Appendix F

Future Baseline AM, PM, SAT Detailed Intersection Modelling Outputs

1.2 LEVELS OF SERVICE

1.2.1 Future Base Line Models

Intersection Name		Approach Description	LOS	Delay (Sec)	Average Que (No Vehicles)	Maximum Que (No Vehicles)
Pacific Hwy / Grosvenour Rd / Burleigh St	Grosvenor Rd	E22	F	225.23	16.16	39
	Pacific Hwyw (s)	W30_	E	67.04	5.17	31
	Burghleigh St	__E32_	F	208.07	1.5	7
	Pacific Hwyw (N)	_S1	C	38.98	30.53	118
Pacific Highway / Tyron Place	Pacific Hwy (S)	_N1_	A	3.47	0.27	8
	Tyron Pl	W2	B	19.21	0	1
	Pacific Hwy (N)	S27_	B	23.02	2.25	35
Pacific Hwy / Strickland Ave	Pacific Hwy (s)	N6	A	0	0	0
	Strickland Ave	W5_	D	44.16	2.04	15
	Pacific Hwy (N)	S4_	A	9.36	0	0
Pacific Hwy / Beaconsfield Parade	Beaconsfield Parade	N12	B	22.25	1.09	4
	Pacific Hwy (s)	_N1_2	A	0	0	0
Pacific Hwy / Bent St	Bent Street	E23__	A	13.29	0.07	2
	Pacific Hwy (s)	_N3_	C	34.24	0	1
Pacific Hwy / Balfour St	Balfour St (W)	_N25__	E	59.58	2.13	12
	Pacific Hwy (S)	N3_	C	37.58	8.68	49
	Balfour St (E)	E20	D	50.19	24.57	78
	Pacific Hwy (N)	_W18_	F	85.78	5.29	8
Pacific Hwy / Highfield Rd	Highfield Rd	E29_	F	132.6	9.91	32
	Pacific Hwy (S)	W22	A	3.83	0.55	19
	Pacific HWY (N)	E28	F	80.48	7.8	43
Lindfield Ave / Balfour St / Havilah Rd	Balfour St	E26__	A	9.19	0.11	9
	Lindfield Ave (S)	_N15_	B	28.37	3.04	12
	Lindfield Ave (S) Slip lane	_N15_2	F	89.71	1.72	4
	Havilah RD	W13	F	89.7	1.85	14
	Lindfield Ave (N)	S26	C	40.28	4.07	21
Balfour St / Bent St / Newark Cres	Bent Street (W)	E24	A	10.19	0	1
	Newark Cres	N24	A	8.5	0	1
	Bent Street (E)	__W20_	A	0.86	0	0
	Balfour St	__S24_	A	5.96	0.02	2
Bent St / Woodford Ln / Bent Ln	Bent St (W)	_E22_	A	8.69	0	1
	Woodford Ln	N46	A	6.98	0	1
	Bent St (E)	W20__	A	14.08	0.01	2
	Balfour Ln	_S22	A	10.92	0.01	3
Beaconsfield Parade / Drovers Way / Woodford Ln	Beaconsfield Prd (W)	_E21_	A	7.8	0	1
	Drovers Way	_N20	A	11.06	0	1
	Beaconsfield Prd (E)	W1__	B	15.87	0.02	2
	Woodford Ln	_S20_2	A	5.02	0.01	2
Lindfield Ave / Kochia Ln	Lindfield Ave (S)	_N12_	A	8.04	1.35	10
	Lindfield Ave (N)	_S15_2	B	22.29	2.4	13
Lindfield Ave / Tryon Rd	Lindfield Ave (S)	N11_	C	38.92	3.55	12
	Tryon Rd	W10_	F	78.09	3.34	17
	Lindfield Ave (N)	_S14_2	B	28.42	3.39	11
Tryon Rd / Chapman Ln (Car Park Entry)	Tryon Rd (W)	E10	A	4.95	0.04	4
	Tryon Rd (E)	W10_2	A	0	0	0
	Chapman Ln	_E30_	C	40.12	1.06	7
Gladstone Prd / Pacific Hwy	Gladstone Prd	E4	B	21.96	0.05	3
	Pacific Hwy (S)	N7	A	6.86	0.13	14
Tryon Rd / Milray St	Tryon Rd (W)	_E11	A	4.85	0.22	5
	Tryon Rd (E)	W17	A	7.8	0.01	1
	Milray St	S16_	A	2.98	0.06	2
Havilah Rd / Milray St	Havilah Rd (W)	E16	A	8.07	0	1
	Milray St	__N16	A	7.88	0.01	2
	Havilah Rd (E)	W15	A	6.51	0	0
Balfour Ln / Balfour St	Balfour Ln	__S25	A	6.84	0.02	2
Havilah Rd / Havilah Ln	Havilah Rd (W)	E15	B	26.58	0	0
	Havilah Ln	__N14	A	12.02	0.18	5
	Havilah Rd (E)	W14	A	3.65	0	0

FIGURE 4 FUTURE BASE LINE AM MODEL LEVELS OF SERVICE

Intersection Name		Approach Description	LOS	Delay (Sec)	Average Que (No Vehicles)	Maximum Que (No Vehicles)
Pacific Hwy / Grosvenour Rd / Burleigh St	Grosvenor Rd	E22	F	420.88	33.46	43
	Pacific Hwyw (s)	W30_	E	65.09	6.45	34
	Burghleigh St	__E32_	A	0	1.06	2
	Pacific Hwyw (N)	_S1	A	4.8	2.38	19
Pacific Highway / Tyron Place	Pacific Hwy (S)	_N1_	A	9.68	2.9	42
	Tyron Pl	W2	B	15.7	0	0
	Pacific Hwy (N)	S27_	B	28.4	3.32	30
Pacific Hwy / Strickland Ave	Pacific Hwy (s)	N6	A	0	0	0
	Strickland Ave	W5_	B	15.74	0.42	7
	Pacific Hwy (N)	S4_	A	6.27	0	0
Pacific Hwy / Beaconsfield Parade	Beaconsfield Parade	N12	B	26.81	0.26	3
	Pacific Hwy (s)	_N1_2	A	0	0	0
Pacific Hwy / Bent St	Bent Street	E23__	E	63.62	0.53	5
	Pacific Hwy (s)	_N3_	A	0	0	0
Pacific Hwy / Balfour St	Balfour St (W)	_N25__	D	53.15	1.57	10
	Pacific Hwy (S)	N3_	D	49.33	16	77
	Balfour St (E)	E20	C	39.44	11.68	46
	Pacific Hwy (N)	_W18_	E	64.89	5.85	10
Pacific Hwy / Highfield Rd	Highfield Rd	E29_	F	114.21	8.31	23
	Pacific Hwy (S)	W22	A	6.93	2.43	33
	Pacific HWY (N)	E28	E	64.19	0.93	22
Lindfield Ave / Balfour St / Havilah Rd	Balfour St	E26__	A	8.15	0.01	1
	Lindfield Ave (S)	_N15_	D	43.03	6.96	16
	Lindfield Ave (S) Slip lane	_N15_2	F	193.03	2.77	4
	Havilah RD	W13	F	438.95	11.44	16
	Lindfield Ave (N)	S26	F	94.93	6.15	19
Balfour St / Bent St / Newark Cres	Bent Street (W)	E24	A	10.48	0	1
	Newark Cres	N24	A	9.97	0	1
	Bent Street (E)	__W20_	A	5.74	0	1
	Balfour St	__S24_	A	6.09	0.02	3
Bent St / Woodford Ln / Bent Ln	Bent St (W)	_E22_	A	8.68	0	1
	Woodford Ln	N46	A	6.9	0	1
	Bent St (E)	W20__	A	13.05	0.01	1
	Balfour Ln	_S22	A	11.54	0.05	1
Beaconsfield Parade / Drovers Way / Woodford Ln	Beaconsfield Prd (W)	_E21_	A	7.65	0	1
	Drovers Way	_N20	A	11.04	0.01	1
	Beaconsfield Prd (E)	W1__	B	19.82	0.05	2
	Woodford Ln	_S20_2	A	4.55	0.01	1
Lindfield Ave / Kochia Ln	Lindfield Ave (S)	_N12_	B	15.97	1.02	12
	Lindfield Ave (N)	_S15_2	A	12.72	0.43	7
Lindfield Ave / Tryon Rd	Lindfield Ave (S)	N11_	B	18.86	1.66	12
	Tryon Rd	W10_	D	55.17	2.61	18
	Lindfield Ave (N)	_S14_2	D	52.25	2.37	10
Tryon Rd / Chapman Ln (Car Park Entry)	Tryon Rd (W)	E10	A	5.64	0.11	5
	Tryon Rd (E)	W10_2	A	0	0	0
	Chapman Ln	_E30_	A	1.79	0.04	3
Gladstone Prd / Pacific Hwy	Gladstone Prd	E4	B	23.68	0.07	3
	Pacific Hwy (S)	N7	A	6.66	0.31	11
Tryon Rd / Milray St	Tryon Rd (W)	_E11	A	6.14	0.63	6
	Tryon Rd (E)	W17	A	9.41	0.02	3
	Milray St	S16_	A	4.44	0.15	6
Havilah Rd / Milray St	Havilah Rd (W)	E16	A	8.15	0	1
	Milray St	__N16	A	5.63	0.01	2
	Havilah Rd (E)	W15	A	4.67	0	0
Balfour Ln / Balfour St	Balfour Ln	__S25	A	5.88	0.02	4
Havilah Rd / Havilah Ln	Havilah Rd (W)	E15	C	42.12	0	0
	Havilah Ln	__N14	F	227.85	16.91	30
	Havilah Rd (E)	W14	F	148.43	5.5	16

