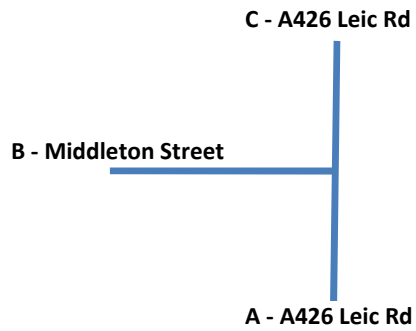


Appendix O

J4 - Leicester Road / Middleton Street – Junction Assessment Data

J4 Leicester Road / Middleton St



0800-0900

Background 2013	A	B	C
A	0	55	644
B	48	0	381
C	492	333	0

Tempo 2013-18	A	B	C
A	1.072	1.072	1.072
B	1.072	1.072	1.072
C	1.072	1.072	1.072

Background 2018	A	B	C
A	0	59	690
B	51	0	408
C	527	357	0

Development	A	B	C
A	0	3	37
B	1	0	0
C	13	0	0

Back + Dev	A	B	C
A	0	62	728
B	52	0	408
C	541	357	0

1700-1800

Background 2013	A	B	C
A	0	60	652
B	72	0	367
C	640	409	0

Tempo 2013-18	A	B	C
A	1.0693	1.0693	1.0693
B	1.0693	1.0693	1.0693
C	1.0693	1.0693	1.0693

Background 2018	A	B	C
A	0	64	697
B	77	0	392
C	684	437	0

Development	A	B	C
A	0	1	13
B	2	0	0
C	27	0	0

Back + Dev	A	B	C
A	0	65	710
B	79	0	392
C	711	437	0

TRANSYT 14
Version: 14.1.2.315 [26-09-12] © Copyright Transport Research Laboratory 2014
For sales and distribution information, program advice and maintenance, contact TRL: Tel: +44 (0)1344 770758 E-mail: software@trl.co.uk Web: http://www.trlsoftware.co.uk
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Last run: 27/01/2014 16:50:42
Analysis Set used for last run: A1 - (untitled)

Filename: J4 Lutterworth_Middleton.t14
Path: S:\PWP\PP Schemes R\6711PP - Glen Parva\Reports\TA\Jct Analysis
Report generation date: 27/01/2014 16:53:20

- » Network Diagrams
- « A1 - (untitled) : D1 - 2018-Back-AM *
- » Summary
- » Network Options
- » Traffic Nodes
- » Arms and Traffic Streams
- » Flow Allocation Tool Tables - Local Matrix: 1
- » Signal Timings
- » TRANSYT 12 Tables
- » Data Entry: Traffic Stream
- » Results: Traffic Stream
- » Results: Link
- » Data Entry: Signal Timings
- » Traffic Stream Results
- » Network Results
- » Point to Point Journey Time

File summary

File Description

Title	(untitled)
Location	
Site Number	
UTCRegion	
Driving Side	Left
Date	06/12/2011
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CEDARBARNMartinA
Description	

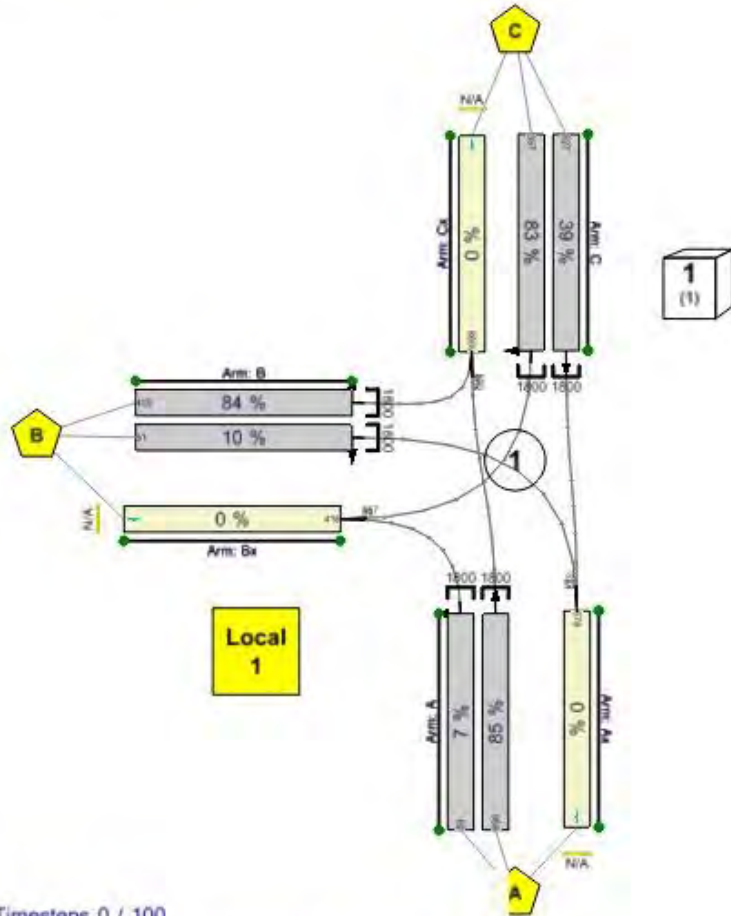
Units

Speed Units	Distance Units	Fuel Economy Units	Fuel Rate Units	Mass Units	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
kph	m	mpg	l/h	kg	perHour	s	-Hour	perHour

Sorting

Show Names Instead of IDs (For Aimsun)	Sorting Direction	Sorting Type	Ignore Prefixes When Sorting	Link Grouping	Source Grouping
	Ascending	Numerical		Normal	Normal

Network Diagrams



(untitled)
 Cyclotime 0s / 100s , Timesteps 0 / 100
 Diagram produced using TRANSYT 14.1.2.315 Network Construction Editor

A1 - (untitled) : D1 - 2018-Back-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)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	LTSWith Highest DOS	Number Of Oversaturated LTS	Percentage Of Oversaturated LTS (%)	LTSWith Worst Signalised PRC	LTSWith Worst Unsignalised PRC	LTSWith Worst Overall PRC	Network Within Capacity
A1 - (untitled)	27/01/2014 16:50:42	27/01/2014 16:50:42	08:00	100	19.81	85.19	A/2	0	0	A/2	Cx/1	A/2	✓

Analysis Set Details

Analysis Set Details

Name	Description	Demand Set	Include In Report	Locked
(untitled)		D1	✓	

Demand Set Details

Name	Description	Composite	Demand Sets	Start Time (HH:mm)	Locked
2018-Back-AM				08:00	

Network Options

Network Timings

Network Cycle Time (s)	Resolution	Number Of Steps	Time Segment Length (min)	Number Of Time Segments	Modelled Time Period (min)
100	1	100	60	1	60

Signals Options

Equal Length Multiple Cycling	Start Displacement (s)	End Displacement (s)	Phase Minimum Broken Penalty (£)	Phase Maximum Broken Penalty (£)	Intergreen Broken Penalty (£)
✓	2	3	10000.00	10000.00	10000.00

Traffic Options

Traffic Model	DOS Threshold (%)	Flow Scaling Factor (%)	Cruise Scaling Factor (%)	Cruise Times Or Speeds	Use Link Stop Weightings	Use Link Delay Weightings	Exclude Pedestrian Links	Random Delay Mode	Type of Vehicle-in-Service	Type Of Random Parameter	PCU Length (m)
Quick PDM	90	100	100	Cruise Speeds	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75

Optimisation Options

Auto Redistribute	Optimisation Type	Optimisation Level	Hill Climb Increments	Use Enhanced Optimisation	Optimisation Order	Locked Green Splits	Full Simulation
✓	Hill Climb (Fast)	Offsets And Green Splits	15,40,-1,15,40,1,-1,1		1		

Economics

Unit Of Cost	Monetary Value Of Delay (£ per PCU-hr)	Monetary Value Of Stops (£ per 100 stops)
£	14.20	2.60

Traffic Nodes

Traffic Nodes

Traffic Node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic Node
A	(untitled)		1
B	(untitled)		1
C	(untitled)		1
Ax	(untitled)		
Bx	(untitled)		

Cx	(untitled)		
----	------------	--	--

Traffic Streams

Arm	Traffic Stream	Name	Description	Length (m)	Traffic Model	Has Restricted Flow	Saturation Flow Source	Saturation Flow (PCU/hr)	Is Signal Controlled	Controller Stream	Phase	Phase2 Enabled	Is Give Way	Traffic Type
A	1	(untitled)		58.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	A			Normal
A	2	(untitled)		100.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	A			Normal
B	1	(untitled)		100.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	D			Normal
B	2	(untitled)		8.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	D			Normal
C	1	(untitled)		100.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	C			Normal
C	2	(untitled)		100.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	B			Normal
Ax	1	(untitled)		100.00	[QuickPDM]		N/A	N/A		N/A	N/A			Normal
Bx	1	(untitled)		100.00	[QuickPDM]		N/A	N/A		N/A	N/A			Normal
Cx	1	(untitled)		100.00	[QuickPDM]		N/A	N/A		N/A	N/A			Normal

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation Flow (PCU/hr)
A	1	1	(untitled)			1800
A	2	1	(untitled)			1800
B	1	1	(untitled)			1800
B	2	1	(untitled)			1800
C	1	1	(untitled)			1800
C	2	1	(untitled)			1800
Ax	1	1	(untitled)			1800
Bx	1	1	(untitled)			1800
Cx	1	1	(untitled)			1800

Modelling

Arm	Traffic Stream	Stop Weighting Multiplier (%)	Delay Weighting Multiplier (%)	Exclude From Results Calculation	Max Queue Storage (PCU)	Has Queue Limit	Has Degree Of Saturation Limit
A	1	100	100		0.00		
A	2	100	100		0.00		
B	1	100	100		0.00		
B	2	100	100		0.00		
C	1	100	100		0.00		
C	2	100	100		0.00		
Ax	1	100	100		0.00		
Bx	1	100	100		0.00		
Cx	1	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Normal Dispersal Type	Normal Dispersal Coefficient	Normal Travel Time Coefficient	Initial Queue (PCU)	Point1 Time Step (s)	Point2 Time Step (s)	Type of Vehicle-in-Service	Vehicle-in-Service	Type Of Random Parameter	Random Parameter
A	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
A	2	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
B	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
B	2	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
C	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
C	2	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50

Arm	Stream	Default	35	80	0.00	0	0	NetworkDefault	Included	NetworkDefault	0.50
Ax	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
Bx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
Cx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)	Bus Flow (PCU/hr)	Tram Flow (PCU/hr)	Cruise Sensitivity Multiplier (%)	Calculated Cruise Speed (kph)
A	1	59	59	0	0	100	1.00
A	2	690	690	0	0	100	1.00
B	1	408	408	0	0	100	1.00
B	2	51	51	0	0	100	1.00
C	1	527	527	0	0	100	1.00
C	2	357	357	0	0	100	1.00
Ax	1	578	578	0	0	100	1.00
Bx	1	416	416	0	0	100	1.00
Cx	1	1098	1098	0	0	100	1.00

Normal - Modelling

Arm	Traffic Stream	Stop Weighting (%)	Delay Weighting (%)
A	1	100	100
A	2	100	100
B	1	100	100
B	2	100	100
C	1	100	100
C	2	100	100
Ax	1	100	100
Bx	1	100	100
Cx	1	100	100

Sources - default sources for entries

Arm	Traffic Stream	Normal Cruise Time (seconds)	Normal Cruise Speed (kph)	Bus Free Running Speed (kph)	Tram Free Running Speed (kph)
A	1	6.96	30.00	Buses Not Permitted	Trams Not Permitted
A	2	12.00	30.00	Buses Not Permitted	Trams Not Permitted
B	1	12.00	30.00	Buses Not Permitted	Trams Not Permitted
B	2	1.00	30.00	Buses Not Permitted	Trams Not Permitted
C	1	12.00	30.00	Buses Not Permitted	Trams Not Permitted
C	2	12.00	30.00	Buses Not Permitted	Trams Not Permitted

Sources - sources for internals

Arm	Traffic Stream	Source	Source Type	Source Traffic Stream	Source Total Flow (PCU/hr)	Source Normal Flow (PCU/hr)	Source Bus Flow (PCU/hr)	Source Tram Flow (PCU/hr)	Normal Cruise Time (seconds)	Normal Cruise Speed (kph)	Bus Free Running Speed (kph)	Tram Free Running Speed (kph)
Ax	1	1	TrafficStream	B/2	51	51	0	0	12.00	30.00	Buses Not Permitted	Trams Not Permitted
Ax	1	2	TrafficStream	C/1	527	527	0	0	12.00	30.00	Buses Not Permitted	Trams Not Permitted
Bx	1	1	TrafficStream	A/1	59	59	0	0	12.00	30.00	Buses Not Permitted	Trams Not Permitted
Bx	1	2	TrafficStream	C/2	357	357	0	0	12.00	30.00	Buses Not Permitted	Trams Not Permitted
Cx	1	1	TrafficStream	B/1	408	408	0	0	12.00	30.00	Buses Not Permitted	Trams Not Permitted

Cx	1	2	TrafficStream	A/2	690	690	0	0	12.00	30.00	Buses Not Permitted	Trams Not Permitted
----	---	---	---------------	-----	-----	-----	---	---	-------	-------	---------------------	---------------------

Flow Allocation Tool Tables - Local Matrix: 1

Normal Input Flows (PCU/hr)

From	To		
	A	B	C
A	0	59	690
B	51	0	408
C	527	357	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Locations

Local Matrix	Location	Name	Entries	Exits	Total Flow In (PCU/hr)	Normal Flow In (PCU/hr)	Bus Flow In (PCU/hr)	Tram Flow In (PCU/hr)	Total Flow Out (PCU/hr)	Normal Flow Out (PCU/hr)	Bus Flow Out (PCU/hr)	Tram Flow Out (PCU/hr)
1	A	(untitled)	A/1,A/2	Ax/1	749	749	0	0	578	578	0	0
1	B	(untitled)	B/1,B/2	Bx/1	459	459	0	0	416	416	0	0
1	C	(untitled)	C/1,C/2	Cx/1	884	884	0	0	1098	1098	0	0

Paths

Local Matrix	Path	Description	Path Items	Calculated Total Flow (PCU/hr)
1	1		C/1,Ax/1	527
1	2		C/2,Bx/1	357
1	3		A/1,Bx/1	59
1	4		A/2,Cx/1	690
1	5		B/1,Cx/1	408
1	6		B/2,Ax/1	51

Normal Path Flows

Local Matrix	Path	Permitted Flow Type	Allocation Type	Percentage (%)	Fixed Flow (PCU/hr)	Calculated Flow (PCU/hr)
1	1	✓	Normal	N/A	N/A	527
1	2	✓	Normal	N/A	N/A	357
1	3	✓	Normal	N/A	N/A	59
1	4	✓	Normal	N/A	N/A	690
1	5	✓	Normal	N/A	N/A	408
1	6	✓	Normal	N/A	N/A	51

Signal Timings

100s cycle time; 100 steps

Controller Stream

Controller Stream	Name	Description	Gaining Delay Type	Signals Manipulation Mode	Multiple Cycling	Offset Relative To	Offset Valid	Offset Positive (s)	Offset Negative (s)	Auto Redistribute	Optimisation Level	Use Sequence
1	(untitled)		Absolute	StageBased	Single	1	✓	0	0	✓	Offsets And Green Splits	1

Phases

Controller Stream	Phase	Name	Minimum Green (s)	Maximum Green (s)	Relative Start Displacement (s)	Relative End Displacement (s)	Dummy
1	A	(untitled)	7	300	0	0	
1	B	(untitled)	7	300	0	0	
1	C	(untitled)	7	300	0	0	
1	D	(untitled)	7	300	0	0	

Library Stages

Controller Stream	Library Stage	Phases In Stage	User Stage Minimum (s)
1	1	A,C	1
1	2	D	1
1	3	B,C	1

Stage Sequences

Controller Stream	Stage Sequence	Name	Stage IDs	Stage Ends	Multiple Cycling Stage IDs	Multiple Cycling Stage Ends
1	1	(untitled)	1,2,3	41,67,90		

Resultant Stages

Controller Stream	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,C	97	41	44	1	7
1	2	✓	2	D	41	67	26	1	7
1	3	✓	3	B,C	67	90	23	1	7

