

Junctions 9
ARCADY 9 - Roundabout Module
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**Filename:** Dawley Road-Blyth Road-Betam Road-Kestrel Way Rb.j9  
**Path:** C:\Users\Jenny Baker\Dropbox (Markides Associates)\Markides Associates Team Folder\Projects\16018.01 - Former Nestle Site, Hayes\Technical\Arcady\SS  
**Report generation date:** 17/05/2017 12:48:54

- «2016 Peak , AM
  - »Junction Network
  - »Arms
  - »Traffic Demand
  - »Origin-Destination Data
  - »Vehicle Mix
  - »Results

**Summary of junction performance**

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2016 Peak								
A - Dawley Road (N)	2.3	7.57	0.68	A	1.0	4.52	0.47	A
B - Blyth Road (E)	2.9	21.91	0.73	C	3.8	23.95	0.79	C
C - Dawley Road (S)	5.4	17.21	0.84	C	4.4	14.43	0.81	B
D - Kestrel Way (SW)	0.1	10.66	0.11	B	0.3	11.99	0.22	B
E - Betam Road (NW)	0.1	5.59	0.07	A	0.2	6.58	0.17	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**

<b>Title</b>	Site 4 Base Model
<b>Location</b>	Hayes and Harlington
<b>Site number</b>	
<b>Date</b>	17/07/2012
<b>Version</b>	
<b>Status</b>	Draft 1
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	VN50026
<b>Enumerator</b>	rhussain [IE-D00135]
<b>Description</b>	

**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	-Hour	perHour

### Analysis Options

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

### Analysis Set Details

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

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2016 Peak	AM	ONE HOUR	07:45	09:15	15	✓

# 2016 Peak , AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A,B,C,D,E	14.00	B

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description
A	Dawley Road (N)	
B	Blyth Road (E)	
C	Dawley Road (S)	
D	Kestral Way (SW)	
E	Betam Road (NW)	

### 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
A - Dawley Road (N)	3.90	7.86	19.0	13.6	34.7	17.0	
B - Blyth Road (E)	3.29	5.65	3.6	7.0	35.0	16.5	
C - Dawley Road (S)	4.97	9.46	13.0	3.0	34.7	36.0	
D - Kestral Way (SW)	3.90	4.66	3.2	3.0	34.0	28.0	
E - Betam Road (NW)	3.60	7.70	8.0	8.2	35.0	16.5	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Dawley Road (N)	0.708	1944
B - Blyth Road (E)	0.531	1174
C - Dawley Road (S)	0.522	1511
D - Kestral Way (SW)	0.419	958
E - Betam Road (NW)	0.609	1525

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

## Traffic Demand

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

## Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Dawley Road (N)		ONE HOUR	✓	997	100.000
B - Blyth Road (E)		ONE HOUR	✓	446	100.000
C - Dawley Road (S)		ONE HOUR	✓	1076	100.000
D - Kestral Way (SW)		ONE HOUR	✓	43	100.000
E - Betam Road (NW)		ONE HOUR	✓	52	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	0	188	762	20	27
	B - Blyth Road (E)	109	0	319	3	15
	C - Dawley Road (S)	636	348	0	58	34
	D - Kestral Way (SW)	7	7	27	0	2
	E - Betam Road (NW)	19	8	25	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	10	10	10	10	10
	B - Blyth Road (E)	10	10	10	10	10
	C - Dawley Road (S)	10	10	10	10	10
	D - Kestral Way (SW)	10	10	10	10	10
	E - Betam Road (NW)	10	10	10	10	10

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Dawley Road (N)	0.68	7.57	2.3	A	915	1372
B - Blyth Road (E)	0.73	21.91	2.9	C	409	614
C - Dawley Road (S)	0.84	17.21	5.4	C	987	1481
D - Kestral Way (SW)	0.11	10.66	0.1	B	39	59
E - Betam Road (NW)	0.07	5.59	0.1	A	48	72

**Main Results for each time segment**
**07:45 - 08:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	751	188	310	1724	0.435	747	576	0.0	0.8	4.041	A
B - Blyth Road (E)	336	84	645	831	0.404	333	412	0.0	0.7	7.906	A
C - Dawley Road (S)	810	203	130	1443	0.561	805	848	0.0	1.4	6.149	A
D - Kestral Way (SW)	32	8	874	592	0.055	32	61	0.0	0.1	7.074	A
E - Betam Road (NW)	39	10	848	1009	0.039	39	58	0.0	0.0	4.084	A

**08:00 - 08:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	896	224	372	1680	0.533	895	691	0.8	1.2	5.031	A
B - Blyth Road (E)	401	100	773	763	0.525	399	494	0.7	1.2	10.823	B
C - Dawley Road (S)	967	242	156	1430	0.677	964	1016	1.4	2.2	8.439	A
D - Kestral Way (SW)	39	10	1047	519	0.074	39	73	0.1	0.1	8.240	A
E - Betam Road (NW)	47	12	1016	906	0.052	47	70	0.0	0.1	4.607	A

**08:15 - 08:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1098	274	453	1623	0.676	1094	840	1.2	2.2	7.428	A
B - Blyth Road (E)	491	123	945	672	0.731	485	602	1.2	2.8	20.513	C
C - Dawley Road (S)	1185	296	190	1412	0.839	1173	1240	2.2	5.2	15.825	C
D - Kestral Way (SW)	47	12	1274	424	0.112	47	88	0.1	0.1	10.506	B
E - Betam Road (NW)	57	14	1236	772	0.074	57	85	0.1	0.1	5.538	A

**08:30 - 08:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1098	274	457	1620	0.678	1098	848	2.2	2.3	7.572	A
B - Blyth Road (E)	491	123	948	670	0.733	491	606	2.8	2.9	21.914	C
C - Dawley Road (S)	1185	296	191	1411	0.840	1184	1247	5.2	5.4	17.214	C
D - Kestral Way (SW)	47	12	1286	419	0.113	47	89	0.1	0.1	10.657	B
E - Betam Road (NW)	57	14	1247	765	0.075	57	86	0.1	0.1	5.593	A

**08:45 - 09:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	896	224	377	1676	0.535	900	702	2.3	1.3	5.128	A
B - Blyth Road (E)	401	100	777	761	0.527	407	500	2.9	1.3	11.412	B
C - Dawley Road (S)	967	242	158	1428	0.677	980	1026	5.4	2.4	9.054	A
D - Kestral Way (SW)	39	10	1064	512	0.076	39	74	0.1	0.1	8.377	A
E - Betam Road (NW)	47	12	1032	896	0.052	47	71	0.1	0.1	4.665	A

## 09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	751	188	314	1721	0.436	752	583	1.3	0.9	4.094	A
B - Blyth Road (E)	336	84	650	828	0.405	338	416	1.3	0.8	8.103	A
C - Dawley Road (S)	810	203	132	1442	0.562	814	856	2.4	1.4	6.338	A
D - Kestral Way (SW)	32	8	884	587	0.055	32	61	0.1	0.1	7.138	A
E - Betam Road (NW)	39	10	858	1002	0.039	39	59	0.1	0.0	4.111	A

# Junctions 9

## ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []  
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**Filename:** Dawley Road-Blyth Road-Betam Road-Kestrel Way Rb OVF mitigation.j9  
**Path:** C:\Users\Demetris Psyllides\Dropbox (Markides Associates)\Markides Associates Team Folder\Projects\16018.01 - Former Nestle Site, Hayes\Technical\Arcady\2024 and 2029 scenarios  
**Report generation date:** 26/01/2017 17:48:19

- »2024 Baseline, AM
- »2024 Baseline , PM
- »2024 Baseline+Dev, AM
- »2024 Baseline+Dev, PM
- »2029 Baseline, AM
- »2029 Baseline , PM
- »2029 Baseline+Dev, AM
- »2029 Baseline+Dev, PM

### Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
<b>2024 Baseline</b>								
A - Dawley Road (N)	5.6	13.63	0.84	B	1.0	4.07	0.49	A
B - Blyth Road (E)	10.4	58.07	0.93	F	93.4	286.44	1.18	F
C - Dawley Road (S)	202.4	523.12	1.26	F	67.2	157.52	1.08	F
D - Kestral Way (SW)	0.2	15.80	0.17	C	0.6	23.81	0.37	C
E - Betam Road (NW)	0.1	7.49	0.10	A	0.4	11.03	0.27	B
<b>2024 Baseline+Dev</b>								
A - Dawley Road (N)	5.2	12.79	0.83	B	1.1	4.20	0.51	A
B - Blyth Road (E)	9.7	53.99	0.93	F	102.9	325.39	1.21	F
C - Dawley Road (S)	226.8	578.65	1.28	F	68.5	159.84	1.09	F
D - Kestral Way (SW)	0.2	15.84	0.17	C	0.6	23.61	0.37	C
E - Betam Road (NW)	0.1	7.50	0.10	A	0.4	10.98	0.27	B
<b>2029 Baseline</b>								
A - Dawley Road (N)	6.2	15.04	0.86	C	1.1	4.18	0.50	A
B - Blyth Road (E)	14.7	77.55	0.97	F	107.8	343.92	1.22	F
C - Dawley Road (S)	230.6	588.15	1.28	F	80.5	197.59	1.10	F
D - Kestral Way (SW)	0.2	15.91	0.17	C	0.7	23.99	0.38	C
E - Betam Road (NW)	0.1	7.52	0.11	A	0.4	11.15	0.27	B
<b>2029 Baseline+Dev</b>								
A - Dawley Road (N)	5.8	14.10	0.85	B	1.2	4.31	0.52	A
B - Blyth Road (E)	13.5	72.32	0.96	F	117.5	389.55	1.24	F

C - Dawley Road (S)	255.8	645.51	1.31	F	82.5	203.46	1.11	F
D - Kestral Way (SW)	0.2	15.94	0.17	C	0.7	23.79	0.38	C
E - Betam Road (NW)	0.1	7.53	0.11	A	0.4	11.07	0.27	B

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

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

## File summary

### File Description

Title	Site 4 Base Model
Location	Hayes and Harlington
Site number	
Date	17/07/2012
Version	
Status	Draft 1
Identifier	
Client	
Jobnumber	VN50026
Enumerator	rhussain [IE-D00135]
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	-Hour	perHour

## Analysis Options

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

## Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2024 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D7	2024 Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D8	2024 Baseline+Dev	AM	ONE HOUR	07:45	09:15	15	✓
D9	2024 Baseline+Dev	PM	ONE HOUR	16:45	18:15	15	✓
D10	2029 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D11	2029 Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D12	2029 Baseline+Dev	AM	ONE HOUR	07:45	09:15	15	✓
D13	2029 Baseline+Dev	PM	ONE HOUR	16:45	18:15	15	✓

## Analysis Set Details

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

# 2024 Baseline, AM

## Data Errors and Warnings



Severity	Area	Item	Description
Warning	Geometry	A - Dawley Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A,B,C,D,E	237.18	F

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description
A	Dawley Road (N)	
B	Blyth Road (E)	
C	Dawley Road (S)	
D	Kestral Way (SW)	
E	Betam Road (NW)	

### 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
A - Dawley Road (N)	3.90	9.00	33.0	17.5	34.7	17.0	
B - Blyth Road (E)	3.29	8.50	6.0	15.0	35.0	16.5	
C - Dawley Road (S)	4.97	9.46	13.0	3.0	34.7	36.0	
D - Kestral Way (SW)	3.90	4.66	3.2	3.0	34.0	28.0	
E - Betam Road (NW)	3.60	7.70	8.0	8.2	35.0	16.5	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Dawley Road (N)	0.785	2300
B - Blyth Road (E)	0.612	1458
C - Dawley Road (S)	0.522	1511
D - Kestral Way (SW)	0.419	958
E - Betam Road (NW)	0.609	1525

