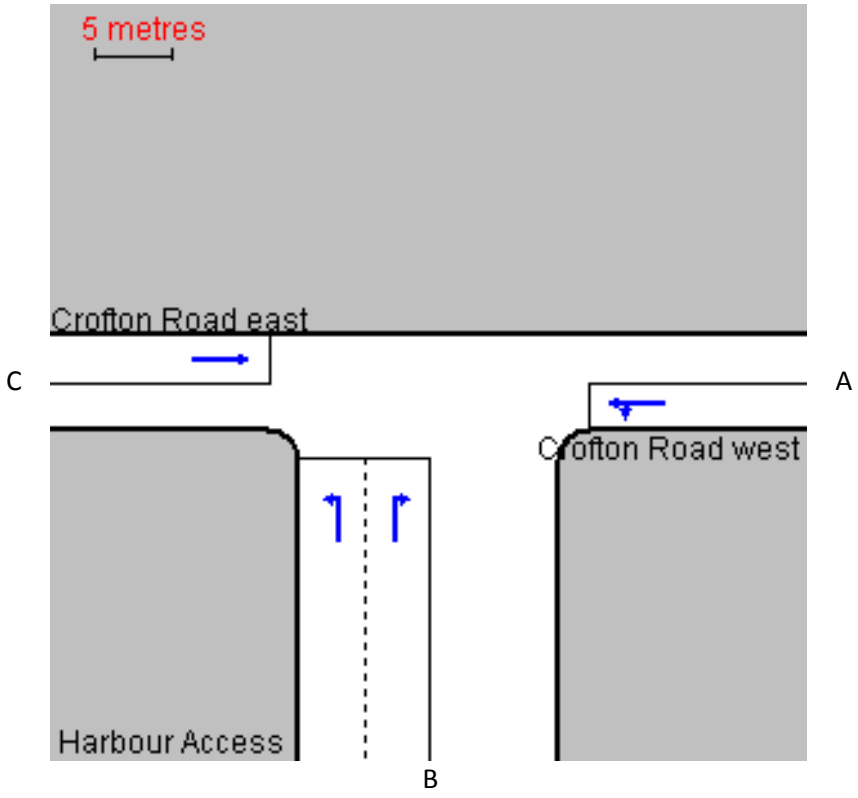
Junction 1



Junction 1 - 2014 - AM - base year

Junction 1 - 2014 - PM - base year

Junction 1 - 2017 - AM - Opening Year - Do-nothing

Junction 1 - 2017 - AM - Opening Year - Do-something

Junction 1 - 2017 - PM - Opening Year - Do-nothing

Junction 1 - 2017 - PM - Opening Year - Do-something

Junction 1 - 2032 - AM - Opening Year - Do-nothing

Junction 1 - 2032 - AM - Opening Year - Do-something

Junction 1 - 2032 - PM - Opening Year - Do-nothing

Junction 1 - 2032 - PM - Opening Year - Do-something

Junction 1 - 2014 - AM - base year

Timing Option: FIXED MODE

Timings are: TIMINGS TO BE OPTIMISED BY OSCADY

Period for Optimisation: 08.15-09.15

Fixed Cycle Time: 120 secs

Optimised Timings below are: DELAY MINIMIZED (see Note 1)

Junction is: WITHIN CAPACITY

Maximum Degree of Saturation (X'): 64.5%

Practical Reserve Capacity of Junction [100(90-X')/X']: 39.6%

Global Effective Green Displacements: START: 1.4

END: 2.9

Data Item	Stage 1	Stage 2	Stage 3
Lanes on Green: Arm A	1		
Arm B		12	
Arm C	1		
Minimum Green Time (Secs)	50.0	20.0	6.0
Optimized Green Time (Secs)	69.0	20.0	6.0
Preceding Interstage	15.0	5.0	5.0
Capacity Maximised Timings (Secs)	69.0	20.0	6.0

Optimised "capacity-maximized" timings (seconds) are derived during the first stage of the optimisation process These timings were calculated for a fixed or maximum cycle time of 120.0 seconds and give a maximum degree of saturation of 64.5 % and practical reserve capacity of the junction of 39.6 % .

Note 1: The "delay-minimized" timings above are for an optimised or fixed cycle time of 120.0 seconds and for demand and sat flow values averaged over the specified optimisation period. They are used to calculate the queues and delays over this period and also the quoted maximum degree of saturation (64.5 %) and practical reserve capacity of the junction (39.6 %) values.

Demand and Saturation Flows

Demand and Saturation Flow over Optimisation Period (08.15-09.15) for Signal Set 1

Arm	Lanes	Movement	Demand		Sat Flow (PCU/Hr)	Degree Of Sat (%)	Reserve Capacity (%)
			(Veh/Hr)	(PCU/Hr)			
A	1	2,3	663.2	701.2	1850.7	64.5	39.6
B	1	2	8.0	8.5	1704.2	2.8	3148.8
	2	1	28.0	29.6	1933.3	8.5	953.1
C	1	3	389.2	411.5	1915.0	36.6	146.1

Junction 1 - 2014 - PM - base year

Timing Option: FIXED MODE

Timings are: TIMINGS TO BE OPTIMISED BY OSCADY

Period for Optimisation: 08.15-09.15

Fixed Cycle Time: 120 secs

Optimised Timings below are: DELAY MINIMIZED (see Note 1)

Junction is: WITHIN CAPACITY

Maximum Degree of Saturation (X'): 64.5%

Practical Reserve Capacity of Junction [100(90-X')/X']: 39.6%

Global Effective Green Displacements: START: 1.4

END: 2.9

Data Item	Stage 1	Stage 2	Stage 3
Lanes on Green: Arm A	1		
Arm B		12	
Arm C	1		
Minimum Green Time (Secs)	50.0	20.0	6.0
Optimized Green Time (Secs)	69.0	20.0	6.0
Preceding Interstage	15.0	5.0	5.0
Capacity Maximised Timings (Secs)	69.0	20.0	6.0

Optimised "capacity-maximized" timings (seconds) are derived during the first stage of the optimisation process These timings were calculated for a fixed or maximum cycle time of 120.0 seconds and give a maximum degree of saturation of 64.5 % and practical reserve capacity of the junction of 39.6 % .

Note 1: The "delay-minimized" timings above are for an optimised or fixed cycle time of 120.0 seconds and for demand and sat flow values averaged over the specified optimisation period. They are used to calculate the queues and delays over this period and also the quoted maximum degree of saturation (64.5 %) and practical reserve capacity of the junction (39.6 %) values.

