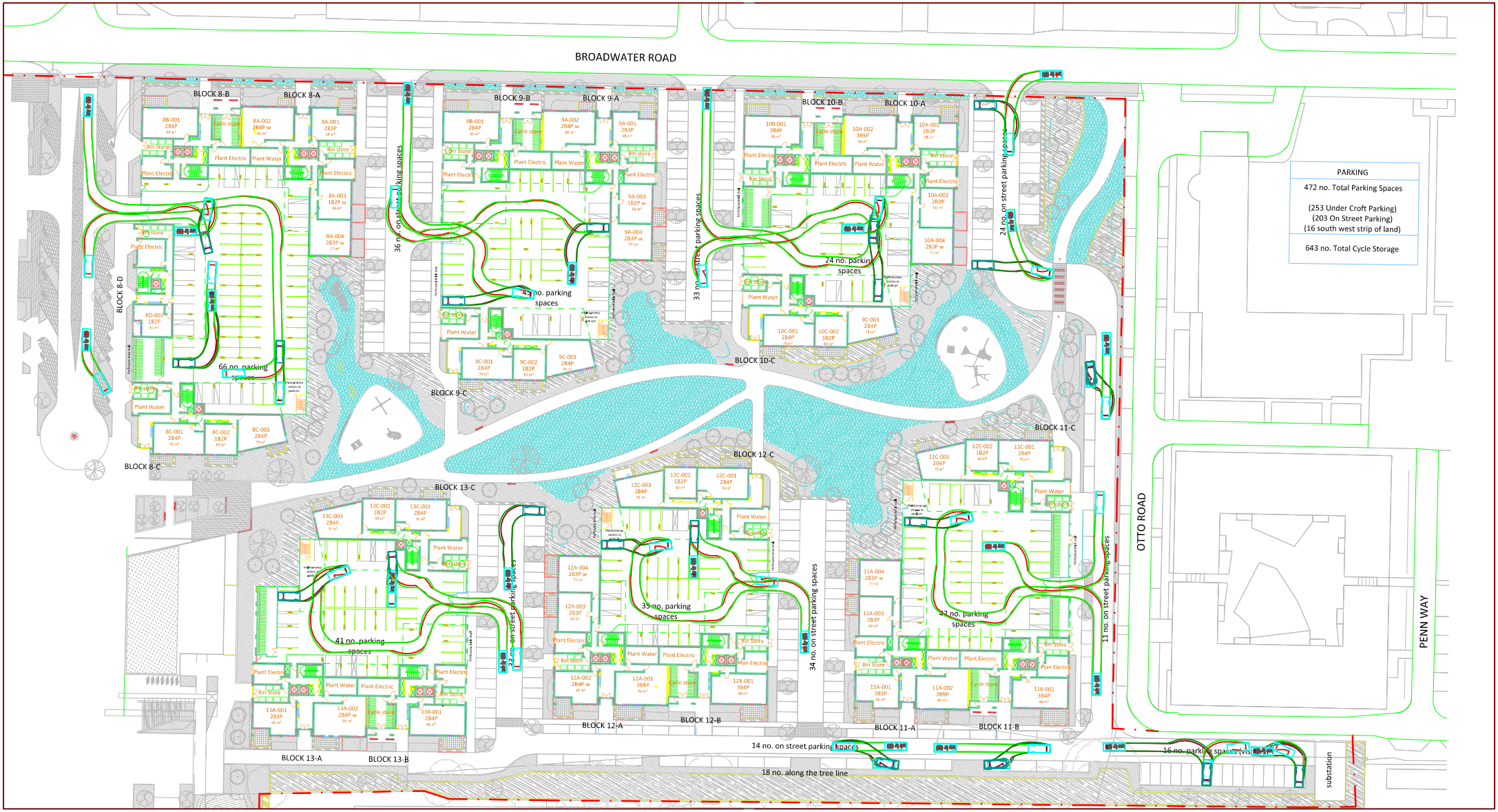
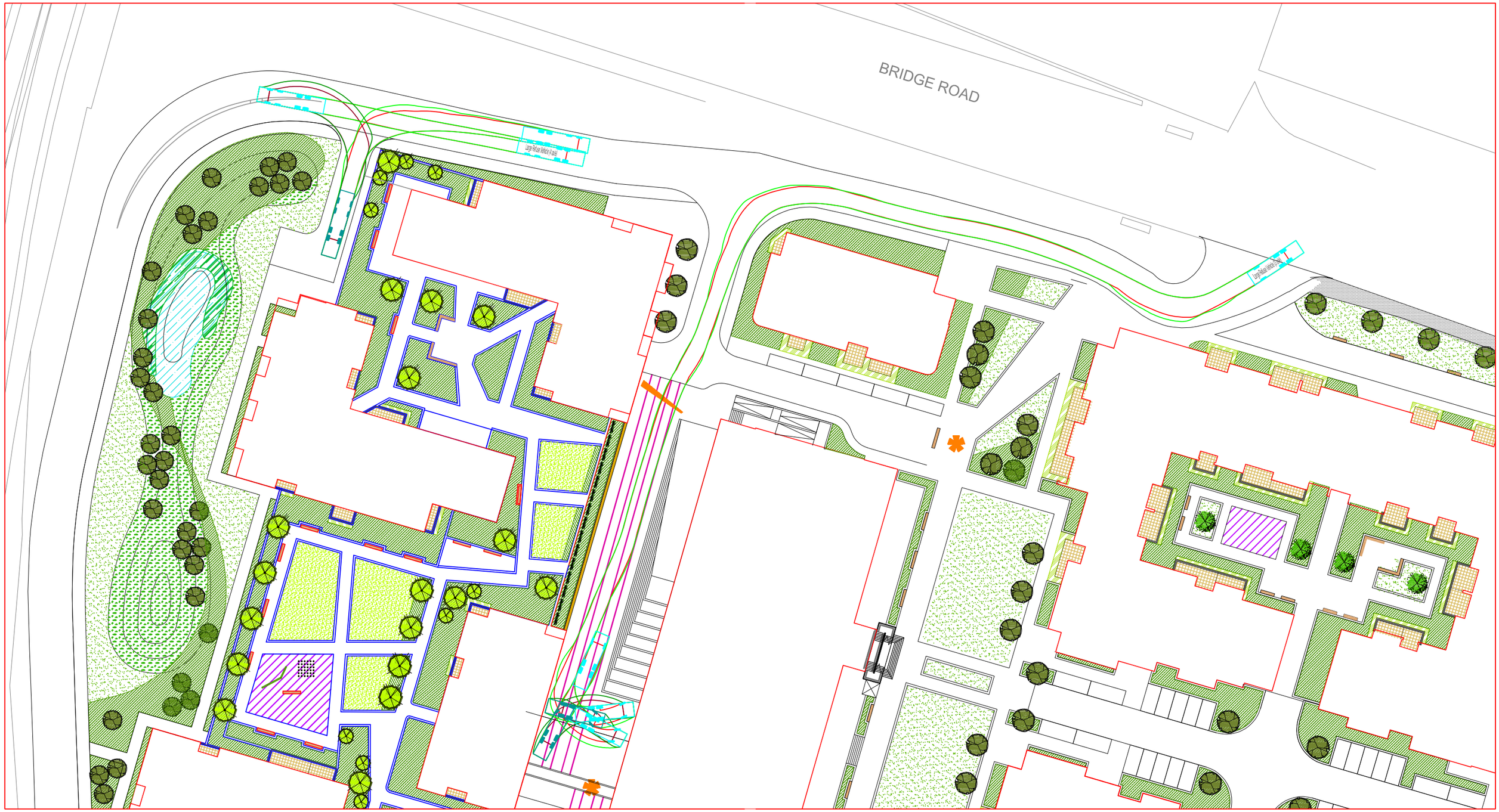


entran
environmental & transportation
7 Greenway Farm | Bath Road | Wick | Bristol | BS30 5RL
TELEPHONE : 0117 937 4077

PROJECT TITLE	Welwyn Garden City - South Site		
DRAWING TITLE	Swept Path Analysis - Large Car		
DATE Jan 2018	SCALE NTS AT A4	STATUS	
DRAWN SA	CHECKED RAF	APPROVED RAF	
DRG SIZE A4	DRAWING NUMBER SK105	REV -	

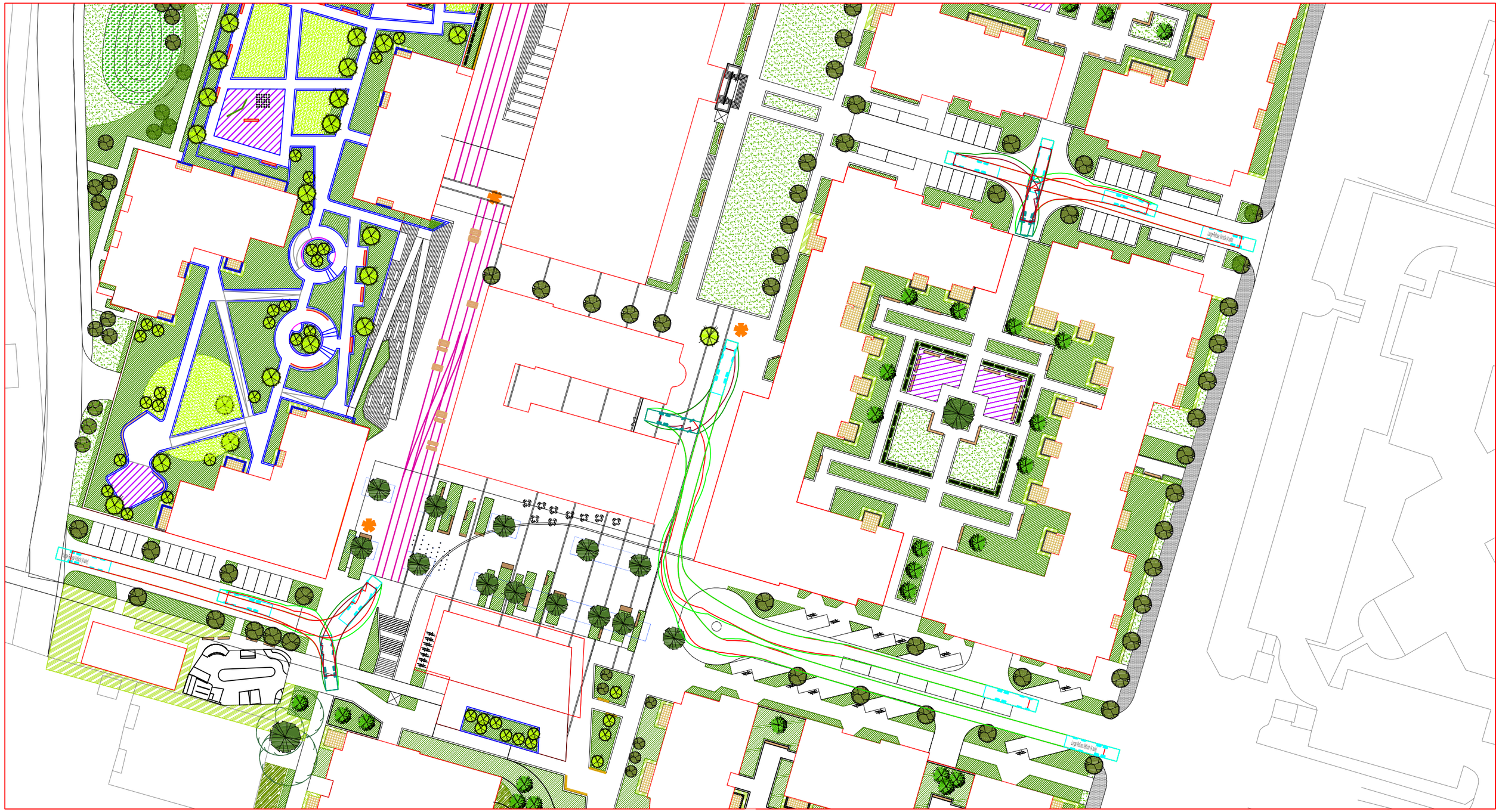
Appendix H

North area servicing swept path analyses



entran
environmental & transportation
7 Greenway Farm | Bath Road | Wick | Bristol | BS30 5RL
TELEPHONE : 0117 937 4077

