Residential

1,750 no. of standard dwellings

50 no. of elderly accomodation units (independent living - Extra Care)

1,800 Total dwellings

Garden Gate Traffic Generation

Table 1: Comparison Garden Gate Trip Rate Analysis with Indicative Housing Mix

Housing Type	Proportion	No. of Units	Vehicular Trip Rate			Vehicular Trip Rate			Traffic Generation			Traffic Generation		
			AM Peak			PM Peak			AM Peak			PM Peak		
			Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way
Privately Owned Houses	90.00%	1,620	0.128	0.376	0.504	0.315	0.204	0.519	207	609	816	510	330	841
Affordable Houses	7.22%	130	0.131	0.245	0.376	0.248	0.184	0.432	17	32	49	32	24	56
Elderly Accommadtion	2.78%	50	0.084	0.080	0.164	0.040	0.084	0.124	4	4	8	2	4	6
Privately Owned Apartments	0%	0												
Affordable Apartments	0%	0												
Total	**100%**	**1,800**	-	-	-	-	-	-	**229**	**645**	**874**	**545**	**359**	**903**

Primary School

630 Pupils (A total of 3-froms will be provided on site - assume 210 pupils per 1 form-entry)

75 Staff

38 Staff Car Parking Space 1 space per 2 staff

Garden Gate Traffic Generation

Table 2: Primary School Peak Period Traffic Generation – Proportion: Staff Only

Time	Arrivals	Departures
AM Period		
0700-0800	33%	0%
0800-0900	67%	0%
0900-1000	0%	0%
PM Period		
1600-1700	0%	67%
1700-1800	0%	33%
1800-1900	0%	0%

0% Proportion of primary school jobs that are filled by future residents on the site

Table 3: Primary School Peak Period Traffic Generation – Staff Only

Time	Arrivals	Departures	Two-Way
AM Period			
0700-0800	12	0	12
0800-0900	25	0	25
0900-1000	0	0	0
PM Period			
1600-1700	0	25	25
1700-1800	0	12	12
1800-1900	0	0	0

40% Pupils mode split by car

252 Pupil arrivals by car

1.50 Average no. of pupils per car

Table 4: Primary School Peak Period Traffic Generation – Proportion: Pupils (Escort Education)

Time	Arrivals	Departures
AM Peak Period		
0700-0800	0%	0%
0800-0900	100%	75%
0900-1000	0%	25%
PM Peak Period		
1600-1700	0%	0%
1700-1800	0%	0%
1800-1900	0%	0%

Table 5: Primary School Peak Period Traffic Generation – Pupils (Escort Education)

Time	Arrivals	Departures	Two-Way
AM Peak Period			
0700-0800	0	0	0
0800-0900	168	126	294
0900-1000	0	42	42
PM Peak Period			
1600-1700	0	0	0
1700-1800	0	0	0
1800-1900	0	0	0

0.3 Expected primary school age pupil yield 30 children per 100 houses

97.2% Proportion of qualifying houses (excludes the 50 elderly units but makes no allowance for the number of apartments that will be provided on site)

1,750

525 No. of primary school children generated

80% Proportion of primary school children residing on site attending the proposed school on-site

420 No. of children attending primary school residing within the new development

210 No. of children attending primary school residing off-site

80% Proportion of external primary school car trips by car (Ref: Table NTS0614 'Trips to school by main mode, trip length and age: England, 2015', National Travel Survey 2016, for 2 to under 5 miles)

Table 6: Primary School Garden Gate Traffic Generation – Escort Education

Time	Arrivals	Departures	Two-Way
AM Peak Period			
0700-0800	0	0	0
0800-0900	112	84	196
0900-1000	0	28	28
PM Peak Period			
1600-1700	0	0	0
1700-1800	0	0	0
1800-1900	0	0	0

34% Proportion of car driver trips to school that continue into work or another destination (Ref: NTS0408 Purpose of next trip by gender and previous trip, National Travel Survey 2016)

Table 7: Internal Escort Education Trips to be Deducted from the Garden Gate Residential Traffic Generation – AM Peak Hour

Time	Traffic Generation		
	Arrivals	Departures	Total
Primary School Garden Gate Traffic	168	126	**294**
Pupils Off-Site	-112	-84	**-196**
Initial Internal Escort Education Trips	56	42	**98**

Table 8: Internal Escort Education Trips to be Deducted from the Garden Gate Residential Traffic Generation – PM Peak Hour

Time	Traffic Generation		
	Arrivals	Departures	Total
Primary School Garden Gate Traffic	0	0	**0**
Pupils Off-Site	0	0	**0**
Initial Internal Escort Education Trips	0	0	**0**

Note: an arrival at the ancillary land uses is a departure from a dwelling

Table 9: Residential Traffic Generation – Internal Escort Education Trips to be Deducted from the Garden Gate Residential Traffic Generation

Time	Traffic Generation		
	Arrivals	Departures	Total
AM Peak Hour	-14	-19	**-33**
PM Peak Hour	0	0	**0**

Health Centre

500 sqm GFA

5 No. of GPs

Garden Gate Traffic Generation

Table 10: Health Centre Garden Gate Vehicular Trip Rates (Per 100 sqm)

Time	Trip Rate (per 100sqm)		
	Arrivals	Departures	Total
AM Peak Hour	4.697	2.647	**7.344**
PM Peak Hour	1.856	2.808	**4.664**

Table 11: Health Centre Garden Gate Traffic Generation (500 sqm)

Time	Traffic Generation		
	Arrivals	Departures	Total
AM Peak Hour	23	13	**37**
PM Peak Hour	9	14	**23**

0.67 doctors per 1,000 population Ref: http://www.nuffieldtrust.org.uk/data-and-charts/number-general-practitioners-1000-population

2.64 Average household size for Ham and Motcombe Ward, 2011 Census

4,752 Forecast population on site

3.2 No. of doctors required for the on-site population

3 rounded no. of doctors

40.0% Proportion of external traffic generation

Table 12: Health Centre – External Traffic Generation

Time	All Vehicles		
	Arrivals	Departures	Total
AM Peak Hour	9	5	**15**
PM Peak Hour	4	6	**9**

34% Proportion of internal car driver trips to the health centre that continue into work or another destination after their appointment

Table 13: Internal Health Centre Trips to be Deducted from the Garden Gate Residential Traffic Generation – AM Peak Hour

Time	Traffic Generation		
	Arrivals	Departures	Total
AM Peak Hour	-14	-8	-22
Trip Chaining	34%	34%	34%
Internal Health Centre Trips to be deducted (allowance for trip chaining)*	-5	-3	-7

Table 14: Internal Health Centre Trips to be Deducted from the Garden Gate Residential Traffic Generation – PM Peak Hour

Time	Traffic Generation		
	Arrivals	Departures	Total
PM Peak Hour	-6	-8	-14
Trip Chaining	34%	34%	34%
Internal Health Centre Trips to be deducted (allowance for trip chaining)*	-2	-3	-5

Table 15: Residential Traffic Generation – Internal Commuting Trips to be Deducted from the Garden Gate Residential Traffic Generation

Time	Traffic Generation		
	Arrivals	Departures	Total
AM Peak Hour	-3	-5	**-7**
PM Peak Hour	-3	-2	**-5**

Note: an arrival at the ancillary land uses is a departure from a dwelling

Pub / Restaurant

750 sqm GFA

Garden Gate Traffic Generation

Table 16: Pub/Restaurant Garden Gate Vehicular Trip Rates (Per 100 sqm)

Time	Trip Rate (per 100sqm)		
	Arrivals	Departures	Total
AM Peak Hour	0.000	0.000	**0.000**
PM Peak Hour	2.763	1.900	**4.663**

Table 17: Pub/Restaurant Garden Gate Traffic Generation (750 sqm)

Time	Traffic Generation		
	Arrivals	Departures	Total
AM Peak Hour	0	0	**0**
PM Peak Hour	21	14	**35**

35.0% Proportion of linked/pass-by trips

Table 18: Pub/Restaurant – Linked/Pass-by Trips

Time	All Vehicles		
	Arrivals	Departures	Total
AM Peak Hour	0	0	**0**
PM Peak Hour	7	5	**12**

Table 19: Pub/Restaurant – New Trips

Time	Traffic Generation		
	Arrivals	Departures	Total
AM Peak Hour	0	0	0
PM Peak Hour	13	9	23

Garden Gate Traffic Generation

Table 20: Garden Gate Traffic Generation Proposed Development – AM Peak Hour

	All Vehicles		
	Arrivals	**Departures**	**Total**
Residential (1,800 dwellings)	229	645	874
Primary School (3 FE) – Staff	25	0	25
Primary School (3 FE) – Escort Education	168	126	294
Local Convenience / Retail	0	0	0
Health Centre	23	13	37
Community Hall	0	0	0
Pub/Restaurant	0	0	0
Total	**445**	**784**	**1,229**

Table 21: Garden Gate Traffic Generation Proposed Development – PM Peak Hour

	All Vehicles		
	Arrivals	**Departures**	**Total**
Residential (1,800 dwellings)	545	359	903
Primary School (3 FE) – Staff	0	12	12
Primary School (3 FE) – Escort Education	0	0	0
Local Convenience / Retail	0	0	0
Health Centre	9	14	23
Community Hall	0	0	
Pub/Restaurant	21	14	35
Total	**575**	**399**	**974**

External Traffic Generation

Table 22: External Traffic Generation Proposed Development – AM Peak Hour

	All Vehicles		
	Arrivals	**Departures**	**Total**
Residential (1,800 dwellings)	229	645	874
Less primary school escort education	-14	-19	-33
Less health centre	-3	-5	-7
Residential (1,800 dwellings) – external	212	621	833
Primary School (3 FE) – Staff	25	0	25
Primary School (3 FE) – Escort Education	112	84	196
Local Convenience / Retail	0	0	0
Health Centre	9	5	15
Community Hall	0	0	0
Pub/Restaurant (less linked / pass-by trips)	0	0	0
Total	**358**	**710**	**1,068**

Table 23: External Traffic Generation Proposed Development – PM Peak Hour

	All Vehicles		
	Arrivals	**Departures**	**Total**
Residential (1,800 dwellings)	545	359	903
Less primary school escort education	0	0	0
Less health centre	-3	-2	-5
Residential (1,800 dwellings) – external	542	357	898
Primary School (3 FE) – Staff	0	12	12
Primary School (3 FE) – Escort Education	0	0	0
Local Convenience / Retail	0	0	0
Health Centre	4	6	9
Community Hall	0	0	0
Pub/Restaurant (less linked / pass-by trips)	13	9	23
Total	**559**	**384**	**943**

APPENDIX U **Development Proposal - Traffic Distribution**

Table 1: Development Proposal – Land Uses Tested within Transport Assessment

Vehicular Access	Residential	Primary School (FE)	Health Centre (sqm)	Pub/Restaurant (sqm)
Woodpecker Meadow (Kingfisher Avenue)	100			
Addison Close	90			
New access from the B3092 New Road to south of Lodden Lakes	117			
Fern Brook Lane	150			
Extension of the eastern arm of the existing Park Farm roundabout	483	2		
Via Principal Street (East and West)	860	1	500	750
Total	**1,800**	**3**	**500**	**750**

Zone 001	B3081 Shaftesbury Road
Zone 009	B3092 New Road
Zone 018	B3081 Wyke Road
Zone 021	B3092
Zone 022	Bay Road

Assignment - Residential

Combination of 2011 Census JtW and Gravity Model

Zone	%	AM Peak			PM Peak		
		Arrivals	Departures	Total	Arrivals	Departures	Total
Zone 001	35.1%	74	218	**292**	190	125	**315**
Zone 009	10.0%	21	62	**83**	54	36	**90**
Zone 018	14.5%	31	90	**121**	79	52	**131**
Zone 021	10.3%	22	64	**85**	56	37	**92**
Zone 022	0.0%	0	0	**0**	0	0	**0**
Internal	30.1%	64	187	**251**	163	107	**271**
Total	**100.0%**	**212**	**621**	**833**	**542**	**357**	**898**

Assignment - Primary School - Staff

2011 Census JtW - Inbound

Zone	%	AM Peak			PM Peak		
		Arrivals	Departures	Total	Arrivals	Departures	Total
Zone 001	40.4%	10	0	**10**	0	5	**5**
Zone 009	11.4%	3	0	**3**	0	1	**1**
Zone 018	14.6%	4	0	**4**	0	2	**2**
Zone 021	11.5%	3	0	**3**	0	1	**1**
Zone 022	0.0%	0	0	**0**	0	0	**0**
Internal	22.2%	6	0	**6**	0	3	**3**
Total	**100.0%**	**25**	**0**	**25**	**0**	**12**	**12**

Assignment - Primary School - Pupils

Gravity Model

Zone	%	AM Peak			PM Peak		
		Arrivals	Departures	Total	Arrivals	Departures	Total
Zone 001	30.6%	34	26	**60**	0	0	**0**
Zone 009	8.8%	10	7	**17**	0	0	**0**
Zone 018	14.5%	16	12	**28**	0	0	**0**
Zone 021	9.2%	10	8	**18**	0	0	**0**
Zone 022	0.0%	0	0	**0**	0	0	**0**
Internal	36.8%	41	31	**72**	0	0	**0**
Total	**100.0%**	**112**	**84**	**196**	**0**	**0**	**0**

Assignment - Health Centre

Gravity Model

Zone	%	AM Peak			PM Peak		
		Arrivals	Departures	Total	Arrivals	Departures	Total
Zone 001	30.6%	3	2	**4**	1	2	**3**
Zone 009	8.8%	1	0	**1**	0	0	**1**
Zone 018	14.5%	1	1	**2**	1	1	**1**
Zone 021	9.2%	1	0	**1**	0	1	**1**
Zone 022	0.0%	0	0	**0**	0	0	**0**
Internal	36.8%	3	2	**5**	1	2	**3**
Total	**100.0%**	**9**	**5**	**15**	**4**	**6**	**9**

Assignment - Pub/Restaurant

Gravity Model

Zone	%	AM Peak			PM Peak		
		Arrivals	Departures	Total	Arrivals	Departures	Total
Zone 001	30.6%	0	0	**0**	4	3	**7**
Zone 009	8.8%	0	0	**0**	1	1	**2**
Zone 018	14.5%	0	0	**0**	2	1	**3**
Zone 021	9.2%	0	0	**0**	1	1	**2**
Zone 022	0.0%	0	0	**0**	0	0	**0**
Internal	36.8%	0	0	**0**	5	3	**8**
Total	**100.0%**	**0**	**0**	**0**	**13**	**9**	**23**

Assignment - Total

Zone	%	AM Peak			PM Peak		
		Arrivals	Departures	Total	Arrivals	Departures	Total
Zone 001		122	245	**367**	195	135	**330**
Zone 009		35	70	**105**	56	38	**94**
Zone 018		52	103	**155**	81	56	**137**
Zone 021		36	72	**108**	57	39	**97**
Zone 022		0	0	**0**	0	0	**0**
Internal		114	220	**334**	169	116	**285**
Total		**358**	**710**	**1068**	**559**	**384**	**943**

Assignment - Woodpecker Meadow (Kingfisher Avenue)

Zone	%	AM Peak			PM Peak		
		Arrivals	Departures	Total	Arrivals	Departures	Total
Zone 001		4	12	**16**	11	7	**18**
Zone 009		1	3	**5**	3	2	**5**
Zone 018		2	5	**7**	4	3	**7**
Zone 021		1	4	**5**	3	2	**5**
Zone 022		0	0	**0**	0	0	**0**
Internal		4	10	**14**	9	6	**15**
Total		**12**	**35**	**46**	**30**	**20**	**50**

Assignment - Addison Close

Zone	%	AM Peak			PM Peak		
		Arrivals	Departures	Total	Arrivals	Departures	Total
Zone 001		4	11	**15**	10	6	**16**
Zone 009		1	3	**4**	3	2	**4**
Zone 018		2	5	**6**	4	3	**7**
Zone 021		1	3	**4**	3	2	**5**
Zone 022		0	0	**0**	0	0	**0**
Internal		3	9	**13**	8	5	**14**
Total		**11**	**31**	**42**	**27**	**18**	**45**

Assignment - New access from the B3092 New Road to south of Lodden Lakes

Zone	%	AM Peak			PM Peak		
		Arrivals	Departures	Total	Arrivals	Departures	Total
Zone 001		5	14	**19**	12	8	**20**
Zone 009		1	4	**5**	4	2	**6**
Zone 018		2	6	**8**	5	3	**8**
Zone 021		1	4	**6**	4	2	**6**
Zone 022		0	0	**0**	0	0	**0**
Internal		4	12	**16**	11	7	**18**
Total		**14**	**40**	**54**	**35**	**23**	**58**

Assignment - Fern Brook Lane

Zone	%	AM Peak			PM Peak		
		Arrivals	Departures	Total	Arrivals	Departures	Total
Zone 001		6	18	**24**	16	10	**26**
Zone 009		2	5	**7**	5	3	**7**
Zone 018		3	8	**10**	7	4	**11**
Zone 021		2	5	**7**	5	3	**8**
Zone 022		0	0	**0**	0	0	**0**
Internal		5	16	**21**	14	9	**23**
Total		**18**	**52**	**69**	**45**	**30**	**75**

Assignment - Extension of the eastern arm of the existing Park Farm roundabout

Zone	%	AM Peak			PM Peak		
		Arrivals	Departures	Total	Arrivals	Departures	Total
Zone 001		50	76	**125**	51	37	**88**
Zone 009		14	22	**36**	15	11	**25**
Zone 018		22	32	**54**	21	15	**36**
Zone 021		15	22	**37**	15	11	**26**
Zone 022		0	0	**0**	0	0	**0**
Internal		48	71	**119**	44	31	**74**
Total		**148**	**223**	**371**	**145**	**104**	**249**

Assignment - Via Principal Street (East and West)

Zone	%	AM Peak			PM Peak		
		Arrivals	Departures	Total	Arrivals	Departures	Total
Zone 001		53	114	**167**	96	66	**162**
Zone 009		15	33	**48**	27	19	**46**
Zone 018		23	48	**71**	40	28	**68**
Zone 021		16	34	**49**	28	19	**47**
Zone 022		0	0	**0**	0	0	**0**
Internal		50	102	**151**	84	58	**142**
Total		**156**	**330**	**486**	**276**	**189**	**465**

A303 / B3081 Leigh Common	%	AM Peak			PM Peak		
		Arrivals	Departures	Total	Arrivals	Departures	Total
B3081 (West)	3.1%	11	22	**33**	17	12	**29**
A303 (West)	11.4%	41	81	**122**	64	44	**108**
Not as far as A303	0.0%	0	0	**0**	0	0	**0**

A303 / B3092 Mere	%	AM Peak			PM Peak		
		Arrivals	Departures	Total	Arrivals	Departures	Total
B3092 Crab Lane	5.8%	21	41	**62**	32	22	**54**
A303 (East)	0.0%	0	0	**0**	0	0	**0**
B3095	0.2%	1	2	**2**	1	1	**2**
Not as far as A303	4.2%	15	30	**45**	24	16	**40**

A30/A350/B3081 Shaftesbury	%	AM Peak			PM Peak		
		Arrivals	Departures	Total	Arrivals	Departures	Total
A350 (North)	10.6%	38	75	**113**	59	41	**100**
A350 (South)	19.4%	70	138	**208**	109	75	**183**
Not as far as Ivy Cross Roundabout	4.9%	17	35	**52**	27	19	**46**

A30 / B3092 East Stour	%	AM Peak			PM Peak		
		Arrivals	Departures	Total	Arrivals	Departures	Total
A30 (West)	4.2%	15	30	**45**	24	16	**40**
A30 (East)	0.0%	0	0	**0**	0	0	**0**
B3092 (South)	4.4%	16	31	**47**	25	17	**42**
Not as far as A30 / B3092 Crossroads	1.4%	5	10	**14**	8	5	**13**

A303 / A350	%	AM Peak			PM Peak		
		Arrivals	Departures	Total	Arrivals	Departures	Total
A303 (East)	1.2%	4	9	**13**	7	5	**12**
A350 (North)	4.6%	16	32	**49**	26	18	**43**
Not as far as A303 / A350	0.3%	1	2	**3**	1	1	**2**

APPENDIX V **Gillingham S-Paramics Traffic Model - Development Impact Testing Report**

Gillingham Strategic Site Allocation, North Dorset
Reference number GB01T17B49_DS

11/09/17

GILLINGHAM S-PARAMICS OPTION TESTING

SYSTRA

GILLINGHAM STRATEGIC SITE ALLOCATION, NORTH DORSET

GILLINGHAM S-PARAMICS MODEL

IDENTIFICATION TABLE	
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APPROVAL

Version	Name		Position	Date	Modifications
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1. INTRODUCTION

A Transport Assessment of the Gillingham Strategic Site Allocation (SSA) has been prepared by i-Transport LLP (i-Transport) on behalf of the South Gillingham Consortium.

This development is expected to bring forward up to 1,800 dwellings and associated social and physical infrastructure.

SIAS Limited (SIAS), now SYSTRA Limited (SYSTRA), was commissioned by the South Gillingham Consortium to update the 2012 S-Paramics Microsimulation model of the B3081 Shaftesbury Road/B3092 Le Neubourg Way corridor and Gillingham town centre to reflect traffic and network conditions in 2016.

The development of the 2016 Base model and details of the calibration and validation are discussed in *Gillingham S-Paramics Base Model Validation Report (SYSTRA Ref. GB01T17B49_2, April 2017).* The 2016 Base model has been agreed by Dorset County Council (DCC), as local highway authority, as being an accurate representation of the existing traffic conditions.

The 2016 Base model was used to create the Do-Minimum models. The development of the Do-Minimum models is discussed in *Gillingham S-Paramics Do Minimum Model Development Report (SYSTRA Ref. GB01T17B49_DM, August 2017).*

This Report will discuss the development of a number of development scenario test models for 2021 and 2031, as well as interim years, and present results demonstrating the impact of the development on the network traffic conditions.