FIGURE 5 FUTURE BASE LINE PM MODEL LEVELS OF SERVICE

Intersection Name		Approach Description	LOS	Delay (Sec)	Average Que (No Vehicles)	Maximum Que (No Vehicles)
Pacific Hwy / Grosvenour Rd / Burleigh St	Grosvenor Rd	E22	F	89.99	7.41	31
	Pacific Hwyw (s)	W30_	E	69.99	7.46	41
	Burghleigh St	__E32_	F	113.06	0.49	3
	Pacific Hwyw (N)	_S1	A	5.48	5.92	37
Pacific Highway / Tyron Place	Pacific Hwy (S)	_N1_	A	11.76	4.63	41
	Tyron Pl	W2	A	0	0	0
	Pacific Hwy (N)	S27_	C	37.65	8.52	42
Pacific Hwy / Strickland Ave	Pacific Hwy (s)	N6	A	0	0	0
	Strickland Ave	W5_	B	25.64	0.84	8
	Pacific Hwy (N)	S4_	A	7.88	0	0
Pacific Hwy / Beaconsfield Parade	Beaconsfield Parade	N12	C	32.46	0.31	5
	Pacific Hwy (s)	_N1_2	A	0	0	0
Pacific Hwy / Bent St	Bent Street	E23__	F	159.88	9.76	15
	Pacific Hwy (s)	_N3_	A	0	0	0
Pacific Hwy / Balfour St	Balfour St (W)	_N25__	D	54.3	1.48	10
	Pacific Hwy (S)	N3_	E	58.81	18.13	64
	Balfour St (E)	E20	D	44.1	15.94	58
	Pacific Hwy (N)	_W18_	D	56.17	5.44	9
Pacific Hwy / Highfield Rd	Highfield Rd	E29_	F	81.46	4.73	20
	Pacific Hwy (S)	W22	A	7.97	2.28	27
	Pacific HWY (N)	E28	E	66.09	1.28	21
Lindfield Ave / Balfour St / Havilah Rd	Balfour St	E26__	A	8.25	0.01	2
	Lindfield Ave (S)	_N15_	D	52.75	8.16	15
	Lindfield Ave (S) Slip lane	_N15_2	F	181	2.73	4
	Havilah RD	W13	F	300.29	11.62	15
	Lindfield Ave (N)	S26	F	342.8	17.02	20
Balfour St / Bent St / Newark Cres	Bent Street (W)	E24	A	11.35	0	0
	Newark Cres	N24	A	12.55	0	0
	Bent Street (E)	__W20_	A	0.66	0	0
	Balfour St	__S24_	A	5.09	0.01	2
Bent St / Woodford Ln / Bent Ln	Bent St (W)	_E22_	A	0	0	0
	Woodford Ln	N46	B	14.96	0.09	2
	Bent St (E)	W20__	B	19.91	0	1
	Balfour Ln	_S22	B	16.96	0.1	4
Beaconsfield Parade / Drovers Way / Woodford Ln	Beaconsfield Prd (W)	_E21_	A	6.09	0	0
	Drovers Way	_N20	A	11.35	0	0
	Beaconsfield Prd (E)	W1__	B	17.3	0.04	1
	Woodford Ln	_S20_2	A	5.94	0.01	2
Lindfield Ave / Kochia Ln	Lindfield Ave (S)	_N12_	D	48.55	4.79	11
	Lindfield Ave (N)	_S15_2	B	16.96	0.87	12
Lindfield Ave / Tryon Rd	Lindfield Ave (S)	N11_	C	34.64	4.32	13
	Tryon Rd	W10_	F	304.2	18.91	42
	Lindfield Ave (N)	_S14_2	D	49.19	3.48	12
Tryon Rd / Chapman Ln (Car Park Entry)	Tryon Rd (W)	E10	A	4.85	0.05	5
	Tryon Rd (E)	W10_2	A	0	0	0
	Chapman Ln	_E30_	E	65.23	4.02	11
Gladstone Prd / Pacific Hwy	Gladstone Prd	E4	B	22.2	0.02	2
	Pacific Hwy (S)	N7	A	7.04	0.22	12
Tryon Rd / Milray St	Tryon Rd (W)	_E11	A	7.36	0.2	10
	Tryon Rd (E)	W17	F	103.32	8.26	33
	Milray St	S16_	E	64.74	3.51	15
Havilah Rd / Milray St	Havilah Rd (W)	E16	A	8.5	0	1
	Milray St	__N16	A	4.57	0	1
	Havilah Rd (E)	W15	A	4.58	0	0
Balfour Ln / Balfour St	Balfour Ln	__S25	A	5.91	0.02	3
Havilah Rd / Havilah Ln	Havilah Rd (W)	E15	F	267.94	0	0
	Havilah Ln	__N14	F	458.47	14.53	26
	Havilah Rd (E)	W14	E	69.72	1.84	9

FIGURE 6 FUTURE BASE LINE SATURDAY MODEL LEVELS OF SERVICE

Appendix G

Lindfield 2008 Traffic Management Option

PARKING: INCREASED SHORT TERM PARKING SUPPLY IN TOWN CENTRE

LINDFIELD AVENUE - KOCHIA LANE - MILRAY STREET - TRYON ROAD PRECINCT: REPLACEMENT OF SURFACE PARKING WITH BASEMENT PARKING. MINOR MODIFICATIONS TO TRAFFIC MANAGEMENT AS PART OF PROPOSED REDEVELOPMENT OF THE PRECINCT

PEDESTRIAN LINK

DETAIL 2

LINDFIELD AVENUE/TRYON ROAD INTERSECTION: TRAFFIC SIGNALS TO REPLACE BOTH EXISTING PRIORITY JUNCTION AND PEDESTRIAN SIGNALS AT STATION ENTRANCE

TRYON PLACE PRECINCT: EXTENSION OF TRYON PLACE SOUTHWARD TO STRICKLAND AVENUE

PACIFIC HIGHWAY/GROSVENOR ROAD INTERSECTION: MINOR CAPACITY IMPROVEMENT: EXTENSION OF PARKING RESTRICTIONS ON GROSVENOR ROAD

DETAIL 2
SCALE 1:500

BEACONSFIELD PARADE TO BENT STREET: LOCAL ROAD CONNECTION BETWEEN BEACONSFIELD PARADE AND BENT STREET

DETAIL 1

PEDESTRIAN LINK

PACIFIC HIGHWAY/BALFOUR STREET/HAVILAH ROAD INTERSECTION: MINOR CAPACITY IMPROVEMENTS 1. LENGTHENING OF RIGHT TURN BAY ON PACIFIC HIGHWAY SOUTHEAST APPROACH 2.EXTENSION OF PARKING RESTRICTIONS ON BALFOUR STREET

BALFOUR LANE: REALIGNMENT OF BALFOUR LANE AS PART OF EXPANSION OF SUPERMARKET SITE

EXTEND RIGHT TURN BAY BY 20m TO 55m

DETAIL 1
SCALE 1:500

CONCEPT PLAN ONLY

REV	DATE	AMENDMENTS	INITIALS

NOTES:
1. CAD File No.:

WORK AS EXECUTED

SUPERVISING ENGINEER

WORK COMPLETED

RECOMMENDED FOR APPROVAL
M D & P ..... / /20

RECOMMENDED FOR APPROVAL
M T T ..... / /20

FIRST ADVERTISEMENT
..../..../ 20 ....

REF DATE
..../..../ 20 ....

SECOND ADVERTISEMENT
..../..../ 20 ....

APPROVAL FOR CONSTRUCTION

DIRECTOR OF TECHNICAL SERVICES
...../...../ 20 .....

DIRECTOR OF OPEN SPACE
...../...../ 20 .....

REDUCTION RATIO
PLAN 1:1000 (A3)
CROSS SECTION .....
LONG. SECT. HOR .....
VERT .....

DIMENSIONS ARE IN METRES UNLESS NOTED

SURVEYED	DATUM
DESIGNED	LEVEL BOOK
TRACED FB	SURVEY DATE
CHECKED ...../...../20.....	

0 10 20 30 40 50 60 70 80 90 100 150 200mm

KU-RING-GAI COUNCIL

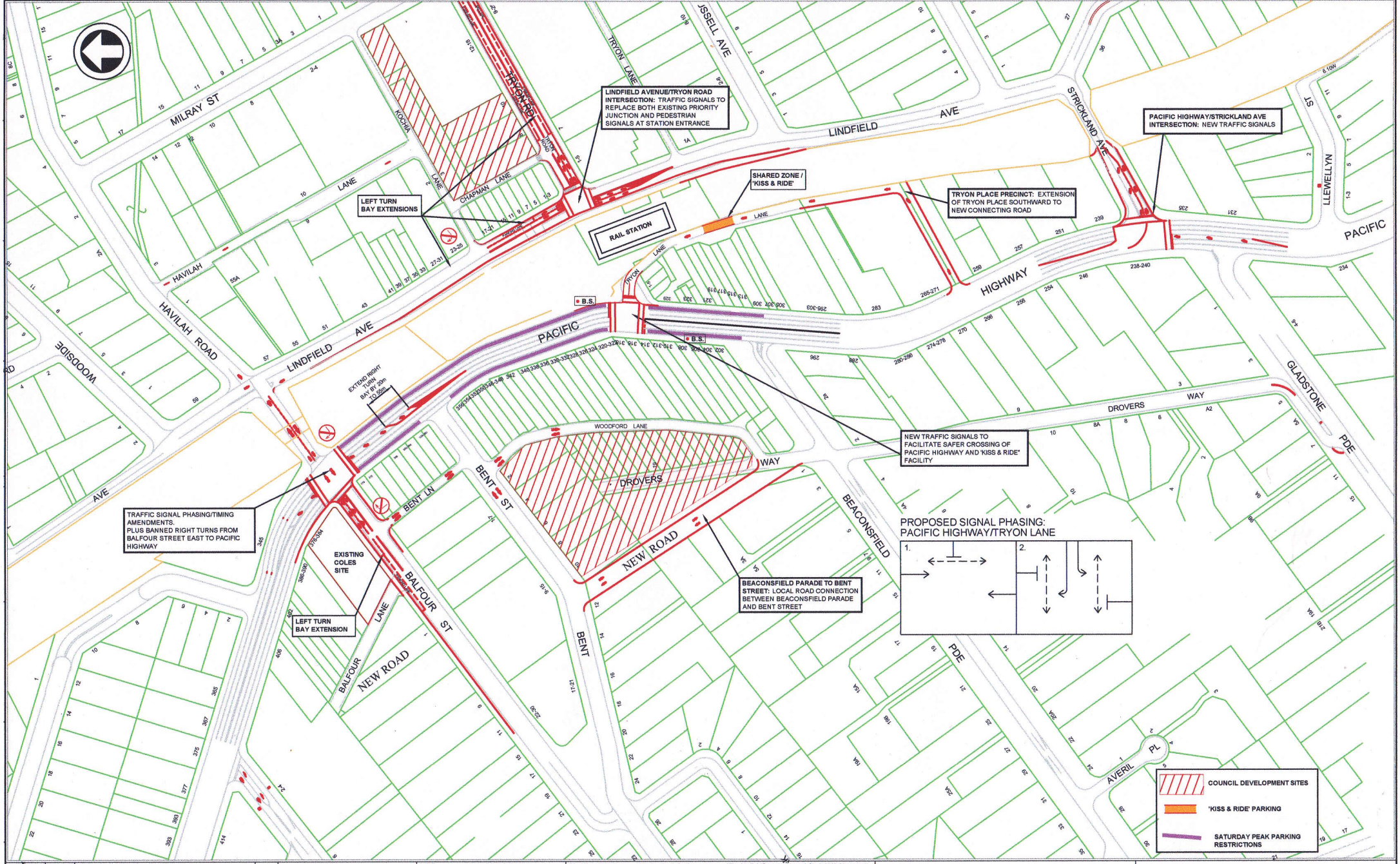
LINDFIELD TOWN CENTRE PROPOSED TRAFFIC CHANGES PACIFIC HIGHWAY, LINDFIELD

DRAFT

SHEET OF | PLAN No | Rev.

Appendix H

Lindfield Traffic Management Option TMM1 - 2014



No.	BY	DATE	DESCRIPTION	APPD.

A1 Original | Co-ordinate System: MGA Zone 56 | Height Datum: A.H.D.

CLIENT

Ku-ring-gai Council

The information shown on this drawing is for the purposes of The Lindfield Transport Network Study 2013. No warranty is given or implied as to its suitability for any other purpose. KMC and it's Consultants accept no liability arising from the use of this drawing and the information shown thereon for any purpose other than the Project.

peopletrans

DRAWN G.W. JARRETT
DESIGNED A. STEWART
DRG CHECK A. STEWART
DESIGN CHECK
APPROVED

LINDFIELD TRANSPORT NETWORK STUDY 2013
DRAFT CONCEPT PLAN

TRAFFIC MANAGEMENT OPTION 1

OF

DRG No.