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

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2024 Baseline	AM	ONE HOUR	07:45	09:15	15	✓

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

## Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Dawley Road (N)		ONE HOUR	✓	1384	100.000
B - Blyth Road (E)		ONE HOUR	✓	628	100.000
C - Dawley Road (S)		ONE HOUR	✓	1556	100.000
D - Kestral Way (SW)		ONE HOUR	✓	46	100.000
E - Betam Road (NW)		ONE HOUR	✓	56	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	0	374	960	21	29
	B - Blyth Road (E)	195	0	414	3	16
	C - Dawley Road (S)	837	620	0	63	36
	D - Kestral Way (SW)	7	8	29	0	2
	E - Betam Road (NW)	20	9	27	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	10	10	10	10	10
	B - Blyth Road (E)	10	10	10	10	10
	C - Dawley Road (S)	10	10	10	10	10
	D - Kestral Way (SW)	10	10	10	10	10
	E - Betam Road (NW)	10	10	10	10	10

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Dawley Road (N)	0.84	13.63	5.6	B	1270	1905
B - Blyth Road (E)	0.93	58.07	10.4	F	576	864
C - Dawley Road (S)	1.26	523.12	202.4	F	1428	2142
D - Kestral Way (SW)	0.17	15.80	0.2	C	42	63
E - Betam Road (NW)	0.10	7.49	0.1	A	51	77

## Main Results for each time segment

### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1042	260	513	1897	0.549	1037	785	0.0	1.3	4.575	A
B - Blyth Road (E)	473	118	798	969	0.488	469	752	0.0	1.0	7.846	A
C - Dawley Road (S)	1171	293	197	1408	0.832	1152	1070	0.0	4.9	14.498	B
D - Kestral Way (SW)	35	9	1284	420	0.083	34	65	0.0	0.1	10.265	B
E - Betam Road (NW)	42	11	1257	760	0.056	42	62	0.0	0.1	5.517	A

### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1244	311	597	1831	0.679	1240	916	1.3	2.3	6.655	A
B - Blyth Road (E)	565	141	955	873	0.646	561	882	1.0	1.9	12.531	B
C - Dawley Road (S)	1399	350	236	1388	1.008	1333	1280	4.9	21.3	46.766	E
D - Kestral Way (SW)	41	10	1494	332	0.125	41	75	0.1	0.2	13.606	B
E - Betam Road (NW)	50	13	1462	635	0.079	50	73	0.1	0.1	6.775	A

### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1524	381	623	1811	0.841	1511	969	2.3	5.4	12.714	B
B - Blyth Road (E)	691	173	1164	745	0.928	666	970	1.9	8.4	40.766	E
C - Dawley Road (S)	1713	428	281	1364	1.256	1361	1549	21.3	109.2	181.574	F
D - Kestral Way (SW)	51	13	1562	303	0.167	50	81	0.2	0.2	15.639	C
E - Betam Road (NW)	62	15	1530	593	0.104	62	82	0.1	0.1	7.443	A

### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1524	381	622	1811	0.841	1523	974	5.4	5.6	13.627	B
B - Blyth Road (E)	691	173	1173	740	0.934	683	972	8.4	10.4	58.071	F
C - Dawley Road (S)	1713	428	288	1361	1.259	1360	1568	109.2	197.5	409.907	F
D - Kestral Way (SW)	51	13	1567	301	0.168	51	81	0.2	0.2	15.804	C
E - Betam Road (NW)	62	15	1534	591	0.104	62	83	0.1	0.1	7.486	A

### 08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1244	311	615	1817	0.685	1257	952	5.6	2.4	7.223	A
B - Blyth Road (E)	565	141	968	866	0.652	598	904	10.4	2.2	16.458	C

C - Dawley Road (S)	1399	350	249	1381	1.013	1379	1316	197.5	202.4	523.118	F
D - Kestral Way (SW)	41	10	1550	308	0.134	42	78	0.2	0.2	14.874	B
E - Betam Road (NW)	50	13	1517	601	0.084	50	75	0.1	0.1	7.192	A

#### 09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1042	260	612	1819	0.573	1046	921	2.4	1.5	5.147	A
B - Blyth Road (E)	473	118	805	965	0.490	477	853	2.2	1.1	8.187	A
C - Dawley Road (S)	1171	293	200	1406	0.833	1399	1082	202.4	145.5	448.503	F
D - Kestral Way (SW)	35	9	1524	319	0.109	35	75	0.2	0.1	13.941	B
E - Betam Road (NW)	42	11	1491	617	0.068	42	68	0.1	0.1	6.892	A

## 2024 Baseline , PM

### Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Dawley Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A,B,C,D,E	147.82	F

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2024 Baseline	PM	ONE HOUR	16:45	18:15	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Dawley Road (N)		ONE HOUR	✓	848	100.000

B - Blyth Road (E)		ONE HOUR	✓	988	100.000
C - Dawley Road (S)		ONE HOUR	✓	1276	100.000
D - Kestral Way (SW)		ONE HOUR	✓	90	100.000
E - Betam Road (NW)		ONE HOUR	✓	119	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	0	174	651	9	14
	B - Blyth Road (E)	401	0	574	2	11
	C - Dawley Road (S)	891	324	0	36	25
	D - Kestral Way (SW)	12	8	69	0	1
	E - Betam Road (NW)	39	22	57	1	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	10	10	10	10	10
	B - Blyth Road (E)	10	10	10	10	10
	C - Dawley Road (S)	10	10	10	10	10
	D - Kestral Way (SW)	10	10	10	10	10
	E - Betam Road (NW)	10	10	10	10	10

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Dawley Road (N)	0.49	4.07	1.0	A	778	1167
B - Blyth Road (E)	1.18	286.44	93.4	F	907	1360
C - Dawley Road (S)	1.08	157.52	67.2	F	1171	1756
D - Kestral Way (SW)	0.37	23.81	0.6	C	83	124
E - Betam Road (NW)	0.27	11.03	0.4	B	109	164

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	638	160	358	2019	0.316	636	1000	0.0	0.5	2.861	A

B - Blyth Road (E)	744	186	601	1090	0.682	735	394	0.0	2.3	10.875	B
C - Dawley Road (S)	961	240	326	1341	0.716	950	1009	0.0	2.7	9.880	A
D - Kestral Way (SW)	68	17	1240	438	0.155	67	36	0.0	0.2	10.647	B
E - Betam Road (NW)	90	22	1269	752	0.119	89	38	0.0	0.1	5.967	A

### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	762	191	428	1964	0.388	762	1190	0.5	0.7	3.291	A
B - Blyth Road (E)	888	222	719	1018	0.873	873	470	2.3	6.2	24.886	C
C - Dawley Road (S)	1147	287	387	1309	0.876	1131	1204	2.7	6.6	20.664	C
D - Kestral Way (SW)	81	20	1476	339	0.238	80	43	0.2	0.3	15.258	C
E - Betam Road (NW)	107	27	1511	605	0.177	107	45	0.1	0.2	7.943	A

### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	934	233	496	1911	0.489	932	1316	0.7	1.0	4.040	A
B - Blyth Road (E)	1088	272	880	920	1.183	910	548	6.2	50.7	126.253	F
C - Dawley Road (S)	1405	351	408	1298	1.082	1276	1382	6.6	38.8	76.350	F
D - Kestral Way (SW)	99	25	1635	273	0.363	98	49	0.3	0.6	22.530	C
E - Betam Road (NW)	131	33	1681	501	0.261	130	52	0.2	0.4	10.663	B

### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	934	233	501	1907	0.490	934	1330	1.0	1.0	4.068	A
B - Blyth Road (E)	1088	272	882	918	1.185	917	553	50.7	93.4	286.438	F
C - Dawley Road (S)	1405	351	411	1297	1.084	1292	1388	38.8	67.2	157.519	F
D - Kestral Way (SW)	99	25	1653	265	0.374	99	49	0.6	0.6	23.811	C
E - Betam Road (NW)	131	33	1700	490	0.268	131	52	0.4	0.4	11.034	B

### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	762	191	462	1938	0.393	764	1333	1.0	0.7	3.379	A
B - Blyth Road (E)	888	222	722	1016	0.874	1004	504	93.4	64.3	282.027	F
C - Dawley Road (S)	1147	287	442	1280	0.896	1259	1284	67.2	39.1	154.301	F
D - Kestral Way (SW)	81	20	1655	264	0.306	81	47	0.6	0.5	21.755	C
E - Betam Road (NW)	107	27	1687	497	0.215	107	49	0.4	0.3	10.161	B

### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	638	160	399	1987	0.321	639	1211	0.7	0.5	2.940	A
B - Blyth Road (E)	744	186	605	1088	0.684	991	434	64.3	2.7	92.010	F
C - Dawley Road (S)	961	240	433	1285	0.748	1103	1162	39.1	3.5	36.815	E
D - Kestral Way (SW)	68	17	1495	331	0.205	69	41	0.5	0.3	15.137	C
E - Betam Road (NW)	90	22	1520	599	0.150	90	44	0.3	0.2	7.785	A

## 2024 Baseline+Dev, AM

### Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Dawley Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A,B,C,D,E	262.79	F

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2024 Baseline+Dev	AM	ONE HOUR	07:45	09:15	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Dawley Road (N)		ONE HOUR	✓	1373	100.000
B - Blyth Road (E)		ONE HOUR	✓	628	100.000
C - Dawley Road (S)		ONE HOUR	✓	1583	100.000
D - Kestral Way (SW)		ONE HOUR	✓	46	100.000
E - Betam Road (NW)		ONE HOUR	✓	56	100.000

## Origin-Destination Data

## Demand (PCU/hr)

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	0	374	949	21	29
	B - Blyth Road (E)	195	0	414	3	16
	C - Dawley Road (S)	864	620	0	63	36
	D - Kestral Way (SW)	7	8	29	0	2
	E - Betam Road (NW)	20	9	27	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	10	10	10	10	10
	B - Blyth Road (E)	10	10	10	10	10
	C - Dawley Road (S)	10	10	10	10	10
	D - Kestral Way (SW)	10	10	10	10	10
	E - Betam Road (NW)	10	10	10	10	10

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Dawley Road (N)	0.83	12.79	5.2	B	1260	1890
B - Blyth Road (E)	0.93	53.99	9.7	F	576	864
C - Dawley Road (S)	1.28	578.65	226.8	F	1453	2179
D - Kestral Way (SW)	0.17	15.84	0.2	C	42	63
E - Betam Road (NW)	0.10	7.50	0.1	A	51	77

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1034	258	513	1897	0.545	1028	804	0.0	1.3	4.530	A
B - Blyth Road (E)	473	118	790	974	0.485	469	751	0.0	1.0	7.770	A
C - Dawley Road (S)	1192	298	197	1408	0.846	1170	1062	0.0	5.4	15.476	C
D - Kestral Way (SW)	35	9	1303	412	0.084	34	65	0.0	0.1	10.477	B
E - Betam Road (NW)	42	11	1275	748	0.056	42	62	0.0	0.1	5.605	A

#### 08:00 - 08:15



Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1234	309	592	1835	0.673	1231	932	1.3	2.2	6.510	A
B - Blyth Road (E)	565	141	946	879	0.642	561	877	1.0	1.9	12.306	B
C - Dawley Road (S)	1423	356	236	1388	1.025	1344	1271	5.4	25.2	52.756	F
D - Kestral Way (SW)	41	10	1505	327	0.126	41	75	0.1	0.2	13.835	B
E - Betam Road (NW)	50	13	1473	628	0.080	50	73	0.1	0.1	6.855	A

#### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1512	378	613	1818	0.831	1500	980	2.2	5.0	12.044	B
B - Blyth Road (E)	691	173	1153	752	0.919	667	961	1.9	7.9	38.889	E
C - Dawley Road (S)	1743	436	282	1364	1.278	1362	1538	25.2	120.5	201.193	F
D - Kestral Way (SW)	51	13	1563	303	0.167	50	80	0.2	0.2	15.685	C
E - Betam Road (NW)	62	15	1532	592	0.104	62	82	0.1	0.1	7.463	A

#### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1512	378	613	1819	0.831	1511	985	5.0	5.2	12.795	B
B - Blyth Road (E)	691	173	1161	747	0.925	684	963	7.9	9.7	53.993	F
C - Dawley Road (S)	1743	436	288	1360	1.281	1360	1557	120.5	216.2	449.020	F
D - Kestral Way (SW)	51	13	1568	301	0.168	51	81	0.2	0.2	15.837	C
E - Betam Road (NW)	62	15	1536	589	0.105	62	82	0.1	0.1	7.501	A

#### 08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1234	309	607	1824	0.677	1246	963	5.2	2.4	6.983	A
B - Blyth Road (E)	565	141	957	872	0.647	595	895	9.7	2.1	15.712	C
C - Dawley Road (S)	1423	356	248	1381	1.030	1381	1304	216.2	226.8	578.653	F
D - Kestral Way (SW)	41	10	1552	307	0.135	42	77	0.2	0.2	14.905	B
E - Betam Road (NW)	50	13	1519	600	0.084	50	75	0.1	0.1	7.208	A

#### 09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1034	258	603	1826	0.566	1037	932	2.4	1.5	5.041	A

B - Blyth Road (E)	473	118	797	970	0.48 7	477	844	2.1	1.1	8.094	A
C - Dawley Road (S)	1192	298	200	1406	0.84 7	1400	1074	226.8	174.9	517.19 8	F
D - Kestral Way (SW)	35	9	1526	318	0.10 9	35	74	0.2	0.1	13.977	B
E - Betam Road (NW)	42	11	1493	615	0.06 9	42	67	0.1	0.1	6.908	A

## 2024 Baseline+Dev, PM

### Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Dawley Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A,B,C,D,E	159.02	F

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2024 Baseline+Dev	PM	ONE HOUR	16:45	18:15	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Dawley Road (N)		ONE HOUR	✓	876	100.000
B - Blyth Road (E)		ONE HOUR	✓	988	100.000
C - Dawley Road (S)		ONE HOUR	✓	1282	100.000
D - Kestral Way (SW)		ONE HOUR	✓	90	100.000
E - Betam Road (NW)		ONE HOUR	✓	119	100.000

## Origin-Destination Data

## Demand (PCU/hr)

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	0	174	679	9	14
	B - Blyth Road (E)	401	0	574	2	11
	C - Dawley Road (S)	897	324	0	36	25
	D - Kestral Way (SW)	12	8	69	0	1
	E - Betam Road (NW)	39	22	57	1	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	10	10	10	10	10
	B - Blyth Road (E)	10	10	10	10	10
	C - Dawley Road (S)	10	10	10	10	10
	D - Kestral Way (SW)	10	10	10	10	10
	E - Betam Road (NW)	10	10	10	10	10

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Dawley Road (N)	0.51	4.20	1.1	A	804	1206
B - Blyth Road (E)	1.21	325.39	102.9	F	907	1360
C - Dawley Road (S)	1.09	159.84	68.5	F	1176	1765
D - Kestral Way (SW)	0.37	23.61	0.6	C	83	124
E - Betam Road (NW)	0.27	10.98	0.4	B	109	164

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	659	165	358	2019	0.327	657	1004	0.0	0.5	2.906	A
B - Blyth Road (E)	744	186	622	1078	0.690	734	394	0.0	2.4	11.244	B
C - Dawley Road (S)	965	241	326	1341	0.720	954	1030	0.0	2.7	9.983	A
D - Kestral Way (SW)	68	17	1244	436	0.155	67	36	0.0	0.2	10.698	B
E - Betam Road (NW)	90	22	1273	750	0.120	89	38	0.0	0.1	5.990	A

#### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	788	197	428	1964	0.401	787	1194	0.5	0.7	3.361	A
B - Blyth Road (E)	888	222	744	1003	0.886	871	470	2.4	6.8	26.960	D
C - Dawley Road (S)	1152	288	386	1309	0.880	1136	1228	2.7	6.8	21.104	C
D - Kestral Way (SW)	81	20	1480	338	0.240	80	43	0.2	0.3	15.361	C
E - Betam Road (NW)	107	27	1515	602	0.178	107	45	0.1	0.2	7.982	A

#### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	964	241	495	1911	0.505	963	1314	0.7	1.1	4.169	A
B - Blyth Road (E)	1088	272	910	901	1.208	893	548	6.8	55.5	139.113	F
C - Dawley Road (S)	1412	353	400	1302	1.084	1280	1403	6.8	39.6	77.390	F
D - Kestral Way (SW)	99	25	1632	274	0.362	98	49	0.3	0.6	22.393	C
E - Betam Road (NW)	131	33	1679	503	0.261	130	51	0.2	0.4	10.621	B

#### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	964	241	500	1907	0.506	964	1328	1.1	1.1	4.200	A
B - Blyth Road (E)	1088	272	913	899	1.209	899	552	55.5	102.9	318.757	F
C - Dawley Road (S)	1412	353	403	1301	1.085	1296	1408	39.6	68.5	159.845	F
D - Kestral Way (SW)	99	25	1650	266	0.372	99	49	0.6	0.6	23.609	C
E - Betam Road (NW)	131	33	1697	492	0.266	131	52	0.4	0.4	10.978	B

#### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	788	197	461	1938	0.406	789	1331	1.1	0.8	3.449	A
B - Blyth Road (E)	888	222	747	1001	0.887	990	503	102.9	77.4	325.394	F
C - Dawley Road (S)	1152	288	437	1283	0.898	1263	1301	68.5	40.9	158.313	F
D - Kestral Way (SW)	81	20	1653	265	0.305	81	46	0.6	0.5	21.633	C
E - Betam Road (NW)	107	27	1685	499	0.215	107	49	0.4	0.3	10.126	B

#### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	659	165	401	1985	0.332	660	1240	0.8	0.5	2.989	A

B - Blyth Road (E)	744	186	626	1075	0.69 2	1041	435	77.4	3.2	136.25 2	F
C - Dawley Road (S)	965	241	454	1274	0.75 8	1114	1212	40.9	3.8	42.572	E
D - Kestral Way (SW)	68	17	1527	318	0.21 3	69	41	0.5	0.3	15.931	C
E - Betam Road (NW)	90	22	1551	580	0.15 4	90	45	0.3	0.2	8.080	A

## 2029 Baseline, AM

### Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Dawley Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A,B,C,D,E	268.43	F

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2029 Baseline	AM	ONE HOUR	07:45	09:15	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Dawley Road (N)		ONE HOUR	✓	1410	100.000
B - Blyth Road (E)		ONE HOUR	✓	640	100.000
C - Dawley Road (S)		ONE HOUR	✓	1584	100.000
D - Kestral Way (SW)		ONE HOUR	✓	47	100.000
E - Betam Road (NW)		ONE HOUR	✓	58	100.000

## Origin-Destination Data

## Demand (PCU/hr)

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	0	379	979	22	30
	B - Blyth Road (E)	198	0	422	3	17
	C - Dawley Road (S)	854	629	0	64	37
	D - Kestral Way (SW)	7	8	30	0	2
	E - Betam Road (NW)	21	9	28	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	10	10	10	10	10
	B - Blyth Road (E)	10	10	10	10	10
	C - Dawley Road (S)	10	10	10	10	10
	D - Kestral Way (SW)	10	10	10	10	10
	E - Betam Road (NW)	10	10	10	10	10

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Dawley Road (N)	0.86	15.04	6.2	C	1294	1941
B - Blyth Road (E)	0.97	77.55	14.7	F	587	881
C - Dawley Road (S)	1.28	588.15	230.6	F	1454	2180
D - Kestral Way (SW)	0.17	15.91	0.2	C	43	65
E - Betam Road (NW)	0.11	7.52	0.1	A	53	80

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1062	265	521	1891	0.561	1056	800	0.0	1.4	4.711	A
B - Blyth Road (E)	482	120	815	959	0.502	477	761	0.0	1.1	8.153	A
C - Dawley Road (S)	1193	298	202	1406	0.848	1171	1091	0.0	5.5	15.636	C
D - Kestral Way (SW)	35	9	1306	410	0.086	35	66	0.0	0.1	10.536	B
E - Betam Road (NW)	44	11	1277	747	0.058	43	64	0.0	0.1	5.627	A

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1268	317	600	1829	0.693	1263	926	1.4	2.4	6.955	A
B - Blyth Road (E)	575	144	976	861	0.668	571	888	1.1	2.1	13.460	B
C - Dawley Road (S)	1424	356	241	1385	1.028	1343	1306	5.5	25.8	53.750	F
D - Kestral Way (SW)	42	11	1507	326	0.130	42	77	0.1	0.2	13.925	B
E - Betam Road (NW)	52	13	1474	627	0.083	52	75	0.1	0.1	6.881	A

#### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1552	388	622	1811	0.857	1538	971	2.4	6.0	13.833	B
B - Blyth Road (E)	705	176	1188	731	0.964	670	972	2.1	10.8	49.309	E
C - Dawley Road (S)	1744	436	285	1362	1.280	1360	1573	25.8	121.8	203.822	F
D - Kestral Way (SW)	52	13	1563	303	0.171	52	82	0.2	0.2	15.748	C
E - Betam Road (NW)	64	16	1530	593	0.108	64	84	0.1	0.1	7.478	A

#### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1552	388	622	1812	0.857	1551	976	6.0	6.2	15.043	C
B - Blyth Road (E)	705	176	1198	725	0.972	689	975	10.8	14.7	77.547	F
C - Dawley Road (S)	1744	436	292	1359	1.284	1358	1595	121.8	218.2	454.339	F
D - Kestral Way (SW)	52	13	1568	301	0.172	52	82	0.2	0.2	15.906	C
E - Betam Road (NW)	64	16	1534	590	0.108	64	85	0.1	0.1	7.518	A

#### 08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1268	317	613	1818	0.697	1282	959	6.2	2.6	7.579	A
B - Blyth Road (E)	575	144	990	852	0.675	624	906	14.7	2.4	20.813	C
C - Dawley Road (S)	1424	356	260	1375	1.035	1374	1354	218.2	230.6	588.149	F
D - Kestral Way (SW)	42	11	1556	306	0.138	42	78	0.2	0.2	15.055	C
E - Betam Road (NW)	52	13	1521	599	0.087	52	78	0.1	0.1	7.247	A

#### 09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1062	265	611	1820	0.583	1066	925	2.6	1.6	5.280	A

B - Blyth Road (E)	482	120	823	954	0.50 5	487	854	2.4	1.1	8.561	A
C - Dawley Road (S)	1193	298	205	1404	0.84 9	1397	1105	230.6	179.4	528.73 6	F
D - Kestral Way (SW)	35	9	1527	318	0.11 1	36	75	0.2	0.1	14.037	B
E - Betam Road (NW)	44	11	1493	616	0.07 1	44	70	0.1	0.1	6.924	A

