

Appendix A Trip Rates Technical Note

\\pba.int\cbh\Projects\43682 Chichester Local Plan - Transport Study\Transport\Working Documents\Final Report\CATM_43682_CTS_Forecasting and Testing Report_ Rev I.docx A- Trip Rates Technical Note 137



Subject:	Development of Scenarios 1,2 and 3 Trip Matrices
Prepared By:	David Cope/Eleftherios Papathanasiadis
Date:	July 2018
Note No:	003
Job No:	43682
Job Name:	Chichester Area Transport Model (CATM)

Item	Subject
1.	Introduction
	This note sets out further information on the TRICS trip rates to be used to determine the level of trips generated within the CATM Scenarios 1,2 and 3 models in respect of the strategic locations.
2.	Summary of Scenarios
	Three scenarios are to be modelled for the local plan assessment.
	Each of the three scenarios, represent a different level of dwellings per annum (dpa) for the identified strategic developments, as follows:
	 Scenario Test 1 – 600dpa Scenario Test 2 – 800dpa Scenario Test 3 – 1,000dpa
3.	TRICS
	Overview
	For the 18 strategic development locations identified as part of the local plan, the trip rates were generated from the TRICS® 7.5.1 database. The methodology and assumptions used for the calculation of trip rates is summarised below. The identified trip rates were used to calculate the impact of each strategic development in terms of trip generation and hence inform the creation of the trip matrices for the three model scenarios.
	The region filter selection excluded Greater London, Wales, Scotland, Ireland and Northern Ireland for both the residential and the employment trip rate estimation.
	Only surveys conducted on a Tuesday, Wednesday or Thursday in order to replicate better a typical working day were used in site selection.
	Residential Trip Rates
	For the residential strategic developments trip rate estimation, the Main Land Use category used was "Residential" with Sub Land Use "Houses Privately Owned". The trip rates were calculated only for vehicles. The development locations were classed by location, such that two separate sets of trip rates were derived, one for "Edge of Town Centre" and the other for "Suburban Area".
	The sites used in for each of the two selections are provided within Appendix A .

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HOUSES		TRICS TRIP RATES				
PRIVATELY	Ed	ge of Town Centr	'e	ę	Suburban Area	
OWNED	ARRIVALS	DEPARTURES	TOTAL	ARRIVALS	DEPARTURES	ΤΟΤΑΙ
AM Peak (08:00 - 09:00)	0.152	0.318	0.470	0.109	0.378	0.487
Inter Peak (10:00 - 16:00)	0.123	0.125	0.248	0.165	0.165	0.330
PM Peak	0.220	0.195	0.390	0.379	0.183	0.562
Employment A similar approa developments. The trip rates us with the sites us	Trip Rates ach has been Trip rates were sed for the em sed in the sele	used to derive th e derived for bus ployment develo ction provided in	ne trip rates siness parks opment sites a Appendix	for the emplo , located on s are summa A .	byment trips withi suburban areas. rized below. (trip	in rate/10
Employment A similar approa developments. The trip rates us with the sites us	Trip Rates ach has been Trip rates were sed for the em sed in the sele TRI	used to derive th e derived for bus ployment develo ction provided in CS TRIP RATES	ne trip rates siness parks opment sites n Appendix	for the emplo , located on a are summat A .	yment trips withi suburban areas. rized below. (trip	in rate/10
Employment A similar approa developments. The trip rates us with the sites us	Trip Rates ach has been Trip rates were sed for the em sed in the sele TRI	used to derive th e derived for bus ployment develo ction provided in CS TRIP RATES BU	ne trip rates siness parks opment sites o Appendix ISINESS PAI	for the emplo , located on s are summat A .	yment trips withi suburban areas. rized below. (trip	in rate/10
Employment ⁻ A similar approa developments. ⁻ The trip rates us with the sites us Suburb	Trip Rates ach has been Trip rates were sed for the em sed in the sele TRI an Area	used to derive the derived for bus ployment develoction provided in CS TRIP RATES BU ARRIVALS	ne trip rates siness parks opment sites a Appendix USINESS PAI DEPARTUR	for the emplo , located on a are summat A. RK ES TOTAL	byment trips withi suburban areas. rized below. (trip	in rate/10
Employment ⁻ A similar approa developments. ⁻ The trip rates us with the sites us Suburb AM Peak (0	Trip Rates ach has been Trip rates were sed for the em sed in the sele TRI an Area 8:00 - 09:00)	used to derive th e derived for bus ployment develo ction provided in CS TRIP RATES BU ARRIVALS 1.686	ne trip rates siness parks opment sites a Appendix USINESS PAI DEPARTUR 0.169	for the emplo , located on a are summat A. RK ES TOTAL 1.855	yment trips withi suburban areas. rized below. (trip	in rate/10
Employment ⁻ A similar approa developments. ⁻ The trip rates us with the sites us Suburb AM Peak (0 Inter Peak (1	Trip Rates ach has been Trip rates were sed for the em sed in the sele TRI an Area 8:00 - 09:00) 0:00 - 16:00)	used to derive the derived for bus ployment develoction provided in CS TRIP RATES BU ARRIVALS 1.686 0.254	ne trip rates siness parks opment sites a Appendix USINESS PAI DEPARTUR 0.169 0.310	for the emplo , located on a are summation A. RK IES TOTAL 1.855 0.565	byment trips withi suburban areas. rized below. (trip	in rate/10
Employment ⁻ A similar approa developments. ⁻ The trip rates us with the sites us Suburb AM Peak (0	Trip Rates ach has been Trip rates were sed for the em sed in the sele TRI an Area 8:00 - 09:00)	used to derive the derived for bus ployment develoction provided in CS TRIP RATES BU ARRIVALS 1.686	ne trip rates siness parks opment sites o Appendix USINESS PAI DEPARTUR 0.169	for the emplo , located on s are summation A. RK ES TOTAL 1.855	byment trips withi suburban areas. rized below. (trip	in rate/10

