

TRANSYT 15
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Filename: M23 J10 Reference Year Layout with Lane Marking Changes - Sensitivity v05.t15
Path: \\Cbh-vfil-001\cbh\Projects\48559 Crawley Transport Study\Transport\Working Documents\Junction Modelling\HE SRN Junction Data\M23 J10 Model\M23 J10 Directional Marking Changes
Report generation date: 20/01/2022 10:22:06

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- «A5 - LP Scenario 2 With Mit & Lane Marking Changes - Sensitivity AM : D5 - LP Scenario 2 With Mit & Lane Marking Changes - Sensitivity AM* :
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 - »Final Prediction Table

File summary

File description

File title	M23 J10 Reference Layout
Location	Crawley
Site number	1
UTCRegion	UTC +1
Driving side	Left
Date	08/09/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	330610079
Enumerator	CORP\dansmith
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber
			✓		✓	✓	✓	✓	✓	✓	✓		

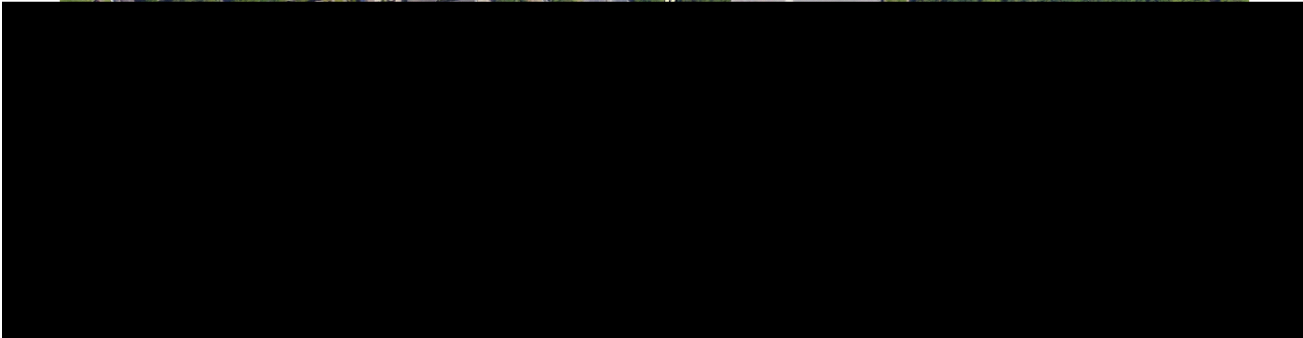
Units

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	mpg	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

Network Diagrams



A5 - LP Scenario 2 With Mit & Lane Marking Changes - Sensitivity AM

D5 - LP Scenario 2 With Mit & Lane Marking Changes - Sensitivity AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst PR
5	20/01/2022 10:21:47	20/01/2022 10:21:48	08:00	60	1360.33	86.81	97.15	211/2	5	13	211/2	201/1	211

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
LP Scenario 2 With Mit & Lane Marking Changes - Sensitivity AM		D5	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
LP Scenario 2 With Mit & Lane Marking Changes - Sensitivity AM				08:00	

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1		✓	✓	Lane Balancing			✓						

Normal Input Flows (PCU/hr)

		To			
		1	2	3	4
From	1	0	1073	92	313
	2	1257	0	466	0
	3	307	505	0	564
	4	1065	0	526	70

