21 April 2017

P +44 1302 322295

Doncaster Opus Office
1-2 Aire House, Richmond Business Park, Sidings Court
Doncaster, DN4 5NL
United Kingdom

Robert Alwyn Parry
Highways Development Control Officer
Conwy County Borough Council
Conwy
LL32 8DU

Ref: Caerhun Area Primary School

Caerhun Area Primary School Transport Assessment Scoping Letter

1. Introduction

Opus International Consultants (UK) Ltd has been commissioned by Pure Residential and Commercial Limited to prepare a Transport Assessment for the proposed 120 place Caerhun Area Primary School in Conwy, Wales to replace Ysgol Trefriw, Ysgol Dolgarrog, and Ysgol Tal Y Bont. The proposed Primary School will be built on the existing school site at Dolgarrog which borders the B5106 Conwy Road that connects the three existing schools. It is anticipated that a full planning application for the scheme will be submitted week commencing 24th May 2017.

It is noted that Conwy County Borough Council (CCBC) have outlined the requirements for a Transport Assessment in an email dated 30th March 2017, which required the following to be included within any report:

1. Details on all current and proposed staff parking (teachers / admin / visitors / support staff etc.) at this site;

2. The TA must assess vehicle movements to the site from both north and south of the proposed development detailing the split;

3. The TA must clarify the volume of traffic on the school being at capacity;

4. The TA must include a review of the accident record for the most recently available 5 year period immediately around the proposed development site and incorporate all above detailed junctions including their routes to the proposed development;

5. TA must take account of any approved but as yet unbuilt committed developments within the traffic flow calculations within the TA work;

6. The TA must include an appraisal of the scheme in the context of current local and national transport planning policy;

7. The TA must include a detailed description of the existing conditions around the site and the local highway network;

8. The TA must include a review of the accessibility of the site by non-motorised modes and a review of facilities in the vicinity of the development site. This will include route assessments of non-motorised users to the proposed school from local residential settlements, other amenities,

bus stops, train station and the like. Review must also take into account Active Travel Wales ERM and INM routes and align with ATW requirements;

9. The TA must include a full appraisal of the proposed development and its intended operation, including details of the level of proposed parking facilities (for cars, motorbikes, cycles etc.), servicing arrangements and swept path analysis plans (as appropriate). Parking levels and dimensions of different types of bays must adhere to SPG LDP2, refuse vehicle and fire tender swept paths to be included;

10. If any off-site works are required to make the development satisfactory in highway terms, the TA must identify them and put forward suitable plans for consideration;

11. A qualitative review of nearby bus stop usage and routes must be included in the TA.

This Transport Scoping Letter has been prepared in order to set out our report structure and methodology for undertaking the Transport Assessment which aims to address each point raised above. This approach was agreed with CCBC to be acceptable on 7 April 2017.

2. Transport Assessment Structure

The TA will be submitted to support the proposals at the application stage. The TA will investigate the transport issues associated with the proposed development. The structure and detail in the TA will be as follows:

Section 1 – will provide a brief overview of the site and sets out the content of the TA

Section 2 – provides a review of the policy context

Section 3 - describes the existing site and highway conditions;

Section 4 - outlines the development proposals;

Section 5 - assesses the trip generation;

Section 6 - considers the potential impacts of the development proposals;

Section 7 – outlines the Transport Implementation Strategy

Section 8 – provides a summary of the Transport Assessment

3. Methodology

Further information on the content of the TA is discussed below.

Section 2 – Policy Context

The TA will include a section that will focus on local and nation transport planning policy and consider how the policy effects access to education. The policies that will be considered include:

- Planning Policy Wales, Edition 8 (January 2016);
- Planning Policy Wales Technical Advice Note 18: Transport (March 2007);
- Active Travel (Wales) Act, 2013;
- Wales National Transport Plan (March 2010);
- North Wales Regional Transport Plan (September 2009);

- North Wales Joint Local Transport Plan (2015);
- Conwy County Borough Council Adopted Local Development Plan (2007 – 2022)

Section 3 – Existing Site and Highway Conditions

Site Visit

A site visit will be undertaken during school term times in order to review the local area, the site visit will take account of:

- Speed limits along the surrounding highway network;
- Standard of footways and uncontrolled crossing points;
- Location of controlled pedestrian/cycling crossing points;
- Cycling facilities within the vicinity of the school;
- Existing traffic regulation orders in the vicinity of the school;
- Pedestrian, vehicle and cyclist entry points.

Existing School Operation

The TA will include a site location plan and provide a description of the current school operation, staff and pupil details and existing parking arrangements, which will be obtained from the applicant and also from site observations. It will also highlight details of the Ysgol Trefriw and Ysgol Tal Y Bont, which are also to be relocated to the proposed developments site location.

Existing Highway Network

Details regarding the local highway network will be provided. This will include but is not limited to, the condition of the highway network, speed limits, parking restrictions, lighting, access and any pedestrian crossings. As part of this section details on the vehicle movements along B1506 Conwy Road will be analysed. In order to capture this information it is proposed to undertake an Automatic Traffic Count (ATC) outside the existing Ysgol Dolgarrog. It is proposed that the ATC is positioned to the south of the proposed site on the B5106 Conwy Road. The proposed location for the ATC is shown in Figure 1.

Figure 1: Proposed ATC location

The ATC data will be used to establish the existing traffic volumes and speeds and will be analysed to highlight any safety concerns on the surrounding highway network such as speeding vehicles

Sustainability Data

The TA will consider the accessibility of the site by non-motorised methods. An audit of the local cycle and pedestrian network adjacent to the site will be undertaken to assess existing opportunities to walk and cycle to the site from existing residential location and surrounding amenities.

As well as an appraisal of the existing pedestrian and cyclist provision an examination of the local public transport services will be undertaken. As requested by CCBC, a review of the bus stop and route usage will be undertaken, this will be primarily carried out by on site observations but we will also contact the relevant bus companies to obtain patronage data. However, we are aware that this information is normally commercially sensitive.

This section will also take account of policy set out in Active Travel Wales.

Personal Injury Collision Data

It is stated in the comments from CCBC that the TA must include a review of the accident record for the most recently available 5 year period immediately around the proposed development site. The TA will analyse Personal Injury Collision (PIC) data from the most recently available 5 year period. The proposed extent of data analysis is shown in Figure 2.

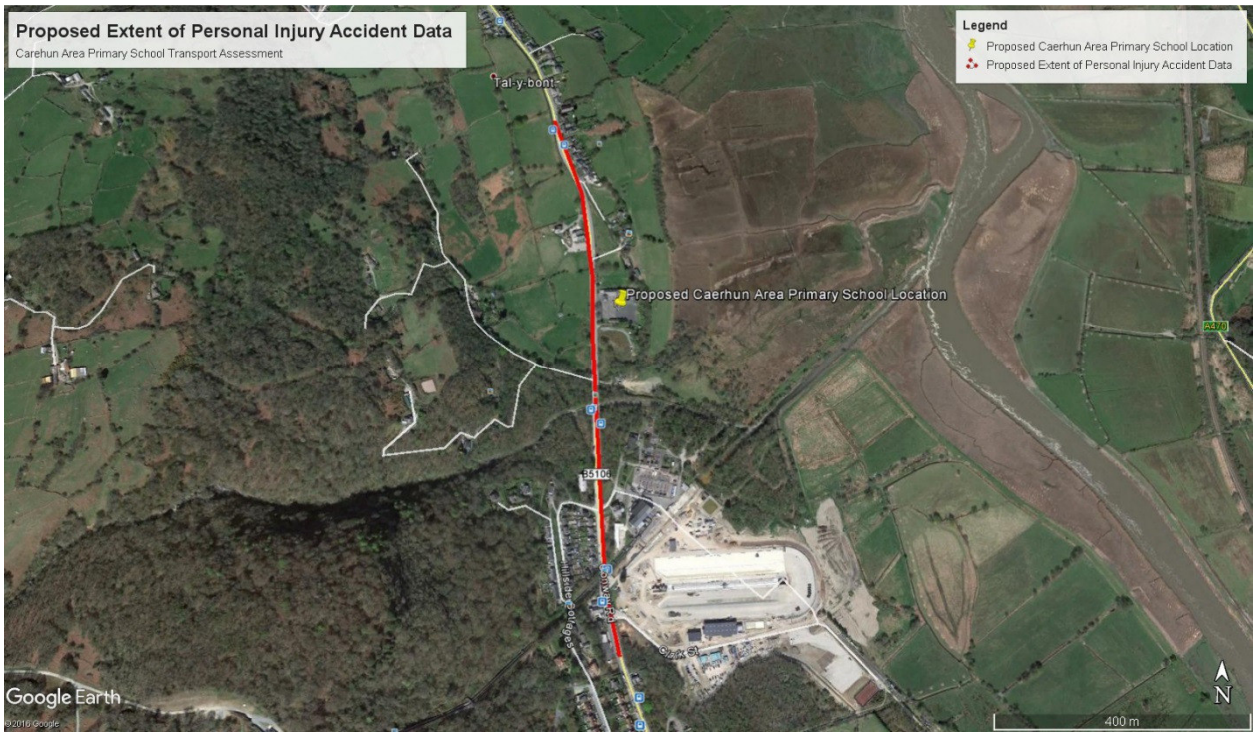


Figure 2: Proposed PIC Extent

The PIC data will be analysed and any patterns in the data that could present a safety concern will be discussed within the TA.

Section 4 – Development Proposals

This section will describe the proposed development composition and outlines the operation of the development.

Proposed Development Composition

Details regarding the development proposals will be included within the TA, this will include opening hours, staff levels, and pupil numbers and will include the Architects layout. It is anticipated that this information will be provided to Opus by the applicant.

Proposed Development Access

The TA will set out details regarding the proposed vehicular and pedestrian/cycle access arrangements and provide justification as to why the proposed arrangements are suitable to serve the development. A plan illustrating visibility splays at the access arrangements will be provided, as appropriate.

Proposed Car Parking Provision

The proposed car parking provision will be provided and it is anticipated that this will be based upon the guidance set out in Conwy Development Plan 2007-2022. Opus has been informed by TACP Architects Ltd that at this stage parking will consider the following:

- 1 per 2 full time staff (Nursery and Crèche);
- 1 for each full time staff (Reception/Infants/Juniors);
- 1 per ancillary staff (Reception/Infants/Juniors)
- 3 visitor spaces (Reception/Infants/Juniors)
- Disabled space – 5% Total Car Park Capacity.

Proposed Cycle Parking Provision

It is anticipated that the proposed cycle parking provision will be provided based upon the guidance set out in Conwy Development Plan 2007-2022. Opus has been informed by TACP Architects Ltd that at this stage parking will consider the following:

- 1 stand per 5 staff
- 1 stand per 20 children

Servicing Arrangements

Details on the delivery and servicing requirements will be included within the TA and swept paths for servicing and emergency vehicles will be provided.

Section 5 – Traffic Generation and Distribution

Trip Generation

This section outlines the level of trips associated with the existing development and predicts the level of trips associated with the proposed development. Opus will seek to liaise with the existing Ysgol Dolgarrog in order to ascertain whether any travel to school information is available in order to provide first principles assessment of how existing and future pupils may travel to the Ysgol Caerhun development.

However, if this information is unavailable a TRICS assessment will ultimately be applied. The TRICS database has been interrogated for comparable sites and two relevant multi-modal surveys in the category '04 – Education – A – Primary' have been identified in order to generate a trip rate for the existing and proposed school. It should be noted that the range of students in the two surveys was between 147 and 184 which is higher than both the existing and proposed student numbers at the site.

The TRICS reports are included at **Appendix A** and the generated peak hour trips by mode are summarised in Table 1 for the existing school, which currently comprises 90 pupils and the respective number of trips for the proposed school, which is seeking capacity for up to 120 pupils are summarised in Table 2.

Table 1: Existing School Trip generation

	Weekday AM Peak (08:00-09:00)			Weekday PM Peak (15:00-16:00)		
	Arrivals	Departures	Total	Arrival	Departures	Total
Vehicles	32	27	58	17	19	36
Cyclists	0	0	0	0	0	0
Vehicle Occupants	59	22	81	17	47	63
Pedestrians	47	4	50	11	49	61
Public Transport users	0	0	0	0	0	0
Total People	106	26	132	28	96	124

Table 2: Proposed School Trip Generation

	Weekday AM Peak (08:00-09:00)			Weekday PM Peak (15:00-16:00)		
	Arrivals	Departures	Total	Arrival	Departures	Total
Vehicles	42	36	78	23	25	48
Cyclists	0	0	0	0	0	0
Vehicle Occupants	78	30	108	22	62	84
Pedestrians	62	5	67	15	66	81
Public Transport users	0	0	0	0	0	0
Total People	142	34	176	38	128	166

Net Impact

Table 3 shows the net impact following the expansion of the existing primary school to 120 pupils.

Table 3: Trip Generation Net Change

	Weekday AM Peak (08:00-09:00)			Weekday PM Peak (15:00-16:00)		
	Arrivals	Departures	Total	Arrival	Departures	Total
Vehicles	11	9	19	6	6	12
Cyclists	0	0	0	0	0	0
Vehicle Occupants	20	7	27	6	16	21
Pedestrians	16	1	17	4	16	20
Public Transport	0	0	0	0	0	0
Total People	35	9	44	9	32	41

The impacts of the additional trips on the highway network will be included within Section 6 of the TA.

Trip Distribution

The predicted number of vehicle trips generated by the proposed development will be distributed at the access junction on a pro rata basis, which will be derived based on the ATC data.