DOCUMENT ISSUE RECORD

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43682/TN003		July 2018	E. Papathanasiadis	D. Cope/N. Moyo		

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Appendix A – TRICS Trip Rates for the Strategic Sites

AM Peak (08:00 - 09:00)				
Strategic sites	Development Type	TRICS Area Definition	ARRIVALS TRIP RATES	DEPARTURES TRIP RATES
Chichester City (including Southern Gateway)	Residential	Edge of Town Centre	0.152	0.318
Tangmere	Residential	Suburban Area	0.109	0.378
Southbourne	Residential	Suburban Area	0.109	0.378
East Wittering	Residential	Suburban Area	0.109	0.378
South of Shopwyke	Residential	Suburban Area	0.109	0.378
Selsey	Residential	Suburban Area	0.109	0.378
Hambrook	Residential	Suburban Area	0.109	0.378
Fishbourne	Residential	Suburban Area	0.109	0.378
Broadbridge	Residential	Suburban Area	0.109	0.378
Hunston/North Mundham	Residential	Suburban Area	0.109	0.378
Donnington	Residential	Suburban Area	0.109	0.378
West Wittering	Residential	Suburban Area	0.109	0.378
Westhampnett	Residential	Suburban Area	0.109	0.378
Birdham	Residential	Suburban Area	0.109	0.378
Boxgrove	Residential	Suburban Area	0.109	0.378
Loxwood	Residential	Suburban Area	0.109	0.378
Wisborough Green	Residential	Suburban Area	0.109	0.378
Sullivan's Yard Employment	Employment	Suburban Area	1.686	0.169

Table 1: AM Peak (08:00 – 09:00) TRICS Trip Rates used for the Scenario Matrices

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Table 2: Inter Peak (10:00 – 16:00) TRICS Trip Rates used for the Scenario Matrices

	Inter Peak (10:00 - 16	5:00)		
Strategic sites	Development Type	TRICS Area Definition	ARRIVALS TRIP RATES	DEPARTURES TRIP RATES
Chichester City (including Southern Gateway)	Residential	Edge of Town Centre	0.123	0.125
Tangmere	Residential	Suburban Area	0.165	0.165
Southbourne	Residential	Suburban Area	0.165	0.165
East Wittering	Residential	Suburban Area	0.165	0.165
South of Shopwyke	Residential	Suburban Area	0.165	0.165
Selsey	Residential	Suburban Area	0.165	0.165
Hambrook	Residential	Suburban Area	0.165	0.165
Fishbourne	Residential	Suburban Area	0.165	0.165
Broadbridge	Residential	Suburban Area	0.165	0.165
Hunston/North Mundham	Residential	Suburban Area	0.165	0.165
Donnington	Residential	Suburban Area	0.165	0.165
West Wittering	Residential	Suburban Area	0.165	0.165
Westhampnett	Residential	Suburban Area	0.165	0.165
Birdham	Residential	Suburban Area	0.165	0.165
Boxgrove	Residential	Suburban Area	0.165	0.165
Loxwood	Residential	Suburban Area	0.165	0.165
Wisborough Green	Residential	Suburban Area	0.165	0.165
Sullivan's Yard Employment	Employment	Suburban Area	0.254	0.310

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Birdham

Boxgrove

Loxwood

Wisborough Green

Sullivan's Yard Employment

PM Peak (17:00 - 18:00)				
Strategic sites	Development Type	TRICS Area Definition	ARRIVALS TRIP RATES	DEPARTURES TRIP RATES
Chichester City (including Southern Gateway)	Residential	Edge of Town Centre	0.220	0.195
Tangmere	Residential	Suburban Area	0.379	0.183
Southbourne	Residential	Suburban Area	0.379	0.183
East Wittering	Residential	Suburban Area	0.379	0.183
South of Shopwyke	Residential	Suburban Area	0.379	0.183
Selsey	Residential	Suburban Area	0.379	0.183
Hambrook	Residential	Suburban Area	0.379	0.183
Fishbourne	Residential	Suburban Area	0.379	0.183
Broadbridge	Residential	Suburban Area	0.379	0.183
Hunston/North Mundham	Residential	Suburban Area	0.379	0.183
Donnington	Residential	Suburban Area	0.379	0.183
West Wittering	Residential	Suburban Area	0.379	0.183
Westhampnett	Residential	Suburban Area	0.379	0.183

Residential

Residential

Residential

Residential

Employment

Table 3: PM Peak (17:00 – 18:00) TRICS Trip Rates used for the Scenario Matrices

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Suburban Area

Suburban Area

Suburban Area

Suburban Area

Suburban Area

0.183

0.183

0.183

0.183

1.273

0.379

0.379

0.379

0.379

0.124



TECHNICAL NOTE Appendix B – Developments Location

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Appendix A - Trip Rates Technical Note



TECHNICAL NOTE Appendix C – TRICS

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Peter Brett Associates Caversham Bridge Ho	use Reading	Licence No: 706701
Filtering Summary		
Land Use	03/A	RESIDENTIAL/HOUSES PRIVATELY OWNED
Selected Trip Rate Calculation Parameter Range	e 6-1500 DWELLS	
Actual Trip Rate Calculation Parameter Range	47-180 DWELLS	
Date Range	Minimum: 01/01/10	Maximum: 27/11/17
Days of the week selected	Tuesday	3
Main Location Types selected	Edge of Town Centre	3
Population <1 Mile ranges selected	1,001 to 5,000 10,001 to 15,000	1 2
Population <5 Mile ranges selected	5,001 to 25,000	3
Car Ownership <5 Mile ranges selected	0.6 to 1.0 1.1 to 1.5	1 2
PTAL Rating	No PTAL Present	3

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Calculation Reference: AUDIT-706701-180718-0708

Licence No: 706701

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use Category VEHICLE	: 03 - RESIDENTIAL : A - HOUSES PRIVATELY OWNED :S	
<u>Selected re</u> 07 YOR NE	o <u>gions and areas:</u> KSHIRE & NORTH LINCOLNSHIRE NORTH EAST LINCOLNSHIRE	1 days

NY NORTH YORKSHIRE 1 days 09 NORTH CB CUMBRIA 1 days

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

Secondary 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:	Number of dwellings
Actual Range:	47 to 180 (units:)
Range Selected by User:	6 to 1500 (units:)

Public Transport Provision: Selection by:

Include all surveys

Date Range: 01/01/10 to 27/11/17

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.