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1		101/1, 101/2	121/1, 121/2	#0000FF
	2		201/1, 201/2	221/1, 221/2	#FF0000
	3		17/1, 17/2	322/1	#00FF00
	4		401/1, 401/2	421/1, 421/2	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	11		2	3	201/1, 202/1, 321/1, 322/1	Normal	466
	12		3	4	17/1, 302/1, 421/1	Normal	419
	13		3	1	17/1, 302/2, 411/1, 121/1	Normal	307
	14		3	4	17/1, 302/2, 421/2	Normal	145
	15		3	2	17/2, 302/3, 411/2, 111/1, 221/1	Normal	505
	18		1	3	101/1, 102/2, 211/1, 321/1, 322/1	Normal	0
	19		1	4	101/2, 102/3, 211/2, 311/1, 421/1	Normal	157
	20		2	4	201/1, 202/2, 311/1, 421/1	Normal	0
	22		1	3	101/2, 102/3, 211/2, 321/2, 322/1	Normal	92
	23		1	4	101/2, 102/3, 211/2, 311/2, 421/2	Normal	157
	24		2	4	201/1, 202/2, 311/2, 421/2	Normal	0
	26		1	2	101/1, 102/2, 221/2	Normal	548
	27		1	1	101/2, 102/3, 211/2, 311/2, 411/1, 121/1	Normal	0
	28		2	1	201/1, 202/2, 311/2, 411/1, 121/1	Percentage	691
	29		4	4	401/2, 402/3, 111/2, 211/2, 311/1, 421/1	Normal	35
	30		1	2	101/2, 102/3, 211/2, 311/3, 411/2, 111/1, 221/1	Disabled	0
	31		1	1	101/2, 102/3, 211/2, 311/3, 411/2, 121/2	Normal	0
	32		2	2	201/2, 202/3, 311/3, 411/2, 111/1, 221/1	Normal	0
	33		3	4	17/2, 302/3, 411/2, 111/2, 211/2, 311/1, 421/1	Disabled	0
	34		3	4	17/2, 302/3, 411/2, 111/2, 211/2, 311/2, 421/2	Disabled	0
	35		2	1	201/2, 202/3, 311/3, 411/2, 121/2	Normal	566
	36		4	1	401/1, 402/1, 121/1	Normal	538
	37		1	2	101/1, 102/1, 221/1	Normal	525
	38		3	3	17/2, 302/3, 411/2, 111/1, 211/1, 321/1, 322/1	Normal	0
	39		2	3	201/1, 202/2, 321/2, 322/1	Normal	0
	43		3	3	17/2, 302/3, 411/2, 111/2, 211/2, 321/2, 322/1	Normal	0
	44		3	1	17/2, 302/3, 411/2, 121/2	Normal	0
	50		4	4	401/2, 402/3, 111/2, 211/2, 311/2, 421/2	Normal	35
	52		4	3	401/2, 402/3, 111/2, 211/2, 321/2, 322/1	Normal	473
	53		4	2	401/1, 402/2, 111/1, 221/1	Normal	0
	54		4	1	401/1, 402/2, 121/2	Normal	527
	56		2	3	201/2, 202/3, 311/3, 411/2, 111/2, 211/2, 321/2, 322/1	Disabled	0
57		4	1	401/2, 402/3, 111/2, 211/2, 311/2, 411/1, 121/1	Disabled	0	
58		4	1	401/2, 402/3, 111/2, 211/2, 311/3, 411/2, 121/2	Disabled	0	
59		2	3	201/2, 202/3, 311/3, 411/2, 111/1, 211/1, 321/1, 322/1	Normal	0	
60		4	3	401/1, 402/2, 111/1, 211/1, 321/1, 322/1	Percentage	53	

Signal Timings

Network Default: 60s cycle time; 60 steps

Intergreen Matrix for Controller Stream 1

		To	
		A	B
From	A		5
	B	5	

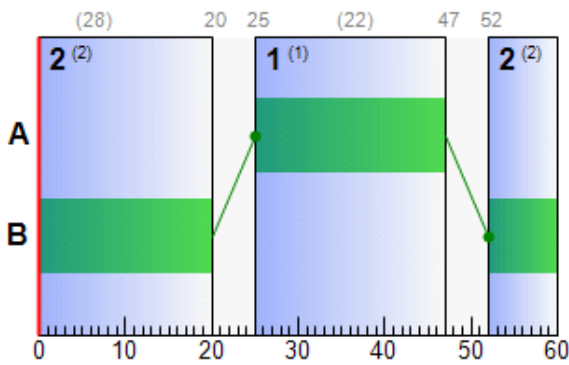
Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	A	25	47	22	1	7
	2	✓	2	B	52	20	28	1	7

