

Client	JA Morgan Construction Ltd
Project Number:	GS1329
Project Name:	Proposed Residential Development, Llandrindod Wells - Vehicle Trip Generation Assessment



Trip rates for the proposed residential development have been based on trips derived from the TRICS database for the corresponding land use. TRICS is a database of trip generation data from a wide variety of existing different sites (residential, employment, leisure etc.) around the UK. Surveys are carried out to measure how many people travel to a site, by what mode, at what time of day, and when they leave. The purpose of the database is to provide an estimate of likely trip generation to/from a new development, by comparing it with trip generation from existing comparative sites.

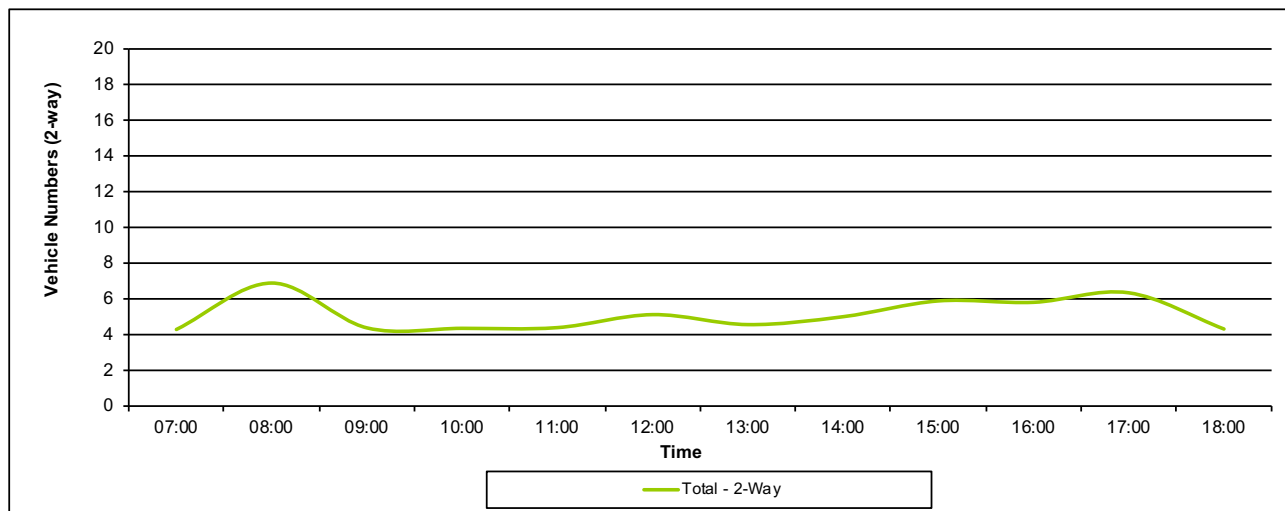
TRICS Information.	
Land Use:	Land Use 03 - Residential - Houses Privately Owned
Calculation Factor:	Per Dwelling
Count Type:	All Vehicles

TRICS Vehicle Trip Rates per Dwelling

Peak Periods	Arrivals	Departures	Total - 2-Way
07:00	0.1	0.3	0.3
08:00	0.2	0.4	0.5
09:00	0.2	0.2	0.3
10:00	0.2	0.2	0.3
11:00	0.2	0.2	0.3
12:00	0.2	0.2	0.4
13:00	0.2	0.2	0.4
14:00	0.2	0.2	0.4
15:00	0.3	0.2	0.5
16:00	0.3	0.2	0.4
17:00	0.3	0.2	0.5
18:00	0.2	0.1	0.3
Total	2.3	2.4	4.7

Vehicle Trip Generations based on 13 Dwellings

Time Period	Arrivals	Departures	Total - 2-Way
07:00	1	3	4
08:00	2	5	7
09:00	2	2	4
10:00	2	2	4
11:00	2	2	4
12:00	2	3	5
13:00	2	2	5
14:00	2	3	5
15:00	3	3	6
16:00	4	2	6
17:00	4	2	6
18:00	2	2	4
Total	30	31	61



