

5. Critique of Traffic Forecasts

5.1. General Comments

There are inconsistencies within the forecasts which should be addressed. In relation to the assessment of impacts on the City of Sydney examples of these inconsistencies are:

1. - Morning peak hour traffic on King Street is forecast to fall between 2014/15 and 2021 without the New M5 (Table 4-1).
2. - Northbound morning peak hour traffic across the northern screenline is forecast to fall between 2014/15 and 2021 without the New M5 (Table 4-1).

The peak to daily convert factors for the screenlines in in Table 4-7 range from 12.2 to 16.1. By way of comparison Roads and Traffic Authority (RTA) counts conducted in 2006 are presented below in Table 5-1. The 2006 counts are presented as they include traffic flows on the M4 Motorway when it was tolled.

Table 5-1: Historical Peak to Daily Factors

Location	Peak (8am-9am)	Daily	daily/peak
City Road, South of Cleveland Street	2,995	41,486	13.9
Princess Highway, South of Yelverton Street	4,673	58,043	12.4
Princess Highway at Cooks River	10,619	66,929	6.3
King Street, South of Enmore Road	1,592	23,029	14.5
General Holmes Drive, Northern end of Tunnel	11,867	155,708	13.1
Marsh Street at Cooks River	4,219	55,448	13.1
M4 Motorway at Salesyard Channel Bridge	6,542	89,115	13.6

From the above table it can be seen that peak to average weekday traffic factors are around 12 to 14. The factors from the EIS (Table 4-7) range from around 8 to 20. This indicates that the model forecasts for daily traffic are not stable.

Of particular concern is the factor for the New M5 which is 16.5 in 2021. This is well in excess of what is experienced on other motorways. The M4 at its peak had a factor of 13.6 as seen in the table above. The implications of this are that the daily forecasts for the New M5 are likely to be excessively high. This in turn will affect the financial assessment of the motorway.

It is not made clear in the EIS but it appears that the modelling includes tolling of the existing M5 East Motorway. If this is the case the EIS needs to assess the effects of this new toll separate to the New M5.

The above (and other illogical changes in traffic flows) brings into question the validity of the forecasts in relation to route choice and how growth is handled in the models. Nevertheless, it is accepted that there can be discrepancies in models that do not affect the overall picture when planning for major roads. The critique below is based on acceptance of the general trends in the forecasts but not necessarily the route choices.

5.2. Year 2021 with and without the New M5

The forecasts indicate the following changes in daily traffic flows:

- The total daily traffic travelling between the north and south across the northern screenline increases by 12% (11,170 vehicles).
- The total daily traffic travelling between the north and south across the eastern screenline decreases by an insignificant amount.

In relation to the eastern screenline:

- Daily traffic flows on Marsh Street fall by 12% (9,256 vehicles).
- Daily traffic flows on The Princes Highway fall by 6% (4,027 vehicles).
- Daily traffic flows on the existing M5 fall by 20% (20,779 vehicles).
- Daily traffic flows on General Holmes Drive rise by 5% (4,688 vehicles).

The reduction in traffic flows on Marsh Street, The Princes Highway, and the existing M5 East amounts to around 34,000 vehicles of which around 29,500 are now using the new M5 and being directed to and from Euston Road and other nearby streets.

The increase in traffic on General Holmes Drive is difficult to understand. It may simply be a modelling discrepancy over-compensating for congestion somewhere further south.

In relation to the northern screenline the new M5:

- Daily traffic flows on King Street increase by 3% (610 vehicles).
- Daily traffic flows on Mitchell Road fall by 43% (11,480 vehicles).
- Daily traffic flows on Euston Road increase by 74% (21,410 vehicles).

Morning and evening traffic flows on Euston Road north of Sydney Park Road are forecast to increase significantly in the peak directions. An additional 900 vehicles per hour northbound in the morning and 600 southbound in the evening are forecast. Mitchell Road is forecast to have an additional 93 vehicles northbound in the morning but a reduction of 25 vehicles in the evening. Peak direction traffic flows on King Street are forecast to fall slightly.

The traffic demands forecast for Euston Road will disperse to other streets. Whilst Euston Road is proposed to be upgraded this upgrade is only to just north of Sydney Park Road. Traffic would have to disperse prior to and shortly after this point. The main alternative routes are Mitchell Road and King Street. It is our opinion that the modelled route choices have not accurately split the traffic between Euston Road, Mitchell Road, and King Street.

The select link plots for Euston Road (Figure 4-6 and Figure 4-7) indicate that the main demand for Euston Road is traffic to and from Campbell Road east of the Princes Highway (76 % AM, 62% PM) with most of the remainder being to and from the New M5 (20 % AM, 25% PM). Some of this traffic may already be accessing Euston Road via Canal Road and Burrows Road or Sydney Park Road. It appears that the upgrade of Campbell Road and Euston Road are effectively providing a new route into the CBD. Traffic on King Street reduces as a result. However, as seen in Figure 4-6 and Figure 4-7, local streets carry significant increase in traffic. Maddox, Fountain,

and Bowden Streets are particular examples (shown in blue). This distribution of additional traffic is of concern. Maddox Street feeds to Mitchell Street and Bourke Road. Fountain Street feeds to Swanson Street and Erskineville Road onto King Street and Enmore Rd. Bowden Street is a feeder to Bourke Road and also to Mandible Street.

It is our advice that the EIS for the New M5 does not address these issues. It is clear that local area traffic management measures will be required in the streets surrounding Euston Road should the New M5 project proceed.

The select link plots for the New M5 (Figure 4-8 and Figure 4-9) indicate that around 60% of the New M5 traffic uses Euston Road. Whilst this is a high proportion the amount of traffic associated with the New M5 is dwarfed by the diversions that occur from other roads to Euston Road.

5.3. Year 2031 with and without the new M5

5.3.1. 2031 With New M5 Only

The forecasts for 2031 with the New M5 only (no WestConnex Stage 3, Sydney Gateway or Southern Extension) show:

- The total daily traffic travelling across the northern screenline increases by 14% between 2021 and 2031 without the New M5.
- An additional 13% increase (compared to 2021 with no New M5) is forecast across the screenline with the New M5.
- The total daily traffic across the eastern screenline increases by 12% without the New M5 and 16% with only the New M5. The differences are not significant.

Traffic forecast for King Street increases by 26% without the New M5 and by 23% with the New M5. The differences are not significant. However, they do indicate that the New M5 does not provide significant relief to traffic growth on King Street.

Traffic flows Mitchell Road increase by 13% without the New M5 and by 26% with the New M5. This indicates that traffic congestion on Euston Road is resulting in diversions to Mitchell Road via Sydney Park Road. This highlights the need for a comprehensive traffic management program should the New M5 proceed.

5.3.2. 2031 with WestConnex-Plus

The addition of the WestConnex Stage 3, Sydney Gateway and Southern Extension to the New M5 results in a major change in traffic flows. We refer to this combination of projects below as “WestConnex-Plus”. It results in significant changes in traffic flows. Table 5-2 presents the relative changes in traffic flows that are forecasts to occur in 2031 with the New M5 and with WestConnex-Plus.

Table 5-2: Year 2031 WestConnex Impacts (Changes in daily traffic flows vs. no New M5)

Screenline / Road Location	With New M5 Only	With WestConnex - Plus
Northern Screenline		
Edgeware Road, west of Edinburgh Road	4%	3%
King Street, south of Alice Street	1%	-2%
Mitchell Road, north of Sydney Park Road	-37%	-33%
Euston Road, north of Sydney Park Road	69%	80%
Total	12%	16%
Eastern Screenline		
Princes Highway, south of the Cooks River	-4%	-68%
New M5, at the Cooks River	n.a.	n.a.
Marsh Street, at the Cooks River	-7%	5%
M5 East, at the Cooks River	-13%	-21%
General Holmes Drive, at the Cooks River	3%	-3%
Total	4%	2%

Some items to note:

- The total daily traffic travelling between the north and south across the northern screenline increases by 16% (16,010 vehicles) compared to the no New M5 scenario.
- The total daily traffic travelling between the north and south across the eastern screenline compared to the no New M5 scenario increases but by an insignificant amount.

In relation to the eastern screenline (compared to the no New M5 scenario):

- Daily traffic flows on Marsh Street rise by 5% (4,758 vehicles).
- Daily traffic flows on The Princes Highway fall by 68% (54,135 vehicles).
- Daily traffic flows on the existing M5 fall by 21% (22,871 vehicles).
- Daily traffic flows on General Holmes Drive fall by 3% (3,082 vehicles).

In relation to the northern screenline WestConnex-Plus (compared to the no New M5 scenario):

- Daily traffic flows on King Street decrease by 2% (500 vehicles).
- Daily traffic flows on Mitchell Road decrease by 33% (9,870 vehicles).
- Daily traffic flows on Euston Road increase by 80% (26,010 vehicles). This is greater than the scenario with just the New M5.

Changes across the eastern screenline in total are not significant. However, there is a major shift of traffic from the Princes Highway to the Southern Extension and the New M5. Traffic flows for the Princes Highway are forecast to fall to around 25,000 vehicles on weekdays. This is similar to what King Street is currently accommodating. It indicates that the Princes Highway could “in theory” be downgraded to 4 lanes with peak period clearways.

On the eastern screenline average weekday traffic on the New M5 is predicted to be increase by 47,000 vehicles with the completion of WestConnex-Plus. It is apparent that the Southern

Connection is required if the New M5 is to attract significant traffic flows. The New M5 EIS reports that weekday volumes on the Princes Highway are currently 75,500 vehicles and that this would rise to 79,085 vehicles by 2031 without the New M5. The increase is relatively low. It is difficult to see the logic that justifies the Southern Connection given that it simply takes traffic away from a route designed to accommodate this demand.

Overall, it is our opinion that the creation of the WestConnex-Plus network needs more investigation. In particular, justification of the New M5, the future role of the Princes Highway, and traffic impacts on Euston Road and the surrounding streets needs to be clearly established.

5.4. Induced Demand

Induced demand is the additional traffic generated as a result of providing more road space for travel. However, it could also be interpreted as releasing suppressed demand due to opening of travel opportunities through providing more road space. Nevertheless, the relationship between providing more road space for travel and the need to minimise excessive road use is controversial.