Appendix I

TMM1 - AM,PM,SAT Detailed Intersection Modelling Outputs

1.2 LEVELS OF SERVICE

Intersection Name		Approach Description	LOS	Delay (Sec)	Average Que (No Vehicles)	Maximum Que (No Vehicles)
Pacific Hwy / Grosvenour Rd / Burleigh St	Grosvenor Rd	E22	F	263.83	19.52	42
	Pacific Hwyw (s)	W30_	E	68.18	5.6	34
	Burghleigh St	__E32_	F	568.46	8.83	23
	Pacific Hwyw (N)	_S1	E	56.65	44.33	137
Pacific Highway / Tyron Place	Pacific Hwy (S)	_N1_	C	38.3	13.22	64
	Tyron Pl	W2	F	92.72	0.8	5
	Pacific Hwy (N)	S27_	B	27.15	4.39	49
Pacific Hwy / Strickland Ave	Pacific Hwy (s)	N6	A	0	0	0
	Strickland Ave	W5_	E	59.85	4.3	16
	Pacific Hwy (N)	S4_	A	11.95	0	1
Pacific Hwy / Beaconsfield Parade	Beaconsfield Parade	N12	F	113.03	4.57	19
	Pacific Hwy (s)	_N1_2	A	0	0	0
Pacific Hwy / Bent St	Bent Street	E23__	E	65.15	0.41	3
	Pacific Hwy (s)	_N3_	A	0	0	0
Pacific Hwy / Balfour St	Balfour St (W)	_N25__	E	68.76	2.57	16
	Pacific Hwy (S)	N3_	E	67.29	22.09	69
	Balfour St (E)	E20	E	58.77	30.86	80
	Pacific Hwy (N)	_W18_	F	70.59	1.25	5
Pacific Hwy / Highfield Rd	Highfield Rd	E29_	F	111.19	7.94	32
	Pacific Hwy (S)	W22	A	3.77	0.56	18
	Pacific HWY (N)	E28	F	106.17	24.46	98
Lindfield Ave / Balfour St / Havilah Rd	Balfour St	E26__	A	7.88	0	2
	Lindfield Ave (S)	_N15_	B	16.24	0.27	6
	Lindfield Ave (S) Slip lane	_N15_2	A	9.52	0.03	1
	Havilah RD	W13	B	16.56	0.01	1
	Lindfield Ave (N)	S26	B	22.35	1.25	11
Balfour St / Bent St / Newark Cres	Bent Street (W)	E24	A	10.18	0	0
	Newark Cres	N24	A	8.16	0	1
	Bent Street (E)	__W20_	A	1.1	0	0
	Balfour St	__S24_	A	5.29	0.01	3
Bent St / Woodford Ln / Bent Ln	Bent St (W)	_E22_	A	7.98	0	1
	Woodford Ln	N46	A	6.68	0	1
	Bent St (E)	W20__	C	31.29	0	1
	Balfour Ln	_S22	A	8.2	0.01	1
Beaconsfield Parade / Drovers Way / Woodford Ln	Beaconsfield Prd (W)	_E21_	B	17.01	0.27	5
	Drovers Way	_N20	B	26.18	0.67	8
	Beaconsfield Prd (E)	W1__	B	20.99	0.1	4
	Woodford Ln	_S20_2	A	10.42	0.19	3
Lindfield Ave / Kochia Ln	Lindfield Ave (S)	_N12_	A	7.14	0.76	3
	Lindfield Ave (N)	_S15_2	A	12.75	0.63	10
Lindfield Ave / Tryon Rd	Lindfield Ave (S)	N11_	D	46.12	3.99	16
	Tryon Rd	W10_	E	56.64	2.83	13
	Lindfield Ave (N)	_S14_2	C	32.93	3.48	14
Tryon Rd / Chapman Ln (Car Park Entry)	Tryon Rd (W)	E10	B	16.04	1.37	9
	Tryon Rd (E)	W10_2	A	0	0	0
	Chapman Ln	_E30_	A	2.91	0.09	4
Gladstone Prd / Pacific Hwy	Gladstone Prd	E4	B	27.62	0.86	16
	Pacific Hwy (S)	N7	A	10.39	1.72	26
Tryon Rd / Milray St	Tryon Rd (W)	_E11	A	9.83	0.62	8
	Tryon Rd (E)	W17	A	6.53	0.01	3
	Milray St	S16_	A	3.46	0.18	4
Havilah Rd / Milray St	Havilah Rd (W)	E16	A	8.28	0	1
	Milray St	__N16	A	7.28	0.01	1
	Havilah Rd (E)	W15	A	8.09	0	0
Balfour Ln / Balfour St	Balfour Ln	__S25	A	9.44	0.07	2
Havilah Rd / Havilah Ln	Havilah Rd (W)	E15	B	14.58	0	0
	Havilah Ln	__N14	A	10.89	0.08	2
	Havilah Rd (E)	W14	A	4.64	0	0

FIGURE 4 OPTION2 AM MODEL WITH TMM LEVELS OF SERVICE

Intersection Name		Approach Description	LOS	Delay (Sec)	Average Que (No Vehicles)	Maximum Que (No Vehicles)
Pacific Hwy / Grosvenour Rd / Burleigh St	Grosvenor Rd	E22	F	439.65	32.79	43
	Pacific Hwyw (s)	W30_	E	67.39	7.4	37
	Burghleigh St	__E32_	A	0	4.28	9
	Pacific Hwyw (N)	_S1	B	15.5	11.43	40
Pacific Highway / Tyron Place	Pacific Hwy (S)	_N1_	A	13.18	5.38	46
	Tyron Pl	W2	F	166.18	3.8	16
	Pacific Hwy (N)	S27_	C	38.98	7.23	45
Pacific Hwy / Strickland Ave	Pacific Hwy (s)	N6	A	0	0	0
	Strickland Ave	W5_	D	42.83	2.96	13
	Pacific Hwy (N)	S4_	C	33.24	0.02	1
Pacific Hwy / Beaconsfield Parade	Beaconsfield Parade	N12	C	37.34	0.52	3
	Pacific Hwy (s)	_N1_2	A	0	0	0
Pacific Hwy / Bent St	Bent Street	E23__	F	335.23	6.03	18
	Pacific Hwy (s)	_N3_	A	0	0	0
Pacific Hwy / Balfour St	Balfour St (W)	_N25__	E	59.4	1.78	9
	Pacific Hwy (S)	N3_	E	60.67	37.03	109
	Balfour St (E)	E20	E	66.81	22.31	80
	Pacific Hwy (N)	_W18_	E	57.45	1.78	8
Pacific Hwy / Highfield Rd	Highfield Rd	E29_	F	92.59	4.85	24
	Pacific Hwy (S)	W22	A	8.49	3.19	33
	Pacific HWY (N)	E28	E	65.79	1.14	17
Lindfield Ave / Balfour St / Havilah Rd	Balfour St	E26__	A	7.84	0	2
	Lindfield Ave (S)	_N15_	B	15.67	0.2	5
	Lindfield Ave (S) Slip lane	_N15_2	A	11.08	0.11	3
	Havilah RD	W13	B	16.57	0.12	3
	Lindfield Ave (N)	S26	B	18.31	0.29	6
Balfour St / Bent St / Newark Cres	Bent Street (W)	E24	A	10.58	0	0
	Newark Cres	N24	A	10.57	0	1
	Bent Street (E)	__W20_	A	4.98	0	2
	Balfour St	__S24_	A	6.86	0.03	4
Bent St / Woodford Ln / Bent Ln	Bent St (W)	_E22_	F	137.22	0.41	4
	Woodford Ln	N46	B	28.11	0.15	1
	Bent St (E)	W20__	C	30.79	0.1	3
	Balfour Ln	_S22	C	33.87	0.04	2
Beaconsfield Parade / Drovers Way / Woodford Ln	Beaconsfield Prd (W)	_E21_	A	7.24	0	1
	Drovers Way	_N20	A	10.81	0.01	1
	Beaconsfield Prd (E)	W1__	B	25.72	0.18	4
	Woodford Ln	_S20_2	A	9.41	0	1
Lindfield Ave / Kochia Ln	Lindfield Ave (S)	_N12_	A	8.92	0.23	4
	Lindfield Ave (N)	_S15_2	A	11.43	0.32	4
Lindfield Ave / Tryon Rd	Lindfield Ave (S)	N11_	B	19.5	0.93	11
	Tryon Rd	W10_	D	43.58	1.8	11
	Lindfield Ave (N)	_S14_2	C	41.78	2.32	13
Tryon Rd / Chapman Ln (Car Park Entry)	Tryon Rd (W)	E10	A	4.77	0.04	3
	Tryon Rd (E)	W10_2	A	0	0	0
	Chapman Ln	_E30_	A	3.7	0.05	3
Gladstone Prd / Pacific Hwy	Gladstone Prd	E4	B	26.95	0.14	4
	Pacific Hwy (S)	N7	A	11.72	2.84	25
Tryon Rd / Milray St	Tryon Rd (W)	_E11	A	8.43	0.68	7
	Tryon Rd (E)	W17	A	7.9	0.01	3
	Milray St	S16_	A	4.34	0.11	3
Havilah Rd / Milray St	Havilah Rd (W)	E16	A	7.94	0	1
	Milray St	__N16	A	6.6	0.01	1
	Havilah Rd (E)	W15	A	6.14	0	0
Balfour Ln / Balfour St	Balfour Ln	__S25	A	12.86	0.27	3
Havilah Rd / Havilah Ln	Havilah Rd (W)	E15	A	12.4	0	0
	Havilah Ln	__N14	A	12.08	0.12	5
	Havilah Rd (E)	W14	A	4.8	0	1

