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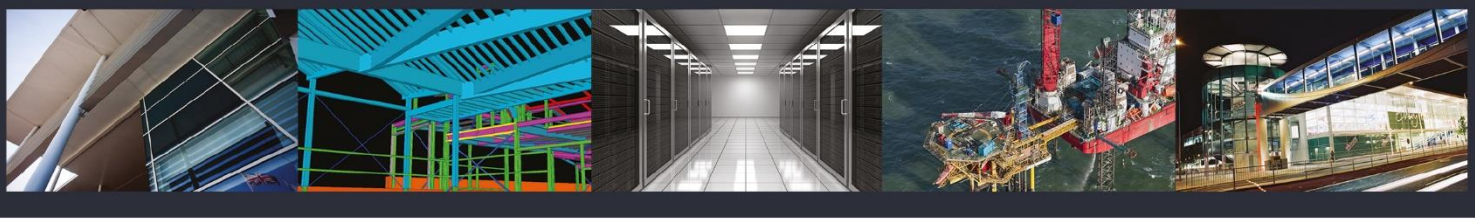

Belmount Navan

Traffic and Transport Assessment

November 19

Prepared for:

Coindale Ltd

STRUCTURAL • CIVIL • DUE DILIGENCE • ENGINEERING MASTERPLANNING
FLOOD MANAGEMENT • INFRASTRUCTURE DESIGN
PRE-DEVELOPMENT ENGINEERING • BIM • TRANSPORTATION

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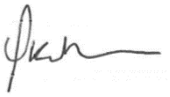
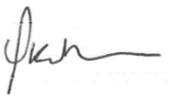
Reviewed by	James Mayer		Director	18/11/19
Approved by	James Mayer		Director	18/11/19

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1 Introduction

1 1 Background

This Traffic and Transport Assessment has been prepared by Pinnacle Consulting Engineers in support of a Strategy Housing Development application to An Bord Pleanála for the following:

The proposed development will consist of the following:

'The proposal relates to a residential development of 544 no. dwellings on a site of c. 15.1 hectares comprising 260 no. houses (18 no. 2 bed, 207 no. 3 bed & 35 no. 4 bed) and 198 no. apartments (46 no. 1 bed, 152 no 2 bed), 30 no. duplex apartments (15 no. 2 bed & 15 no. 3 bed), and 56 no. dwellings in corner blocks (16 no. 1 bed, 24 no. 2 bed & 16 no. 3 bed) as well as the provision of two crèches (ground floor of apartment building [c. 195 sq. m] and single storey creche in housing area [c. 443 sq. m]) Open Space of c. 2.63 hectares including playground areas; all ancillary landscape works with public lighting, planting and boundary treatments including regrading/re-profiling of site where required as well as provision of cycle paths; Provision of vehicular and pedestrian looped access through the site from 3 no. junctions located on Academy Street as well as pedestrian connection in south east of site to Dublin Road and upgrade works to junction onto the Dublin Road; along with 875 no. car parking spaces (including 4 no. car sharing spaces) and 581 cycle spaces; Surface water attenuation measures and underground attenuation systems as well as all ancillary site development works (reprofiling of site as required) as well as connection to existing public water supply and drainage services. All site development and landscape works.'

The site has an area of 15.10Ha.

The site is located approximately c. 900m of Navan Town Centre, and is bounded to the north east by Academy Street ; the R147 Dublin Road to the east and the south and west by various residential developments.

The site is currently a greenfield site.

The site location is shown in Figure 1.

In order to complete this report, Pinnacle Consulting Engineering has made reference to the following documents:

- The Traffic Management Guidelines;
- Guidance on Transport Assessment;
- Design Manual for Urban Road and Streets;
- Design Standards for New Apartments - Guidelines for Planning Authorities (March 2018);
- Meath County Development Plan 2013-2019 - Meath County Council;
- Navan 2030 Integrated Public Realm & Movement Plan; and
- Navan Smarter Travel Plan 2014-2019.

Figure 1: Site Location Source: Google Maps

1 2 S D Consultations pinions

1 2 1 Background

As part of the SHD process numerous meetings, both statutory (Section 247) and non-statutory, where held with the Senior Executive Engineer, Transportation of Meath County Council in addition to the formal Pre-Planning Meeting with An Bord Pleanala.

A summary of Point 7 An Bord Pleanala on the pre-planning submission in so far as they relate to traffic and transportation are outlined below:

1. Trip generation,
2. Impact on junctions
3. Car parking

1 2 2 Trip Generation

The Local Authority deemed that the trip rates from the apartment element of the proposed development were too low and should be more in line with the trip rates associated with the house.

A full review was undertaken of the apartment trip rates. To that end, TRICS was interrogated to determine the total peak hour trip rate (the sum of the arrivals/departures for the AM peak and PM Peak) that would produce the largest trip rate to/from the development. The sites selected for these calculations include sites in Dundalk and Drogheda.

These trip rates were used to calculate the number of trips to/from the apartments/duplexs within the development. This is illustrated in Section 4.3 of this report.

In addition to the apartment trip rates, the Local Authority had concerns relating to the number of trips to/from the proposed school site. At the time of the Pre-Planning Meeting with An Bord Pleanala little was known about the school site.

Since the Pre-Planning Meeting, the Department of Education has provided clarity on its future use. Using statics from the CSO and the Department of Education a more robust approach to determine the number of internal and external trips to/from the school site has been established. This is illustrated in Section 4.4 of this report.

1 2 3 Impact on junctions

The Local Authority expressed concerns regarding the impact that the proposed development would have on the Academy Street/R147 Dublin Road priority-controlled junction. Anecdotally, the Local Authority had concerns that vehicles on Academy Street wishing to turn right currently experience difficulties in doing so and that this would be further exacerbated upon completion of the development.

It is noted from Local Authority's opinion that the priority-controlled junction, as modelled, operates within capacity with the proposed development included but anecdotally some drivers wishing to turn right may find it difficult to do so resulting in queuing and delays.

The Applicant acknowledges this but notes that this is a pre-existing condition and one which would be experienced at similar junctions throughout the county.

In order to mitigate the pre-existing condition and to facilitate the bus gate proposed in the Meath County Development Plan 2013-2019 for the benefit of Navan, the Applicant is proposing to upgrade the Academy Street/Dublin Road priority-controlled junction to a signal-controlled junction.

Refer to the attached Cronin Sutton Consulting Engineers drawing for a general arrangement of the proposed upgraded junction.

Given that the Applicant will incur costs in constructing common infrastructure and/or infrastructure that will be of benefit to others i.e. bus gate, the Applicant will enter a separate consultation with Meath County Council to agree a method of calculation whereby the costs determined can be set off against Development Contribution Levies payable by the Applicant under the Planning Permission. All particulars pertaining to this method of calculation and methodology for levy offset will form part of a Legal Agreement between Meath County Council and the Applicant.

1 2 4 Car Parking

Using current practice, as outlined in Design Standards for New Apartments - Guidelines for Planning Authorities (March 2018), the Applicant has sought to reduce the level of surface car parking for the apartment block that fronts Academy Street.

The Local Authority fear that this may lead to illegal or inconvenient parking taking place within the development or the overspill in to surrounding residential areas.

Aside from the enforcement issues that the Applicant has no control over once development roads have been taken in charge, they have sought to provide a particle and sustainable level of parking. To that end, a parking accumulation study has been carried out to validate the principals outline in the in Design Standards for New Apartments - Guidelines for Planning Authorities (March 2018) and the assumptions made in this report.

No consensus was reached between the Applicant and the Local Authority on this matter, but the Applicant is satisfied that the quantum of car parking provided, along with the mitigation measures offered, is sufficient to offer a long term sustainable level of parking for residents.

The rationale for the car parking strategy for the site is outlined in Section 3.4 of this report.

1 3 bjectives

The main objective of this report is to examine the traffic impact of the proposed development and its access arrangements on the local area road network. The net change in traffic on the network due to additional traffic has been calculated and its impact on the local area road network has been determined.

1 4 Study Methodology

The methodology adopted for this report can be summarised as follows:

Existing Traffic Flow Assessment: - Baseline traffic counts were undertaken on the 14th of September 2017.

Existing Transport Infrastructure: - Pinnacle Consulting Engineering collected information on public transport, walking and cycling in the area of the proposed development.

Development Proposals: - Description of proposed development, including proposed improvements to the road accesses to the site and a review of parking and servicing provisions, and facilities for pedestrians and cyclists.

Development Trip Generation Figures: - Based on the schedule of accommodation of the proposed development, Pinnacle Consulting Engineering derived trip rate data and developed development traffic flows, which were assigned to the existing network having regard for traffic patterns on Academy Street and the surrounding network.

Percentage Impact: - The development traffic impact on key junctions was considered, taking account for traffic growth and committed development traffic.

Assessment of unction Capacity: - The operation of key junction, with and without the proposed development, was undertaken, to determine future operation and any requirements for mitigation measures.

1 5 Structure of Report

The remainder of this report is divided into the following sections:

- Section 2 considers the location of the site and existing traffic flows.
- Section 3 discusses the proposed development
- Section 4 considers the traffic generation and potential impacts of the development,

- Section 5 contains an analysis of capacity of key junctions, including proposed mitigation measures
- Section 6 provides a summary and conclusion.

2 Existing Traffic Conditions

2 1 Existing Conditions

The application site is located in County Meath, approximately 900m south west of Navan Town Centre.

The site is bounded to the north by Academy Street; the R147 Dublin Road to the west; and residential developments to the south and east.

The lands are agricultural in nature with various access points located on Academy Street and the R147 Dublin Road. Due to the topography of the site, these accesses are steep with gradients in excess of 5%.

The site is 15.1 Ha in size.

Figure 2: Site Location and Local Road Network Source: CC

2 2 Existing Road Network

A summary of the existing road network is provided below:

The road network surrounding the site provides a variety of movement functions. Academy Street provides access to Navan town centre. The R147 Dublin Road provides access to Dublin via the M3 motorway.

Academy street is the primary access point which then links to the R147 Dublin Road.

These routes provide for pedestrians, cyclists and motorists alike and a general commentary on these facilities is presented below:

Academy Street

Academy Street is a local street forming a priority-controlled junction with the R147 Dublin Road to the east and the R161 Circular Street to the west.

The carriageway width is approximately 8.0m along the site frontage with footpaths of various widths on each side.

Academy Street has a local road character providing access to local businesses and housing. Local business in the vicinity of the entrance include office, retail and commercial premises.

A speed limit of 50km/h was noted on Academy Street along the site frontage.

No cycle facilities were noted along Academy Street.

Academy Street is within walking distance to the local bus stops for services including the 109,109A, 134, 136 and 179 with good pedestrian facilities that the proposed development can tie into.

R147 Dublin Road

The R147 Dublin Road is a road that links the M3 motorway to the east to Navan town.

The carriageway width is approximately 12.0m along the site frontage with footpaths and verges of various width on each side.

A speed limit of 50km/h was noted on R147 Dublin Road adjacent to the site.

No cycle facilities were noted along the R147 Dublin Road.

An NX bus stop is located on the R147 Dublin Road adjacent to the proposed pedestrian access to the development.

2 3 Traffic Counts

It is proposed that the subject site will be accessed directly from the Academy Street with 3 No. vehicular access points and a pedestrian access on the southern end of the site.

In order to quantify the volumes of traffic movements at key points on the road network adjacent to the site, a set of classified turning movement traffic counts were commissioned. The location of these counts was agreed in consultation with the senior executive engineer of Meath County Council's Transportation Department.

Accordingly, classified counts were carried out on the 14th of September 2017 at the following junction locations:

- Site 1 – Kells Road/Dublin Road/Circular Road Signal Controlled Junction
- Site 2 – Bridge Street/Circular Road/Academy Street Priority Controlled Junction
- Site 3 – Site Access
- Site 4 – Dublin Road/Academy Street Priority Controlled Junction
- Site 5 – Dublin Road/Local Access Priority Controlled Junction
- Site 6 – Dublin Road/Sion Road/Springfield Glen Signal Controlled Junction.

The surveys were carried out on the dates identified above to ensure that flows were representative of normal term time and hence not affected by school holidays or other public holidays or events. As such they provide an appropriate and robust representation of a neutral month during a period of normal school and employment activity. The surveys are designed to provide representative values encompassing AM and PM peak periods during normal traffic conditions.

The results of the traffic surveys are also set out in Appendix A of this report.

The locations of the surveys are each pertinent to the proposal in terms of being at key nodes in the road network that would be affected by traffic assignment and distribution of flows associated with the development site.

The location of the survey points is depicted below at Figure 3.

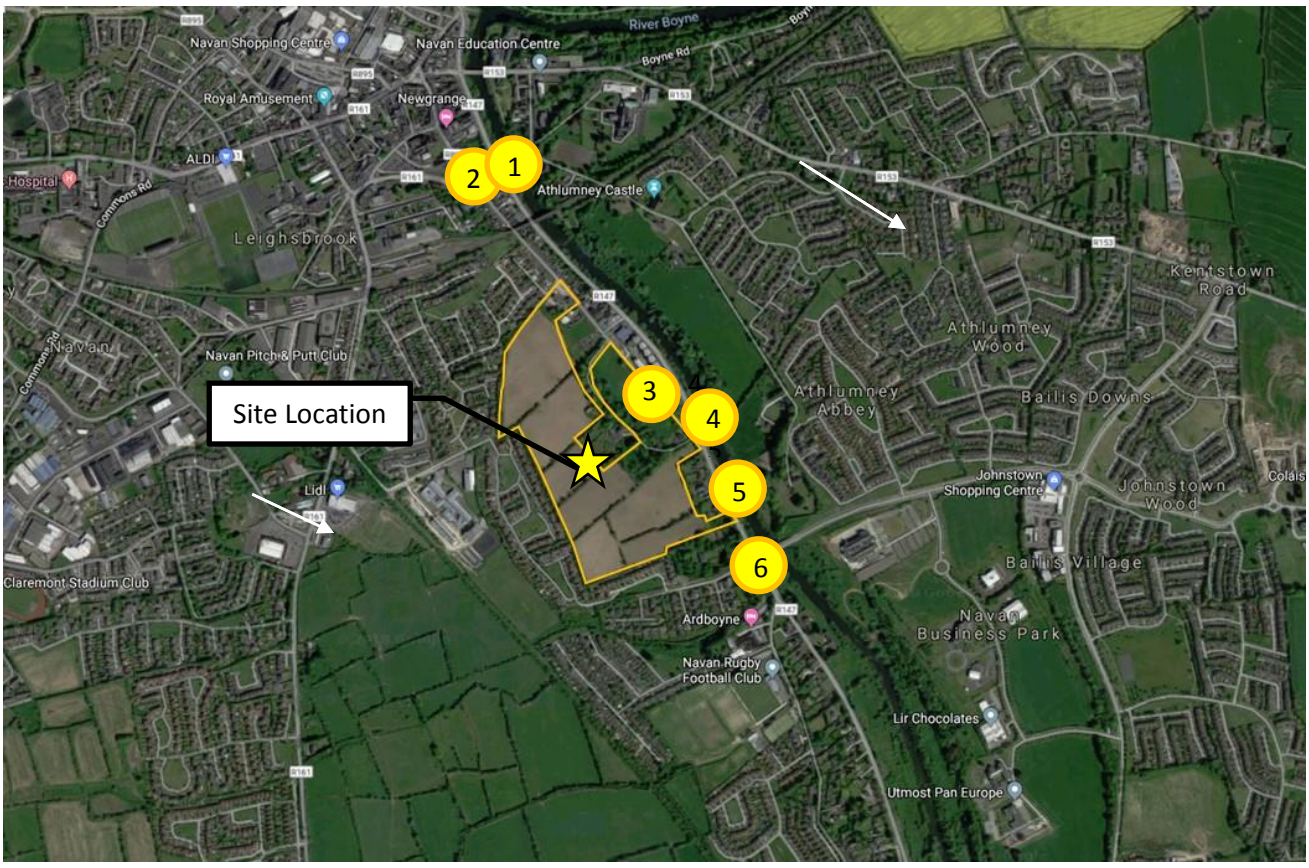

Figure 3 Survey Location

2 1 Public Transport

2 1 1 Bus

Bus transport within the vicinity of the proposed development is illustrated in Figure 4.

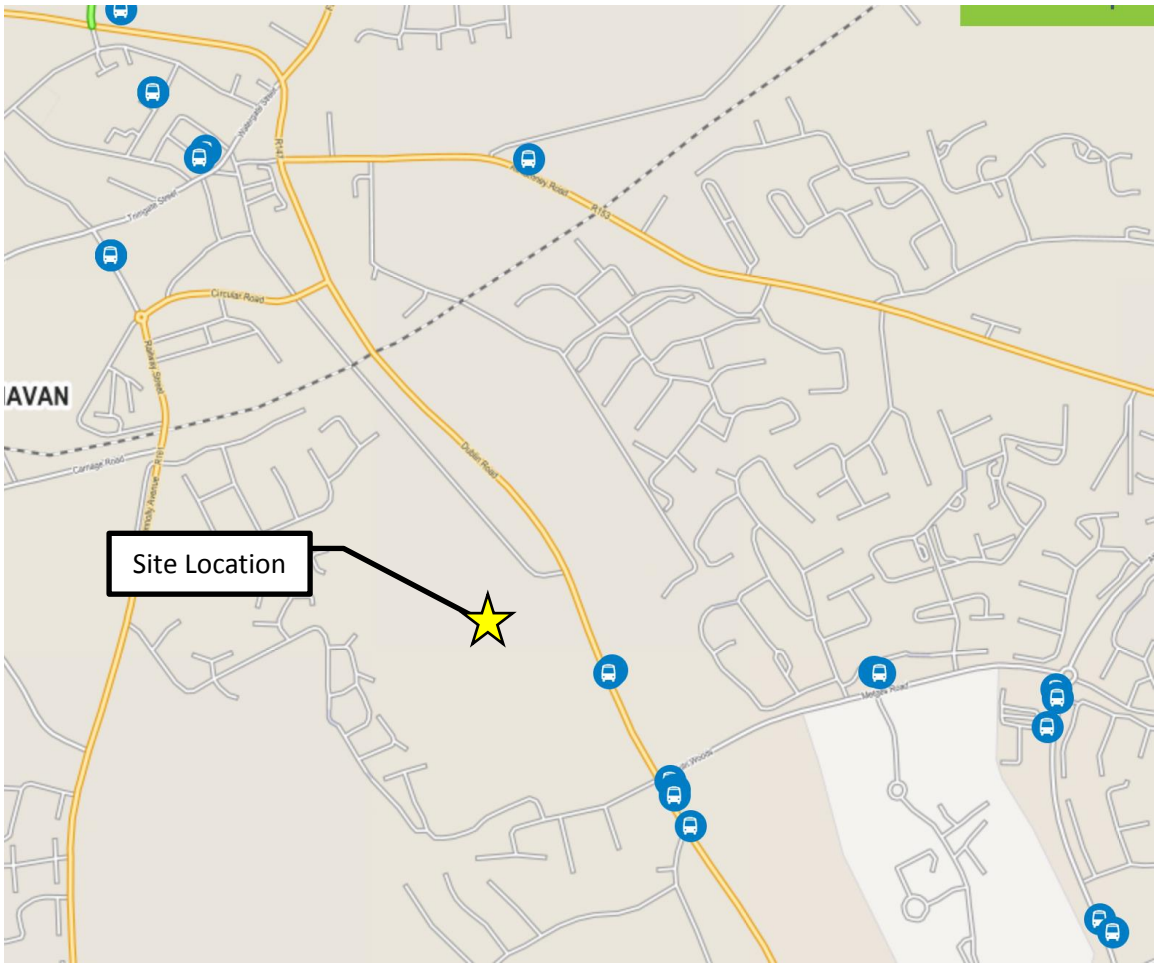

Figure 4 Bus Stop Locations Source: TFI Transport Planner

There are numerous bus operators providing a bus service to Navan and within walking distance to the site, with further details shown in Table 1 below.

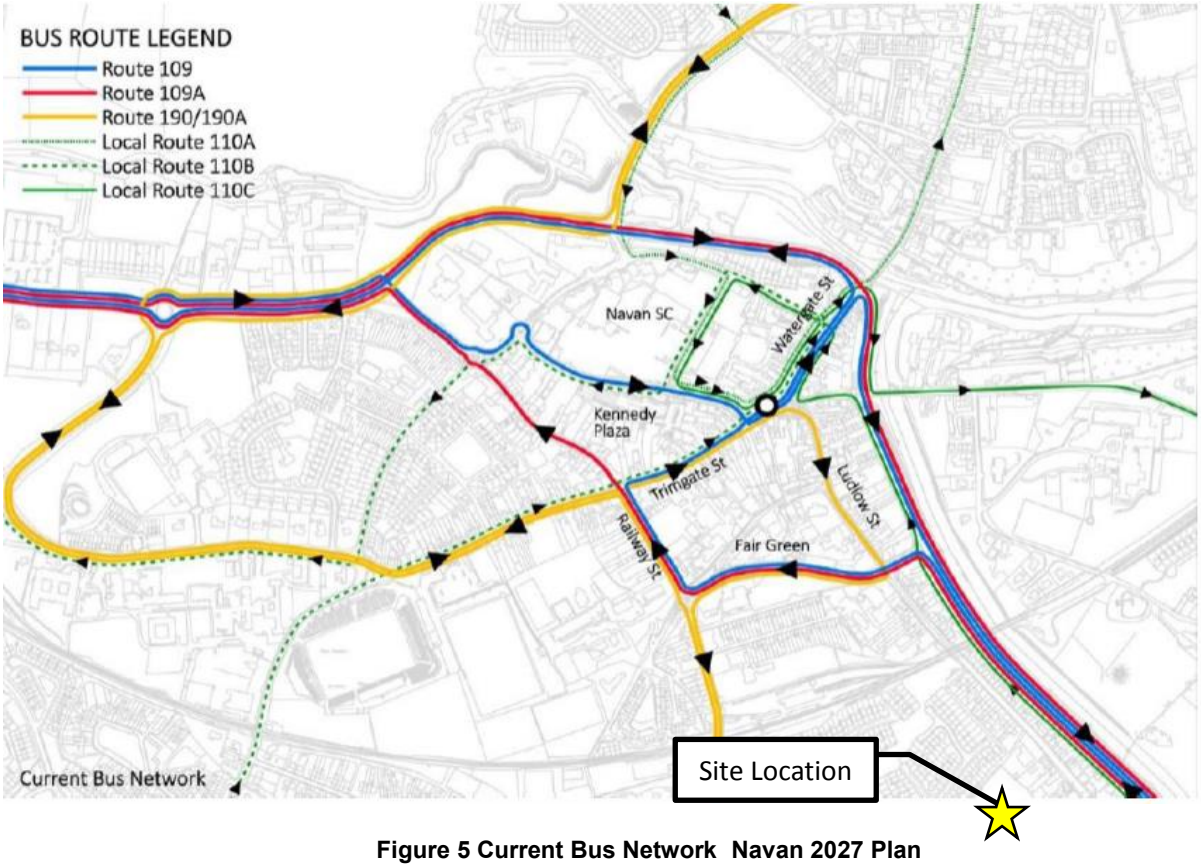

Figure 5 Current Bus Network Navan 2027 Plan

No.	Route	Service		Mon-Fri	Sat	Sun
NX	Wilton Terrace – Navan Mercy Convent	Wilton	First	05:40	06:02	07:00
			Last	23:12	23:10	23:30
		Navan	First	06:05	06:00	07:00
			Last	22:30	00:35	00:55
		Frequency		20 Mins	30 Mins	60 mins
179	Market Street, Cootehill - UCD	Troytown Navan	First	06:23	6:23	6:23
			Last	16:08	10:03	19:28
		UCD	First	13:00	16:35	16:35
			Last	18:10	16:35	16:35
		Frequency		Up to 9/day	Up to 1/day	Up to 1/day
109	Busáras - Virginia	Busáras	First	06:45	06:45	15:5
			Last	23:45	22:45	17:45
		Navan	First	05:32	05:29	7:27
			Last	21:29	19:27	21:29
		Frequency		Up to 14/day	Up to 17/day	Up to 3/day
109a	Busáras - Kells (Opp Business Park)	Dublin	First	02:46	02:46	02:46
			Last	23:15	23:15	23:15
		Navan	First	05:32	05:32	05:32
			Last	23:05	23:05	23:05
		Frequency		Up to 24/day	Up to 24/day	Up to 24/day
109x	Busáras - Cavan Bus Station	Dublin	First	07:15	07:15	09:15
			Last	21:15	21:15	21:15
		Navan	First	05:58	06:20	08:45
			Last	22:05	22:05	22:05
		Frequency		Up to 9/day	Up to 7/day	Up to 6/day
110a/b/c	Navan (Shopping Centre) - Navan (Shopping Centre)	Navan (Shopping Centre)	First	07:45	-	-
			Last	18:15	-	-
		Frequency		Up to 16/day	-	-
190/a	Drogheda - Navan - Trim	Navan	First	07:00	07:00	08:12
			Last	21:20	21:20	20:20
		Frequency		Up to 15/day	Up to 15/day	Up to 12/day

Table 1 Local Bus Services

Measured from the centre of the site, the nearest stop is located approximately 580m from the site which equates to 8 minutes walking time. This is illustrated in Figure 6.

Figure 6: Nearest Bus Stop Route No N Source: CC

There is an additional concertation of services located on Market Square, including the 70, 103x,107,109,179,190 and NX, which is located between 900m and 1.5km (10-16 minutes' walk time) north of the proposed development. This route is illustrated in Figure 7.

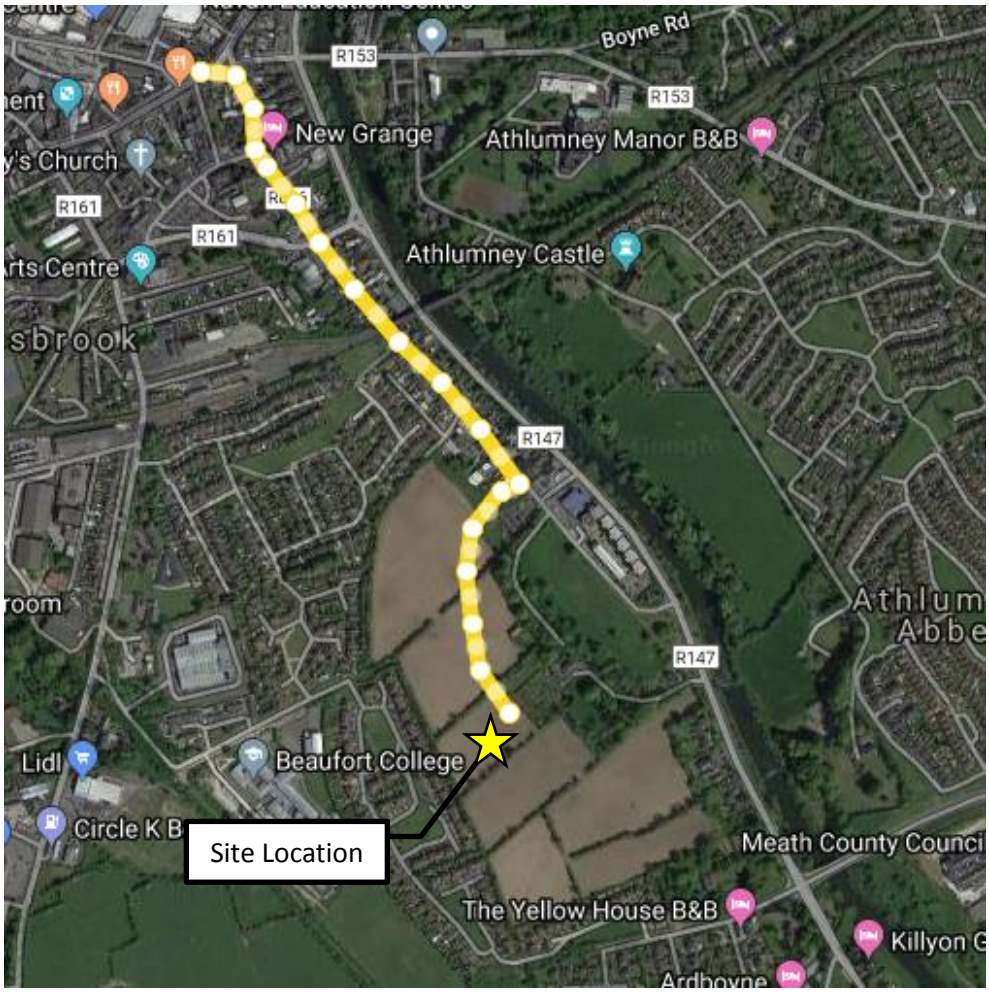

Figure 7: Bus Stop Cluster Source: Google Earth

The plans for improvements and enhancements to local bus network are proposed under the Navan 2027 Plan, as illustrated in Figure 8 below.

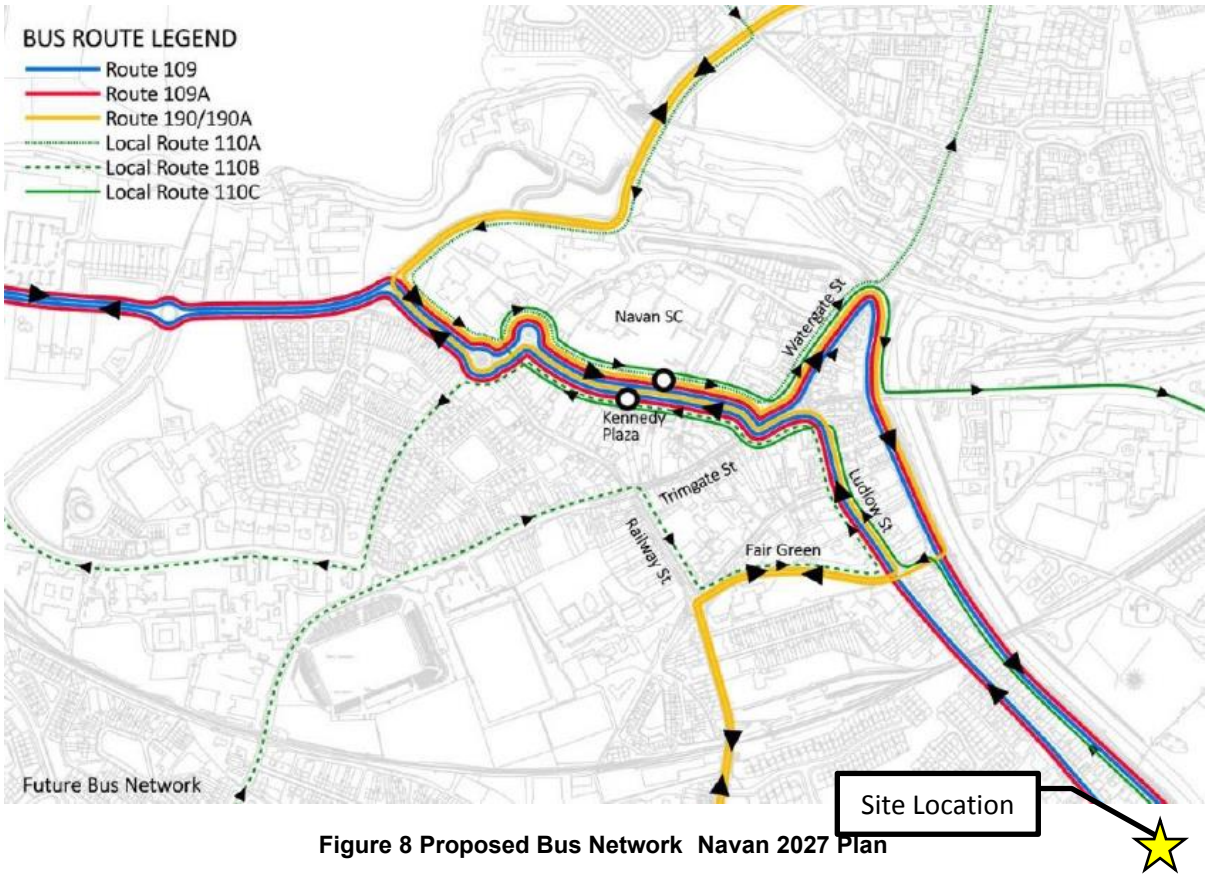

Figure 8 Proposed Bus Network Navan 2027 Plan

2 2 alking and Cycling

A footpath is available on both sides of Academy Street along the site frontage measuring approximately 1.5m to 2.0m wide for pedestrians.

Existing cycle routes identified by the National Transport Authority (NTA) in the vicinity of proposed development are indicated in Figure 9 below.

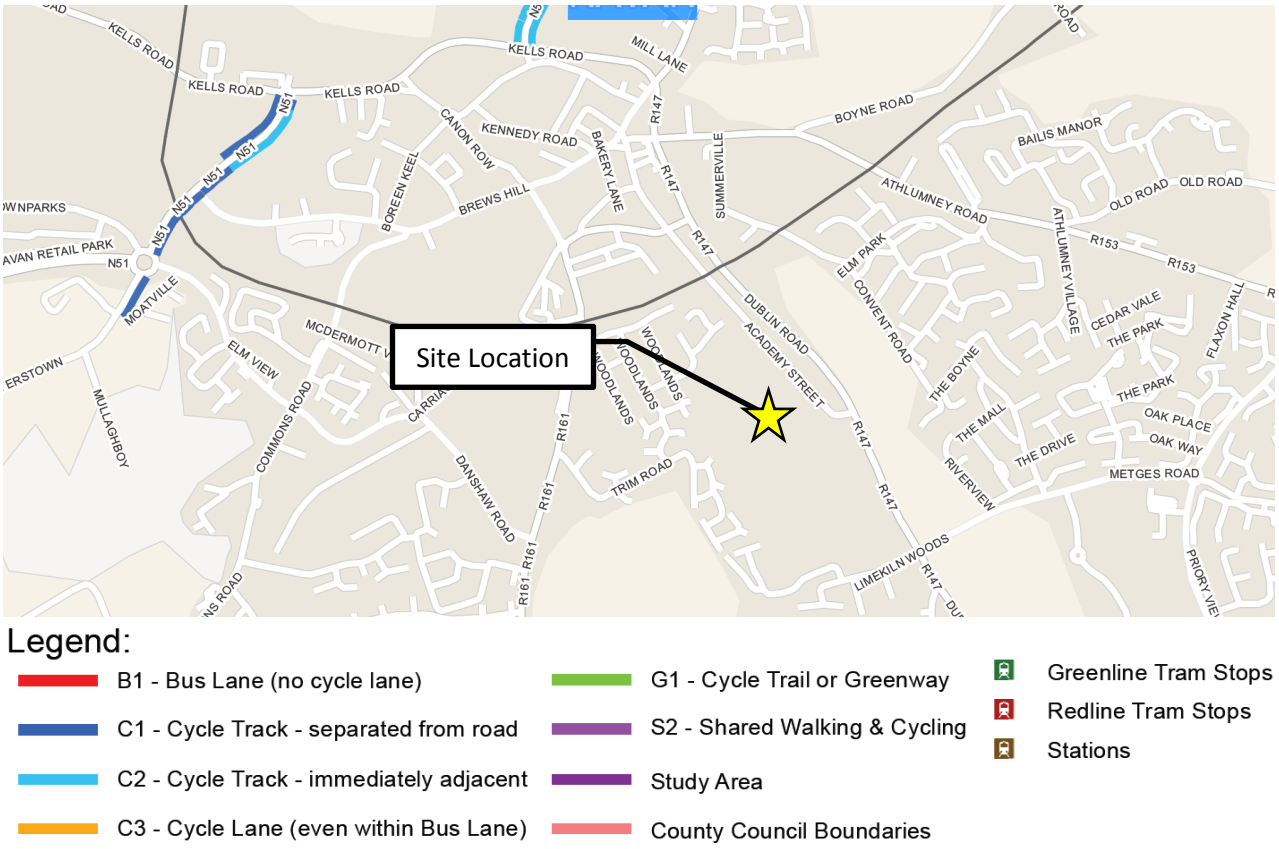

Figure 9: Existing Cycle Routes Source: NTA

There is limited cycle infrastructure located in Navan.

2 3 Road Safety Data

A review of the Road Safety Authority (RSA) traffic collision database has been undertaken for the road network in the vicinity of the proposed site to identify any collision trends. This review will assist to identify and potential safety concerns in relation the existing road network.

Traffic collision data was obtained for the period 2005-2016 which is the most recent data available from the RSA website. These incidents are categorised into class of severity, which includes minor, serious or fatal collisions. The analysis is shown in Figure 10.

No collisions have been reported adjacent to the access to the proposed development.

In reference to DMURS, a full Quality Audit will be undertaken by Pinnacle Consulting Engineers that will address the following:

- Road Safety Audit
- Access Audit
- Walking Audit
- Non-Motorised User Audit
- Cycle Audit

The Quality Audit will address any potential road safety hazards.

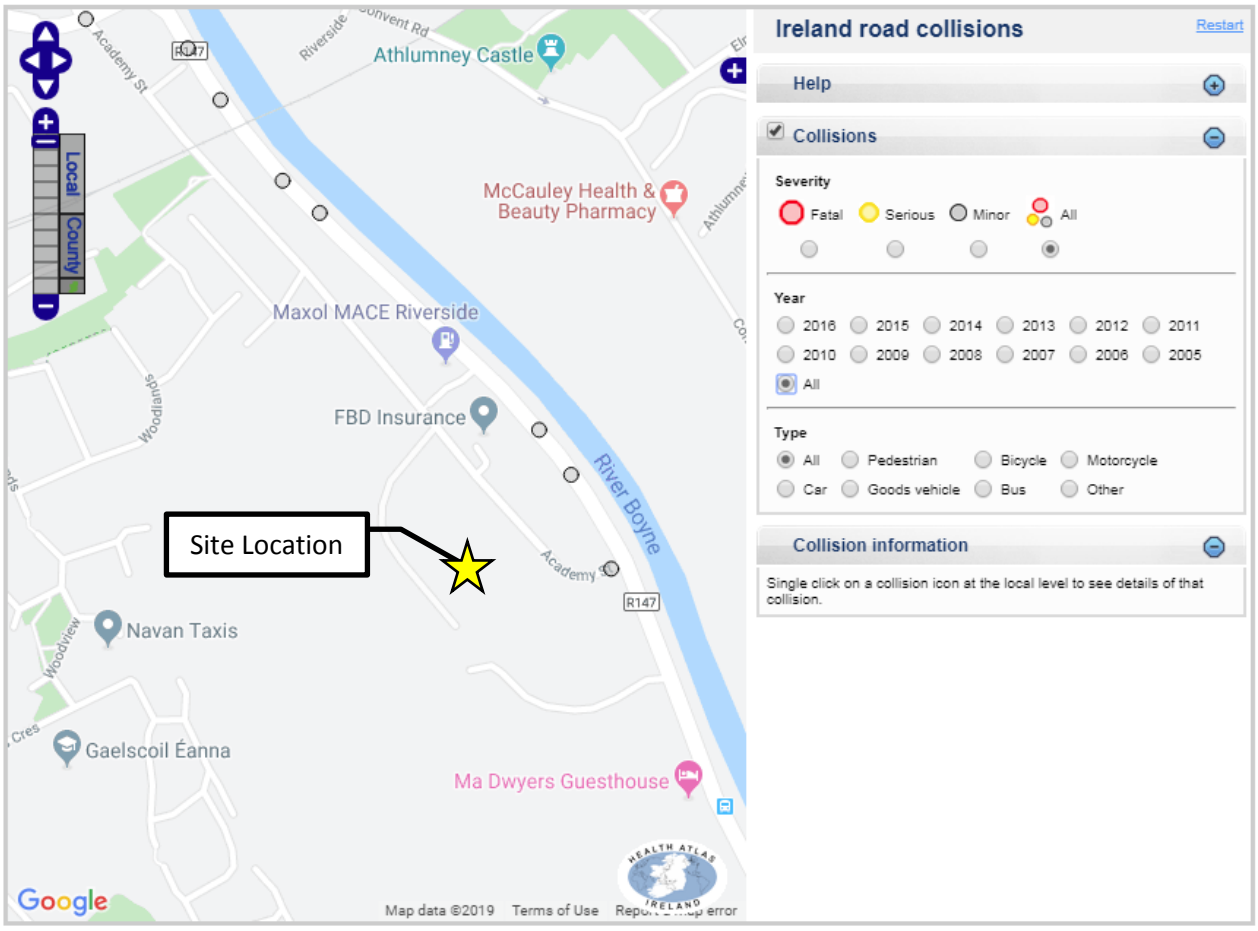

Figure 10: Road Collisions Source: RSA

2 4 Planning Search

A planning search was undertaken to identify any developments that have planning permission but are not yet implemented or any schemes that are implemented but are as yet un-let or empty.

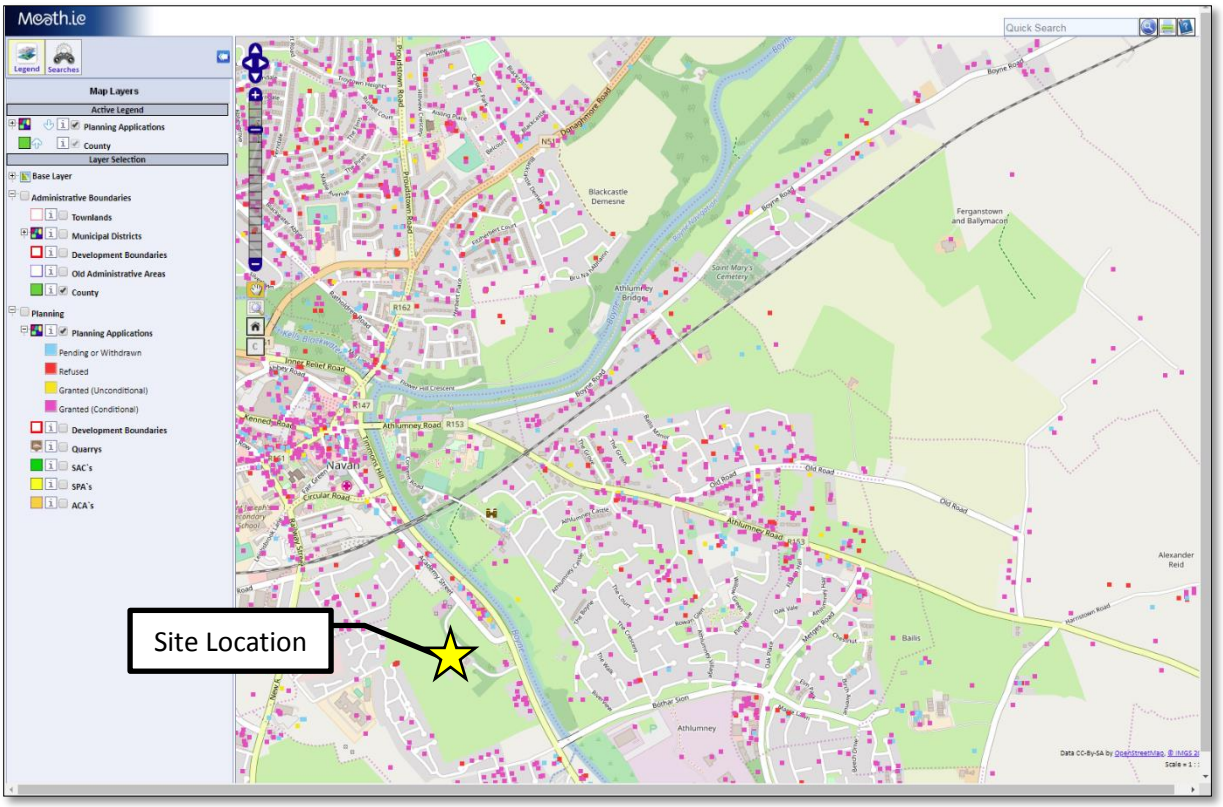

Figure 11: Planning Applications verview Source: Meath County Council

The following applications were deemed the influence the study area of the proposed site:

Register Reference: NA171478

Status: Granted subject to conditions

Development Description: *'The development will consist of: a new part 3 storey, part 2 storey manufacturing building and a double height warehouse with total floor area of 4887m2 of which 2404m2 is additional to the previously approved application. The application consists of elevation changes and internal alterations to accommodate; warehouse storage; processing rooms; office/administration area, Laboratory and associated screened roof top open plant area for use as Food Production facility. The application also includes ancillary site works which include minor alterations to the car park, landscaping and new stand alone on site ESB substation.'*

Register Reference: NA161219

Status: Granted subject to conditions

Development Description: 'D*evelopment will consist of the construction of an Advanced Technology Building of 2.483 sq.m., part two-storey and part double height single-storey with associated car parking, entrance and exit roads, delivery yard, landscaping, site services and sundry related works.'*

An allowance has been made for the school site, with appropriate linked trip reduction has also been allowed for.

These developments will be included the modelling of the impacted junctions. Where a Traffic & Transport Statement is available the figures will be taken directly. If no Traffic & Transport Statement is available TRICS will be used to estimate flows from the development and traffic surveys used for distribution.

2 5 Potential Proposed Committed Infrastructure orks

There are several potential new infrastructure schemes in the vicinity of the proposed development site. Consideration has been given to the impact that these infrastructure schemes may have on the development. This will ensure that provision is allowed for these schemes to be delivered in the future.

A summary of the potential road infrastructure schemes is outlined below.

2 5 1 Cycle Network Improvements

In accordance with the National Transport Authority's Cycle Network Plan for the Greater Dublin area the following improvements to the local cycle networks are proposed:

- Na1 R147 Dublin/Kells Road between the N51 and Old Balreask Woods.
- Na2 Metges Road / East Orbital.
- Na3 Fairgreen to Johnstown with a new bridge over the River Boyne.
- Na4 Southern Ring from Johnstown to Athboy Road.
- Na5 Northern Cross from Athboy Road to Slane Road.
- Na6 Windtown Road to Commons Road.
- Na7 Proudstown Road to Trim Road.

The proposed cycle routes are illustrated in Figure 12 below.

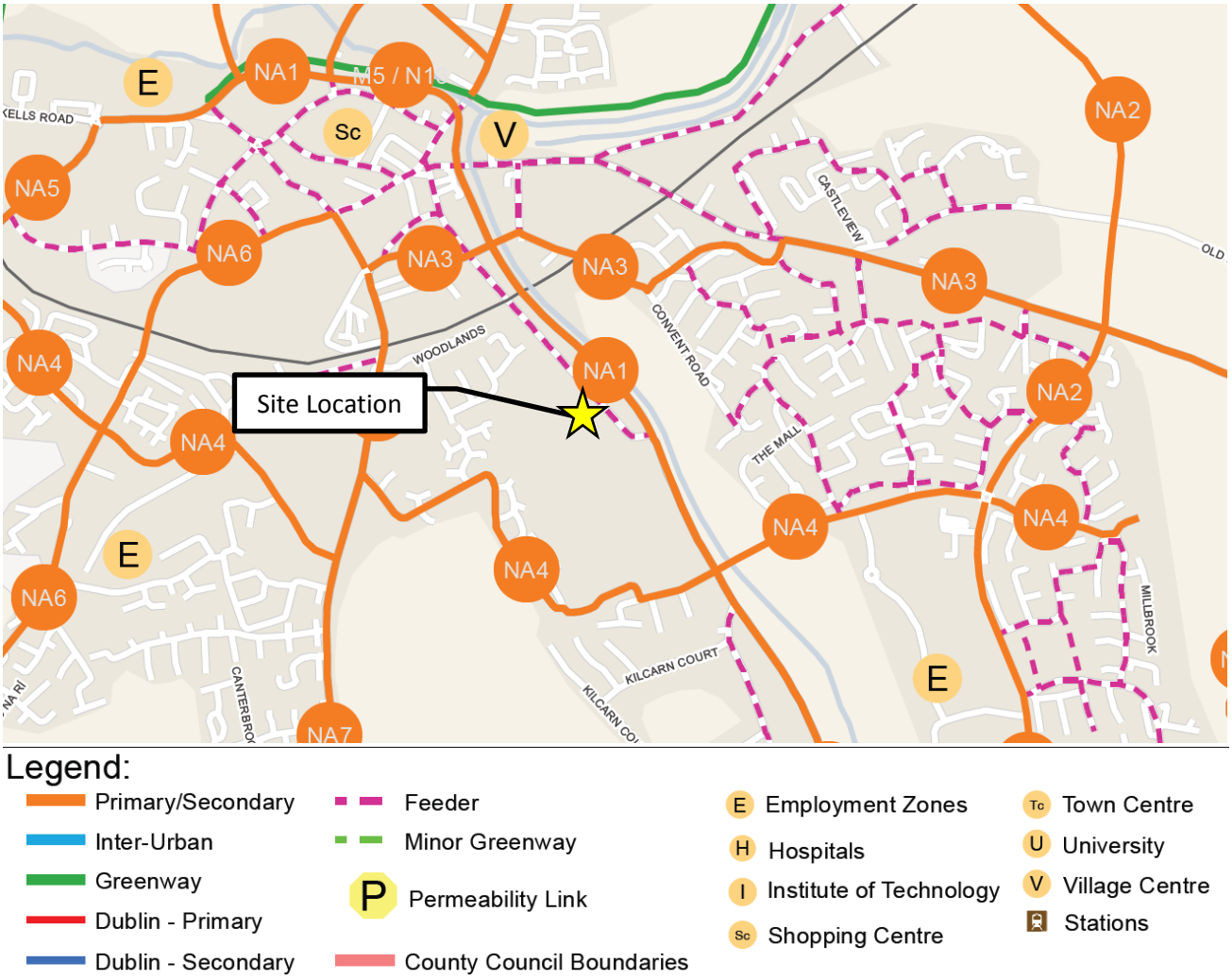

Figure 12: Proposed Cycle Network pgrades Source: NTA

2 5 2 Road Improvement Schemes

The following recommended infrastructure improvements are outlined in the Navan Development Plan 2009-2015:

LTP Action 10

The following is an extract from LTP Action 10:

'The capacity of the R153 Kentstown Road, the Academy Street and the junction of Sion Road with the R147 is identified as a key constraint in allowing the planned growth of east / south east Navan to proceed. The delivery of LDR 6 is considered necessary to alleviate such constraints. The Planning Authority shall consider the need to phase the delivery of this link and in particular the under bridge of the Navan – Drogheda rail line with the proper planning and sustainable development of the area. INF OBJ 11 also proposes the investigation of the need for an additional river crossing of the Boyne linking the Boyne and Slane Roads and this is supported by the conclusions of the Navan Traffic Model.'

In addition, the following is also noted:

'The analysis recommends the consideration of a further river crossing of the Boyne to link the Slane and Academy Street s to alleviate such pressures. The analysis assumes that various sections of the orbital road network are in place before 2022 such as LDR 5 (Slane Road to Proudstown Road), LDR 4 (Rathaldron Road to Kells Road, LDR 6 (Kentstown Road to Academy Street on a phased basis), and LDR 1(a) (Dublin Road to Trim Road). Other sections of the orbital road network are not required during the period up to 2022. Together these form an orbital road network that allows significant levels of through-traffic to be removed from the town centre. This future step-change to the available routing options in Navan has been recognised by the Navan Local Transport Plan, which aims to take full advantage of the opportunities provided in the town centre.'

Note that Framework Plan (FP2) is to be renamed as Master Plan 12 in Variation No.2 of the Navan Development Plan 2009 – 2015.

12 1 Summary

In summary, the existing site benefits from good levels of existing public transport and walking/cycling infrastructure which will assist to encourage sustainable modes of travel for residents and visitors to/from the proposed development.

3 The Proposed Development

3 1 General

The proposed development will consist of the following:

'The proposal relates to a residential development of 544 no. dwellings on a site of c. 15.1 hectares comprising 260 no. houses (18 no. 2 bed, 207 no. 3 bed & 35 no. 4 bed) and 198 no. apartments (46 no. 1 bed, 152 no 2 bed), 30 no. duplex apartments (15 no. 2 bed & 15 no. 3 bed), and 56 no. dwellings in corner blocks (16 no. 1 bed, 24 no. 2 bed & 16 no. 3 bed) as well as the provision of two crèches (ground floor of apartment building [c. 195 sq. m] and single storey creche in housing area [c. 443 sq. m]) Open Space of c. 2.63 hectares including playground areas; all ancillary landscape works with public lighting, planting and boundary treatments including regrading/re-profiling of site where required as well as provision of cycle paths; Provision of vehicular and pedestrian looped access through the site from 3 no. junctions located on Academy Street as well as pedestrian connection in south east of site to Dublin Road and upgrade works to junction onto the Dublin Road; along with 875 no. car parking spaces (including 4 no. car sharing spaces) and 581 cycle spaces; Surface water attenuation measures and underground attenuation systems as well as all ancillary site development works (reprofiling of site as required) as well as connection to existing public water supply and drainage services. All site development and landscape works.'

The site has an area of 15.10Ha.

It is proposed to develop this site based on the following schedule of accommodation: -

Proposed Land ses	
Land se	***Size***
Houses	260
Apartments	198
Duplex & Corner Units	86
Total	**544**

Table 2 Proposed Land ses

3 2 Site Access

The proposed site access points are illustrated in Figure 13 below.

Figure 13: Proposed Access

Primary access to the houses will be provided off Academy Street via a priority-controlled junction at Access No. 3. The school access, Access No. 1, will be used as a secondary access.

Primary access to the apartments will be provided off Academy Street via a priority-controlled junction at Access No. 2.

Access No. 4 will provide pedestrian access to bus stops located on the R147 Dublin Road.

Permeability will be provided to adjoining developments at various locations. Refer to architects' drawings for more details.

3 3 Servicing

An AutoTrack analysis has been carried on the internal service access to demonstrate its capability to cater for residents and service vehicles such as refuse vehicles.

The results of this analysis show that the proposed development can accommodate the anticipated service vehicles that will serve the proposed development.

3 4 Parking Provision

3 4 1 Car Parking Standards Dwelling

Car parking will be provided in accordance with Section 11.9 of Meath County Development Plan 2013-2019.

Car Parking Standards	
Land se	**Standards**
Dwelling - Standard	*2 per convention dwelling*
House Type N7	*1 per 2 bed house*

Table 3 Parking Standards

Parking Provision		
Land se	**Standards**	**Provided**
House – .	484	484
Dwelling – House Type N7	*18*	*18*
Total	***502***	***502***

Table 4 Parking Provision ouses

A total of 502 parking spaces will be provided in accordance with Section 11.9 of the Meath County Development Plan.

All houses have on-curtilage car parking except units 171, 178, 179, 180, 181, 257, 385 & 386 who have all their spaces on-street. Unit 160 has one space on-curtilage and one on-street.

3 4 2 Car Parking – Apartment Duplex Creche

3.4.2.1 **Context**

At the core of the Navan Development Plan 2009-2015 incorporating Variation No. 2, is a well-developed transport network and improving accessibility and connectivity to/from Navan. A key element of this plan is the concept of a '10-minute town' as illustrated in Figure 14.

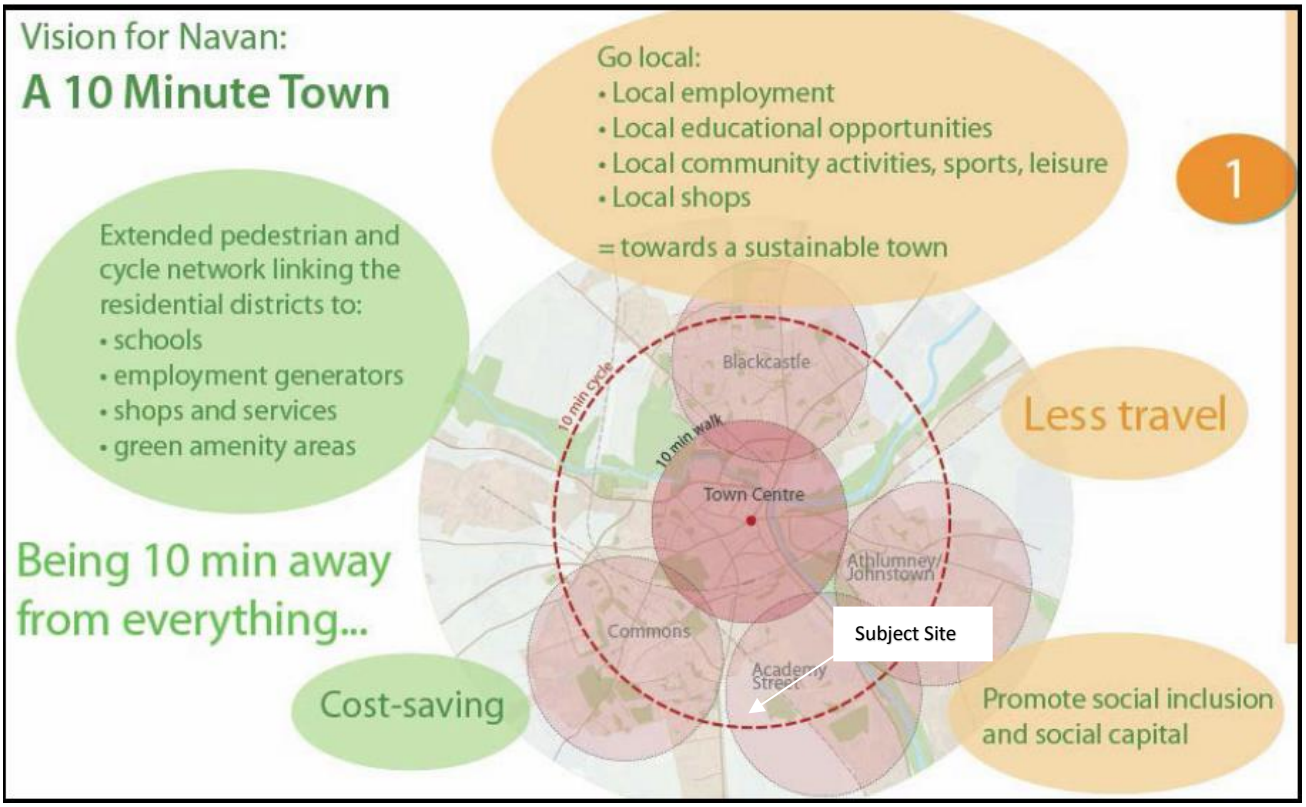

Figure 14 Settlement Transportation ision for Navan Source Navan Development Plan 2009 2015

A core element of this strategy is the proportion of a modal shift away from private car use to more sustainable modes of transport such as walking, cycling and public transport. The Navan Local Transport Plan 2014-2019 sets out how this modal shift will take place.

With regard to public transport the stated aim of Meath County Council is to reopen the Navan-Dublin Rail line. While part of this has been achieved (opening of the M3 Parkway (Pace) and Dublin City Centre line), local bus services have been the traditional sole method of commuter transport within Navan.

Navan currently has a range of bus services operating to/from Navan with which includes services such as the 109, NX etc which the Navan Local Transport Plan 2014-2019 describes as being of 'having a high quality and high frequency regional bus service terminating at Dublin City Centre in addition to a local bus route service serving the town and its environs.'

The expansion and development of local bus services is dependent on local populations. To that end, the Navan Local Transport Plan 2014-2019 has outlined plans to build a Public Transport Interchange which is also included the Navan Development Plan (2009).

The following extract is from Section 4.3 Public Transport Interchange of the Navan Local Transport Plan 2014-2019:

'*The National Transport Authority has indicated their support for the development of a public transport interchange (or hub) in Navan which would service as a central focal point for public transport services in the town. This will encompass a single location where the majority of public transport services operating in the area can be accessed and where an appropriate environment for the comfortable and convenient accessing of those services will be developed. It will provide readily accessible information on public transport services, enabling customers to conveniently determine the public transport*

options available to them in planning a journey. The development of a hub is also intended as a means of promoting public transport.'

It is clear from the above that Meath County Council intends to promote public transport and build upon the current level of 'a high quality and high frequency regional bus service terminating at Dublin City Centre in addition to a local bus route service serving the town and its environs.' This is likely to increase the frequency of services to Navan with significant benefit to the surrounding residential areas both existing and proposed.

Given the location of the proposed development, both in terms of proximity to Navan town and public transport services it will benefit from the potential increase in public transport frequency.

3 4 2 2 Car Parking Standards – Duplex

The 'Sustainable Urban Housing – Design Standards for New Apartments' 2018 published by the Department of Housing, Planning and Local Government sets out alternative designer standards for apartments and has been applied to the parking provision for the duplexs.

The new design standard sets out alternative criteria for the provision of car parking spaces based on the link between the proposed development, access to local amenities and access to public transport.

A comparison between development plan standards and the new apartment guidelines is illustrated in Table 5 & 6 below.

Car Parking Standards – Duplex	
Land se	**Standards**
	Development Plan Standards
Apartments/Flats/ Duplex	1.25 per 1 & 2-bedroom unit; 2 per 3 - 4-bedroom unit in all cases
Visitors	1 space per 4 apartments

Table 5 – Parking Standards

Car Parking Provision - Duplex				
No of nits		**Standards**		
		Development Plan Standards	'Sustainable Urban Housing – Design Standards for New Apartments' DoECLG(2018)	
I Bed	16	20	General car parking spaces	118
2 Bed	39	49		
3 Bed	31	62		
Visitor		22	Visitor	22
Total		**153**	**Total**	**140**

Table 6 –Duplex Parking Provided

3 4 2 3 Car Parking Standards – Creche

The Meath Development Plan requires 8 no. set-down and 7 staff spaces for the creche. A total of 15 spaces will be provided.

3 4 2 4 Car Parking Standards – Apartment Block A B C Including creche in block C

The 'Sustainable Urban Housing – Design Standards for New Apartments' published by the Department of Housing, Planning and Local Government sets out alternative designer standards for apartments.

The new design standard sets out alternative criteria for the provision of car parking spaces based on the link between the proposed development, access to local amenities and access to public transport.

A comparison between development plan standards and the new apartment guidelines is illustrated in Table 7 & 8 below.

Car Parking Standards - Apartment A, B & C (Including creche in block C)		
Land se	**Standards**	
	Development Plan Standards	'Sustainable Urban Housing – Design Standards for New Apartments' DoECLG(2018)
Apartments	1.25 per 1 & 2-bedroom unit; 2 per 3 - 4-bedroom unit in all cases	Depends on Design & Location
Visitors	1 space per 4 apartments	
Creche	1 per employee & dedicated set down area 1 per 5 children	

Table 7 – Parking Standards

Car Parking Provision - Apartment A, B & C (Including creche in block C)				
No of nits		**Standards**		
		Required	'Sustainable Urban Housing – Design Standards for New Apartments' DoECLG(2018)	
I Bed	38	47.5	General car parking spaces	129
2 Bed	120	150	Accessible car parking spaces	7
3 Bed	-	0	Go Car Spaces	4
Creche *		15	Dual Usage (Creche/Visitor)	30
Visitor		39.5		
Total		**237**	**Total**	**170**

Table 8 – Parking Provided

Based on the guidance outlined in 'Sustainable Urban Housing – Design Standards for New Apartments' DoECLG (2018) it is proposed to provide 170 car parking spaces as follows:

General car parking spaces	129
Dual Usage/Limited Time Stage (Creche, Visitor)	30
Accessible car parking spaces	7
Go Car Spaces	4
Total:	**170**
E uivalency:	**204**

Visitors and parents/staff of the creche will have access to 30 car parking spaces that will have limited stay restrictions that will be managed by the Management Company.

The 'Sustainable Urban Housing – Design Standards for New Apartments' published by the Department of Housing, Planning and Local Government (2018) determines the car parking requirements '*having regard to the types of location in cities and towns that may be suitable for apartment development, broadly based on proximity and accessibility criteria*' based on the following designations

- Central and/or Accessible Urban Locations;
- Intermediate Urban Locations; and
- Peripheral and/or Less Accessible Urban Locations.

A Central and/or Accessible Urban Locations are defined by larger scale and higher density developments, comprising wholly of apartments in more central locations that are well served by public transport where the default policy is for car parking provision to be minimised, substantially reduced or wholly eliminated in certain circumstances.

Intermediate Urban Locations are defined as suburban/urban locations that are served by public transport or close to town centres or employment areas and particularly for housing schemes with more than 45 dwellings per hectare net (18 per acre). In such instances planning authorities are encouraged to consider a reduced overall car parking standard and apply an appropriate maximum car parking standard.

Peripheral and/or Less Accessible Urban Location are defined by locations that are peripheral or less accessible urban locations where one car parking space per unit, together with an element of visitor parking, such as one space for every 3-4 apartments, should generally be required.

Public Transport

The proposed development is within 580m and 1.5km (10-16 minutes' walk time) of the of various bus routes within Navan town and 150m to the NX bus service.

The NX bus service currently has a frequency of 20mins. The Navan Local Transport Plan 2014-2019 describes this as '*a high quality and high frequency regional bus service'*. This frequency is likely to increase as populations grow. At the last census, Meath has grown at a rate of 5.9% which was greater than the national growth rate of 3.8%.

Given the population growth, the NTA has produced a Navan Corridor Study, as part of the Draft Transport Strategy for the Grater Dublin Area. The purpose of the study is as follows:

'A particularly aim of the study is to explore and identify public transport options that could effectively meet the growth in travel demand to the year 2035, between the Navan Study Area and Dublin City Centre (within the Canal boundary). Additional demand for internal travel within the corridor has also been considered when reviewing both travel demand and potential public transport schemes. The

review also takes cognisance of through trips that can increase demand on current and future public transport services. The study objectives for the Navan Study Area were outlined by the NTA and have guided the study and assessment process.

These objectives include developing public transport measures that will:

- *Cater for existing public transport usage;*
- *Cater for 100 per cent of future demand growth to Dublin City Centre; and*
- *Cater for more of the existing car-based demand, if feasible.'*

This study is likely to recommend the increase in frequency of public transport services to/from Navan over and above the existing '*high quality and high frequency regional bus service'* that already exist.

Density

The proposed development comprises 544 houses, apartments and duplex providing a density of 44.5 dwelling units per hectare (site area of 12 hectares).

Site Classification

Intermediate Urban Locations are generally suitable for smaller-scale (will vary subject to location), higher density development that may wholly comprise apartments, or alternatively, medium-high density residential development of any scale that includes apartments to some extent (will also vary, but broadly >45 dwellings per hectare net) including:

1. Sites within or close to i.e. within reasonable walking distance (i.e. up to 10 minutes or 800-1,000m), of principal town or suburban centres or employment locations, that may include hospitals and third level institutions;
2. Sites within walking distance (i.e. between 10-15 minutes or 1,000-1,500m) of high capacity urban public transport stops (such as DART, commuter rail or Luas) or within reasonable walking distance (i.e. between 5-10 minutes or up to 1,000m) of high frequency (i.e. min 10 minute peak hour frequency) urban bus services or where such services can be provided. The apartment element of the proposed development is within reasonable walking distance of 'high quality and high frequency regional bus service' that is likely to expand under NTA proposals as outlined below;
3. Sites within easy walking distance (i.e. up to 5 minutes or 400-500m) of reasonably frequent (min 15 minute peak hour frequency) urban bus services.

The apartment element of the proposed development is within reasonable walking distance of Navan Town Centre.

Based on the proximity to public transport and site density it is deemed that the site is an 'intermediate urban location, as defined under Section 4.21 of the 'Sustainable Urban Housing – Design Standards for New Apartments' published by the Department of Housing, Planning and Local Government (2018).

As a result, the Planning Authority is asked to consider 'a reduced overall car parking standard and apply an appropriate maximum car parking standard'.

Car Clubs

'Sustainable Urban Housing – Design Standards for New Apartments' published by the Department of Housing, Planning and Local Government (2018) recommends the following:

'*As well as showing that a site is sufficiently well located in relation to employment, amenities and services, it is important that access to a car sharing club or other non-car based modes of transport are available and/or can be provided to meet the needs of residents, whether as part of the proposed development, or otherwise. 'Car free' development is permissible and if developed, must be fully communicated as part of subsequent apartment sales and marketing processes*. '

Car Clubs gives you a 'car on call', whenever you need it. Car clubs have developed as a modern service in many European cities and are a good alternative to high levels of private car use and 'driver only' occupancy rates. The principal of a car club is to ensure that the optimal use of a small number of vehicles to meet the needs of a wide group of people.

International experience to date shows that healthy car clubs, such as those run by GoCar, operate at a provision of 30 clients per car and every car can replace up to 4 private vehicles thereby significantly reducing the number of traffic movements.

In addition, restricting car parking provision is a recognised method of reducing car dependence of a development.

The Car Club spaces will be managed by GoCar. GoCar over flexibility and move people from private ownership to mutli-modal mobility transport use. This helps grow the multimodality mind set i.e. people take the best decision depending on the transportation needs.

This trend has been identified when comparing Dublin City Council commuter data compared to GoCar Member Data. This data shows how the modal choice can change if an alternative option is available. The availability of car clubs leads to a more sustainable choice for individuals.

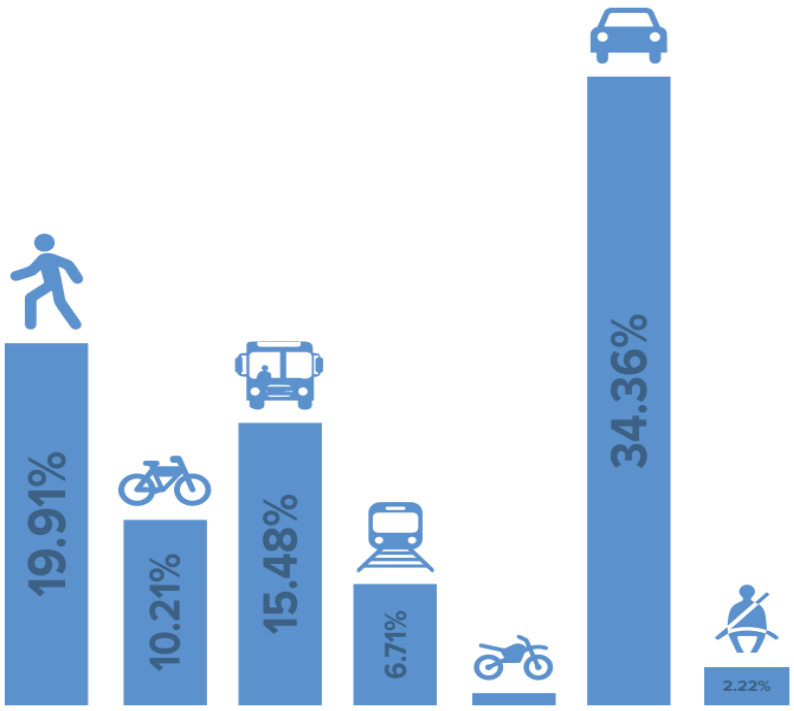

Figure 15 DCC Commuter Census Data

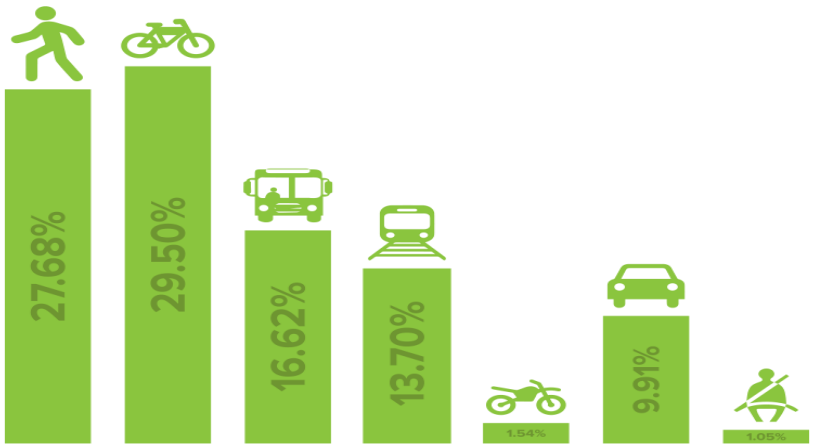

Figure 16 GoCar Member Survey Commuter Data

GoGar has carried out research on GoCar Members and Smart Travel Users. The findings of the GoCar survey are summarised below:

- 80% of users do not own a car;
- Over 60% use public transport at least once a week
- Over 50% cycle at least one a week ;
- Over 40% said that if GoCar did not exist, they would buy a car; and
- Over 50% cycle at least one a week.

Cars can be booked in advance through their app and/or website.

It is the experience of GoCar that the demand for spaces become self-regulating. Members will book in advance for planned trips. Should spaces on site not be available at short notice, members will try other locations

Should members not find a car that is convenient the trip is either postponed to a later date or alternative modes of transport are sought as per the GoCar Member Survey Commuter Data.

The above will help reinforce the multimodality mind set and ensure that people take the best decision depending on the transportation needs

In addition, restricting car parking provision is a recognised method of reducing car dependence of a development.

First Principles Assessment

A 'Parking Accumulation' calculation for this element of the development is presented in this section of the report, which utilises trip generation information gathered from TRICS for the purposes of the Traffic and Transport Assessment. Further details of the trip generation assessment are provided in the following sections of this report.

The trip generation identifies a trip rate for each use within the proposed development and, given the quantum of each use, the total trips generated by each element of the development is identified.

This data then allowed the identification of the profile of use for each element of the development, and the identification of the total arrivals and departures associated with each element of the development.

In order to carry out this study a number of assumptions have been made:

- All residential spaces are reserved for individual dwellings and as such are assumed to be fully occupied at all times. 128 car parking spaces are allocated to residential aspect based on 0.81 space per 1 unit.
- Two crèches are provided within the scheme, one on the main loop route and close to the school, and the other on Academy Street in the base of one the apartment blocks, providing for c.130 children between the 2 no. creches..

Using this information, it was possible to identify the total number of spaces occupied across a 24-hour period. Table 9 below outlines the total trips accumulated for the creche, excluding the residential units, for a weekday 24-hour period and hence calculates the parking accumulation on an hourly basis.

Using the data in Table 9 above, and the assumptions highlighted, the total parking accumulation was calculated. The findings are presented in the graph in Figure 17 below

Parking Accumulation			
Hours	Arrivals	Departures	Accumulation
00:00-01:00	0	0	0
01:00-02:00	0	0	0
02:00-03:00	0	0	0
03:00-04:00	0	0	0
04:00-05:00	0	0	0
05:00-06:00	0	0	0
06:00-07:00	0	0	0
07:00-08:00	10	5	5
08:00-09:00	24	17	12
09:00-10:00	13	13	12
10:00-11:00	4	3	13
11:00-12:00	5	3	15
12:00-13:00	9	12	12
13:00-14:00	6	8	10
14:00-15:00	6	4	12
15:00-16:00	7	10	9
16:00-17:00	9	11	7
17:00-18:00	14	18	3
18:00-19:00	1	4	0
19:00-20:00	0	0	0
20:00-21:00	0	0	0
21:00-22:00	0	0	0
22:00-23:00	0	0	0
23:00-24:00	0	0	0

Table 9 Parking Accumulation

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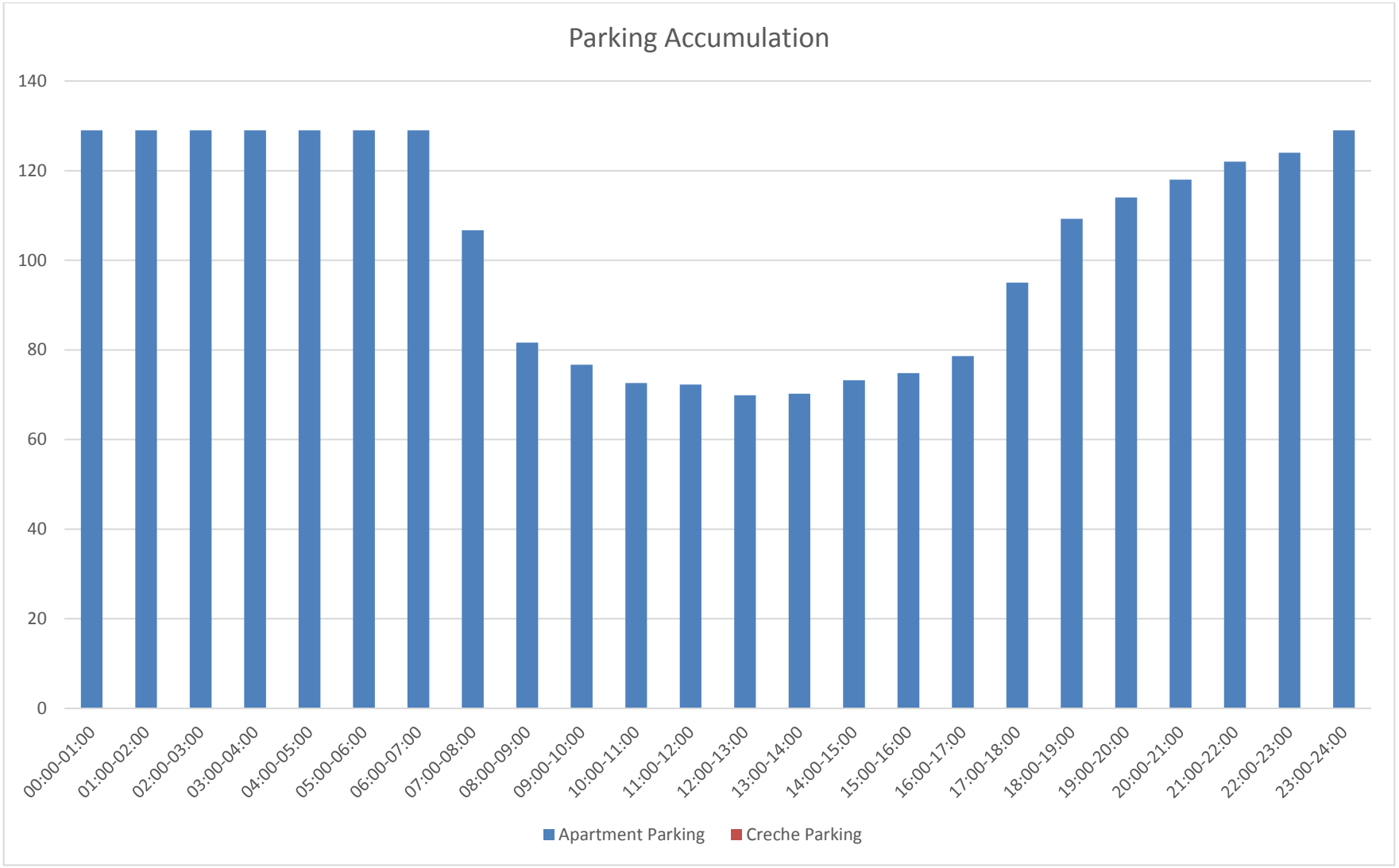

Figure 17 Parking Accumulation

As highlighted above the peak occupancy was found to occur between 11:00 and 12:00 on a weekday where 143 spaces are in use. This allows for dual usage of the visitor and creche parking with the exception of the residential parking spaces. There is a provision of 30 dual usage spaces. The parking accumulation study has identified a max parking demand of 15 spaces. Therefore, there will be 15 spaces free for visitors.

Whilst this study takes into account varied peak operational hours for each land use within the development, no reduction has been made for internalisation of trips. Internalisation is the scenario where a number of trips accounted for will be completed within the development confines, thus negating the need for additional car parking spaces for these trips i.e. between residential units, the creche and school site. An example of internalisation would be residents dropping children to creche on foot. No reduction for internalisation has been made in order to provide a robust analysis, however this will undoubtedly occur, given the mix of uses proposed and the high number of residential units included.

The parking accumulation study outlined above reflects the demand for parking expected from the proposed development, calculated from first principals, offering a sustainable use of space, and encouraging a more appropriate level of parking provision. It is considered that given the scale and range of uses within the proposed development, that this is the most appropriate approach in terms of identifying the parking requirement.

The study identified a maximum parking demand of 143 spaces for the proposed apartment element of the development. The apartment element of the development includes a provision of 170 spaces. This that there are sufficient car parking spaces to meet the expected real-world demand.

As highlighted, the calculations do not account for the anticipated occurrence of internalisation within the development. Given the proximity of the creche facilities relative to the residential units and the proximity of Navan Town (10 Minute Town) internalisation and modal split will undoubtedly reduce this peak demand further. It is considered that the proposed level of parking provision is more than adequate to service the development needs without illegal or inconvenient parking taking place or the overspill in to surrounding residential areas.

Car Parking Strategy & Summary

Notwithstanding the above and taking into account the Local Authorities' concern regarding over spill into local estates, it is proposed to provide 170 comprising of 129 general car parking spaces, 30 dual usage spaces, 7 accessible spaces and 4 car club spaces. Based on feedback from GoCar this is the equivalent of 204 spaces.

Given the sites location relative to high centres of employment, high quality/high frequency public transport and good cycle/walking permeability to the local catchment it is deemed appropriate to apply 'Sustainable Urban Housing – Design Standards for New Apartments' DoECLG(2018) to the proposed development and that the level of spaces provided for the apartments and duplexes is appropriate.

Therefore, the equivalent of 204 car parking spaces are provided as part of the proposed development.

The proposed level of car parking spaces for the apartments and duplexs is approximately 89% of the level of car parking spaces required under the Development Plan standard. Restricting car parking provision is a recognised method of reducing car dependence of a development.

As part of the mitigation measures to offset the reduce car parking provision, the 'Sustainable Urban Housing – Design Standards for New Apartments' published by the Department of Housing, Planning

and Local Government (2018) suggests that there should be an increased supply in cycle space provision and access to car clubs.

For the apartment parking, there are 170 no. spaces for the creche and apartments. There are 38 no. 1-beds and 120 no. 2-beds giving a total of 158 apartments.

The ratio of 0.82 gives 133 cars parking spaces (4 of these as car club spaces) leaving 41 dual usage and accessible spaces.

3 4 2 5 Car Parking Standards – Apartment Block D E

The 'Sustainable Urban Housing – Design Standards for New Apartments' published by the Department of Housing, Planning and Local Government sets out alternative designer standards for apartments.

The new design standard sets out alternative criteria for the provision of car parking spaces based on the link between the proposed development, access to local amenities and access to public transport.

A comparison between development plan standards and the new apartment guidelines is illustrated in Table 12 & 11 below.

Car Parking Standards - Apartment (Including creche in block C)		
Land se	**Standards**	
	Development Plan Standards	'Sustainable Urban Housing – Design Standards for New Apartments' DoECLG(2018)
Apartments	1.25 per 1 & 2-bedroom unit; 2 per 3 - 4-bedroom unit in all cases	Depends on Design & Location
Visitors	1 space per 4 apartments	

Table 10 – Parking Standards

Car Parking Provision - Apartment (Including creche in block C)				
No of nits		**Standards**		
		Required	'Sustainable Urban Housing – Design Standards for New Apartments' DoECLG(2018)	
I Bed	8	10	General car parking spaces	40
2 Bed	32	40	Accessible car parking spaces	2
3 Bed	-	0	Visitor	6
Visitor		10		
Total		**60**	**Total**	**48**

Table 11 – *Parking Provided*

Based on the guidance outlined in 'Sustainable Urban Housing – Design Standards for New Apartments' DoECLG (2018) it is proposed to provide 48 car parking spaces as follows:

General car parking spaces	40
Accessible car parking spaces	2
Visitor	6
Total:	**48**

For Apartment Block D & E, there are 48 no. spaces available. This results in a ratio of 1 space per apartment.

3 4 2 6 Car Parking – Summary

A total of 875 parking spaces will be provided for the development.

Parking will be provided within the curtilage of each house. On street surface car parking will be provided for the apartments, duplexs, creches and visitor car parking spaces.

The development plan standard suggests a total of 297 spaces for the Apartment Block A-E. This is based on a mix of 1 and 2 apartments and a creche.

Without car parking dominating the proposal and taking into account the guidance set out in publications like DMURS and 'Sustainable Urban Housing – Design Standards for New Apartments' it was proposed to provide 170 spaces including 4 car club spaces for Apartment Block A-C and 48spaces for Apartment Block D & E.

This level of parking will both meet the demand for spaces but will also act as demand management tool for trips to/from the proposed development.

The car parking strategy is to provide an equivalent rate of 204 spaces for Apartment Block A,B & C which is 96% of the requirement of Meath County Council and is in line with Section 4.20 the 'Design Standards for New Apartments For Planning Authorities' for Apartment Block A, B & C. For Apartment Block D & E, there are 48 no. spaces available. This results in a ratio of 1 space per apartment.

Therefore, a balance has been struck for the car parking provision taking into account the Development Plan standard and the anticipated demand.

verall Parking Provision	
Land se	**Standards Provided**
3 Bed House	484
2 Bed House	18
Apartment Block A, B, C (including creche in Block C)	170
Apartment Block D & &	48
Duplex	140
Creche (Next to unit No. 29)	15
Total	***875***

Table 12 verall Parking Provision

3.4.3 **Cycle Parking Standards**

Section 11.9.2 of the Meath County Development Plan sets out the cycle parking standards as follows:

'The number of stands required will be a third of the number of car spaces required for the development, subject to a minimum of one stand.'

Under the Meath County Development Plan total of 56 cycle parking spaces are required.

Section 4.17 of the Sustainable Urban Housing – Design Standards for New Apartments' published by the Department of Housing, Planning and Local Government (2018) has the following cycle parking requirements:

'Quantity – a general minimum standard of 1 cycle storage space per bedroom shall be applied. For studio units, at least 1 cycle storage space shall be provided. Visitor cycle parking shall also be provided at a standard of 1 space per 2 residential units.'

A total of 581 cycle parking spaces will be provided. This is significantly in excess of the required amount as outlined in Development Plan and accordance with Para 4.17 'Sustainable Urban Housing – Design Standards for New Apartments' DoECLG(2018).

This level of cycle parking provision will cater for local trips by residents and will mitigate the reduced level of car parking supply.

Bike parking will not be provided within individual apartments. Secure, covered communal parking will be provided at ground floor level adjacent to the main entrances.

A total of 581 cycle parking spaces will be provided for the development

verall Cycle Parking Provision	
Land se	**Standards Provided**
3 Bed House	-
2 Bed House	-
Apartments (including creche in Block C)	417
Corner Blocks	104
Creche (Access Road 1)	14
Duplex	46
Total	**581**

Table verall Cycle Parking Provision

3 5 Pedestrian and Cycle networks

It is a necessary part of the design framework for a residential development such as this to ensure that there is good permeability for those residents and visitors to the development who choose not to travel by car. The development has been designed to ensure that there is good permeability for pedestrians and cyclists. Connections between the internal layout and the external pedestrian and cycle networks form part of the overall access strategy for the site. With this development pedestrian movement is suitably catered for by footpath connections within and adjacent to the development up to the relevant boundaries. These provide good linkage to the surrounding urban areas.

The internal layout demands that all visitors to the site are catered for and so pedestrian routes between dwelling areas and key nodes within the layout are well designed and clearly delineated. This applicant is very experienced in creating safe environments that satisfy resident's requirements and convenience. Accordingly, every effort has been made to ensure that vehicular access will be restricted in areas where there are likely to be the highest concentrations of pedestrian/cycle movements.

The internal site layout will include several crossing facilities that are located along key desire lines and which coordinate well with the circulation within the car park area to enhance the safety, visibility and convenience of those people on foot. These facilities will include features such as tactile paving and surface treatments that will benefit all users and assist those with impaired mobility.

Pedestrian linkage will be provided to the boundary of the local estates such as Woodlands and Lime Kiln Hill residential developments and other future developments as part of the development. Pedestrian linkage to the lands that form part of the Navan Development Plan 2009-2015 (and subsequent Local Area Plans) will be provided as part of subsequent stages of development.

Given the desire in current planning guidance to improve accessibility for non-car modes of travel, access by cycle is increasingly important. In view of the fact that the weather and topography inevitably have an influence on cycle use, the key to cycle accessibility is the existence of convenient and safe links associated with secure and carefully sited cycle parking.

3 5 1 Facilities and access for those with impaired mobility

The design has sought to ensure that the environment created within this development will be accessible to residents and visitors with disabilities. Footpaths will be designed in accordance with the latest design criteria to ensure safe access for those that have a mobility impairment.

4 Traffic Generation and Distribution

4 1 General

The methodology for assessing the traffic implications of this development involves quantifying the number and nature of trips that would be generated and reviewing these trips in the context of the prevailing conditions, the area of influence and the available infrastructure.

The nature of the development and its relative location to the catchment dictates that the modal choice to and from the site would primarily be via private car but with some elements of public transport use.

Accordingly, the development will attract private car, pedestrian and cycle visitation that will need to be catered for in terms of access routes and internal design. Visitation will also include residents and visitors using public transport connections.

A significant factor in trip attraction and hence resultant impact on the surrounding network is the relationship between trips that already utilise the road network which would choose to visit the development and those trips which would be newly generated onto the road network by the creation of the development in this location.

Research into trips associated with developments of this type has been extensive and in order to try and determine a realistic level of resultant impact the following classifications are adopted.

Primary New trip ~ a single purpose trip (such as development-work-development) that would not exist on the network prior to the opening of the development.

Primary Transfer trip ~ an existing single purpose trip to another destination (such as another similar development) that would transfer to the new development once it becomes operational.

Non Primary Diverted trip ~ an existing multi-purpose (linked) trip that involves deviating from the normal route in order to visit the new development whilst on the way to another destination.

Non Primary Pass By trip ~ an existing multi-purpose (linked) trip that arises from visiting the new development without having to deviate significantly from the existing route being taken.

In essence, a Primary trip is one which has the same origin on visiting the site as destination when leaving the site, but only a proportion of these are newly generated (i.e. would not have taken place if the development didn't exist). The remainder of primary trips already exist on the road network as they would be those visiting another similar but existing destination.

A pass-by trip is a form of trip that doesn't result in any additional load to the impact area, since it already exists on the network adjacent to the site.

For the purpose of this assessment it is assumed that the proposed development will generate primary new trips.

4 2 TRICS

The Trip Rate Information Computer System [TRICS] database has been interrogated to derive trip rates commensurate with developments of the character proposed in this case, notably a 544-unit residential development and primary school site.

The use of the TRICS database has also enabled the profile of arrivals and departures throughout the day to be assessed and this has served to confirm the choice of the highest respective peak hours for use in the analyses.

This database is a well-established and constantly updated tool used in the determination of generated traffic for developments since it is a substantial source of validated empirical data on the arrival and departure rates for a range of differing types and sizes of developments in a variety of locations.

4 3 Apartment

4 3 1 Background

As part of the Section 247 meeting, Meath County Council queried the TRICS rate for the apartment blocks deeming it too low. The original TRICS data included sites in Leinster and the Greater Dublin Area taking into account population and car ownership rates.

Therefore, a review of the TRICS rates has been undertaken to determine an appropriate trip rate for the site. The following scenarios have been considered:

- Original proposed
- Leinster (no filters)
- Greater Dublin Area (no filters)
- UK & Ireland

4 3 2 Filtering Criteria

TRICS uses filtering criteria in order to validate results. In order to get valid data sets a minimum of 6 sites were required to produce valid trip rates. Filtering is based on the following criteria:

- Main Land Use (Residential);
- Sun Land Use (Apartments, number of units, trip rate based on: Site area, number of dwellings, density, bedrooms); and
- Location (Town centre, edge of town, etc, Population < 1 Mile, Population < 5 Miles, Car Ownership < 5 Miles, PTAL Rating).

Without filtering, Leinster only produces 3 data sets for private apartments and when filtering is applied the selection this is greatly reduced. Data for the GDA and UK& Ireland is more plentiful and there is a valid data set.

Table 14 illustrates the anticipated trip rates for the various scenarios considered.

Peak our Trip Rates Comparison – Private Apartment								
	Leinster including GDA		Leinster Excluding GDA		GDA		Ireland	
Time Range	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep
07:00-08:00	0.051	0.192	0.029	0.086	0.044	0.216	0.044	0.146
08:00-09:00	0.056	0.215	0.048	0.133	0.047	0.225	**0 055**	**0 176**
09:00-10:00	0.048	0.079	0.067	0.067	0.051	0.092	0.072	0.103
10:00-11:00	0.022	0.048	0.019	0.076	0.029	0.051	0.066	0.082
11:00-12:00	0.034	0.036	0.029	0.038	0.042	0.04	0.082	0.099
12:00-13:00	0.042	0.057	0.038	0.057	0.059	0.067	0.099	0.083
13:00-14:00	0.059	0.057	0.086	0.029	0.074	0.069	0.083	0.08
14:00-15:00	0.055	0.036	0.057	0.038	0.066	0.057	0.083	0.085
15:00-16:00	0.056	0.046	0.057	0.038	0.093	0.059	0.094	0.094
16:00-17:00	0.07	0.046	0.019	0.048	0.112	0.052	0.114	0.088
17:00-18:00	0.154	0.050	0.162	0.095	0.185	0.042	**0 202**	**0 097**
18:00-19:00	0.189	0.099	0.086	0.067	0.171	0.07	0.208	0.127

Table 13 Peak our Trip Rates Comparison – Private Apartment

The total peak hour trip rate (the sum of the arrivals/departures for the AM peak and PM Peak) was calculated to determine the selection criteria that would produce the largest trip rate to/from the development. This is illustrated in Figure 15 below.

Total Peak Trip Rate – Private Apartment			
Leinster including GDA	Leinster Excluding GDA	GDA	Ireland
0.475	0.438	0.499	0.530

Table 14 Total Peak our Trip Rate – Private Apartment

It can be seen from Table 15 that the UK & Ireland selection criteria produce that largest total peak hour trip rate to/from the site.

These trip rates are based on unrestricted car parking. Car parking will be restricted on site and as a result the level of trips to/from the proposed development are likely to be less. Based on the Meath Development Plan Standards, parking for apartments has been reduced by 21%. It is reasonable to conclude that a similar reduction could be applied to the trip rates to/from the apartments.

However, the unrestricted rates have been applied in the interests of providing a robust assessment of the performance of the road network in the future and acknowledging the concerns raised by Meath County Council.

Table 16 illustrates the proposed apartment trip rates.

Peak our Trip Rates					
Trip Generation from TRICS		eekday AM 08:00 09:00		eekday PM 17:00 18:00	
sage	nits	Arrivals	Departures	Arrivals	Departures
Apartments	Per Dwelling	0.055	0.176	0.202	0.097

Table 15 Apartment Trip Rates

4 4 School Site

4 4 1 Background

Part of the wider Belmont lands include a future school site.

Typically, the Department of Education has a requirement for schools with between 6 to 24 classrooms. It is understood, through the negotiations pertaining to the design of the site, that the site has been earmarked for two primary schools of up to 30 classrooms.

According to the Department of Education, the Average Class Size in Primary Schools (2014/15 - 2018/19) ranges from 24.9 to 24.3 with an overall downward trend. Based on an average of 24 pupils per classroom there is a potential pupil population of 720.

According to the Census 2016 Summary Results - Part 1 published by the CSO, the average household size is 2.75. Census 2016 shows the population of the primary school age group (5-12) stood at 548,693. Census 2016 results show that Ireland's population stood at 4,761,865. Therefore, the primary school age group (5-12) equates to 11.5% of the overall population.

Based on 544 total units, it is estimated that up to 172 children from within the development will be of primary school going age.

Anticipated Number of Local Students			
Number of nits	Persons per dwelling	Total Population	Primary School Children Age
544	2.75	1496	172

Table 16 Anticipated Number of Local Students

There is the potential for up to 172 local students to cycle/walk to the school site from within the proposed development. Therefore, the total external school population would be up to 548 pupils.

It is reasonable to assume that not all local children from the proposed development will attend the local school. Accordingly, school site will be tested for an external pupil population of 570.

These assumptions will attract higher trips to the proposed development as the external population is bigger and therefore offers a robust assessment of the potential trip rates to/from the school site via the external road network.

4 4 2 Trip Rates:

Using the TRICS database, the rip rates for a primary school was calculated. These trip rates are illustrated in Table 18 below.

Peak our Trip Rates					
Trip Generation from TRICS		eekday AM 08:00 09:00		eekday PM 17:00 18:00	
sage	nits	Arrivals	Departures	Arrivals	Departures
Primary School	Per Pupil	0.176	0.094	0.022	0.019

Table 17 School Trip Rates

4 5 ouses

Using the TRICS database, the rip rates for houses was calculated. These trip rates are illustrated in Table 19 below.

Peak our Trip Rates					
Trip Generation from TRICS		eekday AM 08:00 09:00		eekday PM 17:00 18:00	
sage	nits	Arrivals	Departures	Arrivals	Departures
Houses – .	Per Bed	0.202	0.635	0.380	0.202

Table 18 ouse Trip Rates

4 6 Trip Attraction

The chosen trip rates for the proposed development are outlined in Table 20 below.

Peak our Trip Rates					
Trip Generation from TRICS		eekday AM 08:00 09:00		eekday PM 17:00 18:00	
sage	nits	Arrivals	Departures	Arrivals	Departures
Houses – .	Per Bed	0.202	0.635	0.380	0.202

Peak our Trip Rates					
Apartments – .	Per Bed	0.055	0.176	0.202	0.097
School	Per pupil	0.176	0.094	0.022	0.019

Table 19 Peak our Trip Rates

These trip rates are used in conjunction with the proposed schedule of accommodation to determine the resultant total trips generated by the proposed development.

For the proposed development, these figures can be seen in Table 21 below.

Peak our Trips					
Trip Generation from TRICS		**eekday AM 08:00 09:00**		**eekday PM 17:00 18:00**	
sage	**nits**	**Arrivals**	**Departures**	**Arrivals**	**Departures**
Houses – .	260	16	50	57	28
Apartments/Duplex– .	284	53	165	99	53
School	570	100	54	13	11
Creche*	-	-	-	-	-
Peak Total		**168**	**269**	**169**	**92**
Two ay Total		**437**		**261**	

Table 20 Peak our Trips

** It is expected that the majority of the trips to/from the creche will be linked to the proposed development. Those trips that are not linked to the development will be tips that are already exist on the network and will divert to the proposed development. The expected level of arrivals/departures to/from the creche site will be zero.*

It can be seen from the above that the total vehicle movements generated by the proposed development will be 168 arrivals and 269 departures in the AM peak (two-way total of 437). The total number of vehicle movements in the PM peak hour will be 169 arrivals and 92 departures (two-way total of 261).

A comparison of Trip Rates at the Pre-Planning Meeting with ABP and the current trip rates are offered in Appendix E.

5 unction Analysis

5 1 Introduction

To assess the resultant impact on the surrounding road network, the anticipated traffic generation and distribution through the network has been applied to the traffic model in order to assess comparative flow levels at the surveyed locations and to analyse resultant junction performance.

In addition to traffic generated due to the proposed development, there is also an expected increase in traffic flows due to general development and an increase in car ownership that needs to be considered. Using Table 5.5.1 of the Project Appraisal Guidelines – Unit 5.5 Link-Based Traffic Growth Forecasting published by the NRA, reference has been made to the percentage increase expected on all roads surrounding the site.

5 2 Growth Factors

The estimated opening year for the proposed development is 2022. This has therefore been the focus of the road network assessment. These flows are shown in Appendix C and for the weekday AM and PM peaks respectively.

NRA PAG Unit 5.5 sets out growth rates for forecasting future traffic. It is noted that in respect to East Area (Wicklow, Meath, Kildare, Louth, Carlow & Monaghan) the growth during the period 2006-2025 is set at 1.1% per annum for medium growth decreasing to 0.9% for the period 2026 onwards (LV rates used).

The factor used is outlined below:

Traffic Growth Rates NRA Project Appraisal Guidelines		
ear	***To Year***	**Table 5 5 1**
2017	2022	1.05
2017	2027	1.11
2017	2037	1.15

Table 21 Growth Factors

These growth rates are applicable to East (Wicklow, Meath, Kildare, Louth, Carlow & Monaghan) and no distinction is offered between rural and urban locations. It has been assumed that medium growth would occur.

The use of these rates in this urban location is highly conservative as the predicted traffic growth is not likely to occur in built up urban locations, such as Navan, with good public transport in the future. However, the rates have been applied in the interests of providing a robust assessment of the performance of the road network in the future.

5 3 unction Capacity Analyses

Junction capacity analyses have been undertaken at the site access junction and at the key junctions at which existing flow data had been obtained. These tests have been carried out using industry standard and approved software for the existing junctions with no development and the assumed year of opening of the development, namely 2022, and for a 5-year design horizon, namely 2027 and for a 15-year design horizon, namely 2037 with development flows added. It may be the case at some nodes within the network that following the distribution and assignment of the traffic generated by the development, the actual proportional impact or change in traffic demand would not necessarily warrant further assessment. For the purpose of a robust assessment, all junctions have been put forward for assessment.

The use of the TRL capacity model programme PICADY [Priority Intersection Capacity and Delay] is well established and accepted by the Meath County Council for the prediction of capacity and incurred delay at priority junctions, whilst ARCADY [Assessment of Roundabout Capacity and Delay] is similarly accepted and used to provide comparable measures of the operational efficiency of roundabout junctions. OSCADY (Optimised Signal Capacity and Delay: Phase-based Rapid Optimisation) is a computer program for optimising phase-based signal timings and calculating capacities, queue lengths and delays (both queuing and geometric) for traffic signal-controlled junctions. Similarly, LinSig is a computer program for optimising phase-based signal timings and calculating capacities, queue lengths and delays (both queuing and geometric) for traffic signal-controlled junctions.

With these well-established methods the results are expressed in terms of a ratio of flow to capacity (RFC) on each approach and the maximum queue length on that approach during the period tested. If the RFC value approaches 1.0 then queuing and delay can be expected to increase. It is normal practice to ensure that the RFC is below 0.85 to achieve a theoretical reserve capacity of greater than 15%, although a value of 0.85 can be marginally exceeded in a future design year situation without any detrimental effect on the satisfactory and safe operation of the junction.

LinSig and OSCADY results are expressed in terms of queues generated and the ‘Degree of Saturation’ (DoS). A Dos value of 85% or below indicates that the junction is operating within capacity. A DoS value of between 85% and 100% indicates that the junction remains within capacity but is beginning to show signs of queuing and delay. A DoS value of less than 100% is desirable in urban areas during peak period traffic. However, values of greater than 100% are typical at many junctions. For the purpose of these calculations the results are reported in terms of maximising the capacity of the junction analysed.

The results of the various capacity assessments are summarised in a series of tables. For each flow condition and for each junction the PICADY or ARCADY output has been assessed and the maximum Ratio of flow to Capacity [RFC] tabulated together with the maximum (end) queue value for the

relevant time segment. For signalised junctions the OSCADY/ LinSig output will be in terms of maximum (end) queue value and DoS.

For the corresponding flow diagrams refer to Appendix C.

5 4 Geometric Parameters

The geometric parameters used for the junctions have been ascertained from the topographical survey details of the junction and other relevant sources. In this way a very good approximation of the relevant geometric inputs has been used. For the proposed junction, the geometry has been obtained by reference to the initial design drawing. This has also enabled an iterative process to be adopted if necessary, to ensure that the junction is designed in accordance with relevant design standards and to achieve sufficient levels of capacity.

In this case, the surveyed junctions will each be analysed to determine the extent of resultant highway impact and the need, if any, for mitigating measures. It is anticipated that the capacity analyses will show how the proposal will be accommodated with a reasonable degree of reserve capacity.

5 5 Trip Distribution

The trips generated by the proposed development have been distributed on the surrounding road network using the directional flows on the surrounding road network. The proposed movements created by the development in the AM and PM peak hour are shown in Appendix C.

5 6 unction Capacity Analysis

The junctions, as surveyed, have been put forward for analysis with the development traffic dispersed through the network as per the current follow conditions.

The results of this analysis are presented below.

5 6 1 Study Area

As part of the junction capacity assessments the following junctions were modelled in isolation –

<u>Priority Junctions</u>

- R161 Circular Road/R896 Bridge Street/Academy Street crossroads
- Academy Street/Site Access

<u>Signal Controlled Junctions</u>

- Circular Road/Kells Road
- Dublin Road/Bothar Sion/Springfield Glen & Dublin Road/Academy Street Academy Street/Site Access T-junction

Junction analysis was carried out using LinSig version 3 and tested with the traffic flow data provided

5 6 2 Traffic Flows

Pinnacle Consulting collected traffic flows for the study area junctions the flows covered the morning and evening peak hours. As part of the junction analysis the following scenarios were modelled - 2017 base year, 2022 opening year (with and without development, 2027 opening year + 5 years (with and without development), and 2037 opening year + 15 years (with and without development)

5 6 3 Site 1: R147 Circular Road ells Road

5 6 3 1 alidation

Pinnacle Consulting Engineers sourced the traffic signal controller staging arrangement, phasing, intergreen timings, stage green splits and cycle times. Phase minimums of 7 seconds were used for all traffic phases, 4 seconds for indicative arrow phases, and pedestrian minimums were based on the pedestrian crossing lengths. To validate the model queue lengths were measured on site by Pinnacle.

The model was validated as well as possible with the data provided, but the traffic data does not compliment the queue data, for example in the AM peak there are only 497 vehicles going southbound and they get 45 seconds of the 60 second cycle time, yet the MMQ was measured at 33 PCU's. With this data and green split allocation, a 33 PCU MMQ cannot be achieved in the model as the traffic flows only require 30 percent of the junction green split. Also, the Google traffic layer only shows orange in the AM peak which means traffic is moving.

5 6 3 2 Saturation flow

Saturation flows where initial calculated using RR67 principles, and then adjusted to try to match the queue lengths recorded on site. Due to the issues with the provided queue data, RR67 calculated saturation flows were used in the base model.

5 6 3 3 Lost Time

Junction lost time values were measured on site by Pinnacle Consulting Engineers. When the green splits and lost time measurements were combined, they did not match the recorded cycle time. The green split and cycle time measurements were amended within the model as part of the validation process. Neither had much of an impact when trying to get the model to mimic the observed queue lengths.

5 6 3 4 Green splits

Green split timings were measured by Pinnacle Consulting Engineers. These values were entered and adjusted slightly where appropriate in the model.

5 6 3 5 Average cycle time

The cycle time was measured onsite by Pinnacle Consulting Engineers.

5 6 3 6 Modelling Results

The base model has been created using the data provided by Pinnacle Consulting Engineers. This model was then used to model the future year scenarios. All traffic signal timings have been optimised for the future year scenarios and existing base data. The modelling results are summarised in the Tables 23,24 and 26 below.

The tables show that the junction is currently running within capacity. When running a 60 second cycle time the AM peak has a PRC of 16.3% and the PM peak has a PRC of 0.5% with Arm 1 - Circular Road being 89.5% saturated.

Kells Road/Circular Road (Base Model AM & PM)					
Road Name	Link	Base Model (AM)		Base Model PM	
		DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)
Circular Road	1/2	64.0%	3.9	74.7%	5.7
Kells Road Northbound	2/2	70.3%	8.0	76.6%	9.1
Kells Road Southbound	3/1	40.3%	4.3	30.8%	3.1
	3/2	30.9%	1.5	24.0%	1.1
Cycle Time		60		60	
PRC (%)		28.0%		17.4%	
Total Delay pcuHr		9.1		10.52	

Table 22 ells Road Circular Road Base AM PM

Kells Road/Circular Road AM Peak (08:00 – 09:00)															
Road Name	Link	2017 AM		AM Opening Year Without Development		AM Opening Year With Development		AM Opening Year + 5 Years Without Development		AM Opening Year + 5 Years With Development		AM Opening Year + 15 Years Without Development		AM Opening Year + 15 Years With Development	
		DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)
Circular Road	1/2	64.0%	3.9	67.6%	4.3	64.2%	5.0	71.1%	4.6	67.6%	5.3	74.1%	5.0	70.9%	5.6
Kells Road Northbound	2/2	70.3%	8.0	74.2%	8.8	69.9%	8.1	78.2%	9.7	73.7%	8.8	81.4%	10.6	76.7%	9.6
Kells Road Southbound	3/1	40.3%	4.3	42.8%	4.8	40.6%	4.3	45.1%	5.0	42.8%	4.5	46.9%	5.4	44.6%	4.9
	3/2	30.9%	1.5	33.5%	1.6	41.1%	2.0	36.6%	1.7	44.2%	2.1	39.3%	1.7	47.2%	2.2
Cycle Time		60		60		60		60		60		60		60	
PRC (%)		28.0%		21.3%		28.7%		15.2%		22.2%		10.5%		16.3%	
Total Delay pcuHr		9.1		10.06		10.31		11.20		11.32		12.28		12.28	

Table 23 – ells Road Circular Road AM Peak LinSig Results

Kells Road/Circular Road PM Peak (17:00 – 18:00)															
Road Name	Link	2017 PM		PM Opening Year Without Development		PM Opening Year With Development		PM Opening Year + 5 Years Without Development		PM Opening Year + 5 Years With Development		PM Opening Year + 15 Years Without Development		PM Opening Year + 15 Years With Development	
		DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)
Circular Road	1/2	74.7%	5.7	78.8%	6.3	78.8%	6.3	82.8%	7.2	82.8%	7.2	86.4%	8.1	86.4%	8.1
Kells Road Northbound	2/2	76.6%	9.1	81.7%	10.5	81.7%	10.5	86.0%	12.1	86.0%	12.1	89.5%	13.9	89.5%	13.9
Kells Road Southbound	3/1	30.8%	3.1	32.6%	3.3	32.6%	3.3	34.4%	3.6	34.4%	3.6	35.8%	3.8	35.8%	3.8
	3/2	24.0%	1.1	26.3%	1.2	35.1%	1.6	28.8%	1.3	38.0%	1.7	31.3%	1.3	40.9%	1.9
Cycle Time		60		60		60		60		60		60		60	
PRC (%)		17.4%		10.2%		10.2%		4.6%		4.6%		0.%		0.5%	
Total Delay pcuHr		10.52		12.06		12.7		13.95		14.49		16.16		16.73	

Table 24 ells Road Circular Road PM Peak LinSig Results

5 6 4 Site 2: R161 Circular Road R896 Bridge Street Academy Street crossroads

The operation of the crossroads was modelled using Junctions 8 PICADY software, and tested with the 2017 base year, 2022 Opening year, 2027 Opening year +5 years and 2037 opening year in Table 26 to 32.

In the 2037 opening year +15 years without development, all the roads operate within the 85% design threshold ratio of flow capacity (RFC) in both the morning and evening peak hours. The maximum RFC recorded was 0.73 with a corresponding queue of 2.55

The additional of the development traffic has a minimal impact on the operation of the junction which continues to operate within capacity in both the peak hours. The junction delay in the evening peak is forecast to increase by 7.13 seconds from 13.1 seconds in 2017 base year to 20.23 seconds in 2037 opening year +15 years (with development). Therefore, the additional of the development traffic has a minimal impact on the operation of the junction, hence this is not a severe impact and no mitigation measures are required.

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	Existing Layout 2017 Base ear							
Stream B-ACD	0.29	8.67	0.23	9.51	0.56	11.67	0.36	13.10
Stream A-BCD	0.00	0.00	0.00		0.00	0.00	0.00	
Stream A-B	-	-	-		-	-	-	
Stream A-C	-	-	-		-	-	-	
Stream D-AB	0.71	9.92	0.42		1.44	14.66	0.59	
Stream D-BC	0.17	9.71	0.14		0.30	10.98	0.23	
Stream C-ABD	0.01	7.02	0.01		0.03	7.03	0.03	
Stream C-D	-	-	-		-	-	-	
Stream C-A								

Table 25 R161 Circular Road R896 Bridge Street Academy Street crossroads 2017 Base ear

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	Existing Layout 2022 pening ear ith Dev							
Stream B-ACD	1.75	21.81	0.64	15.71	1.16	17.56	0.54	16.42
Stream A-BCD	0.00	0.00	0.00		0.00	0.00	0.00	
Stream A-B	-	-	-		-	-	-	
Stream A-C	-	-	-		-	-	-	
Stream D-AB	0.83	10.83	0.46		1.83	17.52	0.65	
Stream D-BC	0.20	10.68	0.17		0.35	11.85	0.26	
Stream C-ABD	0.02	7.32	0.02		0.05	7.32	0.04	
Stream C-D	-	-	-		-	-	-	
Stream C-A	-	-	-		-	-	-	

Table 26 R161 Circular Road R896 Bridge Street Academy Street crossroads 2022 pening ear ith Dev

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	Existing Layout 2022 pening ear ithout Dev							
Stream B-ACD	0.32	8.95	0.24	9.88	0.62	12.37	0.39	14.17
Stream A-BCD	0.00	0.00	0.00		0.00	0.00	0.00	
Stream A-B	-	-	-		-	-	-	
Stream A-C	-	-	-		-	-	-	
Stream D-AB	0.78	10.39	0.44		1.66	16.15	0.63	
Stream D-BC	0.18	9.92	0.15		0.32	11.34	0.24	
Stream C-ABD	0.02	7.08	0.01		0.03	7.10	0.03	
Stream C-D	-	-	-		-	-	-	
Stream C-A	-	-	-		-	-	-	

Table 27 R161 Circular Road R896 Bridge Street Academy Street crossroads Existing Layout 2022 pening ear ithout Dev

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	Existing Layout 2027 pening ear ith Dev							
Stream B-ACD	1.96	24.00	0.67	16.94	1.32	19.27	0.57	18.21
Stream A-BCD	0.00	0.00	0.00		0.00	0.00	0.00	
Stream A-B	-	-	-		-	-	-	
Stream A-C	-	-	-		-	-	-	
Stream D-AB	0.93	11.49	0.48		2.17	19.85	0.69	
Stream D-BC	0.22	11.00	0.18		0.38	12.30	0.28	
Stream C-ABD	0.02	7.39	0.02		0.05	7.40	0.05	
Stream C-D	-	-	-		-	-	-	
Stream C-A	-	-	-		-	-	-	

Table 28 R161 Circular Road R896 Bridge Street Academy Street crossroads 2027 pening ear ith Dev

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	Existing Layout 2027 pening ear ithout Dev							
Stream B-ACD	0.35	9.26	0.35	10.34	0.70	13.24	0.41	**15 63**
Stream A-BCD	0.00	0.00	0.00		0.00	0.00	0.00	
Stream A-B	-	-	-		-	-	-	
Stream A-C	-	-	-		-	-	-	
Stream D-AB	0.87	10.99	0.87		1.96	18.23	0.67	
Stream D-BC	0.19	10.19	0.19		0.35	11.77	0.26	
Stream C-ABD	0.02	7.15	0.02		0.04	7.18	0.04	
Stream C-D	-	-	-		-	-	-	
Stream C-A	-	-	-		-	-	-	

Table 29 R161 Circular Road R896 Bridge Street Academy Street crossroads 2027 pening ear ithout Dev

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	Existing Layout 2037 pening ear ith Dev							
Stream B-ACD	2.15	25.95	0.69	18.03	1.49	21.11	0.61	20.23
Stream A-BCD	0.00	0.00	0.00		0.00	0.00	0.00	
Stream A-B	-	-	-		-	-	-	
Stream A-C	-	-	-		-	-	-	
Stream D-AB	1.01	12.07	0.51		2.55	22.51	0.73	
Stream D-BC	0.23	11.26	0.19		0.41	12.73	0.29	
Stream C-ABD	0.02	7.45	0.02		0.05	7.45	0.05	
Stream C-D	-	-	-		-	-	-	
Stream C-A	-	-	-		-	-	-	

Table 30 R161 Circular Road R896 Bridge Street Academy Street crossroads 2037 pening ear ith Dev

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	Existing Layout 2037 pening ear ithout Dev							
Stream B ACD	0.37	9.54	0.27	10.76	0.77	13.98	0.44	17.05
Stream A BCD	0.00	0.00	0.00		0.00	0.00	0.00	
Stream A B	-	-	-		-	-	-	
Stream A C	-	-	-		-	-	-	
Stream D AB	0.95	11.52	0.49		2.27	20.32	0.70	
Stream D BC	0.20	10.41	0.17		0.38	12.15	0.27	
Stream C ABD	0.02	7.21	0.02		0.04	7.22	0.04	
Stream C D	-	-	-		-	-	-	
Stream C A	-	-	-		-	-	-	

Table 31 R161 Circular Road R896 Bridge Street Academy Street crossroads 2037 pening ear ithout Dev

5 6 5 Site 3: Academy Street Site Access

The operation of the crossroads was modelled using Junctions 8 PICADY software, and tested with the 2017 base year, 2022 Opening year, 2027 Opening year +5 years and 2037 opening year in Table 33-39.