Resultant Phase Green Periods

Controller Stream	Phase	Green Period	Is Base Green Period	Start Time (s)	End Time (s)	Duration (s)
1	A	1	✓	97	41	44
1	B	1	✓	67	90	23
1	C	1	✓	67	41	74
1	D	1	✓	41	67	26

Intergreen Matrix for Controller Stream 1

		To			
		A	B	C	D
From	A	-	7		
	B	7	-		
	C			-	
	D				-

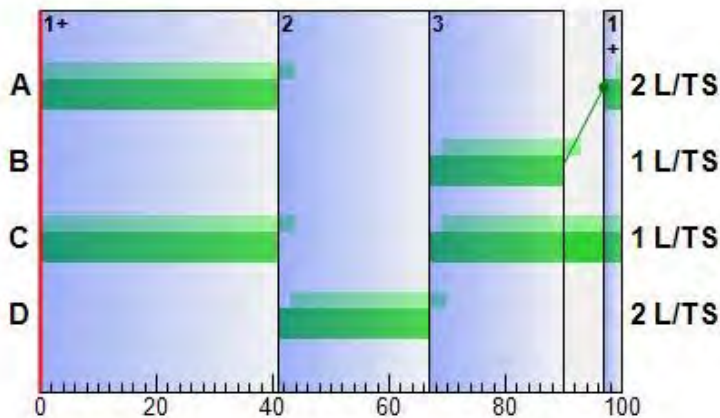
Interstage Matrix for Controller Stream 1

		To		
		1	2	3
From	1	-	0	7
	2	0	-	0
	3	7	0	-

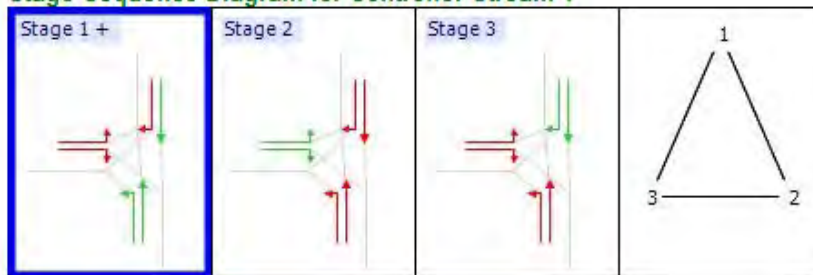
Banned Stage transitions for Controller Stream 1

		To		
		1	2	3
From	1	-		
	2		-	
	3			-

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



TRANSYT 12 Tables

Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	TRANSYT Stage Start (s)	TRANSYT Preceding Interstage (s)	TRANSYT Stage Minimum (s)
1	1	✓	1	A,C	90	7	14
1	2	✓	2	D	41	0	7
1	3	✓	3	B,C	67	0	7

Signals

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	TRANSYT Stage Start (s)	TRANSYT Preceding Interstage (s)	TRANSYT Stage Minimum (s)
1	1	✓	1	A,C	90	7	14
1	2	✓	2	D	41	0	7
1	3	✓	3	B,C	67	0	7

Resultant Phase Green Periods

Controller Stream	Phase	Green Period	TRANSYT Starting Stage (s)	TRANSYT Ending Stage (s)	TRANSYT Start Lag (s)	TRANSYT End Lag (s)
1	A	1	1	2	7	0
1	B	1	3	1	0	0
1	C	1	3	2	0	0
1	D	1	2	3	0	0

Stage Timings (TRANSYT 12 timings)

100s cycle time; 100 steps

Controller Stream	Number of Stages	Stage 1	Stage 2	Stage 3
1	3	90	41	67

Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Amber	Green Period 1			Green Period 2			Green Period 3			Green Period 4		
						Start	End	Duration	Start	End	Duration	Start	End	Duration	Start	End	Duration
A	1	1	1	A	0	97	41	44									
A	2	1	1	A	0	97	41	44									
B	1	1	1	D	0	41	67	26									
B	2	1	1	D	0	41	67	26									
C	1	1	1	C	0	67	41	74									
C	2	1	1	B	0	67	90	23									

Data Entry: Traffic Stream

Traffic Stream

Arm	Traffic Stream	Length (m)	Max Queue Storage (PCU)	Normal Cruise Speed (kph)	Traffic Model	Has Restricted Flow	Saturation Flow Source	Saturation Flow (PCU/hr)	Delay Weighting (%)	Stop Weighting (%)
A	1	58.00	0.00	30.00	[QuickPDM]	✓	SumOfLanes	1800	100	100
A	2	100.00	0.00	30.00	[QuickPDM]	✓	SumOfLanes	1800	100	100
B	1	100.00	0.00	30.00	[QuickPDM]	✓	SumOfLanes	1800	100	100
B	2	8.00	0.00	30.00	[QuickPDM]	✓	SumOfLanes	1800	100	100
C	1	100.00	0.00	30.00	[QuickPDM]	✓	SumOfLanes	1800	100	100
C	2	100.00	0.00	30.00	[QuickPDM]	✓	SumOfLanes	1800	100	100
Ax	1	100.00	0.00	N/A	[QuickPDM]		N/A	N/A	100	100
Bx	1	100.00	0.00	N/A	[QuickPDM]		N/A	N/A	100	100
Cx	1	100.00	0.00	N/A	[QuickPDM]		N/A	N/A	100	100

Results: Traffic Stream

Results: Traffic Stream: Summary

Time Segment	Arm	Traffic Stream	Name	Phase	Phase2	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Wasted Time Blocking Back (s per cycle)	Calculated Capacity (PCU/hr)	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Mean Delay Per PCU (s)
08:00-09:00	A	1	(untitled)	A	N/A	59	1800	44.00	0.00	810	7	1136	0.92	0.90	15.83
08:00-09:00	A	2	(untitled)	A	N/A	690	1800	44.00	0.00	810	85	6	19.38	12.87	36.66
08:00-09:00	B	1	(untitled)	D	N/A	408	1800	26.00	0.00	486	84	7	12.70	10.32	52.50
08:00-09:00	B	2	(untitled)	D	N/A	51	1800	26.00	0.00	486	10	758	1.07	1.04	27.88
08:00-09:00	C	1	(untitled)	C	N/A	527	1800	74.00	0.00	1350	39	131	5.25	3.78	5.27
08:00-09:00	C	2	(untitled)	B	N/A	357	1800	23.00	0.00	432	83	9	11.16	9.37	54.55
08:00-09:00	Ax	1	(untitled)	N/A	N/A	578	Unrestricted	100.00	0.00	Unrestricted	0	Unrestricted	0.00	N/A	0.00
08:00-09:00	Bx	1	(untitled)	N/A	N/A	416	Unrestricted	100.00	0.00	Unrestricted	0	Unrestricted	0.00	N/A	0.00
08:00-09:00	Cx	1	(untitled)	N/A	N/A	1098	Unrestricted	100.00	0.00	Unrestricted	0	Unrestricted	0.00	N/A	0.00

Results: Link

Data Entry: Signal Timings

Green Period

Controller Stream	Phase	Green Period	Start Time (s)	End Time (s)	Duration (s)	Minimum Green (s)	Relative Start Displacement (s)	Relative End Displacement (s)
1	A	1	97	41	44	7	0	0
1	B	1	67	90	23	7	0	0
1	C	1	67	41	74	7	0	0
1	D	1	41	67	26	7	0	0

Traffic Stream Results

Traffic Stream Results: Summary

Time Segment	Arm	Traffic Stream	Calculated Flow Entering LTS (PCU/hr)	Calculated Flow Out Of LTS (PCU/hr)	Flow Discrepancy (PCU/hr)	Adjusted Flow Warning	Calculated Sat Flow (PCU/hr)	Calculated Capacity (PCU/hr)	Degree Of Saturation (%)	DOS Threshold Exceeded	Practical Reserve Capacity (%)	Actual Green (s per cycle)	Effective Green (s per cycle)	Cost Per (£ per cycle)
08:00-09:00	A	1	59	59	0		1800	810	7		1136	44.00	45.00	0
08:00-09:00	A	2	690	690	0		1800	810	85		6	44.00	45.00	0
08:00-09:00	B	1	408	408	0		1800	486	84		7	26.00	27.00	0
08:00-09:00	B	2	51	51	0		1800	486	10		758	26.00	27.00	0
08:00-09:00	C	1	527	527	0		1800	1350	39		131	74.00	75.00	0
08:00-09:00	C	2	357	357	0		1800	432	83		9	23.00	24.00	0
08:00-09:00	Ax	1	578	578	0		Unrestricted	Unrestricted	0		Unrestricted	100.00	100.00	0
08:00-09:00	Bx	1	416	416	0		Unrestricted	Unrestricted	0		Unrestricted	100.00	100.00	0
08:00-09:00	Cx	1	1098	1098	0		Unrestricted	Unrestricted	0		Unrestricted	100.00	100.00	0

Traffic Stream Results: Stops And Delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time Per PCU (s)	Signalled LoS	Mean Delay Per PCU (s)	Uniform Delay (PCU-hr/hr)	Random Plus Oversat Delay (PCU-hr/hr)	Unweighted Cost Of Delay (£ per hr)	Weighted Cost Of Delay (£ per hr)	Mean Stops Per PCU (%)	Uniform Stops (Stops per hr)	Random Stops (Stops per hr)	Unweighted Cost Of Stops (£ per hr)	Weighted Cost Of Stops (£ per hr)
08:00-09:00	A	1	6.96	B	15.83	0.26	0.00	3.68	3.68	54.99	32.34	0.10	0.41	0.41
08:00-09:00	A	2	12.00	D	36.66	4.70	2.33	99.79	99.79	98.21	596.40	81.25	8.50	8.50
08:00-09:00	B	1	12.00	D	52.50	3.91	2.04	84.49	84.49	109.59	376.73	70.38	5.61	5.61
08:00-09:00	B	2	1.00	C	27.88	0.39	0.01	5.61	5.61	74.21	37.63	0.22	0.44	0.44
08:00-09:00	C	1	12.00	A	5.27	0.65	0.12	10.96	10.96	33.91	174.20	4.48	2.24	2.24

08:00-09:00	C	2	12.00	D	54.55	3.57	1.84	76.81	76.81	110.32	330.70	63.15	4.94	4.94
08:00-09:00	Ax	1	12.00	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08:00-09:00	Bx	1	12.00	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08:00-09:00	Cx	1	12.00	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues And Blocking

Time Segment	Arm	Traffic Stream	Initial Queue (PCU)	Mean Max Queue (PCU)	Max Queue Storage (PCU)	Average Link Excess Queue (PCU)	Average Limit Excess Queue (PCU)	Excess Queue Penalty (£ per hr)	Max End Of Green Queue (PCU)	Max End Of Red Queue (PCU)	Wasted Time Starvation (s (per cycle))	Wasted Time Blocking Back (s (per cycle))	Wasted Time Total (s (per cycle))	Estimated Blocking
08:00-09:00	A	1	0.00	0.92	10.09	0.00	0.00	0.00	0.00	0.90	0.00	0.00	0.00	
08:00-09:00	A	2	0.00	19.38	17.39	0.11	0.00	0.00	2.33	12.87	0.00	0.00	0.00	
08:00-09:00	B	1	0.00	12.70	17.39	0.00	0.00	0.00	2.04	10.32	0.00	0.00	0.00	
08:00-09:00	B	2	0.00	1.07	1.39	0.00	0.00	0.00	0.01	1.04	0.00	0.00	0.00	
08:00-09:00	C	1	0.00	5.25	17.39	0.00	0.00	0.00	0.12	3.78	0.00	0.00	0.00	
08:00-09:00	C	2	0.00	11.16	17.39	0.00	0.00	0.00	1.84	9.37	0.00	0.00	0.00	
08:00-09:00	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	N/A	N/A	0.00	0.00	0.00	
08:00-09:00	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	N/A	N/A	0.00	0.00	0.00	
08:00-09:00	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	N/A	N/A	0.00	0.00	0.00	

Traffic Stream Results: Journey Times

Time Segment	Arm	Traffic Stream	Distance Travelled (PCU-km/hr)	Time Spent (PCU-hr/hr)	Mean Journey Speed (kph)	Journey Time Per PCU (s)
08:00-09:00	A	1	3.42	0.37	9.16	22.79
08:00-09:00	A	2	69.00	9.33	7.40	48.66
08:00-09:00	B	1	40.80	7.31	5.58	64.50
08:00-09:00	B	2	0.41	0.41	1.00	28.88
08:00-09:00	C	1	52.70	2.53	20.84	17.27
08:00-09:00	C	2	35.70	6.60	5.41	66.55
08:00-09:00	Ax	1	57.80	1.93	30.00	12.00
08:00-09:00	Bx	1	41.60	1.39	30.00	12.00
08:00-09:00	Cx	1	109.80	3.66	30.00	12.00

Network Results

Run Summary

Time Segment	Analysis Set Used	Run Start Time	Run Finish Time	Modelling Start Time (HH:mm)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	LTSWith Highest DOS	Number Of Oversaturated LTS	Percentage Of Oversaturated LTS (%)	LTSWith Worst Signalised PRC	LTSWith Worst Unsignalised PRC	LTSWith Worst Overall PRC
08:00-09:00	A1 - (untitled)	27/01/2014 16:50:42	27/01/2014 16:50:42	08:00	100	19.81	85.19	A/2	0	0	A/2	Cx/1	A/2

Network Results: Summary

Calculated													
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Time Segment	Flow Entering LTS (PCU/hr)	Calculated Flow Out Of LTS (PCU/hr)	Flow Discrepancy (PCU/hr)	Adjusted Flow Warning	Calculated Sat Flow (PCU/hr)	Calculated Capacity (PCU/hr)	Degree Of Saturation (%)	DOS Threshold Exceeded	Practical Reserve Capacity (%)	Actual Green (s per cycle)	Effective Green (s per cycle)	Cost Of Penalties (£ per hr)	Unweighted Performance Index (£ per hr)
08:00-09:00	4184	4184	0		0	0	85		6	537.00	543.00	0.00	303.47

Network Results: Stops And Delays

Time Segment	Mean Cruise Time Per PCU (s)	Signalled LoS	Mean Delay Per PCU (s)	Uniform Delay (PCU-hr/hr)	Random Plus Oversat Delay (PCU-hr/hr)	Unweighted Cost Of Delay (£ per hr)	Weighted Cost Of Delay (£ per hr)	Mean Stops Per PCU (%)	Uniform Stops (Stops per hr)	Random Stops (Stops per hr)	Unweighted Cost Of Stops (£ per hr)	Weighted Cost Of Stops (£ per hr)
08:00-09:00	11.79	C	17.05	13.47	6.34	281.34	281.34	42.25	1547.99	219.59	22.13	22.13

Network Results: Queues And Blocking

Time Segment	Initial Queue (PCU)	Mean Max Queue (PCU)	Max Queue Storage (PCU)	Average Link Excess Queue (PCU)	Average Limit Excess Queue (PCU)	Excess Queue Penalty (£ per hr)	Max End Of Green Queue (PCU)	Max End Of Red Queue (PCU)	Wasted Time Starvation (s per cycle)	Wasted Time Blocking Back (s per cycle)	Wasted Time Total (s per cycle)	Estimated Blocking
08:00-09:00	0.00	0.00	133.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Network Results: Journey Times

Time Segment	Distance Travelled (PCU-km/hr)	Time Spent (PCU-hr/hr)	Mean Journey Speed (kph)	Journey Time Per PCU (s)
08:00-09:00	411.23	33.52	12.27	28.84

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

		To		
		A	B	C
From	A	0.00	34.79	60.66
	B	40.88	0.00	76.50
	C	29.27	78.55	0.00

Path Journey Time

Path	Avg Journey Time (s)	Normal Journey Time (s)	Bus Journey Time (s)	Tram Journey Time (s)
1	29.27	29.27	0.00	0.00
2	78.55	78.55	0.00	0.00
3	34.79	34.79	0.00	0.00
4	60.66	60.66	0.00	0.00
5	76.50	76.50	0.00	0.00
6	40.88	40.88	0.00	0.00

TRANSYT 14
Version: 14.1.2.315 [26-09-12] © Copyright Transport Research Laboratory 2014
For sales and distribution information, program advice and maintenance, contact TRL: Tel: +44 (0)1344 770758 E-mail: software@trl.co.uk Web: http://www.trlsoftware.co.uk
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Last run: 27/01/2014 16:55:38
Analysis Set used for last run: A1 - (untitled)

