

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.03	8.13	0.0	A	11	17
C-AB	0.00	5.99	0.0	A	2	3
C-A					5	7
A-B					38	56
A-C					20	30

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	9	2	459	0.020	9	0.0	0.0	7.992	A
C-AB	2	0.38	609	0.002	1	0.0	0.0	5.930	A
C-A	4	0.94			4				
A-B	31	8			31				
A-C	17	4			17				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	3	458	0.024	11	0.0	0.0	8.049	A
C-AB	2	0.45	607	0.003	2	0.0	0.0	5.954	A
C-A	4	1			4				
A-B	37	9			37				
A-C	20	5			20				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	3	456	0.029	13	0.0	0.0	8.126	A
C-AB	2	0.55	604	0.004	2	0.0	0.0	5.988	A
C-A	6	1			6				
A-B	45	11			45				
A-C	24	6			24				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	3	456	0.029	13	0.0	0.0	8.126	A
C-AB	2	0.55	604	0.004	2	0.0	0.0	5.988	A
C-A	6	1			6				
A-B	45	11			45				
A-C	24	6			24				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	3	458	0.024	11	0.0	0.0	8.051	A
C-AB	2	0.45	607	0.003	2	0.0	0.0	5.955	A
C-A	4	1			4				
A-B	37	9			37				
A-C	20	5			20				

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	9	2	459	0.020	9	0.0	0.0	7.996	A
C-AB	2	0.38	609	0.002	2	0.0	0.0	5.930	A
C-A	4	0.94			4				
A-B	31	8			31				
A-C	17	4			17				

2030 Growthed Flows, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		4.44	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2030 Growthed Flows	AM	ONE HOUR	08:15	09:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	14	100.000
B		ONE HOUR	✓	29	100.000
C		ONE HOUR	✓	24	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	7	7
	B	24	0	5
	C	15	9	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.07	8.41	0.1	A	27	40
C-AB	0.02	5.94	0.0	A	8	12
C-A					14	21
A-B					6	10
A-C					6	10

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	22	5	462	0.047	22	0.0	0.0	8.168	A
C-AB	7	2	618	0.011	7	0.0	0.0	5.895	A
C-A	11	3			11				
A-B	5	1			5				
A-C	5	1			5				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	26	7	461	0.057	26	0.0	0.1	8.271	A
C-AB	8	2	617	0.013	8	0.0	0.0	5.912	A
C-A	13	3			13				
A-B	6	2			6				
A-C	6	2			6				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	32	8	460	0.069	32	0.1	0.1	8.407	A
C-AB	10	2	617	0.016	10	0.0	0.0	5.936	A
C-A	17	4			17				
A-B	8	2			8				
A-C	8	2			8				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	32	8	460	0.069	32	0.1	0.1	8.408	A
C-AB	10	2	617	0.016	10	0.0	0.0	5.936	A
C-A	17	4			17				
A-B	8	2			8				
A-C	8	2			8				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	26	7	461	0.057	26	0.1	0.1	8.273	A
C-AB	8	2	617	0.013	8	0.0	0.0	5.913	A
C-A	13	3			13				
A-B	6	2			6				
A-C	6	2			6				

09:30 - 09:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	22	5	462	0.047	22	0.1	0.1	8.178	A
C-AB	7	2	618	0.011	7	0.0	0.0	5.896	A
C-A	11	3			11				
A-B	5	1			5				
A-C	5	1			5				

2030 Growthed Flows, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.39	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2030 Growthed Flows	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	65	100.000
B		ONE HOUR	✓	13	100.000
C		ONE HOUR	✓	7	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	43	22
	B	11	0	2
	C	5	2	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.03	8.18	0.0	A	12	18
C-AB	0.00	5.99	0.0	A	2	3
C-A					5	7
A-B					39	59
A-C					20	30

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	10	2	458	0.021	10	0.0	0.0	8.034	A
C-AB	2	0.38	609	0.002	1	0.0	0.0	5.934	A
C-A	4	0.94			4				
A-B	32	8			32				
A-C	17	4			17				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	12	3	456	0.026	12	0.0	0.0	8.093	A
C-AB	2	0.45	606	0.003	2	0.0	0.0	5.959	A
C-A	4	1			4				
A-B	39	10			39				
A-C	20	5			20				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	14	4	455	0.031	14	0.0	0.0	8.176	A
C-AB	2	0.55	603	0.004	2	0.0	0.0	5.993	A
C-A	6	1			6				
A-B	47	12			47				
A-C	24	6			24				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	14	4	455	0.031	14	0.0	0.0	8.176	A
C-AB	2	0.55	603	0.004	2	0.0	0.0	5.993	A
C-A	6	1			6				
A-B	47	12			47				
A-C	24	6			24				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	12	3	456	0.026	12	0.0	0.0	8.094	A
C-AB	2	0.45	606	0.003	2	0.0	0.0	5.961	A
C-A	4	1			4				
A-B	39	10			39				
A-C	20	5			20				

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	10	2	458	0.021	10	0.0	0.0	8.037	A
C-AB	2	0.38	609	0.002	2	0.0	0.0	5.936	A
C-A	4	0.94			4				
A-B	32	8			32				
A-C	17	4			17				

2035 Growthed Flows, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		4.47	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2035 Growthed Flows	AM	ONE HOUR	08:15	09:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	14	100.000
B		ONE HOUR	✓	30	100.000
C		ONE HOUR	✓	26	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	7	7
	B	25	0	5
	C	16	10	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.07	8.45	0.1	A	28	41
C-AB	0.02	5.95	0.0	A	9	14
C-A					15	22
A-B					6	10
A-C					6	10

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	23	6	461	0.049	22	0.0	0.1	8.200	A
C-AB	8	2	618	0.012	7	0.0	0.0	5.902	A
C-A	12	3			12				
A-B	5	1			5				
A-C	5	1			5				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	27	7	460	0.059	27	0.1	0.1	8.306	A
C-AB	9	2	618	0.015	9	0.0	0.0	5.921	A
C-A	14	4			14				
A-B	6	2			6				
A-C	6	2			6				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	33	8	459	0.072	33	0.1	0.1	8.450	A
C-AB	11	3	617	0.018	11	0.0	0.0	5.946	A
C-A	18	4			18				
A-B	8	2			8				
A-C	8	2			8				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	33	8	459	0.072	33	0.1	0.1	8.451	A
C-AB	11	3	617	0.018	11	0.0	0.0	5.946	A
C-A	18	4			18				
A-B	8	2			8				
A-C	8	2			8				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	27	7	460	0.059	27	0.1	0.1	8.310	A
C-AB	9	2	618	0.015	9	0.0	0.0	5.923	A
C-A	14	4			14				
A-B	6	2			6				
A-C	6	2			6				

