

Appendix D

TRICS Data Report

Calculation Reference: AUDIT-349901-150730-0731

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION
Category : A - PRIMARY
VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	SC SURREY	1 days
04	EAST ANGLIA	
	SF SUFFOLK	1 days
05	EAST MIDLANDS	
	NR NORTHAMPTONSHIRE	1 days
11	SCOTLAND	
	DU DUNDEE CITY	1 days
	FA FALKIRK	1 days
13	MUNSTER	
	LI LIMERICK	1 days

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

Filtering Stage 2 selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of pupils
Actual Range: 400 to 800 (units:)
Range Selected by User: 400 to 1000 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/07 to 18/11/13

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	2 days
Wednesday	2 days
Thursday	1 days
Friday	1 days

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

Selected survey types:

Manual count	6 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:

Suburban Area (PPS6 Out of Centre)	4
Edge of Town	1
Neighbourhood Centre (PPS6 Local Centre)	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:

Residential Zone	5
Village	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.

Filtering Stage 3 selection:

Use Class:

D1 6 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®.

Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	1 days
10,001 to 15,000	1 days
15,001 to 20,000	1 days
20,001 to 25,000	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	3 days
125,001 to 250,000	3 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	3 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:

Yes	1 days
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.

LIST OF SITES relevant to selection parameters

1	DU-04-A-01	PRIMARY SCHOOL		DUNDEE CITY
	FALKLAND CRESCENT BROUGHTY FERRY DUNDEE Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of pupils: 412 Survey date: MONDAY 21/05/12			Survey Type: MANUAL
2	FA-04-A-03	PRIMARY SCHOOL		FALKIRK
	GLENDEVON DRIVE MADDISTON FALKIRK Edge of Town Residential Zone Total Number of pupils: 452 Survey date: MONDAY 03/06/13			Survey Type: MANUAL
3	LI-04-A-01	PRIMARY SCHOOL		LIMERICK
	CORBALLY ROAD LIMERICK Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of pupils: 800 Survey date: FRIDAY 24/06/11			Survey Type: MANUAL
4	NR-04-A-02	PRIMARY SCHOOL		NORTHAMPTONSHIRE
	DAYRELL ROAD NORTHAMPTON Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of pupils: 400 Survey date: WEDNESDAY 26/11/08			Survey Type: MANUAL
5	SC-04-A-01	PRIMARY SCHOOL		SURREY
	SCHOOL LANE PIRBRIGHT NEAR WOKING Neighbourhood Centre (PPS6 Local Centre) Village Total Number of pupils: 414 Survey date: THURSDAY 22/11/12			Survey Type: MANUAL
6	SF-04-A-02	PRIMARY SCHOOL		SUFFOLK
	SIDEGATE LANE IPSWICH Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of pupils: 657 Survey date: WEDNESDAY 21/05/08			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 04 - EDUCATION/A - PRIMARY
 VEHICLES

Calculation factor: 1 PUPILS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	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	6	523	0.028	6	523	0.005	6	523	0.033
08:00 - 09:00	6	523	0.158	6	523	0.080	6	523	0.238
09:00 - 10:00	6	523	0.040	6	523	0.057	6	523	0.097
10:00 - 11:00	6	523	0.013	6	523	0.009	6	523	0.022
11:00 - 12:00	6	523	0.014	6	523	0.017	6	523	0.031
12:00 - 13:00	6	523	0.023	6	523	0.022	6	523	0.045
13:00 - 14:00	6	523	0.024	6	523	0.022	6	523	0.046
14:00 - 15:00	6	523	0.049	6	523	0.033	6	523	0.082
15:00 - 16:00	6	523	0.062	6	523	0.099	6	523	0.161
16:00 - 17:00	6	523	0.031	6	523	0.074	6	523	0.105
17:00 - 18:00	6	523	0.017	6	523	0.027	6	523	0.044
18:00 - 19:00	5	547	0.025	5	547	0.018	5	547	0.043
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.484			0.463			0.947

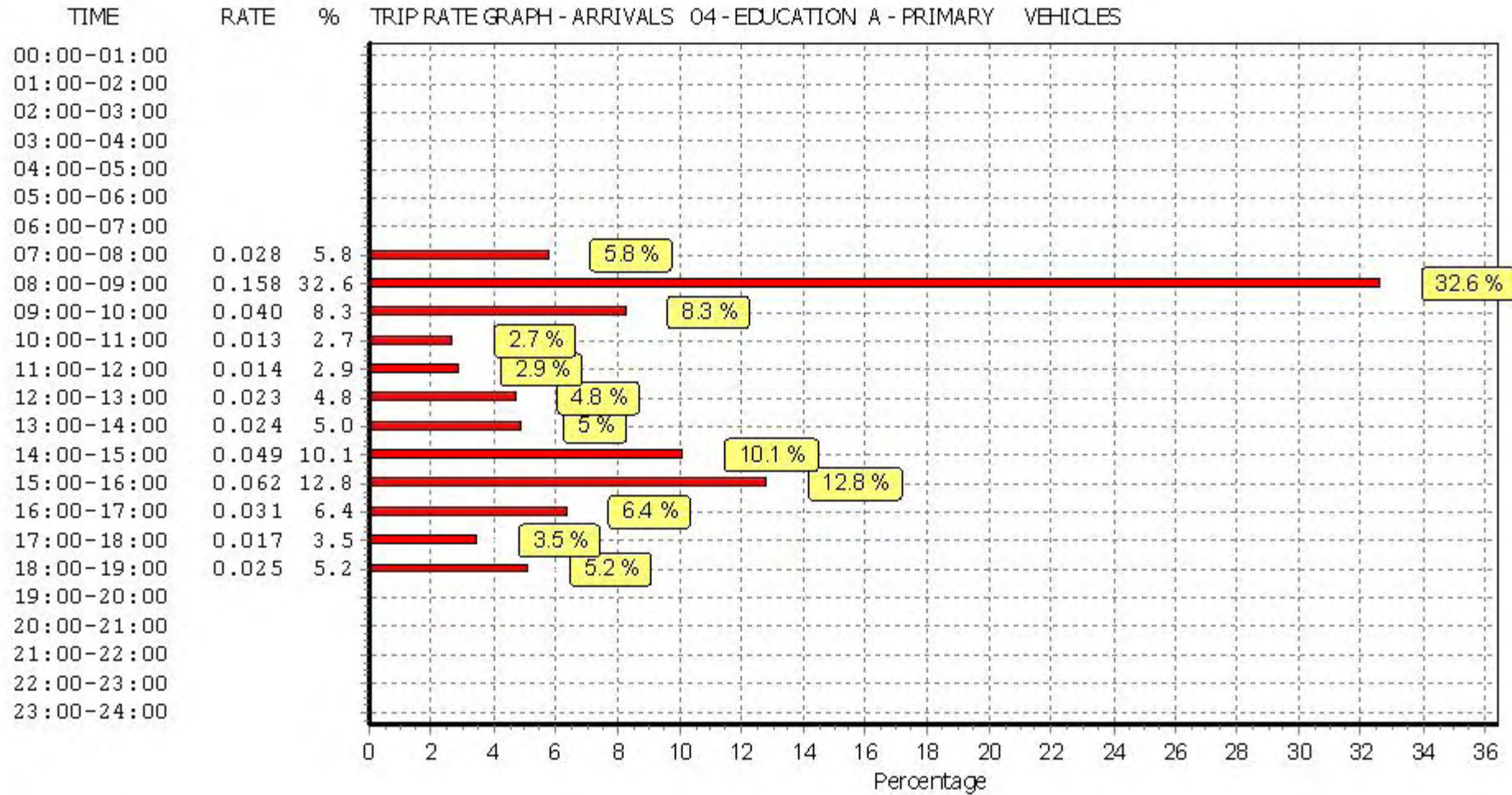
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are 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.

