



**PROPOSED RESIDENTIAL REDEVELOPMENT
OF A CONSOLIDATED SITE AT
172-184 GREAT WESTERN HIGHWAY, WESTMEAD

TRAFFIC AND PARKING ASSESSMENT**

5 February 2015
Ref: 14045

Prepared by

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1. Introduction

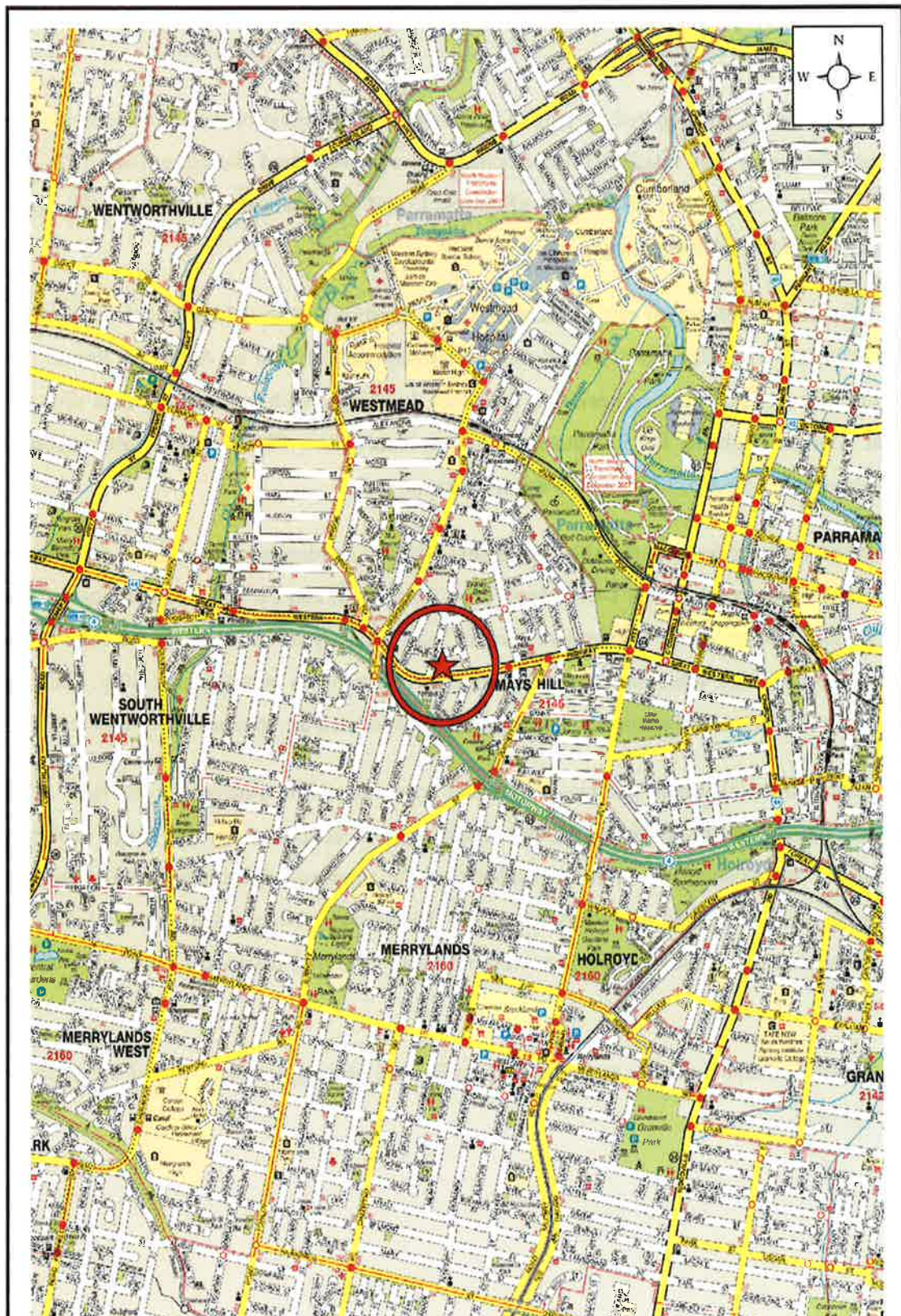
This report has been prepared as part of a development application submission to Holroyd Council for a proposed residential development on a consolidated site comprising 172 – 184 Great Western Highway, Westmead (Figures 1 and 2). A survey plan of the site is reproduced in the following pages.

The proposed development site has a total area of approximately 4245m² with frontages of approximately 102.225m to Great Western Highway and 31.51m to Anderson Street. The existing site development comprises 6 detached dwellings, with vehicular access direct off Great Western Highway for 5 of those allotments Nos. (174 – 184), and vehicular access off Anderson Street for No. 172 Great Western Highway.

It is proposed to redevelop the site with a seven-storey residential flat building containing a total of 109 apartments (16 x 1-bedroom; 77 x 2-bedroom; and 16 x 3-bedroom apartments). The building is served by a basement carpark with capacity to accommodate a total of 136 parking spaces, with vehicular access off Anderson Street via a two-way driveway. Relevant architectural plans of the proposed development are included as Appendix A to this report.

The proposed development site has convenient access to public transport in the form of bus services which run along Great Western Highway and connect with the major centres of Parramatta and Blacktown. Future residents of the proposed development will also have access to train services via Parramatta and Blacktown railway stations, and also via Westmead railway station which is a walking/cycling/driving distance of 1.2 km from the site.

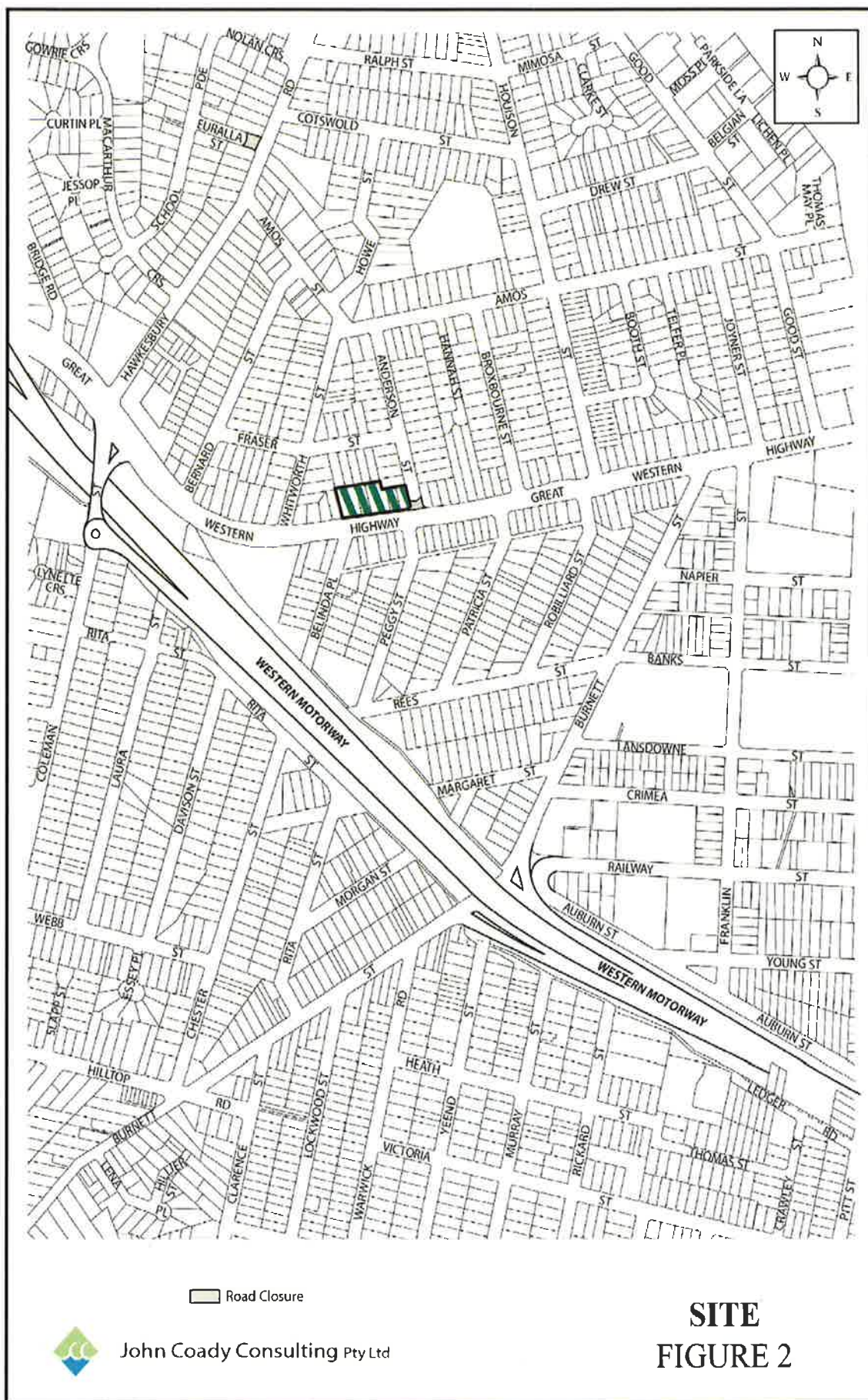
The purpose of this report is to assess the traffic and parking implications of the proposed development.

