

# **Proposed Redevelopment of the Marrickville Metro Shopping Centre**

## **Review of Traffic Management and & Accessibility Plan**

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Prepared by  
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**For Department of Planning &  
Infrastructure**

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# 1. Introduction

## 1.1 Background

AMP Capital Investors is proposing the redevelopment of the Marrickville Metro Shopping Centre. The shopping centre is located at 34 Victoria Road, Marrickville. The existing shopping centre fronts Victoria Road to the north, Murray Street to the east and Smidmore Street to the south and is adjoined by single storey residential dwellings to the west. The location of the shopping centre, along with the surrounding road network, is shown on the next page. It currently comprises some 29,568 m<sup>2</sup> of gross floor space (GFA), including a retail component of 22,933 m<sup>2</sup> and about 1,100 parking spaces. Access to the main car park is provided off Murray Street and Smidmore Street.

The company has submitted a Concept Plan application under Part 3A of the *Environmental Planning and Assessment Act 1979*. The application included a Traffic Management and Accessibility Plan (TMAP) report prepared by Halcrow (2010).

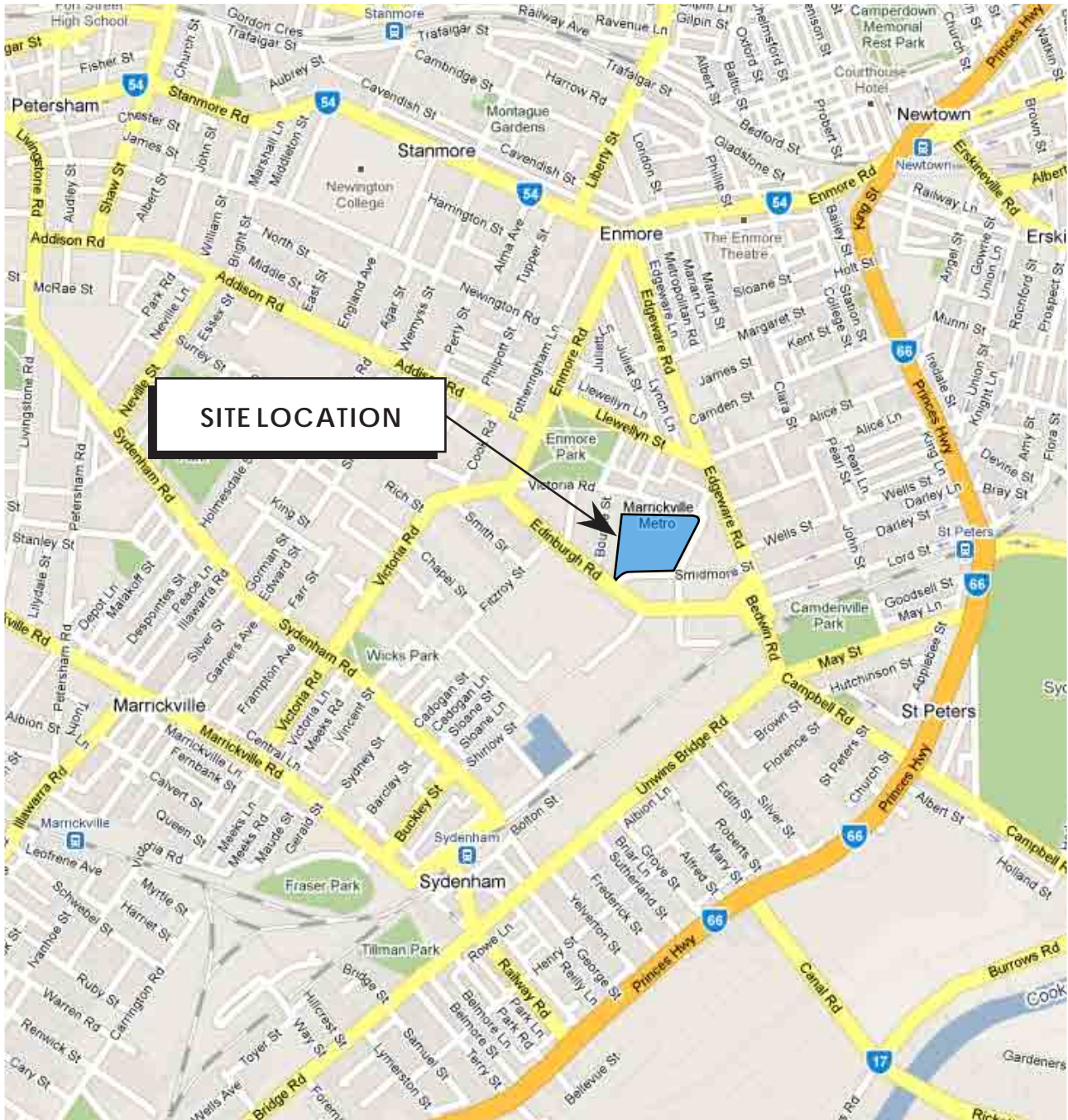
Gennaoui Consulting has been commissioned to carry out the following tasks including:

- Review the Traffic Management and Accessibility Plan (Incorporating Traffic and Parking Study) prepared by Halcrow as part of the Environmental Assessment Report and the Report on Transport prepared for the Preferred Project Report.
- Review submissions and documentation received from Public Authorities and the Community in response to the public exhibition of the Environmental Assessment Report and the Preferred Project Report and review the responses by the Proponent to the submissions.
- Critique and advice on the adequacy of the procedures and approach taken by Halcrow in the preparation of the technical reports and the review and responses to submissions.
- Critique and advice on the adequacy of the conclusions and recommendations made by Halcrow to address any traffic and transport impacts arising from the proposed expansion of the Marrickville Metro Shopping Centre. In this regard, provide specific advice on the adequacy of the roundabouts proposed on Edinburgh Road.
- Based on the data provided by the Proponent and received in submissions:
  - < assess the likely traffic and transport impacts of the proposed expansion of the Marrickville Metro Shopping Centre;
  - < provide advice on whether the impacts are significant; and
  - < provide recommendations to mitigate any impacts.
- Consult with Marrickville Council, the Proponent and the Department as part of the review.



# SITE LOCATION

## MARRICKVILLE METRO TMAP



## 1.2 The Proposed Development

The initial proposal incorporated an additional 21,470 m<sup>2</sup> of new retail floor space, including a second discount department store (8,000 m<sup>2</sup>) and an additional full-line supermarket of 4,000 m<sup>2</sup>, and a total of about 1,815 parking spaces (Halcrow, 2010a). The proposal also included the redevelopment of the site at 13-55 Edinburgh Road located to the south of Smidmore Street which is currently used as a warehouse party equipment rental and supply business with associated ground level car parking. The proposal included the closure of part of Smidmore Street adjacent to the site to create a new urban plaza in Smidmore Street.

In order to facilitate and improve accessibility to and from the expanded development, a TMAP was prepared including traffic measures, new pedestrians and bicycle facilities, provisions of better located bus stops and taxi ranks.

Following a period of public exhibition and in response to concerns raised by Council and others, a new proposal was submitted to the Department of Planning & Infrastructure. In essence the revised proposal (Halcrow, 2010b) involves:

- The retention of Smidmore Street opened to vehicle traffic;
- A reduction in the gross leasable floor space (GLA) of the additional development from 21,470 m<sup>2</sup> to 16,767 m<sup>2</sup> (a reduction of 22% in floor area);
- A reduction in the number of car parking spaces from 1,815 to 1,628;
- Retention of the existing vehicle ramp location within Murray Street and the relocation of the access from Murray Street to the new loading dock 3 further to the south.

## 1.3 Basis of Review

The review of the TMAP prepared in conjunction with the proposed redevelopment and expansion of the Marrickville Metro Shopping Centre has been based on a review of the following documents and information:

- Marrickville Metro - Traffic Management and Accessibility Plan (Incorporating traffic and parking Study) prepared by Halcrow (July 2010).
- Proposed Expansion of Marrickville Metro Shopping Centre – Preferred Project Report on Transport Aspects) prepared by Halcrow (November 2010).
- Review submissions from or on behalf of Council and State Agencies
- Review of other public submissions
- Site inspection during peak periods
- Discussions with Proponent and Council

## 1.4 Scope of Report

This report presents a summary of the review including findings in regard to the adequacy of the adopted study methodology, likely traffic impact of the latest proposed development, its parking requirements, relevance and adequacy of proposed traffic & transport management measures. A number of conditions of consent are recommended to form part of the approval process.

## 2. Review of Traffic & Parking Study

### 2.1 Basis of Assessment

The original July report (Halcrow, 2010a) largely centred on the assumption that Smidmore Street would be closed. A number of issues were raised by Council, State Agencies, the Chamber of Commerce and the public (**refer to section 3**). Council was mostly concerned that the retention of Smidmore Road opened for traffic was not assessed.

Most of the issues were addressed in the November preferred project report (Halcrow, 2010b) which assessed the latest proposal, included in **Appendix A**, which was based on

- the retention of Smidmore Street opened to vehicle traffic;
- a reduction of 22% in the GLA of the additional development);
- a reduction in the total number of car parking spaces from 1,815 to 1,628.

The following assessment includes a detailed review of the two reports including

- the study approach and procedure adopted by the consultants for the project
- relevance and adequacy of information provided
- relevance and adequacy of proposed traffic & transport management measures.

During the course of the review, site inspections were made during the peak periods stipulated in the report (Thursday 5.00 to 6.00 pm & Saturday 12.00 to 1.00pm) to better assess the suitability of the recommended improvements.

A meeting was held with the Proponent and its consultants on 28 September 2011. Major matters discussed and responded to included:

- Discrepancies between the two reports in results of the existing situation
- Trip distribution
- Traffic impact of proposed expansion
- Parking requirements
- Public transport
- Pedestrian and bicycle facilities

A meeting was also held with Marrickville Council officers on 4<sup>th</sup> October 2011. At that time, the latest development proposal was discussed. Concerns were expressed by Council in relation to

- The loss of parking at the approaches of the intersection of Edgeware Road with Alice Street
- The oversupply in number of bicycle spaces
- Traffic problems as a result of providing two separate car parks

This review covered the following areas

- Traffic impact
- Parking requirement
- Loading facilities
- Pedestrian and bicycles facilities
- Public transport (buses, taxis and rail)

A critical review and advice on the adequacy of the conclusions and recommendations made by Halcrow to address any traffic and transport impacts arising from the proposed expansion of the Marrickville Metro Shopping Centre is discussed below. In this regard, specific advice on the adequacy of the roundabouts proposed on Edinburgh Road is also provided.

The methodology used by the consultants in both reports is considered appropriate except where noted below.

## 2.2 Traffic Impact of Proposed Development

### 2.2.1 Trip Generation of Proposed Development Expansion

The Shopping Centre currently generates about 1,040 vehicles per hour two-way on Thursday afternoon, increasing to about 1,635 vehicles per hour two-way on Saturday morning (Halcrow 2010a).

Halcrow has adopted the following RTA (2002) trip generation rates for the shopping centre:

- For development in the range of 20,000 to 30,000 m<sup>2</sup> GLA
  - < 5.9 trips / 100m<sup>2</sup> GLA per hour
  - < 7.5 trips / 100m<sup>2</sup> GLA per hour
- For development over 30,000 m<sup>2</sup> GLA
  - < 4.6 trips / 100m<sup>2</sup> GLA per hour
  - < 6.1 trips / 100m<sup>2</sup> GLA per hour

The existing and future estimated trip generation of the Marrickville Metro Shopping Centre are summarised in **Table 1**. Trips currently generated by the shopping centre are about 77 and 93 percent lower than those determined by using the RTA rates on a Thursday evening and on a Saturday morning respectively.

In estimating the future trip generation of the proposed redevelopment Halcrow discounted the RTA rates accordingly. This approach is considered appropriate given the RTA rates are over 30 years old and shopping patterns have markedly changed over that period. Thus about 1410 and 2,250 trips are expected to be generated by the latest proposal during the peak hours on Thursday afternoon and Saturday respectively

**Table 1: Trip Generation of Marrickville Metro Shopping Centre**

	GLA m <sup>2</sup>	Thursday Evening	Saturday
<b>Existing</b>	22,933		
Actual Trips		1,041	1,597
RTA Trip Rates		5.9	7.5
RTA Based Trips		1,353	1,720
<b>Adjustment</b>		<b>77%</b>	<b>93%</b>
<b>Original Proposal</b>	44,403		
RTA Trip Rates		4.6	6.1
RTA Based Trips		2,043	2,709
<b>Adjusted Trip Generation</b>		<b>1,571</b>	<b>2,515</b>
<b>Final Proposal</b>	39,700		
RTA Trip Rates		4.6	6.1
RTA Based Trips		1,826	2,422
<b>Adjusted Trip Generation</b>		<b>1,405</b>	<b>2,249</b>
<b>Additional Final Trips</b>		<b>364</b>	<b>652</b>

Thus the proposed expansion is likely to generate about 360 and 655 additional vehicles trips per hour during the Thursday afternoon and Saturday morning peak hours respectively as noted in **Table 1**.

## 2.2.2 Trip Distribution

The consultants (Halcrow, 2010a) have stated that the additional traffic was distributed in accordance to the trade area sales forecasts prepared by Pitney Bowes Capital Insight who prepared an Economic Impact Assessment for the proposed development. Traffic growth was thus expected to come mainly from the south, south east and west with little traffic growth expected from the north and north east.

The original report (Halcrow, 2010a) did not include a table or diagram for the distribution. This matter was rectified in the subsequent report (Halcrow, 2010b) which included the diagram reproduced as **Appendix B** of this report. The difference between the arrival and departure distribution is a reflection of the right turn prohibition from Edgeware Road into Enmore Road and from Stanmore Road into Enmore Road south.

In response to a query from Gennaoui Consulting, Halcrow has provided an explanation on the methodology adopted for the derivation of the distribution of the additional shopping centre trips generated. This explanation is also included in **Appendix B**. The majority of additional shopping centre traffic was assumed to use the car parking area to the south of Smidmore Street. This is consistent with the fact that most additional parking spaces will be provided on the southern site.

This explanation is considered reasonable explanation in relation to lesser traffic using Edgeware Road.

### 2.2.3 Assignment of Additional Trips

Prior to assigning the additional shopping centre trips to the road network, Halcrow (2010 a & b) added to the existing volumes the trip generation of the following two local developments for which planning approval has been granted:

- The redevelopment of the Annette Kellerman Aquatic Centre in Enmore Park  
< 190 veh/hr on a Thursday evening and on a Saturday
- An industrial subdivision of part of the Old Unilever site on the corner of Edinburgh Road and Fitzroy Street.  
< 170 veh/hr on a Thursday evening with no traffic on a Saturday

In the July 2010 report Halcrow indicated that no deduction was made for the removal of traffic associated with the warehouse site, as well as for the interception of traffic that would otherwise have travelled out of Marrickville to shop elsewhere.

This conservative approach was however not adopted in conjunction with the revised proposal; in Figure B3 and B8 of Appendix B of the Preferred Project Report (Halcrow, 2010b); traffic assumed to be intercepted by the expanded development has been redirected towards the shopping centre.

The resultant volumes for the initial and latest proposals are reproduced in **Appendices C and D** respectively and summarised in **Table 3**.

The existing volumes listed in Table 3 are those included in Table 2.1 of the latest Halcrow report (2010b). Discrepancies between these and those published in the July report (Halcrow, 2010a) were found at a number of locations. Halcrow has advised that the July volumes included a reassignment of traffic to reflect the potential closure of Smidmore Street.

Discrepancies were also found in the November 2010 projected volumes. Halcrow has provided adjusted volumes which are included as Appendix E and form the basis of the following analysis.

### 2.2.4 Assessment of Intersections

#### Existing Situation

Halcrow assessed the operational capacity of 14 intersections in the surrounding area of the Marrickville Metro Shopping Centre using the SIDRA software which simulates the operations of the intersections to provide a number of performance measures. The results of this analysis are summarised in **Table 4** for existing conditions and with the results for the initial proposed redevelopment and the latest proposal. It should be noted that SIDRA software assumes as default a 5% heavy vehicle in flow volumes, thus the discrepancy between the actual volumes and those noted in Appendix C of the preferred project report (Halcrow, 2010b).

