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

Transport Planning
Traffic Studies
Parking Studies

Our Ref: TR/10935/jj

12 November, 2018

Frasers Property Australia
Level 2
1C Homebush Bay Drive
RHODES NSW 2138

Attention: **Mark Cleveland**
Email: mark.cleveland@frasersproperty.com.au

Dear Sir,

RE: EASTERN CREEK BUSINESS HUB – MOD 4 TRAFFIC MODELLING

1. As requested we have undertaken SIDRA modelling of the traffic effects of Modification 4 (MOD 4) to the approved concept plan for the Eastern Creek Business Hub.

2. MOD 4 involves the provision of a roundabout on the access road (Spine Road) some 120 metres east of the intersection with Rooty Hill Road South. This roundabout would provide access to Lot 1 (to the south), Lot 2 (to the north) and Lot 3 (to the east). A concept plan of the proposed roundabout is attached.

3. The approved concept plan for Eastern Creek Hub has the following scale of development:

   - Lot 1 – 14,000m^2 GFA large format retail;
   - Lot 2 – 9,5000m^2 GFA convenience retail; and
   - Lot 3 – 29.300m^2 GFA bulky good retail.

4. DA's for Lots 1 and 2 have been prepared for a similar scale of development as the concept approval. The approved concept plan was estimated to generate some 1,300 vehicles per hour (two way) in the weekday afternoon peak hour.

5. The operation of the intersection of Rooty Hill Road South/Spine Road/Cable Place and the proposed roundabout on the Spine Road have been analysed using a SIDRA network model. SIDRA analyses intersections controlled by traffic signals, roundabouts and signs and provides a number of performance measures. The most useful measure provided is average delay per vehicle expressed in seconds per vehicle. Based on average delay per vehicle, SIDRA estimates the following levels of service (LOS).

- For traffic signals, the average delay per vehicle in seconds is calculated as delay/(all vehicles), for roundabouts the average delay per vehicle in seconds is selected for the movement with the highest average delay per vehicle, equivalent to the following LOS:

  0 to 14 = "A" Good
  15 to 28 = "B" Good with minimal delays and spare capacity
  29 to 42 = "C" Satisfactory with spare capacity
  43 to 56 = "D" Satisfactory but operating near capacity
  57 to 70 = "E" At capacity and incidents will cause excessive delays. Roundabouts require other control mode.
  >70 = "F" Unsatisfactory and requires additional capacity

6. The SIDRA analysis found that:

   - the intersection of Cable Place/Rooty Hill Road South/Site Access would operate with average delays per vehicle of 30 seconds per vehicle in the weekday afternoon peak hour. This represents level of service C, a satisfactory level of service;

   - the proposed roundabout on the Spine Road would operate with average delays per vehicle of less than 15 seconds per vehicle in the weekday afternoon peak hour. This represents level of service A/B a good level of service with spare capacity; and

   - the 95% back of queue on the Spine Road does not extend back through the roundabout or to Rooty Hill Road South.

7. As a sensitivity test we have analysed the intersections with 10 years traffic growth to the through traffic flows on Rooty Hill Road South. The analysis found that:

   - the intersection of Cable Place/Rooty Hill Road South/Site Access would operate with average delays per vehicle of 31 seconds per vehicle in the weekday afternoon peak hour. This represents level of service C, a satisfactory level of service;

   - the proposed roundabout on the Spine Road would operate with average delays per vehicle of less than 15 seconds per vehicle in the weekday afternoon peak hour. This represents level of service A/B a good level of service with spare capacity; and

   - the 95% back of queue on the Spine Road does not extend back through the roundabout or to Rooty Hill Road South.

