

Meeting Date: Tuesday 14 May 2013
Location: Council Chambers, Level 6, Civic Centre, 1 Devlin Street, Ryde
Time: 7.30pm

ATTACHMENTS FOR COUNCIL MEETING

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 City of Ryde

Lifestyle and opportunity @ your doorstep

PUBLIC WORKS

COR 2009/206

**“MONASH ROAD
(incorporating Eltham Street)**

—

**TRAFFIC MANAGEMENT
OPTIONS PAPER (TMOP)”**

Issue 2: 1 May 2013

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ATTACHMENT 1



ASSESSMENT REVIEW REVISIONS TABLE

Document No	Prepared By	Reviewed by	Issued By	Date
Issue 1	City of Ryde / Bitzios Consulting	H.Muker / F.Ramos	H.Muker	25 April 2013
Issue 2	City of Ryde / Bitzios Consulting	H.Muker / F.Ramos	H.Muker	1 May 2013



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**City of Ryde
Public Works
Traffic & Governance
Monash Road - TMOP
COR2009/206**

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MONASH ROAD (incorporating Eltham Street) – TMOP (Rev 2)
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1 PROPOSAL DETAILS

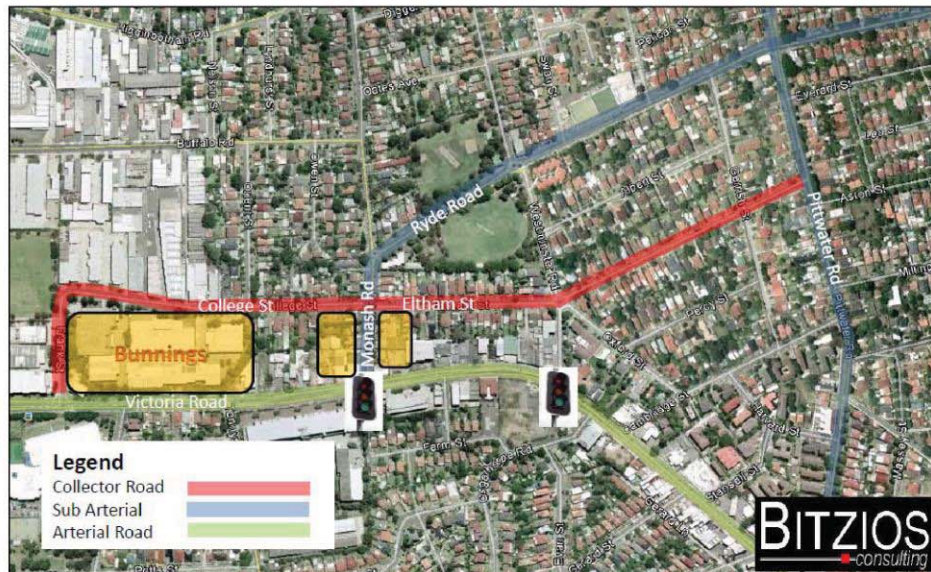
Name and Location of Proposed Activity Monash Road (between Victoria Road and Ryde Road) and adjoining streets. Request for Traffic Management measures to manage both vehicle flow and speeds along Eltham Street, Gladesville between Monash Road and Westminster Road and to improve the flow of traffic as well as safety conditions at the intersection of Eltham Street, College Street and Monash Road.

Local Government Area City of Ryde

2 DESCRIPTION OF THE PROBLEM

The matter of traffic management along Eltham Street has been recently tabled at Traffic Committee on 28 March 2013 that discussed “holistically”, *Road Capacity, Vehicle Speeds and Road Safety*. This report was a segue, to further review the “conditions” following further investigations by Council with subsequent “findings” summarised in an “Options Paper” (purpose of this report). Following the preparation of the report for the Ryde Traffic Committee to consider “Traffic Calming” along Eltham Street an item was raised as a “Matter of Urgency” (as noted below in background) which articulates the “outcomes” to be presented/discussed in subsequent traffic assessment (as a minimum), being:

- Reduce the flow of vehicle traffic and speeds of vehicles along Eltham Street, Gladesville between Monash Road and Westminster Road; and
- Improve the flow of traffic and safety conditions at the intersection of Eltham Street, College Street and Monash Road



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3 BACKGROUND

Council at its meeting on 26 March 2013 resolved to adopt the following recommendation in relation to "Matters of Urgency" under the title "Traffic Issues Related to Eltham Street, Gladesville", as follows:

- (a) The Acting General Manager prepare a report detailing appropriate traffic solutions to reduce the flow of vehicle traffic and speeds of vehicles along Eltham Street, Gladesville between Monash Road and Westminster Road and to further improve the flow of traffic at the intersection of Eltham Street, College Street and Monash Road and that this report be brought back to Council by 7 May 2013.
- (b) That traffic monitoring and investigation be extended by two weeks until 19 April 2013.

Note: Council approved a one week's extension to allow staff additional time to compile the Traffic Management Options Paper.

4 ROAD CLASSIFICATION PARAMETERS

Roads within a network are classified according to road hierarchy which relates closely to the functional role and the associated traffic volumes which they carry. The Roads and Maritime Services of NSW (RMS) has defined four (4) classes for the classification of roads:

- **Arterial Roads** – predominantly carry through traffic from one region to another forming principal avenues of communication for urban traffic movements
- **Sub-arterial Roads** – connect the arterial road to areas of development and carry traffic directly from one part of a region to another. They may also relieve traffic on arterial roads in some circumstances.
- **Collector Roads** – Connect the sub-arterial roads to the local road system in developed areas.
- **Local Roads** – The sub-divisional roads within a particular developed area. These are used solely as local access roads.

The RMS provides the following parameters for functional road classification specifically for the Sydney Conurbation (refer to the following page).

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Table 1.2.5 In the Sydney Conurbation

FACTOR	MEASURE of EFFECTIVENESS	Desirable Features for Each Road Class			
		ARTERIAL	SUB-ARTERIAL	COLLECTOR	LOCAL
Vehicle Speed	Operating speed	70 - 110 km/h	60 - 80 km/h	40 - 60 km/h	40 km/h or less
Traffic Use	Daily volume (vpd) In a residential area In other areas	No limit No limit	20,000 vpd max 20,000 vpd max	5,000 vpd max 10,000 vpd max	2,000 vpd max 4,000 vpd max
Intersection Spacing	Cross street interference	Approx 1 km	Approx 0.5 km		
Road Geometry	Number of travel lanes Medians Min carriageway width	4 or more Yes 13 m	2 or more As needed 7 m	2 or more No 7 m	1 or more No 4 m
Heavy Vehicles	Load restrictions	None	Preferably none	Yes, if residential	Yes, if residential
Traffic Management	Parking Intersection control Lane & separation lines Property access Control of turning veh's mid-block acc's control Right turn bays Road closures LATM devices SATM devices	None Yes Minimised Median cont'l Yes None	Prefer none REFER TO Yes Minimised Maybe control Preferred None Yes	Yes REFER TO TABLE 1.2.5a Maybe Yes No No Possible Yes	Yes No Yes No No Yes Yes
Pedestrian Crossings	Type of crossing	Grade separated or signals	Signals or refuge	Marked crossing Children's xing or refuge	Marked x'ing Children's xing or refuge

Note: Other factors to consider are bus routes, noise effects, impacts on adjacent land use, etc.

Extract from the RMS's Road Design Guide – 1991

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5 DATA COLLECTION, TRAFFIC VOLUMES AND SPEED

5.1 Traffic Data Review

The following traffic data was collected:

- Eltham Street / Monash Road intersection turning count survey (GTK Consulting), 5 April 2013
- SCATS detector counts, 4 April 2013
- Automatic tube counts (CFE), 5-11 April 2013

These counts were undertaken starting either the 4th or 5th of April. This week was after the Easter long weekend, and the preceding Monday was a public holiday. School holidays began the week after the 5th of April. It is therefore likely that traffic conditions on these days would not have represented the average weekday conditions.

To supplement the data, a review was undertaken comparing the most recent data to data provided in the traffic impact assessment for the proposed Bunnings Development (TTPA March 2012) and the proposed supermarket development, 407-417 Victoria Road & 1-9 Monash Road Gladesville (Varga Traffic Planning, December 2012).

It was found that the volumes of traffic westbound on Victoria Road in the SCATS detector counts were considerably less (400veh/hr) than volumes reported in the TTPA report and Varga Sidra models. SCATS detectors can sometimes be unreliable especially in congested conditions. The base traffic volumes were therefore adopted from the TTPA report for the Monash Road / Victoria Road intersection.

Traffic volumes at Eltham Street / College Street / Monash Road intersection were compared to the volumes used by Varga in the traffic impact assessment. The volumes from the recent intersection counts by GTK consulting were found to be marginally higher than those used in the Varga Report. Therefore the volumes from the GTK Consulting traffic surveys were used.

5.2 Traffic Volumes and Speed

The table below details results obtained from traffic volume and speed surveys that were undertaken during the period **5 April to 11 April 2013**

Street Name	Location of Counter (House Number)	85 th % Speed	5-day AADT	7-day AADT	Peak Hour Volume (bidirectional)		Comment
					AM (8am – 9am)	PM (5pm – 6pm)	
Eltham Street	54	57	2208	2041	196	206	Greater than 2000 vpd but less than 5000 vpd

The site plan on the following page illustrates the approximate deployment point of traffic counter detailed in the table above.

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Location Plan of Traffic Count Sites

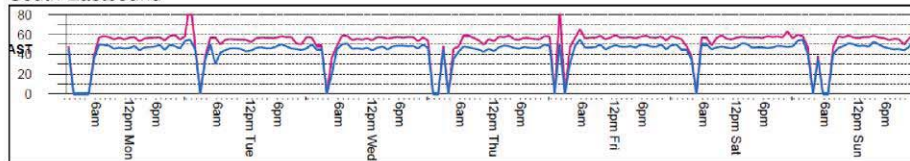


The daily traffic volumes are just greater than the 2200 vehicles per day target from the Road Design Guide, with the peak hourly traffic volumes around 200 vehicles per hour. The RTA Guide to Traffic Generating Developments (Table 4.6) sets out criteria for Environmental Capacity performance standards on residential streets. The goal for a Collector Road is a traffic volume of 300 vehicles per hour and the maximum 500 vehicles per hour.

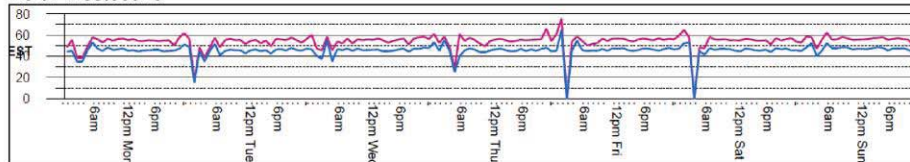
The 85th percentile speed of 57 km/h, while exceeding the speed limit of 50km/h, is probably typical for residential streets with geometry similar to Eltham Street, and is not considered excessive. Nevertheless, an 85th percentile speed of 50 km/hr is desirable.

The speeds by time of day are shown on the graphs below. It shows that speeds are generally constant throughout the day. Late night data when traffic volumes are low are typically unreliable which explains the sudden peaks and troughs seen between 3am and 6am. The blue line represents the 50th percentile speed while the pink line represents the 85th percentile speed.

South Eastbound



North Westbound



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6 OPTIONS ANALYSIS

6.1 Intersection Performance/Road Capacity Review and Characteristics

Using available traffic count data for the intersections of Victoria Road/Monash Road, and Monash Road/Eltham Street/College Street, capacity analyses have been undertaken using the SIDRA Intersection software.

Three (3) scenarios were evaluated:

1. '2013 Existing' – existing traffic conditions before approved development at 1-9 Monash Road
2. '2013 Existing with Development' – existing traffic conditions following completion of approved development at 1-9 Monash Road'
3. '2023 with Future Development' - existing traffic conditions factored up with 10 years of 'background' traffic growth (assuming 1% linear per annum), plus approved development at 1-9 Monash Road, plus proposed Bunnings development at 461 Victoria Road, plus maximum potential development of the western side of Monash Road (Victoria Road to College Street) in accordance with the relevant DCP.

6.1.1 SIDRA intersection analysis with “no” changes/alterations within the existing road environment

The results of the SIDRA intersection analyses are summarised in the table below:

Intersection	Peak Period	2013 Existing		2013 Existing with Development		2023 with Future Development	
		Avg Delay (S)	LoS	Avg Delay (S)	LoS	Avg Delay (S)	LoS
Victoria Road / Monash Road (Signals)	AM	12.5	A	12.5	A	13.2	A
	PM	11.0	A	11.8	A	14.5	A
Monash Road / Eltham Street / College Street (Stop sign controlled)	AM	27.1	B	27.8	B	35.5	C
	PM	31.2	C	41.2	C	61.6	E

Note: Average delay and Level of Service for priority sign controlled intersections is for the worst movement. For traffic signal intersections, this is the average delay and Level of Service for the entire intersection.

The modelling has shown that the operation of the signalised intersection of Victoria Road/Monash Road would remain acceptable (at Level of Service 'A') even with maximum proposed development in 2023. The southbound queue in Monash Road has the potential to block the Monash Road/Eltham Street/College Street intersection (approximately 105m away.) The modelling showed that the 95th percentile queue length was a maximum of 121m in the 2023 PM scenario. Recent queue length surveys indicated that this queue exceeded 120m in only one 15 minute period from 5:00 PM to 5:15 PM.

The modelling of the Stop sign controlled intersection of Monash Road/Eltham Street/College Street shows a gradual increase of delay in the AM peak period, but the worst LoS is C, which is still acceptable. This is for the Eltham Street westbound through movement of just 22 vehicles per hour. In the PM peak period, the LoS deteriorates to 'E'. Again, this is for the Eltham Street through movement of just 24 vehicles per hour. The results indicate that there is insufficient justification for alternative treatments at this intersection in the short to medium term based on traffic efficiency. The situation should be reviewed following the opening of the development at 1-9 Monash Road, and as part of the assessment of any future developments on the western side of Monash Road.

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6.2 Local Roads

The following table below details the various traffic management options that could be considered to ameliorate the incidence of speeding and to improve accessibility, if possible, on Eltham Street.

Traffic Management Measure	Advantages	Disadvantages	Estimated Construction Cost	Comments
LOCAL ROADS				
<i>College Street</i>				
No treatments proposed	Not Applicable	Not Applicable	Not Applicable	Not Applicable

6.3 Collector Roads

Traffic Management Measure	Advantages	Disadvantages	Estimated Construction Cost	Comments
COLLECTOR ROADS (including "Minor" Collector Roads – based on cross sectional profile)				
<i>Eltham Street</i>				Part 5: "Traffic Volumes and Speed" confirms that traffic volumes are within acceptable limits but traffic speeds are a little high. Measures to reduce the incidence of speeding could be considered.
Speed Humps (two required, spaced some 80m apart)	Reduce speeds and discourage through traffic.	Noise associated with braking and accelerating over the hump. May increase traffic volumes on other streets such as Monash Road or Ryde Road. Emergency services (such as ambulance) are generally not supportive of speed humps as they may compromise patient wellbeing, due to vertical translation across the traffic facility	\$30,000 + lighting	Council in the past is not supportive of traffic management measures of this type. The curvature of the road at gutter level may render this facility problematic as cars that abut the facility may find difficulties in traversing across the hump at the outer extremities. Note: A concept

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				plan has been provided (refer to Section 8.2)
Eltham Street Closure (east of driveway access to the approved mixed use development)	Reduction in through vehicle trips separating residential traffic from supermarket traffic.	Increases in some trip distance. Less direct access for emergency vehicles. May encourage some supermarket customers to park on street in Eltham Street (east) rather than drive around the block to access the off-street car park. Service vehicles such as Garbage trucks will need to perform a U turn or 3-point turn, at the closure point. Emergency vehicles do not support mid-block closures.	\$20,000 + lighting	May lead to other undesirable amenity issues in the area

6.3.1 SIDRA intersection analysis with “road closure” proposed along Eltham Street

Further analysis in Sidra was undertaken for the scenario where there is a closure in Eltham Street. The results of the analysis are shown in the table below. Through traffic in Eltham Street was assumed to be redirected via other routes.

Intersection	Peak Period	2013 Existing with Development With Eltham St Closure		2023 with Future Development With Eltham St Closure	
		Avg Delay (S)	LoS	Avg Delay (S)	LoS
Victoria Road / Monash Road (Signals)	AM	11.5	A	12.0	A
	PM	11.6	A	13.9	A
Monash Road / Eltham Street / College Street (Stop sign controlled)	AM	27.4	B	33.9	C
	PM	36.2	C	48.0	D

Note: Average delay and Level of Service for priority sign controlled intersections is for the worst movement. For traffic signal intersections, this is the average delay and Level of Service for the entire intersection.

The results indicate that the closure would improve the operation of the Monash Road / Eltham Street / College Road by removing the through traffic, however, other undesirable amenity impacts as noted in the table above would likely surface.

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6.4 Sub-arterial Roads (“Regional Roads”)

Traffic Management Measure	Advantages	Disadvantages	Estimated Construction Cost	Comments
SUB-ARTERIAL ROADS				
Monash Road				
Roundabout at Eltham Street / College Street / Monash Road intersection	Allows all traffic movements to enter an intersection in a controlled environment where the driver must give way to the first vehicle that enters the roundabout. Would reduce delays to vehicles proceeding through or turning right from both Eltham and College Streets.	May cause delays to through movements on Monash Road if right turns are dominant. College Street does not align with Eltham Street so the geometry might be challenging, especially for northbound trucks accessing the proposed Aldi supermarket, via Eltham Street. May encourage more through traffic to use College and Eltham Streets.	\$130,000 (for roundabout) + lighting	A concept plan has been prepared (refer to Section 8.2)

6.4.1 SIDRA intersection analysis with “roundabout” proposed at the intersection of Eltham Street/Monash Road/College Street

Further analysis in Sidra was undertaken for the scenario where there is a roundabout proposed at the intersection of Eltham Street/Monash Road/College Street.

Intersection	Peak Period	2013 Existing		2013 Existing with Development		2023 with Future Development	
		Avg Delay (S)	LoS	Avg Delay (S)	LoS	Avg Delay (S)	LoS
Monash Road / Eltham Street / College Street (Stop sign controlled)	PM	31.2	C	41.2	C	61.6	E
Monash Road / Eltham Street / College Street (Roundabout)	PM	-	-	-	-	15.9	B

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6.5 Pedestrian Treatments

Options are discussed below for providing pedestrian facilities on Monash Road. With the provision of a super market at the corner of Monash Road / Victoria Road it is likely that the demand for pedestrians to cross Monash Road will increase. It is understood that pedestrian access to the supermarket will be provided from both Monash Road and Victoria Road.

6.5.1 Roundabout

Roundabouts provide some protection for pedestrians within the splitter islands. Pedestrians would be able to stage their crossings of Monash Road.

6.5.2 Pedestrian Refuge

A pedestrian refuge would also provide some protection for pedestrians allowing them to stage their crossings. A pedestrian refuge would require at least 2m of road width for the island. This could restrict the ability to have two through lanes in either direction. It would be preferable to allow two lanes on approach to Victoria Road to give the signalised intersection better efficiency and additional storage space. For this reason any pedestrian refuge should be located in Monash Road north of Eltham Street and College Street.

6.5.3 Pedestrian Crossing

A pedestrian crossing or zebra crossing would provide priority for pedestrians crossings Monash Road. For safety reasons the crossing should not cover two lanes travelling in the same direction. This is because a vehicle stopped at the crossing would restrict sight distance to pedestrians on the crossing. To maintain two lane storage on the approach to Victoria Road it is suggested that any pedestrian crossing be located north of Eltham Street on Monash Road. Because a pedestrian crossing would give priority to pedestrians, it is possible that high pedestrian demand could cause queuing in Monash Road. It is doubtful that the RMS warrants for a pedestrian crossing would be met under current traffic conditions, so the situation should be reviewed after the opening of the mixed use development.

6.5.4 Signalised Pedestrian Crossing

A signalised pedestrian crossing was not considered in Monash Road mid-block as it was thought to be too close to the existing traffic signals at Monash Road / Victoria Road. There is an existing signalised crossing on the Monash Road approach and this is considered adequate if a door to the supermarket is located close to the corner of Monash Road / Victoria Road. In this way the existing signalised crossing would be close to the natural desire line of pedestrians travelling to and from the west. This would also be more desirable than encouraging pedestrians to walk through the car park or loading dock area to access the supermarket.