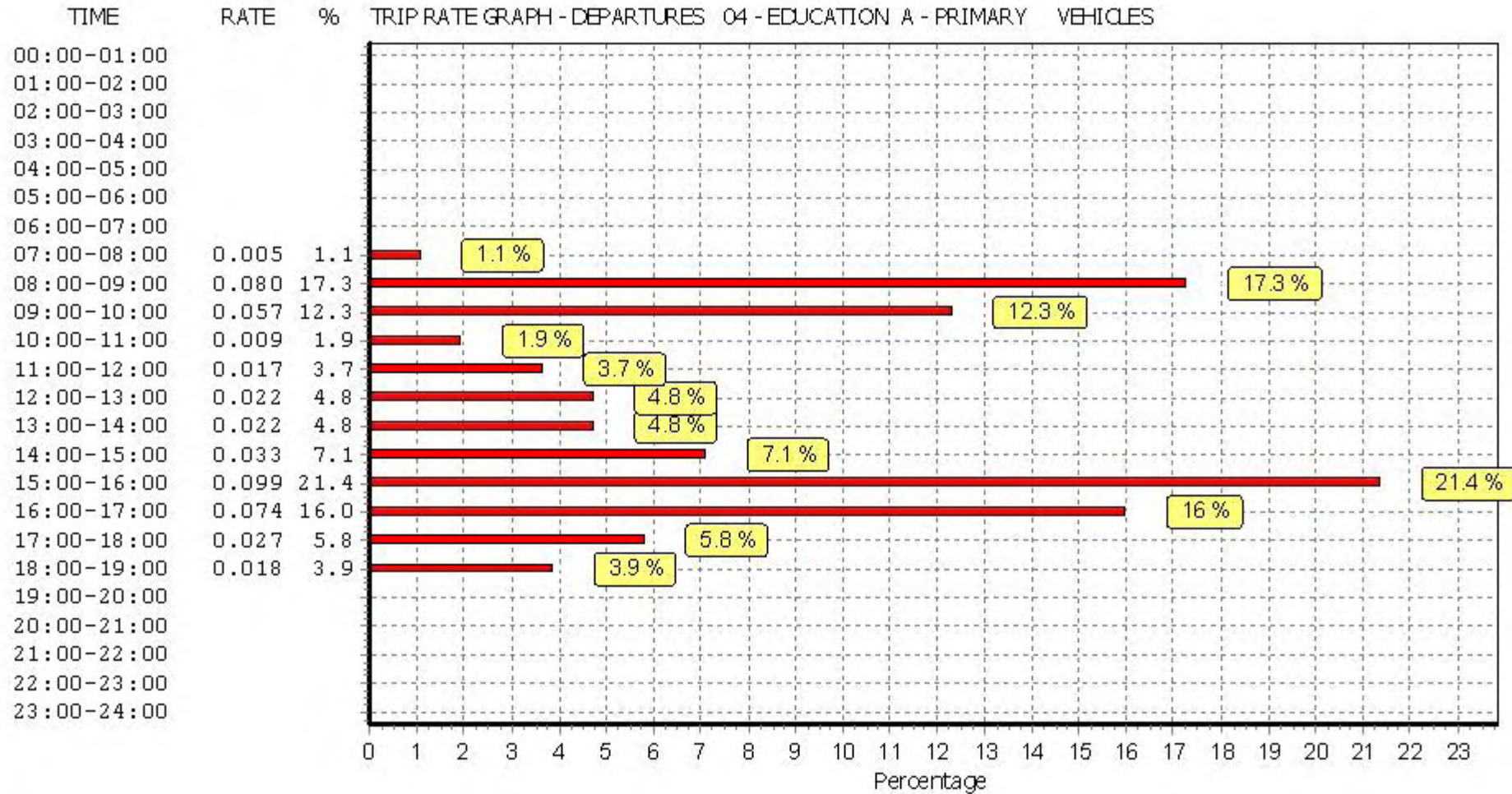
Parameter summary

Trip rate parameter range selected: 400 - 800 (units:)
 Survey date date range: 01/01/07 - 18/11/13
 Number of weekdays (Monday-Friday): 6
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 0

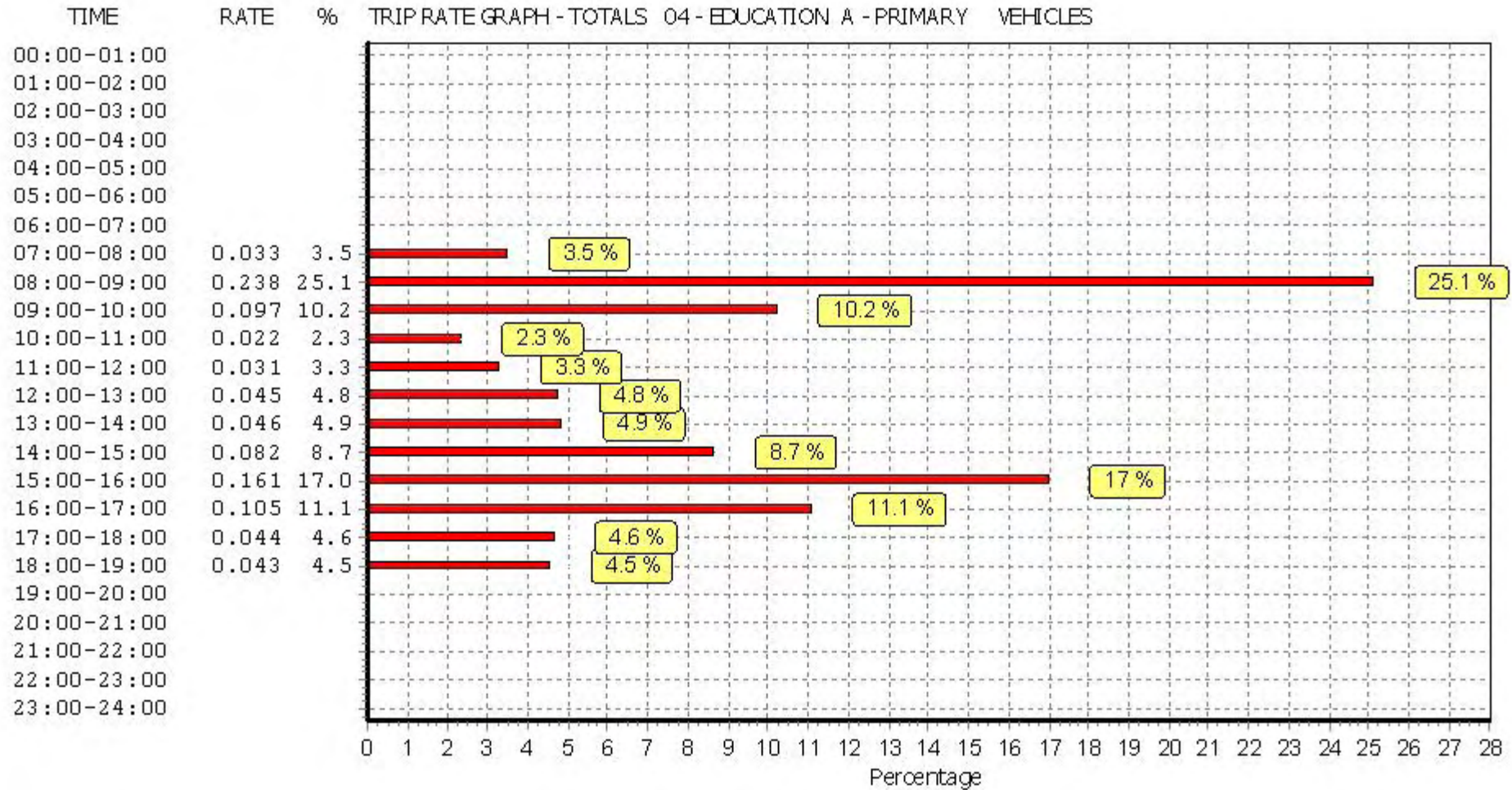
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected 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.



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.



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TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY
 TAXIS
 Calculation factor: 1 PUPILS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	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	6	523	0.000	6	523	0.000	6	523	0.000
08:00 - 09:00	6	523	0.004	6	523	0.003	6	523	0.007
09:00 - 10:00	6	523	0.000	6	523	0.002	6	523	0.002
10:00 - 11:00	6	523	0.000	6	523	0.000	6	523	0.000
11:00 - 12:00	6	523	0.001	6	523	0.000	6	523	0.001
12:00 - 13:00	6	523	0.001	6	523	0.001	6	523	0.002
13:00 - 14:00	6	523	0.000	6	523	0.001	6	523	0.001
14:00 - 15:00	6	523	0.001	6	523	0.001	6	523	0.002
15:00 - 16:00	6	523	0.001	6	523	0.002	6	523	0.003
16:00 - 17:00	6	523	0.000	6	523	0.000	6	523	0.000
17:00 - 18:00	6	523	0.000	6	523	0.000	6	523	0.000
18:00 - 19:00	5	547	0.000	5	547	0.000	5	547	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.008			0.010			0.018