PROJECT TITLE	Welwyn Garden City - North Site		
DRAWING TITLE	Swept Path Analysis - 4 Axle Refuse Vehicle		
DATE Jan 2018	SCALE NTS AT A4	STATUS	
DRAWN SA	CHECKED RAF	APPROVED RAF	
DRG SIZE A4	DRAWING NUMBER SK106	REV -	



entran
environmental & transportation

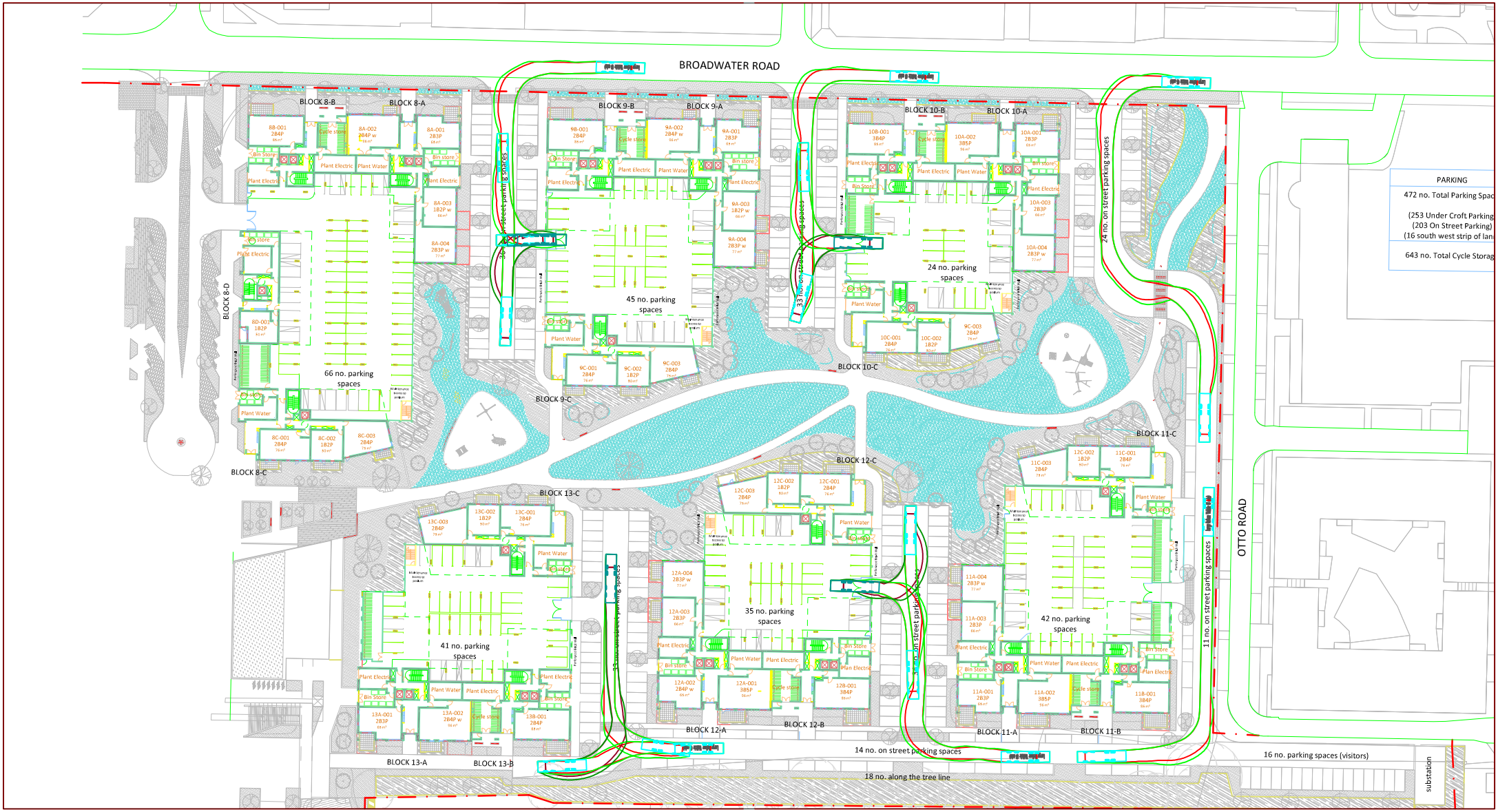
7 Greenway Farm | Bath Road | Wick | Bristol | BS30 5RL

TELEPHONE : 0117 937 4077

PROJECT TITLE	Welwyn Garden City North Site		
DRAWING TITLE	Swept Path Analysis - 4 Axle Refuse Vehicle		
DATE Jan 2018	SCALE NTS AT A4	STATUS	
DRAWN SA	CHECKED RAF	APPROVED RAF	
DRG SIZE A4	DRAWING NUMBER SK104	REV -	

Appendix I

South area refuse vehicle swept path analyses

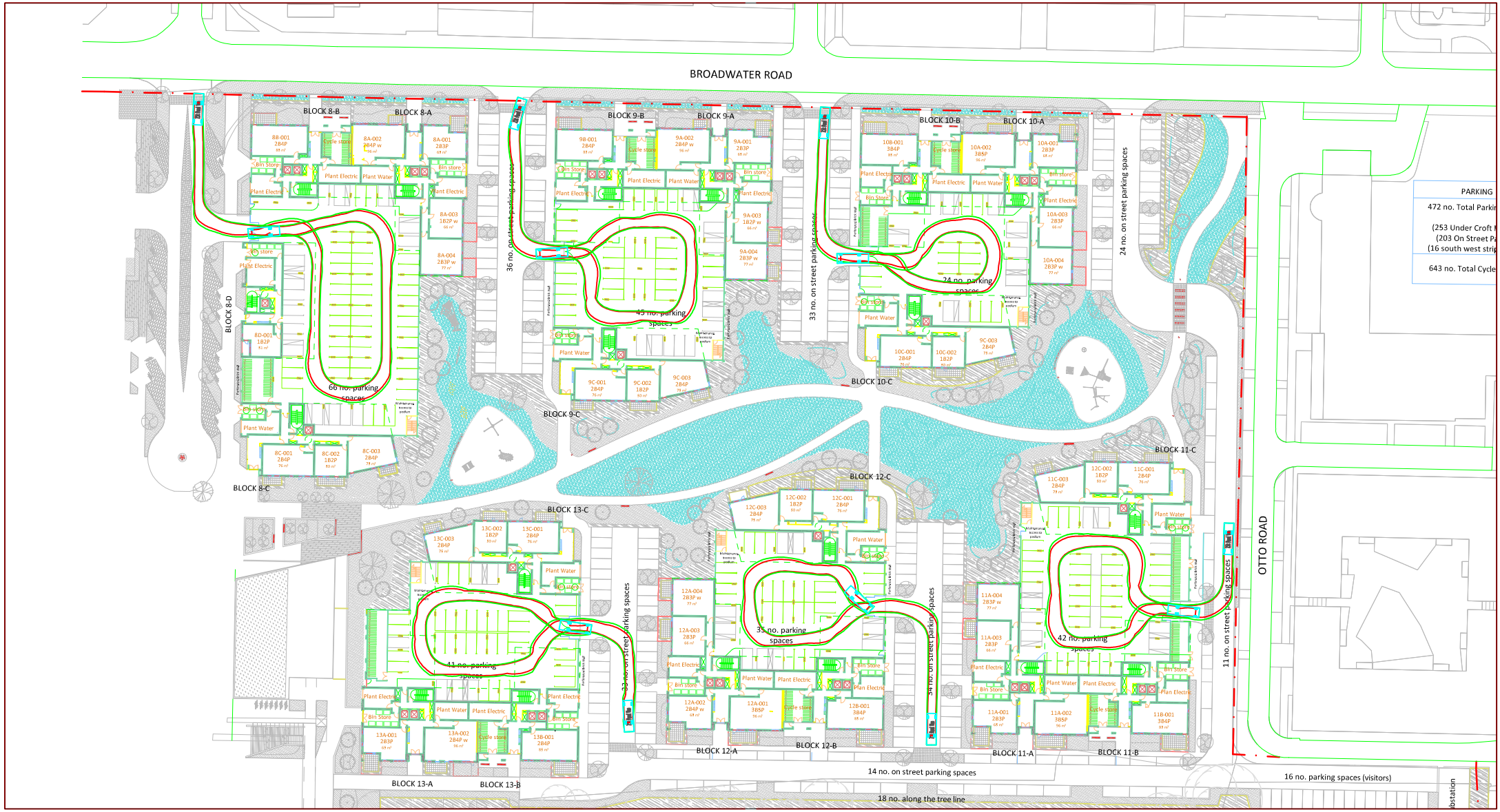


entran
environmental & transportation
7 Greenway Farm | Bath Road | Wick | Bristol | BS30 5RL
TELEPHONE : 0117 937 4077

PROJECT TITLE	Welwyn Garden City - South Side		
DRAWING TITLE	Swept Path Analysis - 4 Axle Refuse Vehicle		
DATE Jan 2018	SCALE NTS AT A4	STATUS	
DRAWN SA	CHECKED RAF	APPROVED RAF	
DRG SIZE A4	DRAWING NUMBER SK101	REV -	

Appendix J

South area daily delivery swept path analyses



entran
environmental & transportation

7 Greenway Farm | Bath Road | Wick | Bristol | BS30 5RL
TELEPHONE : 0117 937 4077

PROJECT TITLE	Welwyn Garden City - South Side		
DRAWING TITLE	Swept Path Analysis - 7.5t Panel Van		
DATE Jan 2018	SCALE AT A4	STATUS	
DRAWN SA	CHECKED RAF	APPROVED RAF	
DRG SIZE A4	DRAWING NUMBER SK102	REV -	

Appendix K

TRICS data

TRICS 7.2.3
Trip Rate F Gross floor area

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use 07 - LEISURE
Category C - LEISURE CENTRE
VEHICLES

Selected regions and areas:

2	SOUTH EAST		
	BU	BUCKINGH	1 days
	OX	OXFORDSH	1 days
	WS	WEST SUS	1 days
3	SOUTH WEST		
	BR	BRISTOL CI	1 days
	DC	DORSET	1 days
5	EAST MIDLANDS		
	LE	LEICESTER	1 days
	LN	LINCOLNSH	1 days
6	WEST MIDLANDS		
	WO	WORCESTI	1 days
7	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YO	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Filtering Stage 2 selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parame
Parameter Gross floor area
Actual Ran 360 to 1700 (units: sqm)
Range Sele 360 to 2000 (units: sqm)

Public Transport Provision:
Selection b Include all surveys

Date Rang 01/01/07 to 13/10/11

This data displays the range of survey dates selected. Only surveys that were conducted within this date range
Selected survey days:
Monday 3 days
Tuesday 3 days
Wednesda 2 days
Thursday 1 days
This data displays the number of selected surveys by day of the week.

Selected survey types:
Manual co 9 days
Directiona 0 days
This data c the total a whilst ATC surveys are undertaking using machines.

Selected Locations:

Town Cent	0
Edge of To	2
Suburban /	2
Edge of To	5
Neighbour	0
Free Stand	0
Not Knowr	0

This data c Edge of To Suburban Neighbou Edge of To Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Z	1
Commerci	0
Developm	0
Residentia	3
Retail Zone	0
Built-Up Zo	0
Village	0
Out of Tow	0
High Stree	0
No Sub Cat	5

This data c Industrial Developm Residentia Retail Zon Built-Up Z Village Out of Tov High Street and No Su

Filtering Stage 3 selection:

Use Class:

D2	9 days

This data c which can be found within the Library module of TRICS®.

Population within 1 mile:

1,001 to 5	1 days
5,001 to 1	3 days
10,001 to :	1 days
15,001 to :	2 days
20,001 to :	1 days
25,001 to !	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to :	2 days
25,001 to	1 days
100,001 to	2 days
125,001 to	2 days
250,001 to	2 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	8 days

This data c within a radius of 5-miles of selected survey sites.

Travel Plan:
No 9 days
This data c and the number of surveys that were undertaken at sites without Travel Plans.

LIST OF SITES relevant to selection parameters

1 BR-07-C-0: SWIMMIN BRISTOL CITY
JUBILEE ROAD
KNOWLE
BRISTOL
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area 900 sqm
Survey dat MONDAY ######## Survey Typ MANUAL

2 BU-07-C-0: SWIM. PO BUCKINGHAMSHIRE
TICKFORD STREET

NEWPORT PAGNELL
Edge of Town
No Sub Category
Total Gross floor area 1020 sqm
Survey dat TUESDAY ######## Survey Typ MANUAL

3 DC-07-C-0 LEISURE CE DORSET
MILLDOWN ROAD

BLANDFORD FORUM
Edge of Town
No Sub Category
Total Gross floor area 1119 sqm
Survey dat MONDAY ######## Survey Typ MANUAL

4 LE-07-C-01 SWIMMIN LEICESTERSHIRE
STATION ROAD
WIGSTON
LEICESTER
Edge of Town
No Sub Category
Total Gross floor area 1200 sqm
Survey dat WEDNESD ######## Survey Typ MANUAL

5 LN-07-C-0: LEISURE CE LINCOLNSHIRE
BIRCHWOOD AVENUE
BIRCHWOOD
LINCOLN
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area 1600 sqm
Survey dat MONDAY ######## Survey Typ MANUAL

6 NY-07-C-0: SWIMMIN NORTH YORKSHIRE
MILL LANE

PICKERING
Edge of Town Centre
No Sub Category
Total Gross floor area 1100 sqm
Survey dat THURSDAY ######## Survey Typ MANUAL
7 OX-07-C-0 SWIMMIN OXFORDSHIRE
BLACKBIRD LEYS ROAD
BLACKBIRD LEYS
OXFORD
Edge of Town
Residential Zone
Total Gross floor area 360 sqm
Survey dat WEDNESD ######## Survey Typ MANUAL
8 WO-07-C-(SWIMMIN WORCESTERSHIRE
WEIR LANE

WORCESTER
Edge of Town
Industrial Zone
Total Gross floor area 850 sqm
Survey dat TUESDAY ######## Survey Typ MANUAL
9 WS-07-C-0 LEISURE CI WEST SUSSEX
STATION ROAD

BILLINGSHURST
Edge of Town Centre
No Sub Category
Total Gross floor area 1700 sqm
Survey dat TUESDAY ######## Survey Typ MANUAL

This sectio it displays the select the day of and whether the survey was a manual classified count or an ATC

TRIP RATE for Land Use 07 - LEISURE/C - LEISURE CENTRE
Calculation Factor: 100 sqm
Count Type: VEHICLES

	ARRIVALS			DEPARTURES			TOTALS		
Time Rang	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00-01:00									
01:00-02:00									
02:00-03:00									
03:00-04:00									
04:00-05:00									
05:00-06:00									
06:00-07:(	8	1031	0.618	8	1031	0.036	8	1031	0.654
07:00-08:(	8	1031	0.715	8	1031	0.582	8	1031	1.297
08:00-09:(	8	1031	0.849	8	1031	0.643	8	1031	1.492

09:00-10:0	8	1031	0.776	8	1031	0.461	8	1031	1.237
10:00-11:0	9	1094	0.731	9	1094	0.65	9	1094	1.381
11:00-12:0	9	1094	0.802	9	1094	0.792	9	1094	1.594
12:00-13:0	9	1094	0.802	9	1094	0.589	9	1094	1.391
13:00-14:0	9	1094	1.076	9	1094	1.117	9	1094	2.193
14:00-15:0	9	1094	0.934	9	1094	0.63	9	1094	1.564
15:00-16:0	9	1094	1.411	9	1094	0.985	9	1094	2.396
16:00-17:0	9	1094	2.01	9	1094	1.787	9	1094	3.797
17:00-18:0	9	1094	2.802	9	1094	2.112	9	1094	4.914
18:00-19:0	9	1094	2.701	9	1094	2.904	9	1094	5.605
19:00-20:0	9	1094	1.949	9	1094	2	9	1094	3.949
20:00-21:0	9	1094	0.761	9	1094	1.625	9	1094	2.386
21:00-22:0	8	1186	0.263	8	1186	1.739	8	1186	2.002
22:00-23:0	1	1200	0.25	1	1200	0.417	1	1200	0.667
23:00-24:00									
Daily Trip Rates:			19.45			19.069			38.519

Parameter summary

Trip rate p 360 - 1700 (units: sqm)
Survey dat 01/01/07 - 13/10/11
Number of 9
Number of 0
Number of 0
Surveys ma 0
This sectio followed b the total r the number of survey days that have been manually removed from the selec

TRICS 7.2.3
Trip Rate F Gross floor area

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use 02 - EMPLOYMENT
Category A - OFFICE
VEHICLES

Selected regions and areas:

2	SOUTH EAST		
	BD	BEDFORDS	1 days
	ES	EAST SUSS	2 days
	HC	HAMPSHIF	1 days
	HF	HERTFORD	2 days
	KC	KENT	5 days
	SC	SURREY	1 days
	SO	SLOUGH	2 days
3	SOUTH WEST		
	BR	BRISTOL CI	1 days
	CW	CORNWAL	1 days
	DC	DORSET	1 days
4	EAST ANGLIA		
	CA	CAMBRIDG	2 days
	NF	NORFOLK	1 days
	SF	SUFFOLK	2 days
6	WEST MIDLANDS		
	WK	WARWICK	1 days
	WM	WEST MID	1 days
7	YORKSHIRE & NORTH LINCOLNSHIRE		
	WY	WEST YOR	1 days
8	NORTH WEST		
	GM	GREATER M	1 days
	LC	LANCASHII	1 days
	MS	MERSEYSII	1 days
9	NORTH		
	DH	DURHAM	2 days
	TV	TEES VALLI	1 days
	TW	TYNE & WI	3 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Filtering Stage 2 selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parame
Parameter Gross floor area
Actual Ran 186 to 9000 (units: sqm)
Range Sele 186 to 10000 (units: sqm)

Public Transport Provision:
Selection b Include all surveys

Date Rang 01/01/07 to 02/10/14

This data displays the range of survey dates selected. Only surveys that were conducted within this date range
Selected survey days:
Monday 4 days
Tuesday 9 days
Wednesda 5 days
Thursday 12 days
Friday 4 days
This data displays the number of selected surveys by day of the week.