Demand and Saturation Flows

Demand and Saturation Flow over Optimisation Period (08.15-09.15) for Signal Set 1

Arm	Lanes	Movement	Demand		Sat Flow (PCU/Hr)	Degree Of Sat (%)	Reserve Capacity (%)
			(Veh/Hr)	(PCU/Hr)			
A	1	2 3	663.2	701.2	1850.7	64.5	39.6
B	1	2	8.0	8.5	1704.2	2.8	3148.8
	2	1	28.0	29.6	1933.3	8.5	953.1
C	1	3	389.2	411.5	1915.0	36.6	146.1

Junction 1 - 2017 - AM - Opening Year - Do-nothing

Timing Option: FIXED MODE

Timings are: TIMINGS TO BE OPTIMISED BY OSCADY

Period for Optimisation: 08.15-09.15

Fixed Cycle Time: 120 secs

Optimised Timings below are: DELAY MINIMIZED (see Note 1)

Junction is: WITHIN CAPACITY

Maximum Degree of Saturation (X'): 64.5%

Practical Reserve Capacity of Junction [100(90-X')/X']: 39.6%

Global Effective Green Displacements: START: 1.4

END: 2.9

Data Item	Stage 1	Stage 2	Stage 3
Lanes on Green: Arm A	1		
Arm B		12	
Arm C	1		
Minimum Green Time (Secs)	50.0	20.0	6.0
Optimized Green Time (Secs)	69.0	20.0	6.0
Preceding Interstage	15.0	5.0	5.0
Capacity Maximised Timings (Secs)	69.0	20.0	6.0

Optimised "capacity-maximized" timings (seconds) are derived during the first stage of the optimisation process These timings were calculated for a fixed or maximum cycle time of 120.0 seconds and give a maximum degree of saturation of 64.5 % and practical reserve capacity of the junction of 39.6 % .

Note 1: The "delay-minimized" timings above are for an optimised or fixed cycle time of 120.0 seconds and for demand and sat flow values averaged over the specified optimisation period. They are used to calculate the queues and delays over this period and also the quoted maximum degree of saturation (64.5 %) and practical reserve capacity of the junction (39.6 %) values.

Demand and Saturation Flows

Demand and Saturation Flow over Optimisation Period (08.15-09.15) for Signal Set 1

Arm	Lanes	Movement	Demand		Sat Flow (PCU/Hr)	Degree Of Sat (%)	Reserve Capacity (%)
			(Veh/Hr)	(PCU/Hr)			
A	1	2 3	663.2	701.2	1850.7	64.5	39.6
B	1	2	8.0	8.5	1704.2	2.8	3148.8
	2	1	28.0	29.6	1933.3	8.5	953.1
C	1	3	389.2	411.5	1915.0	36.6	146.1

Junction 1 - 2017 - AM - Opening Year - Do-something

Timing Option: FIXED MODE

Timings are: TIMINGS TO BE OPTIMISED BY OSCADY

Period for Optimisation: 08.15-09.15

Fixed Cycle Time: 120 secs

Optimised Timings below are: DELAY MINIMIZED (see Note 1)

Junction is: WITHIN CAPACITY

Maximum Degree of Saturation (X'): 68.2%

Practical Reserve Capacity of Junction [100(90-X')/X']: 32.0%

Global Effective Green Displacements: START: 1.4

END: 2.9

Data Item	Stage 1	Stage 2	Stage 3
Lanes on Green: Arm A	1		
Arm B		12	
Arm C	1		
Minimum Green Time (Secs)	50.0	20.0	6.0
Optimized Green Time (Secs)	69.0	20.0	6.0
Preceding Interstage	15.0	5.0	5.0
Capacity Maximised Timings (Secs)	69.0	20.0	6.0

Optimised "capacity-maximized" timings (seconds) are derived during the first stage of the optimisation process These timings were calculated for a fixed or maximum cycle time of 120.0 seconds and give a maximum degree of saturation of 68.2 % and practical reserve capacity of the junction of 32.0 % .

Note 1: The "delay-minimized" timings above are for an optimised or fixed cycle time of 120.0 seconds and for demand and sat flow values averaged over the specified optimisation period. They are used to calculate the queues and delays over this period and also the quoted maximum degree of saturation (68.2 %) and practical reserve capacity of the junction (32.0 %) values.

Demand and Saturation Flows

Demand and Saturation Flow over Optimisation Period (08.15-09.15) for Signal Set 1

Arm	Lanes	Movement	Demand		Sat Flow (PCU/Hr)	Degree Of Sat (%)	Reserve Capacity (%)
			(Veh/Hr)	(PCU/Hr)			
A	1	2 3	697.2	737.1	1840.5	68.2	32.0
B	1	2	8.0	8.5	1704.2	2.8	3148.8
	2	1	70.0	74.0	1933.3	21.4	321.2
C	1	3	395.2	417.8	1915.0	37.1	142.3

Junction 1 - 2017 - PM - Opening Year - Do-nothing

Timing Option: FIXED MODE

Timings are: TIMINGS TO BE OPTIMISED BY OSCADY

Period for Optimisation: 16.00-17.00

Fixed Cycle Time: 120 secs

Optimised Timings below are: DELAY MINIMIZED (see Note 1)

Junction is: WITHIN CAPACITY

Maximum Degree of Saturation (X'): 48.6%

Practical Reserve Capacity of Junction [100(90-X')/X']: 85.2%

Global Effective Green Displacements: START: 1.4

END: 2.9

Data Item	Stage 1	Stage 2	Stage 3
Lanes on Green: Arm A	1		
Arm B		12	
Arm C	1		
Minimum Green Time (Secs)	50.0	20.0	6.0
Optimized Green Time (Secs)	69.0	20.0	6.0
Preceding Interstage	15.0	5.0	5.0
Capacity Maximised Timings (Secs)	69.0	20.0	6.0

Optimised "capacity-maximized" timings (seconds) are derived during the first stage of the optimisation process These timings were calculated for a fixed or maximum cycle time of 120.0 seconds and give a maximum degree of saturation of 48.6 % and practical reserve capacity of the junction of 85.2 % .

Note 1: The "delay-minimized" timings above are for an optimised or fixed cycle time of 120.0 seconds and for demand and sat flow values averaged over the specified optimisation period. They are used to calculate the queues and delays over this period and also the quoted maximum degree of saturation (48.6 %) and practical reserve capacity of the junction (85.2 %) values.