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7 CRASH STATISTICS

As noted in the Traffic Committee report (Item 21 'Eltham Street, Gladesville, Request for traffic calming':

It should be noted that the crash history on Eltham Street between Monash Road and Westminster Road indicates that there has been only one collision between 2003 and 2012. The collision involved one vehicle colliding with the rear of another in 2008.

Crash data for the Eltham Street / Monash Road intersection from 2004 to 2011 indicates that there was less than one crash per year at this location. The majority of these crashes are RUM code 10 which is vehicles colliding perpendicular from adjacent approaches.

Street Name	Crash Year (All Accidents are defined below as a RUM Code)					
	2005	2006	2007	2008	2009	2010
	<i>Collector Roads</i>					
Eltham Street / Monash Road	Nil	1x (RUM 10)	Nil	1x (RUM 10)	1x (RUM 10)	1x (RUM 21)

Note (RUM Codes):

- >> RUM 10: through from Eltham Street colliding with through from Monash Road (northbound)
- >> RUM 21: right out of College Street colliding with through from Eltham Street.

Of the two treatment options considered for the intersection it is anticipated that introducing a roundabout will eliminate or significantly reduce the collisions listed above. However, the road closure will not have any impact.

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8 RELATED DOCUMENTS

8.1 SIDRA modelling results

Victoria Road/Monash Road signalised intersection

MOVEMENT SUMMARY

Site: Victoria Road / Monash Road 2013 Existing AM

Victoria Road / Monash Road 2013 Existing AM

Signals - Fixed Time Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow	HV Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed	
		veh/h	%	v/c	sec	Vehicles	Distance		per veh	km/h	
East: Victoria Road (E)											
5	T	1420	1.3	0.518	1.9	LOS A	4.4	31.5	0.12	0.11	56.4
6	R	92	3.4	0.470	26.0	LOS B	3.3	23.7	0.63	0.78	33.9
Approach		1512	1.5	0.518	3.3	LOS A	4.4	31.5	0.15	0.15	54.4
North: Monash Road (N)											
7	L	79	1.3	0.644	55.4	LOS D	13.0	91.3	0.97	0.83	22.2
9	R	387	0.3	0.644	55.8	LOS D	13.0	91.3	0.98	0.83	22.2
Approach		466	0.5	0.644	55.7	LOS D	13.0	91.3	0.97	0.83	22.2
West: Victoria Road (W)											
10	L	397	0.3	0.663	15.0	LOS B	15.8	111.5	0.40	0.89	42.1
11	T	1951	1.1	0.663	8.8	LOS A	18.4	130.1	0.44	0.41	46.6
Approach		2347	0.9	0.663	9.8	LOS A	18.4	130.1	0.43	0.49	45.8
All Vehicles		4325	1.1	0.663	12.5	LOS A	18.4	130.1	0.39	0.41	43.2

MOVEMENT SUMMARY

Site: Victoria Road / Monash Road 2013 Existing PM

Victoria Road / Monash Road 2013 Existing PM

Signals - Fixed Time Cycle Time = 125 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow	HV Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed	
		veh/h	%	v/c	sec	Vehicles	Distance		per veh	km/h	
East: Victoria Road (E)											
5	T	1935	1.3	0.687	2.1	LOS A	8.3	58.9	0.16	0.15	56.0
6	R	99	3.2	0.475	25.5	LOS B	3.6	26.2	0.62	0.78	34.2
Approach		2034	1.4	0.687	3.2	LOS A	8.3	58.9	0.18	0.18	54.4
North: Monash Road (N)											
7	L	96	1.1	0.638	58.1	LOS E	12.6	88.9	0.98	0.83	21.7
9	R	334	0.3	0.638	59.0	LOS E	12.6	88.9	0.98	0.83	21.5
Approach		429	0.5	0.638	58.8	LOS E	12.6	88.9	0.98	0.83	21.5
West: Victoria Road (W)											
10	L	472	0.2	0.680	13.8	LOS A	15.3	107.4	0.36	0.87	42.9
11	T	1999	1.1	0.680	8.0	LOS A	19.1	134.6	0.41	0.38	47.5
Approach		2471	0.9	0.680	9.1	LOS A	19.1	134.6	0.40	0.48	46.6
All Vehicles		4934	1.1	0.687	11.0	LOS A	19.1	134.6	0.36	0.38	44.7

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MOVEMENT SUMMARY

Site: Victoria Road / Monash Road 2013 Existing With Dev AM

Victoria Road / Monash Road 2013 Existing With Development AM
Signals - Fixed Time Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow	HV Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed	
		veh/h	%			v/c	Vehicles				Distance
East: Victoria Road (E)											
5	T	1420	1.3	0.518	1.9	LOS A	4.4	31.5	0.12	0.11	56.4
6	R	94	3.4	0.478	26.1	LOS B	3.4	24.6	0.64	0.78	33.9
Approach		1514	1.5	0.518	3.4	LOS A	4.4	31.5	0.15	0.15	54.3
North: Monash Road (N)											
7	L	84	1.3	0.657	54.9	LOS D	13.3	93.4	0.97	0.83	22.4
9	R	393	0.3	0.657	55.7	LOS D	13.3	93.4	0.98	0.83	22.2
Approach		477	0.4	0.657	55.5	LOS D	13.3	93.4	0.98	0.83	22.2
West: Victoria Road (W)											
10	L	399	0.3	0.664	14.7	LOS B	15.3	107.4	0.39	0.89	42.3
11	T	1951	1.1	0.664	8.7	LOS A	18.4	130.3	0.43	0.40	46.6
Approach		2349	0.9	0.664	9.7	LOS A	18.4	130.3	0.43	0.49	45.9
All Vehicles		4340	1.1	0.664	12.5	LOS A	18.4	130.3	0.39	0.41	43.2

MOVEMENT SUMMARY

Site: Victoria Road / Monash Road 2013 Existing With Dev PM

Victoria Road / Monash Road 2013 Existing Existing With Development PM
Signals - Fixed Time Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow	HV Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed	
		veh/h	%			v/c	Vehicles				Distance
East: Victoria Road (E)											
5	T	1935	1.3	0.698	2.1	LOS A	8.2	58.3	0.16	0.15	55.9
6	R	127	2.5	0.607	30.1	LOS C	5.7	40.8	0.78	0.83	31.8
Approach		2062	1.4	0.698	3.8	LOS A	8.2	58.3	0.20	0.19	53.5
North: Monash Road (N)											
7	L	126	0.8	0.693	56.5	LOS D	14.2	100.0	0.98	0.85	22.0
9	R	364	0.3	0.693	57.5	LOS E	14.2	100.0	0.99	0.85	21.8
Approach		491	0.4	0.693	57.2	LOS E	14.2	100.0	0.99	0.85	21.8
West: Victoria Road (W)											
10	L	500	0.2	0.695	13.9	LOS A	15.9	111.8	0.39	0.87	42.8
11	T	1999	1.1	0.695	8.3	LOS A	19.8	140.2	0.44	0.41	47.0
Approach		2499	0.9	0.695	9.4	LOS A	19.8	140.2	0.43	0.50	46.1
All Vehicles		5052	1.1	0.698	11.8	LOS A	19.8	140.2	0.39	0.41	43.9

MOVEMENT SUMMARY

Site: Victoria Road / Monash Road 2023 Existing With Dev AM

Victoria Road / Monash Road 2023 Existing With Development AM
Signals - Fixed Time Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)



ITEM 5 (continued)

ATTACHMENT 1

**PUBLIC WORKS ASSESSMENT REPORT FOR
MONASH ROAD (incorporating Eltham Street) – TMOP (Rev 2)
COR2009/206**

Movement Performance - Vehicles											
Mov ID	Turn	Demand	HV	Deg. Satn	Average	Level of	95% Back of Queue		Prop.	Effective	Average
		Flow					Delay	Service			
		veh/h	%	v/c	sec		veh	m		per veh	km/h
East: Victoria Road (E)											
5	T	1599	1.3	0.584	2.0	LOS A	5.7	40.3	0.13	0.12	56.1
6	R	86	3.7	0.457	30.0	LOS C	3.4	24.5	0.69	0.79	31.9
Approach		1685	1.4	0.584	3.4	LOS A	5.7	40.3	0.16	0.16	54.1
North: Monash Road (N)											
7	L	97	1.1	0.733	57.2	LOS E	15.5	108.9	0.99	0.87	21.8
9	R	436	0.2	0.733	58.0	LOS E	15.5	108.9	1.00	0.87	21.7
Approach		533	0.4	0.733	57.9	LOS E	15.5	108.9	0.99	0.87	21.7
West: Victoria Road (W)											
10	L	448	0.2	0.733	15.3	LOS B	19.6	137.8	0.45	0.90	41.9
11	T	2147	1.1	0.733	9.4	LOS A	23.2	164.0	0.50	0.46	45.7
Approach		2596	0.9	0.733	10.4	LOS A	23.2	164.0	0.49	0.54	45.0
All Vehicles		4814	1.0	0.733	13.2	LOS A	23.2	164.0	0.43	0.44	42.5

MOVEMENT SUMMARY

Site: Victoria Road / Monash Road 2023 Existing With Dev PM

Victoria Road / Monash Road 2023 Existing Existing With Development PM
Signals - Fixed Time Cycle Time = 125 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles											
Mov ID	Turn	Demand	HV	Deg. Satn	Average	Level of	95% Back of Queue		Prop.	Effective	Average
		Flow					Delay	Service			
		veh/h	%	v/c	sec		veh	m		per veh	km/h
East: Victoria Road (E)											
5	T	2175	1.3	0.772	2.4	LOS A	12.2	86.3	0.20	0.19	55.3
6	R	208	1.5	0.796	54.0	LOS D	12.5	88.5	0.94	1.03	23.3
Approach		2383	1.3	0.796	6.9	LOS A	12.5	88.5	0.27	0.27	49.6
North: Monash Road (N)											
7	L	137	0.8	0.787	63.0	LOS E	17.2	120.7	1.00	0.90	20.6
9	R	398	0.3	0.787	64.0	LOS E	17.2	120.7	1.00	0.90	20.5
Approach		535	0.4	0.787	63.7	LOS E	17.2	120.7	1.00	0.90	20.5
West: Victoria Road (W)											
10	L	584	0.2	0.804	15.7	LOS B	25.4	178.6	0.51	0.90	41.4
11	T	2266	1.1	0.804	10.6	LOS A	30.9	218.0	0.58	0.54	44.3
Approach		2851	0.9	0.804	11.6	LOS A	30.9	218.0	0.57	0.62	43.7
All Vehicles		5768	1.0	0.804	14.5	LOS A	30.9	218.0	0.48	0.50	41.4

MOVEMENT SUMMARY

Site: Victoria Road / Monash Road 2013 Existing With Dev With Closure AM

Victoria Road / Monash Road 2013 Existing With Development With Eltham St Closure AM
Signals - Fixed Time Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles											
Mov ID	Turn	Demand	HV	Deg. Satn	Average	Level of	95% Back of Queue		Prop.	Effective	Average
		Flow					Delay	Service			
		veh/h	%	v/c	sec		veh	m		per veh	km/h
East: Victoria Road (E)											
5	T	1440	1.3	0.520	1.6	LOS A	4.1	28.8	0.11	0.10	56.8
6	R	80	3.9	0.419	23.4	LOS B	2.5	18.4	0.56	0.76	35.4
Approach		1520	1.5	0.520	2.8	LOS A	4.1	28.8	0.13	0.13	55.2
North: Monash Road (N)											

ITEM 5 (continued)

ATTACHMENT 1

**PUBLIC WORKS ASSESSMENT REPORT FOR
MONASH ROAD (incorporating Eltham Street) – TMOP (Rev 2)
COR2009/206**

7	L	76	1.4	0.620	55.2	LOS D	12.0	84.2	0.97	0.83	22.3
9	R	355	0.3	0.620	56.0	LOS D	12.0	84.2	0.97	0.83	22.1
Approach		431	0.5	0.620	55.9	LOS D	12.0	84.2	0.97	0.83	22.1
West: Victoria Road (W)											
10	L	359	0.3	0.656	14.5	LOS B	15.0	105.7	0.38	0.90	42.5
11	T	1991	1.1	0.656	8.1	LOS A	17.4	122.8	0.41	0.38	47.4
Approach		2349	0.9	0.656	9.1	LOS A	17.4	122.8	0.41	0.46	46.6
All Vehicles		4300	1.1	0.656	11.5	LOS A	17.4	122.8	0.37	0.38	44.1

MOVEMENT SUMMARY

Site: Victoria Road / Monash Road 2013 Existing With Dev With Closure PM

Victoria Road / Monash Road 2013 Existing Existing With Development With Eltham St Closure PM
Signals - Fixed Time Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow	HV %	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
East: Victoria Road (E)											
5	T	1955	1.3	0.705	2.1	LOS A	8.5	60.1	0.17	0.15	55.9
6	R	116	2.7	0.565	28.8	LOS C	4.8	34.7	0.73	0.81	32.5
Approach		2071	1.4	0.705	3.6	LOS A	8.5	60.1	0.20	0.19	53.8
North: Monash Road (N)											
7	L	124	0.8	0.691	56.4	LOS D	14.1	99.4	0.98	0.85	22.0
9	R	364	0.3	0.691	57.4	LOS E	14.1	99.4	0.99	0.85	21.8
Approach		488	0.4	0.691	57.2	LOS E	14.1	99.4	0.99	0.85	21.8
West: Victoria Road (W)											
10	L	465	0.2	0.696	14.1	LOS A	16.2	113.8	0.39	0.88	42.7
11	T	2034	1.1	0.696	8.4	LOS A	19.9	140.6	0.44	0.41	47.0
Approach		2499	0.9	0.696	9.4	LOS A	19.9	140.6	0.43	0.50	46.1
All Vehicles		5058	1.1	0.705	11.6	LOS A	19.9	140.6	0.39	0.41	44.0

MOVEMENT SUMMARY

Site: Victoria Road / Monash Road 2023 Existing With Dev With Closure AM

Victoria Road / Monash Road 2023 Existing With Development With Eltham St Closure AM
Signals - Fixed Time Cycle Time = 120 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow	HV %	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
East: Victoria Road (E)											
5	T	1621	1.3	0.585	1.8	LOS A	5.2	37.0	0.12	0.11	56.6
6	R	73	4.3	0.393	27.0	LOS B	2.5	18.4	0.61	0.77	33.4
Approach		1694	1.4	0.585	2.9	LOS A	5.2	37.0	0.14	0.14	55.0
North: Monash Road (N)											
7	L	85	1.2	0.688	56.5	LOS D	13.6	95.8	0.98	0.85	22.0
9	R	393	0.3	0.688	57.3	LOS E	13.6	95.8	0.99	0.85	21.8
Approach		478	0.4	0.688	57.2	LOS E	13.6	95.8	0.99	0.85	21.8
West: Victoria Road (W)											
10	L	404	0.3	0.724	15.1	LOS B	19.2	135.1	0.44	0.91	42.1
11	T	2192	1.1	0.724	8.7	LOS A	21.9	154.7	0.47	0.44	46.5
Approach		2596	0.9	0.724	9.7	LOS A	21.9	154.7	0.46	0.51	45.8
All Vehicles		4767	1.1	0.724	12.0	LOS A	21.9	154.7	0.40	0.41	43.6

ITEM 5 (continued)

ATTACHMENT 1

**PUBLIC WORKS ASSESSMENT REPORT FOR
MONASH ROAD (incorporating Eltham Street) – TMOP (Rev 2)
COR2009/206**

MOVEMENT SUMMARY

**Site: Victoria Road / Monash
Road 2023 Existing With Dev
With Closure PM**

Victoria Road / Monash Road 2023 Existing Existing With Development With Eltham St Closure PM
Signals - Fixed Time Cycle Time = 125 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow	HV %	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
East: Victoria Road (E)											
5	T	2197	1.2	0.780	2.4	LOS A	12.7	89.6	0.21	0.20	55.2
6	R	196	1.6	0.791	52.1	LOS D	11.7	83.3	0.93	1.01	23.8
Approach		2393	1.3	0.791	6.4	LOS A	12.7	89.6	0.27	0.26	50.1
North: Monash Road (N)											
7	L	133	0.8	0.782	62.8	LOS E	16.9	119.1	1.00	0.89	20.7
9	R	398	0.3	0.782	63.7	LOS E	16.9	119.1	1.00	0.89	20.5
Approach		531	0.4	0.782	63.5	LOS E	16.9	119.1	1.00	0.89	20.5
West: Victoria Road (W)											
10	L	545	0.2	0.794	15.5	LOS B	24.8	174.2	0.50	0.90	41.7
11	T	2304	1.1	0.794	9.8	LOS A	29.2	206.2	0.55	0.52	45.1
Approach		2849	0.9	0.794	10.9	LOS A	29.2	206.2	0.54	0.59	44.4
All Vehicles		5773	1.0	0.794	13.9	LOS A	29.2	206.2	0.47	0.48	41.9

ITEM 5 (continued)

ATTACHMENT 1

**PUBLIC WORKS ASSESSMENT REPORT FOR
MONASH ROAD (incorporating Eltham Street) – TMOP (Rev 2)
COR2009/206**

Monash Road/Eltham Street/College Street Stop sign controlled intersection

MOVEMENT SUMMARY

**Site: Monash Road / Eltham
Street 2013 Existing AM**

Monash Road / Eltham Street 2013 Existing AM
Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow	HV %	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Back of Queue Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Monash Road (S)											
1	L	43	0.0	0.050	6.4	LOS A	0.0	0.0	0.00	0.75	43.3
2	T	420	0.8	0.249	2.5	LOS A	1.9	13.6	0.44	0.00	44.7
3	R	54	0.0	0.249	9.3	LOS A	1.9	13.6	0.50	0.87	42.0
Approach		517	0.6	0.249	3.5	LOS A	1.9	13.6	0.41	0.15	44.3
East: Eltham Street (E)											
4	L	53	0.0	0.112	11.8	LOS A	0.3	1.8	0.46	0.92	39.6
5	T	20	0.0	0.124	26.9	LOS B	0.4	3.0	0.81	1.00	31.1
6	R	5	0.0	0.124	26.7	LOS B	0.4	3.0	0.81	1.00	31.2
Approach		78	0.0	0.124	16.7	LOS B	0.4	3.0	0.58	0.94	36.4
North: Monash Road (N)											
7	L	36	0.0	0.163	6.4	LOS A	0.0	0.0	0.00	0.87	43.3
8	T	421	0.5	0.163	0.7	LOS A	1.1	7.7	0.17	0.00	47.7
9	R	87	0.0	0.163	8.7	LOS A	1.1	7.7	0.50	0.79	42.1
Approach		544	0.4	0.163	2.4	LOS A	1.1	7.7	0.21	0.18	46.4
West: College Street (W)											
10	L	106	0.0	0.222	11.6	LOS A	0.5	3.7	0.45	0.91	39.8
11	T	16	0.0	0.121	27.1	LOS B	0.4	2.9	0.81	1.00	31.0
12	R	8	0.0	0.121	26.9	LOS B	0.4	2.9	0.81	1.00	31.1
Approach		131	0.0	0.222	14.4	LOS B	0.5	3.7	0.52	0.93	37.8
All Vehicles		1269	0.4	0.249	5.0	NA	1.9	13.6	0.34	0.29	43.8

