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Planning Consultants

Environmental Impact Assessment Report – Retail Development, Cock Hill, Cavan Town

Volume III Appendices

Prepared by RMLA Limited

On behalf of Tesco Ireland Limited

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Table of Contents

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Status: FINAL

6.0 Traffic and Transportation

APPENDICES: Chapter 6.0 Material Assets – Traffic and Transportation

APPENDIX 6.1: Model inputs and outputs for 'Junctions 9'

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.1.7462

Filename: Cock Hill_Ardkeen_Crossroads.j9
Path: \\DUBLINFILE\ProjectData\IE01T22A88 Tesco Cavan\5. Technical\5. Modelling\Junctions_9_Models\2022_Existing
Report generation date: 30/11/2022 12:31:02

»2022, Saturday Afternoon
»2022, Friday Evening

Summary of junction performance

	Saturday Afternoon					Friday Evening				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2022									
Stream B-CD	D1	0.3	8.05	0.21	A	D2	0.5	11.31	0.31	B
Stream B-AD		0.6	10.77	0.36	B		1.7	18.32	0.63	C
Stream A-BCD		0.0	5.30	0.01	A		0.0	5.19	0.00	A
Stream D-ABC		0.0	8.03	0.01	A		0.0	0.00	0.00	A
Stream C-ABD		0.2	6.97	0.13	A		0.2	7.57	0.19	A

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

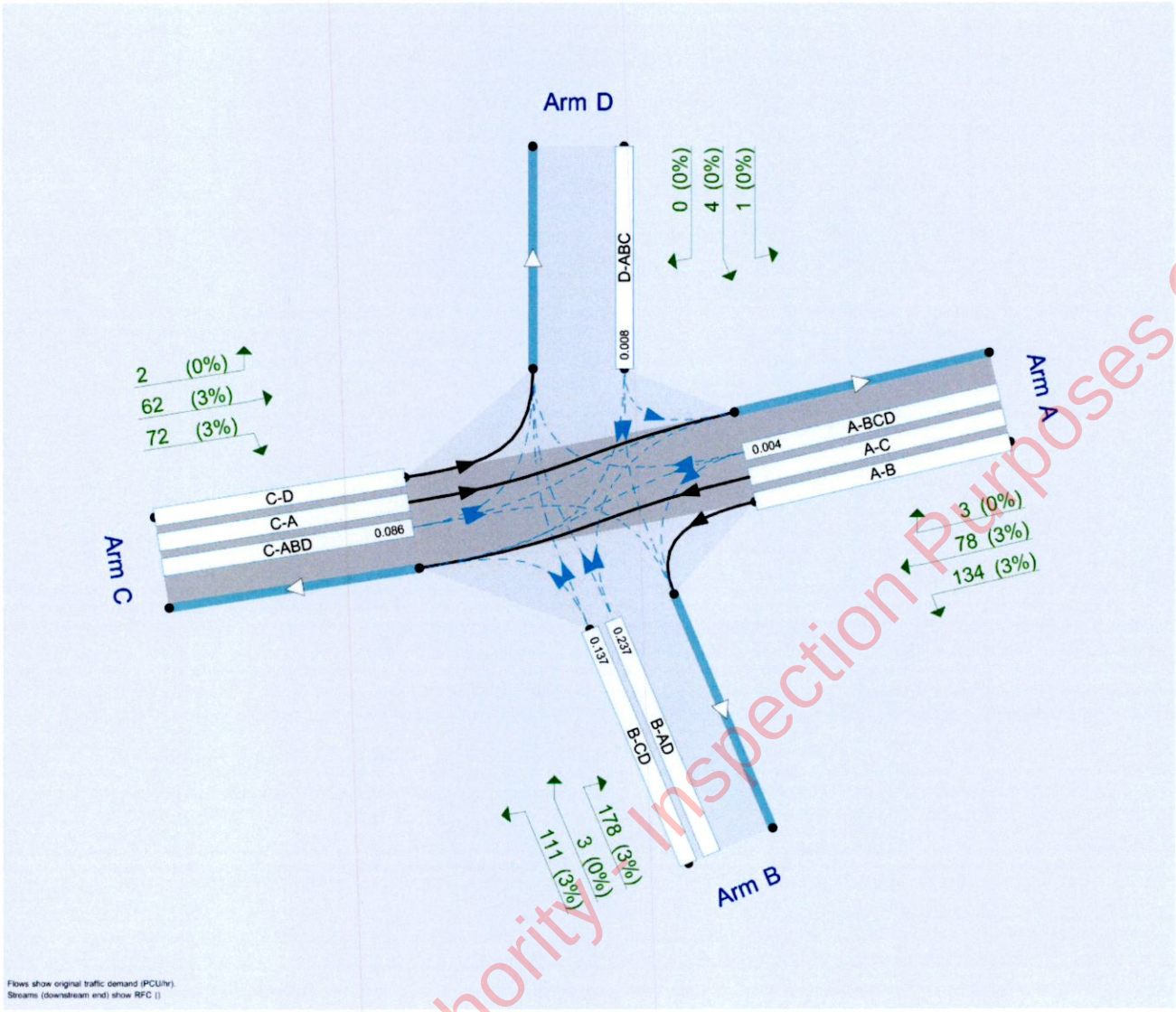
File summary

File Description

Title	
Location	
Site number	
Date	28/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\pgannon
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022	Saturday Afternoon	ONE HOUR	12:45	14:15	15
D2	2022	Friday Evening	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022, Saturday Afternoon

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cock Hill/Ardkeen	Crossroads	Two-way		5.25	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Ardkeen (Eastern Arm)		Major
B	Cock Hill (Southern Arm)		Minor
C	Ardkeen (Western Arm)		Major
D	Cock Hill (Northern Arm)		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A	6.00				60.0	✓	0.00
C	6.00		✓	2.20	170.0	✓	2.00

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)	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		6.00	6.00	6.00	6.00	3.00		3.00	92	182
D	One lane	2.20								120	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
A-D	609	-	-	-	-	-	-	0.236	0.337	0.236	-	-	-
B-A	631	0.115	0.291	0.291	-	-	-	0.183	0.415	-	0.291	0.291	0.145
B-C	690	0.106	0.267	-	-	-	-	-	-	-	-	-	-
B-D, nearside lane	560	0.102	0.258	0.258	-	-	-	0.162	0.369	0.162	-	-	-
B-D, offside lane	631	0.115	0.291	0.291	-	-	-	0.183	0.415	0.183	-	-	-
C-B	672	0.261	0.261	0.372	-	-	-	-	-	-	-	-	-
D-A	603	-	-	-	-	-	-	0.234	-	0.092	-	-	-
D-B, nearside lane	498	0.144	0.144	0.328	-	-	-	0.229	0.229	0.091	-	-	-
D-B, offside lane	498	0.144	0.144	0.328	-	-	-	0.229	0.229	0.091	-	-	-
D-C	498	-	0.144	0.328	0.115	0.229	0.229	0.229	0.229	0.091	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022	Saturday Afternoon	ONE HOUR	12:45	14:15	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 (PCU/hr)	Scaling Factor (%)
A		✓	215	100.000
B		✓	292	100.000
C		✓	136	100.000
D		✓	5	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	134	78	3
	B	178	0	111	3
	C	62	72	0	2
	D	1	4	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	3	3	0
	B	3	0	3	0
	C	3	3	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.21	8.05	0.3	A
B-AD	0.36	10.77	0.6	B
A-BCD	0.01	5.30	0.0	A
A-B				
A-C				
D-ABC	0.01	8.03	0.0	A
C-ABD	0.13	6.97	0.2	A
C-D				
C-A				

Main Results for each time segment

12:45 - 13:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	85	621	0.137	84	0.2	6.898	A
B-AD	135	570	0.237	134	0.3	8.473	A
A-BCD	3	687	0.004	3	0.0	5.295	A
A-B	100			100			
A-C	58			58			
D-ABC	4	474	0.008	4	0.0	7.658	A
C-ABD	54	630	0.086	54	0.1	6.427	A
C-D	2			2			
C-A	47			47			

13:00 - 13:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	102	606	0.167	101	0.2	7.339	A
B-AD	161	558	0.289	161	0.4	9.323	A
A-BCD	4	703	0.005	4	0.0	5.185	A
A-B	120			120			
A-C	70			70			
D-ABC	4	465	0.010	4	0.0	7.811	A
C-ABD	65	622	0.104	65	0.1	6.648	A
C-D	2			2			
C-A	56			56			

13:15 - 13:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	124	585	0.213	124	0.3	8.034	A
B-AD	197	541	0.364	196	0.6	10.731	B
A-BCD	5	725	0.007	5	0.0	5.040	A
A-B	147			147			
A-C	85			85			
D-ABC	6	454	0.012	5	0.0	8.031	A
C-ABD	79	612	0.130	79	0.2	6.962	A
C-D	2			2			
C-A	68			68			

13:30 - 13:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	124	585	0.213	124	0.3	8.049	A
B-AD	197	541	0.364	197	0.6	10.771	B
A-BCD	5	725	0.007	5	0.0	5.044	A
A-B	147			147			
A-C	85			85			
D-ABC	6	454	0.012	6	0.0	8.032	A
C-ABD	79	612	0.130	79	0.2	6.965	A
C-D	2			2			
C-A	68			68			

13:45 - 14:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	102	606	0.168	102	0.2	7.360	A
B-AD	161	558	0.289	162	0.4	9.371	A
A-BCD	4	703	0.005	4	0.0	5.195	A
A-B	120			120			
A-C	70			70			
D-ABC	4	465	0.010	5	0.0	7.814	A
C-ABD	65	622	0.104	65	0.1	6.654	A
C-D	2			2			
C-A	56			56			

14:00 - 14:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	85	620	0.137	85	0.2	6.932	A
B-AD	135	570	0.237	135	0.3	8.540	A
A-BCD	3	687	0.004	3	0.0	5.302	A
A-B	100			100			
A-C	58			58			
D-ABC	4	474	0.008	4	0.0	7.660	A
C-ABD	54	630	0.086	54	0.1	6.437	A
C-D	2			2			
C-A	47			47			

2022, Friday Evening

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cock Hill/Ardkeen	Crossroads	Two-way		9.05	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2022	Friday Evening	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 (PCU/hr)	Scaling Factor (%)
A		✓	257	100.000
B		✓	440	100.000
C		✓	177	100.000
D		✓	3	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	170	86	1
	B	308	0	130	2
	C	71	101	0	5
	D	2	1	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	3	3	0
	B	3	0	3	0
	C	3	3	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.31	11.31	0.5	B
B-AD	0.63	18.32	1.7	C
A-BCD	0.00	5.19	0.0	A
A-B				
A-C				
D-ABC	0.00	0.00	0.0	A
C-ABD	0.19	7.57	0.2	A
C-D				
C-A				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	99	553	0.179	98	0.2	8.140	A
B-AD	232	579	0.401	230	0.7	10.531	B
A-BCD	1	701	0.001	1	0.0	5.181	A
A-B	128			128			
A-C	65			65			
D-ABC	0	461	0.000	0	0.0	0.000	A
C-ABD	76	623	0.122	76	0.1	6.768	A
C-D	4			4			
C-A	53			53			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	118	525	0.225	118	0.3	9.089	A
B-AD	277	563	0.492	276	1.0	12.850	B
A-BCD	1	720	0.002	1	0.0	5.052	A
A-B	153			153			
A-C	77			77			
D-ABC	0	448	0.000	0	0.0	0.000	A
C-ABD	91	614	0.148	91	0.2	7.089	A
C-D	4			4			
C-A	64			64			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	145	475	0.305	144	0.4	11.200	B
B-AD	340	541	0.627	337	1.6	17.890	C
A-BCD	2	747	0.002	2	0.0	4.881	A
A-B	187			187			
A-C	94			94			
D-ABC	0	431	0.000	0	0.0	0.000	A
C-ABD	112	602	0.186	112	0.2	7.561	A
C-D	5			5			
C-A	78			78			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	145	472	0.307	145	0.5	11.315	B
B-AD	340	541	0.627	339	1.7	18.319	C
A-BCD	2	747	0.002	2	0.0	4.887	A
A-B	187			187			
A-C	94			94			
D-ABC	0	431	0.000	0	0.0	0.000	A
C-ABD	112	602	0.186	112	0.2	7.566	A
C-D	5			5			
C-A	78			78			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	118	523	0.226	119	0.3	9.180	A
B-AD	277	564	0.492	280	1.0	13.192	B
A-BCD	1	720	0.002	1	0.0	5.060	A
A-B	153			153			
A-C	77			77			
D-ABC	0	448	0.000	0	0.0	0.000	A
C-ABD	91	614	0.148	91	0.2	7.101	A
C-D	4			4			
C-A	64			64			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	99	551	0.180	99	0.2	8.217	A
B-AD	232	579	0.401	234	0.7	10.776	B
A-BCD	1	701	0.001	1	0.0	5.189	A
A-B	128			128			
A-C	65			65			
D-ABC	0	460	0.000	0	0.0	0.000	A
C-ABD	76	623	0.122	76	0.1	6.787	A
C-D	4			4			
C-A	53			53			

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: Cock_Hill_3_Arm_Rdbt.j9
Path: \\DUBLINFILE\ProjectData\IE01T22A88 Tesco Cavan\5. Technical\5. Modelling\Junctions_9_Models\2022_Existing
Report generation date: 30/11/2022 12:31:45

»2022, Saturday Afternoon
»2022, Friday Evening

Summary of junction performance

	Saturday Afternoon					Friday Evening				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2022									
Arm 1	D1	0.3	3.63	0.24	A	D2	0.6	4.27	0.35	A
Arm 2		0.1	3.35	0.12	A		0.2	3.78	0.18	A
Arm 3		0.2	3.40	0.18	A		0.3	3.70	0.24	A

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

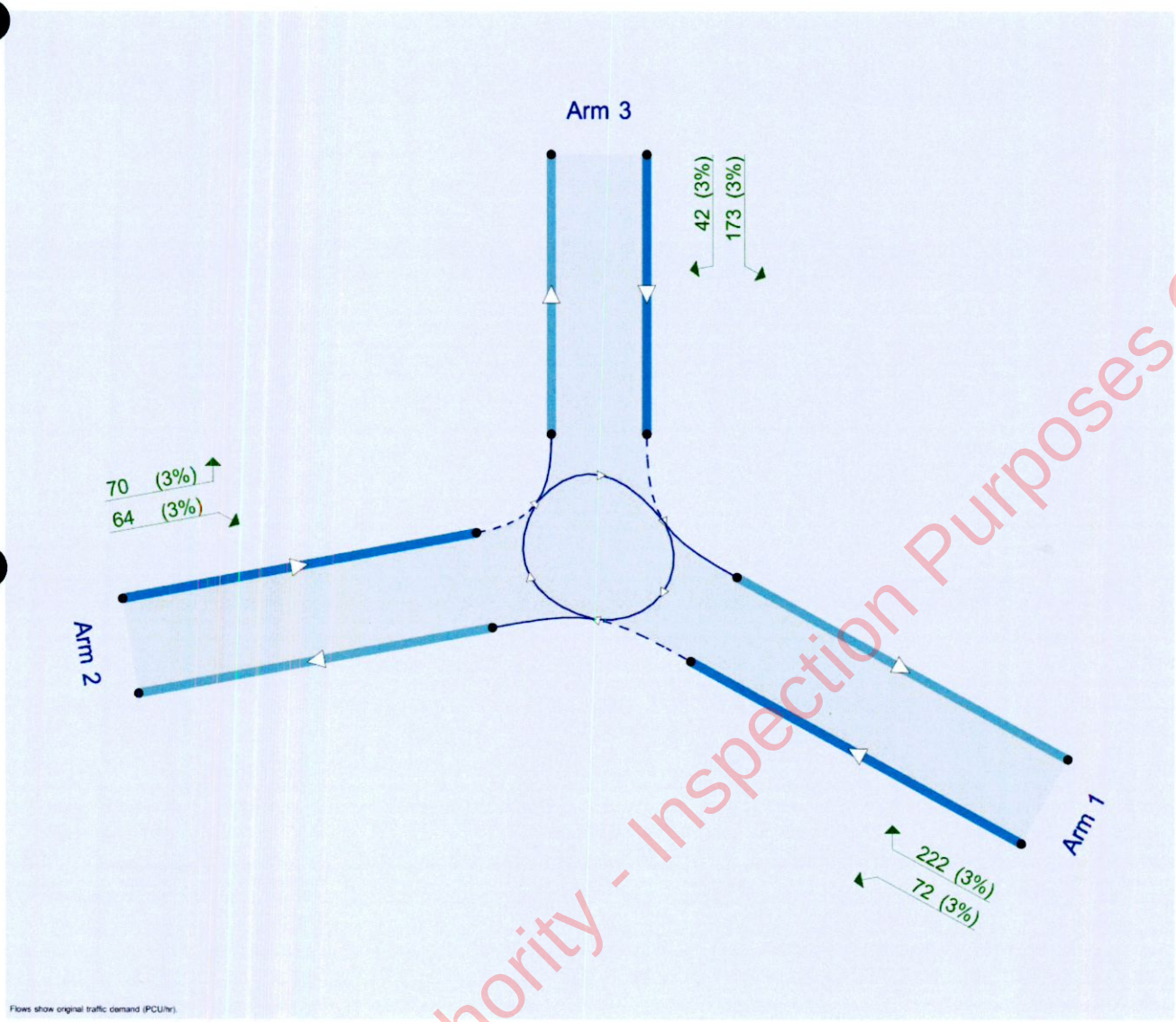
File summary

File Description

Title	
Location	
Site number	
Date	28/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\pgannon
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022	Saturday Afternoon	ONE HOUR	12:45	14:15	15
D2	2022	Friday Evening	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022, Saturday Afternoon

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		1, 2, 3	3.49	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Eastern Arm	
2	Western Arm	
3	Northern Arm	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.03	5.96	9.3	49.9	35.6	35.7	
2	3.69	6.45	6.5	38.9	35.6	51.6	
3	3.33	5.87	7.6	40.5	35.6	39.4	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.587	1374
2	0.573	1396
3	0.581	1369

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)
D1	2022	Saturday Afternoon	ONE HOUR	12:45	14:15	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 (PCU/hr)	Scaling Factor (%)
1		✓	295	100.000
2		✓	134	100.000
3		✓	215	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	1	72	222
	2	64	0	70
	3	173	42	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	3
	2	3	0	3
	3	3	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.24	3.63	0.3	A
2	0.12	3.35	0.1	A
3	0.18	3.40	0.2	A

Main Results for each time segment

12:45 - 13:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	222	32	1355	0.164	221	0.2	3.268	A
2	101	167	1300	0.078	101	0.1	3.091	A
3	162	49	1341	0.121	161	0.1	3.142	A

13:00 - 13:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	265	38	1352	0.196	265	0.3	3.411	A
2	120	200	1281	0.094	120	0.1	3.194	A
3	193	58	1335	0.145	193	0.2	3.246	A

13:15 - 13:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	325	46	1347	0.241	324	0.3	3.627	A
2	148	245	1255	0.118	147	0.1	3.346	A
3	237	72	1327	0.178	237	0.2	3.398	A

13:30 - 13:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	325	46	1347	0.241	325	0.3	3.627	A
2	148	246	1255	0.118	148	0.1	3.347	A
3	237	72	1327	0.178	237	0.2	3.398	A

13:45 - 14:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	265	38	1352	0.196	265	0.3	3.413	A
2	120	201	1281	0.094	121	0.1	3.198	A
3	193	58	1335	0.145	193	0.2	3.248	A

14:00 - 14:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	222	32	1355	0.164	222	0.2	3.274	A
2	101	168	1300	0.078	101	0.1	3.095	A
3	162	49	1341	0.121	162	0.1	3.148	A

2022, Friday Evening

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		1, 2, 3	3.98	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2022	Friday Evening	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 (PCU/hr)	Scaling Factor (%)
1		✓	424	100.000
2		✓	195	100.000
3		✓	289	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	107	317
	2	75	0	120
	3	229	60	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	3
	2	3	0	3
	3	3	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.35	4.27	0.6	A
2	0.18	3.78	0.2	A
3	0.24	3.70	0.3	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	319	45	1347	0.237	318	0.3	3.596	A
2	147	238	1260	0.117	146	0.1	3.328	A
3	218	56	1336	0.163	217	0.2	3.311	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	381	54	1342	0.284	381	0.4	3.856	A
2	175	285	1233	0.142	175	0.2	3.506	A
3	260	67	1330	0.195	260	0.2	3.464	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	467	66	1335	0.350	466	0.5	4.265	A
2	215	349	1196	0.180	214	0.2	3.777	A
3	318	82	1321	0.241	318	0.3	3.696	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	467	66	1335	0.350	467	0.6	4.270	A
2	215	349	1196	0.180	215	0.2	3.778	A
3	318	83	1321	0.241	318	0.3	3.696	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	381	54	1342	0.284	382	0.4	3.862	A
2	175	285	1232	0.142	176	0.2	3.508	A
3	260	68	1330	0.195	260	0.3	3.469	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	319	45	1347	0.237	320	0.3	3.608	A
2	147	239	1259	0.117	147	0.1	3.334	A
3	218	57	1336	0.163	218	0.2	3.315	A

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: Cock_Hill_Site_Entrance.j9
Path: \\DUBLINFILE\ProjectData\IE01T22A88 Tesco Cavan\5. Technical\5. Modelling\Junctions_9_Models\2022_Existing
Report generation date: 30/11/2022 12:32:10

Summary of junction performance

	Saturday Afternoon					Friday Evening				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2022									
Stream B-C	D1	0.0	0.00	0.00	A	D2	0.0	0.00	0.00	A
Stream B-AD		0.0	0.00	0.00	A		0.0	0.00	0.00	A
Stream A-BCD		0.0	0.00	0.00	A		0.0	4.54	0.01	A
Stream D-ABC		0.0	0.00	0.00	A		0.0	7.86	0.02	A
Stream C-ABD		0.0	6.01	0.00	A		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.

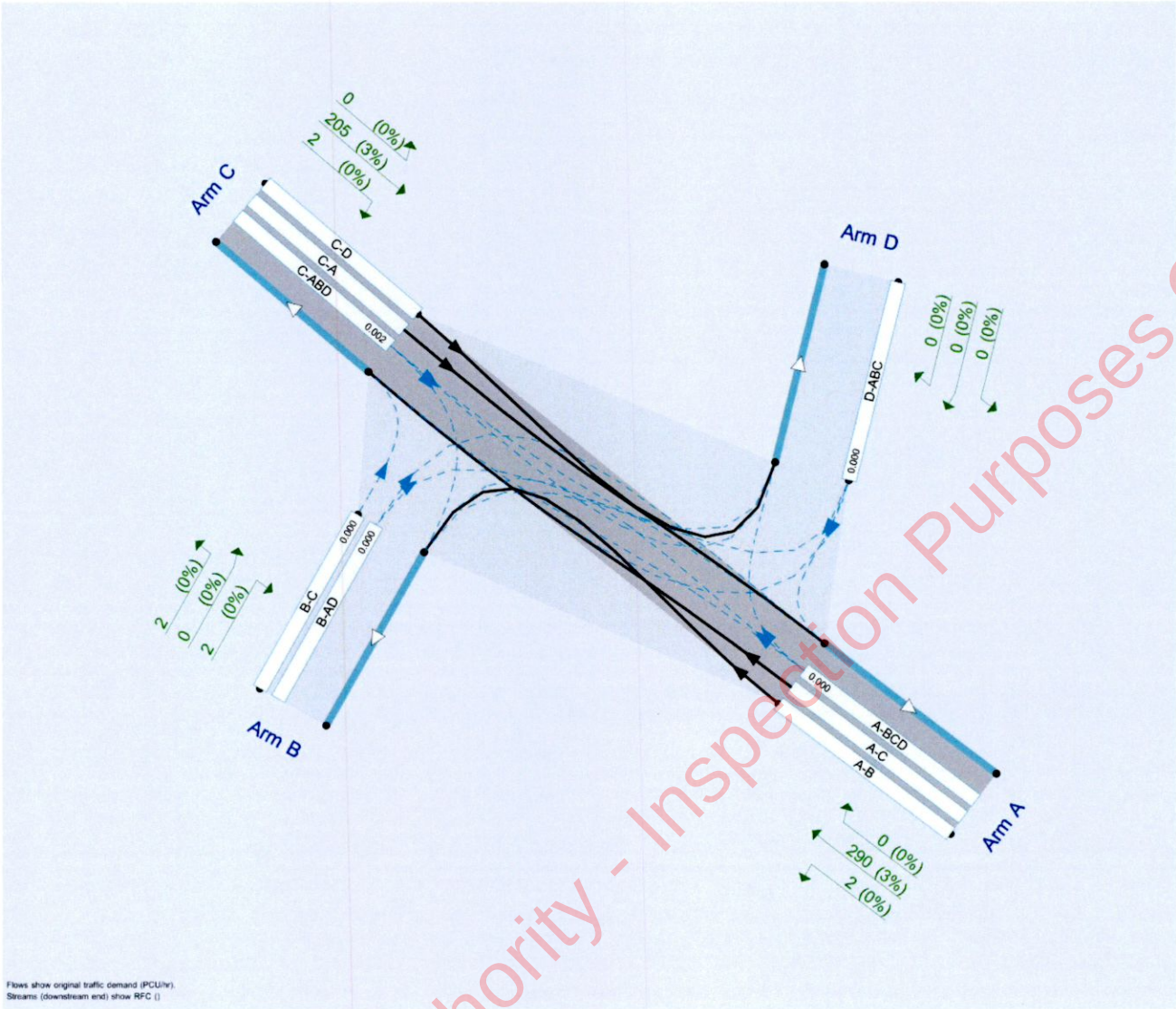
File summary

File Description

Title	
Location	
Site number	
Date	28/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\pgannon
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022	Saturday Afternoon	ONE HOUR	12:45	14:15	15
D2	2022	Friday Evening	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022, Saturday Afternoon

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cock Hill/Site Entrance	Right-Left Stagger	Two-way		0.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Cock Hill (Southern Arm)		Major
B	Site Entrance		Minor
C	Cock Hill (Northern Arm)		Major
D	School Road		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A	6.00				115.0	✓	0.00
C	6.00		✓	3.00	100.0	✓	10.00

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)	Lane Width (Left) (m)	Lane Width (Right) (m)	Visibility to left (m)	Visibility to right (m)
B	Two lanes		3.50	3.50	75	120
D	One lane	3.00			105	100