In the 2037 opening year +15 years without development, all the roads operate within the 85% design threshold ratio of flow capacity (RFC) in both the morning and evening peak hours. The maximum RFC recorded was 0.57 with a corresponding queue of 1.28 in the 2037 AM Peak.

The new junction operates with a max delay of 13.65s.

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	2017 Base ear							
Stream B-AC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stream C-AB	0.00	0.00	0.00		0.00	0.00	0.00	
Stream C-A	-	-	-		-	-	-	
Stream A-B	-	-	-		-	-	-	
Stream A-C	-	-	-		-	-	-	

Table 32 Academy Street Site Access 2017 Base ear

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	2022 pening ear ith Dev							
Stream B-AC	1.26	15.64	0.56	13.50	0.24	8.57	0.19	**7 32**
Stream C-AB	0.15	5.97	0.12		0.15	5.76	0.12	
Stream C-A	-	-	-		-	-	-	
Stream A-B	-	-	-		-	-	-	
Stream A-C	-	-	-		-	-	-	

Table 33 Academy Street Site Access 2022 pening ear ith Dev

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	2022 pening ear ithout Dev							
Stream B-AC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stream C-AB	0.00	0.00	0.00		0.00	0.00	0.00	
Stream C-A	-	-	-		-	-	-	
Stream A-B	-	-	-		-	-	-	
Stream A-C	-	-	-		-	-	-	

Table 34 Academy Street Site Access 2022 pening ear ithout Dev

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	2027 pening ear ith Dev							
Stream B-AC	1.27	15.77	0.57	13.60	0.24	8.62	0.19	7.34
Stream C-AB	0.15	5.98	0.12		0.15	5.76	0.12	
Stream C-A	-	-	-		-	-	-	
Stream A-B	-	-	-		-	-	-	
Stream A-C	-	-	-		-	-	-	

Table 35 Academy Street Site Access 2027 pening ear ith Dev

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	2027 pening ear ithout Dev							
Stream B-AC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stream C-AB	0.00	0.00	0.00		0.00	0.00	0.00	
Stream C-A	-	-	-		-	-	-	
Stream A-B	-	-	-		-	-	-	
Stream A-C	-	-	-		-	-	-	

Table 36 Academy Street Site Access 2027 pening ear ithout Dev

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	2037 pening ear ith Dev							
Stream B-AC	1.28	15.86	0.57	13.65	0.24	8.66	0.19	7.36
Stream C-AB	0.15	5.98	0.12		0.16	5.75	0.12	
Stream C-A	-	-	-		-	-	-	
Stream A-B	-	-	-		-	-	-	
Stream A-C	-	-	-		-	-	-	

Table 37 Academy Street Site Access 2037 pening ear ith Dev

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	2037 pening ear ithout Dev							
Stream B-AC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stream C-AB	0.00	0.00	0.00		0.00	0.00	0.00	
Stream C-A	-	-	-		-	-	-	
Stream A-B	-	-	-		-	-	-	
Stream A-C	-	-	-		-	-	-	

Table 38 Academy Street Site Access 2037 pening ear ithout Dev

5 6 6 Site 4: Dublin Road Academy Street Priority Controlled unction

The operation of the crossroads was modelled using Junctions 8 PICADY software, and tested with the 2017 base year, 2022 Opening year, 2027 Opening year +5 years and 2037 opening year in Table 40-46.

In the 2037 opening year +15 years without development, all the roads operate within the 85% design threshold ratio of flow capacity (RFC) in both the morning and evening peak hours. The maximum RFC recorded was 0.62with a corresponding queue of 0.65 in the AM Peak.

The additional of the development traffic has a minimal impact on the operation of the junction which continues to operate within capacity in both the peak hours. The junction delay in the evening peak is forecast to increase by 9.31 seconds from 27.34 seconds in 2017 base year to 18.03 seconds in 2037 opening year +15 years (with development). While delay at the junction has increased it is within acceptable norms based on an RFC of less than 0.85.

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	Existing Layout 2017 Base ear							
Stream B-C	0.04	7.48	0.04		0.08	7.88	0.07	
Stream B-A	0.14	12.74	0.13		0.23	13.77	0.19	
Stream C-AB	0.03	4.04	0.02		0.06	4.26	0.04	
				9.31				9.70
Stream C-A	-	-	-			-	-	
	-	-	-		-	-	-	
Stream A-B	-	-	-		-	-	-	
Stream A-C	-	-	-		-	-	-	

Table 39 Dublin Road Academy 2017 Base ear

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	Existing Layout 2022 pening ear ith Dev							
Stream B-C	0.06	9.77	0.06		0.09	8.92	0.09	
Stream B-A	1.17	25.23	0.55		0.51	17.83	0.34	
Stream C-AB	0.03	4.04	0.02		0.08	4.29	0.05	
				21.58				13.03
Stream C-A	-	-	-		-	-	-	
Stream A-B	-	-	-		-	-	-	
Stream A-C	-	-	-					

Table 40 Dublin Road Academy 2022 pening ear ith Dev

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	Existing Layout 2022 pening ear ithout Dev							
Stream B-C	0.05	7.66	0.04		0.09	8.92	0.04	
Stream B-A	0.16	13.53	0.14		0.26	17.83	0.14	
Stream C-AB	0.03	3.99	0.02		0.07	4.29	0.02	
				9.76				10.11
Stream C-A	-	-	-		-	-	-	
Stream A-B	-	-	-		-	-	-	
Stream A-C	-	-	-					

Table 41 Dublin Road Academy 2022 pening ear ithout Dev

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	Existing Layout 2027 pening ear ith Dev							
Stream B-C	0.07	10.40	0.06		0.10	9.26	0.09	
Stream B-A	1.36	29.19	0.58		0.58	19.72	0.37	
Stream C-AB	0.04	3.99	0.03		0.08	4.24	0.05	
				24.40				14.12
Stream C-A	-	-	-		-	-	-	
Stream A-B	-	-	-		-	-	-	
Stream A-C	-	-	-					

Table 42 Dublin Road Academy 2027 pening ear ith Dev

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	Existing Layout 2027 pening ear ith Dev							
Stream B-C	0.05	7.88	0.05		0.09	8.40	0.08	
Stream B-A	0.18	14.56	0.15		0.30	16.00	0.23	
Stream C-AB	0.03	3.95	0.03		0.07	4.18	0.05	
				10.12				10.74
Stream C-A	-	-	-		-	-	-	
Stream A-B	-	-	-		-	-	-	
Stream A-C	-	-	-					

Table 43 Dublin Road Academy 2027 pening ear ithout Dev

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	Existing Layout – 2037 pening ear ith Dev							
Stream B-C	0.07	11.03	0.07		0.11	9.61	0.10	
Stream B-A	1.54	33.06	0.62		0.65	17.19	0.40	
Stream C-AB	0.04	3.95	0.03		0.09	4.15	0.06	
				27.34				15.09
Stream C-A	-	-	-		-	-	-	
Stream A-B	-	-	-		-	-	-	
Stream A-C	-	-	-					

Table 44 Dublin Road Academy 2037 pening ear ith Dev

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	Existing Layout – 2037 pening ear ith Dev							
Stream B-C	0.05	8.06	0.05	10.63	0.10	8.64	0.09	11.16
Stream B-A	0.20	15.50	0.17		0.33	17.19	0.25	
Stream C-AB	0.04	3.91	0.03		0.09	4.15	0.06	
Stream C-A	-	-	-		-	-	-	
Stream A-B	-	-	-		-	-	-	
Stream A-C	-	-	-					

Table 45 Dublin Road Academy 2037 pening ear ithout Dev

5 6 7 Site 4 Site5 Site 6: Dublin Road Bothar Sion Springfield Glen Dublin Road Academy Street

5 6 7 1 Background

The Navan 2030 plan considers two key elements that would support and promote sustainable development in Navan Town through:

1. Enhancing the physical attractiveness of the town; and,
2. Improving movement and access in and out of the town centre.

Navan 2030 sets out the following in relation to public transport

'As Navan grows, access to efficient public transport is becoming increasingly important. Public transport services must be developed so as to be convenient, accessible and reliable, and local and regional buses must be integrated. Public transport must not only provide a high-quality service to the people and the town, but also should benefit Navan by bringing people into the town centre.

Public transport services must be developed as a real alternative to private transport, both for local and regional trips. Routes and services must be fully integrated, and in a manner that benefits the community of Navan and also supports the businesses in the town.'

This strategy will be delivered through the diversion of bus services, the provision of dedicated bus taxi termini and out of town car parking. Diversion of bus services will create a bus priority through Academy Street as indicated in the Navan 2030 map below.

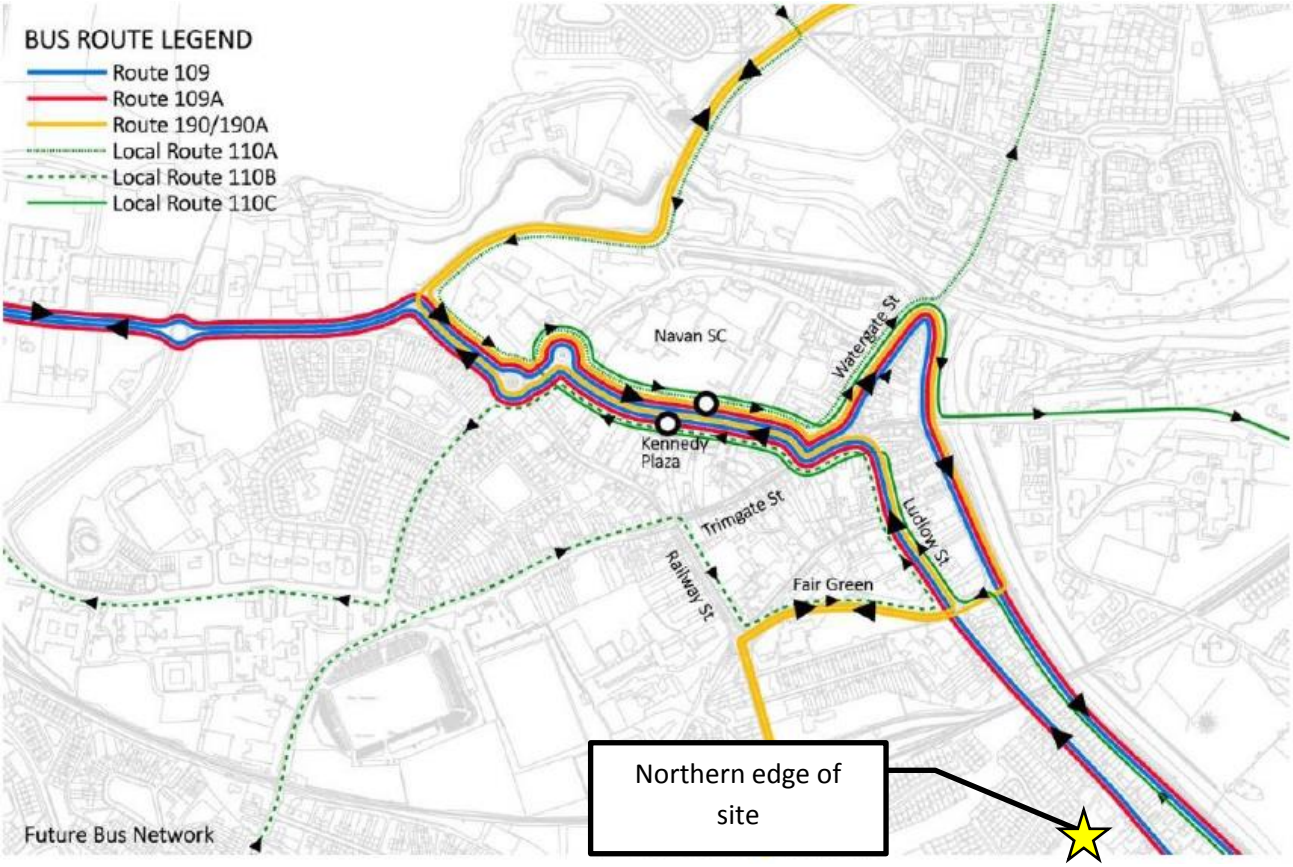

Figure 18 Diverted Bus Routes

In addition, the following junctions were assessed as part of a signalised network to determine the future potential to accommodate bus priority along Academy Street through the provision of linked signal junctions:

- Academy Street/Site Access T-junction/R147 Dublin Road/Academy Street Signalised Junction
- Unnamed Junction
- Dublin Road/Bothar Sion/Springfield Glen

The Dublin Road/Bothar Sion/Springfield Glen 4 arm junction, the Academy Street/R147 3 arm junction, and the Site Access/Academy Street junction have all been modelled as a signalised network. Due to the short distance between the sites the Academy Street/R147 and the Academy Street/Site Access junction they have been modelled as one traffic signal-controlled junction incorporating one stage stream to ensure rigid linking between the sites.

Pease note that these works aren't necessary for the proposed development as outlined modelling of isolated junctions and are included for information purposes only.

5 6 7 2 alidation

Pinnacle Consulting Engineers sourced the traffic signal controller staging arrangement, phasing, intergreen timings, stage green splits and cycle times. Phase minimums of 7 seconds were used for all traffic phases, 4 seconds for indicative arrow phases, and pedestrian minimums were based on the pedestrian crossing lengths. To validate the model queue lengths were measured on site by Pinnacle.

The model has been validated as well as possible with the data provided, but the traffic data does not seem to compliment the queue data, for example in the AM peak there are only 425 vehicles exiting Bothar Sion and they get approximately 45 seconds of the 164 second cycle time, yet the MMQ was measured at 55 PCU's. With this data and green split allocation, a 55 PCU MMQ cannot be achieved in the model as the traffic flows only require 28 percent of the junction green split. Also, the Google traffic layer only shows orange in the AM peak which means traffic is moving.

5 6 7 3 Saturation flow

Saturation flows where initial calculated using RR67 principles, and then adjusted to try to match the queue lengths recorded on site. Due to the issues with the provided queue data, RR67 calculated saturation flows were used in the base model.

To ensure an accurate representation of the ahead lanes on both Dublin Road arms, and to also ensure that the right turners have been modelled correctly the saturation flow for the long lane has been increased to mimic two lanes.

5 6 7 4 Lost Time

Junction lost time values were measured on site by Pinnacle Consulting Engineers. When the green splits and lost time measurements were combined, they did not match the recorded cycle time. The green split and cycle time measurements were amended within the model as part of the validation process. Neither had much of an impact when trying to get the model to mimic the observed queue lengths.

As the all red pedestrian phase is only called once every 15 minutes it has not been included within the model.

5 6 7 5 Green splits

Green split timings were measured by Pinnacle Consulting Engineers. These values were entered and adjusted slightly where appropriate in the model. However, it should be noted that the stage 1 length of 25 seconds (right turn indicative arrows) seems high for approximately 4 PCU's a cycle.

5 6 7 6 Average cycle time

The cycle time was measured onsite by Pinnacle Consulting Engineers.

5 6 7 7 Modelling Results

The base model has been created using the data formulated by Pinnacle Consulting Engineers. This model was then used to model the future year scenarios. All traffic signal timings have been optimised for the future year scenarios and existing base data. The modelling results are summarised in Table 47 to 52 below.

The Academy Street/Site Access T-junction/R147 Dublin Road/Academy Street Signalised Junction currently works with capacity running a 82 second cycle time. All scenarios operate within capacity by running the current cycle time and reoptimizing the green splits such that they complement the junction 'Y' values. The worst-case scenario is AM 2037 with development traffic which operates at a PRC of 9.8% and a DOS of 82.0s%.

The Unnamed junction operates within capacity for all scenarios. The worst-case scenario is AM 2037 with development traffic which operates with a DOS of 59.3%.

The Dublin Road/Bothar Sion/Springfield Glen currently works with capacity running a 164 second cycle time. All scenarios operate within capacity by running the current cycle time and reoptimizing the green splits such that they complement the junction 'Y' values. The worst-case scenario is AM 2037 with development traffic which operates at a PRC of 10.1% and a DOS of 77.2%.

Dublin Road/Academy Street/Site Access AM Peak (08:00 – 09:00)															
Road Name	Link	2017 AM		AM Opening Year Without Development		AM Opening Year With Development		AM Opening Year + 5 Years Without Development		AM Opening Year + 5 Years With Development		AM Opening Year + 15 Years Without Development		AM Opening Year + 15 Years With Development	
		DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)
Dublin Road Northbound Ahead Left	1/1	57.3%	8.3	60.5%	9.3	76.8%	16.6	63.6%	10.1	79.0%	17.8	66.2%	11.2	82.0%	19.7
Dublin Road Southbound Ahead Right	2/1	46.5%	5.9	49.4%	6.5	56.3%	9.3	51.9%	7.1	58.5%	9.9	54.1%	7.6	60.8%	10.6
Academy Street Right Left	3/1	21.3%	1.0	22.9%	1.1	41.7%	1.5	23.9%	1.1	44.8%	1.7	25.0%	1.2	45.1%	1.8
Academy Street Right Left	6/1	7.3%	0.2	7.7%	0.2	15.4%	0.3	8.0%	0.2	15.7%	0.4	8.3%	0.2	16.1%	0.4
Primary Access Right Left	7/1	0.0%	0.0	0.0%	0.0	72.7%	7.0	0.0%	0.0	77.5%	7.5	0.0%	0.0	77.2%	7.4
Academy Street Left Right	8/1	2.6%	0.2	2.8%	0.2	12.3%	0.9	2.9%	0.2	12.2%	0.9	3.1%	0.3	12.3%	0.9
Academy Street	9/1	6.0%	0.0	6.3%	0.0	13.8%	0.1	6.6%	0.0	14.2%	0.1	6.8%	0.0	14.4%	0.1
Primary Access	10/1	0.0%	0.0	0.0%	0.0	8.9%	0.0	0.0%	0.0	8.9%	0.0	0.0%	0.0	8.9%	0.0
Cycle Time		82		82		82		82		82		82		82	
PRC (%)		57.0%		48.9%		17.5%		41.5%		13.9%%		35.9%		9.8%	
Total Delay pcuHr		3.2		3.6		11.1		3.9		12.1		4.2		12.8	

Table 46 Dublin Road Academy Street Site Access AM Peak

Dublin Road/Academy Street/Site Access PM Peak (17:00 – 18:00)															
Road Name	Link	2017 AM		AM Opening Year Without Development		AM Opening Year With Development		AM Opening Year + 5 Years Without Development		AM Opening Year + 5 Years With Development		AM Opening Year + 15 Years Without Development		AM Opening Year + 15 Years With Development	
		DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)
Dublin Road Northbound Ahead Left	1/1	60.0%	9.0	63.7%	10.1	71.5%	13.0	67.1%	11.3	74.9%	14.7	69.9%	12.5	77.6%	16.1
Dublin Road Southbound Ahead Right	2/1	42.1%	5.0	44.4%	5.4	44.3%	5.4	46.6%	5.9	46.6%	5.9	48.6%	6.4	48.6%	6.2
Academy Street Right Left	3/1	43.7%	2.2	45.8%	2.3	63.9%	3.0	48.4%	2.4	66.5%	3.2	50.5%	2.6	69.1%	3.5
Academy Street Right Left	6/1	9.3%	0.2	9.8%	0.2	16.3%	0.4	10.2%	0.3	16.8%	0.4	10.7%	0.3	17.2%	0.4
Primary Access Right Left	7/1	0.0%	0.0	0.0%	0.0	48.3%	2.4	0.0%	0.0	48.3%	2.4	0.0%	0.0	48.3%	2.4
Academy Street Left Right	8/1	5.3%	0.4	5.6%	0.5	12.7%	0.9	5.9%	0.5	13.1%	0.9	6.2%	0.5	13.5%	0.9
Academy Street	9/1	7.6%	0.0	8.0%	0.0	10.7%	0.1	8.4%	0.0	11.1%	0.1	8.8%	0.0	11.5%	0.1
Primary Access	10/1	0.0%	0.0	0.0%	0.0	9.0%	0.0	0.0%	0.0	9.0%	0.0	0.0%	0.0	9.0%	0.0
Cycle Time		164		164		164		164		164		164		164	
PRC (%)		50.1%		41.2%		25.8%		34.0%		20.2%		28.8%		15.9%	
Total Delay pcuHr		3.9		4.3		7.2		4.8		7.9		5.2		8.5	

Table 47 Dublin Road Academy Street Site Access PM Peak

Unnamed Junction AM Peak (08:00 – 09:00)															
Road Name	Link	2017 AM		AM Opening Year Without Development		AM Opening Year With Development		AM Opening Year + 5 Years Without Development		AM Opening Year + 5 Years With Development		AM Opening Year + 15 Years Without Development		AM Opening Year + 15 Years With Development	
		DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)
Dublin Road Southbound Ahead Right	1/1	37.3%	0.3	39.6%	0.3	45.4%	0.4	38.5%	0.3	38.8%	0.3	43.5%	0.3	49.2%	0.5
Dublin Road Northbound Ahead Left	2/1	44.2%	0.4	46.6%	0.4	51.4%	0.5	54.6%	0.6	51.6%	0.5	51.0%	0.7	55.9%	0.6
Local Access Left Right	3/1	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0
Cycle Time		-		-		-		-		-		-		-	
PRC (%)		-		-		-		-		-		-		-	
Total Delay pcuHr		0.7		0.8		0.9		0.9		0.8		0.9		1.1	

Table 48 nnamed unction AM Peak

Unnamed Junction PM Peak (17:00 – 18:00)															
Road Name	Link	2017 AM		AM Opening Year Without Development		AM Opening Year With Development		AM Opening Year + 5 Years Without Development		AM Opening Year + 5 Years With Development		AM Opening Year + 15 Years Without Development		AM Opening Year + 15 Years With Development	
		DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)
Dublin Road Southbound Ahead Right	1/1	34.9%	0.3	36.9%	0.3	38.5%	0.3	38.8%	0.3	40.6%	0.3	40.4%	0.3	42.2%	0.4
Dublin Road Northbound Ahead Left	2/1	46.1%	0.4	49.0%	0.5	54.6%	0.6	51.6%	0.5	57.2%	0.7	53.8%	0.6	59.3%	0.7
Local Access Left Right	3/1	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0
Cycle Time		-		-		-		-		-		-		-	
PRC (%)		-		-		-		-		-		-		-	
Total Delay pcuHr		0.7		0.8		0.9		0.8		1.0		0.9		1.1	

Table 49 nnamed unction PM Peak

Dublin Road/Bothar Sion/Springfield Glen AM Peak (08:00 – 09:00)															
Road Name	Link	2017 AM		AM Opening Year Without Development		AM Opening Year With Development		AM Opening Year + 5 Years Without Development		AM Opening Year + 5 Years With Development		AM Opening Year + 15 Years Without Development		AM Opening Year + 15 Years With Development	
		DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)
Dublin Road Northbound	1/1	49.8%	20.6	53.1%	22.1	48.3%	21.6	57.4%	23.5	52.7%	23.4	61.7%	24.9	56.2%	24.5
Dublin Road Southbound	2/1	56.3%	26.8	59.8%	28.9	58.2%	30.8	62.9%	30.9	61.8%	33.1	65.6%	32.8	64.0%	34.8
Bothar Sion	3/2	56.8%	15.0	60.3%	16.3	76.6%	20.9	63.5%	17.5	79.0%	22.3	66.0%	18.6	81.8%	23.6
Springfield Glen	4/1	53.1%	3.3	55.7%	3.5	67.8%	4.1	59.1%	3.7	70.6%	4.4	61.7%	4.0	74.5%	4.8
Cycle Time		164		164		164		164		164		164		164	
PRC (%)		58.5		49.3%		15.5		41.8		13.9		36.3		10.1	
Total Delay pcuHr		23.0		24.9		26.6		26.8		29.0		28.6		30.9	

Table 50 Dublin Road Bothar Sion Springfield Glen AM Peak

Dublin Road/Bothar Sion/Springfield Glen AM Peak (08:00 – 09:00)															
Road Name	Link	2017 AM		AM Opening Year Without Development		AM Opening Year With Development		AM Opening Year + 5 Years Without Development		AM Opening Year + 5 Years With Development		AM Opening Year + 15 Years Without Development		AM Opening Year + 15 Years With Development	
		DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)
Dublin Road Northbound Ahead Left Right	1/1+1/2	48.4%	21.9	52.4%	23.7	48.3%	21.6	57.4%	23.5	52.7%	23.4	58.6%	27.8	60.8%	29.4
Dublin Road Southbound Right Left Ahead	2/1+2/2	48.1%	23.0	52.3%	25.1	58.2%	30.8	62.9%	30.9	61.8%	33.1	56.7%	28.2	58.9%	29.8
Bothar Sion Right Ahead Left	3/2+3/1	59.7%	15.3	63.7%	17.1	76.6%	20.9	63.5%	17.5	79.0%	22.3	74.2%	21.4	77.2%	22.9
Springfield Glen Left Ahead Right	4/1	31.4%	1.5	31.4%	1.5	67.8%	4.1	59.1%	3.7	70.6%	4.4	39.0%	1.9	39.0%	1.9
Cycle Time		164		164		164		164		164		164		164	
PRC (%)		50.8		41.4		17.5		41.8		13.9		21.3		10.1	
Total Delay pcuHr		20.4		22.6		26.6		26.8		29.0		26.8		28.4	

Table 51 Dublin Road Bothar Sion Springfield Glen PM Peak

6 Summary and Conclusion

6 1 Summary

This Traffic and Transport Assessment has been prepared by Pinnacle Consulting in support of a planning application to An Bord Pleanala for an Strategic Housing Development located on Academy Street, Navan.

The site is located on the Academy Street, 900m south east of Navan.

6 2 Development Proposals

The proposed development will consist of the following:

'The proposal relates to a residential development of 544 no. dwellings on a site of c. 15.1 hectares comprising 260 no. houses (18 no. 2 bed, 207 no. 3 bed & 35 no. 4 bed) and 198 no. apartments (46 no. 1 bed, 152 no 2 bed), 30 no. duplex apartments (15 no. 2 bed & 15 no. 3 bed), and 56 no. dwellings in corner blocks (16 no. 1 bed, 24 no. 2 bed & 16 no. 3 bed) as well as the provision of two crèches (ground floor of apartment building [c. 195 sq. m] and single storey creche in housing area [c. 443 sq. m]) Open Space of c. 2.63 hectares including playground areas; all ancillary landscape works with public lighting, planting and boundary treatments including regrading/re-profiling of site where required as well as provision of cycle paths; Provision of vehicular and pedestrian looped access through the site from 3 no. junctions located on Academy Street as well as pedestrian connection in south east of site to Dublin Road and upgrade works to junction onto the Dublin Road; along with 875 no. car parking spaces (including 4 no. car sharing spaces) and 581 cycle spaces; Surface water attenuation measures and underground attenuation systems as well as all ancillary site development works (reprofiling of site as required) as well as connection to existing public water supply and drainage services. All site development and landscape works.'

The site has an area of 15.10Ha.

6 3 Development Access

Access to the development will be via 3 No. accesses off Academy Street.

A pedestrian only access is located on the south eastern boundary of the site Along Academy Street.

6 4 Parking

A total of 875 parking spaces will be provided for the development.

Parking will be provided within the curtilage of each house. On street surface car parking will be provided for the apartments, duplexs, creches and visitor car parking spaces.

The development plan standard suggests a total of 297 spaces for the Apartment Block A-E. This is based on a mix of 1 and 2 apartments and a creche.

Without car parking dominating the proposal and taking into account the guidance set out in publications like DMURS and 'Sustainable Urban Housing – Design Standards for New Apartments' it was proposed to provide 170 spaces including 4 car club spaces for Apartment Block A-C and 48 spaces for Apartment Block D & E.

A total of 581 cycle spaces will be provided.

6 5 Servicing

The proposed development has been designed such that service vehicles, including fire tenders and refuse vehicles, can circulate internally throughout the development.

6 6 Trip Generation

For the scale and type of development proposed, it is expected the total vehicle movements generated will be 168 arrivals and 269 departures in the AM peak (two-way total of 437). The total number of vehicle movements in the PM peak hour will be 169 arrivals and 92 departures (two-way total of 261).

6 7 perational Assessment

The results of the junction analysis undertaken demonstrates that traffic from the proposed development can be accommodated on the surrounding road network and is within reasonable limits having regard to the prevailing road conditions and development location.

6 8 Conclusion

This traffic assessment has confirmed that the proposed access arrangements would adequately accommodate anticipated levels of traffic visitation and that as such the traffic generated by the development would have no material adverse impact on the operation of all junctions modelled.

It has been shown by the application of recognised assessment techniques that there is a slight increase in traffic levels arising from the development and the distribution of resultant flows around the adjacent road.

The results in terms of flows and movements can be accommodated by the neighbouring junctions with an anticipated slight uplift in congestion and delays at these locations.

This assessment has also considered the transportation aspects of the internal arrangements of the development and has concluded that the proposals would provide enhanced facilities and improved accessibility for all users of the site.

Where applicable, the proposed development is also fully compliant with DMURS.

Accordingly, there are no reasons in relation to traffic and transportation aspects why this scheme should not be granted planning permission.

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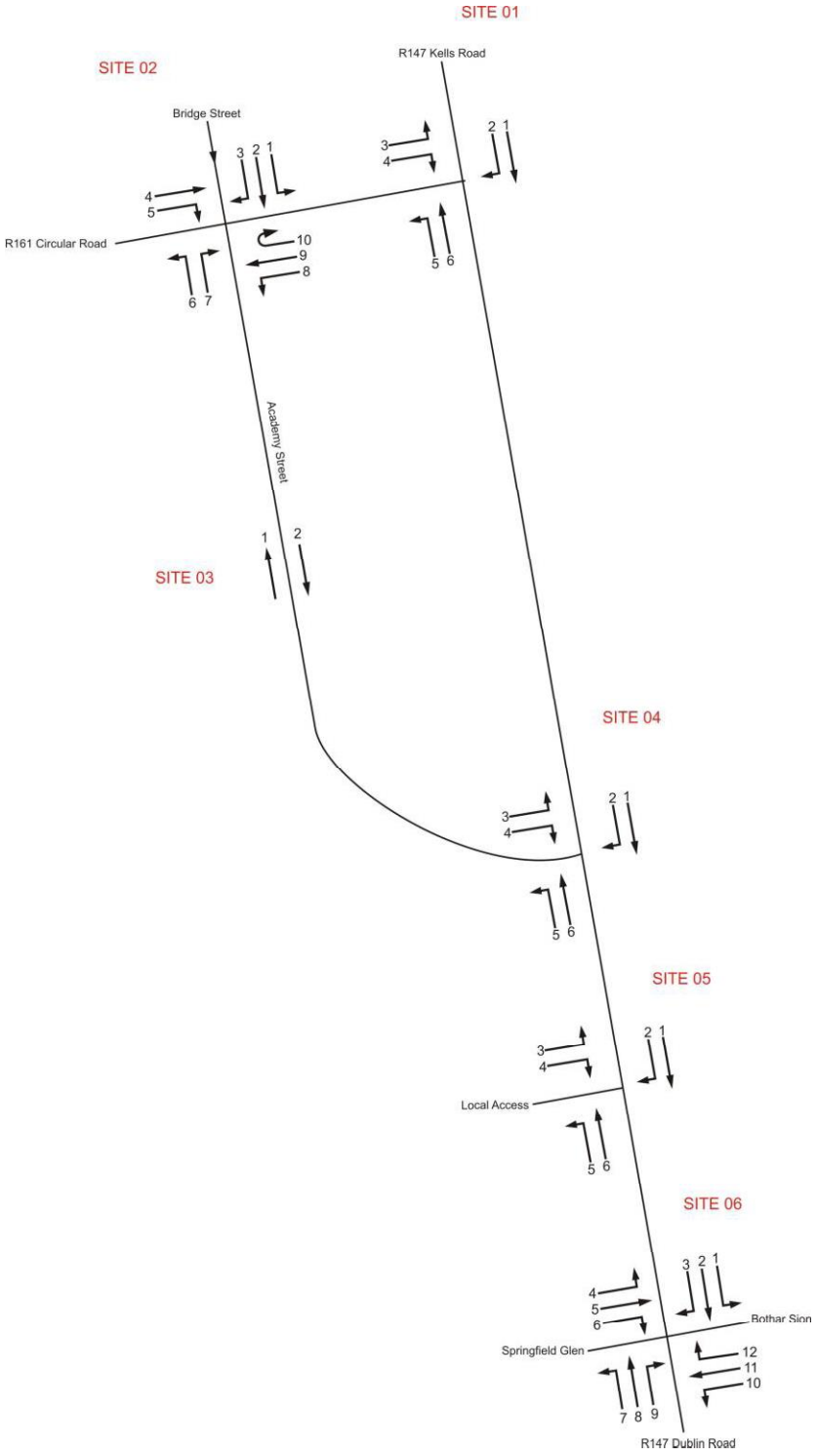
Appendix A Traffic Counts

Site Locations/Traffic Movements



Job number: Ath/17/130	Job date: 14th September 2017	Drawing No: Ath/17/130-2	abacus Transportation Surveys
Client: Waterman Moylan	Day: Thursday	Author: SPW	

ACADEMY STREET NAVAN TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION TURNING COUNTS

SEPTEMBER 2017 ACADEMY STREET NAVAN TRAFFIC COUNTS
ATH/17/130 MANUAL CLASSIFIED JUNCTION TURNING COUNTS

SEPTEMBER 2017 ACADEMY STREET NAVAN TRAFFIC COUNTS
ATH/17/130 MANUAL CLASSIFIED JUNCTION TURNING COUNTS

SEPTEMBER 2017 ACADEMY STREET NAVAN TRAFFIC COUNTS
ATH/17/130 MANUAL CLASSIFIED JUNCTION TURNING COUNTS

SEPTEMBER 2017
ATH/17/130

SITE: 06 DATE: 14th September 2017 SITE: 06 DATE: 14th September 2017 SITE: 06 DATE: 14th September 2017 SITE: 06 DATE: 14th September 2017

LOCATION: R147 Dublin Road/Springfield Glen/Bothar Sion DAY: Thursday LOCATION: R147 Dublin Road/Springfield Glen/Bothar Sion DAY: Thursday LOCATION: R147 Dublin Road/Springfield Glen/Bothar Sion DAY: Thursday LOCATION: R147 Dublin Road/Springfield Glen/Bothar Sion DAY: Thursday

| TIME | MOVEMENT 1 CAR | LGV | OGV1 | OGV2 | BUS | TOT | PCU | MOVEMENT 2 CAR | LGV | OGV1 | OGV2 | BUS | TOT | PCU | MOVEMENT 3 CAR | LGV | OGV1 | OGV2 | BUS | TOT | PCU | MOVEMENT 4 CAR | LGV | OGV1 | OGV2 | BUS | TOT | PCU | MOVEMENT 5 CAR | LGV | OGV1 | OGV2 | BUS | TOT | PCU | MOVEMENT 6 CAR | LGV | OGV1 | OGV2 | BUS | TOT | PCU | MOVEMENT 7 CAR | LGV | OGV1 | OGV2 | BUS | TOT | PCU | MOVEMENT 8 CAR | LGV | OGV1 | OGV2 | BUS | TOT | PCU | MOVEMENT 9 CAR | LGV | OGV1 | OGV2 | BUS | TOT | PCU | MOVEMENT 10 CAR | LGV | OGV1 | OGV2 | BUS | TOT | PCU | MOVEMENT 11 CAR | LGV | OGV1 | OGV2 | BUS | TOT | PCU | MOVEMENT 12 CAR | LGV | OGV1 | OGV2 | BUS | TOT | PCU | PCU's Through Junction |
|---|---|---

ABACUS TRANSPORTATION SURVEYS

SEPTEMBER 2017 ACADEMY STREET NAVAN TRAFFIC COUNTS
ATH/17/130 MANUAL CLASSIFIED JUNCTION TURNING COUNTS

SEPTEMBER 2017
ATH/17/130

SITE: 05 DATE: 14th September 2017

LOCATION: R147 Dublin Road/Local Access DAY: Thursday

SITE: 05 DATE: 14th September 2017

LOCATION: R147 Dublin Road/Local Access DAY: Thursday

	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3							MOVEMENT 4							MOVEMENT 5							MOVEMENT 6							PCU's Through Junction
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	
07:00	132	27	0	4	7	170	182	0	0	0	0	0	0	0	1	0	0	0	0	1	1	07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49	8	2	5	2	66	76	259
07:15	127	34	3	4	8	176	191	0	1	0	0	0	1	1	0	0	0	0	0	0	0	07:15	0	1	0	0	0	1	1	0	0	0	0	0	0	0	64	11	3	4	1	83	91	283
07:30	117	29	3	5	3	157	168	0	0	0	0	0	0	0	0	0	0	0	0	0	0	07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	12	2	6	1	91	101	269
07:45	127	26	3	7	5	168	184	0	0	0	0	0	0	0	0	0	0	0	0	0	0	07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	121	17	0	8	3	149	162	346
H/TOT	503	116	9	20	23	671	725	0	1	0	0	0	1	1	1	0	0	0	0	1	1	H/TOT	0	1	0	0	0	1	1	0	0	0	0	0	0	0	304	48	7	23	7	389	429	1157
08:00	156	21	5	6	3	191	204	0	0	0	0	0	0	0	0	0	0	0	0	0	0	08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	150	12	3	2	1	168	173	377
08:15	114	12	2	7	3	138	151	0	0	0	0	0	0	0	0	0	0	0	0	0	0	08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	191	20	3	3	7	224	236	388
08:30	120	14	3	9	5	151	169	0	0	0	0	0	0	0	0	0	0	0	0	0	0	08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	170	13	2	4	7	196	209	378
08:45	163	12	3	6	3	187	199	0	0	0	0	0	0	0	0	0	0	0	0	0	0	08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	193	18	1	7	6	225	241	440
H/TOT	553	59	13	28	14	667	724	0	0	0	0	0	0	0	0	0	0	0	0	0	0	H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	704	63	9	16	21	813	859	1583
09:00	138	17	3	8	8	174	194	0	0	0	0	0	0	0	0	0	0	0	0	0	0	09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	196	13	5	8	4	226	243	437
09:15	143	9	1	4	3	160	169	0	0	0	0	0	0	0	0	0	0	0	0	0	0	09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	146	13	3	7	8	177	196	364
09:30	131	17	3	4	1	156	164	0	0	0	0	0	0	0	0	0	0	0	0	0	0	09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	157	14	5	9	5	190	209	373
09:45	100	13	2	8	4	127	142	0	0	0	0	0	0	0	0	0	0	0	0	0	0	09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148	14	2	6	2	172	183	325
H/TOT	512	56	9	24	16	617	669	0	0	0	0	0	0	0	0	0	0	0	0	0	0	H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	647	54	15	30	19	765	831	1499
P/TOT	1568	231	31	72	53	1955	2117	0	1	0	0	0	1	1	1	0	0	0	0	1	1	P/TOT	0	1	0	0	0	1	1	0	0	0	0	0	0	0	1655	165	31	69	47	1967	2119	4239

	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3							MOVEMENT 4							MOVEMENT 5							MOVEMENT 6							PCU's Through Junction
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	
16:00	147	20	1	1	3	172	177	1	0	0	0	0	1	1	0	0	0	0	0	0	0	16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	170	24	2	3	1	200	206	384
16:15	112	18	3	7	4	144	159	0	0	0	0	0	0	0	2	0	0	0	0	2	2	16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	181	24	4	0	3	212	217	378
16:30	133	17	5	1	2	158	164	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	178	27	2	3	5	215	225	389
16:45	137	21	2	3	2	165	172	1	0	0	0	0	1	1	0	0	0	0	0	0	0	16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	161	21	3	5	6	196	210	383
H/TOT	529	76	11	12	11	639	671	2	0	0	0	0	2	2	2	0	0	0	0	2	2	H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	690	96	11	11	15	823	858	1533
17:00	140	12	1	2	1	156	160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	196	29	4	1	3	233	239	399
17:15	163	21	3	2	1	190	195	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	24	2	2	1	189	194	389
17:30	149	19	2	0	1	171	173	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	201	16	3	1	3	224	230	403
17:45	144	4	2	0	0	150	151	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	211	15	1	3	1	231	236	387
H/TOT	596	56	8	4	3	667	679	0	0	0	0	0	0	0	0	0	0	0	0	0	0	H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	768	84	10	7	8	877	899	1578
18:00	182	11	4	1	1	199	203	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18:00	0	0	0	0	0	0	0	0	0	1	0	0	1	2	199	21	2	2	3	227	234	438
18:15	138	10	1	0	1	150	152	0	0	0	0	0	0	0	0	0	1	0	0	1	2	18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	148	14	0	3	3	168	175	328
18:30	126	4	0	1	1	132	134	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	186	20	2	1	2	211	215	350
18:45	104	6	3	1	0	114	117	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	214	16	1	0	6	237	244	360
H/TOT	550	31	8	3	3	595	606	0	0	0	0	0	0	0	0	0	1	0	0	1	2	H/TOT	0	0	0	0	0	0	0	0	0	1	0	0	1	2	747	71	5	6	14	843	867	1476
P/TOT	1675	163	27	19	17	1901	1956	2	0	0	0	0	2	2	2	0	1	0	0	3	4	P/TOT	0	0	0	0	0	0	0	0	0	1	0	0	1	2	2205	251	26	24	37	2543	2624	4587

SITE: 04 DATE: 14th September 2017 SITE: 04 DATE: 14th September 2017

LOCATION: R147 Dublin Road/Academy Street DAY: Thursday LOCATION: R147 Dublin Road/Academy Street DAY: Thursday

	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3							MOVEMENT 4							MOVEMENT 5							MOVEMENT 6							PCU's Through Junction
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	
07:00	125	26	0	4	7	162	174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	07:00	7	1	0	0	0	8	8	4	1	0	0	0	5	5	46	7	2	5	2	62	72	259
07:15	116	33	3	4	8	164	179	0	0	0	0	0	0	0	5	1	1	0	0	7	8	07:15	11	2	0	0	0	13	13	6	2	0	2	0	10	13	58	9	3	2	1	73	78	290
07:30	102	29	3	5	3	142	153	0	0	0	0	0	0	0	2	2	0	0	0	4	4	07:30	15	0	0	0	0	15	15	6	1	0	0	0	7	7	64	11	2	6	1	84	94	273
07:45	118	26	3	7	5	159	175	0	0	0	0	0	0	0	1	1	0	0	0	2	2	07:45	9	0	0	0	0	9	9	14	2	0	0	0	16	16	107	15	0	8	3	133	146	348
H/TOT	461	114	9	20	23	627	681	0	0	0	0	0	0	0	8	4	1	0	0	13	14	**H/TOT**	42	3	0	0	0	45	45	30	6	0	2	0	38	41	275	42	7	21	7	352	390	1169
08:00	148	21	5	6	3	183	196	1	1	0	0	0	2	2	3	1	0	0	0	4	4	08:00	8	0	0	0	0	8	8	17	2	0	0	1	20	21	133	10	3	2	0	148	152	383
08:15	106	12	2	7	3	130	143	1	0	0	0	0	1	1	2	0	1	0	0	3	4	08:15	8	0	0	0	0	8	8	30	2	1	0	1	34	36	161	18	2	3	6	190	201	392
08:30	111	13	3	9	5	141	159	0	0	0	0	0	0	0	4	0	0	0	1	5	6	08:30	9	1	0	0	0	10	10	29	2	0	0	1	32	33	141	11	2	4	6	164	176	384
08:45	153	11	3	6	3	176	188	4	0	0	0	0	4	4	4	1	0	0	0	5	5	08:45	10	1	0	0	0	11	11	30	1	0	0	0	31	31	163	17	1	7	6	194	210	449
H/TOT	518	57	13	28	14	630	687	6	1	0	0	0	7	7	13	2	1	0	1	17	19	**H/TOT**	35	2	0	0	0	37	37	106	7	1	0	3	117	121	598	56	8	16	18	696	739	1609
09:00	130	15	3	8	8	164	184	3	0	0	0	0	3	3	8	2	0	0	0	10	10	09:00	8	2	0	0	0	10	10	37	1	0	0	1	39	40	159	12	5	8	3	187	203	450
09:15	130	6	0	4	3	143	151	11	2	1	0	0	14	15	2	1	0	0	0	3	3	09:15	13	3	1	0	0	17	18	24	1	2	0	0	27	28	122	12	1	7	8	150	168	382
09:30	126	13	2	4	1	146	153	2	2	0	0	0	4	4	2	2	0	0	0	4	4	09:30	5	4	1	0	0	10	11	19	3	0	1	0	23	24	138	11	5	8	5	167	185	381
09:45	94	12	2	8	4	120	135	2	0	0	0	0	2	2	4	1	1	0	0	6	7	09:45	6	1	0	0	0	7	7	12	3	0	0	0	15	15	136	11	2	6	2	157	168	334
H/TOT	480	46	7	24	16	573	624	18	4	1	0	0	23	24	16	6	1	0	0	23	24	**H/TOT**	32	10	2	0	0	44	45	92	8	2	1	1	104	107	555	46	13	29	18	661	723	1546
P/TOT	1459	217	29	72	53	1830	1991	24	5	1	0	0	30	31	37	12	3	0	1	53	56	**P/TOT**	109	15	2	0	0	126	127	228	21	3	3	4	259	268	1428	144	28	66	43	1709	1852	4324

	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3							MOVEMENT 4							MOVEMENT 5							MOVEMENT 6							PCU's Through Junction
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	
16:00	134	17	1	1	3	156	161	3	1	0	0	0	4	4	7	1	0	0	0	8	8	16:00	14	3	0	0	0	17	17	32	2	1	0	0	35	36	138	22	1	3	1	165	170	396
16:15	102	16	3	7	4	132	147	0	1	0	0	0	1	1	5	0	0	0	0	5	5	16:15	10	2	0	0	0	12	12	41	2	0	0	0	43	43	142	22	4	0	3	171	176	384
16:30	120	17	4	1	2	144	149	0	0	0	0	0	0	0	1	0	0	0	0	1	1	16:30	13	0	1	0	0	14	15	31	6	0	0	0	37	37	147	21	2	3	5	178	188	390
16:45	132	21	2	3	2	160	167	3	0	0	0	0	3	3	2	0	0	0	0	2	2	16:45	6	0	0	0	0	6	6	21	7	0	0	0	28	28	140	14	3	5	6	168	182	388
H/TOT	488	71	10	12	11	592	624	6	2	0	0	0	8	8	15	1	0	0	0	16	16	**H/TOT**	43	5	1	0	0	49	50	125	17	1	0	0	143	144	567	79	10	11	15	682	716	1557
17:00	128	11	1	2	1	143	147	4	0	0	0	0	4	4	8	1	0	0	0	9	9	17:00	12	1	0	0	0	13	13	32	5	1	0	0	38	39	164	24	3	1	3	195	201	412
17:15	146	20	2	2	1	171	176	3	1	0	0	0	4	4	7	0	0	0	0	7	7	17:15	17	1	1	0	0	19	20	21	7	0	0	0	28	28	139	17	2	2	1	161	166	400
17:30	137	18	2	0	1	158	160	2	1	0	0	0	3	3	8	1	0	0	0	9	9	17:30	12	1	0	0	0	13	13	36	3	0	0	0	39	39	165	13	3	1	3	185	191	415
17:45	135	4	2	0	0	141	142	1	0	0	0	0	1	1	5	3	0	0	0	8	8	17:45	9	0	0	0	0	9	9	41	1	1	0	0	43	44	170	14	0	3	1	188	193	396
H/TOT	546	53	7	4	3	613	625	10	2	0	0	0	12	12	28	5	0	0	0	33	33	**H/TOT**	50	3	1	0	0	54	55	130	16	2	0	0	148	149	638	68	8	7	8	729	750	1623
18:00	170	10	4	1	1	186	190	1	0	0	0	0	1	1	5	0	0	0	0	5	5	18:00	12	1	0	0	0	13	13	26	2	1	0	0	29	30	173	19	1	2	3	198	204	443
18:15	128	8	1	0	1	138	140	1	0	0	0	0	1	1	2	0	0	0	0	2	2	18:15	10	2	0	0	0	12	12	28	2	0	0	0	30	30	120	12	1	3	3	139	146	331
18:30	115	4	0	1	1	121	123	1	0	0	0	0	1	1	3	1	0	0	0	4	4	18:30	11	0	0	0	0	11	11	24	4	0	0	0	28	28	162	16	2	1	2	183	187	355
18:45	98	6	3	1	0	108	111	3	0	0	0	0	3	3	4	0	0	0	0	4	4	18:45	6	0	0	0	0	6	6	25	1	1	0	0	27	28	189	15	0	0	6	210	216	367
H/TOT	511	28	8	3	3	553	564	6	0	0	0	0	6	6	14	1	0	0	0	15	15	**H/TOT**	39	3	0	0	0	42	42	103	9	2	0	0	114	115	644	62	4	6	14	730	754	1496
P/TOT	1545	152	25	19	17	1758	1812	22	4	0	0	0	26	26	57	7	0	0	0	64	64	**P/TOT**	132	11	2	0	0	145	146	358	42	5	0	0	405	408	1849	209	22	24	37	2141	2220	4676

ABACUS TRANSPORTATION SURVEYS

ACADEMY STREET NAVAN TRAFFIC COUNTS **SEPTEMBER 2017**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **ATH/17/130**

SITE: 03 DATE: 14th September 2017

LOCATION: Academy Street Link Count DAY: Thursday

	MOVEMENT 1							MOVEMENT 2						
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
07:00	5	0	1	0	0	6	7	6	2	0	0	0	8	8
07:15	3	3	0	0	0	6	6	9	3	1	0	0	13	14
07:30	8	1	1	2	0	12	15	10	3	2	0	0	15	16
07:45	10	2	0	0	0	12	12	6	2	0	0	0	8	8
H/TOT	26	6	2	2	0	36	40	31	10	3	0	0	44	46
08:00	14	1	0	0	1	16	17	7	0	0	0	0	7	7
08:15	32	5	1	0	1	39	41	7	1	1	0	0	9	10
08:30	28	1	0	0	1	30	31	10	1	0	0	0	11	11
08:45	30	1	0	0	0	31	31	12	2	0	0	0	14	14
H/TOT	104	8	1	0	3	116	120	36	4	1	0	0	41	42
09:00	33	1	0	0	1	35	36	11	2	1	0	0	14	15
09:15	28	3	2	0	0	33	34	11	4	1	0	0	16	17
09:30	22	5	1	0	0	28	29	9	3	1	0	0	13	14
09:45	14	2	1	0	0	17	18	8	2	0	0	0	10	10
H/TOT	97	11	4	0	1	113	116	39	11	3	0	0	53	55
P/TOT	227	25	7	2	4	265	275	106	25	7	0	0	138	142

	MOVEMENT 1							MOVEMENT 2						
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
16:00	32	2	1	0	0	35	36	20	5	0	0	0	25	25
16:15	40	2	0	0	0	42	42	8	2	0	0	0	10	10
16:30	34	7	0	0	0	41	41	13	1	1	0	0	15	16
16:45	23	9	0	0	0	32	32	11	0	0	0	0	11	11
H/TOT	129	20	1	0	0	150	151	52	8	1	0	0	61	62
17:00	33	7	2	0	0	42	43	18	3	0	0	0	21	21
17:15	26	9	0	0	0	35	35	18	1	1	0	0	20	21
17:30	34	1	0	0	0	35	35	21	2	0	0	0	23	23
17:45	37	1	1	0	0	39	40	15	4	0	0	0	19	19
H/TOT	130	18	3	0	0	151	153	72	10	1	0	0	83	84
18:00	28	1	1	0	0	30	31	19	2	0	0	0	21	21
18:15	26	2	0	0	0	28	28	9	2	0	0	0	11	11
18:30	23	2	0	0	0	25	25	14	1	0	0	0	15	15
18:45	25	1	1	0	0	27	28	7	0	0	0	0	7	7
H/TOT	102	6	2	0	0	110	111	49	5	0	0	0	54	54
P/TOT	361	44	6	0	0	411	414	173	23	2	0	0	198	199

SITE: 02 DATE: 14th September 2017 SITE: 02 DATE: 14th September 2017 SITE: 02 DATE: 14th September 2017 SITE: 02 DATE: 14th September 2017

LOCATION: Bridge Street/R161 Circular Road/Academy Street DAY: Thursday LOCATION: Bridge Street/R161 Circular Road/Academy Street DAY: Thursday LOCATION: Bridge Street/R161 Circular Road/Academy Street DAY: Thursday LOCATION: Bridge Street/R161 Circular Road/Academy Street DAY: Thursday

	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3						
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
07:00	20	5	0	0	3	28	31	2	0	0	0	0	2	2	11	1	0	0	0	12	12
07:15	18	1	0	0	3	22	25	3	2	0	0	0	5	5	2	4	0	0	1	7	8
07:30	22	2	0	0	2	26	28	3	0	0	0	0	3	3	7	1	0	1	0	9	10
07:45	29	3	0	0	2	34	36	3	2	0	0	0	5	5	12	1	0	0	0	13	13
H/TOT	89	11	0	0	10	110	120	11	4	0	0	0	15	15	32	7	0	1	1	41	43
08:00	33	5	0	1	4	43	48	3	1	0	0	0	4	4	7	1	0	0	1	9	10
08:15	43	3	0	0	7	53	60	3	0	0	0	0	3	3	5	0	1	0	1	7	9
08:30	61	7	1	0	3	72	76	7	0	0	0	0	7	7	11	0	0	0	0	11	11
08:45	34	2	1	0	2	39	42	2	1	0	0	0	3	3	14	3	0	0	1	18	19
H/TOT	171	17	2	1	16	207	225	15	2	0	0	0	17	17	37	4	1	0	3	45	49
09:00	51	2	1	0	1	55	57	4	3	1	0	0	8	9	19	1	0	0	0	20	20
09:15	68	1	0	0	2	71	73	3	3	1	0	0	7	8	14	1	0	0	1	16	17
09:30	47	3	1	0	1	52	54	6	0	0	0	0	6	6	14	1	1	0	1	17	19
09:45	46	4	0	0	1	51	52	0	0	1	0	0	1	2	9	3	0	0	0	12	12
H/TOT	212	10	2	0	5	229	235	13	6	3	0	0	22	24	56	6	1	0	2	65	68
P/TOT	472	38	4	1	31	546	580	39	12	3	0	0	54	56	125	17	2	1	6	151	159

	MOVEMENT 4							MOVEMENT 5						
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
07:00	23	9	0	0	0	32	32	1	0	0	0	0	1	1
07:15	18	5	0	0	1	24	25	1	1	0	0	0	2	2
07:30	33	12	1	0	4	50	55	1	1	0	0	0	2	2
07:45	17	6	1	1	2	27	31	0	0	1	0	0	1	2
H/TOT	91	32	2	1	7	133	142	3	2	1	0	0	6	7
08:00	33	5	1	1	1	41	44	1	0	0	0	0	1	1
08:15	22	4	1	0	1	28	30	1	0	0	0	0	1	1
08:30	26	6	1	4	1	38	45	0	1	0	0	0	1	1
08:45	19	4	1	0	1	25	27	4	0	0	0	0	4	4
H/TOT	100	19	4	5	4	132	145	6	1	0	0	0	7	7
09:00	17	2	0	0	0	19	19	2	0	0	0	0	2	2
09:15	20	7	0	0	0	27	27	1	0	0	0	0	1	1
09:30	17	5	1	0	0	23	24	2	0	0	0	0	2	2
09:45	20	10	3	1	2	36	41	4	1	0	1	0	6	7
H/TOT	74	24	4	1	2	105	110	9	1	0	1	0	11	12
P/TOT	265	75	10	7	13	370	397	18	4	1	1	0	24	26

	MOVEMENT 6							MOVEMENT 7						
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
07:00	4	0	1	0	0	5	6	0	0	0	0	0	0	0
07:15	3	1	0	0	0	4	4	1	2	0	0	0	3	3
07:30	8	0	1	0	0	9	10	0	0	0	2	0	2	5
07:45	11	3	0	0	0	14	14	4	1	0	0	0	5	5
H/TOT	26	4	2	0	0	32	33	5	3	0	2	0	10	13
08:00	10	1	0	0	1	12	13	3	0	0	0	0	3	3
08:15	22	3	1	0	1	27	29	7	2	0	0	0	9	9
08:30	21	2	0	0	0	23	23	4	0	0	0	0	4	4
08:45	25	0	0	0	0	25	25	5	0	0	0	0	5	5
H/TOT	78	6	1	0	2	87	90	19	2	0	0	0	21	21
09:00	21	1	0	0	1	23	24	10	0	0	0	0	10	10
09:15	15	2	0	0	0	17	17	6	0	2	0	0	8	9
09:30	12	3	1	0	0	16	17	8	2	0	0	0	10	10
09:45	10	1	2	0	0	13	14	6	1	0	1	0	8	9
H/TOT	58	7	3	0	1	69	72	30	3	2	1	0	36	38
P/TOT	162	17	6	0	3	188	194	54	8	2	3	0	67	72

	MOVEMENT 8							MOVEMENT 9							MOVEMENT 10							PCU's Through Junction
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	
###	1	0	0	0	0	1	1	39	14	0	0	1	54	55	1	1	0	0	0	2	2	142
###	4	1	1	0	0	6	7	50	8	2	2	3	65	72	3	2	0	0	0	5	5	155
###	6	1	2	0	0	9	10	44	14	1	2	1	62	66	0	0	0	0	0	0	0	168
###	2	0	0	0	0	2	2	61	11	0	3	2	77	83	0	1	0	0	0	1	1	191
H/TOT	13	2	3	0	0	18	20	194	47	3	7	7	258	276	4	4	0	0	0	8	8	676
###	4	0	0	0	0	4	4	77	11	2	1	3	94	99	0	0	0	0	0	0	0	226
###	8	3	0	0	0	11	11	82	9	2	2	3	98	105	0	0	0	0	0	0	0	255
###	6	0	0	0	0	6	6	65	5	4	0	1	75	78	2	1	0	0	0	3	3	253
###	9	1	1	0	0	11	12	74	8	0	0	3	85	88	1	0	0	0	0	1	1	225
H/TOT	27	4	1	0	0	32	33	298	33	8	3	10	352	370	3	1	0	0	0	4	4	959
###	4	0	0	0	0	4	4	70	8	3	1	2	84	89	1	0	0	0	0	1	1	234
###	2	1	0	0	0	3	3	48	3	3	0	4	58	64	1	1	0	0	0	2	2	220
###	5	1	1	0	0	7	8	67	9	4	3	1	84	91	1	0	0	0	0	1	1	229
###	10	2	0	0	0	12	12	61	15	2	1	1	80	83	2	0	0	0	0	2	2	234
H/TOT	21	4	1	0	0	26	27	246	35	12	5	8	306	327	5	1	0	0	0	6	6	917
P/TOT	61	10	5	0	0	76	79	738	115	23	15	25	916	972	12	6	0	0	0	18	18	2552

	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3						
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
16:00	85	6	0	0	3	94	97	7	3	0	0	0	10	10	18	1	0	0	1	20	21
16:15	68	3	1	0	2	74	77	2	2	0	0	0	4	4	11	4	1	0	0	16	17
16:30	44	7	0	0	0	51	51	4	0	0	0	0	4	4	16	2	0	0	1	19	20
16:45	71	9	0	0	0	80	80	8	0	0	0	0	8	8	10	0	0	0	1	11	12
H/TOT	268	25	1	0	5	299	305	21	5	0	0	0	26	26	55	7	1	0	3	66	70
17:00	70	9	0	0	0	79	79	5	0	0	0	0	5	5	13	1	0	0	0	14	14
17:15	63	6	1	0	1	71	73	5	1	1	0	0	7	8	18	2	0	0	1	21	22
17:30	70	7	0	0	2	79	81	7	0	0	0	0	7	7	22	2	0	0	1	25	26
17:45	73	4	1	0	0	78	79	5	0	0	0	0	5	5	17	0	0	0	0	17	17
H/TOT	276	26	2	0	3	307	311	22	1	1	0	0	24	25	70	5	0	0	2	77	79
18:00	92	3	0	0	0	95	95	5	0	0	0	0	5	5	13	0	0	0	0	13	13
18:15	64	4	1	0	1	70	72	5	0	0	0	0	5	5	10	1	0	0	2	13	15
18:30	61	1	1	0	1	64	66	3	0	0	0	0	3	3	19	1	0	0	0	20	20
18:45	41	5	1	0	0	47	48	5	0	0	0	0	5	5	14	1	0	0	0	15	15
H/TOT	258	13	3	0	2	276	280	18	0	0	0	0	18	19	56	3	0	0	2	61	63
P/TOT	802	64	6	0	10	882	895	61	6	1	0	0	68	69	181	15	1	0	7	204	212

	MOVEMENT 4							MOVEMENT 5						
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
16:00	30	4	0	0	0	34	34	0	0	0	0	0	0	0
16:15	32	6	0	2	7	47	57	1	0	0	0	0	1	1
16:30	15	5	0	0	2	22	24	0	0	0	0	0	0	0
16:45	35	6	3	3	0	47	52	2	0	0	0	0	2	2
H/TOT	112	21	3	5	9	150	167	3	0	0	0	0	3	3
17:00	17	4	0	0	0	21	21	1	0	0	0	0	1	1
17:15	36	7	2	2	0	47	51	3	0	0	0	0	3	3
17:30	43	0	1	0	0	44	45	5	1	0	0	0	6	6
17:45	40	4	0	0	0	44	44	5	0	0	0	0	5	5
H/TOT	136	15	3	2	0	156	160	14	1	0	0	0	15	15
18:00	25	3	0	1	0	29	30	2	0	1	0	0	3	4
18:15	31	5	0	1	0	37	38	4	0	0	0	0	4	4
18:30	23	1	1	1	0	26	28	2	0	0	0	0	2	2
18:45	23	5	0	0	0	28	28	0	0	0	0	0	0	0
H/TOT	102	14	1	3	0	120	124	8	0	1	0	0	9	10
P/TOT	350	50	7	10	9	426	452	25	1	1	0	0	27	28

	MOVEMENT 6							MOVEMENT 7						
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
16:00	20	2	1	0	1	24	26	11	0	2	0	0	13	14
16:15	30	1	0	0	0	31	31	7	1	0	0	0	8	8
16:30	22	2	0	0	0	24	24	11	2	0	0	0	13	13
16:45	16	6	0	0	0	22	22	10	4	0	0	0	14	14
H/TOT	88	11	1	0	1	101	103	39	7	2	0	0	48	49
17:00	23	2	0	0	0	25	25	12	4	1	0	0	17	18
17:15	17	5	0	0	0	22	22	8	1	0	0	0	9	9
17:30	21	2	0	0	0	23	23	13	1	0	0	0	14	14
17:45	28	3	1	0	0	32	33	13	1	0	0	0	14	14
H/TOT	89	12	1	0	0	102	103	46	7	1	0	0	54	55
18:00	13	2	1	0	0	16	17	9	2	0	0	0	11	11
18:15	22	2	1	0	0	25	26	4	1	0	0	0	5	5
18:30	20	3	0	0	0	23	23	7	1	0	0	0	8	8
18:45	18	0	1	0	0	19	20	7	0	0	0	0	7	7
H/TOT	73	7	3	0	0	83	85	27	4	0	0	0	31	31
P/TOT	250	30	5	0	1	286	290	112	18	3	0	0	133	135

	MOVEMENT 8							MOVEMENT 9							MOVEMENT 10							PCU's Through Junction
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	
###	4	1	0	0	0	5	5	71	8	1	1	1	82	85	1	0	0	0	0	1	1	292
###	3	2	0	0	0	5	5	68	4	0	0	3	75	78	3	0	0	0	0	3	3	280
###	9	0	0	0	0	9	9	50	15	1	1	4	71	77	0	0	0	0	0	0	0	222
###	2	0	0	0	0	2	2	72	3	2	1	4	82	88	3	1	0	0	0	4	4	285
H/TOT	18	3	0	0	0	21	21	261	30	4	3	12	310	328	7	1	0	0	0	8	8	1078
###	7	1	0	0	0	8	8	77	11	0	2	3	93	99	0	0	0	0	0	0	0	269
###	5	2	0	0	0	7	7	58	10	0	0	0	68	68	2	1	0	0	0	3	3	265
###	7	0	0	0	0	7	7	72	8	0	2	2	84	89	2	0	0	0	0	2	2	299
###	2	3	0	0	0	5	5	77	2	0	0	1	80	81	1	0	0	0	0	1	1	283
H/TOT	21	6	0	0	0	27	27	294	31	0	4	6	325	336	5	1	0	0	0	6	6	1116
###	10	2	0	0	0	12	12	86	5	1	2	2	96	101	1	0	0	0	0	1	1	288
###	3	2	0	0	0	5	5	61	2	2	1	2	68	72	3	0	0	0	0	3	3	245
###	11	0	0	0	0	11	11	68	10	2	3	1	84	90	3	0	0	0	0	3	3	253
###	4	0	0	0	0	4	4	56	2	1	0	1	60	62	4	2	0	0	0	6	6	194
H/TOT	28	4	0	0	0	32	32	271	19	6	6	6	308	325	11	2	0	0	0	13	13	980
P/TOT	67	13	0	0	0	80	80	816	80	10	13	24	943	989	23	4	0	0	0	27	27	3174

SITE: 01 DATE: 14th September 2017

LOCATION: R147 Kells Road/Dublin Road/R161 Circular Road DAY: Thursday

TIME	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3							MOVEMENT 4							MOVEMENT 5							MOVEMENT 6							PCU's Through Junction
	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU		CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	
07:00	99	18	0	4	4	125	134	27	12	0	0	0	39	39	18	7	0	0	0	25	25	07:00	26	8	0	0	3	37	40	14	3	0	0	1	18	19	32	4	2	5	1	44	53	310
07:15	97	29	3	4	5	138	150	31	7	1	2	2	43	48	21	6	0	0	1	28	29	07:15	19	4	0	0	3	26	29	26	4	2	0	1	33	35	37	6	2	2	0	47	51	341
07:30	69	25	3	3	1	101	107	27	12	2	2	1	44	49	22	10	1	0	4	37	42	07:30	33	4	0	2	2	41	46	23	3	1	0	0	27	28	43	10	1	6	1	61	70	341
07:45	90	21	3	7	2	123	136	29	7	0	1	1	38	40	22	6	1	1	1	31	34	07:45	28	5	0	0	3	36	39	34	5	0	2	1	42	46	74	11	0	6	2	93	103	397
H/TOT	355	93	9	18	12	487	527	114	38	3	5	4	164	176	83	29	2	1	6	121	129	**H/TOT**	106	21	0	2	11	140	154	97	15	3	2	3	120	127	186	31	5	19	4	245	276	1389
08:00	111	17	5	6	1	140	151	45	4	1	1	3	54	59	31	5	1	2	3	42	48	08:00	38	5	0	0	2	45	47	36	7	1	0	0	44	45	100	4	2	2	0	108	112	461
08:15	67	8	2	7	1	85	96	37	7	2	2	1	49	54	32	5	1	0	6	44	51	08:15	40	4	0	0	2	46	48	53	5	0	0	2	60	62	110	13	3	3	4	133	142	453
08:30	61	8	2	8	3	82	96	36	5	2	0	0	43	44	43	9	1	3	2	58	64	08:30	50	5	1	1	2	59	63	37	1	2	0	1	41	43	108	10	0	4	6	128	139	450
08:45	125	9	2	6	1	143	153	25	3	1	0	0	29	30	27	4	1	0	1	33	35	08:45	32	2	1	0	2	37	40	59	6	0	0	3	68	71	108	12	1	7	3	131	144	471
H/TOT	364	42	11	27	6	450	497	143	19	6	3	4	175	186	133	23	4	5	12	177	198	**H/TOT**	160	16	2	1	8	187	197	185	19	3	0	6	213	221	426	39	6	16	13	500	537	1835
09:00	78	13	2	8	7	108	126	28	2	2	1	0	33	35	24	2	0	0	0	26	26	09:00	55	2	1	0	1	59	61	47	6	1	0	2	56	59	120	8	4	8	1	141	154	461
09:15	89	8	1	4	1	103	110	19	1	3	0	0	23	25	43	9	2	0	0	54	55	09:15	52	0	0	0	2	54	56	32	4	0	0	4	40	44	92	9	1	7	4	113	127	416
09:30	95	9	1	4	0	109	115	31	6	3	2	0	42	46	40	4	1	0	0	45	46	09:30	33	6	1	0	1	41	43	42	4	2	1	1	50	53	98	9	3	7	4	121	136	438
09:45	60	7	1	8	1	77	89	33	9	1	1	0	44	46	38	10	2	2	0	52	56	09:45	36	5	1	0	3	45	49	40	8	1	0	1	50	52	100	4	2	6	1	113	123	413
H/TOT	322	37	5	24	9	397	440	111	18	9	4	0	142	152	145	25	5	2	0	177	182	**H/TOT**	176	13	3	0	7	199	208	161	22	4	1	8	196	207	410	30	10	28	10	488	539	1728
P/TOT	1041	172	25	69	27	1334	1463	368	75	18	12	8	481	514	361	77	11	8	18	475	509	**P/TOT**	442	50	5	3	26	526	558	443	56	10	3	17	529	555	1022	100	21	63	27	1233	1352	4951

SITE: 01 DATE: 14th September 2017

LOCATION: R147 Kells Road/Dublin Road/R161 Circular Road DAY: Thursday

TIME	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3							MOVEMENT 4							MOVEMENT 5							MOVEMENT 6							PCU's Through Junction
	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU		CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	
16:00	62	13	1	1	0	77	79	30	4	0	1	0	35	36	52	5	2	0	0	59	60	16:00	75	5	0	0	3	83	86	46	5	1	0	1	53	55	99	18	0	3	0	120	124	440
16:15	39	13	2	7	1	62	73	29	2	0	0	1	32	33	47	6	0	2	6	61	70	16:15	63	4	1	0	3	71	75	45	4	0	0	2	51	53	102	18	4	0	1	125	128	431
16:30	81	12	4	1	2	100	105	26	7	1	1	2	37	41	31	9	0	0	2	42	44	16:30	39	5	0	0	0	44	44	33	8	0	0	2	43	45	115	13	2	3	3	136	144	423
16:45	79	12	1	3	2	97	103	43	1	1	1	0	46	48	63	11	2	3	0	79	84	16:45	56	9	1	0	0	66	67	34	3	1	0	4	42	47	108	11	2	5	2	128	138	486
H/TOT	261	50	8	12	5	336	361	128	14	2	3	3	150	158	193	31	4	5	8	241	258	**H/TOT**	233	23	2	0	6	264	271	158	20	2	0	9	189	199	424	60	8	11	6	509	533	1779
17:00	73	6	1	2	1	83	87	33	5	0	1	1	40	42	40	12	1	0	0	53	54	17:00	59	5	0	0	0	64	64	51	7	0	1	2	61	64	121	18	3	0	1	143	146	457
17:15	88	14	1	1	0	104	106	24	4	0	0	0	28	28	48	8	2	1	0	59	61	17:15	61	7	1	1	1	71	74	41	9	0	0	0	50	50	105	8	2	2	1	118	123	442
17:30	74	14	2	0	0	90	91	29	4	0	2	1	36	40	63	3	1	0	1	68	70	17:30	65	5	0	0	1	71	72	52	4	0	0	1	57	58	121	10	3	1	2	137	142	472
17:45	75	0	1	0	0	76	77	21	3	0	0	0	24	24	66	5	0	0	0	71	71	17:45	61	4	1	0	0	66	67	59	2	0	0	1	62	63	116	15	0	3	0	134	138	439
H/TOT	310	34	5	3	1	353	360	107	16	0	3	2	128	134	217	28	4	1	1	251	255	**H/TOT**	246	21	2	1	2	272	276	203	22	0	1	4	230	235	463	51	8	6	4	532	548	1809
18:00	91	8	4	1	1	105	109	43	6	1	2	0	52	55	47	6	0	1	0	54	55	18:00	80	2	0	0	0	82	82	54	1	0	0	2	57	59	124	18	1	2	1	146	150	511
18:15	71	4	1	0	0	76	77	29	2	2	1	0	34	36	44	6	1	1	0	52	54	18:15	58	4	0	0	1	63	64	38	2	0	0	2	42	44	84	10	1	3	1	99	104	379
18:30	63	4	0	1	0	68	69	35	5	2	3	0	45	50	41	3	2	1	0	47	49	18:30	53	0	0	0	1	54	55	47	5	0	0	1	53	54	118	12	2	1	1	134	137	415
18:45	68	3	3	1	0	75	78	19	1	1	0	0	21	22	42	9	1	0	0	52	53	18:45	33	3	0	0	0	36	36	45	3	0	0	1	49	50	148	12	0	0	5	165	170	408
H/TOT	293	19	8	3	1	324	333	126	14	6	6	0	152	163	174	24	4	3	0	205	211	**H/TOT**	224	9	0	0	2	235	237	184	11	0	0	6	201	207	474	52	4	6	8	544	562	1712
P/TOT	864	103	21	18	7	1013	1054	361	44	8	12	5	430	455	584	83	12	9	9	697	724	**P/TOT**	703	53	4	1	10	771	784	545	53	2	1	19	620	641	1361	163	20	23	18	1585	1643	5301

Appendix B TRICS

Calculation Reference: AUDIT-800401-190128-0101

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : C - FLATS PRIVATELY OWNED
VEHICLES

Selected regions and areas:
14 LEINSTER
LU LOUTH 3 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: 20 to 52 (units:)
Range Selected by User: 20 to 86 (units:)

Parking Spaces Range: Selected: 0 to 86 Actual: 0 to 86

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/10 to 16/09/13

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
Thursday 1 days

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

Selected survey types:
Manual count 3 days
Directional ATC Count 0 days

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

Selected Locations:
Edge of Town Centre 3

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

Selected Location Sub Categories:
Residential Zone 3

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

Secondary Filtering selection:

Use Class:
C3 3 days

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

Secondary Filtering selection (Cont.):

Population within 1 mile:

5,001 to 10,000	2 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:

25,001 to 50,000	3 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	3 days

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

Travel Plan:

No	3 days

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

PTAL Rating:

No PTAL Present	3 days

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

LIST OF SITES relevant to selection parameters

1 LU-03-C-01 BLOCKS OF FLATS LOUTH
DONORE ROAD
DROGHEDA

Edge of Town Centre
Residential Zone
Total Number of dwellings: 52
Survey date: THURSDAY *12/09/13* *Survey Type: MANUAL*

2 LU-03-C-02 BLOCK OF FLATS LOUTH
NICHOLAS STREET
DUNDALK

Edge of Town Centre
Residential Zone
Total Number of dwellings: 33
Survey date: MONDAY *16/09/13* *Survey Type: MANUAL*

3 LU-03-C-03 BLOCK OF FLATS LOUTH
NICHOLAS STREET
DUNDALK

Edge of Town Centre
Residential Zone
Total Number of dwellings: 20
Survey date: MONDAY *16/09/13* *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/C - FLATS PRIVATELY OWNED
VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	3	35	0.029	3	35	0.086	3	35	0.115
08:00 - 09:00	3	35	0.048	3	35	0.133	3	35	0.181
09:00 - 10:00	3	35	0.067	3	35	0.067	3	35	0.134
10:00 - 11:00	3	35	0.019	3	35	0.076	3	35	0.095
11:00 - 12:00	3	35	0.029	3	35	0.038	3	35	0.067
12:00 - 13:00	3	35	0.038	3	35	0.057	3	35	0.095
13:00 - 14:00	3	35	0.086	3	35	0.029	3	35	0.115
14:00 - 15:00	3	35	0.057	3	35	0.038	3	35	0.095
15:00 - 16:00	3	35	0.057	3	35	0.038	3	35	0.095
16:00 - 17:00	3	35	0.019	3	35	0.048	3	35	0.067
17:00 - 18:00	3	35	0.162	3	35	0.095	3	35	0.257
18:00 - 19:00	3	35	0.086	3	35	0.067	3	35	0.153
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.697			0.772			1.469

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.

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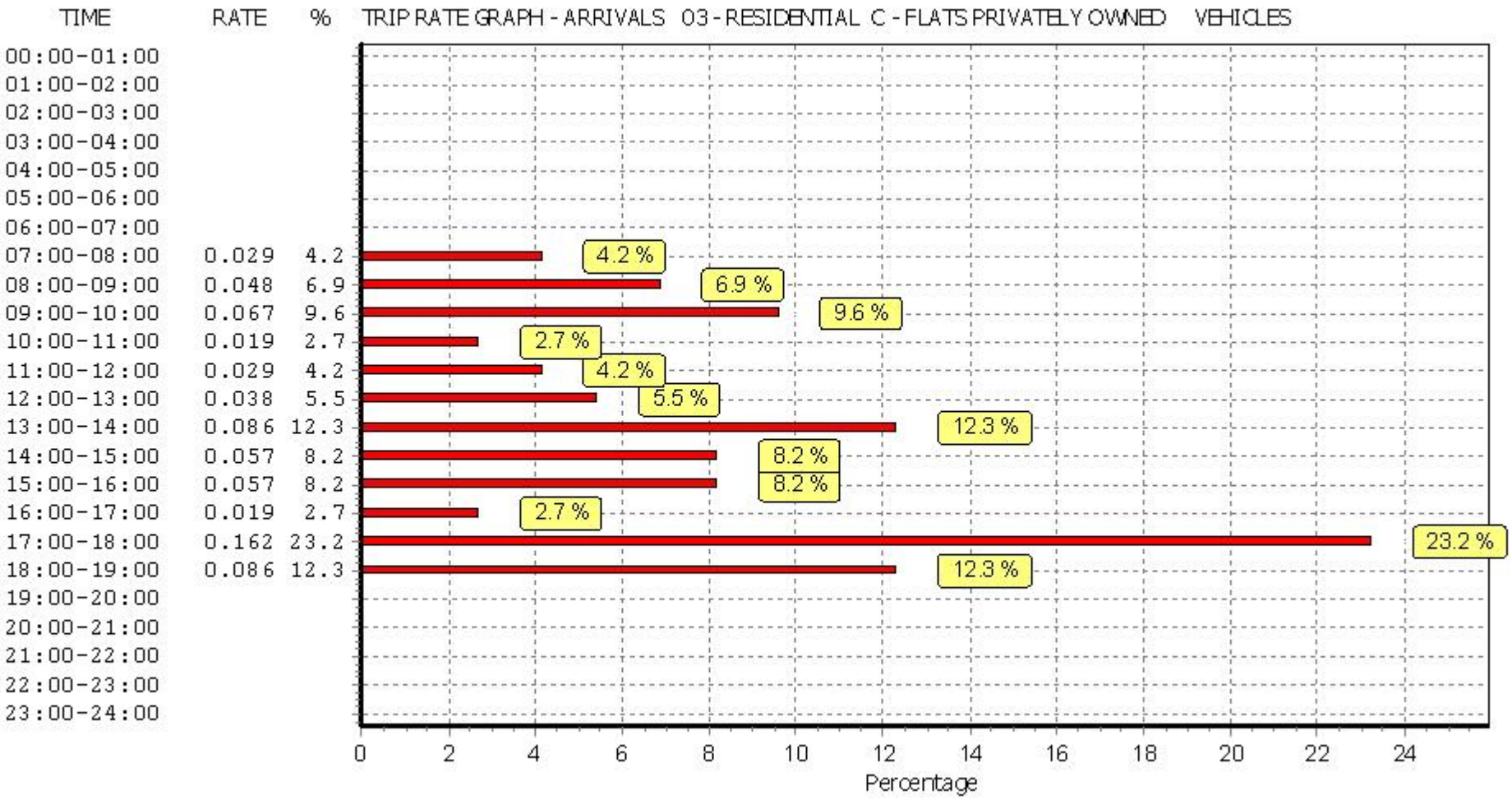
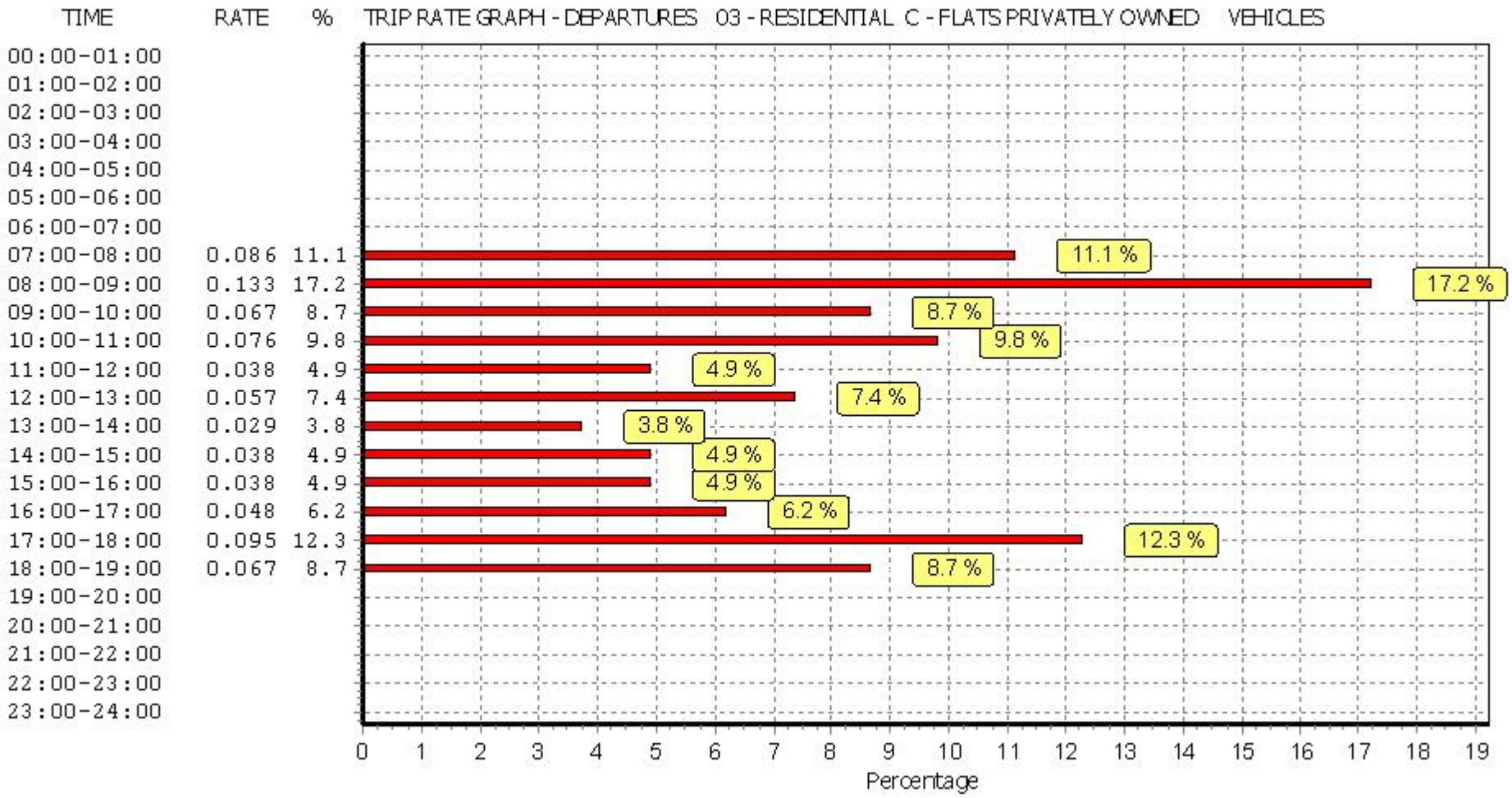
Parameter summary

Trip rate parameter range selected:	20 - 52 (units:)
Survey date date range:	01/01/10 - 16/09/13
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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



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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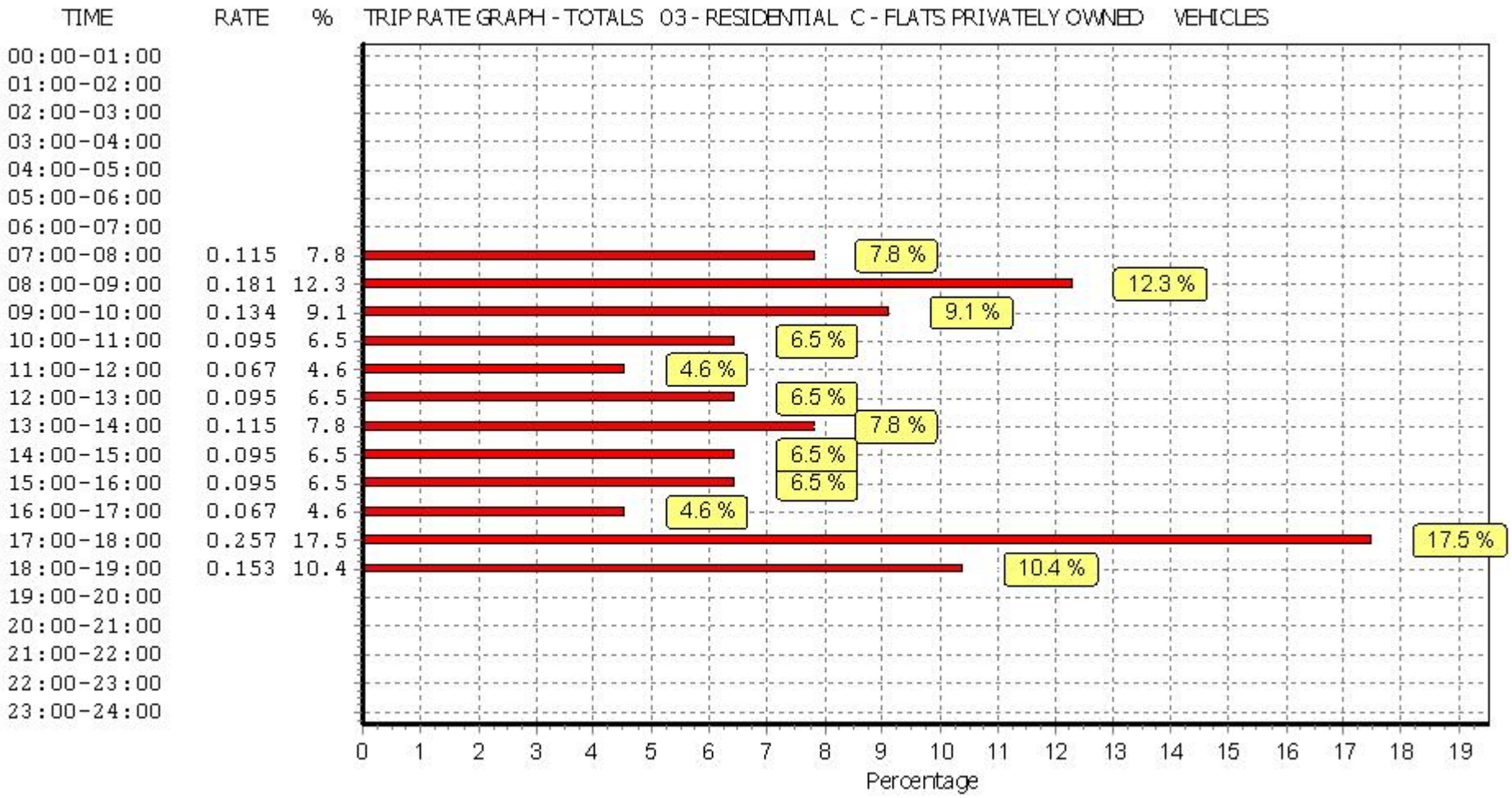

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TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
TAXIS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	3	35	0.010	3	35	0.010	3	35	0.020
08:00 - 09:00	3	35	0.000	3	35	0.000	3	35	0.000
09:00 - 10:00	3	35	0.010	3	35	0.010	3	35	0.020
10:00 - 11:00	3	35	0.000	3	35	0.000	3	35	0.000
11:00 - 12:00	3	35	0.000	3	35	0.000	3	35	0.000
12:00 - 13:00	3	35	0.000	3	35	0.000	3	35	0.000
13:00 - 14:00	3	35	0.000	3	35	0.000	3	35	0.000
14:00 - 15:00	3	35	0.010	3	35	0.010	3	35	0.020
15:00 - 16:00	3	35	0.000	3	35	0.000	3	35	0.000
16:00 - 17:00	3	35	0.000	3	35	0.000	3	35	0.000
17:00 - 18:00	3	35	0.010	3	35	0.010	3	35	0.020
18:00 - 19:00	3	35	0.000	3	35	0.000	3	35	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.040			0.040			0.080

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.

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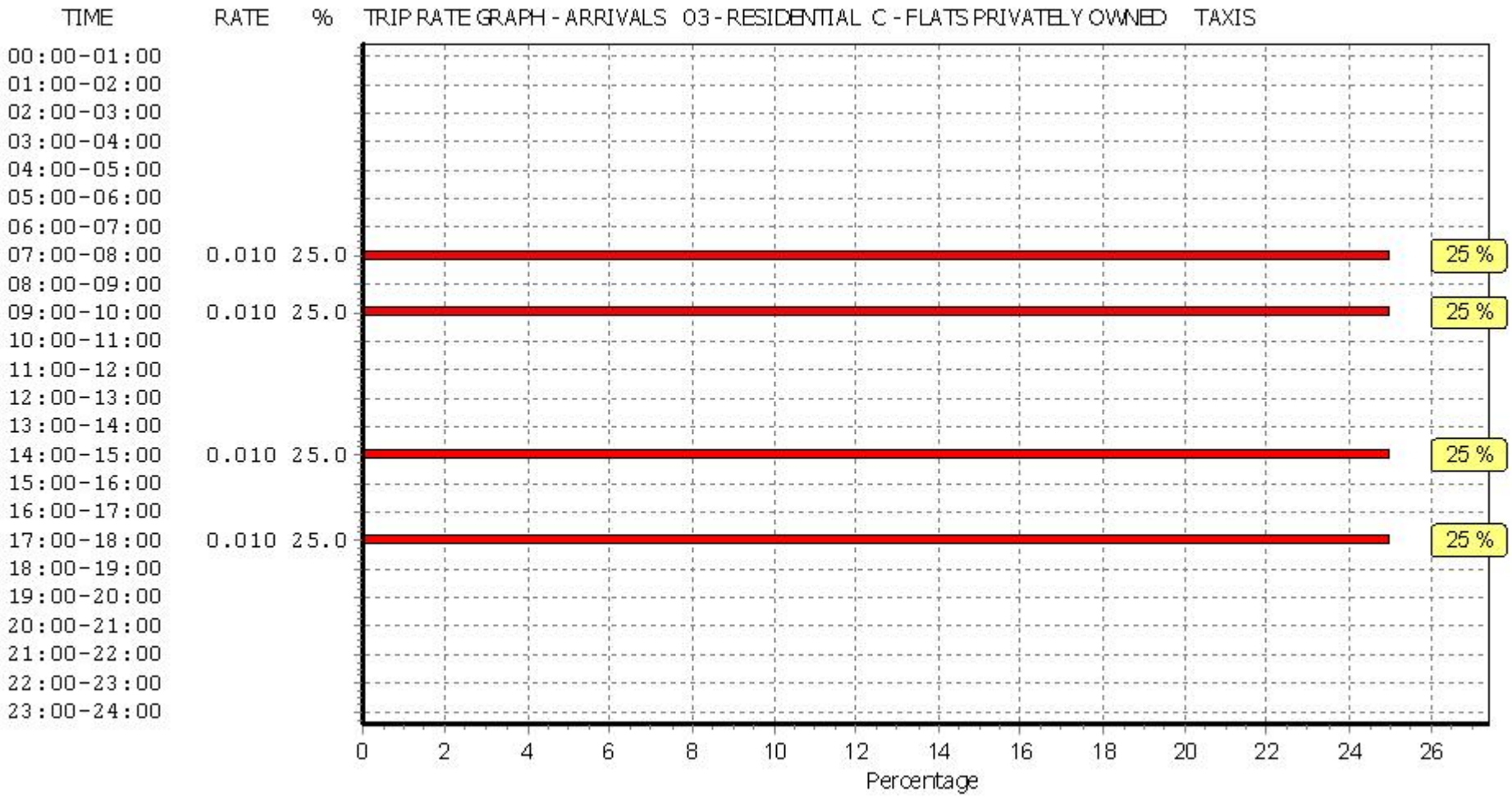
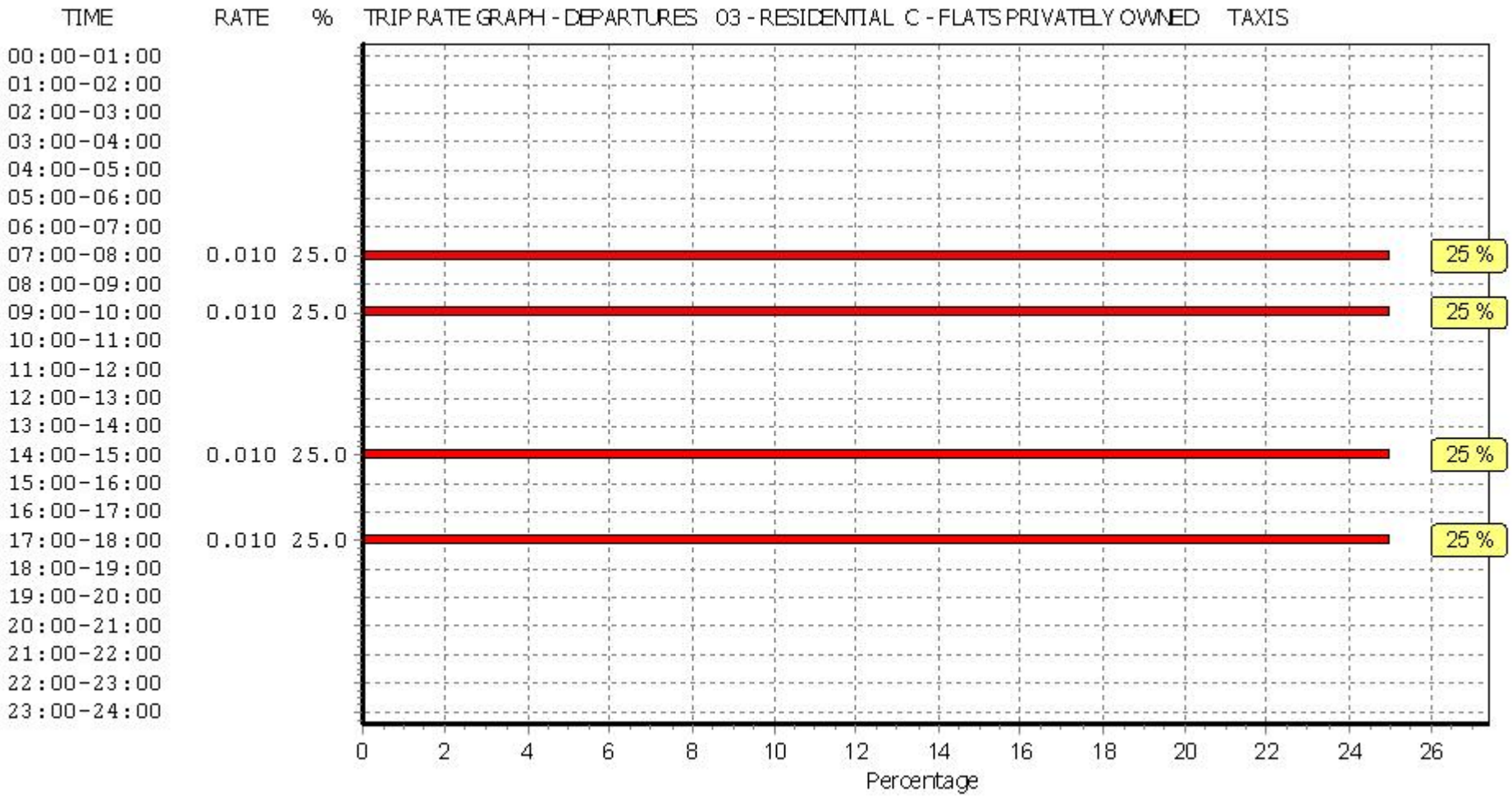


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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



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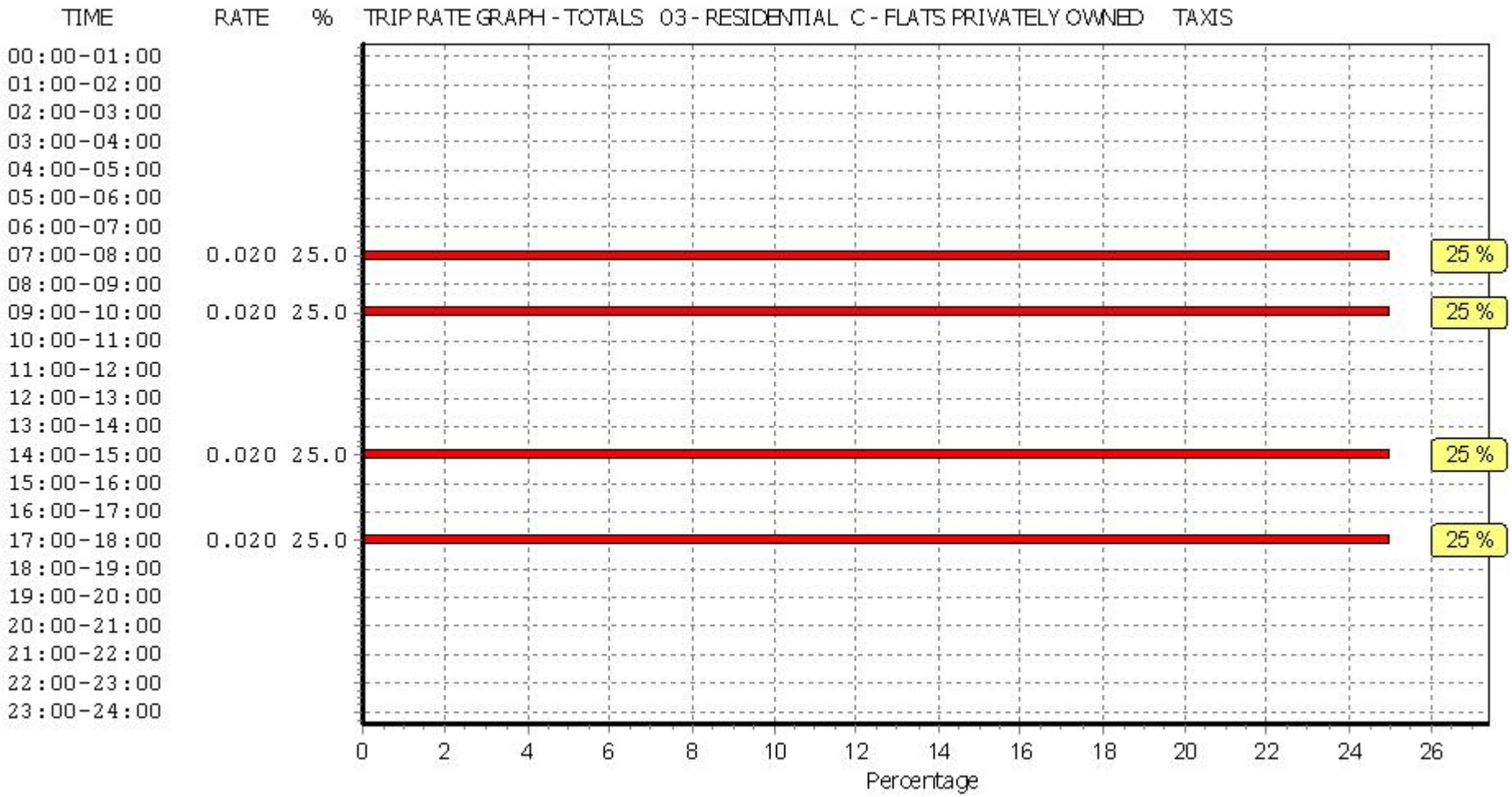

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TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
OGVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	3	35	0.000	3	35	0.000	3	35	0.000
08:00 - 09:00	3	35	0.000	3	35	0.000	3	35	0.000
09:00 - 10:00	3	35	0.010	3	35	0.000	3	35	0.010
10:00 - 11:00	3	35	0.000	3	35	0.010	3	35	0.010
11:00 - 12:00	3	35	0.000	3	35	0.000	3	35	0.000
12:00 - 13:00	3	35	0.000	3	35	0.000	3	35	0.000
13:00 - 14:00	3	35	0.000	3	35	0.000	3	35	0.000
14:00 - 15:00	3	35	0.000	3	35	0.000	3	35	0.000
15:00 - 16:00	3	35	0.010	3	35	0.000	3	35	0.010
16:00 - 17:00	3	35	0.000	3	35	0.010	3	35	0.010
17:00 - 18:00	3	35	0.000	3	35	0.000	3	35	0.000
18:00 - 19:00	3	35	0.000	3	35	0.000	3	35	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.020			0.020			0.040

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.