Filtering Summary

Land Use	03/A	RESIDENTIAL/HOUSES PRIVATELY OWNED
Selected Trip Rate Calculation Parameter Range	6-50 DWELLS	
Actual Trip Rate Calculation Parameter Range	6-47 DWELLS	
Date Range	Minimum: 01/01/09	Maximum: 27/09/16
Days of the week selected	Monday	7
	Tuesday	6
	Wednesday	5
	Thursday	3
	Friday	5
Main Location Types selected	Edge of Town Centre	5
	Suburban Area (PPS6 Out of Centre)	11
	Edge of Town	10
Population <1 Mile ranges selected	1,001 to 5,000	2
	5,001 to 10,000	7
	10,001 to 15,000	7
	15,001 to 20,000	2
	20,001 to 25,000	2
	25,001 to 50,000	6
Population <5 Mile ranges selected	5,001 to 25,000	4
	25,001 to 50,000	2
	50,001 to 75,000	3
	75,001 to 100,000	5
	100,001 to 125,000	1
	125,001 to 250,000	5
	250,001 to 500,000	5
	500,001 or More	1
Car Ownership <5 Mile ranges selected	0.5 or Less	1
	0.6 to 1.0	12
	1.1 to 1.5	13
PTAL Rating	No PTAL Present	26

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

MULTI-MODAL VEHICLESSelected regions and areas:

03	SOUTH WEST	
	DC DORSET	1 days
	DV DEVON	1 days
	SM SOMERSET	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	2 days
	SF SUFFOLK	2 days
05	EAST MIDLANDS	
	LN LINCOLNSHIRE	2 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	2 days
	ST STAFFORDSHIRE	1 days
	WK WARWICKSHIRE	2 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	3 days
08	NORTH WEST	
	CH CHESHIRE	2 days
	GM GREATER MANCHESTER	1 days
	LC LANCASHIRE	1 days
	MS MERSEYSIDE	1 days
09	NORTH	
	TW TYNE & WEAR	1 days
10	WALES	
	PS POWYS	2 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: 6 to 47 (units:)
 Range Selected by User: 6 to 50 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/09 to 27/09/16

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

Selected survey days:

Monday	7 days
Tuesday	6 days
Wednesday	5 days
Thursday	3 days
Friday	5 days

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

Selected survey types:

Manual count	26 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 undertaken using machines.

Selected Locations:

Edge of Town Centre	5
Suburban Area (PPS6 Out of Centre)	11
Edge of Town	10

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	24
No Sub Category	2

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:Use Class:

C1	1 days
C3	24 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®.

Secondary Filtering selection (Cont.):Population within 1 mile:

1,001 to 5,000	2 days
5,001 to 10,000	7 days
10,001 to 15,000	7 days
15,001 to 20,000	2 days
20,001 to 25,000	2 days
25,001 to 50,000	6 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	4 days
25,001 to 50,000	2 days
50,001 to 75,000	3 days
75,001 to 100,000	5 days
100,001 to 125,000	1 days
125,001 to 250,000	5 days
250,001 to 500,000	5 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:

