Reference: 09.141

14 November 2011

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Lewisham Estates P/L
C/- Demian Development Pty Ltd
Level 2, 7 Charles Street
Parramatta NSW 2150

Attention: Angus MacInnes,

Re: 78-90 Old Canterbury Road, Lewisham – PPR Concept Plan: Response to RTA Letter (RDC 09M206-SYD10/00972)

Dear Angus,

We refer to the Roads & Traffic Authority's (now Roads & Maritime Authority) letter dated 14th October 2011 in relation to the future access arrangements to the overall precinct from McGill Street. In this regard, we now provide the following comments:

- Intersection Safety

The intersection of Old Canterbury Road and McGill Street currently permits all movements under priority (Give Way) control.

Reference should be made to accident summary map, included in **Attachment 1** which summarises all accidents in the vicinity of the site, as recorded by the RTA for the 5 year period between 2006 and 2010. It is evident that there have been only a small number of accidents in the vicinity of this intersection of varying causes. As such, there is not considered to be a historic safety issue or accident trend associated with the use of this intersection.

- SIDRA Intersection Modelling

SIDRA Modelling has been undertaken for the intersection of McGill Street and Old Canterbury Road to represent future conditions in the vicinity of the site. This includes signalisation of the intersection of Old Canterbury Road and Edward Street to the west of the site and increased traffic volumes associated with both the McGill Street Precinct (as proposed) and Summer Hill Flour Mill redevelopment.

A copy of the Movement Summary outputs from this modelling is included in **Attachment 2** for reference purposes and is summarised in **Table 1**, below:

Table 1: Future Intersection Performance – Existing Intersection Layout

Intersection Description	Control Type	Period	Degree of Saturation	Intersection Delay	Level of Service
Old Canterbury Rd / McGill St	Priority	AM	0.391	71.4	F
		PM	0.175	78.4	F

It can be seen from above that the intersection will fail under future traffic volumes which relates to delays for a relatively small number of vehicles attempting to turn right from McGill Street onto Old Canterbury Road during peak periods.

In this regard, it is recommended that this access is to be signposted with No Right Turn restrictions during peak periods. Table 2, below, provides a summary of the performance of this intersection assuming through traffic volumes along Old Canterbury Road are reduced by 10% during off-peak times, with No Right Turn movements out of McGill Street permitted during the peaks.

Table 2: Future Intersection Performance – No Right Turn from McGill During Peak Periods

Intersection Description	Control Type	Period	Degree of Saturation	Intersection Delay	Level of Service
Old Canterbury Rd / McGill St (Peak Hours)	Priority (No RT from McGill)	AM	0.189	21.0	B
		PM	0.391	15.8	B
Old Canterbury Rd / McGill St (Off-Peak)	Priority (All Movements)	AM	0.283	48.9	D
		PM	0.120	55.0	D

It can be seen from above that this intersection will operate with acceptable delays and Level of Service under future traffic volumes. This assumes traffic volumes to/from McGill Street remain constant during both peak and off-peak times whereas, in practice, off-peak traffic volumes associated with the site would be reduced similar to that of the surrounding background traffic flows. As such, the above is considered an extremely conservative assessment, with average delays likely to be lower during off-peak periods.

- Conclusions

In summary, the proposed access is considered acceptable, subject to No Right Turn restrictions during peak periods. There is no evident accident trends associated with the historic use of this intersection. In this regard, the future reliance on the use of this intersection is not considered to result in any adverse safety impacts.

We trust the above is of assistance and please contact the undersigned should you have any queries or require any further information regarding the above.

