

Greater Dublin Drainage Project Addendum

Environmental Impact Assessment Report Addendum:
Volume 3A Part B of 6

Appendix A13.4 Junction 10 Outputs

Uisce Éireann

October 2023

Junctions 10
ARCADY 10 - Roundabout Module
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Filename: Import of Junction 1 AM.j10
 Path: Wserver4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction
 Report generation date: 09/03/2023 12:17:06

- »2022 Base Year , AM
- »Phase 5 2027 No construction , AM
- »Phase 5 2027 With construction , AM

Summary of junction performance

AM					
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
2022 Base Year					
Arm A	D1	0.2	4.36	0.16	A
Arm B		0.4	4.06	0.30	A
Arm C		0.3	2.13	0.21	A
Arm D		0.1	2.56	0.06	A
Phase 5 2027 No construction					
Arm A	D2	0.3	4.66	0.21	A
Arm B		0.6	4.62	0.36	A
Arm C		0.4	2.31	0.27	A
Arm D		0.1	2.73	0.08	A
Phase 5 2027 With construction					
Arm A	D3	0.3	5.17	0.22	A
Arm B		0.6	4.69	0.36	A
Arm C		0.4	2.31	0.27	A
Arm D		0.1	2.73	0.08	A

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	Junction2
Location	Clenchagh
Site number	2
Date	05/07/2018
Version	
Status	
Identifier	
Client	Irish Water
Job number	7555
Enumerator	TOBIN/Walrus Rooney
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	Veh.	Veh.	per/hour	s	-Min	per/Min

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queuing 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	35.00	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	2022 Base Year	AM	ONE HOUR	08:15	09:45	15	✓
D2	Phase 5 2027 No construction	AM	ONE HOUR	08:15	09:45	15	✓
D3	Phase 5 2027 With construction	AM	ONE HOUR	08:15	09:45	15	✓

Analysis Set Details

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

2022 Base Year , 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
†	untitled	Standard Roundabout		A, B, C, D	3.15	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.15	A

Arms

Arms

Arm	Name	Description	No give-way line
A	Patrol Station		
B	Clonsough Rd (N)		
C	Clonsough Rd (S)		
D	Hotel Access		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	F - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A	4.50	4.60	8.6	12.6	57.0	85.0		
B	4.00	5.60	10.4	11.2	57.0	49.0		
C	3.20	5.00	9.3	16.7	57.0	55.0		
D	7.10	7.60	9.8	16.1	57.0	77.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.448	1026
B	0.492	1400
C	0.573	2401
D	0.556	1682

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 Base Year	AM	ONE HOUR	08:15	09:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	142	100.000
B		ONE HOUR	✓	348	100.000
C		ONE HOUR	✓	416	100.000
D		ONE HOUR	✓	80	100.000

Origin-Destination Data

Demand (Veh/hr)

	From	To			
		A	B	C	D
	A	0	19	116	7
	B	22	2	306	18
	C	114	177	8	120
	D	9	13	50	0

Vehicle Mix

Heavy Vehicle Percentages

	From	To			
		A	B	C	D
	A	0	8	13	0
	B	0	100	1	0
	C	17	5	27	10
	D	14	14	10	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.18	4.38	0.2	A	130	195
B	0.30	4.06	0.4	A	319	479
C	0.21	2.13	0.3	A	361	572
D	0.05	2.55	0.1	A	73	110

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	197	27	191	1017	0.185	196	109	0.0	0.1	3.953	A
B	282	55	139	1304	0.291	281	158	0.0	0.3	3.447	A
C	312	78	37	2159	0.145	312	364	0.0	0.2	1.948	A
D	89	15	240	1582	0.056	60	109	0.0	0.0	2.397	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	128	32	229	1001	0.128	128	130	0.1	0.1	4.123	A
B	313	78	167	1289	0.243	313	190	0.3	0.3	3.686	A
C	374	93	44	2155	0.173	374	435	0.2	0.2	2.020	A
D	72	18	287	1538	0.047	72	130	0.0	0.0	2.455	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	156	39	260	378	0.160	156	160	0.1	0.2	4.377	A
B	383	98	204	1299	0.302	383	232	0.3	0.4	4.080	A
C	458	114	54	2149	0.213	457	533	0.2	0.3	2.128	A
D	88	22	352	1000	0.059	88	160	0.0	0.1	2.549	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	156	39	260	378	0.160	156	160	0.2	0.2	4.375	A
B	383	98	204	1299	0.302	383	232	0.4	0.4	4.084	A
C	458	114	54	2149	0.213	458	534	0.3	0.3	2.128	A
D	88	22	352	1000	0.059	88	160	0.1	0.1	2.549	A

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	128	32	229	1000	0.128	128	130	0.2	0.1	4.127	A
B	313	78	167	1289	0.243	313	190	0.4	0.3	3.688	A
C	374	93	44	2155	0.173	374	435	0.3	0.2	2.022	A
D	72	18	288	1538	0.047	72	130	0.1	0.0	2.458	A

09:30 - 09:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	107	27	192	1017	0.106	107	109	0.1	0.1	3.958	A
B	262	65	140	1304	0.201	262	159	0.3	0.3	3.458	A
C	313	78	37	2159	0.146	313	365	0.2	0.2	1.891	A
D	80	15	241	1591	0.050	80	105	0.0	0.0	2.390	A

Phase 5 2027 No construction , 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	united	Standard Roundabout		A, B, C, D	3.50	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/Unknown	3.50	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	Phase 5 2027 No construction	AM	ONE HOUR	08:15	09:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	178	100.000
B		ONE HOUR	✓	427	100.000
C		ONE HOUR	✓	511	100.000
D		ONE HOUR	✓	109	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	24	145	9
	B	27	0	378	22
	C	142	220	0	149
	D	11	16	73	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	9	15	0
	B	0	100	1	0
	C	20	6	31	11
	D	16	17	12	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.21	4.98	0.3	A	183	245
B	0.38	4.82	0.8	A	352	568
C	0.27	2.51	0.4	A	488	703
D	0.08	2.73	0.1	A	92	138

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	134	34	232	984	0.136	133	135	0.0	0.2	4.232	A
B	321	90	170	1293	0.248	320	195	0.0	0.3	3.594	A
C	385	98	42	2130	0.181	384	447	0.0	0.2	2.080	A
D	75	19	292	1503	0.050	75	135	0.0	0.1	2.522	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	180	40	278	984	0.180	180	152	0.2	0.2	4.475	A
B	384	98	204	1275	0.301	383	234	0.3	0.4	4.037	A
C	488	115	52	2125	0.218	488	535	0.2	0.3	2.181	A
D	90	23	350	1471	0.061	90	162	0.1	0.1	2.896	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	190	49	340	957	0.205	190	198	0.2	0.3	4.653	A
B	470	118	250	1250	0.378	469	286	0.4	0.6	4.811	A
C	583	141	64	2118	0.268	582	655	0.3	0.4	2.314	A
D	110	28	428	1428	0.077	110	198	0.1	0.1	2.730	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	196	49	340	957	0.205	196	198	0.3	0.3	4.655	A
B	470	118	250	1248	0.375	470	287	0.6	0.6	4.819	A
C	583	141	64	2118	0.268	583	650	0.4	0.4	2.314	A
D	110	28	428	1428	0.077	110	198	0.1	0.1	2.731	A

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	160	40	278	904	0.160	160	162	0.3	0.2	4.430	A
B	384	96	204	1270	0.901	380	234	0.6	0.4	4.047	A
C	458	115	52	2120	0.215	460	517	0.4	0.3	2.764	A
D	90	23	380	1471	0.061	90	162	0.1	0.1	2.626	A

09:30 - 09:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	134	34	233	883	0.130	134	130	0.2	0.2	4.242	A
B	321	80	171	1282	0.249	322	190	0.4	0.3	3.710	A
C	385	96	44	2130	0.181	385	448	0.3	0.2	2.054	A
D	75	19	293	1502	0.050	75	130	0.1	0.1	2.523	A

Phase 5 2027 With construction, 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, D	3.58	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.58	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	Phase 5 2027 With construction	AM	ONE HOUR	08:15	09:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	178	100.000
B		ONE HOUR	✓	433	100.000
C		ONE HOUR	✓	511	100.000
D		ONE HOUR	✓	100	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	24	145	9
	B	27	0	384	22
	C	142	220	0	149
	D	11	16	73	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	9	22	0
	B	0	100	1	0
	C	20	6	31	11
	D	16	17	12	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.22	5.17	0.3	A	153	245
B	0.38	4.89	0.8	A	357	598
C	0.27	2.91	0.4	A	459	703
D	0.08	2.73	0.1	A	92	138

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	134	34	232	938	0.143	133	135	0.0	0.2	4.478	A
B	325	91	179	1290	0.253	325	195	0.0	0.3	3.725	A
C	385	98	42	2130	0.181	384	451	0.0	0.2	2.080	A
D	75	19	292	1593	0.050	75	135	0.0	0.1	2.522	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	160	40	278	918	0.174	160	162	0.2	0.2	4.747	A
B	389	97	204	1270	0.308	389	234	0.3	0.4	4.082	A
C	459	115	52	2125	0.218	459	341	0.2	0.3	2.181	A
D	90	23	358	1471	0.061	90	182	0.1	0.1	2.698	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	198	49	340	890	0.220	198	198	0.2	0.3	5.183	A
B	477	115	250	1244	0.383	479	288	0.4	0.8	4.989	A
C	563	141	64	2118	0.266	562	662	0.3	0.4	2.314	A
D	110	28	428	1428	0.077	110	198	0.1	0.1	2.730	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	198	49	340	890	0.220	198	198	0.3	0.3	5.188	A
B	477	119	250	1244	0.383	477	287	0.6	0.6	4.092	A
C	563	141	64	2118	0.266	563	663	0.4	0.4	2.314	A
D	110	28	428	1428	0.077	110	198	0.1	0.1	2.731	A

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	100	40	278	818	0.174	100	102	0.3	0.2	4.753	A
B	388	97	204	1270	0.300	390	234	0.0	0.4	4.093	A
C	458	116	52	2125	0.216	460	542	0.4	0.3	2.164	A
D	90	23	350	1471	0.061	90	162	0.1	0.1	2.696	A

09:30 - 09:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	134	34	233	930	0.143	134	130	0.2	0.2	4.488	A
B	325	81	171	1269	0.253	325	190	0.4	0.3	3.742	A
C	385	96	44	2130	0.181	385	454	0.3	0.2	2.063	A
D	75	19	293	1502	0.050	75	138	0.1	0.1	2.526	A

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Report generation date: 09/03/2023 12:17:50

»2022 Base Year , PM

»Phase 5 2027 No construction, PM

»Phase 5 2027 With construction, PM

Summary of junction performance

PM					
Set ID	Queue (Veh)	Delay (s)	RFG	LOS	
2022 Base Year					
Arm A	D1	0.3	5.26	0.24	A
Arm B		0.5	4.24	0.32	A
Arm C		0.0	2.21	0.32	A
Arm D		0.0	2.61	0.04	A
Phase 5 2027 No construction					
Arm A	D2	0.4	5.86	0.28	A
Arm B		0.5	4.45	0.35	A
Arm C		0.0	2.38	0.34	A
Arm D		0.1	2.08	0.05	A
Phase 5 2027 With construction					
Arm A	D3	0.4	5.86	0.28	A
Arm B		0.7	4.57	0.41	A
Arm C		0.5	2.36	0.34	A
Arm D		0.1	2.08	0.05	A

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

09/03/2023

File summary

File Description

Title	Junction2
Location	Clenchagh
Site number	2
Date	05/07/2018
Version	
Status	
Identifier	
Client	Irish Water
Job number	7555
Enumerator	TOBIN/Walrus Rooney
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	Veh	Veh	perhour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queuing 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	35.00	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	2022 Base Year	PM	ONE HOUR	17:00	18:30	15	✓
D2	Phase 5 2027 No construction	PM	ONE HOUR	17:00	18:30	15	✓
D3	Phase 5 2027 With construction	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

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

2022 Base Year , 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
†	untitled	Standard Roundabout		A, B, C, D	3.35	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.35	A

Arms

Arms

Arm	Name	Description	No give-way line
A	Patrol Station		
B	Clonsough Rd (N)		
C	Clonsough Rd (S)		
D	Hotel Access		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	F - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A	4.50	4.60	8.6	12.8	57.0	85.0		
B	4.00	5.60	10.4	11.2	57.0	49.0		
C	3.20	5.00	9.3	18.7	57.0	55.0		
D	7.10	7.60	9.8	10.1	57.0	77.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.448	1026
B	0.492	1400
C	0.073	2401
D	0.056	1682

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 Base Year	PM	ONE HOUR	17:00	18:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	201	100.000
B		ONE HOUR	✓	303	100.000
C		ONE HOUR	✓	607	100.000
D		ONE HOUR	✓	59	100.000

Origin-Destination Data

Demand (Veh/hr)

	From	To			
		A	B	C	D
	A	0	51	141	9
	B	29	0	320	14
	C	160	421	9	67
	D	11	6	43	0

Vehicle Mix

Heavy Vehicle Percentages

	From	To			
		A	B	C	D
	A	0	0	13	0
	B	7	0	2	0
	C	8	1	33	3
	D	0	0	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.24	5.28	0.3	A	164	277
B	0.32	4.24	0.5	A	333	500
C	0.32	2.31	0.5	A	603	904
D	0.04	2.01	0.0	A	54	81

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	151	38	359	670	0.180	151	150	0.0	0.2	4.352	A
B	272	58	151	1267	0.212	272	358	0.0	0.3	3.544	A
C	495	124	39	2297	0.215	494	385	0.0	0.3	1.995	A
D	44	11	465	1988	0.028	44	65	0.0	0.0	2.383	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	181	45	430	345	0.191	180	180	0.2	0.2	4.704	A
B	328	82	181	1271	0.257	328	428	0.3	0.3	3.810	A
C	591	148	47	2291	0.258	590	481	0.5	0.3	2.118	A
D	53	13	558	1518	0.035	53	81	0.0	0.0	2.455	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	221	55	528	365	0.244	221	220	0.2	0.3	5.250	A
B	400	100	222	1248	0.320	399	325	0.5	0.5	4.232	A
C	723	181	57	2284	0.317	723	594	0.3	0.5	2.300	A
D	65	16	681	1440	0.040	65	98	0.0	0.0	2.000	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	221	55	528	365	0.245	221	220	0.3	0.3	5.284	A
B	400	100	222	1248	0.320	400	325	0.5	0.5	4.238	A
C	723	181	57	2284	0.317	723	600	0.5	0.5	2.300	A
D	65	16	682	1440	0.040	65	98	0.0	0.0	2.000	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	181	45	430	345	0.191	181	180	0.3	0.2	4.711	A
B	328	82	182	1271	0.267	327	428	0.5	0.3	3.814	A
C	591	148	47	2291	0.258	591	452	0.5	0.3	2.117	A
D	53	13	557	1518	0.035	53	81	0.0	0.0	2.462	A

18:15 - 18:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	181	38	380	370	0.100	182	151	0.2	0.2	4.374	A
B	272	68	152	1287	0.212	274	358	0.3	0.3	3.550	A
C	495	124	39	2297	0.210	490	387	0.3	0.3	1.896	A
D	44	11	488	1557	0.028	44	66	0.0	0.0	2.388	A

Phase 5 2027 No construction, 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	united	Standard Roundabout		A, B, C, D	3.54	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/Unknown	3.54	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	Phase 5 2027 No construction	PM	ONE HOUR	17:00	18:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	219	100.000
B		ONE HOUR	✓	381	100.000
C		ONE HOUR	✓	701	100.000
D		ONE HOUR	✓	63	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	50	103	10
	B	21	0	345	15
	C	172	455	0	72
	D	12	5	45	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	16	0
	B	5	0	3	0
	C	9	1	37	4
	D	0	0	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.28	5.88	0.4	A	201	301
B	0.35	4.49	0.5	A	358	538
C	0.34	2.38	0.5	A	843	965
D	0.05	2.88	0.1	A	58	87

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	165	41	380	949	0.174	164	162	0.0	0.2	4.590	A
B	294	74	157	1271	0.232	293	287	0.0	0.3	3.675	A
C	528	132	42	2298	0.230	527	498	0.0	0.3	2.034	A
D	47	12	495	1540	0.031	47	74	0.0	0.0	2.411	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	197	49	455	818	0.214	197	194	0.2	0.3	4.884	A
B	352	98	188	1255	0.280	351	464	0.3	0.4	3.982	A
C	830	158	50	2290	0.275	830	489	0.3	0.4	2.188	A
D	57	14	552	1488	0.038	57	85	0.5	5.5	2.518	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	241	60	557	877	0.275	241	238	0.3	0.4	5.654	A
B	431	108	250	1252	0.348	430	588	0.4	0.5	4.488	A
C	772	193	62	2283	0.338	771	598	0.4	0.5	2.382	A
D	59	17	725	1412	0.048	59	108	0.0	0.1	2.681	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	241	60	557	877	0.275	241	238	0.4	0.4	5.880	A
B	431	108	250	1252	0.348	430	588	0.5	0.5	4.482	A
C	772	193	62	2282	0.338	772	589	0.5	0.5	2.382	A
D	59	17	725	1411	0.048	59	108	0.1	0.1	2.681	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	197	49	405	918	0.214	197	194	0.4	0.3	4.994	A
B	302	88	188	1264	0.280	302	404	0.6	0.4	3.994	A
C	630	168	50	2290	0.275	631	490	0.6	0.4	2.171	A
D	67	14	503	1480	0.038	67	88	0.1	0.0	2.618	A

18:15 - 18:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	165	41	381	949	0.174	165	163	0.3	0.2	4.090	A
B	294	74	168	1271	0.232	295	388	0.4	0.3	3.096	A
C	628	132	42	2385	0.230	628	410	0.4	0.3	2.038	A
D	47	12	498	1533	0.051	47	74	0.0	0.0	2.414	A

Phase 5 2027 With construction, 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, D	3.74	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.74	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	Phase 5 2027 With construction	PM	ONE HOUR	17:30	18:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	219	100.000
B		ONE HOUR	✓	402	100.000
C		ONE HOUR	✓	701	100.000
D		ONE HOUR	✓	63	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	56	103	10
	B	21	0	416	15
	C	173	400	0	72
	D	12	6	48	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	10	0
	B	8	0	3	0
	C	9	1	37	4
	D	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.28	5.88	0.4	A	201	301
B	0.41	4.57	0.7	A	424	638
C	0.34	2.38	0.5	A	843	985
D	0.05	2.68	0.1	A	58	87

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	165	41	380	949	0.174	164	162	0.0	0.2	4.090	A
B	248	57	187	1272	0.273	246	237	0.0	0.4	3.893	A
C	628	132	42	2298	0.230	627	481	0.0	0.3	2.034	A
D	47	12	495	1540	0.031	47	74	0.0	0.0	2.411	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	197	49	455	910	0.214	197	194	0.2	0.3	4.894	A
B	415	104	188	1255	0.331	415	484	0.4	0.5	4.283	A
C	830	158	50	2290	0.275	830	552	0.3	0.4	2.188	A
D	57	14	592	1488	0.038	57	85	0.0	0.0	2.518	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	241	60	557	877	0.275	241	238	0.3	0.4	5.654	A
B	528	127	230	1232	0.413	528	588	0.5	0.7	4.983	A
C	772	193	62	2283	0.338	771	875	0.4	0.5	2.382	A
D	69	17	726	1412	0.049	69	108	0.0	0.1	2.681	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	241	60	557	877	0.275	241	238	0.4	0.4	5.992	A
B	505	127	230	1232	0.413	505	588	0.7	0.7	4.974	A
C	772	193	62	2282	0.338	772	877	0.5	0.5	2.382	A
D	69	17	726	1411	0.049	69	108	0.1	0.1	2.681	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	197	49	455	818	0.214	197	194	0.4	0.3	4.994	A
B	415	104	188	1255	0.331	415	404	0.7	0.5	4.290	A
C	530	158	50	2290	0.235	531	554	0.5	0.4	2.169	A
D	57	14	593	1495	0.038	57	58	0.1	0.0	2.519	A

18:15 - 18:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	165	41	351	849	0.174	165	163	0.3	0.2	4.590	A
B	348	97	158	1271	0.274	348	388	0.5	0.4	3.893	A
C	528	132	42	2295	0.230	528	454	0.4	0.3	2.035	A
D	47	12	490	1539	0.031	47	74	0.0	0.0	2.412	A

Junctions 10
ARCADY 10 - Roundabout Module
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Filename: Import of Junction 2 AM.j10

Path: Wserver4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction

Report generation date: 09/03/2023 12:21:59

»2022 Base Year , AM

»Phase 5 2027 No Construction, AM

»Phase 5 2027 With Construction, AM

Summary of junction performance

AM					
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
2022 Base Year					
Arm A	D1	1.3	8.72	0.55	A
Arm B		14.7	90.50	3.95	D
Arm C		0.0	0.00	0.00	A
Arm D		92.1	119.74	1.07	F
Phase 5 2027 No Construction					
Arm A	D2	3.2	12.95	0.69	B
Arm B		229.3	429.57	1.23	F
Arm C		0.0	0.00	0.00	A
Arm D		513.1	770.14	1.34	F
Phase 5 2027 With Construction					
Arm A	D3	2.4	14.22	0.71	B
Arm B		238.4	445.56	1.23	F
Arm C		0.0	0.00	0.00	A
Arm D		509.3	841.70	1.39	F

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	Junction2
Location	Clenchagh
Site number	2
Date	05/07/2018
Version	
Status	
Identifier	
Client	Irish Water
Job number	7555
Enumerator	TOBIN/Walrus Rooney
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	Veh.	Veh.	per/hour	s	-Min	per/Min

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queuing 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	35.00	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	2022 Base Year	AM	ONE HOUR	07:15	08:45	15	✓
D2	Phase 5 2027 No Construction	AM	ONE HOUR	07:15	08:45	15	✓
D3	Phase 5 2027 With Construction	AM	ONE HOUR	07:15	08:45	15	✓

Analysis Set Details

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

2022 Base Year , 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
†	untitled	Standard Roundabout		A, B, C, D	73.74	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	73.74	F

Arms

Arms

Arm	Name	Description	No give-way line
A	Cloonslough Road		
B	R139 East		
C	Access Road		
D	R139 West		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	F - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A	8.00	8.10	30.0	38.0	88.0	35.0		
B	5.90	8.60	16.4	23.0	88.0	39.0		
C	4.20	5.90	9.0	14.0	88.0	50.0		
D	6.70	9.20	18.0	55.0	80.0	38.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.851	2486
B	0.810	2027
C	0.458	1433
D	0.868	2570

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 Base Year	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	400	100.000
B		ONE HOUR	✓	1083	100.000
C		ONE HOUR	✓	1	100.000
D		ONE HOUR	✓	2241	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	202	0	184
	B	130	10	0	1037
	C	0	0	0	1
	D	184	2074	0	3

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	0	0
	B	0	12	0	7
	C	0	0	0	0
	D	11	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.55	8.72	1.2	A	418	628
B	0.95	99.50	14.7	D	1544	2517
C	0.00	0.00	0.0	A	0	0
D	1.07	118.74	93.1	F	2090	3085

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	342	85	1505	1292	0.265	342	220	0.0	0.4	3.783	A
B	1267	317	148	1890	0.537	1265	1760	0.0	1.7	4.885	A
C	0	0	1406	745	0.000	0	0	0.0	0.0	0.000	A
D	1987	422	105	2343	0.720	1877	1299	0.0	2.5	5.328	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	410	102	1859	1997	0.374	409	263	0.4	0.8	8.223	A
B	1513	378	177	1972	0.787	1503	2101	1.7	3.2	7.642	A
C	0	0	1894	816	0.000	0	0	0.0	0.0	0.000	A
D	2015	504	131	2329	0.895	2001	1555	2.5	5.5	10.584	B

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	502	128	2132	928	0.541	500	507	0.8	1.2	8.391	A
B	1853	483	216	1948	0.951	1816	2416	3.2	12.6	22.584	D
C	0	0	2031	440	0.000	0	0	0.0	0.0	0.000	A
D	2407	617	107	2311	1.008	2282	1874	5.9	62.3	84.109	F

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	502	128	2153	514	0.545	502	511	1.2	1.2	8.720	A
B	1853	483	217	1948	0.951	1844	2438	12.6	14.7	30.502	D
C	0	0	2001	428	0.000	0	0	0.0	0.0	0.000	A
D	2467	617	180	2309	1.008	2304	1901	62.3	89.1	119.742	F

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	410	102	2148	818	0.440	411	289	1.2	0.8	7.128	A
B	1513	378	178	1971	0.787	1528	2381	14.7	3.4	9.010	A
C	0	0	1735	884	0.000	0	0	0.0	0.0	0.000	A
D	2015	504	138	2328	0.896	2301	1801	83.1	21.5	82.959	F

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	343	88	1846	1241	0.277	340	227	0.8	0.4	4.024	A
B	1267	317	149	1889	0.537	1274	1842	3.4	1.8	5.074	A
C	0	0	1423	738	0.000	0	0	0.0	0.0	0.000	A
D	1887	422	110	2342	0.720	1763	1312	21.5	2.6	7.033	A

Phase 5 2027 No Construction, 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	united	Standard Roundabout		A, B, C, D	501.00	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	501.00	F

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	Phase 5 2027 No Construction	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	508	100.000
B		ONE HOUR	✓	2088	100.000
C		ONE HOUR	✓	1	100.000
D		ONE HOUR	✓	2783	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	320	0	242
	B	162	20	0	1900
	C	0	0	0	1
	D	200	2574	0	4

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	7	0	11
	B	7	14	0	9
	C	0	0	0	0
	D	13	7	0	9

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.89	12.96	2.2	B	521	762
B	1.22	428.37	229.3	F	1916	2674
C	0.00	0.00	0.0	A	0	0
D	1.34	770.14	513.1	F	2554	3531

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	428	107	1924	1096	0.413	428	272	0.0	0.7	8.851	A
B	1472	393	184	1901	0.814	1556	2155	0.0	4.1	9.216	A
C	0	0	1739	688	0.000	0	0	0.0	0.0	0.000	A
D	2095	524	136	2301	0.910	2081	1604	0.0	8.8	13.475	B

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	511	129	2118	912	0.560	608	308	0.7	1.2	8.875	A
B	1877	469	220	1909	0.952	1922	2407	4.1	19.0	30.298	D
C	0	0	2041	417	0.000	0	0	0.0	0.0	0.000	A
D	2502	625	159	2268	1.054	2286	1823	8.8	67.1	62.018	F

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	625	158	2132	903	0.693	622	314	1.2	2.2	12.835	B
B	2296	575	264	1879	1.224	1875	2488	19.0	129.3	143.124	F
C	0	0	2143	366	0.000	0	0	0.0	0.0	0.000	A
D	3004	760	161	2283	1.342	2282	1980	67.1	202.0	204.104	F

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	625	158	2132	903	0.693	625	314	2.2	2.2	12.948	B
B	2296	575	270	1878	1.224	1877	2488	123.9	229.3	341.541	F
C	0	0	2147	364	0.000	0	0	0.0	0.0	0.000	A
D	3054	760	154	2283	1.342	2283	1983	262.0	458.0	571.091	F

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	511	128	2131	908	0.505	514	315	2.2	1.3	9.331	A
B	1877	408	222	1907	0.884	1889	2423	229.3	229.3	426.907	F
C	0	0	2121	377	0.000	0	0	0.0	0.0	0.000	A
D	2502	525	186	2281	1.097	2281	1866	469.0	513.1	769.829	F

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	428	107	2125	907	0.472	429	317	1.3	0.9	7.509	A
B	1872	393	196	1930	0.815	1921	2270	223.8	135.2	339.479	F
C	0	0	2107	365	0.000	0	0	0.0	0.0	0.000	A
D	2096	524	167	2299	0.515	2275	1940	513.1	480.0	779.137	F

Phase 5 2027 With Construction, 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, D	000.75	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	000.75	F

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	Phase 5 2027 With Construction	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	574	100.000
B		ONE HOUR	✓	2090	100.000
C		ONE HOUR	✓	1	100.000
D		ONE HOUR	✓	2879	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	320	0	248
	B	162	20	0	1908
	C	0	0	0	1
	D	305	2670	0	4

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	7	0	15
	B	7	14	0	9
	C	0	0	0	0
	D	13	7	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.71	14.22	2.4	B	527	790
B	1.23	445.96	238.4	F	1918	2877
C	0.00	0.00	0.0	A	0	0
D	1.39	941.70	509.3	F	2042	3503

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	432	108	1995	982	0.440	429	272	0.0	0.8	8.476	A
B	1572	393	198	1924	0.818	1557	2225	0.0	4.2	9.402	A
C	0	0	1745	551	0.000	0	0	0.0	0.0	0.000	A
D	2187	542	136	2302	0.942	2121	1809	0.0	11.7	18.914	C

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	516	128	2132	889	0.590	514	303	0.8	1.4	9.635	A
B	1879	470	225	1900	0.959	1819	2420	4.2	19.1	31.600	D
C	0	0	2044	412	0.000	0	0	0.0	0.0	0.000	A
D	2588	647	158	2298	1.132	2278	1888	11.7	85.7	87.604	F

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	532	158	2139	884	0.715	528	307	1.4	2.4	13.604	D
B	2901	575	274	1889	1.231	1888	2492	15.1	129.0	148.717	F
C	0	0	2140	383	0.000	0	0	0.0	0.0	0.000	A
D	3170	792	162	2284	1.388	2283	1978	88.7	311.3	319.781	F

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	532	158	2139	884	0.715	532	307	2.4	2.4	14.215	B
B	2901	575	276	1878	1.232	1857	2494	138.0	230.4	303.935	F
C	0	0	2143	381	0.000	0	0	0.0	0.0	0.000	A
D	3170	792	163	2284	1.388	2284	1981	211.3	532.8	658.161	F

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	510	129	2138	880	0.583	500	309	2.4	1.4	9.971	A
B	1879	470	222	1889	0.990	1881	2430	230.4	233.5	445.664	F
C	0	0	2119	375	0.000	0	0	0.0	0.0	0.000	A
D	2586	647	165	2282	1.134	2282	1904	532.8	509.3	903.463	F

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	432	108	2133	888	0.487	434	311	1.4	1.0	7.905	A
B	1873	393	191	1933	0.818	1914	2377	233.5	143.2	329.604	F
C	0	0	2105	352	0.000	0	0	0.0	0.0	0.000	A
D	2167	542	167	2281	0.950	2277	1908	605.3	581.5	941.701	F

Junctions 10
ARCADY 10 - Roundabout Module
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Filename: Import of Junction 2 PM.j10

Path: Wserver4-dub\gdrp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction

Report generation date: 09/03/2023 12:22:33

»2022 Base Year , PM

»Phase 5 2027 No Construction , PM

»Phase 5 2027 With Construction , PM

Summary of junction performance

PM					
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
2022 Base Year					
Arm A	D1	0.3	6.41	0.45	A
Arm B		37.6	133.81	1.08	F
Arm C		0.0	0.00	0.00	A
Arm D		63.3	96.68	1.04	F
Phase 5 2027 No Construction					
Arm A	D2	1.4	6.38	0.58	A
Arm B		487.2	627.27	1.38	F
Arm C		0.0	0.00	0.00	A
Arm D		418.0	680.75	1.29	F
Phase 5 2027 With Construction					
Arm A	D3	2.0	10.67	0.67	B
Arm B		542.4	990.53	1.43	F
Arm C		0.0	0.00	0.00	A
Arm D		438.4	697.88	1.31	F

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	Junction2
Location	Clenchagh
Site number	2
Date	05/07/2018
Version	
Status	
Identifier	
Client	Irish Water
Job number	7555
Enumerator	TOBIN/Walrus Rooney
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	Veh.	Veh.	per/hour	s	-/Min	per/Min

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queuing 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	35.00	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	2022 Base Year	PM	ONE HOUR	16:00	17:30	15	✓
D2	Phase 5 2027 No Construction	PM	ONE HOUR	16:00	17:30	15	✓
D3	Phase 5 2027 With Construction	PM	ONE HOUR	16:00	17:30	15	✓

Analysis Set Details

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

2022 Base Year , 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
†	untitled	Standard Roundabout		A, B, C, D	88.77	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	88.77	F

Arms

Arms

Arm	Name	Description	No give-way line
A	Cloonslough Road		
B	R129 East		
C	Access Road		
D	R129 East		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	F - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A	8.00	8.10	30.0	38.0	88.0	35.0		
B	5.90	8.60	19.4	23.0	88.0	39.0		
C	4.20	5.90	9.0	14.0	88.0	50.0		
D	6.70	9.20	18.0	55.0	88.0	38.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.851	2486
B	0.810	2027
C	0.458	1433
D	0.868	2570

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 Base Year	PM	ONE HOUR	16:00	17:30	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 (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	439	100.000
B		ONE HOUR	✓	1898	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2171	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	215	0	221
	B	244	6	0	1848
	C	0	0	0	0
	D	287	1884	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	4	0	10
	B	2	0	0	7
	C	0	0	0	0
	D	5	4	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.46	6.41	0.9	A	403	604
B	1.03	135.81	67.6	F	1742	2612
C	0.00	0.00	0.0	A	0	0
D	1.04	80.58	63.3	F	1992	2988

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	331	83	1415	1411	0.234	329	397	0.0	0.3	3.326	A
B	1428	347	156	1990	0.715	1419	1579	0.0	2.5	6.294	A
C	0	0	1605	862	0.000	0	0	0.0	0.0	0.000	A
D	1834	408	187	2348	0.897	1825	1398	0.0	2.3	4.537	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	395	99	1890	1237	0.319	394	474	0.3	0.3	4.298	A
B	1708	427	198	1989	0.996	1893	1895	2.6	5.9	12.432	B
C	0	0	1891	513	0.000	0	0	0.0	0.0	0.000	A
D	1552	488	225	2322	0.840	1541	1868	2.3	5.0	5.188	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	483	121	1995	1062	0.455	482	545	0.5	0.8	8.167	A
B	2090	522	243	1941	1.076	1916	2205	5.9	49.3	60.876	F
C	0	0	2128	382	0.000	0	0	0.0	0.0	0.000	A
D	2390	598	202	2303	1.038	2208	1900	5.0	38.1	42.303	E

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	483	121	1995	1045	0.493	485	562	0.8	0.5	8.405	A
B	2090	522	243	1941	1.077	1937	2233	49.3	87.0	133.809	F
C	0	0	2180	372	0.000	0	0	0.0	0.0	0.000	A
D	2390	598	250	2301	1.039	2289	1925	38.1	62.3	86.081	F

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	395	99	1897	1100	0.357	390	538	0.9	0.0	5.081	A
B	1700	427	199	1909	0.937	1945	2094	37.0	27.5	109.498	F
C	0	0	2140	388	0.000	0	0	0.0	0.0	0.000	A
D	1852	488	288	2309	0.848	2179	1889	63.3	8.8	47.347	E

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	331	83	1438	1396	0.237	331	418	0.6	0.3	3.385	A
B	1429	357	157	1889	0.719	1529	1602	27.8	2.8	9.814	A
C	0	0	1898	606	0.000	0	0	0.0	0.0	0.000	A
D	1834	498	201	2358	0.700	1651	1494	8.5	2.4	5.374	A

Phase 5 2027 No Construction , 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	united	Standard Roundabout		A, B, C, D	000.30	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	000.30	F

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	Phase 5 2027 No Construction	PM	ONE HOUR	18:00	17:00	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 (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	543	100.000
B		ONE HOUR	✓	2358	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2687	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	208	0	274
	B	301	7	0	2051
	C	0	0	0	0
	D	357	2339	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	5	0	11
	B	2	9	0	8
	C	0	0	0	0
	D	5	5	0	9

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.58	8.38	1.4	A	498	747
B	1.38	827.27	467.2	F	2195	3247
C	0.00	0.00	0.0	A	0	0
D	1.29	535.75	418.0	F	2400	3588

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	408	102	1735	1195	0.345	407	433	0.0	0.5	4.610	A
B	1776	444	205	1948	0.312	1742	1938	0.0	8.5	15.575	C
C	0	0	1947	477	0.000	0	0	0.0	0.0	0.000	A
D	2023	506	227	2257	0.801	1596	1720	0.0	6.8	11.138	B

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	488	122	1906	1045	0.457	487	542	0.5	0.8	5.432	A
B	2121	530	246	1922	1.103	1906	2199	8.5	62.1	73.520	F
C	0	0	2152	378	0.000	0	0	0.0	0.0	0.000	A
D	2418	604	249	2283	1.058	2282	1903	6.8	47.8	51.730	F

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	598	145	1986	1027	0.582	596	544	0.5	1.4	8.302	A
B	2597	645	301	1887	1.376	1887	2261	62.1	239.6	297.484	F
C	0	0	2188	358	0.000	0	0	0.0	0.0	0.000	A
D	2958	740	240	2285	1.295	2284	1941	47.0	210.1	212.475	F

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	598	145	1987	1027	0.582	598	544	1.4	1.4	8.304	A
B	2797	645	302	1887	1.377	1887	2283	239.6	417.3	625.301	F
C	0	0	2188	358	0.000	0	0	0.0	0.0	0.000	A
D	2958	740	240	2285	1.295	2285	1942	210.1	384.5	416.425	F

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	488	122	1984	1929	0.475	490	548	1.4	0.9	5.705	A
B	2121	630	247	1921	1.104	1921	2227	417.3	457.2	620.401	F
C	0	0	2158	368	0.000	0	0	0.0	0.0	0.000	A
D	2418	604	261	2282	1.056	2282	1918	384.5	418.0	636.781	F

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	408	102	1878	1932	0.386	410	500	0.9	0.7	5.790	A
B	1778	444	207	1947	0.912	1943	2181	407.2	428.5	627.274	F
C	0	0	2149	378	0.000	0	0	0.0	0.0	0.000	A
D	2023	506	254	2299	0.887	2275	1656	418.0	355.0	611.787	F

Phase 5 2027 With Construction , 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, D	734.05	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	734.05	F

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	Phase 5 2027 With Construction	PM	ONE HOUR	18:00	17:30	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 (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	615	100.000
B		ONE HOUR	✓	2384	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2695	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	208	0	340
	B	301	7	0	2075
	C	0	0	0	0
	D	357	2338	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	5	0	13
	B	2	0	0	5
	C	0	0	0	0
	D	5	5	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.67	10.67	2.0	B	564	647
B	1.43	566.53	342.4	F	2186	3261
C	0.00	0.00	0.0	A	0	0
D	1.31	567.88	438.4	F	2473	3708

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	463	116	1740	1167	0.400	460	486	0.0	0.7	5.149	A
B	1795	449	259	1911	0.829	1761	1842	0.0	11.0	18.053	C
C	0	0	2010	443	0.000	0	0	0.0	0.0	0.000	A
D	2925	597	226	2279	0.650	2900	1764	0.0	7.2	11.657	B

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	552	138	1901	1924	0.540	551	533	0.7	1.2	7.575	A
B	2143	638	310	1878	1.141	1889	2192	11.0	79.6	66.839	F
C	0	0	2179	359	0.000	0	0	0.0	0.0	0.000	A
D	2423	598	241	2299	1.038	2245	1937	7.2	52.2	58.075	F

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	677	169	1979	1908	0.672	674	532	1.2	2.0	10.860	B
B	2925	656	375	1834	1.432	1835	2371	79.6	277.5	358.045	F
C	0	0	2212	341	0.000	0	0	0.0	0.0	0.000	A
D	2967	742	237	2272	1.306	2272	1976	62.2	226.1	228.062	F

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	577	169	1977	1908	0.672	677	532	2.0	2.0	10.860	B
B	2925	656	361	1832	1.432	1832	2273	277.5	475.5	735.017	F
C	0	0	2213	341	0.000	0	0	0.0	0.0	0.000	A
D	2967	742	237	2272	1.306	2272	1976	226.1	399.5	489.060	F

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	553	138	1874	1010	0.548	555	537	2.0	1.2	7.988	A
B	2143	530	313	1870	1.142	1870	2217	475.5	542.4	973.127	F
C	0	0	2189	354	0.000	0	0	0.0	0.0	0.000	A
D	2423	606	242	2259	1.058	2259	1947	399.3	433.4	657.879	F

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	452	110	1857	1014	0.457	455	549	1.2	0.9	5.571	A
B	1790	448	251	1909	0.949	1905	2170	542.4	514.7	969.534	F
C	0	0	2157	355	0.000	0	0	0.0	0.0	0.000	A
D	2025	507	246	2298	0.855	2281	1921	458.4	380.3	651.833	F