0.5 or Less	1 days
0.6 to 1.0	12 days
1.1 to 1.5	13 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	26 days
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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	26 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	CA-03-A-04	DETACHED		CAMBRIDGESHIRE
	THORPE PARK ROAD			
	PETERBOROUGH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	9		
	Survey date: TUESDAY	18/10/11		Survey Type: MANUAL
2	CH-03-A-08	DETACHED		CHESHIRE
	WHITCHURCH ROAD			
	BOUGHTON HEATH			
	CHESTER			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	11		
	Survey date: TUESDAY	22/05/12		Survey Type: MANUAL
3	CH-03-A-09	TERRACED HOUSES		CHESHIRE
	GREYSTOKE ROAD			
	HURDSFIELD			
	MACCLESFIELD			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	24		
	Survey date: MONDAY	24/11/14		Survey Type: MANUAL
4	DC-03-A-08	BUNGALOWS		DORSET
	HURSTDENE ROAD			
	CASTLE LANE WEST			
	BOURNEMOUTH			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	28		
	Survey date: MONDAY	24/03/14		Survey Type: MANUAL
5	DV-03-A-01	TERRACED HOUSES		DEVON
	BRONSHILL ROAD			
	TORQUAY			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	37		
	Survey date: WEDNESDAY	30/09/15		Survey Type: MANUAL
6	GM-03-A-10	DETACHED/SEMI		GREATER MANCHESTER
	BUTT HILL DRIVE			
	PRESTWICH			
	MANCHESTER			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	29		
	Survey date: WEDNESDAY	12/10/11		Survey Type: MANUAL
7	LC-03-A-30	SEMI-DETACHED		LANCASHIRE
	WATSON ROAD			
	BLACKPOOL			
	Edge of Town Centre			
	Residential Zone			
	Total Number of dwellings:	24		
	Survey date: FRIDAY	14/06/13		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

8	LN-03-A-03	SEMI DETACHED	LINCOLNSHIRE
	ROOKERY LANE		
	BOULTHAM		
	LINCOLN		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	22	
	Survey date: TUESDAY	18/09/12	Survey Type: MANUAL
9	LN-03-A-04	DETACHED & SEMI-DETACHED	LINCOLNSHIRE
	EGERTON ROAD		
	LINCOLN		
	Edge of Town Centre		
	Residential Zone		
	Total Number of dwellings:	30	
	Survey date: MONDAY	29/06/15	Survey Type: MANUAL
10	MS-03-A-03	DETACHED	MERSEYSIDE
	BEMPTON ROAD		
	OTTERSPOOL		
	LIVERPOOL		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	15	
	Survey date: FRIDAY	21/06/13	Survey Type: MANUAL
11	NF-03-A-01	SEMI DET. & BUNGALOWS	NORFOLK
	YARMOUTH ROAD		
	CAISTER-ON-SEA		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	27	
	Survey date: TUESDAY	16/10/12	Survey Type: MANUAL
12	NF-03-A-03	DETACHED HOUSES	NORFOLK
	HALING WAY		
	THETFORD		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	10	
	Survey date: WEDNESDAY	16/09/15	Survey Type: MANUAL
13	NY-03-A-08	TERRACED HOUSES	NORTH YORKSHIRE
	NICHOLAS STREET		
	YORK		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	21	
	Survey date: MONDAY	16/09/13	Survey Type: MANUAL
14	NY-03-A-11	PRIVATE HOUSING	NORTH YORKSHIRE
	HORSEFAIR		
	BOROUGHBRIDGE		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	23	
	Survey date: WEDNESDAY	18/09/13	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

15	NY-03-A-12	TOWN HOUSES		NORTH YORKSHIRE
	RACECOURSE LANE			
	NORTHALLERTON			
	Edge of Town Centre			
	Residential Zone			
	Total Number of dwellings:	47		
	Survey date: TUESDAY	27/09/16		Survey Type: MANUAL
16	PS-03-A-01	MIXED HOUSES		POWYS
	BRYN GLAS			
	WELSHPOOL			
	Edge of Town Centre			
	Residential Zone			
	Total Number of dwellings:	16		
	Survey date: MONDAY	11/05/15		Survey Type: MANUAL
17	PS-03-A-02	DETACHED/SEMI-DETACHED		POWYS
	GUNROG ROAD			
	WELSHPOOL			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	28		
	Survey date: MONDAY	11/05/15		Survey Type: MANUAL
18	SF-03-A-04	DETACHED & BUNGALOWS		SUFFOLK
	NORMANSTON DRIVE			
	LOWESTOFT			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	7		
	Survey date: TUESDAY	23/10/12		Survey Type: MANUAL
19	SF-03-A-05	DETACHED HOUSES		SUFFOLK
	VALE LANE			
	BURY ST EDMUNDS			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	18		
	Survey date: WEDNESDAY	09/09/15		Survey Type: MANUAL
20	SH-03-A-03	DETACHED		SHROPSHIRE
	SOMERBY DRIVE			
	BICTON HEATH			
	SHREWSBURY			
	Edge of Town			
	No Sub Category			
	Total Number of dwellings:	10		
	Survey date: FRIDAY	26/06/09		Survey Type: MANUAL
21	SH-03-A-06	BUNGALOWS		SHROPSHIRE
	ELLESMERE ROAD			
	SHREWSBURY			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	16		
	Survey date: THURSDAY	22/05/14		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