**Table 3: Existing and Future Two-Way Peak Hour Traffic Volumes (vph)**

Link	Location	Thursday PM			Saturday		
		Existing*	Future Initial	Future Latest	Existing *	Future Initial	Future Latest
Enmore Rd	Between Addison Rd & Llewellyn St	1009	1212	1098	904	1196	1033
Victoria Rd	West of Edinburgh Rd	1162	1442	1311	1116	1537	1376
Edgeware Rd	North of Llewellyn St & Alice St	1669	1675	1673	1647	1657	1666
Edgeware Rd	Between Victoria Rd & Llewellyn St	1764	1792	1785	1784	1825	1830
Edgeware Rd	Between Darley St & Edinburgh Rd	1311	1335	1333	1234	1259	1268
Alice St	East of Edgeware Rd	855	919	913	852	924	920
Victoria Rd	Between Murray St & Edgeware Rd	481	493	511	646	670	722
Murray St	Between Murray St Access & Smidmore St	489	413	562	686	552	870
Murray St	Between Smidmore St & Edinburgh Rd	324	455	356	458	584	566
Smidmore St	Between Murray St & Edgeware Rd	91	93	116	109	112	168
Edinburgh Rd	Between Victoria Rd & Fitzroy St	1165	1566	1414	947	1537	1382
Edinburgh Rd	Between Fitzroy St & Smidmore St	1343	1746	1588	1299	1912	1763
Edinburgh Rd	East of Smidmore St	797	1409	1064	535	1354	882
Edinburgh Rd	West of Sydney Steel Rd	798	1455	1115	528	1425	957
Edinburgh Rd	Between Sydney Steel Rd & Murray St	779	1188	898	526	980	627
Edinburgh Rd	Between Murray St & Railway Pde	996	1213	1134	832	1115	1019
Edinburgh Rd	Between Railway Pde & Bedwin Rd	598	756	686	550	756	620
Smidmore St	East of Edinburgh Rd	666	783	739	869	1194	1137
Smidmore St	West of Murray St	404	closed	434	526	closed	604
Fitzroy St	Between Sydenham Rd & Edinburgh Rd	409	515	503	428	502	494
Sydenham Rd	North of Fitzroy St	1251	1321	1313	1221	1267	1261
Sydenham Rd	South of Fitzroy St	1340	1400	1396	1223	1251	1249
Bedwin Rd	Between Edinburgh Rd & Unwins Bridge Rd	1896	2136	2077	1812	2120	2074
Unwins Bridge Rd	West of Bedwin Rd	1771	1839	1825	1551	1627	1615
May St	East of Bedwin Rd	1263	1359	1332	1080	1212	1190
Campbell Rd	South of Unwins Bridge Rd	690	766	748	441	541	529

\*source: Halcrow (2010b)



**Table 4: Performance of Surveyed Intersections**

Intersection		Control	Thursday PM		Saturday	
			LoS	Av. Delay	LoS	Av. Delay
Enmore Rd / Llewellyn St	Existing	Signals	B	22	B	20.3
	<i>Future Initial</i>	<i>Signals</i>	<i>C</i>	<i>29.2</i>	<i>C</i>	<i>34</i>
	<b>Future Latest</b>	<b>Signals</b>	<b>B</b>	<b>27</b>	<b>B</b>	<b>27.7</b>
	<b>Latest Sept 2011</b>	<b>Signals</b>	<b>B</b>	<b>27.5</b>		
Addison Rd / Enmore Rd	Existing	Signals	B	25.1	B	22.6
	<i>Future Initial</i>	<i>Signals</i>	<i>C</i>	<i>35.4</i>	<i>C</i>	<i>35.7</i>
	<b>Future Latest</b>	<b>Signals</b>	<b>C</b>	<b>29.7</b>	<b>C</b>	<b>29.2</b>
	<b>Latest Sept 2011</b>	<b>Signals</b>	<b>C</b>	<b>30.8</b>		
Victoria Rd / Edinburgh Rd	Existing	Signals	B	28.1	B	27.2
	<i>Future Initial</i>	<i>Signals</i>	<i>C</i>	<i>31.4</i>	<i>C</i>	<i>33.9</i>
	<b>Future Latest</b>	<b>Signals</b>	<b>C</b>	<b>30.7</b>	<b>B</b>	<b>28.2</b>
	<b>Latest Sept 2011</b>	<b>Signals</b>	<b>C</b>	<b>30.7</b>		
Edgware Rd/Alice St/Llewellyn St	Existing	Signals	D	51.2	D	50.5
	<i>Future Initial</i>	<i>Signals</i>	<i>E</i>	<i>61.4</i>	<i>E</i>	<i>58.5</i>
	<b>Future Latest</b>	<b>Signals</b>	<b>D</b>	<b>46.2</b>	<b>D</b>	<b>55.1</b>
	<b>Latest Sept 2011</b>	<b>Signals</b>	<b>D</b>	<b>49.0</b>		
Edgware Rd / Victoria Rd	Existing	Signs	C	41.3	C	41.8
	<i>Future Initial</i>	<i>Signs</i>	<i>D</i>	<i>43.3</i>	<i>D</i>	<i>44.9</i>
	<b>Future Latest</b>	<b>Signs</b>	<b>D</b>	<b>42.6</b>	<b>D</b>	<b>44.3</b>
	<b>Latest Sept 2011</b>	<b>Signs</b>	<b>D</b>	<b>43.3</b>		
Edinburgh Rd / Fitzroy St	Existing	Roundabout	B	15.5	A	11.9
	<i>Future Initial</i>	<i>Roundabout</i>	<i>C</i>	<i>41</i>	<i>B</i>	<i>17.1</i>
	<b>Future Latest</b>	<b>Roundabout</b>	<b>B</b>	<b>26.7</b>	<b>B</b>	<b>15.2</b>
	<b>Latest Sept 2011</b>	<b>Roundabout</b>	<b>C</b>	<b>31.4</b>		
Fitzroy St / Sydenham Rd	Existing	Signs	A	11.5	A	12
	<i>Future Initial</i>	<i>Signs</i>	<i>A</i>	<i>12.1</i>	<i>A</i>	<i>12.4</i>
	<b>Future Latest</b>	<b>Signs</b>	<b>A</b>	<b>12</b>	<b>A</b>	<b>12.3</b>
	<b>Latest Sept 2011</b>	<b>Signs</b>	<b>A</b>	<b>12.1</b>		
Edinburgh Rd / Smidmore St	Existing	Signals	B	26.7	C	29.6
	<i>Future Initial</i>	<i>Signals</i>	<i>B</i>	<i>21.6</i>	<i>D</i>	<i>46.9</i>
	<b>Future Latest</b>	<b>Signals</b>	<b>B</b>	<b>26.6</b>	<b>D</b>	<b>52.3</b>
	<b>Latest Sept 2011</b>	<b>Signals</b>	<b>C</b>	<b>29.1</b>		
Smidmore St/ Murray St	Existing	Roundabout	A	8	A	8.2
	<i>Future Initial</i>	<i>Signs</i>	<i>A</i>	<i>11.6</i>	<i>A</i>	<i>14.3</i>
	<b>Future Latest</b>	<b>Roundabout</b>	<b>A</b>	<b>7.9</b>	<b>A</b>	<b>8.6</b>
	<b>Latest Sept 2011</b>	<b>Roundabout</b>	<b>A</b>	<b>8.7</b>		
Edinburgh Rd / Sydney Steel Rd	Existing	Signs	A	11.6	A	9.4
	<i>Future Initial</i>	<i>Roundabout</i>	<i>A</i>	<i>13.8</i>	<i>A</i>	<i>12.3</i>
	<b>Future Latest</b>	<b>Roundabout</b>	<b>A</b>	<b>11.6</b>	<b>A</b>	<b>10.2</b>
	<b>Latest Sept 2011</b>	<b>Roundabout</b>	<b>A</b>	<b>11.6</b>		
Edinburgh Rd / Murray St	Existing	Roundabout	A	11.2	A	10.7
	<i>Future Initial</i>	<i>Roundabout</i>	<i>A</i>	<i>8</i>	<i>A</i>	<i>12.4</i>
	<b>Future Latest</b>	<b>Roundabout</b>	<b>A</b>	<b>11.7</b>	<b>A</b>	<b>11.2</b>
	<b>Latest Sept 2011</b>	<b>Roundabout</b>	<b>A</b>	<b>11.8</b>		
Edinburgh Rd / Railway Pde	Existing	Roundabout	A	9.8	A	9.6
	<i>Future Initial</i>	<i>Roundabout</i>	<i>A</i>	<i>12</i>	<i>A</i>	<i>10.2</i>
	<b>Future Latest</b>	<b>Roundabout</b>	<b>A</b>	<b>10.6</b>	<b>A</b>	<b>9.1</b>
	<b>Latest Sept 2011</b>	<b>Roundabout</b>	<b>A</b>	<b>10.8</b>		
Edinburgh Rd / Bedwin Rd	Existing	Signs	B	24.8	B	24.2
	<i>Future Initial</i>	<i>Signs</i>	<i>C</i>	<i>35.4</i>	<i>C</i>	<i>36.7</i>
	<b>Future Latest</b>	<b>Signs</b>	<b>C</b>	<b>30</b>	<b>B</b>	<b>25.5</b>
	<b>Latest Sept 2011</b>	<b>Signs</b>	<b>C</b>	<b>30.7</b>		
Bedwin Rd / Unwins Bridge Rd / Campbell Rd / May St	Existing	Signals	F	74.5	C	28.8
	<i>Future Initial</i>	<i>Signals</i>	<i>C</i>	<i>32.2</i>	<i>C</i>	<i>29.1</i>
	<b>Future Latest</b>	<b>Signals</b>	<b>B</b>	<b>26.2</b>	<b>C</b>	<b>29.7</b>
	<b>Latest Sept 2011</b>	<b>Signals</b>	<b>B</b>	<b>27.2</b>		

\*Source: Halcrow (2110a & b) Existing LoS from Halcrow 2010b Latest Sept from Halcrow



The intersection of Enmore Road with Stanmore Road and Edgeware Road was not included in the assessment considering that about 25 percent of traffic generated by the proposed development expansion would travel through it. The RTA was consulted regarding the original application and then in respect to the Preferred Project scheme; it is understood that on neither occasion has the RTA expressed the need for the area of investigation to be extended. Halcrow considers it unreasonable to require this intersection to now be examined but acknowledges that this intersection acts as a throttle on traffic travelling north/south to/from Marrickville and that as such its capacity limitations are in fact beneficial in controlling traffic levels in Marrickville.

Discrepancies were found between the results published in the Halcrow July report and the November report at the following intersections:

- Edgeware Road with Alice Street and Llewellyn Street
- Bedwin Street with Unwins Bridge Road and Campbell/May Streets

Halcrow has advised that following the issue of the July TMAP and in the process of preparing the November Preferred Project Report TMAP, a site visit was undertaken to further observe the operation of these two intersections.

With regard to Alice/Llewellyn/Edgeware, the extent of existing 'no parking' on the approaches that was used for the July 2010 SIDRA modelling was shorter than the actual lengths of 'no parking'. The correct length of "No Parking" were then used for the Preferred Project Report (Halcrow, 2010b) SIDRA modelling. Therefore, the corrected 'no parking' lengths above accounts for the minor discrepancies.

With regard to the Bedwin/Unwin/Campbell/May intersection, during the inspection it was observed that the largest volume of eastbound traffic left-turned into Bedwin Road from Unwins Bridge Road on both the Thursday evening and Saturday morning periods; that is the kerbside lane, which is road-marked as a left & through lane, in fact operated as a dedicated left-turn only lane. Therefore, the SIDRA modelling lane arrangement was modified to account for this. This modelling established estimated queues that better reflected actual queuing patterns.

Halcrow concluded that currently all surveyed intersections operate at a satisfactory level of service "C" or better, except at the following locations:

- The signalised intersection of Edgeware Road, Llewellyn Street and Alice Street currently operates LoS D on both Thursday evening and on a Saturday morning with vehicle queues on Edgeware Road extending past the intersection of Edgeware Road with Victoria Road thus interfering with traffic attempting to turn right into and out of Victoria Road.
- The unsignalised intersection of Edgeware Road with Victoria Road due to the right turning movement from Victoria Road, combined with mid-block disruptions from queuing traffic at the intersection of Edgeware Road with Llewellyn Street and Alice Street, operates in an unsatisfactory manner.
- The signalised intersection of Bedwin Road with Unwins Bridge Road and Campbell Road and May Street operates at a Level of Service D (poor but still satisfactory).

### Impact of Proposed Development Expansion

Prior to assessing the impact of the proposed expansion, Halcrow (2010a & b) assumed the following improvements were in place:

- **Intersection of Edgeware Road, Alice Street & Llewellyn Street**

- < Extension to 50m of the length of parking restrictions during the weekday evening and Saturday morning peak periods along the southbound approach on Edgeware Road
- < The existing restriction on the westbound approach of Alice Street be extended to 6.00 pm to fully cover the weekday evening peak period; this would result in the loss of about eight (8) parking spaces over a half hour weekday period.

These improvements would retain but not worsened the existing poor level of service of the intersection. Widening of Edgeware Road and Alice Street to provide an exclusive right turn lane from the south and east respectively would improve the operation. This measure was discounted by the consultants as being counterproductive. However, Halcrow has since advised if parking was restricted for a distance of 100 m south of Alice Street along the western side of Edgeware Road then the future operation of the Edgeware/Alice/Llewellyn intersection would improve to LOS C during both the Thursday evening and the Saturday analysis periods. This would affect parking in front of two houses, both of which also have frontage to Victoria Road. The results of this assessment are included in **Table 5**.

**Table 5 – Alice / Edgeware / Llewellyn – SIDRA Results\***

Traffic Flows	Note	Thursday PM		Saturday	
		LoS	Av. Delay	LoS	Av. Delay
Existing Flows	Existing Layout	D	56.2	D	53.1
Existing + Committed	Existing Layout	E	64.5	D	54.6
Future Flows	Existing Layout	E	67.4	D	55.1
Future Flows	77m No Stopping on Alice St	D	46.2	-	-
Future Flows	(+) 100m No Stopping on Edgeware Rd South	C	31.0	C	32.1

\*source Halcrow (September 2011)

Halcrow had previously indicated that the major impact at this intersection was due to the two approved redevelopment of the Annette Kellerman Aquatic Centre in Enmore Park and the new industrial subdivision of part of the Old Unilever site. Halcrow has therefore included in **Table 5** the effects of incrementally adding:

- < Other developments new traffic;
- < Other + Metro new traffic
- < Future flows with different improvements at intersection. The final line of results illustrate the potential benefits of providing 100m of 'no stopping' on the Edgeware Road South approach.

- **Intersection of Unwins Bridge Rd/Bedwin Rd/May & Campbell Streets**

- < Create a dedicated left slip lane of about 60m by implementing parking restrictions (clearway or permanent) on the Unwins Bridge Road approach;
- < On May Street convert the existing right and through lane to a dedicated right-turn lane. Add a right-turn phase for vehicles turning from May Street into Bedwin Road; reducing the eastbound provision in May Street to one lane and displacing about three parking spaces
- < introduction of a 'diamond lead' phase for right-turning traffic on approaches east west approaches

The above proposed improvements are shown in **Appendix F**. These measures considerably improve the operation of this intersection. The RTA has given approval in principle for the proposed modification subject to a number of further modifications. The final design and operation of the intersection should be agreed in consultation with the RTA and Council

- **Intersection of Edinburgh Road with Sydney Steel Road**

A roundabout is proposed at this location; the roundabout is not required to cater for increased traffic along Edinburgh Road. It is required to cater for buses arriving from the east making a U-turn at this roundabout to access the new bus terminal on the northern side of Edinburgh Road (refer section 2.6.1). The roundabout should therefore be designed accordingly.

- **Intersection of Edinburgh Road with Murray Street**

The existing roundabout is to be retained.

- **Intersection of Edinburgh Road with Railway Parade**

The existing roundabout is to be retained. The roundabout would allow buses travelling from the west along Edinburgh Road to U-turn after departing the proposed new bus terminal. It should be checked to ensure that Metro buses (14.5m long) can make this manoeuvre.

- **Intersection of Edgeware Road and Victoria Road**

Halcrow has recommended the retention of the existing control at this intersection. This sign posted intersection operates at a poor level of service "D" suggesting alternative traffic control largely due to the delays experienced by the right turning vehicles from Victoria Road. Banning of this low volume movement at least during the peak periods would considerably improve the operation of the intersection which would then operate at LoS "B".

## 2.2.5 Conclusions

It appears from the above assessment that Halcrow's objective was to recommend minimum improvements just to ensure that the existing operation of intersections was not further impacted, rather than ensure that the intersections operate at a better level of service. The above assessment indicates that in addition to the proposed traffic measures there is a need for the banning of the right turning movement from Victoria Road into Edgeware Road.

## 2.3 Proposed Parking

### 2.3.1 Parking Provisions

The existing shopping centre includes about 1,100 spaces. Peak usage was surveyed to be 978 spaces on a Saturday morning and 572 spaces on a Thursday evening. The existing supply equates to about 4.7 spaces per 100 m<sup>2</sup> of GLA. The peak surveyed demand was for about 4.25 spaces per 100 m<sup>2</sup> of GLA. This being close to the RTA's suggested parking provision rate of 4.3 spaces per 100 m<sup>2</sup> for shopping centres in the size range of 20,000 to 30,000 m<sup>2</sup> GLA, Halcrow then applied the RTA rate of 4.1 spaces per 100 m<sup>2</sup> GLA for shopping centres with sizes over 30,000 m<sup>2</sup> GLA.

The existing and future estimated parking requirement of the Marrickville Metro Shopping Centre are summarised in **Table 6**. Some 1,628 spaces are proposed for the expanded Marrickville Metro Shopping Centre.

The existing building will accommodate some 1,195 parking spaces, an increase of about 100 spaces. The remaining 433 spaces will be provided in the new building. This is lower than that is required by Council's DCP.

**Table 6: Parking Requirements of Marrickville Metro Shopping Centre**

	GLA m <sup>2</sup>	RTA	Council
<b>Existing</b>	22,933		
Parking Rates		4.3 / 100m <sup>2</sup> GLA	5 / 100m <sup>2</sup> GLA + 30
Parking Requirement		986	1,177
<b>Original Proposal</b>	44,403		
Parking Rates		4.1 / 100m <sup>2</sup> GLA	55 / 100m <sup>2</sup> GLA + 30
Parking Requirement		1,821	2,250
<b>Final Proposal</b>	39,700		
Parking Rates		4.1 / 100m <sup>2</sup> GLA	55 / 100m <sup>2</sup> GLA + 30
Parking Requirement		1,628	2,015

Halcrow has advised that the latest proposal will provide 33 motorcycle parking spaces ( 2% of the latest total car parking provision of 1,628 car parking spaces). These will be located within the car parking levels of the existing site and the expansion site.