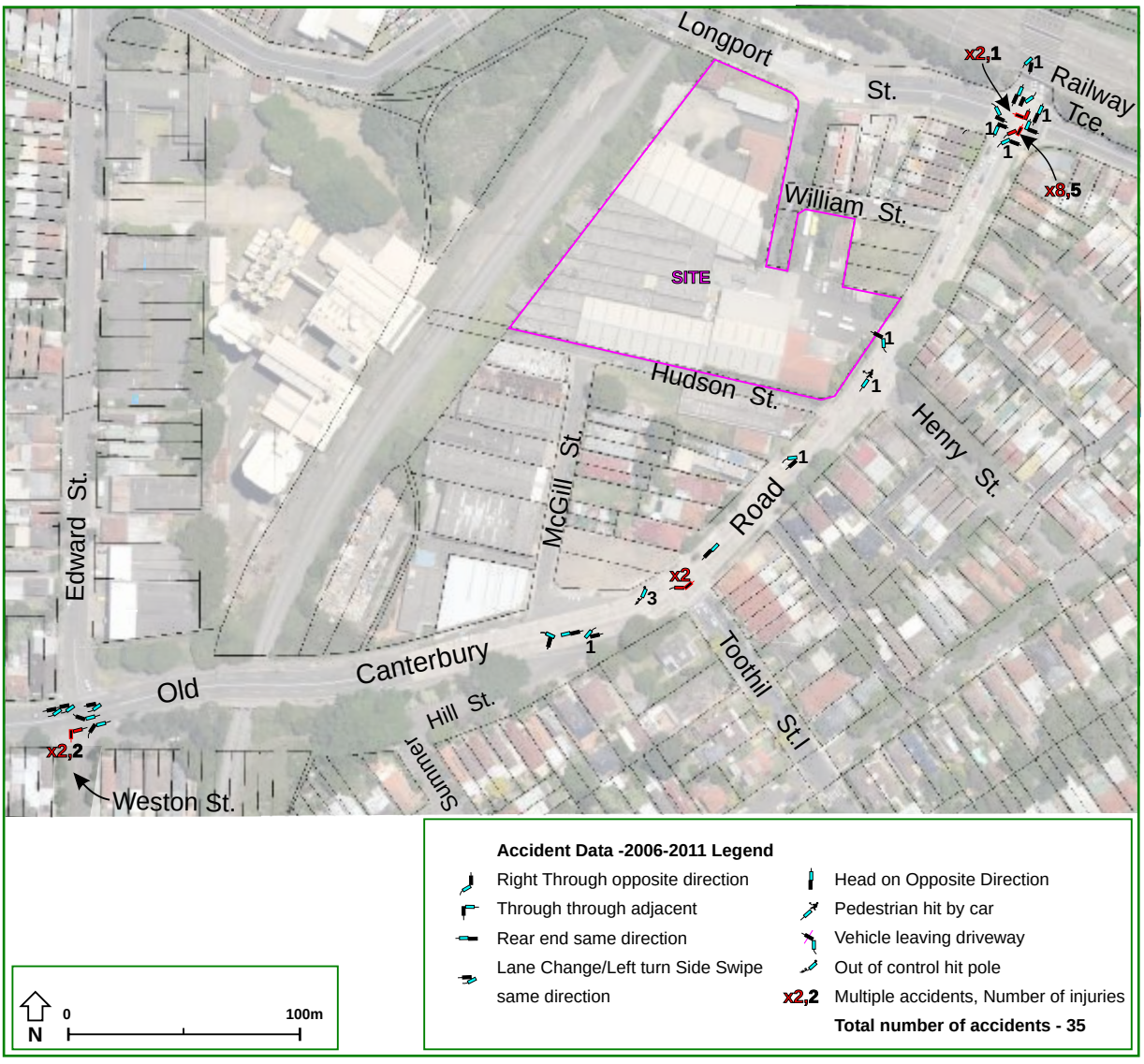
Yours faithfully,

traffix

Tim Lewis
Associate Engineer

Attachment: 1) Historic Accident Summary
2) SIDRA Intersection Outputs

Attachment 1


Longport
St.
Railway
Tce.
William St.
SITE
Hudson St.
Henry St.
Road
McGill St.
Edward St.
Old
Canterbury
Hill St.
Summer
Toothil St.
Weston St.
x2,1
x8,5
x2,2
x2
1
3
N
0
100m
Accident Data -2006-2011 Legend
Right Through opposite direction
Through through adjacent
Rear end same direction
Lane Change/Left turn Side Swipe same direction
Head on Opposite Direction
Pedestrian hit by car
Vehicle leaving driveway
Out of control hit pole
x2,2 Multiple accidents, Number of injuries
Total number of accidents - 35

Attachment 2

MOVEMENT SUMMARY

Site: Old Canterbury / McGill_AM

Old Canterbury Rd / McGill St
Period: AM
Scenario: Future (Site A & B)
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Old Canterbury Rd (east)											
5	T	646	1.5	0.188	5.6	LOS A	3.7	26.1	0.41	0.00	50.2
6	R	15	0.0	0.189	20.9	LOS B	3.7	26.1	0.93	1.01	40.8
Approach		661	1.4	0.188	5.9	LOS B	3.7	26.1	0.42	0.02	49.9
North: McGill St (north)											
7	L	49	0.0	0.146	18.1	LOS B	0.6	4.3	0.77	0.92	40.0
9	R	31	0.0	0.391	71.4	LOS F	1.6	11.5	0.96	1.03	20.2
Approach		80	0.0	0.393	38.5	LOS F	1.6	11.5	0.84	0.96	29.1
West: Old Canterbury Rd (west)											
10	L	23	0.0	0.341	8.2	LOS A	0.0	0.0	0.00	1.07	49.0
11	T	1302	0.2	0.341	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		1325	0.2	0.341	0.1	LOS A	0.0	0.0	0.00	0.02	59.8
All Vehicles		2066	0.6	0.393	3.5	NA	3.7	26.1	0.17	0.06	54.2