22	SM-03-A-01	DETACHED & SEMI	SOMERSET
	WEMBDON ROAD		
	NORTHFIELD		
	BRIDGWATER		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	33	
	Survey date: THURSDAY	24/09/15	Survey Type: MANUAL
23	ST-03-A-06	SEMI-DET. & TERRACED	STAFFORDSHIRE
	STANFORD ROAD		
	BLAKENHALL		
	WOLVERHAMPTON		
	Edge of Town Centre		
	No Sub Category		
	Total Number of dwellings:	17	
	Survey date: FRIDAY	09/05/14	Survey Type: MANUAL
24	TW-03-A-02	SEMI-DETACHED	TYNE & WEAR
	WEST PARK ROAD		
	GATESHEAD		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	16	
	Survey date: MONDAY	07/10/13	Survey Type: MANUAL
25	WK-03-A-01	TERRACED/SEMI/DET.	WARWICKSHIRE
	ARLINGTON AVENUE		
	LEAMINGTON SPA		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	6	
	Survey date: FRIDAY	21/10/11	Survey Type: MANUAL
26	WK-03-A-02	BUNGALOWS	WARWICKSHIRE
	NARBERTH WAY		
	POTTERS GREEN		
	COVENTRY		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	17	
	Survey date: THURSDAY	17/10/13	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.

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

MULTI-MODAL VEHICLES**Calculation factor: 1 DWELLS****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	26	21	0.079	26	21	0.251	26	21	0.330
08:00 - 09:00	26	21	0.168	26	21	0.362	26	21	0.530
09:00 - 10:00	26	21	0.150	26	21	0.187	26	21	0.337
10:00 - 11:00	26	21	0.174	26	21	0.161	26	21	0.335
11:00 - 12:00	26	21	0.153	26	21	0.185	26	21	0.338
12:00 - 13:00	26	21	0.189	26	21	0.205	26	21	0.394
13:00 - 14:00	26	21	0.177	26	21	0.174	26	21	0.351
14:00 - 15:00	26	21	0.174	26	21	0.211	26	21	0.385
15:00 - 16:00	26	21	0.255	26	21	0.198	26	21	0.453
16:00 - 17:00	26	21	0.281	26	21	0.166	26	21	0.447
17:00 - 18:00	26	21	0.333	26	21	0.155	26	21	0.488
18:00 - 19:00	26	21	0.192	26	21	0.140	26	21	0.332
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.325			2.395			4.720

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.

