Colston Budd Rogers& Kafes Pty Ltd
as Trustee for C & B Unit Trust
ABN 27 623 918 759

Our Ref: TR\12473\mc

6 June, 2025

Transport Planning
Traffic Studies
Parking Studies

McDonald's Australia Limited
21-29 Central Avenue
THORNLEIGH NSW 2120

Attention: Stewart Floresta
Email: Stewart.Floresta@au.mcd.com

Dear Sir,

RE: PROPOSED McDONALD'S, 37 ROSEBERRY STREET, BALGOWLAH FURTHER RESPONSE TO TRAFFIC MATTERS RAISED BY COUNCIL

1. As requested, we have reviewed the traffic matters raised by council in relation to traffic modelling of the proposed development. In a meeting held with Council on 2 June, Council raised a number of issues with the traffic effects of the proposed McDonald's. These issues are summarised below:

    1. *Phasing of intersection of Condamine Street / Kenneth Road to reflect TCS plan;*
    2. *Modelled Cycle and phase times of the existing situation did not accurately reflect current operation of Condamine Street / Kenneth Road intersection.*
    3. *Modelled queue lengths along Kenneth Road do not accurately reflect existing conditions.*
    4. *Traffic generation of 180 vehicles during the Weekday PM peak and 260 in the Saturday midday peak period to be adopted fore modelling purposes.*
    5. *Provide an updated traffic assessment incorporating the above.*

2. To respond to the above matters, an updated SIDRA model has been prepared to address Councill's comments. Our response to the above matters is set out below.

    1. *Intersection Phasing*

3. The updated sidra model provides the phasing of the intersection of Condamine Street and Kenneth Road in accordance with the TCS plan. A copy of the TCS plan is provided in Attachment A. it should be noted that the TCS plan shows multiple variable phases for the intersection. Observations of the intersection

over a 30 minute period were used to determine what phases of the TCS plan run. It should be noted that the number and order of phases that ran in each cycle was not consistent, and certain phases were called up based on demand.

2. Cycle and Phase Times

4. Observations of the Condamine Street / Kenneth Road intersection showed a consistent cycle time of 120 seconds. However, as noted above the phases that ran throughout the 120 second cycle time and phase lengths change based on demand.

5. At the meeting with council, Council requested that user given phase times be used to model the existing situation. However, as the intersection utilises variable phases, user given phase times is not an appropriate method to model the intersection as it removes any possibility of variable phases being called up. A more appropriate method is to use a user given cycle time (120 seconds) and place limitations on the model including minimum and maximum green times and phase actuations to ensure the model operates similar to the existing conditions. Limitations have been incorporated into the model to calibrate the model to operate with phase times similar to that of observed phase times.

3. Queue Lengths

6. The model has been calibrated so that modelled queue lengths are similar to observed queue lengths during the Weekday afternoon and Saturday Midday peak periods for the following critical queues:

- Kenneth Road eastern approach to the traffic signal controlled intersection with Condamine Street (the section of Kenneth Road between Condamine Street and Roseberry Street);
- Kenneth Road eastern approach to the roundabout controlled intersection with Roseberry Street; and
- Roseberry Street southern approach to the roundabout controlled intersection with Kenneth Road.

7. Queues on the Kenneth Road eastern approach to Condamine Street were recorded to note:

- average queue length in each cycle;
- number of times during the Friday afternoon and Saturday midday peak hours the queue extended past the roundabout; and

- as the queues extended past the roundabout at Roseberry Street, 95th percentile queues on the Kenneth Road eastbound approach are captured in the queue lengths recorded on the approaches to the roundabout.

8. At the Kenneth Road/Roseberry Street roundabout, the queue lengths were recorded on the eastern (Kenneth Road) and southern (Roseberry Street) approaches to the roundabout. These represent the 95th percentile queues recorded over each 5 minute period.

9. A summary of the existing queuing analysis is set out below:

Kenneth Road Eastern Approach to Condamine Street

- for both the Friday afternoon and Saturday midday peak hours, queue lengths were recorded for 30 cycles (with a 120 second cycle time for the intersection there were 30 cycles in the peak hours);
- during the Friday afternoon peak hour, the average queue length was 10 vehicles (some 70 metres) and 8 times during the 30 cycles, the queue extended past the roundabout along Kenneth Road; and
- during the Saturday midday peak hour queue lengths, the average queue length during the peak hour was 12 vehicles (some 85 metres) and 18 times during the 30 cycles, the queue extended past the roundabout along Kenneth Road.

Roseberry Street/Kenneth Road Roundabout

- during the Friday afternoon peak hour, the 95th percentile queues were:
  - Kenneth Road eastern approach – 7 vehicles (49 metres); and
  - Roseberry Street southern approach – 12 vehicles (84 metres).

- during the Saturday midday peak hour, the 95th percentile queues were:
  - Kenneth Road eastern approach – 13 vehicles (91 metres); and
  - Roseberry Street southern approach – 15 vehicles (105 metres).

10. The SIDRA model for the existing situation was rerun based on the current TCS plan with a 120 second fixed cycle time (as described in paragraphs 3 to 5). Table 1 below summarises the recorded and modelled average queue lengths on the Kenneth Road eastern approach to the intersection with Condamine Street.

Table 1: Kenneth Road Eastern Approach to Condamine Street Comparison of Recorded and Modelled Average Queue Lengths			
Location		**Average Queue (vehicles)**	
		Friday PM	**Saturday Midday**
Kenneth Road (E)	Observed	11	12
	Modelled	10	12

11. Table 2 below summarises the recorded and modelled 95th percentile queue lengths on the Kenneth Road eastern and Roseberry Street southern approaches to the roundabout.

Table 2: Kenneth Road/Roseberry Street Roundabout - Comparison of Recorded and Modelled 95th Percentile Queue Lengths			
Location		**95th Percentile Queue (vehicles)**	
		Friday PM	**Saturday Midday**
Kenneth Road (E)	Observed	7	13
	Modelled	8	12
Roseberry Street (S)	Observed	12	15
	Modelled	12	15

12. Examination of Tables 1 and 2 reveal that recorded and modelled queue lengths for these critical movements for both the Weekday afternoon and Saturday midday peak hour are similar and hence the SIDRA model is appropriate to assess the traffic effects of the proposed McDonald's.

4. Traffic Generation

13. As requested by Council we have updated traffic assessment based on the higher traffic generation rates of 180 vehicles (two-way) in the Friday afternoon and 260 vehicles (two-way) in the Saturday Midday. A review of TfNSW surveys found passing trade of 51% and 56% during the Friday afternoon and Saturday Midday peak periods respectively. Updated traffic flow diagrams are provided in Figures 1 and 2.

5. Updated Traffic Model

14. An updated traffic assessment has been undertaken with the above matters incorporated into the model for the existing and existing plus development scenarios. The result of the updated SIDRA model is summarised in Table 3 below and SIDRA movement summaries are provided in Attachment B.

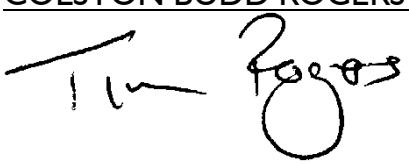
Table 3: Summary of SIDRA Results for Existing and Plus Development					
Location	**Output**	**Weekday Afternoon**		**Saturday Midday**	
		Existing	**+ Dev**	**Existing**	**+ Dev**
Condamine Street/ Kenneth Road	Ave Delay (s)	37	38	40	41
	LOS	C	C	C	C
Kenneth Road / Roseberry Street	Ave Delay (s)	25	28	26	26
	LOS	B	B	B	B
Roseberry Street / Hayes Street	Ave Delay (s)	17	19	26	30
	LOS	B	B	B	B/C

15. Examination of Table 3 reveals that the traffic generated by the proposed development would have minimal impact on the operation of the intersections of Condamine Street/Kenneth Road and Kenneth Road Condamine Street. In particular, we note that:

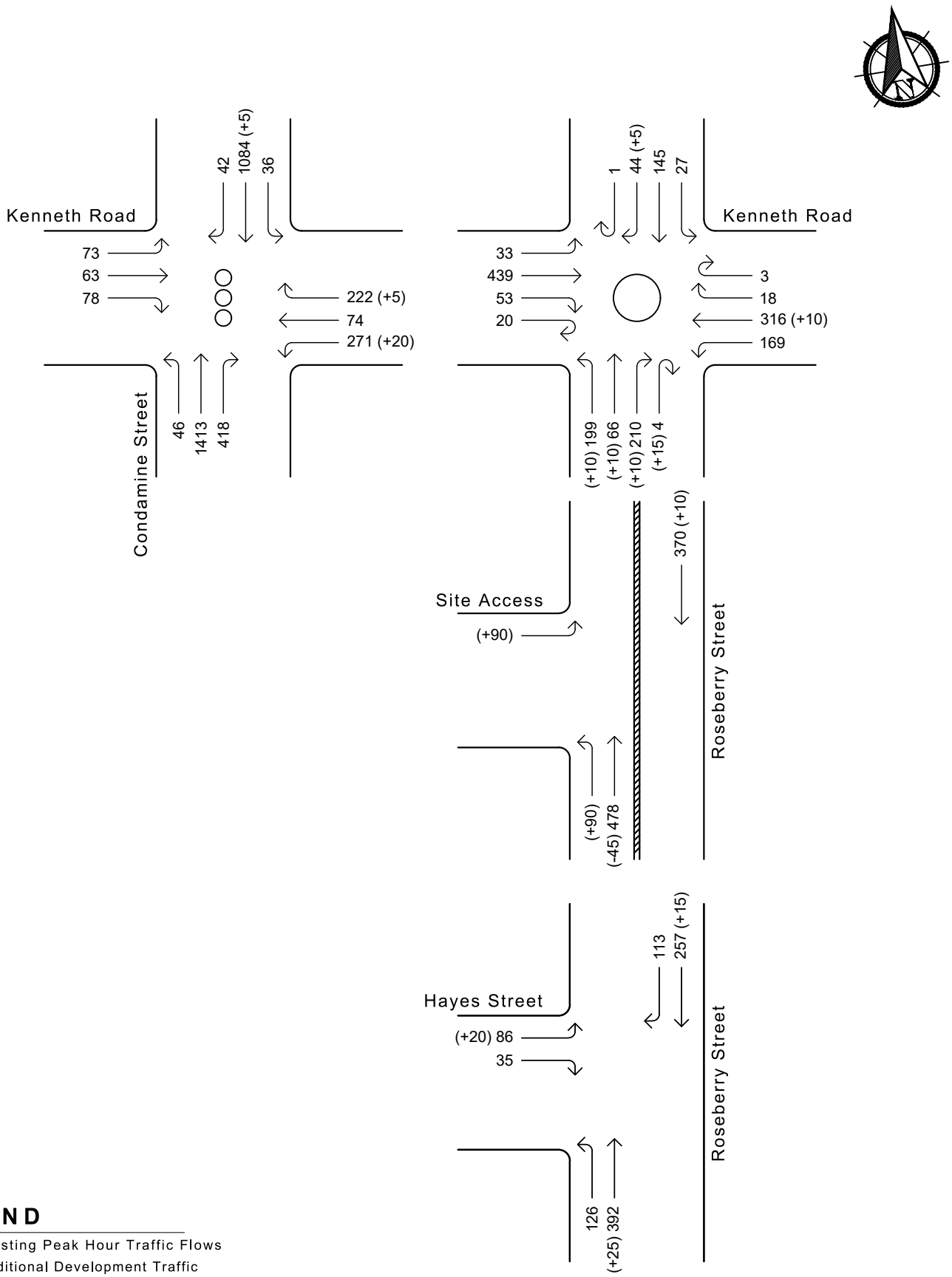
- the proposed development results in a minor increase in traffic (less than 4%) through the roundabout controlled intersection of Kenneth Road/Roseberry Street in the Friday PM and Saturday midday peak hours;
- the proposed development increases traffic on the Kenneth Road westbound approach to the intersection with Condamine Street by 30 vehicles an hour in the Friday PM and Saturday midday peak hours with the majority of vehicles turning left onto Condamine Street (to access McDonald's). This represents a minor increase of one vehicle per cycle during the peak hour;
- a minor reduction in queues (some 3 vehicles) on Roseberry Steet (southern approach) and a minor increase in queues (some 3 vehicles) on Kenneth Road (eastern approach) at the roundabout. This is due to the increase in U-turns from Roseberry Street (south) creating gaps for the southern approach but delays for the eastern approach; and
- increased queuing provided on the Kenneth Road eastern approach to Condamine Street (some four (4) cars) as result of the proposed line marking changes (See Attachment C).

16. We trust the above provides the information you require. Finally, if you should have any queries, please do not hesitate to contact us.

Yours faithfully,
COLSTON BUDD ROGERS & KAFES PTY LTD



T Rogers
Director



LEGEND

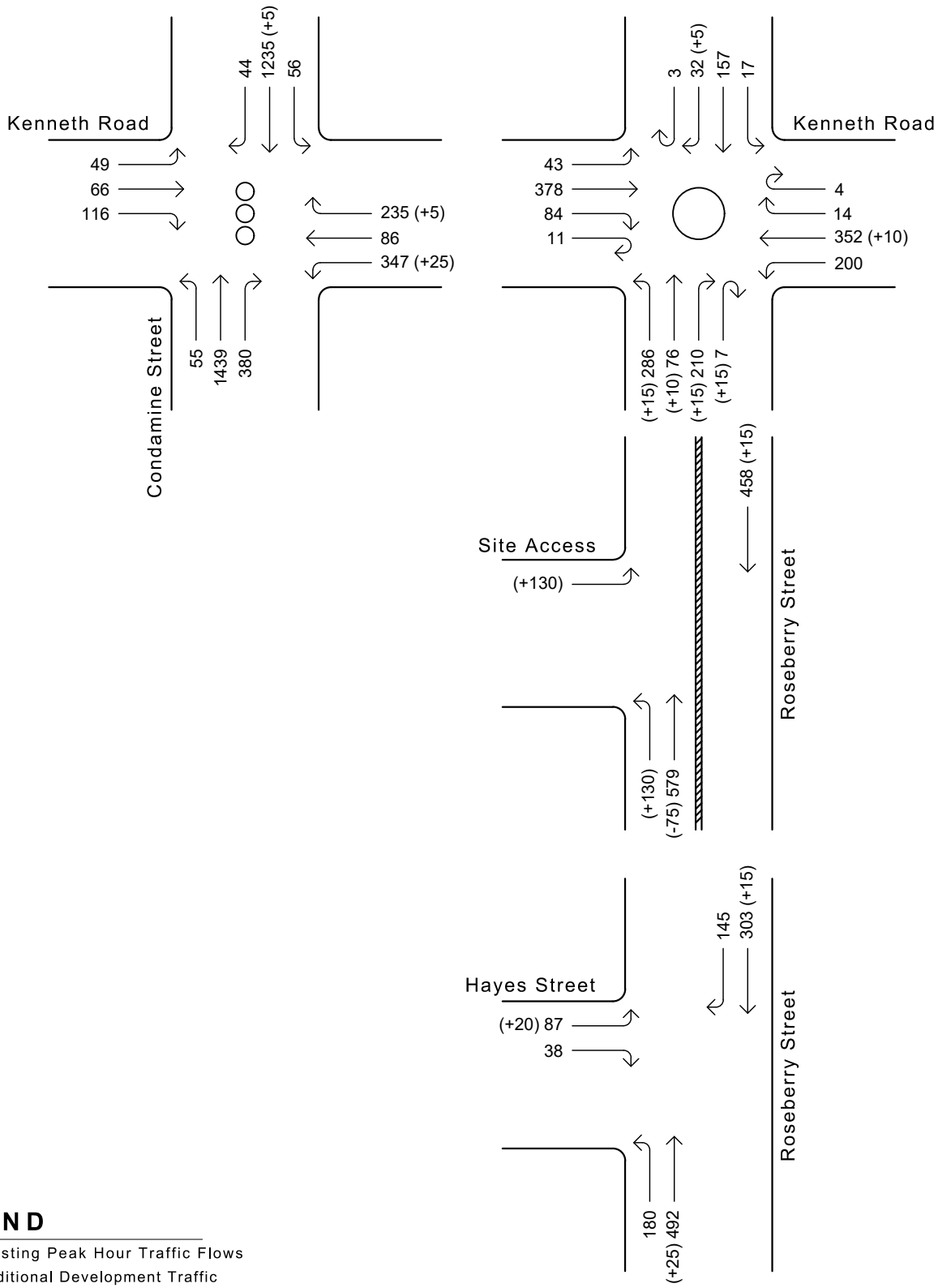
100 - Existing Peak Hour Traffic Flows
(+10) - Additional Development Traffic
- Traffic Signals
- Roundabout