The New M5 EIS makes reference to induced demand in relation to public transport. However, it does not quantify induced demand. We have drawn on information from the EIS for the M4 East EIS in order to advise on the effects of induced demand. This report contained the following statement for that project:

To calculate this induced travel demand, an elasticity approach was used to determine the number of new users and the number of public transport users who shift to car. The methodology used has been based on the New Zealand Transport Agency Economic Evaluation Manual (EEM) which contains a clear summary of the methods for applying an elasticity method for induced demand on a fixed matrix.

Induced travel demand increases 2031 future year traffic volumes using WestConnex between two per cent and seven per cent, with the specific value varying across different sections of the project.

This indicates that the majority of the induced travel demand is related to changes in trip distribution (the pattern of origin-destination combinations) within the assigned trip matrices.

Similar information does not appear to be included in the New M5 EIS report. Nevertheless, it is apparent that the same procedure has been applied in the assessment of the New M5. The New Zealand Transport Agency Economic Evaluation Manual referred to above applies elasticities originally published in the “UK Design Manual for Roads and Bridges (1997)”. It is our view that these elasticities are outdated and not representative of conditions applicable to the proposed New M5.

It is our understanding that the forecasts used in the economic assessment incorporate the above assumptions in relation to induced demand. We advise that the implications of induced

demand have not been adequately assessed and that the forecasts in turn are not reliable for economic or financial assessment.

6. Strategic Issues -

A good indicator of the viability of the New M5 is by comparison with other motorways. Figure 6-1 presents a comparison of the traffic flows forecast for the New M5 in 2021 against published average daily traffic using the Sydney Cross City Tunnel over the first two years after opening (note the Cross City Tunnel average includes weekend traffic). It shows that the New M5 is forecast to operate with similar if not lower traffic volumes.

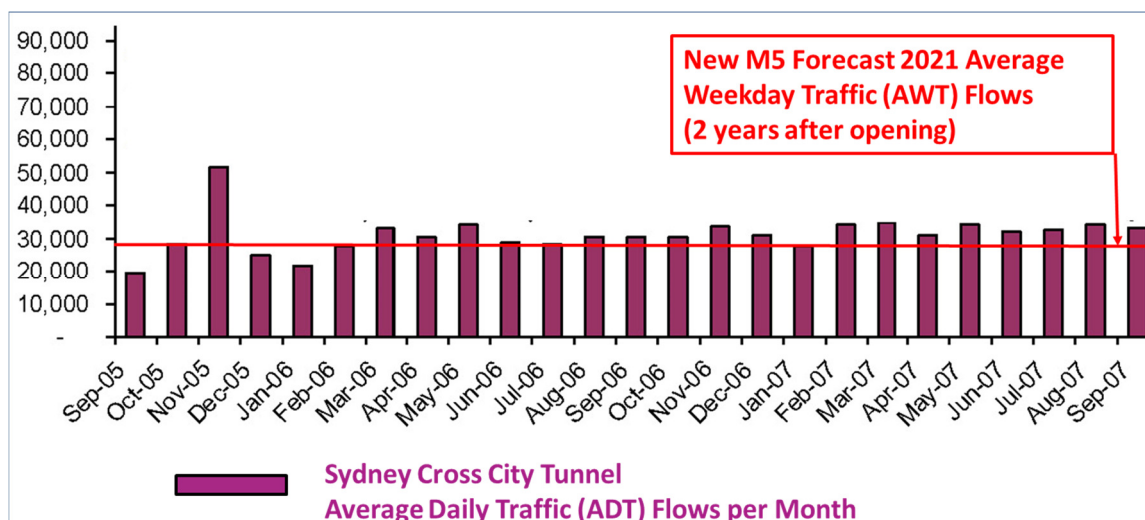
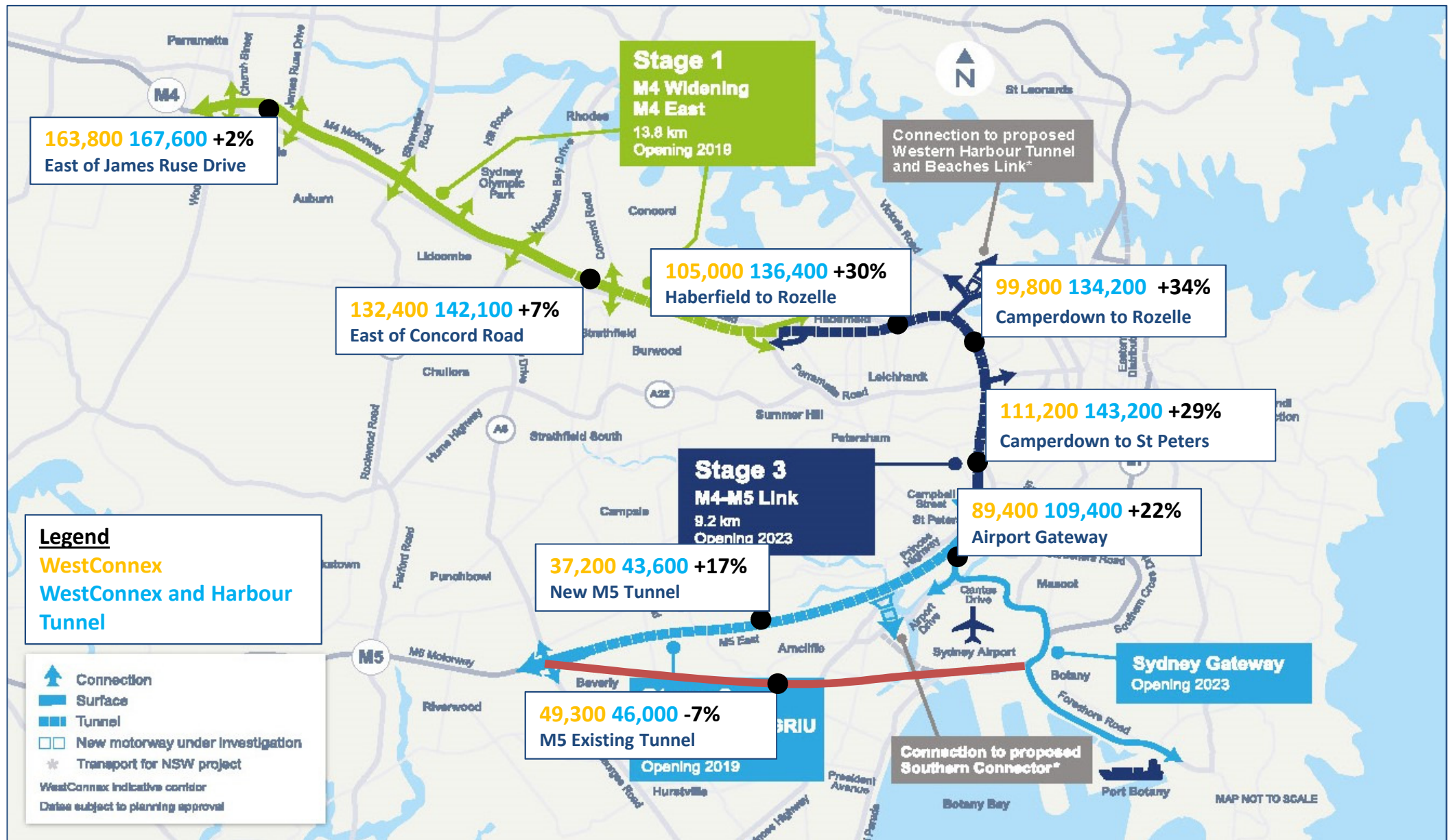


Figure 6-1: Comparison of 2021 AWT forecasts vs. Sydney Cross City Tunnel ADT

Transurban purchased the Cross City Tunnel in June 2014 for around \$475 million. The Cross City Tunnel is a 2.1km motorway. Car toll charges effective 1 October 2015 were \$5.27 for the main tunnel and \$2.49 for the Sir John Young Crescent exit. Heavy vehicle tolls are double the car toll.

The New M5 is 11 km long. At \$0.42/km the toll for cars using just the New M5 would be \$4.62. The Updated Strategic Business Case states that the cost of constructing the New M5 is estimated to be \$4,335 million. This is considerably more than the valuation of the Cross City Tunnel and brings into doubt the value of the new M5.

The Updated Strategic Business Case for WestConnex presents traffic flows on full completion and with an additional scenario with a “Western Harbour Crossing” (Figure 6-2). With WestConnex fully completed weekday traffic flows on the New M5 are forecast to rise to 37,200 vehicles by 2031. With the addition of a new cross harbour tunnel the weekday flows are forecast to rise to 43,600 vehicles. These flows are still very low when compared to the comparative cost of constructing the New M5.



Source: Westconnex Updated Strategic Business Case, Table 7-2 Technical Paper 1

Figure 6-2: Year 2031 Forecast Average Weekday Traffic in the Mainline Tunnels with all of WestConnex completed plus the Western Harbour Tunnel

It can be seen from the forecasts that the New M5 is the weak link in the proposed WestConnex project. It is also apparent from the EIS and other documentation that there is little prospect for this link to be justified. Having considered the relevant information, it is our opinion that the WestConnex concept should be re-visited.

7. Construction Phase

This chapter presents an overview of the construction phase should the project proceed.

7.1. Construction Compounds

The construction activities are expected to commence in late 2016 and conclude in 2019. The compounds required to support construction activities within in the vicinity of the proposed St Peters interchange are shown in Figure 7-1. It is noted that there are inconsistencies in the diagrams of Canal Road Construction Compound (C8) of the New M5 EIS. A mechanic workshop currently located at the corner of Canal Road and the Princess Highway is included in the area of the construction compound in some figures and not in others. It is understood that the mechanic workshop is to be resumed as part of the project.