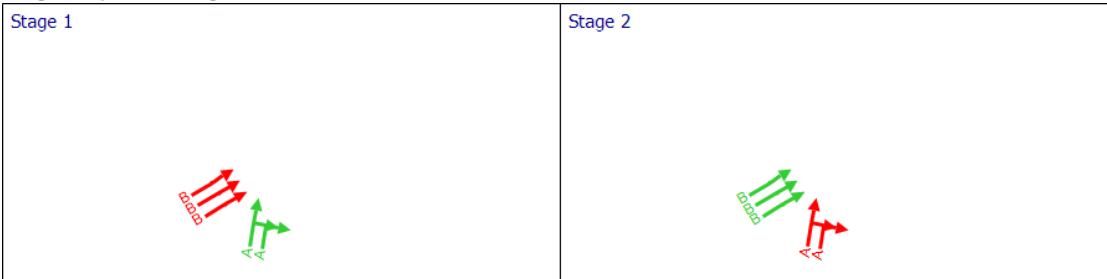
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
102	1	1	1	B	52	20	28
102	2	1	1	B	52	20	28
102	3	1	1	B	52	20	28
111	1	1	1	A	25	47	22
111	2	1	1	A	25	47	22

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Intergreen Matrix for Controller Stream 2

		To	
		A	B
From	A		5
	B	5	

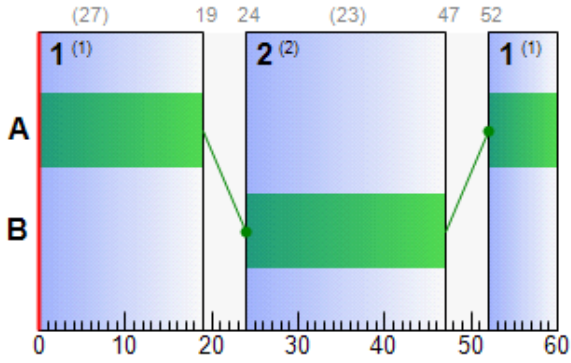
Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
2	1	✓	1	A	52	19	27	1	7
	2	✓	2	B	24	47	23	1	7

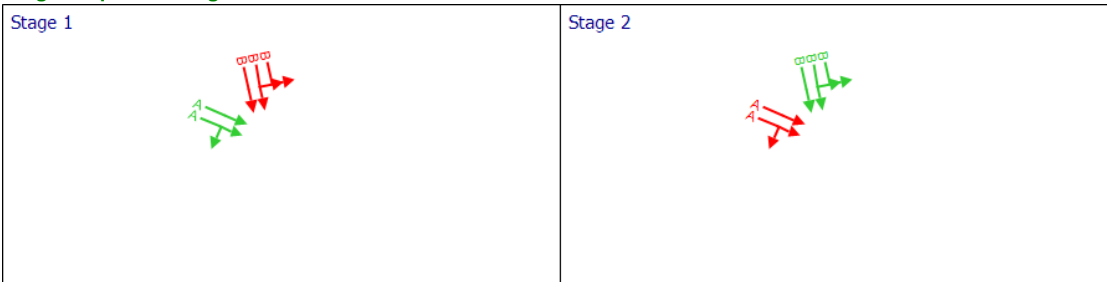
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
202	1	2	2	B	24	47	23
202	2	2	2	B	24	47	23
202	3	2	2	B	24	47	23
211	1	2	2	A	52	19	27
211	2	2	2	A	52	19	27

Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Intergreen Matrix for Controller Stream 3

		To	
		A	B
From	A		6
	B	6	

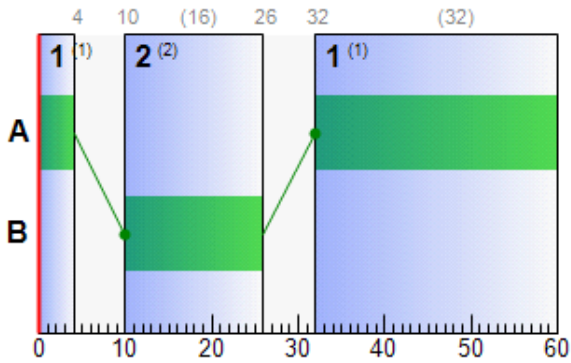
Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
3	1	✓	1	A	32	4	32	1	7
	2	✓	2	B	10	26	16	1	7

