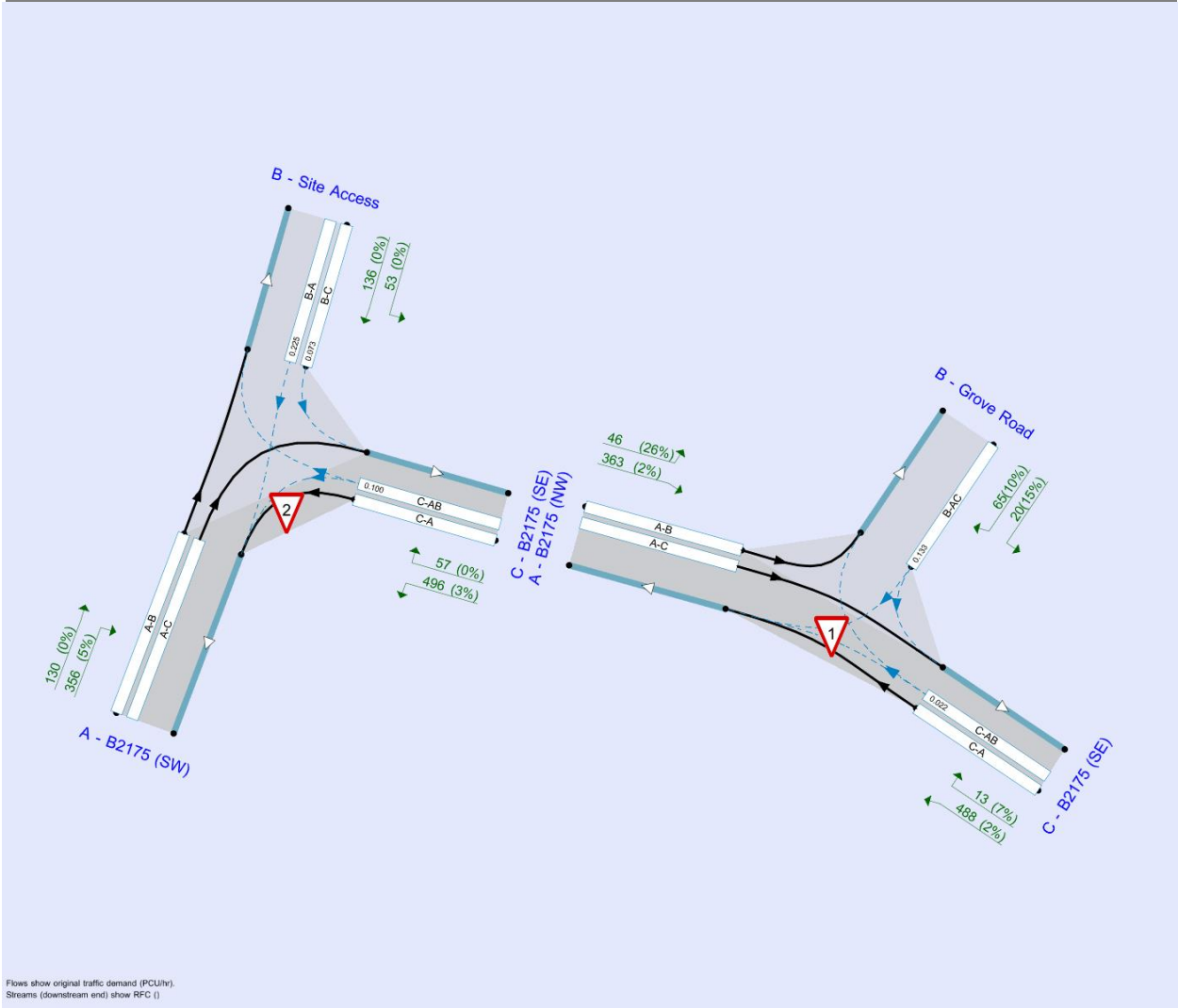


Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2030 + Dev	AM	ONE HOUR	07:45	09:15	15	✓
D2	2030 + Dev	PM	ONE HOUR	16:45	18:15	15	✓
D3	2030 + Dev	Sat	ONE HOUR	12:00	13:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2030 + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	2 - Middle Junction - B - Site Access - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	East Junction	T-Junction	Two-way	Two-way	Two-way		1.79	A
2	Middle Junction	T-Junction	Two-way	Two-way	Two-way		1.85	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.82	A

Arms

Arms

Junction	Arm	Name	Description	Arm type
1 - East Junction	A	B2175 (NW)		Major
	B	Grove Road		Minor
	C	B2175 (SE)		Major
2 - Middle Junction	A	B2175 (SW)		Major
	B	Site Access		Minor
	C	B2175 (SE)		Major

Major Arm Geometry

Junction	Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
1 - East Junction	C - B2175 (SE)	7.30			90.0	✓	0.00
2 - Middle Junction	C - B2175 (SE)	7.30			90.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Junction	Arm	Minor arm type	Lane width (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
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1 - East Junction	B - Grove Road	One lane	3.53								90	90
2 - Middle Junction	B - Site Access	One lane plus flare		10.00	5.57	4.88	4.07	3.65	✓	2.00	90	90

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1 - East Junction	B-A	581	0.100	0.253	0.159	0.361
	B-C	717	0.104	0.262	-	-
	C-B	626	0.229	0.229	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
2 - Middle Junction	B-A	620	0.107	0.269	0.169	0.385
	B-C	652	0.094	0.238	-	-
	C-B	626	0.229	0.229	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

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
D1	2030 + Dev	AM	ONE HOUR	07:45	09:15	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)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - East Junction	A - B2175 (NW)		ONE HOUR	✓	468	100.000
	B - Grove Road		ONE HOUR	✓	95	100.000
	C - B2175 (SE)		ONE HOUR	✓	700	100.000
2 - Middle Junction	A - B2175 (SW)		ONE HOUR	✓	462	100.000
	B - Site Access		ONE HOUR	✓	159	100.000
	C - B2175 (SE)		ONE HOUR	✓	763	100.000

Origin-Destination Data

Demand (PCU/hr)

1 - East Junction

	To			
		A - B2175 (NW)	B - Grove Road	C - B2175 (SE)
From	A - B2175 (NW)	0	81	387
	B - Grove Road	84	0	11
	C - B2175 (SE)	679	21	0

Demand (PCU/hr)

2 - Middle Junction

	To			
		A - B2175 (SW)	B - Site Access	C - B2175 (SE)
From	A - B2175 (SW)	0	36	426
	B - Site Access	117	0	42
	C - B2175 (SE)	746	17	0

Vehicle Mix

Heavy Vehicle Percentages

1 - East Junction

	To			
		A - B2175 (NW)	B - Grove Road	C - B2175 (SE)
From	A - B2175 (NW)	0	25	3
	B - Grove Road	56	0	0
	C - B2175 (SE)	2	5	0

Heavy Vehicle Percentages

2 - Middle Junction

	To			
		A - B2175 (SW)	B - Site Access	C - B2175 (SE)
From	A - B2175 (SW)	0	3	7
	B - Site Access	1	0	0
	C - B2175 (SE)	6	0	0

Results

Results Summary for whole modelled period

Junction	Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - East Junction	B-AC	0.29	21.01	0.6	C	87	131
	C-AB	0.08	4.29	0.1	A	57	85
	C-A					586	878
	A-B					74	111
	A-C					355	533
2 - Middle Junction	B-C	0.10	8.35	0.1	A	39	58
	B-A	0.38	16.95	0.6	C	107	161
	C-AB	0.07	4.13	0.1	A	51	76
	C-A					649	974

	A-B					33	50
	A-C					391	586

Main Results for each time segment

07:45 - 08:00

Junction	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
1 - East Junction	B-AC	72	18	432	0.165	70	0.0	0.3	14.534	B
	C-AB	37	9	902	0.040	36	0.0	0.1	4.295	A
	C-A	490	123			490				
	A-B	61	15			61				
	A-C	291	73			291				
2 - Middle Junction	B-C	32	8	543	0.058	31	0.0	0.1	7.028	A
	B-A	88	22	431	0.204	87	0.0	0.3	10.550	B
	C-AB	32	8	938	0.034	32	0.0	0.0	4.114	A
	C-A	543	136			543				
	A-B	27	7			27				
	A-C	321	80			321				

08:00 - 08:15

Junction	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
1 - East Junction	B-AC	85	21	400	0.213	85	0.3	0.4	16.715	C
	C-AB	52	13	961	0.054	52	0.1	0.1	4.086	A
	C-A	577	144			577				
	A-B	73	18			73				
	A-C	348	87			348				
2 - Middle Junction	B-C	38	9	518	0.073	38	0.1	0.1	7.492	A
	B-A	105	26	394	0.267	105	0.3	0.4	12.550	B
	C-AB	46	12	1004	0.046	46	0.0	0.1	3.899	A
	C-A	640	160			640				
	A-B	32	8			32				
	A-C	383	96			383				

08:15 - 08:30

Junction	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
1 - East Junction	B-AC	105	26	356	0.294	104	0.4	0.6	20.875	C
	C-AB	82	20	1045	0.078	81	0.1	0.1	3.846	A
	C-A	689	172			689				
	A-B	89	22			89				
	A-C	426	107			426				
2 - Middle Junction	B-C	46	12	478	0.097	46	0.1	0.1	8.338	A
	B-A	129	32	343	0.375	128	0.4	0.6	16.825	C
	C-AB	74	19	1099	0.068	74	0.1	0.1	3.662	A
	C-A	766	191			766				
	A-B	40	10			40				
	A-C	469	117			469				

08:30 - 08:45

Junction	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
1 - East Junction	B-AC	105	26	356	0.294	105	0.6	0.6	21.006	C
	C-AB	82	20	1045	0.078	82	0.1	0.1	3.844	A
	C-A	689	172			689				
	A-B	89	22			89				
	A-C	426	107			426				
2 - Middle Junction	B-C	46	12	477	0.097	46	0.1	0.1	8.355	A
	B-A	129	32	343	0.375	129	0.6	0.6	16.949	C
	C-AB	75	19	1099	0.068	75	0.1	0.1	3.671	A
	C-A	766	191			766				
	A-B	40	10			40				
	A-C	469	117			469				

08:45 - 09:00

Junction	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
1 - East Junction	B-AC	85	21	400	0.213	86	0.6	0.4	16.845	C
	C-AB	52	13	961	0.054	52	0.1	0.1	4.081	A
	C-A	577	144			577				
	A-B	73	18			73				
	A-C	348	87			348				
2 - Middle Junction	B-C	38	9	517	0.073	38	0.1	0.1	7.512	A
	B-A	105	26	394	0.267	106	0.6	0.4	12.661	B
	C-AB	46	12	1004	0.046	46	0.1	0.1	3.920	A
	C-A	640	160			640				
	A-B	32	8			32				
	A-C	383	96			383				

09:00 - 09:15

Junction	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
1 - East Junction	B-AC	72	18	432	0.166	72	0.4	0.3	14.665	B
	C-AB	37	9	902	0.041	37	0.1	0.1	4.294	A
	C-A	490	123			490				
	A-B	61	15			61				
	A-C	291	73			291				
2 - Middle Junction	B-C	32	8	543	0.058	32	0.1	0.1	7.049	A
	B-A	88	22	431	0.204	89	0.4	0.3	10.635	B
	C-AB	32	8	938	0.034	32	0.1	0.0	4.127	A
	C-A	542	136			542				
	A-B	27	7			27				
	A-C	321	80			321				

2030 + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	2 - Middle Junction - B - Site Access -	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

		Minor arm geometry	
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Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	East Junction	T-Junction	Two-way	Two-way	Two-way		1.49	A
2	Middle Junction	T-Junction	Two-way	Two-way	Two-way		1.11	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.29	A

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
D2	2030 + Dev	PM	ONE HOUR	16:45	18:15	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)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - East Junction	A - B2175 (NW)		ONE HOUR	✓	608	100.000
	B - Grove Road		ONE HOUR	✓	103	100.000
	C - B2175 (SE)		ONE HOUR	✓	593	100.000
2 - Middle Junction	A - B2175 (SW)		ONE HOUR	✓	688	100.000
	B - Site Access		ONE HOUR	✓	75	100.000
	C - B2175 (SE)		ONE HOUR	✓	656	100.000

Origin-Destination Data

Demand (PCU/hr)

1 - East Junction

From	To			
		A - B2175 (NW)	B - Grove Road	C - B2175 (SE)
	A - B2175 (NW)	0	57	551
	B - Grove Road	79	0	24
	C - B2175 (SE)	577	16	0

Demand (PCU/hr)

2 - Middle Junction

	To			
		A - B2175 (SW)	B - Site Access	C - B2175 (SE)
From	A - B2175 (SW)	0	101	587
	B - Site Access	54	0	21
	C - B2175 (SE)	612	44	0

Vehicle Mix

Heavy Vehicle Percentages

1 - East Junction

	To			
		A - B2175 (NW)	B - Grove Road	C - B2175 (SE)
From	A - B2175 (NW)	0	26	2
	B - Grove Road	10	0	15
	C - B2175 (SE)	2	7	0

Heavy Vehicle Percentages

2 - Middle Junction

	To			
		A - B2175 (SW)	B - Site Access	C - B2175 (SE)
From	A - B2175 (SW)	0	0	4
	B - Site Access	0	0	0
	C - B2175 (SE)	3	0	0

Results

Results Summary for whole modelled period

Junction	Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - East Junction	B-AC	0.32	16.93	0.5	C	95	142
	C-AB	0.06	4.67	0.1	A	38	58
	C-A					506	759
	A-B					52	78
	A-C					506	758
2 - Middle Junction	B-C	0.05	8.15	0.1	A	19	29
	B-A	0.20	14.99	0.2	B	50	74
	C-AB	0.17	4.80	0.5	A	115	172
	C-A					487	731
	A-B					93	139
	A-C					539	808

Main Results for each time segment

16:45 - 17:00

Junction	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
1 - East Junction	B-AC	78	19	433	0.179	77	0.0	0.2	11.188	B
	C-AB	25	6	830	0.030	25	0.0	0.0	4.667	A
	C-A	421	105			421				
	A-B	43	11			43				
	A-C	415	104			415				
2 - Middle Junction	B-C	16	4	529	0.030	16	0.0	0.0	7.009	A
	B-A	41	10	400	0.102	40	0.0	0.1	9.988	A
	C-AB	74	18	838	0.088	73	0.0	0.2	4.779	A
	C-A	420	105			420				
	A-B	76	19			76				
	A-C	442	110			442				

17:00 - 17:15

Junction	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
1 - East Junction	B-AC	93	23	398	0.232	92	0.2	0.3	13.050	B
	C-AB	35	9	875	0.040	35	0.0	0.1	4.462	A
	C-A	498	124			498				
	A-B	51	13			51				
	A-C	495	124			495				
2 - Middle Junction	B-C	19	5	503	0.038	19	0.0	0.0	7.436	A
	B-A	49	12	358	0.136	48	0.1	0.2	11.621	B
	C-AB	105	26	887	0.118	104	0.2	0.3	4.686	A
	C-A	485	121			485				
	A-B	91	23			91				
	A-C	528	132			528				

17:15 - 17:30

Junction	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
1 - East Junction	B-AC	113	28	350	0.324	113	0.3	0.5	16.827	C
	C-AB	54	14	941	0.058	54	0.1	0.1	4.210	A
	C-A	599	150			599				
	A-B	63	16			63				
	A-C	607	152			607				
2 - Middle Junction	B-C	23	6	465	0.050	23	0.0	0.1	8.139	A
	B-A	59	15	300	0.198	59	0.2	0.2	14.939	B
	C-AB	165	41	958	0.172	164	0.3	0.5	4.633	A
	C-A	558	139			558				
	A-B	111	28			111				
	A-C	646	162			646				

17:30 - 17:45

Junction	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
1 - East Junction	B-AC	113	28	350	0.324	113	0.5	0.5	16.932	C
	C-AB	54	14	941	0.058	54	0.1	0.1	4.205	A
	C-A	598	150			598				
	A-B	63	16			63				
	A-C	607	152			607				

2 - Middle Junction	B-C	23	6	465	0.050	23	0.1	0.1	8.146	A
	B-A	59	15	300	0.198	59	0.2	0.2	14.992	B
	C-AB	165	41	958	0.173	165	0.5	0.5	4.650	A
	C-A	557	139			557				
	A-B	111	28			111				
	A-C	646	162			646				

17:45 - 18:00

Junction	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
1 - East Junction	B-AC	93	23	398	0.232	93	0.5	0.3	13.148	B
	C-AB	35	9	876	0.041	36	0.1	0.1	4.446	A
	C-A	498	124			498				
	A-B	51	13			51				
	A-C	495	124			495				
2 - Middle Junction	B-C	19	5	503	0.038	19	0.1	0.0	7.447	A
	B-A	49	12	358	0.136	49	0.2	0.2	11.667	B
	C-AB	105	26	888	0.119	106	0.5	0.3	4.714	A
	C-A	484	121			484				
	A-B	91	23			91				
	A-C	528	132			528				

18:00 - 18:15

Junction	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
1 - East Junction	B-AC	78	19	433	0.179	78	0.3	0.2	11.271	B
	C-AB	25	6	830	0.031	25	0.1	0.0	4.658	A
	C-A	421	105			421				
	A-B	43	11			43				
	A-C	415	104			415				
2 - Middle Junction	B-C	16	4	529	0.030	16	0.0	0.0	7.021	A
	B-A	41	10	400	0.102	41	0.2	0.1	10.025	B
	C-AB	74	19	839	0.088	75	0.3	0.2	4.801	A
	C-A	420	105			420				
	A-B	76	19			76				
	A-C	442	110			442				

2030 + Dev, Sat

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	2 - Middle Junction - B - Site Access - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
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1	East Junction	T-Junction	Two-way	Two-way	Two-way		1.18	A
2	Middle Junction	T-Junction	Two-way	Two-way	Two-way		2.62	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.98	A

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
D3	2030 + Dev	Sat	ONE HOUR	12:00	13:30	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)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - East Junction	A - B2175 (NW)		ONE HOUR	✓	409	100.000
	B - Grove Road		ONE HOUR	✓	85	100.000
	C - B2175 (SE)		ONE HOUR	✓	501	100.000
2 - Middle Junction	A - B2175 (SW)		ONE HOUR	✓	486	100.000
	B - Site Access		ONE HOUR	✓	189	100.000
	C - B2175 (SE)		ONE HOUR	✓	553	100.000

Origin-Destination Data

Demand (PCU/hr)

1 - East Junction

	To			
		A - B2175 (NW)	B - Grove Road	C - B2175 (SE)
From	A - B2175 (NW)	0	46	363
	B - Grove Road	65	0	20
	C - B2175 (SE)	488	13	0

Demand (PCU/hr)

2 - Middle Junction

	To			
		A - B2175 (SW)	B - Site Access	C - B2175 (SE)
From	A - B2175 (SW)	0	130	356
	B - Site Access	136	0	53
	C - B2175 (SE)	496	57	0

Vehicle Mix

Heavy Vehicle Percentages

1 - East Junction

From	To			
		A - B2175 (NW)	B - Grove Road	C - B2175 (SE)
	A - B2175 (NW)	0	26	2
	B - Grove Road	10	0	15
	C - B2175 (SE)	2	7	0

Heavy Vehicle Percentages

2 - Middle Junction

From	To			
		A - B2175 (SW)	B - Site Access	C - B2175 (SE)
	A - B2175 (SW)	0	0	5
	B - Site Access	0	0	0
	C - B2175 (SE)	3	0	0

Results

Results Summary for whole modelled period

Junction	Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - East Junction	B-AC	0.22	12.21	0.3	B	78	117
	C-AB	0.04	4.76	0.1	A	26	39
	C-A					434	651
	A-B					42	63
	A-C					333	500
2 - Middle Junction	B-C	0.12	8.46	0.1	A	49	73
	B-A	0.39	15.61	0.6	C	125	187
	C-AB	0.18	5.07	0.5	A	117	176
	C-A					390	585
	A-B					119	179
	A-C					327	490

Main Results for each time segment

12:00 - 12:15

Junction	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
1 - East Junction	B-AC	64	16	481	0.133	63	0.0	0.2	9.554	A
	C-AB	18	4	810	0.022	18	0.0	0.0	4.759	A
	C-A	359	90			359				
	A-B	35	9			35				
	A-C	273	68			273				
2 - Middle Junction	B-C	40	10	549	0.073	40	0.0	0.1	7.063	A
	B-A	102	26	455	0.225	101	0.0	0.3	10.133	B
	C-AB	80	20	803	0.100	79	0.0	0.2	5.040	A

	C-A	336	84			336				
	A-B	98	24			98				
	A-C	268	67			268				

12:15 - 12:30

Junction	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
1 - East Junction	B-AC	76	19	456	0.167	76	0.2	0.2	10.522	B
	C-AB	24	6	849	0.029	24	0.0	0.0	4.562	A
	C-A	426	107			426				
	A-B	41	10			41				
	A-C	326	82			326				
2 - Middle Junction	B-C	48	12	524	0.091	48	0.1	0.1	7.554	A
	B-A	122	31	424	0.288	122	0.3	0.4	11.901	B
	C-AB	109	27	842	0.130	109	0.2	0.3	4.990	A
	C-A	388	97			388				
	A-B	117	29			117				
	A-C	320	80			320				

12:30 - 12:45

Junction	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
1 - East Junction	B-AC	94	23	421	0.222	93	0.2	0.3	12.187	B
	C-AB	35	9	904	0.039	35	0.0	0.1	4.313	A
	C-A	516	129			516				
	A-B	51	13			51				
	A-C	400	100			400				
2 - Middle Junction	B-C	58	15	485	0.120	58	0.1	0.1	8.441	A
	B-A	150	37	380	0.394	149	0.4	0.6	15.488	C
	C-AB	161	40	897	0.180	161	0.3	0.5	4.977	A
	C-A	447	112			447				
	A-B	143	36			143				
	A-C	392	98			392				

12:45 - 13:00

Junction	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
1 - East Junction	B-AC	94	23	421	0.222	94	0.3	0.3	12.214	B
	C-AB	35	9	904	0.039	35	0.1	0.1	4.309	A
	C-A	516	129			516				
	A-B	51	13			51				
	A-C	400	100			400				
2 - Middle Junction	B-C	58	15	484	0.121	58	0.1	0.1	8.460	A
	B-A	150	37	380	0.394	150	0.6	0.6	15.612	C
	C-AB	162	40	898	0.180	162	0.5	0.5	4.992	A
	C-A	447	112			447				
	A-B	143	36			143				
	A-C	392	98			392				

13:00 - 13:15

Junction	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
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1 - East Junction	B-AC	76	19	456	0.167	77	0.3	0.2	10.553	B
	C-AB	24	6	849	0.029	24	0.1	0.0	4.549	A
	C-A	426	107			426				
	A-B	41	10			41				
	A-C	326	82			326				
2 - Middle Junction	B-C	48	12	523	0.091	48	0.1	0.1	7.576	A
	B-A	122	31	424	0.289	123	0.6	0.4	12.013	B
	C-AB	110	27	842	0.130	111	0.5	0.3	5.018	A
	C-A	387	97			387				
	A-B	117	29			117				
	A-C	320	80			320				

13:15 - 13:30

Junction	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
1 - East Junction	B-AC	64	16	481	0.133	64	0.2	0.2	9.597	A
	C-AB	18	4	810	0.022	18	0.0	0.0	4.752	A
	C-A	359	90			359				
	A-B	35	9			35				
	A-C	273	68			273				
2 - Middle Junction	B-C	40	10	548	0.073	40	0.1	0.1	7.085	A
	B-A	102	26	455	0.225	103	0.4	0.3	10.229	B
	C-AB	81	20	804	0.100	81	0.3	0.2	5.066	A
	C-A	336	84			336				
	A-B	98	24			98				
	A-C	268	67			268				

Junctions 9									
ARCADY 9 - Roundabout Module									
Version: 9.5.1.7462 © Copyright TRL Limited, 2019									
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Filename: J3 - A226_Ebbsfleet CP (Existing) v1.0.j9

Path: O:\London\Vectos\Shares\Projects\Projects\220000\226728 - Northfleet Central, Gravesham\Modelling

Report generation date: 24/05/2023 16:20:24

- »Adjusted 2030 Flows (Without LTC), AM
- »Adjusted 2030 Flows (Without LTC), PM
- »Adjusted 2030 Flows (Without LTC), Saturday

Summary of junction performance

	AM			PM			Saturday		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Adjusted 2030 Flows (Without LTC)									
1 - A226 (NE)	1.2	5.01	0.52	1.2	4.96	0.55	0.5	3.31	0.33
2 - A226 (SE)	0.9	3.97	0.45	0.8	3.58	0.42	0.6	3.30	0.39
3 - Car Park Access (SW)	0.0	3.55	0.01	0.0	3.76	0.04	0.0	3.50	0.04

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	Northfleet
Location	J3 - A226 / Ebbsfleet International Car Park Roundabout
Site number	
Date	21/09/2022
Version	
Status	Existing Junction Layout
Identifier	
Client	
Jobnumber	226728
Enumerator	David Noyce
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	Adjusted 2030 Flows (Without LTC)	AM	ONE HOUR	07:45	09:15	15	✓
D2	Adjusted 2030 Flows (Without LTC)	PM	ONE HOUR	16:45	18:15	15	✓
D3	Adjusted 2030 Flows (Without LTC)	Saturday	ONE HOUR	12:00	13:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

Adjusted 2030 Flows (Without LTC), AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	J3 - A226 / Ebbsfleet International Car Park Roundabout	Standard Roundabout		1, 2, 3	4.50	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A226 (NE)	
2	A226 (SE)	
3	Car Park Access (SW)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A226 (NE)	3.90	7.10	7.3	27.0	50.0	20.0	
2 - A226 (SE)	3.40	7.75	13.0	64.0	50.0	16.0	
3 - Car Park Access (SW)	4.00	6.20	4.4	27.0	50.0	37.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A226 (NE)	0.615	1660
2 - A226 (SE)	0.652	1804
3 - Car Park Access (SW)	0.558	1451

The slope and intercept shown above include any corrections and adjustments.

