



E. Existing PRoW and Enhanced Connections



F. Proposed Dropped Crossing & School Car Parking Options





012 Masterplan-Proposed WIE Edit, A1-Wat-BS-S



G. TRICS Outputs

Waterman Boreham Regent House Brentwood Licence No: 701701

Saturday 16/09/23

Calculation Reference: AUDIT-701701-230916-0906

Page 1

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL

: A - HOUSES PRIVATELY OWNED Category

TOTAL VEHICLES

Selected regions and areas:

SOUTH EAST

EAST SUSSEX ES 1 days

04 EAST ANGLIA

> CAMBRIDGESHIRE CA 1 days NF **NORFOLK** 2 days SF **SUFFOLK** 2 days

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

Primary Filtering 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 calculation.

Parameter: No of Dwellings 12 to 40 (units:) Actual Range: 5 to 40 (units:) Range Selected by User:

All Surveys Included Parking Spaces Range:

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/14 to 09/11/22

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:

Wednesday 3 days Thursday 2 days Friday 1 days

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

Selected survey types:

Manual count 5 days 1 days Directional ATC Count

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

2 Edge of Town Neighbourhood Centre (PPS6 Local Centre)

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone 2 Village 4

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retall Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included 8 days - Selected Servicing vehicles Excluded 39 days - Selected

Page 2 Licence No: 701701

Waterman Boreham Regent House Brentwood

Secondary Filtering selection:

Use Class:

C3 6 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,000 or Less 1 days 1,001 to 5,000 5 days

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

Population within 5 miles:

 5,001
 to 25,000
 2 days

 25,001
 to 50,000
 3 days

 50,001
 to 75,000
 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 5 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes 3 days No 3 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present 6 days

This data displays the number of selected surveys with PTAL Ratings.

This data displays the hamber of selected surveys with the hattings.

Covid-19 Restrictions

Yes

At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions

Waterman Boreham Regent House Brentwood Licence No: 701701

LIST OF SITES relevant to selection parameters

1 CA-03-A-07 MI XED HOUSES CAMBRI DGESHI RE

FIELD END NEAR ELY WITCHFORD

Neighbourhood Centre (PPS6 Local Centre)

Village

Total No of Dwellings: 32

Survey date: THURSDAY 27/05/21 Survey Type: MANUAL

ES-03-A-06 MI XED HOUSES EAST SUSSEX

BISHOPS LANE RINGMER

Neighbourhood Centre (PPS6 Local Centre)

Village

Total No of Dwellings: 12

Survey date: WEDNESDAY 16/06/21 Survey Type: MANUAL

3 NF-03-A-05 MIXED HOUSES NORFOLK

HEATH DRIVE

HOLT

Edge of Town Residential Zone

Total No of Dwellings: 40

Survey date: THURSDAY 19/09/19 Survey Type: MANUAL

4 NF-03-A-10 MI XED HOUSES & FLATS NORFOLK

HUNSTANTON ROAD HUNSTANTON

Edge of Town Residential Zone

Total No of Dwellings: 17

Survey date: WEDNESDAY 12/09/18 Survey Type: DIRECTIONAL ATC COUNT

5 SF-03-A-06 DETACHED & SEMI-DETACHED SUFFOLK

BURY ROAD KENTFORD

Neighbourhood Centre (PPS6 Local Centre)

Village

Total No of Dwellings: 38

Survey date: FRIDAY 22/09/17 Survey Type: MANUAL

6 SF-03-A-08 MI XED HOUSES SUFFOLK

STANNINGFIELD ROAD NEAR BURY ST EDMUNDS GREAT WHELNETHAM

Neighbourhood Centre (PPS6 Local Centre)

Village

Total No of Dwellings: 34

Survey date: WEDNESDAY 16/09/20 Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

Waterman Boreham Regent House Brentwood

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES			TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	DWELLS	Rate	Days	DWELLS	Rate	Days	DWELLS	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 - 08:00	6	29	0.075	6	29	0.301	6	29	0.376
08:00 - 09:00	6	29	0.156	6	29	0.283	6	29	0.439
09:00 - 10:00	6	29	0.145	6	29	0.208	6	29	0.353
10:00 - 11:00	6	29	0.162	6	29	0.191	6	29	0.353
11:00 - 12:00	6	29	0.266	6	29	0.197	6	29	0.463
12:00 - 13:00	6	29	0.145	6	29	0.214	6	29	0.359
13:00 - 14:00	6	29	0.168	6	29	0.162	6	29	0.330
14:00 - 15:00	6	29	0.150	6	29	0.150	6	29	0.300
15:00 - 16:00	6	29	0.277	6	29	0.162	6	29	0.439
16:00 - 17:00	6	29	0.191	6	29	0.191	6	29	0.382
17:00 - 18:00	6	29	0.306	6	29	0.168	6	29	0.474
18:00 - 19:00	6	29	0.225	6	29	0.116	6	29	0.341
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.266			2.343			4.609