Selected survey types:
Manual co 34 days
Directiona 0 days
This data c the total a whilst ATC surveys are undertaking using machines.

Selected Locations:
Town Cent 7
Edge of To 12
Suburban 7
Edge of To 8
Neighbour 0
Free Stand 0
Not Knowr 0
This data c Edge of To Suburban Neighbou Edge of To Town Centre and Not Known.

Selected Location Sub Categories:
Industrial Z 4
Commerci 9
Developm 0
Residentia 6
Retail Zone 0
Built-Up Zo 12
Village 0
Out of Tov 0
High Stree 1
No Sub Ca 2
This data c Industrial Developm Residentia Retail Zon Built-Up Z Village Out of Tov High Street and No Su

Filtering Stage 3 selection:

Use Class:
A1 1 days
B1 33 days
This data c which can be found within the Library module of TRICS®.

Population within 1 mile:
1,001 to 5 1 days
5,001 to 1 7 days

10,001 to : 8 days
15,001 to : 7 days
20,001 to : 1 days
25,001 to ! 10 days
This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:
25,001 to 5 days
50,001 to 2 days
75,001 to 4 days
100,001 tc 1 days
125,001 tc 14 days
250,001 tc 4 days
500,001 oı 4 days
This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:
0.5 or Less 2 days
0.6 to 1.0 14 days
1.1 to 1.5 16 days
1.6 to 2.0 2 days
This data c within a radius of 5-miles of selected survey sites.

Travel Plan:
Yes 12 days
No 22 days
This data c and the number of surveys that were undertaken at sites without Travel Plans.

LIST OF SITES relevant to selection parameters
1 BD-02-A-0: OFFICES BEDFORDSHIRE
BROMHAM ROAD

BEDFORD
Edge of Town Centre
No Sub Category
Total Gross floor area 1469 sqm
Survey dat MONDAY ######## Survey Typ MANUAL
2 BR-02-A-0: PLANNING BRISTOL CITY
ST THOMAS STREET

BRISTOL
Town Centre
Built-Up Zone
Total Gross floor area 5736 sqm
Survey dat FRIDAY ######## Survey Typ MANUAL
3 CA-02-A-0: OFFICE CAMBRIDGESHIRE
NEW ROAD

PETERBOROUGH

Edge of Town Centre
Built-Up Zone
Total Gross floor area 5750 sqm
Survey dat THURSDAY ######## Survey Typ MANUAL
4 CA-02-A-0 OFFICE CAMBRIDGESHIRE
BRETTON WAY

PETERBOROUGH
Edge of Town
Commercial Zone
Total Gross floor area 6483 sqm
Survey dat THURSDAY ######## Survey Typ MANUAL
5 CW-02-A-C INLAND RE CORNWALL
TRINITY STREET

ST AUSTELL
Edge of Town Centre
Built-Up Zone
Total Gross floor area 4850 sqm
Survey dat FRIDAY ######## Survey Typ MANUAL
6 DC-02-A-0 OFFICE DORSET
STATION APPROACH

DORCHESTER
Edge of Town Centre
No Sub Category
Total Gross floor area 1550 sqm
Survey dat THURSDAY ######## Survey Typ MANUAL
7 DH-02-A-0 RPMI OFFI DURHAM
BRINKBURN ROAD

DARLINGTON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area 3372 sqm
Survey dat FRIDAY ######## Survey Typ MANUAL
8 DH-02-A-0 CONSTRUC DURHAM
DURHAM ROAD
BOWBURN
NEAR DURHAM
Edge of Town
Industrial Zone
Total Gross floor area 2000 sqm
Survey dat TUESDAY ######## Survey Typ MANUAL
9 ES-02-A-0 HOUSING (EAST SUSSEX
THE SIDINGS
ORE VALLEY
HASTINGS
Suburban Area (PPS6 Out of Centre)
Residential Zone

Total Gross floor area 186 sqm
Survey dat WEDNESD. ######## Survey Typ MANUAL
10 ES-02-A-1(DISTRICT C EAST SUSSEX
VICARAGE LANE

HAILSHAM
Edge of Town Centre
Built-Up Zone
Total Gross floor area 3640 sqm
Survey dat TUESDAY ######## Survey Typ MANUAL
11 GM-02-A-(LAW OFFIC GREATER MANCHESTER
MOSELEY STREET

MANCHESTER
Town Centre
Built-Up Zone
Total Gross floor area 4200 sqm
Survey dat WEDNESD. ######## Survey Typ MANUAL
12 HC-02-A-0 ERICSON HAMPSHIRE
MAPLEWOOD
CHINEHAM BUSINESS PARK
BASINGSTOKE
Edge of Town
Commercial Zone
Total Gross floor area 9000 sqm
Survey dat THURSDAY ######## Survey Typ MANUAL
13 HF-02-A-0 OFFICE HERTFORDSHIRE
60 VICTORIA STREET

ST ALBANS
Edge of Town Centre
Built-Up Zone
Total Gross floor area 610 sqm
Survey dat WEDNESD. ######## Survey Typ MANUAL
14 HF-02-A-0 OFFICES HERTFORDSHIRE
STATION WAY

ST ALBANS
Edge of Town Centre
Residential Zone
Total Gross floor area 5000 sqm
Survey dat THURSDAY ######## Survey Typ MANUAL
15 KC-02-A-0 LAND REG KENT
FOREST ROAD
CAMDEN PARK
TUNBRIDGE WELLS
Edge of Town
Residential Zone
Total Gross floor area 5677 sqm
Survey dat TUESDAY ######## Survey Typ MANUAL

16 KC-02-A-07 KCC HIGHV KENT
KAVELIN WAY
HENWOOD IND. ESTATE
ASHFORD
Edge of Town
Commercial Zone
Total Gross floor area 2525 sqm
Survey dat MONDAY ######## Survey Typ MANUAL
17 KC-02-A-08 KCC HIGHV KENT
ST MICHAEL'S CLOSE
CLAY WOOD
AYLESFORD
Edge of Town
Industrial Zone
Total Gross floor area 3168 sqm
Survey dat MONDAY ######## Survey Typ MANUAL
18 KC-02-A-09 COUNCIL C KENT
SANDLING ROAD

MAIDSTONE
Edge of Town Centre
Built-Up Zone
Total Gross floor area 1500 sqm
Survey dat WEDNESD ######## Survey Typ MANUAL
19 KC-02-A-10 COUNCIL C KENT
SANDLING ROAD

MAIDSTONE
Edge of Town Centre
Built-Up Zone
Total Gross floor area 2900 sqm
Survey dat WEDNESD ######## Survey Typ MANUAL
20 LC-02-A-09 OFFICES LANCASHIRE
FURTHERGATE

BLACKBURN
Suburban Area (PPS6 Out of Centre)
Built-Up Zone
Total Gross floor area 2600 sqm
Survey dat TUESDAY ######## Survey Typ MANUAL
21 MS-02-A-0 OFFICES MERSEYSIDE
CASTLE STREET

LIVERPOOL
Town Centre
Commercial Zone
Total Gross floor area 9000 sqm
Survey dat TUESDAY ######## Survey Typ MANUAL
22 NF-02-A-0 COUNCIL C NORFOLK
CHAPEL STREET

KING'S LYNN
Edge of Town Centre
Built-Up Zone
Total Gross floor area 5500 sqm
Survey dat THURSDAY ######## Survey Typ MANUAL
23 SC-02-A-15 ACCOUNTA SURREY
BOXGROVE ROAD

GUILDFORD
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area 1896 sqm
Survey dat TUESDAY ######## Survey Typ MANUAL
24 SF-02-A-01 COUNCIL C SUFFOLK
BEETONS WAY

BURY ST. EDMUNDS
Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Gross floor area 8000 sqm
Survey dat MONDAY ######## Survey Typ MANUAL
25 SF-02-A-02 OFFICES SUFFOLK
BATH STREET

IPSWICH
Edge of Town Centre
Commercial Zone
Total Gross floor area 6505 sqm
Survey dat FRIDAY ######## Survey Typ MANUAL
26 SO-02-A-0 COUNCIL C SLOUGH
HIGH STREET

SLOUGH
Town Centre
High Street
Total Gross floor area 1800 sqm
Survey dat THURSDAY ######## Survey Typ MANUAL
27 SO-02-A-0 COUNCIL C SLOUGH
BATH ROAD

SLOUGH
Edge of Town Centre
Built-Up Zone
Total Gross floor area 5050 sqm
Survey dat THURSDAY ######## Survey Typ MANUAL
28 TV-02-A-04 COUNCIL C TEES VALLEY
CORPORATION ROAD

MIDDLESBROUGH

Town Centre
Commercial Zone
Total Gross floor area 3950 sqm
Survey dat TUESDAY ######## Survey Typ MANUAL
29 TW-02-A-C DEVELOPM TYNE & WEAR
KINGFISHER BOULEVARD
LEMINGTON
NEWCASTLE UPON TYNE
Edge of Town
Commercial Zone
Total Gross floor area 6480 sqm
Survey dat THURSDAY ######## Survey Typ MANUAL
30 TW-02-A-C HOUSING (TYNE & WEAR
EARLSWAY
TEAM VALLEY TRAD. EST.
GATESHEAD
Edge of Town
Industrial Zone
Total Gross floor area 2500 sqm
Survey dat TUESDAY ######## Survey Typ MANUAL
31 TW-02-A-C TELEVISIOI TYNE & WEAR
DELTA BANK ROAD
METRO RIVERSIDE PARK
GATESHEAD
Suburban Area (PPS6 Out of Centre)
Commercial Zone
Total Gross floor area 1500 sqm
Survey dat TUESDAY ######## Survey Typ MANUAL
32 WK-02-A-C OFFICES WARWICKSHIRE
WARWICK ROAD

COVENTRY
Town Centre
Built-Up Zone
Total Gross floor area 960 sqm
Survey dat THURSDAY ######## Survey Typ MANUAL
33 WM-02-A- BANK ADM WEST MIDLANDS
BRUNSWICK STREET
BRINDLEY PLACE
BIRMINGHAM
Town Centre
Commercial Zone
Total Gross floor area 8200 sqm
Survey dat THURSDAY ######## Survey Typ MANUAL
34 WY-02-A-C OFFICE WEST YORKSHIRE
VICTORIA ROAD
HEADINGLEY
LEEDS
Suburban Area (PPS6 Out of Centre)
Residential Zone

Total Gross floor area 2696 sqm
Survey dat THURSDAY ######## Survey Typ MANUAL

This sectio it displays the select the day of and whether the survey was a manual classified count or an ATC

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
Calculation Factor: 100 sqm
Count Type: VEHICLES

	ARRIVALS			DEPARTURES			TOTALS		
Time Rang	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00-00:30									
00:30-01:00									
01:00-01:30									
01:30-02:00									
02:00-02:30									
02:30-03:00									
03:00-03:30									
03:30-04:00									
04:00-04:30									
04:30-05:00									
05:00-05:30									
05:30-06:00									
06:00-06:30									
06:30-07:00									
07:00-07:3	34	4007	0.206	34	4007	0.023	34	4007	0.229
07:30-08:0	34	4007	0.457	34	4007	0.058	34	4007	0.515
08:00-08:3	34	4007	0.754	34	4007	0.102	34	4007	0.856
08:30-09:0	34	4007	0.878	34	4007	0.113	34	4007	0.991
09:00-09:3	34	4007	0.707	34	4007	0.153	34	4007	0.86
09:30-10:0	34	4007	0.42	34	4007	0.173	34	4007	0.593
10:00-10:3	34	4007	0.258	34	4007	0.162	34	4007	0.42
10:30-11:0	34	4007	0.186	34	4007	0.176	34	4007	0.362
11:00-11:3	34	4007	0.165	34	4007	0.175	34	4007	0.34
11:30-12:0	34	4007	0.181	34	4007	0.169	34	4007	0.35
12:00-12:3	34	4007	0.185	34	4007	0.244	34	4007	0.429
12:30-13:0	34	4007	0.219	34	4007	0.248	34	4007	0.467
13:00-13:3	34	4007	0.237	34	4007	0.245	34	4007	0.482
13:30-14:0	34	4007	0.239	34	4007	0.197	34	4007	0.436
14:00-14:3	34	4007	0.184	34	4007	0.162	34	4007	0.346
14:30-15:0	34	4007	0.159	34	4007	0.233	34	4007	0.392
15:00-15:3	34	4007	0.12	34	4007	0.233	34	4007	0.353
15:30-16:0	34	4007	0.146	34	4007	0.245	34	4007	0.391
16:00-16:3	34	4007	0.139	34	4007	0.553	34	4007	0.692
16:30-17:0	34	4007	0.097	34	4007	0.605	34	4007	0.702
17:00-17:3	34	4007	0.115	34	4007	0.934	34	4007	1.049
17:30-18:0	34	4007	0.065	34	4007	0.534	34	4007	0.599
18:00-18:3	34	4007	0.033	34	4007	0.263	34	4007	0.296

18:30-19:0	34	4007	0.016	34	4007	0.131	34	4007	0.147
19:00-19:30									
19:30-20:00									
20:00-20:30									
20:30-21:00									
21:00-21:30									
21:30-22:00									
22:00-22:30									
22:30-23:00									
23:00-23:30									
23:30-24:00									
Daily Trip Rates:			6.166			6.131			12.297

Parameter summary

Trip rate p 186 - 9000 (units: sqm)
Survey dat 01/01/07 - 02/10/14
Number of 34
Number of 0
Number of 0
Surveys ma 5
This sectio followed b the total r the number of survey days that have been manually removed from the selec

TRICS 7.2.3
Trip Rate F Gross floor area

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use 05 - HEALTH
Category E - CLINICS
VEHICLES

Selected regions and areas:

3	SOUTH WEST		
	CW	CORNWAL	1 days
5	EAST MIDLANDS		
	LN	LINCOLNSH	2 days
9	NORTH		
	TW	TYNE & WI	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Filtering Stage 2 selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parame
Parameter Gross floor area
Actual Ran 75 to 1400 (units: sqm)
Range Sele 75 to 1790 (units: sqm)

Public Transport Provision:
Selection b Include all surveys

Date Rang 01/01/07 to 10/06/13

This data displays the range of survey dates selected. Only surveys that were conducted within this date range
Selected survey days:
Monday 2 days
Tuesday 1 days
Wednesda 1 days
This data displays the number of selected surveys by day of the week.