Filename: J4 Lutterworth_Middleton-AM-Back+Dev.t14
Path: S:\JPP\JPP Schemes R\6711PP - Glen Parva\Reports\TA\Jct Analysis
Report generation date: 27/01/2014 16:58:07

- » Network Diagrams
- « A1 - (untitled) : D1 - 2018-Back+Dev-AM *
- » Summary
- » Network Options
- » Traffic Nodes
- » Arms and Traffic Streams
- » Flow Allocation Tool Tables - Local Matrix: 1
- » Signal Timings
- » TRANSYT 12 Tables
- » Data Entry: Traffic Stream
- » Results: Traffic Stream
- » Results: Link
- » Data Entry: Signal Timings
- » Traffic Stream Results
- » Network Results
- » Point to Point Journey Time

File summary

File Description

Title	(untitled)
Location	
Site Number	
UTCRegion	
Driving Side	Left
Date	06/12/2011
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CEDARBARNMartinA
Description	

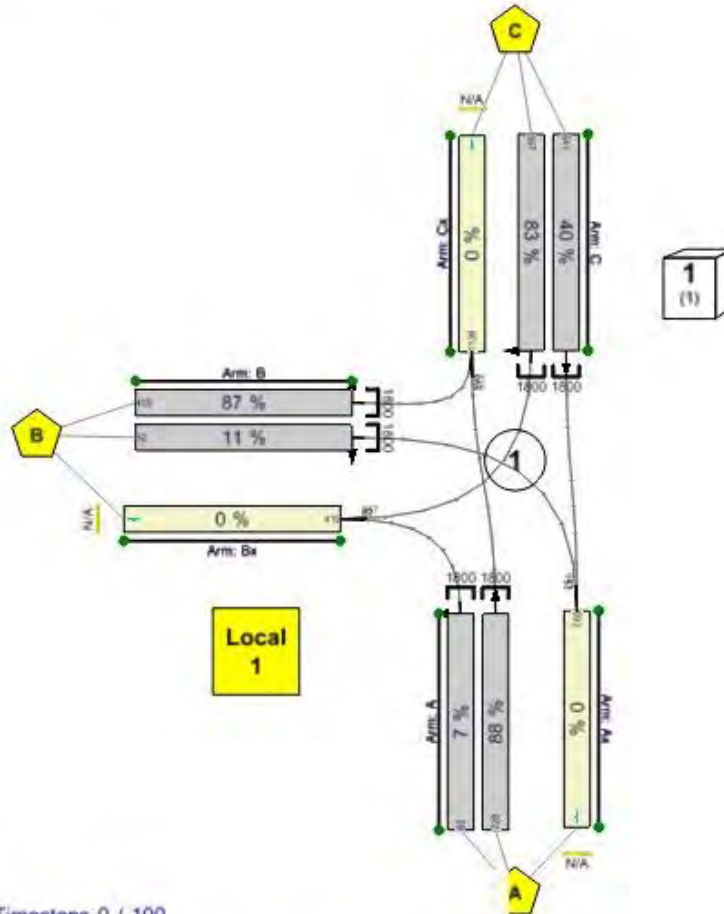
Units

Speed Units	Distance Units	Fuel Economy Units	Fuel Rate Units	Mass Units	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
kph	m	mpg	l/h	kg	perHour	s	-Hour	perHour

Sorting

Show Names Instead of IDs (For Aimsun)	Sorting Direction	Sorting Type	Ignore Prefixes When Sorting	Link Grouping	Source Grouping
	Ascending	Numerical		Normal	Normal

Network Diagrams



(untitled)
 Cyclotime 0s / 100s , Timesteps 0 / 100
 Diagram produced using TRANSYT 14.1.2.315 Network Construction Editor

A1 - (untitled) : D1 - 2018-Back+Dev-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)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	LTSWith Highest DOS	Number Of Oversaturated LTS	Percentage Of Oversaturated LTS (%)	LTSWith Worst Signalised PRC	LTSWith Worst Unsignalised PRC	LTSWith Worst Overall PRC	Network Within Capacity
A1 - (untitled)	27/01/2014 16:55:38	27/01/2014 16:55:38	08:00	100	21.42	87.92	A/2	0	0	A/2	Cx/1	A/2	✓

Analysis Set Details

Analysis Set Details

Name	Description	Demand Set	Include In Report	Locked
(untitled)		D1	✓	

Demand Set Details

Name	Description	Composite	Demand Sets	Start Time (HH:mm)	Locked
2018-Back+Dev-AM				08:00	

Network Options

Network Timings

Network Cycle Time (s)	Resolution	Number Of Steps	Time Segment Length (min)	Number Of Time Segments	Modelled Time Period (min)
100	1	100	60	1	60

Signals Options

Equal Length Multiple Cycling	Start Displacement (s)	End Displacement (s)	Phase Minimum Broken Penalty (£)	Phase Maximum Broken Penalty (£)	Intergreen Broken Penalty (£)
✓	2	3	10000.00	10000.00	10000.00

Traffic Options

Traffic Model	DOS Threshold (%)	Flow Scaling Factor (%)	Cruise Scaling Factor (%)	Cruise Times Or Speeds	Use Link Stop Weightings	Use Link Delay Weightings	Exclude Pedestrian Links	Random Delay Mode	Type of Vehicle-in-Service	Type Of Random Parameter	PCU Length (m)
Quick PDM	90	100	100	Cruise Speeds	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75

Optimisation Options

Auto Redistribute	Optimisation Type	Optimisation Level	Hill Climb Increments	Use Enhanced Optimisation	Optimisation Order	Locked Green Splits	Full Simulation
✓	Hill Climb (Fast)	Offsets And Green Splits	15,40,-1,15,40,1,-1,1		1		

Economics

Unit Of Cost	Monetary Value Of Delay (£ per PCU-hr)	Monetary Value Of Stops (£ per 100 stops)
£	14.20	2.60

Traffic Nodes

Traffic Nodes

Traffic Node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic Node
A	(untitled)		1
B	(untitled)		1
C	(untitled)		1
Ax	(untitled)		
Bx	(untitled)		

Cx	(untitled)		
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Traffic Streams

Arm	Traffic Stream	Name	Description	Length (m)	Traffic Model	Has Restricted Flow	Saturation Flow Source	Saturation Flow (PCU/hr)	Is Signal Controlled	Controller Stream	Phase	Phase2 Enabled	Is Give Way	Traffic Type
A	1	(untitled)		58.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	A			Normal
A	2	(untitled)		100.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	A			Normal
B	1	(untitled)		100.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	D			Normal
B	2	(untitled)		8.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	D			Normal
C	1	(untitled)		100.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	C			Normal
C	2	(untitled)		100.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	B			Normal
Ax	1	(untitled)		100.00	[QuickPDM]		N/A	N/A		N/A	N/A			Normal
Bx	1	(untitled)		100.00	[QuickPDM]		N/A	N/A		N/A	N/A			Normal
Cx	1	(untitled)		100.00	[QuickPDM]		N/A	N/A		N/A	N/A			Normal

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation Flow (PCU/hr)
A	1	1	(untitled)			1800
A	2	1	(untitled)			1800
B	1	1	(untitled)			1800
B	2	1	(untitled)			1800
C	1	1	(untitled)			1800
C	2	1	(untitled)			1800
Ax	1	1	(untitled)			1800
Bx	1	1	(untitled)			1800
Cx	1	1	(untitled)			1800

Modelling

Arm	Traffic Stream	Stop Weighting Multiplier (%)	Delay Weighting Multiplier (%)	Exclude From Results Calculation	Max Queue Storage (PCU)	Has Queue Limit	Has Degree Of Saturation Limit
A	1	100	100		0.00		
A	2	100	100		0.00		
B	1	100	100		0.00		
B	2	100	100		0.00		
C	1	100	100		0.00		
C	2	100	100		0.00		
Ax	1	100	100		0.00		
Bx	1	100	100		0.00		
Cx	1	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Normal Dispersal Type	Normal Dispersal Coefficient	Normal Travel Time Coefficient	Initial Queue (PCU)	Point1 Time Step (s)	Point2 Time Step (s)	Type of Vehicle-in-Service	Vehicle-in-Service	Type Of Random Parameter	Random Parameter
A	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
A	2	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
B	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
B	2	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
C	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
C	2	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50

Arm	Stream	Default	35	80	0.00	0	0	NetworkDefault	Included	NetworkDefault	0.50
Ax	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
Bx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
Cx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)	Bus Flow (PCU/hr)	Tram Flow (PCU/hr)	Cruise Sensitivity Multiplier (%)	Calculated Cruise Speed (kph)
A	1	62	62	0	0	100	1.00
A	2	728	728	0	0	100	1.00
B	1	408	408	0	0	100	1.00
B	2	52	52	0	0	100	1.00
C	1	541	541	0	0	100	1.00
C	2	357	357	0	0	100	1.00
Ax	1	593	593	0	0	100	1.00
Bx	1	419	419	0	0	100	1.00
Cx	1	1136	1136	0	0	100	1.00

Normal - Modelling

Arm	Traffic Stream	Stop Weighting (%)	Delay Weighting (%)
A	1	100	100
A	2	100	100
B	1	100	100
B	2	100	100
C	1	100	100
C	2	100	100
Ax	1	100	100
Bx	1	100	100
Cx	1	100	100

Sources - default sources for entries

Arm	Traffic Stream	Normal Cruise Time (seconds)	Normal Cruise Speed (kph)	Bus Free Running Speed (kph)	Tram Free Running Speed (kph)
A	1	6.96	30.00	Buses Not Permitted	Trams Not Permitted
A	2	12.00	30.00	Buses Not Permitted	Trams Not Permitted
B	1	12.00	30.00	Buses Not Permitted	Trams Not Permitted
B	2	1.00	30.00	Buses Not Permitted	Trams Not Permitted
C	1	12.00	30.00	Buses Not Permitted	Trams Not Permitted
C	2	12.00	30.00	Buses Not Permitted	Trams Not Permitted

Sources - sources for internals

Arm	Traffic Stream	Source	Source Type	Source Traffic Stream	Source Total Flow (PCU/hr)	Source Normal Flow (PCU/hr)	Source Bus Flow (PCU/hr)	Source Tram Flow (PCU/hr)	Normal Cruise Time (seconds)	Normal Cruise Speed (kph)	Bus Free Running Speed (kph)	Tram Free Running Speed (kph)
Ax	1	1	TrafficStream	B/2	52	52	0	0	12.00	30.00	Buses Not Permitted	Trams Not Permitted
Ax	1	2	TrafficStream	C/1	541	541	0	0	12.00	30.00	Buses Not Permitted	Trams Not Permitted
Bx	1	1	TrafficStream	A/1	62	62	0	0	12.00	30.00	Buses Not Permitted	Trams Not Permitted
Bx	1	2	TrafficStream	C/2	357	357	0	0	12.00	30.00	Buses Not Permitted	Trams Not Permitted
Cx	1	1	TrafficStream	B/1	408	408	0	0	12.00	30.00	Buses Not Permitted	Trams Not Permitted

Cx	1	2	TrafficStream	A/2	728	728	0	0	12.00	30.00	Buses Not Permitted	Trams Not Permitted
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Flow Allocation Tool Tables - Local Matrix: 1

Normal Input Flows (PCU/hr)

From	To		
	A	B	C
A	0	62	728
B	52	0	408
C	541	357	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Locations

Local Matrix	Location	Name	Entries	Exits	Total Flow In (PCU/hr)	Normal Flow In (PCU/hr)	Bus Flow In (PCU/hr)	Tram Flow In (PCU/hr)	Total Flow Out (PCU/hr)	Normal Flow Out (PCU/hr)	Bus Flow Out (PCU/hr)	Tram Flow Out (PCU/hr)
1	A	(untitled)	A/1,A/2	Ax/1	790	790	0	0	593	593	0	0
1	B	(untitled)	B/1,B/2	Bx/1	460	460	0	0	419	419	0	0
1	C	(untitled)	C/1,C/2	Cx/1	898	898	0	0	1136	1136	0	0

Paths

Local Matrix	Path	Description	Path Items	Calculated Total Flow (PCU/hr)
1	1		C/1,Ax/1	541
1	2		C/2,Bx/1	357
1	3		A/1,Bx/1	62
1	4		A/2,Cx/1	728
1	5		B/1,Cx/1	408
1	6		B/2,Ax/1	52

Normal Path Flows

Local Matrix	Path	Permitted Flow Type	Allocation Type	Percentage (%)	Fixed Flow (PCU/hr)	Calculated Flow (PCU/hr)
1	1	✓	Normal	N/A	N/A	541
1	2	✓	Normal	N/A	N/A	357
1	3	✓	Normal	N/A	N/A	62
1	4	✓	Normal	N/A	N/A	728
1	5	✓	Normal	N/A	N/A	408
1	6	✓	Normal	N/A	N/A	52

Signal Timings

100s cycle time; 100 steps

Controller Stream

Controller Stream	Name	Description	Gaining Delay Type	Signals Manipulation Mode	Multiple Cycling	Offset Relative To	Offset Valid	Offset Positive (s)	Offset Negative (s)	Auto Redistribute	Optimisation Level	Use Sequence
1	(untitled)		Absolute	StageBased	Single	1	✓	0	0	✓	Offsets And Green Splits	1

Phases

Controller Stream	Phase	Name	Minimum Green (s)	Maximum Green (s)	Relative Start Displacement (s)	Relative End Displacement (s)	Dummy
1	A	(untitled)	7	300	0	0	
1	B	(untitled)	7	300	0	0	
1	C	(untitled)	7	300	0	0	
1	D	(untitled)	7	300	0	0	

Library Stages

Controller Stream	Library Stage	Phases In Stage	User Stage Minimum (s)
1	1	A,C	1
1	2	D	1
1	3	B,C	1

Stage Sequences

Controller Stream	Stage Sequence	Name	Stage IDs	Stage Ends	Multiple Cycling Stage IDs	Multiple Cycling Stage Ends
1	1	(untitled)	1,2,3	42,67,90		

Resultant Stages

Controller Stream	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,C	97	42	45	1	7
1	2	✓	2	D	42	67	25	1	7
1	3	✓	3	B,C	67	90	23	1	7

Resultant Phase Green Periods

Controller Stream	Phase	Green Period	Is Base Green Period	Start Time (s)	End Time (s)	Duration (s)
1	A	1	✓	97	42	45
1	B	1	✓	67	90	23
1	C	1	✓	67	42	75
1	D	1	✓	42	67	25

Intergreen Matrix for Controller Stream 1

		To			
		A	B	C	D
From	A	-	7		
	B	7	-		
	C			-	
	D				-

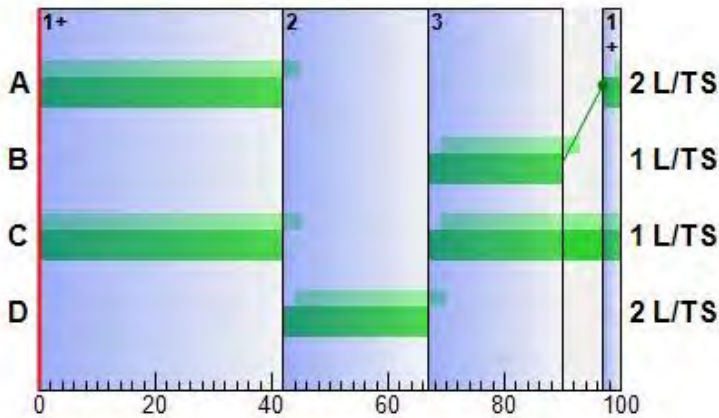
Interstage Matrix for Controller Stream 1

		To		
		1	2	3
From	1	-	0	7
	2	0	-	0
	3	7	0	-

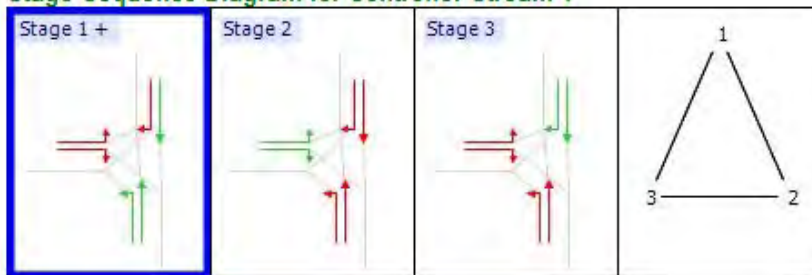
Banned Stage transitions for Controller Stream 1