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
A-D	641	-	-	-	0.248	0.248	0.248	-	0.248	-	-
B-AD	590	0.108	0.272	-	-	-	0.171	0.388	0.171	0.108	0.272
B-C	734	0.113	0.285	-	-	-	-	-	-	0.113	0.285
C-B	687	0.266	0.266	-	-	-	-	-	-	0.266	0.266
D-A	687	-	-	-	0.266	0.105	0.266	-	0.105	-	-
D-BC	562	0.163	0.163	0.370	0.259	0.102	0.259	-	0.102	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022	Saturday Afternoon	ONE HOUR	12:45	14:15	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 (PCU/hr)	Scaling Factor (%)
A		✓	292	100.000
B		✓	4	100.000
C		✓	207	100.000
D		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	2	290	0
	B	2	0	2	0
	C	205	2	0	0
	D	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	3	0
	B	0	0	0	0
	C	3	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.00	0.00	0.0	A
B-AD	0.00	0.00	0.0	A
A-BCD	0.00	0.00	0.0	A
A-B				
A-C				
D-ABC	0.00	0.00	0.0	A
C-ABD	0.00	6.01	0.0	A
C-D				
C-A				

Main Results for each time segment

12:45 - 13:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	672	0.000	0	0.0	0.000	A
B-AD	0	504	0.000	0	0.0	0.000	A
A-BCD	0	602	0.000	0	0.0	0.000	A
A-B	2			2			
A-C	218			218			
D-ABC	0	555	0.000	0	0.0	0.000	A
C-ABD	2	628	0.002	1	0.0	5.742	A
C-D	0			0			
C-A	154			154			

13:00 - 13:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	660	0.000	0	0.0	0.000	A
B-AD	0	487	0.000	0	0.0	0.000	A
A-BCD	0	595	0.000	0	0.0	0.000	A
A-B	2			2			
A-C	261			261			
D-ABC	0	543	0.000	0	0.0	0.000	A
C-ABD	2	617	0.003	2	0.0	5.850	A
C-D	0			0			
C-A	184			184			

13:15 - 13:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	643	0.000	0	0.0	0.000	A
B-AD	0	464	0.000	0	0.0	0.000	A
A-BCD	0	585	0.000	0	0.0	0.000	A
A-B	2			2			
A-C	319			319			
D-ABC	0	525	0.000	0	0.0	0.000	A
C-ABD	2	601	0.004	2	0.0	6.008	A
C-D	0			0			
C-A	226			226			

13:30 - 13:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	643	0.000	0	0.0	0.000	A
B-AD	0	464	0.000	0	0.0	0.000	A
A-BCD	0	585	0.000	0	0.0	0.000	A
A-B	2			2			
A-C	319			319			
D-ABC	0	525	0.000	0	0.0	0.000	A
C-ABD	2	601	0.004	2	0.0	6.008	A
C-D	0			0			
C-A	226			226			

13:45 - 14:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	660	0.000	0	0.0	0.000	A
B-AD	0	487	0.000	0	0.0	0.000	A
A-BCD	0	595	0.000	0	0.0	0.000	A
A-B	2			2			
A-C	261			261			
D-ABC	0	543	0.000	0	0.0	0.000	A
C-ABD	2	617	0.003	2	0.0	5.853	A
C-D	0			0			
C-A	184			184			

14:00 - 14:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	672	0.000	0	0.0	0.000	A
B-AD	0	504	0.000	0	0.0	0.000	A
A-BCD	0	602	0.000	0	0.0	0.000	A
A-B	2			2			
A-C	218			218			
D-ABC	0	555	0.000	0	0.0	0.000	A
C-ABD	2	628	0.002	2	0.0	5.744	A
C-D	0			0			
C-A	154			154			

2022, Friday Evening

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cock Hill/Site Entrance	Right-Left Stagger	Two-way		0.16	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2022	Friday Evening	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 (PCU/hr)	Scaling Factor (%)
A		✓	436	100.000
B		✓	4	100.000
C		✓	271	100.000
D		✓	10	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	0	432	4
	B	0	0	4	0
	C	267	0	0	4
	D	4	0	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	3	0
	B	0	0	0	0
	C	3	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.00	0.00	0.0	A
B-AD	0.00	0.00	0.0	A
A-BCD	0.01	4.54	0.0	A
A-B				
A-C				
D-ABC	0.02	7.86	0.0	A
C-ABD	0.00	0.00	0.0	A
C-D				
C-A				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	641	0.000	0	0.0	0.000	A
B-AD	0	466	0.000	0	0.0	0.000	A
A-BCD	5	809	0.006	5	0.0	4.532	A
A-B	0			0			
A-C	323			323			
D-ABC	8	513	0.015	7	0.0	7.114	A
C-ABD	0	1207	0.000	0	0.0	0.000	A
C-D	3			3			
C-A	201			201			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	622	0.000	0	0.0	0.000	A
B-AD	0	442	0.000	0	0.0	0.000	A
A-BCD	7	843	0.008	7	0.0	4.357	A
A-B	0			0			
A-C	385			385			
D-ABC	9	495	0.018	9	0.0	7.407	A
C-ABD	0	1173	0.000	0	0.0	0.000	A
C-D	4			4			
C-A	240			240			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	597	0.000	0	0.0	0.000	A
B-AD	0	408	0.000	0	0.0	0.000	A
A-BCD	9	892	0.011	9	0.0	4.137	A
A-B	0			0			
A-C	471			471			
D-ABC	11	469	0.023	11	0.0	7.861	A
C-ABD	0	1125	0.000	0	0.0	0.000	A
C-D	4			4			
C-A	294			294			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	597	0.000	0	0.0	0.000	A
B-AD	0	408	0.000	0	0.0	0.000	A
A-BCD	9	892	0.011	9	0.0	4.142	A
A-B	0			0			
A-C	471			471			
D-ABC	11	469	0.023	11	0.0	7.862	A
C-ABD	0	1125	0.000	0	0.0	0.000	A
C-D	4			4			
C-A	294			294			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	622	0.000	0	0.0	0.000	A
B-AD	0	442	0.000	0	0.0	0.000	A
A-BCD	7	843	0.008	7	0.0	4.366	A
A-B	0			0			
A-C	385			385			
D-ABC	9	495	0.018	9	0.0	7.408	A
C-ABD	0	1173	0.000	0	0.0	0.000	A
C-D	4			4			
C-A	240			240			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	641	0.000	0	0.0	0.000	A
B-AD	0	466	0.000	0	0.0	0.000	A
A-BCD	5	809	0.006	5	0.0	4.537	A
A-B	0			0			
A-C	323			323			
D-ABC	8	513	0.015	8	0.0	7.115	A
C-ABD	0	1207	0.000	0	0.0	0.000	A
C-D	3			3			
C-A	201			201			

Junctions 9

ARCADY 9 - Roundabout Module

Filename: Dublin_Rd_Cock_Hill_Rdbt_East_Rd_Cal.j9
Path: \\DUBLINFILE\ProjectData\IE01T22A88 Tesco Cavan\5. Technical\5. Modelling\Junctions_9_Models\2022_Existing
Report generation date: 30/11/2022 14:17:28

»2022, Saturday Afternoon
»2022, Friday Evening

Summary of junction performance

	Saturday Afternoon					Friday Evening				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2022									
Arm 1	D1	16.0	66.60	0.97	F	D2	4.7	23.03	0.83	C
Arm 2		0.7	10.52	0.42	B		0.5	9.00	0.33	A
Arm 3		3.0	18.07	0.76	C		2.1	13.55	0.68	B
Arm 4		2.3	22.24	0.70	C		2.0	18.05	0.66	C

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

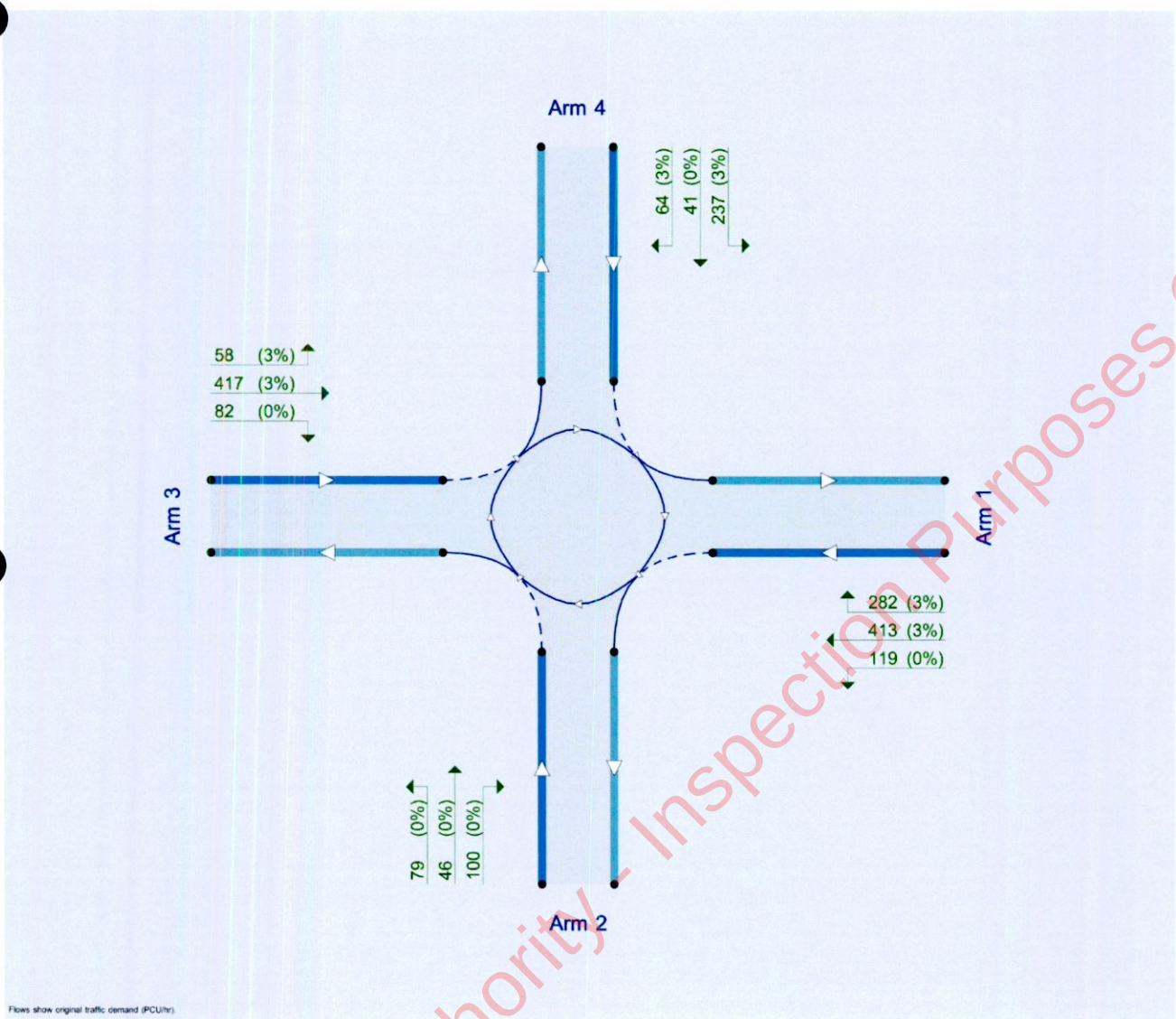
File summary

File Description

Title	
Location	
Site number	
Date	24/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\pgannon
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022	Saturday Afternoon	ONE HOUR	12:45	14:15	15
D2	2022	Friday Evening	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022, Saturday Afternoon

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		1, 2, 3, 4	38.30	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	R212 Dublin Rd (East)	
2	Shopping Centre Entry/Exit (Southern Arm)	
3	R212 Dublin Rd (West)	
4	Cock Hill (Northern Arm)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.15	3.16	0.1	19.4	32.6	52.3	
2	3.65	3.65	0.0	23.4	32.6	61.2	
3	3.65	3.66	0.0	20.3	32.6	39.0	
4	3.04	3.05	0.0	24.4	32.6	53.4	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final slope	Final intercept (PCU/hr)
1	✓	0.464	1030	0.464	1030
2				0.480	995
3				0.518	1073
4				0.461	856

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)
D1	2022	Saturday Afternoon	ONE HOUR	12:45	14:15	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 (PCU/hr)	Scaling Factor (%)
1		✓	821	100.000
2		✓	225	100.000
3		✓	567	100.000
4		✓	344	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	7	119	413	282
	2	100	0	79	46
	3	417	82	10	58
	4	237	41	64	2

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	3	3
	2	0	0	0	0
	3	3	0	0	3
	4	3	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.97	66.60	16.0	F
2	0.42	10.52	0.7	B
3	0.76	18.07	3.0	C
4	0.70	22.24	2.3	C

Main Results for each time segment

12:45 - 13:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	618	148	961	0.643	611	1.8	10.340	B
2	169	579	717	0.236	168	0.3	6.548	A
3	427	326	904	0.472	423	0.9	7.614	A
4	259	460	644	0.402	256	0.7	9.467	A

13:00 - 13:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	738	178	947	0.779	732	3.3	16.640	C
2	202	694	662	0.306	202	0.4	7.819	A
3	510	390	871	0.585	508	1.4	10.104	B
4	309	552	602	0.514	308	1.1	12.508	B

13:15 - 13:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	904	217	929	0.973	868	12.3	44.640	E
2	248	825	599	0.414	247	0.7	10.199	B
3	624	468	831	0.752	618	2.9	16.912	C
4	379	672	546	0.694	374	2.2	20.983	C

13:30 - 13:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	904	219	928	0.974	889	16.0	66.603	F
2	248	844	590	0.420	248	0.7	10.523	B
3	624	476	827	0.755	624	3.0	18.072	C
4	379	678	544	0.697	378	2.3	22.239	C

13:45 - 14:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	738	181	946	0.780	786	4.0	28.240	D
2	202	742	639	0.317	203	0.5	8.287	A
3	510	410	860	0.592	516	1.5	10.884	B
4	309	560	598	0.517	314	1.1	13.208	B

14:00 - 14:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	618	151	960	0.644	626	1.9	11.325	B
2	169	593	710	0.239	170	0.3	6.674	A
3	427	332	901	0.474	429	0.9	7.862	A
4	259	466	641	0.404	261	0.7	9.761	A

2022, Friday Evening

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		1, 2, 3, 4	17.76	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2022	Friday Evening	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 (PCU/hr)	Scaling Factor (%)
1		✓	699	100.000
2		✓	181	100.000
3		✓	521	100.000
4		✓	363	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	7	72	338	282
	2	66	0	71	44
	3	370	45	9	97
	4	214	36	113	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	3	3
	2	0	0	0	0
	3	3	0	0	3
	4	3	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.83	23.03	4.7	C
2	0.33	9.00	0.5	A
3	0.68	13.55	2.1	B
4	0.66	18.05	2.0	C

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	526	151	960	0.548	521	1.2	8.341	A
2	136	559	726	0.188	135	0.2	6.081	A
3	392	298	919	0.427	389	0.8	6.942	A
4	273	371	685	0.399	271	0.7	8.876	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	628	182	946	0.665	625	2.0	11.431	B
2	163	670	673	0.242	162	0.3	7.046	A
3	468	357	888	0.527	467	1.1	8.747	A
4	326	445	650	0.502	325	1.0	11.310	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	770	222	927	0.830	760	4.4	20.912	C
2	199	815	604	0.330	199	0.5	8.874	A
3	574	435	848	0.677	570	2.1	13.122	B
4	400	544	605	0.660	396	1.9	17.395	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	770	223	926	0.831	769	4.7	23.026	C
2	199	824	599	0.333	199	0.5	8.998	A
3	574	439	846	0.678	573	2.1	13.547	B
4	400	547	604	0.662	399	2.0	18.049	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	628	184	944	0.665	639	2.1	12.465	B
2	163	684	666	0.244	163	0.3	7.165	A
3	468	363	885	0.529	472	1.2	9.037	A
4	326	450	648	0.503	330	1.1	11.736	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	526	154	959	0.549	530	1.3	8.679	A
2	136	567	722	0.189	137	0.2	6.150	A
3	392	302	917	0.428	394	0.8	7.091	A
4	273	376	683	0.400	275	0.7	9.099	A

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
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Filename: Cock Hill_Ardkeen_Crossroads.j9
Path: \\DUBLINFILE\ProjectData\IE01T22A88 Tesco Cavan\5. Technical\5. Modelling\Junctions_9_Models\2025_No_Dev
Report generation date: 30/11/2022 12:36:00

»2025, Saturday Afternoon (No Dev)
»2025, Friday Evening (No Dev)

Summary of junction performance

	Saturday Afternoon (No Dev)					Friday Evening (No Dev)				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2025									
Stream B-CD	D1	0.3	8.20	0.22	A	D2	0.5	11.93	0.32	B
Stream B-AD		0.6	11.08	0.38	B		1.9	19.76	0.65	C
Stream A-BCD		0.0	5.28	0.01	A		0.0	5.16	0.00	A
Stream D-ABC		0.0	8.07	0.01	A		0.0	0.00	0.00	A
Stream C-ABD		0.2	7.02	0.13	A		0.2	7.65	0.19	A

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

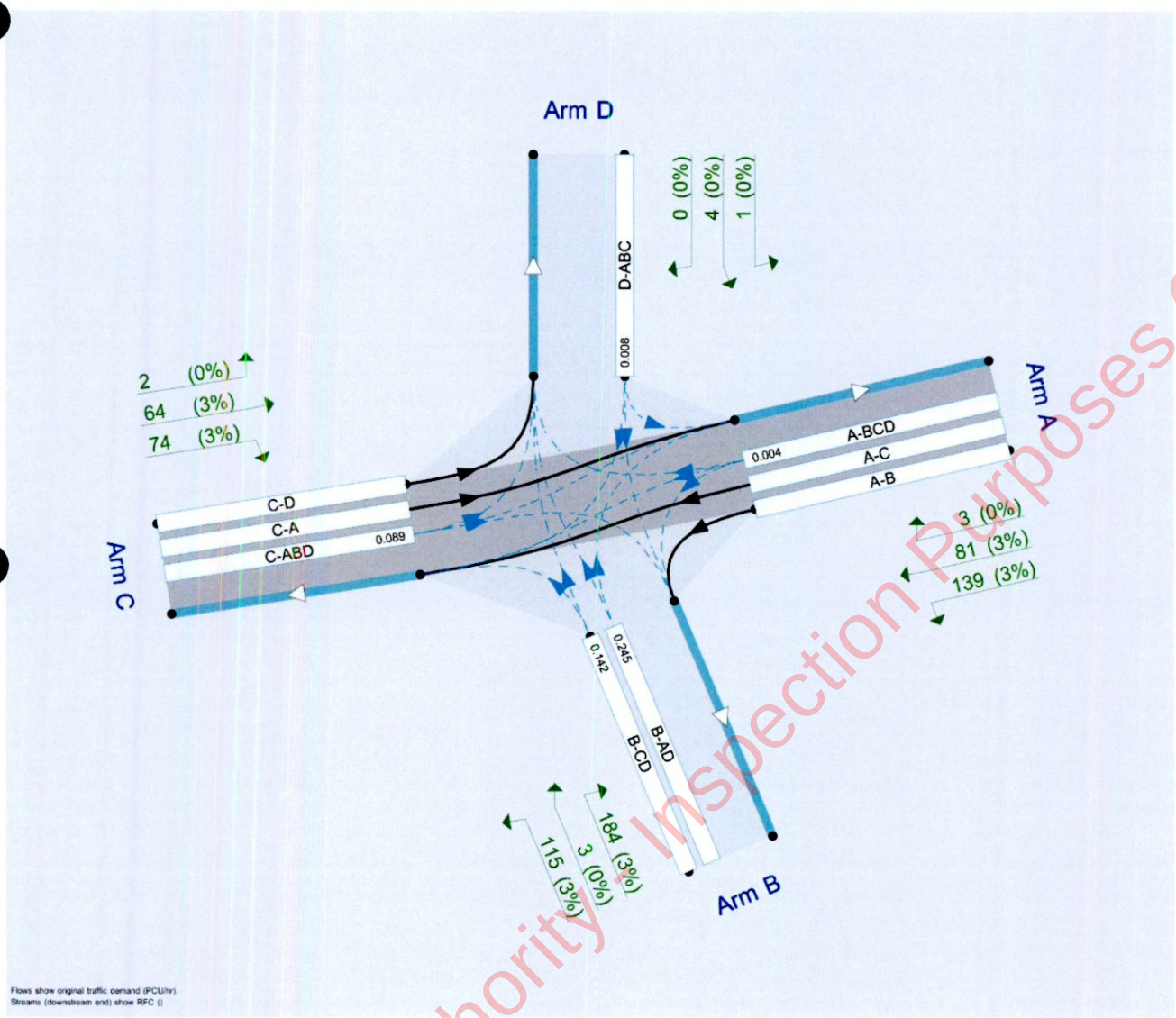
File summary

File Description

Title	
Location	
Site number	
Date	28/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\pgannon
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025	Saturday Afternoon (No Dev)	ONE HOUR	12:45	14:15	15
D2	2025	Friday Evening (No Dev)	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2025, Saturday Afternoon (No Dev)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cock Hill/Ardkeen	Crossroads	Two-way		5.36	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Ardkeen (Eastern Arm)		Major
B	Cock Hill (Southern Arm)		Minor
C	Ardkeen (Western Arm)		Major
D	Cock Hill (Northern Arm)		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A	6.00				60.0	✓	0.00
C	6.00		✓	2.20	170.0	✓	2.00

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)	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		6.00	6.00	6.00	6.00	3.00		3.00	92	182
D	One lane	2.20								120	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
A-D	609	-	-	-	-	-	-	0.236	0.337	0.236	-	-	-
B-A	631	0.115	0.291	0.291	-	-	-	0.183	0.415	-	0.291	0.291	0.145
B-C	690	0.106	0.267	-	-	-	-	-	-	-	-	-	-
B-D, nearside lane	560	0.102	0.258	0.258	-	-	-	0.162	0.369	0.162	-	-	-
B-D, offside lane	631	0.115	0.291	0.291	-	-	-	0.183	0.415	0.183	-	-	-
C-B	672	0.261	0.261	0.372	-	-	-	-	-	-	-	-	-
D-A	603	-	-	-	-	-	-	0.234	-	0.092	-	-	-
D-B, nearside lane	498	0.144	0.144	0.328	-	-	-	0.229	0.229	0.091	-	-	-
D-B, offside lane	498	0.144	0.144	0.328	-	-	-	0.229	0.229	0.091	-	-	-
D-C	498	-	0.144	0.328	0.115	0.229	0.229	0.229	0.229	0.091	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025	Saturday Afternoon (No Dev)	ONE HOUR	12:45	14:15	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 (PCU/hr)	Scaling Factor (%)
A		✓	223	100.000
B		✓	302	100.000
C		✓	140	100.000
D		✓	5	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	139	81	3
	B	184	0	115	3
	C	64	74	0	2
	D	1	4	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	3	3	0
	B	3	0	3	0
	C	3	3	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.22	8.20	0.3	A
B-AD	0.38	11.08	0.6	B
A-BCD	0.01	5.28	0.0	A
A-B				
A-C				
D-ABC	0.01	8.07	0.0	A
C-ABD	0.13	7.02	0.2	A
C-D				
C-A				

Main Results for each time segment

12:45 - 13:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	88	619	0.142	87	0.2	6.967	A
B-AD	139	568	0.245	138	0.3	8.600	A
A-BCD	3	691	0.004	3	0.0	5.271	A
A-B	104			104			
A-C	61			61			
D-ABC	4	472	0.008	4	0.0	7.682	A
C-ABD	56	629	0.089	55	0.1	6.461	A
C-D	2			2			
C-A	48			48			

13:00 - 13:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	105	603	0.174	105	0.2	7.435	A
B-AD	166	555	0.300	166	0.4	9.509	A
A-BCD	4	707	0.005	4	0.0	5.157	A
A-B	124			124			
A-C	72			72			
D-ABC	4	464	0.010	4	0.0	7.840	A
C-ABD	67	621	0.107	67	0.1	6.691	A
C-D	2			2			
C-A	57			57			

13:15 - 13:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	129	581	0.222	129	0.3	8.183	A
B-AD	204	538	0.378	203	0.6	11.036	B
A-BCD	5	730	0.007	5	0.0	5.007	A
A-B	152			152			
A-C	89			89			
D-ABC	6	452	0.012	5	0.0	8.069	A
C-ABD	82	610	0.134	82	0.2	7.020	A
C-D	2			2			
C-A	70			70			

13:30 - 13:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	129	581	0.222	129	0.3	8.200	A
B-AD	204	538	0.378	204	0.6	11.082	B
A-BCD	5	730	0.007	5	0.0	5.013	A
A-B	152			152			
A-C	89			89			
D-ABC	6	452	0.012	6	0.0	8.070	A
C-ABD	82	610	0.134	82	0.2	7.023	A
C-D	2			2			
C-A	70			70			

13:45 - 14:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	105	603	0.174	105	0.2	7.455	A
B-AD	166	555	0.300	167	0.4	9.564	A
A-BCD	4	707	0.005	4	0.0	5.165	A
A-B	124			124			
A-C	72			72			
D-ABC	4	464	0.010	5	0.0	7.842	A
C-ABD	67	621	0.107	67	0.1	6.697	A
C-D	2			2			
C-A	57			57			

14:00 - 14:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	88	618	0.142	88	0.2	6.999	A
B-AD	139	568	0.245	140	0.3	8.671	A
A-BCD	3	690	0.004	3	0.0	5.278	A
A-B	104			104			
A-C	61			61			
D-ABC	4	472	0.008	4	0.0	7.686	A
C-ABD	56	629	0.089	56	0.1	6.471	A
C-D	2			2			
C-A	48			48			