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
D1	Adjusted 2030 Flows (Without LTC)	AM	ONE HOUR	07:45	09:15	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 (%)
1 - A226 (NE)		ONE HOUR	✓	784	100.000
2 - A226 (SE)		ONE HOUR	✓	726	100.000
3 - Car Park Access (SW)		ONE HOUR	✓	6	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - A226 (NE)	2 - A226 (SE)	3 - Car Park Access (SW)
From	1 - A226 (NE)	2	770	12
	2 - A226 (SE)	701	0	25
	3 - Car Park Access (SW)	5	1	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - A226 (NE)	2 - A226 (SE)	3 - Car Park Access (SW)
From	1 - A226 (NE)	0	11	0
	2 - A226 (SE)	10	0	0
	3 - Car Park Access (SW)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A226 (NE)	0.52	5.01	1.2	A	719	1079
2 - A226 (SE)	0.45	3.97	0.9	A	666	999
3 - Car Park Access (SW)	0.01	3.55	0.0	A	6	8

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A226 (NE)	590	148	0.75	1660	0.356	588	531	0.0	0.6	3.712	A
2 - A226 (SE)	547	137	10	1797	0.304	545	578	0.0	0.5	3.148	A
3 - Car Park Access (SW)	5	1	527	1157	0.004	5	28	0.0	0.0	3.123	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A226 (NE)	705	176	0.90	1660	0.425	704	636	0.6	0.8	4.169	A
2 - A226 (SE)	653	163	13	1796	0.364	652	692	0.5	0.6	3.449	A
3 - Car Park Access (SW)	5	1	631	1099	0.005	5	33	0.0	0.0	3.291	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A226 (NE)	863	216	1	1660	0.520	862	779	0.8	1.2	4.989	A
2 - A226 (SE)	799	200	15	1794	0.446	798	847	0.6	0.9	3.960	A
3 - Car Park Access (SW)	7	2	773	1020	0.006	7	41	0.0	0.0	3.551	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A226 (NE)	863	216	1	1660	0.520	863	780	1.2	1.2	5.006	A
2 - A226 (SE)	799	200	15	1794	0.446	799	849	0.9	0.9	3.968	A
3 - Car Park Access (SW)	7	2	774	1019	0.006	7	41	0.0	0.0	3.553	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A226 (NE)	705	176	0.90	1660	0.425	706	637	1.2	0.8	4.190	A
2 - A226 (SE)	653	163	13	1795	0.364	654	695	0.9	0.6	3.461	A
3 - Car Park Access (SW)	5	1	633	1098	0.005	5	33	0.0	0.0	3.296	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A226 (NE)	590	148	0.75	1660	0.356	591	534	0.8	0.6	3.736	A
2 - A226 (SE)	547	137	11	1797	0.304	547	581	0.6	0.5	3.158	A
3 - Car Park Access (SW)	5	1	530	1156	0.004	5	28	0.0	0.0	3.126	A

Adjusted 2030 Flows (Without LTC), PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	J3 - A226 / Ebbsfleet International Car Park Roundabout	Standard Roundabout		1, 2, 3	4.31	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
D2	Adjusted 2030 Flows (Without LTC)	PM	ONE HOUR	16:45	18:15	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 (%)
1 - A226 (NE)		ONE HOUR	✓	814	100.000
2 - A226 (SE)		ONE HOUR	✓	692	100.000
3 - Car Park Access (SW)		ONE HOUR	✓	37	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - A226 (NE)	2 - A226 (SE)	3 - Car Park Access (SW)
From	1 - A226 (NE)	1	806	7
	2 - A226 (SE)	692	0	0
	3 - Car Park Access (SW)	11	26	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - A226 (NE)	2 - A226 (SE)	3 - Car Park Access (SW)
From	1 - A226 (NE)	0	3	0
	2 - A226 (SE)	3	0	0
	3 - Car Park Access (SW)	10	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A226 (NE)	0.55	4.96	1.2	A	747	1120
2 - A226 (SE)	0.42	3.58	0.8	A	635	952
3 - Car Park Access (SW)	0.04	3.76	0.0	A	34	51

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A226 (NE)	613	153	20	1648	0.372	610	528	0.0	0.6	3.564	A
2 - A226 (SE)	521	130	6	1800	0.289	519	624	0.0	0.4	2.892	A
3 - Car Park Access (SW)	28	7	520	1161	0.024	28	5	0.0	0.0	3.264	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A226 (NE)	732	183	23	1646	0.445	731	632	0.6	0.8	4.048	A
2 - A226 (SE)	622	156	7	1799	0.346	622	747	0.4	0.5	3.147	A
3 - Car Park Access (SW)	33	8	622	1104	0.030	33	6	0.0	0.0	3.455	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A226 (NE)	896	224	29	1643	0.546	895	774	0.8	1.2	4.943	A
2 - A226 (SE)	762	190	9	1798	0.424	761	914	0.5	0.8	3.572	A
3 - Car Park Access (SW)	41	10	762	1026	0.040	41	8	0.0	0.0	3.754	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A226 (NE)	896	224	29	1643	0.546	896	775	1.2	1.2	4.965	A
2 - A226 (SE)	762	190	9	1798	0.424	762	916	0.8	0.8	3.578	A
3 - Car Park Access (SW)	41	10	763	1025	0.040	41	8	0.0	0.0	3.756	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A226 (NE)	732	183	23	1646	0.445	733	634	1.2	0.8	4.070	A
2 - A226 (SE)	622	156	7	1799	0.346	623	750	0.8	0.5	3.154	A
3 - Car Park Access (SW)	33	8	624	1103	0.030	33	6	0.0	0.0	3.460	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A226 (NE)	613	153	20	1648	0.372	614	531	0.8	0.6	3.587	A
2 - A226 (SE)	521	130	6	1800	0.289	521	627	0.5	0.4	2.901	A
3 - Car Park Access (SW)	28	7	522	1160	0.024	28	5	0.0	0.0	3.270	A

Adjusted 2030 Flows (Without LTC), Saturday

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	J3 - A226 / Ebbsfleet International Car Park Roundabout	Standard Roundabout		1, 2, 3	3.31	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
D3	Adjusted 2030 Flows (Without LTC)	Saturday	ONE HOUR	12:00	13:30	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 (%)
1 - A226 (NE)		ONE HOUR	✓	499	100.000
2 - A226 (SE)		ONE HOUR	✓	637	100.000
3 - Car Park Access (SW)		ONE HOUR	✓	43	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - A226 (NE)	2 - A226 (SE)	3 - Car Park Access (SW)
From	1 - A226 (NE)	0	481	18
	2 - A226 (SE)	610	0	27
	3 - Car Park Access (SW)	17	26	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - A226 (NE)	2 - A226 (SE)	3 - Car Park Access (SW)
From	1 - A226 (NE)	0	0	0
	2 - A226 (SE)	0	0	0
	3 - Car Park Access (SW)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A226 (NE)	0.33	3.31	0.5	A	458	687
2 - A226 (SE)	0.39	3.30	0.6	A	585	877
3 - Car Park Access (SW)	0.04	3.50	0.0	A	39	59

Main Results for each time segment

12:00 - 12:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A226 (NE)	376	94	20	1648	0.228	374	471	0.0	0.3	2.835	A
2 - A226 (SE)	480	120	14	1795	0.267	478	380	0.0	0.4	2.732	A
3 - Car Park Access (SW)	32	8	458	1196	0.027	32	34	0.0	0.0	3.093	A

12:15 - 12:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A226 (NE)	449	112	23	1646	0.273	448	563	0.3	0.4	3.018	A
2 - A226 (SE)	573	143	16	1793	0.319	572	455	0.4	0.5	2.948	A
3 - Car Park Access (SW)	39	10	548	1145	0.034	39	40	0.0	0.0	3.251	A

12:30 - 12:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A226 (NE)	549	137	29	1643	0.334	549	690	0.4	0.5	3.303	A
2 - A226 (SE)	701	175	20	1791	0.392	701	558	0.5	0.6	3.301	A
3 - Car Park Access (SW)	47	12	671	1077	0.044	47	49	0.0	0.0	3.495	A

12:45 - 13:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A226 (NE)	549	137	29	1643	0.334	549	690	0.5	0.5	3.306	A
2 - A226 (SE)	701	175	20	1791	0.392	701	558	0.6	0.6	3.303	A
3 - Car Park Access (SW)	47	12	672	1076	0.044	47	50	0.0	0.0	3.497	A

13:00 - 13:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A226 (NE)	449	112	23	1646	0.273	449	564	0.5	0.4	3.023	A
2 - A226 (SE)	573	143	16	1793	0.319	573	456	0.6	0.5	2.954	A
3 - Car Park Access (SW)	39	10	549	1145	0.034	39	41	0.0	0.0	3.253	A

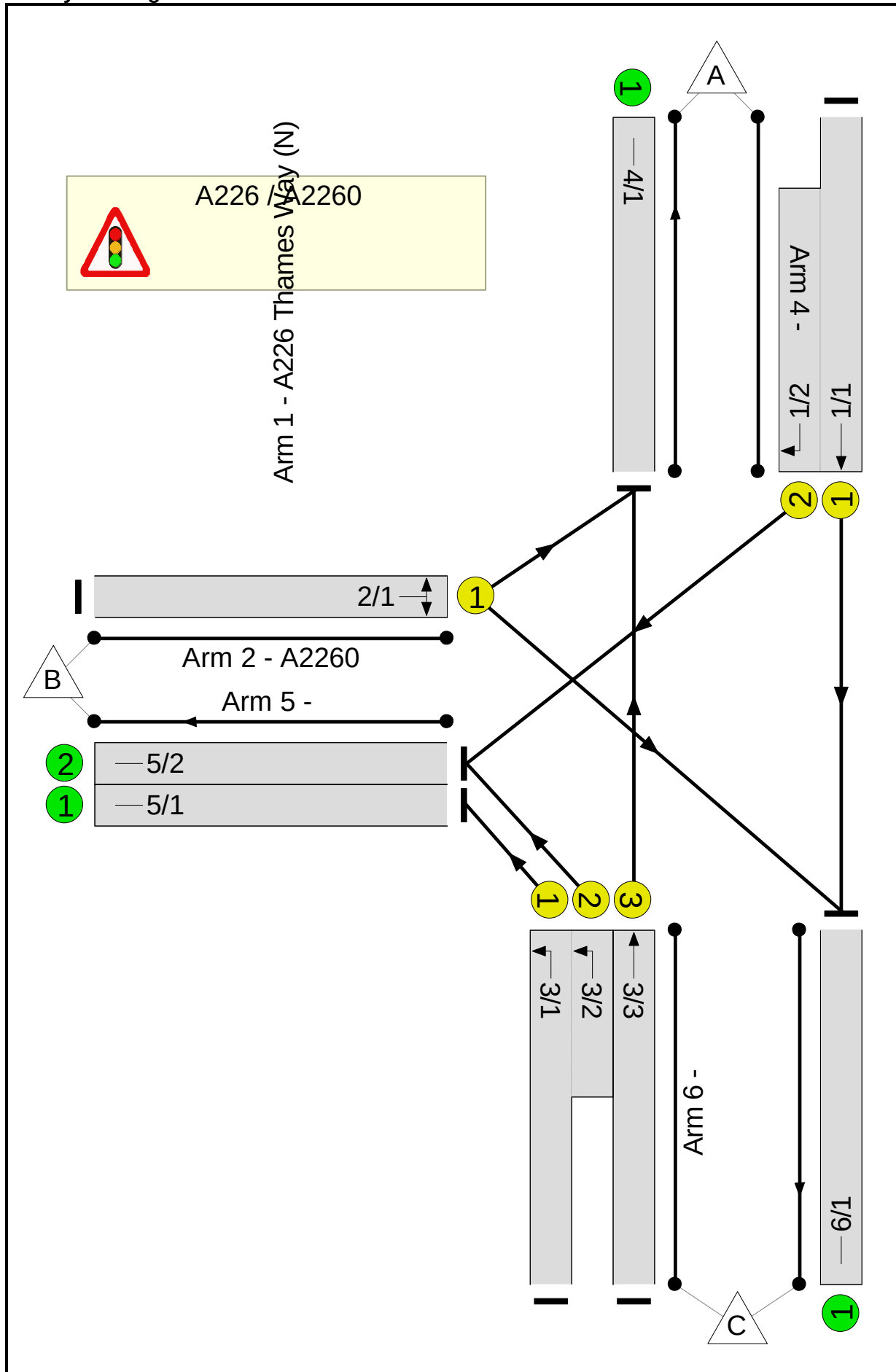
13:15 - 13:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A226 (NE)	376	94	20	1648	0.228	376	472	0.4	0.3	2.841	A
2 - A226 (SE)	480	120	14	1795	0.267	480	382	0.5	0.4	2.738	A
3 - Car Park Access (SW)	32	8	460	1195	0.027	32	34	0.0	0.0	3.098	A

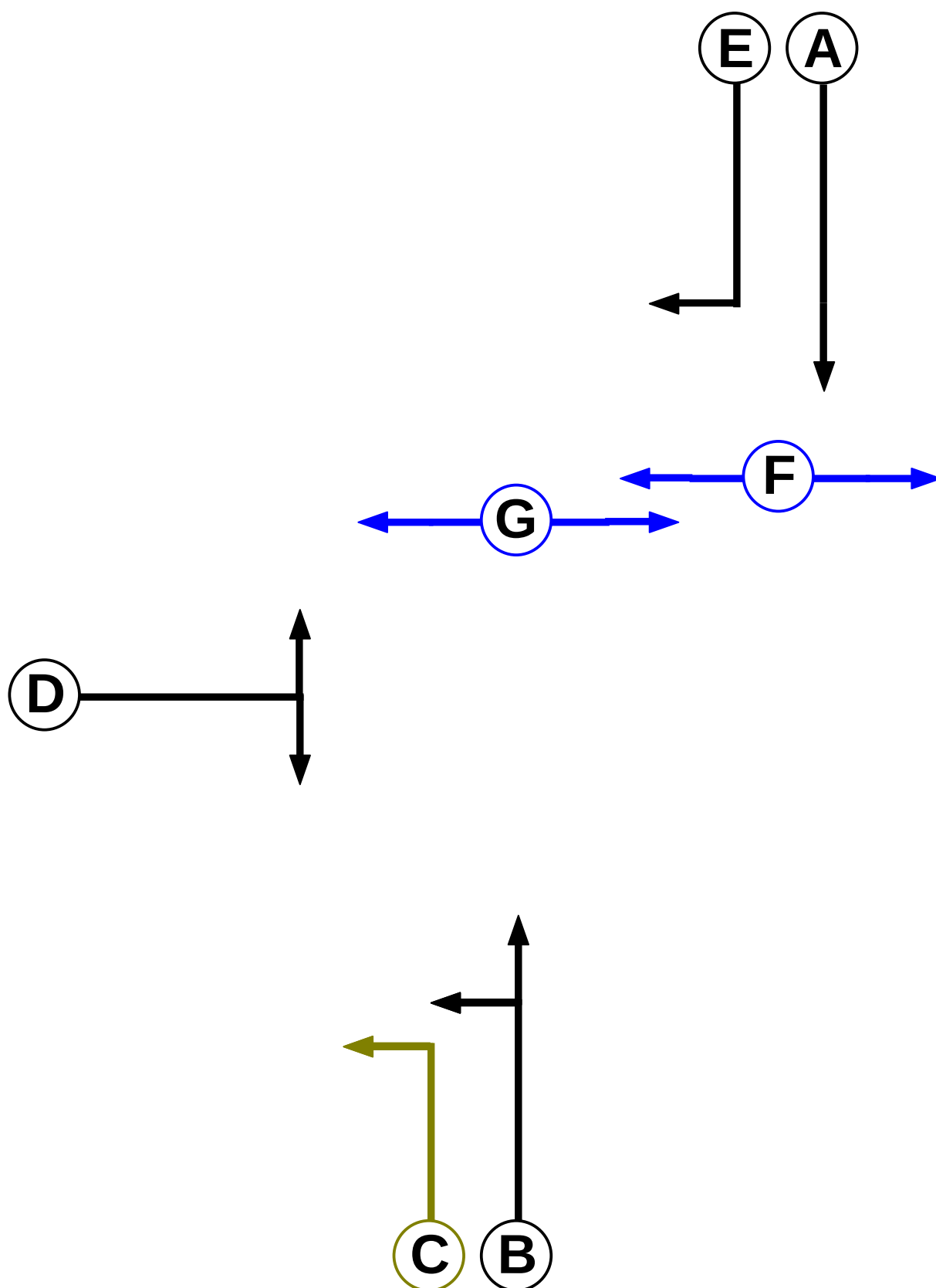
Northfleet**User and Project Details**

Project:	Northfleet
Title:	A2260 / A226 Thames Way
Location:	
Design Layout Ref:	Existing Junction Layout
Additional detail:	
File name:	J4 - A2260_Thames Way (Existing) v2.0.lsg3x
Author:	David Noyce
Company:	Vectos / SLR
Address:	The Cursitor, 38 Chancery Lane, London WC2A 1EN

Junction Layout Diagram



Phase Diagram



Phase Input Data

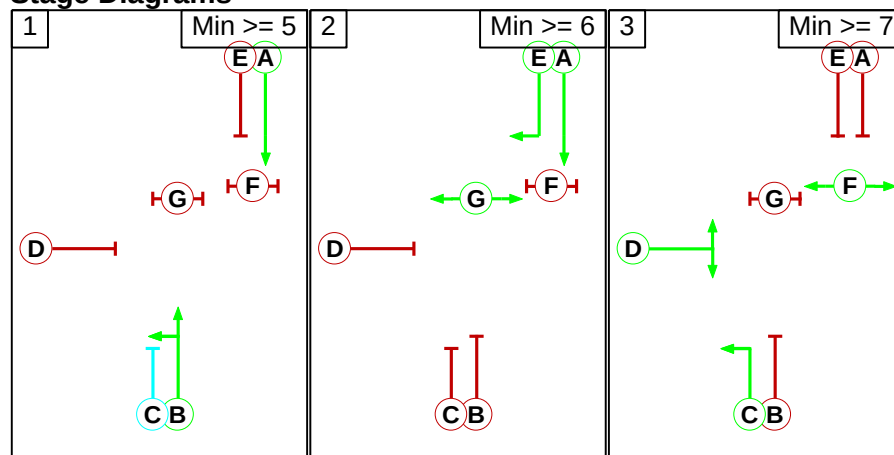
Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Filter	B	7	2
D	Traffic		7	7
E	Traffic		7	7
F	Pedestrian		6	6
G	Pedestrian		6	6

Intergreens

Terminating Phase	Starting Phase							
		A	B	C	D	E	F	G
	A		-	-	5	-	5	-
	B	-		-	6	5	-	9
	C	-	-		-	5	-	-
	D	5	5	-		5	-	8
	E	-	5	8	5		5	-
	F	7	-	-	-	7		-
	G	-	9	-	9	-	-	

Stage Data

Stage No.	Phases in Stage
1	A B
2	A E G
3	C D F

Stage Diagrams**Phase Delays**

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Lane Input Data

Junction: A226 / A2260												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A226 Thames Way (N))	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 6 Ahead	Inf
1/2 (A226 Thames Way (N))	U	E	2	3	12.0	User	1970	-	-	-	-	-
2/1 (A2260)	U	D	2	3	60.0	User	1949	-	-	-	-	-
3/1 (A226 Thames Way (S))	U	B C	2	3	60.0	User	2073	-	-	-	-	-
3/2 (A226 Thames Way (S))	U	B C	2	3	6.0	Geom	-	2.50	0.00	N	Arm 5 Left	Inf
3/3 (A226 Thames Way (S))	U	B	2	3	60.0	User	1995	-	-	-	-	-

Junction: A226 / A2260					
Lane	Custom Occupancy per Flow Group (PCU)				
	2022 Observed, AM	2022 Observed, PM	Adjusted 2030 Flows (without LTC) AM	Adjusted 2030 Flows (without LTC) PM	2030 with Development Flows(without LTC), Sat
3/2 (A226 Thames Way (S) Lane 2)	0.5	0.5	0.5	0.5	6.0

Scenario 1: '2022 Observed, AM' (FG1: '2022 Observed, AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	322	127	449
	B	266	0	216	482
	C	206	369	0	575
	Tot.	472	691	343	1506

Stage Timings

Stage	1	2	3
Duration	10	15	28
Change Point	0	17	41

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A2260 / A226 Thames Way	-	-	-	-	-	-	-	-	66.5%	-	-
A226 / A2260	-	-	-	-	-	-	-	-	66.5%	-	-
1/1+1/2	A226 Thames Way (N) Right Ahead	A E	34:19	7:22	41	449	1915:1970	199+505	63.7 : 63.7%	29.1	7.0
2/1	A2260 Left Right	D	28	50	0	482	1949	725	66.5%	27.8	9.7
3/1+3/2	A226 Thames Way (S) Left	B	46	49	17	369	2073:2005	639+622	29.3 : 29.3%	9.1	3.4
3/3	A226 Thames Way (S) Ahead	B	12	5	17	206	1995	332	62.0%	44.3	4.9
		C1	PRC for Signalled Lanes (%):		35.3		Total Delay for Signalled Lanes (pcuHr):		10.81		
			PRC Over All Lanes (%):		35.3		Total Delay Over All Lanes(pcuHr):		10.81		

Scenario 2: '2022 Observed, PM' (FG2: '2022 Observed, PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	280	144	424
	B	167	0	199	366
	C	117	302	0	419
	Tot.	284	582	343	1209

Stage Timings

Stage	1	2	3
Duration	10	31	41
Change Point	0	17	57

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A2260 / A226 Thames Way	-	-	-	-	-	-	-	-	48.9%	-	-
A226 / A2260	-	-	-	-	-	-	-	-	48.9%	-	-
1/1+1/2	A226 Thames Way (N) Right Ahead	A E	50:35	7:22	57	424	1915:1970	294+572	48.9 : 48.9%	27.6	6.9
2/1	A2260 Left Right	D	41	66	0	366	1949	765	47.8%	28.8	8.6
3/1+3/2	A226 Thames Way (S) Left	B	59	65	17	302	2073:2005	591+576	25.9 : 25.9%	13.7	4.1
3/3	A226 Thames Way (S) Ahead	B	12	5	17	117	1995	242	48.3%	58.1	3.7

C1	PRC for Signalled Lanes (%):	84.0	Total Delay for Signalled Lanes (pcuHr):	9.21
	PRC Over All Lanes (%):	84.0	Total Delay Over All Lanes(pcuHr):	9.21

Scenario 3: 'Adjusted 2030 Flows (without LTC) AM' (FG3: 'Adjusted 2030 Flows (without LTC) AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	211	574	785
	B	289	0	339	628
	C	461	223	0	684
	Tot.	750	434	913	2097

Stage Timings

Stage	1	2	3
Duration	18	6	29
Change Point	0	25	40

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A2260 / A226 Thames Way	-	-	-	-	-	-	-	-	85.8%	-	-
A226 / A2260	-	-	-	-	-	-	-	-	85.8%	-	-
1/1+1/2	A226 Thames Way (N) Right Ahead	A E	33:10	7:30	40	785	1915:1970	753+277	76.2 : 76.2%	28.9	11.5
2/1	A2260 Left Right	D	29	49	0	628	1949	750	83.8%	36.0	14.7
3/1+3/2	A226 Thames Way (S) Left	B	55	48	25	223	2073:2005	758+738	14.9 : 14.9%	4.7	1.0
3/3	A226 Thames Way (S) Ahead	B	20	5	25	461	1995	537	85.8%	49.1	12.3
C1			PRC for Signalled Lanes (%):	4.9	Total Delay for Signalled Lanes (pcuHr):		19.16				
			PRC Over All Lanes (%):	4.9	Total Delay Over All Lanes(pcuHr):		19.16				

Scenario 4: 'Adjusted 2030 Flows (without LTC) PM' (FG4: 'Adjusted 2030 Flows (without LTC) PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	252	594	846
	B	259	0	289	548
	C	445	249	0	694
	Tot.	704	501	883	2088

Stage Timings

Stage	1	2	3
Duration	29	14	39
Change Point	0	36	59

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A2260 / A226 Thames Way	-	-	-	-	-	-	-	-	75.8%	-	-
A226 / A2260	-	-	-	-	-	-	-	-	75.8%	-	-
1/1+1/2	A226 Thames Way (N) Right Ahead	A E	52:18	7:41	59	846	1915:1970	784+333	75.8 : 75.8%	32.9	15.4
2/1	A2260 Left Right	D	39	68	0	548	1949	729	75.2%	39.0	15.6
3/1+3/2	A226 Thames Way (S) Left	B	76	67	36	249	2073:2005	755+737	16.7 : 16.7%	6.0	1.8
3/3	A226 Thames Way (S) Ahead	B	31	5	36	445	1995	597	74.6%	45.5	13.3
C1			PRC for Signalled Lanes (%):		18.8		Total Delay for Signalled Lanes (pcuHr):		19.69		
			PRC Over All Lanes (%):		18.8		Total Delay Over All Lanes(pcuHr):		19.69		

Scenario 5: '2030 with Development Flows (without LTC), Sat' (FG5: '2030 with Development FLOws(without LTC), Sat', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired**Desired Flow :**

	Destination				
	A	B	C	Tot.	
Origin	A	0	157	424	581
	B	254	0	336	590
	C	424	500	0	924
	Tot.	678	657	760	2095

Stage Timings

Stage	1	2	3
Duration	18	6	29
Change Point	0	25	40

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A2260 / A226 Thames Way	-	-	-	-	-	-	-	-	78.9%	-	-
A226 / A2260	-	-	-	-	-	-	-	-	78.9%	-	-
1/1+1/2	A226 Thames Way (N) Right Ahead	A E	33:10	7:30	40	581	1915:1970	752+278	56.4 : 56.5%	24.1	7.2
2/1	A2260 Left Right	D	29	49	0	590	1949	750	78.7%	32.2	13.0
3/1+3/2	A226 Thames Way (S) Left	B	55	48	25	500	2073:2005	865+865	28.9 : 28.9%	5.0	1.9
3/3	A226 Thames Way (S) Ahead	B	20	5	25	424	1995	537	78.9%	41.9	10.3
		C1	PRC for Signalled Lanes (%):		14.0		Total Delay for Signalled Lanes (pcuHr):		14.79		
			PRC Over All Lanes (%):		14.0		Total Delay Over All Lanes(pcuHr):		14.79		

Junctions 9
ARCADY 9 - Roundabout Module
Version: 9.5.1.7462 © Copyright TRL Limited, 2019
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Filename: J5 - A2260_B259 (Existing) v1.0.j9

Path: O:\London\Vectos\Shares\Projects\Projects\220000\226728 - Northfleet Central, Gravesham\Modelling

Report generation date: 24/05/2023 16:30:04

»Adjusted 2030 Flows (Without LTC), AM
 »Adjusted 2030 Flows (Without LTC), PM
 »Adjusted 2030 Flows (Without LTC) , Saturday

Summary of junction performance

	AM			PM			Saturday		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	Adjusted 2030 Flows (Without LTC)								
1 - A2260 (E)	7.2	23.98	0.87	9.6	29.69	0.92	3.4	13.01	0.78
2 - A2260 (S)	1.4	3.40	0.55	1.0	2.80	0.50	1.1	2.88	0.52
3 - B259 (W)	1.8	8.50	0.64	0.9	5.26	0.46	0.9	5.58	0.46
4 - International Way (N)	0.1	7.43	0.07	0.1	5.32	0.09	0.8	6.51	0.44

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	Northfleet
Location	J5 - A2260 / B259 Roundabout
Site number	
Date	21/09/2022
Version	
Status	Existing Junction Layout
Identifier	
Client	
Jobnumber	226728
Enumerator	David Noyce
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
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m	kph	PCU	PCU	perHour	s	-Min	perMin
---	-----	-----	-----	---------	---	------	--------

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	Adjusted 2030 Flows (Without LTC)	AM	ONE HOUR	07:45	09:15	15	✓
D2	Adjusted 2030 Flows (Without LTC)	PM	ONE HOUR	16:45	18:15	15	✓
D3	Adjusted 2030 Flows (Without LTC)	Saturday	ONE HOUR	12:00	13:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

Adjusted 2030 Flows (Without LTC), AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	J5 - A2260 / B259 Roundabout	Standard Roundabout		1, 2, 3, 4	11.47	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A2260 (E)	
2	A2260 (S)	
3	B259 (W)	
4	International Way (N)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A2260 (E)	3.50	7.10	18.5	18.0	70.0	48.0	
2 - A2260 (S)	7.30	9.10	26.5	24.0	70.0	12.0	
3 - B259 (W)	3.50	6.00	21.3	25.0	70.0	15.0	
4 - International Way (N)	3.65	6.70	15.5	15.0	70.0	25.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A2260 (E)	0.476	1615
2 - A2260 (S)	0.703	2848
3 - B259 (W)	0.522	1711
4 - International Way (N)	0.502	1675

The slope and intercept shown above include any corrections and adjustments.