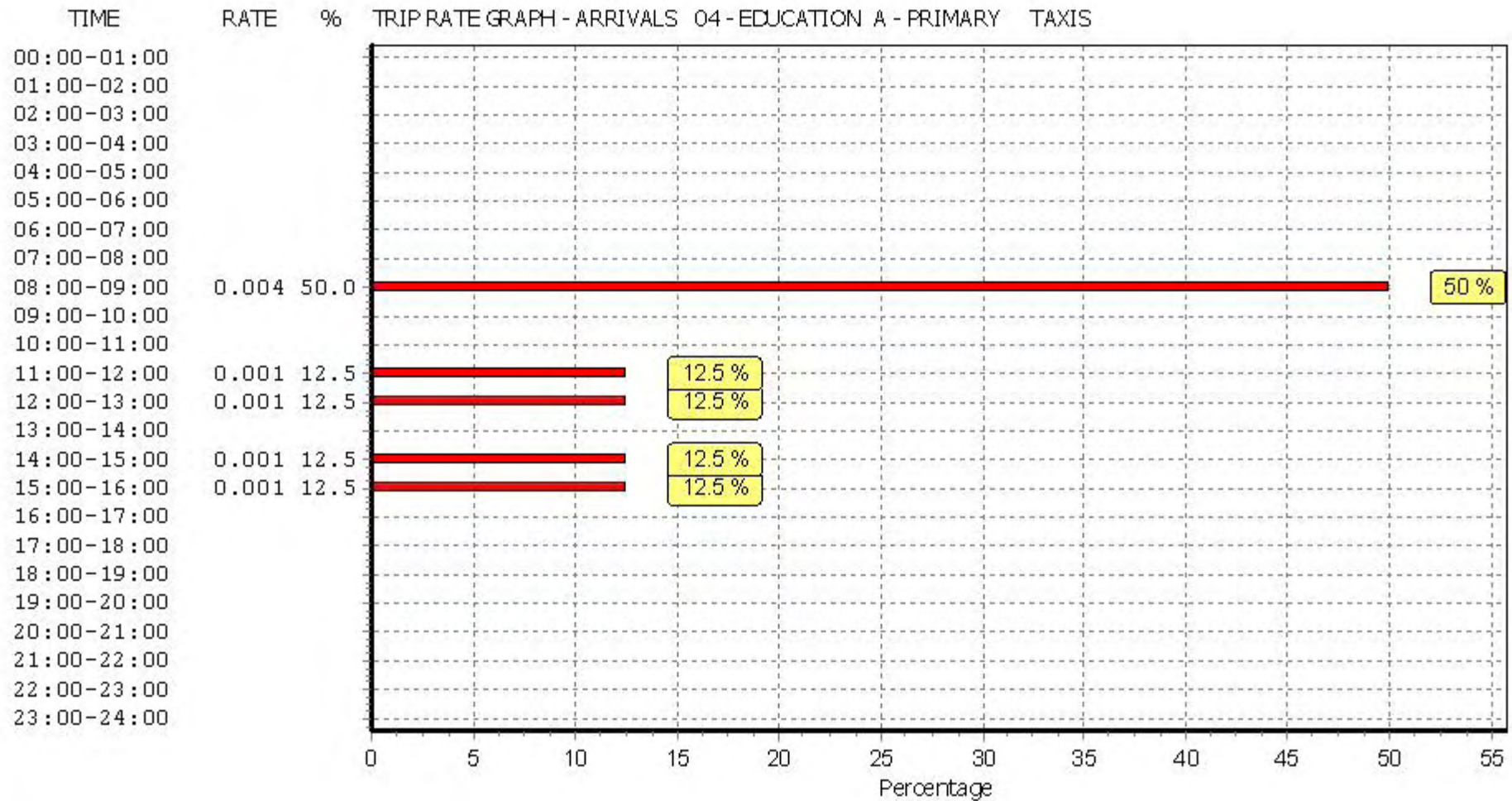
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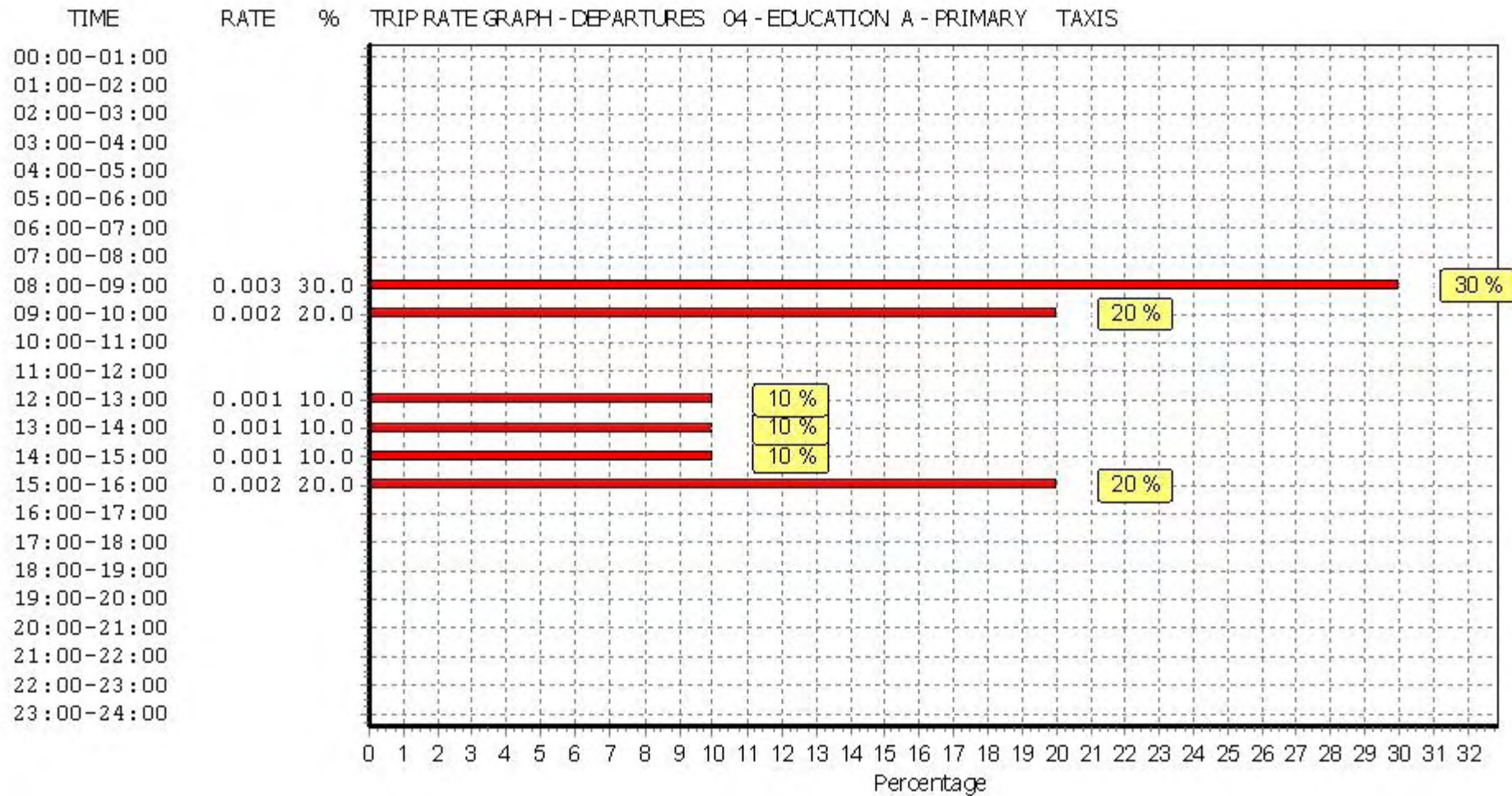
Parameter summary

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 Survey date date range: 01/01/07 - 18/11/13
 Number of weekdays (Monday-Friday): 6
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 0

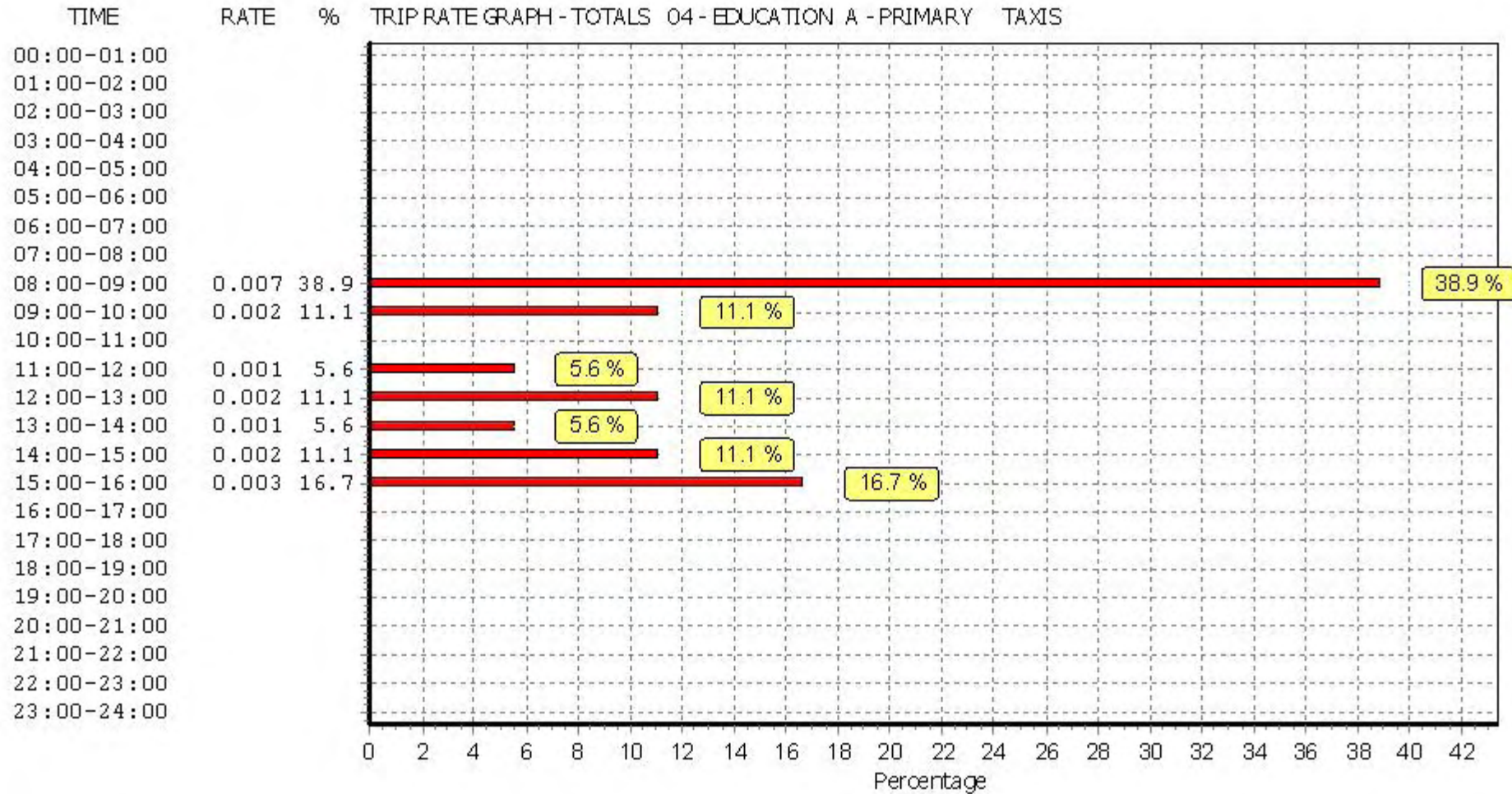
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TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY
 OGVS
 Calculation factor: 1 PUPILS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	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	6	523	0.000	6	523	0.000	6	523	0.000
08:00 - 09:00	6	523	0.000	6	523	0.000	6	523	0.000
09:00 - 10:00	6	523	0.000	6	523	0.000	6	523	0.000
10:00 - 11:00	6	523	0.000	6	523	0.000	6	523	0.000
11:00 - 12:00	6	523	0.000	6	523	0.000	6	523	0.000
12:00 - 13:00	6	523	0.000	6	523	0.000	6	523	0.000
13:00 - 14:00	6	523	0.000	6	523	0.000	6	523	0.000
14:00 - 15:00	6	523	0.000	6	523	0.000	6	523	0.000
15:00 - 16:00	6	523	0.000	6	523	0.000	6	523	0.000
16:00 - 17:00	6	523	0.000	6	523	0.000	6	523	0.000
17:00 - 18:00	6	523	0.000	6	523	0.000	6	523	0.000
18:00 - 19:00	5	547	0.000	5	547	0.000	5	547	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