2025, Friday Evening (No Dev)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cock Hill/Ardkeen	Crossroads	Two-way		9.66	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2025	Friday Evening (No Dev)	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 (PCU/hr)	Scaling Factor (%)
A		✓	266	100.000
B		✓	454	100.000
C		✓	182	100.000
D		✓	3	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	176	89	1
	B	318	0	134	2
	C	73	104	0	5
	D	2	1	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	3	3	0
	B	3	0	3	0
	C	3	3	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.32	11.93	0.5	B
B-AD	0.65	19.76	1.9	C
A-BCD	0.00	5.16	0.0	A
A-B				
A-C				
D-ABC	0.00	0.00	0.0	A
C-ABD	0.19	7.65	0.2	A
C-D				
C-A				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	102	548	0.186	101	0.2	8.266	A
B-AD	240	577	0.416	237	0.7	10.827	B
A-BCD	1	705	0.001	1	0.0	5.156	A
A-B	132			132			
A-C	67			67			
D-ABC	0	459	0.000	0	0.0	0.000	A
C-ABD	78	621	0.126	78	0.1	6.817	A
C-D	4			4			
C-A	55			55			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	122	519	0.235	122	0.3	9.311	A
B-AD	286	560	0.511	285	1.0	13.393	B
A-BCD	1	725	0.002	1	0.0	5.022	A
A-B	158			158			
A-C	80			80			
D-ABC	0	446	0.000	0	0.0	0.000	A
C-ABD	94	612	0.153	94	0.2	7.153	A
C-D	4			4			
C-A	65			65			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	149	463	0.323	149	0.5	11.773	B
B-AD	351	537	0.652	347	1.8	19.190	C
A-BCD	2	752	0.002	2	0.0	4.847	A
A-B	193			193			
A-C	98			98			
D-ABC	0	428	0.000	0	0.0	0.000	A
C-ABD	115	599	0.192	115	0.2	7.649	A
C-D	5			5			
C-A	80			80			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	149	460	0.325	149	0.5	11.929	B
B-AD	350	537	0.652	350	1.9	19.756	C
A-BCD	2	752	0.002	2	0.0	4.851	A
A-B	193			193			
A-C	98			98			
D-ABC	0	428	0.000	0	0.0	0.000	A
C-ABD	115	599	0.192	115	0.2	7.655	A
C-D	5			5			
C-A	80			80			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	122	516	0.236	123	0.3	9.424	A
B-AD	286	561	0.511	289	1.1	13.819	B
A-BCD	1	724	0.002	1	0.0	5.031	A
A-B	158			158			
A-C	80			80			
D-ABC	0	446	0.000	0	0.0	0.000	A
C-ABD	94	612	0.153	94	0.2	7.162	A
C-D	4			4			
C-A	65			65			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	102	546	0.187	102	0.2	8.352	A
B-AD	240	577	0.416	241	0.7	11.105	B
A-BCD	1	705	0.001	1	0.0	5.161	A
A-B	132			132			
A-C	67			67			
D-ABC	0	458	0.000	0	0.0	0.000	A
C-ABD	78	621	0.126	79	0.2	6.834	A
C-D	4			4			
C-A	55			55			

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

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+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: Cock_Hill_3_Arm_Rdbt.j9
Path: \\DUBLINFILE\ProjectData\IE01T22A88 Tesco Cavan\5. Technical\5. Modelling\Junctions_9_Models\2025_No_Dev
Report generation date: 30/11/2022 12:36:26

»2025, Saturday Afternoon (No Dev)
»2025, Friday Evening (No Dev)

Summary of junction performance

	Saturday Afternoon (No Dev)					Friday Evening (No Dev)				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2025									
Arm 1	D1	0.3	3.67	0.25	A	D2	0.6	4.36	0.36	A
Arm 2		0.1	3.38	0.12	A		0.2	3.84	0.19	A
Arm 3		0.2	3.42	0.18	A		0.3	3.74	0.25	A

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

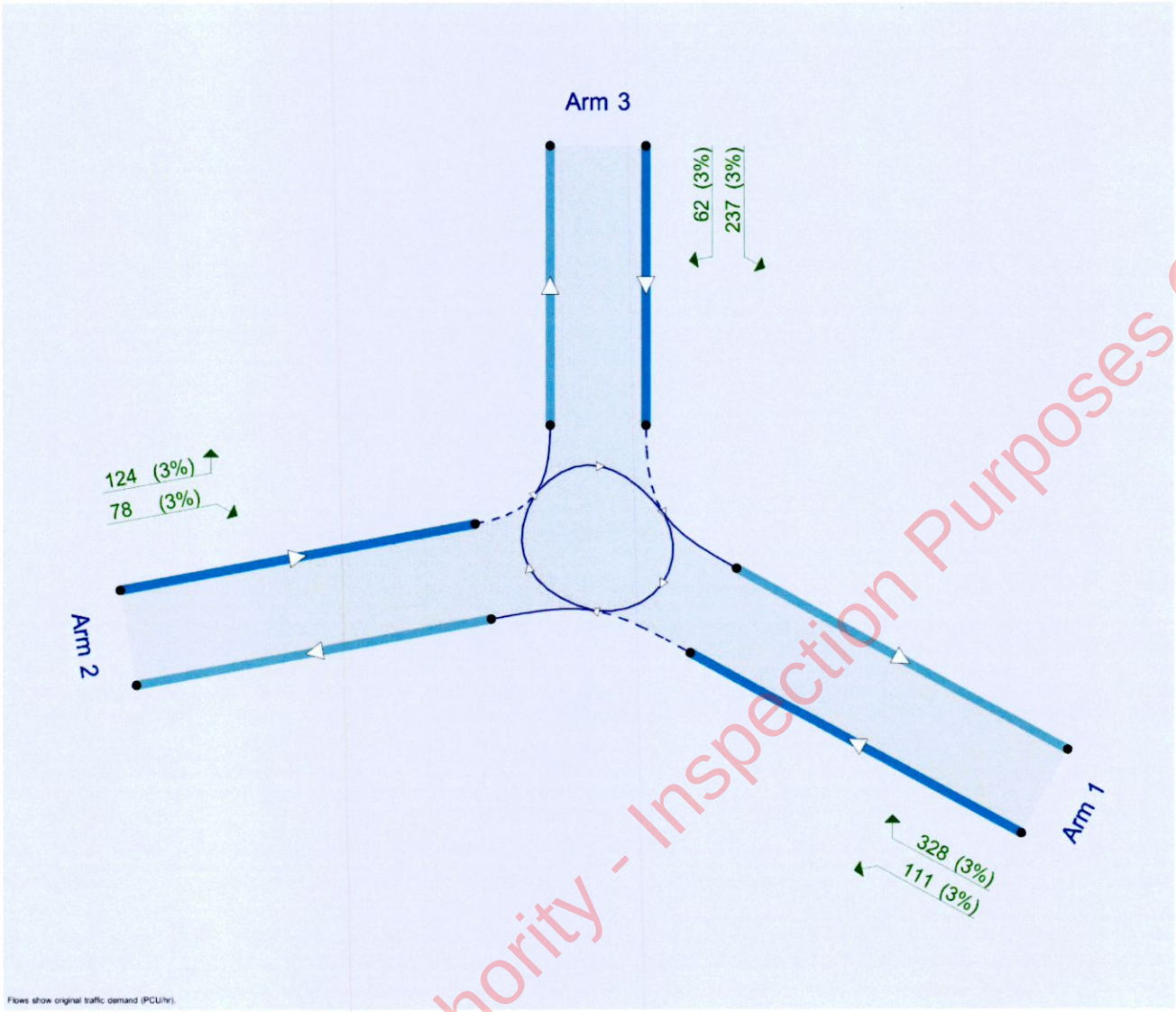
File summary

File Description

Title	
Location	
Site number	
Date	28/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\pgannon
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025	Saturday Afternoon (No Dev)	ONE HOUR	12:45	14:15	15
D2	2025	Friday Evening (No Dev)	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2025, Saturday Afternoon (No Dev)

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		1, 2, 3	3.52	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Eastern Arm	
2	Western Arm	
3	Northern Arm	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.03	5.96	9.3	49.9	35.6	35.7	
2	3.69	6.45	6.5	38.9	35.6	51.6	
3	3.33	5.87	7.6	40.5	35.6	39.4	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.587	1374
2	0.573	1396
3	0.581	1369

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)
D1	2025	Saturday Afternoon (No Dev)	ONE HOUR	12:45	14:15	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 (PCU/hr)	Scaling Factor (%)
1		✓	305	100.000
2		✓	138	100.000
3		✓	221	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	1	74	230
	2	66	0	72
	3	179	42	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	3
	2	3	0	3
	3	3	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.25	3.67	0.3	A
2	0.12	3.38	0.1	A
3	0.18	3.42	0.2	A

Main Results for each time segment

12:45 - 13:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	230	32	1355	0.169	229	0.2	3.290	A
2	104	173	1297	0.080	104	0.1	3.108	A
3	166	50	1340	0.124	166	0.1	3.156	A

13:00 - 13:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	274	38	1352	0.203	274	0.3	3.440	A
2	124	208	1277	0.097	124	0.1	3.215	A
3	199	60	1334	0.149	199	0.2	3.265	A

13:15 - 13:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	336	46	1347	0.249	335	0.3	3.666	A
2	152	254	1250	0.122	152	0.1	3.375	A
3	243	74	1326	0.183	243	0.2	3.423	A

13:30 - 13:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	336	46	1347	0.249	336	0.3	3.666	A
2	152	254	1250	0.122	152	0.1	3.375	A
3	243	74	1326	0.183	243	0.2	3.423	A

13:45 - 14:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	274	38	1352	0.203	275	0.3	3.444	A
2	124	208	1277	0.097	124	0.1	3.219	A
3	199	60	1334	0.149	199	0.2	3.269	A

14:00 - 14:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	230	32	1355	0.169	230	0.2	3.294	A
2	104	174	1296	0.080	104	0.1	3.112	A
3	166	50	1340	0.124	167	0.1	3.160	A

2025, Friday Evening (No Dev)

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		1, 2, 3	4.05	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2025	Friday Evening (No Dev)	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 (PCU/hr)	Scaling Factor (%)
1		✓	439	100.000
2		✓	202	100.000
3		✓	299	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	111	328
	2	78	0	124
	3	237	62	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	3
	2	3	0	3
	3	3	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.36	4.36	0.6	A
2	0.19	3.84	0.2	A
3	0.25	3.74	0.3	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	331	47	1347	0.245	329	0.3	3.639	A
2	152	246	1255	0.121	152	0.1	3.359	A
3	225	59	1335	0.169	224	0.2	3.337	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	395	56	1341	0.294	394	0.4	3.914	A
2	182	295	1227	0.148	181	0.2	3.546	A
3	269	70	1328	0.202	269	0.3	3.498	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	483	68	1334	0.362	483	0.6	4.354	A
2	222	361	1189	0.187	222	0.2	3.834	A
3	329	86	1319	0.250	329	0.3	3.744	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	483	68	1334	0.362	483	0.6	4.359	A
2	222	361	1189	0.187	222	0.2	3.835	A
3	329	86	1319	0.250	329	0.3	3.744	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	395	56	1341	0.294	395	0.4	3.924	A
2	182	295	1227	0.148	182	0.2	3.551	A
3	269	70	1328	0.202	269	0.3	3.504	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	331	47	1346	0.245	331	0.3	3.654	A
2	152	247	1254	0.121	152	0.1	3.367	A
3	225	59	1335	0.169	225	0.2	3.341	A

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.1.7462

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Filename: Cock_Hill_Site_Entrance.j9
Path: \\DUBLINFILE\ProjectData\IE01T22A88 Tesco Cavan\5. Technical\5. Modelling\Junctions_9_Models\2025_No_Dev
Report generation date: 30/11/2022 16:06:30

»2025, Saturday Afternoon (No Dev)
»2025, Friday Evening (No Dev)

Summary of junction performance

	Saturday Afternoon (No Dev)					Friday Evening (No Dev)				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2025									
Stream B-C	D1	0.0	0.00	0.00	A	D2	0.0	0.00	0.00	A
Stream B-AD		0.0	0.00	0.00	A		0.0	0.00	0.00	A
Stream A-BCD		0.0	0.00	0.00	A		0.0	4.51	0.01	A
Stream D-ABC		0.0	0.00	0.00	A		0.0	7.95	0.02	A
Stream C-ABD		0.0	6.04	0.00	A		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	
Location	
Site number	
Date	28/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\pgannon
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025	Saturday Afternoon (No Dev)	ONE HOUR	12:45	14:15	15
D2	2025	Friday Evening (No Dev)	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2025, Saturday Afternoon (No Dev)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cock Hill/Site Entrance	Right-Left Stagger	Two-way		0.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Cock Hill (Southern Arm)		Major
B	Site Entrance		Minor
C	Cock Hill (Northern Arm)		Major
D	School Road		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A	6.00				115.0	✓	0.00
C	6.00		✓	3.00	100.0	✓	10.00

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)	Lane Width (Left) (m)	Lane Width (Right) (m)	Visibility to left (m)	Visibility to right (m)
B	Two lanes		3.50	3.50	75	120
D	One lane	3.00			105	100

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
A-D	641	-	-	-	0.248	0.248	0.248	-	0.248	-	-
B-AD	590	0.108	0.272	-	-	-	0.171	0.388	0.171	0.108	0.272
B-C	734	0.113	0.285	-	-	-	-	-	-	0.113	0.285
C-B	687	0.266	0.266	-	-	-	-	-	-	0.266	0.266
D-A	687	-	-	-	0.266	0.105	0.266	-	0.105	-	-
D-BC	562	0.163	0.163	0.370	0.259	0.102	0.259	-	0.102	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025	Saturday Afternoon (No Dev)	ONE HOUR	12:45	14:15	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 (PCU/hr)	Scaling Factor (%)
A		✓	302	100.000
B		✓	4	100.000
C		✓	214	100.000
D		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	2	300	0
	B	2	0	2	0
	C	212	2	0	0
	D	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	3	0
	B	0	0	0	0
	C	3	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.00	0.00	0.0	A
B-AD	0.00	0.00	0.0	A
A-BCD	0.00	0.00	0.0	A
A-B				
A-C				
D-ABC	0.00	0.00	0.0	A
C-ABD	0.00	6.04	0.0	A
C-D				
C-A				

Main Results for each time segment

12:45 - 13:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	670	0.000	0	0.0	0.000	A
B-AD	0	501	0.000	0	0.0	0.000	A
A-BCD	0	601	0.000	0	0.0	0.000	A
A-B	2			2			
A-C	226			226			
D-ABC	0	553	0.000	0	0.0	0.000	A
C-ABD	2	626	0.002	1	0.0	5.760	A
C-D	0			0			
C-A	160			160			

13:00 - 13:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	658	0.000	0	0.0	0.000	A
B-AD	0	484	0.000	0	0.0	0.000	A
A-BCD	0	593	0.000	0	0.0	0.000	A
A-B	2			2			
A-C	270			270			
D-ABC	0	540	0.000	0	0.0	0.000	A
C-ABD	2	615	0.003	2	0.0	5.873	A
C-D	0			0			
C-A	191			191			

13:15 - 13:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	640	0.000	0	0.0	0.000	A
B-AD	0	460	0.000	0	0.0	0.000	A
A-BCD	0	583	0.000	0	0.0	0.000	A
A-B	2			2			
A-C	330			330			
D-ABC	0	522	0.000	0	0.0	0.000	A
C-ABD	2	598	0.004	2	0.0	6.037	A
C-D	0			0			
C-A	233			233			

13:30 - 13:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	640	0.000	0	0.0	0.000	A
B-AD	0	460	0.000	0	0.0	0.000	A
A-BCD	0	583	0.000	0	0.0	0.000	A
A-B	2			2			
A-C	330			330			
D-ABC	0	522	0.000	0	0.0	0.000	A
C-ABD	2	598	0.004	2	0.0	6.037	A
C-D	0			0			
C-A	233			233			

13:45 - 14:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	658	0.000	0	0.0	0.000	A
B-AD	0	484	0.000	0	0.0	0.000	A
A-BCD	0	593	0.000	0	0.0	0.000	A
A-B	2			2			
A-C	270			270			
D-ABC	0	540	0.000	0	0.0	0.000	A
C-ABD	2	615	0.003	2	0.0	5.873	A
C-D	0			0			
C-A	191			191			

14:00 - 14:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	670	0.000	0	0.0	0.000	A
B-AD	0	501	0.000	0	0.0	0.000	A
A-BCD	0	601	0.000	0	0.0	0.000	A
A-B	2			2			
A-C	226			226			
D-ABC	0	553	0.000	0	0.0	0.000	A
C-ABD	2	626	0.002	2	0.0	5.760	A
C-D	0			0			
C-A	160			160			

2025, Friday Evening (No Dev)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cock Hill/Site Entrance	Right-Left Stagger	Two-way		0.16	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2025	Friday Evening (No Dev)	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 (PCU/hr)	Scaling Factor (%)
A		✓	451	100.000
B		✓	4	100.000
C		✓	280	100.000
D		✓	10	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	0	447	4
	B	0	0	4	0
	C	276	0	0	4
	D	4	0	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	3	0
	B	0	0	0	0
	C	3	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.00	0.00	0.0	A
B-AD	0.00	0.00	0.0	A
A-BCD	0.01	4.51	0.0	A
A-B				
A-C				
D-ABC	0.02	7.95	0.0	A
C-ABD	0.00	0.00	0.0	A
C-D				
C-A				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	637	0.000	0	0.0	0.000	A
B-AD	0	462	0.000	0	0.0	0.000	A
A-BCD	5	815	0.006	5	0.0	4.500	A
A-B	0			0			
A-C	334			334			
D-ABC	8	510	0.015	7	0.0	7.160	A
C-ABD	0	1201	0.000	0	0.0	0.000	A
C-D	3			3			
C-A	208			208			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	619	0.000	0	0.0	0.000	A
B-AD	0	437	0.000	0	0.0	0.000	A
A-BCD	7	851	0.008	7	0.0	4.321	A
A-B	0			0			
A-C	399			399			
D-ABC	9	491	0.018	9	0.0	7.467	A
C-ABD	0	1166	0.000	0	0.0	0.000	A
C-D	4			4			
C-A	248			248			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	593	0.000	0	0.0	0.000	A
B-AD	0	402	0.000	0	0.0	0.000	A
A-B-C-D	10	902	0.011	10	0.0	4.095	A
A-B	0			0			
A-C	487			487			
D-ABC	11	464	0.024	11	0.0	7.945	A
C-ABD	0	1117	0.000	0	0.0	0.000	A
C-D	4			4			
C-A	304			304			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	593	0.000	0	0.0	0.000	A
B-AD	0	402	0.000	0	0.0	0.000	A
A-B-C-D	10	902	0.011	10	0.0	4.099	A
A-B	0			0			
A-C	487			487			
D-ABC	11	464	0.024	11	0.0	7.945	A
C-ABD	0	1117	0.000	0	0.0	0.000	A
C-D	4			4			
C-A	304			304			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	619	0.000	0	0.0	0.000	A
B-AD	0	437	0.000	0	0.0	0.000	A
A-B-C-D	7	851	0.008	7	0.0	4.331	A
A-B	0			0			
A-C	399			399			
D-ABC	9	491	0.018	9	0.0	7.471	A
C-ABD	0	1166	0.000	0	0.0	0.000	A
C-D	4			4			
C-A	248			248			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	637	0.000	0	0.0	0.000	A
B-AD	0	462	0.000	0	0.0	0.000	A
A-B-C-D	5	815	0.006	5	0.0	4.506	A
A-B	0			0			
A-C	334			334			
D-ABC	8	510	0.015	8	0.0	7.163	A
C-ABD	0	1201	0.000	0	0.0	0.000	A
C-D	3			3			
C-A	208			208			

Junctions 9

ARCADY 9 - Roundabout Module

Filename: Dublin_Rd_Cock_Hill_Rdbt_East_Arm_Cal.j9
Path: \\DUBLINFILE\ProjectData\IE01T22A88 Tesco Cavan\5. Technical\5. Modelling\Junctions_9_Models\2025_No_Dev
Report generation date: 30/11/2022 14:21:10

»2025, Saturday Afternoon (No Dev)
»2025, Friday Evening (No Dev)

Summary of junction performance

	Saturday Afternoon (No Dev)					Friday Evening (No Dev)				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2025									
Arm 1	D1	24.2	92.62	1.01	F	D2	5.8	27.65	0.86	D
Arm 2		0.8	11.05	0.44	B		0.5	9.43	0.35	A
Arm 3		3.6	20.70	0.79	C		2.4	15.02	0.71	C
Arm 4		2.7	25.55	0.73	D		2.2	20.17	0.69	C

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

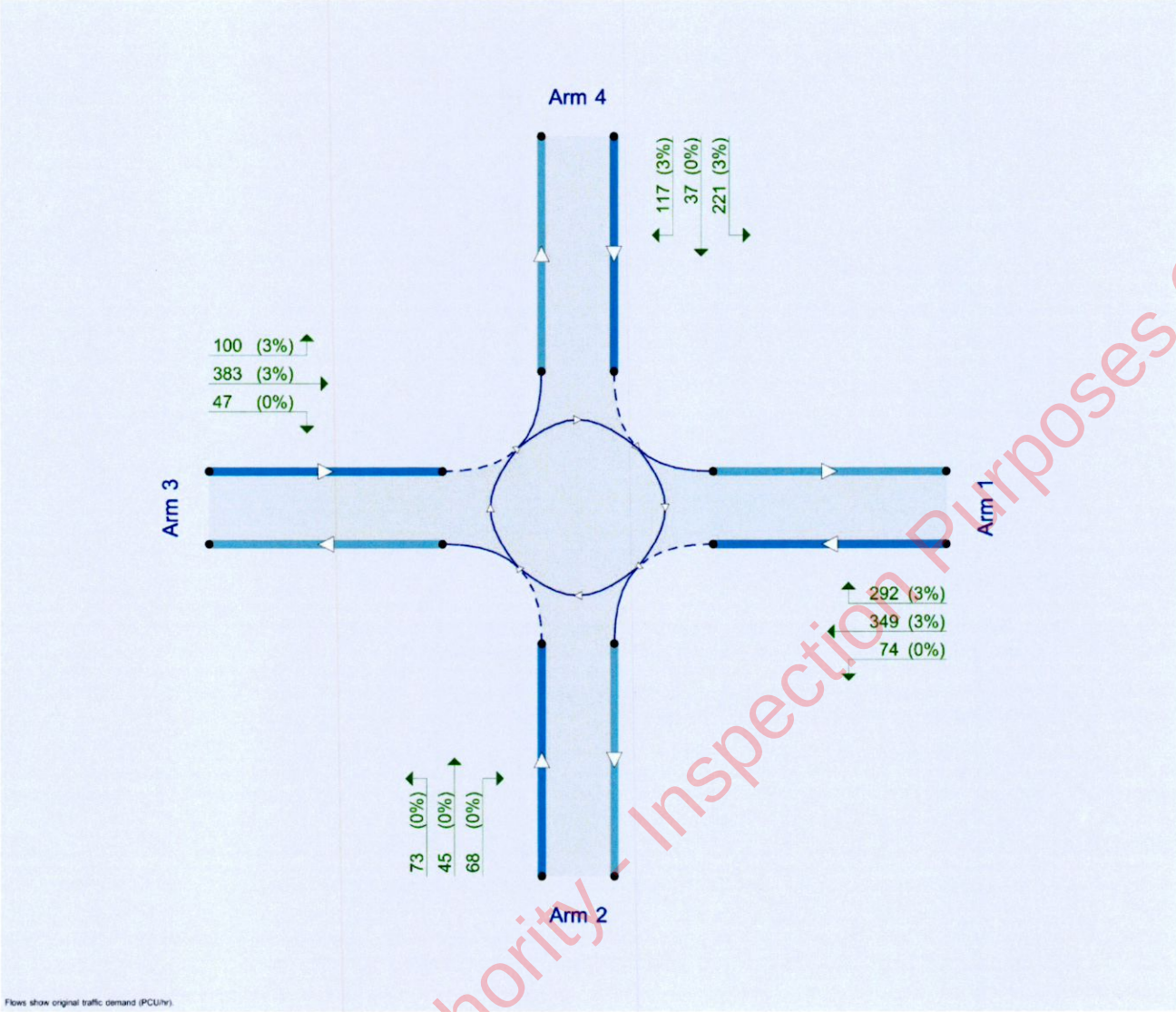
File summary

File Description

Title	
Location	
Site number	
Date	24/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\pgannon
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025	Saturday Afternoon (No Dev)	ONE HOUR	12:45	14:15	15
D2	2025	Friday Evening (No Dev)	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2025, Saturday Afternoon (No Dev)

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		1, 2, 3, 4	50.62	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	R212 Dublin Rd (East)	
2	Shopping Centre Entry/Exit (Southern Arm)	
3	R212 Dublin Rd (West)	
4	Cock Hill (Northern Arm)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.15	3.16	0.1	19.4	32.6	52.3	
2	3.65	3.65	0.0	23.4	32.6	61.2	
3	3.65	3.66	0.0	20.3	32.6	39.0	
4	3.04	3.05	0.0	24.4	32.6	53.4	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final slope	Final intercept (PCU/hr)
1	✓	0.464	1030	0.464	1030
2				0.480	995
3				0.518	1073
4				0.461	856

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)
D1	2025	Saturday Afternoon (No Dev)	ONE HOUR	12:45	14:15	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 (PCU/hr)	Scaling Factor (%)
1		✓	849	100.000
2		✓	233	100.000
3		✓	586	100.000
4		✓	355	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	7	123	427	292
	2	103	0	82	48
	3	431	85	10	60
	4	245	42	66	2

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	3	3
	2	0	0	0	0
	3	3	0	0	3
	4	3	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	1.01	92.62	24.2	F
2	0.44	11.05	0.8	B
3	0.79	20.70	3.6	C
4	0.73	25.55	2.7	D

Main Results for each time segment

12:45 - 13:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	639	153	959	0.666	631	2.0	11.011	B
2	175	598	708	0.248	174	0.3	6.731	A
3	441	337	899	0.491	437	1.0	7.933	A
4	267	475	637	0.420	264	0.7	9.842	A

13:00 - 13:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	763	183	945	0.808	756	3.9	18.734	C
2	209	716	651	0.322	209	0.5	8.131	A
3	527	403	864	0.610	524	1.6	10.787	B
4	319	569	593	0.538	317	1.2	13.302	B

13:15 - 13:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	935	223	927	1.009	884	16.7	55.455	F
2	257	840	591	0.434	255	0.8	10.684	B
3	645	479	825	0.782	638	3.4	19.019	C
4	391	693	536	0.729	385	2.5	23.633	C

13:30 - 13:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	935	225	925	1.010	905	24.2	92.622	F
2	257	859	582	0.441	256	0.8	11.048	B
3	645	487	821	0.786	644	3.6	20.702	C
4	391	699	534	0.733	390	2.7	25.548	D