The Report will discuss development of demand matrices, modelling of the mitigation measures and performance of the test models.

2. DEVELOPMENT SCENARIO BACKGROUND

The South Gillingham Consortium are promoting a strategic residential led mixed-use development (including up to 1,800 homes, a primary school, a neighbourhood centre as well as community facilities and public open space) on land to the south of Gillingham. The *Transport Assessment (i-Transport Report Ref. ITB4057-202)* sets out the details of the development proposal and associated transport assumptions and parameters that have been used. This Report should be consulted to supplement this Testing Report.

2.1 Development Site Access Infrastructure

An overview of the vehicular access strategy is summarised below:

Central Parcel (i.e. Ham Farm and Newhouse Farm) – comprising a total of 960 dwellings, local centre, and 1-form entry extension to St Mary the Virgin C of E VA Primary School:

- Via signalised junction on the B3081 Shaftesbury Road to the south of the existing Park Farm roundabout;
- Extension of Woodpecker Meadow into the site to serve approximately 100 dwellings; and
- Via Principal Street and realigned B3092 New Road in vicinity of junction with Cole Street Lane.

Park Farm (east of the B3081 Shaftesbury Road) – comprising a total of 633 dwellings and 2-form entry primary school:

- Extension of the eastern arm of the existing Park Farm roundabout (currently serving Kingsmead Business Park);
- Eastern end of Cerne Avenue / Cale Way junction (serving a limited number of dwellings); and
- Eastern end of Trent Square / Fern Brook Lane junction (serving a limited number of dwellings).

Lodden Lakes – comprising a total of 207 dwellings:

- Priority junction to the south of Addison Close (via approved access as part of the consented 90 dwelling scheme); and
- New access from the B3092 New Road to south of Lodden Lakes (simple priority junction in advance of extension to Brickfields Business Park coming forward).

2.2 Testing Scenarios

The impact of the development traffic and associated infrastructure is required to be examined for the year 2021. The scenario testing examines three 2021 network/demand scenarios:

- 2021 Do-Minimum plus peak spreading
- 2021 Do-Minimum plus peak spreading plus development (inclusion of development traffic and site access infrastructure)

- 2021 Do-Minimum plus peak spreading plus development plus mitigation (as above plus proposed off site highway mitigation measures and impact of modal shift on baseline and development generated traffic demand resulting from implementation of proposed sustainable transport schemes, i.e. Smarter Choices Initiatives)

In addition to the main future years, based on the likely number of completions per annum given a 2021 opening year, 2024 has been identified as the likely year for the delivery of the on-line highway improvements, and peak period of construction, and 2027 has been identified as the likely year for the delivery of the Principal Street. Therefore, the following interim year assessments have been undertaken:

- 2024 Do-Minimum plus peak spreading
- 2024 Do-Minimum plus peak spreading plus 450 dwellings (inclusion of development traffic and site access infrastructure plus partial implementation of Smarter Choices Initiatives)
- 2024 Do-Minimum plus peak spreading plus 450 dwellings (inclusion of development traffic and site access infrastructure plus proposed on-line highway mitigation measures plus partial implementation of Smarter Choices Initiatives) plus construction traffic of 200 dwellings
- 2027 Do-Minimum plus peak spreading
- 2027 Do-Minimum plus peak spreading plus 1,100 dwellings, 1-form entry extension to St Mary the Virgin C of E VA Primary School, health centre, and pub/restaurant plus mitigation (inclusion of development traffic and site access infrastructure plus proposed on-line highway mitigation measures plus partial implementation of Smarter Choices Initiatives).

The quantum of development served via each access for the proposed 450 dwelling and 1,100 dwelling scenarios are set out in detail in section 11 of the transport assessment.

2031 is examined as a sensitivity test only; there is no requirement for the development to mitigate against the impact of the proposed development in 2031, rather it is provided to Dorset County Council to inform their long-term planning strategies. Two 2031 network/demand scenarios are examined:

- 2031 Do Minimum plus peak spreading
- 2031 Do-Minimum plus peak spreading plus development proposal plus Local Plan developments plus off-site highway mitigation plus Smarter Choices Initiatives.

3. DEMAND MATRICES

This chapter describes development of the traffic demand matrices for the individual test scenarios.

The demand matrices consist of the following components:

- Background Traffic
- Committed Developments
- Development Proposal
- Local Plan Developments

Additionally, the following reduction factors were applied:

- Reduction to the design year baseline traffic flows as a result of the comprehensive transport strategy delivered by the development
- Reduction to development generated traffic to reflect the implementation of the Travel Plan

The procedure adopted to develop the demand matrices is discussed in more details in the following sections.

3.1 Background Traffic

The Background Traffic growth factors were provided by i-Transport. These factors were derived from the National Transport Model (NTM) and locally adjusted based on the TEMPRO database. The resultant growth factors are shown in Table 3.1

Table 3.1 : Background Growth Factors

Period	AM Peak	PM Peak
2016 – 2021	1.0328	1.0295
2016 – 2024	1.0593	1.0557
2016 – 2027	1.0722	1.0685
2016 – 2031	1.0812	1.0774

These growth factors were applied to all movements included within the Base year model and across all vehicle types to derive the Background Traffic growth to each forecast year.

3.2 Committed Developments

North Dorset District Council (NDDC) has provided details of the committed developments to be included in the Do-Minimum model. These are the developments in the area with a valid planning permission that were not built out at the time of the traffic surveys.

Development of the Committed Development demand is described in *Do-Minimum Model Development Report (SYSTRA Ref. GB01T17B49_DM, August 2017).*

In order to undertake a robust assessment, it has been assumed that all Committed Developments will be fully completed by 2021. As a result, all Do-Minimum and Option

models (2021, 2024, 2027 and 2031) contain the same amount of Committed Development traffic.

The total number of trips from the Committed Developments is shown in Table 3.2.

Table 3.2 : Total Number of Trips from Committed Developments

Development	Direction	AM (08-09)	PM (17-18)	AM (07-10)	PM (16-19)
Kingsmead Bussiness Park, Gillingham	Arr.	44	34	91	96
	Dep.	44	34	123	78
Res. Development at Barnaby Mead, Bay, Gillingham	Arr.	8	18	21	45
	Dep.	18	9	43	24
Res. Development at Land at East Shaftesbury	Arr.	11	11	32	27
	Dep.	11	11	24	36
Res. Development at Land to the west of A350 Littledown	Arr.	12	37	38	92
	Dep.	43	19	90	54
Res. Development adjacent to Wincombe Business Park	Arr.	4	11	11	29
	Dep.	12	7	26	19
Res. Development at Hill Brush Factory Site, Mere	Arr.	11	40	6	16
	Dep.	43	24	14	9
Total		**261**	**255**	**518**	**524**

3.3 Development Proposal

3.3.1 Trip Generation

i-Transport provided traffic generation information for the AM (07:00 – 10:00) and PM (16:00 – 19:00) periods before the effects of the sustainable transport strategy measures are taken into account. This information was provided for each access point to each development area.

3.3.2 Trip Distribution

External trip distributions for each development showing development trips to and from external zones were provided by i-Transport. These trips were assigned to the relevant origin – destination movements in the model.

Additionally, i-Transport supplied the total amount of the development traffic with origins and destinations within internal zones within the model, i.e. within the Gillingham built-up area. Internal development trips were assigned to the relevant internal zones in the model using the Base model distribution.

3.3.3 Vehicle Types

All trips generated by the Development Proposal were assumed to be light vehicles (car and LGV trips) and have been added to the matrix level 1 (cars and LGVs).

The only exception is the Construction Traffic in the Peak Construction scenario, where data for HGVs was also provided. The HGV trips were added to the matrix level 2 (HGVs).

3.3.4 Total Number of Trips associated with the Development Proposal

The total number of trips associated with the Development Proposal is shown in Table 3.3. and Development trips for individual access points are shown in Table 3.1

Table 3.3 : Total Number of Trips from Proposed Development

Year	Scenario	AM (07-10)	PM (16-19)
2021	1800 dwellings	2,168	2,565
	1,800 dwellings (no mitigation)	2,168	2,565
2024	450 dwellings	467	610
	Peak Construction (200 dwellings per annum) – 450 dwellings already built out	568	711
2027	1,100 dwellings	1,267	1,592
2031	1,800 dwellings + Local Plan development	2,168	2,565

Table 3.4 : Total Number of Trips from Proposed Development by Access

Development	Period	Type	450 Dwellings	1100 Dwellings	1800 Dwellings
Addison Close	AM (07-10)	Arr.	28	28	28
		Dep.	66	66	66
	PM (16-19)	Arr.	73	73	73
		Dep.	49	49	49
Extension of the eastern arm of the existing Park Farm roundabout	AM (07-10)	Arr.	0	110	249
		Dep.	0	259	427
	PM (16-19)	Arr.	0	288	392
		Dep.	0	193	288
Fern Brook Lane	AM (07-10)	Arr.	46	46	46
		Dep.	109	109	109
	PM (16-19)	Arr.	122	122	122
		Dep.	82	82	82
New access from the B3092 New Road to south of Lodden Lakes	AM (07-10)	Arr.	0	0	36
		Dep.	0	0	85
	PM (16-19)	Arr.	0	0	95
		Dep.	0	0	64
Via Principal Street	AM (07-10)	Arr.	34	197	338
		Dep.	80	348	679
	PM (16-19)	Arr.	89	376	745
		Dep.	60	274	522
Woodpecker Meadow (Kingfisher Avenue)	AM (07-10)	Arr.	31	31	31
		Dep.	73	73	73
	PM (16-19)	Arr.	81	81	81
		Dep.	54	54	54

3.4 Local Plan Developments

In order to undertake an appropriate sensitivity test at the end of the Local Plan period, it is also proposed to include 'soft commitments', i.e. sites which do not have a planning

consent but which have been identified as suitable for development within the adopted North Dorset Local Plan 2011-2031 and there is a reasonable expectation they will come forward during the proposed assessment period:

- Extended Brickfields Business Park
- Mixed-use regeneration in the Station Road area
- Kingsmead Business Park
- Neal's Yard Remedies, Peacemarsh

3.4.1 Trip Generation

i-Transport provided traffic generation information for the AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hours. Expansion factors derived from observed data were used to factor development trips to 3-hour model periods (07:00-10:00 and 16:00-19:00).

3.4.2 Trip Distribution

External trip distributions for each development showing development trips to and from external zones were provided by i-Transport. These trips were assigned to the relevant origin – destination movements.

Additionally, i-Transport supplied the total amount of the development traffic with origins and destinations within internal zones within the model, i.e. within the Gillingham built-up area. Internal development trips were assigned to the relevant internal zones in the model using the Base model distribution.

3.4.3 Vehicle Types

Data for Local Plan Developments were provided separately for light and heavy vehicles. Light vehicles were added to the matrix level 1 (cars and LGVs) and heavy vehicles were added to the matrix level 2 (HGVs).

3.4.4 Total Number of Trips associated with Local Plan Developments

The total number of trips associated with Local Plan Developments is shown in Table 3.5.

Table 3.5 : Total Number of Trips from Local Plan Developments

Year	Scenario	AM (07-10)	PM (16-19)
2021	1800 dwellings	0	0
	1,800 dwellings (no mitigation)	0	0
2024	450 dwellings	0	0
	Peak Construction (200 dwellings per annum) – 450 dwellings already built out	0	0
2027	1,100 dwellings	0	0
2031	1,800 dwellings + Local Plan development	1,286	1,374

The Local Plan Developments were included only in the 2031 forecast year.

3.5 Reduction in Background Traffic due to Transport Strategy

A reduction has been made to design year baseline traffic flows (for traffic originating from dwellings within the town, i.e. excluding through movements) to estimate the likely modal shift of existing journeys as a result of the comprehensive transport strategy delivered by the development. These factors are shown in Table 3.6.

Table 3.6 : Reduction Factors due to Transport Strategy

Year	Scenario	Reduction factor
2021	1800 dwellings	7.5%
	1,800 dwellings (no mitigation)	0.0%
2024	450 dwellings	1.5%
	Peak Construction (200 dwellings per annum) – 450 dwellings already built out	1.5%
2027	1,100 dwellings	4.0%
2031	1,800 dwellings + Local Plan development	7.5%

Reductions in traffic due to the Transport Strategy were applied to the Background Traffic and to trips from the Committed and Local Plan Developments.

The factoring process excluded through movements. A through movement is defined as a trip with both origin and destination at an external model zone. These zones are:

- Zone 1 – B3081 Shaftesbury Road
- Zone 9 – B3092
- Zone 18 – Wyke Road
- Zone 21 – B3092
- Zone 22 – Bay Rd

3.6 Reduction in Development Generated Traffic due to Travel Plan

A reduction has been made to development generated traffic to reflect the implementation of the Travel Plan. These factors are shown in Table 3.7.

Table 3.7 : Reduction Factors due to Travel Plan

Year	Scenario	Reduction factor
2021	1800 dwellings	10.0%
	1,800 dwellings (no mitigation)	0.0%
2024	450 dwellings	5.0%
	Peak Construction (200 dwellings per annum) – 450 dwellings already built out	5.0%
2027	1,100 dwellings	7.5%
2031	1,800 dwellings + Local Plan development	10.0%

The appropriate reduction factor was applied to all trips from the Proposed Development, excluding Construction Traffic in the Peak Construction scenario.

3.7 Total Number of Trips

Table 3.8 shows the total number of trips included in the Option models.

Table 3.8 : Matrix Totals

Year	Scenario	AM (07-10)	PM (16-19)
2021	1,800 dwellings	10,942	11,875
	1,800 dwellings (no mitigation)	11,628	12,666
2024	450 dwellings	10,030	10,798
	Peak Construction (200 dwellings per annum) - 450 dwellings already built out	10,135	10,902
2027	1,100 dwellings	10,689	11,608
2031	1,800 dwellings + Local Plan Development	12,495	13,527

4. PEAK SPREADING

Effects of peak spreading were included in all Option models.

The peak spreading procedure applied in the Gillingham modelling is based on pivoting from the Base model to the individual Do-Minimum models (2021, 2024, 2027, 2031). The same release profiles are then applied in the corresponding Option models (2021, 2024, 2027, 2031).

A detailed description of the peak spreading procedure, including details on realism and sensitivity testing, is included in Do Minimum Model Development Report.

5. ZONING SYSTEM

This chapter describes modifications of the zoning system in the test models. These changes were necessary to allow trips from the Proposed and Local Plan Developments to enter the model network.

Trips from the Proposed Development utilise the following loading points:

- Woodpecker Meadow (Kingfisher Avenue) – Zone 05
- Addison Close – Zone 27
- New access from south of Lodden Lakes to the B3092 New Road – Zone 38 (new zone)
- Fern Brook Lane – Zone 03
- Eastern arm of the existing Park Farm roundabout – Zone 02
- Principal Street (East and West) – Zone 39 (new zone)

Trips from the Local Plan Development utilise the following loading points:

- Extended Brickfields Business Park – Zone 40 (new zone)
- Mixed-use regeneration in the Station Road area – Zone 15
- Kingsmead Business Park – Zone 02
- Neal's Yard Remedies, Peacemarsh – Zone 21

The location of some of the developments meant that they required new zones to be included. These new zones are:

- Zone 38
- Zone 39
- Zone 40

The same zoning system was used in all test models.

6. MODEL NETWORK

This chapter describes modelling of mitigation measures and other road network changes included in the test models.

6.1 Mitigation Measures

In accordance with Policy 21 of North Dorset District Council's adopted Local Plan Part 1, the proposed development will bring forward the following highway improvements:

- Highway improvements at the B3081 Shaftesbury Rd / B3092 New Rd junction (additional lane on the New Road approach, minor layout changes)
- Highway improvements at the B3081 Le Neubourg Way / Newbury junction (the junction is modelled as signalised)
- Provision of SCOOT UTC on the B3081 / B3092 Corridor
- New Link between B3081 Shaftesbury Road and B3092 New Road

The list of mitigation measures included in each test model is shown in Table 6.1.

Table 6.1 : Mitigation Measures included in Option Models

Year	Scenario	B3081 / B3092 Jct	B3081 / Newbury Jct	SCOOT provision	New link B3081 & B3092
2021	1800 dwellings	✓	✓	✓	✓
	1,800 dwellings (no mitigation)	✗	✗	✗	✗
2024	450 dwellings	✗	✗	✗	✗
	Peak Construction (200 dwellings per annum) – 450 dwellings already built out	✓	✓	✓	✗
2027	1,100 dwellings	✓	✓	✓	✗
2031	1,800 dwellings + Local Plan development	✓	✓	✓	✓

Details of the modelling of the individual mitigation measures is as follows.

6.1.1 B3081 Shaftesbury Rd / B3092 New Rd Junction

Proposed highway improvements were coded based on AutoCAD drawing ITB4057-GA-027 Rev C.

Signal stages and minimum green times were coded using data provided by i-Transport.

6.1.2 B3081 Le Neubourg Way / Newbury Junction

Proposed highway improvements were coded based on AutoCAD drawing ITB4057-GA-066 Rev B.

Signal stages and minimum green times were coded using data provided by i-Transport.

6.1.3 New Link between Shaftesbury Road and B3092 New Road

Proposed highway improvements were coded based on AutoCAD drawing ITB4057-GA-070 Rev G.

6.1.4 Provision of SCOOT UTC on B3081 / B3092 Corridor

It is expected that SCOOT UTC will be implemented in the study area at the following junctions:

- Shaftesbury Rd / King John Rd
- Shaftesbury Rd / New Rd
- High St / Le Neubourg Way
- Station Rd / Le Neubourg Way
- Le Neubourg Way / Wyke Rd

S-Paramics modelling of the effects of SCOOT UTC in Gillingham is based on a simplified approach, which uses vehicle actuated (VA) plans at theses junction. The VA plans use the following logic:

- An optional extension of the green time for the main East - West movement. This is achieved by including an additional stage for this movement. This stage is using data from loop detectors located on Le Neubourg Way and on Shaftesbury Rd.
- Clearing the section between High St and New Rd before a new cycle starts. This is achieved by an optional stage, which is only called following the stage extension. This stage allows the vehicles waiting in the right turn lanes to clear this area and prevents the right turns from blocking vehicles on the main road.

6.2 Development Access

Several road network changes are planned to allow access from the Proposed Development. These road network changes are described below:

- New signalised junction of B3081 Shaftesbury Road and the Principal Street – coding was based on AutoCAD drawing ITB4057-SK-019, signal stages and minimum green times were coded using data provided by i-Transport.
- New priority junction of B3092 New Road with the Principal Street – coding was based on AutoCAD drawing ITB4057-GA-082 Rev A.
- New access from the B3092 New Road to south of Lodden Lakes – coding was based on AutoCAD drawing ITB4057-GA-082 Rev A (priority junction). The only exception is the 2031 scenario with 1,800 dwellings + Local Plan development, which is based on drawing ITB4057-GA-083 (roundabout).

These road network changes were included in all test models.

7. MODELLING OUTPUTS

This section shows a comparison of traffic conditions between the Base, Do-Minimum and scenario test models. These comparisons are based on averages across twenty model runs for each time period.

7.1 Total Number of Trips

Table 7.1 shows the total number of trips in the Base, Do-Minimum and Option models.

The comparison shows an increase in number of trips in the Do-Minimum models as a result of trips generated by the Committed Developments and Background Traffic growth.

The comparison shows an additional increase in traffic in the Option models as a result of trips generated by the Proposed and Local Plan Developments and by Construction Traffic.

Table 7.1 : Total Number of Trips

Year	Scenario	AM (07-10)	PM (16-19)
2016	Base	8,733	9,381
2021	Do-Minimum	9,473	10,120
	1,800 dwellings	10,942	11,875
	1,800 dwellings (no mitigation)	11,628	12,666
2024	Do-Minimum	9,701	10,381
	450 dwellings	10,030	10,798
	Peak Construction (200 dwellings per annum) - 450 dwellings already built out	10,135	10,902
2027	Do-Minimum	9,828	10,492
	1,100 dwellings	10,689	11,608
2031	Do-Minimum	9,890	10,571
	1,800 dwellings + Local Plan Development	12,495	13,527

7.2 Average Network Speed

Table 7.2 shows the average speed in mph for the 2021 models with mitigation measures in place.

Table 7.2 : Average Speed (mph) for Year 2021 with Mitigation Measures

Year	Scenario	AM (07-10)	PM (16-19)
2021	Do-Minimum	16.24	17.70
	1,800 dwellings	18.64	17.97

The comparison shows an increase in the average speed in the scenario with the proposed development and highways / junction improvements in place when compared with the 2021 base situation.

The 1,800 dwellings scenario includes mitigation measures at the B3081 Shaftesbury Road / B3092 New Road and at the B3081 Le Neubourg Way / Newbury junction, it includes provision of SCOOT UTC and the New Link between B3081 and B3092.

The results show that with the mitigation measures in place the road network will be able to accommodate trips from the Proposed Development without any detrimental effects on the network speed, and in fact improve conditions compared to the Do-Minimum.

Table 7.3 shows the average speed in mph for the 2021 models with no mitigation measures.

Table 7.3 : Average Speed (mph) for Year 2021 with no Mitigation Measures

Year	Scenario	AM (07-10)	PM (16-19)
2021	Do-Minimum	16.24	17.70
	1,800 dwellings (no mitigation)	5.63	6.27

The comparison shows a significant decrease in the average speed in the scenario with 1,800 dwellings and no mitigation measures. The results show that the road network will operate with much greater levels of congestion and delay with the development traffic and without the mitigation measures in place.

Table 7.4 shows the average speed in mph for the 2024 models with mitigation measures in place.