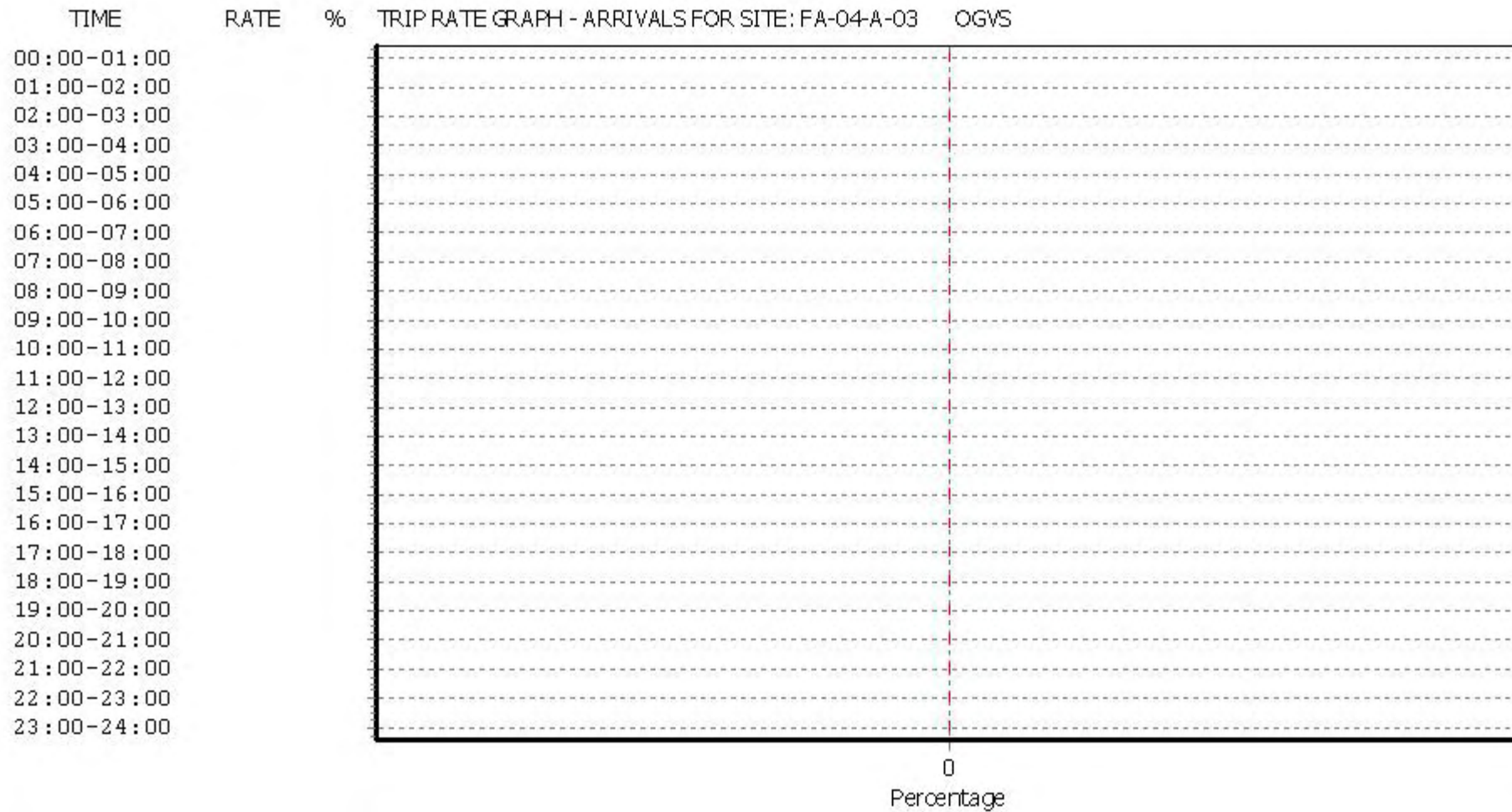
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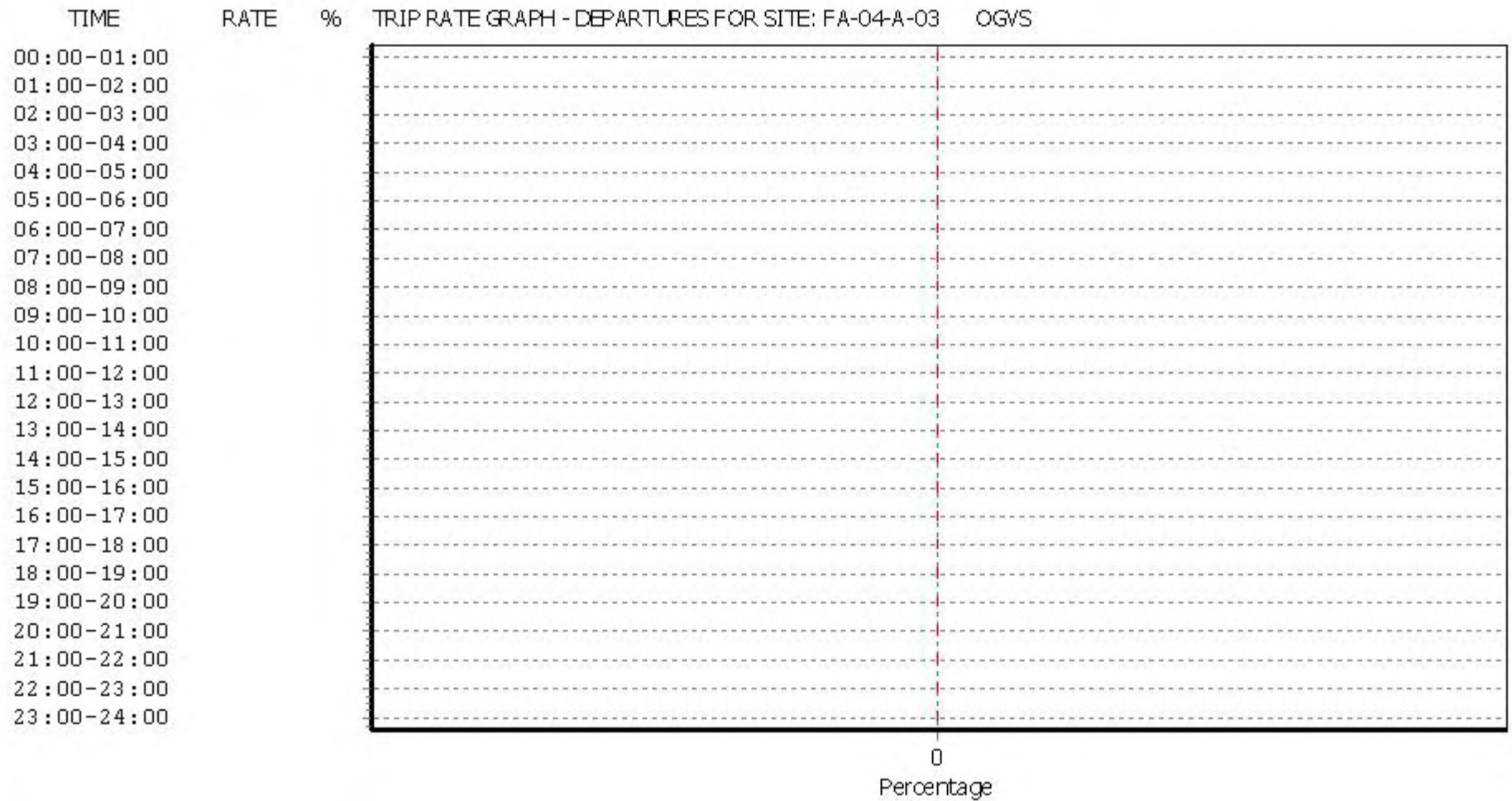
Parameter summary

Trip rate parameter range selected: 400 - 800 (units:)
 Survey date date range: 01/01/07 - 18/11/13
 Number of weekdays (Monday-Friday): 6
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 0