Existing weekday afternoon peak hour traffic flows plus development traffic

Figure 1

Colston Budd Rogers & Kafes Pty Ltd

DRAWN BY CBRK Pty Ltd_mc Ref: 12473 14.05.2025



LEGEND

100 - Existing Peak Hour Traffic Flows
(+10) - Additional Development Traffic
- Traffic Signals
- Roundabout

Existing Saturday midday peak hour traffic flows plus development traffic

Figure 2

Colston Budd Rogers & Kafes Pty Ltd

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Colston Budd Rogers & Kafes Pty Ltd

ATTACHMENT A

TCS PLAN FOR
CONDAMINE STREET / KENNETH ROAD

TCS 0893

DRAWN BY CADD
DO NOT AMEND MANUALLY

DATE IN SERVICE : 24-06-74
DATE RECONSTRUCTED: 04-03-85

Transport Roads & Maritime Services

VARIATION TO DETECTOR SPECIFICATION

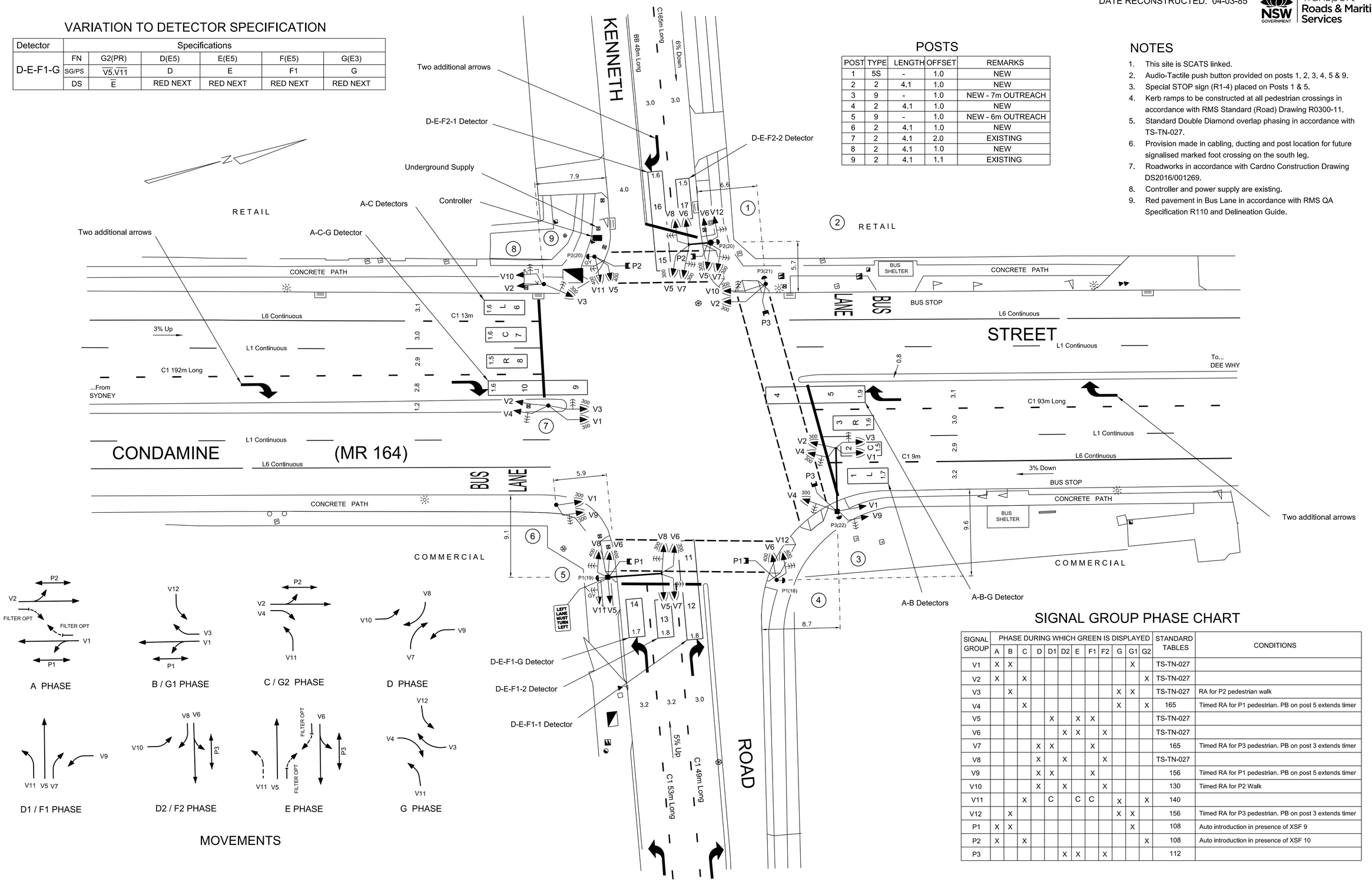
Detector	Specifications					
D-E-F1-G	FN	G2(PR)	D(E5)	E(E5)	F(E5)	G(E3)
	SG/PS	$\overline{V5}$,$\overline{V11}$	D	E	F1	G
	DS	$\overline{E}$	RED NEXT	RED NEXT	RED NEXT	RED NEXT

POSTS

POST	TYPE	LENGTH	OFFSET	REMARKS
1	5S	-	1.0	NEW
2	2	4.1	1.0	NEW
3	9	-	1.0	NEW - 7m OUTREACH
4	2	4.1	1.0	NEW
5	9	-	1.0	NEW - 6m OUTREACH
6	2	4.1	1.0	NEW
7	2	4.1	2.0	EXISTING
8	2	4.1	1.0	NEW
9	2	4.1	1.1	EXISTING

NOTES

1. This site is SCATS linked.
2. Audio-Tactile push button provided on posts 1, 2, 3, 4, 5 & 9.
3. Special STOP sign (R1-4) placed on Posts 1 & 5.
4. Kerb ramps to be constructed at all pedestrian crossings in accordance with RMS Standard (Road) Drawing R0300-11.
5. Standard Double Diamond overlap phasing in accordance with TS-TN-027.
6. Provision made in cabling, ducting and post location for future signalised marked foot crossing on the south leg.
7. Roadworks in accordance with Cardno Construction Drawing DS2016/001269.
8. Controller and power supply are existing.
9. Red pavement in Bus Lane in accordance with RMS QA Specification R110 and Delineation Guide.



SIGNAL GROUP PHASE CHART

SIGNAL GROUP	PHASE DURING WHICH GREEN IS DISPLAYED										STANDARD TABLES	CONDITIONS
	A	B	C	D	D1	D2	E	F1	F2	G	G1	G2	
V1	X	X								X			TS-TN-027	
V2	X		X									X	TS-TN-027	
V3		X								X	X		TS-TN-027	RA for P2 pedestrian walk
V4			X							X		X	165	Timed RA for P1 pedestrian. PB on post 5 extends timer
V5					X		X	X					TS-TN-027	
V6						X	X		X				TS-TN-027	
V7				X	X			X					165	Timed RA for P3 pedestrian. PB on post 3 extends timer
V8				X		X			X				TS-TN-027	
V9				X	X			X					156	Timed RA for P1 pedestrian. PB on post 5 extends timer
V10				X		X				X			130	Timed RA for P2 Walk
V11			X		C		C	C			X		140	
V12		X								X	X		156	Timed RA for P3 pedestrian. PB on post 3 extends timer
P1	X	X									X		108	Auto introduction in presence of XSF 9
P2	X		X									X	108	Auto introduction in presence of XSF 10
P3						X	X		X				112	

A ORIGINAL ISSUE

PUBLIC UTILITY LEGEND		REFERENCE PLANS	
HYDRANT	□	SYMBOLS/ABRVS	VD003-6
STOP VALVE	▲	STD POSN CMPT	VD001-5
GAS VALVE	#	INSTL STOP DET	VC005-17
SEWER MANHOLE	⊕	VEH GROUP OP	TS-TN-019
COMMS PIT	◪	DET LOGIC OP	TS-TN-020
ELECT LIGHT POLE	○	PED MVT OP	TS-TN-021
POWER POLE	○	DDO	TS-TN-027
STAY POLE	⊘		
TELEPHONE BOX	◫	SURVEYOR : RMS	
COMMS PILLAR	◕	DATE : 2015	