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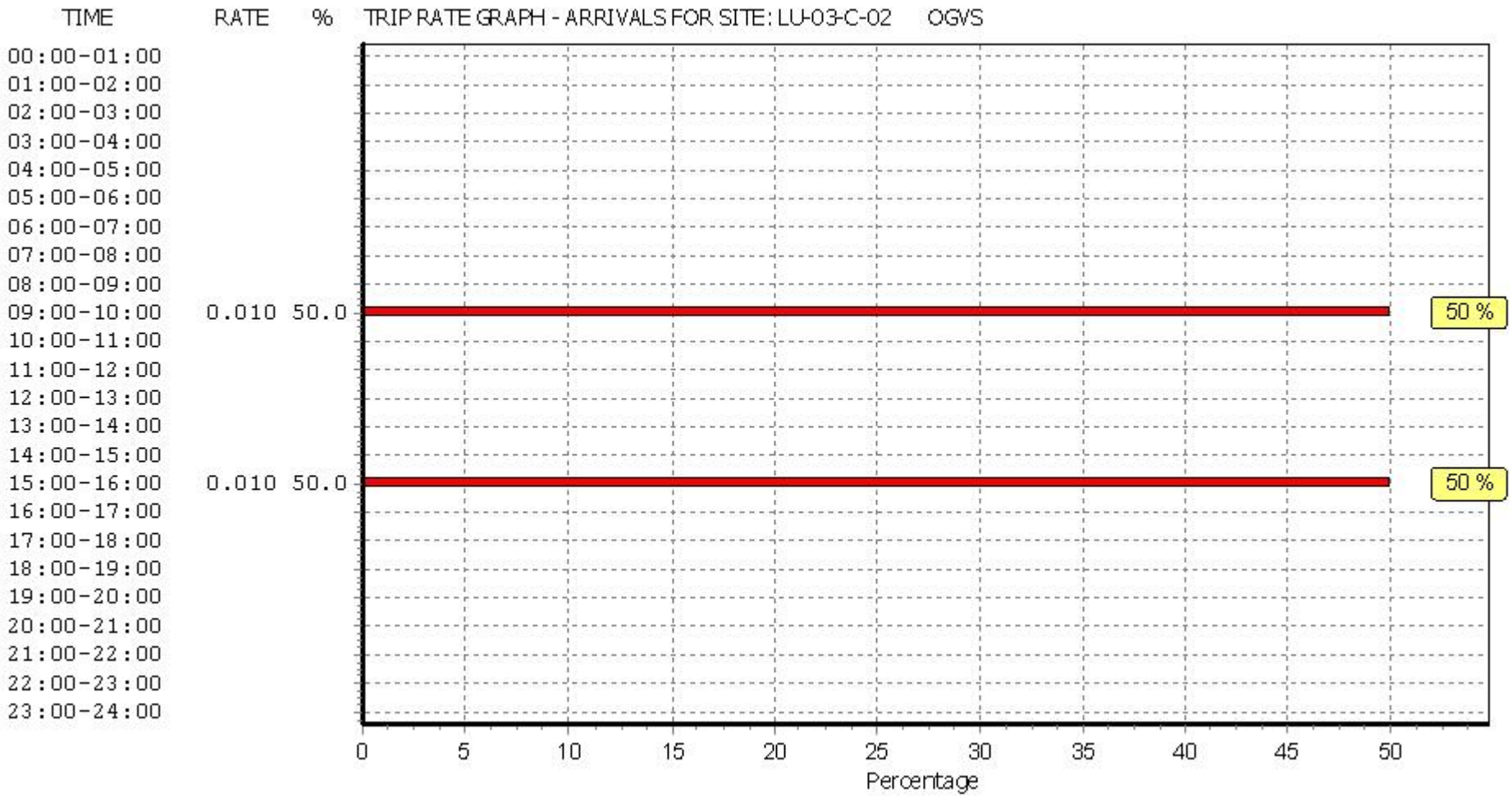

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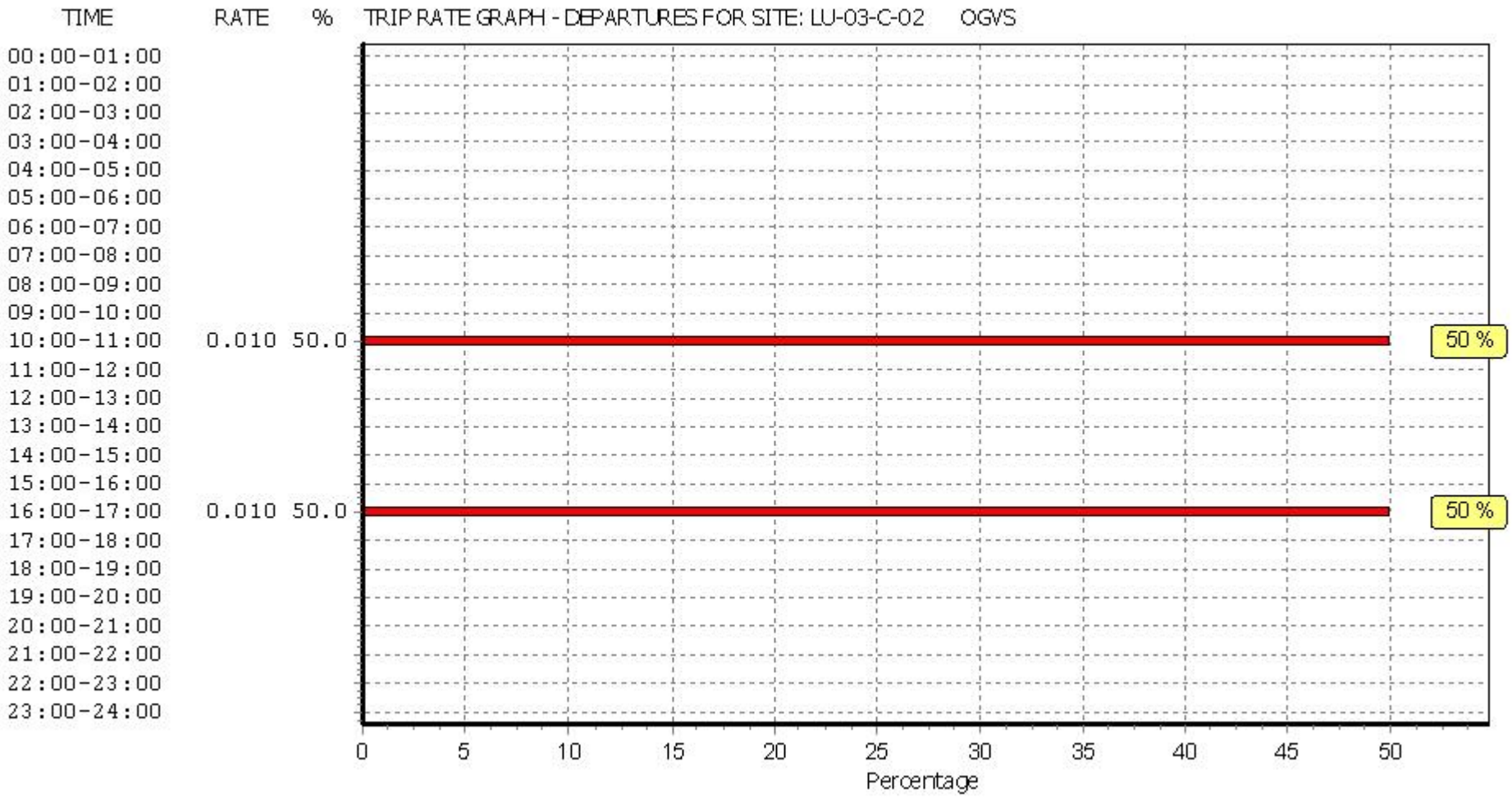

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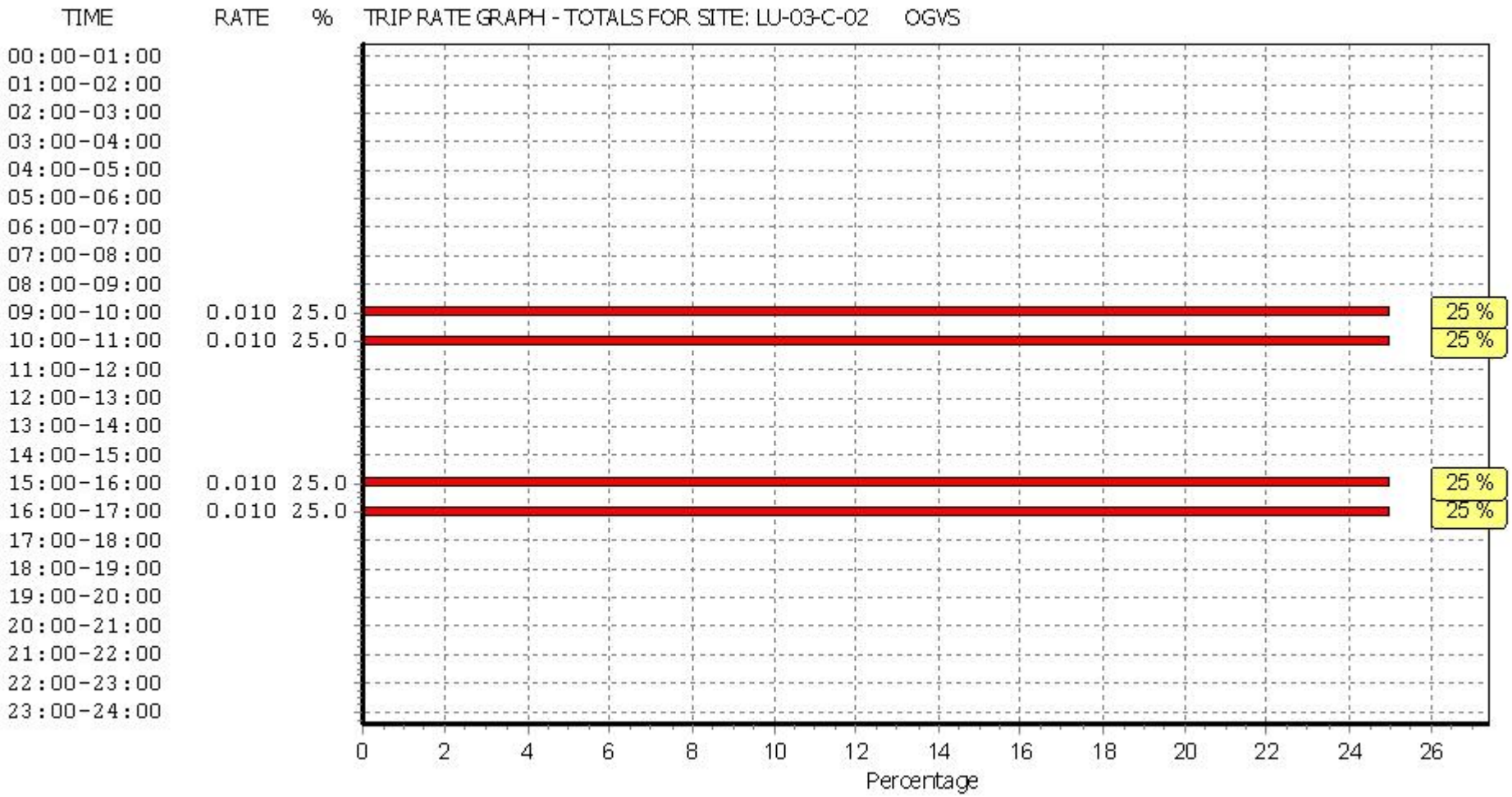

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TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
CYCLISTS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	3	35	0.010	3	35	0.000	3	35	0.010
08:00 - 09:00	3	35	0.029	3	35	0.029	3	35	0.058
09:00 - 10:00	3	35	0.000	3	35	0.000	3	35	0.000
10:00 - 11:00	3	35	0.000	3	35	0.000	3	35	0.000
11:00 - 12:00	3	35	0.000	3	35	0.000	3	35	0.000
12:00 - 13:00	3	35	0.000	3	35	0.000	3	35	0.000
13:00 - 14:00	3	35	0.000	3	35	0.000	3	35	0.000
14:00 - 15:00	3	35	0.000	3	35	0.000	3	35	0.000
15:00 - 16:00	3	35	0.000	3	35	0.010	3	35	0.010
16:00 - 17:00	3	35	0.019	3	35	0.000	3	35	0.019
17:00 - 18:00	3	35	0.000	3	35	0.000	3	35	0.000
18:00 - 19:00	3	35	0.000	3	35	0.000	3	35	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.058			0.039			0.097

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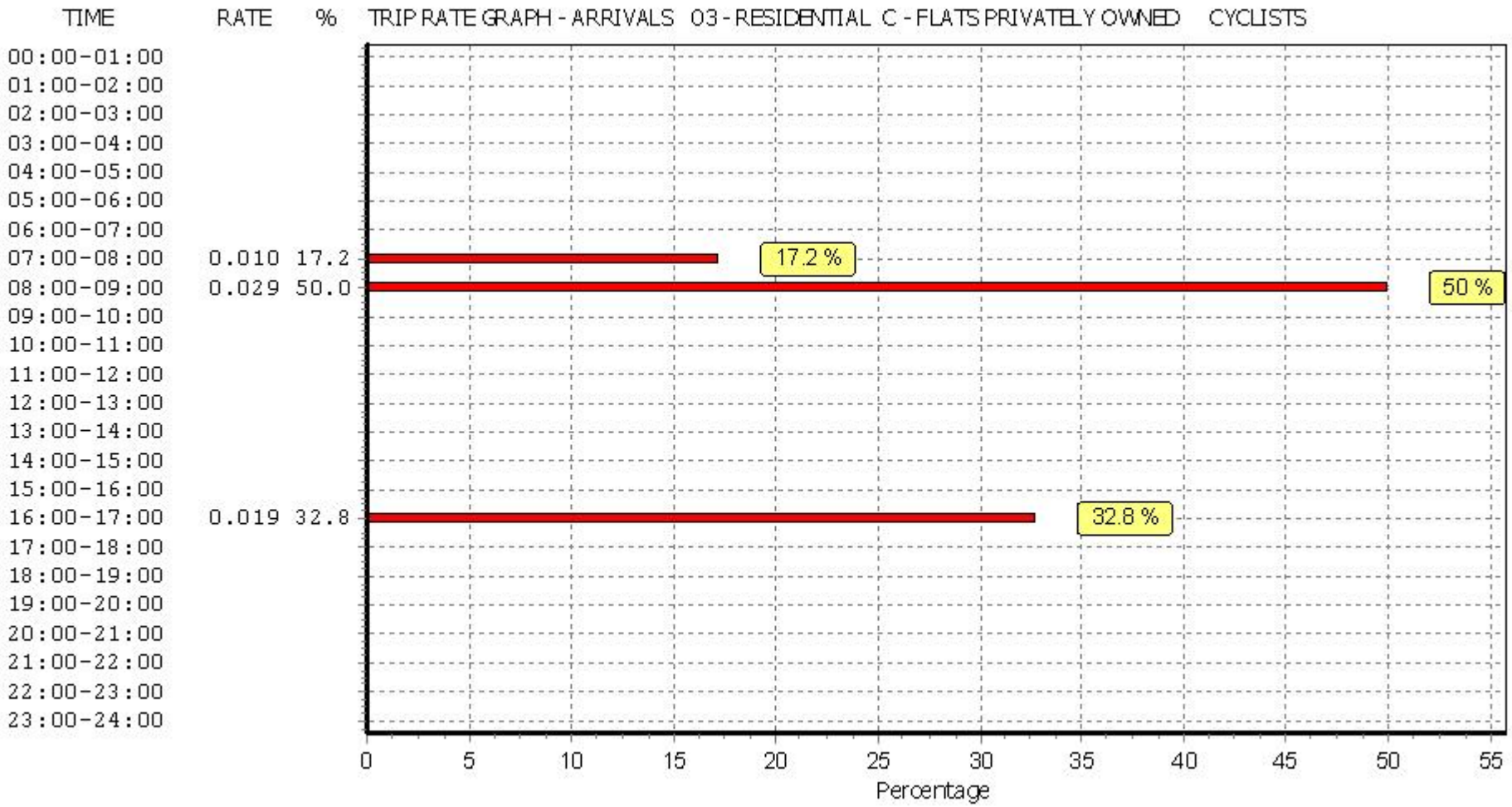

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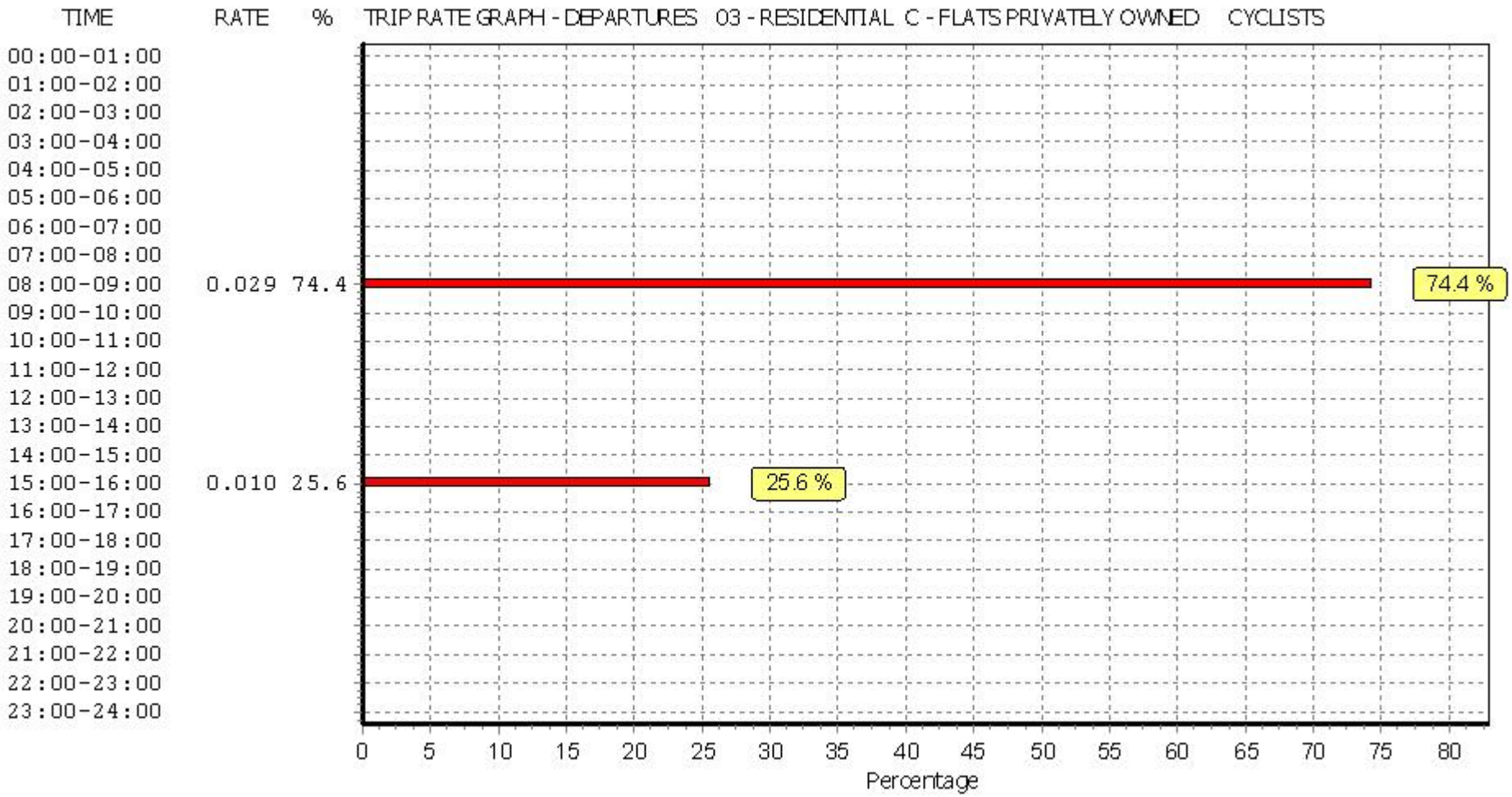

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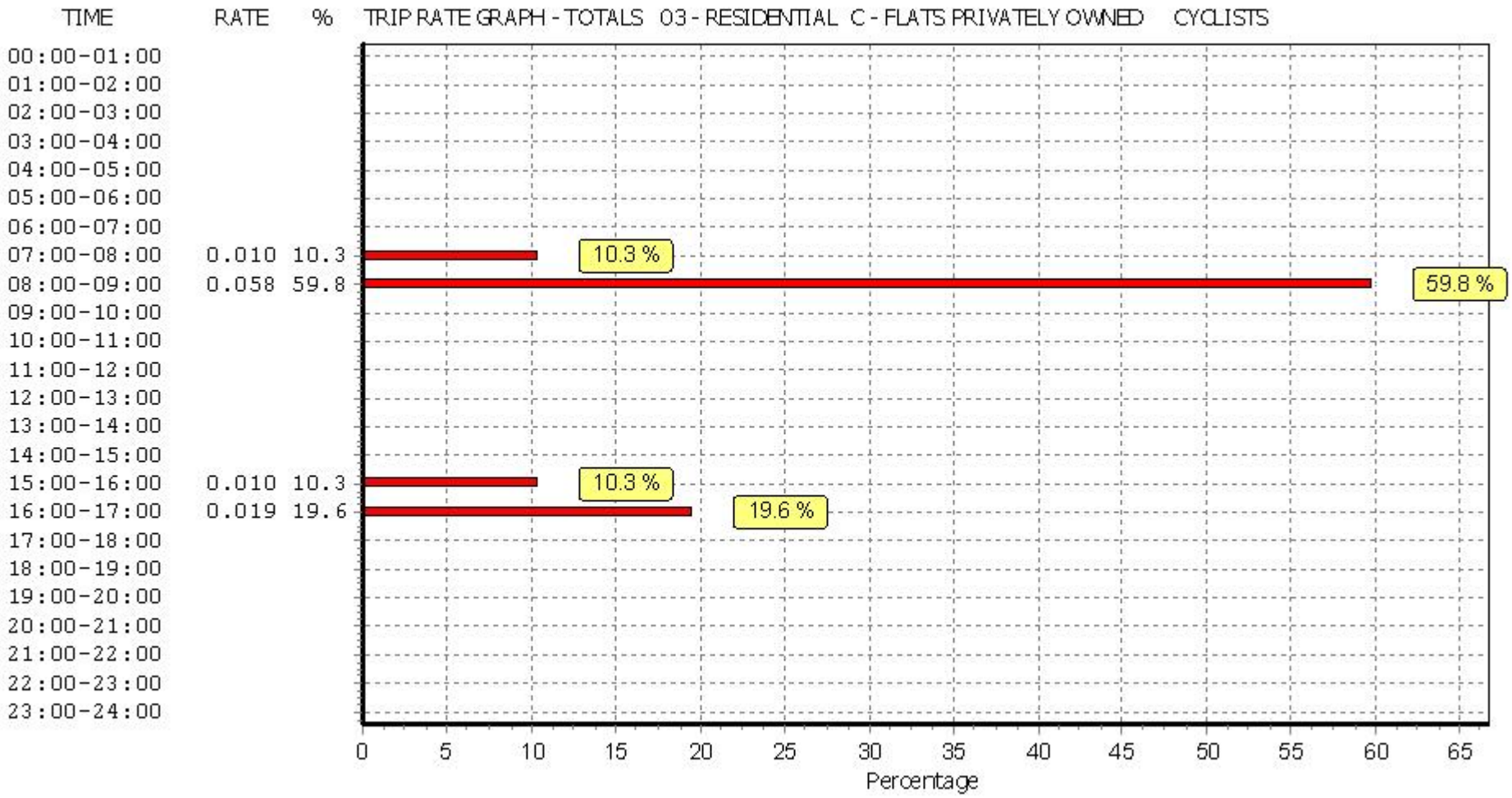

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Calculation Reference: AUDIT-800401-190204-0213

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

12	CONNAUGHT		
	CS	SLIGO	1 days
	LT	LEITRIM	1 days
	RO	ROSCOMMON	2 days
13	MUNSTER		
	CR	CORK	1 days
14	LEINSTER		
	KK	KILKENNY	1 days
	WC	WICKLOW	1 days

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

Secondary Filtering selection:

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

Parameter: Gross floor area
Actual Range: 968 to 11250 (units: sqm)
Range Selected by User: 968 to 5000 (units: sqm)

Parking Spaces Range: Selected: 19 to 327 Actual: 19 to 327

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/10 to 28/05/18

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
Tuesday	1 days
Wednesday	1 days
Thursday	2 days
Friday	1 days

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

Selected survey types:

Manual count	7 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	5
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:

Industrial Zone	3
Commercial Zone	1
Village	1
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:

Not Known	1 days
B1	4 days
B2	1 days
B8	1 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	4 days
5,001 to 10,000	3 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	3 days
25,001 to 50,000	3 days
100,001 to 125,000	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	3 days
1.1 to 1.5	4 days

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

Travel Plan:

No	7 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	7 days

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

LIST OF SITES relevant to selection parameters

1 CR-02-C-01 FABRICATIONS CORK

CORK
WALLINGSTOWN IND.EST.
Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Gross floor area: 1175 sqm
Survey date: THURSDAY 13/12/12 Survey Type: MANUAL

2 CS-02-C-01 AV SPECIALISTS SLIGO
RATHFINN CLOSE
SLIGO
FINISKLIN BUSINESS PARK
Edge of Town
Commercial Zone
Total Gross floor area: 1112 sqm
Survey date: TUESDAY 28/04/15 Survey Type: MANUAL

3 KK-02-C-01 VEHICLE UPHOLSTERY CENTRE KILKENNY
HEBRON IND. ESTATE
KILKENNY

Edge of Town
Industrial Zone
Total Gross floor area: 1772 sqm
Survey date: THURSDAY 26/10/17 Survey Type: MANUAL

4 LT-02-C-01 MEDICAL PRODUCTS LEITRIM
CASTLECARA ROAD
CARRICK-ON-SHANNON
DÚN RÍ
Edge of Town
No Sub Category
Total Gross floor area: 5378 sqm
Survey date: MONDAY 22/05/17 Survey Type: MANUAL

5 RO-02-C-01 PHARMACEUTICAL SUPPLIES ROSCOMMON
N66
ATHLONE

Edge of Town
No Sub Category
Total Gross floor area: 11250 sqm
Survey date: WEDNESDAY 24/09/14 Survey Type: MANUAL

6 RO-02-C-02 METAL COMPANY ROSCOMMON
MOYDRUM ROAD
ATHLONE

Edge of Town
Industrial Zone
Total Gross floor area: 5600 sqm
Survey date: FRIDAY 26/09/14 Survey Type: MANUAL

7 WC-02-C-01 FOAM INSULATION WICKLOW
CHARVEY LANE
RÁTHNEW
COMMONS
Neighbourhood Centre (PPS6 Local Centre)
Village
Total Gross floor area: 968 sqm
Survey date: MONDAY 28/05/18 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 02 - EMPLOYMENT/C - INDUSTRIAL UNIT
VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	7	3894	0.183	7	3894	0.029	7	3894	0.212
07:30 - 08:00	7	3894	0.822	7	3894	0.092	7	3894	0.914
08:00 - 08:30	7	3894	0.220	7	3894	0.139	7	3894	0.359
08:30 - 09:00	7	3894	0.114	7	3894	0.044	7	3894	0.158
09:00 - 09:30	7	3894	0.081	7	3894	0.033	7	3894	0.114
09:30 - 10:00	7	3894	0.059	7	3894	0.077	7	3894	0.136
10:00 - 10:30	7	3894	0.055	7	3894	0.059	7	3894	0.114
10:30 - 11:00	7	3894	0.070	7	3894	0.040	7	3894	0.110
11:00 - 11:30	7	3894	0.048	7	3894	0.051	7	3894	0.099
11:30 - 12:00	7	3894	0.048	7	3894	0.044	7	3894	0.092
12:00 - 12:30	7	3894	0.084	7	3894	0.077	7	3894	0.161
12:30 - 13:00	7	3894	0.077	7	3894	0.073	7	3894	0.150
13:00 - 13:30	7	3894	0.095	7	3894	0.128	7	3894	0.223
13:30 - 14:00	7	3894	0.121	7	3894	0.095	7	3894	0.216
14:00 - 14:30	7	3894	0.103	7	3894	0.088	7	3894	0.191
14:30 - 15:00	7	3894	0.154	7	3894	0.095	7	3894	0.249
15:00 - 15:30	7	3894	0.125	7	3894	0.183	7	3894	0.308
15:30 - 16:00	7	3894	0.440	7	3894	0.242	7	3894	0.682
16:00 - 16:30	7	3894	0.114	7	3894	0.587	7	3894	0.701
16:30 - 17:00	7	3894	0.051	7	3894	0.481	7	3894	0.532
17:00 - 17:30	7	3894	0.055	7	3894	0.220	7	3894	0.275
17:30 - 18:00	7	3894	0.011	7	3894	0.132	7	3894	0.143
18:00 - 18:30	7	3894	0.040	7	3894	0.051	7	3894	0.091
18:30 - 19:00	7	3894	0.015	7	3894	0.037	7	3894	0.052
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			3.185			3.097			6.282

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

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

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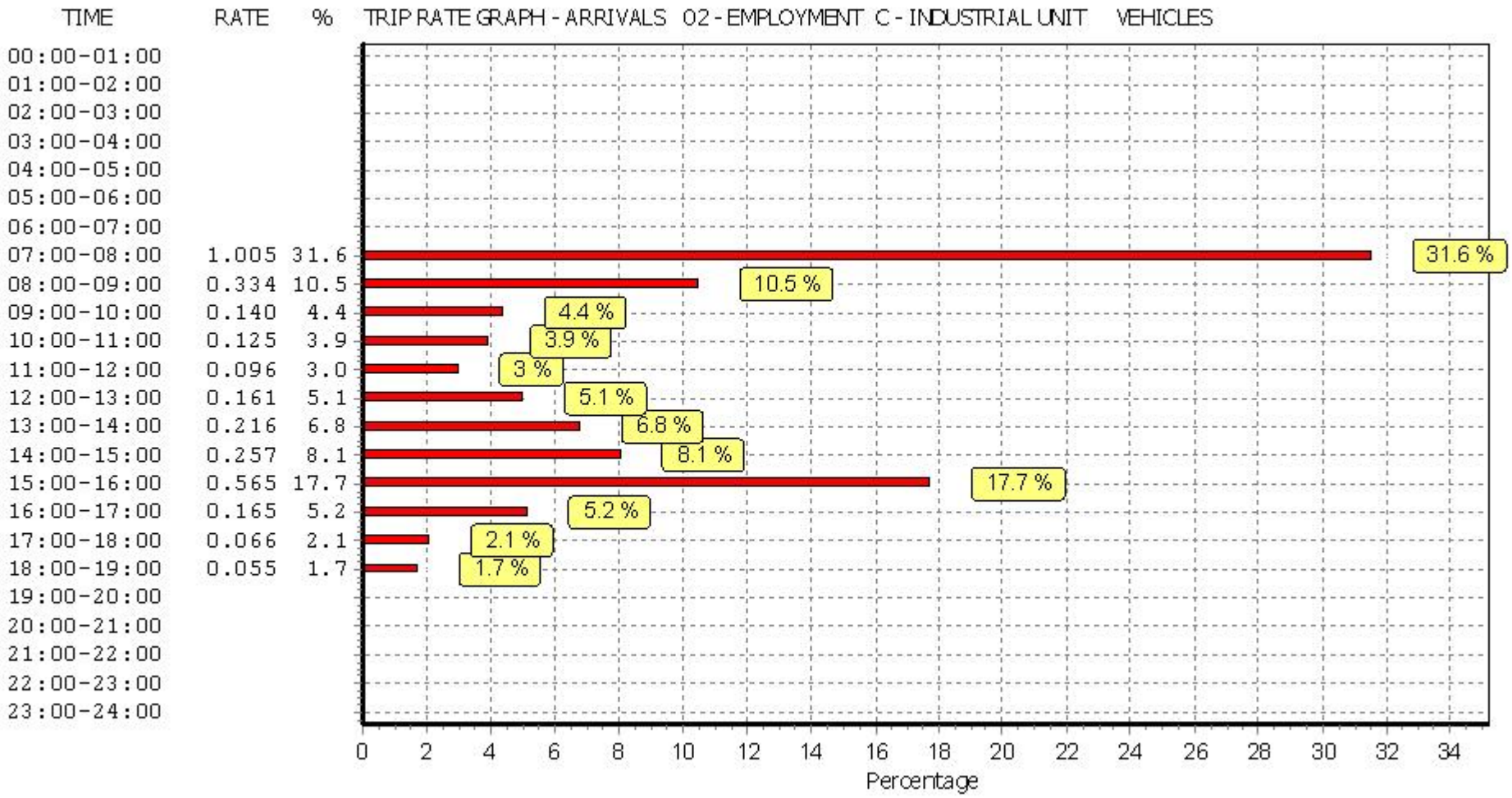
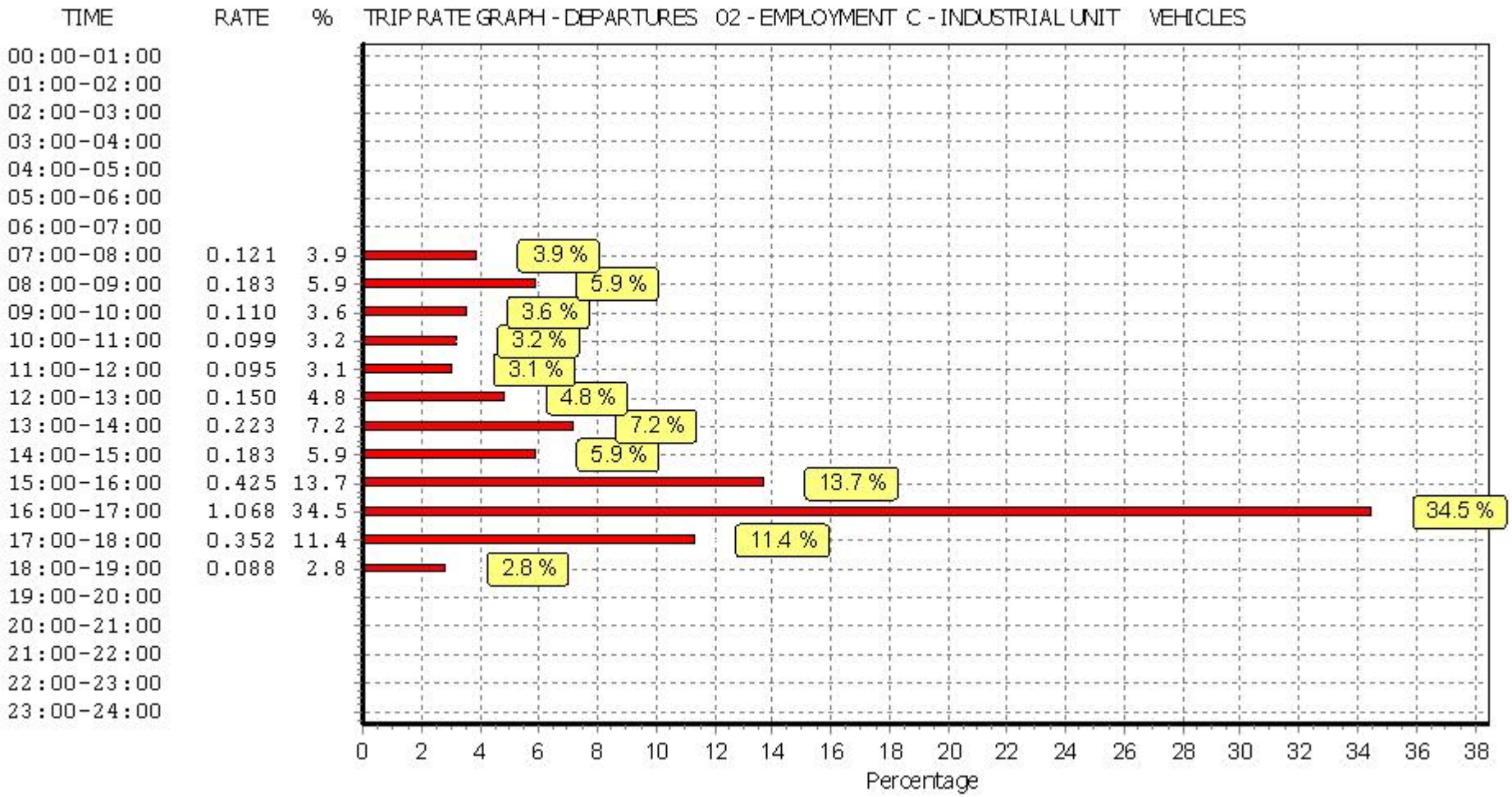
Parameter summary

Trip rate parameter range selected:	968 - 11250 (units: sqm)
Survey date date range:	01/01/10 - 28/05/18
Number of weekdays (Monday-Friday):	7
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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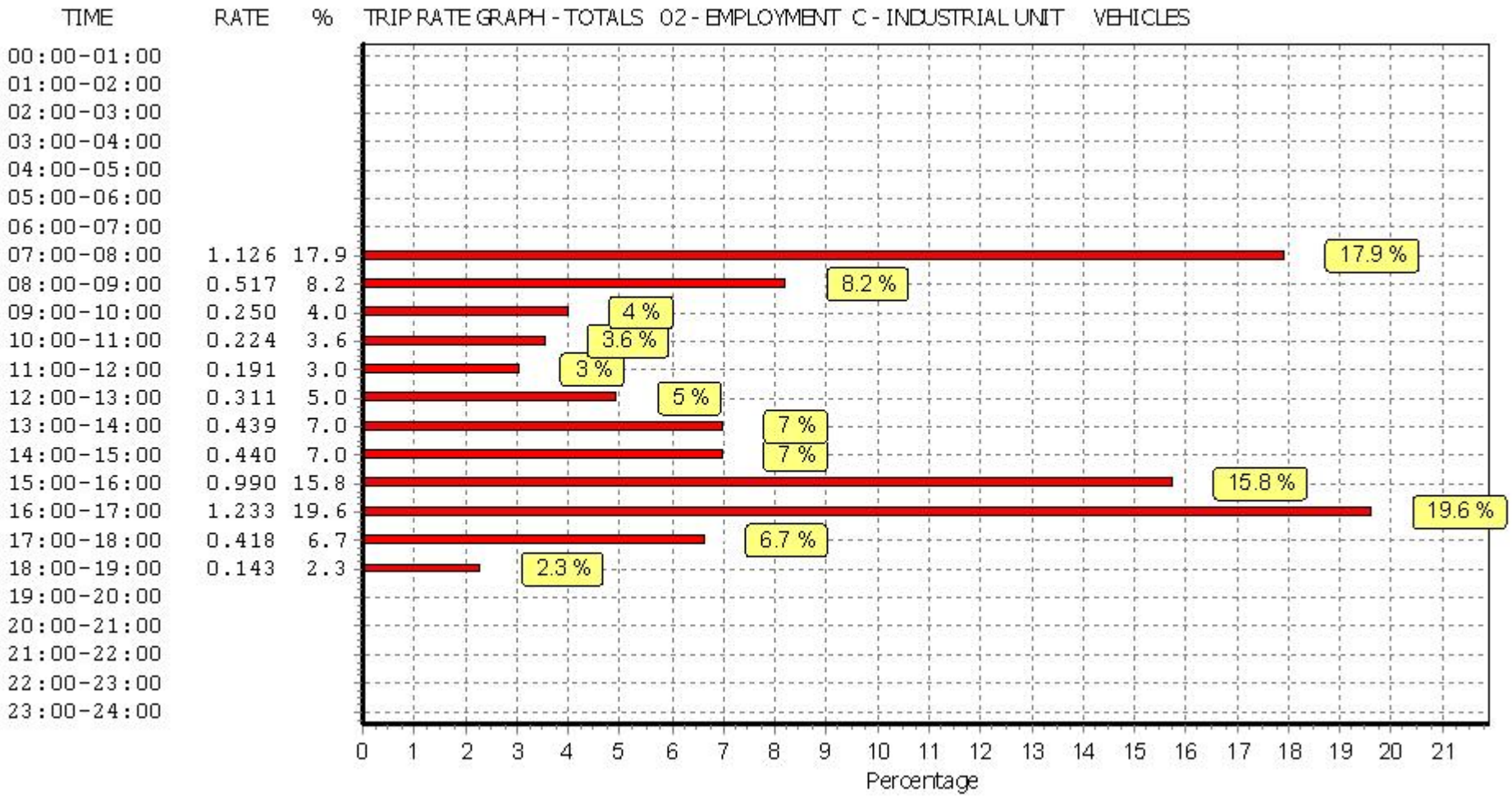

This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT
TAXIS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	7	3894	0.011	7	3894	0.011	7	3894	0.022
07:30 - 08:00	7	3894	0.000	7	3894	0.000	7	3894	0.000
08:00 - 08:30	7	3894	0.000	7	3894	0.000	7	3894	0.000
08:30 - 09:00	7	3894	0.000	7	3894	0.000	7	3894	0.000
09:00 - 09:30	7	3894	0.004	7	3894	0.004	7	3894	0.008
09:30 - 10:00	7	3894	0.000	7	3894	0.000	7	3894	0.000
10:00 - 10:30	7	3894	0.000	7	3894	0.000	7	3894	0.000
10:30 - 11:00	7	3894	0.000	7	3894	0.000	7	3894	0.000
11:00 - 11:30	7	3894	0.000	7	3894	0.000	7	3894	0.000
11:30 - 12:00	7	3894	0.000	7	3894	0.000	7	3894	0.000
12:00 - 12:30	7	3894	0.000	7	3894	0.000	7	3894	0.000
12:30 - 13:00	7	3894	0.000	7	3894	0.000	7	3894	0.000
13:00 - 13:30	7	3894	0.000	7	3894	0.000	7	3894	0.000
13:30 - 14:00	7	3894	0.004	7	3894	0.004	7	3894	0.008
14:00 - 14:30	7	3894	0.004	7	3894	0.004	7	3894	0.008
14:30 - 15:00	7	3894	0.004	7	3894	0.004	7	3894	0.008
15:00 - 15:30	7	3894	0.007	7	3894	0.007	7	3894	0.014
15:30 - 16:00	7	3894	0.000	7	3894	0.000	7	3894	0.000
16:00 - 16:30	7	3894	0.018	7	3894	0.000	7	3894	0.018
16:30 - 17:00	7	3894	0.000	7	3894	0.018	7	3894	0.018
17:00 - 17:30	7	3894	0.007	7	3894	0.007	7	3894	0.014
17:30 - 18:00	7	3894	0.000	7	3894	0.000	7	3894	0.000
18:00 - 18:30	7	3894	0.004	7	3894	0.004	7	3894	0.008
18:30 - 19:00	7	3894	0.000	7	3894	0.000	7	3894	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.063			0.063			0.126

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.

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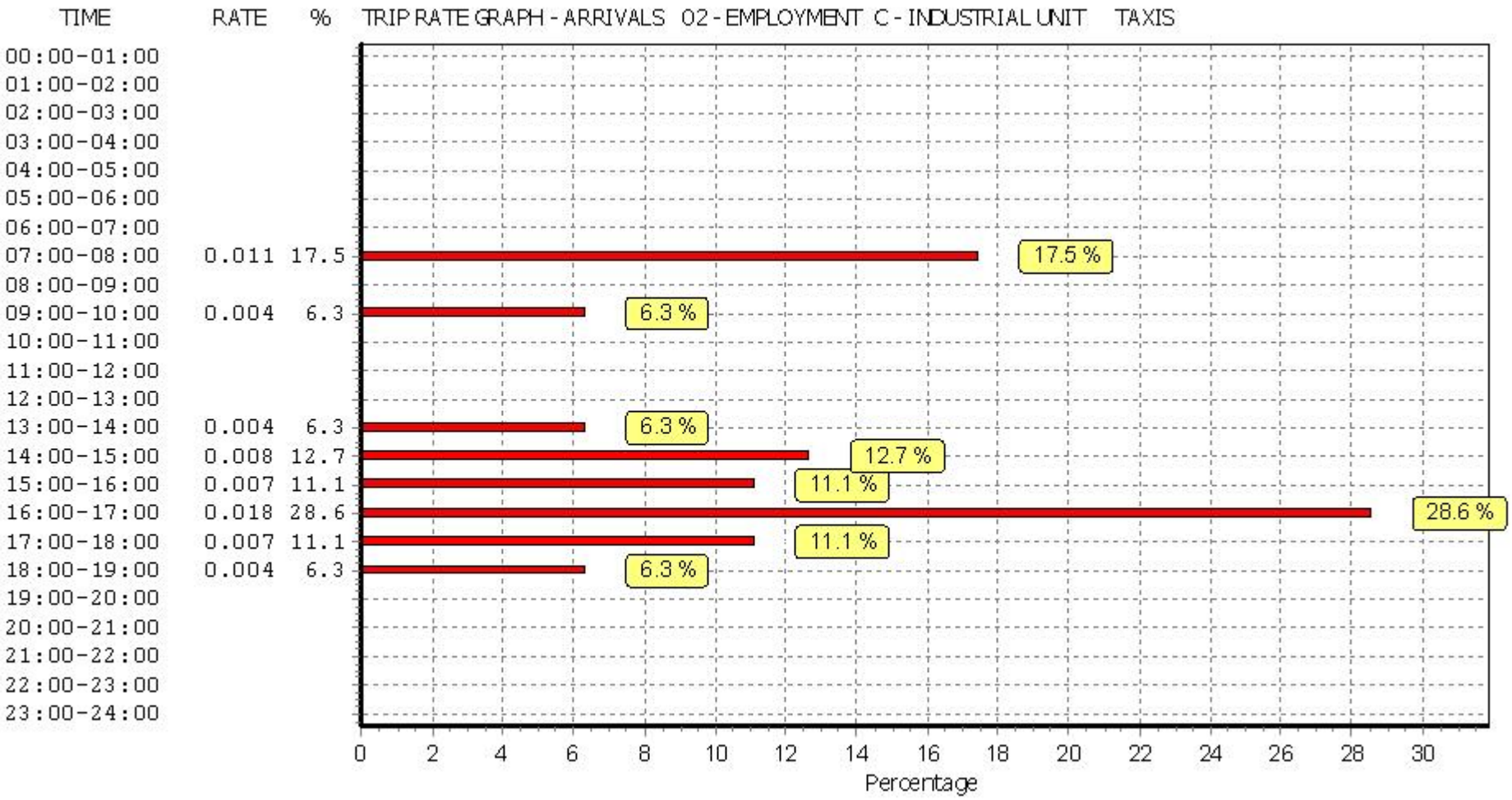
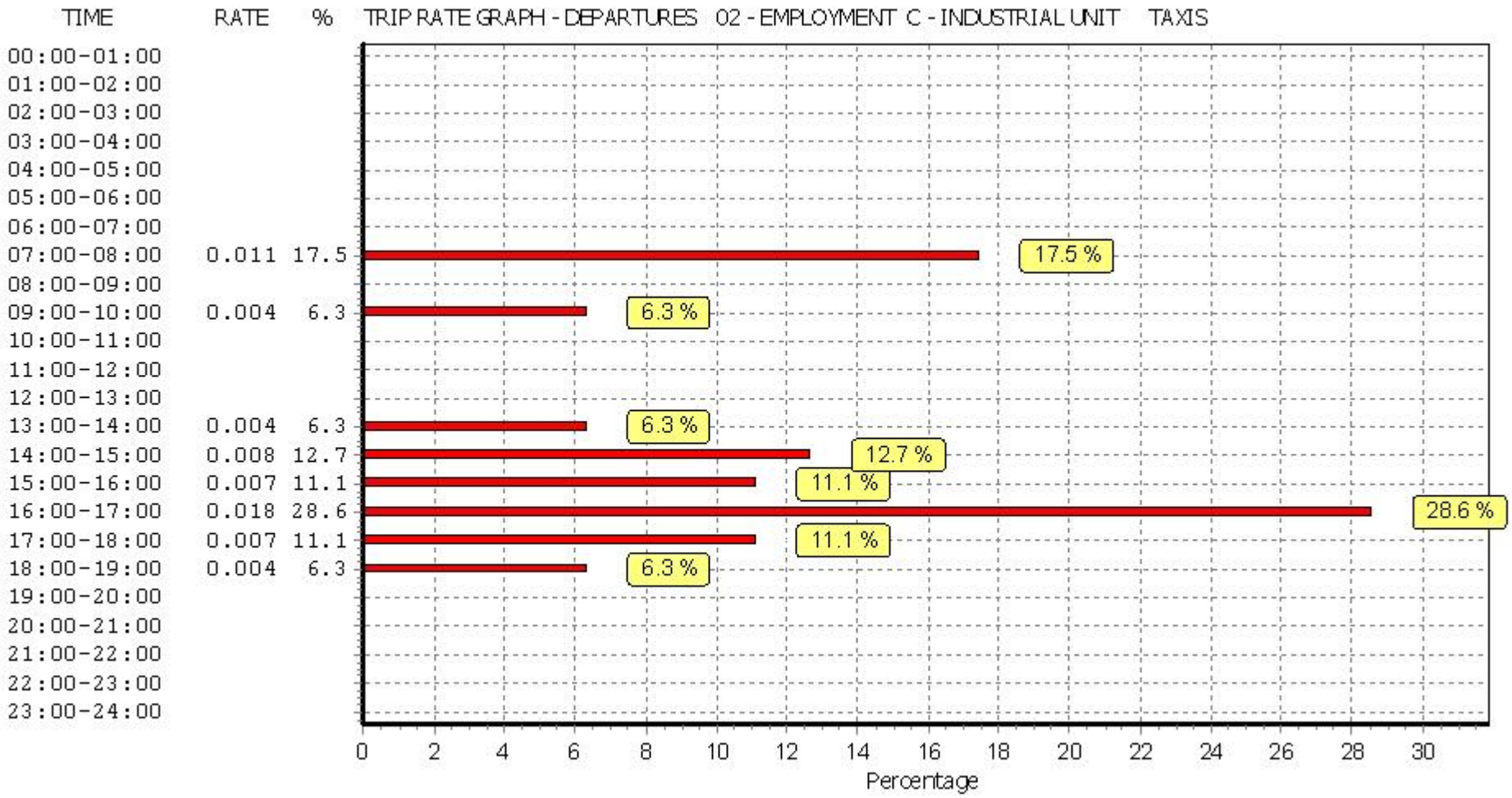
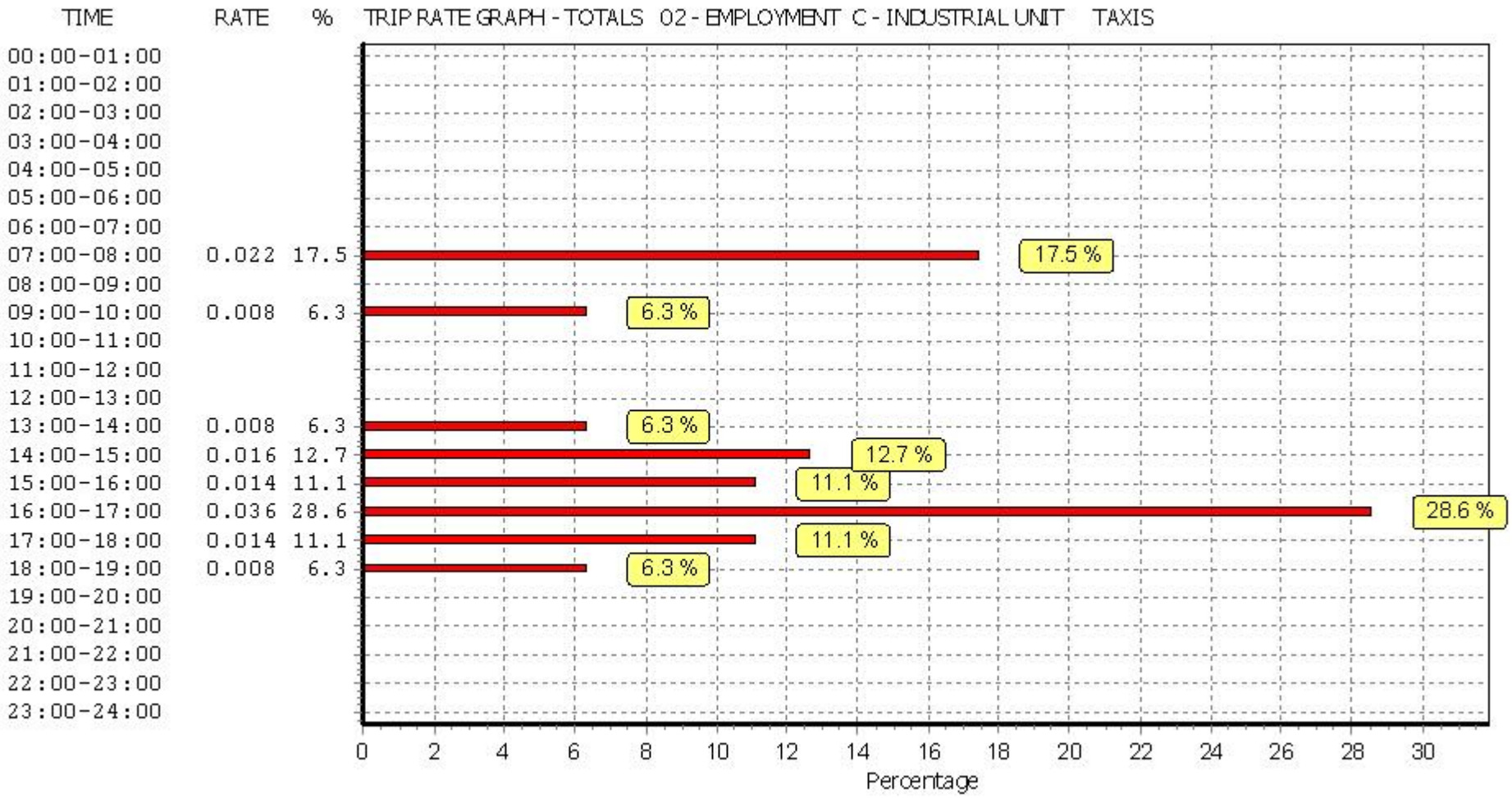


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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



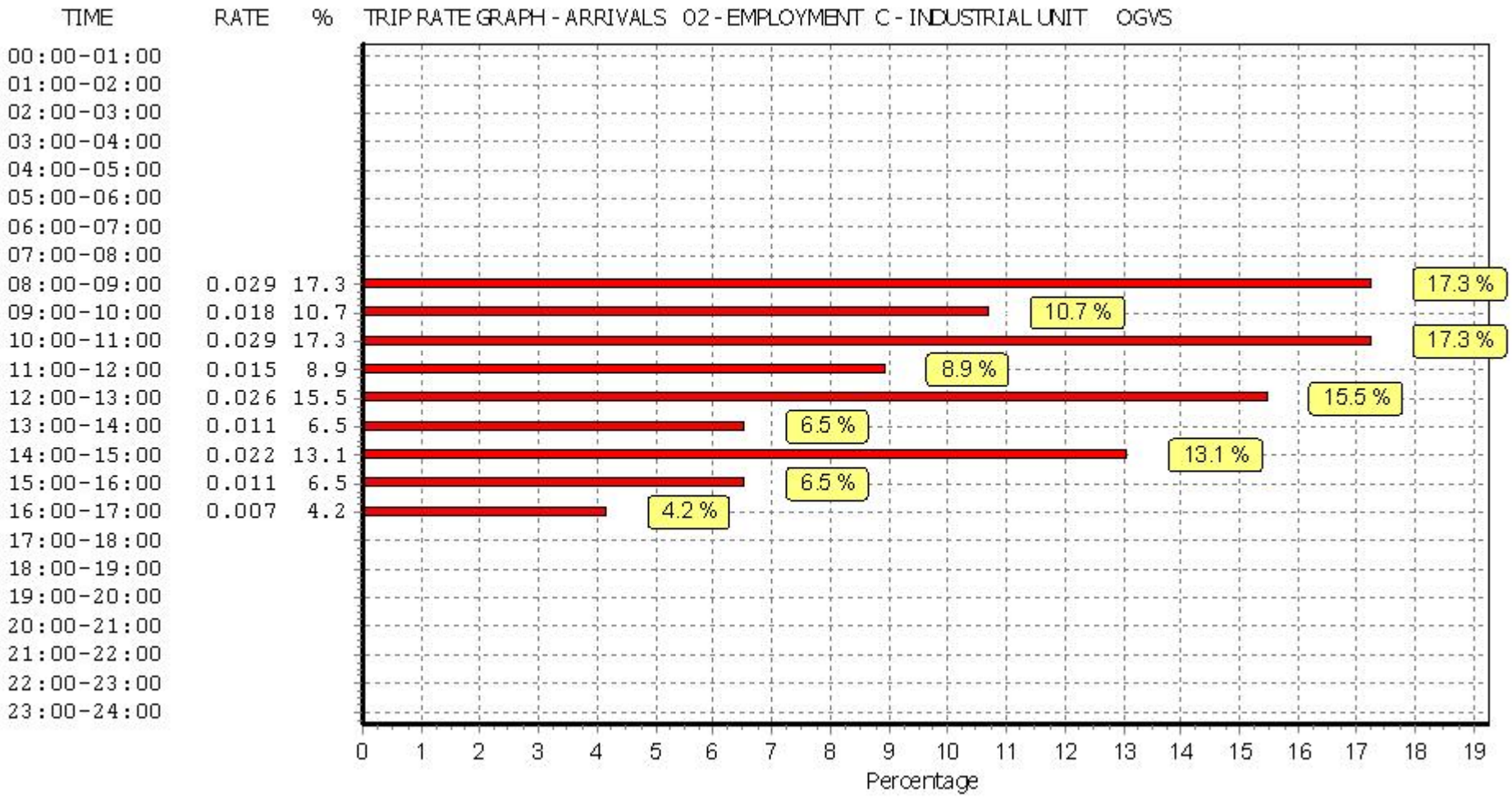
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT
OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

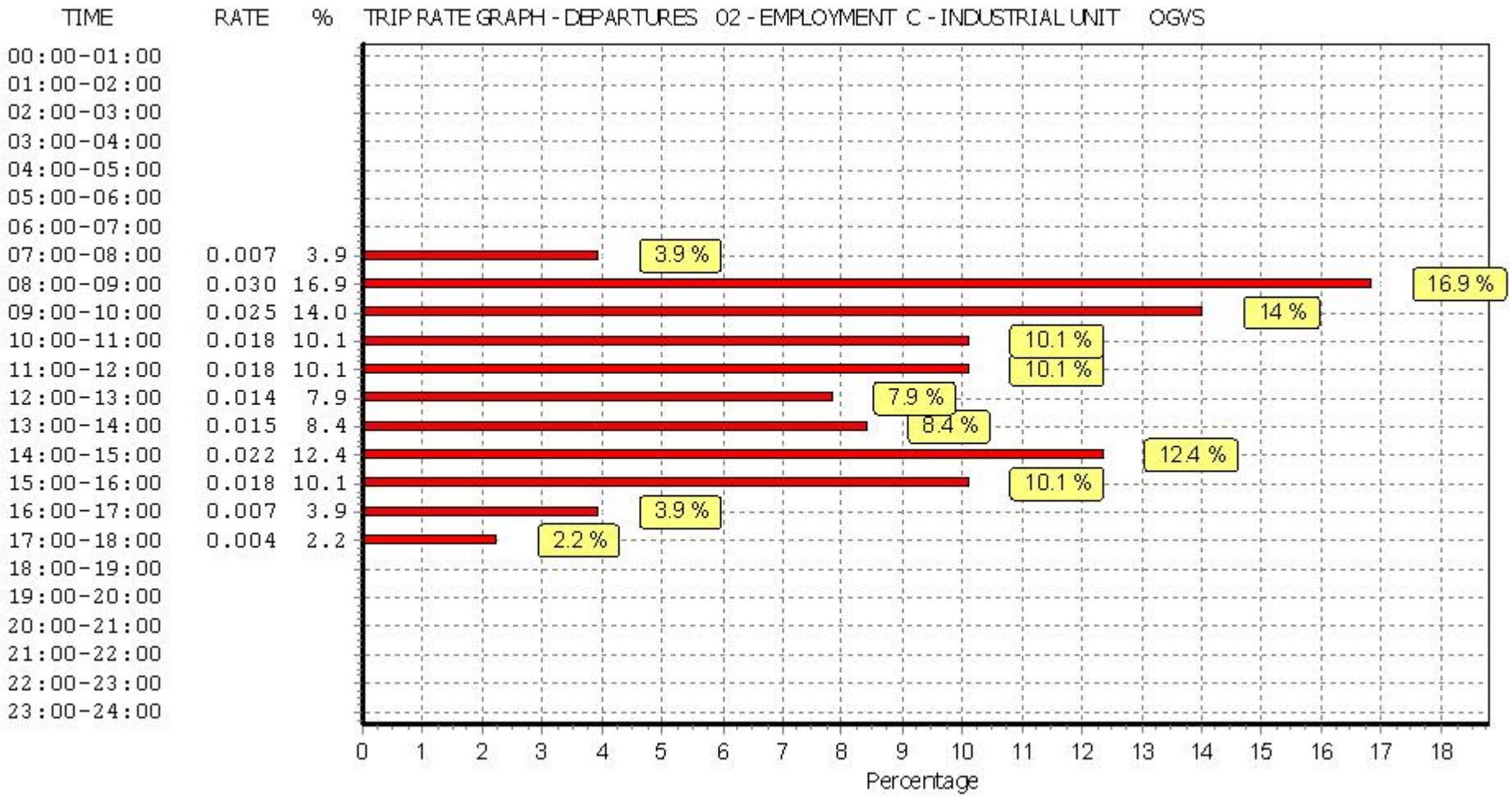
	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	7	3894	0.000	7	3894	0.000	7	3894	0.000
07:30 - 08:00	7	3894	0.000	7	3894	0.007	7	3894	0.007
08:00 - 08:30	7	3894	0.022	7	3894	0.015	7	3894	0.037
08:30 - 09:00	7	3894	0.007	7	3894	0.015	7	3894	0.022
09:00 - 09:30	7	3894	0.011	7	3894	0.007	7	3894	0.018
09:30 - 10:00	7	3894	0.007	7	3894	0.018	7	3894	0.025
10:00 - 10:30	7	3894	0.011	7	3894	0.011	7	3894	0.022
10:30 - 11:00	7	3894	0.018	7	3894	0.007	7	3894	0.025
11:00 - 11:30	7	3894	0.004	7	3894	0.011	7	3894	0.015
11:30 - 12:00	7	3894	0.011	7	3894	0.007	7	3894	0.018
12:00 - 12:30	7	3894	0.015	7	3894	0.007	7	3894	0.022
12:30 - 13:00	7	3894	0.011	7	3894	0.007	7	3894	0.018
13:00 - 13:30	7	3894	0.004	7	3894	0.004	7	3894	0.008
13:30 - 14:00	7	3894	0.007	7	3894	0.011	7	3894	0.018
14:00 - 14:30	7	3894	0.011	7	3894	0.011	7	3894	0.022
14:30 - 15:00	7	3894	0.011	7	3894	0.011	7	3894	0.022
15:00 - 15:30	7	3894	0.004	7	3894	0.011	7	3894	0.015
15:30 - 16:00	7	3894	0.007	7	3894	0.007	7	3894	0.014
16:00 - 16:30	7	3894	0.007	7	3894	0.007	7	3894	0.014
16:30 - 17:00	7	3894	0.000	7	3894	0.000	7	3894	0.000
17:00 - 17:30	7	3894	0.000	7	3894	0.000	7	3894	0.000
17:30 - 18:00	7	3894	0.000	7	3894	0.004	7	3894	0.004
18:00 - 18:30	7	3894	0.000	7	3894	0.000	7	3894	0.000
18:30 - 19:00	7	3894	0.000	7	3894	0.000	7	3894	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.168			0.178			0.346

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.

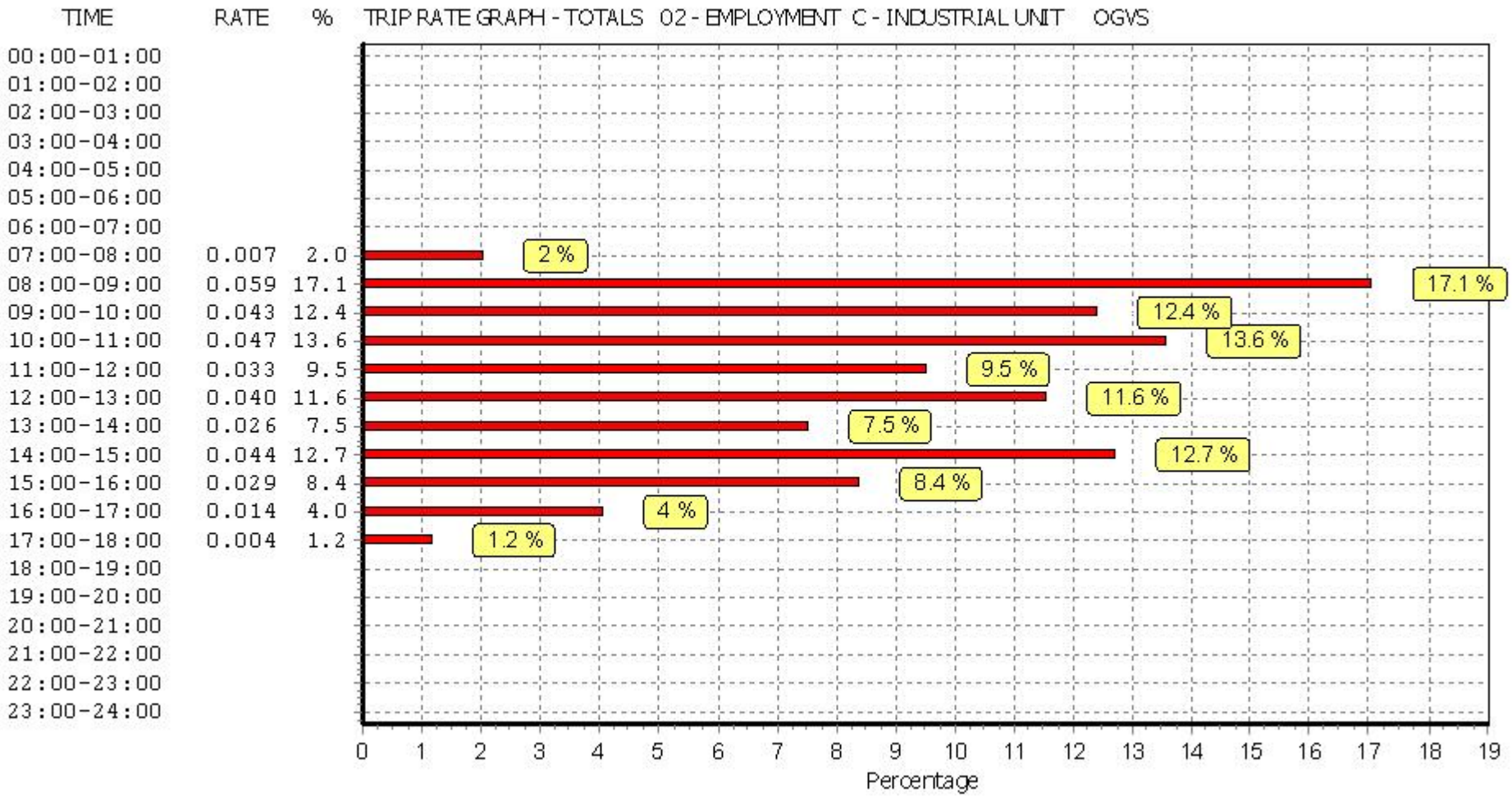
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected 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.*



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 02 - EMPLOYMENT/C - INDUSTRIAL UNIT
CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	7	3894	0.000	7	3894	0.000	7	3894	0.000
07:30 - 08:00	7	3894	0.004	7	3894	0.000	7	3894	0.004
08:00 - 08:30	7	3894	0.000	7	3894	0.000	7	3894	0.000
08:30 - 09:00	7	3894	0.000	7	3894	0.000	7	3894	0.000
09:00 - 09:30	7	3894	0.000	7	3894	0.000	7	3894	0.000
09:30 - 10:00	7	3894	0.000	7	3894	0.000	7	3894	0.000
10:00 - 10:30	7	3894	0.000	7	3894	0.000	7	3894	0.000
10:30 - 11:00	7	3894	0.000	7	3894	0.000	7	3894	0.000
11:00 - 11:30	7	3894	0.000	7	3894	0.000	7	3894	0.000
11:30 - 12:00	7	3894	0.000	7	3894	0.000	7	3894	0.000
12:00 - 12:30	7	3894	0.000	7	3894	0.000	7	3894	0.000
12:30 - 13:00	7	3894	0.000	7	3894	0.000	7	3894	0.000
13:00 - 13:30	7	3894	0.000	7	3894	0.000	7	3894	0.000
13:30 - 14:00	7	3894	0.000	7	3894	0.000	7	3894	0.000
14:00 - 14:30	7	3894	0.000	7	3894	0.000	7	3894	0.000
14:30 - 15:00	7	3894	0.000	7	3894	0.000	7	3894	0.000
15:00 - 15:30	7	3894	0.004	7	3894	0.004	7	3894	0.008
15:30 - 16:00	7	3894	0.000	7	3894	0.000	7	3894	0.000
16:00 - 16:30	7	3894	0.000	7	3894	0.004	7	3894	0.004
16:30 - 17:00	7	3894	0.000	7	3894	0.000	7	3894	0.000
17:00 - 17:30	7	3894	0.000	7	3894	0.000	7	3894	0.000
17:30 - 18:00	7	3894	0.000	7	3894	0.004	7	3894	0.004
18:00 - 18:30	7	3894	0.000	7	3894	0.000	7	3894	0.000
18:30 - 19:00	7	3894	0.000	7	3894	0.000	7	3894	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.008			0.012			0.020

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.

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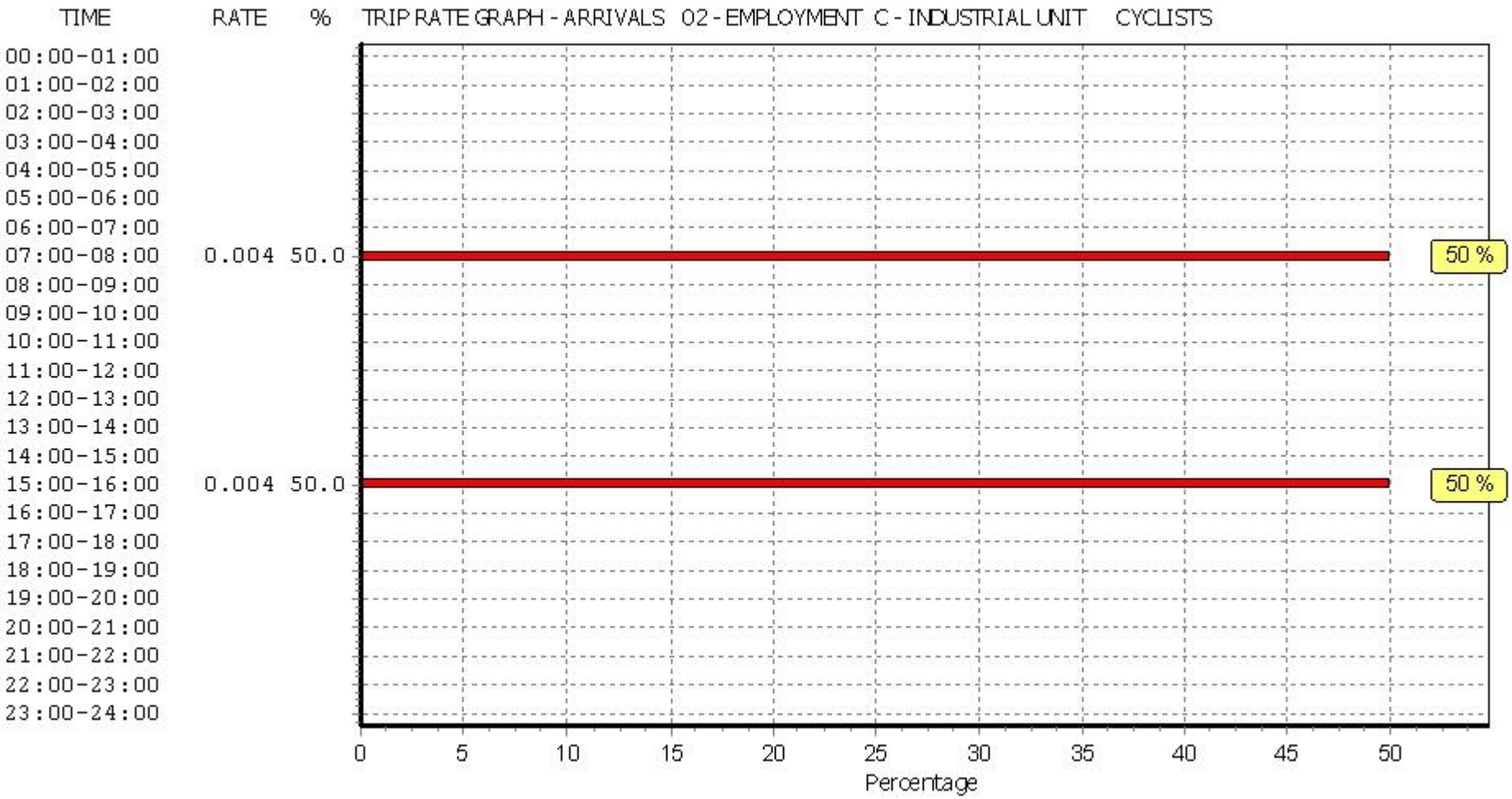

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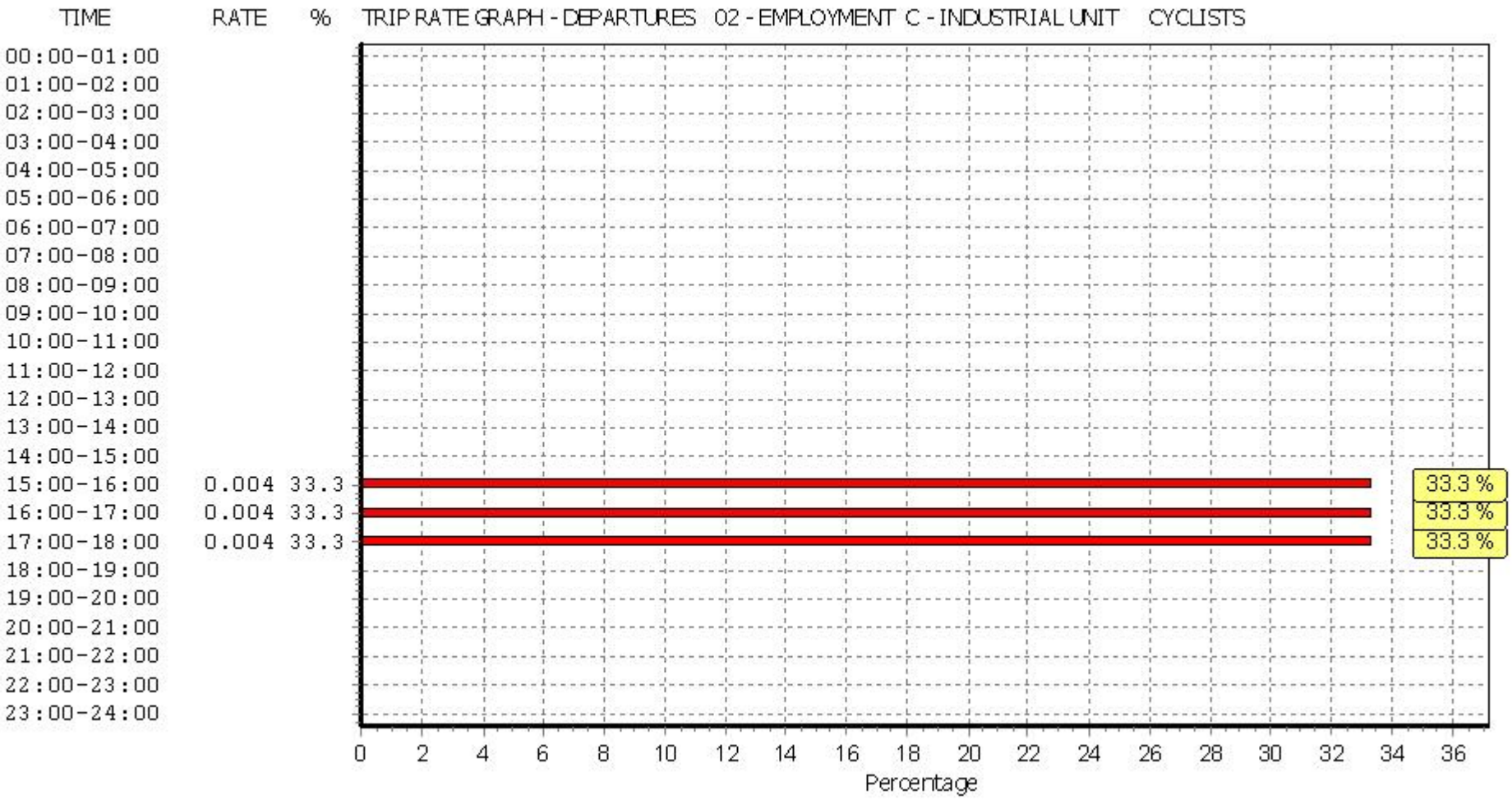

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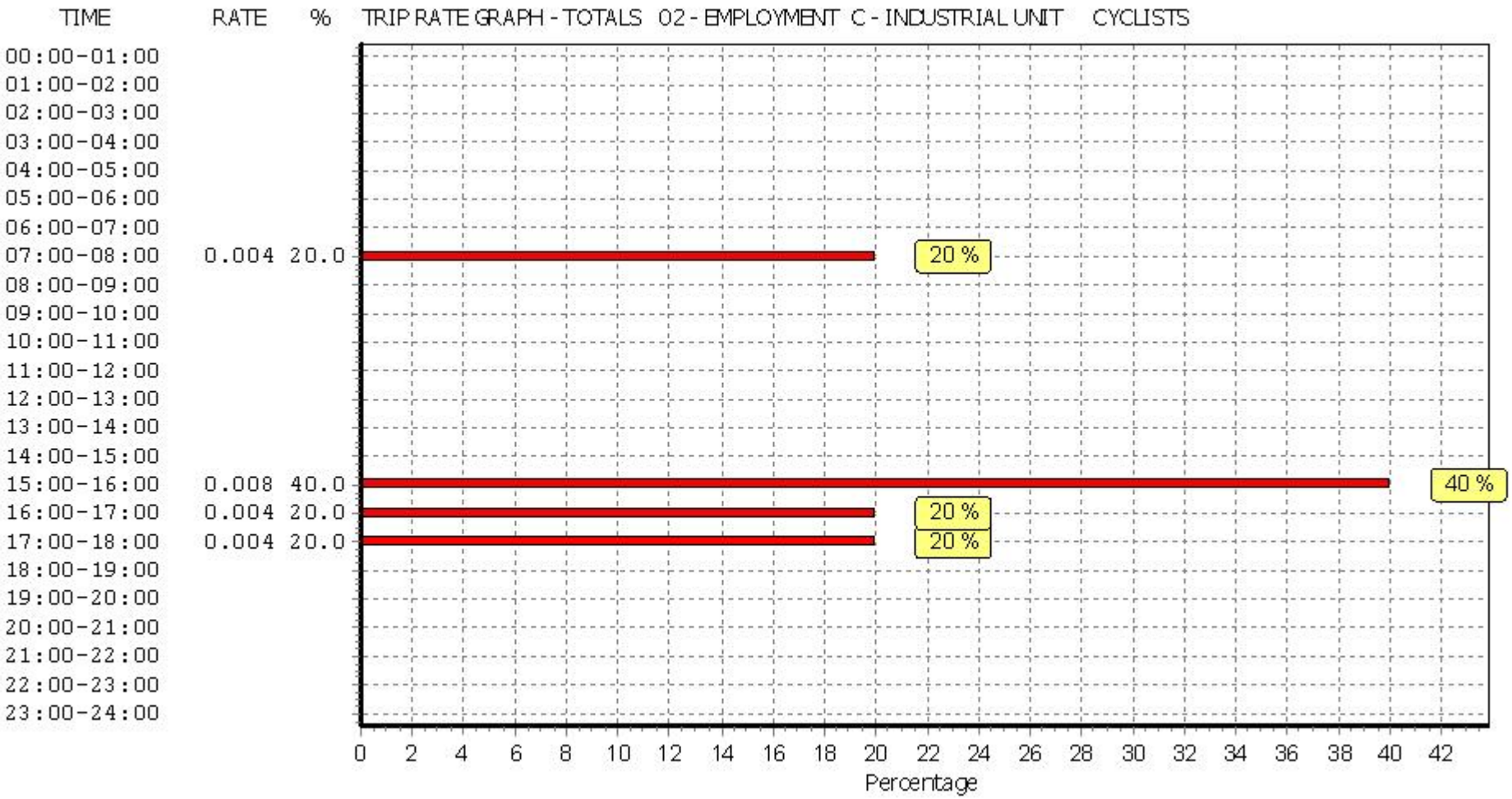

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Calculation Reference: AUDIT-800401-190111-0131

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : C - FLATS PRIVATELY OWNED
VEHICLES

Selected regions and areas:

14	LEINSTER		
	LU	LOUTH	3 days
15	GREATER DUBLIN		
	DL	DUBLIN	5 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: 20 to 372 (units:)
Range Selected by User: 18 to 372 (units:)

Parking Spaces Range: Selected: 0 to 386 Actual: 0 to 386

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/10 to 22/11/16

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	2 days
Tuesday	4 days
Wednesday	1 days
Thursday	1 days

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

Selected survey types:

Manual count	8 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:

Edge of Town Centre	3
Suburban Area (PPS6 Out of Centre)	2
Edge of Town	1
Neighbourhood Centre (PPS6 Local Centre)	2

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	6
Built-Up Zone	1
No Sub Category	1

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

Secondary Filtering selection:

Use Class:

C3	8 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:

5,001 to 10,000	2 days
15,001 to 20,000	1 days
20,001 to 25,000	2 days
25,001 to 50,000	3 days

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

Population within 5 miles:

25,001 to 50,000	3 days
250,001 to 500,000	1 days
500,001 or More	4 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	8 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	7 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	8 days

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

LIST OF SITES relevant to selection parameters

1 DL-03-C-07 BLOCKS OF FLATS DUBLIN
SANDYFORD ROAD
DUBLIN
DUNDRUM
Edge of Town
No Sub Category
Total Number of dwellings: 372
Survey date: TUESDAY *11/05/10* *Survey Type: MANUAL*

2 DL-03-C-11 BLOCK OF FLATS DUBLIN
WYCKHAM WAY
DUBLIN
DUNDRUM
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total Number of dwellings: 96
Survey date: TUESDAY *10/09/13* *Survey Type: MANUAL*

3 DL-03-C-13 BLOCK OF FLATS DUBLIN
SANDYFORD ROAD
DUBLIN

Neighbourhood Centre (PPS6 Local Centre)
Built-Up Zone
Total Number of dwellings: 52
Survey date: TUESDAY *10/09/13* *Survey Type: MANUAL*

4 DL-03-C-14 BLOCKS OF FLATS DUBLIN
BALLINTEER ROAD
DUBLIN
DUNDRUM
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 140
Survey date: TUESDAY *10/09/13* *Survey Type: MANUAL*

5 DL-03-C-15 BLOCKS OF FLATS DUBLIN
MONKSTOWN ROAD
DUBLIN
MONKSTOWN
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 20
Survey date: WEDNESDAY *01/10/14* *Survey Type: MANUAL*

6 LU-03-C-01 BLOCKS OF FLATS LOUTH
DONORE ROAD
DROGHEDA

Edge of Town Centre
Residential Zone
Total Number of dwellings: 52
Survey date: THURSDAY *12/09/13* *Survey Type: MANUAL*

7 LU-03-C-02 BLOCK OF FLATS LOUTH
NICHOLAS STREET
DUNDALK

Edge of Town Centre
Residential Zone
Total Number of dwellings: 33
Survey date: MONDAY *16/09/13* *Survey Type: MANUAL*

8 LU-03-C-03 BLOCK OF FLATS LOUTH
NICHOLAS STREET
DUNDALK

Edge of Town Centre
Residential Zone
Total Number of dwellings: 20
Survey date: MONDAY *16/09/13* *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/C - FLATS PRIVATELY OWNED
VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	8	98	0.051	8	98	0.192	8	98	0.243
08:00 - 09:00	8	98	0.056	8	98	0.215	8	98	0.271
09:00 - 10:00	8	98	0.048	8	98	0.079	8	98	0.127
10:00 - 11:00	8	98	0.022	8	98	0.048	8	98	0.070
11:00 - 12:00	8	98	0.034	8	98	0.036	8	98	0.070
12:00 - 13:00	8	98	0.042	8	98	0.057	8	98	0.099
13:00 - 14:00	8	98	0.059	8	98	0.057	8	98	0.116
14:00 - 15:00	8	98	0.055	8	98	0.036	8	98	0.091
15:00 - 16:00	8	98	0.056	8	98	0.046	8	98	0.102
16:00 - 17:00	8	98	0.070	8	98	0.046	8	98	0.116
17:00 - 18:00	8	98	0.154	8	98	0.050	8	98	0.204
18:00 - 19:00	8	98	0.189	8	98	0.099	8	98	0.288
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.836			0.961			1.797

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

Parameter summary

Trip rate parameter range selected:	20 - 372 (units:)
Survey date date range:	01/01/10 - 22/11/16
Number of weekdays (Monday-Friday):	8
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
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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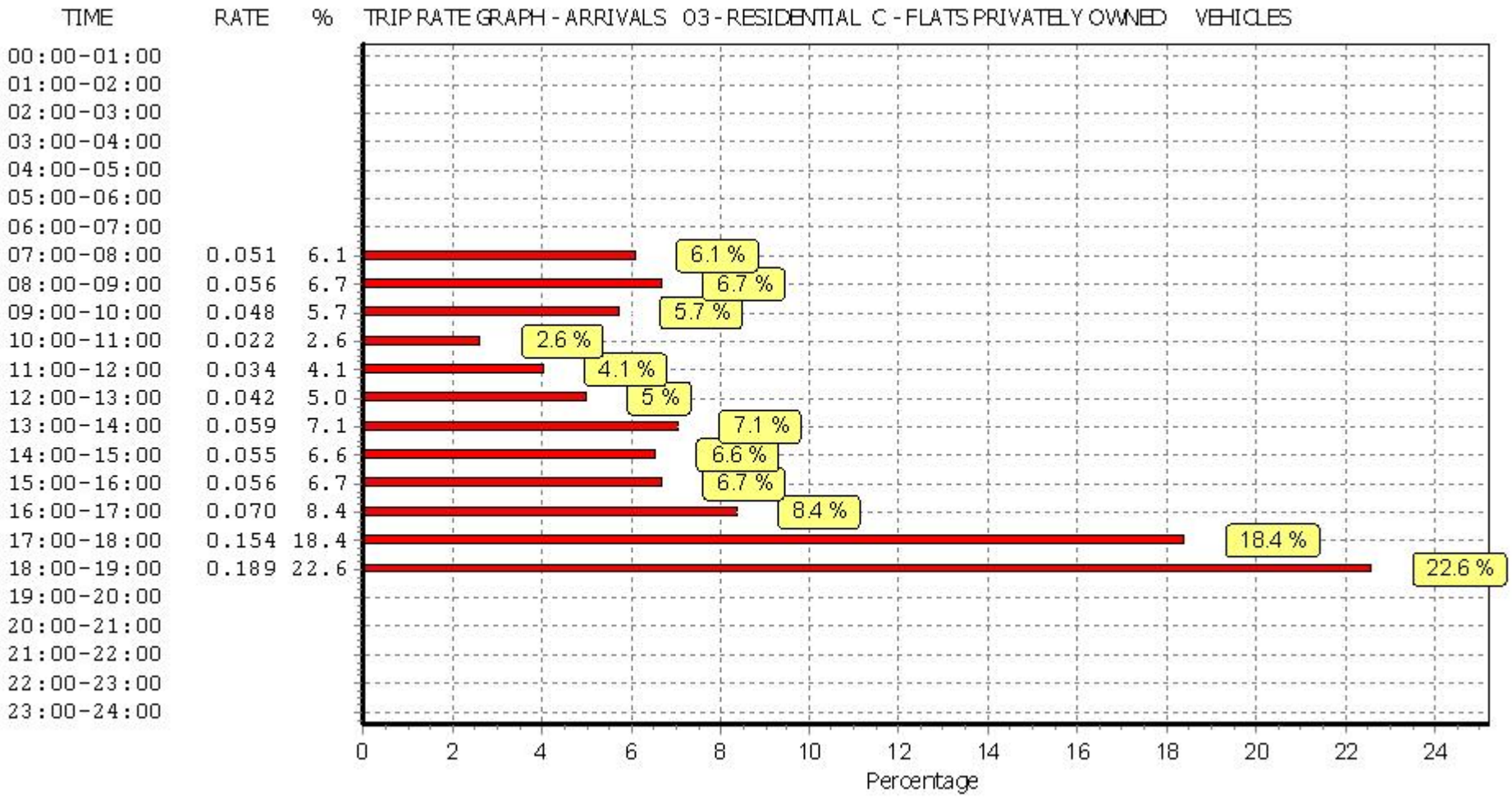

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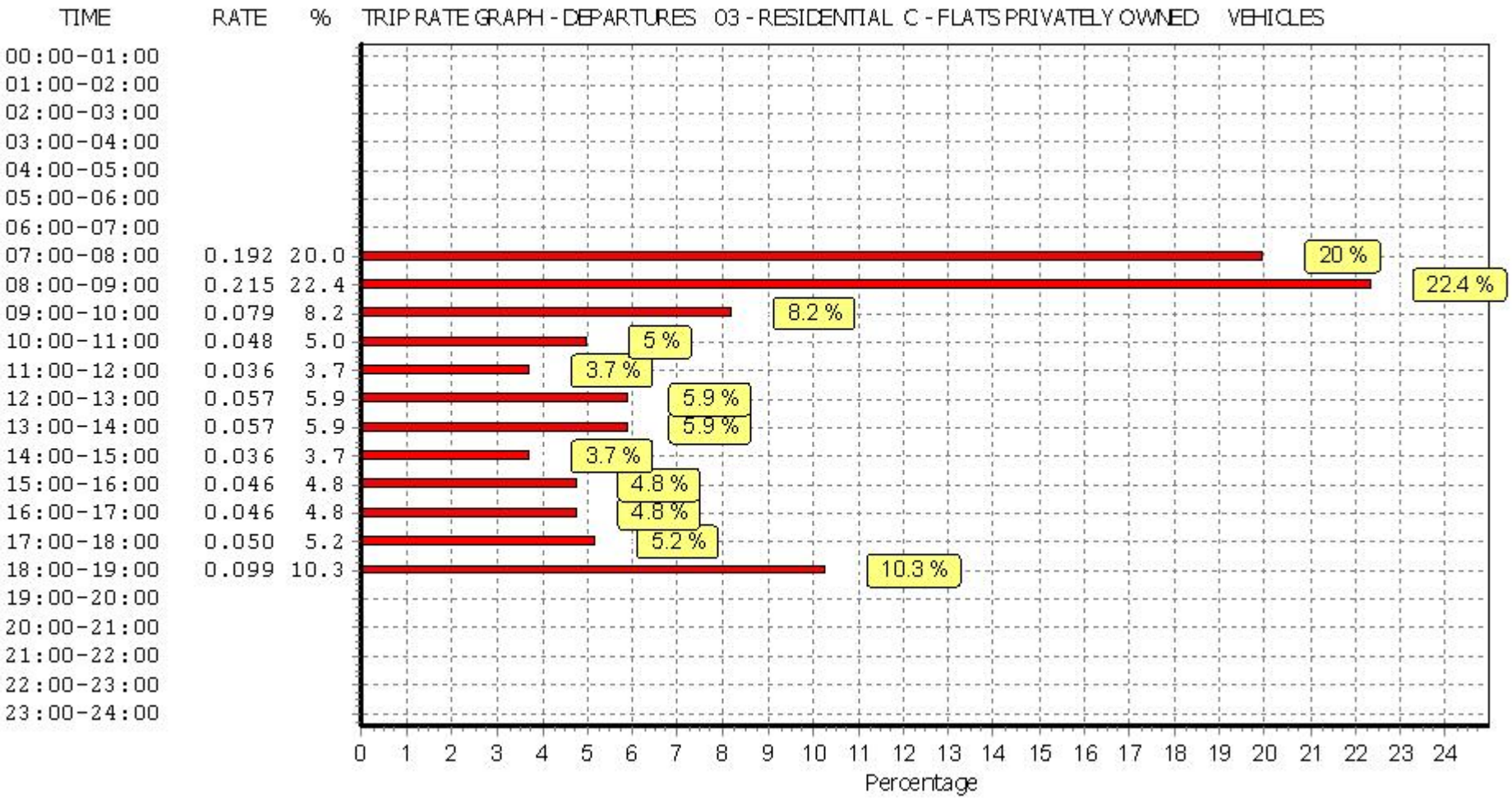

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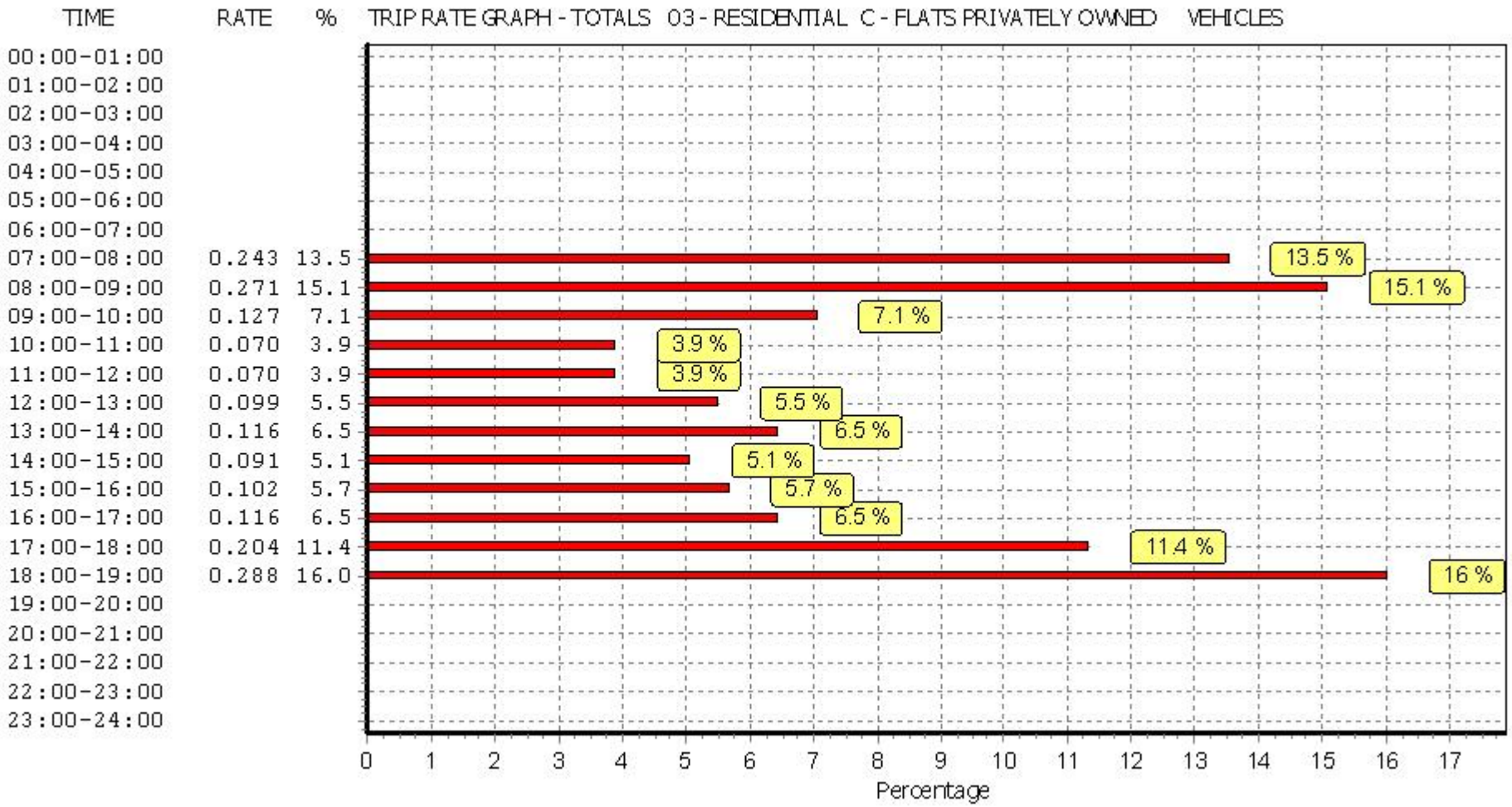

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TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
TAXIS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	8	98	0.004	8	98	0.005	8	98	0.009
08:00 - 09:00	8	98	0.000	8	98	0.000	8	98	0.000
09:00 - 10:00	8	98	0.003	8	98	0.001	8	98	0.004
10:00 - 11:00	8	98	0.001	8	98	0.003	8	98	0.004
11:00 - 12:00	8	98	0.000	8	98	0.000	8	98	0.000
12:00 - 13:00	8	98	0.001	8	98	0.001	8	98	0.002
13:00 - 14:00	8	98	0.003	8	98	0.001	8	98	0.004
14:00 - 15:00	8	98	0.001	8	98	0.003	8	98	0.004
15:00 - 16:00	8	98	0.000	8	98	0.000	8	98	0.000
16:00 - 17:00	8	98	0.000	8	98	0.001	8	98	0.001
17:00 - 18:00	8	98	0.003	8	98	0.001	8	98	0.004
18:00 - 19:00	8	98	0.000	8	98	0.000	8	98	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.016			0.016			0.032

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.

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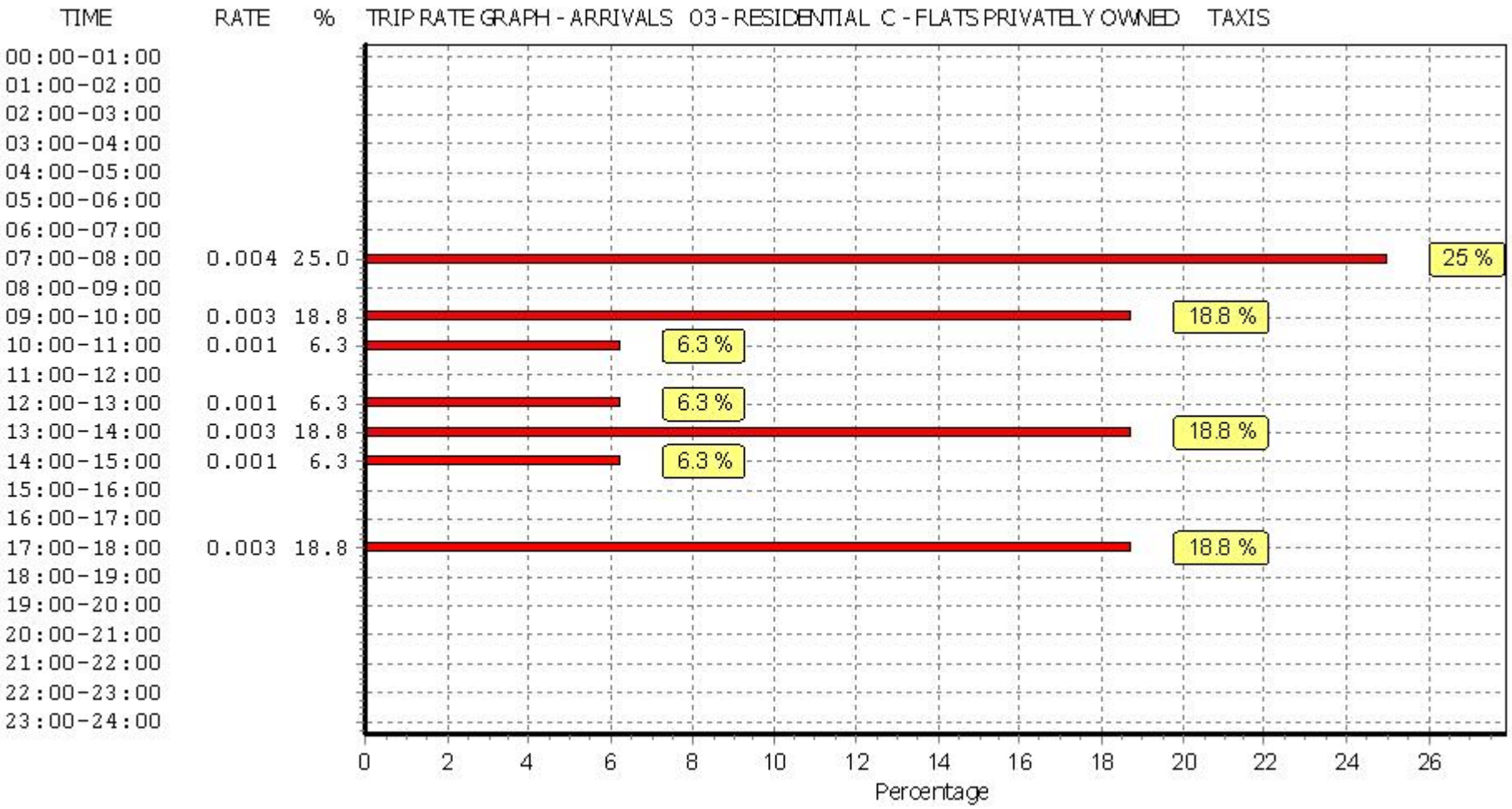

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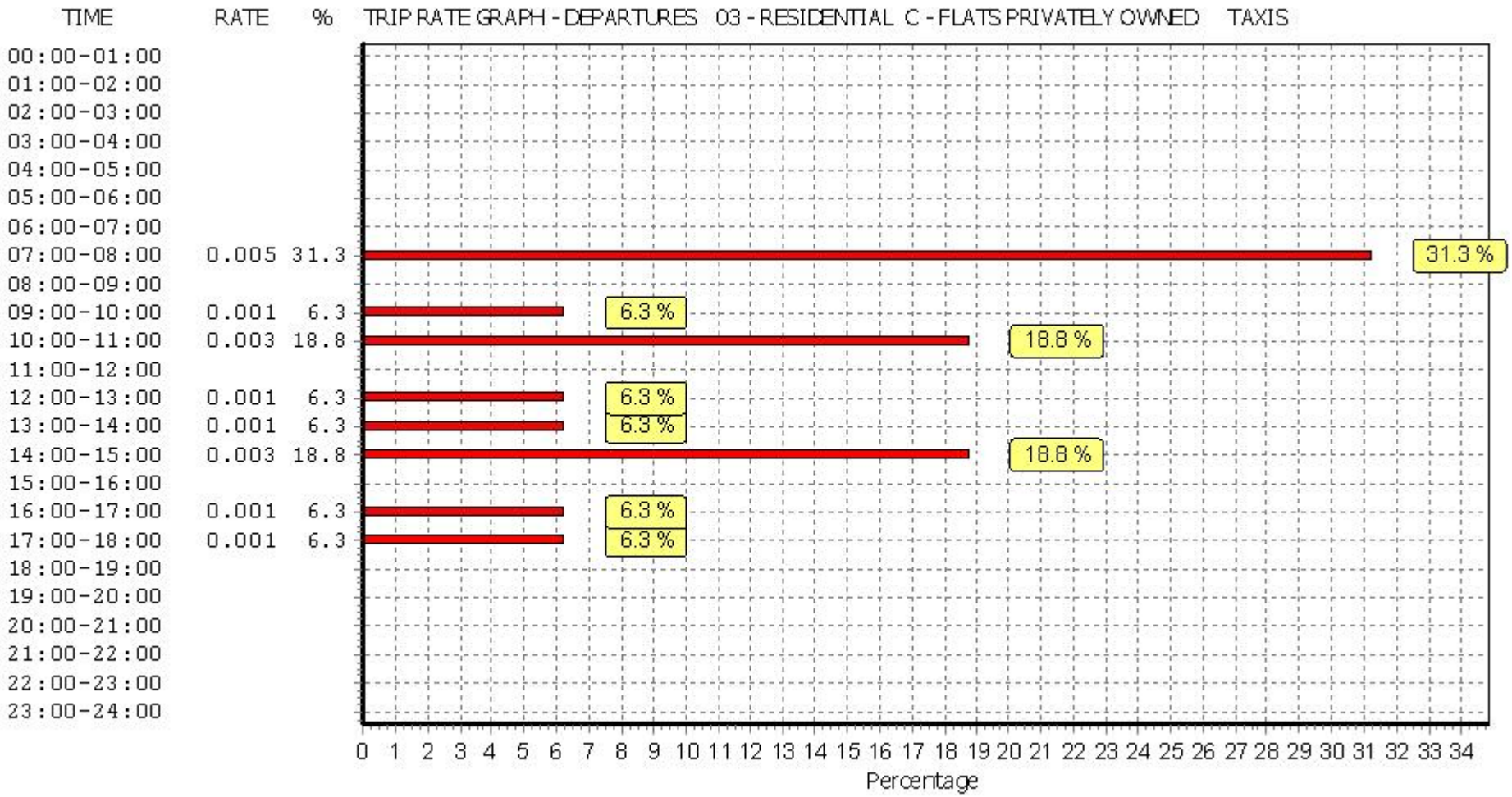

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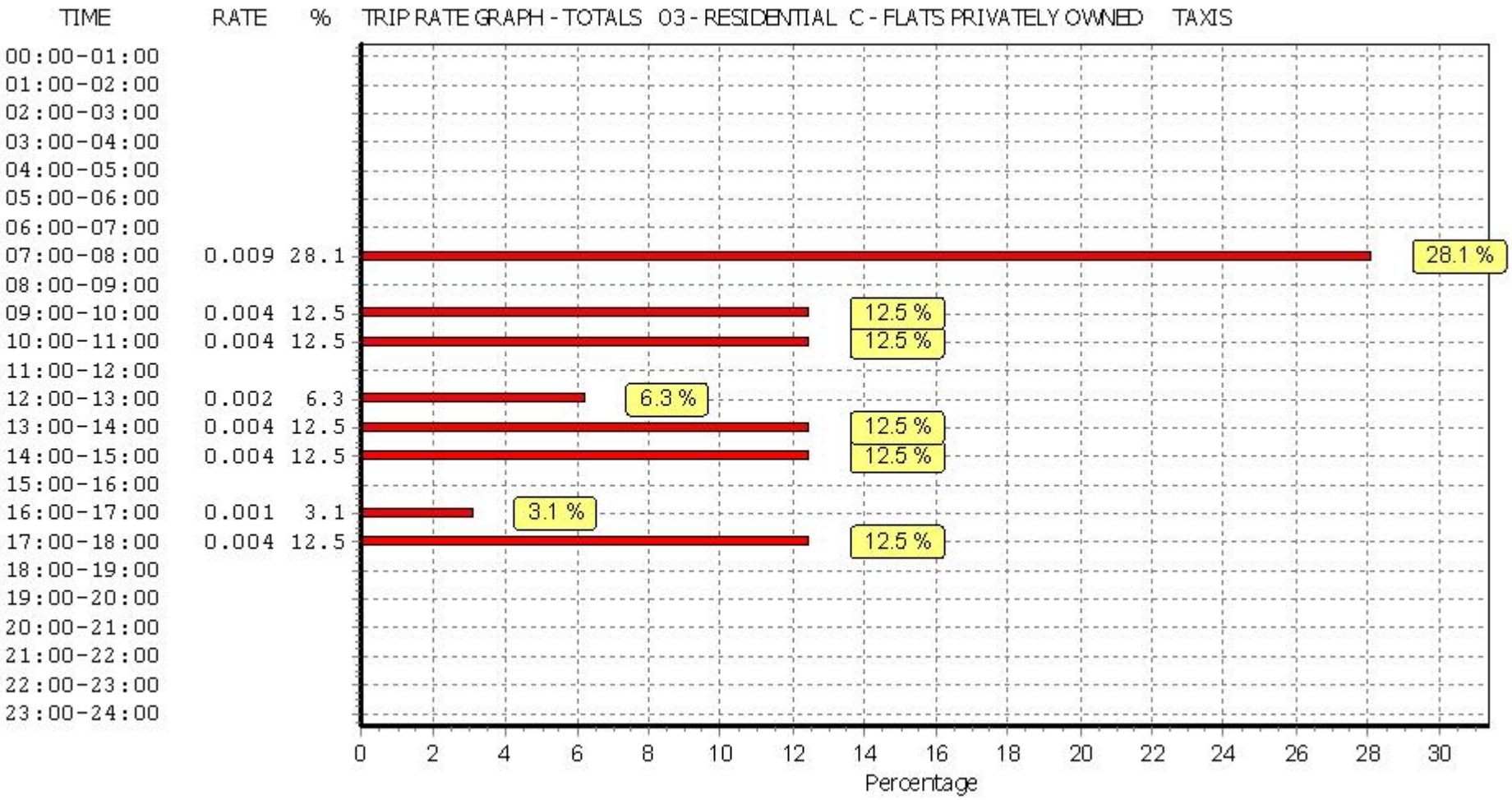

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TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
OGVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	8	98	0.000	8	98	0.004	8	98	0.004
08:00 - 09:00	8	98	0.000	8	98	0.001	8	98	0.001
09:00 - 10:00	8	98	0.001	8	98	0.000	8	98	0.001
10:00 - 11:00	8	98	0.001	8	98	0.003	8	98	0.004
11:00 - 12:00	8	98	0.001	8	98	0.000	8	98	0.001
12:00 - 13:00	8	98	0.000	8	98	0.001	8	98	0.001
13:00 - 14:00	8	98	0.000	8	98	0.000	8	98	0.000
14:00 - 15:00	8	98	0.000	8	98	0.000	8	98	0.000
15:00 - 16:00	8	98	0.001	8	98	0.000	8	98	0.001
16:00 - 17:00	8	98	0.000	8	98	0.001	8	98	0.001
17:00 - 18:00	8	98	0.000	8	98	0.000	8	98	0.000
18:00 - 19:00	8	98	0.000	8	98	0.000	8	98	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			0.010			0.014

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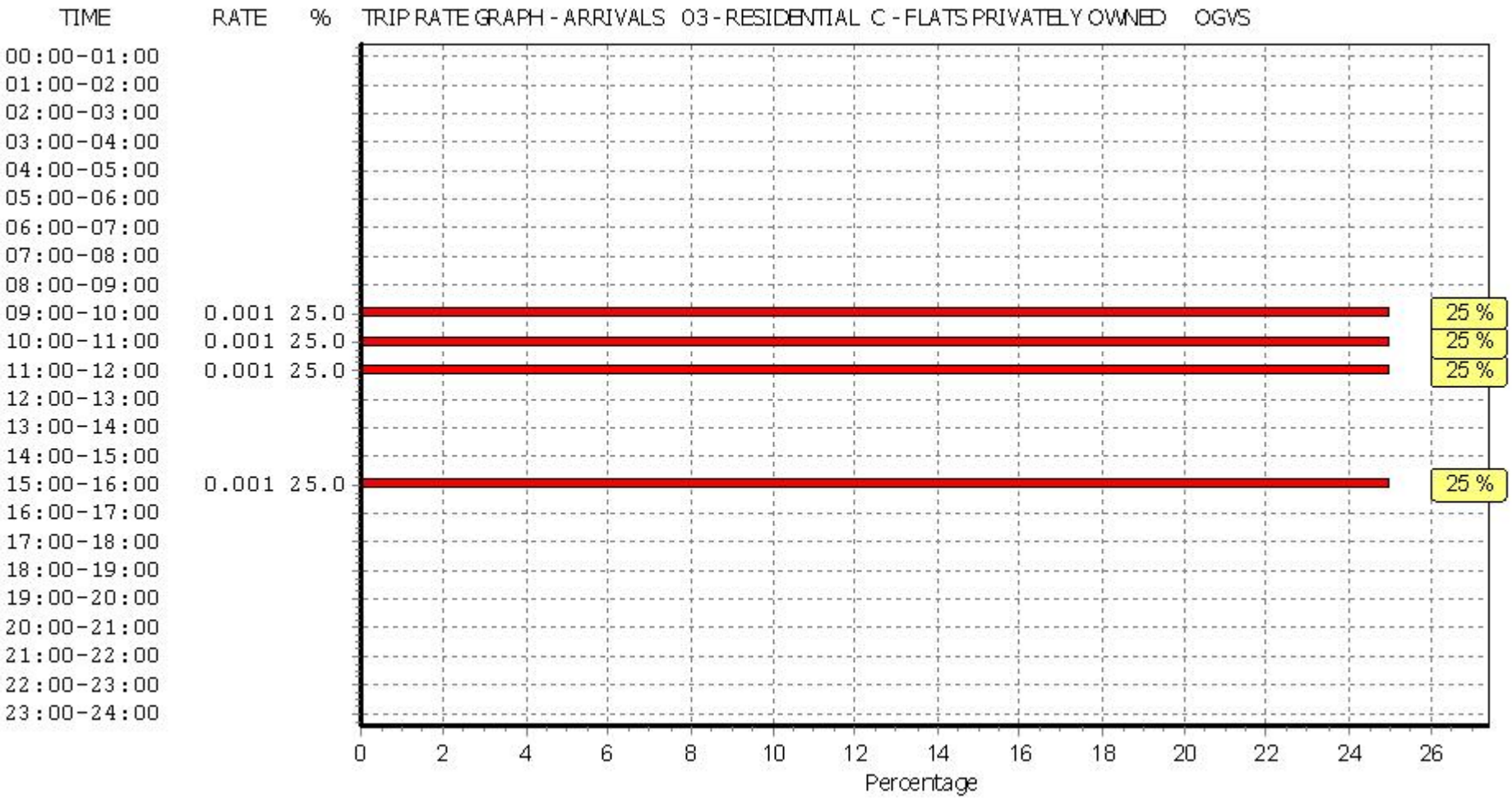

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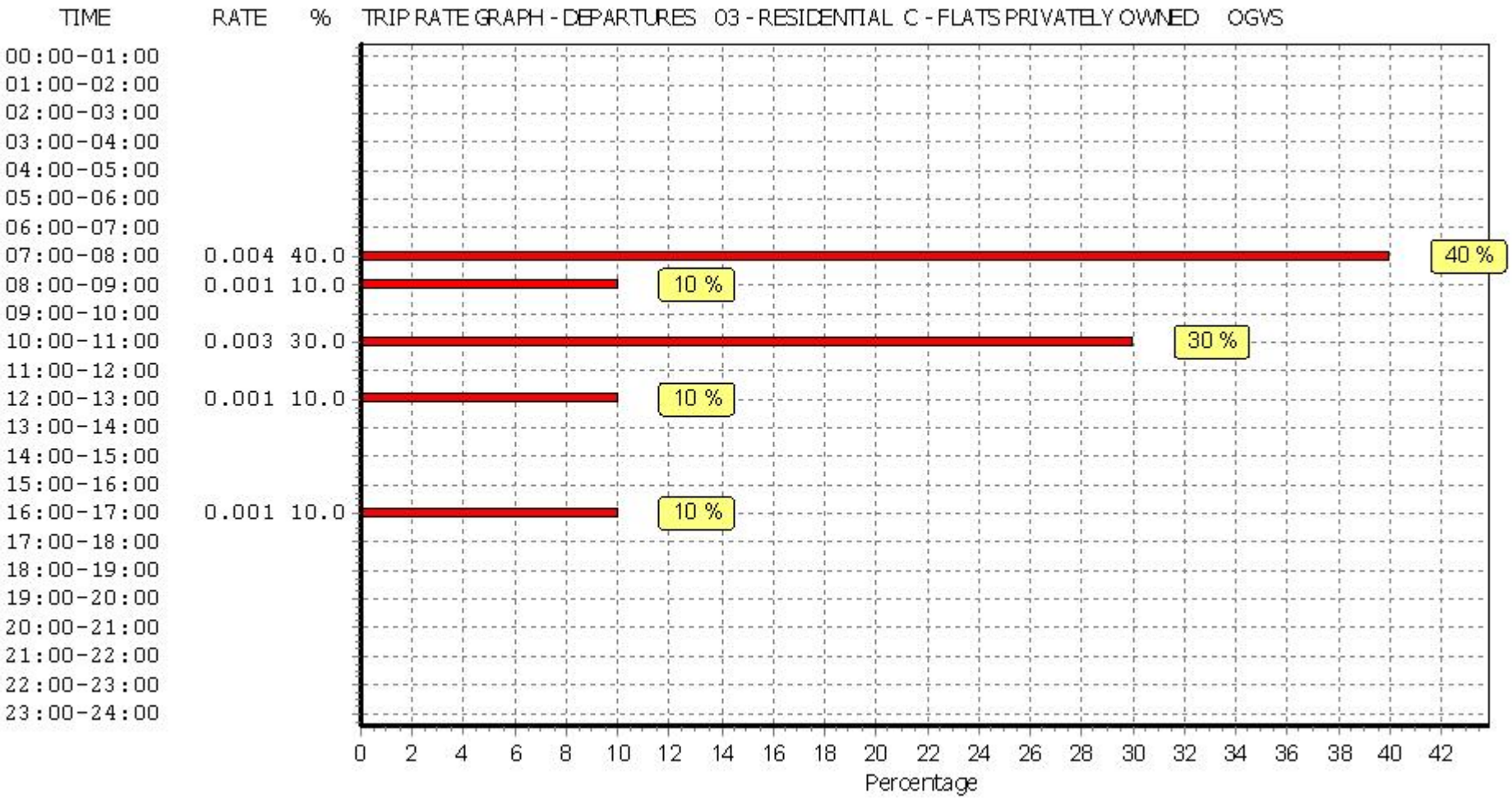

This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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

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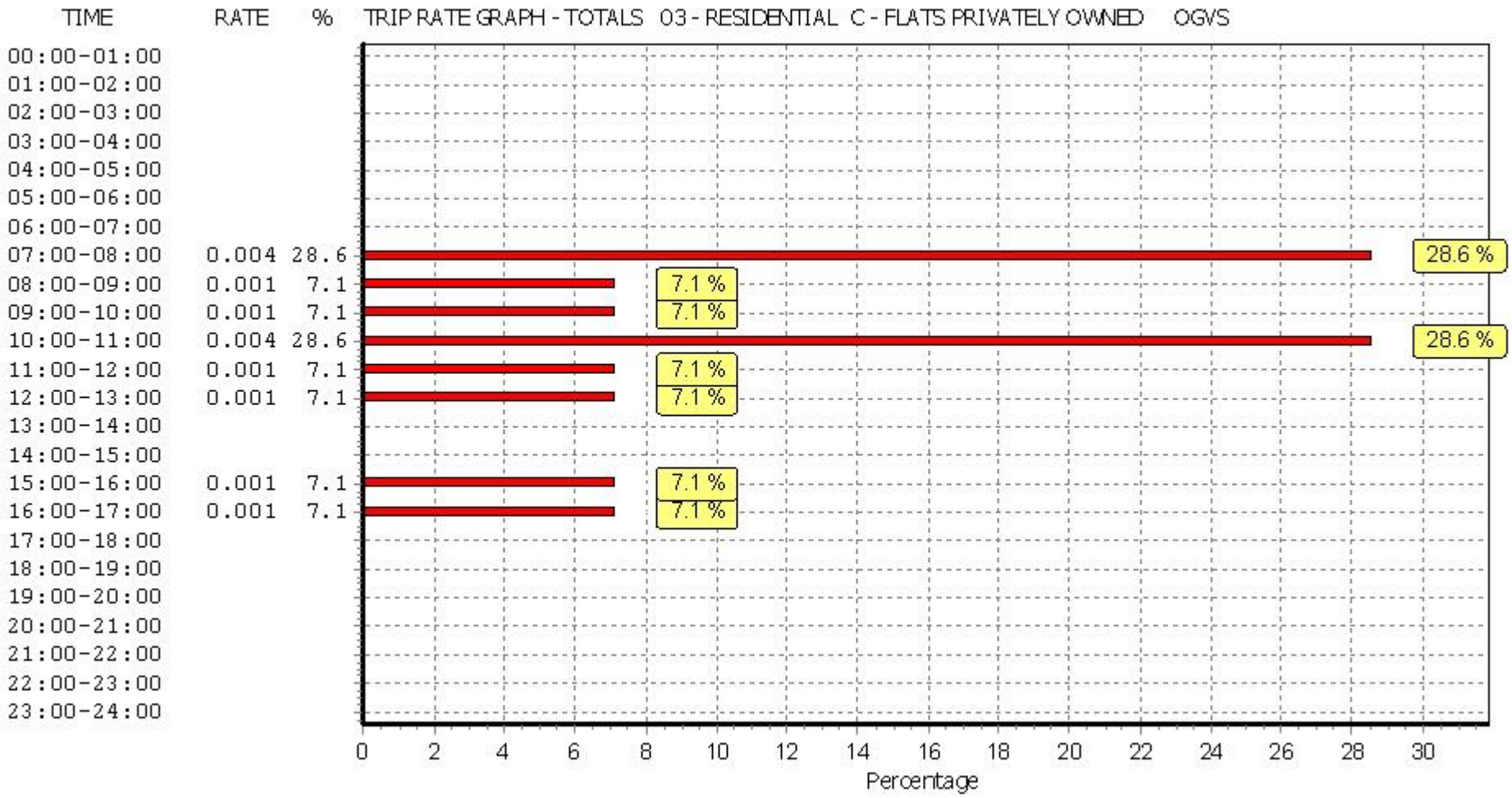

This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
PSVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	8	98	0.001	8	98	0.004	8	98	0.005
08:00 - 09:00	8	98	0.000	8	98	0.000	8	98	0.000
09:00 - 10:00	8	98	0.000	8	98	0.000	8	98	0.000
10:00 - 11:00	8	98	0.000	8	98	0.000	8	98	0.000
11:00 - 12:00	8	98	0.000	8	98	0.000	8	98	0.000
12:00 - 13:00	8	98	0.000	8	98	0.000	8	98	0.000
13:00 - 14:00	8	98	0.000	8	98	0.000	8	98	0.000
14:00 - 15:00	8	98	0.000	8	98	0.000	8	98	0.000
15:00 - 16:00	8	98	0.000	8	98	0.000	8	98	0.000
16:00 - 17:00	8	98	0.000	8	98	0.000	8	98	0.000
17:00 - 18:00	8	98	0.000	8	98	0.000	8	98	0.000
18:00 - 19:00	8	98	0.000	8	98	0.000	8	98	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.001			0.004			0.005

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

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

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

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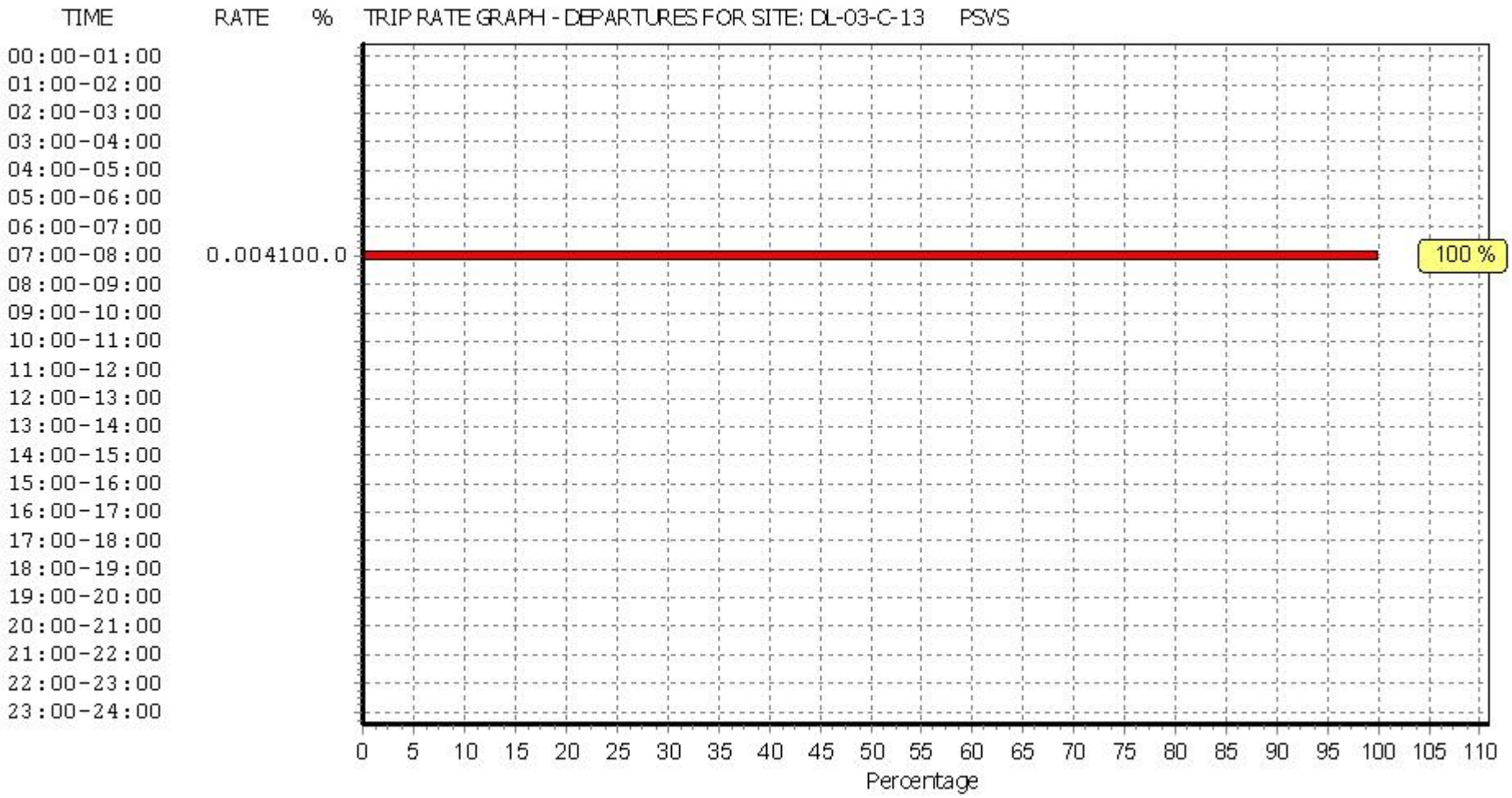

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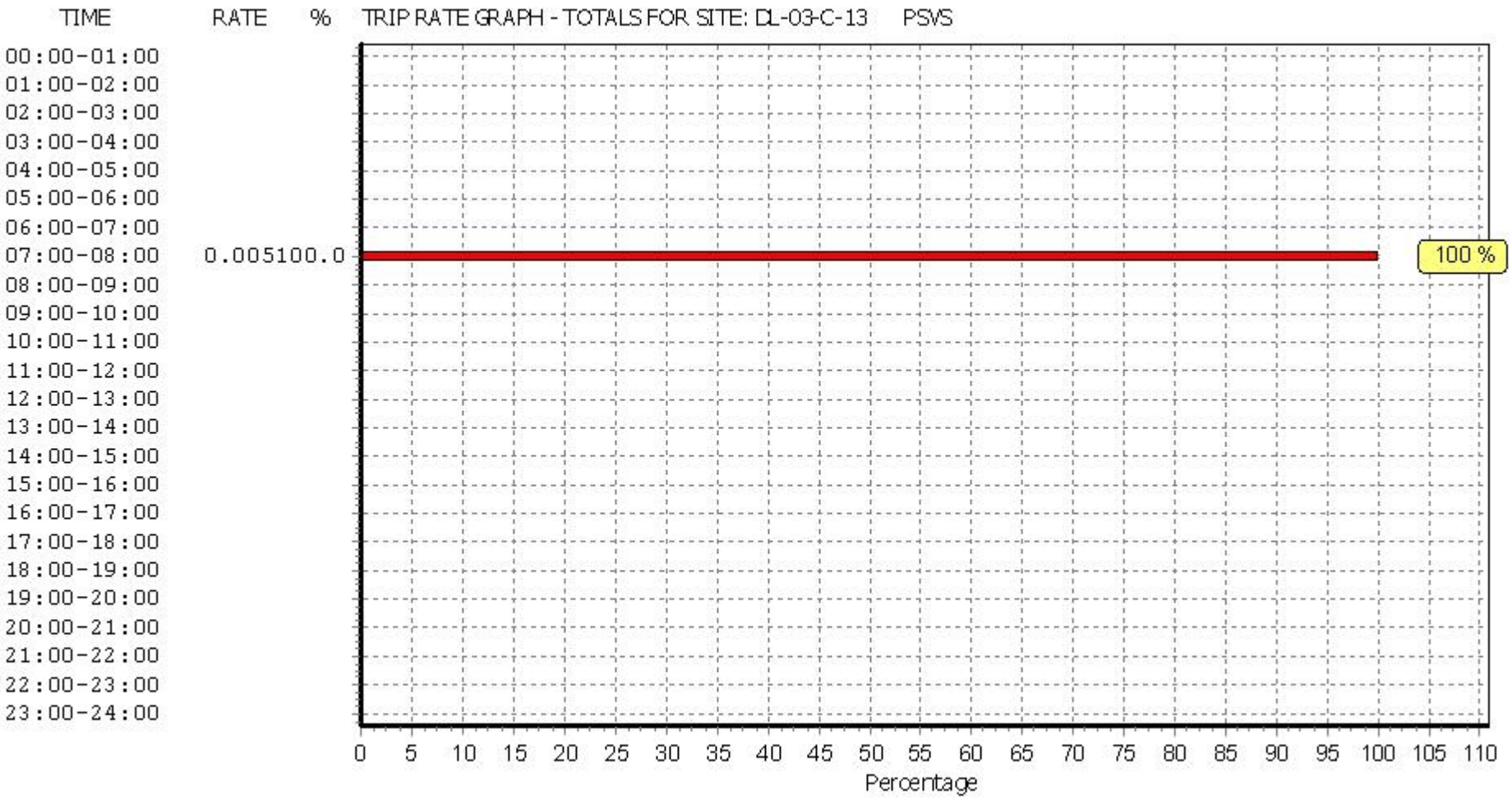

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TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
CYCLISTS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	8	98	0.003	8	98	0.006	8	98	0.009
08:00 - 09:00	8	98	0.004	8	98	0.013	8	98	0.017
09:00 - 10:00	8	98	0.000	8	98	0.005	8	98	0.005
10:00 - 11:00	8	98	0.003	8	98	0.000	8	98	0.003
11:00 - 12:00	8	98	0.003	8	98	0.001	8	98	0.004
12:00 - 13:00	8	98	0.004	8	98	0.000	8	98	0.004
13:00 - 14:00	8	98	0.001	8	98	0.000	8	98	0.001
14:00 - 15:00	8	98	0.000	8	98	0.003	8	98	0.003
15:00 - 16:00	8	98	0.000	8	98	0.003	8	98	0.003
16:00 - 17:00	8	98	0.003	8	98	0.001	8	98	0.004
17:00 - 18:00	8	98	0.005	8	98	0.003	8	98	0.008
18:00 - 19:00	8	98	0.009	8	98	0.004	8	98	0.013
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.035			0.039			0.074

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.