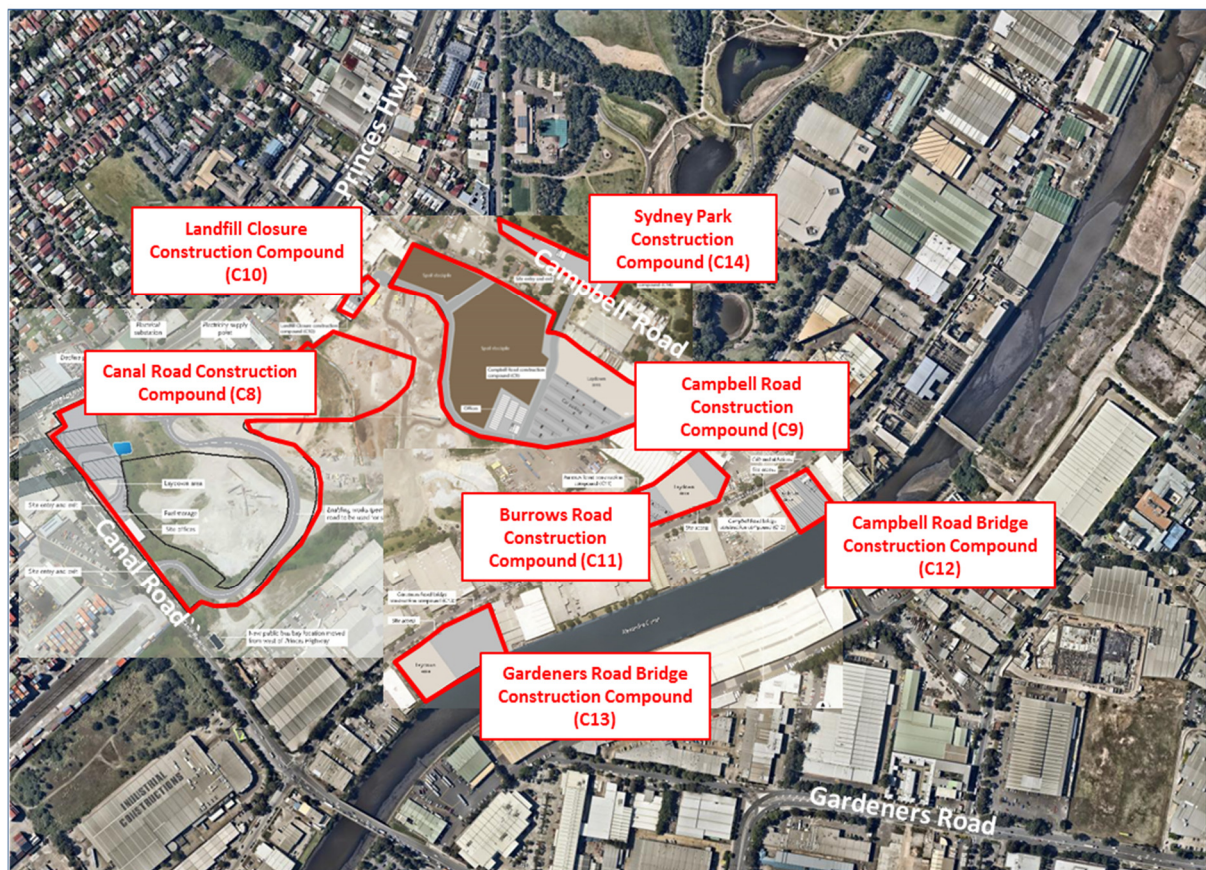


Figure 7-1 Construction compounds in the vicinity of the St Peters Interchange (C8-C14)

7.2. Construction Traffic Generation

The construction compounds around the St Peters interchange and tunnel works are predicted to generate a maximum of about 125 heavy vehicles in addition to 155 light vehicles per hour in the AM and PM peak hours spread over seven construction compounds. The access points and the routes that the construction vehicles will take around the compound are shown in Figure

7-2. Compound C10 is accessed via Compound C9. The Sydney Park Construction Compound (C14) will be accessed via Campbell Road however the exact location has not been specified.



Figure 7-2 Construction compound vehicle access and routes

The project includes an upgrade of the intersection of Campbell Street and the Princes Highway. It is essential that this occurs prior to major works as this intersection will be used by trucks. Current turn restrictions prevent the proposed compound access routes from being viable.

7.3. Site Parking

Table 7-1 presents the estimates of the peak construction workforce and associated parking as published in the New M5 EIS.

Table 7-1 Indicative construction compound light vehicle parking provisions⁶

Construction Compound	Indicative Number of Parking	Peak construction workforce
St Peters Interchange ¹	290	320 ²
Campbell Road bridge	10	15
Gardeners Road bridge	10	10

⁶ Source: New M5 EIS Vol 1A – Table 6-23

1 St Peters interchange includes the Canal Road (C8), Campbell Road (C9), Landfill Closure (C10), Burrows Road (C11) and Sydney Park (C14) construction compounds

2 Includes shift work

The figures above do not correlate with figures elsewhere in the EIS. Table 7-2 presents the forecast peak construction workforce and the number of parking spaces proposed at each of the construction compounds (as opposed to the aggregated figures above). The breakdown of the number of parking spaces for most of the compounds has been determined from the published diagrams in the EIS.

Table 7-2 Peak Construction workforce estimates and indicative number of parking spaces ⁷

Construction compound	Estimated peak construction workforce	Parking	Source of Parking Numbers
Canal Road (C8)	193	13	From Diagrams
Campbell Road (C9)	215	271	From Diagrams
Landfill Closure (C10)	30	12	From Diagrams
Burrows Road (C11)	40	77	From Diagrams
Campbell Road bridge (C12)	35	15	From Report Table
Gardeners Road bridge (C13)	45	10	From Report Table
Sydney Park (C14)	25	10	From Diagrams

From Table 7-2 it can be seen that there are significant differences in parking supply and peak workforces estimates for the various compounds.

The above indicates the need for a shuttle service between compounds if parking is to be accessible for workers. There is also a need to provide adequate accessibility between the compounds and public transport services in general. In this regard it is recommended that any shuttle service also link to the local railway stations.

7.4. Spoil Removal

It is anticipated spoil will be generated from construction compounds in the vicinity of the St Peters interchange with the exception of compound 10 and 13. Spoil handling would occur up to 24 hours per day and seven days per week. Where practical, spoil would be moved during the day, outside of peak periods. The potential spoil management sites and access routes from the construction compounds are identified in Table 7-3.

⁷ New M5 EIS Volume 1A

Table 7-3 Potential Spoil Removal Sites⁸

Spoil management site	Location	Distance from the project (km)	Capacity for site accept spoil (m3)	Accessed via
CSR PGH Brick Pit	75 Townson Road, Schofields	55	550,000	Princes Highway and M5
DHA Schofields	49 Manorhouse Boulevard, Quakers Hill	60	500,000	Princes Highway, M5 and M7
Austral Plant 2 or 3 clay shale pit	738-780 Wallgrove Road, Horsley Park	40	3,000,000	Princes Highway, M5 and M7
Riverstone West Sakkara Development	Land west of Riverstone	60	3,500,000	Princes Highway, M5 and M7
Kurnell Landfill Company	330 Captain Cook Drive, Kurnell	15	7,000,000	Princess Highway and Captain Cook Drive

The removal of the spoil will generally occur along state roads to the south and west. It will not affect the amenity of residents of the City of Sydney.

7.5. Active and Public Transport

The impacts to cyclist and pedestrian facilities around the St Peters interchange as proposed in the New M5 EIS are as follows;

- The Bourke Road cycleway would be temporarily diverted around the construction works due to space constraints.
- Pedestrian facilities within areas subject to local roads upgrades would be relocated or temporary access paths would be constructed to maintain access throughout construction.
- Concrete barriers would be installed to separate construction equipment from members of the public where a haul road is close to a pedestrian access.
- Along Campbell Road / Campbell Street, Euston Road, Bourke Road, Bourke Street, Gardeners Road and the Princes Highway (where it intersects with Campbell Street), the footpath would be affected due to varied and periodic footpath closures and deviations for road widening. Pedestrians would be diverted to an alternative route or alignment.

A strategy for the maintenance of pedestrian and cyclist access throughout construction would be provided as part of the Construction Traffic Management Plan for the project which would be prepared during the detailed design phase of the project.

It is our advice that the proposed arrangements for active transport are not reasonable. In particular:

- **The Bourke Road cycleway diversion is not acceptable. Whilst one can divert traffic, bike riders will continue to use the same route.**
- **TTM support the City's position is that bicycles are human-powered and more vulnerable road users. Therefore, they need to retain their existing path of travel during construction of the New M5. This usually takes the form of dedicating the traffic lane that would**

⁸ Source: New M5 EIS Vol 1A – Table 6-31

otherwise be used by motorised traffic to bike riders. Vehicles that are motorised are to be diverted instead as the impact of a detour is not as significant. The City has followed this approach during construction projects for many years.

- In relation to pedestrian facilities, the proponent would need to follow all City policies including appropriate, accessible paths of travel during construction.

A number of cycle ways and bicycle friendly routes are located in the vicinity of St Peter Interchange (see Figure 7-3) and within Sydney Park. Construction impacts are limited to the perimeter of the park and are therefore unlikely to impact on the community's use of the park.

Any intent to relocate existing routes during construction will require consultation with The City of Sydney.