Table 7.4 : Average Speed (mph) for Year 2024 with Mitigation Measures

Year	Scenario	AM (07-10)	PM (16-19)
2024	Do-Minimum	15.43	17.64
	Peak Construction (200 dwellings per annum) - 450 dwellings already built out	18.23	17.85

The comparison shows an increase in the average speed in the Peak Construction scenario. This scenario includes mitigation measures at the B3081 Shaftesbury Road / B3092 New Road junction and at the B3081 Le Neubourg Way / Newbury junction and it also includes provision of SCOOT UTC.

The results show that with the mitigation measures in place the road network will be able to accommodate trips from the Proposed Development and the Construction Traffic without any detrimental effects on the overall network speed.

Table 7.5 shows the average speed in mph for the 2024 models with no mitigation measures.

Table 7.5 : Average Speed (mph) for Year 2024 with no Mitigation Measures

Year	Scenario	AM (07-10)	PM (16-19)
2024	Do-Minimum	15.43	17.64
	450 dwellings	13.19	14.92

The comparison shows a modest reduction in the overall average network speed in the scenario with 450 dwellings in the weekday peak hour periods in advance of the highway improvements. This falls short of the severe test set out in paragraph 32 of the NPPF.

Table 7.6 shows the average speed in mph for the 2027 models.

Table 7.6 : Average Speed (mph) for Year 2027

Year	Scenario	AM (07-10)	PM (16-19)
2027	Do-Minimum	15.46	17.16
	1,100 dwellings	17.66	17.26

The comparison shows minor increase in the average speed in the scenario with 1,100 dwellings.

This scenario includes mitigation measures at the B3081 Shaftesbury Road / B3092 New Road junction and at the B3081 Le Neubourg Way / Newbury junction and it also includes provision of SCOOT UTC.

The results show that with the mitigation measures in place the road network will be able to accommodate the additional trips from the Proposed Development without any detrimental effects on the network speed, and in fact result in slightly improved network performance.

Table 7.7 shows the average speed in mph for the 2031 models.

Table 7.7 : Average Speed (mph) for Year 2031

Year	Scenario	AM (07-10)	PM (16-19)
2031	Do-Minimum	15.29	16.53
	1,800 dwellings + Local Plan Development	15.43	16.43

The comparison shows a very similar average speed in the Do-Minimum and Option model.

The Option model includes mitigation measures at the B3081 Shaftesbury Road / B3092 New Road and at the B3081 Le Neubourg Way / Newbury junction, it includes provision of SCOOT UTC and the New Link Road between B3081 and B3092.

The results show that with the mitigation measures in place the road network will be able to accommodate trips from the Proposed Development and from the Local Plan Developments without any significant detrimental effects on the network speed.

8. SUMMARY AND CONCLUSIONS

This Report describes the development and performance of a number of scenario models, which have been developed to examine the impact of the proposed Gillingham Strategic Site Allocation development, each including different assumptions about the number of development trips, mitigation measures and background traffic growth.

The Report describes development of demand matrices, modelling of mitigation measures and performance of the test models.

The demand matrices for individual scenarios consists of the Background Traffic, Committed Developments, Development Proposal and Local Plan Developments. Additionally, the reduction to development generated traffic to reflect the implementation of the Travel Plan and reduction to the design year baseline traffic flows as a result of the comprehensive transport strategy delivered by the development has also been taken into account. Effects of peak spreading were included in all scenario models.

In accordance with Policy 21 of North Dorset District Council's adopted Local Plan Part 1, the proposed development will bring forward the following highway improvements:

- Highway improvements at the B3081 Shaftesbury Rd / B3092 New Rd junction
- Highway improvements at the B3081 Le Neubourg Way / Newbury junction
- Provision of SCOOT UTC on the B3081 / B3092 Corridor
- New Link between B3081 Shaftesbury Road and B3092 New Road

The modelling results for the 2021 forecast year show that the scenario with the full number of dwellings (1,800 dwellings) and with a complete set of mitigation measures in place will be able to accommodate development trips. Overall the network as a whole will operate better in 2021 with the proposed development and highways / junction improvements when compared with the 2021 base situation.

The modelling results for the 2024 forecast year show that with all mitigation measures in place, excluding the New Link Road between B3081 and B3092, the road network will be able to accommodate trips from the Proposed Development (450 dwellings) as well as the Construction Traffic without any reduction in the average network speed.

The 2024 modelling results also show that without mitigation measures in place, the 450 dwellings from the Development Proposal will cause some modest (i.e. not severe) reduction in the average network speed.

The modelling results for the 2027 forecast year show that with the mitigation measures in place, excluding the New Link Road between B3081 and B3092, the road network will be able to accommodate the trips from the Development Proposal (1,100 dwellings) without any noticeable reduction in the network speed.

The modelling results for the 2031 forecast year show that with a complete set of mitigation measures the road network will be able to accommodate all trips from the

Proposed Development (1,800 dwellings) and from the Local Plan Developments without any significant reduction in the network speed.

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For more information visit www.systra.co.uk

Birmingham
5th Floor, Lancaster House, Newhall St,
Birmingham, B3 1NQ
T: +44 (0)121 233 7680 F: +44 (0)121 233 7681

Dublin
2nd Floor, Riverview House, 21-23 City Quay
Dublin 2,Ireland
T: +353 (0)1 542 6000 F: +353 (0)1 542 6001

Edinburgh
Prospect House, 5 Thistle Street, Edinburgh EH2 1DF
United Kingdom
T: +44 (0)131 220 6966

Glasgow
Seventh Floor, 124 St Vincent Street
Glasgow G2 5HF United Kingdom
T: +44 (0)141 225 4400

Lille
86 Boulevard Carnot, 59000 Lille, France
T: +33 (0)3 74 07 00 F: +33 (0)1 53 17 36 01

London
Seventh Floor, 15 Old Bailey
London EC4M 7EF United Kingdom
T: +44 (0)20 7529 6500 F: +44 (0)20 3427 6274

Lyon
11, rue de la République, 69001 Lyon, France
T: +33 (0)4 72 10 29 29 F: +33 (0)4 72 10 29 28

Manchester
25th Floor, City Tower, Piccadilly Plaza
Manchester M1 4BT United Kingdom
T: +44 (0)161 236 0282 F: +44 (0)161 236 0095

Marseille
76, rue de la République, 13002 Marseille, France
T: +33 (0)4 91 37 35 15 F: +33 (0)4 91 91 90 14

Newcastle
PO Box 438, Newcastle upon Tyne, NE3 9BT
United Kingdom
T: +44 (0)191 2136157

Paris
72 rue Henry Farman, 75015 Paris, France
T: +33 (0)1 53 17 36 00 F: +33 (0)1 53 17 36 01

Woking
Dukes Court, Duke Street
Woking, Surrey GU21 5BH United Kingdom
T: +44 (0)1483 728051 F: +44 (0)1483 755207

Hong Kong
14th Floor West, Warwick House, TaiKoo Place,
979 King's Road, Island East, Hong Kong
T: +852 2529 7037 F: +852 2527 8490

Shenzhen
Room 905, Excellence Mansion, No.98, No.1 Fuhua Road,
Futian Central Zone, Shenzhen, PRC, Post Code：518048
T：+86 755 3336 1898 F：+86 755 3336 2060

Shenzhen - Beijing Branch Office
Room 1503, Block C, He Qiao Mansion, No. 8 Guanghua Road,
Chaoyang District, Beijing, PRC, Post Code：100026
T：+86 10 8557 0116 F：+86 10 8557 0126

Beijing Joint Venture
Room 1507, Main Building, No. 60, Nan Li Shi Road,
Xi Cheng District, Beijing, PRC, Post Code：100045
T：+86 10 8807 3718 F：+86 10 6804 3744

Mumbai
Antriksh, Unit no. 301, 3rd Floor, CTS Nos.
773, 773/1 to 7, Makwana Road, Marol, Andheri East ,
Mumbai 400069
T: +91 22 2647 3134
B 307, Great Eastern Summit Sector - 15, CBD Belapur Navi
Mumbai - 400 614
T: +91 22 2757 2745

New Delhi
5th Floor Guru Angad Bhawan, 71 Nehru Place, New Delhi
110019
T: +91 11 2641 3310

Noida
3/F, C-131, Sector 2, Noida-201301, U.P.
T: +91 120 432 6999

Singapore
25 Seah Street #04-01 Singapore 188381
T：+65 6227 3252 F：+65 6423 0178

Thailand
37th Floor, Unit F, Payatai Plaza Building,128/404-405 Payathai
Road, Rajthewee, Bangkok 10400, Thailand
T：+662 216 6652 F：+662 216 6651

Vietnam
5/F Perfect Building, Le Thi Hong Gam St, District 1,
Ho Chi Minh City, Vietnam
T：+84 8 3821 7183 F：+84 8 3821 6967

SYSTRA

APPENDIX W **Stage 1 Road Safety Audits- Off Site Highway Improvements**

GM
TRAFFIC CONSULTANTS

GILLINGHAM

STRATEGIC SITE ALLOCATION

NORTH DORSET

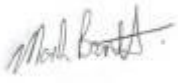
OFF-SITE HIGHWAY IMPROVEMENTS

STAGE 1 ROAD SAFETY AUDIT

JULY 2017

GM
Traffic Consultants Ltd
Registered in England No. 07100121.
Registered Office: 7 Bournemouth Rd, Chandlers Ford Eastleigh, Hants, SO53 3DA

GM
TRAFFIC CONSULTANTS

Revision Status	Prepared by: (Name)	Checked by: (Name)	Approved by: (Signature)	Date Approved:
Original	Mark Barrett	Ian Medd		4 July 2017
Designer's Response				
Authority's Response				
Audit Response				

Client:
I Transport

Engineer:
GM
Traffic Consultants Ltd
33 Riverside Gardens
Romsey
SO51 8HN

Date: 4 July 2017

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3.0 MATTERS ARISING FROM THIS STAGE 1 RSA 6
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APPENDIX C Local Highway Authority Response

1.0 INTRODUCTION

1.1 General

1.1.1 This report results from a Stage 1 Road Safety Audit (RSA) carried out on the off-site highway works associated with the Gillingham Strategic Site Allocation (SSA) in North Dorset.

1.1.2 The proposed sustainable mixed-use development will expand the built-up area of the town to the south and east and will comprise about 1,800 homes, a local centre, and primary school provision.

1.1.3 The off-site works are proposed at the following locations:

B3081 Shaftesbury Road / B3092 New Road Junction

The improvement scheme incorporates a two-lane approach on the B3092 New Road to enable left and right turning traffic to be controlled separately so that the left turn manoeuvre from New Road can run simultaneously with the right-turn from Shaftesbury Road (North) as part of the signal staging. The proposed scheme also includes a new pedestrian crossing on the southern arm of the junction. This new facility will also minimise the need for pedestrians to cross the B3092 New Road. The proposed scheme also includes minor localised widening on the B3081 Shaftesbury Road northern arm to assist with the swept paths of large vehicles at the junction. The proposed stop line on Rose Court will be located at the back edge of the highway to ensure pedestrians are not obstructed by waiting vehicles.

B3081 Le Neubourg Way / Newbury (High Street) Junction

The existing mini-roundabout at the B3081 Le Neubourg Way / Newbury (High Street) will be changed to a traffic signal controlled junction. The proposed signalised arrangement maintains an all movement access to Gillingham Baptist Church. The proposals also includes full pedestrian crossing facilities on the southern side of the junction, across the B3081 Shaftesbury Road and Newbury (High Street) in order to facilitate pedestrian movements along the main pedestrian desire line between the residential areas located to the south of the town, including the Gillingham Southern Extension, and the town centre and Gillingham Secondary School.

A30 / A350 / B3081 Ivy Cross Roundabout in Shaftesbury

The proposals comprises a minor widening scheme on the entry of the A350 Grosvenor Road, A350 / A30 Little Content Lane, and B3081 Bleke Street arms of the roundabouts, and some minor amendments to the central island.

1.1.4 The RSA was carried out at the request of i-Transport.

1.1.5 GM Traffic Consultants Ltd carried out the Audit between 27th June and 4th July 2017. The Auditors were:

Mark Barrett Highways England Cert. of Comp

Ian Medd MCIHT FSoRSA

1.1.6 The Audit Team are independent of the project design team and have also carried out a Stage 1 RSA relating to the access proposals relating to this project. They have had no other involvement with the design.

1.1.7 The report has been prepared in accordance with the Design Manual for Roads and Bridges (DMRB) Highways Directive (HD) 19/15.

1.1.8 Whilst reference is made to certain design standards, where safety may be compromised by a reduction in standard, this report is not intended to provide a design check. The Auditors have only reported on matters that might have an adverse effect on road safety in the context of the chosen design. No attempt has been made to comment on the justification of the scheme or the appropriateness of the design. Consequently, the Auditors accept no responsibility for the design or construction of the scheme.

1.1.9 The Audit consisted of a desktop study and a site visit, which was carried out on Wednesday 28th June 2017 between 10:30 and 13:00. Traffic flows were light to moderate and weather cloudy with intermittent showers.

1.1.10 The recommendations in this report are aimed at addressing the road safety problems; however there may be other alternative acceptable ways to overcome a specific problem, when other practical issues are considered. The recommendations contained herein do not absolve the Designer of his/her responsibilities.

1.1.11 The Auditors would be pleased to discuss the acceptability of alternative solutions to problems identified during the Audit, and would encourage the Designer to consult them on this matter.

1.1.12 The LHA response to the RSA should be formally recorded and reported to the Designer and the RSA Team so that a record of the Audit process is contained in the *As Built* design pack to be provided and retained by the LHA on final completion.

2.0 ITEMS CONSIDERED

2.1 The Road Safety Audit was undertaken on the scheme detailed in the following documentation.

Drawing No.	Rev	Title
MG/BT/ITB4057-117 TN	-	Road Safety Brief
ITB4057-GA-027	C	B3081 Shaftesbury Road / B3092 New Road Junction Proposed Improvement Scheme
ITB4057-GA-066	B	B3081 Le Neubourg Way / Newbury (High Street) Junction Proposed Improvement Scheme
ITB4057-GA-038	A	A30 / A350 / B3081 Ivy Cross Roundabout Proposed Improvement Scheme

2.2 The Audit Team has not been informed of any Departures from Standard.

3.0 MATTERS ARISING FROM THIS STAGE 1 RSA

3.1 ITB4057-GA-027 Rev C– B3081 Shaftesbury Road / B3092 New Road Junction Proposed Improvement Scheme

3.1.1 PROBLEM

LOCATION: B3081 Shaftesbury Road at Rose Court

SUMMARY: Risk head-on collisions

Drivers queuing on Shaftesbury Road (South) may attempt to overtake queuing traffic to enter the right turn pocket for Rose Court. This may increase the risk of collisions with opposing traffic or pedestrians on the crossing.

RECOMMENDATION

Provide measures to prevent overtaking.

3.1.2 PROBLEM

LOCATION: B3081 Shaftesbury Road at Rose Court

SUMMARY: Confusing tactile arrangement

The tactile paving arrangements for pedestrians crossing Rose Court from the east and for pedestrians crossing Shaftesbury Road from the north may be confusing to visually impaired pedestrians due to their proximity to each other, and could result in them stepping into the carriageway unintentionally in the path of passing traffic.

RECOMMENDATION

Ensure the two areas of tactile paving are separated.

.3.1.3 PROBLEM

LOCATION: B3081 Shaftesbury Road at Rose Court

SUMMARY: Risk of pedestrian/vehicle collisions

The hatched area east of the right turn pocket for Rose Court may be used by pedestrians to wait in the middle of the road. This will increase the risk of being struck by passing traffic.

RECOMMENDATION

Reduce the length of the hatching on the approach to the crossing point. See also 3.1.1

Should we actually say provide an island in 3.11, sorting this one as well?

3.2 ITB4057-GA-066 Rev B-B3081 Le Neubourg Way/Newbury (High Street) Junction – Proposed Improvement Scheme

3.2.1 PROBLEM

LOCATION: B3081 Shaftesbury Road at Railway Terrace

SUMMARY: No swept path analysis provided

No swept path analysis has been provided to demonstrate the proposed traffic island on Shaftesbury Road will not restrict manoeuvres to and from Railway Terrace. Restricted movements may lead to drivers having to carry out multiple manoeuvres to access/egress Railway Terrace increasing the risk of collisions with other road users.

RECOMMENDATION

Ensure movements to and from Railway Terrace are not compromised by the traffic island.

3.2.2 PROBLEM

LOCATION: Newbury Mews

SUMMARY: No tactile paving

The absence of tactile paving at the crossing point may result in pedestrians with impairments stumbling/tripping on full height kerbs.

RECOMMENDATION

Provide tactile paving.

3.2.3 PROBLEM

LOCATION: Newbury Mews

SUMMARY: No secondary traffic signal head

There is no secondary traffic signal for vehicles exiting Newbury Mews, and vehicles waiting at the stop line may have difficulty in seeing the primary signal head. This may result in vehicles entering the junction injudiciously and colliding with passing traffic.

RECOMMENDATION

Provide a secondary traffic signal head for Newbury Mews.