Nevertheless the provision of spaces in accordance with RTA Guidelines is considered appropriate. The provision of more spaces would be contrary to the objective of promoting other mode of travel to and from the centre and may make redundant the recommended improvement for buses and bicycles.

Car share is a popular form of transport for people who do not own a car but may occasionally need to use one. Halcrow (2010b) has indicated that three (3) car share spaces will be allocated within the centre car park for priority access to the centre's entrance / exit. This measure is supported.

### 2.3.2 Parking Layout & Circulation

Halcrow (2010a) has indicated that all parking spaces have been designed to meet the geometric requirements of Australian Standards AS 2890.1-2004. This approach is concurred with. It has been assumed that the internal circulation and aisles would also be designed in accordance with the Australian Standard for off-street parking (2004).

To avoid excessive car park search circulation, a counting system is proposed at each car park along with variable signs that will indicate the availability of parking spaces within the car park served by the entrance. This measure is recommended.

### 2.3.3 Access Arrangement to Car Parks

The latest proposal (Halcrow, 2010b) included as **Appendix A** includes the retention of the Murray Street access to the roof top car parking in the existing centre. Access to the existing rooftop car parking from Smidmore Street would be repositioned slightly to allow more active frontage. To minimise car park access traffic in Smidmore Street over the proposed pedestrian crossing between the two parts of the centre, it is proposed to prohibit right turning movement from Smidmore Street into the entry access to this ramp; right-out and left-out would be maintained for exiting traffic.

The new ramp accessing the new building off Edinburgh Road will be a double-helix to provide express up and down movements with internal ramps providing access between the two floors of car parking above each building. The overhead connection between the two car parks proposed in the original proposal is now removed.

The proposed access to and from the two car parks and the locations of the ramps are considered appropriate. However, whilst the separation of the two car parks may be adequate on most of the time, it may result in

- increase traffic circulation on the surrounding road network in the event one of the two car parks is at near capacity, particularly during peak periods
- traffic movements between the two car parks if major items are purchased in each of the two buildings
- increased pedestrian's movements across Smidmore Street between the two car parks.

Therefore, in order to minimise the abovementioned problems, serious consideration should be given to the retention of the overhead connection between the two car parks to minimise. An overhead connection could also be used by shoppers. At the meeting with Council's officers they indicated their support for such a measure.

### 2.3.4 Conclusions

The provision of a minimum of 1,628 spaces would cater for the anticipated demand of the expanded Shopping Centre. Compliance of the parking layout and ramps with the requirements of the Australian Standards (2002) has been assumed. Serious consideration should be given to the provision of an overhead connection between the two car parks.

## 2.4 Loading Facilities & Delivery Vehicles

The existing site includes a number of loading bays and service vehicle parking areas in basement parking areas. Loading docks are located on Smidmore Street and Murray Street. Access to the Murray Street loading bays currently involves trucks reversing directly off the public street.

The latest design shows that a much improved loading area off Murray Street which ensures that all vehicle manoeuvring take place on site allowing all vehicles to enter and exit the site in forward direction as shown in **Appendix G**. This new arrangement would considerably improve conditions along Murray Street by reducing on-street manoeuvring of large trucks including in particular full size semi-trailers servicing the Aldi Store. Furthermore the relocation of the entrance to the loading area would benefit the amenity of those residents.

No changes are proposed to the Smidmore loading facility.

A new loading facility will also be provided in the new building with access from Murray Street. As shown in **Appendix G** all vehicles manoeuvring would take place on site allowing all vehicles to enter and exit the site in forward direction.

All loading facilities should be designed to meet the geometric requirements of Australian Standards AS 2890.1-2002 *Commercial vehicle facilities*.

## 2.5 Pedestrian and & Bicycles

### 2.5.1 Pedestrians

Pedestrian footpaths are provided on both sides of Murray Street, Victoria Road (east), Smidmore Street and Edinburgh Road. Footpaths vary in quality and width. A number of pedestrian facilities are available in the vicinity of the centre as shown in Figure 6 of the July report (Halcrow, 2000a).

The proposed development incorporates a number of improvements for pedestrians as indicated on the Figure 10 in **Appendix H**. These measures include

- New footpaths along some of the site's street frontages;
- Accessible entrances to the centre including a major one on Edinburgh Road adjacent to the new bus terminal;
- New kerb ramps at proposed pedestrian crossings and crossing points;
- Reduction of street clutter which may impede pedestrian movement along the footpath; and
- An improved entrance in Victoria Road.

Furthermore, Halcrow (2010a) has identified the following opportunities also illustrated in **Appendix H**:

- improved pedestrian access to and from St Peters and Sydenham train stations. Including improved lighting intensity along Sydney Steel Road continuation footpath
- a new pedestrian refuge in Edinburgh Road at the roundabout east of Sydney Steel Road.
- a new pedestrian refuge across Edgeware Road north east of Smidmore Road.

The proposals are supported and should form part of the approved TMAP. It is noted that approval from Marrickville Council would be required.

### **2.5.2 Bicycles**

Halcrow has advised that there are 24 existing bicycle parking spaces on site.

Marrickville Council DCP requires some 142 bicycle spaces for the latest proposal (Halcrow, 2010b). Halcrow has estimated a requirement for 65 bicycle spaces a reduction of 12 spaces on the original scheme. Some 80 spaces are proposed on site.

Council requirement would imply a mode split of about 4.2 percent. The proposed 80 spaces equate to mode split of about 2.3 percent. This provision is considered adequate as it implies a three fold increase in parking demand for bicycles in the centre. Nevertheless the situation should be monitored and additional spaces provided as necessary.

Halcrow suggested that If 80 bicycle spaces were provided initially as proposed, it would only take about 10 car spaces to allow the additional 62 bicycle spaces to be provided. This approach is not agreed with as access to the car parking spaces requires steep ramps which would be a deterrent to cyclists to park above ground level. The additional spaces should be provided when required on the ground floor of the expanded development.

A number of bicycle routes access the Marrickville Metro shopping centre are shown on Figure 7 of the July report (Halcrow, 2010a). Halcrow (2010a) have proposed a number of improvements to the cycle network as illustrated in **Appendix I**. The proposals are supported and should form part of the approved TMAP. It is noted that approval from Marrickville Council would be required.

## **2.6 Public Transport**

### **2.6.1 Buses**

Bus routes No 308, 352 and 355 currently provide regular bus services to and from the shopping centre. The bus stop for these services is located outside the centre in Smidmore Road. Halcrow (2010a) found that this bus stop does not provide adequate seating during peak times.

It is now proposed to use the bus stop on the southern side of Smidmore Street for the Marrickville-Leichardt Community Transport bus which provides transport for frail aged people and people living with disabilities and their carers for shared transport.

Three (3) new bus stops are proposed on Edinburgh Road on the frontage of the new shopping centre building as illustrated in **Appendix J**. Plans of the proposed new interchange suitable for Project Application level of consideration have been prepared by Lend Lease Design (architect) and Cardno (civil engineering). Bus patrons would still benefit from the greatly improved bus terminus on Edinburgh Road.

In the Preferred Project Report, Halcrow (2010b), it is stated that the retention of Smidmore Street through the centre would mean that buses would be able to loop around the block, resulting in no change to their travel distance.

However, at a meeting with the proponent, it was advised that Sydney buses would not be travelling through Smidmore Road. The proposed arrangements illustrated in **Appendix J** are supported by STA. Buses arriving from the east would make a U-turn at the proposed roundabout at the intersection Edinburgh Road with Sydney Steel Road to access the new bus terminal. Similarly, buses arriving from the west would make a U-turn at the roundabout at the intersection Edinburgh Road with Railway Parade after departing the new bus terminal.

The proposed bus zone in Edinburgh Road would allow independent operation for three (3) normal 12.5m long buses, or two (2) long buses (14.5m) plus one normal bus. It would also allow Nose to tail operation by three long buses. Thus 50 percent more bus stop capacity would be available which would easily cater for the needs of the proposed expansion.

The proposed design of the new bus stops should be in accordance with the requirements of the NSW State Transit Authority.

## 2.6.2 Rail

The nearest train station is St Peters on the Bankstown line with connecting services to Marrickville, Dulwich Hill and Sydenham Stations. In order to improve access to the two railway stations Halcrow proposed the following improvements:

- Improve the quality and legibility of pedestrians routes between each station and the centre, and
- Provide information about routes to and from each station at the entrance. With the agreement of Railcorp directions to the centre should also be displayed at each station.

The improvements identified in section 2.5.1, shown in **Appendix H** and travel information display proposals, which will show pedestrian routes to the stations, as discussed in the Section 10, *Green Travel Plan*, of the July report (Halcrow, 2010a) would enhance accessibility to and from the two railway stations.

These proposals are supported and should form part of the approved TMap. It is noted that approval from Marrickville Council and State Rail would be required.



### 2.6.3 Taxi Facilities

There is an existing taxi rank with one waiting space together with seating and a shelter in Smidmore Street. A taxi zone of 40m (~6 taxis) on the southern kerb off Smidmore Street, east of the proposed pedestrian crossing is proposed, as shown on the PPR TMAP Figure 7 included as **Appendix L**. Halcrow (2010a) has indicated that the new rank would include:

- Improved street presence and lighting to assist with any perceived security issues by people waiting for taxis particularly at night.
- The provision of seating with shelter for waiting passengers.
- New footpath surfacing.
- Accessible taxi space in accordance with Australian Standard with low height kerb, wheelchair access and accessible paths direct from the shopping centre entry and exit.

These proposals are supported and should form part of the approved TMAP. It is noted that approval from Marrickville Council and the Local Traffic Committee would be required.

## 2.7 Impact on On-Street Car Parking

### 2.7.1 Adjacent to the Centre

In order to take advantage of having retail development on both sides of Smidmore Street, the proponent is proposing to allow the kerbside lanes on each side of the road to be allocated to buses, taxis and private drop-off and pick-ups rather than car parking as illustrated in **Appendix L**. It is also proposed to provide seating for the set down and pick up area clear of the footpath area with accessible loading areas for the community bus. On Murray Street the internalizing of loading bays off it will provide more kerb space along it for kerbside parking adjacent to the centre.

### 2.7.2 Other Impacts

A small number of spaces would also be loss as a result of traffic management measures at the following locations:

- About eight (8) car spaces in Alice Street and Edgeware Road over a half hour period on weekday evenings due to an extension of the hours of the existing evening parking restrictions.
- Three (3) parking spaces on the northern side of Unwins Bridge Road and a loss of three parking spaces on the northern side of May Street adjacent to the park at the corner of Bedwin Road.

## **3. Review of Submissions**

### **3.1 Basis of Review Submissions**

The original proposal for the Marrickville Metro Shopping Centre was placed on exhibition in the latest half of 2010. Submissions were received from state agencies, Marrickville Council, the Chamber of Commerce and the public.

These submissions were taken into consideration by the proponent consultants during the preparation of the latest proposal. The revised proposal which included the retention of the full length of Smidmore Road for traffic and a reduction of 22 percent in floor area and a corresponding reduction in car parking spaces from 1,815 to 1,628.

The second proposal was then placed on exhibition in the first half of 2011. Submissions were also received from state agencies, Marrickville Council, the Chamber of Commerce and the public.

An assessment of all submissions was carried out in conjunction with this review. In essence most traffic and transport issues raised have been addressed satisfactorily by the proponent's consultants. Only matters which have not been properly addressed to the satisfaction of those making submissions are discussed below.

### **3.2 Review Submissions**

#### **3.2.1 Department of Planning**

The Department response to the initial proposal was to ensure that the Preferred Project report include a detailed traffic assessment of retaining Smidmore Street opened to all traffic addressed and addressed all issues raised by the other State Agencies, and Marrickville Council.

All these matters were addressed in the Preferred Project report (Halcrow, 2010b).

#### **3.2.2 Marrickville Council**

Most issues identified by Council and or their consultants (TUP, 2010) were addressed in the PPR report. However the following issues were either not addressed adequately or are still of concern (TUP, 2011) are summarised below

- The TMAP underestimates the increase in traffic that will use Edgeware Road north of Llewellyn Street, Alice Street and the section of Victoria Road east of the Metro. The explanation given in **Appendix B** by Halcrow addresses this issue.
- Proposals for the extension of parking restrictions along Alice Street and Edgeware Road would have significant negative impact on local resident on-street parking availability. It should be noted that the highest impact at this intersection is caused

by the Aquatic Centre and the Old Unilever site rather than from the expansion of Marrickville Metro as discussed in **Table 5** of this report.

- Provision of motor cycles; some 33 motor cycle spaces will be provided.
- TUP (2011) suggested the provision of “No Stopping” restrictions in Smidmore Street adjacent to the loading area, the pedestrian crossing and the car park access. This measure is concurred with.
- TUP (2011) has identified as a significant deficiency in the design of the latest proposal resulting in higher levels of circulating traffic plus higher levels of pedestrian/vehicle conflicts in Smidmore Street. This could be addressed by the provision of an overhead connection between the two car parks as discussed in section 2.3.3.
- Enforcement of the proposed No Right turn into the Smidmore car park is of concern. Halcrow has advised that a median would be provided to prevent that movement but still allow the right turning movement out of the car park.
- Increased traffic in Lord Road. TUP suggested that the proponent contribute towards the cost of traffic calming measures in Lord Road. This is supported providing a nexus could be established.

### 3.2.3 RTA

The RTA response sought to the initial proposal raised a number of points most of which were addressed. Still in contention was the request to submit to the RTA the methodology used for determining the trip distribution and route assignment of the additional traffic generated by the proposed development. The response still did not fully address that issue. However, the explanation given in **Appendix B** addresses this issue.

Furthermore the following relevant issues were also raised by the RTA:

- Clear sight lines shall be provided at the property boundary line to ensure adequate visibility between vehicles leaving the car park and pedestrians along the frontage road footpath in accordance with Figure 3.3 of AS 2890.1 - 2004 for light vehicles and AS 2890.2 - 2002 for heavy vehicles
- The parking areas and entry/exit points need to be clearly delineated through line marking and signage to ensure smooth, safe traffic flow.
- Appropriate street lighting shall be provided at the driveway entry and exit in order to provide adequate visibility at night.
- Demolition and Construction Traffic Management Plan detailing construction vehicle routes, number of trucks, hours of operation, access arrangements and traffic control should be submitted to Council, for approval, prior to the issue of a construction certificate.
- All works/regulatory signposting associated with the proposed development are to be at no cost to the RTA.

All these matters should be included as conditions of consent.

### **3.2.4 Transport NSW**

Transport NSW required

- the provision of five (5) car share spaces. Three (3) spaces are proposed initially by the proponent; this is considered reasonable; more spaces can be provided subject to increased demand.
- The preparation of a Green Travel Plan and Travel Access Guide. Halcrow has proposed such a Plan.

### **3.2.5 State Transit Authority**

All issues raised by STA in relation to the original proposal have been addressed by Halcrow (2011b). Nevertheless all final designs for the bus terminal in Edinburgh Road and the two roundabouts required for bus U-Turning at Sydney Steel Road and Railway Parade should be to the satisfaction of STA.

### **3.2.6 RailCorp**

RailCorp supported all measures aimed at improving way finding and signage between the shopping centres at the stations at St Peters and Sydenham.

### **3.2.7 Chamber of Commerce**

Submission was prepared by Traffix (2010) on behalf of the Chamber of Commerce raised concern in relation to the adopted distribution.

### **3.2.8 Public Submission**

A number of submissions were received from the public. Most issues have been addressed or adequately explained by the proponent's consultant including the following more pertinent issues:

- Proposal includes poor road management planning
- The centre is not located on a major road – proposal is not suitable
- It is a car-orientated retail destination.
- The proposal does not adequately address the goal of achieving reduce car dependence.

Furthermore, concern was expressed about trucks accessing the loading areas via Victoria Road and Murray Street. The proponent has advised that they will require all heavy vehicles to access the loading docks via Edinburgh Road to avoid travelling through residential areas. This should be incorporated as part of the Operational Management Plan.

## 4. Summary, Conclusions & Recommendations

### 4.1 Summary

AMP Capital Investors is proposing the redevelopment of the Marrickville Metro Shopping Centre. The company has submitted a Concept Plan application under Part 3A of the *Environmental Planning and Assessment Act 1979*; the application included a Traffic Management and Accessibility Plan (TMAP). The shopping centre, located at 34 Victoria Road, Marrickville, provides some 29,568 m<sup>2</sup> GFA and parking for some 1,100 cars.

The initial proposal incorporated an additional 21,470 m<sup>2</sup> of new retail floor space and a total of about 1,815 parking spaces. The proposal included the redevelopment of the site at 13-55 Edinburgh Road located to the south of Smidmore Street including the closure of part of Smidmore Street adjacent to the site.

Following a period of public exhibition, a new proposal was submitted involving the retention of Smidmore Street opened to vehicle traffic together with a reduction of the additional development from 21,470 m<sup>2</sup> GLA to 16,767 m<sup>2</sup> GLA and of the number of car parking spaces from 1,815 to 1,628.

About 1410 and 2,250 trips are expected to be generated by the latest proposal during the peak hours on Thursday afternoon and Saturday respectively. Some 1628 spaces are proposed for the expanded Marrickville Metro Shopping Centre; the existing building will accommodate some 1.195 parking spaces with the remaining 433 spaces provided in the new building.