Selected survey types:
Manual co 4 days
Directiona 0 days
This data c the total a whilst ATC surveys are undertaking using machines.

Selected Locations:

Town Cent	0
Edge of To	3
Suburban /	1
Edge of To	0
Neighbour	0
Free Stand	0
Not Knowr	0

This data c Edge of Tc Suburban Neighbou Edge of Tc Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Z	0
Commerci	0
Developm	0
Residentia	3
Retail Zone	0
Built-Up Zc	1
Village	0
Out of Tov	0
High Stree	0
No Sub Cat	0

This data c Industrial Developm Residentia Retail Zon Built-Up Z Village Out of Tov High Street and No Su

Filtering Stage 3 selection:

Use Class:

C3	1 days
D1	3 days

This data c which can be found within the Library module of TRICS®.

Population within 1 mile:

1,001 to 5	1 days
10,001 to :	1 days
20,001 to :	1 days
25,001 to !	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to :	1 days
25,001 to	1 days
50,001 to	1 days
125,001 tc	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	3 days

This data c within a radius of 5-miles of selected survey sites.

Travel Plan:

No	4 days

This data c and the number of surveys that were undertaken at sites without Travel Plans.

LIST OF SITES relevant to selection parameters

1 CW-05-E-0 CHIROPRA CORNWALL
FALMOUTH ROAD

TRURO
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area 75 sqm
Survey dat MONDAY ######## Survey Typ MANUAL
2 LN-05-E-01 CLINIC LINCOLNSHIRE
AVENUE ROAD

GRANTHAM
Edge of Town Centre
Built-Up Zone
Total Gross floor area 1400 sqm
Survey dat WEDNESD ######## Survey Typ MANUAL
3 LN-05-E-02 CHIROPRA LINCOLNSHIRE
NORTH PARADE

GRANTHAM
Edge of Town Centre
Residential Zone
Total Gross floor area 210 sqm
Survey dat MONDAY ######## Survey Typ MANUAL
4 TW-05-E-0 ALTERNAT TYNE & WEAR
HAWKEY'S LANE
CHRITON
NORTH SHIELDS
Edge of Town Centre
Residential Zone
Total Gross floor area 215 sqm
Survey dat TUESDAY ######## Survey Typ MANUAL

This sectio it displays the select the day of and whether the survey was a manual classified count or an ATC

TRIP RATE for Land Use 05 - HEALTH/E - CLINICS
Calculation Factor: 100 sqm
Count Type: VEHICLES

	ARRIVALS			DEPARTURES			TOTALS		
Time Rang	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00-01:00									
01:00-02:00									
02:00-03:00									
03:00-04:00									
04:00-05:00									
05:00-06:00									
06:00-07:0	1	1400	0	1	1400	0	1	1400	0
07:00-08:0	2	808	0.124	2	808	0	2	808	0.124
08:00-09:0	4	475	1.474	4	475	0.263	4	475	1.737
09:00-10:0	4	475	1.895	4	475	1.105	4	475	3

10:00-11:0	4	475	0.947	4	475	1.947	4	475	2.894
11:00-12:0	4	475	1.368	4	475	1	4	475	2.368
12:00-13:0	4	475	1.368	4	475	1.474	4	475	2.842
13:00-14:0	4	475	1.368	4	475	1.263	4	475	2.631
14:00-15:0	3	608	0.932	3	608	0.986	3	608	1.918
15:00-16:0	3	608	0.877	3	608	1.096	3	608	1.973
16:00-17:0	3	608	0.986	3	608	1.205	3	608	2.191
17:00-18:0	3	608	0.438	3	608	1.096	3	608	1.534
18:00-19:0	3	608	0.055	3	608	0.219	3	608	0.274
19:00-20:0	2	805	0	2	805	0	2	805	0
20:00-21:00									
21:00-22:00									
22:00-23:00									
23:00-24:00									
Daily Trip Rates:			11.832			11.654			23.486

Parameter summary

Trip rate p 75 - 1400 (units: sqm)
Survey dat 01/01/07 - 10/06/13
Number of 4
Number of 0
Number of 0
Surveys m 0
This sectio followed b the total r the number of survey days that have been manually removed from the selec

TRICS 7.2.3
Trip Rate F Gross floor area

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use 07 - LEISURE
Category Q - COMMUNITY CENTRE
VEHICLES

Selected regions and areas:

2	SOUTH EAST		
	EX	ESSEX	1 days
4	EAST ANGLIA		
	CA	CAMBRIDG	1 days
5	EAST MIDLANDS		
	NT	NOTTINGH	1 days
9	NORTH		
	DH	DURHAM	1 days
	TV	TEES VALLI	1 days
	TW	TYNE & WI	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Filtering Stage 2 selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parame
Parameter Gross floor area
Actual Ran 225 to 800 (units: sqm)
Range Sele 210 to 1000 (units: sqm)

Public Transport Provision:
Selection b Include all surveys

Date Rang 01/01/07 to 04/10/13

This data displays the range of survey dates selected. Only surveys that were conducted within this date range
Selected survey days:
Monday 1 days
Wednesda 1 days
Thursday 2 days
Friday 2 days
This data displays the number of selected surveys by day of the week.

Selected survey types:
Manual co 6 days
Directiona 0 days
This data c the total a whilst ATC surveys are undertaking using machines.

Selected Locations:
Town Cent 0
Edge of To 1

Suburban / 2
Edge of To 0
Neighbour 3
Free Stand 0
Not Knowr 0
This data c Edge of Tc Suburban Neighbou Edge of Tc Town Centre and Not Known.

Selected Location Sub Categories:
Industrial Z 0
Commerci 0
Developm 0
Residentia 3
Retail Zone 0
Built-Up Zc 0
Village 1
Out of Tov 0
High Stree 0
No Sub Cat 2
This data c Industrial Developm Residentia Retail Zon Built-Up Z Village Out of Tov High Street and No Su

Filtering Stage 3 selection:

Use Class:
D2 6 days
This data c which can be found within the Library module of TRICS®.

Population within 1 mile:
5,001 to 1 1 days
15,001 to 1 days
20,001 to 1 days
25,001 to 2 days
50,001 to 1 days
This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:
75,001 to 1 days
100,001 tc 1 days
125,001 tc 1 days
250,001 tc 2 days
500,001 or 1 days
This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:
0.6 to 1.0 5 days
1.6 to 2.0 1 days
This data c within a radius of 5-miles of selected survey sites.

Travel Plan:
No 6 days

This data c and the number of surveys that were undertaken at sites without Travel Plans.

LIST OF SITES relevant to selection parameters

1 CA-07-Q-0 COMMUN CAMBRIDGESHIRE
HIGH STREET

COTTENHAM
Neighbourhood Centre (PPS6 Local Centre)
Village
Total Gross floor area 500 sqm
Survey dat MONDAY ######## Survey Typ MANUAL

2 DH-07-Q-0 COM. CEN DURHAM
JUTLAND ROAD

HARTLEPOOL
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Gross floor area 500 sqm
Survey dat FRIDAY ######## Survey Typ MANUAL

3 EX-07-Q-0 COMMUN ESSEX
BORDERS LANE

LOUGHTON
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total Gross floor area 352 sqm
Survey dat THURSDAY ######## Survey Typ MANUAL

4 NT-07-Q-0 COMMUN NOTTINGHAMSHIRE
61B MANSFIELD ROAD

NOTTINGHAM
Edge of Town Centre
Residential Zone
Total Gross floor area 800 sqm
Survey dat THURSDAY ######## Survey Typ MANUAL

5 TV-07-Q-0 COM. CEN TEES VALLEY
FULBECK ROAD

MIDDLESBROUGH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area 225 sqm
Survey dat WEDNESD ######## Survey Typ MANUAL

6 TW-07-Q-(COMMUN TYNE & WEAR
HIGH STREET
WREKENTON
GATESHEAD
Neighbourhood Centre (PPS6 Local Centre)
No Sub Category
Total Gross floor area 450 sqm

Survey dat FRIDAY ######## Survey Typ MANUAL

This sectio it displays the select the day of and whether the survey was a manual classified count or an ATC

TRIP RATE for Land Use 07 - LEISURE/Q - COMMUNITY CENTRE
Calculation Factor: 100 sqm
Count Type: VEHICLES

	ARRIVALS			DEPARTURES			TOTALS		
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Rang	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	Rate
00:00-01:00									
01:00-02:00									
02:00-03:00									
03:00-04:00									
04:00-05:00									
05:00-06:00									
06:00-07:00									
07:00-08:0	1	450	0	1	450	0	1	450	0
08:00-09:0	6	471	0.672	6	471	0.389	6	471	1.061
09:00-10:0	6	471	1.203	6	471	0.495	6	471	1.698
10:00-11:0	6	471	0.495	6	471	0.354	6	471	0.849
11:00-12:0	6	471	0.743	6	471	0.955	6	471	1.698
12:00-13:0	5	520	1.153	5	520	0.999	5	520	2.152
13:00-14:0	5	520	0.5	5	520	0.423	5	520	0.923
14:00-15:0	5	520	0.461	5	520	0.5	5	520	0.961
15:00-16:0	5	520	1.191	5	520	1.345	5	520	2.536
16:00-17:0	5	520	0.115	5	520	0.922	5	520	1.037
17:00-18:0	5	520	0.576	5	520	0.269	5	520	0.845
18:00-19:0	5	520	0.615	5	520	0.269	5	520	0.884
19:00-20:0	5	520	0.5	5	520	0.461	5	520	0.961
20:00-21:0	5	520	0.154	5	520	0.653	5	520	0.807
21:00-22:0	5	520	0	5	520	0.384	5	520	0.384
22:00-23:00									
23:00-24:00									
Daily Trip Rates:			8.378			8.418			16.796

Parameter summary

Trip rate p 225 - 800 (units: sqm)
Survey dat 01/01/07 - 04/10/13
Number of 6
Number of 0
Number of 0
Surveys ma 0
This sectio followed b the total r the number of survey days that have been manually removed from the selec

TRICS 7.2.3
Trip Rate F Gross floor area

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use 07 - LEISURE
Category C - LEISURE CENTRE
VEHICLES

Selected regions and areas:

2	SOUTH EAST		
	BU	BUCKINGH	1 days
	OX	OXFORDSH	1 days
	WS	WEST SUS	1 days
3	SOUTH WEST		
	BR	BRISTOL C	1 days
	DC	DORSET	1 days
5	EAST MIDLANDS		
	LE	LEICESTER	1 days
	LN	LINCOLNSI	1 days
6	WEST MIDLANDS		
	WO	WORCESTI	1 days
7	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YO	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Filtering Stage 2 selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calcul
Parameter Gross floor area
Actual Ran 360 to 1700 (units: sqm)
Range Sele 360 to 2000 (units: sqm)

Public Transport Provision:
Selection b Include all surveys

Date Rang 01/01/07 to 13/10/11

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.
Selected survey days:

Monday	3 days
Tuesday	3 days
Wednesda	2 days
Thursday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual co	9 days
Directiona	0 days

This data c the total a whilst ATC surveys are undertaking using machines.

Selected Locations:

Town Cent	0
Edge of To	2
Suburban	2
Edge of To	5
Neighbour	0
Free Stand	0
Not Known	0

This data c Edge of To Suburban Neighbou Edge of To Town Centre and Not Known.

Selected Location Sub Categories:

Industrial	1
Commerci	0
Developm	0
Residentia	3
Retail Zone	0
Built-Up Z	0
Village	0
Out of Tov	0

High Stree 0
No Sub Ca 5
This data c Industrial Developm Residentia Retail Zon Built-Up Z Village Out of Tov High Street and No Sub Category.

Filtering Stage 3 selection:

Use Class:
D2 9 days
This data c which can be found within the Library module of TRICS®.

Population within 1 mile:
1,001 to 5 1 days
5,001 to 1 3 days
10,001 to 1 days
15,001 to 2 days
20,001 to 1 days
25,001 to 1 days
This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:
5,001 to 2 days
25,001 to 1 days
100,001 tc 2 days
125,001 tc 2 days
250,001 tc 2 days
This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:
0.6 to 1.0 1 days
1.1 to 1.5 8 days
This data c within a radius of 5-miles of selected survey sites.

Travel Plan:
No 9 days
This data c and the number of surveys that were undertaken at sites without Travel Plans.