Committed Development

Opus has undertaken a search of planning applications within the vicinity of the site in order to ascertain any committed developments that will need to be considered as part any application. Opus has identified one application 0/40530, which relates to the Surf Snowdonia and has permission for a mixed use

regeneration scheme at the Former Aluminium Work on Conwy Road. As part of the application a Transport Assessment was provided and trip generation numbers provided as part of this report will be included and analysed as part of any Transport Assessment to support the Ysgol Caerhun development.

Car Parking Survey

A car parking survey will be commissioned to be undertaken in order to determine the extent of on-street parking that occurs within the vicinity of the school during drop off and pick up times.

It is understood that Conwy County Council propose to provide a road enhancement scheme to the B5106. This will include the narrowing of the road, reduction of speed from 30mph to 20mph outside the school, and the creation of laybys to serve as a drop off zone for pupils and a stopping area for delivery vehicles.

The survey will be used to demonstrate the impact of these road enhancements to trips generated and on-street parking at the drop off and pick up times. If it is found that additional issues may occur, additional mitigation measures will be suggested.

Section 6 – Impacts of Development

This section will provide an assessment of the potential impact of the proposed Ysgol Caerhun development. The impacts on the following will be considered:

- Operation of Conwy Road – considering the ATC and committed development, the impact will be consider on a percentage increase basis;
- Parking – considering the on-street car parking results and the proposed road enhancement scheme;
- Pedestrian and cycle access – this will consider the site observation and likely number of walking and cycling trips;
- Public Transport – considering the existing bus usage details and the likely number of public transport trips.

If a detrimental impact is found as result of the development then the TA will identify mitigation measures (e.g. off-site works or travel plan measures) that may be required to make the development satisfactory in highway terms.

Section 7 – Transport Implementation Strategy

A chapter will be provided as part of the Transport Assessment, which includes:

- Details of any improvements to the safety of walking and cycling routes, as appropriate;
- Car access restrictions around schools;
- Details regarding cycle parking levels and storage; and
- Framework for future schools travel planning activity.

It should be noted that a Travel Plan for the Ysgol Caerhun development will be provided as a separate document.

4. Summary

A Transport Assessment will be provided in support of the application for the proposed Caerhun Area Primary School in Conwy, Wales. The TA will assess the impact of the development on the local highway network with regards to the accessibility of the site. The existing conditions of the site and proposed developments will be considered as part of the TA. PIC data will also be assessed for the vicinity of the site. Existing and proposed trip generations will be included within any TA and the impacts of the development will be considered and if any detrimental impact is concluded then mitigation measures will be suggested, as appropriate.

Kind Regards

Danielle Shadbolt
Associate Director

APPENDIX A –TRICS Report

Calculation Reference: AUDIT-637801-170411-0406

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

07	**YORKSHIRE & NORTH LINCOLNSHIRE**		
	NE	NORTH EAST LINCOLNSHIRE	1 days
10	**WALES**		
	MT	MERTHYR TYDFIL	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 pupils
Actual Range:	147 to 184 (units:)
Range Selected by User:	0 to 200 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/09 to 20/05/14

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

Selected survey days:

Tuesday	1 days
Friday	1 days

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

Selected survey types:

Manual count	2 days
Directional ATC Count	0 days

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

Selected Locations:

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

D1	2 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
15,001 to 20,000	1 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	1 days
50,001 to 75,000	1 days

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

Car ownership within 5 miles:

1.1 to 1.5	2 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	2 days

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

PTAL Rating:

No PTAL Present	2 days

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

LIST OF SITES relevant to selection parameters

1 **MT-04-A-01** **PRIMARY SCHOOL** **MERTHYR TYDFIL**
BRECON ROAD

MERTHYR TYDFIL
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of pupils: 184
Survey date: FRIDAY *18/10/13* *Survey Type: MANUAL*

2 **NE-04-A-01** **PRIMARY SCHOOL** **NORTH EAST LINCOLNSHIRE**
SUNNINGDALE ROAD

SCUNTHORPE
Edge of Town
Residential Zone
Total Number of pupils: 147
Survey date: TUESDAY *20/05/14* *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

MULTI-MODAL 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	2	166	0.054	2	166	0.027	2	166	0.081
08:00 - 09:00	**2**	**166**	**0.353**	**2**	**166**	**0.296**	**2**	**166**	**0.649**
09:00 - 10:00	2	166	0.036	2	166	0.039	2	166	0.075
10:00 - 11:00	2	166	0.009	2	166	0.009	2	166	0.018
11:00 - 12:00	2	166	0.033	2	166	0.033	2	166	0.066
12:00 - 13:00	2	166	0.018	2	166	0.021	2	166	0.039
13:00 - 14:00	2	166	0.027	2	166	0.042	2	166	0.069
14:00 - 15:00	2	166	0.027	2	166	0.021	2	166	0.048
15:00 - 16:00	2	166	0.193	2	166	0.208	2	166	0.401
16:00 - 17:00	2	166	0.082	2	166	0.088	2	166	0.170
17:00 - 18:00	2	166	0.000	2	166	0.024	2	166	0.024
18:00 - 19:00	1	147	0.000	1	147	0.007	1	147	0.007
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.832			0.815			1.647

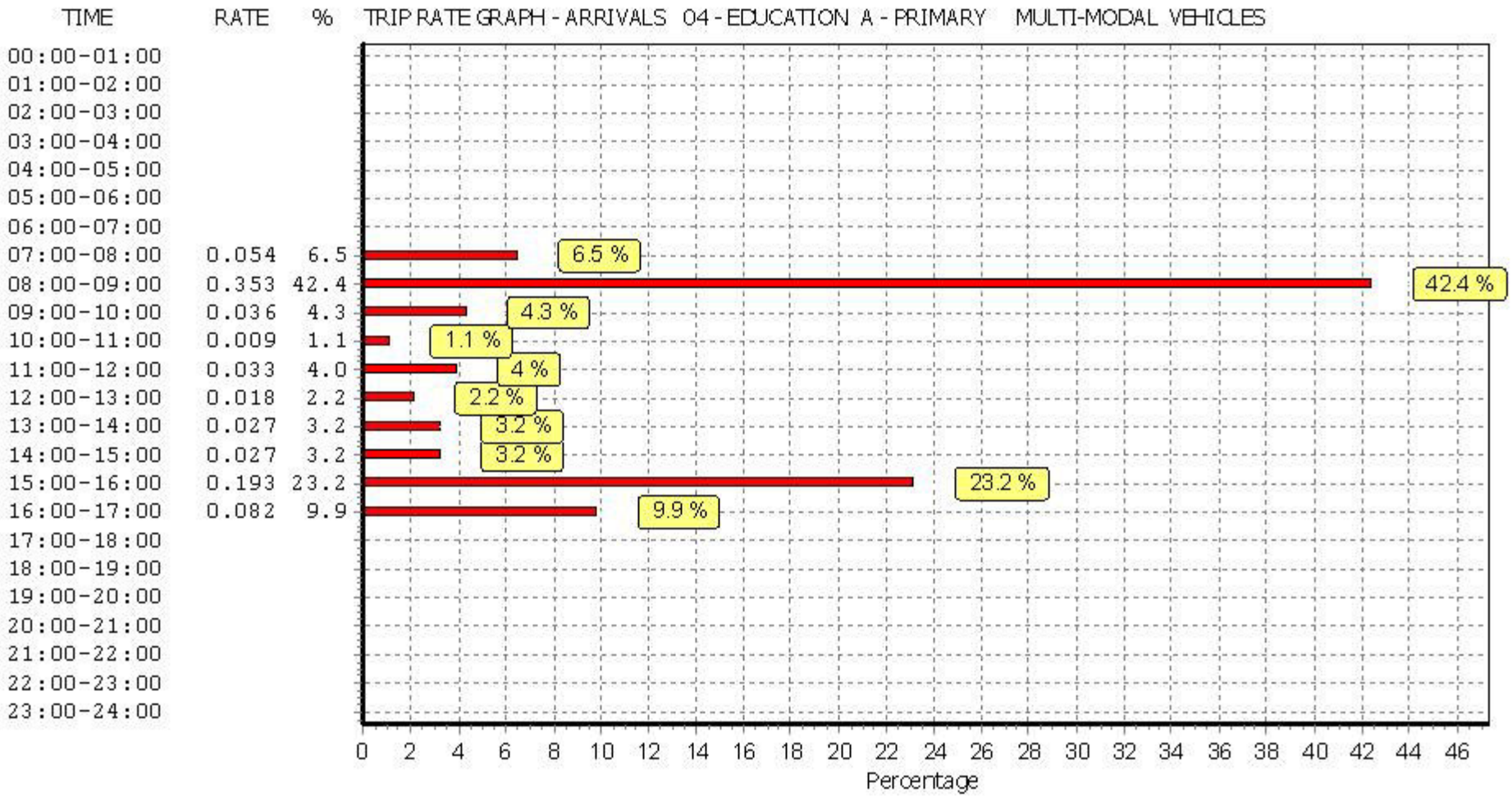
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are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

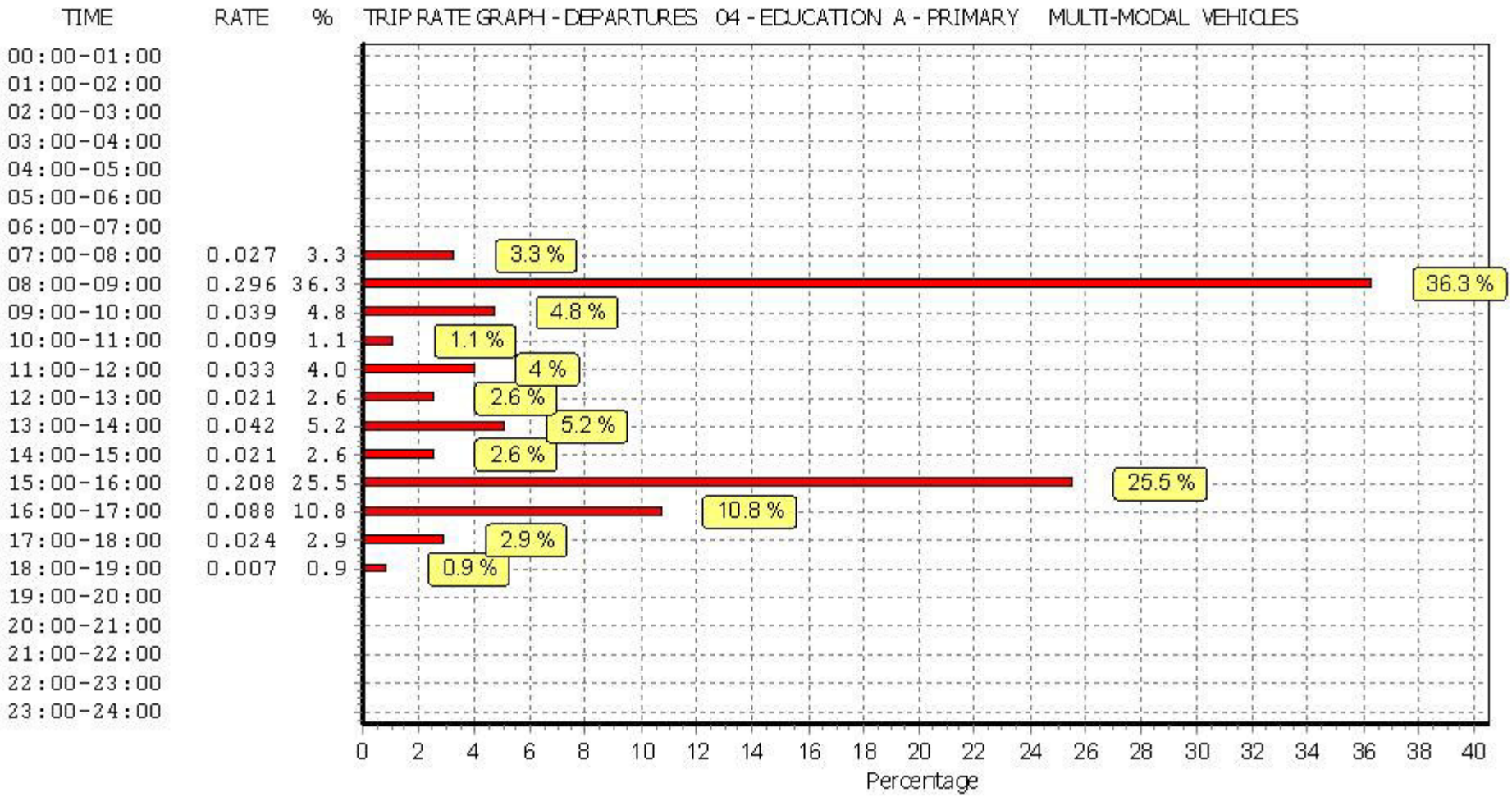
Parameter summary

Trip rate parameter range selected:	147 - 184 (units:)
Survey date date range:	01/01/09 - 20/05/14
Number of weekdays (Monday-Friday):	2
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.