### 4.2 Conclusions

All information provided by the proponent and submitters formed the basis of the assessment of the adequacy of the adopted study methodology, likely traffic impact of the latest proposal, its parking requirements, and the relevance and adequacy of proposed traffic & transport management measures.

The traffic analysis of the proposed redevelopment indicated that it would have an acceptable impact on the surrounding road network including nearby intersections. Furthermore, the number of parking spaces for cars, bicycles and motor cycles is considered appropriate.

Nevertheless, a number of issues associated with the proposed redevelopment have been identified. These issues would be addressed by the implementation of a number of traffic measures and other improvements listed in the section 4.3.

## 4.3 Recommendations

If approval for the redevelopment of the Marrickville Metro Shopping Centre is granted, then serious consideration should be given to incorporating the following or similar measures as conditions of consent.

### Traffic Measures

- In accordance with Marrickville Local Traffic Committee requirements
  - < Introduce parking restriction for a distance of 100 m south of Alice Street along the western side of Edgeware Road during the afternoon peak period from 3.00 to 6.00 pm.
  - < Extend the existing restriction on the westbound approach of Alice Street to 6.00 pm to fully cover the weekday evening peak period.
- Implement the measures highlighted in **Appendix F** at the intersection of Unwins Bridge Road with Bedwin Road and May and Campbell Streets subject to RTA approval.
- Provision of a roundabout at the intersection of Edinburgh Road with Sydney Steel Road designed to allow buses travelling from the east along Edinburgh Road to make U-turn in accordance with STA requirements.
- Upgrade Smidmore Street, Edinburgh Road and Murray Street as per concept designs prepared by Cardno Pty Ltd. Parking restrictions will be as determined by the Marrickville Council Local Traffic Committee.
- The Local Traffic Committee gives serious consideration to the banning of the right turning movement from Victoria Road into Edgeware Road at least during the peak periods.
- A Demolition and Construction Traffic Management Plan detailing construction vehicle routes, number of trucks, hours of operation, access arrangements and traffic control shall be submitted to Council, for approval, prior to the issue of a construction certificate.

### Parking Measures

- A minimum of 1,628 car spaces and 33 spaces for motorcycles shall be provided with no more than 1,200 spaces in the existing building.
- The parking layout and ramps shall comply with the geometric requirements of the Australian Standards *AS 2890.1-2004 Parking Facilities Part 1 Off Street car parking*.
- Three (3) car share spaces shall be allocated within the centre car park for priority access to the centre's entrance / exit.
- A counting system shall be provided at each car park along with variable signs that will indicate the availability of parking spaces.
- The right turning movement from Smidmore Street into the entry access shall be prohibited by the provision of a median in Smidmore Street.
- The parking areas and entry/exit points shall be clearly delineated through line marking and signage to ensure smooth, safe traffic flow.

- Appropriate street lighting shall be provided at the driveway entry and exit in order to provide adequate visibility at night.
- On-street spaces in Smidmore Road adjacent to the Centre shall be allocated to buses, taxis and private drop-off and pick-ups as shown in **Appendix L**.

### **Loading Facilities**

- All service vehicles manoeuvring shall take place on site allowing all vehicles to enter and exit the site in forward direction.
- All loading facilities shall be designed to meet the geometric requirements of Australian Standards AS 2890.1-2002 *Commercial vehicle facilities*.
- All heavy vehicles shall be required to access the loading docks via Edinburgh Road to avoid travelling through residential areas. This should be incorporated as part of the Operational Management Plan.

### **Pedestrians Facilities**

- The proposals to improve pedestrian access and facilities illustrated in **Appendix H** shall form part of the approved TMAP. It should be noted that approval from Marrickville Council would be required. Works to include
  - < New footpaths on site frontage, accessible entries/exits, new kerb ramps at immediate crossings. Located within the Marrickville Metro site.
  - < New pedestrian crossing over Edinburgh Rd incorporated in the proposed roundabout at the intersection of Edinburgh Road with Sydney Steel Road.
  - < Investigate improvements to remedy 'squeeze' point at Victoria Road. Located adjacent to Marrickville Metro.
  - < Proposed pedestrian refuge in Edgeware Road at Smidmore Street. Located to the east of Marrickville Metro.
  - < Improve intensity of lighting and security on pedestrian path. Located to the south of Marrickville Metro near Sydney Steel Street.
- Subject to RTA and Local Traffic Committee agreement a pedestrian refuge shall be provided in Edgeware Road south east of Smidmore Street.

### **Bicycles Facilities**

- A minimum of 80 bicycle spaces shall be provided on site at ground level. All spaces should be provided on the ground floor of the expanded development. The situation should be monitored and additional spaces provided as necessary.
- The proposals to improve bicycle access and facilities illustrated in **Appendix I** shall form part of the approved TMAP. It should be noted that approval from Marrickville Council would be required. Works are to include:
  - < Customer bicycle rails, and staff bicycle parking enclosures within the Marrickville Metro site
  - < Marked bicycle symbols on street in Lord and Darley Streets. Located in front of Camdenville Park
  - < Marked bicycle symbols on street in Edgeware Road under Bedwin Rd
  - < Marked bicycle symbols on street in Edinburgh Rd. Located opposite the Marrickville Metro.

- < Marked bicycle symbols on street in Sydney Steel Road. Located near the intersection of Sydney Steel Road and Edinburgh Road
- < Lighting and signs for bicycle / pedestrian path between Sydney Steel Rd and Shirlow St.
- < Marked bicycle symbols on street (northbound); located on Shirlow Street.
- < Bicycle marking and signs for a two way shared bicycle-pedestrian footpath in Sydenham Road and Railway Parade.
- < Marked bicycle symbols in Victoria Rd to L7 and Juliet Street.
- < Bicycle way finding signage to integrate the new bicycle routes with Council existing cycle network.

### **Public Transport**

- A new bus station on Edinburgh Road, as illustrated in **Appendix J**, shall be constructed to include kerb adjustments and line marking to provide three (3) bus stops plus a quality sheltered passenger waiting area. The design shall be to the satisfaction of the Marrickville Local Traffic Committee in consultation with the State Transit Authority.
- The quality and legibility of pedestrians' routes between St Peters and Sydenham stations and the centre should be improved.
- Information about routes to and from each station shall be displayed at the entrance of each station and at the Shopping Centre. It is noted that approval from Marrickville Council and State Rail would be required.
- A taxi zone of 40m (~6 taxis) shall be provided on the southern kerb of Smidmore Street, as shown in **Appendix L** together with seating and low height kerb for wheelchair access. It is noted that approval from Marrickville Council and the Local Traffic Committee would be required.

### **Green Travel Plan**

- A Green Travel Plan and Travel Access Guide shall be prepared and implemented for the centre. These should include maps showing the location of and routes to public transport stops as well as timetable information for buses that travel to and from the centre.



## 5. References

Halcrow (2010a). "Marrickville Metro - Traffic Management and Accessibility Plan (Incorporating traffic and parking Study). AMP Capital Investors. July.

Halcrow (2010b). "Proposed Expansion of Marrickville Metro Shopping Centre – Preferred Project Report on Transport Aspects. AMP Capital Investors. November.

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Standards Australia (2002). *"AS 2890.2-2002 Off-street Part 2: Commercial vehicle facilities."*

Standards Australia (2004). *"AS 2890.1-2004 Parking Facilities Part 1 Off Street car parking."*

Traffix (2010). *Marrickville Metro Part 3A Objection."* Marrickville Chamber of Commerce. September.

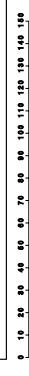
Transport and Urban Planning (2010). *"TMAP Review"*. Marrickville Council. August.

Transport and Urban Planning (2011). *"Review of Preferred Project Report on Transport Aspects for Proposed Redevelopment of Marrickville Metro Shopping Centre"*. Marrickville Council. March.

## **Appendix A**

---

Latest Development Plans





PRELIMINARY

If this drawing is printed or plotted at a size other than B1, DO NOT SCALE DIMENSIONS FROM DRAWING.  
Always use figured dimensions in preference to scaling.

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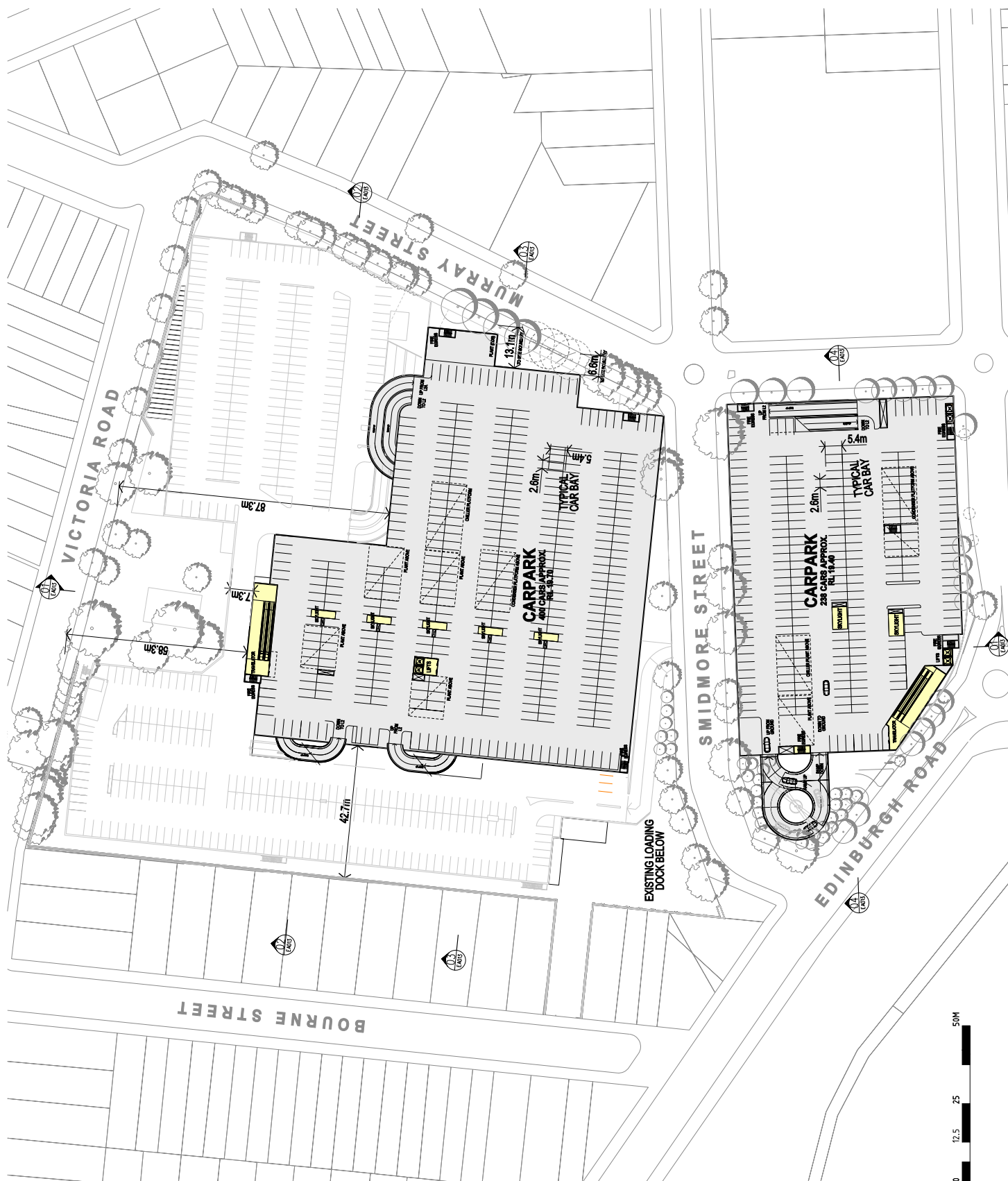
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## **Appendix B**

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Traffic Distribution of Additional  
Traffic

# PRINCIPAL ARRIVAL/DEPARTURE DISTRIBUTION

MARRICKVILLE METRO PPR

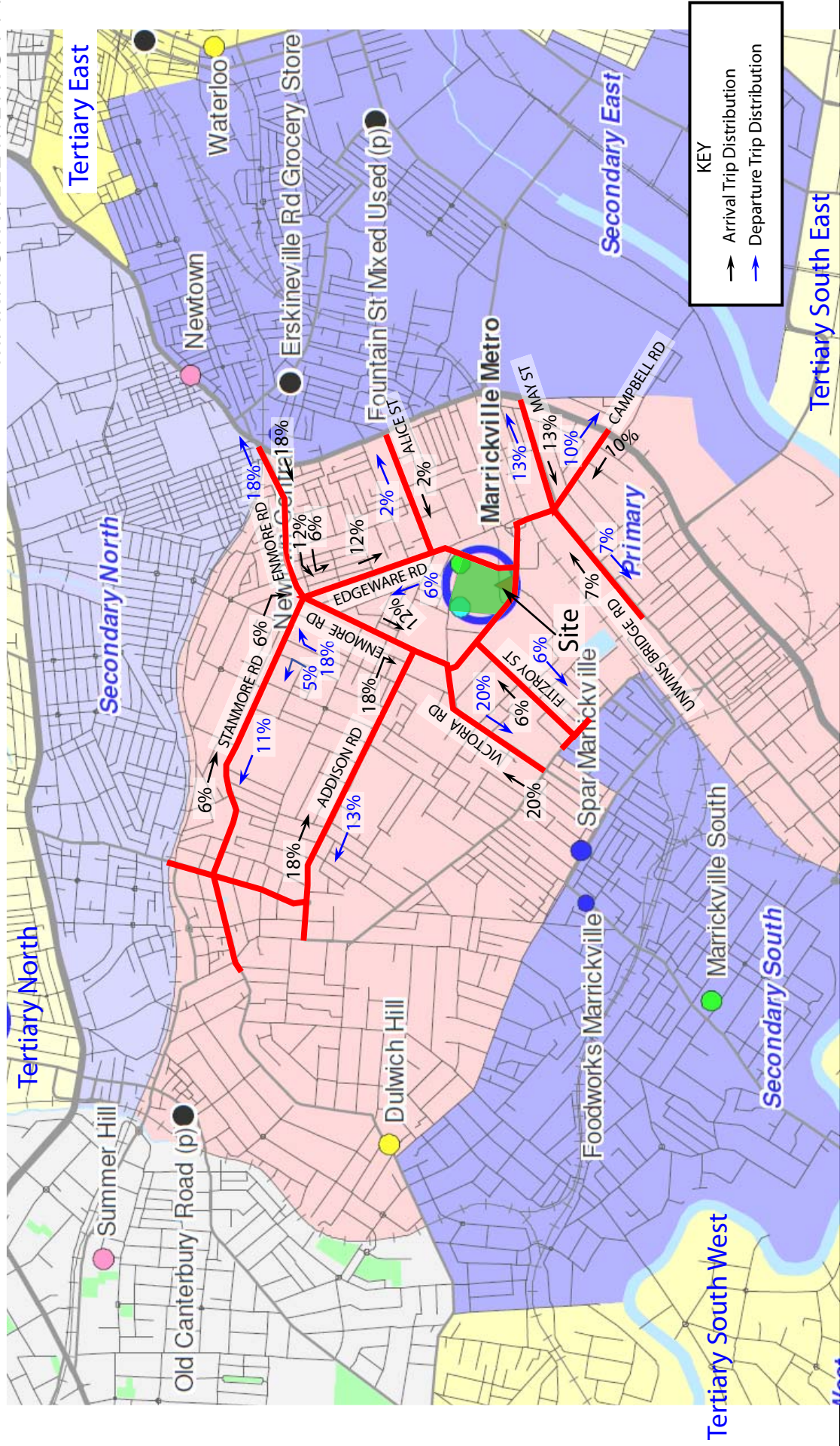


Figure 2



## B. Trip Distribution

### B1. Better Explanation of Trip Distribution

*Ans.* We understand that the area of interest in relation to the trip distribution relates to the relative amount of traffic on Edgeware Rd and Alice Street.

The trip distribution presented in the PP Report was based on a complex approach corridor analysis which estimated the amount of centre sales that would originate within that corridor.