MOVEMENT SUMMARY

**Site: Monash Road / Eltham
Street 2013 Existing PM**

Monash Road / Eltham Street 2013 Existing PM
Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow	HV %	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Back of Queue Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Monash Road (S)											
1	L	31	0.0	0.058	6.4	LOS A	0.0	0.0	0.00	0.81	43.3
2	T	542	0.6	0.289	2.6	LOS A	2.5	17.4	0.45	0.00	44.6
3	R	46	0.0	0.289	9.5	LOS A	2.5	17.4	0.53	0.89	42.0
Approach		619	0.5	0.289	3.3	LOS A	2.5	17.4	0.44	0.11	44.3
East: Eltham Street (E)											
4	L	75	0.0	0.158	11.9	LOS A	0.4	2.5	0.47	0.93	39.6
5	T	20	0.0	0.157	30.4	LOS C	0.5	3.7	0.85	1.00	29.6
6	R	7	0.0	0.157	30.2	LOS C	0.5	3.7	0.85	1.00	29.6
Approach		102	0.0	0.158	16.8	LOS C	0.5	3.7	0.57	0.95	36.3
North: Monash Road (N)											
7	L	49	0.0	0.160	6.4	LOS A	0.0	0.0	0.00	0.85	43.3
8	T	412	0.5	0.160	1.1	LOS A	1.2	8.2	0.20	0.00	47.2
9	R	72	0.0	0.160	9.4	LOS A	1.2	8.2	0.55	0.84	41.7
Approach		533	0.4	0.160	2.7	LOS A	1.2	8.2	0.23	0.19	46.0
West: College Street (W)											
10	L	96	0.0	0.215	12.4	LOS A	0.5	3.6	0.51	0.94	39.3

ITEM 5 (continued)

ATTACHMENT 1

**PUBLIC WORKS ASSESSMENT REPORT FOR
MONASH ROAD (incorporating Eltham Street) – TMOP (Rev 2)
COR2009/206**

11	T	20	0.0	0.179	31.2	LOS C	0.6	4.2	0.85	1.00	29.2
12	R	11	0.0	0.179	31.1	LOS C	0.6	4.2	0.85	1.01	29.3
Approach		126	0.0	0.215	16.9	LOS C	0.6	4.2	0.59	0.96	36.3
All Vehicles		1380	0.4	0.289	5.3	NA	2.5	17.4	0.38	0.28	43.4

MOVEMENT SUMMARY

Site: Monash Road / Eltham Street 2013 Existing With Dev AM

Monash Road / Eltham Street 2013 Existing Existing With Development AM
Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c			sec	Vehicles			
South: Monash Road (S)											
1	L	43	0.0	0.050	6.4	LOS A	0.0	0.0	0.00	0.75	43.3
2	T	420	0.8	0.252	2.5	LOS A	2.0	13.8	0.44	0.00	44.7
3	R	57	0.0	0.252	9.3	LOS A	2.0	13.8	0.50	0.87	42.0
Approach		520	0.6	0.252	3.6	NA	2.0	13.8	0.41	0.16	44.3
East: Eltham Street (E)											
4	L	63	0.0	0.134	11.9	LOS A	0.3	2.1	0.47	0.92	39.6
5	T	20	0.0	0.146	27.8	LOS B	0.5	3.5	0.82	1.00	30.7
6	R	8	0.0	0.146	27.7	LOS B	0.5	3.5	0.82	1.00	30.7
Approach		92	0.0	0.146	16.8	LOS B	0.5	3.5	0.58	0.95	36.3
North: Monash Road (N)											
7	L	37	0.0	0.163	6.4	LOS A	0.0	0.0	0.00	0.87	43.3
8	T	421	0.5	0.163	0.7	LOS A	1.1	7.7	0.17	0.00	47.7
9	R	87	0.0	0.163	8.7	LOS A	1.1	7.7	0.50	0.79	42.1
Approach		545	0.4	0.163	2.4	NA	1.1	7.7	0.21	0.19	46.4
West: College Street (W)											
10	L	106	0.0	0.222	11.6	LOS A	0.5	3.7	0.45	0.91	39.8
11	T	16	0.0	0.123	27.4	LOS B	0.4	2.9	0.82	1.00	30.9
12	R	8	0.0	0.123	27.2	LOS B	0.4	2.9	0.82	1.00	30.9
Approach		131	0.0	0.222	14.5	LOS B	0.5	3.7	0.52	0.93	37.8
All Vehicles		1287	0.4	0.252	5.1	NA	2.0	13.8	0.35	0.30	43.7

MOVEMENT SUMMARY

Site: Monash Road / Eltham Street 2013 Existing With Dev PM

Monash Road / Eltham Street 2013 Existing Existing With Development PM
Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c			sec	Vehicles			
South: Monash Road (S)											
1	L	31	0.0	0.069	6.4	LOS A	0.0	0.0	0.00	0.82	43.3
2	T	542	0.6	0.344	3.0	LOS A	3.3	23.2	0.48	0.00	44.1
3	R	103	0.0	0.344	10.2	LOS A	3.3	23.2	0.60	0.93	41.4
Approach		676	0.5	0.344	4.3	NA	3.3	23.2	0.48	0.18	43.6
East: Eltham Street (E)											
4	L	123	0.0	0.262	12.2	LOS A	0.6	4.5	0.49	0.95	39.4
5	T	20	0.0	0.315	41.2	LOS C	1.1	7.9	0.90	1.04	25.7
6	R	23	0.0	0.315	41.0	LOS C	1.1	7.9	0.90	1.04	25.7
Approach		166	0.0	0.315	19.7	LOS B	1.1	7.9	0.60	0.98	34.6
North: Monash Road (N)											

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7	L	68	0.0	0.165	6.4	LOS A	0.0	0.0	0.00	0.83	43.3
8	T	412	0.5	0.165	1.1	LOS A	1.2	8.6	0.22	0.00	47.1
9	R	72	0.0	0.165	9.4	LOS A	1.2	8.6	0.55	0.84	41.8
Approach		552	0.4	0.165	2.9	NA	1.2	8.6	0.23	0.21	45.8
West: College Street (W)											
10	L	96	0.0	0.215	12.4	LOS A	0.5	3.6	0.51	0.94	39.3
11	T	20	0.0	0.210	36.4	LOS C	0.7	5.0	0.88	1.01	27.3
12	R	11	0.0	0.210	36.2	LOS C	0.7	5.0	0.88	1.02	27.3
Approach		126	0.0	0.215	18.2	LOS B	0.7	5.0	0.60	0.96	35.5
All Vehicles		1520	0.3	0.344	6.6	NA	3.3	23.2	0.41	0.34	42.3

MOVEMENT SUMMARY

**Site: Monash Road / Eltham
Street 2023 Existing With Dev
AM**

Monash Road / Eltham Street 2023 Existing Existing With Development AM
Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow	HV %	Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		Vehicles	Distance		per veh	km/h
							veh	m			
South: Monash Road (S)											
1	L	34	0.0	0.062	6.4	LOS A	0.0	0.0	0.00	0.80	43.3
2	T	492	0.6	0.309	3.1	LOS A	2.8	19.6	0.49	0.00	44.0
3	R	84	0.0	0.309	10.2	LOS A	2.8	19.6	0.60	0.92	41.4
Approach		609	0.5	0.309	4.3	NA	2.8	19.6	0.48	0.17	43.6
East: Eltham Street (E)											
4	L	68	0.0	0.151	12.3	LOS A	0.4	2.5	0.49	0.94	39.3
5	T	22	0.0	0.211	35.5	LOS C	0.7	5.0	0.87	1.02	27.6
6	R	9	0.0	0.211	35.3	LOS C	0.7	5.0	0.87	1.02	27.6
Approach		100	0.0	0.211	19.6	LOS B	0.7	5.0	0.61	0.96	34.7
North: Monash Road (N)											
7	L	42	0.0	0.177	6.4	LOS A	0.0	0.0	0.00	0.86	43.3
8	T	469	0.4	0.177	0.9	LOS A	1.3	9.0	0.20	0.00	47.3
9	R	81	0.0	0.177	9.2	LOS A	1.3	9.0	0.54	0.83	41.9
Approach		593	0.4	0.177	2.5	NA	1.3	9.0	0.23	0.17	46.2
West: College Street (W)											
10	L	121	0.0	0.263	12.1	LOS A	0.6	4.5	0.49	0.93	39.5
11	T	20	0.0	0.199	34.5	LOS C	0.7	4.7	0.87	1.01	28.0
12	R	11	0.0	0.199	34.3	LOS C	0.7	4.7	0.87	1.01	28.0
Approach		152	0.0	0.263	16.6	LOS B	0.7	4.7	0.57	0.95	36.5
All Vehicles		1454	0.4	0.309	5.9	NA	2.8	19.6	0.40	0.31	43.0

MOVEMENT SUMMARY

**Site: Monash Road / Eltham
Street 2023 Existing With Dev
PM**

Monash Road / Eltham Street 2023 Existing Existing With Development PM
Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow	HV %	Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	v/c	sec		Vehicles	Distance		per veh	km/h
							veh	m			
South: Monash Road (S)											
1	L	41	0.0	0.078	6.4	LOS A	0.0	0.0	0.00	0.81	43.3
2	T	604	0.5	0.392	4.0	LOS A	4.5	31.6	0.58	0.00	43.1
3	R	114	0.0	0.392	11.3	LOS A	4.5	31.6	0.71	1.01	40.7
Approach		759	0.4	0.392	5.2	NA	4.5	31.6	0.57	0.19	42.8
East: Eltham Street (E)											
4	L	131	0.0	0.287	12.8	LOS A	0.8	5.3	0.52	0.99	39.0
5	T	24	0.0	0.483	61.6	LOS E	1.8	12.4	0.94	1.08	20.5

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6	R	24	0.0	0.483	61.4	LOS E	1.8	12.4	0.94	1.08	20.5
Approach		179	0.0	0.483	26.0	LOS B	1.8	12.4	0.64	1.01	31.3
North: Monash Road (N)											
7	L	81	0.0	0.201	6.4	LOS A	0.0	0.0	0.00	0.83	43.3
8	T	454	0.5	0.201	1.2	LOS A	1.4	10.1	0.19	0.00	47.3
9	R	101	0.0	0.201	10.1	LOS A	1.4	10.1	0.59	0.86	41.1
Approach		636	0.3	0.201	3.2	NA	1.4	10.1	0.23	0.24	45.7
West: College Street (W)											
10	L	113	0.0	0.263	13.2	LOS A	0.7	4.8	0.54	0.98	38.8
11	T	22	0.0	0.331	52.0	LOS D	1.1	7.9	0.92	1.04	22.7
12	R	13	0.0	0.331	51.8	LOS D	1.1	7.9	0.92	1.04	22.7
Approach		147	0.0	0.331	22.3	LOS B	1.1	7.9	0.63	0.99	33.2
All Vehicles		1721	0.3	0.483	8.1	NA	4.5	31.6	0.45	0.37	41.2

MOVEMENT SUMMARY

**Site: Monash Road / Eltham
Street 2013 Existing With Dev
With Closure AM**

Monash Road / Eltham Street 2013 Existing Existing With Development With Eltham St Closure AM
Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Monash Road (S)											
1	L	43	0.0	0.041	6.4	LOS A	0.0	0.0	0.00	0.71	43.3
2	T	420	0.8	0.203	2.2	LOS A	1.6	11.4	0.42	0.00	45.0
3	R	3	0.0	0.203	8.8	LOS A	1.6	11.4	0.46	0.88	42.5
Approach		466	0.7	0.203	2.6	NA	1.6	11.4	0.38	0.07	44.9
East: Eltham Street (E)											
4	L	14	0.0	0.029	11.5	LOS A	0.1	0.4	0.44	0.87	39.8
5	T	1	0.0	0.023	27.4	LOS B	0.1	0.5	0.80	0.96	30.8
6	R	3	0.0	0.023	27.3	LOS B	0.1	0.5	0.80	1.00	30.9
Approach		18	0.0	0.029	15.2	LOS B	0.1	0.5	0.53	0.90	37.3
North: Monash Road (N)											
7	L	1	0.0	0.154	6.4	LOS A	0.0	0.0	0.00	0.92	43.3
8	T	421	0.5	0.154	0.6	LOS A	1.0	7.0	0.14	0.00	48.0
9	R	87	0.0	0.154	8.7	LOS A	1.0	7.0	0.49	0.79	42.1
Approach		509	0.4	0.154	2.0	NA	1.0	7.0	0.20	0.14	46.8
West: College Street (W)											
10	L	122	0.0	0.255	11.6	LOS A	0.6	4.2	0.46	0.92	39.8
11	T	1	0.0	0.046	25.3	LOS B	0.2	1.1	0.78	1.00	31.8
12	R	8	0.0	0.046	25.2	LOS B	0.2	1.1	0.78	1.00	31.8
Approach		132	0.0	0.255	12.6	LOS A	0.6	4.2	0.48	0.92	39.1
All Vehicles		1125	0.5	0.255	3.7	NA	1.6	11.4	0.32	0.21	44.8

MOVEMENT SUMMARY

**Site: Monash Road / Eltham
Street 2013 Existing With Dev
With Closure PM**

Monash Road / Eltham Street 2013 Existing Existing With Development With Eltham St Closure PM
Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Monash Road (S)											
1	L	31	0.0	0.060	6.4	LOS A	0.0	0.0	0.00	0.81	43.3
2	T	543	0.8	0.298	2.4	LOS A	2.5	17.4	0.43	0.00	44.9
3	R	57	0.0	0.298	9.3	LOS A	2.5	17.4	0.51	0.88	42.1
Approach		631	0.7	0.298	3.2	NA	2.5	17.4	0.41	0.12	44.5
East: Eltham Street (E)											

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4	L	65	0.0	0.137	11.7	LOS A	0.3	2.2	0.46	0.92	39.7
5	T	1	0.0	0.126	36.2	LOS C	0.4	2.8	0.87	1.00	27.3
6	R	16	0.0	0.126	36.0	LOS C	0.4	2.8	0.87	1.00	27.4
Approach		82	0.0	0.137	16.7	LOS B	0.4	2.8	0.54	0.93	36.3
North: Monash Road (N)											
7	L	19	0.0	0.152	6.4	LOS A	0.0	0.0	0.00	0.89	43.3
8	T	412	0.5	0.152	0.9	LOS A	1.1	7.5	0.18	0.00	47.5
9	R	72	0.0	0.152	9.4	LOS A	1.1	7.5	0.54	0.83	41.7
Approach		502	0.4	0.152	2.3	NA	1.1	7.5	0.22	0.15	46.4
West: College Street (W)											
10	L	116	0.0	0.259	12.5	LOS A	0.6	4.5	0.52	0.95	39.2
11	T	1	0.0	0.078	33.0	LOS C	0.2	1.7	0.85	1.00	28.5
12	R	11	0.0	0.078	32.8	LOS C	0.2	1.7	0.85	1.00	28.5
Approach		127	0.0	0.259	14.4	LOS A	0.6	4.5	0.55	0.96	37.9
All Vehicles		1342	0.5	0.298	4.8	NA	2.5	17.4	0.36	0.26	43.9

MOVEMENT SUMMARY

**Site: Monash Road / Eltham
Street 2023 Existing With Dev
With Closure AM**

Monash Road / Eltham Street 2023 Existing Existing With Development With Eltham St Closure AM
Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Monash Road (S)											
1	L	34	0.0	0.048	6.4	LOS A	0.0	0.0	0.00	0.77	43.3
2	T	514	0.6	0.238	2.6	LOS A	2.1	14.7	0.45	0.00	44.8
3	R	3	0.0	0.238	9.3	LOS A	2.1	14.7	0.50	0.91	42.2
Approach		551	0.6	0.238	2.9	NA	2.1	14.7	0.42	0.05	44.7
East: Eltham Street (E)											
4	L	14	0.0	0.030	11.9	LOS A	0.1	0.5	0.46	0.88	39.6
5	T	1	0.0	0.030	33.9	LOS C	0.1	0.7	0.85	1.00	28.2
6	R	3	0.0	0.030	33.7	LOS C	0.1	0.7	0.85	1.00	28.2
Approach		18	0.0	0.030	17.0	LOS B	0.1	0.7	0.56	0.91	36.2
North: Monash Road (N)											
7	L	1	0.0	0.166	6.4	LOS A	0.0	0.0	0.00	0.92	43.3
8	T	469	0.4	0.166	0.8	LOS A	1.2	8.2	0.17	0.00	47.7
9	R	81	0.0	0.166	9.3	LOS A	1.2	8.2	0.54	0.83	41.8
Approach		552	0.4	0.166	2.1	NA	1.2	8.2	0.22	0.12	46.7
West: College Street (W)											
10	L	141	0.0	0.310	12.7	LOS A	0.8	5.9	0.51	0.97	39.1
11	T	1	0.0	0.071	30.5	LOS C	0.2	1.6	0.83	1.00	29.5
12	R	11	0.0	0.071	30.3	LOS C	0.2	1.6	0.83	1.00	29.6
Approach		153	0.0	0.310	14.0	LOS A	0.8	5.9	0.54	0.97	38.2
All Vehicles		1273	0.4	0.310	4.1	NA	2.1	14.7	0.35	0.21	44.5

MOVEMENT SUMMARY

**Site: Monash Road / Eltham
Street 2023 Existing With Dev
With Closure PM**

Monash Road / Eltham Street 2023 Existing Existing With Development With Eltham St Closure PM
Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Monash Road (S)											
1	L	41	0.0	0.067	6.4	LOS A	0.0	0.0	0.00	0.79	43.3
2	T	611	0.7	0.334	3.1	LOS A	3.3	23.5	0.50	0.00	44.1

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3	R	57	0.0	0.334	10.0	LOS A	3.3	23.5	0.58	0.93	41.7
Approach		708	0.6	0.334	3.8	NA	3.3	23.5	0.47	0.12	43.9
East: Eltham Street (E)											
4	L	65	0.0	0.141	12.1	LOS A	0.3	2.3	0.48	0.93	39.5
5	T	1	0.0	0.175	48.0	LOS D	0.5	3.8	0.91	1.00	23.7
6	R	16	0.0	0.175	47.8	LOS D	0.5	3.8	0.91	1.01	23.7
Approach		82	0.0	0.175	19.4	LOS B	0.5	3.8	0.57	0.95	34.7
North: Monash Road (N)											
7	L	19	0.0	0.186	6.4	LOS A	0.0	0.0	0.00	0.90	43.3
8	T	454	0.5	0.186	0.9	LOS A	1.2	8.6	0.14	0.00	48.0
9	R	103	0.0	0.186	10.0	LOS A	1.2	8.6	0.57	0.85	41.0
Approach		576	0.4	0.186	2.7	NA	1.2	8.6	0.21	0.18	46.4
West: College Street (W)											
10	L	136	0.0	0.318	13.7	LOS A	0.9	6.4	0.56	1.01	38.4
11	T	1	0.0	0.124	41.7	LOS C	0.4	2.7	0.89	1.00	25.5
12	R	13	0.0	0.124	41.5	LOS C	0.4	2.7	0.89	1.00	25.5
Approach		149	0.0	0.318	16.2	LOS B	0.9	6.4	0.59	1.01	36.7
All Vehicles		1516	0.4	0.334	5.4	NA	3.3	23.5	0.39	0.28	43.3

ITEM 5 (continued)

ATTACHMENT 1

PUBLIC WORKS ASSESSMENT REPORT FOR
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8.2 Treatment Diagrams (Traffic Facilities)

8.2.1 Speed Humps – Eltham Street



Indicative locations of speed humps some 80m apart



Indicative location of road closure in Eltham Street

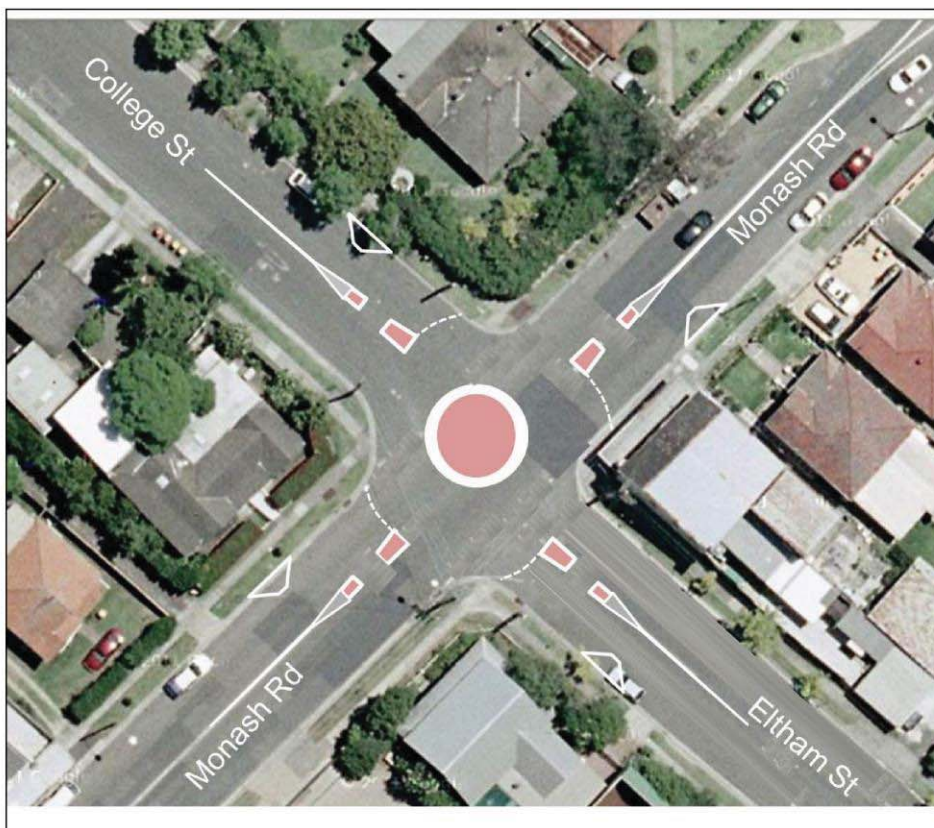


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8.2.2 Roundabout – Eltham Street/College Street/Monash Road



Note: Indicative roundabout design (the centre lines of College Street and Eltham Street are not aligned)



ITEM 5 (continued)

ATTACHMENT 1

**PUBLIC WORKS ASSESSMENT REPORT FOR
MONASH ROAD (incorporating Eltham Street) – TMOP (Rev 2)
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8.3 Ryde Local Traffic Committee Report (March 28 meeting) titled “Eltham Street, Gladesville – Request for Traffic Calming”

AGENDA

City of Ryde

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SECTION 11

ITEM 21

ELTHAM STREET, GLADESVILLE Request for Traffic Calming
File No: Help Desk 5178

Council’s Traffic Engineer – Traffic and Governance report 16 March 2013

Summary Report
Several concerns have been made in relation to traffic conditions on Eltham Street, Gladesville, particularly associated with the perceived excessive traffic volumes. As a consequence, it has been requested that the possibility of traffic calming, including the option of a road closure, be investigated.