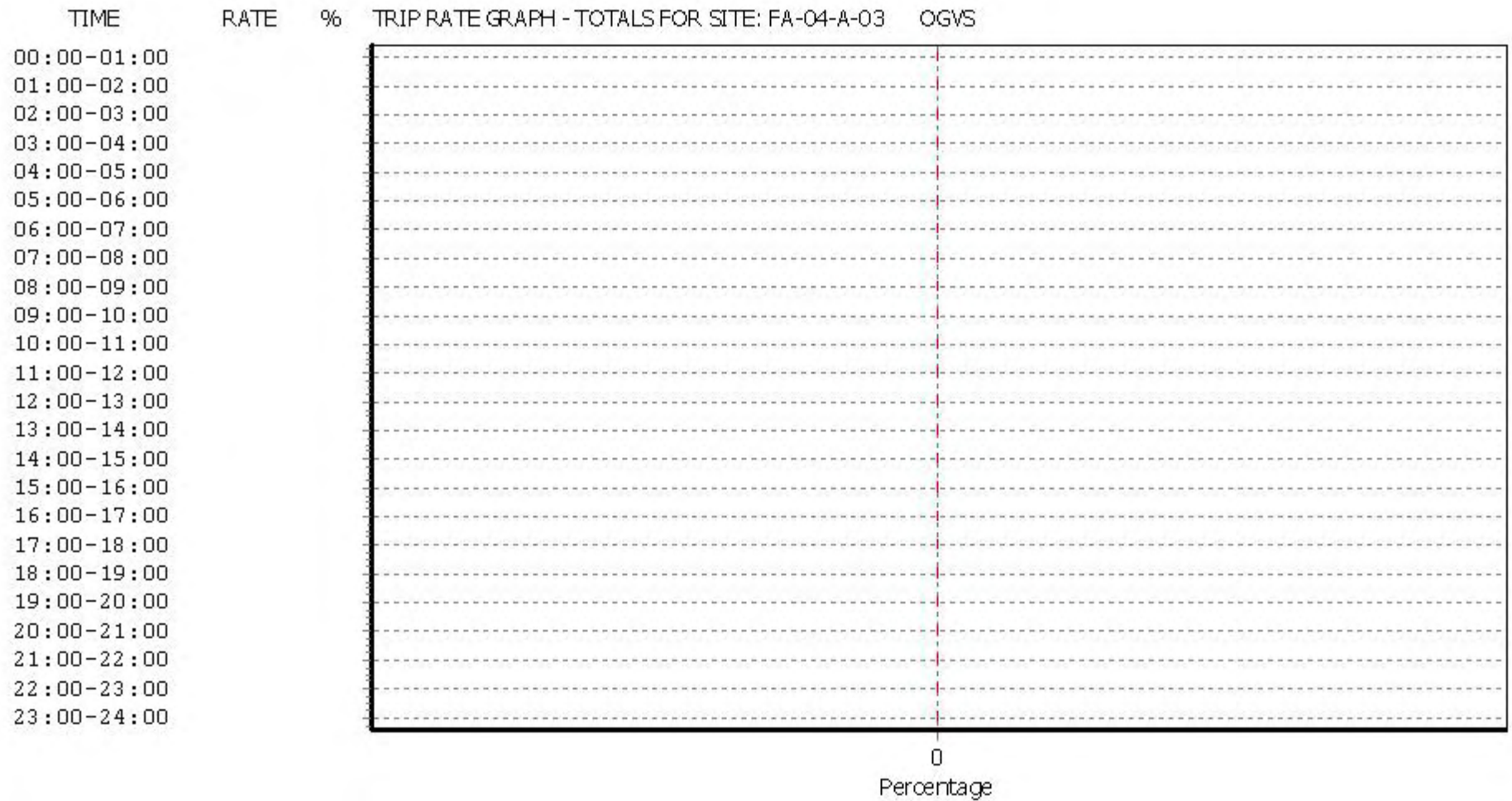
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TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY
 PSVS
 Calculation factor: 1 PUPILS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	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	6	523	0.000	6	523	0.000	6	523	0.000
08:00 - 09:00	6	523	0.000	6	523	0.000	6	523	0.000
09:00 - 10:00	6	523	0.000	6	523	0.000	6	523	0.000
10:00 - 11:00	6	523	0.000	6	523	0.000	6	523	0.000
11:00 - 12:00	6	523	0.001	6	523	0.001	6	523	0.002
12:00 - 13:00	6	523	0.000	6	523	0.000	6	523	0.000
13:00 - 14:00	6	523	0.001	6	523	0.001	6	523	0.002
14:00 - 15:00	6	523	0.001	6	523	0.000	6	523	0.001
15:00 - 16:00	6	523	0.001	6	523	0.001	6	523	0.002
16:00 - 17:00	6	523	0.000	6	523	0.000	6	523	0.000
17:00 - 18:00	6	523	0.000	6	523	0.000	6	523	0.000
18:00 - 19:00	5	547	0.000	5	547	0.000	5	547	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.004			0.003			0.007