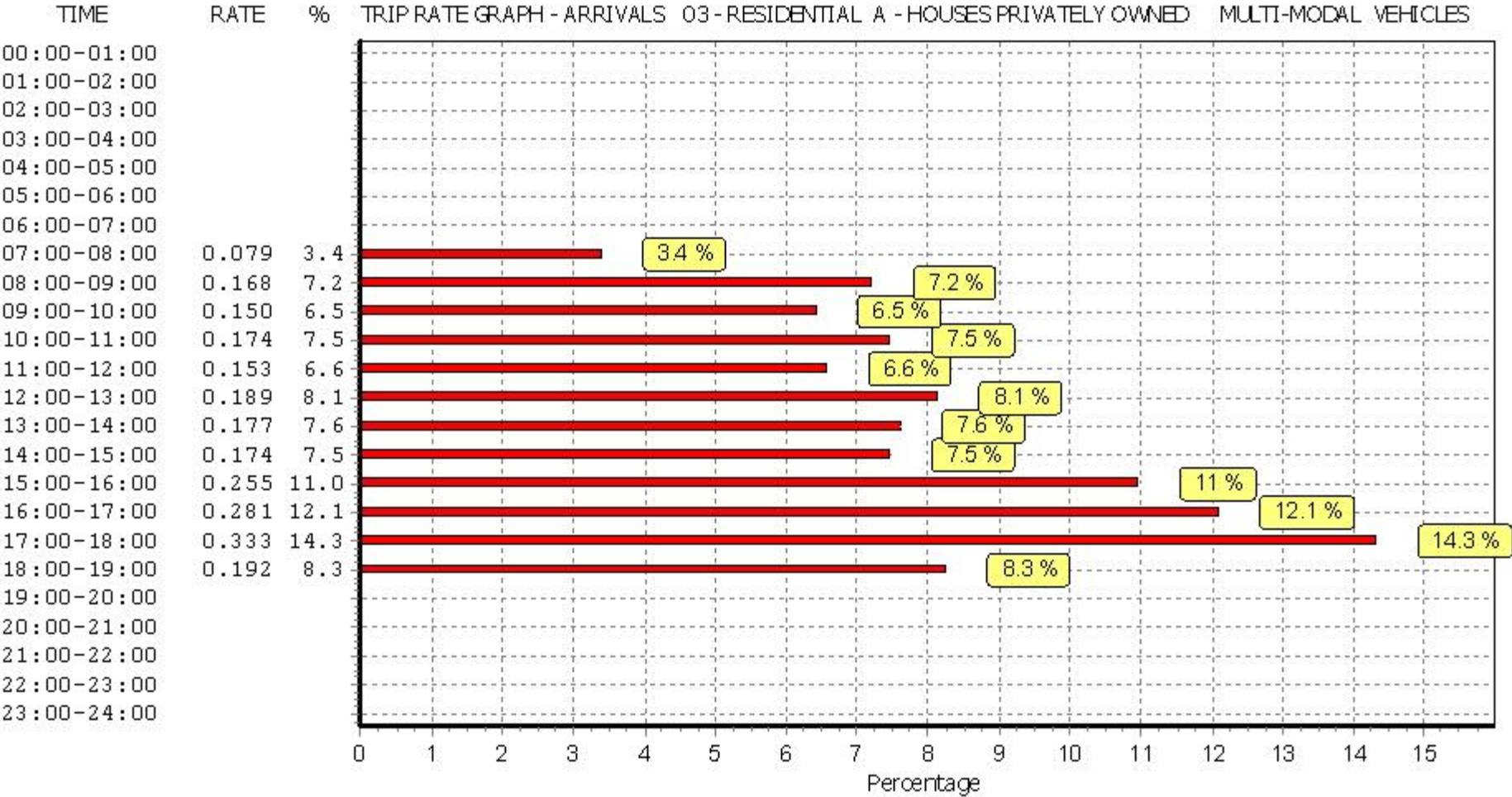
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected 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: $\text{COUNT} / \text{TRP} * \text{FACT}$. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	6 - 47 (units:)
Survey date range:	01/01/09 - 27/09/16
Number of weekdays (Monday-Friday):	26
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

