



28 October 2015

The Hon Rob Stokes MP
Minister for Planning
GPO Box 5341
Sydney NSW 2001

Via email to: Department of Planning & Environment

Dear Minister

RE: WESTCONNEX M4 EAST EIS SUBMISSION - SSI 6307

Please find attached the Ashfield Council submission on the WestConnex EIS, which was considered by the Council at its meeting held on 27 October 2015. The recommendation to submit the EIS response to you for consideration in the assessment of the application was passed unanimously.

Please direct any enquires concerning the submission to Council's Director Planning & Environment, Phil Sarin on Ph: 97161960 or via email: phils@ashfield.nsw.gov.au.

Yours faithfully

Vanessa Chan
General Manager

Subject	REPORT ON THE M4 EAST PROJECT (WESTCONNEX) ENVIRONMENTAL IMPACT STATEMENT (EIS)
File Ref	WestConnex
Prepared by	Phil Sarin - Director Planning and Environment, Cathy Edwards-Davis - Director Works & Infrastructure
Reasons	To inform Council of the technical assessment of the EIS undertaken by Council Officers and independent specialist consultants
Objective	For Council's endorsement as the Formal Submission in response to the public exhibition of the M4 East EIS

EXECUTIVE SUMMARY

The Department of Planning and Environment has placed on public exhibition, the Environmental Impact Statement (EIS) for the M4 East Project (the Project). The Project has been declared a State Significant Infrastructure (SSI) and Critical State Significant Infrastructure (CSSI) project by the Minister for Planning and Environment.

The Project is being proposed by the Sydney Motorway Corporation (SMC) (formerly the WestConnex Delivery Authority (WDA)), on behalf of the NSW Roads and Maritime Services (RMS) and entails upgrading and extending the existing M4 Motorway from Homebush Bay Drive at Homebush to Parramatta Road and the City West Link (Wattle Street) at Haberfield, including twin tunnels of 5.5 kilometres in length. Associated surface works are required to connect the tunnels to the existing road network including large portal interchanges at Wattle Street Haberfield and Parramatta Road Haberfield/Ashfield.

The Project constitutes part of Stage 1 of a wider project known as WestConnex which is a NSW Government initiative to provide a 33-kilometre motorway linking Sydney's west and south-west with Sydney Airport and the Port Botany precinct to purportedly provide Sydney-wide road network improvements (i.e. the Project does not specifically aim to improve local traffic conditions in Ashfield). Other parts of Stage 1 and Stage 2 are already under construction although Stage 3 (a tunnel from Haberfield to St Peters to link the M4 with the M5) is yet to be approved or funded.

The Project will have significant adverse and irreversible impacts on the Ashfield LGA, particularly the Haberfield Heritage Conservation Area. The main impacts are the severance of the Heritage Conservation Area and community at Wattle Street and the severance of the local community at Parramatta Road. In addition, the Project will result in significant traffic, noise, air quality, human health, visual amenity, flooding and drainage, land ownership and asset management impacts.

According to the Proponent, these impacts are to be endured by the Ashfield LGA for the good of the Greater Sydney road network. However, the Project does little to mitigate or compensate locally for these impacts.

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In the opinion of Council Officers, the Project as currently proposed has similarities with the Warkworth Mine Part 3A Project Application which was originally approved by the NSW Planning and Assessment Commission (PAC) although this approval was later overturned upon appeal to the Land and Environment Court by the Bulga Milbrodale Progress Association Inc¹. In that matter, Chief Justice Preston found that the social and economic impacts of that development were inadequately considered and that the economic analysis was held to be deficient in its consideration of issues of equity or distributive justice. In other words, the assessment of that project focused on the economic benefits to the proponent of the mine, the NSW and Commonwealth Governments with little consideration to the entities to whom the distribution of the burdens would be made – i.e. the local residents and the wider population of NSW and Australia through adverse heritage and biodiversity impacts.

The M4 East Project is similar in that it is premised on Sydney-wide road network improvements without due regard to local built environment, natural environment, social and economic impacts.

Council Officers, in conjunction with specialist expert consultants, have reviewed the EIS and have concluded that the Project is flawed as alternate options with far less built and natural environment impacts have not been adequately considered. Furthermore, the Project relies on several assumptions regarding future public transport and road projects – many of which have not yet been designed, endorsed or commitments made to their funding. The traffic model which underpins the Project is highly reliant on these mooted projects which may not come to fruition or may be delayed well beyond the timeframes discussed in the EIS. The resultant impacts on the Ashfield LGA, its community and its environment would be as severe as the impacts of the Project itself.

Council Officers are of the opinion that the EIS should be amended, not only to propose an alternate option for the eastern portal connection to the city west link (i.e. relocation to Lilyfield), but to provide far greater detail and consideration to a variety of design matters.

Notwithstanding, should the Project be approved substantively in its current form, Council Officers have recommended a range of conditions of approval that should be imposed to minimise the construction and operational impacts of the Project although no mitigation or other works are considered sufficient to “offset” or compensate for the adverse impacts of the Project.

1.0 PROJECT HISTORY & APPROVALS PROCESS

The M4 Motorway was constructed in several stages between the late 1960s and the early 1990s and currently connects Concord with the Blue Mountains.

In 2003-04 an option for an eastern extension of the M4 to the Sydney Central Business District (CBD) (the M4 East) was developed and publicly exhibited by the NSW State Government. This option proposed extending the M4 to the City West Link and Parramatta Road at Ashfield as well as widening the existing motorway between

¹ *Bulga Milbrodale Progress Association Inc v Minister for Planning and Infrastructure and Warkworth Mining Limited* [2013] NSWLEC 48.

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Homebush Bay Drive and Concord Road. That scheme was put on hold indefinitely by the then NSW Government.

In September 2013, the *WestConnex Business Case Executive Summary* (the Business Case) was endorsed by the NSW Government. The full Business Case has not been made public.

On 7 January 2014, the then Director General of the Department of Planning & Infrastructure notified the RMS of the environmental assessment requirements for the Project.

On 5 December 2014, the project was declared by the Minister for Planning and Environment to be State Significant Infrastructure (SSI) and Critical State Significant Infrastructure (CSSI) pursuant to sections 115U(4) and 115V of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and clause 16 of the *State Environmental Planning Policy (State and Regional Development) 2011*. The Project is therefore to be assessed under Part 5.1 of the EP&A Act and the Minister for Planning is the determining authority. It is noted that local planning instruments, such as *Ashfield Local Environmental Plan 2013* (the LEP), do not apply to a CSSI project.

On 16 June 2015, the Secretary of the Department of Environment and Planning (the Secretary) issued revised Secretary's Environmental Assessment Requirements (SEARs) for the Project which required an EIS to be prepared addressing various requirements. The EIS currently on public exhibition has been prepared in response to these SEARs.

2.0 STRATEGIC CONTEXT

2.1 State Planning Strategies

WestConnex (including the Project) is identified in several NSW State Government strategies and plans including, but limited to, the following:

- *State Infrastructure Strategy 2012–2032* (2012);
- *NSW Long Term Transport Master Plan* (2012);
- *Sydney's Bus Future: Simpler, faster, better bus services* (2013);
- *A Plan for Growing Sydney* (2014); and
- *NSW Freight and Ports Strategy* (2013).

UrbanGrowth NSW has also recently publicly exhibited the draft *Parramatta Road Urban Transformation Strategy* which envisages approximately 40,000 new homes to be built on land in the vicinity of Parramatta Road from Granville to Camperdown.

2.2 Ashfield LEP 2013

The provisions of the EP&A Act and *State Environmental Planning Policy (State and Regional Development) 2011* override the provisions of Ashfield LEP 2013 for the purposes of assessing and determining the Project. Notwithstanding, the existing zoning

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provisions of the LEP will continue to apply to the land – that is, the Project does not include any proposals to rezone this land.

If the Project is approved, some land will consequentially need to be rezoned as it would then contain road or related infrastructure and no longer be capable of development for say residential or commercial purposes. Such a rezoning process will have to be instigated by Council to bring zonings into alignment with the new built environment. Other residual land that is only required for construction purposes will continue to be zoned as it currently is. Notwithstanding, Council Officers recommend that Council request the NSW Government not initiate any process that would result in changes to land use zoning, building heights or densities on this residue land within the Ashfield LGA.

2.3 Ashfield DCPs and related Plans and Policies

Ashfield Council currently has several Development Control Plans which relate either specifically to land that will be impacted by the Project works (e.g. the Parramatta Road DCP and the Haberfield DCP) or that apply indirectly (e.g. general provisions for development).

Whilst these DCPs are not directly relevant to the Project for the purposes of assessment and determination of the Project Application, they are relevant in the context of Council's and the local community's expectations of future development in the vicinity of the Project works.

If the Project is approved, it will trigger a need to amend these DCPs and other related plans and policies such that they are consistent with the new road infrastructure and can provide more detailed guidance for future development on residue land. Council Officers are of the view that the Proponent or the NSW Government should provide funding for this task.

3.0 PROJECT BACKGROUND

The Sydney Motorway Corporation (SMC) (formerly the WestConnex Delivery Authority (WDA)), on behalf of the NSW Roads and Maritime Services (RMS) is the proponent for the M4 East Project (the Project) which entails upgrading and extending the existing M4 Motorway from Homebush Bay Drive at Homebush to Parramatta Road and the City West Link (Wattle Street) at Haberfield. This includes twin tunnels of 5.5 kilometres in length and associated surface works to connect to the existing road network (see **Section 0** for a detailed description of works within the Ashfield LGA).

The Project constitutes part of Stage 1 of a wider project known as WestConnex which is a NSW Government initiative to provide a 33-kilometre motorway linking Sydney's west and south-west with Sydney Airport and the Port Botany precinct.

The western extent of Stage 1 of WestConnex is already under construction and entails upgrades to the existing M4 Motorway from Parramatta to Homebush. Stage 2 is also under construction and entails upgrades to the existing M5 Motorway from Beverly Hills to St Peters. Stage 3 is yet to be approved or funded and entails construction of a tunnel from Haberfield to St Peters, to link the M4 with the M5. **Figure 1** is an illustration of the WestConnex route.

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Figure 1: WestConnex route map.

According to the NSW Government, WestConnex is a \$15 billion dollar project with the bulk to be funded by a user-pays tolling system, \$1.8 billion to be funded from the Restart NSW infrastructure fund and \$1.5 billion to be funded by the Australian Federal Government. It is proposed that WestConnex will have a capped distance-based tolling system similar to the M7. The following summarises the expected toll rates as at 2013:

WestConnex Stage	Indicative min/max toll (\$2013 including GST)
Stage 1 - M4 Widening & M4 East - M4 Widening (Parramatta to Homebush) - M4 East (Homebush to Haberfield)	Min: \$1.50 Max: \$3.90 Min: \$2.00 Max: \$3.60
Stage 2 - New M5 (Beverly Hills to St Peters)	Min: \$1.70 Max: \$4.80
Stage 3 - M4-M5 Link (Haberfield to St Peters)	Min: \$1.80 Max: \$4.10
Total	Min: \$1.50 Max: \$7.35 (capped)

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Subject to planning approval, the proposed construction program is for commencement of works in the second quarter of 2016 and completion by the first quarter of 2019 – i.e. approximately 3 years. Some preliminary investigative works such as geotechnical investigations have already commenced as these works can be undertaken without development consent by the RMS.

4.0 PROJECT NEED

The EIS justifies the need for the Project as follows:

- Parramatta Road is Sydney's main east-west route, and the only continuous route between Parramatta and the Sydney CBD. The section of Parramatta Road between Burwood and the Sydney CBD is identified in the *NSW Long Term Transport Master Plan* (Transport for NSW 2012a) (Transport Master Plan) as the most important Sydney transport corridor, due largely to it having the highest public transport movements of any corridor in Sydney.
- Parramatta Road east of Concord Road carries more than 90,000 vehicles each day, with up to 6,000 of these being heavy vehicles. This is similar to the traffic volume on both the M4 and the M5 motorways, and means that Parramatta Road, an urban arterial road, currently carries a similar traffic volume to two of Sydney's busiest motorways.
- Parramatta Road is now one of the six most congested transport corridors in Sydney, with high travel demand and average travel speeds of private vehicles during the morning peak of about 30 kilometres an hour. The Parramatta Road corridor is also one of Sydney's busiest corridors for public transport. It has one of the highest numbers of bus passengers during the morning peak of any major bus route in Metropolitan Sydney. Congestion on Parramatta Road has led to bus services using the road being delayed and unreliable.
- The pressure on the road corridor is predicted to continue to increase, with greater Sydney's population set to increase by another million people in the next 10 years and Western Sydney alone expecting an increase in population of up to 900,000 people by 2031. An increase in transport demand from and to Western Sydney will continue to rise in parallel.
- While rail and public transport do provide for efficient travel between major centres, there will continue to be a need for travel by road to jobs that are dispersed across the metropolitan area and not easily accessed by public transport. In addition, public transport alone cannot provide sufficient point-to-point access to the diverse range of employment and educational hubs, shopping centres or recreational centres, nor can it provide for the safe and efficient delivery of goods and services to Sydney's growing population.
- There is also a need to provide a link between Western Sydney and other work and freight centres such as the Sydney Airport and Port Botany, which generate about \$10.5 billion of economic activity for Sydney each year and both locations are heavily dependent on road vehicles for the movement of people and freight. Investment in additional road infrastructure such as the M4 East and other

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WestConnex projects would increase connections to Sydney's west, where the majority of airport and port freight traffic originates or ends.

- This two-way flow between the international gateways and Western Sydney is necessary for centres such as Parramatta and Sydney Olympic Park to continue to experience development, urban renewal and economic benefit.

The EIS encapsulates the above by suggesting that the 'preferred design' is justified for the greater strategic traffic engineering of Sydney. However, this is a flawed conclusion in the context of environmental planning assessment as it completely ignores that the significant adverse impacts of a proposal should either result in its refusal or alternatively, approval subject to appropriate compensatory measures and/or offsets. In this instance, there are no such measures that can compensate for or offsets the adverse impacts on the Ashfield LGA and benefits in areas remote from Ashfield are neither relevant nor appropriate.

In December 2014, the NSW Auditor-General released a review of the Business Case for the Project indicating that "*it was not able to form a view on whether the project is a worthwhile and prudent investment ... for the NSW government*".

Accordingly, Council Officers are of the opinion that the EIS is flawed as the Proponent has not adequately demonstrated that the Project will result in the intended outcomes of WestConnex and, as detailed in this report, the Project will have significant adverse built, natural, social and economic impacts for the Ashfield LGA for which there is inadequate mitigation and/or compensation.

GEN1: *The Project should be refused on the basis that the Business Case for the Project has not been made fully available for public scrutiny and because the Project will have significant adverse built, natural, social and economic impacts for the Ashfield LGA for which there is inadequate mitigation and/or compensation.*

5.0 PROJECT ALTERNATIVES

The EIS indicates that the following alternatives to the Project were considered by the Proponent:

- A 'base case' (or 'do minimum') alternative which would include the current M4 Widening.

The EIS indicates that this option is not viable if Sydney is to maintain global competitiveness and remain an attractive and liveable city and would not address existing congestion on the M4 and Parramatta Road which is expected to worsen as both population and the freight task increases.

- Improving the existing arterial road network, such as upgrading Parramatta Road, Victoria Road and/or alternative road corridors such as Patterson Street, Gipps Street, Queens Road and Ramsay Road;
- Investing in public transport and freight rail improvements in isolation, without any improvement to the road network;

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- Demand management policies which are intended to reduce individual trips and make alternative mode options more viable.

The EIS suggests that these options are considered desirable and complementary to the Project, but do not provide an adequate stand-alone response to the strategic need and project objectives.

- Extension of the M4 as part of WestConnex (the Project).

The EIS indicates that this option was the preferred strategic alternative as it best meets the NSW Government's objectives being:

- facilitating long-term economic growth throughout the project corridor and through to Sydney's international gateways which create Sydney's commercial and freight demand;
- improving the speed, reliability and safety for vehicles travelling along Parramatta Road and parallel arterial roads and catering for the wide range of road travel demands in the area;
- integrating with other WestConnex stages without creating significant cumulative impacts; and
- reducing traffic volumes on Parramatta Road, thereby catering for improved public transport services, cycleways, pedestrian access and general liveability for residents and workers.

Council Officers are of the opinion that the Project is flawed in the absence of concrete proposals for public transport improvements such as rapid transit bus lanes or light rail and cycleways along Parramatta Road as well as the absence of concrete proposals and funding for Stage 3 of WestConnex. Furthermore, the traffic modelling appears to demonstrate that the Project is not utilised by one of the key target groups - residents of Western Sydney.

Mass transit options can carry significantly more passengers than private motor vehicles. Heavy rail can carry up to 40,000 passengers per 'lane' per hour, a bus lane can carry up to 6,000 passengers per lane per hour and a rapid bus transit lane can carry up to 12,000 passengers per lane per hour. This contrasts with a normal vehicle lane which only carries a maximum of approximately 990 passengers per lane per hour. Options for rail and bus have not been fully explored and any road capacity associated with the Project will soon be consumed with induced traffic, thereby negating any travel time "benefits" of the scheme and obfuscating the Project objective to "relieve road congestion".

GEN2: The Project should be refused as it is inconsistent with the Project objectives and inconsistent with the strategic objectives of the NSW Government in the absence of detailed proposals for public transport, pedestrian and cycling initiatives to encourage modal shift to more sustainable travel.

The EIS also indicates that alternatives in respect of the number of tunnel corridors, interchange locations, and ventilation system design and locations were also considered in development of the preferred design.

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One of these alternatives, referred to as the “Long Tunnel Option” was to construct twin 6.5 kilometre tunnels running roughly below Parramatta Road until just west of Great North Road, then connecting with the City West Link at Lilyfield, with a spur tunnel from the end of the main tunnels north of Parramatta Road for a connection to Parramatta Road at Haberfield. This option was discounted on the basis that it was likely to cost more, require more ventilation stacks and was considered to have the potential to increase congestion on the approaches to the Anzac Bridge, including unacceptable queuing back into the eastbound tunnels.

However, the EIS does not include any consideration of the potential positive impacts for the residents, businesses or environment of the Ashfield LGA of this option, as it would bypass the majority of the LGA thereby not introducing adverse traffic, noise, acoustic and air quality impacts and would not require such substantial land acquisition. In addition, this part of the inner-west would be arguably more compatible with ‘motorway infrastructure’ than the preferred approach to introduce such infrastructure into an area of primarily residential character and historic significance. Council Officers are therefore of the opinion that the EIS does not adequately consider viable tunnel alternatives to the Project.

GEN3: *The Project should be refused as it represents an inferior option at the expense of the natural, cultural and built environment of Ashfield LGA and other tunnel alternatives which avoid the significant negative impacts on Ashfield have not been seriously considered.*

6.0 PROJECT DESCRIPTION (ASHFIELD LGA)

As discussed in Section 0, the EIS relates to the eastern extent of Stage 1 of WestConnex which entails upgrading and extending the existing M4 Motorway from Homebush Bay Drive at Homebush to Parramatta Road and the City West Link (Wattle Street) at Haberfield. The following summarises the key aspects as they relate to the Ashfield LGA (see also illustrative extracts at **Attachment 1**).

- Two three-lane tunnels, one eastbound and one westbound, extending from Wattle Street and Chandos Street at Haberfield generally westward beneath the residential streets of Croydon and onward toward Homebush. Each main tunnel would have a minimum internal clearance (height) to in-tunnel services of 5.3 metres;
- An interchange at Wattle Street (City West Link), with an on-ramp to the westbound tunnel and an off-ramp from the eastbound tunnel with realignment of surface lanes from Loudon Street to Parramatta Road. The Project also includes on and off-ramps at this interchange that would provide access to the Stage 3 M4–M5 Link in the future (see **Figures 2 and 3**);

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Figure 2: Proposed layout of the Wattle Street interchange approach.



Figure 3: Proposed layout of the Wattle Street interchange, ventilation facility and associated works.

- An interchange at Parramatta Road between Bland Street and Orpington Street at Ashfield/Haberfield, with an on-ramp to the westbound tunnel and an off-ramp from

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the eastbound tunnel and realignment of surface lanes between Bland and Orpington Streets (see **Figure 4**);

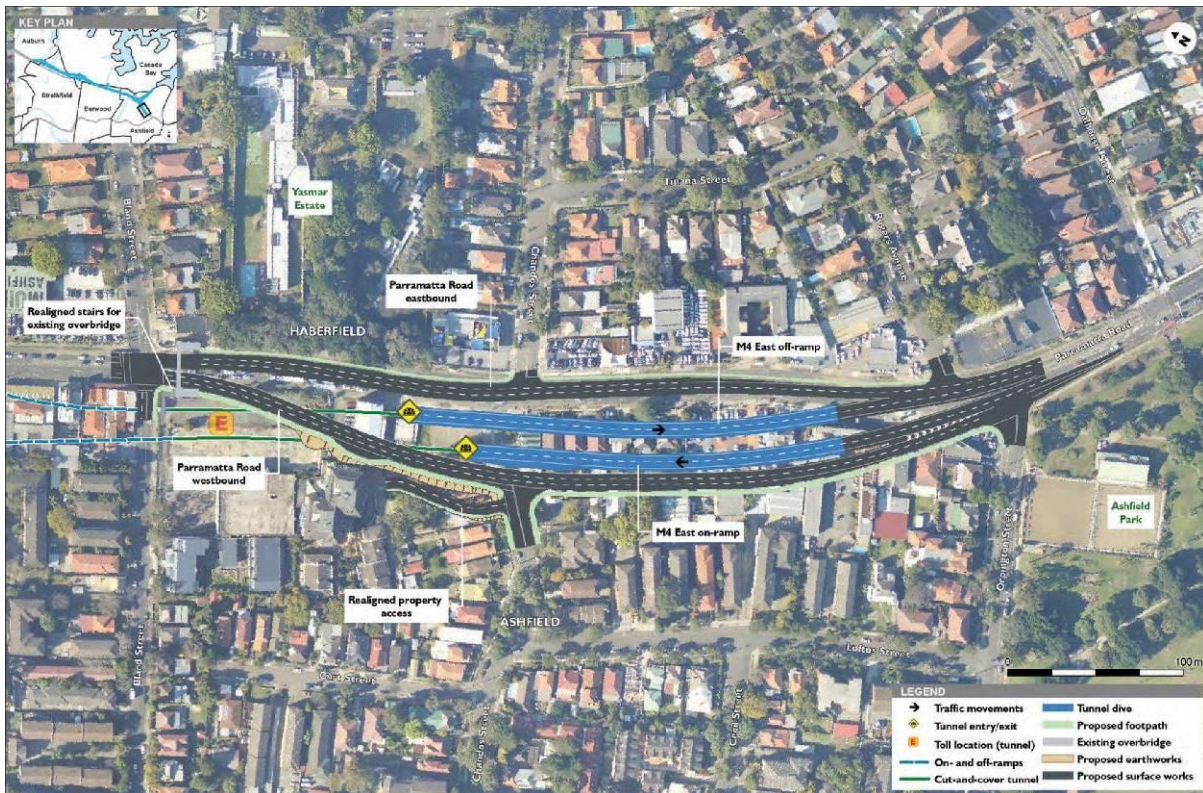


Figure 4: Proposed layout of the Parramatta Road interchange and associated works.

- Installation of tunnel ventilation systems which entail drawing fresh air into the tunnels from the portals and ventilating air through two ventilation facilities, with one of these at the corner of Parramatta Road and Wattle Street at Haberfield (eastern ventilation facility). This ventilation facility is intended to serve both the M4 East (Stage 1) and M4–M5 Link (Stage 3) projects;
- Surface road works including:
 - reconfiguration of existing traffic lanes;
 - changes to traffic signalling and phasing;
 - temporary and permanent road closures (see **Sections 7.4 and 7.5**).
- Pedestrian facilities as follows:
 - Wattle Street interchange - New footpaths on the eastern side of Wattle Street, from near Parramatta Road to near Loudon Avenue, and on the western side of Wattle Street from Ramsay Street to near Loudon Avenue;
 - Parramatta Road interchange - new and/or modified footpaths on both sides of Parramatta Road between Bland Street and Rogers Avenue/Orpington Street and new footpaths on both sides of a small section of Chandos Street, connecting to existing footpaths.
- No cycling specific facilities within the Ashfield LGA;

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- Tunnel support systems and services including:
 - electricity substations;
 - fire pump rooms and tanks;
 - water treatment facilities;
 - fire and life safety systems including emergency evacuation infrastructure;
- Provision of noise barrier walls as follows:
 - Generally south of the Wattle Street portal between the ventilation facility and Martin Street; and
 - East of the Northcote Street construction site (i.e. west of retained dwellings on Wattle, Northcote and Wolseley Streets.

7.0 CONSTRUCTION WORKS

7.1 Construction Sites and Routes

The Project includes four (4) construction sites within the Ashfield LGA. These are briefly described in the following paragraphs, along with a summary of proposed vehicular access routes for each site:

- Northcote Street Tunnel Site (see **Figure 5**) – To be used for the eastern road header launch and occupied from quarter two 2016 to quarter one 2019;
- Eastern Ventilation Facility Site (see **Figure 6**) – To be used for tunnel excavation, construction of ventilation facility and other operational facilities and occupied from quarter two 2016 to quarter four 2018;
- Wattle Street and Walker Avenue Civil Site (see **Figure 6**) – To be used for the construction of the ramp dive structures and occupied from quarter two 2016 to quarter one 2019; and

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Figure 5: Proposed Northcote Street Construction Site



Figure 6: Proposed Eastern Ventilation and Wattle Street/Walker Avenue Construction Sites

- Parramatta Road Civil Site (see **Figure 7**) – To be used for the construction of the ramp dive structures and occupied from quarter two 2016 to quarter one 2019.

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Figure 7: Proposed Parramatta Road Construction Site

7.2 Tunnelling Methodology

The proposed tunnels are to be constructed in sandstone with a ceiling up to 50 metres beneath the ground surface. The tunnels are to be built using the 'heading and bench' method whereby road headers are used to create the tunnel ceiling and the lower portion of the tunnel then dug out by drilling into the rock and blasting, with ground support, rock bolts and tunnel lining installed commensurately.

The EIS indicates that Pre-Condition Building Surveys are to be carried out on properties and structures within 50 metres from the outer edge of the tunnels and within 50 metres of all surface work. Furthermore, that affected residents within this area should expect to receive a letter in late 2015 to explain the position and depth of the tunnel in relation to their property.

According to the EIS information sheets, in the event of any damage to private property as a result of tunnel construction or operation, owners would be eligible for compensation by the contractor, Leighton Samsung John Holland Joint Venture, the motorway operator or the RMS.

7.3 Hours of Work

Proposed Hours for Surface Works are:

- Monday to Friday, 7am to 6pm;
- Saturday, 8am to 1pm;
- Generally, no work on Sunday or public holidays;

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- Some surface work would be carried out at night in accordance with conditions of approval and Environment Protection Licence conditions.

Proposed Hours for Tunnelling Work (including trucks removing spoil) are:

- 24 hours a day, seven days a week.

7.4 Temporary Road/Footpath Closures/Diversions

A number of changes to the arterial and local road networks are proposed during construction as follows:

- Northcote Street, Haberfield – Closed for duration of construction to facilitate demolition of buildings and to provide construction site compound access. To be reopened upon Project completion.
- Ramsay Street (east of Wattle Street), Haberfield – Diversions for various durations over 18 months. To be rebuilt to existing alignment upon Project completion.
- Martin Street (east of Wattle Street), Haberfield – Closed for 2 years to facilitate construction. Temporary Traffic Signals for construction vehicles. To be rebuilt to new alignment upon Project completion.
- Walker Avenue at Parramatta Road, Haberfield – Northbound lane closed, left-in from Parramatta Road permitted only for construction traffic and southbound lane for left turn onto Parramatta Road for the duration of construction. To be reopened upon Project completion.
- Wattle Street, Haberfield – footpath closures on eastern side between Parramatta Road and Martin Street.
- Dobroyd Parade, Haberfield – closure of western footpath north of Martin Street to end of works;
- Chandos Street, (south of Parramatta Road), Ashfield – Closed for 18 months to facilitate demolition of buildings and dive construction. To be reopened upon Project completion.
- Parramatta Road (between Orpington and Bland Street), Ashfield – Lane reductions, temporary traffic signals near Rogers Avenue to provide dedicate right turn bay for construction vehicles entering Parramatta Road construction site for duration of construction.
- Orpington Street at Parramatta Road, Ashfield – Reconfigured with temporary signals for duration of construction. To be rebuilt to new alignment (without signals) upon Project completion.
- Parramatta Road, Ashfield/Haberfield – closure of footpath on southern side between Orpington and Bland Streets and short term closure of pedestrian bridge at Bland Street.

7.5 Permanent Road Closures/Diversions

Proposed permanent changes to the arterial and local road networks include:

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- Martin Street (north of Wattle Street), Haberfield – Left-in and Left-out movements only; and
- Allum Street (north of Walker Avenue), Haberfield – Converted to cul-de-sac.

7.6 Public Transport Changes

Proposed changes to public bus services include:

- Parramatta Road (westbound at Chandos Street), Ashfield – bus stop closed for duration of construction; and
- Parramatta Road (westbound at Orpington Street) – bus stop relocated to east close to Orpington Street.

8.0 KEY ISSUES

The following subsections discuss the impacts of the Project on the residents, businesses and the environment of Ashfield LGA. Each subsection addresses a specific issue or group of issues and includes recommendations for:

- alternatives to the Project that should genuinely be considered;
- additional information that should be provided in order for Council, residents and local businesses to undertake a full and proper assessment of the Project;
- mitigation measures that should be required through conditions of approval if the DoPE is to approve the Project; and/or
- compensatory measures that should be required through conditions of approval if the DoPE is to approve the Project.

Where applicable, issues and recommendations are discussed in terms of the construction and operational phases of the Project, noting that the operational phase consists of the Project with and without Stage 3, which has not been funded or committed to at this time.

8.1 European Heritage

8.1.1 Overview

The Project, by admission in the EIS, will have a significant adverse impact on the heritage values of the Ashfield LGA. This impact is most acute in respect of the loss of listed heritage items (mostly within the Haberfield Heritage Conservation Area), contributory items within the conservation area and to a lesser, but no less important, extent by the impact on the setting of nearby heritage items. In addition, there will be a broader social impact on the local community whose sense of place and community is importantly founded on the existence of such important heritage values of the local environment.

The suburb of Haberfield has been managed by Council and the local community as a Heritage Conservation Area (HCA) for some forty years with the HCA statutorily listed through Council's 1985 LEP and now LEP 2013 and managed through the continuously

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refined development control plans since 1994, yielding the results appreciable in the suburb today.

The Heritage Assessment which accompanies the EIS has been reviewed by Robert Moore Architects (see **Attachment 2**) and this review summarises the impacts as follows:

- Within the Ashfield LGA generally:
 - the loss to demolition of 2 locally significant Items in Chandos Street for the Parramatta Road Construction site;
 - the demolition of 4 potential locally significant Items on the southern side of Parramatta Road; and
 - visual impacts upon three locally significant items in the vicinity of the tunnel works;
- Within the Haberfield Heritage Conservation Area:
 - the demolition of 53 properties for “new motorway infrastructure” including 11 heritage items and 29 contributory items and entailing the physical and visual loss of the buildings, their gardens, street trees and the streetscapes to which they contribute;
 - the permanent physical and visual impacts of the new motorway infrastructure including the roadways, the modification of topography through walls and retaining structures and the noise attenuation walls;
 - the temporary visual impacts of the construction work sites during the Project’s construction;
 - the effective “fragmentation” of the HCA through its separation by the construction of the Wattle Street interchange and associated structures and tunnel portals, through destruction of its legibility in the removal of characteristic houses, block and street layouts, and landscaping;
 - changes to the frontage and access to “Yasmar”, the State heritage listed property fronting Parramatta Road;
 - truncation of Allum Street, Haberfield, through demolition of houses and occupation of acquired lands as one of the Construction Sites for the Project.
- Other impacts:
 - Potential vibration, settlement and noise impacts which could lead to adverse impacts upon the condition, appearance and structural integrity of contributory items within the HCA;
 - Potential impacts upon historical archaeological resources;
 - Potential and actual impacts arising from preliminary components of further stages of WestConnex that are proposed to be built as part of the present contract, including stubs for further tunnels, and possible further construction compounds.

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8.1.2 Loss of and Impacts to Heritage

The Project includes demolition of ten (10) listed houses in Wattle Street, one (1) in Ramsay Street and one (1) in Martin Street, all of which are within the footprint of the proposed Wattle Street portal. In addition, two (2) houses on Chandos Street will be demolished as they are within the footprint of the Parramatta Road portal.

Groupings of adjacent contributory houses are also to be demolished for the Eastern Ventilation facility and contiguous civil construction site and also contributory buildings within the footprint of the Northcote Street construction site.

The Project will also result in remaining adjacent houses being placed in a new and as yet imprecise or uncommunicated context of motorway infrastructure, noise barriers and screen landscaping including:

- houses along the western side of Wattle Street will have reduced front gardens addressing a new busy slip road;
- houses along the western side of Walker Avenue will lose their rear neighbours (along the eastern side of Wattle Street) and their back fence will become the edge of the new Tunnel zone, with dive walls and minimal landscape area;
- contributory houses along the eastern side of Walker Avenue (where contributory houses on the western side will be lost to the construction zone and ventilation structures) will face the civil site and after construction is completed, a new development site;
- the frontage to the State heritage listed “Yasmar” on Parramatta Road (a key historic component of the area tangibly linking the suburb to its earliest settling family - the Ramsays) will be adjoined by a road corridor approximately five times its existing width; and
- the former Peak Freans factory building (now Bunnings), will be tunnelled beneath with possible settlement and vibration impacts.

In respect of the impacts on the Haberfield HCA, the EIS concludes:

“Although localised in the Section of the HCA around Wattle Street, Northcote and Wolseley Streets, the impact of the proposal on the heritage significance of the Haberfield HCA and individual heritage items within it would be significant and unable to be effectively mitigated”.

Council Officers and Robert Moore Architects are of the opinion that the loss of a substantial part of the Haberfield HCA, which has been raised and discussed by State and Local Governments as a place of State significance is neither tolerable nor amortisable. 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 will create a large hole in the quilt, dismissing the pattern and the squares within it and this cannot be acceptably mitigated.

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The Project will not only change the character of Wattle Street but challenge the capacity for the areas east and west of the road within the Haberfield HCA to be comprehended as parts of the same whole in terms of aesthetics, but also through loss of the important evidence of planning and architectural endeavours and innovation and extending to social heritage impacts through the adverse impacts on community identity and the relationship a community has with such a significant place.

The cumulative impacts of the removal of such a large part of the HCA, its severance, the degradation of the visual setting to Yasmar and the contextual diminishment of other surrounding heritage items warrant refusal of the Project in its current form.

EHER1: The Project should be refused on the basis of the significant adverse heritage impacts for which there can be no reasonable mitigation or compensation.

8.1.3 Responses to Heritage Impact

If the Project is approved in its current form, no works or compensation can reasonably mitigate the significant adverse heritage impacts described above although that is not to say that no attempt is necessary or acceptable. Therefore, considerable emphasis must be placed on the design quality of the Project (which the EIS promotes with unrealistic optimism) and future development on the residual land, as well as social and economic 'compensatory' measures.

To this end, the Project does little to be complementary in building design with a 25 metre high ventilation facility, taller than the existing heritage-listed Peak Frean's tower opposite and vastly more assertive in bulk and form. This facility will not only be seen from Walker Avenue living rooms and gardens, but from a considerable area of the surrounding heritage listed streets of Haberfield.

Furthermore, the landscape proposal for a "Boulevard planting of large eucalypts" is completely foreign to Haberfield, which uses measured plantings of smaller species. Similarly unsympathetic landscape proposals apply to the Yasmar frontage.

To the extent they go, the recommended mitigation measures with the EIS and supporting documents are provisionally supportable although they do not match the *gravitas* of what is to be lost and what is at stake.

While partial mitigation only is possible, measures should include:

- the highest design and construction standards must be achieved in the new civic works, integrating heritage responses and requiring the input of Council and local community members as well as independent heritage advisors; and
- interpretation of the Project should be combined with interpretation of its Haberfield context with a suitably prominent and central location to base this Interpretation being *Yasmar*, a significant house of great importance for the suburb.

EHER2: Should approval be granted to the Project, conditions of approval should be imposed requiring:

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- ***A heritage advisory committee to be formed including representatives from Ashfield Council, the local community and independent heritage advisors to provide input to and review the design of all buildings, road infrastructure and ancillary structures; and***
- ***Yasmar should be transferred into the ownership of Ashfield Council together with a grant of \$4.5 million to be used for the restoration of the State Heritage Item and establishment of a Heritage Interpretation Centre.***

8.2 Indigenous Heritage

Ashfield Council acknowledges the Aboriginal Archaeological and Cultural Heritage Assessment that has been undertaken by the Proponent and notes that the Metropolitan Local Aboriginal Land Council (MLALC) was correctly identified as the relevant Local Aboriginal Land Council (LALC) for the Project and further, that the MLALC prepared a cultural heritage survey report for the *WestConnex M4 East - Aboriginal Heritage Assessment, Appendix B*.

As the Project has raised many concerns locally, Council supports the engagement with the MLAC as the recognised Aboriginal organisation in the Sydney Metropolitan Area. However, Council is disappointed that a more robust consultation process to engage affected Council Aboriginal Consultative Committees was not implemented by the Proponent in the development of the above mentioned assessment.

Ashfield Council is proud of the achievements made towards reconciliation and continues this journey with its second Reconciliation Action Plan (RAP) 2014-2016. The RAP outlines work that will help to achieve our enduring goal to build a shared pride and national prosperity in our Aboriginal and Torres Strait Islander cultures and histories. Council's Aboriginal Consultative Committee (ACC) provides Council with strategic advice on recognition, reconciliation and heritage matters and it is essential that the ACC has the opportunity to comment on Projects such as this.

IHER1: If the Project is approved, a condition of approval must be imposed requiring that the Ashfield Council Aboriginal Consultative Committee be directly engaged with any further or future consultation processes with respect to the Project.

8.3 Traffic and Transport

8.3.1 Overview

The Project will require significant changes to the existing road, pedestrian, bicycle and public transport networks within Ashfield LGA and surrounding LGAs, primarily to accommodate the Wattle Street and Parramatta Road interchanges, but also as a consequence of changes in traffic distribution on surrounding local and regional roads.

Adverse impacts on the Ashfield LGA will be experienced during construction and during the operation of the Project, particularly if WestConnex Stage 3 is not completed or not completed in the timeframe specified in the EIS (NB: Stage 3 remains unfunded and no firm commitment has been made to its construction).

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Reviews of the traffic and transport impacts of the Project have been undertaken by Council Officers (see **Attachment 3**) and by TTM Consulting (see **Attachment 4**). The following subsections discuss the findings of these reviews.

8.3.2 Response to SEARs and Methodological Issues

The EIS is considered to be inadequate in a number of respects and does not meet all of the SEARs in respect of traffic and transport. The following summarises these inadequacies:

- The Project is inconsistent with the Project Objectives as the traffic modelling appears to demonstrate that the Project will not be highly utilised by one of the key target groups - residents of Western Sydney;
- The transport modelling relies on as yet undefined Parramatta Road improvements and in particular the conversion of one lane from a regular vehicle lane to a bus lane. However, this does not form part of the Project and is not yet committed, funded or approved. The Project should not proceed on this basis;
- Inadequate consideration has been given to traffic and transport impacts on the local roads during construction and operation;
- Inadequate consideration has been given to traffic and transport impacts on Frederick Street and Liverpool Road with modelling of north-south regional movements not addressed in the EIS;
- The traffic modelling assumptions which show only modest increases in traffic on Parramatta Road and Dobroyd Parade in 2021 as per Tables 8.9 and 8.10 (Volume 1A) need to be reviewed as this data contradicts Figures 8.4 and 8.5 (Section 8.6, Appendix G);
- The traffic modelling assumptions which show modest decreases in traffic on Parramatta Road and Dobroyd Parade in 2031 as per Tables 8.11 and 8.12 (Volume 1A) need to be reviewed as although the Project will increase the total capacity of the regional network, this additional capacity will be taken up by new vehicles and it is therefore not realistic to expect that there will be decreases in traffic volumes at the 'downstream' of the new portals;
- It is unclear whether the new 40,000 homes proposed in the *Draft Parramatta Road Urban Transformation Strategy* have been included in the transport modelling and if they have not they should be as they will result in significant changes to the modelling outputs;
- The peer review of the transport model calibration must be made publicly available;
- No consideration has been given to integrating cycleways and pedestrian elements into the surrounding network with no provision made for additional cycling facilities in the Ashfield LGA and minimal additional pedestrian facilities.

Further details in each of these regards are provided below and a higher degree of articulation of Council's concerns can be found within **Attachments 3 and 4**.

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8.3.3 Construction

Council Officers have significant concerns regarding the very high number of heavy vehicles accessing the various construction sites and the consequential impacts relating to noise, pollution and traffic congestion. It is of particular concern that there will be heavy vehicles operating 24 hours a day, seven days a week for 3 years with some areas experiencing heavy vehicles every three minutes during the day and night, with no respite for residents. Consideration must therefore be given to on-site storage of night time spoil.

TT5: *If the Project is approved, a condition of approval must be imposed requiring that no heavy vehicle movements are to be permitted from 10pm to 7am on any day without specific approval from the Secretary. Furthermore, night-time spoil is to be stored on-site at works sites C7, C8, C9 and C10 within acoustic sheds and moved the following day.*

Of particular concern is the 300 heavy vehicles per day at the Northcote Street site where vehicles will travel eastbound on Wattle Street undertake a u-turn at Reg Coady Reserve and then travel back westbound on Wattle Street/ Parramatta Road – thereby creating 600 heavy vehicles movements per day driving past the residential properties on Wattle Street. This is in addition to 120 vehicles from the Wattle Street site and 60 vehicles from the Eastern ventilation facility site also utilising Wattle Street. This is not an acceptable impact and it is suggested that heavy vehicles exit the Northcote Street site directly onto Parramatta Road with consequential modifications made to the phasing of the lights at the intersection of Parramatta Road/Wattle Street to facilitate the right turn onto Parramatta Road, to head west.

TT6: *If the Project is approved, a condition of approval must be imposed requiring that vehicles exiting the Northcote Street site (C7) must not utilise Wattle Street and Dobroyd Parade. They must exit the site directly onto Parramatta Road, in a westerly direction.*

Prior to the release of the EIS, Council was advised that no local roads would be used for construction vehicle access or egress although the Project now proposes the use of Bland Street to exit the Parramatta Road civil site. There are residential properties on the western side of Bland Street which will be highly impacted by heavy vehicles movements at this site and there are serious safety concerns for pedestrians at this location, particularly given the proximity to the Haberfield Public School, which has primary school aged children. This will be exacerbated by the proposed closure of the Bland Street pedestrian bridge for periods during construction.

