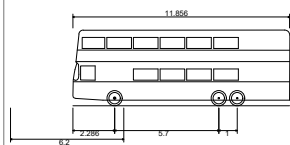




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www.stantec.com/uk



Trident II - 12.00m 3-Axle
Overall Length 11.856m
Overall Width 2.496m
Overall Body Height 4.140m
Min Body Ground Clearance 0.311m
Track Width 2.363m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 9.500m

P01 FIRST ISSUE
Issued/Revision

CB GH 2022.11.22
By Appd YYYY.MM.DD

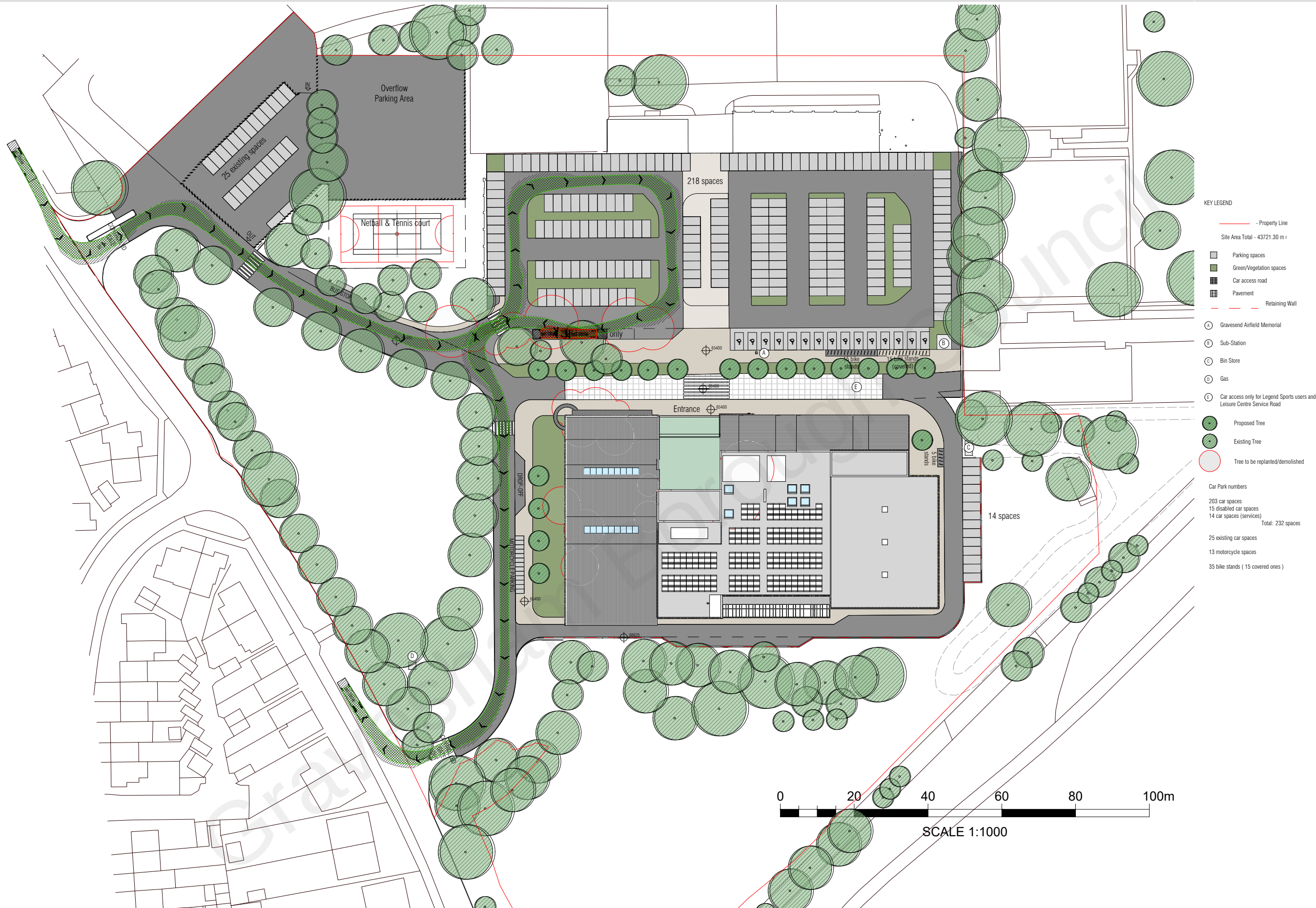
Client/Project:
GRAVESHAM BOROUGH COUNCIL

CASCADES LEISURE
CENTRE, GRAVESHAM

Project No.:
332410895

Title
TRIDENT II SWEEP PATH

Revision: P01 Date: 2022.11.24 Drawing No. 332410895/100/002



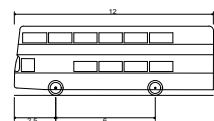
KEY LEGEND

- Property Line
- Site Area Total - 43721.30 m²
- Parking spaces
- Green/Vegetation spaces
- Car access road
- Pavement
- Retaining Wall
- A Gravesend Airfield Memorial
- B Sub-Station
- C Bin Store
- D Gas
- E Car access only for Legend Sports users and Leisure Centre Service Road
- Proposed Tree
- Existing Tree
- Tree to be replanted/demolished
- Car Park numbers
- 203 car spaces
- 15 disabled car spaces
- 14 car spaces (services)
- Total: 232 spaces
- 25 existing car spaces
- 13 motorcycle spaces
- 35 bike stands (15 covered ones)

Plotted: 24.11.2022 20:22:11.24 3:55:42 PM By: Brooks, Charlotte
ORIGINAL SHEET - ISOA3
J:\332410895 - gh - cascades leisure centre, gravesend\autocad\drawings\stn_vehicletracking_002



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Rigid Public Service Vehicle
Overall Length 12.000m
Overall Width 2.550m
Overall Body Height 4.173m
Min Body Ground Clearance 0.344m
Track Width 2.550m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 10.500m

P01 FIRST ISSUE
Issued/Revision

CB
By

GH
Appd

2022.11.22
YYYY.MM.DD

Client/Project:
GRAVESHAM BOROUGH COUNCIL

CASCADES LEISURE
CENTRE, GRAVESHAM

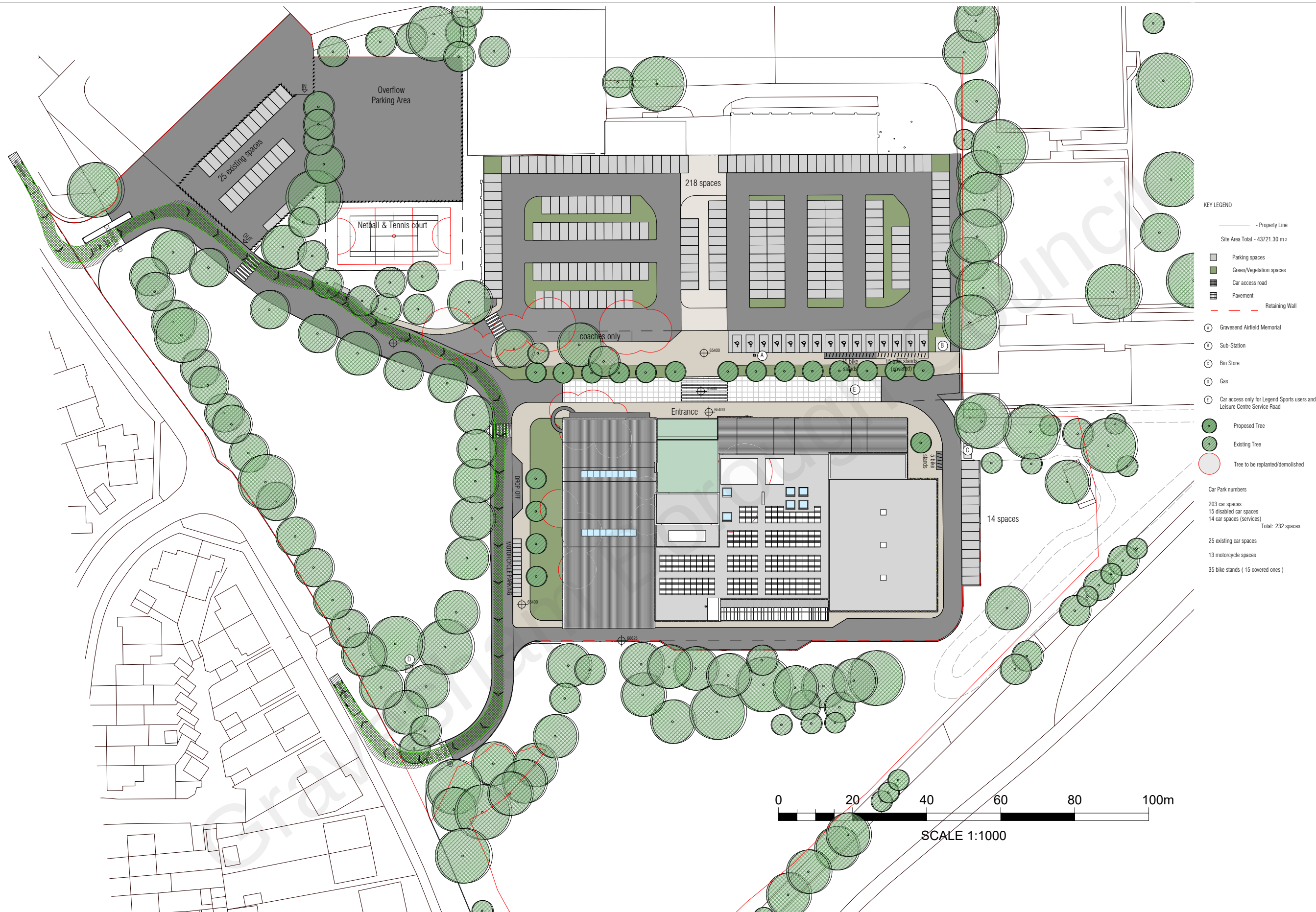
Project No.:
332410895

Title
PUBLIC SERVICE VEHICLE
SWEPT PATH

Revision:
P01

Date:
2022.11.24

Drawing No.
332410895/100/003



KEY LEGEND

- Property Line
- Site Area Total - 43721.30 m²
- Parking spaces
- Green/Vegetation spaces
- Car access road
- Pavement
- Retaining Wall

- A Gravesend Airfield Memorial
- B Sub-Station
- C Bin Store
- D Gas
- E Car access only for Legend Sports users and Leisure Centre Service Road

- Proposed Tree
- Existing Tree
- Tree to be replanted/demolished

Car Park numbers

203 car spaces
15 disabled car spaces
14 car spaces (services)
Total: 232 spaces

25 existing car spaces

13 motorcycle spaces

35 bike stands (15 covered ones)

Appendix C

Site access junction (inbound) model output

Gravesham Borough Council

Junctions 10									
PICADY 10 - Priority Intersection Module									
Version: 10.0.4.1693									
© Copyright TRL Software Limited, 2021									
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+44 (0)1344 379777 software@trl.co.uk trlsoftware.com									
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution									

Filename: 2_ThongLane_CascadesIN.j10

Path: J:\332410895 - GH - Cascades leisure centre, Gravesend\100 - Transport\Modelling\Junctions10

Report generation date: 09/11/2022 10:15:25

- »2022 Base Year, AM
- »2022 Base Year, PM
- »2028 Baseline, AM
- »2028 Baseline, PM
- »2028 Baseline + Proposed LC, AM
- »2028 Baseline + Proposed LC, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year									
Stream B-AC	D1	0.0	0.00	0.00	A	D2	0.0	0.00	0.00	A
Stream C-AB		0.0	5.65	0.03	A		0.1	5.47	0.09	A
	2028 Baseline									
Stream B-AC	D3	0.0	0.00	0.00	A	D4	0.0	0.00	0.00	A
Stream C-AB		0.0	5.55	0.03	A		0.2	5.47	0.10	A
	2028 Baseline + Proposed LC									
Stream B-AC	D5	0.0	0.00	0.00	A	D6	0.0	0.00	0.00	A
Stream C-AB		0.1	5.57	0.04	A		0.2	5.50	0.11	A

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

File summary

File Description

Title	
Location	
Site number	
Date	21/10/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CORP\chbrooks
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	mph	Veh	Veh	perHour	s	-Min	perMin



Flows show original traffic demand (Veh/hr).
Streams (downstream end) show RFC (l)

The junction diagram reflects the last run of Junctions.

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	ONE HOUR	07:25	08:55	15	✓
D2	2022 Base Year	PM	ONE HOUR	16:35	18:05	15	✓
D3	2028 Baseline	AM	ONE HOUR	07:25	08:55	15	✓
D4	2028 Baseline	PM	ONE HOUR	16:35	18:05	15	✓
D5	2028 Baseline + Proposed LC	AM	ONE HOUR	07:25	08:55	15	✓
D6	2028 Baseline + Proposed LC	PM	ONE HOUR	16:35	18:05	15	✓

Analysis Set Details

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

Gravesham Borough Council

2022 Base Year, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	ThongLane_CascadesIN	T-Junction	Two-way	Exit Only	Two-way		0.33	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.33	A

Arms

Arms

Arm	Name	Description	Arm type
A	Thong Lane North		Major
B	Cascades Leisure IN		Minor
C	Thong Lane South		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Thong Lane South	7.43			112.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Cascades Leisure IN				

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	440	0.075	0.190	0.119	0.271
B-C	574	0.083	0.209	-	-
C-B	639	0.232	0.232	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	ONE HOUR	07:25	08:55	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Thong Lane North		ONE HOUR	✓	142	100.000
B - Cascades Leisure IN		ONE HOUR	✓	0	100.000
C - Thong Lane South		ONE HOUR	✓	175	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To			
		A - Thong Lane North	B - Cascades Leisure IN	C - Thong Lane South
	A - Thong Lane North	0	11	131
	B - Cascades Leisure IN	0	0	0
	C - Thong Lane South	161	14	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - Thong Lane North	B - Cascades Leisure IN	C - Thong Lane South
	A - Thong Lane North	0	18	2
	B - Cascades Leisure IN	0	0	0
	C - Thong Lane South	1	8	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.00	0.00	0.0	A	0	0
C-AB	0.03	5.65	0.0	A	17	25
C-A					144	216
A-B					10	15
A-C					120	180

Main Results for each time segment

07:25 - 07:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	465	0.000	0	0.0	0.0	0.000	A
C-AB	13	3	650	0.020	13	0.0	0.0	5.645	A
C-A	119	30			119				
A-B	8	2			8				
A-C	99	25			99				

07:40 - 07:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	459	0.000	0	0.0	0.0	0.000	A
C-AB	16	4	662	0.024	16	0.0	0.0	5.575	A
C-A	141	35			141				
A-B	10	2			10				
A-C	118	29			118				

07:55 - 08:10

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	450	0.000	0	0.0	0.0	0.000	A
C-AB	21	5	679	0.030	21	0.0	0.0	5.476	A
C-A	172	43			172				
A-B	12	3			12				
A-C	144	36			144				

08:10 - 08:25

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	450	0.000	0	0.0	0.0	0.000	A
C-AB	21	5	679	0.030	21	0.0	0.0	5.470	A
C-A	172	43			172				
A-B	12	3			12				
A-C	144	36			144				

08:25 - 08:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	459	0.000	0	0.0	0.0	0.000	A
C-AB	16	4	662	0.024	16	0.0	0.0	5.561	A
C-A	141	35			141				
A-B	10	2			10				
A-C	118	29			118				

08:40 - 08:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	465	0.000	0	0.0	0.0	0.000	A
C-AB	13	3	650	0.020	13	0.0	0.0	5.639	A
C-A	119	30			119				
A-B	8	2			8				
A-C	99	25			99				

2022 Base Year, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	ThongLane_CascadesIN	T-Junction	Two-way	Exit Only	Two-way		0.70	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.70	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2022 Base Year	PM	ONE HOUR	16:35	18:05	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Thong Lane North		ONE HOUR	✓	204	100.000
B - Cascades Leisure IN		ONE HOUR	✓	0	100.000
C - Thong Lane South		ONE HOUR	✓	235	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Thong Lane North	B - Cascades Leisure IN	C - Thong Lane South
From	A - Thong Lane North	0	72	132
	B - Cascades Leisure IN	0	0	0
	C - Thong Lane South	193	42	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Thong Lane North	B - Cascades Leisure IN	C - Thong Lane South
From	A - Thong Lane North	0	1	2
	B - Cascades Leisure IN	0	0	0
	C - Thong Lane South	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.00	0.00	0.0	A	0	0
C-AB	0.09	5.47	0.1	A	52	78
C-A					164	246
A-B					66	99
A-C					121	182

Main Results for each time segment

16:35 - 16:50

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	456	0.000	0	0.0	0.0	0.000	A
C-AB	40	10	699	0.057	40	0.0	0.1	5.461	A
C-A	137	34			137				
A-B	54	14			54				
A-C	99	25			99				

16:50 - 17:05

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	448	0.000	0	0.0	0.0	0.000	A
C-AB	50	13	711	0.070	50	0.1	0.1	5.444	A
C-A	161	40			161				
A-B	65	16			65				
A-C	119	30			119				

17:05 - 17:20

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	436	0.000	0	0.0	0.0	0.000	A
C-AB	65	16	729	0.090	65	0.1	0.1	5.429	A
C-A	193	48			193				
A-B	79	20			79				
A-C	145	36			145				

17:20 - 17:35

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	436	0.000	0	0.0	0.0	0.000	A
C-AB	65	16	729	0.090	65	0.1	0.1	5.433	A
C-A	193	48			193				
A-B	79	20			79				
A-C	145	36			145				

17:35 - 17:50

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	447	0.000	0	0.0	0.0	0.000	A
C-AB	50	13	711	0.070	50	0.1	0.1	5.450	A
C-A	161	40			161				
A-B	65	16			65				
A-C	119	30			119				

17:50 - 18:05

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	456	0.000	0	0.0	0.0	0.000	A
C-AB	40	10	699	0.057	40	0.1	0.1	5.467	A
C-A	137	34			137				
A-B	54	14			54				
A-C	99	25			99				

2028 Baseline, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	ThongLane_CascadesIN	T-Junction	Two-way	Exit Only	Two-way		0.29	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.29	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2028 Baseline	AM	ONE HOUR	07:25	08:55	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Thong Lane North		ONE HOUR	✓	174	100.000
B - Cascades Leisure IN		ONE HOUR	✓	0	100.000
C - Thong Lane South		ONE HOUR	✓	206	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Thong Lane North	B - Cascades Leisure IN	C - Thong Lane South
From	A - Thong Lane North	0	12	162
	B - Cascades Leisure IN	0	0	0
	C - Thong Lane South	192	14	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Thong Lane North	B - Cascades Leisure IN	C - Thong Lane South
From	A - Thong Lane North	0	18	2
	B - Cascades Leisure IN	0	0	0
	C - Thong Lane South	1	8	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.00	0.00	0.0	A	0	0
C-AB	0.03	5.55	0.0	A	17	26
C-A					172	257
A-B					11	16
A-C					149	223

Main Results for each time segment

07:25 - 07:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	459	0.000	0	0.0	0.0	0.000	A
C-AB	13	3	661	0.020	13	0.0	0.0	5.554	A
C-A	142	35			142				
A-B	9	2			9				
A-C	122	30			122				

07:40 - 07:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	451	0.000	0	0.0	0.0	0.000	A
C-AB	17	4	676	0.025	17	0.0	0.0	5.469	A
C-A	168	42			168				
A-B	11	3			11				
A-C	146	36			146				

07:55 - 08:10

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	440	0.000	0	0.0	0.0	0.000	A
C-AB	22	5	695	0.032	22	0.0	0.0	5.352	A
C-A	205	51			205				
A-B	13	3			13				
A-C	178	45			178				

08:10 - 08:25

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	440	0.000	0	0.0	0.0	0.000	A
C-AB	22	5	695	0.032	22	0.0	0.0	5.345	A
C-A	205	51			205				
A-B	13	3			13				
A-C	178	45			178				

08:25 - 08:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	451	0.000	0	0.0	0.0	0.000	A
C-AB	17	4	676	0.025	17	0.0	0.0	5.453	A
C-A	168	42			168				
A-B	11	3			11				
A-C	146	36			146				

08:40 - 08:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	459	0.000	0	0.0	0.0	0.000	A
C-AB	13	3	662	0.020	13	0.0	0.0	5.548	A
C-A	142	35			142				
A-B	9	2			9				
A-C	122	30			122				

Gravesham Borough Council

2028 Baseline, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	ThongLane_CascadesIN	T-Junction	Two-way	Exit Only	Two-way		0.73	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.73	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2028 Baseline	PM	ONE HOUR	16:35	18:05	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Thong Lane North		ONE HOUR	✓	217	100.000
B - Cascades Leisure IN		ONE HOUR	✓	0	100.000
C - Thong Lane South		ONE HOUR	✓	251	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Thong Lane North	B - Cascades Leisure IN	C - Thong Lane South
From	A - Thong Lane North	0	79	138
	B - Cascades Leisure IN	0	0	0
	C - Thong Lane South	205	46	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Thong Lane North	B - Cascades Leisure IN	C - Thong Lane South
From	A - Thong Lane North	0	1	2
	B - Cascades Leisure IN	0	0	0
	C - Thong Lane South	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.00	0.00	0.0	A	0	0
C-AB	0.10	5.47	0.2	A	58	87
C-A					172	259
A-B					72	109
A-C					127	190