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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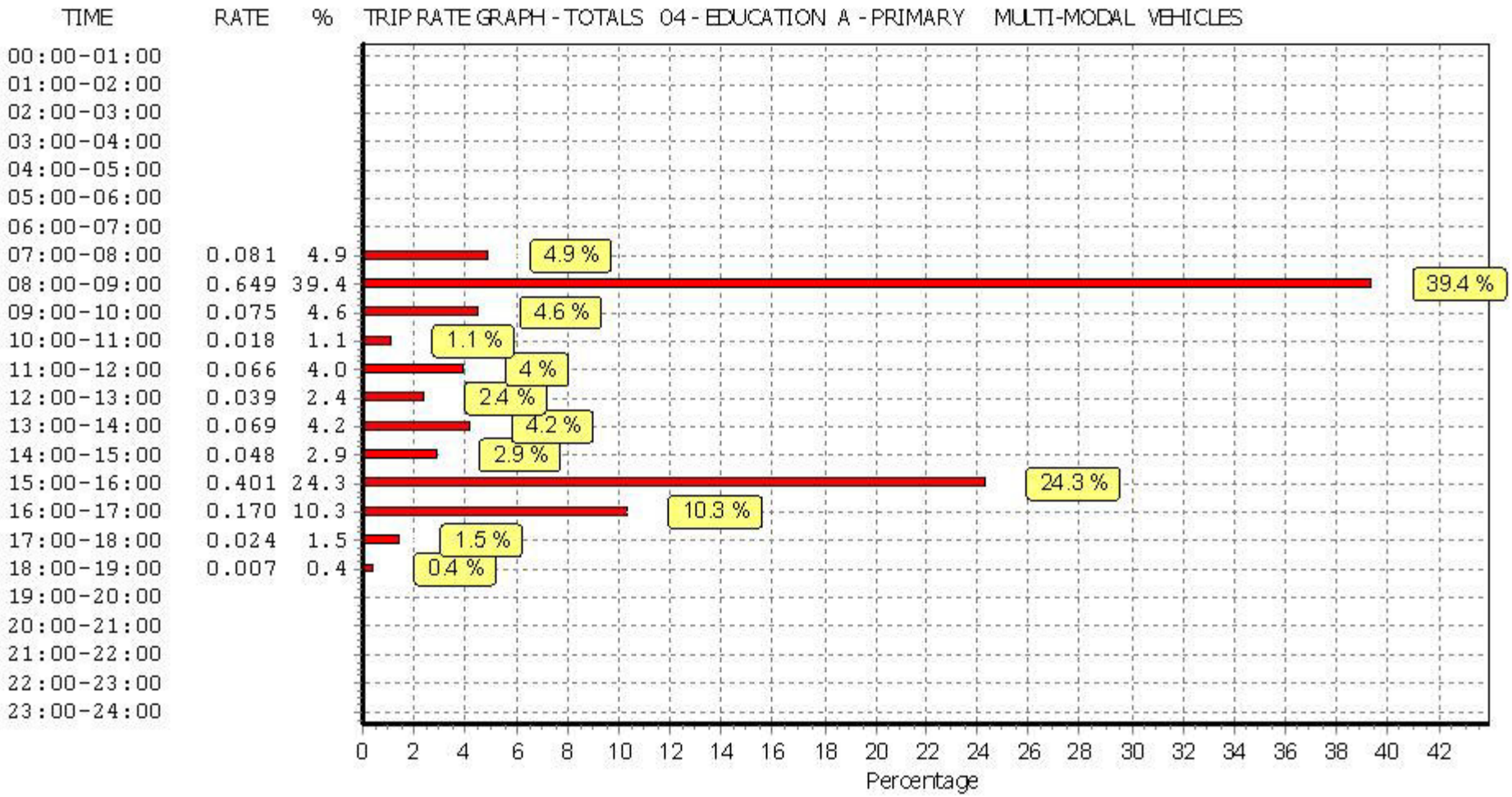

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TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY

MULTI-MODAL CYCLISTS

Calculation factor: 1 PUPILS

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00:00 - 01:00									
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02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	166	0.000	2	166	0.000	2	166	0.000
08:00 - 09:00	**2**	**166**	**0.006**	2	166	0.000	**2**	**166**	**0.006**
09:00 - 10:00	2	166	0.000	2	166	0.000	2	166	0.000
10:00 - 11:00	2	166	0.000	2	166	0.000	2	166	0.000
11:00 - 12:00	2	166	0.000	2	166	0.000	2	166	0.000
12:00 - 13:00	2	166	0.000	2	166	0.000	2	166	0.000
13:00 - 14:00	2	166	0.000	2	166	0.000	2	166	0.000
14:00 - 15:00	2	166	0.000	2	166	0.000	2	166	0.000
15:00 - 16:00	2	166	0.000	**2**	**166**	**0.006**	2	166	0.006
16:00 - 17:00	2	166	0.000	2	166	0.000	2	166	0.000
17:00 - 18:00	2	166	0.000	2	166	0.000	2	166	0.000
18:00 - 19:00	1	147	0.000	1	147	0.000	1	147	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.006			0.006			0.012

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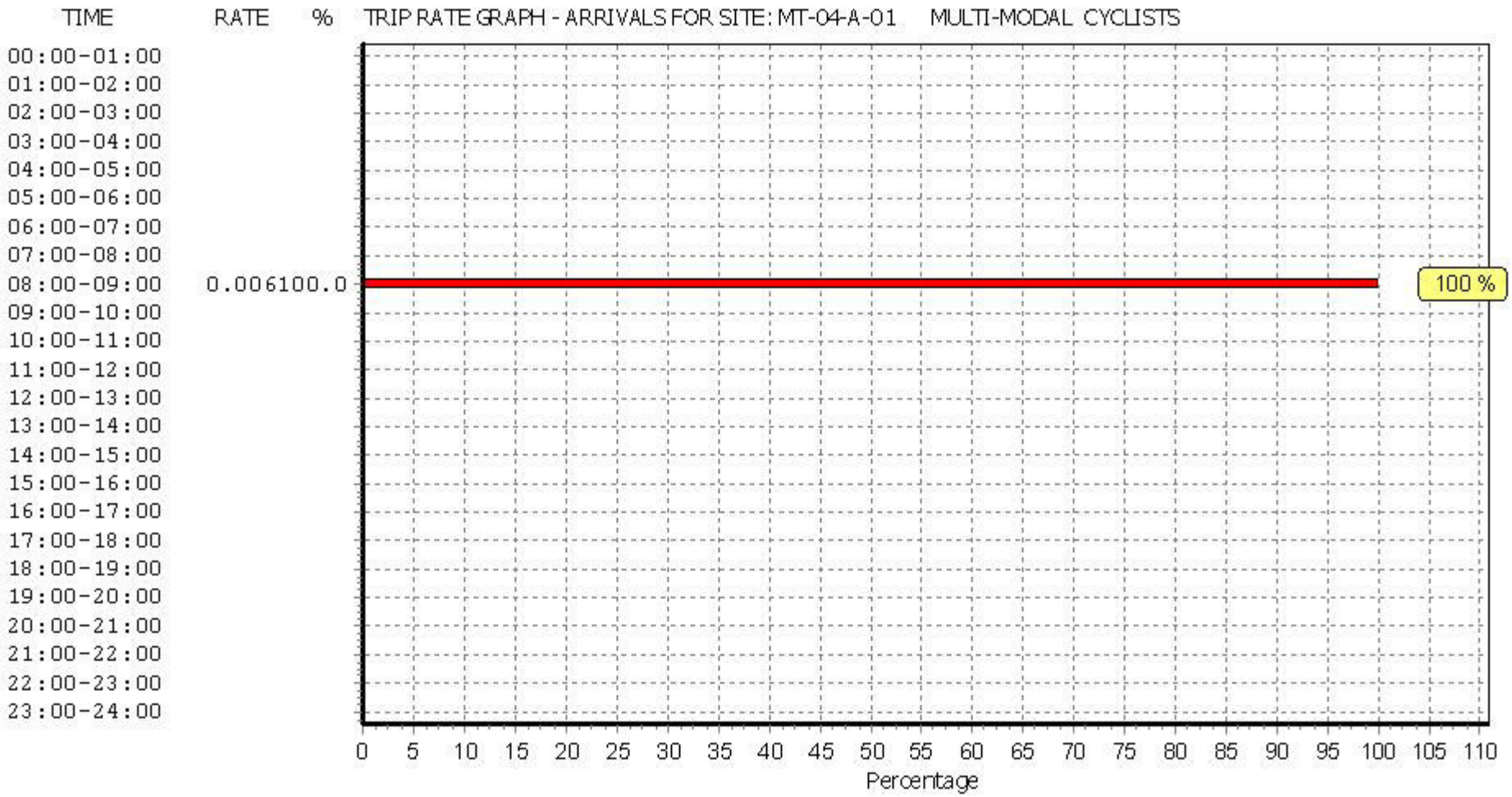
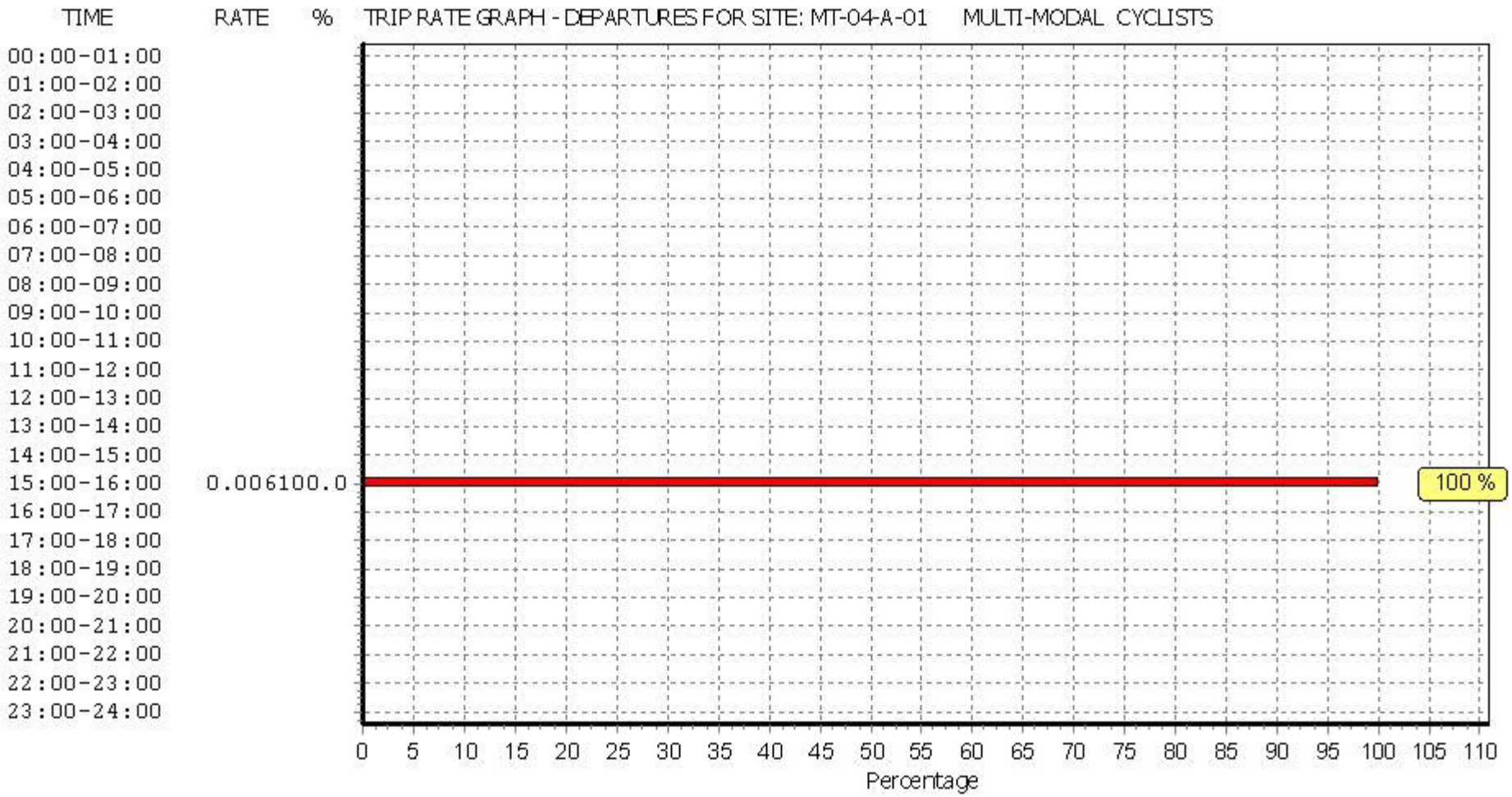
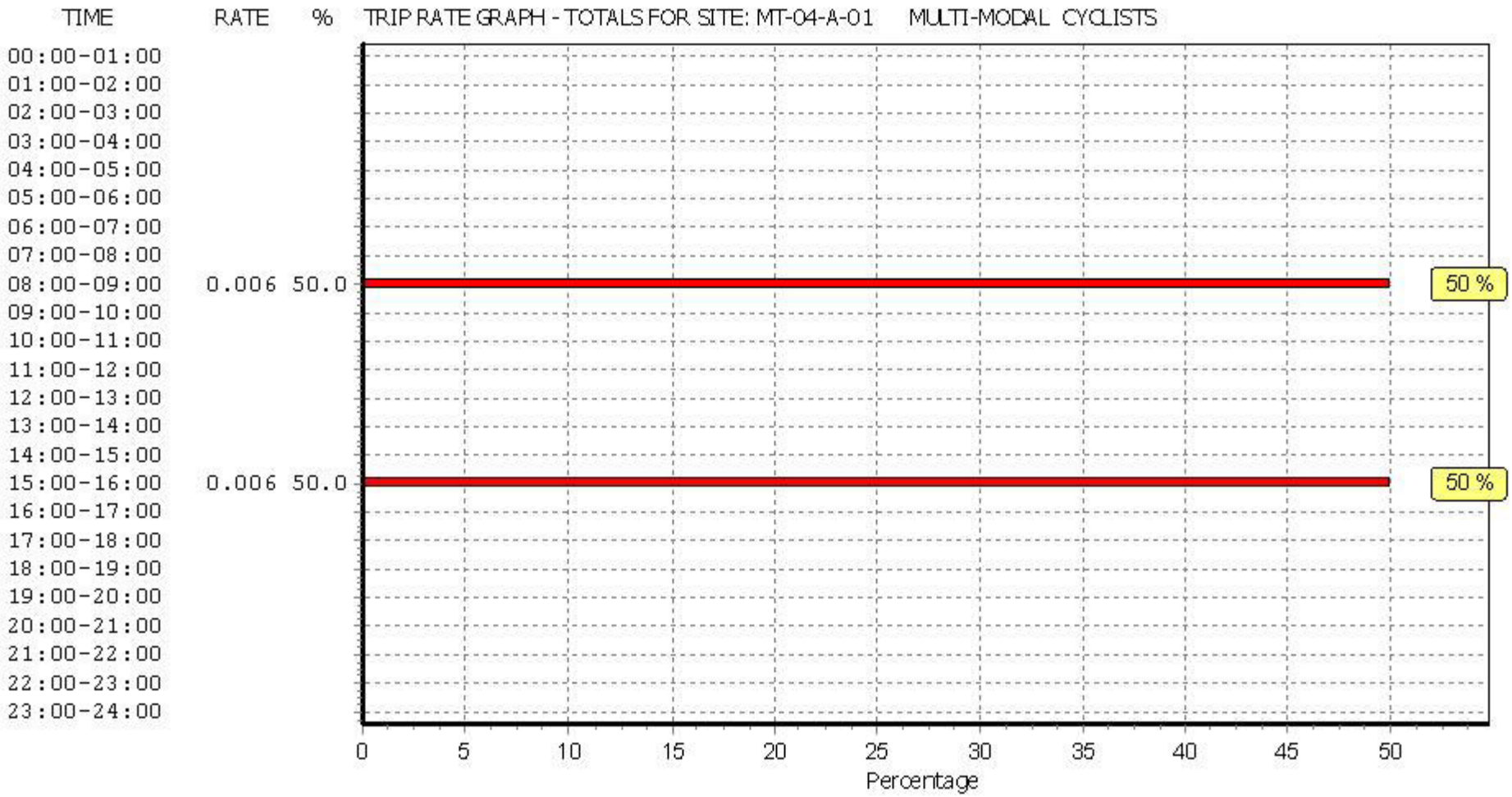