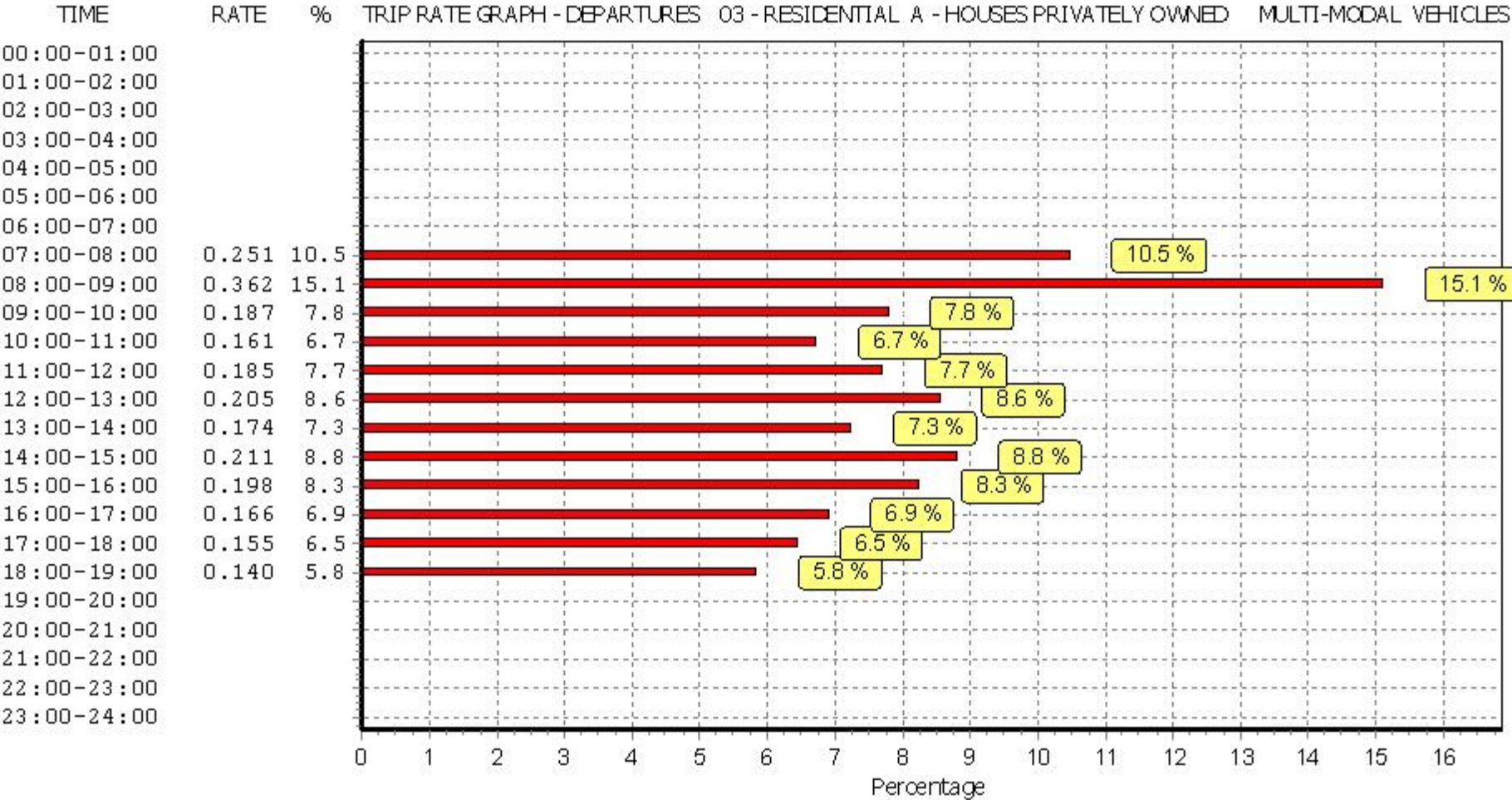
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. 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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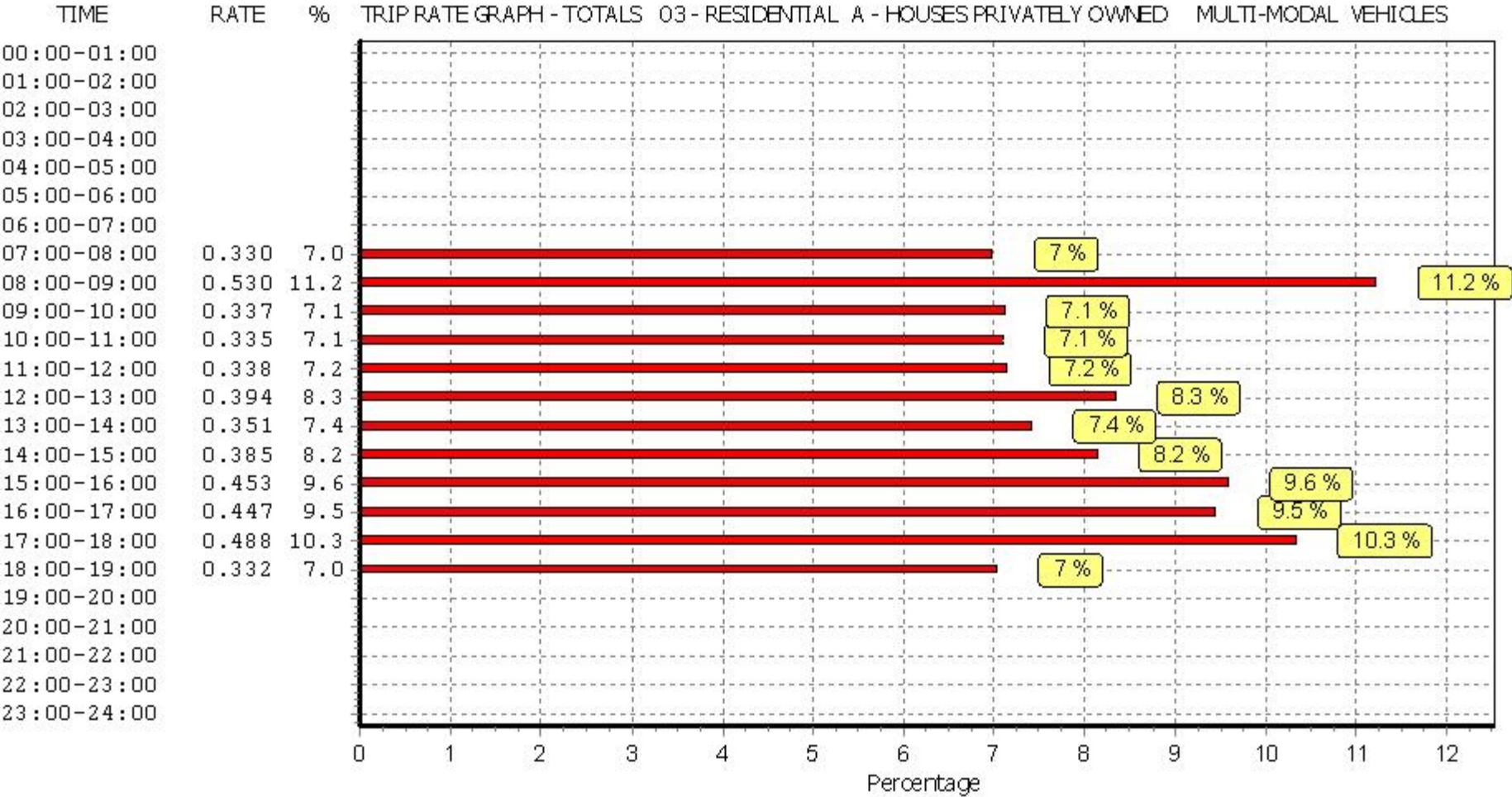
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Licence No: 152302



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.

Licence No: 152302



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.