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
D1	Adjusted 2030 Flows (Without LTC)	AM	ONE HOUR	07:45	09:15	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 (%)
1 - A2260 (E)		ONE HOUR	✓	1039	100.000
2 - A2260 (S)		ONE HOUR	✓	1327	100.000
3 - B259 (W)		ONE HOUR	✓	687	100.000
4 - International Way (N)		ONE HOUR	✓	59	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To				
		1 - A2260 (E)	2 - A2260 (S)	3 - B259 (W)	4 - International Way (N)
	1 - A2260 (E)	0	786	227	26
	2 - A2260 (S)	688	6	446	187
	3 - B259 (W)	124	524	1	38
	4 - International Way (N)	6	51	0	2

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - A2260 (E)	2 - A2260 (S)	3 - B259 (W)	4 - International Way (N)
	1 - A2260 (E)	0	20	1	0
	2 - A2260 (S)	20	0	1	16
	3 - B259 (W)	2	1	0	19
	4 - International Way (N)	21	89	0	100

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A2260 (E)	0.87	23.98	7.2	C	953	1430
2 - A2260 (S)	0.55	3.40	1.4	A	1218	1827
3 - B259 (W)	0.64	8.50	1.8	A	630	946
4 - International Way (N)	0.07	7.43	0.1	A	54	81

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A2260 (E)	782	196	437	1407	0.556	777	614	0.0	1.4	6.497	A
2 - A2260 (S)	999	250	191	2713	0.368	996	1023	0.0	0.7	2.351	A
3 - B259 (W)	517	129	682	1355	0.382	515	505	0.0	0.6	4.360	A
4 - International Way (N)	44	11	1007	1169	0.038	44	190	0.0	0.1	5.729	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A2260 (E)	934	234	524	1366	0.684	930	735	1.4	2.4	9.393	A
2 - A2260 (S)	1193	298	229	2687	0.444	1192	1225	0.7	0.9	2.702	A
3 - B259 (W)	618	154	816	1285	0.481	616	605	0.6	0.9	5.486	A
4 - International Way (N)	53	13	1206	1070	0.050	53	227	0.1	0.1	6.341	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A2260 (E)	1144	286	640	1310	0.873	1127	899	2.4	6.7	20.810	C
2 - A2260 (S)	1461	365	278	2653	0.551	1459	1490	0.9	1.4	3.380	A
3 - B259 (W)	756	189	999	1189	0.636	753	738	0.9	1.7	8.361	A
4 - International Way (N)	65	16	1475	935	0.070	65	278	0.1	0.1	7.411	A

08:30 - 08:45

Arm	Total Demand	Junction	Circulating flow (PCU/hr)	Capacity	RFC	Throughput (PCU/hr)	Throughput (exit	Start queue	End queue	Delay (s)	Unsignalised level of service
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	(PCU/hr)	Arrivals (PCU)		(PCU/hr)			side) (PCU/hr)	(PCU)	(PCU)		
1 - A2260 (E)	1144	286	643	1309	0.874	1142	901	6.7	7.2	23.982	C
2 - A2260 (S)	1461	365	281	2650	0.551	1461	1503	1.4	1.4	3.398	A
3 - B259 (W)	756	189	1001	1188	0.636	756	742	1.7	1.8	8.495	A
4 - International Way (N)	65	16	1479	933	0.070	65	278	0.1	0.1	7.428	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A2260 (E)	934	234	528	1364	0.685	953	737	7.2	2.6	10.463	B
2 - A2260 (S)	1193	298	235	2683	0.445	1195	1246	1.4	0.9	2.718	A
3 - B259 (W)	618	154	819	1283	0.481	621	611	1.8	1.0	5.572	A
4 - International Way (N)	53	13	1211	1067	0.050	53	228	0.1	0.1	6.363	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A2260 (E)	782	196	441	1405	0.557	787	617	2.6	1.5	6.722	A
2 - A2260 (S)	999	250	194	2712	0.368	1000	1034	0.9	0.7	2.362	A
3 - B259 (W)	517	129	685	1353	0.382	518	509	1.0	0.6	4.407	A
4 - International Way (N)	44	11	1013	1167	0.038	45	191	0.1	0.1	5.746	A

Adjusted 2030 Flows (Without LTC), PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	J5 - A2260 / B259 Roundabout	Standard Roundabout		1, 2, 3, 4	13.50	B

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
D2	Adjusted 2030 Flows (Without LTC)	PM	ONE HOUR	16:45	18:15	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 (%)
1 - A2260 (E)		ONE HOUR	✓	1129	100.000
2 - A2260 (S)		ONE HOUR	✓	1230	100.000
3 - B259 (W)		ONE HOUR	✓	536	100.000
4 - International Way (N)		ONE HOUR	✓	87	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - A2260 (E)	2 - A2260 (S)	3 - B259 (W)	4 - International Way (N)
From	1 - A2260 (E)	0	947	173	9
	2 - A2260 (S)	611	4	505	110
	3 - B259 (W)	89	427	1	19
	4 - International Way (N)	25	60	0	2

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - A2260 (E)	2 - A2260 (S)	3 - B259 (W)	4 - International Way (N)
From	1 - A2260 (E)	0	4	2	13
	2 - A2260 (S)	6	0	0	27
	3 - B259 (W)	0	2	0	13
	4 - International Way (N)	0	68	0	100

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A2260 (E)	0.92	29.69	9.6	D	1036	1554
2 - A2260 (S)	0.50	2.80	1.0	A	1129	1693
3 - B259 (W)	0.46	5.26	0.9	A	492	738
4 - International Way (N)	0.09	5.32	0.1	A	80	120

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A2260 (E)	850	212	370	1439	0.591	844	544	0.0	1.5	6.221	A
2 - A2260 (S)	926	232	138	2751	0.337	924	1076	0.0	0.5	2.067	A
3 - B259 (W)	404	101	553	1422	0.284	402	509	0.0	0.4	3.588	A
4 - International Way (N)	65	16	850	1248	0.052	65	105	0.0	0.1	4.288	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A2260 (E)	1015	254	444	1404	0.723	1010	651	1.5	2.6	9.380	A
2 - A2260 (S)	1106	276	166	2731	0.405	1105	1288	0.5	0.7	2.321	A
3 - B259 (W)	482	120	661	1366	0.353	481	609	0.4	0.6	4.149	A
4 - International Way (N)	78	20	1017	1165	0.067	78	126	0.1	0.1	4.671	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A2260 (E)	1243	311	543	1357	0.916	1219	797	2.6	8.6	23.881	C
2 - A2260 (S)	1354	339	200	2707	0.500	1353	1562	0.7	1.0	2.787	A
3 - B259 (W)	590	148	809	1288	0.458	589	743	0.6	0.9	5.243	A
4 - International Way (N)	96	24	1245	1050	0.091	96	154	0.1	0.1	5.316	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A2260 (E)	1243	311	544	1356	0.917	1239	798	8.6	9.6	29.694	D
2 - A2260 (S)	1354	339	203	2705	0.501	1354	1580	1.0	1.0	2.796	A
3 - B259 (W)	590	148	810	1288	0.458	590	747	0.9	0.9	5.263	A
4 - International Way (N)	96	24	1246	1049	0.091	96	154	0.1	0.1	5.321	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A2260 (E)	1015	254	445	1403	0.723	1042	653	9.6	2.8	11.066	B
2 - A2260 (S)	1106	276	171	2728	0.405	1107	1317	1.0	0.7	2.334	A
3 - B259 (W)	482	120	663	1365	0.353	483	615	0.9	0.6	4.171	A
4 - International Way (N)	78	20	1019	1163	0.067	78	126	0.1	0.1	4.680	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A2260 (E)	850	212	372	1438	0.591	855	546	2.8	1.5	6.465	A
2 - A2260 (S)	926	232	140	2749	0.337	927	1087	0.7	0.5	2.073	A
3 - B259 (W)	404	101	555	1421	0.284	404	512	0.6	0.4	3.614	A
4 - International Way (N)	65	16	853	1247	0.053	66	106	0.1	0.1	4.297	A

Adjusted 2030 Flows (Without LTC) , Saturday

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	J5 - A2260 / B259 Roundabout	Standard Roundabout		1, 2, 3, 4	6.70	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
D3	Adjusted 2030 Flows (Without LTC)	Saturday	ONE HOUR	12:00	13:30	15	✓

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

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A2260 (E)		ONE HOUR	✓	880	100.000
2 - A2260 (S)		ONE HOUR	✓	1284	100.000
3 - B259 (W)		ONE HOUR	✓	516	100.000
4 - International Way (N)		ONE HOUR	✓	395	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - A2260 (E)	2 - A2260 (S)	3 - B259 (W)	4 - International Way (N)
From	1 - A2260 (E)	0	734	114	32
	2 - A2260 (S)	740	0	478	66
	3 - B259 (W)	77	426	0	13
	4 - International Way (N)	122	228	45	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - A2260 (E)	2 - A2260 (S)	3 - B259 (W)	4 - International Way (N)
From	1 - A2260 (E)	0	2	0	0
	2 - A2260 (S)	4	0	2	0
	3 - B259 (W)	0	3	0	0
	4 - International Way (N)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A2260 (E)	0.78	13.01	3.4	B	808	1211
2 - A2260 (S)	0.52	2.88	1.1	A	1178	1767
3 - B259 (W)	0.46	5.58	0.9	A	473	710
4 - International Way (N)	0.44	6.51	0.8	A	362	544

Main Results for each time segment

12:00 - 12:15

Arm	Total Demand	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue	End queue	Delay (s)	Unsignalised level of service
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	(PCU/hr)							(PCU)	(PCU)		
1 - A2260 (E)	663	166	524	1366	0.485	659	705	0.0	0.9	5.149	A
2 - A2260 (S)	967	242	143	2747	0.352	964	1040	0.0	0.6	2.078	A
3 - B259 (W)	388	97	629	1382	0.281	387	478	0.0	0.4	3.699	A
4 - International Way (N)	297	74	933	1207	0.246	296	83	0.0	0.3	3.948	A

12:15 - 12:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A2260 (E)	791	198	627	1316	0.601	789	843	0.9	1.5	6.909	A
2 - A2260 (S)	1154	289	171	2727	0.423	1154	1245	0.6	0.8	2.355	A
3 - B259 (W)	464	116	753	1318	0.352	463	572	0.4	0.6	4.314	A
4 - International Way (N)	355	89	1116	1115	0.319	355	100	0.3	0.5	4.734	A

12:30 - 12:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A2260 (E)	969	242	768	1250	0.775	962	1032	1.5	3.3	12.405	B
2 - A2260 (S)	1414	353	209	2701	0.523	1412	1520	0.8	1.1	2.876	A
3 - B259 (W)	568	142	921	1230	0.462	567	700	0.6	0.9	5.554	A
4 - International Way (N)	435	109	1366	989	0.440	434	122	0.5	0.8	6.468	A

12:45 - 13:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A2260 (E)	969	242	770	1249	0.776	968	1034	3.3	3.4	13.009	B
2 - A2260 (S)	1414	353	210	2700	0.524	1414	1528	1.1	1.1	2.883	A
3 - B259 (W)	568	142	923	1229	0.462	568	701	0.9	0.9	5.579	A
4 - International Way (N)	435	109	1369	988	0.440	435	122	0.8	0.8	6.508	A

13:00 - 13:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A2260 (E)	791	198	630	1315	0.602	798	846	3.4	1.6	7.182	A
2 - A2260 (S)	1154	289	173	2726	0.423	1156	1256	1.1	0.8	2.365	A

3 - B259 (W)	464	116	755	1317	0.35 2	465	574	0.9	0.6	4.33 6	A
4 - International Way (N)	355	89	1120	1113	0.31 9	356	100	0.8	0.5	4.76 7	A

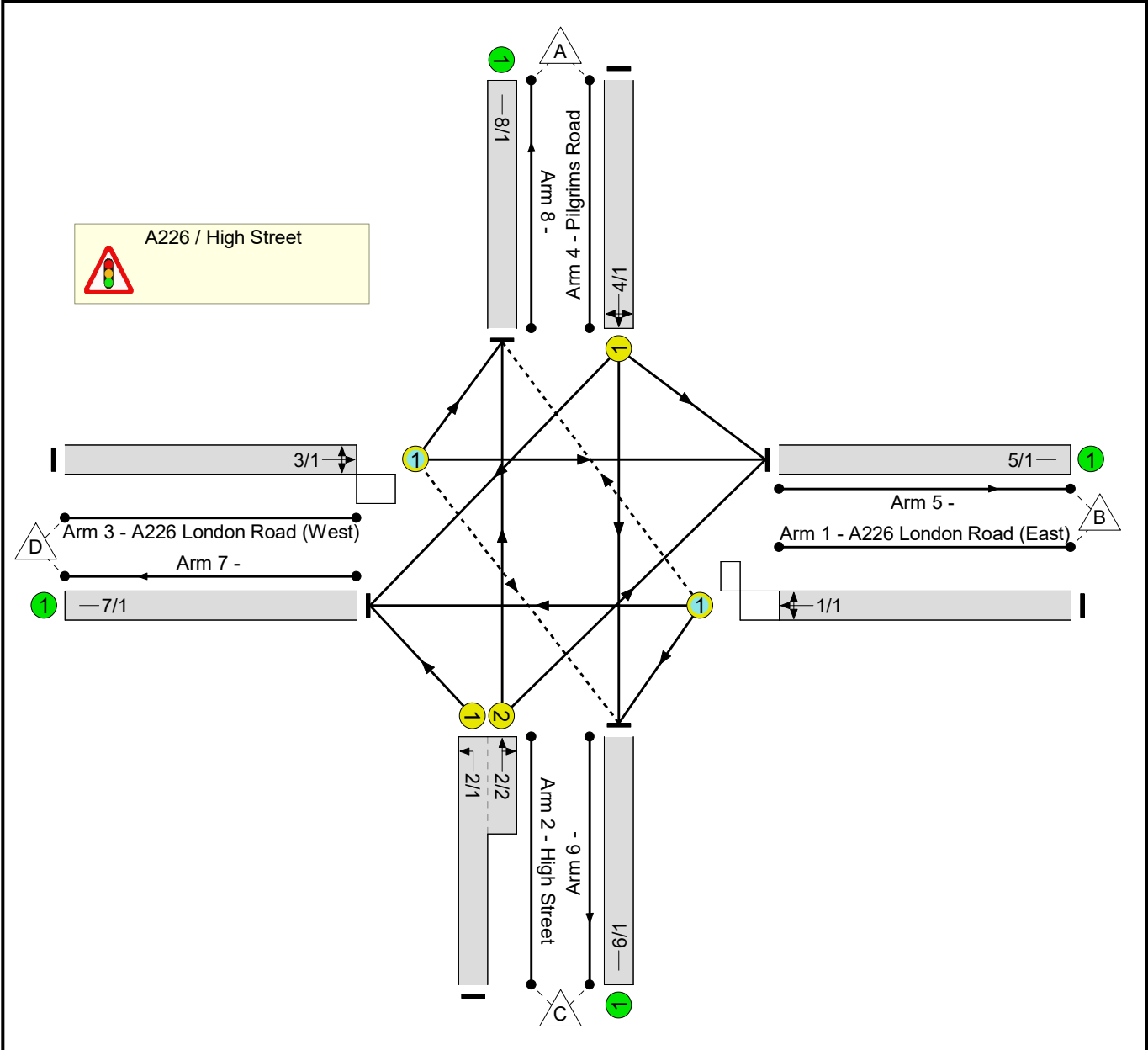
13:15 - 13:30

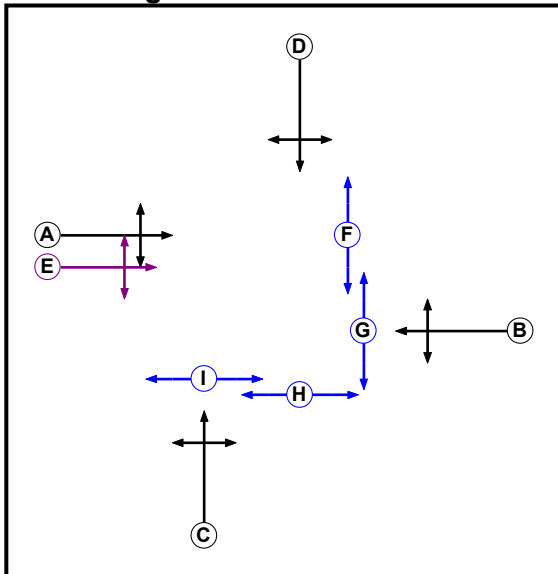
Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A2260 (E)	663	166	527	1364	0.48 6	665	708	1.6	1.0	5.25 3	A
2 - A2260 (S)	967	242	144	2746	0.35 2	967	1048	0.8	0.6	2.08 7	A
3 - B259 (W)	388	97	631	1381	0.28 1	389	480	0.6	0.4	3.71 9	A
4 - International Way (N)	297	74	937	1205	0.24 7	298	84	0.5	0.3	3.97 4	A

User and Project Details

Project:	Northfleet
Title:	A226 / High Street / Pilgrims Road
Design Layout Ref:	Existing Junction Layout
File name:	J6 - A226_High Street (Existing) v1.0.lsg3x
Author:	David Noyce
Company:	Vectos / SLR
Address:	The Cursitor, 38 Chancery Lane, London WC2A 1EN

Junction Layout Diagram



Phase Diagram**Phase Input Data**

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		-9999	7
B	Traffic		-9999	7
C	Traffic		-9999	7
D	Traffic		-9999	7
E	Ind. Arrow	A	-9999	4
F	Pedestrian		-9999	6
G	Pedestrian		-9999	6
H	Pedestrian		-9999	6
I	Pedestrian		-9999	6

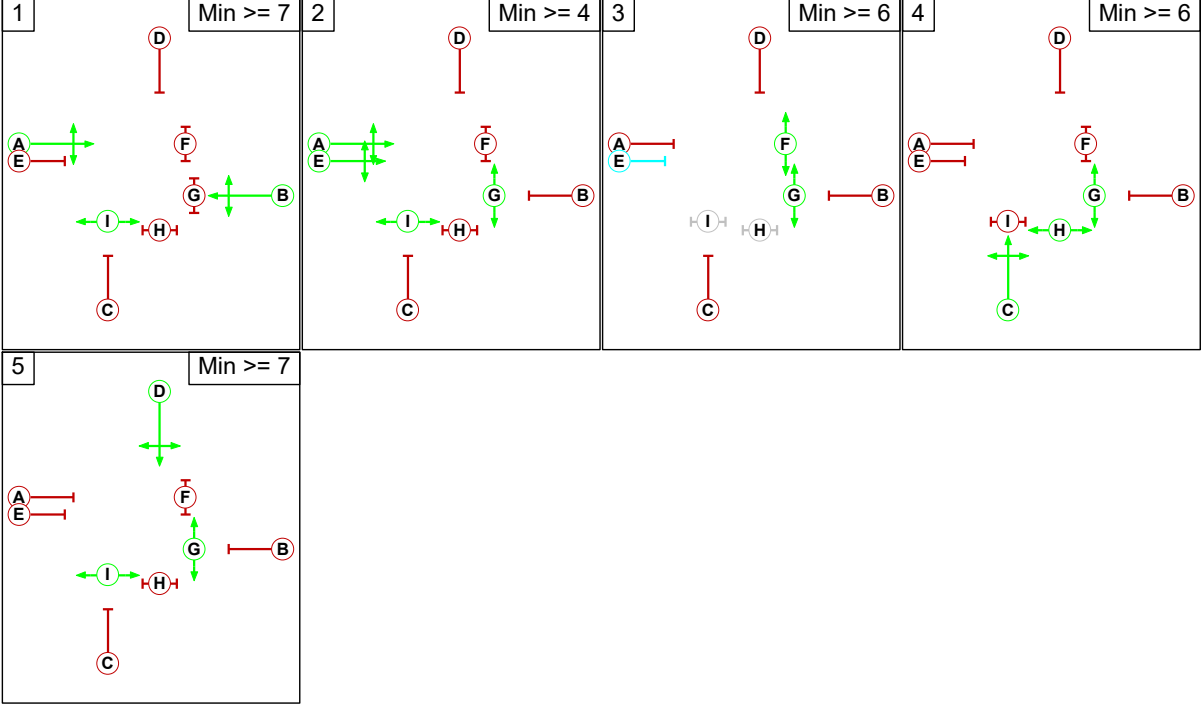
Intergreens

		Starting Phase								
Terminating Phase		A	B	C	D	E	F	G	H	I
	A	-	5	7	-	9	-	10	-	-
	B	-	7	7	5	-	5	8	-	-
	C	5	5	6	5	9	-	-	5	-
	D	5	5	5	7	-	7	-	-	-
	E	-	5	7	-	-	10	-	-	-
	F	7	-	7	-	-	-	-	-	-
	G	-	7	-	-	-	-	-	-	-
	H	8	8	-	8	8	-	-	-	-
	I	-	-	8	-	-	-	-	-	-

Stage Data

Stage No.	Phases in Stage
1	A B I
2	A E G I
3	F G
4	C G H
5	D G I

Stage Diagrams



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
4	1	C	Losing	3	3
5	1	D	Losing	2	2

Lane Input Data

Junction: A226 / High Street												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A226 London Road (East))	O	B	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 6 Left	13.50
											Arm 7 Ahead	50.00
											Arm 8 Right	8.00
2/1 (High Street)	U	C	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 7 Left	9.50
2/2 (High Street)	U	C	2	3	5.0	Geom	-	2.75	0.00	N	Arm 5 Right	10.00
											Arm 8 Ahead	Inf
3/1 (A226 London Road (West))	O	A E	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 5 Ahead	Inf
											Arm 6 Right	10.00
											Arm 8 Left	6.00
4/1 (Pilgrims Road)	U	D	2	3	60.0	Geom	-	2.75	0.00	Y	Arm 5 Left	16.50
											Arm 6 Ahead	5.00
											Arm 7 Right	10.00