Furthermore, Bland Street, at Parramatta Road, is constrained by its width and existing queues and delays will increase if heavy construction vehicles utilise Bland Street. Accordingly, if the Project is approved, it is essential that the road is widened and realigned for northbound vehicles on Bland Street.

TT7: *If the Project is approved, a condition of approval must be imposed requiring that vehicles exiting the Parramatta Road civil site (C10) must not utilise Bland Street. They must exit the site onto Parramatta Road, just east of the intersection with Bland Street.*

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TT8: *Failing the above recommended condition, an appropriately qualified traffic controller must be present at all times on Bland Street, at the exit from the Parramatta Road civil site (C10), to help ensure pedestrian safety, particularly primary school aged children.*

TT9: *Failing the above recommended condition, Bland Street, at Parramatta Road is to be realigned and widened to allow for two northbound lanes, with no associated reduction in footpath widths (making use of the private property land which has been acquired at this intersection).*

Similarly, Council does not support the use of Chandos Street, Orpington Street and Walker Street for light construction vehicles (including light delivery vehicles).

Council also expects that traffic modelling during construction will include the monitoring of heavy vehicles, particularly on local roads, to allow for compliance checks and enforcement.

As highlighted above, the Project includes partial and full road closures which of themselves are of serious concern to Council and the local community. Compounding these concerns are the consequential impacts of increased traffic on nearby local and State roads including:

- Allum Street;
- Alt Street;
- Ash Lane;
- Bland Street;
- Julia Street;
- Loftus Street;
- Orpington Street;
- Ramsay Street;
- Walker Avenue;
- Waratah Street;
- Wolseley Street;
- Frederick Street; and
- Liverpool Road.

The EIS does not appear to include any analysis on the impact of road closures and diversions on these roads Council's assessment of these impacts is more fully articulated in the review at **Attachment 3** to this report. Indeed it is unclear whether the EIS actually included modelling on local roads.

Furthermore, it appears that access to the private properties on the southern side of Dobroyd Parade, between Martin Street and Waratah Street will be restricted. This matter needs to be resolved.

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It is also proposed to undertake a number of footpath closures for the entire construction period or for significant periods as summarised at **Attachment 3**. These closures are entirely unreasonable and unacceptable and will result in significant detours and increased safety risks for pedestrians, particularly the elderly, children and less mobile people. It is noted that it is proposed to close the westbound bus stop at Chandos Street, although if the footpath were to remain open, then this would not need to occur.

Council would not allow a private developer to close off a footpath for such extended periods of time and there is no reason that the Proponent should be treated differently.

- TT10:** *If the Project is approved, a condition of approval must be imposed requiring that modifications which need to be made to the Bland Street pedestrian overpass must be made prior to the substantial commencement of construction such that the bridge can remain open at all times whilst the Parramatta Road civil site (C10) is in operation.*
- TT11.** *If the Project is approved, a condition of approval must be imposed requiring that the footpath on the southern side of Parramatta Road, from Bland Street to Orpington Street is to remain open at all times during construction.*
- TT12.** *If the Project is approved, a condition of approval must be imposed requiring that the footpath on the southern side of Dobroyd Parade, from Martin Street to Waratah Street is to remain open at all times during construction.*
- TT13.** *If the Project is approved, a condition of approval must be imposed requiring that footpath access from Martin Street, to Wattle Street is to remain open at all times during construction.*
- TT14.** *If the Project is approved, a condition of approval must be imposed requiring that footpath access from Chandos Street, to Parramatta Road is to remain open at all times during construction.*
- TT15.** *If the Project is approved, a condition of approval must be imposed requiring that the Proponent shall maintain safe pedestrian access to the fullest extent possible during construction. In circumstances where pedestrian access is temporarily not possible due to construction activities, the Proponent shall ensure that a satisfactory alternate route is provided and sign posted.*

Under both construction and operational stages of the Project, many local streets, some of which already experience degrees of rat-running, will become or worsen as rat-runs with the adverse impacts on residents in respect of increased traffic volumes, speeding and consequentially increased safety risks. The Project should therefore include suitable Local Area Traffic Management (LATM) schemes to protect the amenity of local streets.

- TT16:** *If the Project is approved, a condition of approval must be imposed requiring that the Proponent shall as part of its construction stage monitor traffic changes during construction on regional and local streets in Haberfield, Ashfield and Summer Hill at six monthly intervals, for a period of one week (outside of school holiday periods). The results of this*

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monitoring shall be made publicly available within one month of collection. Should monitoring indicate traffic intrusion 10% above existing (pre-construction) levels on these streets the Proponent shall prepare and implement LATM for these areas, following consultation with Ashfield Council and the community, to minimise and/or restrict use of local roads and improve residential amenity.

TT17: *If the Project is approved, a condition of approval must be imposed requiring the Proponent to take all reasonable steps to ensure that all heavy vehicles travel to and from all construction sites via State roads and/or the routes specified in the EIS. The Proponent shall take all reasonable steps to ensure that no heavy vehicles travel on local roads.*

TT18: *If the Project is approved, a condition of approval must be imposed requiring that the construction sites, site compounds and surrounding areas to be maintained in a generally clean and tidy condition for the duration of the Project.*

The EIS suggests that the construction workforce would be encouraged to utilise public transport and that some parking zones will be established for construction workers, however, there is no detailed information in this regard in the EIS.

The Proponent has indicated that a Construction and Access Management Sub-Plan will form part of a Construction Environmental Management Plan (CEMP) which is expected to be required as a condition of approval. The Proponent suggests that Sub-Plan will be prepared in consultation with Council and will require approval of the DoPE.

TT19: *If the Project is approved, a condition of approval must be imposed requiring, prior to the commencement of substantial construction, a Construction Stage Public Transport Management Plan shall be developed. The Plan shall address the potential impact of construction activities on public transport. The objective of the Plan shall be to achieve at least pre-construction level of service for buses and high occupancy vehicles.*

TT20: *If the Project is approved, a condition of approval must be imposed requiring, the Proponent to develop measurable performance indicators for bus efficiencies (including consideration of bus timetables), occurring as a result of the Project. If bus performance does not meet the indicator targets, the Proponent shall initiate, at its own expense, any actions as reasonably required by Transport for NSW.*

TT21: *If the Project is approved, a condition of approval must be imposed requiring the Proponent to establish an appropriate representative Community Liaison Group (CLG) for the Haberfield and Ashfield community. The Proponent shall:*

- *Ensure that the first meeting is held prior to substantial construction;*
- *Allow the CLG to make comments and recommendations about construction progress and implementation, the environmental management plan and sub plans, monitor compliance with these*

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conditions of approval and other matters relevant to the operation of the Project;

- *Ensure that the CLG have access to the necessary plans and information for such purposes;*
- *Consider the recommendations and comments of the CLG and provide a response to the CLG and Minister for Planning;*
- *Ensure that the CLG shall consist of appropriate community and Council representatives; and*
- *Bear all costs associated with the establishment and ongoing function and resourcing of the CLG, including the provision of at least two senior staff to administer, attend and participate in the meetings.*

TT22: *If the Project is approved, a condition of approval must be imposed requiring the Proponent to nominate a person(s), to be approved by the Minister for Planning, to serve as the Independent Community Liaison Representative(s) (ICLR). The ICLR shall be experienced in mediating disputes. The role of the ICLR shall include but not be limited to:*

- *Attending and chairing Community Liaison Group meetings;*
- *Consulting with the Proponent with regard to consultation strategies;*
- *Being available for direct contact by the community during standard construction hours; and*
- *To the greatest extent practicable, resolve community complaints.*

Council Officers are also of the opinion that the parking strategy should form part of the EIS and be made available for public comment.

TT23: *The EIS should be amended to include a parking strategy for workers associated with the Project and this strategy must be made available for public comment.*

Should the DoPE not agree to this request, Council Officers recommend that the following be required as a condition of approval:

TT24: *If the Project is approved, a condition of approval must be imposed requiring the Proponent to provide:*

- *a shuttle bus service for workers during the entire construction period of the project to alleviate traffic congestion and reduction in the residential parking in the Haberfield area;*
- *workers with access to free public transport to encourage the use of public transport;*
- *subsidised travel during journey to work periods on public transport for residents living within 10km radius of WestConnex construction, to encourage use of public transport during periods of significant disruption and to reduce congestion on local roads.*

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In addition, to the discussion above:

TT1-TT4: Should the Project be approved, recommendations of the EIS relating to a Traffic Management and Safety Plan (TMSP), local road closures and road dilapidation reports must be amended as set out in Recommendation TT1 to TT4 of the review of traffic and transport impacts at Attachment 3 (see also Recommendations at Section 10.4).

8.3.4 Operation

Council Officers query the robustness of the traffic model which underpins the EIS as there are numerous discrepancies and inconsistencies and some conclusions which appear to be incorrect.

For example, the EIS indicates that under the 2021 ‘do minimum’ traffic figures, some intersections in Haberfield and Ashfield will see a decrease in average delays between the base year and 2021 of between 16-25%. As traffic volumes in Sydney generally increase over time there appears to be no valid reason for decreasing vehicle volumes in the absence of any infrastructure or network changes.

Similarly, in the 2021 scenario with the Project, some parts of the EIS indicate that only relatively minor increases in traffic are estimated on Parramatta Road, between Sloane Street and West Street, Haberfield and on Dobroyd Parade, north of Timbrell Drive, Haberfield (less than 150 vehicles per hour). These two locations are ‘downstream’ of the proposed Project where three additional travel lanes will be introduced or at least three lanes if the unfunded bus lanes are introduced on Parramatta Road. With capacity of 1,800 vehicles per hour per lane in the peaks, it is inconceivable that this network capacity will not be substantially taken up. Other parts of the EIS indicate that traffic will increase on the approaches by 900 to 1,600 vehicles – both parts of the EIS cannot be correct.

TT25: The EIS is to be amended to provide clarification and further assessment of the impacts of the Project on traffic flows on Parramatta Road and Dobroyd Parade.

The EIS states unequivocally that “Congestion reduces the safety of road networks” which by definition means that roads around Ashfield and Haberfield will become more unsafe. Given that the Project is proposed with an objective to provide additional infrastructure for freight transportation, Council Officers have serious safety concerns about the associated increase in heavy vehicle movements in Haberfield and Ashfield.

Whilst these safety concerns apply across the whole Project footprint, there are specific safety concerns regarding the proposed intersection of Parramatta Road and Orpington Street where vehicles turning left from Orpington Street could attempt to enter the westbound portal to the M4 tunnel and also where eastbound vehicles exiting the M4 tunnel will be able to turn into Waratah Street, causing potential for rear-end accidents with queued vehicles waiting to turn right. The latter is of particular concern if there are vehicles queued back into the tunnel and/or if motorists do not have sufficient sight distance to observe the queued vehicles as they exit a dark tunnel into a sunny surface environment.

OpTT6: If the Project is approved, a condition of approval must be imposed requiring Orpington Street, Ashfield is to be left in/ left out only to

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Parramatta Road. The concrete median island on Parramatta Road must be extended to the East, to prevent motorists entering the new westbound portal from Orpington Street.

Whilst the construction of the Stage 3 portals on Wattle Street seeks to allow future access to the Stage 3 tunnels, it will encourage additional regional traffic on Frederick Street seeking to access the new portals. This is of extreme concern to Council Officers as it is understood that traffic on Frederick Street is expected to grow by 9.3% between 2021 and 2031 without Stage 3. The inducement to additional traffic as a consequence of Stage 3 will cause significant additional traffic increases on Frederick Street and place greater pressure on its intersection with Liverpool Road as well as surrounding local roads.

Accordingly, Council is strongly opposed to any widening of Frederick Street and requests that the road widening reservation on Frederick Street be removed immediately to provide some certainty to the residents of Frederick Street.

OpTT10: If the Project is approved, a condition of approval must be imposed requiring the easement/road reserve on Frederick Street, Ashfield be removed.

The Project includes very limited additional pedestrian or cycling facilities with many locations in the vicinity of the Project footprint ultimately being considerably worse off and more unsafe for pedestrians and cyclists.

The EIS is also somewhat disingenuous in respect of the limited pedestrian and cycle works that are “proposed” as many of these facilities already exist and are just being rebuilt or relocated, often with adverse consequences for residents and businesses.

Furthermore, the considerable widening of Parramatta Road at Chandos Street and Wattle Street at Ramsay Street will prevent informal crossings to bus stops and other destinations requiring pedestrians to detour significantly, in a car-centric, pedestrian-unfriendly environment. This is not an acceptable outcome. If the Project is approved, a pedestrian and cyclist pathway over/under Parramatta Road at Chandos Street must be provided.

Similarly, there will be increased tension between vehicles on Waratah Street turning right into Dobroyd Parade and pedestrians crossing Dobroyd Parade which will make crossing by pedestrians and cyclists harder and increase safety risks. Accordingly, a pedestrian and cyclist pathway over/under Dobroyd Parade at Waratah Street must be provided as part of the Project.

OpTT16 If the Project is approved, a condition of approval must be imposed requiring a safe, high quality and contiguous cyclist/pedestrian path(s) to be provided for recreational and commuter cyclists and for pedestrians for the length of the Project, from the M4 at Concord through to Haberfield and Ashfield. Details of the provisions for cyclists shall be developed through the preparation of a detailed Cycleway and Pedestrian Plan which shall be prepared in consultation with Bicycle NSW, local councils, relevant bicycle user groups and the CLGs. The Plan must take into consideration existing and future demand. The Cycleway and Pedestrian Plan shall also include:

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- *A detailed description of the proposed design including all connections to surrounding roads, streets and paths;*
- *Lighting, where appropriate;*
- *Safety including safe crossings for pedestrians and those accessing bus stops and security;*
- *Line marking and signage to separate cyclists from pedestrians in accordance with signposting directions from the RMS in relation to all shared paths;*
- *Maintenance;*
- *Consideration of links to existing and future planned cycle networks, roads and paths and potential linkages; and*
- *Appropriate associated landscaping.*

The Cycleway and Pedestrian Plan must include as a minimum:

- *The traffic management treatment at the intersection of Northcote Street and Parramatta Road, Haberfield intersection is to be upgraded to include cyclist provisions;*
- *The traffic management treatment at the intersection of Wolseley Street and Parramatta Road, Haberfield intersection is to be upgraded to include cyclist provisions;*
- *A dedicated, separated and permanent bicycle path which operates the full length of Parramatta Road, from the M4 at Concord to Haberfield;*
- *A dedicated, separated and permanent bicycle path which operates the full length of Wattle Street/ Dobroyd Parade, from Parramatta Road to Timbrell Drive;*
- *A pedestrian and cyclist pathway over/ under Parramatta Road, at Chandos Street, Ashfield;*
- *A pedestrian and cyclist pathway over/ under Wattle Street/Dobroyd Parade, at Ramsay Street, Haberfield; and*
- *A pedestrian and cyclist pathway over/ under Dobroyd Parade, at Waratah Street, Haberfield.*

The design of any such infrastructure shall be certified by a suitably qualified and experienced expert that has considered the above matters. The pedestrian and cyclist facilities should be operational prior to the Proponent receiving toll income.

OpTT17 *If the Project is approved, a condition of approval must be imposed requiring all pedestrian bridges to be of high quality in terms of form, finish and materials and shall be designed by an architect with appropriate experience in urban pedestrian bridge design.*

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OpTT18 If the Project is approved, a condition of approval must be imposed requiring the Proponent to ensure pedestrians are given additional priority at signalised crossings associated with the reduction in traffic volumes, as part of the surface improvements for Parramatta Road.

If the Project is approved, Part 4 of the review of traffic and transport undertaken by Council Officers at **Attachment 3** contains additional detailed recommendations for modifications to measures proposed in the EIS and recommends additional conditions of approval that must be imposed (see also Recommendations at Section 10.4).

8.4 Noise and Vibration

8.4.1 Overview

The Project will generate noise and vibration during construction and operation as a consequence of:

- the demolition of buildings on Parramatta Road and Wattle Street;
- regenerated noise from road headers, rock breakers, drilling and blasting during tunnelling;
- cumulative regenerated noise from tunnelling and airborne noise from surface excavation/construction activities;
- night-time construction truck movements;
- road traffic noise exposure as a result of additional traffic associated with the operation of the Project both with and without the M4-M5 Link.

The following paragraphs summarise the assessment of noise and vibration impacts undertaken by Atkins Acoustics (see also **Attachment 5**).

8.4.2 Response to SEARs

As part of the preparation of the SEARs for the Project, Council raised concerns with respect to vehicles using the entry and exit lane ways to the tunnels and that very high levels of noise and vibration would be experienced at adjoining properties, including nearby residences. Accordingly, Council requested that the following details be provided in the EIS:

- the design of ‘noise screening walls or devices’; and
- a report by a qualified acoustic engineer, explaining how effective they will be in reducing noise impacts for adjoining properties.

The Noise and Vibration Impact Assessment (NVIA) which accompanies the EIS does not adequately respond to the SEARs as it does not provide:

- justification for not treating residential buildings exposed to road traffic noise greater than two (2) storey in height; and

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- 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.

NV1: *The NVIA must be amended to include an assessment of impact on residential buildings exposed to road traffic noise greater than two (2) storeys in height and 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.*

The NVIA assessment of construction noise impacts compares predicted construction noise levels with Noise Management Levels (NMLs) and describes the impacts as 'Minor' (less than 10dBA above NML), 'moderate' (up to 20dBA above NML) and 'high' (greater than 20dBA above NML). However, the NVIA provides no source reference, definition or description of these impacts and does not reference the *Interim Construction Noise Guideline* (DECCW, 2009) (ICNG) as required by the SEARs. It is noted that the ICNG recommends that where the predicted or measured level is greater than the NML, the proponent should apply all reasonable and feasible work practices to meet the NML.

NV2: *The NVIA must be amended to refer to the Interim Construction Noise Guideline (DECCW, 2009) as required by the SEARs and include details of work practices to meet the NML and should identify the extent of properties exposed to construction noise levels greater than 75dBA.*

8.4.3 Background Noise Monitoring

The NVIA which accompanies the EIS is based on the results of ambient background noise monitoring generally conducted at locations fronting existing road traffic noise such as Parramatta Road and Wattle Street. These levels were then used to establish goals for assessing construction noise, fixed plant operational noise (ventilation system) and to validate the operational traffic noise model.

However, the measurement locations selected and reported results are not representative for noise receptors set back from the roads or suitable for assessing construction noise impacts. It is considered that there are differences of 6-10dBA between the levels used in some areas and the levels likely to be encountered and this is significant in terms of assessing noise exposure and impacts. Accordingly, additional noise monitoring should be undertaken and the impacts reassessed.

To this end, the Proponent has advised that additional monitoring is scheduled to be undertaken week commencing 12 October 2015. However, Council Officers are of the opinion that in the absence of this data, a full and proper assessment of the Project cannot be made and that the EIS should be re-exhibited including this data when it is available.

NV3: *Additional noise monitoring should be undertaken at representative locations set back from Parramatta Road and Wattle Street for assessing construction and operational noise impacts and the EIS re-exhibited to enable public scrutiny of this data.*

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8.4.4 Construction

For the purposes of assessing the impact of construction works at the Parramatta Road and Wattle Street portals, the Noise Monitoring Levels (NMLs) adopted for residential properties on surrounding streets (e.g. Loftus Street, Curt Street and Chandos Street near Parramatta Road) are based on noise measurements conducted on Parramatta Road and Wattle Street. These background levels are not representative of the existing ambient noise levels experienced at properties set back from these roads and should be revised to established appropriate criteria or NMLs.

Recommendation: As per NV3.

Following the demolition of buildings on the southern side of Parramatta Road, existing developed multi storey residential properties on Loftus Street, Curt Street and Chandos Street will front onto and be exposed to construction noise impacts. The NVIA refers to modelling and the assessment of construction noise at 1.5m above ground level and reports that noise levels at upper floors of buildings may be higher. However, the NVIA provides no modelling or assessment of construction noise impacts for buildings greater than one (1) storey.

Recommendation: As per NV1.

Whilst the NVIA refers to evening and night criteria and NMLs for assessing regenerated noise in residential properties during 24/7 tunnelling, no criteria, NML's or assessment of impacts at residential properties are included for daytime hours (7.00am to 6.00pm) seven (7) days a week.

NV4: The NVIA must be amended to include criteria, NML's or assessment of impacts at residential properties for daytime hours (7.00am to 6.00pm) seven (7) days a week.

The NVIA refers to 24 hour truck movements from the Northcote Street tunnel construction site with hourly truck projections equating to 27.3 movements per hour (7.00am to 6.00pm), 4.5 movements per hour (6.00pm to 10.00pm) and 2 movements per hour (10.00pm to 7.00am). On an understanding that roadheaders operate continuously 24 hours a day and are the main source of excavated material to be removed from the construction site, no justification is provided to support the significant variation between the truck numbers during daytime/evening/night.

NV5: Additional information is required in respect of the night-time truck movements.

The NVIA provides no traffic details for modelling and assessment of construction traffic noise and no modelling or assessment of L_{Amax} night-time traffic noise for properties exposed to construction traffic.

NV6: The NVIA must be amended to include details of construction traffic and modelling and assessment of L_{Amax} night-time traffic noise for properties exposed to construction traffic.

The NVIA provides no reference or assessment of noise impacts associated with construction workers vehicles and onsite parking.

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NV7: *The NVIA must be amended to assess the noise impacts associated with construction workers vehicles and onsite parking.*

Notwithstanding the deficiencies of the NVIA, should the Project be approved the following conditions are recommended:

NV8: *If the Project is approved a condition of approval must be imposed requiring that construction traffic movements on public roads shall limit any increase in existing road traffic noise levels to no more than 2 dB (A). All feasible and reasonable noise mitigation and management measures must be implemented.*

NV9: *If the Project is approved a condition of approval must be imposed requiring the Proponent to ensure that construction vehicle contractors operate so as to minimise any sleep disturbance impacts. Measures that could be used include contracts that include provisions to deal with unsatisfactory noise performance for the vehicle and/or the operator, and specifying alternatives in place of reversing beepers such as reversing cameras and proximity alarms, or a combination of these.*

The NVIA refers to source data from Wilkinson Murray (2003) for modelling and assessment of regenerated noise from road headers although these source levels are up to 10dBA lower than more recent published data.

NV10: *The NVIA must be amended to the most recent published data in respect of regenerated noise from road headers.*

The NVIA refers to rockbreakers and blasting during tunnelling, including the construction of cross passages between tunnels but does not include an assessment of regenerated noise or vibration from rock breakers or drilling for blasting.

NV11: *The NVIA must be amended to include an assessment of regenerated noise or vibration from rock breakers or drilling for blasting.*

The NVIA confirms that in the vicinity of the Wattle Street access ramps, receivers above these sections of tunnel are predicted to be subject to ground-borne noise levels in the region of 53 dBA LAeq, which significantly exceed both the evening (40dBA) and night-time criteria (35dBA). Similarly, in the area south of Parramatta Road, Ashfield (chainage 6,000), receivers are predicted to be subject to ground-borne noise levels up to around 43 dBA LAeq (15minute), which significantly exceeds the night-time criteria (35dBA), with the most affected receivers experiencing noise levels above the night-time criterion for up to around six days. Notwithstanding, the NVIA does not identify the number of properties that would be exposed to the regenerated noise in these or other locations and does not include an assessment of the impacts.

NV12: *The NVIA must be amended to include and identify the number of properties that would be exposed to the regenerated noise exceeding the noise criteria and assess the impact of those exceedances.*

The NVIA refers safe working distances for assessing vibration during construction and provides a summary of vibration impacts. For tunnelling, vibration sources identified and

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assessed are restricted to road header and rock anchor drilling with no reference or assessment of vibration impacts for rockbreakers or other tunnelling plant/equipment. Furthermore, the NVIA refers to safe working distances to 'Heritage listed buildings' although no definition is provided for the classification of vibration sensitive buildings in the Haberfield Conservation Area.

NV13: *The NVIA must be amended to include:*

- ***an assessment vibration impacts resulting from rockbreakers and other tunnelling plant/equipment on building structures; and***
- ***classification and identification of vibration sensitive buildings in the Haberfield Conservation Area and on other land in the vicinity of the Project footprint.***

NV14: *Should approval be granted to the Project conditions of approval should be imposed requiring:*

- ***dilapidation reports for all structures within 50 metres of any construction works and all identified vibration sensitive buildings within the Haberfield Heritage Conservation Area;***
- ***funding assistance for property owners to engage independent observers during the dilapidation inspections;***
- ***notices for dilapidation inspections and reports are not to be issued within 14 days of or during school holiday periods.***

8.4.5 Operation

The operational traffic noise modelling for 2031 is based on the assumption that the M4-M5 Link is operational although no traffic noise modelling or predicted traffic noise levels are reported for the year 2031 without the M4-M5 Link. There is a considerable risk that the M4-M5 link is not built in this timeframe and accordingly, the NVIA should be amended to assume a worst case scenario in respect of noise impacts at 2031 without the M4-M5 link.

NV15: *The NVIA must be amended to assume a worst case scenario in respect of operational noise impacts at 2031 without the M4-M5 link.*

The NVIA provides a list of multi-storey buildings that qualify for secondary noise control treatment to control traffic noise although no justification provided as to justify why these buildings do not qualify for architectural building treatment to control road traffic noise.

NV16: *The NVIA must be amended to include recommendations for architectural building treatment to multi-storey buildings to control road traffic noise or justify why this is not necessary.*

The NVIA indicates that traffic noise levels due to the Project will not result in 'acute' (i.e. 65 LAeq 15 hour (day), 60 LAeq, 9 hours (night) or greater) traffic noise levels, however, Appendix N to the NVIA identifies properties that are exposed to 'acute' traffic noise. These include Noise Catchment Areas (NCAs) NCA14, NCA15, NCA16, NCA17, NCA18, NCA19, NCA20 and NCA21 within the in the Ashfield LGA.

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The RTA Environmental Direction No 24 refers to the RTA Policy for assessing ‘acute’ levels of traffic noise, the importance of reducing noise levels where existing or predicted road traffic noise levels are identified as ‘acute’ and a requirement to further detailed assessment of feasible and reasonable mitigation measures.

The reported existing and predicted future road traffic noise levels for properties fronting Wattle Street and Parramatta Road typically exceed the ‘acute’ criteria and therefore qualify for further detailed assessment of feasible and reasonable mitigation measures.

NV17: The NVIA must be amended to explain the inconsistency in regards to ‘acute’ traffic noise levels, include an assessment of ‘acute’ levels of traffic noise (including identification of affected properties) and make recommendations for reasonable mitigation measures.

Residential properties exposed to Dobroyd Road between Crane Street and Hawthorne Parade have not been assessed in terms of road traffic noise exposure and these properties are exposed to ‘acute’ traffic noise levels that will increase (2021) as a result of additional traffic associated with the Project.

NV18: The NVIA must be amended to assess the exposure to traffic noise of residential properties exposed to Dobroyd Road between Crane Street and Hawthorne Parade.

8.5 Air Quality

8.5.1 Response to SEARs

The Air Quality Impact Assessment (AQIA) submitted with the EIS has been reviewed by Katestone Environmental (see Appendix 6) who has concluded that the AQIA does not comply with the SEARs as follows:

- Construction emissions and impacts are dealt with generically through a qualitative risk assessment with the underlying assumption that impacts are manageable such that the residual effect will be “not significant”. A more specific assessment is required;
- Not all air pollutants that are likely to be emitted from the Project have been considered (see Section 0);
- Only one “expected traffic scenario” has been considered for surface roads and this may not be representative of worst-case scenarios which may entail much greater traffic volumes on Parramatta Road and/or delays in the provision of the M4-M5 Link;
- The dispersion modelling has not assessed potential impacts on elevated receptors (i.e. above ground level);
- No predictions have been made in regard to air quality due to the ventilation outlets in isolation – rather the model is predicated on averages across a much wider area;

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- No detailed information is provided regarding ventilation operations during emergencies;
- No detailed information is provided regarding proposed mitigation measures to prevent the generation and emission of dust and air pollutants during construction – only generic information is provided with further detail deferred to “Dust Management Plans” that have not yet been prepared.

AQ1: *The AQIA must be amended in respect of the following matters and the EIS re-exhibited to allow public scrutiny and comment:*

- ***A specific assessment of construction emissions and impacts is required;***
- ***Worst-case scenarios entailing much greater traffic volumes on Parramatta Road and/or delays in the provision of the M4-M5 Link are to be assessed;***
- ***The dispersion modelling is to assess potential impacts on elevated receptors;***
- ***Air quality predictions for the ventilation outlets in isolation are required;***
- ***Detailed information regarding ventilation operations during emergencies is required;***
- ***Detailed information regarding proposed mitigation measures to prevent the generation and emission of dust and air pollutants during construction is required.***

Furthermore, the AQIA is dismissive of matters raised by Council in its response to the SEARs as follows:

- No detailed proposals for vehicle emissions filtering has been provided in the AQIA with the AQIA stating:
 - in regard to particulate filtration - that “...*the provision of a tunnel filtration system does not represent a feasible and reasonable mitigation measure and is not being proposed*”; and
 - in regard to denitrification (i.e. removal of oxides of nitrogen) - that “...*the technology around tunnel air filtering systems for nitrogen dioxide is relatively new and any benefit has yet to be sufficiently measured.*”

AQ2: *The AQIA must be amended to provide a more detailed assessment in respect of particulate filtration and denitrification including details of the predicted air quality levels with and without such devices.*

8.5.2 Construction

The AQIA states that “...A Construction Air Quality Management Plan will be produced to cover all construction phases of the M4 East project.” Council is of the opinion that more detailed assessment of the construction impacts should be completed at the EIS stage, however, if this is not to be the case, Council requests the following:

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AQ3: *A detailed quantitative air quality assessment of dust impacts from construction should be included in each Construction Air Quality Management Plan including requirements to conduct compliance monitoring for dust at nearest sensitive receptors. Ashfield Council must be provided with the opportunity to review and comment on any Construction Air Quality Management Plans.*

8.5.3 Operation

There is a lack of information in the AQIA regarding monitoring (both ambient and in-tunnel) during the operation of the M4 East Project with no commitment to continuation of the five ambient air quality monitoring stations proposed as part of the Project, nor whether these monitoring locations best represent worst case impacts from the Project.

AQ4: *The AQIA should be amended to provide recommendations for ambient air quality monitoring. The ambient monitoring should be conducted in accordance with the Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales (DEC, 2007) and concentrations assessed against the criteria stated in the Approved Methods for the modelling and Assessment of Air Pollutants in New South Wales (DEC, 2005) and the National Environment Protection (Ambient Air Quality) Measure and any relevant conditions of approval.*

Monitoring should also be conducted within the ventilation outlet. The sampling point will need to be designed and located in accordance with the Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales (DEC, 2007). The pollutants to be monitored should be as per Table 8-21 of the AQIA and assessed against the concentrations limits specified within Table 8-21. Exit velocity and temperature should also be monitored.

AQ5: *An air quality monitoring scheme be put in place to monitor air quality impacts arising from the project on an ongoing basis with regular reports to be publicly available and accessible on a dedicated website.*

AQ6: *That long-term continuous air quality improvement measures be implemented post project implementation.*

8.6 Human Health

8.6.1 Response to SEARs and Methodological Issues

The Human Health Risk Assessment (HHRA) that accompanies the EIS has been reviewed by ToxConsult (see **Attachment 7**). That review highlights that although the SEARs requires an assessment as to “*how the design of the proposal minimises adverse health impacts*” the HHRA and EIS do not adequately respond to this requirement as follows:

- The HHRA does not adequately assess how the design of the Project (e.g. relative to other design options) minimises adverse health impacts;

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- Whilst the HHRA identifies where mitigation measures will be required, there is no specific reference to how the design, or as yet unconfirmed mitigation measures, minimises adverse health impacts; and
- The HHRA is contradictory in that it indicates that the chosen in-tunnel air quality criteria for NO₂ may be exceeded and as a result, asthmatics who use the tunnel may be at an increased risk of experiencing adverse health effects, but then notes that the ventilation system of the tunnel has been designed so in-tunnel air quality will not exceed these criteria. Therefore, an objective assessment as to how the design of the Project minimises adverse health impacts cannot be undertaken.

HH1: *The HHRA must be amended in respect of the following matters and the EIS re-exhibited to allow public scrutiny and comment:*

- ***A more detailed assessment is required in respect of how the Project (e.g. relative to other design options) minimises adverse health impacts;***
- ***Detailed information is required demonstrating how the design, or specific mitigation measures will minimise adverse health impacts; and***
- ***Clarification is required as to whether the Project will exceed the NO₂ criteria and if so, details provided of specific mitigation measures to ensure that there is no increased risk of human health impacts.***
- ***Internal in tunnel air quality modelling be redone to include other exposure scenarios and assessment of alternative solutions to reduce pollutant concentrations.***

Given the recent revelation of vehicle manufacturers to significantly (perhaps by as much as 50%) understate pollutant emissions, it is questionable 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.

HH2: *The EIS, including the AQIA and HHRA must be amended to include sensitivity testing to account for recent admissions of vehicle manufacturers that pollutant emissions from vehicles is understated.*

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 and such a screening compliance assessment does not necessarily evaluate the actual risks or impacts to health, nor is it necessarily sufficient or appropriate for a project of this scale. In particular, the following concerns are raised:

- The HHRA does not include any justification for the guidelines chosen and this is not an unreasonable requirement for a project of this scale. The HHRA should include 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 averaging times of the guideline may not be pertinent for assessing short term health impacts associated for some pollutants, particularly for the assessment of eye and respiratory tract irritation. Even though irritation may be relatively mild,

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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) and in such a situation, the effect should be considered adverse;

- The HHRA does not include an evaluation for odour impacts. Repeated, unwanted odour can have significant bearing on the amenity of communities and can include such non-specific symptoms such as headache, mental fatigue, stress and perceived irritation.

Although a brief compliance assessment for odour was included in the AQIA, the assessment was conducted using 1-hour average concentrations for only three individual pollutants and this assessment is deficient in that biologically relevant exposure concentrations (brief exposures to peak concentrations) of mixtures of air pollutants was not considered.

- The HHRA does not consider elicitation of an asthma response which does not necessarily require a visit to a hospital emergency department. Whilst the HHRA acknowledges that a wide range of other health effects and health measures have been associated with PM exposure, the available baseline data does not include information for many of these health effects which means it is not possible to undertake a quantitative assessment.

HH3: The HHRA must be amended in respect of the following matters and the EIS re-exhibited to allow public scrutiny and comment:

- ***A scholarly justification is to be provided for the selection of the guidelines used (including justification for choosing one guideline over another) with regards to what health effects are associated with a substance and how the guidelines are protective of acute and chronic health effects;***
- ***The risk of sensory irritation is to be assessed for all relevant compounds and as a mixture;***
- ***Odour impacts are to be assessed for the mixture of relevant compounds; and***
- ***The assessment for PM should include effects other than hospitalisation prevalence and mortality for shorter term exposures.***

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, only two carbonyls (acetaldehyde and formaldehyde) are included and the wear release of compounds entrained within tyres and brake pads that become resuspended in air and emitted from the tunnel stacks has not been assessed.

HH4: The HHRA must be amended to include a robust rationale for the choice of air quality guidelines and the chemicals included in the HHRA. Furthermore, the list of chemicals assessed must be expanded to include metals and other vehicle wear-related substances.

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The HHRA does not consider the potentially different exposure profile for people who may be living above ground in medium and high-rise apartments, with the air quality modelling projecting only ground level concentrations. This is particularly important given the current and future development of the area includes increasing numbers of people inhabiting apartment buildings.

HH5: *The HHRA must be amended to consider the exposure and resulting risk profile for individuals inhabiting above-ground level apartment buildings.*

The HHRA presents the assessment of increased or decreased number of cases by suburb related to the population weighted change in modelled air concentration. The reasons for this aggregation is unclear as the HHRA indicates that Haberfield is one of most impacted suburbs but it has not been separately assessed – this may be obscuring the potential health impact to the Ashfield LGA as a whole.

HH6: *The HHRA must be amended to assess the human health impacts on the suburbs of Haberfield, Ashfield and Croydon specifically.*

8.6.2 Construction

The HHRA does not include a quantitative assessment of construction scenarios and lay-down areas and hence there is no detail as to how construction practices will ensure a negligible health effect on nearby residents from potential dust impacts. For example drilling and grinding sandstone or other hard rock creates small biologically active silica particulates which have carcinogenic potential and public exposure to these particulates has not been considered in the HHRA. Whilst it is preferable to have detailed information in this regard at the EIS stage, this matter could be addressed by conditions of approval and through a detailed Construction Environment Management Plan.

HH7: *A Condition of Approval must be imposed requiring the CEMP to include the following to assist in minimising public exposure to dust from construction activities:*

- ***Regular monitoring of respirable crystalline silica and adherence at the construction boundary to the Victorian ambient air standard (VIC EPA 2007) of 3 µg/m³ as PM_{2.5};***
- ***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%.***

8.6.3 Operation

The EIS does not assess the impacts on air quality (and resulting health impacts) with the inclusion of filtration, or other pollutant reduction measures, in the tunnel exhaust stacks and consequently the potential benefit to human health of including filtration has not been objectively assessed. In addition to providing potential physical/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.

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Accordingly, omission of in-stack pollution reduction measures is not consistent with the policy objectives of the *Protection of the Environment Operations Act 1997*. 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 to omit evaluating of pollution abatement equipment.

HH8: *The EIS, including the AQIA and HHRA must be amended to objectively assess the inclusion of pollution abatement equipment in tunnel exhaust stacks.*

8.7 Social and Economic

A review of Social and Economic impacts of the proposal has been undertaken by Council officers (see **Attachment 8**) and the following paragraphs summarise that assessment.

Ashfield LGA is a culturally diverse LGA, with over 44% of the population who speak a non-English language as compared to 32% of the population across Greater Sydney (2011 census).

The EIS and the consultation methodology for the Project is inadequate as it does not recognise this cultural diversity and does not include translations of the exhibition material in key languages to afford those with poor or no English speaking capabilities to respond to the public exhibition.

SE1: *The Proponent shall produce a summary of the EIS translated into Mandarin, Italian and Greek at a minimum. These translations shall be re-exhibited and community members given the opportunity to provide comment.*

The EIS assessment of the social impacts of the Project relating to *Specific impacts to social infrastructure, Access and connectivity* and *Changes in amenity* have been deemed to be mainly short-term impacts which demonstrates a lack of understanding of the unique nature and community connection to Ashfield's unique LGA where the community come together to connect and support each other.

The Project will change the “face” of the area permanently due to the impact from:

- The loss of local connectivity, as this will be severely compromised in the Haberfield and Ashfield areas;
- Traffic access to areas will dramatically impact on local residents, schools, childcare and aged care facilities;
- Pedestrian access between Ashfield and Haberfield will be greatly reduced in terms of ease of access, directness and safety, effecting residents access to essential services such as but not limited to:
 - Ashfield Train Station;
 - Medicare Local;
 - Haberfield Public School;

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- Ashfield Boys High School;
- De La Salle College;
- The Infants Home;
- Ella Community Centre; and
- More than eight child care centres and after-school hours care centres;
- Amenity impacts in area such as access to parks, community centres, public transport and access to businesses and schools;
- 24 Hours works - Noise, vibration, air quality;
- Visual amenity;
- Property impacts;
- Urban design, landscape character of area impacted.

SE2: *If the Project is approved a condition of approval must be imposed requiring:*

- ***The Proponent to engage a Public Art Consultant in the early planning phase to develop a robust and meaningful Public Art strategy during and post construction that engages community and reflects Ashfield and compliments Council's art policy. The consultant's outcomes shall to include:***
 - ***a detailed rolling strategy based on consultation;***
 - ***a realistic budget of at least \$500,000 which covers:***
 - ^ ***a Public Art expert to implement the plan;***
 - ^ ***payment for artists;***
 - ^ ***community development strategies if applicable;***
 - ^ ***materials, installation and ongoing maintenance;***
 - ^ ***marketing campaign; and***
 - ^ ***maintenance.***

Ashfield Council and other local key stakeholders are to provide comment on the Public Art consultant brief before it goes to tender and provide advice on where to promote, and who to target.

- ***Dedicated places/zones for new public art to be installed in and around the Project precinct;***
- ***The Proponent must provide Ashfield Council with new recreation equipment to make up for the reduction in access to open public spaces;***

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- ***The Proponent must rehabilitate land acquired for construction only to be appropriate community spaces such as suitable open space/parkland or indoor sports centre or youth centre/space;***
- ***The Proponent must provide \$250,000 to Ashfield Council over five years to support Carnival of Cultures in Ashfield Park, to support community cohesion and development activities.***

The EIS indicates that local residents, business owners and bus passengers would be advised of planned construction activities and changes to bus stop locations during construction although there is no indication that such information will be made available in languages other than English. Ashfield LGA has a high number of Chinese and Italian residents whose first language is not English and accordingly, the Proponent should provide notices and other media regarding disruptions during construction in multiple languages.

SE3: ***If the Project is approved a condition of approval must be imposed requiring the Proponent to prepare notices (in minimum 14 font for visually impaired persons) and signage regarding disruptions to road, pedestrian, bicycle and public transport arrangements in multiple languages including English, Chinese and Italian at a minimum.***

The Project construction will entail a number of pedestrian diversions and establishment of alternate cycle routes. With the increase of traffic congestion due to the Project and with a high number of vulnerable groups in the area, additional measures to those stated in the EIS are required.

SE4: ***If the Project is approved a condition of approval must be imposed requiring:***

- ***road safety officers to direct traffic around the Project works;***
- ***dedicated pedestrian and cyclist access routes that provide both accessible and safe connections for the residential communities on either side of the construction project;***
- ***Increased green space in the Ashfield LGA in proximity to the Project footprint, with the following being suitable locations:***
 - ^ Parramatta Road, at Ashfield Park, Wattle Street intersection, Bland Street;***
 - ^ Wattle St, at Ramsey St, Reg Coady Reserve; and***
 - ^ Dobroyd Parade, at Timbrell Drive.***

The EIS assumes that local businesses in Ashfield LGA would benefit from the project expenditure through purchases made by construction workers, however, this does not taken into account that Ashfield LGA's economy is mainly driven by its multicultural community, local eat-streets and retailers who are mainly small to medium size businesses or that the location of Project works does not lend itself to ease of access to these local businesses.

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SE5: *If the Project is approved a condition of approval must be imposed requiring:*

- *Erect signs directing workers to local business areas around the Project including Haberfield Village;*
- *Undertake an assessment to measure the impact on employment within the Ashfield LGA, including the project net change in the number of people employed in businesses and the net change in turnover (\$) generated by local businesses.*

A number of local businesses have or will soon be lost due to land acquired for the Project – particularly on Parramatta Road. The EIS assumes that these acquired businesses serve a wider catchment area and their loss will therefore not significantly disadvantage the local community. However, this has not taken into account that such commercial activity provides a flow on effect to other businesses in the vicinity of their operations. This is particularly relevant to the viability of the Haberfield Village which will be impacted by loss of these business operations and compounded with that fact that the Haberfield Village and surrounding businesses will be impacted by down turn in passing vehicular and foot traffic due to disruption caused by the Project.