09:30 - 09:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	23	6	461	0.049	23	0.1	0.1	8.210	A
C-AB	8	2	618	0.012	8	0.0	0.0	5.905	A
C-A	12	3			12				
A-B	5	1			5				
A-C	5	1			5				

2035 Growthed Flows, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.36	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2035 Growthed Flows	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	67	100.000
B		ONE HOUR	✓	13	100.000
C		ONE HOUR	✓	7	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	44	23
	B	11	0	2
	C	5	2	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.03	8.18	0.0	A	12	18
C-AB	0.00	6.00	0.0	A	2	3
C-A					5	7
A-B					40	61
A-C					21	32

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	10	2	458	0.021	10	0.0	0.0	8.038	A
C-AB	2	0.38	608	0.002	1	0.0	0.0	5.937	A
C-A	4	0.94			4				
A-B	33	8			33				
A-C	17	4			17				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	12	3	456	0.026	12	0.0	0.0	8.098	A
C-AB	2	0.45	606	0.003	2	0.0	0.0	5.963	A
C-A	4	1			4				
A-B	40	10			40				
A-C	21	5			21				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	14	4	454	0.032	14	0.0	0.0	8.181	A
C-AB	2	0.55	603	0.004	2	0.0	0.0	5.999	A
C-A	6	1			6				
A-B	48	12			48				
A-C	25	6			25				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	14	4	454	0.032	14	0.0	0.0	8.182	A
C-AB	2	0.55	603	0.004	2	0.0	0.0	5.999	A
C-A	6	1			6				
A-B	48	12			48				
A-C	25	6			25				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	12	3	456	0.026	12	0.0	0.0	8.100	A
C-AB	2	0.45	606	0.003	2	0.0	0.0	5.965	A
C-A	4	1			4				
A-B	40	10			40				
A-C	21	5			21				

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	10	2	458	0.021	10	0.0	0.0	8.041	A
C-AB	2	0.38	608	0.002	2	0.0	0.0	5.937	A
C-A	4	0.94			4				
A-B	33	8			33				
A-C	17	4			17				

2025 With Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		4.92	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2025 With Development	AM	ONE HOUR	08:15	09:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	16	100.000
B		ONE HOUR	✓	38	100.000
C		ONE HOUR	✓	25	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	9	7
	B	32	0	6
	C	15	10	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.09	8.65	0.1	A	35	52
C-AB	0.02	5.95	0.0	A	9	14
C-A					14	21
A-B					8	12
A-C					6	10

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	29	7	460	0.062	28	0.0	0.1	8.330	A
C-AB	8	2	618	0.012	7	0.0	0.0	5.906	A
C-A	11	3			11				
A-B	7	2			7				
A-C	5	1			5				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	9	459	0.074	34	0.1	0.1	8.466	A
C-AB	9	2	617	0.015	9	0.0	0.0	5.925	A
C-A	13	3			13				
A-B	8	2			8				
A-C	6	2			6				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	42	10	458	0.091	42	0.1	0.1	8.647	A
C-AB	11	3	616	0.018	11	0.0	0.0	5.951	A
C-A	17	4			17				
A-B	10	2			10				
A-C	8	2			8				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	42	10	458	0.091	42	0.1	0.1	8.651	A
C-AB	11	3	616	0.018	11	0.0	0.0	5.951	A
C-A	17	4			17				
A-B	10	2			10				
A-C	8	2			8				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	9	459	0.074	34	0.1	0.1	8.473	A
C-AB	9	2	617	0.015	9	0.0	0.0	5.928	A
C-A	13	3			13				
A-B	8	2			8				
A-C	6	2			6				

09:30 - 09:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	29	7	460	0.062	29	0.1	0.1	8.342	A
C-AB	8	2	618	0.012	8	0.0	0.0	5.906	A
C-A	11	3			11				
A-B	7	2			7				
A-C	5	1			5				

2025 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.49	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2025 With Development	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	81	100.000
B		ONE HOUR	✓	17	100.000
C		ONE HOUR	✓	8	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	59	22
	B	14	0	3
	C	5	3	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.04	8.24	0.0	A	16	23
C-AB	0.01	6.05	0.0	A	3	4
C-A					5	7
A-B					54	81
A-C					20	30

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	3	459	0.028	13	0.0	0.0	8.062	A
C-AB	2	0.56	606	0.004	2	0.0	0.0	5.969	A
C-A	4	0.94			4				
A-B	44	11			44				
A-C	17	4			17				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	15	4	458	0.033	15	0.0	0.0	8.139	A
C-AB	3	0.67	603	0.004	3	0.0	0.0	6.001	A
C-A	4	1			4				
A-B	53	13			53				
A-C	20	5			20				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	19	5	455	0.041	19	0.0	0.0	8.244	A
C-AB	3	0.83	599	0.006	3	0.0	0.0	6.046	A
C-A	6	1			6				
A-B	65	16			65				
A-C	24	6			24				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	19	5	455	0.041	19	0.0	0.0	8.244	A
C-AB	3	0.83	599	0.006	3	0.0	0.0	6.046	A
C-A	6	1			6				
A-B	65	16			65				
A-C	24	6			24				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	15	4	458	0.033	15	0.0	0.0	8.140	A
C-AB	3	0.67	603	0.004	3	0.0	0.0	6.001	A
C-A	4	1			4				
A-B	53	13			53				
A-C	20	5			20				

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	3	459	0.028	13	0.0	0.0	8.066	A
C-AB	2	0.56	606	0.004	2	0.0	0.0	5.969	A
C-A	4	0.94			4				
A-B	44	11			44				
A-C	17	4			17				