Demand and Saturation Flows

Demand and Saturation Flow over Optimisation Period (16.00-17.00) for Signal Set 1

Arm	Lanes	Movement	Demand		Sat Flow (PCU/Hr)	Degree Of Sat (%)	Reserve Capacity (%)
			(Veh/Hr)	(PCU/Hr)			
A	1	2 3	510.0	539.2	1888.3	48.6	85.2
B	1	2	9.2	9.7	1704.2	3.2	2725.0
	2	1	98.0	103.6	1933.3	29.9	200.9
C	1	3	472.0	499.0	1915.0	44.4	102.9

Junction 1 - 2017 - PM - Opening Year - Do-something

Timing Option: FIXED MODE

Timings are: TIMINGS TO BE OPTIMISED BY OSCADY

Period for Optimisation: 16.00-17.00

Fixed Cycle Time: 120 secs

Optimised Timings below are: DELAY MINIMIZED (see Note 1)

Junction is: WITHIN CAPACITY

Maximum Degree of Saturation (X'): 54.1%

Practical Reserve Capacity of Junction [100(90-X')/X']: 66.3%

Global Effective Green Displacements: START: 1.4

END: 2.9

Data Item	Stage 1	Stage 2	Stage 3
Lanes on Green: Arm A	1		
Arm B		12	
Arm C	1		
Minimum Green Time (Secs)	50.0	20.0	6.0
Optimized Green Time (Secs)	69.0	20.0	6.0
Preceding Interstage	15.0	5.0	5.0
Capacity Maximised Timings (Secs)	69.0	20.0	6.0

Optimised "capacity-maximized" timings (seconds) are derived during the first stage of the optimisation process These timings were calculated for a fixed or maximum cycle time of 120.0 seconds and give a maximum degree of saturation of 54.1 % and practical reserve capacity of the junction of 66.3 % .

Note 1: The "delay-minimized" timings above are for an optimised or fixed cycle time of 120.0 seconds and for demand and sat flow values averaged over the specified optimisation period. They are used to calculate the queues and delays over this period and also the quoted maximum degree of saturation (54.1 %) and practical reserve capacity of the junction (66.3 %) values.

Demand and Saturation Flows

Demand and Saturation Flow over Optimisation Period (16.00-17.00) for Signal Set 1

Arm	Lanes	Movement	Demand		Sat Flow (PCU/Hr)	Degree Of Sat (%)	Reserve Capacity (%)
			(Veh/Hr)	(PCU/Hr)			
A	1	2 3	559.2	591.2	1859.1	54.1	66.3
B	1	2	9.2	9.7	1704.2	3.2	2725.0
	2	1	126.0	133.2	1933.3	38.5	134.0
C	1	3	472.0	499.0	1915.0	44.4	102.9

Junction 1 - 2032 - AM - Assessment Year - Do-nothing

Timing Option: FIXED MODE

Timings are: TIMINGS TO BE OPTIMISED BY OSCADY

Period for Optimisation: 08.15-09.15

Fixed Cycle Time: 120 secs

Optimised Timings below are: DELAY MINIMIZED (see Note 1)

Junction is: WITHIN CAPACITY

Maximum Degree of Saturation (X'): 76.4%

Practical Reserve Capacity of Junction [100(90-X')/X']: 17.8%

Global Effective Green Displacements: START: 1.4

END: 2.9

Data Item	Stage 1	Stage 2	Stage 3
Lanes on Green: Arm A	1		
Arm B		12	
Arm C	1		
Minimum Green Time (Secs)	50.0	20.0	6.0
Optimized Green Time (Secs)	69.0	20.0	6.0
Preceding Interstage	15.0	5.0	5.0
Capacity Maximised Timings (Secs)	69.0	20.0	6.0

Optimised "capacity-maximized" timings (seconds) are derived during the first stage of the optimisation process These timings were calculated for a fixed or maximum cycle time of 120.0 seconds and give a maximum degree of saturation of 76.4 % and practical reserve capacity of the junction of 17.8 % .

Note 1: The "delay-minimized" timings above are for an optimised or fixed cycle time of 120.0 seconds and for demand and sat flow values averaged over the specified optimisation period. They are used to calculate the queues and delays over this period and also the quoted maximum degree of saturation (76.4 %) and practical reserve capacity of the junction (17.8 %) values.

Demand and Saturation Flows

Demand and Saturation Flow over Optimisation Period (08.15-09.15) for Signal Set 1

Arm	Lanes	Movement	Demand		Sat Flow (PCU/Hr)	Degree Of Sat (%)	Reserve Capacity (%)
			(Veh/Hr)	(PCU/Hr)			
A	1	2 3	779.2	823.8	1834.9	76.4	17.8
B	1	2	12.0	12.7	1704.2	4.2	2065.9
	2	1	116.0	122.6	1933.3	35.4	154.2
C	1	3	439.2	464.4	1915.0	41.3	118.1

Junction 1 - 2032 - AM - Assessment Year - Do-something

Timing Option: FIXED MODE

Timings are: TIMINGS TO BE OPTIMISED BY OSCADY

Period for Optimisation: 08.15-09.15

Fixed Cycle Time: 120 secs

Optimised Timings below are: DELAY MINIMIZED (see Note 1)

Junction is: WITHIN CAPACITY

Maximum Degree of Saturation (X'): 79.4%

Practical Reserve Capacity of Junction [100(90-X')/X']: 13.4%

Global Effective Green Displacements: START: 1.4

END: 2.9

Data Item	Stage 1	Stage 2	Stage 3
Lanes on Green: Arm A	1		
Arm B		12	
Arm C	1		
Minimum Green Time (Secs)	50.0	20.0	6.0
Optimized Green Time (Secs)	69.0	20.0	6.0
Preceding Interstage	15.0	5.0	5.0
Capacity Maximised Timings (Secs)	69.0	20.0	6.0

Optimised "capacity-maximized" timings (seconds) are derived during the first stage of the optimisation process These timings were calculated for a fixed or maximum cycle time of 120.0 seconds and give a maximum degree of saturation of 79.4 % and practical reserve capacity of the junction of 13.4 % .

Note 1: The "delay-minimized" timings above are for an optimised or fixed cycle time of 120.0 seconds and for demand and sat flow values averaged over the specified optimisation period. They are used to calculate the queues and delays over this period and also the quoted maximum degree of saturation (79.4 %) and practical reserve capacity of the junction (13.4 %) values.