Consideration
Roads are categorised based on their functionality and are also given a numerical value or “notional capacity” relating to the maximum desirable traffic volume for a particular road category. Most guides / standards used throughout Australia consist of definitions that have been conceived several years after the construction of Eltham Street. As a consequence Eltham Street consists of characteristics typical of more than one category including features of a local road as well as a minor collector road.

The above is evident when examining the intended functionality of these types of roads as stipulated in most guides. For example, most guides will define a minor-collector road’s main function as distributing traffic from access streets to and from major collector roads and occasionally, directly to the arterial road network. They generally consist of a maximum road capacity of 3000vpd and consist of vehicular speeds ranging from 40 to 60km/hr. Conversely, local roads are generally roads in which the residential environment is dominant and connect only to collector roads, consist of vehicular speeds of up to 40km/hr and carries a notional capacity of 2000vpd.

Given the above, it is clear that Eltham Street consists of characteristics common to both a minor collector and a local road and should not be viewed strictly as one or the other.

Road Capacity
Road capacities are notional and should only be used as a guide rather than a precise quantifiable limit. As such, an ameliorative treatment aimed at reducing traffic volumes should only be adopted in a case where traffic volumes exceed the notional capacity by a substantial amount. Instead, any treatment that may be considered should aim to best achieve all of the functional purposes of the road.

ITEM 5 (continued)

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City of Ryde

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A traffic survey has been undertaken for the week commencing Monday 18th March 2013. The survey for Eltham Street providing details of the traffic volumes will be tabled at the Traffic Committee for discussion.

The volumes obtained via the survey are anticipated to change given the current number of proposed developments as well as recently approved developments within relatively close proximity of Eltham Street. In addition, the street's minor-collector characteristics suggest that it may be subject to an incremental growth rate associated with the natural growth of the area rather than only as a result of future development solely on Eltham Street.

In light of the above, traffic conditions along Eltham Street should continue to be monitored over time.

Vehicular Speeds

It is desirable for local roads to consist of vehicular speed limits of 40km/hr. This is more common for more recently developed areas in which local roads are designed to be narrower and consist of more curves in the road such that higher traffic speeds are more difficult to achieve. However, the vast majority of roads throughout Sydney including the Ryde and Gladesville area, roads were constructed to consist of a much greater width and include long stretches of straight road. Roads such as this, including Eltham Street, often serve more than the purpose of providing access to residents and limiting traffic volumes to 40km/hr is impractical. Furthermore, vehicular speeds throughout the vast majority of local roads in Sydney are generally limited to 50km/hr. As such, a velocity of 50km/hr is considered to be a reasonable vehicular limit to suit the Eltham Street's functions as both a local road and a minor-collector road. The need for an ameliorative treatment as well as the type of treatment should be determined accordingly.

The survey for Eltham Street providing details of the vehicular speeds will be tabled at the Traffic Committee for discussion.

Road Safety along Eltham Street

Excessive speeds are generally an indicator of road safety concerns. It should be noted that the crash history on Eltham Street between Monash Road and Westminster Road indicates that there has been only one collision between 2003 and 2012. The collision involved one vehicle colliding with the rear of another in 2008. The collision history does not indicate that the road environment is conducive to excessive speeds or of an unsafe environment.

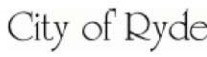
COUNCIL PROPOSAL

- (a) That Council notes the information contained within this report; and
- (b) That vehicular speed, traffic volumes and safety conditions on Eltham Street be monitored.

ITEM 5 (continued)

ATTACHMENT 1

**PUBLIC WORKS ASSESSMENT REPORT FOR
MONASH ROAD (incorporating Eltham Street) – TMOP (Rev 2)
COR2009/206**



AGENDA

Subject: RYDE TRAFFIC COMMITTEE MEETING TO BE HELD 28 MARCH 2013	Page 48 of 48
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COMMITTEE RECOMMENDATION:

Submitted for the consideration of the Committee

<p>Federico Ramos Traffic Engineer – Traffic & Governance</p> <p>Nina Fard Traffic Engineer – Traffic & Governance</p> <p>Harry Muker Section Manager - Traffic & Governance</p>	<p>Austin Morris Service Unit Manager- infrastructure Integration</p> <p>George Dedes Acting Group Manager – Public Works</p>
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ITEM 5 (continued)

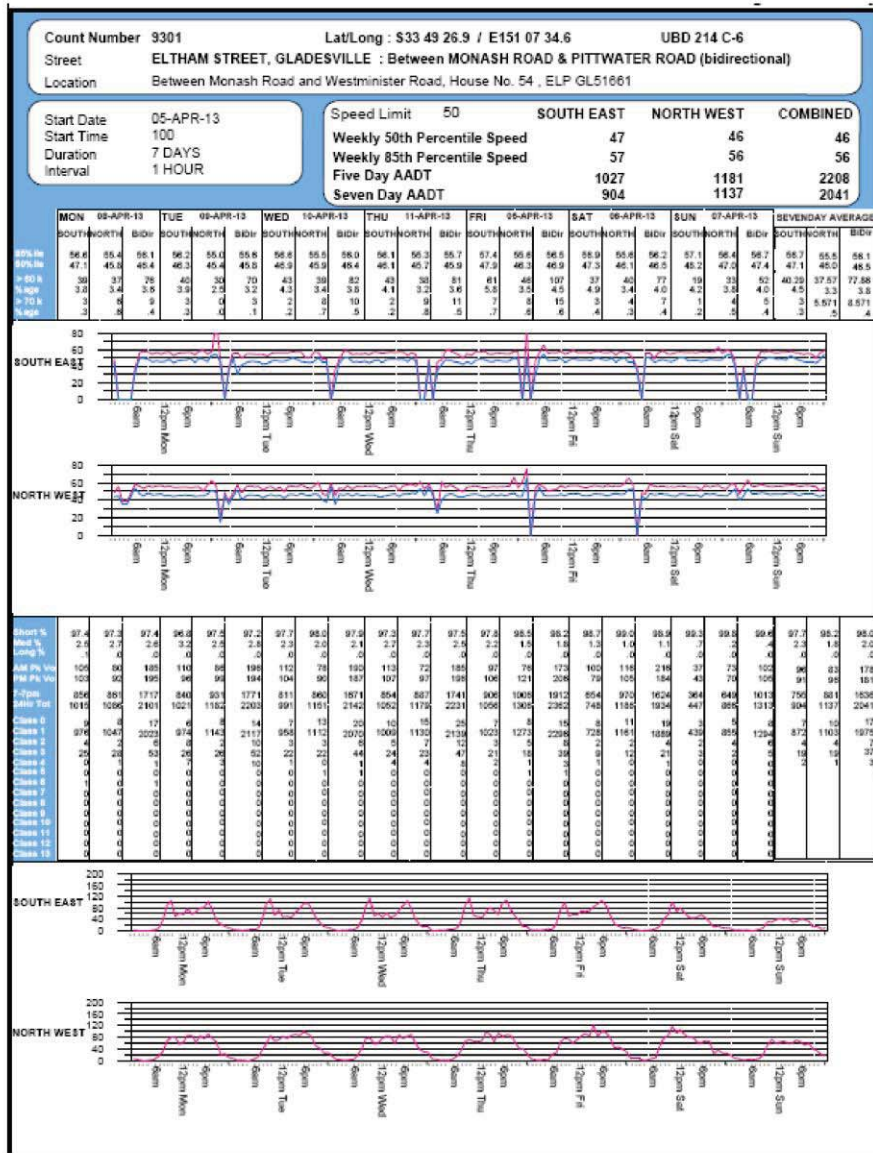
ATTACHMENT 1

**PUBLIC WORKS ASSESSMENT REPORT FOR
MONASH ROAD (incorporating Eltham Street) – TMO (Rev 2)
COR2009/206**

9 OTHER

9.1 Automatic Tube Counts

9.1.1 Eltham Street



ITEM 5 (continued)

ATTACHMENT 1

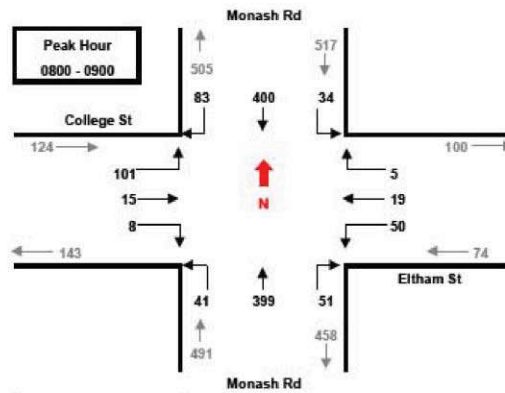
PUBLIC WORKS ASSESSMENT REPORT FOR
MONASH ROAD (incorporating Eltham Street) – TMOP (Rev 2)
COR2009/206

9.2 Intersection Turning Counts (Eltham Street/Monash Road/College Street)



All Vehicles Time Pst	NORTHBOUND Monash Rd			SOUTHBOUND Monash Rd			EASTBOUND College St			WESTBOUND Eltham St			TOT
	L	T	R	L	T	R	L	T	R	L	T	R	
0730-0745	3	114	4	6	97	14	29	2	1	17	2	3	292
0745-0800	8	88	8	8	104	9	20	3	0	5	8	1	262
0800-0815	9	101	11	7	118	14	22	3	5	13	4	0	307
0815-0830	9	100	10	7	91	30	25	1	0	11	7	3	294
0830-0845	13	94	15	10	111	23	26	4	0	17	7	1	321
0845-0900	10	104	15	10	80	16	28	7	3	9	1	1	284
AM Totals	52	601	63	48	601	106	150	20	9	72	29	9	1760

Peak Time	NORTHBOUND Monash Rd			SOUTHBOUND Monash Rd			EASTBOUND College St			WESTBOUND Eltham St			TOT
	L	T	R	L	T	R	L	T	R	L	T	R	
0730-0830	29	403	33	28	410	67	96	9	6	46	21	7	1155
0745-0845	39	383	44	32	424	76	93	11	5	46	26	5	1184
0800-0900	41	399	51	34	400	83	101	15	8	50	19	5	1206
Peak Hour	41	399	51	34	400	83	101	15	8	50	19	5	1206



ITEM 5 (continued)

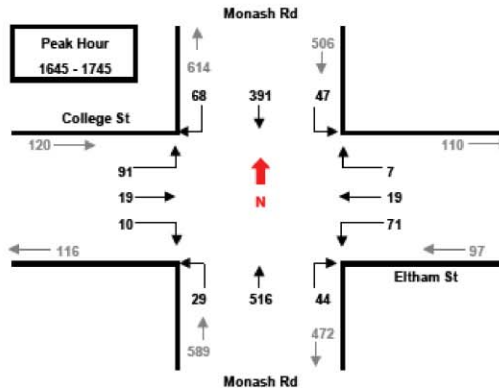
ATTACHMENT 1

**PUBLIC WORKS ASSESSMENT REPORT FOR
MONASH ROAD (incorporating Eltham Street) – TMOP (Rev 2)
COR2009/206**

Client: Ryde City Council
 Intersection: Eltham St/College St/Monash Rd
 Day/Date: Friday 5 April 2013
 Description: Intersection Count All Vehicles/15 Minute Data

All Vehicles Time Per	NORTHBOUND Monash Rd			SOUTHBOUND Monash Rd			EASTBOUND College St			WESTBOUND Eltham St			TOT
	L	T	R	L	T	R	L	T	R	L	T	R	
1630-1645	7	74	6	14	90	19	9	7	2	16	3	2	243
1645-1700	6	123	11	10	122	18	22	3	2	11	4	2	334
1700-1715	10	118	12	14	88	21	17	6	5	26	7	3	327
1715-1730	4	140	15	9	91	11	34	7	3	23	2	1	340
1730-1745	9	135	6	14	90	18	18	3	0	11	6	1	311
1745-1800	6	123	8	9	99	12	13	5	3	13	3	3	297
1800-1815	2	105	10	8	70	13	17	7	1	17	11	4	265
1815-1830	1	99	9	11	83	9	4	1	1	19	1	1	239
1830-1845	1	88	10	7	86	2	13	1	3	14	1	3	229
1845-1900	1	82	9	6	80	2	11	0	1	12	0	1	205
PM Totals	47	1087	96	102	899	125	158	40	21	162	38	21	2798

Peak Time	NORTHBOUND Monash Rd			SOUTHBOUND Monash Rd			EASTBOUND College St			WESTBOUND Eltham St			TOT
	L	T	R	L	T	R	L	T	R	L	T	R	
1630-1730	27	455	44	47	391	69	82	23	12	76	16	8	1250
1645-1745	29	516	44	47	391	68	91	19	10	71	19	7	1312
1700-1800	29	516	41	46	368	62	82	21	11	73	18	8	1275
1715-1815	21	503	39	40	350	54	82	22	7	64	22	9	1213
1730-1830	18	462	33	42	342	52	52	16	5	60	21	9	1112
1745-1845	10	415	37	35	338	36	47	14	8	63	16	11	1030
1800-1900	5	374	38	32	319	26	45	9	6	62	13	9	938
Peak Hour	29	516	44	47	391	68	91	19	10	71	19	7	1312



PM Counts

ITEM 5 (continued)

ATTACHMENT 1

PUBLIC WORKS ASSESSMENT REPORT FOR
MONASH ROAD (incorporating Eltham Street) – TMOP (Rev 2)
COR2009/206

9.3 SCATS Detector Counts

9.3.1 Monash Road / Victoria Road



Note: the hourly breakdown of vehicle volumes collected is summarised on the following page



ITEM 5 (continued)

ATTACHMENT 1

**PUBLIC WORKS ASSESSMENT REPORT FOR
MONASH ROAD (incorporating Eltham Street) – TMOP (Rev 2)
COR2009/206**

Thursday, 04 April 2013										
approach - detector(s)...										
Approach 1	1	2	3	4	5	6	7	8	9	
01:00	6	88	20	5	4	140	84	8	13	368
02:00	10	57	11	3	3	84	53	5	15	241
03:00	6	66	10	7	4	37	30	5	7	172
04:00	9	82	17	5	5	48	27	2	6	201
05:00	18	161	52	4	4	52	38	10	15	354
06:00	159	389	327	11	10	127	79	39	49	1190
07:00	409	817	916	21	24	328	307	90	132	3044
08:00	522	730	782	45	58	663	655	186	198	3839
09:00	413	588	673	50	84	617	573	197	220	3415
10:00	362	672	700	44	77	549	550	169	203	3326
11:00	332	641	680	51	73	463	427	139	187	2993
12:00	290	601	544	60	90	469	455	141	192	2842
13:00	288	579	542	57	79	525	518	185	198	2971
14:00	290	565	515	39	59	576	555	179	206	2984
15:00	331	508	493	63	102	598	622	166	207	3090
16:00	374	560	508	61	105	668	682	185	213	3356
17:00	465	670	661	66	93	719	775	179	215	3843
18:00	560	757	773	42	86	695	719	207	205	4044
19:00	510	702	678	50	71	627	653	152	174	3617
20:00	276	492	416	44	57	586	595	121	144	2731
21:00	178	354	279	40	43	399	412	89	96	1890
22:00	125	352	261	33	30	411	386	73	78	1749
23:00	93	275	166	18	18	362	335	61	65	1393
24:00	43	158	77	9	9	238	230	19	36	819
Approach 1	AM peak	3839	07:00 - 08:00	PM peak	4066	16:45 - 17:45	Daily			
Total	54472									

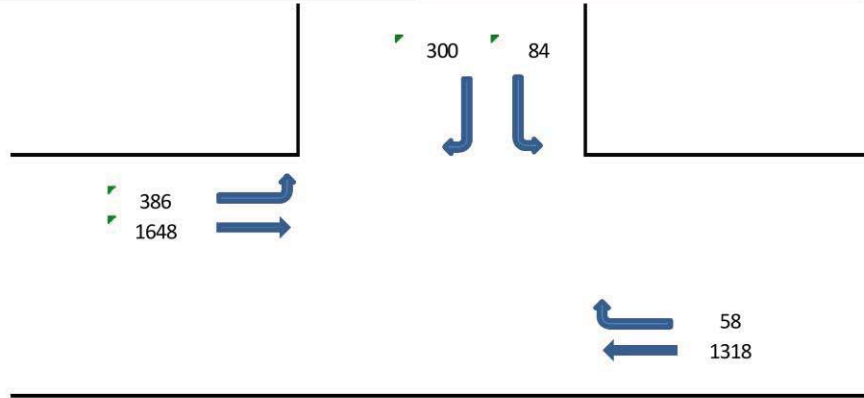
Note: The information contained above is a SCATS output summary of detector counts during hourly intervals



ITEM 5 (continued)

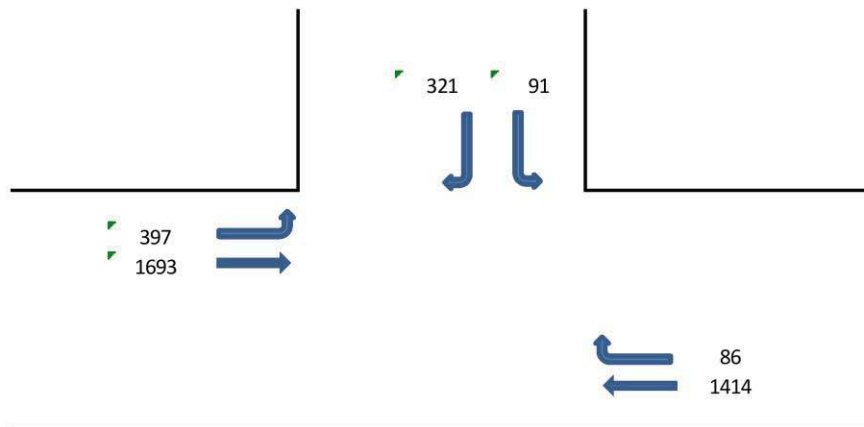
ATTACHMENT 1

**PUBLIC WORKS ASSESSMENT REPORT FOR
MONASH ROAD (incorporating Eltham Street) – TMOP (Rev 2)
COR2009/206**



* 22% turning left from Monash Road
**19% turning left from Victoria Road

AM Peak



* 22% turning left from Monash Road
**19% turning left from Victoria Road

PM Peak

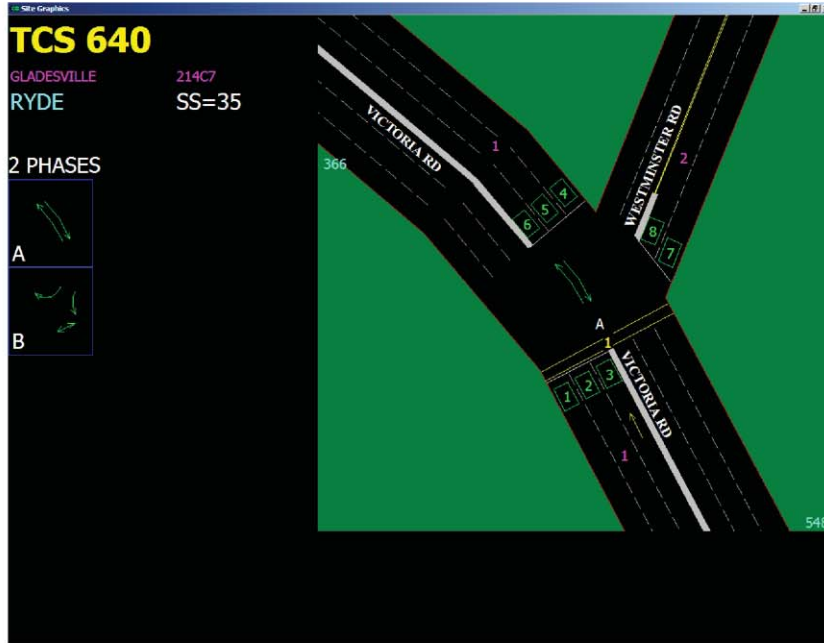


ITEM 5 (continued)