U.B.D. Ref. Map 197 K5
I.S.G. CO-ORDS E: 324 585 N: 1 260 020

DESIGNED J BATES
CHECKED R BATES
J BATES
SITE CHECKED
J BATES
RECOMMENDED

DESIGN APPROVAL
APPROVED
POSITION
DATE 11/05/17
DESIGN PREPARED BY
B-Line Drafting

RMS ACCEPTANCE
RECOMMENDED
ENNIO MORSON
TEAM LEADER
POSITION NETWORK OPERATIONS
DATE 19/05/2017
ACCEPTED
PETER CARRUTHERS
MANAGER NETWORK
POSITION AND SAFETY, SERVICES
DATE 27/05/2017

ROADS AND MARITIME SERVICES

NORTHERN BEACHES COUNCIL AREA
TRAFFIC SIGNALS AT
CONDAMINE STREET (MR 164)
AND KENNETH ROAD
MANLY VALE

DESIGN LAYOUT TCS No 0893

EXISTING ☐ PROPOSED ☒
CADD FILE: VV0893_19A.dgn
SCALE 5 0 (1:200) 5 10
ISSUE A
FILE SF2014/010267
SUPERSEDES SHEET/ISSUE 13/J
REG No. DS2014/001285
TCS No. 0893
SHEET 19

Revision 3 - December 2015

Colston Budd Rogers & Kafes Pty Ltd

ATTACHMENT B

SIDRA MOVEMENT SUMMARIES

USER REPORT FOR NETWORK SITE

All Movement Classes

Project: 12473 Balgowlah McDonald's 250603

Template: Movement Summaries

Site: 101 [PM EX - Condamine Street - Kenneth Road (Site Folder: Weekday PM Existing)]

Network: 2 [Weekday PM Existing (Network Folder: Existing)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Network User-Given Cycle Time)

Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Variable Phasing
Reference Phase: Phase A
Input Phase Sequence: A, C*, D*, D1, E, G, G2*
Output Phase Sequence: A, D1, E, G, G2*
(* Variable Phase)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Condamine Street														
1	L2	48	2.2	48	2.2	0.079	14.7	LOS B	1.3	11.9	0.35	0.55	0.35	45.3
2	T1	1487	5.4	1487	5.4	0.690	2.6	LOS A	6.7	48.8	0.17	0.16	0.17	57.5
3	R2	440	1.0	440	1.0	* 0.957	82.5	LOS F	33.6	237.1	1.00	1.06	1.43	16.4
Approach		1976	4.3	1976	4.3	0.957	20.7	LOS B	33.6	237.1	0.36	0.37	0.46	43.4
East: Kenneth Road														
4	L2	285	1.5	285	1.5	0.289	19.8	LOS B	8.7	62.0	0.57	0.72	0.57	36.8
5	T1	78	1.4	78	1.4	0.162	37.7	LOS C	3.6	25.2	0.82	0.64	0.82	27.0
6	R2	234	1.4	234	1.4	* 1.020	84.0	LOS F	18.2	129.0	1.00	1.17	1.81	13.8
Approach		597	1.4	597	1.4	1.020	47.3	LOS D	18.2	129.0	0.77	0.89	1.09	21.7
North: Condamine Street														
7	L2	38	8.3	38	8.3	0.056	29.0	LOS C	1.3	10.0	0.64	0.69	0.64	31.0
8	T1	1141	6.3	1141	6.3	* 0.931	54.6	LOS D	37.7	278.2	0.98	1.06	1.22	31.6
9	R2	44	0.0	44	0.0	0.714	75.2	LOS F	2.9	20.1	1.00	0.81	1.24	25.7
Approach		1223	6.1	1223	6.1	0.931	54.6	LOS D	37.7	278.2	0.97	1.04	1.20	31.4
West: Kenneth Road														
10	L2	77	0.0	77	0.0	0.580	57.9	LOS E	8.1	56.5	0.98	0.80	0.98	29.4
11	T1	66	0.0	66	0.0	* 0.580	53.4	LOS D	8.1	56.5	0.98	0.80	0.98	20.1
12	R2	82	1.3	82	1.3	0.364	55.4	LOS D	4.5	31.5	0.94	0.77	0.94	29.6
Approach		225	0.5	225	0.5	0.580	55.7	LOS D	8.1	56.5	0.97	0.79	0.97	27.2
All Vehicles		4021	4.2	4021	4.2	1.020	36.9	LOS C	37.7	278.2	0.64	0.67	0.81	34.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Site: 101 [PM EX - Kenneth Road - Roseberry Street (Site Folder: Weekday PM Existing)]

Network: 2 [Weekday PM Existing (Network Folder: Existing)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Roseberry Street														
1	L2	209	2.5	209	2.5	0.886	23.5	LOS B	12.3	87.4	0.91	1.35	1.78	18.7
2	T1	69	0.0	69	0.0	0.886	23.3	LOS B	12.3	87.4	0.91	1.35	1.78	33.8
3	R2	221	0.5	221	0.5	0.886	26.5	LOS B	12.3	87.4	0.91	1.35	1.78	33.6
3u	U	4	0.0	4	0.0	0.886	28.0	LOS B	12.3	87.4	0.91	1.35	1.78	18.7
Approach		504	1.3	504	1.3	0.886	24.8	LOS B	12.3	87.4	0.91	1.35	1.78	29.5
East: Kenneth Road														
4	L2	178	0.6	178	0.6	0.806	11.7	LOS A	7.7	54.2	0.74	0.88	1.01	38.0
5	T1	333	0.3	333	0.3	0.806	11.6	LOS A	7.7	54.2	0.74	0.88	1.01	38.0
6	R2	19	0.0	19	0.0	0.806	14.8	LOS B	7.7	54.2	0.74	0.88	1.01	43.1
6u	U	3	0.0	3	0.0	0.806	16.3	LOS B	7.7	54.2	0.74	0.88	1.01	43.6
Approach		533	0.4	533	0.4	0.806	11.8	LOS A	7.7	54.2	0.74	0.88	1.01	38.4
North: Roseberry Street														
7	L2	28	0.0	28	0.0	0.378	10.6	LOS A	2.8	19.7	0.88	0.82	0.88	42.9
8	T1	153	0.7	153	0.7	0.378	10.6	LOS A	2.8	19.7	0.88	0.82	0.88	38.5
9	R2	46	2.3	46	2.3	0.378	13.8	LOS A	2.8	19.7	0.88	0.82	0.88	38.5
9u	U	1	0.0	1	0.0	0.378	15.2	LOS B	2.8	19.7	0.88	0.82	0.88	43.9
Approach		228	0.9	228	0.9	0.378	11.2	LOS A	2.8	19.7	0.88	0.82	0.88	39.4
West: Kenneth Road														
10	L2	35	3.0	35	3.0	0.611	7.0	LOS A	5.0	35.6	0.53	0.67	0.58	42.0
11	T1	462	1.1	462	1.1	0.611	7.0	LOS A	5.0	35.6	0.53	0.67	0.58	43.1
12	R2	56	3.8	56	3.8	0.611	10.2	LOS A	5.0	35.6	0.53	0.67	0.58	26.1
12u	U	21	5.0	21	5.0	0.611	11.8	LOS A	5.0	35.6	0.53	0.67	0.58	26.1
Approach		574	1.7	574	1.7	0.611	7.5	LOS A	5.0	35.6	0.53	0.67	0.58	42.3
All Vehicles		1839	1.1	1839	1.1	0.886	13.9	LOS A	12.3	87.4	0.74	0.94	1.07	36.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: 101 [PM EX - Roseberry Street - Hayes Street (Site Folder: Weekday PM Existing)]

Network: 2 [Weekday PM Existing (Network Folder: Existing)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Roseberry Street														
1	L2	133	0.0	133	0.0	0.071	4.6	LOS A	0.0	0.0	0.00	0.53	0.00	46.6
2	T1	413	1.5	413	1.5	0.215	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
Approach		545	1.2	545	1.2	0.215	1.2	NA	0.0	0.0	0.00	0.13	0.00	48.6
North: Roseberry Street														
8	T1	271	1.2	271	1.2	0.293	2.3	LOS A	1.6	11.1	0.41	0.23	0.45	46.2
9	R2	119	0.9	119	0.9	0.293	8.4	LOS A	1.6	11.1	0.41	0.23	0.45	44.9
Approach		389	1.1	389	1.1	0.293	4.2	NA	1.6	11.1	0.41	0.23	0.45	45.8
West: Hayes Street														
10	L2	91	0.0	91	0.0	0.245	7.5	LOS A	0.9	6.6	0.58	0.79	0.61	39.2
12	R2	37	0.0	37	0.0	0.245	16.8	LOS B	0.9	6.6	0.58	0.79	0.61	43.3
Approach		127	0.0	127	0.0	0.245	10.2	LOS A	0.9	6.6	0.58	0.79	0.61	40.9
All Vehicles		1062	1.0	1062	1.0	0.293	3.3	NA	1.6	11.1	0.22	0.25	0.24	46.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