13:45 - 14:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	763	187	943	0.809	840	5.0	47.483	E
2	209	789	616	0.340	210	0.5	8.906	A
3	527	434	848	0.621	534	1.7	12.007	B
4	319	579	589	0.542	325	1.3	14.278	B

14:00 - 14:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	639	155	958	0.667	651	2.1	12.437	B
2	175	616	699	0.251	176	0.3	6.895	A
3	441	345	894	0.493	444	1.0	8.244	A
4	267	482	634	0.422	269	0.8	10.189	B

2025, Friday Evening (No Dev)

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		1, 2, 3, 4	20.51	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2025	Friday Evening (No Dev)	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 (PCU/hr)	Scaling Factor (%)
1		✓	722	100.000
2		✓	186	100.000
3		✓	539	100.000
4		✓	375	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	7	74	349	292
	2	68	0	73	45
	3	383	47	9	100
	4	221	37	117	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	3	3
	2	0	0	0	0
	3	3	0	0	3
	4	3	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.86	27.65	5.8	D
2	0.35	9.43	0.5	A
3	0.71	15.02	2.4	C
4	0.69	20.17	2.2	C

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	544	157	957	0.568	538	1.3	8.714	A
2	140	577	718	0.195	139	0.2	6.212	A
3	406	307	914	0.444	403	0.8	7.187	A
4	282	384	679	0.416	279	0.7	9.202	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	649	188	943	0.688	646	2.2	12.291	B
2	167	692	662	0.252	167	0.3	7.261	A
3	485	369	882	0.549	483	1.2	9.221	A
4	337	461	643	0.524	336	1.1	11.946	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	795	229	924	0.861	782	5.3	24.185	C
2	205	839	592	0.346	204	0.5	9.272	A
3	593	448	841	0.706	589	2.3	14.410	B
4	413	562	597	0.692	409	2.2	19.218	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	795	231	923	0.861	793	5.8	27.647	D
2	205	851	586	0.349	205	0.5	9.432	A
3	593	453	838	0.708	593	2.4	15.020	C
4	413	566	595	0.694	413	2.2	20.165	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	649	191	941	0.689	663	2.4	13.848	B
2	167	709	654	0.256	168	0.3	7.415	A
3	485	376	878	0.552	489	1.3	9.608	A
4	337	466	641	0.526	341	1.2	12.515	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	544	159	956	0.568	548	1.4	9.130	A
2	140	587	713	0.196	140	0.2	6.294	A
3	406	312	911	0.445	408	0.8	7.366	A
4	282	389	677	0.417	284	0.7	9.458	A

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: Cock Hill_Ardkeen_Crossroads.j9
Path: \\DUBLINFILE\ProjectData\IE01T22A88 Tesco Cavan\5. Technical\5. Modelling\Junctions_9_Models\2025_Dev
Report generation date: 30/11/2022 12:34:05

»2025, Saturday Afternoon (Dev)
»2025, Friday Evening (Dev)

Summary of junction performance

	Saturday Afternoon (Dev)					Friday Evening (Dev)				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2025									
Stream B-CD	D1	0.7	12.89	0.41	B	D2	1.4	29.20	0.60	D
Stream B-AD		1.8	21.02	0.65	C		5.2	46.73	0.86	E
Stream A-BCD		0.0	5.01	0.01	A		0.0	5.00	0.00	A
Stream D-ABC		0.0	8.89	0.02	A		0.0	0.00	0.00	A
Stream C-ABD		0.3	8.41	0.25	A		0.4	8.69	0.27	A

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

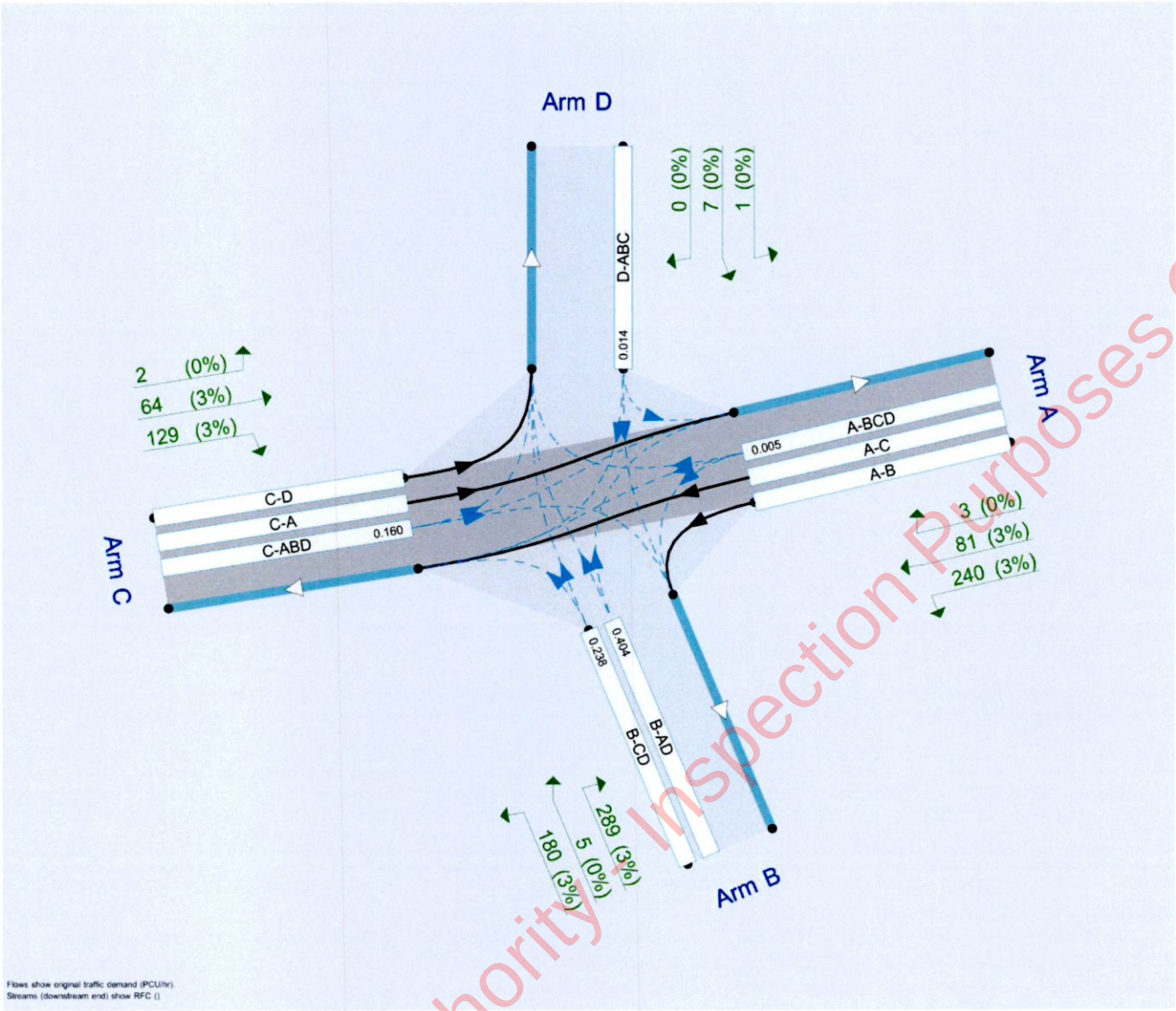
File summary

File Description

Title	
Location	
Site number	
Date	28/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\pgannon
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025	Saturday Afternoon (Dev)	ONE HOUR	12:45	14:15	15
D2	2025	Friday Evening (Dev)	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2025, Saturday Afternoon (Dev)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cock Hill/Ardkeen	Crossroads	Two-way		9.65	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Ardkeen (Eastern Arm)		Major
B	Cock Hill (Southern Arm)		Minor
C	Ardkeen (Western Arm)		Major
D	Cock Hill (Northern Arm)		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A	6.00				60.0	✓	0.00
C	6.00		✓	2.20	170.0	✓	2.00

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)	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		6.00	6.00	6.00	6.00	3.00		3.00	92	182
D	One lane	2.20								120	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
A-D	609	-	-	-	-	-	-	0.236	0.337	0.236	-	-	-
B-A	631	0.115	0.291	0.291	-	-	-	0.183	0.415	-	0.291	0.291	0.145
B-C	690	0.106	0.267	-	-	-	-	-	-	-	-	-	-
B-D, nearside lane	560	0.102	0.258	0.258	-	-	-	0.162	0.368	0.162	-	-	-
B-D, offside lane	631	0.115	0.291	0.291	-	-	-	0.183	0.415	0.183	-	-	-
C-B	672	0.261	0.261	0.372	-	-	-	-	-	-	-	-	-
D-A	603	-	-	-	-	-	-	0.234	-	0.092	-	-	-
D-B, nearside lane	498	0.144	0.144	0.328	-	-	-	0.229	0.229	0.091	-	-	-
D-B, offside lane	498	0.144	0.144	0.328	-	-	-	0.229	0.229	0.091	-	-	-
D-C	498	-	0.144	0.328	0.115	0.229	0.229	0.229	0.229	0.091	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025	Saturday Afternoon (Dev)	ONE HOUR	12:45	14:15	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 (PCU/hr)	Scaling Factor (%)
A		✓	324	100.000
B		✓	474	100.000
C		✓	195	100.000
D		✓	8	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	240	81	3
	B	289	0	180	5
	C	64	129	0	2
	D	1	7	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	3	3	0
	B	3	0	3	0
	C	3	3	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.41	12.89	0.7	B
B-AD	0.65	21.02	1.8	C
A-BCD	0.01	5.01	0.0	A
A-B				
A-C				
D-ABC	0.02	8.89	0.0	A
C-ABD	0.25	8.41	0.3	A
C-D				
C-A				

Main Results for each time segment

12:45 - 13:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	138	580	0.238	137	0.3	8.333	A
B-AD	219	541	0.404	216	0.7	11.318	B
A-BCD	3	730	0.005	3	0.0	5.000	A
A-B	180			180			
A-C	61			61			
D-ABC	6	444	0.014	6	0.0	8.209	A
C-ABD	97	610	0.160	97	0.2	7.211	A
C-D	1			1			
C-A	48			48			

13:00 - 13:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	165	550	0.300	165	0.4	9.605	A
B-AD	261	522	0.500	260	1.0	14.040	B
A-BCD	4	755	0.006	4	0.0	4.846	A
A-B	215			215			
A-C	72			72			
D-ABC	7	432	0.017	7	0.0	8.483	A
C-ABD	116	599	0.195	116	0.2	7.682	A
C-D	2			2			
C-A	57			57			

13:15 - 13:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	203	493	0.411	202	0.7	12.679	B
B-AD	319	495	0.645	316	1.8	20.377	C
A-BCD	6	790	0.008	6	0.0	4.647	A
A-B	262			262			
A-C	89			89			
D-ABC	9	414	0.021	9	0.0	8.890	A
C-ABD	143	584	0.245	143	0.3	8.408	A
C-D	2			2			
C-A	69			69			

13:30 - 13:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	203	490	0.414	203	0.7	12.893	B
B-AD	319	495	0.645	319	1.8	21.015	C
A-BCD	6	790	0.008	6	0.0	4.653	A
A-B	262			262			
A-C	89			89			
D-ABC	9	414	0.021	9	0.0	8.892	A
C-ABD	143	584	0.245	143	0.3	8.414	A
C-D	2			2			
C-A	69			69			

13:45 - 14:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	165	547	0.302	166	0.5	9.756	A
B-AD	261	522	0.499	264	1.1	14.504	B
A-BCD	4	755	0.006	4	0.0	4.856	A
A-B	214			214			
A-C	72			72			
D-ABC	7	431	0.017	7	0.0	8.488	A
C-ABD	116	599	0.195	117	0.3	7.701	A
C-D	2			2			
C-A	57			57			

14:00 - 14:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	138	578	0.239	139	0.3	8.441	A
B-AD	219	541	0.404	220	0.7	11.610	B
A-BCD	3	730	0.005	3	0.0	5.009	A
A-B	180			180			
A-C	61			61			
D-ABC	6	444	0.014	6	0.0	8.215	A
C-ABD	97	610	0.160	98	0.2	7.238	A
C-D	1			1			
C-A	48			48			

2025, Friday Evening (Dev)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cock Hill/Ardkeen	Crossroads	Two-way		22.08	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2025	Friday Evening (Dev)	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 (PCU/hr)	Scaling Factor (%)
A		✓	329	100.000
B		✓	560	100.000
C		✓	220	100.000
D		✓	3	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	239	89	1
	B	392	0	165	3
	C	73	142	0	5
	D	2	1	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	3	3	0
	B	3	0	3	0
	C	3	3	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.60	29.20	1.4	D
B-AD	0.86	46.73	5.2	E
A-BCD	0.00	5.00	0.0	A
A-B				
A-C				
D-ABC	0.00	0.00	0.0	A
C-ABD	0.27	8.69	0.4	A
C-D				
C-A				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	126	516	0.244	125	0.3	9.436	A
B-AD	296	558	0.530	291	1.1	13.677	B
A-BCD	1	729	0.002	1	0.0	4.994	A
A-B	180			180			
A-C	67			67			
D-ABC	0	445	0.000	0	0.0	0.000	A
C-ABD	107	610	0.176	106	0.2	7.354	A
C-D	4			4			
C-A	55			55			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	151	462	0.326	150	0.5	11.850	B
B-AD	353	537	0.657	350	1.9	19.468	C
A-BCD	1	754	0.002	1	0.0	4.836	A
A-B	214			214			
A-C	80			80			
D-ABC	0	430	0.000	0	0.0	0.000	A
C-ABD	128	599	0.214	128	0.3	7.875	A
C-D	4			4			
C-A	65			65			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	185	330	0.560	182	1.2	24.521	C
B-AD	432	505	0.855	421	4.7	39.284	E
A-BCD	2	789	0.003	2	0.0	4.631	A
A-B	262			262			
A-C	98			98			
D-ABC	0	408	0.000	0	0.0	0.000	A
C-ABD	158	585	0.271	158	0.4	8.677	A
C-D	5			5			
C-A	79			79			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	185	310	0.597	184	1.4	29.203	D
B-AD	432	505	0.856	430	5.2	46.728	E
A-BCD	2	789	0.003	2	0.0	4.637	A
A-B	262			262			
A-C	98			98			
D-ABC	0	407	0.000	0	0.0	0.000	A
C-ABD	158	585	0.271	158	0.4	8.693	A
C-D	5			5			
C-A	79			79			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	151	447	0.337	154	0.5	12.819	B
B-AD	353	537	0.657	365	2.1	22.916	C
A-BCD	1	754	0.002	1	0.0	4.848	A
A-B	214			214			
A-C	80			80			
D-ABC	0	428	0.000	0	0.0	0.000	A
C-ABD	128	599	0.214	129	0.3	7.897	A
C-D	4			4			
C-A	65			65			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	126	511	0.247	127	0.3	9.665	A
B-AD	296	558	0.530	299	1.2	14.518	B
A-BCD	1	729	0.002	1	0.0	5.000	A
A-B	180			180			
A-C	67			67			
D-ABC	0	445	0.000	0	0.0	0.000	A
C-ABD	107	610	0.176	108	0.2	7.385	A
C-D	4			4			
C-A	55			55			

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

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Filename: Cock_Hill_3_Arm_Rdbt.j9
Path: \\DUBLINFILE\ProjectData\IE01T22A88 Tesco Cavan\5. Technical\5. Modelling\Junctions_9_Models\2025_Dev
Report generation date: 30/11/2022 12:34:21

»2025, Saturday Afternoon (Dev)
»2025, Friday Evening (Dev)

Summary of junction performance

	Saturday Afternoon (Dev)					Friday Evening (Dev)				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2025									
Arm 1	D1	0.5	4.10	0.32	A	D2	0.7	4.71	0.41	A
Arm 2		0.2	3.81	0.19	A		0.3	4.14	0.23	A
Arm 3		0.3	3.81	0.24	A		0.4	3.98	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	
Location	
Site number	
Date	28/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\pgannon
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025	Saturday Afternoon (Dev)	ONE HOUR	12:45	14:15	15
D2	2025	Friday Evening (Dev)	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2025, Saturday Afternoon (Dev)

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		1, 2, 3	3.94	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Eastern Arm	
2	Western Arm	
3	Northern Arm	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.03	5.96	9.3	49.9	35.6	35.7	
2	3.69	6.45	6.5	38.9	35.6	51.6	
3	3.33	5.87	7.6	40.5	35.6	39.4	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.587	1374
2	0.573	1396
3	0.581	1369

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)
D1	2025	Saturday Afternoon (Dev)	ONE HOUR	12:45	14:15	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 (PCU/hr)	Scaling Factor (%)
1		✓	394	100.000
2		✓	201	100.000
3		✓	285	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	1	74	319
	2	129	0	72
	3	230	55	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	3
	2	3	0	3
	3	3	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.32	4.10	0.5	A
2	0.19	3.81	0.2	A
3	0.24	3.81	0.3	A

Main Results for each time segment

12:45 - 13:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	297	41	1350	0.220	295	0.3	3.514	A
2	151	240	1258	0.120	151	0.1	3.346	A
3	215	98	1312	0.164	214	0.2	3.374	A

13:00 - 13:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	354	49	1345	0.263	354	0.4	3.741	A
2	181	287	1231	0.147	181	0.2	3.529	A
3	256	117	1301	0.197	256	0.3	3.547	A

13:15 - 13:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	434	60	1338	0.324	433	0.5	4.095	A
2	221	352	1194	0.185	221	0.2	3.810	A
3	314	143	1286	0.244	313	0.3	3.813	A

13:30 - 13:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	434	61	1338	0.324	434	0.5	4.098	A
2	221	352	1194	0.185	221	0.2	3.811	A
3	314	143	1286	0.244	314	0.3	3.813	A

13:45 - 14:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	354	50	1345	0.263	355	0.4	3.745	A
2	181	288	1231	0.147	181	0.2	3.532	A
3	256	117	1301	0.197	257	0.3	3.550	A

14:00 - 14:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	297	41	1350	0.220	297	0.3	3.525	A
2	151	241	1258	0.120	151	0.1	3.354	A
3	215	98	1312	0.164	215	0.2	3.379	A

2025, Friday Evening (Dev)

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		1, 2, 3	4.36	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2025	Friday Evening (Dev)	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 (PCU/hr)	Scaling Factor (%)
1		✓	493	100.000
2		✓	236	100.000
3		✓	333	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	111	382
	2	112	0	124
	3	264	69	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	3
	2	3	0	3
	3	3	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.41	4.71	0.7	A
2	0.23	4.14	0.3	A
3	0.28	3.98	0.4	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	371	52	1343	0.276	370	0.4	3.800	A
2	178	286	1232	0.144	177	0.2	3.514	A
3	251	84	1320	0.190	250	0.2	3.460	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	443	62	1337	0.331	443	0.5	4.142	A
2	212	343	1199	0.177	212	0.2	3.755	A
3	299	101	1311	0.228	299	0.3	3.666	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	543	76	1329	0.408	542	0.7	4.705	A
2	260	420	1155	0.225	260	0.3	4.140	A
3	367	123	1297	0.283	366	0.4	3.980	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	543	76	1329	0.408	543	0.7	4.714	A
2	260	421	1155	0.225	260	0.3	4.143	A
3	367	123	1297	0.283	367	0.4	3.983	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	443	62	1337	0.331	444	0.5	4.155	A
2	212	344	1199	0.177	212	0.2	3.760	A
3	299	101	1310	0.228	300	0.3	3.669	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	371	52	1343	0.276	372	0.4	3.819	A
2	178	288	1231	0.144	178	0.2	3.524	A
3	251	84	1320	0.190	251	0.2	3.471	A

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Cock_Hill_Site_Entrance.j9
Path: \\DUBLINFILE\ProjectData\IE01T22A88 Tesco Cavan\5. Technical\5. Modelling\Junctions_9_Models\2025_Dev
Report generation date: 30/11/2022 12:35:19

»2025, Saturday Afternoon (Dev)
»2025, Friday Evening (Dev)

Summary of junction performance

	Saturday Afternoon (Dev)					Friday Evening (Dev)				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2025									
Stream B-C	D1	0.5	8.78	0.32	A	D2	0.3	7.92	0.20	A
Stream B-AD		0.2	11.54	0.18	B		0.1	11.46	0.11	B
Stream A-BCD		0.0	0.00	0.00	A		0.0	4.38	0.01	A
Stream D-ABC		0.0	0.00	0.00	A		0.0	8.28	0.02	A
Stream C-ABD		0.4	9.05	0.31	A		0.3	8.46	0.21	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	
Location	
Site number	
Date	28/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\pgannon
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025	Saturday Afternoon (Dev)	ONE HOUR	12:45	14:15	15
D2	2025	Friday Evening (Dev)	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2025, Saturday Afternoon (Dev)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cock Hill/Site Entrance	Right-Left Stagger	Two-way		3.70	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Cock Hill (Southern Arm)		Major
B	Site Entrance		Minor
C	Cock Hill (Northern Arm)		Major
D	School Road		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A	6.00				115.0	✓	0.00
C	6.00		✓	3.00	100.0	✓	10.00

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)	Lane Width (Left) (m)	Lane Width (Right) (m)	Visibility to left (m)	Visibility to right (m)
B	Two lanes		3.50	3.50	75	120
D	One lane	3.00			105	100

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
A-D	641	-	-	-	0.248	0.248	0.248	-	0.248	-	-
B-AD	590	0.108	0.272	-	-	-	0.171	0.388	0.171	0.108	0.272
B-C	734	0.113	0.285	-	-	-	-	-	-	0.113	0.285
C-B	687	0.266	0.266	-	-	-	-	-	-	0.266	0.266
D-A	687	-	-	-	0.266	0.105	0.266	-	0.105	-	-
D-BC	562	0.163	0.163	0.370	0.259	0.102	0.259	-	0.102	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025	Saturday Afternoon (Dev)	ONE HOUR	12:45	14:15	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 (PCU/hr)	Scaling Factor (%)
A		✓	390	100.000
B		✓	236	100.000
C		✓	371	100.000
D		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	90	300	0
	B	63	0	173	0
	C	212	159	0	0
	D	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	3	0
	B	0	0	0	0
	C	3	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.32	8.78	0.5	A
B-AD	0.18	11.54	0.2	B
A-BCD	0.00	0.00	0.0	A
A-B				
A-C				
D-ABC	0.00	0.00	0.0	A
C-ABD	0.31	9.05	0.4	A
C-D				
C-A				

Main Results for each time segment

12:45 - 13:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	130	645	0.202	129	0.3	6.967	A
B-AD	47	448	0.106	47	0.1	8.969	A
A-BCD	0	589	0.000	0	0.0	0.000	A
A-B	68			68			
A-C	226			226			
D-ABC	0	533	0.000	0	0.0	0.000	A
C-ABD	120	609	0.197	119	0.2	7.330	A
C-D	0			0			
C-A	160			160			

13:00 - 13:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	156	627	0.248	155	0.3	7.632	A
B-AD	57	420	0.135	56	0.2	9.902	A
A-BCD	0	579	0.000	0	0.0	0.000	A
A-B	81			81			
A-C	270			270			
D-ABC	0	516	0.000	0	0.0	0.000	A
C-ABD	143	594	0.241	143	0.3	7.978	A
C-D	0			0			
C-A	191			191			

13:15 - 13:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	190	600	0.317	190	0.5	8.757	A
B-AD	69	382	0.182	69	0.2	11.512	B
A-BCD	0	565	0.000	0	0.0	0.000	A
A-B	99			99			
A-C	330			330			
D-ABC	0	492	0.000	0	0.0	0.000	A
C-ABD	175	573	0.306	175	0.4	9.033	A
C-D	0			0			
C-A	233			233			

13:30 - 13:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	190	600	0.317	190	0.5	8.782	A
B-AD	69	381	0.182	69	0.2	11.537	B
A-BCD	0	565	0.000	0	0.0	0.000	A
A-B	99			99			
A-C	330			330			
D-ABC	0	492	0.000	0	0.0	0.000	A
C-ABD	175	573	0.306	175	0.4	9.055	A
C-D	0			0			
C-A	233			233			

13:45 - 14:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	156	626	0.248	156	0.3	7.663	A
B-AD	57	420	0.135	57	0.2	9.933	A
A-BCD	0	579	0.000	0	0.0	0.000	A
A-B	81			81			
A-C	270			270			
D-ABC	0	516	0.000	0	0.0	0.000	A
C-ABD	143	594	0.241	143	0.3	8.004	A
C-D	0			0			
C-A	191			191			

14:00 - 14:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	130	645	0.202	131	0.3	7.006	A
B-AD	47	447	0.106	48	0.1	9.006	A
A-BCD	0	589	0.000	0	0.0	0.000	A
A-B	68			68			
A-C	226			226			
D-ABC	0	533	0.000	0	0.0	0.000	A
C-ABD	120	609	0.197	120	0.2	7.369	A
C-D	0			0			
C-A	160			160			

2025, Friday Evening (Dev)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cock Hill/Site Entrance	Right-Left Stagger	Two-way		2.13	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2025	Friday Evening (Dev)	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 (PCU/hr)	Scaling Factor (%)
A		✓	506	100.000
B		✓	139	100.000
C		✓	382	100.000
D		✓	10	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	55	447	4
	B	34	0	105	0
	C	276	102	0	4
	D	4	0	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	3	0
	B	0	0	0	0
	C	3	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.20	7.92	0.3	A
B-AD	0.11	11.46	0.1	B
A-BCD	0.01	4.38	0.0	A
A-B				
A-C				
D-ABC	0.02	8.28	0.0	A
C-ABD	0.21	8.46	0.3	A
C-D				
C-A				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	79	623	0.127	78	0.1	6.600	A
B-AD	26	427	0.060	25	0.1	8.949	A
A-BCD	5	838	0.007	5	0.0	4.376	A
A-B	41			41			
A-C	334			334			
D-ABC	8	498	0.015	7	0.0	7.335	A
C-ABD	77	585	0.131	76	0.1	7.068	A
C-D	3			3			
C-A	208			208			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	94	601	0.157	94	0.2	7.101	A
B-AD	31	395	0.077	30	0.1	9.861	A
A-BCD	7	879	0.008	7	0.0	4.184	A
A-B	49			49			
A-C	398			398			
D-ABC	9	476	0.019	9	0.0	7.701	A
C-ABD	92	565	0.162	92	0.2	7.596	A
C-D	4			4			
C-A	248			248			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	116	570	0.203	115	0.3	7.913	A
B-AD	37	352	0.106	37	0.1	11.447	B
A-BCD	11	937	0.011	11	0.0	3.943	A
A-B	60			60			
A-C	486			486			
D-ABC	11	446	0.025	11	0.0	8.278	A
C-ABD	112	538	0.209	112	0.3	8.446	A
C-D	4			4			
C-A	304			304			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	116	570	0.203	116	0.3	7.923	A
B-AD	37	352	0.106	37	0.1	11.460	B
A-BCD	11	937	0.011	11	0.0	3.946	A
A-B	60			60			
A-C	486			486			
D-ABC	11	446	0.025	11	0.0	8.279	A
C-ABD	112	538	0.209	112	0.3	8.456	A
C-D	4			4			
C-A	304			304			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	94	601	0.157	95	0.2	7.115	A
B-AD	31	395	0.077	31	0.1	9.879	A
A-BCD	7	879	0.008	7	0.0	4.192	A
A-B	49			49			
A-C	398			398			
D-ABC	9	476	0.019	9	0.0	7.704	A
C-ABD	92	565	0.162	92	0.2	7.608	A
C-D	4			4			
C-A	248			248			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	79	623	0.127	79	0.1	6.622	A
B-AD	26	427	0.060	26	0.1	8.973	A
A-BCD	6	838	0.007	6	0.0	4.383	A
A-B	41			41			
A-C	334			334			
D-ABC	8	498	0.015	8	0.0	7.337	A
C-ABD	77	585	0.131	77	0.2	7.089	A
C-D	3			3			
C-A	208			208			

