

MORETON / CROSSWAYS / WOODSFORD

Traffic Impact Assessment 2016 (AM Peak)

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**DORSET COUNTY COUNCIL,
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CONTENTS

1.0	INTRODUCTION	5
	Background	5
2.0	EXISTING TRAFFIC LEVELS	6
	Data Collection	6
	Existing Data	7
	Historic Data	9
	Use of Data	10
3.0	SATURN TRAFFIC MODEL	11
	Model Creation	11
	Link Count Calibration and Validation Summary	12
4.0	FORECASTING	13
	Background Growth	13
	Local Development Growth	13
	Quarry Traffic	16
5.0	MODEL RESULTS	18
	Overall Network Statistics	18
	Overall Difference Plots	19
	Quarry Traffic Difference Plots	25
6.0	CONCLUSIONS	38

EXECUTIVE (NON-TECHNICAL) SUMMARY

This Traffic Impact Assessment of proposed built development and minerals development in the Moreton / Crossways / Woodsford area has been undertaken by Dorset County Council's Transportation Modelling Team

Existing traffic levels were been established by way of manual and automatic traffic counts carried out at strategic locations. Traffic flows on the B3390 north of Crossways and A352 west of Owermoigne have reduced over the last ten years whereas traffic flows on the A35 Puddletown bypass have increased. This is most likely due to a combination of the recession and the opening of the Weymouth Relief Road.

The data was used to calibrate an AM peak and Inter peak traffic model of the study area which was cordoned (extracted) from an existing older (outdated) larger model. The new model adequately reflects current (2016) average traffic flows.

A core future scenario (SC0) was created for 2031 based on information from the Department for Transport's National Trip End Model, the industry standard 'TRICS' trip rate database and work carried out in developers Transport Assessments. This scenario contains 47.3% more trips than the base 2016 year and excludes the proposed local development growth in the study area.

Five additional scenarios were modelled to test different proposals for future housing growth. Scenarios ranged from 640 dwellings to a worst case of 2,800 dwellings around Crossways and Moreton. All scenarios included trips attributed to the 'Silverlake' development. The worst case scenario (SC5) contained 81.3% more trips than the base 2016 year.

Future quarry traffic was calculated based on information supplied in the brief. Total quarry related traffic is predicted to reduce as in future only two quarries will be working simultaneously rather than the current three. Identical future year quarry traffic was included in each of the forecast scenarios.

All AM peak forecast models performed well and generally showed no signs of excessive queuing or deterioration of vehicle speeds (increasing congestion) in any scenario, the exception being the A35/A352 junction near Max Gate Roundabout predicted to reach 94% capacity.

In the worst case SC5 development scenario (2800 dwellings), significant increases in traffic are noted on the B3390 south of Crossways, the D21322 west of Crossways, and the C33 West Stafford Bypass. Tthe highest predicted future flows on these roads are around 600 PCUs per hour which should be able to be accommodated in terms of capacity. However, although the model showed that this flow could be accommodated, it may be prudent to further investigate the shuttle-working traffic signals at the bridge over Highgate Lane.

All scenarios exhibited increases in traffic which could cause some additional queuing at the Moreton and Woodsford No. 38 Level Crossings.

The proposed developments in the worst case scenario (SC5) has some effect on the key junctions, the biggest impact being on the A35/A352 Dorchester Bypass junction. The modelled volume over capacity figures show that the other junctions can cope with the predicted AM peak traffic.

1.0 INTRODUCTION

Background

- 1.1 Dorset County Council's Transportation Modelling Team were commissioned on 26 May 2016 by Trevor Badley of Minerals and Waste Planning Policy to undertake a Traffic Impact Assessment of proposed built development and minerals development in the area.
- 1.2 The work undertaken is based on a scoping note dated 21 April 2016 and consists of four elements:
- Establish existing traffic levels
 - Identify expected increases in traffic levels
 - Identify routes of predicted traffic
 - Quantify impacts of predicted traffic
- 1.3 Traffic data collected on 24 May 2016 at Warmwell Quarry, Woodsford Quarry and Moreton Pit, shows that 67% of heavy goods vehicles associated with quarries use the highway network in the inter-peak period between 10:00 and 16:00. A separate report (TM9999_J077_01_Rev0.pdf) deals with the inter-peak.
- 1.4 The study area is shown in **Figure 1.1**.