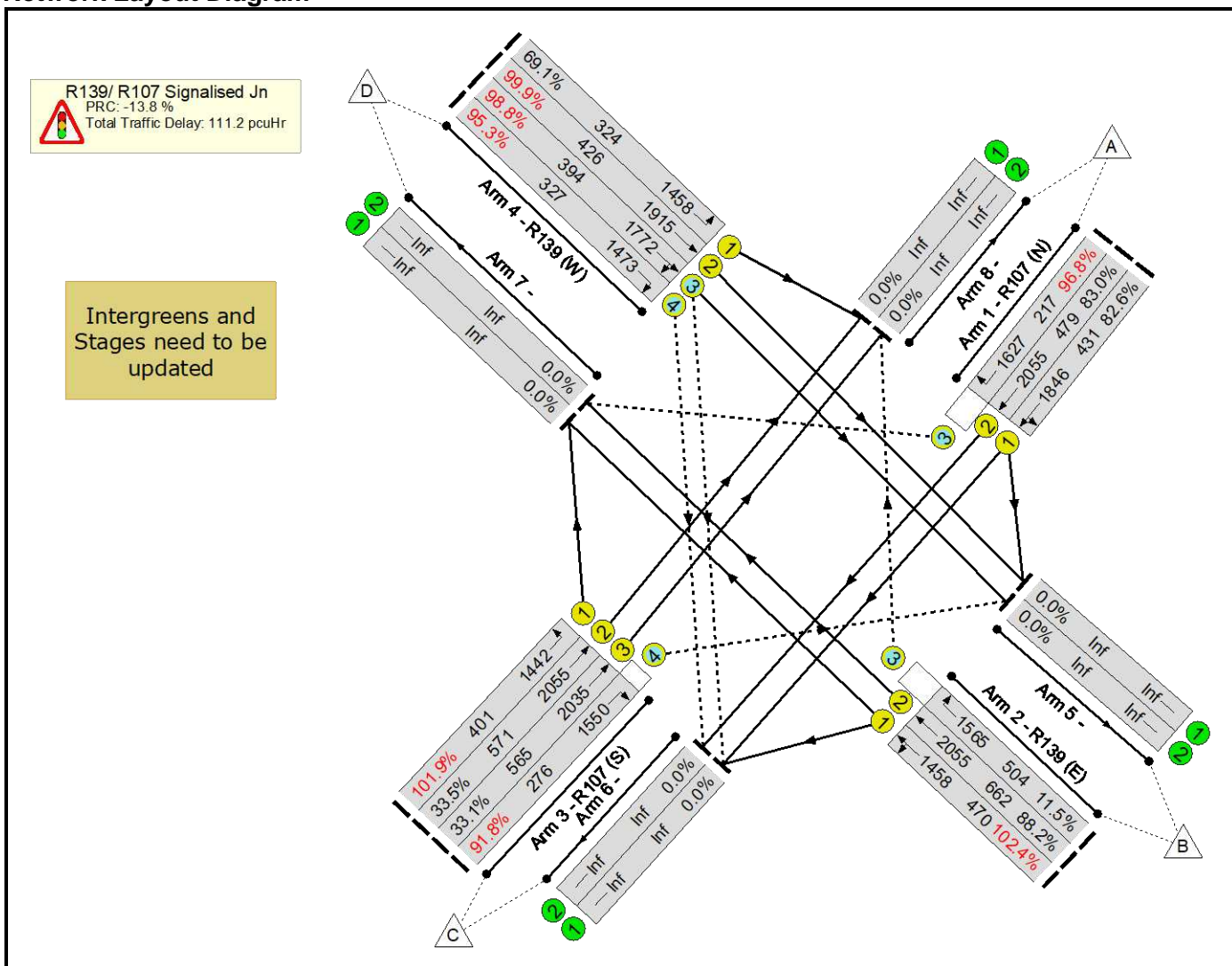
Basic Results Summary
Basic Results Summary

User and Project Details

Project:	Greater Dublin Drainage Project Addendum
Title:	
Location:	
Client:	Irish Water
Site Ref(s):	R139 Road / R107 Malahide Road signalised crossroads
Additional detail:	
File name:	7556 Junction 5.lsg3x
Author:	Gabriela Iha
Company:	TOBIN
Address:	Fairgreen House, Fairgreen Rd, Galway

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

Network Layout Diagram



Basic Results Summary

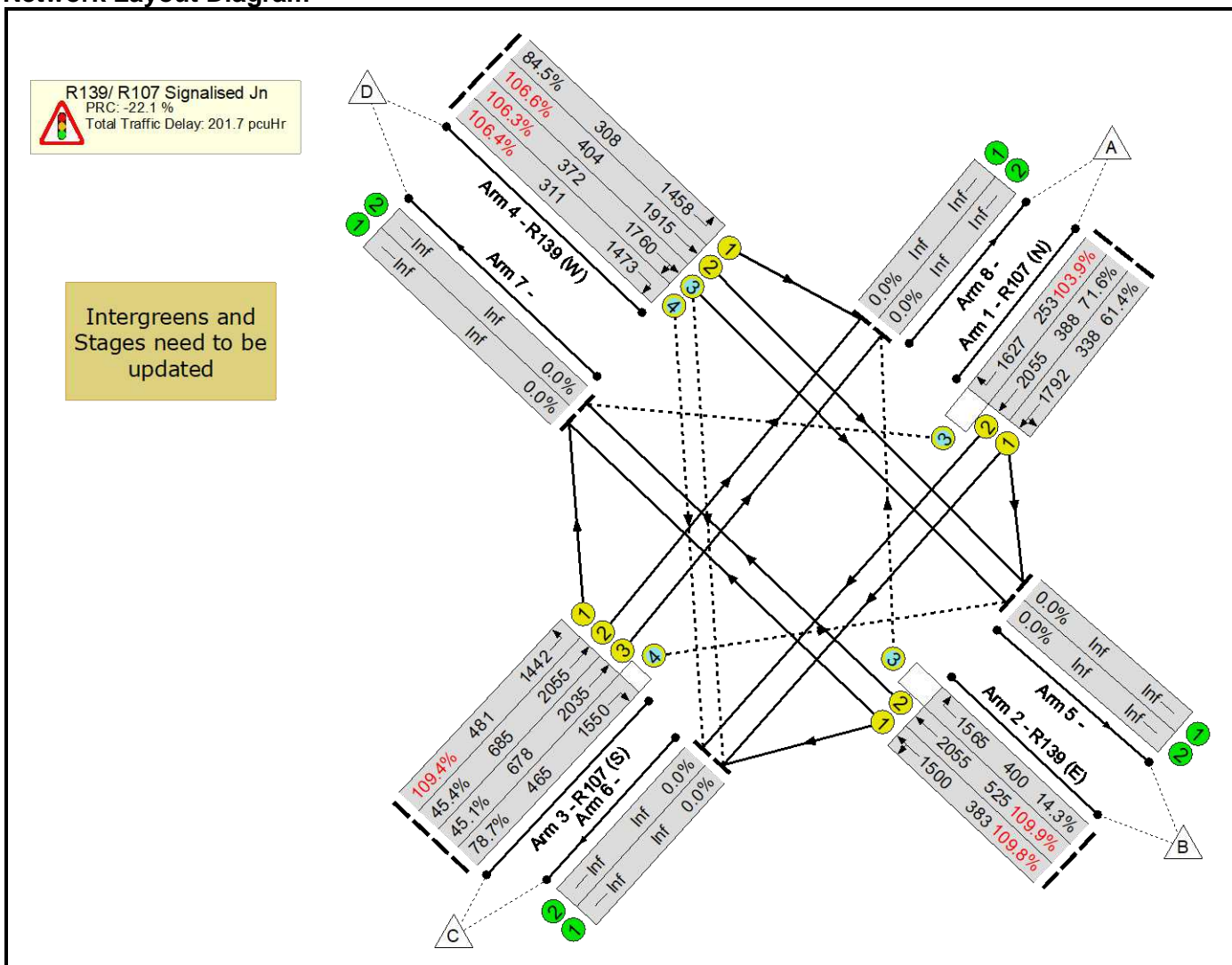
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	102.4%	0	985	33	111.2	-	-
R139/ R107 Signalised Jn	-	-	-		-	-	-	-	-	-	102.4%	0	985	33	111.2	-	-
1/1	R107 (N) Left Ahead	U	A		1	20	-	356	1846	431	82.6%	-	-	-	5.5	55.5	10.7
1/2	R107 (N) Ahead	U	B		1	20	-	398	2055	479	83.0%	-	-	-	5.9	53.7	11.7
1/3	R107 (N) Right	O	C		1	11	-	210	1627	217	96.8%	0	181	29	8.0	136.8	10.9
2/1	R139 (E) Left Ahead	U	D		1	28	-	481	1458	470	102.4%	-	-	-	18.6	138.8	26.4
2/2	R139 (E) Ahead	U	E		1	28	-	584	2055	662	88.2%	-	-	-	8.1	50.0	17.2
2/3	R139 (E) Right	O	F		1	28	-	58	1565	504	11.5%	0	57	1	0.4	25.5	1.1
3/1	R107 (S) Left	U	G		1	24	-	408	1442	401	101.9%	-	-	-	16.2	142.5	22.5
3/2	R107 (S) Ahead	U	H		1	24	-	191	2055	571	33.5%	-	-	-	1.6	30.6	4.0
3/3	R107 (S) Ahead	U	H		1	24	-	187	2035	565	33.1%	-	-	-	1.6	30.6	3.9
3/4	R107 (S) Right	O	I		1	15	-	253	1550	276	91.8%	0	250	3	6.7	94.9	10.3
4/1	R139 (W) Left	U	J		1	19	-	224	1458	324	69.1%	-	-	-	3.1	49.8	6.2
4/2	R139 (W) Ahead	U	K		1	19	-	425	1915	426	99.9%	-	-	-	14.3	121.1	20.7
4/3	R139 (W) Ahead Right	O	K		1	19	-	389	1772	394	98.8%	0	185	0	12.5	115.8	18.4
4/4	R139 (W) Right	O	L		1	19	-	312	1473	327	95.3%	0	312	0	8.8	101.4	13.4
C1					PRC for Signalled Lanes (%): -13.8			Total Delay for Signalled Lanes (pcuHr): 111.22				111.22		Cycle Time (s): 90			
					PRC Over All Lanes (%): -13.8			Total Delay Over All Lanes(pcuHr):				111.22					

Basic Results Summary

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

Network Layout Diagram



Basic Results Summary

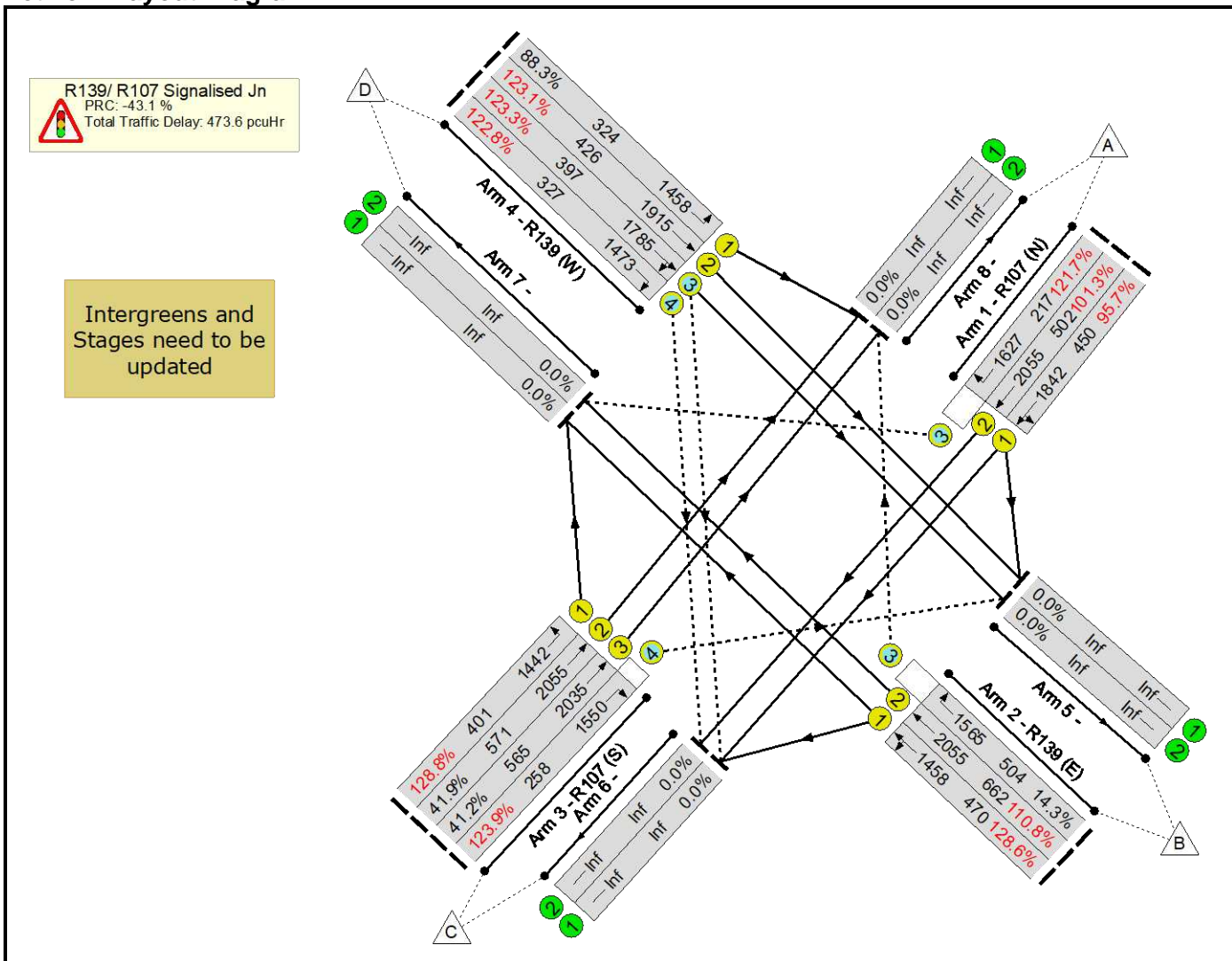
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	
Network	-	-	-		-	-	-	-	-	-	109.9%	0	1132	41	201.7	-	-	
R139/ R107 Signalised Jn	-	-	-		-	-	-	-	-	-	109.9%	0	1132	41	201.7	-	-	
1/1	R107 (N) Left Ahead	U	A		1	16	-	208	1792	338	61.4%	-	-	-	2.7	47.1	5.5	
1/2	R107 (N) Ahead	U	B		1	16	-	278	2055	388	71.6%	-	-	-	3.9	50.2	7.7	
1/3	R107 (N) Right	O	C		1	13	-	263	1627	253	103.9%	0	217	36	14.2	194.9	17.8	
2/1	R139 (E) Left Ahead	U	D		1	22	-	421	1500	383	109.8%	-	-	-	28.5	243.3	34.8	
2/2	R139 (E) Ahead	U	E		1	22	-	577	2055	525	109.9%	-	-	-	37.6	234.8	46.3	
2/3	R139 (E) Right	O	F		1	22	-	57	1565	400	14.3%	0	56	1	0.5	31.2	1.2	
3/1	R107 (S) Left	U	G		1	29	-	526	1442	481	109.4%	-	-	-	33.9	231.8	41.7	
3/2	R107 (S) Ahead	U	H		1	29	-	311	2055	685	45.4%	-	-	-	2.5	28.4	6.5	
3/3	R107 (S) Ahead	U	H		1	29	-	306	2035	678	45.1%	-	-	-	2.4	28.4	6.4	
3/4	R107 (S) Right	O	I		1	26	-	366	1550	465	78.7%	0	362	4	4.7	46.4	10.1	
4/1	R139 (W) Left	U	J		1	18	-	260	1458	308	84.5%	-	-	-	4.9	68.2	8.7	
4/2	R139 (W) Ahead	U	K		1	18	-	431	1915	404	106.6%	-	-	-	24.3	202.8	30.5	
4/3	R139 (W) Ahead Right	O	K		1	18	-	395	1760	372	106.3%	0	186	0	22.2	202.1	27.9	
4/4	R139 (W) Right	O	L		1	18	-	331	1473	311	106.4%	0	311	0	19.4	211.1	24.2	
C1					PRC for Signalled Lanes (%): -22.1			Total Delay for Signalled Lanes (pcuHr): 201.69				201.69		Cycle Time (s): 90				
					PRC Over All Lanes (%): -22.1			Total Delay Over All Lanes(pcuHr):				201.69						

Basic Results Summary

Scenario 3: '2027 AM No Construction' (FG3: '2027 AM No Construction', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

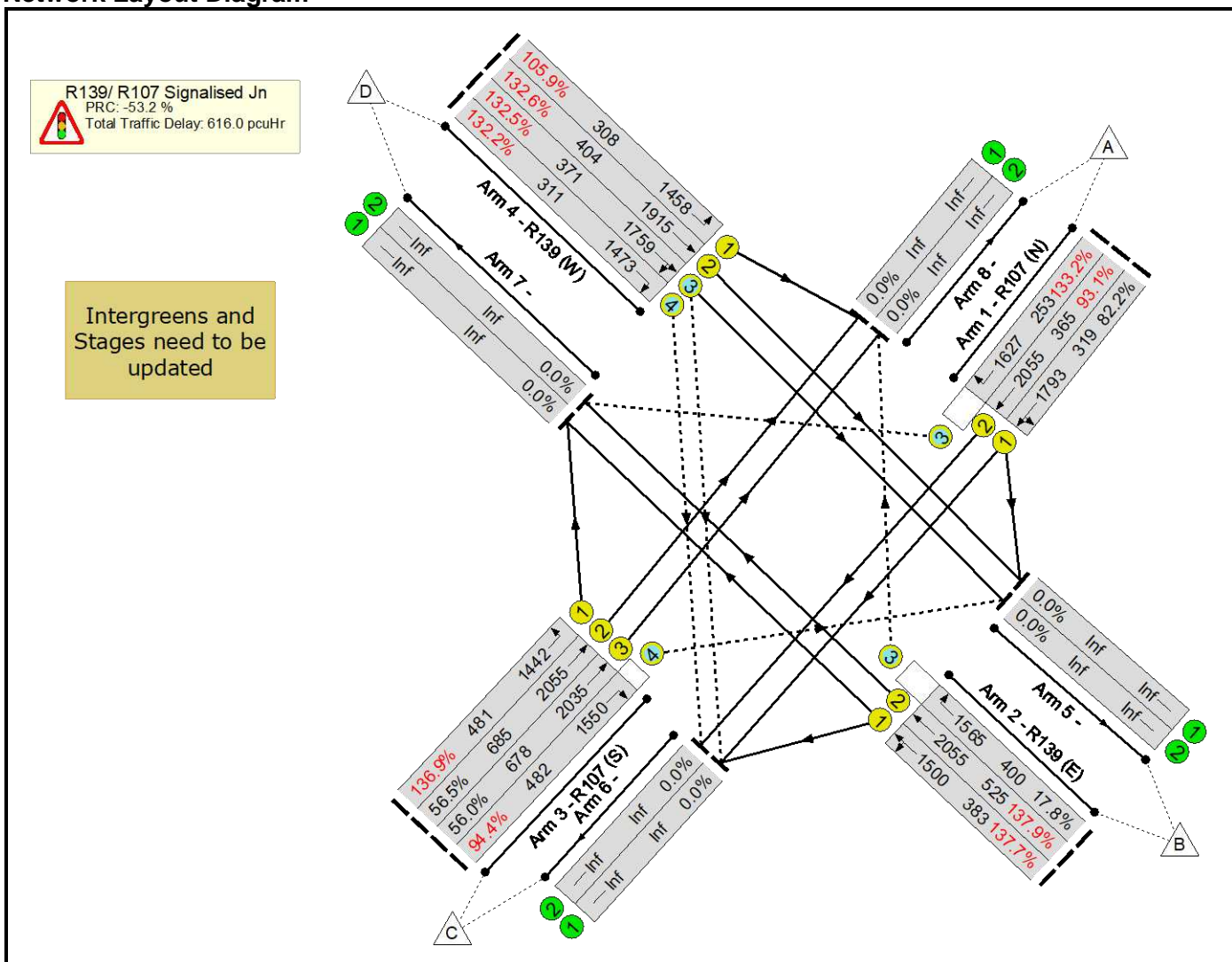
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	128.8%	0	997	55	473.6	-	-
R139/ R107 Signalised Jn	-	-	-		-	-	-	-	-	-	128.8%	0	997	55	473.6	-	-
1/1	R107 (N) Left Ahead	U	A		1	21	-	431	1842	450	95.7%	-	-	-	10.6	88.9	17.2
1/2	R107 (N) Ahead	U	B		1	21	-	509	2055	502	101.3%	-	-	-	18.2	128.8	26.0
1/3	R107 (N) Right	O	C		1	11	-	264	1627	217	121.7%	0	181	36	31.3	427.2	34.8
2/1	R139 (E) Left Ahead	U	D		1	28	-	604	1458	470	128.6%	-	-	-	80.4	479.0	89.4
2/2	R139 (E) Ahead	U	E		1	28	-	734	2055	662	110.8%	-	-	-	49.0	240.2	60.6
2/3	R139 (E) Right	O	F		1	28	-	72	1565	504	14.3%	0	70	2	0.5	25.8	1.3
3/1	R107 (S) Left	U	G		1	24	-	516	1442	401	128.8%	-	-	-	69.8	486.9	75.7
3/2	R107 (S) Ahead	U	H		1	24	-	239	2055	571	41.9%	-	-	-	2.1	32.0	5.2
3/3	R107 (S) Ahead	U	H		1	24	-	233	2035	565	41.2%	-	-	-	2.1	31.9	5.1
3/4	R107 (S) Right	O	I		1	14	-	320	1550	258	123.9%	0	241	17	39.3	442.1	42.8
4/1	R139 (W) Left	U	J		1	19	-	286	1458	324	88.3%	-	-	-	5.9	74.4	10.1
4/2	R139 (W) Ahead	U	K		1	19	-	524	1915	426	123.1%	-	-	-	60.7	417.0	67.3
4/3	R139 (W) Ahead Right	O	K		1	19	-	489	1785	397	123.3%	0	178	0	57.0	419.9	63.2
4/4	R139 (W) Right	O	L		1	19	-	402	1473	327	122.8%	0	327	0	46.7	418.0	51.8
C1					PRC for Signalled Lanes (%): -43.1			Total Delay for Signalled Lanes (pcuHr): 473.61			473.61		Cycle Time (s): 90				
					PRC Over All Lanes (%): -43.1			Total Delay Over All Lanes(pcuHr):			473.61						

Basic Results Summary

Scenario 4: '2027 PM No Construction' (FG4: '2027 PM No Construction', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

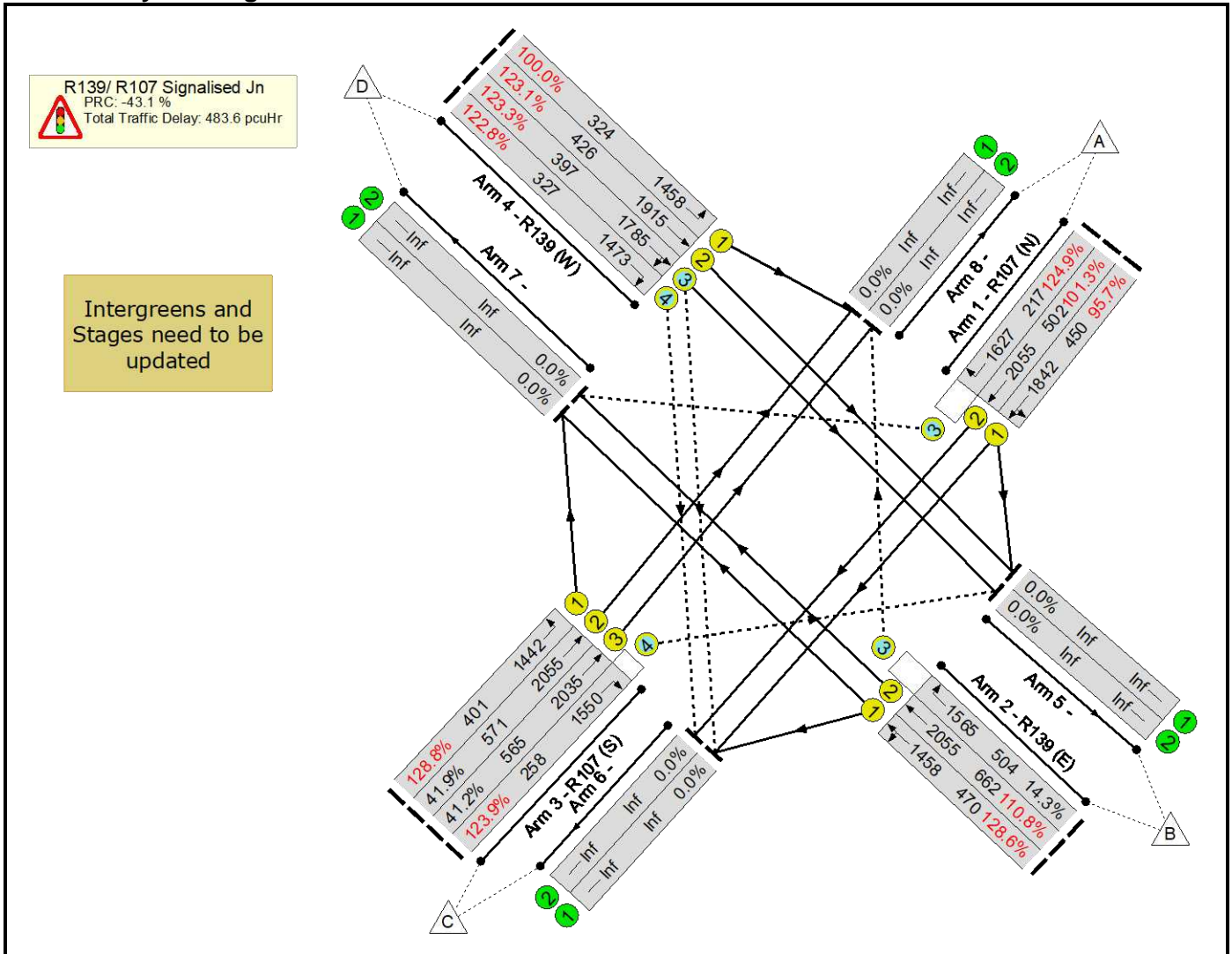
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	137.9%	0	1234	43	616.0	-	-
R139/ R107 Signalised Jn	-	-	-		-	-	-	-	-	-	137.9%	0	1234	43	616.0	-	-
1/1	R107 (N) Left Ahead	U	A		1	15	-	262	1793	319	82.2%	-	-	-	4.7	65.1	8.4
1/2	R107 (N) Ahead	U	B		1	15	-	340	2055	365	93.1%	-	-	-	8.3	87.8	13.2
1/3	R107 (N) Right	O	C		1	13	-	337	1627	253	133.2%	0	217	36	51.7	552.6	56.2
2/1	R139 (E) Left Ahead	U	D		1	22	-	528	1500	383	137.7%	-	-	-	85.5	582.7	92.8
2/2	R139 (E) Ahead	U	E		1	22	-	724	2055	525	137.9%	-	-	-	116.8	580.8	126.8
2/3	R139 (E) Right	O	F		1	22	-	71	1565	400	17.8%	0	69	2	0.6	31.6	1.5
3/1	R107 (S) Left	U	G		1	29	-	658	1442	481	136.9%	-	-	-	103.9	568.6	111.4
3/2	R107 (S) Ahead	U	H		1	29	-	387	2055	685	56.5%	-	-	-	3.3	30.7	8.5
3/3	R107 (S) Ahead	U	H		1	29	-	380	2035	678	56.0%	-	-	-	3.2	30.6	8.3
3/4	R107 (S) Right	O	I		1	27	-	455	1550	482	94.4%	0	450	5	9.7	76.5	16.8
4/1	R139 (W) Left	U	J		1	18	-	326	1458	308	105.9%	-	-	-	18.6	205.0	23.3
4/2	R139 (W) Ahead	U	K		1	18	-	536	1915	404	132.6%	-	-	-	78.1	524.5	84.5
4/3	R139 (W) Ahead Right	O	K		1	18	-	492	1759	371	132.5%	0	187	0	71.7	524.7	77.6
4/4	R139 (W) Right	O	L		1	18	-	411	1473	311	132.2%	0	311	0	59.8	524.0	64.8
C1					PRC for Signalled Lanes (%): -53.2			Total Delay for Signalled Lanes (pcuHr): 615.97			615.97		Cycle Time (s): 90				
					PRC Over All Lanes (%): -53.2			Total Delay Over All Lanes(pcuHr):			615.97						

Basic Results Summary

Scenario 5: '2027 AM with Construction (Phase 5)' (FG5: '2027 AM with Construction (Phase 5)', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

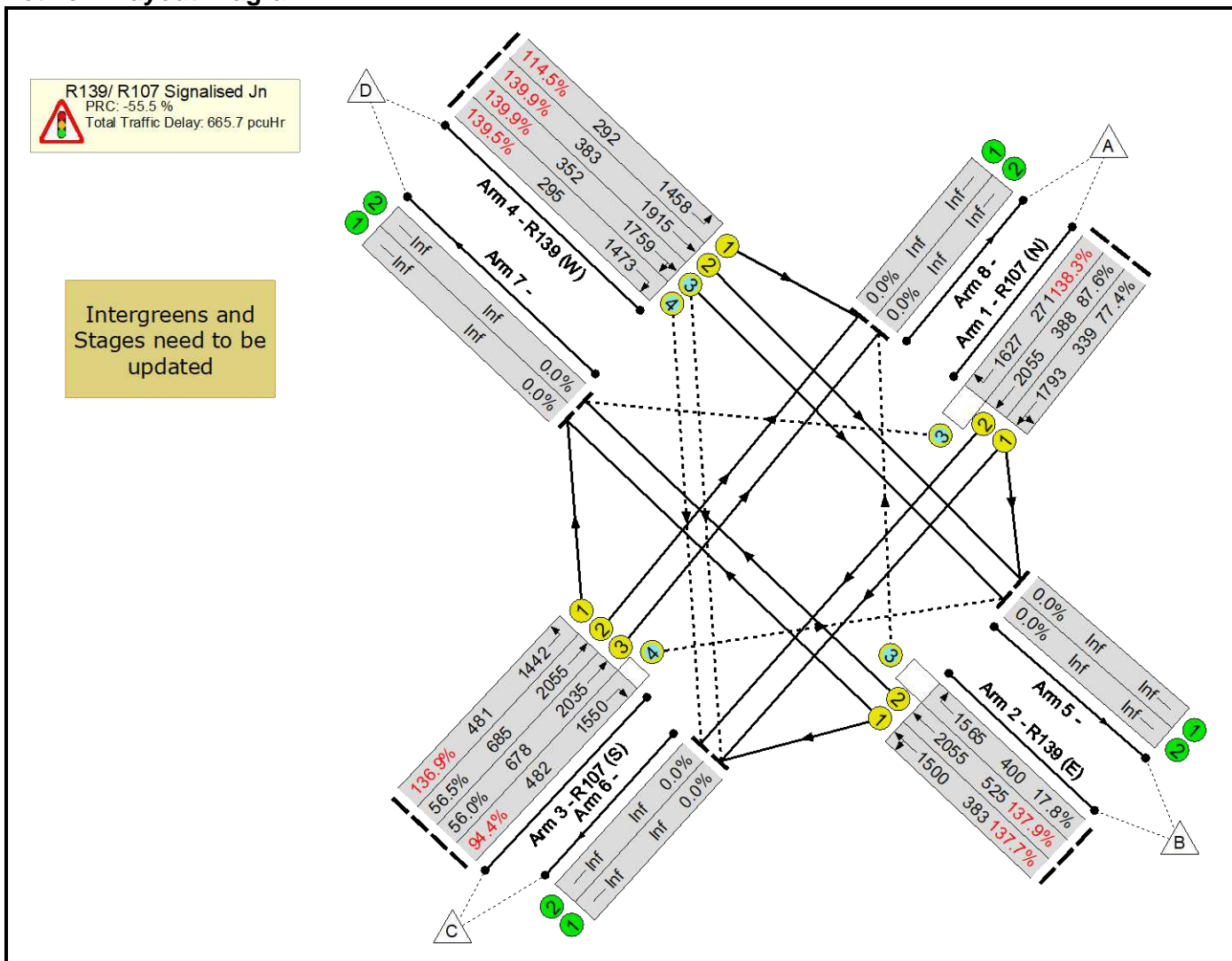
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	
Network	-	-	-		-	-	-	-	-	-	128.8%	0	997	55	483.6	-	-	
R139/ R107 Signalised Jn	-	-	-		-	-	-	-	-	-	128.8%	0	997	55	483.6	-	-	
1/1	R107 (N) Left Ahead	U	A		1	21	-	431	1842	450	95.7%	-	-	-	10.6	88.9	17.2	
1/2	R107 (N) Ahead	U	B		1	21	-	509	2055	502	101.3%	-	-	-	18.2	128.8	26.0	
1/3	R107 (N) Right	O	C		1	11	-	271	1627	217	124.9%	0	181	36	35.0	465.4	38.6	
2/1	R139 (E) Left Ahead	U	D		1	28	-	604	1458	470	128.6%	-	-	-	80.4	479.0	89.4	
2/2	R139 (E) Ahead	U	E		1	28	-	734	2055	662	110.8%	-	-	-	49.0	240.2	60.6	
2/3	R139 (E) Right	O	F		1	28	-	72	1565	504	14.3%	0	70	2	0.5	25.8	1.3	
3/1	R107 (S) Left	U	G		1	24	-	516	1442	401	128.8%	-	-	-	69.8	486.9	75.7	
3/2	R107 (S) Ahead	U	H		1	24	-	239	2055	571	41.9%	-	-	-	2.1	32.0	5.2	
3/3	R107 (S) Ahead	U	H		1	24	-	233	2035	565	41.2%	-	-	-	2.1	31.9	5.1	
3/4	R107 (S) Right	O	I		1	14	-	320	1550	258	123.9%	0	241	17	39.3	442.1	42.8	
4/1	R139 (W) Left	U	J		1	19	-	324	1458	324	100.0%	-	-	-	12.2	135.0	17.0	
4/2	R139 (W) Ahead	U	K		1	19	-	524	1915	426	123.1%	-	-	-	60.7	417.0	67.3	
4/3	R139 (W) Ahead Right	O	K		1	19	-	489	1785	397	123.3%	0	178	0	57.0	419.9	63.2	
4/4	R139 (W) Right	O	L		1	19	-	402	1473	327	122.8%	0	327	0	46.7	418.0	51.8	
C1					PRC for Signalled Lanes (%): -43.1			Total Delay for Signalled Lanes (pcuHr): 483.56				483.56		Cycle Time (s): 90				
					PRC Over All Lanes (%): -43.1			Total Delay Over All Lanes(pcuHr):				483.56						

Basic Results Summary

Scenario 6: '2027 PM with Construction (Phase 5)' (FG6: '2027 PM with Construction (Phase 5)', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)				
Network	-	-	-		-	-	-	-	-	-	139.9%	0	1226	43	665.7	-	-				
R139/ R107 Signalised Jn	-	-	-		-	-	-	-	-	-	139.9%	0	1226	43	665.7	-	-				
1/1	R107 (N) Left Ahead	U	A		1	16	-	262	1793	339	77.4%	-	-	-	4.2	57.2	7.8				
1/2	R107 (N) Ahead	U	B		1	16	-	340	2055	388	87.6%	-	-	-	6.5	68.6	11.3				
1/3	R107 (N) Right	O	C		1	14	-	375	1627	271	138.3%	0	235	36	62.9	603.9	67.9				
2/1	R139 (E) Left Ahead	U	D		1	22	-	528	1500	383	137.7%	-	-	-	85.4	582.0	92.6				
2/2	R139 (E) Ahead	U	E		1	22	-	724	2055	525	137.9%	-	-	-	116.7	580.0	126.6				
2/3	R139 (E) Right	O	F		1	22	-	71	1565	400	17.8%	0	69	2	0.6	31.6	1.5				
3/1	R107 (S) Left	U	G		1	29	-	658	1442	481	136.9%	-	-	-	103.9	568.6	111.4				
3/2	R107 (S) Ahead	U	H		1	29	-	387	2055	685	56.5%	-	-	-	3.3	30.7	8.5				
3/3	R107 (S) Ahead	U	H		1	29	-	380	2035	678	56.0%	-	-	-	3.2	30.6	8.3				
3/4	R107 (S) Right	O	I		1	27	-	455	1550	482	94.4%	0	450	5	9.7	76.5	16.8				
4/1	R139 (W) Left	U	J		1	17	-	334	1458	292	114.5%	-	-	-	29.5	318.4	34.0				
4/2	R139 (W) Ahead	U	K		1	17	-	536	1915	383	139.9%	-	-	-	89.4	600.3	95.4				
4/3	R139 (W) Ahead Right	O	K		1	17	-	492	1759	352	139.9%	0	177	0	82.0	600.4	87.6				
4/4	R139 (W) Right	O	L		1	17	-	411	1473	295	139.5%	0	295	0	68.4	599.5	73.1				
C1					PRC for Signalled Lanes (%):		-55.5	Total Delay for Signalled Lanes (pcuHr):			665.70	Cycle Time (s):		90	PRC Over All Lanes (%):			-55.5	Total Delay Over All Lanes(pcuHr):		665.70

Junctions 10
PICADY 10 - Priority Intersection Module
Version: 10.0.3.1598 © Copyright TRL Software Limited, 2021
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Filename: Import of Junction 8-AM.j10

Path: W:\server4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction

Report generation date: 09/03/2023 12:24:19

- »2022 Base Year, AM
- »2027 no Phase 5, AM
- »2027 with Phase 5, AM

Summary of junction performance

		AM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	
2022 Base Year						
Stream B-AC	D1	18.9	154.75	1.00	F	
Stream C-AB		0.5	5.64	0.20	A	
2027 no Phase 5						
Stream B-AC	D2	36.7	1073.21	1.64	F	
Stream C-AB		0.8	8.00	0.29	A	
2027 with Phase 5						
Stream B-AC	D3	107.2	1140.90	1.00	F	
Stream C-AB		0.9	8.08	0.29	A	

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	(untitled)
Location	
Site number	
Date	04/03/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TOBIN/Maria Rooney
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	Veh	Veh	perhour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.65	28.00	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)
D1	2022 Base Year	AM	ONE HOUR	07:45	09:15	15
D2	2027 no Phase 5	AM	ONE HOUR	07:45	09:15	15
D3	2027 with Phase 5	AM	ONE HOUR	07:45	09:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year, AM

Data Errors and Warnings

No errors or warnings

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	untitled	T-Junction	Two-way	Two-way	Two-way		53.17	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/Junction	53.17	F

Arms

Arms

Arm	Name	Description	Arm type
A	R108(S)		Major
B	R123		Minor
C	R100(N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	8.80			107.0	✓	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

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.90	19	14

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Vol/Hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	535	0.094	0.238	0.149	0.335
B-C	899	0.102	0.258	-	-
C-B	898	0.238	0.238	-	-

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 line segment only; they may differ for subsequent line 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)
D1	2022 Base Year	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	427	100.000
B		✓	315	100.000
C		✓	459	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	182	245
	B	282	0	32
	C	395	84	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	5	5
	B	11	0	17
	C	7	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	1.00	194.75	18.9	F
C-AB	0.20	5.54	0.5	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	227	390	0.624	231	1.5	23.271	C
C-AB	62	727	0.112	81	0.2	5.587	A
C-A	264			264			
A-B	137			137			
A-C	184			184			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	283	356	0.790	277	3.1	41.187	E
C-AB	109	755	0.144	109	0.3	5.570	A
C-A	304			304			
A-B	104			104			
A-C	220			220			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	347	328	1.058	310	12.3	114.498	F
C-AB	158	790	0.198	158	0.5	5.625	A
C-A	349			349			
A-B	200			200			
A-C	270			270			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	347	328	1.058	321	18.9	194.747	F
C-AB	157	790	0.197	157	0.5	5.644	A
C-A	349			349			
A-B	200			200			
A-C	270			270			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	283	356	0.791	337	5.8	138.158	F
C-AB	109	756	0.145	110	0.3	5.592	A
C-A	303			303			
A-B	104			104			
A-C	220			220			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	237	390	0.604	252	1.8	30.780	D
C-AB	82	726	0.113	82	0.2	5.591	A
C-A	264			264			
A-B	137			137			
A-C	184			184			