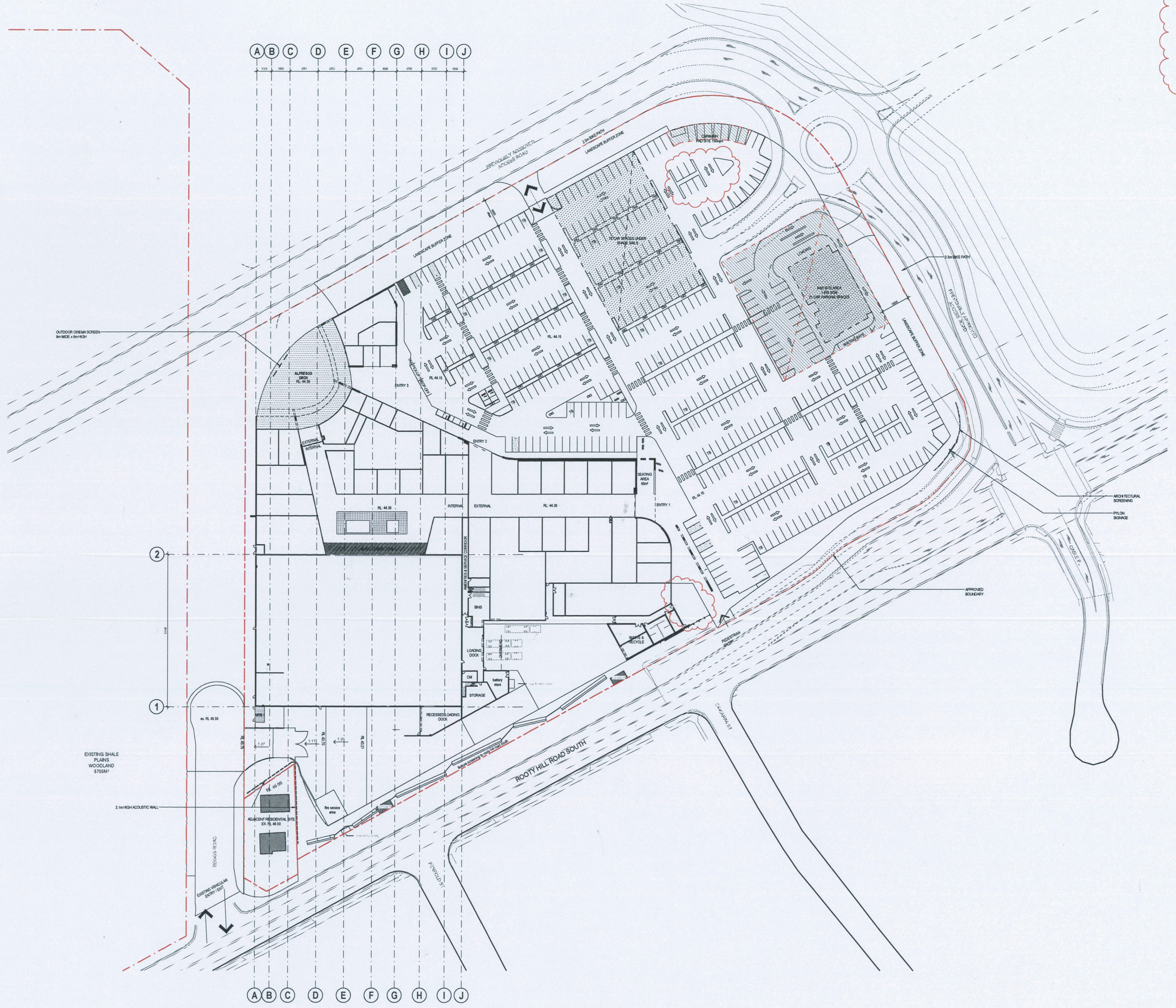
8. Thus in summary the SIDRA analysis has found that with the proposed roundabout on the Spine Road the intersections will perform at acceptable levels of service and can satisfactorily accommodate traffic generated by the concept approval. Copies of the SIDRA movement summaries are attached.

9. 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

Tim Rogers

Tim Rogers
Director



GROUND FLOOR SITE PLAN
1 : 500

TOTAL PARKING - STAGE 1

RETAIL PARKING	
ACCESSIBLE	10
LOADING	1
RETAIL CLASS 3A	430
TAXI PICKUP	2
WOOLWORTHS PICK-UP	4
	447

PAD SITES	
CAR WASH PAD SITE	7
FAST FOOD PAD SITE	23
	30

TOTAL PARKING SPACES

RETAIL	447
PAD SITES	30

477

no.	date	ISSUE / revision	by
P 1	09.04.18	FOR INFORMATION	PL
P 2	10.04.18	FOR INFORMATION	PL
P 3	10.04.18	FOR INFORMATION	PL
P 4	11.04.18	FOR INFORMATION	PL