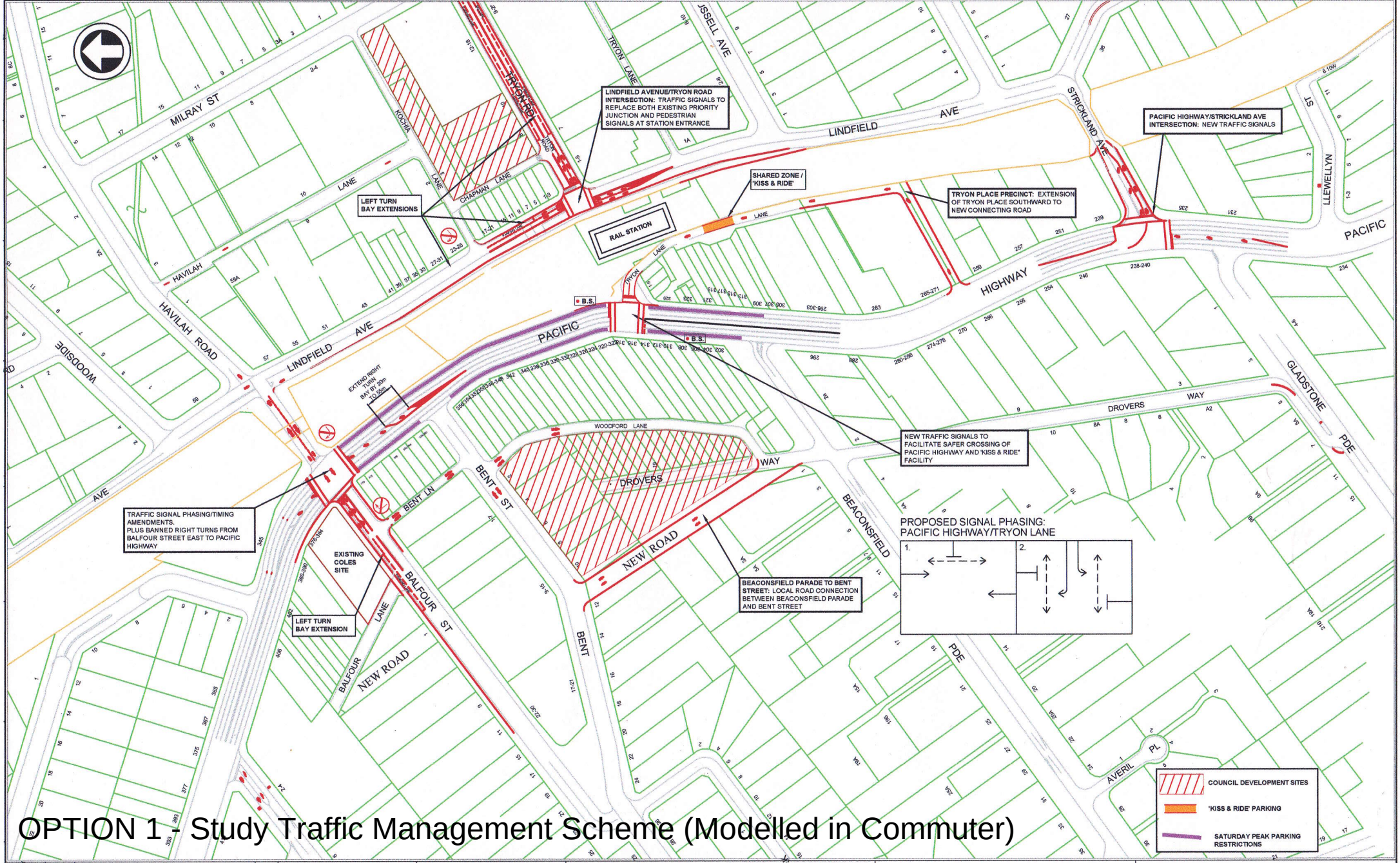
FIGURE 5 OPTION2 PM MODEL WITH TMM LEVELS OF SERVICE

Intersection Name		Approach Description	LOS	Delay (Sec)	Average Que (No Vehicles)	Maximum Que (No Vehicles)
Pacific Hwy / Grosvenour Rd / Burleigh St	Grosvenor Rd	E22	F	146.77	13.11	38
	Pacific Hwyw (s)	W30_	E	69.98	7.12	41
	Burghleigh St	__E32_	F	182.67	1.55	7
	Pacific Hwyw (N)	_S1	A	11.13	12.33	56
Pacific Highway / Tyron Place	Pacific Hwy (S)	_N1_	A	5.26	1.51	23
	Tyron Pl	W2				
	Pacific Hwy (N)	S27_	D	52.21	17.84	52
Pacific Hwy / Strickland Ave	Pacific Hwy (s)	N6	A	0	0	0
	Strickland Ave	W5_	C	36.37	1.09	11
	Pacific Hwy (N)	S4_	C	36.77	0.01	1
Pacific Hwy / Beaconsfield Parade	Beaconsfield Parade	N12	B	23.19	0.45	6
	Pacific Hwy (s)	_N1_2	A	0	0	0
Pacific Hwy / Bent St	Bent Street	E23__	F	88.13	2.05	7
	Pacific Hwy (s)	_N3_	A	0	0	0
Pacific Hwy / Balfour St	Balfour St (W)	_N25__	F	253.15	14.09	39
	Pacific Hwy (S)	N3_	C	37.87	13.18	72
	Balfour St (E)	E20	F	97.26	43.74	89
	Pacific Hwy (N)	_W18_	D	44.25	4.13	8
Pacific Hwy / Highfield Rd	Highfield Rd	E29_	E	69.32	3.43	14
	Pacific Hwy (S)	W22	A	9.86	3.14	31
	Pacific HWY (N)	E28	F	77.74	5.63	52
Lindfield Ave / Balfour St / Havilah Rd	Balfour St	E26__	A	7.85	0	1
	Lindfield Ave (S)	_N15_	B	16.9	1.8	13
	Lindfield Ave (S) Slip lane	_N15_2	D	43.51	1.63	4
	Havilah RD	W13	A	12.04	0.02	2
	Lindfield Ave (N)	S26	B	24.89	0.76	8
Balfour St / Bent St / Newark Cres	Bent Street (W)	E24	C	31.57	0.89	18
	Newark Cres	N24	D	50.97	0.03	1
	Bent Street (E)	__W20_	C	41.79	2	18
	Balfour St	__S24_	A	5.73	0.02	3
Bent St / Woodford Ln / Bent Ln	Bent St (W)	_E22_	A	11.23	0	1
	Woodford Ln	N46	B	26.94	0.61	10
	Bent St (E)	W20__	B	24.9	0.02	2
	Balfour Ln	_S22	A	9.56	0.04	3
Beaconsfield Parade / Drovers Way / Woodford Ln	Beaconsfield Prd (W)	_E21_	A	6.77	0	0
	Drovers Way	_N20	A	14.43	0	1
	Beaconsfield Prd (E)	W1__	B	26.5	0.15	4
	Woodford Ln	_S20_2	A	8.04	0	1
Lindfield Ave / Kochia Ln	Lindfield Ave (S)	_N12_	A	7.94	1.02	7
	Lindfield Ave (N)	_S15_2	B	15.26	0.63	5
Lindfield Ave / Tryon Rd	Lindfield Ave (S)	N11_	B	27.06	3.17	13
	Tryon Rd	W10_	D	51.59	5.06	22
	Lindfield Ave (N)	_S14_2	C	38.97	1.18	8
Tryon Rd / Chapman Ln (Car Park Entry)	Tryon Rd (W)	E10	A	10.86	0.66	6
	Tryon Rd (E)	W10_2	A	0	0	0
	Chapman Ln	_E30_	B	23.21	0.64	4
Gladstone Prd / Pacific Hwy	Gladstone Prd	E4	B	23.81	0.04	2
	Pacific Hwy (S)	N7	A	7.97	0.55	21
Tryon Rd / Milray St	Tryon Rd (W)	_E11	A	8	0.43	8
	Tryon Rd (E)	W17	A	8.22	0.01	3
	Milray St	S16_	A	5.88	0.56	9
Havilah Rd / Milray St	Havilah Rd (W)	E16	A	8.55	0	1
	Milray St	__N16	A	8.38	0.03	2
	Havilah Rd (E)	W15	A	6.81	0	0
Balfour Ln / Balfour St	Balfour Ln	__S25	D	47.29	1.28	5
Havilah Rd / Havilah Ln	Havilah Rd (W)	E15	A	13.34	0	0
	Havilah Ln	__N14	A	13.72	0.24	5
	Havilah Rd (E)	W14	A	8.06	0.01	1

FIGURE 6 OPTION2 SAT MODEL WITH TMM LEVELS OF SERVICE

Appendix J

Lindfield Draft Traffic Management Options 1A, B, C & D



OPTION 1 - Study Traffic Management Scheme (Modelled in Commuter)

No.	BY	DATE	DESCRIPTION	APPD.

A1 Original | Co-ordinate System: MGA Zone 56 | Height Datum: A.H.D.

CLIENT

Ku-ring-gai Council

The information shown on this drawing is for the purposes of The Lindfield Transport Network Study 2013. No warranty is given or implied as to its suitability for any other purpose. KMC and it's Consultants accept no liability arising from the use of this drawing and the information shown thereon for any purpose other than the Project.

peopletrans

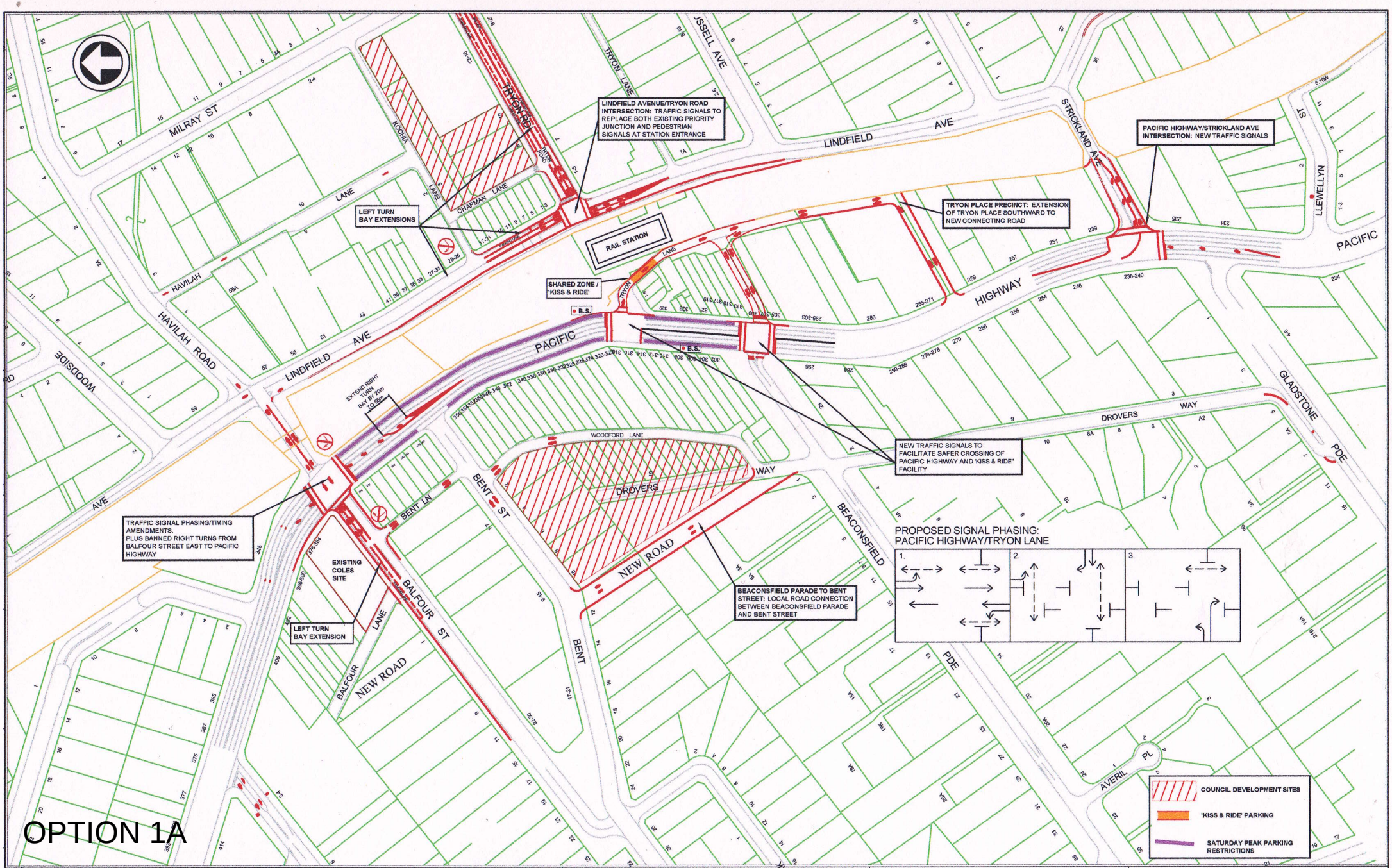
DRAWN G.W. JARRETT
DESIGNED A. STEWART
DRG CHECK A. STEWART
DESIGN CHECK
APPROVED

LINDFIELD TRANSPORT NETWORK STUDY 2013
DRAFT CONCEPT PLAN

TRAFFIC MANAGEMENT OPTION 1

OF

DRG No.



OPTION 1A

No.	BY	DATE	DESCRIPTION	APPD.

A1 Original | Co-ordinate System: MGA Zone 56 | Height Datum: A.H.D.