SE6: *If the Project is approved a condition of approval must be imposed requiring the Proponent to:*

- *commit \$500,000 to support upgrades to Haberfield town centre to revitalise business areas post-construction;*
- *implement a new marketing campaign promoting Haberfield and surrounding businesses;*
- *provide a help line for businesses to access with any concerns;*
- *conduct quarterly marketing/information campaigns during construction in local newspapers - Inner West Courier, CIAO and The Vision China Times - that promote “business as usual” in Ashfield LGA to showcase its villages as places to do business;*
- *Commit \$50,000 over five years to support Feast of Flavours events in Haberfield, Ashfield and Summer Hill to support renewed economic development during and post-construction.*

Furthermore:

SE7: *The NSW State Government should Increase support/visitation from NSW Small Business Commissioner to Ashfield area and include Ashfield, Haberfield and Summer Hill villages in Tourism NSW campaigns for at least five years from the commencement of construction.*

SE8: *If the Project is approved, a condition must be imposed which requires the project proponent to commission a way finding study to examine opportunities to upgrade existing signage, particularly post the operational phase of the project, to direct people to new amenities and facilities and access arrangements. The way finding study recommendations are to be*

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implemented by the project proponent prior to the commissioning of the new road works.

8.8 Urban Design and Visual Amenity

8.8.1 General and Response to SEARs

A review of Urban Design and Visual Amenity impacts of the proposal has been undertaken by Council Officers (see **Attachment 9**) and the following paragraphs summarise that assessment.

Notwithstanding the lack of detail in the EIS, it is evident that the Project will result in a major intervention or ‘cut out’ of the western heart of the historic garden suburb of Haberfield at Wattle Street. This ‘cut out’ will be approximately 780 metres long and approximately 53 metres at its widest point and the EIS concludes this is indeed a ‘high impact’ and does not fit in with the existing historic character of the area. In addition, the Parramatta Road interchange area will result in a large ‘cut out’ being approximately 500 metres long and approximately 60 metres at its widest point. The EIS suggests that the key ‘tool’ to mitigating the significant visual impacts of these interventions is to provide tree planting.

However, as discussed within this report, a far more effective solution would be to at least relocate the Wattle Street portal further east toward Lilyfield where the infrastructure of the City West Link already dominates the urban character and the visual amenity impacts would be far less.

UDAV1: The Project should be amended to relocate the Wattle Street interchange to the City West link at Lilyfield.

The EIS provides only schematic plans of the Project which show the general locations of the parts of the Project infrastructure but do not contain very much detail and accordingly, it is very difficult to ascertain the full impact that the Project will have in terms of urban design and visual amenity. The EIS contains only one major ‘birds eye’ view/aerial artist impression rendering of the Wattle Street portal interchange and likewise for the Parramatta Road interchange. Both these views use trees to mask the complete width of the motorway and disguise its hard edge spatial severity.

In most other planning processes (e.g. a Development Application), this absence of detail would not be acceptable and Council Officers are of the opinion that for such a large Project with substantial adverse impacts on the Ashfield LGA, it is not unreasonable that this detail, which might include computer simulated ‘fly-throughs’, be provided as part of the EIS and indeed, it was required by the SEARs.

UDAV2: The EIS must be amended to provide greater detail with respect to the urban design, materials, finishes and landscaping of the portal interchanges including 3-D computer simulations from various vantage points in the public and private domains.

The design, materials and landscaping must give regard to and respect the unique streetscape and built form of the Haberfield ‘Garden Suburb’.

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The EIS does not adequately respond to the SEARs and specifically the requirement the “*Identification and evaluation of the visual impacts and urban design aspects of the project (and its components) on surrounding area*”. There should have been many more location ‘receivers’ reviewed as, for example, the eastern ventilation facility stacks building is 25 metres high (equivalent to 8 storeys) and will have a long distance impact that has not been adequately considered and has had little regard to the intrinsic ‘Garden Suburb’ character qualities of Haberfield.

UDAV3: The EIS must be amended to include additional visual impact analysis of the Project infrastructure from greater location ‘receivers’ in and around Haberfield and Ashfield.

The Project gives little regard to impact of the Wattle Street interchange on the houses on the western side of Wattle Street. Whilst the impact of the existing traffic arrangement is less than ideal, the Project will worsen these impacts in a number of ways, not least of which is in respect of the outlook from these properties and the context within which they are viewed (i.e. the Haberfield Heritage Conservation Area).

UDAV4: The Project should be amended to have a much wider verge (footpath) of around 6 metres to properties on the western side of Wattle Street to maximise the separation buffer between houses and the roadway.

Given the historic context of Haberfield area, the Ramsay Street crossing verge areas (footpaths) across Wattle Street should be much wider and take a ‘fit out’ that acknowledges the verges are within a historic area and one of the visual gateways into the Haberfield Town Centre.

The area at the Wattle Street and Ramsay Street crossing will be hard edged, hard paved, narrow and therefore pedestrian unfriendly and dominated by traffic movements. Its significant width of approximately 65 metres will also result in long pedestrian crossing times.

In addition, the area around the south side of Wattle Street adjacent to Parramatta Road will thematically be the entry into the ‘Garden Suburb’ and this area should therefore require special thematic treatments, which can easily be located in positions with no detrimental impacts on the actual roadway design.

UDAV5: The Project should be amended to provide at least a 6 metre wide verge on the northern side of the Ramsay Street crossing of Wattle Street. This crossing should be provided with special treatments to the pavements and to the balustrade fencing, space for separate bicycle paths, thematic public artwork and regular rhythmic planting disguising the major roadways vista to the north. The southern verge should mirror these types of treatment a verge area comprising special treatments to the pavements and with thematic public artwork.

The intersection of Wattle Street and Parramatta Road should include special thematic treatments to recognise the southern entry into the Haberfield ‘Garden Suburb’.

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Similarly, a wider verge (footpath) area should be provided along the frontage of Yasmar on Parramatta Road and conceptually/thematically this widened verge would be respectful of the front garden grounds of the only major middle 1800s historic residence remaining on this part of Parramatta Road. It should also provide extra width capacity for pedestrian movement (including school children) in the event the grounds for Yasmar were opened up to the community.

UDAV6: The Project should be amended to provide a wider verge (footpath) area along the frontage of Yasmar on Parramatta Road and conceptually/thematically this widened verge should be respectful of the front garden grounds of this State Heritage item.

The Parramatta Road portal interchange between Bland Street and Ashfield Park is approximately 500m long with the north and south sides of Parramatta Road clearly being significantly separated from each other in this location. Approximately 250 metres along the south side will contain no buildings and so no street/road activation for pedestrian surveillance. In addition, there will be no safe means of pedestrian crossing for approximately 655 metres between Dalhousie Street and Bland Street. Accordingly, a pedestrian bridge should be constructed in this zone to contribute to north-south connectivity. This could potentially be placed on or adjacent to residual land at 162 Parramatta Road and span across the road to be near the Presbyterian Aged Care home at 169 Parramatta Road. If such a bridge was not technically feasible, as a minimum substantial public art should be installed along this part of the road.

UDAV7: The Project should be amended to include a pedestrian bridge over Parramatta Road between 162 Parramatta Road and near 169 Parramatta Road.

In order to improve pedestrian connectivity in the locality, which will be severely disrupted by the Project, the Project should include a north/south pedestrian pathway link across Parramatta Road at Dobroyd Canal).

UDAV8: The Project should be amended to provide for a pedestrian link across Parramatta Road at Dobroyd Canal.

Council Officers consider that there are around 25 places in local streets where 'urban design street improvements' or local area traffic management (LATM) treatments could be provided to protect and continue a 'sense of place' for residents and help to ameliorate against the motorway impacts. This would benefit both affected areas to the north and south side of Parramatta Road and might consist of raised road thresholds thereby slowing traffic, parking lanes being fully or partially replaced and planted out by trees, bushes and ground cover vegetation. The cost of these works should be borne by the Proponent.

UDAV9: The Project should be amended to include, in consultation with Ashfield Council, 'urban design street improvements' or local area traffic management treatments in local streets surrounding the Project footprint. The cost of these works shall be borne by the Proponent.

The SEARs require the EIS to include "Measures to manage lighting impacts both during construction and operation" however, no expert lighting engineering analysis has been undertaken in the EIS. This is unacceptable as there is potential for significant light-spill

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effects during both construction and operational stages of the Project with the former being intensive with 24 hour construction operations and the latter being permanent.

UDAV10: The EIS must be amended to include a detailed lighting assessment of the Project for both construction and operational stages.

The corner of Parramatta Road and Wattle Street will contain a large site with several visually prominent buildings, including the very tall 25 metre high ventilation exhaust stacks which will have long distance visual impacts. The precise aesthetic composition of those buildings needs to be carefully resolved in a way that notes and acknowledges the Haberfield context and is not blandly modularly simplistic. There are standard compositional canons that one would normally make use of, together with some creative interpretative imagination.

The open space setting and landscape design of the site should have high design standards (e.g. there should not be cyclone wire mesh security fencing) not least because of the significant number of adjacent residential properties in Walker Avenue. Similarly, noise walls adjacent to residences shall be constructed and use materials in a way which is sympathetic to the character of those places and which ensures that the components of those walls achieve adequate privacy whilst retaining solar access.

UDAV11: If the Project is approved, a condition of approval must be imposed requiring that the Proponent convene an urban design advisory committee including representatives from Council and the local community, to advise on the urban design and landscaping components of the eastern ventilation site, the portal interchanges, noise walls and other key built elements of the Project.

The proposed works include the installation of various new pieces of street furniture. Strong opposition is raised to the installation of variable message signs (VMSs) on the surface of Parramatta Road and/or Wattle Street/Dobroyd Parade on the approach to the new M4 tunnels. Notwithstanding that these are busy roads, VMSs are large pieces of infrastructure which are entirely out of keeping with the scale and function of these streetscapes and the surrounding heritage conservation area.

UDAV12 If the Project is approved a condition of approval must be imposed requiring that no variable message signs are to be installed on Parramatta Road, Dobroyd Parade, Wattle Street or any other road in Haberfield or Ashfield

8.9 Biodiversity

A review of Biodiversity impacts of the proposal has been undertaken by Council officers (see **Attachment 10**) and the following paragraphs summarise that assessment.

The EIS indicates that vegetation clearance associated with the Project will result in minimal habitat fragmentation, given the already fragmented state of habitat within the Project footprint and that opportunities for threatened species are currently reduced or restricted in the area, therefore the loss of habitat and foraging areas will not impact significantly on these species.

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However, the Project will result in removal of approximately 1 hectare of native vegetation along Dobroyd Parade, including mature eucalypts (*Eucalyptus robusta*) and well established understorey plantings. The EIS does not recommend any biodiversity offset for this loss.

Council Officers disagree with this assessment as the areas of vegetation to be removed, whilst small, are vital and important habitat links in an area with restricted habitat connectivity. The significance of these niche habitat areas increases when they are located where opportunities for native fauna have been significantly reduced through urbanisation. Evidence of the importance of these links is given in the GreenWay Biodiversity Strategy (2012) which identifies 'Islands of Habitat' within the urban landscape as biolinks which provide opportunities for fauna species to exist, move, forage, breed and shelter where habitats are fragmented and discontinuous. These 'bio-links' support functional ecological communities in restricted areas and are more realistic and achievable than creating corridors in an urban settings. Additionally, the importance of these habitat areas is recognised in the recently completed *Parramatta River Native Habitats and Fauna Report 2014* which identifies the native vegetation along Dobroyd Parade within the project footprint as areas of:

- Landscape Corridor – with potential for a linear corridor
- Potential Stepping Stone Habitat – Street Planting Community Involvement

BIO1: *The EIS must be amended to have greater regard to the impacts on habitat connectivity as highlighted in the Parramatta River Native Habitats and Fauna Report 2014, as a consequence of the vegetation clearance at Reg Coady Reserve, Haberfield and along Dobroyd Parade, from Martin Street to Loudon Street in Haberfield.*

BIO2: *The EIS must be amended to include biodiversity offsets to mitigate the losses to biodiversity and increased fragmentation of habitats as a result of the Project.*

Whilst the EIS Field surveys could not record details of microbat movements, an Eastern Bentwing-bat (*Miniopterus schreibersii*) roost site is known to occur within 1.6km of the Project area in Summer Hill.

The EIS indicates that 15.7 hectares of potential foraging area for Eastern Bentwing-bats will be removed as a result of the M4 East Project and that roosting habitats will be temporarily disrupted.

Accordingly, the loss of vegetation associated with the Project within the Ashfield LGA particularly is likely to have an adverse impact on this threatened species by virtue of loss of foraging opportunities and construction noise and vibration.

BIO3: *The EIS must be amended to include further field surveys for and assessment of the potential impacts on the Threatened Eastern Bent-wing bat which is known to roost in close proximity to the Project foot print.*

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Council Officers are also concerned that the management measures relating to biodiversity that are recommended in the EIS will be left to the construction contractor to implement with no oversight. Accordingly, it is recommended that:

BIO4: *The Proponent/Contractor must consult with Ashfield Council in respect of the environment management measures - biodiversity listed in Table 20.6 of the EIS prior to works commencing, to ensure that adequate protection for biodiversity is provided during construction and that sufficient mitigation/ revegetation measures are undertaken prior to completion of the Project.*

8.10 Flooding and Drainage

8.10.1 General and Response to SEARs

A review of Flooding and Drainage impacts of the proposal has been undertaken by Council officers (see **Attachment 11**) and the following paragraphs summarise that assessment.

In general, the assessment of flooding and any necessary stormwater upgrades and improvements has not been addressed adequately within the EIS. Much of the EIS states that further detailed investigations will need to be undertaken during detailed design and construction planning and accordingly, it will be necessary for Council to review and sign-off on the detailed designs in order to provide further comment on the impacts of the project on existing flood regimes, including impacts to existing receivers and infrastructure and the future development potential of affected land.

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. Council does not support this proposed siphonic system and opposes any arrangement that results in increased potential flooding to downstream land. Furthermore, Council will not accept any additional impact and/or volume of water into its stormwater pit and pipe network.

The EIS indicates that construction activities have the potential to exacerbate flooding conditions in adjacent development at a number of locations along the Project corridor with all 10 construction facilities having potential to affect local catchment runoff such that local stormwater management controls would need be implemented to manage these impacts. However, the EIS does not contain any details of these stormwater management controls. Strong opposition would be raised if this proposed arrangement results in increased potential flooding to downstream land and Council will not accept any additional impact and/or volume of water into its stormwater pit and pipe network.

Accordingly, Council Officers make the following recommendations in respect of Flooding and Drainage:

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FD1: *If the Project is approved, a condition of approval must be imposed requiring a flood management strategy (FMS) to be prepared to manage flooding and stormwater related issues and will include:*

- *The layout of construction ancillary facilities*
- *Location of amenities buildings and equipment outside high flood hazard areas*
- *Controlled diversion of overland flow either through or around work areas*
- *Staging construction to limit the extent and duration of temporary works on the floodplain*
- *Monitoring weather conditions*
- *Ensuring construction equipment and materials are removed from floodplain areas at the completion of each work activity, or upon issuing of a weather warning of impending flood producing rain*
- *Provision of temporary flood protection for properties identified as being at risk of adverse flood impacts during any stage of construction of the project*
- *Development of flood emergency response procedures to remove temporary works during periods of heavy rainfall and staff evacuation plans.*
- *For site facilities located within the floodplain, the FMS will identify how risks to personal safety and damage to construction facilities will be managed.*

The sites must be established and amenities located so as to prevent any possible flooding hazard and to eliminate any possible risk.

Stockpiles must be suitably located so that they do not obstruct flow paths which will cause adverse flooding affects to neighbouring properties and allow material to be washed into drainage lines and receiving waters. If this is not possible, suitable measures need to be implemented so as to avoid any possible risk of material being washed into receiving drainage lines and waterways and to protect any neighbouring property that will be affected.

The FMS shall be peer-reviewed and confirmed as meeting the requirements of this condition by a suitably qualified and experienced independent hydrological engineer and Council.

FD2: *If the Project is approved, a condition of approval must be imposed requiring a barrier wall along the eastern side of the tunnel dive structure to direct overland flow around the tunnel entry during a PMF event. The top of the barrier wall will be located a minimum 0.5 m above the 100 year ARI flood level.*

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An investigation is to be undertaken into the impact on the surrounding localised catchment. Appropriate mitigation measures are to be implemented such that there is no additional flooding to adjacent land and a maximum increase of 10mm on Parramatta Road.

The investigation and design shall be peer-reviewed and confirmed as meeting the requirements of this condition by a suitably qualified and experienced independent hydrological engineer and Council.

FD3: *If the Project is approved, a condition of approval must be imposed requiring diversion of stormwater drainage line XD09c and the overland flow path at Chandos Street to be designed to contain flows within the project footprint, preventing an increase in the extent of inundation within the adjacent commercial property.*

Refinement of the pit and pipe drainage system design will be undertaken to prevent an increases in flows and flood levels along Parramatta Road and Bland Street.

That any modifications to the drainage line are to be in form of a conventional stormwater drainage system and it is not to be a siphonic arrangement.

An investigation is to be undertaken into the impact on the surrounding localised catchment. Appropriate mitigation measures are to be implemented such that there is no additional flooding to adjacent land and a maximum increase of 10mm on Parramatta Road, Chandos Street and Bland Street.

The investigation and design shall be peer-reviewed and confirmed as meeting the requirements of this condition by a suitably qualified and experienced independent hydrological engineer and Council.

FD4: *If the Project is approved, a condition of approval must be imposed requiring road level and barriers at the entry to the tunnel portals to prevent ingress of floodwaters during a PMF event, providing a freeboard allowance greater than 0.5 metres freeboard to the peak 100 year ARI flood level.*

A drainage path will be provided to drain local catchment runoff from Allum Street around the tunnel dive structure during a PMF event.

An investigation is to be undertaken into the impact on the surrounding localised catchment. Appropriate mitigation measures are to be implemented such that there is no additional flooding to adjacent land and a maximum increase of 10mm on Wattle Street or Allum Street.

The investigation and design shall be peer-reviewed and confirmed as meeting the requirements of this condition by a suitably qualified and experienced independent hydrological engineer and Council.

FD5: *If the Project is approved, a condition of approval must be imposed requiring measures to be implemented and maintained to intercept concentrated flow and divert it in a controlled manner to prevent scour of*

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disturbed surfaces and transportation of sediment and construction materials.

Surface earthworks are required to be suitably protected from any possible scouring in the event of a storm, so as to prevent the transport of any sediment and construction materials to receiving waters.

The investigation and design shall be peer-reviewed and confirmed as meeting the requirements of this condition by a suitably qualified and experienced independent hydrological engineer and Council.

FD6: *If the Project is approved, a condition of approval must be imposed requiring bunding to be provided to direct overland flow along the haul road and around the Sydney Water pump station.*

An investigation is to be undertaken into the impact on the surrounding localised catchment. Appropriate mitigation measures are to be implemented such that there is no additional flooding to adjacent land and a maximum increase of 10mm on Wattle Street.

FD7: *If the Project is approved, a condition of approval must be imposed requiring the flood standard adopted at each tunnel entry during construction to take account of the duration of construction, the magnitude of inflows and the potential risks to personal safety and the project works.*

A Risk Management Plan must be developed that addresses floods in excess of the flood protection levels so as not to pose any safety risk to road users and operations staff.

FD8: *If the Project is approved, a condition of approval must be imposed requiring all surface water flows from construction sites to be detained through appropriate measures to ensure that there is no exacerbation of existing flooding to the satisfaction of Ashfield Council. Agreement must be reached with Ashfield Council on appropriate and specific measures to be implemented at various locations.*

FD9: *If the Project is approved, a condition of approval must be imposed requiring a detailed Operational Stormwater Management Sub Plan to be prepared in consultation with Ashfield Council. The Sub Plan shall provide details on flood risks, catchment analysis including localised flooding, local drainage catchment assessments, existing drainage systems and capacity, drainage changes resulting from the proposal and implications for the system. The Proponent must fund any additional stormwater drainage systems required as a result of the project, including any detention requirements. The design must take into consideration climate change implications on rainfall and drainage characteristics and blockages of waterway structures from floating debris. The new proposed drainage systems shall be designed to ensure there is no substantial increase in downstream flooding (inundation level or duration) or increase in total volumes to existing drainage systems. The new proposed drainage systems must ensure that flood hazards and risks are eliminated. The design shall meet the following criteria:*

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- *A maximum increase in inundation time of one hour in a 1 in 100 year ARI rainfall event;*
- *A maximum increase of 10mm in inundation at properties where floor levels are currently exceeded in a 1 in 100 year ARI rainfall event; and/or provide alternative flood mitigation solutions consistent with the intent of these limits;*
- *A maximum increase of 10mm in overland flow paths on public roads; and/ or provide alternative flood mitigation solutions consistent with the intent of this limit;*
- *The identification of measures to be implemented to minimise scour and dissipate energy at locations where flood velocities are predicted to increase as a result of the project and cause localised soil erosion;*
- *Identification of drainage system upgrades;*
- *Alterations/augmentations to existing stormwater infrastructure;*
- *Substantial drainage improvements must be undertaken in the vicinity of the intersection of Chandos St and Parramatta Road, (both North and South) so that any storm event up to a 100 year ARI will not pose any risk or damage to life or property.*
- *Substantial drainage improvements must be undertaken in the vicinity of the intersection of Wattle Street/Allum Street and Ash Lane so that any storm event up to a 100 year ARI will not pose any risk or damage to life or property.*
- *Substantial drainage improvements must be undertaken within the vicinity of the intersection of Ramsay Street/City West Link and the intersection of Martin Street/City West Link and in the receiving stormwater pipe network of Martin Street so that any storm event up to a 100 year ARI will not pose any risk or damage to life or property.*
- *Identification of the timing of ongoing maintenance for the works.*

The Operational Stormwater Management Sub Plan shall be prepared by a suitably qualified and experienced person in consultation with directly affected landowners and Council. The Operational Stormwater Management Sub Plan shall be peer-reviewed and confirmed as meeting the requirements of this condition by a suitably qualified and experienced independent hydrological engineer and Council. All relevant infrastructure information shall be provided to the relevant Council and NSW State Emergency Service, to assist in the preparation of any new or necessary update(s) to the relevant plans and documents in relation to flooding.

FD10: *If the Project is approved, a condition of approval must be imposed prohibiting disposal of stormwater to Council's stormwater system without prior agreement from Ashfield Council. Any changes to Council stormwater, including increased volumes, shall be designed, constructed, operated and maintained to meet the requirements of Ashfield Council.*

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- FD11:** *If the Project is approved, a condition of approval must be imposed requiring all new and/or modified stormwater drainage and facilities, including gross pollutant traps and sedimentation basins, to be inspected regularly and maintained in a functional condition for the life of the project by the Proponent, with an emphasis on ensuring there are no system blockages and there is no additional flooding on adjacent land and roads.*
- FD12:** *If the Project is approved, a condition of approval must be imposed requiring any stormwater released into Council's stormwater network and/or Iron Cove to be equivalent or better quality. Stormwater treatment may be required, including ongoing maintenance.*
- FD13:** *If the Project is approved, a condition of approval must be imposed requiring appropriate modifications and upgrades to be made to the road levels and/ or stormwater network to manage flood risk on Dobroyd Parade. Any changes must be undertaken in consultation with the community and they will require the approval of Ashfield Council.*

8.11 Property, Land Use and Assets

8.11.1 General

A total of 182 residential properties have or will be acquired for the Project in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991* with a high number of residential properties to be acquired located in the Ashfield LGA, particularly in Haberfield.

Haberfield residents have been provided with little or no assistance in obtaining independent valuations or be empowered to negotiate a mutual agreement. Some residents have advised that offers are 20-50% below market values and accordingly, residents have been unable to purchase a similar property within the garden suburb or surrounding area. Neither the Proponent nor the NSW State Government has adequately considered or compensated residents for this displacement.

PLUA1: *The NSW Government be apprised that owners of property acquired for the Project should receive market value for that property and that many landowners are of the view that fair compensation has not been received. In addition, property owners should be given appropriate resources and time beyond the mandatory statutory requirements to finalise their response to acquisition notices to ensure that fair and reasonable compensation packages can be negotiated.*

PLUA2: *The NSW Government commission an independent party to undertake a review of compensation offered to those who believe they were not fairly compensated.*

The Project includes acquisition of a part of Reg Coady Reserve and Leasing of other parts of the park. Council has received a Property Acquisition Notice (PAN) in this respect and a separate report is being prepared for Council to consider compensation issues.

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8.11.2 Construction

A review of Council Land and Assets impacts of the proposal has been undertaken by Council officers (see **Attachment 12**) and the following paragraphs summarise that assessment.

As discussed herein, it is proposed to undertake partial closure of various local roads for use as construction sites although the Proponent has not sought Council's approval for use of these local roads and any damage caused will need to be repaired at the Proponent's expense.

PLUA3: A condition of approval must be imposed requiring that any damage caused to local roads must be repaired to Ashfield Council's specifications and to the satisfaction of Council, at the Proponent's expense.

Notwithstanding that the Project includes on/off-ramp portals on Wattle Street for WestConnex Stage 3, it is unclear what alignment the future Stage 3 tunnel works will take and how it is to be constructed. Accordingly, Council Officers are concerned that after enduring land acquisitions and disturbance over 3 years of 24-7 construction for Stage 1, further acquisitions and disturbance will ensue for Stage 3. Accordingly greater detail is required in this regard to ensure that future disturbance is minimised.

PLUA4: The EIS must be amended to include greater detail in regard to the alignment of and construction methodology for Stage 3 works with a view to minimising further disturbance to the residents and businesses of Ashfield and Haberfield.

It is proposed to construct a new access road to No. 98 Chandos Street, Ashfield as part of the project. The Proponent is to be advised that Council will not take responsibility for this new access road - this is a matter between RMS and the property's strata.

PLUA5: The Proponent is to be advised that Ashfield Council will not take responsibility for the new access road to No. 98 Chandos Street, Ashfield. The Proponent will be responsible for the ongoing renewal and maintenance of this road.

The Project includes removal of several large Fig trees within the reserve and will disrupt public pedestrian access and resident amenity in and around that reserve due to footpath closures and light-spill associated with construction works. The EIS does not contain any detailed plans for replacement of trees, maintenance of safe public access or protection of residential amenity. Council Officers recommend that, should the Project be supported, conditions of approval be imposed as follows:

PLUA6: A condition of approval must be imposed requiring that any Fig trees removed from Reg Coady Reserve for construction or associated site works, access and construction management are to be replaced on a 2 for 1 basis (that is 2 replacement trees for each 1 tree removed) from 1000 litre containers. Ashfield Council is to be consulted as to the suitability and quality of all completed tree planting and soft landscaping.

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PLUA7: A condition of approval must be imposed requiring that a Facility Management Plan is developed for each construction site. This plan must include:

- ***Details for safe public pedestrian access around the construction site.***
- ***Details of how it is intended to manage light spill from the construction sites onto residential properties, to minimise impact on resident amenity. Light spill as measured at adjacent residential properties must be no greater (brighter) than P5 as defined in AS1158.***

The Project includes a variety of new landscaping, including street trees. Whilst this is generally supported, any such plantings must be appropriate species and in accordance with Council's Street Tree Strategy.

PLUA8: A condition of approval must be imposed requiring that any new street trees must be appropriate species and in accordance with Ashfield Council's Street Tree Strategy to Council's satisfaction. In this regard, the following must be implemented:

- ***The plant species shall include a mixture of both locally indigenous and Australian native as well as exotic plant species;***
- ***The plant species will demonstrate an understanding of the requirements of the relevant Park Plans of Management, heritage issues, biodiversity, habitat creation opportunities, soil types (including acid sulphate soils), global warming (including related changes to soil hydrology) and the individual planting requirements due to the planting site microclimates;***
- ***Stormwater recycling is to be a permanent component for the long term irrigation of the tree planting and landscaped screen planting;***
- ***Ashfield Council is to be consulted with regard to the species and landscape design prior to its adoption;***
- ***All trees planted in the road easements, landscape buffers, and adjacent open space/ parkland are to be planted from containers having a minimum size of 45 litres;***
- ***All trees planted in turfed areas are to be mulched;***
- ***An Australian Qualification Framework Level 5 Consultant Arborist is to be responsible for the supervision and auditing of the protection and pruning of all retained trees and the supervision of all tree works associated with the nursery stock selection, tree transport to site, planting and establishment maintenance;***
- ***The Proponent and its contractors are to provide effective landscape establishment maintenance for a period of 18 months; and***
- ***Ashfield Council will not accept the long term landscape and tree maintenance for the WestConnex works.***

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8.11.3 Post-Construction

If the Project is approved, some land will consequentially need to be rezoned as it would then contain road or related infrastructure and no longer be capable of development for say residential or commercial purposes. Such a rezoning process will have to be instigated by Council to bring zonings into alignment with the new built environment.

PLUA9: If the Project is approved, the Proponent or the NSW State Government must provide funding to Ashfield Council to amend the Ashfield LEP to accord with the new infrastructure.

If the Project is approved, it will trigger a need to amend several Council DCPs and other related plans and policies such that they are consistent with the new road infrastructure and can provide more detailed guidance for future development on residue land. Council Officers are of the view that the Proponent or the NSW Government should provide funding for this task.

PLUA10: If the Project is approved, the Proponent or the NSW State Government must provide funding to Ashfield Council to amend relevant Ashfield DCPs, plans and policies to accord with the new infrastructure and to provide detailed controls for future development of residual land.

As discussed herein, the Project includes acquisition of land that will contain the Project infrastructure as well as acquisition of land that will be used for construction purposes only. This land will be residue land upon operation commencing. Council Officers have concerns that the Proponent or the NSW State Government will seek to rezone this land to provide for high density development that is incongruous with the surrounding built and natural environment, particularly the Haberfield HCA. Accordingly, the following is recommended:

PLUA11: That the NSW Government should not initiate any process that would change land use zoning, building heights or densities on residue acquired land associated with the Project.

PLUA12: A condition of Approval must be imposed requiring that all land that is acquired for the Project within the Ashfield LGA that is surplus to requirements for the Project infrastructure (i.e. residue land) be transferred to the ownership of Ashfield Council to be classified as Community Land and to be used for recreational and community purposes to assist in offsetting the significant adverse amenity impacts of the Project on the Ashfield Community.

8.12 Greenhouse Gas and Climate Change Risk and Adaptation

The EIS presents a detailed methodology and assessment on the estimated greenhouse gas emissions associated with the Project however, Council Officer make the following recommendations:

GGCC1: That the EIS be amended to extend the comparison of operational road use emissions with and without the Project to include other transport options (e.g. those outlined in Chapter 4.2) as this would provide a greater context and understanding of the potential emissions.

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GGCC2: *That the EIS be amended to include additional commentary on the comparison of car versus public transport emissions and how the NSW Long Term Transport Master Plan objective to grow the proportion of travel by sustainable modes such as public transport as noted in the policy setting section (21.2.1) is being adhered to.*

GGCC3: *If the Project is approved, a condition of approval must be imposed requiring that Scope 3 emissions (indirect) be minimised through appropriate enforcement by the Proponent of sustainable supply chain management, including but not limited to the purchase of low carbon materials and the application of emissions targets for contractors.*

GGCC4: *If the Project is approved, a condition of approval must be imposed requiring that the annual Sustainability report for the Project include the verification of the emissions profile for the Project as illustrated in Figure 21.2 of the EIS.*

The EIS presents a detailed account of how any climate change risk will be mitigated to protect the Project infrastructure but does not address any risks or adaptations required to the surrounding areas as a result of the Project. For example, removal of 12+ hectares of vegetation across the construction area will have significant impact on local heat island impacts, particularly around Ashfield/Haberfield where vegetation will be replaced with hard road surface. There is no discussion of how the proposed landscaping will offset these impacts.

Furthermore, the EIS does not provide commentary on the impact of the Project on climate change in a broader context. In this regard, the Project should not be viewed in isolation but considered in reference to Australia's commitment to emissions reduction and Ecologically Sustainable Development as outlined in the *Protection of the Environment Administration Act 1991* (NSW) and the *Environment Protection and Biodiversity Conservation Act 1999*.

GGCC5: *If the Project is approved, a condition of approval must be imposed requiring the detailed design to demonstrate how the adaptation/mitigation options outlined in Chapter 24 (Table 24.5) have been addressed and these details must be made publically available for comment.*

8.13 Miscellaneous

8.13.1 Project related Costs to Council

If approved, the Project will be under construction for 3 years and post-completion monitoring in respect of noise, air quality and traffic will continue for many additional years. Council is ill-equipped to participate in construction management working groups, respond to public enquiries or to assist in ensuring the proposed monitoring regimes are undertaken and where necessary, mitigation and compensation measures applied. Accordingly, the NSW State Government should make funding assistance available to Council to enable additional resources to be procured in these regards.

MISC1: *Council requests that the NSW State Government provide funding assistance to the order of \$250,000 to Ashfield Council to assist in*

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resourcing tasks required of Council during construction and post-construction monitoring which are as a direct consequence of the Project.

8.13.2 Waste Management Services

Council Officers have concerns regarding the partial closure of various local roads during construction and the impacts on Council's provision of waste collection services to the local community. In particular, the following streets are likely to be affected:

- Allum Street;
- Chandos Street;
- Northcote Street;
- Martin Street; and
- Walker Avenue.

The Project also includes construction a new access road to No. 98 Chandos Street, Ashfield.

Council Officers recommend that the Construction Traffic Management Plan to be prepared for the Project be prepared in consultation with Council with due regard to the design of existing and proposed roads, including weight limits, and the ability for ingress and egress of large waste collection vehicles.

MISC2: A Condition of approval must be imposed requiring the CEMP to include a Construction Traffic Management Plan that is prepared in consultation with Ashfield Council and which gives due regard to the design and construction of any full or partial road closures and the requirement for large truck movements including Council's waste collection vehicles.

9.0 CONCLUSION

Council Officers, in conjunction with specialist expert consultants, have reviewed the EIS and have concluded that the Project will have significant adverse and irreversible impacts on the Ashfield LGA.

The main impacts are the severance of the Heritage Conservation Area and community at Wattle Street and the severance of the local community at Parramatta Road. In addition, the Project will result in significant traffic, noise, air quality, human health, visual amenity, flooding and drainage, land ownership and asset management impacts.

These impacts could be substantially reduced if alternate options were adequately considered. One of these would be to locate the eastern portal connection to the City West link to Lilyfield where the existing City West link dominates the character of that locality.

Council Officers also have significant misgivings regarding the assumptions that underpin the Project. Specifically, the Project relies on several mooted public transport and road

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projects – many of which have not yet been designed, endorsed or commitments made to their funding. In addition to the impacts of the Project itself, there will be severe impacts on the Ashfield LGA, its community and its environment should these projects not come to fruition or be delayed well beyond the timeframes discussed in the EIS.

Council Officers are of the opinion that the EIS should be amended to seriously consider alternate options and to provide far greater detail and consideration to a variety of design details.

Notwithstanding, should the Project be approved substantively in its current form, Council Officers have recommended a range of conditions of approval that should be imposed to minimise the construction and operational impacts of the Project although no mitigation or other works are considered sufficient to “offset” or compensate for the adverse impacts of the Project.

ATTACHMENTS

Attachment 1	Project Layout Maps	7 Pages
Attachment 2	Review of European Heritage Impacts, Robert Moore	24 Pages
Attachment 3	Review of Traffic and Transport Impacts, Ashfield Council	32 Pages
Attachment 4	Review of Traffic and Transport Impacts, TTM Consulting	21 Pages
Attachment 5	Review of Noise and Vibration Impacts, Atkins Acoustics	11 Pages
Attachment 6	Review of Air Quality Impacts, Katestone Environmental	15 Pages
Attachment 7	Review of Human Health Impacts, ToxConsult	23 Pages
Attachment 8	Review of Social and Economic Impacts, Ashfield Council	9 Pages
Attachment 9	Review of Urban Design and Visual Amenity Impacts, Ashfield Council	15 Pages
Attachment 10	Review of Biodiversity Impacts, Ashfield Council	4 Pages
Attachment 11	Review of Flooding and Drainage Impacts, Ashfield Council	9 Pages
Attachment 12	Review of Council Land and Assets Impacts, Ashfield Council	2 Pages
Attachment 13	Notes from Public Meeting 23 September 2015	10 Pages

RECOMMENDATION

10.1 General Recommendations

- GEN1:** The Project should be refused on the basis that the Business Case for the Project has not been made fully available for public scrutiny and because the Project will have significant adverse built, natural, social and economic impacts for the Ashfield LGA for which there is inadequate mitigation and/or compensation.
- GEN2:** The Project should be refused as it is inconsistent with the Project objectives and inconsistent with the strategic objectives of the NSW Government in the absence of detailed proposals for public transport, pedestrian and cycling initiatives to encourage modal shift to more sustainable travel.
- GEN3:** The Project should be refused as it represents an inferior option at the expense of the natural, cultural and built environment of Ashfield LGA and other tunnel alternatives which avoid the significant negative impacts on Ashfield have not been seriously considered.

10.2 European Heritage

- EHER1:** The Project should be refused on the basis of the significant adverse heritage impacts for which there can be no reasonable mitigation or compensation.
- EHER2:** Should approval be granted to the Project, conditions of approval should be imposed requiring:
- A heritage advisory committee to be formed including representatives from Ashfield Council, the local community and independent heritage advisors to provide input to and review the design of all buildings, road infrastructure and ancillary structures; and
 - Yasmar should be transferred into the ownership of Ashfield Council together with a grant of \$4.5 million to be used for the restoration of the State Heritage Item and establishment of a Heritage Interpretation Centre.

10.3 Indigenous Heritage

- IHER1:** If the Project is approved, a condition of approval must be imposed requiring that the Ashfield Council Aboriginal Consultative Committee be directly engaged with any further or future consultation processes with respect to the Project.

10.4 Traffic and Transport

- TT1:** Should the Project be approved, recommendation TT1 of the EIS must be amended as follows:
- A Traffic Management and Safety Plan (TMSP) will be prepared as part of the construction environmental management plan (CEMP), in

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consultation with the relevant road authority, local councils, emergency services, road user groups and pedestrian and bicycle groups. The TMSP will include the guidelines, general requirements and principles of traffic management to be implemented during construction. It will be prepared in accordance with Austroads Guide to Road Design (with appropriate Roads and Maritime supplements), the RTA Traffic Control at Work Sites manual and AS1742.3: Manual of uniform traffic control devices – Part 3: Traffic control for works on roads, and any other relevant standard, guide or manual. It will seek to minimise delays and disruptions, and identify and respond to any changes in road safety as a result of highway construction works.

The TMSP must take into account:

- the cumulative impacts of multiple construction sites; and
- both local and regional traffic impacts and shall at all stages maintain existing priority and running times to public transport, bicycles and pedestrian movements.
- Both regional and local traffic impacts.

TT2: Should the Project be approved, recommendation TT2 of the EIS must be amended as follows:

The TMSP will include:

- A traffic route and haulage management plan
- Site traffic and access management plans
- An incident response plan
- A detailed travel management plan for construction staff at the various worksites, in consultation with local councils and stakeholders associated with the sporting facilities adjacent to the project site. This will include the promotion of public transport and carpooling to reduce work site-related vehicle movements, and also investigate feasible options for the provision of off-site car parking to reduce parking on local roads.
- The TMSP should include site-specific Traffic Management Plans (TMPs) for each specific worksite. The TMPs should include, but not be limited to:
 - ^ Impacts on all existing traffic (including pedestrians, vehicles, cyclists and disabled persons), including the staging of construction works to minimise road closures and delay or detours to traffic;
 - ^ Temporary traffic arrangements, including the identification of detour routes;
 - ^ No heavy vehicles are to be permitted to queue on public roads

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(including local roads);

- ^ Onsite vehicle queuing and parking areas and management measures to minimise peak time congestion
- ^ The impact on pedestrian and bicycle facilities, including measures to ensure safe pedestrian and cycle routes and access at all times, staging to minimise delay or detours, and the provision of alternative facilities and locations for pedestrians and cyclists;
- ^ The provision of safe and convenient access to all bus stops;
- ^ Change of shifts must occur outside of School Zone hours to help ensure safety for school students, particularly school-aged pedestrians;
- ^ The provision of a mini-bus/ shuttle bus from Ashfield station (or equivalent) for workers.
- ^ Resident parking is to be investigated, funded and implemented by the proponent, with approval granted by Council and the Ashfield Traffic Committee.
- ^ Appropriate monitoring, review and amendment mechanisms.
- ^ Light vehicles should be defined as utes and passenger vehicles only. Small Rigid Vehicles, Medium Rigid Vehicles (as defined in AS 2890.2) and above should be considered heavy vehicles.
- ^ The Proponent shall consult all affected schools in relation to all practicable measures to be taken to avoid undue disruption from altered school bus services during construction.
- ^ Introduce temporary speed restrictions in adjacent local streets, directly affected by construction activities
- ^ Consideration given to safe access to Wattle Street properties, particularly with additional heavy vehicles on Wattle Street.
- ^ Access must be retained to all private properties, including the properties on the southern side of Dobroyd Parade, between Martin Street and Waratah Street.
- ^ Construction, traffic modelling will include the monitoring of heavy vehicles, particularly on local roads. This will allow for compliance checks and enforcement, if necessary.
- ^ Traffic management measures during construction for cyclists and pedestrians along Orpington Street, to minimise conflicts with civil site (C10) vehicles.
- ^ Any closure of the intersection of Ramsay Street/ Dobroyd Parade must occur only at night.

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- The TMSP shall be certified by an experienced traffic/transport planner who shall be engaged throughout the construction stage to advise on implementation issues and amendments and as a key liaison contact for the relevant local Councils. The TMSP must be referred to the Ashfield Traffic Committee and Council for review and comment prior to approval.

TT3: Should the Project be approved, recommendation TT10 of the EIS must be amended as follows:

Local road closures will be managed and adequate property access will be maintained. Where road closures are required, reasonable and practical alternate traffic routes will be provided and communicated to the community. This will be undertaken in consultation with Roads and Maritime, local councils and property owners likely to be affected.

Local road closures require consultation and the approval of the Ashfield Traffic Committee and Council.

TT4: Should the Project be approved, recommendation TT11 of the EIS must be amended as follows:

A Road Dilapidation Report will be prepared and will include identification of the existing conditions of local roads and mechanisms to repair any damage caused by the project.

The Dilapidation Report must include existing traffic management devices and cyclist facilities.

Any damage caused to local roads must be repaired to Council's specification and to the satisfaction of Council, at the Proponent's expense.

TT5: If the Project is approved, a condition of approval must be imposed requiring that no heavy vehicle movements are to be permitted from 10pm to 7am on any day without specific approval from the Secretary. Furthermore, night-time spoil is to be stored on-site at works sites C7, C8, C9 and C10 within acoustic sheds and moved the following day.

TT6: If the Project is approved, a condition of approval must be imposed requiring that vehicles exiting the Northcote Street site (C7) must not utilise Wattle Street and Dobroyd Parade. They must exit the site directly onto Parramatta Road, in a westerly direction.