Demand and Saturation Flows

Demand and Saturation Flow over Optimisation Period (08.15-09.15) for Signal Set 1

Arm	Lanes	Movement	Demand		Sat Flow (PCU/Hr)	Degree Of Sat (%)	Reserve Capacity (%)
			(Veh/Hr)	(PCU/Hr)			
A	1	2 3	805.2	851.3	1826.1	79.4	13.4
B	1	2	12.0	12.7	1704.2	4.2	2065.9
	2	1	161.2	170.4	1933.3	49.2	82.9
C	1	3	439.2	464.4	1915.0	41.3	118.1

Junction 1 - 2032 - PM - Assessment Year - Do-nothing

Timing Option: FIXED MODE

Timings are: TIMINGS TO BE OPTIMISED BY OSCADY

Period for Optimisation: 16.00-17.00

Fixed Cycle Time: 120 secs

Optimised Timings below are: DELAY MINIMIZED (see Note 1)

Junction is: WITHIN CAPACITY

Maximum Degree of Saturation (X'): 59.3%

Practical Reserve Capacity of Junction [100(90-X')/X']: 51.8%

Global Effective Green Displacements: START: 1.4

END: 2.9

Data Item	Stage 1	Stage 2	Stage 3
Lanes on Green: Arm A	1		
Arm B		12	
Arm C	1		
Minimum Green Time (Secs)	50.0	20.0	6.0
Optimized Green Time (Secs)	69.0	20.0	6.0
Preceding Interstage	15.0	5.0	5.0
Capacity Maximised Timings (Secs)	69.0	20.0	6.0

Optimised "capacity-maximized" timings (seconds) are derived during the first stage of the optimisation process These timings were calculated for a fixed or maximum cycle time of 120.0 seconds and give a maximum degree of saturation of 59.3 % and practical reserve capacity of the junction of 51.8 % .

Note 1: The "delay-minimized" timings above are for an optimised or fixed cycle time of 120.0 seconds and for demand and sat flow values averaged over the specified optimisation period. They are used to calculate the queues and delays over this period and also the quoted maximum degree of saturation (59.3 %) and practical reserve capacity of the junction (51.8 %) values.

Demand and Saturation Flows

Demand and Saturation Flow over Optimisation Period (16.00-17.00) for Signal Set 1

Arm	Lanes	Movement	Demand		Sat Flow (PCU/Hr)	Degree Of Sat (%)	Reserve Capacity (%)
			(Veh/Hr)	(PCU/Hr)			
A	1	2 3	611.2	646.2	1855.5	59.3	51.8
B	1	2	16.0	16.9	1704.2	5.5	1524.4
	2	1	158.0	167.1	1933.3	48.2	86.6
C	1	3	511.2	540.5	1915.0	48.0	87.3

Junction 1 - 2032 - PM - Assessment Year - Do-something

Timing Option: FIXED MODE

Timings are: TIMINGS TO BE OPTIMISED BY OSCADY

Period for Optimisation: 16.00-17.00

Fixed Cycle Time: 120 secs

Optimised Timings below are: DELAY MINIMIZED (see Note 1)

Junction is: WITHIN CAPACITY

Maximum Degree of Saturation (X'): 65.1%

Practical Reserve Capacity of Junction [100(90-X')/X']: 38.3%

Global Effective Green Displacements: START: 1.4

END: 2.9

Data Item	Stage 1	Stage 2	Stage 3
Lanes on Green: Arm A	1		
Arm B		12	
Arm C	1		
Minimum Green Time (Secs)	50.0	20.0	6.0
Optimized Green Time (Secs)	69.0	20.0	6.0
Preceding Interstage	15.0	5.0	5.0
Capacity Maximised Timings (Secs)	69.0	20.0	6.0

Optimised "capacity-maximized" timings (seconds) are derived during the first stage of the optimisation process These timings were calculated for a fixed or maximum cycle time of 120.0 seconds and give a maximum degree of saturation of 65.1 % and practical reserve capacity of the junction of 38.3 % .

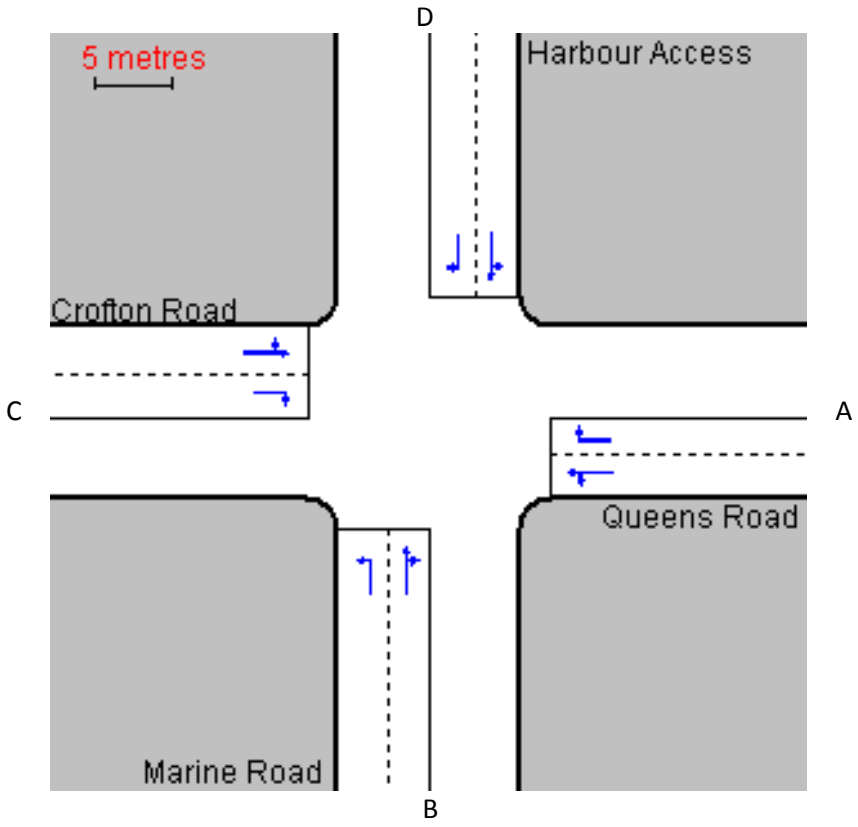
Note 1: The "delay-minimized" timings above are for an optimised or fixed cycle time of 120.0 seconds and for demand and sat flow values averaged over the specified optimisation period. They are used to calculate the queues and delays over this period and also the quoted maximum degree of saturation (65.1 %) and practical reserve capacity of the junction (38.3 %) values.