CLIENT

Ku-ring-gai Council

The information shown on this drawing is for the purposes of The Lindfield Transport Network Study 2013. No warranty is given or implied as to its suitability for any other purpose. KMC and it's Consultants accept no liability arising from the use of this drawing and the information shown thereon for any purpose other than the Project.

peopletrans

DRAWN G.W. JARRETT
DESIGNED A. STEWART
DRG CHECK A. STEWART
DESIGN CHECK
APPROVED

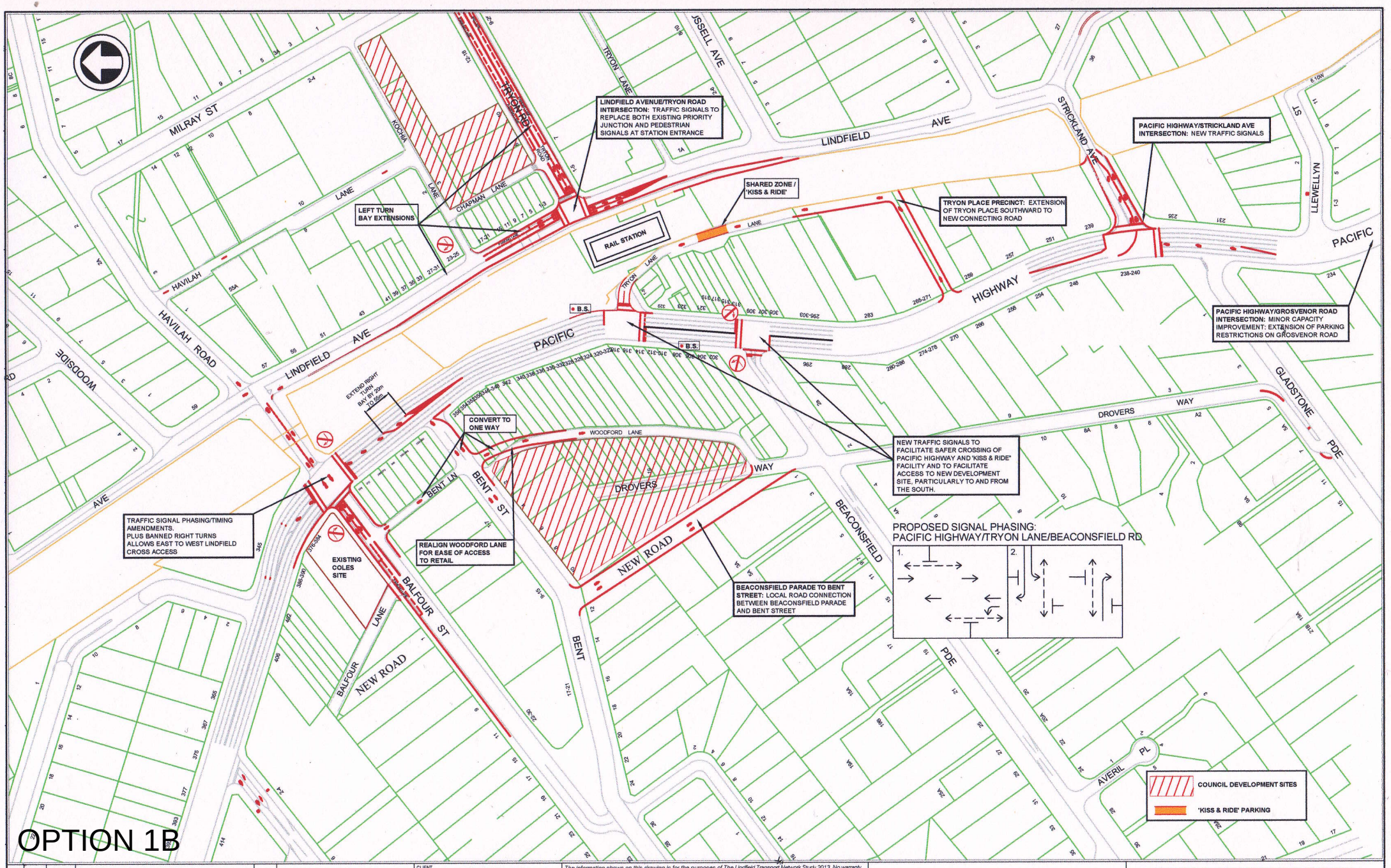
LINDFIELD TRANSPORT NETWORK STUDY 2013
DRAFT CONCEPT PLAN

TRAFFIC MANAGEMENT OPTION 1A

OF

DRG No.

©



No.	BY	DATE	DESCRIPTION	APPD.

A1 Original | Co-ordinate System: MGA Zone 56 | Height Datum: A.H.D.

CLIENT

Ku-ring-gai Council

The information shown on this drawing is for the purposes of The Lindfield Transport Network Study 2013. No warranty is given or implied as to its suitability for any other purpose. KMC and it's Consultants accept no liability arising from the use of this drawing and the information shown thereon for any purpose other than the Project.

peopletrans

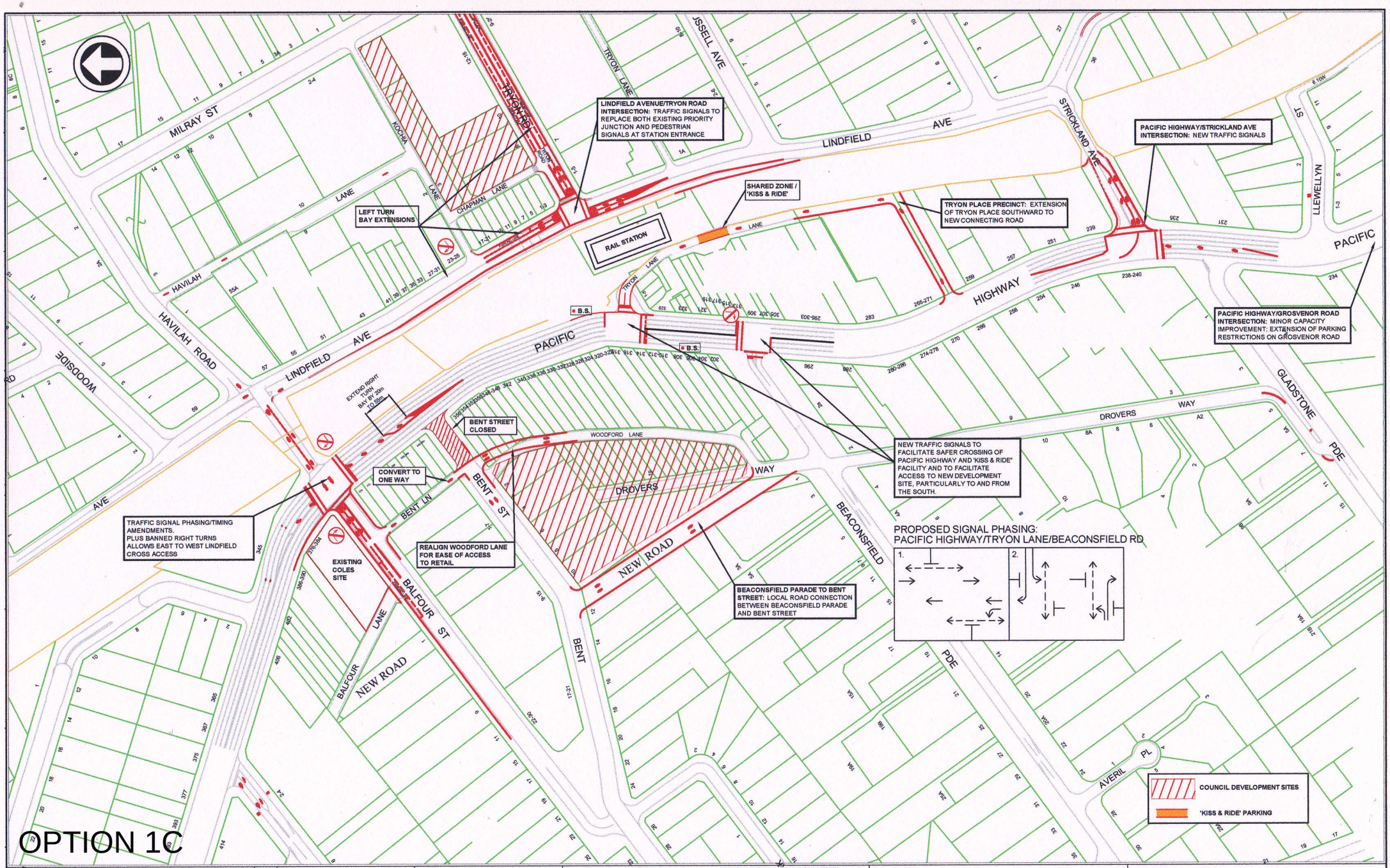
DRAWN G.W. JARRETT
DESIGNED A. STEWART
DRG CHECK A. STEWART
DESIGN CHECK
APPROVED

LINDFIELD TRANSPORT NETWORK STUDY 2013
DRAFT CONCEPT PLAN

TRAFFIC MANAGEMENT OPTION 1B

OF

DRG No.



No.	BY	DATE	DESCRIPTION	APPD.

A1 Original | Co-ordinate System: MGA Zone 56 | Height Datum: A.H.D.

CLIENT

Ku·ring·gai Council

The information shown on this drawing is for the purposes of The Lindfield Transport Network Study 2013. No warranty is given or implied as to its suitability for any other purpose. KMC and it's Consultants accept no liability arising from the use of this drawing and the information shown thereon for any purpose other than the Project.

peopletrans

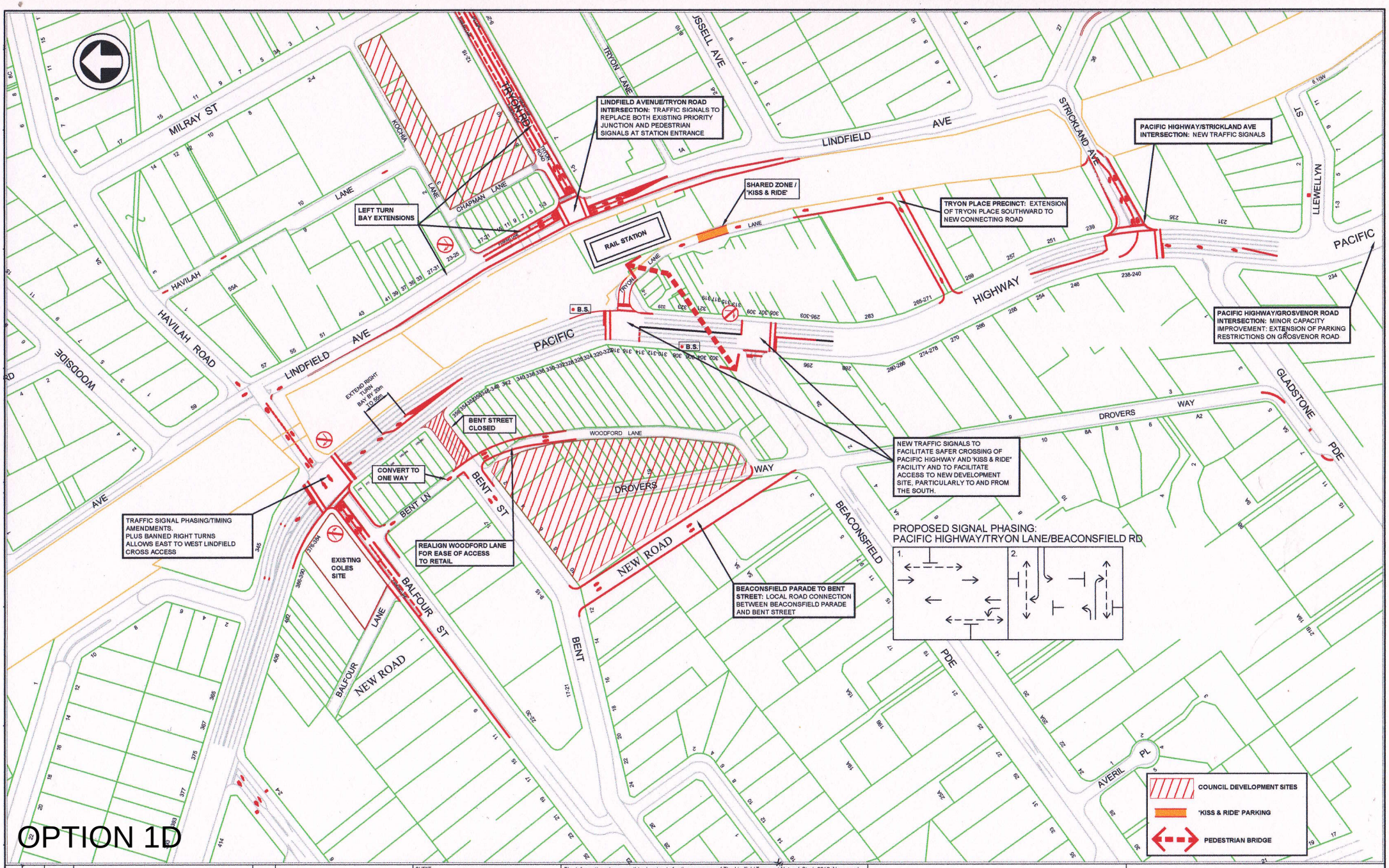
DRAWN G.W. JARRETT
DESIGNED A. STEWART
DRG CHECK A. STEWART
DESIGN CHECK
APPROVED