TT7: If the Project is approved, a condition of approval must be imposed requiring that vehicles exiting the Parramatta Road civil site (C10) must not utilise Bland Street. They must exit the site onto Parramatta Road, just east of the intersection with Bland Street.

TT8: Failing the above recommended condition, an appropriately qualified traffic controller must be present at all times on Bland Street, at the exit from the Parramatta Road civil site (C10), to help ensure pedestrian safety, particularly primary school aged children.

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- TT9:** Failing the above recommended condition, Bland Street, at Parramatta Road is to be realigned and widened to allow for two northbound lanes, with no associated reduction in footpath widths (making use of the private property land which has been acquired at this intersection).
- TT10:** If the Project is approved, a condition of approval must be imposed requiring that modifications which need to be made to the Bland Street pedestrian overpass must be made prior to the substantial commencement of construction such that the bridge can remain open at all times whilst the Parramatta Road civil site (C10) is in operation.
- TT11:** If the Project is approved, a condition of approval must be imposed requiring that the footpath on the southern side of Parramatta Road, from Bland Street to Orpington Street is to remain open at all times during construction.
- TT12:** If the Project is approved, a condition of approval must be imposed requiring that the footpath on the southern side of Dobroyd Parade, from Martin Street to Waratah Street is to remain open at all times during construction.
- TT13:** If the Project is approved, a condition of approval must be imposed requiring that footpath access from Martin Street, to Wattle Street is to remain open at all times during construction.
- TT14:** If the Project is approved, a condition of approval must be imposed requiring that footpath access from Chandos Street, to Parramatta Road is to remain open at all times during construction.
- TT15:** If the Project is approved, a condition of approval must be imposed requiring that the Proponent shall maintain safe pedestrian access to the fullest extent possible during construction. In circumstances where pedestrian access is temporarily not possible due to construction activities, the Proponent shall ensure that a satisfactory alternate route is provided and sign posted.
- TT16:** If the Project is approved, a condition of approval must be imposed requiring that the Proponent shall as part of its construction stage monitor traffic changes during construction on regional and local streets in Haberfield, Ashfield and Summer Hill at six monthly intervals, for a period of one week (outside of school holiday periods). The results of this monitoring shall be made publicly available within one month of collection. Should monitoring indicate traffic intrusion 10% above existing (pre-construction) levels on these streets the Proponent shall prepare and implement LATM for these areas, following consultation with Ashfield Council and the community, to minimise and/or restrict use of local roads and improve residential amenity.
- TT17:** If the Project is approved, a condition of approval must be imposed requiring the Proponent to take all reasonable steps to ensure that all heavy vehicles travel to and from all construction sites via State roads

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and/or the routes specified in the EIS. The Proponent shall take all reasonable steps to ensure that no heavy vehicles travel on local roads.

TT18: If the Project is approved, a condition of approval must be imposed requiring that the construction sites, site compounds and surrounding areas to be maintained in a generally clean and tidy condition for the duration of the Project.

TT19: If the Project is approved, a condition of approval must be imposed requiring, prior to the commencement of substantial construction, a Construction Stage Public Transport Management Plan shall be developed. The Plan shall address the potential impact of construction activities on public transport. The objective of the Plan shall be to achieve at least pre-construction level of service for buses and high occupancy vehicles.

TT20: If the Project is approved, a condition of approval must be imposed requiring, the Proponent to develop measurable performance indicators for bus efficiencies (including consideration of bus timetables), occurring as a result of the Project. If bus performance does not meet the indicator targets, the Proponent shall initiate, at its own expense, any actions as reasonably required by Transport for NSW.

TT21: If the Project is approved, a condition of approval must be imposed requiring the Proponent to establish an appropriate representative Community Liaison Group (CLG) for the Haberfield and Ashfield community. The Proponent shall:

- Ensure that the first meeting is held prior to substantial construction;
- Allow the CLG to make comments and recommendations about construction progress and implementation, the environmental management plan and sub plans, monitor compliance with these conditions of approval and other matters relevant to the operation of the Project;
- Ensure that the CLG have access to the necessary plans and information for such purposes;
- Consider the recommendations and comments of the CLG and provide a response to the CLG and Minister for Planning;
- Ensure that the CLG shall consist of appropriate community and Council representatives; and
- Bear all costs associated with the establishment and ongoing function and resourcing of the CLG, including the provision of at least two senior staff to administer, attend and participate in the meetings.

TT22: If the Project is approved, a condition of approval must be imposed

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requiring the Proponent to nominate a person(s), to be approved by the Minister for Planning, to serve as the Independent Community Liaison Representative(s) (ICLR). The ICLR shall be experienced in mediating disputes. The role of the ICLR shall include but not be limited to:

- Attending and chairing Community Liaison Group meetings;
- Consulting with the Proponent with regard to consultation strategies;
- Being available for direct contact by the community during standard construction hours; and
- To the greatest extent practicable, resolve community complaints.

TT23: The EIS should be amended to include a parking strategy for workers associated with the Project and this strategy must be made available for public comment.

TT24: If the Project is approved, a condition of approval must be imposed requiring the Proponent to provide:

- a shuttle bus service for workers during the entire construction period of the project to alleviate traffic congestion and reduction in the residential parking in the Haberfield area;
- workers with access to free public transport to encourage the use of public transport;
- subsidised travel during journey to work periods on public transport for residents living within 10km radius of WestConnex construction, to encourage use of public transport during periods of significant disruption and to reduce congestion on local roads.

TT25: The EIS is to be amended to provide clarification and further assessment of the impacts of the Project on traffic flows on Parramatta Road and Dobroyd Parade.

TT26: If the project is approved, a condition of approval must be imposed which limits any construction noise level impacts to no more than 2 dB (A) above existing road traffic noise levels. All feasible and reasonable noise mitigation and management measures must be implemented.

TT27: If the project is approved, a condition of approval must be imposed requiring the Proponent is to ensure that construction vehicle contractors operate so as to minimise any sleep disturbance impacts. Measures that could be used include contracts that include provisions to deal with unsatisfactory noise performance for the vehicle and/or the operator, and specifying alternatives in place of reversing beepers such as reversing cameras and proximity alarms, or a combination of these.

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OpTT1: Should the Project be approved, recommendation OpTT1 of the EIS must be amended as follows:

An operational traffic review will be undertaken at 3 and 12 months after the opening of the project to confirm the operational impacts of the project on surrounding arterial roads and major intersections. This review will be undertaken by a suitably qualified traffic consultant that is independent of the design and studies undertaken as part of the EIS.

That the Sydney Motorway Corporation (SMC) be advised that Council requires that 'rat run' into residential streets leading from Parramatta Road and City West Link Road be addressed with restrictions on entry from Parramatta Road and City West Link Road into residential streets be imposed either permanently or in times during peak traffic periods immediately the project is completed and during construction times, pending consultation with community.

OpTT2: Should the Project be approved, recommendation OpTT4 of the EIS must be amended as follows:

On the understanding that there will be no traffic from Timbrell Drive into Mortley Avenue after completion of the WestConnex proposal the following network upgrades will be investigated in consultation with relevant local councils, Roads and Maritime and affected communities:

- Conversion of Mortley Avenue to entry only (except buses) at the Timbrell Drive/ Dobroyd Parade intersection, with an additional entry lane to facilitate amended lane utilisation on the Timbrell Drive approach. Layout amendments could be required on Mortley Avenue which will need to consider impacts on existing parking provision, the location of the bus stop and some existing mature trees...

This is subject to further detailed traffic modelling and consultation with the community. This proposal may only proceed with clear majority community consent.

Should this proposal go ahead, conversion of Mortley Avenue to entry only (except buses and cyclists).

OpTT3: Should the Project be approved, recommendation OpTT5 of the EIS must be amended as follows:

The following network upgrades will be investigated in consultation with relevant local councils, Roads and Maritime and affected communities, and implemented as and when required based on traffic growth and changing traffic patterns:...

- Extension of parking restrictions on the southern (westbound) side of Ramsay Street between Wattle Street and Walker Avenue will NOT be undertaken.
- Creation of a double right turn on the Wattle Street westbound approach to Ramsay Street post opening of the M4–M5 Link. This

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could be achieved by reallocating the right hand through lane, leaving a single through/left lane.

This is subject to further detailed traffic modelling and consultation with the community. This proposal may only proceed with clear majority community consent.

OpTT4: If the Project is approved, a condition of approval must be imposed requiring that Martin Street, Haberfield allow for northbound traffic to turn left onto Dobroyd Parade only (left out). No traffic is to enter Martin Street from Dobroyd Parade (left in). This will be in accordance with the existing pre-construction arrangements. As part of the overall project landscaping, this half road closure is to receive appropriate landscaping.

OpTT5: If the Project is approved, a condition of approval must be imposed requiring that Loudon Street, Haberfield be closed to traffic to/from Dobroyd Parade (i.e. it is to be a cul-de-sac).

OpTT6: If the Project is approved, a condition of approval must be imposed requiring Orpington Street, Ashfield to be left in/ left out only to Parramatta Road. The concrete median island on Parramatta Road must be extended to the East, to prevent motorists entering the new westbound portal from Orpington Street.

OpTT7: If the Project is approved, a condition of approval must be imposed requiring the Proponent to ensure that adequate monitoring of the local and regional road network is conducted prior to construction to provide an appropriate base line for measuring any future impacts resulting from the construction and/or operation of the tunnel. Traffic monitoring should be for a period of one week (outside of school holiday periods). Impacts on bus travel times on these roads (where relevant) shall also be monitored. The results of this monitoring shall be made publicly available within one month of collection. Key impact prediction shall include traffic volumes on approach and departure routes, including (but not limited to) the following streets:

- Allum Street, Haberfield
- Alt Street, Ashfield and Haberfield
- Ash Lane, Haberfield
- Bland Street, Ashfield
- Bland Street, Haberfield
- Boomerang Street, Haberfield
- Chandos Street, Ashfield
- Charlotte Street, Ashfield
- Church Street, Ashfield
- Dalhousie Street, Haberfield
- Dover Street, Summer Hill
- Elizabeth Street, Ashfield
- Frederick Street, Ashfield
- Gower Street, Summer Hill
- Hawthorne Parade, Haberfield

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- Henry Street, Ashfield
- Julia Street, Ashfield
- Kensington Road, Summer Hill
- Liverpool Road, Ashfield
- Loftus Street, Ashfield
- Marion Street, Haberfield
- Martin Street, Haberfield
- Milton Street, Ashfield
- Mortley Avenue, Haberfield
- Northcote Street, Haberfield
- O'Connor Street, Haberfield
- Ormond Street, Ashfield
- Orpington Street, Ashfield
- Pembroke Street, Ashfield
- Ramsay Street, Haberfield
- Rogers Avenue, Haberfield
- Sloane Street, Summer Hill
- St David's Road, Haberfield
- Walker Avenue, Haberfield
- Waratah Street, Haberfield
- Wolseley Street, Haberfield

OpTT8: If the Project is approved, a condition of approval must be imposed requiring that three and twelve (12) months after opening, the Proponent monitor morning and evening peak hour traffic levels in Ashfield and Haberfield for a period of one (1) week (outside of school holiday periods). The results of this monitoring shall be made publicly available within one month of collection. Should monitoring indicate traffic intrusion 10% above existing levels on these streets as a result of the construction of the proposal the Proponent shall prepare and implement LATMs for these areas, following consultation with the Ashfield Traffic Committee, Ashfield Council, bicycle user groups and the community, to minimise and restrict use of local roads and to identify reasonable measures to mitigate the impact of significant increases in traffic on local roads that result from the operation of WestConnex. The LATM measures shall include as a minimum, unless otherwise agreed by Ashfield Council, traffic calming on the following streets:

- Allum Street, Haberfield
- Alt Street, Ashfield and Haberfield (including entry threshold treatments at Parramatta Road)
- Ash Lane, Haberfield
- Bland Street, Ashfield
- Bland Street, Haberfield
- Boomerang Street, Haberfield
- Chandos Street, Ashfield (including entry threshold treatments at Parramatta Road)
- Charlotte Street, Ashfield
- Church Street, Ashfield

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- Dalhousie Street, Haberfield
- Dover Street, Summer Hill
- Elizabeth Street, Ashfield
- Gower Street, Summer Hill
- Hawthorne Parade, Haberfield
- Henry Street, Ashfield
- Julia Street, Ashfield
- Kensington Road, Summer Hill
- Loftus Street, Ashfield
- Martin Street, Haberfield
- Mortley Avenue, Haberfield
- Northcote Street, Haberfield
- O'Connor Street, Haberfield
- Ormond Street, Ashfield
- Orpington Street, Ashfield
- Pembroke Street, Ashfield;
- Ramsay Street, Haberfield (including kerb blisters and a 40km/h
- High Pedestrian Activity Area through the Haberfield town centre)
- Rogers Avenue, Haberfield
- Sloane Street, Summer Hill
- St David's Road, Haberfield
- Wattle Street, Haberfield
- Walker Avenue, Haberfield (including an entry threshold treatment at
- Parramatta Road)
- Waratah Street, Haberfield
- Wolseley Street, Haberfield

The key objective of the LATM shall be to restrict through traffic and ensure that alternative routes for traffic are relatively unattractive. The measures listed above and determined during consultation shall be installed at full cost to the Proponent as soon as practicable after finalising the LATM consultation process and all construction works must be fully completed within 6 months of identification of need by traffic counts and/ or community consultation.

OpTT9: If the Project is approved, a condition of approval must be imposed requiring the Proponent to develop measures to reduce roadway capacity where practicable on the following roads:

- Frederick Street, Ashfield
- Liverpool Road, Ashfield

OpTT10: If the Project is approved, a condition of approval must be imposed requiring the easement/road reserve on Frederick Street, Ashfield be removed.

OpTT11: If the Project is approved, a condition of approval must be imposed requiring the Proponent to identify reasonable measures to "capture" additional road capacity and to maintain and enhance the benefits of short term reductions in traffic volumes on Parramatta Road directly

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influenced by the opening of the Project, to ensure that these traffic volumes do not rise again in the medium to long term. At a minimum, the Proponent shall ensure that one lane in each direction on the entire length of Parramatta Road (continuously), from the M4 at Concord to Haberfield is a dedicated 24 hour Bus Lane for Rapid Bus Transit or a dedicated light rail lane and that this is funded by the Proponent. Other surface improvements for Parramatta Road may include other public transport enhancement measures, separated and designated bicycle paths, widened footpaths and landscaping and these improvements must be funded by the Proponent. The installation of the identified measures shall be fully funded by the Proponent and should be operating prior to the imposition of any tolling on WestConnex.

- OpTT12:** If the Project is approved, a condition of approval must be imposed requiring the Proponent to ensure that one lane in each direction on the entire length of the WestConnex tunnel is a dedicated 24 hour T2 lane.
- OpTT13:** If the Project is approved, a condition of approval must be imposed requiring the Proponent to ensure that the Project does not prevent or impose significantly greater cost implications for future provision of a light rail system on Parramatta Road.
- OpTT14:** If the Project is approved, a condition of approval must be imposed requiring that, as part of the surface improvements for Parramatta Road, the Proponent ensure improved access and travel along and across Parramatta Road for local vehicle trips and active transport.
- OpTT15:** If the Project is approved, a condition of approval must be imposed requiring that, as part of the surface improvements for Parramatta Road, the Proponent ensure improvements for north-south movements and movements from Parramatta Road (via right turn bays) to streets north or south of the corridor.
- OpTT16:** If the Project is approved, a condition of approval must be imposed requiring a safe, high quality and contiguous cyclist/pedestrian path(s) to be provided for recreational and commuter cyclists and for pedestrians for the length of the Project, from the M4 at Concord through to Haberfield and Ashfield. Details of the provisions for cyclists shall be developed through the preparation of a detailed Cycleway and Pedestrian Plan which shall be prepared in consultation with Bicycle NSW, local councils, relevant bicycle user groups and the CLGs. The Plan must take into consideration existing and future demand. The Cycleway and Pedestrian Plan shall also include:
- A detailed description of the proposed design including all connections to surrounding roads, streets and paths;
 - Lighting, where appropriate;
 - Safety including safe crossings for pedestrians and those

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accessing bus stops and security;

- Line marking and signage to separate cyclists from pedestrians in accordance with signposting directions from the RMS in relation to all shared paths;
- Maintenance;
- Consideration of links to existing and future planned cycle networks, roads and paths and potential linkages; and
- Appropriate associated landscaping.

The Cycleway and Pedestrian Plan must include as a minimum:

- The traffic management treatment at the intersection of Northcote Street and Parramatta Road, Haberfield intersection is to be upgraded to include cyclist provisions;
- The traffic management treatment at the intersection of Wolseley Street and Parramatta Road, Haberfield intersection is to be upgraded to include cyclist provisions;
- A dedicated, separated and permanent bicycle path which operates the full length of Parramatta Road, from the M4 at Concord to Haberfield;
- A dedicated, separated and permanent bicycle path which operates the full length of Wattle Street/ Dobroyd Parade, from Parramatta Road to Timbrell Drive;
- A pedestrian and cyclist pathway over/ under Parramatta Road, at Chandos Street, Ashfield;
- A pedestrian and cyclist pathway over/ under Wattle Street/Dobroyd Parade, at Ramsay Street, Haberfield; and
- A pedestrian and cyclist pathway over/ under Dobroyd Parade, at Waratah Street, Haberfield.

The design of any such infrastructure shall be certified by a suitably qualified and experienced expert that has considered the above matters. The pedestrian and cyclist facilities should be operational prior to the Proponent receiving toll income.

OpTT17: If the Project is approved, a condition of approval must be imposed requiring all pedestrian bridges to be of high quality in terms of form, finish and materials and shall be designed by an architect with appropriate experience in urban pedestrian bridge design.

OpTT18: If the Project is approved, a condition of approval must be imposed requiring the Proponent to ensure pedestrians are given additional priority at signalised crossings associated with the reduction in traffic volumes, as part of the surface improvements for Parramatta Road.

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OpTT19: If the Project is approved, a condition of approval must be imposed requiring that no variable message signs are to be installed on Parramatta Road, Dobroyd Parade, Wattle Street or any other road in Haberfield or Ashfield.

OpTT20: If the Project is approved, a condition of approval must be imposed requiring that demand management measures be implemented in conjunction with the Project. These measures should seek to make changes to social attitudes, travel behaviour and government policy.

OpTT21: If the Project is approved, a condition of approval must be imposed requiring that at 12 months and 5 years after the commencement of operation of the Project, or as otherwise agreed to by the Minister for Planning, the Proponent prepare a Road Network Performance Review Plan in consultation with relevant Councils that includes:

- Management measures to minimise toll avoidance, particularly for heavy vehicles;
- Details of any complaints received relating to traffic, transport and access impacts, and how they have been addressed in the Plan. The Plan shall be submitted to the Secretary, Transport for NSW (in relation to impacts on bus services) and to relevant Council within 60 days of its completion and made publicly available. The purpose of the Plan is to optimise road network performance, and manage the performance impacts of the Project on the adjoining road network by identifying or confirming mitigation improvements that could be required in areas where traffic performance may be unsatisfactory at time of completion of construction.

The Proponent shall set aside the sum of \$20 million to be used for implementing any additional operational stage measures resulting from investigations required as part of these conditions of approval and/or further offset measures including public transport improvement, pedestrian and cyclist improvements and/or for any other measure as required by the Secretary, Transport for NSW.

10.5 Noise and Vibration

NV1: The NVIA must be amended to include an assessment of impact on residential buildings exposed to road traffic noise greater than two (2) storeys in height and 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.

NV2: The NVIA must be amended to refer to the Interim Construction Noise Guideline (DECCW, 2009) as required by the SEARs and include details of work practices to meet the NML and should identify the extent of properties exposed to construction noise levels greater than

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- NV3:** Additional noise monitoring should be undertaken at representative locations set back from Parramatta Road and Wattle Street for assessing construction and operational noise impacts and the EIS re-exhibited to enable public scrutiny of this data.
- NV4:** The NVIA must be amended to include criteria, NML's or assessment of impacts at residential properties for daytime hours (7.00am to 6.00pm) seven (7) days a week.
- NV5:** Additional information is required in respect of the night-time truck movements.
- NV6:** The NVIA must be amended to include details of construction traffic and modelling and assessment of L_{Amax} night-time traffic noise for properties exposed to construction traffic.
- NV7:** The NVIA must be amended to assess the noise impacts associated with construction workers vehicles and onsite parking.
- NV8:** If the Project is approved a condition of approval must be imposed requiring that construction traffic movements on public roads shall limit any increase in existing road traffic noise levels to no more than 2 dB (A). All feasible and reasonable noise mitigation and management measures must be implemented.
- NV9:** If the Project is approved a condition of approval must be imposed requiring the Proponent to ensure that construction vehicle contractors operate so as to minimise any sleep disturbance impacts. Measures that could be used include contracts that include provisions to deal with unsatisfactory noise performance for the vehicle and/or the operator, and specifying alternatives in place of reversing beepers such as reversing cameras and proximity alarms, or a combination of these.
- NV10:** The NVIA must be amended to the most recent published data in respect of regenerated noise from road headers.
- NV11:** The NVIA must be amended to include an assessment of regenerated noise or vibration from rock breakers or drilling for blasting.
- NV12:** The NVIA must be amended to include and identify the number of properties that would be exposed to the regenerated noise exceeding the noise criteria and assess the impact of those exceedances.
- NV13:** The NVIA must be amended to include:
- an assessment vibration impacts resulting from rockbreakers and other tunnelling plant/equipment on building structures; and
 - classification and identification of vibration sensitive buildings in the Haberfield Conservation Area and on other land in the vicinity of the Project footprint.

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- NV14:** Should approval be granted to the Project conditions of approval should be imposed requiring:
- dilapidation reports for all structures within 50 metres of any construction works and all identified vibration sensitive buildings within the Haberfield Heritage Conservation Area;
 - funding assistance for property owners to engage independent observers during the dilapidation inspections;
 - notices for dilapidation inspections and reports are not to be issued within 14 days of or during school holiday periods.
- NV15:** The NVIA must be amended to assume a worst case scenario in respect of operational noise impacts at 2031 without the M4-M5 link.
- NV16:** The NVIA must be amended to include recommendations for architectural building treatment to multi-storey buildings to control road traffic noise or justify why this is not necessary.
- NV17:** The NVIA must be amended to explain the inconsistency in regards to 'acute' traffic noise levels, include an assessment of 'acute' levels of traffic noise (including identification of affected properties) and make recommendations for reasonable mitigation measures.
- NV18:** The NVIA must be amended to assess the exposure to traffic noise of residential properties exposed to Dobroyd Road between Crane Street and Hawthorne Parade.

10.6 Air Quality

- AQ1:** The AQIA must be amended in respect of the following matters and the EIS re-exhibited to allow public scrutiny and comment:
- A specific assessment of construction emissions and impacts is required;
 - Worst-case scenarios entailing much greater traffic volumes on Parramatta Road and/or delays in the provision of the M4-M5 Link are to be assessed;
 - The dispersion modelling is to assess potential impacts on elevated receptors;
 - Air quality predictions for the ventilation outlets in isolation are required;
 - Detailed information regarding ventilation operations during emergencies is required;
 - Detailed information regarding proposed mitigation measures to prevent the generation and emission of dust and air pollutants during construction is required.
- AQ2:** The AQIA must be amended to provide a more detailed assessment in

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respect of particulate filtration and denitrification including details of the predicted air quality levels with and without such devices.

AQ3: A detailed quantitative air quality assessment of dust impacts from construction should be included in each Construction Air Quality Management Plan including requirements to conduct compliance monitoring for dust at nearest sensitive receptors. Ashfield Council must be provided with the opportunity to review and comment on any Construction Air Quality Management Plans.

AQ4: The AQIA should be amended to provide recommendations for ambient air quality monitoring. The ambient monitoring should be conducted in accordance with the Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales (DEC, 2007) and concentrations assessed against the criteria stated in the Approved Methods for the modelling and Assessment of Air Pollutants in New South Wales (DEC, 2005) and the National Environment Protection (Ambient Air Quality) Measure and any relevant conditions of approval.

Monitoring should also be conducted within the ventilation outlet. The sampling point will need to be designed and located in accordance with the Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales (DEC, 2007). The pollutants to be monitored should be as per Table 8-21 of the AQIA and assessed against the concentrations limits specified within Table 8-21. Exit velocity and temperature should also be monitored.

AQ5: An air quality monitoring scheme be put in place to monitor air quality impacts arising from the project on an ongoing basis with regular reports to be publicly available and accessible on a dedicated website.

AQ6: That long-term continuous air quality improvement measures be implemented post project implementation.

10.7 Human Health

HH1: The HHRA must be amended in respect of the following matters and the EIS re-exhibited to allow public scrutiny and comment:

- A more detailed assessment is required in respect of how the Project (e.g. relative to other design options) minimises adverse health impacts;
- Detailed information is required demonstrating how the design, or specific mitigation measures will minimise adverse health impacts; and
- Clarification is required as to whether the Project will exceed the NO₂ criteria and if so, details provided of specific mitigation measures to ensure that there is no increased risk of human health impacts.
- Internal in tunnel air quality modelling be redone to include other

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exposure scenarios and assessment of alternative solutions to reduce pollutant concentrations.

- HH2:** The EIS, including the AQIA and HHRA must be amended to include sensitivity testing to account for recent admissions of vehicle manufacturers that pollutant emissions from vehicles is understated.
- HH3:** The HHRA must be amended in respect of the following matters and the EIS re-exhibited to allow public scrutiny and comment:
- A scholarly justification is to be provided for the selection of the guidelines used (including justification for choosing one guideline over another) with regards to what health effects are associated with a substance and how the guidelines are protective of acute and chronic health effects;
 - The risk of sensory irritation is to be assessed for all relevant compounds and as a mixture;
 - Odour impacts are to be assessed for the mixture of relevant compounds; and
 - The assessment for PM should include effects other than hospitalisation prevalence and mortality for shorter term exposures.
- HH4:** The HHRA must be amended to include a robust rationale for the choice of air quality guidelines and the chemicals included in the HHRA. Furthermore, the list of chemicals assessed must be expanded to include metals and other vehicle wear-related substances.
- HH5:** The HHRA must be amended to consider the exposure and resulting risk profile for individuals inhabiting above-ground level apartment buildings.
- HH6:** The HHRA must be amended to assess the human health impacts on the suburbs of Haberfield, Ashfield and Croydon specifically.
- HH7:** A Condition of Approval must be imposed requiring the CEMP to include the following to assist in minimising public exposure to dust from construction activities:
- Regular monitoring of respirable crystalline silica and adherence at the construction boundary to the Victorian ambient air standard (VIC EPA 2007) of 3 µg/m³ as PM_{2.5};
 - 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%.
- HH8:** The EIS, including the AQIA and HHRA must be amended to objectively assess the inclusion of pollution abatement equipment in tunnel exhaust stacks.

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10.8 Social and Economic

SE1: The Proponent shall produce a summary of the EIS translated into Mandarin, Italian and Greek at a minimum. These translations shall be re-exhibited and community members given the opportunity to provide comment.

SE2: If the Project is approved a condition of approval must be imposed requiring:

- The Proponent to engage a Public Art Consultant in the early planning phase to develop a robust and meaningful Public Art strategy during and post construction that engages community and reflects Ashfield and compliments Council's art policy. The consultant's outcomes shall to include:
 - a detailed rolling strategy based on consultation;
 - a realistic budget of at least \$500,000 which covers:
 - ^ a Public Art expert to implement the plan;
 - ^ payment for artists;
 - ^ community development strategies if applicable;
 - ^ materials, installation and ongoing maintenance;
 - ^ marketing campaign; and
 - ^ maintenance.

Ashfield Council and other local key stakeholders are to provide comment on the Public Art consultant brief before it goes to tender and provide advice on where to promote, and who to target.

- Dedicated places/zones for new public art to be installed in and around the Project precinct;
- The Proponent must provide Ashfield Council with new recreation equipment to make up for the reduction in access to open public spaces;
- The Proponent must rehabilitate land acquired for construction only to be appropriate community spaces such as suitable open space/parkland or indoor sports centre or youth centre/space;
- The Proponent must provide \$250,000 to Ashfield Council over five years to support Carnival of Cultures in Ashfield Park, to support community cohesion and development activities.

SE3: If the Project is approved a condition of approval must be imposed requiring the Proponent to prepare notices (in minimum 14 font for visually impaired persons) and signage regarding disruptions to road,

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pedestrian, bicycle and public transport arrangements in multiple languages including English, Chinese and Italian at a minimum.

SE4: If the Project is approved a condition of approval must be imposed requiring:

- road safety officers to direct traffic around the Project works;
- dedicated pedestrian and cyclist access routes that provide both accessible and safe connections for the residential communities on either side of the construction project;
- Increased green space in the Ashfield LGA in proximity to the Project footprint, with the following being suitable locations:
 - ^ Parramatta Road, at Ashfield Park, Wattle Street intersection, Bland Street;
 - ^ Wattle St, at Ramsey St, Reg Coady Reserve; and
 - ^ Dobroyd Parade, at Timbrell Drive.

SE5: If the Project is approved a condition of approval must be imposed requiring:

- Erect signs directing workers to local business areas around the Project including Haberfield Village;
- Undertake an assessment to measure the impact on employment within the Ashfield LGA, including the project net change in the number of people employed in businesses and the net change in turnover (\$) generated by local businesses.

SE6: If the Project is approved a condition of approval must be imposed requiring the Proponent to:

- commit \$500,000 to support upgrades to Haberfield town centre to revitalise business areas post-construction;
- implement a new marketing campaign promoting Haberfield and surrounding businesses;
- provide a help line for businesses to access with any concerns;
- conduct quarterly marketing/information campaigns during construction in local newspapers - Inner West Courier, CIAO and The Vision China Times - that promote “business as usual” in Ashfield LGA to showcase its villages as places to do business;
- Commit \$50,000 over five years to support Feast of Flavours events in Haberfield, Ashfield and Summer Hill to support renewed economic development during and post-construction.

SE7: The NSW State Government should Increase support/visitation from NSW Small Business Commissioner to Ashfield area and include Ashfield, Haberfield and Summer Hill villages in Tourism NSW

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campaigns for at least five years from the commencement of construction.

- SE8:** If the Project is approved, a condition must be imposed which requires the project proponent to commission a way finding study to examine opportunities to upgrade existing signage, particularly post the operational phase of the project, to direct people to new amenities and facilities and access arrangements. The way finding study recommendations are to be implemented by the project proponent prior to the commissioning of the new road works.

10.9 Urban Design and Visual Impact

- UDAV1:** The Project should be amended to relocate the Wattle Street interchange to the City West link at Lilyfield.

- UDAV2:** The EIS must be amended to provide greater detail with respect to the urban design, materials, finishes and landscaping of the portal interchanges including 3-D computer simulations from various vantage points in the public and private domains.

The design, materials and landscaping must give regard to and respect the unique streetscape and built form of the Haberfield 'Garden Suburb'.

- UDAV3:** The EIS must be amended to include additional visual impact analysis of the Project infrastructure from greater location 'receivers' in and around Haberfield and Ashfield.

- UDAV4:** The Project should be amended to have a much wider verge (footpath) of around 6 metres to properties on the western side of Wattle Street to maximise the separation buffer between houses and the roadway.

- UDAV5:** The Project should be amended to provide at least a 6 metre wide verge on the northern side of the Ramsay Street crossing of Wattle Street. This crossing should be provided with special treatments to the pavements and to the balustrade fencing, space for separate bicycle paths, thematic public artwork and regular rhythmic planting disguising the major roadways vista to the north. The southern verge should mirror these types of treatment a verge area comprising special treatments to the pavements and with thematic public artwork.

The intersection of Wattle Street and Parramatta Road should include special thematic treatments to recognise the southern entry into the Haberfield 'Garden Suburb'.

- UDAV6:** The Project should be amended to provide a wider verge (footpath) area along the frontage of Yasmar on Parramatta Road and conceptually/thematically this widened verge should be respectful of the front garden grounds of this State Heritage item.

- UDAV7:** The Project should be amended to include a pedestrian bridge over Parramatta Road between 162 Parramatta Road and near 169

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Parramatta Road.

UDAV8: The Project should be amended to provide for a pedestrian link across Parramatta Road at Dobroyd Canal.

UDAV9: The Project should be amended to include, in consultation with Ashfield Council, 'urban design street improvements' or local area traffic management treatments in local streets surrounding the Project footprint. The cost of these works shall be borne by the Proponent.

UDAV10: The EIS must be amended to include a detailed lighting assessment of the Project for both construction and operational stages.

UDAV11: If the Project is approved, a condition of approval must be imposed requiring that the Proponent convene an urban design advisory committee including representatives from Council and the local community, to advise on the urban design and landscaping components of the eastern ventilation site, the portal interchanges, noise walls and other key built elements of the Project.

UDAV12: If the Project is approved a condition of approval must be imposed requiring that no variable message signs are to be installed on Parramatta Road, Dobroyd Parade, Wattle Street or any other road in Haberfield or Ashfield

10.10 Biodiversity

BIO1: The EIS must be amended to have greater regard to the impacts on habitat connectivity as highlighted in the Parramatta River Native Habitats and Fauna Report 2014, as a consequence of the vegetation clearance at Reg Coady Reserve, Haberfield and along Dobroyd Parade, from Martin Street to Loudon Street in Haberfield.

BIO2: The EIS must be amended to include biodiversity offsets to mitigate the losses to biodiversity and increased fragmentation of habitats as a result of the Project.

BIO3: The EIS must be amended to include further field surveys for and assessment of the potential impacts on the Threatened Eastern Bent-wing bat which is known to roost in close proximity to the Project footprint.

BIO4: The Proponent/Contractor must consult with Ashfield Council in respect of the environment management measures - biodiversity listed in Table 20.6 of the EIS prior to works commencing, to ensure that adequate protection for biodiversity is provided during construction and that sufficient mitigation/ revegetation measures are undertaken prior to completion of the Project.

10.11 Flooding and Drainage

FD1: If the Project is approved, a condition of approval must be imposed requiring a flood management strategy (FMS) to be prepared to

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manage flooding and stormwater related issues and will include:

- The layout of construction ancillary facilities
- Location of amenities buildings and equipment outside high flood hazard areas
- Controlled diversion of overland flow either through or around work areas
- Staging construction to limit the extent and duration of temporary works on the floodplain
- Monitoring weather conditions
- Ensuring construction equipment and materials are removed from floodplain areas at the completion of each work activity, or upon issuing of a weather warning of impending flood producing rain
- Provision of temporary flood protection for properties identified as being at risk of adverse flood impacts during any stage of construction of the project
- Development of flood emergency response procedures to remove temporary works during periods of heavy rainfall and staff evacuation plans.
- For site facilities located within the floodplain, the FMS will identify how risks to personal safety and damage to construction facilities will be managed.

The sites must be established and amenities located so as to prevent any possible flooding hazard and to eliminate any possible risk.

Stockpiles must be suitably located so that they do not obstruct flow paths which will cause adverse flooding affects to neighbouring properties and allow material to be washed into drainage lines and receiving waters. If this is not possible, suitable measures need to be implemented so as to avoid any possible risk of material being washed into receiving drainage lines and waterways and to protect any neighbouring property that will be affected.

The FMS shall be peer-reviewed and confirmed as meeting the requirements of this condition by a suitably qualified and experienced independent hydrological engineer and Council.

FD2: If the Project is approved, a condition of approval must be imposed requiring a barrier wall along the eastern side of the tunnel dive structure to direct overland flow around the tunnel entry during a PMF event. The top of the barrier wall will be located a minimum 0.5 m above the 100 year ARI flood level.

An investigation is to be undertaken into the impact on the surrounding localised catchment. Appropriate mitigation measures

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are to be implemented such that there is no additional flooding to adjacent land and a maximum increase of 10mm on Parramatta Road.

The investigation and design shall be peer-reviewed and confirmed as meeting the requirements of this condition by a suitably qualified and experienced independent hydrological engineer and Council.

FD3: If the Project is approved, a condition of approval must be imposed requiring diversion of stormwater drainage line XD09c and the overland flow path at Chandos Street to be designed to contain flows within the project footprint, preventing an increase in the extent of inundation within the adjacent commercial property.

Refinement of the pit and pipe drainage system design will be undertaken to prevent an increases in flows and flood levels along Parramatta Road and Bland Street.

That any modifications to the drainage line are to be in form of a conventional stormwater drainage system and it is not to be a siphonic arrangement.

An investigation is to be undertaken into the impact on the surrounding localised catchment. Appropriate mitigation measures are to be implemented such that there is no additional flooding to adjacent land and a maximum increase of 10mm on Parramatta Road, Chandos Street and Bland Street.

The investigation and design shall be peer-reviewed and confirmed as meeting the requirements of this condition by a suitably qualified and experienced independent hydrological engineer and Council.

FD4: If the Project is approved, a condition of approval must be imposed requiring road level and barriers at the entry to the tunnel portals to prevent ingress of floodwaters during a PMF event, providing a freeboard allowance greater than 0.5 metres freeboard to the peak 100 year ARI flood level.

A drainage path will be provided to drain local catchment runoff from Allum Street around the tunnel dive structure during a PMF event.

An investigation is to be undertaken into the impact on the surrounding localised catchment. Appropriate mitigation measures are to be implemented such that there is no additional flooding to adjacent land and a maximum increase of 10mm on Wattle Street or Allum Street.

The investigation and design shall be peer-reviewed and confirmed as meeting the requirements of this condition by a suitably qualified and experienced independent hydrological engineer and Council.

FD5: If the Project is approved, a condition of approval must be imposed requiring measures to be implemented and maintained to intercept concentrated flow and divert it in a controlled manner to prevent scour of disturbed surfaces and transportation of sediment and construction

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materials.

Surface earthworks are required to be suitably protected from any possible scouring in the event of a storm, so as to prevent the transport of any sediment and construction materials to receiving waters.

The investigation and design shall be peer-reviewed and confirmed as meeting the requirements of this condition by a suitably qualified and experienced independent hydrological engineer and Council.

- FD6:** If the Project is approved, a condition of approval must be imposed requiring bunding to be provided to direct overland flow along the haul road and around the Sydney Water pump station.

An investigation is to be undertaken into the impact on the surrounding localised catchment. Appropriate mitigation measures are to be implemented such that there is no additional flooding to adjacent land and a maximum increase of 10mm on Wattle Street.

- FD7:** If the Project is approved, a condition of approval must be imposed requiring the flood standard adopted at each tunnel entry during construction to take account of the duration of construction, the magnitude of inflows and the potential risks to personal safety and the project works.

A Risk Management Plan must be developed that addresses floods in excess of the flood protection levels so as not to pose any safety risk to road users and operations staff.

- FD8:** If the Project is approved, a condition of approval must be imposed requiring all surface water flows from construction sites to be detained through appropriate measures to ensure that there is no exacerbation of existing flooding to the satisfaction of Ashfield Council. Agreement must be reached with Ashfield Council on appropriate and specific measures to be implemented at various locations.

- FD9:** If the Project is approved, a condition of approval must be imposed requiring a detailed Operational Stormwater Management Sub Plan to be prepared in consultation with Ashfield Council. The Sub Plan shall provide details on flood risks, catchment analysis including localised flooding, local drainage catchment assessments, existing drainage systems and capacity, drainage changes resulting from the proposal and implications for the system. The Proponent must fund any additional stormwater drainage systems required as a result of the project, including any detention requirements. The design must take into consideration climate change implications on rainfall and drainage characteristics and blockages of waterway structures from floating debris. The new proposed drainage systems shall be designed to ensure there is no substantial increase in downstream flooding (inundation level or duration) or increase in total volumes to existing drainage systems. The new proposed drainage systems must ensure

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that flood hazards and risks are eliminated. The design shall meet the following criteria:

- A maximum increase in inundation time of one hour in a 1 in 100 year ARI rainfall event;
- A maximum increase of 10mm in inundation at properties where floor levels are currently exceeded in a 1 in 100 year ARI rainfall event; and/or provide alternative flood mitigation solutions consistent with the intent of these limits;
- A maximum increase of 10mm in overland flow paths on public roads; and/ or provide alternative flood mitigation solutions consistent with the intent of this limit;
- The identification of measures to be implemented to minimise scour and dissipate energy at locations where flood velocities are predicted to increase as a result of the project and cause localised soil erosion;
- Identification of drainage system upgrades;
- Alterations/augmentations to existing stormwater infrastructure;
- Substantial drainage improvements must be undertaken in the vicinity of the intersection of Chandos Street and Parramatta Road, (both North and South) so that any storm event up to a 100 year ARI will not pose any risk or damage to life or property.
- Substantial drainage improvements must be undertaken in the vicinity of the intersection of Wattle Street/Allum Street and Ash Lane so that any storm event up to a 100 year ARI will not pose any risk or damage to life or property.
- Substantial drainage improvements must be undertaken within the vicinity of the intersection of Ramsay Street/City West Link and the intersection of Martin Street/City West Link and in the receiving stormwater pipe network of Martin Street so that any storm event up to a 100 year ARI will not pose any risk or damage to life or property.
- Identification of the timing of ongoing maintenance for the works.

The Operational Stormwater Management Sub Plan shall be prepared by a suitably qualified and experienced person in consultation with directly affected landowners and Council. The Operational Stormwater Management Sub Plan shall be peer-reviewed and confirmed as meeting the requirements of this condition by a suitably qualified and experienced independent hydrological engineer and Council. All relevant infrastructure information shall be provided to the relevant Council and NSW State Emergency Service, to assist in the preparation of any new or necessary update(s) to the relevant plans and documents in relation to flooding.

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- FD10:** If the Project is approved, a condition of approval must be imposed prohibiting disposal of stormwater to Council's stormwater system without prior agreement from Ashfield Council. Any changes to Council stormwater, including increased volumes, shall be designed, constructed, operated and maintained to meet the requirements of Ashfield Council.
- FD11:** If the Project is approved, a condition of approval must be imposed requiring all new and/or modified stormwater drainage and facilities, including gross pollutant traps and sedimentation basins, to be inspected regularly and maintained in a functional condition for the life of the project by the Proponent, with an emphasis on ensuring there are no system blockages and there is no additional flooding on adjacent land and roads.
- FD12:** If the Project is approved, a condition of approval must be imposed requiring any stormwater released into Council's stormwater network and/ or Iron Cove to be equivalent or better quality. Stormwater treatment may be required, including ongoing maintenance.
- FD13:** If the Project is approved, a condition of approval must be imposed requiring appropriate modifications and upgrades to be made to the road levels and/ or stormwater network to manage flood risk on Dobroyd Parade. Any changes must be undertaken in consultation with the community and they will require the approval of Ashfield Council.