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

The survey data, graphs and all associated supporting information, contained within the TRICS Database are published by TRICS Consortium Limited ("the Company") and the Company claims copyright and database rights in this published work. The Company authorises those who possess a current TRICS licence to access the TRICS Database and copy the data contained within the TRICS Database for the licence holders' use only. Any resulting copy must retain all copyrights and other proprietary notices, and any disclaimer contained thereon.

The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

Parameter summary

Trip rate parameter range selected: 12 - 40 (units:)
Survey date date range: 01/01/14 - 09/11/22

Number of weekdays (Monday-Friday): 6
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Friday 29/09/23 Page 1

Waterman Boreham Regent House Brentwood Licence No: 701701

Calculation Reference: AUDIT-701701-230929-0915

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT Category : C - IND TOTAL VEHICLES : C - INDUSTRIAL UNIT

Selected regions and areas: 04 EAST ANGLIA EAST ANGLIA SF SUFFOLK 1 days 05 EAST MIDLANDS LEICESTERSHIRE LE 1 days NN NORTH NORTHAMPTONSHIRE 1 days 80 NORTH WEST LANCASHIRE 1 days LC 09 NORTH CUMBERLAND CU 1 days

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

Friday 29/09/23 Page 2

Waterman Boreham Regent House Brentwood Licence No: 701701

Primary Filtering 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 calculation.

Parameter: Gross floor area

Actual Range: 175 to 1100 (units: sqm) Range Selected by User: 150 to 2000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/11 to 20/04/23

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:

Thursday 2 days Friday 3 days

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

Selected survey types:

Manual count 5 days
Directional ATC Count 0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre) 1
Edge of Town 3
Free Standing (PPS6 Out of Town) 1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone 5

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included 1 days - Selected Servicing vehicles Excluded 21 days - Selected

Secondary Filtering selection:

Use Class:

Not Known 5 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Filter by Site Operations Breakdown:

All Surveys Included

Population within 500m Range:

All Surveys Included

Friday 29/09/23 Page 3

Waterman Boreham Regent House Brentwood Licence No: 701701

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,001 to 5,000 4 days 5,001 to 10,000 1 days

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

Population within 5 miles:

25,001 to 50,000 1 days 50,001 to 75,000 2 days 75,001 to 100,000 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 2 days 1.1 to 1.5 3 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No 5 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present 5 days

This data displays the number of selected surveys with PTAL Ratings.

Covid-19 Restrictions Yes At least one survey within the selected data set

was undertaken at a time of Covid-19 restrictions

Friday 29/09/23 Page 4

Regent House Licence No: 701701 Waterman Boreham **Brentwood**

LIST OF SITES relevant to selection parameters

CUMBERLAND CU-02-C-01 STEEL FABRICATION

BLACKDYKE ROAD

CARLISLE

KINGSTOWN IND. ESTATE

Edge of Town Industrial Zone

Total Gross floor area: 715 sqm

Survey date: FRIDAY 15/10/21 Survey Type: MANUAL

LC-02-C-06 STEEL FABRICATION **LANCASHIRE**

TOLLGATE ROAD BURSCOUGH

Edge of Town Industrial Zone

Total Gross floor area: 700 sqm

Survey date: THURSDAY 21/04/22 Survey Type: MANUAL

LEICESTÉRSHIRE LE-02-C-01 COMMERCIAL VEHICLE SERVICES

WYMESWOLD ROAD **NEAR LOUGHBOROUGH** BURTON ON THE WOLDS Free Standing (PPS6 Out of Town)

Industrial Zone

Total Gross floor area: 175 sqm

Survey date: FRIDAY 17/06/22 Survey Type: MANUAL NN-02-C-01 RENEWABLE ENGINEERING NORTH NORTHAMPTONSHIRE

TREVITHICK ROAD

CORBY

Suburban Area (PPS6 Out of Centre)