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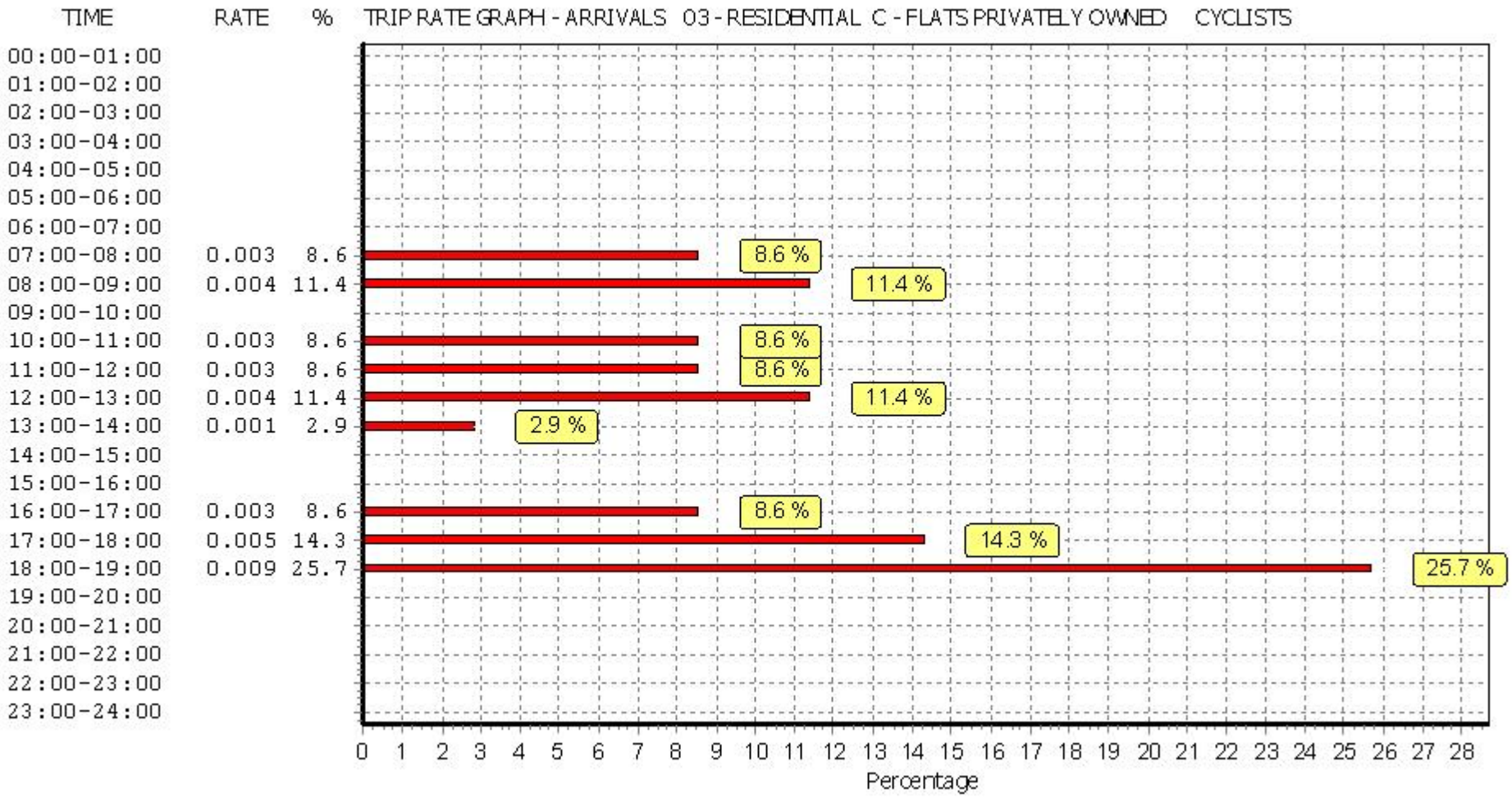

This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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

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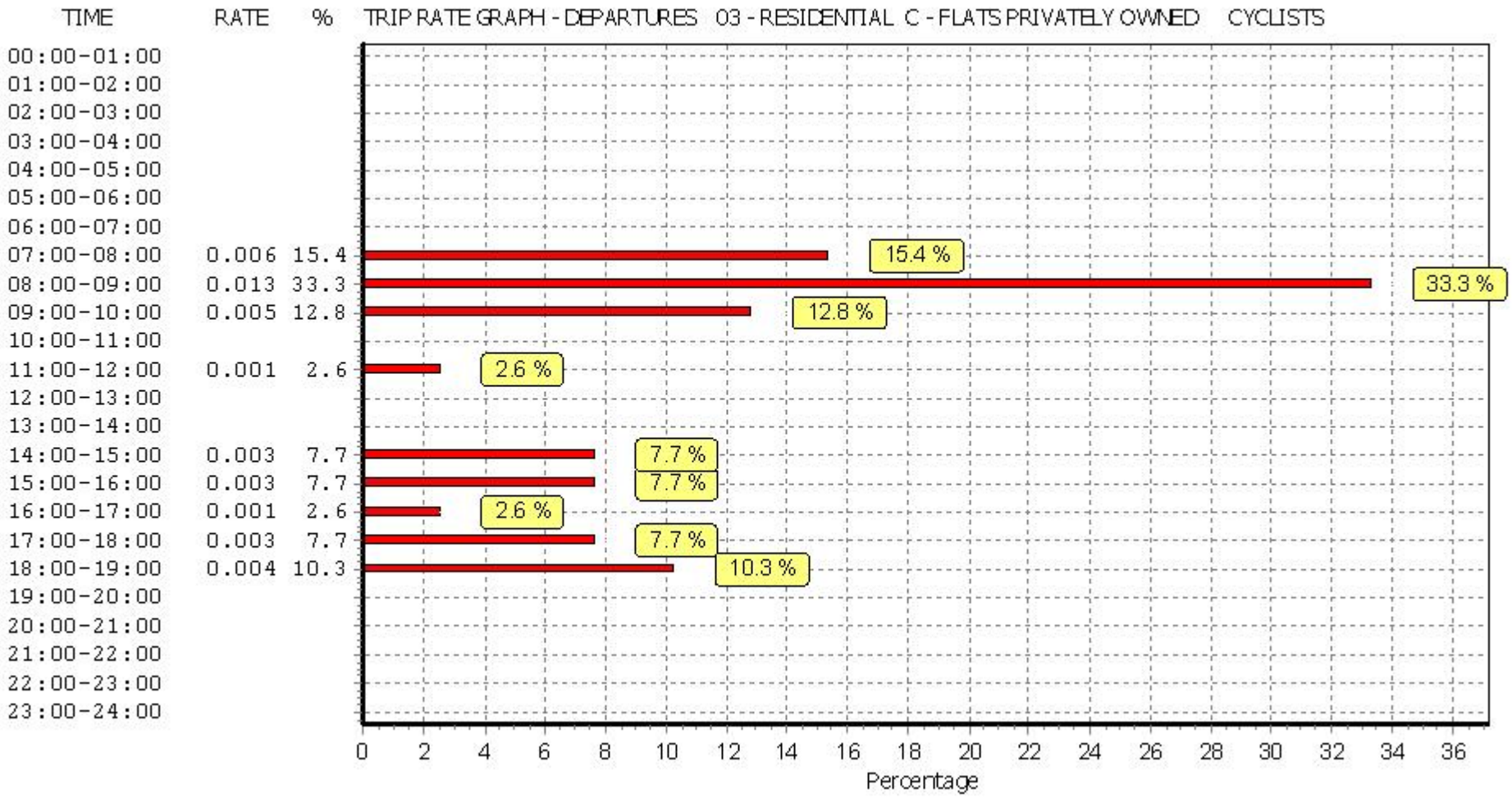

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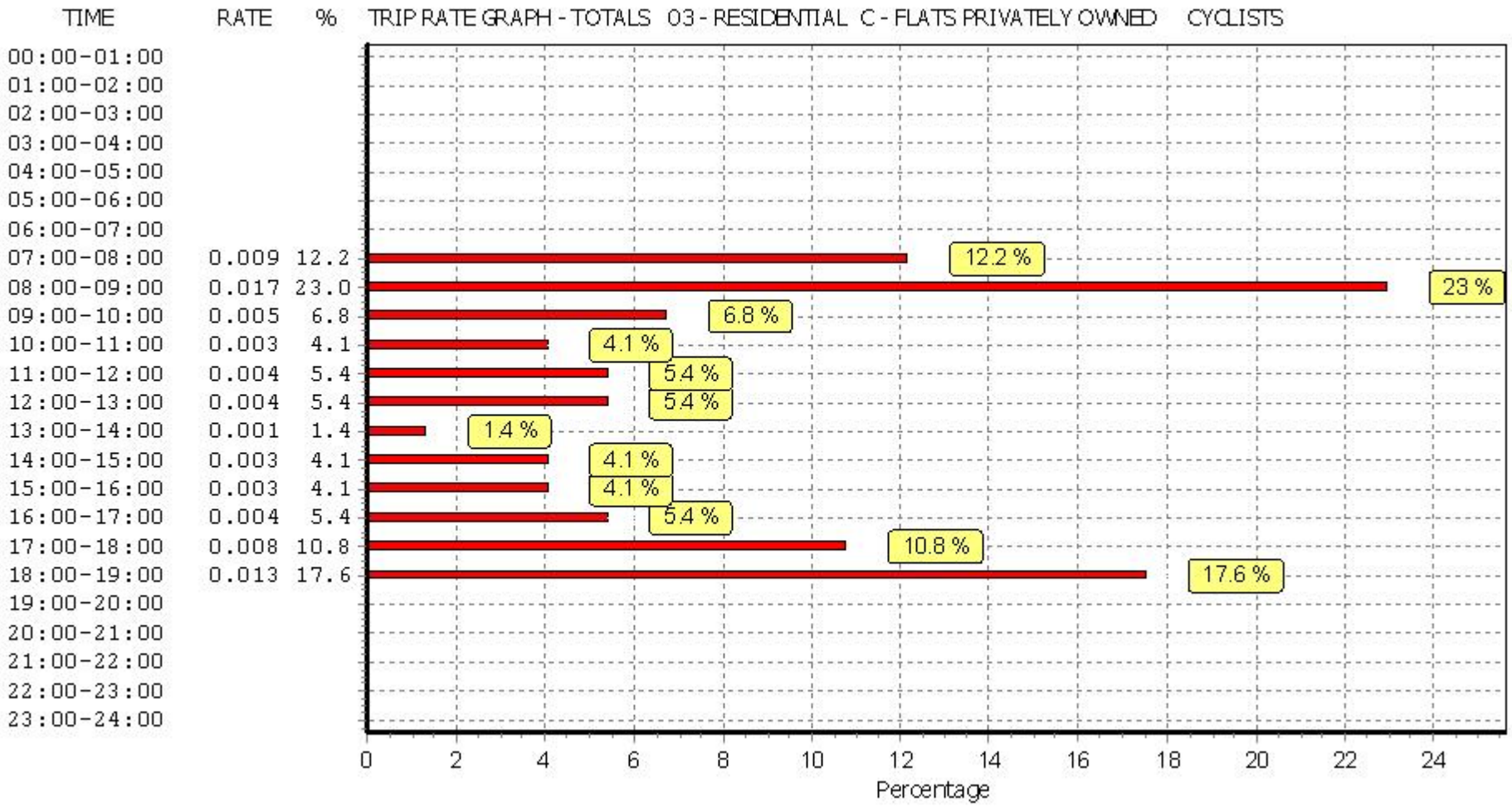

This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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

Calculation Reference: AUDIT-800401-190128-0133

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : C - FLATS PRIVATELY OWNED
VEHICLES

Selected regions and areas:

15	GREATER DUBLIN	
	DL DUBLIN	9 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:	20 to 372 (units:)
Range Selected by User:	18 to 372 (units:)

Parking Spaces Range: Selected: 20 to 386 Actual: 20 to 386

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/10 to 22/11/16

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:

Tuesday	6 days
Wednesday	1 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	9 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)	6
Edge of Town	1
Neighbourhood Centre (PPS6 Local Centre)	2

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	6
Built-Up Zone	1
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:

C3	9 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:

10,001 to 15,000	1 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:

250,001 to 500,000	1 days
500,001 or More	8 days

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

Car ownership within 5 miles:

0.6 to 1.0	4 days
1.1 to 1.5	5 days

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

Travel Plan:

Yes	1 days
No	8 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	9 days

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

LIST OF SITES relevant to selection parameters

1 DL-03-C-07 BLOCKS OF FLATS DUBLIN
SANDYFORD ROAD
DUBLIN
DUNDRUM
Edge of Town
No Sub Category
Total Number of dwellings: 372
Survey date: TUESDAY *11/05/10* *Survey Type: MANUAL*

2 DL-03-C-08 FLATS DUBLIN
FINGLAS ROAD
DUBLIN
FINGLAS
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Number of dwellings: 340
Survey date: FRIDAY *30/09/11* *Survey Type: MANUAL*

3 DL-03-C-09 FLATS DUBLIN
OLD FINGLAS ROAD
DUBLIN
GLASNEVIN
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 201
Survey date: THURSDAY *29/09/11* *Survey Type: MANUAL*

4 DL-03-C-11 BLOCK OF FLATS DUBLIN
WYCKHAM WAY
DUBLIN
DUNDRUM
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total Number of dwellings: 96
Survey date: TUESDAY *10/09/13* *Survey Type: MANUAL*

5 DL-03-C-12 BLOCK OF FLATS DUBLIN
BOOTERSTOWN AVENUE
DUBLIN

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 47
Survey date: TUESDAY *10/09/13* *Survey Type: MANUAL*

6 DL-03-C-13 BLOCK OF FLATS DUBLIN
SANDYFORD ROAD
DUBLIN

Neighbourhood Centre (PPS6 Local Centre)
Built-Up Zone
Total Number of dwellings: 52
Survey date: TUESDAY *10/09/13* *Survey Type: MANUAL*

7 DL-03-C-14 BLOCKS OF FLATS DUBLIN
BALLINTEER ROAD
DUBLIN
DUNDRUM
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 140
Survey date: TUESDAY *10/09/13* *Survey Type: MANUAL*

8 DL-03-C-15 BLOCKS OF FLATS DUBLIN
MONKSTOWN ROAD
DUBLIN
MONKSTOWN
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 20
Survey date: WEDNESDAY *01/10/14* *Survey Type: MANUAL*

9 DL-03-C-16 BLOCKS OF FLATS DUBLIN
BOTANIC AVENUE
DUBLIN
DRUMCONDRA
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 31
Survey date: TUESDAY *22/11/16* *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/C - FLATS PRIVATELY OWNED
VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	9	144	0.044	9	144	0.216	9	144	0.260
08:00 - 09:00	9	144	0.047	9	144	0.225	9	144	0.272
09:00 - 10:00	9	144	0.051	9	144	0.092	9	144	0.143
10:00 - 11:00	9	144	0.029	9	144	0.051	9	144	0.080
11:00 - 12:00	9	144	0.042	9	144	0.040	9	144	0.082
12:00 - 13:00	9	144	0.059	9	144	0.067	9	144	0.126
13:00 - 14:00	9	144	0.074	9	144	0.069	9	144	0.143
14:00 - 15:00	9	144	0.066	9	144	0.057	9	144	0.123
15:00 - 16:00	9	144	0.093	9	144	0.059	9	144	0.152
16:00 - 17:00	9	144	0.112	9	144	0.052	9	144	0.164
17:00 - 18:00	9	144	0.185	9	144	0.042	9	144	0.227
18:00 - 19:00	9	144	0.171	9	144	0.070	9	144	0.241
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.973			1.040			2.013

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.

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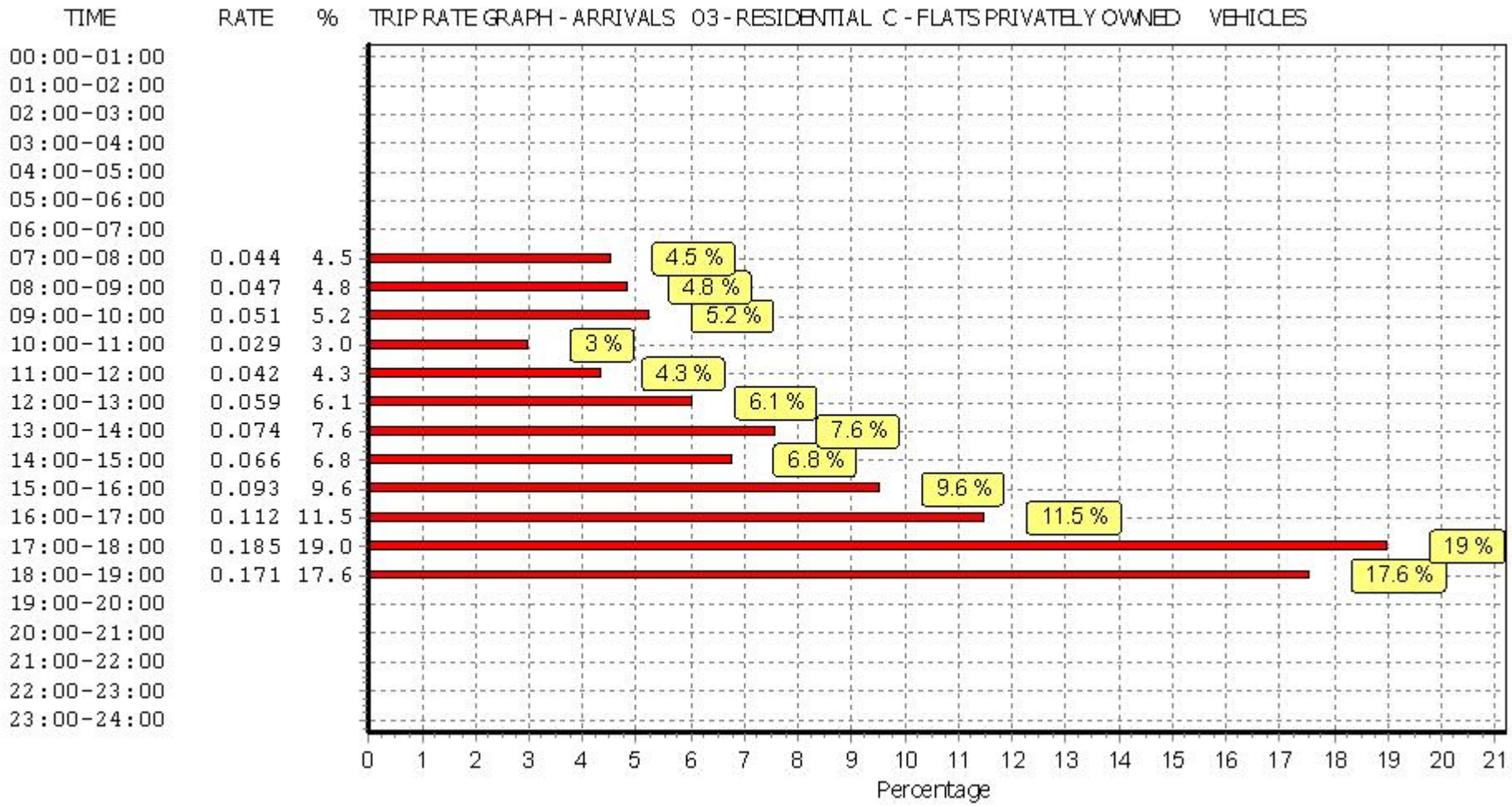
The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

Parameter summary

Trip rate parameter range selected:	20 - 372 (units:)
Survey date date range:	01/01/10 - 22/11/16
Number of weekdays (Monday-Friday):	9
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
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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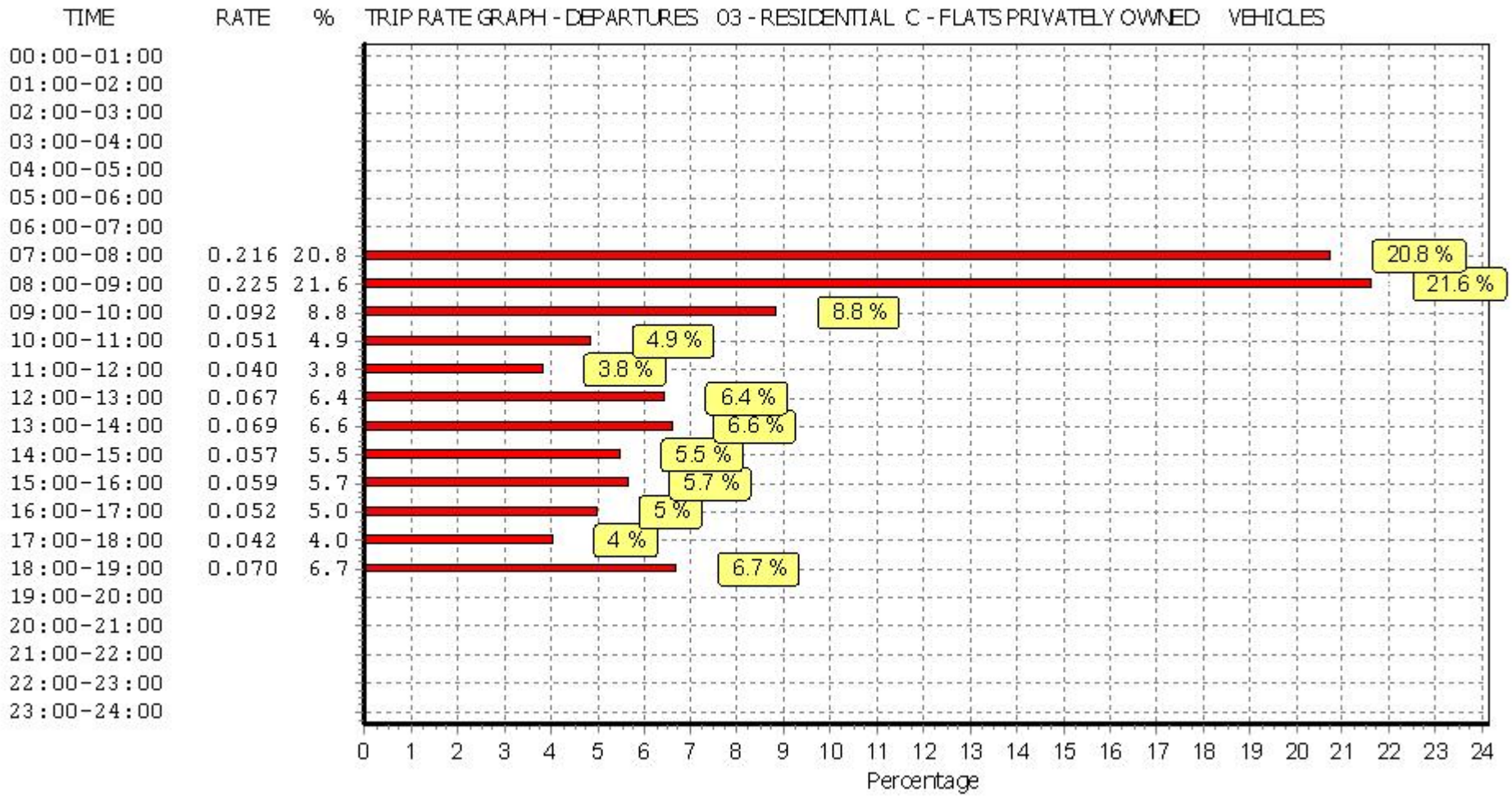

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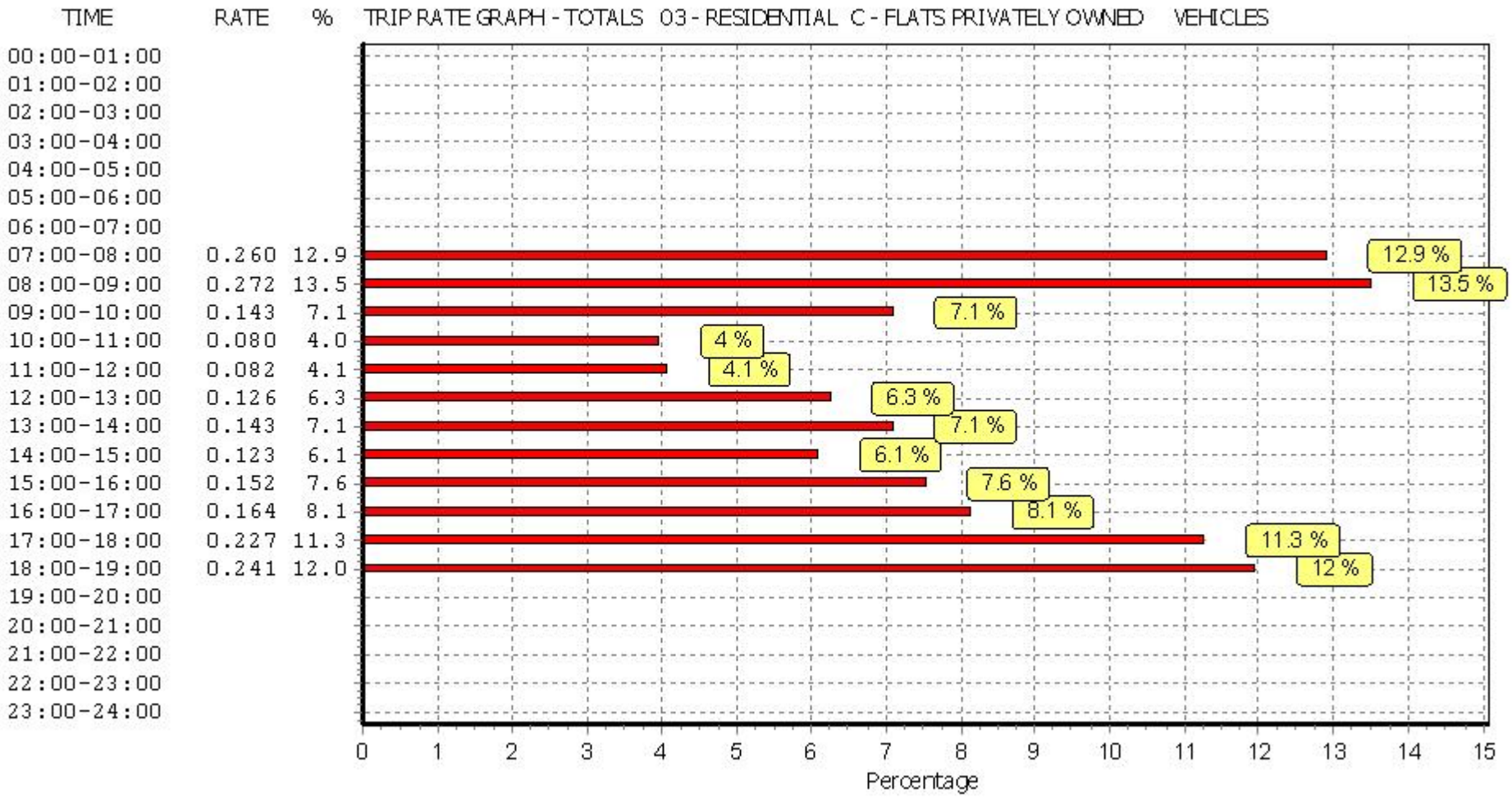

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TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
TAXIS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	9	144	0.002	9	144	0.002	9	144	0.004
08:00 - 09:00	9	144	0.001	9	144	0.000	9	144	0.001
09:00 - 10:00	9	144	0.002	9	144	0.002	9	144	0.004
10:00 - 11:00	9	144	0.001	9	144	0.002	9	144	0.003
11:00 - 12:00	9	144	0.000	9	144	0.000	9	144	0.000
12:00 - 13:00	9	144	0.002	9	144	0.002	9	144	0.004
13:00 - 14:00	9	144	0.002	9	144	0.002	9	144	0.004
14:00 - 15:00	9	144	0.002	9	144	0.002	9	144	0.004
15:00 - 16:00	9	144	0.003	9	144	0.003	9	144	0.006
16:00 - 17:00	9	144	0.000	9	144	0.001	9	144	0.001
17:00 - 18:00	9	144	0.002	9	144	0.001	9	144	0.003
18:00 - 19:00	9	144	0.000	9	144	0.000	9	144	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.017			0.017			0.034

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.

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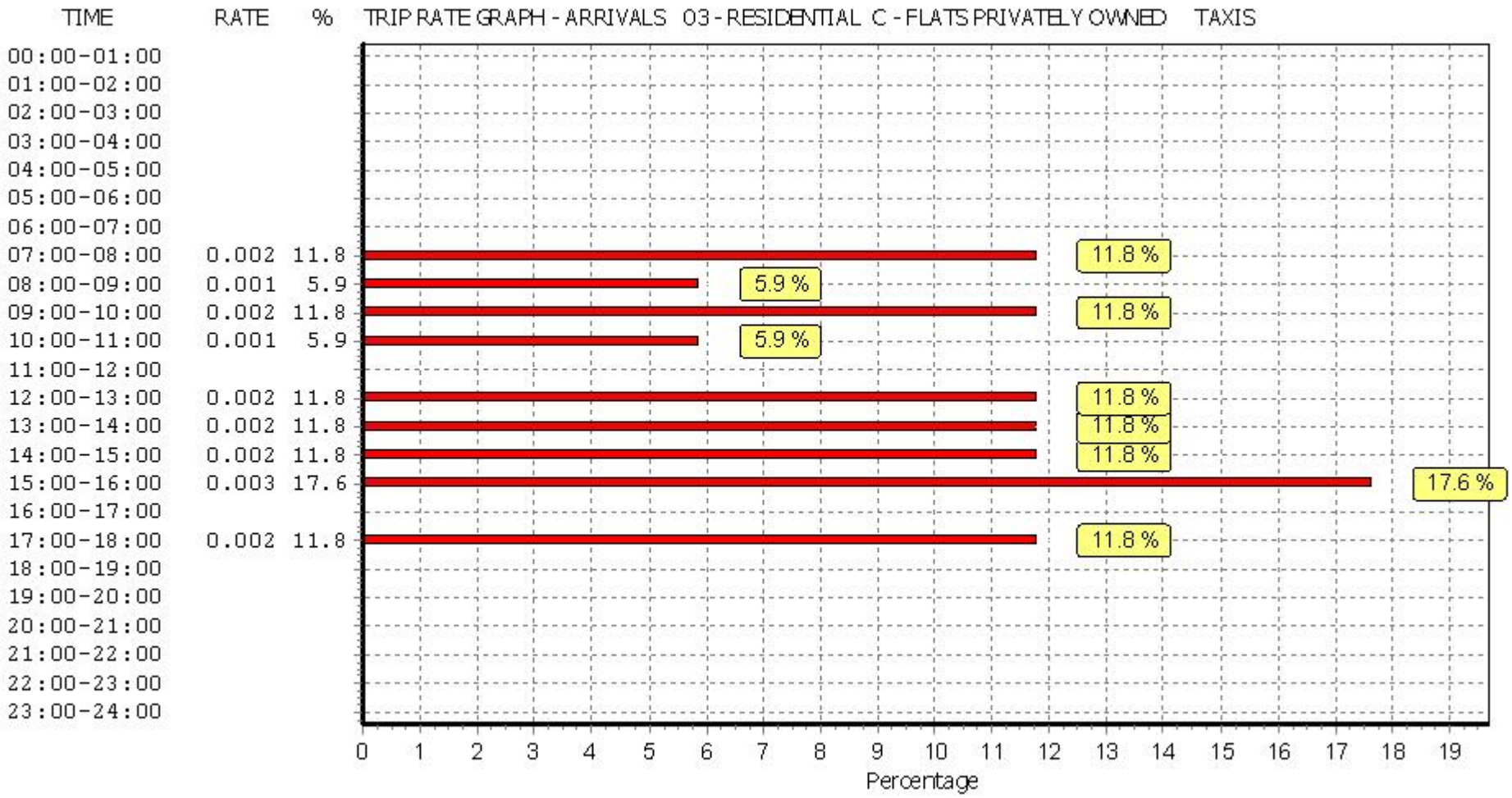
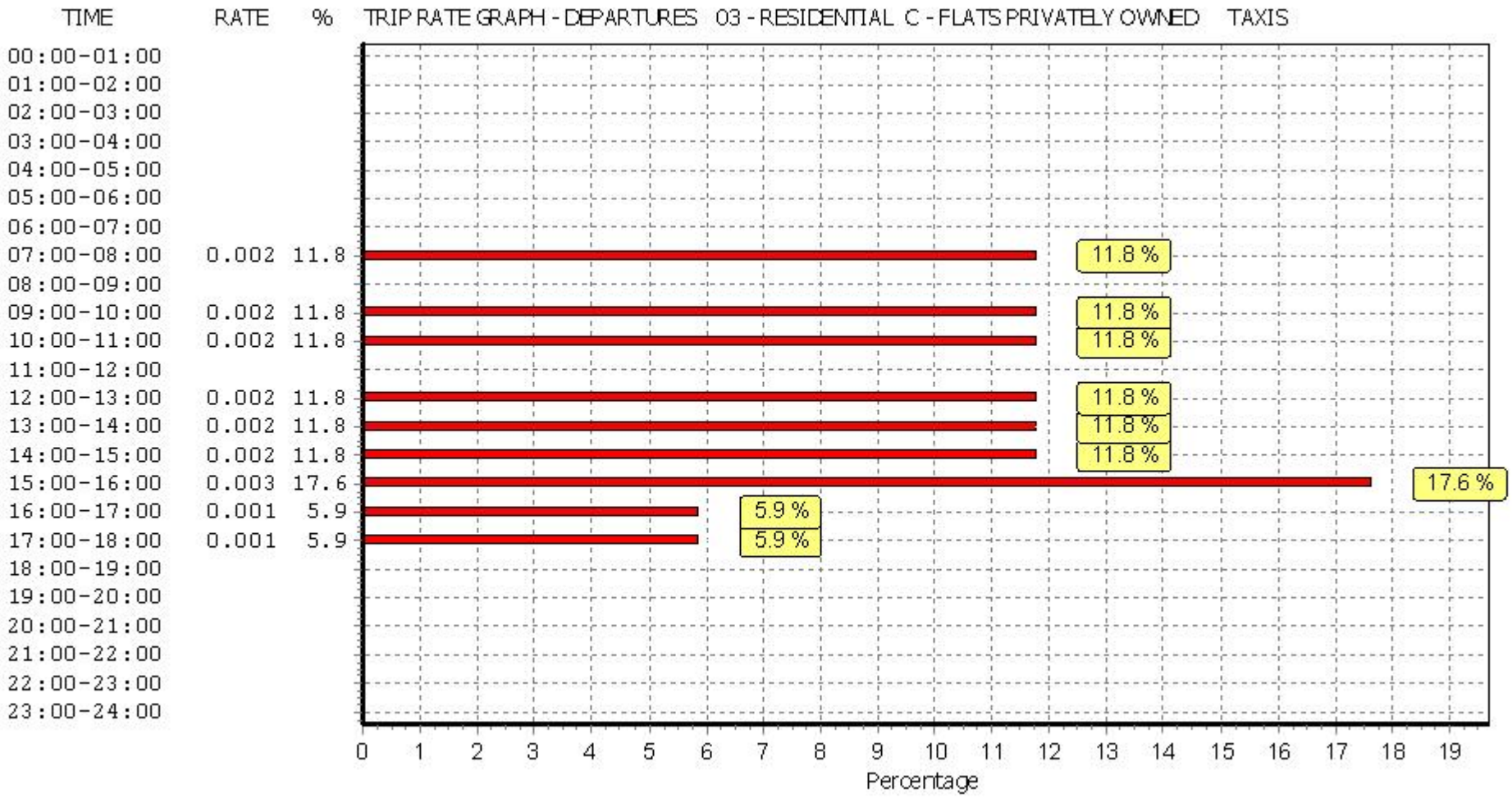


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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



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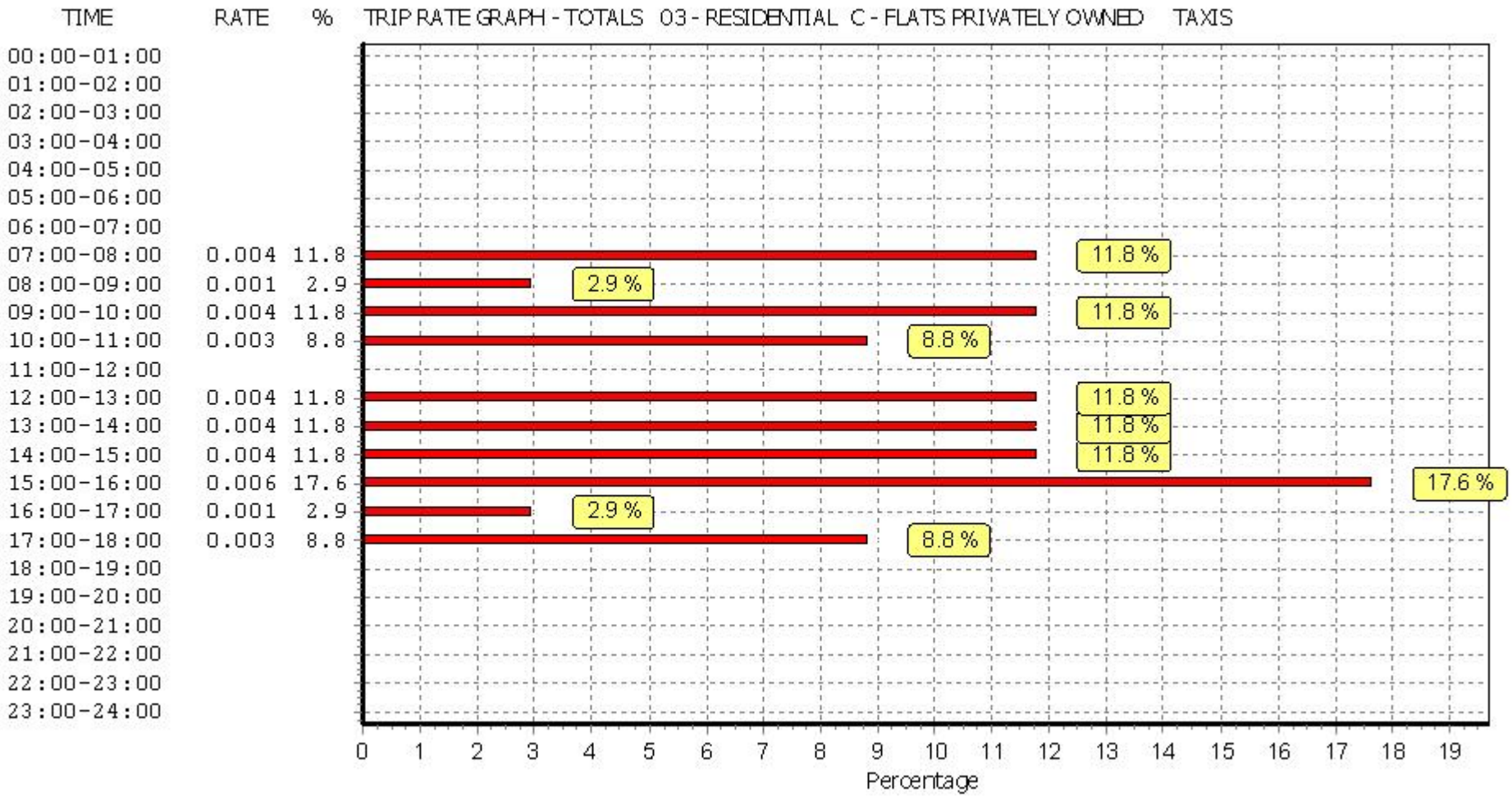

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TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
OGVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	9	144	0.000	9	144	0.002	9	144	0.002
08:00 - 09:00	9	144	0.000	9	144	0.001	9	144	0.001
09:00 - 10:00	9	144	0.000	9	144	0.000	9	144	0.000
10:00 - 11:00	9	144	0.001	9	144	0.001	9	144	0.002
11:00 - 12:00	9	144	0.001	9	144	0.000	9	144	0.001
12:00 - 13:00	9	144	0.001	9	144	0.001	9	144	0.002
13:00 - 14:00	9	144	0.000	9	144	0.001	9	144	0.001
14:00 - 15:00	9	144	0.000	9	144	0.000	9	144	0.000
15:00 - 16:00	9	144	0.001	9	144	0.000	9	144	0.001
16:00 - 17:00	9	144	0.001	9	144	0.001	9	144	0.002
17:00 - 18:00	9	144	0.000	9	144	0.000	9	144	0.000
18:00 - 19:00	9	144	0.001	9	144	0.000	9	144	0.001
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.006			0.007			0.013

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.

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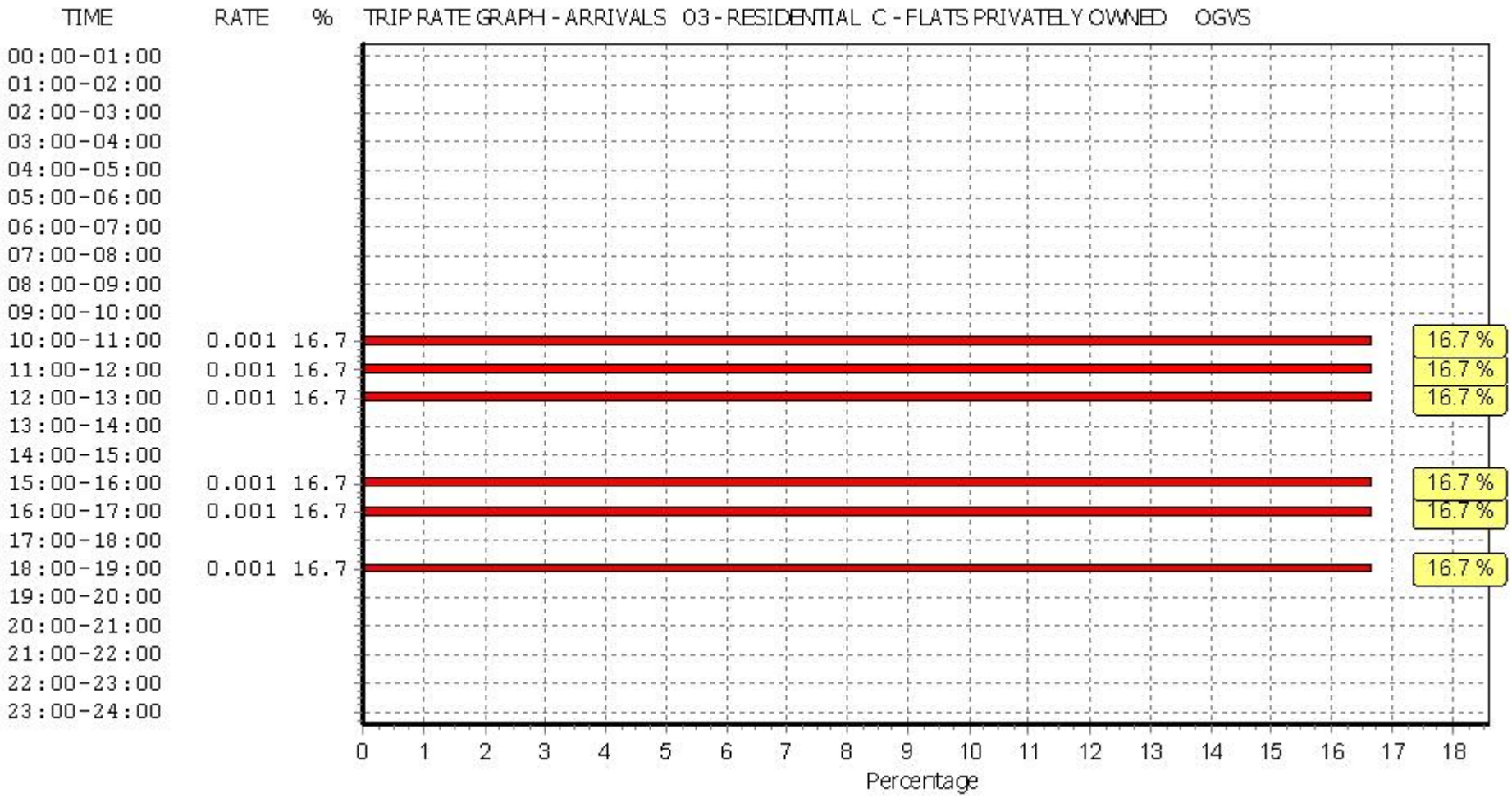

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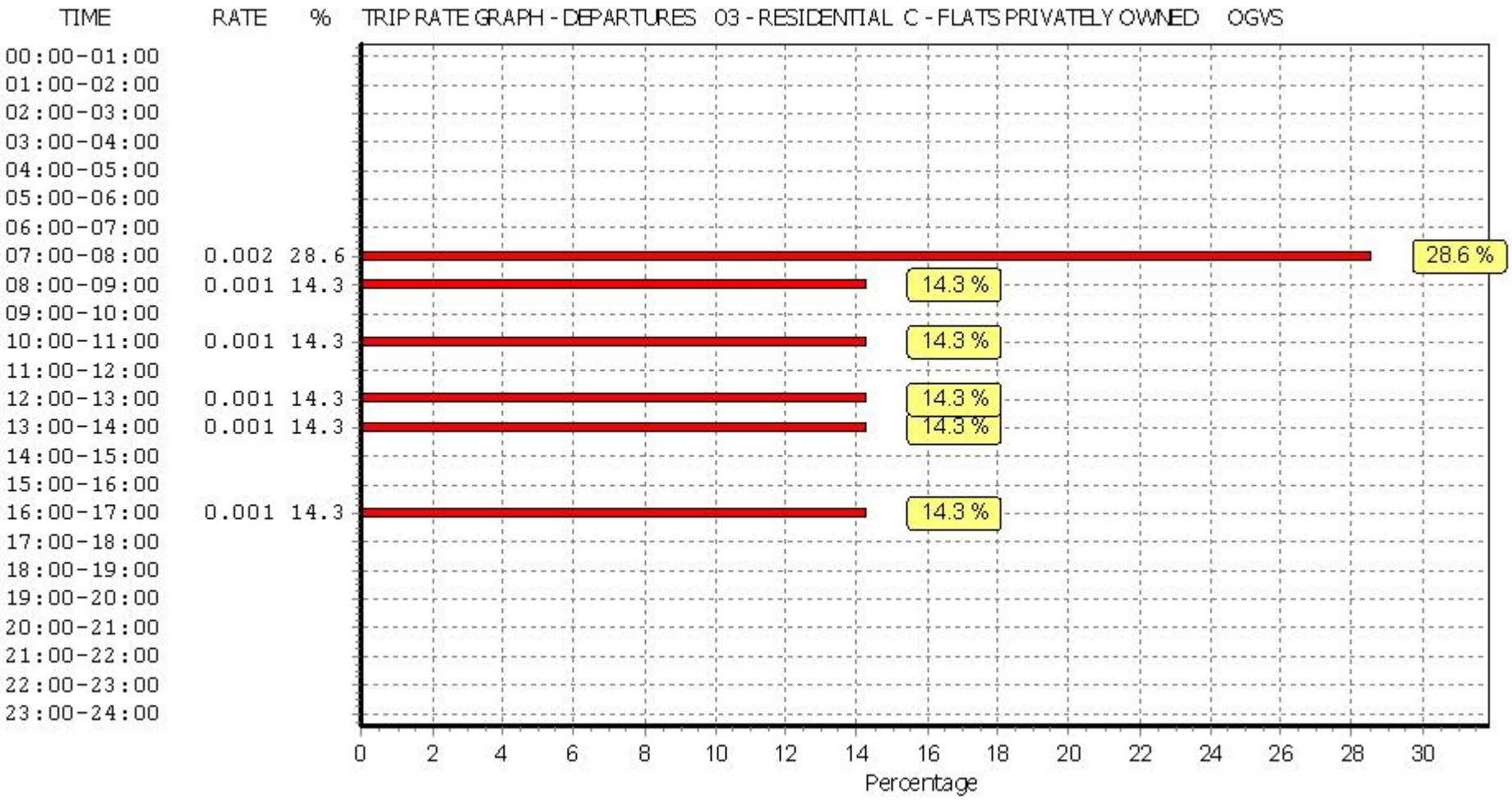

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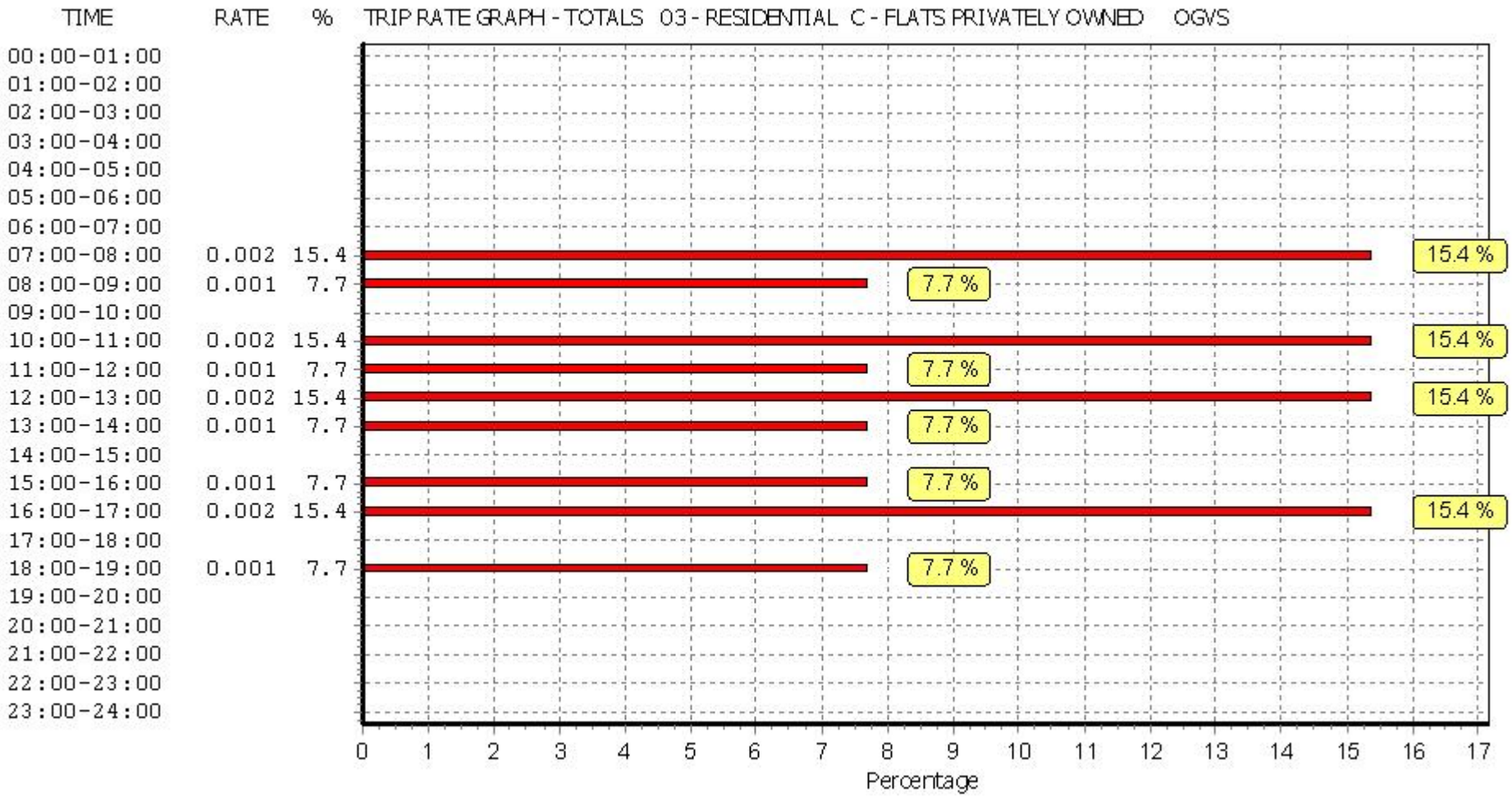

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TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
PSVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	9	144	0.001	9	144	0.002	9	144	0.003
08:00 - 09:00	9	144	0.000	9	144	0.000	9	144	0.000
09:00 - 10:00	9	144	0.000	9	144	0.000	9	144	0.000
10:00 - 11:00	9	144	0.000	9	144	0.000	9	144	0.000
11:00 - 12:00	9	144	0.000	9	144	0.000	9	144	0.000
12:00 - 13:00	9	144	0.000	9	144	0.000	9	144	0.000
13:00 - 14:00	9	144	0.000	9	144	0.000	9	144	0.000
14:00 - 15:00	9	144	0.000	9	144	0.000	9	144	0.000
15:00 - 16:00	9	144	0.000	9	144	0.000	9	144	0.000
16:00 - 17:00	9	144	0.000	9	144	0.000	9	144	0.000
17:00 - 18:00	9	144	0.000	9	144	0.000	9	144	0.000
18:00 - 19:00	9	144	0.000	9	144	0.000	9	144	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.001			0.002			0.003

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.

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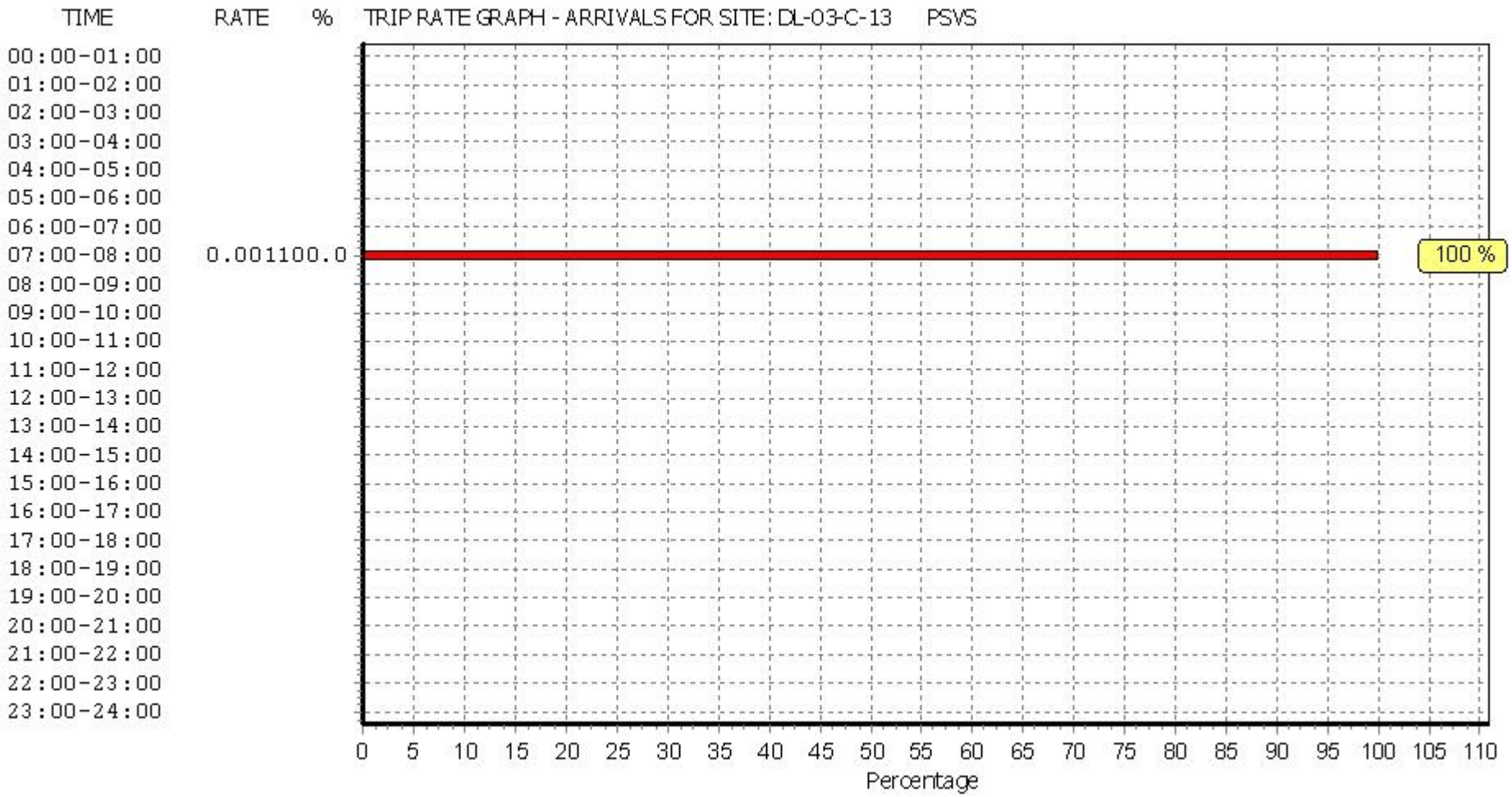

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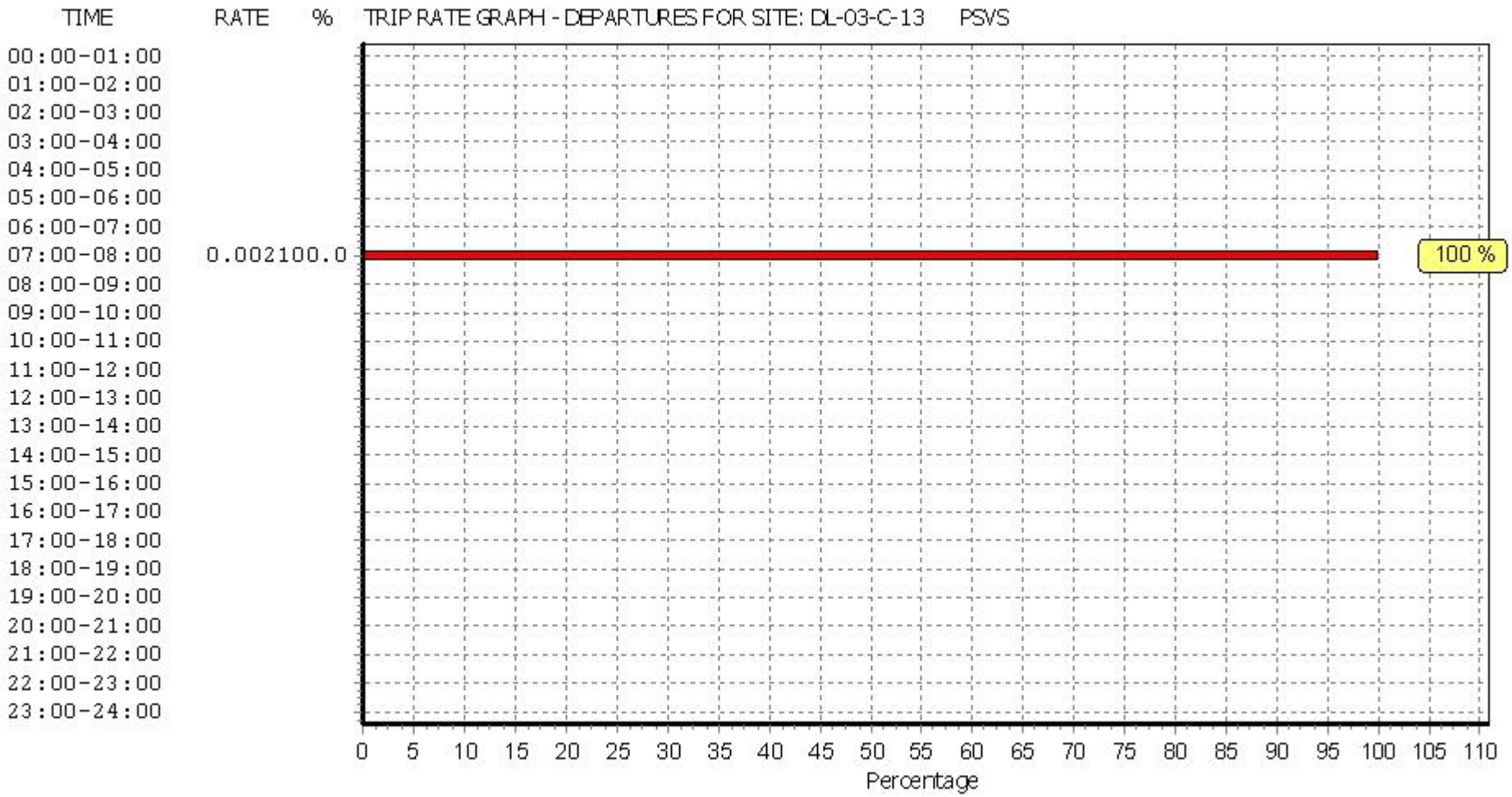

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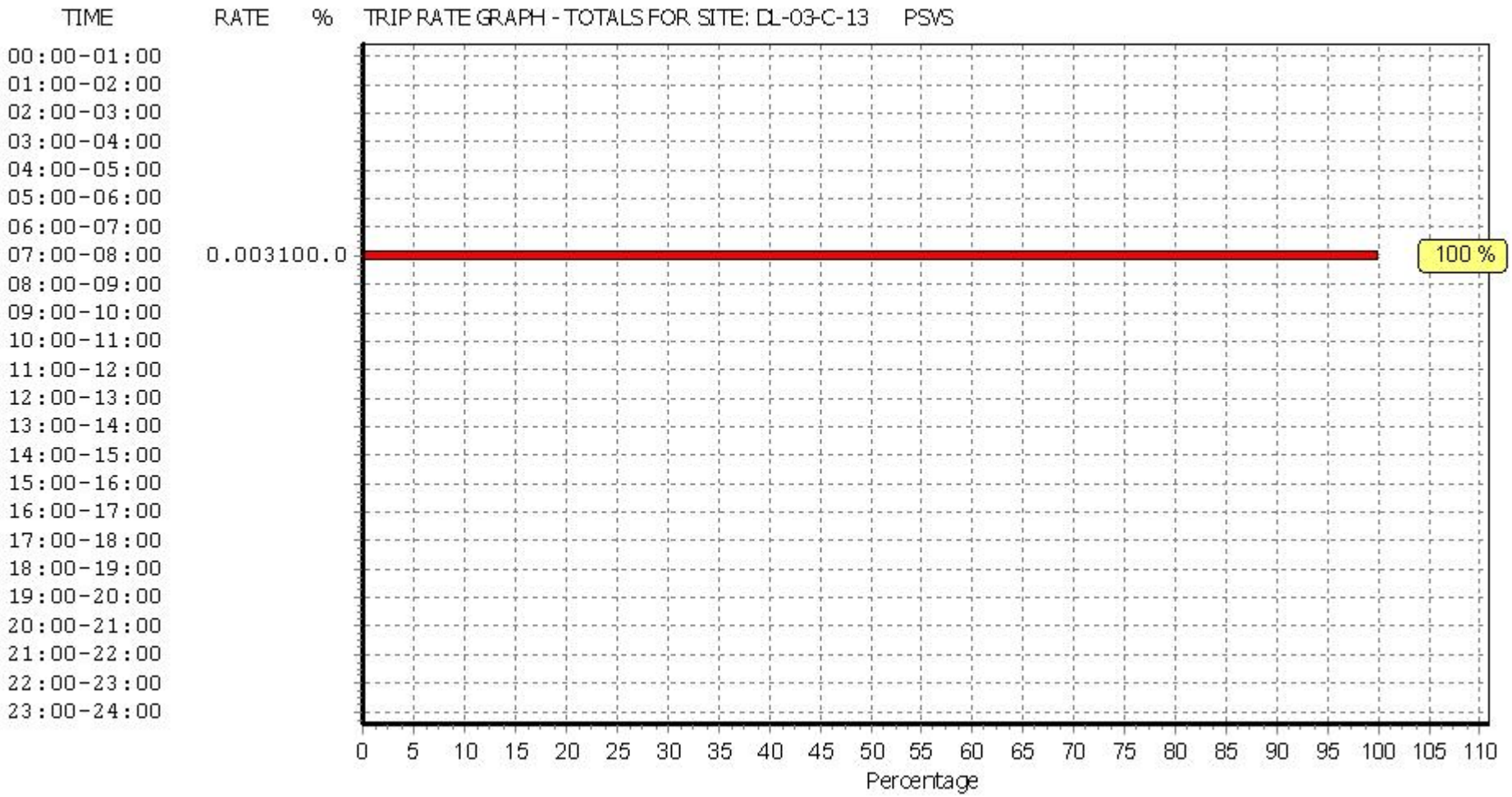

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TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
CYCLISTS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	9	144	0.001	9	144	0.019	9	144	0.020
08:00 - 09:00	9	144	0.000	9	144	0.020	9	144	0.020
09:00 - 10:00	9	144	0.002	9	144	0.006	9	144	0.008
10:00 - 11:00	9	144	0.003	9	144	0.001	9	144	0.004
11:00 - 12:00	9	144	0.004	9	144	0.003	9	144	0.007
12:00 - 13:00	9	144	0.006	9	144	0.001	9	144	0.007
13:00 - 14:00	9	144	0.004	9	144	0.002	9	144	0.006
14:00 - 15:00	9	144	0.003	9	144	0.003	9	144	0.006
15:00 - 16:00	9	144	0.007	9	144	0.002	9	144	0.009
16:00 - 17:00	9	144	0.010	9	144	0.002	9	144	0.012
17:00 - 18:00	9	144	0.014	9	144	0.003	9	144	0.017
18:00 - 19:00	9	144	0.007	9	144	0.002	9	144	0.009
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.061			0.064			0.125

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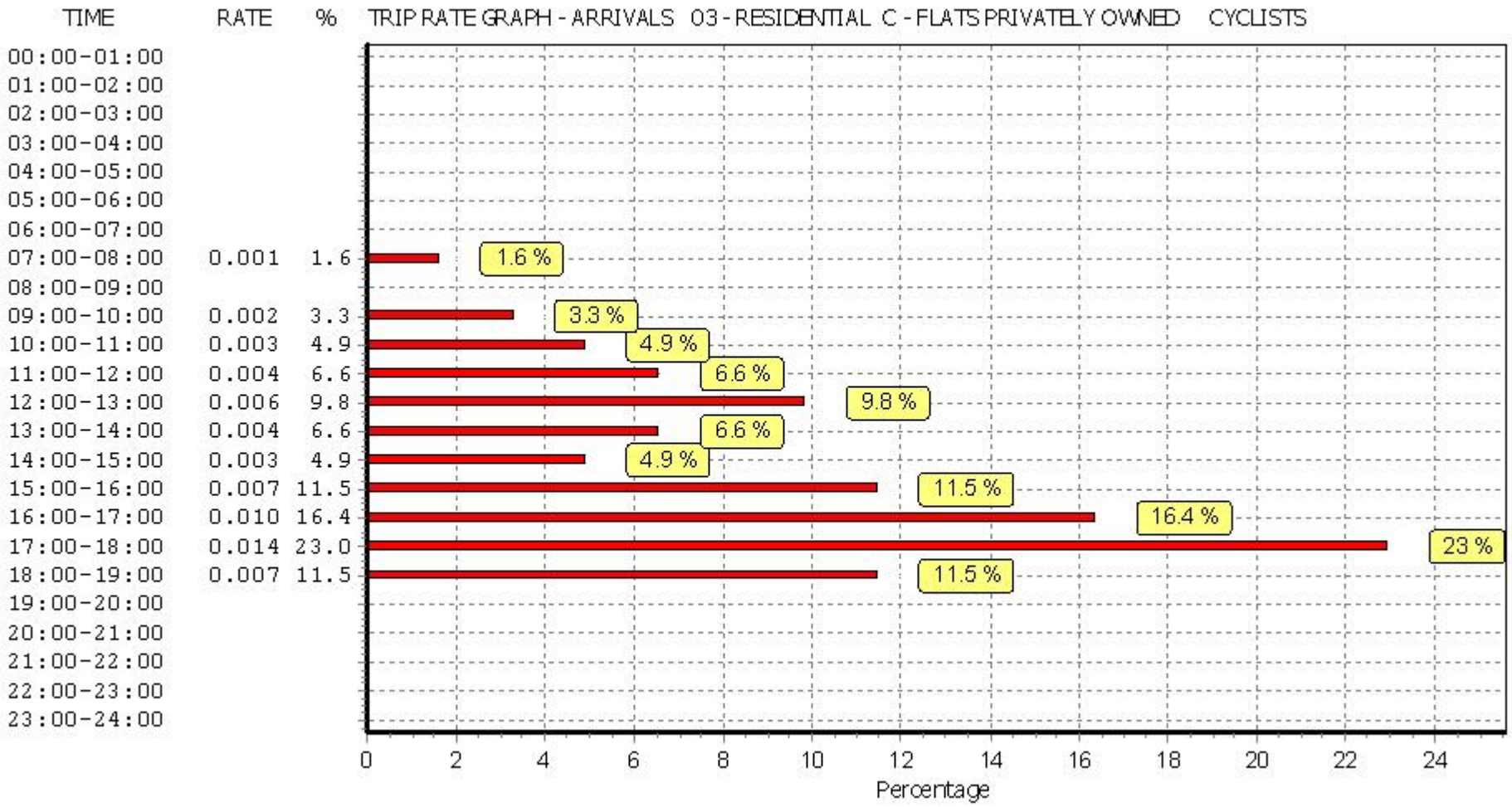

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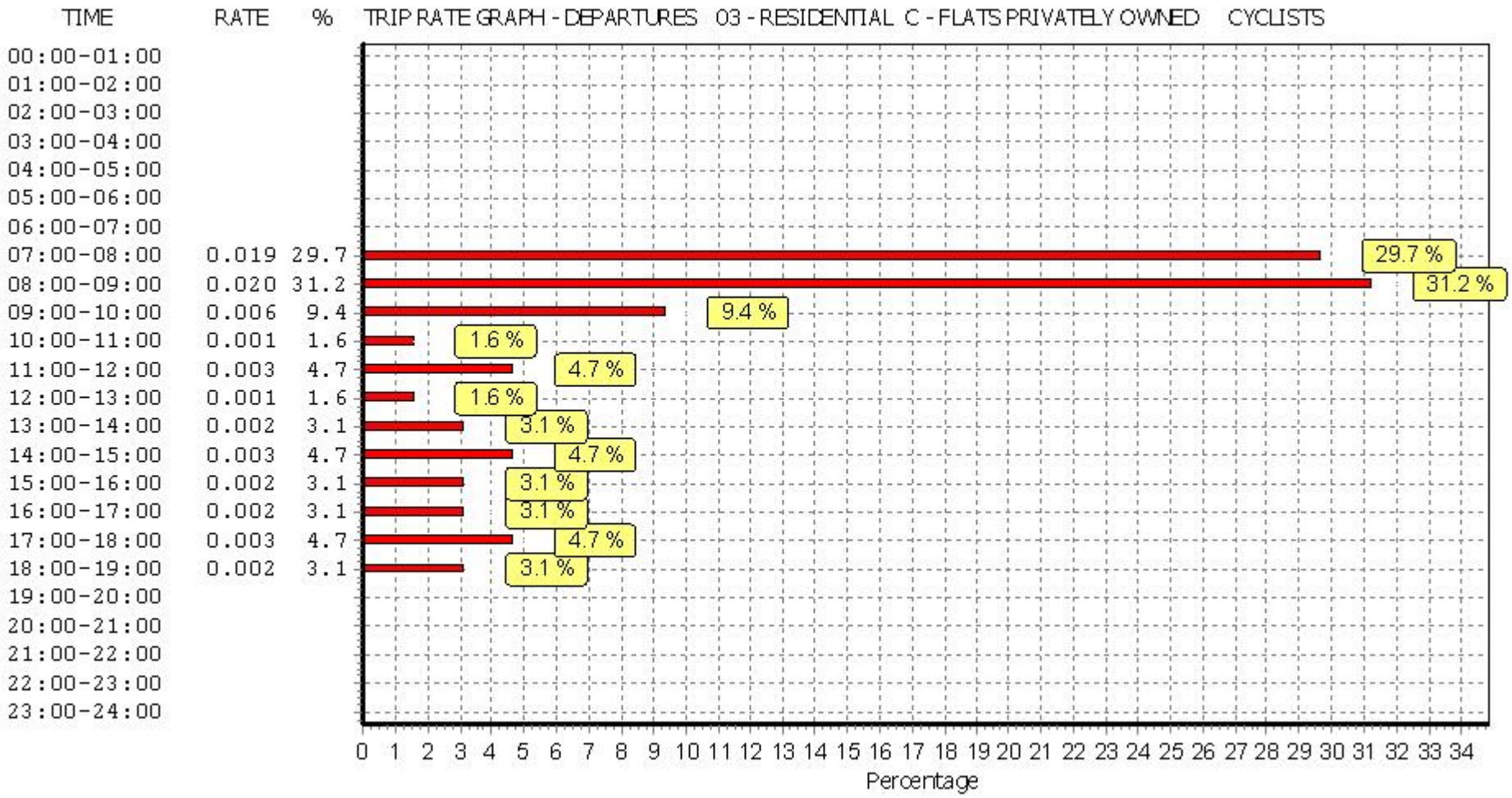

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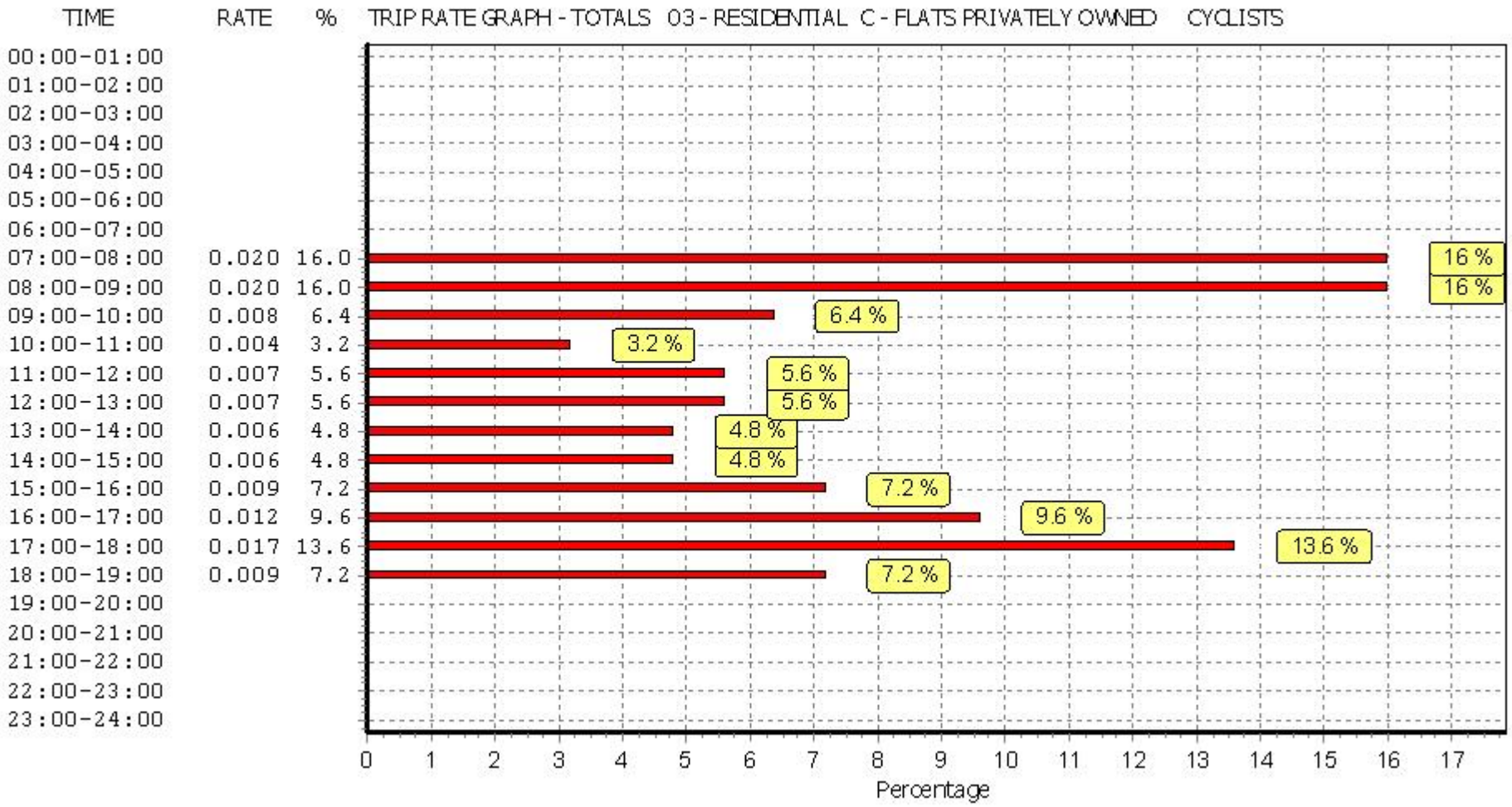

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Calculation Reference: AUDIT-800401-190204-0234

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : A - OFFICE
VEHICLES

Selected regions and areas:

12	CONNAUGHT		
	CS	SLIGO	1 days
	RO	ROSCOMMON	1 days
13	MUNSTER		
	CR	CORK	1 days
15	GREATER DUBLIN		
	DL	DUBLIN	3 days
16	ULSTER (REPUBLIC OF IRELAND)		
	DN	DONEGAL	1 days
	MG	MONAGHAN	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: Gross floor area
Actual Range: 400 to 13827 (units: sqm)
Range Selected by User: 232 to 3000 (units: sqm)

Parking Spaces Range: Selected: 0 to 318 Actual: 0 to 318

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/10 to 16/11/16

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	2 days
Tuesday	2 days
Wednesday	2 days
Thursday	2 days
Friday	1 days

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

Selected survey types:

Manual count	9 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:

Town Centre	2
Edge of Town Centre	3
Edge of Town	2
Neighbourhood Centre (PPS6 Local Centre)	2

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:

Development Zone	1
Residential Zone	3
Built-Up Zone	1
Out of Town	1
High Street	1
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:

B1	9 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:

1,000 or Less	1 days
1,001 to 5,000	3 days
10,001 to 15,000	1 days
15,001 to 20,000	1 days
25,001 to 50,000	2 days
100,001 or More	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	5 days
125,001 to 250,000	1 days
250,001 to 500,000	1 days
500,001 or More	2 days

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

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	8 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	9 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	9 days

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

LIST OF SITES relevant to selection parameters

1 CR-02-A-01 STATISTICS OFFICES CORK
MAHON CRESCENT
CORK

Edge of Town
No Sub Category
Total Gross floor area: 8600 sqm
Survey date: MONDAY 23/06/14 Survey Type: MANUAL

2 CS-02-A-02 COUNCIL OFFICE SLIGO
QUAY STREET
SLIGO

Town Centre
Built-Up Zone
Total Gross floor area: 2750 sqm
Survey date: FRIDAY 01/11/13 Survey Type: MANUAL

3 DL-02-A-04 OFFICES DUBLIN
AMIENS STREET
DUBLIN
DOCKLANDS
Edge of Town Centre
Development Zone
Total Gross floor area: 13827 sqm
Survey date: THURSDAY 20/05/10 Survey Type: MANUAL

4 DL-02-A-05 OFFICE DUBLIN
GORT MUIRE
DUBLIN
BALLINTEER
Neighbourhood Centre (PPS6 Local Centre)
No Sub Category
Total Gross floor area: 12474 sqm
Survey date: TUESDAY 10/09/13 Survey Type: MANUAL

5 DL-02-A-06 OFFICE DUBLIN
CLONSKEAGH ROAD
DUBLIN
CLONSKEAGH
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total Gross floor area: 557 sqm
Survey date: THURSDAY 12/09/13 Survey Type: MANUAL

6 DN-02-A-02 COUNCIL OFFICES DONEGAL
ST ORANS ROAD
BUNCRANA

Edge of Town Centre
Residential Zone
Total Gross floor area: 400 sqm
Survey date: MONDAY 28/06/10 Survey Type: MANUAL

7 MG-02-A-01 MOTOR TAX OFFICE MONAGHAN
MARKET STREET
MONAGHAN

Town Centre
High Street
Total Gross floor area: 400 sqm
Survey date: WEDNESDAY 11/09/13 Survey Type: MANUAL

8 MG-02-A-02 OFFICES MONAGHAN
ARMAGH ROAD
MONAGHAN

Edge of Town
Out of Town
Total Gross floor area: 3205 sqm
Survey date: WEDNESDAY 16/11/16 Survey Type: MANUAL

9 RO-02-A-02 GOVERNMENT OFFICES ROSCOMMON
GOLF LINKS ROAD
ROSCOMMON
ARDSALLAGH BEG
Edge of Town Centre
Residential Zone
Total Gross floor area: 7200 sqm
Survey date: TUESDAY 23/09/14 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 02 - EMPLOYMENT/A - OFFICE
VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	9	5490	0.010	9	5490	0.004	9	5490	0.014
07:30 - 08:00	9	5490	0.095	9	5490	0.012	9	5490	0.107
08:00 - 08:30	9	5490	0.259	9	5490	0.032	9	5490	0.291
08:30 - 09:00	9	5490	0.320	9	5490	0.034	9	5490	0.354
09:00 - 09:30	9	5490	0.273	9	5490	0.038	9	5490	0.311
09:30 - 10:00	9	5490	0.253	9	5490	0.085	9	5490	0.338
10:00 - 10:30	9	5490	0.109	9	5490	0.093	9	5490	0.202
10:30 - 11:00	9	5490	0.107	9	5490	0.103	9	5490	0.210
11:00 - 11:30	9	5490	0.099	9	5490	0.093	9	5490	0.192
11:30 - 12:00	9	5490	0.079	9	5490	0.095	9	5490	0.174
12:00 - 12:30	9	5490	0.091	9	5490	0.095	9	5490	0.186
12:30 - 13:00	9	5490	0.091	9	5490	0.221	9	5490	0.312
13:00 - 13:30	9	5490	0.152	9	5490	0.172	9	5490	0.324
13:30 - 14:00	9	5490	0.158	9	5490	0.170	9	5490	0.328
14:00 - 14:30	9	5490	0.206	9	5490	0.085	9	5490	0.291
14:30 - 15:00	9	5490	0.113	9	5490	0.105	9	5490	0.218
15:00 - 15:30	9	5490	0.038	9	5490	0.063	9	5490	0.101
15:30 - 16:00	9	5490	0.047	9	5490	0.063	9	5490	0.110
16:00 - 16:30	9	5490	0.055	9	5490	0.182	9	5490	0.237
16:30 - 17:00	9	5490	0.045	9	5490	0.223	9	5490	0.268
17:00 - 17:30	9	5490	0.008	9	5490	0.285	9	5490	0.293
17:30 - 18:00	9	5490	0.022	9	5490	0.178	9	5490	0.200
18:00 - 18:30	9	5490	0.014	9	5490	0.087	9	5490	0.101
18:30 - 19:00	8	6127	0.006	8	6127	0.071	8	6127	0.077
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			2.650			2.589			5.239

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

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

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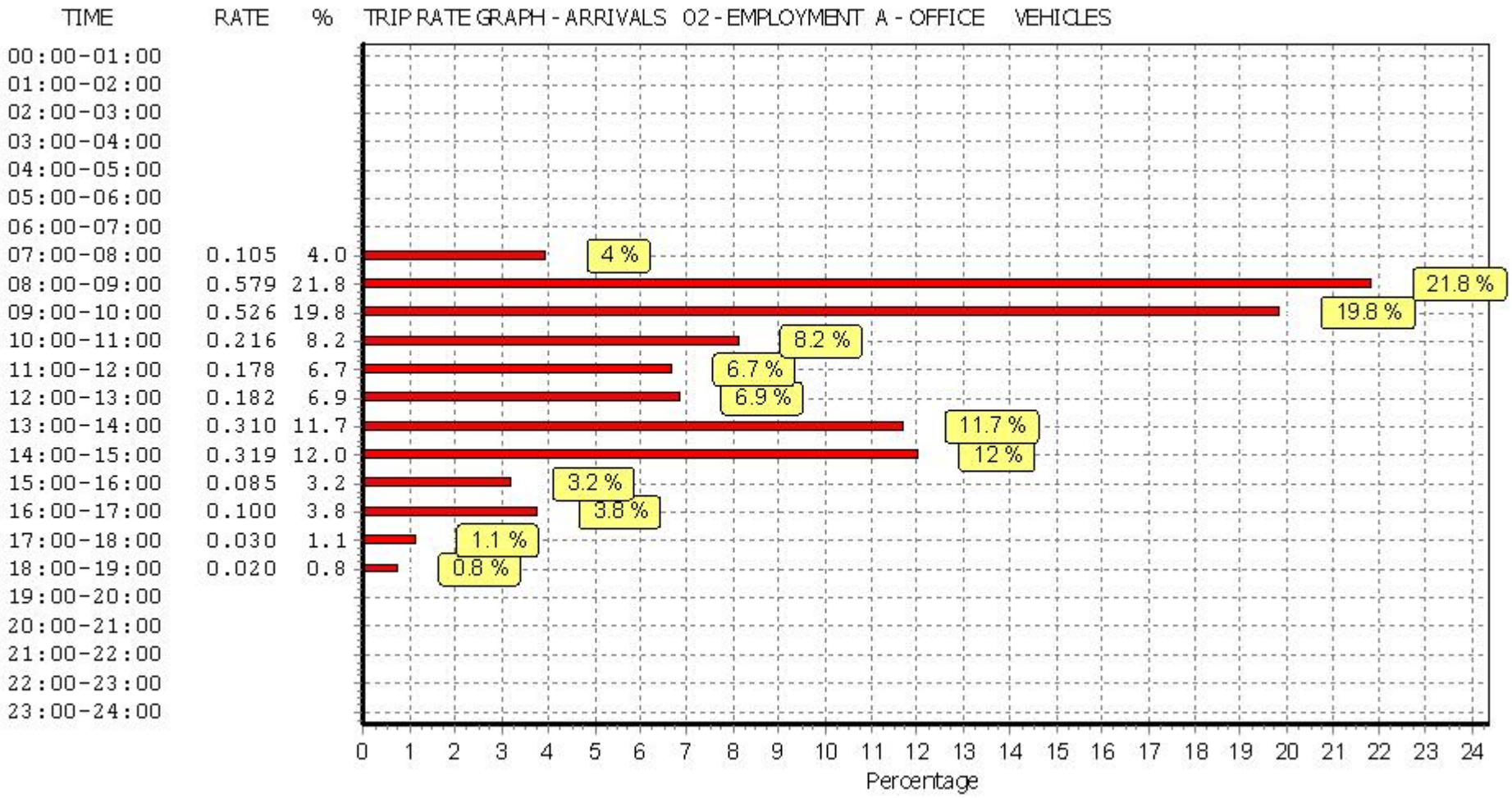
The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

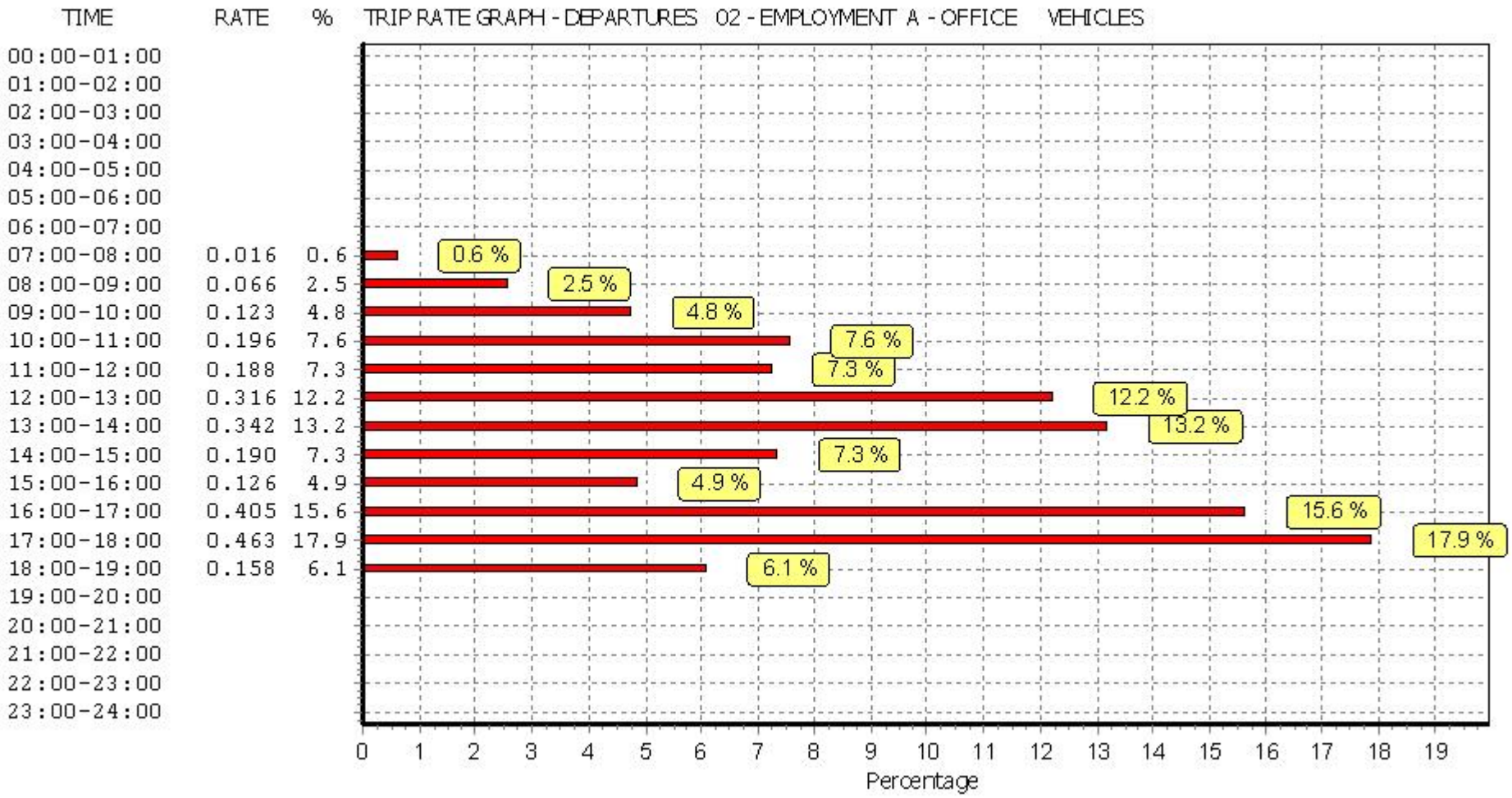
Parameter summary

Trip rate parameter range selected:	400 - 13827 (units: sqm)
Survey date date range:	01/01/10 - 16/11/16
Number of weekdays (Monday-Friday):	9
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
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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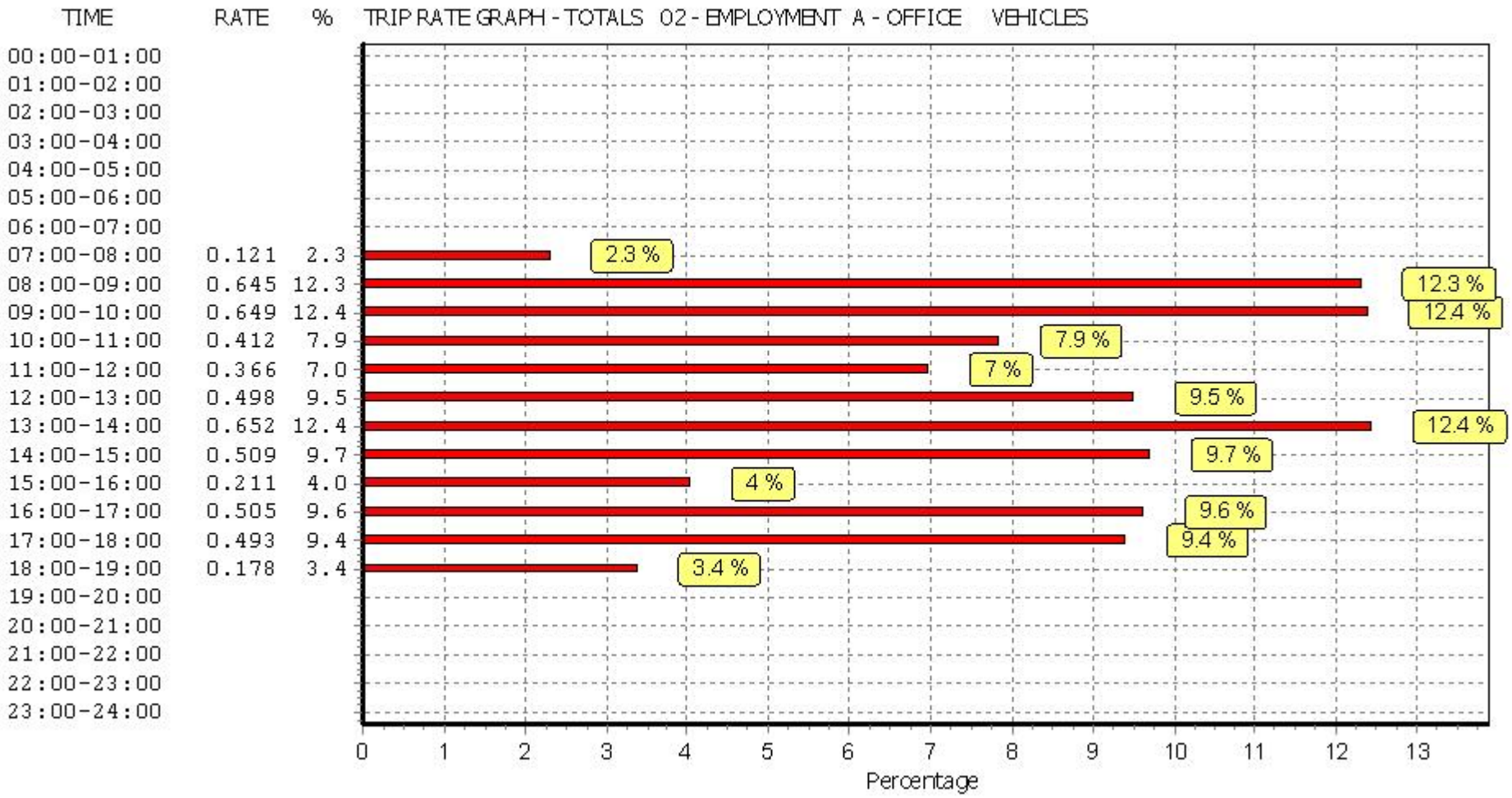

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TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
TAXIS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	9	5490	0.000	9	5490	0.000	9	5490	0.000
07:30 - 08:00	9	5490	0.000	9	5490	0.000	9	5490	0.000
08:00 - 08:30	9	5490	0.000	9	5490	0.000	9	5490	0.000
08:30 - 09:00	9	5490	0.002	9	5490	0.002	9	5490	0.004
09:00 - 09:30	9	5490	0.004	9	5490	0.004	9	5490	0.008
09:30 - 10:00	9	5490	0.000	9	5490	0.000	9	5490	0.000
10:00 - 10:30	9	5490	0.000	9	5490	0.000	9	5490	0.000
10:30 - 11:00	9	5490	0.002	9	5490	0.002	9	5490	0.004
11:00 - 11:30	9	5490	0.000	9	5490	0.000	9	5490	0.000
11:30 - 12:00	9	5490	0.000	9	5490	0.000	9	5490	0.000
12:00 - 12:30	9	5490	0.000	9	5490	0.000	9	5490	0.000
12:30 - 13:00	9	5490	0.000	9	5490	0.000	9	5490	0.000
13:00 - 13:30	9	5490	0.000	9	5490	0.000	9	5490	0.000
13:30 - 14:00	9	5490	0.004	9	5490	0.004	9	5490	0.008
14:00 - 14:30	9	5490	0.002	9	5490	0.002	9	5490	0.004
14:30 - 15:00	9	5490	0.000	9	5490	0.000	9	5490	0.000
15:00 - 15:30	9	5490	0.000	9	5490	0.000	9	5490	0.000
15:30 - 16:00	9	5490	0.000	9	5490	0.000	9	5490	0.000
16:00 - 16:30	9	5490	0.004	9	5490	0.004	9	5490	0.008
16:30 - 17:00	9	5490	0.000	9	5490	0.000	9	5490	0.000
17:00 - 17:30	9	5490	0.000	9	5490	0.000	9	5490	0.000
17:30 - 18:00	9	5490	0.002	9	5490	0.002	9	5490	0.004
18:00 - 18:30	9	5490	0.004	9	5490	0.004	9	5490	0.008
18:30 - 19:00	8	6127	0.000	8	6127	0.000	8	6127	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.024			0.024			0.048

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.

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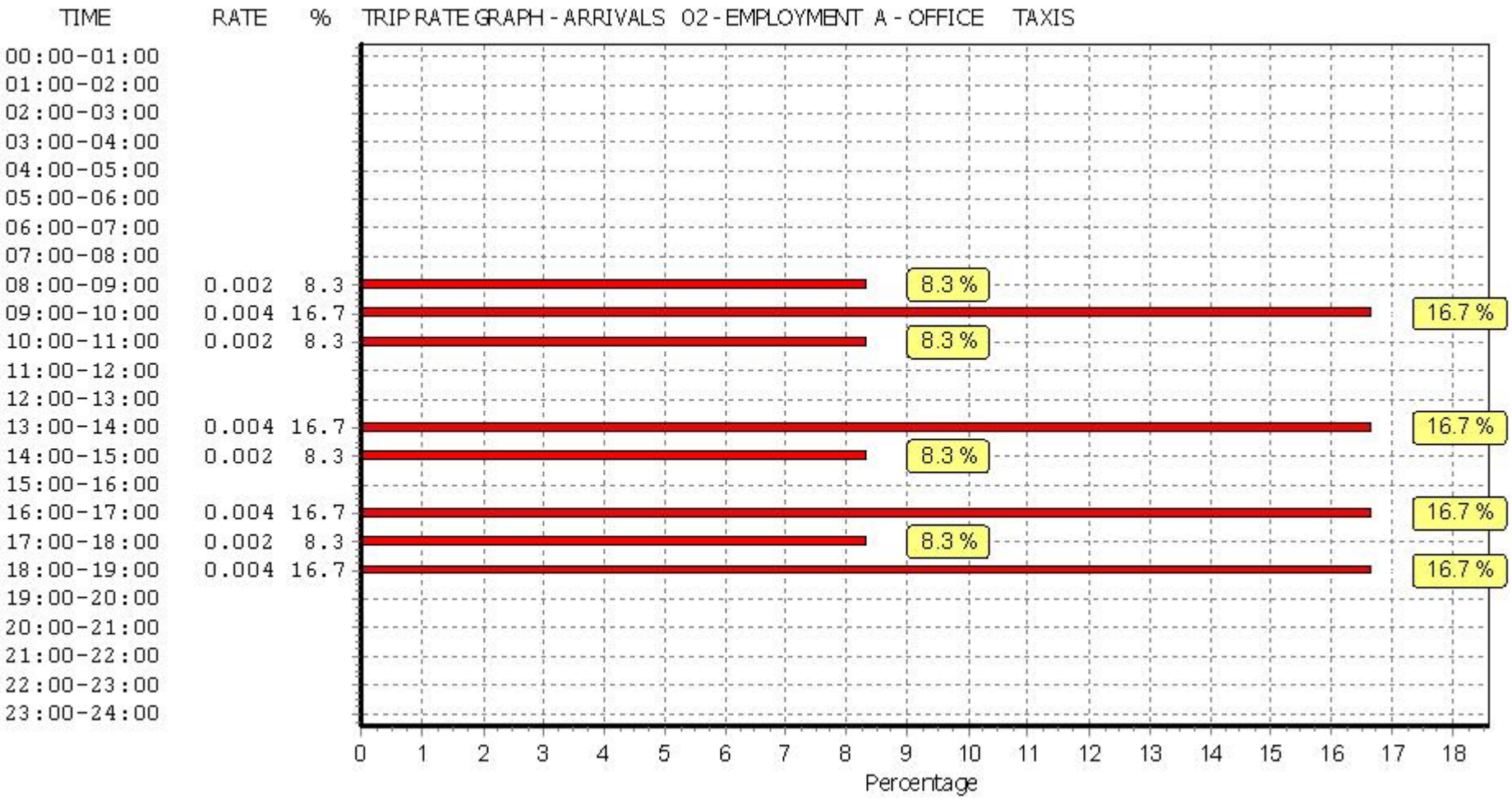
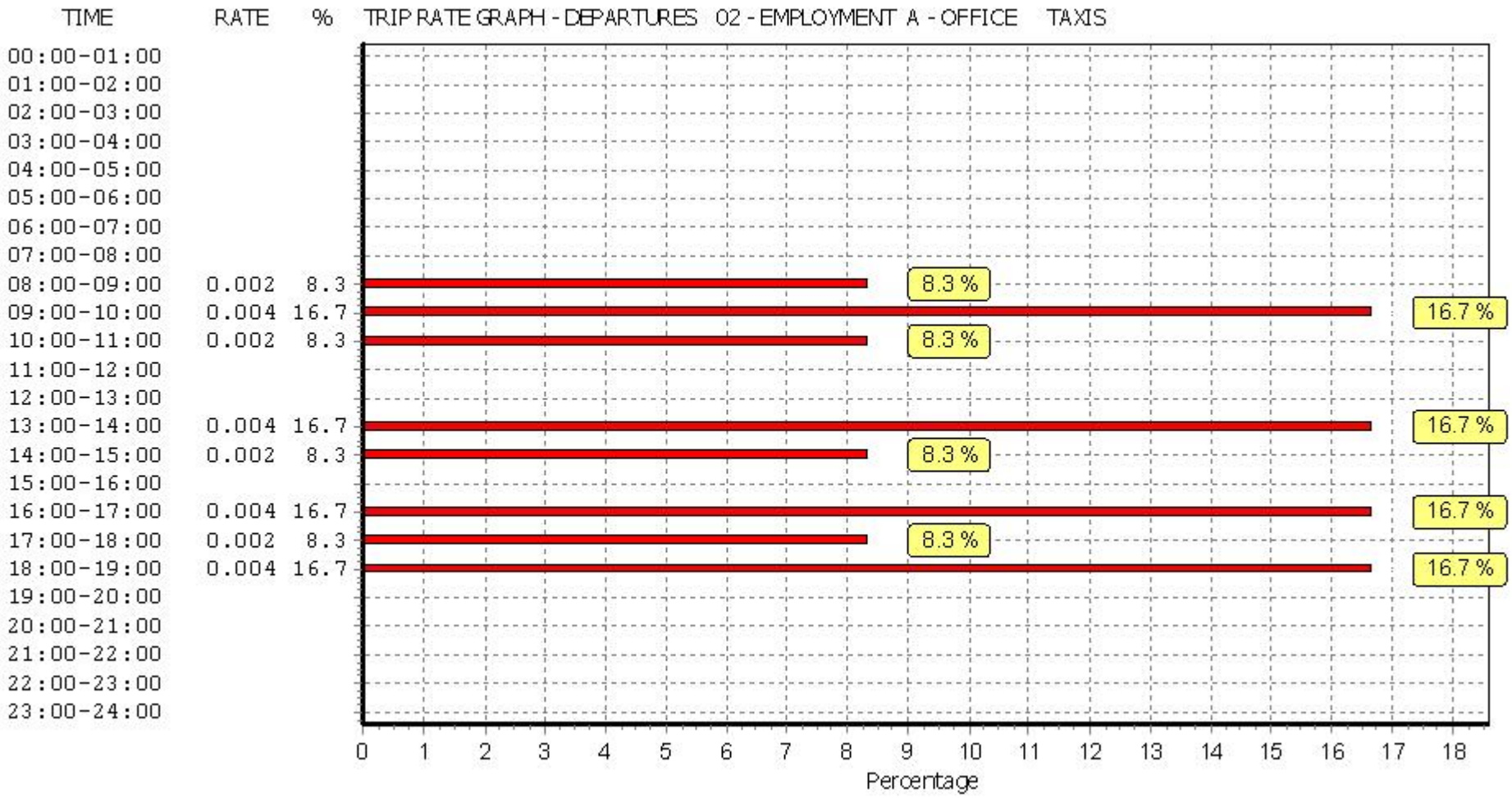


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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



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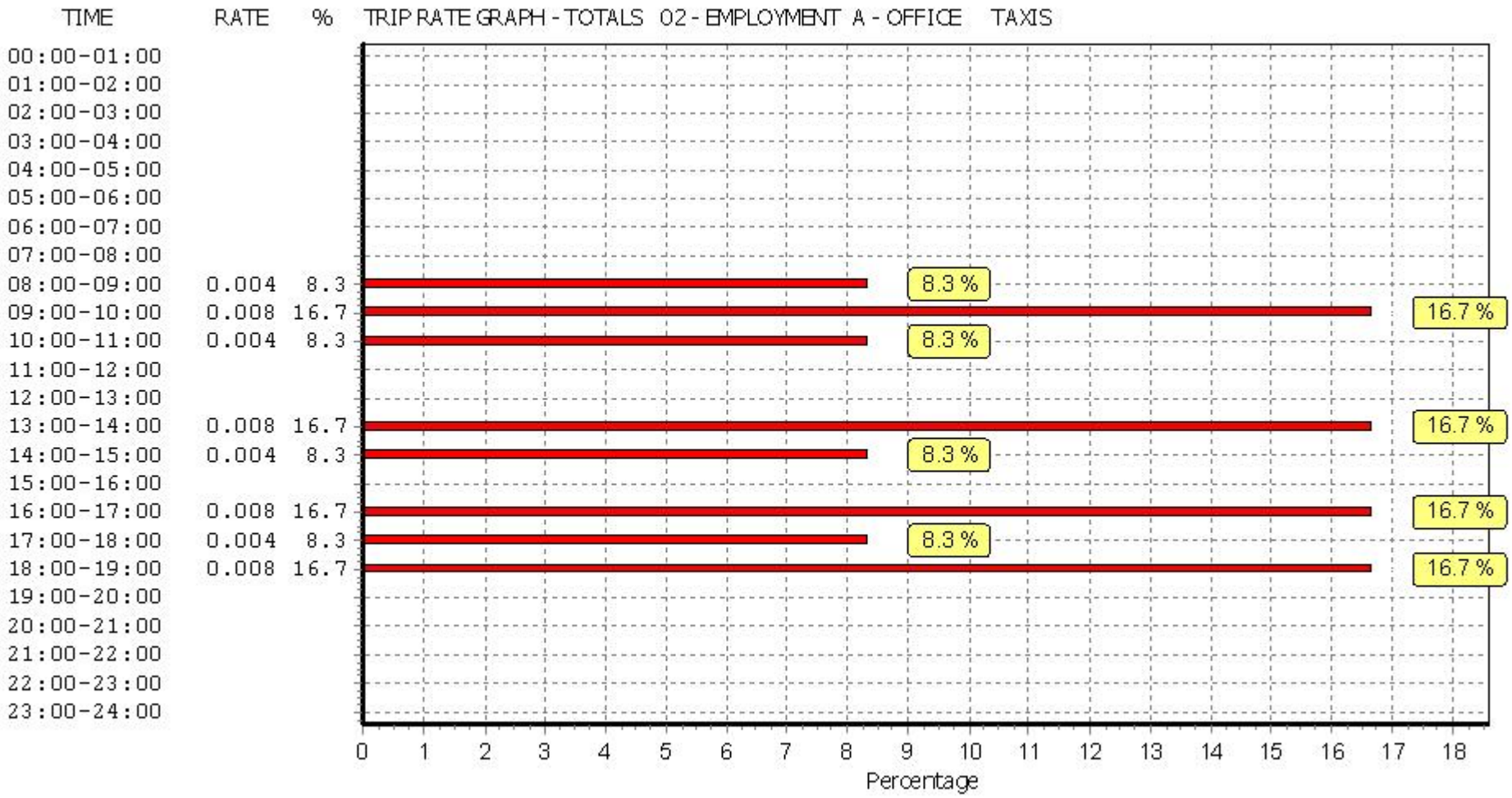

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TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	9	5490	0.000	9	5490	0.000	9	5490	0.000
07:30 - 08:00	9	5490	0.002	9	5490	0.002	9	5490	0.004
08:00 - 08:30	9	5490	0.004	9	5490	0.004	9	5490	0.008
08:30 - 09:00	9	5490	0.000	9	5490	0.000	9	5490	0.000
09:00 - 09:30	9	5490	0.000	9	5490	0.000	9	5490	0.000
09:30 - 10:00	9	5490	0.002	9	5490	0.002	9	5490	0.004
10:00 - 10:30	9	5490	0.002	9	5490	0.002	9	5490	0.004
10:30 - 11:00	9	5490	0.000	9	5490	0.000	9	5490	0.000
11:00 - 11:30	9	5490	0.002	9	5490	0.000	9	5490	0.002
11:30 - 12:00	9	5490	0.000	9	5490	0.002	9	5490	0.002
12:00 - 12:30	9	5490	0.000	9	5490	0.000	9	5490	0.000
12:30 - 13:00	9	5490	0.000	9	5490	0.000	9	5490	0.000
13:00 - 13:30	9	5490	0.000	9	5490	0.000	9	5490	0.000
13:30 - 14:00	9	5490	0.000	9	5490	0.000	9	5490	0.000
14:00 - 14:30	9	5490	0.000	9	5490	0.000	9	5490	0.000
14:30 - 15:00	9	5490	0.002	9	5490	0.000	9	5490	0.002
15:00 - 15:30	9	5490	0.000	9	5490	0.002	9	5490	0.002
15:30 - 16:00	9	5490	0.000	9	5490	0.000	9	5490	0.000
16:00 - 16:30	9	5490	0.000	9	5490	0.000	9	5490	0.000
16:30 - 17:00	9	5490	0.000	9	5490	0.000	9	5490	0.000
17:00 - 17:30	9	5490	0.000	9	5490	0.000	9	5490	0.000
17:30 - 18:00	9	5490	0.000	9	5490	0.000	9	5490	0.000
18:00 - 18:30	9	5490	0.000	9	5490	0.000	9	5490	0.000
18:30 - 19:00	8	6127	0.000	8	6127	0.000	8	6127	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.014			0.014			0.028

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.