However more simply the proportion of sales from each contributory part of the retail catchment can be calculated from the Pitney Bowes Economic Impact Assessment. Attached are the following from that report:

- Table 5.2 with the percentage of existing centre revenue from each part of the trade area sub areas;

Table 5.2									
Marrickville Metro - Market Shares by Sector, 2008/09*									
Trade Area Sector	Retail Spending (\$M)			Centre Sales (\$M)			Centre Market Share		
	Food	Non-food	Total	Food	Non-food	Total	Food	Non-food	Total
Primary Sector	291.6	240.3	531.9	76.5	22.5	99.0	26.2%	9.4%	18.6%
Secondary Sectors									
• North	131.5	114.7	246.2	11.9	3.6	15.5	9.1%	3.1%	6.3%
• East	177.2	156.0	333.1	16.6	6.3	22.9	9.4%	4.1%	6.9%
• South	118.4	91.8	210.2	15.8	10.0	25.8	13.3%	10.9%	12.3%
Total Secondary	427.1	362.4	789.5	44.3	19.9	64.2	10.4%	5.5%	8.1%
<b>Main Trade Area</b>	<b>718.7</b>	<b>602.7</b>	<b>1,321.5</b>	<b>120.8</b>	<b>42.5</b>	<b>163.2</b>	<b>16.8%</b>	<b>7.0%</b>	<b>12.4%</b>
Tertiary Sectors									
• North	322.6	280.1	602.7	0.2	2.2	2.4	0.1%	0.8%	0.4%
• East	175.9	140.0	315.9	0.5	4.5	5.0	0.3%	3.2%	1.6%
• South east	192.9	147.3	340.3	0.2	1.9	2.1	0.1%	1.3%	0.6%
• South West	203.7	156.0	359.7	0.9	8.0	9.0	0.5%	5.1%	2.5%
Total Tertiary	895.2	723.5	1,618.7	1.9	16.6	18.5	0.2%	2.3%	1.1%
<b>Total Trade Area</b>	<b>1,613.9</b>	<b>1,326.2</b>	<b>2,940.1</b>	<b>122.7</b>	<b>59.1</b>	<b>181.8</b>	<b>7.6%</b>	<b>4.5%</b>	<b>6.2%</b>
Sales From Beyond Trade Area				17.2	5.7	22.9			
<b>Total Centre</b>				<b>139.9</b>	<b>64.8</b>	<b>204.7</b>			

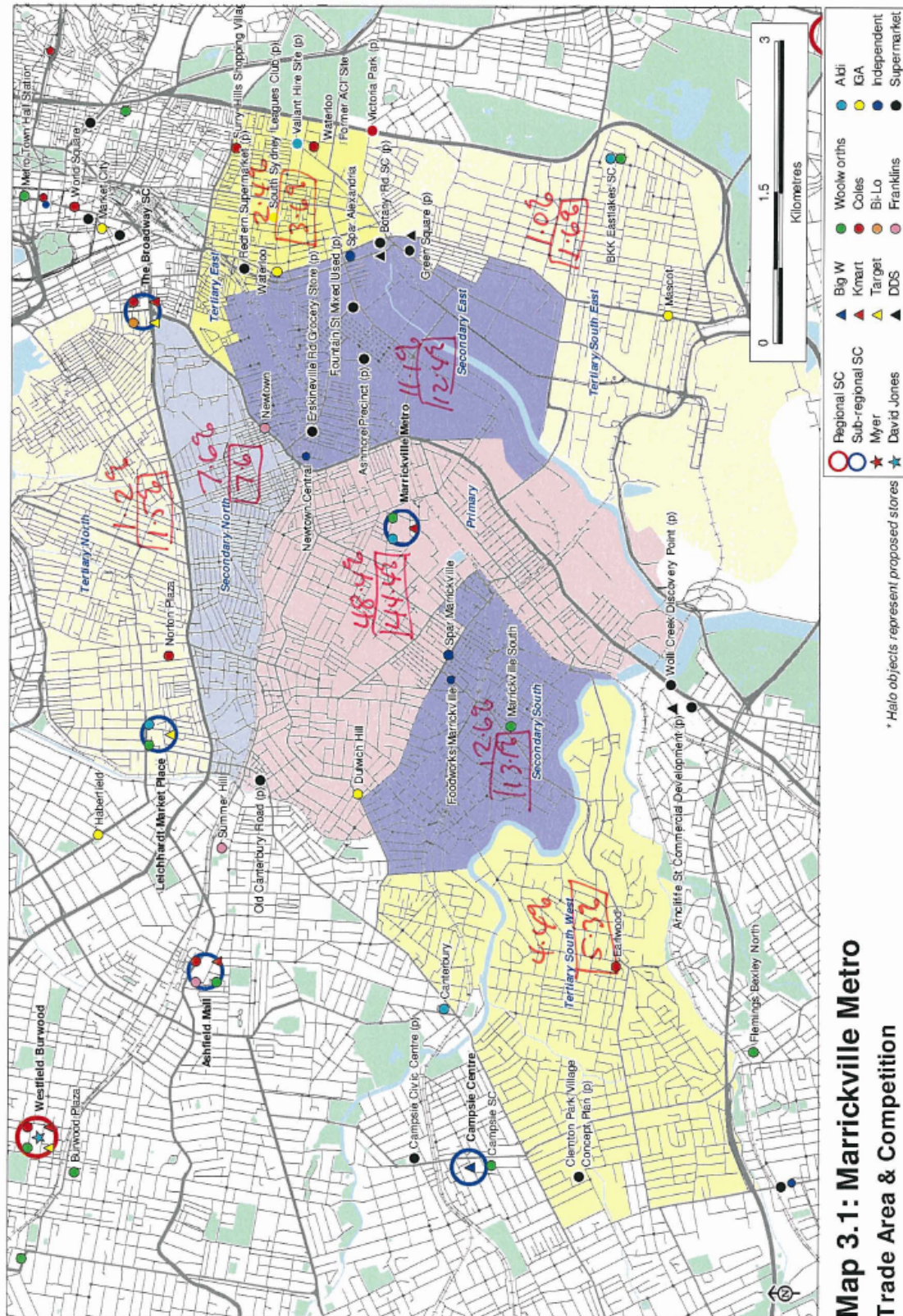
\* Including GST

Source : Pitney Bowes Business Insight

- | Trade Area Sector            | Retail Spending (\$M) |          |         | Centre Sales (\$M) |          |       | Centre Market Share |          |       |
|------------------------------|-----------------------|----------|---------|--------------------|----------|-------|---------------------|----------|-------|
|                              | Food                  | Non-food | Total   | Food               | Non-food | Total | Food                | Non-food | Total |
| Primary Sector               | 307.4                 | 253.2    | 560.6   | 89.6               | 41.1     | 130.7 | 29.2%               | 16.2%    | 23.3% |
| Secondary Sectors            |                       |          |         |                    |          | 44.4% |                     |          |       |
| • North                      | 139.8                 | 121.9    | 261.7   | 15.2               | 7.2      | 22.4  | 7.6%                | 5.9%     | 8.6%  |
| • East                       | 201.3                 | 177.2    | 378.6   | 23.1               | 13.4     | 36.5  | 12.4%               | 7.6%     | 9.6%  |
| • South                      | 123.7                 | 95.9     | 219.6   | 21.7               | 16.9     | 38.6  | 13.1%               | 17.5%    | 17.6% |
| Total Secondary              | 464.9                 | 395.0    | 859.9   | 60.0               | 37.5     | 97.5  | 33.1%               | 12.9%    | 11.3% |
| Main Trade Area              | 772.2                 | 648.3    | 1,420.5 | 149.6              | 78.7     | 228.2 | 19.4%               | 12.1%    | 16.1% |
| Tertiary Sectors             |                       |          |         |                    |          |       |                     |          |       |
| • North                      | 342.3                 | 297.3    | 639.6   | 0.8                | 3.7      | 4.4   | 1.5%                | 0.2%     | 0.7%  |
| • East                       | 199.0                 | 158.4    | 357.4   | 1.7                | 8.9      | 10.6  | 3.6%                | 0.9%     | 3.0%  |
| • South east                 | 217.2                 | 165.9    | 383.1   | 0.7                | 3.9      | 4.6   | 1.6%                | 0.3%     | 1.2%  |
| • South West                 | 212.7                 | 162.9    | 375.7   | 2.7                | 12.9     | 15.7  | 5.3%                | 1.3%     | 4.2%  |
| Total Tertiary               | 971.3                 | 784.4    | 1,755.7 | 6.0                | 29.3     | 35.3  | 12.0%               | 0.6%     | 2.0%  |
| Total Trade Area             | 1,743.5               | 1,432.7  | 3,176.2 | 155.6              | 108.0    | 263.6 | 8.9%                | 7.5%     | 8.3%  |
| Sales From Beyond Trade Area |                       |          |         | 19.8               | 11.1     | 30.8  | 10.5%               |          |       |
| Total Centre                 |                       |          |         | 175.3              | 119.1    | 294.4 |                     |          |       |
- \*Constant 2008/09 dollars & including GST  
Source: Pitney Bowes Business Insight



- Map 3.1 which shows the centre's trade area and sub areas with the proportion of existing and future revenue from each annotated on it.



+ Beyond Trade Area = 11.2% Existing  
10.5% Future

Marrickville Metro, Sydney  
Economic Impact Assessment

Of relevance to Edgeware Road and Alice Street is trade from the following market sub areas:

- Tertiary N 1.5%
- Secondary N 7.6%
- Tertiary E 3.6%
- Secondary E 12.4%
- Primary (say  $\frac{1}{4}$ ) 11.1%
- Total 36.2%

Some of the traffic from the Secondary and Tertiary East sections would use Campbell and May Streets for access – probably 75% = 12%.

Remaining traffic for Enmore Rd, Stanmore Rd and Alice Street is 24.2%.

Assigned traffic before allowing for turn bans is:

- Enmore Rd 18%
- Alice Street 2%
- Stanmore Rd 11%
- Total 29%

The extra 5% is accounted for as an allowance for a component “Beyond Trade Area” traffic which represents 11.2% of the total.

The distribution to remaining parts of the trade area falls out from this and can be similarly demonstrated if required.

## *B2. Discussion of Redistribution of Intercepted Traffic*

*Ans.* The traffic assignment process involved removal of expected intercepted traffic from between its previous entry and exit point within the investigation area and instead directing these trips to and from one of the car park accesses.

The volumes of traffic diverted were relatively small being on a Thursday only 11 veh/hr each way on Victoria Rd/Enmore Rd and 16 veh/hr each way on Edgeware Rd. The combined volume of 54 veh/hr represents 15% of the forecast traffic generation as per RTA guidelines.

In support of this it is noted that the Economic Impact Statement indicates that a very high proportion of the forecast sales growth would be derived at the expense of a number of competing centres to the north of the centre as follows:

• Broadway	21.1%
• Leichhardt Market Town	6.2%
• Norton Plaza	1.8%
• King Street Newtown	3.7%
• Enmore Road	0.8%
• Erskineville Road	<u>0.2%</u>
• Total	33.8%

There would also be some impact on the CBD.

The consequence of this is that a significant number of trips that would otherwise have been made by Marrickville residents to and from the north to shop elsewhere would instead be intercepted by the expanded centre. In the circumstances a 15% allowance is considered to be reasonable.

Because the intercepted trips would be overwhelmingly to and from the north this traffic was deducted from existing traffic flows on Edgeware Road and Victoria/Enmore Roads pro-rata with the traffic volumes that they presently carry.

*B3. Deduction of Warehouse Traffic.*

Ans. The same approach was followed in both reports with existing warehouse traffic conservatively not deducted in each. This resulted in a small over-estimate of traffic in the analysis.

*B4. Allocation of traffic to the new southern car park.*

Comparative floor space parking and estimated traffic generation is as follows.

	Floor Space	Parking Spaces		Thursday		Saturday	
	m <sup>2</sup>	No	% Split	Trip Gen (vph)	% Split	Trip Gen (vph)	% Split
Existing Centre	22,933	1100		1041		1597	
Future Centre N	29,670	1195	73%	1041	76%	1852	78%
Future Centre S	10,030	433	27%	331	24%	530	22%
<b>TOTAL</b>	<b>39,700</b>	<b>1628</b>		<b>1372</b>		<b>2382</b>	

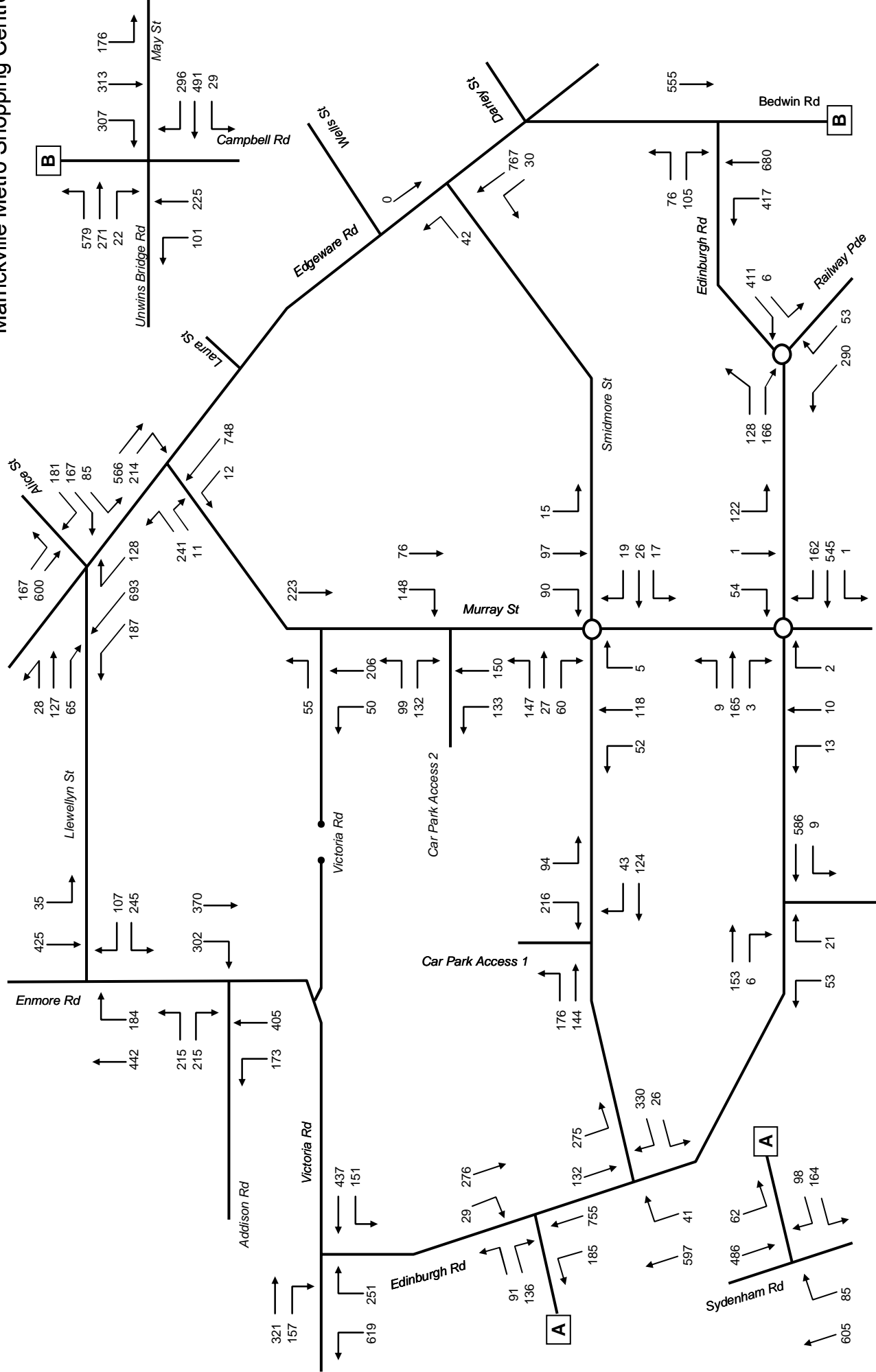
## Appendix C

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Future Traffic Volumes  
Original Proposal

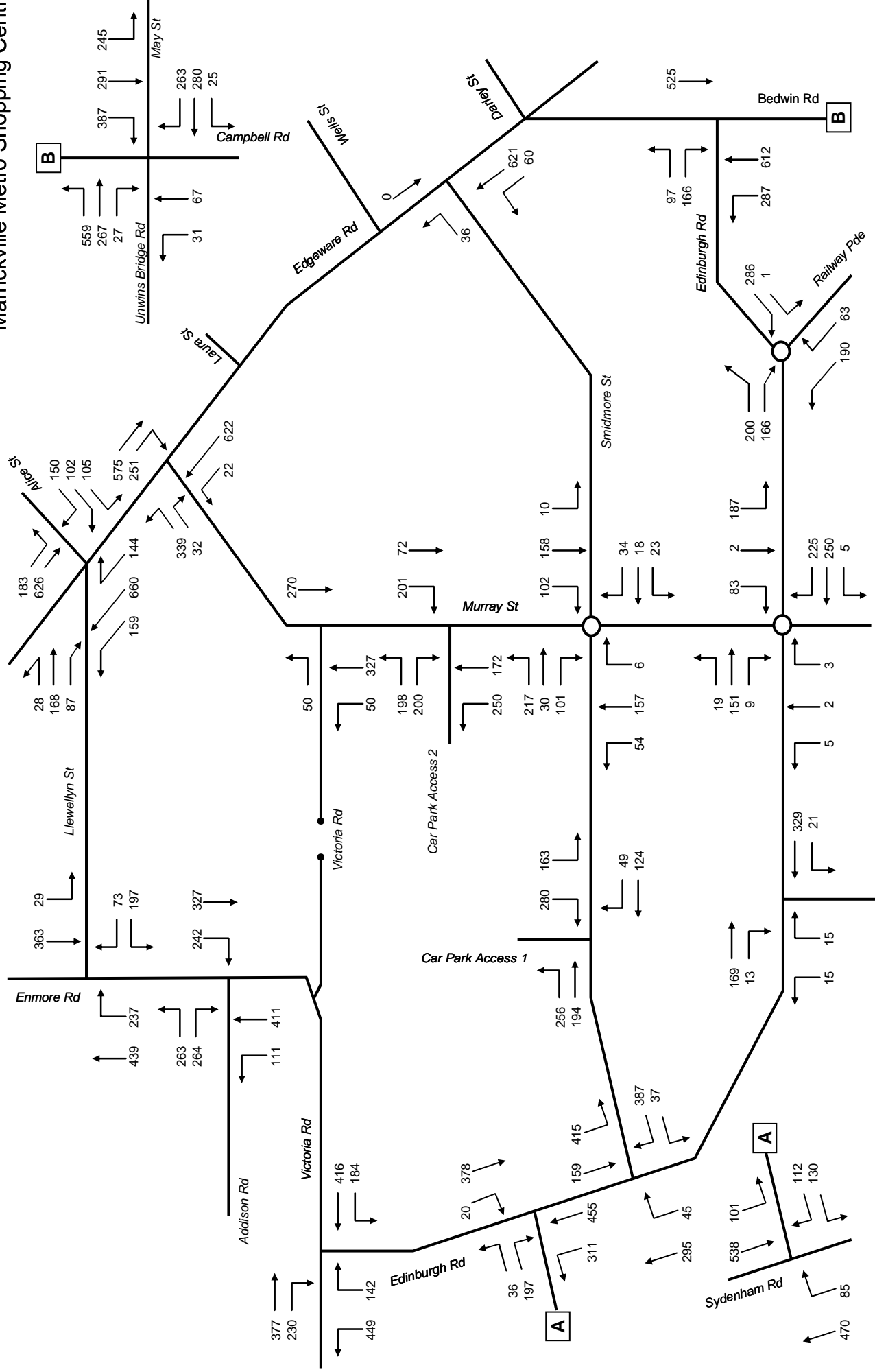
# 2010 SURVEYED TRAFFIC FLOWS, THURSDAY PM