Industrial Zone

Total Gross floor area: 702 sqm

> Survey date: THURSDAY 22/10/20 Survey Type: MANUAL

SF-02-C-01 **JOINERY** SUFFOLK

ANSON ROAD **IPSWICH**

MARTLESHAM HEATH

Edge of Town Industrial Zone

Total Gross floor area: 1100 sqm

Survey date: FRIDAY Survey Type: MANUAL 12/07/13

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

Waterman Boreham Regent House

House Brentwood

Licence No: 701701

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT

TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES			TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	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	3	526	0.063	3	526	0.000	3	526	0.063
06:00 - 07:00	3	526	0.190	3	526	0.063	3	526	0.253
07:00 - 08:00	5	678	0.678	5	678	0.147	5	678	0.825
08:00 - 09:00	5	678	0.501	5	678	0.177	5	678	0.678
09:00 - 10:00	5	678	0.295	5	678	0.324	5	678	0.619
10:00 - 11:00	5	678	0.413	5	678	0.383	5	678	0.796
11:00 - 12:00	5	678	0.206	5	678	0.206	5	678	0.412
12:00 - 13:00	5	678	0.383	5	678	0.413	5	678	0.796
13:00 - 14:00	5	678	0.383	5	678	0.442	5	678	0.825
14:00 - 15:00	5	678	0.383	5	678	0.354	5	678	0.737
15:00 - 16:00	5	678	0.501	5	678	0.560	5	678	1.061
16:00 - 17:00	5	678	0.147	5	678	0.472	5	678	0.619
17:00 - 18:00	5	678	0.118	5	678	0.383	5	678	0.501
18:00 - 19:00	5	678	0.029	5	678	0.177	5	678	0.206
19:00 - 20:00	3	526	0.063	3	526	0.127	3	526	0.190
20:00 - 21:00	3	526	0.000	3	526	0.000	3	526	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.353			4.228			8.581

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Waterman Boreham Regent House Brentwood Licence No: 701701

The survey data, graphs and all associated supporting information, contained within the TRICS Database are published by TRICS Consortium Limited ("the Company") and the Company claims copyright and database rights in this published work. The Company authorises those who possess a current TRICS licence to access the TRICS Database and copy the data contained within the TRICS Database for the licence holders' use only. Any resulting copy must retain all copyrights and other proprietary notices, and any disclaimer contained thereon.

The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

Parameter summary

Trip rate parameter range selected: 175 - 1100 (units: sqm) Survey date date range: 01/01/11 - 20/04/23

Number of weekdays (Monday-Friday): 5
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Friday 29/09/23 Page 1

Calculation Reference: AUDIT-701701-230929-0927

Waterman Boreham Regent House Brentwood Licence No: 701701

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT

Category : A - OFF TOTAL VEHICLES : A - OFFICE

Selected regions and areas: 02 SOUTH EAST

SOUTH EAST

EAST SUSSEX ES 1 days

04 EAST ANGLIA

NORFOLK NF 1 days

06 WEST MIDLANDS

> WARWICKSHIRE 1 days

07 YORKSHIRE & NORTH LINCOLNSHIRE

ΑK WAKEFIELD 1 days

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

Friday 29/09/23 Page 2

Waterman Boreham Regent House Brentwood Licence No: 701701

Primary Filtering 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 calculation.

Parameter: Gross floor area

Actual Range: 186 to 1230 (units: sqm) Range Selected by User: 186 to 1230 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/15 to 23/11/22

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:

Tuesday 2 days Wednesday 2 days

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

Selected survey types:

Manual count 4 days
Directional ATC Count 0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre) 1
Edge of Town 3

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone 1
Commercial Zone 1
Residential Zone 1
No Sub Category 1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included 2 days - Selected Servicing vehicles Excluded 2 days - Selected

Secondary Filtering selection:

Use Class:

Not Known 4 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Filter by Site Operations Breakdown:

All Surveys Included

Population within 500m Range:

All Surveys Included

Friday 29/09/23 Page 3

Waterman Boreham Regent House Brentwood Licence No: 701701

Secondary Filtering selection (Cont.):

Population within 1 mile:

 1,001 to 5,000
 1 days

 10,001 to 15,000
 1 days

 15,001 to 20,000
 1 days

 25,001 to 50,000
 1 days

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

Population within 5 miles:

75,001 to 100,000 1 days 100,001 to 125,000 1 days 125,001 to 250,000 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 4 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes 1 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present 4 days

This data displays the number of selected surveys with PTAL Ratings.