2027 no Phase 5, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use of circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		291.16	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	291.16	F

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)
D2	2027 no Phase 5	AM	ONE HOUR	07:45	08:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	528	100.000
B		✓	390	100.000
C		✓	588	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	325	303
	B	348	0	41
	C	490	78	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	7	11
	B	13	0	20
	C	9	7	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	1.54	1073.01	38.7	F
C-AB	0.29	5.00	0.8	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	282	345	0.821	277	4.1	42.851	E
C-AB	116	755	0.154	116	0.3	5.820	A
C-A	312			312			
A-B	189			189			
A-C	228			228			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	300	318	1.134	300	15.3	142.110	F
C-AB	161	792	0.203	160	0.5	5.708	A
C-A	351			351			
A-B	202			202			
A-C	272			272			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	429	290	1.481	278	32.9	463.036	F
C-AB	242	845	0.287	241	0.8	5.872	A
C-A	384			384			
A-B	248			248			
A-C	334			334			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	429	290	1.485	278	30.3	530.471	F
C-AB	243	845	0.287	243	0.8	5.095	A
C-A	383			383			
A-B	248			248			
A-C	334			334			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	350	317	1.135	317	96.7	1073.510	F
C-AB	152	183	0.204	152	0.5	5.750	A
C-4	350			350			
A-B	202			202			
A-C	272			272			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	293	344	0.852	344	20.3	980.536	F
C-AB	117	186	0.155	118	0.3	5.652	A
C-4	311			311			
A-B	169			169			
A-C	228			228			

2027 with Phase 5, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (%)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		315.00	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	315.00	F

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)
D1	2027 with Phase 5	AM	ONE HOUR	07:45	08:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	526	100.000
B		✓	492	100.000
C		✓	570	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	225	305
	B	345	0	53
	C	490	80	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	7	11
	B	13	0	17
	C	5	8	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	1.58	1140.95	107.2	F
C-AB	0.29	8.08	0.9	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	303	349	0.868	285	4.5	47.944	E
C-AB	118	752	0.157	117	0.3	5.858	A
C-A	311			311			
A-B	189			189			
A-C	228			228			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	301	321	1.125	311	17.1	103.801	F
C-AB	154	739	0.208	163	0.5	5.754	A
C-A	349			349			
A-B	202			202			
A-C	272			272			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	443	283	1.563	283	87.1	484.828	F
C-AB	247	843	0.293	248	0.8	6.050	A
C-A	381			381			
A-B	248			248			
A-C	334			334			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	443	283	1.564	283	87.3	531.872	F
C-AB	248	843	0.294	248	0.9	6.080	A
C-A	380			380			
A-B	248			248			
A-C	334			334			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-RC	301	321	1.127	321	107.2	1140.904	F
C-AB	105	790	0.208	105	0.5	5.804	A
C-A	348			348			
A-B	202			202			
A-C	272			272			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-RC	303	345	0.809	345	90.7	1004.515	F
C-AB	119	753	0.158	120	0.4	5.708	A
C-A	310			310			
A-B	189			189			
A-C	228			228			

Junctions 10
PICADY 10 - Priority Intersection Module
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Filename: Import of Junction 8 PM.j10

Path: Wserver4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction

Report generation date: 09/03/2023 12:24:56

- »2022 Base Year, PM
- »2027 no Phase 5, PM
- »2027 with Phase 5, PM

Summary of junction performance

		PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	
2022 Base Year						
Stream B-AC	D1	1.6	27.76	0.83	D	
Stream C-AB		0.4	5.51	0.17	A	
2027 no Phase 5						
Stream B-AC	D2	6.6	95.62	0.91	F	
Stream C-AB		0.7	8.24	0.24	A	
2027 with Phase 5						
Stream B-AC	D3	7.3	100.37	0.93	F	
Stream C-AB		0.8	8.68	0.28	A	

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	(untitled)
Location	
Site number	
Date	04/03/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TOBIN/Maria Rooney
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	Veh	Veh	perhour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.65	28.00	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)
D1	2022 Base Year	PM	ONE HOUR	18:45	18:15	15
D2	2027 no Phase 5	PM	ONE HOUR	18:45	18:15	15
D3	2027 with Phase 5	PM	ONE HOUR	18:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year, PM

Data Errors and Warnings

No errors or warnings

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	untitled	T-Junction	Two-way	Two-way	Two-way		4.55	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/Junction	4.55	A

Arms

Arms

Arm	Name	Description	Arm type
A	R108(S)		Major
B	R123		Minor
C	R100(N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	8.80			107.0	✓	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

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.90	19	14

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Vol/Hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	535	0.094	0.238	0.149	0.335
B-C	899	0.102	0.258	-	-
C-B	898	0.238	0.238	-	-

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 line segment only; they may differ for subsequent line 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)
D1	2022 Base Year	PM	ONE HOUR	18:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	819	100.000
B		✓	195	100.000
C		✓	291	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	207	412
	B	180	0	40
	C	337	84	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	4	4
	B	4	0	0
	C	4	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.69	27.78	1.0	C
C-AB	0.17	5.91	0.4	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	147	409	0.359	145	0.5	13.521	B
C-AB	84	699	0.093	84	0.2	5.752	A
C-A	230			230			
A-B	150			150			
A-C	310			310			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	175	381	0.460	174	0.8	17.271	C
C-AB	65	706	0.121	65	0.2	5.690	A
C-A	268			268			
A-B	180			180			
A-C	370			370			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	215	344	0.625	212	1.5	28.726	B
C-AB	121	731	0.166	121	0.4	5.695	A
C-A	309			309			
A-B	228			228			
A-C	454			454			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	215	343	0.625	214	1.6	27.793	B
C-AB	122	732	0.168	122	0.4	5.514	A
C-A	309			309			
A-B	228			228			
A-C	454			454			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	175	381	0.460	175	0.9	17.955	C
C-AB	66	706	0.121	66	0.2	5.623	A
C-A	268			268			
A-B	180			180			
A-C	370			370			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	147	409	0.359	146	0.6	13.882	B
C-AB	65	690	0.094	65	0.2	5.774	A
C-A	230			230			
A-B	156			156			
A-C	310			310			

2027 no Phase 5, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use of circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		18.10	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	18.10	C

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)
D2	2027 no Phase 5	PM	ONE HOUR	18:45	19:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	707	100.000
B		✓	240	100.000
C		✓	433	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	237	510
	B	180	0	50
	C	418	87	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	5	4
	B	5	0	0
	C	5	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.91	90.92	8.8	F
C-AB	0.24	6.24	0.7	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	181	372	0.486	177	0.9	18.184	B
C-AB	90	705	0.128	89	0.3	6.820	A
C-A	273			273			
A-B	193			193			
A-C	384			384			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	216	338	0.639	213	1.6	28.187	B
C-AB	124	731	0.170	124	0.4	6.935	A
C-A	310			310			
A-B	231			231			
A-C	458			458			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	264	290	0.911	249	5.3	71.959	F
C-AB	185	755	0.242	184	0.7	6.207	A
C-A	347			347			
A-B	283			283			
A-C	582			582			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	264	290	0.911	258	6.6	82.817	F
C-AB	185	755	0.243	185	0.7	6.237	A
C-A	346			346			
A-B	283			283			
A-C	582			582			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	216	337	0.640	214	1.9	29.634	E
C-AB	125	731	0.170	125	0.4	5.978	A
C-A	310			310			
A-B	231			231			
A-C	458			458			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	181	371	0.487	180	1.0	19.643	C
C-AB	91	708	0.129	92	0.3	5.658	A
C-A	273			273			
A-B	193			193			
A-C	364			364			

2027 with Phase 5, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (%)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		17.77	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	17.77	C

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)
D1	2027 with Phase 5	PM	ONE HOUR	15:45	16:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	787	100.000
B		✓	241	100.000
C		✓	490	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	257	510
	B	185	0	50
	C	410	78	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	5	4
	B	5	0	1
	C	5	3	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.99	105.37	7.3	F
C-AB	0.29	8.88	0.8	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	181	309	0.492	178	0.9	18.022	C
C-AB	107	704	0.152	106	0.3	6.014	A
C-A	200			200			
A-B	193			193			
A-C	364			364			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	217	334	0.649	214	1.7	29.145	D
C-AB	147	727	0.202	145	0.5	6.204	A
C-A	298			298			
A-B	231			231			
A-C	458			458			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	205	280	0.929	248	5.8	70.285	F
C-AB	220	762	0.288	218	0.8	6.038	A
C-A	325			325			
A-B	263			263			
A-C	502			502			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	205	280	0.929	258	7.3	100.374	F
C-AB	220	763	0.289	220	0.8	6.075	A
C-A	325			325			
A-B	263			263			
A-C	502			502			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	217	334	0.649	216	2.0	43.070	E
C-AB	148	728	0.203	148	0.5	6.255	A
C-A	287			287			
A-B	231			231			
A-C	458			458			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	181	338	0.493	180	1.0	20.122	C
C-AB	108	705	0.153	108	0.3	6.052	A
C-A	265			265			
A-B	193			193			
A-C	364			364			

Junctions 10
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Filename: Import of Junction 9 AM.j10
 Path: Wserver4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction
 Report generation date: 09/03/2023 12:25:39

- »2022 Base Year, AM
- »2027 Phase 5 No Construction, AM
- »2027 Phase 5 With Construction, AM

Summary of junction performance

		AM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	
2022 Base Year						
Stream B-AC	D1	0.1	12.71	0.12	B	
Stream C-AB		0.4	5.35	0.16	A	
2027 Phase 5 No Construction						
Stream B-AC	D2	0.2	16.18	0.17	C	
Stream C-AB		0.7	5.45	0.23	A	
2027 Phase 5 With Construction						
Stream B-AC	D3	0.2	16.47	0.17	C	
Stream C-AB		0.9	5.81	0.28	A	

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	(untitled)
Location	
Site number	
Date	04/03/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TOBIN,Marie Rooney
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	Veh	Veh	perhour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.65	28.00	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)
D1	2022 Base Year	AM	ONE HOUR	07:45	09:15	15
D2	2027 Phase 5 No Construction	AM	ONE HOUR	07:45	09:15	15
D3	2027 Phase 5 With Construction	AM	ONE HOUR	07:45	09:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year, AM

Data Errors and Warnings

No errors or warnings

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	untitled	T-Junction	Two-way	Two-way	Two-way		1.06	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/Junction	1.06	A

Arms

Arms

Arm	Name	Description	Arm type
A	R108(N)		Major
B	Golf Link Road		Minor
C	R108(S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	8.80			150.0	✓	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

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.10	21	44

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/ht)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	811	0.061	0.228	0.144	0.327
B-C	858	0.068	0.249	-	-
C-B	861	0.249	0.249	-	-

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 line segment only; they may differ for subsequent line 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)
D1	2022 Base Year	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	468	100.000
B		✓	34	100.000
C		✓	479	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	20	448
	B	13	0	21
	C	431	48	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	9	0
	B	41	0	10
	C	8	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.12	12.71	0.1	B
C-AB	0.10	0.35	0.4	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	28	373	0.069	28	0.1	10.338	B
C-AB	64	739	0.067	64	0.2	5.331	A
C-A	298			298			
A-B	15			15			
A-C	337			337			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	31	362	0.087	30	0.1	11.211	B
C-AB	87	770	0.113	87	0.2	5.278	A
C-A	343			343			
A-B	18			18			
A-C	403			403			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	37	321	0.117	37	0.1	12.894	B
C-AB	127	815	0.158	127	0.4	5.242	A
C-A	400			400			
A-B	22			22			
A-C	493			493			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	37	321	0.117	37	0.1	12.710	B
C-AB	128	815	0.157	128	0.4	5.248	A
C-A	400			400			
A-B	22			22			
A-C	493			493			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	31	361	0.087	31	0.1	11.228	B
C-AB	88	770	0.114	88	0.3	5.284	A
C-A	343			343			
A-B	18			18			
A-C	403			403			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	26	373	0.069	26	0.1	10.366	B
C-AB	85	739	0.088	85	0.2	5.345	A
C-A	298			298			
A-B	15			15			
A-C	337			337			

2027 Phase 5 No Construction, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use of circulating lanes	Junction Delay (s)	Junction LOS
†	untitled	T-Junction	Two-way	Two-way	Two-way		1.35	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.35	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)
D2	2027 Phase 5 No Construction	AM	ONE HOUR	07:45	08:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	580	100.000
B		✓	42	100.000
C		✓	592	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	25	555
	B	10	0	20
	C	533	59	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	10	7
	B	48	0	12
	C	11	12	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.17	18.15	0.2	C
C-AB	0.23	5.45	0.7	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	32	305	0.094	31	0.1	11.798	B
C-AB	93	757	0.121	92	0.3	5.334	A
C-A	353			353			
A-B	19			19			
A-C	418			418			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	38	305	0.122	38	0.1	13.285	B
C-AB	131	805	0.153	131	0.4	5.330	A
C-A	401			401			
A-B	22			22			
A-C	459			459			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	45	259	0.172	45	0.2	15.140	C
C-AB	203	857	0.234	202	0.7	5.430	A
C-A	449			449			
A-B	25			25			
A-C	511			511			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	45	259	0.172	45	0.2	15.157	C
C-AB	204	855	0.235	204	0.7	5.445	A
C-A	448			448			
A-B	25			25			
A-C	511			511			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	38	308	0.123	38	0.1	13.337	B
C-AB	132	809	0.163	132	0.4	8.348	A
C-4	400			400			
A-B	22			22			
A-C	459			459			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	32	336	0.094	32	0.1	11.850	B
C-AB	94	758	0.122	96	0.3	8.358	A
C-4	352			352			
A-B	19			19			
A-C	418			418			

2027 Phase 5 With Construction, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (%)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.55	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.55	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)
D1	2027 Phase 5 With Construction	AM	ONE HOUR	07:45	08:15	30

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	581	100.000
B		✓	42	100.000
C		✓	605	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	25	558
	B	15	0	25
	C	533	72	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	10	7
	B	46	0	12
	C	11	11	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.17	18.47	0.2	C
C-AB	0.28	5.81	0.9	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	32	334	0.095	31	0.1	11.884	B
C-AB	113	370	0.147	112	0.3	5.658	A
C-A	342			342			
A-B	19			19			
A-C	419			419			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	38	306	0.124	38	0.1	13.427	B
C-AB	159	811	0.197	159	0.5	5.535	A
C-A	384			384			
A-B	22			22			
A-C	500			500			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	46	205	0.175	46	0.2	16.416	C
C-AB	246	809	0.283	245	0.9	5.785	A
C-A	420			420			
A-B	28			28			
A-C	612			612			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	46	205	0.175	46	0.2	16.473	C
C-AB	247	870	0.284	247	0.9	5.812	A
C-A	419			419			
A-B	28			28			
A-C	612			612			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-RC	38	305	0.124	38	0.1	13.484	B
C-AB	150	812	0.187	162	0.5	5.557	A
C-A	304			304			
A-B	22			22			
A-C	500			500			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-RC	32	333	0.095	32	0.1	11.933	B
C-AB	114	771	0.148	115	0.3	5.505	A
C-A	341			341			
A-B	19			19			
A-C	419			419			

Junctions 10
PICADY 10 - Priority Intersection Module
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Filename: Import of Junction 9 PM.j10

Path: Wserver4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction

Report generation date: 09/03/2023 12:26:14

»2022 Base Year, PM

»2027 Phase 5 No construction, PM

»2027 Phase 5 With construction, PM

Summary of junction performance

PM					
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
2022 Base Year					
Stream B-AC	D1	0.4	12.05	0.30	B
Stream C-AB		0.6	5.17	0.22	A
2027 Phase 5 No construction					
Stream B-AC	D2	0.7	16.14	0.41	C
Stream C-AB		1.0	5.57	0.33	A
2027 Phase 5 With construction					
Stream B-AC	D3	0.8	16.83	0.44	C
Stream C-AB		1.0	5.05	0.33	A

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	(untitled)
Location	
Site number	
Date	04/03/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TOBIN,Marie Rooney
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	Veh	Veh	perhour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.65	28.00	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)
D1	2022 Base Year	PM	ONE HOUR	15:30	17:00	15
D2	2027 Phase 5 No construction	PM	ONE HOUR	15:30	17:00	15
D3	2027 Phase 5 With construction	PM	ONE HOUR	15:30	17:00	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year, PM

Data Errors and Warnings

No errors or warnings

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	untitled	T-Junction	Two-way	Two-way	Two-way		2.02	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/Junction	2.02	A

Arms

Arms

Arm	Name	Description	Arm type
A	R108(N)		Major
B	Golf Link Road		Minor
C	R108(S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	8.80			150.0	✓	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

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.10	21	44

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Vol/Hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	811	0.061	0.228	0.144	0.327
B-C	858	0.068	0.249	-	-
C-B	861	0.249	0.249	-	-

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 line segment only; they may differ for subsequent line 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)
D1	2022 Base Year	PM	ONE HOUR	15:30	17:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	421	100.000
B		✓	114	100.000
C		✓	547	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	21	410
	B	25	0	79
	C	470	77	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	2
	B	0	0	4
	C	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.30	12.05	0.4	B
C-AB	0.22	5.17	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:30 - 15:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	98	490	0.179	95	0.2	9.098	A
C-AB	102	816	0.125	101	0.2	5.034	A
C-A	309			309			
A-B	16			15			
A-C	309			309			

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	102	457	0.224	102	0.3	10.158	B
C-AB	138	851	0.162	138	0.4	5.052	A
C-A	354			354			
A-B	19			19			
A-C	309			309			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	128	424	0.298	128	0.4	12.007	B
C-AB	201	900	0.223	200	0.6	5.148	A
C-A	402			402			
A-B	23			23			
A-C	451			451			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	128	424	0.298	128	0.4	12.048	B
C-AB	201	900	0.223	201	0.6	5.188	A
C-A	401			401			
A-B	23			23			
A-C	451			451			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	102	457	0.224	102	0.3	10.188	B
C-AB	139	851	0.163	139	0.4	5.080	A
C-A	353			353			
A-B	19			19			
A-C	309			309			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	86	490	0.179	86	0.2	9.152	A
C-AB	103	817	0.126	103	0.3	5.055	A
C-A	309			309			
A-B	18			18			
A-C	309			309			

2027 Phase 5 No construction , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use of circulating lanes	Junction Delay (s)	Junction LOS
†	untitled	T-Junction	Two-way	Two-way	Two-way		2.87	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.87	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)
D2	2027 Phase 5 No construction	PM	ONE HOUR	15:30	17:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	533	100.000
B		✓	140	100.000
C		✓	577	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	20	507
	B	43	0	97
	C	582	96	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	3
	B	0	0	4
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.41	18.14	0.7	C
C-AB	0.33	5.57	1.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:30 - 15:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	105	401	0.234	104	0.3	10.355	B
C-AB	146	805	0.171	145	0.4	5.052	A
C-A	383			383			
A-B	20			20			
A-C	382			382			

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	126	421	0.299	125	0.4	12.104	B
C-AB	205	901	0.228	204	0.6	5.175	A
C-A	404			404			
A-B	25			25			
A-C	458			458			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	164	377	0.409	163	0.7	15.983	C
C-AB	314	965	0.326	312	1.0	5.528	A
C-A	431			431			
A-B	29			29			
A-C	558			558			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	164	377	0.409	164	0.7	15.137	C
C-AB	315	965	0.326	315	1.0	5.555	A
C-A	430			430			
A-B	29			29			
A-C	558			558			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	128	421	0.299	127	0.4	12.298	B
C-AB	208	902	0.229	208	0.6	8.228	A
C-4	403			403			
A-B	23			23			
A-C	458			458			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	105	450	0.234	105	0.3	10.455	B
C-AB	148	857	0.172	148	0.4	8.105	A
C-4	382			382			
A-B	20			20			
A-C	382			382			

2027 Phase 5 With construction, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (%)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		2.92	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.92	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)
D1	2027 Phase 5 With construction	PM	ONE HOUR	15:00	17:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	533	100.000
B		✓	123	100.000
C		✓	677	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	28	307
	B	43	0	110
	C	582	95	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	3
	B	0	0	5
	C	3	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.44	16.63	0.6	C
C-AB	0.33	5.66	1.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:30 - 15:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	115	454	0.254	114	0.3	10.542	B
C-AB	148	348	0.175	145	0.4	5.130	A
C-A	352			352			
A-B	29			29			
A-C	382			382			

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	138	425	0.324	137	0.5	12.478	B
C-AB	207	393	0.232	207	0.6	5.252	A
C-A	401			401			
A-B	23			23			
A-C	456			456			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	108	382	0.440	107	0.8	10.638	C
C-AB	318	909	0.332	317	1.0	5.625	A
C-A	427			427			
A-B	29			29			
A-C	558			558			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	108	382	0.441	106	0.8	10.827	C
C-AB	319	900	0.333	319	1.0	5.558	A
C-A	425			425			
A-B	29			29			
A-C	558			558			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-RC	138	425	0.324	138	0.5	12.037	B
C-AB	209	395	0.233	210	0.6	5.294	A
C-A	400			400			
A-B	23			23			
A-C	450			450			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-RC	115	454	0.254	115	0.3	10.670	B
C-AB	149	349	0.176	150	0.4	5.168	A
C-A	361			361			
A-B	29			29			
A-C	362			362			

Junctions 10
ARCADY 10 - Roundabout Module
Version: 10.0.3.1598 © Copyright TRL Software Limited, 2021
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Filename: Import of Junction 10 AM.j10

Path: Wserver4-dub\gdrp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction

Report generation date: 09/03/2023 12:26:57

- »2022 Base Year , AM
- »2027 No Phase 5, AM
- »2027 With Phase 5, AM

Summary of junction performance

AM					
	Set ID	Queue (Veh)	Delay (min)	RFC	LOS
2022 Base Year					
Arm A	D1	18.1	1.45	0.50	F
Arm B		33.9	2.44	1.10	F
Arm C		61.7	6.01	1.15	F
2027 No Phase 5					
Arm A	D2	16.5	1.83	1.00	F
Arm B		37.9	2.75	1.11	F
Arm C		69.5	7.15	1.15	F
2027 With Phase 5					
Arm A	D3	18.5	1.84	1.00	F
Arm B		39.5	2.81	1.11	F
Arm C		63.9	6.66	1.15	F

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	Junction 10 AM
Location	Dublin
Site number	
Date	05/07/2018
Version	
Status	On-going
Identifier	
Client	Inch Water
Jobnumber	7000
Enumerator	TRLLIMITED\maria@onay
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	Veh	Veh	perhour	min	-/min	perlin

Analysis Options

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queuing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (min)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
JUNCTIONS	9.00						0.85	0.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	DIRECT	07:45	10:15	150	15	✓
D2	2027 No Phase 5	AM	DIRECT	07:45	10:15	150	15	✓
D3	2027 With Phase 5	AM	DIRECT	07:45	10:15	150	15	✓

Analysis Set Details

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

2022 Base Year , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (min)	Junction LOS
1	(unfiled)	Mini-roundabout		A, B, C	3.28	F

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (min)	Network LOS
Left	Normal/unknown	Normal/unknown		3.28	F

Arms

Arms

Arm	Name	Description
A	R108 (S)	
B	Station Road	
C	R108 (N)	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Keelbed central island
A	3.00	3.00	4.00	9.8	17.90	14.30	0.0	
B	5.10	2.00	6.00	10.0	16.70	13.70	0.0	✓
C	3.80	3.80	4.70	10.0	14.50	10.30	2.0	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.030	894
B	0.052	1087
C	0.014	903

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 period length (min)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	DIRECT	07:45	10:15	150	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	Scaling Factor (%)
A		DIRECT		100.000
B		DIRECT		100.000
C		DIRECT		100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	281	211
	B	106	0	82
	C	309	185	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	11
	B	0	0	0
	C	7	5	50

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.98	1.45	18.1	F	530	1325
B	1.10	2.44	33.5	F	962	958
C	1.18	6.51	61.7	F	480	1151

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	374	93	131	760	0.498	370	570	0.0	1.0	0.150	A
B	512	128	159	304	0.548	506	342	0.0	1.2	0.138	A
C	353	98	367	666	0.530	349	309	0.0	1.1	0.187	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	478	120	142	743	0.544	470	566	1.0	1.7	0.222	B
B	512	153	204	306	0.670	508	412	1.2	2.0	0.198	B
C	380	95	429	629	0.683	378	384	1.1	1.6	0.237	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	547	137	170	728	0.754	543	798	1.7	2.8	0.320	C
B	740	185	233	891	0.831	731	480	2.0	4.3	0.355	C
C	480	115	515	588	0.788	453	448	1.5	3.3	0.431	D

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	514	153	209	701	0.872	503	950	2.8	5.5	0.553	D
B	784	190	259	878	0.885	775	554	4.3	6.7	0.537	D
C	871	188	545	570	1.177	559	488	3.3	31.2	2.182	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	591	173	203	706	0.951	551	935	5.5	12.2	1.030	F
B	943	238	285	981	1.066	945	583	6.7	31.1	1.587	F
C	540	180	595	544	1.178	543	535	31.3	55.8	5.042	F

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	594	173	203	706	0.954	578	933	12.2	15.1	1.447	F
B	855	214	291	957	0.997	944	590	21.1	33.9	2.438	F
C	587	142	594	545	1.041	543	541	55.8	81.7	6.810	F

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	513	153	208	702	0.872	543	905	16.1	5.8	1.094	F
B	874	188	278	866	0.776	793	575	33.5	4.1	1.188	F
C	498	124	358	583	0.861	554	510	51.7	47.2	5.891	F

09:30 - 09:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	548	137	218	698	0.788	588	770	8.6	4.1	0.510	D
B	588	142	243	685	0.640	575	542	4.1	1.8	0.196	B
C	402	101	405	642	0.827	583	413	47.2	1.5	2.048	F

09:45 - 10:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	385	98	122	758	0.558	397	548	4.1	1.1	0.173	B
B	487	122	178	827	0.526	490	348	1.8	1.1	0.138	A
C	321	83	345	673	0.477	325	315	1.5	0.9	0.175	B

10:00 - 10:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	358	89	117	758	0.488	358	511	1.1	0.9	0.150	A
B	447	112	153	857	0.477	446	321	1.1	0.9	0.123	A
C	313	78	315	688	0.454	313	285	0.9	0.8	0.100	A



2027 No Phase 5, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (min)	Junction LOS
1	(unfilled)	Mini-roundabout		A, B, C	1.55	F

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (min)	Network LOS
Left	Normal/unknown	Normal/unknown		1.55	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:MM)	Finish time (HH:MM)	Time period length (min)	Time segment length (min)	Run automatically
D2	2027 No Phase 5	All	DIRECT	07:45	10:15	150	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	Scaling Factor (%)
A		DIRECT		100.000
B		DIRECT		100.000
C		DIRECT		100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	349	281
	B	242	0	101
	C	381	229	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	5	13
	B	7	0	7
	C	8	5	54

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	1.00	1.53	18.6	F	530	1325
B	1.11	2.70	37.9	F	662	1666
C	1.15	7.15	66.4	F	480	1151

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	374	93	131	738	0.000	370	570	0.0	1.0	0.161	A
B	512	128	158	924	0.050	098	943	0.0	1.2	0.143	A
C	353	88	358	558	0.537	348	308	0.0	1.1	0.192	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	478	120	142	732	0.054	470	500	1.0	1.8	0.231	B
B	513	103	201	897	0.083	096	414	1.2	2.1	0.200	B
C	380	95	430	521	0.611	378	383	1.1	1.5	0.240	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	547	137	170	710	0.760	542	798	1.8	3.0	0.338	C
B	740	185	232	881	0.841	730	480	2.1	4.6	0.375	C
C	460	110	515	577	0.797	453	447	1.5	3.4	0.450	D

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	614	153	207	682	0.887	602	880	3.0	6.0	0.693	E
B	784	195	268	666	0.900	774	501	4.6	7.3	0.579	D
C	671	168	546	662	1.194	652	485	3.4	33.2	2.390	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	691	173	202	686	0.894	661	927	6.0	13.5	1.127	F
B	843	235	283	661	1.100	838	580	7.3	33.5	1.795	F
C	640	160	591	638	1.168	637	530	33.2	48.8	6.382	F

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (sec)	Unsignalised level of service
A	594	173	202	596	0.997	574	925	13.5	18.5	1.532	F
B	555	214	258	646	1.068	638	587	33.5	37.9	2.793	F
C	587	142	591	538	1.053	537	535	58.9	68.5	7.152	F

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (sec)	Unsignalised level of service
A	513	153	203	594	0.982	547	927	18.5	9.8	1.297	F
B	574	168	277	654	0.788	607	574	37.8	4.7	1.495	F
C	495	124	569	550	0.903	542	514	68.5	55.1	6.576	F

09:30 - 09:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (sec)	Unsignalised level of service
A	545	137	230	578	0.909	559	790	9.8	4.8	0.699	E
B	586	142	243	674	0.649	570	555	4.7	1.9	0.200	B
C	402	101	408	553	0.658	613	413	55.1	2.4	2.940	F

09:45 - 10:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (sec)	Unsignalised level of service
A	385	95	123	744	0.517	399	550	4.8	1.1	0.181	B
B	487	122	171	818	0.532	490	351	1.9	1.2	0.142	A
C	521	93	348	664	0.480	527	315	2.4	1.0	0.181	B

10:00 - 10:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (sec)	Unsignalised level of service
A	355	89	117	748	0.475	355	511	1.1	0.3	0.154	A
B	447	112	153	827	0.482	446	321	1.2	0.5	0.125	A
C	513	78	318	660	0.480	513	284	1.0	0.5	0.164	A

2027 With Phase 5, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (min)	Junction LOS
1	(unfitted)	Mini-roundabout		A, B, C	3.55	F

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (min)	Network LOS
Left	Normal/unknown	Normal/unknown		3.55	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2027 With Phase 5	AM	DIRECT	07:45	10:15	150	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	Scaling Factor (%)
A		DIRECT		100.000
B		DIRECT		100.000
C		DIRECT		100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	300	201
	B	242	0	102
	C	393	230	2

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	5	13
	B	7	0	8
	C	7	5	54

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	1.00	1.54	18.5	F	530	1325
B	1.11	2.81	30.6	F	562	1555
C	1.19	6.98	63.9	F	460	1151

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	374	53	130	740	0.505	370	379	0.0	1.0	0.161	A
B	512	128	159	820	0.557	507	340	0.0	1.2	0.144	A
C	303	88	307	601	0.530	349	310	0.0	1.1	0.190	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	479	120	141	733	0.653	475	500	1.0	1.8	0.230	B
B	613	153	205	894	0.680	609	412	1.2	2.1	0.208	B
C	380	95	429	624	0.609	373	385	1.1	1.5	0.242	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	547	137	158	710	0.700	542	788	1.8	3.0	0.337	C
B	740	180	233	877	0.844	730	477	2.1	4.7	0.383	C
C	460	115	514	680	0.793	453	450	1.5	3.4	0.440	D

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	614	153	200	692	0.887	602	382	3.0	6.0	0.693	E
B	784	190	269	802	0.910	773	549	4.7	7.5	0.690	E
C	671	168	544	660	1.182	654	488	3.4	32.5	2.246	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	691	173	201	690	0.991	691	327	6.0	13.5	1.130	F
B	843	230	284	847	1.113	835	577	7.5	34.5	1.754	F
C	640	160	557	642	1.180	641	532	32.5	57.2	5.212	F

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	594	173	201	590	0.998	574	927	13.5	18.5	1.037	F
B	855	214	290	844	1.013	835	585	34.5	39.5	2.812	F
C	557	142	557	542	1.045	540	538	57.2	53.9	6.875	F

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	513	153	201	590	0.882	545	912	18.5	9.7	1.297	F
B	574	168	279	850	0.792	812	570	39.5	5.0	1.530	F
C	495	124	571	551	0.901	542	520	53.9	52.4	6.293	F

09:30 - 09:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	548	137	224	581	0.805	558	785	9.7	4.7	0.595	B
B	555	142	245	870	0.551	579	547	5.0	1.9	0.214	B
C	492	100	407	535	0.532	593	417	52.4	2.2	2.597	F

09:45 - 10:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	385	95	121	745	0.515	395	550	4.7	1.1	0.180	B
B	457	122	172	813	0.534	490	348	1.9	1.2	0.143	A
C	321	93	345	657	0.481	325	317	2.2	0.9	0.175	B

10:00 - 10:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	355	89	115	748	0.475	355	512	1.1	0.8	0.154	A
B	447	112	153	823	0.484	445	318	1.2	1.0	0.125	A
C	313	78	315	653	0.455	313	285	0.9	0.9	0.163	A

Junctions 10
ARCADY 10 - Roundabout Module
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Filename: Import of Junction 10 PM.j10

Path: Wserver4-dub\gdrp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction

Report generation date: 09/03/2023 12:27:34

- »2022 Base Year , PM
- »2027 No Phase 5, PM
- »2027 With Phase 5, PM

Summary of junction performance

PM					
	Set ID	Queue (Veh)	Delay (min)	RFC	LOS
2022 Base Year					
Arm A	D1	10.8	1.00	0.54	F
Arm B		19.2	1.23	1.08	F
Arm C		80.8	3.74	1.10	F
2027 No Phase 5					
Arm A	D2	11.1	1.00	0.95	F
Arm B		19.8	1.25	1.03	F
Arm C		38.2	3.90	1.11	F
2027 With Phase 5					
Arm A	D3	11.8	1.00	0.95	F
Arm B		20.6	1.35	1.04	F
Arm C		37.9	3.85	1.10	F

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	Junction 10 AM
Location	Dublin
Site number	
Date	05/07/2010
Version	
Status	On-going
Identifier	
Client	Inch Water
Jobnumber	7000
Enumerator	TRLLIMITED\maria@onay
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	Veh	Veh	perhour	min	-/min	per/min

Analysis Options

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queuing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (min)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
JUNCTIONS	9.00						0.85	0.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2022 Base Year	PM	DIRECT	17:15	19:45	150	15	✓
D2	2027 No Phase 5	PM	DIRECT	17:15	19:45	150	15	✓
D3	2027 With Phase 5	PM	DIRECT	17:15	19:45	150	15	✓

Analysis Set Details

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

2022 Base Year , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (min)	Junction LOS
1	(unfiled)	Mini-roundabout		A, B, C	1.88	F

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (min)	Network LOS
Left	Normal/unknown	Normal/unknown		1.88	F

Arms

Arms

Arm	Name	Description
A	R108 (S)	
B	Station Road	
C	R108 (N)	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Keelbed central island
A	3.00	3.00	4.00	9.8	17.90	14.30	0.0	
B	5.10	2.00	6.00	10.0	16.70	13.70	0.0	✓
C	3.80	3.80	4.70	10.0	14.50	10.30	2.0	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.030	894
B	0.052	1087
C	0.014	903

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 period length (min)	Time segment length (min)	Run automatically
D1	2022 Base Year	PM	DIRECT	17:15	18:45	150	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	Scaling Factor (%)
A		DIRECT		100.000
B		DIRECT		100.000
C		DIRECT		100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	1	267	189
	B	307	0	150
	C	237	137	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	3	4
	B	0	0	1
	C	4	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.54	1.00	10.8	F	530	1325
B	1.03	1.23	19.2	F	862	3568
C	1.10	3.74	38.8	F	480	1151

Main Results for each time segment

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	374	93	128	780	0.470	370	564	0.0	0.9	0.143	A
B	512	128	159	392	0.610	506	340	0.0	1.0	0.123	A
C	353	88	342	708	0.496	350	326	0.0	1.0	0.160	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	478	120	139	779	0.610	470	551	0.9	1.5	0.190	B
B	512	153	204	367	0.534	510	411	1.0	1.7	0.167	B
C	380	95	411	674	0.563	378	403	1.0	1.3	0.202	B

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	547	137	167	762	0.718	544	753	1.5	2.4	0.271	C
B	740	185	233	950	0.779	734	478	1.7	3.3	0.270	C
C	480	115	494	832	0.720	455	473	1.3	2.5	0.330	C

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	514	153	218	730	0.841	505	802	2.4	4.5	0.451	D
B	784	195	259	935	0.838	779	554	3.3	4.6	0.358	C
C	871	188	524	817	1.067	598	514	2.5	21.2	1.490	F

18:15 - 18:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	591	173	211	734	0.941	573	801	4.5	9.0	0.797	E
B	943	238	288	919	1.027	885	598	4.6	19.2	1.040	F
C	540	160	596	582	1.100	577	577	21.2	38.8	3.289	F

18:30 - 18:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	594	173	219	735	0.942	585	942	8.0	10.8	1.091	F
B	855	214	294	915	0.934	981	802	19.2	17.8	1.231	F
C	587	142	580	590	0.982	572	575	38.8	35.5	3.737	F

18:45 - 19:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	513	153	225	725	0.844	531	884	10.8	6.3	0.697	E
B	874	166	279	925	0.725	734	388	17.8	2.8	0.392	C
C	498	124	494	832	0.785	615	510	35.5	5.8	2.175	F

19:00 - 19:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	548	137	154	770	0.712	560	651	6.3	2.6	0.390	C
B	588	142	241	945	0.596	572	478	2.6	1.5	0.163	A
C	402	100	385	867	0.585	415	428	5.8	1.5	0.238	B

19:15 - 19:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	385	98	119	792	0.468	391	535	2.6	1.0	0.152	A
B	487	122	168	988	0.493	489	342	1.5	1.0	0.121	A
C	321	83	350	715	0.445	324	327	1.5	0.8	0.154	A

19:30 - 19:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	358	89	115	794	0.448	358	500	1.0	0.8	0.137	A
B	447	112	153	998	0.448	446	318	1.0	0.8	0.110	A
C	313	78	301	725	0.428	313	285	0.8	0.8	0.144	A



2027 No Phase 5, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (min)	Junction LOS
1	(unfilled)	Mini-roundabout		A, B, C	1.94	F

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (min)	Network LOS
Left	Normal/unknown	Normal/unknown		1.94	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:MM)	Finish time (HH:MM)	Time period length (min)	Time segment length (min)	Run automatically
D2	2027 No Phase 5	PM	DIRECT	17:15	18:45	150	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	Scaling Factor (%)
A		DIRECT		100.000
B		DIRECT		100.000
C		DIRECT		100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	330	245
	B	381	0	185
	C	293	189	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	3	5
	B	0	0	2
	C	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.94	1.03	11.1	F	530	1325
B	1.03	1.29	19.8	F	662	1666
C	1.11	3.92	38.2	F	480	1151

Main Results for each time segment

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	374	93	128	783	0.478	370	504	0.0	0.9	0.144	A
B	512	128	158	968	0.518	508	940	0.0	1.1	0.124	A
C	353	88	342	704	0.502	348	324	0.0	1.0	0.167	B

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	478	120	139	770	0.517	470	551	0.9	1.0	0.196	B
B	513	153	201	968	0.630	510	412	1.1	1.7	0.165	B
C	380	95	411	670	0.667	378	402	1.0	1.3	0.290	B

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	547	137	107	758	0.721	544	783	1.0	2.4	0.274	C
B	740	185	232	947	0.782	734	479	1.7	3.3	0.274	C
C	460	110	494	529	0.732	455	472	1.3	2.5	0.330	C

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	614	153	217	728	0.643	600	900	2.4	4.0	0.458	D
B	784	195	268	931	0.642	778	564	3.3	4.7	0.377	D
C	671	168	524	614	1.080	593	512	2.6	21.8	1.634	F

18:15 - 18:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	691	173	210	732	0.944	673	958	4.6	9.2	0.893	E
B	843	235	287	915	1.031	833	595	4.7	19.5	1.089	F
C	640	160	594	579	1.100	675	575	21.8	38.2	3.385	F

18:30 - 18:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (sec)	Unsignalised level of service
A	594	173	208	733	0.945	585	938	8.2	11.1	1.028	F
B	555	214	282	812	0.838	559	602	19.8	18.8	1.288	F
C	587	142	578	587	0.987	589	573	38.2	37.7	3.917	F

18:45 - 19:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (sec)	Unsignalised level of service
A	513	153	224	724	0.845	531	584	11.1	5.4	0.719	E
B	574	168	259	825	0.723	737	585	18.8	2.9	0.415	D
C	495	124	495	527	0.791	511	510	37.7	6.9	2.418	F

19:00 - 19:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (sec)	Unsignalised level of service
A	545	137	155	704	0.718	553	559	5.4	2.7	0.318	C
B	586	142	240	842	0.651	572	481	2.9	1.5	0.184	A
C	432	101	385	563	0.585	432	427	8.9	1.5	0.285	D