Demand and Saturation Flows

Demand and Saturation Flow over Optimisation Period (16.00-17.00) for Signal Set 1

Arm	Lanes	Movement	Demand		Sat Flow (PCU/Hr)	Degree Of Sat (%)	Reserve Capacity (%)
			(Veh/Hr)	(PCU/Hr)			
A	1	2 3	662.4	700.4	1832.5	65.1	38.3
B	1	2	16.0	16.9	1704.2	5.5	1524.4
	2	1	188.0	198.8	1933.3	57.4	56.8
C	1	3	511.2	540.5	1915.0	48.0	87.3

Junction 3



Junction 3 - 2014 - AM - base year

Junction 3 - 2014 - PM - base year

Junction 3 - 2017 - AM - Opening Year - Do-nothing

Junction 3 - 2017 - AM - Opening Year - Do-something

Junction 3 - 2017 - PM - Opening Year - Do-nothing

Junction 3 - 2017 - PM - Opening Year - Do-something

Junction 3 - 2032 - AM - Opening Year - Do-nothing

Junction 3 - 2032 - AM - Opening Year - Do-something

Junction 3 - 2032 - PM - Opening Year - Do-nothing

Junction 3 - 2032 - PM - Opening Year - Do-something

Junction 3 - 2014 - AM - base year

Timing Option: FIXED MODE

Timings are: TIMINGS TO BE OPTIMISED BY OSCADY

Period for Optimisation: 08.15-09.15

Fixed Cycle Time: 72 secs

Optimised Timings below are: DELAY MINIMIZED (see Note 1)

Junction is: WITHIN CAPACITY

Maximum Degree of Saturation (X'): 44.1%

Practical Reserve Capacity of Junction [100(90-X')/X']: 104.3%

Global Effective Green Displacements: START: 0.1

END: 4

Data Item	Stage 1	Stage 2	Stage 3	Stage 4
Lanes on Green: Arm A		12		
Arm B	1		2	
Arm C	12	12		
Arm D			12	
Minimum Green Time (Secs)	7.0	20.0	6.0	6.0
Optimized Green Time (Secs)	7.0	33.0	6.0	6.0
Preceding Interstage	10.0	3.0	4.0	3.0
Capacity Maximised Timings (Secs)	7.0	33.0	6.0	6.0

Optimised "capacity-maximized" timings (seconds) are derived during the first stage of the optimisation process These timings were calculated for a fixed or maximum cycle time of 72.0 seconds and give a maximum degree of saturation of 44.1 % and practical reserve capacity of the junction of 104.3 % .

Note 1: The "delay-minimized" timings above are for an optimised or fixed cycle time of 72.0 seconds and for demand and sat flow values averaged over the specified optimisation period. They are used to calculate the queues and delays over this period and also the quoted maximum degree of saturation (44.1 %) and practical reserve capacity of the junction (104.3 %) values.

Demand and Saturation Flow over Optimisation Period (08.15-09.15) for Signal Set 1

Arm	Lanes	Movement	Demand		Sat Flow (PCU/Hr)	Degree Of Sat (%)	Reserve Capacity (%)
			(Veh/Hr)	(PCU/Hr)			
A	1	2 3	395.2	417.8	1850.6	44.1	104.3
	2	1	41.2	43.6	1102.3	7.7	1067.2
B	1	2	72.0	76.1	1682.6	29.9	201.2
	2	3 1	57.2	60.5	1792.5	24.5	266.8
C	1	2 3	270.0	285.5	1898.1	23.1	289.8
	2	1	224.0	236.8	893.0	40.7	121.0
D	1	2 3	32.0	33.8	1813.0	13.6	563.1
	2	1	3.2	3.4	1770.9	1.4	6377.4

Junction 3 - 2014 - PM - base year

Timing Option: FIXED MODE

Timings are: TIMINGS TO BE OPTIMISED BY OSCADY

Period for Optimisation: 16.00-17.00

Fixed Cycle Time: 72 secs

Optimised Timings below are: DELAY MINIMIZED (see Note 1)

Junction is: WITHIN CAPACITY

Maximum Degree of Saturation (X'): 42.0%

Practical Reserve Capacity of Junction [100(90-X')/X']: 114.4%

Global Effective Green Displacements: START: 0.1

END: 4

Data Item	Stage 1	Stage 2	Stage 3	Stage 4
Lanes on Green: Arm A		12		
Arm B	1		2	
Arm C	12	12		
Arm D			12	
Minimum Green Time (Secs)	7.0	20.0	6.0	6.0
Optimized Green Time (Secs)	12.4	27.6	6.0	6.0
Preceding Interstage	10.0	3.0	4.0	3.0
Capacity Maximised Timings (Secs)	15.0	24.0	7.0	6.0

Optimised "capacity-maximized" timings (seconds) are derived during the first stage of the optimisation process These timings were calculated for a fixed or maximum cycle time of 72.0 seconds and give a maximum degree of saturation of 36.3 % and practical reserve capacity of the junction of 147.9 % .

Note 1: The "delay-minimized" timings above are for an optimised or fixed cycle time of 72.0 seconds and for demand and sat flow values averaged over the specified optimisation period. They are used to calculate the queues and delays over this period and also the quoted maximum degree of saturation (42.0 %) and practical reserve capacity of the junction (114.4 %) values.

Demand and Saturation Flow over Optimisation Period (16.00-17.00) for Signal Set 1

Arm	Lanes	Movement	Demand		Sat Flow (PCU/Hr)	Degree Of Sat (%)	Reserve Capacity (%)
			(Veh/Hr)	(PCU/Hr)			
A	1	2 3	253.2	267.7	1873.7	32.7	175.6
	2	1	65.2	68.9	955.2	16.5	445.7
B	1	2	151.2	159.9	1682.6	42.0	114.4
	2	3 1	81.2	85.9	1616.8	38.6	133.0
C	1	2 3	332.4	351.4	1898.6	28.4	216.7
	2	1	187.2	197.9	1117.1	27.2	230.9
D	1	2 3	63.2	66.8	1811.8	26.8	235.5
	2	1	20.0	21.1	1832.1	8.4	972.2

Junction 3 - 2017 - AM - Opening Year - Do-nothing

Timing Option: FIXED MODE

Timings are: TIMINGS TO BE OPTIMISED BY OSCADY

Period for Optimisation: 08.15-09.15

Fixed Cycle Time: 72 secs

Optimised Timings below are: DELAY MINIMIZED (see Note 1)