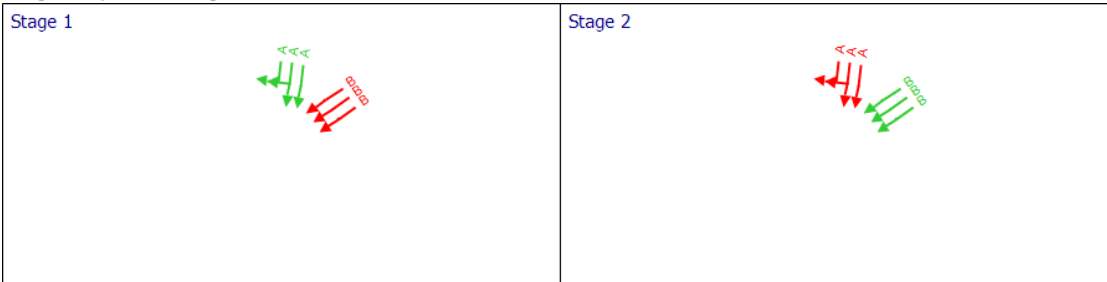
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
302	1	3	3	B	10	26	16
302	2	3	3	B	10	26	16
302	3	3	3	B	10	26	16
311	1	3	3	A	32	4	32
311	2	3	3	A	32	4	32
311	3	3	3	A	32	4	32

Phase Timings Diagram for Controller Stream 3



Stage Sequence Diagram for Controller Stream 3



Intergreen Matrix for Controller Stream 4

		To	
		A	B
From	A		5
	B	5	

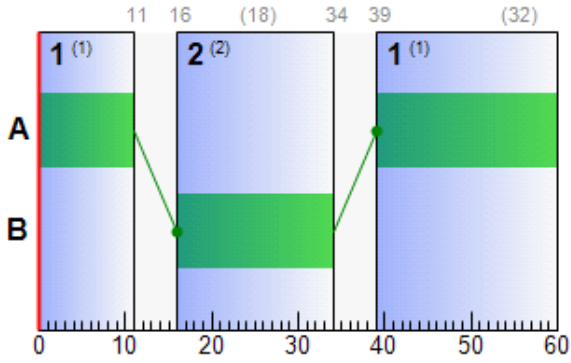
Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
4	1	✓	1	A	39	11	32	1	7
	2	✓	2	B	16	34	18	1	7

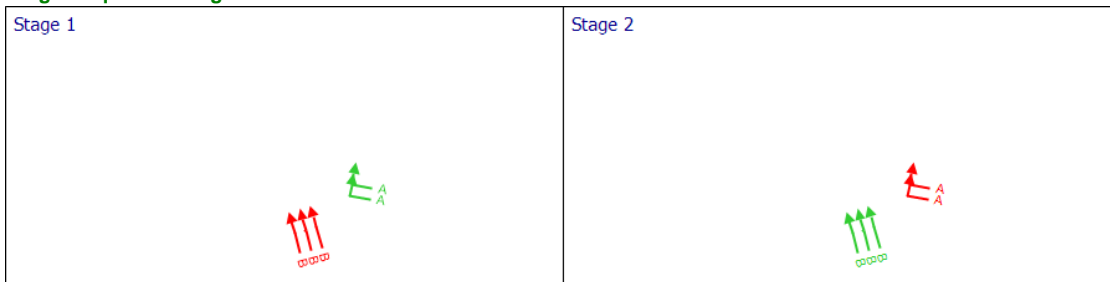
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
402	1	4	4	B	16	34	18
402	2	4	4	B	16	34	18
402	3	4	4	B	16	34	18
411	1	4	4	A	39	11	32
411	2	4	4	A	39	11	32