19:15 - 19:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (sec)	Unsignalised level of service
A	385	95	118	768	0.488	392	535	2.7	1.0	0.154	A
B	487	122	167	804	0.495	489	343	1.5	1.0	0.122	A
C	521	83	329	711	0.452	524	327	1.5	0.8	0.158	A

19:30 - 19:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (sec)	Unsignalised level of service
A	355	89	114	781	0.450	355	500	1.0	0.8	0.138	A
B	447	112	152	852	0.450	446	315	1.0	0.6	0.110	A
C	513	78	305	725	0.431	513	298	0.8	0.8	0.148	A

2027 With Phase 5, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (min)	Junction LOS
1	(unfitted)	Mini-roundabout		A, B, C	1.98	F

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (min)	Network LOS
Left	Normal/unknown	Normal/unknown		1.98	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2027 With Phase 5	PM	DIRECT	17:15	19:45	150	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	Scaling Factor (%)
A		DIRECT		100.000
B		DIRECT		100.000
C		DIRECT		100.000

Origin-Destination Data

Demand (Veh/hrs)

		To		
		A	B	C
From	A	0	330	207
	B	381	0	186
	C	280	170	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	4	5
	B	0	0	2
	C	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.95	1.09	11.8	F	530	1325
B	1.04	1.35	20.6	F	562	1555
C	1.10	3.89	37.9	F	460	1151

Main Results for each time segment

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	374	53	108	778	0.481	370	583	0.0	0.5	0.148	A
B	512	128	153	987	0.519	508	330	0.0	1.1	0.124	A
C	303	88	342	704	0.502	349	328	0.0	1.0	0.107	B

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	479	120	135	771	0.621	475	550	0.9	1.6	0.201	B
B	613	153	206	900	0.638	610	407	1.1	1.7	0.170	B
C	380	95	411	670	0.607	379	408	1.0	1.3	0.200	B

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	547	137	107	754	0.720	544	782	1.6	2.5	0.280	C
B	740	180	238	943	0.780	734	473	1.7	3.4	0.278	C
C	460	115	494	629	0.732	460	478	1.3	2.5	0.330	C

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	614	153	218	729	0.848	600	900	2.5	4.7	0.472	D
B	784	190	260	827	0.840	778	558	3.4	4.8	0.380	C
C	671	168	524	614	1.092	593	519	2.5	21.8	1.533	F

18:15 - 18:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	691	173	211	727	0.950	671	957	4.7	9.7	0.837	F
B	843	230	294	811	1.035	820	589	4.8	20.5	1.101	F
C	640	160	592	680	1.102	575	562	21.9	37.9	1.350	F

18:30 - 18:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	694	173	209	726	0.952	690	938	9.7	11.8	1.087	F
B	855	214	300	907	0.942	858	594	20.6	19.9	1.390	F
C	667	142	577	687	0.985	669	580	27.9	27.5	1.887	F

18:45 - 19:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	613	153	224	720	0.951	635	885	11.8	6.8	0.707	E
B	674	168	277	820	0.732	742	580	19.9	2.9	0.440	D
C	496	124	499	626	0.792	610	519	27.3	8.9	2.499	F

19:00 - 19:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	548	137	169	769	0.722	664	658	6.8	2.8	0.329	C
B	666	142	247	838	0.604	672	476	2.9	1.6	0.166	A
C	492	101	385	663	0.589	432	434	9.9	1.8	0.266	C

19:15 - 19:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	386	96	119	784	0.491	392	534	2.8	1.0	0.156	A
B	487	122	172	881	0.497	489	338	1.6	1.0	0.122	A
C	321	90	329	711	0.462	324	331	1.5	0.8	0.156	A

19:30 - 19:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	356	89	115	780	0.452	356	498	1.0	0.8	0.140	A
B	447	112	156	880	0.451	448	316	1.0	0.8	0.111	A
C	313	78	301	725	0.431	313	302	0.6	0.8	0.140	A

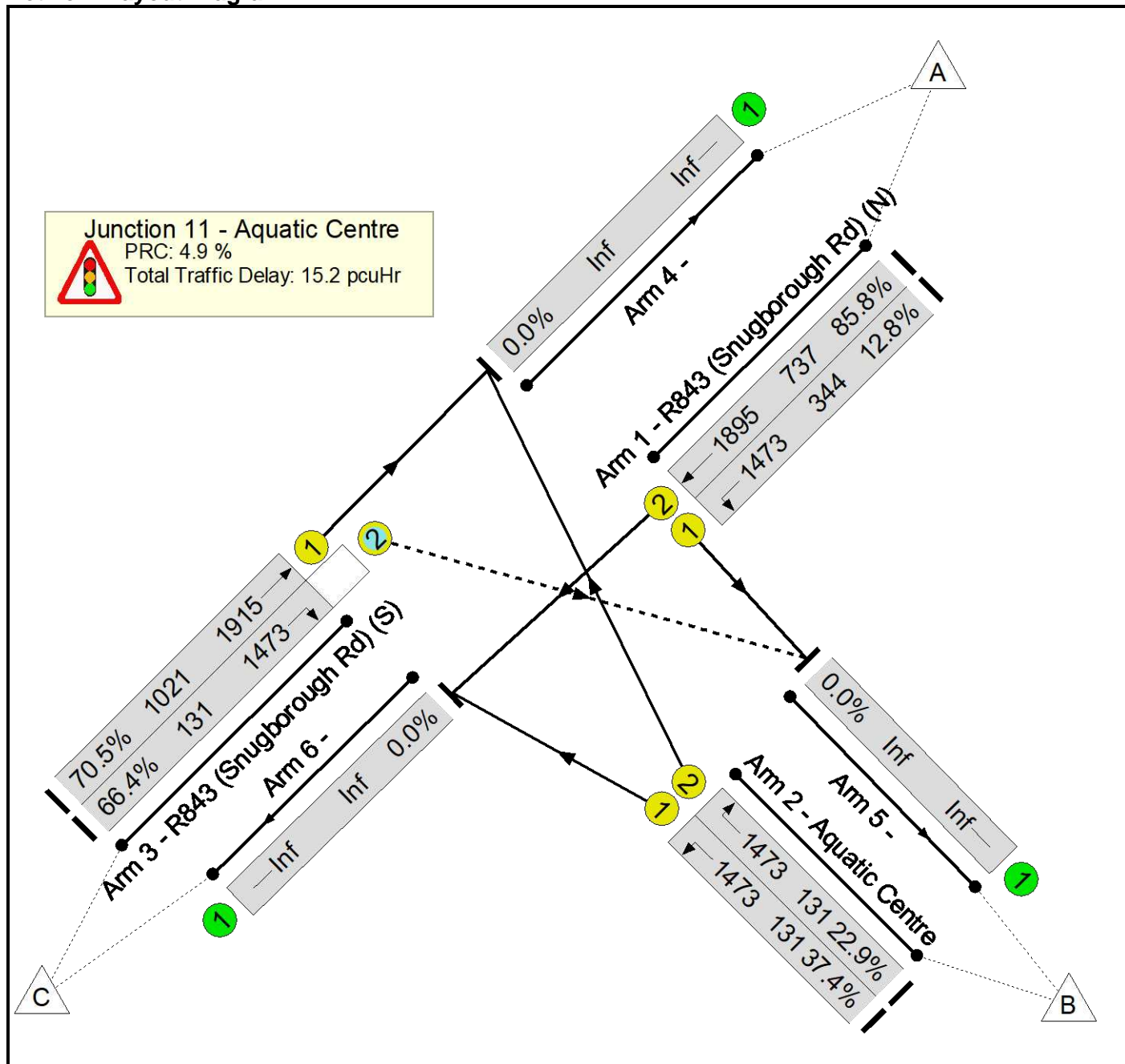
Basic Results Summary
Basic Results Summary

User and Project Details

Project:	Greater Dublin Drainage Project Addendum
Title:	
Location:	
Client:	Irish Water
Site Ref(s):	R843 Snugborough Road / National Aquatic Centre (NAC) signalised priority junction
Additional detail:	
File name:	7556 Junction 11.lsg3x
Author:	Gabriela Iha
Company:	TOBIN
Address:	Block 10-4, Blanchardstown Corporate Park, Dublin 15

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

Network Layout Diagram

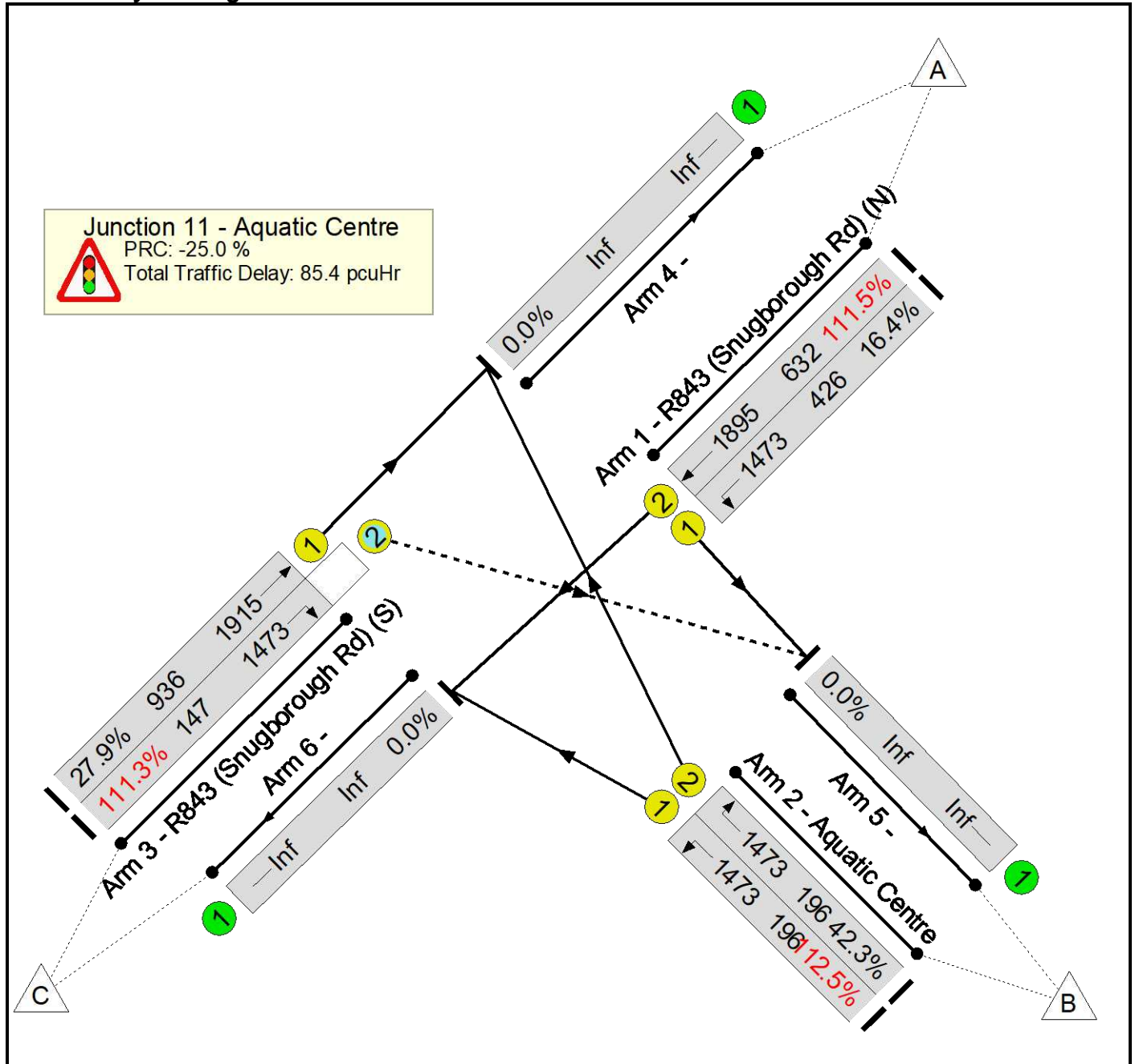


Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item	
Network	-	-	-		-	-	-	-	-	-	85.8%	0	85	2	15.2	-	-	Network	
Junction 11 - Aquatic Centre	-	-	-		-	-	-	-	-	-	85.8%	0	85	2	15.2	-	-	Junction 11 - Aquatic Centre	
1/1	R843 (Snugborough Rd) (N) Left	U	D		1	20	-	44	1473	344	12.8%	-	-	-	0.4	33.3	0.9	1/1	
1/2	R843 (Snugborough Rd) (N) Ahead	U	A		1	34	-	632	1895	737	85.8%	-	-	-	7.3	41.5	17.3	1/2	
2/1	Aquatic Centre Left	U	E		1	7	-	49	1473	131	37.4%	-	-	-	0.8	60.5	1.4	2/1	
2/2	Aquatic Centre Right	U	E		1	7	-	30	1473	131	22.9%	-	-	-	0.5	56.0	0.8	2/2	
3/1	R843 (Snugborough Rd) (S) Ahead	U	B		1	47	-	720	1915	1021	70.5%	-	-	-	4.3	21.6	14.6	3/1	
3/2	R843 (Snugborough Rd) (S) Right	O	C		1	7	-	87	1473	131	66.4%	0	85	2	1.9	79.0	3.1	3/2	
		C1		PRC for Signalled Lanes (%):			4.9		Total Delay for Signalled Lanes (pcuHr):			15.21		Cycle Time (s):		90			
		PRC Over All Lanes (%):			4.9		Total Delay Over All Lanes(pcuHr):			15.21									

Network Layout Diagram

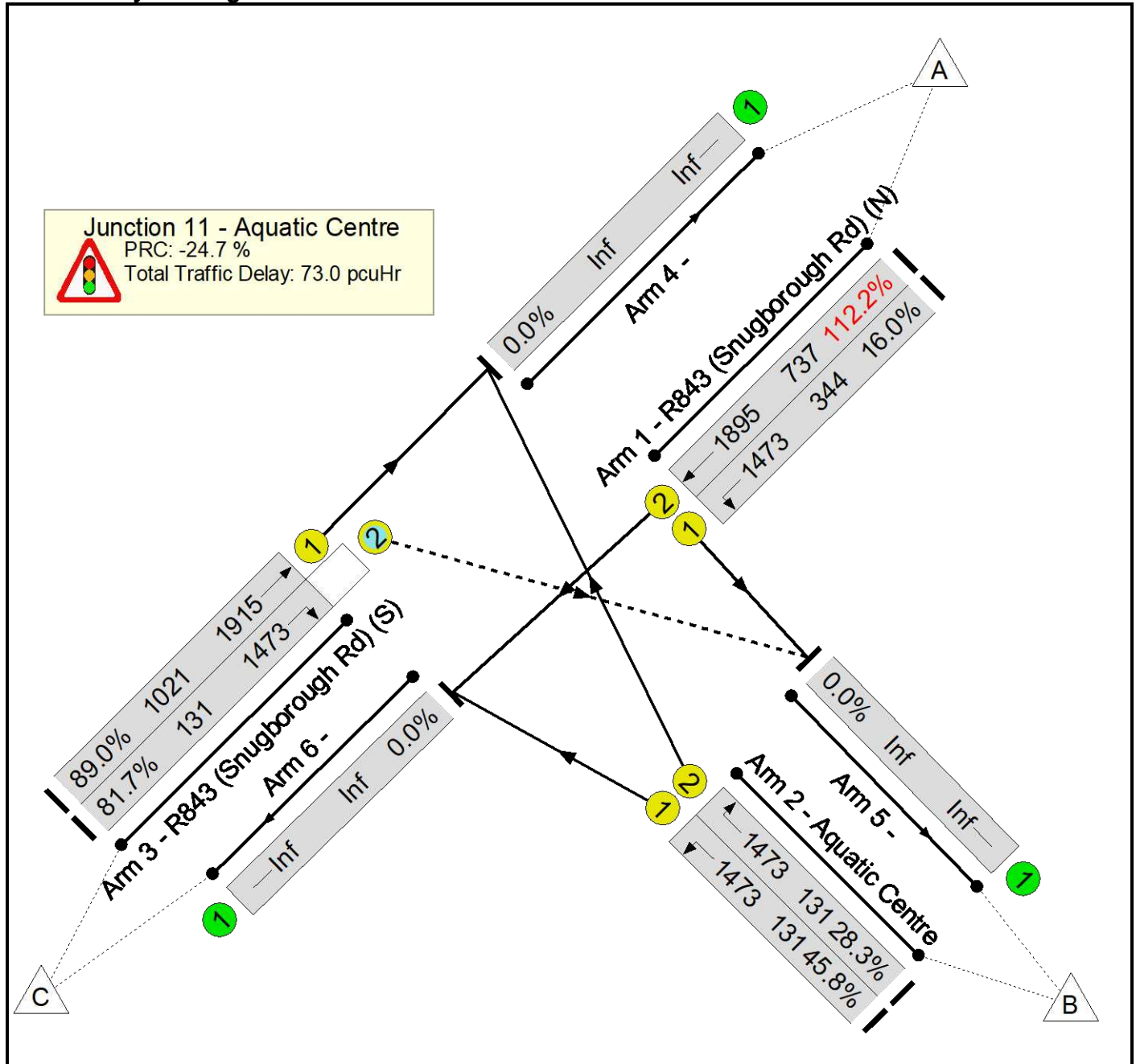


Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item	
Network	-	-	-		-	-	-	-	-	-	112.5%	0	115	33	85.4	-	-	Network	
Junction 11 - Aquatic Centre	-	-	-		-	-	-	-	-	-	112.5%	0	115	33	85.4	-	-	Junction 11 - Aquatic Centre	
1/1	R843 (Snugborough Rd) (N) Left	U	D		1	25	-	70	1473	426	16.4%	-	-	-	0.6	29.0	1.4	1/1	
1/2	R843 (Snugborough Rd) (N) Ahead	U	A		1	29	-	704	1895	632	111.5%	-	-	-	49.3	252.3	59.9	1/2	
2/1	Aquatic Centre Left	U	E		1	11	-	221	1473	196	112.5%	-	-	-	18.9	308.3	21.9	2/1	
2/2	Aquatic Centre Right	U	E		1	11	-	83	1473	196	42.3%	-	-	-	1.2	51.6	2.3	2/2	
3/1	R843 (Snugborough Rd) (S) Ahead	U	B		1	43	-	261	1915	936	27.9%	-	-	-	1.2	16.3	4.0	3/1	
3/2	R843 (Snugborough Rd) (S) Right	O	C		1	8	-	164	1473	147	111.3%	0	115	33	14.2	312.5	16.3	3/2	
C1					PRC for Signalled Lanes (%):			-25.0	Total Delay for Signalled Lanes (pcuHr):				85.44	Cycle Time (s):		90			
					PRC Over All Lanes (%):			-25.0	Total Delay Over All Lanes(pcuHr):				85.44						

Network Layout Diagram

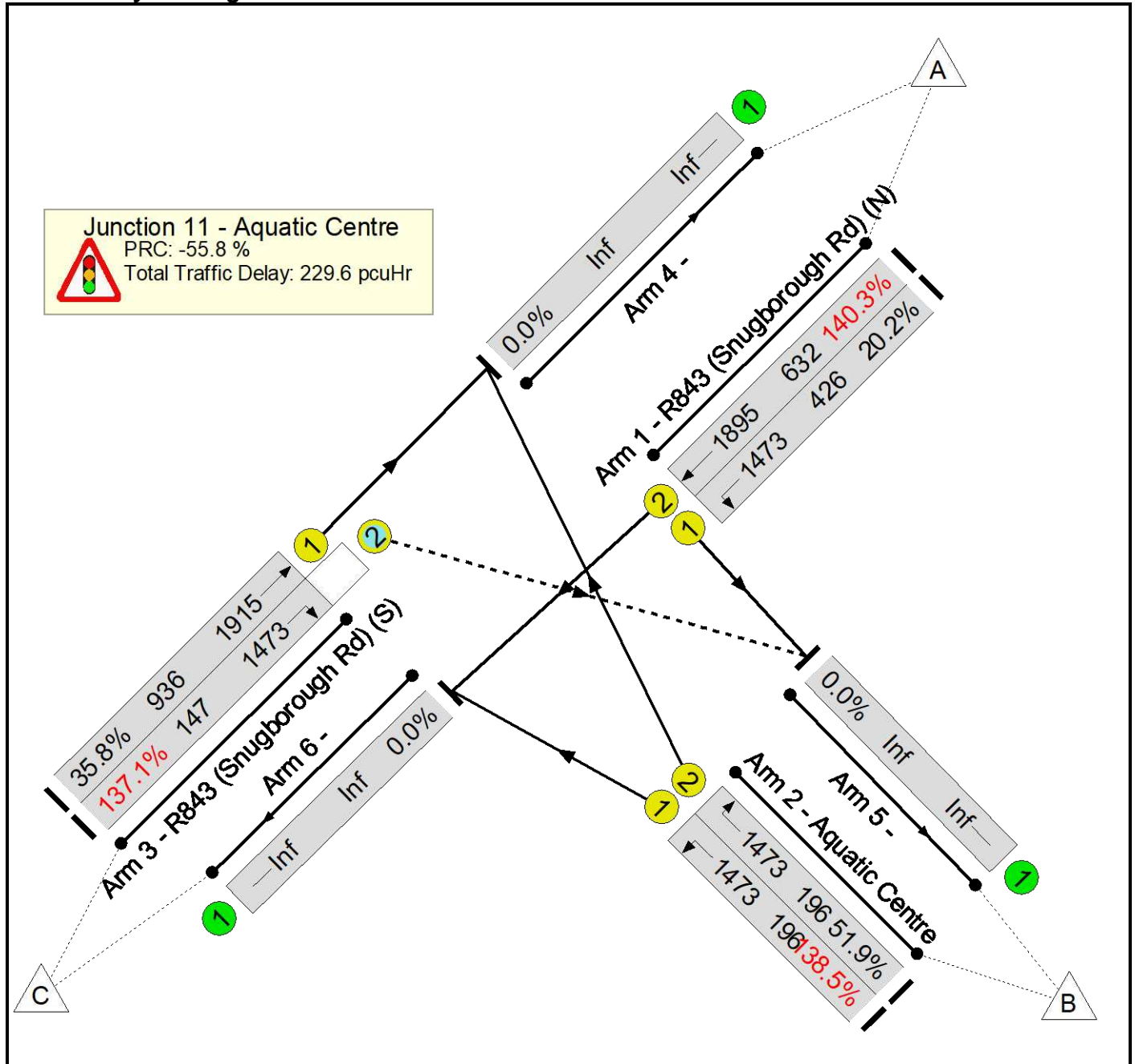


Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item
Network	-	-	-		-	-	-	-	-	-	112.2%	0	98	9	73.0	-	-	Network
Junction 11 - Aquatic Centre	-	-	-		-	-	-	-	-	-	112.2%	0	98	9	73.0	-	-	Junction 11 - Aquatic Centre
1/1	R843 (Snugborough Rd) (N) Left	U	D		1	20	-	55	1473	344	16.0%	-	-	-	0.5	33.7	1.2	1/1
1/2	R843 (Snugborough Rd) (N) Ahead	U	A		1	34	-	827	1895	737	112.2%	-	-	-	59.2	257.6	72.2	1/2
2/1	Aquatic Centre Left	U	E		1	7	-	60	1473	131	45.8%	-	-	-	1.1	64.1	1.8	2/1
2/2	Aquatic Centre Right	U	E		1	7	-	37	1473	131	28.3%	-	-	-	0.6	57.4	1.1	2/2
3/1	R843 (Snugborough Rd) (S) Ahead	U	B		1	47	-	909	1915	1021	89.0%	-	-	-	8.5	33.7	23.7	3/1
3/2	R843 (Snugborough Rd) (S) Right	O	C		1	7	-	107	1473	131	81.7%	0	98	9	3.1	105.1	4.5	3/2
C1					PRC for Signalled Lanes (%): -24.7			Total Delay for Signalled Lanes (pcuHr): 72.97			Cycle Time (s): 90							
					PRC Over All Lanes (%): -24.7			Total Delay Over All Lanes(pcuHr): 72.97										

Network Layout Diagram

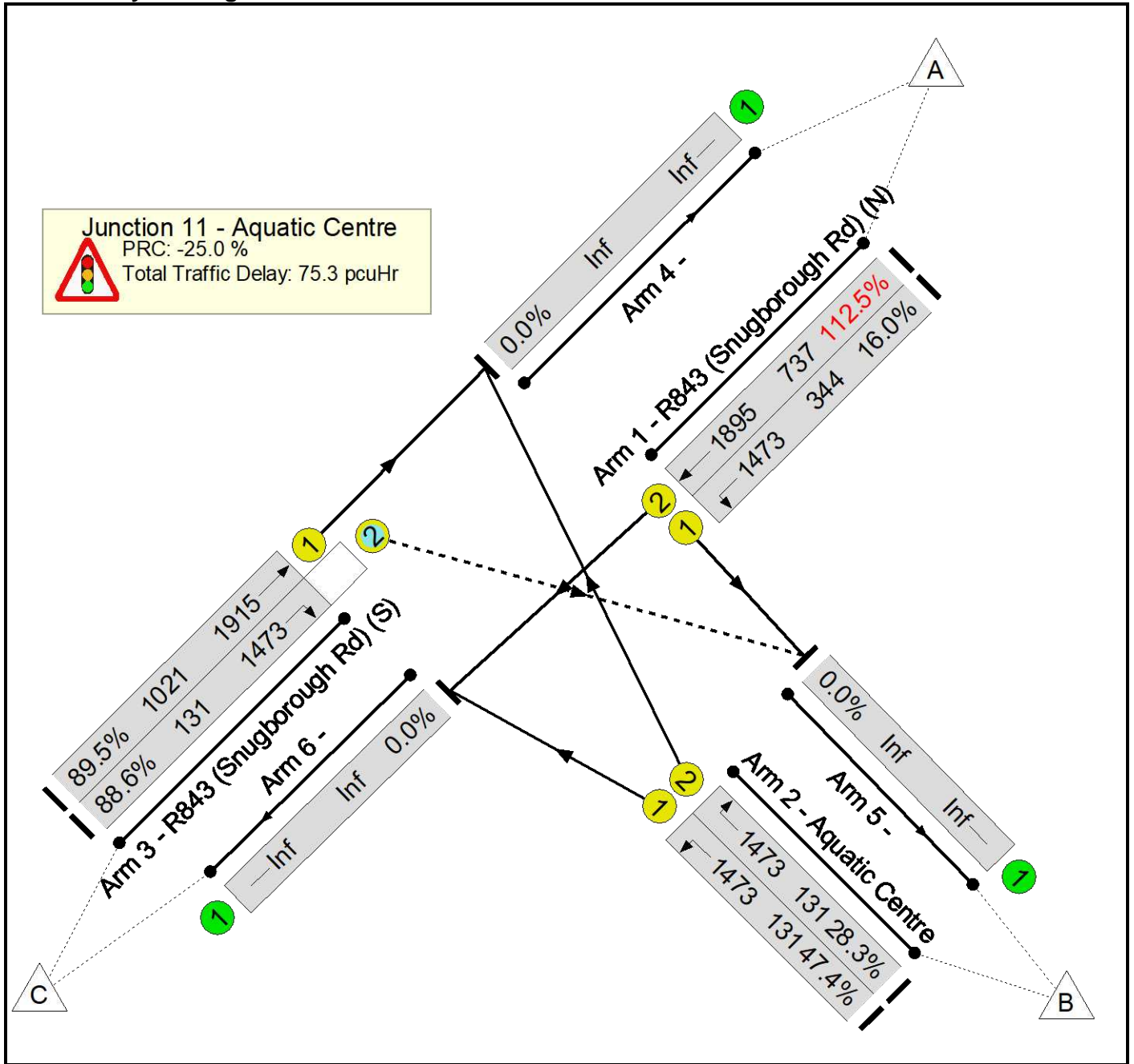


Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item
Network	-	-	-		-	-	-	-	-	-	140.3%	0	115	33	229.6	-	-	Network
Junction 11 - Aquatic Centre	-	-	-		-	-	-	-	-	-	140.3%	0	115	33	229.6	-	-	Junction 11 - Aquatic Centre
1/1	R843 (Snugborough Rd) (N) Left	U	D		1	25	-	86	1473	426	20.2%	-	-	-	0.7	29.5	1.7	1/1
1/2	R843 (Snugborough Rd) (N) Ahead	U	A		1	29	-	886	1895	632	140.3%	-	-	-	146.7	596.0	157.4	1/2
2/1	Aquatic Centre Left	U	E		1	11	-	272	1473	196	138.5%	-	-	-	45.8	606.0	49.3	2/1
2/2	Aquatic Centre Right	U	E		1	11	-	102	1473	196	51.9%	-	-	-	1.6	55.2	2.9	2/2
3/1	R843 (Snugborough Rd) (S) Ahead	U	B		1	43	-	335	1915	936	35.8%	-	-	-	1.6	17.2	5.4	3/1
3/2	R843 (Snugborough Rd) (S) Right	O	C		1	8	-	202	1473	147	137.1%	0	115	33	33.2	592.2	35.5	3/2
C1				PRC for Signalled Lanes (%):			-55.8		Total Delay for Signalled Lanes (pcuHr):			229.57		Cycle Time (s):			90	
				PRC Over All Lanes (%):			-55.8		Total Delay Over All Lanes(pcuHr):			229.57						

Network Layout Diagram

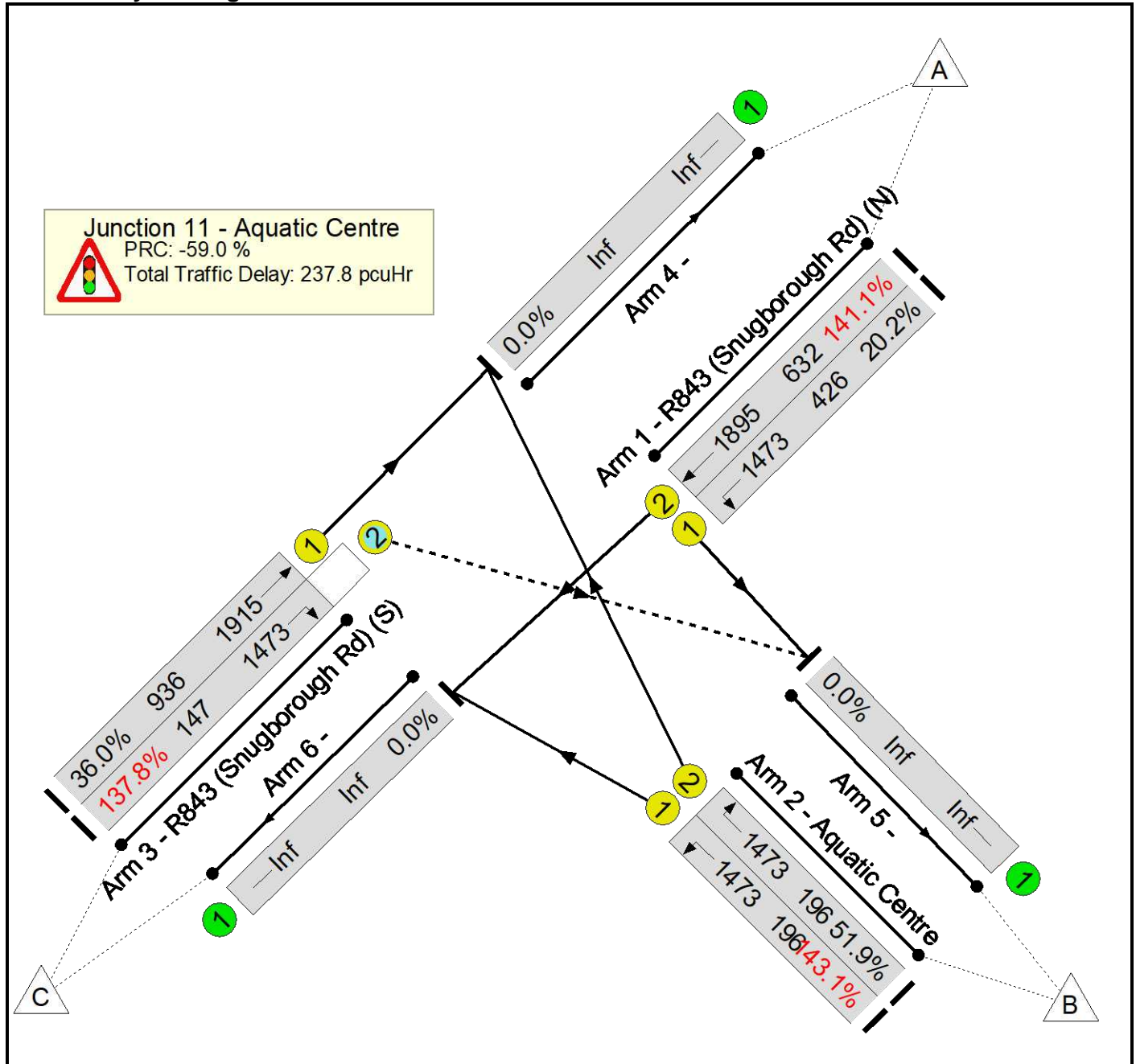


Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item	
Network	-	-	-		-	-	-	-	-	-	112.5%	0	98	18	75.3	-	-	Network	
Junction 11 - Aquatic Centre	-	-	-		-	-	-	-	-	-	112.5%	0	98	18	75.3	-	-	Junction 11 - Aquatic Centre	
1/1	R843 (Snugborough Rd) (N) Left	U	D		1	20	-	55	1473	344	16.0%	-	-	-	0.5	33.7	1.2	1/1	
1/2	R843 (Snugborough Rd) (N) Ahead	U	A		1	34	-	829	1895	737	112.5%	-	-	-	60.2	261.4	73.2	1/2	
2/1	Aquatic Centre Left	U	E		1	7	-	62	1473	131	47.4%	-	-	-	1.1	64.8	1.9	2/1	
2/2	Aquatic Centre Right	U	E		1	7	-	37	1473	131	28.3%	-	-	-	0.6	57.4	1.1	2/2	
3/1	R843 (Snugborough Rd) (S) Ahead	U	B		1	47	-	914	1915	1021	89.5%	-	-	-	8.7	34.4	24.3	3/1	
3/2	R843 (Snugborough Rd) (S) Right	O	C		1	7	-	116	1473	131	88.6%	0	98	18	4.1	128.0	5.7	3/2	
C1					PRC for Signalled Lanes (%):			-25.0	Total Delay for Signalled Lanes (pcuHr):				75.27	Cycle Time (s):		90			
					PRC Over All Lanes (%):			-25.0	Total Delay Over All Lanes(pcuHr):				75.27						

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item
Network	-	-	-		-	-	-	-	-	-	143.1%	0	115	33	237.8	-	-	Network
Junction 11 - Aquatic Centre	-	-	-		-	-	-	-	-	-	143.1%	0	115	33	237.8	-	-	Junction 11 - Aquatic Centre
1/1	R843 (Snugborough Rd) (N) Left	U	D		1	25	-	86	1473	426	20.2%	-	-	-	0.7	29.5	1.7	1/1
1/2	R843 (Snugborough Rd) (N) Ahead	U	A		1	29	-	891	1895	632	141.1%	-	-	-	149.4	603.7	160.1	1/2
2/1	Aquatic Centre Left	U	E		1	11	-	281	1473	196	143.1%	-	-	-	50.7	649.9	54.3	2/1
2/2	Aquatic Centre Right	U	E		1	11	-	102	1473	196	51.9%	-	-	-	1.6	55.2	2.9	2/2
3/1	R843 (Snugborough Rd) (S) Ahead	U	B		1	43	-	337	1915	936	36.0%	-	-	-	1.6	17.3	5.4	3/1
3/2	R843 (Snugborough Rd) (S) Right	O	C		1	8	-	203	1473	147	137.8%	0	115	33	33.8	598.6	36.0	3/2
C1					PRC for Signalled Lanes (%): -59.0			Total Delay for Signalled Lanes (pcuHr): 237.78			Cycle Time (s): 90							
					PRC Over All Lanes (%): -59.0			Total Delay Over All Lanes(pcuHr): 237.78										

Junctions 10
PICADY 10 - Priority Intersection Module
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Filename: Import of Junction 12 AM.j10

Path: W:\server4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction

Report generation date: 09/03/2023 12:28:12

- »2022 Base Year , AM
- »2027 No Phase 5 , AM
- »2027 With Phase 5 , AM

Summary of junction performance

AM					
Set ID	Queue (Veh)	Delay (s)	RFC	LOS	
2022 Base Year					
Stream B-C	D1	0.0	0.00	0.00	A
Stream B-A		0.0	0.00	0.00	A
Stream C-AB		0.0	4.41	0.01	A
2027 No Phase 5					
Stream B-C	D2	0.0	0.00	0.00	A
Stream B-A		0.0	0.00	0.00	A
Stream C-AB		0.0	4.21	0.01	A
2027 With Phase 5					
Stream B-C	D3	0.0	0.00	0.00	A
Stream B-A		0.0	0.00	0.00	A
Stream C-AB		0.0	4.21	0.01	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Control Set.

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	(untitled)
Location	
Site number	
Date	06/06/2018
Version	
Status	(new file)
Identifier	
Client	
Job number	
Enumerator	TCBIN/Ward Rooney
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	Veh	Veh	perHour	s	min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.80	90.00	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)
D1	2022 Base Year	AM	ONE HOUR	07:45	08:15	15
D2	2027 No Phase 5	AM	ONE HOUR	07:45	08:15	15
D3	2027 With Phase 5	AM	ONE HOUR	07:45	08:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	Arm B - 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
t	untitled	T-Junction	Two-way	Two-way	Two-way		0.01	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.01	A

Arms

Arms

Arm	Name	Description	Arm type
A	Snugborough Road (N)		Major
B	Existing Gateway		Minor
C	Snugborough Road (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	13.20			170.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	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)
B	One lane plus flare	8.50	4.00	3.00	3.00	3.00		1.00	22	37

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	520	0.006	0.160	0.105	0.237
B-C	728	0.077	0.194	-	-
C-B	672	0.179	0.179	-	-

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 lane segment only; they may differ for subsequent lane 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)
D1	2022 Base Year	AM	ONE HOUR	07:45	08:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	551	100.000
B		✓	3	100.000
C		✓	552	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	12	559
	B	3	0	0
	C	551	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	35
	B	0	0	0
	C	53	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.00	0.00	0.0	A
C-AB	0.01	4.41	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	621	0.000	0	0.0	0.000	A
B-A	0	352	0.000	0	0.0	0.000	A
C-AB	2	606	0.002	2	0.0	4.318	A
C-A	511			511			
A-B	5			5			
A-C	408			408			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	601	0.000	0	0.0	0.000	A
B-A	0	318	0.000	0	0.0	0.000	A
C-AB	3	677	0.003	3	0.0	4.082	A
C-A	610			610			
A-B	11			11			
A-C	485			485			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	572	0.000	0	0.0	0.000	A
B-A	0	271	0.000	0	0.0	0.000	A
C-AB	5	541	0.008	5	0.0	3.757	A
C-A	745			745			
A-B	13			13			
A-C	593			593			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	572	0.000	0	0.0	0.000	A
B-A	0	271	0.000	0	0.0	0.000	A
C-AB	5	541	0.008	5	0.0	3.650	A
C-A	745			745			
A-B	13			13			
A-C	593			593			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	601	0.000	0	0.0	0.000	A
B-A	0	318	0.000	0	0.0	0.000	A
C-AB	3	677	0.003	3	0.0	4.221	A
C-A	610			610			
A-B	11			11			
A-C	485			485			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RPC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	621	0.000	0	0.0	0.000	A
B-A	0	552	0.000	0	0.0	0.000	A
C-AB	2	835	0.002	2	0.0	4.408	A
C-A	511			511			
A-B	8			8			
A-C	400			400			

2027 No Phase 5 , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	Arm B - 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	untitled	T-Junction	Two-way	Two-way	Two-way		0.02	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.02	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)
D2	2027 No Phase 5	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	790	100.000
B		✓	4	100.000
C		✓	850	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	15	580
	B	4	0	0
	C	849	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	58
	B	0	0	0
	C	58	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.00	0.00	0.0	A
C-AB	0.01	4.21	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	588	0.000	0	0.0	0.000	A
B-A	0	300	0.000	0	0.0	0.000	A
C-AB	3	877	0.003	3	0.0	4.110	A
C-A	037			037			
A-B	11			11			
A-C	016			016			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	581	0.000	0	0.0	0.000	A
B-A	0	296	0.000	0	0.0	0.000	A
C-AB	5	934	0.005	5	0.0	3.620	A
C-A	759			759			
A-B	13			13			
A-C	016			016			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	524	0.000	0	0.0	0.000	A
B-A	0	196	0.000	0	0.0	0.000	A
C-AB	13	1021	0.013	13	0.0	3.532	A
C-A	923			923			
A-B	17			17			
A-C	754			754			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	524	0.000	0	0.0	0.000	A
B-A	0	196	0.000	0	0.0	0.000	A
C-AB	13	1021	0.013	13	0.0	3.570	A
C-A	923			923			
A-B	17			17			
A-C	754			754			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	561	0.000	0	0.0	0.000	A
B-A	0	206	0.000	0	0.0	0.000	A
C-AB	6	933	0.005	6	0.0	3.886	A
C-A	759			759			
A-B	13			13			
A-C	818			818			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	566	0.000	0	0.0	0.000	A
B-A	0	300	0.000	0	0.0	0.000	A
C-AB	3	877	0.003	3	0.0	4.214	A
C-A	837			837			
A-B	11			11			
A-C	518			518			

2027 With Phase 5 , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	Arm B - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a filed 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	unbid	T-Junction	Two-way	Two-way	Two-way		0.02	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.02	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)
DS	2027 With Phase 5	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	702	100.000
B		✓	4	100.000
C		✓	855	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	15	887
	B	4	0	0
	C	854	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	39
	B	0	0	0
	C	58	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.00	0.00	0.0	A
C-AB	0.01	4.21	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	585	0.000	0	0.0	0.000	A
B-A	0	289	0.000	0	0.0	0.000	A
C-AB	3	675	0.003	3	0.0	4.108	A
C-A	641			641			
A-B	11			11			
A-C	517			517			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	561	0.000	0	0.0	0.000	A
B-A	0	255	0.000	0	0.0	0.000	A
C-AB	5	598	0.005	5	0.0	3.817	A
C-A	784			784			
A-B	13			13			
A-C	618			618			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	523	0.000	0	0.0	0.000	A
B-A	0	194	0.000	0	0.0	0.000	A
C-AB	13	1024	0.013	13	0.0	3.524	A
C-A	928			928			
A-B	17			17			
A-C	786			786			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	523	0.000	0	0.0	0.000	A
B-A	0	194	0.000	0	0.0	0.000	A
C-AB	13	1024	0.013	13	0.0	3.583	A
C-A	928			928			
A-B	17			17			
A-C	786			786			

08:15 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	581	0.000	0	0.0	0.000	A
B-A	0	295	0.000	0	0.0	0.000	A
C-AB	5	895	0.005	5	0.0	3.877	A
C-A	764			764			
A-B	13			13			
A-C	818			818			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	588	0.000	0	0.0	0.000	A
B-A	0	299	0.000	0	0.0	0.000	A
C-AB	3	878	0.003	3	0.0	4.207	A
C-A	641			641			
A-B	11			11			
A-C	517			517			

Junctions 10
PICADY 10 - Priority Intersection Module
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Filename: Import of Junction 12 PM.j10

Path: Wserver4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction

Report generation date: 09/03/2023 12:28:48

- »2022 Base Year , PM
- »2027 No Phase 5 , PM
- »2027 With Phase 5 , PM

Summary of junction performance

PM					
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
2022 Base Year					
Stream B-C	D1	0.0	0.00	0.00	A
Stream B-A		0.0	11.35	0.02	B
Stream C-AB		0.0	0.00	0.00	A
2027 No Phase 5					
Stream B-C	D2	0.0	0.00	0.00	A
Stream B-A		0.0	14.13	0.04	B
Stream C-AB		0.0	0.00	0.00	A
2027 With Phase 5					
Stream B-C	D3	0.0	0.00	0.00	A
Stream B-A		0.0	14.26	0.04	B
Stream C-AB		0.0	0.00	0.00	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Control Set.