3.3 ITB4057-GA-038 Rev A – A30 / A350 / B3081 Ivy Cross Roundabout Proposed Improvement Scheme

3.3.1 No issues have been raised.

4.0 AUDITOR STATEMENT

4.1 We certify that this audit has been carried out in compliance with HD 19/15.

AUDIT TEAM LEADER
Mark Barrett
GM Traffic Consultants Ltd

Signed: ……

TEL: 07787 158 834

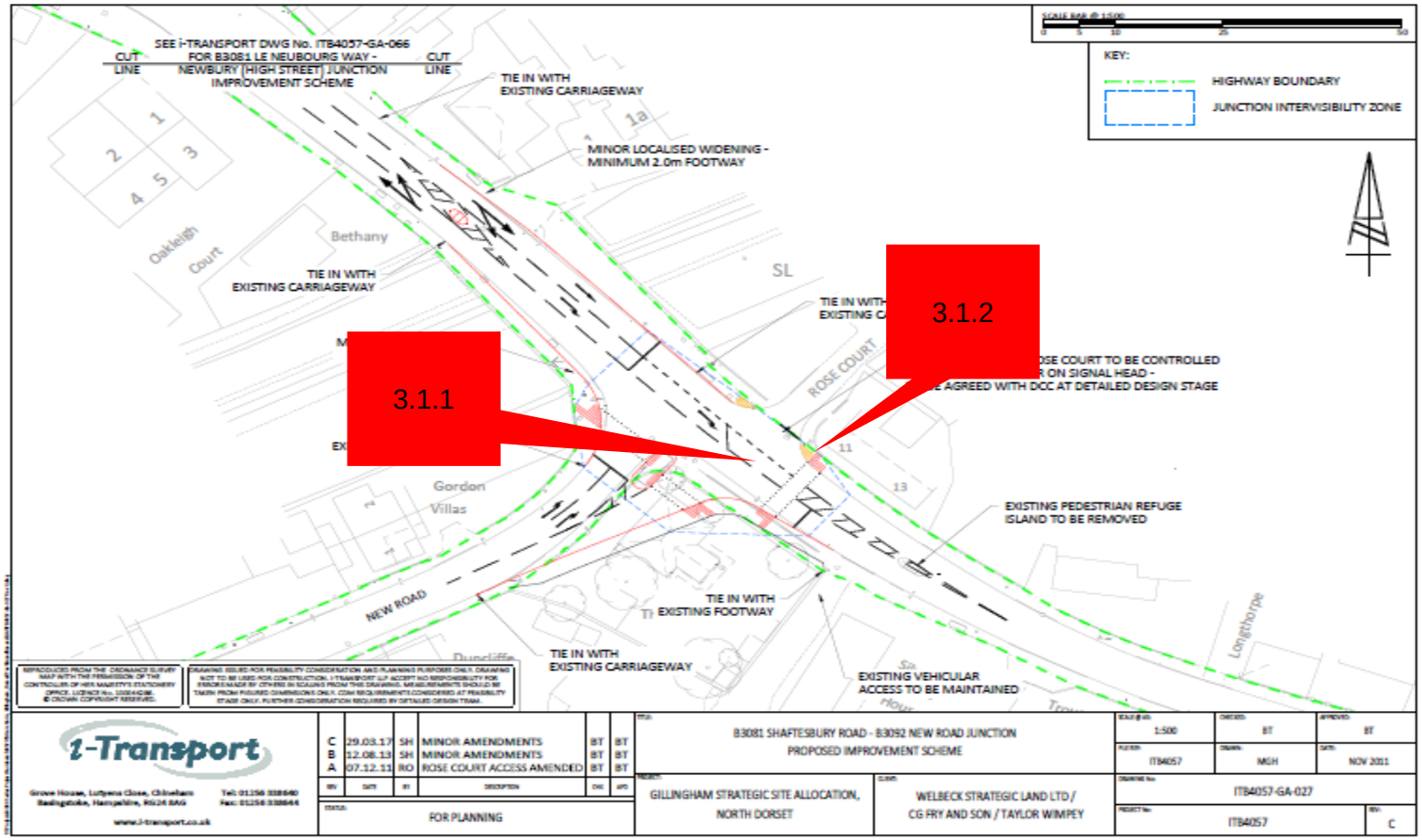
AUDIT TEAM MEMBER

Ian Medd

Signed: …

Date: 4 July 2017

APPENDIX A: LOCATION PLANS


SEE i-TRANSPORT DWG No. ITB4057-GA-066
FOR B3081 LE NEUBOURG WAY -
NEWBURY (HIGH STREET) JUNCTION
IMPROVEMENT SCHEME
CUT LINE
CUT LINE
TIE IN WITH
EXISTING CARRIAGEWAY
MINOR LOCALISED WIDENING -
MINIMUM 2.0m FOOTWAY
KEY:
HIGHWAY BOUNDARY
JUNCTION INTERVISIBILITY ZONE
Bethany
Oakleigh
Court
TIE IN WITH
EXISTING CARRIAGEWAY
SL
3.1.2
3.1.1
ROSE COURT
Gordon
Villas
EXISTING PEDESTRIAN REFUGE
ISLAND TO BE REMOVED
NEW ROAD
TIE IN WITH
EXISTING FOOTWAY
TIE IN WITH
EXISTING CARRIAGEWAY
EXISTING VEHICULAR
ACCESS TO BE MAINTAINED
Longthorpe
i-Transport
C 29.03.17 SH MINOR AMENDMENTS BT BT
B 12.08.13 SH MINOR AMENDMENTS BT BT
A 07.12.11 RO ROSE COURT ACCESS AMENDED BT BT
FOR PLANNING
B3081 SHAFTESBURY ROAD - B3092 NEW ROAD JUNCTION
PROPOSED IMPROVEMENT SCHEME
GILLINGHAM STRATEGIC SITE ALLOCATION,
NORTH DORSET
WELBECK STRATEGIC LAND LTD /
CG FRY AND SON / TAYLOR WIMPEY
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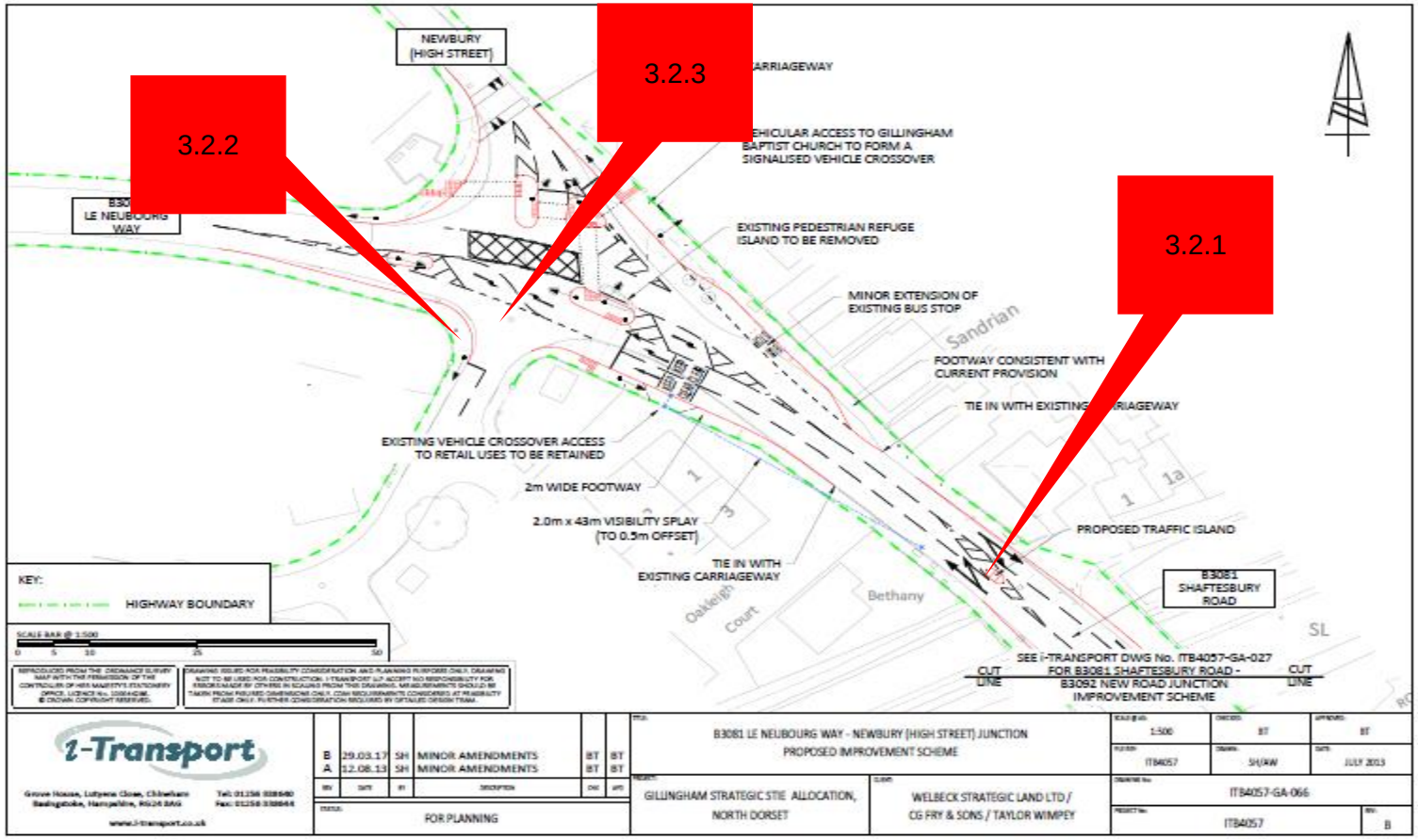
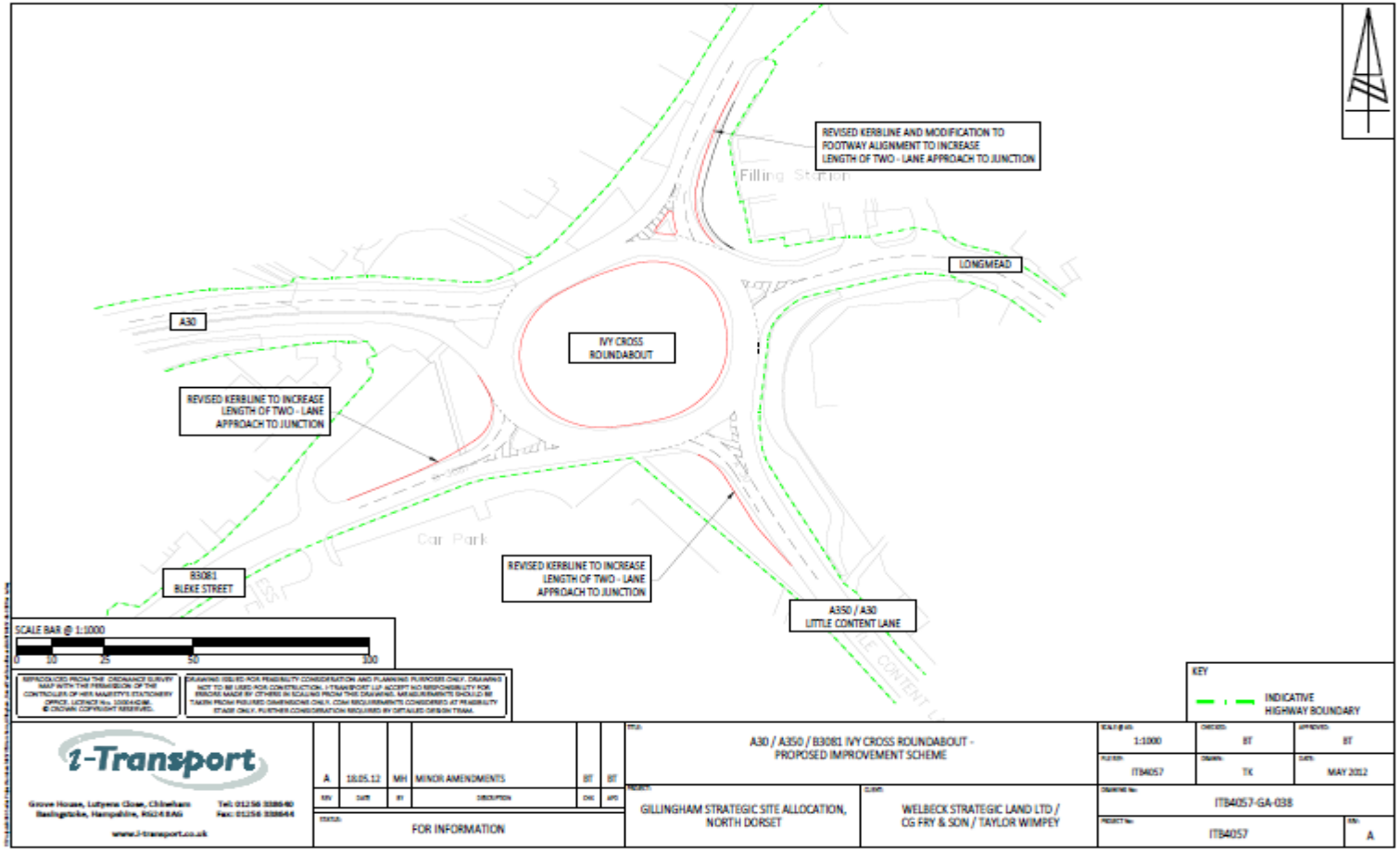
BT
BT
ITB4057
MGH
NOV 2011
ITB4057-GA-027
ITB4057
C


3.2.3
3.2.2
3.2.1
NEWBURY (HIGH STREET)
B3081 LE NEUBOURG WAY
ARRIAGEWAY
EHICULAR ACCESS TO GILLINGHAM BAPTIST CHURCH TO FORM A SIGNALISED VEHICLE CROSSOVER
EXISTING PEDESTRIAN REFUGE ISLAND TO BE REMOVED
MINOR EXTENSION OF EXISTING BUS STOP
FOOTWAY CONSISTENT WITH CURRENT PROVISION
TIE IN WITH EXISTING RIAGEWAY
EXISTING VEHICLE CROSSOVER ACCESS TO RETAIL USES TO BE RETAINED
2m WIDE FOOTWAY
2.0m x 43m VISIBILITY SPLAY (TO 0.5m OFFSET)
TIE IN WITH EXISTING CARRIAGEWAY
PROPOSED TRAFFIC ISLAND
B3081 SHAFTESBURY ROAD
Sandrian
Oakleigh Court
Bethany
SL
KEY:
HIGHWAY BOUNDARY
SEE i-TRANSPORT DWG No. ITB4057-GA-027 FOR B3081 SHAFTESBURY ROAD - B3092 NEW ROAD JUNCTION IMPROVEMENT SCHEME
CUT LINE
CUT LINE
i-Transport
B 29.03.17 SH MINOR AMENDMENTS BT BT
A 12.08.13 SH MINOR AMENDMENTS BT BT
B3081 LE NEUBOURG WAY - NEWBURY (HIGH STREET) JUNCTION
PROPOSED IMPROVEMENT SCHEME
GILLINGHAM STRATEGIC STIE ALLOCATION, NORTH DORSET
WELBECK STRATEGIC LAND LTD / CG FRY & SONS / TAYLOR WIMPEY
FOR PLANNING
ITB4057-GA-066
ITB4057
B
JULY 2013


REVISED KERBLINE AND MODIFICATION TO FOOTWAY ALIGNMENT TO INCREASE LENGTH OF TWO - LANE APPROACH TO JUNCTION
LONGMEAD
A30
IVY CROSS ROUNDABOUT
REVISED KERBLINE TO INCREASE LENGTH OF TWO - LANE APPROACH TO JUNCTION
B3081 BLEKE STREET
REVISED KERBLINE TO INCREASE LENGTH OF TWO - LANE APPROACH TO JUNCTION
A350 / A30 LITTLE CONTENT LANE
SCALE BAR @ 1:1000
0 10 25 50 100
KEY
INDICATIVE HIGHWAY BOUNDARY
i-Transport
A 16.05.12 MH MINOR AMENDMENTS BT BT
FOR INFORMATION
A30 / A350 / B3081 IVY CROSS ROUNDABOUT - PROPOSED IMPROVEMENT SCHEME
GILLINGHAM STRATEGIC SITE ALLOCATION, NORTH DORSET
WELBECK STRATEGIC LAND LTD / CG FRY & SON / TAYLOR WIMPEY
1:1000 BT BT
ITB4057 TK MAY 2012
ITB4057-GA-038
ITB4057 A

APPENDIX B: DESIGNERS RESPONSE

Auditors: Mark Barrett (Team Leader) and Ian Medd (Team Member)

Scheme: Gillingham Strategic Site Allocation, North Dorset - Off-Site Highway Improvements

Date Audit Completed: 4 July 2017

This response is to a Stage 1 Road Safety Audit to the design standard detailed within HD19/15 of Volume 5, Section 2, Part 2, of the Design Manual for Roads and Bridges, as detailed by the Highways Agency.

Problem no. in safety audit report	Problem accepted (yes/no)	Recommended measure accepted (yes/no)	Alternative measure (detail description)
3.1.1			
3.1.2			
3.2.1			
3.2.2			
3.2.3			

APPENDIX C: LOCAL HIGHWAY AUTHORITY RESPONSE

Principal Engineer's Statement:

Road Safety Audit for Gillingham Strategic Site Allocation, North Dorset

Off-Site Highway Improvements

I certify that I have considered the items that have arisen in the Stage 1 Road Safety Audit Report and I am content to accept all of its recommendations except for the ones listed above. I have stated my reasons for not accepting them and I seek the Chief Engineer's endorsement of my proposals.

..... Date.....

Principal Engineer

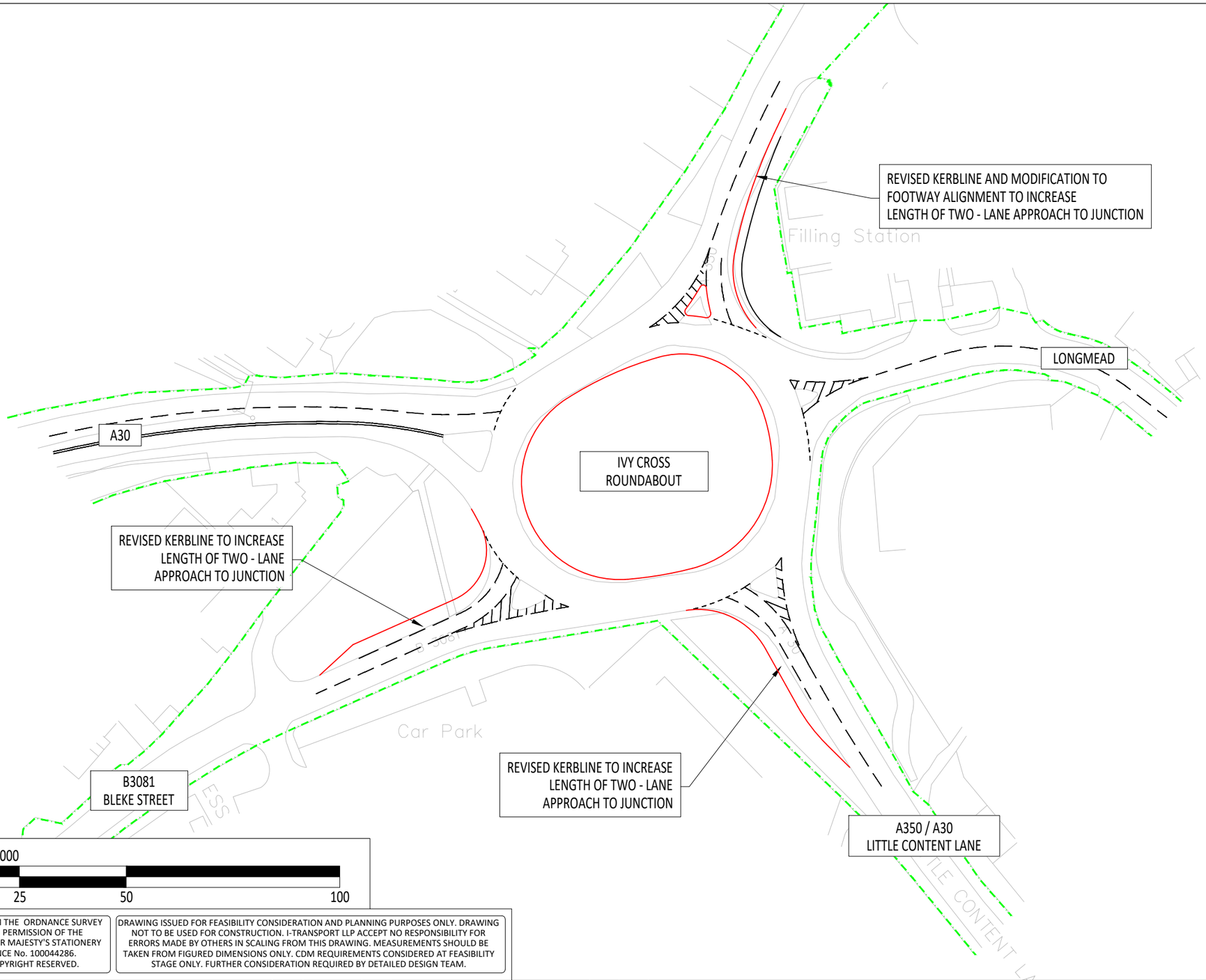
Chief Engineer's Decision:

I accept these proposals by the Principal Engineer.

..... Date.....

Chief Engineer

APPENDIX X **Ivy Cross Roundabout - Potential Improvement Scheme**



SCALE BAR @ 1:1000

0 10 25 50 100

REPRODUCED FROM THE ORDNANCE SURVEY MAP WITH THE PERMISSION OF THE CONTROLLER OF HER MAJESTY'S STATIONERY OFFICE. LICENCE No. 100044286. © CROWN COPYRIGHT RESERVED.

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KEY

INDICATIVE HIGHWAY BOUNDARY

i-Transport

Grove House, Lutyens Close, Chineham
Basingstoke, Hampshire, RG24 8AG
Tel: 01256 338640
Fax: 01256 338644

www.i-transport.co.uk

REV	DATE	BY	DESCRIPTION	CHK	APD
B	15.08.17	MC	MINOR AMENDMENTS	BT	BT
A	18.05.12	MH	MINOR AMENDMENTS	BT	BT

STATUS: FOR INFORMATION

TITLE: A30 / A350 / B3081 IVY CROSS ROUNDABOUT - PROPOSED IMPROVEMENT SCHEME

PROJECT: GILLINGHAM STRATEGIC SITE ALLOCATION, NORTH DORSET

CLIENT: WELBECK STRATEGIC LAND LTD / CG FRY & SON / TAYLOR WIMPEY

SCALE @ A3:	CHECKED:	APPROVED:
1:1000	BT	BT
FILE REF:	DRAWN:	DATE:
ITB4057	TK	MAY 2012

DRAWING No: ITB4057-GA-038

PROJECT No: ITB4057

REV: B

T:\Projects\4000 Series Project Numbers\4057\TB Ham Farm, Gillingham, Dorset\Tech\Acad\Issues\GA\ITB4057-GA-038 Rev B.dwg

APPENDIX Y **Junctions 9 Outputs – Ivy Cross Roundabout - Potential Improvement Scheme**

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.2.5947
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Filename: Ivy Cross + Mit - Upd Geom.j9
Path: T:\Projects\4000 Series Project Numbers\4057ITB Ham Farm, Gillingham, Dorset\Tech\Assessments\Arcady\Ivy Cross Roundabout\2017
Report generation date: 07/09/2017 12:04:29

»(Default Analysis Set) - 2016 Observed Baseline , AM
»(Default Analysis Set) - 2016 Observed Baseline , PM
»(Default Analysis Set) - 2021 Baseline , AM
»(Default Analysis Set) - 2021 Baseline, PM
»(Default Analysis Set) - 2031 Baseline (inc. Local Plan), AM
»(Default Analysis Set) - 2031 Baseline (inc. Local Plan), PM
»(Default Analysis Set) - 2021 with Development , AM
»(Default Analysis Set) - 2021 with Development , PM
»(Default Analysis Set) - 2031 (inc. Local Plan) with Development , AM
»(Default Analysis Set) - 2031 (inc. Local Plan) with Development , PM

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
A1 - 2016 Observed Baseline								
1 - A350 Grosvenor Road	1.0	5.96	0.50	A	1.4	7.88	0.58	A
2 - Longmead	0.7	8.12	0.41	A	0.6	7.13	0.38	A
3 - A350 Little Content Ln	1.3	5.12	0.56	A	2.3	8.33	0.70	A
4 - B3081 Bleke St	0.8	4.37	0.45	A	1.1	6.23	0.53	A
5 - A30 Long Cross	0.3	3.07	0.26	A	0.2	2.92	0.18	A
A1 - 2021 Baseline								
1 - A350 Grosvenor Road	1.2	6.57	0.54	A	1.8	9.76	0.65	A
2 - Longmead	0.8	9.26	0.46	A	0.7	8.13	0.42	A
3 - A350 Little Content Ln	1.7	6.12	0.63	A	3.1	10.78	0.76	B
4 - B3081 Bleke St	0.9	4.62	0.48	A	1.8	8.46	0.64	A
5 - A30 Long Cross	0.4	3.20	0.27	A	0.3	3.20	0.20	A
A1 - 2031 Baseline (inc. Local Plan)								
1 - A350 Grosvenor Road	1.5	7.94	0.61	A	2.7	13.70	0.73	B
2 - Longmead	1.1	11.41	0.53	B	0.9	9.58	0.47	A
3 - A350 Little Content Ln	2.5	8.13	0.71	A	4.8	15.81	0.83	C
4 - B3081 Bleke St	1.1	5.24	0.53	A	3.6	14.95	0.79	B
5 - A30 Long Cross	0.4	3.46	0.30	A	0.3	3.61	0.23	A
A1 - 2021 with Development								
1 - A350 Grosvenor Road	3.1	16.92	0.76	C	3.1	15.20	0.76	C
2 - Longmead	1.0	11.10	0.51	B	0.8	9.48	0.46	A
3 - A350 Little Content Ln	4.5	15.96	0.83	C	6.2	20.00	0.87	C
4 - B3081 Bleke St	5.0	19.77	0.84	C	3.8	15.98	0.80	C
5 - A30 Long Cross	0.5	4.20	0.33	A	0.3	3.63	0.23	A
A1 - 2031 (inc. Local Plan) with Development								
1 - A350 Grosvenor Road	2.2	10.72	0.69	B	5.3	25.61	0.85	D
2 - Longmead	1.5	16.18	0.61	C	1.0	11.38	0.52	B
3 - A350 Little Content Ln	3.4	10.47	0.77	B	12.8	39.46	0.95	E
4 - B3081 Bleke St	2.2	7.89	0.69	A	13.7	50.11	0.96	F
5 - A30 Long Cross	0.5	4.11	0.33	A	0.3	4.11	0.26	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	A30 A350 Ivy Cross Roundabout - Proposed
Location	Shaftesbury
Site number	
Date	21/05/2012
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	ACER-F0FF5A250F\Andrew Lillington
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	-Hour	perHour