1. GENERAL ARCHITECTURAL NOTES

1.1 ARCHITECTURAL DOCUMENTATION

1.1.1 The Architectural Documentation includes the following separate documents: Architectural Drawings, Architectural Construction Schedule, incorporating Architectural Trade Specification, Finishes, Fixture, Fittings & Signage Schedules

1.1.2 The Architectural Documentation shall be read in conjunction with all Project Consultants documentation including: Structural, Civil, Electrical, Mechanical, Hydraulic, Fire, Vertical Transport & Traffic Engineers documentation, Heritage, DDA, ESD Consultants documentation, drawings, specifications, reports & advice

1.2 TENANT & RETAILERS DOCUMENTATION

1.2.1 Refer also all Tenant, Retailers, Supermarket Documentation including: Design & Construction Briefs, Supermarkets Kits, Control Plans, Décor Plans, Floor Finishes Plans, Equipment Schedules, Finishes Schedules, Guidelines, Layouts & Information

1.3 ARCHITECTURAL DRAWINGS

1.3.1 The Architectural Drawing was produced using Revit/ACAD. Do not manually alter this drawing in any way. Do not reproduce in full or part without approval. Do not scale drawings. Figured dimensions take precedence. All dimensions are in millimetres. Any discrepancies shall be reported to the superintendent / architect for action & instruction. Check & verify all dimensions on Site prior to any works. This drawing & it's contents are subject to copyright laws & protection. Member of the Australian Institute of Architects (AIA). Any existing buildings, structure or services to be checked & confirmed on site, prior to commencing any new works

1.4 PRECAST CONCRETE

1.4.1 Refer also Structural Engineers Drawings, details, spec. & notes. Read in conjunction with Architectural Drawings. Check & verify all dimensions on Site prior to any works. Precast concrete panel dimensions, levels, details & rebates to be as per approved Precast Concrete Shop Drawings

1.5 STRUCTURAL STEEL

1.5.1 Refer also Structural Engineers drawings, details spec. & notes. Read in conjunction with Architectural drawings. Check & verify all dimensions on Site prior to any works. Member type, size, level & detail to be read in conjunction with approved Structural Steel Shop Drawings. All exposed structural steelwork to be hot dipped galvanised, UNO

1.6 FIRE HYDRANTS & FIRE HOSE REELS

1.6.1 Refer also Fire Services Drawings for all details of fire hydrants and hose reels. Provide drip trays below all fire hydrants & fire hose reels within cupboards or rooms internally, UNO

1.7 FIRE EXTINGUISHERS

1.7.1 Provide suitable portable Fire Extinguishers where required adjacent electrical switchboards, in accordance with BCA / NCC & current / relevant Australian Standards, including AS 1841, AS 1851 & AS 2444

1.7.2 Fire Extinguishers to be mounted at a height no higher than 1200 to top & no lower than 100 to bottom AFFL. Fire Extinguishers to be mounted no closer than 2M to Electrical Switchboards & Distribution Boards & no further than 20M

1.8 SUPPLY & INSTALLATION OF ALL MATERIALS & PRODUCTS

1.8.1 All materials, products, fixtures, fittings, claddings, linings, equipment, fixings, finishes & miscellaneous items relevant to this project shall be supplied, delivered, stored & installed in full & strict accordance with all manufacturers details, instructions & recommendations for compliance, performance & to satisfy all applicable conditions for back-up, support & nominated warranties

1.9 ACCESSIBILITY

1.9.1 For Accessibility any key swipe, push button devices to be located not less than 500mm away from an internal corner

1.9.2 For Accessibility ensure the force required to operate doors is to be not more than 20N force

1.9.3 For Accessibility ensure all doors have a 30% luminance colour contrast between door or door face & adjacent wall, door frame or architrave

1.9.4 For Accessibility changes in floor levels & different floor finishes to be no higher than 3.0mm vertically, 5.0mm rounded or bevelled or above that height at a gradient of 1 in 8 & total maximum height of 10.0mm