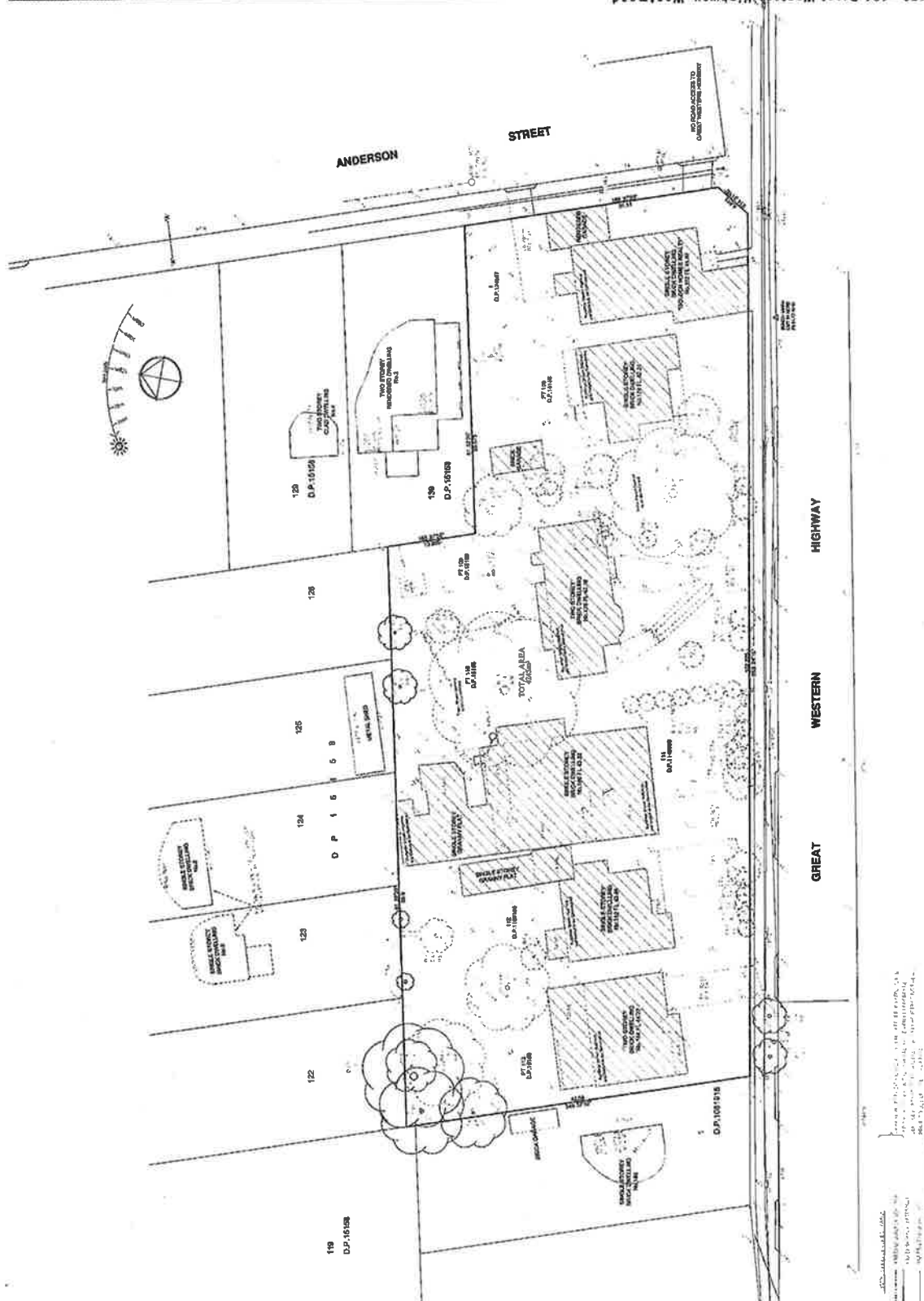


**LOCATION
FIGURE 1**



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2. Parking

Section 3 in Part A of *Holroyd Development Control Plan (August 2013)* specifies the following parking requirements for residential flat buildings:

	Minimum Spaces Required	Maximum Spaces Required
Studio/1-bedroom	0.8	1
2-bedroom	1.0	1.5
3-bedroom	1.2	2
4 plus bedrooms	1.5	2
Visitor	0.2	0.5

Application of those parking requirements to the proposed development yields a *minimum* parking requirement of 132 spaces comprising 110 resident parking spaces and 22 visitor parking spaces as follows:

	No. of Units	Parking Requirement	
		Minimum	Maximum
Studio/1-bedroom	16	12.8	16.0
2-bedroom	77	77.0	115.5
3-bedroom	16	19.2	32.0
Total Resident	109	109.0	163.5
Visitor	109	21.8	54.5
TOTAL		130.8	218.0

As noted in the foregoing, the proposed development makes provision for a total of 136 parking spaces comprising:

- 114 Resident Parking Spaces
- 22 Visitor Parking Spaces (including 1 x Carwash Space)

That off-street parking provision satisfies the *minimum* parking requirement specified by Council's DCP for the proposed development. In circumstances where the proposed development site enjoys convenient public transport access in terms of both bus and train services, it can be concluded that the proposed development has no unacceptable parking implications.

3. Traffic

Existing Road Network

The classifications assigned to the road network serving the site by the RMS (Figure 3) identify the following classified State and Regional Roads which serve and pass through the Westmead area:

State Roads	Regional Roads
M4 Motorway	Burnett Street
Great Western Highway	Pitt Street
Cumberland Highway	O'Connell Street
Woodville Road	Centenary Road–Sherwood Road
Windsor Road	Merrylands Rd – Treves St – Neil St – Monash St – Merrylands Rd

Accordingly, the proposed development site has the benefit of immediate access to the higher order road network which serves and passes through the Westmead area.

The existing traffic and parking controls on the road network serving the site are shown on Figure 4. As can be observed:

- Anderson Street is closed at its southern end, at the intersection with Great Western Highway
- right turn access between Great Western Highway and the residential street system to the north is limited by a variety of traffic management measures
- kerbside parking on the local residential street system to the east of Houison Street is subject to time-related parking restrictions, while kerbside parking on streets to the west of Houison Street, including those streets which provide local access to the proposed development site, is generally unrestricted.

Anderson Street has a sealed carriageway 12.8m wide, and capable of accommodating 4 traffic lanes although the 2 kerbside lanes are typically used for parking.

To provide some information on traffic conditions on the road network serving the site, a count of traffic activity during the weekday AM and PM peak periods was conducted at the following intersections:

Great Western Highway/Hawkesbury Road/Coleman Street
 Great Western Highway/Whitworth Street
 Great Western Highway/Good
 Hawkesbury Road/Amos Street
 Amos Street/Good Street

The weekday AM and PM peak hour traffic flows through those intersections are summarised on Figure 5, while the detailed results of the traffic counts are included as Appendix B to this report.

Projected Traffic Generation Potential

An indication of the traffic generation potential of the proposed development is provided by the RTA Guidelines¹ which specify the following typical traffic generation rates for residential flat buildings:

Smaller Units and Flats (Up to 2-bedrooms)	0.4 – 0.5 vtpd per dwelling
Larger Units and Townhouses (3 or more bedrooms)	0.5 – 0.65 vtpd per dwelling

Application of those typical traffic generation rates to the proposed development yields a total weekday peak period traffic generation potential in the order of 50 vtpd, calculated as follows:

93 (1 and 2-bedroom units) x 0.45	=	40 vtpd
16 (3-bedroom units) x 0.575	=	10 vtpd
Total	=	50 vtpd