USER REPORT FOR NETWORK SITE

All Movement Classes

Project: 12473 Balgowlah McDonald's 250603

Template: Movement Summaries

Site: 101 [Sat EX - Condamine Street - Kenneth Road (Site Folder: Saturday Midday Existing)]

Network: 3 [Saturfday Midday Existing (Network Folder: Existing)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Network User-Given Cycle Time)

Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Variable Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B*, C*, D*, D1*, E, G, G1*, G2*
Output Phase Sequence: A, E, G, G2*
(* Variable Phase)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Condamine Street														
1	L2	58	0.0	58	0.0	0.055	17.7	LOS B	1.5	10.3	0.47	0.67	0.47	42.8
2	T1	1515	2.2	1515	2.2	0.701	2.5	LOS A	7.2	51.0	0.18	0.16	0.18	57.6
3	R2	400	1.3	400	1.3	* 0.971	89.3	LOS F	31.6	223.4	1.00	1.08	1.50	15.5
Approach		1973	2.0	1973	2.0	0.971	20.6	LOS B	31.6	223.4	0.35	0.36	0.45	43.5
East: Kenneth Road														
4	L2	365	0.3	365	0.3	0.418	22.4	LOS B	12.5	87.4	0.63	0.75	0.63	35.3
5	T1	91	1.2	91	1.2	0.188	38.0	LOS C	4.2	29.4	0.83	0.65	0.83	26.9
6	R2	247	0.9	247	0.9	* 0.949	84.8	LOS F	18.7	131.8	1.00	1.12	1.53	17.7
Approach		703	0.6	703	0.6	0.949	46.4	LOS D	18.7	131.8	0.79	0.86	0.98	25.4
North: Condamine Street														
7	L2	59	3.6	59	3.6	0.101	35.7	LOS C	2.4	17.2	0.73	0.72	0.73	27.9
8	T1	1300	2.0	1300	2.0	* 0.964	62.3	LOS E	47.6	339.0	0.98	1.13	1.30	29.7
9	R2	46	0.0	46	0.0	0.748	75.7	LOS F	3.0	21.2	1.00	0.82	1.29	25.5
Approach		1405	2.0	1405	2.0	0.964	61.7	LOS E	47.6	339.0	0.97	1.11	1.28	29.5
West: Kenneth Road														
10	L2	52	0.0	52	0.0	0.277	44.5	LOS D	5.8	40.5	0.86	0.72	0.86	33.1
11	T1	69	0.0	69	0.0	0.277	39.9	LOS C	5.8	40.5	0.86	0.72	0.86	23.6
12	R2	122	0.9	122	0.9	0.771	65.8	LOS E	7.7	54.1	1.00	0.92	1.21	27.3
Approach		243	0.4	243	0.4	0.771	53.9	LOS D	7.7	54.1	0.93	0.82	1.04	27.8
All Vehicles		4324	1.7	4324	1.7	0.971	40.0	LOS C	47.6	339.0	0.66	0.71	0.84	33.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Site: 101 [Sat EX - Kenneth Road - Roseberry Street (Site Folder: Saturday Midday Existing)]

Network: 3 [Saturfday Midday Existing (Network Folder: Existing)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Roseberry Street														
1	L2	301	1.4	301	1.4	0.917	24.3	LOS B	14.9	105.3	0.90	1.38	1.92	18.3
2	T1	80	1.3	80	1.3	0.917	24.3	LOS B	14.9	105.3	0.90	1.38	1.92	33.5
3	R2	221	0.0	221	0.0	0.917	27.4	LOS B	14.9	105.3	0.90	1.38	1.92	33.3
3u	U	7	14.3	7	14.3	0.917	29.5	LOS C	14.9	105.3	0.90	1.38	1.92	18.3
Approach		609	1.0	609	1.0	0.917	25.5	LOS B	14.9	105.3	0.90	1.38	1.92	28.1
East: Kenneth Road														
4	L2	211	0.0	211	0.0	0.891	17.5	LOS B	11.8	83.1	0.78	1.07	1.36	33.9
5	T1	371	0.3	371	0.3	0.891	17.5	LOS B	11.8	83.1	0.78	1.07	1.36	33.9
6	R2	15	7.1	15	7.1	0.891	21.0	LOS B	11.8	83.1	0.78	1.07	1.36	40.3
6u	U	4	0.0	4	0.0	0.891	22.2	LOS B	11.8	83.1	0.78	1.07	1.36	40.7
Approach		600	0.4	600	0.4	0.891	17.7	LOS B	11.8	83.1	0.78	1.07	1.36	34.3
North: Roseberry Street														
7	L2	18	5.9	18	5.9	0.344	10.1	LOS A	2.5	17.7	0.84	0.79	0.84	43.2
8	T1	165	1.9	165	1.9	0.344	9.9	LOS A	2.5	17.7	0.84	0.79	0.84	39.1
9	R2	34	0.0	34	0.0	0.344	13.0	LOS A	2.5	17.7	0.84	0.79	0.84	39.1
9u	U	3	0.0	3	0.0	0.344	14.6	LOS B	2.5	17.7	0.84	0.79	0.84	44.3
Approach		220	1.9	220	1.9	0.344	10.5	LOS A	2.5	17.7	0.84	0.79	0.84	39.8
West: Kenneth Road														
10	L2	45	0.0	45	0.0	0.581	6.9	LOS A	4.6	32.3	0.53	0.68	0.57	42.0
11	T1	398	1.3	398	1.3	0.581	6.9	LOS A	4.6	32.3	0.53	0.68	0.57	43.1
12	R2	88	1.2	88	1.2	0.581	10.1	LOS A	4.6	32.3	0.53	0.68	0.57	26.0
12u	U	12	0.0	12	0.0	0.581	11.5	LOS A	4.6	32.3	0.53	0.68	0.57	26.0
Approach		543	1.2	543	1.2	0.581	7.5	LOS A	4.6	32.3	0.53	0.68	0.57	41.9
All Vehicles		1973	1.0	1973	1.0	0.917	16.5	LOS B	14.9	105.3	0.76	1.03	1.26	34.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: 101 [Sat EX - Roseberry Street - Hayes Street (Site Folder: Saturday Midday Existing)]

Network: 3 [Saturfday Midday Existing (Network Folder: Existing)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Roseberry Street														
1	L2	189	0.0	189	0.0	0.102	4.6	LOS A	0.0	0.0	0.00	0.53	0.00	46.6
2	T1	518	1.0	518	1.0	0.268	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
Approach		707	0.7	707	0.7	0.268	1.3	NA	0.0	0.0	0.00	0.14	0.00	48.4
North: Roseberry Street														
8	T1	319	1.3	319	1.3	0.407	4.5	LOS A	3.0	21.1	0.59	0.29	0.79	44.1
9	R2	153	0.7	153	0.7	0.407	11.2	LOS A	3.0	21.1	0.59	0.29	0.79	43.0
Approach		472	1.1	472	1.1	0.407	6.7	NA	3.0	21.1	0.59	0.29	0.79	43.7
West: Hayes Street														
10	L2	92	1.1	92	1.1	0.350	10.1	LOS A	1.5	10.5	0.70	0.93	0.90	35.6
12	R2	40	2.6	40	2.6	0.350	26.4	LOS B	1.5	10.5	0.70	0.93	0.90	41.0
Approach		132	1.6	132	1.6	0.350	15.0	LOS B	1.5	10.5	0.70	0.93	0.90	37.9
All Vehicles		1311	1.0	1311	1.0	0.407	4.6	NA	3.0	21.1	0.28	0.27	0.37	45.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

USER REPORT FOR NETWORK SITE

All Movement Classes

Project: 12473 Balgowlah McDonald's 250603

Template: Movement Summaries

Site: 101 [PM EX + Dev - Condamine Street - Kenneth Road (Site Folder: Weekday PM Existing + Development)]

Network: 8 [Weekday PM Existing + Development (Network Folder: Existing + Development)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Network User-Given Cycle Time)

Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Variable Phasing
Reference Phase: Phase A
Input Phase Sequence: A, C*, D*, D1, E, G, G2
Output Phase Sequence: A, D1, E, G, G2
(* Variable Phase)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Condamine Street														
1	L2	48	2.2	48	2.2	0.079	14.7	LOS B	1.3	11.9	0.35	0.55	0.35	45.3
2	T1	1487	5.4	1487	5.4	0.690	2.6	LOS A	6.7	48.8	0.17	0.16	0.17	57.5
3	R2	440	1.0	440	1.0	* 0.957	82.5	LOS F	33.6	237.1	1.00	1.06	1.43	16.4
Approach		1976	4.3	1976	4.3	0.957	20.7	LOS B	33.6	237.1	0.36	0.37	0.46	43.4
East: Kenneth Road														
4	L2	306	1.4	306	1.4	0.322	20.1	LOS B	9.5	67.5	0.58	0.73	0.58	36.7
5	T1	78	1.4	78	1.4	0.162	37.7	LOS C	3.6	25.2	0.82	0.64	0.82	27.0
6	R2	239	1.3	239	1.3	* 1.043	98.4	LOS F	20.0	141.8	1.00	1.22	1.91	12.6
Approach		623	1.4	623	1.4	1.043	52.3	LOS D	20.0	141.8	0.77	0.90	1.12	20.7
North: Condamine Street														
7	L2	38	8.3	38	8.3	0.056	29.0	LOS C	1.3	10.0	0.64	0.69	0.64	31.0
8	T1	1146	6.2	1146	6.2	* 0.935	55.7	LOS D	38.3	282.5	0.98	1.07	1.23	31.4
9	R2	44	0.0	44	0.0	0.714	75.2	LOS F	2.9	20.1	1.00	0.81	1.24	25.7
Approach		1228	6.1	1228	6.1	0.935	55.6	LOS D	38.3	282.5	0.97	1.05	1.21	31.1
West: Kenneth Road														
10	L2	77	0.0	77	0.0	0.580	57.9	LOS E	8.1	56.5	0.98	0.80	0.98	29.4
11	T1	66	0.0	66	0.0	* 0.580	53.4	LOS D	8.1	56.5	0.98	0.80	0.98	20.1
12	R2	82	1.3	82	1.3	0.364	55.4	LOS D	4.5	31.5	0.94	0.77	0.94	29.6
Approach		225	0.5	225	0.5	0.580	55.7	LOS D	8.1	56.5	0.97	0.79	0.97	27.2
All Vehicles		4053	4.2	4053	4.2	1.043	38.1	LOS C	38.3	282.5	0.64	0.68	0.82	33.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Site: 101 [PM EX + Dev - Kenneth Road - Roseberry Street (Site Folder: Weekday PM Existing + Development)]

Network: 8 [Weekday PM Existing + Development (Network Folder: Existing + Development)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Roseberry Street														
1	L2	220	2.4	220	2.4	0.686	8.6	LOS A	6.3	44.3	0.84	0.88	1.05	14.5
2	T1	80	0.0	80	0.0	0.686	8.7	LOS A	6.3	44.3	0.84	0.88	1.05	41.0
3	R2	232	0.5	232	0.5	0.686	11.6	LOS A	6.3	44.3	0.84	0.88	1.05	40.3
3u	U	20	0.0	20	0.0	0.686	13.4	LOS A	6.3	44.3	0.84	0.88	1.05	14.5
Approach		552	1.1	552	1.1	0.686	10.1	LOS A	6.3	44.3	0.84	0.88	1.05	35.8
East: Kenneth Road														
4	L2	178	0.6	178	0.6	0.947	28.0	LOS B	14.8	104.3	0.77	1.33	1.79	28.6
5	T1	343	0.3	343	0.3	0.947	28.0	LOS B	14.8	104.3	0.77	1.33	1.79	28.6
6	R2	19	0.0	19	0.0	0.947	31.1	LOS C	14.8	104.3	0.77	1.33	1.79	36.2
6u	U	3	0.0	3	0.0	0.947	32.6	LOS C	14.8	104.3	0.77	1.33	1.79	36.5
Approach		543	0.4	543	0.4	0.947	28.1	LOS B	14.8	104.3	0.77	1.33	1.79	29.1
North: Roseberry Street														
7	L2	28	0.0	28	0.0	0.426	10.9	LOS A	2.9	20.8	0.90	0.85	0.90	42.8
8	T1	153	0.7	153	0.7	0.426	10.9	LOS A	2.9	20.8	0.90	0.85	0.90	38.3
9	R2	52	2.0	52	2.0	0.426	14.3	LOS A	2.9	20.8	0.90	0.85	0.90	38.3
9u	U	1	0.0	1	0.0	0.426	15.6	LOS B	2.9	20.8	0.90	0.85	0.90	43.8
Approach		234	0.9	234	0.9	0.426	11.7	LOS A	2.9	20.8	0.90	0.85	0.90	39.2
West: Kenneth Road														
10	L2	35	3.0	35	3.0	0.640	7.9	LOS A	5.4	38.7	0.58	0.72	0.65	41.3
11	T1	462	1.1	462	1.1	0.640	7.8	LOS A	5.4	38.7	0.58	0.72	0.65	42.5
12	R2	56	3.8	56	3.8	0.640	11.1	LOS A	5.4	38.7	0.58	0.72	0.65	24.8
12u	U	21	5.0	21	5.0	0.640	12.6	LOS A	5.4	38.7	0.58	0.72	0.65	24.8
Approach		574	1.7	574	1.7	0.640	8.3	LOS A	5.4	38.7	0.58	0.72	0.65	41.6
All Vehicles		1902	1.1	1902	1.1	0.947	14.9	LOS B	14.8	104.3	0.75	0.96	1.12	35.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: 101 [PM EX + Dev - Roseberry Street - Site Access (Site Folder: Weekday PM Existing + Development)]

Network: 8 [Weekday PM Existing + Development (Network Folder: Existing + Development)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Roseberry Street														
1	L2	95	0.0	95	0.0	0.310	4.7	LOS A	0.0	0.0	0.00	0.12	0.00	49.4
2	T1	456	1.4	456	1.4	0.310	0.2	LOS A	0.0	0.0	0.00	0.12	0.00	47.2
Approach		551	1.1	551	1.1	0.310	1.0	NA	0.0	0.0	0.00	0.12	0.00	48.2
North: Roseberry Street														
8	T1	400	1.1	400	1.1	0.207	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.1
Approach		400	1.1	400	1.1	0.207	0.0	NA	0.0	0.0	0.00	0.00	0.00	50.1
West: Site Access														
10	L2	95	0.0	95	0.0	0.145	8.5	LOS A	0.5	3.5	0.50	0.73	0.50	47.1
Approach		95	0.0	95	0.0	0.145	8.5	LOS A	0.5	3.5	0.50	0.73	0.50	47.1
All Vehicles		1045	1.0	1045	1.0	0.310	1.3	NA	0.5	3.5	0.05	0.13	0.05	48.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: 101 [PM EX + Dev - Roseberry Street - Hayes Street (Site Folder: Weekday PM Existing + Development)]

Network: 8 [Weekday PM Existing + Development (Network Folder: Existing + Development)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Roseberry Street														
1	L2	133	0.0	133	0.0	0.071	4.6	LOS A	0.0	0.0	0.00	0.53	0.00	46.6
2	T1	439	1.4	439	1.4	0.228	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	50.4
Approach		572	1.1	572	1.1	0.228	1.1	NA	0.0	0.0	0.00	0.12	0.00	48.9
North: Roseberry Street														
8	T1	286	1.1	286	1.1	0.306	2.5	LOS A	1.7	12.0	0.42	0.23	0.48	46.2
9	R2	119	0.9	119	0.9	0.306	8.8	LOS A	1.7	12.0	0.42	0.23	0.48	44.6
Approach		405	1.0	405	1.0	0.306	4.3	NA	1.7	12.0	0.42	0.23	0.48	45.7
West: Hayes Street														
10	L2	112	0.0	112	0.0	0.289	8.4	LOS A	1.2	8.4	0.60	0.84	0.69	39.4
12	R2	37	0.0	37	0.0	0.289	18.7	LOS B	1.2	8.4	0.60	0.84	0.69	43.5
Approach		148	0.0	148	0.0	0.289	11.0	LOS A	1.2	8.4	0.60	0.84	0.69	40.9
All Vehicles		1125	0.9	1125	0.9	0.306	3.6	NA	1.7	12.0	0.23	0.25	0.27	46.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

USER REPORT FOR NETWORK SITE

All Movement Classes

Project: 12473 Balgowlah McDonald's 250603

Template: Movement Summaries

Site: 101 [Sat EX + Dev - Condamine Street - Kenneth Road (Site Folder: Saturday Midday Existing + Development)]