Junction is: WITHIN CAPACITY

Maximum Degree of Saturation (X'): 44.7%

Practical Reserve Capacity of Junction [100(90-X')/X']: 101.2%

Global Effective Green Displacements: START: 0.1

END: 4

Data Item	Stage 1	Stage 2	Stage 3	Stage 4
Lanes on Green: Arm A		12		
Arm B	1		2	
Arm C	12	12		
Arm D			12	
Minimum Green Time (Secs)	7.0	20.0	6.0	6.0
Optimized Green Time (Secs)	7.0	33.0	6.0	6.0
Preceding Interstage	10.0	3.0	4.0	3.0
Capacity Maximised Timings (Secs)	7.0	33.0	6.0	6.0

Optimised "capacity-maximized" timings (seconds) are derived during the first stage of the optimisation process These timings were calculated for a fixed or maximum cycle time of 72.0 seconds and give a maximum degree of saturation of 44.7 % and practical reserve capacity of the junction of 101.2 % .

Note 1: The "delay-minimized" timings above are for an optimised or fixed cycle time of 72.0 seconds and for demand and sat flow values averaged over the specified optimisation period. They are used to calculate the queues and delays over this period and also the quoted maximum degree of saturation (44.7 %) and practical reserve capacity of the junction (101.2 %) values.

Demand and Saturation Flow over Optimisation Period (08.15-09.15) for Signal Set 1

Arm	Lanes	Movement	Demand		Sat Flow (PCU/Hr)	Degree Of Sat (%)	Reserve Capacity (%)
			(Veh/Hr)	(PCU/Hr)			
A	1	2 3	401.2	424.2	1850.7	44.7	101.2
	2	1	42.0	44.4	1091.0	7.9	1033.3
B	1	2	73.2	77.4	1682.6	30.4	196.2
	2	3 1	57.2	60.5	1792.5	24.5	266.8
C	1	2 3	274.0	289.7	1898.4	23.4	284.2
	2	1	227.2	240.2	882.2	41.8	115.3
D	1	2 3	32.0	33.8	1813.0	13.6	563.1
	2	1	3.2	3.4	1770.9	1.4	6377.4

Junction 3 - 2017 - AM - Opening Year - Do-something

Timing Option: FIXED MODE

Timings are: TIMINGS TO BE OPTIMISED BY OSCADY

Period for Optimisation: 08.15-09.15

Fixed Cycle Time: 72 secs

Optimised Timings below are: DELAY MINIMIZED (see Note 1)

Junction is: WITHIN CAPACITY

Maximum Degree of Saturation (X'): 44.7%

Practical Reserve Capacity of Junction [100(90-X')/X']: 101.2%

Global Effective Green Displacements: START: 0.1

END: 4

Data Item	Stage 1	Stage 2	Stage 3	Stage 4
Lanes on Green: Arm A		12		
Arm B	1		2	
Arm C	12	12		
Arm D			12	
Minimum Green Time (Secs)	7.0	20.0	6.0	6.0
Optimized Green Time (Secs)	7.0	33.0	6.0	6.0
Preceding Interstage	10.0	3.0	4.0	3.0
Capacity Maximised Timings (Secs)	7.0	33.0	6.0	6.0

Optimised "capacity-maximized" timings (seconds) are derived during the first stage of the optimisation process These timings were calculated for a fixed or maximum cycle time of 72.0 seconds and give a maximum degree of saturation of 44.7 % and practical reserve capacity of the junction of 101.2 % .

Note 1: The "delay-minimized" timings above are for an optimised or fixed cycle time of 72.0 seconds and for demand and sat flow values averaged over the specified optimisation period. They are used to calculate the queues and delays over this period and also the quoted maximum degree of saturation (44.7 %) and practical reserve capacity of the junction (101.2 %) values.

Demand and Saturation Flow over Optimisation Period (08.15-09.15) for Signal Set 1

Arm	Lanes	Movement	Demand		Sat Flow (PCU/Hr)	Degree Of Sat (%)	Reserve Capacity (%)
			(Veh/Hr)	(PCU/Hr)			
A	1	2 3	401.2	424.2	1850.7	44.7	101.2
	2	1	42.0	44.4	1091.0	7.9	1033.3
B	1	2	73.2	77.4	1682.6	30.4	196.2
	2	3 1	72.4	76.5	1640.7	33.9	165.2
C	1	2 3	274.0	289.7	1898.4	23.4	284.2
	2	1	227.2	240.2	882.2	41.8	115.3
D	1	2 3	64.0	67.7	1829.3	26.9	234.5
	2	1	3.2	3.4	1560.9	1.6	5609.1

Junction 3 - 2017 - PM - Opening Year - Do-nothing

Timing Option: FIXED MODE

Timings are: TIMINGS TO BE OPTIMISED BY OSCADY

Period for Optimisation: 16.00-17.00

Fixed Cycle Time: 72 secs

Optimised Timings below are: DELAY MINIMIZED (see Note 1)

Junction is: WITHIN CAPACITY

Maximum Degree of Saturation (X'): 43.9%

Practical Reserve Capacity of Junction [100(90-X')/X']: 104.9%

Global Effective Green Displacements: START: 0.1

END: 4

Data Item	Stage 1	Stage 2	Stage 3	Stage 4
Lanes on Green: Arm A		12		
Arm B	1		2	
Arm C	12	12		
Arm D			12	
Minimum Green Time (Secs)	7.0	20.0	6.0	6.0
Optimized Green Time (Secs)	11.9	28.1	6.0	6.0
Preceding Interstage	10.0	3.0	4.0	3.0
Capacity Maximised Timings (Secs)	13.0	27.0	6.0	6.0

Optimised "capacity-maximized" timings (seconds) are derived during the first stage of the optimisation process These timings were calculated for a fixed or maximum cycle time of 72.0 seconds and give a maximum degree of saturation of 40.9 % and practical reserve capacity of the junction of 120.2 % .

Note 1: The "delay-minimized" timings above are for an optimised or fixed cycle time of 72.0 seconds and for demand and sat flow values averaged over the specified optimisation period. They are used to calculate the queues and delays over this period and also the quoted maximum degree of saturation (43.9 %) and practical reserve capacity of the junction (104.9 %) values.