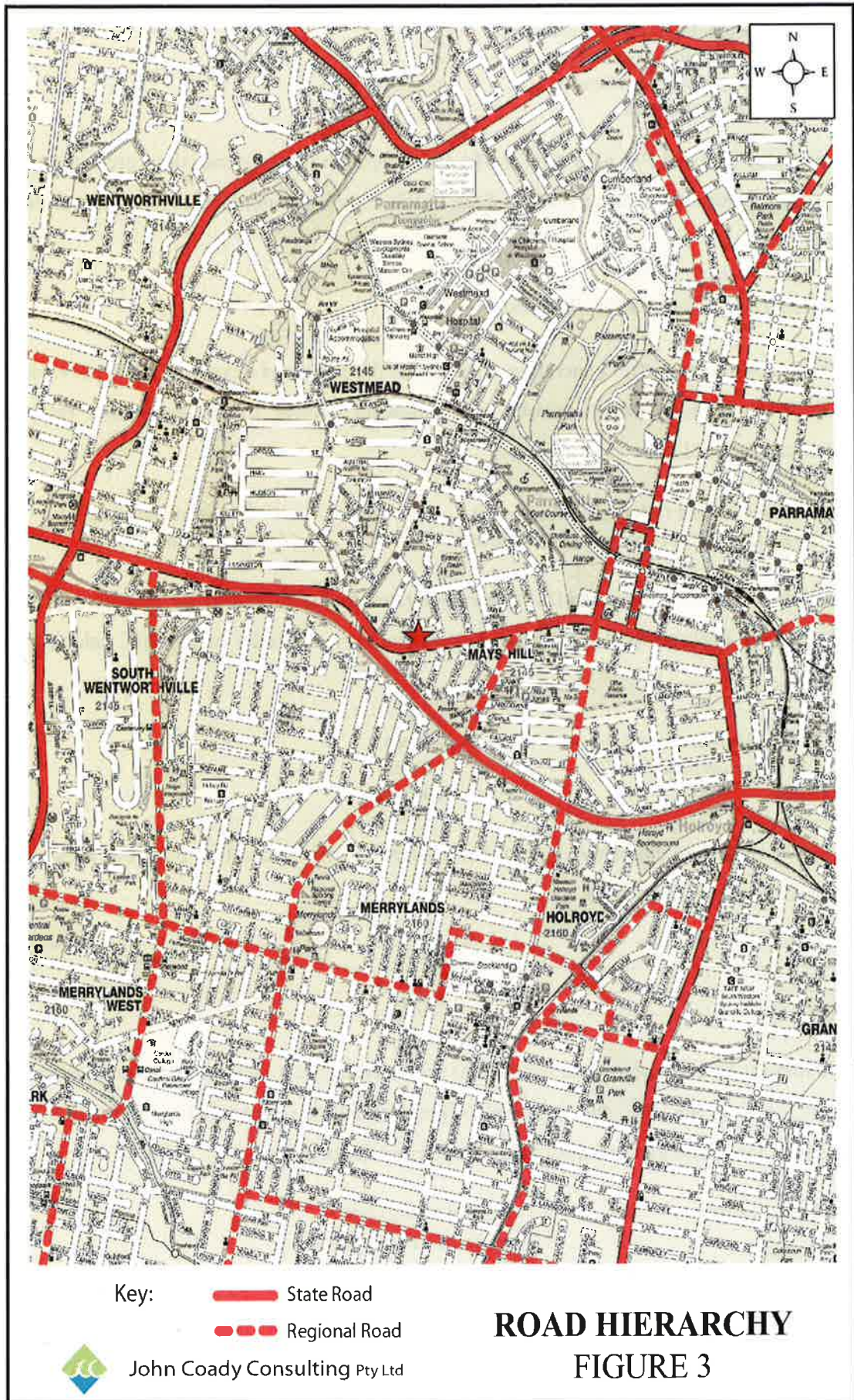
The arrival/departure characteristics of that projected traffic generation potential adopted for the purposes of this assessment is:

	Arrival	Departure
AM peak period	10 vtpd	40 vtpd
PM peak period	40 vtpd	10 vtpd

While there is no reliable way to assign that projected traffic generation potential to the road network serving the site, the *regional* origin/destination characteristics adopted by this assessment for traffic generated by the proposed development is:

To/from the east	40%	Via Western Motorway (25%) Via Great Western Highway (15%)
To/from the west	30%	Via Western Freeway (20%) Via Great Western Highway (10%)
To/from the north	15%	Via Hawkesbury Road (15%)
To/from the south	15%	Via Coleman Street (15%)

¹ RTA "Guide to Traffic Generating Developments. Section 3 – Landuse Traffic Generation" October 2002





There are a number of *local* approach/departure routes which might be used to accommodate the traffic generated by the proposed development and, in practice, motorists will choose the most convenient and quickest *local* access route for their particular trip purpose. This assessment adopts the following *local* access routes:

	To	From
East via Western Motorway	LT Anderson St to Fraser St LT Fraser St to Whitworth St LT Whitworth St to Great Western Hwy RT Great Western Hwy to Burnett St Enter Motorway LT from Burnett St	Exit Motorway RT to Burnett St RT from Burnett St to Great Western Hwy LT from Great Western Hwy to Joyner St LT from Joyner St to Amos St LT from Amos St to Anderson St
East via Great Western Hwy	LT Anderson St to Fraser St LT Fraser St to Whitworth St LT Whitworth St to Great Western Hwy	RT Great Western Hwy to Good St LT from Good St to Amos St LT from Amos St to Anderson St
West via Western Motorway	LT from Anderson St to Amos St LT from Amos St to Hawkesbury Rd RT from Hawkesbury Rd to Great Western Hwy LT Great Western Hwy to Cumberland Hwy Enter M4 RT from Cumberland Hwy	Exit Motorway LT to Cumberland Hwy RT Cumberland Hwy to Great Western Hwy LT Great Western Hwy to Whitworth St RT Whitworth St to Fraser St RT Fraser St to Anderson St
West via Great Western Hwy	LT from Anderson St to Amos St LT from Amos St to Hawkesbury Rd RT from Hawkesbury Rd to Great Western Hwy	LT Great Western Hwy to Whitworth St RT Whitworth St to Fraser St RT Fraser St to Anderson St
North via Hawkesbury Rd	LT from Anderson St to Amos St RT Amos St to Hawkesbury Rd	LT Hawkesbury Rd to Amos St RT Amos St to Anderson St
South via Coleman St	LT Anderson St to Amos St LT Amos St to Hawkesbury Rd – Coleman St	RT Coleman St – Great Western Hwy LT Great Western Hwy – Whitworth St RT Whitworth St – Fraser St RT Fraser St – Anderson St

Assignment of the projected traffic generation potential of the proposed development to the road system serving the site is shown on Figure 6.

Because the proposed development eliminates the existing 6 detached residential dwellings on the site, its traffic generation potential can be reduced by the traffic generation potential of those 6 existing dwellings. However, in order to maintain a conservative approach to this assessment, no discount has been applied in this case.

Traffic Implications – Road Network Capacity

Reference to Figures 5 and 6 leads to a conclusion that the main traffic implications of the proposed development in terms of road network capacity are likely to concern the additional traffic demand as a consequence of the proposed development on the following intersections:

Great Western Highway/Hawkesbury Road/Coleman Street
Great Western Highway/Good Street
Hawkesbury Road/Amos Street

The effect of that additional traffic demand on the operating performance of those intersections can be assessed using the SIDRA traffic model and criteria for interpreting the results of SIDRA analysis are set out on the schedule reproduced in the following pages. The results of the SIDRA analysis of those 3 intersections under existing and projected post-development traffic demand during the weekday AM and PM peak periods are summarised in the following table, while the output sheets for each of the analyses are included as Appendix C to this report. The SIDRA analysis reveals that:

- all of the intersections operate at an acceptable level of service under both existing and projected post-development traffic demand except for the Great Western Highway/Good Street intersection which operates at an unsatisfactory level of service, during the weekday AM peak period only under both existing and projected post-development traffic demand
- the *additional* traffic demand on the intersections as a consequence of the proposed development has only a relatively minor effect on intersection performance.

In the circumstances it can be concluded that the proposed development has no unacceptable effect in terms of road network capacity.

Traffic-Related Environmental Effect

The proposed development does not have any unacceptable traffic-related environmental effect because:

- the traffic generation potential of the proposed development is only moderate
- as noted in the foregoing, the site enjoys immediate access to the higher order road network which serves and passes through the Westmead area
- as can be observed from Figure 6:
 - traffic generated by the proposed development is likely to approach/depart the site over a number of local access routes, diluting the additional traffic demand on any particular route
 - consequently, the additional traffic demand on individual, local residential streets as a consequence of the proposed development is relatively minor.

Intersection	Control Type	AM Peak Hour				PM Peak Hour			
		L.O.S		Avg Delay (Secs)		L.O.S		Avg Delay (secs)	
		Existing	Post Dev	Existing	Post Dev	Existing	Post Dev	Existing	Post Dev
Gt Western Hwy/Hawkesbury Road	Signals	D	D	49	50	D	D	49	50
Hawkesbury Rd/Amos Street	Signals	A	A	9	9	A	A	9	9
Gt Western Hwy/Whitworth Street	Signals	A	A	2	3	A	A	2	3
Gt Western Hwy/Good Street	Give-Way	F	F	111	124	C	C	31	31
Amos Street/Good Street	Roundabout	A	A	9	9	A	A	8	8

Criteria for Interpreting Results of SIDRA Analysis

1. Level of Service (LOS)

LOS	Traffic Signals and Roundabouts	Give Way and Stop Signs
'A'	Good operation.	Good operation.
'B'	Good with acceptable delays and spare capacity.	Acceptable delays and spare capacity.
'C'	Satisfactory.	Satisfactory but accident study required.
'D'	Operating near capacity.	Near capacity and accident study required.
'E'	At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode.	At capacity and requires other control mode.
'F'	Unsatisfactory and requires additional capacity.	Unsatisfactory and requires other control mode.