Main Results for each time segment

16:35 - 16:50

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	453	0.000	0	0.0	0.0	0.000	A
C-AB	44	11	703	0.063	44	0.0	0.1	5.464	A
C-A	145	36			145				
A-B	59	15			59				
A-C	104	26			104				

16:50 - 17:05

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	444	0.000	0	0.0	0.0	0.000	A
C-AB	56	14	716	0.078	56	0.1	0.1	5.452	A
C-A	170	42			170				
A-B	71	18			71				
A-C	124	31			124				

17:05 - 17:20

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	432	0.000	0	0.0	0.0	0.000	A
C-AB	73	18	734	0.100	73	0.1	0.2	5.443	A
C-A	203	51			203				
A-B	87	22			87				
A-C	152	38			152				

17:20 - 17:35

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	432	0.000	0	0.0	0.0	0.000	A
C-AB	73	18	735	0.100	73	0.2	0.2	5.447	A
C-A	203	51			203				
A-B	87	22			87				
A-C	152	38			152				

17:35 - 17:50

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	444	0.000	0	0.0	0.0	0.000	A
C-AB	56	14	716	0.078	56	0.2	0.1	5.460	A
C-A	170	42			170				
A-B	71	18			71				
A-C	124	31			124				

17:50 - 18:05

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	453	0.000	0	0.0	0.0	0.000	A
C-AB	44	11	703	0.063	45	0.1	0.1	5.473	A
C-A	144	36			144				
A-B	59	15			59				
A-C	104	26			104				

2028 Baseline + Proposed LC, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	ThongLane_CascadesIN	T-Junction	Two-way	Exit Only	Two-way		0.33	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.33	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2028 Baseline + Proposed LC	AM	ONE HOUR	07:25	08:55	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Thong Lane North		ONE HOUR	✓	176	100.000
B - Cascades Leisure IN		ONE HOUR	✓	0	100.000
C - Thong Lane South		ONE HOUR	✓	209	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Thong Lane North	B - Cascades Leisure IN	C - Thong Lane South
From	A - Thong Lane North	0	14	162
	B - Cascades Leisure IN	0	0	0
	C - Thong Lane South	193	16	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Thong Lane North	B - Cascades Leisure IN	C - Thong Lane South
From	A - Thong Lane North	0	18	2
	B - Cascades Leisure IN	0	0	0
	C - Thong Lane South	1	8	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.00	0.00	0.0	A	0	0
C-AB	0.04	5.57	0.1	A	20	30
C-A					172	258
A-B					13	19
A-C					149	223

Main Results for each time segment

07:25 - 07:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	458	0.000	0	0.0	0.0	0.000	A
C-AB	15	4	662	0.023	15	0.0	0.0	5.570	A
C-A	142	35			142				
A-B	11	3			11				
A-C	122	30			122				

07:40 - 07:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	450	0.000	0	0.0	0.0	0.000	A
C-AB	19	5	676	0.029	19	0.0	0.0	5.490	A
C-A	169	42			169				
A-B	13	3			13				
A-C	146	36			146				

07:55 - 08:10

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	439	0.000	0	0.0	0.0	0.000	A
C-AB	25	6	696	0.037	25	0.0	0.0	5.378	A
C-A	205	51			205				
A-B	15	4			15				
A-C	178	45			178				

08:10 - 08:25

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	439	0.000	0	0.0	0.0	0.000	A
C-AB	25	6	696	0.037	25	0.0	0.1	5.373	A
C-A	205	51			205				
A-B	15	4			15				
A-C	178	45			178				

08:25 - 08:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	450	0.000	0	0.0	0.0	0.000	A
C-AB	19	5	676	0.029	19	0.1	0.0	5.476	A
C-A	168	42			168				
A-B	13	3			13				
A-C	146	36			146				

08:40 - 08:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	458	0.000	0	0.0	0.0	0.000	A
C-AB	15	4	662	0.023	15	0.0	0.0	5.565	A
C-A	142	35			142				
A-B	11	3			11				
A-C	122	30			122				

Gravesham Borough Council

2028 Baseline + Proposed LC, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	ThongLane_CascadesIN	T-Junction	Two-way	Exit Only	Two-way		0.80	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.80	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2028 Baseline + Proposed LC	PM	ONE HOUR	16:35	18:05	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Thong Lane North		ONE HOUR	✓	227	100.000
B - Cascades Leisure IN		ONE HOUR	✓	0	100.000
C - Thong Lane South		ONE HOUR	✓	266	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Thong Lane North	B - Cascades Leisure IN	C - Thong Lane South
From	A - Thong Lane North	0	89	138
	B - Cascades Leisure IN	0	0	0
	C - Thong Lane South	214	52	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Thong Lane North	B - Cascades Leisure IN	C - Thong Lane South
From	A - Thong Lane North	0	1	2
	B - Cascades Leisure IN	0	0	0
	C - Thong Lane South	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.00	0.00	0.0	A	0	0
C-AB	0.11	5.50	0.2	A	66	100
C-A					178	267
A-B					82	123
A-C					127	190

Main Results for each time segment

16:35 - 16:50

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	451	0.000	0	0.0	0.0	0.000	A
C-AB	51	13	706	0.072	50	0.0	0.1	5.492	A
C-A	150	37			150				
A-B	67	17			67				
A-C	104	26			104				

16:50 - 17:05

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	442	0.000	0	0.0	0.0	0.000	A
C-AB	64	16	719	0.089	64	0.1	0.1	5.493	A
C-A	175	44			175				
A-B	80	20			80				
A-C	124	31			124				

17:05 - 17:20

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	429	0.000	0	0.0	0.0	0.000	A
C-AB	84	21	739	0.114	84	0.1	0.2	5.499	A
C-A	209	52			209				
A-B	98	24			98				
A-C	152	38			152				

17:20 - 17:35

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	429	0.000	0	0.0	0.0	0.000	A
C-AB	84	21	739	0.114	84	0.2	0.2	5.504	A
C-A	209	52			209				
A-B	98	24			98				
A-C	152	38			152				

17:35 - 17:50

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	442	0.000	0	0.0	0.0	0.000	A
C-AB	64	16	719	0.089	64	0.2	0.1	5.499	A
C-A	175	44			175				
A-B	80	20			80				
A-C	124	31			124				

17:50 - 18:05

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	451	0.000	0	0.0	0.0	0.000	A
C-AB	51	13	706	0.072	51	0.1	0.1	5.505	A
C-A	149	37			149				
A-B	67	17			67				
A-C	104	26			104				

Appendix D

Site access junction (outbound) model output

Gravesham Borough Council

Junctions 10									
PICADY 10 - Priority Intersection Module									
Version: 10.0.4.1693									
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Filename: 3_Cascades_ThongLaneOUT.j10

Path: J:\332410895 - GH - Cascades leisure centre, Gravesend\100 - Transport\Modelling\Junctions10

Report generation date: 09/11/2022 10:18:01

»2022 Base Year, AM

»2022 Base Year, PM

»2028 Baseline, AM

»2028 Baseline, PM

»2028 Baseline + Proposed LC, AM

»2028 Baseline + Proposed LC, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year									
Stream B-C	D1	0.0	6.13	0.03	A	D2	0.0	6.38	0.05	A
Stream B-A		0.0	8.62	0.02	A		0.2	8.86	0.15	A
Stream C-AB		0.0	0.00	0.00	A		0.0	0.00	0.00	A
	2028 Baseline									
Stream B-C	D3	0.0	6.23	0.03	A	D4	0.1	6.45	0.05	A
Stream B-A		0.0	8.89	0.02	A		0.2	9.10	0.17	A
Stream C-AB		0.0	0.00	0.00	A		0.0	0.00	0.00	A
	2028 Baseline + Proposed LC									
Stream B-C	D5	0.0	6.26	0.03	A	D6	0.1	6.54	0.06	A
Stream B-A		0.0	8.92	0.03	A		0.2	9.36	0.19	A
Stream C-AB		0.0	0.00	0.00	A		0.0	0.00	0.00	A

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

File summary

File Description

Title	
Location	
Site number	
Date	21/10/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CORP\chbrooks
Description	

Units

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



Flows show original traffic demand (Veh/hr).
Streams (downstream end) show RFC (l)

The junction diagram reflects the last run of Junctions.

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	ONE HOUR	07:25	08:55	15	✓
D2	2022 Base Year	PM	ONE HOUR	16:35	18:05	15	✓
D3	2028 Baseline	AM	ONE HOUR	07:25	08:55	15	✓
D4	2028 Baseline	PM	ONE HOUR	16:35	18:05	15	✓
D5	2028 Baseline + Proposed LC	AM	ONE HOUR	07:25	08:55	15	✓
D6	2028 Baseline + Proposed LC	PM	ONE HOUR	16:35	18:05	15	✓

Analysis Set Details

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

2022 Base Year, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cascades_ThongLaneOUT	T-Junction	Two-way	Entry Only	Two-way		0.58	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.58	A

Arms

Arms

Arm	Name	Description	Arm type
A	Thong Lane North		Major
B	Cascades Lesiure OUT		Minor
C	Thong Lane South		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Thong Lane South	7.41			250.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane Width (Left) (m)	Lane Width (Right) (m)	Visibility to left (m)	Visibility to right (m)
B - Cascades Lesiure OUT	Two lanes	3.74	3.70	41	27

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	539	0.092	0.233	0.147	0.333
B-C	689	0.099	0.250	-	-
C-B	719	0.261	0.261	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	ONE HOUR	07:25	08:55	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Thong Lane North		ONE HOUR	✓	144	100.000
B - Cascades Lesiure OUT		ONE HOUR	✓	22	100.000
C - Thong Lane South		ONE HOUR	✓	123	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To			
		A - Thong Lane North	B - Cascades Lesiure OUT	C - Thong Lane South
	A - Thong Lane North	0	0	144
	B - Cascades Lesiure OUT	8	0	14
	C - Thong Lane South	123	0	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - Thong Lane North	B - Cascades Lesiure OUT	C - Thong Lane South
	A - Thong Lane North	0	0	2
	B - Cascades Lesiure OUT	13	0	7
	C - Thong Lane South	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.03	6.13	0.0	A	13	19
B-A	0.02	8.62	0.0	A	7	11
C-AB	0.00	0.00	0.0	A	0	0
C-A					113	169
A-B					0	0
A-C					132	198

Main Results for each time segment

07:25 - 07:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	11	3	616	0.017	10	0.0	0.0	5.949	A
B-A	6	2	442	0.014	6	0.0	0.0	8.247	A
C-AB	0	0	686	0.000	0	0.0	0.0	0.000	A
C-A	93	23			93				
A-B	0	0			0				
A-C	108	27			108				

07:40 - 07:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	13	3	610	0.021	13	0.0	0.0	6.024	A
B-A	7	2	436	0.017	7	0.0	0.0	8.402	A
C-AB	0	0	681	0.000	0	0.0	0.0	0.000	A
C-A	111	28			111				
A-B	0	0			0				
A-C	129	32			129				

07:55 - 08:10

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	4	603	0.026	15	0.0	0.0	6.131	A
B-A	9	2	426	0.021	9	0.0	0.0	8.623	A
C-AB	0	0	673	0.000	0	0.0	0.0	0.000	A
C-A	135	34			135				
A-B	0	0			0				
A-C	159	40			159				

08:10 - 08:25

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	4	603	0.026	15	0.0	0.0	6.131	A
B-A	9	2	426	0.021	9	0.0	0.0	8.623	A
C-AB	0	0	673	0.000	0	0.0	0.0	0.000	A
C-A	135	34			135				
A-B	0	0			0				
A-C	159	40			159				

08:25 - 08:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	13	3	610	0.021	13	0.0	0.0	6.025	A
B-A	7	2	436	0.017	7	0.0	0.0	8.404	A
C-AB	0	0	681	0.000	0	0.0	0.0	0.000	A
C-A	111	28			111				
A-B	0	0			0				
A-C	129	32			129				

08:40 - 08:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	11	3	616	0.017	11	0.0	0.0	5.952	A
B-A	6	2	442	0.014	6	0.0	0.0	8.249	A
C-AB	0	0	686	0.000	0	0.0	0.0	0.000	A
C-A	93	23			93				
A-B	0	0			0				
A-C	108	27			108				

2022 Base Year, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cascades_ThongLaneOUT	T-Junction	Two-way	Entry Only	Two-way		2.11	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.11	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2022 Base Year	PM	ONE HOUR	16:35	18:05	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Thong Lane North		ONE HOUR	✓	171	100.000
B - Cascades Lesiure OUT		ONE HOUR	✓	92	100.000
C - Thong Lane South		ONE HOUR	✓	91	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Thong Lane North	B - Cascades Lesiure OUT	C - Thong Lane South
From	A - Thong Lane North	0	0	171
	B - Cascades Lesiure OUT	67	0	25
	C - Thong Lane South	91	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Thong Lane North	B - Cascades Lesiure OUT	C - Thong Lane South
From	A - Thong Lane North	0	0	2
	B - Cascades Lesiure OUT	0	0	4
	C - Thong Lane South	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.05	6.38	0.0	A	23	34
B-A	0.15	8.86	0.2	A	61	92
C-AB	0.00	0.00	0.0	A	0	0
C-A					84	125
A-B					0	0
A-C					157	235

Main Results for each time segment

16:35 - 16:50

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	19	5	615	0.031	19	0.0	0.0	6.040	A
B-A	50	13	499	0.101	50	0.0	0.1	8.014	A
C-AB	0	0	681	0.000	0	0.0	0.0	0.000	A
C-A	69	17			69				
A-B	0	0			0				
A-C	129	32			129				

16:50 - 17:05

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	22	6	605	0.037	22	0.0	0.0	6.179	A
B-A	60	15	491	0.123	60	0.1	0.1	8.358	A
C-AB	0	0	674	0.000	0	0.0	0.0	0.000	A
C-A	82	20			82				
A-B	0	0			0				
A-C	154	38			154				

17:05 - 17:20

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	28	7	592	0.047	27	0.0	0.0	6.377	A
B-A	74	18	480	0.154	74	0.1	0.2	8.858	A
C-AB	0	0	665	0.000	0	0.0	0.0	0.000	A
C-A	100	25			100				
A-B	0	0			0				
A-C	188	47			188				

17:20 - 17:35

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	28	7	592	0.047	28	0.0	0.0	6.377	A
B-A	74	18	480	0.154	74	0.2	0.2	8.865	A
C-AB	0	0	665	0.000	0	0.0	0.0	0.000	A
C-A	100	25			100				
A-B	0	0			0				
A-C	188	47			188				

17:35 - 17:50

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	22	6	605	0.037	23	0.0	0.0	6.180	A
B-A	60	15	491	0.123	60	0.2	0.1	8.369	A
C-AB	0	0	674	0.000	0	0.0	0.0	0.000	A
C-A	82	20			82				
A-B	0	0			0				
A-C	154	38			154				

17:50 - 18:05

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	19	5	614	0.031	19	0.0	0.0	6.047	A
B-A	50	13	499	0.101	51	0.1	0.1	8.035	A
C-AB	0	0	681	0.000	0	0.0	0.0	0.000	A
C-A	69	17			69				
A-B	0	0			0				
A-C	129	32			129				

2028 Baseline, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cascades_ThongLaneOUT	T-Junction	Two-way	Entry Only	Two-way		0.53	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.53	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2028 Baseline	AM	ONE HOUR	07:25	08:55	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Thong Lane North		ONE HOUR	✓	176	100.000
B - Cascades Lesiure OUT		ONE HOUR	✓	24	100.000
C - Thong Lane South		ONE HOUR	✓	152	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Thong Lane North	B - Cascades Lesiure OUT	C - Thong Lane South
From	A - Thong Lane North	0	0	176
	B - Cascades Lesiure OUT	9	0	15
	C - Thong Lane South	152	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Thong Lane North	B - Cascades Lesiure OUT	C - Thong Lane South
From	A - Thong Lane North	0	0	2
	B - Cascades Lesiure OUT	13	0	7
	C - Thong Lane South	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.03	6.23	0.0	A	14	20
B-A	0.02	8.89	0.0	A	8	12
C-AB	0.00	0.00	0.0	A	0	0
C-A					139	209
A-B					0	0
A-C					162	242

Main Results for each time segment

07:25 - 07:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	11	3	610	0.018	11	0.0	0.0	6.015	A
B-A	7	2	434	0.015	7	0.0	0.0	8.413	A
C-AB	0	0	680	0.000	0	0.0	0.0	0.000	A
C-A	114	29			114				
A-B	0	0			0				
A-C	133	33			133				

07:40 - 07:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	13	3	603	0.022	13	0.0	0.0	6.105	A
B-A	8	2	426	0.019	8	0.0	0.0	8.608	A
C-AB	0	0	673	0.000	0	0.0	0.0	0.000	A
C-A	137	34			137				
A-B	0	0			0				
A-C	158	40			158				

07:55 - 08:10

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	16	4	594	0.028	16	0.0	0.0	6.234	A
B-A	10	2	415	0.024	10	0.0	0.0	8.891	A
C-AB	0	0	664	0.000	0	0.0	0.0	0.000	A
C-A	167	42			167				
A-B	0	0			0				
A-C	194	48			194				

08:10 - 08:25

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	16	4	594	0.028	16	0.0	0.0	6.234	A
B-A	10	2	415	0.024	10	0.0	0.0	8.891	A
C-AB	0	0	664	0.000	0	0.0	0.0	0.000	A
C-A	167	42			167				
A-B	0	0			0				
A-C	194	48			194				

08:25 - 08:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	13	3	603	0.022	13	0.0	0.0	6.108	A
B-A	8	2	426	0.019	8	0.0	0.0	8.609	A
C-AB	0	0	673	0.000	0	0.0	0.0	0.000	A
C-A	137	34			137				
A-B	0	0			0				
A-C	158	40			158				

08:40 - 08:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	11	3	609	0.018	11	0.0	0.0	6.018	A
B-A	7	2	434	0.015	7	0.0	0.0	8.415	A
C-AB	0	0	680	0.000	0	0.0	0.0	0.000	A
C-A	114	29			114				
A-B	0	0			0				
A-C	133	33			133				

2028 Baseline, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cascades_ThongLaneOUT	T-Junction	Two-way	Entry Only	Two-way		2.24	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.24	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2028 Baseline	PM	ONE HOUR	16:35	18:05	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Thong Lane North		ONE HOUR	✓	178	100.000
B - Cascades Lesiure OUT		ONE HOUR	✓	101	100.000
C - Thong Lane South		ONE HOUR	✓	97	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Thong Lane North	B - Cascades Lesiure OUT	C - Thong Lane South
From	A - Thong Lane North	0	0	178
	B - Cascades Lesiure OUT	74	0	27
	C - Thong Lane South	97	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Thong Lane North	B - Cascades Lesiure OUT	C - Thong Lane South
From	A - Thong Lane North	0	0	2
	B - Cascades Lesiure OUT	0	0	4
	C - Thong Lane South	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.05	6.45	0.1	A	25	37
B-A	0.17	9.10	0.2	A	68	102
C-AB	0.00	0.00	0.0	A	0	0
C-A					89	134
A-B					0	0
A-C					163	245

Main Results for each time segment

16:35 - 16:50

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	20	5	612	0.033	20	0.0	0.0	6.084	A
B-A	56	14	497	0.112	55	0.0	0.1	8.144	A
C-AB	0	0	680	0.000	0	0.0	0.0	0.000	A
C-A	73	18			73				
A-B	0	0			0				
A-C	134	34			134				

16:50 - 17:05

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	24	6	601	0.040	24	0.0	0.0	6.234	A
B-A	67	17	488	0.136	66	0.1	0.2	8.526	A
C-AB	0	0	673	0.000	0	0.0	0.0	0.000	A
C-A	87	22			87				
A-B	0	0			0				
A-C	160	40			160				

17:05 - 17:20

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	29	7	588	0.050	29	0.0	0.1	6.449	A
B-A	81	20	477	0.171	81	0.2	0.2	9.092	A
C-AB	0	0	663	0.000	0	0.0	0.0	0.000	A
C-A	107	27			107				
A-B	0	0			0				
A-C	196	49			196				

17:20 - 17:35

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	29	7	587	0.050	29	0.1	0.1	6.450	A
B-A	81	20	477	0.171	81	0.2	0.2	9.101	A
C-AB	0	0	663	0.000	0	0.0	0.0	0.000	A
C-A	107	27			107				
A-B	0	0			0				
A-C	196	49			196				

17:35 - 17:50

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	24	6	601	0.040	24	0.1	0.0	6.236	A
B-A	67	17	488	0.136	67	0.2	0.2	8.540	A
C-AB	0	0	673	0.000	0	0.0	0.0	0.000	A
C-A	87	22			87				
A-B	0	0			0				
A-C	160	40			160				

17:50 - 18:05

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	20	5	611	0.033	20	0.0	0.0	6.091	A
B-A	56	14	497	0.112	56	0.2	0.1	8.168	A
C-AB	0	0	680	0.000	0	0.0	0.0	0.000	A
C-A	73	18			73				
A-B	0	0			0				
A-C	134	34			134				