<u>Selected survey days:</u> Tuesday

3 days

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

<u>Selected survey types:</u>	
Manual count	3 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.

<u>Selected Locations:</u> Edge of Town Centre

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.

<u>Selected Location Sub Categories:</u> Residential Zone

3

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.

Secondary Filtering selection:

<u>Use Class:</u> C3

3 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

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Secondary Filtering sele	ection (Cont.):	
Population within 1 mile:		
1,001 to 5,000	1 days	
10,001 to 15,000	2 days	
This data displays the num	nber of selected surveys within stated 1-mile radii of populatio	рл.
Population within 5 miles:		
5,001 to 25,000	3 days	
This data displays the num	nber of selected surveys within stated 5-mile radii of populatio	<i>n.</i>
Car ownership within 5 mil	iles:	
	1 days	
0.6 to 1.0		

<u>*Travel Plan:*</u> 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.

<u>PTAL Rating:</u> No PTAL Present

3 days

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

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LIST O	F SITES	s relevant	t to	selection	parameters

Site(1):	CB-03-A-05	Site area:	1.51 hect
Development Name:	DETACHED/TERRACED HOUSING	Number of dwellings:	50
Location:	PENRITH	Housing density:	40
Postcode:	CA11 9HS	Total Bedrooms:	163
Main Location Type:	Edge of Town Centre	Survey Date:	21/06/16
Sub-Location Type:	Residential Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	117
Site(2): Development Name: Location: Postcode: Main Location Type: Sub-Location Type: PTAL:	NE-03-A-03 PRIVATE HOUSES SCUNTHORPE DN15 6BW Edge of Town Centre Residential Zone n/a	Site area: Number of dwellings: Housing density: Total Bedrooms: Survey Date: Survey Day: Parking Spaces:	8.00 hect 180 432 20/05/14 Tuesday 482
Site(3):	NY-03-A-12	Site area:	0.82 hect
Development Name:	TOWN HOUSES	Number of dwellings:	47
Location:	NORTHALLERTON	Housing density:	68
Postcode:	DL7 8EY	Total Bedrooms:	122
Main Location Type:	Edge of Town Centre	Survey Date:	27/09/16
Sub-Location Type:	Residential Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	78

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TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED 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	3	92	0.043	3	92	0.177	3	92	0.220
08:00 - 09:00	3	92	0.152	3	92	0.318	3	92	0.470
09:00 - 10:00	3	92	0.155	3	92	0.112	3	92	0.267
10:00 - 11:00	3	92	0.087	3	92	0.097	3	92	0.184
11:00 - 12:00	3	92	0.119	3	92	0.105	3	92	0.224
12:00 - 13:00	3	92	0.130	3	92	0.134	3	92	0.264
13:00 - 14:00	3	92	0.105	3	92	0.119	3	92	0.224
14:00 - 15:00	3	92	0.112	3	92	0.134	3	92	0.246
15:00 - 16:00	3	92	0.184	3	92	0.159	3	92	0.343
16:00 - 17:00	3	92	0.217	3	92	0.148	3	92	0.365
17:00 - 18:00	3	92	0.220	3	92	0.195	3	92	0.415
18:00 - 19:00	3	92	0.134	3	92	0.162	3	92	0.296
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.658			1.860			3.518

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.

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Parameter summary

Trip rate parameter range selected:	47 - 180 (units:)
Survey date date range:	01/01/10 - 27/11/17
Number of weekdays (Monday-Friday):	3
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.

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Filtering Summary		
Land Use	03/A	RESIDENTIAL/HOUSES PRIVATELY OWNED
Selected Trip Rate Calculation Parameter Range	e 6-1500 DWELLS	
Actual Trip Rate Calculation Parameter Range	7-363 DWELLS	
Date Range	Minimum: 01/01/10	Maximum: 27/11/17
Days of the week selected	Tuesday Wednesday Thursday	7 5 2
Main Location Types selected	Suburban Area (PPS6 Out of Centre)	14
Population <1 Mile ranges selected	1,001 to 5,000 5,001 to 10,000 10,001 to 15,000 15,001 to 20,000 20,001 to 25,000 25,001 to 50,000	1 4 1 3 3 2
Population <5 Mile ranges selected	25,001 to 50,000 50,001 to 75,000 75,001 to 100,000 100,001 to 125,000 125,001 to 250,000 250,001 to 500,000	1 3 4 1 4 1
Car Ownership <5 Mile ranges selected	0.6 to 1.0 1.1 to 1.5	5 9
PTAL Rating	No PTAL Present	14

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TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL Category : A - HOUSES PRIVATELY OWNED VEHICLES

Sele	ected re	egions and areas:		
02	SÕU	TH EAST		
	HC	HAMPSHIRE	1 days	
	KC	KENT	2 days	
	WS	WEST SUSSEX	1 days	
03	SOU	TH WEST		
	DV	DEVON	1 days	
	WL	WILTSHIRE	1 days	
04	EAS	T ANGLI A		
	CA	CAMBRIDGESHIRE	1 days	
	NF	NORFOLK	1 days	
	SF	SUFFOLK	1 days	
05	EAS	T MIDLANDS		
	LN	LINCOLNSHIRE	1 days	
07	YOR	KSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YORKSHIRE	1 days	
	SY	SOUTH YORKSHIRE	1 days	
80	NOR	TH WEST		
	СН	CHESHIRE	1 days	
09	NORTH			
	DH	DURHAM	1 days	

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

Secondary 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.