LIST OF SITES relevant to selection parameters
1 BR-07-C-0 SWIMMIN BRISTOL CITY
JUBILEE ROAD
KNOWLE
BRISTOL
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area 900 sqm
Survey dat MONDAY ######## Survey Typ MANUAL
2 BU-07-C-0 SWIM. PO BUCKINGHAMSHIRE
TICKFORD STREET

NEWPORT PAGNELL
Edge of Town
No Sub Category
Total Gross floor area 1020 sqm
Survey dat TUESDAY ######## Survey Typ MANUAL
3 DC-07-C-0 LEISURE CI DORSET
MILLDOWN ROAD

BLANDFORD FORUM
Edge of Town
No Sub Category
Total Gross floor area 1119 sqm
Survey dat MONDAY ######## Survey Typ MANUAL
4 LE-07-C-01 SWIMMIN LEICESTERSHIRE
STATION ROAD
WIGSTON
LEICESTER
Edge of Town
No Sub Category
Total Gross floor area 1200 sqm
Survey dat WEDNESD ######## Survey Typ MANUAL

5 LN-07-C-0: LEISURE CI LINCOLNSHIRE
BIRCHWOOD AVENUE
BIRCHWOOD
LINCOLN
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area 1600 sqm
Survey dat MONDAY ######## Survey Typ MANUAL
6 NY-07-C-0 SWIMMIN NORTH YORKSHIRE
MILL LANE

PICKERING
Edge of Town Centre
No Sub Category
Total Gross floor area 1100 sqm
Survey dat THURSDA\ ######## Survey Typ MANUAL
7 OX-07-C-0 SWIMMIN OXFORDSHIRE
BLACKBIRD LEYS ROAD
BLACKBIRD LEYS
OXFORD
Edge of Town
Residential Zone
Total Gross floor area 360 sqm
Survey dat WEDNESD ######## Survey Typ MANUAL
8 WO-07-C-(SWIMMIN WORCESTERSHIRE
WEIR LANE

WORCESTER
Edge of Town
Industrial Zone
Total Gross floor area 850 sqm
Survey dat TUESDAY ######## Survey Typ MANUAL
9 WS-07-C-0 LEISURE CI WEST SUSSEX
STATION ROAD

BILLINGSHURST
Edge of Town Centre
No Sub Category
Total Gross floor area 1700 sqm
Survey dat TUESDAY ######## Survey Typ MANUAL

This sectio it displays the select the day of and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 07 - LEISURE/C - LEISURE CENTRE
Calculation Factor: 100 sqm
Count Type: VEHICLES

	ARRIVALS			DEPARTURES			TOTALS		
Time Rang	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00-01:00									
01:00-02:00									
02:00-03:00									
03:00-04:00									
04:00-05:00									
05:00-06:00									
06:00-07:(	8	1031	0.618	8	1031	0.036	8	1031	0.654
07:00-08:(	8	1031	0.715	8	1031	0.582	8	1031	1.297
08:00-09:(	8	1031	0.849	8	1031	0.643	8	1031	1.492
09:00-10:(	8	1031	0.776	8	1031	0.461	8	1031	1.237
10:00-11:(	9	1094	0.731	9	1094	0.65	9	1094	1.381
11:00-12:(	9	1094	0.802	9	1094	0.792	9	1094	1.594
12:00-13:(	9	1094	0.802	9	1094	0.589	9	1094	1.391
13:00-14:(	9	1094	1.076	9	1094	1.117	9	1094	2.193
14:00-15:(	9	1094	0.934	9	1094	0.63	9	1094	1.564
15:00-16:(	9	1094	1.411	9	1094	0.985	9	1094	2.396
16:00-17:(	9	1094	2.01	9	1094	1.787	9	1094	3.797
17:00-18:(	9	1094	2.802	9	1094	2.112	9	1094	4.914
18:00-19:(	9	1094	2.701	9	1094	2.904	9	1094	5.605

19:00-20:0	9	1094	1.949	9	1094	2	9	1094	3.949
20:00-21:0	9	1094	0.761	9	1094	1.625	9	1094	2.386
21:00-22:0	8	1186	0.263	8	1186	1.739	8	1186	2.002
22:00-23:0	1	1200	0.25	1	1200	0.417	1	1200	0.667
23:00-24:00									
Daily Trip Rates:			19.45			19.069			38.519

Parameter summary

Trip rate p 360 - 1700 (units: sqm)
Survey dat 01/01/07 - 13/10/11
Number of 9
Number of 0
Number of 0
Surveys m 0
This sectio followed b the total r the number of survey days that have been manually removed from the selected set outside of the standard filtering pro

TRICS 7.2.3
Trip Rate F Gross floor area

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use 07 - LEISURE
Category I - ART GALLERIES/MUSEUMS/EXHIBITIONS
VEHICLES

Selected regions and areas:

3	SOUTH WEST		
	DC	DORSET	1 days
5	EAST MIDLANDS		
	DS	DERBYSHIF	1 days
16	ULSTER (REPUBLIC OF IRELAND)		
	DN	DONEGAL	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Filtering Stage 2 selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parame
Parameter Gross floor area
Actual Ran 790 to 2090 (units: sqm)
Range Sele 790 to 3000 (units: sqm)

Public Transport Provision:
Selection b Include all surveys

Date Rang 01/01/07 to 16/09/09

This data displays the range of survey dates selected. Only surveys that were conducted within this date range
Selected survey days:
Wednesda 1 days
Thursday 1 days
Saturday 1 days
This data displays the number of selected surveys by day of the week.

Selected survey types:
Manual co 3 days
Directiona 0 days
This data c the total a whilst ATC surveys are undertaking using machines.

Selected Locations:

Town Cent	2
Edge of To	1
Suburban /	0
Edge of To	0
Neighbour	0
Free Stand	0
Not Knowr	0

This data c Edge of Tc Suburban Neighbou Edge of Tc Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Z	0
Commerci	0
Developm	0
Residentia	0
Retail Zone	0
Built-Up Zc	1
Village	0
Out of Tov	0
High Stree	1
No Sub Cat	1

This data c Industrial Developm Residentia Retail Zon Built-Up Z Village Out of Tov High Street and No Su

Filtering Stage 3 selection:

Use Class:

D1 3 days

This data c which can be found within the Library module of TRICS®.

Population within 1 mile:

1,001 to 5 1 days

10,001 to 1 days

25,001 to 1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 1 days

125,001 tc 2 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0 1 days

1.1 to 1.5 2 days

This data c within a radius of 5-miles of selected survey sites.

Travel Plan:

No 3 days

This data c and the number of surveys that were undertaken at sites without Travel Plans.

LIST OF SITES relevant to selection parameters

1 DC-07-I-02 MUSEUM DORSET
HIGH STREET

POOLE
Town Centre
No Sub Category
Total Gross floor area 2000 sqm

Survey dat THURSDAY ######## Survey Typ MANUAL
2 DN-07-I-01 COUNTY M DONEGAL
HIGH ROAD

LETTERKENNY
Edge of Town Centre
High Street
Total Gross floor area 790 sqm
Survey dat WEDNESD. ######## Survey Typ MANUAL
3 DS-07-I-01 ART GALLE DERBYSHIRE
THE STRAND

DERBY
Town Centre
Built-Up Zone
Total Gross floor area 2090 sqm
Survey dat SATURDAY ######## Survey Typ MANUAL

This sectio it displays the select the day of and whether the survey was a manual classified count or an ATC

TRIP RATE for Land Use 07 - LEISURE/I - ART GALLERIES/MUSEUMS/EXHIBITIONS
Calculation Factor: 100 sqm
Count Type: VEHICLES

	ARRIVALS			DEPARTURES			TOTALS		
Time Rang	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00-01:00									
01:00-02:00									
02:00-03:00									
03:00-04:00									
04:00-05:00									
05:00-06:00									
06:00-07:00									
07:00-08:0	1	2090	0.096	1	2090	0.096	1	2090	0.192
08:00-09:0	2	2045	0.049	2	2045	0	2	2045	0.049
09:00-10:0	3	1627	0.205	3	1627	0.041	3	1627	0.246
10:00-11:0	3	1627	0.307	3	1627	0.184	3	1627	0.491
11:00-12:0	3	1627	0.41	3	1627	0.389	3	1627	0.799
12:00-13:0	3	1627	0.184	3	1627	0.246	3	1627	0.43
13:00-14:0	3	1627	0.389	3	1627	0.184	3	1627	0.573
14:00-15:0	3	1627	0.348	3	1627	0.389	3	1627	0.737
15:00-16:0	3	1627	0.246	3	1627	0.266	3	1627	0.512
16:00-17:0	3	1627	0.102	3	1627	0.369	3	1627	0.471
17:00-18:0	3	1627	0	3	1627	0.02	3	1627	0.02
18:00-19:00									
19:00-20:00									
20:00-21:00									
21:00-22:00									

22:00-23:00			
23:00-24:00			
Daily Trip Rates:	2.336	2.184	4.52

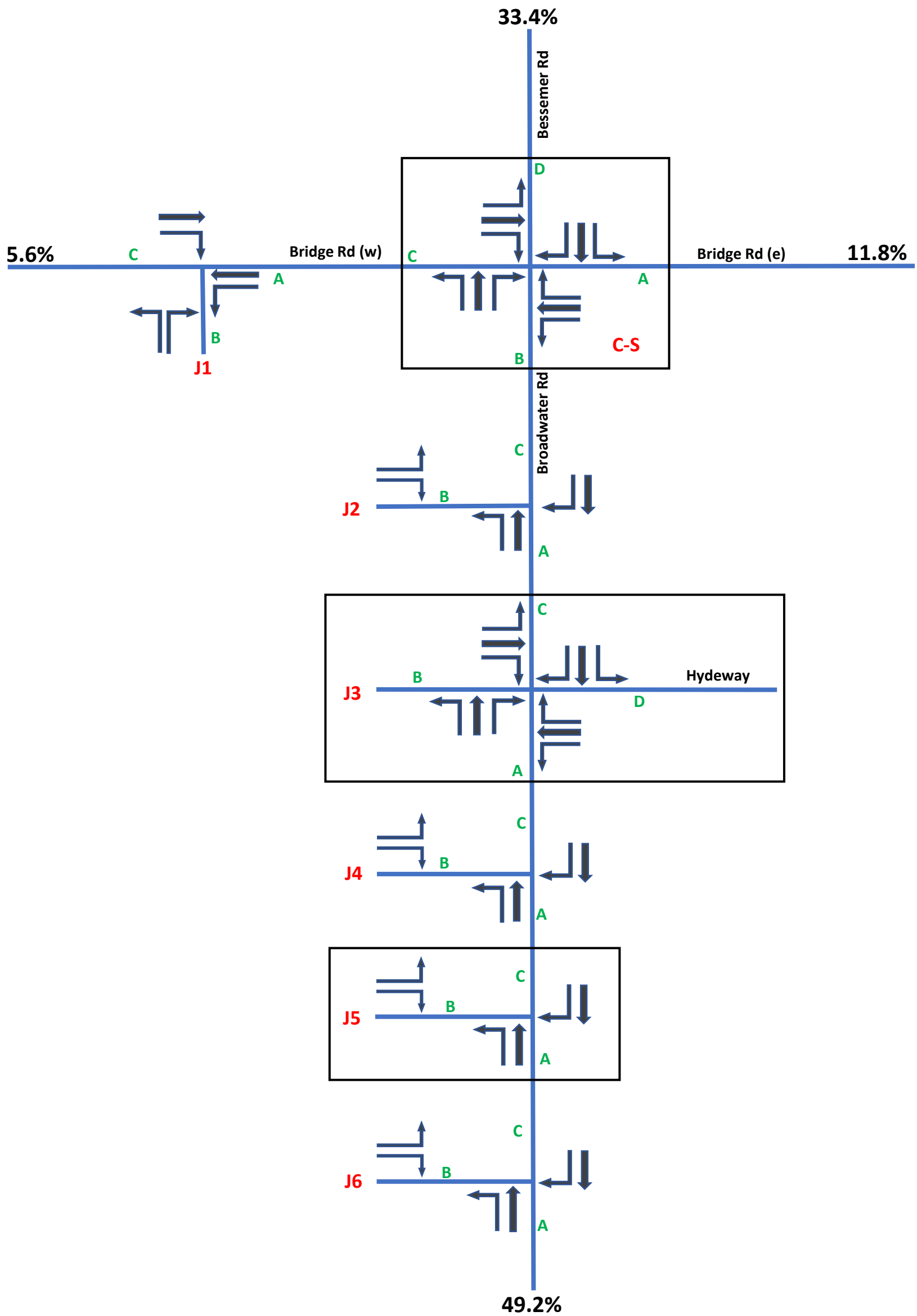
Parameter summary

Trip rate p 790 - 2090 (units: sqm)
Survey dat 01/01/07 - 16/09/09
Number of 2
Number of 1
Number of 0
Surveys ma 0
This sectio followed b the total r the number of survey days that have been manually removed from the selec

Appendix L

Trip distribution

Network Vehicle Trip Distribution



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environmental & transportation

Wheat Quarter - Welwyn Garden City

Base AM Peak

J1

x	A	B	C
A	\	0	677
B	0	\	0
C	793	0	\

J2

x	A	B	C
A	\	0	632
B	0	\	0
C	488	0	\

J3

x	A	B	C	D
A	\	5	501	77
B	89	\	21	15
C	390	15	\	35
D	5	29	17	\

J4

x	A	B	C
A	\	0	578
B	0	\	0
C	484	0	\

J5

x	A	B	C
A	\	0	578
B	0	\	0
C	84	0	\

J6

x	A	B	C
A	\	0	578
B	0	\	0
C	484	0	\

C-S

x	A	B	C	D
A	\	126	416	140
B	108	\	30	494
C	323	122	\	317
D	47	240	231	\

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Wheat Quarter - Welwyn Garden City

Base PM Peak

J1

x	A	B	C
A	\	0	804
B	0	\	0
C	681	0	\

J2

x	A	B	C
A	\	0	597
B	0	\	0
C	583	0	\

J3

x	A	B	C	D
A	\	10	447	64
B	87	\	25	33
C	530	26	\	145
D	15	9	21	\

J4

x	A	B	C
A	\	0	521
B	0	\	0
C	632	0	\

J5

x	A	B	C
A	\	0	521
B	0	\	0
C	632	0	\

J6

x	A	B	C
A	\	0	521
B	0	\	0
C	632	0	\

C-S

x	A	B	C	D
A	\	115	395	63
B	131	\	86	380
C	303	67	\	287
D	63	401	323	\

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Wheat Quarter - Welwyn Garden City