2. Average Vehicle Delay (AVD)

The AVD provides a measure of the operational performance of an intersection as indicated on the table below which relates AVD to LOS. The AVD's listed in the table should be taken as a guide only as longer delays could be tolerated in some locations (ie inner city conditions) and on some roads (ie minor side street intersecting with a major arterial route).

Level of Service	Average Delay per Vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way and Stop Signs
A	less than 14	Good operation.	Good operation.
B	15 to 28	Good with acceptable delays and spare capacity.	Acceptable delays and spare capacity.
C	29 to 42	Satisfactory.	Satisfactory but accident study required.
D	43 to 56	Operating near capacity.	Near capacity and accident study required.
E	57 to 70	At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode.	At capacity and requires other control mode.

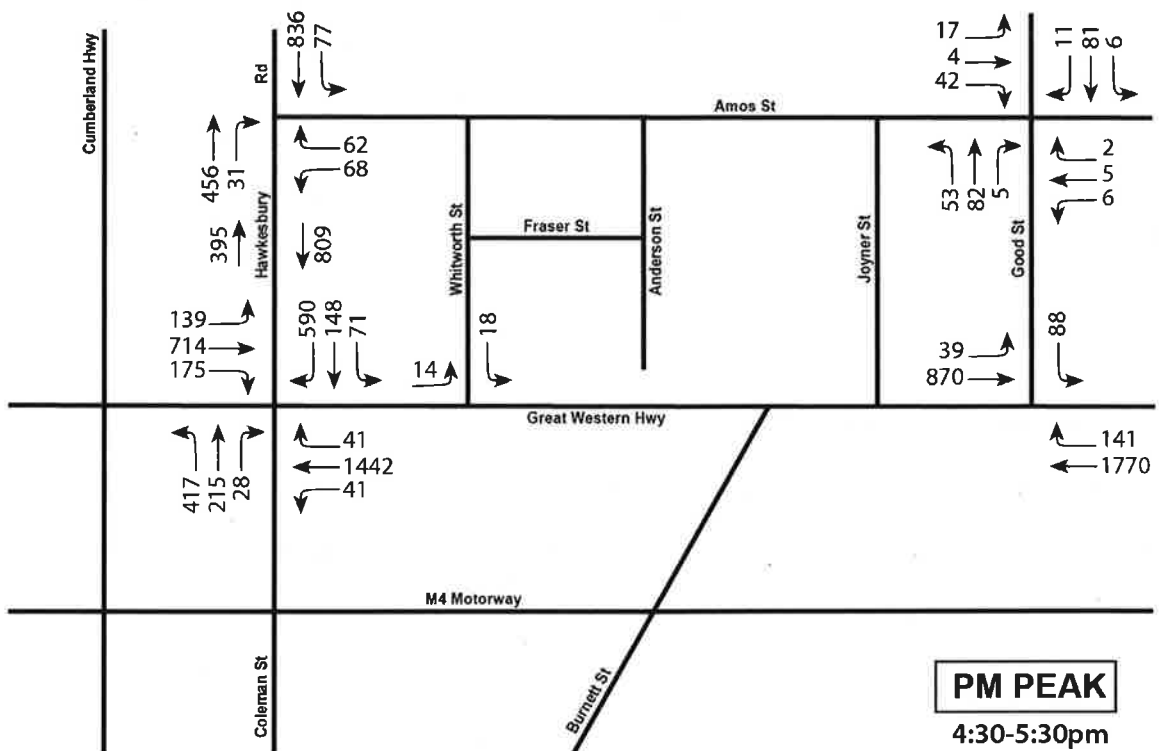
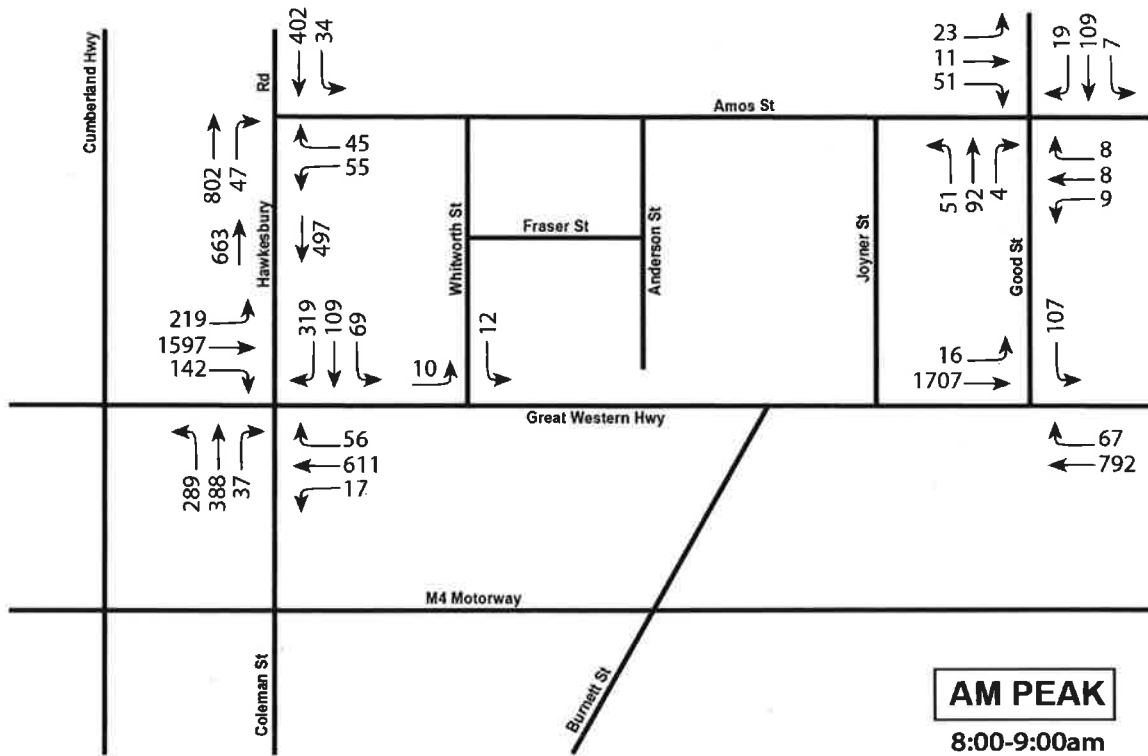
3. Degree of Saturation (DS)

The DS is another measure of the operational performance of individual intersections.