Waterman Boreham Regent House Brentwood Licence No: 701701

LIST OF SITES relevant to selection parameters

1 AK-02-A-01 OFFICES WAKEFIELD

PIONEER WAY
CASTLEFORD
WHITWOOD
Edge of Town
No Sub Category

Total Gross floor area: 1230 sqm

Survey date: TUESDAY 23/05/17 Survey Type: MANUAL

P. ES-02-A-11 HOUSING COMPANY EAST SUSSEX

THE SIDINGS HASTINGS ORE VALLEY

Suburban Area (PPS6 Out of Centre)

Residential Zone

Total Gross floor area: 186 sqm

Survey date: TUESDAY 17/11/15 Survey Type: MANUAL

3 NF-02-A-04 BUILDING CONSULTANT NORFOLK

WHITING ROAD NORWICH

Edge of Town Commercial Zone

Total Gross floor area: 500 sqm

Survey date: WEDNESDAY 13/11/19 Survey Type: MANUAL

4 WK-02-A-03 ENGINEERING CONSULTANTS WARWICKSHIRE

BUDBROOKE ROAD

WARWICK

Edge of Town Industrial Zone

Total Gross floor area: 796 sqm

Survey date: WEDNESDAY 23/11/22 Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

Waterman Boreham Regent House Brentwood

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES	,		TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	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 - 08:00	4	678	1.291	4	678	0.037	4	678	1.328
08:00 - 09:00	4	678	2.655	4	678	0.221	4	678	2.876
09:00 - 10:00	4	678	0.959	4	678	0.258	4	678	1.217
10:00 - 11:00	4	678	0.442	4	678	0.147	4	678	0.589
11:00 - 12:00	4	678	0.221	4	678	0.442	4	678	0.663
12:00 - 13:00	4	678	0.664	4	678	1.106	4	678	1.770
13:00 - 14:00	4	678	0.848	4	678	0.369	4	678	1.217
14:00 - 15:00	4	678	0.295	4	678	0.295	4	678	0.590
15:00 - 16:00	4	678	0.332	4	678	0.627	4	678	0.959
16:00 - 17:00	4	678	0.369	4	678	2.286	4	678	2.655
17:00 - 18:00	4	678	0.000	4	678	2.028	4	678	2.028
18:00 - 19:00	3	494	0.202	3	494	0.742	3	494	0.944
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			8.278			8.558			16.836

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Waterman Boreham Regent House Brentwood Licence No: 701701

The survey data, graphs and all associated supporting information, contained within the TRICS Database are published by TRICS Consortium Limited ("the Company") and the Company claims copyright and database rights in this published work. The Company authorises those who possess a current TRICS licence to access the TRICS Database and copy the data contained within the TRICS Database for the licence holders' use only. Any resulting copy must retain all copyrights and other proprietary notices, and any disclaimer contained thereon.

The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

Parameter summary

Trip rate parameter range selected: 186 - 1230 (units: sqm) Survey date date range: 01/01/15 - 23/11/22

Number of weekdays (Monday-Friday): 4
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.



H. Junction Modelling Outputs



Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.0.2.1574 © Copyright TRL Software Limited, 2021

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

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Plot D Access_High St_The Downs T-Junction.j10

Path: N:\Projects\WIE17784\100\5_Technical\Junction Modelling\Picady

Report generation date: 21/09/2023 13:21:36

»2025 Base + Proposed Dev, AM

»2025 Base + Proposed Dev, PM

Summary of junction performance

		AM					PM			
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2025 Base + Proposed Dev									
Stream B-C		0.1	5.81	0.06	Α		0.1	5.77	0.06	Α
Stream B-A	D1	0.1	8.53	0.09	Α	D2	0.1	8.45	0.09	Α
Stream C-AB		0.1	5.57	0.05	Α		0.1	5.56	0.05	Α