Phase Timings Diagram for Controller Stream 4



Stage Sequence Diagram for Controller Stream 4



Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	17	1	46	97	871	1910	60	0.79	0.19	0.80	2.71	0.00	2.71
		2	24	269	505	2073	60	0.28	0.04	0.17	0.56	0.00	0.56
	101	1	54	68	1073	2005	60	1.03	0.31	1.18	4.37	0.00	4.37
		2	19	373	406	2133	60	0.20	0.02	0.09	0.32	0.00	0.32
	102	1	55	65	525	1989	28	13.35	6.18	32.33	27.64	4.39	32.03
		2	55	65	548	2079	28	13.39	6.40	33.03	28.94	4.69	33.63
		3	40	123	406	2079	28	11.33	4.08	20.73	18.15	3.07	21.22
	111	1	74	22	558	1976	22	32.73	9.99	55.93	72.04	7.50	79.53
		2	69	31	543	2060	22	6.45	1.12	6.13	13.82	0.83	14.65
	121	1	0	Unrestricted	1536	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	1093	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00
	201	1	58	54	1157	1978	60	1.28	0.41	5.48	5.84	0.00	5.84
		2	27	238	566	2123	60	0.31	0.05	0.65	0.69	0.00	0.69
	202	1	61	47	466	2012	23	18.26	6.32	39.87	33.57	4.52	38.09
		2	79	13	691	2187	23	24.99	11.68	73.29	68.11	8.34	76.44
		3	65	38	566	2187	23	19.28	8.07	50.18	43.04	5.90	48.94
	211	1	6	1469	53	1980	27	1.04	0.14	0.58	0.22	0.10	0.32
		2	97	-7	949	2124	27	43.03	21.21	86.11	161.08	15.04	176.12
	221	1	0	Unrestricted	1030	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00
		2	0	Unrestricted	548	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00
	302	1	74	22	419	1997	16	28.76	7.25	40.30	47.54	5.23	52.77
		2	74	22	452	2159	16	28.33	7.51	35.13	50.50	5.62	56.12
		3	83	8	505	2159	16	34.82	9.55	44.02	69.37	7.03	76.40
	311	1	18	412	192	1987	32	15.21	3.33	22.42	11.52	2.42	13.94
		2	79	14	883	2083	32	9.41	8.40	55.40	32.77	4.23	37.00
		3	50	81	566	2069	32	1.56	0.25	1.67	3.49	0.00	3.49
	321	1	27	232	519	1915	60	0.35	0.05	0.22	0.72	0.00	0.72
		2	27	227	565	2055	60	0.33	0.05	0.22	0.74	0.00	0.74
	322	1	0	Unrestricted	1084	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00
	401	1	58	54	1118	1917	60	1.31	0.41	3.41	5.78	0.00	5.78
		2	26	243	543	2070	60	0.31	0.05	0.13	0.66	0.00	0.66
	402	1	90	0	538	1886	18	43.61	11.39	62.58	92.55	8.28	100.84
2		90	0	580	2030	18	42.92	12.52	68.30	98.18	8.98	107.16	
3		85	6	543	2023	18	34.45	10.11	54.74	73.78	7.48	81.27	
411	1	94	-4	998	1931	32	32.81	15.67	68.54	129.15	11.24	140.39	
	2	95	-6	1071	2085	32	31.94	17.15	71.33	134.93	12.69	147.62	
421	1	0	Unrestricted	611	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	
	2	0	Unrestricted	337	Unrestricted	60	0.00	0.00	0.00	0.00	0.00	0.00	