2030 With Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		4.98	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2030 With Development	AM	ONE HOUR	08:15	09:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	16	100.000
B		ONE HOUR	✓	39	100.000
C		ONE HOUR	✓	25	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	9	7
	B	33	0	6
	C	15	10	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.09	8.68	0.1	A	36	54
C-AB	0.02	5.95	0.0	A	9	14
C-A					14	21
A-B					8	12
A-C					6	10

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	29	7	460	0.064	29	0.0	0.1	8.354	A
C-AB	8	2	618	0.012	7	0.0	0.0	5.906	A
C-A	11	3			11				
A-B	7	2			7				
A-C	5	1			5				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	35	9	459	0.076	35	0.1	0.1	8.493	A
C-AB	9	2	617	0.015	9	0.0	0.0	5.925	A
C-A	13	3			13				
A-B	8	2			8				
A-C	6	2			6				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43	11	457	0.094	43	0.1	0.1	8.680	A
C-AB	11	3	616	0.018	11	0.0	0.0	5.951	A
C-A	17	4			17				
A-B	10	2			10				
A-C	8	2			8				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43	11	457	0.094	43	0.1	0.1	8.684	A
C-AB	11	3	616	0.018	11	0.0	0.0	5.951	A
C-A	17	4			17				
A-B	10	2			10				
A-C	8	2			8				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	35	9	459	0.076	35	0.1	0.1	8.500	A
C-AB	9	2	617	0.015	9	0.0	0.0	5.928	A
C-A	13	3			13				
A-B	8	2			8				
A-C	6	2			6				

09:30 - 09:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	29	7	460	0.064	29	0.1	0.1	8.368	A
C-AB	8	2	618	0.012	8	0.0	0.0	5.906	A
C-A	11	3			11				
A-B	7	2			7				
A-C	5	1			5				

2030 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.48	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2030 With Development	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	82	100.000
B		ONE HOUR	✓	17	100.000
C		ONE HOUR	✓	8	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A	B	C
	A	0	60	22
	B	14	0	3
	C	5	3	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A	B	C
	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.04	8.25	0.0	A	16	23
C-AB	0.01	6.05	0.0	A	3	4
C-A					5	7
A-B					55	83
A-C					20	30

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	3	459	0.028	13	0.0	0.0	8.063	A
C-AB	2	0.56	606	0.004	2	0.0	0.0	5.971	A
C-A	4	0.94			4				
A-B	45	11			45				
A-C	17	4			17				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	15	4	457	0.033	15	0.0	0.0	8.141	A
C-AB	3	0.67	603	0.004	3	0.0	0.0	6.004	A
C-A	4	1			4				
A-B	54	13			54				
A-C	20	5			20				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	19	5	455	0.041	19	0.0	0.0	8.245	A
C-AB	3	0.83	599	0.006	3	0.0	0.0	6.049	A
C-A	6	1			6				
A-B	66	17			66				
A-C	24	6			24				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	19	5	455	0.041	19	0.0	0.0	8.245	A
C-AB	3	0.83	599	0.006	3	0.0	0.0	6.049	A
C-A	6	1			6				
A-B	66	17			66				
A-C	24	6			24				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	15	4	457	0.033	15	0.0	0.0	8.143	A
C-AB	3	0.67	603	0.004	3	0.0	0.0	6.004	A
C-A	4	1			4				
A-B	54	13			54				
A-C	20	5			20				

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	3	459	0.028	13	0.0	0.0	8.067	A
C-AB	2	0.56	606	0.004	2	0.0	0.0	5.971	A
C-A	4	0.94			4				
A-B	45	11			45				
A-C	17	4			17				

2035 With Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		5.01	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2035 With Development	AM	ONE HOUR	08:15	09:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	16	100.000
B		ONE HOUR	✓	41	100.000
C		ONE HOUR	✓	26	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	9	7
	B	34	0	7
	C	16	10	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.10	8.69	0.1	A	38	56
C-AB	0.02	5.95	0.0	A	9	14
C-A					15	22
A-B					8	12
A-C					6	10

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	31	8	462	0.067	31	0.0	0.1	8.348	A
C-AB	8	2	618	0.012	7	0.0	0.0	5.906	A
C-A	12	3			12				
A-B	7	2			7				
A-C	5	1			5				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	37	9	461	0.080	37	0.1	0.1	8.493	A
C-AB	9	2	617	0.015	9	0.0	0.0	5.925	A
C-A	14	4			14				
A-B	8	2			8				
A-C	6	2			6				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	45	11	459	0.098	45	0.1	0.1	8.689	A
C-AB	11	3	616	0.018	11	0.0	0.0	5.951	A
C-A	18	4			18				
A-B	10	2			10				
A-C	8	2			8				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	45	11	459	0.098	45	0.1	0.1	8.693	A
C-AB	11	3	616	0.018	11	0.0	0.0	5.951	A
C-A	18	4			18				
A-B	10	2			10				
A-C	8	2			8				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	37	9	461	0.080	37	0.1	0.1	8.500	A
C-AB	9	2	617	0.015	9	0.0	0.0	5.925	A
C-A	14	4			14				
A-B	8	2			8				
A-C	6	2			6				

09:30 - 09:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	31	8	462	0.067	31	0.1	0.1	8.362	A
C-AB	8	2	618	0.012	8	0.0	0.0	5.906	A
C-A	12	3			12				
A-B	7	2			7				
A-C	5	1			5				

2035 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.55	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2035 With Development	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	85	100.000
B		ONE HOUR	✓	18	100.000
C		ONE HOUR	✓	9	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A	B	C
	A	0	62	23
	B	15	0	3
	C	5	4	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A	B	C
	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.04	8.30	0.0	A	17	25
C-AB	0.01	6.07	0.0	A	4	6
C-A					5	7
A-B					57	85
A-C					21	32