Network: 9 [Saturfday Midday Existing + Development (Network Folder: Existing + Development)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Network User-Given Cycle Time)

Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Variable Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B*, C*, D*, D1*, E, G, G1*, G2*
Output Phase Sequence: A, E, G, G2*
(* Variable Phase)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Condamine Street														
1	L2	58	0.0	58	0.0	0.055	17.7	LOS B	1.5	10.3	0.47	0.67	0.47	42.8
2	T1	1515	2.2	1515	2.2	0.701	2.5	LOS A	7.2	51.0	0.18	0.16	0.18	57.6
3	R2	400	1.3	400	1.3	* 0.971	89.3	LOS F	31.6	223.4	1.00	1.08	1.50	15.5
Approach		1973	2.0	1973	2.0	0.971	20.6	LOS B	31.6	223.4	0.35	0.36	0.45	43.5
East: Kenneth Road														
4	L2	397	0.3	397	0.3	0.408	22.9	LOS B	13.8	97.1	0.65	0.76	0.65	35.1
5	T1	91	1.2	91	1.2	0.188	38.0	LOS C	4.2	29.4	0.83	0.65	0.83	26.9
6	R2	253	0.8	253	0.8	* 0.970	93.3	LOS F	20.1	141.9	1.00	1.16	1.61	16.6
Approach		740	0.6	740	0.6	0.970	48.8	LOS D	20.1	141.9	0.79	0.88	1.00	24.7
North: Condamine Street														
7	L2	59	3.6	59	3.6	0.101	35.7	LOS C	2.4	17.2	0.73	0.72	0.73	27.9
8	T1	1300	2.0	1300	2.0	* 0.964	62.3	LOS E	47.6	339.0	0.98	1.13	1.30	29.7
9	R2	46	0.0	46	0.0	0.748	75.7	LOS F	3.0	21.2	1.00	0.82	1.29	25.5
Approach		1405	2.0	1405	2.0	0.964	61.7	LOS E	47.6	339.0	0.97	1.11	1.28	29.5
West: Kenneth Road														
10	L2	52	0.0	52	0.0	0.277	44.5	LOS D	5.8	40.5	0.86	0.72	0.86	33.1
11	T1	69	0.0	69	0.0	0.277	39.9	LOS C	5.8	40.5	0.86	0.72	0.86	23.6
12	R2	122	0.9	122	0.9	0.846	72.0	LOS F	8.1	57.5	1.00	1.00	1.37	26.1
Approach		243	0.4	243	0.4	0.846	57.0	LOS E	8.1	57.5	0.93	0.86	1.11	27.0
All Vehicles		4361	1.7	4361	1.7	0.971	40.6	LOS C	47.6	339.0	0.66	0.72	0.85	33.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Site: 101 [Sat EX + Dev - Kenneth Road - Roseberry Street (Site Folder: Saturday Midday Existing + Development)]

Network: 9 [Saturfday Midday Existing + Development (Network Folder: Existing + Development)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Roseberry Street														
1	L2	322	1.3	322	1.3	0.883	19.7	LOS B	12.3	87.0	0.91	1.22	1.73	8.0
2	T1	91	1.2	91	1.2	0.883	19.9	LOS B	12.3	87.0	0.91	1.22	1.73	33.5
3	R2	232	0.0	232	0.0	0.883	22.7	LOS B	12.3	87.0	0.91	1.22	1.73	33.1
3u	U	23	4.5	23	4.5	0.883	24.6	LOS B	12.3	87.0	0.91	1.22	1.73	8.0
Approach		667	0.9	667	0.9	0.883	20.9	LOS B	12.3	87.0	0.91	1.22	1.73	25.5
East: Kenneth Road														
4	L2	204	0.0	204	0.0	0.943	26.3	LOS B	15.1	105.9	0.77	1.32	1.78	29.4
5	T1	369	0.3	369	0.3	0.943	26.3	LOS B	15.1	105.9	0.77	1.32	1.78	29.4
6	R2	14	7.1	14	7.1	0.943	29.7	LOS C	15.1	105.9	0.77	1.32	1.78	36.8
6u	U	4	0.0	4	0.0	0.943	30.9	LOS C	15.1	105.9	0.77	1.32	1.78	37.2
Approach		592	0.3	592	0.3	0.943	26.4	LOS B	15.1	105.9	0.77	1.32	1.78	29.7
North: Roseberry Street														
7	L2	18	5.9	18	5.9	0.384	10.4	LOS A	2.6	18.7	0.86	0.83	0.86	43.1
8	T1	165	1.9	165	1.9	0.384	10.2	LOS A	2.6	18.7	0.86	0.83	0.86	38.9
9	R2	39	0.0	39	0.0	0.384	13.5	LOS A	2.6	18.7	0.86	0.83	0.86	38.9
9u	U	3	0.0	3	0.0	0.384	14.8	LOS B	2.6	18.7	0.86	0.83	0.86	44.2
Approach		225	1.9	225	1.9	0.384	10.9	LOS A	2.6	18.7	0.86	0.83	0.86	39.6
West: Kenneth Road														
10	L2	45	0.0	45	0.0	0.612	7.6	LOS A	5.1	35.8	0.58	0.73	0.65	41.4
11	T1	398	1.3	398	1.3	0.612	7.6	LOS A	5.1	35.8	0.58	0.73	0.65	42.5
12	R2	88	1.2	88	1.2	0.612	10.8	LOS A	5.1	35.8	0.58	0.73	0.65	24.8
12u	U	12	0.0	12	0.0	0.612	12.3	LOS A	5.1	35.8	0.58	0.73	0.65	24.8
Approach		543	1.2	543	1.2	0.612	8.3	LOS A	5.1	35.8	0.58	0.73	0.65	41.2
All Vehicles		2028	0.9	2028	0.9	0.943	18.0	LOS B	15.1	105.9	0.78	1.07	1.36	32.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: 101 [Sat EX + Dev - Roseberry Street - Site Access (Site Folder: Saturday Midday Existing + Development)]

Network: 9 [Saturfday Midday Existing + Development (Network Folder: Existing + Development)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Roseberry Street														
1	L2	137	0.0	137	0.0	0.474	4.8	LOS A	0.0	0.0	0.00	0.14	0.00	49.3
2	T1	531	1.2	531	1.2	0.474	0.2	LOS A	0.0	0.0	0.00	0.14	0.00	46.6
Approach		667	0.9	667	0.9	0.474	1.2	NA	0.0	0.0	0.00	0.14	0.00	47.9
North: Roseberry Street														
8	T1	498	1.1	498	1.1	0.258	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.2
Approach		498	1.1	498	1.1	0.258	0.0	NA	0.0	0.0	0.00	0.00	0.00	50.2
West: Site Access														
10	L2	137	0.0	137	0.0	0.309	9.9	LOS A	0.9	6.3	0.56	0.84	0.63	45.4
Approach		137	0.0	137	0.0	0.309	9.9	LOS A	0.9	6.3	0.56	0.84	0.63	45.4
All Vehicles		1302	0.9	1302	0.9	0.474	1.6	NA	0.9	6.3	0.06	0.16	0.07	47.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Site: 101 [Sat EX + Dev - Roseberry Street - Hayes Street (Site Folder: Saturday Midday Existing + Development)]

Network: 9 [Saturfday Midday Existing + Development (Network Folder: Existing + Development)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Roseberry Street														
1	L2	189	0.0	189	0.0	0.102	4.6	LOS A	0.0	0.0	0.00	0.53	0.00	46.6
2	T1	544	1.0	544	1.0	0.282	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	50.3
Approach		734	0.7	734	0.7	0.282	1.3	NA	0.0	0.0	0.00	0.14	0.00	48.7
North: Roseberry Street														
8	T1	335	1.3	335	1.3	0.425	4.9	LOS A	3.2	22.8	0.60	0.29	0.83	43.8
9	R2	153	0.7	153	0.7	0.425	11.7	LOS A	3.2	22.8	0.60	0.29	0.83	42.4
Approach		487	1.1	487	1.1	0.425	7.0	NA	3.2	22.8	0.60	0.29	0.83	43.3
West: Hayes Street														
10	L2	113	0.9	113	0.9	0.410	11.4	LOS A	1.8	13.0	0.73	0.97	1.01	35.5
12	R2	40	2.6	40	2.6	0.410	29.6	LOS C	1.8	13.0	0.73	0.97	1.01	40.9
Approach		153	1.4	153	1.4	0.410	16.2	LOS B	1.8	13.0	0.73	0.97	1.01	37.5
All Vehicles		1374	0.9	1374	0.9	0.425	5.0	NA	3.2	22.8	0.30	0.28	0.41	45.2