10.12 Planning, Land Use and Assets

- PLUA1:** The NSW Government be apprised that owners of property acquired for the Project should receive market value for that property and that many landowners are of the view that fair compensation has not been received. In addition, property owners should be given appropriate resources and time beyond the mandatory statutory requirements to finalise their response to acquisition notices to ensure that fair and reasonable compensation packages can be negotiated.
- PLUA2:** The NSW Government commission an independent party to undertake a review of compensation offered to those who believe they were not fairly compensated.
- PLUA3:** A condition of approval must be imposed requiring that any damage caused to local roads must be repaired to Ashfield Council's specifications and to the satisfaction of Council, at the Proponent's expense.
- PLUA4:** The EIS must be amended to include greater detail in regard to the alignment of and construction methodology for Stage 3 works with a view to minimising further disturbance to the residents and businesses of Ashfield and Haberfield.
- PLUA5:** The Proponent is to be advised that Ashfield Council will not take

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responsibility for the new access road to No. 98 Chandos Street, Ashfield. The Proponent will be responsible for the ongoing renewal and maintenance of this road.

PLUA6: A condition of approval must be imposed requiring that any Fig trees removed from Reg Coady Reserve for construction or associated site works, access and construction management are to be replaced on a 2 for 1 basis (that is 2 replacement trees for each 1 tree removed) from 1000 litre containers. Ashfield Council is to be consulted as to the suitability and quality of all completed tree planting and soft landscaping.

PLUA7: A condition of approval must be imposed requiring that a Facility Management Plan is developed for each construction site. This plan must include:

- Details for safe public pedestrian access around the construction site.
- Details of how it is intended to manage light spill from the construction sites onto residential properties, to minimise impact on resident amenity. Light spill as measured at adjacent residential properties must be no greater (brighter) than P5 as defined in AS1158.

PLUA8: A condition of approval must be imposed requiring that any new street trees must be appropriate species and in accordance with Ashfield Council's Street Tree Strategy to Council's satisfaction. In this regard, the following must be implemented:

- The plant species shall include a mixture of both locally indigenous and Australian native as well as exotic plant species;
- The plant species will demonstrate an understanding of the requirements of the relevant Park Plans of Management, heritage issues, biodiversity, habitat creation opportunities, soil types (including acid sulphate soils), global warming (including related changes to soil hydrology) and the individual planting requirements due to the planting site microclimates;
- Stormwater recycling is to be a permanent component for the long term irrigation of the tree planting and landscaped screen planting;
- Ashfield Council is to be consulted with regard to the species and landscape design prior to its adoption;
- All trees planted in the road easements, landscape buffers, and adjacent open space/ parkland are to be planted from containers having a minimum size of 45 litres;
- All trees planted in turfed areas are to be mulched;
- An Australian Qualification Framework Level 5 Consultant

REPORT ON THE M4 EAST PROJECT (WESTCONNEX) ENVIRONMENTAL IMPACT STATEMENT (EIS)

Arborist is to be responsible for the supervision and auditing of the protection and pruning of all retained trees and the supervision of all tree works associated with the nursery stock selection, tree transport to site, planting and establishment maintenance;

- The Proponent and its contractors are to provide effective landscape establishment maintenance for a period of 18 months; and
- Ashfield Council will not accept the long term landscape and tree maintenance for the WestConnex works.

PLUA9: If the Project is approved, the Proponent or the NSW State Government must provide funding to Ashfield Council to amend the Ashfield LEP to accord with the new infrastructure.

PLUA10: If the Project is approved, the Proponent or the NSW State Government must provide funding to Ashfield Council to amend relevant Ashfield DCPs, plans and policies to accord with the new infrastructure and to provide detailed controls for future development of residual land.

PLUA11: That the NSW Government should not initiate any process that would change land use zoning, building heights or densities on residue acquired land associated with the Project.

PLUA12: A condition of Approval must be imposed requiring that all land that is acquired for the Project within the Ashfield LGA that is surplus to requirements for the Project infrastructure (i.e. residue land) be transferred to the ownership of Ashfield Council to be classified as Community Land and to be used for recreational and community purposes to assist in offsetting the significant adverse amenity impacts of the Project on the Ashfield Community.

10.13 Greenhouse Gas and Climate Change Risk and Adaptation

GGCC1: That the EIS be amended to extend the comparison of operational road use emissions with and without the Project to include other transport options (e.g. those outlined in Chapter 4.2) as this would provide a greater context and understanding of the potential emissions.

GGCC2: That the EIS be amended to include additional commentary on the comparison of car versus public transport emissions and how the NSW Long Term Transport Master Plan objective to grow the proportion of travel by sustainable modes such as public transport as noted in the policy setting section (21.2.1) is being adhered to.

GGCC3: If the Project is approved, a condition of approval must be imposed requiring that Scope 3 emissions (indirect) be minimised through appropriate enforcement by the Proponent of sustainable supply chain management, including but not limited to the purchase of low carbon

REPORT ON THE M4 EAST PROJECT (WESTCONNEX) ENVIRONMENTAL IMPACT STATEMENT (EIS)

materials and the application of emissions targets for contractors.

GGCC4: If the Project is approved, a condition of approval must be imposed requiring that the annual Sustainability report for the Project include the verification of the emissions profile for the Project as illustrated in Figure 21.2 of the EIS.

GGCC5: If the Project is approved, a condition of approval must be imposed requiring the detailed design to demonstrate how the adaptation/mitigation options outlined in Chapter 24 (Table 24.5) have been addressed and these details must be made publically available for comment.

10.14 Miscellaneous

MISC1: Council requests that the NSW State Government provide funding assistance to the order of \$250,000 to Ashfield Council to assist in resourcing tasks required of Council during construction and post-construction monitoring which are as a direct consequence of the Project.

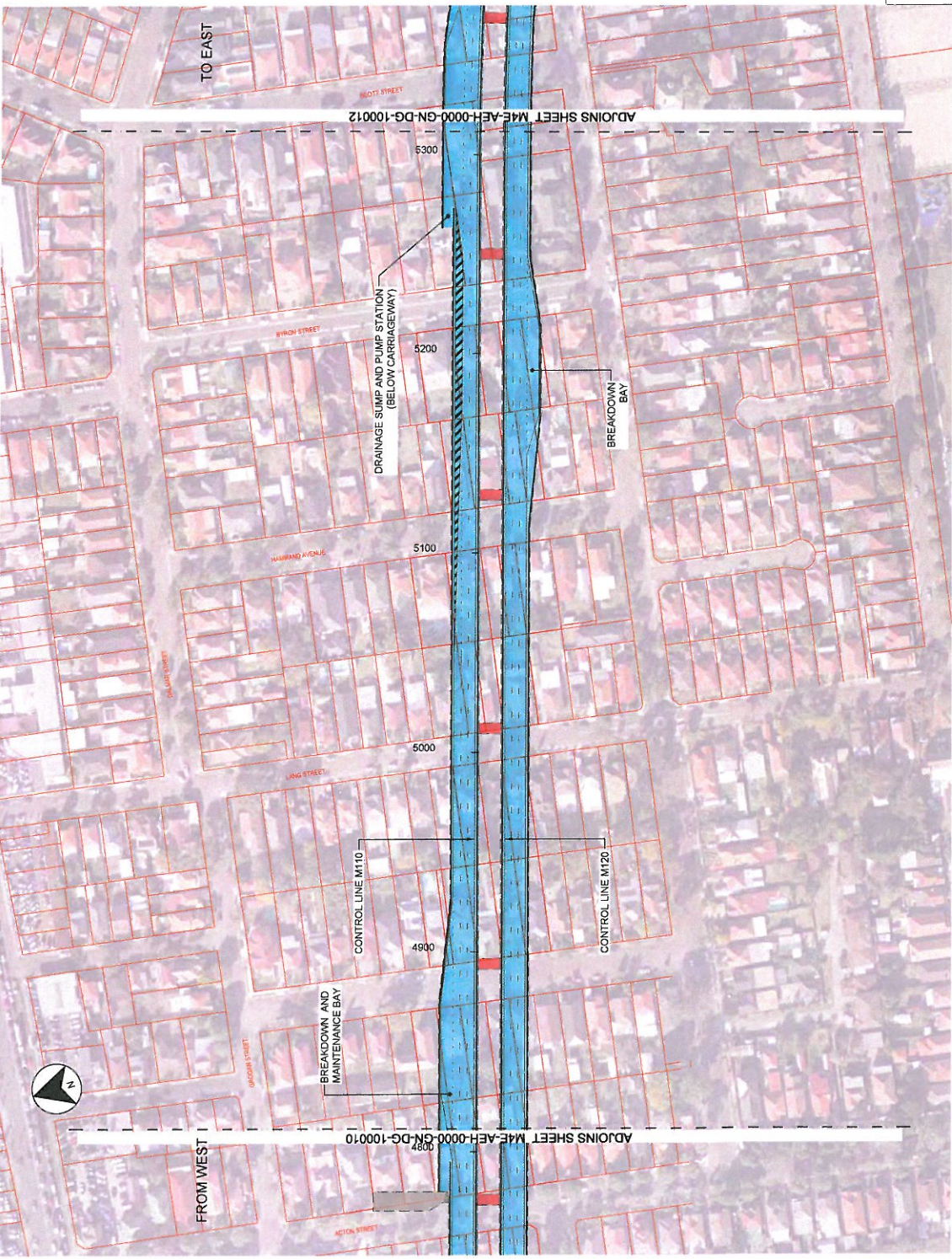
MISC2: A Condition of approval must be imposed requiring the CEMP to include a Construction Traffic Management Plan that is prepared in consultation with Ashfield Council and which gives due regard to the design and construction of any full or partial road closures and the requirement for large truck movements including Council's waste collection vehicles.

PHIL SARIN
Director Planning and Environment

CATHY EDWARDS-DAVIS
Director Works & Infrastructure

ATTACHMENT 1

- LEGEND
- EXISTING BRIDGE
 - PROPOSED BRIDGE
 - BUILDINGS / FACILITIES
 - DRAINAGE STRUCTURE
 - DIVE STRUCTURE
 - CUT AND COVER TUNNEL
 - DRIVEN TUNNEL
 - PROPOSED FOOTPATH / CYCLEWAY
 - SUBSTATION NICHE (SS)
 - LONGITUDINAL EGRESS PASSAGE
 - CROSS PASSAGE (XP)
 - PROPOSED RETAINING WALL
 - EXISTING NOISE WALL
 - PROPOSED NOISE WALL
 - PROPOSED HEADLIGHT SCREEN



KEY PLAN
ZONE 0000

01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15

ALL DIMENSIONS ARE PRELIMINARY AND SUBJECT TO ADJUSTMENT IN A DETAILED DESIGN

WESTCONNEX M4 EAST

GENERAL
PROJECT WIDE
LAYOUT PLAN
SHEET 11

PROJECT: M4E - AEH - 0000 - GN - DG - 100 - 011 - W1

COMPANY: AECOM

DESIGNER: HASSELL

DATE: 20/02/2015

SCALE: 1:2000

STATUS: TENDER DESIGN

NOT TO BE USED FOR CONSTRUCTION

ORIGINAL DATE: 20/02/2015

DESIGNED BY: PP

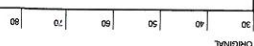
COORDINATE SYSTEM: MGA ZONE 56

HEIGHT DATUM: A.D.D.

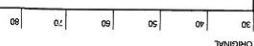
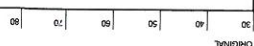
DATE PRINTED: 21/02/2015 4:23 PM

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REV	DATE	DESCRIPTION	APPROVAL
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W2	27/02/2015	ISSUED FOR MODIFIED TENDER	TD
M	20/02/2015	ISSUED FOR MODIFIED TENDER	TD
REV			



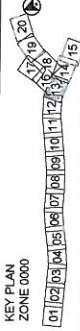
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LEGEND

- EXISTING BRIDGE
- PROPOSED BRIDGE
- BUILDINGS / FACILITIES
- DRAINAGE STRUCTURE
- DIVE STRUCTURE
- CUT AND COVER TUNNEL
- DRIVEN TUNNEL
- PROPOSED FOOTPATH / CYCLEWAY
- SUBSTATION NICHE (SS)
- LONGITUDINAL EGRESS PASSAGE
- CROSS PASSAGE (XP)
- PROPOSED RETAINING WALL
- EXISTING NOISE WALL
- PROPOSED NOISE WALL
- PROPOSED HEADLIGHT SCREEN

KEY PLAN
ZONE 0000



ALL DIMENSIONS ARE PRELIMINARY AND SUBJECT TO ADJUSTMENT IN A DETAILED DESIGN

WESTCONNEX M4 EAST

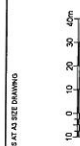
GENERAL
PROJECT WIDE
LAYOUT PLAN
SHEET 13

PROJECT: M4E - AEH - 0000 - GN - DG - 100 - 013 - W1



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ORIGINAL SIZE	A3
COORDINATE SYSTEM	MGA ZONE 56
DATE PRINTED	15/06/2015 4:11 PM
FILE NAME	15/06/2015 4:11 PM

WestConnex



REV	DATE	DESCRIPTION	APPROVAL
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W2	27/06/2015	ISSUED FOR MODIFIED TENDER	TD
W3	20/06/2015	ISSUED FOR MODIFIED TENDER	TD

LEGEND

- EXISTING BRIDGE
- PROPOSED BRIDGE
- BUILDINGS / FACILITIES
- DRAINAGE STRUCTURE
- DIVE STRUCTURE
- CUT AND COVER TUNNEL
- DRIVEN TUNNEL
- PROPOSED FOOTPATH / CYCLEWAY
- SUBSTATION NICHE (SS)
- LONGITUDINAL EGRESS PASSAGE
- CROSS PASSAGE (CP)
- PROPOSED RETAINING WALL
- EXISTING NOISE WALL
- PROPOSED NOISE WALL
- PROPOSED HEADLIGHT SCREEN



KEY PLAN
ZONE 0000



ALL DIMENSIONS ARE PRELIMINARY AND SUBJECT TO ADJUSTMENT IN A DETAILED DESIGN

WESTCONNEX M4 EAST

GENERAL
PROJECT WIDE
LAYOUT PLAN
SHEET 17

PROJECT	COUNTRY	SCALE	DATE	DOCUMENT	LOD NO.	DOC NO.	REV
M4E	AEH	0000	GN	DG	100	017	W1



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COORDINATE SYSTEM	COORDINATE SYSTEM	COORDINATE SYSTEM	COORDINATE SYSTEM	COORDINATE SYSTEM	COORDINATE SYSTEM
MGA ZONE 58	MGA ZONE 58	MGA ZONE 58	MGA ZONE 58	MGA ZONE 58	MGA ZONE 58
AHD	AHD	AHD	AHD	AHD	AHD
REVISION	REVISION	REVISION	REVISION	REVISION	REVISION
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SCALE	SCALE	SCALE	SCALE	SCALE	SCALE
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DATE	DATE	DATE	DATE	DATE	DATE
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2006/01/15	2006/01/15	2006/01/15	2006/01/15	2006/01/15	2006/01/15
2006/01/15	2006/01/15	2006/01/15	2006/01/15	2006/01/15	2006/01/15
2006/01/15	2006/01/15	2006/01/15	2006/01/15	2006/01/15	2006/01/15

80 mm ON ORIGINAL

ATTACHMENT 2

WESTCONNEX M4 EAST : ENVIRONMENTAL IMPACT STATEMENT

Comment on the Assessment of Impacts upon Built Heritage

prepared for

Ashfield Council

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October 2015

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3.0	The Impacts Examined	4
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	Author CV	

1.0 Introduction

This report reviews the approach and proposals to manage the issues of built heritage impact raised by the WestConnex Project Application. It seeks to assist Ashfield Council's consideration and subsequent comment on the Project to the State Government. Its focus is upon response to the assessed impacts of the development upon built heritage matters under Ashfield Council's stewardship, encompassing impacts upon identified and listed heritage items, and upon conservation areas which primarily involves the Haberfield Conservation Area.

The 10th of 10 objectives enunciated within the EIS for the Project is to:

- *Protect natural and cultural resources and enhance the environment.*

To achieve this, the Project:

"...would be undertaken in accordance with the environmental management constraints identified in this EIS as well as any additional measures identified in conditions of approval for this Project".

A reading of the EIS makes it apparent that matters of implication for heritage in the Project appear throughout the various section of the EIS document, and make difficult a comprehensive assessment of the manner in which heritage issues have been identified, and how they are proposed to be addressed.

For Council and the Ashfield community, the impact of the Project upon the heritage places falling within its influence are serious indeed, as expressed at the public meetings held to discuss the issue, and in submissions made by residents and concerned private individuals. Great concern relates to the impact upon the suburb of Haberfield, most of which has been managed by Council (and its community) as a Heritage Conservation Area for some forty years. The Haberfield HCA has been statutorily listed through Council's 1985 LEP and managed through the continuously refined Development Control Plan since 1994, yielding the results appreciable in the suburb today.

Those areas within the Haberfield HCA to be affected are not the only heritage places to be affected by the Project, both within Ashfield and within neighbouring local government areas. Individually listed places within and beyond Ashfield are also to be affected, from impact upon setting, to loss through demolition, but Ashfield's heritage seems set to be most affected. The review of these impacts and suggestions for their mitigation have been prepared by GML Heritage Pty Ltd (GML) - their report, conclusions and recommendations being set out in Volume 2H, Appendix S.

Relevantly, the Aims of Ashfield Council's LEP 2013 are:

- (a) to promote the orderly and economic development of Ashfield in a manner that is consistent with the need to protect the environment,*
- (b) to retain and enhance the identity of Ashfield as an early residential suburb with local service industries and retail centres,*
- (c) to identify and conserve the environmental and cultural heritage of Ashfield,*

.....
 (f) to protect the urban character of the Haberfield, Croydon and Summer Hill urban village centres while providing opportunities for small-scale, infill development that enhances the amenity and vitality of the centres,

(h) to ensure that development has proper regard to environmental constraints and minimises any adverse impacts on biodiversity, water resources, riparian land and natural landforms.

Conservation of Ashfield's heritage and cultural resources is a crucial interest for Council, and the impact of the WestConnex Project which will be, by admission in the Project EIS, of great adverse impact upon that heritage, is therefore a matter of serious concern.

2.0 Heritage Impacts

The heritage items, comprising individual buildings through to Conservation Areas, and the Project impacts upon them that have been assessed by GML, have included both established statutory listings and proposed listings; the impacts range from loss (complete demolition) to deleterious effects upon setting.

Concisely reported in the Executive Summary, for Ashfield the project entails:

- In Ashfield generally - the loss to demolition of 2 locally significant Items in Chandos Street for the Parramatta Road Construction site; the demolition of four potential locally significant Items on the southern side of Parramatta Road; minor visual impacts upon three locally significant items in the vicinity of the tunnel works;
- Within the Haberfield Heritage Conservation Area:
 - the demolition of 53 properties for "new motorway infrastructure" - including 11 heritage items and 29 contributory items, and entailing the physical and visual loss of the buildings, their gardens, street trees and the streetscapes to which they contribute;
 - the permanent physical and visual impacts of the new motorway infrastructure including the roadways, the modification of topography through walls and retaining structures, and the noise attenuation walls;
 - the temporary visual impacts of the construction work sites during the Project's construction;
 - the effective "fragmentation" of the HCA through its separation by the construction of the Wattle Street interchange and associated structures and tunnel portals, through destruction of its legibility in the removal of characteristic houses, block and street layouts, and landscaping;
 - changes to the frontage and access to "Yasmar", the State Heritage listed property fronting Parramatta Road;

- truncation of Allum Street, Haberfield, through demolition of houses and occupation of acquired lands as one of the Construction Sites for the Project;
- Potential vibration, settlement and noise impacts which could lead to adverse impacts upon the condition, appearance and structural integrity of contributory items within the HCA;
- Potential impacts upon historical archaeological resources;
- Potential and actual impacts arising from preliminary components of further stages of WestConnex that are proposed to be built as part of the present contract, including stubs for further tunnels, and possible further construction compounds.

These impacts give rise to three areas of concern for the HCA:

- the extent of the loss of contributory buildings and streetscapes, and the consequent structural impact upon the HCA
- the impact of the construction compounds (proposed and future) temporary in purpose but permanent in their conflict with elements of the HCA; and
- the impact of the permanent tunnel and interchange infrastructure, in the form of the ground works, landscaping and ventilation structures (the stack) to be imposed upon the HCA and its landscape.

3.0 The Impacts Examined

3.1 Losses and detrimental impact to Items

Heritage Items and Conservation Areas within Ashfield that are in the “potential impact zone” of the Project are tabulated in Table 6.1, Section 6 of the HIA. Primarily, listed houses in Wattle Street are to be demolished – Nos. 9,19,21,23-25,35,37-39,41-43, 51 and 53. Nos. 164 Ramsay and 46 Martin Streets are also to be demolished. The placement of these Items can be appreciated from Fig. 6.6, which indicates their conflict with the portal and cut-cover area of Civil Construction site C9.

The mapping also shows how groupings of adjacent contributory houses are to be demolished for the Eastern Ventilation facility and contiguous civil construction site between Walker and Wattle Streets (C8). Further contributory buildings are to be demolished in the Northcote Street Tunnel Site C7.

The mapping indicates how these demolitions will place the adjacent, remaining houses in a new, as yet imprecise or uncommunicated context of motorway infrastructure, noise barriers and landscape – all seemingly yet to be designed. Looking more closely:

- houses at the southern end of Northcote Street will be placed against the Northcote Tunnel Works Site (and its eventual redeveloped form);
- houses along the western side of Wattle Street will have reduced frontage gardens addressing the new busy slip road allowing access to Ramsay Street and Dobroyd Parade; a landscape zone will separate this slip road from the tunnel entrance portals;

- houses ranged along the western side of Walker Avenue will lose their rear neighbours (along the eastern side of Wattle Street) and their back fence will become the edge of the new Tunnel zone, with drive walls and apparently minimal landscape area;
- at the southern end of Walker Avenue, where contributory houses will be lost to the civil zone and ventilation structures, contributory houses ranged along the eastern side of the street will face the civil site and after construction is completed, the eventual new development of the site ;
- on Parramatta Road:
 - the frontage to the State heritage listed “Yasmar” - a key historic component of the area tangibly linking the suburb to its earliest settling family the Ramsays – is said to be impacted in a minimal, but really unspecified manner;
 - the former Peak Freans factory building, now Bunnings premises, will be under-tunnelled with possible settlement and vibration impacts;
 - Nos. 94 and 96 Chandos Street will be demolished.

A fair and simply expressed impact evaluation must be reached, both for the loss of what now exists and is valued, and of the impact of what is to proposed to be constructed, so that hopefully, its impacts can still be lessened.

3.2 Impacts interpreted

In evaluating a major community project proposed as having significant broad benefits, the loss of a small number of individually listed buildings might be accepted with regret as a sustainable community and individual cost. While very few projects could and would be excused of adverse impact upon a State Heritage Item, the loss of buildings considered to be of a simple or representative heritage value MIGHT be tolerated. However, the loss of a substantial part of a Heritage Conservation Area that has been raised and discussed by State and Local Governments as a place of State significance is not so readily tolerable or amortisable. It should be avoided, full stop.

With regard to the impact upon Haberfield, the EIS Summary concludes:

“Although localised in the Section of the HCA around Wattle Street, Northcote and Wolseley Streets, the impact of the proposal on the heritage significance of the Haberfield HCA and individual heritage items within it would be significant and unable to be effectively mitigated”.

As to mitigation measures it is asserted:

“The detailed design, documentation and construction of the project would be managed to ensure that, as far as possible, the identified potential heritage and archaeological impacts are minimised and avoided.”

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. What then, is being lost, and how is it proposed to use the lands so cleared, and what will the community be required to accept in its place?

In its scale, its likely effect upon the established landscapes absorbed AND juxtaposed with new road development, and its impacts upon the established community of Haberfield, it is difficult to find analogies for the Project. One example could be Hunters Hill, where the suburb sustained the upgrade of Burns Bay Road through construction of Fig Tree Bridge, Tarban Creek Bridge, and an open cut roadway through the peninsula.

This cut a huge swathe through the established historic landscape, the loss of 19th Century streetscapes, the demolition of heritage items including the residence *St. Malo*, and the separation of a community, raising a substantial challenge to its established identity.

While Wattle Street has been an increasingly busy road carrying heavy traffic, and its future has been signalled through zonings and acquisitions over time, it has not lost its place as visibly part of Haberfield, whose scale and domesticity extend from the corners of those streets intersecting with Wattle Street. The development of the new tunnel interchange and infrastructure will change not only the character of Wattle Street but challenge the capacity for the areas east and west of the road to be apprehended as parts of the same whole.

This goes beyond matters of aesthetics, the appreciation of a place of singular, intended and designed aesthetic characteristics, and adverse historic impact through loss of the important evidence of planning and architectural endeavours and innovation. It extends to the adverse social heritage impact through the adverse impacts on community identity and the relationship a community has with such a significant place.

4.0 Urban Design, Landscape Character and Visual Impacts

If little can be done about the extent of the projected losses of heritage items caused by the Project, emphasis must shift to how its realisation can be influenced to greater regard for the sensitive heritage context it will occupy. While the assessment of heritage impacts by GML has not retreated from the conclusion that the impacts upon heritage values are of a major adverse nature, there is also a tacit acknowledgement – and assertion – throughout the EIS that high quality design will be a part of the successful project outcome that will respond to heritage losses. However, this must be informed by accepting a necessarily close relationship with the management of heritage issues – if truly high quality design outcomes are to be achieved. Invocations of “high quality design” are increasingly hollow in times when opinions are bought and sold and every design is promised to be of “high quality”. The eventual delivery is too often disappointing.

A report by Aecom addresses Urban Design, Landscape Character and Visual Impact assessments. This report, and the GML Heritage Impact Assessment emphasise the need for design at all levels of the Project to be aware and responsive to the heritage significance of its context, and acknowledge that at every step and decision, solutions which go to better heritage outcomes need to be prioritised. However, some of the Aecom comments and assessments do not suggest a literacy with heritage issues, including statutory requirements that would normally apply or prevail (but which might be

set aside by the nature of the Project). **It must be a foremost, central concern of the ongoing design resolution of the Project that the heritage implications of design and construction elements are assimilated and accepted within the evolving Project build task. This intent, while signalled, is not yet convincingly demonstrated.**

The report summary states that it addresses the WestConnex Urban Design Framework's vision statement that

"a 'whole of corridor' design approach shall be adopted, to ensure the realisation of a memorable motorway experience that is legible, identifiable and integrated into the existing urban fabric. The successful project 'integration within the existing urban fabric is critical to a well-managed response to potential visual impact and is of direct relevance to this assessment".

How this is reconciled with heritage issues will be a key part of the desired "integration with the existing urban fabric". Key elements of the report's response were to include:

- ☐ *Identification of urban and landscape design objectives of the project to enhance the interchanges, tunnels, 'cut and cover' and 'slot' arrangements.*
- ☐ *Provision of an overview description of urban design and landscape concept for the project.*
- ☐ *Consideration of residual land and treatments, including identification of opportunities to utilise surplus or residual land, and utilise key structures (such as stacks) for multiple uses.*
- ☐ *Identification of measures to create, promote and enhance connectivity across Parramatta Road, where impacts to connectivity are associated with the project.*
- ☐ *Demonstration of how the proposed urban and landscape design elements would be consistent with the existing and desired future character of the area.*

All of these extend the inter-relationship of the Urban Design/Landscape and Visual Impacts concerns with heritage considerations, but do not say so. Examining Urban Design and Landscape Character impacts, the report summary outlines:

"A total of 15 Landscape Character Zones (LCZ) were identified as having the potential to be impacted by the surface components of the project. The LCZs reflect the differences in character that are inherent in such a densely urbanised setting, due to factors such as: mix and period of housing types; interweaving of land uses, and the number of different land uses.

Potential impacts were considered across the 15 LCZs. The assessment found that high visual impacts would only occur at three of the identified LCZs; those being the Concord Oval precinct, Haberfield precinct and the Yasmar Juvenile Training Facility."

The Haberfield Precinct comprises a high value, locally-listed Heritage Conservation Area, and *Yasmar* is a State Heritage Listed property. That these should be 2 of the 3 zones of high visual impact must be a concern, and require this acknowledgement, in this context. In examining the impact upon the identified “landscape zones” or precincts the report continues:

“The key project impacts on the Wattle Street precinct (LCZ 10) would be:

- *□ □ A change in landscape character for Wattle Street, from a congested four lane road with fronting single lot residential development, to a motorway interchange landscape*

- *□ □ Introduction of a visual break in the residential character of Ramsay Street where it crosses Wattle Street (about 80 metres wide, subject to detailed design) with a motorway interchange landscape*

- *□ □ Construction of infrastructure on the corner of Wattle Street and Parramatta Road, comprising the Eastern ventilation facility and associated electrical substations, including the acquisition of ten residences on the western side of Walker Avenue. This infrastructure would be opposite a Jehovah’s Witnesses place of worship on the western side of Wattle Street*

- *□ □ Widening of Wattle Street from around 20 metres wide up to around 80 metres wide, subject to detailed design, with the addition of two tunnel portals at Ramsay Street, and a further two portals midway between Ramsay Street and Parramatta Road, and acquisition of residences on the southern side of the road, including 10 heritage listed buildings within the Haberfield HCA*

- *□ □ Acquisition of eight residences on Ramsay Street and three residences on Martin Street, including one heritage residence on Martin Street*

- *□ □ Acquisition of commercial development on Parramatta Road between Wolseley Street and Wattle Street*

- *□ □ Potential for retained housing on the northern side of Wattle Street to succumb further to major road entropy effects as exists at Sydney Road and Concord Road*

- *□ □ A reduction in the extent of traffic immediately in front of residential housing between Ash Lane and Ramsay Street from four lanes to two lanes, with a similar but less pronounced increase in amenity between Ramsay Street and Martin Street*

- *□ □ Provision of a noise wall to the eastern side of Wattle Street, located between the ventilation facility at the western end of Wattle Street and Ramsay Street, which has the potential to create a poor quality space between the back of the noise wall and the back fences of the remaining residences on the north side of Walker Street.”*

This concise summary dryly describes heritage impacts of a massive, extraordinary nature upon the locality concerned. On just one point of detail, in the preceding schedule of works for this zone, the ventilation facility is described:

“Architecturally designed ventilation facilities would be located between Wattle Street and Walker Avenue, together with fresh air intakes, substations and maintenance facilities. The scale of the ventilation facility would be similar to that of the existing Bunnings building on the south west corner of the intersection opposite.”

Notwithstanding the heritage listing and concerns of heritage impact the assessment for this zone concludes:

“The sensitivity of the landscape to change is considered to be moderate within the existing context of both Wattle Street and Ramsay Street being busy roads.

The magnitude of change is considered to be high given the quadrupling of the road corridor width, introduction of dive structure/tunnel portals and loss of housing.”

In reviewing the impact upon the identified landscape zone for Haberfield (LCZ 12) the report continues:

“The key project effects on the Haberfield precinct (LCZ 12) would be:

- *Change in the visual character of Walker Avenue:*
 - *Created by the proposed boulevard planting of large eucalypts to Wattle Street visible from the Walker Avenue footpaths*
 - *The increased proximity of residences along the western side of Walker Street to the Wattle Street interchange (previously separated by a row of housing)*
- ☐ ☐ *Virtually all of this LCZ falls within the Haberfield HCA, with a significant change in character proposed to the Parramatta Road end of Walker Avenue including:*
 - *Visual prominence of an uncharacteristic infrastructure facility, including **a tall ventilation outlet (around 25 metres high)**, set within a visually uncharacteristic landscape setting. This facility would be seen from some of the front rooms and front gardens of residences to the eastern side/southern end of Walker Avenue, and from the footpaths of Walker Avenue for pedestrians walking south along Walker Avenue towards Parramatta Road*

- *Acquisition of 10 houses on the western side of the street, leaving a row of 10 houses on the eastern side, with reduced symmetry on the street*
- □ □ *Impact on the landscape character of Martin Street with the acquisition of three residences (including one heritage-listed residence) and introduction of a boulevard landscape with associated tall tree planting at the end of the street."*

The nature and impact of the major ventilation facility emerges in dribs and drabs. Located upslope of the Bunnings (former Peak Frean's building), at 25 metres high the ventilation facility will be taller than the existing heritage-listed tower, and in its suggested form and bulk, vastly more assertive. It will resemble an isolated, peculiar apartment building. The facility will not only be seen from Walker Avenue living rooms and gardens, it will be visible from a considerable area of the surrounding heritage listed streets of Haberfield. Images within the report show the structure to have considerable bulk and height. A scaffold framework might allow some better demonstration of this.

Also mentioned here in passing, the "Boulevard planting of large eucalypts" is a concept completely foreign to Haberfield, which uses measured plantings of smaller species. However, the assessment concludes:

"The sensitivity of the landscape to change is considered to be high within the context of quality of Federation-era housing stock and quiet, wide streetscape character.

The magnitude of change is considered to be high within the context of the concentrated impacts at the ends of Walker Avenue and Martin Street in conjunction with the broader landscape character impacts along the length of Walker Street."

The key project effects on the Yasmar Juvenile Training Facility (LCZ 13) are considered to be:

- □ □ *A gradual widening of the road verge to the southern half of the frontage, and the addition of a row of large eucalypt street trees to the verge within this widened area*
- □ □ *The addition of large street trees to the widened verge area could result in an overly crowded canopy along the Yasmar road frontage and potentially affect three existing Morton Bay figs, considered to be of heritage significance. The southernmost specimen of these figs has its canopy spreading across about one-and-a-half lanes of southbound traffic. The canopies of the remaining trees within the Yasmar frontage generally extend to the existing Parramatta Road kerb*
- □ □ *The addition of street trees to the Yasmar frontage would be visually out of character with the existing distinctive 'forest' edge to this facility, which would be best left as a visually prominent element of the*

Parramatta Road landscape in its own right, and this could be achieved through appropriate landscaping design."

The report correctly concludes the inappropriateness of planting unrelated to the significant arboretum landscape of Yasmar, but there is no mention of Yasmar's fence and gates, which would be key elements for conservation at its frontage. The report further concludes:

"The sensitivity of the landscape to change is considered to be high within the context of the heritage significance of the site, and the distinctive existing dense 'forest' planting to the frontage, including the characteristic period planting of Morton (sic) Bay figs.

The magnitude of change is considered to be high, within the context of the potential extent of change to the character of the Yasmar frontage component of this LCZ.

These impacts could largely be mitigated through implementing an appropriate landscaping design in this LCZ".

Considering that Yasmar is a State heritage item, nothing but an appropriate landscaping design proposal should be suggested for the property. Proposals adequately responding to the significance of the property are necessary, and would normally be vetted by the Heritage Division, in a "normal" planning regime.

While detailed analysis of this report could continue through subsequent sections to show the "disconnect" between the consideration of Urban/Landscape/Visual Impact Issues and the consideration of heritage issues, it must be abundantly clear, from the examples above, that while the impact of the loss of heritage items and their context is identified and acknowledged, the potentially disastrous heritage impacts of the comprehensive construction design and final built form of the Project infrastructure are not being acknowledged nor fully engaged with.

The Urban Design, Landscape Character and Visual Impact report offers little comfort that the **integration** of the Project with the established, heritage-significant urban landscape of Ashfield and its Haberfield Conservation Area is being seriously pursued. If this is indeed equally important with the "Motorway experience" of the project as suggested by the WUDF vision statement, then the intent of that statement has not been met. Much may be "considered", but little is being mandated to require a heritage-compatible outcome.

Any success in the reconciliation of the Wattle Street Interchange and infrastructure with its Haberfield context will utterly and totally depend upon the detailed design of its engineering structures and landscape architecture. There cannot be confidence that this will be achieved while these major structural parts of the whole remain "conceptual images for discussion purposes". That the major visual impacts, and utterly dramatic and dominating juxtaposition of the proposed Eastern Ventilation facility upon Haberfield can be thought capable of acceptable remedy through references to broad design principles (concluded to have been already met in the design materials offered) - is extremely disappointing. It is not acceptable.

5.0 Proposed mitigation measures and recommendations

Within the GML HIA report mitigation measures relevant to built heritage are proposed as follows:

- heritage specialists (built and landscape heritage and historical archaeology) and qualified urban designers to provide input to the detailed design and documentation phase
- management of vibration impacts through the nominated method (EIS, Appendix J) with appropriate monitoring and protection of heritage items
- New structures and their landscape settings would be of a high-quality, sympathetic design to minimise visual impacts on the setting of heritage buildings and landscapes
- The Construction Heritage Management Plan to detail how construction impacts on Aboriginal and historic heritage will be minimised and managed, including training and induction processes for construction personnel
- An Interpretation Plan to be implemented, in accordance with the NSW Heritage Division guidelines and to include initiatives in new public reserves and walkways
- Photographic recording of heritage and contributory items, groups and streetscapes, together with potential items to be impacted by the Project, in accordance with the guidelines of the NSW Heritage Division
- Recycling of heritage fabric from heritage and contributory items to be demolished
- During construction, impacts to built heritage, heritage landscapes and historical archaeological sites are to be minimised or dealt with as per the Construction Heritage Management Plan.

Others relating to historical archaeological management are also nominated, but not commented on here.

Within the Aecom UD/LC/VI report specific recommendations are made for the Ashfield Landscape Character Zones as follows:

“LCZ 9 – Dobroyd Parade precinct

- ☐ Consider the provision of a landscape design response to Reg Coady Reserve that re-integrates the new road edge with the landscape character of the park
- ☐ Consider a landscape response along the edge of Reg Coady Reserve edge which more closely reflects the existing generally informal planting character of the reserve
- ☐ Where feasible, consider moving the footpath away from the busy road edge on both sides of Dobroyd Parade. In conjunction with this approach, consider the provision of formal tree planting to the eastern side of Dobroyd Parade between the footpath and kerb to match the treatment between Martin Street and Ramsey Street.
- ☐ Regarding the proposed noise wall to the eastern edge of Dobroyd Parade:

- □ consider augmentation of the existing screen planting to the area between Waratah Street and Crane Avenue on the residential side to maximise screening of the noise wall from this location
- □ Consider setting the wall far enough back from Dobroyd Parade to provide an avenue of tall planting continuing up to Martin Street, as currently proposed north of Martin Street.

LCZ 10 – Wattle Street precinct

- □ Consider an opportunity to extend the street tree planting along the western side of Wattle Street and Dobroyd Parade
- □ During detailed design investigate opportunities to locate the footpath away from the busy kerb and provide the proposed tall tree planting between the kerb and the footpath, to match that proposed between Ramsey Street and Martin Street
- □ Consider an integrated artwork approach to the noise walls along Wattle Street and Dobroyd Parade.
- □ During the detail design process, consider ways to:
 - □ provide pedestrian and streetscape amenity between the noise walls and the street
 - □ to integrate the area between the back fences of the Walker Street residences and the curving noise wall

LCZ 12 – Haberfield precinct

- □ Investigate opportunities to increase the proposed street tree planting to Walker Avenue and seek to reinstate the original Brush Box street tree avenue character, in order to reduce the visibility of the infrastructure from pedestrians and residential receivers at the western end the street and reduce the landscape character impacts of the project in this precinct.
- □ Careful consideration of development proposed for the residual land on Walker Avenue is needed to allow the development to visually complement the remaining row of low density housing on the other side/end of the street, and to reinforce the federation era landscape/heritage qualities and character of the street.

LCZ 13 – Yasmar Juvenile Training Facility

- Ensure that street trees are not planted in front of and immediately adjoining Yasmar, to retain the distinctive 'forest' edge character of this facility as seen from Parramatta Road."

On urban design matters, Aecom make the following heritage-relevant recommendations:

"7.2.1 General recommendations

- □ During detailed design, continue to explore opportunities to minimise the project footprint and removal of vegetation; to maximise screen and structure planting; to

further integrate landscape elements along the project boundaries into their urban setting; and to rationalise road alignments

- *During detailed design, explore ways to optimise project integration, and transition intersection precincts into existing streetscapes to improve connectivity, amenity and community value e.g. through footpath improvements and street tree planting*
- *During detailed design, optimise the integration of proposed open spaces within the local context and consider issues of accessibility and activation, to integrate noise walls and other features to improve amenity and attract users*
- *Consider coordinating the design of retaining wall and major structures across the project, regardless of structural typology, to present as a coordinated 'suite of elements' e.g. consistently finished to class 2 concrete minimum*
- *Consider lighting strategies that include alternatives to high-pressure sodium induction lighting systems e.g. LED saves energy, costs less to maintain and provides better, safer light quality for roads*
- ☐ *Consider ways to maximise opportunities for tree planting while satisfying road design requirements at spatially constrained street cross sections e.g. through the incorporation of crash barriers*
- ☐ *Consider ways to include an arts strategy across the project, developed during detailed design*
- *Where practicable, areas of residual land should be made good with appropriately sized street planting, especially those areas where mature street trees have been removed to provide construction access*
- *During detailed design, guidance should be developed to provide indications of the appropriate scale and typology of the future development of residual land, including ways to promote project integration and activation*
- *Consider having the detailed design regularly reviewed by an independent design and sustainability review panel to ensure design quality throughout each stage of works, in accordance with the WUDF Principle 6.6.*

7.2.3 Ventilation and substation facilities

During detailed design, refinements to the ventilation facilities designs should be considered to further moderate their visual impact.

Similarly, the distribution substation designs should be further refined during detailed design to be integrated as far as possible within each landscape and urban context e.g. by developing exposed elevations to a similar level of detail and through the addition of appropriate streetscape interventions.

During detailed design, (if feasible and having regard to the required subsurface arrangement with respect to the tunnel geometry), consideration should be given to the way that the eastern ventilation facility addresses Walker Avenue. This consideration would explore whether a public domain and redevelopment arrangement can be created. For example, further exploration as to whether the orientation of the exterior of the ventilation facility can be undertaken to mirror the Bunnings 'street- wall', with street trees providing scale mitigation and shade amenity.

To the extent they go, these recommendations are provisionally supportable. Those of GML are sensible, frequently applied measures which in this instance, in the face of what is to be lost for the Project, do not somehow extend to match the *gravitas* of what is to be lost, and what is at stake. Records do not assuage loss.

The Aecom recommendations might seek "consideration" but how and who by will responses be judged? These recommendations should all be moved from "consideration" to required action through explicit conditions of consent. The obvious need and potential for their refinement shows how much further work is truly required to integrate the

heritage concerns and measures with UD/LC/VI measures, as design development proceeds.

The Urban Design recommendations indicate how crucial it is for heritage matters to be given an effective voice within those voices which will, together, determine whether or not the Project successfully realises the WUDF vision. The capacity for independent heritage and urban design specialists to participate in resolution of the conflicts with the historic setting of the new Motorway is essential.

While appropriate record keeping, as recommended by GML is apposite and necessary, the sacrifice that the Ashfield and Haberfield community, and the Haberfield Heritage Conservation Area will make for the Project will only be truly and partially mitigated (only partial mitigation is possible) if

- the highest design and construction standards are achieved in the new civic works, integrating heritage responses; AND
- interpretation of the Project is combined with interpretation of its Haberfield context.

A prominent and central location where this Interpretation might be based is at *Yasmar*, a significant house of great importance for the suburb, and one which has been wanting an appropriate occupation to support its necessary and demanding conservation for some years. It is a property worthy of its State heritage listing, equal to many of the great houses owned and exhibited by the State for the community through Sydney Living Museums. There may be a model in which the house, its significant gardens and the attached former corrective services structures could perform a new community role supporting environmental education and interpretation of heritage values of the place.