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	14	3	457	0.030	13	0.0	0.0	8.105	A
C-AB	3	0.75	605	0.005	3	0.0	0.0	5.984	A
C-A	4	0.94			4				
A-B	47	12			47				
A-C	17	4			17				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	16	4	456	0.036	16	0.0	0.0	8.188	A
C-AB	4	0.90	602	0.006	4	0.0	0.0	6.019	A
C-A	4	1			4				
A-B	56	14			56				
A-C	21	5			21				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	20	5	453	0.044	20	0.0	0.0	8.300	A
C-AB	4	1	598	0.007	4	0.0	0.0	6.068	A
C-A	6	1			6				
A-B	68	17			68				
A-C	25	6			25				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	20	5	453	0.044	20	0.0	0.0	8.300	A
C-AB	4	1	598	0.007	4	0.0	0.0	6.068	A
C-A	6	1			6				
A-B	68	17			68				
A-C	25	6			25				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	16	4	456	0.036	16	0.0	0.0	8.191	A
C-AB	4	0.90	602	0.006	4	0.0	0.0	6.021	A
C-A	4	1			4				
A-B	56	14			56				
A-C	21	5			21				

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	14	3	457	0.030	14	0.0	0.0	8.109	A
C-AB	3	0.75	605	0.005	3	0.0	0.0	5.986	A
C-A	4	0.94			4				
A-B	47	12			47				
A-C	17	4			17				

APPENDIX 7

Accident Data



crashmap.co.uk

Crash Date: Saturday, September 03, 2016 **Time of Crash:** 1:20:00 PM **Crash Reference:** 201660U133842

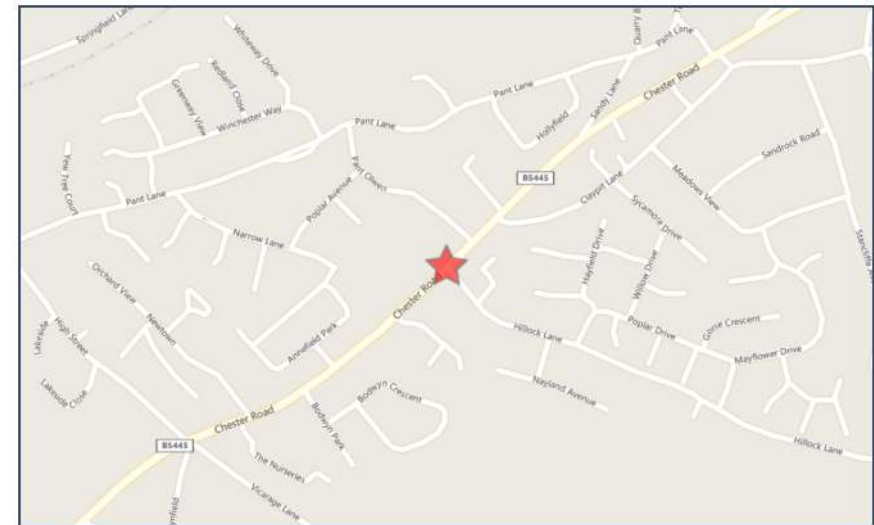
Highest Injury Severity: Slight
Highway Authority: Wrexham
Local Authority: Wrexham County Borough
Weather Description: Raining without high winds
Road Surface Description: Wet or Damp
Speed Limit: 30
Light Conditions: Daylight: regardless of presence of streetlights
Carriageway Hazards: None
Junction Detail: T or staggered junction
Junction Pedestrian Crossing: No physical crossing facility within 50 metres
Road Type: Single carriageway
Junction Control: Give way or uncontrolled

Road Number: B5445

Number of Casualties: 2

Number of Vehicles: 2

OS Grid Reference: 335380 354909



For more information about the data please visit: www.crashmap.co.uk/home/Faq

To subscribe to unlimited reports using CrashMap Pro visit www.crashmap.co.uk/Home/Premium_Services



Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Manoeuvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
2	Car (excluding private hire)	-1	Female	26 - 35	Vehicle is waiting to turn right	Back	Other	None	None
1	Car (excluding private hire)	-1	Male	Unknown	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
2	1	Slight	Driver or rider	Female	26 - 35	Unknown or other	Unknown or other
2	2	Slight	Vehicle or pillion passenger	Female	Over 75	Unknown or other	Unknown or other

For more information about the data please visit: www.crashmap.co.uk/home/Faq

To subscribe to unlimited reports using CrashMap Pro visit www.crashmap.co.uk/Home/Premium_Services

APPENDIX 8

Travel Plan Framework

Proposed Residential Development
Hillock Lane, Gresford

NORRIS JONES DEVELOPMENTS

Residential Travel Plan

May 2020





Contents

1	INTRODUCTION	2
1.1	Preamble.....	2
1.2	Structure of the Travel Plan	2
1.3	Development Proposals.....	3
2	MANAGEMENT MEASURES	4
2.1	Introduction	4
2.2	Appointment of Travel Co-ordinator	4
2.3	Resident's Travel Pack	5
2.4	Travel Awareness and Information	7
2.5	Promotion of Lift Share Scheme.....	7
2.6	Encouraging Walking/Cycling.....	7
2.7	Encouraging Travel by Public Transport	8
2.8	Marketing and Promotion.....	8
3	ACCESSIBILITY BY NON-CAR MODES.....	10
3.1	Introduction	10
3.2	Accessibility on Foot.....	12
4	TRAVEL PLAN TARGETS	20
4.1	Introduction	20
4.2	Potential Targets	20
4.3	Action Plan	21
5	PLAN MONITORING AND ASSESSMENT.....	23
6	CONCLUSIONS.....	25

PLANS

(See Transport Assessment)



1 INTRODUCTION

1.1 Preamble

- 1.1.1 Croft have been instructed by Norris Jones Developments to advise on the traffic and transportation issues relating to a proposed residential development on land to the south of Hillock Lane in Gresford.
- 1.1.2 The report will form supplementary information to assist in the determination of a forthcoming outline planning application on the site for up to 110 residential dwellings, with associated car parking and landscaping.
- 1.1.3 The Highway Authority and the Planning Authority responsible for Gresford is Wrexham County Borough Council (WCBC).
- 1.1.4 A Framework Travel Plan has also been prepared to ensure that travel to and from the site by sustainable modes is maximised.
- 1.1.5 Due to the location of the site close to Gresford and all its services and facilities, the proposed development will help deliver much needed housing in a sustainable location which is well integrated and connected to local facilities and employment opportunities.

1.2 Structure of the Travel Plan

- 1.2.1 Following this introduction, Section 2 details Travel Plan Policy and guidance and presents the 'Travel Plan Pyramid'.
- 1.2.2 Section 3 sets out a series of management measures that will be implemented as part of the Travel Plan.