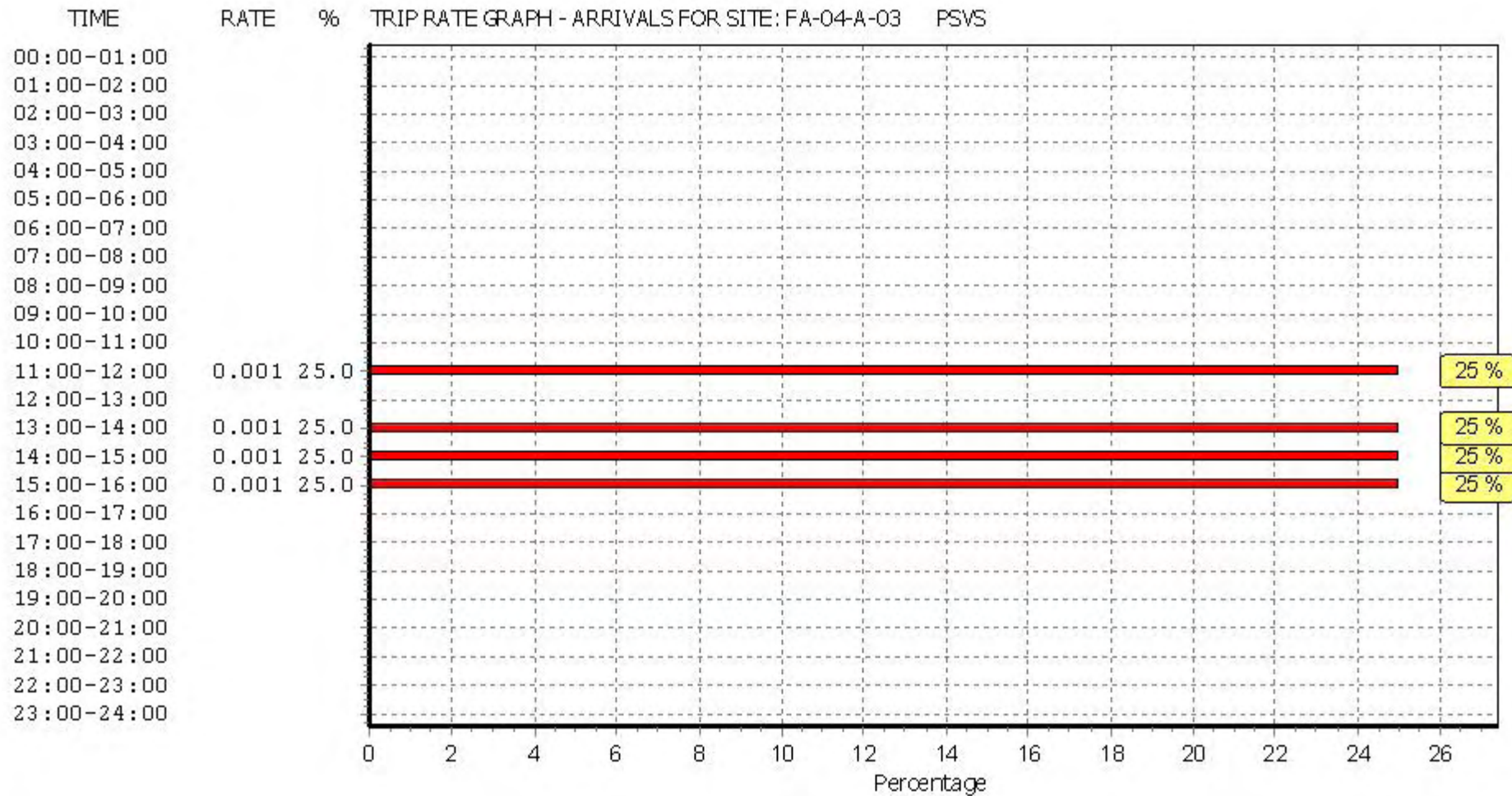
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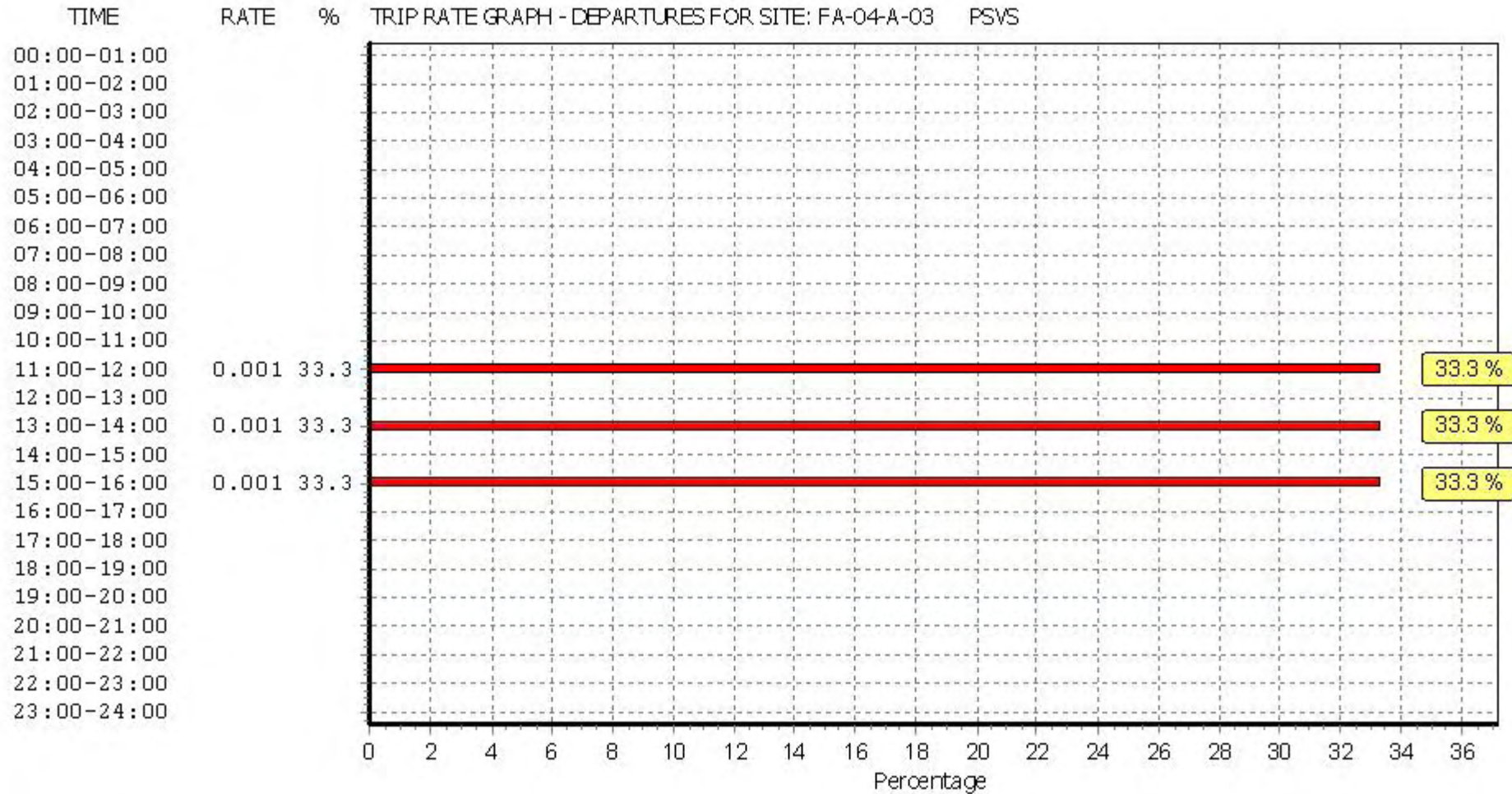
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 Survey date date range: 01/01/07 - 18/11/13
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 Number of Sundays: 0
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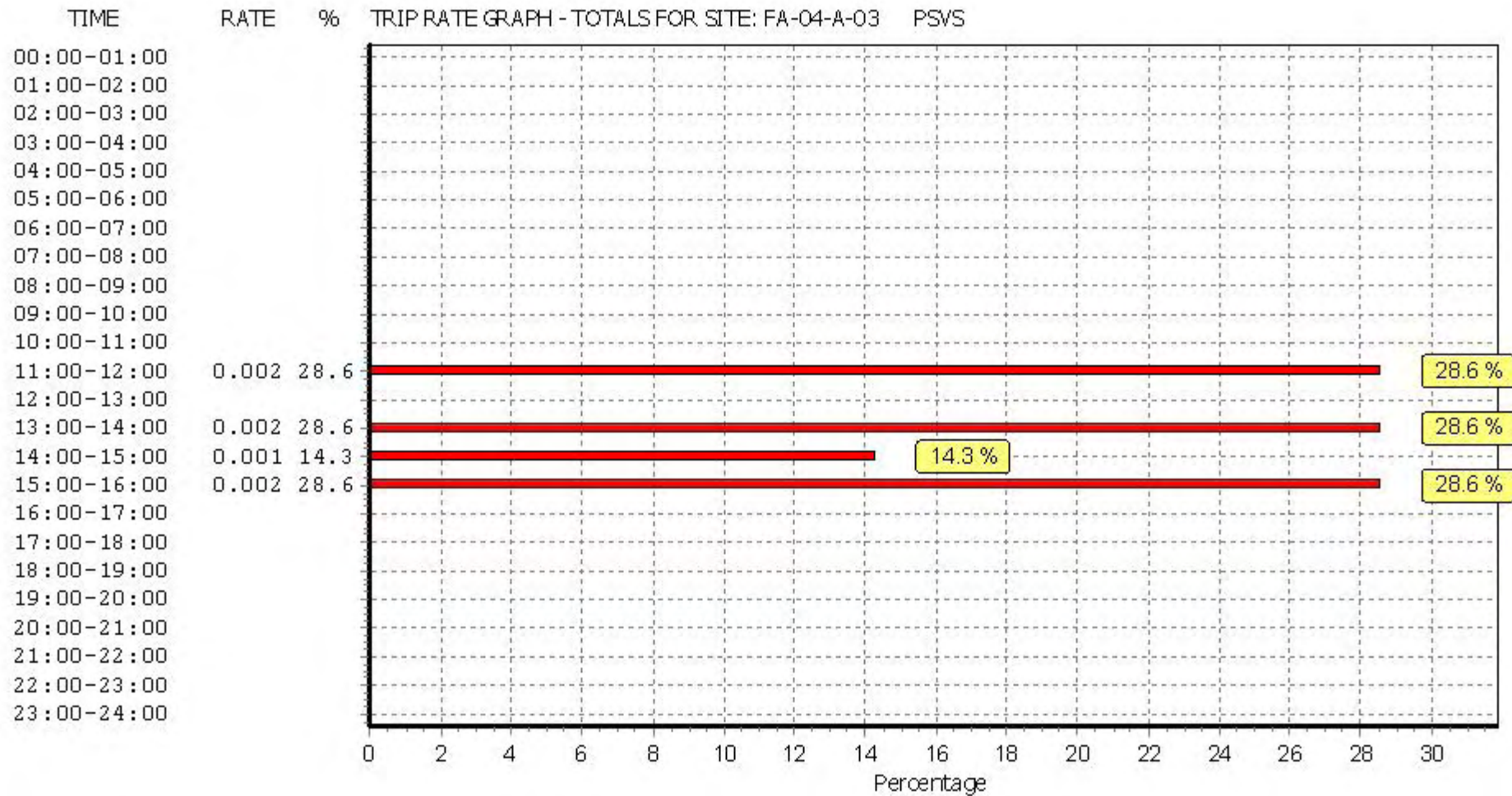
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TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY
 CYCLISTS

Calculation factor: 1 PUPILS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	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	6	523	0.002	6	523	0.000	6	523	0.002
08:00 - 09:00	6	523	0.004	6	523	0.001	6	523	0.005
09:00 - 10:00	6	523	0.001	6	523	0.001	6	523	0.002
10:00 - 11:00	6	523	0.000	6	523	0.001	6	523	0.001
11:00 - 12:00	6	523	0.000	6	523	0.000	6	523	0.000
12:00 - 13:00	6	523	0.000	6	523	0.000	6	523	0.000
13:00 - 14:00	6	523	0.000	6	523	0.000	6	523	0.000
14:00 - 15:00	6	523	0.000	6	523	0.000	6	523	0.000
15:00 - 16:00	6	523	0.002	6	523	0.001	6	523	0.003
16:00 - 17:00	6	523	0.000	6	523	0.004	6	523	0.004
17:00 - 18:00	6	523	0.000	6	523	0.001	6	523	0.001
18:00 - 19:00	5	547	0.000	5	547	0.000	5	547	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.009			0.009			0.018

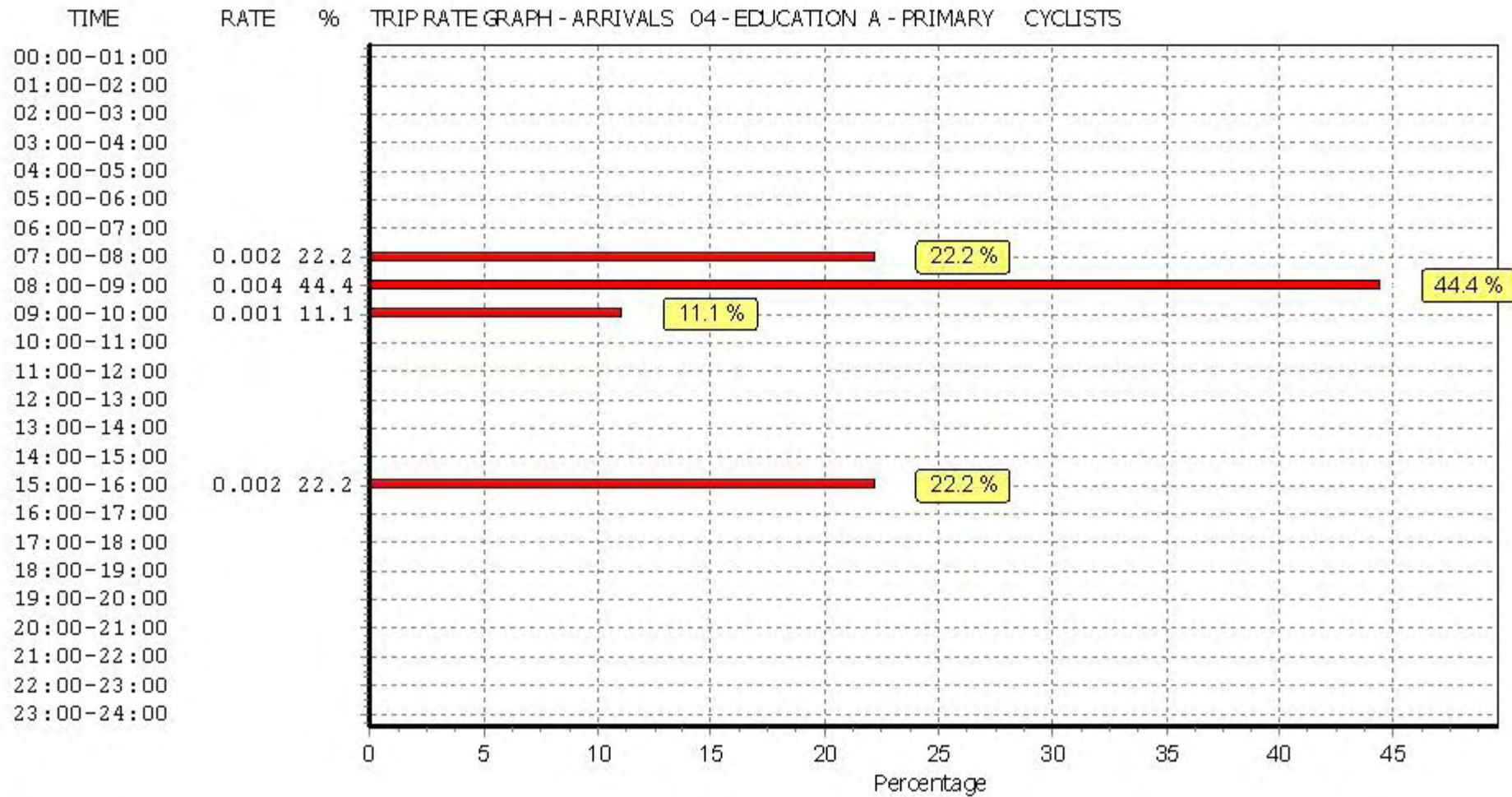
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are 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.