Marrickville Metro Shopping Centre



# 2010 SURVEYED TRAFFIC FLOWS, SATURDAY

Marrickville Metro Shopping Centre





## Appendix D

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Future Traffic Volumes  
Latest Proposal

## Marrickville Metro PPR



X:\CTLRGW - Marrickville Metro\67 - Calculations\CTLRGWx10 Network\_v3.xls - 1/11/2010

## Marrickville Metro PPR



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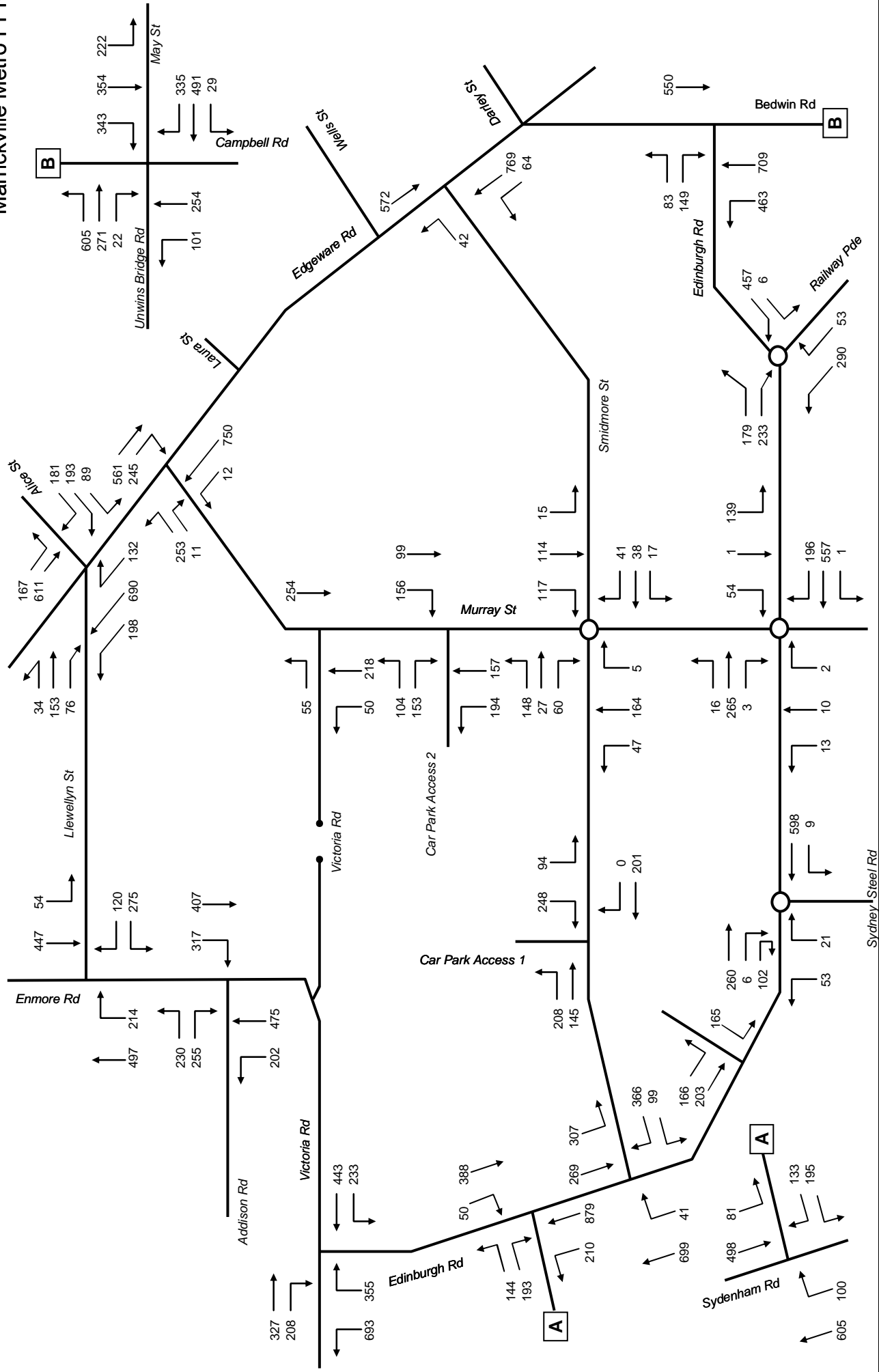
## **Appendix E**

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Amended Future Traffic Volumes  
Latest Proposal

# FUTURE YEAR TRAFFIC FLOWS ON SURROUNDING ROAD NETWORK, THURSDAY PM

## Marrickville Metro PPR



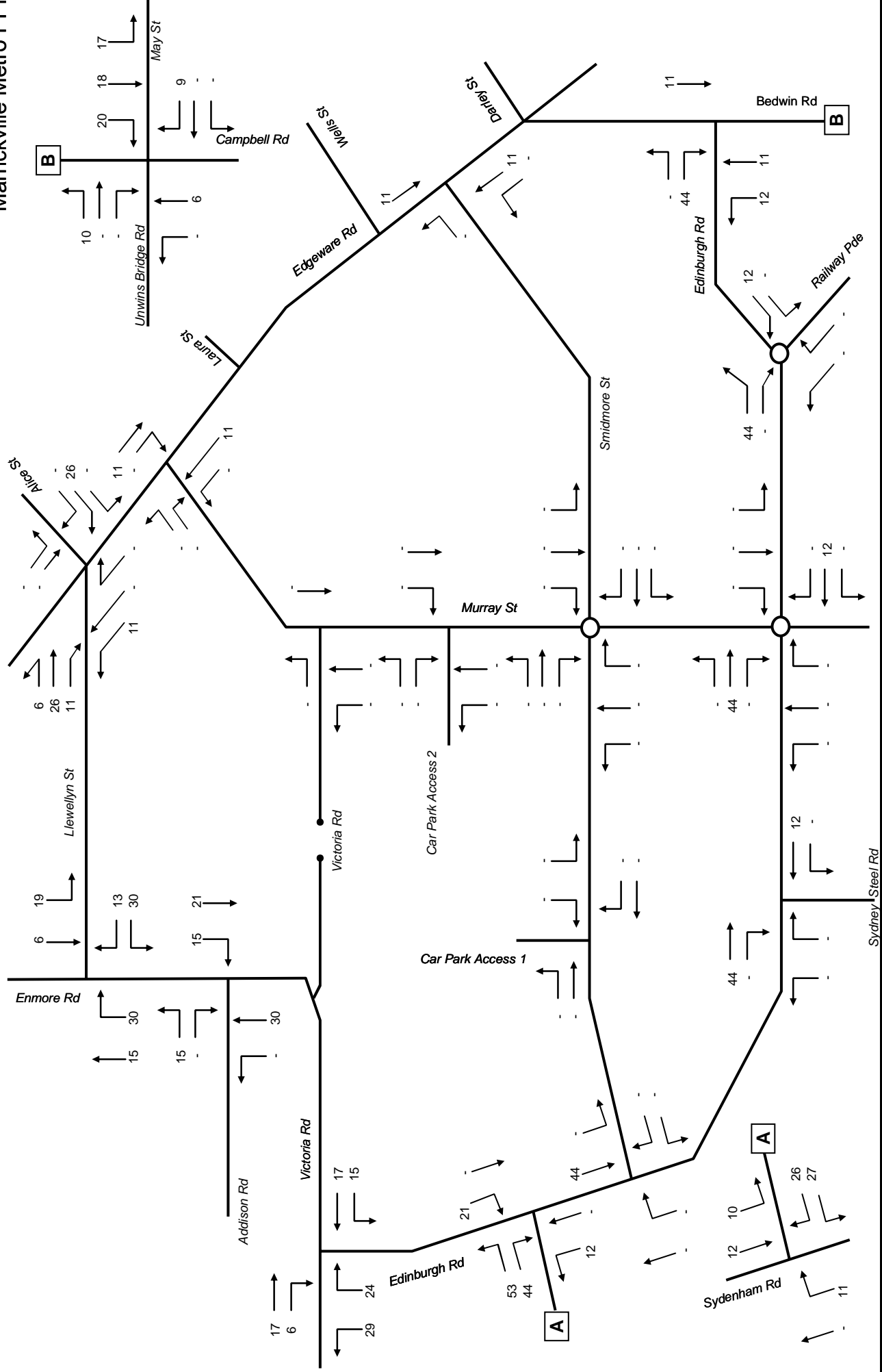
## Marrickville Metro PPR



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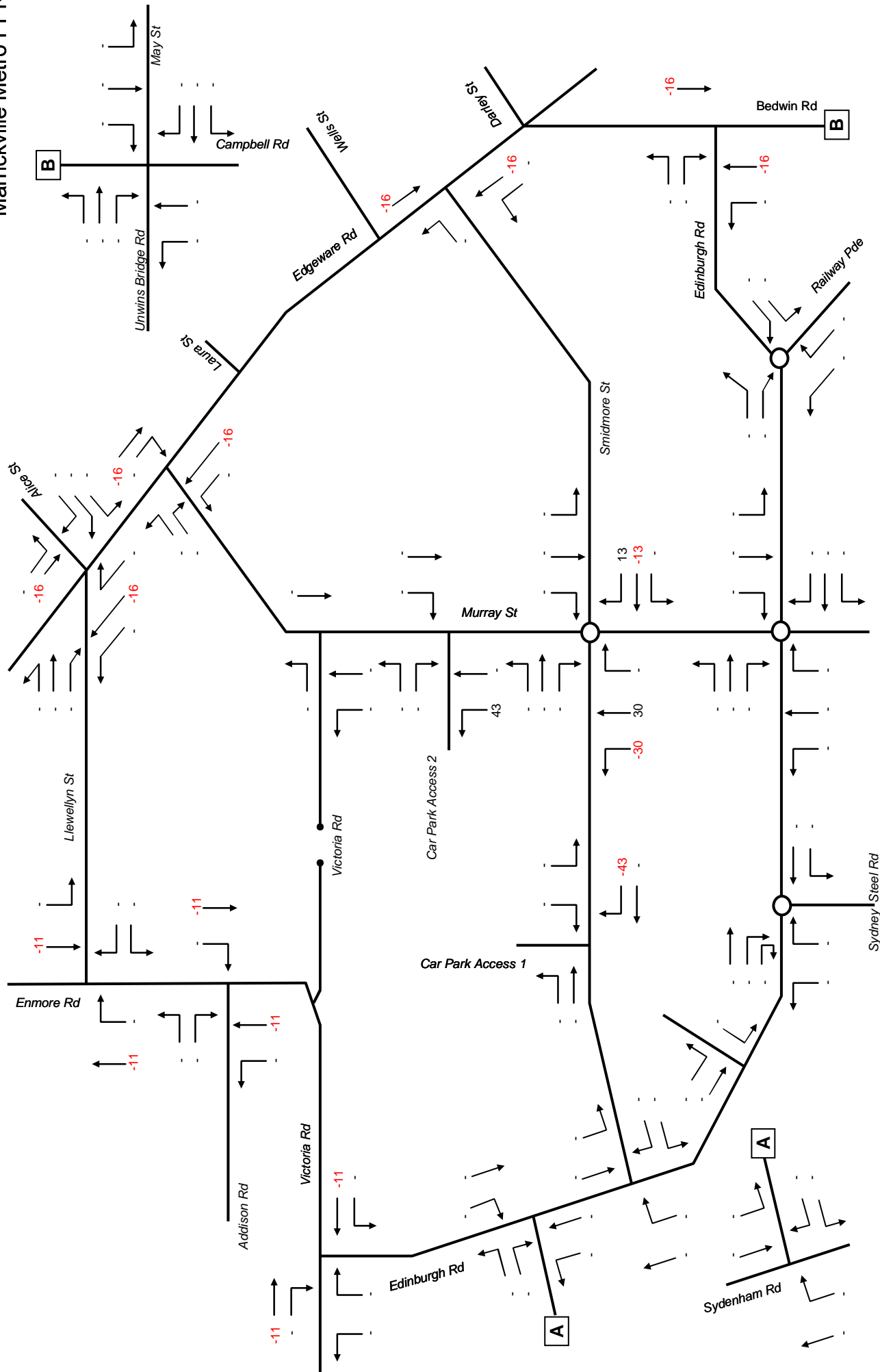
# LOCAL COMMITTED DEVELOPMENT TRAFFIC FLOWS, THURSDAY PM