1.2.3 Section 4 of the Travel Plan considers the accessibility of the site by non-car modes, including walking, cycling and public transport. Section 5 discusses targets for reducing trips by the private car while Section 6 details the monitoring of the Travel Plan.

1.2.4 Section 7 draws together the findings and conclusions.

1.3 Development Proposals

1.3.1 The applicant is seeking outline planning permission to develop the site for up to 110 residential dwellings, with associated car parking, landscaping and public open space.

1.3.2 It is proposed that vehicular access into the site will be provided for in the form of a new priority controlled junction off Hillock Lane, north of the site.

1.4 The Travel Plan

1.4.1 The aim of the Travel Plan is as follows:

- To encourage residents and visitors to use alternatives to the private car;
- To increase the awareness of the advantages and potential for travel by more environmentally friendly modes; and
- To introduce a package of management measures that will facilitate travel by modes of transport other than the private car.

1.5 Residents Travel Pack

1.5.1 The principal measure will consist of a Residents Travel Pack containing relevant material to promote non-car modes of travel and the provision of certain physical measures. This will be discussed further in Section 3.



2 MANAGEMENT MEASURES

2.1 Introduction

2.1.1 The following Travel Plan measures will be implemented:

- i) Appointment of Travel Plan Co-ordinator
- ii) Resident's Travel Pack
- iii) Travel Awareness and Information
- iv) Promotion of Lift Share Scheme
- v) Encouraging Walking/Cycling
- vi) Encouraging Home Working and Delivery Services
- vii) Encouraging Travel by Public Transport
- viii) Marketing and Promotion

2.2 Appointment of Travel Co-ordinator

2.2.1 A Travel Plan Co-ordinator (TPC) is to be appointed by the housebuilder or developer at least one month before the first properties being occupied.

2.2.2 The TPC will be responsible for all aspects of the Travel Plan.

2.2.3 Their primary functions will be as follows;

- Liaison with the local planning and highways authorities;
- Provision of a Residents Travel Pack containing information for residents;



- Promotion of the sustainable transport options available to residents, including public transport, cycle, walking and car sharing schemes; and
- Maintenance of all necessary systems, data and paperwork.

2.2.4 The role of the TPC will also be to develop and manage the Travel Plan for the site.

2.2.5 The duties will include monitoring, reviewing targets and forming action plans to remedy areas where the Travel Plan is not performing. Annual progress reports will be prepared and submitted to the Council.

2.2.6 Details of the nominated TPC will be submitted to the Planning and Highway Authority and the appropriate local bus companies at least one month prior to first occupation at the site. Similarly, the TPC will be advised of appropriate contact personnel at the Council.

2.3 Resident's Travel Pack

2.3.1 It is an important and emerging principle in residential developments that where appropriate, the implementation of travel plan type measures can establish a pattern of travel behaviour favouring sustainable modes from the inception of the development.

2.3.2 The proposed development is very well placed for encouraging access on foot or by cycle to a wide range of facilities. Similarly, the existence of a local bus and rail services will encourage choice of public transport as a primary means of travel for the development.

2.3.3 However, in order to build on these locational advantages, it is recommended that a Residents' Travel Pack is provided for the occupants of each new dwelling.



- 2.3.4 The contents of such a travel pack would include information relating to walking and cycling routes in the area and the provision of up to date bus and rail timetable information, as well as identification of the location of nearby amenity facilities as part of the information supplied to prospective purchasers.
- 2.3.1 The contents of the packs will vary depending upon the information available on sources such as the internet or local bus stops.
- 2.3.2 However, the Travel Packs will include:
- Information about the local area, e.g. location, distance and directions to local shops, schools, Post Offices, Doctor Surgeries, Hospitals, Banks, Libraries, Parks, attractions and other local amenities.
 - Copies of the most recently published public transport information.
 - Details of web sites and other sources of information which can be accessed in the future such as:
 - Public Transport - Links to timetable information e.g. www.traveline.org.uk and www.nationalrail.co.uk
 - Car Sharing - Links to websites that co-ordinate car sharing such as www.carshare.com, www.liftshare.org.uk and www.nationalcarshare.co.uk to encourage car sharing.
 - Cycling - Link to the UK's National Cyclists Organisation website www.ctc.org.uk and Sustrans www.sustrans.org.uk
 - Local Amenities - local supermarkets offering internet shopping would reduce the need for car travel.



- 2.3.3 The adoption of such travel packs is recognised as being an important element in ensuring that access by non-car modes is promoted from the earliest occupation of a residential development. Within the Resident's Welcome Pack, residents will be encouraged to consider ways in which to reduce their need to travel such as home delivery for shopping and working from home.
- 2.3.4 The first issue of the Resident's Travel Pack will be the responsibility of the house builder.
- 2.3.5 The provision of a Resident's Travel Pack will form part of the terms of the sale or occupancy of the dwellings and therefore they are aware in advance of what is required of them within the Travel Plan.

2.4 Travel Awareness and Information

- 2.4.1 Residents will be made aware of the existence of the Travel Plan and its aims. As mentioned previously, Resident's Travel Packs will be issued for new residents moving into the development and prospective buyers will be made aware of the Travel Plan when viewing properties.

2.5 Promotion of Lift Share Scheme

- 2.5.1 The Travel Plan Co-ordinator will promote the use of car sharing via registering on the Liftshare website. It allows users to register their details, where they are travelling to, if they are offering a lift or need a lift to their destination.
- 2.5.2 The website can be found at the following location www.liftshare.com

2.6 Encouraging Walking/Cycling

- 2.6.1 Residents will be provided with information and advice concerning safe pedestrian and cycle routes to the site through the WalkBUDi/BikeBUDi schemes.



- 2.6.2 Information on these schemes is available on the following websites www.walkbudi.com and www.bikebudi.com
- 2.6.3 The WalkBUDi/BikeBUDi schemes are part of the National Lift Share Network and are simple and free to use. They simply match individuals with others walking or cycling the same way so they can walk or cycle together. The matches are displayed in both table and map format, allowing the user to easily find the most suitable people.
- 2.6.4 The WalkBUDi/BikeBUDi schemes aim to help individuals to meet others wanting to travel the same way. They can be used for regular trips such as walking or cycling to the office or going to the station as well as making a journey safer.
- 2.6.5 As part of these schemes the provision of walking/cycling signage will be investigated by the Travel Plan Co-ordinator, this signage could provide details on the routes and distances to and from local services and amenities in the area.