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	(untitled)
Location	
Site number	
Date	06/06/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TCBIN/Ward Rooney
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	Veh	Veh	perHour	s	veh	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.80	90.00	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)
D1	2022 Base Year	PM	ONE HOUR	15:45	17:15	15
D2	2027 No Phase 5	PM	ONE HOUR	15:45	17:15	15
D3	2027 With Phase 5	PM	ONE HOUR	15:45	17:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	Arm B - 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
t	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	Snigborough Road (N)		Major
B	Existing Gateway		Minor
C	Snigborough Road (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	13.20			170.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	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)
B	One lane plus flare	8.50	4.00	3.00	3.00	3.00		1.00	22	37

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	533	0.007	0.108	0.100	0.241
B-C	080	0.072	0.181	-	-
C-B	072	0.178	0.178	-	-

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 lane segment only; they may differ for subsequent lane 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)
D1	2022 Base Year	PM	ONE HOUR	15:45	17:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	745	100.000
B		✓	7	100.000
C		✓	342	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	4	742
	B	7	0	0
	C	342	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	15
	B	0	0	0
	C	27	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.02	11.39	0.0	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	501	0.000	0	0.0	0.000	A
B-A	5	390	0.014	5	0.0	9.355	A
C-AB	0	491	0.000	0	0.0	0.000	A
C-A	267			267			
A-B	3			3			
A-C	559			559			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	538	0.000	0	0.0	0.000	A
B-A	5	352	0.017	5	0.0	10.115	B
C-AB	0	471	0.000	0	0.0	0.000	A
C-A	307			307			
A-B	4			4			
A-C	607			607			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	506	0.000	0	0.0	0.000	A
B-A	8	324	0.024	8	0.0	11.390	B
C-AB	0	444	0.000	0	0.0	0.000	A
C-A	377			377			
A-B	4			4			
A-C	817			817			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	506	0.000	0	0.0	0.000	A
B-A	8	324	0.024	8	0.0	11.350	B
C-AB	0	444	0.000	0	0.0	0.000	A
C-A	377			377			
A-B	4			4			
A-C	817			817			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	538	0.000	0	0.0	0.000	A
B-A	8	352	0.017	8	0.0	10.115	B
C-AB	0	471	0.000	0	0.0	0.000	A
C-A	307			307			
A-B	4			4			
A-C	607			607			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	581	0.000	0	0.0	0.000	A
B-A	5	590	0.014	5	0.0	9.980	A
C-AB	0	451	0.000	0	0.0	0.000	A
C-A	257			257			
A-B	3			3			
A-C	559			559			

2027 No Phase 5 , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	Arm B - 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	untitled	T-Junction	Two-way	Two-way	Two-way		0.08	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.08	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)
D2	2027 No Phase 5	PM	ONE HOUR	15:45	17:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	828	100.000
B		✓	9	100.000
C		✓	430	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	824
	B	9	0	0
	C	430	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	18
	B	0	0	0
	C	31	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.04	14.13	0.0	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	528	0.000	0	0.0	0.000	A
B-A	7	350	0.019	7	0.0	10.458	B
C-AB	0	454	0.000	0	0.0	0.000	A
C-A	324			324			
A-B	4			4			
A-C	696			696			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	458	0.000	0	0.0	0.000	A
B-A	8	314	0.026	8	0.0	11.771	B
C-AB	0	430	0.000	0	0.0	0.000	A
C-A	387			387			
A-B	4			4			
A-C	831			831			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	458	0.000	0	0.0	0.000	A
B-A	10	205	0.037	10	0.0	14.130	B
C-AB	0	395	0.000	0	0.0	0.000	A
C-A	473			473			
A-B	6			6			
A-C	1017			1017			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	458	0.000	0	0.0	0.000	A
B-A	10	205	0.037	10	0.0	14.132	B
C-AB	0	395	0.000	0	0.0	0.000	A
C-A	473			473			
A-B	6			6			
A-C	1017			1017			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	499	0.000	0	0.0	0.000	A
B-A	8	314	0.025	8	0.0	11.777	B
C-AB	0	420	0.000	0	0.0	0.000	A
C-A	387			387			
A-B	4			4			
A-C	831			831			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	528	0.000	0	0.0	0.000	A
B-A	7	380	0.019	7	0.0	10.506	B
C-AB	0	454	0.000	0	0.0	0.000	A
C-A	324			324			
A-B	4			4			
A-C	690			690			

2027 With Phase 5 , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	Arm B - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a filed 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	unbid	T-Junction	Two-way	Two-way	Two-way		0.08	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.08	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)
DS	2027 With Phase 5	PM	ONE HOUR	16:45	17:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	935	100.000
B		✓	9	100.000
C		✓	432	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	5	930
	B	9	0	0
	C	432	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	18
	B	0	0	0
	C	52	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.04	14.25	0.0	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	527	0.000	0	0.0	0.000	A
B-A	7	348	0.019	7	0.0	10.543	B
C-AB	0	452	0.000	0	0.0	0.000	A
C-A	325			325			
A-B	4			4			
A-C	700			700			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	498	0.000	0	0.0	0.000	A
B-A	8	312	0.026	8	0.0	11.858	B
C-AB	0	427	0.000	0	0.0	0.000	A
C-A	388			388			
A-B	4			4			
A-C	830			830			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	498	0.000	0	0.0	0.000	A
B-A	10	285	0.038	10	0.0	14.244	B
C-AB	0	392	0.000	0	0.0	0.000	A
C-A	478			478			
A-B	0			0			
A-C	1024			1024			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	498	0.000	0	0.0	0.000	A
B-A	10	285	0.038	10	0.0	14.251	B
C-AB	0	392	0.000	0	0.0	0.000	A
C-A	478			478			
A-B	0			0			
A-C	1024			1024			

16:15 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	496	0.000	0	0.0	0.000	A
B-A	8	312	0.020	8	0.0	11.842	B
C-AB	0	427	0.000	0	0.0	0.000	A
C-A	388			388			
A-B	4			4			
A-C	830			830			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	527	0.000	0	0.0	0.000	A
B-A	7	346	0.019	7	0.0	10.551	B
C-AB	0	452	0.000	0	0.0	0.000	A
C-A	325			325			
A-B	4			4			
A-C	700			700			

Junctions 10
PICADY 10 - Priority Intersection Module
Version: 10.0.3.1598 © Copyright TRL Software Limited, 2021
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Filename: Import of Junction A AM.j10

Path: Wserver4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction

Report generation date: 09/03/2023 12:30:04

- *2022 Base Year , AM
- *2027 No Phase 5 , AM
- *2027 With Phase 5 , AM

Summary of junction performance

		AM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	
2022 Base Year						
Stream B-AC	D1	0.0	0.00	0.00	A	
Stream C-AB		0.0	0.00	0.00	A	
2027 No Phase 5						
Stream B-AC	D2	0.0	0.00	0.00	A	
Stream C-AB		0.0	0.00	0.00	A	
2027 With Phase 5						
Stream B-AC	D3	0.0	13.89	0.02	B	
Stream C-AB		0.0	0.00	0.00	A	

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	(untitled)
Location	
Site number	
Date	09/03/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TOBIN/Maria Rooney
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	Veh	Veh	perhour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.65	28.00	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)
D1	2022 Base Year	AM	ONE HOUR	07:45	08:15	15
D2	2027 No Phase 5	AM	ONE HOUR	07:45	08:15	15
D3	2027 With Phase 5	AM	ONE HOUR	07:45	08:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year , AM

Data Errors and Warnings

No errors or warnings

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	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	Clonsillaugh Rd (N)		Major
B	VVWTP		Minor
C	Clonsillaugh Rd (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	8.00			80.0	✓	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

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	110	70

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Vol/Hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	549	0.100	0.250	0.109	0.261
B-C	688	0.102	0.259	-	-
C-B	620	0.240	0.240	-	-

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 line segment only; they may differ for subsequent line 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)
D1	2022 Base Year	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	332	100.000
B		✓	0	100.000
C		✓	184	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	332
	B	0	0	0
	C	184	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	13
	B	0	0	0
	C	15	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	514	0.000	0	0.0	0.000	A
C-AB	0	514	0.000	0	0.0	0.000	A
C-A	139			139			
A-B	0			0			
A-C	200			200			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-A	0	498	0.000	0	0.0	0.000	A
C-A	0	502	0.000	0	0.0	0.000	A
C-B	185			185			
A-B	0			0			
A-C	288			288			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-A	0	472	0.000	0	0.0	0.000	A
C-A	0	465	0.000	0	0.0	0.000	A
C-B	203			203			
A-B	0			0			
A-C	300			300			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-A	0	472	0.000	0	0.0	0.000	A
C-A	0	465	0.000	0	0.0	0.000	A
C-B	203			203			
A-B	0			0			
A-C	300			300			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-A	0	498	0.000	0	0.0	0.000	A
C-A	0	502	0.000	0	0.0	0.000	A
C-B	185			185			
A-B	0			0			
A-C	288			288			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-A	0	514	0.000	0	0.0	0.000	A
C-A	0	514	0.000	0	0.0	0.000	A
C-B	139			139			
A-B	0			0			
A-C	200			200			

2027 No Phase 5 , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use of circulating lanes	Junction Delay (s)	Junction LOS
†	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)
D2	2027 No Phase 5	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	410	100.000
B		✓	0	100.000
C		✓	232	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	410
	B	0	0	0
	C	232	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	15
	B	0	0	0
	C	18	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	499	0.000	0	0.0	0.000	A
C-AB	0	490	0.000	0	0.0	0.000	A
C-A	175			175			
A-B	0			0			
A-C	313			313			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	499	0.000	0	0.0	0.000	A
C-AB	0	474	0.000	0	0.0	0.000	A
C-A	209			209			
A-B	0			0			
A-C	374			374			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	499	0.000	0	0.0	0.000	A
C-AB	0	453	0.000	0	0.0	0.000	A
C-A	255			255			
A-B	0			0			
A-C	458			458			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	499	0.000	0	0.0	0.000	A
C-AB	0	453	0.000	0	0.0	0.000	A
C-A	255			255			
A-B	0			0			
A-C	458			458			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	400	0.000	0	0.0	0.000	A
C-AB	0	474	0.000	0	0.0	0.000	A
C-A	209			209			
A-B	0			0			
A-C	374			374			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	489	0.000	0	0.0	0.000	A
C-AB	0	490	0.000	0	0.0	0.000	A
C-A	175			175			
A-B	0			0			
A-C	313			313			

2027 With Phase 5 , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (%)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.22	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.22	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)
01	2027 With Phase 5	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	415	100.000
B		✓	0	100.000
C		✓	232	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	415
	B	0	0	0
	C	232	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	15
	B	0	0	100
	C	18	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.02	13.89	0.0	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	5	287	0.016	4	0.0	12.720	B
C-AB	0	490	0.000	0	0.0	0.000	A
C-A	175			175			
A-B	0			0			
A-C	313			313			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	5	278	0.019	5	0.0	13.188	B
C-AB	0	474	0.000	0	0.0	0.000	A
C-A	209			209			
A-B	0			0			
A-C	374			374			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	7	200	0.025	7	0.0	13.880	B
C-AB	0	493	0.000	0	0.0	0.000	A
C-A	285			285			
A-B	0			0			
A-C	458			458			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	7	200	0.025	7	0.0	13.880	B
C-AB	0	493	0.000	0	0.0	0.000	A
C-A	285			285			
A-B	0			0			
A-C	458			458			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	5	278	0.019	5	0.0	13.192	B
C-AB	0	474	0.000	0	0.0	0.000	A
C-A	209			209			
A-B	0			0			
A-C	374			374			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	5	287	0.018	5	0.0	12.729	B
C-AB	0	490	0.000	0	0.0	0.000	A
C-A	175			175			
A-B	0			0			
A-C	313			313			

Junctions 10
PICADY 10 - Priority Intersection Module
Version: 10.0.3.1598 © Copyright TRL Software Limited, 2021
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Filename: Import of Junction A PM.j10

Path: Wserver4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction

Report generation date: 09/03/2023 12:30:42

- »2022 Base Year , PM
- »2027 No Phase 5 , PM
- »2027 With Phase 5 , PM

Summary of junction performance

		PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	
2022 Base Year						
Stream B-AC	D1	0.0	0.00	0.00	A	
Stream C-AB		0.0	0.00	0.00	A	
2027 No Phase 5						
Stream B-AC	D2	0.0	0.00	0.00	A	
Stream C-AB		0.0	0.00	0.00	A	
2027 With Phase 5						
Stream B-AC	D3	0.2	9.40	0.17	A	
Stream C-AB		0.0	0.00	0.00	A	

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	(untitled)
Location	
Site number	
Date	09/03/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TOBIN/Maria Rooney
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	Veh	Veh	perhour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.65	28.00	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)
D1	2022 Base Year	PM	ONE HOUR	15:45	17:15	15
D2	2027 No Phase 5	PM	ONE HOUR	15:45	17:15	15
D3	2027 With Phase 5	PM	ONE HOUR	15:45	17:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year , PM

Data Errors and Warnings

No errors or warnings

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	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	Clonsillaugh Rd (N)		Major
B	VVWTP		Minor
C	Clonsillaugh Rd (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	8.00			80.0	✓	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

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	110	70

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Vol/Hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	549	0.100	0.250	0.105	0.261
B-C	688	0.102	0.259	-	-
C-B	620	0.240	0.240	-	-

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 line segment only; they may differ for subsequent line 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)
D1	2022 Base Year	PM	ONE HOUR	15:45	17:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1373	100.000
B		✓	0	100.000
C		✓	1415	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	1373
	B	0	0	0
	C	1415	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	15
	B	0	0	0
	C	27	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	81	0.000	0	0.0	0.000	A
C-AB	0	255	0.000	0	0.0	0.000	A
C-A	1085			1085			
A-B	0			0			
A-C	1034			1034			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	296	0.000	0	0.0	0.000	A
C-A	1272			1272			
A-B	0			0			
A-C	1234			1234			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	176	0.000	0	0.0	0.000	A
C-A	1558			1558			
A-B	0			0			
A-C	1012			1012			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	176	0.000	0	0.0	0.000	A
C-A	1558			1558			
A-B	0			0			
A-C	1012			1012			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	296	0.000	0	0.0	0.000	A
C-A	1272			1272			
A-B	0			0			
A-C	1234			1234			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	295	0.000	0	0.0	0.000	A
C-A	1085			1085			
A-B	0			0			
A-C	1034			1034			

2027 No Phase 5 , PM

Data Errors and Warnings

No errors or warnings

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	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)
D2	2027 No Phase 5	PM	ONE HOUR	15:45	17:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	382	100.000
B		✓	0	100.000
C		✓	563	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	382
	B	0	0	0
	C	563	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	18
	B	0	0	0
	C	51	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	455	0.000	0	0.0	0.000	A
C-AB	0	455	0.000	0	0.0	0.000	A
C-A	424			424			
A-B	0			0			
A-C	268			268			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	425	0.000	0	0.0	0.000	A
C-AB	0	453	0.000	0	0.0	0.000	A
C-A	508			508			
A-B	0			0			
A-C	343			343			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	381	0.000	0	0.0	0.000	A
C-AB	0	434	0.000	0	0.0	0.000	A
C-A	620			620			
A-B	0			0			
A-C	421			421			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	381	0.000	0	0.0	0.000	A
C-AB	0	434	0.000	0	0.0	0.000	A
C-A	620			620			
A-B	0			0			
A-C	421			421			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	425	0.000	0	0.0	0.000	A
C-AB	0	453	0.000	0	0.0	0.000	A
C-A	508			508			
A-B	0			0			
A-C	343			343			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	455	0.000	0	0.0	0.000	A
C-AB	0	488	0.000	0	0.0	0.000	A
C-A	424			424			
A-B	0			0			
A-C	268			268			

2027 With Phase 5 , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (%)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.81	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.51	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)
01	2027 With Phase 5	PM	ONE HOUR	15:45	17:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	382	100.000
B		✓	71	100.000
C		✓	503	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	382
	B	0	0	71
	C	503	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	13
	B	0	0	17
	C	51	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.17	3.40	0.2	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	53	495	0.108	53	0.1	3.120	A
C-AB	0	455	0.000	0	0.0	0.000	A
C-A	424			424			
A-B	0			0			
A-C	268			268			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	54	481	0.133	54	0.2	3.017	A
C-AB	0	453	0.000	0	0.0	0.000	A
C-A	505			505			
A-B	0			0			
A-C	343			343			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	78	401	0.170	78	0.2	3.390	A
C-AB	0	434	0.000	0	0.0	0.000	A
C-A	520			520			
A-B	0			0			
A-C	421			421			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	78	401	0.170	78	0.2	3.398	A
C-AB	0	434	0.000	0	0.0	0.000	A
C-A	520			520			
A-B	0			0			
A-C	421			421			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	54	481	0.133	54	0.2	8.031	A
C-AB	0	483	0.000	0	0.0	0.000	A
C-A	308			308			
A-B	0			0			
A-C	343			343			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	53	486	0.108	54	0.1	8.143	A
C-AB	0	488	0.000	0	0.0	0.000	A
C-A	424			424			
A-B	0			0			
A-C	288			288			

Junctions 10
PICADY 10 - Priority Intersection Module
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Filename: Import of Junction B AM.j10

Path: Wserver4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction

Report generation date: 09/03/2023 12:31:15

- »2022 Base Year , AM
- »2027 No Phase 5 , AM
- »2027 With Phase 5 , AM

Summary of junction performance

		AM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	
2022 Base Year						
Stream B-AC	D1	0.0	0.00	0.00	A	
Stream C-AB		0.0	0.00	0.00	A	
2027 No Phase 5						
Stream B-AC	D2	0.0	0.00	0.00	A	
Stream C-AB		0.0	0.00	0.00	A	
2027 With Phase 5						
Stream B-AC	D3	0.0	0.00	0.00	A	
Stream C-AB		0.0	0.00	0.00	A	

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	(untitled)
Location	
Site number	
Date	09/03/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TOBIN/Maria Rooney
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	Veh	Veh	perhour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.65	28.00	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)
D1	2022 Base Year	AM	ONE HOUR	07:45	08:15	15
D2	2027 No Phase 5	AM	ONE HOUR	07:45	08:15	15
D3	2027 With Phase 5	AM	ONE HOUR	07:45	08:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year , AM

Data Errors and Warnings

No errors or warnings

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	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/Junction	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	R139 (W)		Major
B	VWTF		Minor
C	R139 (E)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	12.00			200.0	✓	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

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	200	200

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Vol/ht)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	697	0.004	0.237	0.149	0.335
B-C	791	0.069	0.224	-	-
C-B	899	0.156	0.198	-	-

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 line segment only; they may differ for subsequent line 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)
D1	2022 Base Year	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1137	100.000
B		✓	0	100.000
C		✓	1285	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	1137
	B	0	0	0
	C	1285	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	12
	B	0	0	0
	C	14	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	367	0.000	0	0.0	0.000	A
C-AB	0	466	0.000	0	0.0	0.000	A
C-A	967			967			
A-B	0			0			
A-C	800			800			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-A	0	319	0.000	0	0.0	0.000	A
C-A	0	433	0.000	0	0.0	0.000	A
C-A	1155			1155			
A-B	0			0			
A-C	1022			1022			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-A	0	198	0.000	0	0.0	0.000	A
C-A	0	366	0.000	0	0.0	0.000	A
C-A	1415			1415			
A-B	0			0			
A-C	1252			1252			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-A	0	198	0.000	0	0.0	0.000	A
C-A	0	366	0.000	0	0.0	0.000	A
C-A	1415			1415			
A-B	0			0			
A-C	1252			1252			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-A	0	319	0.000	0	0.0	0.000	A
C-A	0	433	0.000	0	0.0	0.000	A
C-A	1155			1155			
A-B	0			0			
A-C	1022			1022			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-A	0	397	0.000	0	0.0	0.000	A
C-A	0	466	0.000	0	0.0	0.000	A
C-A	967			967			
A-B	0			0			
A-C	800			800			

2027 No Phase 5 , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use of circulating lanes	Junction Delay (s)	Junction LOS
†	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)
D2	2027 No Phase 5	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1432	100.000
B		✓	0	100.000
C		✓	1603	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	1432
	B	0	0	0
	C	1603	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	14
	B	0	0	0
	C	16	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	283	0.000	0	0.0	0.000	A
C-AB	0	414	0.000	0	0.0	0.000	A
C-A	1207			1207			
A-B	0			0			
A-C	1078			1078			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	153	0.000	0	0.0	0.000	A
C-AB	0	370	0.000	0	0.0	0.000	A
C-A	1441			1441			
A-B	0			0			
A-C	1287			1287			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	310	0.000	0	0.0	0.000	A
C-A	1785			1785			
A-B	0			0			
A-C	1577			1577			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	310	0.000	0	0.0	0.000	A
C-A	1785			1785			
A-B	0			0			
A-C	1577			1577			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	153	0.000	0	0.0	0.000	A
C-AB	0	370	0.000	0	0.0	0.000	A
C-A	1441			1441			
A-B	0			0			
A-C	1287			1287			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	283	0.000	0	0.0	0.000	A
C-AB	0	414	0.000	0	0.0	0.000	A
C-A	1207			1207			
A-B	0			0			
A-C	1078			1078			

2027 With Phase 5 , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (%)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)
01	2027 With Phase 5	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1528	100.000
B		✓	0	100.000
C		✓	1005	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	71	1457
	B	0	0	0
	C	1005	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	17	14
	B	0	0	0
	C	16	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	270	0.000	0	0.0	0.000	A
C-AB	0	389	0.000	0	0.0	0.000	A
C-A	1200			1200			
A-B	53			53			
A-C	1097			1097			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	144	0.000	0	0.0	0.000	A
C-AB	0	352	0.000	0	0.0	0.000	A
C-A	1443			1443			
A-B	54			54			
A-C	1310			1310			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	288	0.000	0	0.0	0.000	A
C-A	1757			1757			
A-B	78			78			
A-C	1604			1604			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	288	0.000	0	0.0	0.000	A
C-A	1757			1757			
A-B	78			78			
A-C	1604			1604			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	144	0.000	0	0.0	0.000	A
C-AB	0	352	0.000	0	0.0	0.000	A
C-A	1443			1443			
A-B	54			54			
A-C	1310			1310			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	270	0.000	0	0.0	0.000	A
C-AB	0	389	0.000	0	0.0	0.000	A
C-A	1200			1200			
A-B	53			53			
A-C	1097			1097			

Junctions 10
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Filename: Import of Junction B PM.j10
 Path: Wserver4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction
 Report generation date: 09/03/2023 12:31:51

- »2022 Base Year , PM
- »2027 No Phase 5 , PM
- »2027 With Phase 5 , PM

Summary of junction performance

		PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	
2022 Base Year						
Stream B-AC	D1	0.0	0.00	0.00	A	
Stream C-AB		0.0	0.00	0.00	A	
2027 No Phase 5						
Stream B-AC	D2	0.0	0.00	0.00	A	
Stream C-AB		0.0	0.00	0.00	A	
2027 With Phase 5						
Stream B-AC	D3	0.0	0.00	0.00	A	
Stream C-AB		0.0	0.00	0.00	A	

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	(untitled)
Location	
Site number	
Date	09/03/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TOBIN/Maria Rooney
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	Veh	Veh	perhour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.65	28.00	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)
D1	2022 Base Year	PM	ONE HOUR	18:45	19:15	15
D2	2027 No Phase 5	PM	ONE HOUR	18:45	19:15	15
D3	2027 With Phase 5	PM	ONE HOUR	18:45	19:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year , PM

Data Errors and Warnings

No errors or warnings

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	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/Junction	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	R139 (W)		Major
B	VWTF		Minor
C	R139 (E)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	12.00			200.0	✓	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

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	200	200

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Vol/Hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	697	0.004	0.237	0.149	0.335
B-C	791	0.069	0.224	-	-
C-B	899	0.156	0.198	-	-

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 line segment only; they may differ for subsequent line 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)
D1	2022 Base Year	PM	ONE HOUR	18:45	19:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1355	100.000
B		✓	0	100.000
C		✓	1787	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	1355
	B	0	0	0
	C	1787	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	12
	B	0	0	0
	C	20	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	274	0.000	0	0.0	0.000	A
C-AB	0	422	0.000	0	0.0	0.000	A
C-A	1345			1345			
A-B	0			0			
A-C	1020			1020			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	146	0.000	0	0.0	0.000	A
C-AB	0	327	0.000	0	0.0	0.000	A
C-A	1988			1988			
A-B	0			0			
A-C	1218			1218			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	327	0.000	0	0.0	0.000	A
C-A	1988			1988			
A-B	0			0			
A-C	1492			1492			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	327	0.000	0	0.0	0.000	A
C-A	1988			1988			
A-B	0			0			
A-C	1492			1492			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	146	0.000	0	0.0	0.000	A
C-AB	0	327	0.000	0	0.0	0.000	A
C-A	1988			1988			
A-B	0			0			
A-C	1218			1218			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	274	0.000	0	0.0	0.000	A
C-AB	0	422	0.000	0	0.0	0.000	A
C-A	1345			1345			
A-B	0			0			
A-C	1020			1020			

2027 No Phase 5 , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
†	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)
D2	2027 No Phase 5	PM	ONE HOUR	18:45	19:15	15

Vehicle mix source	PCU Factor for a HW (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1700	100.000
B		✓	0	100.000
C		✓	2271	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	1700
	B	0	0	0
	C	2271	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	14
	B	0	0	0
	C	23	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	59	0.000	0	0.0	0.000	A
C-AB	0	300	0.000	0	0.0	0.000	A
C-A	1710			1710			
A-B	0			0			
A-C	1280			1280			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	310	0.000	0	0.0	0.000	A
C-A	2042			2042			
A-B	0			0			
A-C	1528			1528			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	241	0.000	0	0.0	0.000	A
C-A	2500			2500			
A-B	0			0			
A-C	1872			1872			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	241	0.000	0	0.0	0.000	A
C-A	2500			2500			
A-B	0			0			
A-C	1872			1872			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	310	0.000	0	0.0	0.000	A
C-A	2042			2042			
A-B	0			0			
A-C	1528			1528			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	59	0.000	0	0.0	0.000	A
C-AB	0	350	0.000	0	0.0	0.000	A
C-A	1710			1710			
A-B	0			0			
A-C	1280			1280			

2027 With Phase 5 , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (%)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)
D1	2027 With Phase 5	PM	ONE HOUR	15:45	16:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1700	100.000
B		✓	0	100.000
C		✓	2290	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	1700
	B	0	0	0
	C	2290	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	100	14
	B	0	0	0
	C	23	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	308	0.000	0	0.0	0.000	A
C-A	1728			1728			
A-B	6			6			
A-C	1261			1261			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	308	0.000	0	0.0	0.000	A
C-A	2054			2054			
A-B	6			6			
A-C	1530			1530			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	238	0.000	0	0.0	0.000	A
C-A	2528			2528			
A-B	7			7			
A-C	1874			1874			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	238	0.000	0	0.0	0.000	A
C-A	2528			2528			
A-B	7			7			
A-C	1874			1874			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	308	0.000	0	0.0	0.000	A
C-A	2064			2064			
A-B	5			5			
A-C	1530			1530			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	01	0.000	0	0.0	0.000	A
C-AB	0	358	0.000	0	0.0	0.000	A
C-A	1729			1729			
A-B	5			5			
A-C	1261			1261			

Junctions 10
ARCADY 10 - Roundabout Module
Version: 10.0.3.1598 © 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
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Filename: Import of Junction 1 AM.j10

Path: Wserver5-dub\Gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIA\ Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Operation

Report generation date: 18/10/2023 11:17:47

-
- *2022 Base Year , AM
 - *2029 No Development , AM
 - *2029 With Development , AM
 - *2034 No Development , AM
 - *2034 With Development , AM
 - *2044 No Development , AM
 - *2044 With Development , AM

Summary of junction performance

AM					
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
2022 Base Year					
Arm A	D1	0.2	4.40	0.17	A
Arm B		0.4	4.16	0.31	A
Arm C		0.2	2.07	0.15	A
Arm D		0.1	2.57	0.05	A
2029 No Development					
Arm A	D2	0.3	4.55	0.20	A
Arm B		0.5	4.45	0.35	A
Arm C		0.3	2.17	0.22	A
Arm D		0.1	2.65	0.07	A
2029 With Development					
Arm A	D3	0.3	4.55	0.20	A
Arm B		0.5	4.55	0.35	A
Arm C		0.3	2.17	0.22	A
Arm D		0.1	2.65	0.07	A
2034 No Development					
Arm A	D4	0.3	4.87	0.22	A
Arm B		0.5	4.55	0.35	A
Arm C		0.3	2.22	0.23	A
Arm D		0.1	2.73	0.08	A
2034 With Development					
Arm A	D5	0.3	4.87	0.22	A
Arm B		0.5	4.77	0.39	A
Arm C		0.3	2.22	0.23	A
Arm D		0.1	2.73	0.08	A
2044 No Development					
Arm A	D6	0.3	5.25	0.25	A
Arm B		0.7	5.09	0.42	A
Arm C		0.4	2.35	0.25	A
Arm D		0.1	2.97	0.09	A
2044 With Development					
Arm A	D7	0.3	5.25	0.25	A
Arm B		0.8	5.22	0.43	A
Arm C		0.4	2.35	0.25	A
Arm D		0.1	2.87	0.09	A

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	Junction2
Location	Clonsillaigh
Site number	2
Date	05/07/2010
Version	
Status	
Identifier	
Client	Irish Water
Jobnumber	7550
Enumerator	TOBIN/Maria Rooney
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	Veh	Veh	perHour	s	Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queuing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RPC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	30.00	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	2022 Base Year	AM	ONE HOUR	08:15	09:45	15	✓
D2	2029 No Development	AM	ONE HOUR	08:15	09:45	15	✓
D3	2029 With Development	AM	ONE HOUR	08:15	09:45	15	✓
D4	2034 No Development	AM	ONE HOUR	08:15	09:45	15	✓
D5	2034 With Development	AM	ONE HOUR	08:15	09:45	15	✓
D6	2044 No Development	AM	ONE HOUR	08:15	09:45	15	✓
D7	2044 With Development	AM	ONE HOUR	08:15	09:45	15	✓

Analysis Set Details

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

2022 Base Year , 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, D	3.21	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.21	A

Arms

Arms

Arm	Name	Description	No give-way line
A	Petrol Station		
B	Cloonsleigh Rd (N)		
C	Cloonsleigh Rd (S)		
D	Hotel Access		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	F - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	Phi - Conflict (entry) angle (deg)	Entry only	Exit only
A	4.00	4.80	8.6	12.0	57.0	65.0		
B	4.00	5.80	10.4	11.2	57.0	48.0		
C	3.20	9.00	5.3	16.7	57.0	50.0		
D	7.10	7.60	9.6	16.1	57.0	77.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.449	1226
B	0.492	1400
C	0.573	2401
D	0.559	1892

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 Base Year	AM	ONE HOUR	08:15	09:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	153	100.000
B		ONE HOUR	✓	355	100.000
C		ONE HOUR	✓	387	100.000
D		ONE HOUR	✓	60	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	30	120	2
	B	17	2	320	10
	C	145	139	8	57
	D	11	14	55	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	8	13	0
	B	0	100	1	0
	C	17	5	27	10
	D	14	14	10	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.17	4.40	0.2	A	140	211
B	0.31	4.10	0.4	A	320	489
C	0.19	2.07	0.2	A	337	505
D	0.06	2.07	0.1	A	73	110

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	115	29	177	1022	0.113	115	131	0.0	0.1	3.966	A
B	282	97	158	1304	0.205	288	154	0.0	0.3	3.485	A
C	270	89	24	2150	0.125	270	380	0.0	0.1	1.821	A
D	60	10	248	1054	0.038	60	52	0.0	0.0	2.408	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	138	34	212	1007	0.137	137	158	0.1	0.2	4.140	A
B	318	80	185	1289	0.248	318	184	0.3	0.3	3.709	A
C	330	82	29	2147	0.154	330	455	0.1	0.2	1.981	A
D	72	18	297	1527	0.047	72	62	0.0	0.0	2.474	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	168	42	250	980	0.171	168	191	0.2	0.2	4.400	A
B	391	98	202	1298	0.308	390	220	0.3	0.4	4.094	A
C	404	101	35	2143	0.189	404	558	0.2	0.2	2.070	A
D	88	22	363	1490	0.059	88	76	0.0	0.1	2.598	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	168	42	250	980	0.171	168	192	0.2	0.2	4.402	A
B	391	98	203	1299	0.308	391	220	0.4	0.4	4.096	A
C	404	101	35	2143	0.189	404	558	0.2	0.2	2.070	A
D	88	22	363	1490	0.059	88	76	0.1	0.1	2.598	A

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	138	34	212	1007	0.137	138	157	0.2	0.2	4.142	A
B	318	80	186	1289	0.248	320	184	0.4	0.3	3.716	A
C	330	82	29	2147	0.154	330	458	0.2	0.2	1.981	A
D	72	18	297	1527	0.047	72	62	0.1	0.0	2.474	A

09:30 - 09:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	115	29	178	1022	0.113	115	131	0.2	0.1	3.871	A
B	287	67	139	1394	0.205	288	154	0.3	0.3	3.473	A
C	278	69	24	2150	0.129	278	382	0.2	0.1	1.921	A
D	60	15	249	1553	0.038	60	52	0.0	0.0	2.412	A

2029 No Development , 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, D	3.43	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.43	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	2029 No Development	AM	ONE HOUR	08:15	09:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	170	100.000
B		ONE HOUR	✓	404	100.000
C		ONE HOUR	✓	422	100.000
D		ONE HOUR	✓	82	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	34	138	2
	B	19	2	372	11
	C	163	182	6	66
	D	13	16	83	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	5	14	0
	B	0	100	1	0
	C	18	6	29	10
	D	15	15	11	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.20	4.68	0.3	A	162	242
B	0.30	4.46	0.5	A	371	558
C	0.22	2.17	0.3	A	367	561
D	0.07	2.08	0.1	A	84	127

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	132	33	202	1008	0.132	132	151	0.0	0.2	4.130	A
B	304	76	156	1293	0.235	303	170	0.0	0.3	3.625	A
C	318	79	28	2132	0.149	317	435	0.0	0.2	1.993	A
D	89	17	264	1919	0.048	85	59	0.0	0.0	2.493	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	158	40	242	988	0.160	158	181	0.2	0.2	4.349	A
B	383	91	190	1278	0.285	383	210	0.3	0.4	3.939	A
C	375	95	31	2129	0.178	375	521	0.2	0.2	2.057	A
D	83	21	340	1488	0.056	83	71	0.0	0.1	2.681	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	194	48	258	982	0.201	194	221	0.2	0.3	4.882	A
B	445	111	252	1253	0.355	444	257	0.4	0.5	4.449	A
C	485	118	38	2124	0.215	484	838	0.2	0.3	2.166	A
D	101	25	416	1445	0.070	101	87	0.1	0.1	2.078	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	194	48	258	982	0.201	194	221	0.5	0.3	4.694	A
B	445	111	252	1253	0.355	445	258	0.5	0.5	4.450	A
C	485	118	39	2124	0.219	485	839	0.3	0.3	2.108	A
D	101	25	416	1445	0.070	101	87	0.1	0.1	2.078	A

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	158	40	242	988	0.161	158	181	0.3	0.2	4.354	A
B	383	91	190	1270	0.280	384	211	0.5	0.4	3.950	A
C	375	95	32	2129	0.178	380	522	0.3	0.2	2.058	A
D	83	21	340	1487	0.056	83	71	0.1	0.1	2.594	A

09:30 - 09:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	133	33	203	1003	0.132	133	151	0.2	0.2	4.139	A
B	304	76	159	1293	0.235	305	170	0.4	0.3	3.542	A
C	318	79	25	2132	0.149	318	437	0.2	0.2	1.995	A
D	89	17	265	1519	0.048	89	80	0.1	0.0	2.498	A

2029 With Development , 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
t	untitled	Standard Roundabout		A, B, C, D	3.47	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.47	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	2029 With Development	AM	ONE HOUR	08:15	09:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	176	100.000
B		ONE HOUR	✓	411	100.000
C		ONE HOUR	✓	422	100.000
D		ONE HOUR	✓	82	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	34	139	2
	B	19	2	379	11
	C	168	182	0	85
	D	13	16	83	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	8	14	0
	B	0	100	2	0
	C	18	8	29	10
	D	15	15	31	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.20	4.08	0.3	A	102	242
B	0.26	4.06	0.5	A	377	308
C	0.22	2.17	0.3	A	387	581
D	0.07	2.68	0.1	A	84	127