Marrickville Metro PPR



INTERCEPTED / DIVERTED TRIPS FROM VICTORIA RD-ENMORE RD AND EDGEWARE RD, THURSDAY PM

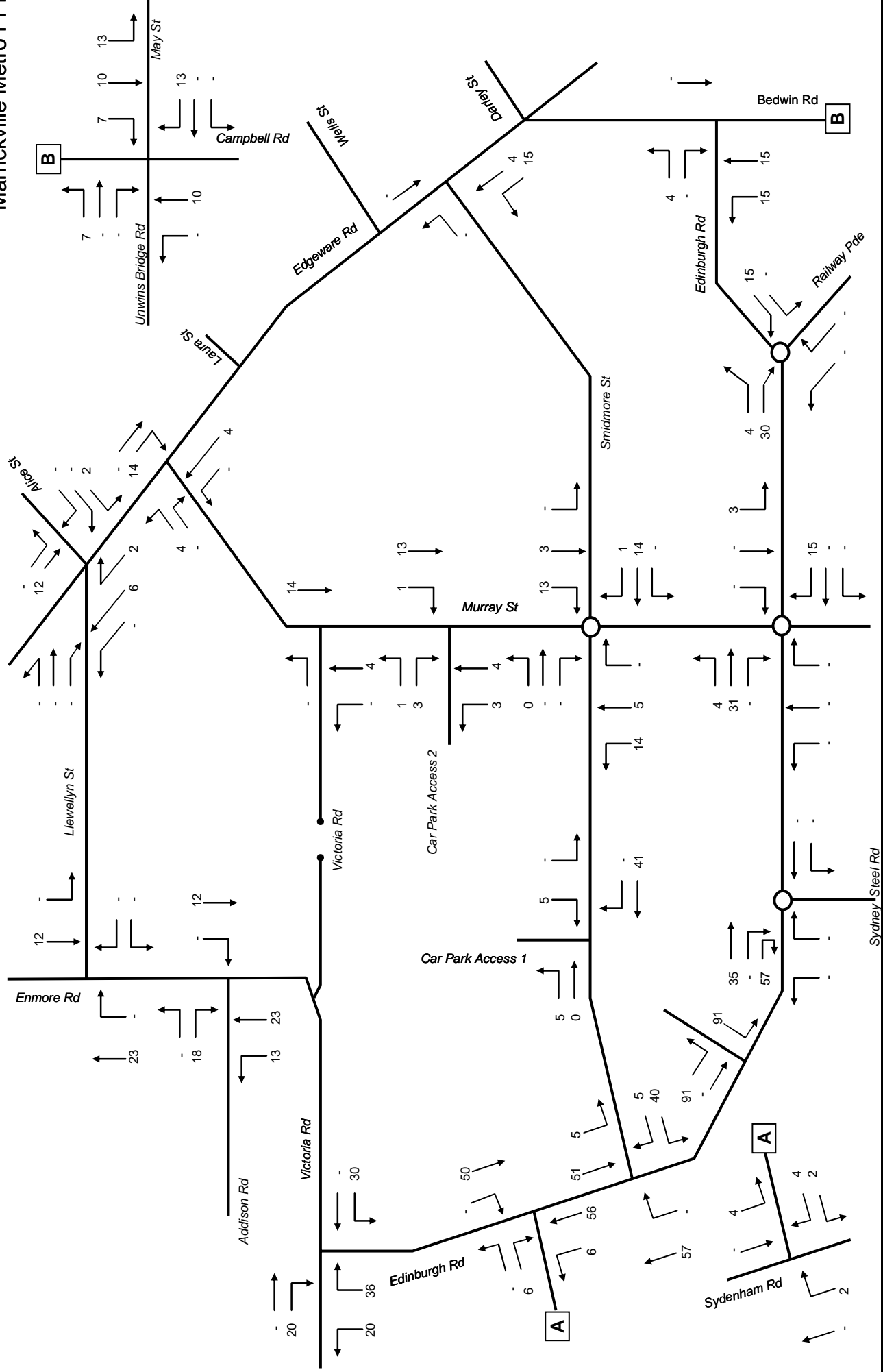
Marrickville Metro PPR





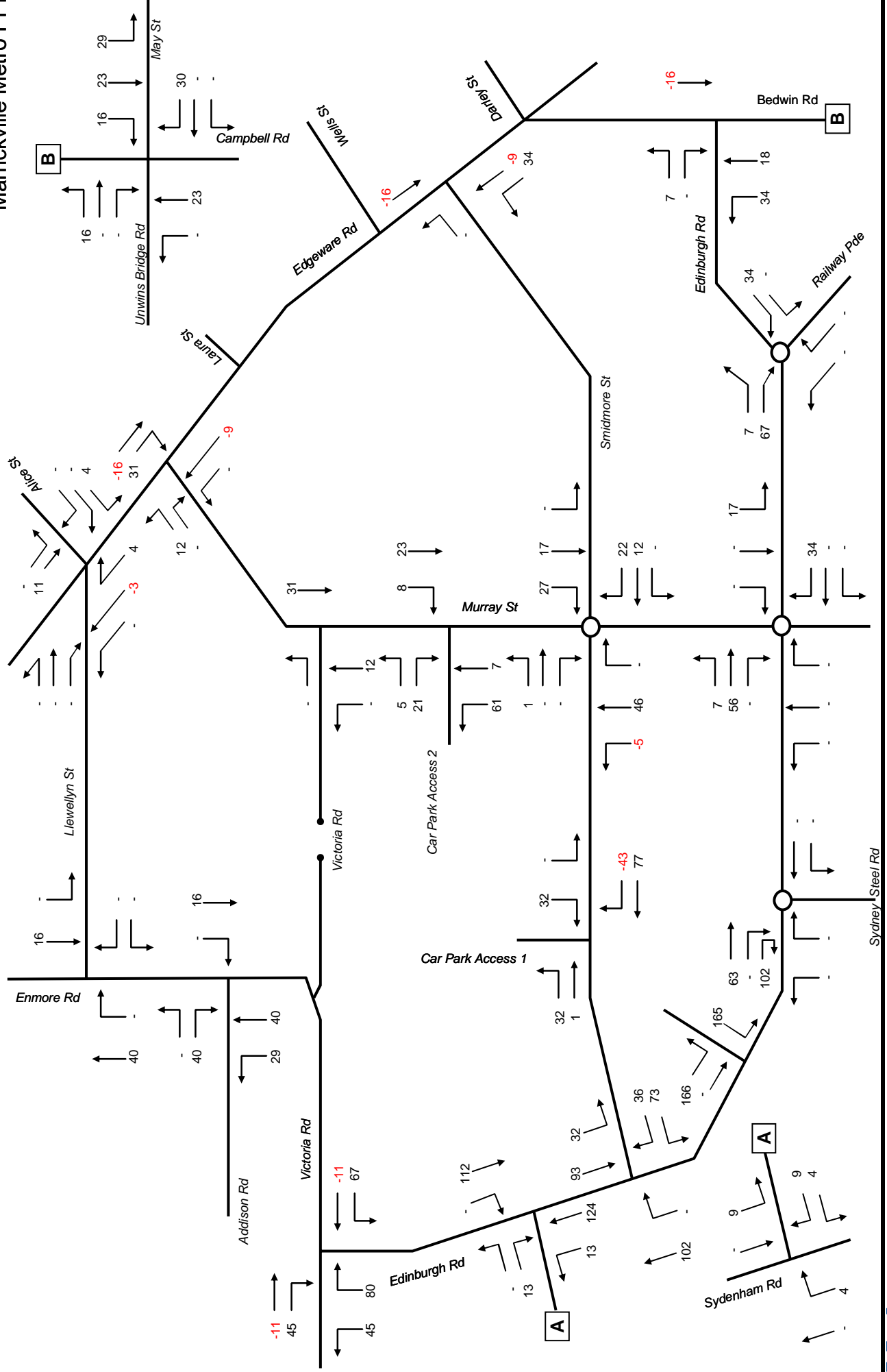
# LOCAL TRIP DISTRIBUTION FOR NEW TRIPS, THURSDAY PM

Marrickville Metro PPR



# FORECASTED NETT CHANGE IN TRAFFIC FLOWS, THURSDAY PM

Marrickville Metro PPR



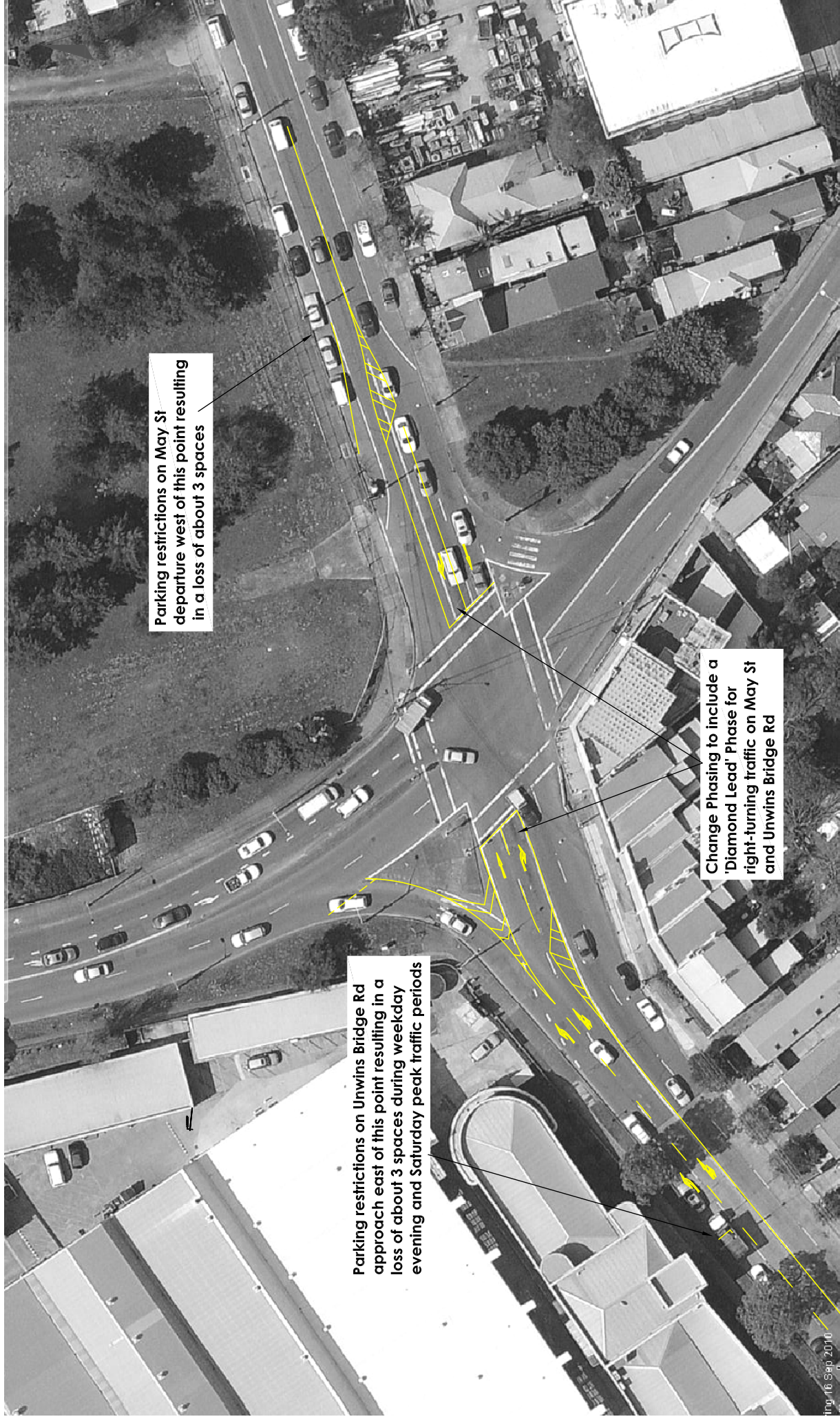
## **Appendix F**

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Intersection of Unwins Bridge Road  
with Bedwin/Campbell/May

# LANE RELOCATION AND PARKING RESTRICTIONS FOR UNWINS BRIDGE ROAD AND MAY STREET

Marrickville Metro PPR



Scale: 1:500@A3

## **Appendix G**

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Proposed Murray Street  
Loading Facilities







## **Appendix H**

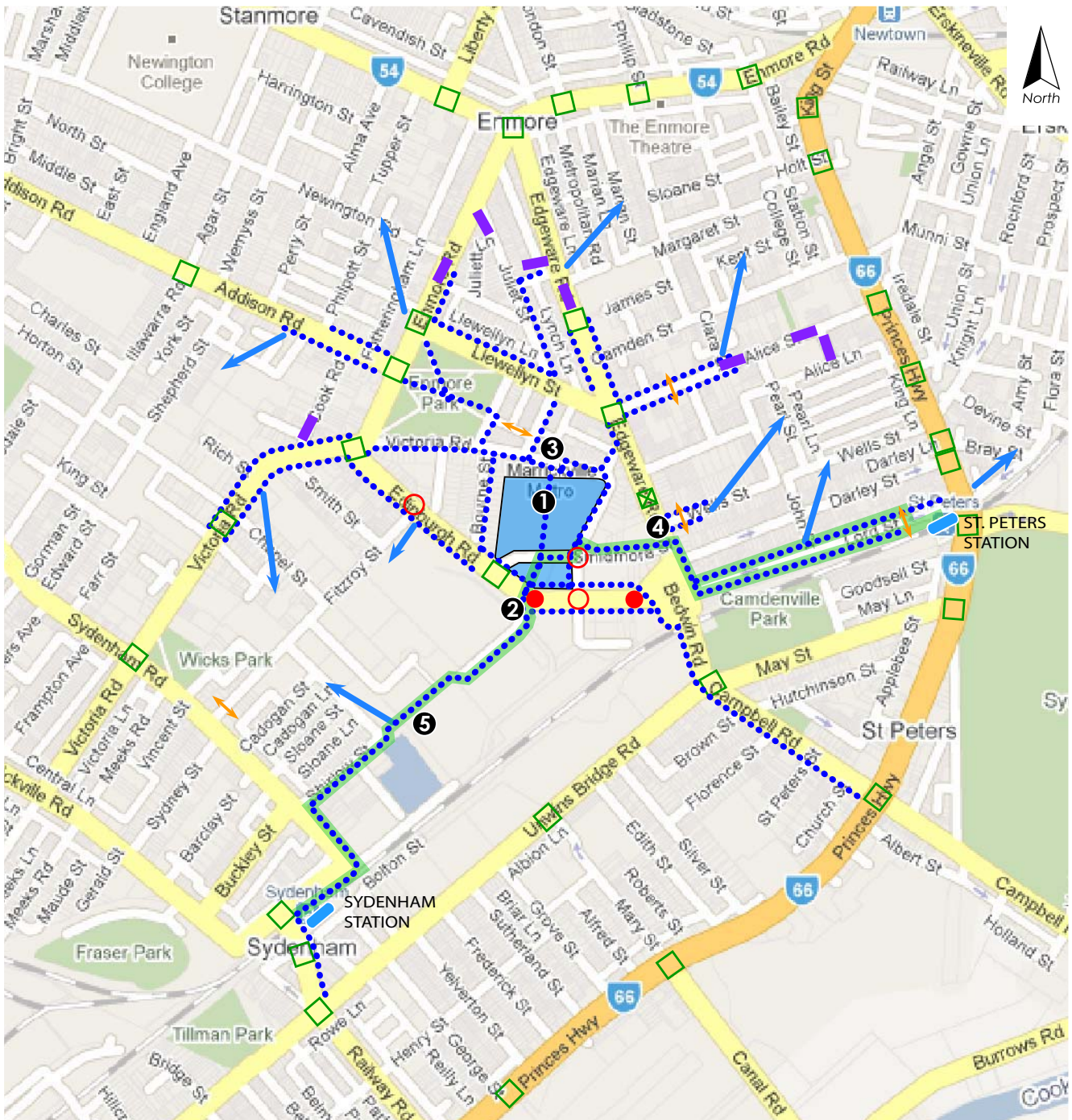
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Proposed Pedestrian Routes  
Improvements



# PROPOSED PEDESTRIAN ROUTE IMPROVEMENTS

MARRICKVILLE METRO TMAP



## List of Improvements

- 1** New footpaths on site frontage, accessible entries/exits, new kerb ramps at immediate crossings.
- 2** New pedestrian refuge crossing
- 3** Investigate improvements to remedy 'squeeze' point
- 4** Proposed pedestrian refuge in Edgeware Road at Smidmore Street
- 5** Improve intensity of lighting and security on pedestrian path

## Key

- ..... Walking Route
- Connection to local area and street network
- Intersection Traffic Signals
- X Pedestrian Crossing Signals
- Existing Roundabout
- New Roundabout
- Traffic Island/refuge
- Pedestrian Crossing
- ..... Improved Pedestrian Routes to Station
- Train Station

## **Appendix I**

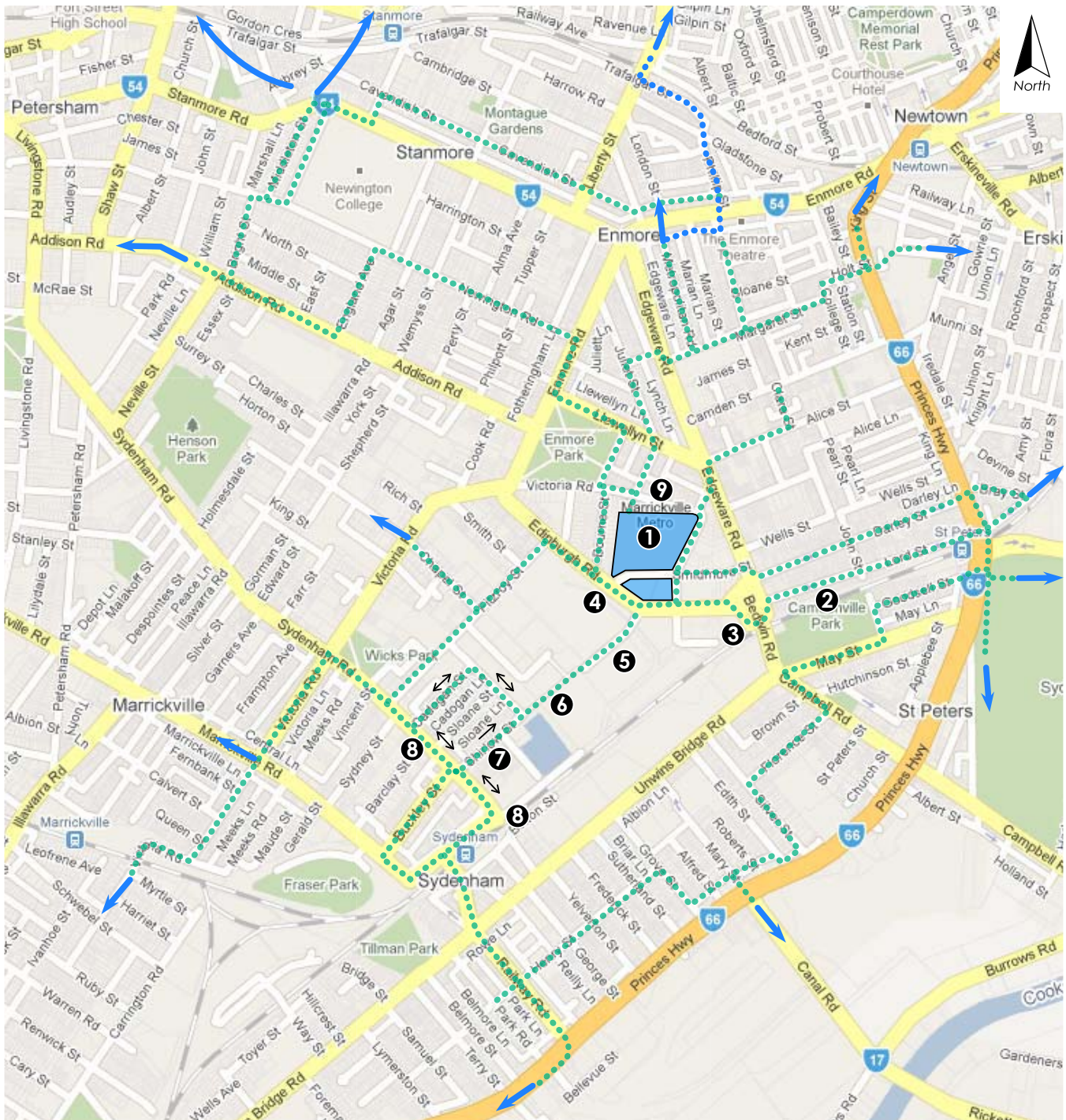
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### Proposed Bicycle Improvements



# PROPOSED BICYCLE IMPROVEMENTS

## MARRICKVILLE METRO TMAP



### List of Improvements

- 1** Customer bicycle rails, staff bicycle parking enclosure
- 2** Marked bicycle symbols on street in Lord and Darley Streets
- 3** Marked bicycle symbols on street in Edgeware Road under Bedwin Road
- 4** Marked bicycle symbols on street in Edinburgh Road
- 5** Marked bicycle symbols on street in Sydney Steel Road
- 6** Lighting and signs for off street shared bicycle pedestrian path between Steel Road and Shirlow Street
- 7** Marked bicycle symbols on street (northbound)
- 8** Bicycle marking and signs for a two way shared bicycle-pedestrian footpath in Sydenham Road and Railway Parade
- 9** Marked bicycle symbols in Victoria Road to L7 and Juliet Street