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2016 Observed Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D2	2016 Observed Baseline	PM	ONE HOUR	17:00	18:30	15	✓
D3	2021 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D4	2021 Baseline	PM	ONE HOUR	17:00	18:30	15	✓
D5	2031 Baseline (inc. Local Plan)	AM	ONE HOUR	07:45	09:15	15	✓
D6	2031 Baseline (inc. Local Plan)	PM	ONE HOUR	17:00	18:30	15	✓
D7	2021 with Development	AM	ONE HOUR	07:45	09:15	15	✓
D8	2021 with Development	PM	ONE HOUR	17:00	18:30	15	✓
D9	2031 (inc. Local Plan) with Development	AM	ONE HOUR	07:45	09:15	15	✓
D10	2031 (inc. Local Plan) with Development	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	(Default Analysis Set)	✓	100.000	100.000

(Default Analysis Set) - 2016 Observed Baseline , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - A350 Little Content Ln - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - B3081 Bleke St - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A30 A350 Ivy Cross Rbt	Standard Roundabout	1, 2, 3, 4, 5	5.16	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A350 Grosvenor Road	
2	Longmead	
3	A350 Little Content Ln	
4	B3081 Bleke St	
5	A30 Long Cross	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A350 Grosvenor Road	3.25	7.30	21.0	20.0	60.0	24.0	
2 - Longmead	3.65	5.50	7.0	20.0	60.0	30.0	
3 - A350 Little Content Ln	3.65	7.60	38.5	18.0	60.0	31.0	
4 - B3081 Bleke St	3.65	8.00	41.9	12.5	60.0	26.5	
5 - A30 Long Cross	6.50	8.50	20.0	35.0	60.0	25.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A350 Grosvenor Road	0.576	1780
2 - Longmead	0.507	1410
3 - A350 Little Content Ln	0.605	1989
4 - B3081 Bleke St	0.615	2059
5 - A30 Long Cross	0.709	2522

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	2016 Observed Baseline	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A350 Grosvenor Road		ONE HOUR	✓	546	100.000
2 - Longmead		ONE HOUR	✓	279	100.000
3 - A350 Little Content Ln		ONE HOUR	✓	816	100.000
4 - B3081 Bleke St		ONE HOUR	✓	619	100.000
5 - A30 Long Cross		ONE HOUR	✓	368	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	4	25	309	136	72
	2 - Longmead	74	0	89	72	44
	3 - A350 Little Content Ln	371	25	2	311	107
	4 - B3081 Bleke St	158	109	339	2	11
	5 - A30 Long Cross	116	71	157	24	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	0	12	8	3	15
	2 - Longmead	11	0	1	6	5
	3 - A350 Little Content Ln	5	8	0	5	6
	4 - B3081 Bleke St	1	0	5	0	9
	5 - A30 Long Cross	4	7	3	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A350 Grosvenor Road	0.50	5.96	1.0	2.2	A	501	752
2 - Longmead	0.41	8.12	0.7	3.2	A	256	384
3 - A350 Little Content Ln	0.56	5.12	1.3	1.5	A	749	1123
4 - B3081 Bleke St	0.45	4.37	0.8	2.5	A	568	852
5 - A30 Long Cross	0.26	3.07	0.3	1.4	A	338	507

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	411	103	547	1347	0.305	409	542	0.0	0.4	3.832	A
2 - Longmead	210	53	784	937	0.224	209	173	0.0	0.3	4.929	A
3 - A350 Little Content Ln	614	154	321	1694	0.363	612	672	0.0	0.6	3.322	A
4 - B3081 Bleke St	466	117	524	1662	0.280	464	409	0.0	0.4	3.001	A
5 - A30 Long Cross	277	69	813	1848	0.150	276	175	0.0	0.2	2.289	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	491	123	655	1287	0.381	490	649	0.4	0.6	4.512	A
2 - Longmead	251	63	938	858	0.292	250	207	0.3	0.4	5.914	A
3 - A350 Little Content Ln	734	183	384	1655	0.443	733	805	0.6	0.8	3.901	A
4 - B3081 Bleke St	556	139	628	1597	0.349	556	489	0.4	0.5	3.457	A
5 - A30 Long Cross	331	83	973	1734	0.191	331	210	0.2	0.2	2.565	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)	LOS
1 - A350 Grosvenor Road	601	150	801	1206	0.499	600	794	0.6	1.0	5.925	A
2 - Longmead	307	77	1148	752	0.409	306	253	0.4	0.7	8.058	A
3 - A350 Little Content Ln	898	225	470	1602	0.561	897	985	0.8	1.3	5.091	A
4 - B3081 Bleke St	682	170	768	1507	0.452	680	599	0.5	0.8	4.347	A
5 - A30 Long Cross	405	101	1191	1578	0.257	405	257	0.2	0.3	3.068	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)	LOS
1 - A350 Grosvenor Road	601	150	803	1205	0.499	601	796	1.0	1.0	5.960	A
2 - Longmead	307	77	1151	751	0.409	307	253	0.7	0.7	8.116	A
3 - A350 Little Content Ln	898	225	471	1601	0.561	898	986	1.3	1.3	5.123	A
4 - B3081 Bleke St	682	170	770	1506	0.453	682	600	0.8	0.8	4.365	A
5 - A30 Long Cross	405	101	1193	1577	0.257	405	258	0.3	0.3	3.072	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)	LOS
1 - A350 Grosvenor Road	491	123	657	1286	0.382	492	652	1.0	0.6	4.543	A
2 - Longmead	251	63	942	857	0.293	252	207	0.7	0.4	5.964	A
3 - A350 Little Content Ln	734	183	386	1653	0.444	735	807	1.3	0.8	3.931	A
4 - B3081 Bleke St	556	139	630	1595	0.349	558	491	0.8	0.5	3.476	A
5 - A30 Long Cross	331	83	977	1731	0.191	331	211	0.3	0.2	2.574	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)	LOS
1 - A350 Grosvenor Road	411	103	549	1346	0.305	412	545	0.6	0.4	3.857	A
2 - Longmead	210	53	788	935	0.225	211	173	0.4	0.3	4.974	A
3 - A350 Little Content Ln	614	154	323	1692	0.363	615	676	0.8	0.6	3.347	A
4 - B3081 Bleke St	466	117	527	1661	0.281	467	411	0.5	0.4	3.016	A
5 - A30 Long Cross	277	69	817	1845	0.150	277	176	0.2	0.2	2.296	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.44	0.00	0.00	0.44	0.44			N/A	N/A
2 - Longmead	0.29	0.00	0.00	0.29	0.29			N/A	N/A
3 - A350 Little Content Ln	0.57	0.55	1.00	1.40	1.45			N/A	N/A
4 - B3081 Bleke St	0.39	0.00	0.00	0.39	0.39			N/A	N/A
5 - A30 Long Cross	0.18	0.00	0.00	0.18	0.18			N/A	N/A

08:00 - 08:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.61	0.09	0.81	1.36	1.43			N/A	N/A
2 - Longmead	0.41	0.00	0.00	0.41	0.41			N/A	N/A
3 - A350 Little Content Ln	0.79	0.08	0.82	1.42	1.42			N/A	N/A
4 - B3081 Bleke St	0.53	0.06	0.67	1.33	1.42			N/A	N/A
5 - A30 Long Cross	0.24	0.00	0.00	0.24	0.24			N/A	N/A

08:15 - 08:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.98	0.03	0.26	0.98	0.98			N/A	N/A
2 - Longmead	0.68	0.03	0.26	0.68	0.68			N/A	N/A
3 - A350 Little Content Ln	1.26	0.03	0.26	1.26	1.26			N/A	N/A
4 - B3081 Bleke St	0.82	0.03	0.25	0.82	0.82			N/A	N/A
5 - A30 Long Cross	0.34	0.03	0.25	0.45	0.48			N/A	N/A

08:30 - 08:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.99	0.03	0.27	0.99	2.19			N/A	N/A
2 - Longmead	0.69	0.03	0.29	1.35	3.17			N/A	N/A
3 - A350 Little Content Ln	1.27	0.03	0.27	1.27	1.27			N/A	N/A
4 - B3081 Bleke St	0.82	0.03	0.28	0.82	2.49			N/A	N/A
5 - A30 Long Cross	0.34	0.03	0.33	1.13	1.36			N/A	N/A

08:45 - 09:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.62	0.16	0.91	1.38	1.44			N/A	N/A
2 - Longmead	0.42	0.00	0.00	0.42	0.42			N/A	N/A
3 - A350 Little Content Ln	0.80	0.33	0.96	1.40	1.45			N/A	N/A
4 - B3081 Bleke St	0.54	0.54	1.00	1.40	1.45			N/A	N/A
5 - A30 Long Cross	0.24	0.00	0.00	0.24	0.24			N/A	N/A

09:00 - 09:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.44	0.03	0.35	1.15	1.32			N/A	N/A
2 - Longmead	0.29	0.00	0.00	0.29	0.29			N/A	N/A
3 - A350 Little Content Ln	0.57	0.06	0.66	1.33	1.42			N/A	N/A
4 - B3081 Bleke St	0.39	0.00	0.00	0.39	0.39			N/A	N/A
5 - A30 Long Cross	0.18	0.00	0.00	0.18	0.18			N/A	N/A

(Default Analysis Set) - 2016 Observed Baseline , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - A350 Little Content Ln - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - B3081 Bleke St - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Profile Type	D2 - 2016 Observed Baseline , PM	'O-D data varies over time' option has been selected but all arms use ONE HOUR profile type, which shapes the flows over time automatically. Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A30 A350 Ivy Cross Rbt	Standard Roundabout	1, 2, 3, 4, 5	7.11	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2016 Observed Baseline	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A350 Grosvenor Road		ONE HOUR	✓	580	100.000
2 - Longmead		ONE HOUR	✓	276	100.000
3 - A350 Little Content Ln		ONE HOUR	✓	902	100.000
4 - B3081 Bleke St		ONE HOUR	✓	597	100.000
5 - A30 Long Cross		ONE HOUR	✓	252	100.000

Origin-Destination Data

Demand (Veh/hr)

17:00 - 17:15

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	4	12	339	132	93
	2 - Longmead	34	0	70	113	59
	3 - A350 Little Content Ln	343	42	3	388	126
	4 - B3081 Bleke St	128	120	327	0	22
	5 - A30 Long Cross	68	25	154	5	0

17:15 - 17:30

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	100	100	100	100	100
	2 - Longmead	100	100	100	100	100
	3 - A350 Little Content Ln	100	100	100	100	100
	4 - B3081 Bleke St	100	100	100	100	100
	5 - A30 Long Cross	100	100	100	100	100

17:30 - 17:45

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	100	100	100	100	100
	2 - Longmead	100	100	100	100	100
	3 - A350 Little Content Ln	100	100	100	100	100
	4 - B3081 Bleke St	100	100	100	100	100
	5 - A30 Long Cross	100	100	100	100	100

17:45 - 18:00

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	100	100	100	100	100
	2 - Longmead	100	100	100	100	100
	3 - A350 Little Content Ln	100	100	100	100	100
	4 - B3081 Bleke St	100	100	100	100	100
	5 - A30 Long Cross	100	100	100	100	100

18:00 - 18:15

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	4	12	339	132	93
	2 - Longmead	34	0	70	113	59
	3 - A350 Little Content Ln	343	42	3	388	126
	4 - B3081 Bleke St	128	120	327	0	22
	5 - A30 Long Cross	68	25	154	5	0

18:15 - 18:30

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	4	12	339	132	93
	2 - Longmead	34	0	70	113	59
	3 - A350 Little Content Ln	343	42	3	388	126
	4 - B3081 Bleke St	128	120	327	0	22
	5 - A30 Long Cross	68	25	154	5	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	0	17	1	1	8
	2 - Longmead	6	0	1	1	2
	3 - A350 Little Content Ln	3	2	0	3	2
	4 - B3081 Bleke St	2	2	2	0	0
	5 - A30 Long Cross	4	4	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A350 Grosvenor Road	0.58	7.88	1.4	2.3	A	532	798
2 - Longmead	0.38	7.13	0.6	2.8	A	253	380
3 - A350 Little Content Ln	0.70	8.33	2.3	4.3	A	828	1242
4 - B3081 Bleke St	0.53	6.23	1.1	2.4	A	548	822
5 - A30 Long Cross	0.18	2.92	0.2	0.5	A	231	347

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	437	109	507	1447	0.302	435	433	0.0	0.4	3.549	A
2 - Longmead	208	52	793	983	0.211	207	149	0.0	0.3	4.634	A
3 - A350 Little Content Ln	679	170	330	1735	0.391	677	670	0.0	0.6	3.392	A
4 - B3081 Bleke St	449	112	528	1691	0.266	448	478	0.0	0.4	2.894	A
5 - A30 Long Cross	190	47	751	1947	0.097	189	225	0.0	0.1	2.048	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	521	130	875	1205	0.433	520	468	0.4	0.8	5.244	A
2 - Longmead	248	62	928	915	0.271	248	467	0.3	0.4	5.393	A
3 - A350 Little Content Ln	811	203	707	1523	0.533	809	469	0.6	1.1	5.032	A
4 - B3081 Bleke St	537	134	1048	1384	0.388	536	468	0.4	0.6	4.238	A
5 - A30 Long Cross	227	57	1116	1690	0.134	226	467	0.1	0.2	2.458	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	639	160	1071	1097	0.582	636	572	0.8	1.4	7.773	A
2 - Longmead	304	76	1135	810	0.375	303	572	0.4	0.6	7.080	A
3 - A350 Little Content Ln	993	248	866	1427	0.696	989	572	1.1	2.2	8.141	A
4 - B3081 Bleke St	657	164	1283	1238	0.531	655	572	0.6	1.1	6.156	A
5 - A30 Long Cross	277	69	1366	1513	0.183	277	572	0.2	0.2	2.912	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	639	160	1074	1095	0.583	639	574	1.4	1.4	7.884	A
2 - Longmead	304	76	1139	809	0.376	304	574	0.6	0.6	7.131	A
3 - A350 Little Content Ln	993	248	869	1425	0.697	993	574	2.2	2.3	8.325	A
4 - B3081 Bleke St	657	164	1288	1235	0.532	657	574	1.1	1.1	6.230	A
5 - A30 Long Cross	277	69	1371	1510	0.184	277	574	0.2	0.2	2.920	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	521	130	613	1387	0.376	525	521	1.4	0.6	4.190	A
2 - Longmead	248	62	955	901	0.275	249	183	0.6	0.4	5.530	A
3 - A350 Little Content Ln	811	203	400	1693	0.479	816	804	2.3	0.9	4.131	A
4 - B3081 Bleke St	537	134	641	1621	0.331	539	575	1.1	0.5	3.338	A
5 - A30 Long Cross	227	57	907	1835	0.123	227	273	0.2	0.1	2.238	A

18:15 - 18:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	437	109	509	1446	0.302	437	435	0.6	0.4	3.570	A
2 - Longmead	208	52	797	981	0.212	208	150	0.4	0.3	4.662	A
3 - A350 Little Content Ln	679	170	332	1734	0.392	680	673	0.9	0.6	3.422	A
4 - B3081 Bleke St	449	112	531	1689	0.266	450	481	0.5	0.4	2.908	A
5 - A30 Long Cross	190	47	755	1944	0.098	190	226	0.1	0.1	2.051	A

Queue Variation Results for each time segment

17:00 - 17:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.43	0.00	0.00	0.43	0.43			N/A	N/A
2 - Longmead	0.27	0.00	0.00	0.27	0.27			N/A	N/A
3 - A350 Little Content Ln	0.64	0.55	1.00	1.40	1.45			N/A	N/A
4 - B3081 Bleke St	0.36	0.00	0.00	0.36	0.36			N/A	N/A
5 - A30 Long Cross	0.11	0.00	0.00	0.11	0.11			N/A	N/A

17:15 - 17:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.75	0.08	0.81	1.11	1.11			N/A	N/A
2 - Longmead	0.37	0.00	0.00	0.37	0.37			N/A	N/A
3 - A350 Little Content Ln	1.13	0.06	0.70	2.44	3.47			N/A	N/A
4 - B3081 Bleke St	0.63	0.08	0.76	1.36	1.43			N/A	N/A
5 - A30 Long Cross	0.15	0.00	0.00	0.15	0.15			N/A	N/A

17:30 - 17:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	1.37	0.03	0.26	1.37	1.37			N/A	N/A
2 - Longmead	0.59	0.03	0.25	0.59	0.59			N/A	N/A
3 - A350 Little Content Ln	2.23	0.03	0.27	2.23	4.33			N/A	N/A
4 - B3081 Bleke St	1.12	0.03	0.26	1.12	1.12			N/A	N/A
5 - A30 Long Cross	0.22	0.03	0.25	0.46	0.48			N/A	N/A

17:45 - 18:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	1.38	0.03	0.27	1.38	2.31			N/A	N/A
2 - Longmead	0.60	0.03	0.30	1.42	2.82			N/A	N/A
3 - A350 Little Content Ln	2.26	0.03	0.27	2.26	2.26			N/A	N/A
4 - B3081 Bleke St	1.13	0.03	0.27	1.13	2.43			N/A	N/A
5 - A30 Long Cross	0.22	0.03	0.25	0.45	0.48			N/A	N/A

18:00 - 18:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.61	0.06	0.62	1.35	1.44			N/A	N/A
2 - Longmead	0.38	0.00	0.00	0.38	0.38			N/A	N/A
3 - A350 Little Content Ln	0.93	0.06	0.67	1.80	2.54			N/A	N/A
4 - B3081 Bleke St	0.50	0.05	0.46	1.28	1.39			N/A	N/A
5 - A30 Long Cross	0.14	0.00	0.00	0.14	0.14			N/A	N/A

18:15 - 18:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.43	0.04	0.37	1.22	1.37			N/A	N/A
2 - Longmead	0.27	0.00	0.00	0.27	0.27			N/A	N/A
3 - A350 Little Content Ln	0.65	0.04	0.40	1.34	1.98			N/A	N/A
4 - B3081 Bleke St	0.36	0.03	0.30	0.87	1.19			N/A	N/A
5 - A30 Long Cross	0.11	0.00	0.00	0.11	0.11			N/A	N/A

(Default Analysis Set) - 2021 Baseline , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - A350 Little Content Ln - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - B3081 Bleke St - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A30 A350 Ivy Cross Rbt	Standard Roundabout	1, 2, 3, 4, 5	5.83	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2021 Baseline	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A350 Grosvenor Road		ONE HOUR	✓	581	100.000
2 - Longmead		ONE HOUR	✓	302	100.000
3 - A350 Little Content Ln		ONE HOUR	✓	894	100.000
4 - B3081 Bleke St		ONE HOUR	✓	650	100.000
5 - A30 Long Cross		ONE HOUR	✓	380	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	4	26	319	158	74
	2 - Longmead	76	0	92	89	45
	3 - A350 Little Content Ln	383	26	2	372	111
	4 - B3081 Bleke St	165	115	356	2	12
	5 - A30 Long Cross	120	73	162	25	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	0	12	8	3	15
	2 - Longmead	11	0	1	5	5
	3 - A350 Little Content Ln	5	8	0	5	6
	4 - B3081 Bleke St	0	0	5	0	8
	5 - A30 Long Cross	4	7	3	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A350 Grosvenor Road	0.54	6.57	1.2	1.9	A	533	800
2 - Longmead	0.46	9.26	0.8	3.6	A	277	416
3 - A350 Little Content Ln	0.63	6.12	1.7	2.3	A	820	1231
4 - B3081 Bleke St	0.48	4.62	0.9	2.1	A	596	895
5 - A30 Long Cross	0.27	3.20	0.4	1.4	A	349	523