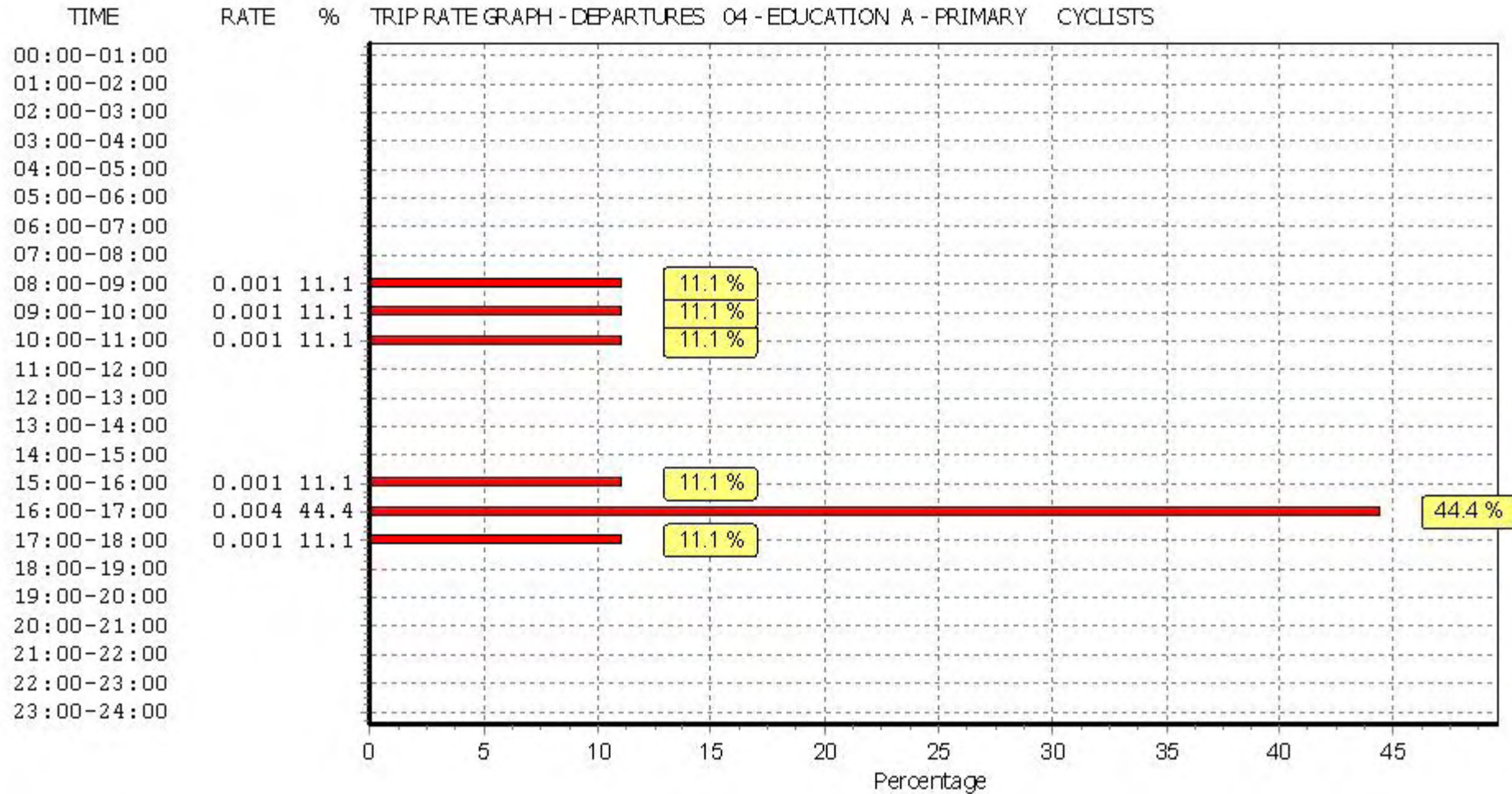
Parameter summary

Trip rate parameter range selected: 400 - 800 (units:)
 Survey date date range: 01/01/07 - 18/11/13
 Number of weekdays (Monday-Friday): 6
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 0

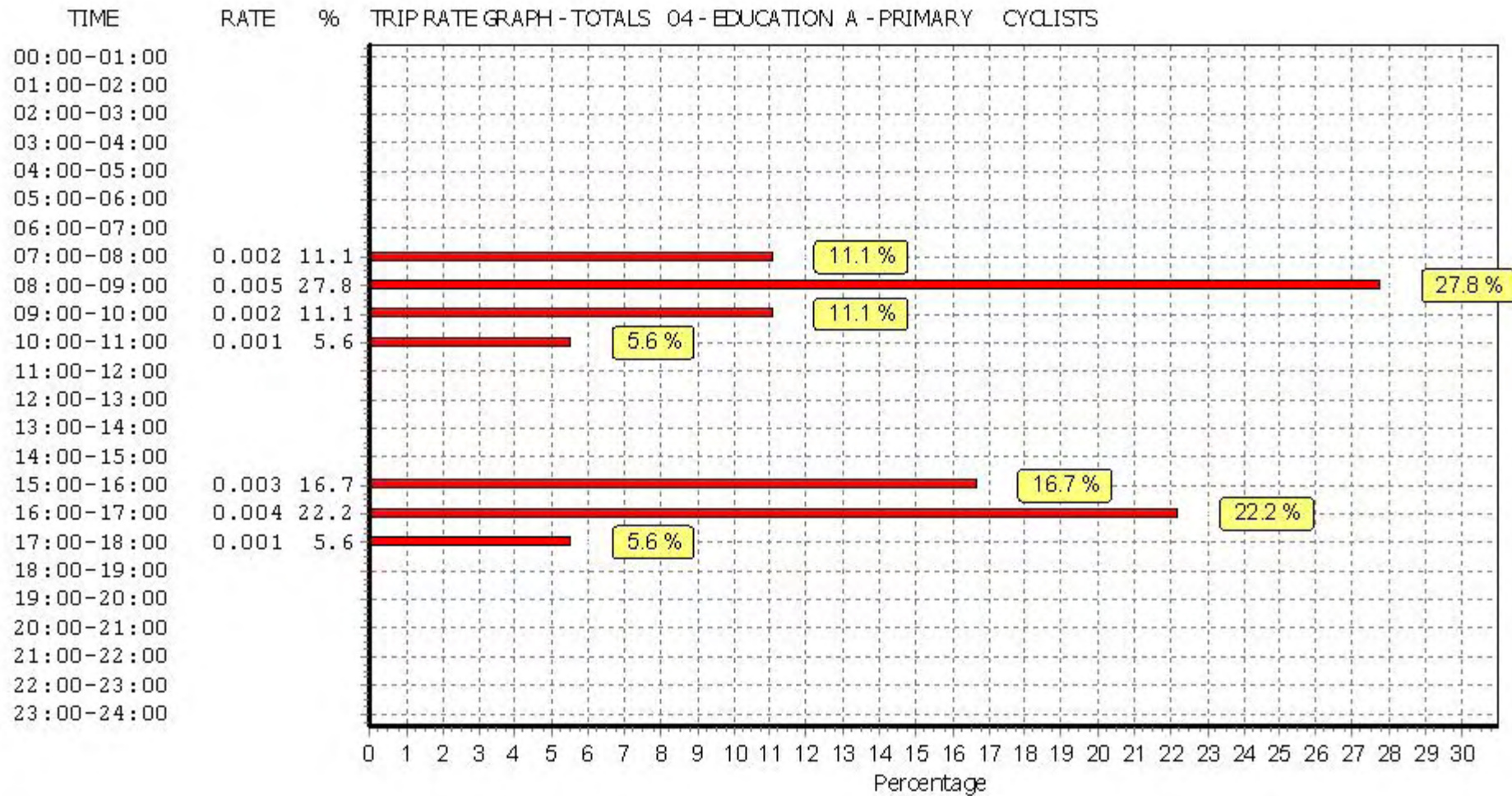
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected 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.