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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



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.



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.

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY

MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: 1 PUPILS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	2	166	0.069	2	166	0.003	2	166	0.072
08:00 - 09:00	**2**	**166**	**0.650**	2	166	0.248	**2**	**166**	**0.898**
09:00 - 10:00	2	166	0.036	2	166	0.027	2	166	0.063
10:00 - 11:00	2	166	0.018	2	166	0.018	2	166	0.036
11:00 - 12:00	2	166	0.042	2	166	0.036	2	166	0.078
12:00 - 13:00	2	166	0.018	2	166	0.021	2	166	0.039
13:00 - 14:00	2	166	0.030	2	166	0.042	2	166	0.072
14:00 - 15:00	2	166	0.030	2	166	0.024	2	166	0.054
15:00 - 16:00	2	166	0.187	**2**	**166**	**0.517**	2	166	0.704
16:00 - 17:00	2	166	0.109	2	166	0.154	2	166	0.263
17:00 - 18:00	2	166	0.000	2	166	0.024	2	166	0.024
18:00 - 19:00	1	147	0.000	1	147	0.007	1	147	0.007
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.189			1.121			2.310

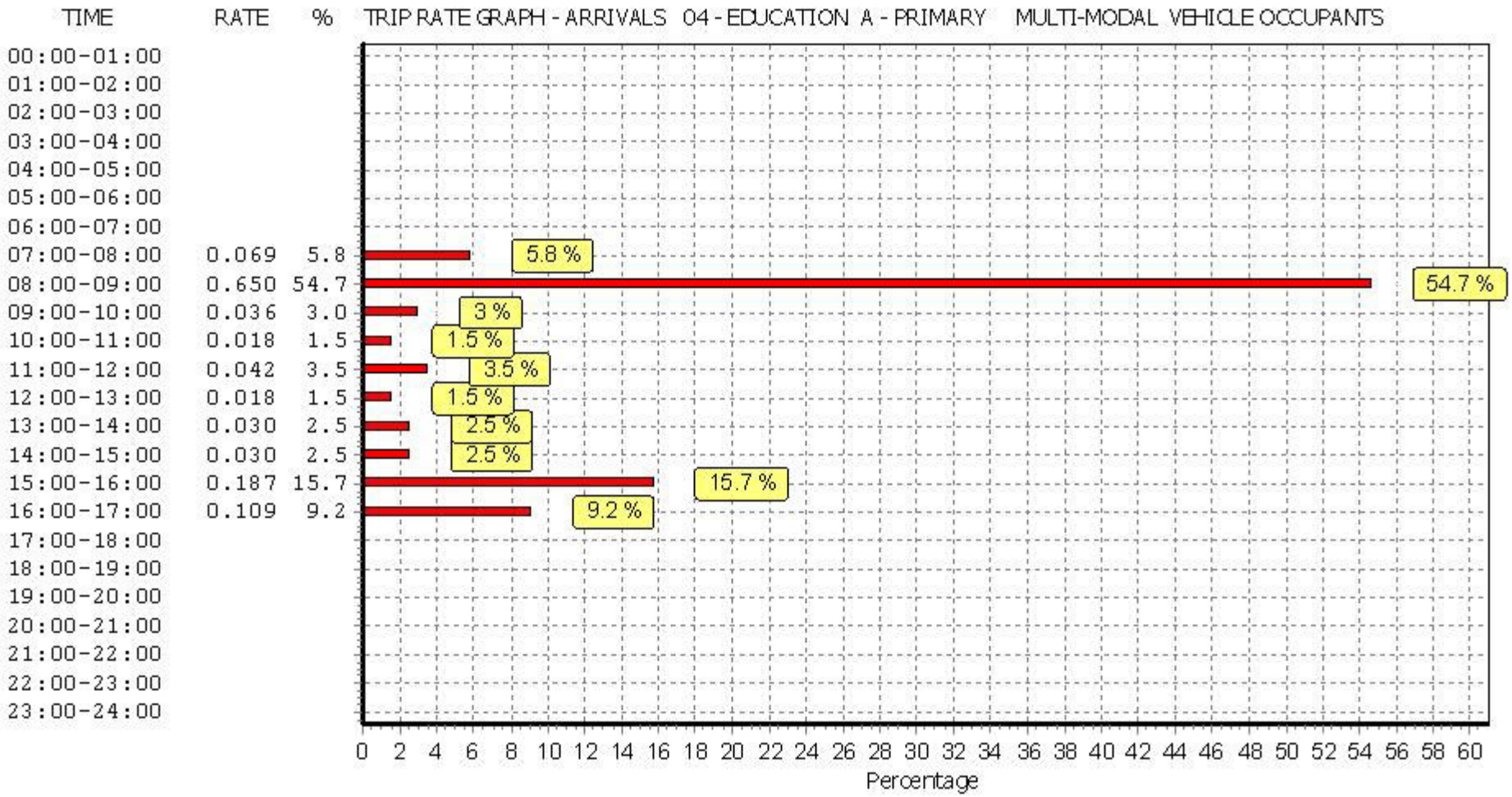
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are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

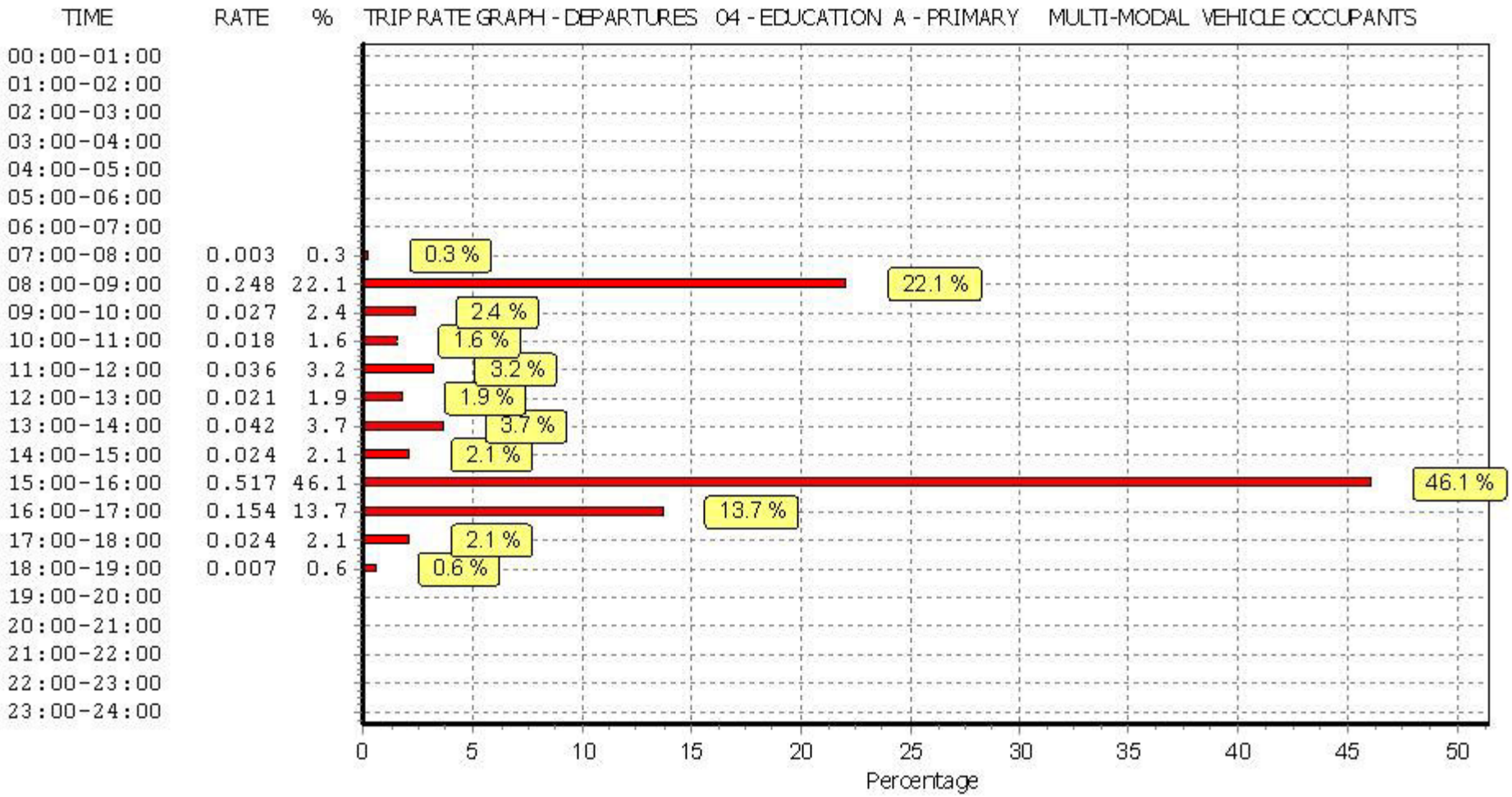
Parameter summary

Trip rate parameter range selected:	147 - 184 (units:)
Survey date date range:	01/01/09 - 20/05/14
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

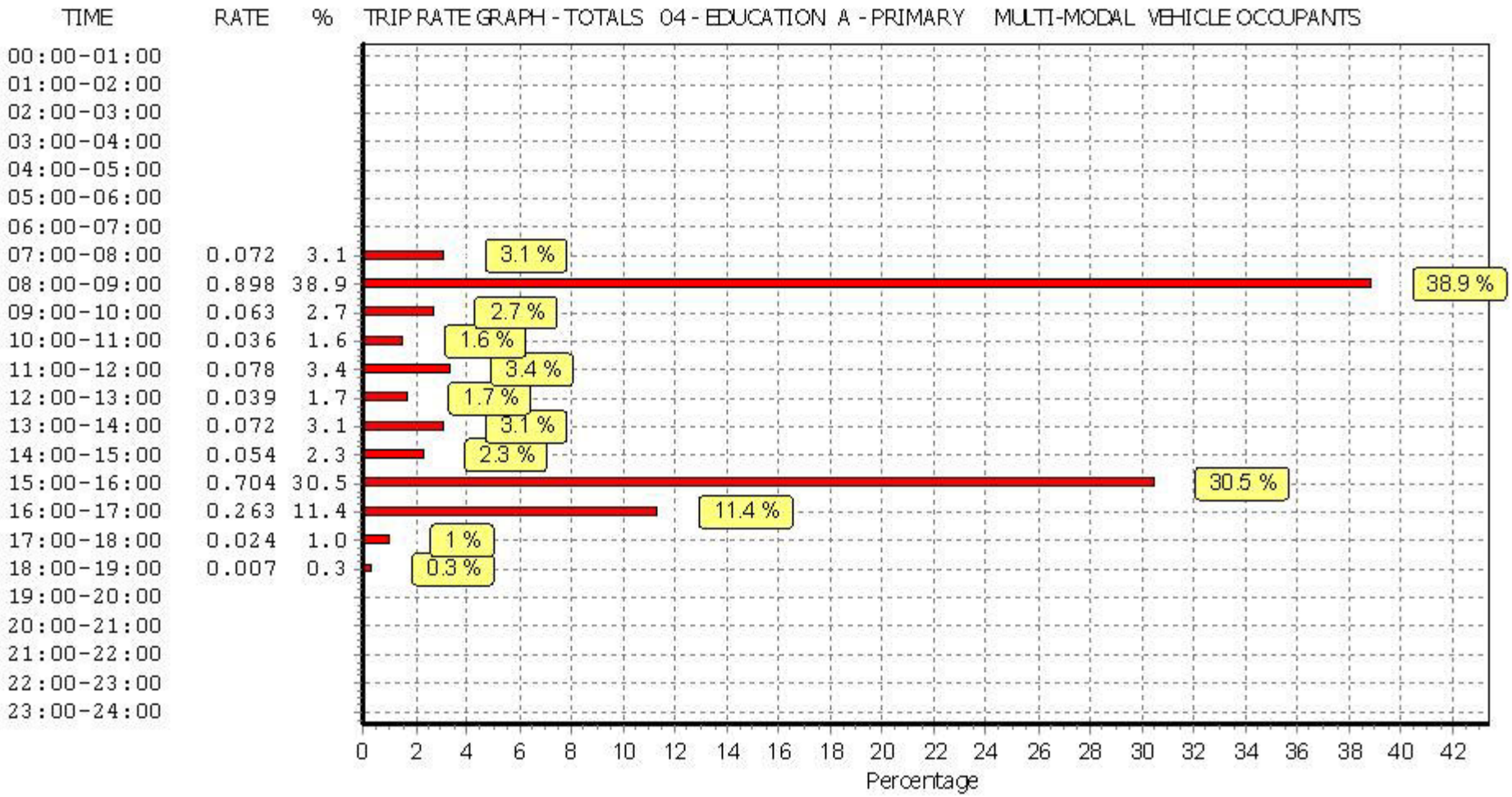
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected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



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.