ATTACHMENT 1

PUBLIC WORKS ASSESSMENT REPORT FOR
MONASH ROAD (incorporating Eltham Street) – TMOP (Rev 2)
COR2009/206

Westminster Road and Victoria Road



ITEM 5 (continued)

ATTACHMENT 1

**PUBLIC WORKS ASSESSMENT REPORT FOR
MONASH ROAD (incorporating Eltham Street) – TMOP (Rev 2)
COR2009/206**

Thursday, 04 April 2013									
approach - detector(s)...									
Approach 1	1	2	3	4	5	6	7	8	
01:00	2	152	74	6	89	28	2	1	354
02:00	1	92	41	7	51	15	0	1	208
03:00	1	48	20	1	66	15	0	1	152
04:00	0	56	19	2	80	27	2	2	188
05:00	1	57	34	8	146	87	2	1	336
06:00	1	137	79	71	393	331	2	5	1019
07:00	15	330	308	166	830	881	9	20	2559
08:00	48	653	660	204	725	728	10	49	3077
09:00	54	558	592	112	615	696	35	79	2741
10:00	13	553	590	124	696	742	14	55	2787
11:00	16	458	465	89	685	711	7	36	2467
12:00	14	481	503	22	636	655	8	37	2356
13:00	11	529	555	82	623	618	12	43	2473
14:00	19	594	585	89	621	554	16	49	2527
15:00	33	600	678	113	589	533	14	44	2604
16:00	32	694	729	135	591	522	23	82	2808
17:00	40	737	782	153	681	715	19	50	3177
18:00	38	693	731	214	769	821	8	70	3344
19:00	26	617	668	159	726	719	14	55	2984
20:00	41	548	615	85	534	440	7	35	2305
21:00	18	390	405	67	362	302	4	21	1569
22:00	6	418	406	57	381	284	5	18	1575
23:00	13	392	318	36	274	182	5	12	1232
24:00	2	249	219	25	174	86	2	6	763
Approach 1	AM peak	3077	07:00 - 08:00	PM peak	3413	16:45 - 17:45	Daily		
Total	45605								

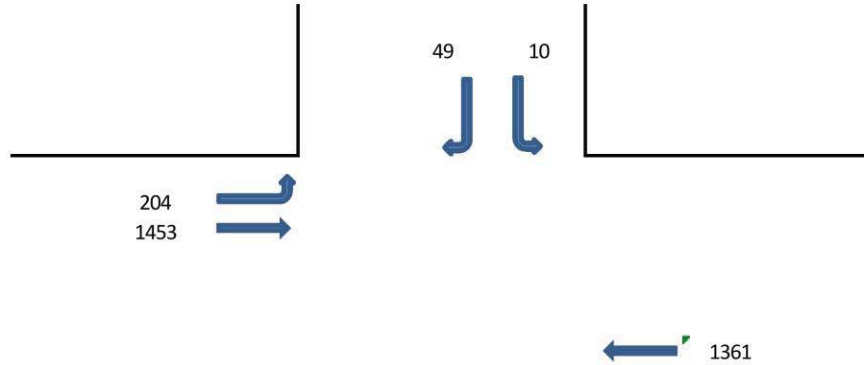
Note: The information contained above is a SCATS output summary of detector counts during hourly intervals



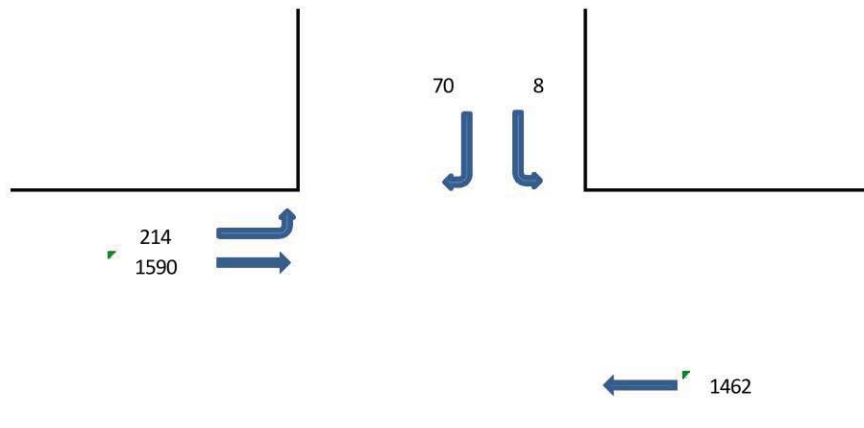
ITEM 5 (continued)

ATTACHMENT 1

PUBLIC WORKS ASSESSMENT REPORT FOR
MONASH ROAD (incorporating Eltham Street) – TMOP (Rev 2)
COR2009/206



AM Peak



PM Peak

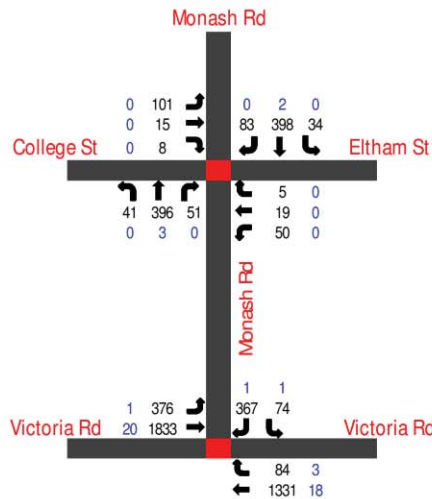


ITEM 5 (continued)

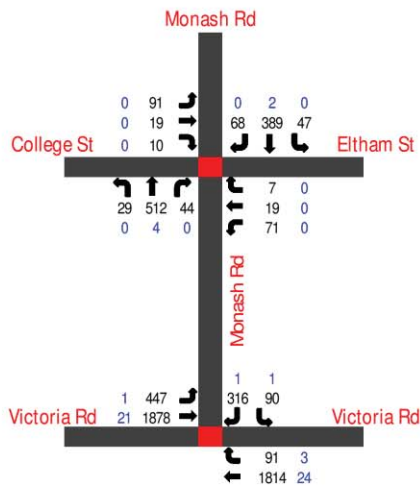
ATTACHMENT 1

**PUBLIC WORKS ASSESSMENT REPORT FOR
MONASH ROAD (incorporating Eltham Street) – TMOP (Rev 2)
COR2009/206**

9.4 Traffic Volume Diagrams



2013 Existing AM Peak Hour Traffic Volume



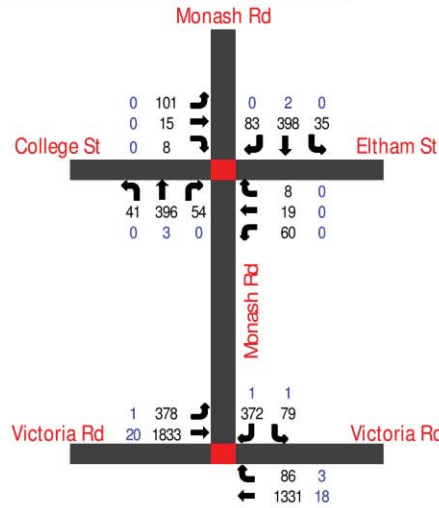
2013 Existing PM Peak Hour Traffic Volume



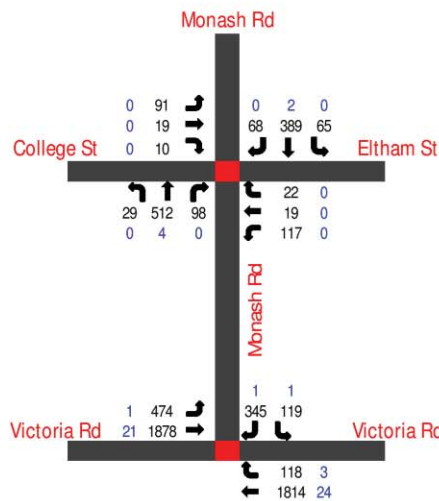
ITEM 5 (continued)

ATTACHMENT 1

**PUBLIC WORKS ASSESSMENT REPORT FOR
MONASH ROAD (incorporating Eltham Street) – TMOP (Rev 2)
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2013 Existing With Development AM Peak Hour Traffic Volume



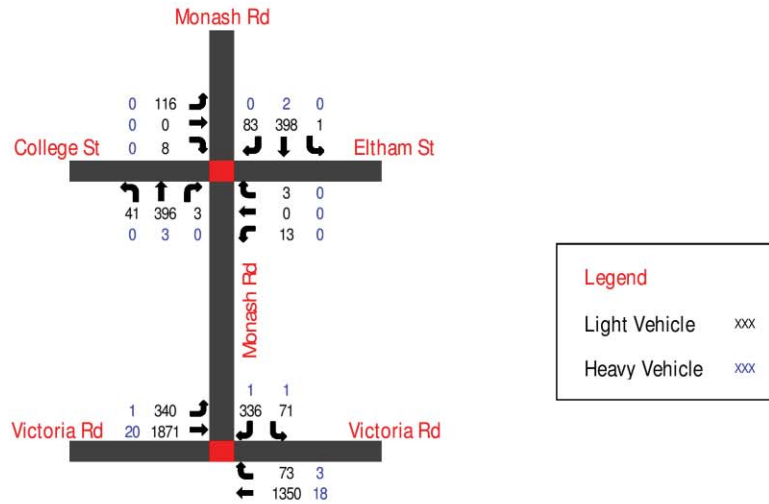
2013 Existing With Development PM Peak Hour Traffic Volume



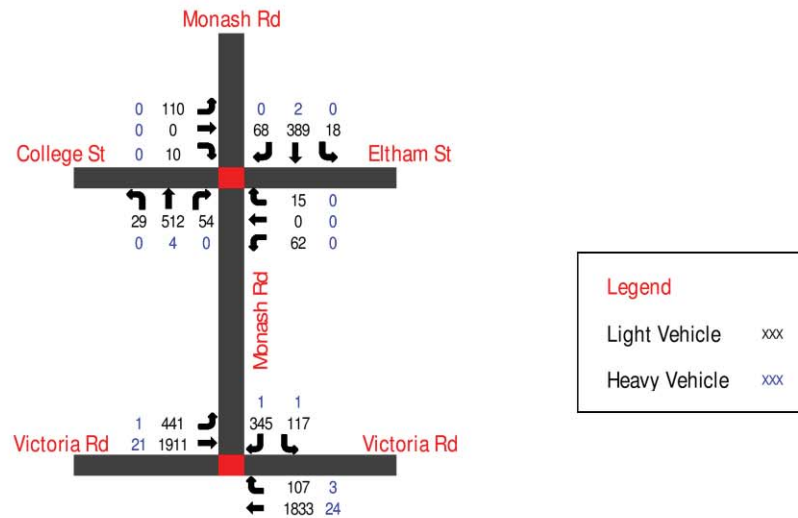
ITEM 5 (continued)

ATTACHMENT 1

**PUBLIC WORKS ASSESSMENT REPORT FOR
MONASH ROAD (incorporating Eltham Street) – TMOP (Rev 2)
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2013 Existing With Development With Eltham St Closure AM Peak Hour Traffic Volume



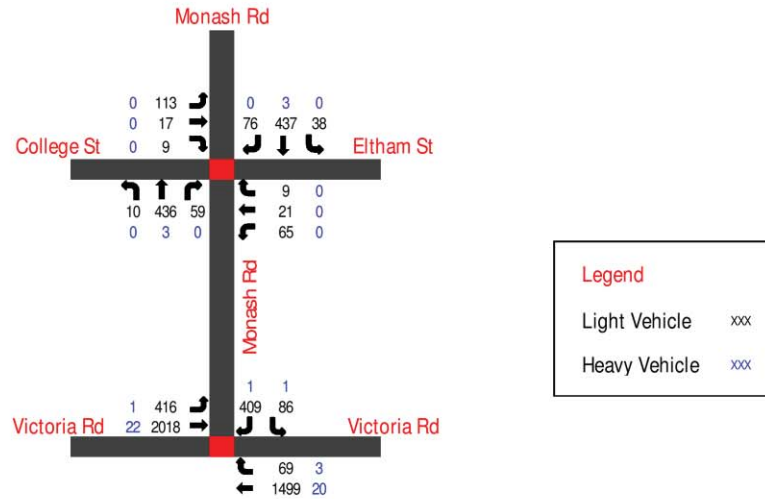
2013 Existing With Development With Eltham St Closure PM Peak Hour Traffic Volume



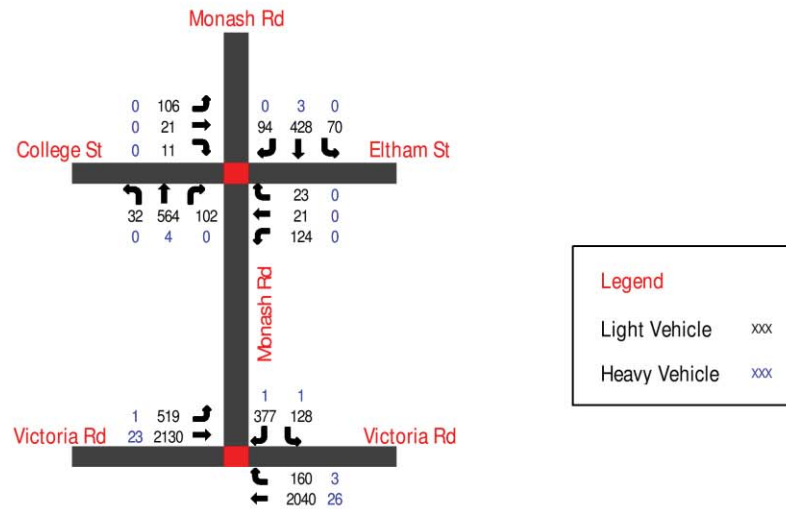
ITEM 5 (continued)

ATTACHMENT 1

**PUBLIC WORKS ASSESSMENT REPORT FOR
MONASH ROAD (incorporating Eltham Street) – TMOP (Rev 2)
COR2009/206**



2023 Existing With Development AM Peak Hour Traffic Volume



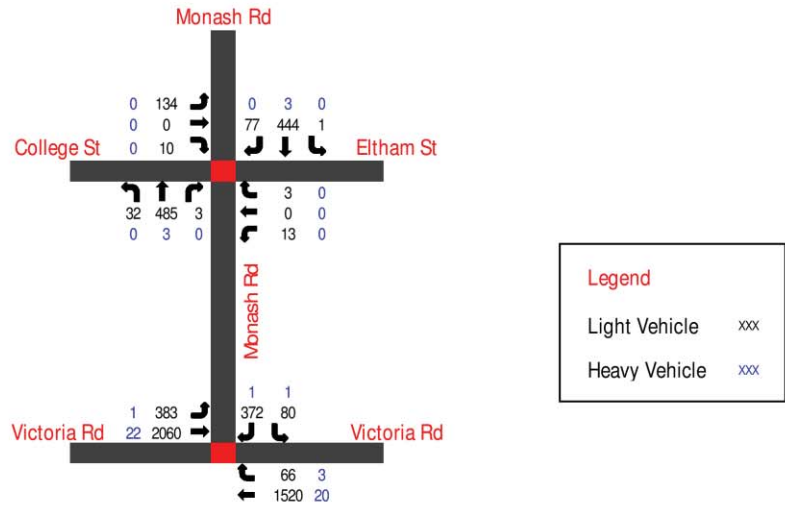
2023 Existing With Development PM Peak Hour Traffic Volume



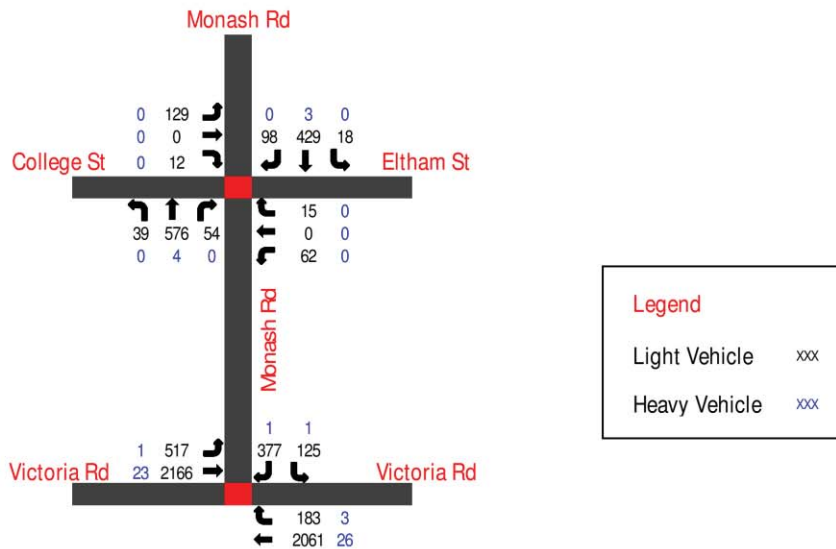
ITEM 5 (continued)

ATTACHMENT 1

**PUBLIC WORKS ASSESSMENT REPORT FOR
MONASH ROAD (incorporating Eltham Street) – TMOP (Rev 2)
COR2009/206**



2023 Existing With Development With Eltham St Closure AM Peak Hour Traffic Volume



2023 Existing With Development With Eltham St Closure PM Peak Hour Traffic Volume

ITEM 5 (continued)

ATTACHMENT 1

**PUBLIC WORKS ASSESSMENT REPORT FOR
MONASH ROAD (incorporating Eltham Street) – TMOP (Rev 2)
COR2009/206**

9.5 Traffic Generation Assumptions

The traffic generation used for analysis in this report were derived from various sources based on accepted traffic generation estimation methods. All of the rates used are based on RMS documents. The developments include:

- 407-417 Victoria Road & 1-9 Monash Road Gladesville
- Bunnings Development
- 2 College Street & 10 Monash Road
- DCP related development along Monash Road

407-417 Victoria Road & 1-9 Monash Road Gladesville

The traffic generation for this development has been provided from the Varga Traffic Planning report dated December 2012. This report has been independently reviewed and found to be a reasonable estimate of future traffic generated by the proposed supermarket development.

Bunnings Development

The traffic impact assessment for this development has been produced by TTPA in a report dated March 2012. This report has been independently reviewed and was found to be a reasonable estimate of traffic generation. It is noted that this development proposes an access off Victoria Road and would therefore remove some of the existing vehicle trips that currently use College Street as the existing developments have no access to Victoria Road.

2 College Street & 10 Monash Road

There is a proposal for a 4 storey mixed development at this location. A schedule for this development has been provided. Using the traffic generation rates published in the 'RTA Guide to Traffic Generating Developments' for medium density residential developments. The traffic generation was calculated and is shown in the Table below.