3. SITE PLAN NOTES

3.1 DIMENSIONS, LEVELS, & BUILDING SET-OUT

3.1.1 The Builder shall check & verify all dimensions, levels, set-backs, easements etc. & all existing services prior to commencing works on site. Any discrepancies shall be referred to the superintendent for action & instruction

3.1.2 The Builder shall also engage a licensed, qualified land surveyor to accurately set out all site & building elements, setbacks, building & column grids, levels, grades, batters etc. as required

3.2 DOCUMENTATION

3.2.1 Refer to Civil Engineer documentation for storm water drainage, legal point of discharge, surface levels & grades, bench marks & levels, car park car park surface & sub-surface construction, cutting, filling, etc. park surface & sub-surface construction, cutting, filling, etc

3.2.2 Refer Fire & Hydraulic Engineers Documentation for Fire Hydrants, Fire Service, mains water supply, meters, water & sewer reticulation & discharge

3.2.3 Refer Landscape Architects Documentation for landscape works, plants, soil, mulch, retaining walls, water retention systems, irrigation, tanks, pumps, controls & equipment etc

3.2.4 Refer all available Documentation for works adjacent to subject site including fences, alignments, levels, footpaths, crossovers, in ground services, roadways, re-grading, re-surfacing, re-establishment etc. and all in-ground services

3.3 COMPLIANCE & REFERENCES

3.3.1 All Site works including car park layout & design shall comply with the current BCA / NCC, relevant Australian Standards, Local Authorities, Service Providers, & all applicable design & construction briefs

3.3.2 Refer Geotechnical Investigations & Report & Feature & level Survey, where provided

3.4 EXTERNAL SURFACES, KERBS, PEDESTRIAN & PRAM RAMPS, TACTILES (TGSI)

3.4.1 All external landings, ingoes, footpaths, walkways, pavements, paved, tiled or concreted surfaces to drain away from building. Provide 1:100 nominal cross falls where possible UNO

3.4.2 Provide maximum cross falls of 1:40 to pedestrian areas including footpaths, walkways, pavements adjacent buildings, below canopies & car parks areas etc

3.4.3 Provide 5.0mm (max.) high threshold with rounded slab edge below all external doors as a weather stop with (max)1:8 fall away from doorway

3.4.4 Max. grade of pedestrian ramps to be 1:8 with 45 degree splayed sections each end

3.4.5 All External ground surfaces & finishes including paving, tiles, bricks, concrete, bitumen etc to be non-slip.
External colonnades, walkways, & pedestrian crossings to be Pendulum W / Ramp R10.
External Ramps to be Pendulum V / Ramp R11
External Stair Nosings to be Pendulum W / Ramp R11
Internal ramps, slopes (greater than 2 degrees) - (Dry), to be Pendulum X / Ramp R10
Accessible internal stair nosings (Dry) - Handrails present, to be Pendulum X / Ramp R10
Accessible internal stair nosings (Wet) - Handrails present, to be Pendulum W / Ramp B or R11
Refer BCA, Australian Standards and HB 197 Extract, Table 1, 2, 3, 4 & 5

3.4.6 Provide hazard tactile panels adjacent all kerb ramps, other ramps / stairs / steps as required 600mm min. deep & the width of ramp or stairs & located 300mm (+ or - 10mm) from edge of ramp or adjacent tread / riser. Refer AS 1428.1 for details, set-out & dimensions of pedestrian ramps, accessibility & Tactiles (TGSI)

3.5 CAR PARKING

3.5.1 Refer Civil Engineers Documentation for car park surfaces and substrate/construction

3.5.2 All car park line marking, car spaces, accessible space & pram symbols, directional arrows, pedestrian crossings, stop & give way signs etc. to be in accordance with Australian Standards & Local Authorities

3.5.3 Car Parking to comply with BCA, Australian Standards & Local Authorities requirements

3.5.4 Provide statutory & advisory vehicle road & speed signage to Car Parking areas. Provide speed humps near ingress/egress, entry/exit & points of danger as required. Refer also Traffic Engineers Documentation

3.5.5 Basement Car Parking clearance to be 2100 min. to structure, sprinklers, light fittings, signage etc. Provide height restriction signage as required