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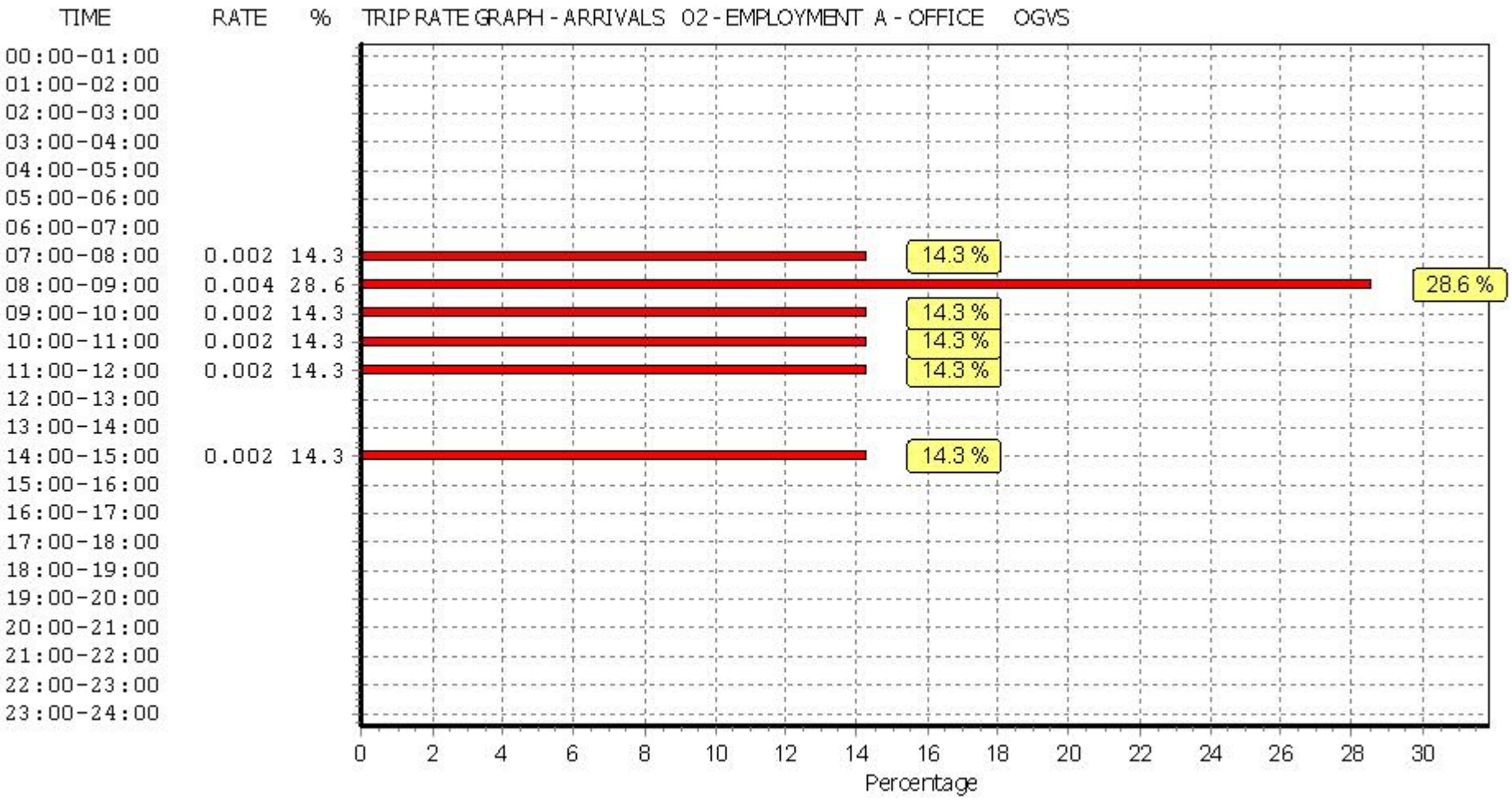
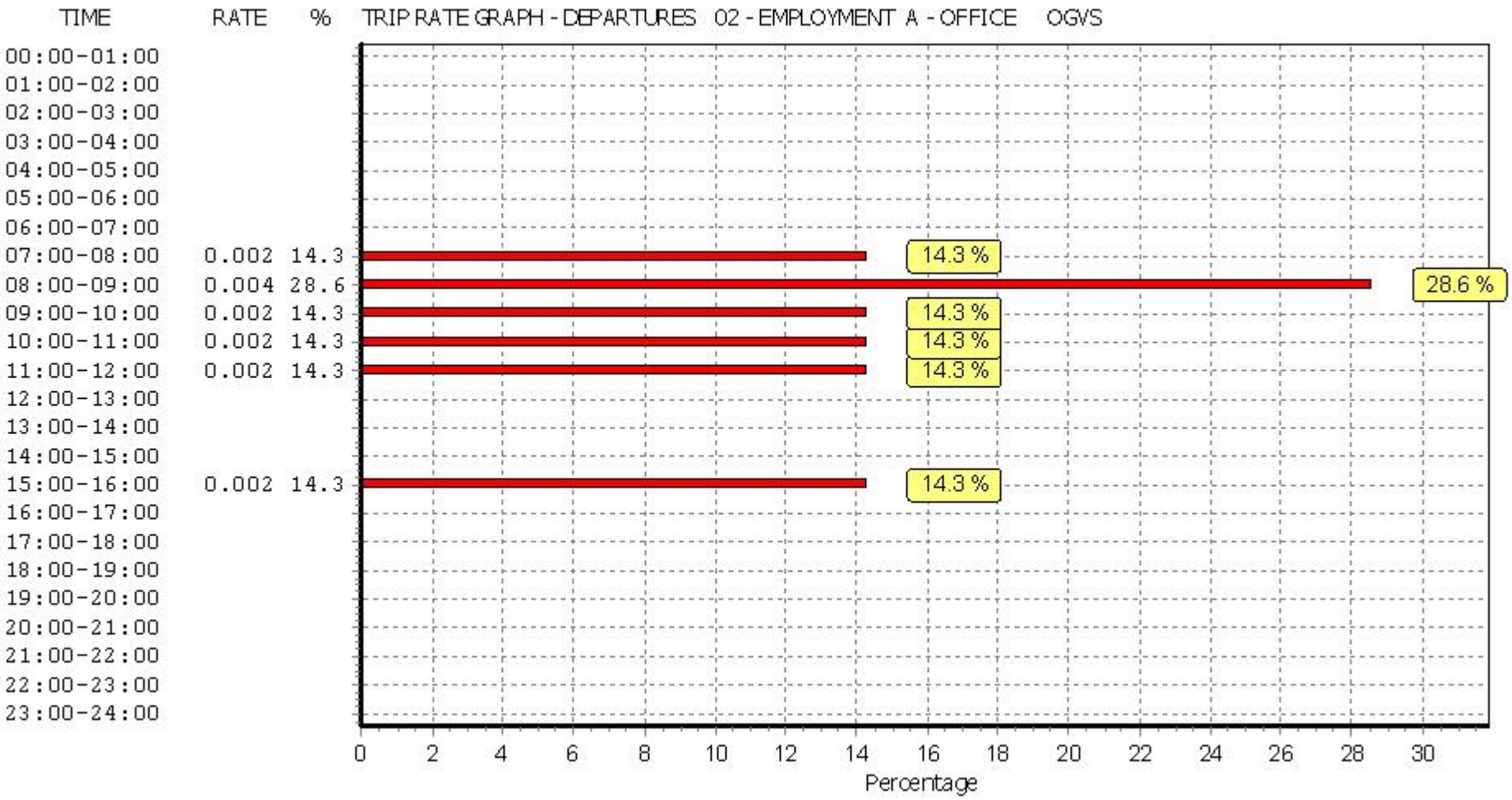


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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



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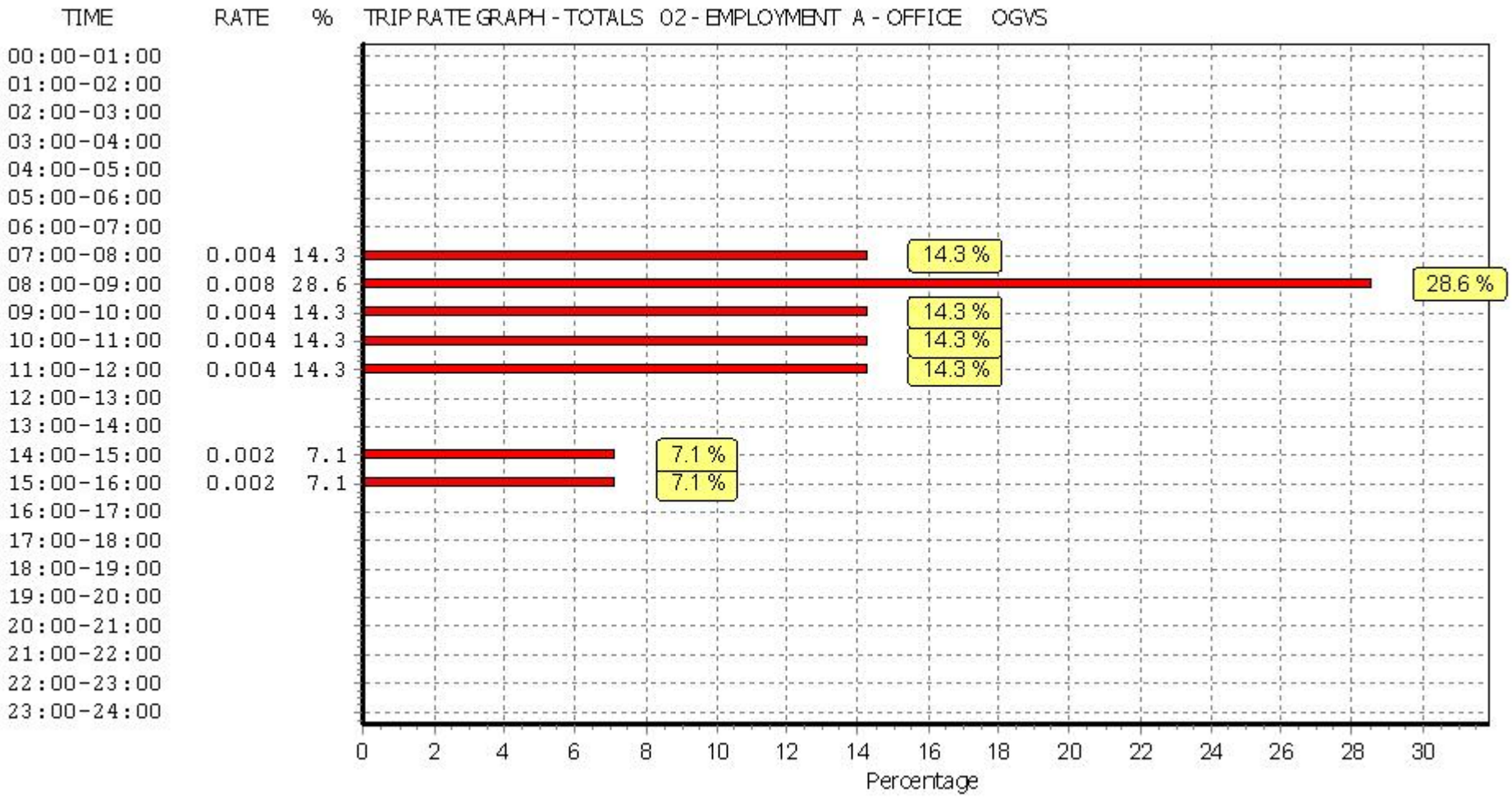

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TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	9	5490	0.000	9	5490	0.000	9	5490	0.000
07:30 - 08:00	9	5490	0.000	9	5490	0.000	9	5490	0.000
08:00 - 08:30	9	5490	0.010	9	5490	0.002	9	5490	0.012
08:30 - 09:00	9	5490	0.004	9	5490	0.000	9	5490	0.004
09:00 - 09:30	9	5490	0.006	9	5490	0.000	9	5490	0.006
09:30 - 10:00	9	5490	0.006	9	5490	0.002	9	5490	0.008
10:00 - 10:30	9	5490	0.000	9	5490	0.002	9	5490	0.002
10:30 - 11:00	9	5490	0.006	9	5490	0.004	9	5490	0.010
11:00 - 11:30	9	5490	0.002	9	5490	0.004	9	5490	0.006
11:30 - 12:00	9	5490	0.000	9	5490	0.000	9	5490	0.000
12:00 - 12:30	9	5490	0.000	9	5490	0.002	9	5490	0.002
12:30 - 13:00	9	5490	0.000	9	5490	0.002	9	5490	0.002
13:00 - 13:30	9	5490	0.004	9	5490	0.002	9	5490	0.006
13:30 - 14:00	9	5490	0.002	9	5490	0.002	9	5490	0.004
14:00 - 14:30	9	5490	0.006	9	5490	0.008	9	5490	0.014
14:30 - 15:00	9	5490	0.000	9	5490	0.002	9	5490	0.002
15:00 - 15:30	9	5490	0.002	9	5490	0.002	9	5490	0.004
15:30 - 16:00	9	5490	0.002	9	5490	0.000	9	5490	0.002
16:00 - 16:30	9	5490	0.000	9	5490	0.002	9	5490	0.002
16:30 - 17:00	9	5490	0.002	9	5490	0.004	9	5490	0.006
17:00 - 17:30	9	5490	0.000	9	5490	0.008	9	5490	0.008
17:30 - 18:00	9	5490	0.000	9	5490	0.004	9	5490	0.004
18:00 - 18:30	9	5490	0.000	9	5490	0.000	9	5490	0.000
18:30 - 19:00	8	6127	0.000	8	6127	0.000	8	6127	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.052			0.052			0.104

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.

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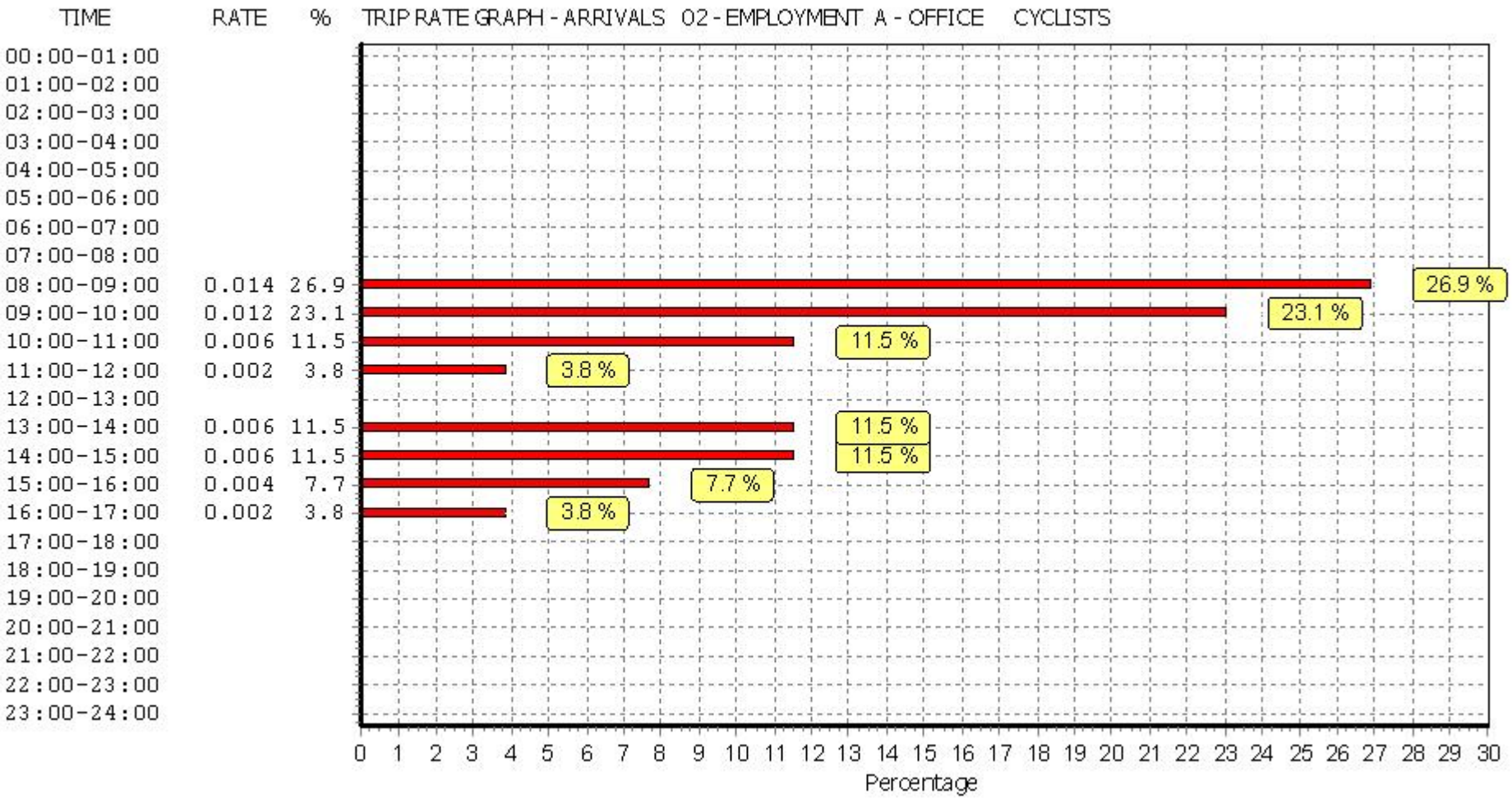

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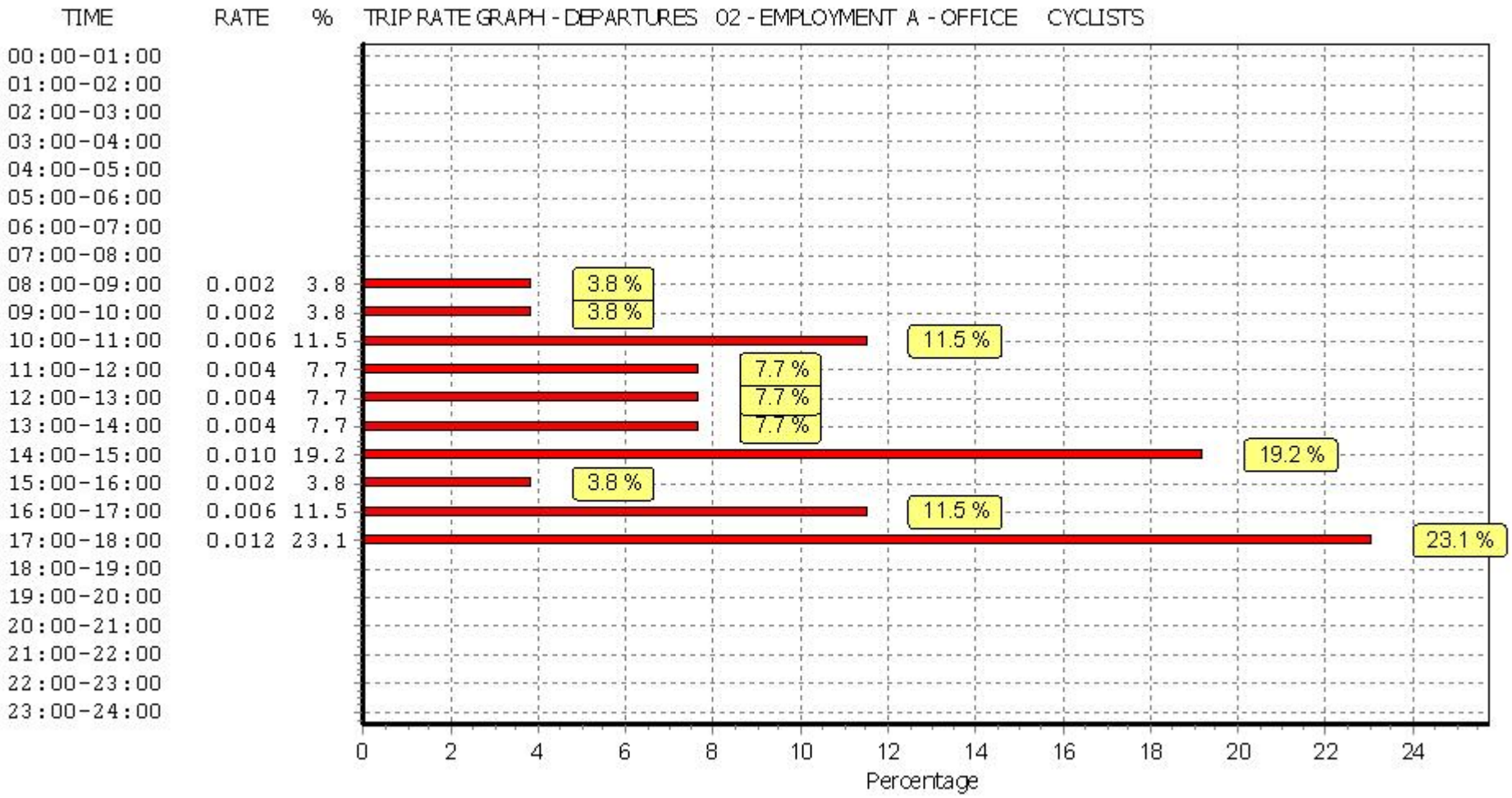

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Calculation Reference: AUDIT-800401-190923-0936

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : C - FLATS PRIVATELY OWNED
VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	BD	BEDFORDSHIRE	2 days
03	SOUTH WEST		
	DC	DORSET	1 days
04	EAST ANGLIA		
	SF	SUFFOLK	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	RI	EAST RIDING OF YORKSHIRE	1 days
09	NORTH		
	CB	CUMBRIA	2 days
11	SCOTLAND		
	SA	SOUTH AYRSHIRE	1 days
12	CONNAUGHT		
	GA	GALWAY	1 days
13	MUNSTER		
	WA	WATERFORD	1 days
14	LEINSTER		
	LU	LOUTH	3 days
16	ULSTER (REPUBLIC OF IRELAND)		
	MG	MONAGHAN	1 days

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

Secondary Filtering selection:

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

Parameter: Number of dwellings
Actual Range: 14 to 175 (units:)
Range Selected by User: 230 to 350 (units:)

Parking Spaces Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/11 to 06/06/19

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	3 days
Tuesday	5 days
Wednesday	2 days
Thursday	2 days
Friday	2 days

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

Selected survey types:

Manual count	14 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	7
Suburban Area (PPS6 Out of Centre)	5
Edge of Town	2

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	11
No Sub Category	3

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

Secondary Filtering selection:

Use Class:

C3	14 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	3 days
10,001 to 15,000	5 days
15,001 to 20,000	2 days
20,001 to 25,000	1 days
25,001 to 50,000	2 days

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

Population within 5 miles:

5,001 to 25,000	2 days
25,001 to 50,000	4 days
50,001 to 75,000	8 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	11 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	14 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	14 days

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

LIST OF SITES relevant to selection parameters

1 BD-03-C-01 BLOCKS OF FLATS BEDFORDSHIRE
WING ROAD
LEIGHTON BUZZARD
LINSLADE
Edge of Town Centre
Residential Zone
Total Number of dwellings: 175
Survey date: TUESDAY *15/05/18* *Survey Type: MANUAL*

2 BD-03-C-02 BLOCKS OF FLATS BEDFORDSHIRE
STANBRIDGE ROAD
LEIGHTON BUZZARD

Edge of Town Centre
Residential Zone
Total Number of dwellings: 62
Survey date: TUESDAY *15/05/18* *Survey Type: MANUAL*

3 CB-03-C-02 BLOCK OF FLATS CUMBRIA
BRIDGE LANE
PENRITH

Edge of Town
No Sub Category
Total Number of dwellings: 35
Survey date: WEDNESDAY *11/06/14* *Survey Type: MANUAL*

4 CB-03-C-03 FLATS & BUNGALOWS CUMBRIA
LOUND STREET
KENDAL

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 33
Survey date: MONDAY *09/06/14* *Survey Type: MANUAL*

5 DC-03-C-02 FLATS IN BLOCKS DORSET
PALM COURT
WEYMOUTH
SPA ROAD
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 14
Survey date: FRIDAY *28/03/14* *Survey Type: MANUAL*

6 GA-03-C-01 FLATS GALWAY
BALLYLOUGHANE ROAD
GALWAY

Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Number of dwellings: 34
Survey date: THURSDAY *31/10/13* *Survey Type: MANUAL*

7 LU-03-C-01 BLOCKS OF FLATS LOUTH
DONORE ROAD
DROGHEDA

Edge of Town Centre
Residential Zone
Total Number of dwellings: 52
Survey date: THURSDAY *12/09/13* *Survey Type: MANUAL*

8 LU-03-C-02 BLOCK OF FLATS LOUTH
NICHOLAS STREET
DUNDALK

Edge of Town Centre
Residential Zone
Total Number of dwellings: 33
Survey date: MONDAY *16/09/13* *Survey Type: MANUAL*

9 LU-03-C-03 BLOCK OF FLATS LOUTH
NICHOLAS STREET
DUNDALK

Edge of Town Centre
Residential Zone
Total Number of dwellings: 20
Survey date: MONDAY *16/09/13* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

10 MG-03-C-01 BLOCK OF FLATS MONAGHAN
MALL ROAD
MONAGHAN

Edge of Town Centre
No Sub Category
Total Number of dwellings: 28
Survey date: FRIDAY *06/09/13* *Survey Type: MANUAL*

11 RI-03-C-01 FLATS EAST RIDING OF YORKSHIRE
465 PRIORY ROAD
HULL

Edge of Town
Residential Zone
Total Number of dwellings: 20
Survey date: TUESDAY *13/05/14* *Survey Type: MANUAL*

12 SA-03-C-01 BLOCK OF FLATS SOUTH AYRSHIRE
RACECOURSE ROAD
AYR

Edge of Town Centre
Residential Zone
Total Number of dwellings: 51
Survey date: TUESDAY *16/09/14* *Survey Type: MANUAL*

13 SF-03-C-03 BLOCKS OF FLATS SUFFOLK
TOLLGATE LANE
BURY ST EDMUNDS

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 30
Survey date: WEDNESDAY *03/12/14* *Survey Type: MANUAL*

14 WA-03-C-01 BLOCKS OF FLATS WATERFORD
UPPER YELLOW ROAD
WATERFORD

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 51
Survey date: TUESDAY *12/05/15* *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/C - FLATS PRIVATELY OWNED
VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	14	46	0.044	14	46	0.146	14	46	0.190
08:00 - 09:00	14	46	0.055	14	46	0.176	14	46	0.231
09:00 - 10:00	14	46	0.072	14	46	0.103	14	46	0.175
10:00 - 11:00	14	46	0.066	14	46	0.082	14	46	0.148
11:00 - 12:00	14	46	0.082	14	46	0.099	14	46	0.181
12:00 - 13:00	14	46	0.099	14	46	0.083	14	46	0.182
13:00 - 14:00	14	46	0.083	14	46	0.080	14	46	0.163
14:00 - 15:00	14	46	0.083	14	46	0.085	14	46	0.168
15:00 - 16:00	14	46	0.094	14	46	0.094	14	46	0.188
16:00 - 17:00	14	46	0.114	14	46	0.088	14	46	0.202
17:00 - 18:00	14	46	0.202	14	46	0.097	14	46	0.299
18:00 - 19:00	14	46	0.208	14	46	0.127	14	46	0.335
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.202			1.260			2.462

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

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

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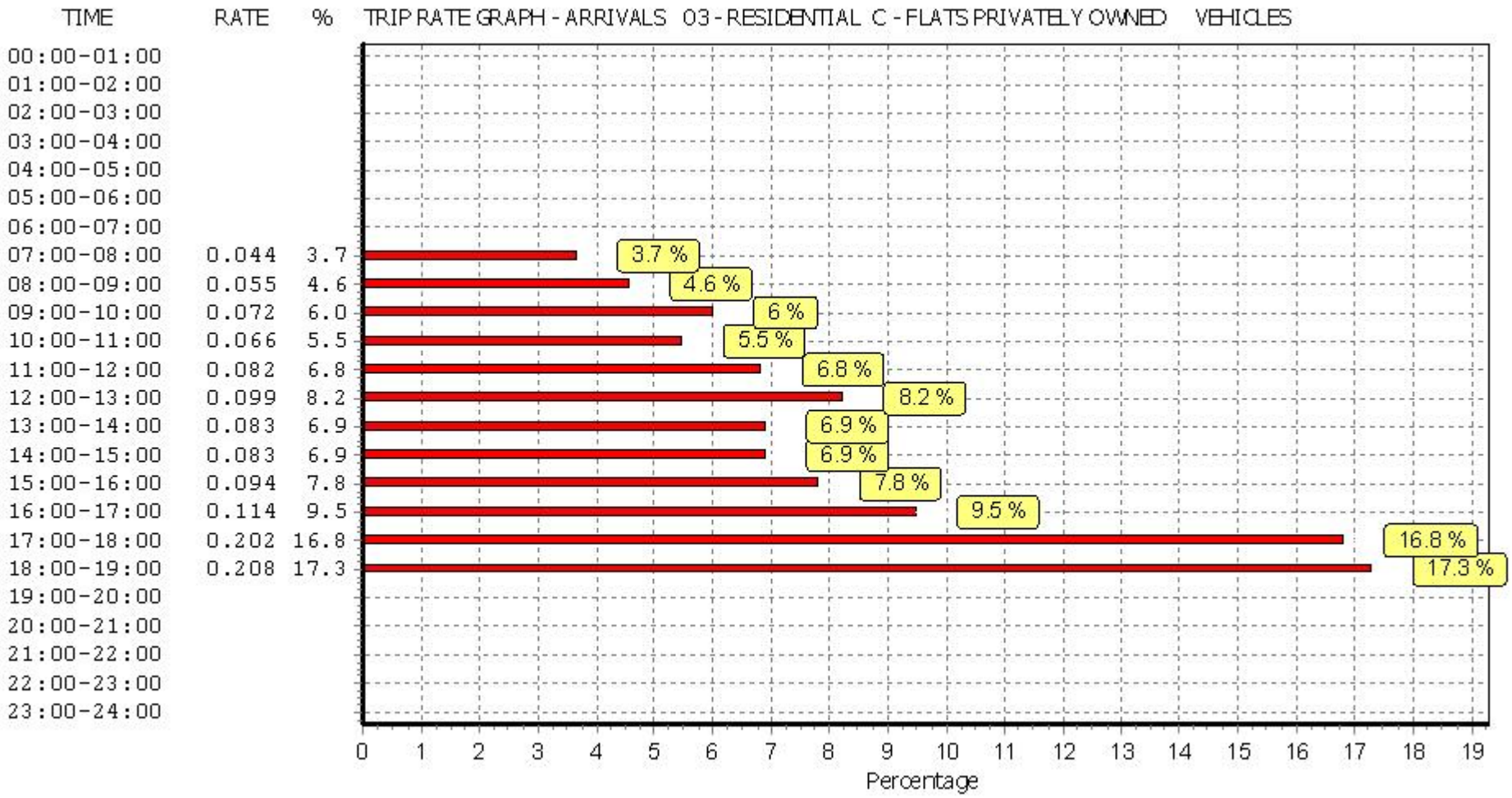
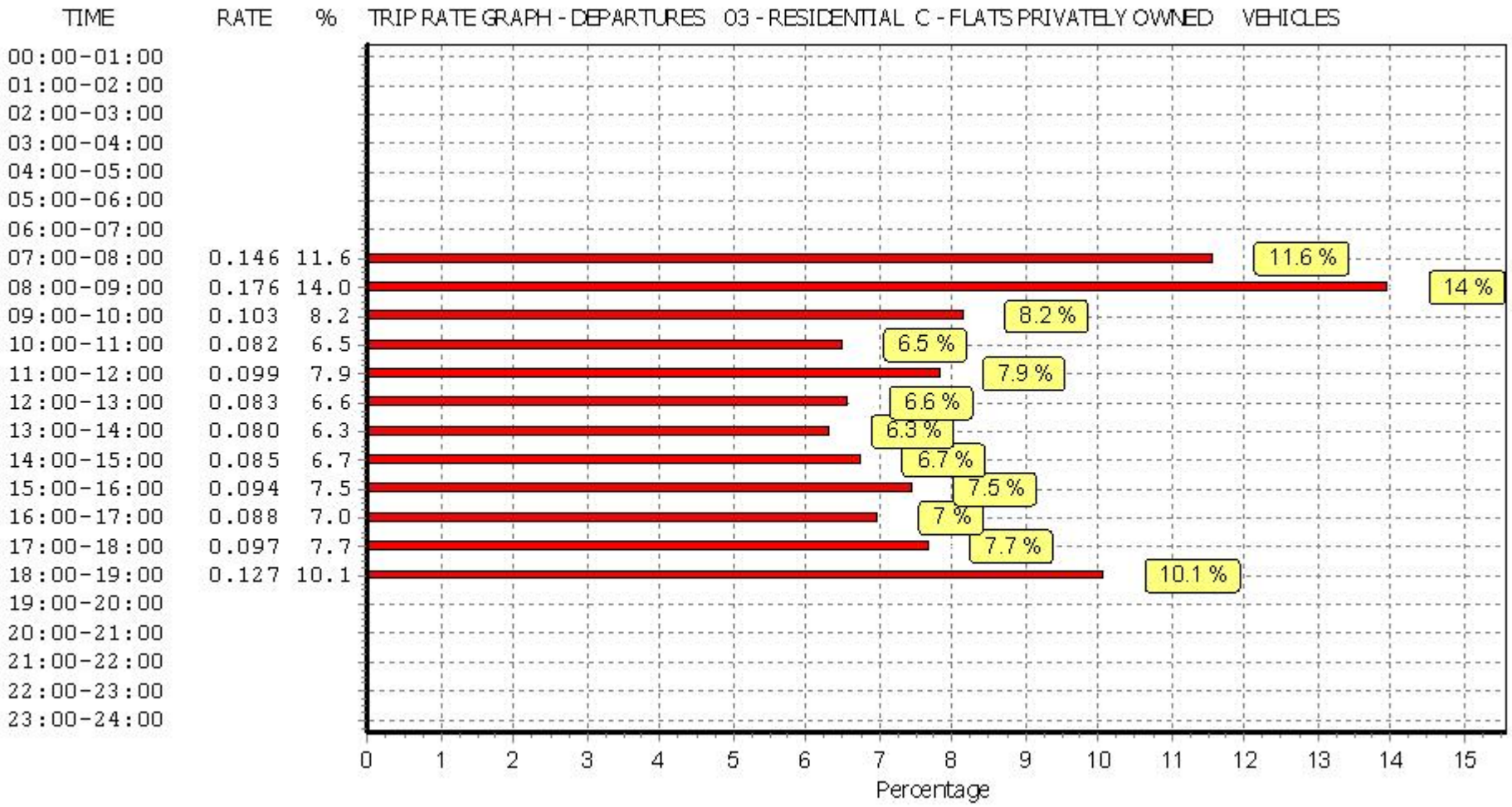
Parameter summary

Trip rate parameter range selected:	14 - 175 (units:)
Survey date date range:	01/01/11 - 06/06/19
Number of weekdays (Monday-Friday):	14
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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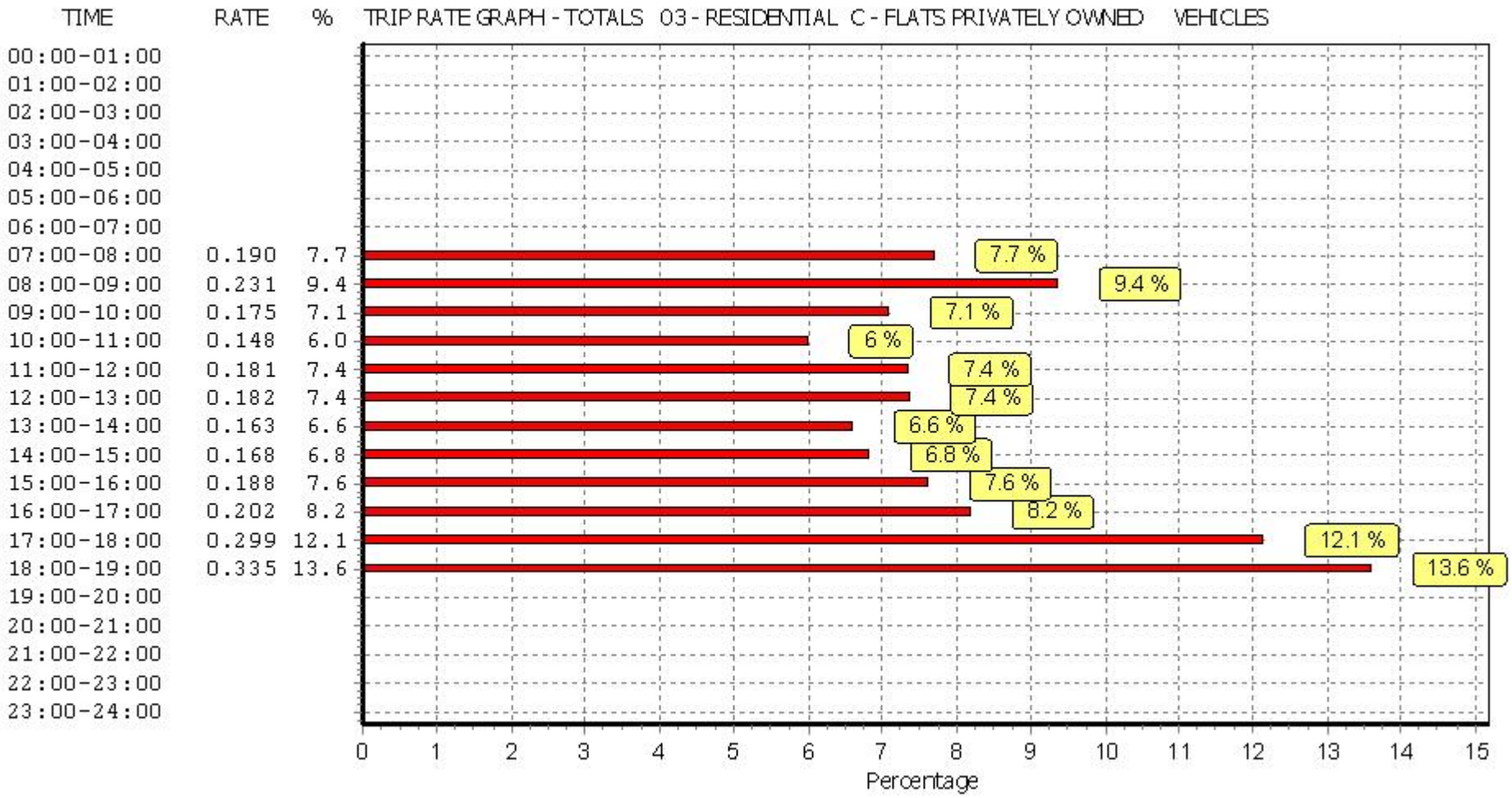

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TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
TAXIS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	14	46	0.003	14	46	0.005	14	46	0.008
08:00 - 09:00	14	46	0.000	14	46	0.000	14	46	0.000
09:00 - 10:00	14	46	0.003	14	46	0.003	14	46	0.006
10:00 - 11:00	14	46	0.000	14	46	0.000	14	46	0.000
11:00 - 12:00	14	46	0.002	14	46	0.002	14	46	0.004
12:00 - 13:00	14	46	0.002	14	46	0.002	14	46	0.004
13:00 - 14:00	14	46	0.003	14	46	0.003	14	46	0.006
14:00 - 15:00	14	46	0.002	14	46	0.002	14	46	0.004
15:00 - 16:00	14	46	0.002	14	46	0.002	14	46	0.004
16:00 - 17:00	14	46	0.003	14	46	0.003	14	46	0.006
17:00 - 18:00	14	46	0.003	14	46	0.003	14	46	0.006
18:00 - 19:00	14	46	0.000	14	46	0.000	14	46	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.023			0.025			0.048

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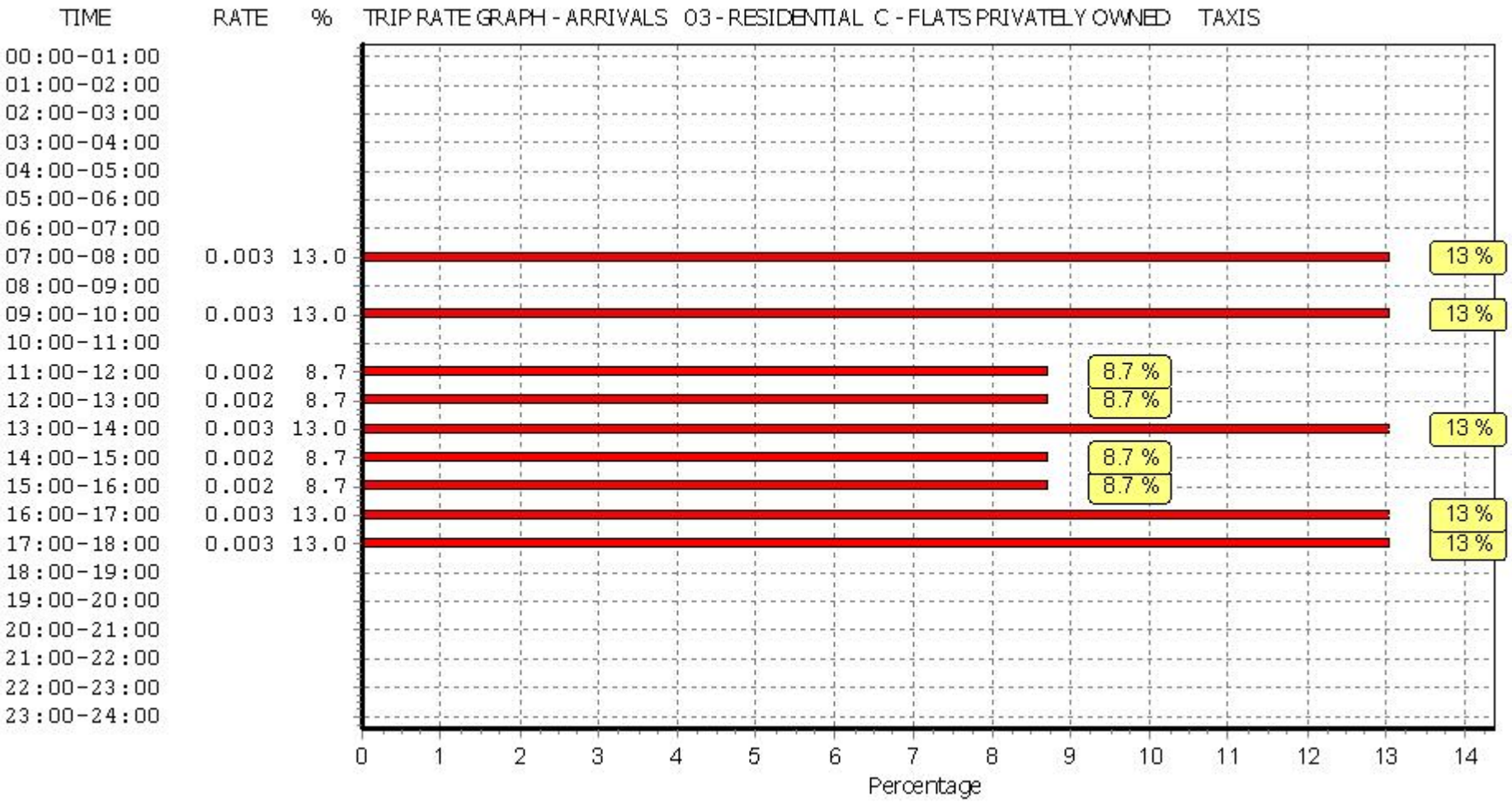

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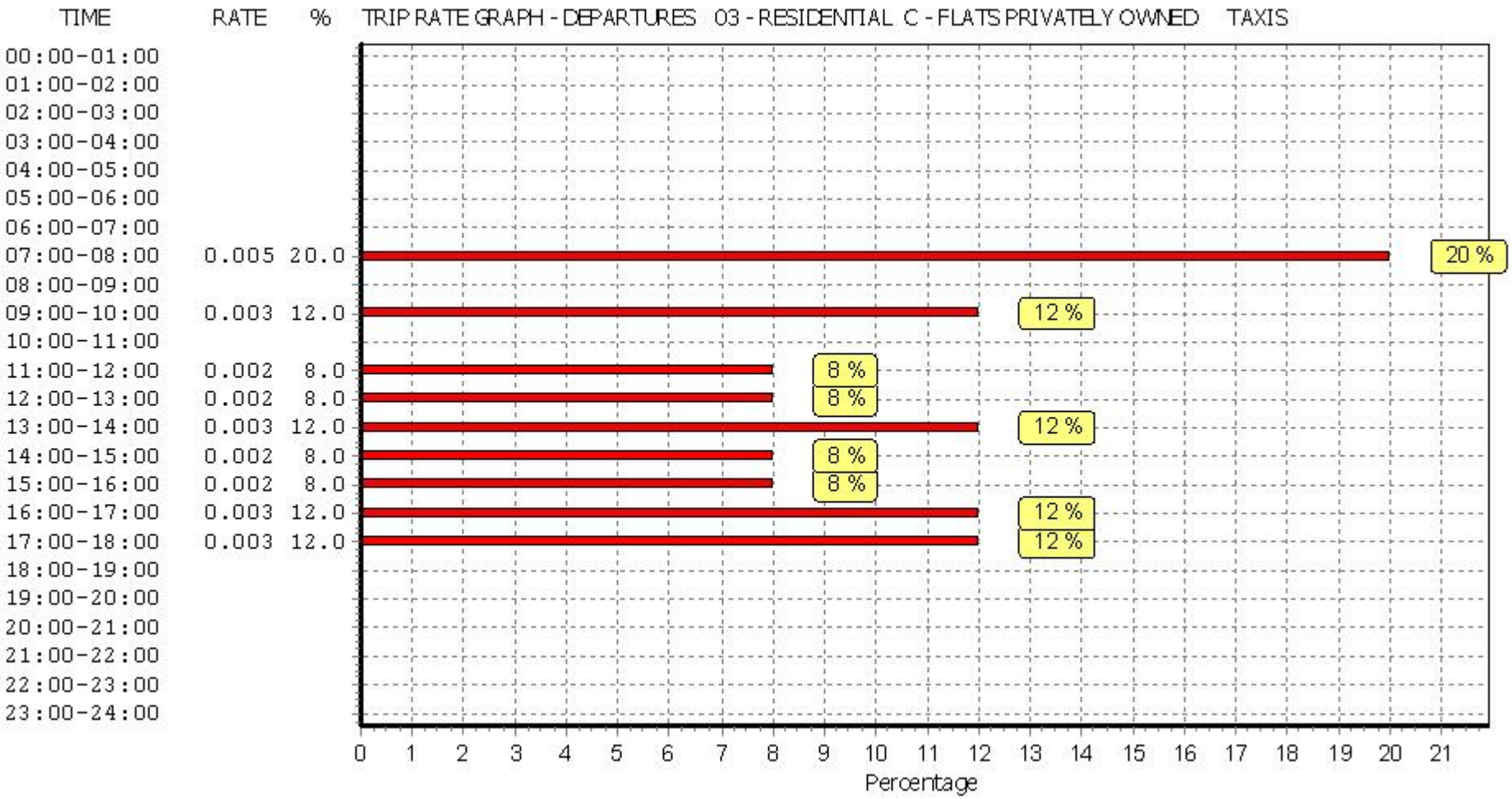

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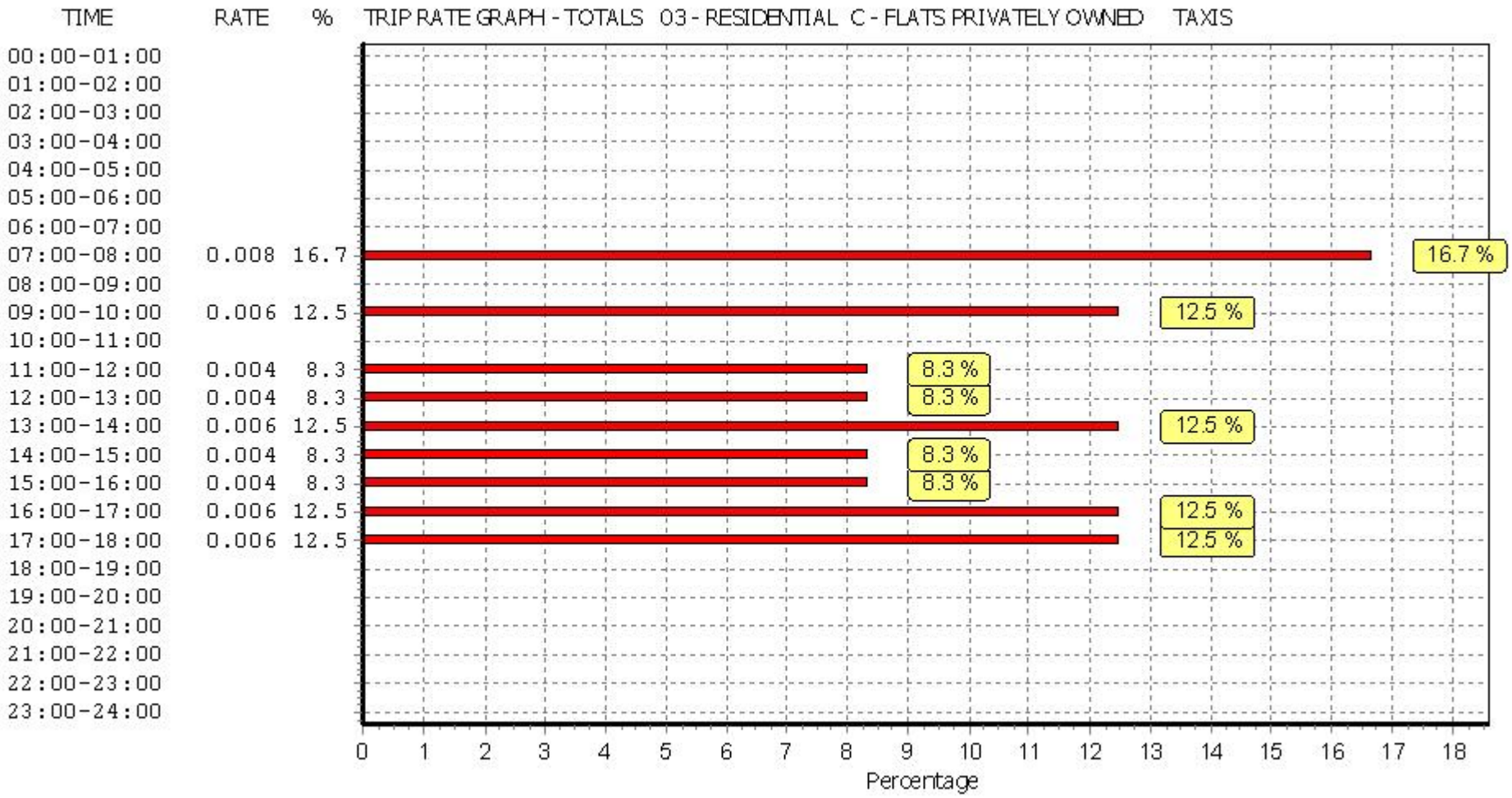

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TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
OGVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	14	46	0.002	14	46	0.003	14	46	0.005
08:00 - 09:00	14	46	0.002	14	46	0.002	14	46	0.004
09:00 - 10:00	14	46	0.005	14	46	0.003	14	46	0.008
10:00 - 11:00	14	46	0.000	14	46	0.002	14	46	0.002
11:00 - 12:00	14	46	0.000	14	46	0.000	14	46	0.000
12:00 - 13:00	14	46	0.003	14	46	0.002	14	46	0.005
13:00 - 14:00	14	46	0.000	14	46	0.002	14	46	0.002
14:00 - 15:00	14	46	0.002	14	46	0.002	14	46	0.004
15:00 - 16:00	14	46	0.002	14	46	0.000	14	46	0.002
16:00 - 17:00	14	46	0.000	14	46	0.002	14	46	0.002
17:00 - 18:00	14	46	0.000	14	46	0.000	14	46	0.000
18:00 - 19:00	14	46	0.000	14	46	0.000	14	46	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.016			0.018			0.034

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.

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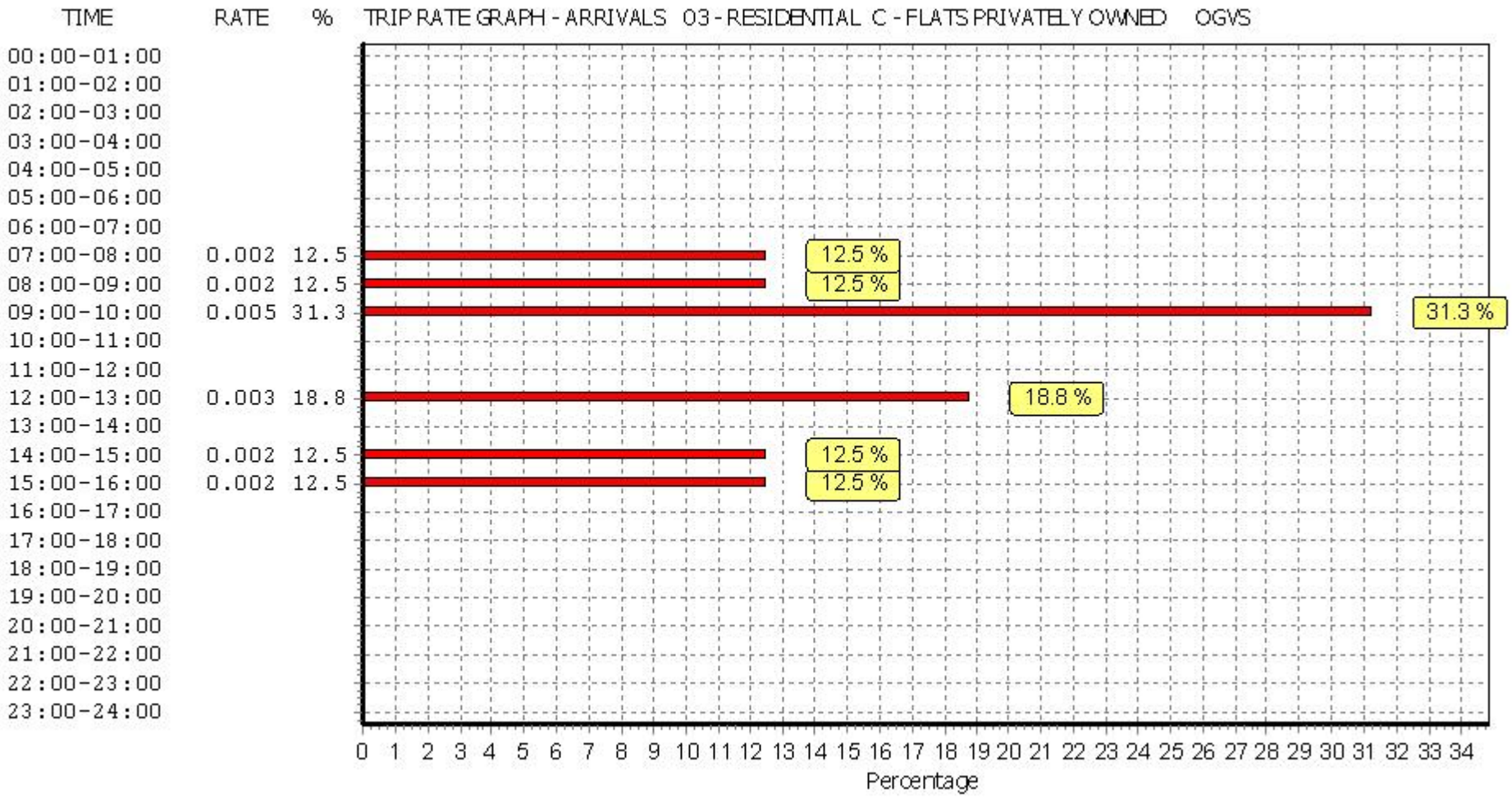

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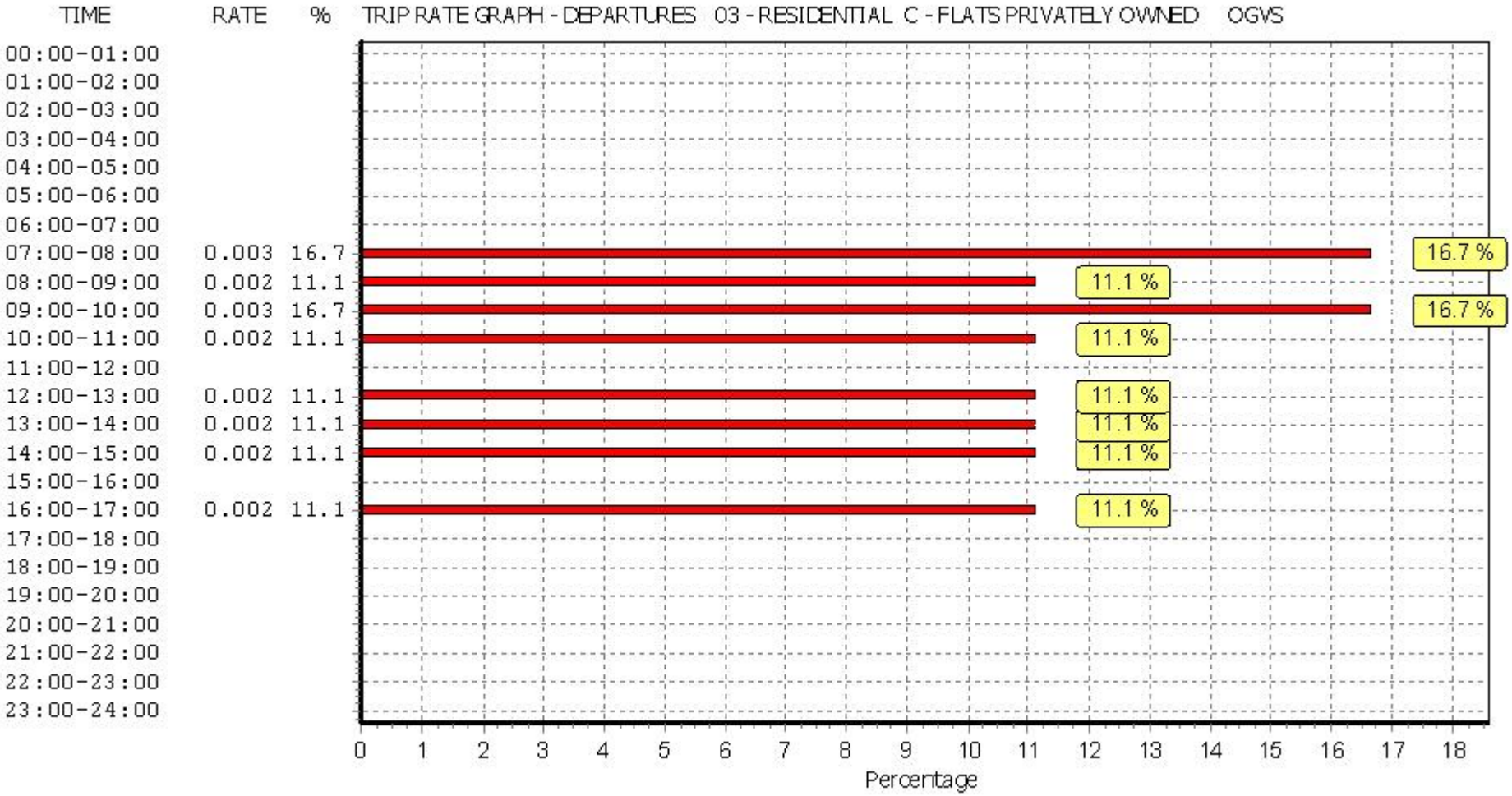

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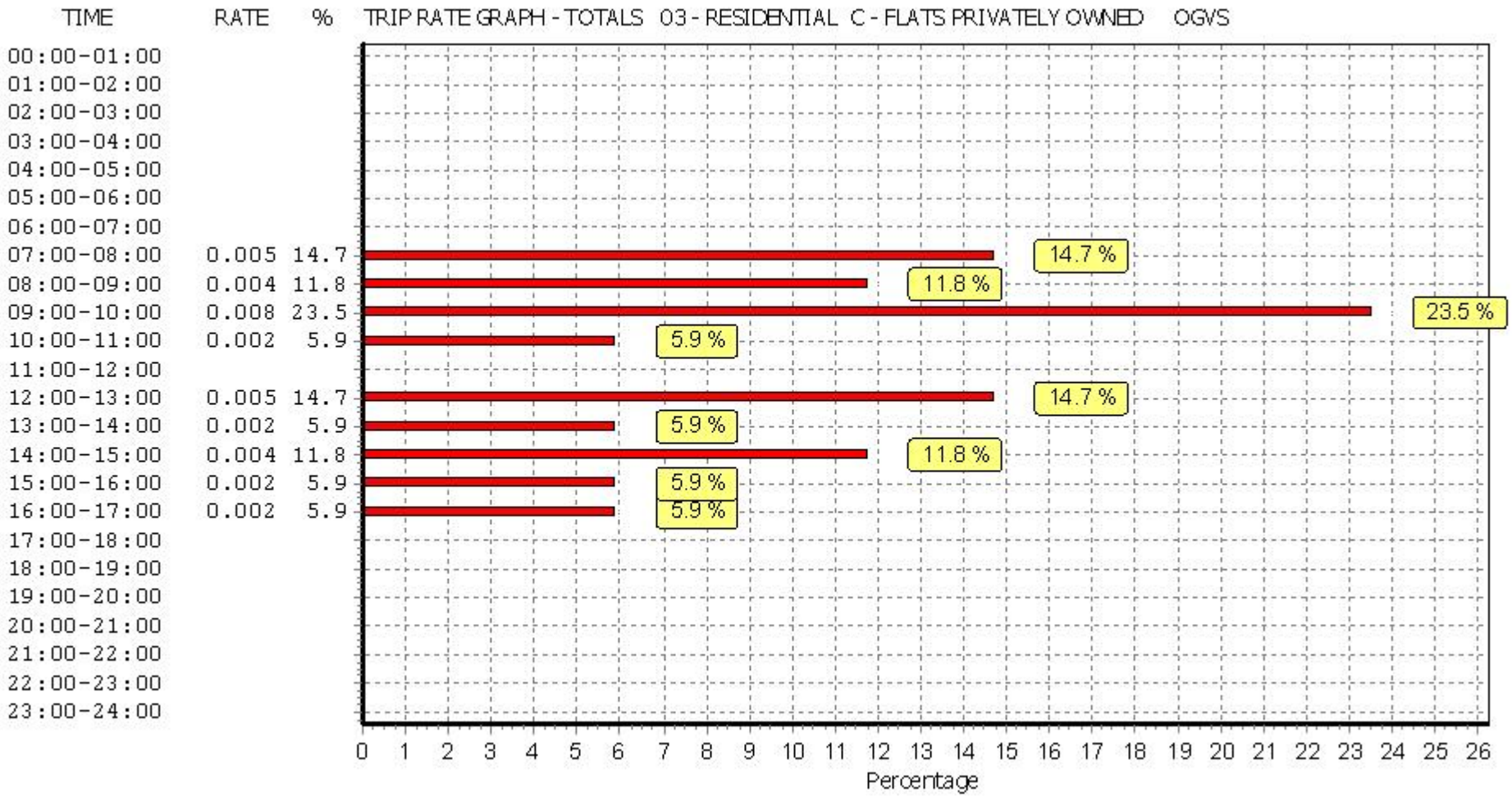

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TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
PSVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	14	46	0.000	14	46	0.000	14	46	0.000
08:00 - 09:00	14	46	0.000	14	46	0.000	14	46	0.000
09:00 - 10:00	14	46	0.000	14	46	0.000	14	46	0.000
10:00 - 11:00	14	46	0.002	14	46	0.002	14	46	0.004
11:00 - 12:00	14	46	0.000	14	46	0.000	14	46	0.000
12:00 - 13:00	14	46	0.000	14	46	0.000	14	46	0.000
13:00 - 14:00	14	46	0.000	14	46	0.000	14	46	0.000
14:00 - 15:00	14	46	0.000	14	46	0.000	14	46	0.000
15:00 - 16:00	14	46	0.002	14	46	0.000	14	46	0.002
16:00 - 17:00	14	46	0.000	14	46	0.002	14	46	0.002
17:00 - 18:00	14	46	0.002	14	46	0.002	14	46	0.004
18:00 - 19:00	14	46	0.000	14	46	0.000	14	46	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

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.

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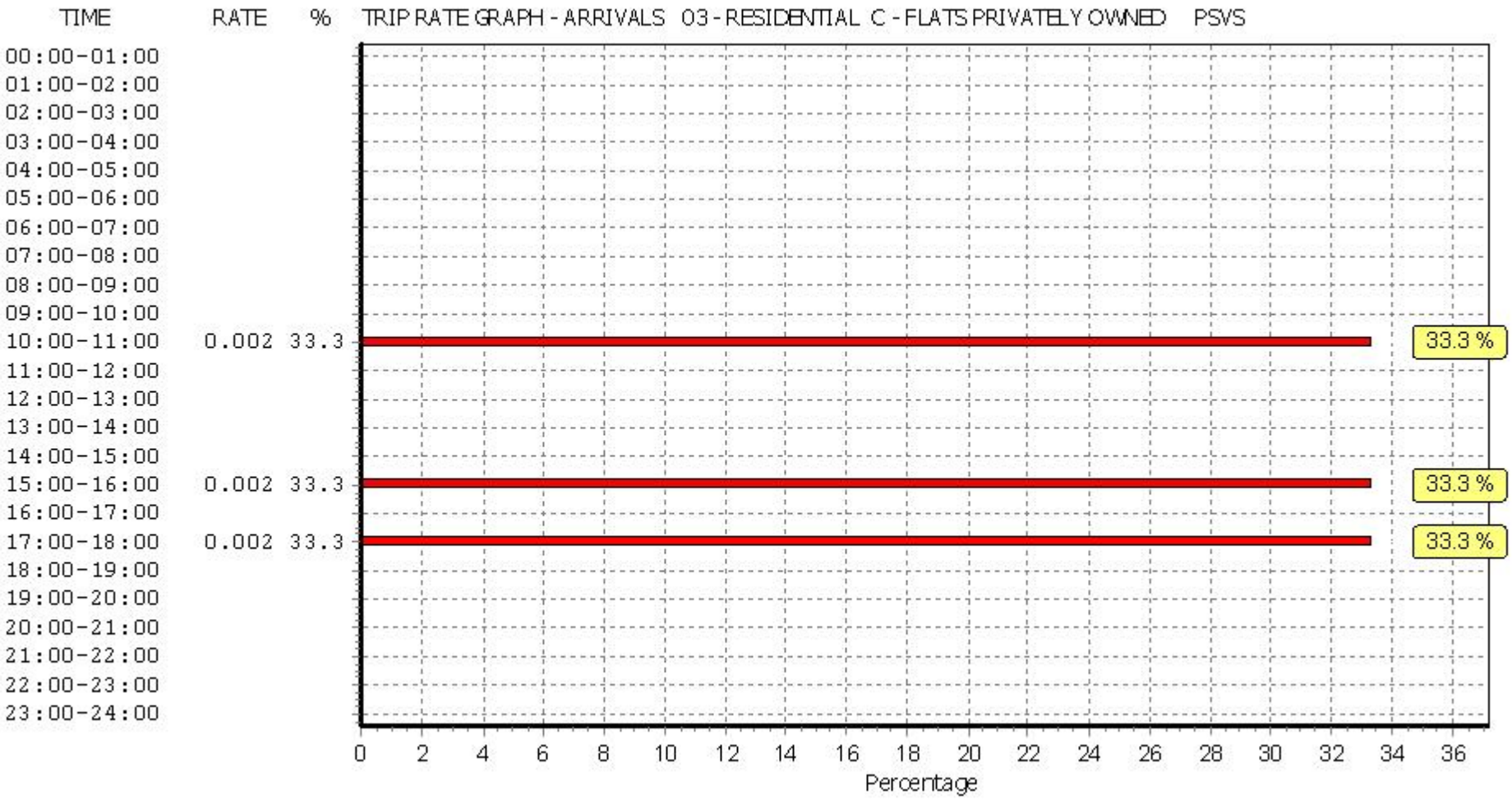
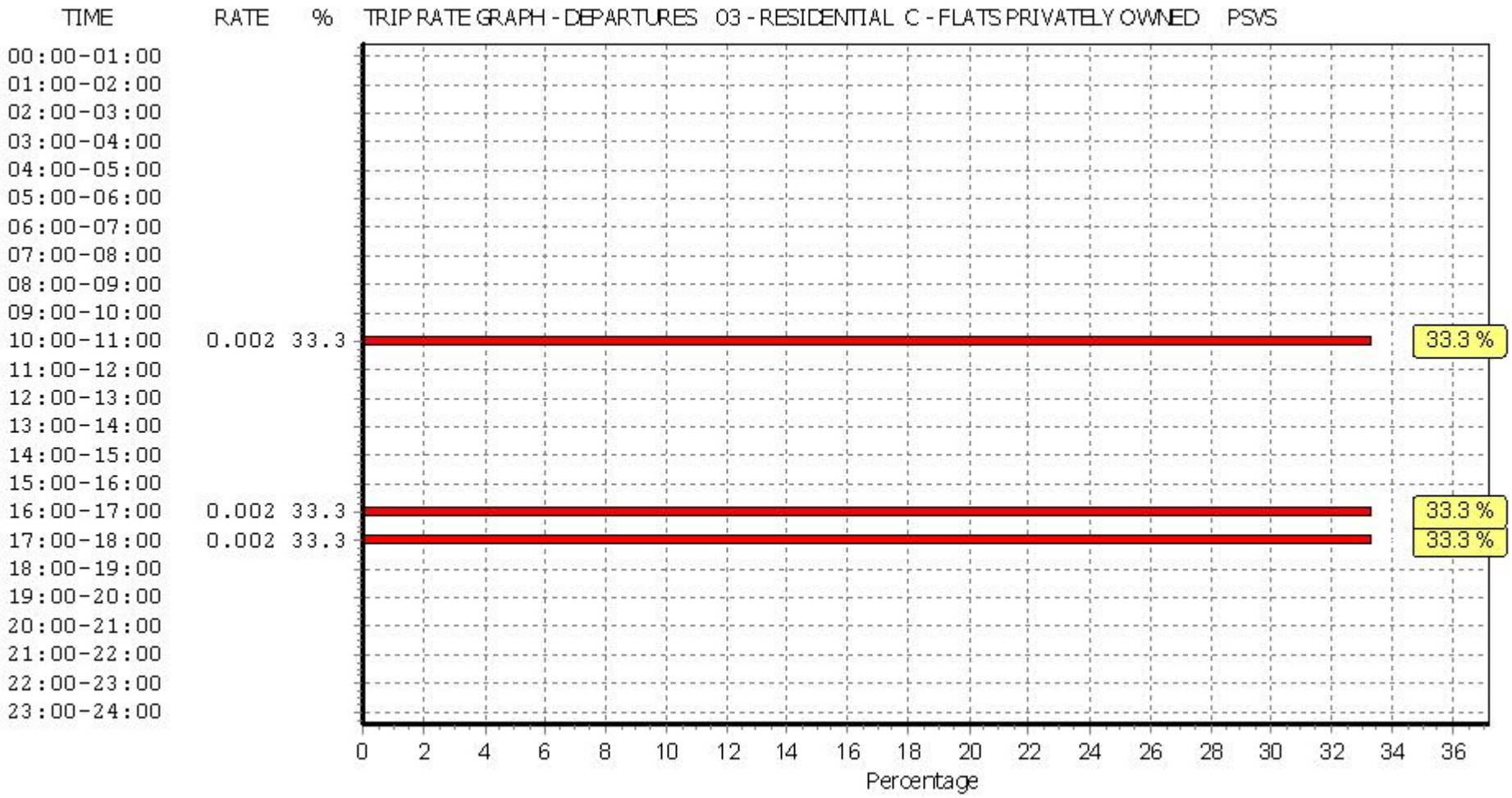


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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



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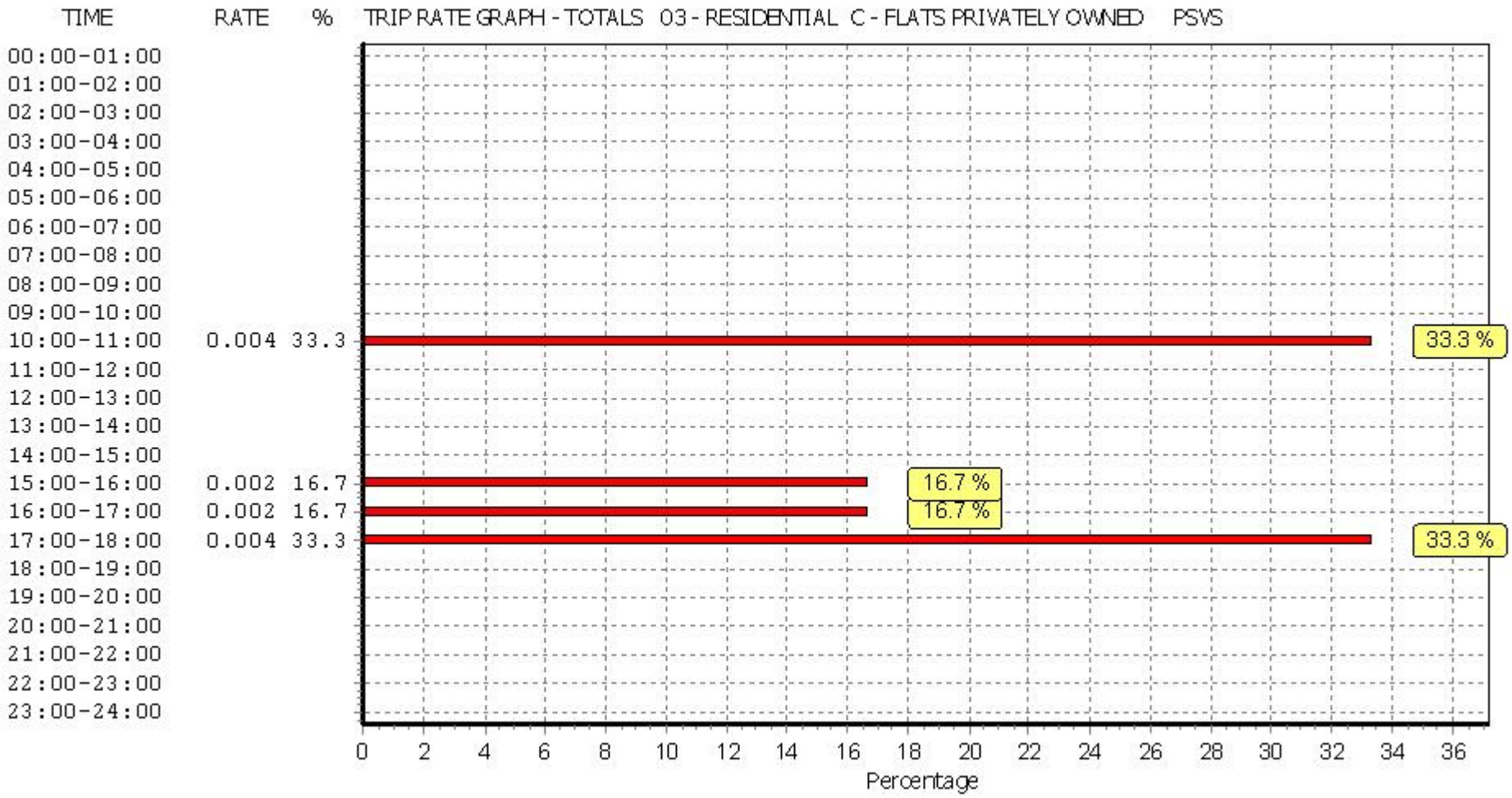

This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
CYCLISTS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	14	46	0.005	14	46	0.006	14	46	0.011
08:00 - 09:00	14	46	0.006	14	46	0.011	14	46	0.017
09:00 - 10:00	14	46	0.005	14	46	0.006	14	46	0.011
10:00 - 11:00	14	46	0.003	14	46	0.000	14	46	0.003
11:00 - 12:00	14	46	0.000	14	46	0.003	14	46	0.003
12:00 - 13:00	14	46	0.002	14	46	0.000	14	46	0.002
13:00 - 14:00	14	46	0.000	14	46	0.003	14	46	0.003
14:00 - 15:00	14	46	0.002	14	46	0.000	14	46	0.002
15:00 - 16:00	14	46	0.002	14	46	0.002	14	46	0.004
16:00 - 17:00	14	46	0.005	14	46	0.002	14	46	0.007
17:00 - 18:00	14	46	0.003	14	46	0.002	14	46	0.005
18:00 - 19:00	14	46	0.002	14	46	0.000	14	46	0.002
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.035			0.035			0.070

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.

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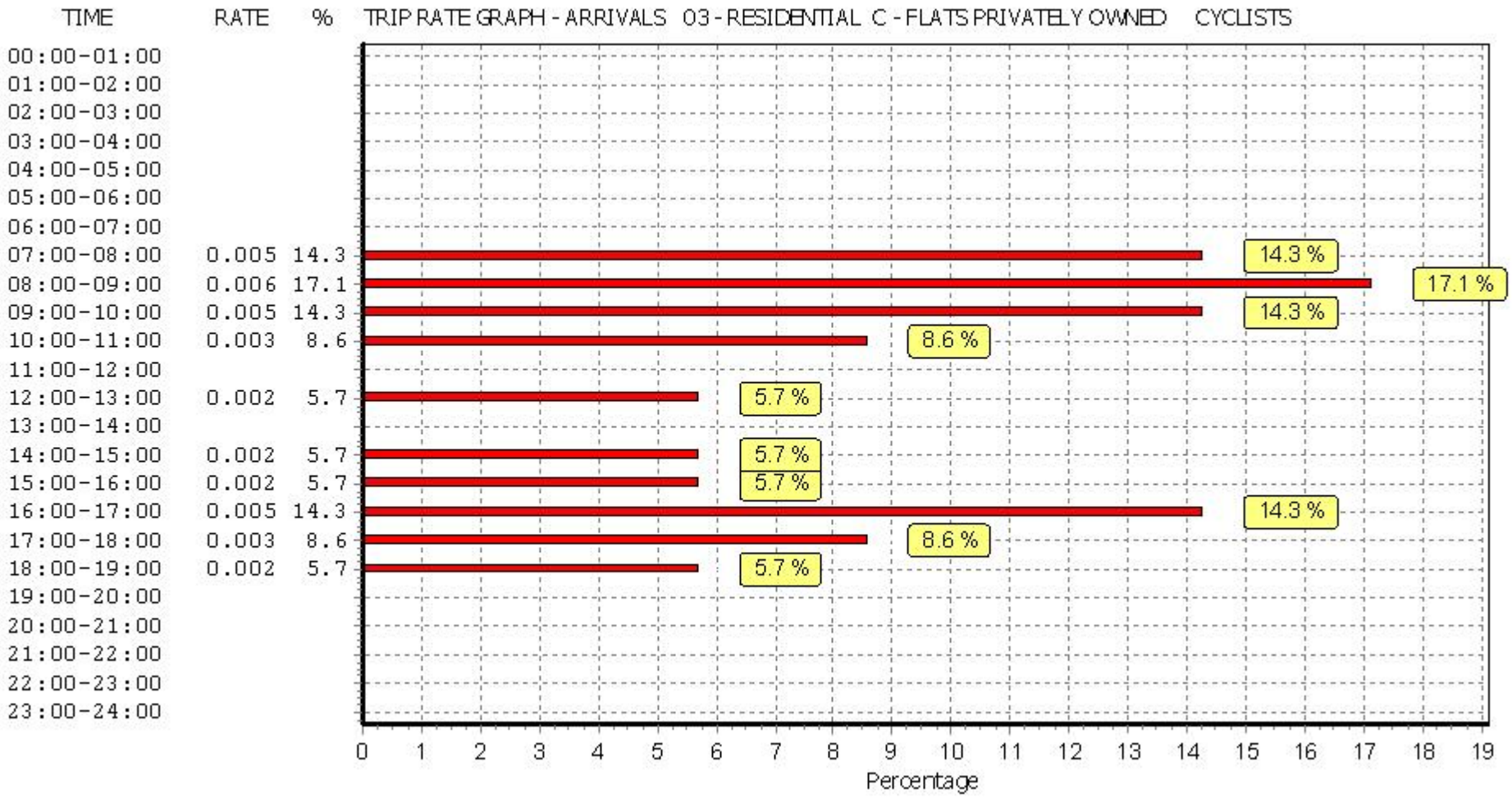
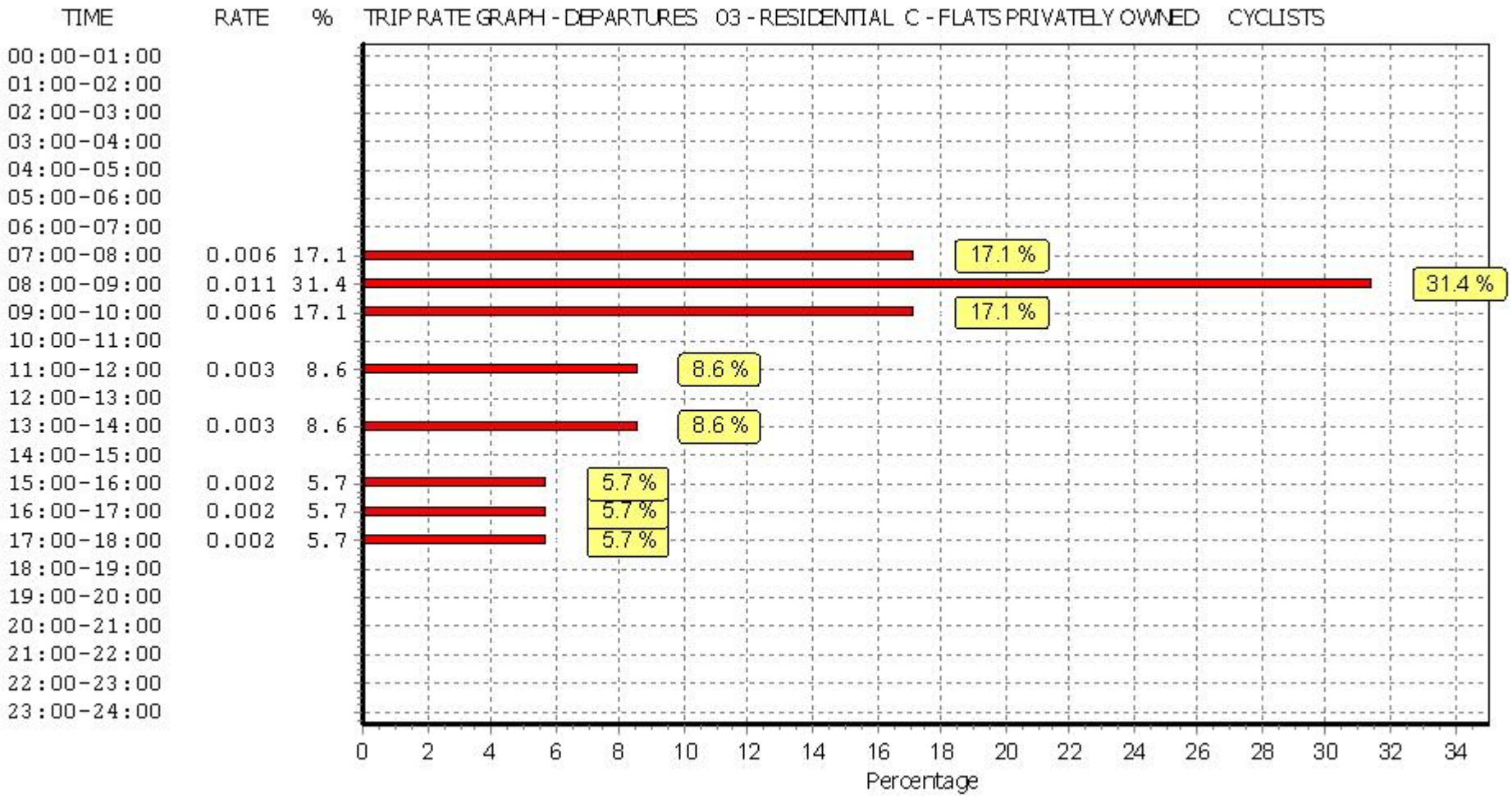
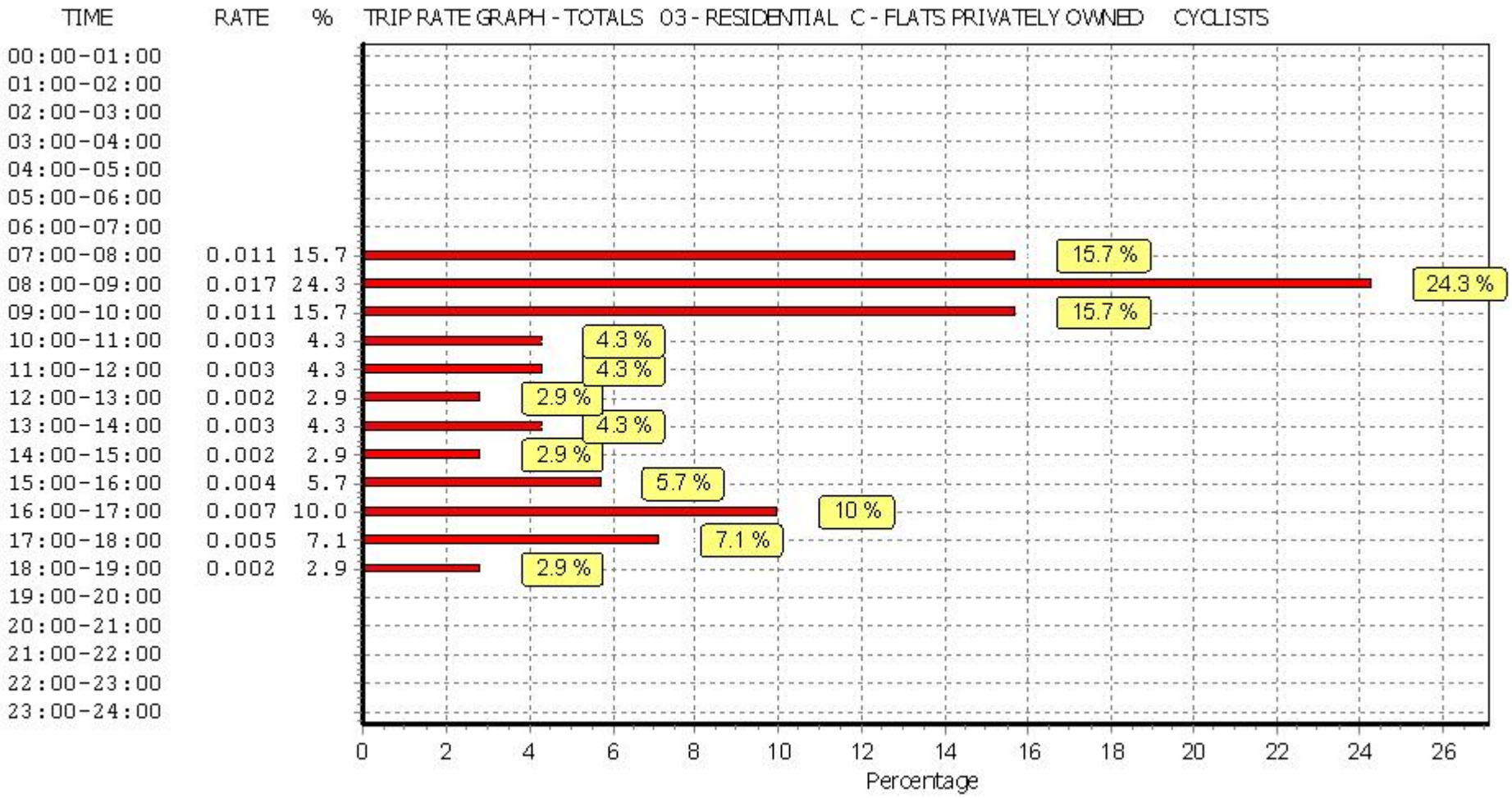


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through 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 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
CARS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	14	46	0.025	14	46	0.094	14	46	0.119
08:00 - 09:00	14	46	0.025	14	46	0.108	14	46	0.133
09:00 - 10:00	14	46	0.022	14	46	0.039	14	46	0.061
10:00 - 11:00	14	46	0.045	14	46	0.045	14	46	0.090
11:00 - 12:00	14	46	0.030	14	46	0.056	14	46	0.086
12:00 - 13:00	14	46	0.058	14	46	0.038	14	46	0.096
13:00 - 14:00	14	46	0.047	14	46	0.047	14	46	0.094
14:00 - 15:00	14	46	0.039	14	46	0.039	14	46	0.078
15:00 - 16:00	14	46	0.044	14	46	0.049	14	46	0.093
16:00 - 17:00	14	46	0.078	14	46	0.044	14	46	0.122
17:00 - 18:00	14	46	0.096	14	46	0.047	14	46	0.143
18:00 - 19:00	14	46	0.138	14	46	0.077	14	46	0.215
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.647			0.683			1.330

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.

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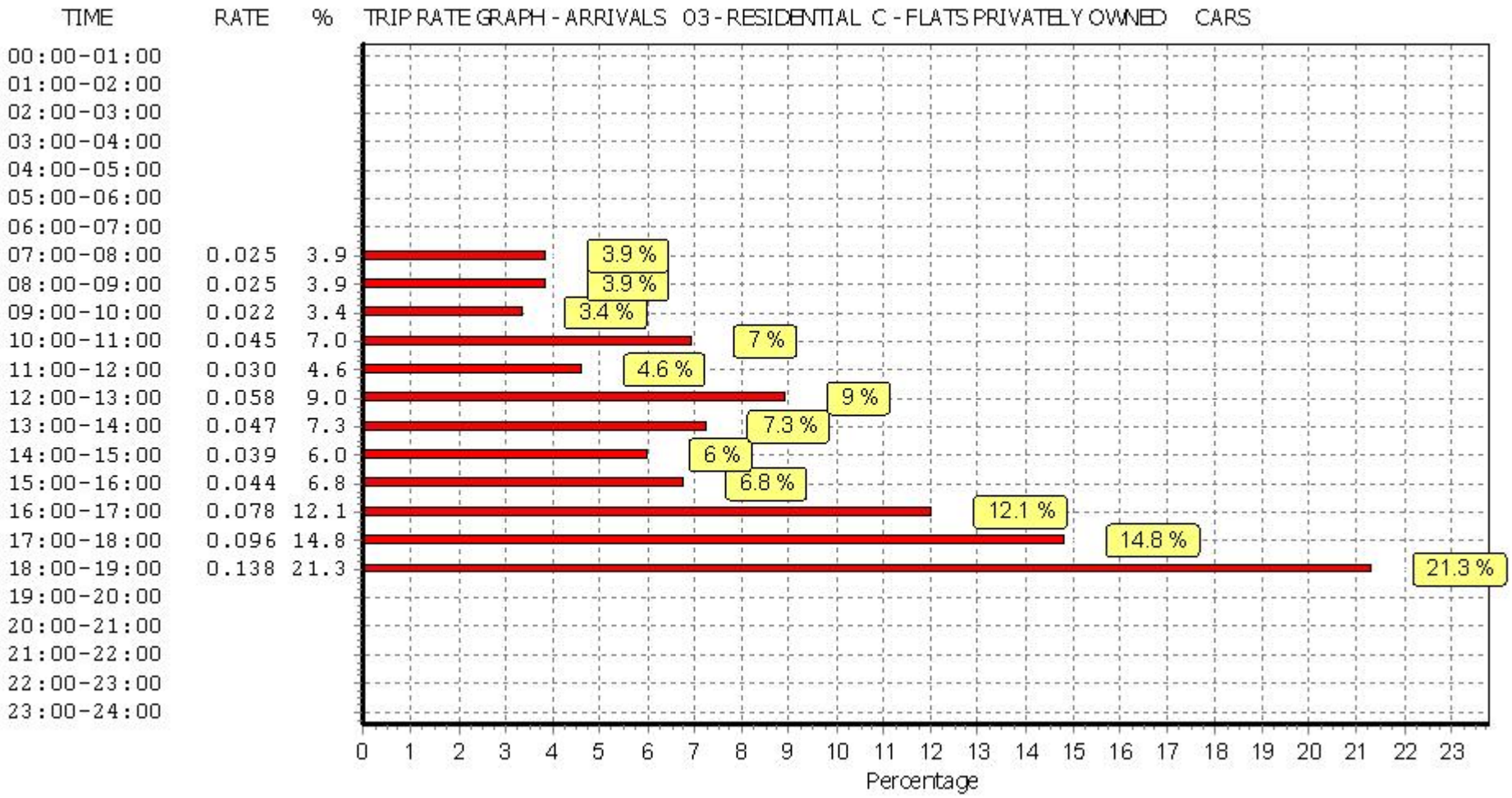
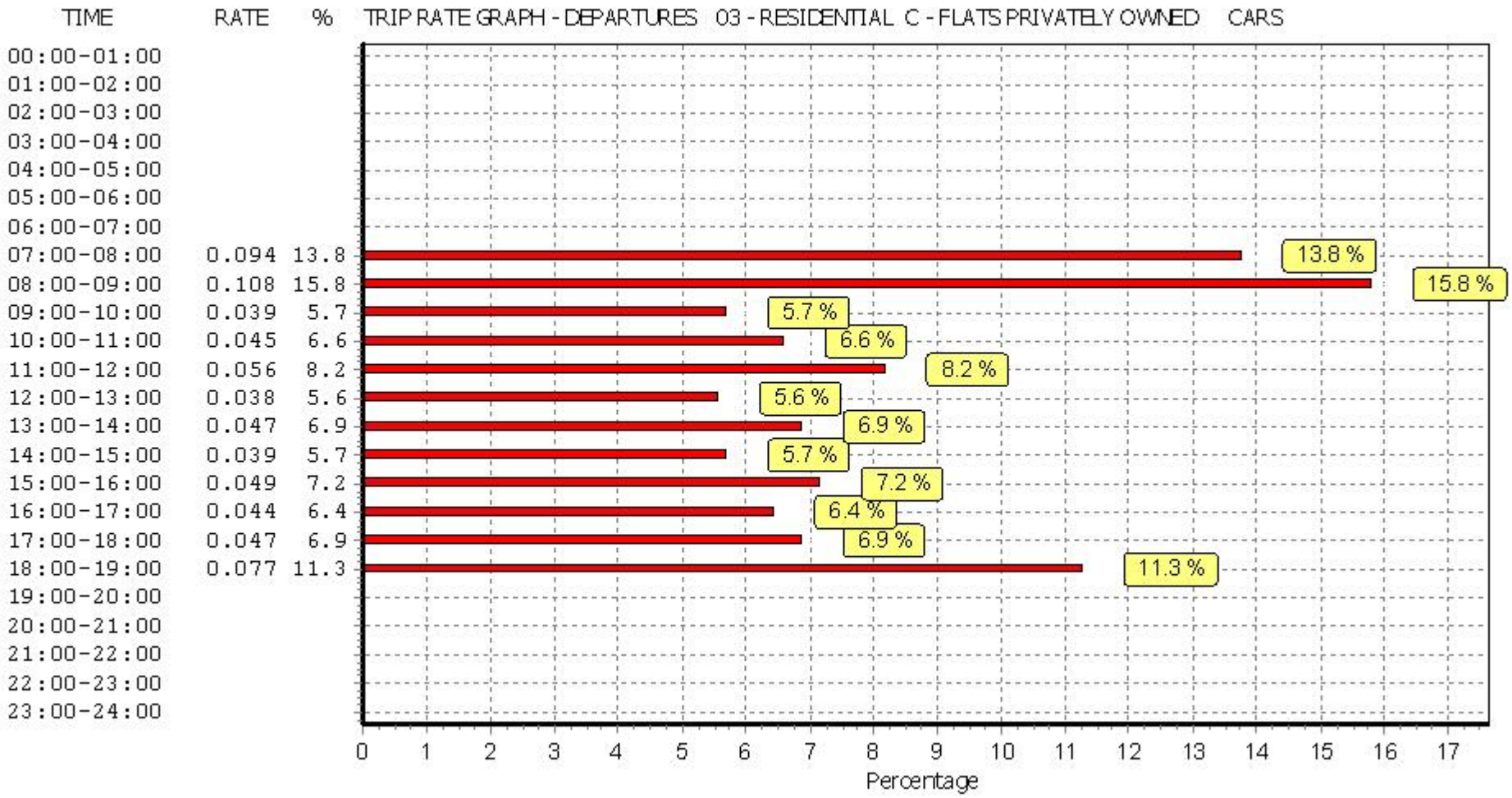


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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



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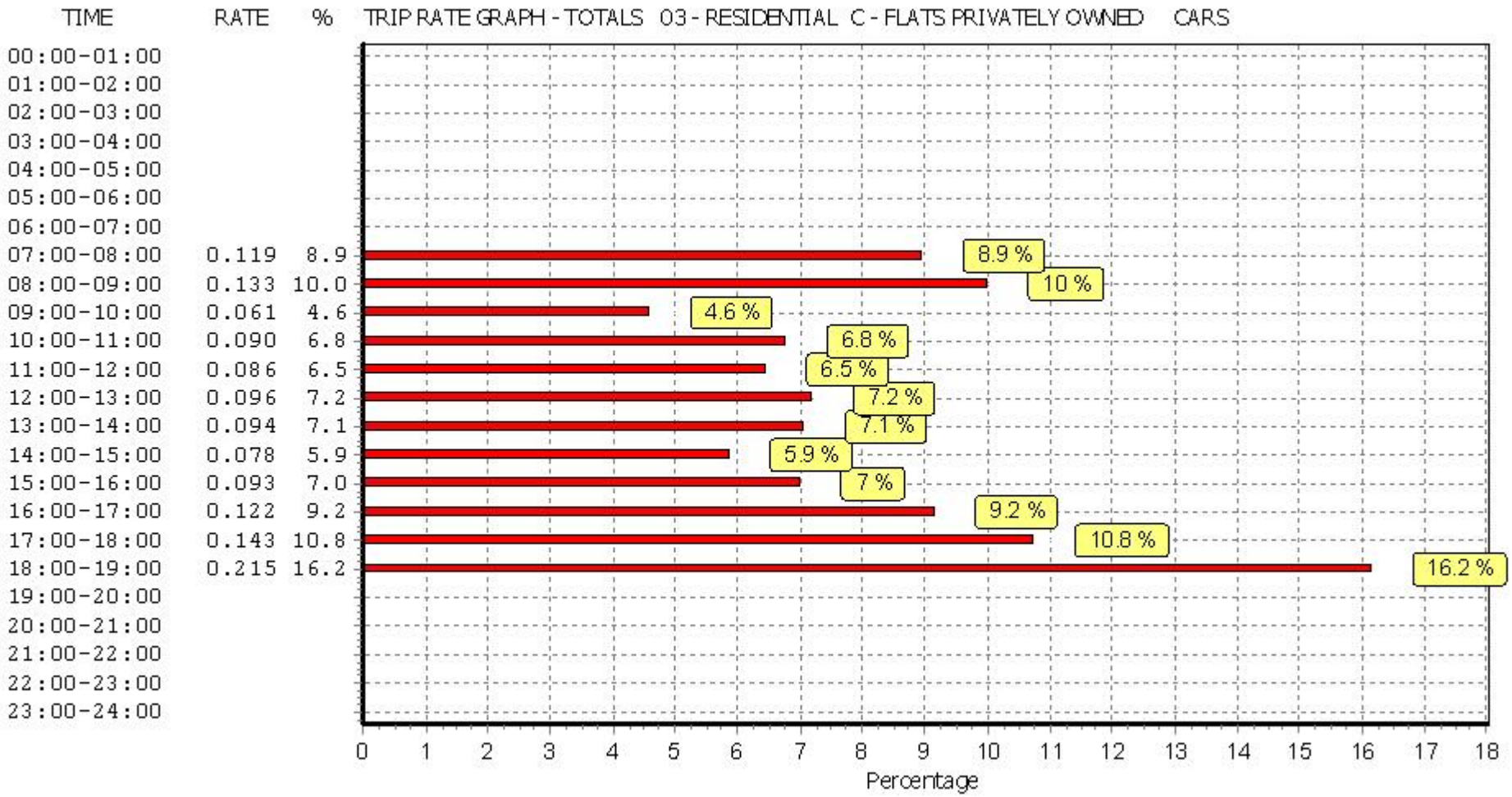

This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
LGVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	14	46	0.003	14	46	0.009	14	46	0.012
08:00 - 09:00	14	46	0.008	14	46	0.011	14	46	0.019
09:00 - 10:00	14	46	0.016	14	46	0.009	14	46	0.025
10:00 - 11:00	14	46	0.005	14	46	0.009	14	46	0.014
11:00 - 12:00	14	46	0.022	14	46	0.020	14	46	0.042
12:00 - 13:00	14	46	0.006	14	46	0.009	14	46	0.015
13:00 - 14:00	14	46	0.003	14	46	0.005	14	46	0.008
14:00 - 15:00	14	46	0.009	14	46	0.006	14	46	0.015
15:00 - 16:00	14	46	0.011	14	46	0.014	14	46	0.025
16:00 - 17:00	14	46	0.009	14	46	0.011	14	46	0.020
17:00 - 18:00	14	46	0.019	14	46	0.006	14	46	0.025
18:00 - 19:00	14	46	0.009	14	46	0.009	14	46	0.018
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.120			0.118			0.238

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.