2028 Baseline + Proposed LC, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cascades_ThongLaneOUT	T-Junction	Two-way	Entry Only	Two-way		0.59	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.59	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2028 Baseline + Proposed LC	AM	ONE HOUR	07:25	08:55	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Thong Lane North		ONE HOUR	✓	176	100.000
B - Cascades Lesiure OUT		ONE HOUR	✓	27	100.000
C - Thong Lane South		ONE HOUR	✓	154	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Thong Lane North	B - Cascades Lesiure OUT	C - Thong Lane South
From	A - Thong Lane North	0	0	176
	B - Cascades Lesiure OUT	10	0	17
	C - Thong Lane South	154	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Thong Lane North	B - Cascades Lesiure OUT	C - Thong Lane South
From	A - Thong Lane North	0	0	2
	B - Cascades Lesiure OUT	13	0	7
	C - Thong Lane South	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.03	6.26	0.0	A	16	23
B-A	0.03	8.92	0.0	A	9	14
C-AB	0.00	0.00	0.0	A	0	0
C-A					141	212
A-B					0	0
A-C					162	242

Main Results for each time segment

07:25 - 07:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	13	3	609	0.021	13	0.0	0.0	6.035	A
B-A	8	2	434	0.017	7	0.0	0.0	8.433	A
C-AB	0	0	680	0.000	0	0.0	0.0	0.000	A
C-A	116	29			116				
A-B	0	0			0				
A-C	133	33			133				

07:40 - 07:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	4	603	0.025	15	0.0	0.0	6.129	A
B-A	9	2	426	0.021	9	0.0	0.0	8.633	A
C-AB	0	0	673	0.000	0	0.0	0.0	0.000	A
C-A	138	35			138				
A-B	0	0			0				
A-C	158	40			158				

07:55 - 08:10

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	19	5	593	0.032	19	0.0	0.0	6.265	A
B-A	11	3	414	0.027	11	0.0	0.0	8.924	A
C-AB	0	0	664	0.000	0	0.0	0.0	0.000	A
C-A	170	42			170				
A-B	0	0			0				
A-C	194	48			194				

08:10 - 08:25

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	19	5	593	0.032	19	0.0	0.0	6.265	A
B-A	11	3	414	0.027	11	0.0	0.0	8.924	A
C-AB	0	0	664	0.000	0	0.0	0.0	0.000	A
C-A	170	42			170				
A-B	0	0			0				
A-C	194	48			194				

08:25 - 08:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	4	603	0.025	15	0.0	0.0	6.132	A
B-A	9	2	426	0.021	9	0.0	0.0	8.636	A
C-AB	0	0	673	0.000	0	0.0	0.0	0.000	A
C-A	138	35			138				
A-B	0	0			0				
A-C	158	40			158				

08:40 - 08:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	13	3	609	0.021	13	0.0	0.0	6.035	A
B-A	8	2	434	0.017	8	0.0	0.0	8.435	A
C-AB	0	0	680	0.000	0	0.0	0.0	0.000	A
C-A	116	29			116				
A-B	0	0			0				
A-C	133	33			133				

2028 Baseline + Proposed LC, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Cascades_ThongLaneOUT	T-Junction	Two-way	Entry Only	Two-way		2.46	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.46	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2028 Baseline + Proposed LC	PM	ONE HOUR	16:35	18:05	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Thong Lane North		ONE HOUR	✓	178	100.000
B - Cascades Lesiure OUT		ONE HOUR	✓	114	100.000
C - Thong Lane South		ONE HOUR	✓	103	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Thong Lane North	B - Cascades Lesiure OUT	C - Thong Lane South
From	A - Thong Lane North	0	0	178
	B - Cascades Lesiure OUT	83	0	31
	C - Thong Lane South	103	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Thong Lane North	B - Cascades Lesiure OUT	C - Thong Lane South
From	A - Thong Lane North	0	0	2
	B - Cascades Lesiure OUT	0	0	4
	C - Thong Lane South	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.06	6.54	0.1	A	28	43
B-A	0.19	9.36	0.2	A	76	114
C-AB	0.00	0.00	0.0	A	0	0
C-A					95	142
A-B					0	0
A-C					163	245

Main Results for each time segment

16:35 - 16:50

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	23	6	609	0.038	23	0.0	0.0	6.140	A
B-A	62	16	496	0.126	62	0.0	0.1	8.281	A
C-AB	0	0	680	0.000	0	0.0	0.0	0.000	A
C-A	78	19			78				
A-B	0	0			0				
A-C	134	34			134				

16:50 - 17:05

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	28	7	599	0.047	28	0.0	0.0	6.305	A
B-A	75	19	488	0.153	74	0.1	0.2	8.710	A
C-AB	0	0	673	0.000	0	0.0	0.0	0.000	A
C-A	93	23			93				
A-B	0	0			0				
A-C	160	40			160				

17:05 - 17:20

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	34	9	584	0.058	34	0.0	0.1	6.543	A
B-A	91	23	476	0.192	91	0.2	0.2	9.347	A
C-AB	0	0	663	0.000	0	0.0	0.0	0.000	A
C-A	113	28			113				
A-B	0	0			0				
A-C	196	49			196				

17:20 - 17:35

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	34	9	584	0.058	34	0.1	0.1	6.544	A
B-A	91	23	476	0.192	91	0.2	0.2	9.358	A
C-AB	0	0	663	0.000	0	0.0	0.0	0.000	A
C-A	113	28			113				
A-B	0	0			0				
A-C	196	49			196				

17:35 - 17:50

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	28	7	599	0.047	28	0.1	0.0	6.309	A
B-A	75	19	488	0.153	75	0.2	0.2	8.724	A
C-AB	0	0	673	0.000	0	0.0	0.0	0.000	A
C-A	93	23			93				
A-B	0	0			0				
A-C	160	40			160				

17:50 - 18:05

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	23	6	609	0.038	23	0.0	0.0	6.145	A
B-A	62	16	496	0.126	63	0.2	0.1	8.309	A
C-AB	0	0	680	0.000	0	0.0	0.0	0.000	A
C-A	78	19			78				
A-B	0	0			0				
A-C	134	34			134				

Appendix E

A226 Rochester Road / Thong Lane model output

Gravesham Borough Council

Junctions 10									
PICADY 10 - Priority Intersection Module									
Version: 10.0.4.1693									
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The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution									

Filename: 1_A226_ThongLane.j10

Path: J:\332410895 - GH - Cascades leisure centre, Gravesend\100 - Transport\Modelling\Junctions10

Report generation date: 09/11/2022 10:14:21

»2022 Base Year, AM

»2022 Base Year, PM

»2028 Baseline, AM

»2028 Baseline, PM

»2028 Baseline + Proposed LC, AM

»2028 Baseline + Proposed LC, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year									
Stream B-AC	D1	0.5	8.77	0.34	A	D2	0.6	8.90	0.37	A
Stream C-AB		0.4	7.21	0.28	A		0.4	6.53	0.28	A
	2028 Baseline									
Stream B-AC	D3	0.8	10.56	0.44	B	D4	0.7	9.52	0.40	A
Stream C-AB		0.5	8.07	0.34	A		0.4	6.77	0.29	A
	2028 Baseline + Proposed LC									
Stream B-AC	D5	0.8	10.62	0.44	B	D6	0.7	9.83	0.42	A
Stream C-AB		0.5	8.10	0.34	A		0.4	6.87	0.30	A

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

File summary

File Description

Title	
Location	
Site number	
Date	21/10/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CORP\chbrooks
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	mph	Veh	Veh	perHour	s	-Min	perMin



Flows show original traffic demand (Veh/hr).
Streams (downstream end) show RFC (l)

The junction diagram reflects the last run of Junctions.

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	ONE HOUR	07:25	08:55	15	✓
D2	2022 Base Year	PM	ONE HOUR	16:35	18:05	15	✓
D3	2028 Baseline	AM	ONE HOUR	07:25	08:55	15	✓
D4	2028 Baseline	PM	ONE HOUR	16:35	18:05	15	✓
D5	2028 Baseline + Proposed LC	AM	ONE HOUR	07:25	08:55	15	✓
D6	2028 Baseline + Proposed LC	PM	ONE HOUR	16:35	18:05	15	✓

Analysis Set Details

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

Gravesham Borough Council

2022 Base Year, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A226_ThongLane	T-Junction	Two-way	Two-way	Two-way		2.37	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.37	A

Arms

Arms

Arm	Name	Description	Arm type
A	A226 East		Major
B	Thong Lane		Minor
C	A226 West		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - A226 West	7.50	✓	7.66	✓	4.75	250.0	✓	9.90

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Thong Lane	One lane	4.12	250	250

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	908	0.132	0.334	0.210	0.477
B-C	869	0.124	0.314	-	-
C-B	918	0.332	0.332	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	ONE HOUR	07:25	08:55	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A226 East		ONE HOUR	✓	557	100.000
B - Thong Lane		ONE HOUR	✓	195	100.000
C - A226 West		ONE HOUR	✓	476	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To			
		A - A226 East	B - Thong Lane	C - A226 West
	A - A226 East	0	150	407
	B - Thong Lane	81	0	114
	C - A226 West	302	174	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - A226 East	B - Thong Lane	C - A226 West
	A - A226 East	0	4	5
	B - Thong Lane	1	0	2
	C - A226 West	4	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.34	8.77	0.5	A	179	268
C-AB	0.28	7.21	0.4	A	160	239
C-A					277	416
A-B					138	206
A-C					373	560

Main Results for each time segment

07:25 - 07:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	147	37	706	0.208	146	0.0	0.3	6.417	A
C-AB	131	33	757	0.173	130	0.0	0.2	5.739	A
C-A	227	57			227				
A-B	113	28			113				
A-C	306	77			306				

07:40 - 07:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	175	44	672	0.261	175	0.3	0.3	7.235	A
C-AB	156	39	729	0.215	156	0.2	0.3	6.282	A
C-A	271	68			271				
A-B	135	34			135				
A-C	366	91			366				

07:55 - 08:10

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	215	54	625	0.343	214	0.3	0.5	8.745	A
C-AB	192	48	691	0.277	191	0.3	0.4	7.203	A
C-A	333	83			333				
A-B	165	41			165				
A-C	448	112			448				

08:10 - 08:25

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	215	54	625	0.344	215	0.5	0.5	8.774	A
C-AB	192	48	691	0.277	192	0.4	0.4	7.214	A
C-A	333	83			333				
A-B	165	41			165				
A-C	448	112			448				

08:25 - 08:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	175	44	672	0.261	176	0.5	0.4	7.268	A
C-AB	156	39	729	0.215	157	0.4	0.3	6.299	A
C-A	271	68			271				
A-B	135	34			135				
A-C	366	91			366				

08:40 - 08:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	147	37	705	0.208	147	0.4	0.3	6.451	A
C-AB	131	33	757	0.173	131	0.3	0.2	5.757	A
C-A	227	57			227				
A-B	113	28			113				
A-C	306	77			306				

2022 Base Year, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A226_ThongLane	T-Junction	Two-way	Two-way	Two-way		2.27	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.27	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2022 Base Year	PM	ONE HOUR	16:35	18:05	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A226 East		ONE HOUR	✓	419	100.000
B - Thong Lane		ONE HOUR	✓	220	100.000
C - A226 West		ONE HOUR	✓	748	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - A226 East	B - Thong Lane	C - A226 West
From	A - A226 East	0	88	331
	B - Thong Lane	83	0	137
	C - A226 West	558	190	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - A226 East	B - Thong Lane	C - A226 West
From	A - A226 East	0	2	3
	B - Thong Lane	0	0	0
	C - A226 West	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.37	8.90	0.6	A	202	303
C-AB	0.28	6.53	0.4	A	174	262
C-A					512	768
A-B					81	121
A-C					304	456

Main Results for each time segment

16:35 - 16:50

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	166	41	727	0.228	164	0.0	0.3	6.384	A
C-AB	143	36	810	0.177	142	0.0	0.2	5.384	A
C-A	420	105			420				
A-B	66	17			66				
A-C	249	62			249				

16:50 - 17:05

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	198	49	694	0.285	197	0.3	0.4	7.237	A
C-AB	171	43	789	0.216	171	0.2	0.3	5.817	A
C-A	502	125			502				
A-B	79	20			79				
A-C	298	74			298				

17:05 - 17:20

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	242	61	647	0.374	241	0.4	0.6	8.863	A
C-AB	209	52	760	0.275	209	0.3	0.4	6.525	A
C-A	614	154			614				
A-B	97	24			97				
A-C	364	91			364				

17:20 - 17:35

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	242	61	647	0.374	242	0.6	0.6	8.895	A
C-AB	209	52	760	0.275	209	0.4	0.4	6.532	A
C-A	614	154			614				
A-B	97	24			97				
A-C	364	91			364				

17:35 - 17:50

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	198	49	694	0.285	199	0.6	0.4	7.276	A
C-AB	171	43	789	0.216	171	0.4	0.3	5.831	A
C-A	502	125			502				
A-B	79	20			79				
A-C	298	74			298				

17:50 - 18:05

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	166	41	727	0.228	166	0.4	0.3	6.424	A
C-AB	143	36	810	0.177	143	0.3	0.2	5.400	A
C-A	420	105			420				
A-B	66	17			66				
A-C	249	62			249				

2028 Baseline, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A226_ThongLane	T-Junction	Two-way	Two-way	Two-way		3.03	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.03	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2028 Baseline	AM	ONE HOUR	07:25	08:55	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A226 East		ONE HOUR	✓	601	100.000
B - Thong Lane		ONE HOUR	✓	239	100.000
C - A226 West		ONE HOUR	✓	521	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - A226 East	B - Thong Lane	C - A226 West
From	A - A226 East	0	178	423
	B - Thong Lane	99	0	140
	C - A226 West	314	207	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - A226 East	B - Thong Lane	C - A226 West
From	A - A226 East	0	4	5
	B - Thong Lane	1	0	2
	C - A226 West	4	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.44	10.56	0.8	B	219	329
C-AB	0.34	8.07	0.5	A	190	285
C-A					288	432
A-B					163	245
A-C					388	582

Main Results for each time segment

07:25 - 07:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	180	45	692	0.260	179	0.0	0.3	6.988	A
C-AB	156	39	745	0.209	155	0.0	0.3	6.086	A
C-A	236	59			236				
A-B	134	34			134				
A-C	318	80			318				

07:40 - 07:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	215	54	656	0.328	214	0.3	0.5	8.144	A
C-AB	186	47	715	0.260	186	0.3	0.3	6.791	A
C-A	282	71			282				
A-B	160	40			160				
A-C	380	95			380				

07:55 - 08:10

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	263	66	604	0.436	262	0.5	0.8	10.490	B
C-AB	228	57	674	0.338	227	0.3	0.5	8.047	A
C-A	346	86			346				
A-B	196	49			196				
A-C	466	116			466				

08:10 - 08:25

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	263	66	604	0.436	263	0.8	0.8	10.561	B
C-AB	228	57	674	0.338	228	0.5	0.5	8.069	A
C-A	346	86			346				
A-B	196	49			196				
A-C	466	116			466				

08:25 - 08:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	215	54	656	0.328	216	0.8	0.5	8.209	A
C-AB	186	47	715	0.260	187	0.5	0.4	6.815	A
C-A	282	71			282				
A-B	160	40			160				
A-C	380	95			380				

08:40 - 08:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	180	45	692	0.260	180	0.5	0.4	7.043	A
C-AB	156	39	745	0.209	156	0.4	0.3	6.114	A
C-A	236	59			236				
A-B	134	34			134				
A-C	318	80			318				

2028 Baseline, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A226_ThongLane	T-Junction	Two-way	Two-way	Two-way		2.42	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.42	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2028 Baseline	PM	ONE HOUR	16:35	18:05	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A226 East		ONE HOUR	✓	438	100.000
B - Thong Lane		ONE HOUR	✓	233	100.000
C - A226 West		ONE HOUR	✓	782	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - A226 East	B - Thong Lane	C - A226 West
From	A - A226 East	0	93	345
	B - Thong Lane	88	0	145
	C - A226 West	581	201	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - A226 East	B - Thong Lane	C - A226 West
From	A - A226 East	0	2	3
	B - Thong Lane	0	0	0
	C - A226 West	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.40	9.52	0.7	A	214	321
C-AB	0.29	6.77	0.4	A	184	277
C-A					533	800
A-B					85	128
A-C					317	475

Main Results for each time segment

16:35 - 16:50

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	175	44	720	0.244	174	0.0	0.3	6.586	A
C-AB	151	38	805	0.188	150	0.0	0.2	5.490	A
C-A	437	109			437				
A-B	70	18			70				
A-C	260	65			260				

16:50 - 17:05

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	209	52	685	0.306	209	0.3	0.4	7.558	A
C-AB	181	45	783	0.231	180	0.2	0.3	5.968	A
C-A	522	131			522				
A-B	84	21			84				
A-C	310	78			310				

17:05 - 17:20

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	257	64	635	0.404	256	0.4	0.7	9.474	A
C-AB	221	55	753	0.294	221	0.3	0.4	6.758	A
C-A	640	160			640				
A-B	102	26			102				
A-C	380	95			380				

17:20 - 17:35

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	257	64	635	0.404	257	0.7	0.7	9.522	A
C-AB	221	55	753	0.294	221	0.4	0.4	6.769	A
C-A	640	160			640				
A-B	102	26			102				
A-C	380	95			380				

17:35 - 17:50

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	209	52	685	0.306	210	0.7	0.4	7.604	A
C-AB	181	45	783	0.231	181	0.4	0.3	5.982	A
C-A	522	131			522				
A-B	84	21			84				
A-C	310	78			310				

17:50 - 18:05

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	175	44	719	0.244	176	0.4	0.3	6.630	A
C-AB	151	38	805	0.188	152	0.3	0.2	5.510	A
C-A	437	109			437				
A-B	70	18			70				
A-C	260	65			260				

2028 Baseline + Proposed LC, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A226_ThongLane	T-Junction	Two-way	Two-way	Two-way		3.05	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.05	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2028 Baseline + Proposed LC	AM	ONE HOUR	07:25	08:55	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A226 East		ONE HOUR	✓	602	100.000
B - Thong Lane		ONE HOUR	✓	240	100.000
C - A226 West		ONE HOUR	✓	522	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - A226 East	B - Thong Lane	C - A226 West
From	A - A226 East	0	179	423
	B - Thong Lane	100	0	140
	C - A226 West	314	208	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - A226 East	B - Thong Lane	C - A226 West
From	A - A226 East	0	4	5
	B - Thong Lane	1	0	2
	C - A226 West	4	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.44	10.62	0.8	B	220	330
C-AB	0.34	8.10	0.5	A	191	286
C-A					288	432
A-B					164	246
A-C					388	582

Main Results for each time segment

07:25 - 07:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	181	45	692	0.261	179	0.0	0.3	7.005	A
C-AB	157	39	745	0.210	156	0.0	0.3	6.094	A
C-A	236	59			236				
A-B	135	34			135				
A-C	318	80			318				

07:40 - 07:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	216	54	655	0.329	215	0.3	0.5	8.172	A
C-AB	187	47	715	0.261	187	0.3	0.4	6.807	A
C-A	282	71			282				
A-B	161	40			161				
A-C	380	95			380				

07:55 - 08:10

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	264	66	603	0.438	263	0.5	0.8	10.550	B
C-AB	229	57	674	0.340	228	0.4	0.5	8.073	A
C-A	346	86			346				
A-B	197	49			197				
A-C	466	116			466				

08:10 - 08:25

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	264	66	603	0.438	264	0.8	0.8	10.621	B
C-AB	229	57	674	0.340	229	0.5	0.5	8.095	A
C-A	346	86			346				
A-B	197	49			197				
A-C	466	116			466				

08:25 - 08:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	216	54	655	0.329	217	0.8	0.5	8.237	A
C-AB	187	47	715	0.261	188	0.5	0.4	6.833	A
C-A	282	71			282				
A-B	161	40			161				
A-C	380	95			380				

08:40 - 08:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	181	45	692	0.261	181	0.5	0.4	7.061	A
C-AB	157	39	745	0.210	157	0.4	0.3	6.125	A
C-A	236	59			236				
A-B	135	34			135				
A-C	318	80			318				

2028 Baseline + Proposed LC, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A226_ThongLane	T-Junction	Two-way	Two-way	Two-way		2.54	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.54	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2028 Baseline + Proposed LC	PM	ONE HOUR	16:35	18:05	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A226 East		ONE HOUR	✓	441	100.000
B - Thong Lane		ONE HOUR	✓	242	100.000
C - A226 West		ONE HOUR	✓	788	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - A226 East	B - Thong Lane	C - A226 West
From	A - A226 East	0	96	345
	B - Thong Lane	91	0	151
	C - A226 West	581	207	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - A226 East	B - Thong Lane	C - A226 West
From	A - A226 East	0	2	3
	B - Thong Lane	0	0	0
	C - A226 West	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.42	9.83	0.7	A	222	333
C-AB	0.30	6.87	0.4	A	190	285
C-A					533	800
A-B					88	132
A-C					317	475

Main Results for each time segment

16:35 - 16:50

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	182	46	718	0.254	181	0.0	0.3	6.680	A
C-AB	156	39	804	0.194	155	0.0	0.2	5.535	A
C-A	437	109			437				
A-B	72	18			72				
A-C	260	65			260				

16:50 - 17:05

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	218	54	683	0.318	217	0.3	0.5	7.710	A
C-AB	186	47	782	0.238	186	0.2	0.3	6.031	A
C-A	522	131			522				
A-B	86	22			86				
A-C	310	78			310				

17:05 - 17:20

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	266	67	633	0.421	265	0.5	0.7	9.773	A
C-AB	228	57	752	0.303	227	0.3	0.4	6.858	A
C-A	640	160			640				
A-B	106	26			106				
A-C	380	95			380				

17:20 - 17:35

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	266	67	633	0.421	266	0.7	0.7	9.828	A
C-AB	228	57	752	0.303	228	0.4	0.4	6.869	A
C-A	640	160			640				
A-B	106	26			106				
A-C	380	95			380				

17:35 - 17:50

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	218	54	683	0.318	219	0.7	0.5	7.763	A
C-AB	186	47	782	0.238	187	0.4	0.3	6.046	A
C-A	522	131			522				
A-B	86	22			86				
A-C	310	78			310				

17:50 - 18:05

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	182	46	718	0.254	183	0.5	0.3	6.728	A
C-AB	156	39	804	0.194	156	0.3	0.2	5.555	A
C-A	437	109			437				
A-B	72	18			72				
A-C	260	65			260				

Appendix F

Thong Lane / Leander Drive model output

Gravesham Borough Council

Junctions 10									
ARCADY 10 - Roundabout Module									
Version: 10.0.4.1693									
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+44 (0)1344 379777 software@trl.co.uk trlsoftware.com									
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution									

Filename: 6_LeanderDrive_ThongLane.j10

Path: J:\332410895 - GH - Cascades leisure centre, Gravesend\100 - Transport\Modelling\Junctions10

Report generation date: 09/11/2022 08:57:44

»2022 Base Year, AM

»2022 Base Year, PM

»2028 Baseline, AM

»2028 Baseline, PM

»2028 Baseline + Proposed LC, AM

»2028 Baseline + Proposed LC, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year									
1 - Thong Lane North	D1	0.5	5.57	0.34	A	D2	0.5	5.59	0.35	A
2 - Thong Lane South		0.3	6.91	0.25	A		0.4	6.89	0.29	A
3 - Leander Drive		0.4	6.76	0.28	A		0.5	7.43	0.33	A
	2028 Baseline									
1 - Thong Lane North	D3	0.6	5.94	0.38	A	D4	0.6	5.82	0.37	A
2 - Thong Lane South		0.4	7.45	0.30	A		0.4	7.13	0.31	A
3 - Leander Drive		0.4	7.11	0.30	A		0.5	7.69	0.34	A
	2028 Baseline + Proposed LC									
1 - Thong Lane North	D5	0.6	5.98	0.38	A	D6	0.6	5.93	0.38	A
2 - Thong Lane South		0.4	7.47	0.30	A		0.5	7.27	0.32	A
3 - Leander Drive		0.4	7.12	0.30	A		0.5	7.79	0.35	A

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

File summary

File Description

Title	
Location	
Site number	
Date	02/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CORP\chbrooks
Description	

Units

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



Flows show original traffic demand (Veh/hr).