Include all surveys

Parameter:	Number of dwellings
Actual Range:	7 to 363 (units:)
Range Selected by User:	6 to 1500 (units:)

Public Transport Provision: Selection by:

Date Range: 01/01/10 to 27/11/17

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.

<u>Selected survey days:</u>	
Tuesday	7 days
Wednesday	5 days
Thursday	2 days

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

<u>Selected survey types:</u>	
Manual count	14 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.

<u>Selected Locations:</u> Suburban Area (PPS6 Out of 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.

<u>Selected Location Sub Categories:</u> Residential Zone

14

14

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.

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ter Brett Associates	Caversham Bridge House	Reading	Licence No: 706701
Secondary Filt	tering selection:		
<u>Use Class:</u>		10 days	
03		13 days	
This data displa	ays the number of surveys pe	er Use Class classification within the selected set. Th	ne Use Classes Order 2005
has been used .	for this purpose, which can b	ne found within the Library module of TRICS®.	
Population with	nin 1 mile:		
1,001 to 5,000		1 days	
5,001 to 10,00	0	4 days	
10,001 to 15,00	00	1 days	
15,001 to 20,00	00	3 days	
20,001 to 25,00	00	3 days	
25,001 to 50,00	00	2 days	
This data displa	ays the number of selected s	- urveys within stated 1-mile radii of population.	
Population with	in 5 miles:		
25.001 to 50.0	00	1 days	

25,001 to 50,000	1 days
50,001 to 75,000	3 days
75,001 to 100,000	4 days
100,001 to 125,000	1 days
125,001 to 250,000	4 days
250,001 to 500,000	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	5 days
1.1 to 1.5	9 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.

<u>Travel Plan:</u>	
Yes	2 days
No	12 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.

<u>PTAL Rating:</u> No PTAL Present

14 days

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

Reading

Licence No: 706701

LIST OF SITES relevant to selection parameters

Peter Brett Associates Caversham Bridge House

Site(1):	CA-03-A-04
Development Name:	DETACHED
Location:	PETERBOROUGH
Postcode:	PE3 6LQ
Main Location Type:	Suburban Area (PPS6 Out of Centre)
Sub-Location Type:	Residential Zone
PTAL:	n/a
Site(2):	CH-03-A-08
Development Name:	DETACHED
Location:	CHESTER
Postcode:	CH3 5JZ
Main Location Type:	Suburban Area (PPS6 Out of Centre)
Sub-Location Type:	Residential Zone
PTAL:	n/a
Site(3):	DH-03-A-01
Development Name:	SEMI DETACHED
Location:	BISHOP AUCKLAND
Postcode:	DL14 6RH
Main Location Type:	Suburban Area (PPS6 Out of Centre)
Sub-Location Type:	Residential Zone
PTAL:	n/a
Site(4):	DV-03-A-01
Development Name:	TERRACED HOUSES
Location:	TORQUAY
Postcode:	TQ1 3HR
Main Location Type:	Suburban Area (PPS6 Out of Centre)
Sub-Location Type:	Residential Zone
PTAL:	n/a
Site(5):	HC-03-A-18
Development Name:	HOUSES & FLATS
Location:	LIPHOOK
Postcode:	GU30 7TG
Main Location Type:	Suburban Area (PPS6 Out of Centre)
Sub-Location Type:	Residential Zone
PTAL:	n/a
Site(6):	KC-03-A-03
Development Name:	MIXED HOUSES & FLATS
Location:	ASHFORD
Postcode:	TN24 OFR
Main Location Type:	Suburban Area (PPS6 Out of Centre)
Sub-Location Type:	Residential Zone
PTAL:	n/a
Site(7):	KC-03-A-06
Development Name:	MIXED HOUSES & FLATS
Location:	HERNE BAY
Postcode:	CT6 6DF
Main Location Type:	Suburban Area (PPS6 Out of Centre)
Sub-Location Type:	Residential Zone
PTAL:	n/a
Site(8):	LN-03-A-03
Development Name:	SEMI DETACHED
Location:	LINCOLN
Postcode:	LN6 7PL
Main Location Type:	Suburban Area (PPS6 Out of Centre)
Sub-Location Type:	Residential Zone
PTAL:	n/a
Site(9):	NF-03-A-01
Development Name:	SEMI DET. & BUNGALOWS
Location:	CAISTER-ON-SEA
Postcode:	NR30 5BX
Main Location Type:	Suburban Area (PPS6 Out of Centre)
Sub-Location Type:	Residential Zone
PTAL:	n/a
Site(10):	NY-03-A-13
Development Name:	TERRACED HOUSES
Location:	CATTERICK GARRISON
Postcode:	DL9 4SB
Main Location Type:	Suburban Area (PPS6 Out of Centre)
Sub-Location Type:	Residential Zone

n/a

PTAL:

Site area:	0.48 hect
Number of dwellings:	9
Housing density:	21
Total Bedrooms:	35
Survey Date:	18/10/11
Survey Day:	Tuesday
Parking Spaces:	22
Site area:	0.48 hect
Number of dwellings:	11
Housing density:	37
Total Bedrooms:	44
Survey Date:	22/05/12
Survey Day:	Tuesday
Parking Spaces:	52
Site area:	0.90 hect
Number of dwellings:	50
Housing density:	94
Total Bedrooms:	150
Survey Date:	28/03/17
Survey Day:	Tuesday
Parking Spaces:	87
Site area:	1.25 hect
Number of dwellings:	37
Housing density:	53
Total Bedrooms:	111
Survey Date:	30/09/15
Survey Day:	Wednesday
Parking Spaces:	103
Site area:	1.40 hect
Number of dwellings:	62
Housing density:	46
Total Bedrooms:	205
Survey Date:	29/11/16
Survey Day:	Tuesday
Parking Spaces:	136
Site area:	1.38 hect
Number of dwellings:	51
Housing density:	66
Total Bedrooms:	157
Survey Date:	14/07/16
Survey Day:	Thursday
Parking Spaces:	110
Site area:	8.00 hect
Number of dwellings:	363
Housing density:	73
Total Bedrooms:	1007
Survey Date:	27/09/17
Survey Day:	Wednesday
Parking Spaces:	789
Site area:	0.77 hect
Number of dwellings:	22
Housing density:	29
Total Bedrooms:	58
Survey Date:	18/09/12
Survey Day:	Tuesday
Parking Spaces:	24
Site area:	1.49 hect
Number of dwellings:	27
Housing density:	19
Total Bedrooms:	66
Survey Date:	16/10/12
Survey Day:	Tuesday
Parking Spaces:	64
Site area:	0.30 hect
Number of dwellings:	10
Housing density:	33
Total Bedrooms:	32
Survey Date:	10/05/17
Survey Day:	Wedness Jychnical Note
Parking Spaces:	19

Site(11):	SF-03-A-04	Site area:	0.59 hect
Development Name:	DETACHED & BUNGALOWS	Number of dwellings:	7
Location:	LOWESTOFT	Housing density:	15
Postcode:	NR32 2PQ	Total Bedrooms:	7
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	23/10/12
Sub-Location Type:	Residential Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	31
Site(12):	SY-03-A-01	Site area:	1.73 hect
Development Name:	SEMI DETACHED HOUSES	Number of dwellings:	54
Location:	DONCASTER	Housing density:	34
Postcode:	DN5 9TD	Total Bedrooms:	162
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	18/09/13
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	61
Site(13):	WL-03-A-02	Site area:	1.16 hect
Development Name:	SEMI DETACHED	Number of dwellings:	27
Location:	SWINDON	Housing density:	25
Postcode:	SN2 7HT	Total Bedrooms:	91
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	22/09/16
Sub-Location Type:	Residential Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	122
Site(14):	WS-03-A-05	Site area:	1.61 hect
Development Name:	TERRACED & FLATS	Number of dwellings:	48
Location:	SHOREHAM BY SEA	Housing density:	50
Postcode:	BN43 6TQ	Total Bedrooms:	129
Main Location Type:	Suburban Area (PPS6 Out of Centre)	Survey Date:	18/04/12
Sub-Location Type:	Residential Zone	Survey Day:	Wednesday
PTAL:	n/a	Parking Spaces:	132

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Wednesday 18/07/18 Page 6

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TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED 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	14	56	0.077	14	56	0.333	14	56	0.410
08:00 - 09:00	14	56	0.109	14	56	0.378	14	56	0.487
09:00 - 10:00	14	56	0.134	14	56	0.152	14	56	0.286
10:00 - 11:00	14	56	0.126	14	56	0.157	14	56	0.283
11:00 - 12:00	14	56	0.147	14	56	0.134	14	56	0.281
12:00 - 13:00	14	56	0.162	14	56	0.161	14	56	0.323
13:00 - 14:00	14	56	0.167	14	56	0.174	14	56	0.341
14:00 - 15:00	14	56	0.156	14	56	0.198	14	56	0.354
15:00 - 16:00	14	56	0.231	14	56	0.167	14	56	0.398
16:00 - 17:00	14	56	0.310	14	56	0.184	14	56	0.494
17:00 - 18:00	14	56	0.379	14	56	0.183	14	56	0.562
18:00 - 19:00	14	56	0.293	14	56	0.189	14	56	0.482
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.291			2.410			4.701

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.

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Parameter summary

Trip rate parameter range selected:7 - 363 (units:)Survey date date range:01/01/10 - 27/11/17Number of weekdays (Monday-Friday):14Number of Saturdays:0Number of Sundays:0Surveys automatically removed from selection:1Surveys 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.

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RATE TRIP RATE GRAPH - TOTALS 03 - RESIDENTIAL A - HOUSES PRIVATELY OWNED 96 VEHICLES

TRICS 7.5.2 230718 B18.40 Database right	of TRICS Consortium Limited, 2018. All right	s reserved Thursday 26/07/18 Page 1
Peter Brett Associates Caversham Bridge Hou	ise Reading	Licence No: 706701
Filtering Summary		
Land Use	02/B	EMPLOYMENT/BUSINESS PARK
Selected Trip Rate Calculation Parameter Range	975-132084 sqm GFA	
Actual Trip Rate Calculation Parameter Range	3300-55000 sqm GFA	
Date Range	Minimum: 01/01/10	Maximum: 22/11/17
Days of the week selected	Thursday Friday	1 3
Main Location Types selected	Suburban Area (PPS6 Out of Centre)	4
Population <1 Mile ranges selected	20,001 to 25,000 25,001 to 50,000	1 3
Population <5 Mile ranges selected	250,001 to 500,000 500,001 or More	3 1
Car Ownership <5 Mile ranges selected	0.6 to 1.0	4
PTAL Rating	No PTAL Present	4

Calculation Reference: AUDIT-706701-180726-0734

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TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Cate VEF	I Use gory II CLE	: 02 - EMPLOYMENT : B - BUSINESS PARK S	
Sele	cted re	gions and areas:	
02	SOU	TH EAST	
	HC	HAMPSHIRE	1 days
07	YORI	KSHIRE & NORTH LINCOLNSHIRE	
	WY	WEST YORKSHIRE	1 days
80	NOR	TH WEST	
	GM	GREATER MANCHESTER	1 days
09	NOR	TH	
	ΤW	TYNE & WEAR	1 days

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

Secondary 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:	3300 to 55000 (units: sqm)
Range Selected by User:	975 to 132084 (units: sqm)

Public Transport Provision: Selection by:

Include all surveys

Date Range: 01/01/10 to 22/11/17

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.