PRELIMINARY

Frasers Property

project - address
EASTERN CREEK RC
NSW 2766

drawing title
GROUND FLOOR SITE PLAN

job no.	drawing no.	issue
2015-088	A1000	P 4
	scale @ A0	drawn
	1 : 500	PLE

All dimensions in millimetres unless noted otherwise
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MELBOURNE
SYDNEY
PERTH
1800 422 533
i2C.COM.AU

11/04/2018 5:57:14 PM

MOVEMENT SUMMARY

Site: 102 [Site Access - Rooty Hills Road PM + Mod 4]

Network: N101 [Eastern Creek Mod 4]

Rooty Hill Road (north)
Site Category: (None)
Signals - Fixed Time Coordinated   Cycle Time = 120 seconds (Site User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows 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	Aver. No. Cycles	Average Speed km/h
South: Rooty Hill Road (south)														
1	L2	5	3.0	5	3.0	0.484	12.7	LOS A	9.7	69.7	0.32	0.29	0.32	50.7
2	T1	1137	3.0	1137	3.0	0.484	7.1	LOS A	9.7	69.7	0.32	0.29	0.32	51.5
3	R2	442	3.0	442	3.0	0.621	34.0	LOS C	18.2	130.8	0.76	0.80	0.76	21.6
Approach		1584	3.0	1584	3.0	0.621	14.6	LOS B	18.2	130.8	0.44	0.43	0.44	42.8
East: Spine Road														
4	L2	442	3.0	442	3.0	0.425	14.8	LOS B	9.5	68.0	0.48	0.76	0.63	37.7
5	T1	5	3.0	5	3.0	0.015	42.7	LOS D	0.2	1.8	0.84	0.56	0.84	28.5
6	R2	242	3.0	242	3.0	0.887	71.5	LOS F	16.4	117.7	1.00	0.99	1.34	18.5
Approach		689	3.0	689	3.0	0.887	34.9	LOS C	16.4	117.7	0.67	0.84	0.88	26.6
North: Rooty Hill Road (north)														
7	L2	242	3.0	242	3.0	0.239	9.7	LOS A	3.9	28.3	0.36	0.66	0.36	43.3
8	T1	895	3.0	895	3.0	0.908	60.3	LOS E	32.1	230.3	1.00	1.07	1.27	25.0
9	R2	5	3.0	5	3.0	0.058	66.8	LOS E	0.3	2.2	0.98	0.65	0.98	26.7
Approach		1142	3.0	1142	3.0	0.908	49.6	LOS D	32.1	230.3	0.86	0.99	1.07	26.5
West: Cable Place														
10	L2	5	3.0	5	3.0	0.028	46.8	LOS D	0.5	3.5	0.83	0.63	0.83	32.8
11	T1	5	3.0	5	3.0	0.028	41.2	LOS C	0.5	3.5	0.83	0.63	0.83	24.9
12	R2	5	3.0	5	3.0	0.019	48.7	LOS D	0.3	1.8	0.84	0.65	0.84	29.5
Approach		16	3.0	16	3.0	0.028	45.6	LOS D	0.5	3.5	0.83	0.64	0.83	29.4
All Vehicles		3432	3.0	3432	3.0	0.908	30.5	LOS C	32.1	230.3	0.63	0.70	0.74	32.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate
P1	South Full Crossing	53	53.3	LOS E	0.2	0.2	0.94	0.94
P2	East Full Crossing	53	38.5	LOS D	0.1	0.1	0.80	0.80
P3	North Full Crossing	53	53.3	LOS E	0.2	0.2	0.94	0.94
P4	West Full Crossing	53	36.9	LOS D	0.1	0.1	0.79	0.79
All Pedestrians		211	45.5	LOS E			0.87	0.87

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 101 [Site Access Roundabout Stage 2 - Mod 4 + 10 years]