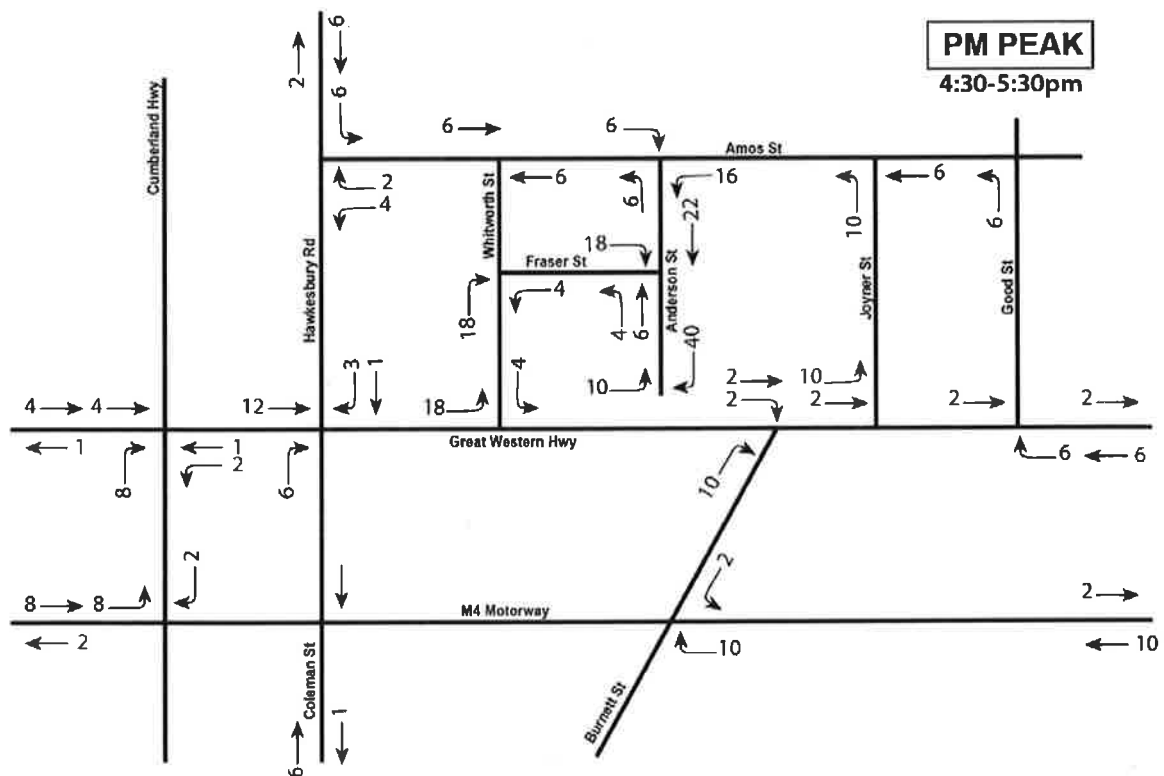
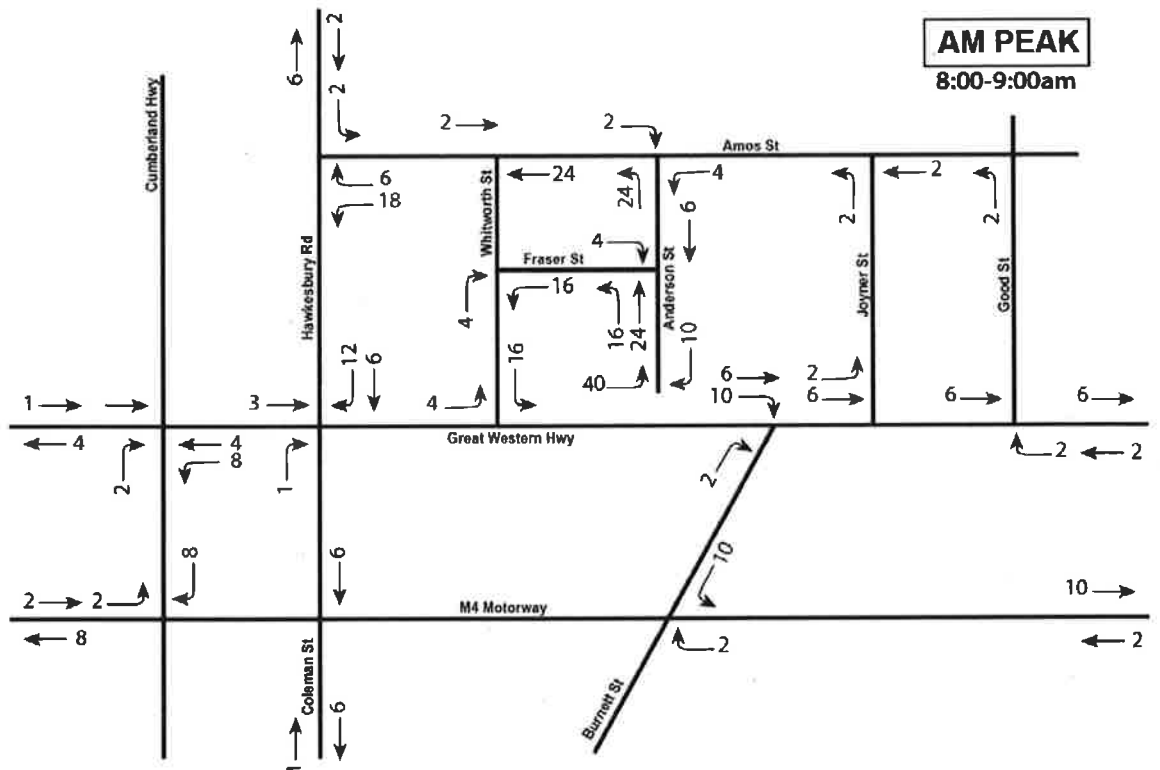
For intersections controlled by traffic signals² both queue length and delay increase rapidly as DS approaches 1, and it is usual to attempt to keep DS to less than 0.9. Values of DS in the order of 0.7 generally represent satisfactory intersection operation. When DS exceeds 0.9 queues can be anticipated.

For intersections controlled by a roundabout or GIVE WAY or STOP signs, satisfactory intersection operation is indicated by a DS of 0.8 or less.

² The values of DS for intersections under traffic signal control are only valid for cycle length of 120 secs.