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.



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.

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY

MULTI-MODAL PEDESTRIANS

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	2	166	0.030	2	166	0.000	2	166	0.030
08:00 - 09:00	**2**	**166**	**0.520**	2	166	0.039	2	166	0.559
09:00 - 10:00	2	166	0.009	2	166	0.009	2	166	0.018
10:00 - 11:00	2	166	0.003	2	166	0.000	2	166	0.003
11:00 - 12:00	2	166	0.063	2	166	0.091	2	166	0.154
12:00 - 13:00	2	166	0.027	2	166	0.015	2	166	0.042
13:00 - 14:00	2	166	0.003	2	166	0.024	2	166	0.027
14:00 - 15:00	2	166	0.000	2	166	0.000	2	166	0.000
15:00 - 16:00	2	166	0.127	**2**	**166**	**0.547**	**2**	**166**	**0.674**
16:00 - 17:00	2	166	0.024	2	166	0.124	2	166	0.148
17:00 - 18:00	2	166	0.000	2	166	0.000	2	166	0.000
18:00 - 19:00	1	147	0.000	1	147	0.000	1	147	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.806			0.849			1.655

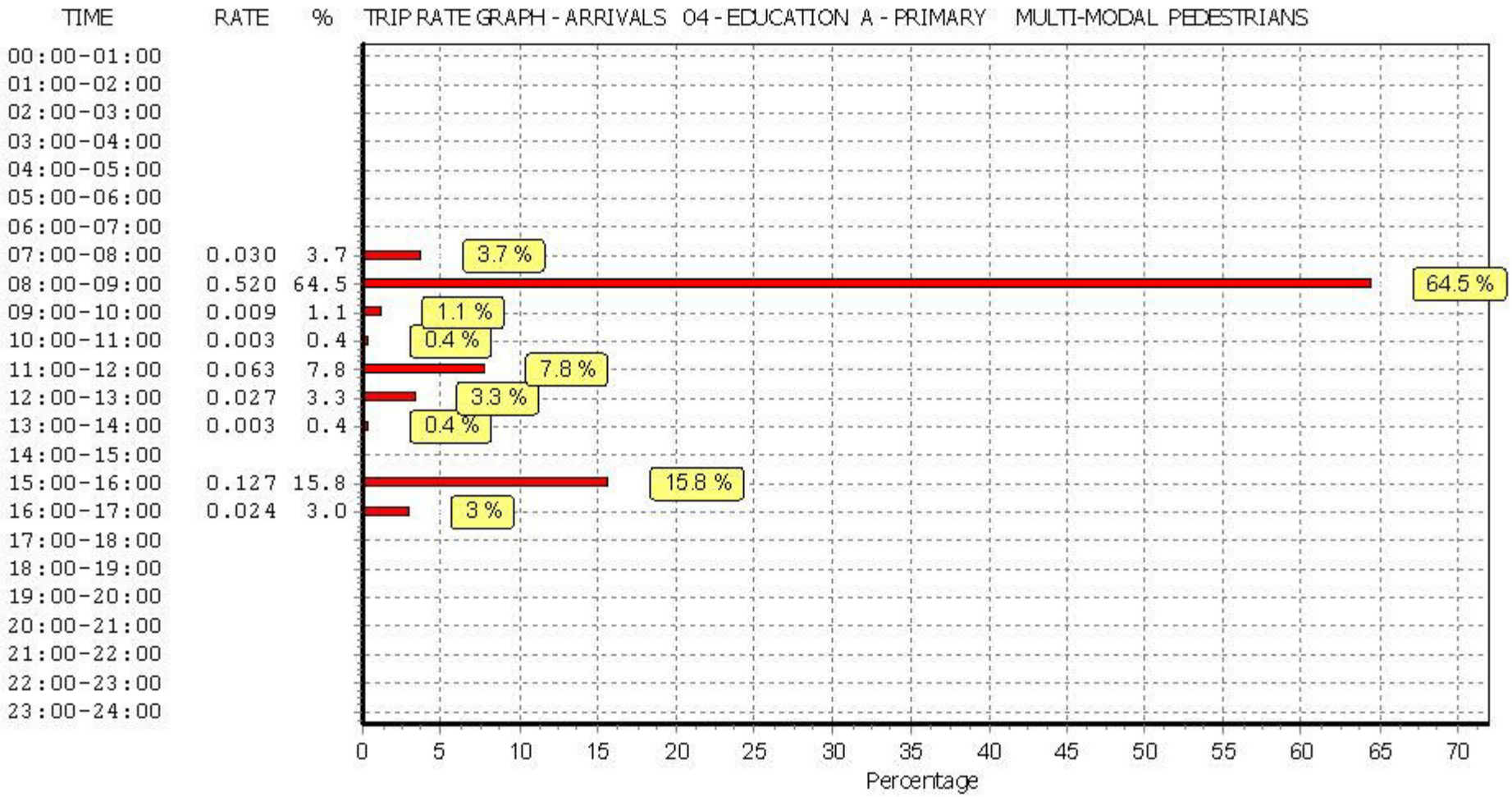
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are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

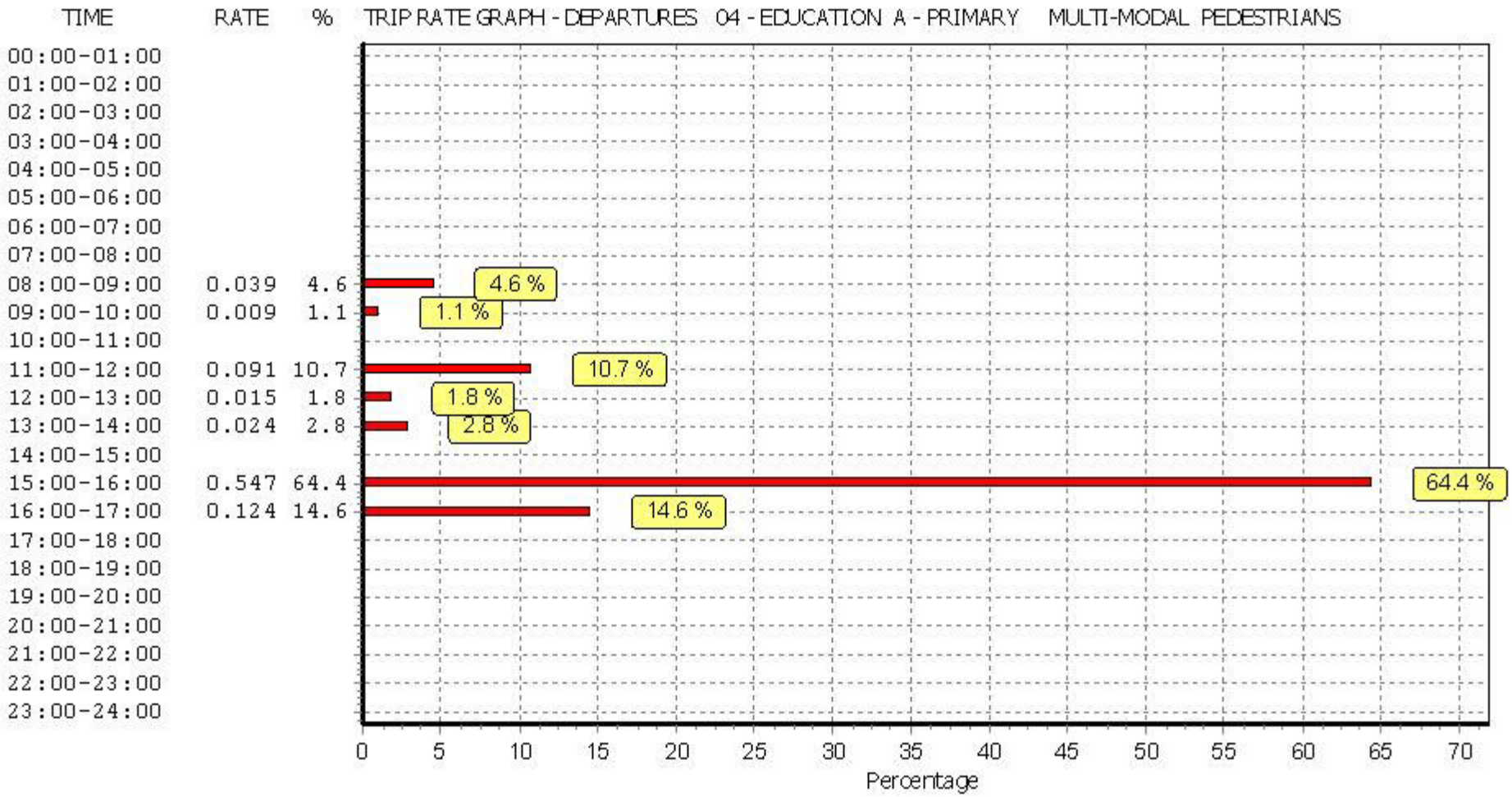
Parameter summary

Trip rate parameter range selected:	147 - 184 (units:)
Survey date date range:	01/01/09 - 20/05/14
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

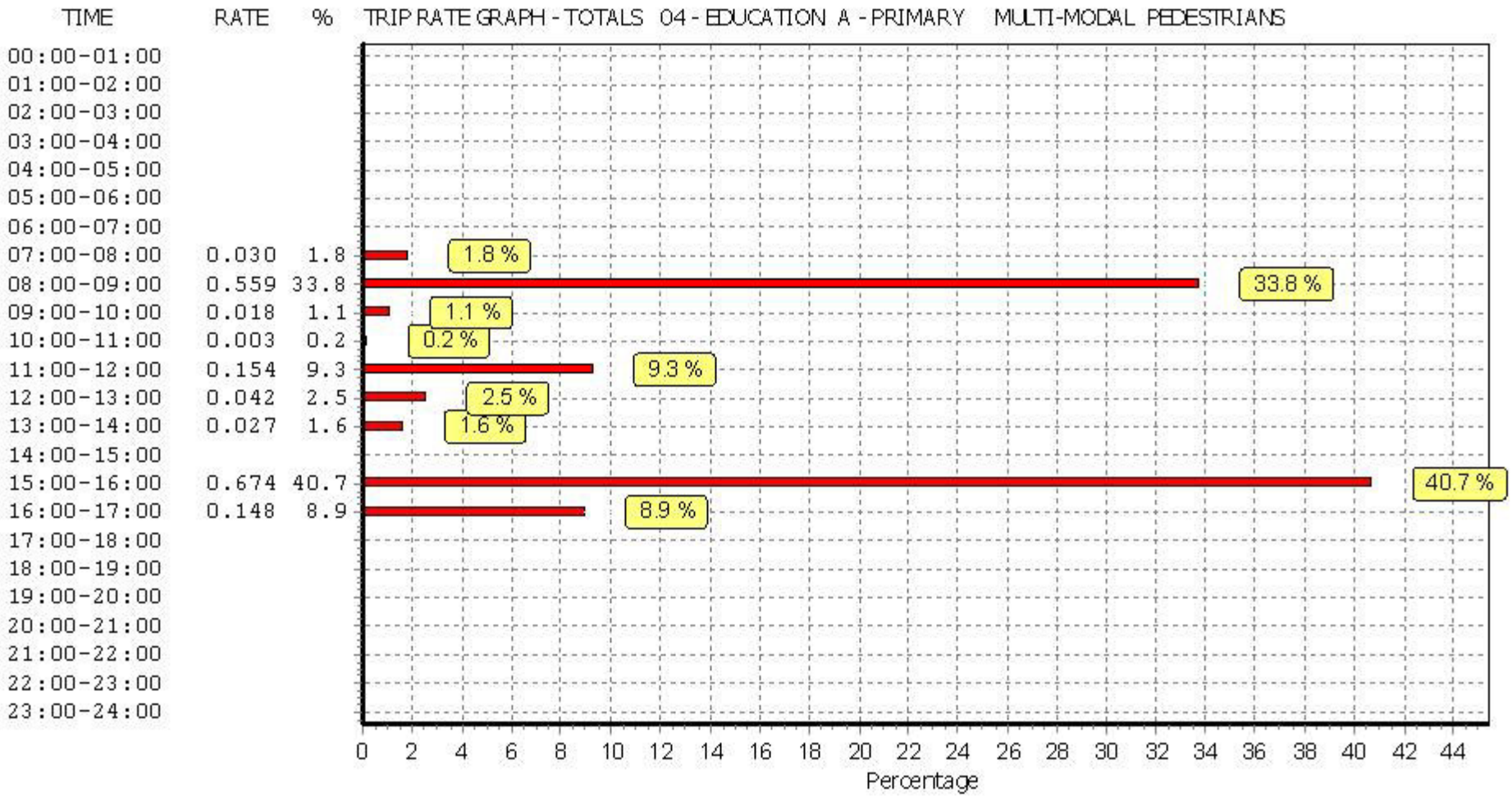
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected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



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.