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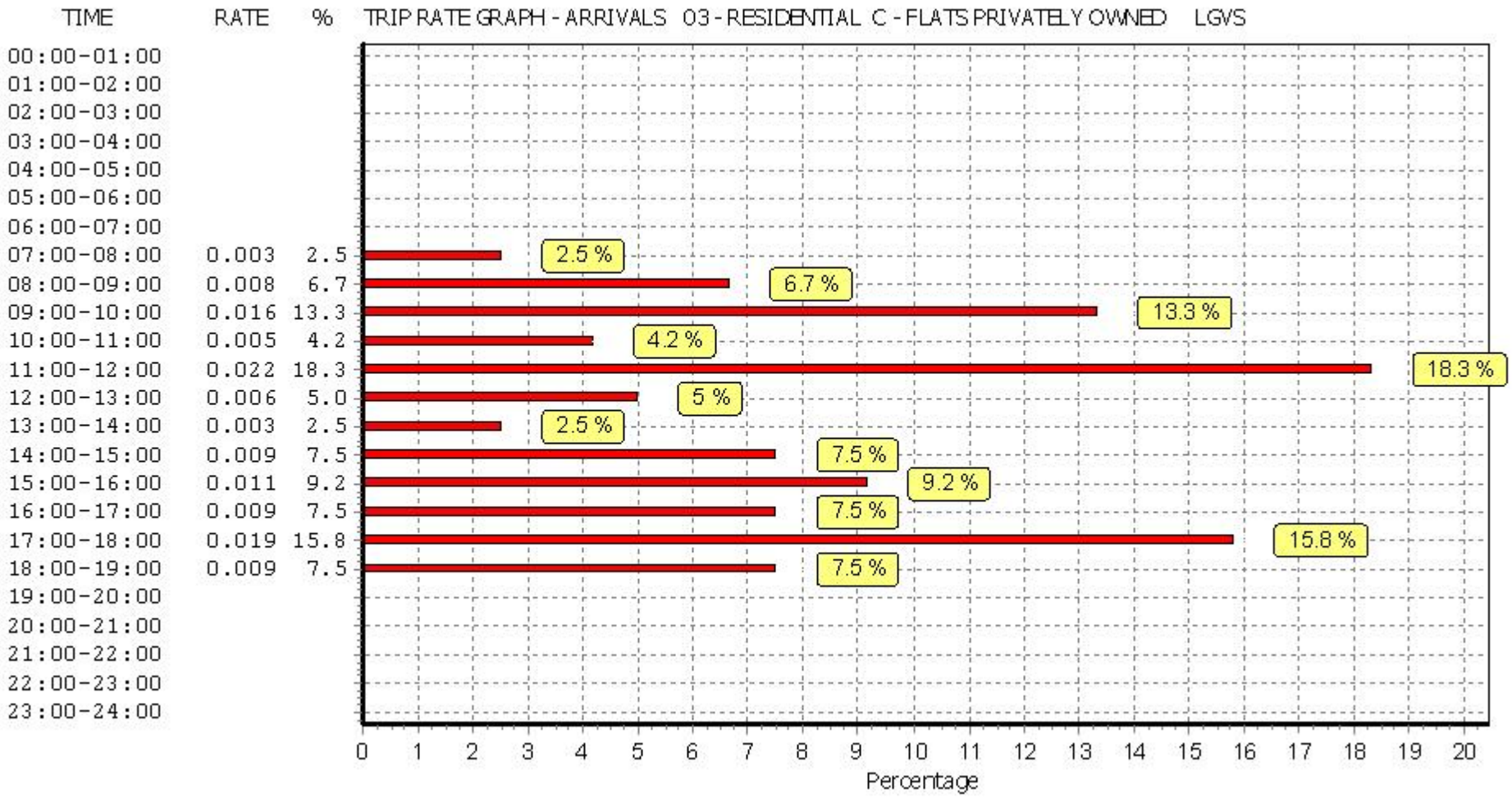
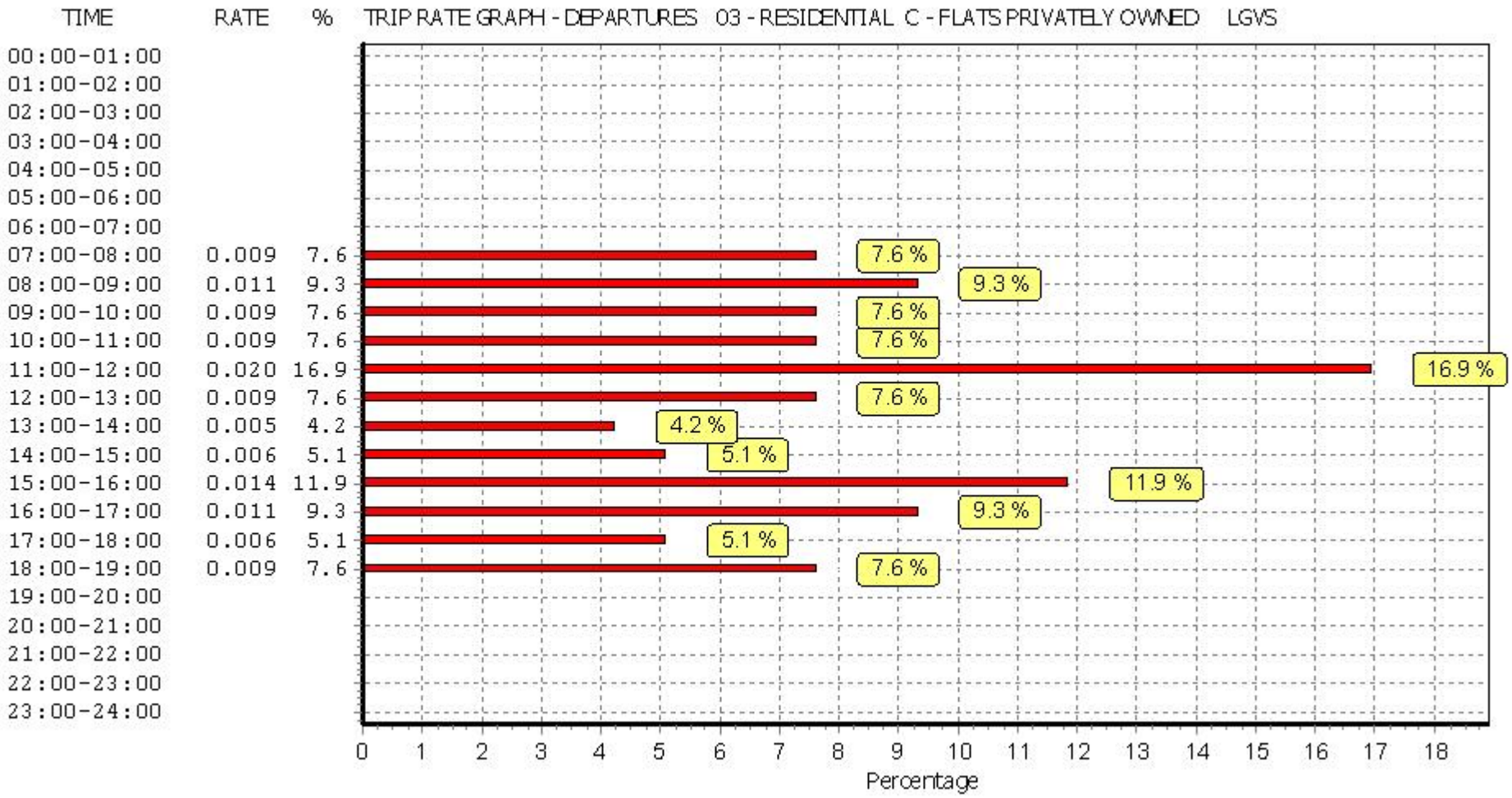


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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



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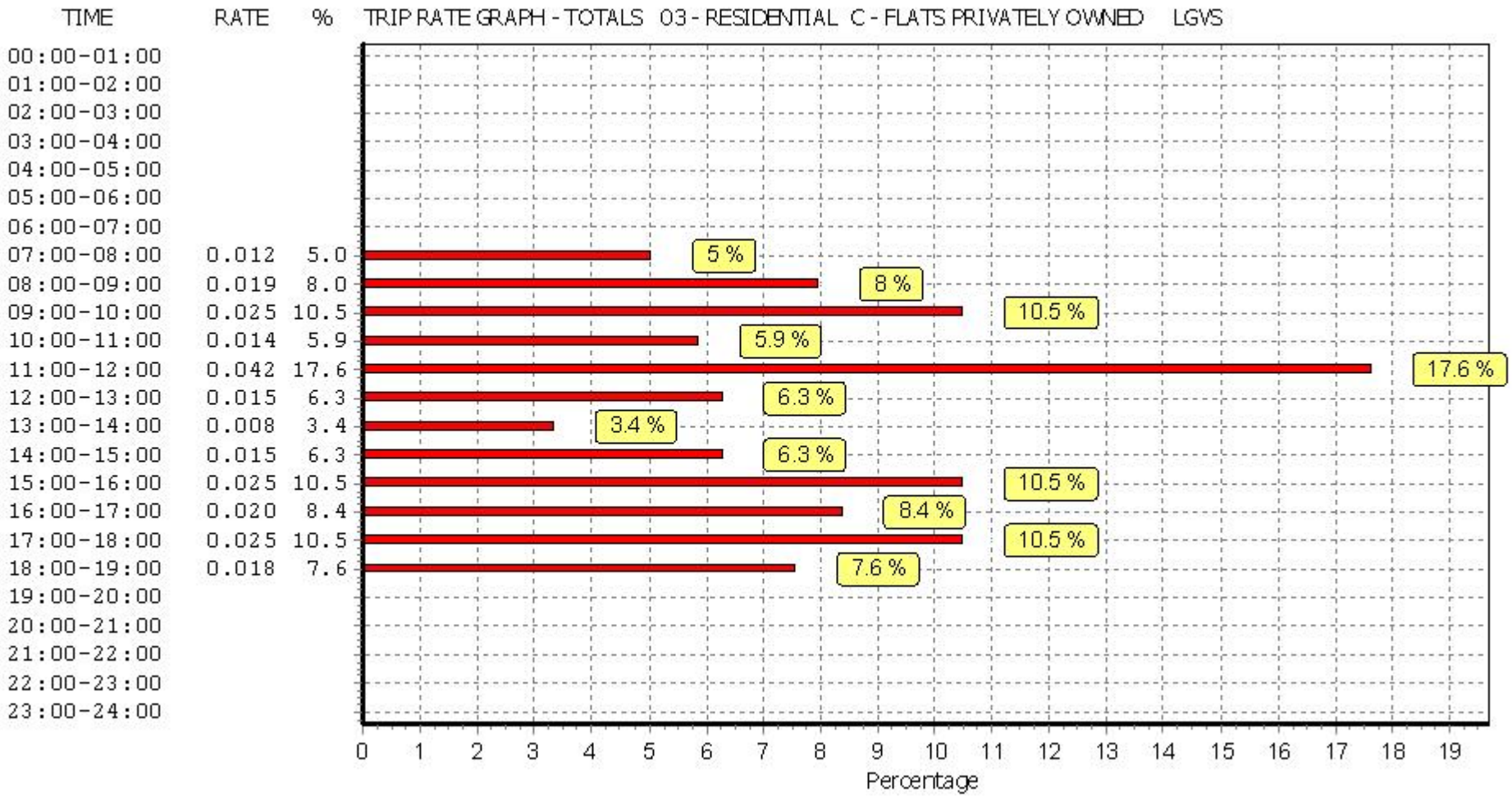

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TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MOTOR CYCLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	14	46	0.000	14	46	0.000	14	46	0.000
08:00 - 09:00	14	46	0.000	14	46	0.000	14	46	0.000
09:00 - 10:00	14	46	0.000	14	46	0.000	14	46	0.000
10:00 - 11:00	14	46	0.000	14	46	0.000	14	46	0.000
11:00 - 12:00	14	46	0.000	14	46	0.000	14	46	0.000
12:00 - 13:00	14	46	0.000	14	46	0.002	14	46	0.002
13:00 - 14:00	14	46	0.000	14	46	0.000	14	46	0.000
14:00 - 15:00	14	46	0.000	14	46	0.000	14	46	0.000
15:00 - 16:00	14	46	0.002	14	46	0.002	14	46	0.004
16:00 - 17:00	14	46	0.000	14	46	0.000	14	46	0.000
17:00 - 18:00	14	46	0.002	14	46	0.002	14	46	0.004
18:00 - 19:00	14	46	0.002	14	46	0.002	14	46	0.004
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.006			0.008			0.014

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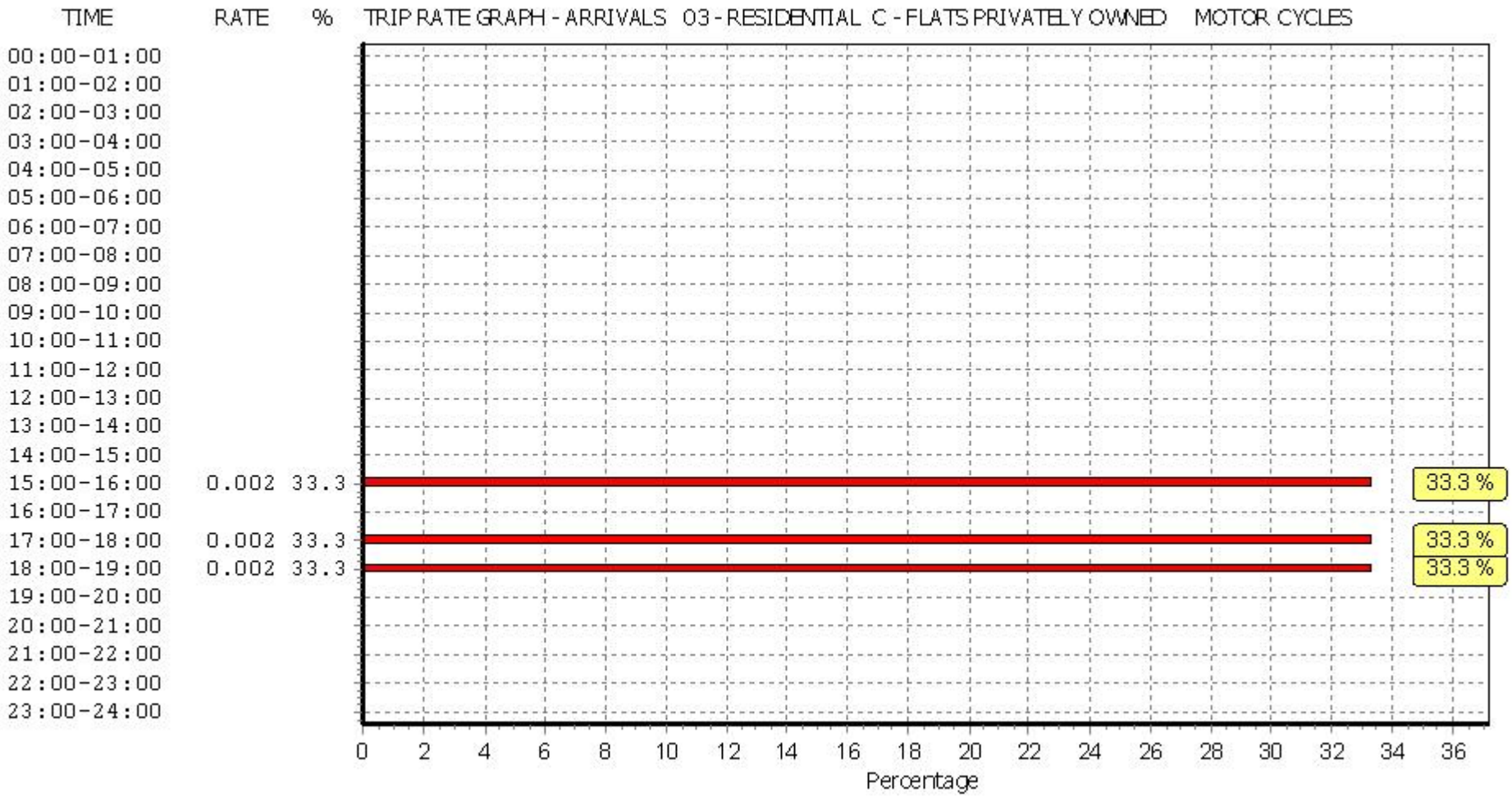

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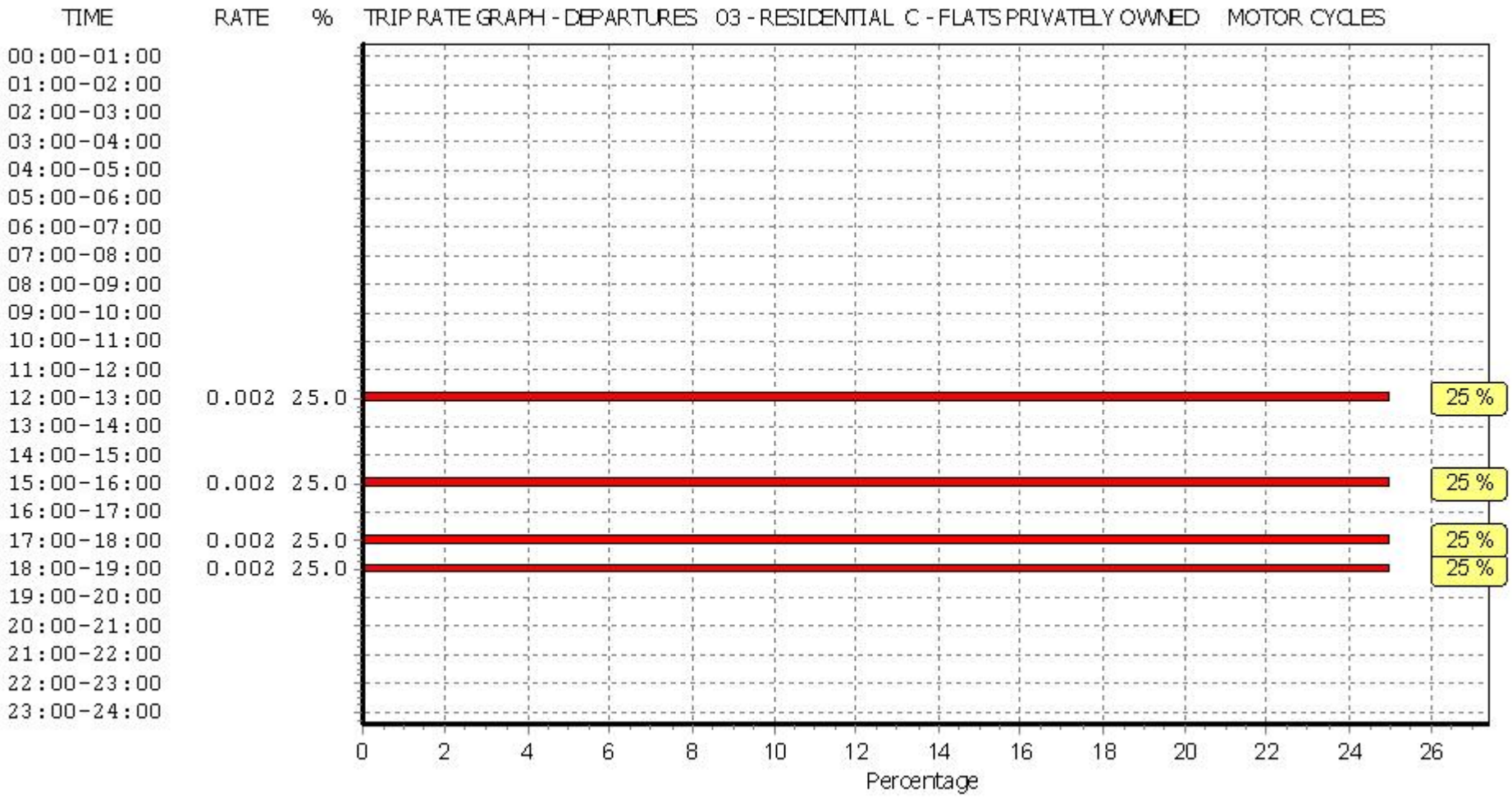
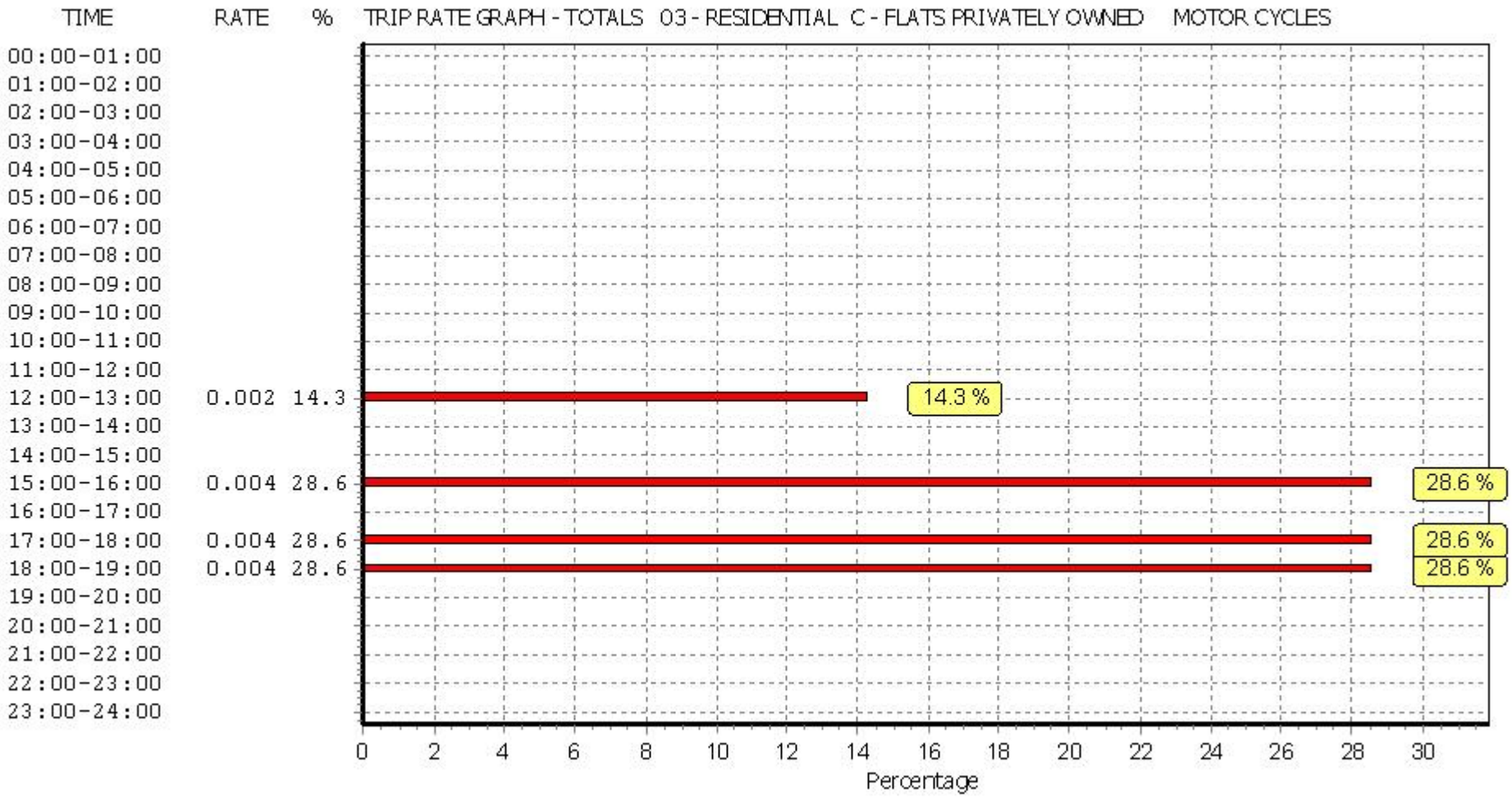


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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



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Calculation Reference: AUDIT-800401-190226-0237

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION
Category : B - SECONDARY
VEHICLES

Selected regions and areas:

12	CONNAUGHT		
	RO	ROSCOMMON	1 days
13	MUNSTER		
	CL	CLARE	1 days
	TI	TIPPERARY	1 days
14	LEINSTER		
	KK	KILKENNY	1 days
	WC	WICKLOW	1 days
15	GREATER DUBLIN		
	DL	DUBLIN	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 pupils
Actual Range: 265 to 726 (units:)
Range Selected by User: 213 to 726 (units:)

Parking Spaces Range: Selected: 15 to 101 Actual: 15 to 101

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/10 to 21/11/17

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

Selected survey days:

Monday	2 days
Tuesday	3 days
Wednesday	1 days
Thursday	1 days

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

Selected survey types:

Manual count	7 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:

Edge of Town Centre	2
Suburban Area (PPS6 Out of Centre)	2
Edge of Town	3

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

Selected Location Sub Categories:

Residential Zone	3
No Sub Category	4

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

Secondary Filtering selection:

Use Class:

D1	7 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	3 days
5,001 to 10,000	2 days
20,001 to 25,000	1 days
100,001 or More	1 days

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

Population within 5 miles:

5,000 or Less	1 days
5,001 to 25,000	3 days
25,001 to 50,000	1 days
500,001 or More	2 days

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

Car ownership within 5 miles:

0.6 to 1.0	4 days
1.1 to 1.5	3 days

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

Travel Plan:

No	7 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	7 days

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

LIST OF SITES relevant to selection parameters

1 CL-04-B-01 SECONDARY SCHOOL CLARE
HARMONY ROW
ENNIS

Edge of Town Centre
No Sub Category
Total Number of pupils: 380
Survey date: WEDNESDAY *06/11/13* *Survey Type: MANUAL*

2 DL-04-B-01 SECONDARY SCHOOL DUBLIN
SANDFORD ROAD
DUBLIN
RANELAGH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of pupils: 265
Survey date: TUESDAY *27/09/11* *Survey Type: MANUAL*

3 DL-04-B-02 SECONDARY SCHOOL DUBLIN
ZION ROAD
DUBLIN
RATHFARNHAM
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of pupils: 726
Survey date: MONDAY *19/10/15* *Survey Type: MANUAL*

4 KK-04-B-02 SECONDARY SCHOOL KILKENNY
LADY'S WELL STREET
THOMASTOWN

Edge of Town Centre
No Sub Category
Total Number of pupils: 265
Survey date: THURSDAY *26/10/17* *Survey Type: MANUAL*

5 RO-04-B-01 SECONDARY SCHOOL ROSCOMMON
ST THERESA'S ROAD
ROSCOMMON

Edge of Town
Residential Zone
Total Number of pupils: 272
Survey date: TUESDAY *23/09/14* *Survey Type: MANUAL*

6 TI-04-B-01 SECONDARY SCHOOL TIPPERARY
CASTLEMEADOWS
THURLES
GORTATAGGART
Edge of Town
No Sub Category
Total Number of pupils: 400
Survey date: TUESDAY *21/11/17* *Survey Type: MANUAL*

7 WC-04-B-01 SECONDARY SCHOOL WICKLOW
NEWCASTLE ROAD
KILCOOLE

Edge of Town
No Sub Category
Total Number of pupils: 586
Survey date: MONDAY *18/10/10* *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/B - SECONDARY
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	7	413	0.030	7	413	0.009	7	413	0.039
08:00 - 09:00	7	413	0.334	7	413	0.241	7	413	0.575
09:00 - 10:00	7	413	0.052	7	413	0.051	7	413	0.103
10:00 - 11:00	7	413	0.016	7	413	0.013	7	413	0.029
11:00 - 12:00	7	413	0.018	7	413	0.016	7	413	0.034
12:00 - 13:00	7	413	0.014	7	413	0.024	7	413	0.038
13:00 - 14:00	7	413	0.017	7	413	0.024	7	413	0.041
14:00 - 15:00	7	413	0.039	7	413	0.024	7	413	0.063
15:00 - 16:00	7	413	0.178	7	413	0.180	7	413	0.358
16:00 - 17:00	7	413	0.048	7	413	0.124	7	413	0.172
17:00 - 18:00	7	413	0.048	7	413	0.074	7	413	0.122
18:00 - 19:00	7	413	0.019	7	413	0.021	7	413	0.040
19:00 - 20:00	1	586	0.060	1	586	0.007	1	586	0.067
20:00 - 21:00	1	586	0.000	1	586	0.000	1	586	0.000
21:00 - 22:00	1	586	0.005	1	586	0.067	1	586	0.072
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.878			0.875			1.753

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

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

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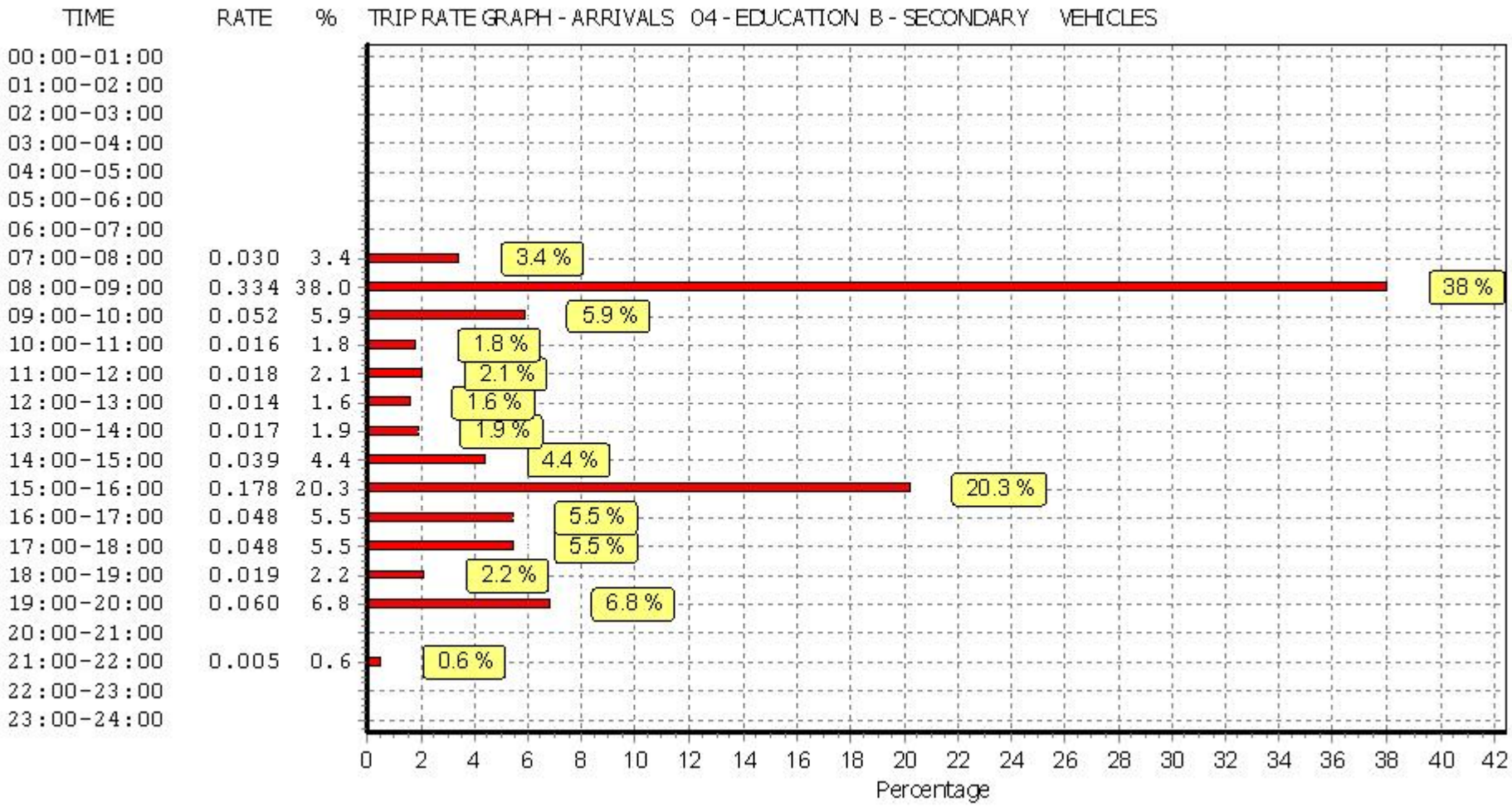
The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

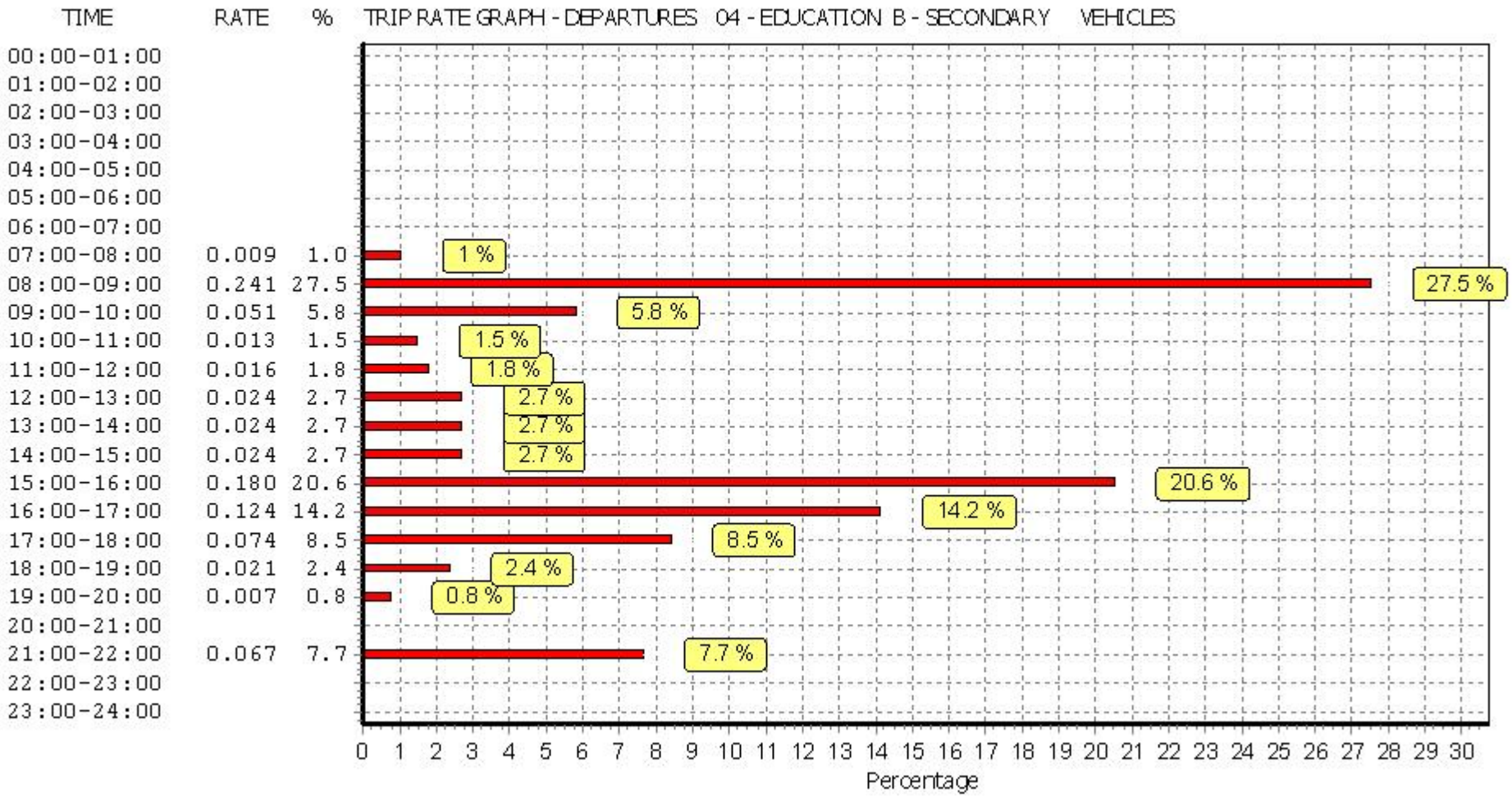
Parameter summary

Trip rate parameter range selected:	265 - 726 (units:)
Survey date date range:	01/01/10 - 21/11/17
Number of weekdays (Monday-Friday):	7
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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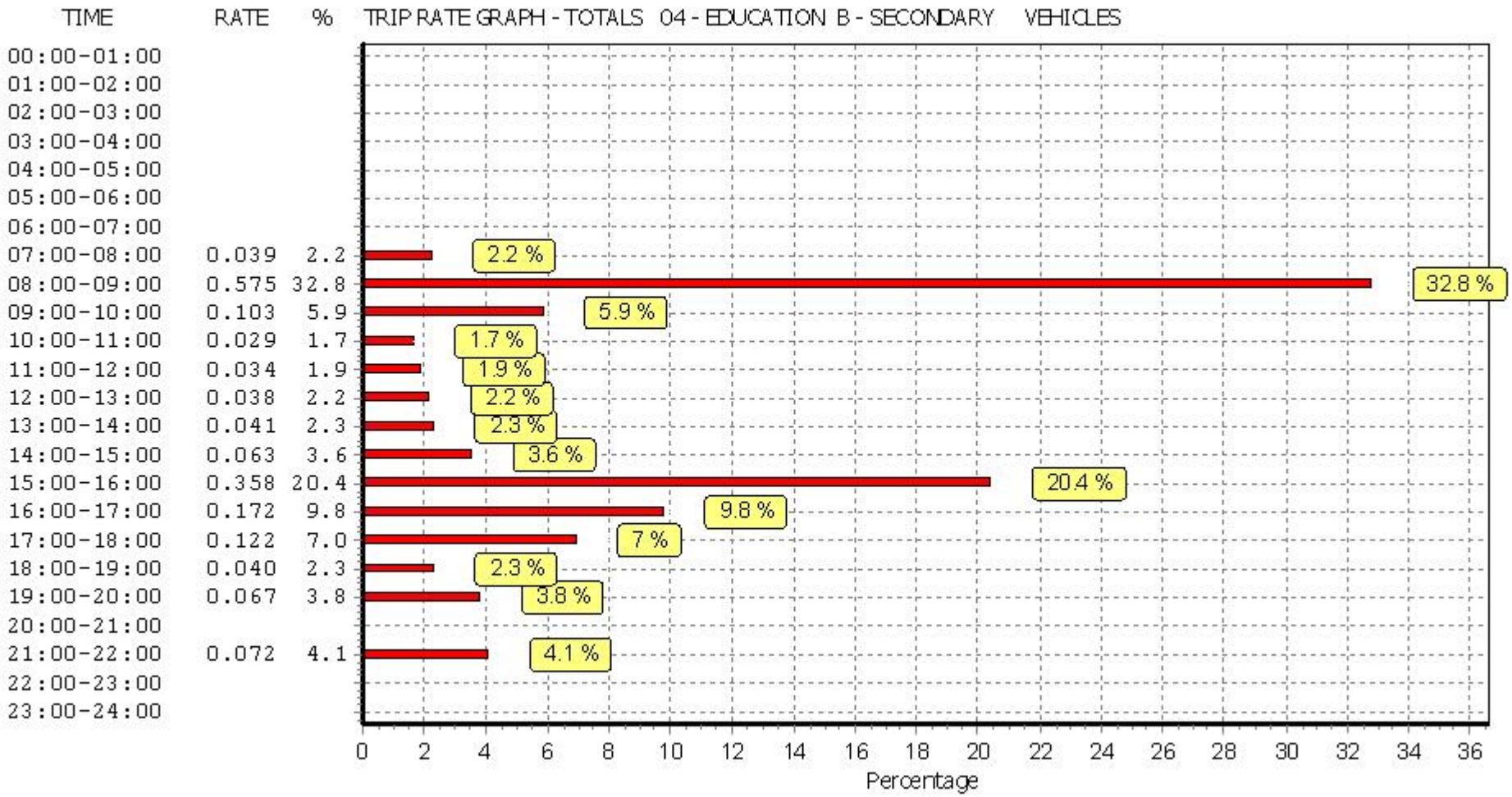

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TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY
TAXIS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	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	7	413	0.000	7	413	0.000	7	413	0.000
08:00 - 09:00	7	413	0.002	7	413	0.001	7	413	0.003
09:00 - 10:00	7	413	0.001	7	413	0.001	7	413	0.002
10:00 - 11:00	7	413	0.000	7	413	0.000	7	413	0.000
11:00 - 12:00	7	413	0.000	7	413	0.000	7	413	0.000
12:00 - 13:00	7	413	0.000	7	413	0.000	7	413	0.000
13:00 - 14:00	7	413	0.000	7	413	0.000	7	413	0.000
14:00 - 15:00	7	413	0.000	7	413	0.000	7	413	0.000
15:00 - 16:00	7	413	0.002	7	413	0.002	7	413	0.004
16:00 - 17:00	7	413	0.001	7	413	0.001	7	413	0.002
17:00 - 18:00	7	413	0.000	7	413	0.000	7	413	0.000
18:00 - 19:00	7	413	0.000	7	413	0.000	7	413	0.000
19:00 - 20:00	1	586	0.000	1	586	0.000	1	586	0.000
20:00 - 21:00	1	586	0.000	1	586	0.000	1	586	0.000
21:00 - 22:00	1	586	0.000	1	586	0.000	1	586	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.006			0.005			0.011

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.

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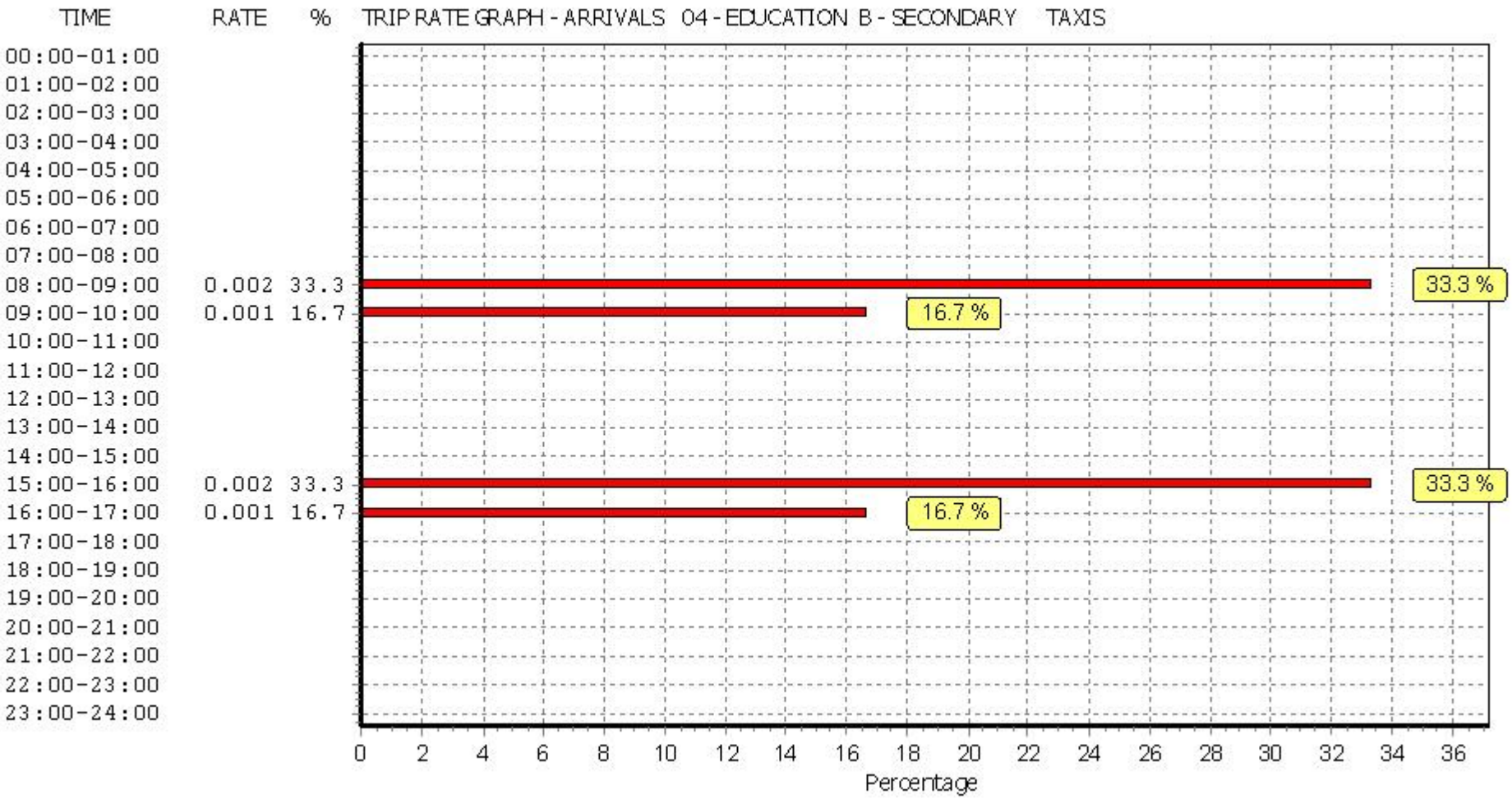

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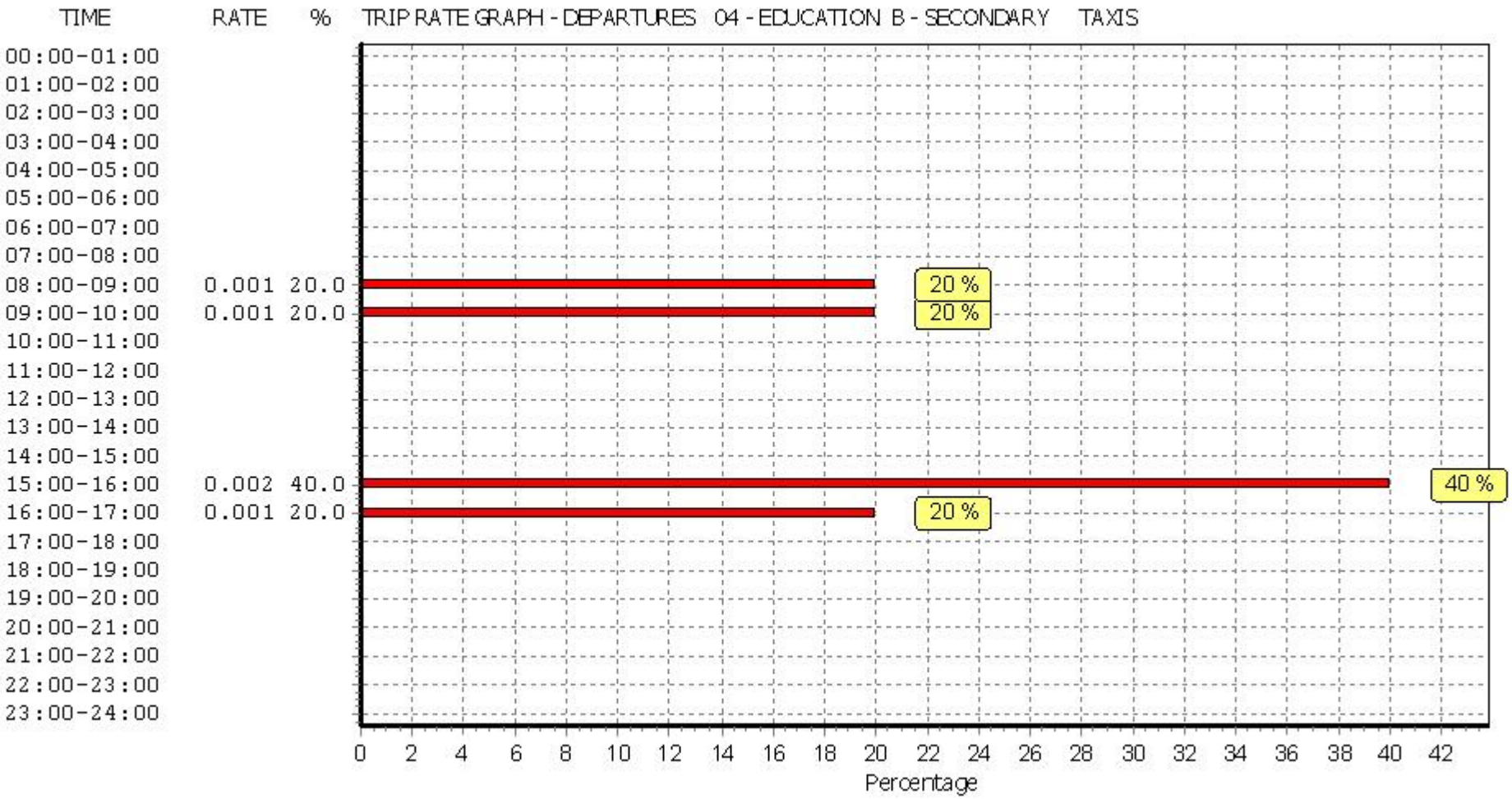

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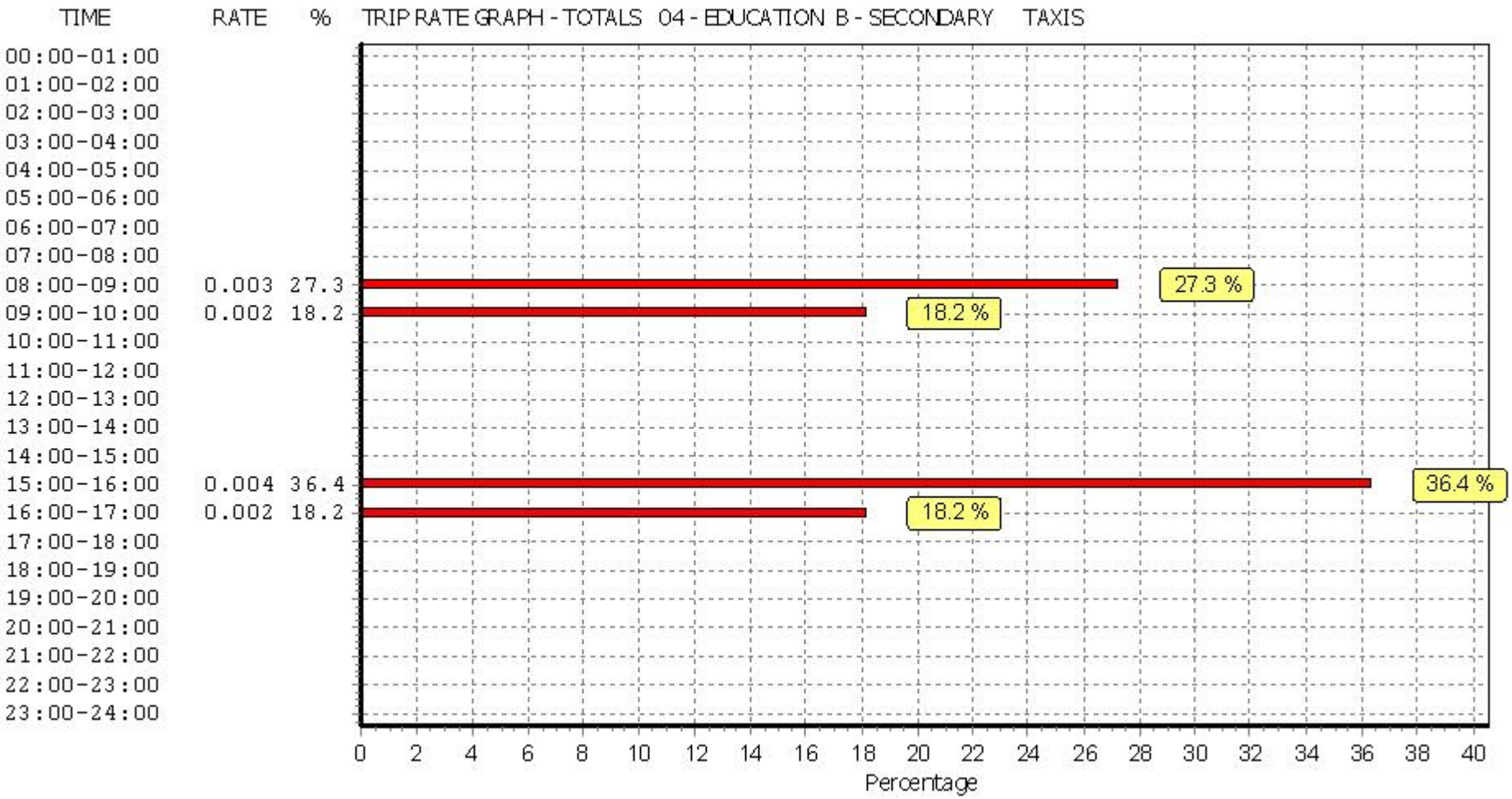

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TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY
OGVS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	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	7	413	0.000	7	413	0.000	7	413	0.000
08:00 - 09:00	7	413	0.001	7	413	0.001	7	413	0.002
09:00 - 10:00	7	413	0.001	7	413	0.001	7	413	0.002
10:00 - 11:00	7	413	0.000	7	413	0.001	7	413	0.001
11:00 - 12:00	7	413	0.001	7	413	0.001	7	413	0.002
12:00 - 13:00	7	413	0.000	7	413	0.000	7	413	0.000
13:00 - 14:00	7	413	0.000	7	413	0.000	7	413	0.000
14:00 - 15:00	7	413	0.000	7	413	0.000	7	413	0.000
15:00 - 16:00	7	413	0.000	7	413	0.000	7	413	0.000
16:00 - 17:00	7	413	0.000	7	413	0.000	7	413	0.000
17:00 - 18:00	7	413	0.000	7	413	0.000	7	413	0.000
18:00 - 19:00	7	413	0.000	7	413	0.000	7	413	0.000
19:00 - 20:00	1	586	0.000	1	586	0.000	1	586	0.000
20:00 - 21:00	1	586	0.000	1	586	0.000	1	586	0.000
21:00 - 22:00	1	586	0.000	1	586	0.000	1	586	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.003			0.004			0.007

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.

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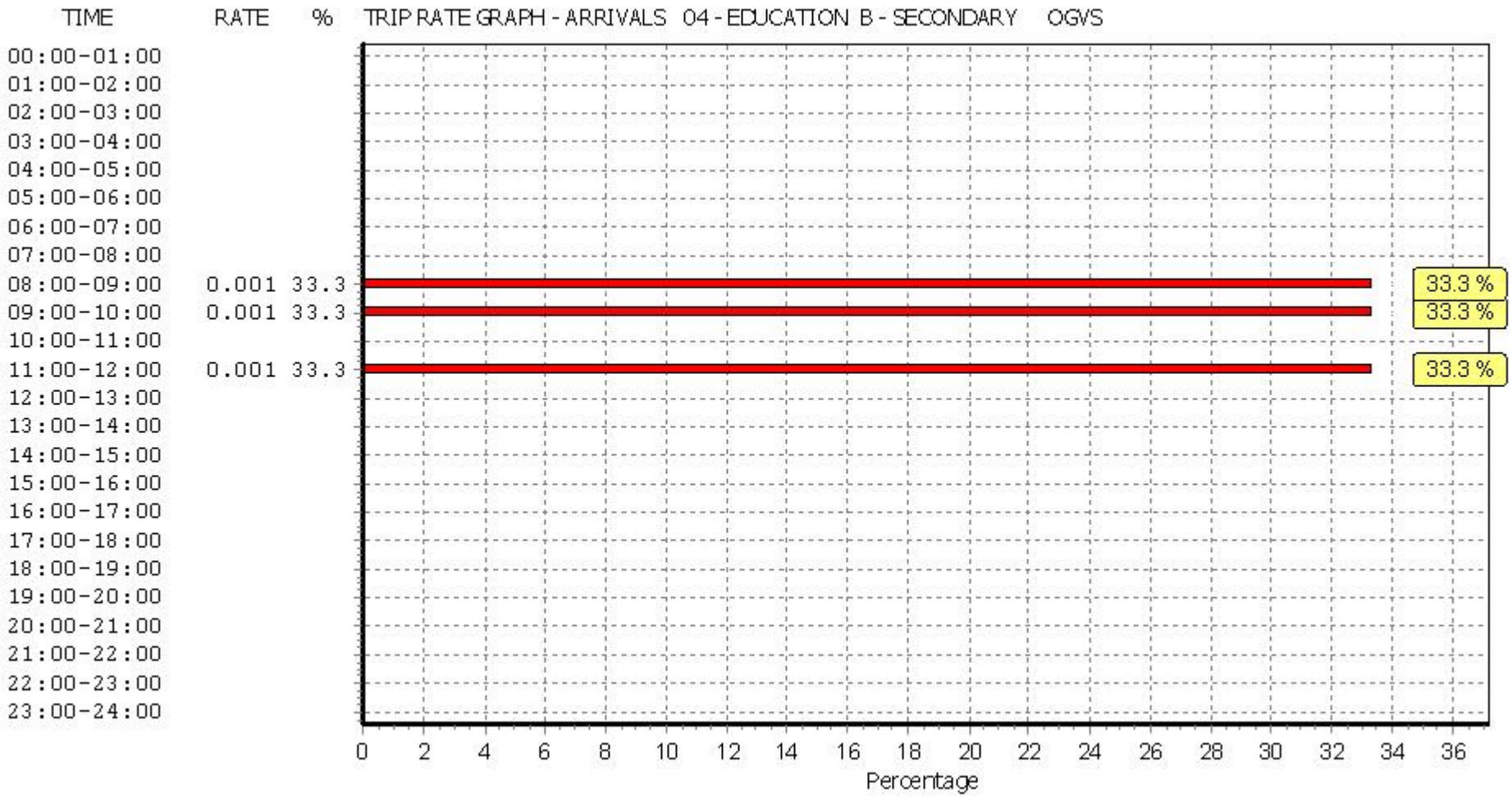

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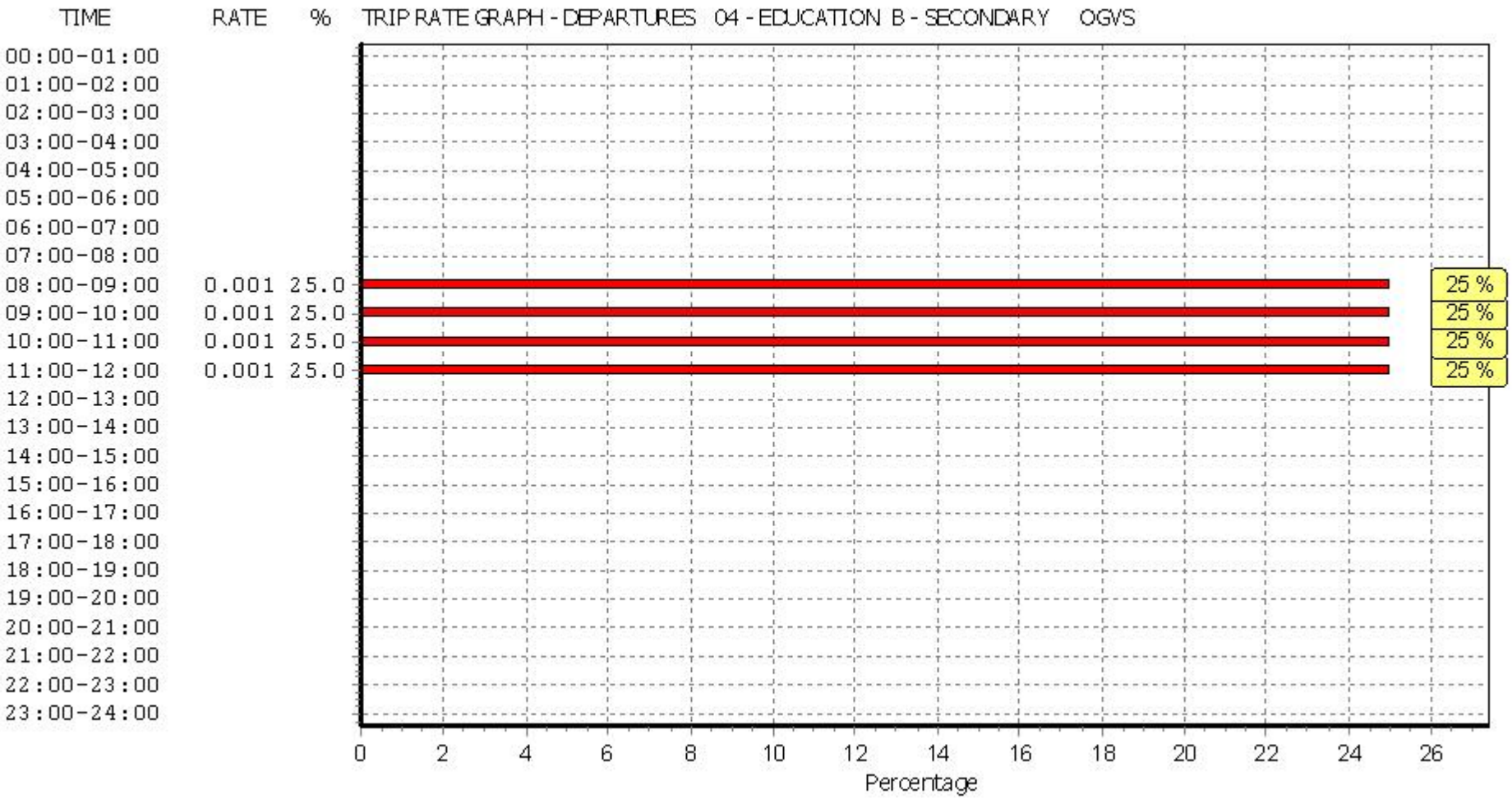

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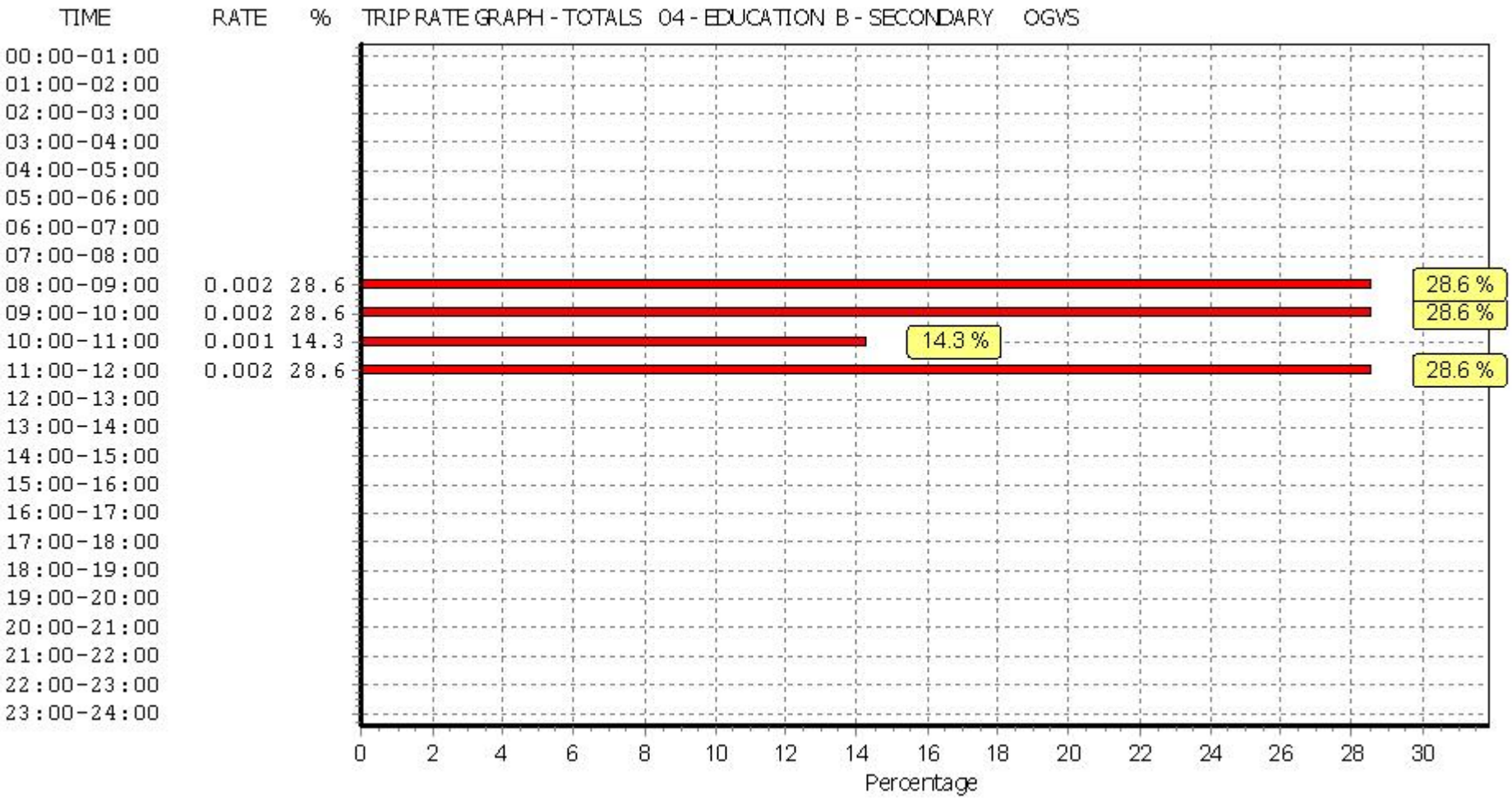

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TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY
PSVS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	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	7	413	0.000	7	413	0.000	7	413	0.000
08:00 - 09:00	7	413	0.004	7	413	0.004	7	413	0.008
09:00 - 10:00	7	413	0.000	7	413	0.001	7	413	0.001
10:00 - 11:00	7	413	0.000	7	413	0.000	7	413	0.000
11:00 - 12:00	7	413	0.000	7	413	0.000	7	413	0.000
12:00 - 13:00	7	413	0.000	7	413	0.000	7	413	0.000
13:00 - 14:00	7	413	0.000	7	413	0.000	7	413	0.000
14:00 - 15:00	7	413	0.000	7	413	0.000	7	413	0.000
15:00 - 16:00	7	413	0.002	7	413	0.002	7	413	0.004
16:00 - 17:00	7	413	0.000	7	413	0.000	7	413	0.000
17:00 - 18:00	7	413	0.000	7	413	0.000	7	413	0.000
18:00 - 19:00	7	413	0.000	7	413	0.000	7	413	0.000
19:00 - 20:00	1	586	0.000	1	586	0.000	1	586	0.000
20:00 - 21:00	1	586	0.000	1	586	0.000	1	586	0.000
21:00 - 22:00	1	586	0.000	1	586	0.000	1	586	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.006			0.007			0.013

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.

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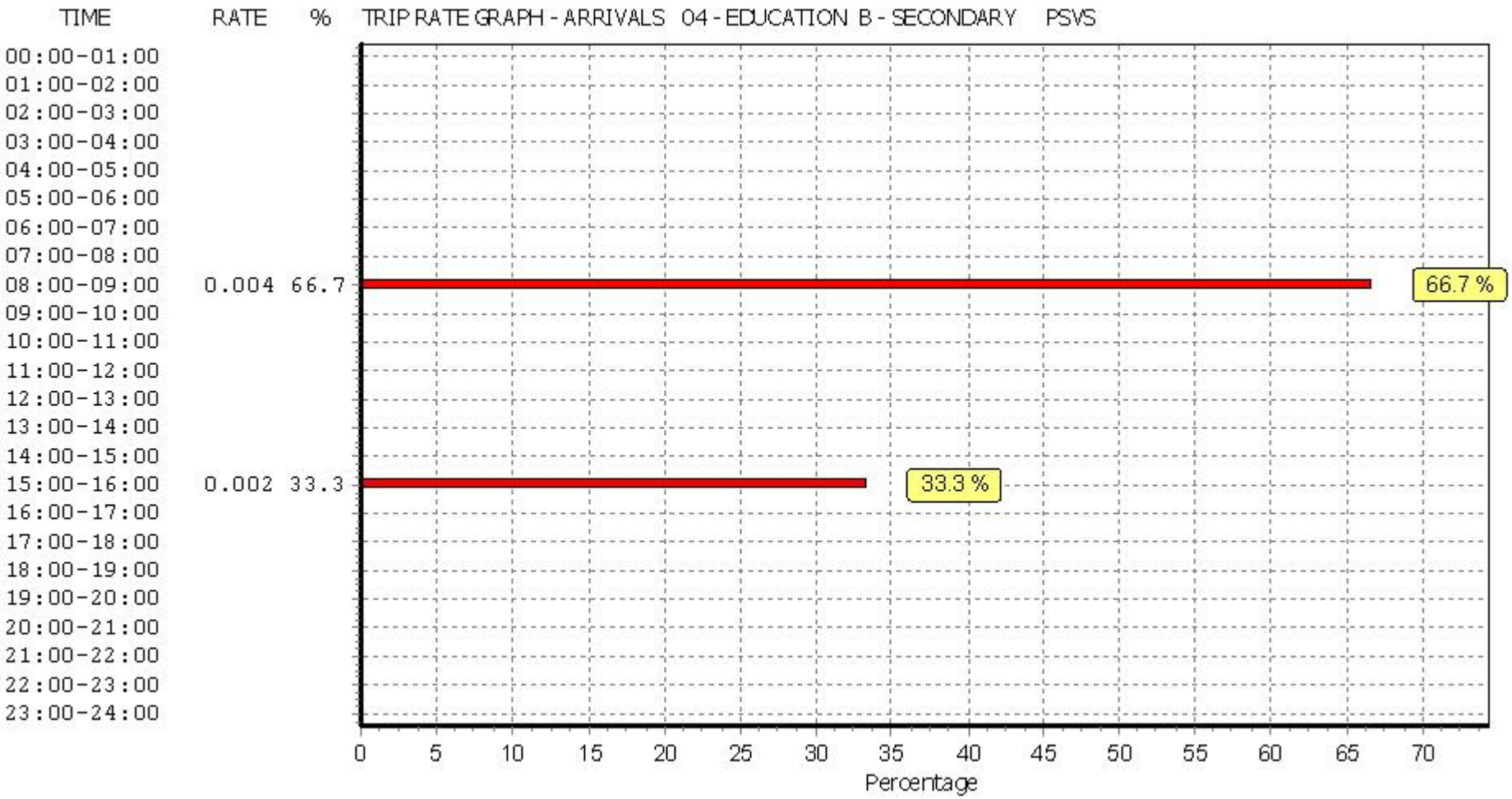

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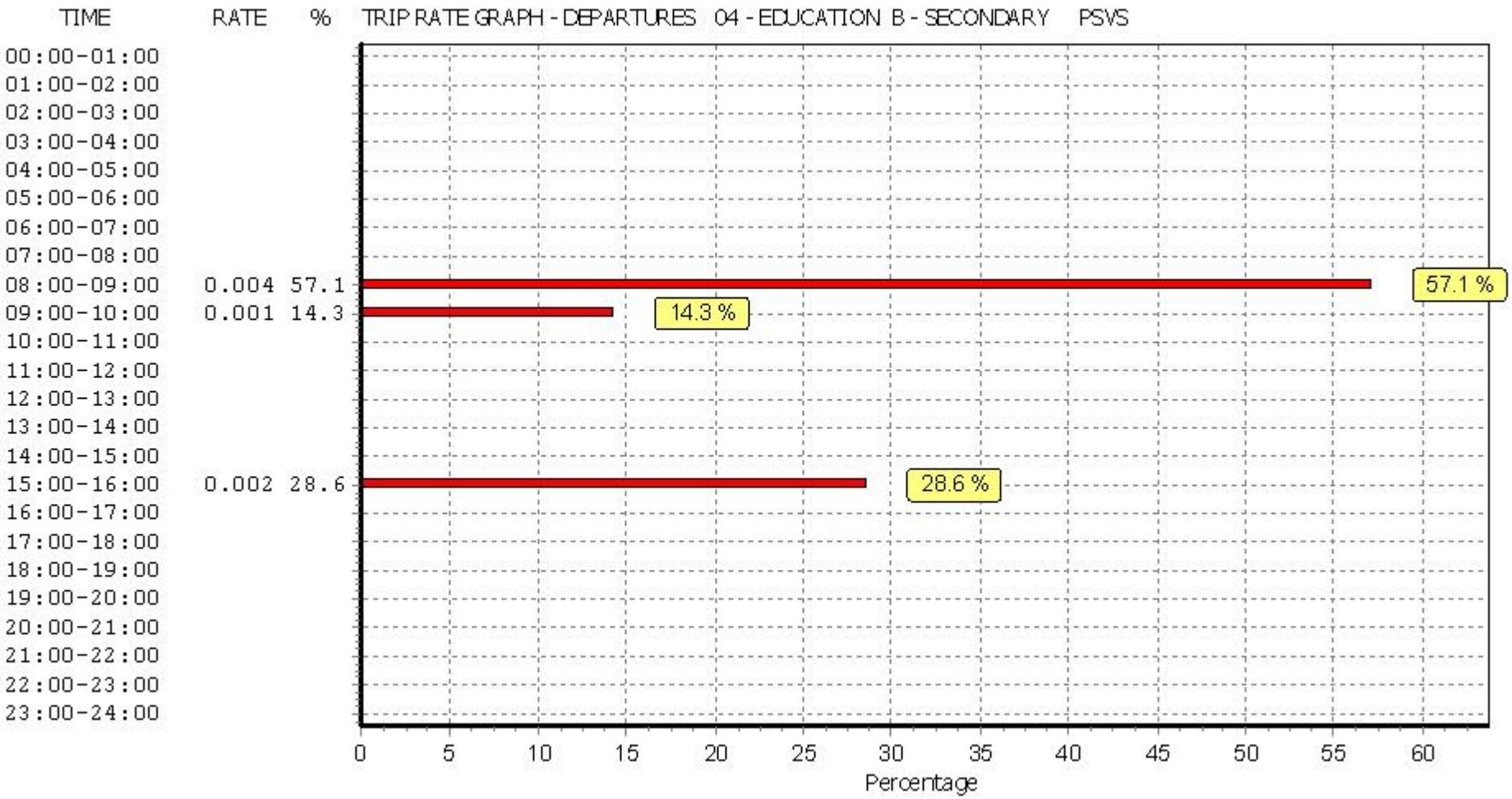

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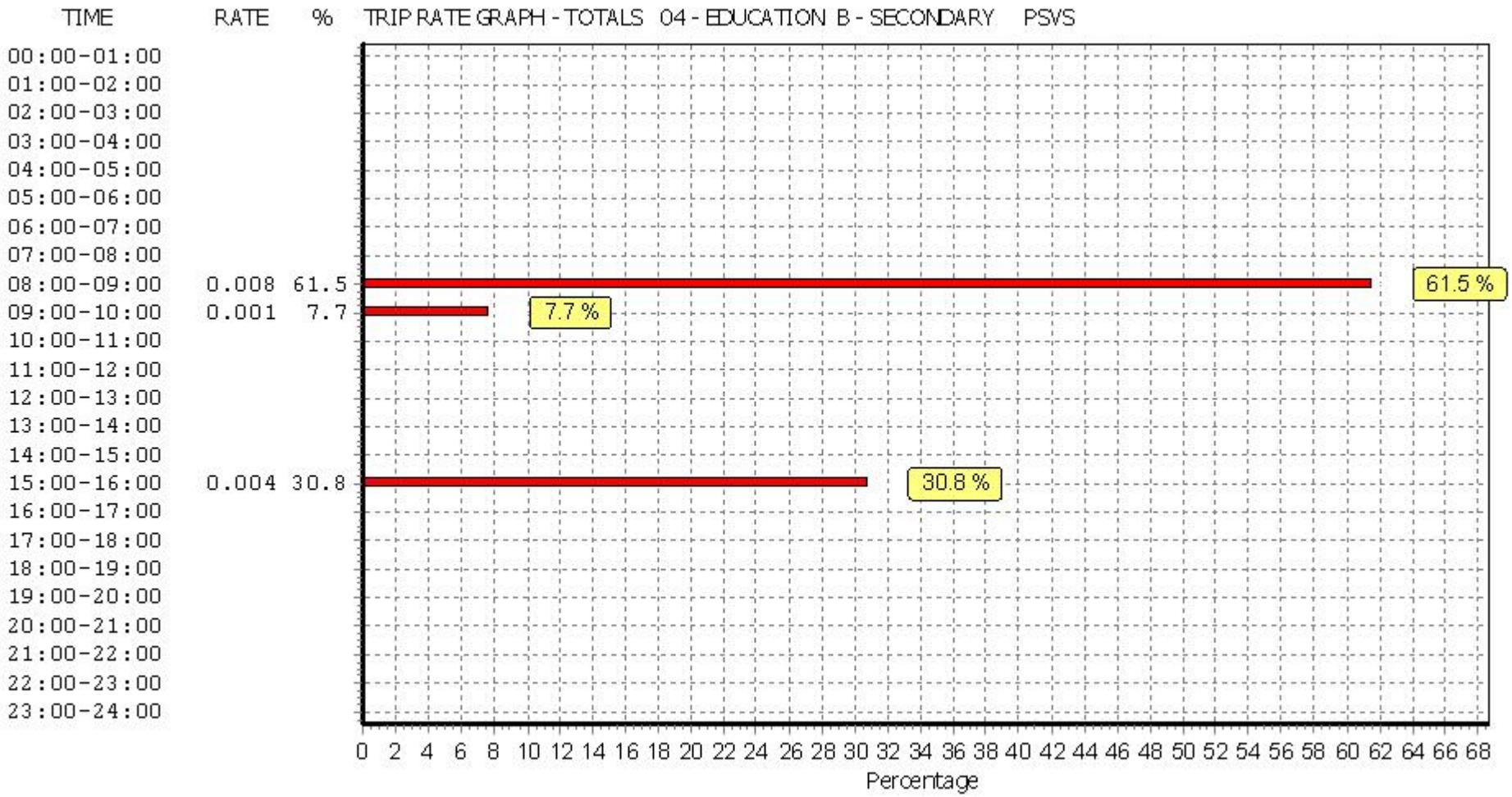

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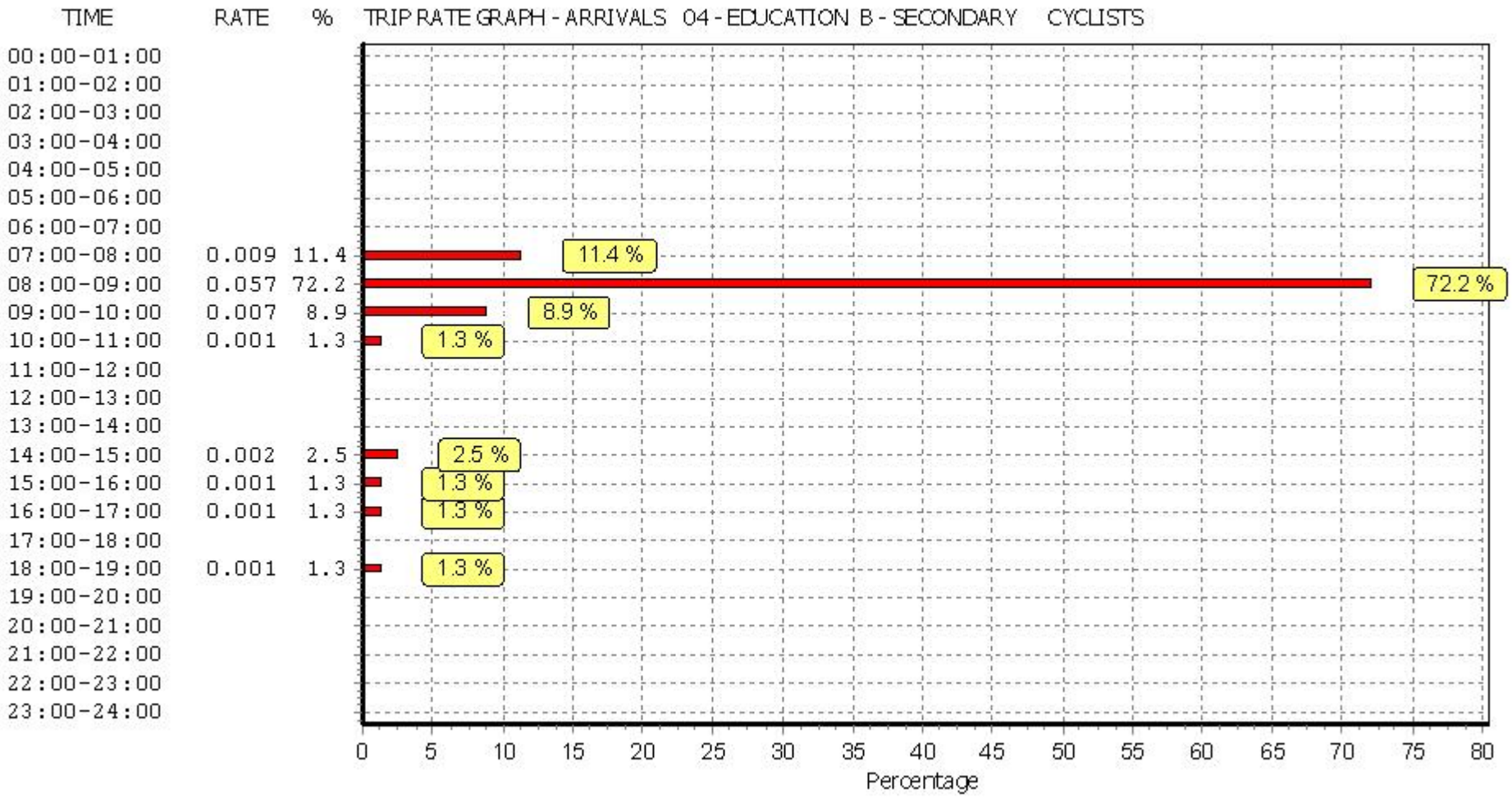
TRIP RATE for Land Use 04 - EDUCATION/B - SECONDARY
CYCLISTS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	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	7	413	0.009	7	413	0.001	7	413	0.010
08:00 - 09:00	7	413	0.057	7	413	0.002	7	413	0.059
09:00 - 10:00	7	413	0.007	7	413	0.002	7	413	0.009
10:00 - 11:00	7	413	0.001	7	413	0.000	7	413	0.001
11:00 - 12:00	7	413	0.000	7	413	0.001	7	413	0.001
12:00 - 13:00	7	413	0.000	7	413	0.001	7	413	0.001
13:00 - 14:00	7	413	0.000	7	413	0.001	7	413	0.001
14:00 - 15:00	7	413	0.002	7	413	0.003	7	413	0.005
15:00 - 16:00	7	413	0.001	7	413	0.021	7	413	0.022
16:00 - 17:00	7	413	0.001	7	413	0.029	7	413	0.030
17:00 - 18:00	7	413	0.000	7	413	0.013	7	413	0.013
18:00 - 19:00	7	413	0.001	7	413	0.005	7	413	0.006
19:00 - 20:00	1	586	0.000	1	586	0.000	1	586	0.000
20:00 - 21:00	1	586	0.000	1	586	0.000	1	586	0.000
21:00 - 22:00	1	586	0.000	1	586	0.000	1	586	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.079			0.079			0.158

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

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



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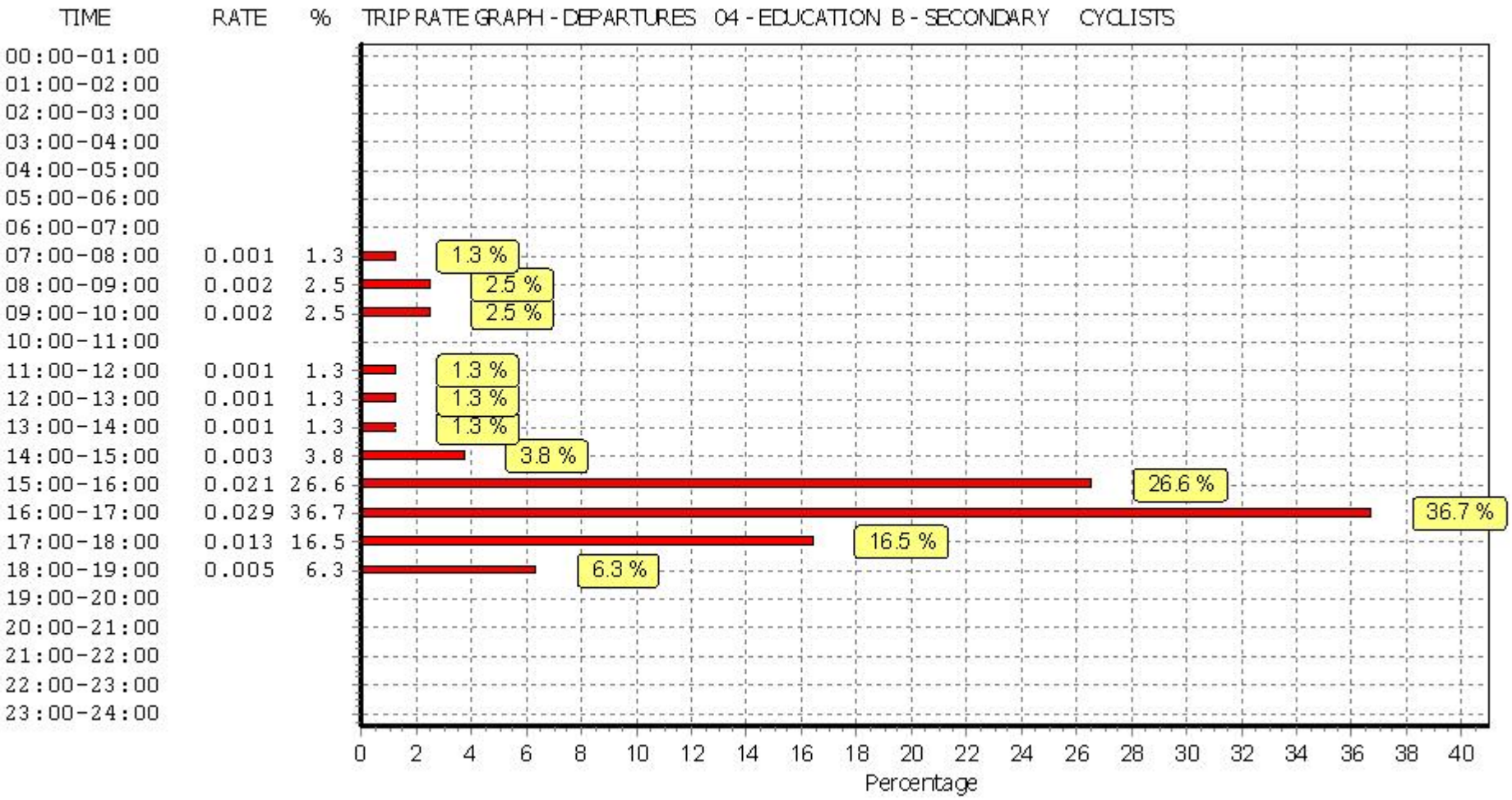

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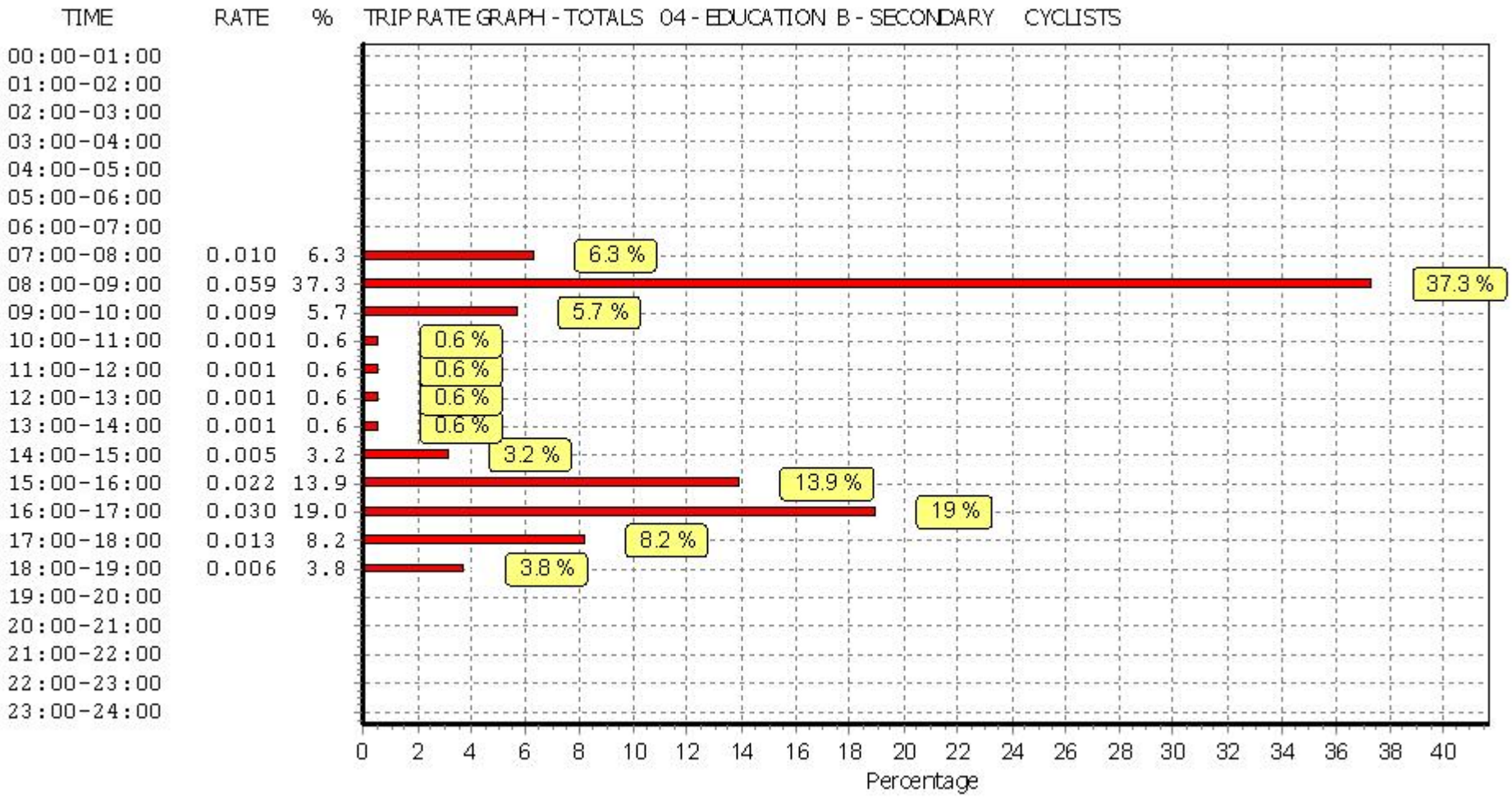

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Calculation Reference: AUDIT-800401-190403-0449

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION
Category : D - NURSERY
VEHICLES

Selected regions and areas:

01	GREATER LONDON		
	KI	KINGSTON	1 days
	RB	REDBRIDGE	1 days
03	SOUTH WEST		
	WL	WILTSHIRE	1 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
	SF	SUFFOLK	1 days
05	EAST MIDLANDS		
	DS	DERBYSHIRE	1 days
	LE	LEICESTERSHIRE	1 days
	LN	LINCOLNSHIRE	1 days
	NR	NORTHAMPTONSHIRE	1 days
06	WEST MIDLANDS		
	SH	SHROPSHIRE	1 days
	WK	WARWICKSHIRE	1 days
09	NORTH		
	TV	TEES VALLEY	1 days
	TW	TYNE & WEAR	1 days
11	SCOTLAND		
	DU	DUNDEE CITY	1 days
12	CONNAUGHT		
	RO	ROSCOMMON	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 pupils
Actual Range: 21 to 110 (units:)
Range Selected by User: 18 to 90 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/11 to 12/07/18

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	1 days
Tuesday	2 days
Wednesday	6 days
Thursday	3 days
Friday	4 days

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

Selected survey types:

Manual count	16 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:

Edge of Town Centre	3
Suburban Area (PPS6 Out of Centre)	7
Edge of Town	6

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	16

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	16 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	2 days
5,001 to 10,000	2 days
15,001 to 20,000	3 days
20,001 to 25,000	2 days
25,001 to 50,000	7 days

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

Population within 5 miles:

5,001 to 25,000	2 days
50,001 to 75,000	1 days
75,001 to 100,000	4 days
125,001 to 250,000	4 days
250,001 to 500,000	4 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	6 days
1.1 to 1.5	9 days

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

Travel Plan:

No	16 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	15 days
1b Very poor	1 days

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

LIST OF SITES relevant to selection parameters

1 CA-04-D-02 NURSERY CAMBRIDGESHIRE
EASTFIELD ROAD
PETERBOROUGH

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of pupils: 50
Survey date: TUESDAY *18/10/16* *Survey Type: MANUAL*

2 DS-04-D-02 NURSERY DERBYSHIRE
MAXWELL AVENUE
DERBY
DARLEY ABBEY
Edge of Town
Residential Zone
Total Number of pupils: 54
Survey date: THURSDAY *12/07/18* *Survey Type: MANUAL*

3 DU-04-D-01 NURSERY DUNDEE CITY
LONGTOWN TERRACE
DUNDEE

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of pupils: 36
Survey date: MONDAY *24/04/17* *Survey Type: MANUAL*

4 KI-04-D-01 NURSERY KINGSTON
WINDMILL LANE
SURBITON
LONG DITTON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of pupils: 55
Survey date: WEDNESDAY *22/06/16* *Survey Type: MANUAL*

5 LE-04-D-01 NURSERY LEICESTERSHIRE
WIGSTON ROAD
LEICESTER
OADBY
Edge of Town
Residential Zone
Total Number of pupils: 80
Survey date: THURSDAY *30/10/14* *Survey Type: MANUAL*

6 LN-04-D-01 NURSERY LINCOLNSHIRE
NEWARK ROAD
LINCOLN
SWALLOW BECK
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of pupils: 49
Survey date: TUESDAY *31/10/17* *Survey Type: MANUAL*

7 NR-04-D-02 NURSERY NORTHAMPTONSHIRE
PARK AVENUE
KETTERING

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of pupils: 21
Survey date: WEDNESDAY *26/09/12* *Survey Type: MANUAL*

8 RB-04-D-02 NURSERY REDBRIDGE
RAY LODGE ROAD
WOODFORD GREEN

Edge of Town
Residential Zone
Total Number of pupils: 67
Survey date: WEDNESDAY *22/11/17* *Survey Type: MANUAL*

9 RO-04-D-01 NURSERY ROSCOMMON
PARK VIEW
ROSCOMMON
CRUBY HILL
Edge of Town
Residential Zone
Total Number of pupils: 106
Survey date: FRIDAY *26/09/14* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

10	RO-04-D-02 CIRCULAR ROAD ROSCOMMON BALLYPHEASAN Edge of Town Centre Residential Zone Total Number of pupils: *Survey date: FRIDAY*	NURSERY	52 *27/04/18*	ROSCOMMON *Survey Type: MANUAL*
11	SF-04-D-03 CAMP ROAD LOWESTOFT Edge of Town Centre Residential Zone Total Number of pupils: *Survey date: WEDNESDAY*	NURSERY	110 *10/12/14*	SUFFOLK *Survey Type: MANUAL*
12	SH-04-D-01 OLD COLEHAM SHREWSBURY Edge of Town Centre Residential Zone Total Number of pupils: *Survey date: WEDNESDAY*	NURSERY	56 *28/05/14*	SHROPSHIRE *Survey Type: MANUAL*
13	TV-04-D-01 COTSWOLD DRIVE REDCAR Edge of Town Residential Zone Total Number of pupils: *Survey date: FRIDAY*	NURSERY	25 *19/05/17*	TEES VALLEY *Survey Type: MANUAL*
14	TW-04-D-02 ETTRICK GROVE SUNDERLAND HIGH BARNES Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of pupils: *Survey date: WEDNESDAY*	NURSERY	110 *28/11/12*	TYNE & WEAR *Survey Type: MANUAL*
15	WK-04-D-01 THE RIDGEWAY STRATFORD UPON AVON Edge of Town Residential Zone Total Number of pupils: *Survey date: FRIDAY*	NURSERY	61 *29/06/18*	WARWICKSHIRE *Survey Type: MANUAL*
16	WL-04-D-01 SHREWSBURY ROAD SWINDON WALCOT Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of pupils: *Survey date: THURSDAY*	NURSERY	75 *22/09/16*	WILTSHIRE *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/D - NURSERY
VEHICLES
Calculation factor: 1
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	1	50	0.000	1	50	0.000	1	50	0.000
07:00 - 08:00	16	63	0.107	16	63	0.054	16	63	0.161
08:00 - 09:00	16	63	0.269	16	63	0.184	16	63	0.453
09:00 - 10:00	16	63	0.141	16	63	0.144	16	63	0.285
10:00 - 11:00	16	63	0.040	16	63	0.029	16	63	0.069
11:00 - 12:00	16	63	0.060	16	63	0.036	16	63	0.096
12:00 - 13:00	16	63	0.102	16	63	0.135	16	63	0.237
13:00 - 14:00	16	63	0.071	16	63	0.093	16	63	0.164
14:00 - 15:00	16	63	0.062	16	63	0.049	16	63	0.111
15:00 - 16:00	16	63	0.082	16	63	0.108	16	63	0.190
16:00 - 17:00	16	63	0.101	16	63	0.126	16	63	0.227
17:00 - 18:00	16	63	0.156	16	63	0.203	16	63	0.359
18:00 - 19:00	15	65	0.012	15	65	0.041	15	65	0.053
19:00 - 20:00	1	50	0.000	1	50	0.000	1	50	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.203			1.202			2.405

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

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

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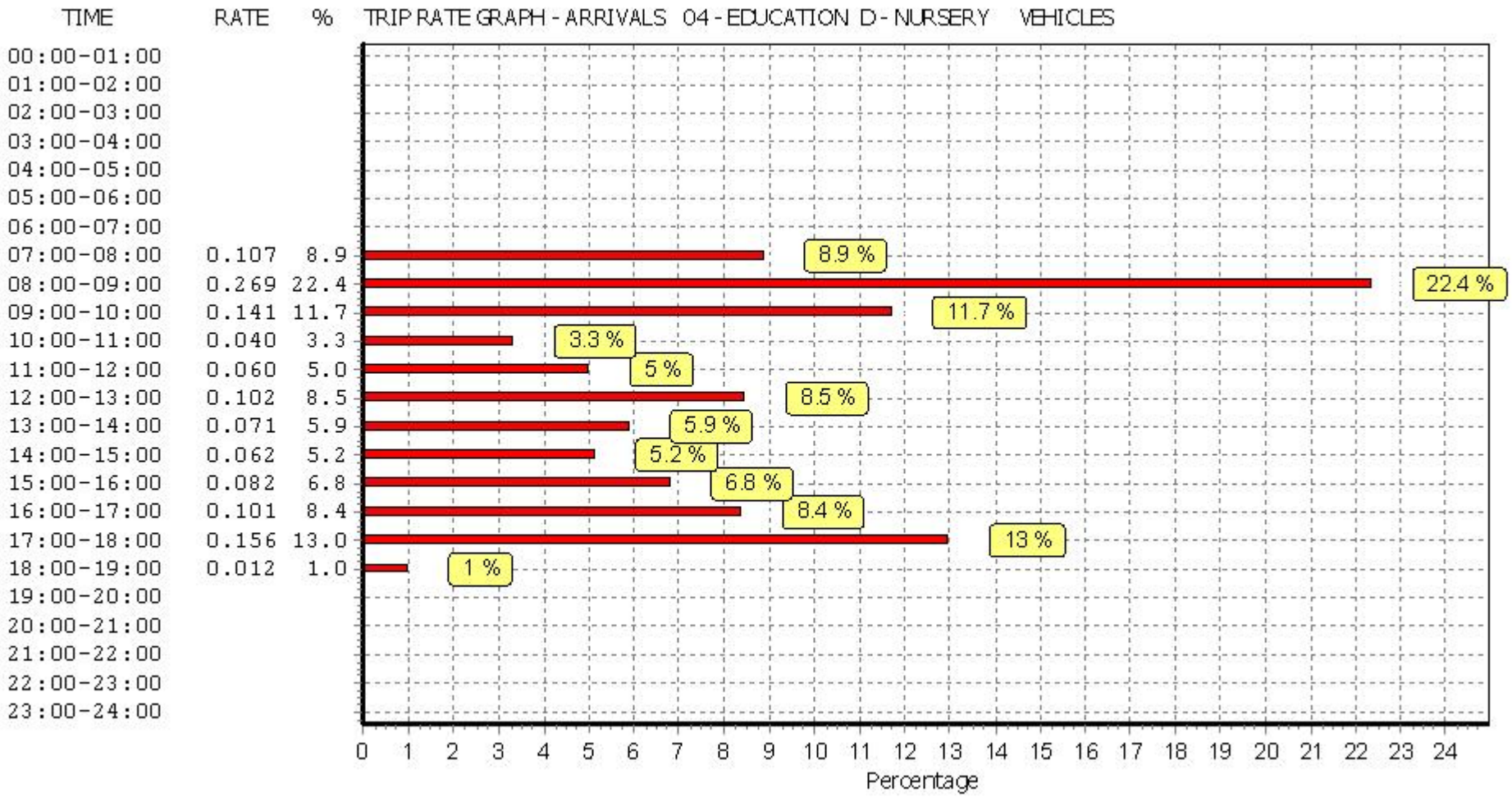
The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

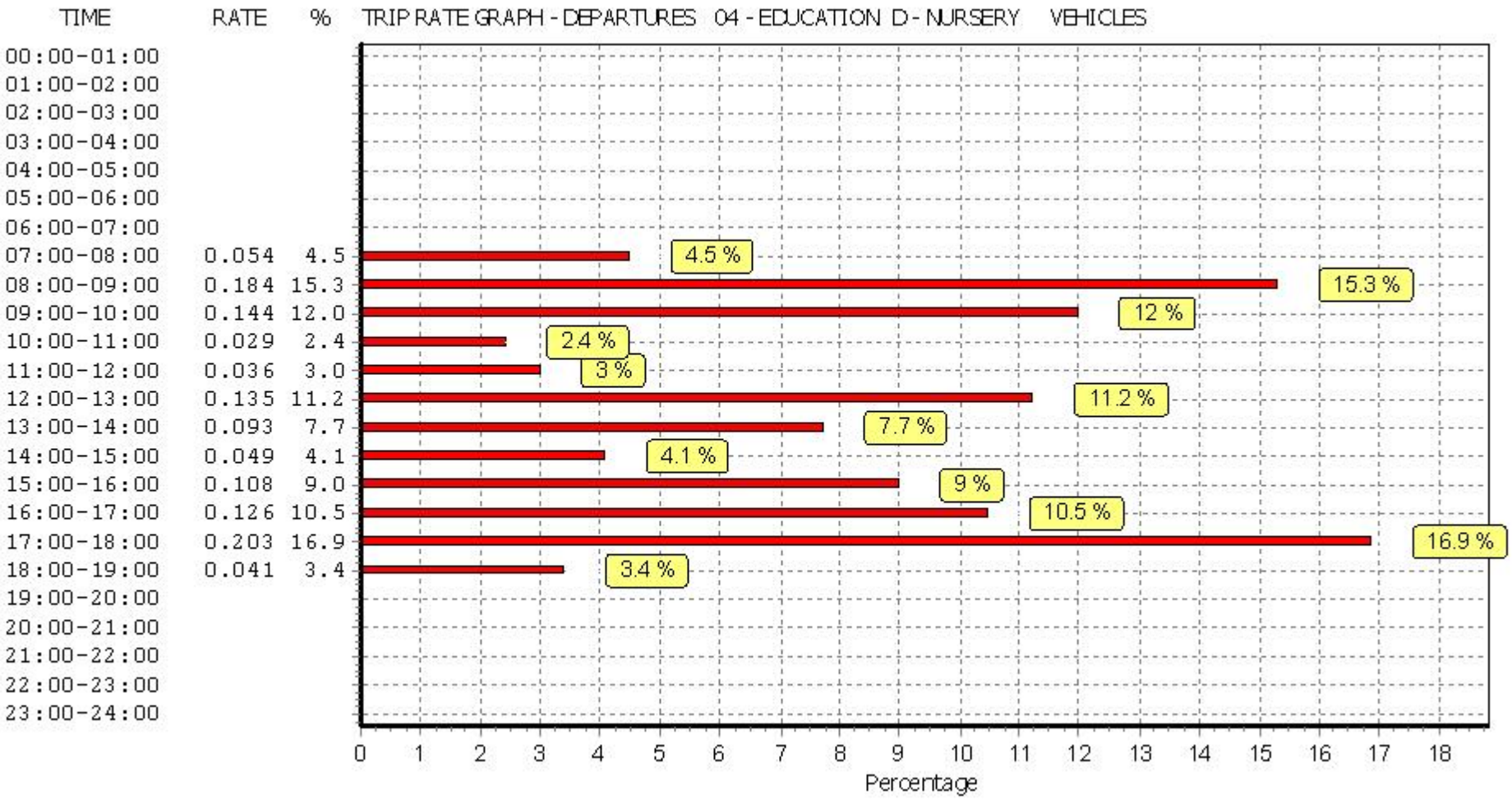
Parameter summary

Trip rate parameter range selected:	21 - 110 (units:)
Survey date date range:	01/01/11 - 12/07/18
Number of weekdays (Monday-Friday):	16
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
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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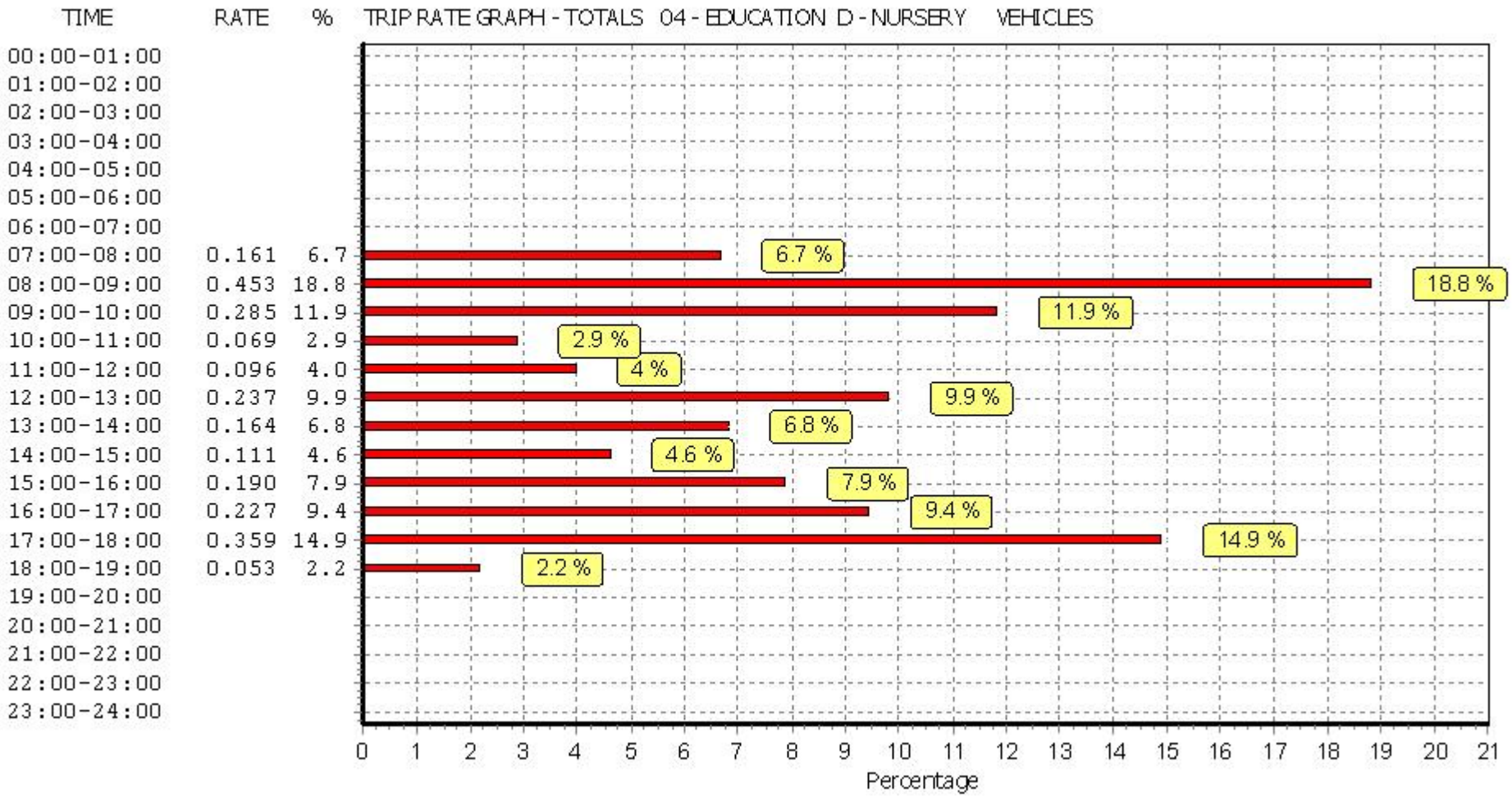

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TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY
TAXIS
Calculation factor: 1
BOLD print indicates peak (busiest) period

	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	1	50	0.000	1	50	0.000	1	50	0.000
07:00 - 08:00	16	63	0.002	16	63	0.002	16	63	0.004
08:00 - 09:00	16	63	0.003	16	63	0.001	16	63	0.004
09:00 - 10:00	16	63	0.001	16	63	0.003	16	63	0.004
10:00 - 11:00	16	63	0.003	16	63	0.003	16	63	0.006
11:00 - 12:00	16	63	0.000	16	63	0.000	16	63	0.000
12:00 - 13:00	16	63	0.002	16	63	0.002	16	63	0.004
13:00 - 14:00	16	63	0.000	16	63	0.000	16	63	0.000
14:00 - 15:00	16	63	0.003	16	63	0.002	16	63	0.005
15:00 - 16:00	16	63	0.000	16	63	0.001	16	63	0.001
16:00 - 17:00	16	63	0.000	16	63	0.000	16	63	0.000
17:00 - 18:00	16	63	0.001	16	63	0.001	16	63	0.002
18:00 - 19:00	15	65	0.000	15	65	0.000	15	65	0.000
19:00 - 20:00	1	50	0.000	1	50	0.000	1	50	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.015			0.015			0.030

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.