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	437	109	571	1336	0.328	435	561	0.0	0.5	3.992	A
2 - Longmead	227	57	827	918	0.248	226	180	0.0	0.3	5.194	A
3 - A350 Little Content Ln	673	168	354	1674	0.402	670	698	0.0	0.7	3.579	A
4 - B3081 Bleke St	489	122	540	1656	0.295	488	484	0.0	0.4	3.076	A
5 - A30 Long Cross	286	72	847	1825	0.157	285	181	0.0	0.2	2.337	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	522	131	683	1273	0.410	521	672	0.5	0.7	4.785	A
2 - Longmead	271	68	989	835	0.325	271	216	0.3	0.5	6.375	A
3 - A350 Little Content Ln	804	201	424	1631	0.493	803	836	0.7	1.0	4.340	A
4 - B3081 Bleke St	584	146	647	1588	0.368	584	580	0.4	0.6	3.582	A
5 - A30 Long Cross	342	85	1014	1706	0.200	341	217	0.2	0.2	2.638	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)	LOS
1 - A350 Grosvenor Road	640	160	837	1188	0.539	638	822	0.7	1.1	6.522	A
2 - Longmead	333	83	1211	722	0.460	331	264	0.5	0.8	9.167	A
3 - A350 Little Content Ln	984	246	519	1573	0.626	982	1023	1.0	1.6	6.060	A
4 - B3081 Bleke St	716	179	791	1496	0.478	714	709	0.6	0.9	4.598	A
5 - A30 Long Cross	418	105	1240	1545	0.271	418	266	0.2	0.4	3.192	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)	LOS
1 - A350 Grosvenor Road	640	160	838	1187	0.539	640	824	1.1	1.2	6.575	A
2 - Longmead	333	83	1213	721	0.461	332	264	0.8	0.8	9.265	A
3 - A350 Little Content Ln	984	246	521	1572	0.626	984	1025	1.6	1.7	6.124	A
4 - B3081 Bleke St	716	179	794	1495	0.479	716	711	0.9	0.9	4.621	A
5 - A30 Long Cross	418	105	1243	1543	0.271	418	266	0.4	0.4	3.200	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)	LOS
1 - A350 Grosvenor Road	522	131	685	1272	0.411	524	674	1.2	0.7	4.825	A
2 - Longmead	271	68	993	833	0.326	273	216	0.8	0.5	6.444	A
3 - A350 Little Content Ln	804	201	427	1629	0.493	806	839	1.7	1.0	4.388	A
4 - B3081 Bleke St	584	146	651	1586	0.368	586	583	0.9	0.6	3.605	A
5 - A30 Long Cross	342	85	1018	1703	0.201	342	218	0.4	0.3	2.647	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)	LOS
1 - A350 Grosvenor Road	437	109	574	1334	0.328	438	564	0.7	0.5	4.023	A
2 - Longmead	227	57	831	916	0.248	228	181	0.5	0.3	5.241	A
3 - A350 Little Content Ln	673	168	357	1672	0.402	674	702	1.0	0.7	3.613	A
4 - B3081 Bleke St	489	122	544	1654	0.296	490	487	0.6	0.4	3.095	A
5 - A30 Long Cross	286	72	851	1821	0.157	286	183	0.3	0.2	2.346	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.48	0.00	0.00	0.48	0.48			N/A	N/A
2 - Longmead	0.33	0.00	0.00	0.33	0.33			N/A	N/A
3 - A350 Little Content Ln	0.67	0.55	1.00	1.40	1.45			N/A	N/A
4 - B3081 Bleke St	0.42	0.00	0.00	0.42	0.42			N/A	N/A
5 - A30 Long Cross	0.19	0.00	0.00	0.19	0.19			N/A	N/A

08:00 - 08:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.69	0.09	0.82	1.38	1.45			N/A	N/A
2 - Longmead	0.48	0.00	0.00	0.48	0.48			N/A	N/A
3 - A350 Little Content Ln	0.96	0.07	0.81	1.74	2.31			N/A	N/A
4 - B3081 Bleke St	0.58	0.08	0.76	1.35	1.43			N/A	N/A
5 - A30 Long Cross	0.25	0.00	0.00	0.25	0.25			N/A	N/A

08:15 - 08:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	1.15	0.03	0.26	1.15	1.15			N/A	N/A
2 - Longmead	0.84	0.03	0.26	0.84	0.84			N/A	N/A
3 - A350 Little Content Ln	1.64	0.03	0.26	1.64	1.64			N/A	N/A
4 - B3081 Bleke St	0.91	0.03	0.26	0.91	0.91			N/A	N/A
5 - A30 Long Cross	0.37	0.03	0.25	0.45	0.48			N/A	N/A

08:30 - 08:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	1.16	0.03	0.27	1.16	1.88			N/A	N/A
2 - Longmead	0.85	0.03	0.29	1.15	3.56			N/A	N/A
3 - A350 Little Content Ln	1.66	0.03	0.27	1.66	1.66			N/A	N/A
4 - B3081 Bleke St	0.91	0.03	0.27	0.91	2.10			N/A	N/A
5 - A30 Long Cross	0.37	0.03	0.33	1.21	1.44			N/A	N/A

08:45 - 09:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.70	0.16	0.91	1.38	1.44			N/A	N/A
2 - Longmead	0.49	0.04	0.44	1.27	1.38			N/A	N/A
3 - A350 Little Content Ln	0.98	0.16	0.99	1.35	1.71			N/A	N/A
4 - B3081 Bleke St	0.59	0.55	1.00	1.40	1.45			N/A	N/A
5 - A30 Long Cross	0.25	0.00	0.00	0.25	0.25			N/A	N/A

09:00 - 09:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.49	0.04	0.44	1.27	1.38			N/A	N/A
2 - Longmead	0.33	0.03	0.26	0.47	0.50			N/A	N/A
3 - A350 Little Content Ln	0.68	0.06	0.65	1.18	1.18			N/A	N/A
4 - B3081 Bleke St	0.42	0.00	0.00	0.42	0.42			N/A	N/A
5 - A30 Long Cross	0.19	0.00	0.00	0.19	0.19			N/A	N/A

(Default Analysis Set) - 2021 Baseline, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - A350 Little Content Ln - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - B3081 Bleke St - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Profile Type	D4 - 2021 Baseline, PM	'O-D data varies over time' option has been selected but all arms use ONE HOUR profile type, which shapes the flows over time automatically. Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A30 A350 Ivy Cross Rbt	Standard Roundabout	1, 2, 3, 4, 5	9.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2021 Baseline	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A350 Grosvenor Road		ONE HOUR	✓	611	100.000
2 - Longmead		ONE HOUR	✓	292	100.000
3 - A350 Little Content Ln		ONE HOUR	✓	962	100.000
4 - B3081 Bleke St		ONE HOUR	✓	695	100.000
5 - A30 Long Cross		ONE HOUR	✓	263	100.000

Origin-Destination Data

Demand (Veh/hr)

17:00 - 17:15

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	4	12	349	150	96
	2 - Longmead	35	0	72	124	61
	3 - A350 Little Content Ln	353	43	3	433	130
	4 - B3081 Bleke St	152	138	381	0	24
	5 - A30 Long Cross	70	26	159	8	0

17:15 - 17:30

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	100	100	100	100	100
	2 - Longmead	100	100	100	100	100
	3 - A350 Little Content Ln	100	100	100	100	100
	4 - B3081 Bleke St	100	100	100	100	100
	5 - A30 Long Cross	100	100	100	100	100

17:30 - 17:45

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	100	100	100	100	100
	2 - Longmead	100	100	100	100	100
	3 - A350 Little Content Ln	100	100	100	100	100
	4 - B3081 Bleke St	100	100	100	100	100
	5 - A30 Long Cross	100	100	100	100	100

17:45 - 18:00

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	100	100	100	100	100
	2 - Longmead	100	100	100	100	100
	3 - A350 Little Content Ln	100	100	100	100	100
	4 - B3081 Bleke St	100	100	100	100	100
	5 - A30 Long Cross	100	100	100	100	100

18:00 - 18:15

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	4	13	365	142	177
	2 - Longmead	37	0	75	122	75
	3 - A350 Little Content Ln	370	45	3	418	269
	4 - B3081 Bleke St	138	129	352	0	28
	5 - A30 Long Cross	136	35	290	7	0

18:15 - 18:30

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	4	13	365	142	177
	2 - Longmead	37	0	75	122	75
	3 - A350 Little Content Ln	370	45	3	418	269
	4 - B3081 Bleke St	138	129	352	0	28
	5 - A30 Long Cross	136	35	290	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	0	17	1	0	8
	2 - Longmead	6	0	1	1	2
	3 - A350 Little Content Ln	3	2	0	2	2
	4 - B3081 Bleke St	2	1	1	0	0
	5 - A30 Long Cross	4	4	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A350 Grosvenor Road	0.65	9.76	1.8	3.2	A	561	841
2 - Longmead	0.42	8.13	0.7	3.3	A	268	402
3 - A350 Little Content Ln	0.76	10.78	3.1	11.7	B	883	1324
4 - B3081 Bleke St	0.64	8.46	1.8	2.7	A	638	957
5 - A30 Long Cross	0.20	3.20	0.3	0.6	A	241	362

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	460	115	569	1418	0.324	458	461	0.0	0.5	3.741	A
2 - Longmead	220	55	863	950	0.231	219	164	0.0	0.3	4.916	A
3 - A350 Little Content Ln	724	181	358	1726	0.420	721	723	0.0	0.7	3.572	A
4 - B3081 Bleke St	523	131	544	1694	0.309	521	536	0.0	0.4	3.068	A
5 - A30 Long Cross	198	50	832	1892	0.105	198	233	0.0	0.1	2.124	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	549	137	959	1162	0.473	548	506	0.5	0.9	5.842	A
2 - Longmead	263	66	1002	879	0.299	262	505	0.3	0.4	5.830	A
3 - A350 Little Content Ln	865	216	756	1497	0.578	862	507	0.7	1.3	5.653	A
4 - B3081 Bleke St	625	156	1112	1350	0.463	623	507	0.4	0.9	4.945	A
5 - A30 Long Cross	236	59	1229	1612	0.147	236	506	0.1	0.2	2.616	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	673	168	1173	1044	0.645	669	619	0.9	1.8	9.523	A
2 - Longmead	321	80	1224	767	0.419	320	619	0.4	0.7	8.037	A
3 - A350 Little Content Ln	1059	265	926	1394	0.760	1052	619	1.3	3.0	10.341	B
4 - B3081 Bleke St	765	191	1360	1195	0.640	762	619	0.9	1.7	8.242	A
5 - A30 Long Cross	290	72	1503	1418	0.204	289	619	0.2	0.3	3.188	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	673	168	1179	1041	0.646	673	622	1.8	1.8	9.764	A
2 - Longmead	321	80	1230	764	0.421	321	622	0.7	0.7	8.127	A
3 - A350 Little Content Ln	1059	265	930	1392	0.761	1059	622	3.0	3.1	10.783	B
4 - B3081 Bleke St	765	191	1367	1190	0.643	765	622	1.7	1.8	8.456	A
5 - A30 Long Cross	290	72	1510	1413	0.205	290	622	0.3	0.3	3.204	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	549	137	678	1347	0.408	554	530	1.8	0.7	4.563	A
2 - Longmead	263	66	1038	859	0.306	264	193	0.7	0.4	6.059	A
3 - A350 Little Content Ln	865	216	461	1662	0.520	873	841	3.1	1.1	4.607	A
4 - B3081 Bleke St	625	156	785	1541	0.405	629	549	1.8	0.7	3.965	A
5 - A30 Long Cross	236	59	971	1793	0.132	237	444	0.3	0.2	2.312	A

18:15 - 18:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	460	115	562	1413	0.326	461	441	0.7	0.5	3.786	A
2 - Longmead	220	55	865	946	0.232	220	157	0.4	0.3	4.961	A
3 - A350 Little Content Ln	724	181	382	1710	0.423	726	703	1.1	0.7	3.660	A
4 - B3081 Bleke St	523	131	650	1626	0.322	524	458	0.7	0.5	3.268	A
5 - A30 Long Cross	198	49	805	1912	0.104	198	369	0.2	0.1	2.102	A

Queue Variation Results for each time segment

17:00 - 17:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.48	0.00	0.00	0.48	0.48			N/A	N/A
2 - Longmead	0.30	0.00	0.00	0.30	0.30			N/A	N/A
3 - A350 Little Content Ln	0.72	0.55	1.00	1.40	1.45			N/A	N/A
4 - B3081 Bleke St	0.44	0.00	0.00	0.44	0.44			N/A	N/A
5 - A30 Long Cross	0.12	0.00	0.00	0.12	0.12			N/A	N/A

17:15 - 17:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.89	0.07	0.81	1.49	1.88			N/A	N/A
2 - Longmead	0.42	0.00	0.00	0.42	0.42			N/A	N/A
3 - A350 Little Content Ln	1.35	0.05	0.54	3.28	4.93			N/A	N/A
4 - B3081 Bleke St	0.85	0.07	0.75	1.46	1.87			N/A	N/A
5 - A30 Long Cross	0.17	0.00	0.00	0.17	0.17			N/A	N/A

17:30 - 17:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	1.76	0.03	0.27	1.76	2.94			N/A	N/A
2 - Longmead	0.71	0.03	0.26	0.71	0.71			N/A	N/A
3 - A350 Little Content Ln	3.02	0.03	0.29	3.02	11.75			N/A	N/A
4 - B3081 Bleke St	1.74	0.03	0.27	1.74	1.84			N/A	N/A
5 - A30 Long Cross	0.26	0.03	0.25	0.46	0.48			N/A	N/A

17:45 - 18:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	1.80	0.03	0.27	1.80	3.18			N/A	N/A
2 - Longmead	0.72	0.03	0.29	1.31	3.28			N/A	N/A
3 - A350 Little Content Ln	3.10	0.03	0.28	3.10	5.44			N/A	N/A
4 - B3081 Bleke St	1.77	0.03	0.27	1.77	2.66			N/A	N/A
5 - A30 Long Cross	0.26	0.03	0.26	0.48	0.61			N/A	N/A

18:00 - 18:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.69	0.05	0.53	1.05	1.65			N/A	N/A
2 - Longmead	0.44	0.00	0.00	0.44	0.44			N/A	N/A
3 - A350 Little Content Ln	1.10	0.05	0.46	2.64	4.01			N/A	N/A
4 - B3081 Bleke St	0.69	0.06	0.61	1.41	1.41			N/A	N/A
5 - A30 Long Cross	0.15	0.00	0.00	0.15	0.15			N/A	N/A

18:15 - 18:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.49	0.04	0.37	1.29	1.29			N/A	N/A
2 - Longmead	0.30	0.00	0.00	0.30	0.30			N/A	N/A
3 - A350 Little Content Ln	0.74	0.04	0.35	1.74	3.13			N/A	N/A
4 - B3081 Bleke St	0.48	0.04	0.38	1.32	1.49			N/A	N/A
5 - A30 Long Cross	0.12	0.00	0.00	0.12	0.12			N/A	N/A

(Default Analysis Set) - 2031 Baseline (inc. Local Plan), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - A350 Little Content Ln - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - B3081 Bleke St - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A30 A350 Ivy Cross Rbt	Standard Roundabout	1, 2, 3, 4, 5	7.17	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2031 Baseline (inc. Local Plan)	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A350 Grosvenor Road		ONE HOUR	✓	636	100.000
2 - Longmead		ONE HOUR	✓	317	100.000
3 - A350 Little Content Ln		ONE HOUR	✓	1001	100.000
4 - B3081 Bleke St		ONE HOUR	✓	711	100.000
5 - A30 Long Cross		ONE HOUR	✓	399	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	4	27	334	193	78
	2 - Longmead	80	0	96	93	48
	3 - A350 Little Content Ln	401	27	2	455	116
	4 - B3081 Bleke St	182	120	394	2	13
	5 - A30 Long Cross	125	77	170	27	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	0	12	8	3	15
	2 - Longmead	11	0	1	5	5
	3 - A350 Little Content Ln	5	8	0	4	6
	4 - B3081 Bleke St	0	0	5	0	8
	5 - A30 Long Cross	4	7	3	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A350 Grosvenor Road	0.61	7.94	1.5	1.9	A	584	875
2 - Longmead	0.53	11.41	1.1	4.1	B	291	436
3 - A350 Little Content Ln	0.71	8.13	2.5	5.1	A	919	1378
4 - B3081 Bleke St	0.53	5.24	1.1	1.5	A	652	979
5 - A30 Long Cross	0.30	3.46	0.4	1.5	A	366	549

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	479	120	615	1314	0.364	477	594	0.0	0.6	4.289	A
2 - Longmead	239	60	903	879	0.271	237	188	0.0	0.4	5.594	A
3 - A350 Little Content Ln	754	188	393	1658	0.455	750	747	0.0	0.8	3.953	A
4 - B3081 Bleke St	535	134	566	1639	0.327	533	577	0.0	0.5	3.250	A
5 - A30 Long Cross	300	75	909	1781	0.169	300	191	0.0	0.2	2.429	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	572	143	735	1246	0.459	571	711	0.6	0.8	5.319	A
2 - Longmead	285	71	1081	789	0.361	284	225	0.4	0.6	7.125	A
3 - A350 Little Content Ln	900	225	471	1610	0.559	898	894	0.8	1.3	5.045	A
4 - B3081 Bleke St	639	160	678	1568	0.408	638	691	0.5	0.7	3.870	A
5 - A30 Long Cross	359	90	1088	1653	0.217	358	229	0.2	0.3	2.780	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)	LOS
1 - A350 Grosvenor Road	700	175	900	1155	0.607	698	869	0.8	1.5	7.832	A
2 - Longmead	349	87	1322	666	0.524	347	276	0.6	1.1	11.207	B
3 - A350 Little Content Ln	1102	276	575	1546	0.713	1097	1093	1.3	2.4	7.947	A
4 - B3081 Bleke St	783	196	829	1472	0.532	781	844	0.7	1.1	5.198	A
5 - A30 Long Cross	439	110	1330	1481	0.297	439	280	0.3	0.4	3.452	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)	LOS
1 - A350 Grosvenor Road	700	175	902	1154	0.607	700	872	1.5	1.5	7.936	A
2 - Longmead	349	87	1326	664	0.525	349	276	1.1	1.1	11.412	B
3 - A350 Little Content Ln	1102	276	578	1544	0.714	1102	1097	2.4	2.5	8.130	A
4 - B3081 Bleke St	783	196	832	1470	0.533	783	848	1.1	1.1	5.242	A
5 - A30 Long Cross	439	110	1334	1478	0.297	439	281	0.4	0.4	3.465	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)	LOS
1 - A350 Grosvenor Road	572	143	738	1245	0.459	574	715	1.5	0.9	5.392	A
2 - Longmead	285	71	1086	786	0.363	287	226	1.1	0.6	7.243	A
3 - A350 Little Content Ln	900	225	475	1608	0.560	905	899	2.5	1.3	5.152	A
4 - B3081 Bleke St	639	160	683	1565	0.409	641	696	1.1	0.7	3.906	A
5 - A30 Long Cross	359	90	1094	1649	0.218	359	230	0.4	0.3	2.793	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)	LOS
1 - A350 Grosvenor Road	479	120	617	1312	0.365	480	597	0.9	0.6	4.331	A
2 - Longmead	239	60	908	877	0.272	239	189	0.6	0.4	5.658	A
3 - A350 Little Content Ln	754	188	396	1656	0.455	755	751	1.3	0.8	4.007	A
4 - B3081 Bleke St	535	134	571	1637	0.327	536	581	0.7	0.5	3.275	A
5 - A30 Long Cross	300	75	914	1777	0.169	301	192	0.3	0.2	2.438	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.57	0.55	1.00	1.40	1.45			N/A	N/A
2 - Longmead	0.37	0.00	0.00	0.37	0.37			N/A	N/A
3 - A350 Little Content Ln	0.83	0.55	1.00	1.40	1.45			N/A	N/A
4 - B3081 Bleke St	0.48	0.00	0.00	0.48	0.48			N/A	N/A
5 - A30 Long Cross	0.20	0.00	0.00	0.20	0.20			N/A	N/A

08:00 - 08:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.84	0.08	0.83	1.20	1.67			N/A	N/A
2 - Longmead	0.56	0.07	0.73	1.35	1.42			N/A	N/A
3 - A350 Little Content Ln	1.25	0.05	0.66	2.86	4.18			N/A	N/A
4 - B3081 Bleke St	0.68	0.08	0.79	1.37	1.45			N/A	N/A
5 - A30 Long Cross	0.28	0.00	0.00	0.28	0.28			N/A	N/A

08:15 - 08:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	1.51	0.03	0.27	1.51	1.51			N/A	N/A
2 - Longmead	1.07	0.03	0.26	1.07	1.07			N/A	N/A
3 - A350 Little Content Ln	2.41	0.03	0.28	2.41	5.13			N/A	N/A
4 - B3081 Bleke St	1.12	0.03	0.26	1.12	1.12			N/A	N/A
5 - A30 Long Cross	0.42	0.03	0.25	0.45	0.48			N/A	N/A

08:30 - 08:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	1.53	0.03	0.27	1.53	1.86			N/A	N/A
2 - Longmead	1.09	0.03	0.28	1.09	4.14			N/A	N/A
3 - A350 Little Content Ln	2.45	0.03	0.27	2.45	2.45			N/A	N/A
4 - B3081 Bleke St	1.13	0.03	0.27	1.13	1.45			N/A	N/A
5 - A30 Long Cross	0.42	0.03	0.33	1.34	1.46			N/A	N/A

08:45 - 09:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.86	0.11	0.90	1.48	1.48			N/A	N/A
2 - Longmead	0.58	0.06	0.66	1.33	1.42			N/A	N/A
3 - A350 Little Content Ln	1.29	0.08	1.01	2.52	3.37			N/A	N/A
4 - B3081 Bleke St	0.70	0.29	0.95	1.39	1.45			N/A	N/A
5 - A30 Long Cross	0.28	0.00	0.00	0.28	0.28			N/A	N/A

09:00 - 09:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.58	0.05	0.48	1.36	1.47			N/A	N/A
2 - Longmead	0.38	0.03	0.33	1.07	1.29			N/A	N/A
3 - A350 Little Content Ln	0.84	0.05	0.46	1.80	2.68			N/A	N/A
4 - B3081 Bleke St	0.49	0.04	0.44	1.27	1.38			N/A	N/A
5 - A30 Long Cross	0.20	0.00	0.00	0.20	0.20			N/A	N/A

(Default Analysis Set) - 2031 Baseline (inc. Local Plan), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - A350 Little Content Ln - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - B3081 Bleke St - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Profile Type	D6 - 2031 Baseline (inc. Local Plan), PM	'O-D data varies over time' option has been selected but all arms use ONE HOUR profile type, which shapes the flows over time automatically. Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A30 A350 Ivy Cross Rbt	Standard Roundabout	1, 2, 3, 4, 5	13.43	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2031 Baseline (inc. Local Plan)	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A350 Grosvenor Road		ONE HOUR	✓	647	100.000
2 - Longmead		ONE HOUR	✓	305	100.000
3 - A350 Little Content Ln		ONE HOUR	✓	1024	100.000
4 - B3081 Bleke St		ONE HOUR	✓	817	100.000
5 - A30 Long Cross		ONE HOUR	✓	274	100.000

Origin-Destination Data

17:00 - 17:15

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	4	13	365	165	100
	2 - Longmead	37	0	75	129	64
	3 - A350 Little Content Ln	370	45	3	470	136
	4 - B3081 Bleke St	187	144	461	0	25
	5 - A30 Long Cross	73	27	166	8	0