6.0 Conclusions

In reaching a Cumulative Assessment the EIS particularises conclusions on each of the dimensions of its impact assessment, addressing the SEARS schedule of requirements, tabulated for concise expression in 28.3.

On Urban Design, Landscape Character and Visual Impact it concludes:

- *Construction impact:* Visual changes due to motorway, tunnel and bridge construction. Visual impacts associated with construction site compounds. *Mitigation:* Site compounds and work areas would be screened, organised and managed to minimise visual impacts.

Residual Impacts : Construction activities would still be visible from some locations. However, construction impacts are temporary and therefore the residual impacts are considered to be low.

- *Construction impact:* Impact of construction lighting as a result of night works, including 24 hour tunnelling activities.

Construction lighting impacts would be temporary during construction and with mitigation residual impacts are considered to be low.

- *Construction impact:* Impact of built structures and vegetation removal on sensitive receivers.

Mitigation: Vegetation clearance would be minimised where possible. Built structures would be designed to minimise impacts and to integrate into the surrounding area. Landscaping of the project footprint in line with the urban design and landscape management plan to minimise impacts.

- *Operational impact:* Impact on the community due to new lighting associated with operational features of the project such as roads and operational facilities.
Mitigation: Lighting design to minimise light spill on to adjacent properties.

Residual impacts: would vary depending on the location of the sensitive receiver. However, residual impacts on sensitive receivers would be low to moderate.

- Operational lighting impacts: would occur in areas generally already subject to lighting impacts due to existing roads and buildings. With careful design the residual impacts are considered to be low.

Mitigation: Use of cut-off and direction lighting to ensure glare and light spill is minimised. Lighting should only be used when sites are in use.

On Non-Aboriginal Heritage Impacts it is concluded:

- *Construction impact:* Visual impacts on setting of heritage conservation areas (HCA) and heritage items.

Mitigation: **Heritage specialist input into detailed design would be provided to guide location and design of new structures. New structures would be of high-quality design and materials. Where feasible and reasonable, vegetated buffers would be retained and new planting strategies implemented. Photographic archival recording would be undertaken.**

Residual impacts: would vary, and would be minor to moderate, and would not be effectively mitigated at all locations.

- *Construction impact:* 22 locally listed heritage items and nine potential heritage items would be demolished.

Mitigation: **Photographic archival recording** would be undertaken of heritage items and potential items. **Heritage fabric will be salvaged** from properties to be demolished, and stored **for future conservation works** by owners of heritage properties in the Canada Bay and Ashfield LGAs.

Residual impacts: would be high, and would not be effectively mitigated.

- *Construction impact:* Two HCA (Powell's Estate and Haberfield) would be partially demolished.

Mitigation: **Photographic archival recording** would be undertaken of contributory items. **Heritage fabric would be salvaged**, and stored for future conservation works in the Canada Bay and Ashfield LGAs.

Residual Impacts: Would be high, and would not be effectively mitigated.

- *Construction impact:* Impact on potential historical archaeological resource.

Mitigation: **Monitoring and salvage** would be undertaken as stipulated by the NSW Office of Environment and Heritage, Canada Bay Council and Ashfield Council. The *Standard Management Procedure – Unexpected Heritage Items* (Roads and Maritime, 2015) would be applied in the event any unanticipated archaeological artefacts are discovered.

Mitigation: Assessment found that the majority of potential historical archaeological resource would be of local significance. With mitigation, residual impacts are therefore expected to be low.

- *Construction impact:* Partial demolition of heritage items (including gardens and street trees)

Mitigation: **Boundary structures would be replaced with appropriate materials**, the maximum number of **street trees would be retained and protected** during construction, and **landscape buffers and replacement trees** would be provided where appropriate (with suitable/sympathetic species). Structures to be retained would **be protected during construction**.

Residual impacts: would be minor to moderate, and could not be effectively mitigated for all heritage items.

- *Operational impact:* Impacts on the setting of heritage items or Powell's Estate/Haberfield HCA, from future development of residual land.

Mitigation: **Future development of residual land within a HCA would comply with the provisions of the relevant development control plan and would respect the scale, form and pattern of neighbouring heritage features.**

Residual Impacts: With mitigation, residual adverse impacts are expected to be low and beneficial impacts could be achieved through appropriate development and landscaping.

Concerns about heritage outcomes of the project could not be alleviated by these conclusions. Too much of the Project with major ramifications and potentially or accepted adverse impact for heritage issues remains unresolved and viewed with an unrealistic optimism that high design quality will solve all.

Residents of Haberfield will be subjected to construction impacts whose reasonability they will be effectively unable to challenge (24hr tunnelling and associated work impacts, including lighting). The design of built structures and landscaping measures will be critical to "minimising impact", especially of the extent of the roadworks, portals and retaining structures, and the ventilation facility, for which every evidence offered suggests a profound, massive and unsympathetic visual impact, so extraordinarily at odds with its heritage context that its proposal beggars belief. After the tumult of the roadworks will come the predictable struggle to ensure that development of released temporary construction lands will "*respect the scale, form and pattern of neighbouring heritage features*". This concern will apply to structures proposed within the HCA, or adjacent, or with a potential adverse impact upon it.

It is true that heritage-sensitive design could reduce impacts arising from the construction phase, from the permanent engineering and infrastructure to be built in the project, and from the eventual development of residual lands released after

completion. But how can this be assured? An effective mechanism for achieving this is not really canvassed or proposed in the EIS, and unless a structure for “enforcing” the outcomes truly required is put in place, they will remain lofty phrases and procedural “ticks” in paving the way for the sad diminution of one of Australia’s truly significant and innovative heritage places – that is very much a living community, managing and protecting its heritage to the best of its abilities.

7.0 Overall recommendations

If it were at all possible to reconsider the design of the proposed Wattle Street interchange, so as to relocate the portals, avoid the landscape modification, and the heritage destruction, and avoid the dissection of Haberfield in the manner that is the foreseeable consequence of the current plans, then that should occur. “World’s best” motorway construction should not depend upon the loss and destruction of community and cultural heritage for its realisation, and indeed, it cannot be regarded as acceptable if it needs to do so. The “motorway experience” cannot be the prevailing yardstick in such an assessment, just as heritage concerns cannot prevail over others. Neither, however, should heritage be the cost.

The achievements of urban planning that we admire universally include vision for the future along with respect for what has been inherited. Another “road” does not equate with a place of social and design planning of excellence, a model for living environments around the country, and a place venerated by its community and those who understand its importance.

If the major decisions cannot be reviewed, then Conditions of Consent must ensure that the “real design” of the environment that is to be built benefits from the input of independent heritage and design professionals able to contribute to excellence in the way that the Project really does achieve “*integration within the existing urban fabric*”. The output must be guided by the context.

An oversight committee must be established to ensure that this occurs, with power to influence design at the detail end, as well as the conceptual stage at which much of the detail planning appears to remain, at least publicly. The management of such a committee of committed participants should not be unreasonable.

Finally, if the suburb, and Heritage Conservation Area of Haberfield and its community are to pay much of the environmental cost of this Project, the future of “Yasmar” may be brought into useful, strategic involvement. The re-dedication of the restored house and grounds as a centre for the celebration and interpretation of Haberfield’s heritage and environmental values and its community could be a culturally desirable outcome of a Project which otherwise will entail a high, destructive and distasteful environmental cost.

8.0 Author Identification

Robert Allan Moore, of Robert A Moore Pty Ltd., is a registered architect, and heritage consultant. He has consulted to Commonwealth, State and Local Governments and maintained an independent practice for more than 30 years.

Author CV

Curriculum Vitae

ROBERT ALLAN MOORE

Robert A. Moore Pty. Ltd

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Qualifications:

Bachelor of Architecture, University of Queensland, St. Lucia (1976)

Chartered (Registered) Architect NSW (1983-present)

Institute of Advanced Architectural Studies, York (UK): 1984 Summer

School on Historic Structures

Relevant Professional Memberships :

Associate of the Royal Australian Institute of Architects (1982-present) ;

(Conservation Juror, NSW Chapter Awards 1994) ;

Member Historic Buildings and Sites Committee, R.A.I.A. (NSW)(1985);

National Trust of Australia, NSW (Member Architectural Advisory Panel 1988-2008);

(Juror and Chair, National Trust Energy Australia Awards 2009-11) ;

Full member Australia ICOMOS ;

Member, Docomomo International ;

Former trustee, "Nutcote" (May Gibbs' home), for North Sydney Council ;

Member, Ku-ring-gai Council Heritage Advisory Committee (2008-2012).

Experience:

Following employment with The National Trust of Queensland and the NSW Heritage Council, as well as private practices specialising in conservation work, Robert Moore established Robert A. Moore Pty. Ltd., Architects and Conservation Consultants, in 1985. The practice has since undertaken work for State and Commonwealth departments, local government authorities and citizen groups, and private clients. Through involvement in public and professional conservation organisations the practice maintains a commitment to conservation and awareness of changing philosophy and issues.

1985 - Principal - Robert Moore, Architects

Present (Robert A. Moore Pty. Ltd., est. September, 1988.)

A. Heritage and Conservation Planning Studies :

Haberfield Conservation Study:

Survey of Haberfield Garden suburb and preparation of guidelines for conservation and infill development. Project Co-ordinator. (Co-consultants: Meredith Walker, Penelope Pike, Lester Tropman & Associates.)

Ku-ring-gai Heritage Study:

Heritage Study of the Municipality of Ku-ring-gai for Ku-

ring-gai Municipal Council. Project Co-ordinator (Co-consultants: Helen Proudfoot, Penelope Pike, Lester Tropman & Associates, Wendy Thorpe).
Also for Council, a subsequent review of 143 objections to listing.

Lane Cove Heritage Study:

Heritage Study of the Municipality of Lane Cove.
Architectural Consultant , (Co-consultants Peter Spearritt, Penelope Pike, Lester Tropman & Associates, Wendy Thorpe, Beth Rich).

Glen Innes Heritage Study:

Project Co-ordinator and Architectural Consultant for the Heritage Study of the Municipality of Glen Innes. (Co-consultants Gillian Oppenheimer, Penelope Pike, Lester Tropman and Associates, Wendy Thorp and Elizabeth Rich).

Willoughby City Council : Review of Heritage Listings

Review of 40 proposed heritage listings for Council in response to owner submissions.

Parramatta City Council : Conservation Guidelines

With Penelope Pike, preparation of conservation guidelines for the assistance of residents and developers within the city.

Parramatta City Council : Review of Heritage Listings

With Terry Kass, review of some 200 proposed heritage listings around Parramatta as part of implementing Council's Heritage Study.

Bulli Main Street Study :

A report on ways and means of improving the sense of place and townscape of the township of Bulli, now part of Greater Wollongong, for a local citizens' committee and Wollongong City Council.

Ku-ring-gai Conservation Areas Review :

With Godden Mackay Logan, review of six Urban Conservation Areas for Ku-ring-gai Council.

Lane Cove Conservation Areas Review :

With Godden Mackay Logan, review of existing and proposed conservation areas.

Hornsby Conservation Areas Review :

With Godden Mackay Logan, review of proposed conservation areas.

Haberfield Development Control Plan (Conservation)(2006-7) :

Review of Haberfield Conservation DCP for Ashfield Municipal Council

B. Conservation Plans and Plans of Management:

Jenolan Caves Reserve:

Plan of Management for the Caves House Precinct, for the

NSW Tourism Commission and NSW Public Works Department.

Holy Cross R.C. Church, Kincumber:

Conservation Report for the Parish Committee, funded by the NSW Bicentennial Council.

Hill End Historic Village:

Draft Management Plan for the NSW National Parks and Wildlife Service.

Hill End Historic Village:

Draft Development Control Plan for Evans Shire Council in conjunction with the NSW Department of Planning (prepared in association with Penelope Pike, Conservation Planner)

The Bushells Building, Harrington Street, The Rocks :

With C. & M.J. Doring, preparation of a Conservation Plan for the Sydney Cove Authority.

Hyde Park Barracks and The Royal Mint, Sydney :

With Meredith Walker, preparation of a Conservation Plan for the Powerhouse Museum.

The Elizabeth Street Waiting Shed, Hyde Park, Sydney :

With C. & M.J. Doring Pty. Ltd., preparation of a Conservation Plan and adaptation proposals for the State Transit Authority.

"Fernhill", Old Bowenfels, Lithgow :

With Meredith Walker, preparation of a Conservation Plan for the National Trust of Australia (NSW).

The Royal Mint, Sydney :

With Meredith Walker, review of the Conservation Plan and 1994 proposals for the Mint complex, for the Powerhouse Museum.

The Bathers Pavilion, Balmoral Beach :

Preparation of a Conservation Plan, including co-ordination of specialist subcontractors, for Mosman Municipal Council.

The Guy House, Castlecrag :

With Meredith Walker and Michael Lehany, preparation of a Conservation Plan for this Burley Griffin dwelling, prior to the proposal of adaptive re-use works by a new owner.

Orange Court House, Orange :

Conservation Management Plan for The NSW Attorney-General's Department.

Old Wallerawang Schoolhouse, Wallerawang :
Conservation Management Plan, for Delta Power

C. Conservation Works :

Dredges' Cottage, Campbelltown:
Inspection report and costings for conservation works on Victorian period cottages, for the NSW Department of Environment and Planning.

"Susannah Place", The Rocks, Sydney:
Conservation Works for the Sydney Cove Authority and Historic Houses Trust of N.S.W.
(RAIA Merit Award for Conservation)

"Fitzroy Terrace", Pitt Street, Redfern :
Conservation and adaptation of the central residence of this 1840's Georgian terrace, attributed to the early colonial architect James Hume. The house serves as a contemporary home.

"Yandra", Woolwich Road, Hunters Hill :
Alterations and additions to this sandstone residence, built by the Joubert family (who developed so much of Hunters Hill) for use as a family home.

45-47 Argyle Street, The Rocks :
With Terry Kass, preparation of a Conservation Plan, and documentation and administration of subsequent adaptation works for the Sydney Cove Authority.

"Woodford Academy", Woodford, Blue Mountains :
Documentation and administration of conservation works for the National Trust of Australia (NSW).

"Fernhill", Old Bowenfels, Lithgow :
Documentation and administration of conservation works for the National Trust of Australia (NSW).

Hambledon Cottage, Parramatta :
Conservation works (roof replacement and rising damp mitigation) for Parramatta City Council.

Manly Court House, Manly :
Reconstruction of the Court House forecourt and approaches for the Department of Courts Administration.

Lancer Barracks, Parramatta :
(with Gazzard Sheldon Architects)
Design, documentation and administration of conservation works to the Lancer Barracks complex, for the Australian Army.

The Bathers' Pavilion, Balmoral :

consulting conservation architect to Mosman Council during refurbishment of the building (Architects Alex Popov Architects and McConnell Rayner Architects).

"Hartford House", Glebe :

Conservation and alteration works upon this 1898 High Victorian Queen Anne Revival mansion, in securing its return to residential use from institutional occupation.

"Pangloss", Castlecrag :

Alterations and additions to a Griffin/Nicholls designed residence

"Dorchester", Robertson Road, Centennial Park :

Restoration, alterations and additions to a listed Inter-War bungalow within the Centennial Park Conservation Area

"Eastcote" Mt. Wilson :

Alterations and additions to an existing mountains residence within the Mount Wilson conservation area

Anglesea Barracks, Hobart : Officers' Mess

(with GML Pty Ltd)

Analysis of fabric and construction in CMP.

The practice has also undertaken an extensive range of alteration and additions projects, involving period housing of widely varying periods, styles and scale, most of them heritage listed. The practice also has undertaken the preparation of a broad variety of heritage impact statements and assessments.

Robert Moore was **Heritage Advisor** to Glen Innes

Municipal Council under the NSW Department of Planning's Heritage

Advisor Programme, 1989 - 1991, and 1994-2002. Robert was appointed **Heritage Advisor** to Ashfield Municipal Council in December 1992, and appointed Heritage

Advisor to **Pittwater Council** in January 2000. He has also been a member of the panel of heritage Advisors to **Warringah Council**.

Robert has provided heritage advice to other Councils on a consultancy basis and has appeared as a Court-appointed expert on heritage issues in the Land and Environment Court, as well as appearing as an expert witness for Ashfield, Parramatta, Ku-ring-gai, South Sydney, Waverley, Woollahra, Leichhardt and other Councils. He has also advised and appeared in the Court on behalf of residents and community groups.

ATTACHMENT 3

TRAFFIC AND TRANSPORT IMPACT ASSESSMENT

1.0 Introduction

This is a review of the Traffic and Transport components of the WestConnex EIS for the part affecting the Ashfield LGA being one of the considerations of the Secretary's Environmental Assessment Requirements (SEAR).

2.0 SEAR Response

SEAR Requirements (in part)	Compliance Response
Traffic and Transport — including but not limited to: 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;	Inadequate consideration has been given to traffic and transport impacts on the local roads. This is outlined in Sections 3.1.3 and 3.2.5 below. Inadequate consideration has been given to traffic and transport impacts on Frederick Street and Liverpool Road. The modelling of north-south regional movements has not been addressed in the EIS. The traffic modelling assumptions which show only modest increases in traffic on Parramatta Road and Dobroyd Parade in 2021 as per Tables 8.9 and 8.10 (Volume 1A) need to be reviewed. This data appears to contradict Figures 8.4 and 8.5 (Section 8.6, Appendix G). This is outlined in Section 3.2.2 below. The traffic modelling assumptions which show modest decreases in traffic on Parramatta Road and Dobroyd Parade in 2031 as per Tables 8.11 and 8.12 (Volume 1A) need to be reviewed. This is outlined in Section 3.4.2 below. It is unknown whether the new 40,000 homes proposed in the Draft Parramatta Road Urban Transformation Strategy have been included in the transport modelling. This is outlined in Section 3.2.2 below. It is understood that a peer review has been undertaken of the transport model calibration. This peer review must be made publicly available.
induced traffic and operational	The transport modelling for this project relies on



Ashfield Council

SEAR Requirements (in part)	Compliance Response
implications for public transport (particularly with respect to strategic bus corridors and bus routes) and consideration of opportunities to improve public transport patronage;	the Parramatta Road improvements; in particular that one lane will be converted from a regular vehicle lane to a bus lane. It is of extreme concern that these improvements on Parramatta Road have not been funded as part of the WestConnex program. This is outlined in Section 3.2.3 below. The bus travel time improvements similarly rely on these unfunded works.
impacts on cyclists and pedestrian access and safety and consideration of opportunities to integrate cycleway and pedestrian elements with surrounding networks;	No consideration has been given to integrating cycleways and pedestrian elements into the surrounding network. There has been no provision made for additional cycling facilities in the Ashfield Council area and minimal additional pedestrian facilities. This is outlined in Sections 3.5 and 3.6 below.
- construction traffic and transport impacts of the project (including ancillary facilities) and associated management measures, in particular: - impacts to the road network (including safety and level of service, pedestrian and cyclist access, and disruption to public transport services and access to properties),	Concerns regarding heavy vehicle impacts are outlined in section 3.1.1. Serious concerns are raised in section 3.1.4 regarding safe pedestrian access during construction. It is proposed to reduce Parramatta Road to two lanes in both directions between Bland Street and Orpington Street, Ashfield during construction. However, the modelling has allowed for three lanes. These concerns are outlined further in section 3.1.5 below. This will impact on public transport services. It appears that access to the private properties on the southern side of Dobroyd Parade, between Martin Street and Waratah Street will be restricted. This matter needs to be resolved prior to the commencement of construction.
the nature of existing traffic on construction access routes (including consideration of peak traffic times), and	The traffic modelling assumptions which show a decrease in average delays between the base year traffic figures Table 6.9 (Section 6.3 Appendix G) and the 2017 traffic figures Table 7.16 (Section 7.4.3 Appendix G) need to be reviewed. This is outlined in Section 3.1.2 below. It is proposed to reduce Parramatta Road to two lanes in both directions between Bland Street and Orpington Street, Ashfield during construction. However, the modelling has allowed for three lanes. These concerns are outlined further in

SEAR Requirements (in part)	Compliance Response
the need to close, divert or otherwise reconfigure elements of the road network associated with construction of the project, having reference to the cumulative construction impacts of other infrastructure preparing for or commencing construction; and	section 3.1.5 below. Inadequate consideration has been given to traffic and transport impacts on the local roads during construction. This is outlined in Section 3.1.3 below.
details of how the project meets the objectives of the overall WestConnex Scheme.	Concern is raised in Section 3.2.1 that inadequate consideration has been given to project alternatives. Further, the traffic modelling appears to demonstrate that the project does not appear to be utilised by one of the key target groups, residents of Western Sydney.

3.0 Key Issues

3.1 Construction

The key traffic and transport issues during construction are as follows:

- There will be high heavy vehicle volumes, operating 24 hours, seven days with inappropriate travel routes;
- Some of the assumptions made in the traffic modelling do not appear to make sense;
- Modifications are being proposed to vehicle access, including local roads and there does not appear to have been any analysis undertaken on the likely impacts;
- It is proposed to severely restrict pedestrian access during construction;
- It is proposed to reduce Parramatta Road to two lanes between Bland Street and Dalhousie Street, resulting in significant delays, which has not been the subject of traffic modelling; and
- Inadequate consideration has been given to parking for workers at the various construction sites.

These will be discussed in more detail below.

3.1.1 Heavy Vehicles

There is significant concern about the very high number of heavy vehicles accessing the various construction sites. Heavy vehicles create significant noise, pollution and they contribute to congestion. It is of particular concern that there will be heavy vehicles operating 24 hours a day, seven days a week. For example, Northcote Street tunnel site (C7) will have heavy vehicles every three minutes during the day. The residents quite rightly might expect some respite in the evenings and on weekends. However, from 6pm to 7am, there will be heavy vehicles every 3.3 minutes. The other construction sites also have high heavy vehicle usage. Consideration must be given to on-site storage of night time spoil.

Council is particularly concerned that it is proposed to have 300 heavy vehicles per day at the Northcote Street site (C7). It is proposed that these vehicles will travel eastbound on Wattle Street, undertake a u-turn at Reg Coady Reserve and then travel back westbound on Wattle

Street/ Parramatta Road. This will therefore see 600 heavy vehicles per day driving past the residential properties on Wattle Street. Further, there will also be 120 vehicles from the Wattle Street site (C9) and 60 vehicles from the Eastern ventilation facility site (C8) utilising Wattle Street. These Wattle Street properties will therefore have to contend with between 660 and 960 additional heavy vehicle movements per day. This is not an acceptable impact. It is therefore suggested that heavy vehicles exit the Northcote Street site (C7) directly onto Parramatta Road. Modifications could be made to the phasing of the lights at the intersection of Parramatta Road/ Wattle Street to facilitate the right turn onto Parramatta Road, to head west.

Prior to the release of the EIS, Council was advised that no local roads would be used for construction vehicle access or egress. Egress of heavy vehicles onto a local road is not supported. Council is therefore strongly opposed to the use of Bland Street to exit the Parramatta Road civil site (C10). There are residential properties on the western side of Bland Street, which will be highly impacted by heavy vehicles movements at this site. Further, there are serious safety concerns for pedestrians at this location, particularly given the proximity to the Haberfield Public School, which has primary school aged children. The safety concerns are further exacerbated by the proposed closure of the Bland Street pedestrian bridge during construction. Council was advised prior to the release of the EIS that this bridge would remain open during construction.

Bland Street, at Parramatta Road, is constrained by its width. There are already delays experienced at this intersection because it is very tight for two lanes of northbound vehicles to exit Bland Street onto Parramatta Road at the same time. These queues and delays will increase if heavy construction vehicles utilise Bland Street. Although not supported by Council, *if* this option proceeds, it is essential that the road is realigned, such that it is widened for northbound vehicles on Bland Street. It should be noted that this must not be at the expense of footpath widths. RMS is already acquiring land at this location, and it is expected that the additional road width would be obtained by cutting into what is currently private property.

Similarly, Council does not support the use of Chandos Street, Orpington Street and Walker Street for light construction vehicles (including light delivery vehicles). No definition has been provided for a 'light' construction vehicle. Light vehicles should be limited to utes and passenger vehicles only. Small Rigid Vehicles, Medium Rigid Vehicles (as defined in AS 2890.2) and above should be considered heavy vehicles.

Council expects that during construction, traffic modelling will include the monitoring of heavy vehicles, particularly on local roads. This will allow for compliance checks and enforcement, if necessary.

3.1.2 Traffic Modelling

Table 7.14 (Section 7.4.1 Appendix G) shows that background vehicle volumes on Parramatta Road between Bland Street and Dalhousie Street, Haberfield will decrease eastbound in the AM Peak and westbound in the PM Peak in 2017. It is unclear what assumptions have been made to obtain this result but it does not seem feasible. Vehicle volumes in Sydney generally increase over time. There would appear to be no reason for decreasing vehicle volumes at this location, in the absence of any infrastructure or network changes.

Similarly, a comparison of Table 6.9 (Section 6.3 Appendix G) which shows the base year traffic figures and Table 7.16 (Section 7.4.3 Appendix G) which shows the 2017 traffic figures, shows that most of the intersections in Haberfield and Ashfield will see a decrease in average delays at



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these intersections between the base year and 2017 of between 7.7 and 49%. The table below demonstrates this. **Again it is unclear what assumptions have been made to obtain these results but they do not appear to make sense.**

Intersection	Base year per Table 6.9 (Section 6.3 Appendix G)			2017 Without construction per Table 7.16 and 7.17 (Section 7.4.3 Appendix G)			2017 With construction per Table 7.16 and 7.17 (Section 7.4.3 Appendix G)		
	PCU	Av. Delay (s)	LoS	PCU	Av. Delay (s)	LoS	PCU	Av. Delay (s)	LoS
AM									
Parramatta Road & Frederick Street	7160	84.5	F	7217	71 (-16%)	F	7536	89	F
Parramatta Road & Bland Street	4498	21.7	B	4252	11 (-49%)	A	4380	12	A
Wattle Street & Ramsay Street	4678	81.1	F	4702	120 (+48%)	F	4920	124	F
Dobroyd Parade & Waratah Avenue	3567	25.1	B	3544	19 (-24%)	B	3632	36	C
Dobroyd Parade & Timbrell Drive	4863	59.6	E	4926	55 (-7.7%)	D	4926	48	D
PM									
Parramatta Road & Frederick Street	7427	83.4	F	7428	77 (-7.7%)	F	7734	117	F
Parramatta Road & Bland Street	4139	19.9	B	4066	11 (-45%)	A	4231	11	A
Wattle Street & Ramsay Street	4402	57.9	E	4283	36 (-38%)	C	4432	38	C
Dobroyd Parade & Waratah Avenue	3717	21.8	B	3633	27 (+24%)	B	3700	58	E
Dobroyd Parade & Timbrell Drive	5045	42.9	D	5011	38 (-11%)	C	5011	38	C



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3.1.3 Vehicle Access

Serious concern is raised regarding the partial closure of various local roads during construction, including the following:

- Allum Street
- Chandos Street
- Northcote Street
- Martin Street
- Walker Avenue

There has been no consultation with Council regarding the closure of these Council owned local roads. The closure of these roads will increase traffic on alternative nearby local roads, including:

- Allum Street
- Alt Street
- Ash Lane
- Bland Street
- Julia Street
- Loftus Street
- Orpington Street
- Ramsay Street
- Walker Avenue
- Waratah Street
- Wolseley Street

There does not appear to have been any analysis undertaken on the impact of these partial road closures. There is considerable concern that the vehicle increases on the alternative nearby local roads will increase significantly. This will increase the noise, pollution and congestion on these alternate roads, impacting greatly on the residents.

From the plans provided, it appears that access to the private properties on the southern side of Dobroyd Parade, between Martin Street and Waratah Street will be restricted. This matter needs to be resolved.

It is understood that it is proposed to close the intersection of Ramsay Street/Dobroyd Parade at times during construction. Ramsay Street has a high AADT of over 15,000. This will have a significant impact on accessibility to Haberfield for residents. Any closure of this intersection must be limited to the night.

As well as the above local roads, there does not appear to have been any detailed traffic analysis undertaken on the following important state roads during construction:

- Frederick Street
- Liverpool Road

Traffic analysis on the above streets needs to be assessed urgently. There will be serious travel time increases and delays at these locations during construction. Consideration needs to be given as to whether these roads can physically cater to the vehicle volumes during construction or whether this will lead to severe congestion, causing significant backups.

3.1.4 Pedestrian Access

The EIS outlines that it is proposed to undertake a number of footpath closures for the entire construction period or for significant periods. This includes:

Proposed Footpath Closure	Suggested Alternative	Detour Impacts
Martin Street, south of Wattle Street	Via Alt Street and Ramsay Street or Waratah Street	Pedestrians would have to walk up to an additional 650 metres. This is an additional 9 minutes of travelling time.
Dobroyd Parade, between Martin Street and north of Waratah Street	Reg Coady Reserve and Timbrell Park or footpath on western side of Dobroyd Parade, with pedestrian crossings located at Ramsay Street, Waratah Street and Timbrell Drive/Mortley Avenue	Pedestrians would have to walk up to an additional 240 metres and make up to two crossings of busy Dobroyd Parade which provides limited green time to pedestrians. This is up to an additional 9.3 minutes of travelling time.
Parramatta Road, between Bland Street and Orpington Street (southern side)	Pedestrian route on the north side of the road would remain open with crossings located at Bland Street and Dalhousie Street.	Pedestrians would have to walk up to an additional 260 metres and make up to two crossings of busy Parramatta Road which provides limited green time to pedestrians. This is up to an additional 9.6 minutes of travelling time.
Chandos Street, at Parramatta Road	Via Loftus Street and Orpington Street; or via Julie Street and Bland Street	Pedestrians would have to walk up to an additional 1,000 metres and make up to one crossing of busy Parramatta Road which provides limited green time to pedestrians. This is up to an additional 16.8 minutes of travelling time.

The closure of these footpaths is entirely unacceptable. This will result in significant detours for pedestrians as outlined above. This is not reasonable, particularly for elderly and less mobile people. It is particularly of concern as these residents are more likely to make use of the bus services. Further, Council has grave concerns that pedestrians will not use the alternative routes and will in fact end up walking on the road. These are very busy roads and this would be an extreme road safety concern.

Council would not allow a private developer to close off a footpath for such extended periods of time. There is no reason that WestConnex should be treated differently. **It is noted that the footpaths in the above locations are Council owned footpaths and recommendations will be made that Council not give consent to have these closed.**

It is noted that it is proposed to close the westbound bus stop at Chandos Street. If the footpath were to remain open, then this would not need to occur.

3.1.5 Congestion

It is proposed to reduce Parramatta Road to two lanes in both directions between Bland Street and Orpington Street, Ashfield during construction. This will create extreme congestion issues on Parramatta Road, during construction. This will lead to increased travel times, which is particularly of concern for public buses and their schedules.

Table 8.8 in Volume 1A shows that there will be 3 lanes on Parramatta Road, between Bland Street and Dalhousie Street, Haberfield during construction. Under these circumstances there will be a Level of Service D for east and westbound traffic during the AM and PM Peaks. However, elsewhere it is understood that Parramatta Road will be reduced to two lanes at this location during construction. This reduction to two lanes has not been the subject of traffic modelling. This is likely to result in significant congestion and delays, including increased travel times for buses. **This modelling needs to be undertaken as a matter of urgency.**

3.1.6 Parking

Limited consideration has been given to parking for workers on the various construction sites. The EIS states vaguely that there is public transport available. Ashfield Station is some 1.2 to 1.8 kilometres away. Buses on Parramatta Road offer a fairly slow and inefficient service from the city. Further, it is noted that the staff will be working shifts and buses may not always be available. It is therefore likely that many of the construction site workers will choose to drive to work. On-site parking will be limited and will not be available for all staff.

Consideration must therefore be given to the running of a shuttle bus for WestConnex workers and for the introduction of resident parking permit schemes in streets surrounding the proposed worksites. This should be at the expense of the project proponents.

3.2 Stage 1 Complete, Stage 3 not commenced

The key traffic and transport issues once Stage 1 is completed, but before Stage 3 has commenced are as follows:

- Very little consideration has been given to alternatives to the WestConnex project, which is extraordinary given that the project is worth over \$15 billion and it does not appear to satisfactorily meet its own project objectives;
- The assumptions made in the traffic modelling do not appear to make sense and they are contradictory;
- The traffic modelling relies on the Parramatta Road enhancements, including the provision of a dedicated bus lane, and these works have not been funded as part of the WestConnex project;
- Extreme concern is raised that the project will just move the existing congestion/pinch point from Concord to Haberfield;
- Modifications are being proposed to vehicle access, including local roads and there does not appear to have been any analysis undertaken on the likely impacts;
- The proposed project will have a significant impact on the localised environment for residents; and
- The project will increase localised safety issues.

These will be discussed in more detail below.

3.2.1 Project Alternatives

Mass transit options can carry significantly more passengers than private motor vehicles. Heavy rail can carry up to 40,000 passengers per 'lane' per hour, a bus lane can carry up to 6,000 passengers per lane per hour and a rapid bus transit lane can carry up to 12,000 passengers per lane per hour. This contrasts with a normal vehicle lane which only carries a maximum of approximately 990 passengers per lane per hour.

One of the objectives of the project is to 'relieve road congestion' (Executive Summary, Volume 1A). However, insufficient justification has been given that the provision of additional road infrastructure will assist in resolving Sydney's complicated and serious mass transit issues. The M4 itself has been widened over time from four to six lanes (generally); however, this has not reduced congestion. Further widening again is now under construction as part of the WestConnex project. Another example is the Cross City Tunnel which was built with one of its key objectives being to relieve congestion in the Sydney CBD. This has not occurred.

New road infrastructure does not generally resolve congestion issues because it usually just attracts additional vehicles. This additional traffic is due to:

- Traffic reassignment;
- Traffic redistribution;
- Mode shifting; and
- Induced trips.

Induced traffic growth is essentially people making social and economic exchanges that they did not previously make because congestion levels and longer journey times prohibited them from doing so.

The WestConnex project may in the short term result in reduced travel times. New road infrastructure will reduce congestion in the short term, by creating additional road capacity. However, in the medium to long term, it is highly likely that this additional road capacity will just be taken up by additional vehicles. The level of congestion will therefore rise to its existing levels and there will be no real benefit experienced by motorists who utilise this road. These additional vehicles increase localised environmental impacts, including air pollution and noise impacts. This then impacts on the amenity of residents who live on Parramatta Road and nearby.

The EIS figures (Table 8.2, Section 8.3, Appendix G) demonstrate that in 2031 when comparing the 'do minimum' with the 'do something' scenarios, the project will induce an additional 65,100 vehicles per day on the western screenline (21.6%) increase, 81,800 vehicles on the central screenline (30.9%), 90,500 vehicles on the portal screenline (93.8%) and 90,100 vehicles on the eastern screenline (47.7%).

This project by definition will therefore result in increased environmental impacts associated with these additional vehicles, including congestion, increased noise and increased air pollution. As well as the impacts on the main roads, there will be associated increases in vehicle volumes on the supporting regional and local roads, impacting on residential amenity.

Section 10.1 (Appendix G) clearly demonstrates that in both 2021 and 2031, the mid-block performance downstream of the portal remains at level of service E or F. That is, even with billions of dollars in infrastructure expenditure on this project, Parramatta Road, between Sloane

Street and West Street, and Dobroyd Parade, north of Timbrell Drive will continue to operate near capacity to well in excess of capacity.

The executive summary (Volume 1A) outlines that WestConnex is needed because an “increase in transport demand from and to Western Sydney will continue to rise...there will continue to be a need for travel by road to jobs that are dispersed across the metropolitan area and not easily accessed by public transport.” Section 8.4 and 8.5 (Appendix G) outlines the 2021 and 2031 traffic modelling. In general, if the infrastructure were being built to allow residents of western Sydney to access jobs in eastern Sydney, it would be anticipated that there would be higher eastbound vehicle movements in the AM Peak and westbound vehicle movements in the PM Peak. The opposite is in fact the case, as demonstrated by the vehicle volumes in the tunnel as shown in Tables 8.3, 8.4, 8.5 and 8.6 (Appendix G):

Year	Location	Eastbound	Westbound
AM Peak			
2021	Western screenline	1500	2200
	Central screenline	2100	2800
2031	Western screenline	2600	4900
	Central screenline	3600	5800
PM Peak			
2021	Western screenline	1900	1300
	Central screenline	2700	2200
2031	Western screenline	4300	3500
	Central screenline	5700	4900

The project does not, therefore, appear to be being utilised by one of the key target groups, residents of Western Sydney. This does call into question whether the project is meeting one of its core objectives.

Overall, the EIS has given very little consideration to alternative projects. In particular, there has been very little consideration given to public transport options. Given the ever increasing population growth in Sydney, it is essential that consideration is given to mass transit options, which as outlined above, can carry significantly more passengers than private motor vehicles.

The EIS states, “Public transport options such as rail, light rail or bus would be feasible potential alternatives if the project, as part of WestConnex, was primarily concerned with transporting people to and from centres. However, the key customer markets identified for the project include highly dispersed and long distance passenger movements, as well as heavy and light freight and commercial services and businesses whose travel patterns are also greatly dispersed and diverse in nature” (4.2.3 Volume 1A). The EIS provides no objective data to justify this comment. Notwithstanding this, if more of Sydney’s commuting/passenger journeys were made via public transport, then there would be more road space for these other uses.



The EIS also states, “While demand management could help to spread the demand for peak travel to less congested time periods, its effectiveness would be limited by other constraints, such as availability of other travel modes at the user’s origin and destination, and flexibility of working arrangements to take advantage of ‘time of day’ tolling or transport pricing benefits” (4.2.4 Volume 1A). This comment is invalid if more public transport mode options are available. Further, the comment seems to make assumptions that people are unwilling to make changes in their travel behaviour to reflect pricing signals. The EIS provides no objective data to justify this comment. The State Government is about to embark on the largest infrastructure project in NSW, at a cost of over \$15 billion. It is appropriate to investigate such alternatives in a more thorough manner. The Cross City Tunnel provides a prime example where motorists demonstrate toll aversion. This is evidenced between the predicted (pre-opening) traffic volumes and the actual traffic volumes. Changes in toll prices may similarly impact on motorist behaviour.

The EIS goes on to state, “Demand management measures are seen as complementary initiatives rather than a viable standalone alternative to the project. To have a major impact on road traffic, demand management would also require major changes in social attitudes, travel behaviour and government policy” (4.2.4 Volume 1A). It is accepted that there is no one transport solution. At a minimum therefore, it is important that these complementary initiatives are undertaken at the same time as the proposed road project.

A comparison to Table 6.9 (Section 6.3 Appendix G) which shows the base year traffic figures and Table 10.10 and 10.12 (Section 10.2 Appendix G) which shows the 2021 'do minimum' traffic figures, shows that some intersections in Haberfield and Ashfield will see a decrease in average delays between the base year and in 2021 of between 16 and 25%. The table below demonstrates this. Vehicle volumes in Sydney generally increase over time. There would appear to be no reason for decreasing vehicle volumes at this location, in the absence of any infrastructure or network changes. **It is therefore unclear what assumptions have been made to obtain these results but they do not appear to make sense.**

Intersection	Base year per Table 6.9 (Section 6.3 Appendix G)			2021 'Do Minimum' per Table 10.10 and 10.12 (Section 10.2 Appendix G)		
	PCU	Av. Delay (s)	LoS	PCU	Av. Delay (s)	LoS
AM						
Parramatta Road & Bland Street	4498	21.7	B	4771	18(-17%)	B
Dobroyd Parade & Timbrell Drive	4863	59.6	E	5049	47(-21%)	D
PM						

Parramatta Road & Bland Street	4139	19.9	B	4437	15(-25%)	B
Dobroyd Parade & Timbrell Drive	5045	42.9	D	5136	36(-16%)	C

Greater detail needs to be provided into what assumptions were utilised in developing the model for the various scenarios.

In 2021, the traffic modelling in Tables 8.9 and 8.10 Volume 1A shows only relatively minor increases in traffic on Parramatta Road, between Sloane Street and West Street, Haberfield of +99 to +149 and similarly on Dobroyd Parade, north of Timbrell Drive, Haberfield of +2 to +34 vehicles per hour. **These very modest traffic increases do not appear to make sense.**

These two locations are ‘downstream’ of the proposed project. The WestConnex tunnel will create three additional travel lanes. Even if the unfunded bus lanes are introduced on Parramatta Road, there will be a net increase of two additional travel lanes. These lanes have the potential to carry up to 1,800 vehicles per hour in the peaks. Significant additional traffic will therefore be added from traffic going to and from the new WestConnex tunnel. **The assumptions made in the modelling need to be checked urgently.** The total capacity of this regional route/network between, Homebush and Haberfield will be increased significantly, and this additional capacity will be taken up by new vehicles. Unless there are going to be lane closures on the surface (Parramatta Road), then it is not realistic that there are only minor increases in traffic volumes at the ‘downstream’ of the new portals.

Indeed, Figures 8.4 and 8.5 (Section 8.6, Appendix G) appear to contradict the above data. This modelling shows 900 vehicles on the off-ramp at Wattle Street and 1,200 vehicles at Parramatta Road in the AM Peak. In the PM Peak, there are 1,100 vehicles on the off-ramp at Wattle Street and 1,600 vehicles at Parramatta Road. These vehicles exiting the tunnel must increase downstream traffic volumes significantly.

The Auditor-General’s Report into the project identifies that the benefits of WestConnex include, “provide the environment for...25,000 residences to be created over the next 20 years along Parramatta Road.” However, it is understood the Draft Parramatta Road Urban Transformation Strategy released in September 2015 allows for 40,000 new homes for up to 70,000 new people along the corridor. This is a significant change in population. The traffic modellers have used Bureau of Transport Statistics data for population growth. However, AECOM’s traffic modellers were unclear as to whether these 40,000 new homes had been included in the modelling. This needs to be clarified urgently.

3.2.3 Parramatta Road Enhancements

3.1 Appendix G of the EIS states, “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”. The objectives for the project include, to “Create opportunities for urban revitalisation, improved liveability, and public and active transport (walking and cycling) improvements along and around Parramatta Road” and to “Enhance movements across the

Parramatta Road corridor which are currently restricted". Further, section 3.4 Volume 1A states, "WestConnex is intended to be delivered as an integrated package of transport improvements across Sydney, with complementary enhancements to the existing road network (including associated surface street changes, bus priority measures, heavy vehicle access improvements), redesign of bus services and facilities, improved access to rail stations and upgrades to cyclist and pedestrian facilities".

It is therefore of extreme concern that these improvements on Parramatta Road have not been funded as part of the WestConnex program. This project is being partially justified based on surface improvements, and the associated sustainability and liveability improvements. If these surface improvements do not occur, then the project has limited benefit. The Cross City Tunnel was similarly sold on this basis and the on-surface improvements once the tunnel was open, particularly the public transport improvements, largely did not occur.