### Key

- ..... Bicycle Routes Metro
- Connections to wider bicycle networks
- ..... Proposed Regional Route 5 to Camperdown

## **Appendix J**




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Proposed Bus Routes  
at Shopping Centre

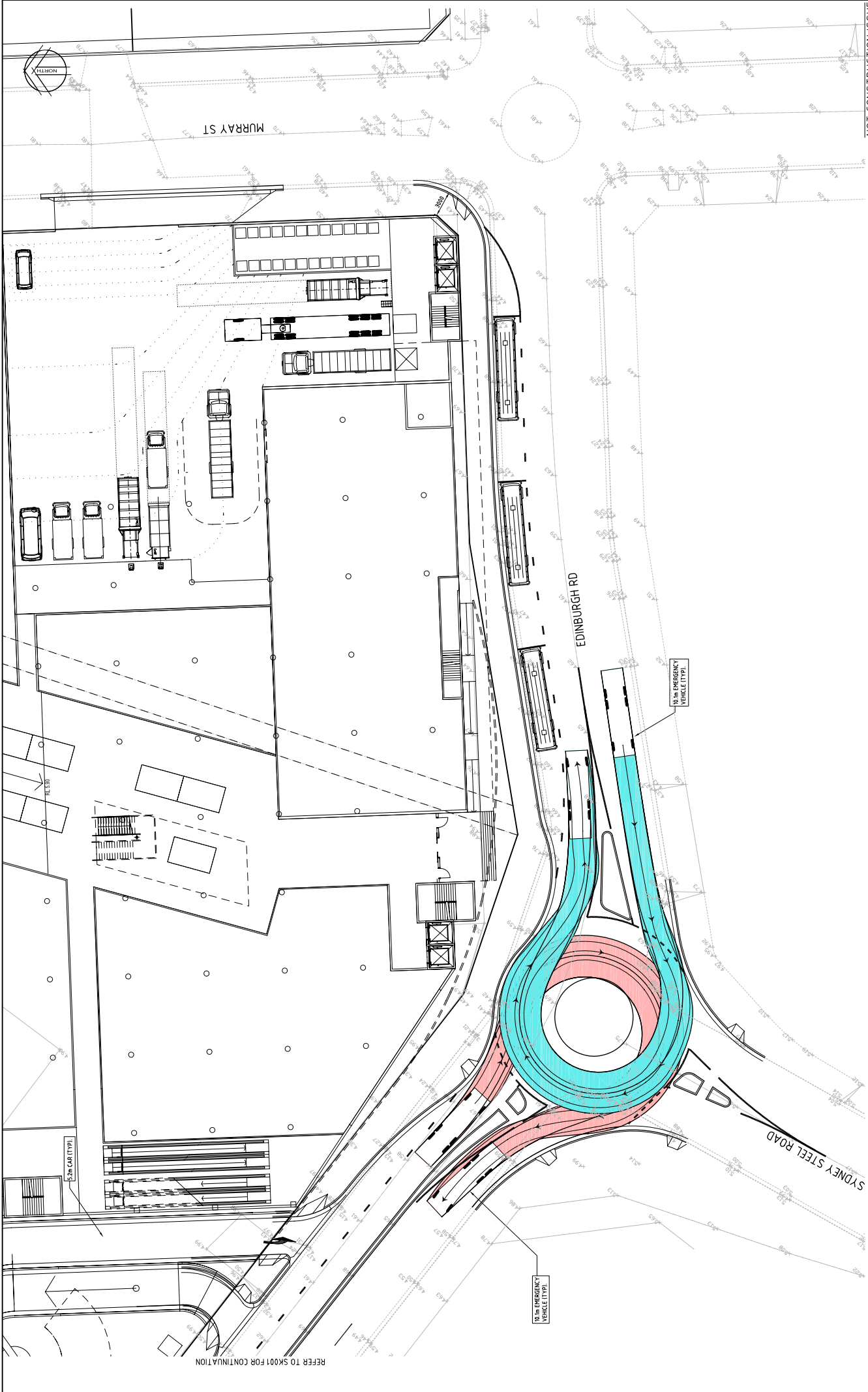
# MARRICKVILLE METRO TMAP




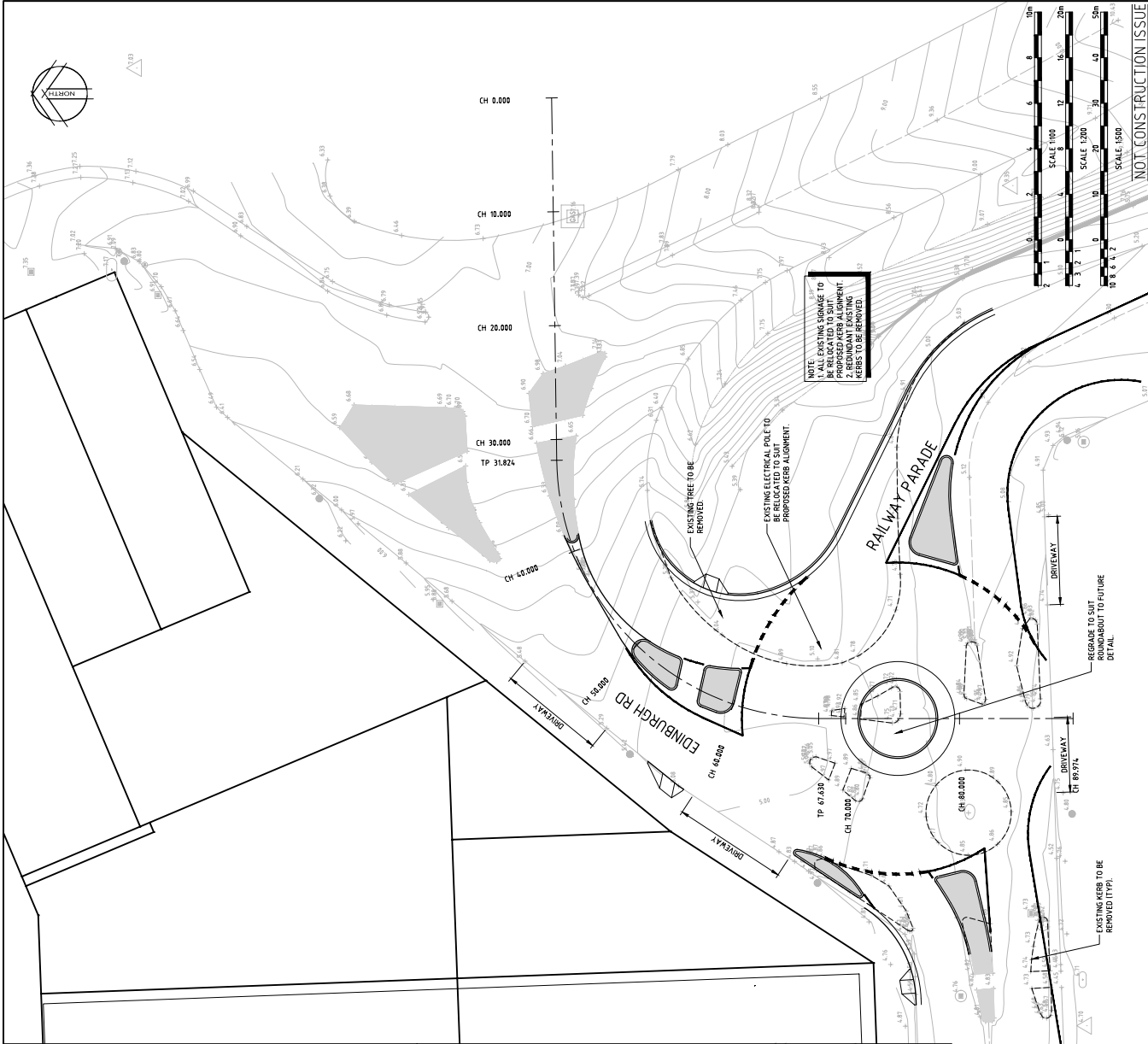
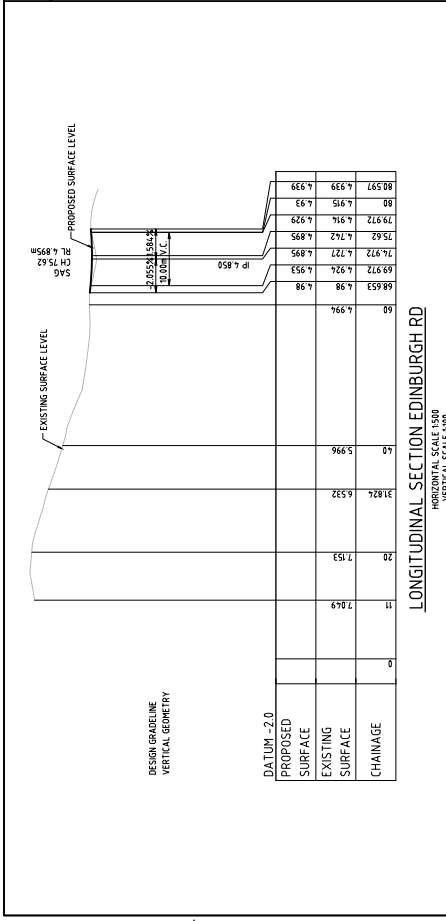
## Key

-  Routes 308, 352
-  Route 355
-  Bus Stop





REF: X-HL-A1-1096-CH1331.mxd - Marrickville Metro Shopping Centre\Drawings\CH1331.mxd - EDINBURGH ROAD AND SYDNEY STEEL ROAD ROUNDABOUT.dwg		DATE PLOTTED: 8 November 2010 11:24 AM BY: MICHAEL HODGES (NORWES7)	
Rev	Date	Description	Drawn / Appr
D	08.11.10	ISSUE FOR APPROVALS	MKH / MKH
C	04.11.10	REVISED ARCHITECTURAL	RDH / MKH
B	25.10.10	UPDATED SITE LAYOUT	RDH / MKH
A	18.10.10	UPDATED SITE LAYOUT	RDH / MKH
AMP capital INVESTORS			
Bovis Lend Lease			
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 Cardno 190 Park Road, Sydney NSW 1585 Phone: 02 9551 1455 Fax: 02 9551 1456 Email: info@cardno.com.au Web: www.cardno.com.au			
Drawn: RDM Date: 18.10.10 Client: AMP Capital Investors Limited Project: Bovis Lend Lease Marrickville Metro Shopping Centre - EDINBURGH ROAD AND SYDNEY STEEL ROAD ROUNDABOUT			
NOT CONSTRUCTION ISSUE			
FOR INFORMATION		Status	Scale
Date: MAY '10		Date: MAY '10	Scale: A1
Drawing Number: 210026-SK-002c		Revision	Revision

[illegible]

## Burrows, Derrick

---

**From:** Brian\_Mander@sta.nsw.gov.au  
**Sent:** Monday, 6 June 2011 9:57 AM  
**To:** Masson, Bruce  
**Cc:** Burrows, Derrick; Trethewey, Piran  
**Subject:** Re: Marrickville Metro Bus Turn Around Arrangements  
**Attachments:** 210026-SK-010 (B)-EDINBURGH ROAD AND RAILWAY PARADE.pdf

Dear Bruce

my apologies for not responding sooner, but i have also been on leave.  
i have reviewed the suggestion and do not have any real concerns with the proposal providing 14.5m vehicles can comfortably negotiate this turn

regards brian

"Masson, Bruce" <[MassonB@halcrow.com](mailto:MassonB@halcrow.com)>

16/05/2011 10:54 AM

To <[Brian\\_Mander@sta.nsw.gov.au](mailto:Brian_Mander@sta.nsw.gov.au)>

cc "Burrows, Derrick" <[Derrick.Burrows@lendlease.com](mailto:Derrick.Burrows@lendlease.com)>, "Trethewey, Piran" <[TretheweyP@halcrow.com](mailto:TretheweyP@halcrow.com)>

Subject Marrickville Metro Bus Turn Around Arrangements

Dear Brian,

We have re-investigated the Sydney Buses preferred option 1 which involves new roundabouts on Edinburgh Road at Sydney Steel Road and Murray Street.

We are able to provide one at the Sydney Steel Road intersection but a large enough roundabout at the Murray Street intersection would both bite significantly into the development site and reduce the capacity of the new bus terminus to only 1 or 2 buses.

As an alternative we have prepared a plan of a possible roundabout at the Edinburgh Road/Railway Parade intersection, a little further to the west. A copy of this is attached.

This roundabout would avoid the need for buses to pass along Smidmore Street and would thus avoid your concerns with this option.

Would you please advise if this option is acceptable to Sydney Buses.

I will be on extended long service leave from Friday of this week so if you are not able to respond prior to that could I ask you to respond to Piran Trethewey of this office and to Derrick Burrows at Lend Lease.

Many thanks

Bruce

**Bruce Masson**  
Director Transport Planning

**Halcrow**  
Consulting Business Group  
Suite 20/809 Pacific Highway  
Chatswood NSW 2067



## **Appendix K**

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Bus Terminal Design  
in Edinburgh Road

NOT CONSTRUCTION ISSUE

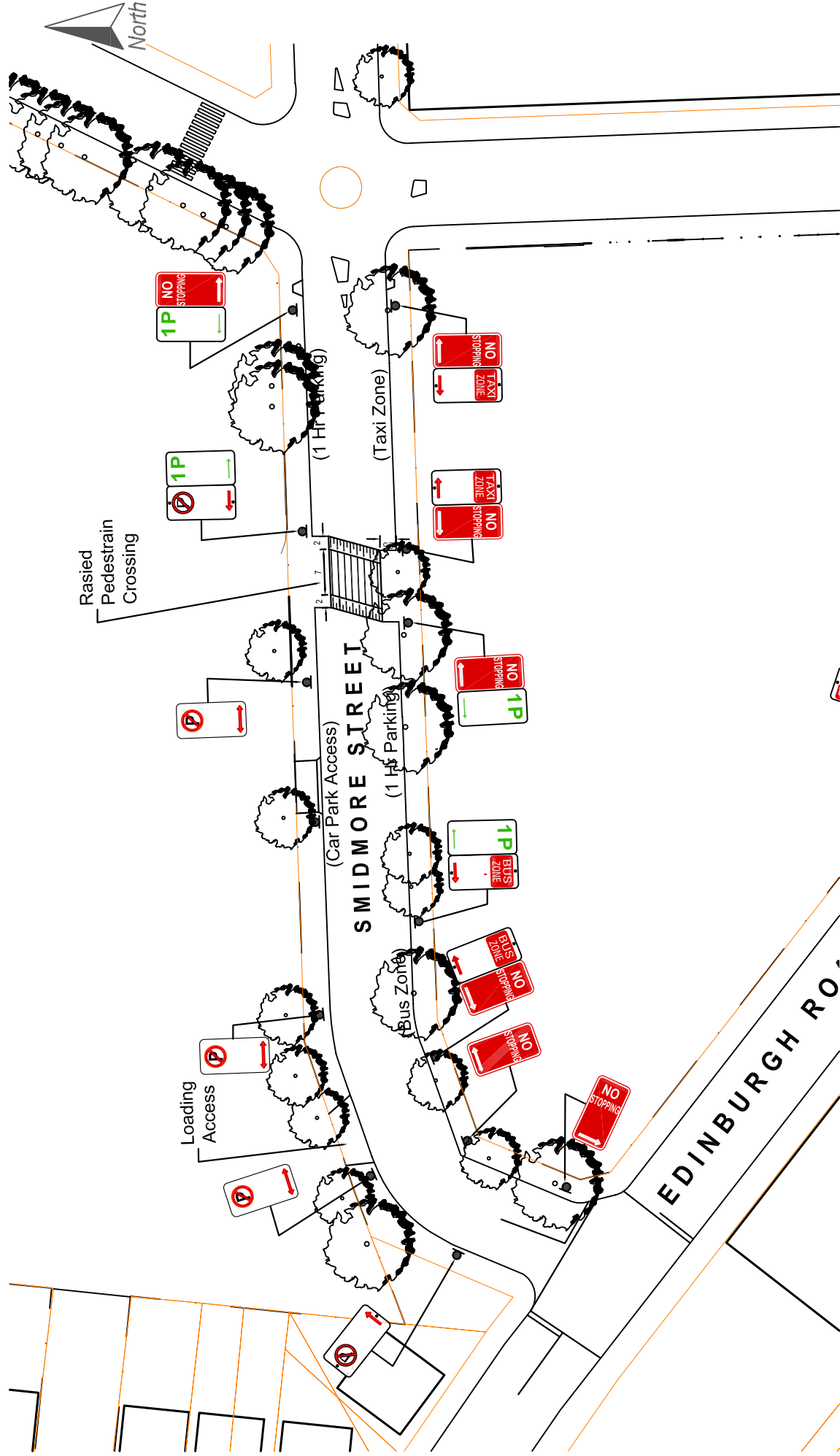
## **Appendix L**

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Parking Proposals in Smidmore Street

# PROPOSED PARKING CONTROLS - SMIDMORE STREET

MARRICKVILLE METRO PPR



Scale: 1:1000@A4

**Halcrow**

Filename: CTLRGWda12

**Figure 7**

Date: 02 November 2010