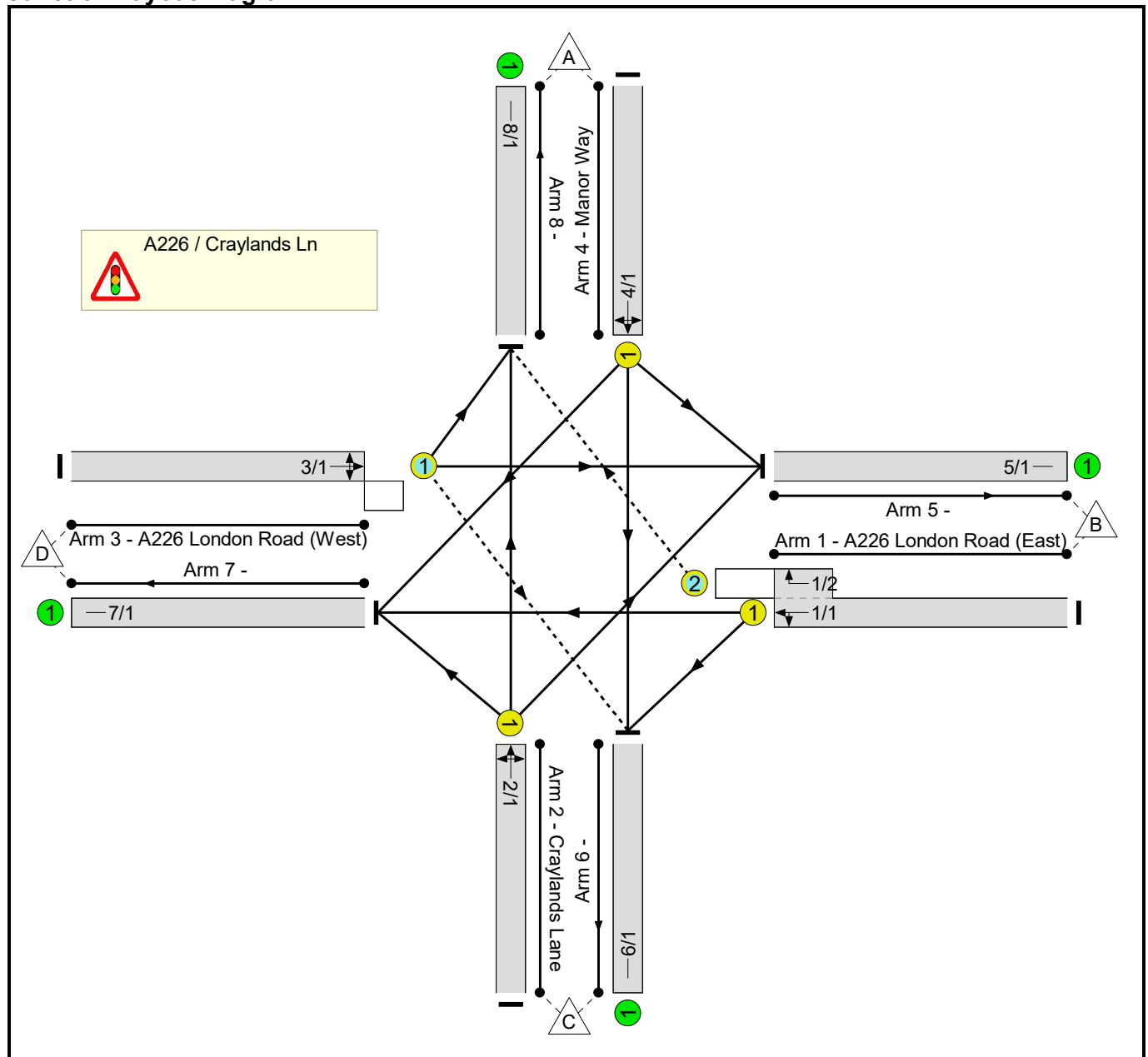
Give-Way Lane Input Data

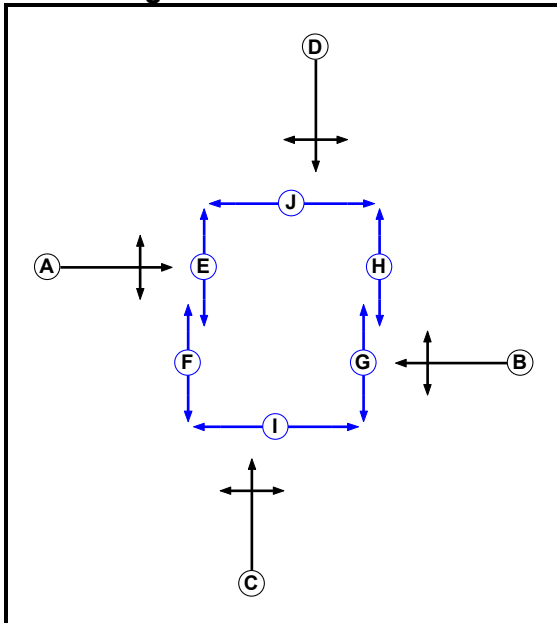
One-Way Lane Input Data

Junction: A226 / High Street											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Block Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in IG (PCU)
1/1 (A226 London Road (East))	8/1 (Right)	1440	0	3/1	1.09	All	3.00	1.00	0.50	3	3.00
3/1 (A226 London Road (West))	6/1 (Right)	1440	0	1/1	1.09	All	2.00	2.00	0.50	2	2.00

User and Project Details

Project:	Northfleet
Title:	A226 / Craylands Lane
Design Layout Ref:	Existing Junction Layout
File name:	J7 - A226_Craylands Lane (Existing) v1.0.lsg3x
Author:	David Noyce
Company:	Vectos / SLR
Address:	The Cursitor, 38 Chancery Lane, London WC2A 1EN

Junction Layout Diagram

Phase Diagram**Phase Input Data**

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Pedestrian		4	4
F	Pedestrian		4	4
G	Pedestrian		5	5
H	Pedestrian		4	4
I	Pedestrian		7	7
J	Pedestrian		7	7

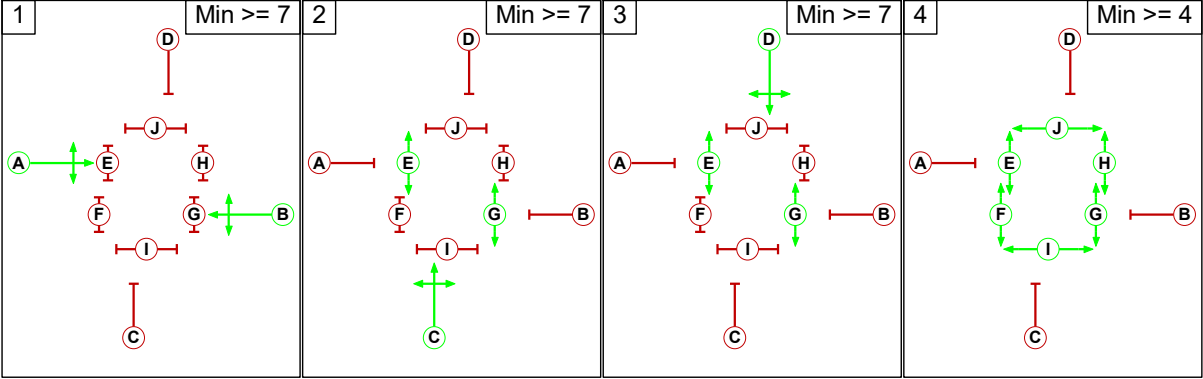
Intergreens

	Starting Phase									
	A	B	C	D	E	F	G	H	I	J
Terminating Phase	A	-	5	8	5	-	-	12	9	9
	B	-	8	6	-	12	5	-	9	9
	C	5	5	8	-	8	-	12	5	9
	D	5	5	7	-	11	-	9	8	5
	E	5	-	-	-	-	-	-	-	-
	F	-	5	5	-	-	-	-	-	-
	G	-	5	-	-	-	-	-	-	-
	H	5	-	5	-	-	-	-	-	-
	I	5	5	5	-	-	-	-	-	-
	J	5	5	5	-	-	-	-	-	-

Stage Data

Stage No.	Phases in Stage
1	A B
2	C E G
3	D E G
4	E F G H I J

Stage Diagrams



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Lane Input Data

Junction: A226 / Craylands Ln												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A226 London Road (East))	U	B	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 6 Left	16.50
											Arm 7 Ahead	Inf
1/2 (A226 London Road (East))	O	B	2	3	3.0	Geom	-	3.00	0.00	N	Arm 8 Right	12.00
2/1 (Craylands Lane)	U	C	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Right	12.00
											Arm 7 Left	13.50
											Arm 8 Ahead	Inf
3/1 (A226 London Road (West))	O	A	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 5 Ahead	Inf
											Arm 6 Right	10.00
											Arm 8 Left	16.50
4/1 (Manor Way)	U	D	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Left	16.50
											Arm 6 Ahead	Inf
											Arm 7 Right	15.00

Give-Way Lane Input Data

Junction: A226 / Craylands Ln											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Block Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in IG (PCU)
1/2 (A226 London Road (East))	8/1 (Right)	1440	0	3/1	1.09	To 5/1 (Ahead) To 8/1 (Left)	3.00	-	0.50	3	3.00
3/1 (A226 London Road (West))	6/1 (Right)	1440	0	1/1	1.09	All	2.00	2.00	0.50	2	2.00

Scenario 4: 'Weekday, AM'

(FG4: 'Weekday, AM', Plan 2: 'Peds Every 2nd Cycle')

Traffic Flows, Desired**Desired Flow :**

		Destination				
Origin		A	B	C	D	Tot.
	A	0	126	38	49	213
	B	67	0	0	239	306
	C	46	23	0	81	150
	D	56	231	51	0	338
	Tot.	169	380	89	369	1007

Stage Timings

Stage	1	2	3	1	2	3	4
Duration	10	7	12	20	7	7	4
Change Point	0	15	30	50	75	90	105

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A226 / Craylands Lane	-	-	-	-	-	-	-	-	66.7%	-	-
A226 / Craylands Ln	-	-	-	-	-	-	-	-	66.7%	-	-
1/1+1/2	A226 London Road (East) Left Ahead Right	B	30	5(55)	15(75)	306	1980:1827	458+129	52.1 : 52.1%	26.3	4.4
2/1	Craylands Lane Right Left Ahead	C	14	23(83)	30(90)	150	1821	243	61.8%	43.6	3.1
3/1	A226 London Road (West) Ahead Right Left	A	30	5(55)	15(75)	338	1908	509	66.4%	30.7	6.5
4/1	Manor Way Left Ahead Right	D	19	38(98)	50(105)	213	1825	319	66.7%	39.8	4.4
C1			PRC for Signalled Lanes (%):	34.9	Total Delay for Signalled Lanes (pcuHr):		9.29	Cycle Time (s): 120			
			PRC Over All Lanes (%):	34.9	Total Delay Over All Lanes(pcuHr):		9.29				

Scenario 5: 'Weekday, PM'

(FG5: 'Weekday, PM', Plan 2: 'Peds Every 2nd Cycle')

Traffic Flows, Desired**Desired Flow :**

		Destination				
Origin		A	B	C	D	Tot.
	A	0	121	17	77	215
	B	71	0	6	200	277
	C	20	16	0	69	105
	D	60	311	66	0	437
	Tot.	151	448	89	346	1034

Stage Timings

Stage	1	2	3	1	2	3	4
Duration	14	7	9	19	7	7	4
Change Point	0	19	34	51	75	90	105

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A226 / Craylands Lane	-	-	-	-	-	-	-	-	79.3%	-	-
A226 / Craylands Ln	-	-	-	-	-	-	-	-	79.3%	-	-
1/1+1/2	A226 London Road (East) Left Ahead Right	B	33	5(56)	19(75)	277	1975:1827	480+165	42.9 : 42.9%	24.5	3.5
2/1	Craylands Lane Right Left Ahead	C	14	27(83)	34(90)	105	1799	240	43.8%	37.4	2.1
3/1	A226 London Road (West) Ahead Right Left	A	33	5(56)	19(75)	437	1913	558	78.3%	34.6	9.4
4/1	Manor Way Left Ahead Right	D	16	42(98)	51(105)	215	1808	271	79.3%	55.0	5.6
C1			PRC for Signalled Lanes (%):	13.5	Total Delay for Signalled Lanes (pcuHr):		10.46	Cycle Time (s): 120			
			PRC Over All Lanes (%):	13.5	Total Delay Over All Lanes(pcuHr):		10.46				

Scenario 6: 'Weekend'

(FG6: 'Weekend', Plan 2: 'Peds Every 2nd Cycle')

Traffic Flows, Desired**Desired Flow :**

		Destination				
Origin		A	B	C	D	Tot.
	A	0	36	3	0	39
	B	39	0	0	445	484
	C	3	0	0	23	26
	D	0	308	2	0	310
	Tot.	42	344	5	468	859

Stage Timings

Stage	1	2	3	1	2	3	4
Duration	15	7	7	20	7	7	4
Change Point	0	20	35	50	75	90	105

Link Results

Item	Lane Description	Full Phase	Total Green (s)	Start Green (s)	End Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A226 / Craylands Lane	-	-	-	-	-	-	-	-	75.8%	-	-
A226 / Craylands Ln	-	-	-	-	-	-	-	-	75.8%	-	-
1/1+1/2	A226 London Road (East) Left Ahead Right	B	35	5(55)	20(75)	484	1980:1827	587+51	75.8 : 75.8%	30.8	9.7
2/1	Craylands Lane Right Left Ahead	C	14	28(83)	35(90)	26	1789	239	10.9%	31.6	0.5
3/1	A226 London Road (West) Ahead Right Left	A	35	5(55)	20(75)	310	1978	610	50.8%	23.6	5.5
4/1	Manor Way Left Ahead Right	D	14	43(98)	50(105)	39	1813	242	16.1%	32.2	0.7
C1			PRC for Signalled Lanes (%):	18.7	Total Delay for Signalled Lanes (pcuHr):		6.75	Cycle Time (s): 120			
			PRC Over All Lanes (%):	18.7	Total Delay Over All Lanes(pcuHr):		6.75				

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462
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Filename: J8 - A226_A206_B255 (Existing) v1.0.j9

Path: O:\London\Vectos\Shares\Projects\Projects\220000\226728 - Northfleet Central, Gravesham\Modelling

Report generation date: 30/05/2023 14:02:51

»2022 Observed, AM

»2022 Observed, PM

»Adjusted 2030 Flows (Without LTC), AM

»Adjusted 2030 Flows (Without LTC), PM

»Adjusted 2030 Flows (Without LTC) , Saturday

Summary of junction performance

	AM			PM			Saturday		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2022 Observed									
1 - A206 (N) - LEFT TURN	0.4	6.04	0.27	0.7	7.88	0.41			
2 - A206 (N) - AHEAD	0.6	3.70	0.38	2.6	8.73	0.72			
3 - A226 London Road (E)	1.0	4.80	0.48	1.2	6.84	0.53			
4 - B255 (S) - LEFT TURN	0.4	5.06	0.27	0.4	5.06	0.30			
5 - B255 (S) - AHEAD	1.6	5.57	0.60	1.1	4.43	0.51			
6 - A226 London Road (W)	0.8	4.59	0.45	0.9	4.35	0.48			
Adjusted 2030 Flows (Without LTC)									
1 - A206 (N) - LEFT TURN	0.4	6.04	0.27	0.8	8.61	0.44	0.4	4.38	0.26
2 - A206 (N) - AHEAD	1.3	5.13	0.55	7.6	21.85	0.89	0.3	2.56	0.23
3 - A226 London Road (E)	11.8	35.39	0.94	16.8	62.57	0.98	0.2	2.46	0.15
4 - B255 (S) - LEFT TURN	1.0	13.30	0.49	0.8	8.80	0.43	0.1	3.62	0.05
5 - B255 (S) - AHEAD	7.2	26.71	0.89	2.1	8.27	0.67	0.1	2.31	0.07
6 - A226 London Road (W)	3.0	16.44	0.75	2.0	9.17	0.67	0.1	2.05	0.11

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	Northfleet
Location	J8 - A226 / A206 / B255 Roundabout
Site number	
Date	21/09/2022
Version	
Status	Existing Junction Layout
Identifier	
Client	
Jobnumber	226728
Enumerator	David Noyce
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Observed	AM	ONE HOUR	07:45	09:15	15	✓
D2	2022 Observed	PM	ONE HOUR	16:45	18:15	15	✓
D7	Adjusted 2030 Flows (Without LTC)	AM	ONE HOUR	07:45	09:15	15	✓
D8	Adjusted 2030 Flows (Without LTC)	PM	ONE HOUR	16:45	18:15	15	✓
D9	Adjusted 2030 Flows (Without LTC)	Saturday	ONE HOUR	12:00	13:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2022 Observed, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	J8 - A226 / A206 / B255 Roundabout	Standard Roundabout		1, 2, 3, 4, 5, 6	4.89	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A206 (N) - LEFT TURN	
2	A206 (N) - AHEAD	
3	A226 London Road (E)	
4	B255 (S) - LEFT TURN	
5	B255 (S) - AHEAD	
6	A226 London Road (W)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A206 (N) - LEFT TURN	3.65	4.21	2.5	53.0	56.0	12.0	
2 - A206 (N) - AHEAD	7.00	7.00	0.0	82.0	56.0	43.0	
3 - A226 London Road (E)	3.50	9.75	22.8	24.0	56.0	23.0	
4 - B255 (S) - LEFT TURN	3.90	4.30	3.3	84.0	56.0	13.0	
5 - B255 (S) - AHEAD	7.20	7.20	0.0	155.0	56.0	43.0	
6 - A226 London Road (W)	6.60	9.30	6.6	20.0	56.0	23.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A206 (N) - LEFT TURN	0.535	1317
2 - A206 (N) - AHEAD	0.650	2104
3 - A226 London Road (E)	0.667	2136
4 - B255 (S) - LEFT TURN	0.550	1391
5 - B255 (S) - AHEAD	0.664	2176
6 - A226 London Road (W)	0.714	2411

The slope and intercept shown above include any corrections and adjustments.

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
D1	2022 Observed	AM	ONE HOUR	07:45	09:15	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 (%)
1 - A206 (N) - LEFT TURN		ONE HOUR	✓	233	100.000
2 - A206 (N) - AHEAD		ONE HOUR	✓	573	100.000
3 - A226 London Road (E)		ONE HOUR	✓	669	100.000
4 - B255 (S) - LEFT TURN		ONE HOUR	✓	242	100.000
5 - B255 (S) - AHEAD		ONE HOUR	✓	929	100.000
6 - A226 London Road (W)		ONE HOUR	✓	603	100.000

Origin-Destination Data

Demand (PCU/hr)

	To						
		1 - A206 (N) - LEFT TURN	2 - A206 (N) - AHEAD	3 - A226 London Road (E)	4 - B255 (S) - LEFT TURN	5 - B255 (S) - AHEAD	6 - A226 London Road (W)
From	1 - A206 (N) - LEFT TURN	0	233	0	0	0	0
	2 - A206 (N) - AHEAD	28	0	0	401	0	144
	3 - A226 London Road (E)	244	0	1	182	0	242
	4 - B255 (S) - LEFT TURN	0	0	0	0	242	0
	5 - B255 (S) - AHEAD	728	0	188	13	0	0
	6 - A226 London Road (W)	190	0	189	223	0	1

Vehicle Mix

Heavy Vehicle Percentages

	To						
		1 - A206 (N) - LEFT TURN	2 - A206 (N) - AHEAD	3 - A226 London Road (E)	4 - B255 (S) - LEFT TURN	5 - B255 (S) - AHEAD	6 - A226 London Road (W)
From	1 - A206 (N) - LEFT TURN	0	17	0	0	0	0
	2 - A206 (N) - AHEAD	4	0	0	8	0	2
	3 - A226 London Road (E)	12	0	0	6	0	4
	4 - B255 (S) - LEFT TURN	0	0	0	0	2	0
	5 - B255 (S) - AHEAD	3	0	7	0	0	0
	6 - A226 London Road (W)	2	0	3	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A206 (N) - LEFT TURN	0.27	6.04	0.4	A	214	321
2 - A206 (N) - AHEAD	0.38	3.70	0.6	A	526	789
3 - A226 London Road (E)	0.48	4.80	1.0	A	614	921
4 - B255 (S) - LEFT TURN	0.27	5.06	0.4	A	222	333
5 - B255 (S) - AHEAD	0.60	5.57	1.6	A	852	1279
6 - A226 London Road (W)	0.45	4.59	0.8	A	553	830

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	175	44	461	1070	0.164	175	893	0.0	0.2	4.700	A
2 - A206 (N) - AHEAD	431	108	461	1804	0.239	430	175	0.0	0.3	2.781	A
3 - A226 London Road (E)	504	126	608	1731	0.291	502	284	0.0	0.4	3.139	A
4 - B255 (S) - LEFT TURN	182	46	495	1119	0.163	181	615	0.0	0.2	3.913	A
5 - B255 (S) - AHEAD	699	175	495	1847	0.379	697	181	0.0	0.6	3.240	A
6 - A226 London Road (W)	454	113	902	1768	0.257	453	290	0.0	0.4	2.798	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	209	52	552	1021	0.205	209	1068	0.2	0.3	5.187	A
2 - A206 (N) - AHEAD	515	129	552	1745	0.295	515	209	0.3	0.4	3.108	A
3 - A226 London Road (E)	601	150	727	1652	0.364	601	339	0.4	0.6	3.675	A
4 - B255 (S) - LEFT TURN	218	54	593	1065	0.204	217	736	0.2	0.3	4.329	A
5 - B255 (S) - AHEAD	835	209	593	1782	0.469	834	217	0.6	0.9	3.932	A
6 - A226 London Road (W)	542	136	1079	1641	0.330	541	348	0.4	0.5	3.348	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	257	64	676	955	0.269	256	1307	0.3	0.4	6.022	A
2 - A206 (N) - AHEAD	631	158	676	1665	0.379	630	256	0.4	0.6	3.690	A
3 - A226 London Road (E)	737	184	890	1543	0.477	735	415	0.6	1.0	4.774	A
4 - B255 (S) - LEFT TURN	266	67	725	992	0.268	266	900	0.3	0.4	5.051	A
5 - B255 (S) - AHEAD	1023	256	725	1694	0.604	1020	266	0.9	1.6	5.519	A
6 - A226 London Road (W)	664	166	1320	1469	0.452	663	425	0.5	0.8	4.560	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	257	64	677	954	0.269	257	1310	0.4	0.4	6.036	A
2 - A206 (N) - AHEAD	631	158	677	1664	0.379	631	257	0.6	0.6	3.700	A
3 - A226 London Road (E)	737	184	892	1542	0.478	737	416	1.0	1.0	4.797	A
4 - B255 (S) - LEFT TURN	266	67	727	992	0.269	266	902	0.4	0.4	5.062	A
5 - B255 (S) - AHEAD	1023	256	727	1694	0.604	1023	266	1.6	1.6	5.567	A
6 - A226 London Road (W)	664	166	1323	1467	0.453	664	426	0.8	0.8	4.587	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	209	52	554	1020	0.205	210	1073	0.4	0.3	5.204	A
2 - A206 (N) - AHEAD	515	129	554	1744	0.295	516	210	0.6	0.4	3.116	A
3 - A226 London Road (E)	601	150	729	1650	0.364	603	341	1.0	0.6	3.696	A
4 - B255 (S) - LEFT TURN	218	54	595	1064	0.204	218	738	0.4	0.3	4.342	A
5 - B255 (S) - AHEAD	835	209	595	1781	0.469	838	218	1.6	0.9	3.970	A
6 - A226 London Road (W)	542	136	1084	1638	0.331	543	349	0.8	0.5	3.371	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	175	44	464	1068	0.164	176	897	0.3	0.2	4.719	A
2 - A206 (N) - AHEAD	431	108	464	1803	0.239	432	176	0.4	0.3	2.790	A
3 - A226 London Road (E)	504	126	611	1730	0.291	504	285	0.6	0.4	3.155	A
4 - B255 (S) - LEFT TURN	182	46	498	1118	0.163	182	617	0.3	0.2	3.927	A
5 - B255 (S) - AHEAD	699	175	498	1846	0.379	701	182	0.9	0.6	3.263	A
6 - A226 London Road (W)	454	113	906	1764	0.257	455	292	0.5	0.4	2.814	A

2022 Observed, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	J8 - A226 / A206 / B255 Roundabout	Standard Roundabout		1, 2, 3, 4, 5, 6	6.30	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
D2	2022 Observed	PM	ONE HOUR	16:45	18:15	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 (%)
1 - A206 (N) - LEFT TURN		ONE HOUR	✓	309	100.000
2 - A206 (N) - AHEAD		ONE HOUR	✓	993	100.000
3 - A226 London Road (E)		ONE HOUR	✓	563	100.000
4 - B255 (S) - LEFT TURN		ONE HOUR	✓	275	100.000
5 - B255 (S) - AHEAD		ONE HOUR	✓	802	100.000
6 - A226 London Road (W)		ONE HOUR	✓	692	100.000

Origin-Destination Data

Demand (PCU/hr)

	To						
		1 - A206 (N) - LEFT TURN	2 - A206 (N) - AHEAD	3 - A226 London Road (E)	4 - B255 (S) - LEFT TURN	5 - B255 (S) - AHEAD	6 - A226 London Road (W)
From	1 - A206 (N) - LEFT TURN	0	309	0	0	0	0
	2 - A206 (N) - AHEAD	44	0	0	767	0	182
	3 - A226 London Road (E)	188	0	1	179	0	195
	4 - B255 (S) - LEFT TURN	0	0	0	0	275	0
	5 - B255 (S) - AHEAD	489	0	286	27	0	0
	6 - A226 London Road (W)	179	0	221	291	0	1

Vehicle Mix

Heavy Vehicle Percentages

From	To						
		1 - A206 (N) - LEFT TURN	2 - A206 (N) - AHEAD	3 - A226 London Road (E)	4 - B255 (S) - LEFT TURN	5 - B255 (S) - AHEAD	6 - A226 London Road (W)
	1 - A206 (N) - LEFT TURN	0	7	0	0	0	0
	2 - A206 (N) - AHEAD	0	0	0	2	0	1
	3 - A226 London Road (E)	7	0	0	7	0	2
	4 - B255 (S) - LEFT TURN	0	0	0	0	1	0
	5 - B255 (S) - AHEAD	4	0	5	0	0	0
	6 - A226 London Road (W)	2	0	0	1	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A206 (N) - LEFT TURN	0.41	7.88	0.7	A	284	425
2 - A206 (N) - AHEAD	0.72	8.73	2.6	A	911	1367
3 - A226 London Road (E)	0.53	6.84	1.2	A	517	775
4 - B255 (S) - LEFT TURN	0.30	5.06	0.4	A	252	379
5 - B255 (S) - AHEAD	0.51	4.43	1.1	A	736	1104
6 - A226 London Road (W)	0.48	4.35	0.9	A	635	952