17:15 - 17:30

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	100	100	100	100	100
	2 - Longmead	100	100	100	100	100
	3 - A350 Little Content Ln	100	100	100	100	100
	4 - B3081 Bleke St	100	100	100	100	100
	5 - A30 Long Cross	100	100	100	100	100

17:30 - 17:45

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	100	100	100	100	100
	2 - Longmead	100	100	100	100	100
	3 - A350 Little Content Ln	100	100	100	100	100
	4 - B3081 Bleke St	100	100	100	100	100
	5 - A30 Long Cross	100	100	100	100	100

17:45 - 18:00

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	100	100	100	100	100
	2 - Longmead	100	100	100	100	100
	3 - A350 Little Content Ln	100	100	100	100	100
	4 - B3081 Bleke St	100	100	100	100	100
	5 - A30 Long Cross	100	100	100	100	100

18:00 - 18:15

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	4	13	365	142	177
	2 - Longmead	37	0	75	122	75
	3 - A350 Little Content Ln	370	45	3	418	269
	4 - B3081 Bleke St	138	129	352	0	28
	5 - A30 Long Cross	136	35	290	7	0

18:15 - 18:30

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	4	13	365	142	177
	2 - Longmead	37	0	75	122	75
	3 - A350 Little Content Ln	370	45	3	418	269
	4 - B3081 Bleke St	138	129	352	0	28
	5 - A30 Long Cross	136	35	290	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	0	17	1	0	8
	2 - Longmead	6	0	1	1	2
	3 - A350 Little Content Ln	3	2	0	2	2
	4 - B3081 Bleke St	2	2	1	0	0
	5 - A30 Long Cross	4	4	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A350 Grosvenor Road	0.73	13.70	2.7	10.7	B	594	891
2 - Longmead	0.47	9.58	0.9	3.7	A	280	420
3 - A350 Little Content Ln	0.83	15.81	4.8	24.1	C	940	1409
4 - B3081 Bleke St	0.79	14.95	3.6	16.7	B	750	1125
5 - A30 Long Cross	0.23	3.61	0.3	1.2	A	251	377

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	487	122	641	1377	0.354	485	503	0.0	0.5	4.026	A
2 - Longmead	230	57	954	904	0.254	228	172	0.0	0.3	5.319	A
3 - A350 Little Content Ln	771	193	380	1713	0.450	768	802	0.0	0.8	3.795	A
4 - B3081 Bleke St	615	154	569	1674	0.367	613	579	0.0	0.6	3.384	A
5 - A30 Long Cross	206	52	938	1816	0.114	206	244	0.0	0.1	2.235	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	582	145	1056	1108	0.525	579	550	0.5	1.1	6.784	A
2 - Longmead	274	69	1087	836	0.328	274	548	0.3	0.5	6.396	A
3 - A350 Little Content Ln	921	230	810	1464	0.629	917	551	0.8	1.7	6.541	A
4 - B3081 Bleke St	734	184	1177	1306	0.562	732	550	0.6	1.3	6.236	A
5 - A30 Long Cross	246	62	1360	1518	0.162	246	549	0.1	0.2	2.829	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	712	178	1289	979	0.728	707	670	1.1	2.5	12.941	B
2 - Longmead	336	84	1326	716	0.469	334	670	0.5	0.9	9.386	A
3 - A350 Little Content Ln	1127	282	990	1355	0.832	1116	670	1.7	4.5	14.396	B
4 - B3081 Bleke St	900	225	1436	1145	0.786	891	670	1.3	3.4	13.727	B
5 - A30 Long Cross	302	75	1657	1308	0.231	301	670	0.2	0.3	3.574	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	712	178	1298	974	0.731	712	675	2.5	2.6	13.700	B
2 - Longmead	336	84	1335	711	0.472	336	675	0.9	0.9	9.582	A
3 - A350 Little Content Ln	1127	282	996	1352	0.834	1126	675	4.5	4.8	15.813	C
4 - B3081 Bleke St	900	225	1448	1138	0.791	899	675	3.4	3.6	14.955	B
5 - A30 Long Cross	302	75	1672	1298	0.232	302	675	0.3	0.3	3.613	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	582	145	775	1291	0.450	589	579	2.6	0.8	5.180	A
2 - Longmead	274	69	1142	806	0.340	276	222	0.9	0.5	6.802	A
3 - A350 Little Content Ln	921	230	489	1646	0.559	934	929	4.8	1.3	5.159	A
4 - B3081 Bleke St	734	184	839	1505	0.488	745	584	3.6	1.0	4.805	A
5 - A30 Long Cross	246	62	1108	1695	0.145	247	476	0.3	0.2	2.488	A

18:15 - 18:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	487	122	638	1369	0.356	488	481	0.8	0.6	4.094	A
2 - Longmead	230	57	948	905	0.254	230	179	0.5	0.3	5.344	A
3 - A350 Little Content Ln	771	193	402	1698	0.454	773	775	1.3	0.8	3.899	A
4 - B3081 Bleke St	615	154	690	1598	0.385	616	485	1.0	0.6	3.671	A
5 - A30 Long Cross	206	52	912	1834	0.112	206	394	0.2	0.1	2.211	A

Queue Variation Results for each time segment

17:00 - 17:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.54	0.54	1.00	1.40	1.45			N/A	N/A
2 - Longmead	0.34	0.00	0.00	0.34	0.34			N/A	N/A
3 - A350 Little Content Ln	0.81	0.54	1.00	1.40	1.45			N/A	N/A
4 - B3081 Bleke St	0.58	0.55	1.00	1.40	1.45			N/A	N/A
5 - A30 Long Cross	0.13	0.00	0.00	0.13	0.13			N/A	N/A

17:15 - 17:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	1.09	0.06	0.74	2.24	3.13			N/A	N/A
2 - Longmead	0.48	0.00	0.00	0.48	0.48			N/A	N/A
3 - A350 Little Content Ln	1.66	0.05	0.47	4.35	6.92			N/A	N/A
4 - B3081 Bleke St	1.26	0.05	0.49	3.01	4.65			N/A	N/A
5 - A30 Long Cross	0.19	0.00	0.00	0.19	0.19			N/A	N/A

17:30 - 17:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	2.54	0.03	0.29	2.54	10.56			N/A	N/A
2 - Longmead	0.87	0.03	0.26	0.87	0.87			N/A	N/A
3 - A350 Little Content Ln	4.52	0.03	0.33	8.56	24.11			N/A	N/A
4 - B3081 Bleke St	3.42	0.03	0.31	4.63	16.77			N/A	N/A
5 - A30 Long Cross	0.30	0.03	0.25	0.46	0.48			N/A	N/A

17:45 - 18:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	2.64	0.03	0.28	2.64	7.46			N/A	N/A
2 - Longmead	0.88	0.03	0.29	1.17	3.70			N/A	N/A
3 - A350 Little Content Ln	4.77	0.03	0.29	4.77	18.25			N/A	N/A
4 - B3081 Bleke St	3.61	0.03	0.29	3.61	12.40			N/A	N/A
5 - A30 Long Cross	0.30	0.03	0.30	0.91	1.21			N/A	N/A

18:00 - 18:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.83	0.04	0.42	1.87	2.91			N/A	N/A
2 - Longmead	0.52	0.06	0.59	1.32	1.41			N/A	N/A
3 - A350 Little Content Ln	1.29	0.04	0.37	3.30	6.06			N/A	N/A
4 - B3081 Bleke St	0.96	0.04	0.39	2.38	3.99			N/A	N/A
5 - A30 Long Cross	0.17	0.00	0.00	0.17	0.17			N/A	N/A

18:15 - 18:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.56	0.03	0.33	1.18	2.27			N/A	N/A
2 - Longmead	0.34	0.03	0.27	0.48	0.80			N/A	N/A
3 - A350 Little Content Ln	0.84	0.03	0.31	1.60	4.13			N/A	N/A
4 - B3081 Bleke St	0.63	0.03	0.32	1.29	2.91			N/A	N/A
5 - A30 Long Cross	0.13	0.00	0.00	0.13	0.13			N/A	N/A

(Default Analysis Set) - 2021 with Development , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - A350 Little Content Ln - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - B3081 Bleke St - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Profile Type	D7 - 2021 with Development , AM	'O-D data varies over time' option has been selected but all arms use ONE HOUR profile type, which shapes the flows over time automatically. Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A30 A350 Ivy Cross Rbt	Standard Roundabout	1, 2, 3, 4, 5	15.30	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2021 with Development	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A350 Grosvenor Road		ONE HOUR	✓	619	100.000
2 - Longmead		ONE HOUR	✓	302	100.000
3 - A350 Little Content Ln		ONE HOUR	✓	964	100.000
4 - B3081 Bleke St		ONE HOUR	✓	863	100.000
5 - A30 Long Cross		ONE HOUR	✓	380	100.000

Origin-Destination Data

Demand (Veh/hr)

07:45 - 08:00

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	4	26	319	196	74
	2 - Longmead	76	0	92	89	45
	3 - A350 Little Content Ln	383	26	2	442	111
	4 - B3081 Bleke St	240	115	494	2	12
	5 - A30 Long Cross	120	73	162	25	0

08:00 - 08:15

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	100	100	100	100	100
	2 - Longmead	100	100	100	100	100
	3 - A350 Little Content Ln	100	100	100	100	100
	4 - B3081 Bleke St	100	100	100	100	100
	5 - A30 Long Cross	100	100	100	100	100

08:15 - 08:30

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	100	100	100	100	100
	2 - Longmead	100	100	100	100	100
	3 - A350 Little Content Ln	100	100	100	100	100
	4 - B3081 Bleke St	100	100	100	100	100
	5 - A30 Long Cross	100	100	100	100	100

08:30 - 08:45

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	100	100	100	100	100
	2 - Longmead	100	100	100	100	100
	3 - A350 Little Content Ln	100	100	100	100	100
	4 - B3081 Bleke St	100	100	100	100	100
	5 - A30 Long Cross	100	100	100	100	100

08:45 - 09:00

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	4	13	365	142	177
	2 - Longmead	37	0	75	122	75
	3 - A350 Little Content Ln	370	45	3	418	269
	4 - B3081 Bleke St	138	129	352	0	28
	5 - A30 Long Cross	136	35	290	7	0

09:00 - 09:15

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	4	13	365	142	177
	2 - Longmead	37	0	75	122	75
	3 - A350 Little Content Ln	370	45	3	418	269
	4 - B3081 Bleke St	138	129	352	0	28
	5 - A30 Long Cross	136	35	290	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	0	12	8	2	15
	2 - Longmead	11	0	1	5	5
	3 - A350 Little Content Ln	5	8	0	4	6
	4 - B3081 Bleke St	0	0	3	0	8
	5 - A30 Long Cross	4	7	3	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A350 Grosvenor Road	0.76	16.92	3.1	14.3	C	568	852
2 - Longmead	0.51	11.10	1.0	4.1	B	277	416
3 - A350 Little Content Ln	0.83	15.96	4.5	22.7	C	885	1327
4 - B3081 Bleke St	0.84	19.77	5.0	25.1	C	792	1188
5 - A30 Long Cross	0.33	4.20	0.5	1.9	A	349	523

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	466	117	674	1289	0.362	464	617	0.0	0.6	4.353	A
2 - Longmead	227	57	958	856	0.266	226	180	0.0	0.4	5.701	A
3 - A350 Little Content Ln	726	181	383	1665	0.436	723	801	0.0	0.8	3.806	A
4 - B3081 Bleke St	650	162	540	1674	0.388	647	565	0.0	0.6	3.498	A
5 - A30 Long Cross	286	72	1006	1717	0.167	285	181	0.0	0.2	2.512	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	556	139	1135	1035	0.538	554	561	0.6	1.1	7.455	A
2 - Longmead	271	68	1130	785	0.346	271	559	0.4	0.5	6.992	A
3 - A350 Little Content Ln	867	217	839	1399	0.619	863	562	0.8	1.6	6.677	A
4 - B3081 Bleke St	776	194	1141	1294	0.600	772	561	0.6	1.5	6.865	A
5 - A30 Long Cross	342	85	1354	1495	0.228	341	559	0.2	0.3	3.119	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)	LOS
1 - A350 Grosvenor Road	682	170	1383	898	0.759	674	682	1.1	2.9	15.589	C
2 - Longmead	333	83	1375	662	0.502	331	682	0.5	1.0	10.793	B
3 - A350 Little Content Ln	1061	265	1024	1288	0.824	1051	682	1.6	4.3	14.525	B
4 - B3081 Bleke St	950	238	1392	1135	0.837	938	682	1.5	4.6	17.266	C
5 - A30 Long Cross	418	105	1648	1288	0.325	418	682	0.3	0.5	4.132	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)	LOS
1 - A350 Grosvenor Road	682	170	1395	892	0.764	681	688	2.9	3.1	16.918	C
2 - Longmead	333	83	1387	656	0.507	332	688	1.0	1.0	11.104	B
3 - A350 Little Content Ln	1061	265	1032	1284	0.827	1060	688	4.3	4.5	15.957	C
4 - B3081 Bleke St	950	238	1404	1128	0.843	949	688	4.6	5.0	19.769	C
5 - A30 Long Cross	418	105	1664	1276	0.328	418	688	0.5	0.5	4.195	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)	LOS
1 - A350 Grosvenor Road	556	139	874	1163	0.479	565	599	3.1	0.9	6.107	A
2 - Longmead	271	68	1203	732	0.371	273	236	1.0	0.6	7.878	A
3 - A350 Little Content Ln	867	217	479	1598	0.542	880	997	4.5	1.2	5.103	A
4 - B3081 Bleke St	776	194	798	1503	0.516	791	561	5.0	1.1	5.170	A
5 - A30 Long Cross	342	85	1130	1638	0.209	342	459	0.5	0.3	2.783	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)	LOS
1 - A350 Grosvenor Road	466	117	719	1247	0.374	467	496	0.9	0.6	4.624	A
2 - Longmead	227	57	997	837	0.272	228	190	0.6	0.4	5.921	A
3 - A350 Little Content Ln	726	181	392	1652	0.439	727	832	1.2	0.8	3.902	A
4 - B3081 Bleke St	650	162	656	1595	0.407	651	464	1.1	0.7	3.823	A
5 - A30 Long Cross	286	72	928	1780	0.161	286	379	0.3	0.2	2.412	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.56	0.55	1.00	1.40	1.45			N/A	N/A
2 - Longmead	0.36	0.00	0.00	0.36	0.36			N/A	N/A
3 - A350 Little Content Ln	0.77	0.55	1.00	1.40	1.45			N/A	N/A
4 - B3081 Bleke St	0.63	0.55	1.00	1.40	1.45			N/A	N/A
5 - A30 Long Cross	0.20	0.00	0.00	0.20	0.20			N/A	N/A

08:00 - 08:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	1.14	0.06	0.70	2.50	3.56			N/A	N/A
2 - Longmead	0.52	0.06	0.62	1.32	1.41			N/A	N/A
3 - A350 Little Content Ln	1.60	0.05	0.48	4.11	6.51			N/A	N/A
4 - B3081 Bleke St	1.47	0.05	0.47	3.78	5.95			N/A	N/A
5 - A30 Long Cross	0.29	0.00	0.00	0.29	0.29			N/A	N/A

08:15 - 08:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	2.93	0.03	0.31	3.96	14.37			N/A	N/A
2 - Longmead	0.98	0.03	0.26	0.98	0.98			N/A	N/A
3 - A350 Little Content Ln	4.29	0.03	0.33	7.85	22.71			N/A	N/A
4 - B3081 Bleke St	4.60	0.04	0.36	10.36	25.04			N/A	N/A
5 - A30 Long Cross	0.48	0.03	0.25	0.48	0.48			N/A	N/A

08:30 - 08:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	3.10	0.03	0.29	3.10	11.50			N/A	N/A
2 - Longmead	1.01	0.03	0.29	1.16	4.08			N/A	N/A
3 - A350 Little Content Ln	4.53	0.03	0.29	4.53	17.18			N/A	N/A
4 - B3081 Bleke St	4.98	0.03	0.31	5.48	23.17			N/A	N/A
5 - A30 Long Cross	0.49	0.03	0.33	1.46	1.90			N/A	N/A

08:45 - 09:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.93	0.04	0.40	2.23	3.66			N/A	N/A
2 - Longmead	0.60	0.08	0.78	1.36	1.43			N/A	N/A
3 - A350 Little Content Ln	1.20	0.04	0.37	3.00	5.65			N/A	N/A
4 - B3081 Bleke St	1.08	0.03	0.35	2.63	5.18			N/A	N/A
5 - A30 Long Cross	0.26	0.00	0.00	0.26	0.26			N/A	N/A

09:00 - 09:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.60	0.03	0.32	1.28	2.68			N/A	N/A
2 - Longmead	0.38	0.03	0.31	0.99	1.25			N/A	N/A
3 - A350 Little Content Ln	0.79	0.03	0.31	1.49	3.86			N/A	N/A
4 - B3081 Bleke St	0.69	0.03	0.30	1.46	3.30			N/A	N/A
5 - A30 Long Cross	0.19	0.00	0.00	0.19	0.19			N/A	N/A

(Default Analysis Set) - 2021 with Development , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - A350 Little Content Ln - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - B3081 Bleke St - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Profile Type	D8 - 2021 with Development , PM	'O-D data varies over time' option has been selected but all arms use ONE HOUR profile type, which shapes the flows over time automatically. Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A30 A350 Ivy Cross Rbt	Standard Roundabout	1, 2, 3, 4, 5	15.54	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2021 with Development	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A350 Grosvenor Road		ONE HOUR	✓	670	100.000
2 - Longmead		ONE HOUR	✓	292	100.000
3 - A350 Little Content Ln		ONE HOUR	✓	1071	100.000
4 - B3081 Bleke St		ONE HOUR	✓	811	100.000
5 - A30 Long Cross		ONE HOUR	✓	263	100.000

Origin-Destination Data

Demand (Veh/hr)

17:00 - 17:15

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	4	12	349	209	96
	2 - Longmead	35	0	72	124	61
	3 - A350 Little Content Ln	353	43	3	542	130
	4 - B3081 Bleke St	193	138	456	0	24
	5 - A30 Long Cross	70	26	159	8	0

17:15 - 17:30

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	100	100	100	100	100
	2 - Longmead	100	100	100	100	100
	3 - A350 Little Content Ln	100	100	100	100	100
	4 - B3081 Bleke St	100	100	100	100	100
	5 - A30 Long Cross	100	100	100	100	100

17:30 - 17:45

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	100	100	100	100	100
	2 - Longmead	100	100	100	100	100
	3 - A350 Little Content Ln	100	100	100	100	100
	4 - B3081 Bleke St	100	100	100	100	100
	5 - A30 Long Cross	100	100	100	100	100

17:45 - 18:00

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	100	100	100	100	100
	2 - Longmead	100	100	100	100	100
	3 - A350 Little Content Ln	100	100	100	100	100
	4 - B3081 Bleke St	100	100	100	100	100
	5 - A30 Long Cross	100	100	100	100	100

18:00 - 18:15

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	4	13	365	142	177
	2 - Longmead	37	0	75	122	75
	3 - A350 Little Content Ln	370	45	3	418	269
	4 - B3081 Bleke St	138	129	352	0	28
	5 - A30 Long Cross	136	35	290	7	0

18:15 - 18:30

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	4	13	365	142	177
	2 - Longmead	37	0	75	122	75
	3 - A350 Little Content Ln	370	45	3	418	269
	4 - B3081 Bleke St	138	129	352	0	28
	5 - A30 Long Cross	136	35	290	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	0	17	1	0	8
	2 - Longmead	6	0	1	1	2
	3 - A350 Little Content Ln	3	2	0	2	2
	4 - B3081 Bleke St	2	1	1	0	0
	5 - A30 Long Cross	4	4	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A350 Grosvenor Road	0.76	15.20	3.1	13.6	C	615	922
2 - Longmead	0.46	9.48	0.8	3.7	A	268	402
3 - A350 Little Content Ln	0.87	20.00	6.2	31.3	C	983	1474
4 - B3081 Bleke St	0.80	15.98	3.8	18.2	C	744	1116
5 - A30 Long Cross	0.23	3.63	0.3	1.2	A	241	362

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	504	126	625	1389	0.363	502	491	0.0	0.6	4.050	A
2 - Longmead	220	55	963	899	0.244	219	164	0.0	0.3	5.277	A
3 - A350 Little Content Ln	806	202	402	1701	0.474	803	779	0.0	0.9	3.993	A
4 - B3081 Bleke St	611	153	543	1693	0.361	608	662	0.0	0.6	3.311	A
5 - A30 Long Cross	198	50	919	1831	0.108	198	233	0.0	0.1	2.204	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	602	151	1059	1107	0.544	600	557	0.6	1.2	7.066	A
2 - Longmead	263	66	1104	827	0.317	262	555	0.3	0.5	6.358	A
3 - A350 Little Content Ln	963	241	808	1465	0.657	959	558	0.9	1.9	7.054	A
4 - B3081 Bleke St	729	182	1209	1289	0.566	726	558	0.6	1.3	6.366	A
5 - A30 Long Cross	236	59	1380	1505	0.157	236	556	0.1	0.2	2.836	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	738	184	1291	979	0.754	731	677	1.2	2.9	14.142	B
2 - Longmead	321	80	1344	707	0.455	320	677	0.5	0.8	9.276	A
3 - A350 Little Content Ln	1179	295	987	1357	0.869	1164	677	1.9	5.8	17.360	C
4 - B3081 Bleke St	893	223	1473	1124	0.794	884	677	1.3	3.6	14.447	B
5 - A30 Long Cross	290	72	1679	1293	0.224	289	677	0.2	0.3	3.582	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	738	184	1302	973	0.758	737	683	2.9	3.0	15.197	C
2 - Longmead	321	80	1356	701	0.459	321	683	0.8	0.8	9.481	A
3 - A350 Little Content Ln	1179	295	994	1353	0.871	1177	683	5.8	6.2	20.003	C
4 - B3081 Bleke St	893	223	1487	1115	0.801	892	683	3.6	3.8	15.978	C
5 - A30 Long Cross	290	72	1696	1282	0.226	290	683	0.3	0.3	3.627	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	602	151	769	1295	0.465	611	590	3.0	0.9	5.324	A
2 - Longmead	263	66	1156	799	0.328	264	224	0.8	0.5	6.739	A
3 - A350 Little Content Ln	963	241	490	1645	0.586	982	930	6.2	1.4	5.586	A
4 - B3081 Bleke St	729	182	871	1487	0.490	740	601	3.8	1.0	4.890	A
5 - A30 Long Cross	236	59	1121	1686	0.140	237	490	0.3	0.2	2.484	A