Level	1 x Bedroom	2x Bedrooms	3xBedrooms	Retail (m ²)	Total
Rate	<i>0.5 per bed</i>	<i>0.5 per bed</i>	<i>0.65 per bed</i>	-	
LG		3	1		
G/1		3	1	285	
2	1	6	1		
3	2	2	1		
4	1	2	1		
Total	4	16	5	285	
Traffic Generation	2	8	3.25	-	14 vehicles

The total number of trips generated was 14 vehicles per hour. It was assumed a directional split of 80/20 in each of the peak. The retail floor space was considered to be so low that it would not generate any external vehicle trips and would be purely be to service tenants and local residents. This is likely to be a small café.

DCP Related developments

The DCP for this area identifies properties along Monash Road that may developed in the future with increased floor space ratios.

Without any details on exactly what these developments would be the traffic generation for the areas identified in the DCP were based on the traffic generation estimate for 2 College Street and 10 Monash Road on a pro-rata basis. The DCP areas are shown in the Figure below.

ITEM 5 (continued)

ATTACHMENT 1

**PUBLIC WORKS ASSESSMENT REPORT FOR
MONASH ROAD (incorporating Eltham Street) – TMOP (Rev 2)
COR2009/206**



Figure 4.6X Block 02, 03 & 04 Built Form Plan

The estimated traffic generation of the additional possible developments are indicated in the Table below. The basis was an estimated about 3.5 trips per level.

Development	Category	Traffic Generation
Development 1	Upto Level 5	18
Development 2	Upto Level 4	14
Development 3	Upto Level 3	11
Development 4	Upto Level 3	11
Development 4	Upto Level 1	4
Development 4	Upto Level 5	18
Development 4	Upto Level 3	11
Total Traffic Gen		87

A directional split was assumed to be 80/20.

Background Traffic Growth

To estimate the predicted traffic growth over ten years a 10% growth was applied to all traffic movements. This is consistent with level of traffic experienced in other areas of Sydney that are fully developed.

ITEM 13 (continued)

ATTACHMENT 1

City of Ryde – Preferred Providers

1. Provision of Minor Works and Services and Pre-qualification of providers for large Civil Works

Mastercut Concrete Aust Pty Ltd
Awada Civil Pty Ltd
KK Civil Engineering
MSA Civil and Communications
Avant Constructions
Online Pipe & Cabling Locating
Australian urban Tree Services
Atlantis Group of Companies Pty Ltd
Anzellotti Constructions Pty Ltd
Nitro Civil and Earthworks
Ally Civil
A J Paving
The Australian Grinding Company
Workforce Road Services
Exclusive Developments
C J Murphy Tree Recycling Services
Mansour Paving
Allstate Linemarking
Get Civil
Celtic Civil
C W Concrete
Codmah
Sam the Paving Man
Interflow
North Shore Paving
Plateau Tree Service
Jeankon
Sydney Metro Tree Service
Kelbon
Complete Linemarking Services
Tirawley Contracting
Total Drain Cleaning Services
The Stump Guy Tree Care
I C Pipes
Scape Constructions
Talis Civil
Performance Concrete
South West Kerbing
Guidance Road Management
ITS Trenchless
Downer
Ford Civil Contracting
MMA Civil Contracting
Northern Fencing Specialist

ITEM 13 (continued)

ATTACHMENT 1

2. Plant Hire

A & A hire service
A and C Plant Hire Pty Ltd
Accalaimed Excavations Pty Ltd
Active Tipper Hire
Allards Plant hire pty ltd
Australian Grader Hire Pty Ltd
Barron Transport Pty Ltd
Coates Hire Operations
Complete Hire
Conplant Pty Ltd
DXcore Pty Ltd
E&B Tipper Hire Pty Ltd
G & R.D Chong Pty Ltd
Haines Bros Earthmoving & Drainage
Kennards Hire
Onsite Rental Group
Porter Plant
R & K Johnson Excavations
Raygal Pty Ltd
Shrrin Rentals Pty Ltd
Supreme Earthmoving Pty Ltd
Universal Mobile Tower Hire

3. Trades (electrical, plumbing and carpentry (currently being renewed))

JNK
Flash Plumbing

4. Assessment Consultants

Town Planning Consultants Preferred

Architectus Group Pty Ltd
aSquare Planning Pty Ltd
Barnson Pty Ltd
Bob Tillott Associates
Brian Elton & Associates / Elton Consulting
City Plan Strategy & Development Pty Ltd
Creative Planning Solutions Pty Ltd
Don J Smith
GHD Pty Ltd
McKenzie Group Consulting Planning (NSW) Pty Ltd
MP Urban Planning
Planning Ingenuity
Scott Carver Pty Ltd
SJB Planning (NSW) Pty Ltd
Smith & Tzannes
Stimson Consultant Services Pty Ltd ATF The BGN Trust
The Planning Group (NSW) Pty Ltd
Willana Associates
Worley Parsons Services Pty Ltd

ITEM 13 (continued)

ATTACHMENT 1

Town Planning Consultants – Alternate

Blueprint Planning Consultants
Cityscape Planning + Projects
DEM (Aust) Pty Ltd
James Stanley Colman
RPS Australia East Pty Ltd
Urban Perspectives Environmental Solutions Pty Ltd

Bushfire Consultants – Preferred

Building Code & Bushfire Hazard Solutions
Eco Logical Australia Pty Ltd
Travers Bushfire & Ecology

Bushfire Consultants – Alternate

GHD Pty Ltd

Structural Engineers – Preferred

Cardno (NSW) Pty Ltd
Consulting Earth Scientists
James Rose Consulting

Structural Engineers – Alternate

Demlakian Consulting Engineers
Waterman AHW Pty Ltd
Worley Parsons Services Pty Ltd

Landscape Architects – Preferred

Paul Stacy Landscape Consulting
Creative Planning Solutions Pty Ltd
Moir Landscape Architect Pty Ltd

Landscape Architects – Alternate

Anne Clements & Associates Pty Ltd
DEM (Aust) Pty Ltd
Group GSA Pty Ltd
Imagescape Design Studios

Access Consultants – Preferred

McKenzie Group Consulting Planning (NSW) Pty Ltd - Access Consultant

Access Consultants – Alternate

None

Consultant Development Engineers – Preferred Barker Ryan Stewart

Demlakian Consulting Engineers
Optimal Stormwater Pty Ltd
Worley Parsons Services Pty Ltd

Consultant Development Engineers – Alternate

Barnson Pty Ltd
Cardno (NSW) Pty Ltd
James Rose Consulting

ITEM 13 (continued)

ATTACHMENT 1

Consultant Architects – Preferred

Architectus Group Pty Ltd
Smith & Tzannes
Worley Parsons Services Pty Ltd

Consultant Architects – Alternate

Baker Kavanagh Architects
DEM (Aust) Pty Ltd
GHD Pty Ltd
Group GSA Pty Ltd
Jones Sonter
nkt Architect Pty Ltd
peckvonhartel
Shobha Designs

Heritage Consultants – Preferred

Heritage Advice (BN)
Noel Bell Ridley Smith & Partners Pty Ltd
Worley Parsons Services Pty Ltd

Heritage Consultants – Alternate

Artefact Heritage Services
nghenvironmental

Consultant Traffic Engineers – Preferred

Barker Ryan Stewart
Bitzios Consulting
GTA Consultants
gtk Consulting Pty Ltd
SMEC Australia Pty Ltd
Winning Traffic Solutions Pty Ltd

Consultant Traffic Engineers – Alternate

Barnson Pty Ltd
Cardno (NSW) Pty Ltd
GHD Pty Ltd
Halcrow

5. Learning and Development

Workforce Management Consulting
Wizard Corporate Training
Whyte & Co Pty Ltd
UXC Training Group
UNE Partnership Pty Ltd
Trans-Plant Training
Open Door Coaching Group
TAFE NSW Northern Group
Sydney Construction Training School
St John Ambulance
Skillnet Australia
Shire Coaching & Training
Segla International Pty Ltd

ITEM 13 (continued)**ATTACHMENT 1**

Secondnature International Pty Ltd
Sally Foley Lewis
Safeguard Training Services
RMG Solutions
Risk Response & Rescue
Raising the Bar
Prisma Cross-Cultural Consultants
Premium Health Pty Ltd
PM Partners Group
Peter Berry Consultancy
People For Success
Passmore Duff Pty Ltd
Pacific Consulting
National Safety Council of Australia
Monster Solutions Pty Ltd
Mirna Tarabay
Merryn Crawford Consulting
Medilife Pty Ltd
Maximus International Pty Ltd
Macquarie Community College
Local Government Training Institute
Linkage Australia & New Zealand Pty Ltd
LGSA
Kaplan Education Pty Ltd
IPAA NSW
Integro Learning Company Pty Ltd
Goal Professional Services
Forrest Training
Flanagan Brown Greaves Pty Ltd (Trading as FBG Group)
DGR Consulting Pty Ltd
Developing Potential Australia
Davidson Trahaire Corpsych
Communispond Australasia Pty Ltd
Comet Training Pty Ltd
Combined Training & Consulting
Central Coast Community College
Blue Visions Management Pty Ltd
Bite Sized Training Pty Ltd
Baseline Training & Consulting Pty Ltd
Barton Family Trust T/A Insight Services
Barrington Corporate Risk Pty Ltd
Australian Institute of Management NSW & ACT Training Centre Limited
Australian Commercial Disputes Centre LTD
Aurora Training & Professional Services Pty Ltd
Active Learning Centre International
Fraud Prevention and Governance Pty Ltd

6. Legal Services providers

Heard McEwan Legal
Kells the Lawyers
Maddocks
Marsdens Law Group

ITEM 13 (continued)

ATTACHMENT 1

PCR Law and Associates
Planning Law Solutions
Sparke Helmore Lawyers
Stoey and Gough Solicitors and Attorneys

7. Catering

Amadeus Catering Pty Ltd
U@MQ-ltd (Crunch Events and Catering)
Toast Food North Ryde

ITEM 13 (continued)

ATTACHMENT 2

NPN2.11 Corporate Wardrobe (National Panel Contract)

The contracted suppliers are:

Supplier
Staples Australia Pty Ltd
Pacific Brands (NNT and Stylecorp)
Totally WorkWear Group of Franchises;
<ul style="list-style-type: none"> ▪ Ballina / Coffs Harbour (NSW)
<ul style="list-style-type: none"> ▪ Central Coast (NSW)
<ul style="list-style-type: none"> ▪ Gold Coast and Nerang (QLD)
<ul style="list-style-type: none"> ▪ Dubbo (NSW)
<ul style="list-style-type: none"> ▪ Parkes (NSW)
<ul style="list-style-type: none"> ▪ Port Stephens (NSW)
<ul style="list-style-type: none"> ▪ Richmond (SA)
<ul style="list-style-type: none"> ▪ Keilor Park and Maidstone (VIC)

NPN3.11 - Supply of Workwear and Personal Protective Apparel (National panel contract)

The contracted suppliers are:

Supplier
Staples Australia Pty Ltd
Pacific Brands (Hard Yakka)
RSEA Pty Ltd
Worksense Workwear and Safety Pty Limited

ITEM 13 (continued)

ATTACHMENT 2

LGP106-2 Advertising - Media Sydney Metropolitan Daily Newspapers, Regional Publications and On-line Advertising and LGP406-2 Advertising Agencies (NSW panel contract)

LGP106-2 - Advertising - Media Sydney Metropolitan Daily Newspapers, Regional Publications and On-line Advertising (panel contract)

The contracted suppliers are:

Supplier
John Fairfax Publications Pty Ltd
Nationwide News Pty Ltd

LGP406-2 - Advertising Agencies (panel contract)

The contracted agencies are:

Supplier
Blaze Advertising
Leonard Holt Robb

ITEM 13 (continued)

ATTACHMENT 2

LGP308-2 - Playground, Open Space and Recreational Infrastructure

The LGP Approved Contractors are:

1. Abud Pty Ltd
2. Active Play Pty Ltd
3. A-Play
4. Austek Play
5. Community Asset Management NZ Limited
6. Court Craft Australia Pty Ltd
7. CRS Creative Recreation Solutions Pty Ltd
8. Ellis & Sons
9. Exeloo Pty Ltd
10. Fleetwood Urban Pty Ltd
11. Forpark Australia
12. Furphy Foundry Pty Ltd
13. G James Extrusion Co Pty Ltd
14. Greenline Group Pty Ltd
15. Kompan Playscape Pty Ltd
16. Landmark Products
17. Moduplay Group Pty Ltd
18. Moodie Outdoor Products Pty Ltd
19. Orca Solar Lighting
20. Parkequip Pty Ltd
21. Play By Design Pty Ltd
22. Playrope Pty Ltd
23. Rechenberg Pty Ltd
24. Replas
25. RUD Chains Pty Ltd
26. Scully Outdoor Designs Pty Ltd
27. Spizvac Marketing Pty Ltd
28. Star Structures Pty Ltd
29. StraBe
30. Street Furniture Australia Pty Ltd
31. Synthetic Grass and Rubber Surfaces Australia Pty Ltd
32. Tiger Turf Australia Pty Ltd
33. The Glascott Group Pty Ltd
34. The Great Outdoor Gym Company
35. Town and Park Furniture
36. Unisite Pty Ltd
37. Urban Maintenance Systems
38. Viva Recreation Pty Ltd
39. Wagners CFTM Pty Ltd
40. Xenian Pty Ltd

ITEM 13 (continued)

ATTACHMENT 2

LGP1208-2 Professional Consulting Services (Engineering, Planning, Environment, Community and Assets)

The LGP Approved Contractors are:

1. Acoustic Dynamics Pty Ltd
2. ACT Geotechnical Engineers Pty Ltd
3. AEC Group Limited
4. Altus Group Consulting Pty Ltd
5. Altus Page Kirkland
6. Annand Associates Urban Design Pty Ltd
7. APC Environmental Management
8. APV Valuers & Asset Management
9. Aquenta Consulting Pty Ltd
10. Ardill Payne & Partners
11. Artefact Heritage Services Pty Ltd
12. Arup Pty Ltd
13. Asset & Facilities Management Consulting Pty Ltd
14. Asset Technologies Pacific Pty Ltd
15. AssetVal Pty Ltd
16. Australian Cultural Heritage Management (VIC) Pty Ltd
17. AWT Water Pty Ltd
18. Barker Ryan Stewart Pty Ltd
19. Beca Pty Ltd
20. Bewsher Consulting Pty Ltd
21. Biosis Pty Ltd
22. Bitzios Consulting
23. BMT WBM Pty Ltd
24. Bowdens Group Australia Pty Ltd
25. Brown Consulting (NSW) Pty Ltd
26. Building Services Engineers Pty Ltd
27. CAMMS
28. Capital Insight Pty Limited
29. Cardno (NSW/ACT) Pty Ltd
30. Catchment Simulation Solutions Pty Ltd
31. CH2M Hill Australia Pty Ltd
32. Civil Tech Consulting Engineers
33. CLOUSTON Associates (Australia) Pty Ltd
34. Coffey Environments (Australia) Pty Ltd
35. Complete Urban Pty Ltd
36. Cox Inall Ridgeway
37. CT Management Group Pty Ltd
38. Danu Consulting Pty Ltd
39. David Heap & Associate
40. Demlakian Consulting Services

ITEM 13 (continued)

ATTACHMENT 2

41. Douglas Partners Pty Ltd
42. Dragonfly Environmental Pty Ltd
43. Eco Logical Australia Pty Ltd
44. Ecofund Queensland Pty Ltd
45. Ecosite Solutions Pty Ltd
46. Edge Environment Pty Ltd
47. Elton Consulting Group Pty Ltd
48. Equatica Pty Ltd
49. Erbas and Associates Pty Ltd
50. Floth Sustainable Building Consultants
51. Fresh Landscape Design Pty Ltd
52. Gallagher Jeffs Consulting
53. Geolyse Pty Limited
54. Gerard Coutts & Associates
55. GHD Pty Ltd
56. Gilbert & Sutherland Pty Ltd
57. Giles Tribe Pty Limited
58. Graphite Architects
59. GroupGSA incorporating John Holland Landscape Architects and Associates
60. Guy Sturt & Associates Pty Ltd
61. Gyte Consulting International Pty Ltd
62. *Hill PDA Pty Ltd - pending receipt of signed standing offer deed*
63. Homewood Consulting
64. Hunter Water Australia Pty Limited
65. HydroScience Consulting Pty Ltd
66. Hydrosphere Consulting Pty Ltd
67. HydroStorm Consulting Pty Ltd
68. Ian Alexander McQuhae
69. J Wyndham Prince Pty Ltd
70. James Mather Delaney Design Pty Ltd
71. James Rose Consulting Pty Ltd
72. *Jerez Enterprises Pty Ltd - pending receipt of signed standing offer deed*
73. Jetty Research Pty Ltd
74. *KF Williams & Associates Pty Ltd - pending receipt of signed standing offer deed*
75. King & Campbell Pty Ltd
76. Lambert & Rehbein (NSW) Pty Ltd
77. LFA (Pacific) Pty Ltd
78. Local Government Engineering Services Pty Ltd
79. MacDonald International
80. MacroPlan Dimasi
81. Maluxme Capital Pty Ltd
82. Matthew Higginson Landscape Architecture
83. MB Envirocare Pty Ltd
84. Mecone Pty Ltd

ITEM 13 (continued)

ATTACHMENT 2

85. Meinhardt Infrastructure & Environment Pty Ltd
86. MG Planning Pty Ltd
87. Mike Ritchie & Associates Pty Ltd
88. MJM Consulting Engineers
89. Mode Design Corp. Pty. Ltd
90. Moir Landscape Architecture Pty Ltd
91. Molino Stewart
92. Montemare Consulting
93. Morrison Low Consultants Pty Ltd
94. Moultrie Survey Pty Ltd
95. MWH Australia Pty Ltd
96. Newton Denny Chapelle
97. NGH Environmental Pty Ltd
98. Northrop Consulting Engineers Pty Ltd
99. NSW Department of Finance and Services (DFS)
100. Opus International Consultants (NSW) Pty Ltd
101. Parkland Environmental Planners
102. Parsons Brinckerhoff Australia Pty Ltd
103. Phillips Group Pty Ltd
104. Phillips Marler
105. Planning Environmental & Economic Consulting
106. Planright Australasia Pty Ltd
107. PSA Consulting (Australia) Pty Ltd
108. Rapid Map Services Pty Ltd
109. RCA Australia
110. Regional Geotechnical Solutions Pty Ltd
111. Rice Project Management Services
112. Risk Frontiers
113. Risk Management Australia Pty Ltd
114. RoadNet Pty Ltd
115. Royal HaskoningDHV
116. Rudds Consulting Engineers Pty Ltd
117. Scottstock IT Pty Ltd
118. Sergon Building Consultant
119. SGS Economics and Planning Pty Ltd
120. SLR Consulting Pty Ltd
121. Storm Consulting Pty Ltd
122. Straight Talk Pty Ltd
123. Strategy Hunter
124. The Water and Carbon Group Pty Ltd
125. TLB Engineers
126. TompkinsMDA Architects Pty Ltd
127. Total Earth Care Pty Ltd
128. Tract Consultants Pty Ltd

ITEM 13 (continued)

ATTACHMENT 2

129. Trans Tasman Energy Group Pty Ltd
130. Umbaco Landscape Architects Pty Ltd
131. Urban Perspectives Environmental Solutions Pty Ltd
132. Vantage Environmental Management Pty Ltd
133. Vekta Pty Ltd
134. WaterGroup Pty Ltd
135. Waterman AHW Pty Limited
136. Webber Architects
137. WMAwater
138. WS Atkins International Limited

ITEM 13 (continued)

ATTACHMENT 2

LGP808-2 - HR Temporary Placements and Associated Services

The LGP Approved Contractors are:

1. Advantage Professional Pty Ltd
2. Allstaff Australia Pty Ltd
3. Australian Business Solutions Group
4. Capstone Recruitment Group Pty Ltd
5. Careers MultiList Limited
6. Challenge Recruitment Limited
7. Chandler MacLeod Group Limited
8. Complete Staff Solutions Pty Ltd
9. Conduit Recruitment
10. CT Management Group Pty Ltd
11. Drake Australia Pty Ltd
12. Early Learning Placements Pty Ltd
13. Eather Recruitment and Labour Hire
14. Effective People Pty Ltd
15. Finite IT Recruitment Solutions
16. Hays Specialist Recruitment (Australia) Pty Ltd
17. IPA Personnel Pty Ltd
18. JHA Recruitment & Staff @ Work Pty Ltd
19. Kingfisher Recruitment NSW Pty Limited
20. LabourCo Council Services Pty Ltd
21. Labourpower Recruitment Services Pty Ltd
22. Local Government Appointments
23. Manpower Services (Australia) Pty Ltd
24. McArthur
25. MCJ Appointments Pty Ltd
26. Michael Page International
27. MTC Recruitment Limited
28. Men At Work Labour Hires NSW
29. NGA Net Pty Ltd
30. NORTEC Staffing Solutions
31. Programmed Intergrated Workforce Limited
32. Quay Appointments Pty Limited
33. Randstad Pty Ltd
34. Redistaff
35. Regent Personnel Pty Ltd
36. SCO Recruitment
37. Skilled Group Limited
38. Workforce Recruitment and Labour Services Pty Ltd

The contract concludes on 30 November 2015 with optional 2 x 12 month extensions. For further information contact Bruce Rose brose@lqp.org.au or 02 8270 8708 or 0409 818 355.