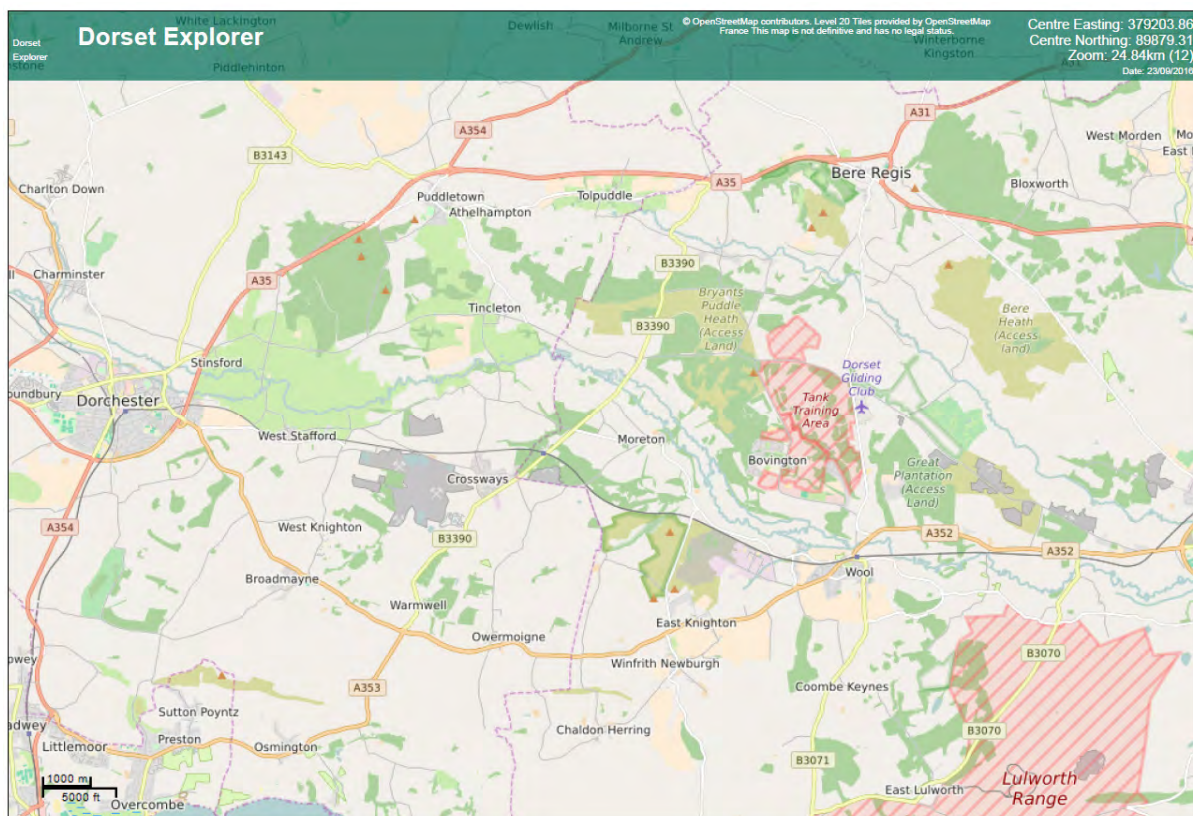


Figure 1.1 – Study Area

2.0 EXISTING TRAFFIC LEVELS

Data Collection

- 2.1 Traffic count data was collected at a number of locations by way of Automatic Traffic Counts (ATC) and Manual Turning Counts (MTC). The ATCs are listed in **Table 2.1** and shown in **Figure 2.1**. The MTC are listed in **Table 2.2** and shown in **Figure 2.2**.