		To		
		1	2	3
From	1	-		
	2		-	
	3			-

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



TRANSYT 12 Tables

Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	TRANSYT Stage Start (s)	TRANSYT Preceding Interstage (s)	TRANSYT Stage Minimum (s)
1	1	✓	1	A,C	90	7	14
1	2	✓	2	D	42	0	7
1	3	✓	3	B,C	67	0	7

Signals

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	TRANSYT Stage Start (s)	TRANSYT Preceding Interstage (s)	TRANSYT Stage Minimum (s)
1	1	✓	1	A,C	90	7	14
1	2	✓	2	D	42	0	7
1	3	✓	3	B,C	67	0	7

Resultant Phase Green Periods

Controller Stream	Phase	Green Period	TRANSYT Starting Stage (s)	TRANSYT Ending Stage (s)	TRANSYT Start Lag (s)	TRANSYT End Lag (s)
1	A	1	1	2	7	0
1	B	1	3	1	0	0
1	C	1	3	2	0	0
1	D	1	2	3	0	0

Stage Timings (TRANSYT 12 timings)

100s cycle time; 100 steps

Controller Stream	Number of Stages	Stage 1	Stage 2	Stage 3
1	3	90	42	67

Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Amber	Green Period 1			Green Period 2			Green Period 3			Green Period 4		
						Start	End	Duration	Start	End	Duration	Start	End	Duration	Start	End	Duration
A	1	1	1	A	0	97	42	45									
A	2	1	1	A	0	97	42	45									
B	1	1	1	D	0	42	67	25									
B	2	1	1	D	0	42	67	25									
C	1	1	1	C	0	67	42	75									
C	2	1	1	B	0	67	90	23									

Data Entry: Traffic Stream

Traffic Stream

Arm	Traffic Stream	Length (m)	Max Queue Storage (PCU)	Normal Cruise Speed (kph)	Traffic Model	Has Restricted Flow	Saturation Flow Source	Saturation Flow (PCU/hr)	Delay Weighting (%)	Stop Weighting (%)
A	1	58.00	0.00	30.00	[QuickPDM]	✓	SumOfLanes	1800	100	100
A	2	100.00	0.00	30.00	[QuickPDM]	✓	SumOfLanes	1800	100	100
B	1	100.00	0.00	30.00	[QuickPDM]	✓	SumOfLanes	1800	100	100
B	2	8.00	0.00	30.00	[QuickPDM]	✓	SumOfLanes	1800	100	100
C	1	100.00	0.00	30.00	[QuickPDM]	✓	SumOfLanes	1800	100	100
C	2	100.00	0.00	30.00	[QuickPDM]	✓	SumOfLanes	1800	100	100
Ax	1	100.00	0.00	N/A	[QuickPDM]		N/A	N/A	100	100
Bx	1	100.00	0.00	N/A	[QuickPDM]		N/A	N/A	100	100
Cx	1	100.00	0.00	N/A	[QuickPDM]		N/A	N/A	100	100

Results: Traffic Stream

Results: Traffic Stream: Summary

Time Segment	Arm	Traffic Stream	Name	Phase	Phase2	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Wasted Time Blocking Back (s per cycle)	Calculated Capacity (PCU/hr)	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Mean Delay Per PCU (s)
08:00-09:00	A	1	(untitled)	A	N/A	62	1800	45.00	0.00	828	7	1102	0.95	0.93	15.29
08:00-09:00	A	2	(untitled)	A	N/A	728	1800	45.00	0.00	828	88	2	21.17	13.89	39.18
08:00-09:00	B	1	(untitled)	D	N/A	408	1800	25.00	0.00	468	87	3	13.42	11.04	58.82
08:00-09:00	B	2	(untitled)	D	N/A	52	1800	25.00	0.00	468	11	710	1.10	1.08	28.70
08:00-09:00	C	1	(untitled)	C	N/A	541	1800	75.00	0.00	1368	40	128	5.24	3.74	4.98
08:00-09:00	C	2	(untitled)	B	N/A	357	1800	23.00	0.00	432	83	9	11.16	9.37	54.55
08:00-09:00	Ax	1	(untitled)	N/A	N/A	593	Unrestricted	100.00	0.00	Unrestricted	0	Unrestricted	0.00	N/A	0.00
08:00-09:00	Bx	1	(untitled)	N/A	N/A	419	Unrestricted	100.00	0.00	Unrestricted	0	Unrestricted	0.00	N/A	0.00
08:00-09:00	Cx	1	(untitled)	N/A	N/A	1136	Unrestricted	100.00	0.00	Unrestricted	0	Unrestricted	0.00	N/A	0.00

Results: Link

Data Entry: Signal Timings

Green Period

Controller Stream	Phase	Green Period	Start Time (s)	End Time (s)	Duration (s)	Minimum Green (s)	Relative Start Displacement (s)	Relative End Displacement (s)
1	A	1	97	42	45	7	0	0
1	B	1	67	90	23	7	0	0
1	C	1	67	42	75	7	0	0
1	D	1	42	67	25	7	0	0

Traffic Stream Results

Traffic Stream Results: Summary

Time Segment	Arm	Traffic Stream	Calculated Flow Entering LTS (PCU/hr)	Calculated Flow Out Of LTS (PCU/hr)	Flow Discrepancy (PCU/hr)	Adjusted Flow Warning	Calculated Sat Flow (PCU/hr)	Calculated Capacity (PCU/hr)	Degree Of Saturation (%)	DOS Threshold Exceeded	Practical Reserve Capacity (%)	Actual Green (s per cycle)	Effective Green (s per cycle)	Cost Per (£)
08:00-09:00	A	1	62	62	0		1800	828	7		1102	45.00	46.00	0
08:00-09:00	A	2	728	728	0		1800	828	88		2	45.00	46.00	0
08:00-09:00	B	1	408	408	0		1800	468	87		3	25.00	26.00	0
08:00-09:00	B	2	52	52	0		1800	468	11		710	25.00	26.00	0
08:00-09:00	C	1	541	541	0		1800	1368	40		128	75.00	76.00	0
08:00-09:00	C	2	357	357	0		1800	432	83		9	23.00	24.00	0
08:00-09:00	Ax	1	593	593	0		Unrestricted	Unrestricted	0		Unrestricted	100.00	100.00	0
08:00-09:00	Bx	1	419	419	0		Unrestricted	Unrestricted	0		Unrestricted	100.00	100.00	0
08:00-09:00	Cx	1	1136	1136	0		Unrestricted	Unrestricted	0		Unrestricted	100.00	100.00	0

Traffic Stream Results: Stops And Delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time Per PCU (s)	Signalled LoS	Mean Delay Per PCU (s)	Uniform Delay (PCU-hr/hr)	Random Plus Oversat Delay (PCU-hr/hr)	Unweighted Cost Of Delay (£ per hr)	Weighted Cost Of Delay (£ per hr)	Mean Stops Per PCU (%)	Uniform Stops (Stops per hr)	Random Stops (Stops per hr)	Unweighted Cost Of Stops (£ per hr)	Weighted Cost Of Stops (£ per hr)
08:00-09:00	A	1	6.96	B	15.29	0.26	0.00	3.74	3.74	53.99	33.37	0.11	0.42	0.42
08:00-09:00	A	2	12.00	D	39.18	4.95	2.97	112.50	112.50	102.08	639.99	103.15	9.32	9.32
08:00-09:00	B	1	12.00	E	58.82	4.01	2.65	94.66	94.66	115.61	381.55	90.13	5.91	5.91
08:00-09:00	B	2	1.00	C	28.70	0.41	0.01	5.89	5.89	75.33	38.92	0.25	0.45	0.45
08:00-09:00	C	1	12.00	A	4.98	0.62	0.13	10.63	10.63	32.82	172.92	4.64	2.23	2.23

08:00-09:00	C	2	12.00	D	54.55	3.57	1.84	76.81	76.81	110.32	330.70	63.15	4.94	4.94
08:00-09:00	Ax	1	12.00	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08:00-09:00	Bx	1	12.00	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
08:00-09:00	Cx	1	12.00	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues And Blocking

Time Segment	Arm	Traffic Stream	Initial Queue (PCU)	Mean Max Queue (PCU)	Max Queue Storage (PCU)	Average Link Excess Queue (PCU)	Average Limit Excess Queue (PCU)	Excess Queue Penalty (£ per hr)	Max End Of Green Queue (PCU)	Max End Of Red Queue (PCU)	Wasted Time Starvation (s (per cycle))	Wasted Time Blocking Back (s (per cycle))	Wasted Time Total (s (per cycle))	Estimated Blocking
08:00-09:00	A	1	0.00	0.95	10.09	0.00	0.00	0.00	0.00	0.93	0.00	0.00	0.00	
08:00-09:00	A	2	0.00	21.17	17.39	0.37	0.00	0.00	2.97	13.89	0.00	0.00	0.00	
08:00-09:00	B	1	0.00	13.42	17.39	0.00	0.00	0.00	2.65	11.04	0.00	0.00	0.00	
08:00-09:00	B	2	0.00	1.10	1.39	0.00	0.00	0.00	0.01	1.08	0.00	0.00	0.00	
08:00-09:00	C	1	0.00	5.24	17.39	0.00	0.00	0.00	0.13	3.74	0.00	0.00	0.00	
08:00-09:00	C	2	0.00	11.16	17.39	0.00	0.00	0.00	1.84	9.37	0.00	0.00	0.00	
08:00-09:00	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	N/A	N/A	0.00	0.00	0.00	
08:00-09:00	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	N/A	N/A	0.00	0.00	0.00	
08:00-09:00	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	N/A	N/A	0.00	0.00	0.00	

Traffic Stream Results: Journey Times

Time Segment	Arm	Traffic Stream	Distance Travelled (PCU-km/hr)	Time Spent (PCU-hr/hr)	Mean Journey Speed (kph)	Journey Time Per PCU (s)
08:00-09:00	A	1	3.60	0.38	9.39	22.25
08:00-09:00	A	2	72.80	10.35	7.03	51.18
08:00-09:00	B	1	40.80	8.03	5.08	70.82
08:00-09:00	B	2	0.42	0.43	0.97	29.70
08:00-09:00	C	1	54.10	2.55	21.20	16.98
08:00-09:00	C	2	35.70	6.60	5.41	66.55
08:00-09:00	Ax	1	59.30	1.98	30.00	12.00
08:00-09:00	Bx	1	41.90	1.40	30.00	12.00
08:00-09:00	Cx	1	113.60	3.79	30.00	12.00

Network Results

Run Summary

Time Segment	Analysis Set Used	Run Start Time	Run Finish Time	Modelling Start Time (HH:mm)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	LTSWith Highest DOS	Number Of Oversaturated LTS	Percentage Of Oversaturated LTS (%)	LTSWith Worst Signalised PRC	LTSWith Worst Unsignalised PRC	LTSWith Worst Overall PRC
08:00-09:00	A1 - (untitled)	27/01/2014 16:55:38	27/01/2014 16:55:38	08:00	100	21.42	87.92	A/2	0	0	A/2	Cx/1	A/2

Network Results: Summary

Calculated													
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Time Segment	Flow Entering LTS (PCU/hr)	Calculated Flow Out Of LTS (PCU/hr)	Flow Discrepancy (PCU/hr)	Adjusted Flow Warning	Calculated Sat Flow (PCU/hr)	Calculated Capacity (PCU/hr)	Degree Of Saturation (%)	DOS Threshold Exceeded	Practical Reserve Capacity (%)	Actual Green (s (per cycle))	Effective Green (s (per cycle))	Cost Of Penalties (£ per hr)	Unweighted Performance Index (£ per hr)
08:00-09:00	4296	4296	0		0	0	88		2	538.00	544.00	0.00	327.49

Network Results: Stops And Delays

Time Segment	Mean Cruise Time Per PCU (s)	Signalled LoS	Mean Delay Per PCU (s)	Uniform Delay (PCU-hr/hr)	Random Plus Oversat Delay (PCU-hr/hr)	Unweighted Cost Of Delay (£ per hr)	Weighted Cost Of Delay (£ per hr)	Mean Stops Per PCU (%)	Uniform Stops (Stops per hr)	Random Stops (Stops per hr)	Unweighted Cost Of Stops (£ per hr)	Weighted Cost Of Stops (£ per hr)
08:00-09:00	11.79	D	17.95	13.82	7.60	304.22	304.22	43.27	1597.45	261.42	23.27	23.27

Network Results: Queues And Blocking

Time Segment	Initial Queue (PCU)	Mean Max Queue (PCU)	Max Queue Storage (PCU)	Average Link Excess Queue (PCU)	Average Limit Excess Queue (PCU)	Excess Queue Penalty (£ per hr)	Max End Of Green Queue (PCU)	Max End Of Red Queue (PCU)	Wasted Time Starvation (s (per cycle))	Wasted Time Blocking Back (s (per cycle))	Wasted Time Total (s (per cycle))	Estimated Blocking
08:00-09:00	0.00	0.00	133.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Network Results: Journey Times

Time Segment	Distance Travelled (PCU-km/hr)	Time Spent (PCU-hr/hr)	Mean Journey Speed (kph)	Journey Time Per PCU (s)
08:00-09:00	422.21	35.50	11.89	29.75

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

	To			
	A	B	C	
From	A	0.00	34.25	63.18
	B	41.70	0.00	82.82
	C	28.98	78.55	0.00

Path Journey Time

Path	Avg Journey Time (s)	Normal Journey Time (s)	Bus Journey Time (s)	Tram Journey Time (s)
1	28.98	28.98	0.00	0.00
2	78.55	78.55	0.00	0.00
3	34.25	34.25	0.00	0.00
4	63.18	63.18	0.00	0.00
5	82.82	82.82	0.00	0.00
6	41.70	41.70	0.00	0.00

TRANSYT 14
Version: 14.1.2.315 [26-09-12] © Copyright Transport Research Laboratory 2014
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Last run: 27/01/2014 17:01:14
Analysis Set used for last run: A1 - (untitled)

Filename: J4 Lutterworth_Middleton-PM-Back.t14
Path: S:\JPP\JPP Schemes R\R6711PP - Glen Parva\Reports\TA\Jct Analysis
Report generation date: 27/01/2014 17:02:08

- » Network Diagrams
- « A1 - (untitled) : D1 - 2018-Bac-PM *
- » Summary
- » Network Options
- » Traffic Nodes
- » Arms and Traffic Streams
- » Flow Allocation Tool Tables - Local Matrix: 1
- » Signal Timings
- » TRANSYT 12 Tables
- » Data Entry: Traffic Stream
- » Results: Traffic Stream
- » Results: Link
- » Data Entry: Signal Timings
- » Traffic Stream Results
- » Network Results
- » Point to Point Journey Time

File summary

File Description

Title	(untitled)
Location	
Site Number	
UTCRegion	
Driving Side	Left
Date	06/12/2011
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CEDARBARNMartinA
Description	