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.



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.

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY

MULTI-MODAL TOTAL RAIL PASSENGERS

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	2	166	0.000	2	166	0.000	2	166	0.000
08:00 - 09:00	2	166	0.000	2	166	0.000	2	166	0.000
09:00 - 10:00	2	166	0.000	2	166	0.000	2	166	0.000
10:00 - 11:00	2	166	0.000	2	166	0.000	2	166	0.000
11:00 - 12:00	2	166	0.000	2	166	0.000	2	166	0.000
12:00 - 13:00	2	166	0.000	2	166	0.000	2	166	0.000
13:00 - 14:00	2	166	0.000	2	166	0.000	2	166	0.000
14:00 - 15:00	2	166	0.000	2	166	0.000	2	166	0.000
15:00 - 16:00	2	166	0.000	2	166	0.000	2	166	0.000
16:00 - 17:00	2	166	0.000	2	166	0.000	2	166	0.000
17:00 - 18:00	2	166	0.000	2	166	0.000	2	166	0.000
18:00 - 19:00	1	147	0.000	1	147	0.000	1	147	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

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.*

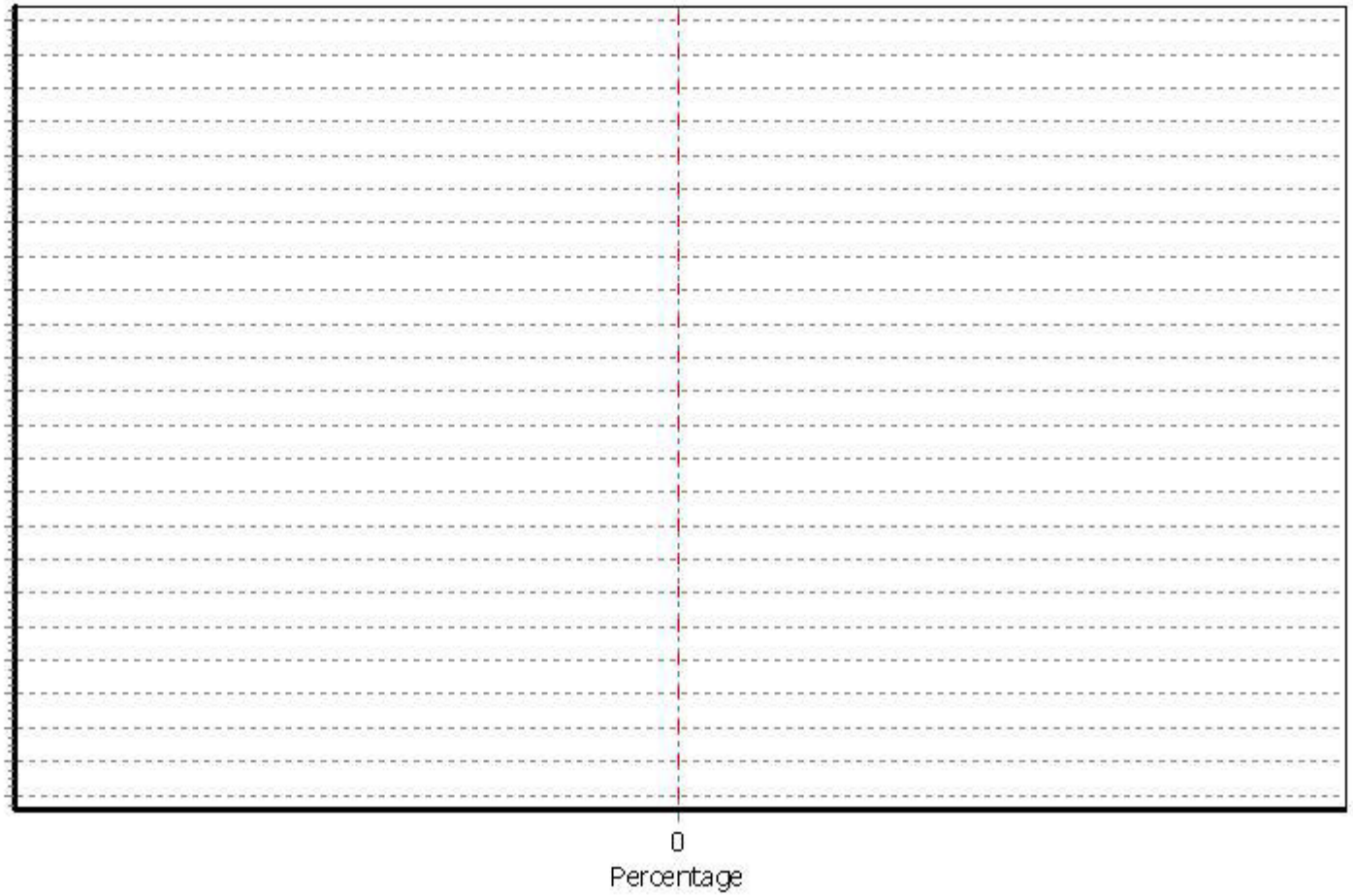
Parameter summary

Trip rate parameter range selected:	147 - 184 (units:)
Survey date date range:	01/01/09 - 20/05/14
Number of weekdays (Monday-Friday):	2
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.

TIME	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		
08:00-09:00		
09:00-10:00		
10:00-11:00		
11:00-12:00		
12:00-13:00		
13:00-14:00		
14:00-15:00		
15:00-16:00		
16:00-17:00		
17:00-18:00		
18:00-19:00		
19:00-20:00		
20:00-21:00		
21:00-22:00		
22:00-23:00		
23:00-24:00		

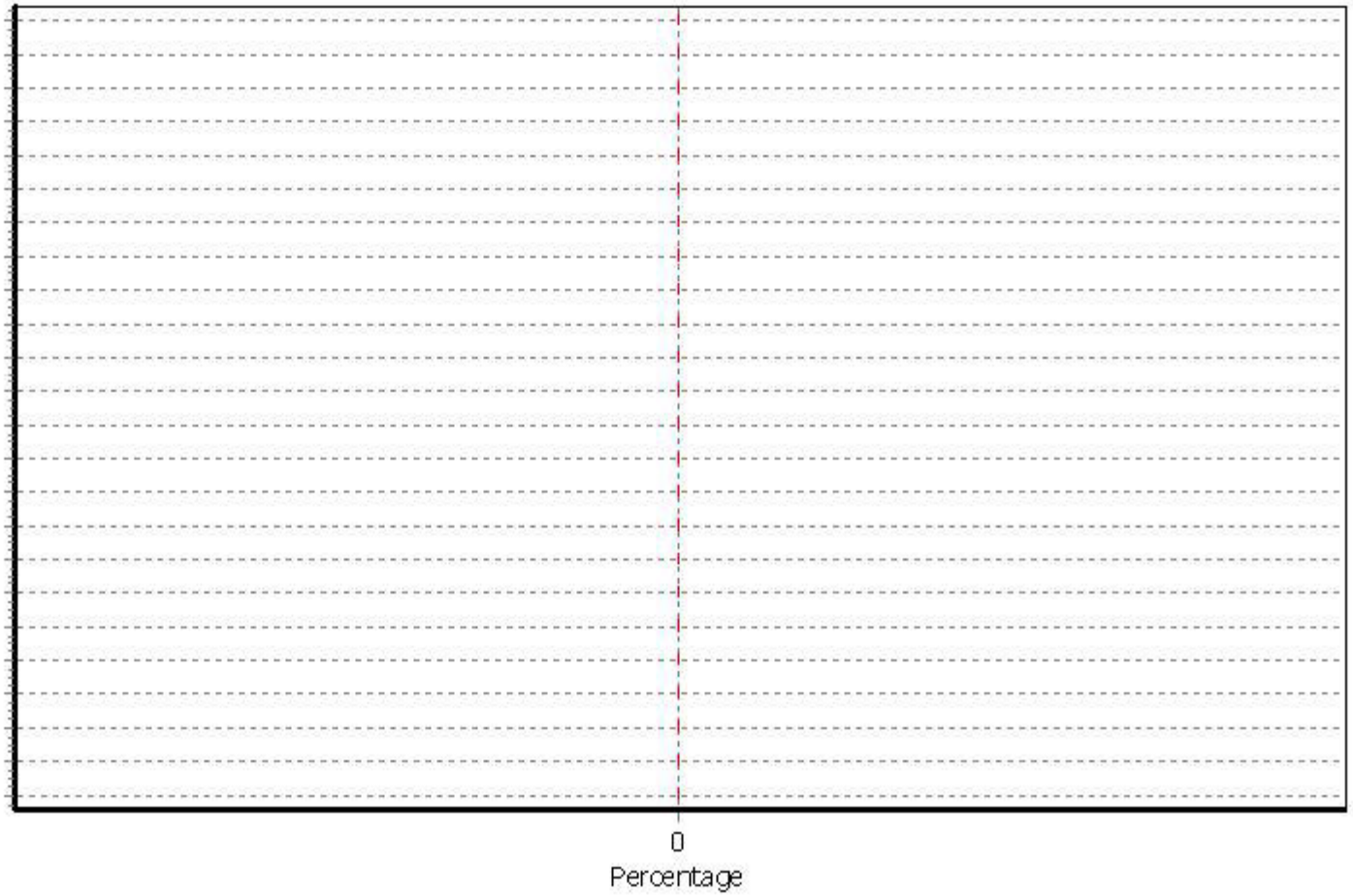
TRIP RATE GRAPH - ARRIVALS 04 - EDUCATION A - PRIMARY MULTI-MODAL TOTAL RAIL PASSENGERS



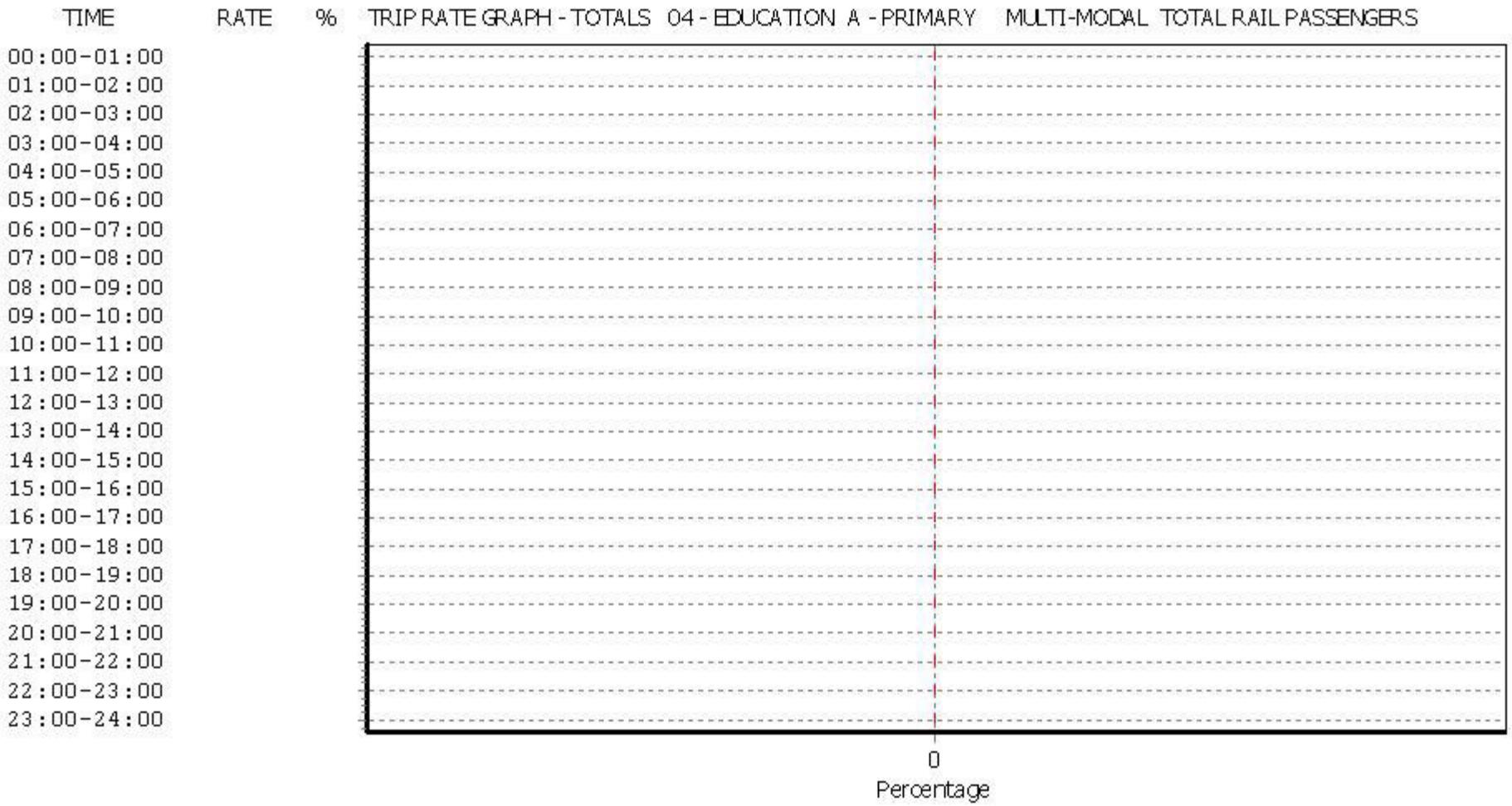
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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

TIME	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		
08:00-09:00		
09:00-10:00		
10:00-11:00		
11:00-12:00		
12:00-13:00		
13:00-14:00		
14:00-15:00		
15:00-16:00		
16:00-17:00		
17:00-18:00		
18:00-19:00		
19:00-20:00		
20:00-21:00		
21:00-22:00		
22:00-23:00		
23:00-24:00		

TRIP RATE GRAPH - DEPARTURES 04 - EDUCATION A - PRIMARY MULTI-MODAL TOTAL RAIL PASSENGERS



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.