Demand and Saturation Flow over Optimisation Period (16.00-17.00) for Signal Set 1

Arm	Lanes	Movement	Demand		Sat Flow (PCU/Hr)	Degree Of Sat (%)	Reserve Capacity (%)
			(Veh/Hr)	(PCU/Hr)			
A	1	2 3	304.0	321.4	1835.2	39.4	128.5
	2	1	19.2	20.3	941.5	4.8	1756.3
B	1	2	153.2	162.0	1682.6	43.9	104.9
	2	3 1	82.0	86.7	1607.3	39.2	129.4
C	1	2 3	337.2	356.5	1898.8	28.8	212.2
	2	1	190.0	200.9	1108.1	27.8	223.4
D	1	2 3	64.0	67.7	1813.0	27.1	231.6
	2	1	20.0	21.1	1832.1	8.4	972.2

Junction 3 - 2017 - PM - Opening Year - Do-something

Timing Option: FIXED MODE

Timings are: TIMINGS TO BE OPTIMISED BY OSCADY

Period for Optimisation: 16.00-17.00

Fixed Cycle Time: 72 secs

Optimised Timings below are: DELAY MINIMIZED (see Note 1)

Junction is: WITHIN CAPACITY

Maximum Degree of Saturation (X'): 51.1%

Practical Reserve Capacity of Junction [100(90-X')/X']: 76.0%

Global Effective Green Displacements: START: 0.1

END: 4

Data Item	Stage 1	Stage 2	Stage 3	Stage 4
Lanes on Green: Arm A		12		
Arm B	1		2	
Arm C	12	12		
Arm D			12	
Minimum Green Time (Secs)	7.0	20.0	6.0	6.0
Optimized Green Time (Secs)	11.3	26.7	8.0	6.0
Preceding Interstage	10.0	3.0	4.0	3.0
Capacity Maximised Timings (Secs)	12.0	25.0	9.0	6.0

Optimised "capacity-maximized" timings (seconds) are derived during the first stage of the optimisation process These timings were calculated for a fixed or maximum cycle time of 72.0 seconds and give a maximum degree of saturation of 44.1 % and practical reserve capacity of the junction of 104.1 % .

Note 1: The "delay-minimized" timings above are for an optimised or fixed cycle time of 72.0 seconds and for demand and sat flow values averaged over the specified optimisation period. They are used to calculate the queues and delays over this period and also the quoted maximum degree of saturation (51.1 %) and practical reserve capacity of the junction (76.0 %) values.

Demand and Saturation Flow over Optimisation Period (16.00-17.00) for Signal Set 1

Arm	Lanes	Movement	Demand (Veh/Hr)	Demand (PCU/Hr)	Sat Flow (PCU/Hr)	Degree Of Sat (%)	Reserve Capacity (%)
A	1	2 3	304.0	321.4	1835.2	41.2	118.3
	2	1	28.0	29.6	921.9	7.6	1090.7
B	1	2	153.2	162.0	1682.6	45.5	97.7
	2	3 1	117.2	123.9	1468.3	51.1	76.0
C	1	2 3	337.2	356.5	1898.8	30.1	199.0
	2	1	190.0	200.9	1092.7	29.5	205.4
D	1	2 3	89.2	94.3	1840.7	31.0	189.9
	2	1	20.0	21.1	1407.0	9.1	888.5

Junction 3 - 2032 - AM - Opening Year - Do-nothing

Timing Option: FIXED MODE

Timings are: TIMINGS TO BE OPTIMISED BY OSCADY

Period for Optimisation: 08.15-09.15

Fixed Cycle Time: 72 secs

Optimised Timings below are: DELAY MINIMIZED (see Note 1)

Junction is: WITHIN CAPACITY

Maximum Degree of Saturation (X'): 49.4%

Practical Reserve Capacity of Junction [100(90-X')/X']: 82.1%

Global Effective Green Displacements: START: 0.1

END: 4

Data Item	Stage 1	Stage 2	Stage 3	Stage 4
Lanes on Green: Arm A		12		
Arm B	1		2	
Arm C	12	12		
Arm D			12	
Minimum Green Time (Secs)	7.0	20.0	6.0	6.0
Optimized Green Time (Secs)	7.0	33.0	6.0	6.0
Preceding Interstage	10.0	3.0	4.0	3.0
Capacity Maximised Timings (Secs)	7.0	33.0	6.0	6.0

Optimised "capacity-maximized" timings (seconds) are derived during the first stage of the optimisation process These timings were calculated for a fixed or maximum cycle time of 72.0 seconds and give a maximum degree of saturation of 49.4 % and practical reserve capacity of the junction of 82.1 % .

Note 1: The "delay-minimized" timings above are for an optimised or fixed cycle time of 72.0 seconds and for demand and sat flow values averaged over the specified optimisation period. They are used to calculate the queues and delays over this period and also the quoted maximum degree of saturation (49.4 %) and practical reserve capacity of the junction (82.1 %) values.

Demand and Saturation Flow over Optimisation Period (08.15-09.15) for Signal Set 1

Arm	Lanes	Movement	Demand		Sat Flow (PCU/Hr)	Degree Of Sat (%)	Reserve Capacity (%)
			(Veh/Hr)	(PCU/Hr)			
A	1	2 3	443.2	468.6	1850.4	49.4	82.1
	2	1	60.0	63.4	1013.8	12.2	637.1
B	1	2	78.0	82.5	1682.6	32.4	178.0
	2	3 1	75.2	79.5	1713.0	33.8	166.6
C	1	2 3	311.2	329.0	1892.0	26.7	237.1
	2	1	244.0	258.0	815.6	48.6	85.3
D	1	2 3	59.2	62.6	1796.6	25.3	255.2
	2	1	8.0	8.5	1591.0	3.9	2227.7

Junction 3 - 2032 - AM - Opening Year - Do-something

Timing Option: FIXED MODE

Timings are: TIMINGS TO BE OPTIMISED BY OSCADY

Period for Optimisation: 08.15-09.15

Fixed Cycle Time: 72 secs

Optimised Timings below are: DELAY MINIMIZED (see Note 1)

Junction is: WITHIN CAPACITY

Maximum Degree of Saturation (X'): 49.3%

Practical Reserve Capacity of Junction [100(90-X')/X']: 82.7%

Global Effective Green Displacements: START: 0.1

END: 4

Data Item	Stage 1	Stage 2	Stage 3	Stage 4
Lanes on Green: Arm A		12		
Arm B	1		2	
Arm C	12	12		
Arm D			12	
Minimum Green Time (Secs)	7.0	20.0	6.0	6.0
Optimized Green Time (Secs)	7.0	33.0	6.0	6.0
Preceding Interstage	10.0	3.0	4.0	3.0
Capacity Maximised Timings (Secs)	7.0	33.0	6.0	6.0

Optimised "capacity-maximized" timings (seconds) are derived during the first stage of the optimisation process These timings were calculated for a fixed or maximum cycle time of 72.0 seconds and give a maximum degree of saturation of 49.3 % and practical reserve capacity of the junction of 82.7 % .