2.7 Encouraging Travel by Public Transport

- 2.7.1 The TPC will liaise with the local bus operators to promote the use of bus and rail services and ensure that up to date timetable information is readily available to residents.
- 2.7.2 Travel by public transport will be promoted and residents will be encouraged to access the public transport information provided on relevant websites, as well as utilising the Journey Planning tools available.

2.8 Marketing and Promotion

- 2.8.1 To ensure that potential residents of the site are informed about the Travel Plan and its goals from the earliest stage, the Travel Plan will have a significant presence within the sales suite of the development which will include a display outlining the sustainable travel measures being implemented and details of access by sustainable travel modes.



- 2.8.2 The sales staff will be given training to promote the Travel Plan as an asset and selling point of the development and key concepts relating to accessibility included in marketing/sales particulars.



3 ACCESSIBILITY BY NON-CAR MODES

3.1 Introduction

3.1.1 The Welsh Government aims to extend choice in transport and secure accessibility in a way which supports sustainable development and helps to tackle the causes of climate change by;

"Encouraging a more effective and efficient transport system, with greater use of the more sustainable and healthy forms of travel, and minimising the need to travel. This will be achieved through integration:

- *within and between different types of transport;*
- *between transport measures and land use planning;*
- *between transport measures and policies to protect and improve the environment; and*
- *between transport measures and policies for education, health, social inclusion and wealth creation".*

3.1.2 Land use planning can help to achieve the Welsh Government's objectives for transport through:

- *reducing the need to travel, especially by private car, by locating development where there is good access by public transport, walking and cycling;*
- *locating development near other related uses to encourage multi-purpose trips and reduce the length of journeys;*
- *improving accessibility by walking, cycling and public transport;*



- *ensuring that transport is accessible to all, taking into account the needs of disabled and other less mobile people;*
- *promoting walking and cycling;*
- *supporting the provision of high quality public transport;*
- *supporting traffic management measures;*
- *promoting sustainable transport options for freight and commerce;*
- *supporting sustainable travel options in rural areas;*
- *supporting necessary infrastructure improvements; and*
- *ensuring that, as far as possible, transport infrastructure does not contribute to land take, urban sprawl or neighbourhood severance.*

3.1.3 New proposals should attempt to influence the mode of travel to the development in terms of gaining a shift in modal split towards non-car modes, thus assisting in meeting the aspirations of current national and local planning policy.

3.1.4 The accessibility of the proposed site has been considered by the following modes of transport:

- Accessibility on foot.
- Accessibility by cycle.
- Accessibility by bus.
- Accessibility by rail.



3.2 Accessibility on Foot

- 3.2.1 It is important to create a choice of direct, safe and attractive routes between where people live and where they need to travel in their day-to-day life.
- 3.2.2 This philosophy clearly encourages the opportunity to walk whatever the journey purpose and also helps to create more active streets and a more vibrant neighbourhood.
- 3.2.3 The nearest footways to the site are located approximately 90 metres north from the centre on the site, on the northern side of the Hillock Lane/Stancliffe Avenue. However, as previously stated footway provision on Hillock Lane to link with the existing provision is to be provided as part of the development proposals. These arrangements are displayed in **Plan 2**. The provision of these facilities will provide safe and convenient pedestrian links to the extensive pedestrian infrastructure located in this area of Gresford.
- 3.2.4 This provides pedestrian links throughout Gresford and provides direct linkages to the nearby day to day amenities within the settlement.
- 3.2.5 The CIHT document 'Planning for Walking' from 2015 states, in paragraph 2.1, that in 2012 that 79% of all journeys made in the UK of less than a mile (1.6 kilometres) are carried out on foot.
- 3.2.6 Within the Institution of Highways and Transportation (IHT) document, entitled "Guidelines for Providing for Journeys on Foot", Table 2.2 suggests distances for desirable, acceptable and preferred maximum walks to 'town centres', 'commuting/schools' and 'elsewhere'. The 'preferred maximum' distances are shown below in Table 3.1.



Suggested Preferred Maximum Walk		
Town Centre	Commuting/School	Elsewhere
800m	2,000m	1,200m

Table 2.1 – IHT ‘Providing for Journeys on Foot’ Walk Distances

- 3.2.7 Reference to the 2,000 metre walk distance is also made in the now superseded Planning Policy Guidance (PPG) Note 13 which advised that ‘walking is the most important mode of travel at the local level and offers the greatest potential to replace short car trips, particularly under 2km’.
- 3.2.8 Manual for Streets (MfS) continues the theme of the acceptability of the 2,000 metre distance in paragraph 4.4.1. This states that ‘walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes’ (up to about 800m) walking distance of residential areas which residents may access comfortably on foot. However, this is not an upper limit and PPS13 states that walking offers the greatest potential to replace short car trips, particularly those under 2 km’.
- 3.2.9 Table 3.2 below summarises this guidance in tabular form.

‘Comfortable’ Walk	‘Preferred Maximum’ Walk
800m	2,000m

Table 3.2 – Manual for Streets Walk Distances



3.2.10 More specific guidance on the distances that children will walk to school is found in the July 2014 document published by the Department for Education (DfE) entitled 'Home to School Travel and Transport' statutory guidance document. This suggests that the maximum walking distance to schools is 2 miles (3.2 kilometres) for children under 8 and 3 miles (4.8 kilometres) for children over the age of 8. This is summarised below in Table 3.3.

Children under 8 Walk Distance	Children over 8 Walk Distance
3,200m	4,800m

Table 3.3 – DfE Walk Distances to Schools

3.2.11 Further evidence that people will walk further than the suggested 'preferred maximum' distances in the IHT 'Providing for Journeys on Foot' is contained in a WYG Report entitled 'Accessibility – How Far do People Walk and Cycle'. This report refers to National Travel Survey (NTS) data for the UK as a whole, excluding London, identifying the following 85th percentile walk distances:

- All journey purposes – 1,950 metres.
- Commuting – 2, 400 metres.
- Shopping – 1,600 metres.
- Education – 3,200 or 4,800 metres.
- Personal business – 1,600 metres.