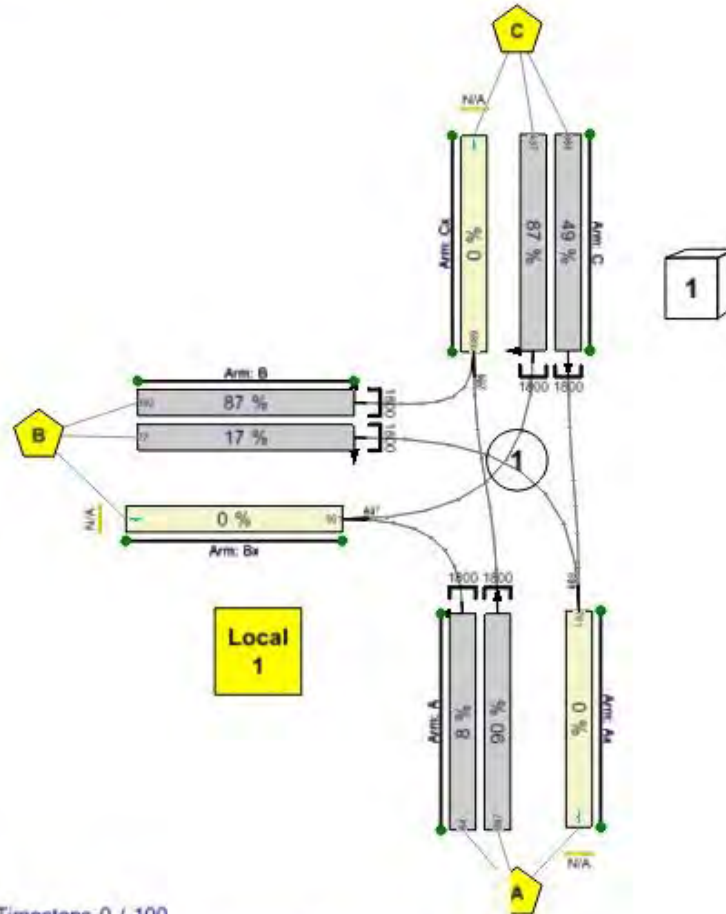
Units

Speed Units	Distance Units	Fuel Economy Units	Fuel Rate Units	Mass Units	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
kph	m	mpg	l/h	kg	perHour	s	-Hour	perHour

Sorting

Show Names Instead of IDs (For Aimsun)	Sorting Direction	Sorting Type	Ignore Prefixes When Sorting	Link Grouping	Source Grouping
	Ascending	Numerical		Normal	Normal

Network Diagrams



(untitled)
 Cyclotime 0s / 100s , Timesteps 0 / 100
 Diagram produced using TRANSYT 14.1.2.315 Network Construction Editor

A1 - (untitled) : D1 - 2018-Bac-PM *

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)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	LTSWith Highest DOS	Number Of Oversaturated LTS	Percentage Of Oversaturated LTS (%)	LTSWith Worst Signalised PRC	LTSWith Worst Unsignalised PRC	LTSWith Worst Overall PRC	Network Within Capacity
A1 - (untitled)	27/01/2014 17:01:14	27/01/2014 17:01:14	17:00	100	24.04	90.05	A/2	1	11	A/2	Cx/1	A/2	

Analysis Set Details

Analysis Set Details

Name	Description	Demand Set	Include In Report	Locked
(untitled)		D1	✓	

Demand Set Details

Name	Description	Composite	Demand Sets	Start Time (HH:mm)	Locked
2018-Bac-PM				17:00	

Network Options

Network Timings

Network Cycle Time (s)	Resolution	Number Of Steps	Time Segment Length (min)	Number Of Time Segments	Modelled Time Period (min)
100	1	100	60	1	60

Signals Options

Equal Length Multiple Cycling	Start Displacement (s)	End Displacement (s)	Phase Minimum Broken Penalty (£)	Phase Maximum Broken Penalty (£)	Intergreen Broken Penalty (£)
✓	2	3	10000.00	10000.00	10000.00

Traffic Options

Traffic Model	DOS Threshold (%)	Flow Scaling Factor (%)	Cruise Scaling Factor (%)	Cruise Times Or Speeds	Use Link Stop Weightings	Use Link Delay Weightings	Exclude Pedestrian Links	Random Delay Mode	Type of Vehicle-in-Service	Type Of Random Parameter	PCU Length (m)
Quick PDM	90	100	100	Cruise Speeds	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75

Optimisation Options

Auto Redistribute	Optimisation Type	Optimisation Level	Hill Climb Increments	Use Enhanced Optimisation	Optimisation Order	Locked Green Splits	Full Simulation
✓	Hill Climb (Fast)	Offsets And Green Splits	15,40,-1,15,40,1,-1,1		1		

Economics

Unit Of Cost	Monetary Value Of Delay (£ per PCU-hr)	Monetary Value Of Stops (£ per 100 stops)
£	14.20	2.60

Traffic Nodes

Traffic Nodes

Traffic Node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic Node
A	(untitled)		1
B	(untitled)		1
C	(untitled)		1
Ax	(untitled)		
Bx	(untitled)		

Cx	(untitled)		
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Traffic Streams

Arm	Traffic Stream	Name	Description	Length (m)	Traffic Model	Has Restricted Flow	Saturation Flow Source	Saturation Flow (PCU/hr)	Is Signal Controlled	Controller Stream	Phase	Phase2 Enabled	Is Give Way	Traffic Type
A	1	(untitled)		58.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	A			Normal
A	2	(untitled)		100.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	A			Normal
B	1	(untitled)		100.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	D			Normal
B	2	(untitled)		8.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	D			Normal
C	1	(untitled)		100.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	C			Normal
C	2	(untitled)		100.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	B			Normal
Ax	1	(untitled)		100.00	[QuickPDM]		N/A	N/A		N/A	N/A			Normal
Bx	1	(untitled)		100.00	[QuickPDM]		N/A	N/A		N/A	N/A			Normal
Cx	1	(untitled)		100.00	[QuickPDM]		N/A	N/A		N/A	N/A			Normal

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation Flow (PCU/hr)
A	1	1	(untitled)			1800
A	2	1	(untitled)			1800
B	1	1	(untitled)			1800
B	2	1	(untitled)			1800
C	1	1	(untitled)			1800
C	2	1	(untitled)			1800
Ax	1	1	(untitled)			1800
Bx	1	1	(untitled)			1800
Cx	1	1	(untitled)			1800

Modelling

Arm	Traffic Stream	Stop Weighting Multiplier (%)	Delay Weighting Multiplier (%)	Exclude From Results Calculation	Max Queue Storage (PCU)	Has Queue Limit	Has Degree Of Saturation Limit
A	1	100	100		0.00		
A	2	100	100		0.00		
B	1	100	100		0.00		
B	2	100	100		0.00		
C	1	100	100		0.00		
C	2	100	100		0.00		
Ax	1	100	100		0.00		
Bx	1	100	100		0.00		
Cx	1	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Normal Dispersal Type	Normal Dispersal Coefficient	Normal Travel Time Coefficient	Initial Queue (PCU)	Point1 Time Step (s)	Point2 Time Step (s)	Type of Vehicle-in-Service	Vehicle-in-Service	Type Of Random Parameter	Random Parameter
A	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
A	2	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
B	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
B	2	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
C	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
C	2	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50

U	Z	Default	35	80	0.00	0	0	NetworkDefault	Included	NetworkDefault	0.50
Ax	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
Bx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
Cx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)	Bus Flow (PCU/hr)	Tram Flow (PCU/hr)	Cruise Sensitivity Multiplier (%)	Calculated Cruise Speed (kph)
A	1	64	64	0	0	100	1.00
A	2	697	697	0	0	100	1.00
B	1	392	392	0	0	100	1.00
B	2	77	77	0	0	100	1.00
C	1	684	684	0	0	100	1.00
C	2	437	437	0	0	100	1.00
Ax	1	761	761	0	0	100	1.00
Bx	1	501	501	0	0	100	1.00
Cx	1	1089	1089	0	0	100	1.00

Normal - Modelling

Arm	Traffic Stream	Stop Weighting (%)	Delay Weighting (%)
A	1	100	100
A	2	100	100
B	1	100	100
B	2	100	100
C	1	100	100
C	2	100	100
Ax	1	100	100
Bx	1	100	100
Cx	1	100	100

Sources - default sources for entries

Arm	Traffic Stream	Normal Cruise Time (seconds)	Normal Cruise Speed (kph)	Bus Free Running Speed (kph)	Tram Free Running Speed (kph)
A	1	6.96	30.00	Buses Not Permitted	Trams Not Permitted
A	2	12.00	30.00	Buses Not Permitted	Trams Not Permitted
B	1	12.00	30.00	Buses Not Permitted	Trams Not Permitted
B	2	1.00	30.00	Buses Not Permitted	Trams Not Permitted
C	1	12.00	30.00	Buses Not Permitted	Trams Not Permitted
C	2	12.00	30.00	Buses Not Permitted	Trams Not Permitted

Sources - sources for internals

Arm	Traffic Stream	Source	Source Type	Source Traffic Stream	Source Total Flow (PCU/hr)	Source Normal Flow (PCU/hr)	Source Bus Flow (PCU/hr)	Source Tram Flow (PCU/hr)	Normal Cruise Time (seconds)	Normal Cruise Speed (kph)	Bus Free Running Speed (kph)	Tram Free Running Speed (kph)
Ax	1	1	TrafficStream	B/2	77	77	0	0	12.00	30.00	Buses Not Permitted	Trams Not Permitted
Ax	1	2	TrafficStream	C/1	684	684	0	0	12.00	30.00	Buses Not Permitted	Trams Not Permitted
Bx	1	1	TrafficStream	A/1	64	64	0	0	12.00	30.00	Buses Not Permitted	Trams Not Permitted
Bx	1	2	TrafficStream	C/2	437	437	0	0	12.00	30.00	Buses Not Permitted	Trams Not Permitted
Cx	1	1	TrafficStream	B/1	392	392	0	0	12.00	30.00	Buses Not Permitted	Trams Not Permitted

Cx	1	2	TrafficStream	A/2	697	697	0	0	12.00	30.00	Buses Not Permitted	Trams Not Permitted
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Flow Allocation Tool Tables - Local Matrix: 1

Normal Input Flows (PCU/hr)

From	To		
	A	B	C
A	0	64	697
B	77	0	392
C	684	437	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Locations

Local Matrix	Location	Name	Entries	Exits	Total Flow In (PCU/hr)	Normal Flow In (PCU/hr)	Bus Flow In (PCU/hr)	Tram Flow In (PCU/hr)	Total Flow Out (PCU/hr)	Normal Flow Out (PCU/hr)	Bus Flow Out (PCU/hr)	Tram Flow Out (PCU/hr)
1	A	(untitled)	A/1,A/2	Ax/1	761	761	0	0	761	761	0	0
1	B	(untitled)	B/1,B/2	Bx/1	469	469	0	0	501	501	0	0
1	C	(untitled)	C/1,C/2	Cx/1	1121	1121	0	0	1089	1089	0	0

Paths

Local Matrix	Path	Description	Path Items	Calculated Total Flow (PCU/hr)
1	1		C/1,Ax/1	684
1	2		C/2,Bx/1	437
1	3		A/1,Bx/1	64
1	4		A/2,Cx/1	697
1	5		B/1,Cx/1	392
1	6		B/2,Ax/1	77

Normal Path Flows

Local Matrix	Path	Permitted Flow Type	Allocation Type	Percentage (%)	Fixed Flow (PCU/hr)	Calculated Flow (PCU/hr)
1	1	✓	Normal	N/A	N/A	684
1	2	✓	Normal	N/A	N/A	437
1	3	✓	Normal	N/A	N/A	64
1	4	✓	Normal	N/A	N/A	697
1	5	✓	Normal	N/A	N/A	392
1	6	✓	Normal	N/A	N/A	77

Signal Timings

100s cycle time; 100 steps

Controller Stream

Controller Stream	Name	Description	Gaining Delay Type	Signals Manipulation Mode	Multiple Cycling	Offset Relative To	Offset Valid	Offset Positive (s)	Offset Negative (s)	Auto Redistribute	Optimisation Level	Use Sequence
1	(untitled)		Absolute	StageBased	Single	1	✓	0	0	✓	Offsets And Green Splits	1

Phases

Controller Stream	Phase	Name	Minimum Green (s)	Maximum Green (s)	Relative Start Displacement (s)	Relative End Displacement (s)	Dummy
1	A	(untitled)	7	300	0	0	
1	B	(untitled)	7	300	0	0	
1	C	(untitled)	7	300	0	0	
1	D	(untitled)	7	300	0	0	

Library Stages

Controller Stream	Library Stage	Phases In Stage	User Stage Minimum (s)
1	1	A,C	1
1	2	D	1
1	3	B,C	1

Stage Sequences

Controller Stream	Stage Sequence	Name	Stage IDs	Stage Ends	Multiple Cycling Stage IDs	Multiple Cycling Stage Ends
1	1	(untitled)	1,2,3	43,67,94		

Resultant Stages

Controller Stream	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,C	1	43	42	1	7
1	2	✓	2	D	43	67	24	1	7
1	3	✓	3	B,C	67	94	27	1	7

Resultant Phase Green Periods

Controller Stream	Phase	Green Period	Is Base Green Period	Start Time (s)	End Time (s)	Duration (s)
1	A	1	✓	1	43	42
1	B	1	✓	67	94	27
1	C	1	✓	67	43	76
1	D	1	✓	43	67	24

Intergreen Matrix for Controller Stream 1

		To			
		A	B	C	D
From	A	-	7		
	B	7	-		
	C			-	
	D				-

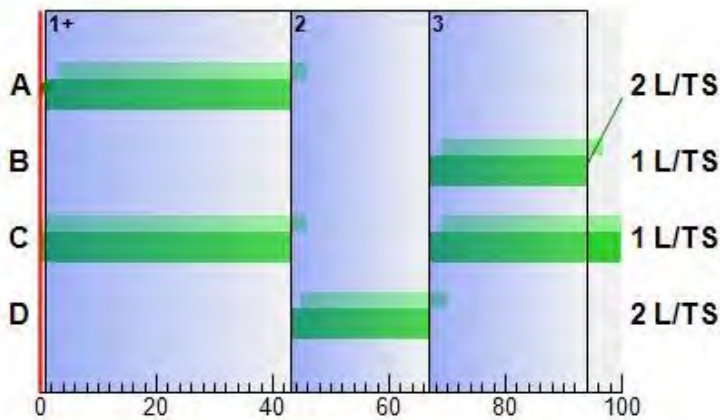
Interstage Matrix for Controller Stream 1

		To		
		1	2	3
From	1	-	0	7
	2	0	-	0
	3	7	0	-

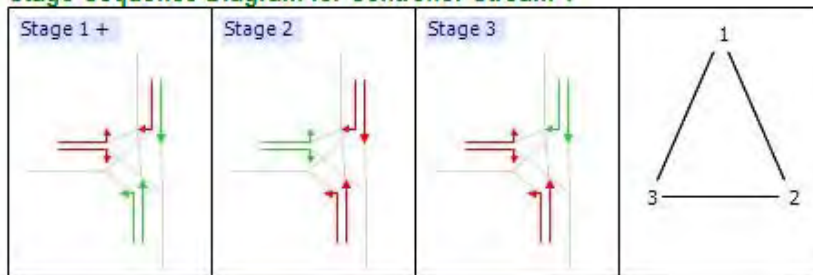
Banned Stage transitions for Controller Stream 1

		To		
		1	2	3
From	1	-		
	2		-	
	3			-

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



TRANSYT 12 Tables

Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	TRANSYT Stage Start (s)	TRANSYT Preceding Interstage (s)	TRANSYT Stage Minimum (s)
1	1	✓	1	A,C	94	7	14
1	2	✓	2	D	43	0	7
1	3	✓	3	B,C	67	0	7

Signals

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	TRANSYT Stage Start (s)	TRANSYT Preceding Interstage (s)	TRANSYT Stage Minimum (s)
1	1	✓	1	A,C	94	7	14
1	2	✓	2	D	43	0	7
1	3	✓	3	B,C	67	0	7

Resultant Phase Green Periods

Controller Stream	Phase	Green Period	TRANSYT Starting Stage (s)	TRANSYT Ending Stage (s)	TRANSYT Start Lag (s)	TRANSYT End Lag (s)
1	A	1	1	2	7	0
1	B	1	3	1	0	0
1	C	1	3	2	0	0
1	D	1	2	3	0	0

Stage Timings (TRANSYT 12 timings)

100s cycle time; 100 steps

Controller Stream	Number of Stages	Stage 1	Stage 2	Stage 3
1	3	94	43	67

Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Amber	Green Period 1			Green Period 2			Green Period 3			Green Period 4		
						Start	End	Duration	Start	End	Duration	Start	End	Duration	Start	End	Duration
A	1	1	1	A	0	1	43	42									
A	2	1	1	A	0	1	43	42									
B	1	1	1	D	0	43	67	24									
B	2	1	1	D	0	43	67	24									
C	1	1	1	C	0	67	43	76									
C	2	1	1	B	0	67	94	27									