<u>Selected survey days:</u>	
Thursday	1 days
Friday	3 days

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

<u>Selected survey types:</u>	
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.

4

2 2

Selected Locations:

Suburban Area (PPS6 Out of 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:	
Industrial Zone	
No Sub Category	

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.

Secondary Filtering selection:

<u>Use Class:</u> B1

4 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS@.

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Peter Brett Associates Caversham Bridge House	Reading	Licence No: 706701
Secondary Filtering selection (Cont.):		
Population within 1 mile:		
20,001 to 25,000	1 days	
25,001 to 50,000	3 days	
This data displays the number of selected .	surveys within stated 1-mile radii of population.	
Population within 5 miles:		
250,001 to 500,000	3 days	
500,001 or More	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	4 days	
This data displays the number of selected within a radius of 5-miles of selected surve	surveys within stated ranges of average cars owned per ey sites.	residential dwelling,
Travel Plan		

No

4 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.

<u>PTAL Rating:</u> No PTAL Present

4 days

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

Reading

LIST OF SITES relevant to selection parameters

Peter Brett Associates Caversham Bridge House

Site(1): Development Name: Location: Postcode: Main Location Type: Sub-Location Type: PTAL:	GM-02-B-04 BUSINESS PARK OLDHAM OL2 6HT Suburban Area (PPS6 Out of Centre) Industrial Zone n/a	Gross floor area: Parking spaces: Number of Employees: Survey Date: Survey Day:	3300 sqm 92 166 22/10/15 Thursday
Site(2): Development Name: Location: Postcode: Main Location Type: Sub-Location Type: PTAL:	HC-02-B-02 BUSINESS PARK PORTSMOUTH PO6 3EZ Suburban Area (PPS6 Out of Centre) No Sub Category n/a	Gross floor area: Parking spaces: Number of Employees: Survey Date: Survey Day:	55000 sqm 2732 2800 18/10/13 Friday
Site(3): Development Name: Location: Postcode: Main Location Type: Sub-Location Type: PTAL:	TW-02-B-05 BUSINESS PARK NEWCASTLE NE4 7YB Suburban Area (PPS6 Out of Centre) No Sub Category n/a	Gross floor area: Parking spaces: Number of Employees: Survey Date: Survey Day:	7926 sqm 229 400 13/11/15 Friday
Site(4): Development Name: Location: Postcode: Main Location Type: Sub-Location Type: PTAL:	WY-02-B-01 BUSINESS PARK LEEDS LS8 5DR Suburban Area (PPS6 Out of Centre) Industrial Zone n/a	Gross floor area: Parking spaces: Number of Employees: Survey Date: Survey Day:	4078 sqm 75 120 20/09/13 Friday

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Trip Rates for I	Key Periods	Trips per 100 sqm GFA		
Period	Inbound	Outbound	Total	
0800-0900	1.686	0.169	1.855	
1700-1800	0.124	1.273	1.397	

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK VEHICLES Calculation factor: 100 sqm BOLD print indicates peak (busiest) period

		ARRIVALS			DEPARTURES	5	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	17576	0.568	4	17576	0.084	4	17576	0.652
08:00 - 09:00	4	17576	1.686	4	17576	0.169	4	17576	1.855
09:00 - 10:00	4	17576	0.667	4	17576	0.233	4	17576	0.900
10:00 - 11:00	4	17576	0.216	4	17576	0.135	4	17576	0.351
11:00 - 12:00	4	17576	0.222	4	17576	0.236	4	17576	0.458
12:00 - 13:00	4	17576	0.283	4	17576	0.455	4	17576	0.738
13:00 - 14:00	4	17576	0.340	4	17576	0.350	4	17576	0.690
14:00 - 15:00	4	17576	0.290	4	17576	0.283	4	17576	0.573
15:00 - 16:00	4	17576	0.174	4	17576	0.403	4	17576	0.577
16:00 - 17:00	4	17576	0.189	4	17576	0.622	4	17576	0.811
17:00 - 18:00	4	17576	0.124	4	17576	1.273	4	17576	1.397
18:00 - 19:00	4	17576	0.040	4	17576	0.432	4	17576	0.472
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.799			4.675			9.474

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.

Thursday 26/07/18 Page 6

Peter Brett Associates Caversham Bridge House Reading

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Parameter summary

Trip rate parameter range selected:3300 - 55000 (units: sqm)Survey date date range:01/01/10 - 22/11/17Number of weekdays (Monday-Friday):4Number of Saturdays:0Number of Sundays:0Surveys automatically removed from selection:0Surveys 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.

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RATE TRIP RATE GRAPH - TOTALS 02 - EMPLOYMENT B - BUSINESS PARK 96 VEHICLES

Reading

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TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK

Caversham Bridge House

TAXIS

Peter Brett Associates

Calculation factor: 100 sqm BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES	5	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	17576	0.004	4	17576	0.004	4	17576	0.008
08:00 - 09:00	4	17576	0.017	4	17576	0.017	4	17576	0.034
09:00 - 10:00	4	17576	0.014	4	17576	0.014	4	17576	0.028
10:00 - 11:00	4	17576	0.007	4	17576	0.006	4	17576	0.013
11:00 - 12:00	4	17576	0.007	4	17576	0.009	4	17576	0.016
12:00 - 13:00	4	17576	0.011	4	17576	0.010	4	17576	0.021
13:00 - 14:00	4	17576	0.003	4	17576	0.004	4	17576	0.007
14:00 - 15:00	4	17576	0.006	4	17576	0.006	4	17576	0.012
15:00 - 16:00	4	17576	0.004	4	17576	0.004	4	17576	0.008
16:00 - 17:00	4	17576	0.004	4	17576	0.003	4	17576	0.007
17:00 - 18:00	4	17576	0.011	4	17576	0.013	4	17576	0.024
18:00 - 19:00	4	17576	0.001	4	17576	0.001	4	17576	0.002
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.089			0.091			0.180

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.