ID	Location	Start Date	End Date	Easting	Northing
10	A352 Owermoigne	23/05/2016	29/05/2016	376567	85003
317	A352 Came	18/04/2016	24/04/2016	371192	88810
355	B3390 North of Level Crossing	17/05/2016	23/05/2016	377550	88715
1450	West of Crossways	17/05/2016	23/05/2016	375882	88905
1451	B3390 Warmwell Rd, Crossways	17/05/2016	23/05/2016	375510	86832
1634	C33 East of West Stafford	17/05/2016	23/05/2016	374061	89625
2054	B3390 Warmwell Rd, Crossways	17/05/2016	23/05/2016	376801	88220
2137	B3390 Warmwell Rd, Crossways	18/05/2016	24/05/2016	375292	85875
2965	A352 South of Whitcombe	18/04/2016	24/04/2016	272023	87354
3018	D21322 West Link Road	17/05/2016	23/05/2016	376558	88279

Table 2.1 – Automatic Traffic Counts

ID	Location	Date	Easting	Northing
50154	B3390/C80 Waddock Cross	17/05/2016	379946	91073
50155	B3390/C33 Hurst Heath Cross	24/05/2016	378555	89584
50156	Warmwell Road / Redbridge Road / Dick of the Banks Road / Moreton Road	19/05/2016	377384	88580
50157	Warmwell Road / West Link Road	19/05/2016	376662	88125
50158	Dick Of The Banks Road / West Link Road / Highgate Lane	19/05/2016	376503	88704
50159	Warmwell Quarry (Highgate Lane)	24/05/2016	375864	88912
50160	Woodsford Quarry (Highgate Lane)	24/05/2016	375133	89205
50161	Moreton Pit (Redbridge Road)	24/05/2016	378151	88507
50162	Warmwell Roundabout	14/06/2016	347981	85406
50167	Highgate Lane / Lewell Lane	19/05/2016	374128	89622

Table 2.2 – Manual Traffic Counts

Existing Data

2.2 Further existing automatic traffic count data collected by Dorset County Council, Highways England and from two Transport Assessments was also used. Existing ATC data is listed in **Table 2.3** and shown in **Figure 2.1**. Existing MTC data is listed in **Table 2.4** and shown in **Figure 2.2**.

ID	Location	Start Date	End Date	Easting	Northing
1394	C80 East of B3390, Waddock Cross	13/05/2010	19/05/2010	380759	91139
1395	C33 West Stafford Bypass	17/03/2014	30/03/2014	371331	89654
1636	Higher Woodsford	07/03/2013	13/03/2013	376610	89433
2004	A35 Yellowham Hill	07/03/2016	20/03/2016	372552	92964
2005	A35 Rogers Hill Farm	01/05/2016	31/05/2016	382910	95105
2240	Dick 'O' The Banks Road	01/06/2015	07/06/2015	377268	88624
2464	A35 East of A354 Northbrook Interchange	01/05/2016	31/05/2016	377146	94954
2596	A352 Broadmayne	29/11/2014	05/12/2014	373255	86425
2866	B3390 Warmwell Road, Crossways	01/10/2014	07/10/2014	377203	88471

Table 2.3 – Existing Automatic Traffic Counts

ID	Location	Date	Easting	Northing
5138-0411	Stinsford Roundabout	04/10/2011	370869	91228
5138-0311	A35 / A352 Junction	04/10/2011	370260	89738
5138-0211	Max Gate Roundabout	04/10/2011	370458	89795
Jct 3*	C33 / A352	12/05/2015	370733	89627
Jct 8AC*	B3390 / A35 Eastbound Slip	12/05/2015	381452	94825
Jct 8B*	B3390 / A35 Westbound Slip	12/05/2015	381134	94741

* - Traffic Count AM and PM periods only (no Inter-peak data)

Table 2.4 – Existing Manual Traffic Counts



Note – Triangles = New Data Collection, Stars = existing data

Figure 2.1 – Location of Automatic Traffic Counts



Note – Triangles = New Data Collection, Stars = existing data

Figure 2.2 – Location of Manual Traffic Counts

Historic Data

2.3 Three traffic count sites in the study area are monitored regularly from which Annual Average Daily Traffic (AADT) figures are produced. Historic traffic flows (2005 to 2014) are shown in **Figure 2.3**, **Figure 2.4** and **Figure 2.5**.