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

Filename: Dublin_Rd_Cock_Hill_Rdbt_East_Arm_Cal.j9
Path: \\DUBLINFILE\ProjectData\IE01T22A88 Tesco Cavan\5. Technical\5. Modelling\Junctions_9_Models\2025_Dev
Report generation date: 30/11/2022 14:19:34

»2025, Saturday Afternoon (Dev)
»2025, Friday Evening (Dev)

Summary of junction performance

	Saturday Afternoon (Dev)					Friday Evening (Dev)				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2025									
Arm 1	D1	59.0	195.09	1.11	F	D2	9.0	41.45	0.92	E
Arm 2		0.9	12.02	0.47	B		0.6	10.36	0.38	B
Arm 3		4.6	26.71	0.83	D		2.9	17.67	0.75	C
Arm 4		12.2	88.87	0.97	F		4.0	31.38	0.81	D

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

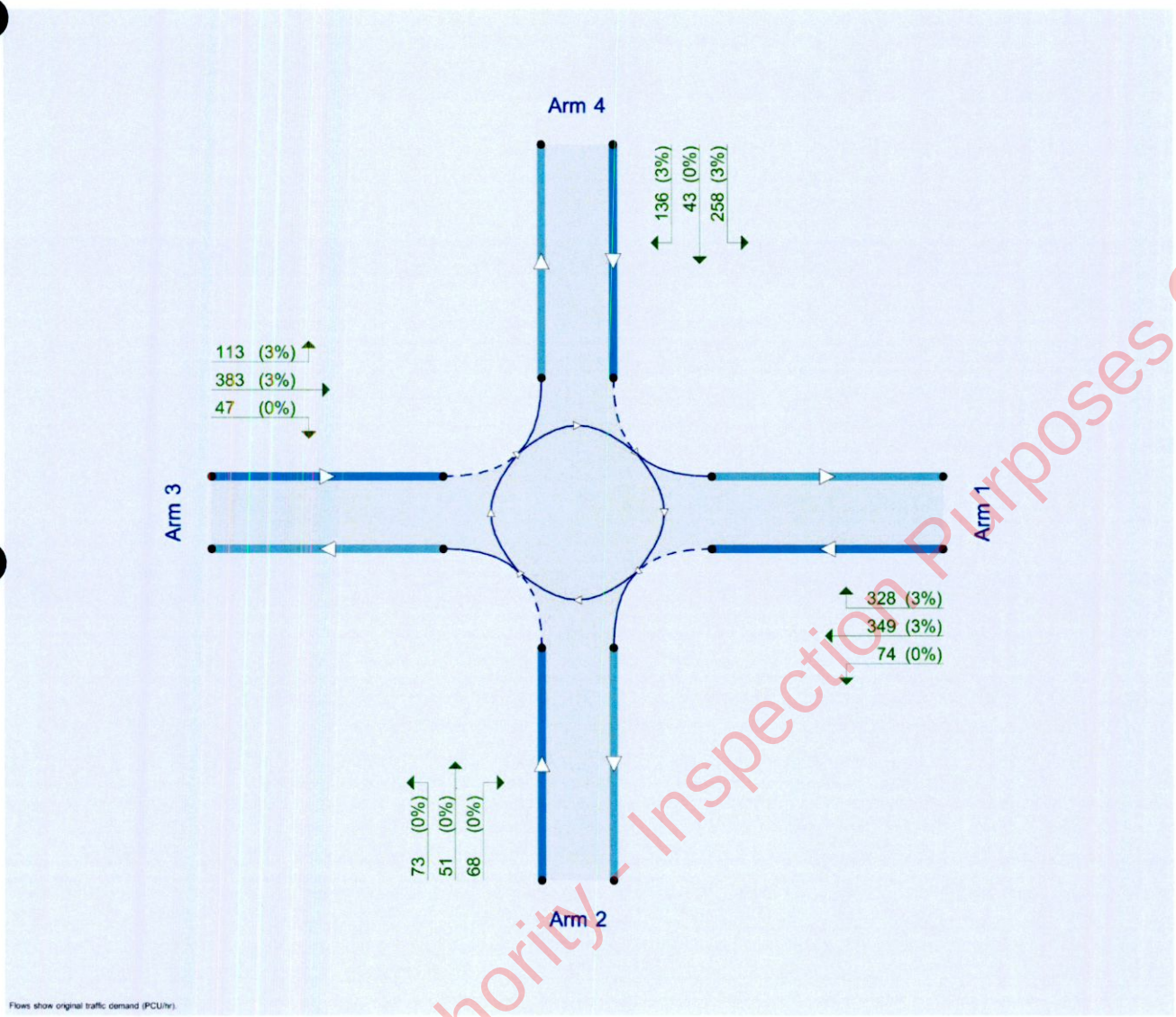
File summary

File Description

Title	
Location	
Site number	
Date	24/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\pgannon
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025	Saturday Afternoon (Dev)	ONE HOUR	12:45	14:15	15
D2	2025	Friday Evening (Dev)	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2025, Saturday Afternoon (Dev)

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		1, 2, 3, 4	107.37	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	R212 Dublin Rd (East)	
2	Shopping Centre Entry/Exit (Southern Arm)	
3	R212 Dublin Rd (West)	
4	Cock Hill (Northern Arm)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.15	3.16	0.1	19.4	32.6	52.3	
2	3.65	3.65	0.0	23.4	32.6	61.2	
3	3.65	3.66	0.0	20.3	32.6	39.0	
4	3.04	3.05	0.0	24.4	32.6	53.4	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final slope	Final intercept (PCU/hr)
1	✓	0.464	1030	0.464	1030
2				0.480	995
3				0.518	1073
4				0.461	856

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)
D1	2025	Saturday Afternoon (Dev)	ONE HOUR	12:45	14:15	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 (PCU/hr)	Scaling Factor (%)
1		✓	914	100.000
2		✓	243	100.000
3		✓	599	100.000
4		✓	470	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	7	123	427	357
	2	103	0	82	58
	3	431	85	10	73
	4	324	56	88	2

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	3	3
	2	0	0	0	0
	3	3	0	0	3
	4	3	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	1.11	195.09	59.0	F
2	0.47	12.02	0.9	B
3	0.83	26.71	4.6	D
4	0.97	88.87	12.2	F

Main Results for each time segment

12:45 - 13:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	688	179	947	0.727	678	2.6	13.260	B
2	183	661	677	0.270	181	0.4	7.239	A
3	451	392	870	0.518	447	1.1	8.629	A
4	354	474	637	0.555	349	1.2	12.611	B

13:00 - 13:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	822	215	930	0.883	807	6.2	27.160	D
2	218	788	617	0.354	218	0.5	9.009	A
3	538	468	831	0.648	536	1.8	12.369	B
4	423	569	594	0.712	418	2.4	20.519	C

13:15 - 13:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1006	255	912	1.104	896	33.8	94.668	F
2	268	880	572	0.468	266	0.9	11.722	B
3	660	535	796	0.829	650	4.3	23.738	C
4	517	690	538	0.962	490	9.1	58.517	F

13:30 - 13:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1006	261	909	1.107	905	59.0	195.094	F
2	268	891	567	0.472	267	0.9	12.020	B
3	660	540	793	0.831	658	4.6	26.705	D
4	517	698	534	0.969	505	12.2	88.868	F

13:45 - 14:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	822	230	923	0.890	908	37.5	193.474	F
2	218	883	571	0.383	219	0.6	10.273	B
3	538	509	810	0.665	549	2.1	14.643	B
4	423	582	588	0.719	460	2.9	35.173	E

14:00 - 14:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	688	184	945	0.728	826	3.0	56.080	F
2	183	791	615	0.298	184	0.4	8.368	A
3	451	452	839	0.538	455	1.2	9.693	A
4	354	483	633	0.559	360	1.3	13.819	B

2025, Friday Evening (Dev)

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		1, 2, 3, 4	29.33	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2025	Friday Evening (Dev)	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 (PCU/hr)	Scaling Factor (%)
1		✓	758	100.000
2		✓	192	100.000
3		✓	552	100.000
4		✓	437	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	7	74	349	328
	2	68	0	73	51
	3	383	47	9	113
	4	258	43	136	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	3	3
	2	0	0	0	0
	3	3	0	0	3
	4	3	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.92	41.45	9.0	E
2	0.38	10.36	0.6	B
3	0.75	17.67	2.9	C
4	0.81	31.38	4.0	D

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	571	175	949	0.601	565	1.5	9.480	A
2	145	617	698	0.207	144	0.3	6.477	A
3	416	338	898	0.463	412	0.9	7.561	A
4	329	384	679	0.485	325	0.9	10.347	B

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	681	210	933	0.731	677	2.6	14.204	B
2	173	740	639	0.270	172	0.4	7.701	A
3	496	406	863	0.575	494	1.4	9.977	A
4	393	460	644	0.610	390	1.5	14.462	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	835	255	912	0.915	814	7.8	32.489	D
2	211	892	567	0.373	211	0.6	10.082	B
3	608	490	819	0.742	602	2.8	16.613	C
4	481	561	597	0.806	473	3.7	27.901	D

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	835	258	910	0.917	830	9.0	41.451	E
2	211	908	559	0.378	211	0.6	10.359	B
3	608	498	815	0.745	607	2.9	17.670	C
4	481	565	595	0.808	480	4.0	31.380	D

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	681	216	930	0.733	705	3.0	17.969	C
2	173	770	625	0.276	173	0.4	7.987	A
3	496	419	856	0.580	502	1.5	10.609	B
4	393	467	640	0.613	402	1.7	16.046	C

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	571	178	947	0.602	576	1.6	10.104	B
2	145	630	692	0.209	145	0.3	6.584	A
3	416	345	895	0.465	418	0.9	7.790	A
4	329	389	676	0.486	332	1.0	10.814	B

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
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Filename: Cock Hill_Ardkeen_Crossroads.j9
Path: \\DUBLINFILE\ProjectData\IE01T22A88 Tesco Cavan\5. Technical\5. Modelling\Junctions_9_Models\2030_No_Dev
Report generation date: 30/11/2022 16:12:37

»2030, Saturday Afternoon (No Dev)
»2030, Friday Evening (No Dev)

Summary of junction performance

	Saturday Afternoon (No Dev)					Friday Evening (No Dev)				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2030									
Stream B-CD	D1	0.3	8.47	0.24	A	D2	0.6	13.48	0.37	B
Stream B-AD		0.7	11.67	0.40	B		2.3	23.24	0.70	C
Stream A-BCD		0.0	5.25	0.01	A		0.0	5.13	0.00	A
Stream D-ABC		0.0	8.14	0.01	A		0.0	0.00	0.00	A
Stream C-ABD		0.2	7.14	0.14	A		0.3	7.82	0.20	A

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

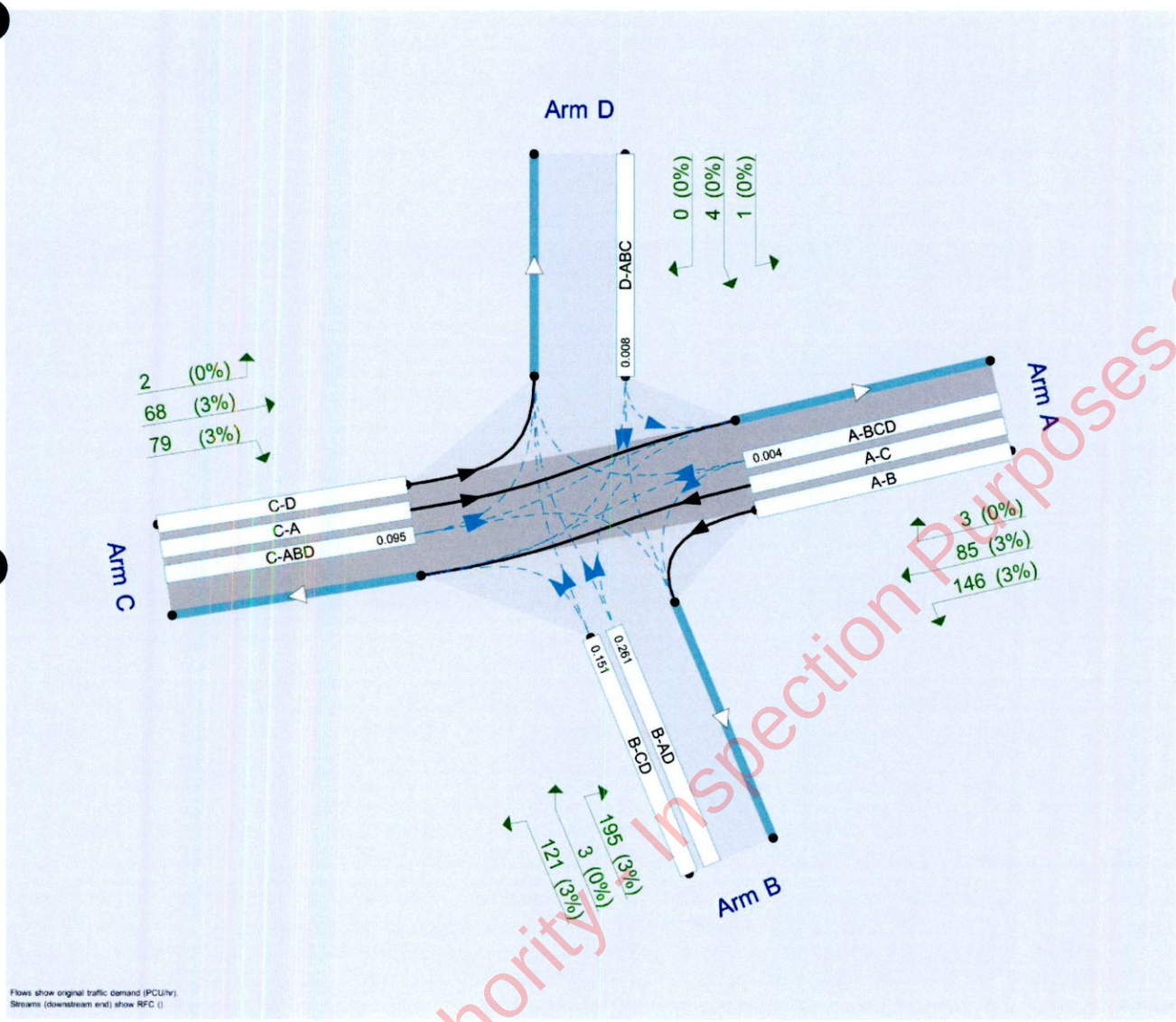
File summary

File Description

Title	
Location	
Site number	
Date	28/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\pgannon
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2030	Saturday Afternoon (No Dev)	ONE HOUR	12:45	14:15	15
D2	2030	Friday Evening (No Dev)	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2030, Saturday Afternoon (No Dev)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cock Hill/Ardkeen	Crossroads	Two-way		5.60	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Ardkeen (Eastern Arm)		Major
B	Cock Hill (Southern Arm)		Minor
C	Ardkeen (Western Arm)		Major
D	Cock Hill (Northern Arm)		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A	6.00				60.0	✓	0.00
C	6.00		✓	2.20	170.0	✓	2.00

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)	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		6.00	6.00	6.00	6.00	3.00		3.00	92	182
D	One lane	2.20								120	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
A-D	609	-	-	-	-	-	-	0.236	0.337	0.236	-	-	-
B-A	632	0.115	0.291	0.291	-	-	-	0.183	0.416	-	0.291	0.291	0.145
B-C	689	0.106	0.267	-	-	-	-	-	-	-	-	-	-
B-D, nearside lane	560	0.102	0.258	0.258	-	-	-	0.162	0.368	0.162	-	-	-
B-D, offside lane	632	0.115	0.291	0.291	-	-	-	0.183	0.416	0.183	-	-	-
C-B	672	0.261	0.261	0.372	-	-	-	-	-	-	-	-	-
D-A	603	-	-	-	-	-	-	0.234	-	0.092	-	-	-
D-B, nearside lane	498	0.144	0.144	0.328	-	-	-	0.229	0.229	0.091	-	-	-
D-B, offside lane	498	0.144	0.144	0.328	-	-	-	0.229	0.229	0.091	-	-	-
D-C	498	-	0.144	0.328	0.115	0.229	0.229	0.229	0.229	0.091	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2030	Saturday Afternoon (No Dev)	ONE HOUR	12:45	14:15	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 (PCU/hr)	Scaling Factor (%)
A		✓	234	100.000
B		✓	319	100.000
C		✓	149	100.000
D		✓	5	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	146	85	3
	B	195	0	121	3
	C	68	79	0	2
	D	1	4	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	3	3	0
	B	3	0	3	0
	C	3	3	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.24	8.47	0.3	A
B-AD	0.40	11.67	0.7	B
A-BCD	0.01	5.25	0.0	A
A-B				
A-C				
D-ABC	0.01	8.14	0.0	A
C-ABD	0.14	7.14	0.2	A
C-D				
C-A				

Main Results for each time segment

12:45 - 13:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	93	614	0.151	92	0.2	7.089	A
B-AD	148	565	0.261	146	0.4	8.829	A
A-BCD	3	694	0.004	3	0.0	5.244	A
A-B	109			109			
A-C	64			64			
D-ABC	4	470	0.008	4	0.0	7.724	A
C-ABD	60	627	0.095	59	0.1	6.528	A
C-D	2			2			
C-A	51			51			

13:00 - 13:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	111	597	0.185	110	0.2	7.605	A
B-AD	176	552	0.320	176	0.5	9.852	A
A-BCD	4	712	0.005	4	0.0	5.125	A
A-B	131			131			
A-C	76			76			
D-ABC	4	461	0.010	4	0.0	7.892	A
C-ABD	71	618	0.115	71	0.1	6.776	A
C-D	2			2			
C-A	61			61			

13:15 - 13:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	136	573	0.236	135	0.3	8.460	A
B-AD	216	533	0.405	215	0.7	11.615	B
A-BCD	5	736	0.007	5	0.0	4.970	A
A-B	160			160			
A-C	93			93			
D-ABC	6	448	0.012	5	0.0	8.137	A
C-ABD	87	607	0.144	87	0.2	7.134	A
C-D	2			2			
C-A	75			75			

13:30 - 13:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	136	573	0.237	136	0.3	8.474	A
B-AD	216	533	0.405	216	0.7	11.674	B
A-BCD	5	736	0.007	5	0.0	4.974	A
A-B	160			160			
A-C	93			93			
D-ABC	6	448	0.012	6	0.0	8.138	A
C-ABD	87	607	0.144	87	0.2	7.137	A
C-D	2			2			
C-A	75			75			

13:45 - 14:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	111	597	0.185	111	0.2	7.631	A
B-AD	176	552	0.319	177	0.5	9.921	A
A-BCD	4	712	0.005	4	0.0	5.135	A
A-B	131			131			
A-C	76			76			
D-ABC	4	461	0.010	5	0.0	7.895	A
C-ABD	71	618	0.115	71	0.1	6.782	A
C-D	2			2			
C-A	61			61			

14:00 - 14:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	93	613	0.151	93	0.2	7.129	A
B-AD	148	565	0.261	148	0.4	8.912	A
A-BCD	3	694	0.004	3	0.0	5.251	A
A-B	109			109			
A-C	64			64			
D-ABC	4	470	0.008	4	0.0	7.726	A
C-ABD	60	627	0.095	60	0.1	6.540	A
C-D	2			2			
C-A	51			51			

2030, Friday Evening (No Dev)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cock Hill/Ardkeen	Crossroads	Two-way		11.15	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2030	Friday Evening (No Dev)	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 (PCU/hr)	Scaling Factor (%)
A		✓	281	100.000
B		✓	481	100.000
C		✓	193	100.000
D		✓	3	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	186	94	1
	B	337	0	142	2
	C	78	110	0	5
	D	2	1	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	3	3	0
	B	3	0	3	0
	C	3	3	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.37	13.48	0.6	B
B-AD	0.70	23.24	2.3	C
A-BCD	0.00	5.13	0.0	A
A-B				
A-C				
D-ABC	0.00	0.00	0.0	A
C-ABD	0.20	7.82	0.3	A
C-D				
C-A				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	108	541	0.200	107	0.3	8.525	A
B-AD	254	572	0.444	251	0.8	11.441	B
A-BCD	1	711	0.002	1	0.0	5.117	A
A-B	140			140			
A-C	71			71			
D-ABC	0	455	0.000	0	0.0	0.000	A
C-ABD	83	618	0.134	82	0.2	6.911	A
C-D	4			4			
C-A	59			59			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	129	507	0.255	129	0.3	9.789	A
B-AD	303	555	0.547	302	1.2	14.566	B
A-BCD	1	731	0.002	1	0.0	4.978	A
A-B	167			167			
A-C	84			84			
D-ABC	0	441	0.000	0	0.0	0.000	A
C-ABD	99	609	0.163	99	0.2	7.274	A
C-D	4			4			
C-A	70			70			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	158	437	0.362	157	0.6	13.190	B
B-AD	371	530	0.701	367	2.2	22.249	C
A-BCD	2	761	0.002	2	0.0	4.795	A
A-B	204			204			
A-C	103			103			
D-ABC	0	422	0.000	0	0.0	0.000	A
C-ABD	122	596	0.205	122	0.3	7.816	A
C-D	5			5			
C-A	85			85			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	158	433	0.365	158	0.6	13.481	B
B-AD	371	530	0.701	371	2.3	23.240	C
A-BCD	2	761	0.002	2	0.0	4.801	A
A-B	204			204			
A-C	103			103			
D-ABC	0	422	0.000	0	0.0	0.000	A
C-ABD	122	596	0.205	122	0.3	7.823	A
C-D	5			5			
C-A	85			85			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	129	503	0.257	130	0.4	9.961	A
B-AD	303	555	0.547	307	1.3	15.228	C
A-BCD	1	731	0.002	1	0.0	4.987	A
A-B	167			167			
A-C	84			84			
D-ABC	0	441	0.000	0	0.0	0.000	A
C-ABD	99	609	0.163	99	0.2	7.287	A
C-D	4			4			
C-A	70			70			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	108	538	0.201	108	0.3	8.632	A
B-AD	254	572	0.444	256	0.8	11.798	B
A-BCD	1	710	0.002	1	0.0	5.125	A
A-B	140			140			
A-C	71			71			
D-ABC	0	455	0.000	0	0.0	0.000	A
C-ABD	83	618	0.134	83	0.2	6.930	A
C-D	4			4			
C-A	59			59			

Junctions 9

ARCADY 9 - Roundabout Module

Filename: Cock_Hill_3_Arm_Rdbt.j9
Path: \\DUBLINFILE\ProjectData\IE01T22A88 Tesco Cavan\5. Technical\5. Modelling\Junctions_9_Models\2030_No_Dev
Report generation date: 30/11/2022 16:13:00

»2030, Saturday Afternoon (No Dev)
»2030, Friday Evening (No Dev)

Summary of junction performance

	Saturday Afternoon (No Dev)					Friday Evening (No Dev)				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2030									
Arm 1	D1	0.4	3.75	0.26	A	D2	0.6	4.52	0.38	A
Arm 2		0.2	3.43	0.13	A		0.3	3.93	0.20	A
Arm 3		0.2	3.48	0.19	A		0.4	3.83	0.26	A