## 2029 Baseline , PM

### Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Dawley Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A,B,C,D,E	179.94	F

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2029 Baseline	PM	ONE HOUR	16:45	18:15	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Dawley Road (N)		ONE HOUR	✓	867	100.000
B - Blyth Road (E)		ONE HOUR	✓	1002	100.000
C - Dawley Road (S)		ONE HOUR	✓	1305	100.000
D - Kestral Way (SW)		ONE HOUR	✓	92	100.000
E - Betam Road (NW)		ONE HOUR	✓	122	100.000

## Origin-Destination Data



## Demand (PCU/hr)

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	0	177	667	9	14
	B - Blyth Road (E)	404	0	585	2	11
	C - Dawley Road (S)	912	331	0	37	25
	D - Kestral Way (SW)	12	8	71	0	1
	E - Betam Road (NW)	40	23	58	1	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	10	10	10	10	10
	B - Blyth Road (E)	10	10	10	10	10
	C - Dawley Road (S)	10	10	10	10	10
	D - Kestral Way (SW)	10	10	10	10	10
	E - Betam Road (NW)	10	10	10	10	10

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Dawley Road (N)	0.50	4.18	1.1	A	796	1193
B - Blyth Road (E)	1.22	343.92	107.8	F	919	1379
C - Dawley Road (S)	1.10	197.59	80.5	F	1197	1796
D - Kestral Way (SW)	0.38	23.99	0.7	C	84	127
E - Betam Road (NW)	0.27	11.15	0.4	B	112	168

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	653	163	366	2012	0.324	651	1018	0.0	0.5	2.905	A
B - Blyth Road (E)	754	189	615	1082	0.697	745	402	0.0	2.4	11.443	B
C - Dawley Road (S)	982	246	328	1340	0.733	971	1031	0.0	2.9	10.433	B
D - Kestral Way (SW)	69	17	1262	429	0.162	68	37	0.0	0.2	10.963	B
E - Betam Road (NW)	92	23	1293	738	0.125	91	38	0.0	0.2	6.121	A

#### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	779	195	437	1957	0.398	779	1209	0.5	0.7	3.358	A
B - Blyth Road (E)	901	225	736	1008	0.894	882	479	2.4	7.2	28.022	D
C - Dawley Road (S)	1173	293	389	1308	0.897	1154	1229	2.9	7.7	23.229	C
D - Kestral Way (SW)	83	21	1499	330	0.251	82	43	0.2	0.4	15.966	C
E - Betam Road (NW)	110	27	1536	590	0.186	109	45	0.2	0.2	8.233	A

#### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	955	239	502	1906	0.501	953	1317	0.7	1.1	4.143	A
B - Blyth Road (E)	1103	276	901	907	1.217	899	554	7.2	58.1	143.937	F
C - Dawley Road (S)	1437	359	401	1302	1.104	1285	1399	7.7	45.7	86.732	F
D - Kestral Way (SW)	101	25	1636	272	0.372	100	49	0.4	0.6	22.757	C
E - Betam Road (NW)	134	34	1686	498	0.269	134	51	0.2	0.4	10.837	B

#### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	955	239	506	1903	0.502	955	1329	1.1	1.1	4.177	A
B - Blyth Road (E)	1103	276	903	906	1.218	905	558	58.1	107.8	330.781	F
C - Dawley Road (S)	1437	359	403	1301	1.105	1297	1404	45.7	80.5	184.428	F
D - Kestral Way (SW)	101	25	1651	266	0.381	101	50	0.6	0.7	23.990	C
E - Betam Road (NW)	134	34	1701	489	0.275	134	51	0.4	0.4	11.151	B

#### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	779	195	467	1934	0.403	781	1333	1.1	0.7	3.441	A
B - Blyth Road (E)	901	225	739	1006	0.896	996	509	107.8	84.1	343.922	F
C - Dawley Road (S)	1173	293	436	1283	0.914	1266	1299	80.5	57.3	197.586	F
D - Kestral Way (SW)	83	21	1655	264	0.313	83	47	0.7	0.5	21.969	C
E - Betam Road (NW)	110	27	1690	496	0.221	110	49	0.4	0.3	10.271	B

#### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	653	163	425	1967	0.332	654	1303	0.7	0.5	3.019	A

B - Blyth Road (E)	754	189	619	1079	0.69 9	1065	460	84.1	6.3	158.91 6	F
C - Dawley Road (S)	982	246	461	1270	0.77 4	1194	1223	57.3	4.5	81.031	F
D - Kestral Way (SW)	69	17	1612	282	0.24 5	70	44	0.5	0.4	18.697	C
E - Betam Road (NW)	92	23	1636	529	0.17 4	92	46	0.3	0.2	9.077	A

## 2029 Baseline+Dev, AM

### Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Dawley Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A,B,C,D,E	294.76	F

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2029 Baseline+Dev	AM	ONE HOUR	07:45	09:15	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Dawley Road (N)		ONE HOUR	✓	1400	100.000
B - Blyth Road (E)		ONE HOUR	✓	640	100.000
C - Dawley Road (S)		ONE HOUR	✓	1611	100.000
D - Kestral Way (SW)		ONE HOUR	✓	47	100.000
E - Betam Road (NW)		ONE HOUR	✓	58	100.000

## Origin-Destination Data

## Demand (PCU/hr)

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	0	379	969	22	30
	B - Blyth Road (E)	198	0	422	3	17
	C - Dawley Road (S)	881	629	0	64	37
	D - Kestral Way (SW)	7	8	30	0	2
	E - Betam Road (NW)	21	9	28	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	10	10	10	10	10
	B - Blyth Road (E)	10	10	10	10	10
	C - Dawley Road (S)	10	10	10	10	10
	D - Kestral Way (SW)	10	10	10	10	10
	E - Betam Road (NW)	10	10	10	10	10

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Dawley Road (N)	0.85	14.10	5.8	B	1285	1927
B - Blyth Road (E)	0.96	72.32	13.5	F	587	881
C - Dawley Road (S)	1.31	645.51	255.8	F	1478	2217
D - Kestral Way (SW)	0.17	15.94	0.2	C	43	65
E - Betam Road (NW)	0.11	7.53	0.1	A	53	80

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1054	263	520	1892	0.557	1049	819	0.0	1.4	4.668	A
B - Blyth Road (E)	482	120	808	964	0.500	478	761	0.0	1.1	8.079	A
C - Dawley Road (S)	1213	303	202	1406	0.863	1189	1084	0.0	6.0	16.751	C
D - Kestral Way (SW)	35	9	1324	403	0.088	35	66	0.0	0.1	10.755	B
E - Betam Road (NW)	44	11	1295	736	0.059	43	64	0.0	0.1	5.713	A

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1259	315	595	1833	0.687	1255	941	1.4	2.4	6.800	A
B - Blyth Road (E)	575	144	967	866	0.664	571	882	1.1	2.1	13.248	B
C - Dawley Road (S)	1448	362	241	1385	1.046	1351	1297	6.0	30.3	60.442	F
D - Kestral Way (SW)	42	11	1516	322	0.131	42	76	0.1	0.2	14.112	B
E - Betam Road (NW)	52	13	1483	622	0.084	52	75	0.1	0.1	6.949	A

#### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1541	385	613	1818	0.848	1528	983	2.4	5.6	13.105	B
B - Blyth Road (E)	705	176	1178	737	0.956	672	964	2.1	10.2	47.166	E
C - Dawley Road (S)	1774	443	286	1362	1.303	1360	1565	30.3	133.7	225.227	F
D - Kestral Way (SW)	52	13	1565	302	0.171	52	81	0.2	0.2	15.793	C
E - Betam Road (NW)	64	16	1532	592	0.108	64	84	0.1	0.1	7.497	A

#### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1541	385	613	1819	0.847	1541	987	5.6	5.8	14.100	B
B - Blyth Road (E)	705	176	1187	731	0.963	691	966	10.2	13.5	72.320	F
C - Dawley Road (S)	1774	443	293	1358	1.306	1358	1586	133.7	237.7	495.431	F
D - Kestral Way (SW)	52	13	1569	300	0.172	52	81	0.2	0.2	15.941	C
E - Betam Road (NW)	64	16	1536	589	0.108	64	85	0.1	0.1	7.534	A

#### 08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1259	315	605	1825	0.690	1272	969	5.8	2.5	7.323	A
B - Blyth Road (E)	575	144	980	858	0.670	620	897	13.5	2.4	19.510	C
C - Dawley Road (S)	1448	362	258	1376	1.053	1376	1342	237.7	255.8	645.507	F
D - Kestral Way (SW)	42	11	1556	305	0.138	42	78	0.2	0.2	15.067	C
E - Betam Road (NW)	52	13	1522	598	0.087	52	77	0.1	0.1	7.254	A

#### 09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1054	263	602	1827	0.577	1058	936	2.5	1.5	5.177	A

B - Blyth Road (E)	482	120	815	959	0.50 2	487	845	2.4	1.1	8.468	A
C - Dawley Road (S)	1213	303	205	1404	0.86 4	1398	1097	255.8	209.6	599.72 8	F
D - Kestral Way (SW)	35	9	1529	317	0.11 2	36	74	0.2	0.1	14.066	B
E - Betam Road (NW)	44	11	1495	615	0.07 1	44	69	0.1	0.1	6.940	A

## 2029 Baseline+Dev, PM

### Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Dawley Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A,B,C,D,E	194.18	F

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2029 Baseline+Dev	PM	ONE HOUR	16:45	18:15	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Dawley Road (N)		ONE HOUR	✓	895	100.000
B - Blyth Road (E)		ONE HOUR	✓	1002	100.000
C - Dawley Road (S)		ONE HOUR	✓	1312	100.000
D - Kestral Way (SW)		ONE HOUR	✓	92	100.000
E - Betam Road (NW)		ONE HOUR	✓	122	100.000

## Origin-Destination Data

## Demand (PCU/hr)

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	0	177	695	9	14
	B - Blyth Road (E)	404	0	585	2	11
	C - Dawley Road (S)	918	331	0	37	26
	D - Kestral Way (SW)	12	8	71	0	1
	E - Betam Road (NW)	40	23	58	1	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	10	10	10	10	10
	B - Blyth Road (E)	10	10	10	10	10
	C - Dawley Road (S)	10	10	10	10	10
	D - Kestral Way (SW)	10	10	10	10	10
	E - Betam Road (NW)	10	10	10	10	10

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Dawley Road (N)	0.52	4.31	1.2	A	821	1232
B - Blyth Road (E)	1.24	389.55	117.5	F	919	1379
C - Dawley Road (S)	1.11	203.46	82.5	F	1204	1806
D - Kestral Way (SW)	0.38	23.79	0.7	C	84	127
E - Betam Road (NW)	0.27	11.07	0.4	B	112	168

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	674	168	366	2012	0.335	672	1022	0.0	0.6	2.948	A
B - Blyth Road (E)	754	189	636	1069	0.706	744	402	0.0	2.5	11.859	B
C - Dawley Road (S)	988	247	328	1340	0.737	976	1052	0.0	3.0	10.567	B
D - Kestral Way (SW)	69	17	1267	427	0.162	68	37	0.0	0.2	11.026	B
E - Betam Road (NW)	92	23	1297	735	0.125	91	39	0.0	0.2	6.145	A

#### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	805	201	436	1957	0.411	804	1212	0.6	0.8	3.431	A
B - Blyth Road (E)	901	225	761	992	0.908	879	479	2.5	7.9	30.518	D
C - Dawley Road (S)	1179	295	388	1309	0.901	1160	1253	3.0	7.9	23.840	C
D - Kestral Way (SW)	83	21	1504	328	0.252	82	43	0.2	0.4	16.085	C
E - Betam Road (NW)	110	27	1540	587	0.187	109	46	0.2	0.2	8.277	A

#### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	985	246	501	1906	0.517	984	1315	0.8	1.2	4.285	A
B - Blyth Road (E)	1103	276	931	888	1.242	882	554	7.9	63.2	158.193	F
C - Dawley Road (S)	1445	361	393	1306	1.106	1289	1420	7.9	46.7	88.285	F
D - Kestral Way (SW)	101	25	1634	273	0.371	100	49	0.4	0.6	22.761	C
E - Betam Road (NW)	134	34	1682	501	0.268	134	52	0.2	0.4	10.778	B

#### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	985	246	506	1903	0.518	985	1325	1.2	1.2	4.314	A
B - Blyth Road (E)	1103	276	934	887	1.244	886	557	63.2	117.5	365.292	F
C - Dawley Road (S)	1445	361	395	1305	1.107	1302	1424	46.7	82.5	187.965	F
D - Kestral Way (SW)	101	25	1647	267	0.379	101	49	0.6	0.7	23.786	C
E - Betam Road (NW)	134	34	1696	492	0.273	134	52	0.4	0.4	11.072	B

#### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	805	201	466	1934	0.416	806	1331	1.2	0.8	3.514	A
B - Blyth Road (E)	901	225	764	990	0.910	981	508	117.5	97.4	389.553	F
C - Dawley Road (S)	1179	295	430	1286	0.917	1270	1315	82.5	60.0	203.465	F
D - Kestral Way (SW)	83	21	1653	265	0.312	83	47	0.7	0.5	21.845	C
E - Betam Road (NW)	110	27	1687	498	0.220	110	49	0.4	0.3	10.222	B

#### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	674	168	427	1965	0.343	675	1310	0.8	0.6	3.070	A



<b>B - Blyth Road (E)</b>	754	189	640	1066	0.70 7	1055	462	97.4	22.4	208.89 7	F
<b>C - Dawley Road (S)</b>	988	247	457	1272	0.77 6	1209	1237	60.0	4.7	88.007	F
<b>D - Kestral Way (SW)</b>	69	17	1622	278	0.24 9	70	44	0.5	0.4	19.079	C
<b>E - Betam Road (NW)</b>	92	23	1645	523	0.17 6	92	47	0.3	0.2	9.197	A

# Junctions 9

## ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []  
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**Filename:** Dawley Road-Blyth Road-Betam Road-Kestrel Way Rb OVF mitigation.j9  
**Path:** C:\Users\Demetris Psyllides\Dropbox (Markides Associates)\Markides Associates Team Folder\Projects\16018.01 - Former Nestle Site, Hayes\Technical\Arcady\2024 Cumulative  
**Report generation date:** 24/01/2017 10:16:26

- »2024 Baseline, AM
- »2024 Baseline , PM
- »2024 Baseline+Dev, AM
- »2024 Baseline+Dev, PM

### Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2024 Baseline								
A - Dawley Road (N)	5.7	13.75	0.84	B	1.1	4.15	0.50	A
B - Blyth Road (E)	11.0	60.95	0.94	F	100.1	312.81	1.20	F
C - Dawley Road (S)	219.5	561.99	1.27	F	73.1	173.42	1.09	F
D - Kestrel Way (SW)	0.2	15.82	0.17	C	0.6	23.73	0.37	C
E - Betam Road (NW)	0.1	7.49	0.10	A	0.4	11.02	0.27	B
2024 Baseline+Dev								
A - Dawley Road (N)	5.8	14.06	0.85	B	1.2	4.29	0.52	A
B - Blyth Road (E)	12.2	66.91	0.95	F	111.1	364.09	1.23	F
C - Dawley Road (S)	251.0	633.41	1.30	F	85.4	213.26	1.11	F
D - Kestrel Way (SW)	0.2	15.84	0.17	C	0.6	23.59	0.37	C
E - Betam Road (NW)	0.1	7.51	0.10	A	0.4	10.98	0.27	B

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

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

### File summary

#### File Description

<b>Title</b>	Site 4 Base Model
<b>Location</b>	Hayes and Harlington
<b>Site number</b>	
<b>Date</b>	17/07/2012
<b>Version</b>	

Status	Draft 1
Identifier	
Client	
Jobnumber	VN50026
Enumerator	rhussain [IE-D00135]
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	-Hour	perHour

## Analysis Options

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

## Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2024 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D7	2024 Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D8	2024 Baseline+Dev	AM	ONE HOUR	07:45	09:15	15	✓
D9	2024 Baseline+Dev	PM	ONE HOUR	16:45	18:15	15	✓

## Analysis Set Details

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

# 2024 Baseline, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Dawley Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A,B,C,D,E	255.33	F

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description
A	Dawley Road (N)	
B	Blyth Road (E)	
C	Dawley Road (S)	
D	Kestral Way (SW)	
E	Betam Road (NW)	

## 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
A - Dawley Road (N)	3.90	9.00	33.0	17.5	34.7	17.0	
B - Blyth Road (E)	3.29	8.50	6.0	15.0	35.0	16.5	
C - Dawley Road (S)	4.97	9.46	13.0	3.0	34.7	36.0	
D - Kestral Way (SW)	3.90	4.66	3.2	3.0	34.0	28.0	
E - Betam Road (NW)	3.60	7.70	8.0	8.2	35.0	16.5	

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Dawley Road (N)	0.785	2300
B - Blyth Road (E)	0.612	1458
C - Dawley Road (S)	0.522	1511
D - Kestral Way (SW)	0.419	958
E - Betam Road (NW)	0.609	1525

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

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2024 Baseline	AM	ONE HOUR	07:45	09:15	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Dawley Road (N)		ONE HOUR	✓	1391	100.000
B - Blyth Road (E)		ONE HOUR	✓	628	100.000
C - Dawley Road (S)		ONE HOUR	✓	1575	100.000
D - Kestral Way (SW)		ONE HOUR	✓	46	100.000
E - Betam Road (NW)		ONE HOUR	✓	56	100.000

## Origin-Destination Data

## Demand (PCU/hr)

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	0	374	967	21	29
	B - Blyth Road (E)	195	0	414	3	16
	C - Dawley Road (S)	856	620	0	63	36
	D - Kestral Way (SW)	7	8	29	0	2
	E - Betam Road (NW)	20	9	27	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	10	10	10	10	10
	B - Blyth Road (E)	10	10	10	10	10
	C - Dawley Road (S)	10	10	10	10	10
	D - Kestral Way (SW)	10	10	10	10	10
	E - Betam Road (NW)	10	10	10	10	10

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Dawley Road (N)	0.84	13.75	5.7	B	1276	1915
B - Blyth Road (E)	0.94	60.95	11.0	F	576	864
C - Dawley Road (S)	1.27	561.99	219.5	F	1445	2168
D - Kestral Way (SW)	0.17	15.82	0.2	C	42	63
E - Betam Road (NW)	0.10	7.49	0.1	A	51	77

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1047	262	513	1897	0.552	1042	799	0.0	1.3	4.601	A
B - Blyth Road (E)	473	118	804	966	0.489	469	751	0.0	1.0	7.895	A
C - Dawley Road (S)	1186	296	197	1408	0.842	1165	1075	0.0	5.3	15.174	C
D - Kestral Way (SW)	35	9	1297	414	0.084	34	65	0.0	0.1	10.413	B
E - Betam Road (NW)	42	11	1270	752	0.056	42	62	0.0	0.1	5.578	A

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1250	313	593	1834	0.682	1247	927	1.3	2.3	6.696	A
B - Blyth Road (E)	565	141	962	869	0.649	561	878	1.0	2.0	12.678	B
C - Dawley Road (S)	1416	354	236	1388	1.020	1341	1287	5.3	24.0	50.911	F
D - Kestral Way (SW)	41	10	1502	328	0.126	41	75	0.1	0.2	13.772	B
E - Betam Road (NW)	50	13	1470	630	0.080	50	73	0.1	0.1	6.833	A

#### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1532	383	616	1816	0.843	1519	976	2.3	5.4	12.814	B
B - Blyth Road (E)	691	173	1172	741	0.933	664	963	2.0	8.7	42.089	E
C - Dawley Road (S)	1734	434	281	1364	1.271	1362	1555	24.0	117.0	195.011	F
D - Kestral Way (SW)	51	13	1562	303	0.167	50	81	0.2	0.2	15.663	C
E - Betam Road (NW)	62	15	1531	593	0.104	62	82	0.1	0.1	7.454	A

#### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1532	383	616	1816	0.843	1531	981	5.4	5.7	13.747	B
B - Blyth Road (E)	691	173	1181	735	0.940	682	966	8.7	11.0	60.948	F
C - Dawley Road (S)	1734	434	288	1361	1.274	1361	1576	117.0	210.4	436.876	F
D - Kestral Way (SW)	51	13	1567	301	0.168	51	81	0.2	0.2	15.820	C
E - Betam Road (NW)	62	15	1535	590	0.105	62	83	0.1	0.1	7.495	A

#### 08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1250	313	609	1822	0.686	1263	960	5.7	2.5	7.245	A
B - Blyth Road (E)	565	141	974	862	0.655	600	898	11.0	2.2	16.983	C
C - Dawley Road (S)	1416	354	250	1381	1.026	1380	1324	210.4	219.5	561.994	F
D - Kestral Way (SW)	41	10	1552	307	0.135	42	77	0.2	0.2	14.914	B
E - Betam Road (NW)	50	13	1519	600	0.084	50	75	0.1	0.1	7.206	A

#### 09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1047	262	606	1824	0.574	1051	929	2.5	1.5	5.149	A

B - Blyth Road (E)	473	118	811	962	0.49 2	477	846	2.2	1.1	8.243	A
C - Dawley Road (S)	1186	296	200	1406	0.84 3	1399	1088	219.5	166.1	496.61 8	F
D - Kestral Way (SW)	35	9	1526	318	0.10 9	35	74	0.2	0.1	13.967	B
E - Betam Road (NW)	42	11	1493	616	0.06 8	42	68	0.1	0.1	6.906	A

## 2024 Baseline , PM

### Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Dawley Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A,B,C,D,E	160.90	F

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2024 Baseline	PM	ONE HOUR	16:45	18:15	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Dawley Road (N)		ONE HOUR	✓	868	100.000
B - Blyth Road (E)		ONE HOUR	✓	988	100.000
C - Dawley Road (S)		ONE HOUR	✓	1290	100.000
D - Kestral Way (SW)		ONE HOUR	✓	90	100.000
E - Betam Road (NW)		ONE HOUR	✓	119	100.000

## Origin-Destination Data

## Demand (PCU/hr)

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	0	174	671	9	14
	B - Blyth Road (E)	401	0	574	2	11
	C - Dawley Road (S)	905	324	0	36	25
	D - Kestral Way (SW)	12	8	69	0	1
	E - Betam Road (NW)	39	22	57	1	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	10	10	10	10	10
	B - Blyth Road (E)	10	10	10	10	10
	C - Dawley Road (S)	10	10	10	10	10
	D - Kestral Way (SW)	10	10	10	10	10
	E - Betam Road (NW)	10	10	10	10	10

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Dawley Road (N)	0.50	4.15	1.1	A	796	1195
B - Blyth Road (E)	1.20	312.81	100.1	F	907	1360
C - Dawley Road (S)	1.09	173.42	73.1	F	1184	1776
D - Kestral Way (SW)	0.37	23.73	0.6	C	83	124
E - Betam Road (NW)	0.27	11.02	0.4	B	109	164