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

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

File summary

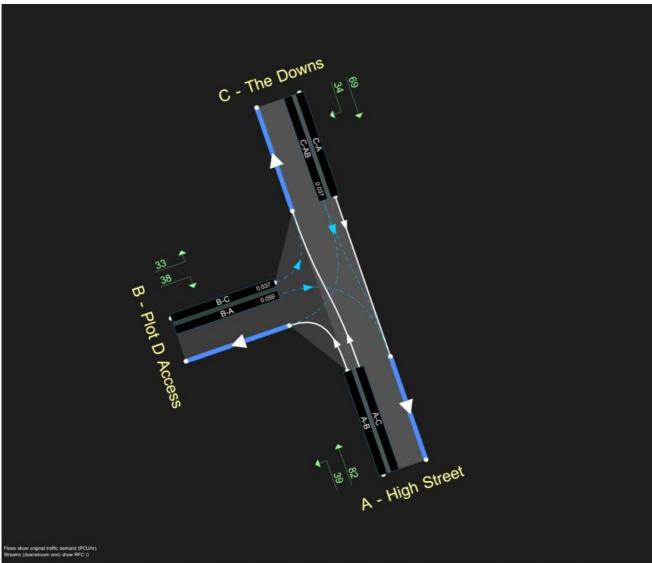
File Description

Title	
Location	
Site number	
Date	18/09/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WATERLOO\CSDA
Description	

Units

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





The junction diagram reflects the last run of Junctions.

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025 Base + Proposed Dev	AM	ONE HOUR	08:15	09:45	15	✓
D2	2025 Base + Proposed Dev	PM	ONE HOUR	14:30	16:00	15	✓

Analysis Set Details

I	D	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
7	11	✓	100.000	100.000



2025 Base + Proposed Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare		Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Minor arm visibility to right	B - Plot D Access - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.
Warning	Major arm width	C - The Downs - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		2.30	Α

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.30	Α

Arms

Arms

Arm	Name	Description	Arm type
Α	High Street		Major
В	Plot D Access		Minor
С	The Downs		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - The Downs	5.45			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 - Plot D Access	One lane plus flare	8.80	3.20	3.00	3.00	3.00	✓	1.00	39	20

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)			Slope for C-A	Slope for C-B
B-A	519	0.097	0.244	0.154	0.349
B-C	707	0.111	0.281	-	-
С-В	719	0.285	0.285	-	-

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

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

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



Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile Start time type (HH:mm)		Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025 Base + Proposed Dev	AM	ONE HOUR	08:15	09:45	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	Arm Linked arm Profile t		Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - High Street		ONE HOUR	✓	128	100.000
B - Plot D Access		ONE HOUR	✓	73	100.000
C - The Downs		ONE HOUR	✓	110	100.000

Origin-Destination Data

Demand (PCU/hr)

		То							
		A - High Street	B - Plot D Access	C - The Downs					
F	A - High Street	0	38	90					
From	B - Plot D Access	39	0	34					
	C - The Downs	77	33	0					

Vehicle Mix

Heavy Vehicle Percentages

		То								
		A - High Street B - Plot D Access		C - The Downs						
	A - High Street	0	0	7						
From	B - Plot D Access	0	0	0						
	C - The Downs	5	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)
в-с	0.06	5.81	0.1	А	31	47
B-A	0.09	8.53	0.1	А	36	54
C-AB	0.05	5.57	0.1	А	30	46
C-A					71	106
A-B					35	52
A-C					83	124



Main Results for each time segment

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)	Unsignalised level of service
в-с	26	6	674	0.038	25	0.0	0.0	5.551	А
B-A	29	7	482	0.061	29	0.0	0.1	7.942	Α
C-AB	25	6	693	0.036	25	0.0	0.0	5.383	А
C-A	58	14			58				
A-B	29	7			29				
A-C	68	17			68				

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)	Unsignalised level of service
в-с	31	8	667	0.046	31	0.0	0.0	5.657	А
B-A	35	9	475	0.074	35	0.1	0.1	8.181	A
C-AB	30	7	689	0.043	30	0.0	0.0	5.462	A
C-A	69	17			69				
A-B	34	9			34				
A-C	81	20			81				

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)	Unsignalised level of service
В-С	37	9	658	0.057	37	0.0	0.1	5.804	A
B-A	43	11	465	0.092	43	0.1	0.1	8.526	A
C-AB	37	9	683	0.054	37	0.0	0.1	5.569	A
C-A	85	21			85				
A-B	42	10			42				
A-C	99	25			99				