Final Prediction Table

Traffic Stream Results

Arm	Traffic Stream	Name	Traffic node	SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
				Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Max end of queue (PCU)
17	1		3			871	1910	60	0.00	46	97	17.17	0.79	0.00	0.19	
	2		3			505	2073	60	0.00	24	269	16.63	0.28	0.00	0.04	
101	1		1			1073	2005	60	0.00	54	68	19.06	1.03	0.00	0.31	
	2		1			406	2133	60	0.00	19	373	18.20	0.20	0.00	0.02	
102	1		1	1	B	525	1989	28	0.00	55	65	26.53	13.35	66.68	6.18	5.28
	2		1	1	B	548	2079	28	0.00	55	65	26.76	13.39	68.28	6.40	5.50
	3		1	1	B	406	2079	28	0.00	40	123	24.93	11.33	60.34	4.08	3.86
111	1		1	1	A	558	1976	22	0.00	74	22	48.96	32.73	107.16	9.99	9.56
	2		1	1	A	543	2060	22	5.00	69	31	22.37	6.45	12.17	1.12	1.12
121	1					1536	Unrestricted	60	0.00	0	Unrestricted	40.68	0.00	0.00	0.00	
	2					1093	Unrestricted	60	0.00	0	Unrestricted	41.09	0.00	0.00	0.00	
201	1		2			1157	1978	60	0.00	58	54	6.46	1.28	0.00	0.41	
	2		2			566	2123	60	0.00	27	238	5.48	0.31	0.00	0.05	
202	1		2	2	B	466	2012	23	1.26	61	47	29.19	18.26	77.30	6.32	5.52
	2		2	2	B	691	2187	23	0.15	79	13	35.99	24.99	96.23	11.68	9.36
	3		2	2	B	566	2187	23	0.16	65	38	30.37	19.28	83.11	8.07	6.88
211	1		2	2	A	53	1980	27	19.00	6	1469	22.66	1.04	15.54	0.14	0.14
	2		2	2	A	949	2124	27	0.41	97	-7	64.01	43.03	126.40	21.21	15.3
221	1					1030	Unrestricted	60	0.00	0	Unrestricted	22.50	0.00	0.00	0.00	
	2					548	Unrestricted	60	15.00	0	Unrestricted	22.68	0.00	0.00	0.00	
302	1		3	3	B	419	1997	16	0.00	74	22	43.28	28.76	99.59	7.25	6.50
	2		3	3	B	452	2159	16	0.00	74	22	43.07	28.33	99.10	7.51	6.89
	3		3	3	B	505	2159	16	0.10	83	8	49.80	34.82	111.05	9.55	8.52
311	1		3	3	A	192	1987	32	27.00	18	412	28.67	15.21	100.58	3.33	3.22
	2		3	3	A	883	2083	32	4.88	79	14	22.55	9.41	38.16	8.40	4.68
	3		3	3	A	566	2069	32	9.00	50	81	14.38	1.56	0.00	0.25	0.25
321	1		3			519	1915	60	27.00	27	232	16.16	0.35	0.00	0.05	
	2		3			565	2055	60	32.00	27	227	16.46	0.33	0.00	0.05	
322	1					1084	Unrestricted	60	0.00	0	Unrestricted	22.13	0.00	0.00	0.00	
401	1		4			1118	1917	60	0.00	58	54	9.55	1.31	0.00	0.41	
	2		4			543	2070	60	0.00	26	243	24.31	0.31	0.00	0.05	
402	1		4	4	B	538	1886	18	0.00	90	0	56.18	43.61	122.80	11.39	10.2
	2		4	4	B	580	2030	18	0.00	90	0	55.56	42.92	123.46	12.52	11.0
	3		4	4	B	543	2023	18	0.00	85	6	47.20	34.45	109.93	10.11	9.01
411	1		4	4	A	998	1931	32	1.00	94	-4	54.12	32.81	89.79	15.67	15.3
	2		4	4	A	1071	2085	32	0.70	95	-6	52.70	31.94	94.51	17.15	17.1
421	1					611	Unrestricted	60	6.00	0	Unrestricted	30.16	0.00	0.00	0.00	
	2					337	Unrestricted	60	7.00	0	Unrestricted	30.35	0.00	0.00	0.00	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	3975.44	219.33	18.13	42.00	44.82	1232.76	127.58	0.00	1360.33
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians									
TOTAL	3975.44	219.33	18.13	42.00	44.82	1232.76	127.58	0.00	1360.33

- | < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- | * = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%
- | ^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%
- | + = average link/traffic stream excess queue is greater than 0
- | **P.I. = PERFORMANCE INDEX**