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.

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY

MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 1 PUPILS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	2	166	0.000	2	166	0.000	2	166	0.000
08:00 - 09:00	**2**	**166**	**0.006**	2	166	0.000	**2**	**166**	**0.006**
09:00 - 10:00	2	166	0.000	2	166	0.000	2	166	0.000
10:00 - 11:00	2	166	0.000	2	166	0.000	2	166	0.000
11:00 - 12:00	2	166	0.000	2	166	0.000	2	166	0.000
12:00 - 13:00	2	166	0.000	2	166	0.000	2	166	0.000
13:00 - 14:00	2	166	0.000	2	166	0.000	2	166	0.000
14:00 - 15:00	2	166	0.000	2	166	0.000	2	166	0.000
15:00 - 16:00	2	166	0.000	2	166	0.000	2	166	0.000
16:00 - 17:00	2	166	0.000	**2**	**166**	**0.003**	2	166	0.003
17:00 - 18:00	2	166	0.000	2	166	0.000	2	166	0.000
18:00 - 19:00	1	147	0.000	1	147	0.000	1	147	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.006			0.003			0.009

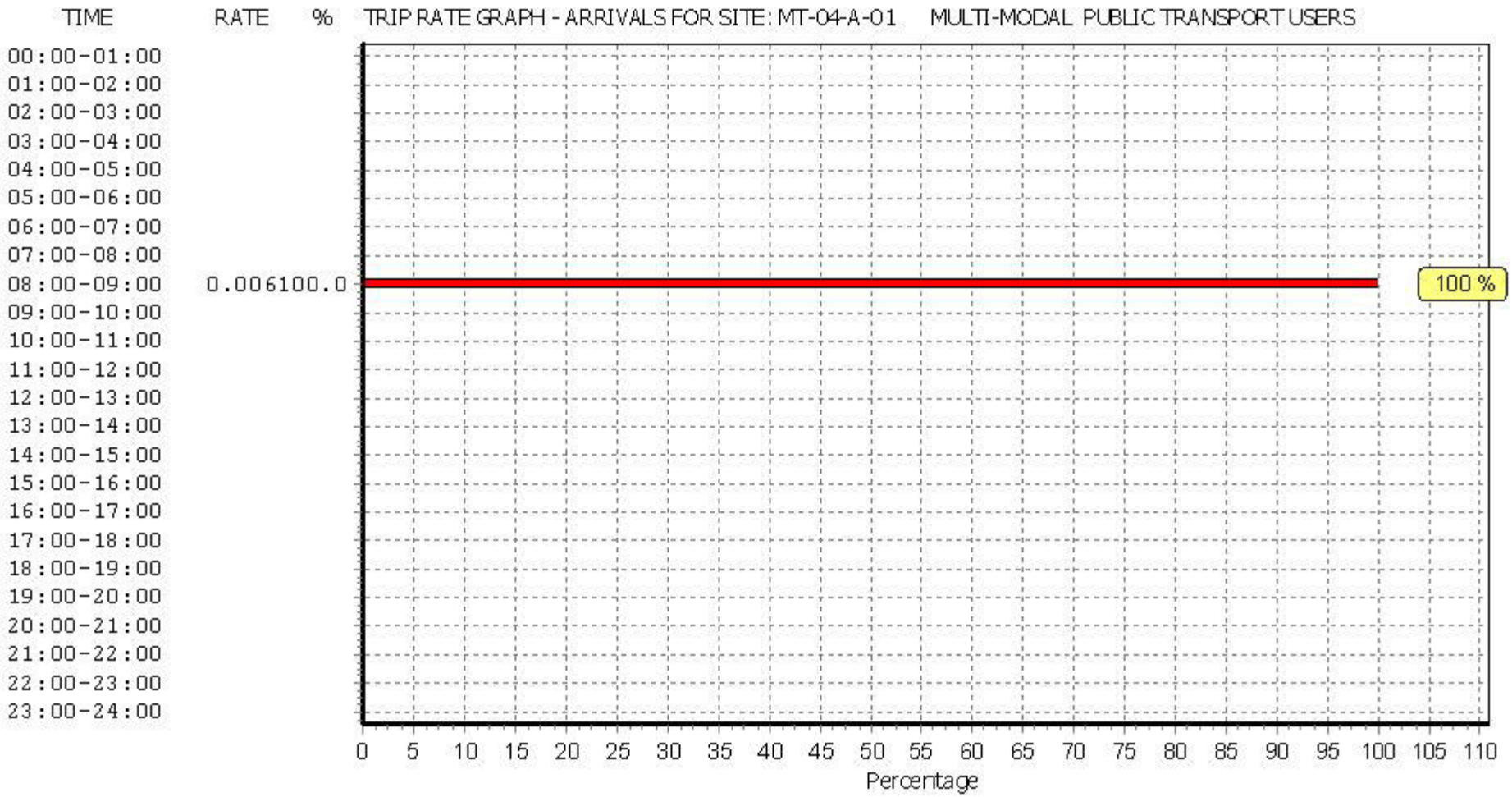
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are 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:	147 - 184 (units:)
Survey date date range:	01/01/09 - 20/05/14
Number of weekdays (Monday-Friday):	2
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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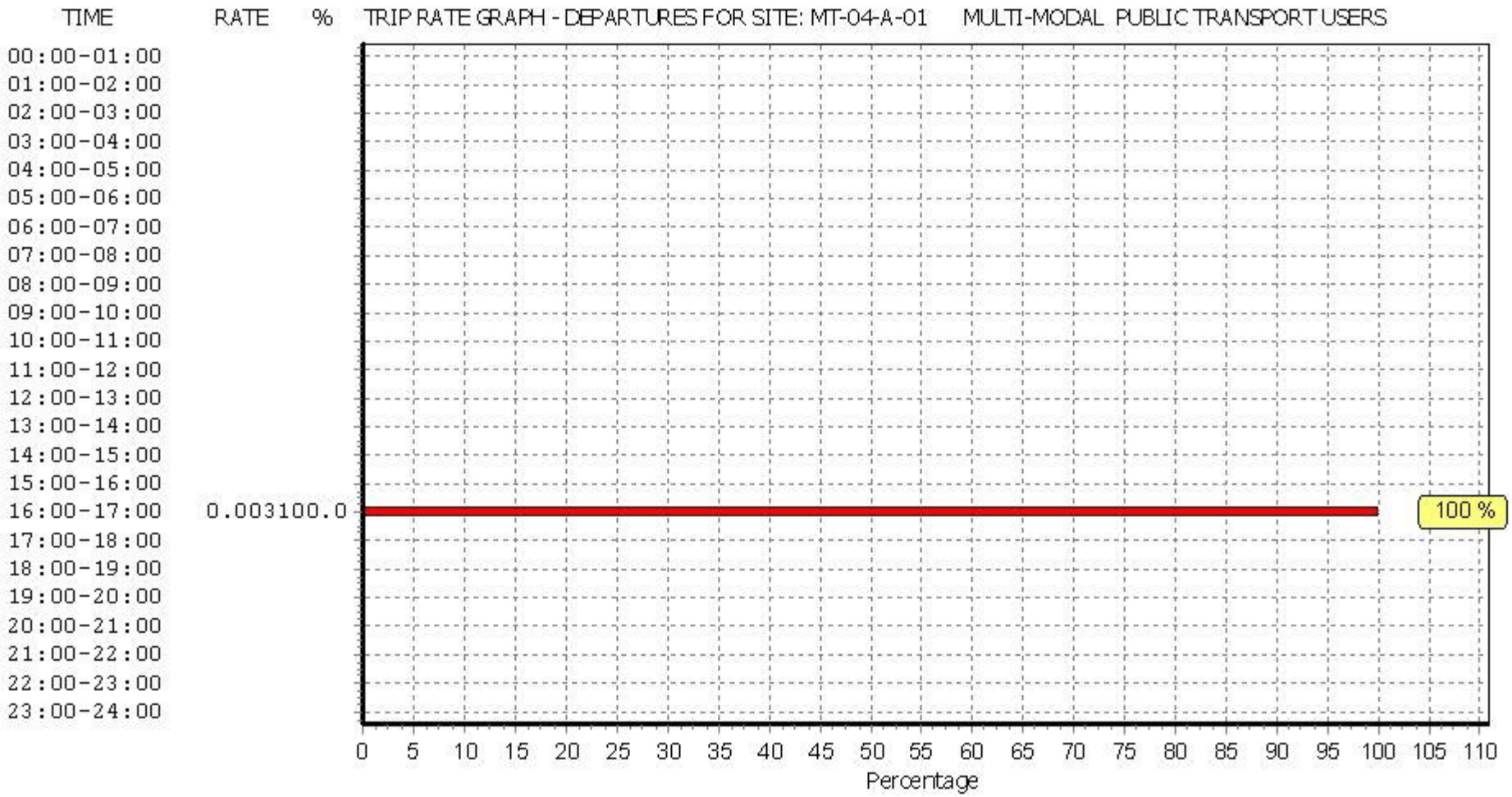

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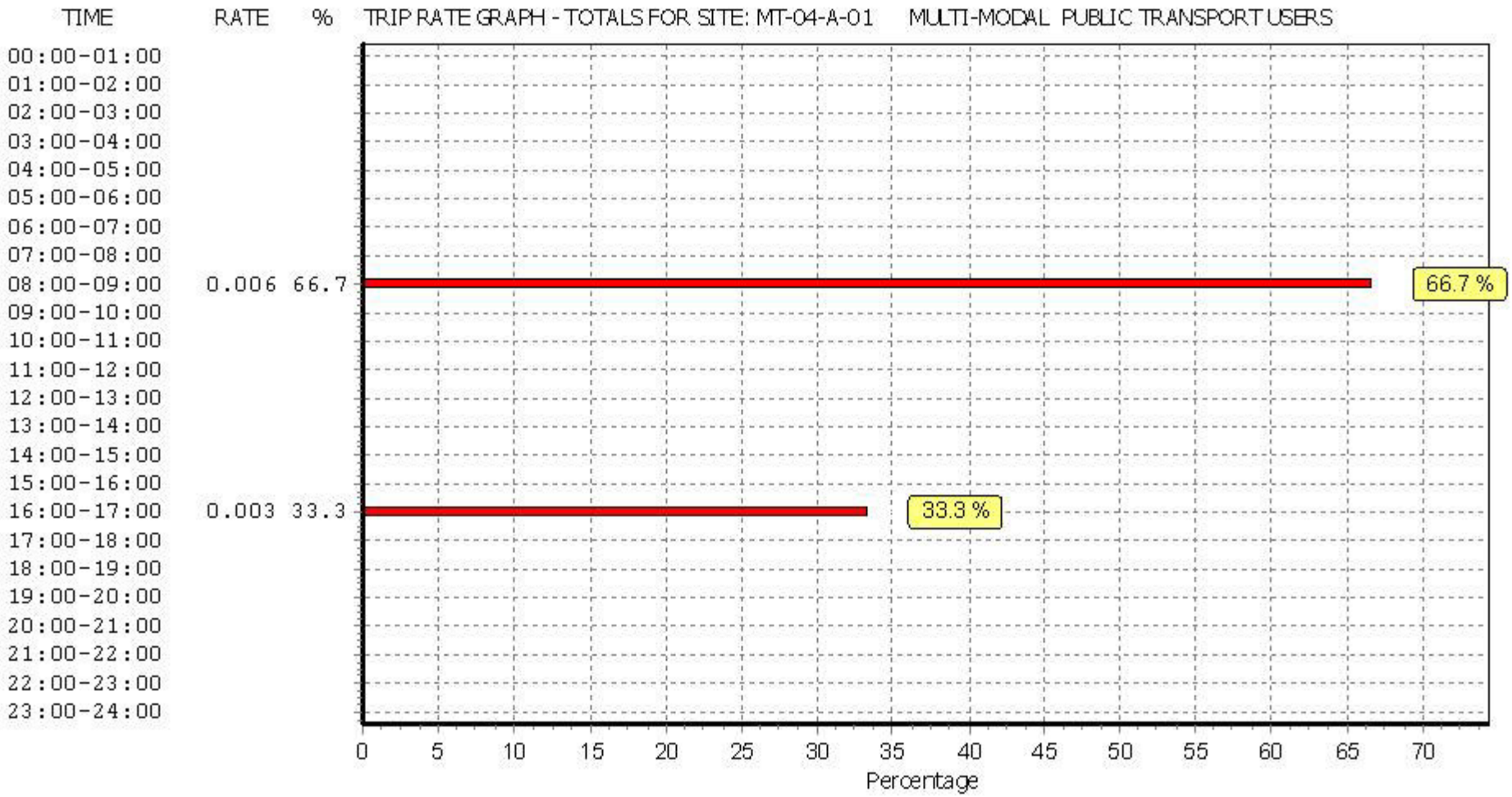