LINDFIELD TRANSPORT NETWORK STUDY 2013
DRAFT CONCEPT PLAN

TRAFFIC MANAGEMENT OPTION 1C

OF

DRG No.



OPTION 1D

No.	BY	DATE	DESCRIPTION	APPD.

A1 Original | Co-ordinate System: MGA Zone 56 | Height Datum: A.H.D.

CLIENT

Ku-ring-gai Council

The information shown on this drawing is for the purposes of The Lindfield Transport Network Study 2013. No warranty is given or implied as to its suitability for any other purpose. KMC and it's Consultants accept no liability arising from the use of this drawing and the information shown thereon for any purpose other than the Project.

peopletrans

DRAWN G.W. JARRETT
DESIGNED A. STEWART
DRG CHECK A. STEWART
DESIGN CHECK
APPROVED

LINDFIELD TRANSPORT NETWORK STUDY 2013
DRAFT CONCEPT PLAN

TRAFFIC MANAGEMENT OPTION 1D

OF

DRG No.

Appendix K

Lindfield Traffic Management Option TMM1-Rev 1

LINDFIELD AVENUE/TRYON ROAD INTERSECTION: TRAFFIC SIGNALS TO REPLACE BOTH EXISTING PRIORITY JUNCTION AND PEDESTRIAN SIGNALS AT STATION ENTRANCE

PACIFIC HIGHWAY/STRICKLAND AVE INTERSECTION: NEW TRAFFIC SIGNALS

SHARED ZONE / 'KISS & RIDE'

TRYON PLACE PRECINCT: EXTENSION OF TRYON PLACE SOUTHWARD TO NEW CONNECTING ROAD

LEFT TURN BAY EXTENSIONS

RAIL STATION

NEW TRAFFIC SIGNALS TO FACILITATE SAFER CROSSING OF PACIFIC HIGHWAY AND 'KISS & RIDE" FACILITY

EXTEND RIGHT TURN BAY BY 20m TO 65m

TRAFFIC SIGNAL PHASING/TIMING AMENDMENTS.
PLUS BANNED RIGHT TURN FROM BALFOUR STREET EAST TO PACIFIC HIGHWAY

BEACONSFIELD PARADE TO BENT STREET: LOCAL ROAD CONNECTION BETWEEN BEACONSFIELD PARADE AND BENT STREET

LEFT TURN BAY EXTENSION

COLES SITE

B.S.

PHASES

A

E

B

E2

D

PROPOSED SIGNAL PHASING:
PACIFIC HIGHWAY/TRYON LANE

1.

2.

COUNCIL DEVELOPMENT SITES

COLES DEVELOPMENT SITE

'KISS & RIDE' PARKING

SATURDAY PEAK PARKING RESTRICTIONS

No.	BY	DATE	DESCRIPTION	APPD.
REV. 1	A.S.	19/09	REVISED FOLLOWING MODELLING OF COLES - BALFOR ST REDEVELOPMENT SITE	A.S.
	A.S.	17/02	ORIGINAL ISSUE	A.S.

A1 Original | Co-ordinate System: MGA Zone 56 | Height Datum: A.H.D.

CLIENT

Ku·ring·gai Council

The information shown on this drawing is for the purposes of The Lindfield Transport Network Study 2013. No warranty is given or implied as to its suitability for any other purpose. KMC and it's Consultants accept no liability arising from the use of this drawing and the information shown thereon for any purpose other than the Project.

peopletrans

DRAWN G.W. JARRETT
DESIGNED A. STEWART
DRG CHECK A. STEWART
DESIGN CHECK
APPROVED

LINDFIELD TRANSPORT NETWORK STUDY 2013/14
DRAFT CONCEPT PLAN

TRAFFIC MANAGEMENT MEASURES 1

(REV. 1)

OF

DRG No.

©

Appendix L

Land Use Option C – AM,PM,SAT Detailed Intersection Modelling Outputs (TMM1 v TMM1C)

		AM								PM								SAT							
		TMM1				TMM1C				TMM1				TMM1C				TMM1				TMM1C			
Intersection Name	Approach	LOS	Delay (Sec)	Queue Ave	Queue Max	LOS	Delay (Sec)	Queue Ave	Queue Max	LOS	Delay (Sec)	Queue Ave	Queue Max	LOS	Delay (Sec)	Queue Ave	Queue Max	LOS	Delay (Sec)	Queue Ave	Queue Max	LOS	Delay (Sec)	Queue Ave	Queue Max
Pacific Hwy / Grosvenour Rd / Burleigh St	Grosvenor Rd	F	503	33	44	F	353	24	42	F	484	33	44	F	495	33	43	F	126	11	40	F	123	11	38
	Pacific Hwyw (s)	E	69	6	41	E	69	6	40	F	71	9	55	F	73	9	50	F	73	8	49	F	80	11	81
	Burghleigh St	F	359	3	12	F	1200	17	22	A	0	5	10	A	0	9	21	F	1196	16	23	F	151	1	5
	Pacific Hwyw (N)	C	30	25	111	B	27	22	95	A	12	8	33	B	17	11	45	A	12	11	51	A	11	11	50
Pacific Highway / Tyron Place	Pacific Hwy (S)	A	0	0	1	A	0	0	1	A	0	0	1	A	0	0	1	A	0	0	1	A	0	0	1
	Tyron Pl	F	105	1	7	E	63	1	6	F	417	12	21	D	51	1	7	E	62	4	21	D	50	3	14
	Pacific Hwy (N)	C	32	8	59	C	30	7	56	C	35	5	44	D	43	7	42	D	49	14	54	E	67	23	66
Pacific Hwy / Strickland Ave	Pacific Hwy (s)	A	0	0	0	A	0	0	0	A	0	0	0	A	0	0	0	A	0	0	0	A	0	0	0
	Strickland Ave	D	56	2	17	E	60	4	18	D	47	4	17	D	48	4	17	C	35	2	17	C	38	3	15
	Pacific Hwy (N)	A	9	0	0	A	9	0	0	B	27	0	1	B	21	0	1	A	11	0	0	C	38	0	1
Pacific Hwy / Beaconsfield Parade	Beaconsfield Parade	E	67	4	16	C	29	2	13	F	173	4	13	C	33	2	8	B	26	2	11	C	40	3	14
	Pacific Hwy (N)	A	5	0	7	A	8	2	11	A	7	2	11	A	13	3	13	A	8	1	14	A	14	3	14
	Pacific Hwy (s)	C	30	3	67	C	33	3	33	B	24	2	31	C	35	6	36	B	22	2	47	E	64	21	92
Pacific Hwy / Bent St	Bent Street	B	20	0	3					F	206	10	20					F	121	2	8				
	Pacific Hwy (s)	A	0	0	0	A	0	0	0	A	0	0	0	A	0	0	0	A	0	0	0	A	0	0	0
Pacific Hwy / Balfour St	Balfour St (W)	F	94	5	37	F	74	2	13	D	56	2	9	D	56	2	9	E	66	3	16	E	63	2	12
	Pacific Hwy (S)	D	52	22	84	B	28	24	58	F	82	46	111	E	67	41	108	F	71	43	99	F	83	46	100
	Balfour St (E)	C	38	17	74	D	43	21	75	D	53	17	70	D	53	16	68	F	123	57	95	E	69	28	85
	Pacific Hwy (N)	F	96	5	7	F	129	4	8	D	51	2	8	D	48	1	7	D	45	5	8	D	44	3	8
Pacific Hwy / Highfield Rd	Highfield Rd	F	133	9	33	F	128	9	34	F	87	5	31	F	86	5	28	F	75	4	15	E	67	4	14
	Pacific Hwy (S)	A	2	0	6	A	5	1	12	A	7	2	39	A	7	2	36	A	7	2	27	A	5	1	23
	Pacific HWY (N)	F	72	4	35	F	80	8	54	E	64	1	16	E	64	1	15	F	368	161	271	E	69	2	27
Lindfield Ave / Balfour St / Havilah Rd	Balfour St	A	8	0	1	A	8	0	3	A	8	0	2	A	8	0	2	A	9	0	3	A	8	0	2
	Lindfield Ave (S)	A	14	0	5	A	14	0	4	B	17	1	11	B	17	1	9	B	16	5	17	B	16	1	13
	Lindfield Ave (S) Slip lane	C	39	1	4	B	22	0	4	B	16	0	4	A	12	0	3	F	86	2	4	C	31	1	4
	Havilah RD	C	31	0	1	B	18	0	1	B	16	0	3	B	17	0	2	B	19	0	3	A	11	0	1
	Lindfield Ave (N)	D	43	5	21	B	22	1	17	B	19	0	6	B	18	0	5	C	34	3	18	B	23	1	11
Balfour St / Bent St / Newark Cres	Bent Street (W)	A	11	0	1	A	9	0	1	A	10	0	1	A	10	0	0	A	11	0	0	A	10	0	0
	Newark Cres	A	8	0	1	A	8	0	1	A	11	0	1	A	10	0	0	B	15	0	1	A	14	0	1
	Bent Street (E)	A	1	0	1	A	1	0	1	A	6	0	1	A	3	0	1	A	7	0	2	A	4	0	3
	Balfour St	A	5	0	1	A	6	0	3	A	8	0	5	A	8	0	4	A	9	0	7	A	9	0	4
Bent St / Woodford Ln / Bent Ln	Bent St (W)	A	8	0	1	A	10	0	1	A	9	0	1	A	9	0	1	A	8	0	2	A	9	0	0
	Woodford Ln	A	7	0	0	A	0	0	0	A	7	0	1	A	0	0	0	A	7	0	2	A	0	0	0
	Bent St (E)	E	58	0	1					C	38	0	4					D	44	0	4				
	Balfour Ln	A	9	0	2	A	9	0	1	C	40	0	3	D	45	0	2	B	18	0	6	A	0	0	0
Beaconsfield Parade / Drovers Way / Woodford Ln	Beaconsfield Prd (W)	A	7	0	2	A	7	0	2	A	11	0	2	A	7	0	1	A	9	0	2	A	9	0	2
	Drovers Way	A	12	0	1	A	12	0	2	B	18	0	2	A	11	0	1	A	13	0	1	A	14	0	1
	Beaconsfield Prd (E)	A	10	0	3	A	14	0	4	B	24	0	6	A	13	0	3	B	20	0	7	B	15	0	5
	Woodford Ln	A	8	0	2	A	8	0	2	B	16	0	2	A	8	0	2	A	10	0	3	A	10	0	5
Lindfield Ave / Kochia Ln	Lindfield Ave (S)	A	7	1	3	A	8	1	6	A	8	0	4	A	8	0	3	A	9	1	12	A	8	1	8
	Lindfield Ave (N)	A	13	1	11	A	12	1	12	A	11	0	8	A	10	0	7	A	13	1	10	A	14	1	12
Lindfield Ave / Tryon Rd	Lindfield Ave (S)	B	26	1	7	B	26	1	8	B	20	1	12	B	24	2	12	B	26	3	12	C	33	4	13
	Tryon Rd	E	65	4	19	D	50	3	15	C	40	2	8	C	40	2	10	E	62	4	21	D	50	3	14
	Lindfield Ave (N)	B	28	3	13	B	25	3	16	B	23	2	11	B	26	3	14	B	25	3	12	B	28	3	11
Tryon Rd / Chapman Ln (Car Park Entry)	Tryon Rd (W)	A	6	0	6	A	9	0	7	A	6	0	6	A	9	0	6	A	8	0	5	A	11	1	7
	Tryon Rd (E)	A	0	0	0	A	0	0	0	A	0	0	0	A	0	0	0	A	0	0	0	A	0	0	0
	Chapman Ln	A	14	0	4	A	2	0	3	A	8	0	4	A	4	0	3	B	28	1	4	A	9	0	4
Gladstone Prd / Pacific Hwy	Gladstone Prd	B	26	0	4	B	25	0	5	C	29	0	4	C	30	0	3	B	28	0	2	B	27	0	5
	Pacific Hwy (S)	A	7	0	7	A	6	0	4	A	13	4	24	A	14	4	25	A	8	0	13	A	11	2	20
Tryon Rd / Milray St	Tryon Rd (W)	A	6	0	6	A	8	1	8	A	10	1	8	A	10	1	8	A	6	0	5	A	11	1	7
	Tryon Rd (E)	A	7	0	1	A	7	0	1	A	8	0	5	A	8	0	2	A	8	0	2	A	9	0	3
	Milray St	A	4	0	4	A	3	0	4	A	5	0	4	A	4	0	5	A	5	0	4	A	6	1	6
Havilah Rd / Milray St	Havilah Rd (W)	A	8	0	1	A	8	0	1	A	8	0	1	A	8	0	1	A	8	0	1	A	8	0	2
	Milray St	A	8	0	1	A	9	0	2	A	7	0	1	A	7	0	1	A	6	0	2	A	6	0	2
	Havilah Rd (E)	A	8	0	0	A	8	0	0	A	6	0	0	A	6	0	0	A	8	0	0	A	7	0	0
Balfour Ln / Balfour St	Balfour Ln	A	0	0	0	A	0	0	0	A	0	0	0	A	0	0	0	A	0	0	0	A	0	0	0
Havilah Rd / Havilah Ln	Havilah Rd (W)	B	28	0	0	A	14	0	0	A	13	0	0	A	13	0	0	B	20	0	0	A	14	0	0
	Havilah Ln	A	11	0	2	A	11	0	2	A	12	0	3	A	12	0	3	A	13	0	2	A	12	0	4
	Havilah Rd (E)	A	4	0	0	A	3	0	0	A	5	0	1	A	5	0	0	A	9	0	1	A	8	0	1