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	233	58	621	984	0.236	231	675	0.0	0.3	5.107	A
2 - A206 (N) - AHEAD	748	187	621	1701	0.440	744	231	0.0	0.8	3.818	A
3 - A226 London Road (E)	424	106	984	1481	0.286	422	381	0.0	0.4	3.571	A
4 - B255 (S) - LEFT TURN	207	52	458	1139	0.182	206	948	0.0	0.2	3.893	A
5 - B255 (S) - AHEAD	604	151	458	1872	0.323	602	206	0.0	0.5	2.950	A
6 - A226 London Road (W)	521	130	777	1857	0.281	519	283	0.0	0.4	2.714	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	278	69	743	919	0.302	277	808	0.3	0.5	5.996	A
2 - A206 (N) - AHEAD	893	223	743	1621	0.551	891	277	0.8	1.2	5.001	A
3 - A226 London Road (E)	506	127	1177	1352	0.374	505	456	0.4	0.6	4.471	A
4 - B255 (S) - LEFT TURN	247	62	548	1090	0.227	247	1134	0.2	0.3	4.313	A
5 - B255 (S) - AHEAD	721	180	548	1812	0.398	720	247	0.5	0.7	3.435	A
6 - A226 London Road (W)	622	156	929	1748	0.356	621	339	0.4	0.6	3.224	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	340	85	909	830	0.410	339	989	0.5	0.7	7.828	A
2 - A206 (N) - AHEAD	1093	273	909	1513	0.722	1088	339	1.2	2.6	8.502	A
3 - A226 London Road (E)	620	155	1439	1178	0.526	618	558	0.6	1.2	6.738	A
4 - B255 (S) - LEFT TURN	303	76	670	1023	0.296	302	1386	0.3	0.4	5.043	A
5 - B255 (S) - AHEAD	883	221	670	1731	0.510	881	302	0.7	1.1	4.407	A
6 - A226 London Road (W)	762	190	1137	1600	0.476	760	414	0.6	0.9	4.323	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	340	85	911	829	0.410	340	991	0.7	0.7	7.876	A
2 - A206 (N) - AHEAD	1093	273	911	1512	0.723	1093	340	2.6	2.6	8.725	A
3 - A226 London Road (E)	620	155	1444	1174	0.528	620	559	1.2	1.2	6.836	A
4 - B255 (S) - LEFT TURN	303	76	673	1021	0.296	303	1392	0.4	0.4	5.059	A
5 - B255 (S) - AHEAD	883	221	673	1729	0.511	883	303	1.1	1.1	4.432	A
6 - A226 London Road (W)	762	190	1140	1598	0.477	762	416	0.9	0.9	4.345	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	278	69	745	918	0.303	279	811	0.7	0.5	6.040	A
2 - A206 (N) - AHEAD	893	223	745	1620	0.551	898	279	2.6	1.3	5.110	A
3 - A226 London Road (E)	506	127	1185	1346	0.376	508	458	1.2	0.6	4.531	A
4 - B255 (S) - LEFT TURN	247	62	552	1088	0.227	248	1142	0.4	0.3	4.332	A
5 - B255 (S) - AHEAD	721	180	552	1810	0.398	723	248	1.1	0.7	3.455	A
6 - A226 London Road (W)	622	156	933	1745	0.356	624	342	0.9	0.6	3.244	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	233	58	623	983	0.237	233	679	0.5	0.3	5.142	A
2 - A206 (N) - AHEAD	748	187	623	1699	0.440	749	233	1.3	0.8	3.866	A
3 - A226 London Road (E)	424	106	990	1477	0.287	425	383	0.6	0.4	3.602	A
4 - B255 (S) - LEFT TURN	207	52	461	1138	0.182	207	954	0.3	0.2	3.908	A
5 - B255 (S) - AHEAD	604	151	461	1870	0.323	605	207	0.7	0.5	2.968	A
6 - A226 London Road (W)	521	130	780	1854	0.281	522	285	0.6	0.4	2.729	A

Adjusted 2030 Flows (Without LTC), AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	J8 - A226 / A206 / B255 Roundabout	Standard Roundabout		1, 2, 3, 4, 5, 6	21.22	C

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	Adjusted 2030 Flows (Without LTC)	AM	ONE HOUR	07:45	09:15	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 (%)
1 - A206 (N) - LEFT TURN		ONE HOUR	✓	229	100.000
2 - A206 (N) - AHEAD		ONE HOUR	✓	821	100.000
3 - A226 London Road (E)		ONE HOUR	✓	1161	100.000
4 - B255 (S) - LEFT TURN		ONE HOUR	✓	245	100.000
5 - B255 (S) - AHEAD		ONE HOUR	✓	931	100.000
6 - A226 London Road (W)		ONE HOUR	✓	612	100.000

Origin-Destination Data

Demand (PCU/hr)

	To						
		1 - A206 (N) - LEFT TURN	2 - A206 (N) - AHEAD	3 - A226 London Road (E)	4 - B255 (S) - LEFT TURN	5 - B255 (S) - AHEAD	6 - A226 London Road (W)
From	1 - A206 (N) - LEFT TURN	0	229	0	0	0	0
	2 - A206 (N) - AHEAD	275	0	0	402	0	144
	3 - A226 London Road (E)	730	0	1	177	0	253
	4 - B255 (S) - LEFT TURN	0	0	0	0	245	0
	5 - B255 (S) - AHEAD	730	0	188	13	0	0
	6 - A226 London Road (W)	189	0	205	218	0	0

Vehicle Mix

Heavy Vehicle Percentages

From	To						
		1 - A206 (N) - LEFT TURN	2 - A206 (N) - AHEAD	3 - A226 London Road (E)	4 - B255 (S) - LEFT TURN	5 - B255 (S) - AHEAD	6 - A226 London Road (W)
	1 - A206 (N) - LEFT TURN	0	17	0	0	0	0
	2 - A206 (N) - AHEAD	10	0	0	8	0	2
	3 - A226 London Road (E)	3	0	0	6	0	4
	4 - B255 (S) - LEFT TURN	0	0	0	0	2	0
	5 - B255 (S) - AHEAD	3	0	7	0	0	0
	6 - A226 London Road (W)	2	0	3	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A206 (N) - LEFT TURN	0.27	6.04	0.4	A	210	315
2 - A206 (N) - AHEAD	0.55	5.13	1.3	A	753	1130
3 - A226 London Road (E)	0.94	35.39	11.8	E	1065	1598
4 - B255 (S) - LEFT TURN	0.49	13.30	1.0	B	225	337
5 - B255 (S) - AHEAD	0.89	26.71	7.2	D	854	1281
6 - A226 London Road (W)	0.75	16.44	3.0	C	562	842

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	172	43	468	1066	0.162	172	1441	0.0	0.2	4.703	A
2 - A206 (N) - AHEAD	618	155	468	1800	0.343	616	172	0.0	0.6	3.265	A
3 - A226 London Road (E)	874	219	789	1611	0.543	869	295	0.0	1.2	5.002	A
4 - B255 (S) - LEFT TURN	184	46	1051	813	0.227	183	607	0.0	0.3	5.816	A
5 - B255 (S) - AHEAD	701	175	1051	1478	0.474	697	183	0.0	0.9	4.761	A
6 - A226 London Road (W)	461	115	1451	1376	0.335	459	297	0.0	0.5	4.008	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	206	51	560	1017	0.202	206	1724	0.2	0.3	5.191	A
2 - A206 (N) - AHEAD	738	185	560	1740	0.424	737	206	0.6	0.8	3.858	A
3 - A226 London Road (E)	1044	261	944	1507	0.693	1039	353	1.2	2.3	7.909	A
4 - B255 (S) - LEFT TURN	220	55	1257	700	0.315	220	726	0.3	0.5	7.630	A
5 - B255 (S) - AHEAD	837	209	1257	1341	0.624	834	220	0.9	1.7	7.319	A
6 - A226 London Road (W)	550	138	1735	1173	0.469	549	356	0.5	0.9	5.889	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	252	63	679	953	0.265	252	2082	0.3	0.4	6.001	A
2 - A206 (N) - AHEAD	904	226	679	1663	0.544	902	252	0.8	1.3	5.079	A
3 - A226 London Road (E)	1278	320	1154	1368	0.935	1247	428	2.3	10.0	26.195	D
4 - B255 (S) - LEFT TURN	270	67	1518	557	0.484	268	883	0.5	0.9	12.616	B
5 - B255 (S) - AHEAD	1025	256	1518	1168	0.877	1007	268	1.7	6.2	21.167	C
6 - A226 London Road (W)	674	168	2094	916	0.735	667	430	0.9	2.7	14.369	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	252	63	687	949	0.266	252	2111	0.4	0.4	6.041	A
2 - A206 (N) - AHEAD	904	226	687	1658	0.545	904	252	1.3	1.3	5.135	A
3 - A226 London Road (E)	1278	320	1158	1365	0.937	1271	433	10.0	11.8	35.386	E
4 - B255 (S) - LEFT TURN	270	67	1539	545	0.495	270	890	0.9	1.0	13.299	B
5 - B255 (S) - AHEAD	1025	256	1539	1154	0.888	1021	270	6.2	7.2	26.714	D
6 - A226 London Road (W)	674	168	2124	895	0.753	673	436	2.7	3.0	16.437	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	206	51	572	1011	0.204	206	1773	0.4	0.3	5.240	A
2 - A206 (N) - AHEAD	738	185	572	1732	0.426	740	206	1.3	0.8	3.909	A
3 - A226 London Road (E)	1044	261	951	1503	0.695	1081	361	11.8	2.4	9.601	A
4 - B255 (S) - LEFT TURN	220	55	1294	680	0.324	222	738	1.0	0.5	8.056	A
5 - B255 (S) - AHEAD	837	209	1294	1317	0.636	858	222	7.2	1.9	8.504	A
6 - A226 London Road (W)	550	138	1787	1136	0.484	558	365	3.0	1.0	6.462	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	172	43	473	1064	0.162	173	1455	0.3	0.2	4.728	A
2 - A206 (N) - AHEAD	618	155	473	1797	0.344	619	173	0.8	0.6	3.289	A
3 - A226 London Road (E)	874	219	794	1607	0.544	879	298	2.4	1.3	5.155	A
4 - B255 (S) - LEFT TURN	184	46	1061	808	0.228	185	612	0.5	0.3	5.903	A
5 - B255 (S) - AHEAD	701	175	1061	1472	0.476	705	185	1.9	1.0	4.892	A
6 - A226 London Road (W)	461	115	1465	1365	0.337	463	300	1.0	0.5	4.089	A

Adjusted 2030 Flows (Without LTC), PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	J8 - A226 / A206 / B255 Roundabout	Standard Roundabout		1, 2, 3, 4, 5, 6	23.71	C

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	Adjusted 2030 Flows (Without LTC)	PM	ONE HOUR	16:45	18:15	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 (%)
1 - A206 (N) - LEFT TURN		ONE HOUR	✓	322	100.000
2 - A206 (N) - AHEAD		ONE HOUR	✓	1197	100.000
3 - A226 London Road (E)		ONE HOUR	✓	900	100.000
4 - B255 (S) - LEFT TURN		ONE HOUR	✓	288	100.000
5 - B255 (S) - AHEAD		ONE HOUR	✓	840	100.000
6 - A226 London Road (W)		ONE HOUR	✓	732	100.000

Origin-Destination Data

Demand (PCU/hr)

	To						
		1 - A206 (N) - LEFT TURN	2 - A206 (N) - AHEAD	3 - A226 London Road (E)	4 - B255 (S) - LEFT TURN	5 - B255 (S) - AHEAD	6 - A226 London Road (W)
From	1 - A206 (N) - LEFT TURN	0	322	0	0	0	0
	2 - A206 (N) - AHEAD	198	0	0	809	0	190
	3 - A226 London Road (E)	511	0	1	182	0	206
	4 - B255 (S) - LEFT TURN	0	0	0	0	288	0
	5 - B255 (S) - AHEAD	511	0	299	30	0	0
	6 - A226 London Road (W)	188	0	238	305	0	1

Vehicle Mix

Heavy Vehicle Percentages

	To						
		1 - A206 (N) - LEFT TURN	2 - A206 (N) - AHEAD	3 - A226 London Road (E)	4 - B255 (S) - LEFT TURN	5 - B255 (S) - AHEAD	6 - A226 London Road (W)
From	1 - A206 (N) - LEFT TURN	0	7	0	0	0	0
	2 - A206 (N) - AHEAD	7	0	0	2	0	1
	3 - A226 London Road (E)	4	0	0	7	0	2
	4 - B255 (S) - LEFT TURN	0	0	0	0	1	0
	5 - B255 (S) - AHEAD	4	0	5	0	0	0
	6 - A226 London Road (W)	2	0	0	1	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A206 (N) - LEFT TURN	0.44	8.61	0.8	A	295	443
2 - A206 (N) - AHEAD	0.89	21.85	7.6	C	1098	1648
3 - A226 London Road (E)	0.98	62.57	16.8	F	826	1239
4 - B255 (S) - LEFT TURN	0.43	8.80	0.8	A	264	396
5 - B255 (S) - AHEAD	0.67	8.27	2.1	A	771	1156
6 - A226 London Road (W)	0.67	9.17	2.0	A	672	1008

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	242	61	655	966	0.251	241	1055	0.0	0.4	5.305	A
2 - A206 (N) - AHEAD	901	225	655	1678	0.537	896	241	0.0	1.2	4.699	A
3 - A226 London Road (E)	678	169	1148	1371	0.494	674	403	0.0	1.0	5.343	A
4 - B255 (S) - LEFT TURN	217	54	829	936	0.232	216	993	0.0	0.3	5.041	A
5 - B255 (S) - AHEAD	632	158	829	1626	0.389	630	216	0.0	0.7	3.757	A
6 - A226 London Road (W)	551	138	1161	1582	0.348	549	297	0.0	0.5	3.508	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	289	72	784	897	0.323	289	1262	0.4	0.5	6.328	A
2 - A206 (N) - AHEAD	1076	269	784	1594	0.675	1072	289	1.2	2.1	7.030	A
3 - A226 London Road (E)	809	202	1374	1221	0.663	805	483	1.0	2.0	8.963	A
4 - B255 (S) - LEFT TURN	259	65	991	847	0.306	258	1188	0.3	0.4	6.177	A
5 - B255 (S) - AHEAD	755	189	991	1518	0.497	754	258	0.7	1.0	4.899	A
6 - A226 London Road (W)	658	165	1389	1420	0.464	657	355	0.5	0.9	4.754	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	355	89	958	804	0.441	353	1521	0.5	0.8	8.519	A
2 - A206 (N) - AHEAD	1318	329	958	1482	0.889	1298	353	2.1	6.9	18.484	C
3 - A226 London Road (E)	991	248	1667	1026	0.966	951	590	2.0	12.0	38.301	E
4 - B255 (S) - LEFT TURN	317	79	1180	742	0.427	316	1437	0.4	0.7	8.504	A
5 - B255 (S) - AHEAD	925	231	1180	1392	0.664	921	316	1.0	2.0	7.894	A
6 - A226 London Road (W)	806	201	1677	1215	0.664	802	425	0.9	1.9	8.710	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	355	89	962	802	0.442	354	1539	0.8	0.8	8.611	A
2 - A206 (N) - AHEAD	1318	329	962	1479	0.891	1315	354	6.9	7.6	21.849	C
3 - A226 London Road (E)	991	248	1685	1013	0.978	972	592	12.0	16.8	62.571	F
4 - B255 (S) - LEFT TURN	317	79	1203	730	0.434	317	1454	0.7	0.8	8.800	A
5 - B255 (S) - AHEAD	925	231	1203	1377	0.672	925	317	2.0	2.1	8.274	A
6 - A226 London Road (W)	806	201	1695	1201	0.671	806	432	1.9	2.0	9.167	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	289	72	791	893	0.324	291	1306	0.8	0.5	6.406	A
2 - A206 (N) - AHEAD	1076	269	791	1590	0.677	1098	291	7.6	2.2	7.810	A
3 - A226 London Road (E)	809	202	1402	1202	0.673	867	487	16.8	2.2	13.124	B
4 - B255 (S) - LEFT TURN	259	65	1049	815	0.318	260	1220	0.8	0.5	6.567	A
5 - B255 (S) - AHEAD	755	189	1049	1480	0.510	759	260	2.1	1.1	5.235	A
6 - A226 London Road (W)	658	165	1434	1388	0.474	662	374	2.0	0.9	5.041	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	242	61	660	964	0.252	243	1065	0.5	0.4	5.352	A
2 - A206 (N) - AHEAD	901	225	660	1675	0.538	905	243	2.2	1.2	4.821	A
3 - A226 London Road (E)	678	169	1159	1364	0.497	682	406	2.2	1.0	5.533	A
4 - B255 (S) - LEFT TURN	217	54	838	930	0.233	217	1003	0.5	0.3	5.107	A
5 - B255 (S) - AHEAD	632	158	838	1619	0.391	634	217	1.1	0.7	3.813	A
6 - A226 London Road (W)	551	138	1172	1575	0.350	553	301	0.9	0.5	3.561	A

Adjusted 2030 Flows (Without LTC) , Saturday

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	J8 - A226 / A206 / B255 Roundabout	Standard Roundabout		1, 2, 3, 4, 5, 6	2.86	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	Adjusted 2030 Flows (Without LTC)	Saturday	ONE HOUR	12:00	13:30	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 (%)
1 - A206 (N) - LEFT TURN		ONE HOUR	✓	264	100.000
2 - A206 (N) - AHEAD		ONE HOUR	✓	399	100.000
3 - A226 London Road (E)		ONE HOUR	✓	246	100.000
4 - B255 (S) - LEFT TURN		ONE HOUR	✓	47	100.000
5 - B255 (S) - AHEAD		ONE HOUR	✓	108	100.000
6 - A226 London Road (W)		ONE HOUR	✓	201	100.000

Origin-Destination Data

Demand (PCU/hr)

		To					
From		1 - A206 (N) - LEFT TURN	2 - A206 (N) - AHEAD	3 - A226 London Road (E)	4 - B255 (S) - LEFT TURN	5 - B255 (S) - AHEAD	6 - A226 London Road (W)
	1 - A206 (N) - LEFT TURN	0	264	0	0	0	0
	2 - A206 (N) - AHEAD	395	0	0	0	0	4
	3 - A226 London Road (E)	0	0	0	92	0	154
	4 - B255 (S) - LEFT TURN	0	0	0	0	47	0
	5 - B255 (S) - AHEAD	0	0	108	0	0	0
	6 - A226 London Road (W)	5	0	146	50	0	0

Vehicle Mix

Heavy Vehicle Percentages

From	To						
		1 - A206 (N) - LEFT TURN	2 - A206 (N) - AHEAD	3 - A226 London Road (E)	4 - B255 (S) - LEFT TURN	5 - B255 (S) - AHEAD	6 - A226 London Road (W)
	1 - A206 (N) - LEFT TURN	0	3	0	0	0	0
	2 - A206 (N) - AHEAD	3	0	0	0	0	5
	3 - A226 London Road (E)	0	0	0	10	0	2
	4 - B255 (S) - LEFT TURN	0	0	0	0	1	0
	5 - B255 (S) - AHEAD	0	0	6	0	0	0
	6 - A226 London Road (W)	7	0	1	5	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A206 (N) - LEFT TURN	0.26	4.38	0.4	A	242	363
2 - A206 (N) - AHEAD	0.23	2.56	0.3	A	366	549
3 - A226 London Road (E)	0.15	2.46	0.2	A	226	339
4 - B255 (S) - LEFT TURN	0.05	3.62	0.1	A	43	65
5 - B255 (S) - AHEAD	0.07	2.31	0.1	A	99	149
6 - A226 London Road (W)	0.11	2.05	0.1	A	184	277

Main Results for each time segment

12:00 - 12:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	199	50	228	1194	0.166	198	300	0.0	0.2	3.717	A
2 - A206 (N) - AHEAD	300	75	228	1955	0.154	300	198	0.0	0.2	2.238	A
3 - A226 London Road (E)	185	46	337	1912	0.097	185	191	0.0	0.1	2.185	A
4 - B255 (S) - LEFT TURN	35	9	415	1163	0.030	35	107	0.0	0.0	3.224	A
5 - B255 (S) - AHEAD	81	20	415	1900	0.043	81	35	0.0	0.0	2.097	A
6 - A226 London Road (W)	151	38	378	2142	0.071	151	119	0.0	0.1	1.845	A

12:15 - 12:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	237	59	273	1170	0.203	237	359	0.2	0.3	3.971	A
2 - A206 (N) - AHEAD	359	90	273	1926	0.186	358	237	0.2	0.2	2.365	A
3 - A226 London Road (E)	221	55	403	1868	0.118	221	228	0.1	0.1	2.292	A
4 - B255 (S) - LEFT TURN	42	11	497	1118	0.038	42	128	0.0	0.0	3.379	A
5 - B255 (S) - AHEAD	97	24	497	1846	0.053	97	42	0.0	0.1	2.181	A
6 - A226 London Road (W)	181	45	452	2089	0.087	181	142	0.1	0.1	1.926	A

12:30 - 12:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	291	73	335	1138	0.256	290	440	0.3	0.4	4.374	A
2 - A206 (N) - AHEAD	439	110	335	1886	0.233	439	290	0.2	0.3	2.562	A
3 - A226 London Road (E)	271	68	494	1807	0.150	271	280	0.1	0.2	2.456	A
4 - B255 (S) - LEFT TURN	52	13	608	1057	0.049	52	156	0.0	0.1	3.617	A
5 - B255 (S) - AHEAD	119	30	608	1772	0.067	119	52	0.1	0.1	2.307	A
6 - A226 London Road (W)	221	55	553	2016	0.110	221	174	0.1	0.1	2.047	A

12:45 - 13:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	291	73	335	1138	0.256	291	440	0.4	0.4	4.378	A
2 - A206 (N) - AHEAD	439	110	335	1886	0.233	439	291	0.3	0.3	2.562	A
3 - A226 London Road (E)	271	68	494	1807	0.150	271	280	0.2	0.2	2.456	A
4 - B255 (S) - LEFT TURN	52	13	609	1056	0.049	52	156	0.1	0.1	3.617	A
5 - B255 (S) - AHEAD	119	30	609	1772	0.067	119	52	0.1	0.1	2.308	A
6 - A226 London Road (W)	221	55	554	2016	0.110	221	174	0.1	0.1	2.047	A

13:00 - 13:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	237	59	273	1170	0.203	238	360	0.4	0.3	3.978	A
2 - A206 (N) - AHEAD	359	90	273	1926	0.186	359	238	0.3	0.2	2.368	A
3 - A226 London Road (E)	221	55	404	1867	0.118	221	228	0.2	0.1	2.293	A
4 - B255 (S) - LEFT TURN	42	11	498	1118	0.038	42	128	0.1	0.0	3.383	A
5 - B255 (S) - AHEAD	97	24	498	1846	0.053	97	42	0.1	0.1	2.183	A
6 - A226 London Road (W)	181	45	453	2088	0.087	181	142	0.1	0.1	1.927	A

13:15 - 13:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A206 (N) - LEFT TURN	199	50	229	1194	0.166	199	301	0.3	0.2	3.725	A
2 - A206 (N) - AHEAD	300	75	229	1955	0.154	301	199	0.2	0.2	2.241	A
3 - A226 London Road (E)	185	46	338	1911	0.097	185	191	0.1	0.1	2.188	A
4 - B255 (S) - LEFT TURN	35	9	417	1162	0.030	35	107	0.0	0.0	3.228	A
5 - B255 (S) - AHEAD	81	20	417	1899	0.043	81	35	0.1	0.0	2.100	A
6 - A226 London Road (W)	151	38	379	2141	0.071	151	119	0.1	0.1	1.849	A

Junctions 9			
ARCADY 9 - Roundabout Module			
Version: 9.5.1.7462 © Copyright TRL Limited, 2019			
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Filename: J9 - A206_Station Road (Existing) v1.0.j9

Path: O:\London\Vectos\Shares\Projects\Projects\220000\226728 - Northfleet Central, Gravesham\Modelling

Report generation date: 25/05/2023 10:04:11

- »AM - Adjusted 2030 Flows (Without LTC), AM
- »PM - Adjusted 2030 Flows (Without LTC), PM
- »Sat - Adjusted 2030 Flows (Without LTC), Saturday

Summary of junction performance

	AM		
	Queue (PCU)	Delay (s)	RFC
	AM - Adjusted 2030 Flows (Without LTC)		
1 - B255 Station Road (N)	0.2	3.57	0.14
2 - Station Approach (E)	0.1	4.68	0.06
3 - A206 St Clements Way (S)	1.6	3.96	0.60
4 - A206 Crossways Boulevard (W)	0.3	1.78	0.23

	PM		
	Queue (PCU)	Delay (s)	RFC
	PM - Adjusted 2030 Flows (Without LTC)		
1 - B255 Station Road (N)	0.2	5.56	0.19
2 - Station Approach (E)	0.2	7.70	0.11
3 - A206 St Clements Way (S)	0.8	2.88	0.43
4 - A206 Crossways Boulevard (W)	0.9	2.38	0.48

	Saturday		
	Queue (PCU)	Delay (s)	RFC
	Sat - Adjusted 2030 Flows (Without LTC)		
1 - B255 Station Road (N)	0.0	2.55	0.03
2 - Station Approach (E)	0.0	0.00	0.00
3 - A206 St Clements Way (S)	0.2	1.92	0.19
4 - A206 Crossways Boulevard (W)	0.1	1.30	0.11

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	Northfleet
Location	J9 - A206 / Station Road / Station Approach Roundabout
Site number	
Date	21/09/2022
Version	
Status	Existing Junction Layout
Identifier	
Client	
Jobnumber	226728
Enumerator	David Noyce
Description	A206 (South) - Arm C - Intercept Adjustments used to account for unequal lane usage of third lane (used by right turners and u-turners).

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	Adjusted 2030 Flows (Without LTC)	AM	ONE HOUR	07:45	09:15	15	✓
D2	Adjusted 2030 Flows (Without LTC)	PM	ONE HOUR	16:45	18:15	15	✓
D3	Adjusted 2030 Flows (Without LTC)	Saturday	ONE HOUR	12:00	13:30	15	✓

AM - Adjusted 2030 Flows (Without LTC), AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	AM	✓	✓	D1	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	J9 - A206 / Station Road / Station Approach Roundabout	Standard Roundabout		1, 2, 3, 4	3.33	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	B255 Station Road (N)	
2	Station Approach (E)	
3	A206 St Clements Way (S)	
4	A206 Crossways Boulevard (W)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - B255 Station Road (N)	3.40	6.70	20.1	12.0	50.0	21.0	
2 - Station Approach (E)	3.00	6.50	20.4	26.0	50.0	19.0	
3 - A206 St Clements Way (S)	9.70	10.90	5.1	20.0	50.0	35.0	
4 - A206 Crossways Boulevard (W)	9.00	10.40	11.9	24.0	50.0	18.0	

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
1 - B255 Station Road (N)	None		
2 - Station Approach (E)	None		
3 - A206 St Clements Way (S)	Direct	Low lane usage in offside lane	-642
4 - A206 Crossways Boulevard (W)	None		

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B255 Station Road (N)	0.605	1683
2 - Station Approach (E)	0.618	1672
3 - A206 St Clements Way (S)	0.867	2450
4 - A206 Crossways Boulevard (W)	0.904	3186

The slope and intercept shown above include any corrections and adjustments.