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.



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Appendix E

Car Occupancy Levels

Average group size for travel to school

We have considered a number of schools across the South East specifically in Surrey and Kent. This has found that an average occupancy level of 1.5 is consistent across the South East and can be applied in East Sussex.

Surrey example

TA and STP supporting that application, is shown in the extract from the STP below.

How students and staff currently travel to school

Date of survey 06/11/2014

Means of transport	Number of students	Percentage	Number of staff	Percentage
Walk	176	31	17	17
Walking Bus				
Cycle	35	6	2	2
Micro-Scooter				
Park 'n' Stride				
Car share*	48	8		
Car passenger	163	29		
Car driver			80	79
Train			1	1
Taxi	10	2		
Public Bus	132	23	1	1
School Bus	5	1		
Other				
Total no. of respondents	569	100	101	100

* NB – car sharing means travelling in the car with people who live at a different address to you.

Student response rate: 100% Staff response rate: 100%

The 8% recorded as 'car share', however, does not translate into an escort ratio of 1.08. The 8% must be considered in relation to the 29% recorded as car passenger, and the consequent total by car of 37% of all pupils. The average group size (escort ratio) for those travelling by car would therefore be $37/29 = 1.28$.

However, that figure itself is an under-estimate of the true escort ratio across the whole school population due to the way the travel data is categorised. As is normal in STPs, those recorded as car sharing in all the examples referred to by SCC (including the Bishop David Brown school) specifically excludes all siblings from the same household who car share with each other (see standard definition at foot of extract table above). The figure for car share only includes children from different families sharing. This somewhat anomalous approach leads to a significant under-recording of the true extent of

car sharing across all pupils, and therefore to a significant over-estimate of the consequential number of car vehicle journeys involved.

Nationally, 2011 Census shows the following:

- 47% of families¹ with dependent children² have 1 dependent child;
- 39% of families with dependent children have 2 dependent children;
- 14% of families with dependent children have 3+ dependent children.

Locally the figures are 42% @ 1 child, 42% @ 2 children, and 16% at 3+.

The total number of dependent children per 100 families with dependent children in Woking is therefore $42 + (42 \times 2) + (16 \times 3) = 174$ (of whom 132, or 76%, of the total are from families with more than 1 dependent children, and 42 or 24% from families with only 1 dependent child). Overall, the average number of dependent children in all families with 1 or more dependent children = 1.74. More simply put, the average family sending children to school sends 1.74 children.

It follows therefore that, if all siblings from a family with more than 1 dependent child travelled to/from school with each other, the escort ratio across all children attending school would also = 1.74. That is certainly likely to be the norm for children travelling to school by car. Two influences would determine to what extent a figure of 1.74 is achieved at any particular Primary or Secondary school:

- **The proportion of siblings attending the same school** - Schools Admissions policy favours and prioritises 'siblings' even above 'home-school distance'. Given the competition for school places, and the 'hassle' of transporting children to different schools (which is one stated reason for sibling priority), it is very unlikely that a family would not take advantage of the 'siblings priority' when seeking a school place for second and subsequent siblings.
- **The average 'school years gap' between siblings** which would determine the proportion of siblings who could attend the same school - For a 7-year-group secondary school, a typical 2 year school years gap means that for only 5 of the 7 years would two siblings be of secondary school age and for only 3 of the 7 years would three siblings be of secondary school age. Using the above 2011 Census data for Woking, the total number of secondary school age dependent children per 100 families would be:

$$(42 \times 1) + (42 \times 2 \times 5/7) + (16 \times 2 \times 2/7) + (16 \times 3 \times 3/7) = 131.71$$

Of which 42 (32%) would be single children and 89.71 (68%) would be siblings. The average travelling group size (across the whole school population) resulting only from siblings travelling together would therefore be 1.32. For families with siblings, the average travelling group size

¹ Single or multiple adults in any relationship, with children

² Dependent children are those living with their parent(s) and either (a) aged under 16, or (b) aged 16 to 18 in full-time education, excluding children aged 16 to 18 who have a spouse, partner or child living in the household

would be $89.71 / (42+16) = 1.55$; for families with only one dependent child, the average travelling group size would be 1.0.

Combining the two 'markets':

- The 68% of all 100 pupils that are siblings would have an average travelling group size of 1.55;
- The 32% of all 100 pupils who are not siblings could (according to the Bishop David Brown school example) have a car share component giving an average travelling group size of 1.28;
- The overall school population average travelling group size (i.e. the escort ratio) would therefore be $(68% \times 1.55) + (32% \times 1.28) = 1.464$.

The extent of car sharing amongst different families would be a key target for the proposed STP, and a better result than achieved at Bishop David Brown School would be expected.

Kent example

Average group size for travel to school by car

Inevitably, some children travel to/from school by car. This creates vehicular travel and parking demands. Important in determining the number of trips and parking requirement is the escort ratio - the average number of pupils travelling in a group by car to/from school, excluding the person doing the escorting (e.g. parent).

In School Travel Plans the % recorded as 'car share' does not translate directly into an escort ratio. If taken as such, this can substantially under-estimate the true escort ratio across the whole school population due to the way the STP travel data is categorised. In STPs, those recorded as car sharing specifically excludes all siblings from the same household who car share with each other. The STP figure for car share only includes sharing by children from different families.

Because car sharing amongst siblings is very different from car sharing between families, this somewhat anomalous approach significantly under-records the true extent of car sharing across all pupils, and therefore can lead to a significant over-estimate of the consequential number of car vehicle journeys involved for a given school population.

Nationally, 2011 Census shows the following:

FAMILIES WITH DEPENDENT CHILDREN³ AGED 0-11 (UK TOTALS – 2011 CENSUS)				
	TOTAL	TOTAL WITH AT LEAST 1 CHILD AGED 5 OR MORE		% TOTAL
1 CHILD AGED 5-11	810729	810729	810729	21%
2 CHILDREN YOUNGEST 0-4	1131967	792377 (Note 1)	} } 1908797	49.5%
2 CHILDREN YOUNGEST 5-11	1116420	1116420		
3 CHILDREN YOUNGEST 0-4	664556	664556 (Note 1)	} } 1141245	29.5%
3 CHILDREN YOUNGEST 5-11	476689	476689		
TOTAL	4200361	3860771	3860771	100%

³ Dependent children are those living with their parent(s) and either (a) aged under 16, or (b) aged 16 to 18 in full-time education, excluding children aged 16 to 18 who have a spouse, partner or child living in the household

Note 1: Assumes average age gap between siblings = 2 years

Locally in Medway the 2011 Census shows very similar proportions:

FAMILIES WITH DEPENDENT CHILDREN AGED 0-11 (MEDWAY – 2011 CENSUS)				
	TOTAL	TOTAL WITH AT LEAST 1 CHILD AGED 5 OR MORE		% TOTAL
1 CHILD AGED 5-11	3464	3464	3464	20%
2 CHILDREN YOUNGEST 0-4	5203	3642 (Note 1)	} 8881	51%
2 CHILDREN YOUNGEST 5-11	5239	5239		
3 CHILDREN YOUNGEST 0-4	2961	2961 (Note 1)	} 5154	29%
3 CHILDREN YOUNGEST 5-11	2193	2193		
TOTAL	19060	17499	17499	100%

Note 1: Assumes average age gap between siblings = 2 years

The total number of dependent children aged 5 or more per 100 relevant families (i.e. with at least 1 child aged 5 or more) in Medway is therefore $20 + (51*2) + (29*3) = 209$, i.e. an average of 2.09 children per family.

Converting this to an average escort ratio for siblings travelling to school by car depends on the following:

- **Whether siblings would travel together** – this is certainly likely to be the norm for children travelling to school by car;
- **The proportion of primary school age siblings attending the same school** - Schools Admissions policy favours and prioritises ‘siblings’ even above ‘home-school distance’. Given the competition for school places, and the ‘hassle’ of transporting children to different schools (which is one stated reason for the sibling priority policy), it is very unlikely that a family would not take advantage of the ‘siblings priority’ when seeking a school place for second and subsequent siblings.
- **The average ‘school years gap’ between siblings** which would determine the proportion of siblings who would be of the right age that they could attend the same primary school - For a 7-year-group primary school, a typical 2 year school years gap means that for only 5 of the 7 years would two siblings be of primary school age and for only 3 of the 7 years would three siblings be of primary school age. Using the above 2011 Census data for Medway, the total number of primary school age dependent children per 100 families would be:

$$(20*1) + (51*2*5/7) + (29*2*2/7) + (29*3*3/7) = 146.71$$

The average travelling group size (across the whole primary school population) resulting only from siblings travelling together would therefore be 1.47. For families with siblings, the average travelling

group size would be 1.58; for families with only one dependent child, the average travelling group size would be 1.0.

STPs typically record between-family car share of 10% or more. Combining the two 'markets':

- The 80% of all 100 pupils that are siblings would have an average travelling group size of 1.58;
- The 20% of all 100 pupils who are not siblings could typically have a car share component giving an average travelling group size of 1.10;
- The overall school population average travelling group size (i.e. the escort ratio) would therefore be $(80\% \times 1.58) + (20\% \times 1.10) = 1.484$.

The extent of car sharing between different families would be a key target for any STP, and a better result than assumed could be expected.

In light of the above, the assumption that the overall escort ratio (taking both siblings and non-siblings into account) would be 1.5 is considered robust and achievable.