ITEM 13 (continued)

ATTACHMENT 2

LGP1007-2 Office Supplies and Janitorial (including; Heavy Duty Cleaning) and Associated Products

The LGP Approved Contractors are:

LGP Approved Contractor
Blackwoods
Complete Office Supplier Pty Ltd
Cyndan Chemicals
Environmental Fluid Systems Pty Ltd
OfficeMax Australia Limited
Staples Australia Pty Ltd

More suppliers may be added post negotiations.

LGP407-2 - Telecommunications (NSW panel contract)

The contracted suppliers are:

Supplier
AAPT Limited
Applied Satellite Technology Australia
CountryTell Community Broadband
Optus Networks Pty Ltd
Pacnet
Soul Pattinson Telecommunications Pty Ltd
Telstra Corporation Limited
Vertical

LGP109-2 Debt Recovery

The LGP Approved Contractors are:

LGP Approved Contractor
AMPAC Debt Recovery Pty Ltd
Austral Mercantile Collections Pty Ltd
Australian Debt Recoveries Pty Ltd
CDC Collections Australia
Coleman Greig Lawyers
Custom Commercial Services Pty Ltd

ITEM 13 (continued)

ATTACHMENT 2

Executive Collections
J S Mueller & Co
Legalforce Specialist Debt Collectors
NV Lawyers
Outstanding Collections (AUST) Pty Ltd
Recoveries & Reconstructions (Aust) Pty Ltd
SR Law

LGP1107-2 Operating Lease Services to cover Information and Communications Technology, Photocopiers, Printers and other Equipment.

THIS CONTRACT IS FOR COUNCIL USE ONLY

The contracted supplier is:

Supplier
Macquarie Equipment Finance

ITEM 13 (continued)

ATTACHMENT 2

LGP1008-2 Provision of IT&C Professional Services

LGP Approved Contractors are:

1. *AB Industries Pty Ltd - pending receipt of the signed Standing Offer Deed*
2. Acresta Carbon Pty Ltd
3. Acresta Mobile Pty Ltd
4. Advance Vision Technology Trust
5. Allcom Networks Pty Ltd
6. Andor Systems (Aust) Pty Ltd
7. Art of Multimedia Pty Ltd
8. Artis Group
9. Assetic Australia Pty Ltd
10. ASI Solutions
11. Aten Systems Pty Ltd
12. *ATI Australia Pty Ltd - pending receipt of the signed Standing Offer Deed*
13. CAMMS
14. Cirrus Technologies Pty Ltd
15. *Civica Pty Limited - pending receipt of the signed Standing Offer Deed*
16. Communications Design & Management Pty Limited
17. Computer Systems (Australia) Pty. Limited
18. Content Security Pty Ltd
19. Converged Communication Network Applications Pty Ltd
20. CQR Consulting Australia Pty Ltd
21. Datacom Systems NSW Pty Ltd
22. Dataflex Pty Ltd
23. Dataweave Pty Ltd
24. Dialog Information Technology
25. Dragonfly Technologies Pty Ltd
26. Empower IT Solutions Pty Ltd
27. Enigma Business Products
28. Enosys Solutions Pty Ltd
29. Ethan Group Pty Ltd
30. Fibre Optics Design and Construct Pty Ltd
31. FinXL IT Professional Services.
32. Fredon Industries Pty Ltd.
33. Fusion5 Pty Ltd
34. Global Asset Systems Pty Ltd
35. Hitech Support Pty Ltd
36. IAB Services
37. ICON Strategic Solutions Pty Ltd
38. Iconyx Pty Ltd
39. ICT Networks Pty Ltd
40. IMC Communications Pty LTD
41. Ipera Communications Pty Ltd

ITEM 13 (continued)

ATTACHMENT 2

- 42. iPlatinum
- 43. Kalba Australia Pty Ltd
- 44. Lange Consulting and Software
- 45. Linktech Solutions Pty Ltd
- 46. MARM UPS Pty Ltd
- 47. MassMedia Studios Pty Ltd.
- 48. MCR Computer Resources Pty Ltd
- 49. Multibase WebAustralis Pty Ltd
- 50. Net Communications Pty Ltd
- 51. Odyssey Training
- 52. Open Spatial Australia Pty Ltd
- 53. OSS Infotech Pty Ltd
- 54. *PTS Consulting Australia Pty Ltd - pending receipt of the signed Standing Offer Deed*
- 55. Quest Security Solutions Pty Ltd
- 56. Revolution IT Pty Ltd
- 57. SAF Australia Pty Ltd
- 58. Sense of Security Pty Ltd
- 59. Simient Pty Ltd
- 60. Stamford Interactive Pty Ltd
- 61. SureBridge Pty Ltd
- 62. Telcell Communication Pty Ltd
- 63. Terra Firma Pty Ltd
- 64. The Somerville Group Pty Ltd
- 65. The Strategic Directions Group Pty Ltd
- 66. Thomas Duryea Consulting Pty Ltd
- 67. *Trimble Navigation Australia Pty Ltd - pending receipt of the signed Standing Offer Deed*
- 68. Uplinx Group Pty Ltd
- 69. *Vivid Group Pty Ltd - pending receipt of the signed Standing Offer Deed*
- 70. VMTech
- 71. Well Done International Pty Ltd

LGP108-2 Microsoft Licensing and Associated Products and Services via Large Account Resellers (LARs)

THIS CONTRACT IS FOR COUNCIL USE ONLY

The LGP Approved Contracts are:

LGP Approved Contractor
Datacom Systems NSW Pty Ltd
<i>Data#3 Limited - pending receipt of standing offer deed</i>
SoftwareONE Australia Pty Ltd
Staples Australia Pty Ltd

ITEM 13 (continued)

ATTACHMENT 2

LGP306-2 Supply of PCs, Notebooks, Servers and Associated Services and Equipment

The Contracted Suppliers are:

1. ACT Logistics P/L
2. Advanced Mobile IT Pty Ltd
3. Allcom Networks Pty Ltd
4. APCD Pty Ltd
5. ASI Solutions
6. Computer Systems Australia
7. Data#3 Ltd
8. Dataflex Pty Ltd
9. Dell Australia Pty Ltd
10. Enigma Business Products
11. Fujitsu PC Asia Pacific Ltd
12. iQ3 Pty Ltd
13. MCR Computer Resources Pty Ltd
14. MRI (Aust) Pty Ltd
15. Net Communications Pty Ltd
16. Pioneer Computers (Dream Industrial Pty Ltd)
17. Staples Australia Pty Ltd
18. 4D Global Pty Ltd
19. Thomas Duryea Consulting Pty Ltd

LGP309 RFID Systems (NSW panel contract)

The contracted Suppliers are:

Supplier
Bibliotheca RFID Systems Australia Pty Ltd
Civica Pty Ltd
EnvisionWare Pty Ltd
FE Technologies

ITEM 13 (continued)

ATTACHMENT 2

LGP507-2 - Library Books and Resource Materials (NSW panel contract)

The contracted suppliers are:

Supplier
AES Library Supplies
ALS Library Services Pty Ltd
Bloomin' Books
Bolinda Publishing Pty Ltd (Audiobooks and Large Print)
Bolinda Digital Pty Ltd (eBooks, eAudiobooks)
Book Supplies Pty Ltd
Continental Book Shop Soundbooks Pty Ltd
Digital Education Services
Educational Concepts (Sales) Pty Ltd/ Book Zone Sales
Elan Media Partners Pty Ltd
Gametradars Parramatta
Global Language Books Pty Ltd
James Bennett Pty Ltd
Keith Ainsworth Pty Ltd
Kinokuniya Bookstores of Australia Pty Ltd
Library AV and Large Print Pty Ltd
Marcom Projects Pty Ltd
MDM Entertainment Pty Ltd
Peter Pal Library Supplies
Phoenix Library Services
Sound Text Media Pty Ltd
Southern Scene Pty Ltd
Sydney Books Online
The BookHouse
Ulverscroft Large Print (Australia) Pty Ltd
University Co-Operative Bookshop
Warner Books Pty Ltd
Wavesound Pty Ltd
Zenith Management Services Group Pty Ltd

ITEM 13 (continued)

ATTACHMENT 2

LGP408 - Chemicals (NSW panel contract)

The contracted suppliers are:

Supplier
Globe Australia Pty Ltd
Hammersley Products Australia Pty Ltd
Landmark Operations Limited
Maxwell and Kemp
Nuturf
Omega Chemicals
Redox Pty Ltd
Tasman Chemicals

LGP908-2 Pipes, Fittings & Fixtures and Associated Products & Services

The LGP Approved Contractors are:

LGP Approved contractor
BCP Precast
MultiTrode Pty Ltd
Pentair Water Solutions Pty Ltd
Reece Pty Ltd
RuhrpumpSih Australia Pty Ltd
Tradelink Plumbing Centres

LGP508 - Small Plant and Outdoor Power Equipment (NSW panel contract)

The contracted suppliers are:

Supplier
Australian Hammer Supplies Pty Ltd
Briggs and Stratton Australia Pty Ltd (Victa Lawncare Pty Ltd)
GWS Machinery P/L
GYC Pty Ltd
Husqvarna Australia Pty Ltd
John Deere
New Holland Agriculture

ITEM 13 (continued)

ATTACHMENT 2

Steamaster Australia Pty Ltd
Specialised Mowing Equipment
STIHL Pty Ltd

NPN1.11 Supply of Mobile Garbage Bins, Industrial Containers & Bins, Static Compactors, Associated Products and Services (National panel contract)

The contracted suppliers are:

Supplier
Fallshaw Holdings Pty Ltd/ Liftmaster Materials Handling
Garwood International Pty Limited
Mastec Australia Pty Ltd
SULO MGB Australia Pty Ltd
Superior Pak
Wastech Engineering Pty Ltd

LGP707-2 - Heavy Plant and Equipment (NSW panel contract)

The contracted suppliers are:

1. Atlas Copco Construction Equipment - Dynapac
2. Ausroad Systems Pty Ltd (formerly Jetpacher Roadtech Pty Ltd)
3. Carrington Equipment Pty Ltd
4. Case NSW
5. CJD Equipment Pty Ltd
6. Clark Equipment - Bobcat
7. Conplant Amman Australia
8. Eagle Equipment Australia Pty Ltd
9. Hitachi Construction Machinery (Australia) Pty Ltd
10. JCB - Construction Equipment Australia Pty Ltd
11. Komatsu Australia Pty Ltd
12. Kubota Tractor Australia Pty Ltd
13. Liebherr Australia Pty Ltd
14. McDonald Murphy Machinery
15. Paveline International Pty Ltd
16. Price Farm Machinery
17. Semco Equipment Sales
18. Sydney Trucks and Machinery Centre Pty Ltd (previously Tri-City Trucks Pty Ltd)
19. Westrac Pty Ltd
20. William Adams Pty Ltd

ITEM 13 (continued)

ATTACHMENT 2

21. Wirtgen Australia Pty Ltd

BUS198-0410 - Trucks, Vans and Omnibuses (National panel contract)

The contracted suppliers are:

1. Cargotec Australia Pty Ltd
2. Hino Motor Sales Australia Pty Ltd
3. Isuzu Australia Limited
4. Iveco Trucks Australia Ltd
5. PACCAR Australia Pty Ltd (DAF and Kenworth)
6. Paveline International Pty Ltd
7. Rosmech Sales and Service Pty Ltd
8. Scania Australia Pty Ltd
9. Schwarze Industries Australia Pty Ltd
10. Transpacific Commercial Vehicles (Western Star, Dennis Eagle, Foton and MAN)
11. UD Trucks Australia Pty Ltd
12. Volvo Commercial Vehicles Sydney

LGP1608-2 Specialised Truck Bodies and Machines: Waste Collection, Civic Cleaning, Removal and Access.

The LGP Approved Contractors are:

1. ASC Dulevo Pty Ltd
2. Binksie Services Pty Ltd
3. Garwood International Pty Ltd
4. Hako Australia Pty Ltd
5. MacDonald Johnston Pty Ltd
6. Manco Engineering Australia Pty Ltd
7. Rosmech Sales & Service Pty Ltd
8. Tennant Australia

ITEM 13 (continued)

ATTACHMENT 3



**Your PA Procurement Australia Contracts
NEW SOUTH WALES
April 2013**

CONTRACT NO	DESCRIPTION	CONTRACTOR	EXPIRES
1204/0617	Advertising and Media Services	Adcorp Australia (Vic) P/L Blaze P/L Marketforce Advertising Ltd	31/08/2013
1506/0217	Automotive Spare Parts	Burson Automotive Parts CBC Australia Reppo Australia	30/06/2015
1110/0103	Bulk Fuels	Caltex Australia Petroleum P/L McLennan Bulk Fuel Reliance Petroleum Scotts Petroleum	31/10/2013
	Biodiesel		
	Diesel	Caltex Australia Petroleum P/L McLennan Bulk Fuel Reliance Petroleum Scotts Petroleum	
	E10	Caltex Australia Petroleum P/L McLennan Bulk Fuel Reliance Petroleum Scotts Petroleum	
	Unleaded	Caltex Australia Petroleum P/L McLennan Bulk Fuel Reliance Petroleum Scotts Petroleum	

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Thursday, 4 April 2013

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This document is updated at the end of each month. For contracts close to expiry, please contact your dedicated Procurement Australia account manager to receive a status update.

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Marea Getsios
Southern NSW Area Manager
Mobile: 0412 096 617
Email: mgetsios@palt.d.com.au

ITEM 13 (continued)

ATTACHMENT 3

CONTRACT NO	DESCRIPTION	CONTRACTOR	EXPIRES
1401/1205	Cash Collections		31/01/2014
	<i>Cash Collections - Facilities</i>	Australia Wide Security Brokers P/L Linfox Armaguard P/L	
	<i>Cash Collections - Parking Meters</i>	Linfox Armaguard P/L	
	<i>Cash Counting</i>	Australia Wide Security Brokers P/L Linfox Armaguard P/L	
	<i>Cash Delivery</i>	Australia Wide Security Brokers P/L Linfox Armaguard P/L	
1508/0831	Cleaning Consumables and Services		31/08/2015
	<i>Cleaning Consumables</i>	Apex Cleaning & Polishing Supplies P/L Dominant Australia P/L J Blackwood & Son P/L Staples Australia P/L	
1212/0901	Corporate Uniform Protective Clothing & Safety Products		31/12/2013
	<i>Corporate Uniforms</i>	Janine Baird Uniforms Neat & Trim Uniform P/L Specialized Apparel Worksense Safety & Workwear P/L Yakka P/L	
	<i>Melbourne City Council Customised Corporate Uniform</i>	Janine Baird Uniforms	
	<i>PPE & Safety Products</i>	J Blackwood & Son P/L Janine Baird Uniforms Staples Australia P/L Stay Safe P/L Worksense Safety & Workwear P/L Yakka P/L	
1410/0619	Courier Services		31/12/2014
		Australia Post Jet Couriers (Sydney) Pty Ltd	

ITEM 13 (continued)
ATTACHMENT 3

CONTRACT NO	DESCRIPTION	CONTRACTOR	EXPIRES
1511/1212	Debt Collection Services <i>Debt Collection Services</i>	Australian Receivables Limited Midstate Credit Management Services P/L ML&C Collections P/L National Credit Management Ltd Recoveries & Reconstruction (Aust) P/L	30/11/2015
1212/1011	Electrical Products	L&H Group MM Electrical Rexel Electrical Supplies	30/06/2013
1510/1023	Gases & Associated Products <i>Compressed Gases</i>	BOC Limited	31/10/2015
1503/1019	Hardware, Plumbing, Cement Products & Herbicides <i>Cement & Associated Products</i> <i>Hardware & Associated Products</i> <i>Herbicides & Associated Products</i> <i>Plumbing Equipment & supplies</i>	Bunnings Group Limited Bunnings Group Limited J Blackwood & Son P/L Bunnings Group Limited Bunnings Group Limited Reece Australia P/L	30/04/2015
1309/0310	Hire of Equipment <i>Relocatable Buildings</i> <i>Road Construction, Tools & Equipment</i> <i>Temporary Fencing</i>	Coates Hire Operations Coates Hire Operations Australian Temporary Fencing P/L Coates Hire Operations	19/12/2013
1311/0217	Hire of Vehicles <i>Commercial Vehicles</i> <i>Passenger Vehicles</i>	Budget Rent A Car Australia P/L Europcar Australia & New Zealand Thrifty Car Rentals Budget Rent A Car Australia P/L Europcar Australia & New Zealand Thrifty Car Rentals	31/10/2013

ITEM 13 (continued)

ATTACHMENT 3

CONTRACT NO	DESCRIPTION	CONTRACTOR	EXPIRES
1404/0710	<i>IT Products & Services</i>		30/06/2014
	<i>Disposal Services</i>	MRI (Aust) P/L Staples Australia P/L	
	<i>IT Hardware</i>	Gen-i Australia P/L Invotec P/L Southern Cross Computer Systems P/L Staples Australia P/L Thomas Duryea Consulting	
	<i>IT Infrastructure</i>	02 Networks P/L Anyware Computer Accessories Gen-i Australia P/L Invotec P/L Southern Cross Computer Systems P/L Staples Australia P/L Thomas Duryea Consulting	
	<i>IT Services</i>	02 Networks P/L Applied Aged Care Solutions P/L Gen-i Australia P/L Invotec P/L Logical Technologies P/L Southern Cross Computer Systems P/L Staples Australia P/L Synergy Corporate Technologies Terra Firma P/L Thomas Duryea Consulting	
	<i>Leasing</i>	Gen-i Australia P/L Staples Australia P/L	
	<i>RFID Products</i>	3M Australia P/L Bibliotheca RFID Library Systems Australia P/L Caval Ltd FE Technologies Tecevo Automated Systems	
	<i>Software</i>	Anyware Computer Accessories Applied Aged Care Solutions P/L Gen-i Australia P/L Invotec P/L Southern Cross Computer Systems P/L	

ITEM 13 (continued)

ATTACHMENT 3

CONTRACT NO	DESCRIPTION	CONTRACTOR	EXPIRES
		Staples Australia P/L	
		Synergy Corporate Technologies	
		Thomas Duryea Consulting	

ITEM 13 (continued)

ATTACHMENT 3

CONTRACT NO	DESCRIPTION	CONTRACTOR	EXPIRES
1504/0826	<i>Library Books, Av Media, Periodicals, Subscription and Related Services</i>		30/06/2015
	<i>Additional Support Services</i>	ALS Library Service Arab Friends Book Club Aussie Global Books Baker & Taylor Inc Bolinda Publishing P/L Books Music and Videos Brian Farrow Agency P/L Caval Ltd Digital Educational Services DLS Australia Educational Concepts Sales P/L Elan Media Partners P/L Global Language Books P/L Insegna Booksellers James Bennett P/L Julian Wood Bookseller P/L LN Viet Books Pty Ltd Marcom Projects Peter Pal Library Supplier Protect A Book QEC Distribution (Aust) Queensland Library Supplies P/L Readings P/L Robinsons Bookshop Sound Text Media Southern Scene Thorpe-Bowker Ulverscroft Large Print (Australia) P/L University Co-operative Bookshop Ltd Warner Books P/L Wavesound P/L Zenith Management	
	<i>AV Material</i>	ALS Library Service Arab Friends Book Club Aussie Global Books Baker & Taylor Inc Beograd Online PL Bolinda Publishing P/L Books Music and Videos Caval Ltd	

ITEM 13 (continued)

ATTACHMENT 3

CONTRACT NO	DESCRIPTION	CONTRACTOR	EXPIRES
		Continental Bookshop	
		Digital Educational Services	
		Elan Media Partners P/L	
		Foreign Language Bookshop	
		Greek Book Importers	
		Insegna Booksellers	
		James Bennett P/L	
		Julian Wood Bookseller P/L	
		LN Viet Books Pty Ltd	
		Marcom Projects	
		Mondo Music P/L	
		Negozio Italia	
		Nusantara Indonesian Bookshop PL	
		Peter Pal Library Supplier	
		Readings P/L	
		Robinsons Bookshop	
		Sound Text Media	
		Southern Scene	
		Ulverscroft Large Print (Australia) P/L	
		University Co-operative Bookshop Ltd	
		Wavesound P/L	
		Zagreb Croatian Bookshop	
	<i>Downloadable Materials</i>	ALS Library Service	
		Aussie Global Books	
		Bolinda Publishing P/L	
		James Bennett P/L	
		Library Ideas LLC	
		Overdrive Inc	
		Warner Books P/L	
		Wavesound P/L	
	<i>English Printed Material</i>	ALS Library Service	
		Baker & Taylor Inc	
		Brian Farrow Agency P/L	
		Civica Library and Learning	
		Continental Bookshop	
		Digital Educational Services	
		DLS Australia	
		Educational Concepts Sales P/L	
		Foreign Language Bookshop	
		James Bennett P/L	
		Julian Wood Bookseller P/L	

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This document is updated at the end of each month. For contracts close to expiry, please contact your dedicated Procurement Australia account manager to receive a status update.