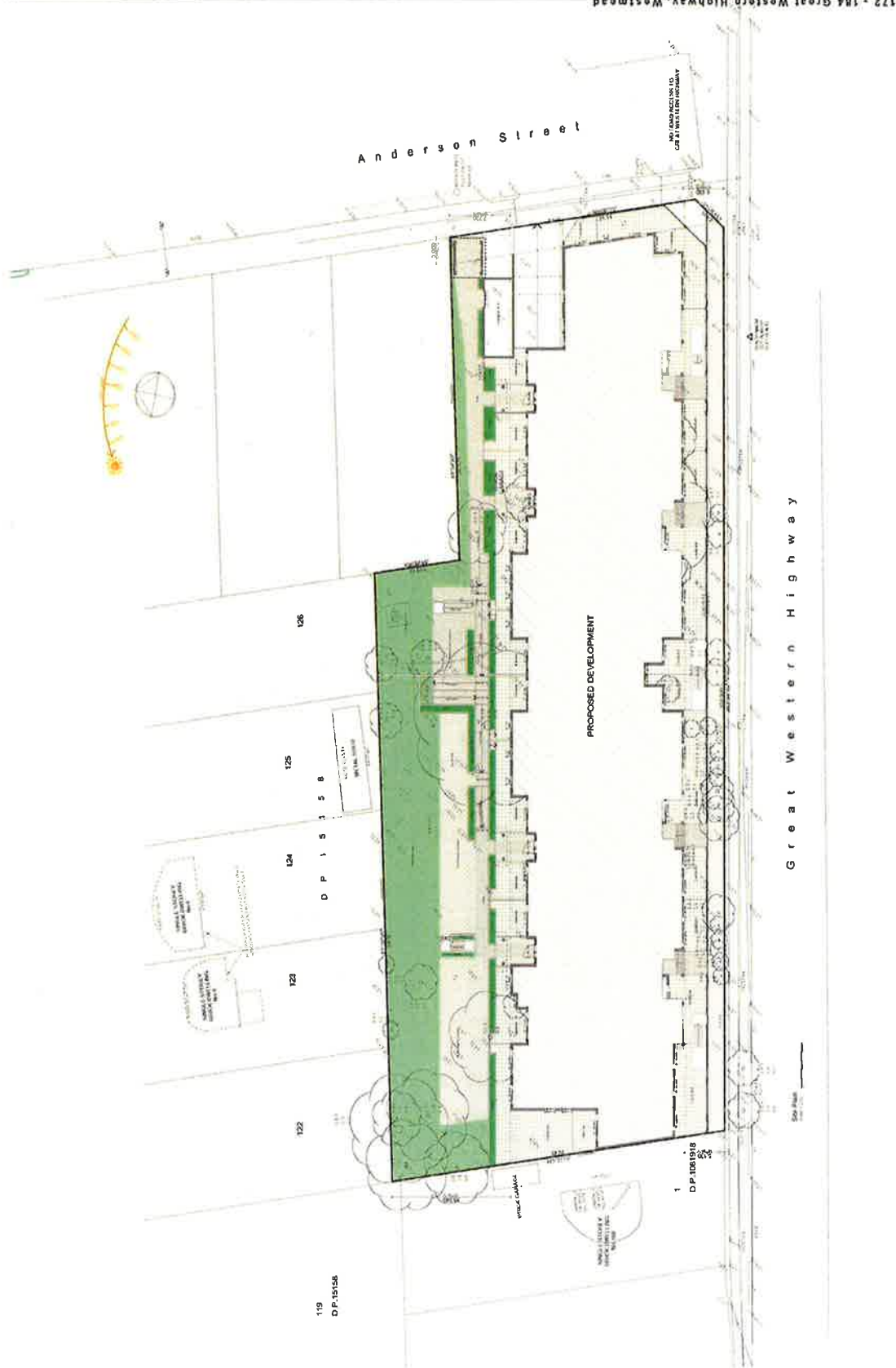
EXISTING TRAFFIC FLOWS
FIGURE 5



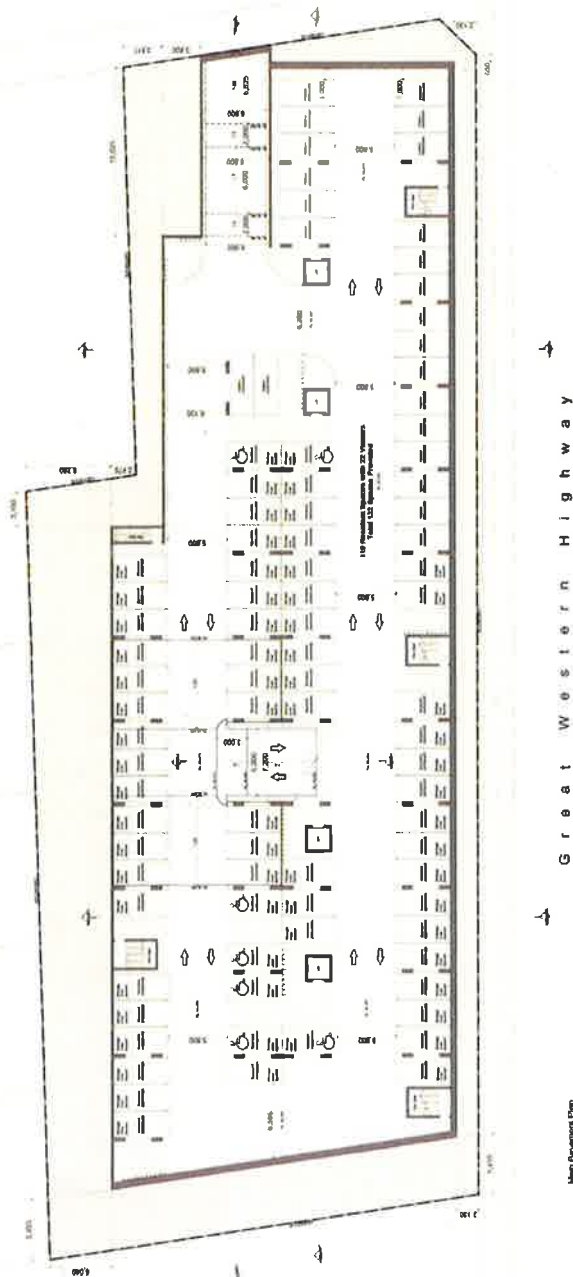
TRAFFIC ASSIGNMENT
FIGURE 6

Appendix A

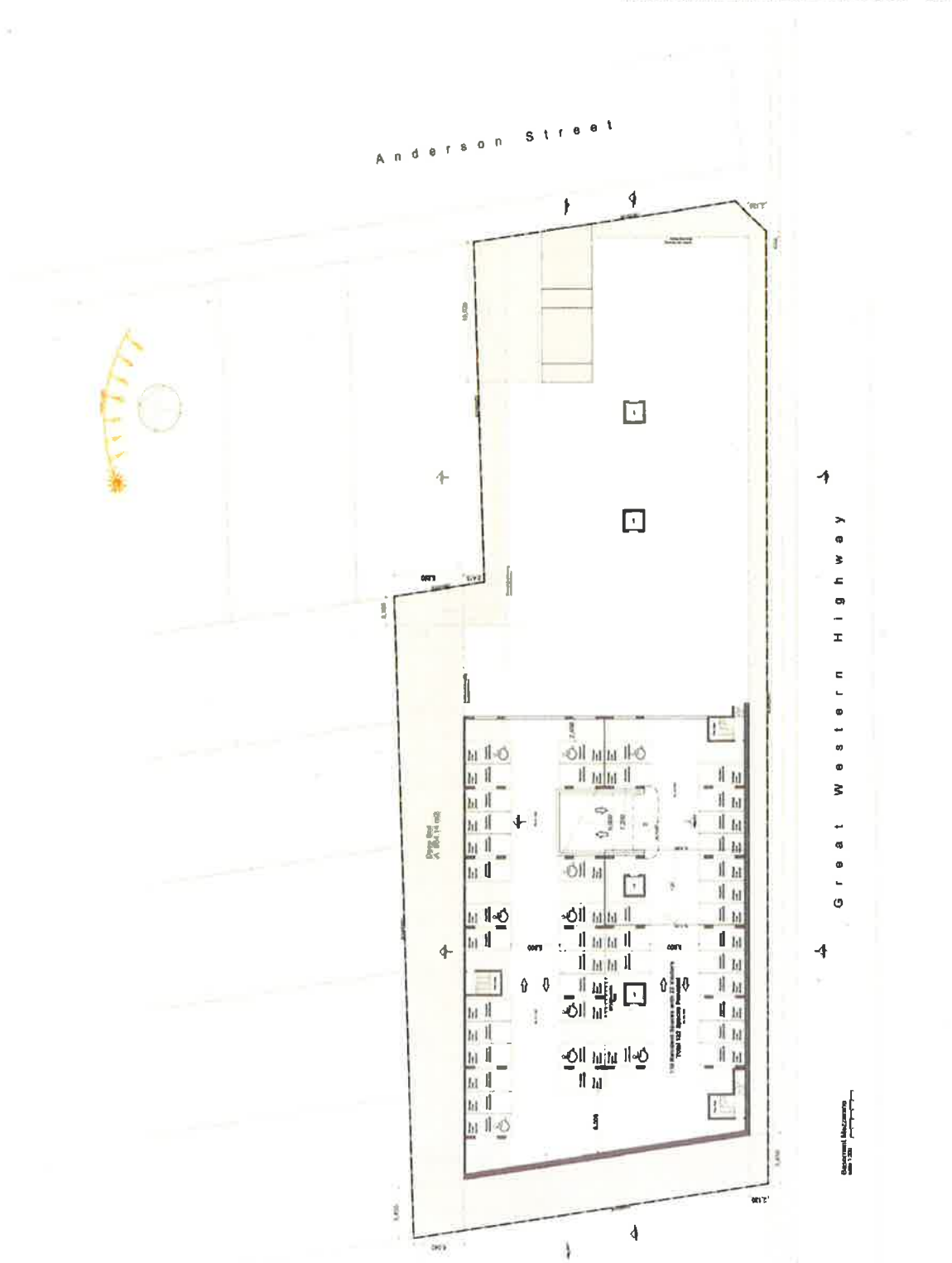
Architectural Plans







Master Curriculum Plan



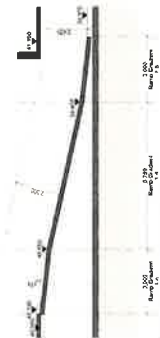
SCHEDULE OF FEATURES FOR ADAPTABLE HOUSING

ADAPTABLE HOUSE CLASS C

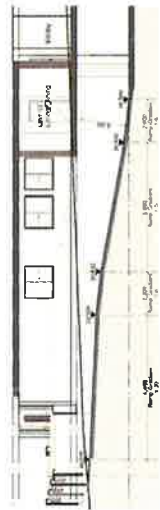
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[illegible][illegible]Post Adaptable Unit
Units 3 & 20Post Adaptable Unit
Units 9 & 12Post Adaptable Unit
Units 34Post Adaptable Unit
Units 41

Post Adaptable Unit
Units 5 13 22 32
(6, 14, 23 & 33 mirrored)

Post Adaptable Unit
Units 42

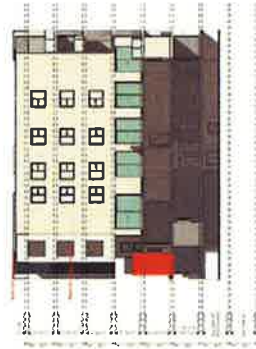
Mezzanine Ramp Detail



Carpark Entry Ramp Detail



Elevation (WGS Elevation Internal)



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Appendix B

Traffic Count Data

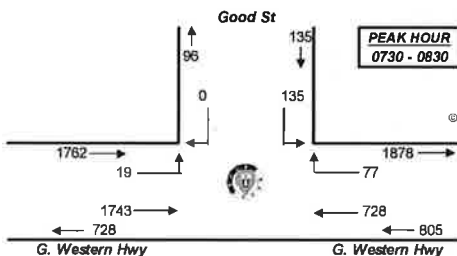
**R.O.A.R. DATA***Reliable, Original & Authentic Results*

Ph.88196847, Fax 88196849, Mob.0418-239019

All Vehicles	WEST G. Western Hwy		NORTH Good St		EAST G. Western Hwy		TOTAL
	L	T	R	L	T	R	
0700 - 0715	4	388	0	11	115	7	525
0715 - 0730	4	435	0	25	131	12	607
0730 - 0745	6	473	0	38	199	20	736
0745 - 0800	5	445	0	28	153	14	645
0800 - 0815	3	398	0	39	189	23	652
0815 - 0830	5	427	0	30	187	20	669
0830 - 0845	4	389	0	11	194	14	612
0845 - 0900	4	493	0	27	222	10	756
Period End	35	3448	0	209	1390	120	5202

Peak Per	WEST G. Western Hwy		NORTH Good St		EAST G. Western Hwy		TOTAL
	L	T	R	L	T	R	
0700 - 0800	19	1741	0	102	598	53	2513
0715 - 0815	18	1751	0	130	672	69	2640
0730 - 0830	19	1743	0	135	728	77	2702
0745 - 0845	17	1659	0	108	723	71	2578
0800 - 0900	16	1707	0	107	792	67	2689