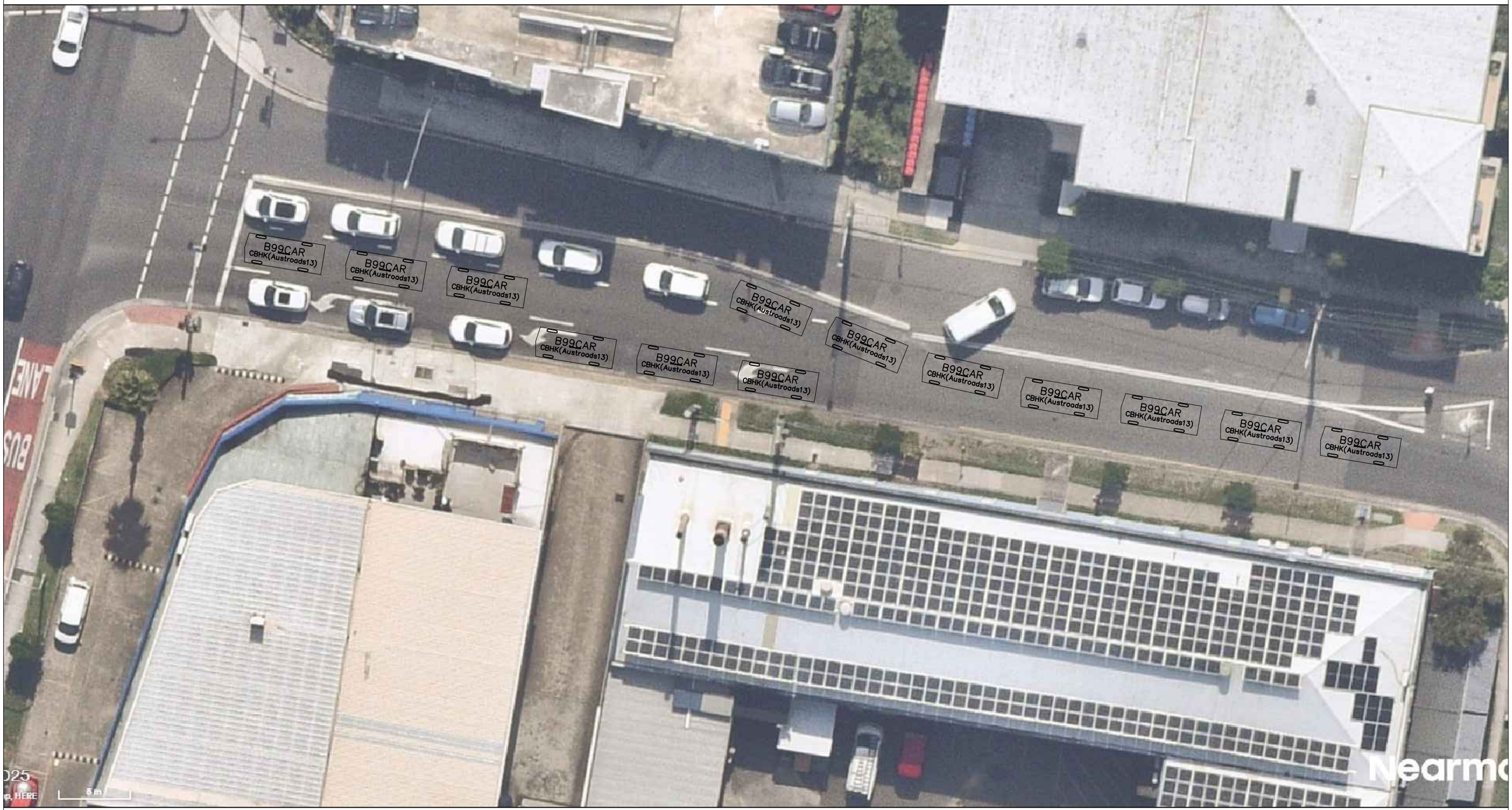
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Colston Budd Rogers & Kafes Pty Ltd

ATTACHMENT C

LINE MARKING CONCEPT SKETCH ON
KENNETH ROAD WITH VEHICLE QUEUING

EXISTING CONFIGURATION



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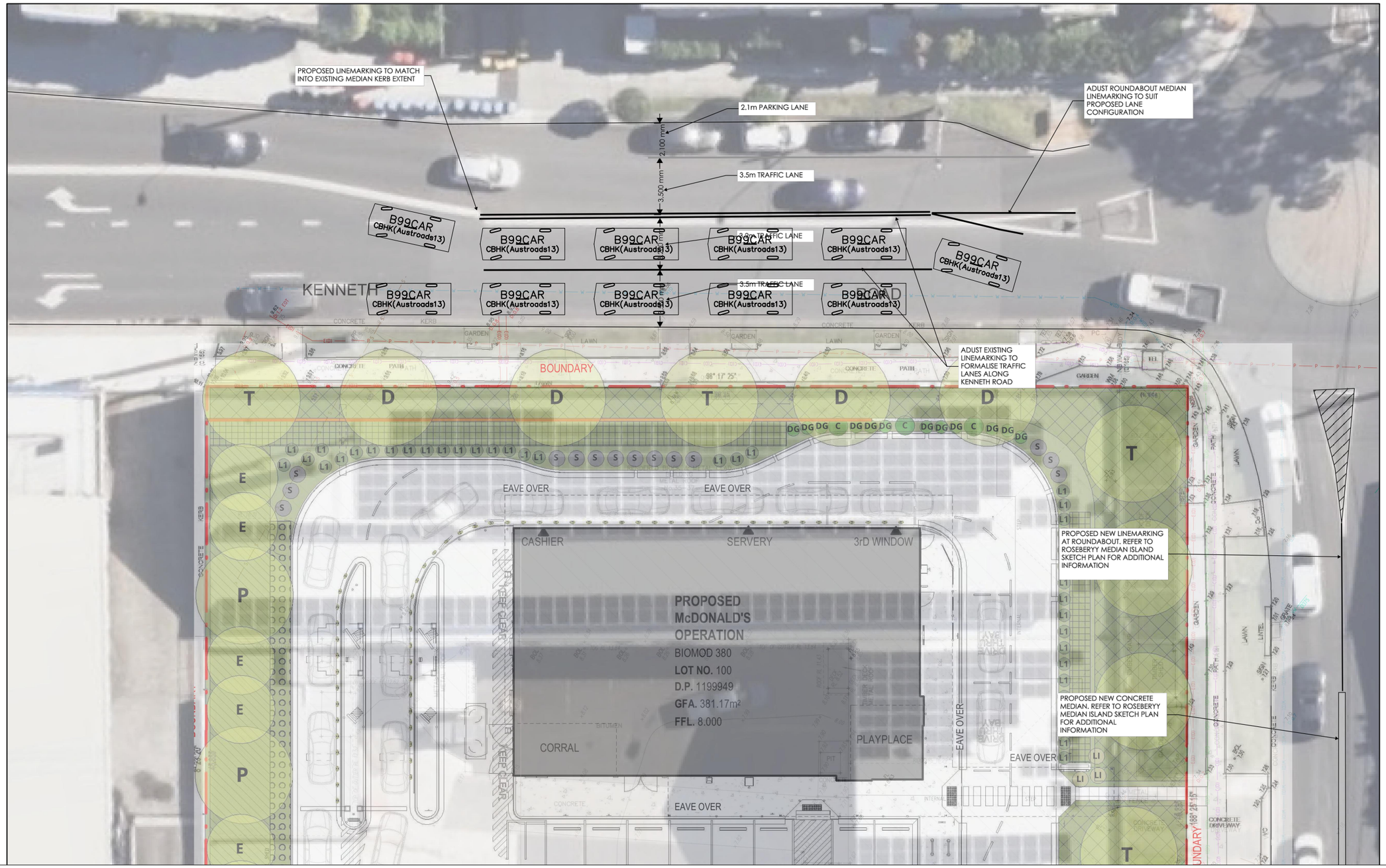
QUEUING ON KENNETH ROAD WITHOUT UPGRADES

DRAWN BY CBRK Pty Ltd_mc Ref: 12473 5.06.2025

C1

PROPOSED CONFIGURATION



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QUEUING ON KENNETH ROAD WITH UPGRADES

DRAWN BY CBRK Pty Ltd_mc Ref: 12473 5.06.2025

C2