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

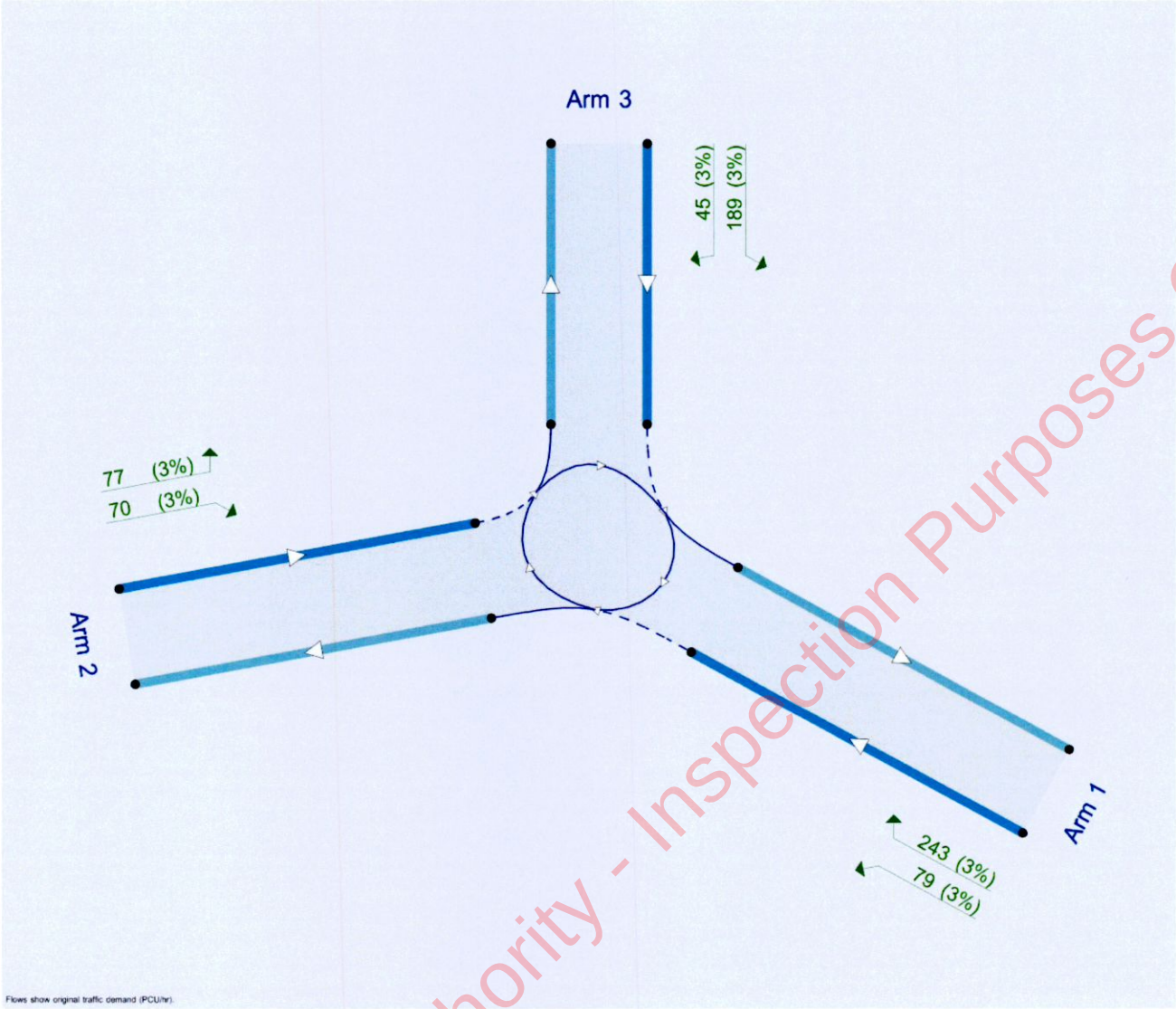
File summary

File Description

Title	
Location	
Site number	
Date	28/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\pgannon
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2030	Saturday Afternoon (No Dev)	ONE HOUR	12:45	14:15	15
D2	2030	Friday Evening (No Dev)	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2030, Saturday Afternoon (No Dev)

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		1, 2, 3	3.59	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Eastern Arm	
2	Western Arm	
3	Northern Arm	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.03	5.96	9.3	49.9	35.6	35.7	
2	3.69	6.45	6.5	38.9	35.6	51.6	
3	3.33	5.87	7.6	40.5	35.6	39.4	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.587	1374
2	0.573	1396
3	0.581	1369

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)
D1	2030	Saturday Afternoon (No Dev)	ONE HOUR	12:45	14:15	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 (PCU/hr)	Scaling Factor (%)
1		✓	323	100.000
2		✓	147	100.000
3		✓	234	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	1	79	243
	2	70	0	77
	3	189	45	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	3
	2	3	0	3
	3	3	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.26	3.75	0.4	A
2	0.13	3.43	0.2	A
3	0.19	3.48	0.2	A

Main Results for each time segment

12:45 - 13:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	243	34	1354	0.180	242	0.2	3.331	A
2	111	183	1291	0.086	110	0.1	3.140	A
3	176	53	1338	0.132	176	0.2	3.188	A

13:00 - 13:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	290	40	1350	0.215	290	0.3	3.497	A
2	132	219	1270	0.104	132	0.1	3.257	A
3	210	64	1332	0.158	210	0.2	3.305	A

13:15 - 13:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	356	50	1345	0.264	355	0.4	3.747	A
2	162	268	1242	0.130	162	0.2	3.432	A
3	258	78	1324	0.195	257	0.2	3.477	A

13:30 - 13:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	356	50	1345	0.264	356	0.4	3.747	A
2	162	269	1242	0.130	162	0.2	3.432	A
3	258	78	1324	0.195	258	0.2	3.477	A

13:45 - 14:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	290	40	1350	0.215	291	0.3	3.500	A
2	132	220	1270	0.104	132	0.1	3.261	A
3	210	64	1332	0.158	211	0.2	3.306	A

14:00 - 14:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	243	34	1354	0.180	243	0.2	3.338	A
2	111	184	1290	0.086	111	0.1	3.142	A
3	176	53	1338	0.132	176	0.2	3.191	A

2030, Friday Evening (No Dev)

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		1, 2, 3	4.17	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2030	Friday Evening (No Dev)	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 (PCU/hr)	Scaling Factor (%)
1		✓	464	100.000
2		✓	213	100.000
3		✓	316	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	117	347
	2	82	0	131
	3	250	66	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	3
	2	3	0	3
	3	3	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.38	4.52	0.6	A
2	0.20	3.93	0.3	A
3	0.26	3.83	0.4	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	349	50	1345	0.260	348	0.4	3.715	A
2	160	260	1247	0.129	160	0.2	3.409	A
3	238	62	1333	0.178	237	0.2	3.379	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	417	59	1339	0.312	417	0.5	4.018	A
2	191	312	1217	0.157	191	0.2	3.614	A
3	284	74	1326	0.214	284	0.3	3.557	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	511	73	1331	0.384	510	0.6	4.512	A
2	235	382	1177	0.199	234	0.3	3.932	A
3	348	90	1317	0.264	348	0.4	3.827	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	511	73	1331	0.384	511	0.6	4.519	A
2	235	382	1177	0.199	235	0.3	3.934	A
3	348	90	1317	0.264	348	0.4	3.827	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	417	59	1339	0.312	418	0.5	4.028	A
2	191	312	1217	0.157	192	0.2	3.620	A
3	284	74	1326	0.214	284	0.3	3.559	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	349	50	1345	0.260	350	0.4	3.730	A
2	160	262	1246	0.129	161	0.2	3.416	A
3	238	62	1333	0.178	238	0.2	3.389	A

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: Cock_Hill_Site_Entrance.j9
Path: \\DUBLINFILE\ProjectData\IE01T22A88 Tesco Cavan\5. Technical\5. Modelling\Junctions_9_Models\2030_No_Dev
Report generation date: 30/11/2022 16:13:21

»2030, Saturday Afternoon (No Dev)
»2030, Friday Evening (No Dev)

Summary of junction performance

	Saturday Afternoon (No Dev)					Friday Evening (No Dev)				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2030									
Stream B-C	D1	0.0	0.00	0.00	A	D2	0.0	0.00	0.00	A
Stream B-AD		0.0	0.00	0.00	A		0.0	0.00	0.00	A
Stream A-BCD		0.0	0.00	0.00	A		0.0	4.45	0.01	A
Stream D-ABC		0.0	0.00	0.00	A		0.0	8.24	0.03	A
Stream C-ABD		0.0	6.09	0.00	A		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.

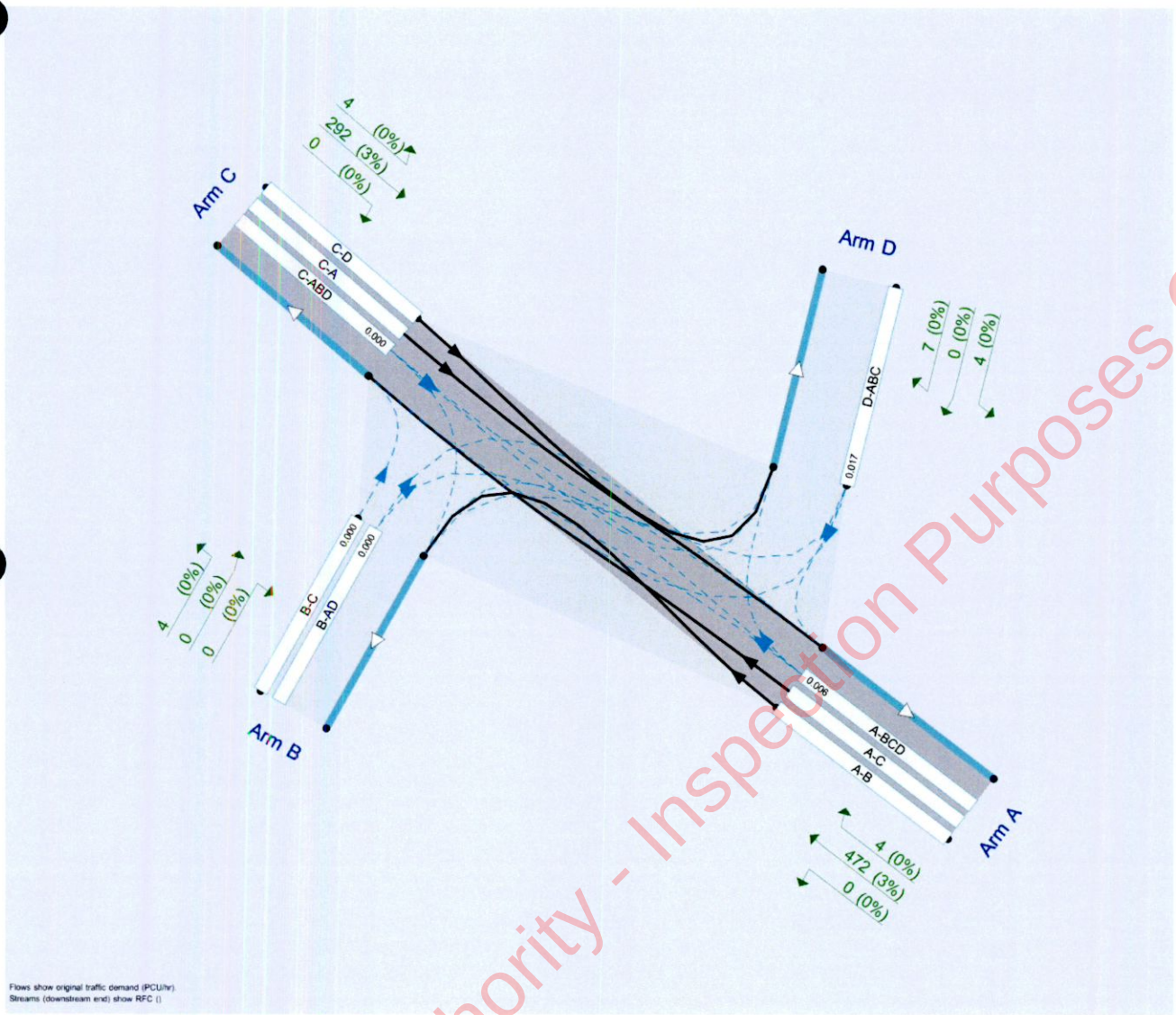
File summary

File Description

Title	
Location	
Site number	
Date	28/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\pgannon
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2030	Saturday Afternoon (No Dev)	ONE HOUR	12:45	14:15	15
D2	2030	Friday Evening (No Dev)	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2030, Saturday Afternoon (No Dev)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cock Hill/Site Entrance	Right-Left Stagger	Two-way		0.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Cock Hill (Southern Arm)		Major
B	Site Entrance		Minor
C	Cock Hill (Northern Arm)		Major
D	School Road		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A	6.00				115.0	✓	0.00
C	6.00		✓	3.00	100.0	✓	10.00

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)	Lane Width (Left) (m)	Lane Width (Right) (m)	Visibility to left (m)	Visibility to right (m)
B	Two lanes		3.50	3.50	75	120
D	One lane	3.00			105	100

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
A-D	641	-	-	-	0.248	0.248	0.248	-	0.248	-	-
B-AD	590	0.108	0.272	-	-	-	0.171	0.388	0.171	0.108	0.272
B-C	734	0.113	0.285	-	-	-	-	-	-	0.113	0.285
C-B	687	0.266	0.266	-	-	-	-	-	-	0.266	0.266
D-A	687	-	-	-	0.266	0.105	0.266	-	0.105	-	-
D-BC	562	0.163	0.163	0.370	0.259	0.102	0.259	-	0.102	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2030	Saturday Afternoon (No Dev)	ONE HOUR	12:45	14:15	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 (PCU/hr)	Scaling Factor (%)
A		✓	319	100.000
B		✓	4	100.000
C		✓	226	100.000
D		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	2	317	0
	B	2	0	2	0
	C	224	2	0	0
	D	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	3	0
	B	0	0	0	0
	C	3	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.00	0.00	0.0	A
B-AD	0.00	0.00	0.0	A
A-BCD	0.00	0.00	0.0	A
A-B				
A-C				
D-ABC	0.00	0.00	0.0	A
C-ABD	0.00	6.09	0.0	A
C-D				
C-A				

Main Results for each time segment

12:45 - 13:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	666	0.000	0	0.0	0.000	A
B-AD	0	496	0.000	0	0.0	0.000	A
A-BCD	0	599	0.000	0	0.0	0.000	A
A-B	2			2			
A-C	239			239			
D-ABC	0	549	0.000	0	0.0	0.000	A
C-ABD	2	623	0.002	1	0.0	5.792	A
C-D	0			0			
C-A	169			169			

13:00 - 13:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	653	0.000	0	0.0	0.000	A
B-AD	0	478	0.000	0	0.0	0.000	A
A-BCD	0	591	0.000	0	0.0	0.000	A
A-B	2			2			
A-C	285			285			
D-ABC	0	535	0.000	0	0.0	0.000	A
C-ABD	2	611	0.003	2	0.0	5.912	A
C-D	0			0			
C-A	201			201			

13:15 - 13:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	635	0.000	0	0.0	0.000	A
B-AD	0	452	0.000	0	0.0	0.000	A
A-BCD	0	579	0.000	0	0.0	0.000	A
A-B	2			2			
A-C	349			349			
D-ABC	0	516	0.000	0	0.0	0.000	A
C-ABD	2	593	0.004	2	0.0	6.088	A
C-D	0			0			
C-A	247			247			

13:30 - 13:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	635	0.000	0	0.0	0.000	A
B-AD	0	452	0.000	0	0.0	0.000	A
A-BCD	0	579	0.000	0	0.0	0.000	A
A-B	2			2			
A-C	349			349			
D-ABC	0	516	0.000	0	0.0	0.000	A
C-ABD	2	593	0.004	2	0.0	6.088	A
C-D	0			0			
C-A	247			247			

13:45 - 14:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	653	0.000	0	0.0	0.000	A
B-AD	0	478	0.000	0	0.0	0.000	A
A-BCD	0	591	0.000	0	0.0	0.000	A
A-B	2			2			
A-C	285			285			
D-ABC	0	535	0.000	0	0.0	0.000	A
C-ABD	2	611	0.003	2	0.0	5.915	A
C-D	0			0			
C-A	201			201			

14:00 - 14:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	666	0.000	0	0.0	0.000	A
B-AD	0	496	0.000	0	0.0	0.000	A
A-BCD	0	599	0.000	0	0.0	0.000	A
A-B	2			2			
A-C	239			239			
D-ABC	0	549	0.000	0	0.0	0.000	A
C-ABD	2	623	0.002	2	0.0	5.792	A
C-D	0			0			
C-A	169			169			

2030, Friday Evening (No Dev)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cock Hill/Site Entrance	Right-Left Stagger	Two-way		0.16	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2030	Friday Evening (No Dev)	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 (PCU/hr)	Scaling Factor (%)
A		✓	476	100.000
B		✓	4	100.000
C		✓	296	100.000
D		✓	11	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	0	472	4
	B	0	0	4	0
	C	292	0	0	4
	D	4	0	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	3	0
	B	0	0	0	0
	C	3	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.00	0.00	0.0	A
B-AD	0.00	0.00	0.0	A
A-B-C-D	0.01	4.45	0.0	A
A-B				
A-C				
D-ABC	0.03	8.24	0.0	A
C-ABD	0.00	0.00	0.0	A
C-D				
C-A				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	632	0.000	0	0.0	0.000	A
B-AD	0	454	0.000	0	0.0	0.000	A
A-B-C-D	5	825	0.006	5	0.0	4.446	A
A-B	0			0			
A-C	353			353			
D-ABC	8	499	0.017	8	0.0	7.338	A
C-ABD	0	1191	0.000	0	0.0	0.000	A
C-D	3			3			
C-A	220			220			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	612	0.000	0	0.0	0.000	A
B-AD	0	428	0.000	0	0.0	0.000	A
A-B-C-D	7	863	0.008	7	0.0	4.261	A
A-B	0			0			
A-C	421			421			
D-ABC	10	478	0.021	10	0.0	7.688	A
C-ABD	0	1153	0.000	0	0.0	0.000	A
C-D	4			4			
C-A	263			263			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	584	0.000	0	0.0	0.000	A
B-AD	0	391	0.000	0	0.0	0.000	A
A-B-C-D	10	918	0.011	10	0.0	4.029	A
A-B	0			0			
A-C	514			514			
D-A-B-C	12	449	0.027	12	0.0	8.237	A
C-A-B-D	0	1101	0.000	0	0.0	0.000	A
C-D	4			4			
C-A	321			321			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	584	0.000	0	0.0	0.000	A
B-AD	0	391	0.000	0	0.0	0.000	A
A-B-C-D	10	918	0.011	10	0.0	4.034	A
A-B	0			0			
A-C	514			514			
D-A-B-C	12	449	0.027	12	0.0	8.237	A
C-A-B-D	0	1101	0.000	0	0.0	0.000	A
C-D	4			4			
C-A	321			321			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	612	0.000	0	0.0	0.000	A
B-AD	0	428	0.000	0	0.0	0.000	A
A-B-C-D	7	863	0.008	7	0.0	4.270	A
A-B	0			0			
A-C	421			421			
D-A-B-C	10	478	0.021	10	0.0	7.689	A
C-A-B-D	0	1153	0.000	0	0.0	0.000	A
C-D	4			4			
C-A	263			263			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	0	632	0.000	0	0.0	0.000	A
B-AD	0	454	0.000	0	0.0	0.000	A
A-B-C-D	5	825	0.006	5	0.0	4.453	A
A-B	0			0			
A-C	353			353			
D-A-B-C	8	499	0.017	8	0.0	7.339	A
C-A-B-D	0	1191	0.000	0	0.0	0.000	A
C-D	3			3			
C-A	220			220			

Junctions 9

ARCADY 9 - Roundabout Module

Filename: Dublin_Rd_Cock_Hill_Rdbt_East_Arm_Cal.j9
Path: \\DUBLINFILE\ProjectData\IE01T22A88 Tesco Cavan\5. Technical\5. Modelling\Junctions_9_Models\2030_No_Dev
Report generation date: 30/11/2022 14:26:22

»2030, Saturday Afternoon (No Dev)
»2030, Friday Evening (No Dev)

Summary of junction performance

	Saturday Afternoon (No Dev)					Friday Evening (No Dev)				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2030									
Arm 1	D1	46.1	156.39	1.07	F	D2	9.0	41.45	0.92	E
Arm 2		0.9	11.74	0.47	B		0.6	10.40	0.39	B
Arm 3		4.8	26.98	0.84	D		3.1	18.40	0.76	C
Arm 4		3.8	35.20	0.80	E		3.0	25.40	0.75	D

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

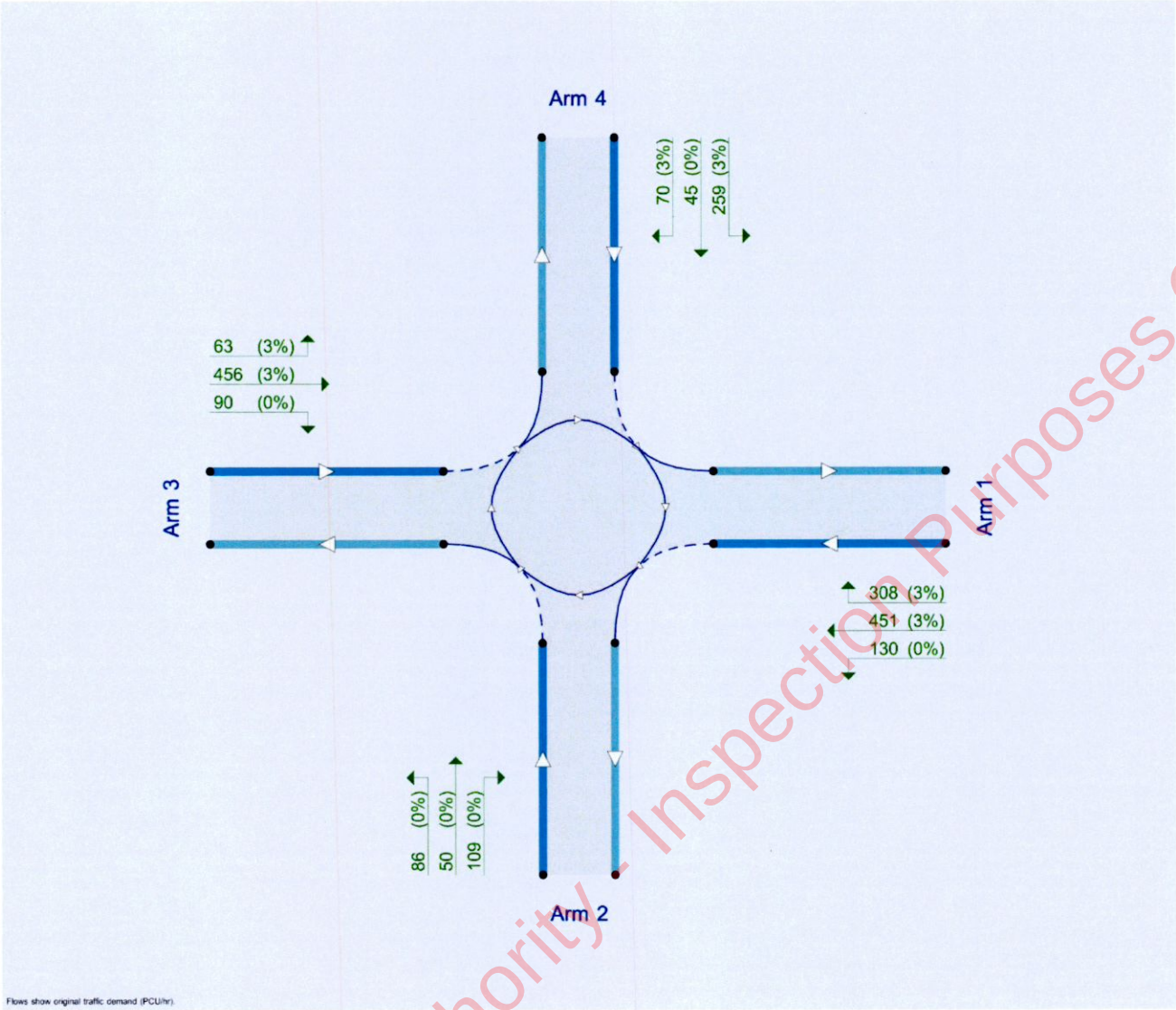
File summary

File Description

Title	
Location	
Site number	
Date	24/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\pgannon
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2030	Saturday Afternoon (No Dev)	ONE HOUR	12:45	14:15	15
D2	2030	Friday Evening (No Dev)	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2030, Saturday Afternoon (No Dev)

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		1, 2, 3, 4	80.97	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	R212 Dublin Rd (East)	
2	Shopping Centre Entry/Exit (Southern Arm)	
3	R212 Dublin Rd (West)	
4	Cock Hill (Northern Arm)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.15	3.16	0.1	19.4	32.6	52.3	
2	3.65	3.65	0.0	23.4	32.6	61.2	
3	3.65	3.66	0.0	20.3	32.6	39.0	
4	3.04	3.05	0.0	24.4	32.6	53.4	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final slope	Final intercept (PCU/hr)
1	✓	0.464	1030	0.464	1030
2				0.480	995
3				0.518	1073
4				0.461	856

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)
D1	2030	Saturday Afternoon (No Dev)	ONE HOUR	12:45	14:15	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 (PCU/hr)	Scaling Factor (%)
1		✓	897	100.000
2		✓	245	100.000
3		✓	620	100.000
4		✓	376	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	8	130	451	308
	2	109	0	86	50
	3	456	90	11	63
	4	259	45	70	2

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	3	3
	2	0	0	0	0
	3	3	0	0	3
	4	3	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	1.07	156.39	46.1	F
2	0.47	11.74	0.9	B
3	0.84	26.98	4.8	D
4	0.80	35.20	3.8	E

Main Results for each time segment

12:45 - 13:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	675	162	955	0.707	666	2.4	12.409	B
2	184	631	692	0.267	183	0.4	7.057	A
3	467	355	889	0.525	462	1.1	8.558	A
4	283	503	624	0.454	280	0.8	10.630	B

13:00 - 13:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	806	195	940	0.858	795	5.3	23.714	C
2	220	754	633	0.348	220	0.5	8.697	A
3	557	424	853	0.653	554	1.9	12.218	B
4	338	603	578	0.585	336	1.4	15.112	C

13:15 - 13:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	988	236	921	1.073	899	27.5	79.939	F
2	270	858	583	0.463	268	0.8	11.411	B
3	683	493	818	0.835	672	4.5	23.782	C
4	414	731	519	0.798	406	3.5	30.601	D

13:30 - 13:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	988	239	919	1.075	913	46.1	156.393	F
2	270	872	576	0.468	270	0.9	11.740	B
3	683	499	815	0.838	681	4.8	26.976	D
4	414	740	515	0.804	413	3.8	35.202	E

13:45 - 14:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	806	201	937	0.861	917	18.6	131.742	F
2	220	860	582	0.379	221	0.6	10.015	B
3	557	468	830	0.671	568	2.2	14.585	B
4	338	617	571	0.592	347	1.5	17.075	C

14:00 - 14:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	675	166	953	0.708	739	2.6	21.997	C
2	184	695	661	0.279	185	0.4	7.581	A
3	467	382	875	0.533	471	1.2	9.211	A
4	283	512	620	0.457	286	0.9	11.145	B

2030, Friday Evening (No Dev)

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		1, 2, 3, 4	28.15	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2030	Friday Evening (No Dev)	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 (PCU/hr)	Scaling Factor (%)
1		✓	764	100.000
2		✓	198	100.000
3		✓	569	100.000
4		✓	397	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	8	79	369	308
	2	72	0	78	48
	3	404	49	10	106
	4	234	39	124	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	3	3
	2	0	0	0	0
	3	3	0	0	3
	4	3	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.92	41.45	9.0	E
2	0.39	10.40	0.6	B
3	0.76	18.40	3.1	C
4	0.75	25.40	3.0	D

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	575	165	953	0.603	569	1.5	9.478	A
2	149	610	702	0.212	148	0.3	6.489	A
3	428	325	905	0.474	425	0.9	7.647	A
4	299	405	669	0.447	296	0.8	9.823	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	687	199	938	0.732	682	2.7	14.198	B
2	178	732	643	0.277	178	0.4	7.720	A
3	512	390	871	0.587	509	1.4	10.162	B
4	357	486	632	0.565	355	1.3	13.269	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	841	241	918	0.916	820	7.8	32.506	D
2	218	881	572	0.381	217	0.6	10.127	B
3	626	471	829	0.756	620	3.0	17.214	C
4	437	592	583	0.750	431	2.8	23.472	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	841	244	917	0.918	836	9.0	41.451	E
2	218	897	564	0.387	218	0.6	10.401	B
3	626	478	825	0.759	626	3.1	18.399	C
4	437	597	580	0.753	436	3.0	25.405	D

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	687	203	936	0.734	711	3.0	17.949	C
2	178	760	630	0.283	179	0.4	8.000	A
3	512	402	865	0.592	518	1.5	10.844	B
4	357	494	628	0.568	363	1.4	14.261	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	575	168	952	0.604	581	1.6	10.101	B
2	149	622	696	0.214	150	0.3	6.596	A
3	428	331	902	0.475	431	0.9	7.888	A
4	299	411	666	0.449	301	0.9	10.182	B

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: Cock Hill_Ardkeen_Crossroads.j9
Path: \\DUBLINFILE\ProjectData\IE01T22A88 Tesco Cavan\5. Technical\5. Modelling\Junctions_9_Models\2030_Dev
Report generation date: 30/11/2022 16:07:50

»2030, Saturday Afternoon (Dev)
»2030, Friday Evening (Dev)

Summary of junction performance

	Saturday Afternoon (Dev)					Friday Evening (Dev)				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2030									
Stream B-CD	D1	0.8	14.10	0.44	B	D2	3.3	66.17	0.81	F
Stream B-AD		2.1	23.40	0.68	C		7.8	67.27	0.92	F
Stream A-BCD		0.0	4.98	0.01	A		0.0	4.96	0.00	A
Stream D-ABC		0.0	8.98	0.02	A		0.0	0.00	0.00	A
Stream C-ABD		0.4	8.56	0.25	A		0.4	8.91	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.