Data Entry: Traffic Stream

Traffic Stream

Arm	Traffic Stream	Length (m)	Max Queue Storage (PCU)	Normal Cruise Speed (kph)	Traffic Model	Has Restricted Flow	Saturation Flow Source	Saturation Flow (PCU/hr)	Delay Weighting (%)	Stop Weighting (%)
A	1	58.00	0.00	30.00	[QuickPDM]	✓	SumOfLanes	1800	100	100
A	2	100.00	0.00	30.00	[QuickPDM]	✓	SumOfLanes	1800	100	100
B	1	100.00	0.00	30.00	[QuickPDM]	✓	SumOfLanes	1800	100	100
B	2	8.00	0.00	30.00	[QuickPDM]	✓	SumOfLanes	1800	100	100
C	1	100.00	0.00	30.00	[QuickPDM]	✓	SumOfLanes	1800	100	100
C	2	100.00	0.00	30.00	[QuickPDM]	✓	SumOfLanes	1800	100	100
Ax	1	100.00	0.00	N/A	[QuickPDM]		N/A	N/A	100	100
Bx	1	100.00	0.00	N/A	[QuickPDM]		N/A	N/A	100	100
Cx	1	100.00	0.00	N/A	[QuickPDM]		N/A	N/A	100	100

Results: Traffic Stream

Results: Traffic Stream: Summary

Time Segment	Arm	Traffic Stream	Name	Phase	Phase2	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Wasted Time Blocking Back (s per cycle)	Calculated Capacity (PCU/hr)	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Mean Delay Per PCU (s)
17:00-18:00	A	1	(untitled)	A	N/A	64	1800	42.00	0.00	774	8	988	1.05	1.02	17.07
17:00-18:00	A	2	(untitled)	A	N/A	697	1800	42.00	0.00	774	90	0	21.46	14.68	45.34
17:00-18:00	B	1	(untitled)	D	N/A	392	1800	24.00	0.00	450	87	3	12.97	10.79	60.09
17:00-18:00	B	2	(untitled)	D	N/A	77	1800	24.00	0.00	450	17	426	1.69	1.62	30.23
17:00-18:00	C	1	(untitled)	C	N/A	684	1800	76.00	0.00	1386	49	82	7.27	4.61	5.53
17:00-18:00	C	2	(untitled)	B	N/A	437	1800	27.00	0.00	504	87	4	14.10	11.31	55.36
17:00-18:00	Ax	1	(untitled)	N/A	N/A	761	Unrestricted	100.00	0.00	Unrestricted	0	Unrestricted	0.00	N/A	0.00
17:00-18:00	Bx	1	(untitled)	N/A	N/A	501	Unrestricted	100.00	0.00	Unrestricted	0	Unrestricted	0.00	N/A	0.00
17:00-18:00	Cx	1	(untitled)	N/A	N/A	1089	Unrestricted	100.00	0.00	Unrestricted	0	Unrestricted	0.00	N/A	0.00

Results: Link

Data Entry: Signal Timings

Green Period

Controller Stream	Phase	Green Period	Start Time (s)	End Time (s)	Duration (s)	Minimum Green (s)	Relative Start Displacement (s)	Relative End Displacement (s)
1	A	1	1	43	42	7	0	0
1	B	1	67	94	27	7	0	0
1	C	1	67	43	76	7	0	0
1	D	1	43	67	24	7	0	0

Traffic Stream Results

Traffic Stream Results: Summary

Time Segment	Arm	Traffic Stream	Calculated Flow Entering LTS (PCU/hr)	Calculated Flow Out Of LTS (PCU/hr)	Flow Discrepancy (PCU/hr)	Adjusted Flow Warning	Calculated Sat Flow (PCU/hr)	Calculated Capacity (PCU/hr)	Degree Of Saturation (%)	DOS Threshold Exceeded	Practical Reserve Capacity (%)	Actual Green (s per cycle)	Effective Green (s per cycle)	Cc Per (£)
17:00-18:00	A	1	64	64	0		1800	774	8		988	42.00	43.00	0
17:00-18:00	A	2	697	697	0		1800	774	90	✓	0	42.00	43.00	0
17:00-18:00	B	1	392	392	0		1800	450	87		3	24.00	25.00	0
17:00-18:00	B	2	77	77	0		1800	450	17		426	24.00	25.00	0
17:00-18:00	C	1	684	684	0		1800	1386	49		82	76.00	77.00	0
17:00-18:00	C	2	437	437	0		1800	504	87		4	27.00	28.00	0
17:00-18:00	Ax	1	761	761	0		Unrestricted	Unrestricted	0		Unrestricted	100.00	100.00	0
17:00-18:00	Bx	1	501	501	0		Unrestricted	Unrestricted	0		Unrestricted	100.00	100.00	0
17:00-18:00	Cx	1	1089	1089	0		Unrestricted	Unrestricted	0		Unrestricted	100.00	100.00	0

Traffic Stream Results: Stops And Delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time Per PCU (s)	Signalled LoS	Mean Delay Per PCU (s)	Uniform Delay (PCU-hr/hr)	Random Plus Oversat Delay (PCU-hr/hr)	Unweighted Cost Of Delay (£ per hr)	Weighted Cost Of Delay (£ per hr)	Mean Stops Per PCU (%)	Uniform Stops (Stops per hr)	Random Stops (Stops per hr)	Unweighted Cost Of Stops (£ per hr)	Weighted Cost Of Stops (£ per hr)
17:00-18:00	A	1	6.96	B	17.07	0.30	0.00	4.31	4.31	57.81	36.87	0.13	0.46	0.46
17:00-18:00	A	2	12.00	D	45.34	5.13	3.65	124.65	124.65	108.16	628.60	125.26	9.45	9.45
17:00-18:00	B	1	12.00	E	60.09	3.92	2.63	92.91	92.91	116.35	366.98	89.10	5.72	5.72
17:00-18:00	B	2	1.00	C	30.23	0.63	0.02	9.18	9.18	77.69	59.19	0.63	0.69	0.69
17:00-18:00	C	1	12.00	A	5.53	0.81	0.24	14.92	14.92	35.58	234.77	8.61	3.05	3.05

17:00-18:00	C	2	12.00	E	55.36	4.16	2.57	95.43	95.43	112.83	405.41	87.64	6.18	6.18
17:00-18:00	Ax	1	12.00	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17:00-18:00	Bx	1	12.00	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17:00-18:00	Cx	1	12.00	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues And Blocking

Time Segment	Arm	Traffic Stream	Initial Queue (PCU)	Mean Max Queue (PCU)	Max Queue Storage (PCU)	Average Link Excess Queue (PCU)	Average Limit Excess Queue (PCU)	Excess Queue Penalty (£ per hr)	Max End Of Green Queue (PCU)	Max End Of Red Queue (PCU)	Wasted Time Starvation (s (per cycle))	Wasted Time Blocking Back (s (per cycle))	Wasted Time Total (s (per cycle))	Estimated Blocking
17:00-18:00	A	1	0.00	1.05	10.09	0.00	0.00	0.00	0.00	1.02	0.00	0.00	0.00	
17:00-18:00	A	2	0.00	21.46	17.39	0.45	0.00	0.00	3.65	14.68	0.00	0.00	0.00	
17:00-18:00	B	1	0.00	12.97	17.39	0.00	0.00	0.00	2.63	10.79	0.00	0.00	0.00	
17:00-18:00	B	2	0.00	1.69	1.39	0.02	0.00	0.00	0.02	1.62	0.00	0.00	0.00	
17:00-18:00	C	1	0.00	7.27	17.39	0.00	0.00	0.00	0.24	4.61	0.00	0.00	0.00	
17:00-18:00	C	2	0.00	14.10	17.39	0.00	0.00	0.00	2.57	11.31	0.00	0.00	0.00	
17:00-18:00	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	N/A	N/A	0.00	0.00	0.00	
17:00-18:00	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	N/A	N/A	0.00	0.00	0.00	
17:00-18:00	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	N/A	N/A	0.00	0.00	0.00	

Traffic Stream Results: Journey Times

Time Segment	Arm	Traffic Stream	Distance Travelled (PCU-km/hr)	Time Spent (PCU-hr/hr)	Mean Journey Speed (kph)	Journey Time Per PCU (s)
17:00-18:00	A	1	3.71	0.43	8.69	24.03
17:00-18:00	A	2	69.70	11.10	6.28	57.34
17:00-18:00	B	1	39.20	7.85	4.99	72.09
17:00-18:00	B	2	0.62	0.67	0.92	31.23
17:00-18:00	C	1	68.40	3.33	20.54	17.53
17:00-18:00	C	2	43.70	8.18	5.34	67.36
17:00-18:00	Ax	1	76.10	2.54	30.00	12.00
17:00-18:00	Bx	1	50.10	1.67	30.00	12.00
17:00-18:00	Cx	1	108.90	3.63	30.00	12.00

Network Results

Run Summary

Time Segment	Analysis Set Used	Run Start Time	Run Finish Time	Modelling Start Time (HH:mm)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	LTSWith Highest DOS	Number Of Oversaturated LTS	Percentage Of Oversaturated LTS (%)	LTSWith Worst Signalised PRC	LTSWith Worst Unsignalised PRC	LTSWith Worst Overall PRC
17:00-18:00	A1 - (untitled)	27/01/2014 17:01:14	27/01/2014 17:01:14	17:00	100	24.04	90.05	A/2	1	11	A/2	Cx/1	A/2

Network Results: Summary

Calculated													
------------	--	--	--	--	--	--	--	--	--	--	--	--	--

Time Segment	Flow Entering LTS (PCU/hr)	Calculated Flow Out Of LTS (PCU/hr)	Flow Discrepancy (PCU/hr)	Adjusted Flow Warning	Calculated Sat Flow (PCU/hr)	Calculated Capacity (PCU/hr)	Degree Of Saturation (%)	DOS Threshold Exceeded	Practical Reserve Capacity (%)	Actual Green (s (per cycle))	Effective Green (s (per cycle))	Cost Of Penalties (£ per hr)	Unweighted Performance Index (£ per hr)
17:00-18:00	4702	4702	0		0	0	90	✓	0	535.00	541.00	0.00	366.96

Network Results: Stops And Delays

Time Segment	Mean Cruise Time Per PCU (s)	Signalled LoS	Mean Delay Per PCU (s)	Uniform Delay (PCU-hr/hr)	Random Plus Oversat Delay (PCU-hr/hr)	Unweighted Cost Of Delay (£ per hr)	Weighted Cost Of Delay (£ per hr)	Mean Stops Per PCU (%)	Uniform Stops (Stops per hr)	Random Stops (Stops per hr)	Unweighted Cost Of Stops (£ per hr)	Weighted Cost Of Stops (£ per hr)
17:00-18:00	11.75	D	18.41	14.94	9.10	341.40	341.40	43.45	1731.82	311.37	25.56	25.56

Network Results: Queues And Blocking

Time Segment	Initial Queue (PCU)	Mean Max Queue (PCU)	Max Queue Storage (PCU)	Average Link Excess Queue (PCU)	Average Limit Excess Queue (PCU)	Excess Queue Penalty (£ per hr)	Max End Of Green Queue (PCU)	Max End Of Red Queue (PCU)	Wasted Time Starvation (s (per cycle))	Wasted Time Blocking Back (s (per cycle))	Wasted Time Total (s (per cycle))	Estimated Blocking
17:00-18:00	0.00	0.00	133.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Network Results: Journey Times

Time Segment	Distance Travelled (PCU-km/hr)	Time Spent (PCU-hr/hr)	Mean Journey Speed (kph)	Journey Time Per PCU (s)
17:00-18:00	460.43	39.39	11.69	30.16

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

	To			
	A	B	C	
From	A	0.00	36.03	69.34
	B	43.23	0.00	84.09
	C	29.53	79.36	0.00

Path Journey Time

Path	Avg Journey Time (s)	Normal Journey Time (s)	Bus Journey Time (s)	Tram Journey Time (s)
1	29.53	29.53	0.00	0.00
2	79.36	79.36	0.00	0.00
3	36.03	36.03	0.00	0.00
4	69.34	69.34	0.00	0.00
5	84.09	84.09	0.00	0.00
6	43.23	43.23	0.00	0.00

TRANSYT 14
Version: 14.1.2.315 [26-09-12] © Copyright Transport Research Laboratory 2014
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Last run: 28/01/2014 08:21:28
 Analysis Set used for last run: A1 - (untitled)

Filename: J4 Lutterworth_Middleton-PM-Back+Dev.t14
 Path: S:\JPP\JPP Schemes R\6711PP - Glen Parva\Reports\TA\Jct Analysis
 Report generation date: 28/01/2014 08:22:24

- » Network Diagrams
- « A1 - (untitled) : D1 - 2018-Back+Dev-PM *
- » Summary
- » Network Options
- » Traffic Nodes
- » Arms and Traffic Streams
- » Flow Allocation Tool Tables - Local Matrix: 1
- » Signal Timings
- » TRANSYT 12 Tables
- » Data Entry: Traffic Stream
- » Results: Traffic Stream
- » Results: Link
- » Data Entry: Signal Timings
- » Traffic Stream Results
- » Network Results
- » Point to Point Journey Time

File summary

File Description

Title	(untitled)
Location	
Site Number	
UTCRegion	
Driving Side	Left
Date	06/12/2011
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CEDARBARNMartinA
Description	

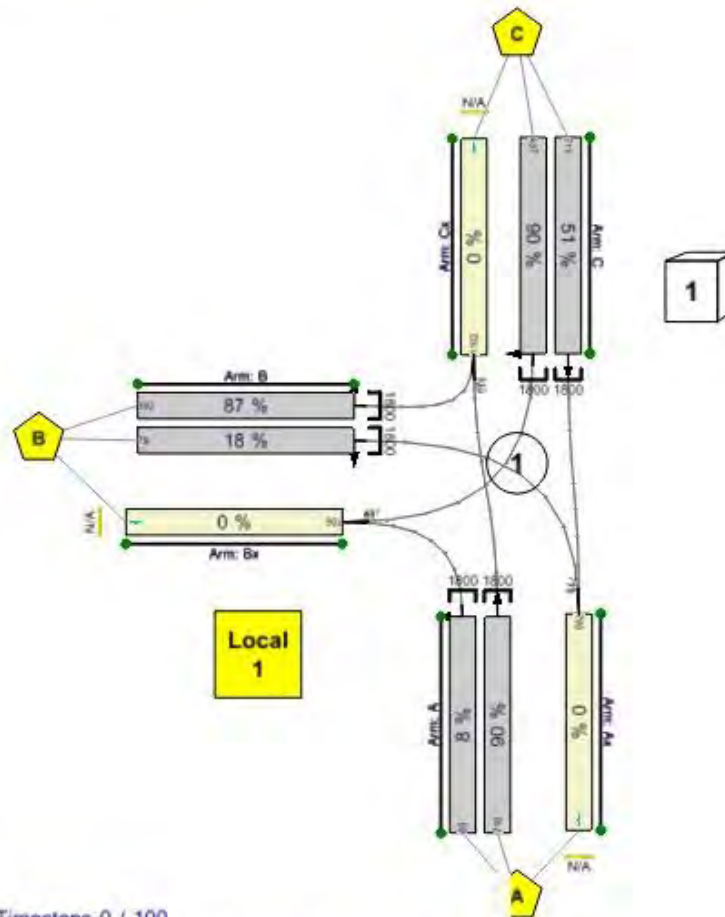
Units

Speed Units	Distance Units	Fuel Economy Units	Fuel Rate Units	Mass Units	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
kph	m	mpg	l/h	kg	perHour	s	-Hour	perHour

Sorting

Show Names Instead of IDs (For Aimsun)	Sorting Direction	Sorting Type	Ignore Prefixes When Sorting	Link Grouping	Source Grouping
	Ascending	Numerical		Normal	Normal

Network Diagrams



(untitled)
 Cyclotime 0s / 100s , Timesteps 0 / 100
 Diagram produced using TRANSYT 14.1.2.315 Network Construction Editor

A1 - (untitled) : D1 - 2018-Back+Dev-PM *

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)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	LTSWith Highest DOS	Number Of Oversaturated LTS	Percentage Of Oversaturated LTS (%)	LTSWith Worst Signalised PRC	LTSWith Worst Unsignalised PRC	LTSWith Worst Overall PRC	Network Within Capacity
A1 - (untitled)	28/01/2014 08:21:28	28/01/2014 08:21:28	17:00	100	24.93	89.92	C/2	0	0	C/2	Cx/1	C/2	✓