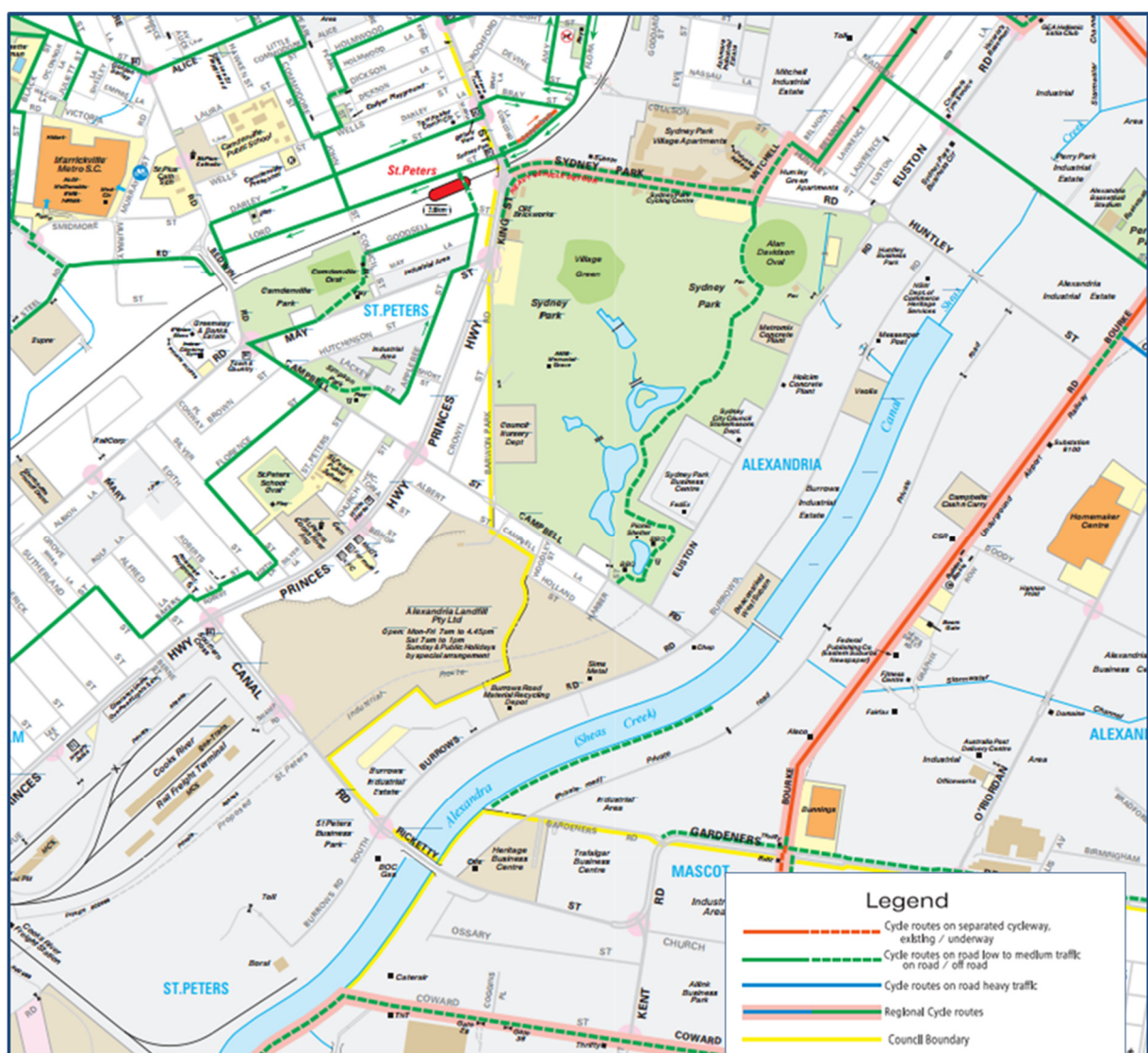


Figure 7-3: Local Cycle Network⁹

⁹ Source: <http://www.sydneycycleways.net/map/>

It is essential that Council is involved in the management of pedestrians and cycling infrastructure during the construction phase. Significant changes to regulation of traffic should be referred to Council's Local Traffic Committee.

It is recommended that Council is consulted in relation to significant changes to the pedestrian and cycling infrastructure during the construction phase.

7.6. Bus Routes

The EIS contains proposals for temporary removal of a bus stop on The Princes Highway south of Campbell Street during construction and the permanent relocation of a bus stop on the eastern side of Canal Road further along the road to the south. Both of these measures are not in the interest of public transport users and indeed should be considered to be representative of poor planning.

In relation to the bus stop on the Princes Highway:

- It provides an important connection to local businesses and local residences.
- There appears no reason why it could not be relocated to the southern side of Albert Street during construction and still perform its function. Given the current upgraded intersection design it appears that this may be required anyway.

In relation to the proposed permanent relocation of the bus stop on Canal Road:

- This new location would be 130 metres from another bus stop. The bus stops service a major regional limited stops route (418 – Burwood to Bondi Junction). Placing them so close to each serves no purpose.
- Relocation of the bus stop to the Princes Highway could have been considered. However, the bus stop would have to be set back from The Princes Highway / Canal Road intersection enough distance to allow the bus driver to re-enter the traffic stream and enter the traffic turning right from the Princes Highway into Canal Road. This would place the bus stop back near another existing bus stop used for the route.
- Ultimately, the only appropriate place for the bus stop is where it is currently located. It is recommended that the bus stop is retained at this location and that the design reflects this.

It is recommended that the treatment of bus stops is reconsidered in the interests of maintaining at least the current level of service provided to the community. In particular:

- **The southbound bus stop on the Princes Highway south of Campbell Street should remain open to public transport users during the construction phase. It is noted that this may require it being located south of Albert Street.**
- **The southbound bus stop on Canal Road south of the Princes Highway should be retained in its current location.**

7.7. Green Travel Plan

The EIS does not include a Green Travel Plan.

Given the size of the project and the significant workforce it is recommended that one is required for the project. The green travel plan should give workers an opportunity to travel to and from work by means other than car. Provision should be made on site for workers who travel by bicycle.

7.8. Cumulative Effects

Construction of the Sydney Metro is planned to commence in 2017. A southern dive site is proposed for Marrickville and would be located north of Sydenham Station and south of Bedwin Road. This site would provide support for tunnelling operations and spoil removal. The impacts of truck movements associated with this activity in addition to the New M5 construction have not been assessed in the EIS. This additional truck traffic is most likely to remove spoil via Campbell Street east of the Princes Highway.

It is essential that planned road upgrades for Campbell Street as well as the upgrade of the intersection of Campbell Street with the Princes Highway are completed prior to this additional traffic entering the system.

8. Operational Phase

8.1. Active Transport

Planning for pedestrians and bike riders is an essential component of any road based project.

Pedestrian planning requires an understanding of the need to provide safe and convenient linkages between homes, schools, shops, and public transport. Such linkages should be as direct as possible.

The government's long-term strategy for cycling in NSW¹⁰ identifies three pillars for Sydney's cycling future. The first pillar relates to infrastructure. It identifies the priority to "deliver bicycle infrastructure through major transport and development projects." This is applicable in the design of the New M5.

The following sections focus on what has been provided to ensure the safe and equitable access for pedestrians and bike riders.

8.1.1. Campbell Street - Unwins Bridge Road to the Princes Highway



Adequate pedestrian connectivity is maintained through the realignment and upgrade of the intersection. As with the existing intersection of Unwins Bridge Road with Campbell Street four pedestrian crossings have been provided. The triangle pedestrian crossing on the North-West bound exit will be removed.

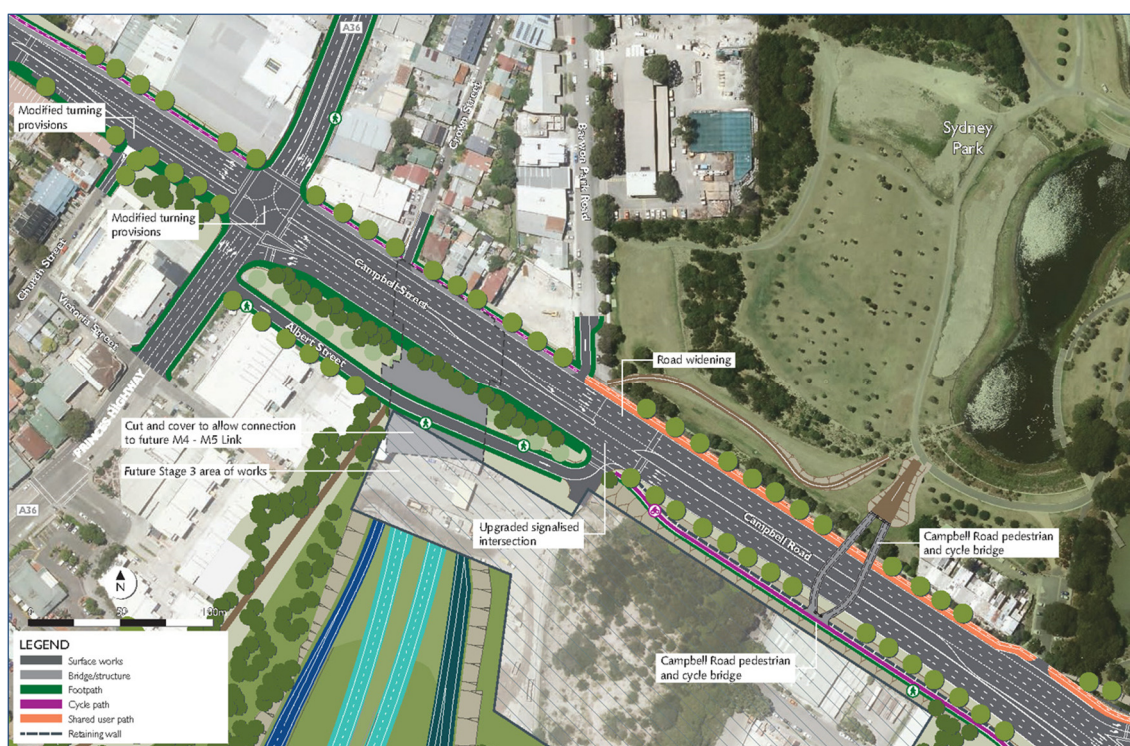
¹⁰ Sydney's Cycling Future, Transport for NSW (2013)

Parking bays are proposed to be provided on the northern and southern side of Campbell Street in the vicinity of Simpson Park. The intersection of St Peters Street and Campbell Street will be upgraded to a signalised intersection with two pedestrian crossings providing pedestrian access between the northern and southern side of side of Campbell street.

A cycle lane has been provided on the northern side of Campbell street which appears to terminate at the intersection of Unwins Bridge Road/Campbell Road/May Street/ Bedwin Road.

The EIS plans¹¹ show a turn bay for traffic westbound on Campbell Street to turn right into May Street. This movement is currently banned and should remain so as it could result in diversions to King Street.

8.1.2. Intersection of Campbell Street and Princess Highway



Adequate pedestrian connectivity is maintained through the upgrade of the intersection. The upgraded intersection of Albert Street/ Campbell Street and Princess Highway provide for pedestrian crossings. The provision of an additional crossing across the Princess Highway on the Northern side of Campbell Street is an improvement on the existing intersection configuration.

There are inconsistencies in the figures of this intersection. A triangle pedestrian island is included on the north bound exit in some and in others it is not. The inclusion of a triangle pedestrian island is not appropriate in high density urban areas. It is recommended that the alternative layout without the island is adopted to ensure pedestrian safety.