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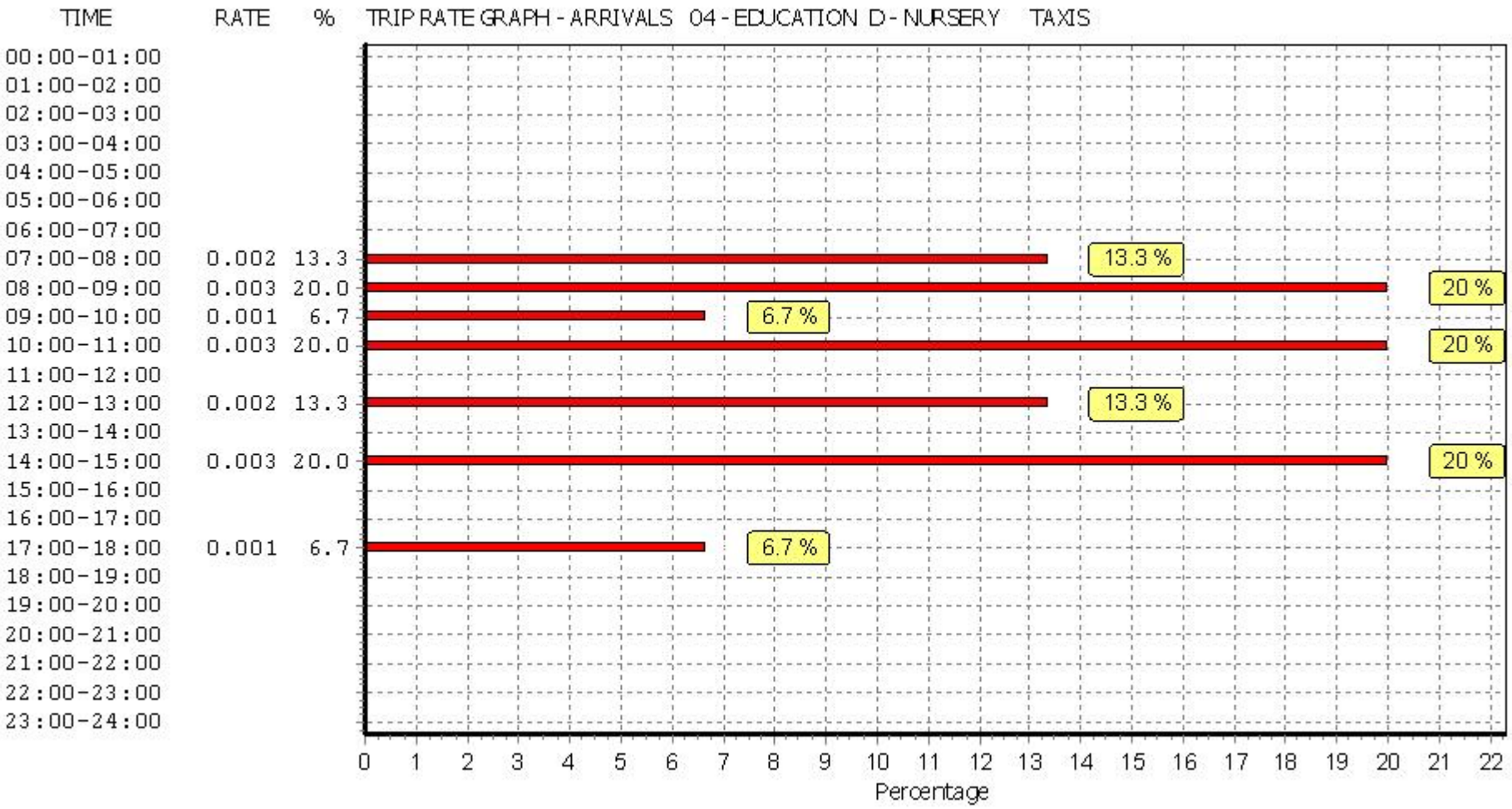

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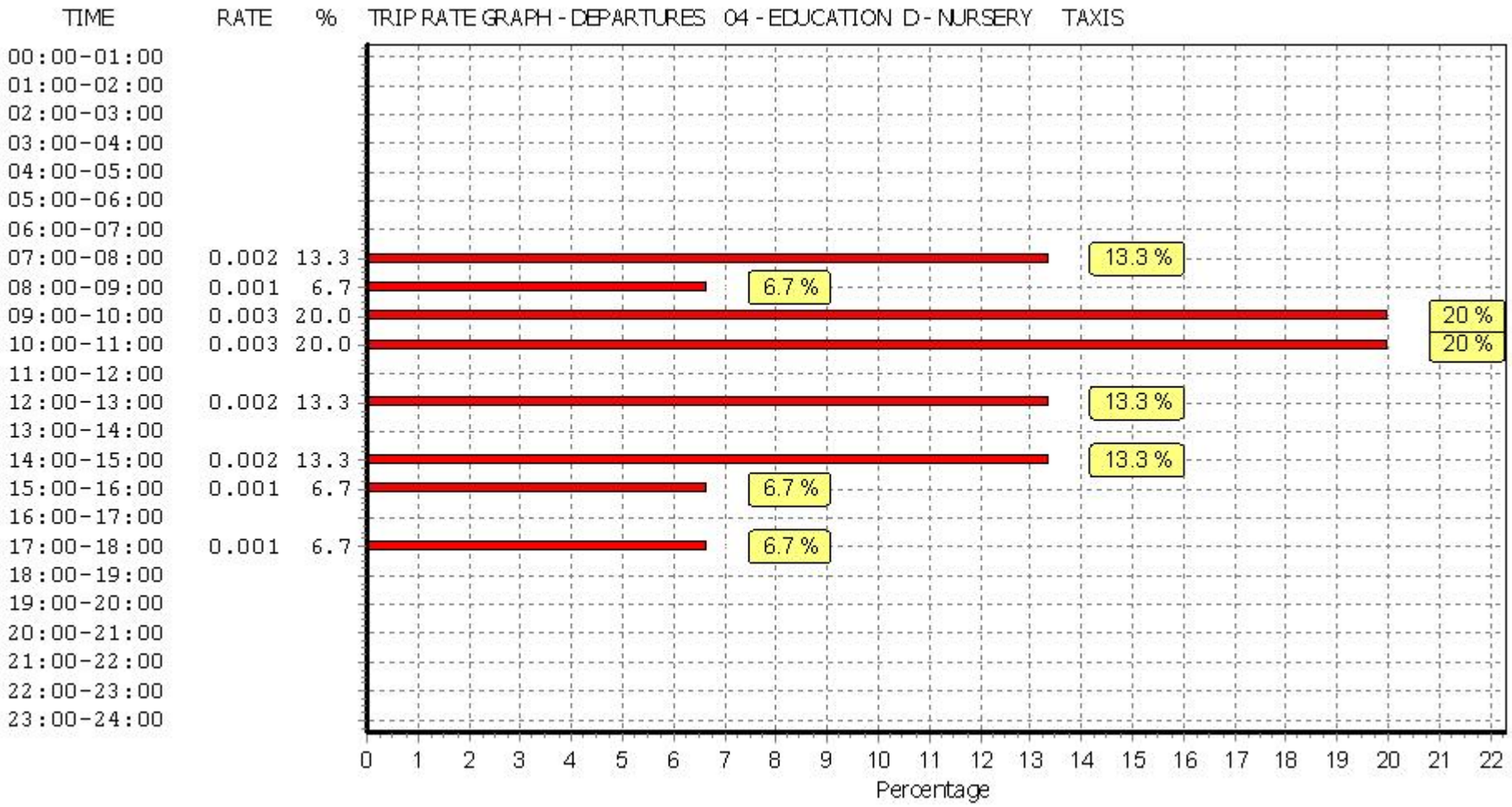

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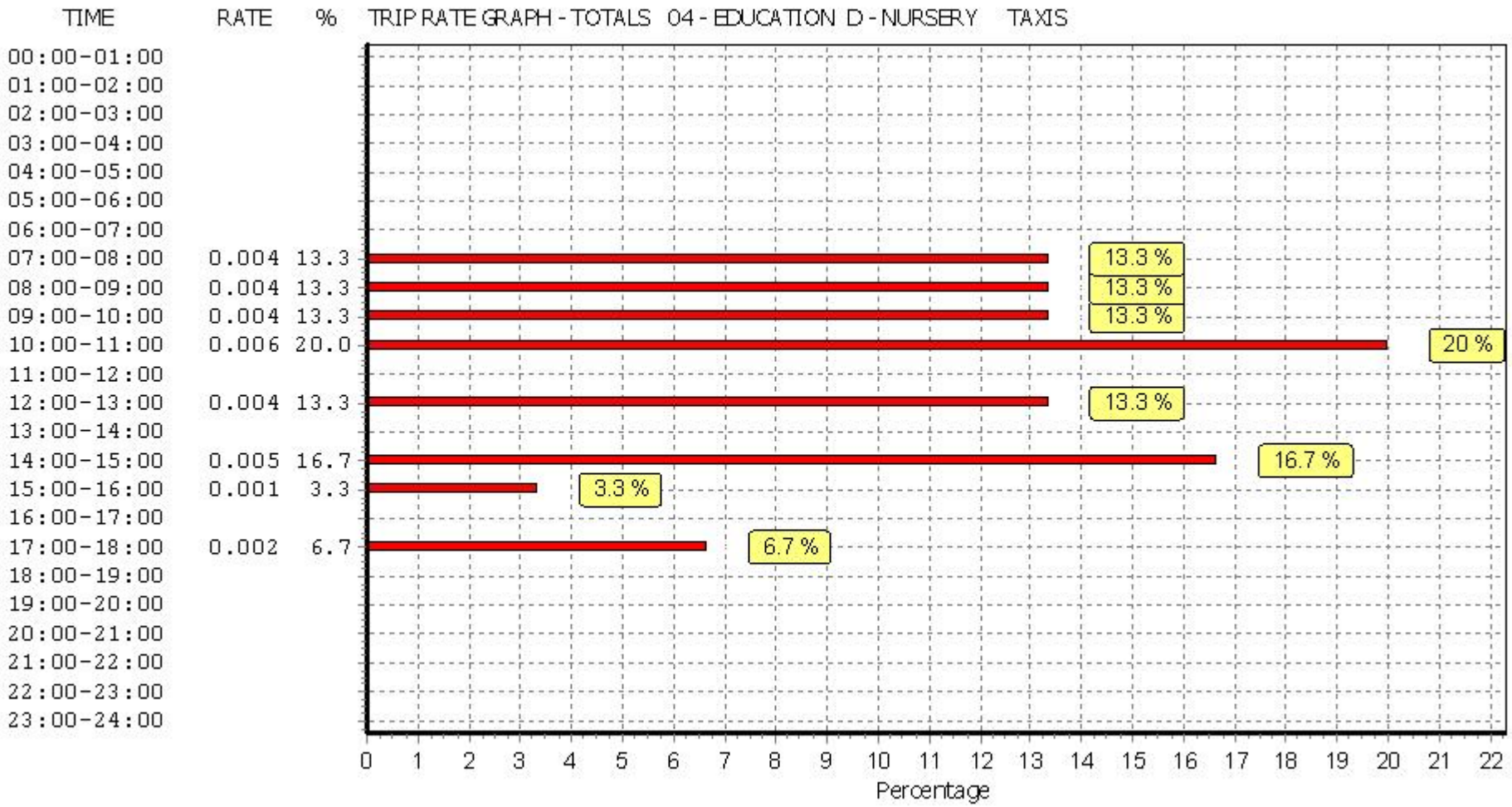

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TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY
OGVS
Calculation factor: 1
BOLD print indicates peak (busiest) period

	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	1	50	0.000	1	50	0.000	1	50	0.000
07:00 - 08:00	16	63	0.001	16	63	0.001	16	63	0.002
08:00 - 09:00	16	63	0.000	16	63	0.000	16	63	0.000
09:00 - 10:00	16	63	0.003	16	63	0.003	16	63	0.006
10:00 - 11:00	16	63	0.000	16	63	0.000	16	63	0.000
11:00 - 12:00	16	63	0.001	16	63	0.001	16	63	0.002
12:00 - 13:00	16	63	0.001	16	63	0.001	16	63	0.002
13:00 - 14:00	16	63	0.001	16	63	0.001	16	63	0.002
14:00 - 15:00	16	63	0.000	16	63	0.000	16	63	0.000
15:00 - 16:00	16	63	0.000	16	63	0.000	16	63	0.000
16:00 - 17:00	16	63	0.000	16	63	0.000	16	63	0.000
17:00 - 18:00	16	63	0.000	16	63	0.000	16	63	0.000
18:00 - 19:00	15	65	0.000	15	65	0.000	15	65	0.000
19:00 - 20:00	1	50	0.000	1	50	0.000	1	50	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.007			0.007			0.014

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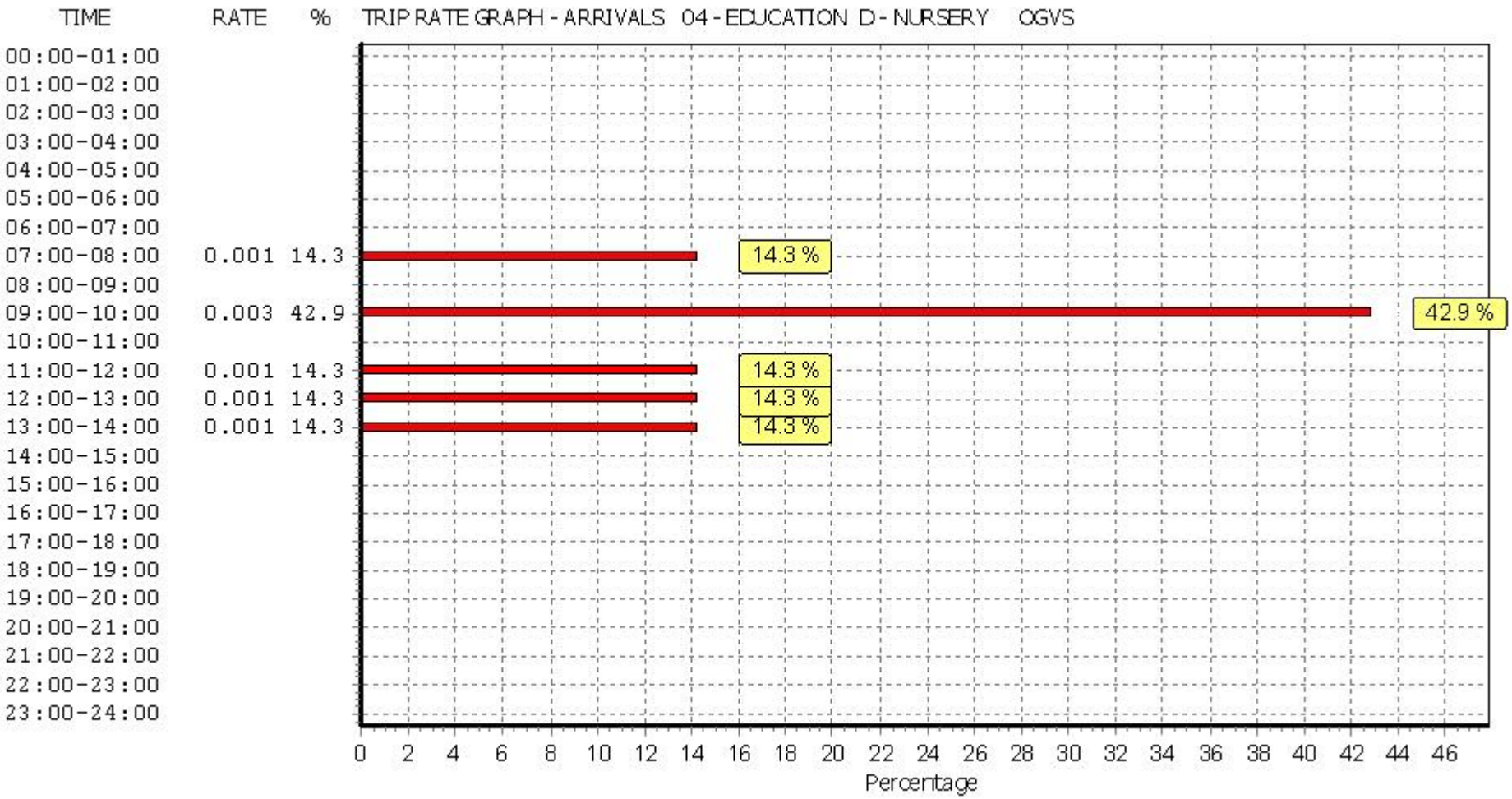
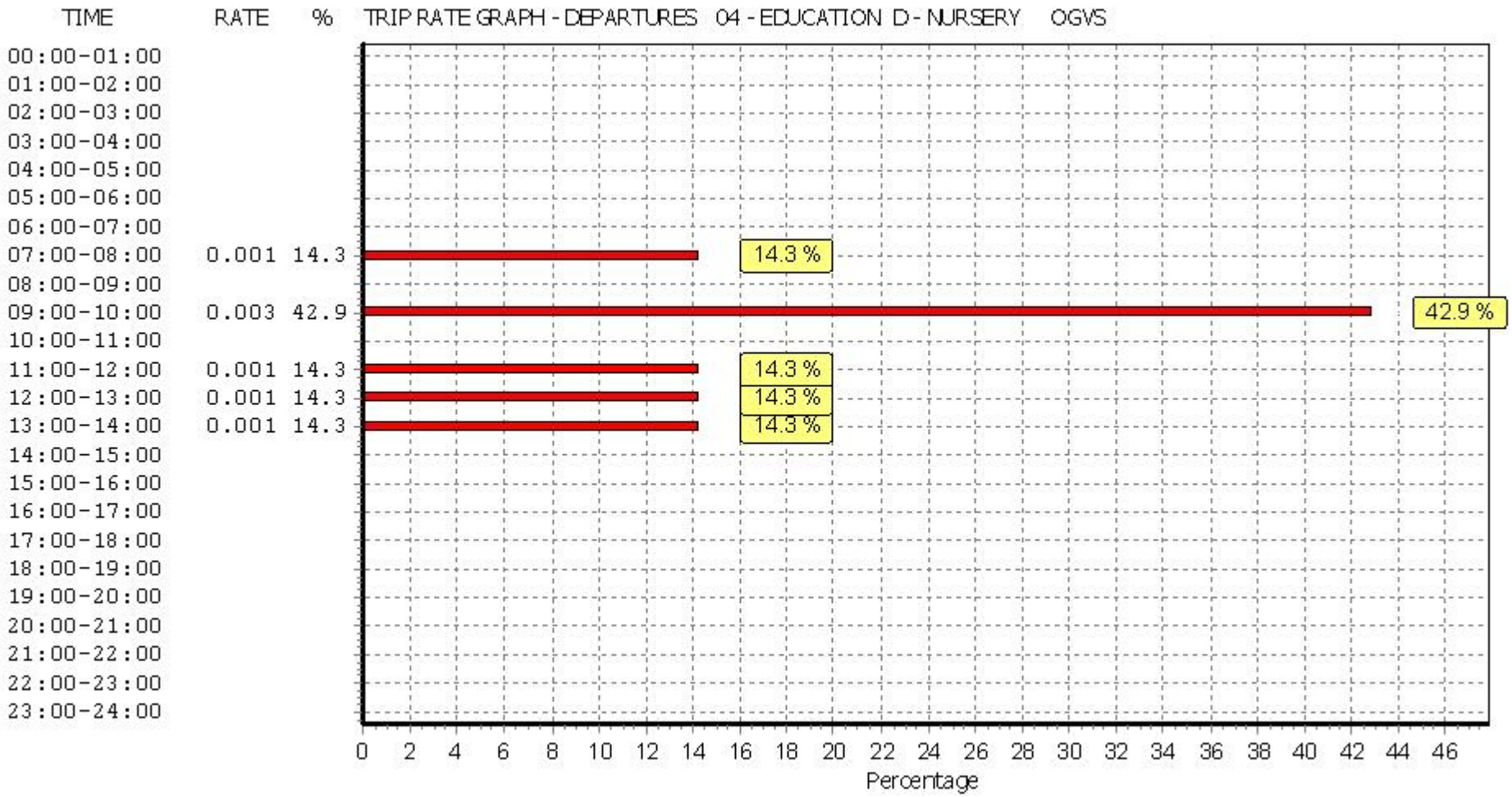


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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



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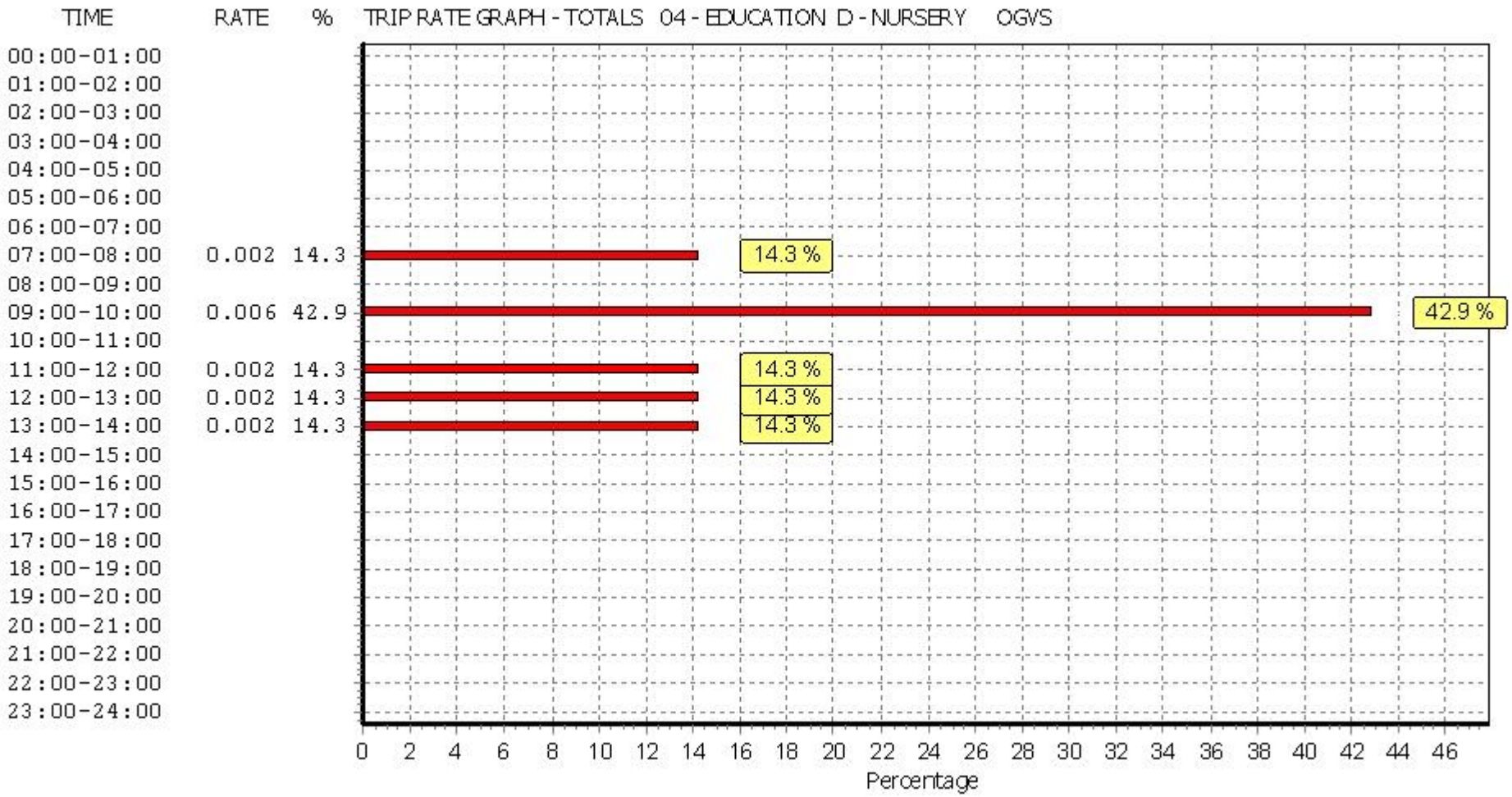

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TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY
PSVS
Calculation factor: 1
BOLD print indicates peak (busiest) period

	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	1	50	0.000	1	50	0.000	1	50	0.000
07:00 - 08:00	16	63	0.000	16	63	0.000	16	63	0.000
08:00 - 09:00	16	63	0.001	16	63	0.001	16	63	0.002
09:00 - 10:00	16	63	0.000	16	63	0.000	16	63	0.000
10:00 - 11:00	16	63	0.000	16	63	0.000	16	63	0.000
11:00 - 12:00	16	63	0.000	16	63	0.000	16	63	0.000
12:00 - 13:00	16	63	0.000	16	63	0.000	16	63	0.000
13:00 - 14:00	16	63	0.000	16	63	0.000	16	63	0.000
14:00 - 15:00	16	63	0.000	16	63	0.000	16	63	0.000
15:00 - 16:00	16	63	0.000	16	63	0.000	16	63	0.000
16:00 - 17:00	16	63	0.000	16	63	0.000	16	63	0.000
17:00 - 18:00	16	63	0.000	16	63	0.000	16	63	0.000
18:00 - 19:00	15	65	0.000	15	65	0.000	15	65	0.000
19:00 - 20:00	1	50	0.000	1	50	0.000	1	50	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.001			0.001			0.002

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.

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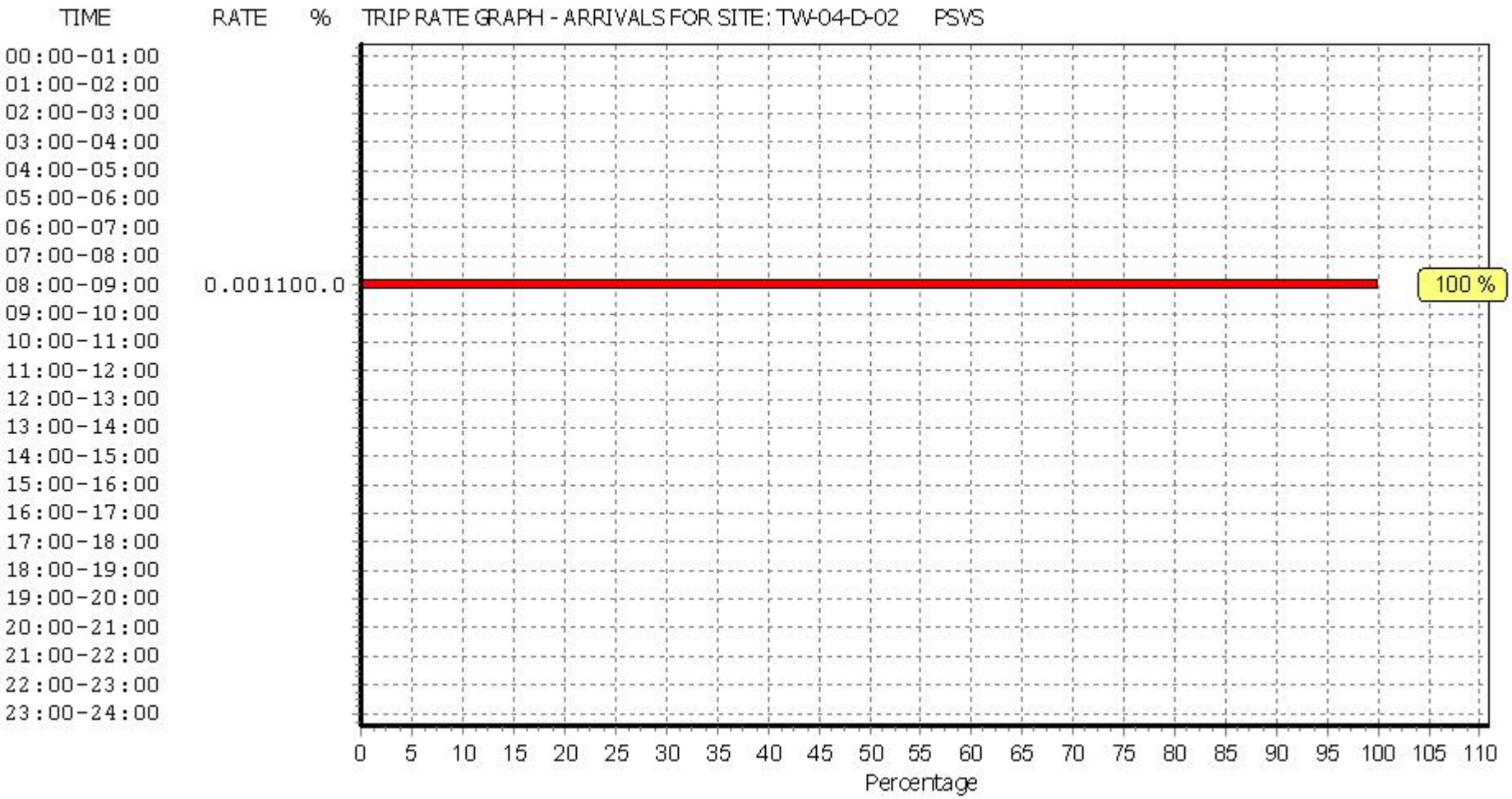

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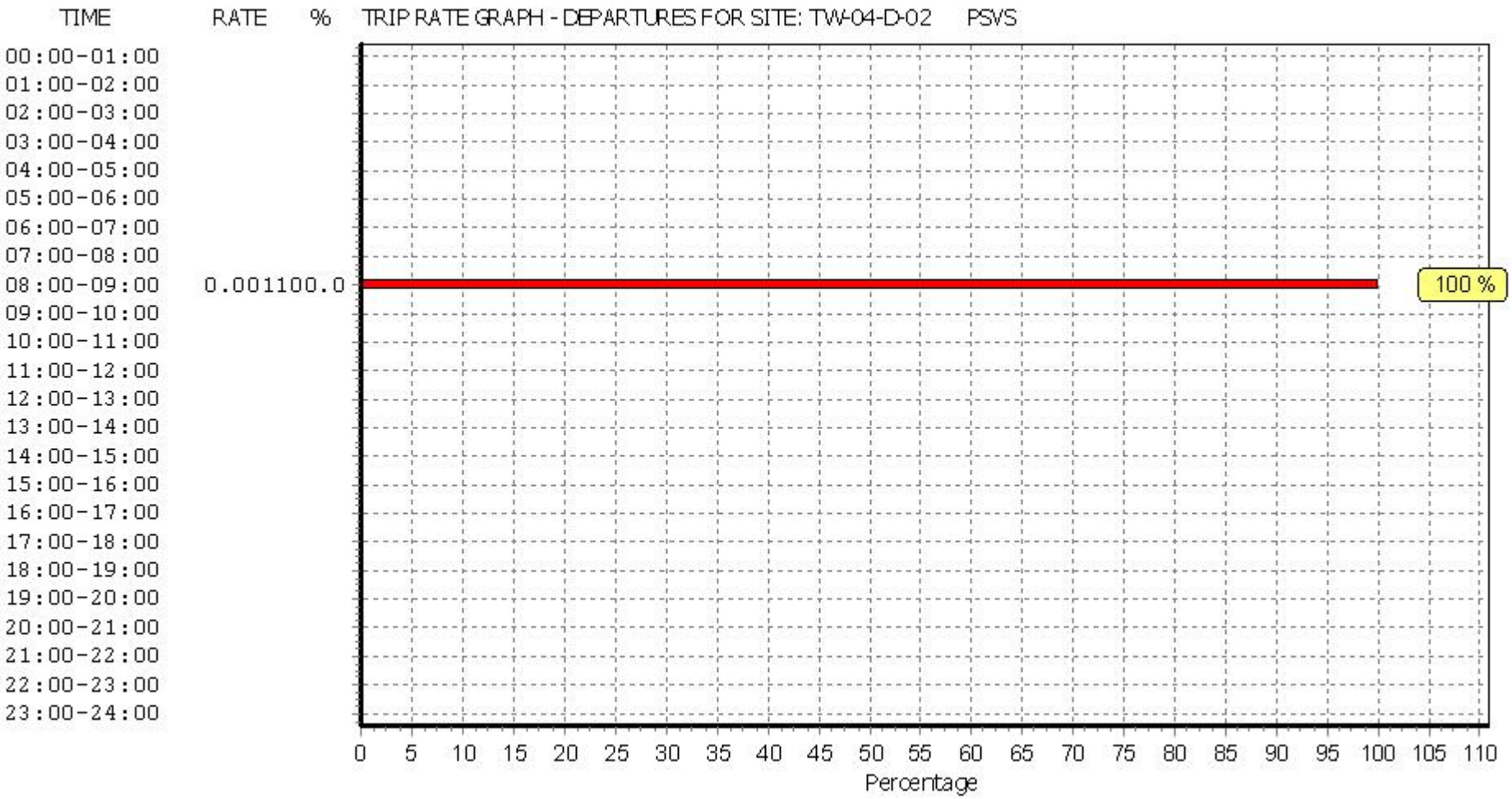

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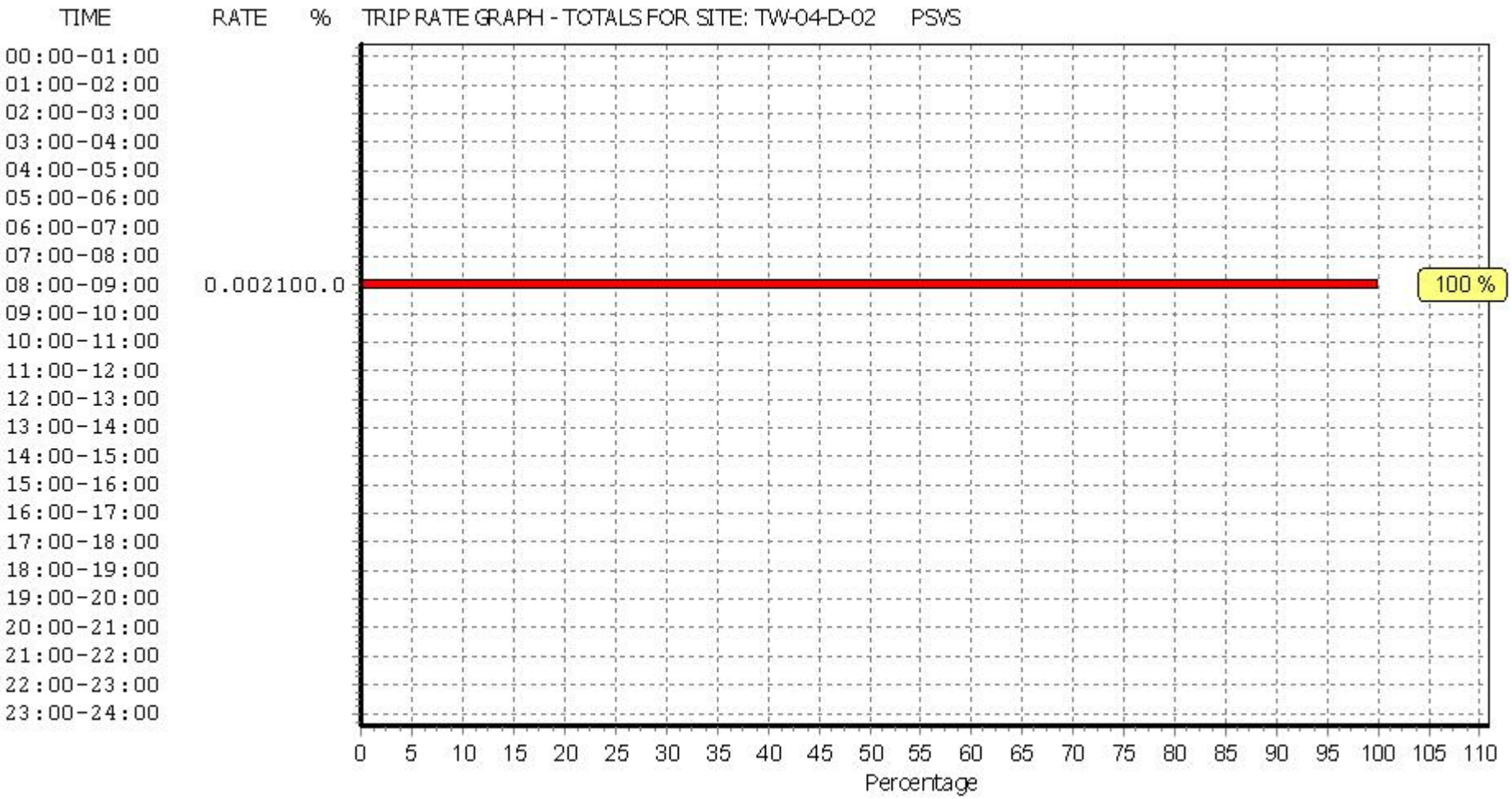

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TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY
CYCLISTS
Calculation factor: 1
BOLD print indicates peak (busiest) period

	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	1	50	0.000	1	50	0.000	1	50	0.000
07:00 - 08:00	16	63	0.004	16	63	0.000	16	63	0.004
08:00 - 09:00	16	63	0.011	16	63	0.004	16	63	0.015
09:00 - 10:00	16	63	0.004	16	63	0.002	16	63	0.006
10:00 - 11:00	16	63	0.000	16	63	0.002	16	63	0.002
11:00 - 12:00	16	63	0.003	16	63	0.001	16	63	0.004
12:00 - 13:00	16	63	0.003	16	63	0.002	16	63	0.005
13:00 - 14:00	16	63	0.002	16	63	0.003	16	63	0.005
14:00 - 15:00	16	63	0.000	16	63	0.000	16	63	0.000
15:00 - 16:00	16	63	0.002	16	63	0.006	16	63	0.008
16:00 - 17:00	16	63	0.000	16	63	0.002	16	63	0.002
17:00 - 18:00	16	63	0.001	16	63	0.007	16	63	0.008
18:00 - 19:00	15	65	0.001	15	65	0.002	15	65	0.003
19:00 - 20:00	1	50	0.000	1	50	0.000	1	50	0.000
20:00 - 21:00	1	50	0.000	1	50	0.000	1	50	0.000
21:00 - 22:00	1	50	0.000	1	50	0.000	1	50	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.031			0.031			0.062

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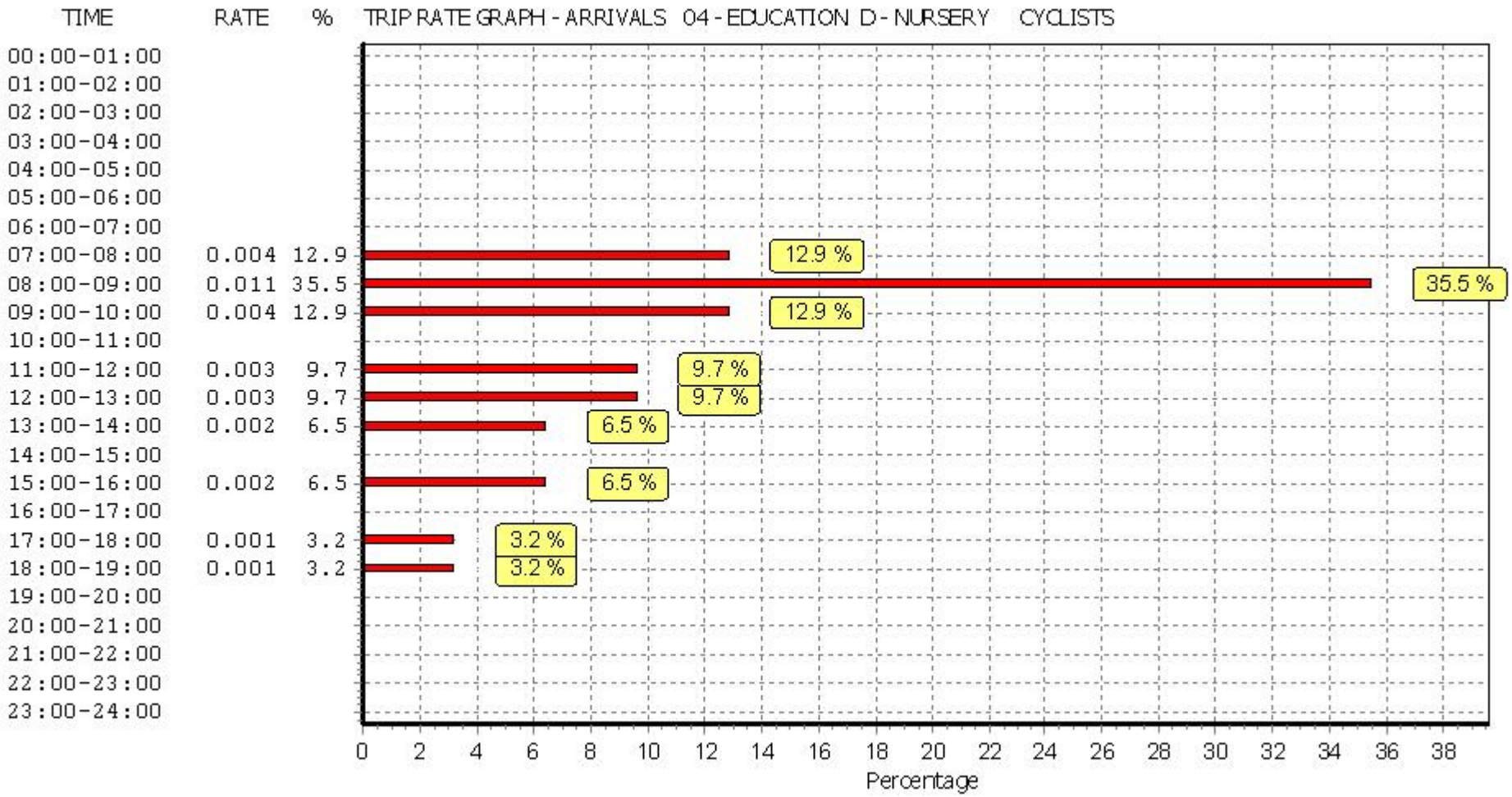

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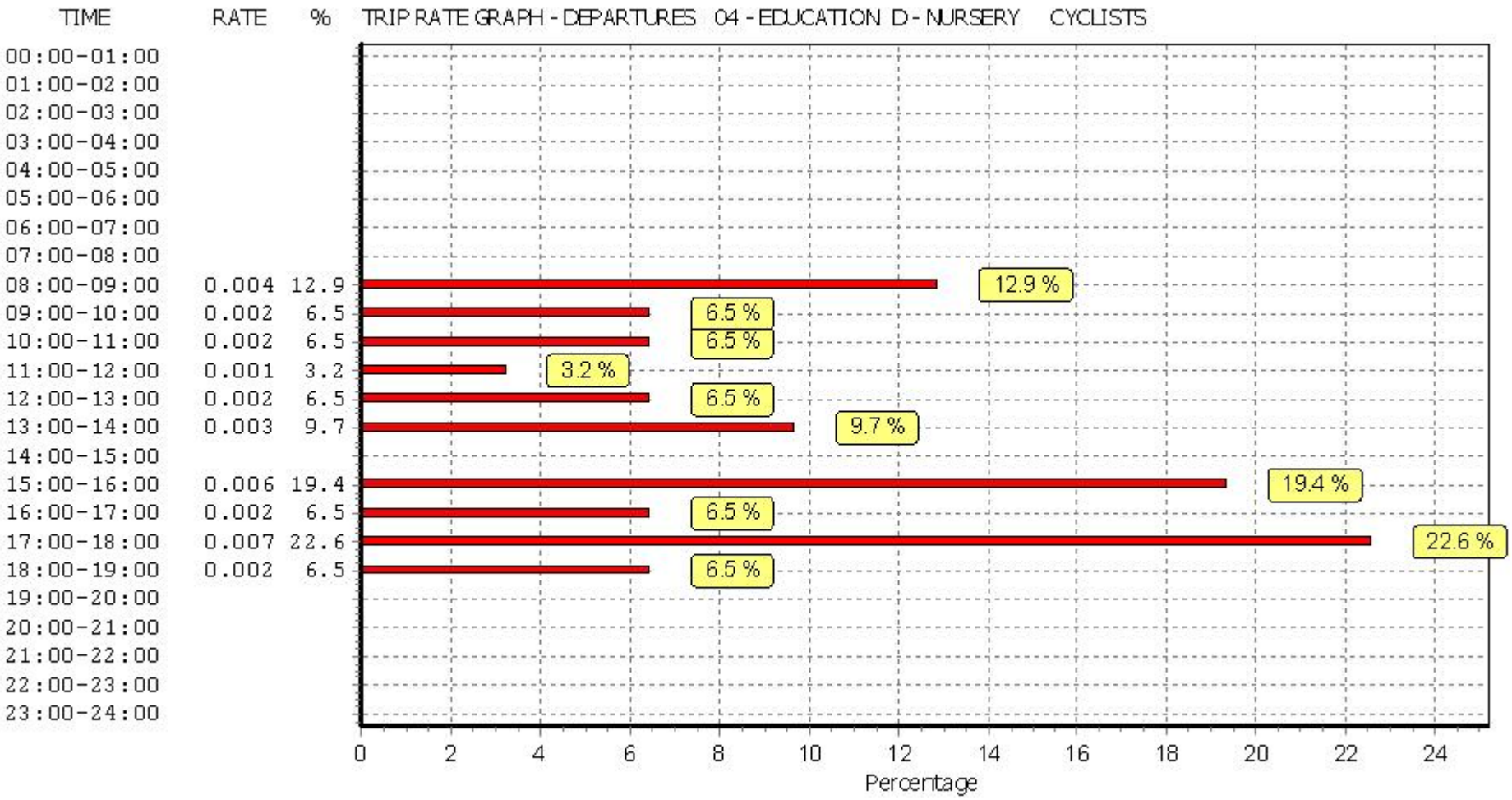

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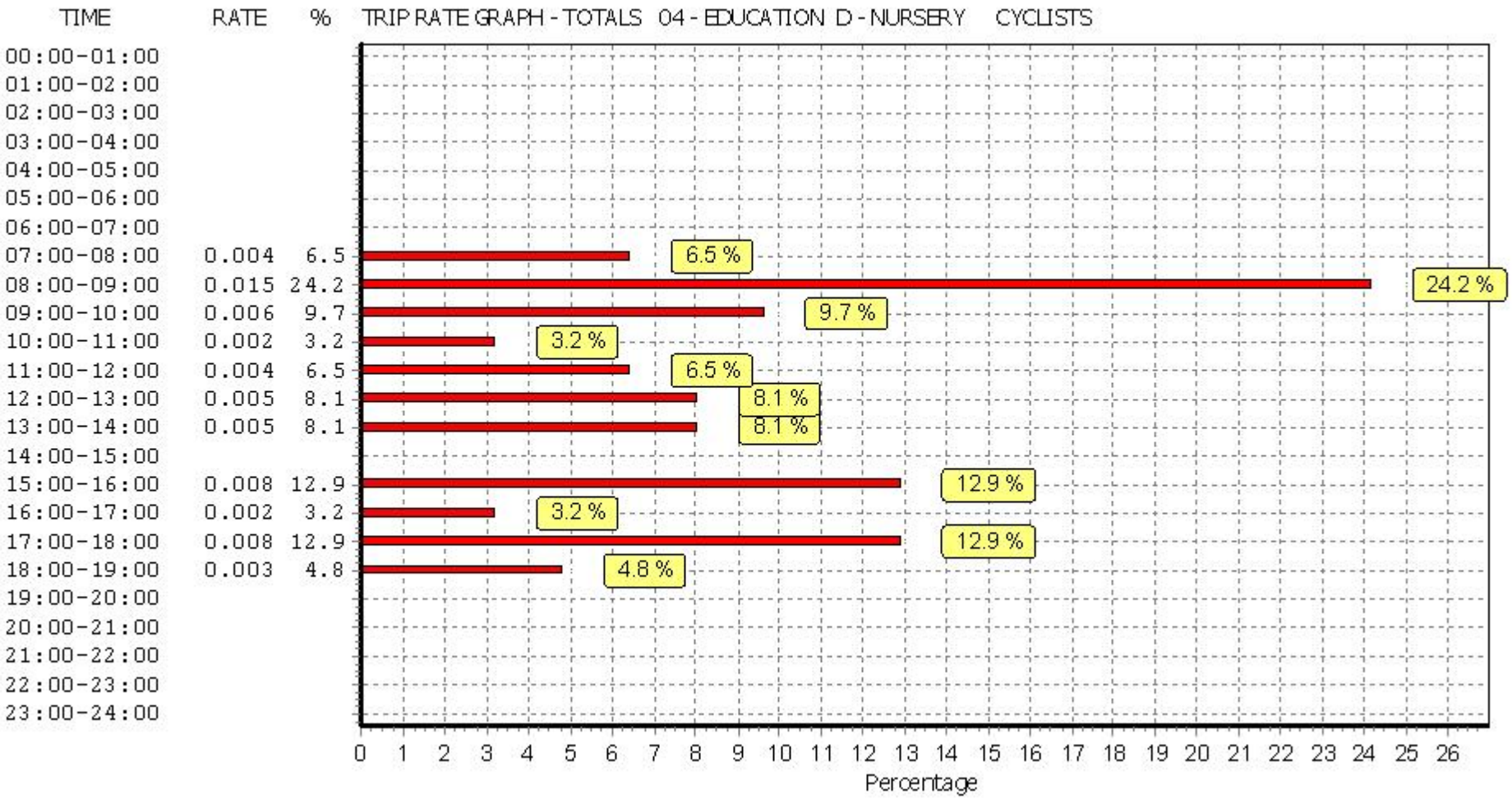

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Calculation Reference: AUDIT-800401-190111-0151

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

14	LEINSTER		
	CC	CARLOW	1 days
	WC	WICKLOW	2 days
	WX	WEXFORD	1 days
15	GREATER DUBLIN		
	DL	DUBLIN	1 days

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

Secondary Filtering selection:

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

Parameter: Number of dwellings
Actual Range: 23 to 56 (units:)
Range Selected by User: 8 to 437 (units:)

Parking Spaces Range: Selected: 16 to 591 Actual: 16 to 591

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/10 to 28/05/18

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	3 days
Wednesday	1 days
Thursday	1 days

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

Selected survey types:

Manual count	5 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	2
Suburban Area (PPS6 Out of Centre)	1
Edge of Town	2

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	3
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:

C3	5 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	2 days
5,001 to 10,000	2 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	2 days
25,001 to 50,000	2 days
125,001 to 250,000	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	3 days
1.1 to 1.5	1 days
1.6 to 2.0	1 days

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

Travel Plan:

No	5 days

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

PTAL Rating:

No PTAL Present	5 days

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

LIST OF SITES relevant to selection parameters

1 CC-03-A-01 DETACHED HOUSES CARLOW
R417 ANTHY ROAD
CARLOW

Edge of Town
Residential Zone
Total Number of dwellings: 23
Survey date: WEDNESDAY *25/05/16* *Survey Type: MANUAL*

2 DL-03-A-07 SEMI DET./TERRACED DUBLIN
CASTLE DAWSON
DUBLIN
BLACKROCK
Edge of Town Centre
Residential Zone
Total Number of dwellings: 56
Survey date: MONDAY *26/09/11* *Survey Type: MANUAL*

3 WC-03-A-01 DETACHED HOUSES WICKLOW
STATION ROAD
WICKLOW
CORPORATION MURRAGH
Edge of Town
No Sub Category
Total Number of dwellings: 50
Survey date: MONDAY *28/05/18* *Survey Type: MANUAL*

4 WC-03-A-02 DETACHED HOUSES WICKLOW
MARLTON ROAD
WICKLOW
FRIARSHILL
Edge of Town Centre
Residential Zone
Total Number of dwellings: 45
Survey date: MONDAY *28/05/18* *Survey Type: MANUAL*

5 WX-03-A-01 SEMI-DETACHED WEXFORD
CLONARD ROAD
WEXFORD

Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Number of dwellings: 34
Survey date: THURSDAY *25/09/14* *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 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	5	42	0.058	5	42	0.240	5	42	0.298
08:00 - 09:00	5	42	0.202	5	42	0.635	5	42	0.837
09:00 - 10:00	5	42	0.216	5	42	0.250	5	42	0.466
10:00 - 11:00	5	42	0.178	5	42	0.236	5	42	0.414
11:00 - 12:00	5	42	0.139	5	42	0.173	5	42	0.312
12:00 - 13:00	5	42	0.226	5	42	0.154	5	42	0.380
13:00 - 14:00	5	42	0.226	5	42	0.221	5	42	0.447
14:00 - 15:00	5	42	0.269	5	42	0.260	5	42	0.529
15:00 - 16:00	5	42	0.351	5	42	0.264	5	42	0.615
16:00 - 17:00	5	42	0.452	5	42	0.212	5	42	0.664
17:00 - 18:00	5	42	0.380	5	42	0.202	5	42	0.582
18:00 - 19:00	5	42	0.274	5	42	0.255	5	42	0.529
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.971			3.102			6.073

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.

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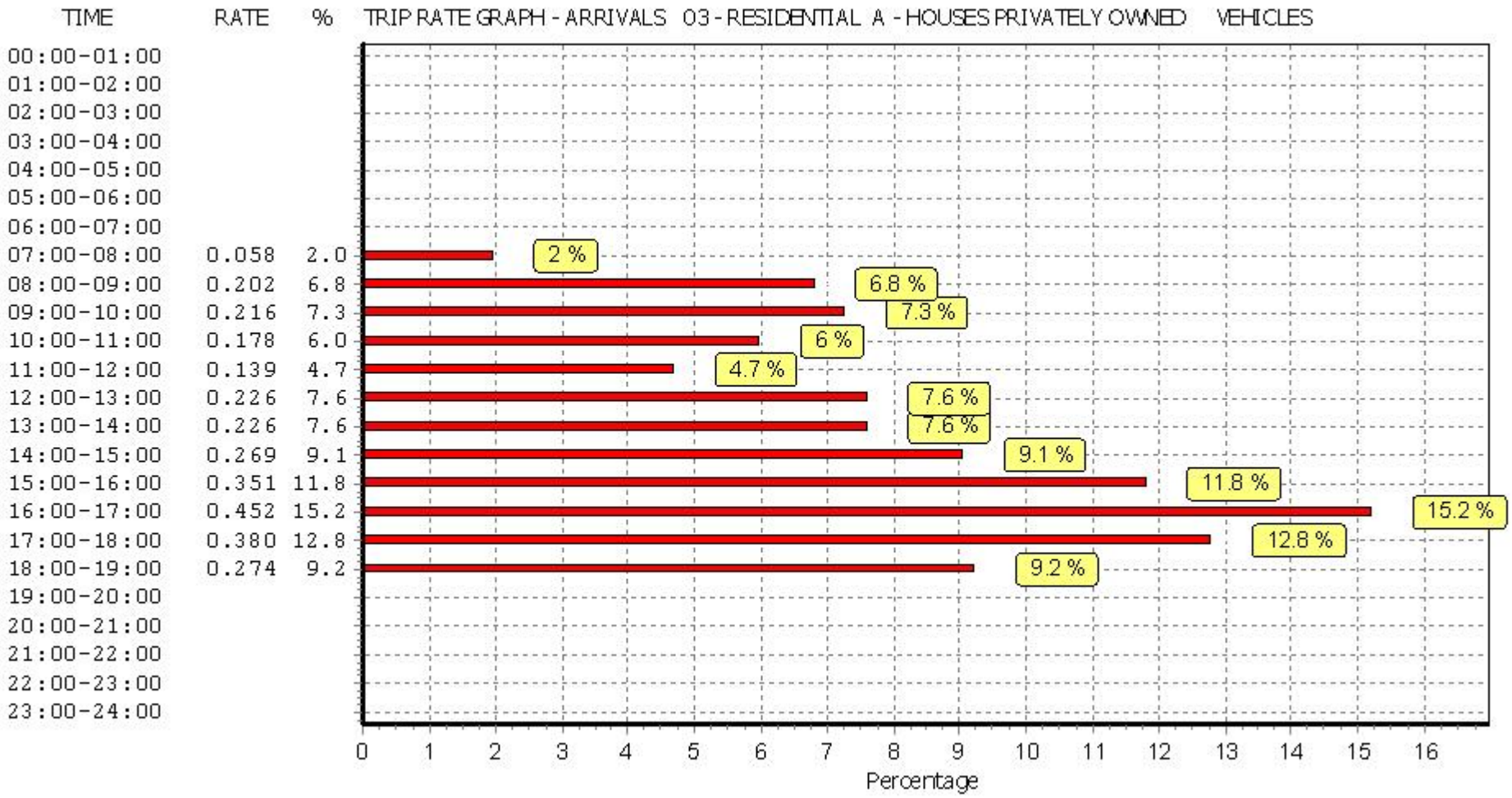
Parameter summary

Trip rate parameter range selected:	23 - 56 (units:)
Survey date date range:	01/01/10 - 28/05/18
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

Pinnacle Engineering Consultants Teoranta Patrick Street Dun Laoghaire Licence No: 800401



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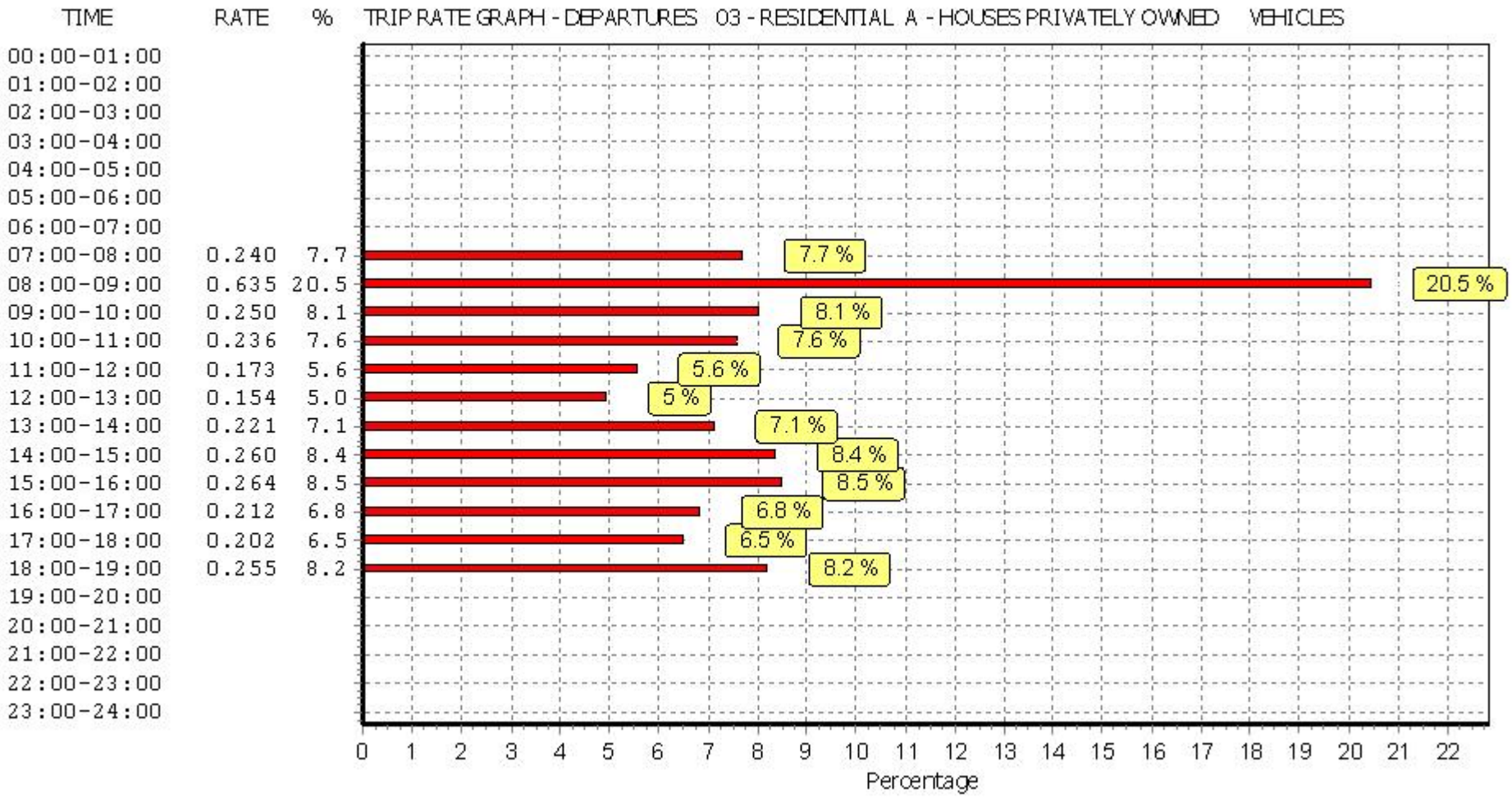

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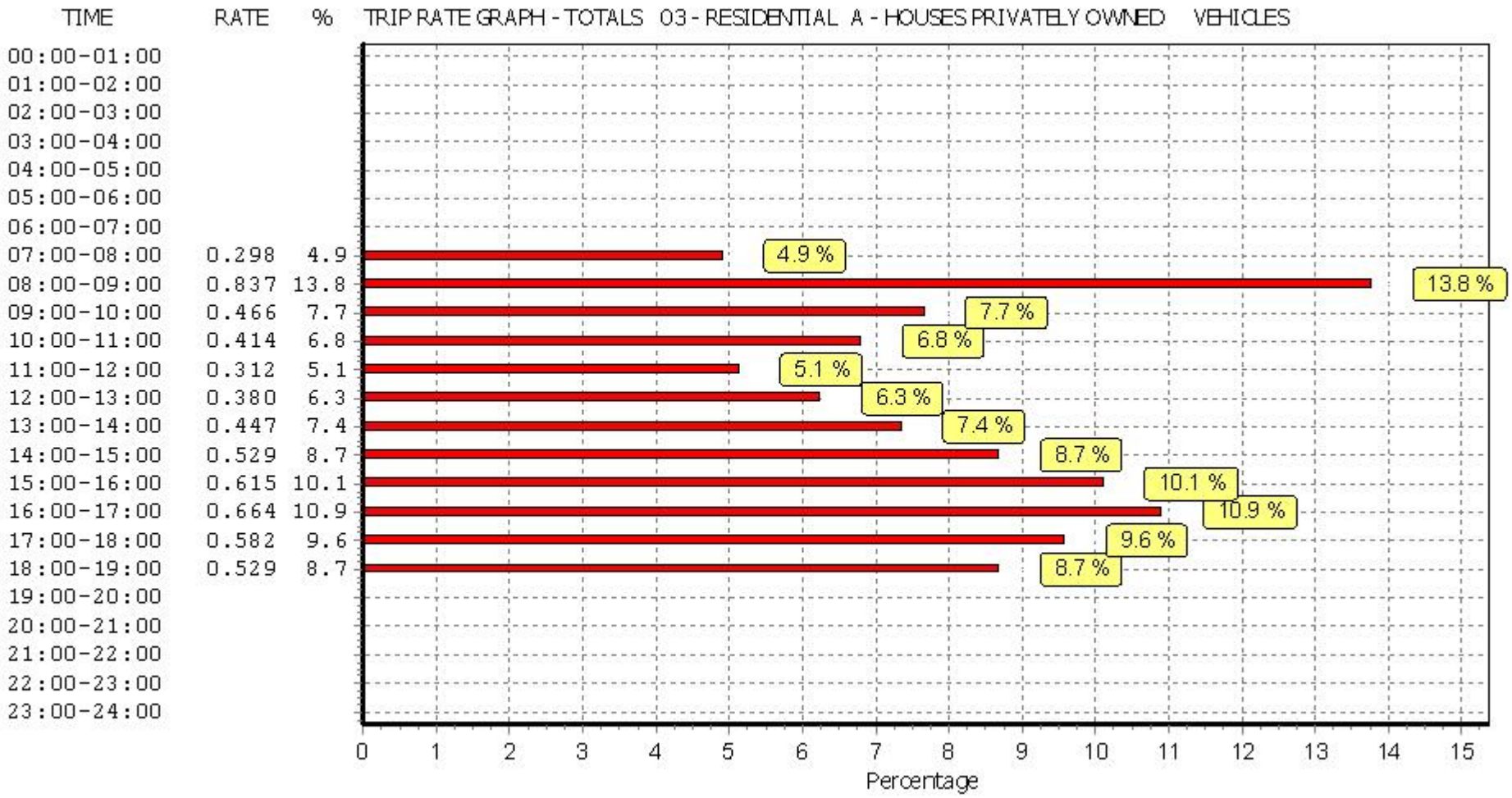

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TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
TAXIS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	5	42	0.000	5	42	0.000	5	42	0.000
08:00 - 09:00	5	42	0.000	5	42	0.000	5	42	0.000
09:00 - 10:00	5	42	0.005	5	42	0.000	5	42	0.005
10:00 - 11:00	5	42	0.000	5	42	0.005	5	42	0.005
11:00 - 12:00	5	42	0.000	5	42	0.000	5	42	0.000
12:00 - 13:00	5	42	0.000	5	42	0.000	5	42	0.000
13:00 - 14:00	5	42	0.010	5	42	0.005	5	42	0.015
14:00 - 15:00	5	42	0.000	5	42	0.005	5	42	0.005
15:00 - 16:00	5	42	0.000	5	42	0.000	5	42	0.000
16:00 - 17:00	5	42	0.000	5	42	0.000	5	42	0.000
17:00 - 18:00	5	42	0.000	5	42	0.000	5	42	0.000
18:00 - 19:00	5	42	0.000	5	42	0.000	5	42	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.015			0.015			0.030

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.

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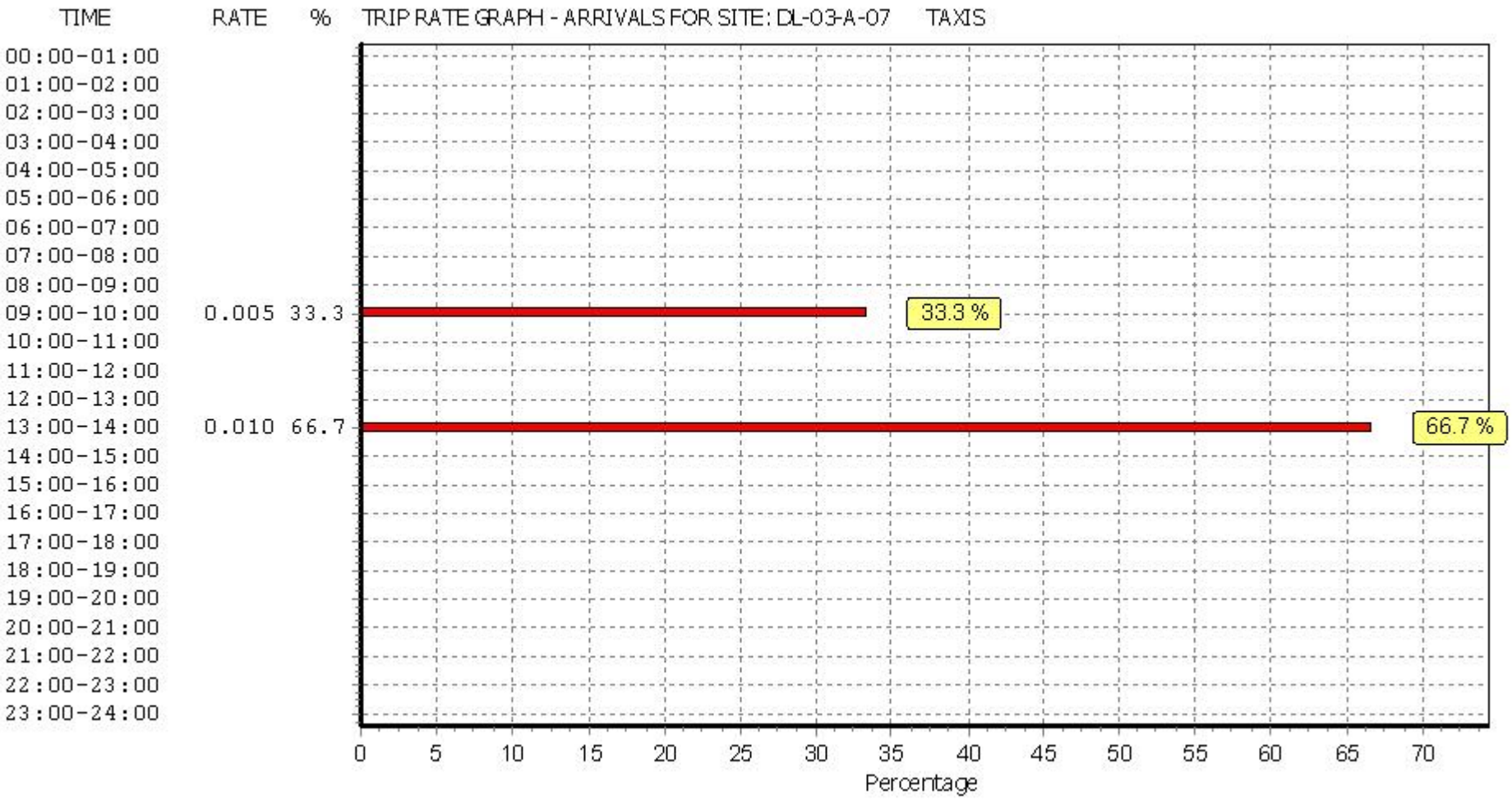
Pinnacle Engineering Consultants Teoranta Patrick Street Dun Laoghaire Licence No: 800401



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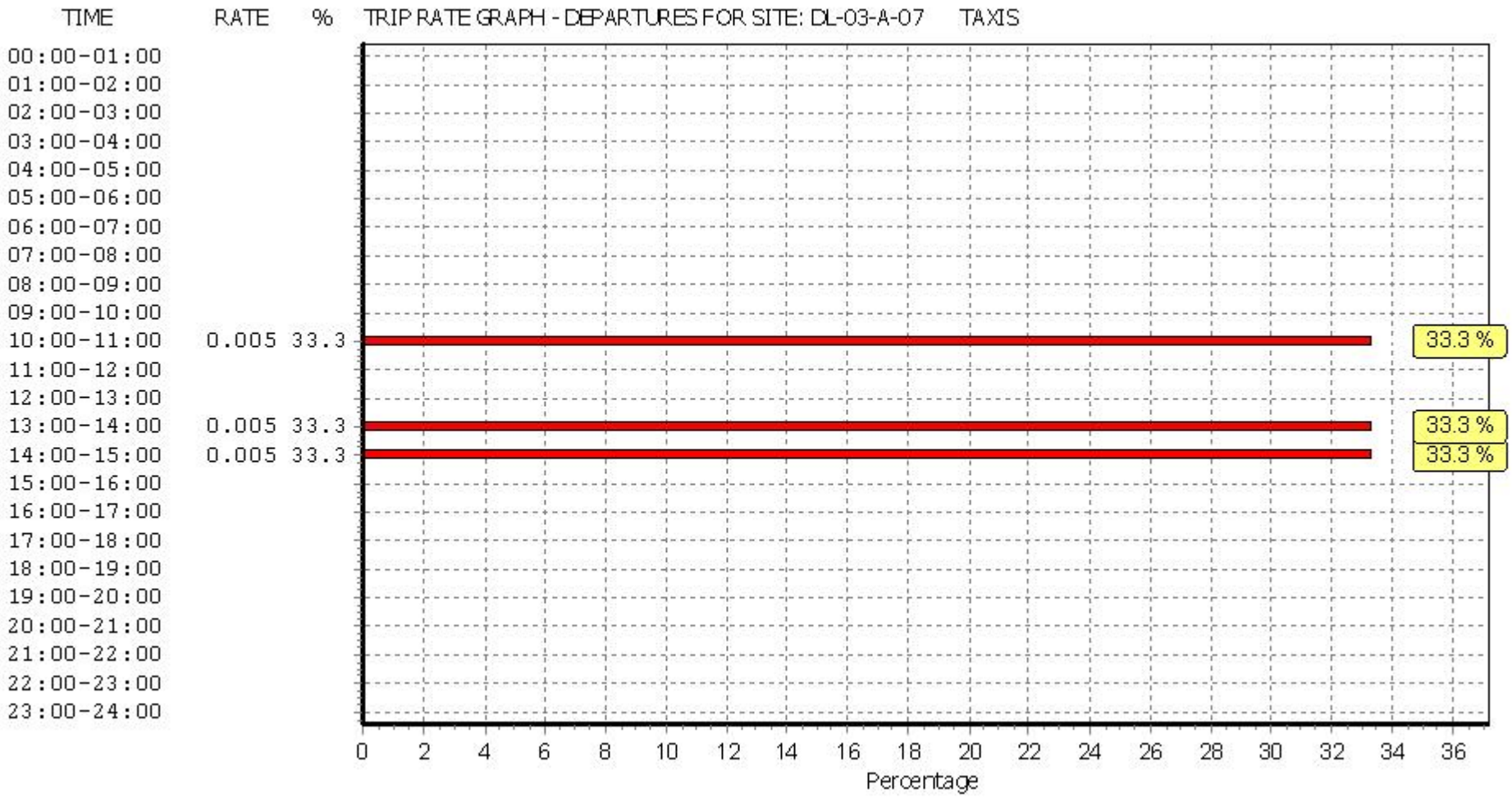
Pinnacle Engineering Consultants Teoranta Patrick Street Dun Laoghaire Licence No: 800401



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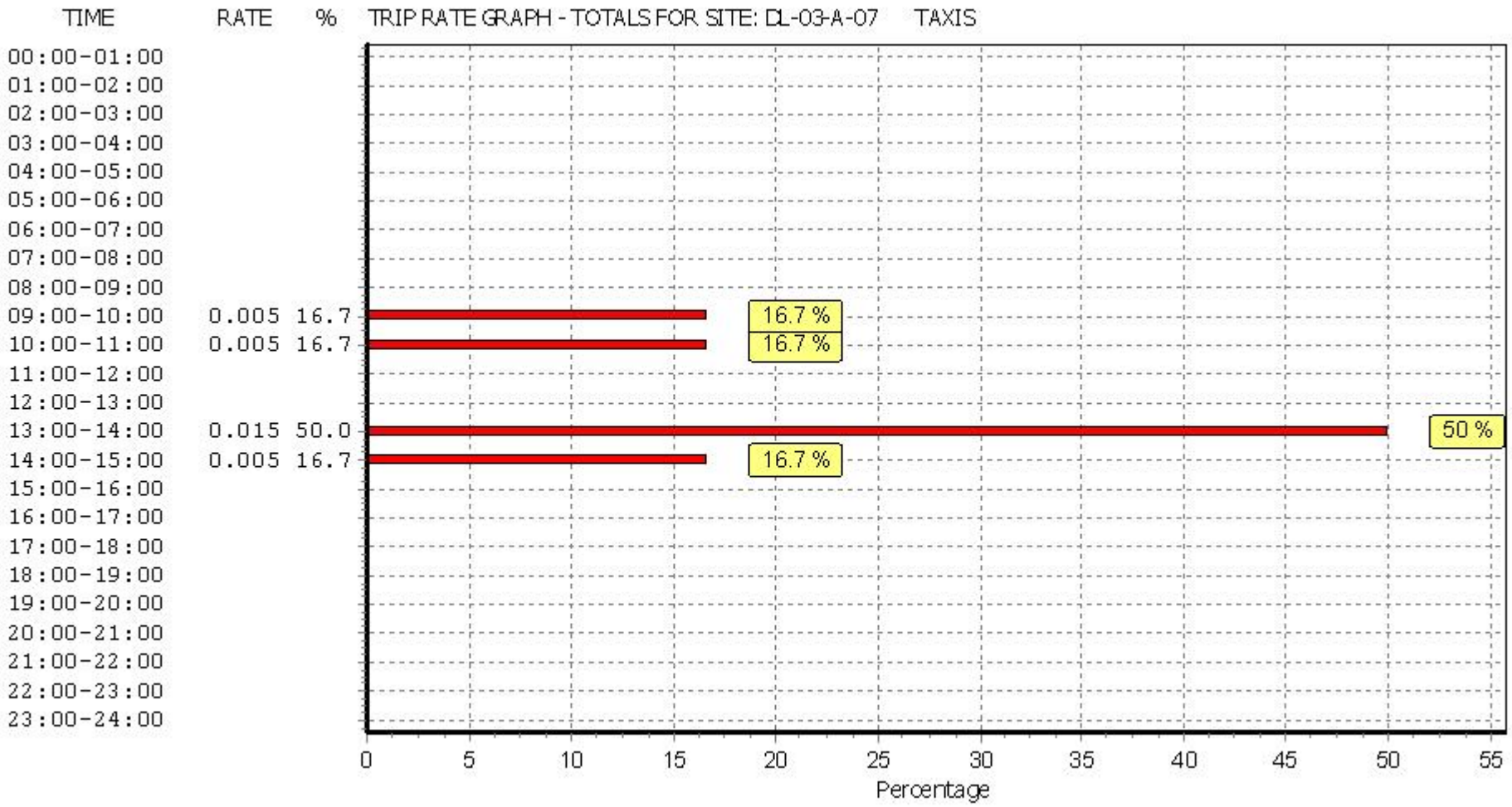

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TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
OGVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	5	42	0.000	5	42	0.000	5	42	0.000
08:00 - 09:00	5	42	0.000	5	42	0.000	5	42	0.000
09:00 - 10:00	5	42	0.010	5	42	0.005	5	42	0.015
10:00 - 11:00	5	42	0.000	5	42	0.005	5	42	0.005
11:00 - 12:00	5	42	0.000	5	42	0.000	5	42	0.000
12:00 - 13:00	5	42	0.000	5	42	0.000	5	42	0.000
13:00 - 14:00	5	42	0.005	5	42	0.005	5	42	0.010
14:00 - 15:00	5	42	0.000	5	42	0.000	5	42	0.000
15:00 - 16:00	5	42	0.005	5	42	0.005	5	42	0.010
16:00 - 17:00	5	42	0.000	5	42	0.000	5	42	0.000
17:00 - 18:00	5	42	0.000	5	42	0.000	5	42	0.000
18:00 - 19:00	5	42	0.000	5	42	0.000	5	42	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.020			0.020			0.040

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.

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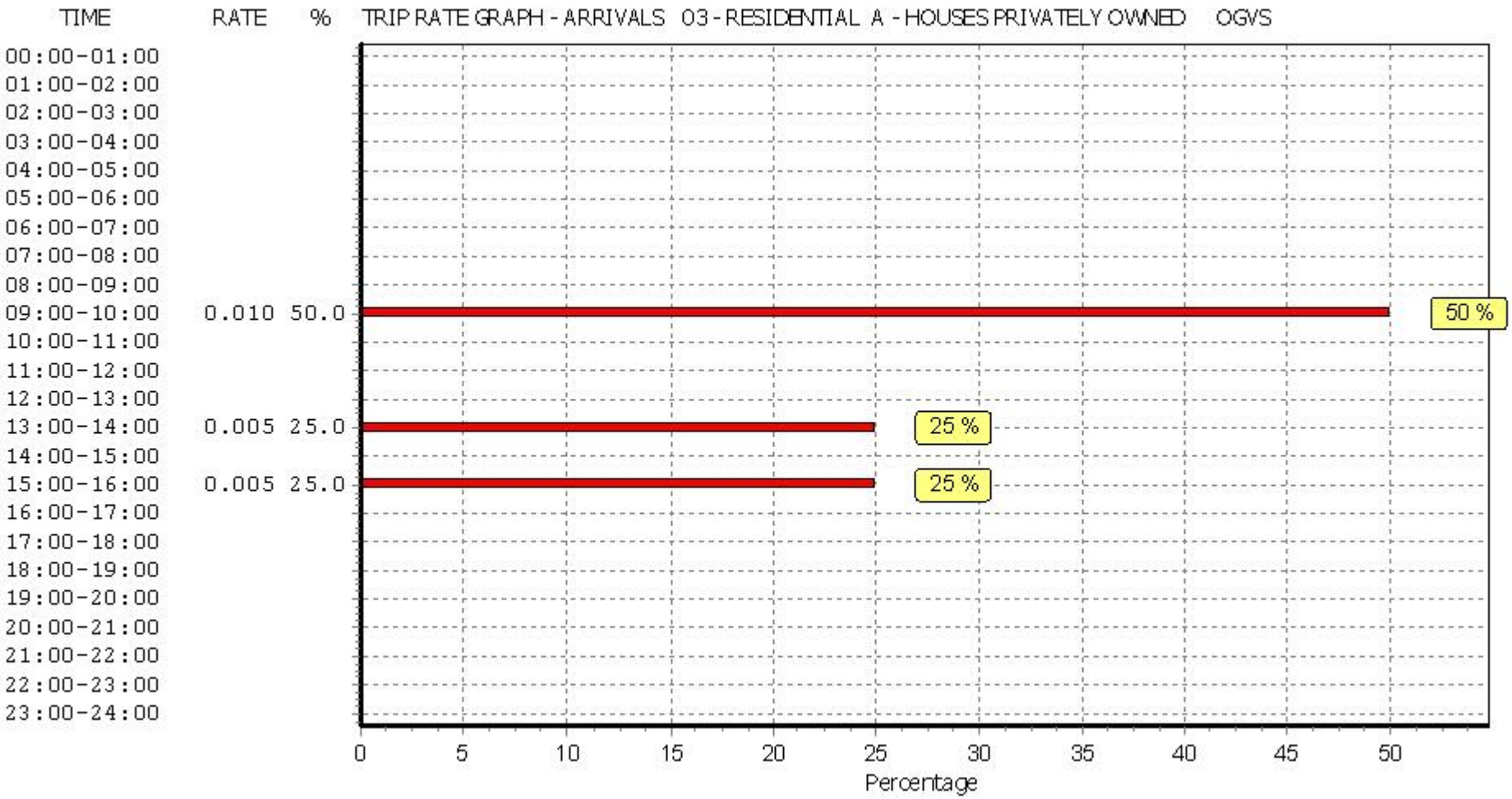

This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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

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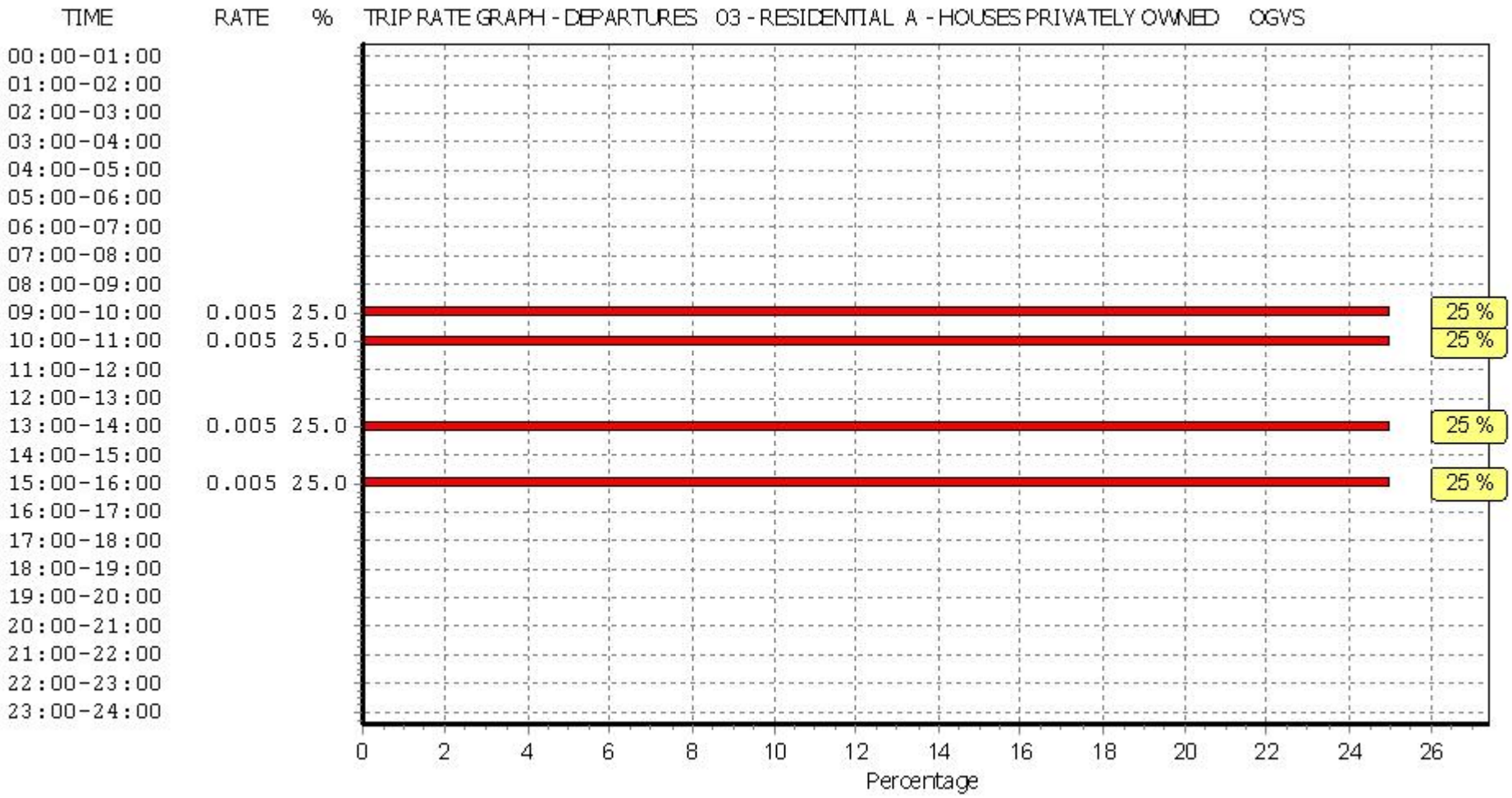

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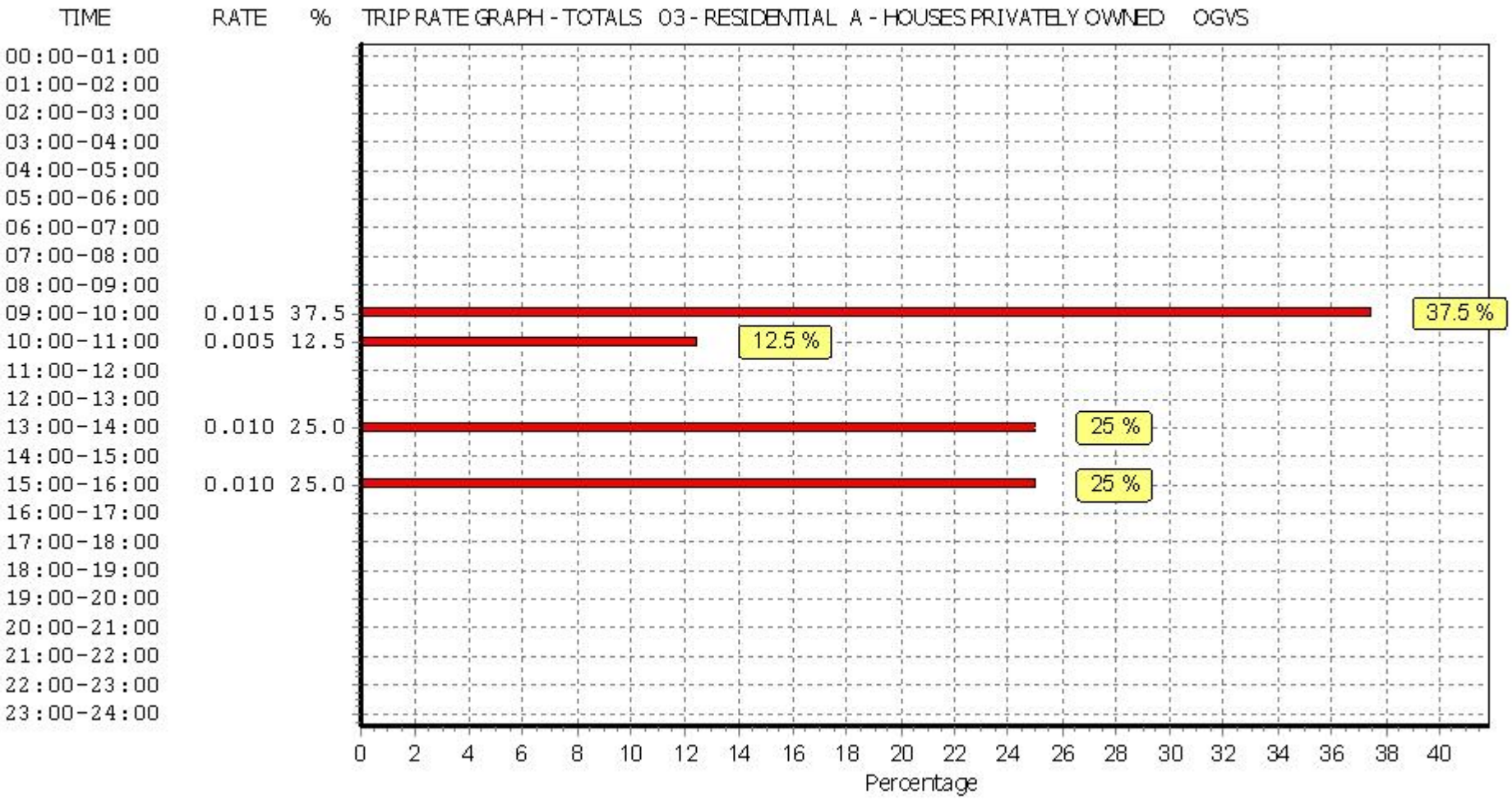

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TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
CYCLISTS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	5	42	0.010	5	42	0.014	5	42	0.024
08:00 - 09:00	5	42	0.000	5	42	0.063	5	42	0.062
09:00 - 10:00	5	42	0.005	5	42	0.034	5	42	0.039
10:00 - 11:00	5	42	0.010	5	42	0.005	5	42	0.015
11:00 - 12:00	5	42	0.010	5	42	0.019	5	42	0.029
12:00 - 13:00	5	42	0.005	5	42	0.005	5	42	0.010
13:00 - 14:00	5	42	0.019	5	42	0.014	5	42	0.033
14:00 - 15:00	5	42	0.010	5	42	0.000	5	42	0.010
15:00 - 16:00	5	42	0.019	5	42	0.000	5	42	0.019
16:00 - 17:00	5	42	0.029	5	42	0.005	5	42	0.034
17:00 - 18:00	5	42	0.034	5	42	0.000	5	42	0.034
18:00 - 19:00	5	42	0.005	5	42	0.000	5	42	0.005
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.156			0.158			0.314

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.

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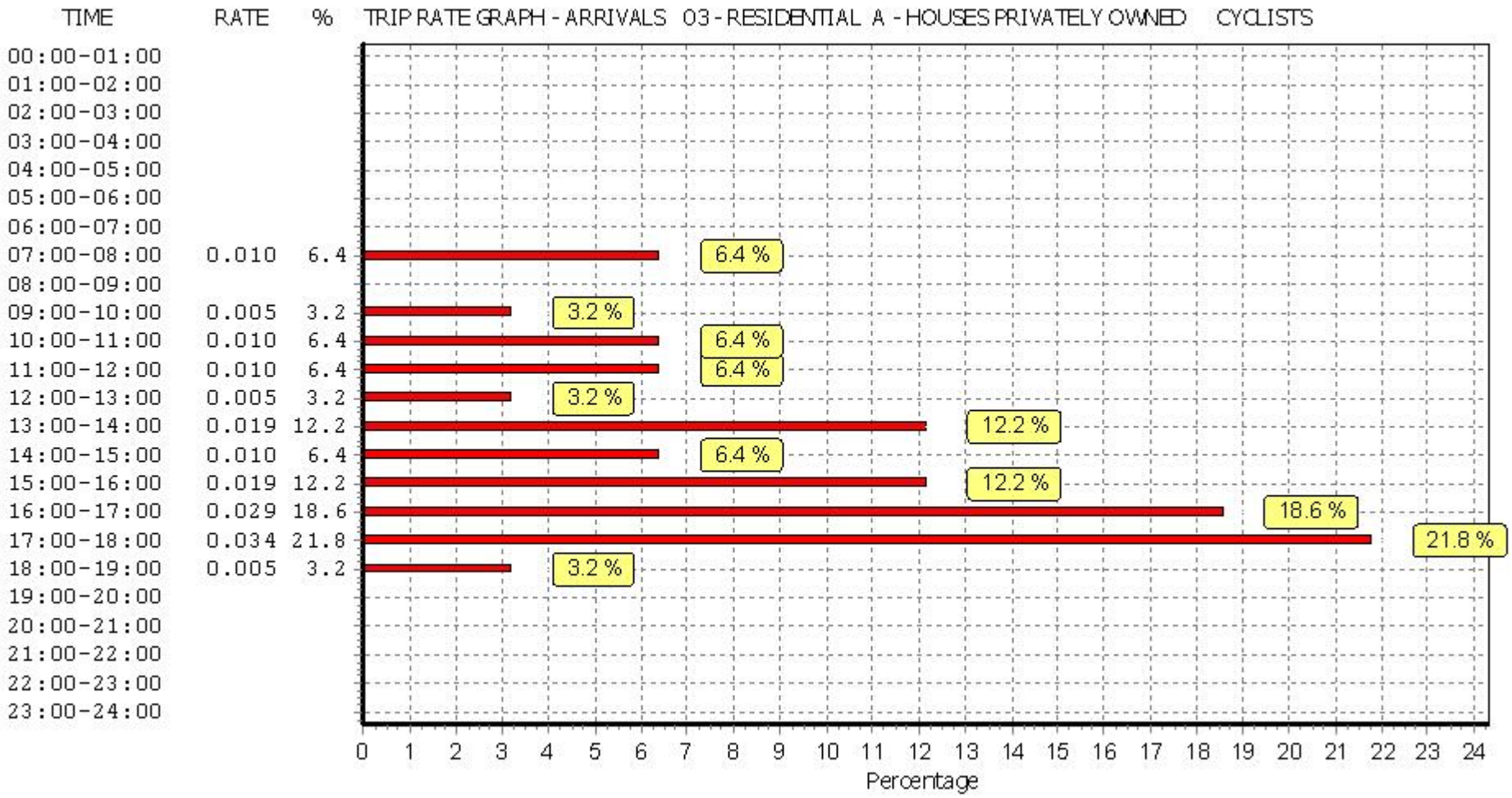
Pinnacle Engineering Consultants Teoranta Patrick Street Dun Laoghaire Licence No: 800401



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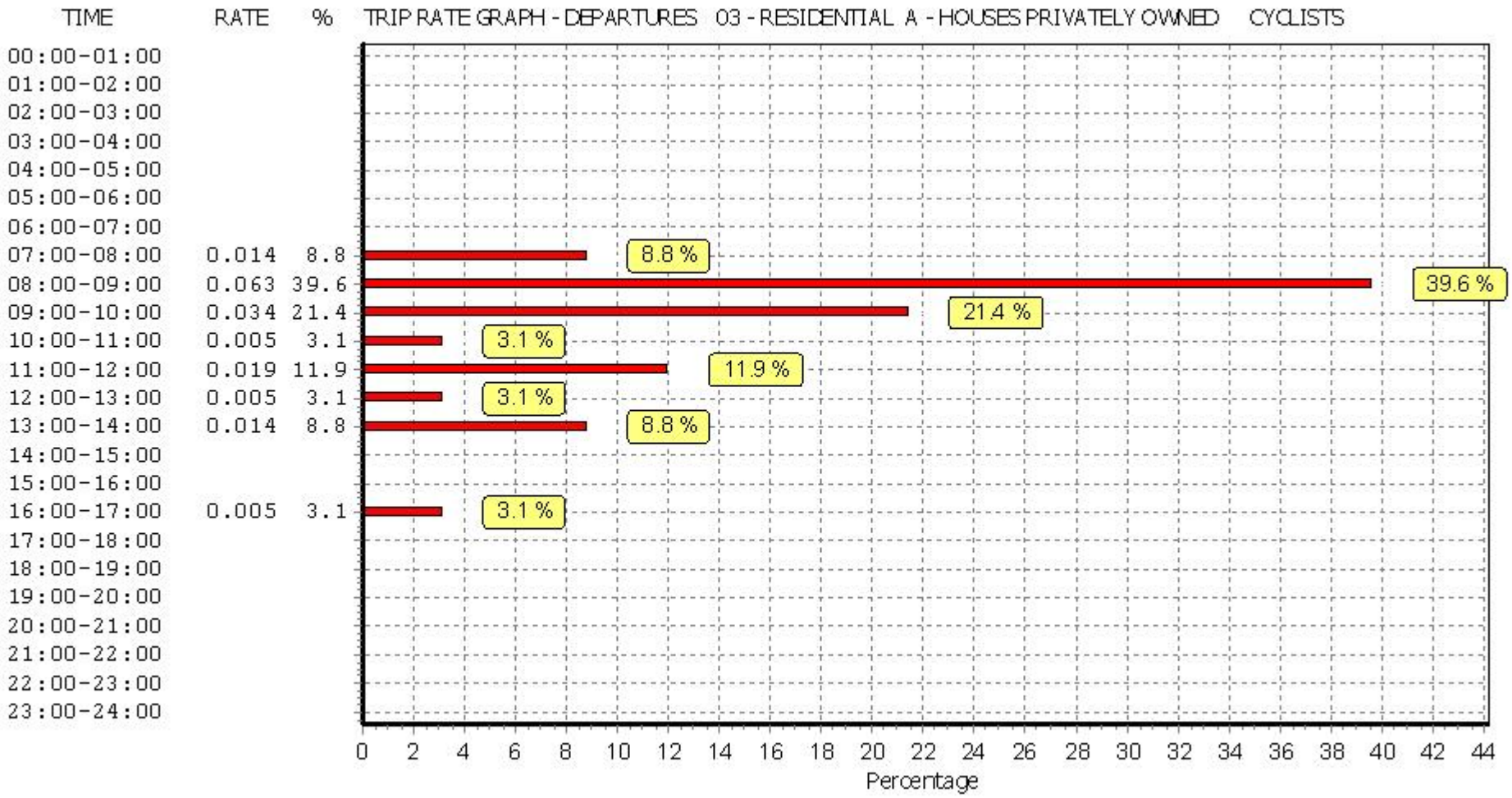

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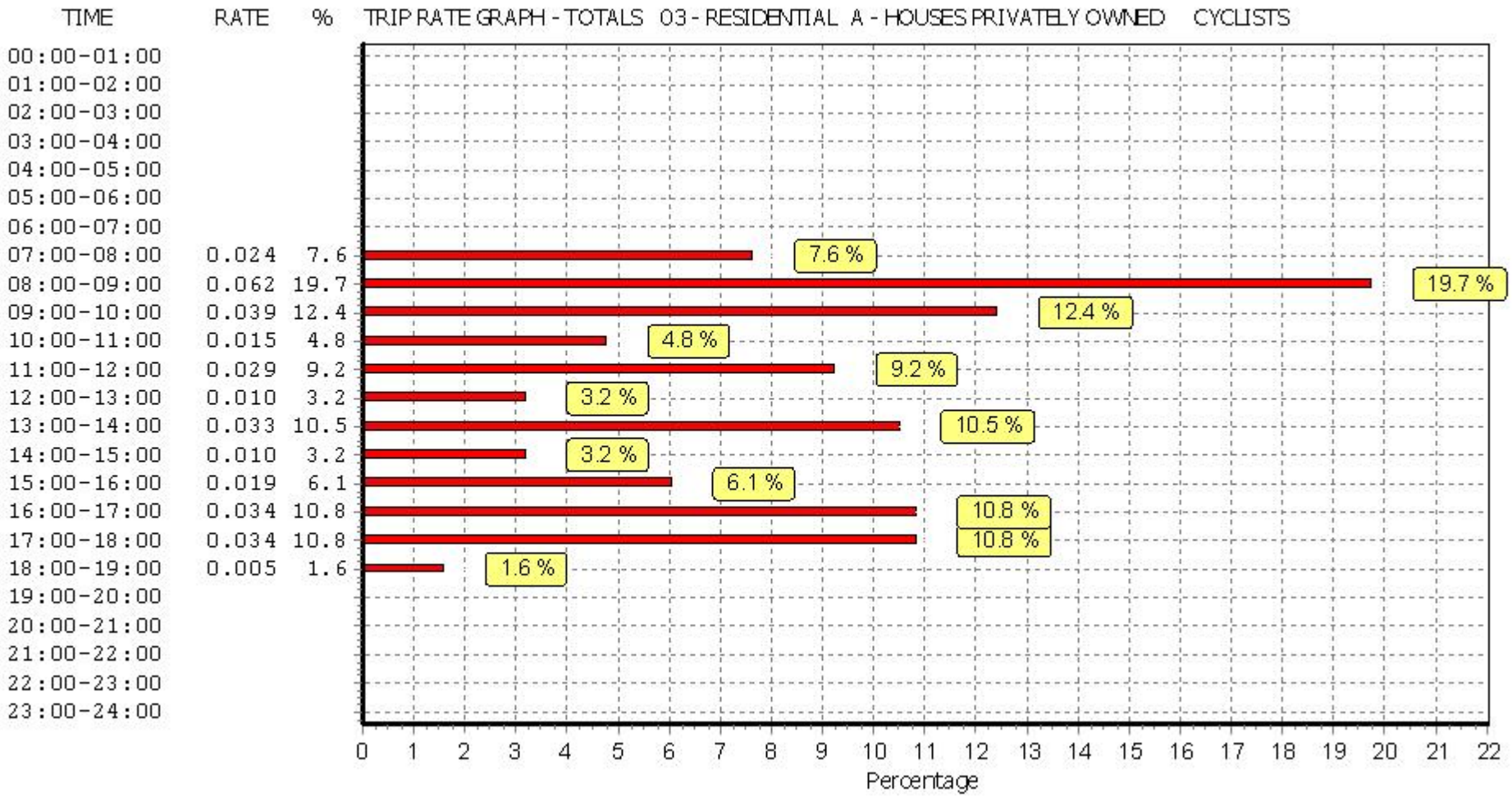

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Calculation Reference: AUDIT-800401-190409-0459

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

12	CONNAUGHT		
	GA	GALWAY	1 days
	RO	ROSCOMMON	1 days
13	MUNSTER		
	LI	LIMERICK	2 days
	TI	TIPPERARY	1 days
14	LEINSTER		
	LU	LOUTH	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 pupils
Actual Range: 82 to 1020 (units:)
Range Selected by User: 82 to 1020 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/11 to 27/10/16

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:

Thursday	6 days
Friday	1 days

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

Selected survey types:

Manual count	7 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:

Edge of Town Centre	4
Edge of Town	2
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
No Sub Category	1

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

Secondary Filtering selection:

Use Class:

D1	7 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:

1,000 or Less	1 days
1,001 to 5,000	2 days
5,001 to 10,000	1 days
15,001 to 20,000	3 days

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

Population within 5 miles:

5,000 or Less	2 days
25,001 to 50,000	2 days
75,001 to 100,000	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	1 days
1.1 to 1.5	6 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	6 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	7 days

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

LIST OF SITES relevant to selection parameters

1 GA-04-A-01 PRIMARY SCHOOL GALWAY
SALTHILL ROAD LOWER
GALWAY

Edge of Town Centre
Residential Zone
Total Number of pupils: 249
Survey date: THURSDAY *11/10/12* *Survey Type: MANUAL*

2 LI-04-A-02 PRIMARY SCHOOL LIMERICK
SHELBOURNE ROAD
LIMERICK

Edge of Town Centre
Residential Zone
Total Number of pupils: 180
Survey date: THURSDAY *07/11/13* *Survey Type: MANUAL*

3 LI-04-A-03 PRIMARY SCHOOL LIMERICK
DUBLIN ROAD
LIMERICK
QUARRY HILL
Edge of Town Centre
Residential Zone
Total Number of pupils: 225
Survey date: THURSDAY *07/11/13* *Survey Type: MANUAL*

4 LU-04-A-01 PRIMARY SCHOOL LOUTH
UNION STREET
DUNDALK

Edge of Town Centre
No Sub Category
Total Number of pupils: 324
Survey date: THURSDAY *12/09/13* *Survey Type: MANUAL*

5 LU-04-A-02 PRIMARY SCHOOL LOUTH
BRYANSTOWN
DROGHEDA
BRYANSTOWN MANOR
Edge of Town
Residential Zone
Total Number of pupils: 1020
Survey date: FRIDAY *19/06/15* *Survey Type: MANUAL*

6 RO-04-A-01 PRIMARY SCHOOL ROSCOMMON
WARREN ROAD
BOYLE

Edge of Town
Residential Zone
Total Number of pupils: 82
Survey date: THURSDAY *25/09/14* *Survey Type: MANUAL*

7 TI-04-A-01 PRIMARY SCHOOL TIPPERARY
OLD ROAD
NEAR NENAGH
SILVERMINES
Neighbourhood Centre (PPS6 Local Centre)
Village
Total Number of pupils: 84
Survey date: THURSDAY *26/05/16* *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

	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	7	309	0.012	7	309	0.003	7	309	0.015
08:00 - 09:00	7	309	0.176	7	309	0.094	7	309	0.270
09:00 - 10:00	7	309	0.094	7	309	0.115	7	309	0.209
10:00 - 11:00	7	309	0.008	7	309	0.010	7	309	0.018
11:00 - 12:00	7	309	0.005	7	309	0.006	7	309	0.011
12:00 - 13:00	7	309	0.011	7	309	0.007	7	309	0.018
13:00 - 14:00	7	309	0.053	7	309	0.042	7	309	0.095
14:00 - 15:00	7	309	0.098	7	309	0.086	7	309	0.184
15:00 - 16:00	7	309	0.032	7	309	0.104	7	309	0.136
16:00 - 17:00	7	309	0.005	7	309	0.016	7	309	0.021
17:00 - 18:00	7	309	0.022	7	309	0.019	7	309	0.041
18:00 - 19:00	7	309	0.004	7	309	0.015	7	309	0.019
19:00 - 20:00	2	672	0.000	2	672	0.001	2	672	0.001
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.520			0.518			1.038

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.

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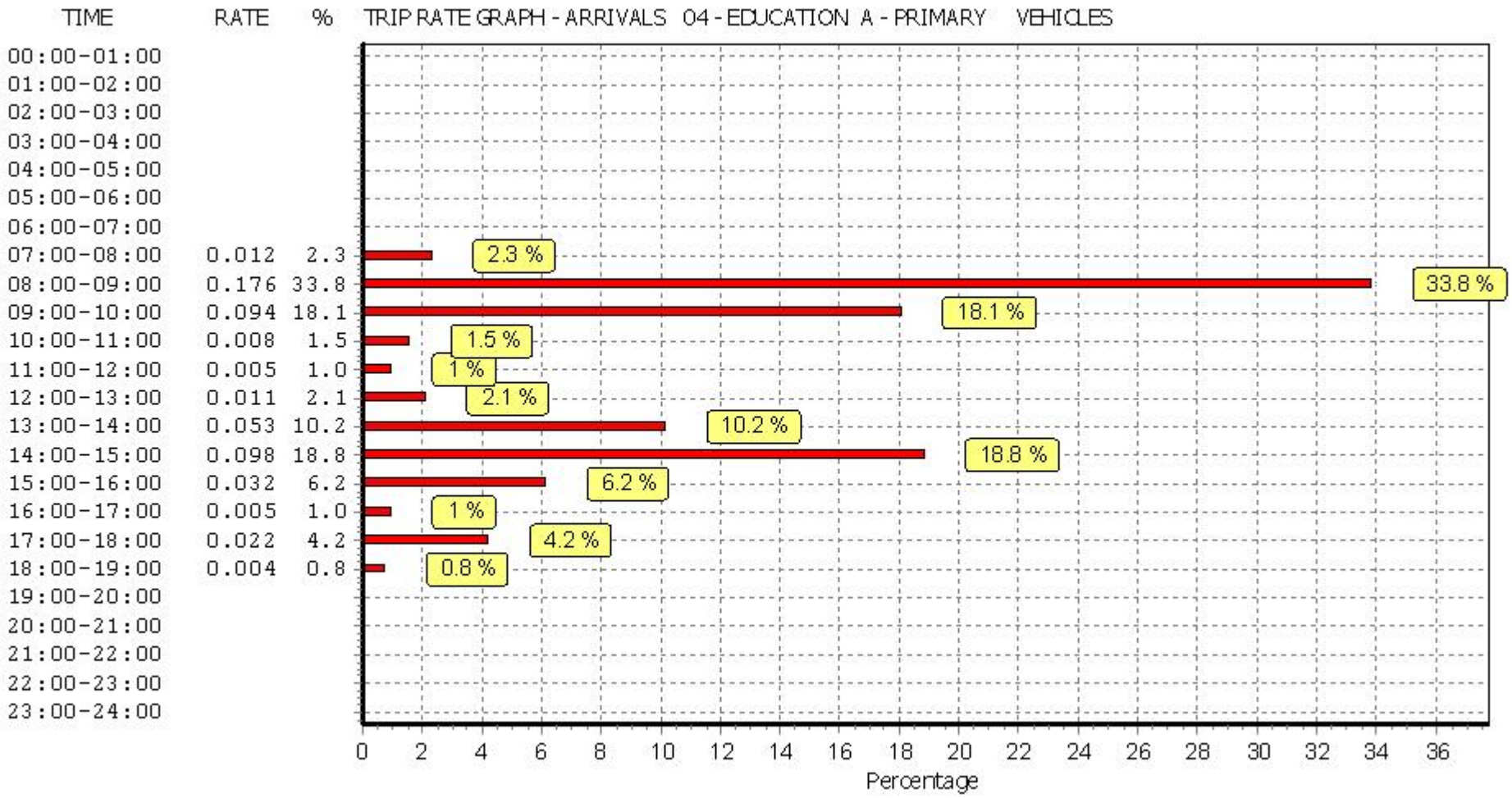
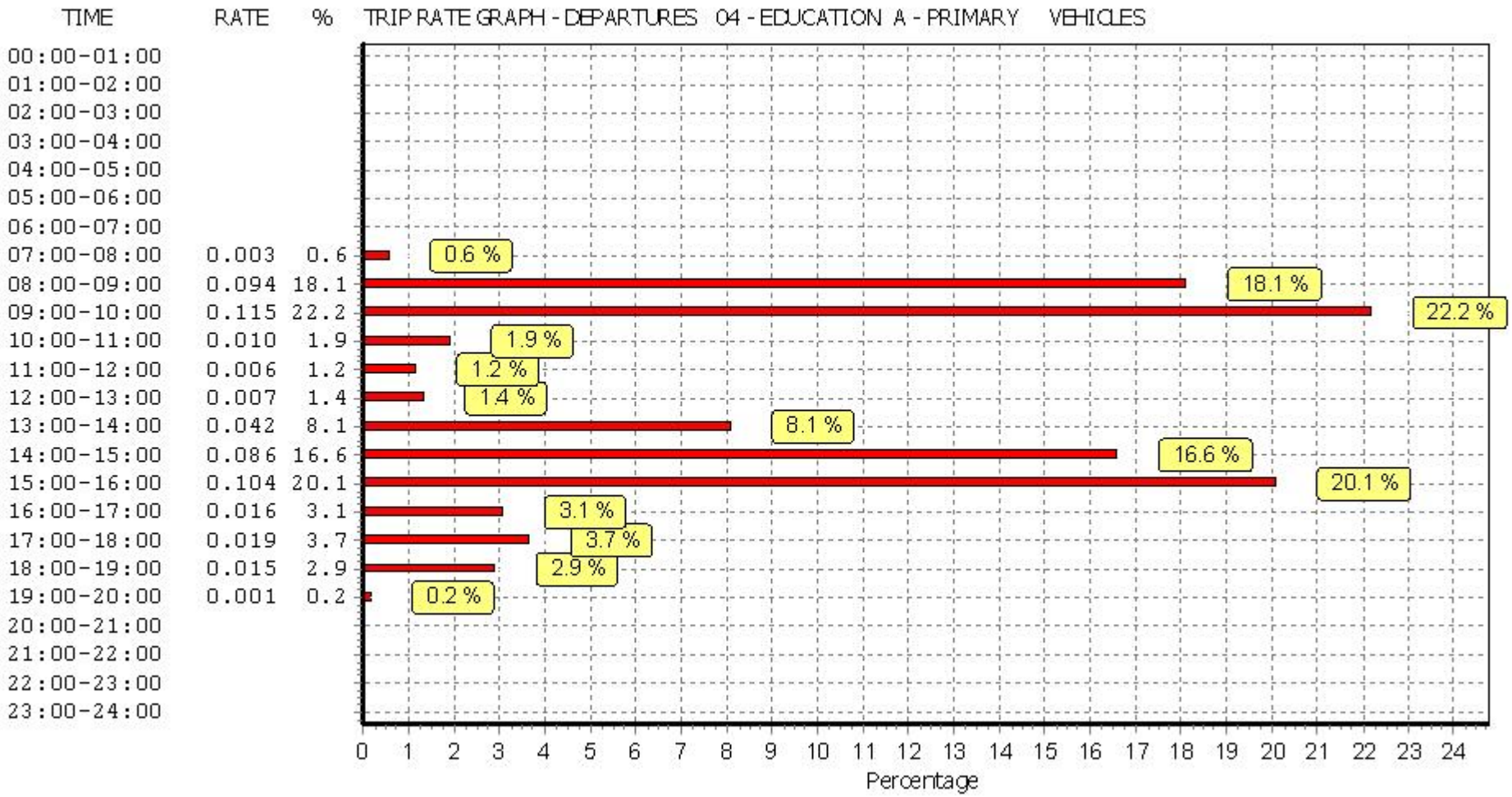
Parameter summary

Trip rate parameter range selected:	82 - 1020 (units:)
Survey date date range:	01/01/11 - 27/10/16
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

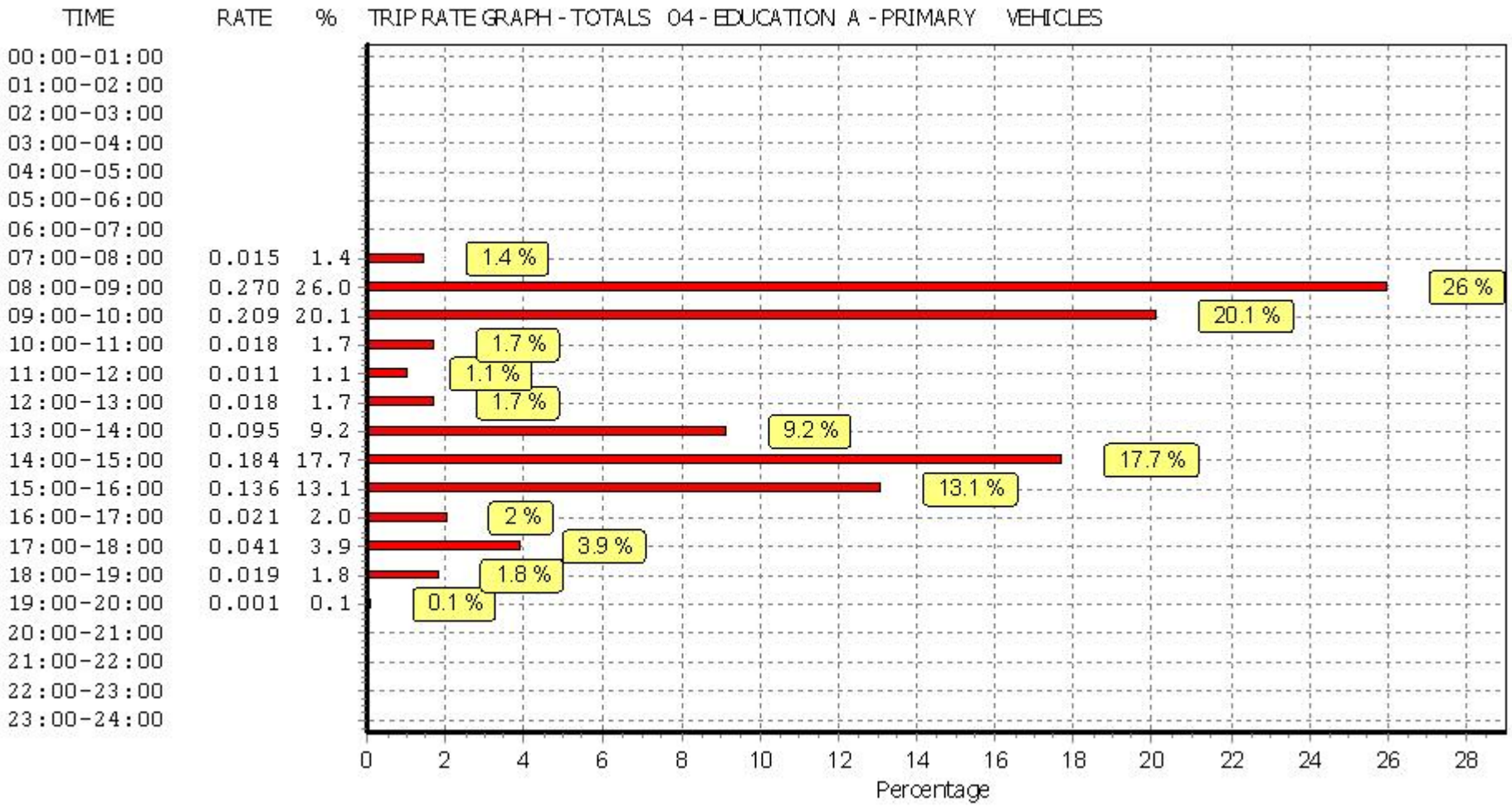
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected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



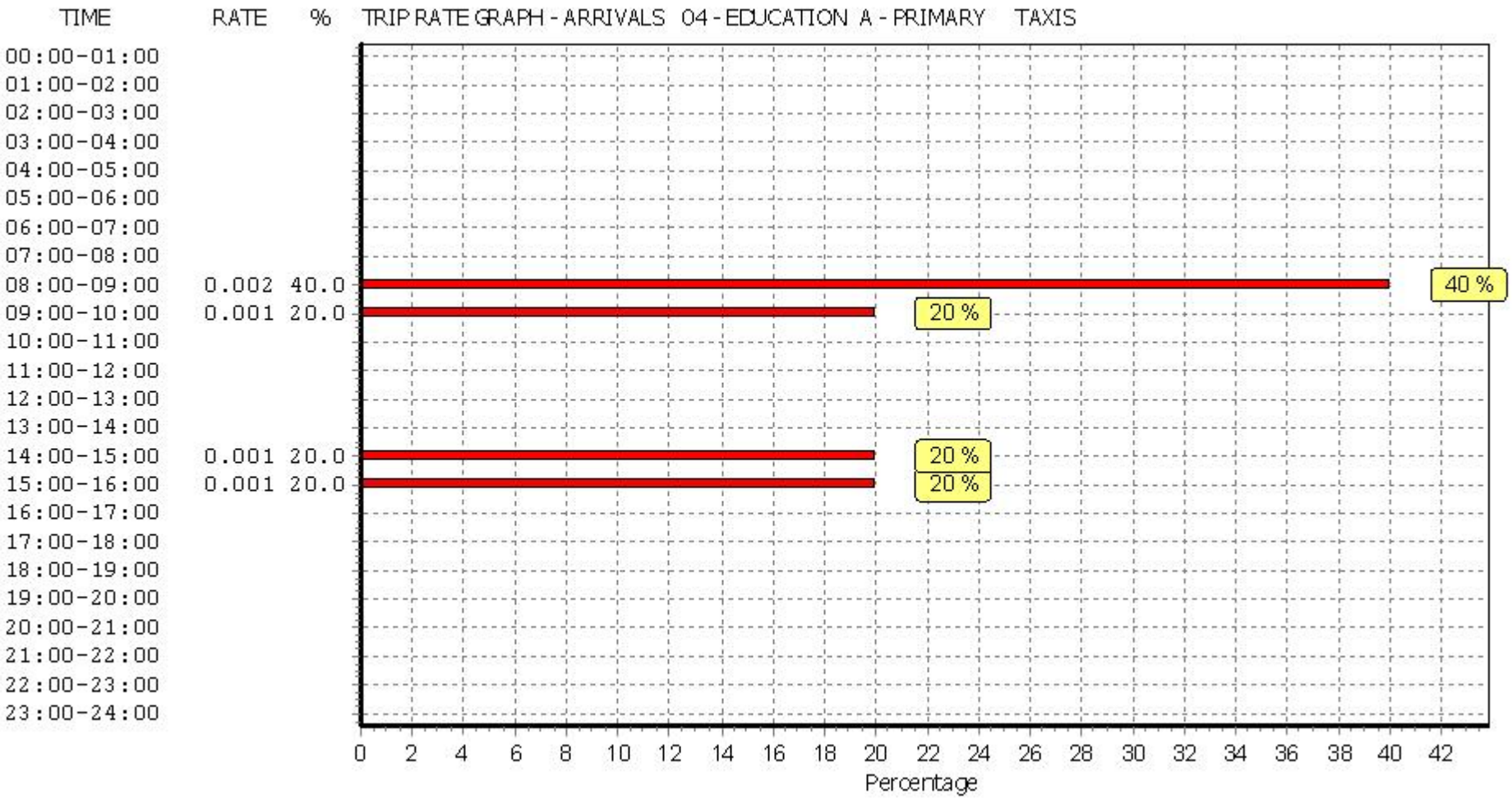
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through 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
TAXIS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

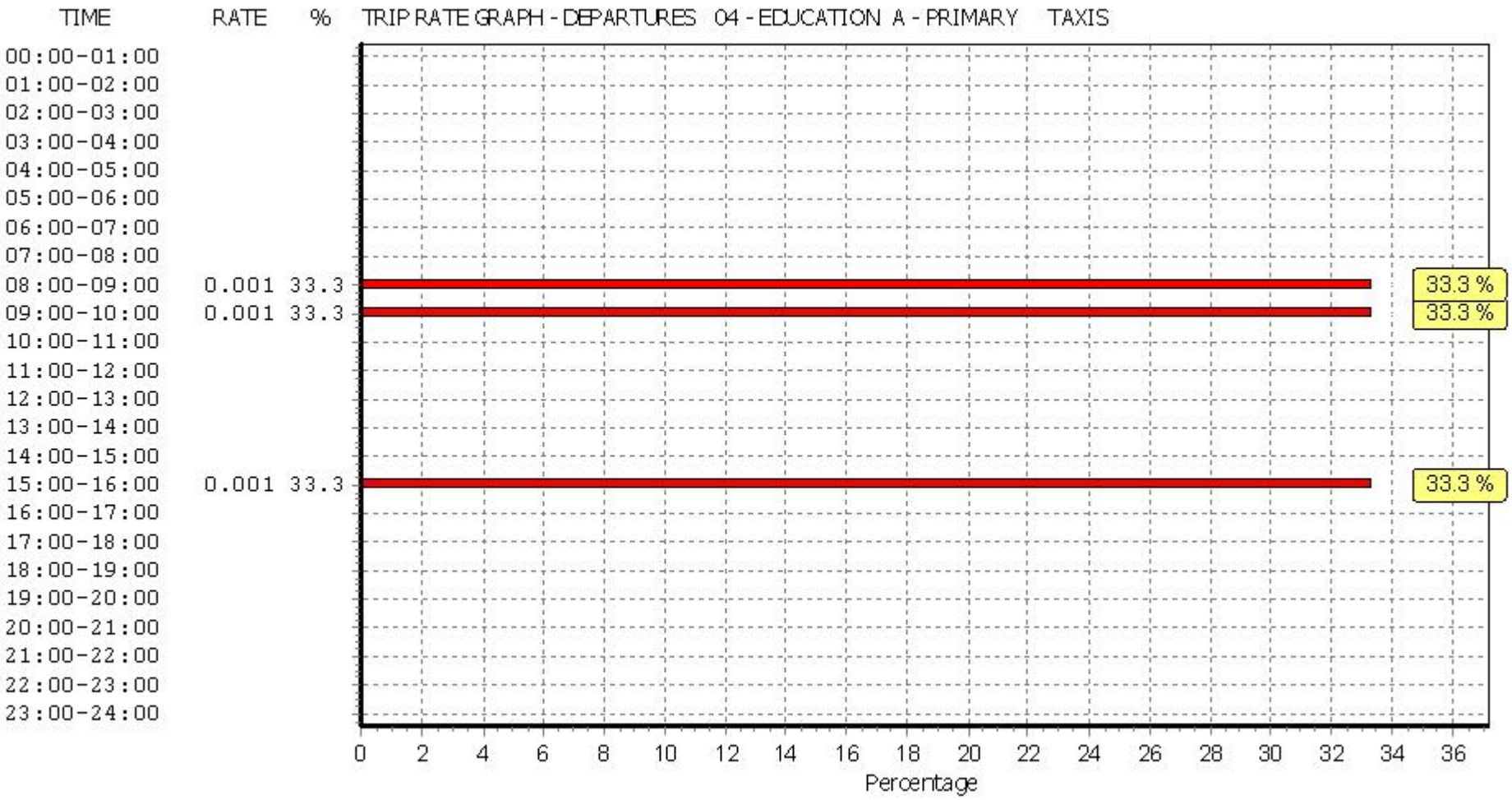
	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	7	309	0.000	7	309	0.000	7	309	0.000
08:00 - 09:00	7	309	0.002	7	309	0.001	7	309	0.003
09:00 - 10:00	7	309	0.001	7	309	0.001	7	309	0.002
10:00 - 11:00	7	309	0.000	7	309	0.000	7	309	0.000
11:00 - 12:00	7	309	0.000	7	309	0.000	7	309	0.000
12:00 - 13:00	7	309	0.000	7	309	0.000	7	309	0.000
13:00 - 14:00	7	309	0.000	7	309	0.000	7	309	0.000
14:00 - 15:00	7	309	0.001	7	309	0.000	7	309	0.001
15:00 - 16:00	7	309	0.001	7	309	0.001	7	309	0.002
16:00 - 17:00	7	309	0.000	7	309	0.000	7	309	0.000
17:00 - 18:00	7	309	0.000	7	309	0.000	7	309	0.000
18:00 - 19:00	7	309	0.000	7	309	0.000	7	309	0.000
19:00 - 20:00	2	672	0.000	2	672	0.000	2	672	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.005			0.003			0.008

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.