Analysis Set Details

Analysis Set Details

Name	Description	Demand Set	Include In Report	Locked
(untitled)		D1	✓	

Demand Set Details

Name	Description	Composite	Demand Sets	Start Time (HH:mm)	Locked
2018-Back+Dev-PM				17:00	

Network Options

Network Timings

Network Cycle Time (s)	Resolution	Number Of Steps	Time Segment Length (min)	Number Of Time Segments	Modelled Time Period (min)
100	1	100	60	1	60

Signals Options

Equal Length Multiple Cycling	Start Displacement (s)	End Displacement (s)	Phase Minimum Broken Penalty (£)	Phase Maximum Broken Penalty (£)	Intergreen Broken Penalty (£)
✓	2	3	10000.00	10000.00	10000.00

Traffic Options

Traffic Model	DOS Threshold (%)	Flow Scaling Factor (%)	Cruise Scaling Factor (%)	Cruise Times Or Speeds	Use Link Stop Weightings	Use Link Delay Weightings	Exclude Pedestrian Links	Random Delay Mode	Type of Vehicle-in-Service	Type Of Random Parameter	PCU Length (m)
Quick PDM	90	100	100	Cruise Speeds	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75

Optimisation Options

Auto Redistribute	Optimisation Type	Optimisation Level	Hill Climb Increments	Use Enhanced Optimisation	Optimisation Order	Locked Green Splits	Full Simulation
✓	Hill Climb (Fast)	Offsets And Green Splits	15,40,-1,15,40,1,-1,1		1		

Economics

Unit Of Cost	Monetary Value Of Delay (£ per PCU-hr)	Monetary Value Of Stops (£ per 100 stops)
£	14.20	2.60

Traffic Nodes

Traffic Nodes

Traffic Node	Name	Description
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic Node
A	(untitled)		1
B	(untitled)		1
C	(untitled)		1
Ax	(untitled)		
Bx	(untitled)		

Cx	(untitled)		
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Traffic Streams

Arm	Traffic Stream	Name	Description	Length (m)	Traffic Model	Has Restricted Flow	Saturation Flow Source	Saturation Flow (PCU/hr)	Is Signal Controlled	Controller Stream	Phase	Phase2 Enabled	Is Give Way	Traffic Type
A	1	(untitled)		58.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	A			Normal
A	2	(untitled)		100.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	A			Normal
B	1	(untitled)		100.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	D			Normal
B	2	(untitled)		8.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	D			Normal
C	1	(untitled)		100.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	C			Normal
C	2	(untitled)		100.00	[QuickPDM]	✓	SumOfLanes	1800	✓	1	B			Normal
Ax	1	(untitled)		100.00	[QuickPDM]		N/A	N/A		N/A	N/A			Normal
Bx	1	(untitled)		100.00	[QuickPDM]		N/A	N/A		N/A	N/A			Normal
Cx	1	(untitled)		100.00	[QuickPDM]		N/A	N/A		N/A	N/A			Normal

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation Flow (PCU/hr)
A	1	1	(untitled)			1800
A	2	1	(untitled)			1800
B	1	1	(untitled)			1800
B	2	1	(untitled)			1800
C	1	1	(untitled)			1800
C	2	1	(untitled)			1800
Ax	1	1	(untitled)			1800
Bx	1	1	(untitled)			1800
Cx	1	1	(untitled)			1800

Modelling

Arm	Traffic Stream	Stop Weighting Multiplier (%)	Delay Weighting Multiplier (%)	Exclude From Results Calculation	Max Queue Storage (PCU)	Has Queue Limit	Has Degree Of Saturation Limit
A	1	100	100		0.00		
A	2	100	100		0.00		
B	1	100	100		0.00		
B	2	100	100		0.00		
C	1	100	100		0.00		
C	2	100	100		0.00		
Ax	1	100	100		0.00		
Bx	1	100	100		0.00		
Cx	1	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Normal Dispersal Type	Normal Dispersal Coefficient	Normal Travel Time Coefficient	Initial Queue (PCU)	Point1 Time Step (s)	Point2 Time Step (s)	Type of Vehicle-in-Service	Vehicle-in-Service	Type Of Random Parameter	Random Parameter
A	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
A	2	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
B	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
B	2	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
C	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
C	2	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50

Arm	Stream	Default	35	80	0.00	0	0	NetworkDefault	Included	NetworkDefault	0.50
Ax	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
Bx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50
Cx	1	Default	35	80	0.00	0	0	NetworkDefault	Not-Included	NetworkDefault	0.50

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)	Bus Flow (PCU/hr)	Tram Flow (PCU/hr)	Cruise Sensitivity Multiplier (%)	Calculated Cruise Speed (kph)
A	1	65	65	0	0	100	1.00
A	2	710	710	0	0	100	1.00
B	1	392	392	0	0	100	1.00
B	2	79	79	0	0	100	1.00
C	1	711	711	0	0	100	1.00
C	2	437	437	0	0	100	1.00
Ax	1	790	790	0	0	100	1.00
Bx	1	502	502	0	0	100	1.00
Cx	1	1102	1102	0	0	100	1.00

Normal - Modelling

Arm	Traffic Stream	Stop Weighting (%)	Delay Weighting (%)
A	1	100	100
A	2	100	100
B	1	100	100
B	2	100	100
C	1	100	100
C	2	100	100
Ax	1	100	100
Bx	1	100	100
Cx	1	100	100

Sources - default sources for entries

Arm	Traffic Stream	Normal Cruise Time (seconds)	Normal Cruise Speed (kph)	Bus Free Running Speed (kph)	Tram Free Running Speed (kph)
A	1	6.96	30.00	Buses Not Permitted	Trams Not Permitted
A	2	12.00	30.00	Buses Not Permitted	Trams Not Permitted
B	1	12.00	30.00	Buses Not Permitted	Trams Not Permitted
B	2	1.00	30.00	Buses Not Permitted	Trams Not Permitted
C	1	12.00	30.00	Buses Not Permitted	Trams Not Permitted
C	2	12.00	30.00	Buses Not Permitted	Trams Not Permitted

Sources - sources for internals

Arm	Traffic Stream	Source	Source Type	Source Traffic Stream	Source Total Flow (PCU/hr)	Source Normal Flow (PCU/hr)	Source Bus Flow (PCU/hr)	Source Tram Flow (PCU/hr)	Normal Cruise Time (seconds)	Normal Cruise Speed (kph)	Bus Free Running Speed (kph)	Tram Free Running Speed (kph)
Ax	1	1	TrafficStream	B/2	79	79	0	0	12.00	30.00	Buses Not Permitted	Trams Not Permitted
Ax	1	2	TrafficStream	C/1	711	711	0	0	12.00	30.00	Buses Not Permitted	Trams Not Permitted
Bx	1	1	TrafficStream	A/1	65	65	0	0	12.00	30.00	Buses Not Permitted	Trams Not Permitted
Bx	1	2	TrafficStream	C/2	437	437	0	0	12.00	30.00	Buses Not Permitted	Trams Not Permitted
Cx	1	1	TrafficStream	B/1	392	392	0	0	12.00	30.00	Buses Not Permitted	Trams Not Permitted

Cx	1	2	TrafficStream	A/2	710	710	0	0	12.00	30.00	Buses Not Permitted	Trams Not Permitted
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Flow Allocation Tool Tables - Local Matrix: 1

Normal Input Flows (PCU/hr)

From	To		
	A	B	C
A	0	65	710
B	79	0	392
C	711	437	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Locations

Local Matrix	Location	Name	Entries	Exits	Total Flow In (PCU/hr)	Normal Flow In (PCU/hr)	Bus Flow In (PCU/hr)	Tram Flow In (PCU/hr)	Total Flow Out (PCU/hr)	Normal Flow Out (PCU/hr)	Bus Flow Out (PCU/hr)	Tram Flow Out (PCU/hr)
1	A	(untitled)	A/1,A/2	Ax/1	775	775	0	0	790	790	0	0
1	B	(untitled)	B/1,B/2	Bx/1	471	471	0	0	502	502	0	0
1	C	(untitled)	C/1,C/2	Cx/1	1148	1148	0	0	1102	1102	0	0

Paths

Local Matrix	Path	Description	Path Items	Calculated Total Flow (PCU/hr)
1	1		C/1,Ax/1	711
1	2		C/2,Bx/1	437
1	3		A/1,Bx/1	65
1	4		A/2,Cx/1	710
1	5		B/1,Cx/1	392
1	6		B/2,Ax/1	79

Normal Path Flows

Local Matrix	Path	Permitted Flow Type	Allocation Type	Percentage (%)	Fixed Flow (PCU/hr)	Calculated Flow (PCU/hr)
1	1	✓	Normal	N/A	N/A	711
1	2	✓	Normal	N/A	N/A	437
1	3	✓	Normal	N/A	N/A	65
1	4	✓	Normal	N/A	N/A	710
1	5	✓	Normal	N/A	N/A	392
1	6	✓	Normal	N/A	N/A	79

Signal Timings

100s cycle time; 100 steps

Controller Stream

Controller Stream	Name	Description	Gaining Delay Type	Signals Manipulation Mode	Multiple Cycling	Offset Relative To	Offset Valid	Offset Positive (s)	Offset Negative (s)	Auto Redistribute	Optimisation Level	Use Sequence
1	(untitled)		Absolute	StageBased	Single	1	✓	0	0	✓	Offsets And Green Splits	1

Phases

Controller Stream	Phase	Name	Minimum Green (s)	Maximum Green (s)	Relative Start Displacement (s)	Relative End Displacement (s)	Dummy
1	A	(untitled)	7	300	0	0	
1	B	(untitled)	7	300	0	0	
1	C	(untitled)	7	300	0	0	
1	D	(untitled)	7	300	0	0	

Library Stages

Controller Stream	Library Stage	Phases In Stage	User Stage Minimum (s)
1	1	A,C	1
1	2	D	1
1	3	B,C	1

Stage Sequences

Controller Stream	Stage Sequence	Name	Stage IDs	Stage Ends	Multiple Cycling Stage IDs	Multiple Cycling Stage Ends
1	1	(untitled)	1,2,3	44,68,94		

Resultant Stages

Controller Stream	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,C	1	44	43	1	7
1	2	✓	2	D	44	68	24	1	7
1	3	✓	3	B,C	68	94	26	1	7

Resultant Phase Green Periods

Controller Stream	Phase	Green Period	Is Base Green Period	Start Time (s)	End Time (s)	Duration (s)
1	A	1	✓	1	44	43
1	B	1	✓	68	94	26
1	C	1	✓	68	44	76
1	D	1	✓	44	68	24

Intergreen Matrix for Controller Stream 1

		To			
		A	B	C	D
From	A	-	7		
	B	7	-		
	C			-	
	D				-

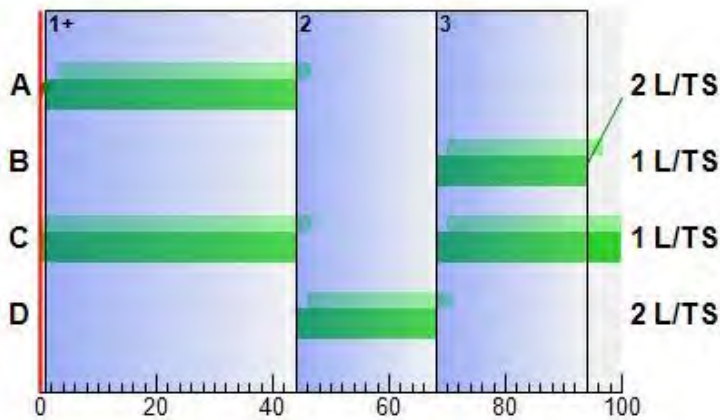
Interstage Matrix for Controller Stream 1

		To		
		1	2	3
From	1	-	0	7
	2	0	-	0
	3	7	0	-

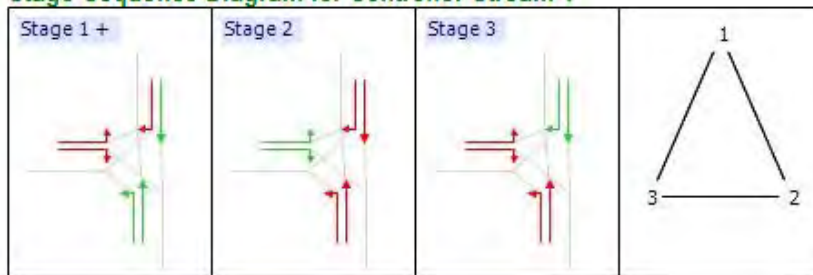
Banned Stage transitions for Controller Stream 1

		To		
		1	2	3
From	1	-		
	2		-	
	3			-

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



TRANSYT 12 Tables

Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	TRANSYT Stage Start (s)	TRANSYT Preceding Interstage (s)	TRANSYT Stage Minimum (s)
1	1	✓	1	A,C	94	7	14
1	2	✓	2	D	44	0	7
1	3	✓	3	B,C	68	0	7

Signals

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	TRANSYT Stage Start (s)	TRANSYT Preceding Interstage (s)	TRANSYT Stage Minimum (s)
1	1	✓	1	A,C	94	7	14
1	2	✓	2	D	44	0	7
1	3	✓	3	B,C	68	0	7

Resultant Phase Green Periods

Controller Stream	Phase	Green Period	TRANSYT Starting Stage (s)	TRANSYT Ending Stage (s)	TRANSYT Start Lag (s)	TRANSYT End Lag (s)
1	A	1	1	2	7	0
1	B	1	3	1	0	0
1	C	1	3	2	0	0
1	D	1	2	3	0	0

Stage Timings (TRANSYT 12 timings)

100s cycle time; 100 steps

Controller Stream	Number of Stages	Stage 1	Stage 2	Stage 3
1	3	94	44	68

Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Amber	Green Period 1			Green Period 2			Green Period 3			Green Period 4		
						Start	End	Duration	Start	End	Duration	Start	End	Duration	Start	End	Duration
A	1	1	1	A	0	1	44	43									
A	2	1	1	A	0	1	44	43									
B	1	1	1	D	0	44	68	24									
B	2	1	1	D	0	44	68	24									
C	1	1	1	C	0	68	44	76									
C	2	1	1	B	0	68	94	26									

Data Entry: Traffic Stream

Traffic Stream

Arm	Traffic Stream	Length (m)	Max Queue Storage (PCU)	Normal Cruise Speed (kph)	Traffic Model	Has Restricted Flow	Saturation Flow Source	Saturation Flow (PCU/hr)	Delay Weighting (%)	Stop Weighting (%)
A	1	58.00	0.00	30.00	[QuickPDM]	✓	SumOfLanes	1800	100	100
A	2	100.00	0.00	30.00	[QuickPDM]	✓	SumOfLanes	1800	100	100
B	1	100.00	0.00	30.00	[QuickPDM]	✓	SumOfLanes	1800	100	100
B	2	8.00	0.00	30.00	[QuickPDM]	✓	SumOfLanes	1800	100	100
C	1	100.00	0.00	30.00	[QuickPDM]	✓	SumOfLanes	1800	100	100
C	2	100.00	0.00	30.00	[QuickPDM]	✓	SumOfLanes	1800	100	100
Ax	1	100.00	0.00	N/A	[QuickPDM]		N/A	N/A	100	100
Bx	1	100.00	0.00	N/A	[QuickPDM]		N/A	N/A	100	100
Cx	1	100.00	0.00	N/A	[QuickPDM]		N/A	N/A	100	100