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Reading

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK

Caversham Bridge House

OGVS Calculation factor: 100 sqm

Peter Brett Associates

BOLD print indicates peak (busiest) period

		ARRIVALS			DEPARTURES	5	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	17576	0.001	4	17576	0.001	4	17576	0.002
08:00 - 09:00	4	17576	0.006	4	17576	0.000	4	17576	0.006
09:00 - 10:00	4	17576	0.007	4	17576	0.007	4	17576	0.014
10:00 - 11:00	4	17576	0.001	4	17576	0.003	4	17576	0.004
11:00 - 12:00	4	17576	0.001	4	17576	0.001	4	17576	0.002
12:00 - 13:00	4	17576	0.000	4	17576	0.001	4	17576	0.001
13:00 - 14:00	4	17576	0.006	4	17576	0.003	4	17576	0.009
14:00 - 15:00	4	17576	0.003	4	17576	0.004	4	17576	0.007
15:00 - 16:00	4	17576	0.001	4	17576	0.004	4	17576	0.005
16:00 - 17:00	4	17576	0.009	4	17576	0.007	4	17576	0.016
17:00 - 18:00	4	17576	0.001	4	17576	0.003	4	17576	0.004
18:00 - 19:00	4	17576	0.000	4	17576	0.001	4	17576	0.001
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.036			0.035			0.071

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.

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RATE TRIP RATE GRAPH - DEPARTURES 02 - EMPLOYMENT B - BUSINESS PARK 96 OGVS

TIME

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Reading

Licence No: 706701

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK

Caversham Bridge House

PSVS

Peter Brett Associates

Calculation factor: 100 sqm BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES	5	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	17576	0.007	4	17576	0.006	4	17576	0.013
08:00 - 09:00	4	17576	0.006	4	17576	0.007	4	17576	0.013
09:00 - 10:00	4	17576	0.007	4	17576	0.007	4	17576	0.014
10:00 - 11:00	4	17576	0.000	4	17576	0.000	4	17576	0.000
11:00 - 12:00	4	17576	0.001	4	17576	0.000	4	17576	0.001
12:00 - 13:00	4	17576	0.000	4	17576	0.001	4	17576	0.001
13:00 - 14:00	4	17576	0.000	4	17576	0.000	4	17576	0.000
14:00 - 15:00	4	17576	0.000	4	17576	0.000	4	17576	0.000
15:00 - 16:00	4	17576	0.001	4	17576	0.001	4	17576	0.002
16:00 - 17:00	4	17576	0.007	4	17576	0.007	4	17576	0.014
17:00 - 18:00	4	17576	0.010	4	17576	0.007	4	17576	0.017
18:00 - 19:00	4	17576	0.004	4	17576	0.007	4	17576	0.011
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.043			0.043			0.086

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.

TIME

Licence No: 706701

RATE % TRIP RATE GRAPH - ARRIVALS FOR SITE: HC-02-B-02 PSVS



TIME

Licence No: 706701

RATE % TRIP RATE GRAPH - DEPARTURES FOR SITE: HC-02-B-02 PSVS



TIME

Licence No: 706701

RATE % TRIP RATE GRAPH - TOTALS FOR SITE: HC-02-B-02 PSVS



Licence No: 706701

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK CYCLISTS Calculation factor: 100 sqm BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES	5	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	17576	0.037	4	17576	0.000	4	17576	0.037
08:00 - 09:00	4	17576	0.073	4	17576	0.009	4	17576	0.082
09:00 - 10:00	4	17576	0.011	4	17576	0.000	4	17576	0.011
10:00 - 11:00	4	17576	0.013	4	17576	0.004	4	17576	0.017
11:00 - 12:00	4	17576	0.009	4	17576	0.003	4	17576	0.012
12:00 - 13:00	4	17576	0.006	4	17576	0.006	4	17576	0.012
13:00 - 14:00	4	17576	0.010	4	17576	0.011	4	17576	0.021
14:00 - 15:00	4	17576	0.007	4	17576	0.010	4	17576	0.017
15:00 - 16:00	4	17576	0.003	4	17576	0.013	4	17576	0.016
16:00 - 17:00	4	17576	0.007	4	17576	0.026	4	17576	0.033
17:00 - 18:00	4	17576	0.013	4	17576	0.082	4	17576	0.095
18:00 - 19:00	4	17576	0.000	4	17576	0.024	4	17576	0.024
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.189			0.188			0.377

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.

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RATE TRIP RATE GRAPH - ARRIVALS 02 - EMPLOYMENT B - BUSINESS PARK 96 CYCLISTS

Licence No: 706701



Licence No: 706701



Reading

Licence No: 706701

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK

Caversham Bridge House

CARS

Peter Brett Associates

Calculation factor: 100 sqm BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES	5	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	17576	0.087	4	17576	0.003	4	17576	0.090
08:00 - 09:00	4	17576	0.270	4	17576	0.024	4	17576	0.294
09:00 - 10:00	4	17576	0.085	4	17576	0.026	4	17576	0.111
10:00 - 11:00	4	17576	0.028	4	17576	0.026	4	17576	0.054
11:00 - 12:00	4	17576	0.028	4	17576	0.033	4	17576	0.061
12:00 - 13:00	4	17576	0.060	4	17576	0.098	4	17576	0.158
13:00 - 14:00	4	17576	0.073	4	17576	0.060	4	17576	0.133
14:00 - 15:00	4	17576	0.044	4	17576	0.041	4	17576	0.085
15:00 - 16:00	4	17576	0.014	4	17576	0.073	4	17576	0.087
16:00 - 17:00	4	17576	0.018	4	17576	0.108	4	17576	0.126
17:00 - 18:00	4	17576	0.021	4	17576	0.212	4	17576	0.233
18:00 - 19:00	4	17576	0.009	4	17576	0.031	4	17576	0.040
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.737			0.735			1.472

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.