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	653	163	358	2019	0.324	651	1010	0.0	0.5	2.893	A
B - Blyth Road (E)	744	186	616	1081	0.688	734	394	0.0	2.3	11.143	B
C - Dawley Road (S)	971	243	326	1341	0.724	960	1024	0.0	2.8	10.127	B
D - Kestral Way (SW)	68	17	1250	434	0.156	67	36	0.0	0.2	10.766	B
E - Betam Road (NW)	90	22	1279	746	0.120	89	38	0.0	0.1	6.022	A

#### 17:00 - 17:15



Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	780	195	427	1964	0.397	780	1201	0.5	0.7	3.340	A
B - Blyth Road (E)	888	222	737	1007	0.882	871	470	2.3	6.6	26.342	D
C - Dawley Road (S)	1160	290	387	1309	0.886	1143	1221	2.8	7.1	21.781	C
D - Kestral Way (SW)	81	20	1486	335	0.242	80	43	0.2	0.3	15.524	C
E - Betam Road (NW)	107	27	1522	598	0.179	107	45	0.1	0.2	8.047	A

#### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	956	239	493	1913	0.500	954	1319	0.7	1.1	4.126	A
B - Blyth Road (E)	1088	272	902	906	1.200	898	546	6.6	54.2	135.335	F
C - Dawley Road (S)	1420	355	402	1301	1.092	1281	1397	7.1	41.9	80.884	F
D - Kestral Way (SW)	99	25	1635	273	0.364	98	49	0.3	0.6	22.555	C
E - Betam Road (NW)	131	33	1682	501	0.262	130	51	0.2	0.4	10.676	B

#### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	956	239	498	1909	0.501	956	1332	1.1	1.1	4.153	A
B - Blyth Road (E)	1088	272	904	905	1.202	904	550	54.2	100.1	309.345	F
C - Dawley Road (S)	1420	355	405	1299	1.093	1295	1402	41.9	73.1	169.317	F
D - Kestral Way (SW)	99	25	1652	266	0.373	99	49	0.6	0.6	23.725	C
E - Betam Road (NW)	131	33	1699	490	0.267	131	52	0.4	0.4	11.016	B

#### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	780	195	459	1940	0.402	782	1336	1.1	0.7	3.423	A
B - Blyth Road (E)	888	222	740	1005	0.884	994	501	100.1	73.6	312.813	F
C - Dawley Road (S)	1160	290	438	1282	0.904	1263	1296	73.1	47.2	173.417	F
D - Kestral Way (SW)	81	20	1655	264	0.306	81	46	0.6	0.5	21.745	C
E - Betam Road (NW)	107	27	1688	497	0.215	107	49	0.4	0.3	10.166	B

#### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	653	163	407	1981	0.330	654	1258	0.7	0.5	2.986	A

B - Blyth Road (E)	744	186	619	1079	0.68 9	1027	441	73.6	2.9	123.03 9	F
C - Dawley Road (S)	971	243	448	1277	0.76 1	1145	1198	47.2	3.9	54.248	F
D - Kestral Way (SW)	68	17	1551	308	0.22 0	68	42	0.5	0.3	16.605	C
E - Betam Road (NW)	90	22	1575	566	0.15 8	90	45	0.3	0.2	8.326	A

## 2024 Baseline+Dev, AM

### Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Dawley Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A,B,C,D,E	289.02	F

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2024 Baseline+Dev	AM	ONE HOUR	07:45	09:15	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Dawley Road (N)		ONE HOUR	✓	1405	100.000
B - Blyth Road (E)		ONE HOUR	✓	628	100.000
C - Dawley Road (S)		ONE HOUR	✓	1609	100.000
D - Kestral Way (SW)		ONE HOUR	✓	46	100.000
E - Betam Road (NW)		ONE HOUR	✓	56	100.000

## Origin-Destination Data

## Demand (PCU/hr)

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	0	374	981	21	29
	B - Blyth Road (E)	195	0	414	3	16
	C - Dawley Road (S)	890	620	0	63	36
	D - Kestral Way (SW)	7	8	29	0	2
	E - Betam Road (NW)	20	9	27	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	10	10	10	10	10
	B - Blyth Road (E)	10	10	10	10	10
	C - Dawley Road (S)	10	10	10	10	10
	D - Kestral Way (SW)	10	10	10	10	10
	E - Betam Road (NW)	10	10	10	10	10

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Dawley Road (N)	0.85	14.06	5.8	B	1289	1934
B - Blyth Road (E)	0.95	66.91	12.2	F	576	864
C - Dawley Road (S)	1.30	633.41	251.0	F	1476	2215
D - Kestral Way (SW)	0.17	15.84	0.2	C	42	63
E - Betam Road (NW)	0.10	7.51	0.1	A	51	77

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1058	264	512	1898	0.557	1052	823	0.0	1.4	4.654	A
B - Blyth Road (E)	473	118	814	960	0.493	469	750	0.0	1.0	7.995	A
C - Dawley Road (S)	1211	303	197	1408	0.860	1188	1085	0.0	5.9	16.527	C
D - Kestral Way (SW)	35	9	1320	404	0.086	34	64	0.0	0.1	10.683	B
E - Betam Road (NW)	42	11	1293	738	0.057	42	62	0.0	0.1	5.691	A

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1263	316	586	1840	0.687	1259	946	1.4	2.4	6.777	A
B - Blyth Road (E)	565	141	974	862	0.655	561	871	1.0	2.0	12.987	B
C - Dawley Road (S)	1446	362	236	1388	1.042	1352	1299	5.9	29.5	59.068	F
D - Kestral Way (SW)	41	10	1514	323	0.128	41	74	0.1	0.2	14.016	B
E - Betam Road (NW)	50	13	1483	622	0.081	50	72	0.1	0.1	6.922	A

#### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1547	387	605	1825	0.848	1534	989	2.4	5.6	13.067	B
B - Blyth Road (E)	691	173	1187	732	0.945	662	952	2.0	9.4	44.897	E
C - Dawley Road (S)	1772	443	280	1365	1.298	1363	1569	29.5	131.6	220.855	F
D - Kestral Way (SW)	51	13	1564	302	0.167	50	79	0.2	0.2	15.699	C
E - Betam Road (NW)	62	15	1533	591	0.104	62	81	0.1	0.1	7.472	A

#### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1547	387	605	1825	0.848	1546	994	5.6	5.8	14.062	B
B - Blyth Road (E)	691	173	1196	726	0.952	680	955	9.4	12.2	66.914	F
C - Dawley Road (S)	1772	443	287	1361	1.301	1361	1590	131.6	234.2	486.968	F
D - Kestral Way (SW)	51	13	1568	301	0.169	51	80	0.2	0.2	15.843	C
E - Betam Road (NW)	62	15	1537	589	0.105	62	82	0.1	0.1	7.508	A

#### 08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1263	316	597	1831	0.690	1276	975	5.8	2.5	7.303	A
B - Blyth Road (E)	565	141	987	854	0.661	604	887	12.2	2.3	18.208	C
C - Dawley Road (S)	1446	362	251	1380	1.048	1379	1340	234.2	251.0	633.408	F
D - Kestral Way (SW)	41	10	1555	306	0.135	42	76	0.2	0.2	14.971	B
E - Betam Road (NW)	50	13	1522	598	0.084	50	74	0.1	0.1	7.229	A

#### 09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1058	264	595	1833	0.577	1062	943	2.5	1.5	5.161	A

B - Blyth Road (E)	473	118	821	955	0.49 5	477	835	2.3	1.1	8.363	A
C - Dawley Road (S)	1211	303	200	1406	0.86 1	1400	1098	251.0	203.8	585.18 1	F
D - Kestral Way (SW)	35	9	1528	318	0.10 9	35	73	0.2	0.1	14.013	B
E - Betam Road (NW)	42	11	1496	614	0.06 9	42	67	0.1	0.1	6.924	A

## 2024 Baseline+Dev, PM

### Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Dawley Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A,B,C,D,E	189.77	F

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2024 Baseline+Dev	PM	ONE HOUR	16:45	18:15	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Dawley Road (N)		ONE HOUR	✓	900	100.000
B - Blyth Road (E)		ONE HOUR	✓	988	100.000
C - Dawley Road (S)		ONE HOUR	✓	1317	100.000
D - Kestral Way (SW)		ONE HOUR	✓	90	100.000
E - Betam Road (NW)		ONE HOUR	✓	119	100.000

## Origin-Destination Data

## Demand (PCU/hr)

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	0	174	703	9	14
	B - Blyth Road (E)	401	0	574	2	11
	C - Dawley Road (S)	932	324	0	36	25
	D - Kestral Way (SW)	12	8	69	0	1
	E - Betam Road (NW)	39	22	57	1	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	10	10	10	10	10
	B - Blyth Road (E)	10	10	10	10	10
	C - Dawley Road (S)	10	10	10	10	10
	D - Kestral Way (SW)	10	10	10	10	10
	E - Betam Road (NW)	10	10	10	10	10

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Dawley Road (N)	0.52	4.29	1.2	A	826	1239
B - Blyth Road (E)	1.23	364.09	111.1	F	907	1360
C - Dawley Road (S)	1.11	213.26	85.4	F	1209	1813
D - Kestral Way (SW)	0.37	23.59	0.6	C	83	124
E - Betam Road (NW)	0.27	10.98	0.4	B	109	164

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	678	169	358	2019	0.336	675	1029	0.0	0.6	2.942	A
B - Blyth Road (E)	744	186	639	1067	0.697	734	394	0.0	2.4	11.597	B
C - Dawley Road (S)	992	248	326	1341	0.739	980	1048	0.0	3.0	10.636	B
D - Kestral Way (SW)	68	17	1269	426	0.159	67	36	0.0	0.2	11.009	B
E - Betam Road (NW)	90	22	1298	734	0.122	89	38	0.0	0.2	6.132	A

#### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	809	202	427	1965	0.412	808	1222	0.6	0.8	3.422	A
B - Blyth Road (E)	888	222	766	989	0.898	869	469	2.4	7.3	28.964	D
C - Dawley Road (S)	1184	296	386	1310	0.904	1163	1249	3.0	8.1	24.214	C
D - Kestral Way (SW)	81	20	1506	326	0.248	80	43	0.2	0.4	16.050	C
E - Betam Road (NW)	107	27	1542	586	0.183	107	45	0.2	0.2	8.252	A

#### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	991	248	489	1916	0.517	989	1325	0.8	1.2	4.266	A
B - Blyth Road (E)	1088	272	937	885	1.230	878	541	7.3	59.8	151.007	F
C - Dawley Road (S)	1450	363	394	1305	1.111	1290	1420	8.1	48.2	90.454	F
D - Kestral Way (SW)	99	25	1636	272	0.364	98	48	0.4	0.6	22.608	C
E - Betam Road (NW)	131	33	1683	500	0.262	130	51	0.2	0.4	10.703	B

#### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	991	248	493	1913	0.518	991	1335	1.2	1.2	4.294	A
B - Blyth Road (E)	1088	272	939	883	1.232	883	545	59.8	111.1	347.950	F
C - Dawley Road (S)	1450	363	396	1304	1.112	1301	1425	48.2	85.4	193.935	F
D - Kestral Way (SW)	99	25	1649	267	0.372	99	48	0.6	0.6	23.590	C
E - Betam Road (NW)	131	33	1697	491	0.267	131	51	0.4	0.4	10.984	B

#### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	809	202	454	1943	0.416	811	1341	1.2	0.8	3.499	A
B - Blyth Road (E)	888	222	769	988	0.899	978	496	111.1	88.7	364.091	F
C - Dawley Road (S)	1184	296	431	1286	0.921	1269	1315	85.4	64.0	213.257	F
D - Kestral Way (SW)	81	20	1655	264	0.306	81	46	0.6	0.5	21.742	C
E - Betam Road (NW)	107	27	1688	497	0.215	107	48	0.4	0.3	10.174	B

#### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	678	169	421	1970	0.344	678	1334	0.8	0.6	3.070	A

<b>B - Blyth Road (E)</b>	744	186	643	1064	0.69 9	1051	456	88.7	11.9	177.78 8	F
<b>C - Dawley Road (S)</b>	992	248	459	1272	0.78 0	1227	1236	64.0	5.1	99.391	F
<b>D - Kestral Way (SW)</b>	68	17	1643	269	0.25 2	68	43	0.5	0.4	19.745	C
<b>E - Betam Road (NW)</b>	90	22	1665	511	0.17 5	90	46	0.3	0.2	9.405	A



# Junctions 9

## ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []  
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**Filename:** Dawley Road-Blyth Road-Betam Road-Kestrel Way Rb OVF mitigation.j9  
**Path:** C:\Users\Demetris Psyllides\Dropbox (Markides Associates)\Markides Associates Team Folder\Projects\16018.01 - Former Nestle Site, Hayes\Technical\Arcady\2029 Cumulative  
**Report generation date:** 26/01/2017 18:24:39

- »2029 Baseline, AM
- »2029 Baseline , PM
- »2029 Baseline+Dev, AM
- »2029 Baseline+Dev, PM

### Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
<b>2029 Baseline</b>								
A - Dawley Road (N)	6.2	15.04	0.86	C	1.1	4.18	0.50	A
B - Blyth Road (E)	14.7	77.55	0.97	F	107.8	343.92	1.22	F
C - Dawley Road (S)	230.6	588.15	1.28	F	81.1	199.34	1.11	F
D - Kestrel Way (SW)	0.2	15.91	0.17	C	0.7	24.00	0.38	C
E - Betam Road (NW)	0.1	7.52	0.11	A	0.4	11.13	0.27	B
<b>2029 Baseline+Dev</b>								
A - Dawley Road (N)	5.8	14.10	0.85	B	1.2	4.31	0.52	A
B - Blyth Road (E)	13.5	72.32	0.96	F	117.5	389.55	1.24	F
C - Dawley Road (S)	255.8	645.51	1.31	F	82.5	203.46	1.11	F
D - Kestrel Way (SW)	0.2	15.94	0.17	C	0.7	23.79	0.38	C
E - Betam Road (NW)	0.1	7.53	0.11	A	0.4	11.07	0.27	B

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

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

### File summary

#### File Description

<b>Title</b>	Site 4 Base Model
<b>Location</b>	Hayes and Harlington
<b>Site number</b>	
<b>Date</b>	17/07/2012
<b>Version</b>	

Status	Draft 1
Identifier	
Client	
Jobnumber	VN50026
Enumerator	rhussain [IE-D00135]
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	-Hour	perHour

## Analysis Options

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

## Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2029 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D11	2029 Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D12	2029 Baseline+Dev	AM	ONE HOUR	07:45	09:15	15	✓
D13	2029 Baseline+Dev	PM	ONE HOUR	16:45	18:15	15	✓

## Analysis Set Details

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

# 2029 Baseline, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Dawley Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A,B,C,D,E	268.43	F

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description
A	Dawley Road (N)	
B	Blyth Road (E)	
C	Dawley Road (S)	
D	Kestral Way (SW)	
E	Betam Road (NW)	

## 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
A - Dawley Road (N)	3.90	9.00	33.0	17.5	34.7	17.0	
B - Blyth Road (E)	3.29	8.50	6.0	15.0	35.0	16.5	
C - Dawley Road (S)	4.97	9.46	13.0	3.0	34.7	36.0	
D - Kestral Way (SW)	3.90	4.66	3.2	3.0	34.0	28.0	
E - Betam Road (NW)	3.60	7.70	8.0	8.2	35.0	16.5	

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Dawley Road (N)	0.785	2300
B - Blyth Road (E)	0.612	1458
C - Dawley Road (S)	0.522	1511
D - Kestral Way (SW)	0.419	958
E - Betam Road (NW)	0.609	1525

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

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2029 Baseline	AM	ONE HOUR	07:45	09:15	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Dawley Road (N)		ONE HOUR	✓	1410	100.000
B - Blyth Road (E)		ONE HOUR	✓	640	100.000
C - Dawley Road (S)		ONE HOUR	✓	1584	100.000
D - Kestral Way (SW)		ONE HOUR	✓	47	100.000
E - Betam Road (NW)		ONE HOUR	✓	58	100.000

## Origin-Destination Data

## Demand (PCU/hr)

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	0	379	979	22	30
	B - Blyth Road (E)	198	0	422	3	17
	C - Dawley Road (S)	854	629	0	64	37
	D - Kestral Way (SW)	7	8	30	0	2
	E - Betam Road (NW)	21	9	28	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	10	10	10	10	10
	B - Blyth Road (E)	10	10	10	10	10
	C - Dawley Road (S)	10	10	10	10	10
	D - Kestral Way (SW)	10	10	10	10	10
	E - Betam Road (NW)	10	10	10	10	10

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Dawley Road (N)	0.86	15.04	6.2	C	1294	1941
B - Blyth Road (E)	0.97	77.55	14.7	F	587	881
C - Dawley Road (S)	1.28	588.15	230.6	F	1454	2180
D - Kestral Way (SW)	0.17	15.91	0.2	C	43	65
E - Betam Road (NW)	0.11	7.52	0.1	A	53	80

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1062	265	521	1891	0.561	1056	800	0.0	1.4	4.711	A
B - Blyth Road (E)	482	120	815	959	0.502	477	761	0.0	1.1	8.153	A
C - Dawley Road (S)	1193	298	202	1406	0.848	1171	1091	0.0	5.5	15.636	C
D - Kestral Way (SW)	35	9	1306	410	0.086	35	66	0.0	0.1	10.536	B
E - Betam Road (NW)	44	11	1277	747	0.058	43	64	0.0	0.1	5.627	A

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1268	317	600	1829	0.693	1263	926	1.4	2.4	6.955	A
B - Blyth Road (E)	575	144	976	861	0.668	571	888	1.1	2.1	13.460	B
C - Dawley Road (S)	1424	356	241	1385	1.028	1343	1306	5.5	25.8	53.750	F
D - Kestral Way (SW)	42	11	1507	326	0.130	42	77	0.1	0.2	13.925	B
E - Betam Road (NW)	52	13	1474	627	0.083	52	75	0.1	0.1	6.881	A

#### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1552	388	622	1811	0.857	1538	971	2.4	6.0	13.833	B
B - Blyth Road (E)	705	176	1188	731	0.964	670	972	2.1	10.8	49.309	E
C - Dawley Road (S)	1744	436	285	1362	1.280	1360	1573	25.8	121.8	203.822	F
D - Kestral Way (SW)	52	13	1563	303	0.171	52	82	0.2	0.2	15.748	C
E - Betam Road (NW)	64	16	1530	593	0.108	64	84	0.1	0.1	7.478	A

#### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1552	388	622	1812	0.857	1551	976	6.0	6.2	15.043	C
B - Blyth Road (E)	705	176	1198	725	0.972	689	975	10.8	14.7	77.547	F
C - Dawley Road (S)	1744	436	292	1359	1.284	1358	1595	121.8	218.2	454.339	F
D - Kestral Way (SW)	52	13	1568	301	0.172	52	82	0.2	0.2	15.906	C
E - Betam Road (NW)	64	16	1534	590	0.108	64	85	0.1	0.1	7.518	A

#### 08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1268	317	613	1818	0.697	1282	959	6.2	2.6	7.579	A
B - Blyth Road (E)	575	144	990	852	0.675	624	906	14.7	2.4	20.813	C
C - Dawley Road (S)	1424	356	260	1375	1.035	1374	1354	218.2	230.6	588.149	F
D - Kestral Way (SW)	42	11	1556	306	0.138	42	78	0.2	0.2	15.055	C
E - Betam Road (NW)	52	13	1521	599	0.087	52	78	0.1	0.1	7.247	A

#### 09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1062	265	611	1820	0.583	1066	925	2.6	1.6	5.280	A

B - Blyth Road (E)	482	120	823	954	0.50 5	487	854	2.4	1.1	8.561	A
C - Dawley Road (S)	1193	298	205	1404	0.84 9	1397	1105	230.6	179.4	528.73 6	F
D - Kestral Way (SW)	35	9	1527	318	0.11 1	36	75	0.2	0.1	14.037	B
E - Betam Road (NW)	44	11	1493	616	0.07 1	44	70	0.1	0.1	6.924	A

## 2029 Baseline , PM

### Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Dawley Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A,B,C,D,E	180.63	F

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2029 Baseline	PM	ONE HOUR	16:45	18:15	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Dawley Road (N)		ONE HOUR	✓	867	100.000
B - Blyth Road (E)		ONE HOUR	✓	1002	100.000
C - Dawley Road (S)		ONE HOUR	✓	1306	100.000
D - Kestral Way (SW)		ONE HOUR	✓	92	100.000
E - Betam Road (NW)		ONE HOUR	✓	122	100.000

## Origin-Destination Data

## Demand (PCU/hr)

		To				
From		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
	A - Dawley Road (N)	0	177	667	9	14
	B - Blyth Road (E)	404	0	585	2	11
	C - Dawley Road (S)	912	331	0	37	26
	D - Kestral Way (SW)	12	8	71	0	1
	E - Betam Road (NW)	40	23	58	1	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
From		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
	A - Dawley Road (N)	10	10	10	10	10
	B - Blyth Road (E)	10	10	10	10	10
	C - Dawley Road (S)	10	10	10	10	10
	D - Kestral Way (SW)	10	10	10	10	10
	E - Betam Road (NW)	10	10	10	10	10

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Dawley Road (N)	0.50	4.18	1.1	A	796	1193
B - Blyth Road (E)	1.22	343.92	107.8	F	919	1379
C - Dawley Road (S)	1.11	199.34	81.1	F	1198	1798
D - Kestral Way (SW)	0.38	24.00	0.7	C	84	127
E - Betam Road (NW)	0.27	11.13	0.4	B	112	168

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	653	163	366	2012	0.324	651	1018	0.0	0.5	2.904	A
B - Blyth Road (E)	754	189	615	1082	0.697	745	402	0.0	2.4	11.443	B
C - Dawley Road (S)	983	246	328	1340	0.734	972	1031	0.0	2.9	10.453	B
D - Kestral Way (SW)	69	17	1263	429	0.162	68	37	0.0	0.2	10.973	B
E - Betam Road (NW)	92	23	1293	738	0.125	91	39	0.0	0.2	6.121	A

#### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	779	195	437	1957	0.398	779	1209	0.5	0.7	3.358	A
B - Blyth Road (E)	901	225	736	1008	0.894	882	479	2.4	7.2	28.022	D
C - Dawley Road (S)	1174	294	389	1308	0.898	1155	1229	2.9	7.7	23.321	C
D - Kestral Way (SW)	83	21	1500	329	0.251	82	43	0.2	0.4	15.987	C
E - Betam Road (NW)	110	27	1536	590	0.186	109	46	0.2	0.2	8.232	A

#### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	955	239	502	1906	0.501	953	1317	0.7	1.1	4.142	A
B - Blyth Road (E)	1103	276	901	907	1.217	899	554	7.2	58.1	143.938	F
C - Dawley Road (S)	1438	359	401	1302	1.105	1285	1399	7.7	45.9	87.148	F
D - Kestral Way (SW)	101	25	1636	272	0.372	100	49	0.4	0.6	22.768	C
E - Betam Road (NW)	134	34	1685	499	0.269	134	52	0.2	0.4	10.825	B

#### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	955	239	506	1903	0.502	955	1328	1.1	1.1	4.176	A
B - Blyth Road (E)	1103	276	903	906	1.218	905	558	58.1	107.8	330.783	F
C - Dawley Road (S)	1438	359	403	1301	1.106	1297	1404	45.9	81.1	185.522	F
D - Kestral Way (SW)	101	25	1651	266	0.381	101	50	0.6	0.7	23.995	C
E - Betam Road (NW)	134	34	1700	490	0.274	134	52	0.4	0.4	11.134	B

#### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	779	195	466	1934	0.403	781	1333	1.1	0.7	3.440	A
B - Blyth Road (E)	901	225	739	1006	0.896	996	508	107.8	84.1	343.921	F
C - Dawley Road (S)	1174	294	436	1283	0.915	1266	1299	81.1	58.1	199.344	F
D - Kestral Way (SW)	83	21	1655	264	0.313	83	47	0.7	0.5	21.974	C
E - Betam Road (NW)	110	27	1689	496	0.221	110	50	0.4	0.3	10.260	B

#### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	653	163	425	1966	0.332	654	1305	0.7	0.5	3.018	A



B - Blyth Road (E)	754	189	619	1079	0.69 9	1065	460	84.1	6.3	158.91 3	F
C - Dawley Road (S)	983	246	461	1270	0.77 4	1197	1223	58.1	4.5	82.967	F
D - Kestral Way (SW)	69	17	1615	281	0.24 7	70	44	0.5	0.4	18.821	C
E - Betam Road (NW)	92	23	1638	527	0.17 4	92	47	0.3	0.2	9.108	A

## 2029 Baseline+Dev, AM

### Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Dawley Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A,B,C,D,E	294.76	F

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2029 Baseline+Dev	AM	ONE HOUR	07:45	09:15	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Dawley Road (N)		ONE HOUR	✓	1400	100.000
B - Blyth Road (E)		ONE HOUR	✓	640	100.000
C - Dawley Road (S)		ONE HOUR	✓	1611	100.000
D - Kestral Way (SW)		ONE HOUR	✓	47	100.000
E - Betam Road (NW)		ONE HOUR	✓	58	100.000

## Origin-Destination Data

## Demand (PCU/hr)

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	0	379	969	22	30
	B - Blyth Road (E)	198	0	422	3	17
	C - Dawley Road (S)	881	629	0	64	37
	D - Kestral Way (SW)	7	8	30	0	2
	E - Betam Road (NW)	21	9	28	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	10	10	10	10	10
	B - Blyth Road (E)	10	10	10	10	10
	C - Dawley Road (S)	10	10	10	10	10
	D - Kestral Way (SW)	10	10	10	10	10
	E - Betam Road (NW)	10	10	10	10	10

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Dawley Road (N)	0.85	14.10	5.8	B	1285	1927
B - Blyth Road (E)	0.96	72.32	13.5	F	587	881
C - Dawley Road (S)	1.31	645.51	255.8	F	1478	2217
D - Kestral Way (SW)	0.17	15.94	0.2	C	43	65
E - Betam Road (NW)	0.11	7.53	0.1	A	53	80

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1054	263	520	1892	0.557	1049	819	0.0	1.4	4.668	A
B - Blyth Road (E)	482	120	808	964	0.500	478	761	0.0	1.1	8.079	A
C - Dawley Road (S)	1213	303	202	1406	0.863	1189	1084	0.0	6.0	16.751	C
D - Kestral Way (SW)	35	9	1324	403	0.088	35	66	0.0	0.1	10.755	B
E - Betam Road (NW)	44	11	1295	736	0.059	43	64	0.0	0.1	5.713	A

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1259	315	595	1833	0.687	1255	941	1.4	2.4	6.800	A
B - Blyth Road (E)	575	144	967	866	0.664	571	882	1.1	2.1	13.248	B
C - Dawley Road (S)	1448	362	241	1385	1.046	1351	1297	6.0	30.3	60.442	F
D - Kestral Way (SW)	42	11	1516	322	0.131	42	76	0.1	0.2	14.112	B
E - Betam Road (NW)	52	13	1483	622	0.084	52	75	0.1	0.1	6.949	A

#### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1541	385	613	1818	0.848	1528	983	2.4	5.6	13.105	B
B - Blyth Road (E)	705	176	1178	737	0.956	672	964	2.1	10.2	47.166	E
C - Dawley Road (S)	1774	443	286	1362	1.303	1360	1565	30.3	133.7	225.227	F
D - Kestral Way (SW)	52	13	1565	302	0.171	52	81	0.2	0.2	15.793	C
E - Betam Road (NW)	64	16	1532	592	0.108	64	84	0.1	0.1	7.497	A

#### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1541	385	613	1819	0.847	1541	987	5.6	5.8	14.100	B
B - Blyth Road (E)	705	176	1187	731	0.963	691	966	10.2	13.5	72.320	F
C - Dawley Road (S)	1774	443	293	1358	1.306	1358	1586	133.7	237.7	495.431	F
D - Kestral Way (SW)	52	13	1569	300	0.172	52	81	0.2	0.2	15.941	C
E - Betam Road (NW)	64	16	1536	589	0.108	64	85	0.1	0.1	7.534	A

#### 08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1259	315	605	1825	0.690	1272	969	5.8	2.5	7.323	A
B - Blyth Road (E)	575	144	980	858	0.670	620	897	13.5	2.4	19.510	C
C - Dawley Road (S)	1448	362	258	1376	1.053	1376	1342	237.7	255.8	645.507	F
D - Kestral Way (SW)	42	11	1556	305	0.138	42	78	0.2	0.2	15.067	C
E - Betam Road (NW)	52	13	1522	598	0.087	52	77	0.1	0.1	7.254	A

#### 09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	1054	263	602	1827	0.577	1058	936	2.5	1.5	5.177	A

B - Blyth Road (E)	482	120	815	959	0.50 2	487	845	2.4	1.1	8.468	A
C - Dawley Road (S)	1213	303	205	1404	0.86 4	1398	1097	255.8	209.6	599.72 8	F
D - Kestral Way (SW)	35	9	1529	317	0.11 2	36	74	0.2	0.1	14.066	B
E - Betam Road (NW)	44	11	1495	615	0.07 1	44	69	0.1	0.1	6.940	A

## 2029 Baseline+Dev, PM

### Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	A - Dawley Road (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A,B,C,D,E	194.18	F

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2029 Baseline+Dev	PM	ONE HOUR	16:45	18:15	15	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Dawley Road (N)		ONE HOUR	✓	895	100.000
B - Blyth Road (E)		ONE HOUR	✓	1002	100.000
C - Dawley Road (S)		ONE HOUR	✓	1312	100.000
D - Kestral Way (SW)		ONE HOUR	✓	92	100.000
E - Betam Road (NW)		ONE HOUR	✓	122	100.000

## Origin-Destination Data

## Demand (PCU/hr)

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	0	177	695	9	14
	B - Blyth Road (E)	404	0	585	2	11
	C - Dawley Road (S)	918	331	0	37	26
	D - Kestral Way (SW)	12	8	71	0	1
	E - Betam Road (NW)	40	23	58	1	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		A - Dawley Road (N)	B - Blyth Road (E)	C - Dawley Road (S)	D - Kestral Way (SW)	E - Betam Road (NW)
From	A - Dawley Road (N)	10	10	10	10	10
	B - Blyth Road (E)	10	10	10	10	10
	C - Dawley Road (S)	10	10	10	10	10
	D - Kestral Way (SW)	10	10	10	10	10
	E - Betam Road (NW)	10	10	10	10	10

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Dawley Road (N)	0.52	4.31	1.2	A	821	1232
B - Blyth Road (E)	1.24	389.55	117.5	F	919	1379
C - Dawley Road (S)	1.11	203.46	82.5	F	1204	1806
D - Kestral Way (SW)	0.38	23.79	0.7	C	84	127
E - Betam Road (NW)	0.27	11.07	0.4	B	112	168

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	674	168	366	2012	0.335	672	1022	0.0	0.6	2.948	A
B - Blyth Road (E)	754	189	636	1069	0.706	744	402	0.0	2.5	11.859	B
C - Dawley Road (S)	988	247	328	1340	0.737	976	1052	0.0	3.0	10.567	B
D - Kestral Way (SW)	69	17	1267	427	0.162	68	37	0.0	0.2	11.026	B
E - Betam Road (NW)	92	23	1297	735	0.125	91	39	0.0	0.2	6.145	A

#### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	805	201	436	1957	0.411	804	1212	0.6	0.8	3.431	A
B - Blyth Road (E)	901	225	761	992	0.908	879	479	2.5	7.9	30.518	D
C - Dawley Road (S)	1179	295	388	1309	0.901	1160	1253	3.0	7.9	23.840	C
D - Kestral Way (SW)	83	21	1504	328	0.252	82	43	0.2	0.4	16.085	C
E - Betam Road (NW)	110	27	1540	587	0.187	109	46	0.2	0.2	8.277	A

#### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	985	246	501	1906	0.517	984	1315	0.8	1.2	4.285	A
B - Blyth Road (E)	1103	276	931	888	1.242	882	554	7.9	63.2	158.193	F
C - Dawley Road (S)	1445	361	393	1306	1.106	1289	1420	7.9	46.7	88.285	F
D - Kestral Way (SW)	101	25	1634	273	0.371	100	49	0.4	0.6	22.761	C
E - Betam Road (NW)	134	34	1682	501	0.268	134	52	0.2	0.4	10.778	B

#### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	985	246	506	1903	0.518	985	1325	1.2	1.2	4.314	A
B - Blyth Road (E)	1103	276	934	887	1.244	886	557	63.2	117.5	365.292	F
C - Dawley Road (S)	1445	361	395	1305	1.107	1302	1424	46.7	82.5	187.965	F
D - Kestral Way (SW)	101	25	1647	267	0.379	101	49	0.6	0.7	23.786	C
E - Betam Road (NW)	134	34	1696	492	0.273	134	52	0.4	0.4	11.072	B

#### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	805	201	466	1934	0.416	806	1331	1.2	0.8	3.514	A
B - Blyth Road (E)	901	225	764	990	0.910	981	508	117.5	97.4	389.553	F
C - Dawley Road (S)	1179	295	430	1286	0.917	1270	1315	82.5	60.0	203.465	F
D - Kestral Way (SW)	83	21	1653	265	0.312	83	47	0.7	0.5	21.845	C
E - Betam Road (NW)	110	27	1687	498	0.220	110	49	0.4	0.3	10.222	B

#### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A - Dawley Road (N)	674	168	427	1965	0.343	675	1310	0.8	0.6	3.070	A

<b>B - Blyth Road (E)</b>	754	189	640	1066	0.70 7	1055	462	97.4	22.4	208.89 7	F
<b>C - Dawley Road (S)</b>	988	247	457	1272	0.77 6	1209	1237	60.0	4.7	88.007	F
<b>D - Kestral Way (SW)</b>	69	17	1622	278	0.24 9	70	44	0.5	0.4	19.079	C
<b>E - Betam Road (NW)</b>	92	23	1645	523	0.17 6	92	47	0.3	0.2	9.197	A