PEAK HR	19	1743	0	135	728	77	2702
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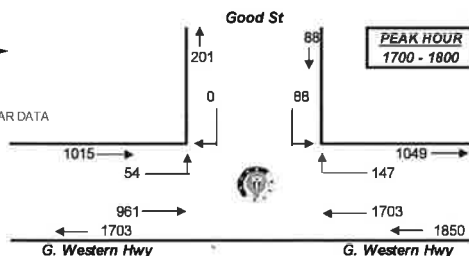


Client : John Coady Consulting
 Job No/Name : 5344 WESTMEAD Traffic Counts
 Day/Date : Friday / 10th October 2014

All Vehicles	WEST G. Western Hwy		NORTH Good St		EAST G. Western Hwy		TOTAL
	L	T	R	L	T	R	
1600 - 1615	3	211	0	20	409	17	660
1615 - 1630	5	191	2	19	423	28	668
1630 - 1645	7	218	0	17	429	36	707
1645 - 1700	9	203	0	30	445	27	714
1700 - 1715	9	206	0	23	419	39	696
1715 - 1730	14	243	0	18	477	39	791
1730 - 1745	11	245	0	20	419	35	730
1745 - 1800	20	267	0	27	388	34	736
Period End	78	1784	2	174	3409	255	5702

Peak Per	WEST G. Western Hwy		NORTH Good St		EAST G. Western Hwy		TOTAL
	L	T	R	L	T	R	
1600 - 1700	24	823	2	86	1706	108	2749
1615 - 1715	30	818	2	89	1716	130	2785
1630 - 1730	39	870	0	88	1770	141	2908
1645 - 1745	43	897	0	91	1760	140	2931
1700 - 1800	54	961	0	88	1703	147	2953

PEAK HOUR	54	961	0	88	1703	147	2953
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**R.O.A.R. DATA***Reliable, Original & Authentic Results*

Ph.88196847, Fax 88196849, Mob.0418-239019

Client : John Coady Consulting

Job No/Name : 5344 WESTMEAD Traffic Counts

Day/Date : Friday / 10th October 2014

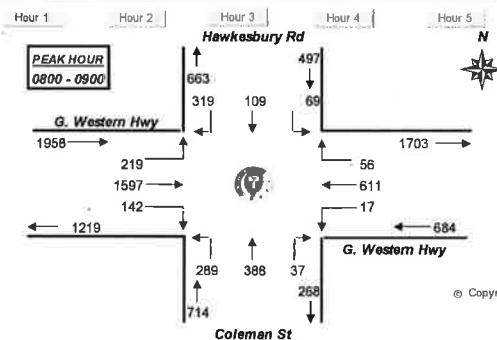
All Vehicles	NORTH				WEST				SOUTH				EAST				TOT
	Hawkesbury Rd				G. Western Hwy				Coleman St				G. Western Hwy				
Time Per	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	TOT	
0700 - 0715	8	9	44	48	380	22	66	113	9	3	98	10	810				
0715 - 0730	12	12	76	46	376	22	70	132	1	1	95	9	852				
0730 - 0745	21	19	80	73	444	15	44	97	6	4	146	18	967				
0745 - 0800	20	13	72	47	329	17	81	113	7	4	125	14	842				
0800 - 0815	19	25	68	56	357	21	69	115	14	1	148	7	899				
0815 - 0830	18	19	62	47	415	38	64	90	6	6	130	15	960				
0830 - 0845	13	29	78	48	419	38	74	92	7	7	149	20	974				
0845 - 0900	18	38	81	66	406	45	63	91	10	3	184	14	1020				
Period End	130	162	591	433	3126	218	550	843	60	29	1075	107	7324				

All Vehicles	NORTH				WEST				SOUTH				EAST				TOT
	Hawkesbury Rd				G. Western Hwy				Coleman St				G. Western Hwy				
Time Per	L	T	R		L	T	R		L	T	R		L	T	R		
1600 - 1615	23	40	147		38	179	34		101	81	11		10	325	12		981
1615 - 1630	20	51	168		28	168	34		100	69	8		15	310	11		982
1630 - 1645	19	33	158		45	173	44		118	57	8		8	378	10		1051
1645 - 1700	18	41	136		35	173	47		79	57	4		11	341	10		954
1700 - 1715	14	30	131		25	183	43		130	53	5		12	360	3		989
1715 - 1730	20	44	163		34	185	41		60	48	11		10	363	18		1027
1730 - 1745	12	41	85		27	226	30		116	50	13		12	368	4		994
1745 - 1800	10	34	125		43	240	32		118	60	10		9	310	7		908
Period End	138	314	1125		275	1527	365		852	455	70		87	2755	75		7976

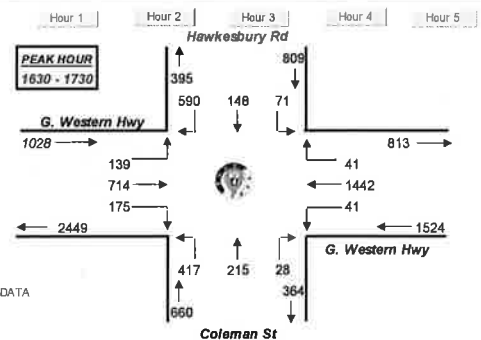
Peak Time	NORTH				WEST				SOUTH				EAST				TOT
	Hawkesbury Rd				G. Western Hwy				Coleman St				G. Western Hwy				
	L	T	R		L	T	R		L	T	R		L	T	R		
0700 - 0800	61	53	272		214	1529	76		261	455	23		12	464	51		3471
0715 - 0815	72	69	298		222	1506	75		263	457	28		10	514	48		3560
0730 - 0830	78	76	312		223	1545	91		277	415	33		15	549	54		3668
0745 - 0845	70	86	310		198	1520	114		307	410	34		18	552	56		3676
0800 - 0900	69	109	319		219	1597	142		289	388	37		17	611	58		3853

Peak Time	NORTH				WEST				SOUTH				EAST				TOT
	Hawkesbury Rd				G. Western Hwy				Coleman St				G. Western Hwy				
	L	T	R		L	T	R		L	T	R		L	T	R		
1600 - 1700	80	165	611		146	593	159		398	244	31		44	1354	43		3968
1615 - 1715	71	155	595		133	697	168		427	238	25		46	1389	34		3976
1630 - 1730	71	148	580		139	714	175		417	215	28		41	1442	41		4021
1645 - 1745	64	156	527		121	767	161		415	208	33		45	1432	35		3964
1700 - 1800	56	149	514		129	834	146		454	211	39		43	1401	32		4008

PEAK HOUR	69	109	319	219	1597	142	289	388	37	17	611	58	3853	PEAK HOUR	71	148	590	139	714	175	417	215	28	41	1442	41	4021
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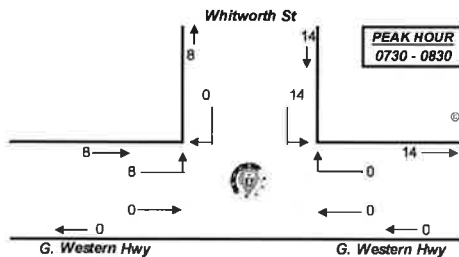
**ROAR DATA***Reliable, Original & Authentic Results*

Ph.88196847, Fax 88196849, Mob.0418-239019

Client : John Coady Consulting
 Job No/Name : 5344 WESTMEAD Traffic Counts
 Day/Date : Friday / 10th October 2014

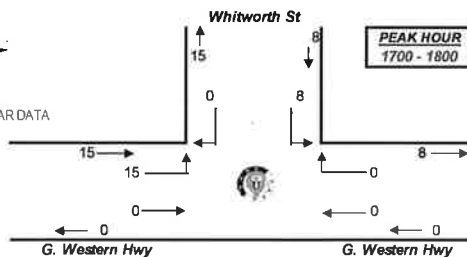
All Vehicles	WEST G. Western Hwy			NORTH Whitworth St			EAST G. Western Hwy			TOTAL
	L	T	R	L	T	R	L	T	R	
0700 - 0715	3			1						4
0715 - 0730	2			3						5
0730 - 0745	6			2						8
0745 - 0800	1			4						5
0800 - 0815	0			2						2
0815 - 0830	1			6						7
0830 - 0845	3			2						5
0845 - 0900	6			2						8
Period End	22	0	0	22	0	0				44

Peak Per	WEST G. Western Hwy			NORTH Whitworth St			EAST G. Western Hwy			TOTAL
	L	T	R	L	T	R	L	T	R	
0700 - 0800	12	0	0	10	0	0				22
0715 - 0815	9	0	0	11	0	0				20
0730 - 0830	8	0	0	14	0	0				22
0745 - 0845	5	0	0	14	0	0				19
0800 - 0900	10	0	0	12	0	0				22
PEAK HR	8	0	0	14	0	0				22