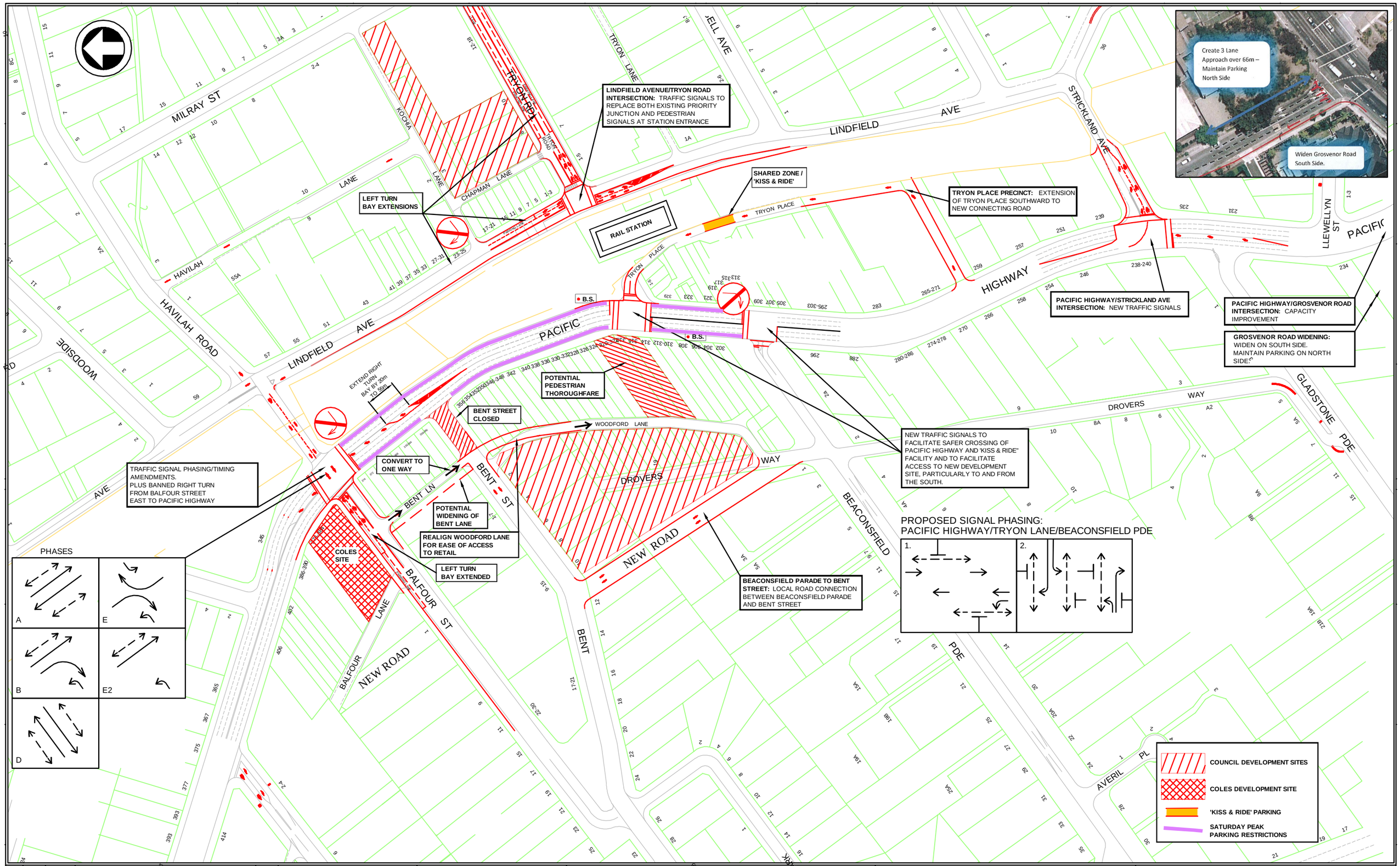
Appendix M

TMM1E - AM,PM,SAT Detailed Intersection Modelling Outputs (Land Use Option C v Land Use Option E)