¹¹ Volume 1A - Figure 5-31 Bedwin Road, Campbell Street and Campbell Road realignment, widening and extension works - map 1

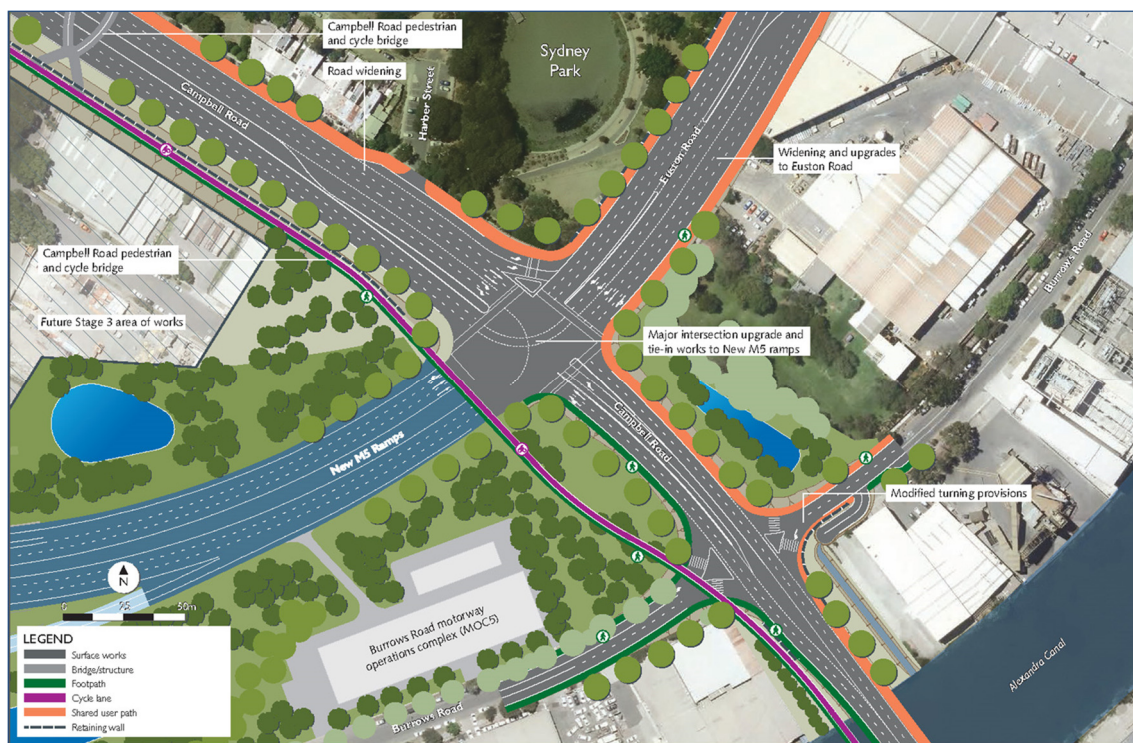
What appear to be raised and separated cycle ways and footpaths are provided on the Southern side of Campbell Street. Concern is raised about their narrow design, lack of rest areas and lack of access points to and from these facilities. Further consideration should be given to the design of these features to ensure amenity and encourage usage.

Provision is made for a bridge connecting the raised cyclist and pedestrian bridge from the southern of Campbell Road and Sydney Park. North of the bridge is an at grade pedestrian crossing at the signalised intersection proposed at Albert Street. This provides both separated and at grade access to and from Sydney Park.

It is our view that benefits of grade separation are likely to be offset by severance due to limited access points. An at grade solution on the northern side of Campbell Street would appear to be a more logical solution in developing the regional cycle network.

The EIS plans¹² show a turn bay for traffic westbound on Campbell Street to turn right into the Princes Highway. This movement is currently banned and should remain so as it could result in diversions to King Street.

8.1.3. Intersection of New M5/ Campbell Road to Burrows Road

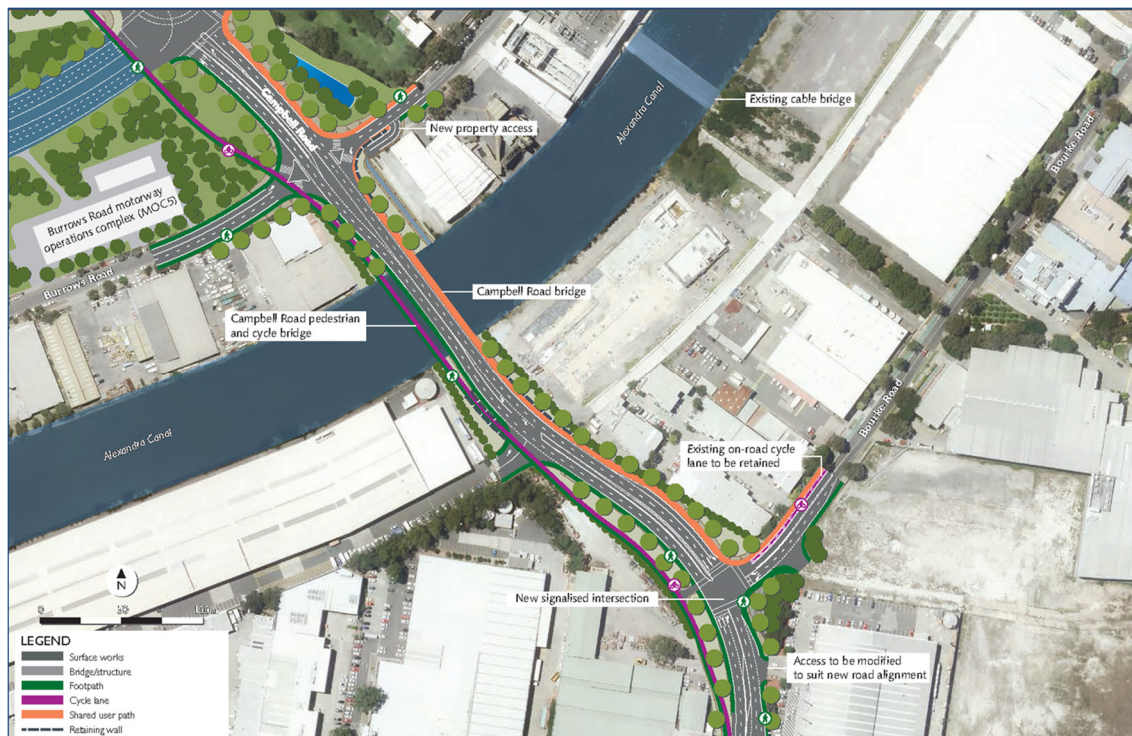


Adequate pedestrian connectivity is maintained through the upgrade of the intersection. Signalised pedestrian crossings have been provided across Campbell Road and Euston Roads while a pedestrian and cyclist bridge provides access across the M5.

¹² Volume 1A - Figure 5-32 Bedwin Road, Campbell Street and Campbell Road realignment, widening and extension works - map 2

The inclusion of a triangle pedestrian island at traffic signals is not appropriate in high density urban areas. **It is recommended that the alternative layout without the island is adopted to ensure pedestrian safety.**

8.1.4. Burrows Road to Bourke Road



The intersection of Bourke Road and Campbell Road is proposed to be signalised with the provision of three pedestrian crossings. Cyclists have the choice of using a shared path on the northern side of the new Campbell Road Bridge or a pedestrian/cyclist bridge on the southern side.

As noted earlier in Section 8.1.2 it is our view that benefits of grade separation are likely to be offset by severance due to limited access points. An at grade solution on the northern side of the new Campbell Road Bridge would appear to be a more logical solution in developing the regional cycle network.

8.1.5. Euston Road from Campbell Street to Maddox Street -



Adequate pedestrian connectivity is maintained through the upgrade of the intersection of Euston Road with Sydney Park Road from a round-a-bout to a signalised intersection. Four pedestrian crossings have been provided. Two triangle pedestrian crossings have been provided on Sydney Park Road. These should be removed to ensure pedestrian safety.

Euston Road is to be widened to three lanes each way north of Campbell Street with the kerbside lane to be available for parking outside of peak periods. This widening extends to just south of Maddox Street where the current cross section is maintained. A shared cycle lane is provided south of Sydney Park Road and along the southern side of Sydney Park Road itself up to Mitchell Road.

8.2. Euston Road

As highlighted in Section 5.2 the main source of the high increase in traffic on Euston Road is not related to the New M5. It is traffic diverting onto the upgraded Campbell Road and Euston Road from the Princess Highway and Campbell Street / Edgeware Road. This traffic then disperses onto the local street system. Streets that are known to be adversely affected include Maddox, Fountain, and Bowden are particular examples.

Local area traffic management measures will be required in the streets surrounding Euston Road should the New M5 project proceed.

9. Key Issues

9.1. Validity of WestConnex Stage 2

It is difficult to see how the New M5 is justified given the low traffic forecasts. The main traffic impact within the City of Sydney is in the vicinity of Euston Road which has traffic diverting from “non New M5” arterial traffic routes and filtering onto local streets.

The EIS does not address this issue. It is recommended that Council highlights the need for a justification for completion of the New M5 given that it results in significant traffic diversions that are best accommodated within the existing road network.

9.2. Construction Phase

If the project proceeds as per the EIS then there are aspects of the construction phase which will need to be addressed. These are summarised below.

The construction activities are expected to commence in late 2016 and conclude in 2019. Movement of spoil will be via the Princes Highway to the south and is not expected to cause significant disruption or adverse impacts on residents.

It is essential that planned road upgrades for Campbell Street as well as the upgrade of the intersection of Campbell Street with the Princes Highway are completed prior to traffic associated with the New M5 and Sydney Metro entering the system.

There is a need for a shuttle service between compounds if parking is to be accessible for workers. There is also a need to provide adequate accessibility between the compounds and public transport services in general. In this regard it is recommended that any shuttle service also link to the local railway stations.

It is our advice that the proposed arrangements for active transport are not reasonable. Council needs to be consulted in relation to significant changes to the pedestrian and cycling infrastructure during the construction phase. In particular:

- The Bourke Road cycleway diversion is not acceptable.
- In relation to pedestrian facilities, the proponent will need to follow all City policies including appropriate, accessible paths of travel during construction.

It is recommended that the treatment of bus stops is reconsidered in the interests of maintaining at least the current level of service provided to the community. In particular:

- The southbound bus stop on the Princes Highway south of Campbell Street should remain open to public transport users during the construction phase. It is noted that this may require it being relocated south of Albert Street.
- The southbound bus stop on Canal Road south of the Princes Highway should be retained in its current location.