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RATE TRIP RATE GRAPH - ARRIVALS 02 - EMPLOYMENT B - BUSINESS PARK 96 CARS

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TIME RATE TRIP RATE GRAPH - TOTALS 02 - EMPLOYMENT B - BUSINESS PARK 96 CARS 00:00-01:00 01:00-02:0002:00-03:00 03:00-04:0004:00-05:0005:00-06:00 06:00-07:00 07:00-08:00 0.090 6.1 6.1% 0.294 20.0 20 % 08:00-09:00 7.5 % 09:00-10:00 0.111 7.5 3.7 % 10:00-11:00 0.054 3.7 11:00-12:00 0.061 4.1 4.1% 10.7 % 12:00-13:000.158 10.7 9% 13:00-14:00 0.133 9.0 0.085 5.8 % 5.8 14:00-15:00 5.9 % 15:00-16:00 0.087 5.9 8.6 % 16:00-17:00 0.126 8.6 15.8 % 17:00-18:00 0.233 15.8 0.040 2.7 2.7 % 18:00-19:00 19:00-20:00 20:00-21:00 21:00-22:00 22:00-23:00 23:00-24:00 n. 2 3 5 8 9 12 15 16 17 18 19 20 21 22 4 6 10 13 14 11 Percentage

Reading

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK

Caversham Bridge House

LGVS

Peter Brett Associates

Calculation factor: 100 sqm BOLD print indicates peak (busiest) period

	ARRIVALS			[DEPARTURES	5	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	17576	0.043	4	17576	0.010	4	17576	0.053
08:00 - 09:00	4	17576	0.061	4	17576	0.030	4	17576	0.091
09:00 - 10:00	4	17576	0.050	4	17576	0.057	4	17576	0.107
10:00 - 11:00	4	17576	0.053	4	17576	0.033	4	17576	0.086
11:00 - 12:00	4	17576	0.047	4	17576	0.057	4	17576	0.104
12:00 - 13:00	4	17576	0.047	4	17576	0.031	4	17576	0.078
13:00 - 14:00	4	17576	0.023	4	17576	0.040	4	17576	0.063
14:00 - 15:00	4	17576	0.033	4	17576	0.033	4	17576	0.066
15:00 - 16:00	4	17576	0.034	4	17576	0.033	4	17576	0.067
16:00 - 17:00	4	17576	0.027	4	17576	0.043	4	17576	0.070
17:00 - 18:00	4	17576	0.007	4	17576	0.027	4	17576	0.034
18:00 - 19:00	4	17576	0.004	4	17576	0.028	4	17576	0.032
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.429			0.422			0.851

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.

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RATE TRIP RATE GRAPH - ARRIVALS 02 - EMPLOYMENT B - BUSINESS PARK 96 LGVS

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RATE TRIP RATE GRAPH - DEPARTURES 02 - EMPLOYMENT B - BUSINESS PARK 96 LGVS

Licence No: 706701

TIME RATE TRIP RATE GRAPH - TOTALS 02 - EMPLOYMENT B - BUSINESS PARK 96 LGVS 00:00-01:00 01:00-02:0002:00-03:00 03:00-04:0004:00-05:0005:00-06:00 06:00-07:00 07:00-08:00 0.053 6.2 6.2% 10.7 % 08:00-09:00 0.091 10.7 09:00-10:00 0.107 12.6 12.6 % 10.1 % 10:00-11:00 0.086 10.1 11:00-12:00 0.104 12.2 12.2 % 9.2 % 12:00-13:000.078 9.2 7.4% 13:00-14:00 0.063 7.4 7.8 7.8 % 14:00-15:00 0.066 7.9 15:00-16:00 0.067 7.9% 16:00-17:00 0.070 8.2 8.2% 17:00-18:00 0.034 4.0 4% 3.8 % 18:00-19:00 0.032 3.8 19:00-20:00 20:00-21:00 21:00-22:00 22:00-23:00 23:00-24:00 2 3 5 6 8 9 n 10 11 12 13 14 Δ Percentage

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TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK MOTOR CYCLES Calculation factor: 100 sqm BOLD print indicates peak (busiest) period

		ARRIVALS			DEPARTURES	5	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	17576	0.001	4	17576	0.000	4	17576	0.001
08:00 - 09:00	4	17576	0.011	4	17576	0.001	4	17576	0.012
09:00 - 10:00	4	17576	0.007	4	17576	0.001	4	17576	0.008
10:00 - 11:00	4	17576	0.003	4	17576	0.001	4	17576	0.004
11:00 - 12:00	4	17576	0.000	4	17576	0.001	4	17576	0.001
12:00 - 13:00	4	17576	0.001	4	17576	0.000	4	17576	0.001
13:00 - 14:00	4	17576	0.000	4	17576	0.003	4	17576	0.003
14:00 - 15:00	4	17576	0.001	4	17576	0.000	4	17576	0.001
15:00 - 16:00	4	17576	0.000	4	17576	0.004	4	17576	0.004
16:00 - 17:00	4	17576	0.001	4	17576	0.001	4	17576	0.002
17:00 - 18:00	4	17576	0.000	4	17576	0.009	4	17576	0.009
18:00 - 19:00	4	17576	0.000	4	17576	0.004	4	17576	0.004
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.025			0.025			0.050

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.

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This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Appendix A - Trip Rates Technical Note