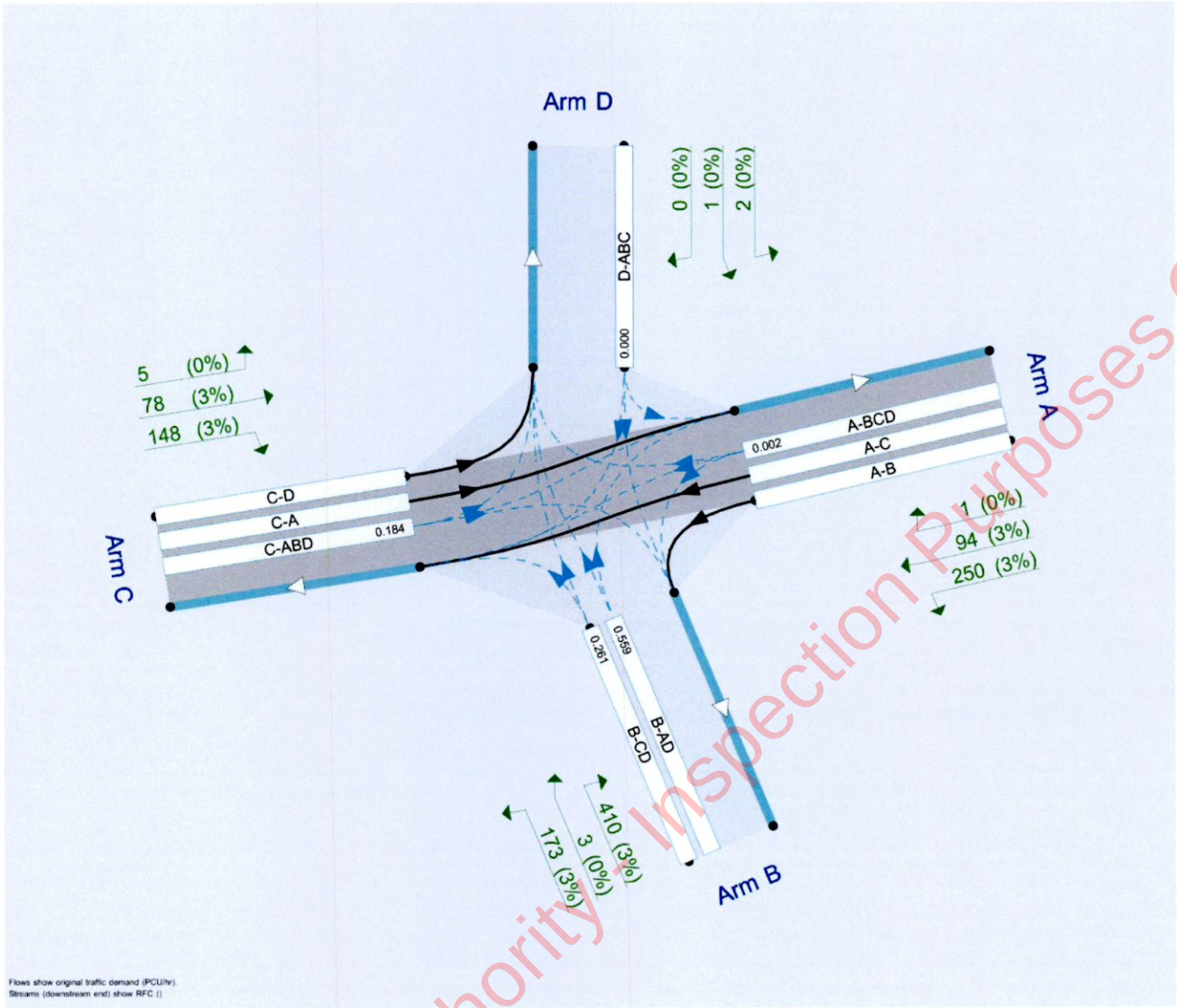
File summary

File Description

Title	
Location	
Site number	
Date	28/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\pgannon
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2030	Saturday Afternoon (Dev)	ONE HOUR	12:45	14:15	15
D2	2030	Friday Evening (Dev)	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2030, Saturday Afternoon (Dev)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cock Hill/Ardkeen	Crossroads	Two-way		10.57	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Ardkeen (Eastern Arm)		Major
B	Cock Hill (Southern Arm)		Minor
C	Ardkeen (Western Arm)		Major
D	Cock Hill (Northern Arm)		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A	6.00				60.0	✓	0.00
C	6.00		✓	2.20	170.0	✓	2.00

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)	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		6.00	6.00	6.00	6.00	3.00		3.00	92	182
D	One lane	2.20								120	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
A-D	609	-	-	-	-	-	-	0.236	0.337	0.236	-	-	-
B-A	631	0.115	0.291	0.291	-	-	-	0.183	0.415	-	0.291	0.291	0.145
B-C	690	0.106	0.267	-	-	-	-	-	-	-	-	-	-
B-D, nearside lane	560	0.102	0.258	0.258	-	-	-	0.162	0.368	0.162	-	-	-
B-D, offside lane	631	0.115	0.291	0.291	-	-	-	0.183	0.415	0.183	-	-	-
C-B	672	0.261	0.261	0.372	-	-	-	-	-	-	-	-	-
D-A	603	-	-	-	-	-	-	0.234	-	0.092	-	-	-
D-B, nearside lane	498	0.144	0.144	0.328	-	-	-	0.229	0.229	0.091	-	-	-
D-B, offside lane	498	0.144	0.144	0.328	-	-	-	0.229	0.229	0.091	-	-	-
D-C	498	-	0.144	0.328	0.115	0.229	0.229	0.229	0.229	0.091	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2030	Saturday Afternoon (Dev)	ONE HOUR	12:45	14:15	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 (PCU/hr)	Scaling Factor (%)
A		✓	336	100.000
B		✓	492	100.000
C		✓	203	100.000
D		✓	8	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	248	85	3
	B	300	0	187	5
	C	68	133	0	2
	D	1	7	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	3	3	0
	B	3	0	3	0
	C	3	3	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.44	14.10	0.8	B
B-AD	0.68	23.40	2.1	C
A-BCD	0.01	4.98	0.0	A
A-B				
A-C				
D-ABC	0.02	8.98	0.0	A
C-ABD	0.25	8.56	0.4	A
C-D				
C-A				

Main Results for each time segment

12:45 - 13:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	143	575	0.249	142	0.3	8.529	A
B-AD	227	537	0.422	224	0.7	11.722	B
A-BCD	3	735	0.005	3	0.0	4.970	A
A-B	186			186			
A-C	64			64			
D-ABC	6	442	0.014	6	0.0	8.257	A
C-ABD	100	608	0.165	100	0.2	7.273	A
C-D	1			1			
C-A	51			51			

13:00 - 13:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	172	542	0.316	171	0.5	9.971	A
B-AD	271	518	0.523	269	1.1	14.824	B
A-BCD	4	761	0.006	4	0.0	4.812	A
A-B	222			222			
A-C	76			76			
D-ABC	7	428	0.017	7	0.0	8.546	A
C-ABD	120	596	0.201	120	0.3	7.782	A
C-D	2			2			
C-A	61			61			

13:15 - 13:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	211	477	0.441	209	0.8	13.767	B
B-AD	331	489	0.678	327	2.0	22.469	C
A-BCD	6	797	0.008	6	0.0	4.607	A
A-B	271			271			
A-C	93			93			
D-ABC	9	410	0.021	9	0.0	8.974	A
C-ABD	148	581	0.254	147	0.4	8.544	A
C-D	2			2			
C-A	74			74			

13:30 - 13:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	211	473	0.445	210	0.8	14.095	B
B-AD	331	489	0.678	331	2.1	23.398	C
A-BCD	6	797	0.008	6	0.0	4.613	A
A-B	271			271			
A-C	93			93			
D-ABC	9	410	0.021	9	0.0	8.976	A
C-ABD	148	581	0.254	148	0.4	8.558	A
C-D	2			2			
C-A	74			74			

13:45 - 14:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	172	538	0.319	173	0.5	10.172	B
B-AD	271	518	0.523	274	1.2	15.433	C
A-BCD	4	760	0.006	4	0.0	4.824	A
A-B	222			222			
A-C	76			76			
D-ABC	7	428	0.017	7	0.0	8.549	A
C-ABD	120	596	0.201	120	0.3	7.801	A
C-D	2			2			
C-A	61			61			

14:00 - 14:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	143	573	0.250	144	0.3	8.656	A
B-AD	227	537	0.422	229	0.8	12.068	B
A-BCD	3	735	0.005	3	0.0	4.979	A
A-B	186			186			
A-C	64			64			
D-ABC	6	442	0.014	6	0.0	8.264	A
C-ABD	100	608	0.165	101	0.2	7.312	A
C-D	1			1			
C-A	51			51			

2030, Friday Evening (Dev)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cock Hill/Ardkeen	Crossroads	Two-way		34.91	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2030	Friday Evening (Dev)	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 (PCU/hr)	Scaling Factor (%)
A		✓	345	100.000
B		✓	586	100.000
C		✓	231	100.000
D		✓	3	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	250	94	1
	B	410	0	173	3
	C	78	148	0	5
	D	2	1	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	3	3	0
	B	3	0	3	0
	C	3	3	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.81	66.17	3.3	F
B-AD	0.92	67.27	7.8	F
A-BCD	0.00	4.96	0.0	A
A-B				
A-C				
D-ABC	0.00	0.00	0.0	A
C-ABD	0.28	8.91	0.4	A
C-D				
C-A				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	132	506	0.261	131	0.4	9.832	A
B-AD	309	553	0.559	304	1.3	14.626	B
A-BCD	1	735	0.002	1	0.0	4.953	A
A-B	188			188			
A-C	71			71			
D-ABC	0	442	0.000	0	0.0	0.000	A
C-ABD	112	607	0.184	111	0.2	7.461	A
C-D	4			4			
C-A	58			58			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	158	442	0.357	157	0.6	12.967	B
B-AD	369	531	0.695	365	2.2	21.897	C
A-BCD	2	761	0.002	2	0.0	4.790	A
A-B	224			224			
A-C	84			84			
D-ABC	0	425	0.000	0	0.0	0.000	A
C-ABD	134	596	0.225	134	0.3	8.023	A
C-D	4			4			
C-A	69			69			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	194	277	0.699	188	2.1	39.102	E
B-AD	452	495	0.912	434	6.5	50.423	F
A-BCD	2	799	0.003	2	0.0	4.578	A
A-B	275			275			
A-C	103			103			
D-ABC	0	402	0.000	0	0.0	0.000	A
C-ABD	165	581	0.284	165	0.4	8.894	A
C-D	5			5			
C-A	84			84			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	194	239	0.809	189	3.3	66.166	F
B-AD	452	493	0.916	446	7.8	67.266	F
A-BCD	2	799	0.003	2	0.0	4.584	A
A-B	275			275			
A-C	103			103			
D-ABC	0	400	0.000	0	0.0	0.000	A
C-ABD	165	581	0.284	165	0.4	8.911	A
C-D	5			5			
C-A	84			84			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	158	414	0.381	169	0.7	15.712	C
B-AD	369	529	0.697	390	2.6	29.865	D
A-BCD	2	761	0.002	2	0.0	4.802	A
A-B	224			224			
A-C	84			84			
D-ABC	0	423	0.000	0	0.0	0.000	A
C-ABD	134	596	0.225	134	0.3	8.048	A
C-D	4			4			
C-A	69			69			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	132	499	0.264	133	0.4	10.157	B
B-AD	309	553	0.559	314	1.4	15.819	C
A-BCD	1	735	0.002	1	0.0	4.962	A
A-B	188			188			
A-C	71			71			
D-ABC	0	441	0.000	0	0.0	0.000	A
C-ABD	112	607	0.184	112	0.2	7.499	A
C-D	4			4			
C-A	58			58			

Junctions 9

ARCADY 9 - Roundabout Module

Filename: Cock_Hill_3_Arm_Rdbt.j9
Path: \\DUBLINFILE\ProjectData\IE01T22A88 Tesco Cavan\5. Technical\5. Modelling\Junctions_9_Models\2030_Dev
Report generation date: 30/11/2022 16:08:15

»2030, Saturday Afternoon (Dev)
»2030, Friday Evening (Dev)

Summary of junction performance

	Saturday Afternoon (Dev)					Friday Evening (Dev)				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2030									
Arm 1	D1	0.5	4.20	0.34	A	D2	0.8	4.90	0.43	A
Arm 2		0.2	3.88	0.20	A		0.3	4.26	0.24	A
Arm 3		0.4	3.88	0.25	A		0.4	4.08	0.30	A

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

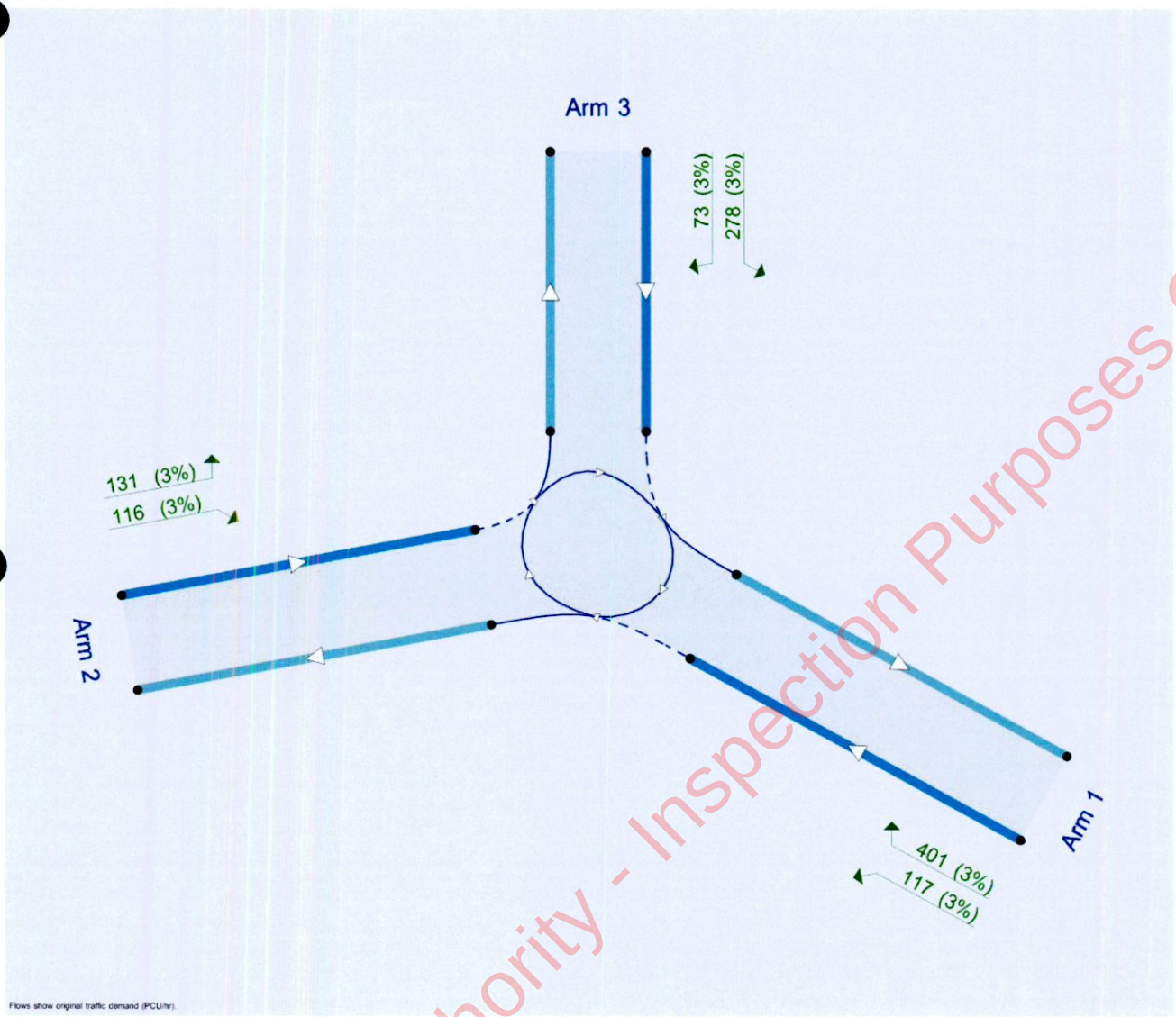
File summary

File Description

Title	
Location	
Site number	
Date	28/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\pgannon
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2030	Saturday Afternoon (Dev)	ONE HOUR	12:45	14:15	15
D2	2030	Friday Evening (Dev)	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2030, Saturday Afternoon (Dev)

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		1, 2, 3	4.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Eastern Arm	
2	Western Arm	
3	Northern Arm	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.03	5.96	9.3	49.9	35.6	35.7	
2	3.69	6.45	6.5	38.9	35.6	51.6	
3	3.33	5.87	7.6	40.5	35.6	39.4	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.587	1374
2	0.573	1396
3	0.581	1369

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)
D1	2030	Saturday Afternoon (Dev)	ONE HOUR	12:45	14:15	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 (PCU/hr)	Scaling Factor (%)
1		✓	412	100.000
2		✓	210	100.000
3		✓	297	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	1	79	332
	2	133	0	77
	3	240	57	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	3
	2	3	0	3
	3	3	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.34	4.20	0.5	A
2	0.20	3.88	0.2	A
3	0.25	3.88	0.4	A

Main Results for each time segment

12:45 - 13:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	310	43	1349	0.230	309	0.3	3.563	A
2	158	250	1253	0.126	158	0.1	3.384	A
3	224	101	1311	0.171	223	0.2	3.407	A

13:00 - 13:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	370	51	1344	0.276	370	0.4	3.808	A
2	189	299	1224	0.154	189	0.2	3.579	A
3	267	120	1299	0.206	267	0.3	3.592	A

13:15 - 13:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	454	63	1337	0.339	453	0.5	4.191	A
2	231	366	1186	0.195	231	0.2	3.882	A
3	327	147	1283	0.255	327	0.4	3.875	A

13:30 - 13:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	454	63	1337	0.339	454	0.5	4.196	A
2	231	367	1186	0.195	231	0.2	3.884	A
3	327	148	1283	0.255	327	0.4	3.877	A

13:45 - 14:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	370	51	1344	0.276	371	0.4	3.815	A
2	189	300	1224	0.154	189	0.2	3.585	A
3	267	121	1299	0.206	267	0.3	3.597	A

14:00 - 14:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	310	43	1349	0.230	311	0.3	3.571	A
2	158	251	1252	0.126	158	0.1	3.390	A
3	224	101	1310	0.171	224	0.2	3.415	A

2030, Friday Evening (Dev)

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		1, 2, 3	4.50	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2030	Friday Evening (Dev)	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 (PCU/hr)	Scaling Factor (%)
1		✓	518	100.000
2		✓	247	100.000
3		✓	351	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	117	401
	2	116	0	131
	3	278	73	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	3
	2	3	0	3
	3	3	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.43	4.90	0.8	A
2	0.24	4.26	0.3	A
3	0.30	4.08	0.4	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	390	55	1342	0.291	388	0.4	3.883	A
2	186	301	1223	0.152	185	0.2	3.570	A
3	264	87	1318	0.200	263	0.3	3.511	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	466	66	1335	0.349	465	0.5	4.258	A
2	222	360	1189	0.187	222	0.2	3.832	A
3	316	104	1308	0.241	315	0.3	3.733	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	570	80	1327	0.430	569	0.8	4.890	A
2	272	441	1143	0.238	272	0.3	4.251	A
3	386	128	1295	0.298	386	0.4	4.078	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	570	80	1327	0.430	570	0.8	4.902	A
2	272	441	1143	0.238	272	0.3	4.258	A
3	386	128	1295	0.298	386	0.4	4.082	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	466	66	1335	0.349	467	0.6	4.272	A
2	222	361	1189	0.187	222	0.2	3.837	A
3	316	104	1308	0.241	316	0.3	3.737	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	390	55	1342	0.291	391	0.4	3.900	A
2	186	302	1223	0.152	186	0.2	3.577	A
3	264	87	1318	0.200	265	0.3	3.522	A

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: Cock_Hill_Site_Entrance.j9
Path: \\DUBLINFILE\ProjectData\IE01T22A88 Tesco Cavan\5. Technical\5. Modelling\Junctions_9_Models\2030_Dev
Report generation date: 30/11/2022 16:08:39

»2030, Saturday Afternoon (Dev)
»2030, Friday Evening (Dev)

Summary of junction performance

	Saturday Afternoon (Dev)					Friday Evening (Dev)				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2030									
Stream B-C	D1	0.5	8.90	0.32	A	D2	0.3	8.07	0.21	A
Stream B-AD		0.2	11.82	0.19	B		0.1	11.87	0.11	B
Stream A-BCD		0.0	0.00	0.00	A		0.0	4.33	0.01	A
Stream D-ABC		0.0	0.00	0.00	A		0.0	8.60	0.03	A
Stream C-ABD		0.4	9.17	0.31	A		0.3	8.61	0.21	A

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

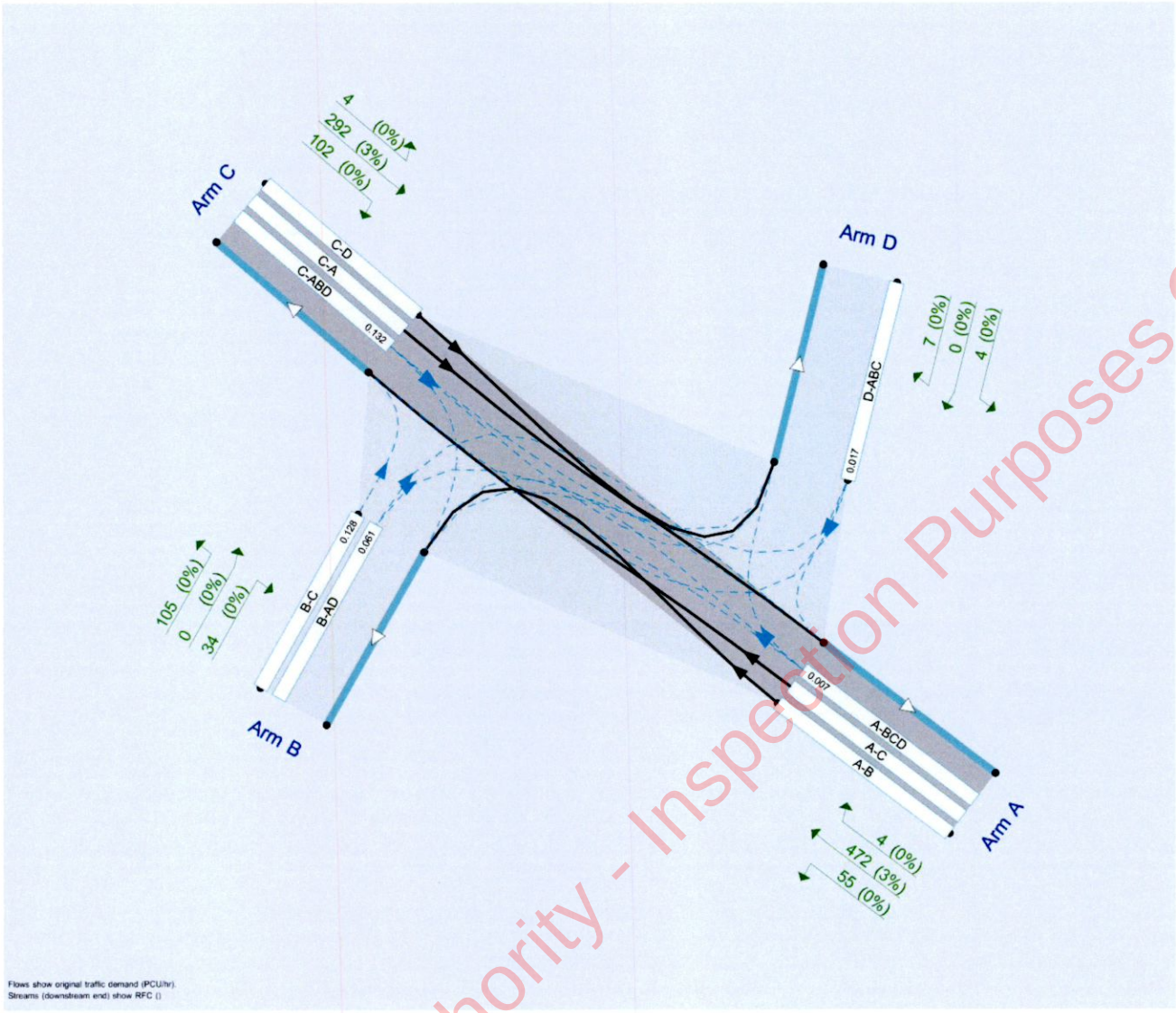
File summary

File Description

Title	
Location	
Site number	
Date	28/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\pgannon
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2030	Saturday Afternoon (Dev)	ONE HOUR	12:45	14:15	15
D2	2030	Friday Evening (Dev)	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2030, Saturday Afternoon (Dev)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cock Hill/Site Entrance	Right-Left Stagger	Two-way		3.65	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Cock Hill (Southern Arm)		Major
B	Site Entrance		Minor
C	Cock Hill (Northern Arm)		Major
D	School Road		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A	6.00				115.0	✓	0.00
C	6.00		✓	3.00	100.0	✓	10.00