LOS (Aver. Int. Delay): NA. The average intersection delay is not a good LOS measure for two-way sign control due to zero delays associated with major road movements.
Level of Service (Worst Movement): LOS F. LOS Method for individual vehicle movements: Delay (RTA NSW).
Approach LOS values are based on the worst delay for any vehicle movement.

MOVEMENT SUMMARY

Old Canterbury Rd / McGill St
Period: PM
Scenario: Future (Site A & B)
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Old Canterbury Rd (east)											
5	T	1384	0.6	0.391	3.4	LOS A	7.5	52.9	0.40	0.00	52.8
6	R	47	0.0	0.391	15.7	LOS B	7.5	52.9	0.88	1.08	45.0
Approach		1432	0.6	0.391	3.8	LOS B	7.5	52.9	0.41	0.04	52.5
North: McGill St (north)											
7	L	14	0.0	0.021	11.7	LOS A	0.1	0.6	0.54	0.74	45.4
9	R	9	0.0	0.175	78.4	LOS F	0.6	4.5	0.96	0.99	18.9
Approach		23	0.0	0.174	39.0	LOS F	0.6	4.5	0.71	0.84	28.9
West: Old Canterbury Rd (west)											
10	L	73	0.0	0.211	8.2	LOS A	0.0	0.0	0.00	0.97	49.0
11	T	741	1.0	0.211	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		814	0.9	0.211	0.7	LOS A	0.0	0.0	0.00	0.09	58.8
All Vehicles		2268	0.7	0.391	3.0	NA	7.5	52.9	0.27	0.06	54.1

LOS (Aver. Int. Delay): NA. The average intersection delay is not a good LOS measure for two-way sign control due to zero delays associated with major road movements.
Level of Service (Worst Movement): LOS F. LOS Method for individual vehicle movements: Delay (RTA NSW).
Approach LOS values are based on the worst delay for any vehicle movement.

MOVEMENT SUMMARY

Site: Old Canterbury / McGill_AM (No RT Exit)

Old Canterbury Rd / McGill St
Period: AM
Scenario: Future (Site A & B) - No RT Exit
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Old Canterbury Rd (east)											
5	T	646	1.5	0.188	5.6	LOS A	3.7	26.1	0.41	0.00	50.2
6	R	15	0.0	0.189	21.0	LOS B	3.7	26.1	0.93	1.01	40.8
Approach		661	1.4	0.188	5.9	LOS B	3.7	26.1	0.42	0.02	49.9
North: McGill St (north)											
7	L	80	0.0	0.236	19.1	LOS B	1.1	7.5	0.79	0.95	39.3
Approach		80	0.0	0.236	19.1	LOS B	1.1	7.5	0.79	0.95	39.3
West: Old Canterbury Rd (west)											
10	L	23	0.0	0.341	8.2	LOS A	0.0	0.0	0.00	1.07	49.0
11	T	1302	0.2	0.341	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		1325	0.2	0.341	0.1	LOS A	0.0	0.0	0.00	0.02	59.8
All Vehicles		2066	0.6	0.341	2.7	NA	3.7	26.1	0.16	0.06	55.2

LOS (Aver. Int. Delay): NA. The average intersection delay is not a good LOS measure for two-way sign control due to zero delays associated with major road movements.

Level of Service (Worst Movement): LOS B. LOS Method for individual vehicle movements: Delay (RTA NSW).

Approach LOS values are based on the worst delay for any vehicle movement.