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
D1	Adjusted 2030 Flows (Without LTC)	AM	ONE HOUR	07:45	09:15	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 (%)
1 - B255 Station Road (N)		ONE HOUR	✓	154	100.000
2 - Station Approach (E)		ONE HOUR	✓	55	100.000
3 - A206 St Clements Way (S)		ONE HOUR	✓	1290	100.000
4 - A206 Crossways Boulevard (W)		ONE HOUR	✓	601	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - B255 Station Road (N)	2 - Station Approach (E)	3 - A206 St Clements Way (S)	4 - A206 Crossways Boulevard (W)
	1 - B255 Station Road (N)	2	4	102	46
	2 - Station Approach (E)	1	0	36	18
	3 - A206 St Clements Way (S)	68	37	144	1041
	4 - A206 Crossways Boulevard (W)	31	15	535	20

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - B255 Station Road (N)	2 - Station Approach (E)	3 - A206 St Clements Way (S)	4 - A206 Crossways Boulevard (W)
	1 - B255 Station Road (N)	0	0	1	0
	2 - Station Approach (E)	0	0	29	50
	3 - A206 St Clements Way (S)	1	37	1	4
	4 - A206 Crossways Boulevard (W)	3	50	12	18

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - B255 Station Road (N)	0.14	3.57	0.2	A	141	212
2 - Station Approach (E)	0.06	4.68	0.1	A	50	76
3 - A206 St Clements Way (S)	0.60	3.96	1.6	A	1184	1776
4 - A206 Crossways Boulevard (W)	0.23	1.78	0.3	A	551	827

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B255 Station Road (N)	116	29	564	1342	0.086	116	77	0.0	0.1	2.954	A
2 - Station Approach (E)	41	10	638	1279	0.032	41	42	0.0	0.0	3.911	A
3 - A206 St Clements Way (S)	971	243	65	2393	0.406	968	614	0.0	0.7	2.627	A
4 - A206 Crossways Boulevard (W)	452	113	189	3015	0.150	452	844	0.0	0.2	1.578	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B255 Station Road (N)	138	35	675	1275	0.109	138	92	0.1	0.1	3.187	A
2 - Station Approach (E)	49	12	763	1201	0.041	49	50	0.0	0.1	4.201	A
3 - A206 St Clements Way (S)	1160	290	78	2382	0.487	1159	734	0.7	1.0	3.063	A
4 - A206 Crossways Boulevard (W)	540	135	226	2982	0.181	540	1010	0.2	0.2	1.656	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B255 Station Road (N)	170	42	826	1184	0.143	169	112	0.1	0.2	3.572	A
2 - Station Approach (E)	61	15	934	1096	0.055	60	62	0.1	0.1	4.675	A
3 - A206 St Clements Way (S)	1420	355	96	2367	0.600	1418	899	1.0	1.5	3.944	A
4 - A206 Crossways Boulevard (W)	662	165	277	2936	0.225	661	1237	0.2	0.3	1.778	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B255 Station Road (N)	170	42	827	1183	0.143	170	112	0.2	0.2	3.574	A
2 - Station Approach (E)	61	15	935	1095	0.055	61	62	0.1	0.1	4.677	A
3 - A206 St Clements Way (S)	1420	355	96	2367	0.600	1420	900	1.5	1.6	3.963	A
4 - A206 Crossways Boulevard (W)	662	165	277	2935	0.225	662	1239	0.3	0.3	1.778	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B255 Station Road (N)	138	35	676	1275	0.109	139	92	0.2	0.1	3.189	A
2 - Station Approach (E)	49	12	764	1201	0.041	50	50	0.1	0.1	4.206	A
3 - A206 St Clements Way (S)	1160	290	78	2382	0.487	1162	735	1.6	1.0	3.082	A
4 - A206 Crossways Boulevard (W)	540	135	227	2981	0.181	541	1013	0.3	0.2	1.657	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B255 Station Road (N)	116	29	566	1341	0.086	116	77	0.1	0.1	2.957	A
2 - Station Approach (E)	41	10	640	1277	0.032	41	42	0.1	0.0	3.917	A
3 - A206 St Clements Way (S)	971	243	66	2393	0.406	972	615	1.0	0.7	2.644	A
4 - A206 Crossways Boulevard (W)	452	113	190	3015	0.150	453	848	0.2	0.2	1.578	A

PM - Adjusted 2030 Flows (Without LTC), PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	PM	✓	✓	D2	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	J9 - A206 / Station Road / Station Approach Roundabout	Standard Roundabout		1, 2, 3, 4	2.91	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	B255 Station Road (N)	
2	Station Approach (E)	
3	A206 St Clements Way (S)	
4	A206 Crossways Boulevard (W)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - B255 Station Road (N)	3.40	6.70	20.1	12.0	50.0	21.0	
2 - Station Approach (E)	3.00	6.50	20.4	26.0	50.0	19.0	
3 - A206 St Clements Way (S)	9.70	10.90	5.1	20.0	50.0	35.0	
4 - A206 Crossways Boulevard (W)	9.00	10.40	11.9	24.0	50.0	18.0	

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
1 - B255 Station Road (N)	None		
2 - Station Approach (E)	None		
3 - A206 St Clements Way (S)	Direct	Low lane usage in offside lane	-712
4 - A206 Crossways Boulevard (W)	None		

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B255 Station Road (N)	0.605	1683
2 - Station Approach (E)	0.618	1672
3 - A206 St Clements Way (S)	0.867	2380
4 - A206 Crossways Boulevard (W)	0.904	3186

The slope and intercept shown above include any corrections and adjustments.

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
D2	Adjusted 2030 Flows (Without LTC)	PM	ONE HOUR	16:45	18:15	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 (%)
1 - B255 Station Road (N)		ONE HOUR	✓	135	100.000
2 - Station Approach (E)		ONE HOUR	✓	73	100.000
3 - A206 St Clements Way (S)		ONE HOUR	✓	908	100.000
4 - A206 Crossways Boulevard (W)		ONE HOUR	✓	1287	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - B255 Station Road (N)	2 - Station Approach (E)	3 - A206 St Clements Way (S)	4 - A206 Crossways Boulevard (W)
	1 - B255 Station Road (N)	0	6	86	43
	2 - Station Approach (E)	2	0	52	19
	3 - A206 St Clements Way (S)	113	40	66	689
	4 - A206 Crossways Boulevard (W)	61	28	1185	13

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - B255 Station Road (N)	2 - Station Approach (E)	3 - A206 St Clements Way (S)	4 - A206 Crossways Boulevard (W)
	1 - B255 Station Road (N)	0	0	0	0
	2 - Station Approach (E)	0	0	36	50
	3 - A206 St Clements Way (S)	2	41	0	4
	4 - A206 Crossways Boulevard (W)	0	30	2	33

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - B255 Station Road (N)	0.19	5.56	0.2	A	124	186
2 - Station Approach (E)	0.11	7.70	0.2	A	67	100
3 - A206 St Clements Way (S)	0.43	2.88	0.8	A	833	1250
4 - A206 Crossways Boulevard (W)	0.48	2.38	0.9	A	1181	1771

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B255 Station Road (N)	102	25	1001	1078	0.094	101	132	0.0	0.1	3.683	A
2 - Station Approach (E)	55	14	1046	1026	0.054	55	56	0.0	0.1	5.111	A
3 - A206 St Clements Way (S)	684	171	58	2330	0.293	682	1043	0.0	0.4	2.284	A
4 - A206 Crossways Boulevard (W)	969	242	166	3036	0.319	967	574	0.0	0.5	1.783	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B255 Station Road (N)	121	30	1197	959	0.127	121	158	0.1	0.1	4.295	A
2 - Station Approach (E)	66	16	1251	900	0.073	66	66	0.1	0.1	5.955	A
3 - A206 St Clements Way (S)	816	204	69	2320	0.352	816	1248	0.4	0.6	2.504	A
4 - A206 Crossways Boulevard (W)	1157	289	199	3007	0.385	1156	686	0.5	0.6	1.996	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B255 Station Road (N)	149	37	1465	797	0.187	148	194	0.1	0.2	5.548	A
2 - Station Approach (E)	80	20	1532	726	0.111	80	81	0.1	0.2	7.688	A
3 - A206 St Clements Way (S)	1000	250	85	2307	0.433	999	1528	0.6	0.8	2.879	A
4 - A206 Crossways Boulevard (W)	1417	354	243	2967	0.478	1416	840	0.6	0.9	2.382	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B255 Station Road (N)	149	37	1467	796	0.187	149	194	0.2	0.2	5.559	A
2 - Station Approach (E)	80	20	1534	725	0.111	80	81	0.2	0.2	7.701	A
3 - A206 St Clements Way (S)	1000	250	85	2306	0.433	1000	1529	0.8	0.8	2.882	A
4 - A206 Crossways Boulevard (W)	1417	354	243	2966	0.478	1417	841	0.9	0.9	2.384	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B255 Station Road (N)	121	30	1199	958	0.127	122	158	0.2	0.1	4.306	A
2 - Station Approach (E)	66	16	1254	898	0.073	66	67	0.2	0.1	5.969	A
3 - A206 St Clements Way (S)	816	204	69	2320	0.352	817	1250	0.8	0.6	2.508	A
4 - A206 Crossways Boulevard (W)	1157	289	199	3006	0.385	1158	688	0.9	0.6	2.001	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B255 Station Road (N)	102	25	1003	1076	0.094	102	133	0.1	0.1	3.693	A
2 - Station Approach (E)	55	14	1050	1024	0.054	55	56	0.1	0.1	5.127	A
3 - A206 St Clements Way (S)	684	171	58	2330	0.293	684	1047	0.6	0.4	2.289	A
4 - A206 Crossways Boulevard (W)	969	242	167	3036	0.319	970	576	0.6	0.5	1.787	A

Sat - Adjusted 2030 Flows (Without LTC), Saturday

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A3	Sat	✓	✓	D3	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	J9 - A206 / Station Road / Station Approach Roundabout	Standard Roundabout		1, 2, 3, 4	1.71	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	B255 Station Road (N)	
2	Station Approach (E)	
3	A206 St Clements Way (S)	
4	A206 Crossways Boulevard (W)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - B255 Station Road (N)	3.40	6.70	20.1	12.0	50.0	21.0	
2 - Station Approach (E)	3.00	6.50	20.4	26.0	50.0	19.0	
3 - A206 St Clements Way (S)	9.70	10.90	5.1	20.0	50.0	35.0	
4 - A206 Crossways Boulevard (W)	9.00	10.40	11.9	24.0	50.0	18.0	

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
1 - B255 Station Road (N)	None		
2 - Station Approach (E)	None		
3 - A206 St Clements Way (S)	Direct	Average of AM and PM	-677
4 - A206 Crossways Boulevard (W)	None		

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B255 Station Road (N)	0.605	1683
2 - Station Approach (E)	0.618	1672
3 - A206 St Clements Way (S)	0.867	2415
4 - A206 Crossways Boulevard (W)	0.904	3186

The slope and intercept shown above include any corrections and adjustments.

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
D3	Adjusted 2030 Flows (Without LTC)	Saturday	ONE HOUR	12:00	13:30	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 (%)
1 - B255 Station Road (N)		ONE HOUR	✓	46	100.000
2 - Station Approach (E)		ONE HOUR	✓	0	100.000
3 - A206 St Clements Way (S)		ONE HOUR	✓	400	100.000
4 - A206 Crossways Boulevard (W)		ONE HOUR	✓	305	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - B255 Station Road (N)	2 - Station Approach (E)	3 - A206 St Clements Way (S)	4 - A206 Crossways Boulevard (W)
	1 - B255 Station Road (N)	0	0	0	46
	2 - Station Approach (E)	0	0	0	0
	3 - A206 St Clements Way (S)	0	0	0	400
	4 - A206 Crossways Boulevard (W)	38	0	267	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - B255 Station Road (N)	2 - Station Approach (E)	3 - A206 St Clements Way (S)	4 - A206 Crossways Boulevard (W)
	1 - B255 Station Road (N)	0	0	0	3
	2 - Station Approach (E)	0	0	0	0
	3 - A206 St Clements Way (S)	0	0	0	3
	4 - A206 Crossways Boulevard (W)	2	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - B255 Station Road (N)	0.03	2.55	0.0	A	42	63
2 - Station Approach (E)	0.00	0.00	0.0	A	0	0
3 - A206 St Clements Way (S)	0.19	1.92	0.2	A	367	551
4 - A206 Crossways Boulevard (W)	0.11	1.30	0.1	A	280	420

Main Results for each time segment

12:00 - 12:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B255 Station Road (N)	35	9	201	1562	0.022	35	29	0.0	0.0	2.427	A
2 - Station Approach (E)	0	0	235	1527	0.000	0	0	0.0	0.0	0.000	A
3 - A206 St Clements Way (S)	301	75	35	2385	0.126	301	201	0.0	0.1	1.778	A
4 - A206 Crossways Boulevard (W)	230	57	0	3186	0.072	229	335	0.0	0.1	1.252	A

12:15 - 12:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B255 Station Road (N)	41	10	240	1538	0.027	41	34	0.0	0.0	2.476	A
2 - Station Approach (E)	0	0	281	1499	0.000	0	0	0.0	0.0	0.000	A
3 - A206 St Clements Way (S)	360	90	41	2379	0.151	359	240	0.1	0.2	1.835	A
4 - A206 Crossways Boulevard (W)	274	69	0	3186	0.086	274	401	0.1	0.1	1.271	A

12:30 - 12:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B255 Station Road (N)	51	13	294	1506	0.034	51	42	0.0	0.0	2.548	A
2 - Station Approach (E)	0	0	345	1460	0.000	0	0	0.0	0.0	0.000	A
3 - A206 St Clements Way (S)	440	110	51	2371	0.186	440	294	0.2	0.2	1.920	A
4 - A206 Crossways Boulevard (W)	336	84	0	3186	0.105	336	491	0.1	0.1	1.298	A

12:45 - 13:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B255 Station Road (N)	51	13	294	1506	0.034	51	42	0.0	0.0	2.548	A
2 - Station Approach (E)	0	0	345	1460	0.000	0	0	0.0	0.0	0.000	A
3 - A206 St Clements Way (S)	440	110	51	2371	0.186	440	294	0.2	0.2	1.920	A
4 - A206 Crossways Boulevard (W)	336	84	0	3186	0.105	336	491	0.1	0.1	1.298	A

13:00 - 13:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B255 Station Road (N)	41	10	240	1538	0.027	41	34	0.0	0.0	2.476	A
2 - Station Approach (E)	0	0	281	1499	0.000	0	0	0.0	0.0	0.000	A
3 - A206 St Clements Way (S)	360	90	41	2379	0.151	360	240	0.2	0.2	1.838	A
4 - A206 Crossways Boulevard (W)	274	69	0	3186	0.086	274	401	0.1	0.1	1.271	A

13:15 - 13:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B255 Station Road (N)	35	9	201	1562	0.022	35	29	0.0	0.0	2.429	A
2 - Station Approach (E)	0	0	236	1527	0.000	0	0	0.0	0.0	0.000	A
3 - A206 St Clements Way (S)	301	75	35	2385	0.126	301	201	0.2	0.1	1.778	A
4 - A206 Crossways Boulevard (W)	230	57	0	3186	0.072	230	336	0.1	0.1	1.254	A

Junctions 10		
ARCADY 10 - Roundabout Module		
Version: 10.0.4.1693 © Copyright TRL Software Limited, 2021		
For sales and distribution information, program advice and maintenance, contact TRL Software: +44 (0)1344 379777 software@trl.co.uk trlsoftware.com		
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution		

Filename: J10 - A226_New Access Roundabout (SK02) v1.0.j10

Path: O:\London\Vectos\Projects\Projects\220000\226728 - Northfleet Central, Gravesham\Modelling

Report generation date: 18/07/2023 09:48:48

- [»2030 With Development Flows \(Without LTC\), AM](#)
[»2030 With Development Flows \(Without LTC\), PM](#)
[»2030 With Development Flows \(Without LTC\) , Saturday](#)

Summary of junction performance

	AM			PM			Saturday		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2030 With Development Flows (Without LTC)									
A - A226 (N)	1.2	6.21	0.54	1.1	5.73	0.51	0.5	4.47	0.35
B - Access	0.1	4.17	0.12	1.1	7.40	0.52	0.4	4.45	0.28
C - A226 (S)	2.5	9.00	0.72	2.6	9.36	0.72	2.0	7.66	0.66

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	
Location	
Site number	
Date	10/05/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	SLR\ben.stone
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
----------------	-------------	---------------------	-----------------------	------------	---------------------	-------------------	---------------------

m	kph	PCU	PCU	perHour	s	-Min	perMin
---	-----	-----	-----	---------	---	------	--------

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2030 With Development Flows (Without LTC)	AM	ONE HOUR	07:45	09:15	15	✓
D2	2030 With Development Flows (Without LTC)	PM	ONE HOUR	16:45	18:15	15	✓
D3	2030 With Development Flows (Without LTC)	Saturday	ONE HOUR	12:00	13:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2030 With Development Flows (Without LTC), AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C	7.63	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.63	A

Arms

Arms

Arm	Name	Description	No give-way line
A	A226 (N)		
B	Access		
C	A226 (S)		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - A226 (N)	4.00	6.94	4.9	25.0	38.0	46.0		
B - Access	3.25	6.49	7.7	20.0	38.0	40.0		
C - A226 (S)	4.00	6.94	4.9	25.0	38.0	46.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - A226 (N)	0.582	1447
B - Access	0.566	1353
C - A226 (S)	0.582	1447

The slope and intercept shown above include any corrections and adjustments.

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
D1	2030 With Development Flows (Without LTC)	AM	ONE HOUR	07:45	09:15	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 - A226 (N)		ONE HOUR	✓	619	100.000
B - Access		ONE HOUR	✓	113	100.000
C - A226 (S)		ONE HOUR	✓	930	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		A - A226 (N)	B - Access	C - A226 (S)
	A - A226 (N)	0	45	574
	B - Access	27	0	86
	C - A226 (S)	648	282	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - A226 (N)	B - Access	C - A226 (S)
	A - A226 (N)	0	0	1
	B - Access	1	0	1
	C - A226 (S)	2	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A226 (N)	0.54	6.21	1.2	A	568	852
B - Access	0.12	4.17	0.1	A	104	156
C - A226 (S)	0.72	9.00	2.5	A	853	1280

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A226 (N)	466	117	211	1325	0.352	464	505	0.0	0.5	4.212	A
B - Access	85	21	430	1110	0.077	85	245	0.0	0.1	3.547	A
C - A226 (S)	700	175	20	1436	0.488	696	495	0.0	1.0	4.927	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A226 (N)	556	139	253	1300	0.428	556	606	0.5	0.7	4.875	A
B - Access	102	25	515	1062	0.096	101	293	0.1	0.1	3.786	A
C - A226 (S)	836	209	24	1433	0.583	834	592	1.0	1.4	6.094	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A226 (N)	682	170	309	1268	0.538	680	740	0.7	1.2	6.165	A
B - Access	124	31	630	996	0.125	124	359	0.1	0.1	4.169	A
C - A226 (S)	1024	256	30	1430	0.716	1020	725	1.4	2.5	8.826	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A226 (N)	682	170	310	1267	0.538	681	743	1.2	1.2	6.207	A
B - Access	124	31	632	996	0.125	124	360	0.1	0.1	4.173	A

C - A226 (S)	1024	256	30	1430	0.716	1024	727	2.5	2.5	9.003	A
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08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A226 (N)	556	139	255	1299	0.428	558	610	1.2	0.8	4.913	A
B - Access	102	25	518	1060	0.096	102	295	0.1	0.1	3.795	A
C - A226 (S)	836	209	24	1433	0.583	840	595	2.5	1.4	6.221	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A226 (N)	466	117	213	1324	0.352	467	510	0.8	0.6	4.245	A
B - Access	85	21	433	1108	0.077	85	247	0.1	0.1	3.553	A
C - A226 (S)	700	175	20	1435	0.488	702	498	1.4	1.0	5.003	A

2030 With Development Flows (Without LTC), PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C	7.78	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.78	A

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
D2	2030 With Development Flows (Without LTC)	PM	ONE HOUR	16:45	18:15	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 - A226 (N)		ONE HOUR	✓	610	100.000

B - Access		ONE HOUR	✓	471	100.000
C - A226 (S)		ONE HOUR	✓	908	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		A - A226 (N)	B - Access	C - A226 (S)
A - A226 (N)		0	51	559
B - Access		95	0	376
C - A226 (S)		687	221	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - A226 (N)	B - Access	C - A226 (S)
A - A226 (N)		0	0	1
B - Access		0	0	0
C - A226 (S)		1	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A226 (N)	0.51	5.73	1.1	A	560	840
B - Access	0.52	7.40	1.1	A	432	648
C - A226 (S)	0.72	9.36	2.6	A	833	1250

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A226 (N)	459	115	165	1351	0.340	457	586	0.0	0.5	4.055	A
B - Access	355	89	419	1116	0.318	353	204	0.0	0.5	4.704	A
C - A226 (S)	684	171	71	1406	0.486	680	701	0.0	0.9	4.970	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
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A - A226 (N)	548	137	198	1332	0.412	548	701	0.5	0.7	4.628	A
B - Access	423	106	502	1069	0.396	423	244	0.5	0.6	5.559	A
C - A226 (S)	816	204	85	1398	0.584	814	839	0.9	1.4	6.200	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A226 (N)	672	168	242	1306	0.514	670	857	0.7	1.1	5.697	A
B - Access	519	130	614	1006	0.516	517	298	0.6	1.0	7.344	A
C - A226 (S)	1000	250	104	1387	0.721	995	1027	1.4	2.5	9.161	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A226 (N)	672	168	243	1306	0.514	672	861	1.1	1.1	5.727	A
B - Access	519	130	615	1005	0.516	519	299	1.0	1.1	7.401	A
C - A226 (S)	1000	250	105	1386	0.721	1000	1029	2.5	2.6	9.363	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A226 (N)	548	137	200	1331	0.412	550	707	1.1	0.7	4.657	A
B - Access	423	106	504	1068	0.396	425	246	1.1	0.7	5.610	A
C - A226 (S)	816	204	86	1397	0.584	821	843	2.6	1.4	6.336	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A226 (N)	459	115	167	1350	0.340	460	590	0.7	0.5	4.085	A
B - Access	355	89	422	1115	0.318	355	205	0.7	0.5	4.745	A
C - A226 (S)	684	171	72	1406	0.486	685	705	1.4	1.0	5.051	A

2030 With Development Flows (Without LTC), Saturday

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C	6.23	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.23	A

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
D3	2030 With Development Flows (Without LTC)	Saturday	ONE HOUR	12:00	13:30	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 - A226 (N)		ONE HOUR	✓	398	100.000
B - Access		ONE HOUR	✓	290	100.000
C - A226 (S)		ONE HOUR	✓	849	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		A - A226 (N)	B - Access	C - A226 (S)
	A - A226 (N)	0	36	362
	B - Access	58	0	232
	C - A226 (S)	541	308	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - A226 (N)	B - Access	C - A226 (S)
	A - A226 (N)	0	0	1
	B - Access	0	0	0
	C - A226 (S)	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A226 (N)	0.35	4.47	0.5	A	365	548
B - Access	0.28	4.45	0.4	A	266	399
C - A226 (S)	0.66	7.66	2.0	A	779	1169

Main Results for each time segment

12:00 - 12:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A226 (N)	300	75	231	1313	0.228	298	449	0.0	0.3	3.577	A
B - Access	218	55	271	1200	0.182	217	258	0.0	0.2	3.662	A
C - A226 (S)	639	160	43	1422	0.449	636	445	0.0	0.8	4.618	A

12:15 - 12:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A226 (N)	358	89	276	1287	0.278	357	538	0.3	0.4	3.907	A
B - Access	261	65	325	1169	0.223	260	309	0.2	0.3	3.960	A
C - A226 (S)	763	191	52	1417	0.539	762	533	0.8	1.2	5.551	A

12:30 - 12:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A226 (N)	438	110	338	1251	0.350	438	657	0.4	0.5	4.465	A
B - Access	319	80	398	1128	0.283	319	378	0.3	0.4	4.447	A
C - A226 (S)	935	234	64	1410	0.663	932	653	1.2	1.9	7.567	A

12:45 - 13:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A226 (N)	438	110	339	1250	0.351	438	659	0.5	0.5	4.473	A
B - Access	319	80	399	1128	0.283	319	379	0.4	0.4	4.453	A
C - A226 (S)	935	234	64	1410	0.663	935	654	1.9	2.0	7.664	A

13:00 - 13:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A226 (N)	358	89	278	1286	0.278	358	541	0.5	0.4	3.920	A
B - Access	261	65	326	1169	0.223	261	310	0.4	0.3	3.969	A
C - A226 (S)	763	191	52	1417	0.539	766	535	2.0	1.2	5.628	A

13:15 - 13:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A226 (N)	300	75	232	1312	0.228	300	452	0.4	0.3	3.589	A
B - Access	218	55	273	1199	0.182	219	260	0.3	0.2	3.672	A
C - A226 (S)	639	160	44	1422	0.450	641	448	1.2	0.8	4.674	A

Appendix M

FRAMEWORK TRAVEL PLAN

Northfleet Central 1 Ltd

Northfleet Harbourside, Gravesham

August 2023

Framework Travel Plan

Contents

1 Introduction 1

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Figures

Figure 1.1 – Site Location

Figure 2.1 – Walking Routes and 2km Isochrones

Figure 2.2 – Walking Routes and 800m Isochrones

Figure 2.3 – Cycling Routes and 5km Isochrones

Appendices

Appendix A – Site Layout

Appendix B – Walking Isochrones

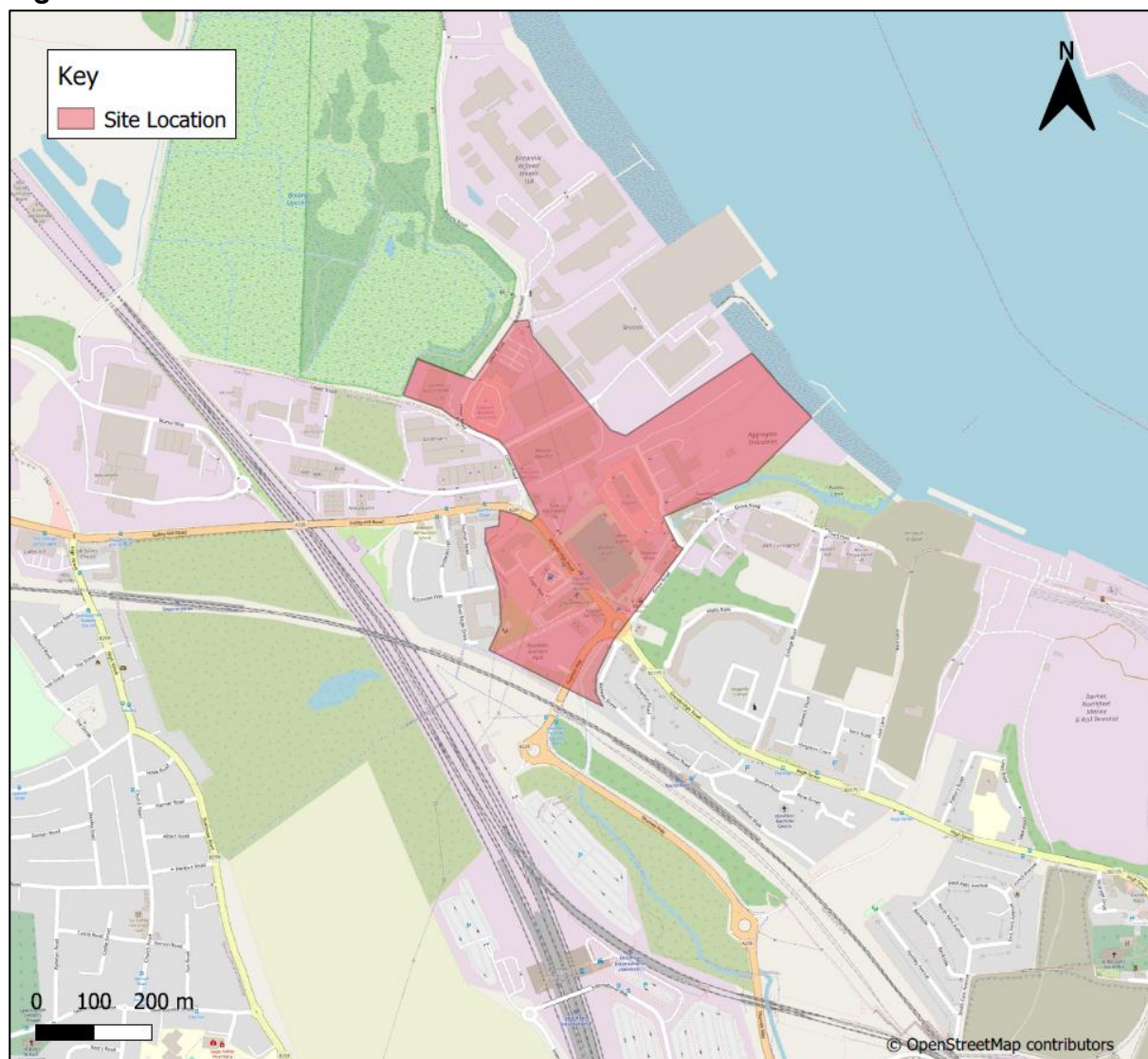
Appendix C – Cycling Isochrones

Appendix D – Travel Survey Example

1 Introduction

- 1.1 Vectos have been appointed by Northfleet Central 1 Limited to provide transport planning in support of an outline planning application for a mixed-use development on land at and surrounding the Ebbsfleet United Football Ground. The site location is illustrated in **Figure 1.1** below whilst a plan of the proposed development is included in **Appendix A**.