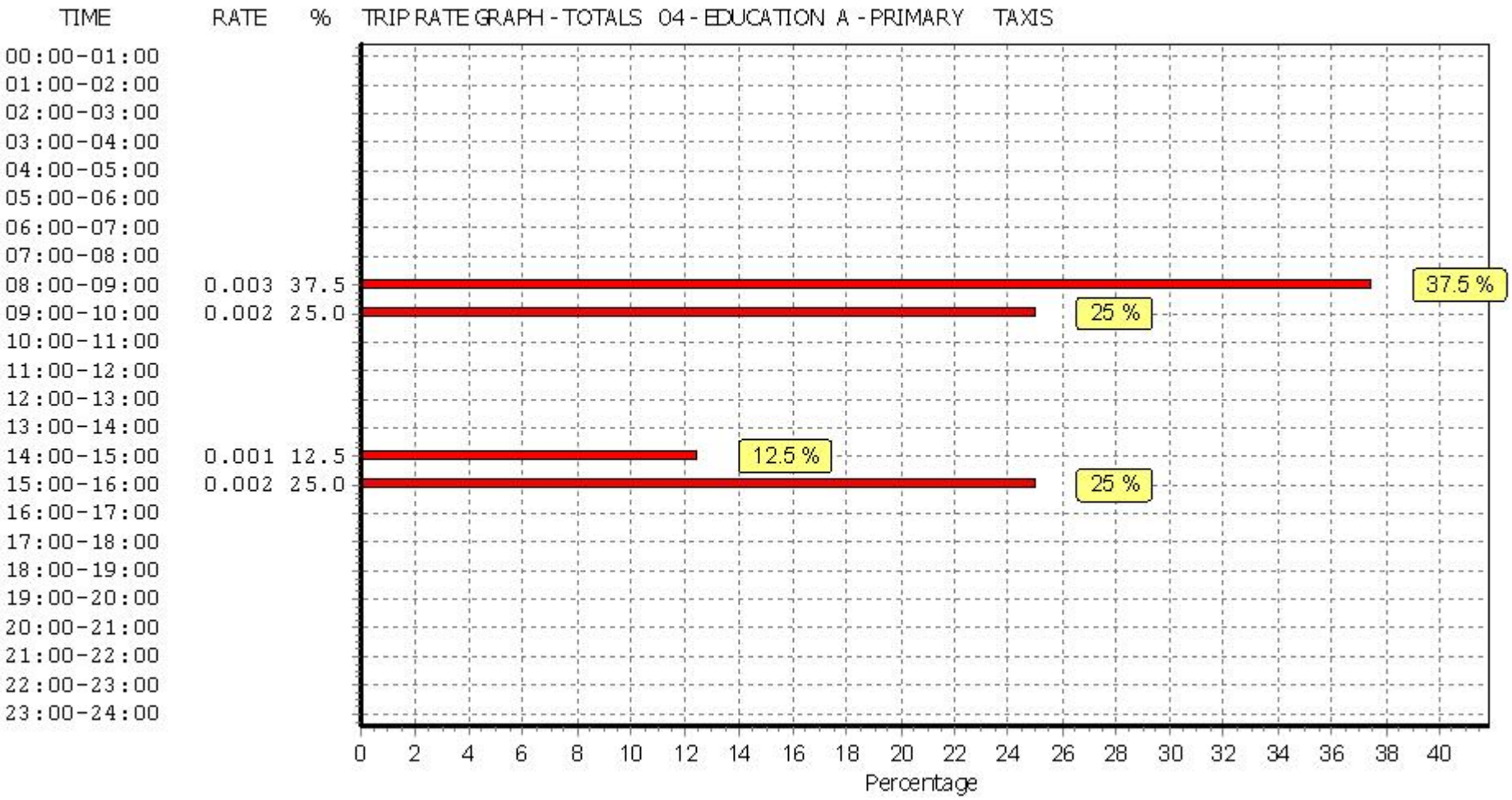
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected 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.*



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.



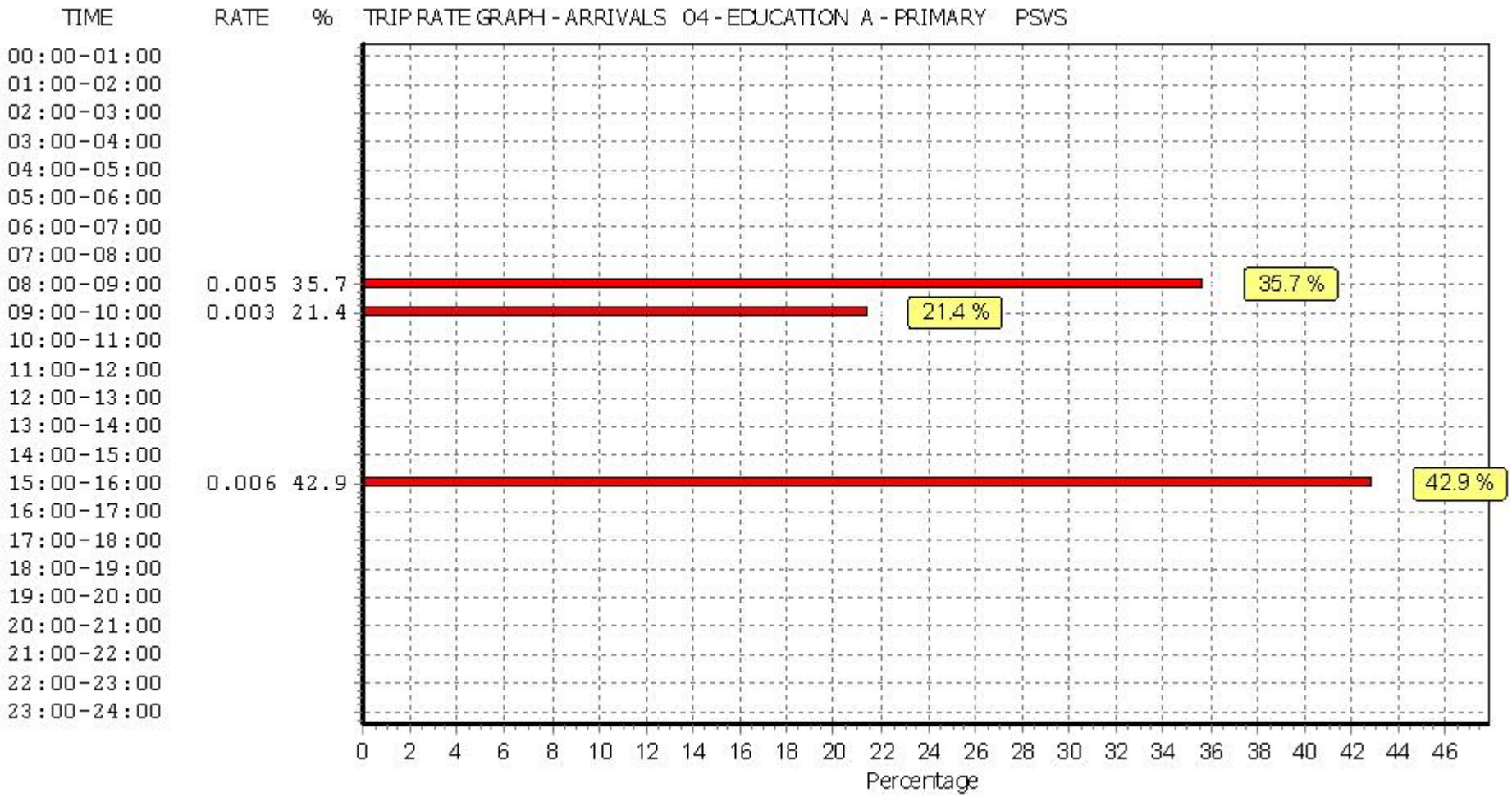
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through 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
PSVS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

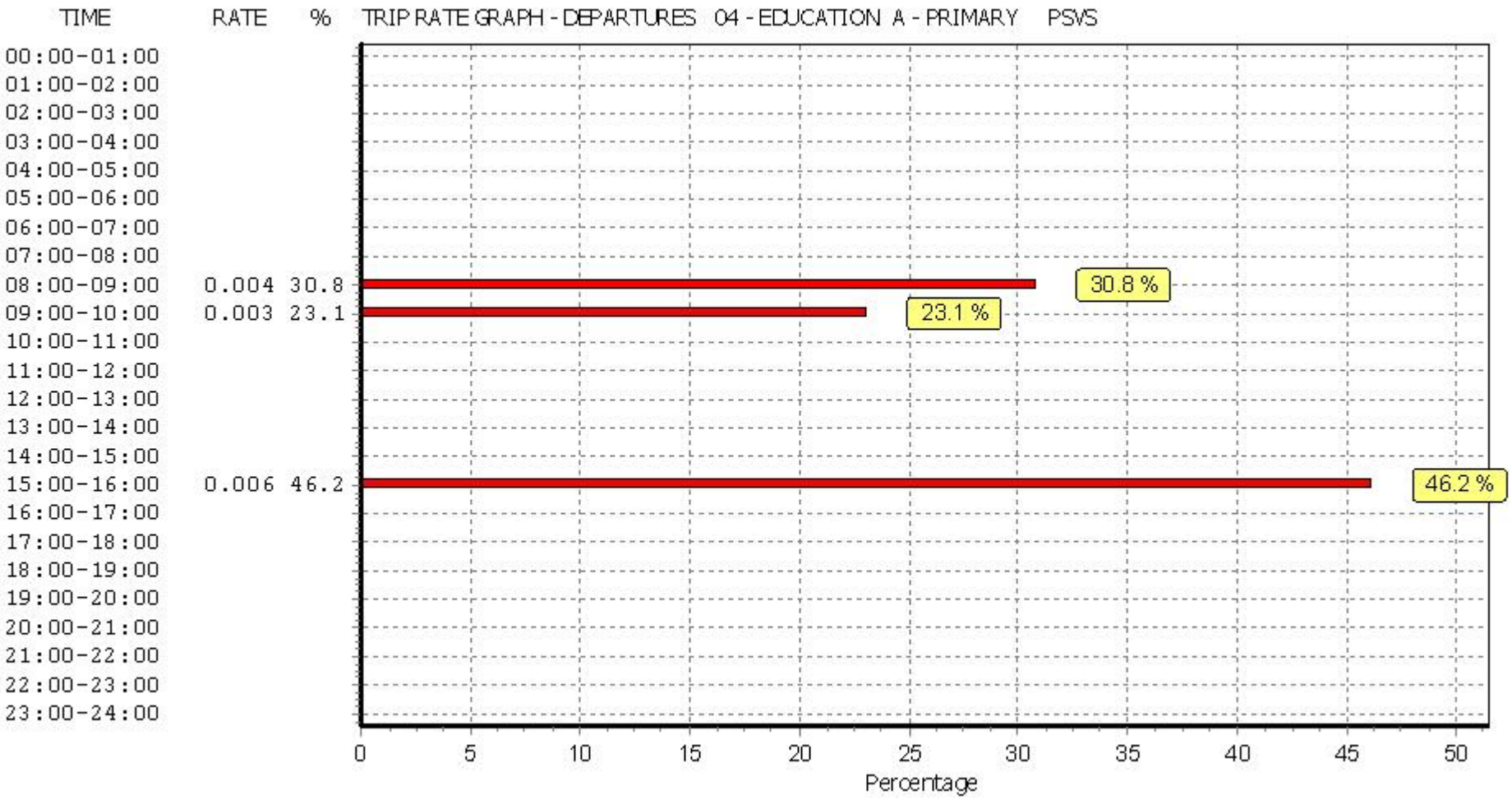
	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	7	309	0.000	7	309	0.000	7	309	0.000
08:00 - 09:00	7	309	0.005	7	309	0.004	7	309	0.009
09:00 - 10:00	7	309	0.003	7	309	0.003	7	309	0.006
10:00 - 11:00	7	309	0.000	7	309	0.000	7	309	0.000
11:00 - 12:00	7	309	0.000	7	309	0.000	7	309	0.000
12:00 - 13:00	7	309	0.000	7	309	0.000	7	309	0.000
13:00 - 14:00	7	309	0.000	7	309	0.000	7	309	0.000
14:00 - 15:00	7	309	0.000	7	309	0.000	7	309	0.000
15:00 - 16:00	7	309	0.006	7	309	0.006	7	309	0.012
16:00 - 17:00	7	309	0.000	7	309	0.000	7	309	0.000
17:00 - 18:00	7	309	0.000	7	309	0.000	7	309	0.000
18:00 - 19:00	7	309	0.000	7	309	0.000	7	309	0.000
19:00 - 20:00	2	672	0.000	2	672	0.000	2	672	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.014			0.013			0.027

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.

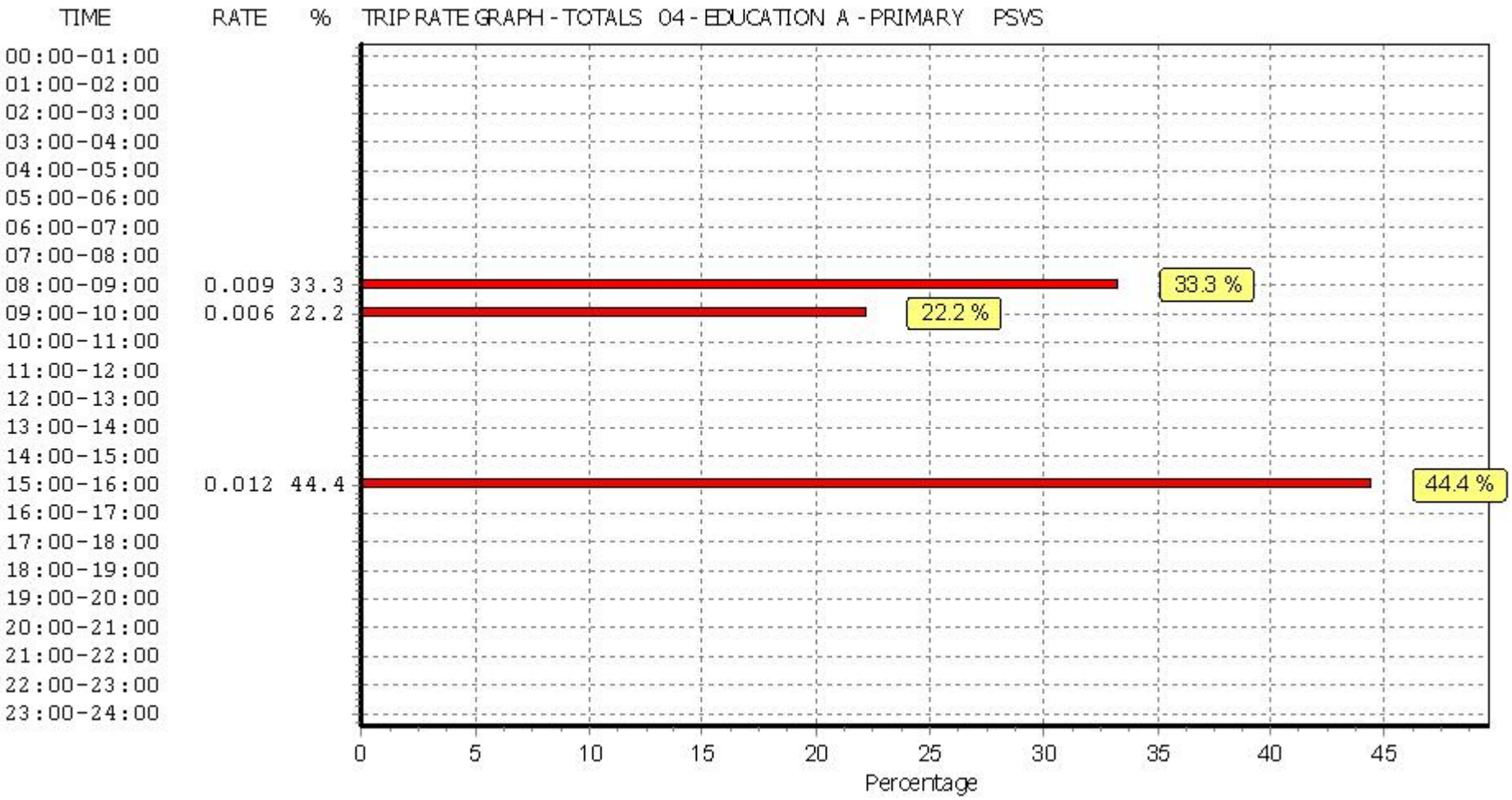
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected 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.*



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.



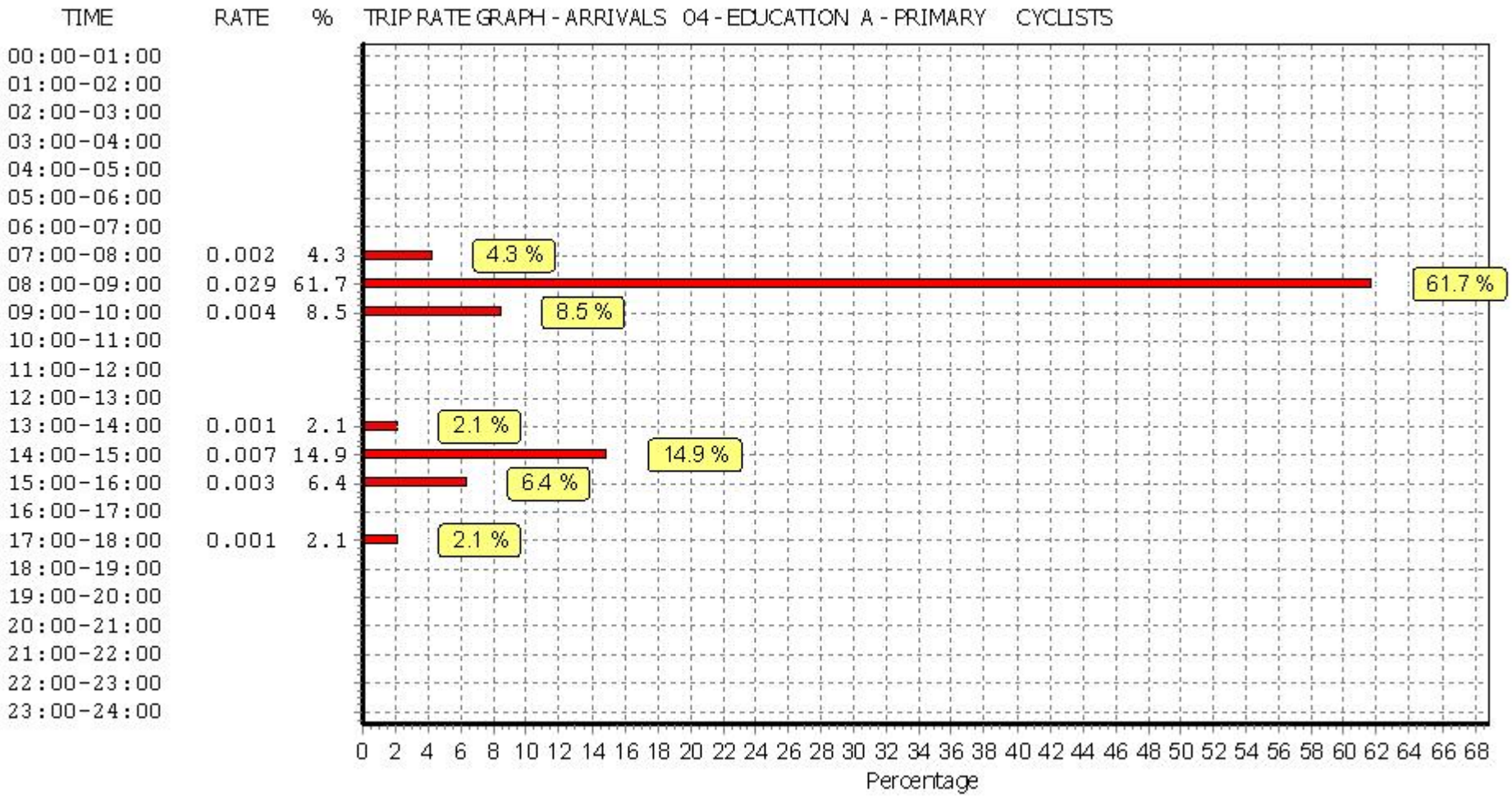
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through 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
CYCLISTS
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

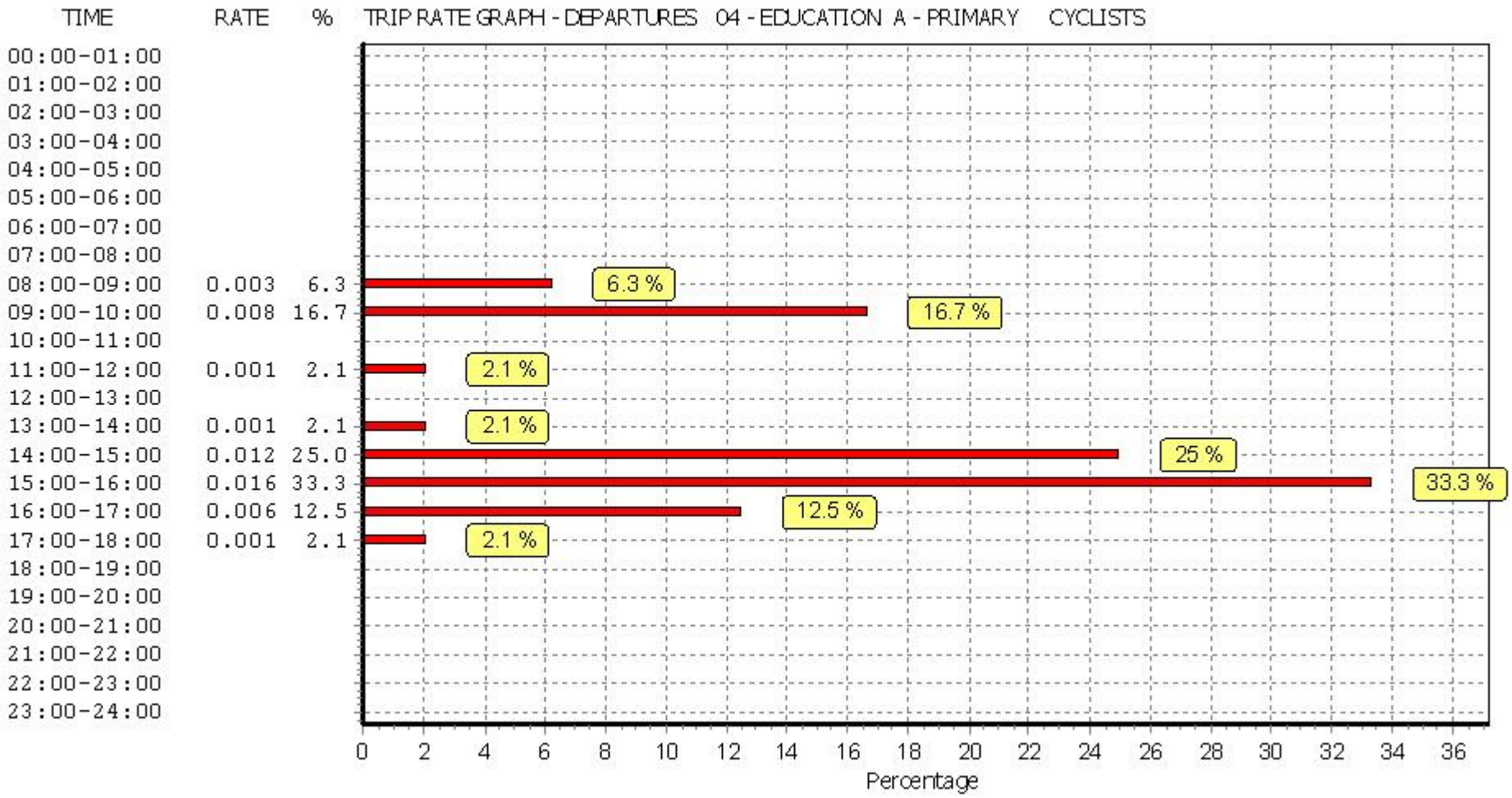
	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	7	309	0.002	7	309	0.000	7	309	0.002
08:00 - 09:00	7	309	0.029	7	309	0.003	7	309	0.032
09:00 - 10:00	7	309	0.004	7	309	0.008	7	309	0.012
10:00 - 11:00	7	309	0.000	7	309	0.000	7	309	0.000
11:00 - 12:00	7	309	0.000	7	309	0.001	7	309	0.001
12:00 - 13:00	7	309	0.000	7	309	0.000	7	309	0.000
13:00 - 14:00	7	309	0.001	7	309	0.001	7	309	0.002
14:00 - 15:00	7	309	0.007	7	309	0.012	7	309	0.019
15:00 - 16:00	7	309	0.003	7	309	0.016	7	309	0.019
16:00 - 17:00	7	309	0.000	7	309	0.006	7	309	0.006
17:00 - 18:00	7	309	0.001	7	309	0.001	7	309	0.002
18:00 - 19:00	7	309	0.000	7	309	0.000	7	309	0.000
19:00 - 20:00	2	672	0.000	2	672	0.000	2	672	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.047			0.048			0.095

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.

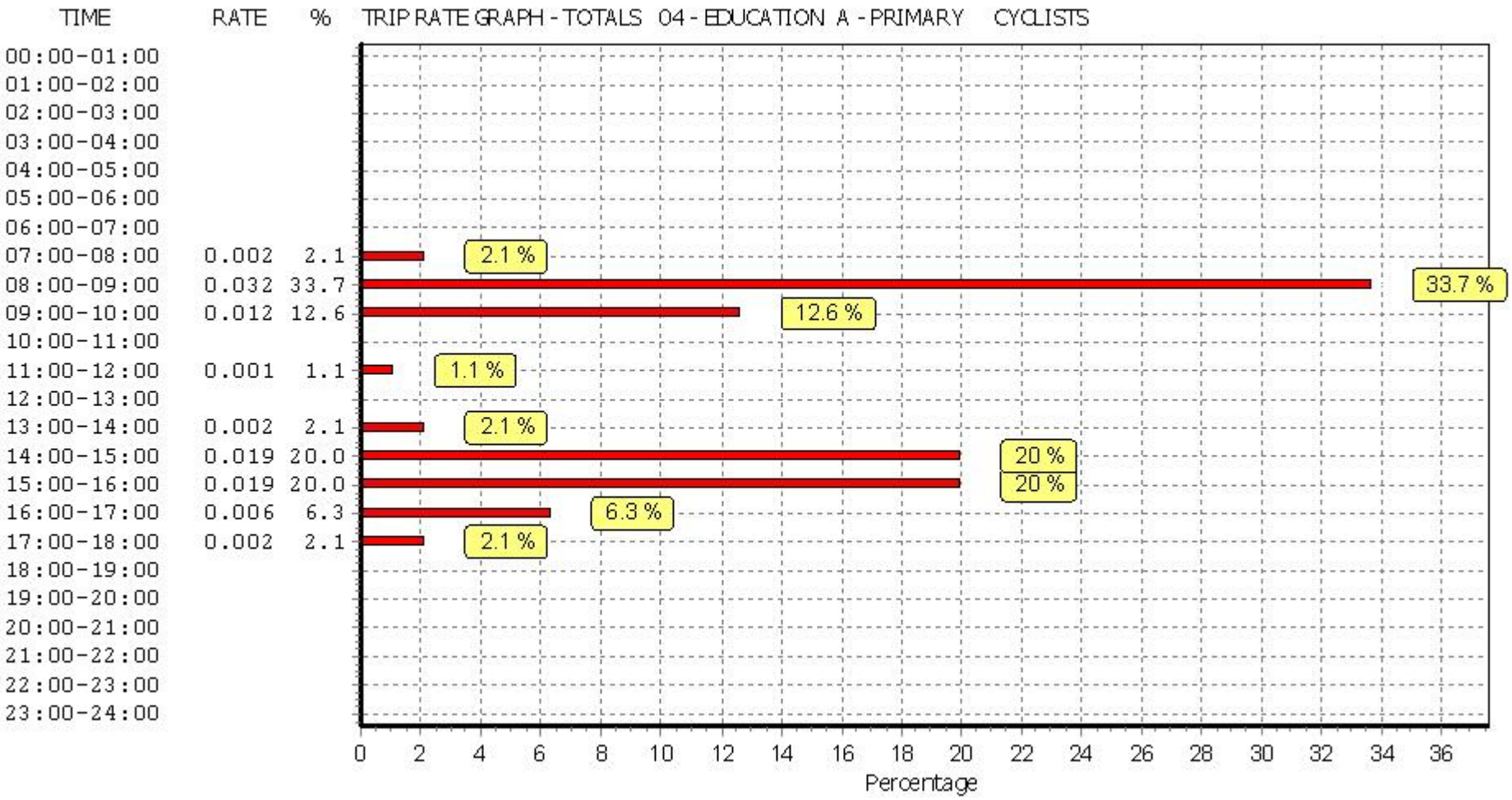
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected 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.*



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.

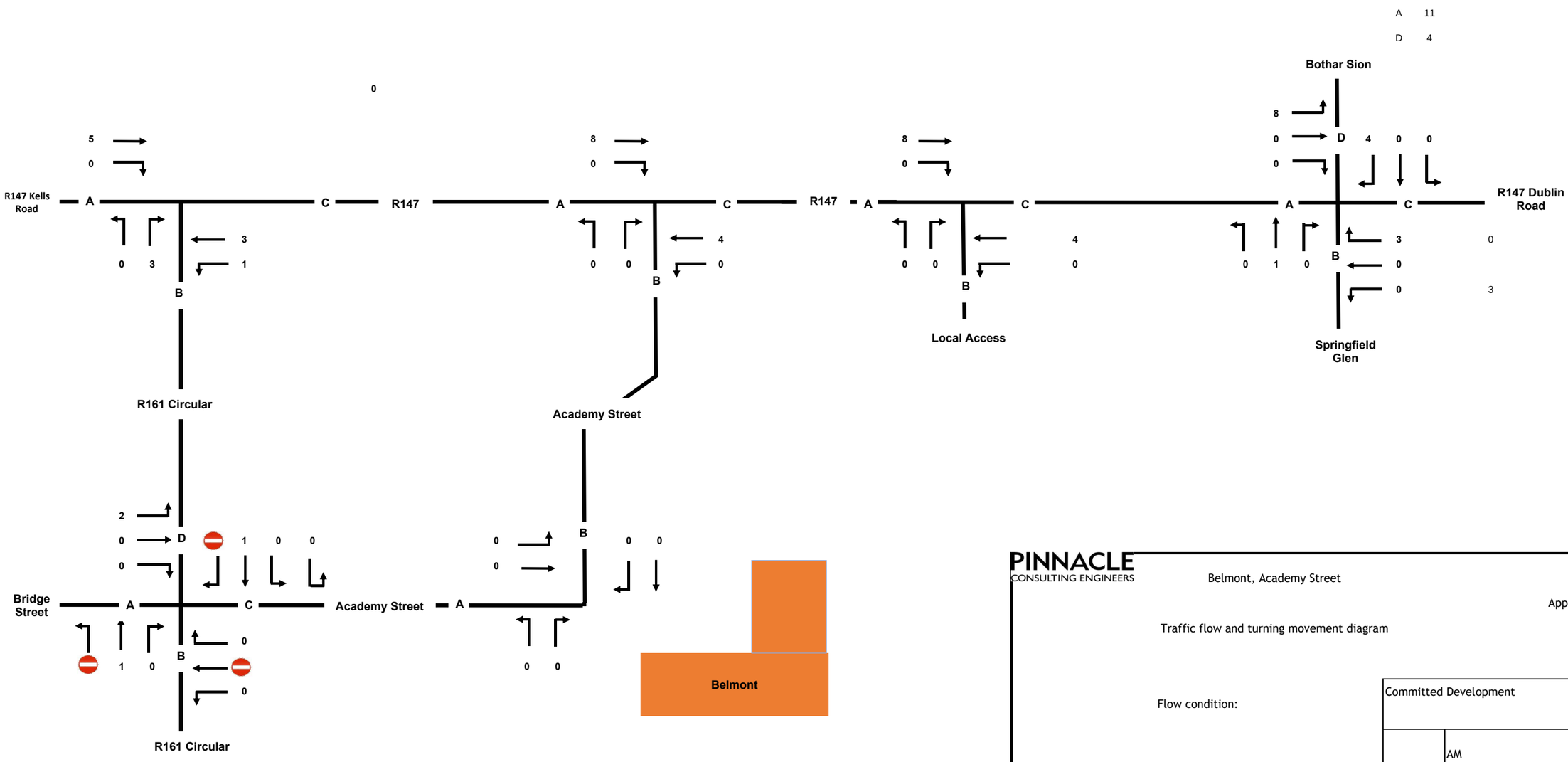


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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

Appendix C Flow Diagrams



PINNACLE
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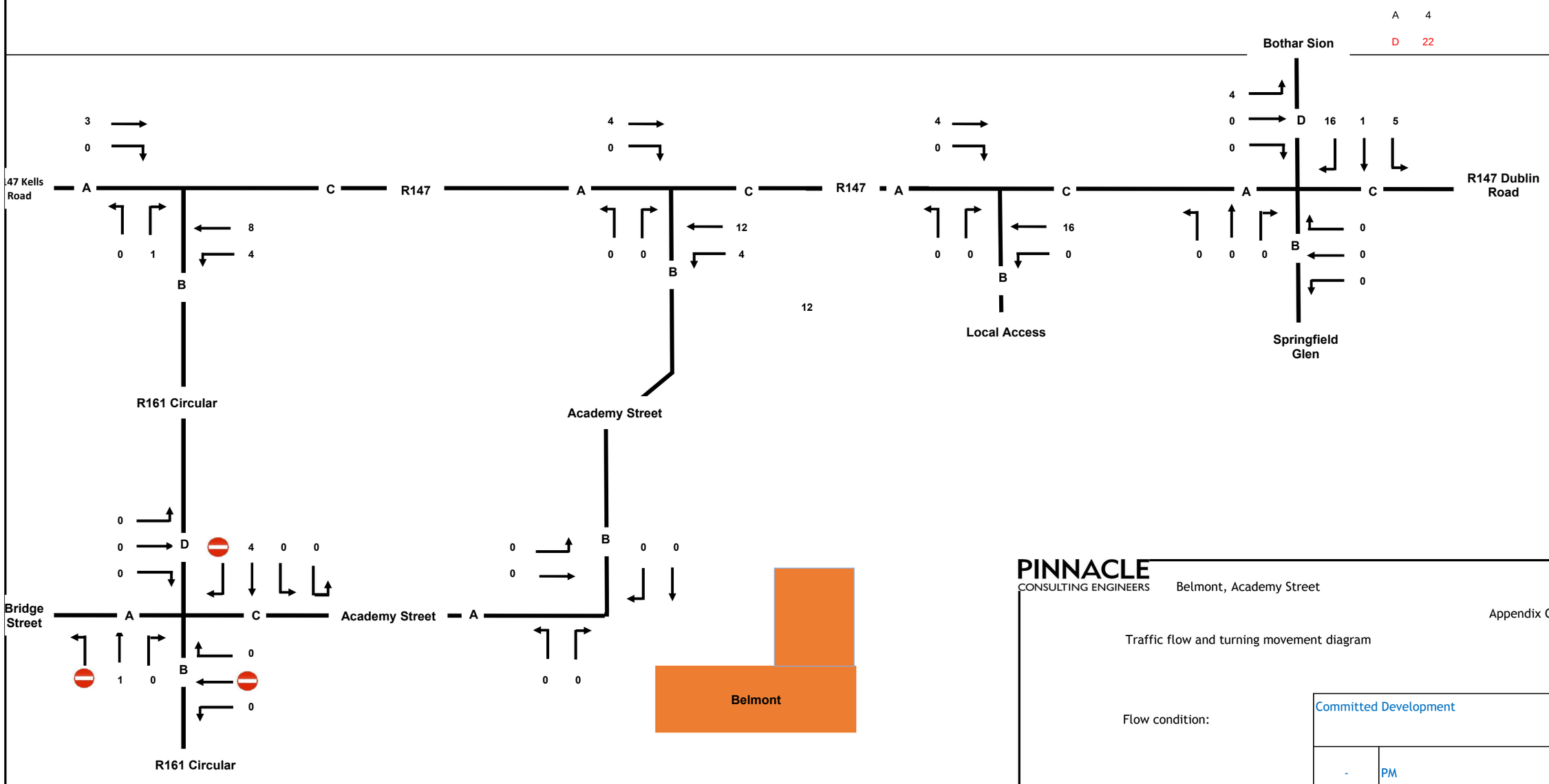
Belmont, Academy Street

Appendix C.1

Traffic flow and turning movement diagram

Flow condition: Committed Development

AM



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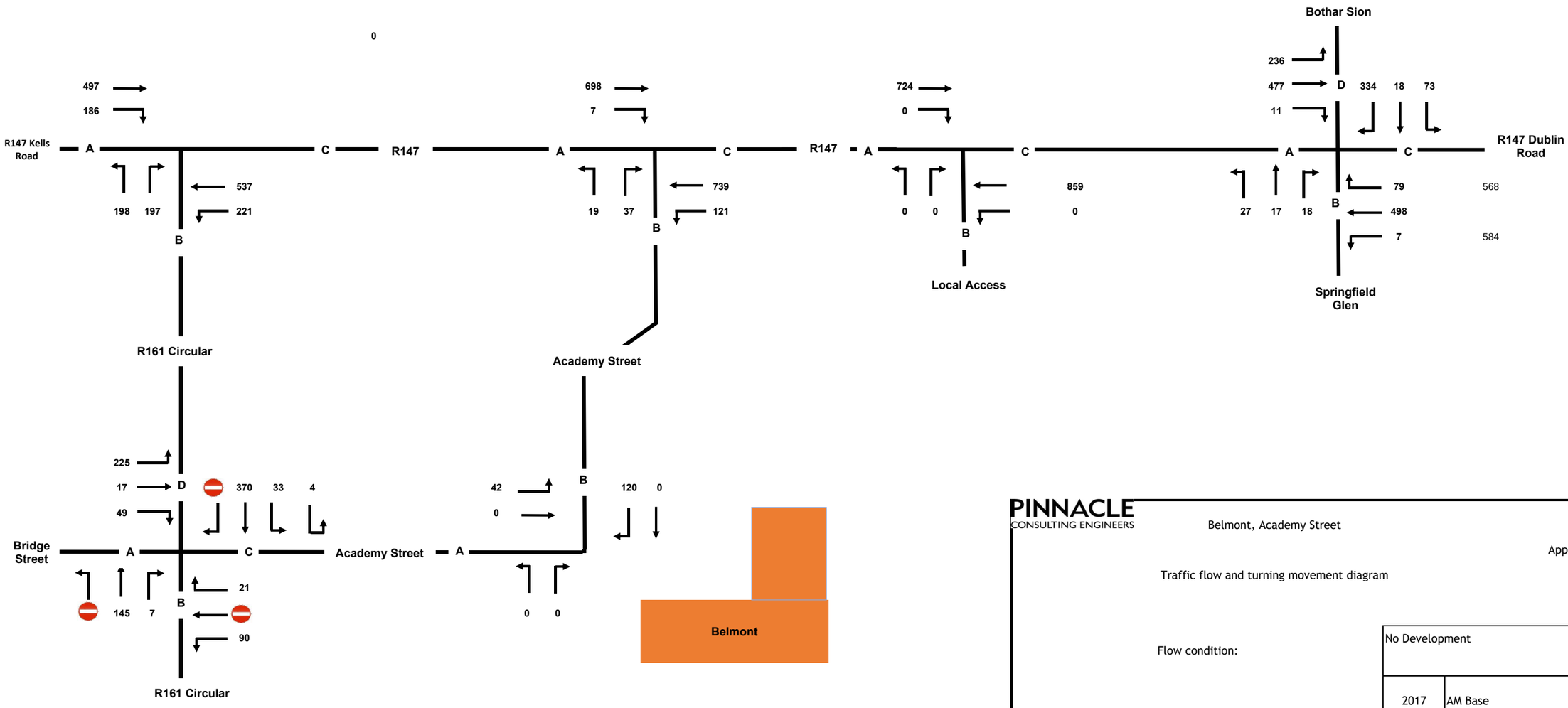
Appendix C.2

Traffic flow and turning movement diagram

Flow condition: Committed Development

- PM



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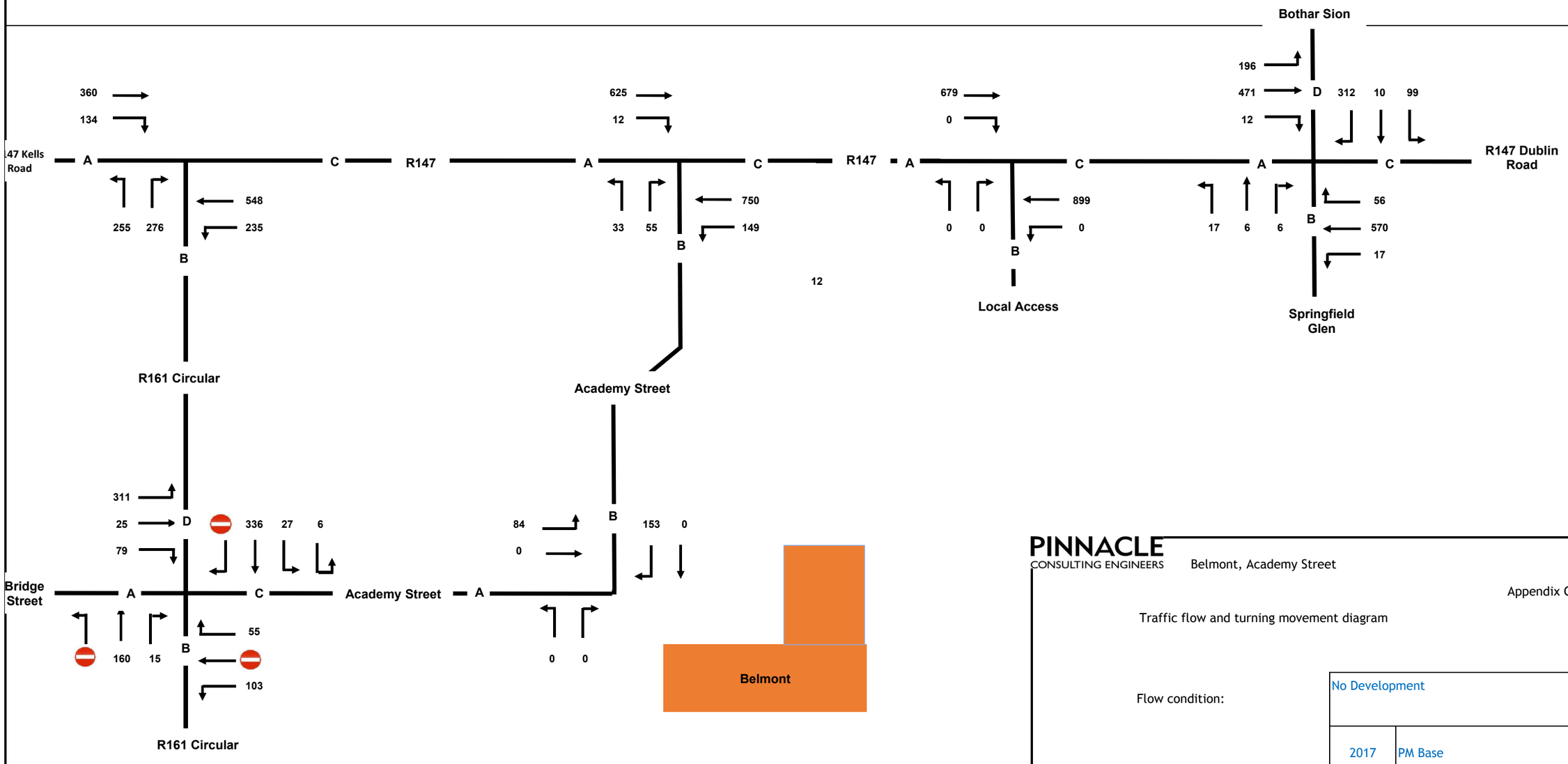
Appendix C.3

Traffic flow and turning movement diagram

Flow condition: No Development

2017 AM Base



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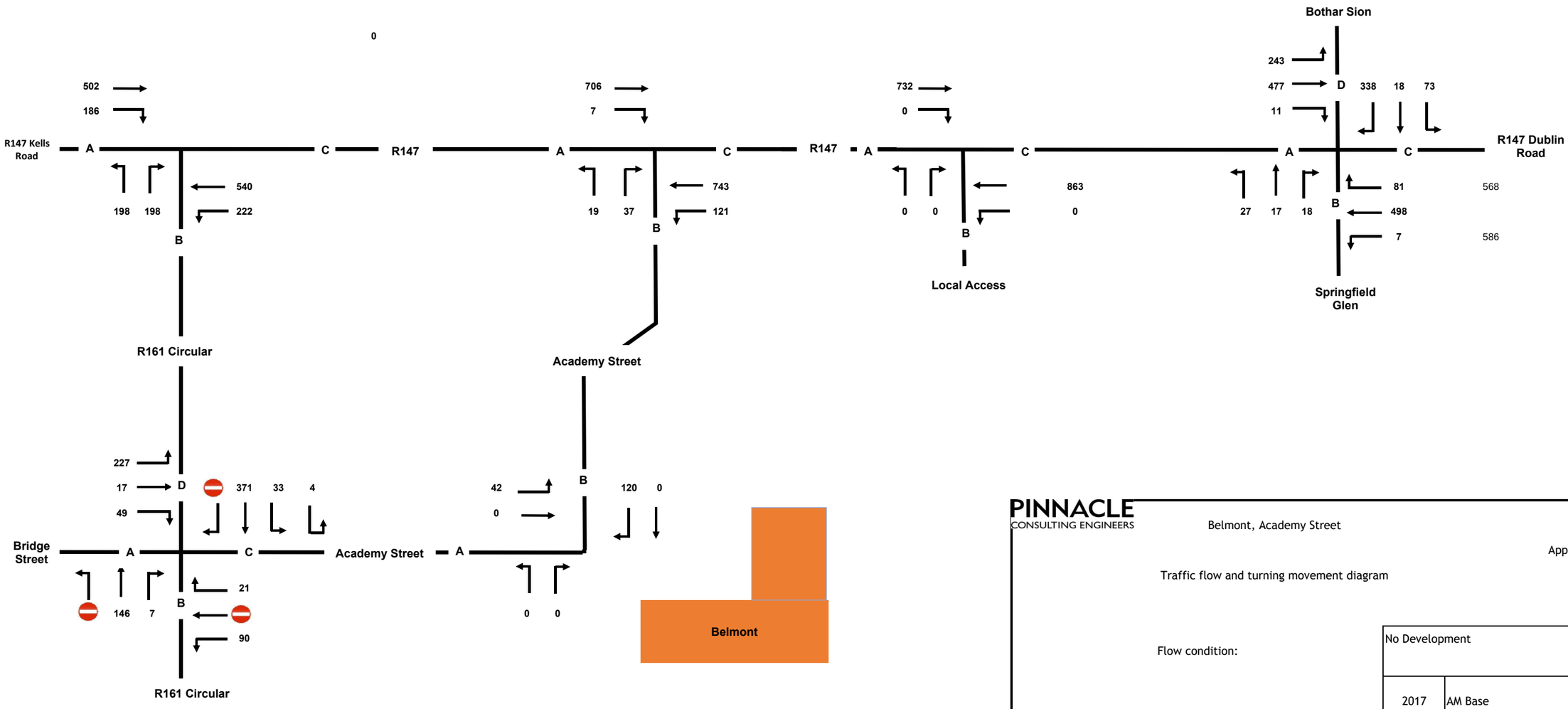
Belmont, Academy Street

Appendix C.4

Traffic flow and turning movement diagram

Flow condition:	No Development	
	2017	PM Base



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CONSULTING ENGINEERS

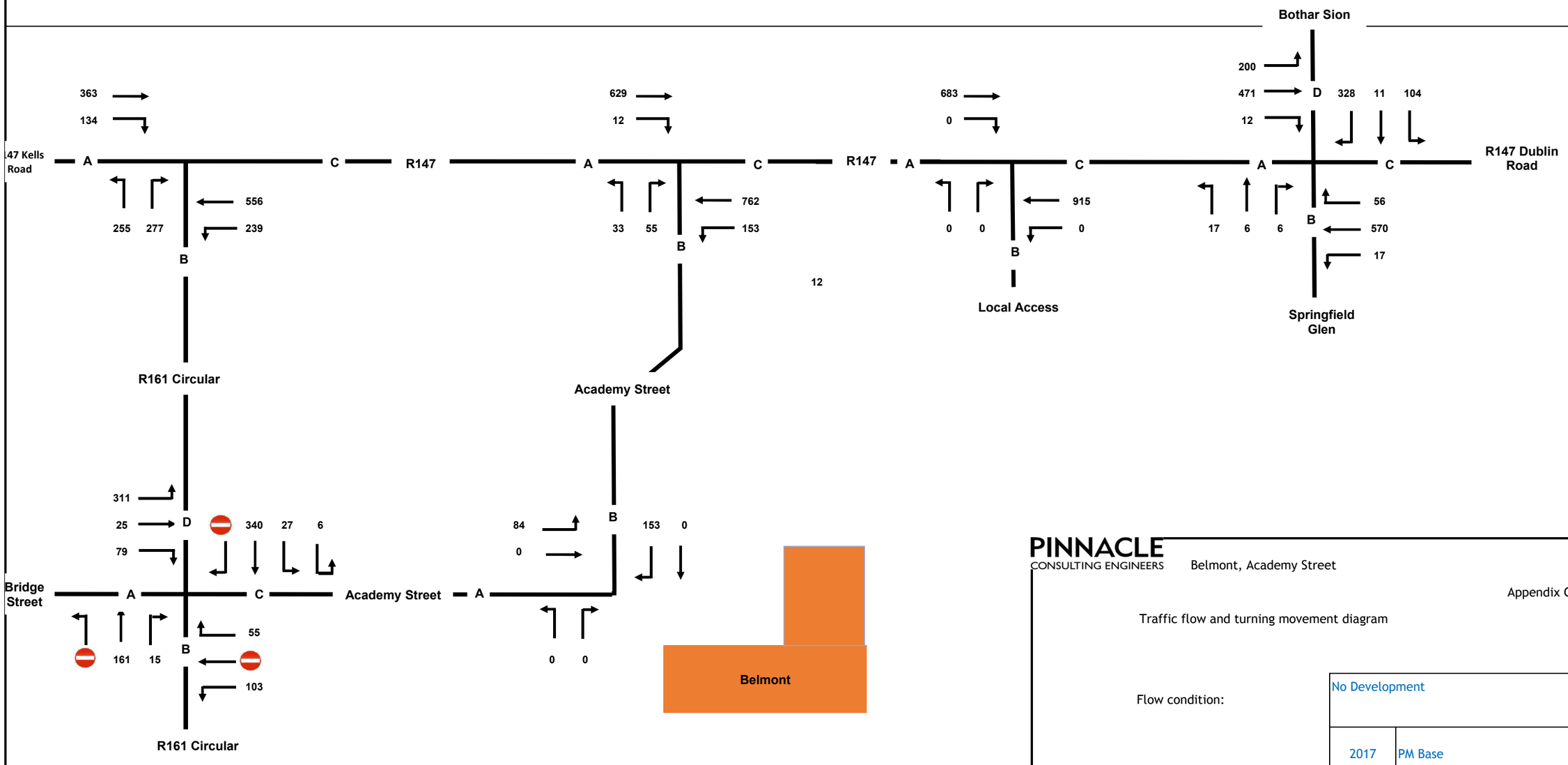
Belmont, Academy Street

Appendix C.5

Traffic flow and turning movement diagram

Flow condition: No Development

2017 AM Base



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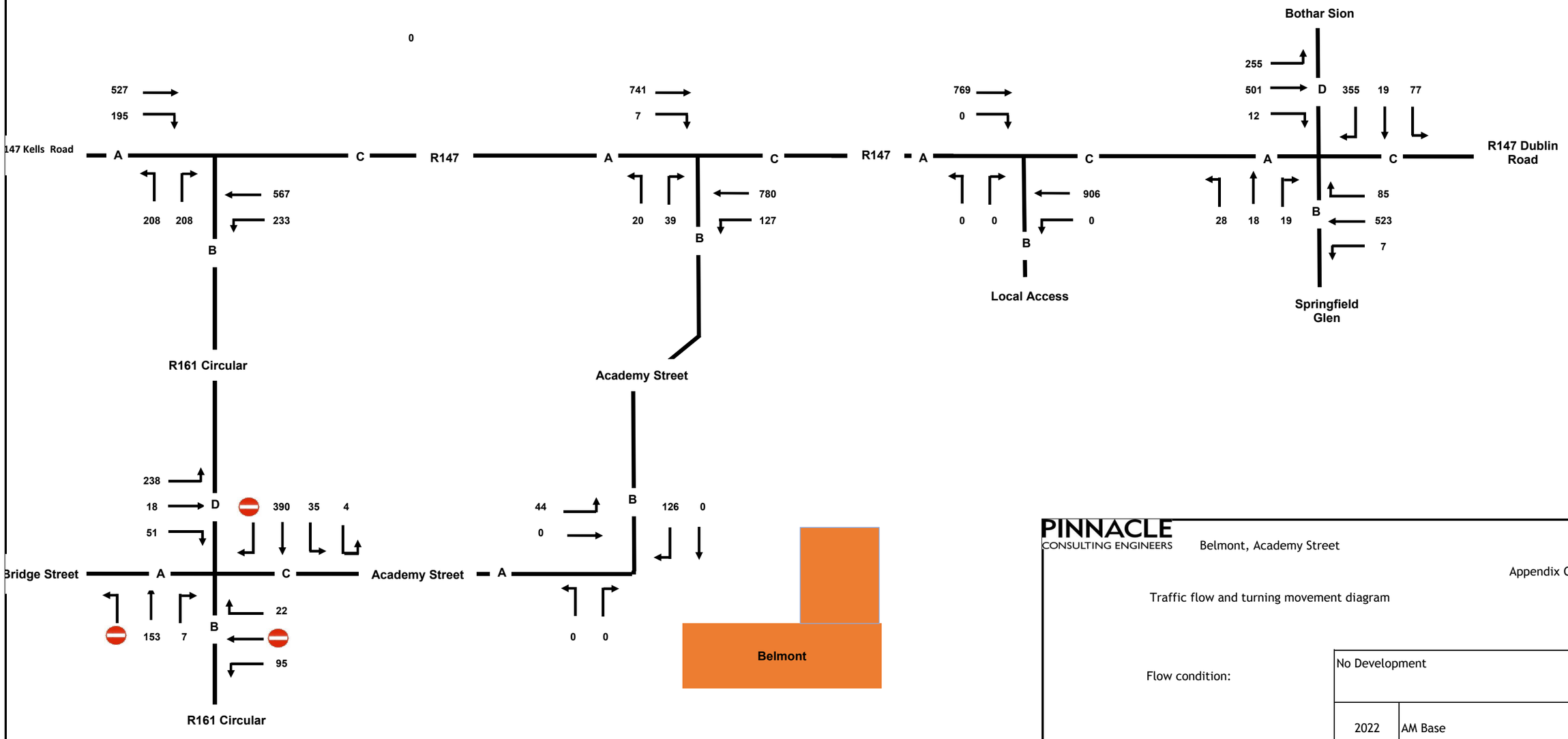
Belmont, Academy Street

Appendix C.6

Traffic flow and turning movement diagram

Flow condition:	No Development	
	2017	PM Base



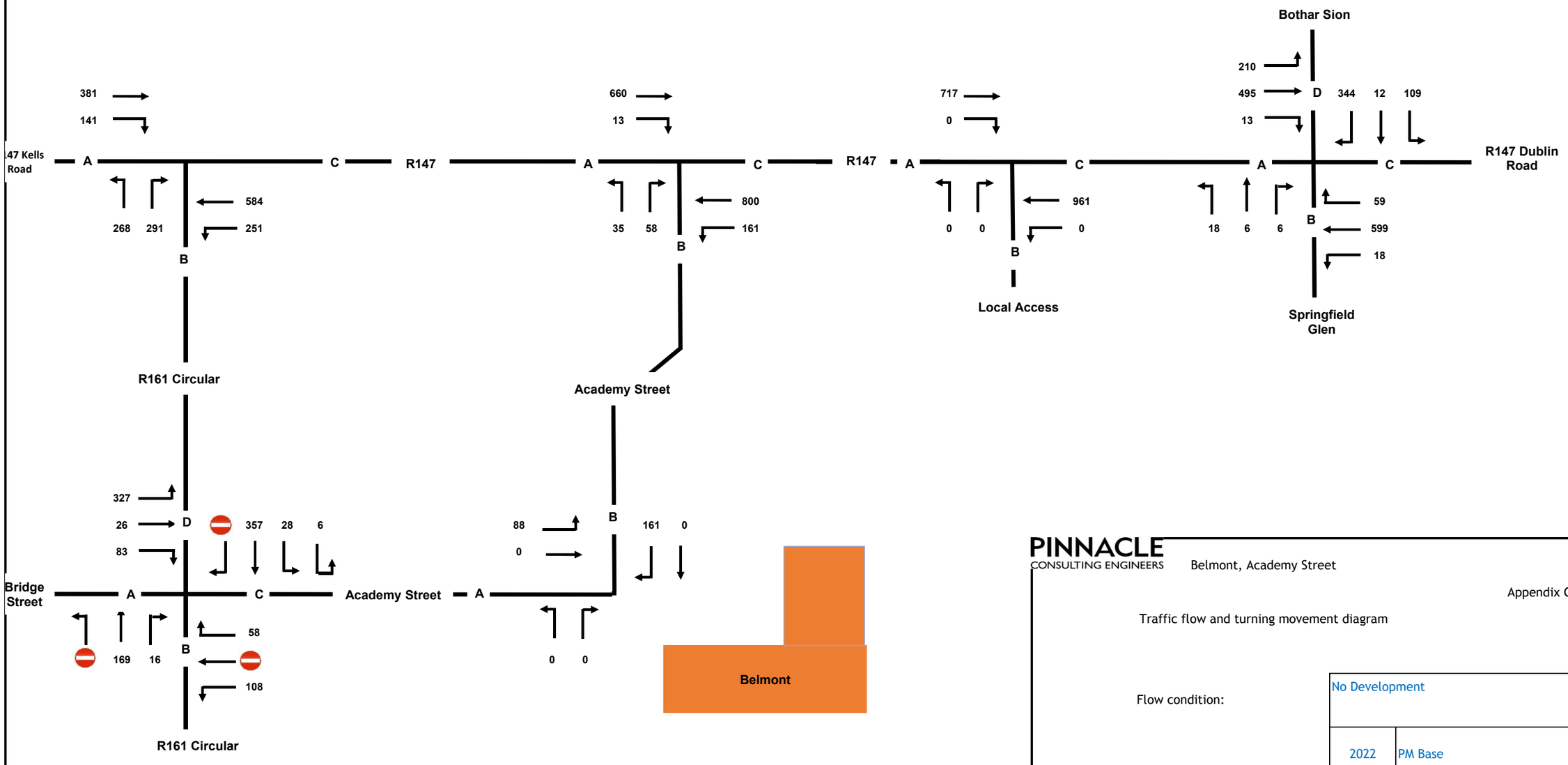
PINNACLE CONSULTING ENGINEERS

Belmont, Academy Street

Appendix C.7

Traffic flow and turning movement diagram

Flow condition:	No Development
2022	AM Base



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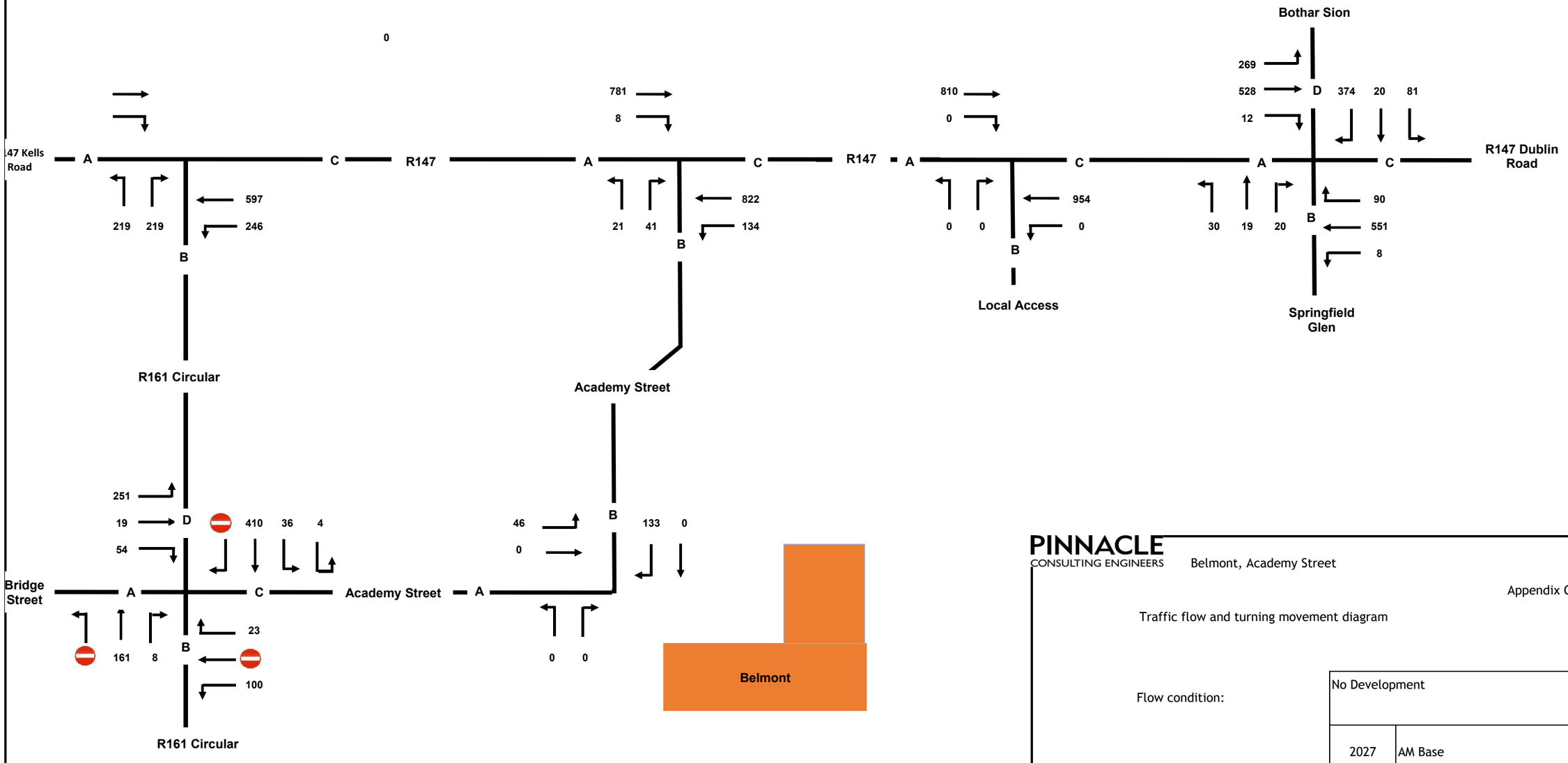
Belmont, Academy Street

Appendix C.8

Traffic flow and turning movement diagram

Flow condition:	No Development	
	2022	PM Base



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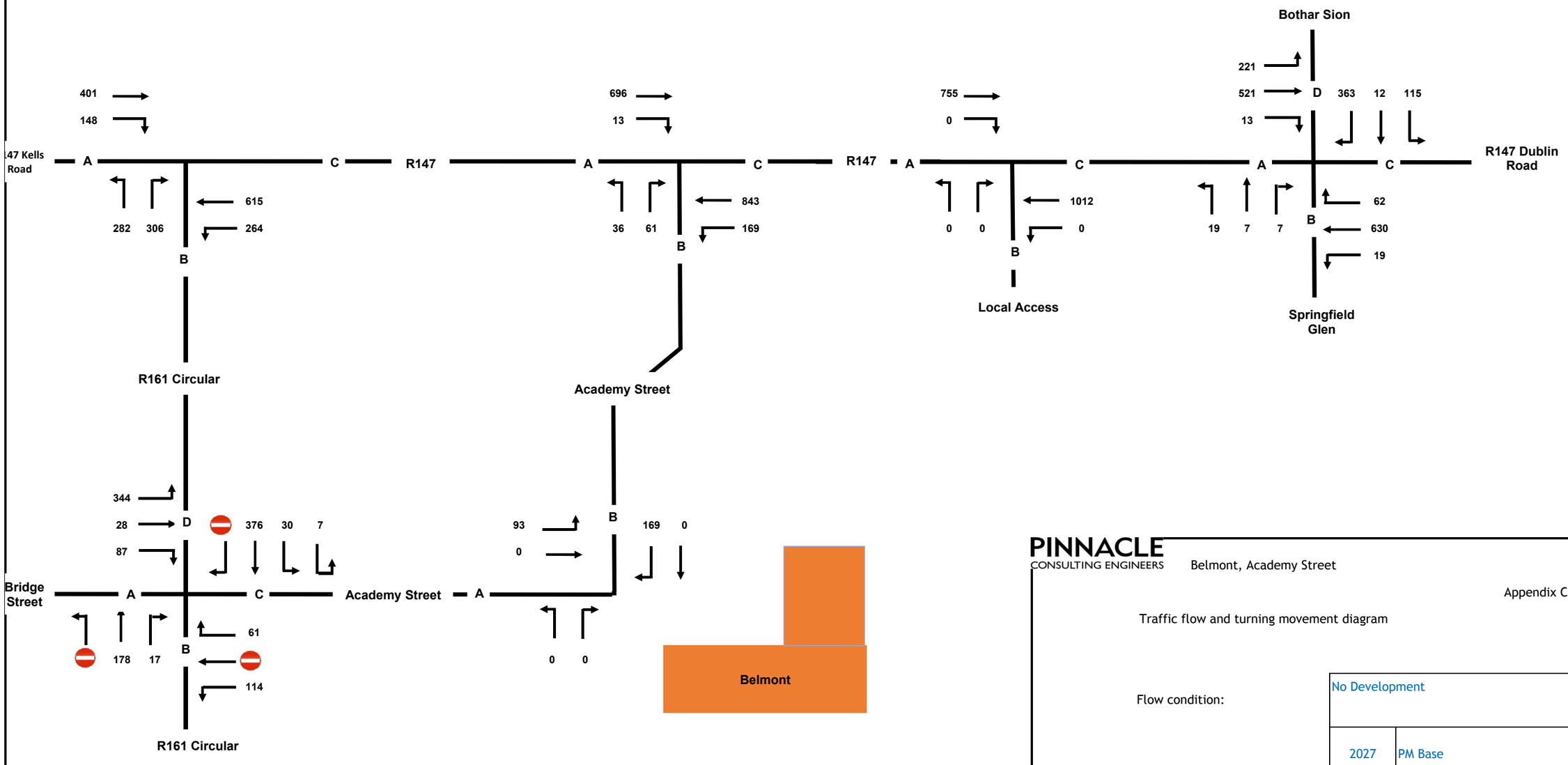
Appendix C.9

Traffic flow and turning movement diagram

Flow condition:	No Development	
	2027	AM Base



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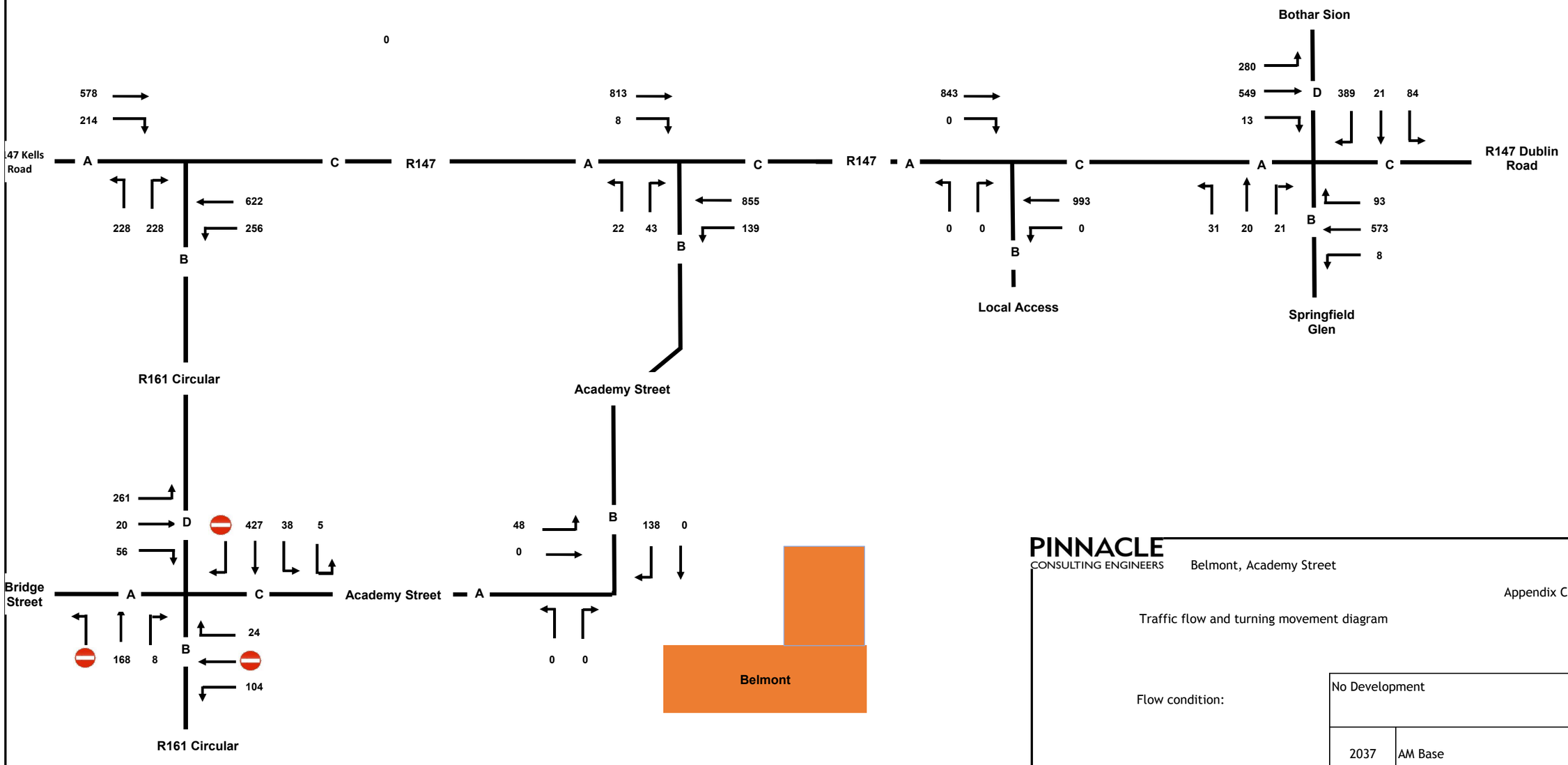
Belmont, Academy Street

Appendix C.10

Traffic flow and turning movement diagram

Flow condition:	No Development	
	2027	PM Base



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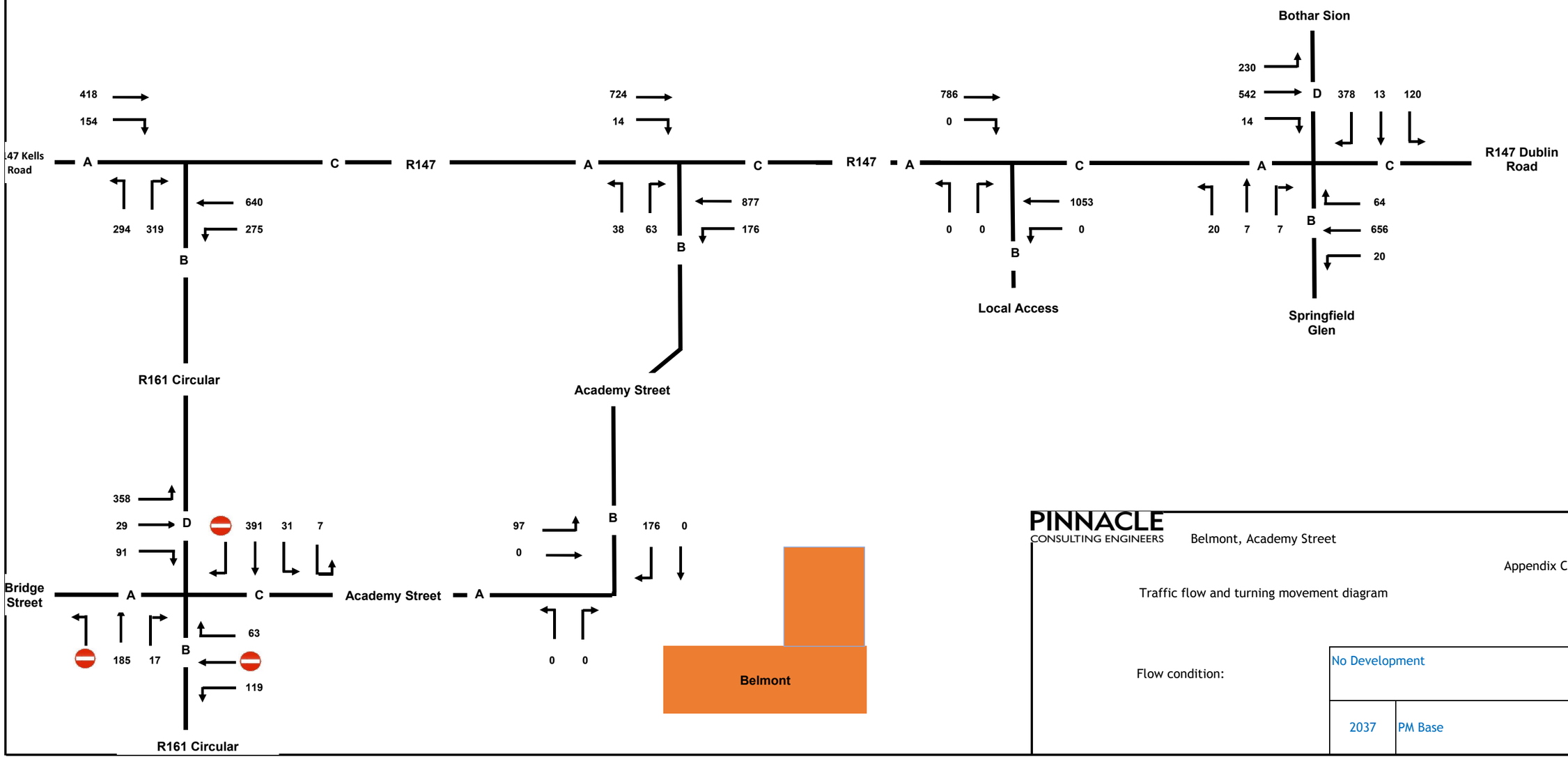
Appendix C.11

Traffic flow and turning movement diagram

Flow condition:	No Development	
	2037	AM Base



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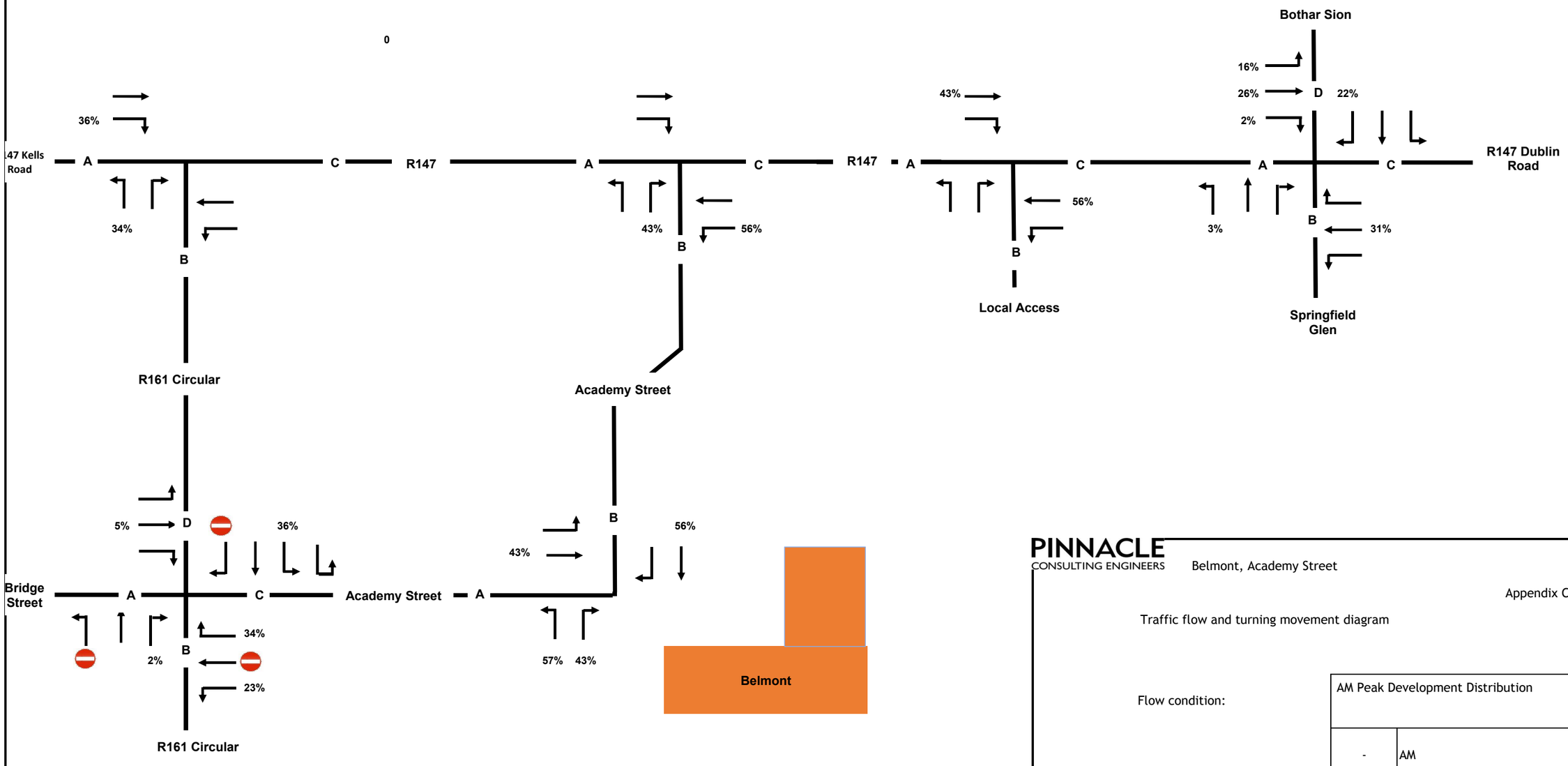
Belmont, Academy Street

Appendix C.12

Traffic flow and turning movement diagram

Flow condition: No Development

2037 PM Base



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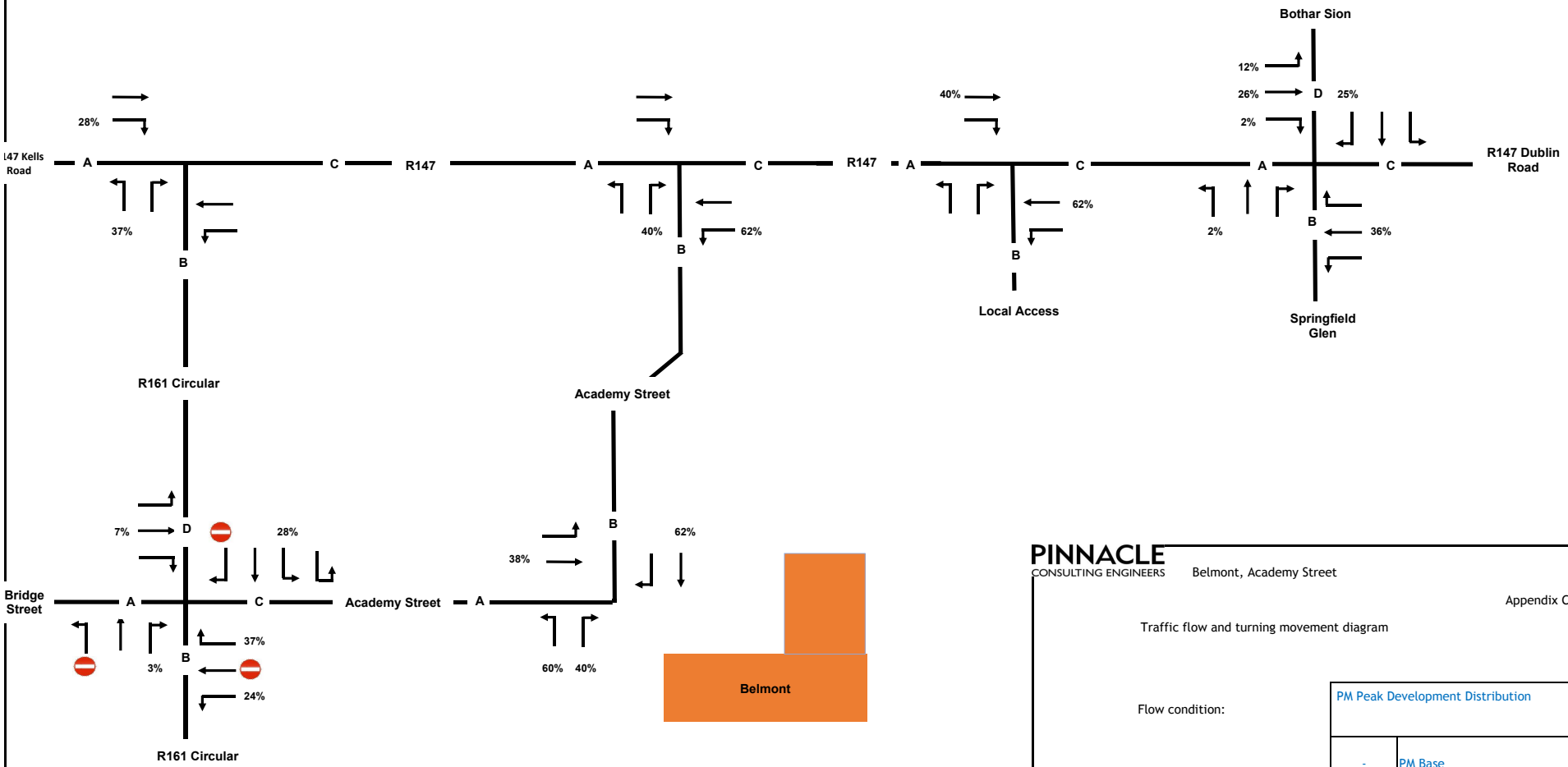
Appendix C.13

Traffic flow and turning movement diagram

Flow condition:	AM Peak Development Distribution	
	-	AM



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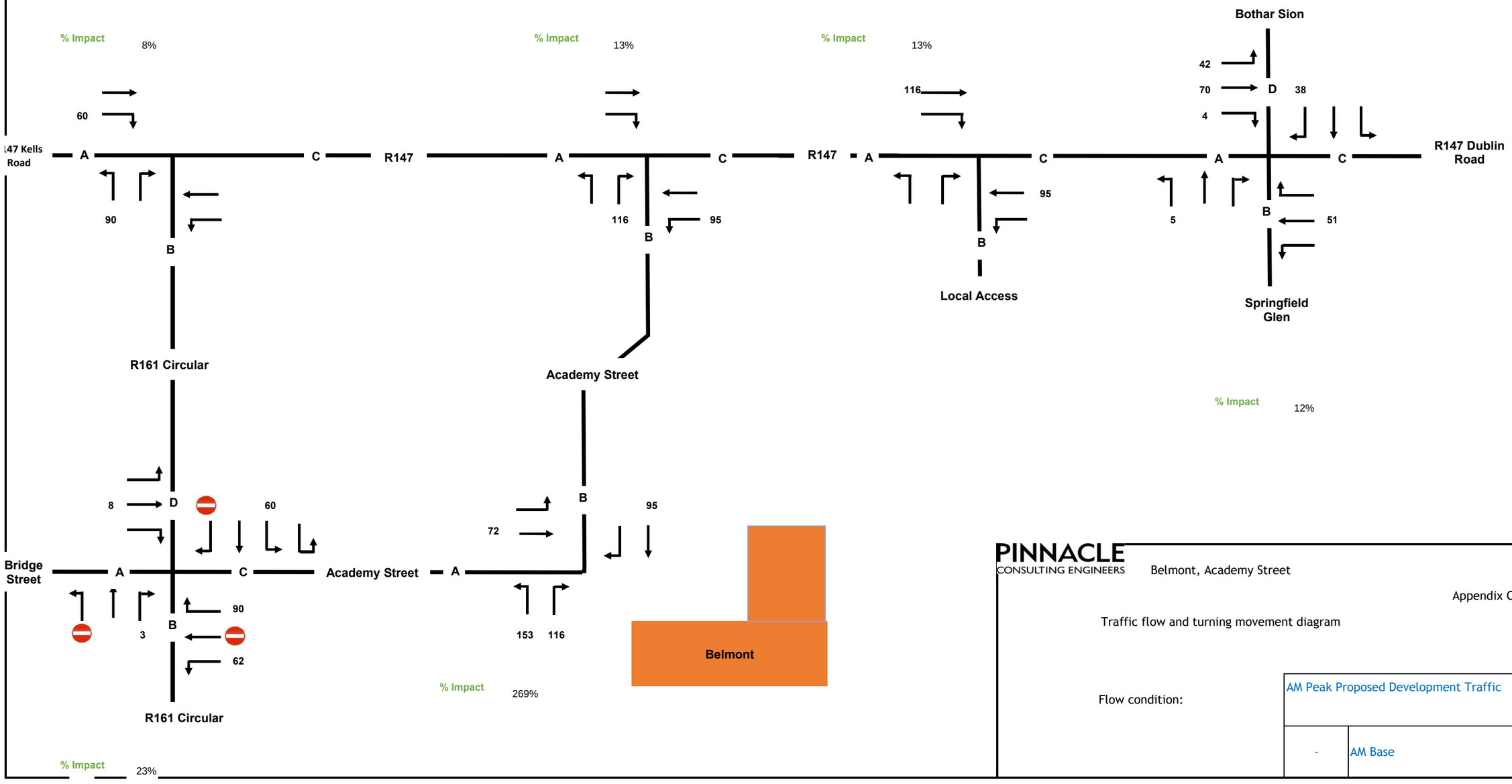
Appendix C.14

Traffic flow and turning movement diagram

Flow condition:

PM Peak Development Distribution

\- PM Base



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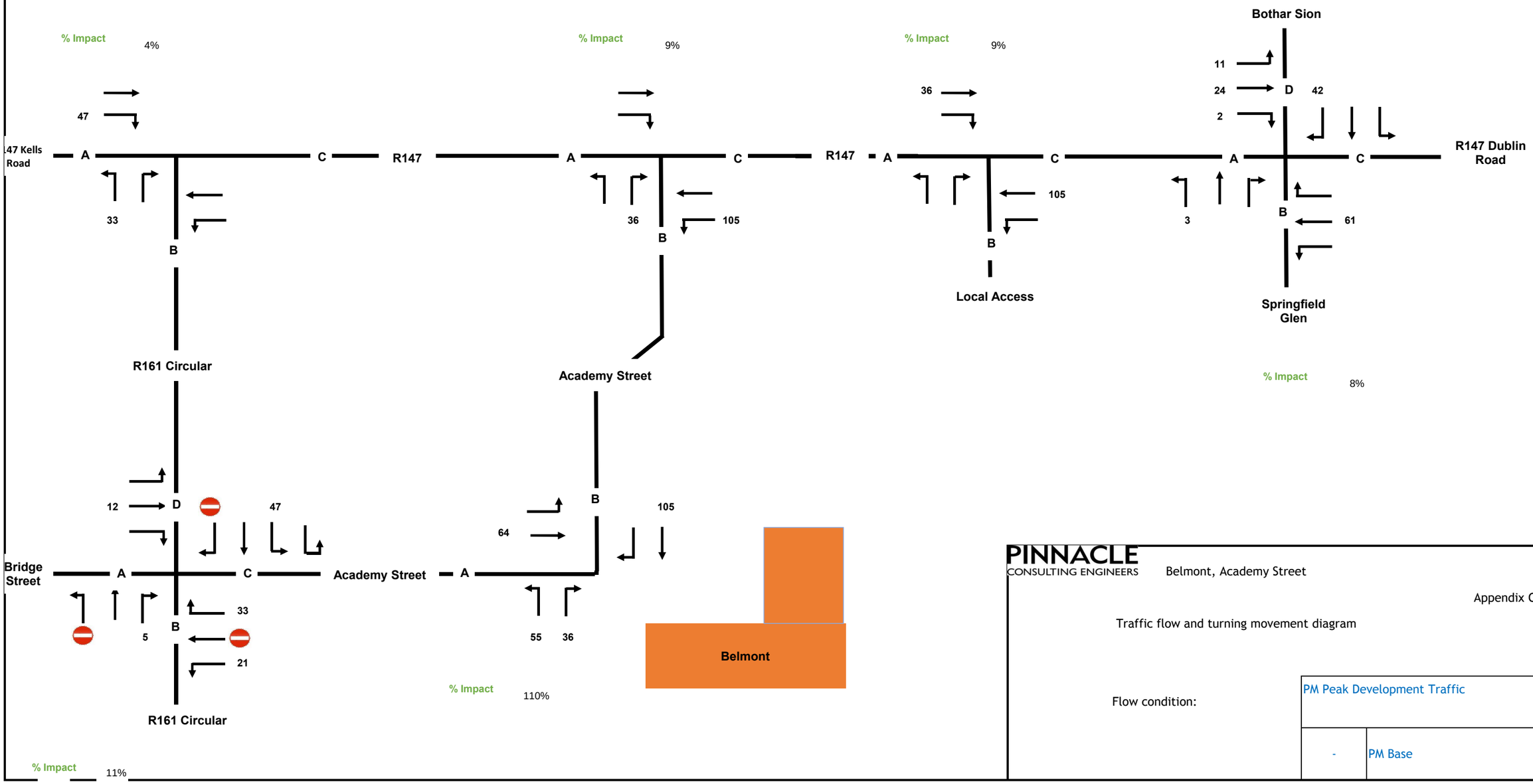
Appendix C.15

Traffic flow and turning movement diagram

Flow condition:

AM Peak Proposed Development Traffic

\- AM Base



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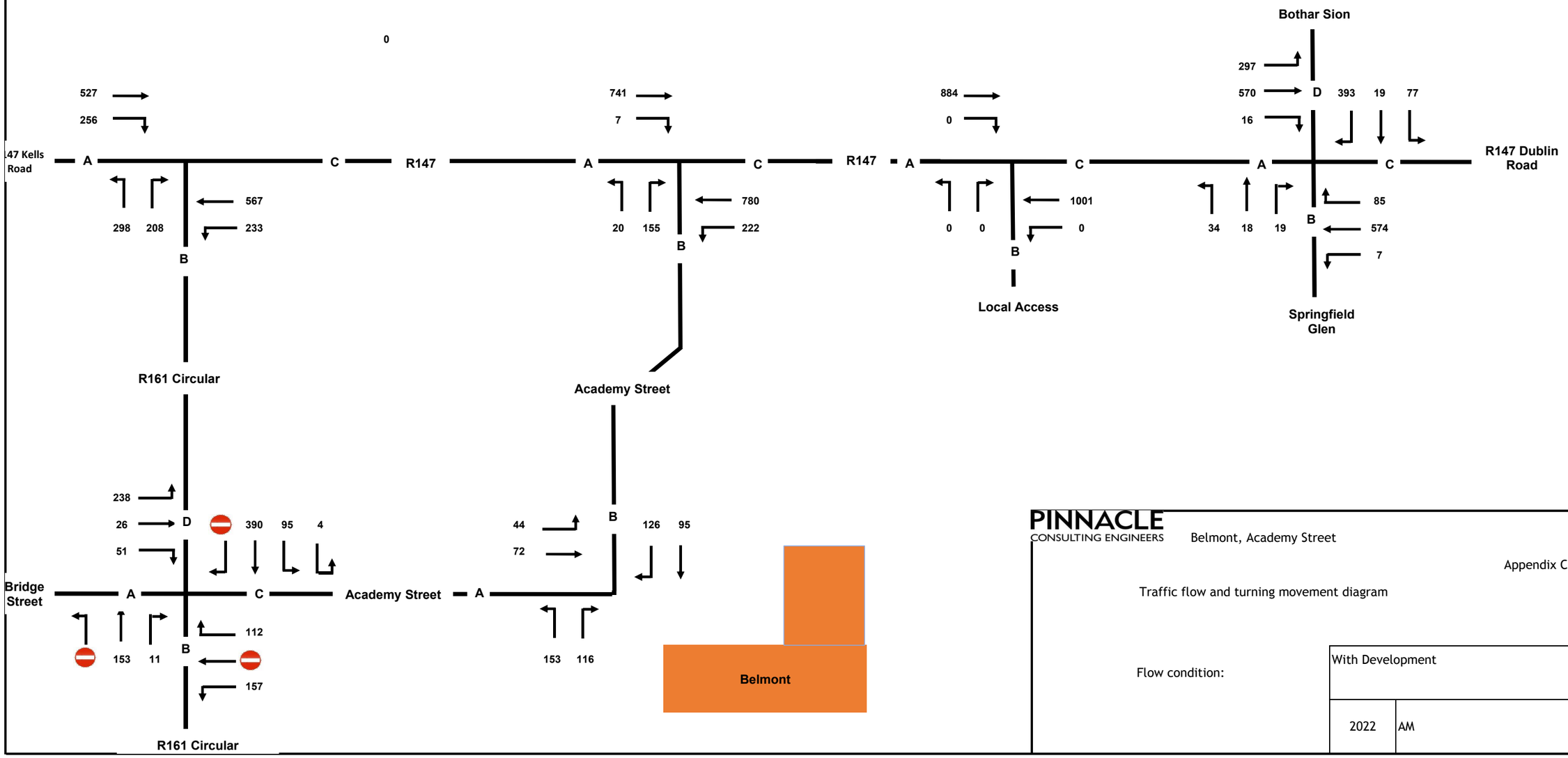
Appendix C.16

Traffic flow and turning movement diagram

Flow condition: PM Peak Development Traffic

\- PM Base



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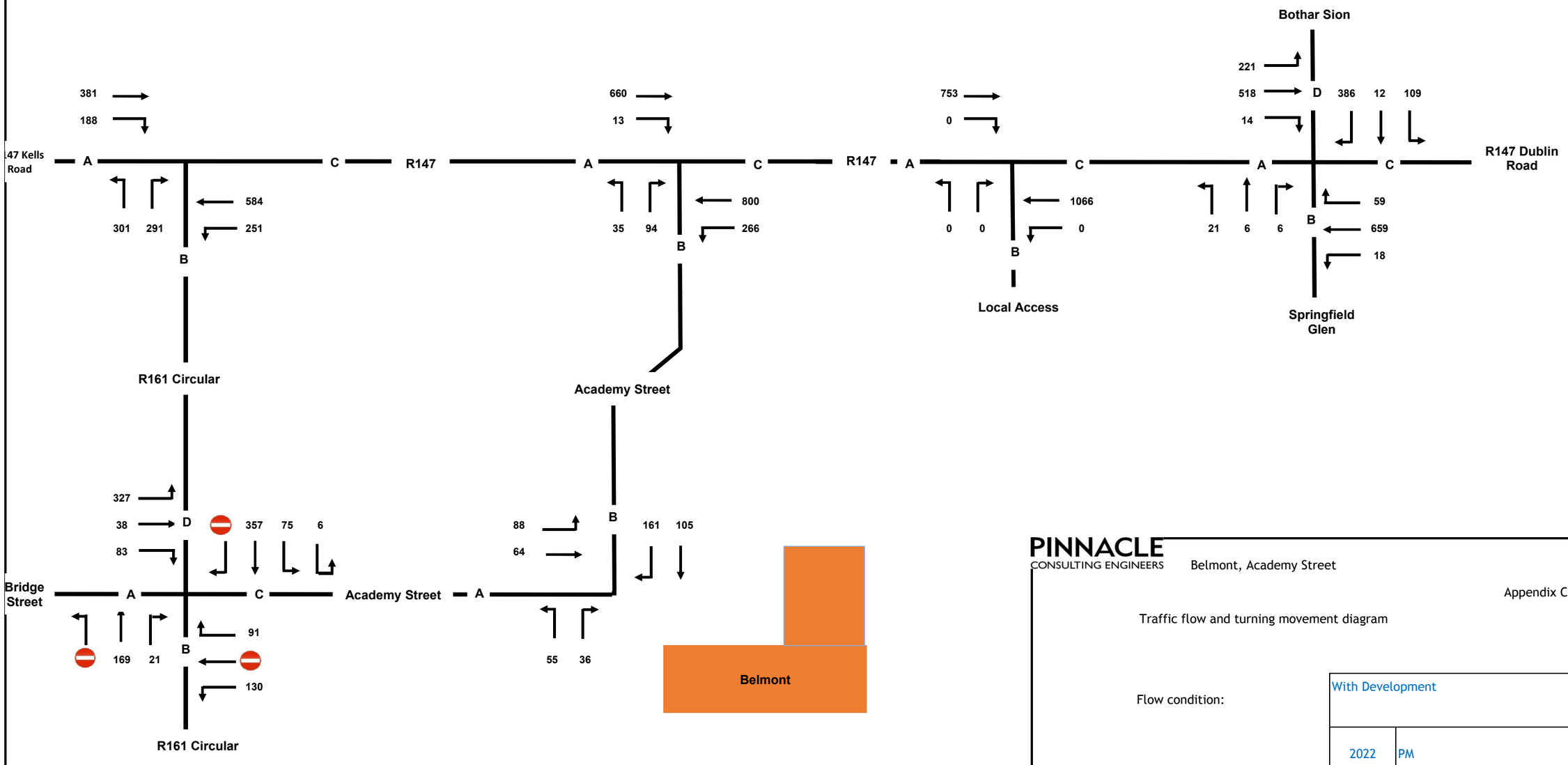
Appendix C.17

Traffic flow and turning movement diagram

Flow condition:	With Development	
	2022	AM



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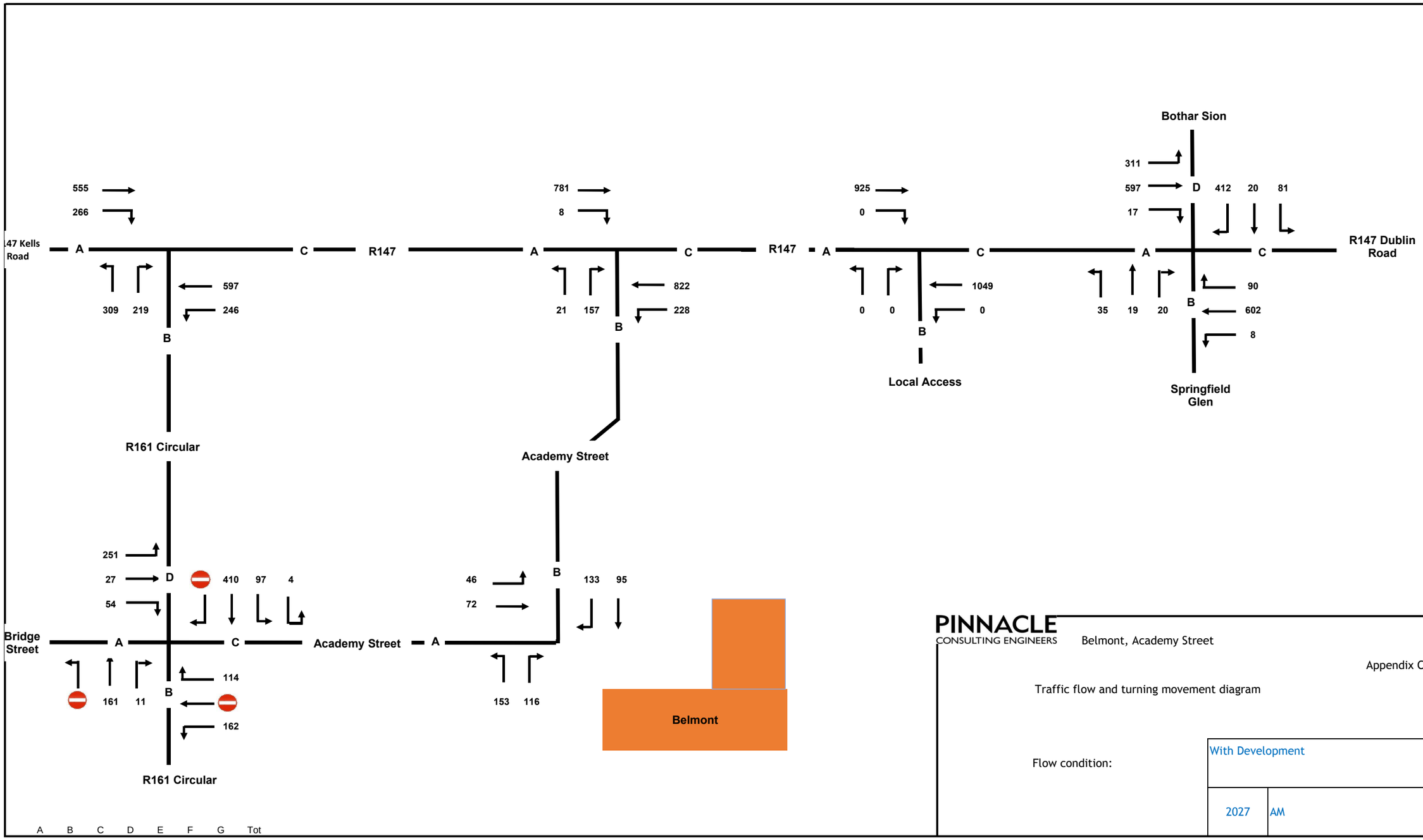
Appendix C.18

Traffic flow and turning movement diagram

Flow condition:	With Development	
	2022	PM



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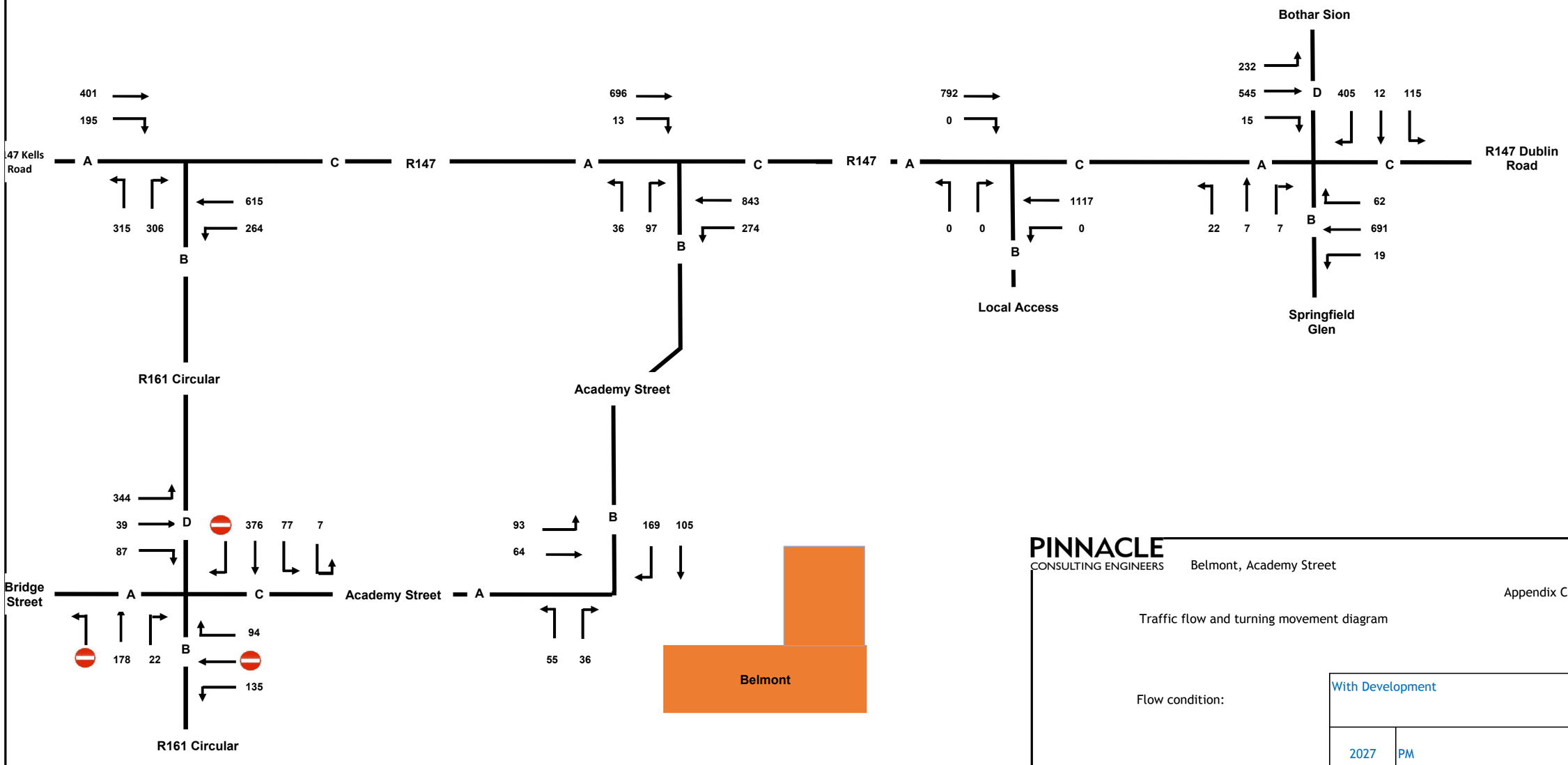
Appendix C.19

Traffic flow and turning movement diagram

Flow condition: With Development

2027 AM



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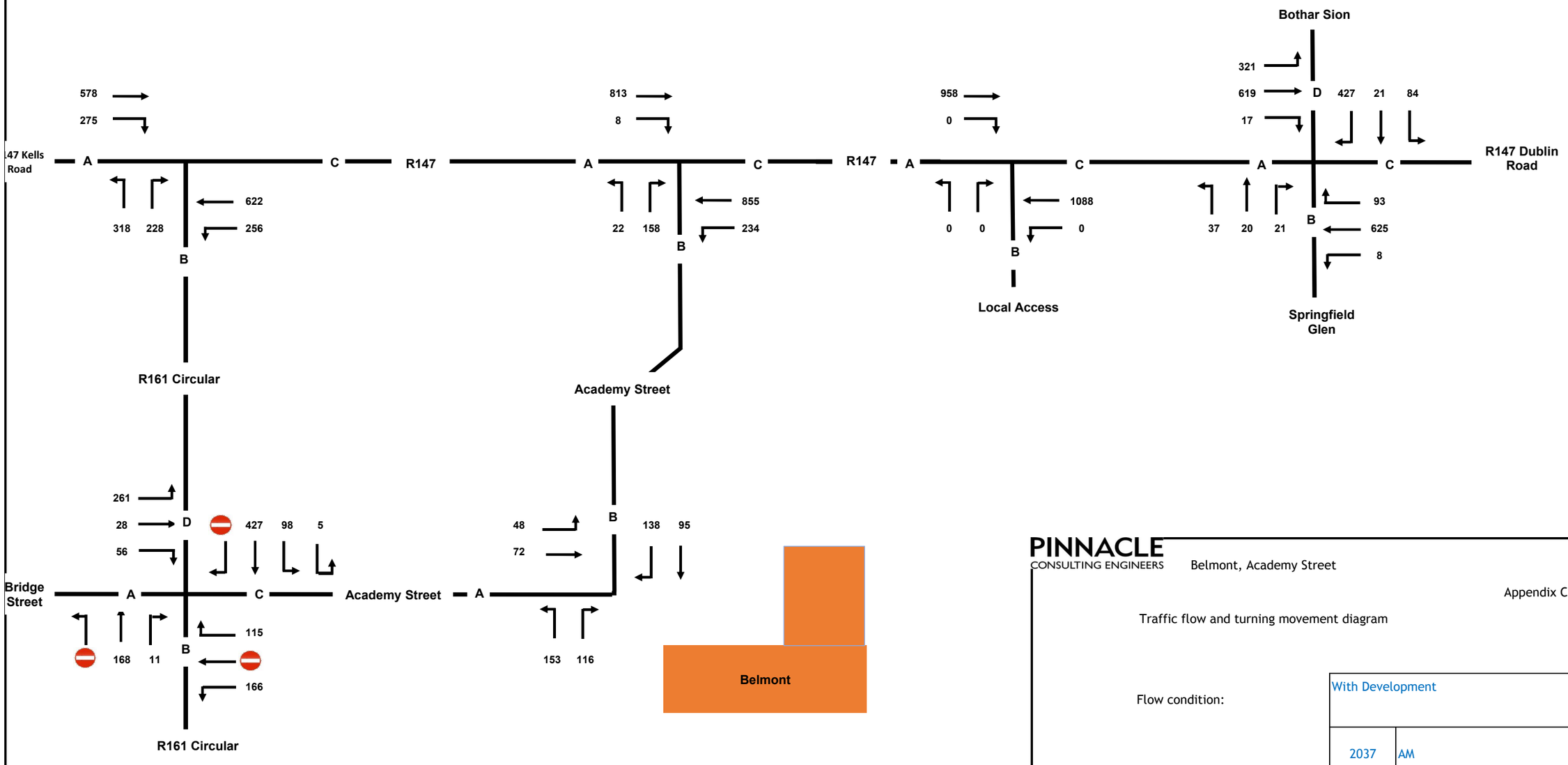
Appendix C.20

Traffic flow and turning movement diagram

Flow condition:	With Development	
	2027	PM



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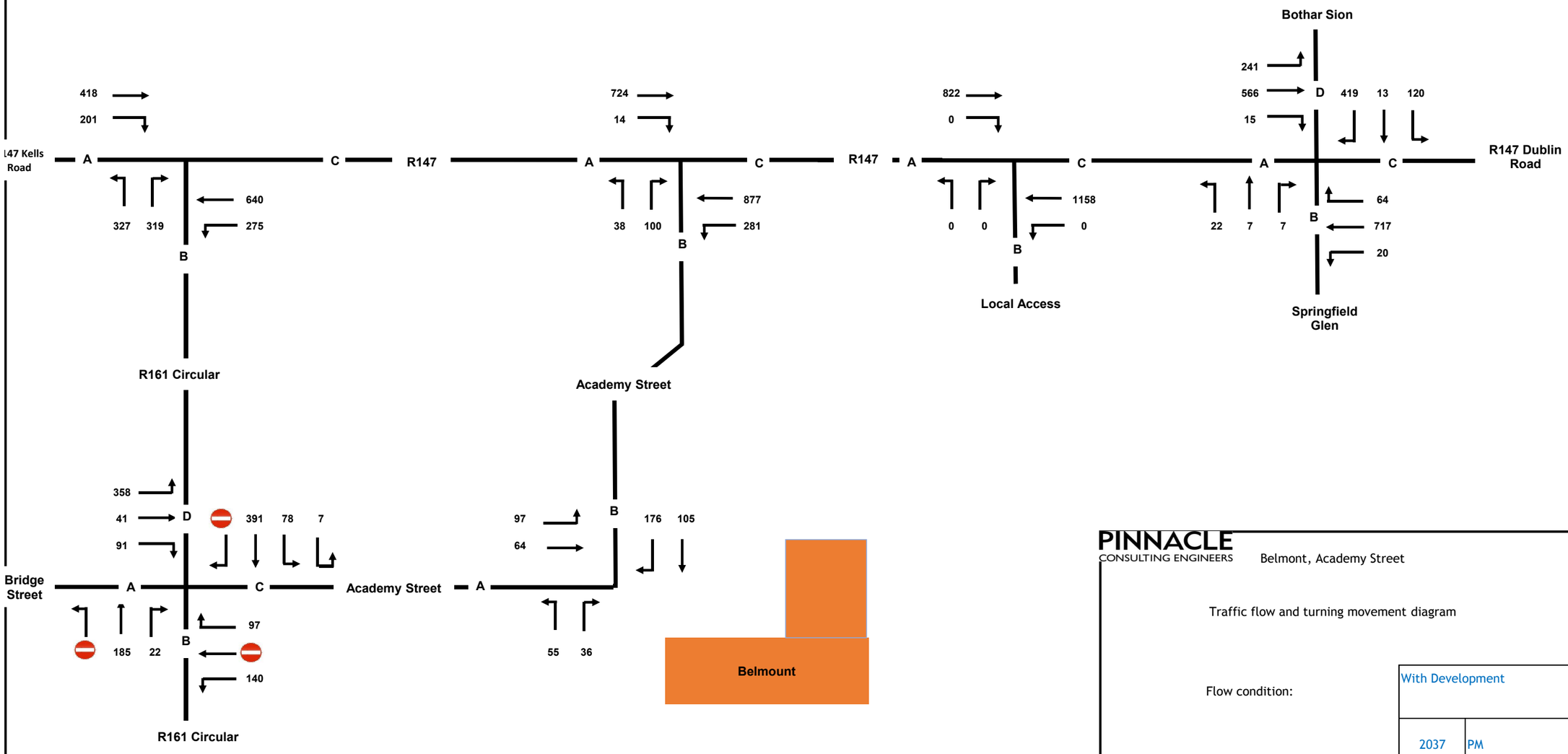
Appendix C.21

Traffic flow and turning movement diagram

Flow condition:	With Development	
	2037	AM



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Appendix C.22

Traffic flow and turning movement diagram

Flow condition:	With Development	
	2037	PM

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