It is recommended that a green travel plan is prepared for the project. The green travel plan should give workers an opportunity to travel to and from work by means other than car. Provision should be made on site for workers who travel by bicycle.

9.3. Operational Phase (prior to WestConnex Stage 3)

If the project proceeds as per the EIS local area traffic management measures will be required in the streets surrounding Euston Road.

The EIS plans show a turn bay for traffic westbound on Campbell Street to turn right into May Street. This movement is currently banned and should remain so as it could result in diversions to King Street.

The EIS plans show a turn bay for traffic westbound on Campbell Street to turn right into the Princes Highway. This movement is currently banned and should remain so as it could result in diversions to King Street.

Provision is made for a bridge connecting the raised cyclist and pedestrian bridge from the southern of Campbell Road and Sydney Park. It is our advice that an at grade solution on the northern side of Campbell Street would be a more logical solution in developing the regional cycle network.

Whilst not explicit in the project description the right turn from the New M5 to the new Campbell Road Bridge link to Bourke Road will be banned. This effectively makes the new Campbell Road Bridge link a through route replacing the current route via Campbell Road / Burrows Road / Ricketty Street. We advise that this is a positive outcome.

TTM have been advised that the modelling for the New M5 has assumed banning of the right turn from Mitchell into Sydney Park Rd, and a bus only right turn from Euston into Sydney Park Road. This measure requires further consultation with the City of Sydney.

Appendix A - Screenlines of Morning and Evening Peak Hour Traffic Forecasts

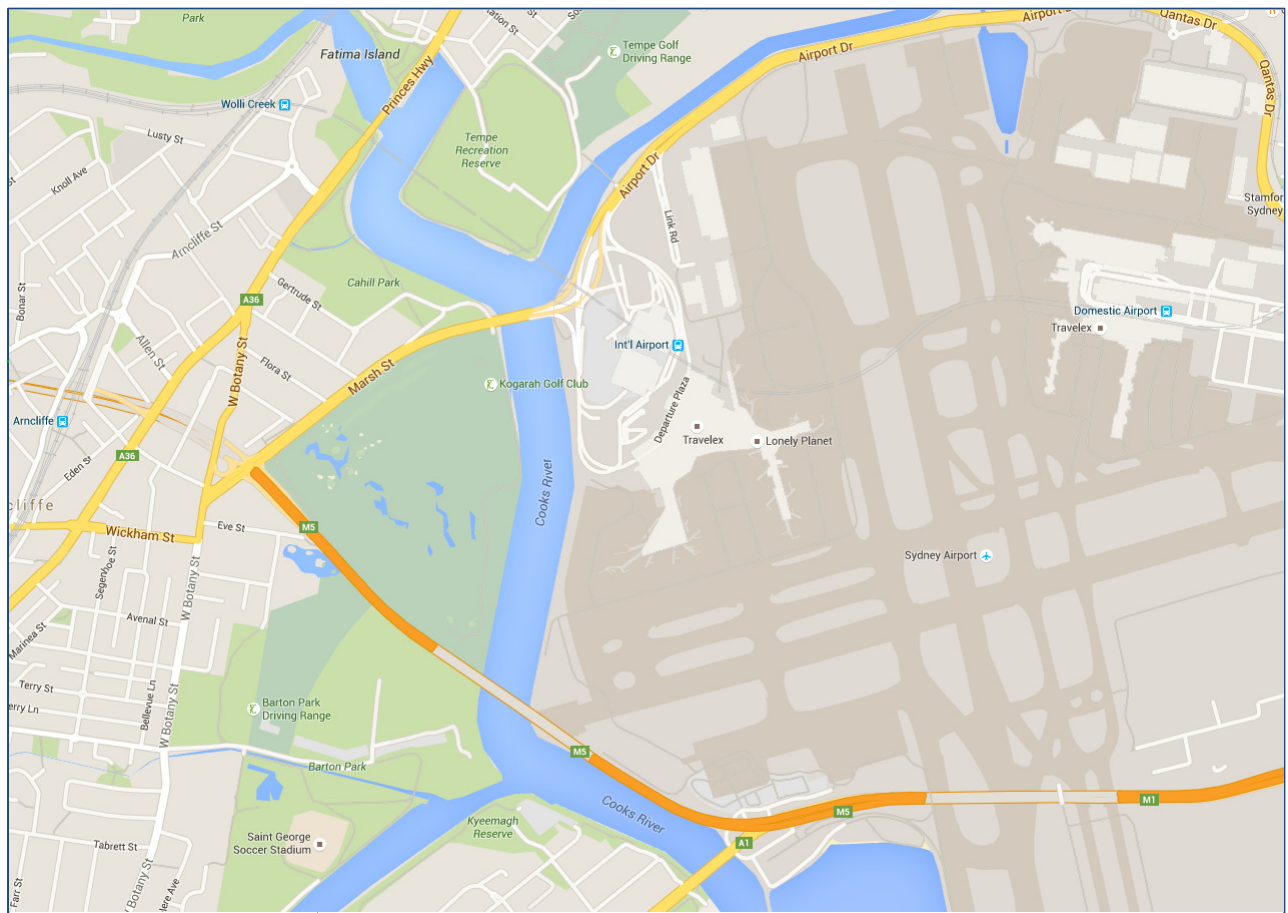
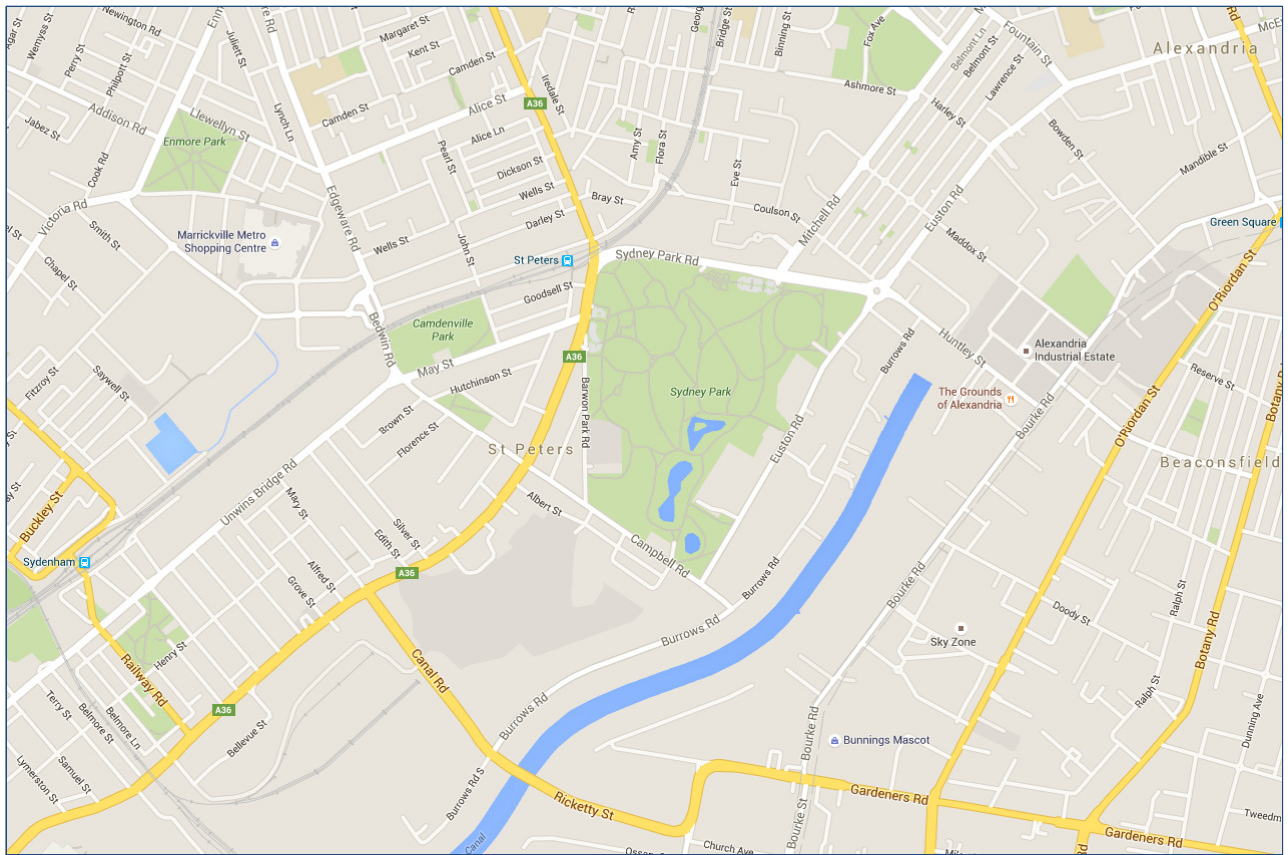


Figure A-1: Year 2021 Forecast Morning Peak Hour Traffic (2-Way)