The transport modelling for this project relies on the Parramatta Road improvements; in particular that one lane will be converted from a regular vehicle lane to a bus lane. Section 4.1.3 Appendix G outlines that in the modelling for the 2021 'do something' scenario that it includes the following assumption, "Revised layout along Parramatta Road reflecting the provision of kerbside bus lanes between Burwood Road and Chandos Street (east of Bland Street), and the retention of two through traffic lanes in each direction." Given these works have not been funded it is disingenuous to rely on this in the traffic modelling. **It is of extreme concern that these improvements on Parramatta Road have not been funded as part of the WestConnex program.**

As well as the addition of bus lanes on Parramatta Road, the following improvements are identified:

- Improved access and travel along and across Parramatta Road for local vehicle trips and active transport;
- Improvements for north-south movements and movements from Parramatta Road (via right turn bays) to streets north or south of the corridor; and
- Pedestrians could be given additional priority at signalised crossings associated with the reduction in traffic volumes.

If the bus lanes and surface improvements are not undertaken at the same time as the WestConnex project, the additional capacity realised on Parramatta Road will quickly and readily be taken up by additional vehicles in advance of 2021, as has been outlined above. It will then become impossible to introduce these surface improvements.

Similarly, section 8.4.2 Volume 1A states that a new high frequency bus route between Burwood and the CBD, via Parramatta Road will be provided. It is noted that again the traffic modelling relies on the assumption that bus lanes will be provided with the opening of the project, "The operational modelling has assumed that bus lanes would be provided between Burwood Road and east of Bland Street to coincide with the opening of the project. Further provision of bus lanes to the east is also assumed to coincide with the opening of the M4–M5 Link." Given these works have not been funded it is disingenuous to rely on this in the traffic modelling.

The reduction in delays at the intersections of Parramatta Road and Wattle Street and Wattle Street and Ramsay Street as outlined in Table 8.14 Volume 1A will similarly not occur without surface improvements. Further, the new right-turn movement into Ramsay Street is likely to increase delays at this intersection.

It is of grave concern that the same mistakes which went into the modelling for the Lane Cove Tunnel and the Cross City Tunnel projects are being replicated in the modelling for WestConnex. It is understood that the model calibration has been validated by an independent peer review and it was found that the model was suitable. The report from this peer review must be made publicly available as a matter of urgency. It is noted that the Auditor-General found in a December 2014 review of the WestConnex project that the traffic data received in early August 2013 “raises questions about the underlying quality of the modelling.” The Auditor-General’s report goes on to say, “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” and that “deficiencies related to the way the business case dealt with risks around traffic projections...”. Serious concerns are raised that this lack of independent peer review for the project has continued into this project development and EIS stage.

3.2.4 Pinch Points

Extreme concern is raised that the project will just move the existing congestion/pinch point from Concord to Haberfield. The EIS states, “The long tunnel option was considered to have the potential to increase congestion on the approaches to the Anzac Bridge, including unacceptable queuing back into the eastbound tunnels” (4.3.1 Volume 1A). It appears that the queuing will instead occur in Haberfield.

Section 4.3.3 Volume 1A of the EIS outlines that the preferred option for the tunnel is three lanes (as opposed to two or four). However, there are only two lanes coming off the portal onto Parramatta Road at Haberfield. Parramatta Road itself reduces to two lanes for eastbound traffic, adjacent to the off-ramps on Parramatta Road. For eastbound vehicles, Parramatta Road remains three lanes east of Orpington Street, although there will now be four lanes of vehicles merging into this location. This creates a clear pinch point/congestion point for traffic ‘downstream’ of the portals. There is no additional road capacity east of Orpington Street. There is a further significant pinch point slightly to the east, where it reduces again, to two lanes, at Battle Bridge.

Similarly, Dobroyd Parade currently has two lanes of traffic in each direction. The new tunnel will introduce another two lanes of traffic. This creates a clear pinch point/congestion point for traffic ‘downstream’ of the portals.

Table 8.3 Volume 1A shows that Parramatta Road, between Sloane Street and West Street, Haberfield is already operating at a Level of Service F in the AM and PM peaks. Dobroyd Parade, north of Timbrell Drive, Haberfield is also already operating at a Level of Service F in the AM and PM peaks. These two locations are ‘downstream’ of the proposed project. Adding additional traffic to and from the new WestConnex tunnel is just going to exacerbate this high level of congestion.

The proponent’s Traffic Consultant confirmed at the Public Consultation meeting held at Ashfield Council on the 23 September 2015 that Stage 1 of the project will provide no benefit or improvements to traffic movements at Parramatta Road, Ashfield and Dobroyd Parade, Haberfield.

3.2.5 Local Roads

Serious concern is raised that there has been little consideration given to the impact of the project on local roads, and the associated changes in travel behaviour and increases in traffic volumes.

In Appendix A of Appendix G, there is a response to agency letters. Council requested traffic modelling be undertaken at the following:

- All state, regional and collector roads and local streets north of Parramatta Road within the Ashfield LGA
- All state, regional and collector roads, and local streets south of Parramatta Road, including Croydon Road, Bland Street, Liverpool Road, Elizabeth Street and Sloane Street
- Key state roads and collector roads south of Liverpool Road including Milton Street, Holden Street, Queen Street
- The Longport Street/Carlton Crescent/Smith Street, Summer Hill locality
- All local streets which might be affected by 'rat runs' between collector roads

The proponent's response states, "A detailed traffic impact analysis has been undertaken to assess the impact of both the WestConnex M4 East and Full WestConnex scenarios on the affected local road network." Modelling has been undertaken on some State Roads and this is outlined in the EIS. If modelling *has* been undertaken on local roads, this has not been outlined in the detailed EIS.

The following local streets are proposed to have modifications:

- Allum Street, Haberfield
- Martin Street, Haberfield
- Mortley Avenue, Haberfield
- Ramsay Street, Haberfield
- Waratah Street, Haberfield

These changes and the associated issues are described below. The changes will result in increased local traffic, including on the following streets:

- Alt Street, Haberfield
- Boomerang Street, Haberfield
- Ramsay Street, Haberfield
- Walker Street, Haberfield
- Waratah Street, Haberfield

The permanent closure of Allum Street, at Wattle Street will result in increased vehicle movements on Ramsay Street and Walker Avenue.

The southern side of Martin Street, Haberfield, at Dobroyd Parade currently only permits northbound traffic to turn left onto Dobroyd Parade (left out). No traffic may enter Martin Street from Dobroyd Parade (left in). This arrangement is supported by local residents and it is therefore recommended that this existing arrangement be retained.

The northern side of Martin Street, Haberfield, at Dobroyd Parade currently has no restrictions, allowing a right turn in and out of from Dobroyd Parade. It is proposed that this will become left in/out only. This will result in significant detours for the residents of Martin Street (north) when entering and exiting the street.

It is proposed to convert Mortley Avenue to entry only (except buses) at the Timbrell Drive/Dobroyd Parade intersection, with an additional entry lane to facilitate amended lane utilisation on

the Timbrell Drive approach. This will result in increased traffic on Boomerang Street and Waratah Street. It is understood that consideration is also being given to the removal of the pedestrian crossing on the south-western side of the intersection. This could potentially mean that there is no pedestrian crossing of Dobroyd Parade at Timbrell Drive/Mortley Avenue. The removal of this existing facility is strongly opposed and it is simply untenable if there are to be no pedestrian facilities for pedestrian facilities across Dobroyd Parade.

It is proposed to introduce a new right turn to Ramsay Street, for eastbound vehicles on Wattle Street. This will result in significantly increased traffic in Ramsay Street. Council is greatly concerned that increased traffic volumes on Ramsay Street will prompt the RMS to install Clearways on Ramsay Street. Council is vehemently opposed to Clearways on this road. This is a road which has a number of residential properties, and a vibrant shopping centre which will suffer greatly from the removal of parking. Council is strongly opposed to parking restrictions on the southern (westbound) side of Ramsay Street between Wattle Street and Walker Avenue.

Eastbound vehicles on Wattle Street/Dalhousie Street will no longer be able to turn right onto Waratah Street. Only eastbound vehicles exiting the M4 tunnel will be able to turn into Waratah Street. Combined with the new right turn at Ramsay Street, this will result in increased traffic in Ramsay Street and Alt Street.

Section 11.2.3 (Appendix G) identifies that "high volumes emerging from Parramatta Road exit ramp combined with a short merge, the proximity of the Dalhousie Street intersection, a substantial increase in volumes for the right turn at Hume Highway, and significant congestion at the Hume Highway intersection have been assessed as likely to lead to lengthy queues on the project off-ramp prior to the opening of the M4-M5 Link." Further, the traffic assessment report clearly indicates that the intersection of Parramatta Road and Liverpool Road is currently operating at Level of Service F and that delays will be worse once the project is operational (2021 and 2013). One of the suggested management techniques is to introduce 'turn restrictions'. The specific details are not discussed but it must be assumed that this restriction would be for eastbound vehicles on Parramatta Road, preventing them from turning right into Liverpool Road. This would severely impact on the accessibility to Ashfield. This option is strongly opposed, without substantial community consultation and support.

As well as the above streets, which will be directly impacted by the proposal, other streets will be impacted by changes in travel patterns brought about by the project. It is anticipated that there will be increased vehicle volumes in the following streets as well:

- Dalhousie Street, Haberfield for motorists entering and exiting the new portals
- Gower Street, Summer Hill for motorists entering the new portals
- Hawthorne Parade, Haberfield for motorists entering the new portals
- Liverpool Road, for motorists entering and exiting the new portals
- Marion Street, Haberfield, for motorists entering and exiting the new portals
- O'Connor Street, Haberfield, for motorists exiting the new portals
- Ormond Street, Ashfield for motorists entering the new portals
- Orpington Street, Ashfield for motorists entering the new portals
- Pembroke Street, Ashfield, for motorists entering the new portals
- Ramsay Street, Haberfield, for motorists exiting the new portals
- Rogers Avenue, Haberfield, for motorists exiting the new portals
- St David's Road, Haberfield for motorists exiting the new portals
- Waratah Street, Haberfield for motorists entering the new portals

There has been no analysis undertaken on likely increases in vehicle volumes on the above streets. Increasing vehicle volumes and potential speeding along these local roads is highly undesirable. It will impact on the local environment, residential amenity and it has the potential to significantly increase the number and severity of road crashes. Suitable LATM schemes should be in place to protect the amenity of these streets, once WestConnex opens.

This existing local road network performance already experiences rat-runs, including motorists travelling along Liverpool Road intending to turn left into Parramatta Road, currently use Gower Street – Ormond Street and Pembroke Street – Orpington Street. It is expected that under the WestConnex construction and operational stages, that these rat-runs will continue to be used with increasing traffic volumes and potentially speeding along these local streets. Suitable LATM schemes should be in place to protect the amenity of these streets.

Similarly, rat-running occurs where vehicles enter Haberfield at either Mortley Street or Boomerang Street (which has poor sight distances) – continue along Boomerang Street – then either Boomerang Street - Waratah Street, or Learmonth Street – Tillock Street – Waratah Street – continues along Waratah Street towards Hawthorne Parade – and exit via Marion Street or Parramatta Road. These rat-runs will significantly increase during the construction and operational stages. Of particular concern is the speed of vehicles travelling through these streets. The EIS identifies that Haberfield has "...quiet local streets..." (p. 13-4). Therefore, any increases in traffic along these streets will be highly evident. Suitable LATM schemes should be in place to protect the amenity of these streets.

The project is re-configuring and modifying the intersection of Parramatta Road and Chandos Street (north and south). Haberfield Public School is located in Chandos Street (north) with a direct access point and a 40 km/hr school zone. Chandos Street is a local road and only local traffic should be encouraged to use these streets once the project is operational.

It is unclear if any changes are proposed for Loudon Avenue, Haberfield. At the moment, it is utilised only by local traffic. It is unclear if it is proposed that there would now be access to and from Loudon Avenue to Dobroyd Parade.

Increased vehicle volumes on Parramatta Road, Wattle Street and Dalhousie Street will further increase delays for Haberfield and Ashfield residents trying to access these State Roads. RMS gives priority to the main roads by providing them with the bulk of the 'green time' at signalised intersections. The increased vehicle volumes and congestion associated with WestConnex will increase the pressure on RMS to provide more green time to the state roads, at the expense of local roads and residents.

3.2.6 Environment

The proposed project will have a significant impact on the localised environment for residents.

The new portals and works on Parramatta Road and Wattle Street/Dobroyd Parade will physically widen the road environment significantly. These roads are already congested with thousands of vehicles each day. Widening this road will lead to a further 'psychological' split of residents on either side of the road, dividing them into separate communities. This is particularly an issue for the western and eastern sides of Haberfield which will be further divided by the Wattle Street portals; and Haberfield and Ashfield which will be further divided by the Parramatta Road portals.

The proposed works include the installation of various new pieces of street furniture. Strong opposition is raised to the installation of variable message signs on the surface of Parramatta Road and/or Wattle Street/Dobroyd Parade on the approach to the new M4 tunnels. Notwithstanding that these are busy roads, VMS are large pieces of infrastructure which are entirely out of keeping with the scale and function of these streetscapes.

It is proposed to install new 5.0m high noise walls on Wattle Street and Dobroyd Parade. Whilst these devices will assist with noise mitigation, this will have a significant impact on the urban landscape and amenity for residents.

3.2.7 Safety

A number of safety concerns are created in relation to the project.

The EIS states unequivocally, "Congestion reduces the safety of road networks" (3.2.2 Volume 1A). By definition then, the roads around Ashfield and Haberfield will become more unsafe. The WestConnex project is being built with an objective to provide additional infrastructure for freight transportation. There are serious safety concerns about the associated increase in heavy vehicle movements in Haberfield and Ashfield. Increased heavy vehicles present an increased risk to other motorists.

The intersection of Parramatta Road and Orpington Street, Ashfield creates safety concerns. Vehicles turning left from Orpington Street, could attempt to enter the westbound portal to the M4 tunnel. They would need to merge with through traffic on Parramatta Road over a very short distance to do this. Concerns are raised that there is the potential for a number of accidents to occur as vehicles are merging over this short distance.

Eastbound vehicles exiting the M4 tunnel will be able to turn into Waratah Street. Concern is raised that there may be safety issues with the potential for rear-end accidents with queued vehicles waiting to turn right at this intersection. This is particularly of concern if there are vehicles queued back into the tunnel and/or if motorists do not have sufficient sight distance to observe the queued vehicles as they exit a dark tunnel into a sunny surface environment.

3.3 Gaps between Stages

Serious concern is raised regarding the proposed four year gap between the Completion of Stage 1 and Stage 3 of the project. The increased traffic generated by Stage 1 of the project will be forced to use the surface roads of Haberfield and Ashfield for at least four years.

As outlined previously, the proponent's Traffic Consultant confirmed at the Public Consultation meeting held at Ashfield Council on the 23 September 2015 that Stage 1 of the project will provide no benefit or improvements to traffic movements at Parramatta Road, Ashfield and Dobroyd Parade, Haberfield.

Council is particularly concerned that Stage 3 funding has not yet been secured. For all the reasons outlined above, this project will create a significant negative impact on the residents of Haberfield and Ashfield. If Stage 3 does not proceed, all of these negative impacts will continue indefinitely, which is untenable for the local community.

3.4 Stage 3 Complete

The key traffic and transport issues once Stage 3 is completed are as follows:

- The assumptions made in the traffic modelling do not appear to make sense and they are contradictory;
- The traffic modelling relies on the Parramatta Road enhancements, including the provision of a dedicated bus lane, and these works have not been funded as part of the WestConnex project;

These will be discussed in more detail below.

3.4.1 Project Alternatives

As stated above, very little consideration has been given to alternatives to the WestConnex project and the M4-M5 link (Stage 3), which is extraordinary given that the project is worth billions and it does not appear to satisfactorily meet its own project objectives.

3.4.2 Traffic Modelling

In 2031, the modelling in Tables 8.11 and 8.12 Volume 1A generally shows modest decreases in traffic on Parramatta Road, between Sloane Street and West Street, Haberfield and similarly on Dobroyd Parade, north of Timbrell Drive, Haberfield. These minor decreases mean these roads are currently Level of Service F and will continue to operate at Level of Service F. **These modest traffic decreases do not appear to make sense.**

These two locations are 'downstream' of the proposed project. It is noted that some of the traffic created in the Stage 1 tunnel will now continue into the M4-M5 connection tunnel. However, the total capacity of this regional route/network, between Homebush and Haberfield, will be increased significantly, and this additional capacity will be taken up by new vehicles. Unless there are going to be lane closures on the surface (Parramatta Road), then it is not realistic to expect that there will be decreases in traffic volumes at the 'downstream' of the new portals. **The assumptions made in the modelling need to be checked urgently.**

3.4.3 Parramatta Road Enhancements

The transport modelling for this project appears to rely on the Parramatta Road improvements; in particular that one lane will be converted from a regular vehicle lane to a bus lane. Section 4.1.3 Appendix G outlines that in the modelling for the 2031 'do something' scenario that it includes the following assumption, "Additional bus lane provision on Parramatta Road is assumed from west of Hume Highway to east of Sloane Street (eastbound), and from west of Norton Street to Hume Highway (westbound)." Given these works have not been funded it is disingenuous to rely on this in the traffic modelling. **It is of extreme concern that these improvements on Parramatta Road have not been funded as part of the WestConnex program.**

The 2031 modelling also relies on this assumption, "Reduction in through and right turn lanes on Wattle Street approaching Parramatta Road to accommodate exit from the M4–M5 Link." This has been presented as an option in the EIS and not a definite design proposal.

3.4.4 Other Concerns

A number of other concerns have been raised by Stage 3 of the project. These are outlined below.

The new off-ramp from the future M4-M5 link will have significant merging over very short lengths. Safety concerns are raised that there is the potential for a number of accidents to occur as vehicles are merging over this short distance.

It is noted that there will be new on/off-ramps portals on Wattle Street and it is proposed that these be built now with Stage 1 of the project. It is unclear what alignment the future Stage 3 tunnel works will take and how this will connect to the future M4-M5 link stub tunnels. Concern is raised that further land acquisitions in Haberfield may be required.

The new on-ramp westbound from Parramatta Road, would merge from two lanes to one lane beneath Bunnings. This could create further congestion for westbound traffic on Parramatta Road.

The construction of the Stage 3 portals on Wattle Street (W2b option) is appreciated as a means to 'future proofing' and allowing future access to the Stage 3 tunnels. However, this will encourage additional regional traffic on Frederick Street, for vehicles accessing the new portals. This is of extreme concern to Council. Serious concerns are already raised about vehicle volumes on Frederick Street, and the associated environmental impacts on residents. Although not contained in the EIS, it is understood that traffic on Frederick Street is expected to grow by 9.3% between 2021 and 2031. The base year (2015) figures have not been provided; however, it can be assumed that the total increase between 2015 and 2031 will be even greater than 9.3%.

Council is strongly opposed to the Frederick Street widening, particularly if it were to enable these additional vehicles to access the Stage 3 tunnels. Council is therefore requesting that the road widening easement on Frederick Street be removed immediately to provide some certainty to the residents of Frederick Street.

3.5 Pedestrians

The EIS states unequivocally, "Congestion reduces the safety of road networks" (3.2.2 Volume 1A). By definition then, the roads around Ashfield and Haberfield will become more unsafe. The WestConnex project is being built with an objective to provide additional infrastructure for freight transportation. There are serious safety concerns about the associated increase in heavy vehicle movements in Haberfield and Ashfield. Increased heavy vehicles present an increased risk to other motorists, but more importantly to pedestrians. Serious concerns are therefore raised about the safety of pedestrians in Haberfield and Ashfield in the new non-pedestrian friendly environments created by WestConnex.

There are very limited additional pedestrian facilities being created in association with the Project. In many locations, the environment will be considerably worse and more unsafe for pedestrians.

It is somewhat disingenuous to state that new footpaths will be provided on the eastern side of Wattle Street, from near Parramatta Road to near Loudon Avenue, and on the western side of Wattle Street from Ramsay Street to near Loudon Avenue. Much of this footpath already exists, with the exception of Reg Cody Reserve, Robson Park and where alternatives exist on the slip

lane/local traffic lane on Dobroyd Parade. The existing footpaths need to be replaced because the existing footpaths are being removed to make way for the new road infrastructure.

Similarly, there are existing footpaths on Parramatta Road.

Parramatta Road, at Chandos Street will be widened considerably. Although there are currently no formal pedestrian facilities at this location, pedestrians do cross the road at this location, particularly to access the bus stops which are on either side of the road. The WestConnex project will make it impossible for pedestrians to cross at this location. This will require them to detour significantly, in a car centric-pedestrian unfriendly environment. This is not acceptable. A pedestrian and cyclist pathway over/under Parramatta Road, at Chandos Street, Ashfield must be provided as part of the Project.

Similarly, Wattle Street/Dobroyd Parade at Ramsay Street will be widened considerably from 20 metres to 80 metres. There are existing signalised pedestrian crossings at this intersection. The WestConnex project will widen Wattle Street/Dobroyd Parade considerably and introduce a new right turn for eastbound vehicles. The Project will therefore require pedestrians to undertake a much longer crossing in a car centric-pedestrian unfriendly environment. This is patently unsafe and unacceptable. A pedestrian and cyclist pathway over/under Wattle Street/Dobroyd Parade, at Ramsay Street, Haberfield must be provided as part of the project.

There is existing tension between northbound vehicles on Waratah Street, turning right into Dobroyd Parade and pedestrians crossing Dobroyd Parade. The increased congestion at this intersection will add to this tension, with greater safety risks to pedestrians. This is patently unsafe and unacceptable. A pedestrian and cyclist pathway over/under Dobroyd Parade, at Waratah Street, Haberfield must be provided as part of the project.

3.6 Cyclist Facilities

3.1 Appendix G of the EIS states, “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”. The objectives for the project include, to “Create opportunities for urban revitalisation, improved liveability, and public and active transport (walking and **cycling**) improvements along and around Parramatta Road” and to “Enhance movements across the Parramatta Road corridor which are currently restricted”. Further, section 3.4 Volume 1A states, “WestConnex is intended to be delivered as an integrated package of transport improvements across Sydney, with complementary enhancements to the existing road network (including associated surface street changes, bus priority measures, heavy vehicle access improvements), redesign of bus services and facilities, improved access to rail stations and **upgrades to cyclist and pedestrian facilities**”.

Given the above, it is very disappointing that there are no proposed cyclist facilities in Ashfield and Haberfield. The State Government is spending over \$15 billion on transport infrastructure. It is completely unsatisfactory that a parallel regional cyclist facility, for the length of the project, is not being installed at the same time.

The above regional cycling facilities should link to existing and proposed local facilities, including the facilities on Dalhousie Street, Ormond Street, Orpington Street and Parramatta Road.

4.0 Recommendations

Below are suggested modifications to the EIS Conditions and new proposed EIS Conditions. Suggested conditions are made for the construction and operational phases.

4.1 Construction

4.1.1 Modified proposed conditions

Modify EIS proposed TT1 to state:

- TT1. A Traffic Management and Safety Plan (TMSP) will be prepared as part of the construction environmental management plan (CEMP), in consultation with the relevant road authority, local councils, emergency services, road user groups and pedestrian and bicycle groups. The TMSP will include the guidelines, general requirements and principles of traffic management to be implemented during construction. It will be prepared in accordance with Austroads Guide to Road Design (with appropriate Roads and Maritime supplements), the RTA Traffic Control at Work Sites manual and AS1742.3: Manual of uniform traffic control devices – Part 3: Traffic control for works on roads, and any other relevant standard, guide or manual. It will seek to minimise delays and disruptions, and identify and respond to any changes in road safety as a result of highway construction works.

The TMSP must take into account:

- The cumulative impacts of multiple construction sites
- The Plan shall take into account both local and regional traffic impacts and shall at all stages maintain existing priority and running times to public transport, bicycles and pedestrian movements.
- Both regional and local traffic impacts.

Modify EIS proposed TT2 to state:

TT2. The TMSP will include:

- A traffic route and haulage management plan
- Site traffic and access management plans
- An incident response plan
- A detailed travel management plan for construction staff at the various worksites, in consultation with local councils and stakeholders associated with the sporting facilities adjacent to the project site. This will include the promotion of public transport and carpooling to reduce work site-related vehicle movements, and also investigate feasible options for the provision of off-site car parking to reduce parking on local roads.
- The TMSP should include site-specific Traffic Management Plans (TMPs) for each specific worksite. The TMPs should include, but not be limited to:
 - Impacts on all existing traffic (including pedestrians, vehicles, cyclists and disabled persons), including the staging of construction works to minimise road closures and delay or detours to traffic;
 - Temporary traffic arrangements, including the identification of detour routes;



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- No heavy vehicles are to be permitted to queue on public roads (including local roads);
- Onsite vehicle queuing and parking areas and management measures to minimise peak time congestion
- The impact on pedestrian and bicycle facilities, including measures to ensure safe pedestrian and cycle routes and access at all times, staging to minimise delay or detours, and the provision of alternative facilities and locations for pedestrians and cyclists;
- The provision of safe and convenient access to all bus stops;
- Change of shifts must occur outside of School Zone hours to help ensure safety for school students, particularly school-aged pedestrians;
- The provision of a mini-bus/ shuttle bus from Ashfield station (or equivalent) for workers.
- Resident parking is to be investigated, funded and implemented by the proponent, with approval granted by Council and the Ashfield Traffic Committee.
- Appropriate monitoring, review and amendment mechanisms.
- Light vehicles should be defined as utes and passenger vehicles only. Small Rigid Vehicles, Medium Rigid Vehicles (as defined in AS 2890.2) and above should be considered heavy vehicles.
- The Proponent shall consult all affected schools in relation to all practicable measures to be taken to avoid undue disruption from altered school bus services during construction.
- Introduce temporary speed restrictions in adjacent local streets, directly affected by construction activities
- Consideration given to safe access to Wattle Street properties, particularly with additional heavy vehicles on Wattle Street.
- Access must be retained to all private properties, including the properties on the southern side of Dobroyd Parade, between Martin Street and Waratah Street.
- Construction, traffic modelling will include the monitoring of heavy vehicles, particularly on local roads. This will allow for compliance checks and enforcement, if necessary.
- Traffic management measures during construction for cyclists and pedestrians along Orpington Street, to minimise conflicts with civil site (C10) vehicles.
- Any closure of the intersection of Ramsay Street/ Dobroyd Parade must occur only at night.

The TMSP shall be certified by an experienced traffic/transport planner who shall be engaged throughout the construction stage to advise on implementation issues and amendments and as a key liaison contact for the relevant local Councils. The TMSP must be referred to the Ashfield Traffic Committee and Council for review and comment prior to approval.

Modify EIS proposed TT10 to state:

- TT3. Local road closures will be managed and adequate property access will be maintained. Where road closures are required, reasonable and practical alternate traffic routes will be provided and communicated to the community. This will be undertaken in consultation with Roads and Maritime, local councils and property owners likely to be affected.

Local road closures require consultation and the approval of the Ashfield Traffic Committee and Council.

Modify EIS proposed TT11 to state:

- TT4. A Road Dilapidation Report will be prepared and will include identification of the existing conditions of local roads and mechanisms to repair any damage caused by the project.

The Dilapidation Report must include existing traffic management devices and cyclist facilities.

Any damage caused to local roads must be repaired to Council's specification and to the satisfaction of Council, at the Proponent's expense.

4.1.2 Additional Conditions

- TT5. There are to be no heavy vehicle movements from 10pm to 7am, without specific approval from the Secretary. Night time spoil is to be stored on-site at C7, C8, C9 and C10 within acoustic sheds and moved the following day.
- TT6. Vehicles exiting the Northcote Street site (C7) must not utilise Wattle Street and Dobroyd Parade. They must exit the site directly onto Parramatta Road, in a westerly direction.
- TT7. Vehicles exiting the Parramatta Road civil site (C10) must not utilise Bland Street. They must exit the site onto Parramatta Road, just east of the intersection with Bland Street.
- TT8. Failing the above recommended condition, an appropriately qualified traffic controller must be present at all times on Bland Street, at the exit from the Parramatta Road civil site (C10), to help ensure pedestrian safety, particularly primary school aged children.
- TT9. Failing the above recommended condition, Bland Street, at Parramatta Road is to be realigned and widened to allow for two northbound lanes, with no associated reduction in footpath widths (making use of the private property land which has been acquired at this intersection).
- TT10. The modifications which need to be made to the Bland Street pedestrian overpass must be made prior to the substantial commencement of construction such that the bridge can remain open at all times whilst the Parramatta Road civil site (C10) is in operation.
- TT11. The footpath on the southern side of Parramatta Road, from Bland Street to Orpington Street is to remain open at all times during construction.
- TT12. The footpath on the southern side of Dobroyd Parade, from Martin Street to Waratah Street is to remain open at all times during construction.
- TT13. Footpath access from Martin Street, to Wattle Street is to remain open at all times during construction.

- TT14. Footpath access from Chandos Street, to Parramatta Road is to remain open at all times during construction.
- TT15. The Proponent shall maintain safe pedestrian access to the fullest extent possible during construction. In circumstances where pedestrian access is temporarily not possible due to construction activities, the Proponent shall ensure that a satisfactory alternate route is provided and sign posted.
- TT16. The Proponent shall as part of its construction stage monitor traffic changes during construction on regional and local streets in Haberfield, Ashfield and Summer Hill at six monthly intervals, for a period of one week (outside of school holiday periods). The results of this monitoring shall be made publicly available within one month of collection. Should monitoring indicate traffic intrusion 10% above existing (pre-construction) levels on these streets the Proponent shall prepare and implement LATM for these areas, following consultation with Ashfield Council and the community, to minimise and/or restrict use of local roads.
- TT17. The Proponent shall take all reasonable steps to ensure that all heavy vehicles travel to and from all construction sites via State roads and/or the routes specified in the EIS. The Proponent shall take all reasonable steps to ensure that no heavy vehicles travel on local roads.
- TT18. For the duration of the project, the construction sites, site compounds and surrounding areas shall be maintained in a generally clean and tidy condition.
- TT19. Prior to the commencement of substantial construction, a Construction Stage Public Transport Management Plan shall be developed. The Plan shall address the potential impact of construction activities on public transport. The objective of the Plan shall be to achieve at least pre-construction level of service for buses and high occupancy vehicles.
- TT20. The Proponent shall, develop measurable performance indicators for bus efficiencies (including consideration of bus timetables), occurring as a result of the Project. If bus performance does not meet the indicator targets, the Proponent shall initiate, at its own expense, any actions as reasonably required by Transport for NSW.
- TT21. The Proponent shall establish an appropriate representative Community Liaison Group (CLG) for the Haberfield and Ashfield community. The Proponent shall:
- Ensure that the first meeting is held prior to substantial construction;
 - Allow the CLG to make comments and recommendations about construction progress and implementation, the environmental management plan and sub plans, monitor compliance with these conditions of approval and other matters relevant to the operation of the Project;
 - Ensure that the CLG have access to the necessary plans and information for such purposes;
 - Consider the recommendations and comments of the CLG and provide a response to the CLG and Minister for Planning;
 - Ensure that the CLG shall consist of appropriate community and Council representatives; and
 - Bear all costs associated with the establishment and ongoing function and resourcing of the CLG, including the provision of at least two senior staff to administer, attend and participate in the meetings.

- TT22. The Proponent shall nominate a person(s), to be approved by the Minister for Planning, to serve as the Independent Community Liaison Representative(s) (ICLR). The ICLR shall be experienced in mediating disputes. The role of the ICLR shall include but not be limited to:
- Attending and chairing Community Liaison Group meetings;
 - Consulting with the Proponent with regard to consultation strategies;
 - Being available for direct contact by the community during standard construction hours; and
 - To the greatest extent practicable, resolve community complaints.
- TT23. Construction traffic movements on public roads shall limit any increase in existing road traffic noise levels to no more than 2 dB(A). All feasible and reasonable noise mitigation and management measures must be implemented.
- TT24. The Proponent is to ensure that construction vehicle contractors operate so as to minimise any sleep disturbance impacts. Measures that could be used include contracts that include provisions to deal with unsatisfactory noise performance for the vehicle and/or the operator, and specifying alternatives in place of reversing beepers such as reversing cameras and proximity alarms, or a combination of these.

4.2 Operational

4.2.1 Modified proposed conditions

Modify EIS proposed OpTT1 to state:

- OpTT1. An operational traffic review will be undertaken at 3 and 12 months after the opening of the project to confirm the operational impacts of the project on surrounding arterial roads and major intersections. This review will be undertaken by a suitably qualified traffic consultant that is independent of the design and studies undertaken as part of the EIS.

That the Sydney Motorway Corporation (SMC) be advised that Council requires that 'rat run' into residential streets leading from Parramatta Road and City West Link Road be addressed with restrictions on entry from Parramatta Road and City West Link Road into residential streets be imposed either permanently or in times during peak traffic periods immediately the project is completed and during construction times, pending consultation with community.

Modify EIS proposed OpTT4 to state:

- OpTT2. The following network upgrades will be investigated in consultation with relevant local councils, Roads and Maritime and affected communities:

On the understanding that there will be no traffic from Timbrell Drive into Mortley Avenue after completion of the WestConnex proposal the following network upgrades will be investigated in consultation with relevant local councils, Roads and Maritime and affected communities:

- Conversion of Mortley Avenue to entry only (except buses) at the Timbrell Drive/ Dobroyd Parade intersection, with an additional entry lane to facilitate amended lane utilisation on the Timbrell Drive approach. Layout amendments could be required on Mortley Avenue which will need to consider impacts on existing parking provision, the location of the bus stop and some existing mature trees...

This is subject to further detailed traffic modelling and consultation with the community. This proposal may only proceed with clear majority community consent.

Should this proposal go ahead, conversion of Mortley Avenue to entry only (except buses **and cyclists**)....

Modify EIS proposed OpTT5 to state:

OpTT3. The following network upgrades will be investigated in consultation with relevant local councils, Roads and Maritime and affected communities, and implemented as and when required based on traffic growth and changing traffic patterns:...

- Extension of parking restrictions on the southern (westbound) side of Ramsay Street between Wattle Street and Walker Avenue will NOT be undertaken...
- Creation of a double right turn on the Wattle Street westbound approach to Ramsay Street post opening of the M4–M5 Link. This could be achieved by reallocating the right hand through lane, leaving a single through/left lane.

This is subject to further detailed traffic modelling and consultation with the community. This proposal may only proceed with clear majority community consent.

4.2.2 Additional Conditions

Local

- OpTT4. Martin Street, Haberfield is to allow for northbound traffic to turn left onto Dobroyd Parade only (left out). No traffic is to enter Martin Street from Dobroyd Parade (left in). This will be in accordance with the existing pre-construction arrangements. As part of the overall project landscaping, this half road closure is to receive appropriate landscaping.
- OpTT5. Loudon Street, Haberfield is to be closed to traffic to/from Dobroyd Parade (i.e. it is to be a cul-de-sac).
- OpTT6. Orpington Street, Ashfield is to be left in/ left out only to Parramatta Road. The concrete median island on Parramatta Road must be extended to the East, to prevent motorists entering the new westbound portal from Orpington Street.
- OpTT7. The Proponent shall ensure adequate monitoring of the local and regional road network is conducted prior to construction to provide an appropriate base line for measuring any future impacts resulting from the construction and/or operation of the tunnel. Traffic monitoring should be for a period of one week (outside of school holiday periods). Impacts on bus travel times on these roads (where relevant) shall also be monitored. The results of this monitoring shall be made publicly available within one month of



Ashfield Council

collection. Key impact prediction shall include traffic volumes on approach and departure routes, including (but not limited to) the following streets:

- Allum Street, Haberfield
- Alt Street, Ashfield and Haberfield
- Ash Lane, Haberfield
- Bland Street, Ashfield
- Bland Street, Haberfield
- Boomerang Street, Haberfield
- Chandos Street, Ashfield
- Charlotte Street, Ashfield
- Church Street, Ashfield
- Dalhousie Street, Haberfield
- Dover Street, Summer Hill
- Elizabeth Street, Ashfield
- Frederick Street, Ashfield
- Gower Street, Summer Hill
- Hawthorne Parade, Haberfield
- Henry Street, Ashfield
- Julia Street, Ashfield
- Kensington Road, Summer Hill
- Liverpool Road, Ashfield
- Loftus Street, Ashfield
- Marion Street, Haberfield
- Martin Street, Haberfield
- Milton Street, Ashfield
- Mortley Avenue, Haberfield
- Northcote Street, Haberfield
- O'Connor Street, Haberfield
- Ormond Street, Ashfield
- Orpington Street, Ashfield
- Pembroke Street, Ashfield
- Ramsay Street, Haberfield
- Rogers Avenue, Haberfield
- Sloane Street, Summer Hill
- St David's Road, Haberfield
- Walker Avenue, Haberfield
- Waratah Street, Haberfield
- Wolseley Street, Haberfield

OpTT8. Three and twelve (12) months after opening, the Proponent shall monitor morning and evening peak hour traffic levels in Ashfield and Haberfield for a period of one (1) week (outside of school holiday periods). The results of this monitoring shall be made publicly available within one month of collection. Should monitoring indicate traffic intrusion 10% above existing levels on these streets as a result of the construction of the proposal the Proponent shall prepare and implement LATMs for these areas, following consultation with the Ashfield Traffic Committee, Ashfield Council, bicycle user groups and the community, to minimise and restrict use of local roads and to identify reasonable measures to mitigate the impact of significant increases in traffic on local roads that result from the operation of WestConnex. The LATM measures shall include as a



Ashfield Council

minimum, unless otherwise agreed by Ashfield Council, traffic calming on the following streets:

- Allum Street, Haberfield
- Alt Street, Ashfield and Haberfield (including entry threshold treatments at Parramatta Road)
- Ash Lane, Haberfield
- Bland Street, Ashfield
- Bland Street, Haberfield
- Boomerang Street, Haberfield
- Chandos Street, Ashfield (including entry threshold treatments at Parramatta Road)
- Charlotte Street, Ashfield
- Church Street, Ashfield
- Dalhousie Street, Haberfield
- Dover Street, Summer Hill
- Elizabeth Street, Ashfield
- Gower Street, Summer Hill
- Hawthorne Parade, Haberfield
- Henry Street, Ashfield
- Julia Street, Ashfield
- Kensington Road, Summer Hill
- Loftus Street, Ashfield
- Martin Street, Haberfield
- Mortley Avenue, Haberfield
- Northcote Street, Haberfield
- O'Connor Street, Haberfield
- Ormond Street, Ashfield
- Orpington Street, Ashfield
- Pembroke Street, Ashfield;
- Ramsay Street, Haberfield (including kerb blisters and a 40km/h High Pedestrian Activity Area through the Haberfield town centre)
- Rogers Avenue, Haberfield
- Sloane Street, Summer Hill
- St David's Road, Haberfield
- Wattle Street, Haberfield
- Walker Avenue, Haberfield (including an entry threshold treatment at Parramatta Road)
- Waratah Street, Haberfield
- Wolseley Street, Haberfield

The key objective of the LATM shall be to restrict through traffic and ensure that alternative routes for traffic are relatively unattractive. The measures listed above and determined during consultation shall be installed at full cost to the Proponent as soon as practicable after finalising the LATM consultation process and all construction works must be fully completed within 6 months of identification of need by traffic counts and/or community consultation.

Regional

OpTT9. The Proponent shall develop measures to reduce roadway capacity where practicable on the following roads:

- Frederick Street, Ashfield
- Liverpool Road, Ashfield

OpTT10. That the easement/road reserve on Frederick Street, Ashfield be removed.

Public Transport

OpTT11. The Proponent must identify reasonable measures to “capture” additional road capacity and to maintain and enhance the benefits of short term reductions in traffic volumes on Parramatta Road directly influenced by the opening of the Project, to ensure that these traffic volumes do not rise again in the medium to long term. At a minimum, the Proponent shall ensure that one lane in each direction on the entire length of Parramatta Road (continuously), from the M4 at Concord to Haberfield is a dedicated 24 hour Bus Lane for Rapid Bus Transit or a dedicated light rail lane and that this is funded by the Proponent. Other surface improvements for Parramatta Road may include other public transport enhancement measures, separated and designated bicycle paths, widened footpaths and landscaping and these improvements must be funded by the Proponent. The installation of the identified measures shall be fully funded by the Proponent and should be operating prior to the imposition of any tolling on WestConnex.

OpTT12. The Proponent shall ensure that one lane in each direction on the entire length of the WestConnex tunnel is a dedicated 24 hour T2 lane.

OpTT13. The Proponent shall ensure that the Project does not prevent or impose significantly greater cost implications for future provision of a light rail system on Parramatta Road.

Parramatta Road

OpTT14. As part of the surface improvements for Parramatta Road, the Proponent shall ensure improved access and travel along and across Parramatta Road for local vehicle trips and active transport.

OpTT15. As part of the surface improvements for Parramatta Road, the Proponent shall ensure improvements for north-south movements and movements from Parramatta Road (via right turn bays) to streets north or south of the corridor.

Bikes and Pedestrians

OpTT16. A safe, high quality and contiguous cyclist/pedestrian path(s) shall be provided for recreational and commuter cyclists and for pedestrians for the length of the Project, from the M4 at Concord through to Haberfield and Ashfield. Details of the provisions for cyclists shall be developed through the preparation of a detailed Cycleway and Pedestrian Plan which shall be prepared in consultation with Bicycle NSW, local

councils, relevant bicycle user groups and the CLGs. The Plan must take into consideration existing and future demand. The Cycleway and Pedestrian Plan shall also include:

- A detailed description of the proposed design including all connections to surrounding roads, streets and paths;
- Lighting, where appropriate;
- Safety including safe crossings for pedestrians and those accessing bus stops and security;
- Line marking and signage to separate cyclists from pedestrians in accordance with signposting directions from the RMS in relation to all shared paths;
- Maintenance;
- Consideration of links to existing and future planned cycle networks, roads and paths and potential linkages; and
- Appropriate associated landscaping.

The Cycleway and Pedestrian Plan must include as a minimum:

- The traffic management treatment at the intersection of Northcote Street and Parramatta Road, Haberfield intersection is to be upgraded to include cyclist provisions;
- The traffic management treatment at the intersection of Wolseley Street and Parramatta Road, Haberfield intersection is to be upgraded to include cyclist provisions;
- A dedicated, separated and permanent bicycle path which operates the full length of Parramatta Road, from the M4 at Concord to Haberfield;
- A dedicated, separated and permanent bicycle path which operates the full length of Wattle Street/ Dobroyd Parade, from Parramatta Road to Timbrell Drive;
- A pedestrian and cyclist pathway over/ under Parramatta Road, at Chandos Street, Ashfield;
- A pedestrian and cyclist pathway over/ under Wattle Street/Dobroyd Parade, at Ramsay Street, Haberfield; and
- A pedestrian and cyclist pathway over/ under Dobroyd Parade, at Waratah Street, Haberfield.

The design of any such infrastructure shall be certified by a suitably qualified and experienced expert that has considered the above matters. The pedestrian and cyclist facilities should be operational prior to the Proponent receiving toll income.