Network: N101 [Eastern Creek Mod 4]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows		Arrival Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed
		Total veh/h	HV %	Total veh/h	HV %	v/c	sec		Vehicles veh	Distance m				km/h
South: Lot 1														
1	L2	168	3.0	168	3.0	0.367	5.3	LOS A	2.1	14.7	0.68	0.73	0.68	25.6
2	T1	53	3.0	53	3.0	0.367	6.2	LOS A	2.1	14.7	0.68	0.73	0.68	22.5
3	R2	53	0.0	53	0.0	0.367	6.1	LOS A	2.1	14.7	0.68	0.73	0.68	35.6
Approach		274	2.4	274	2.4	0.367	5.6	LOS A	2.1	14.7	0.68	0.73	0.68	26.6
East: Spine Road (E)														
4	L2	53	0.0	53	0.0	0.454	7.7	LOS A	3.0	20.7	0.69	0.77	0.71	51.7
5	T1	263	0.0	263	0.0	0.454	8.0	LOS A	3.0	20.7	0.69	0.77	0.71	47.0
6	R2	53	0.0	53	0.0	0.454	12.0	LOS A	3.0	20.7	0.69	0.77	0.71	52.6
Approach		368	0.0	368	0.0	0.454	8.5	LOS A	3.0	20.7	0.69	0.77	0.71	49.1
North: Lot 2														
7	L2	53	0.0	53	0.0	0.443	3.5	LOS A	3.0	21.5	0.68	0.67	0.68	33.4
8	T1	53	3.0	53	3.0	0.443	5.5	LOS A	3.0	21.5	0.68	0.67	0.68	21.9
9	R2	263	3.0	263	3.0	0.443	6.0	LOS A	3.0	21.5	0.68	0.67	0.68	23.9
Approach		368	2.6	368	2.6	0.443	5.6	LOS A	3.0	21.5	0.68	0.67	0.68	25.0
West: Spine Road (W)														
10	L2	263	3.0	263	3.0	0.242	6.2	LOS A	1.1	7.6	0.28	0.58	0.28	21.8
11	T1	263	0.0	263	0.0	0.333	5.2	LOS A	1.7	11.9	0.29	0.58	0.29	50.9
12	R2	168	3.0	168	3.0	0.333	9.8	LOS A	1.7	11.9	0.29	0.58	0.29	22.1
Approach		695	1.9	695	1.9	0.333	6.7	LOS A	1.7	11.9	0.28	0.58	0.28	28.1
All Vehicles		1705	1.7	1705	1.7	0.454	6.7	LOS A	3.0	21.5	0.52	0.66	0.53	29.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 102 [Site Access - Rooty Hills Road PM + Mod 4 + 10 years]

Network: N101 [Eastern Creek Mod 4 + 10 years]

Rooty Hill Road (north)
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total	Demand Flows HV	Arrival Flows Total	Arrival Flows HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	95% Back of Queue Distance	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Rooty Hill Road (south)														
1	L2	5	3.0	5	3.0	0.605	13.5	LOS A	14.5	104.3	0.38	0.35	0.38	50.0
2	T1	1421	3.0	1421	3.0	0.605	7.9	LOS A	14.5	104.3	0.38	0.35	0.38	50.6
3	R2	442	3.0	442	3.0	0.768	45.6	LOS D	22.6	162.6	0.92	0.86	0.94	17.7
Approach		1868	3.0	1868	3.0	0.768	16.9	LOS B	22.6	162.6	0.51	0.47	0.52	41.3
East: Spine Road														
4	L2	442	3.0	442	3.0	0.474	19.8	LOS B	11.6	83.5	0.59	0.82	0.80	33.7
5	T1	5	3.0	5	3.0	0.015	42.7	LOS D	0.2	1.8	0.84	0.56	0.84	28.5
6	R2	242	3.0	242	3.0	0.887	71.5	LOS F	16.4	117.7	1.00	0.99	1.34	18.5
Approach		689	3.0	689	3.0	0.887	38.1	LOS C	16.4	117.7	0.74	0.88	0.99	25.4
North: Rooty Hill Road (north)														
7	L2	242	3.0	242	3.0	0.232	11.0	LOS A	4.5	32.7	0.40	0.67	0.40	41.8
8	T1	1121	3.0	1121	3.0	0.909	54.6	LOS D	40.3	289.4	0.98	1.05	1.21	26.4
9	R2	5	3.0	5	3.0	0.058	66.8	LOS E	0.3	2.2	0.98	0.65	0.98	26.7
Approach		1368	3.0	1368	3.0	0.909	47.0	LOS D	40.3	289.4	0.88	0.99	1.07	27.6
West: Cable Place														
10	L2	5	3.0	5	3.0	0.028	46.8	LOS D	0.5	3.5	0.83	0.63	0.83	32.8
11	T1	5	3.0	5	3.0	0.028	41.2	LOS C	0.5	3.5	0.83	0.63	0.83	24.9
12	R2	5	3.0	5	3.0	0.019	48.7	LOS D	0.3	1.8	0.84	0.65	0.84	29.5
Approach		16	3.0	16	3.0	0.028	45.6	LOS D	0.5	3.5	0.83	0.64	0.83	29.4
All Vehicles		3942	3.0	3942	3.0	0.909	31.1	LOS C	40.3	289.4	0.68	0.72	0.79	32.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
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SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow	Average Delay	Level of Service	Average Back of Queue Pedestrian	Average Back of Queue Distance	Prop. Queued	Effective Stop Rate
		ped/h	sec		ped	m		
P1	South Full Crossing	53	53.3	LOS E	0.2	0.2	0.94	0.94
P2	East Full Crossing	53	31.6	LOS D	0.1	0.1	0.73	0.73
P3	North Full Crossing	53	53.3	LOS E	0.2	0.2	0.94	0.94
P4	West Full Crossing	53	30.2	LOS D	0.1	0.1	0.71	0.71
All Pedestrians		211	42.1	LOS E			0.83	0.83