18:15 - 18:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	504	126	631	1374	0.367	506	488	0.9	0.6	4.151	A
2 - Longmead	220	55	957	900	0.244	221	179	0.5	0.3	5.303	A
3 - A350 Little Content Ln	806	202	403	1698	0.475	808	775	1.4	0.9	4.057	A
4 - B3081 Bleke St	611	153	713	1587	0.385	612	498	1.0	0.6	3.700	A
5 - A30 Long Cross	198	49	921	1829	0.108	198	404	0.2	0.1	2.208	A

Queue Variation Results for each time segment

17:00 - 17:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.57	0.55	1.00	1.40	1.45			N/A	N/A
2 - Longmead	0.32	0.00	0.00	0.32	0.32			N/A	N/A
3 - A350 Little Content Ln	0.89	0.53	0.99	1.41	1.46			N/A	N/A
4 - B3081 Bleke St	0.56	0.55	1.00	1.40	1.45			N/A	N/A
5 - A30 Long Cross	0.12	0.00	0.00	0.12	0.12			N/A	N/A

17:15 - 17:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	1.17	0.06	0.70	2.60	3.72			N/A	N/A
2 - Longmead	0.46	0.00	0.00	0.46	0.46			N/A	N/A
3 - A350 Little Content Ln	1.87	0.05	0.46	5.00	8.21			N/A	N/A
4 - B3081 Bleke St	1.28	0.05	0.49	3.09	4.77			N/A	N/A
5 - A30 Long Cross	0.19	0.00	0.00	0.19	0.19			N/A	N/A

17:30 - 17:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	2.88	0.03	0.30	3.20	13.43			N/A	N/A
2 - Longmead	0.82	0.03	0.26	0.82	0.82			N/A	N/A
3 - A350 Little Content Ln	5.77	0.04	0.38	14.35	31.33			N/A	N/A
4 - B3081 Bleke St	3.58	0.03	0.32	5.53	18.19			N/A	N/A
5 - A30 Long Cross	0.29	0.03	0.25	0.46	0.48			N/A	N/A

17:45 - 18:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	3.02	0.03	0.29	3.02	9.86			N/A	N/A
2 - Longmead	0.84	0.03	0.29	1.26	3.65			N/A	N/A
3 - A350 Little Content Ln	6.23	0.03	0.32	8.08	30.29			N/A	N/A
4 - B3081 Bleke St	3.82	0.03	0.29	3.82	14.32			N/A	N/A
5 - A30 Long Cross	0.29	0.03	0.29	0.81	1.16			N/A	N/A

18:00 - 18:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.88	0.04	0.39	2.06	3.49			N/A	N/A
2 - Longmead	0.49	0.05	0.46	1.28	1.39			N/A	N/A
3 - A350 Little Content Ln	1.43	0.04	0.35	3.53	7.23			N/A	N/A
4 - B3081 Bleke St	0.97	0.04	0.38	2.42	4.18			N/A	N/A
5 - A30 Long Cross	0.16	0.00	0.00	0.16	0.16			N/A	N/A

18:15 - 18:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.58	0.03	0.32	1.22	2.60			N/A	N/A
2 - Longmead	0.33	0.03	0.26	0.46	0.49			N/A	N/A
3 - A350 Little Content Ln	0.91	0.03	0.30	1.27	4.41			N/A	N/A
4 - B3081 Bleke St	0.63	0.03	0.31	1.22	2.94			N/A	N/A
5 - A30 Long Cross	0.12	0.00	0.00	0.12	0.12			N/A	N/A

(Default Analysis Set) - 2031 (inc. Local Plan) with Development , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - A350 Little Content Ln - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - B3081 Bleke St - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A30 A350 Ivy Cross Rbt	Standard Roundabout	1, 2, 3, 4, 5	9.63	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2031 (inc. Local Plan) with Development	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A350 Grosvenor Road		ONE HOUR	✓	674	100.000
2 - Longmead		ONE HOUR	✓	317	100.000
3 - A350 Little Content Ln		ONE HOUR	✓	1071	100.000
4 - B3081 Bleke St		ONE HOUR	✓	924	100.000
5 - A30 Long Cross		ONE HOUR	✓	399	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	4	27	334	231	78
	2 - Longmead	80	0	96	93	48
	3 - A350 Little Content Ln	401	27	2	525	116
	4 - B3081 Bleke St	257	120	532	2	13
	5 - A30 Long Cross	125	77	170	27	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	0	12	8	2	15
	2 - Longmead	11	0	1	5	5
	3 - A350 Little Content Ln	5	8	0	4	6
	4 - B3081 Bleke St	1	0	4	0	8
	5 - A30 Long Cross	4	7	3	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A350 Grosvenor Road	0.69	10.72	2.2	5.9	B	618	928
2 - Longmead	0.61	16.18	1.5	6.2	C	291	436
3 - A350 Little Content Ln	0.77	10.47	3.4	13.0	B	983	1474
4 - B3081 Bleke St	0.69	7.89	2.2	3.5	A	848	1272
5 - A30 Long Cross	0.33	4.11	0.5	2.0	A	366	549

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	507	127	718	1265	0.401	505	650	0.0	0.7	4.721	A
2 - Longmead	239	60	1034	816	0.293	237	188	0.0	0.4	6.201	A
3 - A350 Little Content Ln	806	202	421	1643	0.491	802	850	0.0	1.0	4.266	A
4 - B3081 Bleke St	696	174	566	1643	0.423	693	658	0.0	0.7	3.778	A
5 - A30 Long Cross	300	75	1068	1670	0.180	300	191	0.0	0.2	2.626	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	606	151	859	1186	0.511	604	778	0.7	1.0	6.175	A
2 - Longmead	285	71	1238	713	0.400	284	225	0.4	0.7	8.375	A
3 - A350 Little Content Ln	963	241	505	1592	0.605	961	1017	1.0	1.5	5.682	A
4 - B3081 Bleke St	831	208	678	1571	0.529	829	787	0.7	1.1	4.840	A
5 - A30 Long Cross	359	90	1278	1521	0.236	358	229	0.2	0.3	3.097	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)	LOS
1 - A350 Grosvenor Road	742	186	1050	1079	0.688	738	950	1.0	2.1	10.410	B
2 - Longmead	349	87	1512	574	0.608	346	275	0.7	1.5	15.530	C
3 - A350 Little Content Ln	1179	295	615	1524	0.774	1172	1243	1.5	3.3	10.030	B
4 - B3081 Bleke St	1017	254	827	1476	0.689	1013	961	1.1	2.2	7.705	A
5 - A30 Long Cross	439	110	1561	1320	0.333	439	279	0.3	0.5	4.080	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)	LOS
1 - A350 Grosvenor Road	742	186	1054	1077	0.689	742	954	2.1	2.2	10.721	B
2 - Longmead	349	87	1519	571	0.611	349	276	1.5	1.5	16.183	C
3 - A350 Little Content Ln	1179	295	620	1522	0.775	1179	1248	3.3	3.4	10.472	B
4 - B3081 Bleke St	1017	254	832	1473	0.691	1017	966	2.2	2.2	7.894	A
5 - A30 Long Cross	439	110	1569	1315	0.334	439	281	0.5	0.5	4.111	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)	LOS
1 - A350 Grosvenor Road	606	151	864	1183	0.512	610	784	2.2	1.1	6.333	A
2 - Longmead	285	71	1248	708	0.402	288	227	1.5	0.7	8.647	A
3 - A350 Little Content Ln	963	241	511	1588	0.606	970	1025	3.4	1.6	5.887	A
4 - B3081 Bleke St	831	208	685	1567	0.530	835	795	2.2	1.1	4.948	A
5 - A30 Long Cross	359	90	1289	1513	0.237	359	231	0.5	0.3	3.121	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)	LOS
1 - A350 Grosvenor Road	507	127	722	1262	0.402	509	654	1.1	0.7	4.787	A
2 - Longmead	239	60	1042	812	0.294	240	189	0.7	0.4	6.301	A
3 - A350 Little Content Ln	806	202	425	1640	0.492	809	856	1.6	1.0	4.342	A
4 - B3081 Bleke St	696	174	571	1640	0.424	697	663	1.1	0.7	3.827	A
5 - A30 Long Cross	300	75	1076	1665	0.180	301	193	0.3	0.2	2.642	A

Queue Variation Results for each time segment

07:45 - 08:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.66	0.55	1.00	1.40	1.45			N/A	N/A
2 - Longmead	0.41	0.00	0.00	0.41	0.41			N/A	N/A
3 - A350 Little Content Ln	0.96	0.55	1.00	1.40	1.45			N/A	N/A
4 - B3081 Bleke St	0.73	0.55	1.00	1.40	1.45			N/A	N/A
5 - A30 Long Cross	0.22	0.00	0.00	0.22	0.22			N/A	N/A

08:00 - 08:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	1.03	0.06	0.79	1.93	2.73			N/A	N/A
2 - Longmead	0.66	0.08	0.76	1.36	1.44			N/A	N/A
3 - A350 Little Content Ln	1.51	0.05	0.50	3.81	5.86			N/A	N/A
4 - B3081 Bleke St	1.11	0.06	0.70	2.37	3.38			N/A	N/A
5 - A30 Long Cross	0.31	0.00	0.00	0.31	0.31			N/A	N/A

08:15 - 08:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	2.12	0.03	0.28	2.12	5.95			N/A	N/A
2 - Longmead	1.49	0.03	0.28	1.49	4.17			N/A	N/A
3 - A350 Little Content Ln	3.26	0.03	0.29	3.26	12.98			N/A	N/A
4 - B3081 Bleke St	2.16	0.03	0.27	2.16	3.50			N/A	N/A
5 - A30 Long Cross	0.50	0.03	0.25	0.50	0.50			N/A	N/A

08:30 - 08:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	2.17	0.03	0.27	2.17	3.79			N/A	N/A
2 - Longmead	1.53	0.03	0.29	1.53	6.18			N/A	N/A
3 - A350 Little Content Ln	3.35	0.03	0.27	3.35	5.27			N/A	N/A
4 - B3081 Bleke St	2.20	0.03	0.27	2.20	2.20			N/A	N/A
5 - A30 Long Cross	0.50	0.03	0.32	1.47	2.04			N/A	N/A

08:45 - 09:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	1.06	0.07	0.87	1.93	2.69			N/A	N/A
2 - Longmead	0.68	0.06	0.63	1.32	1.32			N/A	N/A
3 - A350 Little Content Ln	1.56	0.06	0.84	3.71	5.40			N/A	N/A
4 - B3081 Bleke St	1.14	0.09	0.99	1.93	2.63			N/A	N/A
5 - A30 Long Cross	0.31	0.00	0.00	0.31	0.31			N/A	N/A

09:00 - 09:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.68	0.04	0.42	1.40	1.99			N/A	N/A
2 - Longmead	0.42	0.04	0.36	1.25	1.44			N/A	N/A
3 - A350 Little Content Ln	0.98	0.04	0.39	2.42	4.03			N/A	N/A
4 - B3081 Bleke St	0.74	0.05	0.47	1.46	1.97			N/A	N/A
5 - A30 Long Cross	0.22	0.00	0.00	0.22	0.22			N/A	N/A

(Default Analysis Set) - 2031 (inc. Local Plan) with Development , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - A350 Little Content Ln - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - B3081 Bleke St - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Profile Type	D10 - 2031 (inc. Local Plan) with Development , PM	'O-D data varies over time' option has been selected but all arms use ONE HOUR profile type, which shapes the flows over time automatically. Are you sure this is correct?
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A30 A350 Ivy Cross Rbt	Standard Roundabout	1, 2, 3, 4, 5	33.99	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2031 (inc. Local Plan) with Development	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A350 Grosvenor Road		ONE HOUR	✓	706	100.000
2 - Longmead		ONE HOUR	✓	305	100.000
3 - A350 Little Content Ln		ONE HOUR	✓	1133	100.000
4 - B3081 Bleke St		ONE HOUR	✓	933	100.000
5 - A30 Long Cross		ONE HOUR	✓	274	100.000

Origin-Destination Data

17:00 - 17:15

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	4	13	365	224	100
	2 - Longmead	37	0	75	129	64
	3 - A350 Little Content Ln	370	45	3	579	136
	4 - B3081 Bleke St	228	144	536	0	25
	5 - A30 Long Cross	73	27	166	8	0

17:15 - 17:30

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	100	100	100	100	100
	2 - Longmead	100	100	100	100	100
	3 - A350 Little Content Ln	100	100	100	100	100
	4 - B3081 Bleke St	100	100	100	100	100
	5 - A30 Long Cross	100	100	100	100	100

17:30 - 17:45

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	100	100	100	100	100
	2 - Longmead	100	100	100	100	100
	3 - A350 Little Content Ln	100	100	100	100	100
	4 - B3081 Bleke St	100	100	100	100	100
	5 - A30 Long Cross	100	100	100	100	100

17:45 - 18:00

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	100	100	100	100	100
	2 - Longmead	100	100	100	100	100
	3 - A350 Little Content Ln	100	100	100	100	100
	4 - B3081 Bleke St	100	100	100	100	100
	5 - A30 Long Cross	100	100	100	100	100

18:00 - 18:15

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	4	13	365	142	177
	2 - Longmead	37	0	75	122	75
	3 - A350 Little Content Ln	370	45	3	418	269
	4 - B3081 Bleke St	138	129	352	0	28
	5 - A30 Long Cross	136	35	290	7	0

18:15 - 18:30

Demand (Veh/hr)

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	4	13	365	142	177
	2 - Longmead	37	0	75	122	75
	3 - A350 Little Content Ln	370	45	3	418	269
	4 - B3081 Bleke St	138	129	352	0	28
	5 - A30 Long Cross	136	35	290	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A350 Grosvenor Road	2 - Longmead	3 - A350 Little Content Ln	4 - B3081 Bleke St	5 - A30 Long Cross
From	1 - A350 Grosvenor Road	0	17	1	0	8
	2 - Longmead	6	0	1	1	2
	3 - A350 Little Content Ln	3	2	0	2	2
	4 - B3081 Bleke St	1	2	1	0	0
	5 - A30 Long Cross	4	4	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A350 Grosvenor Road	0.85	25.61	5.3	27.5	D	648	972
2 - Longmead	0.52	11.38	1.0	4.3	B	280	420
3 - A350 Little Content Ln	0.95	39.46	12.8	66.1	E	1040	1559
4 - B3081 Bleke St	0.96	50.11	13.7	64.6	F	856	1284
5 - A30 Long Cross	0.26	4.11	0.3	1.3	A	251	377

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	532	133	697	1347	0.394	529	534	0.0	0.6	4.398	A
2 - Longmead	230	57	1054	854	0.269	228	172	0.0	0.4	5.744	A
3 - A350 Little Content Ln	853	213	424	1688	0.505	849	858	0.0	1.0	4.271	A
4 - B3081 Bleke St	702	176	569	1679	0.418	700	704	0.0	0.7	3.666	A
5 - A30 Long Cross	206	52	1025	1756	0.117	206	243	0.0	0.1	2.322	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	635	159	1156	1053	0.603	631	600	0.6	1.5	8.472	A
2 - Longmead	274	69	1189	785	0.349	274	598	0.4	0.5	7.032	A
3 - A350 Little Content Ln	1019	255	862	1433	0.711	1013	601	1.0	2.4	8.462	A
4 - B3081 Bleke St	839	210	1274	1248	0.672	834	601	0.7	2.0	8.576	A
5 - A30 Long Cross	246	62	1509	1414	0.174	246	598	0.1	0.2	3.082	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	777	194	1390	923	0.842	765	722	1.5	4.6	21.254	C
2 - Longmead	336	84	1433	662	0.507	334	722	0.5	1.0	10.905	B
3 - A350 Little Content Ln	1247	312	1045	1322	0.944	1215	722	2.4	10.5	27.829	D
4 - B3081 Bleke St	1027	257	1539	1083	0.948	994	722	2.0	10.3	32.543	D
5 - A30 Long Cross	302	75	1811	1201	0.251	301	722	0.2	0.3	4.001	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	777	194	1412	911	0.853	775	733	4.6	5.2	25.609	D
2 - Longmead	336	84	1454	652	0.515	336	733	1.0	1.0	11.378	B
3 - A350 Little Content Ln	1247	312	1057	1315	0.949	1238	733	10.5	12.9	39.464	E
4 - B3081 Bleke St	1027	257	1562	1069	0.961	1013	733	10.3	13.7	50.112	F
5 - A30 Long Cross	302	75	1843	1178	0.256	302	733	0.3	0.3	4.107	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	635	159	893	1224	0.518	651	651	5.2	1.1	6.465	A
2 - Longmead	274	69	1280	737	0.372	276	264	1.0	0.6	7.845	A
3 - A350 Little Content Ln	1019	255	527	1622	0.628	1063	1029	12.9	1.7	6.951	A
4 - B3081 Bleke St	839	210	943	1443	0.581	888	648	13.7	1.4	7.071	A
5 - A30 Long Cross	246	62	1297	1562	0.158	247	534	0.3	0.2	2.739	A

18:15 - 18:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - A350 Grosvenor Road	532	133	708	1329	0.400	533	528	1.1	0.7	4.531	A
2 - Longmead	230	57	1040	858	0.268	231	201	0.6	0.4	5.747	A
3 - A350 Little Content Ln	853	213	423	1685	0.506	856	847	1.7	1.0	4.354	A
4 - B3081 Bleke St	702	176	753	1562	0.450	705	526	1.4	0.8	4.214	A
5 - A30 Long Cross	206	52	1029	1753	0.118	206	429	0.2	0.1	2.328	A

Queue Variation Results for each time segment

17:00 - 17:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.65	0.55	1.00	1.40	1.45			N/A	N/A
2 - Longmead	0.36	0.00	0.00	0.36	0.36			N/A	N/A
3 - A350 Little Content Ln	1.01	0.18	1.01	1.40	1.74			N/A	N/A
4 - B3081 Bleke St	0.71	0.08	0.77	1.41	1.48			N/A	N/A
5 - A30 Long Cross	0.13	0.00	0.00	0.13	0.13			N/A	N/A

17:15 - 17:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	1.48	0.05	0.54	3.70	5.65			N/A	N/A
2 - Longmead	0.53	0.06	0.65	1.33	1.42			N/A	N/A
3 - A350 Little Content Ln	2.38	0.05	0.46	6.56	10.96			N/A	N/A
4 - B3081 Bleke St	1.99	0.04	0.44	5.41	9.09			N/A	N/A
5 - A30 Long Cross	0.21	0.00	0.00	0.21	0.21			N/A	N/A

17:30 - 17:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	4.64	0.04	0.38	11.75	25.05			N/A	N/A
2 - Longmead	1.00	0.03	0.26	1.00	1.00			N/A	N/A
3 - A350 Little Content Ln	10.47	0.08	1.95	30.18	47.13			N/A	N/A
4 - B3081 Bleke St	10.26	0.09	2.72	28.90	43.56			N/A	N/A
5 - A30 Long Cross	0.33	0.03	0.25	0.46	0.48			N/A	N/A

17:45 - 18:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	5.23	0.03	0.33	8.78	27.20			N/A	N/A
2 - Longmead	1.04	0.03	0.29	1.20	4.26			N/A	N/A
3 - A350 Little Content Ln	12.86	0.06	1.01	37.53	66.26			N/A	N/A
4 - B3081 Bleke St	13.72	0.07	1.91	40.16	64.66			N/A	N/A
5 - A30 Long Cross	0.34	0.03	0.33	1.11	1.33			N/A	N/A

18:00 - 18:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	1.09	0.03	0.34	2.60	5.40			N/A	N/A
2 - Longmead	0.60	0.08	0.77	1.35	1.43			N/A	N/A
3 - A350 Little Content Ln	1.72	0.03	0.32	3.22	8.95			N/A	N/A
4 - B3081 Bleke St	1.41	0.03	0.31	2.26	7.11			N/A	N/A
5 - A30 Long Cross	0.19	0.00	0.00	0.19	0.19			N/A	N/A

18:15 - 18:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - A350 Grosvenor Road	0.67	0.03	0.29	1.26	3.00			N/A	N/A
2 - Longmead	0.37	0.03	0.31	0.98	1.24			N/A	N/A
3 - A350 Little Content Ln	1.03	0.03	0.28	1.03	3.60			N/A	N/A
4 - B3081 Bleke St	0.82	0.03	0.27	0.82	2.12			N/A	N/A
5 - A30 Long Cross	0.13	0.00	0.00	0.13	0.13			N/A	N/A

E enquiries@i-transport.co.uk
W www.i-transport.co.uk

Grove House, Lutyens Close
Chineham Court, Basingstoke
Hampshire RG24 8AG
T 01256 338 640
F 01256 338 644

Centurion House
129 Deansgate
Manchester M3 3WR
T 0161 830 2172
F 0161 830 2173

4 Lombard Street
London
EC3V 9HD
T 020 7190 2820
F 020 7190 2821