Development AM Peak

J1

x	A	B	C
A	\	43	26
B	124	\	8
C	4	3	\

J2

x	A	B	C
A	\	6	252
B	1	\	2
C	81	1	\

J3

x	A	B	C	D
A	\	11	145	0
B	109	\	113	0
C	181	13	\	0
D	0	0	0	\

J4

x	A	B	C
A	\	1	132
B	23	\	24
C	204	2	\

J5

x	A	B	C
A	\	1	116
B	16	\	17
C	219	1	\

J6

x	A	B	C
A	\	5	38
B	77	\	79
C	291	5	\

C-S

x	A	B	C	D
A	\	5	5	0
B	55	\	49	154
C	15	70	\	44
D	0	17	16	\

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Wheat Quarter - Welwyn Garden City

Development PM Peak

J1

x	A	B	C
A	\	126	18
B	116	\	7
C	7	25	\

J2

x	**A**	**B**	**C**
A	\	3	178
B	5	\	6
C	261	3	\

J3

x	**A**	**B**	**C**	**D**
A	\	103	97	0
B	80	\	84	0
C	248	107	\	0
D	0	0	0	\

J4

x	A	B	C
A	\	22	183
B	16	\	17
C	244	22	\

J5

x	**A**	**B**	**C**
A	\	15	193
B	11	\	12
C	239	16	\

J6

x	**A**	**B**	**C**
A	\	72	152
B	54	\	56
C	219	74	\

C-S

x	**A**	**B**	**C**	**D**
A	\	51	16	0
B	40	\	85	115
C	14	85	\	41
D	0	146	44	\

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Wheat Quarter - Welwyn Garden City

Development + Base AM Peak

J1

x	A	B	C
A	\	43	703
B	124	\	8
C	797	3	\

J2

x	A	B	C
A	\	6	884
B	1	\	2
C	569	1	\

J3

x	A	B	C	D
A	\	16	646	77
B	198	\	134	15
C	571	28	\	35
D	5	29	17	\

J4

x	A	B	C
A	\	1	710
B	23	\	24
C	688	2	\

J5

x	A	B	C
A	\	1	694
B	16	\	17
C	303	1	\

J6

x	A	B	C
A	\	5	616
B	77	\	79
C	775	5	\

C-S

x	A	B	C	D
A	\	131	421	140
B	163	\	79	648
C	338	192	\	361
D	47	257	247	\

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Wheat Quarter - Welwyn Garden City

Development + Base PM Peak

J1

x	A	B	C
A	\	126	822
B	116	\	7
C	688	25	\

J2

x	A	B	C
A	\	3	775
B	5	\	6
C	844	3	\

J3

x	A	B	C	D
A	\	113	544	64
B	167	\	109	33
C	778	133	\	145
D	15	9	21	\

J4

x	A	B	C
A	\	22	704
B	16	\	17
C	876	22	\

J5

x	A	B	C
A	\	15	714
B	11	\	12
C	871	16	\

J6

x	A	B	C
A	\	72	673
B	54	\	56
C	851	74	\

C-S

x	A	B	C	D
A	\	166	411	63
B	171	\	171	495
C	317	152	\	328
D	63	547	367	\

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Appendix M

PICADY output files

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.2.5947
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Filename: Junction 1.j9
Path: C:\clients\EnTran\Welwyn Gdn city\Jan 2018
Report generation date: 15/01/2018 14:55:01

»Base + Development, AM
»Base + Development, PM

Summary of junction performance

	AM						PM					
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Network Residual Capacity
	Base + Development											
Stream B-AC	1.1	28.83	0.54	D	A	5 %	1.3	35.62	0.57	E	A	0 %
Stream C-AB	0.0	8.18	0.01	A		[Stream B-AC]	0.1	8.78	0.07	A		[Stream B-AC]

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. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	Junction 1
Location	Welwyn Garden City
Site number	
Date	14/01/2018
Version	
Status	
Identifier	Broadwater Rd
Client	
Jobnumber	
Enumerator	AL
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	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	Base + Development	AM	ONE HOUR	07:45	09:15	15	✓
D2	Base + Development	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

Base + Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Junction 1	T-Junction	Two-way	2.28	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	5	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm type
A	East		Major
B	South		Minor
C	West		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - West	7.84			75.0	✓	1.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - South	One lane	4.31	86	67

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	610	0.102	0.258	0.162	0.369
1	B-C	753	0.106	0.269	-	-
1	C-B	617	0.220	0.220	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	Base + 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 (PCU/hr)	Scaling Factor (%)
A - East		ONE HOUR	✓	746	100.000
B - South		ONE HOUR	✓	132	100.000
C - West		ONE HOUR	✓	800	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - East	B - South	C - West
From	A - East	0	43	703
	B - South	124	0	8
	C - West	797	3	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - East	B - South	C - West
From	A - East	0	0	0
	B - South	0	0	0
	C - West	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.54	28.83	1.1	D	121	182
C-AB	0.01	8.18	0.0	A	3	4
C-A					731	1097
A-B					39	59
A-C					645	968

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	99	25	380	0.261	98	0.0	0.3	12.685	B
C-AB	2	0.57	497	0.005	2	0.0	0.0	7.282	A
C-A	600	150			600				
A-B	32	8			32				
A-C	529	132			529				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	119	30	334	0.355	118	0.3	0.5	16.592	C
C-AB	3	0.68	474	0.006	3	0.0	0.0	7.638	A
C-A	716	179			716				
A-B	39	10			39				
A-C	632	158			632				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	145	36	270	0.539	143	0.5	1.1	27.945	D
C-AB	3	0.84	443	0.008	3	0.0	0.0	8.182	A
C-A	877	219			877				
A-B	47	12			47				
A-C	774	194			774				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	145	36	270	0.539	145	1.1	1.1	28.833	D
C-AB	3	0.84	443	0.008	3	0.0	0.0	8.182	A
C-A	877	219			877				
A-B	47	12			47				
A-C	774	194			774				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	119	30	334	0.355	121	1.1	0.6	17.057	C
C-AB	3	0.68	474	0.006	3	0.0	0.0	7.639	A
C-A	716	179			716				
A-B	39	10			39				
A-C	632	158			632				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	99	25	380	0.261	100	0.6	0.4	12.883	B
C-AB	2	0.57	497	0.005	2	0.0	0.0	7.285	A
C-A	600	150			600				
A-B	32	8			32				
A-C	529	132			529				

Base + Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Junction 1	T-Junction	Two-way	2.59	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	0	Stream B-AC

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	Base + Development	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - East		ONE HOUR	✓	948	100.000
B - South		ONE HOUR	✓	123	100.000
C - West		ONE HOUR	✓	713	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - East	B - South	C - West
From	A - East	0	126	822
	B - South	116	0	7
	C - West	688	25	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - East	B - South	C - West
From	A - East	0	0	0
	B - South	0	0	0
	C - West	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.57	35.62	1.3	E	113	169
C-AB	0.07	8.78	0.1	A	25	38
C-A					629	944
A-B					116	173
A-C					754	1131

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	93	23	357	0.259	91	0.0	0.3	13.468	B
C-AB	20	5	482	0.041	20	0.0	0.0	7.790	A
C-A	517	129			517				
A-B	95	24			95				
A-C	619	155			619				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	111	28	306	0.361	110	0.3	0.5	18.230	C
C-AB	24	6	462	0.052	24	0.0	0.1	8.216	A
C-A	617	154			617				
A-B	113	28			113				
A-C	739	185			739				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	135	34	236	0.574	133	0.5	1.2	34.021	D
C-AB	31	8	441	0.071	31	0.1	0.1	8.775	A
C-A	754	188			754				
A-B	139	35			139				
A-C	905	226			905				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	135	34	236	0.574	135	1.2	1.3	35.621	E
C-AB	31	8	441	0.071	31	0.1	0.1	8.780	A
C-A	754	188			754				
A-B	139	35			139				
A-C	905	226			905				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	111	28	306	0.361	113	1.3	0.6	18.917	C
C-AB	24	6	462	0.052	24	0.1	0.1	8.223	A
C-A	617	154			617				
A-B	113	28			113				
A-C	739	185			739				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	93	23	357	0.259	94	0.6	0.4	13.703	B
C-AB	20	5	482	0.041	20	0.1	0.0	7.798	A
C-A	517	129			517				
A-B	95	24			95				
A-C	619	155			619				

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.2.5947
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Filename: Junction 2.j9
Path: C:\clients\EnTran\Welwyn Gdn city\Jan 2018
Report generation date: 15/01/2018 14:55:45

»Base + Development, AM
»Base + Development, PM

Summary of junction performance

	AM						PM					
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Network Residual Capacity
	Base + Development											
Stream B-AC	0.0	0.00	0.00	A	A	170 %	0.0	13.84	0.04	B	A	36 %
Stream C-AB	0.0	8.96	0.00	A		[Stream C-AB]	0.0	8.29	0.01	A		[Stream B-AC]

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. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	Junction 2
Location	Welwyn Garden City
Site number	
Date	14/01/2018
Version	
Status	
Identifier	Broadwater Rd
Client	
Jobnumber	
Enumerator	AL
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	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	Base + Development	AM	ONE HOUR	07:45	09:15	15	✓
D2	Base + Development	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

Base + Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Junction 2	T-Junction	Two-way	0.01	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	170	Stream C-AB

Arms

Arms

Arm	Name	Description	Arm type
A	South		Major
B	West		Minor
C	North		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - North	6.75			104.0	✓	1.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - West	One lane	3.41	28	20

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	517	0.091	0.230	0.145	0.329
1	B-C	663	0.098	0.248	-	-
1	C-B	634	0.238	0.238	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	Base + 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 (PCU/hr)	Scaling Factor (%)
A - South		ONE HOUR	✓	890	100.000
B - West		ONE HOUR	✓	3	100.000
C - North		ONE HOUR	✓	570	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - South	B - West	C - North
From	A - South	0	6	884
	B - West	1	0	2
	C - North	569	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - South	B - West	C - North
From	A - South	0	0	0
	B - West	0	0	0
	C - North	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.00	0.00	0.0	A	0	0
C-AB	0.00	8.96	0.0	A	0.92	1
C-A					522	783
A-B					6	8
A-C					811	1217

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	0	0	375	0.000	0	0.0	0.0	0.000	A
C-AB	0.75	0.19	476	0.002	0.75	0.0	0.0	7.580	A
C-A	428	107			428				
A-B	5	1			5				
A-C	666	166			666				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	0	0	333	0.000	0	0.0	0.0	0.000	A
C-AB	0.90	0.23	445	0.002	0.90	0.0	0.0	8.105	A
C-A	512	128			512				
A-B	5	1			5				
A-C	795	199			795				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	0	0	272	0.000	0	0.0	0.0	0.000	A
C-AB	1	0.28	403	0.003	1	0.0	0.0	8.957	A
C-A	626	157			626				
A-B	7	2			7				
A-C	973	243			973				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	0	0	272	0.000	0	0.0	0.0	0.000	A
C-AB	1	0.28	403	0.003	1	0.0	0.0	8.957	A
C-A	626	157			626				
A-B	7	2			7				
A-C	973	243			973				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	0	0	333	0.000	0	0.0	0.0	0.000	A
C-AB	0.90	0.23	445	0.002	0.90	0.0	0.0	8.105	A
C-A	512	128			512				
A-B	5	1			5				
A-C	795	199			795				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	0	0	375	0.000	0	0.0	0.0	0.000	A
C-AB	0.75	0.19	476	0.002	0.76	0.0	0.0	7.580	A
C-A	428	107			428				
A-B	5	1			5				
A-C	666	166			666				

Base + Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Junction 2	T-Junction	Two-way	0.11	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	36	Stream B-AC

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	Base + Development	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - South		ONE HOUR	✓	778	100.000
B - West		ONE HOUR	✓	11	100.000
C - North		ONE HOUR	✓	847	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - South	B - West	C - North
From	A - South	0	3	775
	B - West	5	0	6
	C - North	844	3	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - South	B - West	C - North
From	A - South	0	0	0
	B - West	0	0	0
	C - North	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.04	13.84	0.0	B	10	15
C-AB	0.01	8.29	0.0	A	3	4
C-A					774	1162
A-B					3	4
A-C					711	1067

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	8	2	381	0.022	8	0.0	0.0	9.650	A
C-AB	2	0.57	498	0.005	2	0.0	0.0	7.263	A
C-A	635	159			635				
A-B	2	0.56			2				
A-C	583	146			583				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	10	2	337	0.029	10	0.0	0.0	10.998	B
C-AB	3	0.68	472	0.006	3	0.0	0.0	7.665	A
C-A	759	190			759				
A-B	3	0.67			3				
A-C	697	174			697				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	12	3	272	0.045	12	0.0	0.0	13.839	B
C-AB	3	0.84	438	0.008	3	0.0	0.0	8.287	A
C-A	929	232			929				
A-B	3	0.83			3				
A-C	853	213			853				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	12	3	272	0.045	12	0.0	0.0	13.845	B
C-AB	3	0.84	438	0.008	3	0.0	0.0	8.289	A
C-A	929	232			929				
A-B	3	0.83			3				
A-C	853	213			853				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	10	2	337	0.029	10	0.0	0.0	11.007	B
C-AB	3	0.68	472	0.006	3	0.0	0.0	7.668	A
C-A	759	190			759				
A-B	3	0.67			3				
A-C	697	174			697				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	8	2	381	0.022	8	0.0	0.0	9.655	A
C-AB	2	0.57	498	0.005	2	0.0	0.0	7.266	A
C-A	635	159			635				
A-B	2	0.56			2				
A-C	583	146			583				

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.2.5947
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Filename: Junction 3.j9
Path: C:\clients\EnTran\Welwyn Gdn city\Jan 2018
Report generation date: 15/01/2018 14:56:22

»Base + Development, AM
»Base + Development, PM

Summary of junction performance

	AM						PM					
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Network Residual Capacity
	Base + Development											
Stream B-CD	12.9	289.05	1.11	F	F	-20 % [Stream B-AD]	19.4	450.54	1.27	F	F	-23 % [Stream B-AD]
Stream B-AD	16.5	269.33	1.11	F			22.6	439.76	1.26	F		
Stream A-BCD	0.2	6.66	0.16	A			0.3	8.49	0.18	A		
Stream D-AB	0.1	15.03	0.09	C			0.1	14.84	0.09	B		
Stream D-BC	0.2	22.85	0.17	C			0.4	50.49	0.27	F		
Stream C-ABD	0.1	7.23	0.06	A			0.7	6.45	0.30	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. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	Junction 3
Location	Welwyn Garden City
Site number	
Date	14/01/2018
Version	
Status	
Identifier	Broadwater Rd
Client	
Jobnumber	
Enumerator	AL
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	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	Base + Development	AM	ONE HOUR	07:45	09:15	15	✓
D2	Base + Development	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