The junction diagram reflects the last run of Junctions.

Analysis Options

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
JUNCTIONS 9	5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	ONE HOUR	07:25	08:55	15	✓
D2	2022 Base Year	PM	ONE HOUR	16:35	18:05	15	✓
D3	2028 Baseline	AM	ONE HOUR	07:25	08:55	15	✓
D4	2028 Baseline	PM	ONE HOUR	16:35	18:05	15	✓
D5	2028 Baseline + Proposed LC	AM	ONE HOUR	07:25	08:55	15	✓
D6	2028 Baseline + Proposed LC	PM	ONE HOUR	16:35	18:05	15	✓

Analysis Set Details

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

2022 Base Year, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	6.25	A

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		6.25	A

Arms

Arms

Arm	Name	Description
1	Thong Lane North	
2	Thong Lane South	
3	Leander Drive	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1 - Thong Lane North	3.32	3.32	4.03	9.0	14.77	14.30	0.0	
2 - Thong Lane South	3.31	2.60	3.59	1.2	11.17	8.42	0.0	
3 - Leander Drive	3.18	3.06	4.23	1.6	9.64	6.76	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Thong Lane North	0.641	1026
2 - Thong Lane South	0.586	840
3 - Leander Drive	0.606	831

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	ONE HOUR	07:25	08:55	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Thong Lane North		ONE HOUR	✓	301	100.000
2 - Thong Lane South		ONE HOUR	✓	161	100.000
3 - Leander Drive		ONE HOUR	✓	191	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		1 - Thong Lane North	2 - Thong Lane South	3 - Leander Drive
From	1 - Thong Lane North	0	99	202
	2 - Thong Lane South	109	0	52
	3 - Leander Drive	148	43	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - Thong Lane North	2 - Thong Lane South	3 - Leander Drive
From	1 - Thong Lane North	0	3	1
	2 - Thong Lane South	2	0	0
	3 - Leander Drive	1	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Thong Lane North	0.34	5.57	0.5	A	276	414
2 - Thong Lane South	0.25	6.91	0.3	A	148	222
3 - Leander Drive	0.28	6.76	0.4	A	175	263

Main Results for each time segment

07:25 - 07:40

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	227	57	32	988	0.229	225	192	0.0	0.3	4.716	A
2 - Thong Lane South	121	30	151	740	0.164	120	106	0.0	0.2	5.803	A
3 - Leander Drive	144	36	82	766	0.188	143	190	0.0	0.2	5.769	A

07:40 - 07:55

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	271	68	39	984	0.275	270	231	0.3	0.4	5.045	A
2 - Thong Lane South	145	36	181	722	0.200	145	127	0.2	0.2	6.229	A
3 - Leander Drive	172	43	98	756	0.227	171	228	0.2	0.3	6.154	A

07:55 - 08:10

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	331	83	47	978	0.339	331	282	0.4	0.5	5.560	A
2 - Thong Lane South	177	44	222	699	0.254	177	156	0.2	0.3	6.895	A
3 - Leander Drive	210	53	120	743	0.283	210	279	0.3	0.4	6.751	A

08:10 - 08:25

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	331	83	47	978	0.339	331	283	0.5	0.5	5.569	A
2 - Thong Lane South	177	44	222	698	0.254	177	156	0.3	0.3	6.906	A
3 - Leander Drive	210	53	120	743	0.283	210	280	0.4	0.4	6.761	A

08:25 - 08:40

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	271	68	39	983	0.275	271	232	0.5	0.4	5.057	A
2 - Thong Lane South	145	36	182	722	0.200	145	128	0.3	0.3	6.241	A
3 - Leander Drive	172	43	98	756	0.227	172	229	0.4	0.3	6.172	A

08:40 - 08:55

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	227	57	32	988	0.229	227	194	0.4	0.3	4.736	A
2 - Thong Lane South	121	30	152	739	0.164	121	107	0.3	0.2	5.826	A
3 - Leander Drive	144	36	82	766	0.188	144	192	0.3	0.2	5.793	A

2022 Base Year, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	6.50	A

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		6.50	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2022 Base Year	PM	ONE HOUR	16:35	18:05	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Thong Lane North		ONE HOUR	✓	309	100.000
2 - Thong Lane South		ONE HOUR	✓	193	100.000
3 - Leander Drive		ONE HOUR	✓	214	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		1 - Thong Lane North	2 - Thong Lane South	3 - Leander Drive
From	1 - Thong Lane North	0	147	162
	2 - Thong Lane South	144	0	49
	3 - Leander Drive	157	57	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - Thong Lane North	2 - Thong Lane South	3 - Leander Drive
From	1 - Thong Lane North	0	0	0
	2 - Thong Lane South	0	0	0
	3 - Leander Drive	1	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Thong Lane North	0.35	5.59	0.5	A	284	425
2 - Thong Lane South	0.29	6.89	0.4	A	177	266
3 - Leander Drive	0.33	7.43	0.5	A	196	295

Main Results for each time segment

16:35 - 16:50

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	233	58	43	997	0.233	231	225	0.0	0.3	4.687	A
2 - Thong Lane South	145	36	121	769	0.189	144	153	0.0	0.2	5.760	A
3 - Leander Drive	161	40	108	750	0.215	160	158	0.0	0.3	6.088	A

16:50 - 17:05

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	278	69	51	991	0.280	277	270	0.3	0.4	5.040	A
2 - Thong Lane South	174	43	145	754	0.230	173	183	0.2	0.3	6.192	A
3 - Leander Drive	192	48	129	737	0.261	192	189	0.3	0.3	6.596	A

17:05 - 17:20

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	340	85	63	984	0.346	340	331	0.4	0.5	5.585	A
2 - Thong Lane South	212	53	178	735	0.289	212	224	0.3	0.4	6.875	A
3 - Leander Drive	236	59	158	720	0.327	235	232	0.3	0.5	7.413	A

17:20 - 17:35

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	340	85	63	984	0.346	340	331	0.5	0.5	5.595	A
2 - Thong Lane South	212	53	178	735	0.289	212	225	0.4	0.4	6.888	A
3 - Leander Drive	236	59	159	720	0.327	236	232	0.5	0.5	7.430	A

17:35 - 17:50

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	278	69	51	991	0.280	278	271	0.5	0.4	5.053	A
2 - Thong Lane South	174	43	146	754	0.230	174	184	0.4	0.3	6.211	A
3 - Leander Drive	192	48	130	737	0.261	193	190	0.5	0.4	6.620	A

17:50 - 18:05

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	233	58	43	997	0.233	233	227	0.4	0.3	4.714	A
2 - Thong Lane South	145	36	122	768	0.189	146	154	0.3	0.2	5.785	A
3 - Leander Drive	161	40	109	750	0.215	161	159	0.4	0.3	6.124	A

Gravesham Borough Council

2028 Baseline, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	6.65	A

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		6.65	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2028 Baseline	AM	ONE HOUR	07:25	08:55	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Thong Lane North		ONE HOUR	✓	339	100.000
2 - Thong Lane South		ONE HOUR	✓	191	100.000
3 - Leander Drive		ONE HOUR	✓	198	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		1 - Thong Lane North	2 - Thong Lane South	3 - Leander Drive
From	1 - Thong Lane North	0	130	209
	2 - Thong Lane South	137	0	54
	3 - Leander Drive	154	44	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - Thong Lane North	2 - Thong Lane South	3 - Leander Drive
From	1 - Thong Lane North	0	2	1
	2 - Thong Lane South	2	0	0
	3 - Leander Drive	1	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Thong Lane North	0.38	5.94	0.6	A	311	467
2 - Thong Lane South	0.30	7.45	0.4	A	175	263
3 - Leander Drive	0.30	7.11	0.4	A	182	273

Main Results for each time segment

07:25 - 07:40

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	255	64	33	990	0.258	254	218	0.0	0.3	4.881	A
2 - Thong Lane South	144	36	156	736	0.195	143	130	0.0	0.2	6.055	A
3 - Leander Drive	149	37	102	753	0.198	148	197	0.0	0.2	5.937	A

07:40 - 07:55

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	305	76	39	986	0.309	304	261	0.3	0.4	5.280	A
2 - Thong Lane South	172	43	188	718	0.239	171	156	0.2	0.3	6.581	A
3 - Leander Drive	178	44	123	741	0.240	178	236	0.2	0.3	6.388	A

07:55 - 08:10

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	373	93	48	980	0.381	373	320	0.4	0.6	5.923	A
2 - Thong Lane South	210	53	230	694	0.303	210	191	0.3	0.4	7.432	A
3 - Leander Drive	218	55	150	724	0.301	218	289	0.3	0.4	7.098	A

08:10 - 08:25

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	373	93	48	980	0.381	373	320	0.6	0.6	5.935	A
2 - Thong Lane South	210	53	230	693	0.303	210	192	0.4	0.4	7.450	A
3 - Leander Drive	218	55	151	724	0.301	218	290	0.4	0.4	7.112	A

08:25 - 08:40

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	305	76	40	986	0.309	305	262	0.6	0.5	5.299	A
2 - Thong Lane South	172	43	188	718	0.239	172	157	0.4	0.3	6.602	A
3 - Leander Drive	178	44	123	741	0.240	178	237	0.4	0.3	6.409	A

08:40 - 08:55

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	255	64	33	990	0.258	256	220	0.5	0.3	4.907	A
2 - Thong Lane South	144	36	158	736	0.195	144	131	0.3	0.2	6.089	A
3 - Leander Drive	149	37	103	753	0.198	149	198	0.3	0.2	5.969	A

Gravesham Borough Council

2028 Baseline, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	6.73	A

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		6.73	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2028 Baseline	PM	ONE HOUR	16:35	18:05	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Thong Lane North		ONE HOUR	✓	326	100.000
2 - Thong Lane South		ONE HOUR	✓	205	100.000
3 - Leander Drive		ONE HOUR	✓	223	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		1 - Thong Lane North	2 - Thong Lane South	3 - Leander Drive
From	1 - Thong Lane North	0	157	169
	2 - Thong Lane South	154	0	51
	3 - Leander Drive	164	59	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - Thong Lane North	2 - Thong Lane South	3 - Leander Drive
From	1 - Thong Lane North	0	1	0
	2 - Thong Lane South	0	0	0
	3 - Leander Drive	1	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Thong Lane North	0.37	5.82	0.6	A	299	449
2 - Thong Lane South	0.31	7.13	0.4	A	188	282
3 - Leander Drive	0.34	7.69	0.5	A	205	307

Main Results for each time segment

16:35 - 16:50

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	245	61	44	991	0.248	244	238	0.0	0.3	4.810	A
2 - Thong Lane South	154	39	127	765	0.202	153	162	0.0	0.3	5.871	A
3 - Leander Drive	168	42	115	746	0.225	167	165	0.0	0.3	6.203	A

16:50 - 17:05

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	293	73	53	985	0.297	293	285	0.3	0.4	5.195	A
2 - Thong Lane South	184	46	152	751	0.246	184	194	0.3	0.3	6.350	A
3 - Leander Drive	200	50	138	732	0.274	200	198	0.3	0.4	6.762	A

17:05 - 17:20

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	359	90	65	977	0.367	358	349	0.4	0.6	5.808	A
2 - Thong Lane South	226	56	186	731	0.309	225	237	0.3	0.4	7.116	A
3 - Leander Drive	246	61	169	714	0.344	245	242	0.4	0.5	7.670	A

17:20 - 17:35

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	359	90	65	977	0.367	359	350	0.6	0.6	5.820	A
2 - Thong Lane South	226	56	186	731	0.309	226	238	0.4	0.4	7.130	A
3 - Leander Drive	246	61	170	714	0.344	246	242	0.5	0.5	7.691	A

17:35 - 17:50

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	293	73	53	985	0.297	294	287	0.6	0.4	5.209	A
2 - Thong Lane South	184	46	152	750	0.246	185	195	0.4	0.3	6.369	A
3 - Leander Drive	200	50	139	732	0.274	201	198	0.5	0.4	6.788	A

17:50 - 18:05

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	245	61	45	991	0.248	246	240	0.4	0.3	4.834	A
2 - Thong Lane South	154	39	127	765	0.202	155	163	0.3	0.3	5.903	A
3 - Leander Drive	168	42	116	745	0.225	168	166	0.4	0.3	6.242	A

Gravesham Borough Council

2028 Baseline + Proposed LC, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	6.68	A

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		6.68	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2028 Baseline + Proposed LC	AM	ONE HOUR	07:25	08:55	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Thong Lane North		ONE HOUR	✓	340	100.000
2 - Thong Lane South		ONE HOUR	✓	192	100.000
3 - Leander Drive		ONE HOUR	✓	198	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		1 - Thong Lane North	2 - Thong Lane South	3 - Leander Drive
From	1 - Thong Lane North	0	131	209
	2 - Thong Lane South	138	0	54
	3 - Leander Drive	154	44	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - Thong Lane North	2 - Thong Lane South	3 - Leander Drive
From	1 - Thong Lane North	0	3	1
	2 - Thong Lane South	2	0	0
	3 - Leander Drive	1	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Thong Lane North	0.38	5.98	0.6	A	312	468
2 - Thong Lane South	0.30	7.47	0.4	A	176	264
3 - Leander Drive	0.30	7.12	0.4	A	182	273

Main Results for each time segment

07:25 - 07:40

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	256	64	33	986	0.260	255	218	0.0	0.3	4.912	A
2 - Thong Lane South	145	36	156	736	0.196	144	131	0.0	0.2	6.063	A
3 - Leander Drive	149	37	103	753	0.198	148	197	0.0	0.2	5.941	A

07:40 - 07:55

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	306	76	39	982	0.311	305	262	0.3	0.4	5.317	A
2 - Thong Lane South	173	43	188	718	0.240	172	157	0.2	0.3	6.592	A
3 - Leander Drive	178	44	124	740	0.240	178	236	0.2	0.3	6.394	A

07:55 - 08:10

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	374	94	48	976	0.384	374	321	0.4	0.6	5.971	A
2 - Thong Lane South	211	53	230	694	0.305	211	192	0.3	0.4	7.449	A
3 - Leander Drive	218	55	152	724	0.301	218	289	0.3	0.4	7.108	A

08:10 - 08:25

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	374	94	48	976	0.384	374	321	0.6	0.6	5.983	A
2 - Thong Lane South	211	53	230	693	0.305	211	193	0.4	0.4	7.467	A
3 - Leander Drive	218	55	152	723	0.301	218	290	0.4	0.4	7.122	A

08:25 - 08:40

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	306	76	40	982	0.311	306	263	0.6	0.5	5.336	A
2 - Thong Lane South	173	43	188	718	0.240	173	158	0.4	0.3	6.613	A
3 - Leander Drive	178	44	124	740	0.241	178	237	0.4	0.3	6.413	A

08:40 - 08:55

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	256	64	33	986	0.260	256	220	0.5	0.4	4.938	A
2 - Thong Lane South	145	36	158	736	0.196	145	132	0.3	0.2	6.097	A
3 - Leander Drive	149	37	104	752	0.198	149	198	0.3	0.2	5.973	A

Gravesham Borough Council

2028 Baseline + Proposed LC, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	6.84	A

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		6.84	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2028 Baseline + Proposed LC	PM	ONE HOUR	16:35	18:05	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Thong Lane North		ONE HOUR	✓	336	100.000
2 - Thong Lane South		ONE HOUR	✓	214	100.000
3 - Leander Drive		ONE HOUR	✓	223	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		1 - Thong Lane North	2 - Thong Lane South	3 - Leander Drive
From	1 - Thong Lane North	0	167	169
	2 - Thong Lane South	163	0	51
	3 - Leander Drive	164	59	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - Thong Lane North	2 - Thong Lane South	3 - Leander Drive
From	1 - Thong Lane North	0	1	0
	2 - Thong Lane South	0	0	0
	3 - Leander Drive	1	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Thong Lane North	0.38	5.93	0.6	A	308	462
2 - Thong Lane South	0.32	7.27	0.5	A	196	295
3 - Leander Drive	0.35	7.79	0.5	A	205	307

Main Results for each time segment

16:35 - 16:50

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	253	63	44	991	0.255	252	245	0.0	0.3	4.858	A
2 - Thong Lane South	161	40	127	765	0.210	160	169	0.0	0.3	5.937	A
3 - Leander Drive	168	42	122	742	0.226	167	165	0.0	0.3	6.247	A

16:50 - 17:05

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	302	76	53	985	0.307	302	293	0.3	0.4	5.262	A
2 - Thong Lane South	192	48	152	751	0.256	192	203	0.3	0.3	6.442	A
3 - Leander Drive	200	50	146	727	0.276	200	198	0.3	0.4	6.823	A

17:05 - 17:20

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	370	92	65	977	0.379	369	359	0.4	0.6	5.914	A
2 - Thong Lane South	236	59	186	731	0.322	235	248	0.3	0.5	7.255	A
3 - Leander Drive	246	61	179	708	0.347	245	242	0.4	0.5	7.765	A

17:20 - 17:35

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	370	92	65	977	0.379	370	360	0.6	0.6	5.927	A
2 - Thong Lane South	236	59	186	731	0.323	236	249	0.5	0.5	7.272	A
3 - Leander Drive	246	61	179	708	0.347	246	242	0.5	0.5	7.789	A

17:35 - 17:50

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	302	76	53	985	0.307	303	295	0.6	0.4	5.281	A
2 - Thong Lane South	192	48	152	750	0.256	193	204	0.5	0.3	6.462	A
3 - Leander Drive	200	50	147	727	0.276	201	198	0.5	0.4	6.854	A

17:50 - 18:05

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	253	63	45	991	0.255	253	247	0.4	0.3	4.883	A
2 - Thong Lane South	161	40	127	765	0.211	161	170	0.3	0.3	5.970	A
3 - Leander Drive	168	42	123	741	0.227	168	166	0.4	0.3	6.286	A

Gravesham Borough Council

Appendix G

Thong Lane / Whinfell Way model output

Gravesham Borough Council

Junctions 10										
ARCADY 10 - Roundabout Module										
Version: 10.0.4.1693										
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The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution										

Filename: 7_WhinfellWay_ThongLane.j10

Path: J:\332410895 - GH - Cascades leisure centre, Gravesend\100 - Transport\Modelling\Junctions10

Report generation date: 09/11/2022 08:59:46

»2022 Base Year, AM

»2022 Base Year, PM

»2028 Baseline, AM

»2028 Baseline, PM

»2028 Baseline + Proposed LC, AM

»2028 Baseline + Proposed LC, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year									
1 - Thong Lane North	D1	0.2	4.77	0.16	A	D2	0.2	5.02	0.17	A
2 - Thong Lane South		0.2	5.62	0.18	A		0.3	5.91	0.22	A
3 - Whinfell Way		0.2	5.24	0.14	A		0.4	6.29	0.27	A
	2028 Baseline									
1 - Thong Lane North	D3	0.2	4.96	0.20	A	D4	0.2	5.08	0.18	A
2 - Thong Lane South		0.3	5.87	0.22	A		0.3	6.06	0.24	A
3 - Whinfell Way		0.2	5.44	0.15	A		0.4	6.47	0.28	A
	2028 Baseline + Proposed LC									
1 - Thong Lane North	D5	0.2	4.96	0.20	A	D6	0.2	5.08	0.18	A
2 - Thong Lane South		0.3	5.96	0.23	A		0.4	6.24	0.26	A
3 - Whinfell Way		0.2	5.46	0.15	A		0.4	6.59	0.28	A

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

File summary

File Description

Title	
Location	
Site number	
Date	02/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CORP\chbrooks
Description	

Units

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



Flows show original traffic demand (Veh/hr).