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 101 [Site Access Roundabout Stage 2 - Mod 4 + 10 years]

Network: N101 [Eastern Creek Mod 4 + 10 years]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows		Arrival Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed
		Total veh/h	HV %	Total veh/h	HV %	v/c	sec		Vehicles veh	Distance m				km/h
South: Lot 1														
1	L2	168	3.0	168	3.0	0.368	5.3	LOS A	2.1	14.7	0.68	0.73	0.68	25.6
2	T1	53	3.0	53	3.0	0.368	6.2	LOS A	2.1	14.7	0.68	0.73	0.68	22.5
3	R2	53	0.0	53	0.0	0.368	6.1	LOS A	2.1	14.7	0.68	0.73	0.68	35.6
Approach		274	2.4	274	2.4	0.368	5.6	LOS A	2.1	14.7	0.68	0.73	0.68	26.6
East: Spine Road (E)														
4	L2	53	0.0	53	0.0	0.453	7.7	LOS A	3.0	20.9	0.70	0.76	0.71	51.7
5	T1	263	0.0	263	0.0	0.453	8.0	LOS A	3.0	20.9	0.70	0.76	0.71	47.0
6	R2	53	0.0	53	0.0	0.453	12.0	LOS A	3.0	20.9	0.70	0.76	0.71	52.6
Approach		368	0.0	368	0.0	0.453	8.5	LOS A	3.0	20.9	0.70	0.76	0.71	49.1
North: Lot 2														
7	L2	53	0.0	53	0.0	0.440	3.6	LOS A	3.1	22.4	0.69	0.66	0.69	33.3
8	T1	53	3.0	53	3.0	0.440	5.6	LOS A	3.1	22.4	0.69	0.66	0.69	21.9
9	R2	263	3.0	263	3.0	0.440	6.2	LOS A	3.1	22.4	0.69	0.66	0.69	23.9
Approach		368	2.6	368	2.6	0.440	5.7	LOS A	3.1	22.4	0.69	0.66	0.69	24.9
West: Spine Road (W)														
10	L2	263	3.0	263	3.0	0.242	6.2	LOS A	1.1	7.6	0.27	0.58	0.27	21.8
11	T1	263	0.0	263	0.0	0.333	5.2	LOS A	1.7	11.9	0.27	0.58	0.27	50.9
12	R2	168	3.0	168	3.0	0.333	9.8	LOS A	1.7	11.9	0.27	0.58	0.27	22.1
Approach		695	1.9	695	1.9	0.333	6.7	LOS A	1.7	11.9	0.27	0.58	0.27	28.1
All Vehicles		1705	1.7	1705	1.7	0.453	6.7	LOS A	3.1	22.4	0.52	0.66	0.52	29.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.