SIDRA INTERSECTION

MOVEMENT SUMMARY

Site: Old Canterbury / McGill_PM (No RT Exit)

Old Canterbury Rd / McGill St
Period: PM
Scenario: Future (Site A & B) - No RT Exit
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Old Canterbury Rd (east)											
5	T	1384	0.6	0.391	3.4	LOS A	7.5	52.9	0.40	0.00	52.8
6	R	47	0.0	0.391	15.8	LOS B	7.5	52.9	0.88	1.09	45.0
Approach		1432	0.6	0.391	3.8	LOS B	7.5	52.9	0.41	0.04	52.5
North: McGill St (north)											
7	L	23	0.0	0.035	11.8	LOS A	0.2	1.1	0.54	0.76	45.3
Approach		23	0.0	0.035	11.8	LOS A	0.2	1.1	0.54	0.76	45.3
West: Old Canterbury Rd (west)											
10	L	73	0.0	0.211	8.2	LOS A	0.0	0.0	0.00	0.97	49.0
11	T	741	1.0	0.211	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		814	0.9	0.211	0.7	LOS A	0.0	0.0	0.00	0.09	58.8
All Vehicles		2268	0.7	0.391	2.8	NA	7.5	52.9	0.27	0.06	54.5

LOS (Aver. Int. Delay): NA. The average intersection delay is not a good LOS measure for two-way sign control due to zero delays associated with major road movements.

Level of Service (Worst Movement): LOS B. LOS Method for individual vehicle movements: Delay (RTA NSW).

Approach LOS values are based on the worst delay for any vehicle movement.

SIDRA INTERSECTION

MOVEMENT SUMMARY

Site: Old Canterbury / McGill_AM (10% Reduction in Thru Vols)

Old Canterbury Rd / McGill St
Period: AM
Scenario: Future (Site A & B) - 10% Reduction in Through Volumes
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Old Canterbury Rd (east)											
5	T	583	1.6	0.169	4.4	LOS A	2.8	20.1	0.38	0.00	51.8
6	R	15	0.0	0.169	18.1	LOS B	2.8	20.1	0.85	1.01	42.9
Approach		598	1.6	0.169	4.7	LOS B	2.8	20.1	0.39	0.02	51.5
North: McGill St (north)											
7	L	49	0.0	0.122	16.1	LOS B	0.5	3.7	0.72	0.91	41.5
9	R	31	0.0	0.283	48.9	LOS D	1.2	8.4	0.93	1.00	25.5
Approach		80	0.0	0.282	28.6	LOS D	1.2	8.4	0.80	0.94	33.5
West: Old Canterbury Rd (west)											
10	L	23	0.0	0.309	8.2	LOS A	0.0	0.0	0.00	1.06	49.0
11	T	1173	0.3	0.307	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		1196	0.3	0.307	0.2	LOS A	0.0	0.0	0.00	0.02	59.7
All Vehicles		1874	0.7	0.307	2.8	NA	2.8	20.1	0.16	0.06	55.1

LOS (Aver. Int. Delay): NA. The average intersection delay is not a good LOS measure for two-way sign control due to zero delays associated with major road movements.
Level of Service (Worst Movement): LOS D. LOS Method for individual vehicle movements: Delay (RTA NSW).
Approach LOS values are based on the worst delay for any vehicle movement.

MOVEMENT SUMMARY

Old Canterbury Rd / McGill St
Period: PM
Scenario: Future (Site A & B) - 10% Reduction in Through Volumes
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Old Canterbury Rd (east)											
5	T	1246	0.7	0.353	2.7	LOS A	5.8	40.7	0.35	0.00	53.6
6	R	47	0.0	0.353	14.2	LOS A	5.8	40.7	0.77	1.06	46.0
Approach		1294	0.7	0.353	3.1	LOS A	5.8	40.7	0.36	0.04	53.3
North: McGill St (north)											
7	L	14	0.0	0.019	11.2	LOS A	0.1	0.6	0.51	0.72	45.8
9	R	9	0.0	0.120	55.0	LOS D	0.5	3.2	0.94	0.98	23.8
Approach		23	0.0	0.120	29.1	LOS D	0.5	3.2	0.69	0.82	33.3
West: Old Canterbury Rd (west)											
10	L	73	0.0	0.192	8.2	LOS A	0.0	0.0	0.00	0.96	49.0
11	T	667	1.1	0.192	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		740	1.0	0.192	0.8	LOS A	0.0	0.0	0.00	0.09	58.7
All Vehicles		2057	0.8	0.353	2.6	NA	5.8	40.7	0.23	0.07	54.8

LOS (Aver. Int. Delay): NA. The average intersection delay is not a good LOS measure for two-way sign control due to zero delays associated with major road movements.
Level of Service (Worst Movement): LOS D. LOS Method for individual vehicle movements: Delay (RTA NSW).
Approach LOS values are based on the worst delay for any vehicle movement.