The junction diagram reflects the last run of Junctions.

Analysis Options

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
JUNCTIONS 9	5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	ONE HOUR	07:25	08:55	15	✓
D2	2022 Base Year	PM	ONE HOUR	08:00	09:30	15	✓
D3	2028 Baseline	AM	ONE HOUR	07:25	08:55	15	✓
D4	2028 Baseline	PM	ONE HOUR	08:00	09:30	15	✓
D5	2028 Baseline + Proposed LC	AM	ONE HOUR	07:25	08:55	15	✓
D6	2028 Baseline + Proposed LC	PM	ONE HOUR	08:00	09:30	15	✓

Analysis Set Details

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

2022 Base Year, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	5.21	A

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		5.21	A

Arms

Arms

Arm	Name	Description
1	Thong Lane North	
2	Thong Lane South	
3	Whinfell Way	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1 - Thong Lane North	3.50	3.40	3.40	0.0	14.16	13.43	0.0	
2 - Thong Lane South	3.79	2.68	4.36	1.6	9.64	7.14	0.0	
3 - Whinfell Way	3.19	3.19	5.20	1.5	10.61	7.73	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Thong Lane North	0.617	945
2 - Thong Lane South	0.593	824
3 - Whinfell Way	0.612	874

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	ONE HOUR	07:25	08:55	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Thong Lane North		ONE HOUR	✓	131	100.000
2 - Thong Lane South		ONE HOUR	✓	131	100.000
3 - Whinfell Way		ONE HOUR	✓	103	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		1 - Thong Lane North	2 - Thong Lane South	3 - Whinfell Way
From	1 - Thong Lane North	0	108	23
	2 - Thong Lane South	107	0	24
	3 - Whinfell Way	67	36	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - Thong Lane North	2 - Thong Lane South	3 - Whinfell Way
From	1 - Thong Lane North	0	3	0
	2 - Thong Lane South	3	0	4
	3 - Whinfell Way	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Thong Lane North	0.16	4.77	0.2	A	120	180
2 - Thong Lane South	0.18	5.62	0.2	A	120	180
3 - Whinfell Way	0.14	5.24	0.2	A	95	142

Main Results for each time segment

07:25 - 07:40

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	99	25	27	906	0.109	98	130	0.0	0.1	4.451	A
2 - Thong Lane South	99	25	17	789	0.125	98	108	0.0	0.1	5.207	A
3 - Whinfell Way	78	19	80	824	0.094	77	35	0.0	0.1	4.820	A

07:40 - 07:55

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	118	29	32	903	0.130	118	156	0.1	0.1	4.583	A
2 - Thong Lane South	118	29	21	787	0.150	118	129	0.1	0.2	5.378	A
3 - Whinfell Way	93	23	96	814	0.114	92	42	0.1	0.1	4.992	A

07:55 - 08:10

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	144	36	40	899	0.160	144	191	0.1	0.2	4.769	A
2 - Thong Lane South	144	36	25	784	0.184	144	158	0.2	0.2	5.622	A
3 - Whinfell Way	113	28	118	800	0.142	113	52	0.1	0.2	5.240	A

08:10 - 08:25

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	144	36	40	899	0.160	144	192	0.2	0.2	4.771	A
2 - Thong Lane South	144	36	25	784	0.184	144	159	0.2	0.2	5.625	A
3 - Whinfell Way	113	28	118	800	0.142	113	52	0.2	0.2	5.243	A

08:25 - 08:40

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	118	29	32	903	0.130	118	157	0.2	0.2	4.585	A
2 - Thong Lane South	118	29	21	787	0.150	118	130	0.2	0.2	5.385	A
3 - Whinfell Way	93	23	96	813	0.114	93	42	0.2	0.1	4.995	A

08:40 - 08:55

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	99	25	27	906	0.109	99	131	0.2	0.1	4.460	A
2 - Thong Lane South	99	25	17	789	0.125	99	109	0.2	0.1	5.220	A
3 - Whinfell Way	78	19	81	823	0.094	78	35	0.1	0.1	4.827	A

2022 Base Year, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	5.81	A

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		5.81	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2022 Base Year	PM	ONE HOUR	08:00	09:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Thong Lane North		ONE HOUR	✓	132	100.000
2 - Thong Lane South		ONE HOUR	✓	158	100.000
3 - Whinfell Way		ONE HOUR	✓	190	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
From		1 - Thong Lane North	2 - Thong Lane South	3 - Whinfell Way
	1 - Thong Lane North	0	80	52
	2 - Thong Lane South	136	0	22
	3 - Whinfell Way	99	91	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		1 - Thong Lane North	2 - Thong Lane South	3 - Whinfell Way
	1 - Thong Lane North	0	4	0
	2 - Thong Lane South	1	0	0
	3 - Whinfell Way	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Thong Lane North	0.17	5.02	0.2	A	121	182
2 - Thong Lane South	0.22	5.91	0.3	A	145	217
3 - Whinfell Way	0.27	6.29	0.4	A	174	262

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	99	25	68	882	0.113	99	176	0.0	0.1	4.594	A
2 - Thong Lane South	119	30	39	794	0.150	118	128	0.0	0.2	5.320	A
3 - Whinfell Way	143	36	102	811	0.176	142	55	0.0	0.2	5.373	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	119	30	82	874	0.136	119	211	0.1	0.2	4.766	A
2 - Thong Lane South	142	36	47	790	0.180	142	154	0.2	0.2	5.556	A
3 - Whinfell Way	171	43	122	799	0.214	171	66	0.2	0.3	5.730	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	145	36	100	863	0.168	145	258	0.2	0.2	5.015	A
2 - Thong Lane South	174	43	57	783	0.222	174	188	0.2	0.3	5.901	A
3 - Whinfell Way	209	52	150	782	0.268	209	81	0.3	0.4	6.278	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	145	36	100	863	0.168	145	259	0.2	0.2	5.018	A
2 - Thong Lane South	174	43	57	783	0.222	174	188	0.3	0.3	5.906	A
3 - Whinfell Way	209	52	150	782	0.268	209	81	0.4	0.4	6.287	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	119	30	82	874	0.136	119	212	0.2	0.2	4.770	A
2 - Thong Lane South	142	36	47	790	0.180	142	154	0.3	0.2	5.563	A
3 - Whinfell Way	171	43	122	799	0.214	171	67	0.4	0.3	5.743	A

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	99	25	69	882	0.113	99	177	0.2	0.1	4.604	A
2 - Thong Lane South	119	30	39	794	0.150	119	129	0.2	0.2	5.336	A
3 - Whinfell Way	143	36	103	811	0.176	143	56	0.3	0.2	5.394	A

Gravesham Borough Council

2028 Baseline, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	5.42	A

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		5.42	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2028 Baseline	AM	ONE HOUR	07:25	08:55	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Thong Lane North		ONE HOUR	✓	162	100.000
2 - Thong Lane South		ONE HOUR	✓	161	100.000
3 - Whinfell Way		ONE HOUR	✓	108	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
From		1 - Thong Lane North	2 - Thong Lane South	3 - Whinfell Way
	1 - Thong Lane North	0	138	24
	2 - Thong Lane South	136	0	25
	3 - Whinfell Way	70	38	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		1 - Thong Lane North	2 - Thong Lane South	3 - Whinfell Way
	1 - Thong Lane North	0	2	0
	2 - Thong Lane South	2	0	4
	3 - Whinfell Way	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Thong Lane North	0.20	4.96	0.2	A	149	223
2 - Thong Lane South	0.22	5.87	0.3	A	148	222
3 - Whinfell Way	0.15	5.44	0.2	A	99	149

Main Results for each time segment

07:25 - 07:40

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	122	30	28	912	0.134	121	154	0.0	0.2	4.549	A
2 - Thong Lane South	121	30	18	795	0.152	120	132	0.0	0.2	5.331	A
3 - Whinfell Way	81	20	102	811	0.100	81	37	0.0	0.1	4.929	A

07:40 - 07:55

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	146	36	34	909	0.160	145	185	0.2	0.2	4.716	A
2 - Thong Lane South	145	36	22	793	0.183	145	158	0.2	0.2	5.550	A
3 - Whinfell Way	97	24	122	798	0.122	97	44	0.1	0.1	5.135	A

07:55 - 08:10

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	178	45	42	904	0.197	178	226	0.2	0.2	4.957	A
2 - Thong Lane South	177	44	26	790	0.224	177	194	0.2	0.3	5.868	A
3 - Whinfell Way	119	30	150	781	0.152	119	54	0.1	0.2	5.435	A

08:10 - 08:25

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	178	45	42	904	0.197	178	227	0.2	0.2	4.959	A
2 - Thong Lane South	177	44	26	790	0.224	177	194	0.3	0.3	5.872	A
3 - Whinfell Way	119	30	150	781	0.152	119	54	0.2	0.2	5.438	A

08:25 - 08:40

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	146	36	34	909	0.160	146	186	0.2	0.2	4.719	A
2 - Thong Lane South	145	36	22	793	0.183	145	158	0.3	0.2	5.557	A
3 - Whinfell Way	97	24	122	798	0.122	97	44	0.2	0.1	5.141	A

08:40 - 08:55

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	122	30	29	912	0.134	122	155	0.2	0.2	4.559	A
2 - Thong Lane South	121	30	18	795	0.152	121	133	0.2	0.2	5.347	A
3 - Whinfell Way	81	20	103	810	0.100	81	37	0.1	0.1	4.941	A

Gravesham Borough Council

2028 Baseline, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	5.95	A

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		5.95	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2028 Baseline	PM	ONE HOUR	08:00	09:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Thong Lane North		ONE HOUR	✓	138	100.000
2 - Thong Lane South		ONE HOUR	✓	171	100.000
3 - Whinfell Way		ONE HOUR	✓	197	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
From		1 - Thong Lane North	2 - Thong Lane South	3 - Whinfell Way
	1 - Thong Lane North	0	84	54
	2 - Thong Lane South	148	0	23
	3 - Whinfell Way	103	94	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		1 - Thong Lane North	2 - Thong Lane South	3 - Whinfell Way
	1 - Thong Lane North	0	4	0
	2 - Thong Lane South	1	0	0
	3 - Whinfell Way	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Thong Lane North	0.18	5.08	0.2	A	127	190
2 - Thong Lane South	0.24	6.06	0.3	A	157	235
3 - Whinfell Way	0.28	6.47	0.4	A	181	271

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	104	26	70	881	0.118	103	188	0.0	0.1	4.629	A
2 - Thong Lane South	129	32	40	793	0.162	128	133	0.0	0.2	5.406	A
3 - Whinfell Way	148	37	111	806	0.184	147	58	0.0	0.2	5.462	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	124	31	84	872	0.142	124	225	0.1	0.2	4.812	A
2 - Thong Lane South	154	38	48	789	0.195	154	160	0.2	0.2	5.668	A
3 - Whinfell Way	177	44	133	792	0.224	177	69	0.2	0.3	5.848	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	152	38	103	861	0.177	152	276	0.2	0.2	5.076	A
2 - Thong Lane South	188	47	59	782	0.241	188	196	0.2	0.3	6.056	A
3 - Whinfell Way	217	54	163	774	0.280	217	85	0.3	0.4	6.457	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	152	38	103	861	0.177	152	276	0.2	0.2	5.079	A
2 - Thong Lane South	188	47	59	782	0.241	188	196	0.3	0.3	6.061	A
3 - Whinfell Way	217	54	163	773	0.280	217	85	0.4	0.4	6.467	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	124	31	85	872	0.142	124	226	0.2	0.2	4.817	A
2 - Thong Lane South	154	38	49	788	0.195	154	160	0.3	0.2	5.676	A
3 - Whinfell Way	177	44	133	792	0.224	177	69	0.4	0.3	5.863	A

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	104	26	71	880	0.118	104	189	0.2	0.1	4.638	A
2 - Thong Lane South	129	32	41	793	0.162	129	134	0.2	0.2	5.421	A
3 - Whinfell Way	148	37	112	805	0.184	149	58	0.3	0.2	5.483	A

Gravesham Borough Council

2028 Baseline + Proposed LC, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	5.46	A

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		5.46	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2028 Baseline + Proposed LC	AM	ONE HOUR	07:25	08:55	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Thong Lane North		ONE HOUR	✓	162	100.000
2 - Thong Lane South		ONE HOUR	✓	163	100.000
3 - Whinfell Way		ONE HOUR	✓	108	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		1 - Thong Lane North	2 - Thong Lane South	3 - Whinfell Way
From	1 - Thong Lane North	0	138	24
	2 - Thong Lane South	138	0	25
	3 - Whinfell Way	70	38	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - Thong Lane North	2 - Thong Lane South	3 - Whinfell Way
From	1 - Thong Lane North	0	2	0
	2 - Thong Lane South	3	0	4
	3 - Whinfell Way	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Thong Lane North	0.20	4.96	0.2	A	149	223
2 - Thong Lane South	0.23	5.96	0.3	A	150	224
3 - Whinfell Way	0.15	5.46	0.2	A	99	149

Main Results for each time segment

07:25 - 07:40

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	122	30	28	912	0.134	121	156	0.0	0.2	4.549	A
2 - Thong Lane South	123	31	18	789	0.156	122	132	0.0	0.2	5.395	A
3 - Whinfell Way	81	20	103	809	0.100	81	37	0.0	0.1	4.940	A

07:40 - 07:55

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	146	36	34	909	0.160	145	187	0.2	0.2	4.716	A
2 - Thong Lane South	147	37	22	787	0.186	146	158	0.2	0.2	5.622	A
3 - Whinfell Way	97	24	124	796	0.122	97	44	0.1	0.1	5.149	A

07:55 - 08:10

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	178	45	42	904	0.197	178	229	0.2	0.2	4.957	A
2 - Thong Lane South	179	45	26	784	0.229	179	194	0.2	0.3	5.952	A
3 - Whinfell Way	119	30	152	779	0.153	119	54	0.1	0.2	5.454	A

08:10 - 08:25

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	178	45	42	904	0.197	178	229	0.2	0.2	4.959	A
2 - Thong Lane South	179	45	26	784	0.229	179	194	0.3	0.3	5.956	A
3 - Whinfell Way	119	30	152	778	0.153	119	54	0.2	0.2	5.457	A

08:25 - 08:40

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	146	36	34	909	0.160	146	187	0.2	0.2	4.721	A
2 - Thong Lane South	147	37	22	787	0.186	147	158	0.3	0.2	5.631	A
3 - Whinfell Way	97	24	124	796	0.122	97	44	0.2	0.1	5.155	A

08:40 - 08:55

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	122	30	29	912	0.134	122	157	0.2	0.2	4.557	A
2 - Thong Lane South	123	31	18	789	0.156	123	133	0.2	0.2	5.409	A
3 - Whinfell Way	81	20	104	809	0.101	81	37	0.1	0.1	4.952	A

Gravesham Borough Council

2028 Baseline + Proposed LC, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout		1, 2, 3	6.06	A

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		6.06	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2028 Baseline + Proposed LC	PM	ONE HOUR	08:00	09:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - Thong Lane North		ONE HOUR	✓	138	100.000
2 - Thong Lane South		ONE HOUR	✓	186	100.000
3 - Whinfell Way		ONE HOUR	✓	197	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		1 - Thong Lane North	2 - Thong Lane South	3 - Whinfell Way
From	1 - Thong Lane North	0	84	54
	2 - Thong Lane South	163	0	23
	3 - Whinfell Way	103	94	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - Thong Lane North	2 - Thong Lane South	3 - Whinfell Way
From	1 - Thong Lane North	0	4	0
	2 - Thong Lane South	1	0	0
	3 - Whinfell Way	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - Thong Lane North	0.18	5.08	0.2	A	127	190
2 - Thong Lane South	0.26	6.24	0.4	A	171	256
3 - Whinfell Way	0.28	6.59	0.4	A	181	271

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	104	26	70	881	0.118	103	199	0.0	0.1	4.629	A
2 - Thong Lane South	140	35	40	793	0.177	139	133	0.0	0.2	5.498	A
3 - Whinfell Way	148	37	122	799	0.186	147	58	0.0	0.2	5.518	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	124	31	84	872	0.142	124	239	0.1	0.2	4.812	A
2 - Thong Lane South	167	42	48	788	0.212	167	160	0.2	0.3	5.791	A
3 - Whinfell Way	177	44	146	784	0.226	177	69	0.2	0.3	5.928	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	152	38	103	861	0.177	152	292	0.2	0.2	5.076	A
2 - Thong Lane South	205	51	59	782	0.262	204	196	0.3	0.4	6.228	A
3 - Whinfell Way	217	54	179	763	0.284	216	85	0.3	0.4	6.578	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	152	38	103	861	0.177	152	293	0.2	0.2	5.079	A
2 - Thong Lane South	205	51	59	782	0.262	205	196	0.4	0.4	6.236	A
3 - Whinfell Way	217	54	179	763	0.284	217	85	0.4	0.4	6.587	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	124	31	85	872	0.142	124	240	0.2	0.2	4.817	A
2 - Thong Lane South	167	42	49	788	0.212	168	160	0.4	0.3	5.801	A
3 - Whinfell Way	177	44	147	783	0.226	178	69	0.4	0.3	5.944	A

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - Thong Lane North	104	26	71	880	0.118	104	201	0.2	0.1	4.640	A
2 - Thong Lane South	140	35	41	793	0.177	140	134	0.3	0.2	5.518	A
3 - Whinfell Way	148	37	123	798	0.186	149	58	0.3	0.2	5.545	A

Gravesham Borough Council

Appendix H

Thong Lane / Vigilant Way model output

Gravesham Borough Council

Junctions 10									
PICADY 10 - Priority Intersection Module									
Version: 10.0.4.1693									
© Copyright TRL Software Limited, 2021									
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Filename: 8_VigilantWay_ThongLane.j10

Path: J:\332410895 - GH - Cascades leisure centre, Gravesend\100 - Transport\Modelling\Junctions10

Report generation date: 08/11/2022 14:26:13

- »2022 Base Year, AM
- »2022 Base Year, PM
- »2028 Baseline, AM
- »2028 Baseline, PM
- »2028 Baseline + Proposed LC, AM
- »2028 Baseline + Proposed LC, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year									
Stream B-AC	D1	0.2	7.89	0.16	A	D2	0.1	7.18	0.09	A
Stream C-AB		0.1	5.66	0.08	A		0.2	6.55	0.17	A
	2028 Baseline									
Stream B-AC	D3	0.2	8.22	0.17	A	D4	0.1	7.27	0.09	A
Stream C-AB		0.1	5.97	0.09	A		0.3	6.60	0.18	A
	2028 Baseline + Proposed LC									
Stream B-AC	D5	0.2	8.23	0.17	A	D6	0.1	7.30	0.09	A
Stream C-AB		0.1	5.96	0.09	A		0.3	6.60	0.18	A

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	
Location	
Site number	
Date	02/11/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CORP\chbrooks
Description	

Units

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



Flows show original traffic demand (Veh/hr).
Streams (downstream end) show RFC (l).

The junction diagram reflects the last run of Junctions.