Base + Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Junction 3	Crossroads	Two-way	55.43	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-20	Stream B-AD

Arms

Arms

Arm	Name	Description	Arm type
A	South		Major
B	West		Minor
C	North		Major
D	East		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A - South	6.75			250.0	✓	1.00
C - North	6.75			250.0	✓	1.00

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - West	One lane plus flare	10.00	4.75	3.04	3.02	2.93		1.00	32	36
D - East	One lane plus flare	10.00	4.74	4.06	3.78	3.62		1.00	60	31

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	719	-	-	-	-	-	-	0.269	0.385	0.269	-	-	-
1	B-A	549	0.097	0.244	0.244	-	-	-	0.154	0.349	-	0.244	0.244	0.122
1	B-C	680	0.101	0.255	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	532	0.094	0.237	0.237	-	-	-	0.149	0.338	0.149	-	-	-
1	B-D, offside lane	549	0.097	0.244	0.244	-	-	-	0.154	0.349	0.154	-	-	-
1	C-B	719	0.269	0.269	0.385	-	-	-	-	-	-	-	-	-
1	D-A	688	-	-	-	-	-	-	0.258	-	0.102	-	-	-
1	D-B, nearside lane	547	0.153	0.153	0.348	-	-	-	0.244	0.244	0.096	-	-	-
1	D-B, offside lane	547	0.153	0.153	0.348	-	-	-	0.244	0.244	0.096	-	-	-
1	D-C	547	-	0.153	0.348	0.122	0.244	0.244	0.244	0.244	0.096	-	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	Base + 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 (PCU/hr)	Scaling Factor (%)
A - South		ONE HOUR	✓	739	100.000
B - West		ONE HOUR	✓	347	100.000
C - North		ONE HOUR	✓	634	100.000
D - East		ONE HOUR	✓	51	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - South	B - West	C - North	D - East
From	A - South	0	16	646	77
	B - West	198	0	134	15
	C - North	571	28	0	35
	D - East	5	29	17	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - South	B - West	C - North	D - East
From	A - South	0	0	0	0
	B - West	0	0	0	0
	C - North	0	0	0	0
	D - East	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-CD	1.11	289.05	12.9	F	135	203
B-AD	1.11	269.33	16.5	F	183	275
A-BCD	0.16	6.66	0.2	A	82	122
A-B					14	22
A-C					582	873
D-AB	0.09	15.03	0.1	C	19	28
D-BC	0.17	22.85	0.2	C	28	42
C-ABD	0.06	7.23	0.1	A	27	41
C-D					32	48
C-A					523	784

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-CD	109	27	427	0.256	108	0.0	0.3	11.235	B
B-AD	152	38	326	0.467	149	0.0	0.8	19.975	C
A-BCD	63	16	637	0.099	62	0.0	0.1	6.263	A
A-B	12	3			12				
A-C	482	120			482				
D-AB	15	4	370	0.041	15	0.0	0.0	10.148	B
D-BC	23	6	313	0.074	23	0.0	0.1	12.407	B
C-ABD	22	5	579	0.038	22	0.0	0.0	6.453	A
C-D	26	7			26				
C-A	429	107			429				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-CD	131	33	322	0.408	130	0.3	0.7	18.621	C
B-AD	181	45	275	0.658	177	0.8	1.7	35.623	E
A-BCD	78	20	636	0.123	78	0.1	0.2	6.459	A
A-B	14	4			14				
A-C	572	143			572				
D-AB	18	5	326	0.056	18	0.0	0.1	11.685	B
D-BC	27	7	266	0.104	27	0.1	0.1	15.103	C
C-ABD	26	7	557	0.047	26	0.0	0.1	6.778	A
C-D	31	8			31				
C-A	512	128			512				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-CD	164	41	147	1.112	133	0.7	8.3	159.477	F
B-AD	218	55	199	1.095	185	1.7	10.0	147.699	F
A-BCD	104	26	644	0.161	103	0.2	0.2	6.655	A
A-B	17	4			17				
A-C	693	173			693				
D-AB	23	6	264	0.088	23	0.1	0.1	14.936	B
D-BC	33	8	199	0.166	33	0.1	0.2	21.588	C
C-ABD	33	8	532	0.063	33	0.1	0.1	7.226	A
C-D	38	10			38				
C-A	626	157			626				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-CD	164	41	150	1.091	146	8.3	12.9	289.055	F
B-AD	218	55	197	1.109	192	10.0	16.5	269.329	F
A-BCD	104	26	644	0.161	104	0.2	0.2	6.661	A
A-B	17	4			17				
A-C	693	173			693				
D-AB	23	6	263	0.089	23	0.1	0.1	15.032	C
D-BC	33	8	190	0.173	33	0.2	0.2	22.852	C
C-ABD	33	8	531	0.063	33	0.1	0.1	7.231	A
C-D	38	10			38				
C-A	626	157			626				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-CD	133	33	182	0.730	168	12.9	4.1	194.141	F
B-AD	179	45	242	0.741	227	16.5	4.5	179.508	F
A-BCD	78	20	635	0.123	79	0.2	0.2	6.470	A
A-B	14	4			14				
A-C	572	143			572				
D-AB	18	5	325	0.057	19	0.1	0.1	11.745	B
D-BC	27	7	252	0.109	28	0.2	0.1	16.092	C
C-ABD	26	7	557	0.047	26	0.1	0.1	6.785	A
C-D	31	8			31				
C-A	512	128			512				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-CD	109	27	403	0.271	124	4.1	0.4	13.578	B
B-AD	152	38	321	0.473	166	4.5	0.9	25.114	D
A-BCD	63	16	637	0.099	63	0.2	0.1	6.275	A
A-B	12	3			12				
A-C	482	120			482				
D-AB	15	4	369	0.041	15	0.1	0.0	10.178	B
D-BC	23	6	309	0.075	23	0.1	0.1	12.632	B
C-ABD	22	5	579	0.038	22	0.1	0.0	6.462	A
C-D	26	7			26				
C-A	429	107			429				

Base + Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Junction 3	Crossroads	Two-way	66.08	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-23	Stream B-AD

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	Base + Development	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - South		ONE HOUR	✓	721	100.000
B - West		ONE HOUR	✓	309	100.000
C - North		ONE HOUR	✓	1056	100.000
D - East		ONE HOUR	✓	45	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - South	B - West	C - North	D - East
From	A - South	0	113	544	64
	B - West	167	0	109	33
	C - North	778	133	0	145
	D - East	15	9	21	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - South	B - West	C - North	D - East
From	A - South	0	0	0	0
	B - West	0	0	0	0
	C - North	0	0	0	0
	D - East	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-CD	1.27	450.54	19.4	F	127	191
B-AD	1.26	439.76	22.6	F	156	234
A-BCD	0.18	8.49	0.3	A	71	107
A-B					101	152
A-C					489	733
D-AB	0.09	14.84	0.1	B	19	28
D-BC	0.27	50.49	0.4	F	23	34
C-ABD	0.30	6.45	0.7	A	172	259
C-D					125	188
C-A					671	1007

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-CD	100	25	392	0.254	98	0.0	0.3	12.204	B
B-AD	133	33	288	0.461	130	0.0	0.8	22.266	C
A-BCD	53	13	541	0.098	52	0.0	0.1	7.357	A
A-B	84	21			84				
A-C	406	101			406				
D-AB	15	4	424	0.035	15	0.0	0.0	8.803	A
D-BC	19	5	253	0.075	19	0.0	0.1	15.341	C
C-ABD	122	30	690	0.177	121	0.0	0.3	6.321	A
C-D	106	26			106				
C-A	567	142			567				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-CD	122	31	272	0.448	120	0.3	0.8	23.436	C
B-AD	156	39	229	0.680	152	0.8	1.9	44.243	E
A-BCD	67	17	525	0.128	67	0.1	0.2	7.869	A
A-B	100	25			100				
A-C	481	120			481				
D-AB	18	4	369	0.049	18	0.0	0.1	10.262	B
D-BC	23	6	194	0.116	22	0.1	0.1	20.899	C
C-ABD	161	40	722	0.223	160	0.3	0.4	6.410	A
C-D	124	31			124				
C-A	665	166			665				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-CD	156	39	123	1.270	115	0.8	11.2	229.759	F
B-AD	184	46	148	1.245	140	1.9	12.7	228.542	F
A-BCD	94	24	519	0.182	94	0.2	0.3	8.461	A
A-B	120	30			120				
A-C	579	145			579				
D-AB	23	6	273	0.082	22	0.1	0.1	14.337	B
D-BC	27	7	113	0.239	26	0.1	0.3	41.336	E
C-ABD	235	59	796	0.295	234	0.4	0.6	6.409	A
C-D	146	36			146				
C-A	782	196			782				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-CD	156	39	125	1.250	123	11.2	19.4	450.544	F
B-AD	184	46	146	1.259	145	12.7	22.6	439.764	F
A-BCD	94	24	519	0.182	94	0.3	0.3	8.485	A
A-B	120	30			120				
A-C	579	145			579				
D-AB	23	6	265	0.086	23	0.1	0.1	14.844	B
D-BC	27	7	98	0.275	27	0.3	0.4	50.491	F
C-ABD	235	59	796	0.295	235	0.6	0.7	6.433	A
C-D	146	36			146				
C-A	782	196			782				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-CD	127	32	165	0.771	157	19.4	12.0	344.069	F
B-AD	150	38	194	0.776	186	22.6	13.8	345.755	F
A-BCD	67	17	524	0.128	68	0.3	0.2	7.899	A
A-B	100	25			100				
A-C	481	120			481				
D-AB	18	5	364	0.050	18	0.1	0.1	10.420	B
D-BC	22	6	167	0.134	23	0.4	0.2	25.121	D
C-ABD	161	40	722	0.223	162	0.7	0.4	6.448	A
C-D	124	31			124				
C-A	665	166			665				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-CD	102	26	303	0.337	148	12.0	0.5	30.725	D
B-AD	131	33	269	0.485	182	13.8	1.0	62.258	F
A-BCD	53	13	541	0.098	53	0.2	0.1	7.387	A
A-B	84	21			84				
A-C	406	101			406				
D-AB	15	4	422	0.035	15	0.1	0.0	8.849	A
D-BC	19	5	236	0.080	19	0.2	0.1	16.606	C
C-ABD	122	30	689	0.177	122	0.4	0.3	6.356	A
C-D	106	26			106				
C-A	567	142			567				

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.2.5947
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Filename: Junction 4.j9
Path: C:\clients\EnTran\Welwyn Gdn city\Jan 2018
Report generation date: 15/01/2018 14:56:54

»Base + Development, AM
»Base + Development, PM

Summary of junction performance

	AM						PM					
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Network Residual Capacity
	Base + Development											
Stream B-AC	0.2	13.71	0.16	B	A	41 %	0.1	14.87	0.13	B	A	31 %
Stream C-AB	0.0	8.23	0.01	A		[Stream B-AC]	0.1	7.85	0.06	A		[Stream B-AC]

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. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	Junction 4
Location	Welwyn Garden City
Site number	
Date	14/01/2018
Version	
Status	
Identifier	Broadwater Rd
Client	
Jobnumber	
Enumerator	AL
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	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	Base + Development	AM	ONE HOUR	07:45	09:15	15	✓
D2	Base + Development	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

Base + Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Junction 4	T-Junction	Two-way	0.46	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	41	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm type
A	South		Major
B	West		Minor
C	North		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - North	6.76			73.0	✓	1.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - West	One lane	3.41	41	36

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	529	0.093	0.236	0.148	0.337
1	B-C	673	0.100	0.252	-	-
1	C-B	616	0.231	0.231	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	Base + 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 (PCU/hr)	Scaling Factor (%)
A - South		ONE HOUR	✓	711	100.000
B - West		ONE HOUR	✓	47	100.000
C - North		ONE HOUR	✓	690	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - South	B - West	C - North
From	A - South	0	1	710
	B - West	23	0	24
	C - North	688	2	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - South	B - West	C - North
From	A - South	0	0	0
	B - West	0	0	0
	C - North	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.16	13.71	0.2	B	43	65
C-AB	0.01	8.23	0.0	A	2	3
C-A					631	947
A-B					0.92	1
A-C					652	977

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	35	9	408	0.087	35	0.0	0.1	9.634	A
C-AB	2	0.38	494	0.003	1	0.0	0.0	7.305	A
C-A	518	129			518				
A-B	0.75	0.19			0.75				
A-C	535	134			535				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	42	11	370	0.114	42	0.1	0.1	10.982	B
C-AB	2	0.45	471	0.004	2	0.0	0.0	7.671	A
C-A	618	155			618				
A-B	0.90	0.22			0.90				
A-C	638	160			638				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	52	13	314	0.165	51	0.1	0.2	13.684	B
C-AB	2	0.56	439	0.005	2	0.0	0.0	8.235	A
C-A	757	189			757				
A-B	1	0.28			1				
A-C	782	195			782				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	52	13	314	0.165	52	0.2	0.2	13.711	B
C-AB	2	0.56	439	0.005	2	0.0	0.0	8.235	A
C-A	757	189			757				
A-B	1	0.28			1				
A-C	782	195			782				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	42	11	370	0.114	43	0.2	0.1	11.011	B
C-AB	2	0.45	471	0.004	2	0.0	0.0	7.671	A
C-A	618	155			618				
A-B	0.90	0.22			0.90				
A-C	638	160			638				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	35	9	408	0.087	36	0.1	0.1	9.661	A
C-AB	2	0.38	494	0.003	2	0.0	0.0	7.308	A
C-A	518	129			518				
A-B	0.75	0.19			0.75				
A-C	535	134			535				

Base + Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Junction 4	T-Junction	Two-way	0.41	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	31	Stream B-AC

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	Base + Development	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - South		ONE HOUR	✓	726	100.000
B - West		ONE HOUR	✓	33	100.000
C - North		ONE HOUR	✓	898	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - South	B - West	C - North
From	A - South	0	22	704
	B - West	16	0	17
	C - North	876	22	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - South	B - West	C - North
From	A - South	0	0	0
	B - West	0	0	0
	C - North	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.13	14.87	0.1	B	30	45
C-AB	0.06	7.85	0.1	A	22	33
C-A					802	1203
A-B					20	30
A-C					646	969