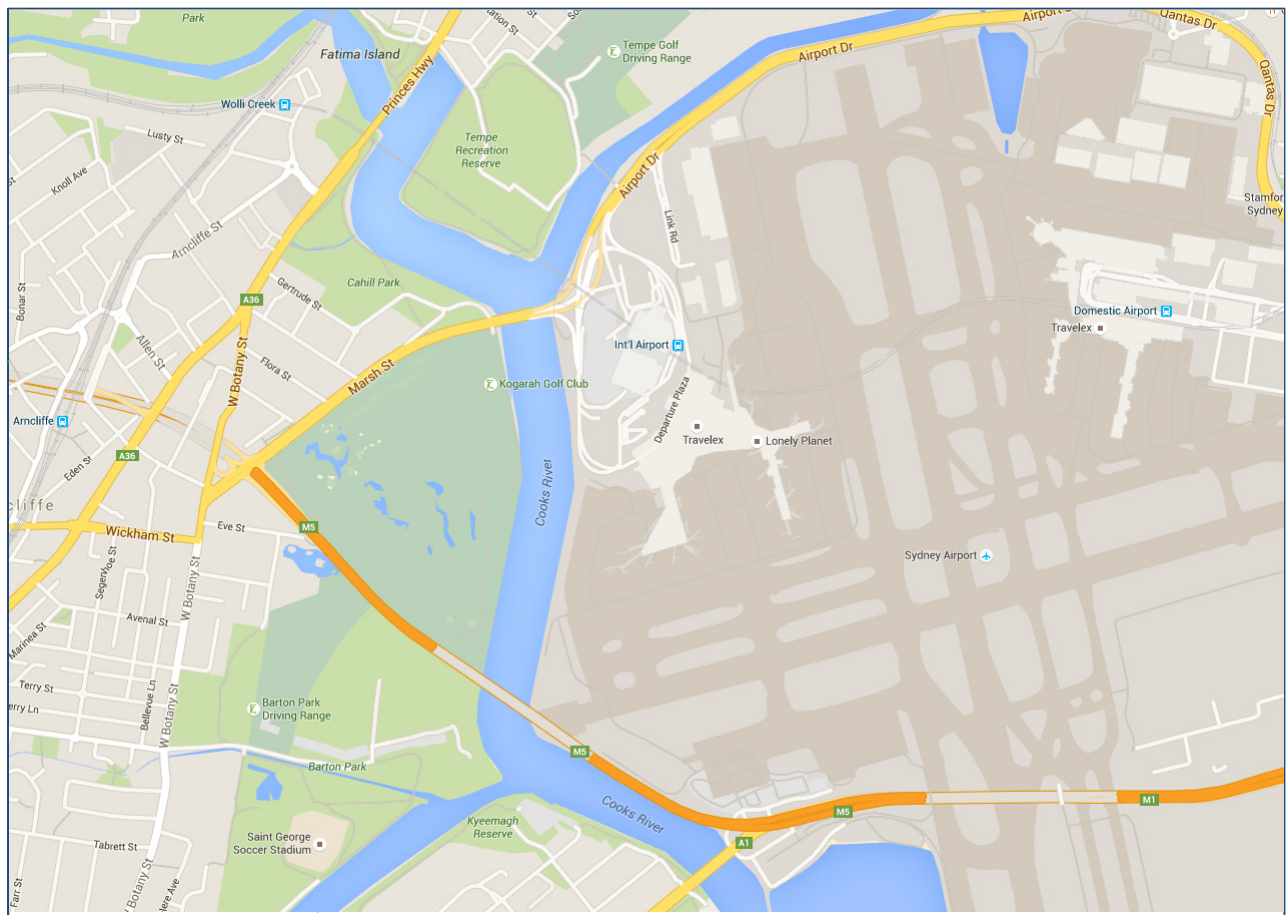
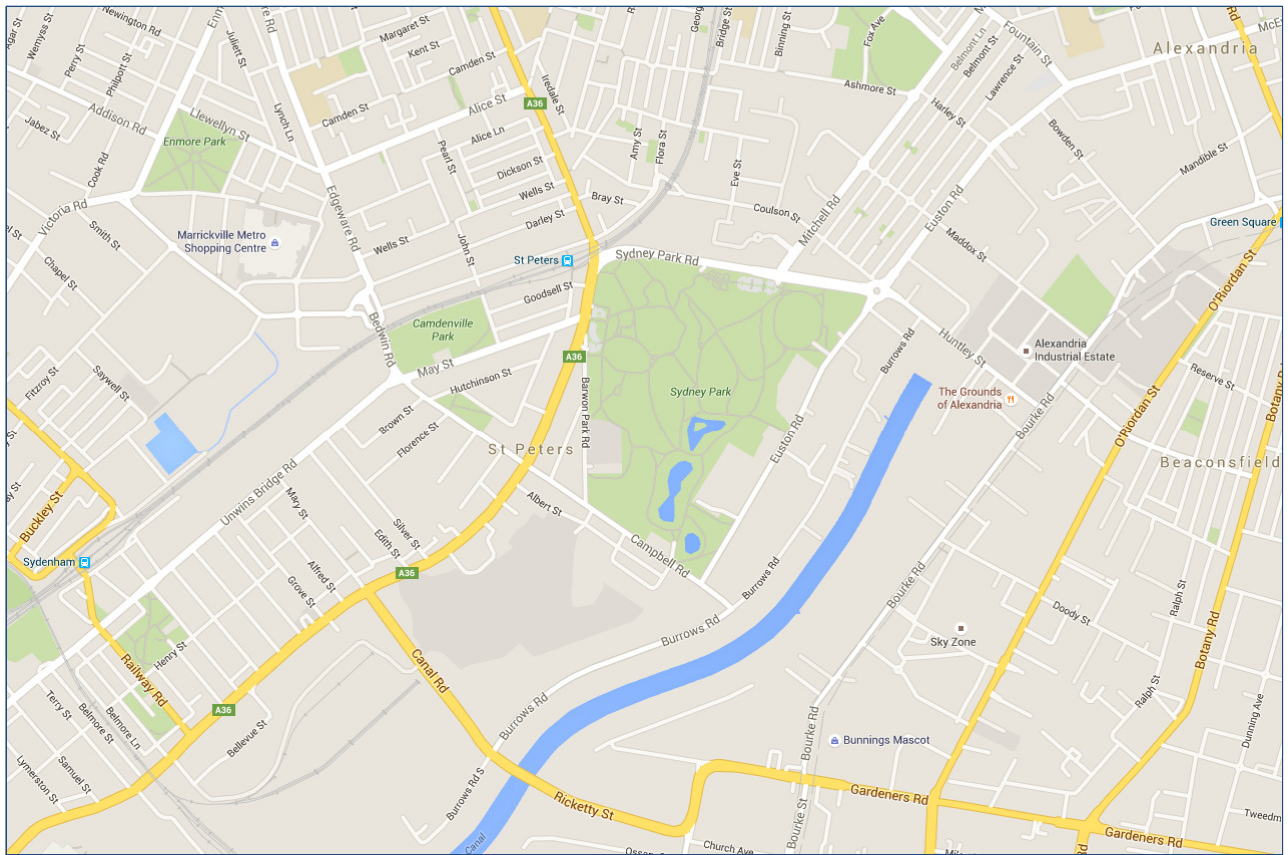


Figure A-2: Year 2021 Forecast Evening Peak Hour Traffic (2-Way)

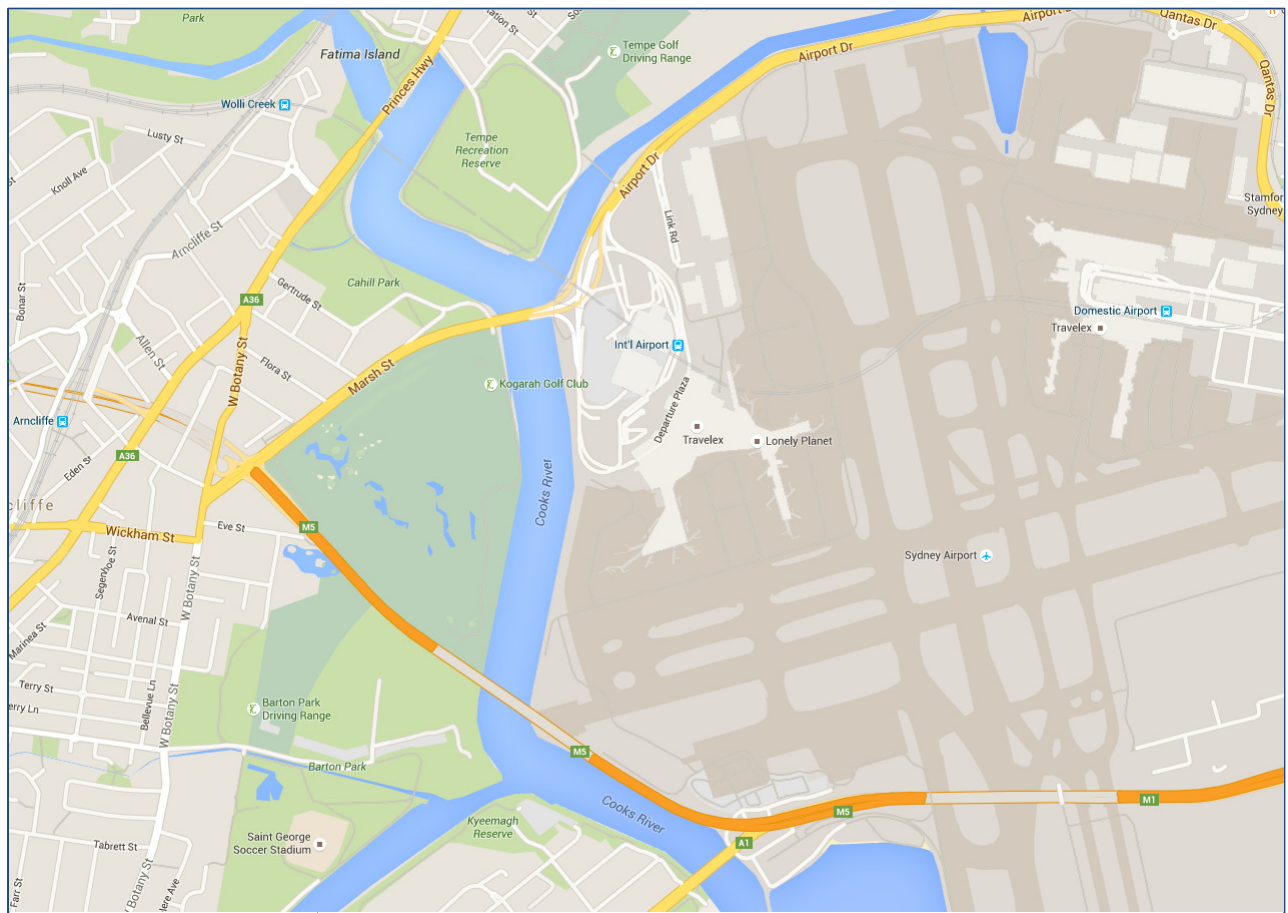
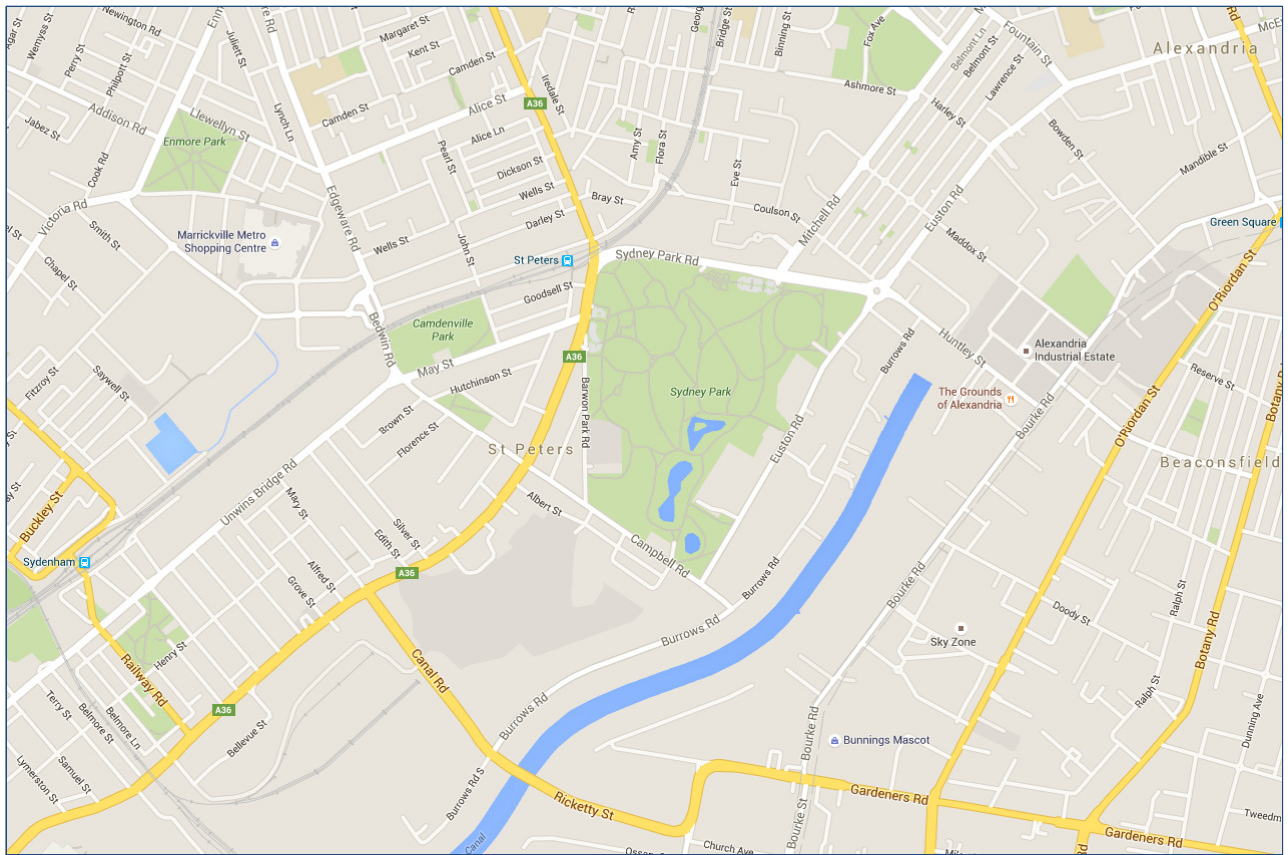