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	ONE HOUR	07:25	08:55	15	✓
D2	2022 Base Year	PM	ONE HOUR	16:45	18:15	15	✓
D3	2028 Baseline	AM	ONE HOUR	07:25	08:55	15	✓
D4	2028 Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D5	2028 Baseline + Proposed LC	AM	ONE HOUR	07:25	08:55	15	✓
D6	2028 Baseline + Proposed LC	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

Gravesham Borough Council

2022 Base Year, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Thong Lane North - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		2.32	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.32	A

Arms

Arms

Arm	Name	Description	Arm type
A	Thong Lane South		Major
B	Vigilant Way		Minor
C	Thong Lane North		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Thong Lane North	5.57			112.5	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Vigilant Way	One lane	3.80	32	26

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	541	0.100	0.253	0.159	0.362
B-C	692	0.108	0.273	-	-
C-B	639	0.252	0.252	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	ONE HOUR	07:25	08:55	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Thong Lane South		ONE HOUR	✓	136	100.000
B - Vigilant Way		ONE HOUR	✓	78	100.000
C - Thong Lane North		ONE HOUR	✓	158	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Thong Lane South	B - Vigilant Way	C - Thong Lane North
From	A - Thong Lane South	0	48	88
	B - Vigilant Way	43	0	35
	C - Thong Lane North	120	38	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Thong Lane South	B - Vigilant Way	C - Thong Lane North
From	A - Thong Lane South	0	2	1
	B - Vigilant Way	0	0	0
	C - Thong Lane North	3	0	8

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.16	7.89	0.2	A	72	107
C-AB	0.08	5.66	0.1	A	42	63
C-A					103	155
A-B					44	66
A-C					81	121

Main Results for each time segment

07:25 - 07:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	59	15	560	0.105	58	0.0	0.1	7.163	A
C-AB	33	8	672	0.049	33	0.0	0.1	5.634	A
C-A	86	21			86				
A-B	36	9			36				
A-C	66	17			66				

07:40 - 07:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	70	18	553	0.127	70	0.1	0.1	7.456	A
C-AB	41	10	678	0.060	41	0.1	0.1	5.645	A
C-A	101	25			101				
A-B	43	11			43				
A-C	79	20			79				

07:55 - 08:10

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	86	21	542	0.158	86	0.1	0.2	7.887	A
C-AB	52	13	688	0.075	52	0.1	0.1	5.659	A
C-A	122	31			122				
A-B	53	13			53				
A-C	97	24			97				

08:10 - 08:25

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	86	21	542	0.158	86	0.2	0.2	7.892	A
C-AB	52	13	688	0.075	52	0.1	0.1	5.664	A
C-A	122	31			122				
A-B	53	13			53				
A-C	97	24			97				

08:25 - 08:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	70	18	553	0.127	70	0.2	0.1	7.467	A
C-AB	41	10	678	0.060	41	0.1	0.1	5.652	A
C-A	101	25			101				
A-B	43	11			43				
A-C	79	20			79				

08:40 - 08:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	59	15	560	0.105	59	0.1	0.1	7.182	A
C-AB	33	8	672	0.049	33	0.1	0.1	5.644	A
C-A	86	21			86				
A-B	36	9			36				
A-C	66	17			66				

2022 Base Year, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Thong Lane North - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		2.76	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.76	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2022 Base Year	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Thong Lane South		ONE HOUR	✓	119	100.000
B - Vigilant Way		ONE HOUR	✓	45	100.000
C - Thong Lane North		ONE HOUR	✓	196	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Thong Lane South	B - Vigilant Way	C - Thong Lane North
From	A - Thong Lane South	0	52	67
	B - Vigilant Way	21	0	24
	C - Thong Lane North	111	85	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Thong Lane South	B - Vigilant Way	C - Thong Lane North
From	A - Thong Lane South	0	0	1
	B - Vigilant Way	0	0	0
	C - Thong Lane North	2	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.09	7.18	0.1	A	41	62
C-AB	0.17	6.55	0.2	A	93	139
C-A					87	130
A-B					48	72
A-C					61	92

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	34	8	571	0.059	34	0.0	0.1	6.698	A
C-AB	73	18	648	0.113	73	0.0	0.1	6.253	A
C-A	74	19			74				
A-B	39	10			39				
A-C	50	13			50				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	40	10	563	0.072	40	0.1	0.1	6.894	A
C-AB	90	23	655	0.138	90	0.1	0.2	6.374	A
C-A	86	21			86				
A-B	47	12			47				
A-C	60	15			60				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	50	12	551	0.090	49	0.1	0.1	7.177	A
C-AB	115	29	665	0.173	115	0.2	0.2	6.550	A
C-A	101	25			101				
A-B	57	14			57				
A-C	74	18			74				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	50	12	551	0.090	50	0.1	0.1	7.178	A
C-AB	115	29	665	0.173	115	0.2	0.2	6.554	A
C-A	101	25			101				
A-B	57	14			57				
A-C	74	18			74				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	40	10	562	0.072	41	0.1	0.1	6.898	A
C-AB	90	23	655	0.138	91	0.2	0.2	6.380	A
C-A	86	21			86				
A-B	47	12			47				
A-C	60	15			60				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	34	8	571	0.059	34	0.1	0.1	6.709	A
C-AB	74	18	648	0.113	74	0.2	0.1	6.266	A
C-A	74	19			74				
A-B	39	10			39				
A-C	50	13			50				

2028 Baseline, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Thong Lane North - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		2.22	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.22	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2028 Baseline	AM	ONE HOUR	07:25	08:55	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Thong Lane South		ONE HOUR	✓	166	100.000
B - Vigilant Way		ONE HOUR	✓	81	100.000
C - Thong Lane North		ONE HOUR	✓	191	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Thong Lane South	B - Vigilant Way	C - Thong Lane North
From	A - Thong Lane South	0	50	116
	B - Vigilant Way	45	0	36
	C - Thong Lane North	151	40	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Thong Lane South	B - Vigilant Way	C - Thong Lane North
From	A - Thong Lane South	0	2	1
	B - Vigilant Way	0	0	0
	C - Thong Lane North	3	8	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.17	8.22	0.2	A	74	111
C-AB	0.09	5.97	0.1	A	47	71
C-A					128	192
A-B					46	69
A-C					106	160

Main Results for each time segment

07:25 - 07:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	61	15	550	0.111	60	0.0	0.1	7.344	A
C-AB	37	9	639	0.057	36	0.0	0.1	5.966	A
C-A	107	27			107				
A-B	38	9			38				
A-C	87	22			87				

07:40 - 07:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	73	18	540	0.135	73	0.1	0.2	7.694	A
C-AB	46	11	649	0.070	45	0.1	0.1	5.971	A
C-A	126	32			126				
A-B	45	11			45				
A-C	104	26			104				

07:55 - 08:10

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	89	22	527	0.169	89	0.2	0.2	8.213	A
C-AB	59	15	663	0.089	59	0.1	0.1	5.969	A
C-A	151	38			151				
A-B	55	14			55				
A-C	128	32			128				

08:10 - 08:25

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	89	22	527	0.169	89	0.2	0.2	8.220	A
C-AB	59	15	663	0.089	59	0.1	0.1	5.966	A
C-A	151	38			151				
A-B	55	14			55				
A-C	128	32			128				

08:25 - 08:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	73	18	540	0.135	73	0.2	0.2	7.704	A
C-AB	46	11	649	0.070	46	0.1	0.1	5.963	A
C-A	126	32			126				
A-B	45	11			45				
A-C	104	26			104				

08:40 - 08:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	61	15	550	0.111	61	0.2	0.1	7.366	A
C-AB	37	9	639	0.057	37	0.1	0.1	5.972	A
C-A	107	27			107				
A-B	38	9			38				
A-C	87	22			87				

2028 Baseline, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Thong Lane North - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		2.79	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.79	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2028 Baseline	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Thong Lane South		ONE HOUR	✓	126	100.000
B - Vigilant Way		ONE HOUR	✓	47	100.000
C - Thong Lane North		ONE HOUR	✓	206	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
From		A - Thong Lane South	B - Vigilant Way	C - Thong Lane North
	A - Thong Lane South	0	54	72
	B - Vigilant Way	22	0	25
	C - Thong Lane North	117	89	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A - Thong Lane South	B - Vigilant Way	C - Thong Lane North
	A - Thong Lane South	0	0	1
	B - Vigilant Way	0	0	0
	C - Thong Lane North	2	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.09	7.27	0.1	A	43	65
C-AB	0.18	6.60	0.3	A	98	147
C-A					91	136
A-B					50	74
A-C					66	99

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	35	9	568	0.062	35	0.0	0.1	6.750	A
C-AB	78	19	650	0.119	77	0.0	0.2	6.277	A
C-A	78	19			78				
A-B	41	10			41				
A-C	54	14			54				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	42	11	559	0.076	42	0.1	0.1	6.960	A
C-AB	95	24	657	0.145	95	0.2	0.2	6.408	A
C-A	90	22			90				
A-B	49	12			49				
A-C	65	16			65				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	52	13	547	0.095	52	0.1	0.1	7.265	A
C-AB	122	30	667	0.182	121	0.2	0.3	6.599	A
C-A	105	26			105				
A-B	59	15			59				
A-C	79	20			79				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	52	13	547	0.095	52	0.1	0.1	7.266	A
C-AB	122	30	667	0.182	122	0.3	0.3	6.603	A
C-A	105	26			105				
A-B	59	15			59				
A-C	79	20			79				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	42	11	559	0.076	42	0.1	0.1	6.967	A
C-AB	95	24	657	0.145	96	0.3	0.2	6.415	A
C-A	90	22			90				
A-B	49	12			49				
A-C	65	16			65				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	35	9	568	0.062	35	0.1	0.1	6.759	A
C-AB	78	19	650	0.119	78	0.2	0.2	6.294	A
C-A	77	19			77				
A-B	41	10			41				
A-C	54	14			54				

2028 Baseline + Proposed LC, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Thong Lane North - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		2.21	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.21	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2028 Baseline + Proposed LC	AM	ONE HOUR	07:25	08:55	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Thong Lane South		ONE HOUR	✓	168	100.000
B - Vigilant Way		ONE HOUR	✓	81	100.000
C - Thong Lane North		ONE HOUR	✓	193	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Thong Lane South	B - Vigilant Way	C - Thong Lane North
From	A - Thong Lane South	0	50	118
	B - Vigilant Way	45	0	36
	C - Thong Lane North	153	40	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Thong Lane South	B - Vigilant Way	C - Thong Lane North
From	A - Thong Lane South	0	2	1
	B - Vigilant Way	0	0	0
	C - Thong Lane North	2	8	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.17	8.23	0.2	A	74	111
C-AB	0.09	5.96	0.1	A	47	71
C-A					130	195
A-B					46	69
A-C					108	162

Main Results for each time segment

07:25 - 07:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	61	15	550	0.111	60	0.0	0.1	7.350	A
C-AB	37	9	640	0.057	36	0.0	0.1	5.957	A
C-A	109	27			109				
A-B	38	9			38				
A-C	89	22			89				

07:40 - 07:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	73	18	540	0.135	73	0.1	0.2	7.703	A
C-AB	46	11	650	0.070	46	0.1	0.1	5.958	A
C-A	128	32			128				
A-B	45	11			45				
A-C	106	27			106				

07:55 - 08:10

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	89	22	526	0.169	89	0.2	0.2	8.225	A
C-AB	59	15	664	0.089	59	0.1	0.1	5.955	A
C-A	153	38			153				
A-B	55	14			55				
A-C	130	32			130				

08:10 - 08:25

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	89	22	526	0.169	89	0.2	0.2	8.232	A
C-AB	59	15	664	0.089	59	0.1	0.1	5.950	A
C-A	153	38			153				
A-B	55	14			55				
A-C	130	32			130				

08:25 - 08:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	73	18	540	0.135	73	0.2	0.2	7.714	A
C-AB	46	11	650	0.070	46	0.1	0.1	5.948	A
C-A	128	32			128				
A-B	45	11			45				
A-C	106	27			106				

08:40 - 08:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	61	15	550	0.111	61	0.2	0.1	7.373	A
C-AB	37	9	641	0.057	37	0.1	0.1	5.961	A
C-A	109	27			109				
A-B	38	9			38				
A-C	89	22			89				

2028 Baseline + Proposed LC, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - Thong Lane North - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		2.73	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.73	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2028 Baseline + Proposed LC	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Thong Lane South		ONE HOUR	✓	132	100.000
B - Vigilant Way		ONE HOUR	✓	47	100.000
C - Thong Lane North		ONE HOUR	✓	209	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Thong Lane South	B - Vigilant Way	C - Thong Lane North
From	A - Thong Lane South	0	54	78
	B - Vigilant Way	22	0	25
	C - Thong Lane North	120	89	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Thong Lane South	B - Vigilant Way	C - Thong Lane North
From	A - Thong Lane South	0	0	1
	B - Vigilant Way	0	0	0
	C - Thong Lane North	2	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.09	7.30	0.1	A	43	65
C-AB	0.18	6.60	0.3	A	99	148
C-A					93	140
A-B					50	74
A-C					72	107

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	35	9	567	0.062	35	0.0	0.1	6.768	A
C-AB	78	19	650	0.120	77	0.0	0.2	6.276	A
C-A	80	20			80				
A-B	41	10			41				
A-C	59	15			59				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	42	11	558	0.076	42	0.1	0.1	6.984	A
C-AB	96	24	658	0.146	96	0.2	0.2	6.407	A
C-A	92	23			92				
A-B	49	12			49				
A-C	70	18			70				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	52	13	545	0.095	52	0.1	0.1	7.297	A
C-AB	122	31	668	0.183	122	0.2	0.3	6.599	A
C-A	108	27			108				
A-B	59	15			59				
A-C	86	21			86				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	52	13	545	0.095	52	0.1	0.1	7.298	A
C-AB	122	31	668	0.183	122	0.3	0.3	6.603	A
C-A	108	27			108				
A-B	59	15			59				
A-C	86	21			86				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	42	11	558	0.076	42	0.1	0.1	6.988	A
C-AB	96	24	658	0.146	96	0.3	0.2	6.414	A
C-A	92	23			92				
A-B	49	12			49				
A-C	70	18			70				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	35	9	567	0.062	35	0.1	0.1	6.778	A
C-AB	78	19	651	0.120	78	0.2	0.2	6.290	A
C-A	79	20			79				
A-B	41	10			41				
A-C	59	15			59				

Appendix I

A2 / Thong Lane model output

Gravesham Borough Council

Junctions 10									
ARCADY 10 - Roundabout Module									
Version: 10.0.4.1693									
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Filename: 4_Roundabout.j10

Path: J:\332410895 - GH - Cascades leisure centre, Gravesend\100 - Transport\Modelling\Junctions10

Report generation date: 09/11/2022 10:19:23

»2022 Base Year, AM

»2022 Base Year, PM

»2028 Baseline, AM

»2028 Baseline, PM

»2028 Baseline + Proposed LC, AM

»2028 Baseline + Proposed LC, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year									
1 - A2 Slip Off	D1	0.7	4.55	0.43	A	D2	0.3	3.42	0.23	A
2 - Brewers Road		0.2	3.16	0.17	A		0.1	2.58	0.11	A
3 - Halfpence Lane		0.1	2.78	0.12	A		0.2	2.96	0.20	A
4 - Darnley Lodge Lane		0.2	4.36	0.20	A		0.1	4.12	0.12	A
	2028 Baseline									
1 - A2 Slip Off	D3	0.8	4.90	0.46	A	D4	0.3	3.50	0.25	A
2 - Brewers Road		0.2	3.27	0.19	A		0.1	2.61	0.11	A
3 - Halfpence Lane		0.1	2.84	0.13	A		0.3	3.02	0.21	A
4 - Darnley Lodge Lane		0.3	4.58	0.23	A		0.1	4.18	0.13	A
	2028 Baseline + Proposed LC									
1 - A2 Slip Off	D5	0.8	4.91	0.46	A	D6	0.4	3.64	0.27	A
2 - Brewers Road		0.2	3.27	0.19	A		0.1	2.62	0.11	A
3 - Halfpence Lane		0.1	2.84	0.13	A		0.3	3.03	0.21	A
4 - Darnley Lodge Lane		0.3	4.59	0.24	A		0.2	4.20	0.13	A

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

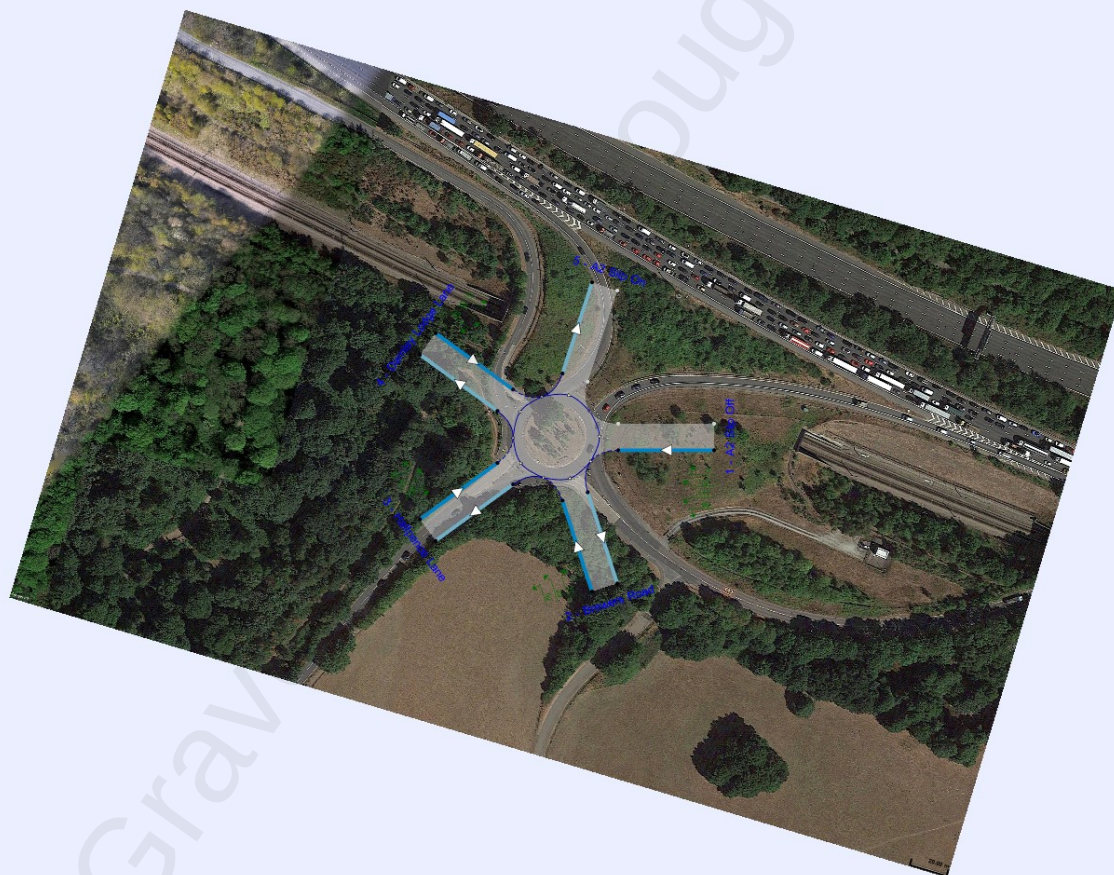
File summary

File Description

Title	
Location	
Site number	
Date	21/10/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CORP\chbrooks
Description	

Units

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



Flows show original traffic demand (Veh/hr).

The junction diagram reflects the last run of Junctions.