OpTT17. All pedestrian bridges shall be of high quality in terms of form, finish and materials and shall be designed by an architect with appropriate experience in urban pedestrian bridge design.

OpTT18. As part of the surface improvements for Parramatta Road, the Proponent shall ensure pedestrians are given additional priority at signalised crossings associated with the reduction in traffic volumes.

Other

No variable message signs are to be installed on Parramatta Road, Dobroyd Parade, Wattle Street or any other road in Haberfield or Ashfield.

That demand management measures be implemented in conjunction with the Project. These measures should seek to make changes to social attitudes, travel behaviour and government policy.

At 12 months, and 5 years, after the commencement of operation of the WestConnex, or as otherwise agreed to by the Minister for Planning, the Proponent shall prepare a Road Network Performance Review Plan in consultation with relevant Councils that includes:

- Management measures to minimise toll avoidance, particularly for heavy vehicles;
- Details of any complaints received relating to traffic, transport and access impacts, and how they have been addressed in the Plan. The Plan shall be submitted to the Secretary, Transport for NSW (in relation to impacts on bus services) and to relevant Council within 60 days of its completion and made publicly available. The purpose of the Plan is to optimise road network performance, and manage the performance impacts of the Project on the adjoining road network by identifying or confirming mitigation improvements that could be required in areas where traffic performance may be unsatisfactory at time of completion of construction.

The Proponent shall set aside the sum of \$20 million to be used for implementing any additional operational stage measures resulting from investigations required as part of these conditions of approval and/or further offset measures including public transport improvement, pedestrian and cyclist improvements and/or for any other measure as required by the Secretary, Transport for NSW.



WestConnex EIS Submission Report - Traffic and Transport

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13 October 2015

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1. Introduction

1.1. Background

TTM Consulting has been engaged by Ashfield Council to prepare a report for Council's consideration in response to the traffic related components of the Environmental Impact Statement for Stage 1 of the WestConnex Project – M4 East extension. This report assesses both the construction and operation phases of the proposal.

1.2. Sections of the EIS Addressed in This Report

This report assesses the traffic and transport information provided in Chapter 8 Traffic and Transport, parts of Chapter 6 Construction Work, and parts of Chapter 26 Cumulative Impacts of the main report and the Traffic and Transport Assessment contained in Appendix G.

1.3. Overview

The WestConnex project is being delivered in three stages namely:

1. Stage 1 involves the widening of the M4 Motorway from Church Street to Homebush Bay Drive plus construction of the M4 East tunnel from Homebush Bay Drive to Parramatta Road and the City West Link.
2. Stage 2 involves construction of a tunnel from the M5 at Beverly Hills to St Peters.
3. Stage 3 involves construction of a tunnel linking up the first two stages. There has also been investigations into linking to the ANZAC Bridge.

The widening of the M4 commenced in March 2015. Work has commenced on delivery an upgrade of the M5 / King Georges Road interchange as part of Stage 2.

Running parallel with Stage 1 is the Parramatta Road Urban Renewal program which is looking at opportunities to take advantage of reduced traffic flows on Parramatta Road due to diversions to WestConnex.

It should be noted that whilst Stage 1 and 2 of WestConnex are committed projects there is no guarantee about the timing or eventual completion of Stage 3. Stage 3 will require significantly more government investment as the traffic levels in the Stage 3 tunnel are likely to be substantially lower than for Stage 1 or 2.

2. Compliance with the Secretary's Environmental Assessment Requirements

The Secretary's Environmental Assessment Requirements dated 16 June 2015 have the following requirements in relation to traffic and transport:

- details of how the following meet the traffic and transport objectives of the project, taking into account adjacent sensitive land uses, future growth areas, approved and proposed infrastructure projects, and traffic (vehicular, cyclist and pedestrian) needs:
 - the preferred alignment and design,
 - the proposed interchanges and connections to the surrounding road network, and
 - associated road infrastructure facilities;
- 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;
- 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;
- impacts on cyclists and pedestrian access and safety and consideration of opportunities to integrate cycleway and pedestrian elements with surrounding networks;
- construction traffic and transport impacts of the project (including ancillary facilities) and associated management measures, in particular:
 - impacts to the road network (including safety and level of service, pedestrian and cyclist access, and disruption to public transport services and access to properties),
 - route identification and scheduling of transport movements,
 - the number, frequency and size of construction related vehicles (both passenger, commercial and heavy vehicles),
 - the nature of existing traffic on construction access routes (including consideration of peak traffic times), and
 - the need to close, divert or otherwise reconfigure elements of the road network associated with construction of the project, having reference to the cumulative construction impacts of other infrastructure preparing for or commencing construction; and
- details of how the project meets the objectives of the overall WestConnex Scheme.

The EIS generally satisfies these requirements with the exception of adequately addressing the needs of pedestrians and cyclists during and after construction. These issues are highlighted later in this report.

3. Forecast Traffic Flows

3.1. Screenlines

The following sections present an overview of traffic changes associated with operational phase of the M4 East. Forecasts of average weekday and peak period flows have been reported in the EIS. The Westconnex Development Authority has provided additional information in relation to flows in the Ashfield Local Government Area. The following scenarios have been assessed:

1. Year 2021 without the M4 East,
2. Year 2021 with the M4 East,
3. Year 2031 without the M4 East, and
4. Year 2031 with the M4 East plus the completion of Stage 3 of WestConnex.

No information has been provided on likely traffic flows in 2031 if WestConnex Stage 3 is delayed.

Traffic flows have been collated for four screenlines in the immediate vicinity of the Ashfield Local Government Area. The screenlines are shown in Figure 3-1. They include the following roads:

- Central screenline:
 - Lyons Road West
 - Queens Road
 - M4 East
 - Parramatta Road
 - Hume Highway
 - Georges River Road
 - Canterbury Road
- Portal screenline:
 - M4 East – Wattle Street Portal
 - Wattle Street
 - M4–M5 Link
 - M4 East – Parramatta Road Portal
 - Parramatta Road
- Eastern screenline:
 - Lyons Road
 - Dobroyd Parade
 - M4–M5 Link
 - Marion Street
 - Parramatta Road
 - New Canterbury Road
- Ashfield North-South Screenline:

-
- Croydon Road
 - Frederick Street
 - Bland Street
 - Hume Highway
 - Sloan Street
 - Old Canterbury Road

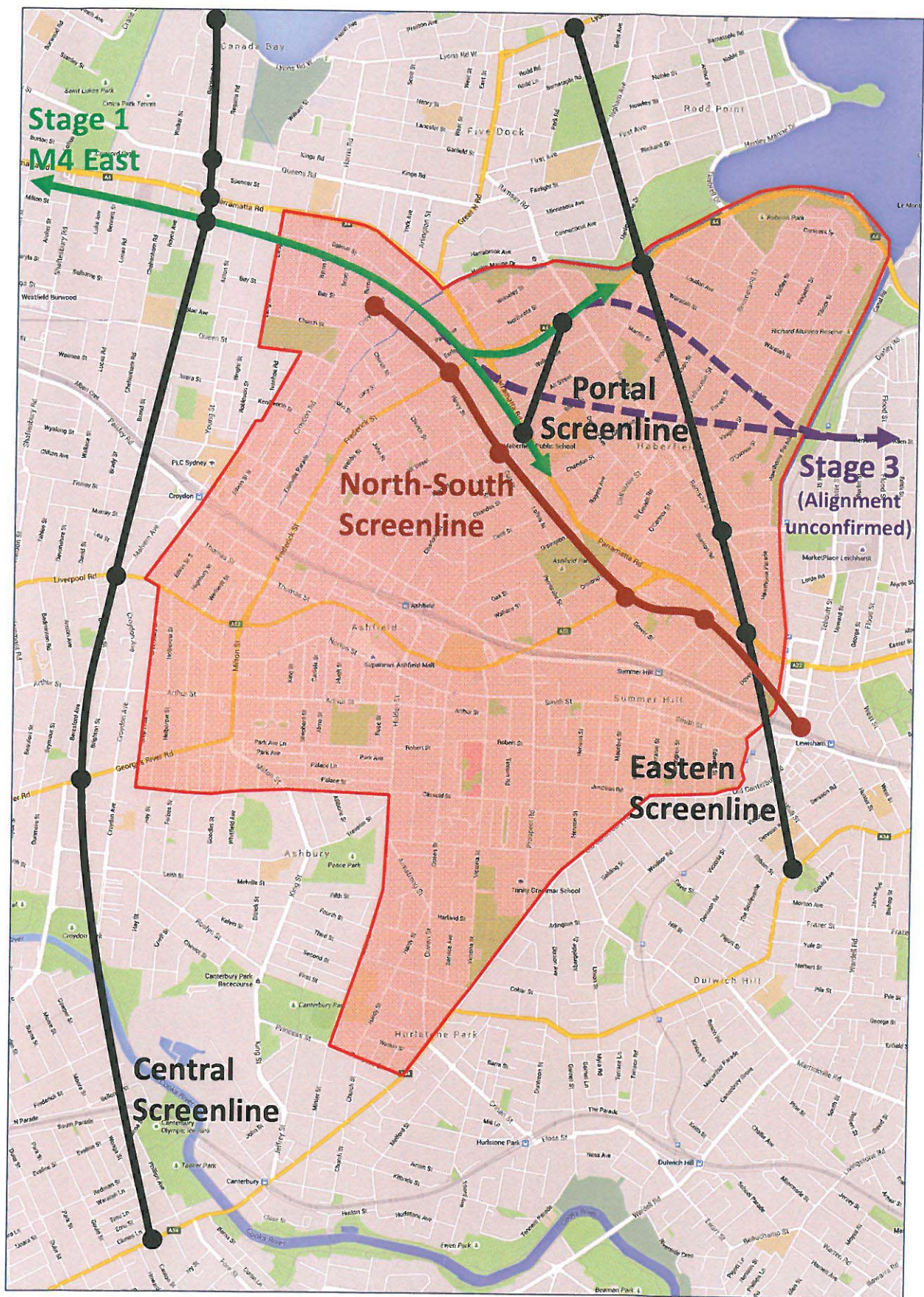


Figure 3.1: Screenline Locations

Table 3.1 presents the forecast average weekday traffic flows for 2021 and 2031. The forecasts are presented graphically in the following pages.

Table 3.1: Year 2021 Average Weekday Traffic Forecasts

Screenline / Road Location	2021 AWT		Change	2031 AWT		Change
	Without M4 East	With M4 East Only		Without M4 East	With Full WestConnex	
Central screenline						
Lyons Road West	19,900	19,100	-4%	21,500	19,900	-7%
Queens Road	12,700	9,200	-28%	14,400	11,000	-24%
M4 East	-	67,700	-	-	133,900	-
Parramatta Road	78,200	36,400	-53%	82,400	45,300	-45%
Hume Highway	29,400	26,300	-11%	38,800	32,400	-16%
Georges River Road	44,900	44,500	-1%	47,900	46,800	-2%
Canterbury Road	56,500	56,200	-1%	60,000	57,800	-4%
Total	241,600	259,400	7%	265,000	346,800	31%
Portal screenline						
M4 East – Wattle Street Portal	-	31,500	-	-	21,900	-
Wattle Street	48,400	28,800	-40%	47,800	30,200	-37%
M4–M5 Link	-	-	-	-	87,300	-
M4 East – Parramatta Road Portal	-	36,100	-	-	24,600	-
Parramatta Road	44,200	20,200	-54%	48,700	23,000	-53%
Total	92,600	116,600	26%	96,500	187,000	94%
Eastern screenline						
Lyons Road	36,600	35,500	-3%	42,300	38,400	-9%
Dobroyd Parade	56,100	61,900	10%	56,900	56,200	-1%
M4–M5 Link	-	-	-	-	106,800	-
Marion Street	9,700	10,500	8%	11,200	9,900	-12%
Parramatta Road	62,600	67,000	7%	69,800	58,200	-17%
New Canterbury Road	17,600	18,000	2%	20,000	19,500	-3%
Total	182,600	192,900	6%	200,200	289,000	44%
Ashfield North-South Screenline						
Croydon Road	13,900	12,100	-13%	16,200	16,000	-1%
Frederick Street	33,200	31,900	-4%	34,400	36,300	6%
Bland Street	11,000	10,400	-5%	14,100	13,000	-8%
Hume Highway	15,500	15,000	-3%	21,200	15,300	-28%
Sloan Street	9,100	9,400	3%	9,900	9,600	-3%
Old Canterbury Road	34,500	35,600	3%	36,300	36,300	0%
Total	117,200	114,400	-19%	132,100	126,500	-4%

3.2. Year 2021 with and without the M4 East

The forecasts indicate the following:

- The total daily traffic travelling between the east and west across the eastern and central screenlines increases by 6 % (10,300 vehicles) and 7 % (17,800 vehicles).
- The increase at the eastern end of the tunnel portals is significant with 11,900 additional vehicles accessing Wattle Street and 12,100 accessing Parramatta Road.
- There is a net decrease in north south traffic movements south of Parramatta Road (2,800 vehicles).

It is evident from the traffic flow changes that negative impacts of the M4 East are generally limited to the areas immediately north and east of the tunnel portals and the suburb of Haberfield in particular.

Daily traffic flows on Marion Street increase by 8% (800 vehicles). This is most likely due to traffic avoiding Parramatta Road which would be heavily congested due to the increases on that road. This indicates the need to consider traffic management along this route and surrounding streets, particularly in the vicinity of the local shops.

3.3. Year 2021 with and without the M4 East

The forecasts indicate the following:

- The total daily traffic travelling between the east and west across the eastern and central screenlines increases by 44 % (88,800 vehicles) and 31 % (81,800 vehicles).
- The increase at the eastern end of the tunnel portals is has 4,300 additional vehicles accessing Wattle Street and 1,100 accessing Parramatta Road.
- There is a net decrease in north south traffic movements south of Parramatta Road (5,600 vehicles).

The increase at the eastern end of the tunnel portals in 2031 is significantly less than in 2021 due to the completion of the full WestConnex project. The net decrease in north south traffic movements south of Parramatta Road is greater than in 2021.

It is evident that the net effect of WestConnex being fully completed from a traffic perspective is positive for the Ashfield Local Government Area. This does not negate the importance of addressing issues arising between the completion of the M4 East and Stage 3 of WestConnex.

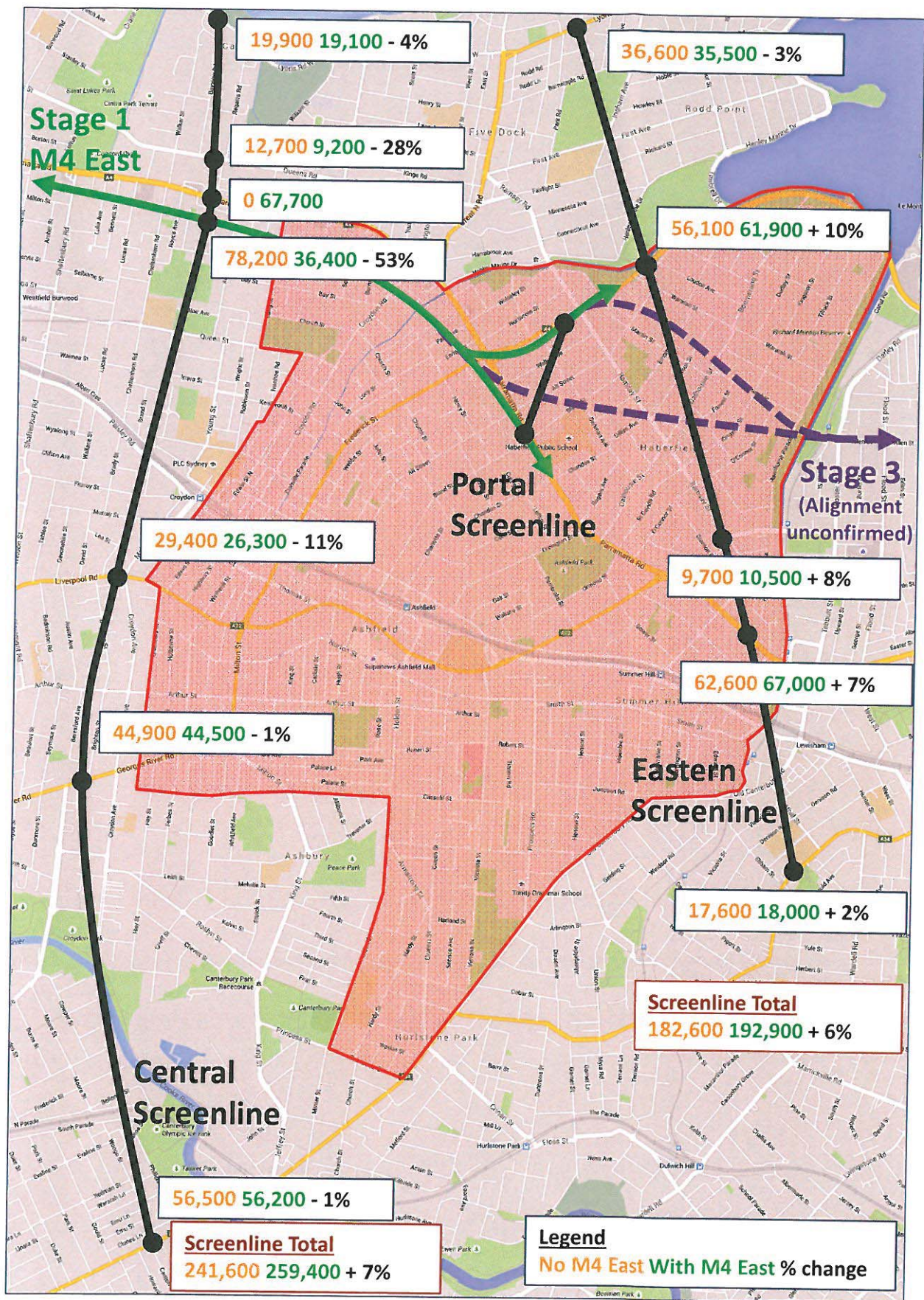


Figure: 3.2 Year 2021 Forecast Average Weekday Traffic (2-Way – Central and Eastern Screenlines)

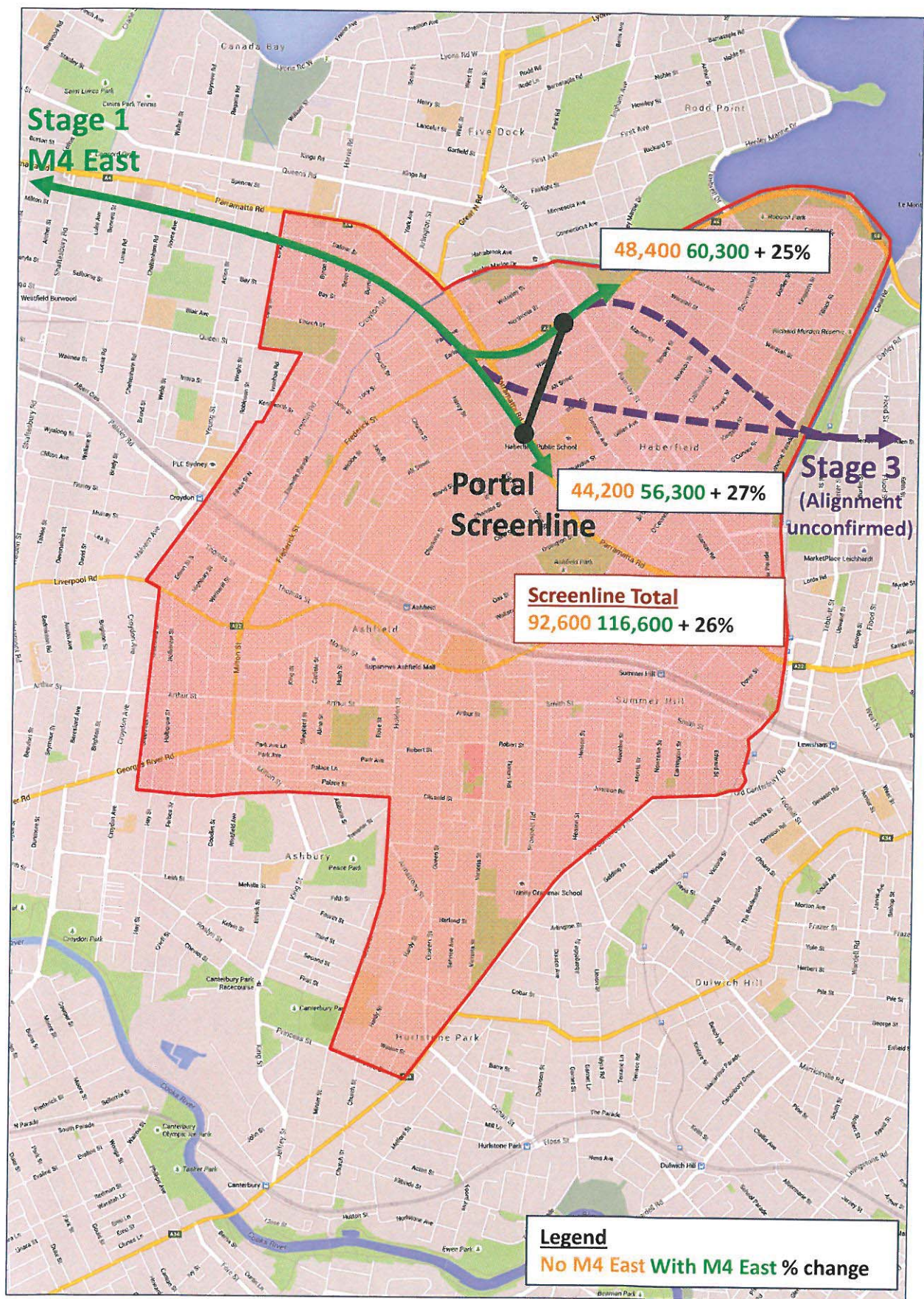


Figure 3.3: Year 2021 Forecast Average Weekday Traffic (2-Way) – Portal Screenline

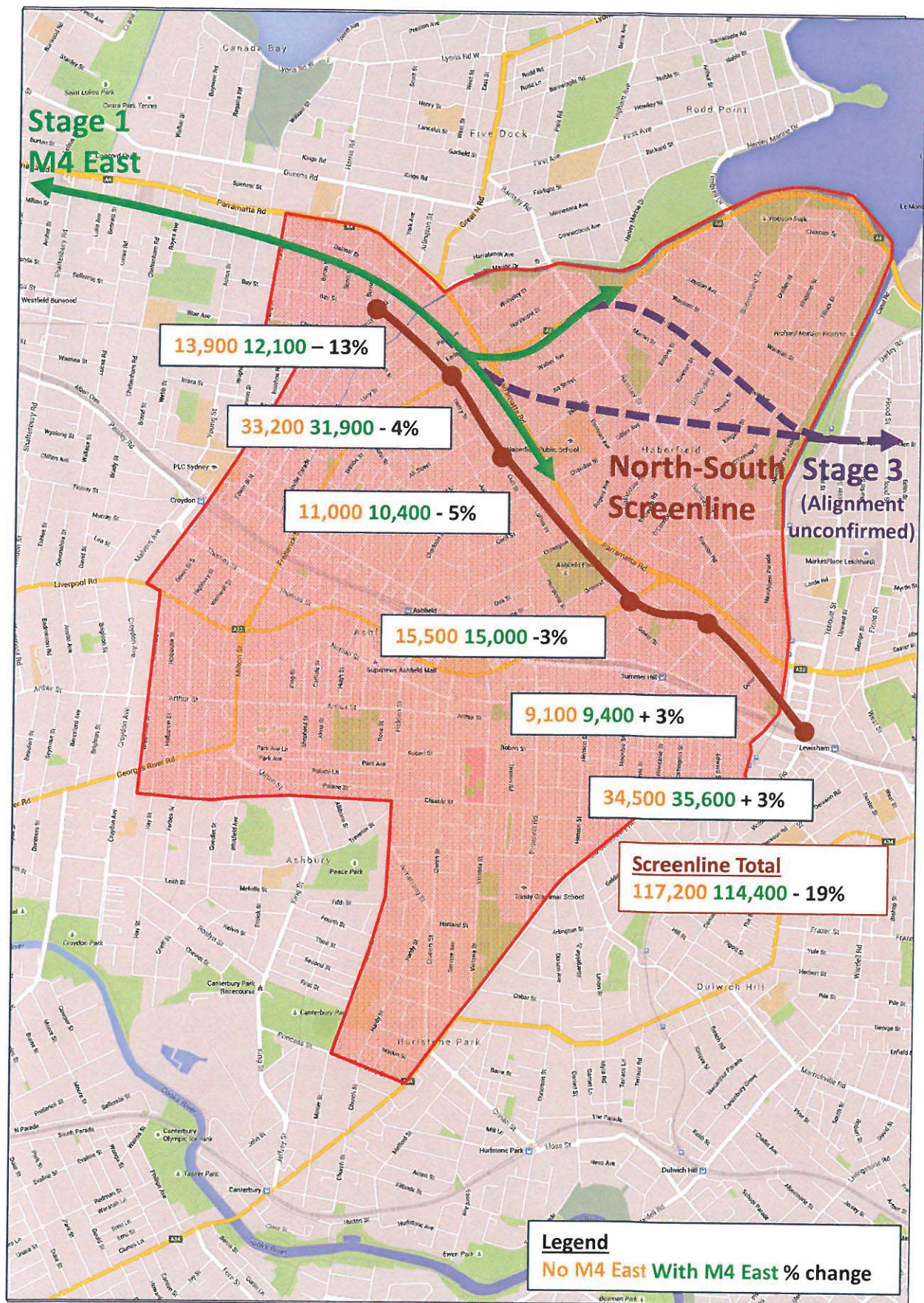


Figure 3.4: Year 2021 Forecast Average Weekday Traffic (2-Way) - North-South Screenline

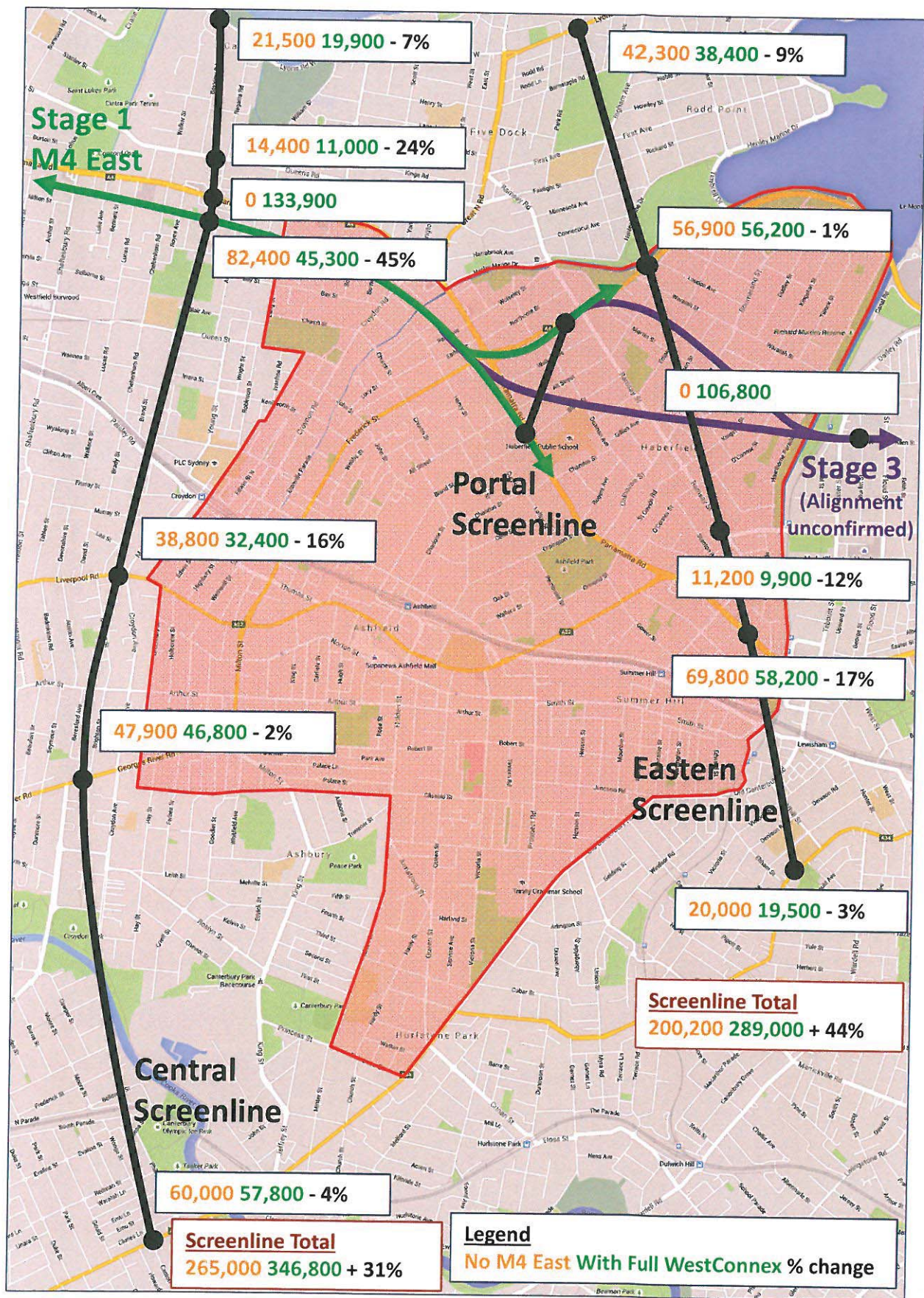


Figure: 3.5 Year 2031 Forecast Average Weekday Traffic (2-Way – Central and Eastern Screenlines)

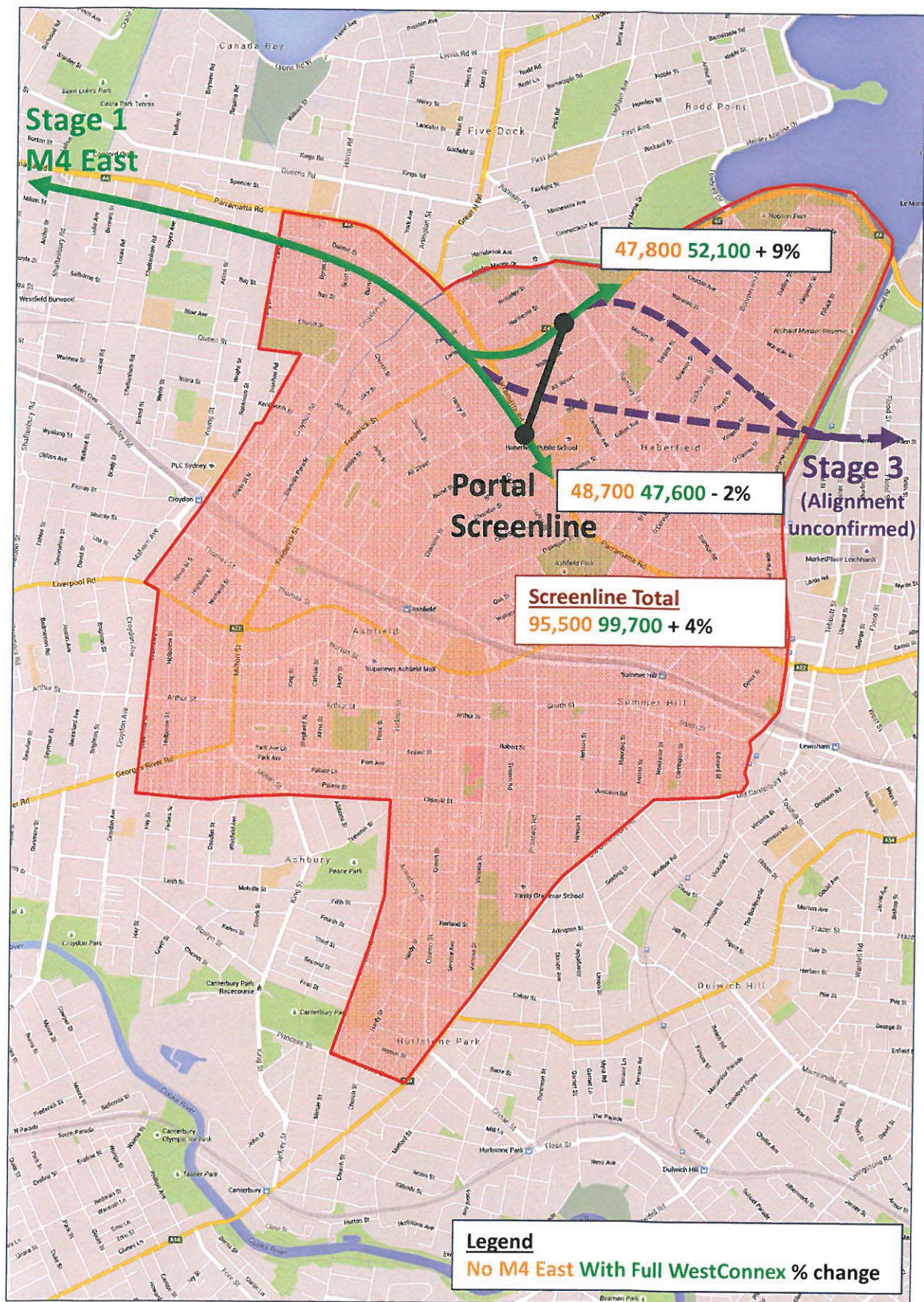


Figure 3.6: Year 2031 Forecast Average Weekday Traffic (2-Way) – Portal Screenline

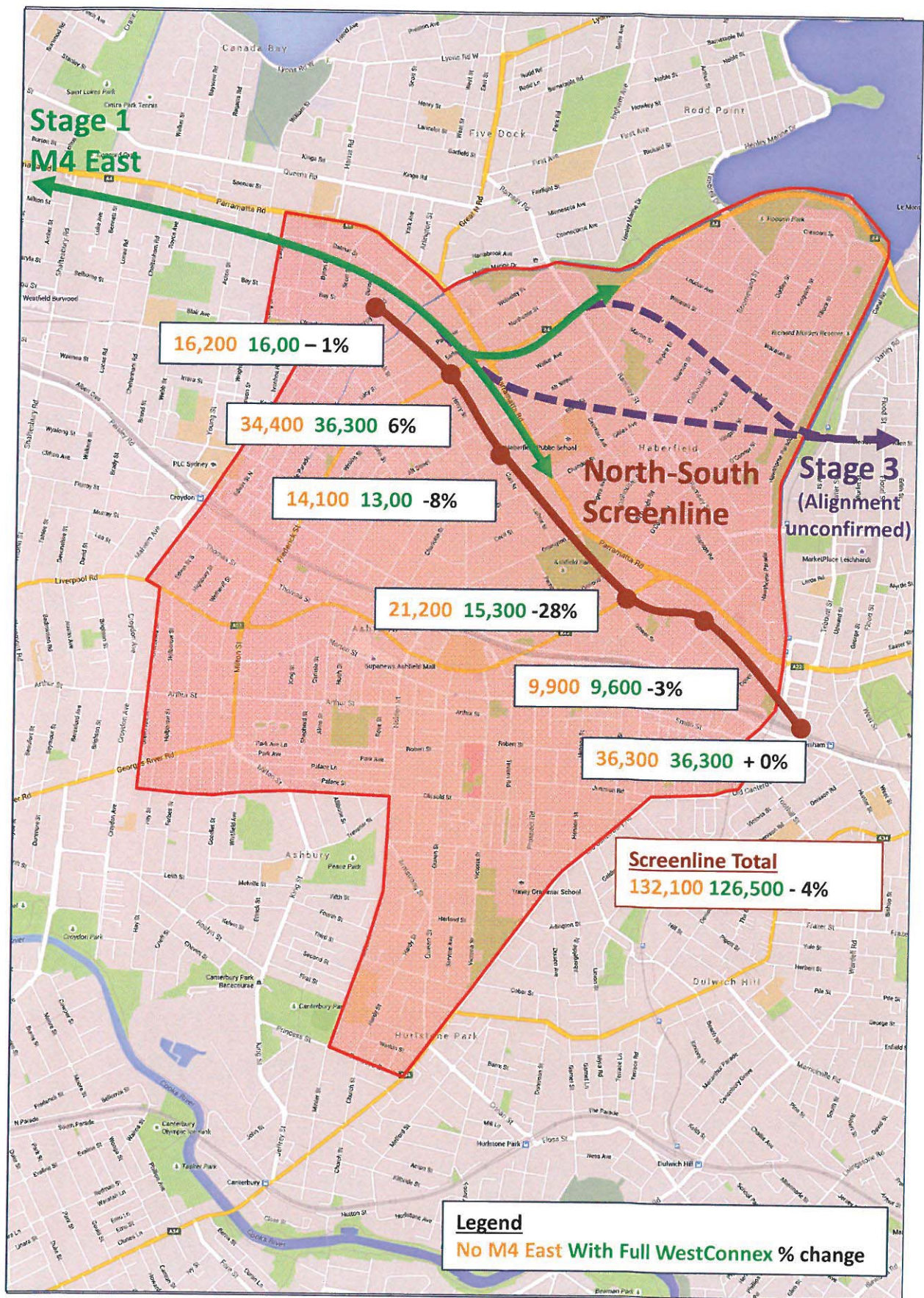


Figure 3.7: Year 2031 Forecast Average Weekday Traffic (2-Way) - North-South Screenline

4. Key Issues

4.1. Critical General Issues

4.1.1. Completion of WestConnex Stage 3

Issue

The traffic forecasts indicate a net benefit to the community in the Ashfield Local Government Area in terms of traffic flows following the completion of Stage 3 of WestConnex. However, there are significant adverse impacts between the opening of the M4 East and Stage 3, particularly within the Haberfield area.

EIS Response

The EIS addresses only the M4 East component of WestConnex.

Recommended Council Response

Council highlights the imperative for Stage 3 to be completed as soon as possible to avoid long term degradation of local traffic conditions and impacts on residents and businesses.

4.1.2. Public Transport

Issue

Improvements to public transport has not been included in the proposal. This will place added pressure on the road system by not providing travellers with a choice of mode.

EIS Response

The addresses only the M4 East component of WestConnex.

Recommended Council Response

Council highlights the imperative for public transport improvements to be completed as soon as possible to provide travellers with a viable alternative to WestConnex and the travel by car in general.

4.2. Construction Phase

The construction phase is programed to occur from the second quarter of 2016 to the first quarter of 2019. It will result in considerable disruption to the local community, particularly in relation to pedestrians and cyclist and impacts of heavy vehicle movements. Specific issues which require further attention are presented below.

4.2.1. Provision for Workers Travelling to and from Construction Sites

Issue

There is little or no provision for workers parking in the vicinity of the constructions zones at the eastern and of the project. If not adequately addressed then local residents will be adversely affected. Resident parking may be required.

EIS Response

Section 11.1.1 of the Traffic and Transport Assessment identifies the need for traffic management and safety plans which would include “a detailed travel management strategy for construction staff at the various worksites, in consultation with local councils and stakeholders associated with the sporting facilities adjacent to the project site. This would include the promotion of public transport and car-pooling to reduce worksite-related vehicle movements, and also investigate feasible options for the provision of offsite parking to reduce parking on local roads.”

The main report in the EIS does not include this recommendation.

Recommended Council Response

That the preparation of traffic management and safety plans which including a detailed travel management strategy for construction staff at the various worksites is made a consent condition. Consideration of the need for resident parking is to be included in this requirement.

Reason

It is essential that Council and residents are involved in the management of parking that could occur on local streets during the construction phase.

4.2.2. Parramatta Road Pedestrian over bridge

Issue

Section 7.4.7 of the EIS main report indicates that the Parramatta Road Pedestrian footbridge on the eastern side of Bland Street will be closed for short periods while the access is modified to be via Bland Street rather than Parramatta Road. The footbridge is used by children travelling to and from Haberfield Public School (amongst others). It also has lift access for people with a disability or in need of such a facility. Re-direction of these vulnerable people to cross Parramatta Road at grade is not acceptable.

EIS Response

Pedestrians are expected to cross Parramatta Road at grade when this occurs.

Recommended Council Response

Any closure of the Parramatta Road Pedestrian footbridge on the eastern side of Bland Street is to be restricted to times when demand is negligible. Appropriate times are to be determined in consultation with Council with supporting documentation of pedestrian flows to be provided. Appropriate notification of local residents and the school is required if and when such closures occur.

Reason

To maintain the safety of crossing at this location for pedestrians.

4.2.3. Use of Wattle Street by Heavy Vehicles

Issue

The EIS proposes that heavy vehicles exiting the Northcote Street site would turn left into Wattle Street, travel up to Waratah Street where a turn facility would be provided so that they could return along Wattle Street (Section 6.5.10). This effectively results in two additional truck movements in Wattle Street which are not required.

These movements are not required. There is sufficient capacity on Parramatta Road to provide a temporary signalised right turn out of the site at its western end for the duration of construction.

Recommended Council Response

All traffic exiting the Northcote Street construction site are to be provided with a signalised right turn directly onto Parramatta Road. The proposed turning facility on Wattle Street / Dobroyd Parade is to be removed.

Reason

To minimise adverse impacts on local residents.

4.3. Operational Phase (prior to WestConnex Stage 3)

4.3.1. Marion Street

Issue

Daily traffic flows on Marion Street are forecast to increase by 8% (800 vehicles) by 2021 with the completion of the M4 East. This is most likely due to traffic avoiding Parramatta Road which would be heavily congested due to the increases on that road. Traffic management measures will need to be considered along Marion Street and Ramsay Street as well as the surrounding streets, particularly in the vicinity of the local shops.

EIS Response

The EIS does not assess conditions along this section of Ramsay Street / Marion Street.

Recommended Council Response

Traffic flows are to be monitored within the Haberfield area following completion of the M4 East. Traffic management measures are to be implemented should the review identify significant changes in traffic flows on the local street system.

Reason

To minimise adverse impacts on local residents.

4.4. Wattle Street

Issue

Pedestrians crossing Wattle Street at Ramsay Street are required to negotiate 2 separate intersections over a significant distance. This effectively severs the Haberfield community into 2 separate villages. It results in a significant loss of accessibility for the local community who travel by foot.

There is no direct solution to this dilemma without complete redesign of the portal. A pedestrian footbridge may be an option.

EIS Response

The EIS does not assess issue relating to severance.

Recommended Council Response

Notes the severance causes at Wattle Street and requests investigation of possible ways of compensating for it.

Reason

To minimise severance of the Haberfield community.

4.4.1. Orpington Street

Issue

The EIS appears to allow access from Orpington Street to the westbound tunnel portal on Parramatta Road. Orpington Street should be left in / left out from and to Parramatta Road. Require a median preventing left turn into tunnel.

EIS Response

The WestConnex team have been made aware of this.

Recommended Council Response

Orpington Street should be restricted to left in / left out to and from Parramatta Road only.

Reason

Traffic safety.

4.5. Operational Phase (after completion of WestConnex Stage 3)

There appear to be no major traffic related issues that the full completion of WestConnex would have on the Ashfield local Government Area. Traffic flows will generally fall indicating a net reduction in through traffic on the surface streets. This traffic would have diverted to WestConnex.