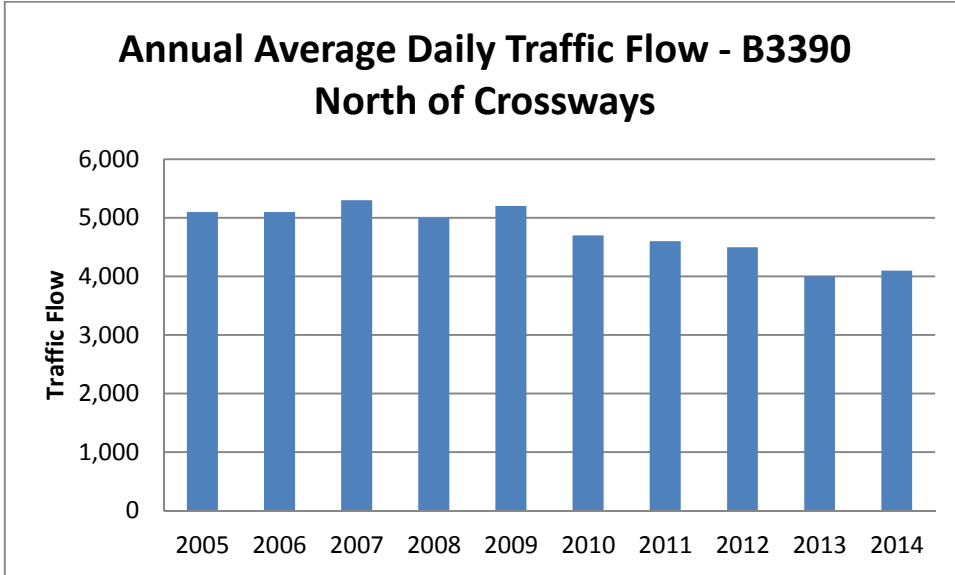


Figure 2.3 – B3390 North of Crossways AADT Flows 2005-2014

2.4 Traffic flows on the B3390 north of Crossways have fallen since 2009. This is due to a combination of the recession and the opening of the Weymouth Relief Road. The AADT has reduced by around 20 percent from a peak of 5,300 vehicles per day in 2007 to 4,100 vehicles per day in 2014.

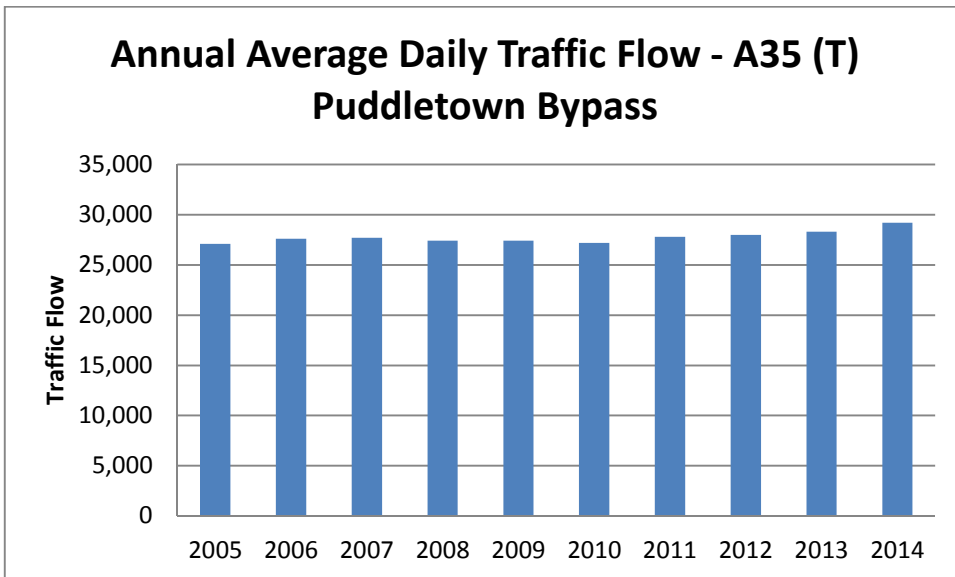


Figure 2.4 – A35 (T) Puddletown Bypass AADT Flows 2005-2014

2.5 Traffic flows on the A35 (T) west of Puddletown have gradually increased since 2005. This is partially due to the opening of the Weymouth Relief Road which has made the

route more attractive for vehicles travelling to and from Weymouth from the east. The AADT flow has increased by around 8 percent from 27,100 vehicles per day in 2005 to 29,200 vehicles per day in 2014.