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	ONE HOUR	07:25	08:55	15	✓
D2	2022 Base Year	PM	ONE HOUR	16:35	18:05	15	✓
D3	2028 Baseline	AM	ONE HOUR	07:25	08:55	15	✓
D4	2028 Baseline	PM	ONE HOUR	16:35	18:05	15	✓
D5	2028 Baseline + Proposed LC	AM	ONE HOUR	07:25	08:55	15	✓
D6	2028 Baseline + Proposed LC	PM	ONE HOUR	16:35	18:05	15	✓

Analysis Set Details

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

2022 Base Year, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Roundabout	Standard Roundabout		1, 2, 3, 4, 5	3.97	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.97	A

Arms

Arms

Arm	Name	Description	No give-way line
1	A2 Slip Off		
2	Brewers Road		
3	Halfpence Lane		
4	Darnley Lodge Lane		
5	A2 Slip On		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - A2 Slip Off	3.54	7.83	9.9	25.2	49.3	38.8	✓	
2 - Brewers Road	4.42	6.80	19.6	19.2	49.2	41.6		
3 - Halfpence Lane	3.71	7.40	11.4	25.4	48.8	34.7		
4 - Darnley Lodge Lane	2.47	6.16	9.7	15.6	48.9	44.0		
5 - A2 Slip On								✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A2 Slip Off	0.584	1583
2 - Brewers Road	0.615	1781
3 - Halfpence Lane	0.605	1663
4 - Darnley Lodge Lane	0.495	1174
5 - A2 Slip On		

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	ONE HOUR	07:25	08:55	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A2 Slip Off		ONE HOUR	✓	534	100.000
2 - Brewers Road		ONE HOUR	✓	218	100.000
3 - Halfpence Lane		ONE HOUR	✓	161	100.000
4 - Darnley Lodge Lane		ONE HOUR	✓	183	100.000
5 - A2 Slip On					

Origin-Destination Data

Demand (Veh/hr)

	To					
		1 - A2 Slip Off	2 - Brewers Road	3 - Halfpence Lane	4 - Darnley Lodge Lane	5 - A2 Slip On
From	1 - A2 Slip Off	0	100	348	86	0
	2 - Brewers Road	0	1	103	26	88
	3 - Halfpence Lane	0	120	0	22	19
	4 - Darnley Lodge Lane	0	97	54	0	32
	5 - A2 Slip On	0	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - A2 Slip Off	2 - Brewers Road	3 - Halfpence Lane	4 - Darnley Lodge Lane	5 - A2 Slip On
From	1 - A2 Slip Off	0	7	0	3	0
	2 - Brewers Road	0	100	4	4	5
	3 - Halfpence Lane	0	3	0	5	5
	4 - Darnley Lodge Lane	0	0	4	0	3
	5 - A2 Slip On	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A2 Slip Off	0.43	4.55	0.7	A	490	735
2 - Brewers Road	0.17	3.16	0.2	A	200	300
3 - Halfpence Lane	0.12	2.78	0.1	A	148	222
4 - Darnley Lodge Lane	0.20	4.36	0.2	A	168	252
5 - A2 Slip On						

Main Results for each time segment

07:25 - 07:40

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	402	101	204	1435	0.280	400	0	0.0	0.4	3.475	A
2 - Brewers Road	164	41	366	1482	0.111	164	239	0.0	0.1	2.730	A
3 - Halfpence Lane	121	30	151	1515	0.080	121	379	0.0	0.1	2.582	A
4 - Darnley Lodge Lane	138	34	171	1067	0.129	137	101	0.0	0.1	3.868	A
5 - A2 Slip On			204				104				

07:40 - 07:55

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	480	120	244	1412	0.340	480	0	0.4	0.5	3.861	A
2 - Brewers Road	196	49	438	1439	0.136	196	286	0.1	0.2	2.894	A
3 - Halfpence Lane	145	36	181	1497	0.097	145	454	0.1	0.1	2.662	A
4 - Darnley Lodge Lane	165	41	205	1050	0.157	164	120	0.1	0.2	4.065	A
5 - A2 Slip On			244				125				

07:55 - 08:10

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	588	147	299	1379	0.426	587	0	0.5	0.7	4.539	A
2 - Brewers Road	240	60	537	1381	0.174	240	350	0.2	0.2	3.154	A
3 - Halfpence Lane	177	44	221	1472	0.120	177	555	0.1	0.1	2.780	A
4 - Darnley Lodge Lane	201	50	251	1027	0.196	201	147	0.2	0.2	4.360	A
5 - A2 Slip On			299				153				

08:10 - 08:25

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	588	147	299	1379	0.426	588	0	0.7	0.7	4.549	A
2 - Brewers Road	240	60	537	1381	0.174	240	350	0.2	0.2	3.155	A
3 - Halfpence Lane	177	44	221	1472	0.120	177	556	0.1	0.1	2.780	A
4 - Darnley Lodge Lane	201	50	251	1027	0.196	201	148	0.2	0.2	4.362	A
5 - A2 Slip On			299				153				

08:25 - 08:40

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	480	120	245	1411	0.340	481	0	0.7	0.5	3.872	A
2 - Brewers Road	196	49	439	1439	0.136	196	286	0.2	0.2	2.897	A
3 - Halfpence Lane	145	36	181	1496	0.097	145	455	0.1	0.1	2.663	A
4 - Darnley Lodge Lane	165	41	205	1050	0.157	165	121	0.2	0.2	4.069	A
5 - A2 Slip On			245				125				

08:40 - 08:55

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	402	101	205	1435	0.280	403	0	0.5	0.4	3.488	A
2 - Brewers Road	164	41	368	1481	0.111	164	240	0.2	0.1	2.733	A
3 - Halfpence Lane	121	30	151	1514	0.080	121	381	0.1	0.1	2.583	A
4 - Darnley Lodge Lane	138	34	172	1067	0.129	138	101	0.2	0.1	3.877	A
5 - A2 Slip On			205				105				

Gravesham Borough Council

2022 Base Year, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Roundabout	Standard Roundabout		1, 2, 3, 4, 5	3.21	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.21	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2022 Base Year	PM	ONE HOUR	16:35	18:05	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A2 Slip Off		ONE HOUR	✓	292	100.000
2 - Brewers Road		ONE HOUR	✓	152	100.000
3 - Halfpence Lane		ONE HOUR	✓	270	100.000
4 - Darnley Lodge Lane		ONE HOUR	✓	110	100.000
5 - A2 Slip On					

Origin-Destination Data

Demand (Veh/hr)

	To					
		1 - A2 Slip Off	2 - Brewers Road	3 - Halfpence Lane	4 - Darnley Lodge Lane	5 - A2 Slip On
From	1 - A2 Slip Off	0	63	107	122	0
	2 - Brewers Road	0	1	50	27	74
	3 - Halfpence Lane	0	205	0	51	14
	4 - Darnley Lodge Lane	0	63	28	0	19
	5 - A2 Slip On	0	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1 - A2 Slip Off	2 - Brewers Road	3 - Halfpence Lane	4 - Darnley Lodge Lane	5 - A2 Slip On
	1 - A2 Slip Off	0	2	1	1	0
	2 - Brewers Road	0	0	2	4	3
	3 - Halfpence Lane	0	0	0	0	0
	4 - Darnley Lodge Lane	0	3	0	0	0
	5 - A2 Slip On	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A2 Slip Off	0.23	3.42	0.3	A	268	402
2 - Brewers Road	0.11	2.58	0.1	A	139	209
3 - Halfpence Lane	0.20	2.96	0.2	A	248	372
4 - Darnley Lodge Lane	0.12	4.12	0.1	A	101	151
5 - A2 Slip On						

Main Results for each time segment

16:35 - 16:50

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	220	55	223	1435	0.153	219	0	0.0	0.2	2.960	A
2 - Brewers Road	114	29	193	1616	0.071	114	249	0.0	0.1	2.396	A
3 - Halfpence Lane	203	51	168	1560	0.130	203	138	0.0	0.1	2.651	A
4 - Darnley Lodge Lane	83	21	221	1046	0.079	82	150	0.0	0.1	3.737	A
5 - A2 Slip On			223				80				

16:50 - 17:05

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	263	66	267	1409	0.186	262	0	0.2	0.2	3.138	A
2 - Brewers Road	136	34	231	1593	0.086	136	298	0.1	0.1	2.471	A
3 - Halfpence Lane	243	61	201	1539	0.158	243	166	0.1	0.2	2.776	A
4 - Darnley Lodge Lane	99	25	264	1024	0.097	99	180	0.1	0.1	3.889	A
5 - A2 Slip On			267				96				

17:05 - 17:20

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	321	80	327	1374	0.234	321	0	0.2	0.3	3.418	A
2 - Brewers Road	167	42	283	1561	0.107	167	365	0.1	0.1	2.580	A
3 - Halfpence Lane	297	74	246	1511	0.197	297	203	0.2	0.2	2.964	A
4 - Darnley Lodge Lane	121	30	323	995	0.122	121	220	0.1	0.1	4.117	A
5 - A2 Slip On			327				118				

17:20 - 17:35

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	321	80	327	1374	0.234	321	0	0.3	0.3	3.418	A
2 - Brewers Road	167	42	283	1561	0.107	167	366	0.1	0.1	2.581	A
3 - Halfpence Lane	297	74	247	1511	0.197	297	203	0.2	0.2	2.965	A
4 - Darnley Lodge Lane	121	30	324	995	0.122	121	220	0.1	0.1	4.118	A
5 - A2 Slip On			327				118				

17:35 - 17:50

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	263	66	267	1409	0.186	263	0	0.3	0.2	3.143	A
2 - Brewers Road	136	34	231	1592	0.086	136	299	0.1	0.1	2.473	A
3 - Halfpence Lane	243	61	202	1539	0.158	243	166	0.2	0.2	2.779	A
4 - Darnley Lodge Lane	99	25	265	1024	0.097	99	180	0.1	0.1	3.891	A
5 - A2 Slip On			267				96				

17:50 - 18:05

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	220	55	224	1434	0.153	220	0	0.2	0.2	2.964	A
2 - Brewers Road	114	29	194	1615	0.071	114	250	0.1	0.1	2.397	A
3 - Halfpence Lane	203	51	169	1559	0.130	203	139	0.2	0.2	2.655	A
4 - Darnley Lodge Lane	83	21	221	1045	0.079	83	151	0.1	0.1	3.742	A
5 - A2 Slip On			224				81				

2028 Baseline, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Roundabout	Standard Roundabout		1, 2, 3, 4, 5	4.21	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.21	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2028 Baseline	AM	ONE HOUR	07:25	08:55	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A2 Slip Off		ONE HOUR	✓	566	100.000
2 - Brewers Road		ONE HOUR	✓	231	100.000
3 - Halfpence Lane		ONE HOUR	✓	172	100.000
4 - Darnley Lodge Lane		ONE HOUR	✓	217	100.000
5 - A2 Slip On					

Origin-Destination Data

Demand (Veh/hr)

	To					
		1 - A2 Slip Off	2 - Brewers Road	3 - Halfpence Lane	4 - Darnley Lodge Lane	5 - A2 Slip On
From	1 - A2 Slip Off	0	100	361	105	0
	2 - Brewers Road	0	1	107	32	91
	3 - Halfpence Lane	0	125	0	27	20
	4 - Darnley Lodge Lane	0	115	64	0	38
	5 - A2 Slip On	0	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1 - A2 Slip Off	2 - Brewers Road	3 - Halfpence Lane	4 - Darnley Lodge Lane	5 - A2 Slip On
	1 - A2 Slip Off	0	7	0	3	0
	2 - Brewers Road	0	100	4	3	5
	3 - Halfpence Lane	0	3	0	4	5
	4 - Darnley Lodge Lane	0	0	3	0	3
	5 - A2 Slip On	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A2 Slip Off	0.46	4.90	0.8	A	519	779
2 - Brewers Road	0.19	3.27	0.2	A	212	318
3 - Halfpence Lane	0.13	2.84	0.1	A	158	236
4 - Darnley Lodge Lane	0.23	4.58	0.3	A	199	299
5 - A2 Slip On						

Main Results for each time segment

07:25 - 07:40

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	426	107	229	1421	0.300	424	0	0.0	0.4	3.605	A
2 - Brewers Road	174	43	397	1466	0.119	173	256	0.0	0.1	2.783	A
3 - Halfpence Lane	129	32	172	1504	0.086	129	399	0.0	0.1	2.618	A
4 - Darnley Lodge Lane	163	41	178	1067	0.153	163	123	0.0	0.2	3.977	A
5 - A2 Slip On			229				112				

07:40 - 07:55

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	509	127	274	1395	0.365	508	0	0.4	0.6	4.058	A
2 - Brewers Road	208	52	476	1419	0.146	208	306	0.1	0.2	2.970	A
3 - Halfpence Lane	154	39	206	1483	0.104	154	478	0.1	0.1	2.708	A
4 - Darnley Lodge Lane	195	49	213	1049	0.186	195	147	0.2	0.2	4.213	A
5 - A2 Slip On			274				134				

07:55 - 08:10

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	623	156	335	1359	0.459	622	0	0.6	0.8	4.881	A
2 - Brewers Road	254	64	583	1356	0.188	254	375	0.2	0.2	3.266	A
3 - Halfpence Lane	189	47	252	1455	0.130	189	585	0.1	0.1	2.842	A
4 - Darnley Lodge Lane	239	60	261	1025	0.233	239	180	0.2	0.3	4.579	A
5 - A2 Slip On			335				164				

08:10 - 08:25

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	623	156	336	1358	0.459	623	0	0.8	0.8	4.895	A
2 - Brewers Road	254	64	584	1355	0.188	254	375	0.2	0.2	3.268	A
3 - Halfpence Lane	189	47	252	1455	0.130	189	586	0.1	0.1	2.843	A
4 - Darnley Lodge Lane	239	60	261	1025	0.233	239	181	0.3	0.3	4.581	A
5 - A2 Slip On			336				164				

08:25 - 08:40

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	509	127	275	1394	0.365	510	0	0.8	0.6	4.074	A
2 - Brewers Road	208	52	477	1418	0.146	208	307	0.2	0.2	2.976	A
3 - Halfpence Lane	154	39	206	1483	0.104	155	479	0.1	0.1	2.709	A
4 - Darnley Lodge Lane	195	49	213	1049	0.186	195	148	0.3	0.2	4.220	A
5 - A2 Slip On			275				134				

08:40 - 08:55

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	426	107	230	1421	0.300	427	0	0.6	0.4	3.626	A
2 - Brewers Road	174	43	400	1465	0.119	174	257	0.2	0.1	2.789	A
3 - Halfpence Lane	129	32	173	1504	0.086	129	401	0.1	0.1	2.619	A
4 - Darnley Lodge Lane	163	41	178	1067	0.153	164	124	0.2	0.2	3.987	A
5 - A2 Slip On			230				112				

2028 Baseline, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Roundabout	Standard Roundabout		1, 2, 3, 4, 5	3.27	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.27	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2028 Baseline	PM	ONE HOUR	16:35	18:05	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A2 Slip Off		ONE HOUR	✓	306	100.000
2 - Brewers Road		ONE HOUR	✓	158	100.000
3 - Halfpence Lane		ONE HOUR	✓	283	100.000
4 - Darnley Lodge Lane		ONE HOUR	✓	116	100.000
5 - A2 Slip On					

Origin-Destination Data

Demand (Veh/hr)

	To					
		1 - A2 Slip Off	2 - Brewers Road	3 - Halfpence Lane	4 - Darnley Lodge Lane	5 - A2 Slip On
From	1 - A2 Slip Off	0	66	111	129	0
	2 - Brewers Road	0	1	52	28	77
	3 - Halfpence Lane	0	214	0	54	15
	4 - Darnley Lodge Lane	0	66	30	0	20
	5 - A2 Slip On	0	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1 - A2 Slip Off	2 - Brewers Road	3 - Halfpence Lane	4 - Darnley Lodge Lane	5 - A2 Slip On
	1 - A2 Slip Off	0	2	1	1	0
	2 - Brewers Road	0	0	2	4	3
	3 - Halfpence Lane	0	0	0	0	0
	4 - Darnley Lodge Lane	0	3	0	0	0
	5 - A2 Slip On	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A2 Slip Off	0.25	3.50	0.3	A	281	421
2 - Brewers Road	0.11	2.61	0.1	A	145	217
3 - Halfpence Lane	0.21	3.02	0.3	A	260	390
4 - Darnley Lodge Lane	0.13	4.18	0.1	A	106	160
5 - A2 Slip On						

Main Results for each time segment

16:35 - 16:50

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	230	58	233	1429	0.161	230	0	0.0	0.2	3.001	A
2 - Brewers Road	119	30	203	1610	0.074	118	260	0.0	0.1	2.413	A
3 - Halfpence Lane	213	53	176	1555	0.137	212	145	0.0	0.2	2.680	A
4 - Darnley Lodge Lane	87	22	230	1041	0.084	87	158	0.0	0.1	3.773	A
5 - A2 Slip On			233				84				

16:50 - 17:05

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	275	69	279	1402	0.196	275	0	0.2	0.2	3.194	A
2 - Brewers Road	142	35	243	1586	0.089	142	312	0.1	0.1	2.492	A
3 - Halfpence Lane	254	64	211	1533	0.166	254	173	0.2	0.2	2.814	A
4 - Darnley Lodge Lane	104	26	276	1019	0.102	104	189	0.1	0.1	3.936	A
5 - A2 Slip On			279				101				

17:05 - 17:20

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	337	84	342	1366	0.247	337	0	0.2	0.3	3.498	A
2 - Brewers Road	174	43	297	1553	0.112	174	382	0.1	0.1	2.609	A
3 - Halfpence Lane	312	78	258	1504	0.207	311	212	0.2	0.3	3.018	A
4 - Darnley Lodge Lane	128	32	338	988	0.129	128	232	0.1	0.1	4.182	A
5 - A2 Slip On			342				123				

17:20 - 17:35

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	337	84	342	1365	0.247	337	0	0.3	0.3	3.499	A
2 - Brewers Road	174	43	297	1553	0.112	174	382	0.1	0.1	2.609	A
3 - Halfpence Lane	312	78	258	1504	0.207	312	212	0.3	0.3	3.018	A
4 - Darnley Lodge Lane	128	32	338	988	0.129	128	232	0.1	0.1	4.182	A
5 - A2 Slip On			342				123				

17:35 - 17:50

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	275	69	280	1402	0.196	275	0	0.3	0.2	3.196	A
2 - Brewers Road	142	35	243	1586	0.089	142	312	0.1	0.1	2.495	A
3 - Halfpence Lane	254	64	211	1533	0.166	255	174	0.3	0.2	2.816	A
4 - Darnley Lodge Lane	104	26	276	1019	0.102	104	190	0.1	0.1	3.939	A
5 - A2 Slip On			280				101				

17:50 - 18:05

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	230	58	234	1428	0.161	231	0	0.2	0.2	3.008	A
2 - Brewers Road	119	30	203	1609	0.074	119	261	0.1	0.1	2.416	A
3 - Halfpence Lane	213	53	177	1554	0.137	213	145	0.2	0.2	2.684	A
4 - Darnley Lodge Lane	87	22	231	1041	0.084	87	159	0.1	0.1	3.779	A
5 - A2 Slip On			234				84				

2028 Baseline + Proposed LC, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Roundabout	Standard Roundabout		1, 2, 3, 4, 5	4.23	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.23	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2028 Baseline + Proposed LC	AM	ONE HOUR	07:25	08:55	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A2 Slip Off		ONE HOUR	✓	567	100.000
2 - Brewers Road		ONE HOUR	✓	231	100.000
3 - Halfpence Lane		ONE HOUR	✓	172	100.000
4 - Darnley Lodge Lane		ONE HOUR	✓	219	100.000
5 - A2 Slip On					

Origin-Destination Data

Demand (Veh/hr)

	To					
		1 - A2 Slip Off	2 - Brewers Road	3 - Halfpence Lane	4 - Darnley Lodge Lane	5 - A2 Slip On
From	1 - A2 Slip Off	0	100	361	106	0
	2 - Brewers Road	0	1	107	32	91
	3 - Halfpence Lane	0	125	0	27	20
	4 - Darnley Lodge Lane	0	116	65	0	38
	5 - A2 Slip On	0	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1 - A2 Slip Off	2 - Brewers Road	3 - Halfpence Lane	4 - Darnley Lodge Lane	5 - A2 Slip On
	1 - A2 Slip Off	0	7	0	3	0
	2 - Brewers Road	0	100	4	3	5
	3 - Halfpence Lane	0	3	0	4	5
	4 - Darnley Lodge Lane	0	0	3	0	3
	5 - A2 Slip On	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A2 Slip Off	0.46	4.91	0.8	A	520	780
2 - Brewers Road	0.19	3.27	0.2	A	212	318
3 - Halfpence Lane	0.13	2.84	0.1	A	158	236
4 - Darnley Lodge Lane	0.24	4.59	0.3	A	201	301
5 - A2 Slip On						

Main Results for each time segment

07:25 - 07:40

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	427	107	230	1420	0.301	425	0	0.0	0.4	3.611	A
2 - Brewers Road	174	43	399	1465	0.119	173	257	0.0	0.1	2.785	A
3 - Halfpence Lane	129	32	173	1504	0.086	129	400	0.0	0.1	2.619	A
4 - Darnley Lodge Lane	165	41	178	1067	0.155	164	124	0.0	0.2	3.984	A
5 - A2 Slip On			230				112				

07:40 - 07:55

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	510	127	276	1394	0.366	509	0	0.4	0.6	4.067	A
2 - Brewers Road	208	52	478	1418	0.146	208	307	0.1	0.2	2.973	A
3 - Halfpence Lane	154	39	207	1483	0.104	154	479	0.1	0.1	2.709	A
4 - Darnley Lodge Lane	197	49	213	1049	0.188	197	148	0.2	0.2	4.222	A
5 - A2 Slip On			276				134				

07:55 - 08:10

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	624	156	338	1357	0.460	623	0	0.6	0.8	4.897	A
2 - Brewers Road	254	64	585	1355	0.188	254	376	0.2	0.2	3.270	A
3 - Halfpence Lane	189	47	253	1455	0.130	189	586	0.1	0.1	2.844	A
4 - Darnley Lodge Lane	241	60	261	1025	0.235	241	181	0.2	0.3	4.589	A
5 - A2 Slip On			338				164				

08:10 - 08:25

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	624	156	338	1357	0.460	624	0	0.8	0.8	4.911	A
2 - Brewers Road	254	64	586	1354	0.188	254	377	0.2	0.2	3.272	A
3 - Halfpence Lane	189	47	253	1454	0.130	189	587	0.1	0.1	2.844	A
4 - Darnley Lodge Lane	241	60	261	1025	0.235	241	182	0.3	0.3	4.594	A
5 - A2 Slip On			338				164				

08:25 - 08:40

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	510	127	276	1393	0.366	511	0	0.8	0.6	4.084	A
2 - Brewers Road	208	52	479	1417	0.147	208	308	0.2	0.2	2.978	A
3 - Halfpence Lane	154	39	207	1483	0.104	155	480	0.1	0.1	2.710	A
4 - Darnley Lodge Lane	197	49	213	1049	0.188	197	149	0.3	0.2	4.229	A
5 - A2 Slip On			276				134				

08:40 - 08:55

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	427	107	231	1420	0.301	427	0	0.6	0.4	3.629	A
2 - Brewers Road	174	43	401	1464	0.119	174	258	0.2	0.1	2.791	A
3 - Halfpence Lane	129	32	173	1503	0.086	129	402	0.1	0.1	2.622	A
4 - Darnley Lodge Lane	165	41	178	1067	0.155	165	124	0.2	0.2	3.994	A
5 - A2 Slip On			231				112				

2028 Baseline + Proposed LC, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Roundabout	Standard Roundabout		1, 2, 3, 4, 5	3.34	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.34	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2028 Baseline + Proposed LC	PM	ONE HOUR	16:35	18:05	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A2 Slip Off		ONE HOUR	✓	339	100.000
2 - Brewers Road		ONE HOUR	✓	159	100.000
3 - Halfpence Lane		ONE HOUR	✓	284	100.000
4 - Darnley Lodge Lane		ONE HOUR	✓	119	100.000
5 - A2 Slip On					