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	132	33	202	1003	0.132	132	151	0.0	0.2	4.130	A
B	308	77	158	1282	0.241	308	170	0.0	0.3	3.092	A
C	318	79	20	2132	0.148	317	440	0.0	0.2	1.883	A
D	89	17	284	1519	0.045	89	59	0.0	0.0	2.483	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	158	40	242	980	0.160	158	181	0.2	0.2	4.348	A
B	308	82	190	1280	0.282	308	210	0.3	0.4	4.017	A
C	379	85	31	2129	0.178	379	527	0.2	0.2	2.057	A
D	83	21	340	1488	0.055	83	71	0.0	0.1	2.551	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	194	48	296	982	0.201	194	221	0.2	0.3	4.682	A
B	453	113	232	1242	0.364	452	257	0.4	0.6	4.554	A
C	485	116	38	2124	0.219	484	648	0.2	0.3	2.168	A
D	101	25	416	1445	0.070	101	87	0.1	0.1	2.676	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	194	48	296	982	0.201	194	221	0.3	0.3	4.584	A
B	452	113	232	1241	0.365	452	258	0.6	0.6	4.582	A
C	485	116	35	2124	0.219	485	648	0.3	0.3	2.188	A
D	101	25	416	1445	0.070	101	87	0.1	0.1	2.878	A

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	158	40	242	988	0.161	158	181	0.3	0.2	4.354	A
B	308	82	190	1285	0.292	370	211	0.6	0.4	4.028	A
C	379	85	32	2129	0.178	380	528	0.3	0.2	2.058	A
D	83	21	340	1487	0.055	83	71	0.1	0.1	2.582	A

09:10 - 09:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	133	33	203	1003	0.132	133	151	0.2	0.2	4.137	A
B	305	77	155	1261	0.241	310	170	0.4	0.3	3.705	A
C	318	79	20	2132	0.149	318	442	0.2	0.2	1.984	A
D	68	17	280	1018	0.040	68	60	0.1	0.0	2.480	A

2034 No Development , 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, D	3.05	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.55	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
D4	2034 No Development	AM	ONE HOUR	08:15	09:45	15	<input checked="" type="checkbox"/>

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	<input checked="" type="checkbox"/>	187	100.000
B		ONE HOUR	<input checked="" type="checkbox"/>	427	100.000
C		ONE HOUR	<input checked="" type="checkbox"/>	443	100.000
D		ONE HOUR	<input checked="" type="checkbox"/>	58	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	20	148	2
	B	20	2	383	12
	C	178	195	7	70
	D	14	17	87	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	9	15	0
	B	0	100	1	0
	C	19	6	30	11
	D	15	16	11	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.22	4.87	6.3	A	172	257
B	0.38	4.05	0.5	A	352	588
C	0.23	2.22	0.3	A	411	617
D	0.08	2.73	0.1	A	80	135

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	141	35	215	888	0.142	140	150	0.0	0.2	4.243	A
B	321	80	199	1267	0.250	320	188	0.0	0.3	3.717	A
C	337	84	28	2120	0.158	337	481	0.0	0.2	2.017	A
D	74	18	301	1508	0.048	74	85	0.0	0.1	2.513	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	188	42	257	870	0.173	188	191	0.2	0.2	4.484	A
B	384	98	202	1289	0.303	383	225	0.3	0.4	4.084	A
C	403	101	33	2118	0.190	403	552	0.2	0.2	2.100	A
D	88	22	300	1473	0.060	88	75	0.1	0.1	2.098	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	208	51	315	948	0.218	206	234	0.2	0.3	4.884	A
B	470	118	247	1244	0.378	469	273	0.4	0.6	4.045	A
C	493	123	41	2112	0.234	493	578	0.2	0.3	2.223	A
D	108	27	441	1428	0.076	108	92	0.1	0.1	2.726	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	200	51	318	948	0.218	200	235	0.3	0.3	4.800	A
B	470	118	248	1244	0.378	470	273	0.6	0.6	4.053	A
C	493	123	41	2112	0.234	493	577	0.3	0.3	2.223	A
D	108	27	442	1428	0.076	108	92	0.1	0.1	2.727	A

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	188	42	257	870	0.173	188	192	0.3	0.2	4.490	A
B	384	98	202	1289	0.303	385	223	0.6	0.4	4.074	A
C	403	101	33	2118	0.190	403	554	0.3	0.2	2.101	A
D	88	22	301	1473	0.060	88	75	0.1	0.1	2.091	A

09:30 - 09:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	141	35	215	888	0.142	141	160	0.2	0.2	4.250	A
B	321	99	170	1267	0.250	322	187	0.4	0.3	3.731	A
C	337	84	26	2120	0.158	337	484	0.2	0.2	2.019	A
D	74	18	302	1905	0.049	74	83	0.1	0.1	2.514	A

2034 With Development , 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, D	3.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.00	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
DS	2034 With Development	AM	ONE HOUR	08:15	09:45	90	✓

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 (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	187	100.000
B		ONE HOUR	✓	434	100.000
C		ONE HOUR	✓	448	100.000
D		ONE HOUR	✓	98	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	30	148	2
	B	20	2	400	12
	C	173	193	7	70
	D	14	17	57	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	9	15	0
	B	0	100	2	0
	C	19	0	30	11
	D	10	16	11	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.22	4.87	0.3	A	172	257
B	0.39	4.77	0.8	A	398	597
C	0.23	2.22	0.3	A	411	617
D	0.08	2.73	0.1	A	90	135

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	141	35	215	566	0.142	140	100	0.0	0.2	4.243	A
B	327	82	109	1276	0.256	325	186	0.0	0.3	3.783	A
C	327	84	28	2120	0.153	337	456	0.0	0.2	2.017	A
D	74	18	301	1506	0.048	74	63	0.0	0.1	2.513	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	168	42	257	570	0.173	166	191	0.2	0.2	4.484	A
B	390	88	202	1268	0.310	390	223	0.3	0.4	4.146	A
C	403	101	33	2118	0.190	403	558	0.2	0.2	2.100	A
D	68	22	309	1473	0.060	68	75	0.1	0.1	2.596	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	206	51	315	546	0.218	206	234	0.2	0.3	4.854	A
B	478	119	247	1233	0.388	477	273	0.4	0.6	4.761	A
C	493	123	41	2112	0.234	493	684	0.2	0.3	2.223	A
D	106	27	441	1428	0.076	106	92	0.1	0.1	2.726	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	206	51	315	546	0.218	206	235	0.3	0.3	4.696	A
B	478	119	248	1232	0.388	478	273	0.6	0.6	4.786	A
C	493	123	41	2112	0.234	493	685	0.3	0.3	2.223	A
D	108	27	442	1428	0.076	108	92	0.1	0.1	2.727	A

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	168	42	257	570	0.173	166	192	0.3	0.2	4.490	A
B	390	88	203	1257	0.310	391	223	0.6	0.5	4.158	A
C	403	101	33	2110	0.190	403	560	0.3	0.2	2.101	A
D	68	22	301	1473	0.060	68	76	0.1	0.1	2.691	A

09:30 - 09:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (+)	Unsignalised level of service
A	141	35	215	988	0.142	141	160	0.2	0.2	4.250	A
B	327	82	170	1270	0.260	327	187	0.5	0.3	3.800	A
C	337	84	28	2120	0.168	337	459	0.2	0.2	2.019	A
D	74	18	302	1500	0.049	74	63	0.1	0.1	2.516	A

2044 No Development , 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
†	untitled	Standard Roundabout		A, B, C, D	3.82	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.82	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
DS	2044 No Development	AM	ONE HOUR	08:15	09:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	209	100.000
B		ONE HOUR	✓	488	100.000
C		ONE HOUR	✓	498	100.000
D		ONE HOUR	✓	108	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	40	165	3
	B	22	3	430	13
	C	196	212	8	77
	D	15	19	74	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	10	17	0
	B	0	100	1	0
	C	21	7	35	12
	D	17	18	15	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.20	5.25	0.3	A	152	268
B	0.42	5.09	0.7	A	429	644
C	0.26	2.35	0.4	A	450	682
D	0.09	2.67	0.1	A	89	149

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	157	39	237	363	0.163	157	178	0.0	0.2	4.462	A
B	352	88	188	1273	0.277	351	208	0.0	0.4	3.895	A
C	373	93	31	2080	0.175	373	507	0.0	0.2	2.090	A
D	81	20	334	1405	0.055	81	70	0.0	0.1	2.612	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	188	47	264	543	0.199	188	213	0.2	0.2	4.787	A
B	421	100	225	1252	0.330	420	240	0.4	0.5	4.320	A
C	440	111	38	2080	0.214	440	508	0.2	0.3	2.190	A
D	87	24	400	1422	0.068	87	84	0.1	0.1	2.710	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	230	58	348	510	0.251	230	201	0.2	0.3	5.249	A
B	515	129	270	1223	0.421	514	301	0.5	0.7	5.072	A
C	548	137	45	2080	0.263	548	744	0.3	0.4	2.348	A
D	119	30	490	1372	0.087	119	102	0.1	0.1	2.871	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	230	58	348	510	0.251	230	201	0.3	0.3	5.254	A
B	515	129	270	1223	0.421	515	302	0.7	0.7	5.080	A
C	548	137	45	2080	0.263	548	745	0.4	0.4	2.348	A
D	119	30	490	1372	0.087	119	102	0.1	0.1	2.871	A

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	188	47	264	543	0.199	188	213	0.3	0.3	4.774	A
B	421	100	228	1251	0.338	422	247	0.7	0.5	4.342	A
C	448	111	38	2085	0.214	448	510	0.4	0.3	2.196	A
D	87	24	400	1422	0.068	87	84	0.1	0.1	2.718	A

09:30 - 09:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	157	39	238	962	0.183	150	179	0.3	0.2	4.473	A
B	352	88	189	1272	0.277	353	209	0.5	0.4	3.918	A
C	373	93	32	2085	0.179	374	510	0.3	0.2	2.098	A
D	81	20	332	1458	0.056	81	72	0.1	0.1	2.014	A

2044 With Development , 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
†	untitled	Standard Roundabout		A, B, C, D	3.88	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.88	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
D7	2044 With Development	AM	ONE HOUR	06:15	09:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	209	100.000
B		ONE HOUR	✓	475	100.000
C		ONE HOUR	✓	495	100.000
D		ONE HOUR	✓	105	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	40	105	3
	B	22	3	437	13
	C	199	212	8	77
	D	15	19	74	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	10	17	0
	B	0	100	2	0
	C	21	7	33	12
	D	17	18	13	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.25	5.25	0.3	A	192	255
B	0.43	5.22	0.8	A	438	654
C	0.26	2.35	0.4	A	455	683
D	0.08	2.87	0.1	A	89	148

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	157	39	237	953	0.163	157	178	0.0	0.2	4.462	A
B	356	89	188	1261	0.284	356	296	0.0	0.4	3.870	A
C	373	93	31	2080	0.179	373	513	0.0	0.2	2.096	A
D	81	20	334	1459	0.056	81	79	0.0	0.1	2.812	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	180	47	284	943	0.190	180	213	0.2	0.2	4.767	A
B	427	107	225	1241	0.344	427	248	0.4	0.5	4.415	A
C	448	111	38	2088	0.214	448	514	0.2	0.3	2.196	A
D	97	24	400	1422	0.068	97	84	0.1	0.1	2.715	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	230	58	348	915	0.251	230	281	0.2	0.3	5.249	A
B	523	131	278	1212	0.431	523	301	0.5	0.8	5.205	A
C	540	137	40	2080	0.263	540	752	0.3	0.4	2.340	A
D	119	30	490	1372	0.087	119	102	0.1	0.1	2.871	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	230	58	348	915	0.251	230	281	0.3	0.3	5.254	A
B	523	131	278	1212	0.431	523	302	0.8	0.8	5.223	A
C	540	137	40	2080	0.263	540	753	0.4	0.4	2.340	A
D	119	30	490	1372	0.087	119	102	0.1	0.1	2.871	A

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	188	47	284	943	0.199	188	213	0.3	0.3	4.770	A
B	427	107	220	1240	0.344	428	247	0.8	0.5	4.438	A
C	448	111	38	2080	0.214	448	515	0.4	0.3	2.196	A
D	97	24	400	1422	0.068	97	84	0.1	0.1	2.715	A

09:30 - 09:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	157	39	238	952	0.163	198	179	0.3	0.2	4.473	A
B	358	89	169	1251	0.294	358	200	0.5	0.4	3.892	A
C	372	93	32	2069	0.179	374	510	0.3	0.2	2.090	A
D	81	20	355	1458	0.056	81	70	0.1	0.1	2.614	A

Junctions 10
ARCADY 10 - Roundabout Module
Version: 10.0.3.1598 © Copyright TRL Software Limited, 2021
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Filename: Import of Junction 1 PM.j10

Path: Wserver5-dub\Gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIA\ Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Operation

Report generation date: 18/10/2023 11:25:49

-
- »2022 Base Year , PM
 - »2029 No Development, PM
 - »2029 With Development, PM
 - »2034 No Development, PM
 - »2034 With Development, PM
 - »2044 No Development, PM
 - »2044 With Development, PM

Summary of junction performance

PM					
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
2022 Base Year					
Arm A	D1	0.2	4.55	0.18	A
Arm B		0.3	3.75	0.25	A
Arm C		0.3	2.05	0.24	A
Arm D		0.1	2.45	0.05	A
2029 No Development					
Arm A	D2	0.3	5.05	0.21	A
Arm B		0.4	4.05	0.29	A
Arm C		0.4	2.15	0.27	A
Arm D		0.1	2.54	0.05	A
2029 With Development					
Arm A	D3	0.3	5.05	0.21	A
Arm B		0.4	4.19	0.31	A
Arm C		0.4	2.15	0.27	A
Arm D		0.1	2.54	0.05	A
2034 No Development					
Arm A	D4	0.3	5.23	0.23	A
Arm B		0.4	4.18	0.30	A
Arm C		0.4	2.21	0.29	A
Arm D		0.1	2.50	0.05	A
2034 With Development					
Arm A	D5	0.3	5.23	0.23	A
Arm B		0.5	4.38	0.33	A
Arm C		0.4	2.21	0.29	A
Arm D		0.1	2.50	0.05	A
2044 No Development					
Arm A	D6	0.4	5.87	0.25	A
Arm B		0.5	4.45	0.34	A
Arm C		0.5	2.31	0.32	A
Arm D		0.1	2.59	0.07	A
2044 With Development					
Arm A	D7	0.4	5.87	0.25	A
Arm B		0.5	4.58	0.37	A
Arm C		0.5	2.31	0.32	A
Arm D		0.1	2.59	0.07	A

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	Junction2
Location	Clonsillaigh
Site number	2
Date	05/07/2010
Version	
Status	
Identifier	
Client	Irish Water
Jobnumber	7550
Enumerator	TOBIN/Maria Rooney
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	Veh	Veh	perHour	s	Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queuing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RPC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	30.00	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	2022 Base Year	PM	ONE HOUR	16:00	17:30	15	✓
D2	2029 No Development	PM	ONE HOUR	16:00	17:30	15	✓
D3	2029 With Development	PM	ONE HOUR	16:00	17:30	15	✓
D4	2034 No Development	PM	ONE HOUR	16:00	17:30	15	✓
D5	2034 With Development	PM	ONE HOUR	16:00	17:30	15	✓
D6	2044 No Development	PM	ONE HOUR	16:00	17:30	15	✓
D7	2044 With Development	PM	ONE HOUR	16:00	17:30	15	✓

Analysis Set Details

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

2022 Base Year , 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, D	2.97	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.97	A

Arms

Arms

Arm	Name	Description	No give-way line
A	Petal Station		
B	Clonsillaigh Rd (N)		
C	Clonsillaigh Rd (S)		
D	Hotel Access		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	F - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A	4.00	4.80	8.6	12.0	57.0	65.0		
B	4.00	5.80	10.4	11.2	57.0	48.0		
C	3.20	9.00	5.3	16.7	57.0	50.0		
D	7.10	7.50	9.5	16.1	57.0	77.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.449	1226
B	0.492	1400
C	0.573	2401
D	0.559	1892

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 Base Year	PM	ONE HOUR	16:00	17:30	10	✓

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 (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	153	100.000
B		ONE HOUR	✓	293	100.000
C		ONE HOUR	✓	501	100.000
D		ONE HOUR	✓	87	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	43	108	1
	B	22	0	254	7
	C	100	530	5	58
	D	5	12	48	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	13	0
	B	7	0	2	0
	C	7	1	53	3
	D	0	0	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.18	4.05	0.2	A	140	211
B	0.20	3.75	0.3	A	200	390
C	0.24	2.05	0.3	A	480	690
D	0.05	2.45	0.1	A	81	92

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	115	29	298	1000	0.115	115	102	0.0	0.1	4.094	A
B	213	53	124	1302	0.164	212	288	0.0	0.2	3.302	A
C	377	94	24	2318	0.163	370	312	0.0	0.2	1.853	A
D	89	13	300	1033	0.031	80	80	0.0	0.0	2.274	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	138	34	357	878	0.141	137	122	0.1	0.2	4.294	A
B	254	64	148	1289	0.197	254	348	0.2	0.2	3.478	A
C	450	113	29	2310	0.195	450	374	0.2	0.2	1.930	A
D	60	15	419	1690	0.038	60	60	0.0	0.0	2.345	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	168	42	437	942	0.179	168	150	0.2	0.2	4.650	A
B	312	78	181	1271	0.245	311	424	0.2	0.3	3.750	A
C	552	138	35	2310	0.239	551	458	0.2	0.3	2.040	A
D	74	18	513	1542	0.048	74	74	0.0	0.1	2.451	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	168	42	437	942	0.179	168	150	0.2	0.2	4.652	A
B	312	78	182	1271	0.245	312	424	0.3	0.3	3.750	A
C	552	138	35	2310	0.239	552	458	0.3	0.3	2.046	A
D	74	18	513	1542	0.048	74	74	0.1	0.1	2.451	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	138	34	357	878	0.141	138	122	0.2	0.2	4.299	A
B	254	64	149	1289	0.197	255	348	0.3	0.2	3.483	A
C	450	113	29	2310	0.195	451	374	0.3	0.2	1.931	A
D	60	15	419	1694	0.038	60	60	0.1	0.0	2.348	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	115	29	289	1000	0.115	115	102	0.2	0.1	4.071	A
B	213	53	104	1302	0.184	213	290	0.2	0.2	3.396	A
C	377	94	24	2318	0.182	377	313	0.2	0.2	1.854	A
D	50	13	351	1633	0.031	50	50	0.0	0.0	2.276	A

2029 No Development, 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, D	3.18	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.18	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	2029 No Development	PM	ONE HOUR	18:00	17:30	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 (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	175	100.000
B		ONE HOUR	✓	324	100.000
C		ONE HOUR	✓	572	100.000
D		ONE HOUR	✓	77	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	49	124	1
	B	25	0	291	8
	C	124	377	8	88
	D	8	14	58	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	15	0
	B	8	0	3	0
	C	8	1	35	4
	D	0	0	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.21	5.08	0.3	A	151	241
B	0.29	4.05	0.4	A	297	448
C	0.27	2.15	0.4	A	325	787
D	0.05	2.54	0.1	A	71	155

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	132	33	340	870	0.135	131	117	0.0	0.2	4.290	A
B	244	51	141	1280	0.191	243	330	0.0	0.2	3.988	A
C	431	108	27	2309	0.187	430	357	0.0	0.2	1.915	A
D	58	14	400	1895	0.038	58	57	0.0	0.0	2.328	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	157	39	407	842	0.187	157	140	0.2	0.2	4.594	A
B	291	73	169	1285	0.230	291	365	0.2	0.3	3.898	A
C	514	129	32	2305	0.223	514	428	0.2	0.3	2.010	A
D	65	17	478	1551	0.044	65	68	0.0	0.0	2.412	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	130	48	498	865	0.213	130	172	0.2	0.3	5.051	A
B	357	89	207	1245	0.287	358	484	0.5	0.4	4.050	A
C	630	157	40	2300	0.274	625	520	0.5	0.4	2.155	A
D	85	21	585	1801	0.050	85	84	0.0	0.1	2.541	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	130	48	495	864	0.213	130	172	0.5	0.3	5.057	A
B	357	89	207	1245	0.287	357	484	0.4	0.4	4.054	A
C	630	157	40	2300	0.274	630	524	0.4	0.4	2.155	A
D	85	21	585	1801	0.050	85	84	0.1	0.1	2.542	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	157	39	408	842	0.187	158	140	0.3	0.2	4.090	A
B	291	73	169	1285	0.230	292	390	0.4	0.3	3.700	A
C	514	129	32	2305	0.223	515	429	0.4	0.3	2.010	A
D	65	17	479	1551	0.044	68	68	0.1	0.0	2.413	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	132	33	341	909	0.130	132	118	0.2	0.2	4.300	A
B	244	51	142	1279	0.191	244	331	0.3	0.2	3.477	A
C	431	108	27	2309	0.187	431	359	0.3	0.2	1.818	A
D	58	14	401	1804	0.038	58	57	0.0	0.0	2.329	A

2029 With Development, 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, D	3.24	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.24	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
03	2029 With Development	PM	ONE HOUR	16:00	17:30	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 (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	175	100.000
B		ONE HOUR	✓	351	100.000
C		ONE HOUR	✓	572	100.000
D		ONE HOUR	✓	77	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	49	124	1
	B	25	0	318	0
	C	124	377	0	60
	D	0	14	60	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	15	0
	B	0	0	3	0
	C	0	1	55	4
	D	0	0	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.21	5.00	0.3	A	101	241
B	0.21	4.19	0.4	A	322	483
C	0.27	2.15	0.4	A	525	757
D	0.08	2.54	0.1	A	71	108

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	132	33	340	570	0.136	131	117	0.0	0.2	4.290	A
B	204	00	141	1280	0.200	203	330	0.0	0.3	3.037	A
C	431	108	27	2309	0.187	430	377	0.0	0.2	1.915	A
D	58	14	400	1505	0.035	58	57	0.0	0.0	2.325	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	157	39	407	542	0.167	157	140	0.2	0.2	4.094	A
B	310	79	109	1280	0.249	310	390	0.3	0.3	3.798	A
C	514	129	32	2305	0.223	514	452	0.2	0.3	2.010	A
D	69	17	478	1551	0.044	69	68	0.0	0.0	2.412	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	192	48	496	500	0.213	192	172	0.2	0.3	5.051	A
B	385	97	207	1245	0.310	385	494	0.3	0.4	4.189	A
C	630	157	40	2300	0.274	629	553	0.3	0.4	2.155	A
D	85	21	585	1501	0.056	85	84	0.0	0.1	2.541	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	193	48	499	504	0.213	193	172	0.3	0.3	5.057	A
B	386	97	207	1245	0.310	386	494	0.4	0.4	4.193	A
C	630	157	40	2300	0.274	630	554	0.4	0.4	2.155	A
D	85	21	588	1501	0.056	85	84	0.1	0.1	2.542	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	157	39	408	542	0.167	156	140	0.3	0.2	4.592	A
B	318	79	105	1285	0.249	318	398	0.4	0.3	3.794	A
C	514	129	32	2305	0.223	515	453	0.4	0.3	2.010	A
D	69	17	479	1551	0.044	69	68	0.1	0.0	2.415	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	132	33	341	568	0.138	132	118	0.2	0.2	4.300	A
B	264	66	142	1280	0.205	265	331	0.3	0.3	3.540	A
C	431	108	27	2308	0.187	431	379	0.3	0.2	1.918	A
D	58	14	401	1004	0.030	58	57	0.0	0.0	2.327	A

2034 No Development, 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, D	3.27	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.27	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
D4	2034 No Development	PM	ONE HOUR	16:00	17:30	15	<input checked="" type="checkbox"/>

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	<input checked="" type="checkbox"/>	185	100.000
B		ONE HOUR	<input checked="" type="checkbox"/>	341	100.000
C		ONE HOUR	<input checked="" type="checkbox"/>	605	100.000
D		ONE HOUR	<input checked="" type="checkbox"/>	60	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	51	132	1
	B	28	0	307	8
	C	132	397	6	70
	D	6	14	59	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	15	0
	B	5	0	3	0
	C	8	1	37	4
	D	0	0	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.23	5.23	0.3	A	170	255
B	0.30	4.18	0.4	A	313	409
C	0.29	2.21	0.4	A	550	833
D	0.00	2.00	0.1	A	73	110

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	130	35	350	901	0.145	130	124	0.0	0.2	4.371	A
B	257	94	150	1275	0.201	250	347	0.0	0.3	3.525	A
C	455	114	28	2302	0.198	454	378	0.0	0.2	1.948	A
D	50	15	422	1580	0.030	60	60	0.0	0.0	2.386	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	160	42	429	932	0.178	160	148	0.2	0.2	4.697	A
B	307	77	180	1259	0.244	300	415	0.3	0.3	3.779	A
C	544	130	33	2298	0.237	544	453	0.2	0.3	2.052	A
D	72	18	500	1534	0.047	72	72	0.0	0.0	2.402	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	204	51	525	890	0.228	203	182	0.2	0.3	5.221	A
B	375	94	220	1237	0.303	373	508	0.3	0.4	4.173	A
C	550	167	41	2293	0.291	550	554	0.3	0.4	2.212	A
D	88	22	618	1470	0.060	88	88	0.0	0.1	2.694	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	204	51	525	892	0.228	204	182	0.3	0.3	5.220	A
B	375	94	220	1237	0.303	370	509	0.4	0.4	4.177	A
C	550	167	41	2293	0.291	550	555	0.4	0.4	2.212	A
D	88	22	619	1470	0.060	88	88	0.1	0.1	2.694	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	160	42	429	932	0.178	167	148	0.3	0.2	4.704	A
B	307	77	180	1259	0.244	307	415	0.4	0.3	3.783	A
C	544	130	33	2298	0.237	544	454	0.4	0.3	2.053	A
D	72	18	506	1533	0.047	72	72	0.1	0.0	2.403	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	138	35	359	961	0.145	138	124	0.2	0.2	4.382	A
B	257	84	151	1274	0.201	257	348	0.3	0.3	3.641	A
C	455	114	26	2302	0.196	458	380	0.3	0.2	1.551	A
D	89	15	423	1579	0.058	80	80	0.0	0.0	2.989	A

2034 With Development, 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, D	3.35	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.35	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
DS	2034 With Development	PM	ONE HOUR	16:00	17:00	60	✓

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 (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	105	100.000
B		ONE HOUR	✓	308	100.000
C		ONE HOUR	✓	609	100.000
D		ONE HOUR	✓	80	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	51	132	1
	B	20	0	334	8
	C	132	397	0	70
	D	0	14	59	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	15	0
	B	8	0	4	0
	C	8	1	30	4
	D	0	0	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.23	5.23	0.3	A	170	255
B	0.33	4.38	0.5	A	338	507
C	0.29	2.21	0.4	A	555	833
D	0.08	2.85	0.1	A	73	110

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	138	35	308	901	0.145	138	124	0.0	0.2	4.371	A
B	277	89	190	1294	0.215	278	347	0.0	0.3	3.541	A
C	455	114	28	2302	0.196	454	398	0.0	0.2	1.947	A
D	89	15	422	1580	0.036	89	89	0.0	0.0	2.388	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	166	42	429	932	0.178	166	148	0.2	0.2	4.096	A
B	331	83	180	1248	0.265	331	415	0.3	0.4	3.822	A
C	544	138	33	2399	0.237	544	477	0.2	0.3	2.051	A
D	72	18	505	1534	0.047	72	72	0.0	0.0	2.482	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	204	51	525	880	0.228	203	182	0.2	0.3	5.220	A
B	405	101	220	1227	0.330	405	508	0.4	0.5	4.378	A
C	688	167	41	2293	0.291	688	584	0.3	0.4	2.212	A
D	88	22	618	1470	0.060	88	88	0.0	0.1	2.894	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	204	51	525	890	0.228	204	182	0.3	0.3	5.225	A
B	405	101	220	1227	0.330	405	509	0.5	0.5	4.382	A
C	688	167	41	2293	0.291	688	585	0.4	0.4	2.212	A
D	88	22	618	1470	0.060	88	88	0.1	0.1	2.894	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	166	42	429	932	0.178	167	146	0.3	0.2	4.703	A
B	331	83	180	1248	0.265	331	415	0.5	0.4	3.829	A
C	544	138	33	2298	0.237	544	478	0.4	0.3	2.052	A
D	72	18	506	1533	0.047	72	72	0.1	0.0	2.483	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (+)	Unsignalised level of service
A	135	35	359	901	0.145	135	124	0.2	0.2	4.384	A
B	277	69	151	1203	0.215	277	348	0.4	0.3	3.050	A
C	455	114	28	2302	0.186	455	400	0.3	0.2	1.950	A
D	50	15	423	1579	0.038	50	50	0.0	0.0	2.371	A

2044 No Development, 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, D	3.48	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.48	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
DS	2044 No Development	PM	ONE HOUR	16:00	17:30	15	<input checked="" type="checkbox"/>

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	<input checked="" type="checkbox"/>	205	100.000
B		ONE HOUR	<input checked="" type="checkbox"/>	375	100.000
C		ONE HOUR	<input checked="" type="checkbox"/>	663	100.000
D		ONE HOUR	<input checked="" type="checkbox"/>	89	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	58	147	1
	B	29	0	337	9
	C	145	435	8	77
	D	7	16	55	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	17	0
	B	0	0	3	0
	C	10	1	40	4
	D	0	0	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.20	5.07	0.4	A	188	282
B	0.34	4.45	0.5	A	344	510
C	0.32	2.31	0.5	A	598	913
D	0.07	2.59	0.1	A	82	123

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	154	39	353	335	0.165	154	137	0.0	0.2	4.894	A
B	282	71	688	1264	0.223	281	381	0.0	0.3	3.853	A
C	498	125	31	2295	0.218	496	415	0.0	0.3	2.093	A
D	87	17	403	1057	0.043	87	85	0.0	0.0	2.415	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	184	48	470	903	0.204	184	184	0.2	0.3	5.095	A
B	337	84	188	1245	0.270	337	455	0.3	0.4	3.857	A
C	590	148	37	2290	0.260	590	488	0.3	0.4	2.124	A
D	80	20	553	1505	0.053	80	79	0.0	0.1	2.523	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	226	56	575	960	0.262	225	200	0.3	0.4	5.067	A
B	413	103	243	1222	0.338	412	558	0.4	0.5	4.441	A
C	730	182	45	2285	0.320	730	610	0.4	0.5	2.315	A
D	88	24	678	1435	0.068	88	97	0.1	0.1	2.689	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	226	56	576	960	0.262	225	200	0.4	0.4	5.875	A
B	413	103	243	1222	0.338	413	558	0.5	0.5	4.448	A
C	730	182	45	2285	0.320	730	611	0.5	0.5	2.315	A
D	88	24	678	1435	0.068	88	97	0.1	0.1	2.685	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	184	48	471	903	0.204	185	164	0.4	0.3	5.015	A
B	337	84	189	1248	0.271	336	456	0.5	0.4	3.988	A
C	598	148	37	2290	0.260	596	500	0.5	0.4	2.127	A
D	80	20	554	1508	0.053	80	79	0.1	0.1	2.528	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	154	39	394	934	0.166	156	137	0.3	0.2	4.620	A
B	282	71	697	1264	0.223	283	382	0.4	0.3	3.872	A
C	495	125	51	2294	0.218	495	418	0.4	0.3	2.095	A
D	57	17	454	1550	0.043	57	65	0.1	0.0	2.418	A

2044 With Development, 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, D	3.57	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.57	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
D7	2044 With Development	PM	ONE HOUR	16:00	17:30	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 (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	205	100.000
B		ONE HOUR	✓	402	100.000
C		ONE HOUR	✓	663	100.000
D		ONE HOUR	✓	89	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	50	147	1
	B	29	0	354	9
	C	145	435	6	77
	D	7	16	66	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	17	0
	B	5	0	4	0
	C	10	1	40	4
	D	0	0	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.20	5.07	0.4	A	188	282
B	0.37	4.88	0.8	A	389	553
C	0.32	2.31	0.5	A	598	913
D	0.07	2.09	0.1	A	82	123

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	184	39	393	830	0.180	184	137	0.0	0.2	4.004	A
B	393	76	188	1254	0.241	391	301	0.0	0.3	3.775	A
C	499	125	31	2295	0.210	490	438	0.0	0.3	2.000	A
D	87	17	463	1557	0.043	87	86	0.0	0.0	2.415	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	184	46	470	800	0.204	184	164	0.2	0.3	5.090	A
B	391	90	198	1258	0.292	391	458	0.3	0.4	4.112	A
C	598	149	37	2290	0.280	596	529	0.3	0.4	2.124	A
D	80	20	553	1508	0.053	80	79	0.0	0.1	2.523	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	228	58	575	860	0.262	225	200	0.3	0.4	5.887	A
B	443	111	243	1212	0.365	442	558	0.4	0.6	4.871	A
C	730	182	45	2285	0.320	730	640	0.4	0.5	2.310	A
D	98	24	673	1430	0.068	98	97	0.1	0.1	2.689	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	228	58	576	860	0.262	228	200	0.4	0.4	5.875	A
B	443	111	243	1212	0.365	443	558	0.6	0.6	4.879	A
C	730	182	45	2285	0.320	730	641	0.5	0.5	2.310	A
D	98	24	673	1430	0.068	98	97	0.1	0.1	2.689	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	184	46	471	800	0.204	180	164	0.4	0.3	5.014	A
B	391	90	199	1230	0.292	392	400	0.6	0.4	4.124	A
C	598	149	37	2290	0.280	596	524	0.5	0.4	2.127	A
D	80	20	554	1508	0.053	80	79	0.1	0.1	2.524	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	154	39	394	934	0.165	155	137	0.3	0.2	4.018	A
B	302	76	107	1253	0.242	303	352	0.4	0.3	3.789	A
C	499	120	21	2294	0.218	499	438	0.4	0.3	2.097	A
D	67	17	404	1558	0.043	67	66	0.1	0.0	2.415	A

Junctions 10
ARCADY 10 - Roundabout Module
Version: 10.0.3.1598 © Copyright TRL Software Limited, 2021
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Filename: Import of Junction 2.AM.j10

Path: Wserver5-dub\Gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIA\ Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Operation

Report generation date: 18/10/2023 11:41:19

-
- *2022 Base Year , AM
 - *2029 No Development , AM
 - *2029 With Development , AM
 - *2034 No Development , AM
 - *2034 With Development , AM
 - *2044 No Development , AM
 - *2044 With Development , AM

Summary of junction performance

AM					
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
2022 Base Year					
Arm A	D1	1.2	9.44	0.57	A
Arm B		251.7	485.53	1.24	F
Arm C		0.0	0.00	0.00	A
Arm D		68.9	53.25	1.04	F
2029 No Development					
Arm A	D2	1.8	12.15	0.65	B
Arm B		697.6	1117.30	1.49	F
Arm C		0.0	0.00	0.00	A
Arm D		252.6	385.60	1.25	F
2029 With Development					
Arm A	D3	2.0	12.71	0.65	B
Arm B		613.6	1132.38	1.46	F
Arm C		0.0	0.00	0.00	A
Arm D		266.7	418.56	1.21	F
2034 No Development					
Arm A	D4	2.3	13.93	0.71	B
Arm B		798.9	1462.51	1.66	F
Arm C		0.0	0.00	0.00	A
Arm D		373.1	563.96	1.27	F
2034 With Development					
Arm A	D5	2.5	14.91	0.72	B
Arm B		796.8	1484.20	1.66	F
Arm C		0.0	0.00	0.00	A
Arm D		396.3	595.32	1.28	F
2044 No Development					
Arm A	D6	3.5	19.04	0.79	C
Arm B		1212.4	2237.40	1.75	F
Arm C		0.0	0.00	0.00	A
Arm D		669.7	1004.47	1.41	F
2044 With Development					
Arm A	D7	3.5	21.07	0.80	C
Arm B		1220.8	2257.82	1.75	F
Arm C		0.0	0.00	0.00	A
Arm D		697.7	1082.10	1.42	F

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	Junction2
Location	Clonsillaigh
Site number	2
Date	05/07/2010
Version	
Status	
Identifier	
Client	Irish Water
Jobnumber	7550
Enumerator	TOBIN/Maria Rooney
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	Veh	Veh	perHour	s	Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queuing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RPC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	30.00	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	2022 Base Year	AM	ONE HOUR	07:30	09:00	15	✓
D2	2029 No Development	AM	ONE HOUR	07:30	09:00	15	✓
D3	2029 With Development	AM	ONE HOUR	07:30	09:00	15	✓
D4	2034 No Development	AM	ONE HOUR	07:30	09:00	15	✓
D5	2034 With Development	AM	ONE HOUR	07:30	09:00	15	✓
D6	2044 No Development	AM	ONE HOUR	07:30	09:00	15	✓
D7	2044 With Development	AM	ONE HOUR	07:30	09:00	15	✓

Analysis Set Details

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

2022 Base Year , 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, D	252.21	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	252.21	F

Arms

Arms

Arm	Name	Description	No give-way line
A	Clostrough Road		
B	R139 East		
C	Access Road		
D	R138 West		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	F - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	Phi - Conflict (entry) angle (deg)	Entry only	Exit only
A	8.00	8.10	30.0	38.0	60.0	35.0		
B	8.00	8.80	10.4	23.0	60.0	33.0		
C	4.20	5.90	9.0	14.0	60.0	53.0		
D	6.70	8.20	18.0	65.0	60.0	38.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.051	2408
B	0.010	2227
C	0.456	1423
D	0.088	2570

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 Base Year	AM	ONE HOUR	07:30	09:00	10	✓

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 (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	450	100.000
B		ONE HOUR	✓	2162	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2038	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	228	0	232
	B	133	19	0	2011
	C	0	0	0	0
	D	137	2071	0	2

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	0	0
	B	8	12	0	7
	C	0	0	0	0
	D	11	8	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.57	9.44	1.3	A	452	633
B	1.24	465.33	261.7	F	1865	2977
C	0.00	0.00	0.0	A	0	0
D	1.04	63.25	69.8	F	2026	3039

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	348	87	1560	1290	0.266	346	200	0.0	0.4	3.890	A
B	1828	467	175	1973	0.825	1811	1755	0.0	4.4	9.521	A
C	0	0	1780	560	0.000	0	0	0.0	0.0	0.000	A
D	1002	410	113	2342	0.710	1053	1073	0.0	2.4	5.154	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	414	100	1089	1065	0.378	413	208	0.4	0.8	5.297	A
B	1945	480	210	1901	0.990	1877	2072	4.4	21.2	33.301	D
C	0	0	2087	413	0.000	0	0	0.0	0.0	0.000	A
D	1985	490	132	2329	0.852	1973	1985	2.4	5.4	9.799	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	500	127	2104	900	0.509	504	288	0.0	1.2	8.905	A
B	2382	580	250	1923	1.238	1920	2411	21.2	130.0	104.481	F
C	0	0	2178	369	0.000	0	0	0.0	0.0	0.000	A
D	2431	598	138	2327	1.045	2287	2041	8.4	41.8	48.305	E

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	506	127	2193	887	0.571	506	289	1.2	1.3	9.439	A
B	2382	580	267	1922	1.239	1922	2411	136.0	281.0	306.197	F
C	0	0	2179	367	0.000	0	0	0.0	0.0	0.000	A
D	2431	598	135	2327	1.045	2317	2044	41.0	69.9	89.257	F

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	414	100	2197	930	0.442	416	206	1.3	0.8	5.947	A
B	1945	488	212	1969	0.997	1944	2321	261.8	261.7	466.331	F
C	0	0	2150	373	0.000	0	0	0.0	0.0	0.000	A
D	1985	490	137	2326	0.853	2298	2019	89.9	7.0	58.143	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	348	97	1606	1271	0.272	348	223	0.8	0.4	3.908	A
B	1928	407	177	1972	0.828	1964	1786	261.7	167.8	385.078	F
C	0	0	2141	367	0.000	0	0	0.0	0.0	0.000	A
D	1992	490	138	2325	0.715	1980	2003	7.0	2.6	5.733	A

2029 No Development , 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, D	879.77	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	879.77	F

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	2029 No Development	AM	ONE HOUR	07:30	09:00	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 (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	529	100.000
B		ONE HOUR	✓	2487	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2535	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	202	0	207
	B	153	22	0	2312
	C	0	0	0	0
	D	168	2378	0	2

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	5	0	10
	B	7	15	0	8
	C	0	0	0	0
	D	12	8	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.98	12.15	1.9	E	485	728
B	1.48	1117.50	307.5	F	2092	3425
C	0.00	0.00	0.0	A	0	0
D	1.20	385.00	202.0	F	2327	3491

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	398	100	1792	1129	0.350	398	228	0.0	0.0	4.831	A
B	1872	468	201	1897	0.800	1814	1898	0.0	14.7	23.041	C
C	0	0	2015	439	0.000	0	0	0.0	0.0	0.000	A
D	1309	477	128	2330	0.815	1892	1887	0.0	4.3	7.353	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	478	119	2102	841	0.508	474	254	0.0	1.0	7.678	A
B	2238	559	241	1913	1.189	1807	2335	14.7	98.9	113.209	F
C	0	0	2148	373	0.000	0	0	0.0	0.0	0.000	A
D	2280	570	154	2325	0.950	2222	2514	4.3	18.8	28.095	D