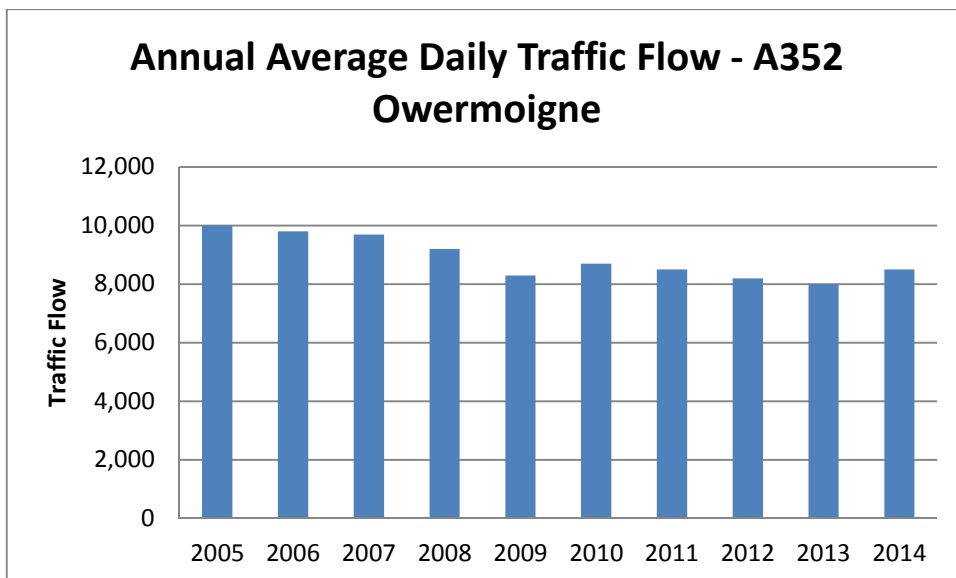


Figure 2.5 – A352 Owermoigne AADT Flows 2005-2014

- 2.6 Traffic flows on the A352 west of Owermoigne have gradually fallen since 2005. This is due to a combination of the recession and the opening of the Weymouth Relief Road. The AADT has reduced by 15 percent from a peak of 10,000 vehicles per day in 2005 to 8,500 vehicles per day in 2014.
Use of Data
- 2.7 The data was used in the calibration of an AM peak SATURN traffic model (discussed in Chapter 3). The model is based on an existing model completed in 1999 but has been updated to include alterations to the highway network and current traffic flows.
- 2.8 The model represents current (2016) conditions for a neutral time of year (spring) for the AM period (average of 08:00 to 09:00).

3.0 SATURN TRAFFIC MODEL

Model Creation

- 3.1 The network for this study was extracted / cut-from (Cordoned) from a larger existing SATURN model of the Crossways area created in 1999. The area extracted is shown in **Figure 3.1**. The network was audited and altered where necessary to reflect current conditions. Changes included altering speed limits and junction layouts.