Results: Traffic Stream

Results: Traffic Stream: Summary

Time Segment	Arm	Traffic Stream	Name	Phase	Phase2	Calculated Flow Entering LTS (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Wasted Time Blocking Back (s per cycle)	Calculated Capacity (PCU/hr)	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Mean Max Queue (PCU)	Max End Of Red Queue (PCU)	Mean Delay Per PCU (s)
17:00-18:00	A	1	(untitled)	A	N/A	65	1800	43.00	0.00	792	8	997	1.05	1.01	16.48
17:00-18:00	A	2	(untitled)	A	N/A	710	1800	43.00	0.00	792	90	0	21.65	14.55	43.67
17:00-18:00	B	1	(untitled)	D	N/A	392	1800	24.00	0.00	450	87	3	12.97	10.79	60.09
17:00-18:00	B	2	(untitled)	D	N/A	79	1800	24.00	0.00	450	18	413	1.73	1.66	30.29
17:00-18:00	C	1	(untitled)	C	N/A	711	1800	76.00	0.00	1386	51	75	7.58	4.81	5.74
17:00-18:00	C	2	(untitled)	B	N/A	437	1800	26.00	0.00	486	90	0	15.06	12.27	63.29
17:00-18:00	Ax	1	(untitled)	N/A	N/A	790	Unrestricted	100.00	0.00	Unrestricted	0	Unrestricted	0.00	N/A	0.00
17:00-18:00	Bx	1	(untitled)	N/A	N/A	502	Unrestricted	100.00	0.00	Unrestricted	0	Unrestricted	0.00	N/A	0.00
17:00-18:00	Cx	1	(untitled)	N/A	N/A	1102	Unrestricted	100.00	0.00	Unrestricted	0	Unrestricted	0.00	N/A	0.00

Results: Link

Data Entry: Signal Timings

Green Period

Controller Stream	Phase	Green Period	Start Time (s)	End Time (s)	Duration (s)	Minimum Green (s)	Relative Start Displacement (s)	Relative End Displacement (s)
1	A	1	1	44	43	7	0	0
1	B	1	68	94	26	7	0	0
1	C	1	68	44	76	7	0	0
1	D	1	44	68	24	7	0	0

Traffic Stream Results

Traffic Stream Results: Summary

Time Segment	Arm	Traffic Stream	Calculated Flow Entering LTS (PCU/hr)	Calculated Flow Out Of LTS (PCU/hr)	Flow Discrepancy (PCU/hr)	Adjusted Flow Warning	Calculated Sat Flow (PCU/hr)	Calculated Capacity (PCU/hr)	Degree Of Saturation (%)	DOS Threshold Exceeded	Practical Reserve Capacity (%)	Actual Green (s per cycle)	Effective Green (s per cycle)	Cost Per (£ per cycle)
17:00-18:00	A	1	65	65	0		1800	792	8		997	43.00	44.00	0
17:00-18:00	A	2	710	710	0		1800	792	90		0	43.00	44.00	0
17:00-18:00	B	1	392	392	0		1800	450	87		3	24.00	25.00	0
17:00-18:00	B	2	79	79	0		1800	450	18		413	24.00	25.00	0
17:00-18:00	C	1	711	711	0		1800	1386	51		75	76.00	77.00	0
17:00-18:00	C	2	437	437	0		1800	486	90		0	26.00	27.00	0
17:00-18:00	Ax	1	790	790	0		Unrestricted	Unrestricted	0		Unrestricted	100.00	100.00	0
17:00-18:00	Bx	1	502	502	0		Unrestricted	Unrestricted	0		Unrestricted	100.00	100.00	0
17:00-18:00	Cx	1	1102	1102	0		Unrestricted	Unrestricted	0		Unrestricted	100.00	100.00	0

Traffic Stream Results: Stops And Delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time Per PCU (s)	Signalled LoS	Mean Delay Per PCU (s)	Uniform Delay (PCU-hr/hr)	Random Plus Oversat Delay (PCU-hr/hr)	Unweighted Cost Of Delay (£ per hr)	Weighted Cost Of Delay (£ per hr)	Mean Stops Per PCU (%)	Uniform Stops (Stops per hr)	Random Stops (Stops per hr)	Unweighted Cost Of Stops (£ per hr)	Weighted Cost Of Stops (£ per hr)
17:00-18:00	A	1	6.96	B	16.48	0.29	0.00	4.23	4.23	56.79	36.78	0.13	0.46	0.46
17:00-18:00	A	2	12.00	D	43.67	5.11	3.51	122.29	122.29	106.74	637.15	120.74	9.50	9.50
17:00-18:00	B	1	12.00	E	60.09	3.92	2.63	92.91	92.91	116.35	366.98	89.10	5.72	5.72
17:00-18:00	B	2	1.00	C	30.29	0.65	0.02	9.44	9.44	77.72	60.73	0.67	0.71	0.71
17:00-18:00	C	1	12.00	A	5.74	0.86	0.27	16.09	16.09	36.51	249.94	9.67	3.26	3.26

17:00-18:00	C	2	12.00	E	63.29	4.27	3.41	109.09	109.09	120.51	412.07	114.55	6.60	6.60
17:00-18:00	Ax	1	12.00	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17:00-18:00	Bx	1	12.00	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17:00-18:00	Cx	1	12.00	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues And Blocking

Time Segment	Arm	Traffic Stream	Initial Queue (PCU)	Mean Max Queue (PCU)	Max Queue Storage (PCU)	Average Link Excess Queue (PCU)	Average Limit Excess Queue (PCU)	Excess Queue Penalty (£ per hr)	Max End Of Green Queue (PCU)	Max End Of Red Queue (PCU)	Wasted Time Starvation (s (per cycle))	Wasted Time Blocking Back (s (per cycle))	Wasted Time Total (s (per cycle))	Estimated Blocking
17:00-18:00	A	1	0.00	1.05	10.09	0.00	0.00	0.00	0.00	1.01	0.00	0.00	0.00	
17:00-18:00	A	2	0.00	21.65	17.39	0.48	0.00	0.00	3.51	14.55	0.00	0.00	0.00	
17:00-18:00	B	1	0.00	12.97	17.39	0.00	0.00	0.00	2.63	10.79	0.00	0.00	0.00	
17:00-18:00	B	2	0.00	1.73	1.39	0.03	0.00	0.00	0.02	1.66	0.00	0.00	0.00	
17:00-18:00	C	1	0.00	7.58	17.39	0.00	0.00	0.00	0.27	4.81	0.00	0.00	0.00	
17:00-18:00	C	2	0.00	15.06	17.39	0.00	0.00	0.00	3.41	12.27	0.00	0.00	0.00	
17:00-18:00	Ax	1	0.00	0.00	17.39	0.00	0.00	0.00	N/A	N/A	0.00	0.00	0.00	
17:00-18:00	Bx	1	0.00	0.00	17.39	0.00	0.00	0.00	N/A	N/A	0.00	0.00	0.00	
17:00-18:00	Cx	1	0.00	0.00	17.39	0.00	0.00	0.00	N/A	N/A	0.00	0.00	0.00	

Traffic Stream Results: Journey Times

Time Segment	Arm	Traffic Stream	Distance Travelled (PCU-km/hr)	Time Spent (PCU-hr/hr)	Mean Journey Speed (kph)	Journey Time Per PCU (s)
17:00-18:00	A	1	3.77	0.42	8.91	23.44
17:00-18:00	A	2	71.00	10.98	6.47	55.67
17:00-18:00	B	1	39.20	7.85	4.99	72.09
17:00-18:00	B	2	0.63	0.69	0.92	31.29
17:00-18:00	C	1	71.10	3.50	20.30	17.74
17:00-18:00	C	2	43.70	9.14	4.78	75.29
17:00-18:00	Ax	1	79.00	2.63	30.00	12.00
17:00-18:00	Bx	1	50.20	1.67	30.00	12.00
17:00-18:00	Cx	1	110.20	3.67	30.00	12.00

Network Results

Run Summary

Time Segment	Analysis Set Used	Run Start Time	Run Finish Time	Modelling Start Time (HH:mm)	Cycle Time Used (s)	Total Network Delay (PCU-hr/hr)	Highest DOS (%)	LTSWith Highest DOS	Number Of Oversaturated LTS	Percentage Of Oversaturated LTS (%)	LTSWith Worst Signalised PRC	LTSWith Worst Unsignalised PRC	LTSWith Worst Overall PRC
17:00-18:00	A1 - (untitled)	28/01/2014 08:21:28	28/01/2014 08:21:28	17:00	100	24.93	89.92	C/2	0	0	C/2	Cx/1	C/2

Network Results: Summary

Calculated													
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Time Segment	Flow Entering LTS (PCU/hr)	Calculated Flow Out Of LTS (PCU/hr)	Flow Discrepancy (PCU/hr)	Adjusted Flow Warning	Calculated Sat Flow (PCU/hr)	Calculated Capacity (PCU/hr)	Degree Of Saturation (%)	DOS Threshold Exceeded	Practical Reserve Capacity (%)	Actual Green (s (per cycle))	Effective Green (s (per cycle))	Cost Of Penalties (£ per hr)	Unweighted Performance Index (£ per hr)
17:00-18:00	4788	4788	0		0	0	90		0	536.00	542.00	0.00	380.30

Network Results: Stops And Delays

Time Segment	Mean Cruise Time Per PCU (s)	Signalled LoS	Mean Delay Per PCU (s)	Uniform Delay (PCU-hr/hr)	Random Plus Oversat Delay (PCU-hr/hr)	Unweighted Cost Of Delay (£ per hr)	Weighted Cost Of Delay (£ per hr)	Mean Stops Per PCU (%)	Uniform Stops (Stops per hr)	Random Stops (Stops per hr)	Unweighted Cost Of Stops (£ per hr)	Weighted Cost Of Stops (£ per hr)
17:00-18:00	11.75	D	18.75	15.10	9.83	354.05	354.05	43.83	1763.65	334.86	26.25	26.25

Network Results: Queues And Blocking

Time Segment	Initial Queue (PCU)	Mean Max Queue (PCU)	Max Queue Storage (PCU)	Average Link Excess Queue (PCU)	Average Limit Excess Queue (PCU)	Excess Queue Penalty (£ per hr)	Max End Of Green Queue (PCU)	Max End Of Red Queue (PCU)	Wasted Time Starvation (s (per cycle))	Wasted Time Blocking Back (s (per cycle))	Wasted Time Total (s (per cycle))	Estimated Blocking
17:00-18:00	0.00	0.00	133.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Network Results: Journey Times

Time Segment	Distance Travelled (PCU-km/hr)	Time Spent (PCU-hr/hr)	Mean Journey Speed (kph)	Journey Time Per PCU (s)
17:00-18:00	468.80	40.56	11.56	30.50

Point to Point Journey Time

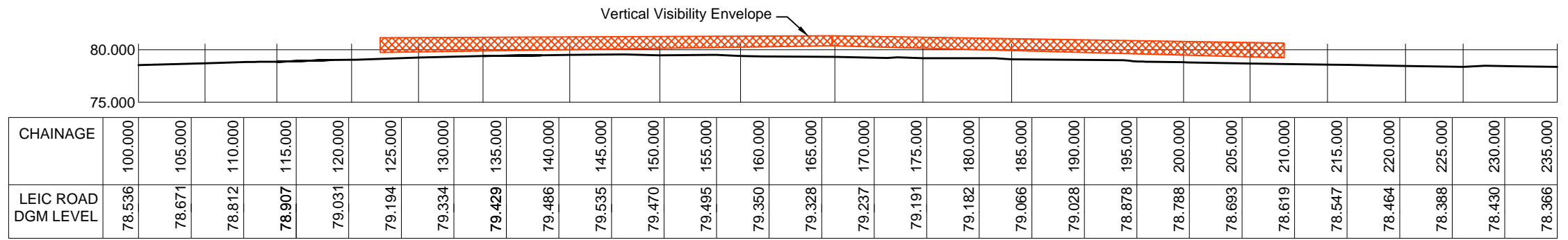
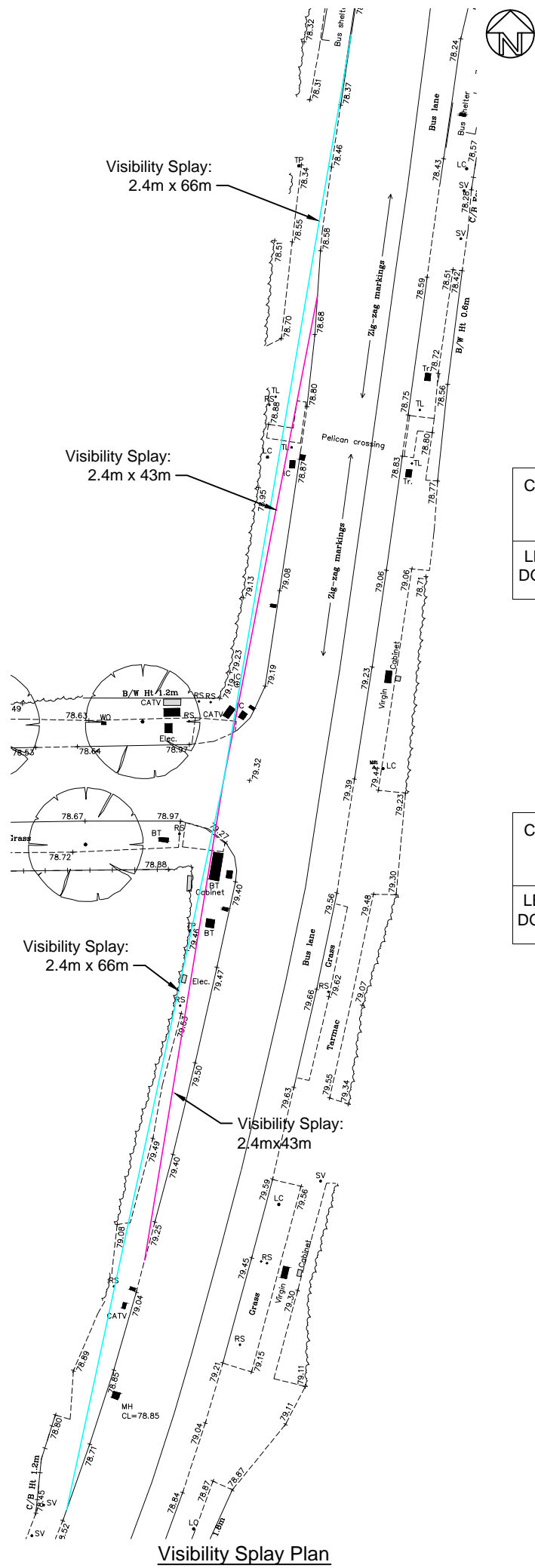
Average Journey Time (s) for Local Matrix: 1

		To		
		A	B	C
From	A	0.00	35.44	67.67
	B	43.29	0.00	84.09
	C	29.74	87.29	0.00

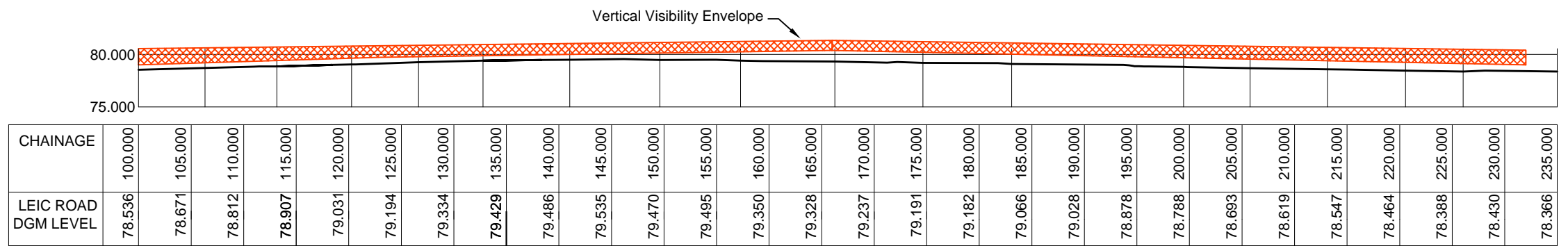
Path Journey Time

Path	Avg Journey Time (s)	Normal Journey Time (s)	Bus Journey Time (s)	Tram Journey Time (s)
1	29.74	29.74	0.00	0.00
2	87.29	87.29	0.00	0.00
3	35.44	35.44	0.00	0.00
4	67.67	67.67	0.00	0.00
5	84.09	84.09	0.00	0.00
6	43.29	43.29	0.00	0.00


Appendix P
Visibility Splays: Glenville Avenue
JPP drawing no. R6711PP-TA06



Visibility Splay Long Section 2.4m x 44m



Visibility Splay Long Section 2.4m x 66m



Client Manor Oak Homes

Project Residential Development
Glen Parva, Leicester

Title Visibility Splays:
Glenville Avenue

Scale at A3 1:500 | **Drawn by** MJA | **Checked by** | **Date** 04/02/2014

Status | **Project ref** R6711PP | **Drawing no.** TA06 | **Revision**

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