Figure A-3: Year 2031 Forecast Morning Peak Hour Traffic with WestConnex-Plus (2-Way)

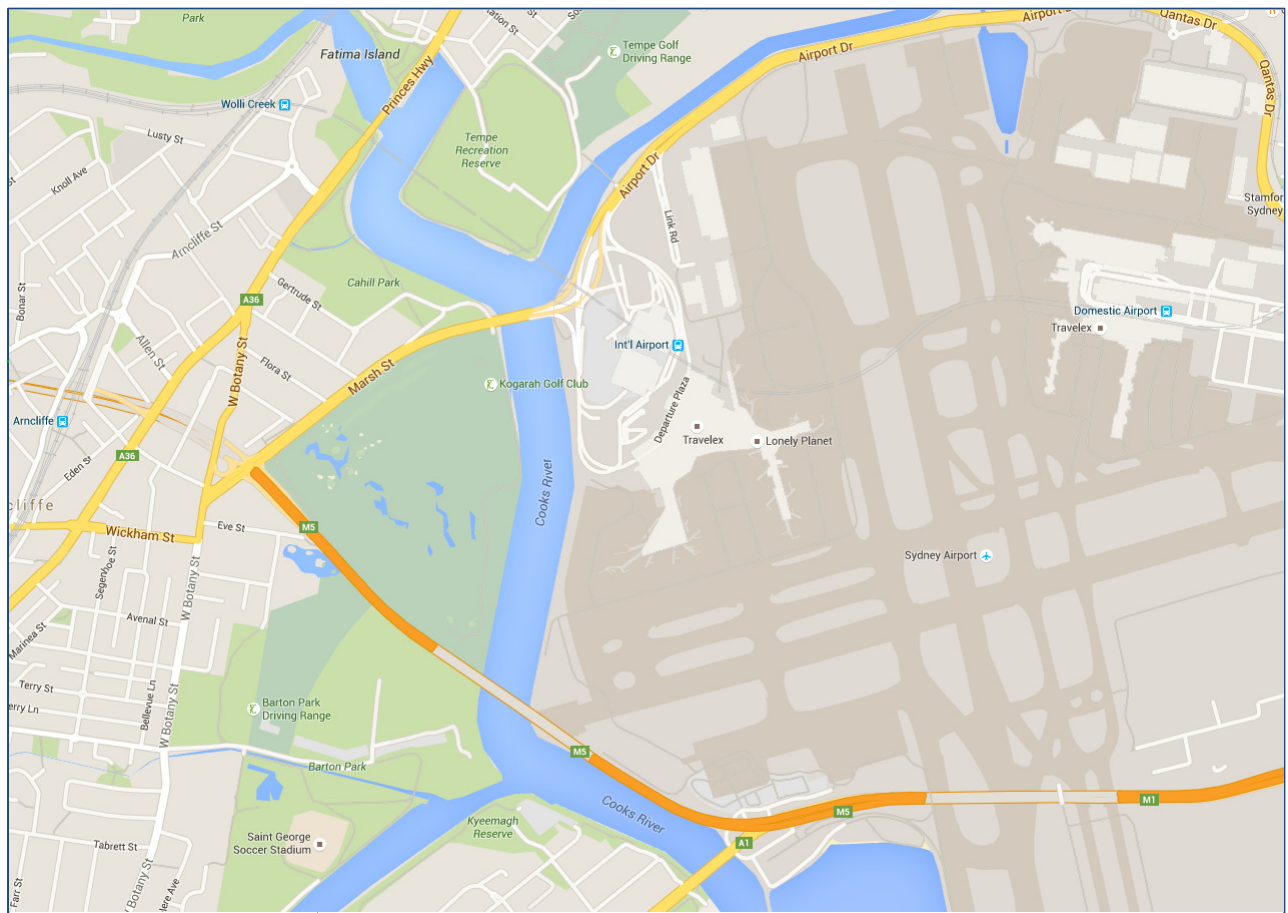
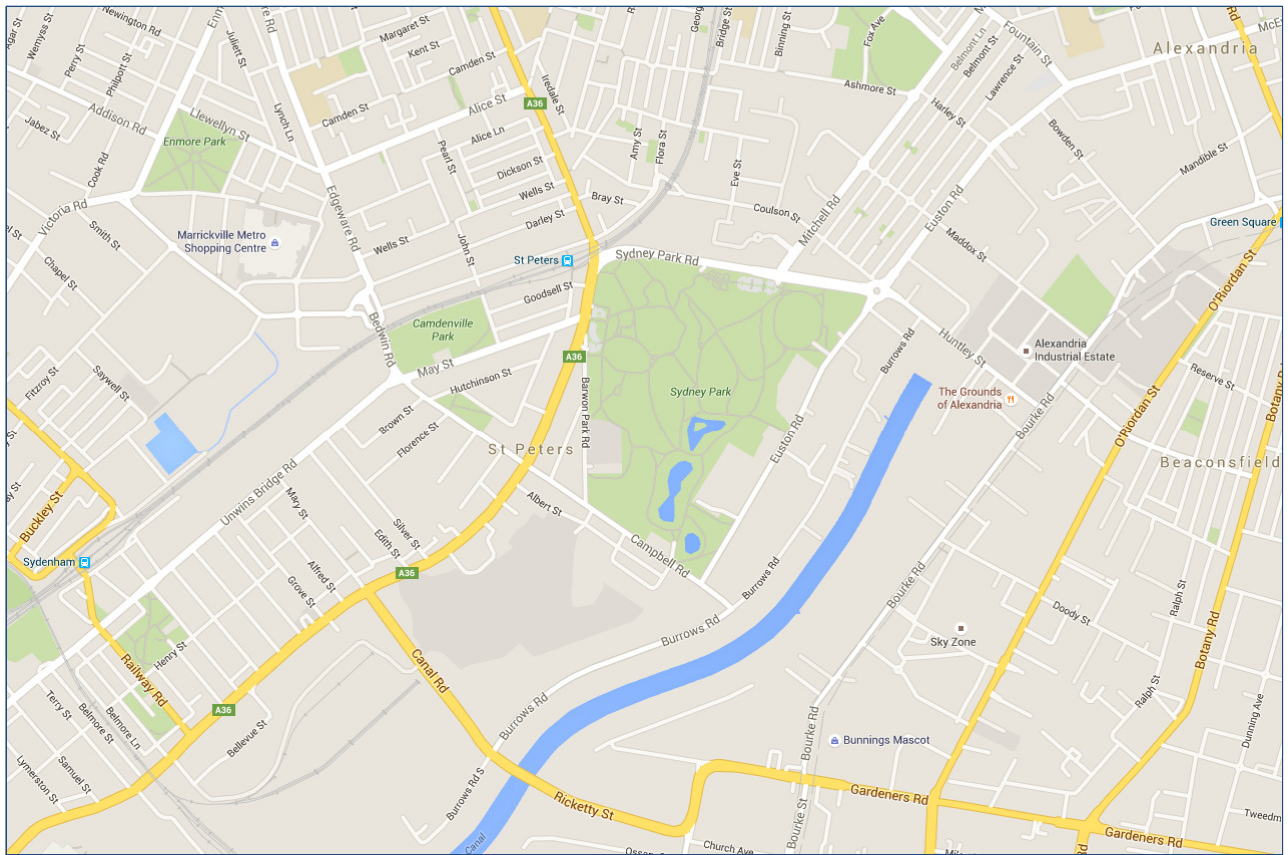


Figure A-4: Year 2031 Forecast Evening Peak Hour Traffic with WestConnex-Plus (2-Way)