Figure 1.1: Site Location



- 1.2 The site falls within the administrative boundaries of Kent County Council (KCC) and Gravesham Borough Council (GBC).
- 1.3 The Proposed Development will comprise:
- Site clearance including the existing industrial uses on-site and remediation of brownfield land as relevant;
 - Realignment of the A226 Galley Hill Road / Stonebridge Road;

- Up to 3,500 residential units (Use Class C3);
- A new multi-use stadium (with associated facilities) with up to 8,000 seats and up to 15,000m2 Gross External Area (GEA) (Sui Generis Use);
- Up to 22,500m2 (GEA) Use Class E(a) retail floorspace;
- Up to 9,500m2 (GEA) Use Class E(b) food and beverage floorspace;
- Up to 18,000m2 (GEA) Use Class E(g) office floorspace;
- Up to 5,000m2 (GEA) 'other' flexible use, comprising local services, indoor sport, recreation and fitness, medical or health services, crèche or nursery, etc.) (Use Class E(c, d, e, f));
- Up to 4,000m2 (GEA) (Use Class F2) local community use;
- Up to 300 room hotel (Use Class C1), comprising up to 20,000m2 (GEA) floorspace;
- Other Sui Generis Uses
- Car, cycle parking and e-charging facilities; and
- Provision of landscaping, public realm and associated works.

- 1.4 This Framework Travel Plan (FTP) relates to the entirety of the proposed development, including both the commercial and residential aspects of the site. This FTP considers guidance contained within the National Planning Practice Guidance (NPPG) and the Gravesham Core Strategy.

Mission Statement

- 1.5 The predominate aim of this FTP is to put in place the management tools deemed necessary to enable future site users of the development to make more informed decisions about their travel, which minimises the adverse effects of their travel on the environment. This is achieved by setting out a strategy for eliminating the barriers keeping site users from using sustainable modes which in effect self manages single-occupancy vehicle use.

Scope

- 1.6 This FTP has been written as a standalone document and contains all the relevant information needed to effectively implement and monitor the Travel Plan itself.
- 1.7 The remainder of this document is structured as follows:
- **Section 2** – Outlines the existing site;
 - **Section 3** – Outlines the baseline travel patterns for residents at the site;
 - **Section 4** – Sets out the objectives and targets of the Travel Plan;

- **Section 5** – Outlines the Travel Plan strategy;
- **Section 6** – Sets out the measures that will be implemented to help achieve the objectives and targets of the Travel Plan;
- **Section 7** – Outlines the monitoring and review programme which will ensure the Travel Plan continues to develop;
- **Section 8** – Sets out the Action Plan for the site.

2 Existing Site Context

- 2.1 This section of the FTP provides an overview of the development site and the background to the development proposals.

Active Travel

Walking

- 2.2 The transport network surrounding the site has excellent pedestrian and cycling connectivity with several footway and cycleway connections in the local area.
- 2.3 Footways are present along both sides of the A226 with street lighting provided throughout. The footways are adequately surfaced, with dropped kerbs and tactile paving present at times. These footways continue along the B175 (Stonebridge Road) and the A226 to the north with footway connections also provided from the site to Ebbsfleet International station.
- 2.4 Further pedestrian routes are also available in the form of PROWs. To the south, a pedestrian footpath provides access to the site via a footway over the railway line towards Swanscombe. An additional promoted PROW route travels through the site with a general north south alignment. This route travels northwest from Gravesend passing through the site and into the marshes.
- 2.5 These routes and the 800m and 2km isochrones associated with each of the character areas across the site are illustrated within **Figure 2.1** and **Figure 2.2** overleaf. Full size plans are shown in **Appendix B**.

Figure 2.1: Walking Routes and 800m Isochrones

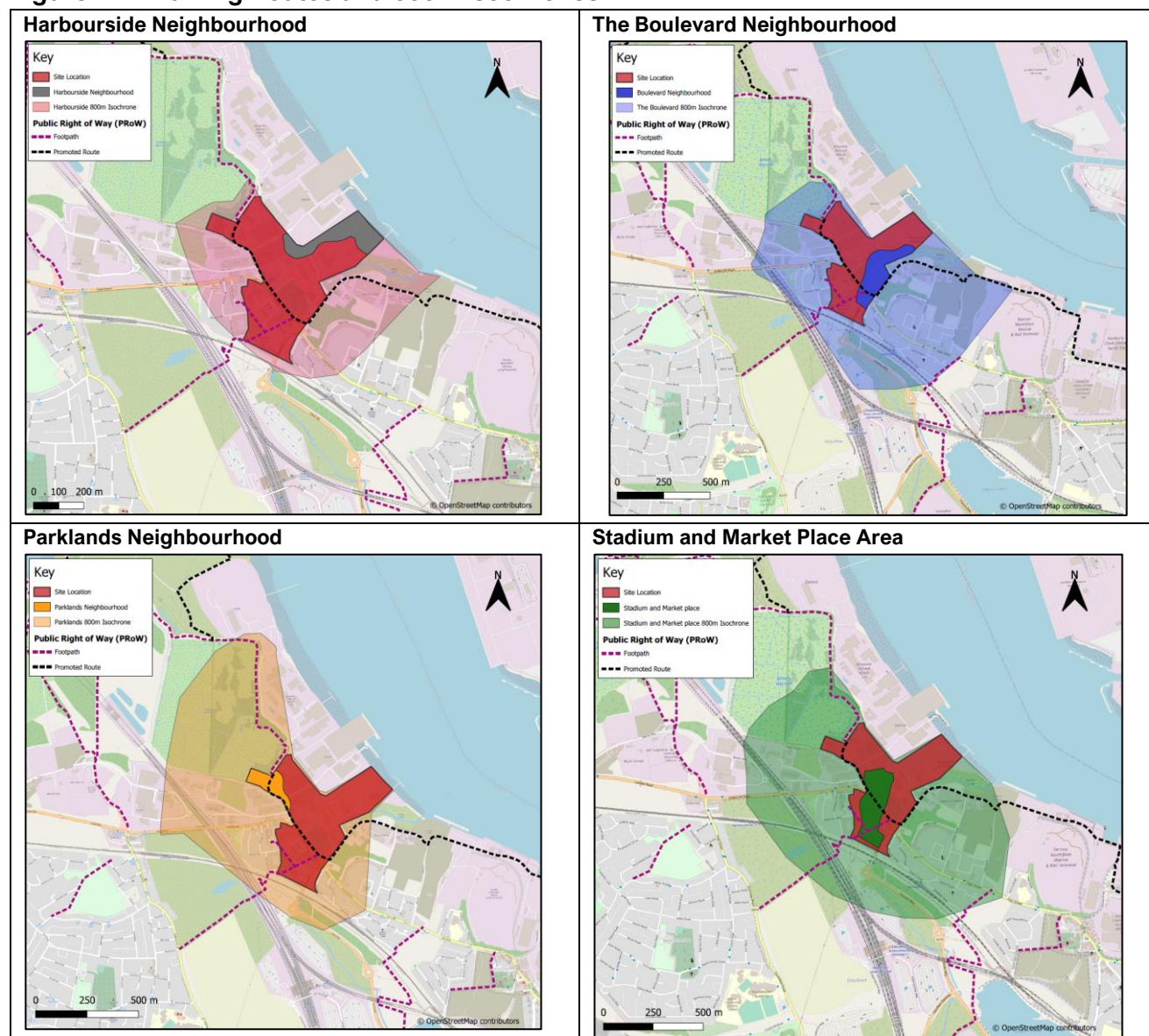
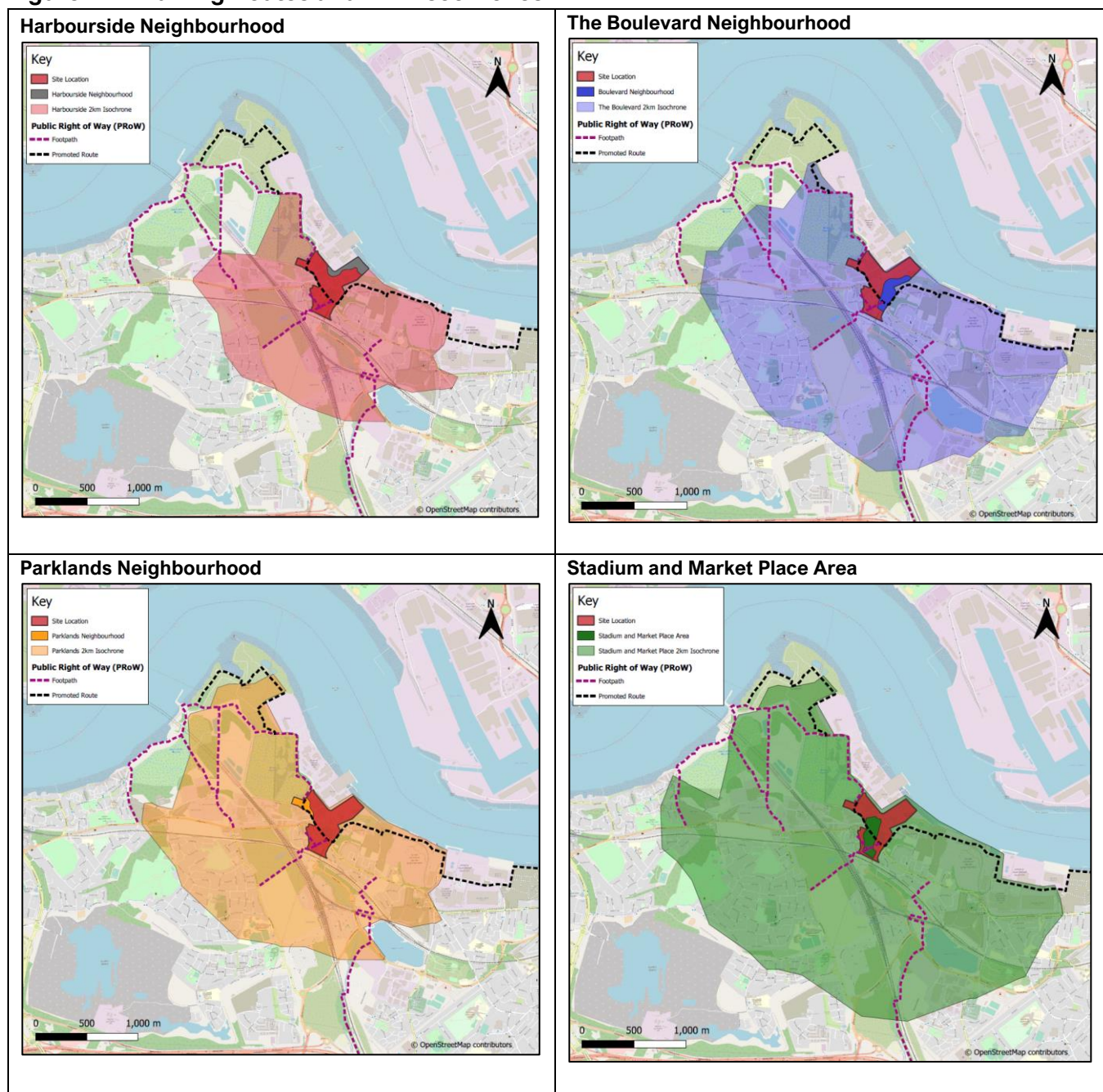


Figure 2.2: Walking Routes and 2km Isochrones

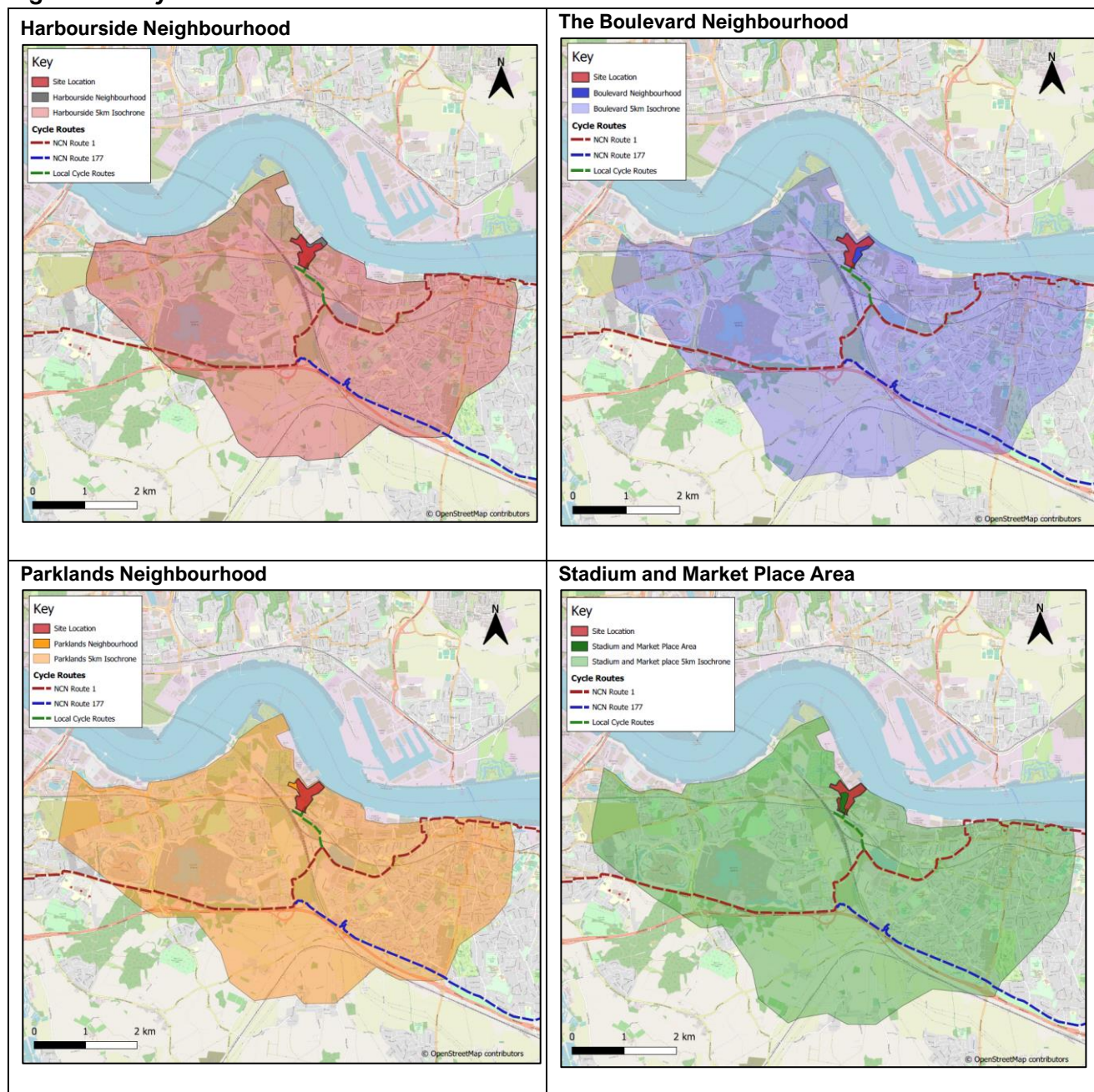


Cycling

- 2.6 Regarding cycling, there is a local cycle route along the A226 to the south of the site that consists of an off carriageway shared cycleway. This carriageway continues to travel southbound along the A226 (Thames Way) towards Gravesend. At the A226/A2260 junction, 1.2km from the site the local cycle route changes to become NCN Route 1, however the route characteristics remain the same.
- 2.7 NCN Route 1 is a long-distance cycle route that runs from Kent to Essex passing through central London. In closer proximity to the site, the route provides access to Gravesend to the east and Dartford to the west. Further to the south, NCN Route 1 provides access to NCN Route 177. **Figure**

2.3 overleaf highlights these key cycle routes along with the 5km isochrone associated with each of the key character areas across the site. Full size plans are shown in **Appendix C**.

Figure 2.3: Cycle Routes and 5km Isochrones



Existing Offsite Walking / Cycling Assessment

- 2.8 An audit has been completed to review the existing walking and cycling routes that are not located within the site boundary. Routes within the site boundary have not been included within this assessment as the proposals for this development involve the complete redevelopment of the area and as such an assessment of these routes would not be beneficial or representative of the future site.
- 2.9 It is also noted that The Green Corridors and KCC Active Travel teams are considering / proposing several walking/cycling schemes across the Ebbsfleet / Gravesham area. These schemes include:
- Improvements to the cycle route along Thames Way;
 - A feasibility study looking to improve the Fastrack service and the walking/cycling facilities along Stonebridge Road between Lower Road and Grove Road. This is the section of Grove Road through the proposed site.
 - A feasibility study looking to improve the walking/cycling connections along the A226 between Craylands Land and Lower Road.
 - Improvements to Northfleet High Street
- 2.10 The routes that have been assessed are from the site boundary to the following locations:
- Ebbsfleet International Station
 - Northfleet Railway Station
 - Swanscombe Railway Station
 - Lawn Road Primary School
 - Ebbsfleet Academy
 - Swanscombe Methodist Church
 - Swanscombe Health Centre
- 2.11 Overall, this assessment determined that there are more than adequate walking routes between the site and three local stations. The assessment of these routes is shown in Appendix D of the TAA.

Public Transport

- 2.12 The site has excellent connectivity to the surrounding public transport network and has access to regular bus and rail services within a few minutes' walk of any area within the proposed red line boundary.

Bus Services

- 2.13 There are multiple bus stops located within walking distance of the site, including the Ebbsfleet United Football Ground bus stop located along the A226 directly adjacent to the existing football ground. A second bus stop, Taunton Road is located along the A226 approximately 200m north of the Ebbsfleet United Football Ground. Both bus stops provide raised kerbs and timetables.
- 2.14 Pedestrians can access the Taunton Road bus stop on foot using the pedestrian footways present on both the northern and southern sides of the A226 carriageway. These footways are generally wide and well surfaced, with dropped kerbs and street lighting throughout. Additional protective barriers are in place around the Lower Road junction to provide additional protection to pedestrians.
- 2.15 Those accessing eastbound services from this stop will travel along the northern footway and will need to cross Lower Road which is located between the site and Taunton Road bus stop. This road has no dedicated pedestrian crossing however this is not considered to be a notable concern as Lower Road solely acts as an access to the industrial area to the north and as such has low traffic flows.
- 2.16 In order to access the westbound services, pedestrians will need to cross the road at the pedestrian crossing located immediately to the west of the Grove Road/Stonebridge Road/A226 roundabout. This crossing point has a central reservation and protective metal barriers.
- 2.17 An overview of the bus services servicing these bus stops is presented within **Table 2.1** overleaf.

Table 2.1: Bus Routes and Frequencies

Stop Name	Route Number	Route	Approximate Frequency		
			Weekday	Saturday	Sunday
Ebbsfleet Football Ground Bus Stop	AZ Fastrack	Dartford – Gravesend	5 per day	5 per day	5 per day
Ebbsfleet Football Ground Bus Stop	B Fastrack	Temple Hill – Gravesend	5 per hour	5 per hour	3 per hour
Ebbsfleet Football Ground Bus Stop	34	New Barn – Wilmington	1 per day (School Bus)	No Service	No Service
Ebbsfleet Football Ground Bus Stop	3	Gravesend – Wilmington Grammar School	1 per day (School Bus)	No Service	No Service
Ebbsfleet Football Ground Bus Stop	306	Sevenoaks – Bluewater	1 morning Service	5 evening services	No Service
Ebbsfleet Football Ground Bus Stop	308	Gravesend – Sevenoaks	1 per hour	1.5 per hour	No Service
Taunton Road Bus Stop	480	Dartford – Riverview Park	3 per hour	3 per hour	2 per hour
Taunton Road Bus Stop	490	Dartford – Gravesend	3 per hour	3 per hour	2 per hour

- 2.18 **Table 2.1** highlights the range of bus services available from the site, indicating that the site and its users would be able to travel using buses thus minimising the need to travel using private vehicles.

Rail Services

- 2.19 The closest railway station to the site is Northfleet Rail Station which is located approximately 450m to the southeast of the site. This station can also be reached using the 480 and 490 bus services which stop at the Hive bus stop situated approximately 240m from Northfleet Station on the B2175 High Street. Rail services from Northfleet travel to destinations including London Charing Cross and Luton.
- 2.20 Ebbsfleet International Station is also located in close proximity to the site, approximately 800m to the south of Ebbsfleet United Football Club. Ebbsfleet International Station has provision for approximately 3,000 car parking spaces and approximately 100 cycle parking spaces. London St Pancras can be reached in 20 minutes from Ebbsfleet International.
- 2.21 Northfleet Station benefits from customer help points, CCTV and ramps for train access. Furthermore, staff help is available Monday to Friday 6:10-22:10 via a helpline contact number. There are currently no dedicated cycling routes to the station, with cyclists required to travel on road on the B2175 and Station Road / Railway Street / Hamerton Road.
- 2.22 If improvements to the cycle infrastructure are sought for Northfleet Station by KCC or GBC then this could be achieved through Section 106 contributions as the station is not located within the site boundary. The same would be the case for any improvements to pedestrian or cycle links between the site and Northfleet Station, or any other local amenities.
- 2.23 **Table 2.2** presents the rail services operating at both Northfleet Station and Ebbsfleet International, along with their frequencies.

Table 2.2: Rail Routes and Frequencies

Station	Operator	Route	Approximate Frequency		
			Weekday	Saturday	Sunday
Ebbsfleet International	Southeastern	St Pancras International – Ebbsfleet International – Ramsgate	2 per hour	2 per hour	2 per hour
Ebbsfleet International	Southeastern	St Pancras International – Ebbsfleet International – Maidstone West	3 per day	No Service	No Service
Ebbsfleet International	Southeastern	St Pancras International – Ebbsfleet International – Gravesend	2 per hour	1 per hour	1 per hour
Northfleet Station	Southeastern	St Pancras International – Northfleet – Rainham	2 per hour	2 per hour	2 per hour
Northfleet Station	Southeastern	London Charing Cross – Northfleet – Gravesend	2 per hour	2 per hour	2 per hour
Northfleet Station	Thameslink	Luton – Northfleet – Rainham	2 per hour	2 per hour	2 per hour

- 2.24 Considering the results presented in **Table 2.2**, there are a wide range of rail services available to those using the site. These services operate at a high frequency and provide access to several locations.

Local Highway Network

- 2.25 This section describes the existing highway network relevant to the proposed site.

A226

- 2.26 The A226 has a general east-west alignment travelling between Dartford and Gravesend. The A226 comprises a two-way single carriageway with sections operating at both 30mph and 40mph. Throughout pedestrian footways are present on at least one side of the carriageway along with street lighting. The A226 runs through the site, along this section there is a ghost island right turn bay adjacent to the football ground, along with bus stops, pedestrian footways and street lighting.
- 2.27 To the west of the site the A226 continues for approximately 3km until it reaches the A206 / A226 / B255 roundabout junction. The A226 continues westbound from the roundabout towards Dartford. To the southeast the A226 continues for 3.7km until it reaches the Thames Way/London Road priority junction.

A206

- 2.28 The A206 has a general east west alignment travelling between the A206 / A226 / B255 roundabout and the M25 Junction 1A. Throughout this is a dual carriageway that is subject to a 40mph speed limit. The A206 has a pedestrian footway along at least one side of the carriageway throughout along with an in-carriageway cycle lane for extended sections. To the west the A206 provides access to Junction 1A of the M25, to the east it provides access to the A206 / A226 / B255 roundabout

M25

- 2.29 The M25 is part of the strategic road network and provides an orbital route around London. The M25 also provides access to a number of key national routes including the M1 and M40 and its most immediate point of access is approximately 6.4km or an 11-minute drive time from the site.

A2206

- 2.30 1.1km to the southwest of the site, the A226 also provides a connection to the A2206. The A2206 comprises a two-way single carriageway road with sections operating at 40mph and 50mph. There is a shared cycle/footway travelling along the northern side of the carriageway, street lighting is present throughout. The A2206 provides a strategic link to the A2 corridor further south.