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	25	6	388	0.064	25	0.0	0.1	9.893	A
C-AB	17	4	512	0.034	17	0.0	0.0	7.268	A
C-A	659	165			659				
A-B	17	4			17				
A-C	530	133			530				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	30	7	344	0.086	30	0.1	0.1	11.452	B
C-AB	21	5	499	0.042	21	0.0	0.0	7.533	A
C-A	786	197			786				
A-B	20	5			20				
A-C	633	158			633				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	36	9	278	0.131	36	0.1	0.1	14.846	B
C-AB	27	7	486	0.056	27	0.0	0.1	7.848	A
C-A	961	240			961				
A-B	24	6			24				
A-C	775	194			775				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	36	9	278	0.131	36	0.1	0.1	14.874	B
C-AB	27	7	486	0.056	27	0.1	0.1	7.852	A
C-A	961	240			961				
A-B	24	6			24				
A-C	775	194			775				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	30	7	344	0.086	30	0.1	0.1	11.477	B
C-AB	21	5	499	0.042	21	0.1	0.0	7.536	A
C-A	786	197			786				
A-B	20	5			20				
A-C	633	158			633				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	25	6	388	0.064	25	0.1	0.1	9.916	A
C-AB	17	4	512	0.034	17	0.0	0.0	7.272	A
C-A	659	165			659				
A-B	17	4			17				
A-C	530	133			530				

Junctions 9

PICADY 9 - Priority Intersection Module

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Filename: Junction 5.j9
Path: C:\clients\EnTran\Welwyn Gdn city\Jan 2018
Report generation date: 15/01/2018 14:57:33

»Base + Development, AM
»Base + Development, PM

Summary of junction performance

	AM						PM					
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Network Residual Capacity
	Base + Development											
Stream B-AC	0.1	10.61	0.10	B	A	83 %	0.1	13.92	0.09	B	A	35 %
Stream C-AB	0.0	8.29	0.00	A		[Stream B-AC]	0.0	8.06	0.04	A		[Stream B-AC]

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. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	Junction 5
Location	Welwyn Garden City
Site number	
Date	14/01/2018
Version	
Status	
Identifier	Broadwater Rd
Client	
Jobnumber	
Enumerator	AL
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	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	Base + Development	AM	ONE HOUR	07:45	09:15	15	✓
D2	Base + Development	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

Base + Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Junction 5	T-Junction	Two-way	0.35	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	83	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm type
A	South		Major
B	West		Minor
C	North		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - North	6.76			61.0	✓	1.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - West	One lane	3.40	45	47

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	536	0.094	0.239	0.150	0.341
1	B-C	680	0.101	0.255	-	-
1	C-B	609	0.228	0.228	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	Base + 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 (PCU/hr)	Scaling Factor (%)
A - South		ONE HOUR	✓	695	100.000
B - West		ONE HOUR	✓	33	100.000
C - North		ONE HOUR	✓	304	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - South	B - West	C - North
From	A - South	0	1	694
	B - West	16	0	17
	C - North	303	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - South	B - West	C - North
From	A - South	0	0	0
	B - West	0	0	0
	C - North	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.10	10.61	0.1	B	30	45
C-AB	0.00	8.29	0.0	A	0.92	1
C-A					278	417
A-B					0.92	1
A-C					637	955

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	25	6	449	0.055	25	0.0	0.1	8.487	A
C-AB	0.75	0.19	490	0.002	0.75	0.0	0.0	7.354	A
C-A	228	57			228				
A-B	0.75	0.19			0.75				
A-C	522	131			522				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	30	7	418	0.071	30	0.1	0.1	9.263	A
C-AB	0.90	0.23	467	0.002	0.90	0.0	0.0	7.720	A
C-A	272	68			272				
A-B	0.90	0.22			0.90				
A-C	624	156			624				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	36	9	376	0.097	36	0.1	0.1	10.601	B
C-AB	1	0.28	435	0.003	1	0.0	0.0	8.287	A
C-A	334	83			334				
A-B	1	0.28			1				
A-C	764	191			764				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	36	9	376	0.097	36	0.1	0.1	10.607	B
C-AB	1	0.28	435	0.003	1	0.0	0.0	8.287	A
C-A	334	83			334				
A-B	1	0.28			1				
A-C	764	191			764				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	30	7	418	0.071	30	0.1	0.1	9.270	A
C-AB	0.90	0.23	467	0.002	0.90	0.0	0.0	7.720	A
C-A	272	68			272				
A-B	0.90	0.22			0.90				
A-C	624	156			624				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	25	6	449	0.055	25	0.1	0.1	8.500	A
C-AB	0.75	0.19	490	0.002	0.75	0.0	0.0	7.357	A
C-A	228	57			228				
A-B	0.75	0.19			0.75				
A-C	522	131			522				

Base + Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Junction 5	T-Junction	Two-way	0.28	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	35	Stream B-AC

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	Base + Development	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - South		ONE HOUR	✓	729	100.000
B - West		ONE HOUR	✓	23	100.000
C - North		ONE HOUR	✓	887	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - South	B - West	C - North
From	A - South	0	15	714
	B - West	11	0	12
	C - North	871	16	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - South	B - West	C - North
From	A - South	0	0	0
	B - West	0	0	0
	C - North	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.09	13.92	0.1	B	21	32
C-AB	0.04	8.06	0.0	A	16	23
C-A					798	1197
A-B					14	21
A-C					655	983

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	17	4	394	0.044	17	0.0	0.0	9.539	A
C-AB	12	3	500	0.025	12	0.0	0.0	7.375	A
C-A	655	164			655				
A-B	11	3			11				
A-C	538	134			538				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	21	5	350	0.059	21	0.0	0.1	10.934	B
C-AB	15	4	484	0.031	15	0.0	0.0	7.674	A
C-A	782	196			782				
A-B	13	3			13				
A-C	642	160			642				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	25	6	284	0.089	25	0.1	0.1	13.902	B
C-AB	19	5	466	0.041	19	0.0	0.0	8.063	A
C-A	957	239			957				
A-B	17	4			17				
A-C	786	197			786				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	25	6	284	0.089	25	0.1	0.1	13.917	B
C-AB	19	5	466	0.041	19	0.0	0.0	8.065	A
C-A	957	239			957				
A-B	17	4			17				
A-C	786	197			786				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	21	5	350	0.059	21	0.1	0.1	10.948	B
C-AB	15	4	484	0.031	15	0.0	0.0	7.679	A
C-A	782	196			782				
A-B	13	3			13				
A-C	642	160			642				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	17	4	394	0.044	17	0.1	0.0	9.553	A
C-AB	12	3	500	0.025	12	0.0	0.0	7.379	A
C-A	655	164			655				
A-B	11	3			11				
A-C	538	134			538				

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.2.5947
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Filename: Junction 6.j9
Path: C:\clients\EnTran\Welwyn Gdn city\Jan 2018
Report generation date: 15/01/2018 14:58:22

»Base + Development, AM
»Base + Development, PM

Summary of junction performance

	AM						PM					
	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Network Residual Capacity
	Base + Development											
Stream B-AC	1.1	23.70	0.53	C	A	11 %	0.8	25.59	0.46	D	A	7 %
Stream C-AB	0.0	7.73	0.01	A		[Stream B-AC]	0.3	7.34	0.19	A		[Stream B-AC]

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. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	Junction 6
Location	Welwyn Garden City
Site number	
Date	14/01/2018
Version	
Status	
Identifier	Broadwater Rd
Client	
Jobnumber	
Enumerator	AL
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	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	Base + Development	AM	ONE HOUR	07:45	09:15	15	✓
D2	Base + Development	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

Base + Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Junction 6	T-Junction	Two-way	2.40	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	11	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm type
A	South		Major
B	West		Minor
C	North		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - North	6.75			79.0	✓	1.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - West	One lane	3.48	33	22

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	523	0.092	0.233	0.147	0.333
1	B-C	668	0.099	0.251	-	-
1	C-B	620	0.232	0.232	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	Base + 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 (PCU/hr)	Scaling Factor (%)
A - South		ONE HOUR	✓	621	100.000
B - West		ONE HOUR	✓	156	100.000
C - North		ONE HOUR	✓	780	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - South	B - West	C - North
From	A - South	0	5	616
	B - West	77	0	79
	C - North	775	5	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - South	B - West	C - North
From	A - South	0	0	0
	B - West	0	0	0
	C - North	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.53	23.70	1.1	C	143	215
C-AB	0.01	7.73	0.0	A	5	7
C-A					711	1067
A-B					5	7
A-C					565	848

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	117	29	413	0.285	116	0.0	0.4	12.066	B
C-AB	4	0.95	515	0.007	4	0.0	0.0	7.035	A
C-A	583	146			583				
A-B	4	0.94			4				
A-C	464	116			464				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	140	35	376	0.373	139	0.4	0.6	15.161	C
C-AB	5	1	496	0.009	5	0.0	0.0	7.317	A
C-A	697	174			697				
A-B	4	1			4				
A-C	554	138			554				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	172	43	323	0.531	170	0.6	1.1	23.154	C
C-AB	6	1	471	0.012	6	0.0	0.0	7.733	A
C-A	853	213			853				
A-B	6	1			6				
A-C	678	170			678				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	172	43	323	0.531	172	1.1	1.1	23.702	C
C-AB	6	1	471	0.012	6	0.0	0.0	7.733	A
C-A	853	213			853				
A-B	6	1			6				
A-C	678	170			678				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	140	35	376	0.373	142	1.1	0.6	15.516	C
C-AB	5	1	496	0.009	5	0.0	0.0	7.321	A
C-A	697	174			697				
A-B	4	1			4				
A-C	554	138			554				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	117	29	413	0.285	118	0.6	0.4	12.258	B
C-AB	4	0.95	515	0.007	4	0.0	0.0	7.035	A
C-A	583	146			583				
A-B	4	0.94			4				
A-C	464	116			464				

Base + Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Junction 6	T-Junction	Two-way	1.97	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	7	Stream B-AC

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	Base + Development	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - South		ONE HOUR	✓	745	100.000
B - West		ONE HOUR	✓	110	100.000
C - North		ONE HOUR	✓	925	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - South	B - West	C - North
From	A - South	0	72	673
	B - West	54	0	56
	C - North	851	74	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - South	B - West	C - North
From	A - South	0	0	0
	B - West	0	0	0
	C - North	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.46	25.59	0.8	D	101	151
C-AB	0.19	7.34	0.3	A	87	131
C-A					762	1142
A-B					66	99
A-C					618	926

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	83	21	376	0.220	82	0.0	0.3	12.170	B
C-AB	64	16	562	0.114	63	0.0	0.1	7.208	A
C-A	632	158			632				
A-B	54	14			54				
A-C	507	127			507				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	99	25	330	0.299	98	0.3	0.4	15.484	C
C-AB	82	21	574	0.143	82	0.1	0.2	7.322	A
C-A	749	187			749				
A-B	65	16			65				
A-C	605	151			605				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	121	30	262	0.463	119	0.4	0.8	25.048	D
C-AB	115	29	607	0.190	115	0.2	0.3	7.316	A
C-A	903	226			903				
A-B	79	20			79				
A-C	741	185			741				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	121	30	261	0.463	121	0.8	0.8	25.592	D
C-AB	115	29	607	0.190	115	0.3	0.3	7.332	A
C-A	903	226			903				
A-B	79	20			79				
A-C	741	185			741				

17:45 - 18:00

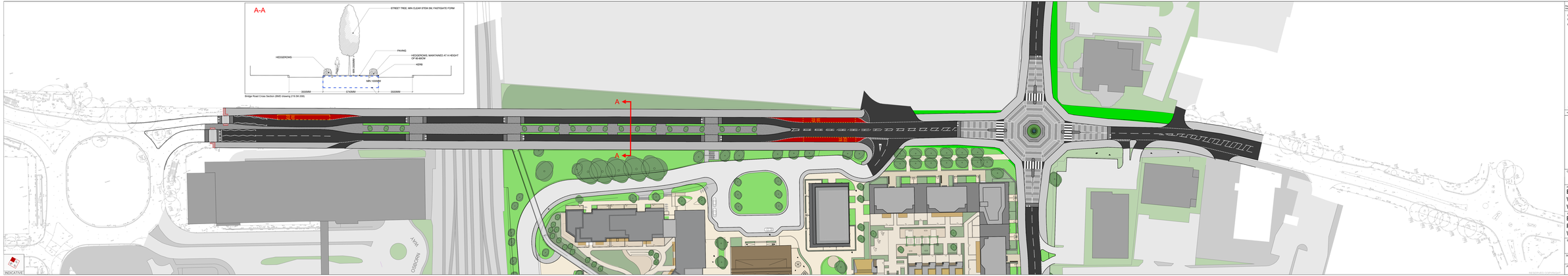
Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	99	25	330	0.300	100	0.8	0.4	15.788	C
C-AB	82	21	574	0.143	83	0.3	0.2	7.344	A
C-A	749	187			749				
A-B	65	16			65				
A-C	605	151			605				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-AC	83	21	376	0.220	83	0.4	0.3	12.318	B
C-AB	64	16	562	0.114	64	0.2	0.1	7.232	A
C-A	632	158			632				
A-B	54	14			54				
A-C	507	127			507				

Appendix N

Highway improvements



INDICATIVE

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NOTES:
Based on DTPR Masterplan 2405-T-00-0000-ZX-005 (Issued 10/02/16)
Includes Bridge Road Cross Section (BM2 drawing 219 SK 008)

No.	Date	Details	TP	DD	CH	Rev.

Broad
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Welwyn Garden City

tpa
Transport Planning Association

55 Kingsway
LONDON
WC2B 6TA
0207 580 4014
www.tpa.uk.com

CLIENT:
Spenhill
WELWYN GARDEN CITY

PROJECT:
BROADWATER ROAD WEST,
WELWYN GARDEN CITY

TITLE:
BRIDGE ROAD
PROPOSED IMPROVEMENTS
WITH CENTRE LINE

STATUS:
FOR INFORMATION

SCALE	DATE	DRAWN	CHECKED	APPROVED
1:500	22/02/16	GDG	DEF	RTBL

JOB NO	DRAWING NO	REVISION
1309-14	FL138	-

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