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)	Lane Width (Left) (m)	Lane Width (Right) (m)	Visibility to left (m)	Visibility to right (m)
B	Two lanes		3.50	3.50	75	120
D	One lane	3.00			105	100

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
A-D	641	-	-	-	0.248	0.248	0.248	-	0.248	-	-
B-AD	590	0.108	0.272	-	-	-	0.171	0.388	0.171	0.108	0.272
B-C	734	0.113	0.285	-	-	-	-	-	-	0.113	0.285
C-B	687	0.266	0.266	-	-	-	-	-	-	0.266	0.266
D-A	687	-	-	-	0.266	0.105	0.266	-	0.105	-	-
D-BC	562	0.163	0.163	0.370	0.259	0.102	0.259	-	0.102	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2030	Saturday Afternoon (Dev)	ONE HOUR	12:45	14:15	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 (PCU/hr)	Scaling Factor (%)
A		✓	407	100.000
B		✓	236	100.000
C		✓	383	100.000
D		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	90	317	0
	B	63	0	173	0
	C	224	159	0	0
	D	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	3	0
	B	0	0	0	0
	C	3	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.32	8.90	0.5	A
B-AD	0.19	11.82	0.2	B
A-BCD	0.00	0.00	0.0	A
A-B				
A-C				
D-ABC	0.00	0.00	0.0	A
C-ABD	0.31	9.17	0.4	A
C-D				
C-A				

Main Results for each time segment

12:45 - 13:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	130	641	0.203	129	0.3	7.019	A
B-AD	47	443	0.107	47	0.1	9.081	A
A-BCD	0	587	0.000	0	0.0	0.000	A
A-B	68			68			
A-C	239			239			
D-ABC	0	529	0.000	0	0.0	0.000	A
C-ABD	120	605	0.198	119	0.2	7.383	A
C-D	0			0			
C-A	169			169			

13:00 - 13:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	156	622	0.250	155	0.3	7.707	A
B-AD	57	414	0.137	56	0.2	10.068	B
A-BCD	0	576	0.000	0	0.0	0.000	A
A-B	81			81			
A-C	285			285			
D-ABC	0	511	0.000	0	0.0	0.000	A
C-ABD	143	590	0.242	143	0.3	8.051	A
C-D	0			0			
C-A	201			201			

13:15 - 13:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	190	595	0.320	190	0.5	8.880	A
B-AD	69	374	0.185	69	0.2	11.788	B
A-BCD	0	562	0.000	0	0.0	0.000	A
A-B	99			99			
A-C	349			349			
D-ABC	0	486	0.000	0	0.0	0.000	A
C-ABD	175	568	0.308	175	0.4	9.146	A
C-D	0			0			
C-A	247			247			

13:30 - 13:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	190	595	0.320	190	0.5	8.905	A
B-AD	69	374	0.185	69	0.2	11.816	B
A-BCD	0	562	0.000	0	0.0	0.000	A
A-B	99			99			
A-C	349			349			
D-ABC	0	486	0.000	0	0.0	0.000	A
C-ABD	175	568	0.308	175	0.4	9.169	A
C-D	0			0			
C-A	247			247			

13:45 - 14:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	156	622	0.250	156	0.3	7.736	A
B-AD	57	414	0.137	57	0.2	10.099	B
A-BCD	0	576	0.000	0	0.0	0.000	A
A-B	81			81			
A-C	285			285			
D-ABC	0	511	0.000	0	0.0	0.000	A
C-ABD	143	590	0.242	143	0.3	8.078	A
C-D	0			0			
C-A	201			201			

14:00 - 14:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	130	641	0.203	131	0.3	7.058	A
B-AD	47	442	0.107	48	0.1	9.123	A
A-BCD	0	587	0.000	0	0.0	0.000	A
A-B	68			68			
A-C	239			239			
D-ABC	0	529	0.000	0	0.0	0.000	A
C-ABD	120	605	0.198	120	0.2	7.424	A
C-D	0			0			
C-A	169			169			

2030, Friday Evening (Dev)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cock Hill/Site Entrance	Right-Left Stagger	Two-way		2.10	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2030	Friday Evening (Dev)	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 (PCU/hr)	Scaling Factor (%)
A		✓	531	100.000
B		✓	139	100.000
C		✓	398	100.000
D		✓	11	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	55	472	4
	B	34	0	105	0
	C	292	102	0	4
	D	4	0	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	3	0
	B	0	0	0	0
	C	3	0	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.21	8.07	0.3	A
B-AD	0.11	11.87	0.1	B
A-BCD	0.01	4.33	0.0	A
A-B				
A-C				
D-ABC	0.03	8.60	0.0	A
C-ABD	0.21	8.61	0.3	A
C-D				
C-A				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	79	618	0.128	78	0.1	6.670	A
B-AD	26	420	0.061	25	0.1	9.117	A
A-BCD	6	848	0.007	6	0.0	4.325	A
A-B	41			41			
A-C	353			353			
D-ABC	8	487	0.017	8	0.0	7.526	A
C-ABD	77	580	0.132	76	0.2	7.137	A
C-D	3			3			
C-A	220			220			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	94	594	0.159	94	0.2	7.197	A
B-AD	31	387	0.079	30	0.1	10.105	B
A-BCD	8	891	0.009	8	0.0	4.127	A
A-B	49			49			
A-C	421			421			
D-ABC	10	463	0.021	10	0.0	7.940	A
C-ABD	92	559	0.164	92	0.2	7.697	A
C-D	4			4			
C-A	263			263			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	116	562	0.206	115	0.3	8.062	A
B-AD	37	341	0.110	37	0.1	11.852	B
A-BCD	11	953	0.012	11	0.0	3.880	A
A-B	60			60			
A-C	514			514			
D-ABC	12	431	0.028	12	0.0	8.601	A
C-ABD	112	530	0.212	112	0.3	8.598	A
C-D	4			4			
C-A	321			321			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	116	561	0.206	116	0.3	8.073	A
B-AD	37	341	0.110	37	0.1	11.868	B
A-BCD	11	953	0.012	11	0.0	3.883	A
A-B	60			60			
A-C	514			514			
D-ABC	12	431	0.028	12	0.0	8.602	A
C-ABD	112	530	0.212	112	0.3	8.610	A
C-D	4			4			
C-A	321			321			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	94	594	0.159	95	0.2	7.212	A
B-AD	31	386	0.079	31	0.1	10.123	B
A-BCD	8	891	0.009	8	0.0	4.137	A
A-B	49			49			
A-C	421			421			
D-ABC	10	463	0.021	10	0.0	7.944	A
C-ABD	92	559	0.164	92	0.2	7.711	A
C-D	4			4			
C-A	263			263			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	79	617	0.128	79	0.1	6.692	A
B-AD	26	420	0.061	26	0.1	9.141	A
A-BCD	6	848	0.007	6	0.0	4.332	A
A-B	41			41			
A-C	353			353			
D-ABC	8	486	0.017	8	0.0	7.531	A
C-ABD	77	580	0.132	77	0.2	7.162	A
C-D	3			3			
C-A	220			220			

Junctions 9

ARCADY 9 - Roundabout Module

Filename: Dublin_Rd_Cock_Hill_Rdbt_East_Arm_Cal.j9
Path: \\DUBLINFILE\ProjectData\IE01T22A88 Tesco Cavan\5. Technical\5. Modelling\Junctions_9_Models\2030_Dev
Report generation date: 30/11/2022 14:24:43

»2030, Saturday Afternoon (Dev)
»2030, Friday Evening (Dev)

Summary of junction performance

	Saturday Afternoon (Dev)					Friday Evening (Dev)				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2030									
Arm 1	D1	87.9	331.53	1.17	F	D2	16.1	68.32	0.98	F
Arm 2		1.0	12.61	0.50	B		0.7	11.43	0.42	B
Arm 3		6.7	37.00	0.88	E		3.8	22.29	0.80	C
Arm 4		22.9	148.41	1.05	F		5.7	43.87	0.87	E

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

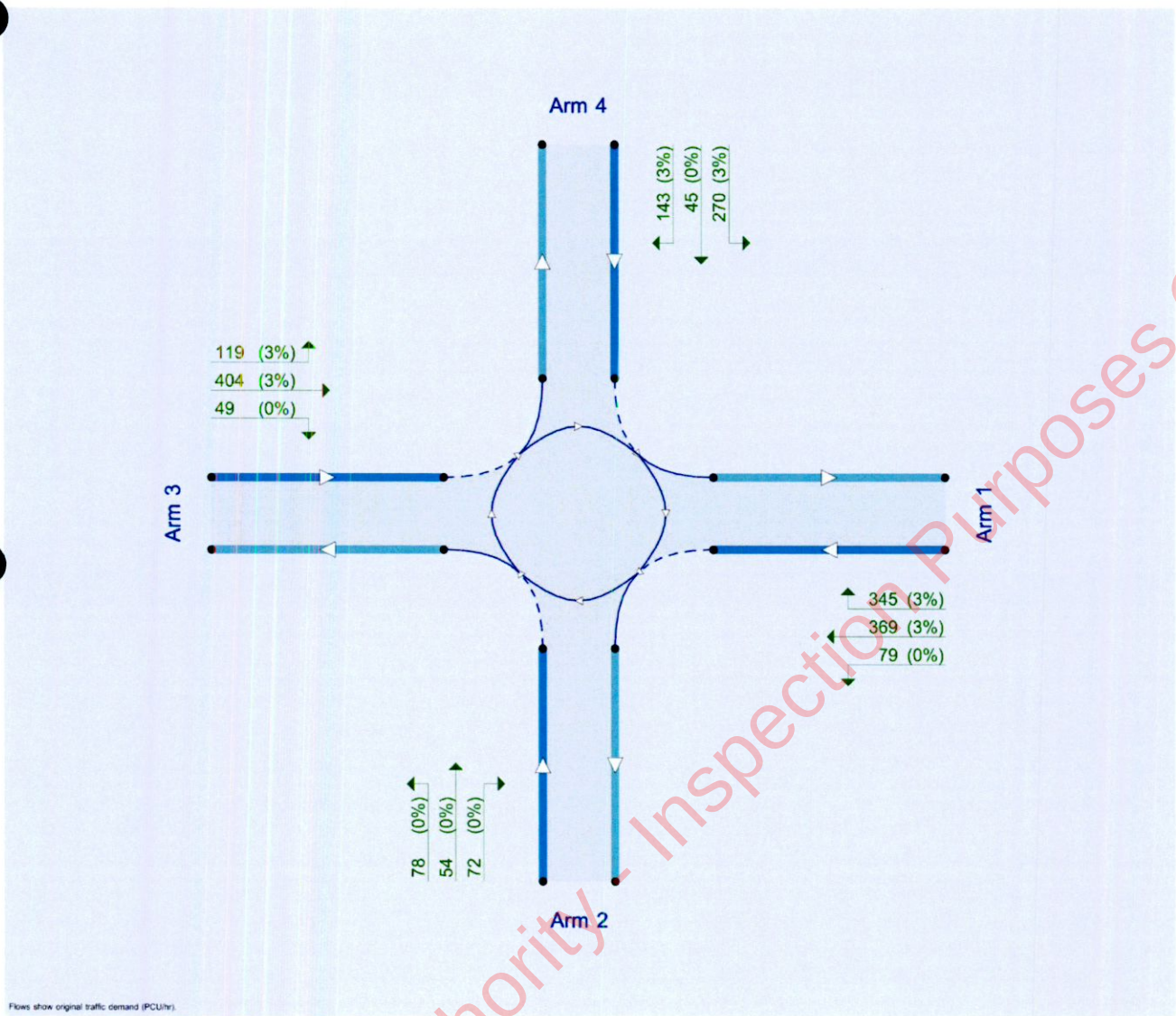
File summary

File Description

Title	
Location	
Site number	
Date	24/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\pgannon
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2030	Saturday Afternoon (Dev)	ONE HOUR	12:45	14:15	15
D2	2030	Friday Evening (Dev)	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2030, Saturday Afternoon (Dev)

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		1, 2, 3, 4	178.69	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	R212 Dublin Rd (East)	
2	Shopping Centre Entry/Exit (Southern Arm)	
3	R212 Dublin Rd (West)	
4	Cock Hill (Northern Arm)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.15	3.16	0.1	19.4	32.6	52.3	
2	3.65	3.65	0.0	23.4	32.6	61.2	
3	3.65	3.66	0.0	20.3	32.6	39.0	
4	3.04	3.05	0.0	24.4	32.6	53.4	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final slope	Final intercept (PCU/hr)
1	✓	0.464	1030	0.464	1030
2				0.480	995
3				0.518	1073
4				0.461	856

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)
D1	2030	Saturday Afternoon (Dev)	ONE HOUR	12:45	14:15	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 (PCU/hr)	Scaling Factor (%)
1		✓	963	100.000
2		✓	256	100.000
3		✓	634	100.000
4		✓	490	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	8	130	451	374
	2	109	0	86	61
	3	456	90	11	77
	4	338	59	91	2

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	3	3
	2	0	0	0	0
	3	3	0	0	3
	4	3	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	1.17	331.53	87.9	F
2	0.50	12.61	1.0	B
3	0.88	37.00	6.7	E
4	1.05	148.41	22.9	F

Main Results for each time segment

12:45 - 13:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	725	188	943	0.769	712	3.2	15.280	C
2	193	693	662	0.291	191	0.4	7.622	A
3	477	411	860	0.555	472	1.2	9.399	A
4	369	502	624	0.591	363	1.4	13.868	B

13:00 - 13:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	866	225	926	0.935	842	9.1	36.442	E
2	230	821	601	0.383	229	0.6	9.672	A
3	570	488	820	0.695	566	2.2	14.293	B
4	440	602	578	0.762	434	3.0	24.646	C

13:15 - 13:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1060	262	908	1.167	901	49.0	129.527	F
2	282	885	570	0.495	280	1.0	12.376	B
3	698	546	790	0.883	683	6.0	30.676	D
4	540	727	521	1.036	494	14.4	82.470	F

13:30 - 13:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1060	268	906	1.170	905	87.9	281.502	F
2	282	890	567	0.497	282	1.0	12.607	B
3	698	548	789	0.885	695	6.7	36.998	E
4	540	738	516	1.046	505	22.9	148.407	F

13:45 - 14:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	866	253	913	0.949	902	78.8	331.529	F
2	230	888	568	0.405	231	0.7	10.716	B
3	570	513	807	0.706	586	2.6	17.814	C
4	440	621	570	0.773	515	4.3	83.965	F

14:00 - 14:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	725	195	940	0.772	928	28.2	211.418	F
2	193	883	571	0.338	193	0.5	9.556	A
3	477	498	815	0.586	482	1.5	11.215	B
4	369	513	619	0.596	380	1.6	16.077	C

2030, Friday Evening (Dev)

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		1, 2, 3, 4	44.07	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2030	Friday Evening (Dev)	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 (PCU/hr)	Scaling Factor (%)
1		✓	801	100.000
2		✓	204	100.000
3		✓	582	100.000
4		✓	458	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	8	79	369	345
	2	72	0	78	54
	3	404	49	10	119
	4	270	45	143	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	3	3
	2	0	0	0	0
	3	3	0	0	3
	4	3	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.98	68.32	16.1	F
2	0.42	11.43	0.7	B
3	0.80	22.29	3.8	C
4	0.87	43.87	5.7	E

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	603	184	945	0.638	596	1.8	10.402	B
2	154	651	682	0.225	152	0.3	6.783	A
3	438	357	888	0.493	434	1.0	8.075	A
4	345	405	669	0.515	341	1.1	10.977	B

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	720	221	928	0.776	714	3.3	16.802	C
2	183	780	620	0.296	183	0.4	8.219	A
3	523	428	852	0.614	521	1.6	11.092	B
4	412	486	632	0.652	409	1.8	16.342	C

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	882	266	907	0.973	846	12.2	45.352	E
2	225	927	550	0.409	224	0.7	11.005	B
3	641	511	808	0.793	633	3.6	20.208	C
4	504	591	583	0.864	491	5.1	35.928	E

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	882	271	904	0.975	866	16.1	68.321	F
2	225	949	539	0.416	225	0.7	11.430	B
3	641	520	803	0.798	640	3.8	22.295	C
4	504	597	581	0.868	502	5.7	43.867	E

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	720	229	924	0.779	768	4.0	29.170	D
2	183	835	594	0.309	184	0.5	8.813	A
3	523	453	839	0.624	531	1.8	12.331	B
4	412	495	627	0.656	426	2.1	19.576	C

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	603	188	943	0.640	611	1.9	11.419	B
2	154	668	674	0.228	154	0.3	6.930	A
3	438	365	884	0.496	441	1.0	8.399	A
4	345	411	666	0.518	349	1.1	11.776	B

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.1.7462

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Filename: Cock Hill_Ardkeen_Crossroads.j9
Path: \\DUBLINFILE\ProjectData\IE01T22A88 Tesco Cavan\5. Technical\5. Modelling\Junctions_9_Models\2040_No_Dev
Report generation date: 30/11/2022 16:17:04

»2040, Saturday Afternoon (No Dev)
»2040, Friday Evening (No Dev)

Summary of junction performance

	Saturday Afternoon (No Dev)					Friday Evening (No Dev)				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2040									
Stream B-CD	D1	0.3	8.71	0.25	A	D2	0.7	15.19	0.40	C
Stream B-AD		0.8	12.18	0.42	B		2.8	26.78	0.74	D
Stream A-BCD		0.0	5.22	0.01	A		0.0	5.10	0.00	A
Stream D-ABC		0.0	8.30	0.02	A		0.0	0.00	0.00	A
Stream C-ABD		0.2	7.22	0.15	A		0.3	7.97	0.22	A

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

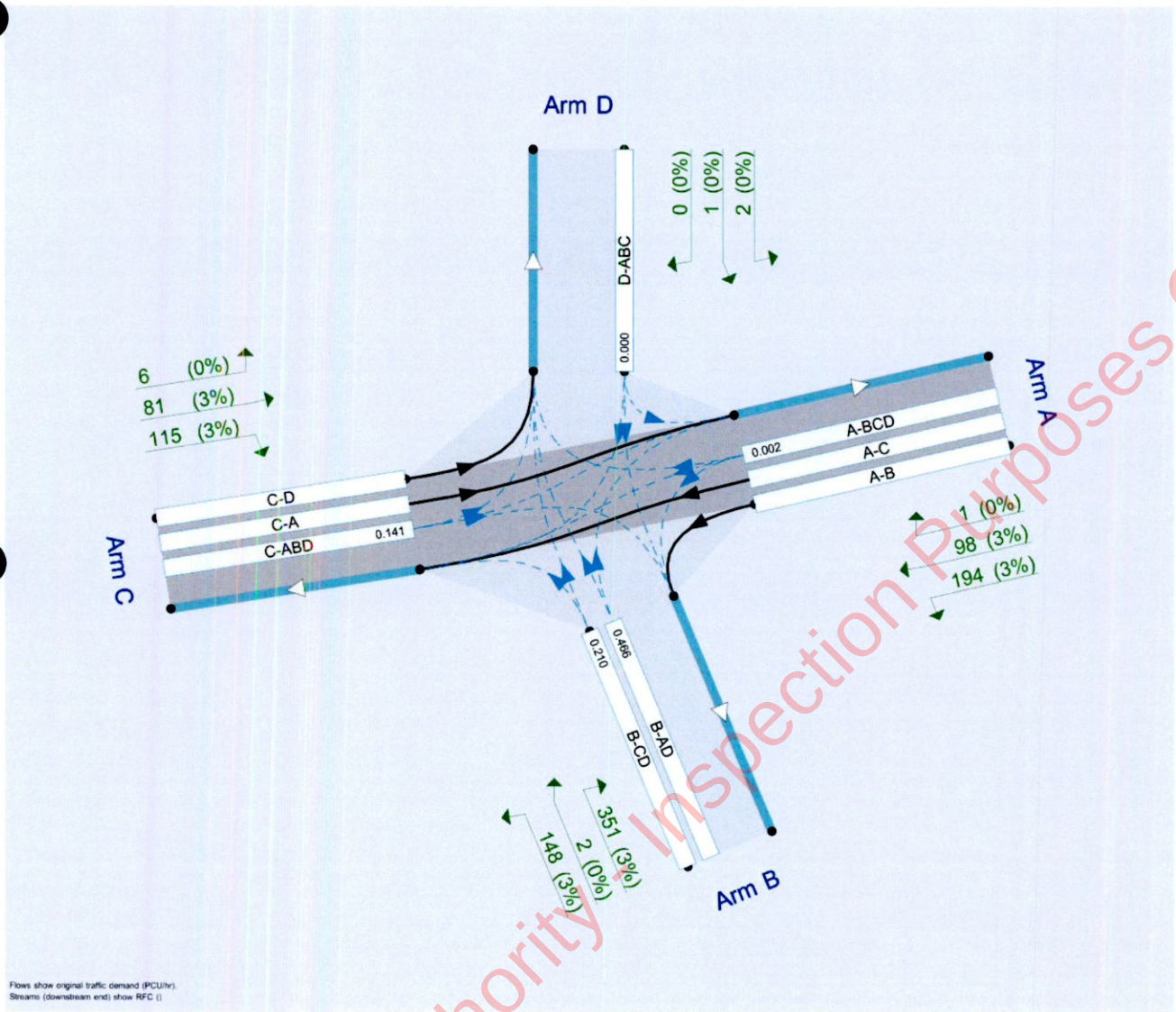
File summary

File Description

Title	
Location	
Site number	
Date	28/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADSYSTRA\pgannon
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2040	Saturday Afternoon (No Dev)	ONE HOUR	12:45	14:15	15
D2	2040	Friday Evening (No Dev)	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2040, Saturday Afternoon (No Dev)

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cock Hill/Ardkeen	Crossroads	Two-way		5.78	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Ardkeen (Eastern Arm)		Major
B	Cock Hill (Southern Arm)		Minor
C	Ardkeen (Western Arm)		Major
D	Cock Hill (Northern Arm)		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A	6.00				60.0	✓	0.00
C	6.00		✓	2.20	170.0	✓	2.00

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)	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		6.00	6.00	6.00	6.00	3.00		3.00	92	182
D	One lane	2.20								120	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
A-D	609	-	-	-	-	-	-	0.236	0.337	0.236	-	-	-
B-A	632	0.115	0.291	0.291	-	-	-	0.183	0.416	-	0.291	0.291	0.145
B-C	689	0.106	0.267	-	-	-	-	-	-	-	-	-	-
B-D, nearside lane	560	0.102	0.258	0.258	-	-	-	0.162	0.368	0.162	-	-	-
B-D, offside lane	632	0.115	0.291	0.291	-	-	-	0.183	0.416	0.183	-	-	-
C-B	672	0.261	0.261	0.372	-	-	-	-	-	-	-	-	-
D-A	603	-	-	-	-	-	-	0.234	-	0.092	-	-	-
D-B, nearside lane	498	0.144	0.144	0.328	-	-	-	0.229	0.229	0.091	-	-	-
D-B, offside lane	498	0.144	0.144	0.328	-	-	-	0.229	0.229	0.091	-	-	-
D-C	498	-	0.144	0.328	0.115	0.229	0.229	0.229	0.229	0.091	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2040	Saturday Afternoon (No Dev)	ONE HOUR	12:45	14:15	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 (PCU/hr)	Scaling Factor (%)
A		✓	245	100.000
B		✓	332	100.000
C		✓	155	100.000
D		✓	6	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	153	89	3
	B	203	0	126	3
	C	71	82	0	2
	D	1	5	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	3	3	0
	B	3	0	3	0
	C	3	3	0	0
	D	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.25	8.71	0.3	A
B-AD	0.42	12.18	0.8	B
A-BCD	0.01	5.22	0.0	A
A-B				
A-C				
D-ABC	0.02	8.30	0.0	A
C-ABD	0.15	7.22	0.2	A
C-D				
C-A				

Main Results for each time segment

12:45 - 13:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	96	610	0.158	96	0.2	7.188	A
B-AD	154	562	0.274	152	0.4	9.019	A
A-BCD	3	699	0.004	3	0.0	5.212	A
A-B	115			115			
A-C	67			67			
D-ABC	5	464	0.010	4	0.0	7.838	A
C-ABD	62	625	0.099	61	0.1	6.572	A
C-D	2			2			
C-A	53			53			

13:00 - 13:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	115	593	0.194	115	0.2	7.747	A
B-AD	183	548	0.335	183	0.5	10.143	B
A-BCD	4	717	0.005	4	0.0	5.089	A
A-B	137			137			
A-C	80			80			
D-ABC	5	454	0.012	5	0.0	8.025	A
C-ABD	74	616	0.120	74	0.1	6.838	A
C-D	2			2			
C-A	64			64			

13:15 - 13:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	141	567	0.249	141	0.3	8.684	A
B-AD	224	529	0.425	224	0.7	12.151	B
A-BCD	5	743	0.007	5	0.0	4.927	A
A-B	167			167			
A-C	97			97			
D-ABC	7	440	0.015	7	0.0	8.297	A
C-ABD	91	604	0.150	90	0.2	7.221	A
C-D	2			2			
C-A	78			78			

13:30 - 13:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-CD	141	567	0.249	141	0.3	8.708	A
B-AD	224	529	0.425	224	0.8	12.183	B
A-BCD	5	743	0.007	5	0.0	4.933	A
A-B	167			167			
A-C	97			97			
D-ABC	7	440	0.015	7	0.0	8.298	A
C-ABD	91	604	0.150	91	0.2	7.224	A
C-D	2			2			
C-A	78			78			