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TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY

MULTI-MODAL TOTAL PEOPLE

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	2	166	0.100	2	166	0.003	2	166	0.103
08:00 - 09:00	**2**	**166**	**1.181**	2	166	0.287	**2**	**166**	**1.468**
09:00 - 10:00	2	166	0.045	2	166	0.036	2	166	0.081
10:00 - 11:00	2	166	0.021	2	166	0.018	2	166	0.039
11:00 - 12:00	2	166	0.106	2	166	0.127	2	166	0.233
12:00 - 13:00	2	166	0.045	2	166	0.036	2	166	0.081
13:00 - 14:00	2	166	0.033	2	166	0.066	2	166	0.099
14:00 - 15:00	2	166	0.030	2	166	0.024	2	166	0.054
15:00 - 16:00	2	166	0.314	**2**	**166**	**1.069**	2	166	1.383
16:00 - 17:00	2	166	0.133	2	166	0.281	2	166	0.414
17:00 - 18:00	2	166	0.000	2	166	0.024	2	166	0.024
18:00 - 19:00	1	147	0.000	1	147	0.007	1	147	0.007
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.008			1.978			3.986

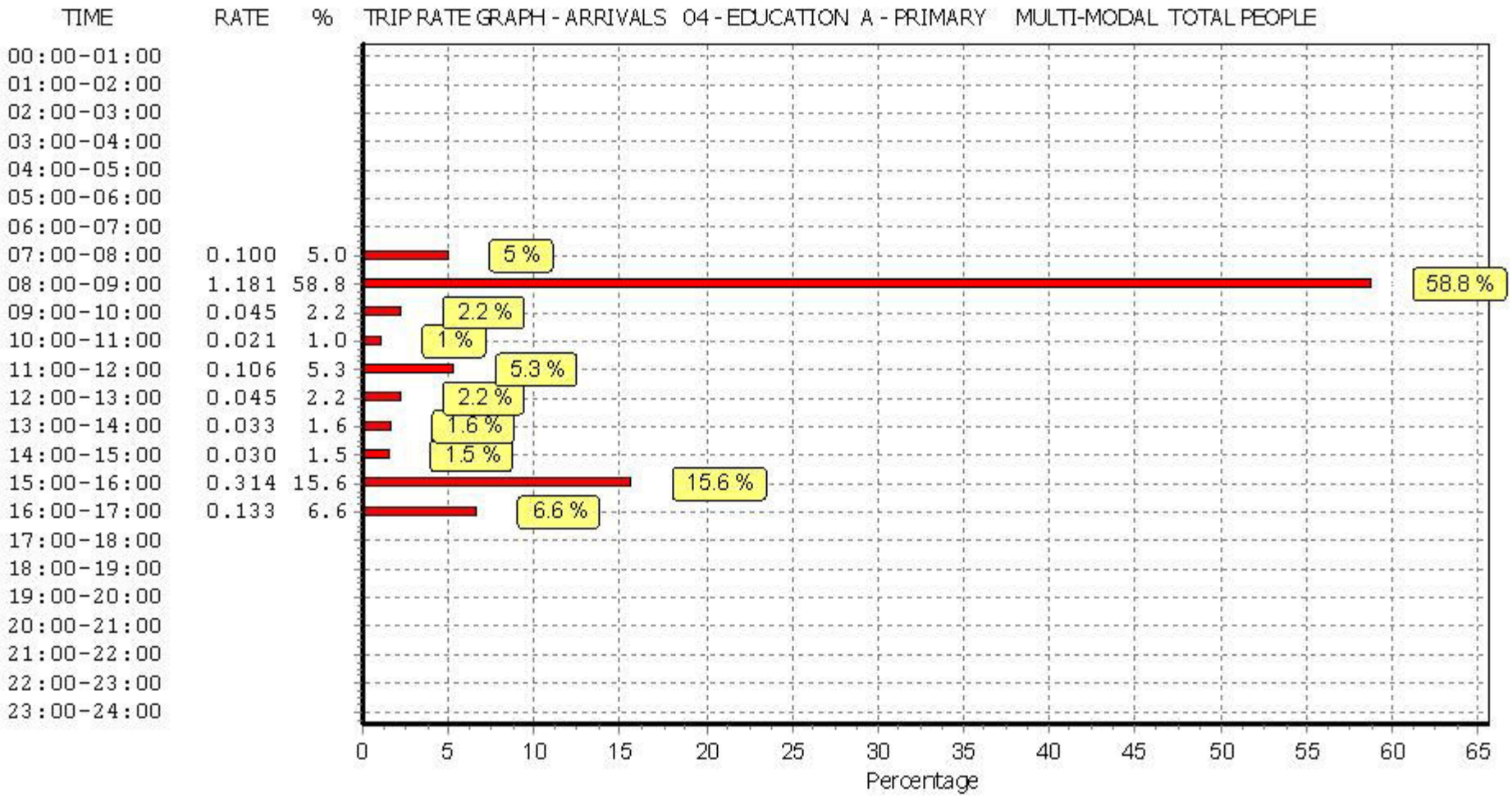
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are 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:	147 - 184 (units:)
Survey date date range:	01/01/09 - 20/05/14
Number of weekdays (Monday-Friday):	2
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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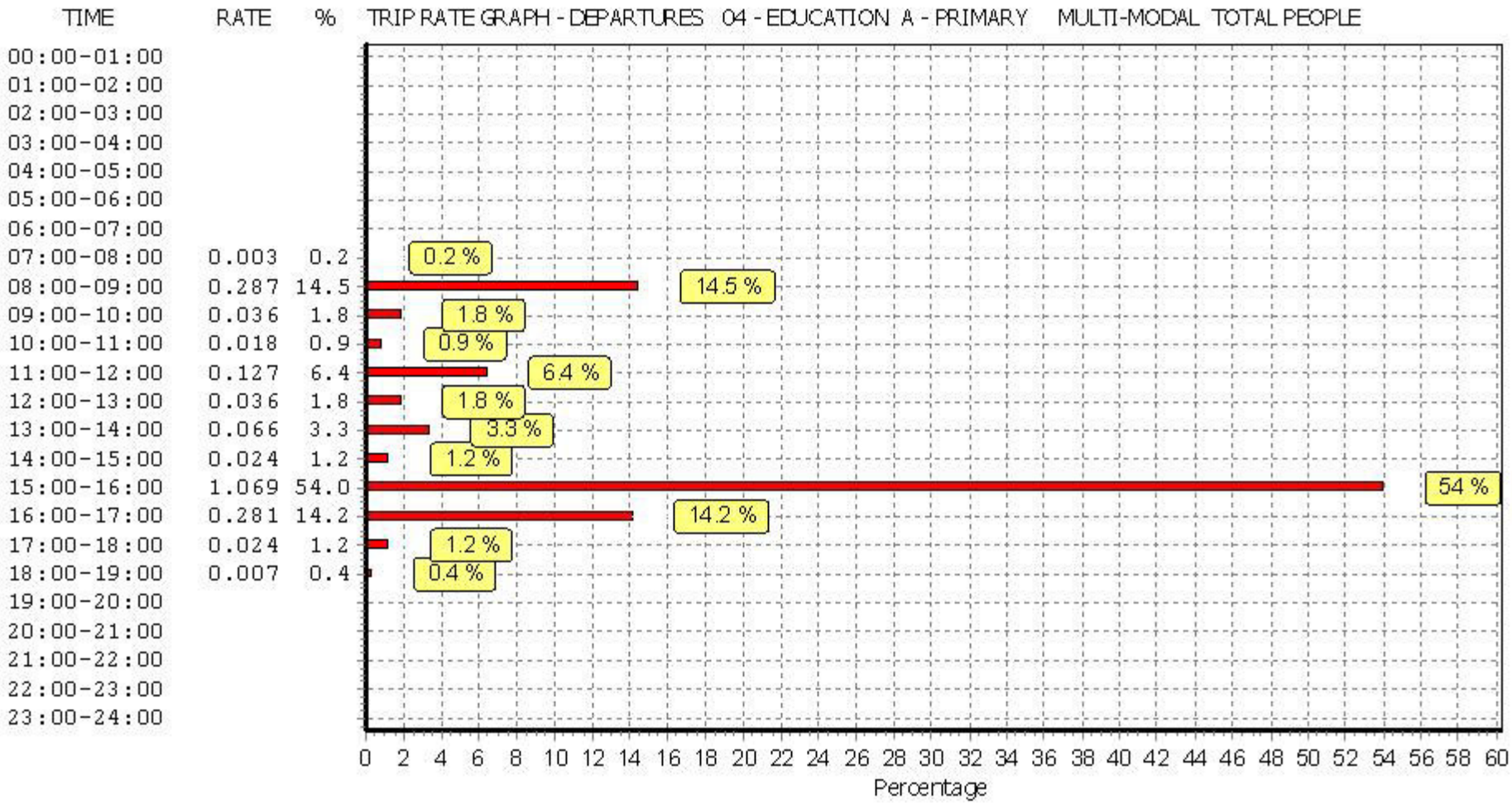

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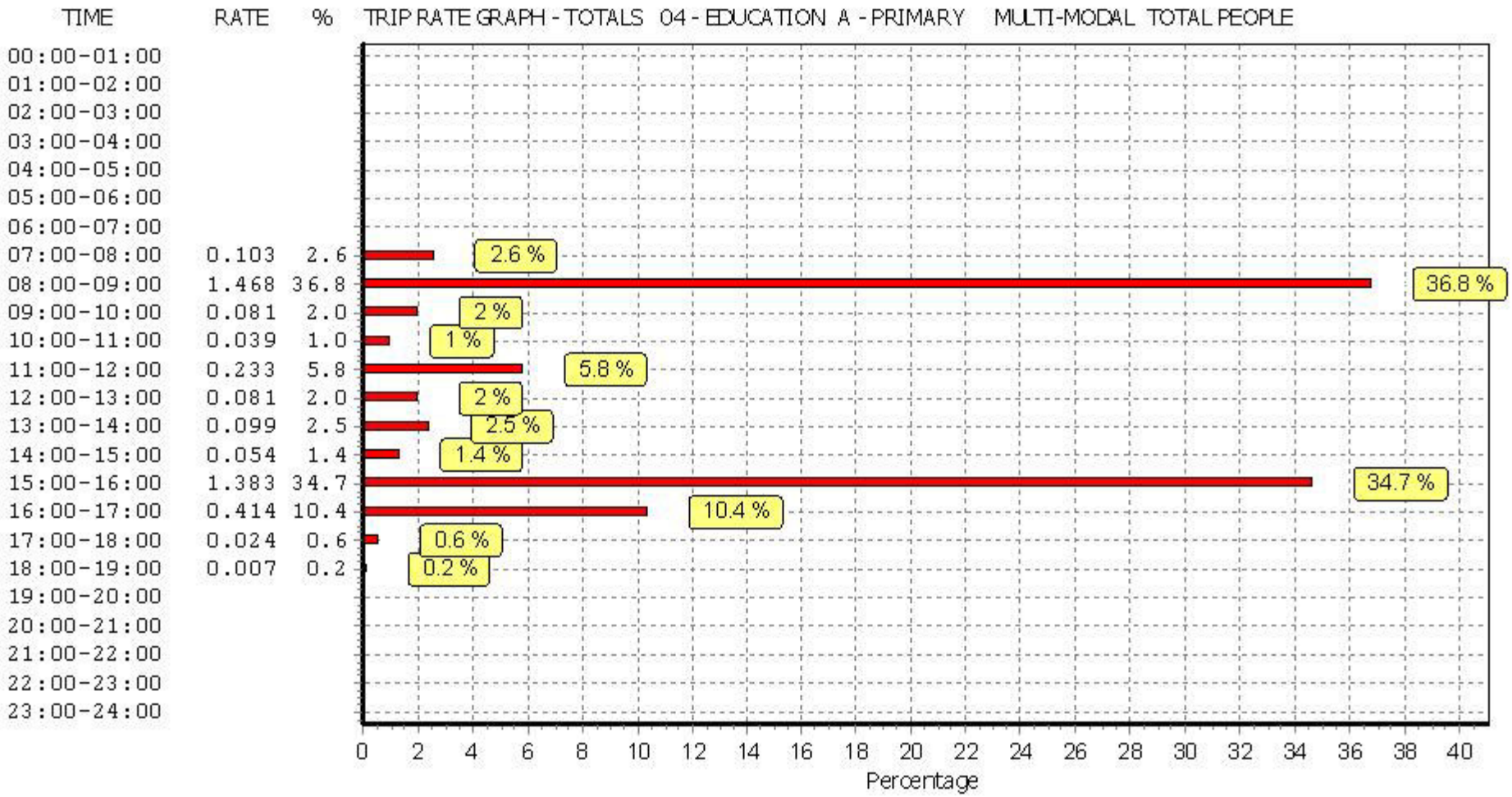

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