All Vehicles	WEST G. Western Hwy			NORTH Whitworth St			EAST G. Western Hwy			TOTAL
	L	T	R	L	T	R	L	T	R	
1600 - 1615	1			2						3
1615 - 1630	3			0						3
1630 - 1645	2			1						3
1645 - 1700	2			1						3
1700 - 1715	3			5						8
1715 - 1730	7			1						8
1730 - 1745	2			1						3
1745 - 1800	3			1						4
Period End	23	0	0	12	0	0				35

Peak Per	WEST G. Western Hwy			NORTH Whitworth St			EAST G. Western Hwy			TOTAL
	L	T	R	L	T	R	L	T	R	
1600 - 1700	8	0	0	4	0	0				12
1615 - 1715	10	0	0	7	0	0				17
1630 - 1730	14	0	0	8	0	0				22
1645 - 1745	14	0	0	8	0	0				22
1700 - 1800	15	0	0	8	0	0				23
PEAK HOUR	15	0	0	8	0	0				23



**R.O.A.R. DATA***Reliable, Original & Authentic Results*

Ph.88196847, Fax 88196849, Mob.0418-239019

Client : John Coady Consulting

Job No/Name : 5375 WESTMEAD Amos St

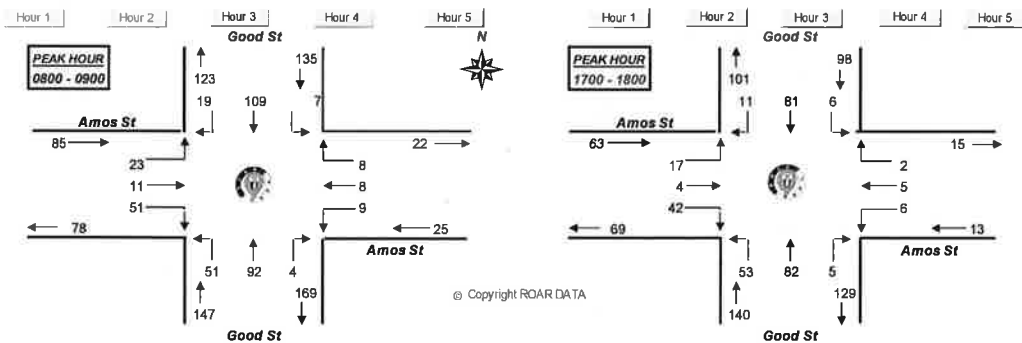
Day/Date : Thursday 23rd October 2014

All Vehicles	NORTH Good St				WEST Amos St				SOUTH Good St				EAST Amos St				TOT
	L	T	R		L	T	R		L	T	R		L	T	R		
0700 - 0715	0	16	3		0	0	2		6	14	0		1	1	1		44
0715 - 0730	0	15	4		1	0	1		8	17	1		4	3	1		55
0730 - 0745	2	10	4		3	1	3		5	18	0		1	1	1		49
0745 - 0800	3	17	2		2	4	5		9	22	0		1	3	1		69
0800 - 0815	5	26	2		6	4	17		11	24	2		3	2	5		107
0815 - 0830	1	27	8		4	4	10		17	22	2		3	3	1		102
0830 - 0845	0	31	6		7	1	13		15	25	0		2	1	1		102
0845 - 0900	1	25	3		6	2	11		8	21	0		1	2	1		81
Period End	12	167	32		29	16	62		79	163	5		16	16	12		609

All Vehicles	NORTH Good St				WEST Amos St				SOUTH Good St				EAST Amos St				TOT
	L	T	R		L	T	R		L	T	R		L	T	R		
1800 - 1815	1	17	3		3	3	4		10	19	2		3	2	1		68
1815 - 1830	0	15	2		3	1	6		8	14	0		1	1	0		51
1830 - 1845	0	18	4		2	0	3		7	14	0		1	1	1		51
1845 - 1900	0	14	2		1	1	7		9	11	0		1	1	1		48
1900 - 1915	1	17	1		2	0	7		12	13	1		2	1	0		57
1915 - 1930	1	21	3		5	0	11		10	18	1		2	0	0		72
1930 - 1945	2	18	2		4	2	11		14	23	2		1	2	1		82
1945 - 1800	2	25	5		6	2	13		17	28	1		1	2	1		103
Period End	7	145	22		28	9	62		87	140	7		12	10	5		532

Peak Time	NORTH Good St				WEST Amos St				SOUTH Good St				EAST Amos St				TOT
	L	T	R		L	T	R		L	T	R		L	T	R		
0700 - 0800	5	58	13		6	5	11		28	71	1		7	6	4		217
0715 - 0815	10	68	12		12	9	26		33	81	3		9	9	8		280
0730 - 0830	11	80	16		15	13	35		42	86	4		8	9	8		327
0745 - 0845	9	101	18		19	13	45		52	93	4		9	9	8		380
0800 - 0900	7	102	19		23	11	51		51	92	4		9	8	8		392
PEAK HOUR	7	109	19		23	11	51		51	92	4		9	8	8		392

Peak Time	NORTH Good St				WEST Amos St				SOUTH Good St				EAST Amos St				TOT
	L	T	R		L	T	R		L	T	R		L	T	R		
1800 - 1900	1	64	11		9	5	20		34	58	2		6	5	3		218
1815 - 1915	1	64	9		8	2	23		36	52	1		5	4	2		207
1830 - 1930	2	70	10		10	1	28		38	56	2		6	3	2		228
1845 - 1945	4	70	8		12	3	36		45	65	4		6	4	2		259
1900 - 1800	6	81	11		17	4	42		53	82	5		6	5	2		314
PEAK HOUR	6	81	11		17	4	42		53	82	5		6	5	2		314



**R.O.A.R. DATA***Reliable, Original & Authentic Results*

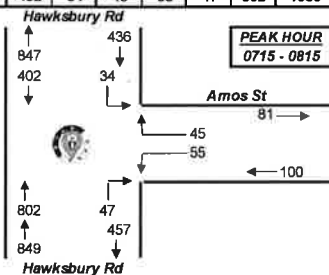
Ph.88196847, Fax 88196849, Mob.0418-239019

All Vehicles

Time Per	NORTH		EAST		SOUTH		TOTAL
	Hawksbury	Amos St	Hawksbury	Amos St	Hawksbury	Amos St	
0700 - 0715	87	6	2	14	4	212	325
0715 - 0730	91	5	3	23	6	234	362
0730 - 0745	112	7	16	9	5	190	339
0745 - 0800	93	8	13	8	16	186	324
0800 - 0815	106	14	13	15	20	192	380
0815 - 0830	92	14	10	17	21	208	362
0830 - 0845	113	12	11	14	20	121	291
0845 - 0900	98	14	9	10	14	187	332
Period End	792	80	77	110	106	1530	2695

Peak Per	NORTH		EAST		SOUTH		TOTAL
	Hawksbury	Amos St	Hawksbury	Amos St	Hawksbury	Amos St	
0700 - 0800	383	26	34	54	31	822	1350
0715 - 0815	402	34	45	55	47	802	1385
0730 - 0830	403	43	52	49	62	776	1385
0745 - 0845	404	48	47	54	77	707	1337
0800 - 0900	409	54	43	56	75	708	1345

PEAK HR	402	34	45	55	47	802	1385
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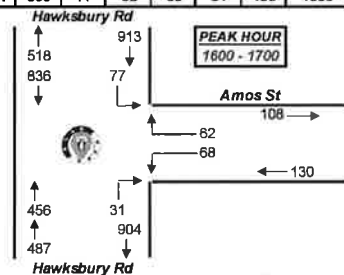
Client : John Coady Consulting
 Job No/Name : 5375 WESTMEAD Amos St
 Day/Date : Thursday 23rd October 2014

All Vehicles

Time Per	NORTH		EAST		SOUTH		TOTAL
	Hawksbury	Amos St	Hawksbury	Amos St	Hawksbury	Amos St	
1600 - 1615	212	11	15	17	7	113	375
1615 - 1630	186	24	12	18	7	94	341
1630 - 1645	220	18	17	17	8	121	401
1645 - 1700	218	24	18	16	9	128	413
1700 - 1715	179	10	15	17	10	104	335
1715 - 1730	193	13	16	19	9	117	367
1730 - 1745	214	15	8	15	8	98	358
1745 - 1800	220	15	11	15	8	116	385
Period End	1842	130	112	134	66	891	2975

Peak Per	NORTH		EAST		SOUTH		TOTAL
	Hawksbury	Amos St	Hawksbury	Amos St	Hawksbury	Amos St	
1600 - 1700	836	77	62	68	31	456	1530
1615 - 1715	803	76	62	68	34	447	1490
1630 - 1730	810	65	66	69	36	470	1516
1645 - 1745	804	62	57	67	36	447	1473
1700 - 1800	806	53	50	66	35	435	1445

PEAK HR	836	77	62	68	31	456	1530
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Appendix C
SIDRA Output Sheets