Note 1: The "delay-minimized" timings above are for an optimised or fixed cycle time of 72.0 seconds and for demand and sat flow values averaged over the specified optimisation period. They are used to calculate the queues and delays over this period and also the quoted maximum degree of saturation (49.3 %) and practical reserve capacity of the junction (82.7 %) values.

Demand and Saturation Flow over Optimisation Period (08.15-09.15) for Signal Set 1

Arm	Lanes	Movement	Demand		Sat Flow (PCU/Hr)	Degree Of Sat (%)	Reserve Capacity (%)
			(Veh/Hr)	(PCU/Hr)			
A	1	2 3	442.0	467.3	1851.0	49.3	82.7
	2	1	60.0	63.4	1013.8	12.2	637.1
B	1	2	78.0	82.5	1682.6	32.4	178.0
	2	3 1	91.2	96.4	1536.6	45.6	97.2
C	1	2 3	311.2	329.0	1892.0	26.7	237.1
	2	1	244.0	258.0	815.6	48.6	85.3
D	1	2 3	94.4	99.8	1813.6	40.0	124.9
	2	1	8.0	8.5	1348.0	4.6	1872.2

Junction 3 - 2032 - PM - Opening Year - Do-nothing

Timing Option: FIXED MODE

Timings are: TIMINGS TO BE OPTIMISED BY OSCADY

Period for Optimisation: 16.00-17.00

Fixed Cycle Time: 72 secs

Optimised Timings below are: DELAY MINIMIZED (see Note 1)

Junction is: WITHIN CAPACITY

Maximum Degree of Saturation (X'): 48.4%

Practical Reserve Capacity of Junction [100(90-X')/X']: 85.8%

Global Effective Green Displacements: START: 0.1

END: 4

Data Item	Stage 1	Stage 2	Stage 3	Stage 4
Lanes on Green: Arm A		12		
Arm B	1		2	
Arm C	12	12		
Arm D			12	
Minimum Green Time (Secs)	7.0	20.0	6.0	6.0
Optimized Green Time (Secs)	11.7	27.3	7.0	6.0
Preceding Interstage	10.0	3.0	4.0	3.0
Capacity Maximised Timings (Secs)	13.0	26.0	7.0	6.0

Optimised "capacity-maximized" timings (seconds) are derived during the first stage of the optimisation process These timings were calculated for a fixed or maximum cycle time of 72.0 seconds and give a maximum degree of saturation of 45.1 % and practical reserve capacity of the junction of 99.8 % .

Note 1: The "delay-minimized" timings above are for an optimised or fixed cycle time of 72.0 seconds and for demand and sat flow values averaged over the specified optimisation period. They are used to calculate the queues and delays over this period and also the quoted maximum degree of saturation (48.4 %) and practical reserve capacity of the junction (85.8 %) values.

Demand and Saturation Flow over Optimisation Period (16.00-17.00) for Signal Set 1

Arm	Lanes	Movement	Demand		Sat Flow (PCU/Hr)	Degree Of Sat (%)	Reserve Capacity (%)
			(Veh/Hr)	(PCU/Hr)			
A	1	2 3	326.4	345.1	1835.0	43.4	107.6
	2	1	33.2	35.1	873.3	9.3	871.4
B	1	2	164.0	173.4	1682.6	47.6	89.3
	2	3 1	94.0	99.4	1359.9	48.4	85.8
C	1	2 3	369.2	390.4	1895.6	32.3	178.8
	2	1	204.0	215.7	1062.6	31.8	182.9
D	1	2 3	102.0	107.8	1813.6	39.4	128.3
	2	1	28.0	29.6	1748.6	11.2	702.0

Junction 3 - 2032 - PM - Opening Year - Do-something

Timing Option: FIXED MODE

Timings are: TIMINGS TO BE OPTIMISED BY OSCADY

Period for Optimisation: 16.00-17.00

Fixed Cycle Time: 72 secs

Optimised Timings below are: DELAY MINIMIZED (see Note 1)

Junction is: WITHIN CAPACITY

Maximum Degree of Saturation (X'): 54.5%

Practical Reserve Capacity of Junction [100(90-X')/X']: 65.0%

Global Effective Green Displacements: START: 0.1

END: 4

Data Item	Stage 1	Stage 2	Stage 3	Stage 4
Lanes on Green: Arm A		12		
Arm B	1		2	
Arm C	12	12		
Arm D			12	
Minimum Green Time (Secs)	7.0	20.0	6.0	6.0
Optimized Green Time (Secs)	11.0	25.2	9.8	6.0
Preceding Interstage	10.0	3.0	4.0	3.0
Capacity Maximised Timings (Secs)	11.0	24.0	11.0	6.0

Optimised "capacity-maximized" timings (seconds) are derived during the first stage of the optimisation process These timings were calculated for a fixed or maximum cycle time of 72.0 seconds and give a maximum degree of saturation of 48.6 % and practical reserve capacity of the junction of 85.3 % .

Note 1: The "delay-minimized" timings above are for an optimised or fixed cycle time of 72.0 seconds and for demand and sat flow values averaged over the specified optimisation period. They are used to calculate the queues and delays over this period and also the quoted maximum degree of saturation (54.5 %) and practical reserve capacity of the junction (65.0 %) values.

Demand and Saturation Flow over Optimisation Period (16.00-17.00) for Signal Set 1

Arm	Lanes	Movement	Demand		Sat Flow	Degree Of Sat	Reserve Capacity
			(Veh/Hr)	(PCU/Hr)	(PCU/Hr)	(%)	(%)
A	1	2 3	326.4	345.1	1835.0	46.5	93.4
	2	1	43.2	45.7	831.7	13.6	562.2
B	1	2	164.0	173.4	1682.6	49.7	81.0
	2	3 1	131.2	138.7	1338.4	54.5	65.0
C	1	2 3	369.2	390.4	1895.6	34.4	161.7
	2	1	204.0	215.7	1030.2	35.0	157.4
D	1	2 3	129.2	136.6	1834.1	39.2	129.6
	2	1	28.0	29.6	1346.7	11.6	678.0