3.2.12 Overall, in Table 5.1, the document states that 1,950 square metres is the 85th percentile distance for walking as the main mode of travel. Table 3.4 below summarises the various 85th percentile walk distances suggested as guidelines in the WYG Study.



All Journeys	85 th Percentile Walk Distances				Overall Preferred Max
	Commuting	Shopping	Education	Personal	
1,950m	2,100m	1,600m	3,200/4,800m	1,600m	1,950m

Table 3.4 – WYG Report/NTS Data Walk Distances

- 3.2.13 In summary, it is considered that the distance of 1,950 metres, or around 2 kilometres, represents an acceptable maximum walking distance for the majority of land uses although clearly the DfE guidance for walking to school is up to 3.2 kilometres.
- 3.2.14 Section 3.1 of the CIHT guidance 'Planning for Walking' mentioned earlier in this report provides a useful reminder of the health benefits of walking. This states that:
- 'A brisk 20 minute walk each day could be enough to reduce an individual's risk of an early death'.*
- 3.2.15 A 20 minute walk equates to a walking distance of around 1,600 metres.
- 3.2.16 In light of the above review, a pedestrian catchment of 2 kilometres from the centre of the site, using all available pedestrian routes, has been provided in **Plan 3** and provides an illustrative indication of the areas that can be reached based on a leisurely walk from the site.
- 3.2.17 In addition, to the pedestrian catchment plan, a review of the proximity of local facilities such as community facilities, restaurants and local shops/retail outlets has been undertaken and the location of these is also shown in **Plan 3**.



3.2.18 The 2,000 metre pedestrian catchment illustrates that the whole of Gresford can be accessed along with various amenities such as The Rofft School, Co-operative food store, Gresford Library, Gresford Village Recreational Club, All Saints' Gresford School, Alyn Family Doctors, Texaco Petrol Station, The Plough Public House and a Spar convenience store. The facilities can be accessed via the footway provision provided on Hillock Lane and the B5445 Chester Road.

3.2.19 Table 3.5 below, shows the walking distance from the centre of the site to the local amenities in the vicinity of the site. The table also confirms whether or not the particular amenity is within the 'preferred maximum' walk distances using the above guideline criteria:

Local Amenity	Distance	Guidance Criteria	Meets with Guidance?
The Rofft School	800m	3,200m	YES
Co-operative food store	940m	1,600m	YES
Alyn Family Doctors	1,170m	1,600m	YES
Spar convenience store	1,210m	1,600m	YES
The Plough Public House	1,290m	1,600m	YES
Gresford Library	1,400m	1,600m	YES
Texaco Petrol Station	1,430m	1,600m	YES
All Saints' Gresford School	1,900m	3,200m	YES

Table 3.5 - Distance from Site to Local Facilities

3.2.20 As can be seen in the above table, the site is located within close proximity to a number of local amenities including primary services as well as leisure facilities.



- 3.2.21 It is therefore considered that the existing and proposed pedestrian infrastructure will facilitate safe and direct pedestrian linkages between the site and local destinations.

3.3 Access by Cycle

- 3.3.1 An alternative mode of travel to the site could be achieved by bicycle.
- 3.3.2 A distance of 5 kilometres is generally accepted as a distance where cycling has the potential to replace short car journeys. This distance equates to a journey of around 25 minutes based on a leisurely cycle speed of 12 kilometres per hour and would encompass Rossett, Gresford, Gwersyllt and areas of Wrexham.
- 3.3.3 The site can therefore be considered as being accessible by cycle.

3.4 Access by Bus

- 3.4.1 The nearest bus stops are located to the west of the site on Chester Road with an approximate walking distance of around 900 metres from the centre of the site. All the nearest bus stops to the site are shown on **Plan 3**. These bus stops can be accessed via the existing and proposed footway provision on Hillock Lane and Chester Road.
- 3.4.2 A summary of the services available from the nearest bus stops from the development site is provided in Table 3.6 below.



Service No	Route	Monday – Friday Frequency per hour				Sat	Sun
		AM Peak	Midday	PM Peak	Eve		
1	Wrexham - Chester	4	4	4	2	4	2

Table 3.6 - Existing Bus Services Operating Past the Site

- 3.4.3 As can be seen from Table 3.6, the nearest bus stops to the site provides services to and from Wrexham and Chester which likely to be the main area of employment for potential residents of the development.
- 3.4.4 This bus service to Wrexham from Gresford from Monday to Friday start at 07:03 hours, this service arrives into Wrexham at around 0714. The last bus to depart Wrexham towards Gresford on a weekday is at 2250 hours.
- 3.4.5 Therefore, even with walking time of around 13 minutes to the bus stop from the site, it can be concluded that the local bus service provides an appropriate option for commute trips to and from Wrexham, which are the main areas of employment for potential residents of the development.
- 3.4.6 It is therefore concluded that the proposed development site is accessible by bus.

3.5 Accessibility by Rail

- 3.5.1 Chester train station and Wrexham train station are both accessible from the site. Although these stations are located outside of the 2 kilometre pedestrian catchment, they can both be accessed via a bus journey.



- 3.5.2 Chester train station can be accessed via a 32 minute bus journey on service 1 from the site. This train station is managed by Transport for Wales and has 7 platforms, offering 15 services per hours to destinations such as Liverpool, Manchester, London and Leeds.
- 3.5.3 Additionally, Wrexham Central train station is accessible via a 13 minute bus journey from the site on service 1 to Wrexham bus station and then a short walk, equating to a combined journey time of approximately 16 minutes. This station is also managed by Transport for Wales and has 1 platform, offering 1 service per hour to Bidston.
- 3.5.4 This provides excellent opportunities to travel to and from the site by rail.