Origin-Destination Data

Demand (Veh/hr)

	To					
From		1 - A2 Slip Off	2 - Brewers Road	3 - Halfpence Lane	4 - Darnley Lodge Lane	5 - A2 Slip On
	1 - A2 Slip Off	0	96	111	132	0
	2 - Brewers Road	0	1	52	29	77
	3 - Halfpence Lane	0	214	0	55	15
	4 - Darnley Lodge Lane	0	68	30	0	21
	5 - A2 Slip On	0	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1 - A2 Slip Off	2 - Brewers Road	3 - Halfpence Lane	4 - Darnley Lodge Lane	5 - A2 Slip On
	1 - A2 Slip Off	0	2	1	1	0
	2 - Brewers Road	0	0	2	4	3
	3 - Halfpence Lane	0	0	0	0	0
	4 - Darnley Lodge Lane	0	3	0	0	0
	5 - A2 Slip On	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A2 Slip Off	0.27	3.64	0.4	A	311	467
2 - Brewers Road	0.11	2.62	0.1	A	146	219
3 - Halfpence Lane	0.21	3.03	0.3	A	261	391
4 - Darnley Lodge Lane	0.13	4.20	0.2	A	109	164
5 - A2 Slip On						

Main Results for each time segment

16:35 - 16:50

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	255	64	235	1427	0.179	254	0	0.0	0.2	3.069	A
2 - Brewers Road	120	30	205	1608	0.074	119	284	0.0	0.1	2.417	A
3 - Halfpence Lane	214	53	179	1553	0.138	213	145	0.0	0.2	2.686	A
4 - Darnley Lodge Lane	90	22	230	1041	0.086	89	162	0.0	0.1	3.780	A
5 - A2 Slip On			235				85				

16:50 - 17:05

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	305	76	281	1400	0.218	305	0	0.2	0.3	3.286	A
2 - Brewers Road	143	36	245	1584	0.090	143	340	0.1	0.1	2.497	A
3 - Halfpence Lane	255	64	215	1531	0.167	255	173	0.2	0.2	2.821	A
4 - Darnley Lodge Lane	107	27	276	1019	0.105	107	194	0.1	0.1	3.948	A
5 - A2 Slip On			281				102				

17:05 - 17:20

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	373	93	344	1363	0.274	373	0	0.3	0.4	3.632	A
2 - Brewers Road	175	44	300	1551	0.113	175	417	0.1	0.1	2.616	A
3 - Halfpence Lane	313	78	263	1501	0.208	312	212	0.2	0.3	3.028	A
4 - Darnley Lodge Lane	131	33	338	988	0.133	131	238	0.1	0.2	4.198	A
5 - A2 Slip On			344				124				

17:20 - 17:35

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	373	93	345	1363	0.274	373	0	0.4	0.4	3.635	A
2 - Brewers Road	175	44	301	1551	0.113	175	417	0.1	0.1	2.616	A
3 - Halfpence Lane	313	78	263	1501	0.208	313	212	0.3	0.3	3.029	A
4 - Darnley Lodge Lane	131	33	338	988	0.133	131	238	0.2	0.2	4.199	A
5 - A2 Slip On			345				124				

17:35 - 17:50

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	305	76	282	1400	0.218	305	0	0.4	0.3	3.292	A
2 - Brewers Road	143	36	246	1584	0.090	143	341	0.1	0.1	2.500	A
3 - Halfpence Lane	255	64	215	1531	0.167	256	174	0.3	0.2	2.823	A
4 - Darnley Lodge Lane	107	27	276	1019	0.105	107	194	0.2	0.1	3.951	A
5 - A2 Slip On			282				102				

17:50 - 18:05

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2 Slip Off	255	64	236	1426	0.179	255	0	0.3	0.2	3.077	A
2 - Brewers Road	120	30	206	1608	0.074	120	286	0.1	0.1	2.420	A
3 - Halfpence Lane	214	53	180	1552	0.138	214	145	0.2	0.2	2.689	A
4 - Darnley Lodge Lane	90	22	231	1041	0.086	90	163	0.1	0.1	3.788	A
5 - A2 Slip On			236				85				

Appendix J

A2 / Brewers Road model output

Gravesham Borough Council

Junctions 10				
PICADY 10 - Priority Intersection Module				
Version: 10.0.4.1693				
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Filename: 5_BrewersRoad_A2Slip.j10

Path: J:\332410895 - GH - Cascades leisure centre, Gravesend\100 - Transport\Modelling\Junctions10

Report generation date: 09/11/2022 10:20:23

»2022 Base Year, AM

»2022 Base Year, PM

»2028 Baseline, AM

»2028 Baseline, PM

»2028 Baseline + Proposed LC, AM

»2028 Baseline + Proposed LC, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year									
Stream B-AC	D1	0.6	10.88	0.37	B	D2	0.4	10.27	0.31	B
Stream C-AB		0.8	9.25	0.42	A		1.0	10.02	0.49	B
	2028 Baseline									
Stream B-AC	D3	0.7	11.47	0.40	B	D4	0.5	10.67	0.33	B
Stream C-AB		0.9	9.91	0.46	A		1.2	10.51	0.52	B
	2028 Baseline + Proposed LC									
Stream B-AC	D5	0.7	11.48	0.40	B	D6	0.5	10.71	0.33	B
Stream C-AB		0.9	9.94	0.46	A		1.2	10.59	0.52	B

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

File summary

File Description

Title	
Location	
Site number	
Date	21/10/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CORP\chbrooks
Description	

Units

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



Flows show original traffic demand (Veh/hr).
Streams (downstream end) show RFC (l)

The junction diagram reflects the last run of Junctions.

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	ONE HOUR	07:25	08:55	15	✓
D2	2022 Base Year	PM	ONE HOUR	16:35	18:05	15	✓
D3	2028 Baseline	AM	ONE HOUR	07:25	08:55	15	✓
D4	2028 Baseline	PM	ONE HOUR	16:35	18:05	15	✓
D5	2028 Baseline + Proposed LC	AM	ONE HOUR	07:25	08:55	15	✓
D6	2028 Baseline + Proposed LC	PM	ONE HOUR	16:35	18:05	15	✓

Analysis Set Details

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

Gravesham Borough Council

2022 Base Year, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	BrewersRoad_A2Slip	T-Junction	Two-way	Two-way	Two-way		6.77	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.77	A

Arms

Arms

Arm	Name	Description	Arm type
A	Brewers Road North		Major
B	A2 Slip East		Minor
C	Brewers Road South		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has rightturn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Brewers Road South	7.14			196.8	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - A2 Slip East	One lane	4.68	40	43

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	598	0.103	0.262	0.165	0.374
B-C	761	0.111	0.280	-	-
C-B	688	0.253	0.253	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	ONE HOUR	07:25	08:55	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Brewers Road North		ONE HOUR	✓	162	100.000
B - A2 Slip East		ONE HOUR	✓	179	100.000
C - Brewers Road South		ONE HOUR	✓	291	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Brewers Road North	B - A2 Slip East	C - Brewers Road South
From	A - Brewers Road North	0	30	132
	B - A2 Slip East	91	0	88
	C - Brewers Road South	64	227	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Brewers Road North	B - A2 Slip East	C - Brewers Road South
From	A - Brewers Road North	0	0	2
	B - A2 Slip East	3	0	5
	C - Brewers Road South	2	3	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.37	10.88	0.6	B	164	246
C-AB	0.42	9.25	0.8	A	229	344
C-A					38	57
A-B					28	41
A-C					121	182

Main Results for each time segment

07:25 - 07:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	135	34	567	0.238	134	0.0	0.3	8.291	A
C-AB	184	46	668	0.276	183	0.0	0.4	7.393	A
C-A	35	9			35				
A-B	23	6			23				
A-C	99	25			99				

07:40 - 07:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	161	40	550	0.292	161	0.3	0.4	9.222	A
C-AB	223	56	669	0.334	223	0.4	0.5	8.074	A
C-A	38	10			38				
A-B	27	7			27				
A-C	119	30			119				

07:55 - 08:10

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	197	49	528	0.373	196	0.4	0.6	10.826	B
C-AB	280	70	669	0.418	279	0.5	0.8	9.210	A
C-A	41	10			41				
A-B	33	8			33				
A-C	145	36			145				

08:10 - 08:25

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	197	49	528	0.373	197	0.6	0.6	10.878	B
C-AB	280	70	669	0.418	280	0.8	0.8	9.250	A
C-A	41	10			41				
A-B	33	8			33				
A-C	145	36			145				

08:25 - 08:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	161	40	550	0.293	162	0.6	0.4	9.282	A
C-AB	224	56	669	0.334	224	0.8	0.5	8.124	A
C-A	38	10			38				
A-B	27	7			27				
A-C	119	30			119				

08:40 - 08:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	135	34	566	0.238	135	0.4	0.3	8.365	A
C-AB	184	46	668	0.276	185	0.5	0.4	7.458	A
C-A	35	9			35				
A-B	23	6			23				
A-C	99	25			99				

2022 Base Year, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	BrewersRoad_A2Slip	T-Junction	Two-way	Two-way	Two-way		7.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2022 Base Year	PM	ONE HOUR	16:35	18:05	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Brewers Road North		ONE HOUR	✓	148	100.000
B - A2 Slip East		ONE HOUR	✓	143	100.000
C - Brewers Road South		ONE HOUR	✓	361	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Brewers Road North	B - A2 Slip East	C - Brewers Road South
From	A - Brewers Road North	0	55	93
	B - A2 Slip East	88	0	55
	C - Brewers Road South	88	273	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Brewers Road North	B - A2 Slip East	C - Brewers Road South
From	A - Brewers Road North	0	0	2
	B - A2 Slip East	0	0	4
	C - Brewers Road South	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.31	10.27	0.4	B	131	197
C-AB	0.49	10.02	1.0	B	284	426
C-A					47	71
A-B					50	76
A-C					85	128

Main Results for each time segment

16:35 - 16:50

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	108	27	554	0.195	107	0.0	0.2	8.041	A
C-AB	227	57	701	0.324	225	0.0	0.5	7.536	A
C-A	45	11			45				
A-B	41	10			41				
A-C	70	18			70				

16:50 - 17:05

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	129	32	535	0.240	128	0.2	0.3	8.853	A
C-AB	277	69	704	0.393	276	0.5	0.7	8.397	A
C-A	48	12			48				
A-B	49	12			49				
A-C	84	21			84				

17:05 - 17:20

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	157	39	509	0.310	157	0.3	0.4	10.224	B
C-AB	349	87	708	0.492	347	0.7	1.0	9.945	A
C-A	49	12			49				
A-B	61	15			61				
A-C	102	26			102				

17:20 - 17:35

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	157	39	508	0.310	157	0.4	0.4	10.265	B
C-AB	349	87	709	0.492	349	1.0	1.0	10.018	B
C-A	49	12			49				
A-B	61	15			61				
A-C	102	26			102				

17:35 - 17:50

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	129	32	534	0.241	129	0.4	0.3	8.900	A
C-AB	277	69	705	0.393	278	1.0	0.7	8.479	A
C-A	48	12			48				
A-B	49	12			49				
A-C	84	21			84				

17:50 - 18:05

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	108	27	553	0.195	108	0.3	0.2	8.101	A
C-AB	227	57	702	0.324	228	0.7	0.5	7.618	A
C-A	45	11			45				
A-B	41	10			41				
A-C	70	18			70				

2028 Baseline, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	BrewersRoad_A2Slip	T-Junction	Two-way	Two-way	Two-way		7.24	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.24	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2028 Baseline	AM	ONE HOUR	07:25	08:55	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Brewers Road North		ONE HOUR	✓	171	100.000
B - A2 Slip East		ONE HOUR	✓	188	100.000
C - Brewers Road South		ONE HOUR	✓	317	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Brewers Road North	B - A2 Slip East	C - Brewers Road South
From	A - Brewers Road North	0	31	140
	B - A2 Slip East	95	0	93
	C - Brewers Road South	70	247	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Brewers Road North	B - A2 Slip East	C - Brewers Road South
From	A - Brewers Road North	0	0	2
	B - A2 Slip East	3	0	4
	C - Brewers Road South	1	3	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.40	11.47	0.7	B	173	259
C-AB	0.46	9.91	0.9	A	252	377
C-A					39	59
A-B					28	43
A-C					128	193

Main Results for each time segment

07:25 - 07:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	142	35	563	0.251	140	0.0	0.3	8.485	A
C-AB	202	50	670	0.301	200	0.0	0.5	7.641	A
C-A	37	9			37				
A-B	23	6			23				
A-C	105	26			105				

07:40 - 07:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	169	42	546	0.310	169	0.3	0.4	9.536	A
C-AB	245	61	670	0.366	245	0.5	0.6	8.452	A
C-A	40	10			40				
A-B	28	7			28				
A-C	126	31			126				

07:55 - 08:10

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	207	52	521	0.397	206	0.4	0.6	11.399	B
C-AB	308	77	671	0.458	306	0.6	0.9	9.852	A
C-A	41	10			41				
A-B	34	9			34				
A-C	154	39			154				

08:10 - 08:25

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	207	52	521	0.397	207	0.6	0.7	11.466	B
C-AB	308	77	671	0.458	308	0.9	0.9	9.907	A
C-A	41	10			41				
A-B	34	9			34				
A-C	154	39			154				

08:25 - 08:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	169	42	545	0.310	170	0.7	0.5	9.612	A
C-AB	245	61	670	0.366	246	0.9	0.6	8.517	A
C-A	40	10			40				
A-B	28	7			28				
A-C	126	31			126				

08:40 - 08:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	142	35	563	0.252	142	0.5	0.3	8.569	A
C-AB	202	51	670	0.302	203	0.6	0.5	7.719	A
C-A	37	9			37				
A-B	23	6			23				
A-C	105	26			105				

Gravesham Borough Council

2028 Baseline, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	BrewersRoad_A2Slip	T-Junction	Two-way	Two-way	Two-way		7.36	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.36	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2028 Baseline	PM	ONE HOUR	16:35	18:05	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Brewers Road North		ONE HOUR	✓	154	100.000
B - A2 Slip East		ONE HOUR	✓	149	100.000
C - Brewers Road South		ONE HOUR	✓	377	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Brewers Road North	B - A2 Slip East	C - Brewers Road South
From	A - Brewers Road North	0	57	97
	B - A2 Slip East	92	0	57
	C - Brewers Road South	92	285	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Brewers Road North	B - A2 Slip East	C - Brewers Road South
From	A - Brewers Road North	0	0	2
	B - A2 Slip East	0	0	4
	C - Brewers Road South	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.33	10.67	0.5	B	137	205
C-AB	0.52	10.51	1.2	B	298	448
C-A					47	71
A-B					52	78
A-C					89	134

Main Results for each time segment

16:35 - 16:50

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	112	28	549	0.204	111	0.0	0.3	8.203	A
C-AB	238	60	702	0.339	236	0.0	0.5	7.691	A
C-A	46	11			46				
A-B	43	11			43				
A-C	73	18			73				

16:50 - 17:05

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	134	33	529	0.253	134	0.3	0.3	9.094	A
C-AB	291	73	705	0.412	290	0.5	0.7	8.655	A
C-A	48	12			48				
A-B	51	13			51				
A-C	87	22			87				

17:05 - 17:20

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	164	41	502	0.327	163	0.3	0.5	10.625	B
C-AB	367	92	710	0.516	365	0.7	1.1	10.415	B
C-A	49	12			49				
A-B	63	16			63				
A-C	107	27			107				

17:20 - 17:35

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	164	41	501	0.327	164	0.5	0.5	10.673	B
C-AB	367	92	710	0.517	367	1.1	1.2	10.508	B
C-A	48	12			48				
A-B	63	16			63				
A-C	107	27			107				

17:35 - 17:50

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	134	33	529	0.253	135	0.5	0.3	9.149	A
C-AB	291	73	706	0.412	292	1.2	0.8	8.752	A
C-A	48	12			48				
A-B	51	13			51				
A-C	87	22			87				

17:50 - 18:05

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	112	28	548	0.205	113	0.3	0.3	8.269	A
C-AB	238	60	702	0.339	239	0.8	0.6	7.793	A
C-A	45	11			45				
A-B	43	11			43				
A-C	73	18			73				

2028 Baseline + Proposed LC, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	BrewersRoad_A2Slip	T-Junction	Two-way	Two-way	Two-way		7.27	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.27	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2028 Baseline + Proposed LC	AM	ONE HOUR	07:25	08:55	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Brewers Road North		ONE HOUR	✓	171	100.000
B - A2 Slip East		ONE HOUR	✓	188	100.000
C - Brewers Road South		ONE HOUR	✓	318	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Brewers Road North	B - A2 Slip East	C - Brewers Road South
From	A - Brewers Road North	0	31	140
	B - A2 Slip East	95	0	93
	C - Brewers Road South	70	248	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Brewers Road North	B - A2 Slip East	C - Brewers Road South
From	A - Brewers Road North	0	0	2
	B - A2 Slip East	3	0	4
	C - Brewers Road South	1	3	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.40	11.48	0.7	B	173	259
C-AB	0.46	9.94	0.9	A	253	379
C-A					39	59
A-B					28	43
A-C					128	193

Main Results for each time segment

07:25 - 07:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	142	35	563	0.251	140	0.0	0.3	8.489	A
C-AB	203	51	670	0.303	201	0.0	0.5	7.654	A
C-A	37	9			37				
A-B	23	6			23				
A-C	105	26			105				

07:40 - 07:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	169	42	545	0.310	169	0.3	0.4	9.542	A
C-AB	246	62	670	0.367	246	0.5	0.6	8.472	A
C-A	40	10			40				
A-B	28	7			28				
A-C	126	31			126				

07:55 - 08:10

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	207	52	521	0.397	206	0.4	0.6	11.409	B
C-AB	309	77	671	0.460	308	0.6	0.9	9.884	A
C-A	41	10			41				
A-B	34	9			34				
A-C	154	39			154				

08:10 - 08:25

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	207	52	521	0.398	207	0.6	0.7	11.478	B
C-AB	309	77	671	0.460	309	0.9	0.9	9.941	A
C-A	41	10			41				
A-B	34	9			34				
A-C	154	39			154				

08:25 - 08:40

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	169	42	545	0.310	170	0.7	0.5	9.619	A
C-AB	246	62	670	0.367	248	0.9	0.6	8.538	A
C-A	39	10			39				
A-B	28	7			28				
A-C	126	31			126				

08:40 - 08:55

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	142	35	562	0.252	142	0.5	0.3	8.573	A
C-AB	203	51	670	0.303	204	0.6	0.5	7.732	A
C-A	37	9			37				
A-B	23	6			23				
A-C	105	26			105				

Gravesham Borough Council

2028 Baseline + Proposed LC, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	BrewersRoad_A2Slip	T-Junction	Two-way	Two-way	Two-way		7.41	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.41	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2028 Baseline + Proposed LC	PM	ONE HOUR	16:35	18:05	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Brewers Road North		ONE HOUR	✓	155	100.000
B - A2 Slip East		ONE HOUR	✓	150	100.000
C - Brewers Road South		ONE HOUR	✓	379	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Brewers Road North	B - A2 Slip East	C - Brewers Road South
From	A - Brewers Road North	0	57	98
	B - A2 Slip East	92	0	58
	C - Brewers Road South	92	287	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Brewers Road North	B - A2 Slip East	C - Brewers Road South
From	A - Brewers Road North	0	0	2
	B - A2 Slip East	0	0	4
	C - Brewers Road South	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.33	10.71	0.5	B	138	206
C-AB	0.52	10.59	1.2	B	301	451
C-A					47	71
A-B					52	78
A-C					90	135

Main Results for each time segment

16:35 - 16:50

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	113	28	549	0.206	112	0.0	0.3	8.214	A
C-AB	240	60	702	0.342	238	0.0	0.5	7.721	A
C-A	46	11			46				
A-B	43	11			43				
A-C	74	18			74				

16:50 - 17:05

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	135	34	529	0.255	135	0.3	0.3	9.113	A
C-AB	293	73	705	0.415	292	0.5	0.8	8.701	A
C-A	48	12			48				
A-B	51	13			51				
A-C	88	22			88				

17:05 - 17:20

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	165	41	502	0.329	165	0.3	0.5	10.664	B
C-AB	369	92	709	0.520	367	0.8	1.2	10.500	B
C-A	48	12			48				
A-B	63	16			63				
A-C	108	27			108				

17:20 - 17:35

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	165	41	501	0.330	165	0.5	0.5	10.711	B
C-AB	369	92	710	0.520	369	1.2	1.2	10.595	B
C-A	48	12			48				
A-B	63	16			63				
A-C	108	27			108				

17:35 - 17:50

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	135	34	529	0.255	135	0.5	0.3	9.171	A
C-AB	293	73	705	0.415	294	1.2	0.8	8.802	A
C-A	48	12			48				
A-B	51	13			51				
A-C	88	22			88				

17:50 - 18:05

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	113	28	548	0.206	113	0.3	0.3	8.282	A
C-AB	240	60	702	0.342	241	0.8	0.6	7.825	A
C-A	45	11			45				
A-B	43	11			43				
A-C	74	18			74				