A2

- 2.31 The A2 has an east west alignment and provides a strategic link through Kent to both the east and west extending east to Dover and west beyond Kent into London. The A2 has multilane carriageways operating in both directions. This road operates at the national speed limit. The A2 is accessed and

egressed using the most relevant slip roads, and its most immediate point of access is approximately 2.5km or a 4-minute drive time from the site.

Summary

- 2.32 This section outlines that the proposed site is well located to benefit from public and active travel. A number of PROWs and cycle lanes are present within the vicinity of the site suggesting that the site is easily accessible for both pedestrians and cyclists.
- 2.33 Furthermore, a wide range of both bus and rail services operating at a high frequency are accessible in close proximity to the site, again, suggesting that the site is easily accessible through the use of public transport modes. The site is also located in close proximity to major multilane carriageways that provide further means of access by car or public transport (bus) to the wider area and is therefore considered to address the needs of people with disabilities and reduced mobility in relation to all modes of transport.

3 Baseline Travel Patterns

- 3.1 This section will set out the baseline mode split information for future residents of the proposed development. These will be used as a basis for setting future targets in this FTP.

Mode Share

- 3.2 Within the first six months of occupation of the site, travel surveys will be completed which will accurately identify the travel patterns of residents at the site. These will be carried out in the form of travel survey questionnaires and will identify a resident's main mode of travel to work. The exact nature of the survey will need to be discussed and agreed in advance with the relevant authorities. The baseline data will be a useful guide in the setting of realistic targets for mode shift over the life of the development. Details of the management of the survey are set out in **Sections 5 and 7**.
- 3.3 In the interim, and for the purpose of setting indicative targets as part of this FTP, the modal split has been determined using TRICS and Census data.

Residential Mode Share

- 3.4 The residential mode share for the site has been determined using the TRICS database. The sites selected for the trip generation that is presented within the TA have once again been consulted. However, in order to determine the mode share, only the sites with multimodal surveys have been consulted to determine the residential modal share.
- 3.5 The residential mode share is summarised in **Table 3.1**.

Table 3.1: Residential Modal Share

Mode	Mode Split
Underground, metro, light rail or tram	0%
Train	3%
Bus, minibus, or coach	9%
Taxi	0%
Motorcycle, scooter or moped	0%
Driving a car or van	29%
Passenger in a car or van	32%
Bicycle	2%
On foot	25%
Other method of travel to work	0%
Total	100%

- 3.6 **Table 3.1** indicates that approximately 39% of residents will use sustainable and active modes of transport such as walking, cycling or public transport to travel.

Commercial Mode Share

- 3.7 In order to determine the commercial mode share for the site the 2011 Census dataset (WU03EW) for the MSOA Gravesham 001 has been consulted. This has been used to give an indication of the expected mode split for employees. It should be acknowledged that the mode share presented is likely to change to reflect the baseline travel surveys undertaken once the site is operational. These changes will be discussed with the relevant authorities.
- 3.8 The assumed mode share for the commercial uses across the site are presented overleaf.

Table 3.2: Commercial Modal Share

Mode	Mode Split
Underground, metro, light rail or tram	0%
Train	1%
Bus, minibus, or coach	6%
Taxi	0%
Motorcycle, scooter or moped	2%
Driving a car or van	75%
Passenger in a car or van	5%
Bicycle	3%
On foot	8%
Other method of travel to work	1%
Total	100%

- 3.9 Consulting the results presented within **Table 3.2** it can be concluded that at present the majority of commercial trips are undertaken by car.
- 3.10 The mode shares shown above will be used to derive interim FTP targets. If, after the baseline travel surveys have been undertaken, it is found that the expected mode split is not accurate, the targets will be adjusted to reflect the actual mode split.
- 3.11 The undertaking of the baseline surveys represents the start of the FTP for monitoring purposes and will provide a basis for ratifying and adjusting the targets as set out in the FTP.

4 Objective and Targets

4.1 This section of the report sets out the overarching objectives for the FTP, as well as targets for the short and medium term. It includes indicators through which progress towards meeting the targets will be measured. Further information on monitoring and review of the FTP can be found in **Section 7**.

- **Objectives** are the high-level aims of the FTP. They help to give the Travel Plan direction and provide a clear focus.
- **Targets** are the measurable goals by which progress will be assessed. The FTP sets out targets which will be sought to be achieved within the period covered by this Travel Plan.

Objectives

4.2 The TP's overriding objective is:

To engage with and encourage residents to use more sustainable ways of travelling to/from the site through more effective promotion of active modes. This will minimise the impact of the development on the surrounding highway network.

4.3 The sub-objectives are:

- **Sub-objective 1:** To increase site user awareness of the advantages and availability of sustainable / active modes of transport;
- **Sub-objective 2:** To promote the health and fitness benefits of active travel to all site users; and therefore
- **Sub-objective 3:** To reduce the dependence of site users on travelling by private vehicles.

4.4 These objectives will be achieved by introducing a package of physical and management measures that will facilitate site user travel by sustainable modes.

Targets

4.5 Travel Plan targets are measurable goals by which progress can be assessed. These targets should be reviewed through a programme of monitoring (outlined in **Section 7**) to ensure they remain SMART (Specific, Measurable, Achievable, Realistic and Timed).

4.6 There are two types of targets, namely: 'Action' and 'Aim' targets.

- **Action Targets** are non-quantifiable actions that need to be achieved by a certain time.
- **Aim Targets** are quantifiable and in the case of this FTP relate to the degree of modal shift the plan is seeking to achieve.

Action Targets

- 4.7 The action targets for this FTP in the short term are:
- To appoint a Travel Plan Co-Ordinator within first six months of occupation; and
 - To coordinate baseline travel surveys (see **Section 7**) within six months of the first occupation of the development.
- 4.8 A further action plan has been completed within **Section 8** of this FTP, this provides the key actions required before and within the first six months of occupation of the development.

Aim Targets

- 4.9 The aim targets of this FTP are focused on travel to the site.
- 4.10 The interim baseline travel patterns (as shown in **Table 1**) will be used to set targets until baseline travel surveys can be carried out. These will be carried out within six months of occupation of the development.
- 4.11 For this FTP, targets are set over a five-year period from the time of the initial baseline travel survey. The final target for this FTP should be achieved by the fifth anniversary of the first travel survey. There will be an interim review of the progress towards targets on the third anniversary of the initial baseline travel surveys. If the targets are not met by year five, the lifecycle of this FTP may be extended to a date agreeable with the developer and the relevant authorities. **Table 4.1** shows the target mode split for the development once the TP has been implemented.

Table 4.1: Travel Plan Aim Targets

Target	Indicator	Mode Split		
		Baseline (Year 0)	Interim Review (Year 3)	Final Target (Year 5)
Residential				
Achieve a 10-percentage point increase in sustainable mode share	Travel Surveys	39%	45%	49%
Achieve a 10-percentage point decrease in single occupancy vehicle movements	Travel Surveys	29%	34%	39%
Commercial				
Achieve a 10-percentage point increase in sustainable mode share	Travel Surveys	18%	23%	28%
Achieve a 10-percentage point decrease in single occupancy vehicle movements	Travel Surveys	75%	79%	85%

- 4.12 The targets listed in **Table 4.1** are based on both TRICS and census data and therefore may need to be adjusted once an accurate baseline mode share has been established from the baseline travel surveys. Any adjustments to the targets will be discussed and agreed with the relevant authorities.
- 4.13 Indicators are the elements which will be measured in order to assess progress towards meeting the final target. For the most part this will be the main mode listed by site users in the monitoring surveys conducted annually up to and including year five.
- 4.14 This target will be achieved by introducing a package of physical and management measures that will facilitate travel by sustainable modes. A description of these measures is set out in **Section 5**.
- 4.15 Details on the review and monitoring of these targets are set out in **Section 7**.

5 Travel Plan Strategy

Management

- 5.1 A Travel Plan Co-Ordinator (TPC) will be appointed whose role will be to encourage and foster a sustainable approach to the development where possible. A TPC will be named within the first six months of the occupation of the development.
- 5.2 The role of the TPC will be part-time and will vary throughout the year in response to campaigns / sustainable transport events / monitoring surveys taking place. The TPC will be allocated enough time to effectively manage and implement the TP as agreed.

Funding

- 5.3 The FTP, its accompanying measures and initiatives, and the TPC role will be funded by Northfleet Central 1 Limited, throughout the five-year period. The developer will ensure that the TPC has sufficient funding to effectively implement the FTP.

Travel Plan Coordinator Responsibilities

- 5.4 The TPC will be responsible for the administration of the FTP, the implementation of measures, and for the on-going monitoring and review of the FTP. They will have overall responsibility for ensuring that the measures are successfully delivered on time and to budget.
- 5.5 The TPC will report to the developer, relevant authorities and other involved stakeholders regarding the implementation and progression of the FTP.
- 5.6 The duties of the TPC will therefore include:
- Providing guidance to, and be the main point of contact, for site users and issue travel information;
 - Liaising with site users to inform them of upcoming promotions and to gather feedback on the day-to-day operations of the FTP;
 - Communicating information regarding relevant national and local initiatives related to the promotion of sustainable travel;
 - Undertaking the travel surveys over the five-year period and supply evidence of this to the relevant authorities;
 - Taking responsibility for data collection and review of the FTP;
 - Designing and implementing effective marketing and awareness-raising campaigns to promote the FTP;
 - Liaising with external organisations, e.g. local authorities and retailers;

- Co-ordinating the monitoring programme for the FTP, including target setting and make necessary changes if the targets are not being met; and
- Establishing and maintaining a filing system for recording all correspondence relating to the FTP.

Marketing Strategy

- 5.7 An essential element of the strategy identified in this FTP, and one which largely determines its success, is the promotion of the FTP. In order to promote and increase awareness of the FTP, the following measures will be adopted:
- Display of key FTP information within Information Packs;
 - Arrange Q&A sessions and offer a personalised travel planning service if demand is identified;
 - Promote national travel initiatives and organise events such as organised cycle rides; and
 - The provision of Information Packs.

6 Measures and Initiatives

- 6.1 This section of the FTP outlines the specific physical and management measures to be implemented as part of the FTP. The implementation of these measures includes both 'hard' and 'soft' measures and is considered to be the core of the FTP.
- 6.2 The measures outlined below will be agreed with the relevant authorities as being suitable for the situation at the site. However, this list is not exhaustive and the TPC will be free to investigate other potential initiatives.
- 6.3 An Action Plan is also included in this report, at **Section 8**, which shows the measures / initiatives and a possible timescale for implementation.

Measures

Management and Promotion

- 6.4 A TPC will be appointed to manage the FTP. The developer will be responsible for appointing a member of staff to fulfil this role and will ensure that they have sufficient time and resources to undertake their responsibilities.
- 6.5 The TPC will be responsible for overseeing the implementation of the FTP. The TPC will provide personalised travel planning advice should demand be identified, as well as providing Information Packs.
- 6.6 This Information Pack will contain information regarding:
- Walking and cycling routes;
 - Bus and train station locations and timetable information;
 - Journey Planner tools;
 - Car sharing opportunities;
 - Contact details for the TPC; and
 - Brief overview of the FTP.
- 6.7 The TPC will continuously promote the FTP and its initiatives and will be responsible for investigating new ways for site users to become involved. The TPC will also publicise the on-going progress and successes of the FTP in order to encourage site users to travel sustainably.

Walking

- 6.8 The TPC will be responsible for promoting the benefits of walking to staff of the site. As well as providing information regarding local walking routes within the Information Packs, the TPC will promote public health campaigns such as Change 4 Life (NHS programme) and walking challenges

such as the 10,000 steps a day campaign. These highlight the health benefits associated with active travel.

- 6.9 The TPC will liaise with KCC and GBC to make sure that all footways and pedestrian routes are maintained and well-lit within and around the site.
- 6.10 Consideration will be given to the presence of communal umbrellas within the commercial aspects of the development. Other items may also be considered.
- 6.11 Other measures that may be introduced with the aim of increasing number of people travelling to and from the site on foot may be based around provision of the following facilities and benefits:
- Information on the pedestrian routes in and around the proposed site, relevant maps should be included on notice boards, a website and travel packs.
 - Promotion of a walk to work week
 - Encourage walking as a leisure activity by providing information regarding relevant walking websites.
 - Outline and promote the health benefits of walking

Cycling

- 6.12 Cycle parking will be provided in line with the required KCC cycle parking standards which seeks 1 space per unit for flats/maisonettes. This therefore equates to a total of 3,500 cycle parking spaces across the residential aspect of the development. 709 cycle parking spaces will also be provided across the non-residential aspects of the site, this cycle parking provision will again be in line with KCC cycle parking standards.
- 6.13 The provision will be provided by dedicated cycle stores including e-bike charging points located at each of the residential blocks. Cycle parking will be secure and conveniently located close to building entrances to ensure that it is easily accessible and usable for residents. Cycling parking stores will be well signed, visible and will benefit from a good level of surveillance through natural surveillance or CCTV. Furthermore, long stay spaces will be sheltered and protected from the weather. Showers, lockers and changing facilities will be provided for the non-residential uses at the site.
- 6.14 Furthermore, cycle parking spaces for adaptive bicycles will be provided at the site. In particular these spaces will be larger to accommodate the larger bicycles with a minimum gap between stands of 1.0m. These spaces will be suitably located, including at the end of a row of cycle stands to ensure they are accessible to all. Adaptive cycle spaces will be provided in line with the Kent Design Guide standards which state that 5% of all cycle parking spaces should be designed for use by disabled cyclists.
- 6.15 Short stay spaces will be located across the public realm but in locations that do not obstruct pedestrian movement. All cycle parking spaces will be well maintained to ensure they remain attractive to users and secure.

- 6.16 A number of new cycle routes will be introduced within the site boundary. A mobility hub will also be introduced as part of the proposals, this hub will include cycle hire to enable those who don't wish to own their own bike to be able to cycle at the site. As described previously, information regarding local cycle routes will be provided within Information Packs.
- 6.17 The TPC will also liaise with the relevant authorities to discuss ideas for awareness raising events and initiatives. Participation in national and local events for specific campaigns will also form a central role in raising awareness of travel options such as National Bike Week.
- 6.18 The TPC will investigate cycle training, on either an individual or group basis, depending on the number and ability of participants and availability of trainers. The aim is to make cyclists more confident and comfortable cycling on the road, therefore encouraging them to cycle to / from the site on a regular basis.
- 6.19 The TPC will liaise with local bike shops to investigate the potential for potential discounts or site user benefits. This information will be passed on to site users.
- 6.20 KCC's new cycle loan scheme provides free access to refurbished cycles with the aim of promoting active and sustainable ways to travel to and from work and/or education, which are provided through Cycle Community. For more information contact KentConnected@kent.go.uk.
- 6.21 The development will provide information on local cycle network routes. This information will be provided on maps and made available to site users through the TP notice boards, website and Travel Pack.

Public Transport

- 6.22 Up-to-date timetables and journey planning tools, including route information and service frequencies, will be provided within the Information Packs.
- 6.23 The Fastrack service will be routed through the site, with two stops provided within the site boundary. The TPC will liaise with Fastrack and other commercial services to improve services, negotiate discounts and trial new initiatives, such as bulk ticket purchase.
- 6.24 Encourage participation in national events such as 'In work without my car day'.
- 6.25 In addition, links to the National Rail and Traveline websites as well as enquiry phone numbers will be advertised through all relevant means.

Fastrack Bus Passes

- 6.26 Sustainable Travel Vouchers will be provided to residents of the site, these vouchers can be used by first time residents to cover the cost of Fastrack Bus Tickets in order to increase the number of people using public transport services. A voucher for the value of an Adult Annual Thameside ticket can be provided, totalling £820 for the year.
- 6.27 The Thameside region consists of two distinct regions; Gravesham to the east and Dartford to the west. Considering the sites location between these two areas, it is unlikely that residents will need to

have a full Annual Thameside ticket. As such it is proposed that additional Fastrack bus tickets will be provided. These tickets will provide more travel flexibility for residents of the site:

- Annual Dartford Ticket
- Annual Gravesend Ticket

6.28 **Table 6.1** presents a breakdown of the different costs of each ticket

Table 6.1: Bus Ticket Prices

Bus Ticket Region	Cost
Adult Annual Thameside	£820
Adult Annual Dartford	£620
Adult Annual Gravesend	£690

Mobility Hub

6.29 A mobility hub is proposed to be located at the centre of the proposed site. A mobility hub provides a focal point in an area or sites transport network. Their presence helps to facilitate the seamless integration of different modes of transport, multimodal supportive infrastructure, and placemaking strategies to create a centre of activity. Mobility hubs support local living, low-car lifestyles and the reallocation of space from roads and car parking to housing and public realm, and have the potential to contribute significantly to decarbonising transport. Indicative images of what the mobility hub proposed for the site could look.

6.30 The Mobility Hub proposed for the site could benefit from several the features listed below:

- High-quality bicycle parking, including secure
- Bicycle repair stations
- Bike, e-bike and e-scooter share
- Connected active travel routes
- Cargo bike share
- EV car club
- Demand Responsive transport (DRT) pick up and drop off bays
- EV charging points for car club and DRT
- Secure parcel lockers
- High speed free Wi-Fi

- Real time travel information
- Wayfinding totem signage for onward active travel journeys
- Proximity to a public transport stop
- Appropriate safety infrastructure, primarily good lighting
- Highly accessible for everyone
- Shower facilities

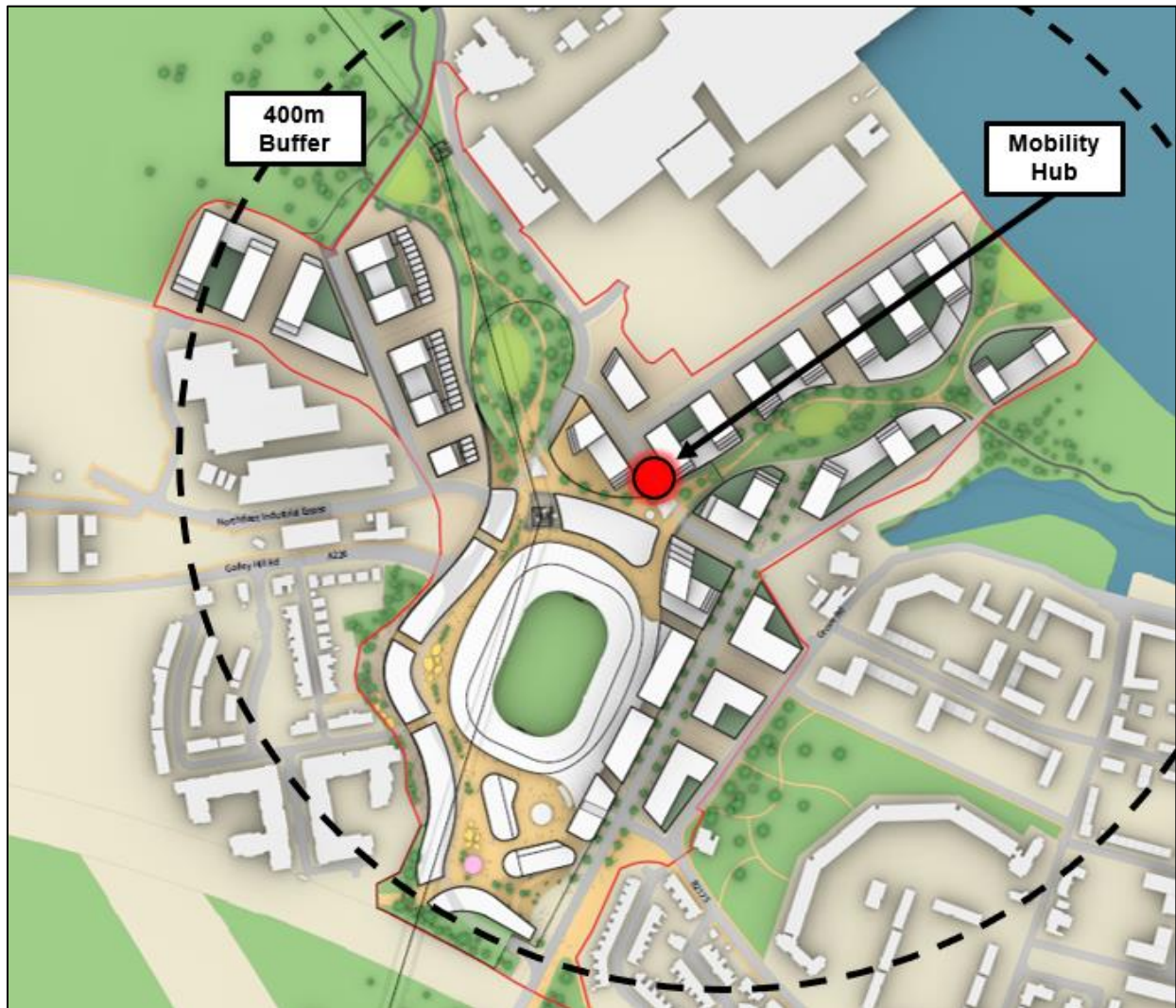
6.31 In addition, several concierge features could be provided:

- Micro-consolidation centre for parcel receipt, including onward delivery by cargo bike,
- ground drone and air drone
- Third Place working hub
- Café
- Travel planning services, including for schools
- Coordination of local walks and cycles
- Management of IT platforms for carsharing and DRT

Car Club

6.32 Car club spaces will also be provided at the proposed site. These spaces will be located at the mobility hub in the centre of the site. The proposed location of the mobility hub at the site is such that it ensures that residents living across the site will be within walking distance of the hub, and the car club spaces located there. **Figure 6.1** shows the 400m distance from the mobility hub, illustrating that all residents at the site would be within a 400m (5 minute walk) of the on site car club spaces.

Figure 6.1: 400m Walking Distance to Car Club Spaces



Other Measures

- 6.33 Travel awareness measures should play a key part of the FTP, for example:
- Car-free days to be promoted;
 - Promote the use of a car sharing database such as Liftshare;
 - Personalised travel information if the demand is identified;
 - Promote participation in National Bike Week events; and
 - Promoting the health and cost benefits of using sustainable transport.

7 Monitoring and Review

- 7.1 The FTP is part of a continuous process for improvement, requiring monitoring review and revision to ensure it remains relevant. This section sets out the proposals for monitoring and review of the FTP.

Monitoring

- 7.2 All monitoring will follow the most up to date DfT and GBC best practice guidance and will be the responsibility of the TPC.
- 7.3 The monitoring programme will begin with the initial baseline travel survey, to be undertaken within six months of occupation of the development.
- 7.4 It is important to note that the development will be built in phases over a nine year period, with the first occupation taking place at the end of year 5. The FTP will monitor the site from first occupation and then continue monitoring every six months until at least five years after full occupation.
- 7.5 The interim (Year 3) targets set out in this FTP may be revised on the results of the initial baseline travel survey if the modal split is found to be considerably different from the census data modal split. The targets will be discussed with the relevant authorities before being finalised.
- 7.6 An example travel survey which could be used for the site is presented at **Appendix D**.
- 7.7 If the travel targets are not being met then the measures implemented at the site would be reviewed and adjusted as necessary. Revised measures would be able to utilise travel information to inform of the most effective measures to support at the site.
- 7.8 If sustainable travel targets have not been met by the end of the FTP's five-year lifespan, monitoring could be extended.
- 7.9 Additional monitoring of the following is also useful to judge whether the implementation or proportion of certain measures needs to be modified. The following factors should be monitored on a constant basis:
- Comments received relating to the operation and implications of the FTP; and
 - Information gathered through the monitoring process will be recorded for input to the annual review (outlined below). The information will be made available to the relevant authorities.

Transport Review Group

- 7.10 Furthermore, a Transport Review Group, which would include the Travel Plan Co-ordinator would be established. This group would incorporate key stakeholders and would be responsible for reviewing and reporting on travel behaviour at the site and deciding the best course of action to ensure that the travel targets are achieved.

Reporting

- 7.11 An FTP review will be undertaken by the TPC after the first full occupation survey, and the subsequent surveys after 3 and 5 years of full occupation to assess the progress of the FTP. This will outline the results of the survey, measures that have been implemented and any changes to targets and measures as a result of the survey data.
- 7.12 The report will also incorporate the results of monitoring throughout the preceding period. The report will be issued to the relevant authorities within three months of completion of the survey. Any revisions to targets or measures will be agreed with the relevant authorities.

8 Action Plan

- 8.1 The Action Plan outlined in **Table 3** overleaf sets out the measures included within the FTP that are directed at influencing travel.

Table 3: Action Plan for Travel Plan Measures

Measures	Notes	Timescale	Monitoring Method	Responsibility
General				
Appointment of Travel Plan Coordinator	Part time role	Within six months of the occupation of development	N/A	Developer
Information Packs	To be provided to all site users	Upon occupation	N/A	Developer
Appointment of Transport Review Group	Comprises TPC and key stakeholders	Within six months of the occupation of development	N/A	Developer
Cycling				
Provision of cycle parking	Provision to be in accordance with KCC standards	As part of construction	N/A	Developer
Provide cycle route maps and other information relating to cycle facilities	Site Users to be provided with relevant information	Ongoing	Monitor uptake through travel surveys	Estate Management Company
Promote available cycle training	Making cycling more accessible	Ongoing	TPC to monitor uptake through travel surveys	Estate Management Company
Walking				
Health benefits of walking to be promoted (10,000 Steps a Day)	Promoted in conjunction with the organisation of social walks and walk to work days	Spring and Summer (annually)	Monitor uptake through travel surveys	Occupiers/ Tenant Bodies and Estate Management Company

Information related to safe walking routes	Site Users to be provided with relevant information	Ongoing	Monitor uptake through travel surveys	Occupiers/ Tenant Bodies and Estate Management Company
Public Transport				
Journey planner information to be provided	Site users to be provided with relevant information, the Fastrack service will be routed through the site.	Ongoing	N/A	Occupiers/ Tenant Bodies and Estate Management Company
Other				
Mobility Hub	A mobility hub will be provided within the site that will incorporate a number of facilities including a bus stop for the Fastrack service.	As part of construction	N/A	Developer
Promote initiatives to encourage sustainable travel such as commuter challenges and car-free days	Investigate local/national and regional options	Ongoing	TPC to monitor	Occupiers/ Tenant Bodies and Estate Management Company

Appendix A