3.6 Accessibility Summary

- 3.6.1 The proposals have been considered in terms of accessibility by non-car modes for the proposed residential development.
- 3.6.2 The following conclusions can be drawn from this section of the Report:
- 3.6.3 The site is accessible on foot and these provisions will be improved as part of the works on the development site.
- 3.6.4 The services from the bus stops on Chester Road, travelling to Wrexham and Chester, demonstrates that the proposed development can be accessed by bus.
- 3.6.5 The site is accessible via rail with Wrexham and Chester train stations located just a short bus journey from the site.
- 3.6.6 In light of the above, it is considered the site is highly accessible by non-car modes and will cater for needs of the development's residents and assist in promoting a choice of travel modes other than the private car.



4 TRAVEL PLAN TARGETS

4.1 Introduction

- 4.1.1 This section of the Travel Plan deals with the post development scenario i.e. once the development is complete, occupied and the Travel Plan has been implemented and relates to targets against which the success of the Plan in achieving its objectives will be measured.
- 4.1.2 The targets are designed to be quantifiable, be relevant to both measures and objectives identified in the Plan and to include timescale.
- 4.1.3 In order to set the targets, further information (e.g. through a travel survey) may have to be obtained in order to establish against which to set the targets. This information will be related to existing patterns of movement (i.e. the proportion of residents who travel to their workplace by non-car mode) and may be obtained from sources such as the National Travel Survey and the National Census.
- 4.1.4 More accurate information to establish the baseline targets however, will be obtained from a Residents Travel Survey which will be undertaken within one month of the development being 50% occupied.
- 4.1.5 As part of the reserved matters application, suitable targets for reducing the need to travel by private car will be set against the baseline targets and agreed with the Council and included in the final Residential Travel Plan for the whole development.

4.2 Potential Targets

- 4.2.1 The targets are designed to be quantifiable, be relevant to both measures and objectives identified in the Plan and to include timescale.



4.2.2 Targets which according to the DfT may potentially be included in the Travel Plan include the following:

- Car trips per household - targets set on the basis of predicted trip rates for the development.
- Uptake of alternatives - targets for bus patronage, registration and participation in the Liftshare car share scheme, cycle counts and pedestrian counts.
- Car ownership and mode of travel - trip based targets may be supplemented by targets related to car ownership, travel to work by mode and travel to school by mode.
- Travel Plan awareness targets - for example, a target can be established to ensure a significant percentage of residents are aware of the Travel Plan and its purpose.

4.3 Action Plan

4.3.1 Table 4.1 below provides an Action Plan and timescales to assist the Travel Plan Co-ordinator (TPC) to implement the obligations of the Travel Plan.



Action	Target Date	Indicator/Measured by	Responsibility
Appointment of TPC	TPC appointed one month prior to first occupation of site	Appointment of TPC by target date	Housebuilder
Production of Residents Travel Pack	Upon Occupation	Resident travel survey	Housebuilder
Undertake initial travel surveys	Within 1 month of reaching 50% occupation of development	Receipt of survey results	TPC
Agree Travel Plan Targets	1 month after initial travel survey undertaken	Receipt of written agreements of targets	TPC
Achieve target car driver travel to work mode split	5 years after initial travel survey	Residents travel surveys conducted in years 1, 3 and 5	TPC

Table 4.1 – Travel Plan Action Plan and Timescales

- 4.3.2 The table above sets out the key tasks that will need to be undertaken by the Travel Plan Co-ordinator as part of the Travel Plan including guidance as to timescales for the tasks to be undertaken.



5 PLAN MONITORING AND ASSESSMENT

5.1.1 DfT best practice guidelines state that monitoring of the Travel Plan should normally take place on the following basis:

- Early on in the occupation period of the site - for example, triggered by 50% occupancy to provide the information base for the review of the plan;
- Annually or at least every two years thereafter to provide on-going information on the impact of the plan;
- Monitoring should take place over a wide range of time periods to reflect the different pattern of journeys that can be generated by residential development.

5.1.2 The monitoring could include items such as:

- Full residential surveys to be completed in year 1, year 3 and year 5 and snap shot surveys to be completed every 6 to 12 months.
- Feedback from bus operators to establish demand for local bus services.

5.1.3 Once planning permission has been granted, consideration will be given on how best to monitor and measure the success of the Travel Plan measures when preparing the final Travel Plan for the development. Appropriate monitoring arrangements will be discussed and agreed with the Council.

5.1.4 The monitoring and assessment of the Travel Plan will include the submission of annual progress reports detailing the results of the travel surveys with regards to targets, budgets, general effectiveness and current initiatives.

5.1.5 An annual report is to be submitted to the local authority no later than one month following the anniversary of the approval of the Travel Plan.



- 5.1.6 This will allow effective measures to be promoted and increased while ineffective measures can be revised and rectified. New initiatives for the coming year will also be contained within the report and submitted to officers at the Council.



6 CONCLUSIONS

- 6.1.1 This Travel Plan has detailed the proposals associated with the development site to promote sustainable modes of travel and reduce the dependency of the private car.
- 6.1.2 Additionally, the Travel Plan has presented a series of measures to be implemented to reduce the number of single car occupancy trips.
- 6.1.3 The information contained within the Travel Plan and details of sustainable modes of transport in the vicinity of the site will be accessible to residents and visitors to the development. The aim of the Travel Plan is:
- to encourage residents to use sustainable modes of transport to access the site;
 - reduce the reliance on single car occupancy journeys; and
 - generally reduce traffic related pollution and noise.
- 6.1.4 A wide range of measures and actions will be used to encourage car sharing, public transport use, cycling and walking.
- 6.1.5 The Travel Plan Co-ordinator will ensure the Travel Plan is implemented and is operating effectively.
- 6.1.6 A detailed resident Travel Survey will be undertaken to establish travel modes of residents and following this, specific targets will be set and agreed with the Travel Plan team at the Council.
- 6.1.7 The site has been demonstrated to benefit from excellent non-car accessibility and it should, therefore, be expected that the adoption of a Travel Plan would be particularly effective.
- 6.1.8 It can therefore be concluded that the proposals will provide a highly sustainable development and should be considered acceptable to the local highway authority.



CROFT

Croft Transport Solutions

Hill Quays, 9 Jordan Street,
Manchester M15 4PY

0161 667 3746

info@croftts.co.uk

www.croftts.co.uk



Croft Transport Planning & Design

Hill Quays, 9 Jordan Street,
Manchester M15 4PY

0161 667 3746
info@croftts.co.uk
www.croftts.co.uk