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)	Unsignalised level of service
в-с	37	9	657	0.057	37	0.1	0.1	5.805	Α
B-A	43	11	465	0.092	43	0.1	0.1	8.529	A
C-AB	37	9	683	0.054	37	0.1	0.1	5.569	A
C-A	85	21			85				
A-B	42	10			42				
A-C	99	25			99				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
в-с	31	8	667	0.046	31	0.1	0.0	5.662	A
B-A	35	9	475	0.074	35	0.1	0.1	8.186	А
C-AB	30	7	689	0.043	30	0.1	0.0	5.463	А
C-A	69	17			69				
A-B	34	9			34				
A-C	81	20			81				

5



09:30 - 09:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
В-С	26	6	673	0.038	26	0.0	0.0	5.558	A
B-A	29	7	482	0.061	29	0.1	0.1	7.954	A
C-AB	25	6	693	0.036	25	0.0	0.0	5.388	A
C-A	58	14			58				
A-B	29	7			29				
A-C	68	17			68				



2025 Base + Proposed Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare		Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Minor arm visibility to right	B - Plot D Access - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.
Warning	Major arm width	C - The Downs - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		2.38	А

Junction Network

Driv	ving side	Lighting	Network delay (s)	Network LOS
	Left	Normal/unknown	2.38	Α

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	2025 Base + Proposed Dev	PM	ONE HOUR	14:30	16:00	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 - High Street		ONE HOUR	✓	121	100.000
B - Plot D Access		ONE HOUR	✓	71	100.000
C - The Downs		ONE HOUR	✓	103	100.000

Origin-Destination Data

Demand (PCU/hr)

	То							
		A - High Street	B - Plot D Access	C - The Downs				
	A - High Street	0	39	82				
From	B - Plot D Access	38	0	33				
	C - The Downs	69	34	0				

Vehicle Mix



Heavy Vehicle Percentages

	То								
From		A - High Street	B - Plot D Access	C - The Downs					
	A - High Street	0	0	0					
	B - Plot D Access	0	0	0					
	C - The Downs	3	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)
в-с	0.06	5.77	0.1	А	30	45
B-A	0.09	8.45	0.1	А	35	52
C-AB	0.05	5.56	0.1	А	31	47
C-A					63	95
A-B					36	54
A-C					75	113

Main Results for each time segment

14:30 - 14:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	25	6	675	0.037	25	0.0	0.0	5.533	А
B-A	29	7	484	0.059	28	0.0	0.1	7.892	A
C-AB	26	6	695	0.037	26	0.0	0.0	5.378	A
C-A	52	13			52				
A-B	29	7			29				
A-C	62	15			62				

14:45 - 15:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	30	7	669	0.044	30	0.0	0.0	5.633	A
B-A	34	9	477	0.072	34	0.1	0.1	8.118	A
C-AB	31	8	690	0.044	31	0.0	0.0	5.456	A
C-A	62	15			62				
A-B	35	9			35				
A-C	74	18			74				

15:00 - 15:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
В-С	36	9	660	0.055	36	0.0	0.1	5.772	A
B-A	42	10	468	0.089	42	0.1	0.1	8.441	A
C-AB	38	9	685	0.055	38	0.0	0.1	5.562	A
C-A	76	19			76				
A-B	43	11			43				
A-C	90	23			90				

8



15:15 - 15:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
в-с	36	9	660	0.055	36	0.1	0.1	5.773	Α
B-A	42	10	468	0.089	42	0.1	0.1	8.445	А
C-AB	38	9	685	0.055	38	0.1	0.1	5.562	А
C-A	76	19			76				
A-B	43	11			43				
A-C	90	23			90				

15:30 - 15:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
В-С	30	7	668	0.044	30	0.1	0.0	5.638	А
B-A	34	9	477	0.072	34	0.1	0.1	8.122	A
C-AB	31	8	691	0.044	31	0.1	0.0	5.457	A
C-A	62	15			62				
A-B	35	9			35				
A-C	74	18			74				

15:45 - 16:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
В-С	25	6	675	0.037	25	0.0	0.0	5.542	А
B-A	29	7	484	0.059	29	0.1	0.1	7.903	А
C-AB	26	6	695	0.037	26	0.0	0.0	5.383	А
C-A	52	13			52				
A-B	29	7			29				
A-C	62	15			62				

9

We are Waterman, where every project matters

We deliver progressive, sustainability-driven environmental and engineering consultancy services across every sector. We think differently, and we're harnessing our collective expertise to deliver greener, healthier and well-connected communities, networks and built environments.

Based in strategic locations throughout the UK and Ireland, our team of specialists is at the forefront of tackling the climate emergency and forging a path to a Net Zero built environment.

UK & Ireland Office Locations