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	582	148	2197	880	0.662	579	299	1.0	1.9	11.808	B
B	2738	685	294	1880	1.457	1880	2481	98.9	311.5	355.138	F
C	0	0	2174	360	0.000	0	0	0.0	0.0	0.000	A
D	2792	698	132	2327	1.200	2323	2541	18.8	130.1	120.123	F

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	582	148	2200	878	0.663	582	299	1.9	1.9	12.150	B
B	2738	685	290	1879	1.457	1879	2480	311.5	528.3	798.882	F
C	0	0	2175	359	0.000	0	0	0.0	0.0	0.000	A
D	2792	698	132	2327	1.200	2325	2542	130.1	292.0	304.687	F

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	478	119	2191	884	0.538	478	260	1.9	1.2	9.940	A
B	2238	559	243	1911	1.170	1911	2420	528.3	307.0	1088.224	F
C	0	0	2158	370	0.000	0	0	0.0	0.0	0.000	A
D	2280	570	134	2325	0.950	2316	2520	282.6	243.0	385.602	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	388	100	2188	880	0.450	400	201	1.2	0.8	7.441	A
B	1872	468	204	1900	0.907	1833	2380	597.0	592.3	1117.298	F
C	0	0	2130	370	0.000	0	0	0.0	0.0	0.000	A
D	1990	477	136	2324	0.821	2315	2000	242.5	142.1	300.844	F

2029 With Development , 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, D	098.10	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	098.10	F

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
03	2029 With Development	AM	ONE HOUR	07:30	09:00	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 (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	538	100.000
B		ONE HOUR	✓	2487	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2503	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	282	0	274
	B	153	22	0	2512
	C	0	0	0	0
	D	150	2405	0	2

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	8	0	11
	B	7	13	0	8
	C	0	0	0	0
	D	12	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.08	12.71	2.0	B	482	738
B	1.99	1132.38	813.5	F	2282	2423
C	0.00	0.00	0.0	A	0	0
D	1.21	418.58	289.7	F	2352	2528

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	484	101	1811	1121	0.360	401	228	0.0	0.8	4.968	A
B	1872	408	207	1933	0.928	1512	2000	0.0	15.0	23.402	C
C	0	0	2018	430	0.000	0	0	0.0	0.0	0.000	A
D	1930	482	128	2320	0.828	1911	1891	0.0	4.0	8.259	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	482	120	2117	820	0.820	480	203	0.0	1.1	8.006	A
B	2238	558	247	1908	1.172	1902	2350	10.0	98.2	115.308	F
C	0	0	2148	271	0.000	0	0	0.0	0.0	0.000	A
D	2304	578	134	2328	0.951	2237	2018	4.0	21.4	28.888	D

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	590	148	2198	874	0.678	588	287	1.1	2.0	12.341	B
B	2738	688	302	1874	1.452	1873	2484	98.0	314.7	401.058	F
C	0	0	2178	388	0.000	0	0	0.0	0.0	0.000	A
D	2822	705	132	2327	1.213	2524	2843	21.4	145.3	135.505	F

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	590	148	2202	873	0.678	590	287	2.0	2.0	12.318	B
B	2738	688	303	1872	1.452	1872	2488	214.7	531.2	809.038	F
C	0	0	2178	357	0.000	0	0	0.0	0.0	0.000	A
D	2822	705	132	2327	1.213	2527	2844	145.3	289.7	325.140	F

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	482	120	2135	878	0.545	485	258	2.0	1.2	9.227	A
B	2238	558	250	1908	1.173	1908	2408	531.2	813.5	1081.308	F
C	0	0	2158	388	0.000	0	0	0.0	0.0	0.000	A
D	2304	578	134	2320	0.951	2317	2022	209.7	208.4	410.058	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	404	101	2190	879	0.459	405	280	1.2	0.9	7.834	A
B	1872	488	209	1932	0.929	1928	2388	515.6	999.8	1132.378	F
C	0	0	2137	378	0.000	0	0	0.0	0.0	0.000	A
D	1930	482	130	2320	0.830	2310	2002	200.4	169.9	339.778	F

2034 No Development , 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, D	910.14	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	910.14	F

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
D4	2034 No Development	AM	ONE HOUR	07:30	09:00	15	<input checked="" type="checkbox"/>

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	<input checked="" type="checkbox"/>	560	100.000
B		ONE HOUR	<input checked="" type="checkbox"/>	2532	100.000
C		ONE HOUR	<input checked="" type="checkbox"/>	0	100.000
D		ONE HOUR	<input checked="" type="checkbox"/>	2581	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	277	0	283
	B	161	24	0	2447
	C	0	0	0	0
	D	165	2514	0	2

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	7	0	10
	B	7	12	0	8
	C	0	0	0	0
	D	13	8	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.71	13.93	2.9	B	514	771
B	1.55	1462.61	788.9	F	2415	3523
C	0.00	0.00	0.0	A	0	0
D	1.27	563.90	373.1	F	2400	3590

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	422	106	1698	1972	0.353	419	237	0.0	0.0	5.491	A
B	1962	455	213	1900	1.027	1686	2064	0.0	29.0	38.748	E
C	0	0	2679	407	0.000	0	0	0.0	0.0	0.000	A
D	2018	526	131	2328	0.858	1954	1948	0.0	6.0	10.211	B

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	500	120	2158	501	0.559	501	257	0.8	1.2	9.953	A
B	2988	592	255	1904	1.343	1902	2404	29.0	144.9	171.461	F
C	0	0	2157	368	0.000	0	0	0.0	0.0	0.000	A
D	2410	603	134	2324	1.037	2281	2023	6.0	38.3	43.431	E

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	617	154	2195	876	0.705	610	357	1.2	2.3	15.458	B
B	2898	724	311	1809	1.550	1809	2500	144.9	402.1	530.488	F
C	0	0	2180	356	0.000	0	0	0.0	0.0	0.000	A
D	2952	738	131	2326	1.259	2326	2049	38.3	190.1	186.554	F

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	617	154	2200	874	0.705	610	357	2.3	2.3	13.929	B
B	2898	724	313	1808	1.651	1808	2503	402.1	659.0	1014.798	F
C	0	0	2181	356	0.000	0	0	0.0	0.0	0.000	A
D	2952	738	131	2326	1.259	2326	2050	190.1	361.8	426.252	F

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	502	126	2198	876	0.576	507	259	2.3	1.4	9.884	A
B	2986	592	268	1902	1.244	1992	2447	650.6	770.6	1304.310	F
C	0	0	2160	367	0.000	0	0	0.0	0.0	0.000	A
D	2410	603	134	2324	1.037	2324	2027	361.6	373.1	583.957	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	422	105	2192	879	0.480	422	251	1.4	0.9	7.830	A
B	1992	495	218	1929	1.627	1929	2400	775.6	788.9	1462.808	F
C	0	0	2144	375	0.000	0	0	0.0	0.0	0.000	A
D	2018	505	158	2323	0.895	2317	2009	373.1	258.3	521.994	F

2034 With Development , 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, D	938.01	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	938.01	F

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
DS	2034 With Development	AM	ONE HOUR	07:30	09:00	95	✓

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 (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	587	100.000
B		ONE HOUR	✓	2032	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2708	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	277	0	290
	B	101	24	0	2447
	C	0	0	0	0
	D	100	2341	0	2

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	7	0	12
	B	7	13	0	8
	C	0	0	0	0
	D	13	6	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.72	14.91	2.5	E	520	792
B	1.56	1494.20	792.0	F	2415	3623
C	0.00	0.00	0.0	A	0	0
D	1.28	596.32	398.1	F	2485	3727

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	427	107	1907	1000	0.400	424	237	0.0	0.7	5.727	A
B	1982	495	218	1924	1.030	1982	2113	0.0	29.9	37.039	E
C	0	0	2090	404	0.000	0	0	0.0	0.0	0.000	A
D	2039	510	131	2326	0.876	2013	1950	0.0	6.4	10.739	B

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	510	127	2196	987	0.574	507	255	0.7	1.3	9.407	A
B	2096	592	251	1897	1.247	1995	2412	29.9	147.5	175.332	F
C	0	0	2157	366	0.000	0	0	0.0	0.0	0.000	A
D	2434	606	133	2325	1.047	2266	2923	6.4	43.1	47.404	E

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	524	155	2201	965	0.721	520	255	1.3	2.5	14.392	B
B	2096	724	319	1891	1.557	1981	2502	147.5	498.7	539.770	F
C	0	0	2180	354	0.000	0	0	0.0	0.0	0.000	A
D	2582	745	131	2326	1.252	2325	2545	43.1	207.1	158.989	F

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	524	155	2202	965	0.722	524	258	2.5	2.5	14.505	B
B	2096	724	321	1890	1.358	1980	2555	498.7	998.3	1025.546	F
C	0	0	2180	353	0.000	0	0	0.0	0.0	0.000	A
D	2662	745	131	2327	1.282	2320	2650	207.1	870.9	480.303	F

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	510	127	2200	966	0.585	514	258	2.5	1.5	10.355	B
B	2096	592	255	1895	1.248	1995	2450	565.3	794.1	1373.156	F
C	0	0	2100	365	0.000	0	0	0.0	0.0	0.000	A
D	2434	609	133	2325	1.047	2325	2027	370.9	296.1	595.318	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	427	107	2194	909	0.491	428	209	1.0	1.0	8.207	A
B	1992	490	221	1923	-1.031	1923	2402	794.1	798.8	1434.204	F
C	0	0	2144	373	0.000	0	0	0.0	0.0	0.000	A
D	2038	510	135	2324	0.977	2218	2009	395.3	328.5	504.797	F

2044 No Development , 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
†	untitled	Standard Roundabout		A, B, C, D	1475.45	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1475.45	F

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
DS	2044 No Development	AM	ONE HOUR	07:30	08:00	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 (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	619	100.000
B		ONE HOUR	✓	2508	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2557	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	308	0	313
	B	170	28	0	2702
	C	0	0	0	0
	D	184	2770	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	8	0	12
	B	8	15	0	9
	C	0	0	0	0
	D	14	7	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.79	19.04	3.0	C	558	852
B	1.70	2237.40	1212.4	F	2007	4000
C	0.00	0.00	0.0	A	0	0
D	1.41	1034.47	589.7	F	2713	4070

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	488	117	2048	546	0.482	482	249	0.0	1.0	7.377	A
B	2168	547	238	1838	1.154	1672	2272	0.0	79.0	81.875	F
C	0	0	2108	382	0.000	0	0	0.0	0.0	0.000	A
D	2220	657	131	2303	0.920	2104	1970	0.0	15.5	20.508	C

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	558	139	2171	668	0.641	553	257	1.0	1.7	11.344	B
B	2012	603	282	1807	1.889	1800	2442	79.0	200.5	338.770	F
C	0	0	2149	361	0.000	0	0	0.0	0.0	0.000	A
D	2658	665	131	2304	1.154	2297	2018	10.5	108.9	101.893	F

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	682	170	2178	663	0.790	675	255	1.7	3.4	18.470	C
B	3200	800	344	1828	1.700	1828	2809	200.5	608.3	803.140	F
C	0	0	2172	349	0.000	0	0	0.0	0.0	0.000	A
D	3256	614	128	2305	1.412	2305	2043	105.9	343.5	354.344	F

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	682	170	2178	663	0.790	681	255	3.4	3.0	19.837	C
B	3200	800	247	1828	1.762	1828	2513	506.3	851.3	1539.981	F
C	0	0	2173	349	0.000	0	0	0.0	0.0	0.000	A
D	3256	614	128	2308	1.412	2306	2045	343.5	581.0	724.580	F

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	558	139	2177	664	0.644	562	257	3.0	1.9	12.247	B
B	2812	663	287	1864	1.402	1864	2453	651.6	1138.9	2003.770	F
C	0	0	2151	360	0.000	0	0	0.0	0.0	0.000	A
D	2958	685	131	2304	1.154	2304	2020	581.0	866.7	975.538	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RPC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	499	117	2173	2668	0.538	499	259	1.9	1.2	9.118	A
B	2186	547	259	1894	1.155	1894	2402	1138.8	1212.4	2237.402	F
C	0	0	2133	370	0.000	0	0	0.0	0.0	0.000	A
D	2220	557	133	2302	0.907	2296	2000	509.7	551.5	1034.472	F

2044 With Development , 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
†	untitled	Standard Roundabout		A, B, C, D	1505.25	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1505.25	F

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	2044 With Development	AM	ONE HOUR	07:30	09:00	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 (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	620	100.000
B		ONE HOUR	✓	2900	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2884	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	300	0	820
	B	178	25	0	2702
	C	0	0	0	0
	D	184	2797	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	8	0	13
	B	8	15	0	9
	C	0	0	0	0
	D	14	7	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.00	21.07	5.9	D	574	862
B	1.70	2257.80	1220.0	F	2667	4500
C	0.00	0.00	0.0	A	0	0
D	1.62	1082.10	587.7	F	2738	4107

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	471	118	2050	833	0.505	457	249	0.0	1.0	7.654	A
B	2188	547	241	1801	1.157	1805	2288	0.0	80.0	83.023	F
C	0	0	2108	389	0.000	0	0	0.0	0.0	0.000	A
D	2247	562	131	2304	0.925	2177	1976	0.0	17.3	22.149	D

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	563	141	2173	862	0.653	500	255	1.0	1.6	11.782	B
B	2812	653	258	1801	1.404	1801	2444	80.0	257.5	343.154	F
C	0	0	2149	355	0.000	0	0	0.0	0.0	0.000	A
D	2683	671	151	2304	1.154	2056	2019	17.3	113.3	108.505	F

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	585	172	2180	858	0.804	602	254	1.8	3.7	15.635	D
B	3200	800	351	1822	1.756	1822	2511	267.3	812.3	872.607	F
C	0	0	2173	347	0.000	0	0	0.0	0.0	0.000	A
D	3285	821	128	2306	1.425	2306	2045	113.3	358.3	371.525	F

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	585	172	2180	858	0.804	585	254	3.7	3.5	21.070	D
B	3200	800	354	1820	1.758	1820	2514	812.3	857.3	1055.301	F
C	0	0	2174	340	0.000	0	0	0.0	0.0	0.000	A
D	3285	821	128	2306	1.425	2306	2045	358.3	603.1	753.210	F

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	563	141	2179	868	0.656	570	250	3.8	2.0	12.810	B
B	2812	653	294	1808	1.406	1808	2450	857.3	1148.0	2021.615	F
C	0	0	2152	358	0.000	0	0	0.0	0.0	0.000	A
D	2683	671	139	2304	1.154	2304	2023	603.1	587.7	1015.671	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	471	118	2174	861	0.547	474	287	2.0	1.2	9.277	A
B	2188	547	245	1889	1.158	1888	2404	1148.0	1223.8	2257.818	F
C	0	0	2134	368	0.600	0	0	0.0	0.0	0.000	A
D	2247	562	133	2303	0.576	2295	2001	891.7	584.5	1082.101	F

Junctions 10
ARCADY 10 - Roundabout Module
Version: 10.0.3.1598 © Copyright TRL Software Limited, 2021
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Filename: Import of Junction 2 PM.j10

Path: Wserver4-dub\gdrp\3-0 Documents\3-03 Draft Documents\3-03-10 EIA Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Operation

Report generation date: 09/03/2023 12:36:14

-
- *2022 Base Year , PM
 - *2028 No Development, PM
 - *2028 With Development, PM
 - *2033 No Development, PM
 - *2033 With Development, PM
 - *2043 No Development, PM
 - *2043 With Development, PM

Summary of junction performance

PM					
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
2022 Base Year					
Arm A	D1	0.0	6.04	0.46	A
Arm B		498.3	707.56	1.33	F
Arm C		0.0	0.00	0.00	A
Arm D		67.1	90.81	1.04	F
2028 No Development					
Arm A	D2	1.1	7.00	0.52	A
Arm B		738.3	1029.04	1.51	F
Arm C		0.0	0.00	0.00	A
Arm D		225.7	335.73	1.18	F
2028 With Development					
Arm A	D3	1.2	8.48	0.50	A
Arm B		761.1	1380.82	1.53	F
Arm C		0.0	0.00	0.00	A
Arm D		231.0	353.35	1.19	F
2033 No Development					
Arm A	D4	1.3	8.00	0.57	A
Arm B		890.3	1771.24	1.62	F
Arm C		0.0	0.00	0.00	A
Arm D		352.8	543.75	1.29	F
2033 With Development					
Arm A	D5	1.0	9.39	0.60	A
Arm B		1018.8	1828.00	1.64	F
Arm C		0.0	0.00	0.00	A
Arm D		384.4	550.84	1.27	F
2043 No Development					
Arm A	D6	1.7	10.14	0.63	B
Arm B		1433.3	2549.40	1.82	F
Arm C		0.0	0.00	0.00	A
Arm D		626.6	877.40	1.40	F
2043 With Development					
Arm A	D7	1.5	11.31	0.68	B
Arm B		1400.4	2515.25	1.84	F
Arm C		0.0	0.00	0.00	A
Arm D		639.3	899.70	1.40	F

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	Junction2
Location	Clonsillaigh
Site number	2
Date	05/07/2010
Version	
Status	
Identifier	
Client	Irish Water
Jobnumber	7550
Enumerator	TOBIN/Maria Rooney
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	Veh	Veh	perHour	s	Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queuing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RPC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	30.00	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	2022 Base Year	PM	ONE HOUR	16:00	17:30	15	✓
D2	2028 No Development	PM	ONE HOUR	16:00	17:30	15	✓
D3	2028 With Development	PM	ONE HOUR	16:00	17:30	15	✓
D4	2035 No Development	PM	ONE HOUR	16:00	17:30	15	✓
D5	2035 With Development	PM	ONE HOUR	16:00	17:30	15	✓
D6	2043 No Development	PM	ONE HOUR	16:00	17:30	15	✓
D7	2043 With Development	PM	ONE HOUR	16:00	17:30	15	✓

Analysis Set Details

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

2022 Base Year , 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, D	380.95	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	380.95	F

Arms

Arms

Arm	Name	Description	No give-way line
A	Clostrough Road		
B	R139 East		
C	Access Road		
D	R139 East		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	F - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	Phi - Conflict (entry) angle (deg)	Entry only	Exit only
A	8.00	8.10	30.0	38.0	60.0	35.0		
B	8.30	8.80	10.4	23.0	60.0	33.0		
C	4.20	5.90	9.0	14.0	60.0	53.0		
D	6.70	8.20	18.0	65.0	60.0	38.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.051	2408
B	0.010	2227
C	0.456	1423
D	0.888	2570

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 Base Year	PM	ONE HOUR	16:00	17:30	10	✓

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 (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	409	100.000
B		ONE HOUR	✓	2370	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2185	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	228	0	184
	B	272	25	0	2073
	C	0	0	0	0
	D	201	1978	0	5

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	4	0	10
	B	2	0	0	7
	C	0	0	0	0
	D	5	4	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.46	6.84	6.8	A	375	553
B	1.33	707.06	408.1	F	2175	3202
C	0.00	0.00	0.0	A	0	0
D	1.04	60.81	67.1	F	2008	3007

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	308	77	1504	1359	0.227	307	352	0.0	0.3	3.418	A
B	1784	448	142	2005	0.850	1758	1889	0.0	7.1	13.252	B
C	0	0	1836	510	0.000	0	0	0.0	0.0	0.000	A
D	1045	411	220	2325	0.707	1035	1078	0.0	2.4	5.149	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	388	92	1754	1175	0.313	367	405	0.3	0.5	4.451	A
B	2131	533	170	1987	1.032	1903	1951	7.1	49.0	60.029	F
C	0	0	2132	396	0.000	0	0	0.0	0.0	0.000	A
D	1904	491	298	2309	0.851	1952	1886	2.4	5.3	9.795	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	400	113	2079	994	0.403	449	434	0.5	0.8	0.080	A
B	2008	552	207	1904	1.329	1903	2321	49.0	210.0	243.121	F
C	0	0	2170	377	0.000	0	0	0.0	0.0	0.000	A
D	2406	591	246	2308	1.042	2287	1924	8.3	40.1	44.595	E

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	450	113	2107	976	0.451	450	437	0.8	0.8	5.844	A
B	2009	552	209	1963	1.329	1963	2300	210.0	372.2	535.415	F
C	0	0	2171	377	0.000	0	0	0.0	0.0	0.000	A
D	2406	591	246	2308	1.042	2296	1925	40.1	67.1	50.513	F

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	388	92	2023	1029	0.357	369	431	0.8	0.6	5.452	A
B	2131	533	171	1987	1.073	1986	2221	272.2	498.3	707.683	F
C	0	0	2151	384	0.000	0	0	0.0	0.0	0.000	A
D	1904	491	249	2307	0.852	2205	1908	67.1	8.8	52.735	F

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	398	77	1630	1342	0.229	309	382	0.6	0.3	3.489	A
B	1784	449	143	2004	0.850	1999	1997	498.3	354.5	698.920	F
C	0	0	2142	392	0.000	0	0	0.0	0.0	0.000	A
D	1540	411	251	2305	0.714	1952	1882	6.8	2.5	5.741	A

2028 No Development, 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, D	787.38	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	787.38	F

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	2028 No Development	PM	ONE HOUR	18:00	17:30	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 (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	400	100.000
B		ONE HOUR	✓	2008	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2450	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	252	0	208
	B	305	28	0	2335
	C	0	0	0	0
	D	228	2225	0	5

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	4	0	10
	B	2	0	0	7
	C	0	0	0	0
	D	5	5	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.52	7.99	1.1	A	422	633
B	1.51	1329.64	738.3	F	2448	3672
C	0.00	0.00	0.0	A	0	0
D	1.18	388.73	233.7	F	2254	3380

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	345	87	1684	1234	0.281	345	387	0.0	0.4	4.042	A
B	2009	652	150	1894	1.008	1893	1870	0.0	23.8	31.220	D
C	0	0	2073	425	0.000	0	0	0.0	0.0	0.000	A
D	1845	462	239	2293	0.806	1833	1834	0.0	4.0	7.361	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	414	103	1684	1942	0.387	412	424	0.4	0.7	5.708	A
B	2398	630	191	1974	1.215	1971	2206	23.8	130.7	147.868	F
C	0	0	2180	381	0.000	0	0	0.0	0.0	0.000	A
D	2006	552	248	2289	0.935	2180	1916	4.0	15.4	22.854	D

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	508	127	2095	971	0.522	505	433	0.7	1.1	7.695	A
B	2937	734	233	1947	1.508	1947	2387	130.7	378.3	473.966	F
C	0	0	2180	372	0.000	0	0	0.0	0.0	0.000	A
D	2704	678	243	2280	1.181	2285	1997	15.4	120.1	113.249	F

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	508	127	2100	968	0.523	508	433	1.1	1.1	7.797	A
B	2937	734	234	1947	1.508	1947	2372	378.3	629.8	924.234	F
C	0	0	2181	372	0.000	0	0	0.0	0.0	0.000	A
D	2704	678	243	2291	1.181	2290	1998	120.1	223.7	274.289	F

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	414	103	2089	970	0.424	415	430	1.1	0.7	6.448	A
B	2398	600	192	1973	1.216	1973	2312	629.8	732.2	1235.079	F
C	0	0	2155	380	0.000	0	0	0.0	0.0	0.000	A
D	2006	642	246	2288	0.955	2278	1919	223.7	366.1	339.734	F

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	345	87	2087	970	0.355	347	437	0.7	0.0	5.731	A
B	2098	502	152	1992	1.008	1892	2273	732.2	735.3	1328.039	F
C	0	0	2154	365	0.000	0	0	0.0	0.0	0.000	A
D	1049	462	249	2297	0.809	2278	1905	208.1	09.4	242.758	F

2028 With Development, 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, D	812.77	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	812.77	F

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
03	2028 With Development	PM	ONE HOUR	16:00	17:30	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 (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	487	100.000
B		ONE HOUR	✓	2988	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2408	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	252	0	215
	B	305	20	0	2335
	C	0	0	0	0
	D	220	2237	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	4	0	11
	B	2	0	0	7
	C	0	0	0	0
	D	5	5	0	35

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.00	3.48	1.2	A	447	670
B	1.20	1390.82	761.1	F	2448	3572
C	0.00	0.00	0.0	A	0	0
D	1.19	359.35	231.0	F	2285	3397

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	387	92	1992	1220	0.300	385	388	0.0	0.4	4.200	A
B	2009	602	180	1979	1.015	1905	1878	0.0	25.8	33.204	D
C	0	0	2085	417	0.000	0	0	0.0	0.0	0.000	A
D	1858	465	238	2292	0.811	1842	1847	0.0	4.1	7.730	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	438	108	1992	1030	0.420	437	422	0.4	0.7	0.005	A
B	2398	600	210	1907	1.200	1954	2213	20.8	130.9	100.747	F
C	0	0	2189	376	0.000	0	0	0.0	0.0	0.000	A
D	2219	555	244	2288	0.970	2179	1925	4.1	16.3	23.906	C

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	530	134	2097	962	0.557	534	429	0.7	1.2	3.357	A
B	2837	734	262	1926	1.520	1926	2358	135.9	355.7	489.517	F
C	0	0	2189	365	0.000	0	0	0.0	0.0	0.000	A
D	2717	679	240	2291	1.150	2286	1948	10.3	124.2	117.057	F

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	530	134	2101	960	0.558	536	430	1.2	1.2	8.482	A
B	2937	734	263	1926	1.525	1926	2373	389.7	842.6	959.219	F
C	0	0	2189	365	0.000	0	0	0.0	0.0	0.000	A
D	2717	679	240	2291	1.156	2290	1949	124.2	231.5	263.169	F

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	438	108	2090	967	0.453	435	432	1.2	0.6	6.847	A
B	2398	600	217	1955	1.227	1956	2313	642.6	753.3	1283.073	F
C	0	0	2173	374	0.000	0	0	0.0	0.0	0.000	A
D	2219	555	244	2288	0.970	2278	1928	231.0	210.1	303.850	F

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	367	92	2668	968	0.375	968	434	0.8	0.8	6.003	A
B	2006	502	152	1978	1.016	1977	2274	763.1	761.1	1380.623	F
C	0	0	2129	381	0.000	0	0	0.0	0.0	0.000	A
D	1808	455	247	2267	0.813	2270	1913	215.1	111.0	260.148	F

2033 No Development, 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, D	1088.01	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1088.01	F

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
D4	2033 No Development	PM	ONE HOUR	16:00	17:30	15	<input checked="" type="checkbox"/>

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	<input checked="" type="checkbox"/>	493	100.000
B		ONE HOUR	<input checked="" type="checkbox"/>	2653	100.000
C		ONE HOUR	<input checked="" type="checkbox"/>	0	100.000
D		ONE HOUR	<input checked="" type="checkbox"/>	2925	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	270	0	223
	B	329	30	0	2497
	C	0	0	0	0
	D	242	2377	0	8

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	5	0	11
	B	2	0	0	7
	C	0	0	0	0
	D	5	5	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.57	8.88	1.3	A	452	678
B	1.02	1771.24	390.3	F	2018	3927
C	0.00	0.00	0.0	A	0	0
D	1.20	543.75	352.8	F	2408	3513

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	371	95	1704	1153	0.322	369	402	0.0	0.5	4.560	A
B	2148	537	171	1965	1.002	1948	1951	0.0	50.4	53.905	F
C	0	0	2118	402	0.000	0	0	0.0	0.0	0.000	A
D	1978	494	243	2291	0.833	1955	1875	0.0	5.8	10.087	B

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	443	111	2058	987	0.449	442	431	0.5	0.8	8.589	A
B	2586	641	205	1964	1.306	1983	2253	50.4	200.8	259.268	F
C	0	0	2108	377	0.000	0	0	0.0	0.0	0.000	A
D	2900	690	245	2289	1.031	2242	1923	5.8	30.3	41.009	E

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	543	138	2095	956	0.566	541	432	0.8	1.3	8.566	A
B	3141	785	250	1935	1.023	1935	2380	200.8	502.1	607.081	F
C	0	0	2135	368	0.000	0	0	0.0	0.0	0.000	A
D	2890	723	241	2291	1.251	2290	1944	30.3	185.2	178.864	F

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	543	130	2100	959	0.500	543	432	1.3	1.3	8.050	A
B	3141	780	251	1930	1.024	1930	2382	200.3	608.9	627.701	F
C	0	0	2135	368	0.000	0	0	0.0	0.0	0.000	A
D	2890	723	241	2292	1.251	2291	1944	185.3	335.0	412.137	F

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	443	111	2088	980	0.452	445	430	1.3	0.9	7.015	A
B	2680	641	206	1963	1.327	1963	2337	603.9	984.3	1007.072	F
C	0	0	2109	377	0.000	0	0	0.0	0.0	0.000	A
D	2980	690	245	2289	1.031	2288	1924	330.0	352.8	543.747	F

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	371	93	2062	1854	0.385	372	437	0.8	0.8	6.092	A
B	2148	637	174	1904	1.003	1904	2290	354.3	365.3	1771.240	F
C	0	0	2157	363	0.000	0	0	0.0	0.0	0.000	A
D	1978	494	248	2288	0.854	2281	1910	352.8	278.8	457.001	F

2033 With Development, 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, D	1114.82	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1114.82	F

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
DS	2033 With Development	PM	ONE HOUR	16:00	17:30	95	✓

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 (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	520	100.000
B		ONE HOUR	✓	2803	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2537	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	270	0	250
	B	320	30	0	2497
	C	0	0	0	0
	D	242	2389	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	5	0	11
	B	2	0	0	7
	C	0	0	0	0
	D	5	5	0	36

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.00	9.39	1.0	A	477	716
B	1.54	1925.65	1019.0	F	2618	3927
C	0.00	0.00	0.0	A	0	0
D	1.27	559.84	364.4	F	2426	3630

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	391	88	1802	1140	0.342	389	401	0.0	0.0	4.750	A
B	2148	527	192	1971	1.090	1935	1999	0.0	63.2	66.090	F
C	0	0	2127	387	0.000	0	0	0.0	0.0	0.000	A
D	1965	496	241	2299	0.857	1961	1965	0.0	6.0	10.316	B

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	467	117	2059	962	0.476	466	428	0.0	0.0	5.966	A
B	2666	641	229	1947	1.317	1947	2286	63.2	207.7	247.316	F
C	0	0	2176	372	0.000	0	0	0.0	0.0	0.000	A
D	2371	593	243	2299	1.036	2245	1933	6.0	37.4	43.375	E

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	573	143	2100	966	0.589	570	429	0.0	1.6	9.276	A
B	3141	795	279	1915	1.640	1915	2391	207.7	514.2	661.661	F
C	0	0	2195	362	0.000	0	0	0.0	0.0	0.000	A
D	2603	726	235	2291	1.257	2250	1956	37.4	190.8	184.956	F

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	573	143	2101	966	0.589	572	425	1.6	1.6	9.395	A
B	3141	795	260	1915	1.640	1915	2393	514.2	820.8	1257.464	F
C	0	0	2195	362	0.000	0	0	0.0	0.0	0.000	A
D	2603	726	239	2291	1.257	2291	1960	190.8	343.8	423.283	F

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	467	117	2059	967	0.485	465	432	1.6	1.0	7.415	A
B	2666	641	251	1946	1.318	1946	2337	620.8	575.4	1054.361	F
C	0	0	2177	371	0.000	0	0	0.0	0.0	0.000	A
D	2371	593	243	2299	1.036	2288	1934	343.8	364.4	559.940	F

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	391	98	2092	901	0.407	393	434	1.0	0.7	6.345	A
B	2148	637	194	1970	1.050	1970	2291	575.4	1018.9	1828.552	F
C	0	0	2154	379	0.000	0	0	0.0	0.0	0.000	A
D	1980	490	246	2287	0.853	2281	1918	364.4	290.5	517.183	F

2043 No Development, 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
†	untitled	Standard Roundabout		A, B, C, D	1001.83	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1001.83	F

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
DS	2043 No Development	PM	ONE HOUR	16:00	17:30	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 (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	843	100.000
B		ONE HOUR	✓	3135	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2682	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	298	0	247
	B	358	35	0	2750
	C	0	0	0	0
	D	265	2011	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	5	0	12
	B	3	0	0	8
	C	0	0	0	0
	D	8	8	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.03	10.14	1.7	B	488	747
B	1.82	2049.40	1493.3	F	2890	4321
C	0.00	0.00	0.0	A	0	0
D	1.49	977.40	520.6	F	2045	3807

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	408	102	1941	1944	0.352	408	414	0.0	0.0	5.625	A
B	2983	551	189	1955	1.205	1936	2158	0.0	109.7	104.102	F
C	0	0	2125	388	0.000	0	0	0.0	0.0	0.000	A
D	2170	542	240	2209	0.950	2115	1890	0.0	13.7	19.127	C

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	488	122	2074	959	0.509	487	427	0.0	1.0	7.601	A
B	2822	700	220	1931	1.421	1931	2335	100.7	329.4	412.780	F
C	0	0	2107	372	0.000	0	0	0.0	0.0	0.000	A
D	2591	548	239	2270	1.141	2202	1918	13.7	90.0	94.490	F

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	598	149	2083	953	0.627	595	424	1.0	1.6	10.000	B
B	3450	804	270	1900	1.218	1900	2403	329.4	718.0	994.911	F
C	0	0	2175	362	0.000	0	0	0.0	0.0	0.000	A
D	3173	790	234	2272	1.390	2272	1940	90.0	321.2	334.188	F

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	598	149	2083	953	0.628	598	424	1.0	1.7	10.130	B
B	3450	804	277	1899	1.620	1899	2400	719.0	1107.8	1732.912	F
C	0	0	2175	362	0.000	0	0	0.0	0.0	0.000	A
D	3173	790	234	2272	1.390	2272	1940	321.2	340.4	690.104	F

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	488	122	2082	954	0.512	491	429	1.7	1.1	7.898	A
B	2822	705	228	1900	1.422	1930	2344	1107.8	1330.8	2280.247	F
C	0	0	2158	372	0.000	0	0	0.0	0.0	0.000	A
D	2591	548	239	2270	1.141	2270	1919	348.4	808.8	932.908	F

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RPC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	409	102	2977	357	0.427	410	400	1.1	0.8	8.557	A
B	2983	551	191	1953	1.210	1553	2298	1930.8	1433.5	2549.309	F
C	0	0	2145	379	0.000	0	0	0.0	0.0	0.000	A
D	2170	542	242	2208	0.957	2200	1902	220.6	502.9	977.397	F

2043 With Development, 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
†	untitled	Standard Roundabout		A, B, C, D	1534.45	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1534.45	F

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	2043 With Development	PM	ONE HOUR	16:00	17:30	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 (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	570	100.000
B		ONE HOUR	✓	3139	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2894	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	280	0	274
	B	388	33	0	2750
	C	0	0	0	0
	D	285	2823	0	8

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	5	0	13
	B	3	0	0	8
	C	0	0	0	0
	D	8	8	0	40

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.00	11.31	1.9	B	523	765
B	1.84	2915.25	1480.4	F	2680	4521
C	0.00	0.00	0.0	A	0	0
D	1.40	588.70	338.3	F	2000	3863

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	428	107	1947	1932	0.416	428	412	0.0	0.7	5.914	A
B	2363	691	209	1949	1.216	1862	2154	0.0	110.3	108.144	F
C	0	0	2131	383	0.000	0	0	0.0	0.0	0.000	A
D	2179	545	238	2269	0.900	2121	1853	0.0	14.4	15.732	D

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	612	128	2076	951	0.538	611	424	0.7	1.1	8.138	A
B	2622	705	259	1913	1.475	1913	2335	110.3	337.4	427.695	F
C	0	0	2183	387	0.000	0	0	0.0	0.0	0.000	A
D	2600	650	237	2270	1.140	2082	1928	14.4	69.3	67.528	F

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	628	157	2064	948	0.654	625	421	1.1	1.9	11.198	B
B	3458	884	305	1878	1.840	1878	2403	337.4	731.9	1029.487	F
C	0	0	2183	350	0.000	0	0	0.0	0.0	0.000	A
D	3186	797	233	2272	1.402	2272	1950	69.3	327.9	341.360	F

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	628	157	2064	945	0.654	627	421	1.9	1.9	11.310	B
B	3458	884	306	1877	1.841	1877	2405	731.9	1120.0	1784.439	F
C	0	0	2184	350	0.000	0	0	0.0	0.0	0.000	A
D	3186	797	233	2272	1.402	2272	1951	327.9	586.3	703.337	F

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	612	128	2082	947	0.541	610	420	1.9	1.2	8.401	A
B	2622	705	262	1912	1.476	1912	2340	1120.0	1954.1	2218.404	F
C	0	0	2184	386	0.000	0	0	0.0	0.0	0.000	A
D	2600	650	237	2270	1.146	2270	1927	69.3	539.3	951.047	F

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating Flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	429	107	3077	950	0.452	431	427	1.2	0.8	6.952	A
B	2353	591	212	1938	1.219	1938	2296	1354.1	1480.4	2519.294	F
C	0	0	2150	374	0.600	0	0	0.0	0.0	0.000	A
D	2173	545	240	2268	0.951	2264	1910	838.3	818.0	395.657	F

Junctions 10
PICADY 10 - Priority Intersection Module
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Filename: Import of Junction A AM.j10
 Path: Wserver5-dub\Gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIA\ Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Operation
 Report generation date: 18/10/2023 12:01:20

- »2022 Base Year , AM
- »2029 No Development , AM
- »2029 With Development , AM
- »2034 No Development , AM
- »2034 With Development , AM
- »2044 No Development , AM
- »2044 With Development , AM

Summary of junction performance

	AM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
2022 Base Year					
Stream B-AC	D1	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
2029 No Development					
Stream B-AC	D2	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
2029 With Development					
Stream B-AC	D3	0.0	10.21	0.02	B
Stream C-AB		0.0	0.00	0.00	A
2034 No Development					
Stream B-AC	D4	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
2034 With Development					
Stream B-AC	D5	0.0	10.40	0.02	B
Stream C-AB		0.0	0.00	0.00	A
2044 No Development					
Stream B-AC	D6	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
2044 With Development					
Stream B-AC	D7	0.0	10.81	0.02	B
Stream C-AB		0.0	0.00	0.00	A

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	(untitled)
Location	
Site number	
Date	08/08/2010
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TOBIN/Maria Rooney
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	Veh	Veh	perHour	s	Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	38.00	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)
D1	2022 Base Year	AM	ONE HOUR	07:45	09:15	15
D2	2029 No Development	AM	ONE HOUR	07:45	09:15	15
D3	2029 With Development	AM	ONE HOUR	07:45	09:15	15
D4	2034 No Development	AM	ONE HOUR	07:45	09:15	15
D5	2034 With Development	AM	ONE HOUR	07:45	09:15	15
D6	2044 No Development	AM	ONE HOUR	07:45	09:15	15
D7	2044 With Development	AM	ONE HOUR	07:45	09:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year , AM

Data Errors and Warnings

No errors or warnings

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	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	Clonsilla Rd (N)		Major
B	WWTP		Minor
C	Clonsilla Rd (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (RCU)
C	8.00			90.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	110	70

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (veh/h)	Slope for A-B	Slope for R-C	Slope for C-A	Slope for C-B
B-A	549	0.100	0.253	0.109	0.361
B-C	688	0.102	0.259	-	-
C-B	629	0.240	0.240	-	-

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 line segment only; they may differ for subsequent line 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)
D1	2022 Base Year	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	300	100.000
B		✓	0	100.000
C		✓	180	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	300
	B	0	0	0
	C	180	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	13
	B	0	0	0
	C	15	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	507	0.000	0	0.0	0.000	A
C-AB	0	509	0.000	0	0.0	0.000	A
C-A	140			140			
A-B	0			0			
A-C	271			271			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	489	0.000	0	0.0	0.000	A
C-AB	0	495	0.000	0	0.0	0.000	A
C-A	187			187			
A-B	0			0			
A-C	324			324			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	453	0.000	0	0.0	0.000	A
C-AB	0	477	0.000	0	0.0	0.000	A
C-A	205			205			
A-B	0			0			
A-C	390			390			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	453	0.000	0	0.0	0.000	A
C-AB	0	477	0.000	0	0.0	0.000	A
C-A	205			205			
A-B	0			0			
A-C	390			390			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	489	0.000	0	0.0	0.000	A
C-AB	0	495	0.000	0	0.0	0.000	A
C-A	187			187			
A-B	0			0			
A-C	324			324			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	507	0.000	0	0.0	0.000	A
C-AB	0	509	0.000	0	0.0	0.000	A
C-A	140			140			
A-B	0			0			
A-C	271			271			