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ITEM 13 (continued)

ATTACHMENT 3

CONTRACT NO	DESCRIPTION	CONTRACTOR	EXPIRES
		Peter Pal Library Supplier	
		Readings P/L	
		Robinsons Bookshop	
		Slow Glass Books P/L	
		Sound Text Media	
		Southern Scene	
		University Co-operative Bookshop Ltd	
		Warner Books P/L	
	<i>Full Shelf Ready Services</i>		
		ALS Library Service	
		Aussie Global Books	
		Baker & Taylor Inc	
		Bolinda Publishing P/L	
		Books Music and Videos	
		Caval Ltd	
		Civica Library and Learning	
		Continental Bookshop	
		Digital Educational Services	
		DLS Australia	
		EBSCO Australia	
		Educational Concepts Sales P/L	
		Elan Media Partners P/L	
		Insegna Booksellers	
		James Bennett P/L	
		Julian Wood Bookseller P/L	
		LN Viet Books Pty Ltd	
		Marcom Projects	
		Peter Pal Library Supplier	
		Protect A Book	
		Sound Text Media	
		Southern Scene	
		Uiverscroft Large Print (Australia) P/L	
		Wavesound P/L	
		Zenith Management	
	<i>Large Printed Material</i>		
		ALS Library Service	
		Aussie Global Books	
		Baker & Taylor Inc	
		Bolinda Publishing P/L	
		Brian Farrow Agency P/L	
		Continental Bookshop	
		DLS Australia	
		Foreign Language Bookshop	

ITEM 13 (continued)

ATTACHMENT 3

CONTRACT NO	DESCRIPTION	CONTRACTOR	EXPIRES
		James Bennett P/L	
		Julian Wood Bookseller P/L	
		Southern Scene	
		Ulvicroft Large Print (Australia) P/L	
		Wavesound P/L	
	<i>LOTE Printed Material</i>		
		Arab Friends Book Club	
		Aussie Global Books	
		Baker & Taylor Inc	
		Beograd Online PL	
		Books Music and Videos	
		Casalini Libri Spa	
		Caval Ltd	
		Civica Library and Learning	
		Continental Bookshop	
		Digital Educational Services	
		Foreign Language Bookshop	
		Global Language Books P/L	
		Greek Book Importers	
		Insegna Booksellers	
		LN Viet Books Pty Ltd	
		Negozio Italia	
		Nusantara Indonesian Bookshop PL	
		Zagreb Croatian Bookshop	
	<i>Online Subscriptions</i>		
		Adult Multicultural Education Services	
		Casalini Libri Spa	
		Digital Educational Services	
		Foreign Language Bookshop	
		James Bennett P/L	
		Library Ideas LLC	
		RMIT Publishing	
		Thorpe-Bowker	
		Warner Books P/L	
		Wavesound P/L	
	<i>Printed Periodical Subscription and Magazines</i>		
		Arab Friends Book Club	
		Beograd Online PL	
		EBSCO Australia	
		Greek Book Importers	
		Isubscribe P/L	
		LN Viet Books Pty Ltd	
		Negozio Italia	

ITEM 13 (continued)

ATTACHMENT 3

CONTRACT NO	DESCRIPTION	CONTRACTOR	EXPIRES
		Prenax PL Thorpe-Bowker Zagreb Croatian Bookshop	
1504/0105	<i>Lubricants & Associated Services</i>		30/04/2015
		Castrol Australia P/L Gulf Western Premium Quality Lubricating Oils	
1212/0503	<i>Mobile Garbage Bin</i>		31/01/2014
		Mastec Australia P/L Sulo MGB Australia P/L Transpacific Superior Pak P/L	
1306/0401	<i>Mowing/Turfcare Small Plant and Gardening equipment</i>		31/08/2013
	<i>Horticultural & Motorised Construction Equipment</i>	Allpower Industries P/L Mt Waverly Mowerpower	
	<i>Mowing/Turfcare Equipment</i>	AGCO Australia Ltd Allpower Industries P/L John Deere Limited Kubota Tractor Australia P/L Mt Waverly Mowerpower New Holland Agriculture Toro Australia Group Sales P/L	
	<i>Servicing and Repairs</i>	Allpower Industries P/L Atlas Copco Construction Equipment Australia Mt Waverly Mowerpower	
	<i>Small Plant and Machinery</i>	Atlas Copco Construction Equipment Australia Komatsu Australia P/L Semco Equipment Sales William Adams P/L Wirtgen Australia P/L	
	<i>Spare Parts</i>	Allpower Industries P/L Atlas Copco Construction Equipment Australia Mt Waverly Mowerpower	

ITEM 13 (continued)

ATTACHMENT 3

CONTRACT NO	DESCRIPTION	CONTRACTOR	EXPIRES
1411/0830	<i>Office Furniture, Library Furniture, Shelving and White Goods (Electrical Consumer Desks, Workstations, Tables & Accessories</i>	Eastern Commercial Furniture P/L Gregory Commercial Furniture P/L IntraSpace OfficeMax Australia Limited Queensland Library Supplies P/L Raeco Staples Australia P/L	31/05/2015
	<i>Library Shelving & Associated Products</i>	Dexion Office Gregory Commercial Furniture P/L IntraSpace OfficeMax Australia Limited Queensland Library Supplies P/L Raeco Staples Australia P/L	
	<i>Seating</i>	Eastern Commercial Furniture P/L Gregory Commercial Furniture P/L IntraSpace Mark Perry P/L OfficeMax Australia Limited Queensland Library Supplies P/L Raeco Staples Australia P/L	
	<i>Storage Cabinets and Units</i>	Dexion Office Eastern Commercial Furniture P/L Gregory Commercial Furniture P/L IntraSpace OfficeMax Australia Limited Queensland Library Supplies P/L Staples Australia P/L	
	<i>White Goods & Electrical Consumer Goods</i>	OfficeMax Australia Limited Sharp Corporation of Australia	

ITEM 13 (continued)

ATTACHMENT 3

CONTRACT NO	DESCRIPTION	CONTRACTOR	EXPIRES		
1212/0104	One Card (Supply of Fuels at Retail Outlets)		31/01/2014		
	<i>Biodiesel Derivative Blends</i>	BP Australia P/L Wright Express Australia P/L			
	<i>Diesel</i>	BP Australia P/L Wright Express Australia P/L			
	<i>E10</i>	BP Australia P/L Wright Express Australia P/L			
	<i>LPG Autogas</i>	BP Australia P/L Wright Express Australia P/L			
	<i>ULP Deliverables</i>	BP Australia P/L Wright Express Australia P/L			
	1308/1001	Paint and Graffiti Removal Services			31/01/2014
		<i>Graffiti Removal Services</i>		Kleenit Victoria Urban Maintenance Systems P/L Workzone	
		<i>Paints & Associated Services</i>		Dulux Australia PPG Architectural Coatings P/L	

ITEM 13 (continued)
ATTACHMENT 3

CONTRACT NO	DESCRIPTION	CONTRACTOR	EXPIRES
1405/0827	Photocopiers, Printers & Associated Products & Services		30/06/2014
	<i>Associated Services</i>	Canon Australia Pty Ltd Fuji Xerox Australia P/L Konica Minolta Business Solutions Australia P/L Ricoh Australia P/L Toshiba (Australia) P/L	
	<i>Card Printers / Readers and Associated Software</i>	Bear Solutions (Australasia) P/L Canon Australia Pty Ltd Fuji Xerox Australia P/L Ricoh Australia P/L Sharp Corporation of Australia P/L	
	<i>Leasing and Rental</i>	Canon Australia Pty Ltd Fuji Xerox Australia P/L Konica Minolta Business Solutions Australia P/L Ricoh Australia P/L Sharp Corporation of Australia P/L Toshiba (Australia) P/L	
	<i>Pay by Copy and Pay by Click</i>	Canon Australia Pty Ltd Fuji Xerox Australia P/L Konica Minolta Business Solutions Australia P/L Ricoh Australia P/L Sharp Corporation of Australia P/L Toshiba (Australia) P/L	
	<i>Photocopier & Multifunctional Devices, Consumables & Maintenance Services</i>	Canon Australia Pty Ltd Fuji Xerox Australia P/L Konica Minolta Business Solutions Australia P/L Ricoh Australia P/L Sharp Corporation of Australia P/L Toshiba (Australia) P/L	
	<i>Printers & Scanning Devices, Consumables and Maintenance Services</i>	Canon Australia Pty Ltd Fuji Xerox Australia P/L Konica Minolta Business Solutions Australia P/L Ricoh Australia P/L Sharp Corporation of Australia P/L	
	<i>Software Solutions</i>	Bear Solutions (Australasia) P/L Canon Australia Pty Ltd Fuji Xerox Australia P/L	

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ITEM 13 (continued)

ATTACHMENT 3

CONTRACT NO	DESCRIPTION	CONTRACTOR	EXPIRES
		Konica Minolta Business Solutions Australia P/L Ricoh Australia P/L Sharp Corporation of Australia P/L Toshiba (Australia) P/L	
1503/1021	Planning, Design & Engineering / Civil Consultancy Services <i>Engineering / Civil Consultancy Services</i>		31/05/2015
		Equity Justice Access MWH Australia P/L Omnalink P/L Pitt & Sherry (Operations) P/L Planright Australasia P/L PTV Asia-Pacific SMEC Australia P/L TGM Group P/L Tomkinson Group Traffix Group P/L URS Australia P/L Woolacotts Consulting Engineers P/L Wright Barrat	
	<i>Planning & Design Consultancy Services</i>	Equity Justice Access MWH Australia P/L Pitt & Sherry (Operations) P/L Planright Australasia P/L Rob Pickett Design SMEC Australia P/L Sweett Group TGM Group P/L Tomkinson Group URS Australia P/L Woolacotts Consulting Engineers P/L Wright Barrat	
1109/0616	Printing Services & Distribution Service <i>Print Management Systems</i>		30/09/2013
		Forms Express Lanes Laser Printers P/L	
	<i>Printing Services</i>	Forms Express Highlight Printing	

ITEM 13 (continued)

ATTACHMENT 3

CONTRACT NO	DESCRIPTION	CONTRACTOR	EXPIRES
1404/1018	<i>RC Pipes, Grates, Covers and Associated Services</i>		31/05/2014
	<i>Access Covers, Grates and Associated Products</i>		
		Road Safety Grating	
		Rocla Pipeline Products	
	<i>Reinforced Concrete Pipes and Associated Products</i>		
		Rocla Pipeline Products	

ITEM 13 (continued)

ATTACHMENT 3

CONTRACT NO	DESCRIPTION	CONTRACTOR	EXPIRES
1410/0618	Recruitment Training and Associated Services		31/12/2014
	<i>Career Transition and Outplacement</i>	Beilby Corporation P/L Chandler Macleod Drake Australia P/L External Management Consultants Hoban Recruitment Hudson Global Resources (Aust) P/L Mercury Search and Selection Randstad P/L Regent Recruitment	
	<i>Coaching and Mentoring</i>	Australian Institute of Management Beilby Corporation P/L Chandler Macleod Drake Australia P/L External Management Consultants Hoban Recruitment Hudson Global Resources (Aust) P/L Randstad P/L Regent Recruitment Tanner James Management Consultants P/L	
	<i>Executive Recruitment</i>	Adecco All Staff Australia P/L Auslink Consulting Group P/L Beilby Corporation P/L Chandler Macleod Design & Build Recruitment Trust P/L Drake Australia P/L Hays Specialist Recruitment (Australia) P/L Hudson Global Resources (Aust) P/L Jo Fisher Executive P/L MEGT Australia Ltd Mercury Search and Selection Quest Personnel Randstad P/L Regent Recruitment Six Degrees Executive Skilled Group Limited	
	<i>Permanent Recruitment</i>	Adecco All Staff Australia P/L	

ITEM 13 (continued)

ATTACHMENT 3

CONTRACT NO	DESCRIPTION	CONTRACTOR	EXPIRES
		Auslink Consulting Group P/L	
		Beilby Corporation P/L	
		Chandler Macleod	
		Design & Build Recruitment Trust P/L	
		Drake Australia P/L	
		Hays Specialist Recruitment (Australia) P/L	
		Hoban Recruitment	
		Hudson Global Resources (Aust) P/L	
		MEGT Australia Ltd	
		Mercury Search and Selection	
		Quest Personnel	
		Randstad P/L	
		Regent Recruitment	
		SCO Recruitment	
		Six Degrees Executive	
		Skilled Group Limited	
	<i>Temporary Recruitment</i>		
		Adecco	
		All Staff Australia P/L	
		Auslink Consulting Group P/L	
		Chandler Macleod	
		Design & Build Recruitment Trust P/L	
		Drake Australia P/L	
		Hays Specialist Recruitment (Australia) P/L	
		Hoban Recruitment	
		McArthur Management Services	
		MEGT Australia Ltd	
		Mercury Search and Selection	
		Quest Personnel	
		Randstad P/L	
		Regent Recruitment	
		SCO Recruitment	
		Six Degrees Executive	
		Skilled Group Limited	
		Work Solutions (Melb) P/L	
	<i>Training</i>		
		Auslink Consulting Group P/L	
		Australian Institute of Management	
		Beilby Corporation P/L	
		Chandler Macleod	
		Drake Australia P/L	
		External Management Consultants	
		Hoban Recruitment	

ITEM 13 (continued)

ATTACHMENT 3

CONTRACT NO	DESCRIPTION	CONTRACTOR	EXPIRES
		Hudson Global Resources (Aust) P/L Skilled Group Limited Tanner James Management Consultants P/L	
1407/0316	Road Signs and Associated Services		31/08/2014
	<i>Installation, Maintenance & Repairs</i>	Artcraft P/L Danthonia Designs De Neefe Signs P/L RMS	
	<i>Road Signs & Accessories</i>	Artcraft P/L Danthonia Designs De Neefe Signs P/L RMS	
	<i>Work Zone & Associated Products</i>	Artcraft P/L De Neefe Signs P/L Dura-Post RMS	
1409/0828	Sanitary / Hazardous Waste & Medical Consumables		30/09/2014
	<i>Hazardous Waste Services</i>	Transpacific Cleanaway P/L	
	<i>Hygiene Products & Services</i>	Transpacific Cleanaway P/L	
	<i>Medical Consumables</i>	Thermo Fisher Scientific Australia P/L	
	<i>Sharp Containers</i>	Transpacific Cleanaway P/L	
1208/0824	Stationery, Office Machines, IT Consumables & Copy Paper		31/10/2013
	<i>Copy Paper & Non Printed Envelopes</i>	Fuji Xerox Australia P/L Maxim Office Group Staples Australia P/L	
	<i>IT Consumables</i>	Staples Australia P/L Toner Express	
	<i>Office Machines</i>	GBC Australia Staples Australia P/L	
	<i>Stationery Supplies</i>	Maxim Office Group Staples Australia P/L	

ITEM 13 (continued)

ATTACHMENT 3

CONTRACT NO	DESCRIPTION	CONTRACTOR	EXPIRES
1405/0829	<i>Telecommunication Products and Services</i> <i>Conference Call Services</i>	Premiere Global Services	30/05/2014
1305/0216	<i>Tyres & Batteries</i> <i>Batteries</i>	Beaurepaires Century Yuasa Batteries Exide Batteries & Marshall Batteries	31/07/2013
	<i>Tyres and Tubes</i>	Beaurepaires Bridgestone Australia Ltd Toyo Tyres & Rubber Australia Ltd Tyres4U Yokohama Tyres Australia P/L	
1405/0214	<i>Vehicle Procurement, Leasing and Disposals</i> <i>Disposals</i>	Manheim P/L Pickles Auctions P/L	30/06/2014
	<i>Leasing</i>	Custom Fleet Porter Plant Summit Auto Lease Australia P/L Toyota Fleet Management	
	<i>Vehicle Procurement</i>	Honda Australia P/L Inchcape Automotive (Volkswagen) Inchcape Automotive Retail (Subaru Melbourne) Kia Motors Australia P/L Peugeot Automobiles Australia Ssangyong Motors Australia Suzuki Australia P/L	

ITEM 13 (continued)

ATTACHMENT 3

CONTRACT NO	DESCRIPTION	CONTRACTOR	EXPIRES
1212/0104B	<i>Vendors Fuel Card (Supply of Fuels at Retail Outlets)</i>		31/01/2014
	<i>Biodiesel Derivative Blends</i>	BP Australia P/L Caltex Australia Petroleum P/L	
	<i>Diesel</i>	BP Australia P/L Caltex Australia Petroleum P/L	
	<i>E10</i>	BP Australia P/L Caltex Australia Petroleum P/L	
	<i>LPG Autogas</i>	BP Australia P/L Caltex Australia Petroleum P/L	
	<i>ULP Derivatives</i>	BP Australia P/L Caltex Australia Petroleum P/L	

ITEM 13 (continued)

ATTACHMENT 4

Preferred Suppliers (NSROC Arrangements)

1. Asphalt

Downer Edi
Boral

2. General hardware

Bakers/Blackwoods

3. Turf, supply, supply and lay

Grech's Turf Supplies
Hi Quality Turf
Qualturf Pty Ltd

4. Street signs, road signs and associated hardware

RMS Roadsigns

ITEM 13 (continued)

ATTACHMENT 5

**NSW State Government Preferred Provider options through
PROCUREPOINT**

Preamble (taken from Procurepoint website)

Better buying solutions for agencies are available through the use of NSW Government contracts and systems that provide ready access to currently approved suppliers or sourcing pathways for new goods and services requirements.

NSW Government contracts are the principal method by which goods and services are made available to NSW Government buyers. These contracts are 'panel' or 'standing offer' arrangements, where one or more suppliers of similar goods or services are appointed to supply to government under each contract. The goods and services currently available on contract, including ICT services, can be found in eCatalogues.

A ready solution for seeking quick quotes from pre-registered suppliers is available through an increasing number of Prequalification Schemes. Buyers can access services provided under these schemes with the knowledge that suppliers have already been through an extensive assessment process. Schemes are currently in place for performance and management services, executive search services and for engaging independent audit and risk committee members. Further schemes are being established for ICT, printing, contingent labour and other services in the near future. Suppliers can learn more and prequalify to provide services at prequalification schemes.

Range of Providers utilised through Procurepoint

Light Fleet

Holden
Ford
Hyundai
Toyota
Isuzu
Iveco

Servers and Associated Hardware

Dell
IBM
Hewlett Packard
Cisco

Fuel and Oil Products

Caltex