		AM								PM								SAT							
		Task4				Task 5				Task4				Task5				Task4				Task5			
		Land Use Option C - TMM1E				Land Use Option E - TMM1E				Land Use Option C - TMM1E				Land Use Option E - TMM1E				Land Use Option C - TMM1E				Land Use Option E - TMM1E			
Intersection Name	Approach	LOS	Delay (Sec)	Queue Ave	Queue Max	LOS	Delay (Sec)	Queue Ave	Queue Max	LOS	Delay (Sec)	Queue Ave	Queue Max	LOS	Delay (Sec)	Queue Ave	Queue Max	LOS	Delay (Sec)	Queue Ave	Queue Max	LOS	Delay (Sec)	Queue Ave	Queue Max
Pacific Hwy / Grosvenour Rd / Burleigh St	Grosvenor Rd	F	284	20	42	F	517	34	43	F	490	33	41	F	508	33	41	F	131	12	40	F	101	10	34
	Pacific Hwyw (s)	E	69	6	33	E	69	6	37	F	126	43	161	F	257	142	217	F	79	9	91	F	101	21	117
	Burghleigh St	F	581	9	22	F	683	10	23	A	0	6	10	A	0	15	28	F	136	1	4	F	172	2	6
	Pacific Hwyw (N)	D	48	38	132	C	39	31	109	A	8	6	28	A	12	10	43	B	24	20	70	C	34	26	117
Pacific Highway / Tyron Place	Pacific Hwy (S)	A	0	0	1	A	0	0	1	A	0	0	1	A	0	0	1	A	0	0	1	A	0	0	1
	Tyron Pl	F	127	2	8	F	154	3	12	F	350	19	39	F	137	5	17	F	73	1	8	F	155	3	18
	Pacific Hwy (N)	C	29	8	59	C	29	8	60	B	28	4	40	B	27	7	44	B	22	3	22	D	44	14	80
Pacific Hwy / Strickland Ave	Pacific Hwy (s)	A	0	0	0	A	0	0	0	A	0	0	0	A	0	0	0	A	0	0	0	A	0	0	0
	Strickland Ave	E	61	5	16	E	63	5	18	D	49	5	15	C	42	4	18	C	40	3	17	C	41	4	18
	Pacific Hwy (N)	A	9	0	0	A	13	0	1	C	37	0	1	D	43	0	1	A	10	0	0	A	11	0	1
Pacific Hwy / Beaconsfield Parade	Beaconsfield Parade	B	22	1	9	B	23	1	12	E	62	4	15	F	81	8	22	E	58	5	18	E	65	7	20
	Pacific Hwy (N)	A	12	4	34	A	11	4	32	A	11	2	21	A	12	2	18	A	8	2	16	A	12	4	21
	Pacific Hwy (s)	E	61	16	73	E	69	19	75	D	43	11	66	D	52	17	74	C	40	7	59	D	51	12	63
Pacific Hwy / Balfour St	Balfour St (W)	F	114	4	24	F	103	3	16	D	48	3	8	D	54	1	11	E	63	2	10	E	57	2	11
	Pacific Hwy (S)	C	30	23	60	C	32	28	72	E	61	38	102	E	62	31	92	F	76	44	98	F	88	55	114
	Balfour St (E)	C	30	11	53	C	35	14	60	D	51	16	79	D	55	18	79	E	57	22	75	F	74	32	86
	Pacific Hwy (N)	F	112	3	8	F	168	5	8	D	53	2	7	D	47	2	8	D	46	4	8	D	50	4	8
Pacific Hwy / Highfield Rd	Highfield Rd	F	102	7	22	F	110	8	27	F	86	4	22	F	99	6	30	E	65	4	15	E	68	4	16
	Pacific Hwy (S)	A	5	1	12	A	5	1	13	A	6	2	39	A	6	2	36	A	6	2	26	A	6	2	26
	Pacific HWY (N)	E	69	2	27	E	70	3	29	E	65	1	18	E	65	1	23	E	66	1	19	F	77	6	54
Lindfield Ave / Balfour St / Havilah Rd	Balfour St	A	8	0	3	A	8	0	3	A	8	0	2	A	8	0	3	A	8	0	2	B	19	1	10
	Lindfield Ave (S)	A	14	0	4	A	13	3	14	B	16	1	6	B	18	1	9	B	15	1	15	B	18	2	13
	Lindfield Ave (S) Slip lane	B	20	0	3	F	194	1	5	A	12	0	4	A	12	0	3	B	27	1	4	C	38	1	4
	Havilah RD	C	32	0	2	F	82	1	5	B	16	0	2	B	17	0	4	A	12	0	2	B	28	0	3
	Lindfield Ave (N)	B	23	1	12	D	45	5	21	B	19	0	5	B	19	0	3	B	21	1	12	F	88	11	21
Balfour St / Bent St / Newark Cres	Bent Street (W)	A	9	0	1	A	9	0	0	A	10	0	0	A	9	0	0	A	10	0	0	A	9	0	0
	Newark Cres	A	9	0	1	A	11	0	1	A	10	0	0	A	11	0	1	B	15	0	1	B	15	0	1
	Bent Street (E)	A	1	0	1	A	1	0	1	A	3	0	1	A	9	0	2	A	7	0	2	A	8	0	2
	Balfour St	A	6	0	2	A	6	0	3	A	7	0	2	A	9	0	4	A	9	0	6	A	10	0	6
Bent St / Woodford Ln / Bent Ln	Bent St (W)	A	9	0	1	A	9	0	1	A	9	0	0	A	9	0	1	A	9	0	1	A	10	0	0
	Woodford Ln	A	0	0	0	A	0	0	0	A	0	0	0	A	0	0	0	A	0	0	0	A	0	0	0
	Balfour Ln	A	9	0	2	A	10	0	3	D	45	0	2	A	9	0	2	A	0	0	0	A	12	0	0
Beaconsfield Parade / Drovers Way / Woodford Ln	Beaconsfield Prd (W)	A	7	0	1	A	7	0	1	A	7	0	1	A	8	0	2	A	8	0	1	A	12	0	2
	Drovers Way	A	12	0	2	A	12	0	2	A	13	0	2	A	14	0	1	A	13	0	1	B	16	0	1
	Beaconsfield Prd (E)	A	12	0	5	A	11	0	3	A	7	0	3	A	8	0	10	A	7	0	5	A	8	0	8
	Woodford Ln	A	8	0	2	A	8	0	2	A	9	0	5	B	17	1	9	A	11	0	5	A	12	1	6
Lindfield Ave / Kochia Ln	Lindfield Ave (S)	A	8	1	3	B	16	2	12	A	8	0	2	A	7	0	4	A	8	1	5	A	9	1	10
	Lindfield Ave (N)	A	12	0	8	A	13	1	13	A	10	0	7	A	11	0	7	A	11	1	8	D	52	7	14
Lindfield Ave / Tryon Rd	Lindfield Ave (S)	B	25	1	6	C	30	1	10	B	23	2	11	D	47	5	13	B	25	2	12	C	29	3	14
	Tryon Rd	D	48	2	14	D	53	3	14	C	39	2	11	D	44	3	13	D	48	3	17	E	60	6	33
	Lindfield Ave (N)	B	27	4	17	B	28	4	17	B	24	2	15	C	38	5	17	B	25	3	11	D	52	8	16
Tryon Rd / Chapman Ln (Car Park Entry)	Tryon Rd (W)	A	9	0	6	A	10	0	7	A	8	0	6	A	14	1	7	A	9	0	6	A	11	1	7
	Tryon Rd (E)	A	0	0	0	A	0	0	0	A	0	0	0	A	0	0	0	A	0	0	0	A	0	0	0
	Chapman Ln	A	4	0	3	A	6	0	4	A	3	0	4	A	6	0	4	A	10	0	4	A	11	0	4
Gladstone Prd / Pacific Hwy	Gladstone Prd	B	25	0	3	C	29	0	8	C	33	0	4	C	42	1	5	C	32	0	4	C	34	0	3
	Pacific Hwy (S)	A	8	0	9	A	9	1	14	B	18	7	25	B	27	12	26	A	10	1	20	A	14	3	20
Tryon Rd / Milray St	Tryon Rd (W)	A	5	0	6	A	6	0	6	A	10	1	9	A	9	2	11	A	12	1	9	A	14	1	8
	Tryon Rd (E)	A	7	0	1	A	7	0	1	A	8	0	1	A	8	0	4	A	9	0	5	A	11	1	26
	Milray St	A	3	0	4	A	4	0	5	A	4	0	4	A	4	0	3	A	6	0	5	A	11	1	9
Havilah Rd / Milray St	Havilah Rd (W)	A	8	0	2	A	8	0	1	A	8	0	1	A	8	0	1	A	8	0	1	A	9	0	2
	Milray St	A	9	0	2	A	8	0	2	A	7	0	2	A	7	0	1	A	6	0	1	A	7	0	2
	Havilah Rd (E)	A	8	0	0	A	8	0	0	A	7	0	0	A	7	0	0	A	7	0	0	A	8	0	1
Balfour Ln / Balfour St	Balfour Ln	A	0	0	0	A	0	0	0	A	0	0	0	A	0	0	0	A	0	0	0	A	0	0	0
Havilah Rd / Havilah Ln	Havilah Rd (W)	A	14	0	0	C	37	0	0	A	12	0	0	A	13	0	0	A	14	0	0	E	59	0	0
	Havilah Ln	A	12	0	3	A	12	0	3	A	11	0	2	A	12	0	3	A	12	0	2	A	13	0	4
	Havilah Rd (E)	A	4	0	0	A	4	0	0	A	5	0	0	A	5	0	0	A	8	0	1	A	8	0	1

Appendix N

Lindfield Traffic Management Option 1C – (TMM1C)



No.	BY	DATE	DESCRIPTION	APPD.
REV. 1	A.S.	19/09	REVISED FOLLOWING MODELLING OF COLES - BALFOR ST REDEVELOPMENT SITE	A.S.
	A.S.	17/02	ORIGINAL ISSUE	A.S.

A1 Original | Co-ordinate System: MGA Zone 56 | Height Datum: A.H.D.

CLIENT

Ku-ring-gai Council

The information shown on this drawing is for the purposes of The Lindfield Transport Network Study 2013. No warranty is given or implied as to its suitability for any other purpose. KMC and it's Consultants accept no liability arising from the use of this drawing and the information shown thereon for any purpose other than the Project.

peopletrans

DRAWN G.W. JARRETT
DESIGNED A. STEWART
DRG CHECK A. STEWART
DESIGN CHECK
APPROVED

LINDFIELD TRANSPORT NETWORK STUDY 2013/14
DRAFT CONCEPT PLAN

TRAFFIC MANAGEMENT MEASURES 1C

OF

DRG No.

Appendix O

Lindfield Transport Plan - Consolidated Fee Estimate Table

Lindfield Transport Network Study 2013/14

Strategic Cost Estimate - Traffic Management Measures 1C

Traffic Management Measures 1C						
Item No	**Item Description**	**Unit**	**Quantity**	**Rate**	**Total**	**Comments**
1	New Traffic Signals - Tryon Place/Pacific Highway TCS992	No.	1	Sum	$250,000.00	
2	New Traffic Signals - Beaconsfield Parade/Pacific Highway TCS XXX (Including Beaconsfield Parade Widening West Side)	No.	1	Sum	$294,125.00	
3	New Traffic Signals - Strickland Avenue/Pacific Highway TCSXXX	No.	1	Sum	$250,000.00	
4	Traffic Signal Adjustments - Balfour Street/Pacific Highway TCS 894	No.	1	Sum	$20,000.00	
5	New Traffic Signals - Tryon Road/Lindfield Avenue TCSXXX	No.	1	Sum	$250,000.00	
6	Grosvenor Street Widening (South side) - TCS	m2	210	(Refer Detail)	$44,125.00	
6	New Road 4.5m wide - Tryon Place Extension	m2	337.5	(Refer Detail)	$67,825.00	
7	Tryon Place Shared Zone (Pavers Surface Treatment, Signs & Linemarking)	m2	1250	Sum	$500,000.00	(Highest level treatment as per TD 2014-003, roadway raised and constructed with pavers.)
8	New Road 6.0m wide - Bent Street to Drovers Way	m2	1950	(Refer Detail)	$282,250.00	
9	Bent Street Closure between Pacific Highway and Bent Lane (Potential Pedestrianisation/Pocket Park/Development Site)	m2	415	Sum	$50,000.00	
10	Woodford Lane Re-alignment/New Road Construction 4.5m wide (East of Bent Street)	m2	315	(Refer Detail)	$85,275.00	
11	Bent Lane Widening 3.0m (Between Balfour Street and Bent Street)	m2	200	(Refer Detail)	$67,125.00	
12	Closure Kochia Lane between Lindfield Avenue and Chapman Lane (Potential Pedestrianisation/Cycle Access Treatment)	m2	175	Sum	$50,000.00	
13	Pacific Highway Bus Stops Relocate to Departure side of Intersection/Enhancements	No.	2	Sum	$20,000.00	
14	Bicycle Route Infrastructure	m	150	(Refer Detail)	$35,000.00	In addition to Bikeplan KMC $127,000
15	Bicycle Parking (Station East Side)	No.	10	$900.00	$9,000.00	
16	Bicycle Parking (Station West Side)	No.	20	$900.00	$18,000.00	
17	Pedestrian Facilities (KMC PAMP)	No.	5	Sum	$20,000.00	Lindfield PAMP Items 1,4,5,7,8 are not part of any developer contribution funding.
	Sub-Total 1				**$2,312,725.00**	
18	Traffic Management & Control Fees (1.5%)				$34,690.88	
	Sub-Total 2				**$2,347,415.88**	
19	Design Contingency (10%)				$23,474.16	
20	Construction Contingency (10%)				$23,474.16	
	Sub-Total 3				**$2,394,364.19**	
21	Lindfield Grade Seperated Pedestrian Bridge	No.	1	Sum	$4,600,000.00	
	Grand Total				**$6,994,364.19**	

Notes:

1 Cost estimates prepared by PeopleTrans are to be used for feasibility planning purposes only and should not be relied for other purposes unless verified by a suitably qualified civil engineer or quantity surveyor.

2 The above cost estimates relate to external civil works required to support the proposed development. It is assumed that works required on the development sites themselves i.e. demolition & site clearance, would be costed seperately.

3 The above cost estimates do not include the following:
* Property acquisition costs. (i.e. Bent Lane Widening or Woodford Lane re-alignment)
* Relocation of services costs.
* Any on-going maintenance costs associated with these works.
* Open cuttings for TCS signal conduit installation across the Pacific Highway.
* Provision of lighting for any new infrastructure.

4 The cost estimates for the Lindfield Pedestrian Bridge has assumed the worst case upper limit as indicated in the separate report prepared for PeopleTrans by Robert Bird Group titled **"Feasibility Report Lindfield Pedestrian Bridge, Issue C-Final, 13th August 2014"**

peopletrans