2029 No Development , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (%)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)
D2	2029 No Development	AM	ONE HOUR	07:45	08:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	410	100.000
B		✓	0	100.000
C		✓	210	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	410
	B	0	0	0
	C	210	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	14
	B	0	0	0
	C	16	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	481	0.000	0	0.0	0.000	A
C-AB	0	495	0.000	0	0.0	0.000	A
C-A	182			182			
A-B	0			0			
A-C	313			313			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	459	0.000	0	0.0	0.000	A
C-AB	0	479	0.000	0	0.0	0.000	A
C-A	193			193			
A-B	0			0			
A-C	374			374			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	439	0.000	0	0.0	0.000	A
C-AB	0	458	0.000	0	0.0	0.000	A
C-A	237			237			
A-B	0			0			
A-C	458			458			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	439	0.000	0	0.0	0.000	A
C-AB	0	458	0.000	0	0.0	0.000	A
C-A	237			237			
A-B	0			0			
A-C	458			458			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	409	0.000	0	0.0	0.000	A
C-AB	0	479	0.000	0	0.0	0.000	A
C-A	193			193			
A-B	0			0			
A-C	374			374			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	481	0.000	0	0.0	0.000	A
C-AB	0	495	0.000	0	0.0	0.000	A
C-A	162			162			
A-B	0			0			
A-C	313			313			

2029 With Development , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (%)	Junction LOS
1	united	T-Junction	Two-way	Two-way	Two-way		0.14	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.14	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)
D3	2029 With Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	415	100.000
B		✓	7	100.000
C		✓	215	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	415
	B	0	0	7
	C	215	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	14
	B	0	0	45
	C	16	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.02	10.21	0.0	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	5	388	0.013	5	0.0	9.370	A
C-AB	0	435	0.000	0	0.0	0.000	A
C-A	162			162			
A-B	0			0			
A-C	313			313			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	6	377	0.016	6	0.0	9.710	A
C-AB	0	419	0.000	0	0.0	0.000	A
C-A	193			193			
A-B	0			0			
A-C	374			374			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	7	300	0.021	7	0.0	10.209	B
C-AB	0	436	0.000	0	0.0	0.000	A
C-A	237			237			
A-B	0			0			
A-C	458			458			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	7	300	0.021	7	0.0	10.209	B
C-AB	0	436	0.000	0	0.0	0.000	A
C-A	237			237			
A-B	0			0			
A-C	458			458			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	377	0.010	0	0.0	9.713	A
C-AB	0	479	0.000	0	0.0	0.000	A
C-A	193			193			
A-B	0			0			
A-C	374			374			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	389	0.013	0	0.0	9.379	A
C-AB	0	495	0.000	0	0.0	0.000	A
C-A	162			162			
A-B	0			0			
A-C	313			313			

2034 No Development , AM

Data Errors and Warnings

No errors or warnings

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	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)
D4	2034 No Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	442	100.000
B		✓	0	100.000
C		✓	229	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	442
	B	0	0	0
	C	229	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	15
	B	0	0	0
	C	17	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	483	0.000	0	0.0	0.000	A
C-AB	0	487	0.000	0	0.0	0.000	A
C-A	172			172			
A-B	0			0			
A-C	333			333			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	400	0.000	0	0.0	0.000	A
C-AB	0	470	0.000	0	0.0	0.000	A
C-A	206			206			
A-B	0			0			
A-C	397			397			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	427	0.000	0	0.0	0.000	A
C-AB	0	448	0.000	0	0.0	0.000	A
C-A	252			252			
A-B	0			0			
A-C	407			407			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	427	0.000	0	0.0	0.000	A
C-AB	0	448	0.000	0	0.0	0.000	A
C-A	252			252			
A-B	0			0			
A-C	407			407			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-RC	0	400	0.000	0	0.0	0.000	A
C-RB	0	470	0.000	0	0.0	0.000	A
C-A	206			206			
A-B	0			0			
A-C	397			397			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-RC	0	483	0.000	0	0.0	0.000	A
C-RB	0	487	0.000	0	0.0	0.000	A
C-A	172			172			
A-B	0			0			
A-C	333			333			

2034 With Development , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
t	untitled	T-Junction	Two-way	Two-way	Two-way		0.13	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.13	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)
D5	2034 With Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	442	100.000
B		✓	7	100.000
C		✓	229	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	442
	B	0	0	7
	C	229	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	15
	B	0	0	48
	C	17	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.02	10.40	0.0	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	5	324	0.013	5	0.0	9.487	A
C-AB	0	487	0.000	0	0.0	0.000	A
C-A	172			172			
A-B	0			0			
A-C	333			333			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	6	371	0.016	6	0.0	9.852	A
C-AB	0	470	0.000	0	0.0	0.000	A
C-A	208			208			
A-B	0			0			
A-C	397			397			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	7	353	0.021	7	0.0	10.402	B
C-AB	0	448	0.000	0	0.0	0.000	A
C-A	252			252			
A-B	0			0			
A-C	487			487			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	7	353	0.021	7	0.0	10.402	B
C-AB	0	448	0.000	0	0.0	0.000	A
C-A	252			252			
A-B	0			0			
A-C	487			487			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	371	0.016	0	0.0	9.655	A
C-AB	0	470	0.000	0	0.0	0.000	A
C-A	208			208			
A-B	0			0			
A-C	397			397			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	5	384	0.013	5	0.0	9.490	A
C-AB	0	487	0.000	0	0.0	0.000	A
C-A	172			172			
A-B	0			0			
A-C	333			333			

2044 No Development , AM

Data Errors and Warnings

No errors or warnings

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	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)
D5	2044 No Development	AM	ONE HOUR	07:45	08:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	492	100.000
B		✓	0	100.000
C		✓	255	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	492
	B	0	0	0
	C	255	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	17
	B	0	0	0
	C	19	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:15 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	487	0.000	0	0.0	0.000	A
C-AB	0	471	0.000	0	0.0	0.000	A
C-A	192			192			
A-B	0			0			
A-C	370			370			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	440	0.000	0	0.0	0.000	A
C-AB	0	453	0.000	0	0.0	0.000	A
C-A	229			229			
A-B	0			0			
A-C	442			442			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	405	0.000	0	0.0	0.000	A
C-AB	0	427	0.000	0	0.0	0.000	A
C-A	281			281			
A-B	0			0			
A-C	542			542			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	405	0.000	0	0.0	0.000	A
C-AB	0	427	0.000	0	0.0	0.000	A
C-A	281			281			
A-B	0			0			
A-C	542			542			

08:15 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	440	0.000	0	0.0	0.000	A
C-AB	0	453	0.000	0	0.0	0.000	A
C-A	229			229			
A-B	0			0			
A-C	442			442			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	487	0.000	0	0.0	0.000	A
C-AB	0	471	0.000	0	0.0	0.000	A
C-A	192			192			
A-B	0			0			
A-C	370			370			

2044 With Development , AM

Data Errors and Warnings

No errors or warnings

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	united	T-Junction	Two-way	Two-way	Two-way		0.12	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.12	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)
D7	2044 With Development	AM	ONE HOUR	07:45	08:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	492	100.000
B		✓	7	100.000
C		✓	255	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	492
	B	0	0	7
	C	255	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	17
	B	0	0	45
	C	19	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.02	10.81	0.0	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	5	576	0.014	5	0.0	9.714	A
C-AB	0	471	0.000	0	0.0	0.000	A
C-A	192			192			
A-B	0			0			
A-C	370			370			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	8	581	0.017	8	0.0	10.148	B
C-AB	0	455	0.000	0	0.0	0.000	A
C-A	229			229			
A-B	0			0			
A-C	442			442			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	7	541	0.022	7	0.0	10.807	B
C-AB	0	427	0.000	0	0.0	0.000	A
C-A	281			281			
A-B	0			0			
A-C	542			542			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	7	541	0.022	7	0.0	10.807	B
C-AB	0	427	0.000	0	0.0	0.000	A
C-A	281			281			
A-B	0			0			
A-C	542			542			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	301	0.017	0	0.0	10.145	B
C-AB	0	405	0.000	0	0.0	0.000	A
C-A	229			229			
A-B	0			0			
A-C	442			442			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	370	0.014	0	0.0	9.717	A
C-AB	0	471	0.000	0	0.0	0.000	A
C-A	192			192			
A-B	0			0			
A-C	370			370			

Junctions 10
PICADY 10 - Priority Intersection Module
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Filename: Import of Junction A PM.j10

Path: Wserver5-dub\Gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIA\ Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Operation

Report generation date: 18/10/2023 12:13:08

- »2022 Base Year , PM
- »2029 No Development , PM
- »2029 With Development , PM
- »2034 No Development , PM
- »2034 With Development , PM
- »2044 No Development , PM
- »2044 With Development , PM

Summary of junction performance

	PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
2022 Base Year					
Stream B-AC	D1	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
2029 No Development					
Stream B-AC	D2	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
2029 With Development					
Stream B-AC	D3	0.1	7.99	0.00	A
Stream C-AB		0.0	0.00	0.00	A
2034 No Development					
Stream B-AC	D4	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
2034 With Development					
Stream B-AC	D5	0.1	8.09	0.00	A
Stream C-AB		0.0	0.00	0.00	A
2044 No Development					
Stream B-AC	D6	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
2044 With Development					
Stream B-AC	D7	0.1	8.37	0.00	A
Stream C-AB		0.0	0.00	0.00	A

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	(untitled)
Location	
Site number	
Date	08/08/2010
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TOBIN/Maria Rooney
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	Veh	Veh	perHour	s	Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	38.00	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)
D1	2022 Base Year	PM	ONE HOUR	15:45	17:15	15
D2	2029 No Development	PM	ONE HOUR	15:45	17:15	15
D3	2029 With Development	PM	ONE HOUR	15:45	17:15	15
D4	2034 No Development	PM	ONE HOUR	15:45	17:15	15
D5	2034 With Development	PM	ONE HOUR	15:45	17:15	15
D6	2044 No Development	PM	ONE HOUR	15:45	17:15	15
D7	2044 With Development	PM	ONE HOUR	15:45	17:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year , PM

Data Errors and Warnings

No errors or warnings

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	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	Clonsilla Rd (N)		Major
B	WWTP		Minor
C	Clonsilla Rd (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	8.00			90.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	110	70

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (veh/h)	Slope for A-B	Slope for R-C	Slope for C-A	Slope for C-B
B-A	549	0.100	0.253	0.109	0.361
B-C	688	0.102	0.259	-	-
C-B	629	0.240	0.240	-	-

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 line segment only; they may differ for subsequent line 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)
D1	2022 Base Year	PM	ONE HOUR	15:45	17:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	287	100.000
B		✓	0	100.000
C		✓	329	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	287
	B	0	0	0
	C	329	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	16
	B	0	0	0
	C	8	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	511	0.000	0	0.0	0.000	A
C-AB	0	539	0.000	0	0.0	0.000	A
C-A	248			248			
A-B	0			0			
A-C	216			216			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	492	0.000	0	0.0	0.000	A
C-AB	0	527	0.000	0	0.0	0.000	A
C-A	290			290			
A-B	0			0			
A-C	258			258			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	487	0.000	0	0.0	0.000	A
C-AB	0	512	0.000	0	0.0	0.000	A
C-A	302			302			
A-B	0			0			
A-C	310			310			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	487	0.000	0	0.0	0.000	A
C-AB	0	512	0.000	0	0.0	0.000	A
C-A	302			302			
A-B	0			0			
A-C	310			310			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	492	0.000	0	0.0	0.000	A
C-AB	0	527	0.000	0	0.0	0.000	A
C-A	290			290			
A-B	0			0			
A-C	258			258			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	511	0.000	0	0.0	0.000	A
C-AB	0	539	0.000	0	0.0	0.000	A
C-A	248			248			
A-B	0			0			
A-C	210			210			

2029 No Development , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (%)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)
D2	2029 No Development	PM	ONE HOUR	16:45	17:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	332	100.000
B		✓	0	100.000
C		✓	378	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	332
	B	0	0	0
	C	378	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	17
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	495	0.000	0	0.0	0.000	A
C-AB	0	525	0.000	0	0.0	0.000	A
C-A	285			285			
A-B	0			0			
A-C	250			250			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	474	0.000	0	0.0	0.000	A
C-AB	0	513	0.000	0	0.0	0.000	A
C-A	340			340			
A-B	0			0			
A-C	298			298			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	444	0.000	0	0.0	0.000	A
C-AB	0	495	0.000	0	0.0	0.000	A
C-A	418			418			
A-B	0			0			
A-C	368			368			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	444	0.000	0	0.0	0.000	A
C-AB	0	495	0.000	0	0.0	0.000	A
C-A	418			418			
A-B	0			0			
A-C	368			368			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	474	0.000	0	0.0	0.000	A
C-AB	0	513	0.000	0	0.0	0.000	A
C-A	340			340			
A-B	0			0			
A-C	298			298			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	495	0.000	0	0.0	0.000	A
C-AB	0	526	0.000	0	0.0	0.000	A
C-A	285			285			
A-B	0			0			
A-C	250			250			

2029 With Development , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (%)	Junction LOS
1	united	T-Junction	Two-way	Two-way	Two-way		0.30	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.30	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)
D1	2029 With Development	PM	ONE HOUR	15:45	17:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	332	100.000
B		✓	27	100.000
C		✓	378	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	332
	B	0	0	27
	C	378	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	17
	B	0	0	16
	C	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.06	7.35	0.1	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	20	511	0.040	20	0.0	7.338	A
C-AB	0	525	0.000	0	0.0	0.000	A
C-A	255			255			
A-B	0			0			
A-C	250			250			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	24	488	0.049	24	0.1	7.598	A
C-AB	0	513	0.000	0	0.0	0.000	A
C-A	340			340			
A-B	0			0			
A-C	298			298			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	30	490	0.062	30	0.1	7.885	A
C-AB	0	495	0.000	0	0.0	0.000	A
C-A	415			415			
A-B	0			0			
A-C	366			366			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	30	490	0.062	30	0.1	7.887	A
C-AB	0	495	0.000	0	0.0	0.000	A
C-A	415			415			
A-B	0			0			
A-C	366			366			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	24	486	0.049	24	0.1	7.003	A
C-AB	0	513	0.000	0	0.0	0.000	A
C-A	340			340			
A-B	0			0			
A-C	298			298			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	20	511	0.040	20	0.0	7.342	A
C-AB	0	526	0.000	0	0.0	0.000	A
C-A	285			285			
A-B	0			0			
A-C	250			250			

2034 No Development , PM

Data Errors and Warnings

No errors or warnings

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	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)
D4	2034 No Development	PM	ONE HOUR	10:45	17:15	10

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	353	100.000
B		✓	0	100.000
C		✓	400	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	353
	B	0	0	0
	C	400	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	17
	B	0	0	0
	C	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	488	0.000	0	0.0	0.000	A
C-AB	0	522	0.000	0	0.0	0.000	A
C-A	301			301			
A-B	0			0			
A-C	288			288			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	488	0.000	0	0.0	0.000	A
C-AB	0	508	0.000	0	0.0	0.000	A
C-A	350			350			
A-B	0			0			
A-C	317			317			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	433	0.000	0	0.0	0.000	A
C-AB	0	489	0.000	0	0.0	0.000	A
C-A	140			140			
A-B	0			0			
A-C	389			389			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	433	0.000	0	0.0	0.000	A
C-AB	0	489	0.000	0	0.0	0.000	A
C-A	140			140			
A-B	0			0			
A-C	389			389			

Continued on page 10

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-RC	0	400	0.000	0	0.0	0.000	A
C-RB	0	508	0.000	0	0.0	0.000	A
C-A	300			300			
A-B	0			0			
A-C	317			317			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-RC	0	488	0.000	0	0.0	0.000	A
C-RB	0	522	0.000	0	0.0	0.000	A
C-A	301			301			
A-B	0			0			
A-C	288			288			

2034 With Development , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
t	untitled	T-Junction	Two-way	Two-way	Two-way		0.29	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.29	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)
D5	2034 With Development	PM	ONE HOUR	16:45	17:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	353	100.000
B		✓	27	100.000
C		✓	400	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	353
	B	0	0	27
	C	400	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	17
	B	0	0	16
	C	9	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	8.09	0.1	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	20	506	0.040	20	0.0	7.401	A
C-AB	0	522	0.000	0	0.0	0.000	A
C-A	301			301			
A-B	0			0			
A-C	288			288			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	24	493	0.049	24	0.1	7.075	A
C-AB	0	508	0.000	0	0.0	0.000	A
C-A	300			300			
A-B	0			0			
A-C	317			317			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	30	474	0.063	30	0.1	8.095	A
C-AB	0	489	0.000	0	0.0	0.000	A
C-A	440			440			
A-B	0			0			
A-C	389			389			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	30	474	0.063	30	0.1	8.095	A
C-AB	0	489	0.000	0	0.0	0.000	A
C-A	440			440			
A-B	0			0			
A-C	389			389			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	24	493	0.049	24	0.1	7.025	A
C-AB	0	508	0.000	0	0.0	0.000	A
C-A	300			300			
A-B	0			0			
A-C	317			317			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	20	500	0.040	20	0.0	7.425	A
C-AB	0	522	0.000	0	0.0	0.000	A
C-A	301			301			
A-B	0			0			
A-C	288			288			

2044 No Development , PM

Data Errors and Warnings

No errors or warnings

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	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)
D5	2044 No Development	PM	ONE HOUR	16:45	17:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	394	100.000
B		✓	0	100.000
C		✓	443	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	394
	B	0	0	0
	C	443	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	20
	B	0	0	0
	C	10	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:15 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	472	0.000	0	0.0	0.000	A
C-AB	0	509	0.000	0	0.0	0.000	A
C-A	334			334			
A-B	0			0			
A-C	297			297			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	446	0.000	0	0.0	0.000	A
C-AB	0	493	0.000	0	0.0	0.000	A
C-A	398			398			
A-B	0			0			
A-C	354			354			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	409	0.000	0	0.0	0.000	A
C-AB	0	472	0.000	0	0.0	0.000	A
C-A	488			488			
A-B	0			0			
A-C	434			434			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	409	0.000	0	0.0	0.000	A
C-AB	0	472	0.000	0	0.0	0.000	A
C-A	488			488			
A-B	0			0			
A-C	434			434			

16:15 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	446	0.000	0	0.0	0.000	A
C-AB	0	493	0.000	0	0.0	0.000	A
C-A	398			398			
A-B	0			0			
A-C	354			354			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	472	0.000	0	0.0	0.000	A
C-AB	0	509	0.000	0	0.0	0.000	A
C-A	334			334			
A-B	0			0			
A-C	297			297			

2044 With Development , PM

Data Errors and Warnings

No errors or warnings

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	united	T-Junction	Two-way	Two-way	Two-way		0.20	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.20	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)
D7	2044 With Development	PM	ONE HOUR	15:45	17:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	394	100.000
B		✓	27	100.000
C		✓	443	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	394
	B	0	0	27
	C	443	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	20
	B	0	0	16
	C	19	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	8.37	0.1	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	20	496	0.041	20	0.0	7.557	A
C-AB	0	505	0.000	0	0.0	0.000	A
C-A	334			334			
A-B	0			0			
A-C	297			297			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	24	481	0.050	24	0.1	7.681	A
C-AB	0	495	0.000	0	0.0	0.000	A
C-A	398			398			
A-B	0			0			
A-C	354			354			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	30	490	0.065	30	0.1	8.370	A
C-AB	0	472	0.000	0	0.0	0.000	A
C-A	488			488			
A-B	0			0			
A-C	434			434			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	30	490	0.065	30	0.1	8.371	A
C-AB	0	472	0.000	0	0.0	0.000	A
C-A	488			488			
A-B	0			0			
A-C	434			434			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	24	481	0.000	24	0.1	7.883	A
C-AB	0	483	0.000	0	0.0	0.000	A
C-A	388			388			
A-B	0			0			
A-C	354			354			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	20	486	0.041	20	0.0	7.504	A
C-AB	0	509	0.000	0	0.0	0.000	A
C-A	334			334			
A-B	0			0			
A-C	297			297			

Junctions 10
PICADY 10 - Priority Intersection Module
Version: 10.0.3.1598 © Copyright TRL Software Limited, 2021
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Filename: Import of Junction B AM.j10
 Path: Wserver5-dub\Gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIA\ Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Operation
 Report generation date: 18/10/2023 12:16:20

- »2022 Base Year , AM
- »2029 No Development, AM
- »2029 With Development, AM
- »2034 No Development, AM
- »2034 With Development, AM
- »2044 No Development, AM
- »2044 With Development, AM

Summary of junction performance

	AM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
2022 Base Year					
Stream B-AC	D1	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
2029 No Development					
Stream B-AC	D2	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
2029 With Development					
Stream B-AC	D3	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
2034 No Development					
Stream B-AC	D4	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
2034 With Development					
Stream B-AC	D5	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
2044 No Development					
Stream B-AC	D6	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
2044 With Development					
Stream B-AC	D7	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A

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	(untitled)
Location	
Site number	
Date	08/08/2010
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TOBIN/Maria Rooney
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	Veh	Veh	perHour	s	Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	38.00	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)
D1	2022 Base Year	AM	ONE HOUR	07:45	09:15	15
D2	2029 No Development	AM	ONE HOUR	07:45	09:15	15
D3	2029 With Development	AM	ONE HOUR	07:45	09:15	15
D4	2034 No Development	AM	ONE HOUR	07:45	09:15	15
D5	2034 With Development	AM	ONE HOUR	07:45	09:15	15
D6	2044 No Development	AM	ONE HOUR	07:45	09:15	15
D7	2044 With Development	AM	ONE HOUR	07:45	09:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use of circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	R139 (W)		Major
B	WWTP		Minor
C	R139 (E)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (RCU)
C	12.00			200.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	250	250

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/h/c)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	697	0.094	0.237	0.149	0.239
B-C	781	0.099	0.224	-	-
C-B	699	0.198	0.190	-	-

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 line segment only; they may differ for subsequent line 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)
D1	2022 Base Year	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1288	100.000
B		✓	0	100.000
C		✓	1778	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	1288
	B	0	0	0
	C	1778	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	12
	B	0	0	0
	C	14	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	304	0.000	0	0.0	0.000	A
C-AB	0	444	0.000	0	0.0	0.000	A
C-A	1338			1338			
A-B	0			0			
A-C	570			570			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	190	0.000	0	0.0	0.000	A
C-AB	0	405	0.000	0	0.0	0.000	A
C-A	1596			1596			
A-B	0			0			
A-C	1158			1158			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	351	0.000	0	0.0	0.000	A
C-A	1556			1556			
A-B	0			0			
A-C	1415			1415			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	351	0.000	0	0.0	0.000	A
C-A	1556			1556			
A-B	0			0			
A-C	1415			1415			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	190	0.000	0	0.0	0.000	A
C-AB	0	405	0.000	0	0.0	0.000	A
C-A	1596			1596			
A-B	0			0			
A-C	1158			1158			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	304	0.000	0	0.0	0.000	A
C-AB	0	444	0.000	0	0.0	0.000	A
C-A	1330			1330			
A-B	0			0			
A-C	570			570			

2029 No Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (%)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)
D2	2029 No Development	AM	ONE HOUR	07:45	08:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1489	100.000
B		✓	0	100.000
C		✓	2087	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	1489
	B	0	0	0
	C	2087	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	13
	B	0	0	0
	C	15	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	207	0.000	0	0.0	0.000	A
C-AB	0	409	0.000	0	0.0	0.000	A
C-A	1549			1549			
A-B	0			0			
A-C	1121			1121			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	40	0.000	0	0.0	0.000	A
C-AB	0	364	0.000	0	0.0	0.000	A
C-A	1849			1849			
A-B	0			0			
A-C	1339			1339			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	301	0.000	0	0.0	0.000	A
C-A	2285			2285			
A-B	0			0			
A-C	1839			1839			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	301	0.000	0	0.0	0.000	A
C-A	2285			2285			
A-B	0			0			
A-C	1839			1839			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	40	0.000	0	0.0	0.000	A
C-AB	0	364	0.000	0	0.0	0.000	A
C-A	1049			1049			
A-B	0			0			
A-C	1339			1339			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	207	0.000	0	0.0	0.000	A
C-AB	0	409	0.000	0	0.0	0.000	A
C-A	1549			1549			
A-B	0			0			
A-C	1121			1121			

2029 With Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (%)	Junction LOS
1	united	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)
D1	2029 With Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1518	100.000
B		✓	0	100.000
C		✓	2057	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	27	1489
	B	0	0	0
	C	2057	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	21	13
	B	0	0	0
	C	15	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	204	0.000	0	0.0	0.000	A
C-AB	0	404	0.000	0	0.0	0.000	A
C-A	1549			1549			
A-B	20			20			
A-C	1121			1121			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	35	0.000	0	0.0	0.000	A
C-AB	0	355	0.000	0	0.0	0.000	A
C-A	1849			1849			
A-B	24			24			
A-C	1335			1335			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	295	0.000	0	0.0	0.000	A
C-A	2255			2255			
A-B	30			30			
A-C	1835			1835			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	295	0.000	0	0.0	0.000	A
C-A	2255			2255			
A-B	30			30			
A-C	1835			1835			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	35	0.000	0	0.0	0.000	A
C-AB	0	308	0.000	0	0.0	0.000	A
C-A	1849			1849			
A-B	24			24			
A-C	1335			1335			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	204	0.000	0	0.0	0.000	A
C-AB	0	404	0.000	0	0.0	0.000	A
C-A	1549			1549			
A-B	20			20			
A-C	1121			1121			

2034 No Development, AM

Data Errors and Warnings

No errors or warnings

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	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)
D4	2034 No Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1560	100.000
B		✓	0	100.000
C		✓	2185	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	1560
	B	0	0	0
	C	2185	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	13
	B	0	0	0
	C	15	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	100	0.000	0	0.0	0.000	A
C-AB	0	395	0.000	0	0.0	0.000	A
C-A	1045			1045			
A-B	0			0			
A-C	1190			1190			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	347	0.000	0	0.0	0.000	A
C-A	1004			1004			
A-B	0			0			
A-C	1420			1420			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	281	0.000	0	0.0	0.000	A
C-A	2408			2408			
A-B	0			0			
A-C	1740			1740			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	281	0.000	0	0.0	0.000	A
C-A	2408			2408			
A-B	0			0			
A-C	1740			1740			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-RC	0	0	0.000	0	0.0	0.000	A
C-RB	0	347	0.000	0	0.0	0.000	A
C-A	1304			1304			
A-B	0			0			
A-C	1420			1420			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-RC	0	100	0.000	0	0.0	0.000	A
C-RB	0	395	0.000	0	0.0	0.000	A
C-A	1045			1045			
A-B	0			0			
A-C	1190			1190			

2034 Wth Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
t	untied	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)
D5	2034 Wth Development	AM	ONE HOUR	07:45	08:10	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1607	100.000
B		✓	0	100.000
C		✓	2185	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	27	1500
	B	0	0	0
	C	2185	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	21	13
	B	0	0	0
	C	15	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	157	0.000	0	0.0	0.000	A
C-AB	0	390	0.000	0	0.0	0.000	A
C-A	1045			1045			
A-B	20			20			
A-C	1190			1190			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	341	0.000	0	0.0	0.000	A
C-A	1954			1954			
A-B	24			24			
A-C	1420			1420			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	274	0.000	0	0.0	0.000	A
C-A	2405			2405			
A-B	30			30			
A-C	1740			1740			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	274	0.000	0	0.0	0.000	A
C-A	2405			2405			
A-B	30			30			
A-C	1740			1740			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	341	0.000	0	0.0	0.000	A
C-A	1964			1964			
A-B	24			24			
A-C	1420			1420			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	157	0.000	0	0.0	0.000	A
C-AB	0	390	0.000	0	0.0	0.000	A
C-A	1645			1645			
A-B	20			20			
A-C	1190			1190			

2044 No Development, AM

Data Errors and Warnings

No errors or warnings

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	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)
D5	2044 No Development	AM	ONE HOUR	07:45	08:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1755	100.000
B		✓	0	100.000
C		✓	2432	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	1755
	B	0	0	0
	C	2432	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	15
	B	0	0	0
	C	17	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:15 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	33	0.000	0	0.0	0.000	A
C-AB	0	305	0.000	0	0.0	0.000	A
C-A	1831			1831			
A-B	0			0			
A-C	1321			1321			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	305	0.000	0	0.0	0.000	A
C-A	2180			2180			
A-B	0			0			
A-C	1578			1578			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	231	0.000	0	0.0	0.000	A
C-A	2078			2078			
A-B	0			0			
A-C	1932			1932			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	231	0.000	0	0.0	0.000	A
C-A	2078			2078			
A-B	0			0			
A-C	1932			1932			

08:15 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	305	0.000	0	0.0	0.000	A
C-A	2180			2180			
A-B	0			0			
A-C	1578			1578			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	33	0.000	0	0.0	0.000	A
C-AB	0	305	0.000	0	0.0	0.000	A
C-A	1831			1831			
A-B	0			0			
A-C	1221			1221			

2044 With Development, AM

Data Errors and Warnings

No errors or warnings

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	unbid	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)
D7	2044 With Development	AM	ONE HOUR	07:45	08:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1752	100.000
B		✓	0	100.000
C		✓	2432	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	27	1750
	B	0	0	0
	C	2432	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	21	15
	B	0	0	0
	C	17	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	29	0.000	0	0.0	0.000	A
C-AB	0	555	0.000	0	0.0	0.000	A
C-A	1831			1831			
A-B	20			20			
A-C	1321			1321			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	500	0.000	0	0.0	0.000	A
C-A	2180			2180			
A-B	24			24			
A-C	1578			1578			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	225	0.000	0	0.0	0.000	A
C-A	2078			2078			
A-B	30			30			
A-C	1932			1932			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	225	0.000	0	0.0	0.000	A
C-A	2078			2078			
A-B	30			30			
A-C	1932			1932			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	300	0.000	0	0.0	0.000	A
C-A	2188			2188			
A-B	24			24			
A-C	1578			1578			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	29	0.000	0	0.0	0.000	A
C-AB	0	355	0.000	0	0.0	0.000	A
C-A	1831			1831			
A-B	29			29			
A-C	1321			1321			

Junctions 10
PICADY 10 - Priority Intersection Module
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Filename: Import of Junction B PM.j10

Path: Wserver5-dub\Gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIA\ Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Operation

Report generation date: 18/10/2023 12:19:14

- »2022 Base Year , PM
- »2029 No Development, PM
- »2029 With Development, PM
- »2034 No Development, PM
- »2034 With Development, PM
- »2044 No Development, PM
- »2044 With Development, PM

Summary of junction performance

		PM				
		Set ID	Queue (Veh)	Delay (s)	RFC	LOS
2022 Base Year						
Stream B-AC	D1		0.0	0.00	0.00	A
Stream C-AB			0.0	0.00	0.00	A
2029 No Development						
Stream B-AC	D2		0.0	0.00	0.00	A
Stream C-AB			0.0	0.00	0.00	A
2029 With Development						
Stream B-AC	D3		0.0	0.00	0.00	A
Stream C-AB			0.0	0.00	0.00	A
2034 No Development						
Stream B-AC	D4		0.0	0.00	0.00	A
Stream C-AB			0.0	0.00	0.00	A
2034 With Development						
Stream B-AC	D5		0.0	0.00	0.00	A
Stream C-AB			0.0	0.00	0.00	A
2044 No Development						
Stream B-AC	D6		0.0	0.00	0.00	A
Stream C-AB			0.0	0.00	0.00	A
2044 With Development						
Stream B-AC	D7		0.0	0.00	0.00	A
Stream C-AB			0.0	0.00	0.00	A

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	(untitled)
Location	
Site number	
Date	08/08/2010
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TOBIN/Maria Rooney
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	Veh	Veh	perHour	s	Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	38.00	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)
D1	2022 Base Year	PM	ONE HOUR	18:45	19:15	15
D2	2029 No Development	PM	ONE HOUR	18:45	19:15	15
D3	2029 With Development	PM	ONE HOUR	18:45	19:15	15
D4	2034 No Development	PM	ONE HOUR	18:45	19:15	15
D5	2034 With Development	PM	ONE HOUR	18:45	19:15	15
D6	2044 No Development	PM	ONE HOUR	18:45	19:15	15
D7	2044 With Development	PM	ONE HOUR	18:45	19:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use of circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	R139 (W)		Major
B	WVTF		Minor
C	R139 (E)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (RCU)
C	12.00			200.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	250	250

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/h)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	697	0.094	0.237	0.149	0.239
B-C	781	0.099	0.224	-	-
C-B	699	0.198	0.190	-	-

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 line segment only; they may differ for subsequent line 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)
D1	2022 Base Year	PM	ONE HOUR	18:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1355	100.000
B		✓	0	100.000
C		✓	1787	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	1355
	B	0	0	0
	C	1787	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	12
	B	0	0	0
	C	20	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	274	0.000	0	0.0	0.000	A
C-AB	0	422	0.000	0	0.0	0.000	A
C-A	1345			1345			
A-B	0			0			
A-C	1020			1020			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	195	0.000	0	0.0	0.000	A
C-AB	0	302	0.000	0	0.0	0.000	A
C-A	1800			1800			
A-B	0			0			
A-C	1218			1218			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	327	0.000	0	0.0	0.000	A
C-A	1566			1566			
A-B	0			0			
A-C	1452			1452			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	327	0.000	0	0.0	0.000	A
C-A	1566			1566			
A-B	0			0			
A-C	1452			1452			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	195	0.000	0	0.0	0.000	A
C-AB	0	302	0.000	0	0.0	0.000	A
C-A	1800			1800			
A-B	0			0			
A-C	1218			1218			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	274	0.000	0	0.0	0.000	A
C-AB	0	422	0.000	0	0.0	0.000	A
C-A	1345			1345			
A-B	0			0			
A-C	1020			1020			

2029 No Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (%)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)
D2	2029 No Development	PM	ONE HOUR	18:45	19:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1505	100.000
B		✓	0	100.000
C		✓	2081	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	1505
	B	0	0	0
	C	2081	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	12
	B	0	0	0
	C	21	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	128	0.000	0	0.0	0.000	A
C-AB	0	368	0.000	0	0.0	0.000	A
C-A	1567			1567			
A-B	0			0			
A-C	1178			1178			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	343	0.000	0	0.0	0.000	A
C-A	1871			1871			
A-B	0			0			
A-C	1407			1407			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	279	0.000	0	0.0	0.000	A
C-A	2291			2291			
A-B	0			0			
A-C	1723			1723			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	279	0.000	0	0.0	0.000	A
C-A	2291			2291			
A-B	0			0			
A-C	1723			1723			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	343	0.000	0	0.0	0.000	A
C-A	1871			1871			
A-B	0			0			
A-C	1407			1407			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	158	0.000	0	0.0	0.000	A
C-AB	0	388	0.000	0	0.0	0.000	A
C-A	1587			1587			
A-B	0			0			
A-C	1178			1178			

2029 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (%)	Junction LOS
1	unfiled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)
D1	2029 With Development	PM	ONE HOUR	18:45	19:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1577	100.000
B		✓	0	100.000
C		✓	2081	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	12	1585
	B	0	0	0
	C	2081	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	32	12
	B	0	0	0
	C	21	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	100	0.000	0	0.0	0.000	A
C-AB	0	305	0.000	0	0.0	0.000	A
C-A	1567			1567			
A-B	0			0			
A-C	1178			1178			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	240	0.000	0	0.0	0.000	A
C-A	1871			1871			
A-B	11			11			
A-C	1407			1407			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	276	0.000	0	0.0	0.000	A
C-A	2291			2291			
A-B	13			13			
A-C	1723			1723			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	276	0.000	0	0.0	0.000	A
C-A	2291			2291			
A-B	13			13			
A-C	1723			1723			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	340	0.000	0	0.0	0.000	A
C-A	1671			1671			
A-B	11			11			
A-C	1407			1407			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	100	0.000	0	0.0	0.000	A
C-AB	0	380	0.000	0	0.0	0.000	A
C-A	1557			1557			
A-B	9			9			
A-C	1178			1178			

2034 No Development, PM

Data Errors and Warnings

No errors or warnings

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	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)
D4	2034 No Development	PM	ONE HOUR	18:45	19:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1660	100.000
B		✓	0	100.000
C		✓	2217	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	1660
	B	0	0	0
	C	2217	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	13
	B	0	0	0
	C	22	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	104	0.000	0	0.0	0.000	A
C-AB	0	370	0.000	0	0.0	0.000	A
C-A	1059			1059			
A-B	0			0			
A-C	1250			1250			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	321	0.000	0	0.0	0.000	A
C-A	1993			1993			
A-B	0			0			
A-C	1492			1492			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	254	0.000	0	0.0	0.000	A
C-A	2441			2441			
A-B	0			0			
A-C	1929			1929			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	254	0.000	0	0.0	0.000	A
C-A	2441			2441			
A-B	0			0			
A-C	1929			1929			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-RC	0	0	0.000	0	0.0	0.000	A
C-RB	0	321	0.000	0	0.0	0.000	A
C-A	1893			1893			
A-B	0			0			
A-C	1492			1492			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-RC	0	134	0.000	0	0.0	0.000	A
C-RB	0	370	0.000	0	0.0	0.000	A
C-A	1059			1059			
A-B	0			0			
A-C	1250			1250			

2034 Wth Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
t	untied	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)
D5	2034 Wth Development	PM	ONE HOUR	18:45	19:10	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1672	100.000
B		✓	0	100.000
C		✓	2217	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	12	1860
	B	0	0	0
	C	2217	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	32	13
	B	0	0	0
	C	22	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	102	0.000	0	0.0	0.000	A
C-AB	0	308	0.000	0	0.0	0.000	A
C-A	1009			1009			
A-B	9			9			
A-C	1250			1250			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	319	0.000	0	0.0	0.000	A
C-A	1993			1993			
A-B	11			11			
A-C	1492			1492			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	251	0.000	0	0.0	0.000	A
C-A	2441			2441			
A-B	13			13			
A-C	1628			1628			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	251	0.000	0	0.0	0.000	A
C-A	2441			2441			
A-B	13			13			
A-C	1628			1628			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	319	0.000	0	0.0	0.000	A
C-A	1993			1993			
A-B	11			11			
A-C	1492			1492			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	102	0.000	0	0.0	0.000	A
C-AB	0	308	0.000	0	0.0	0.000	A
C-A	1009			1009			
A-B	9			9			
A-C	1250			1250			

2044 No Development, PM

Data Errors and Warnings

No errors or warnings

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	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)
D5	2044 No Development	PM	ONE HOUR	10:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1843	100.000
B		✓	0	100.000
C		✓	2488	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	1843
	B	0	0	0
	C	2488	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	15
	B	0	0	0
	C	24	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:15 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	335	0.000	0	0.0	0.000	A
C-A	1873			1873			
A-B	0			0			
A-C	1380			1380			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	280	0.000	0	0.0	0.000	A
C-A	2237			2237			
A-B	0			0			
A-C	1557			1557			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	204	0.000	0	0.0	0.000	A
C-A	2738			2738			
A-B	0			0			
A-C	2029			2029			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	204	0.000	0	0.0	0.000	A
C-A	2738			2738			
A-B	0			0			
A-C	2029			2029			

17:15 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	280	0.000	0	0.0	0.000	A
C-A	2237			2237			
A-B	0			0			
A-C	1657			1657			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	335	0.000	0	0.0	0.000	A
C-A	1873			1873			
A-B	0			0			
A-C	1380			1380			

2044 With Development, PM

Data Errors and Warnings

No errors or warnings

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	united	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)
D7	2044 With Development	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1855	100.000
B		✓	0	100.000
C		✓	2488	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	12	1843
	B	0	0	0
	C	2488	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	32	15
	B	0	0	0
	C	24	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	332	0.000	0	0.0	0.000	A
C-A	1873			1873			
A-B	9			9			
A-C	1388			1388			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	277	0.000	0	0.0	0.000	A
C-A	2237			2237			
A-B	11			11			
A-C	1857			1857			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	201	0.000	0	0.0	0.000	A
C-A	2739			2739			
A-B	13			13			
A-C	2029			2029			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	201	0.000	0	0.0	0.000	A
C-A	2739			2739			
A-B	13			13			
A-C	2029			2029			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	277	0.000	0	0.0	0.000	A
C-A	2237			2237			
A-B	11			11			
A-C	1857			1857			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	322	0.000	0	0.0	0.000	A
C-A	1872			1872			
A-B	9			9			
A-C	1388			1388			