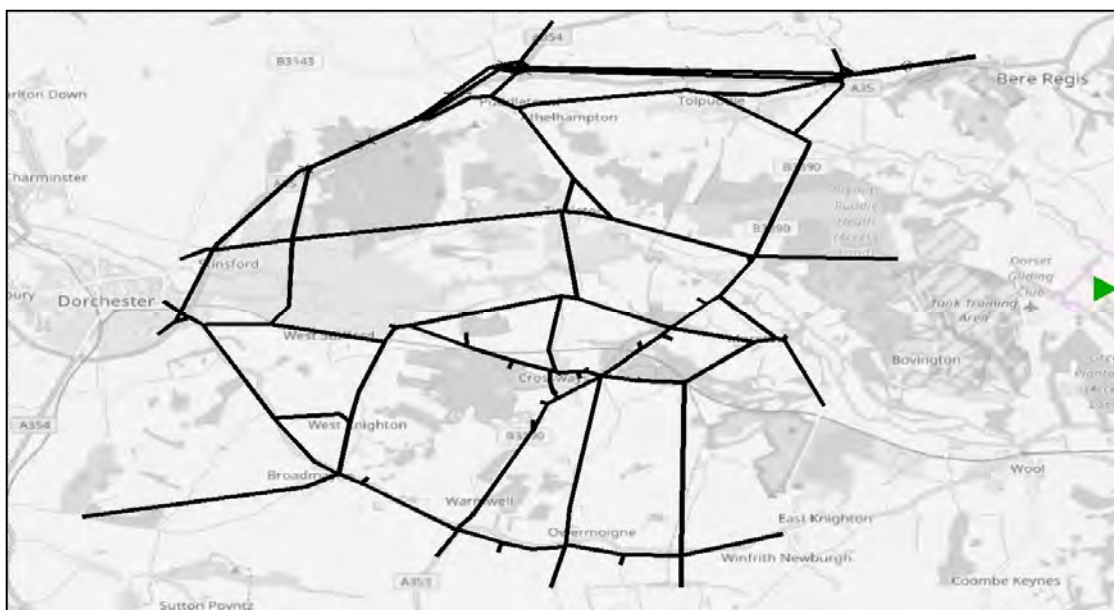


Figure 3.1 – SATURN Model Network

- 3.2 Traffic for the model is contained in 70-zone matrices (Modelled traffic enters and exits the network at 70 locations). A list of the zones and their descriptions are contained in Appendix A. Each matrix contains the following four levels:
- Level 1 – Cars
 - Level 2 – Light Goods Vehicles
 - Level 3 – Heavy Goods Vehicles
 - Level 4 – Quarry related Heavy Goods Vehicles
- 3.3 Buses are represented separately as fixed route trips
- 3.4 The model matrices were altered during the calibration process to reflect the traffic observed in the May / June 2016 traffic counts.
- 3.5 Calibration results (link counts) are contained in **Appendix B** and validation results (independent turning counts) are contained in **Appendix C**. To be considered a robust model, the calibration and validation results should meet the criteria set out in the Design Manual for Roads and Bridges (DMRB) Volume 12.
- 3.6 Table 3.1 summarises the DMRB Criteria for traffic flow Calibration / Validation. Both the GEH statistic and the absolute or relative flow difference for the complete model have been assessed.

Criteria and Measurements		
	Assigned Hourly Flows	Acceptable Guidelines
1	Individual flows within 100vph (flows<700vph)	85% of all cases
2	Individual flows within 15% (flows 700 -2700vph	85% of all cases
3	Individual flows within 400 vph for flows >2700vph	85% of all cases
4	Total Screenline flows within 5%	All (or nearly all) screenlines
5	GEH Statistics: individual flows GEH<5	85% of all cases
6	GEH Statistics: screenline flows GEH<4	All (or nearly all) screenlines

Table 3.1 – DMRB Criteria

3.7 The GEH statistic is used in the validation of the model to compare the difference between an observed flow and a modelled flow, acceptability guidelines contained within the DMRB state more than 85% of cases should have a GEH value of less than 5.

Link Count Calibration and Validation Summary

3.8 **Table 3.2** shows the overall calibration and validation results for the link counts based on the data in **Appendix B** and **Appendix C**.

AM peak (average of 0800-0900)	Total counts	Total With GEH < 5	Percentage	Within guidelines?
Calibration	38	33	87%	YES
Validation	128	109	85%	YES

Table 3.2 – Link Calibration/ Validation Summary Table

3.9 It can be seen from Table 3.2 that percentage of results for both calibration and validation meet the DMRB guidelines for traffic counts and the model validates well.

4.0 FORECASTING

Background Growth

- 4.1 Forecasting has been carried out in-line with guidance contained in TAG UNIT M4 – Forecasting and Uncertainty (November 2014).
- 4.2 The base year is 2016 and the forecast year 2031.
- 4.3 Future car trips have been calculated based on data from the '**TEMPRO v.7**' dataset. Future goods vehicles trips have been based on NTM data from the DfT document '**Road Traffic Forecasts 2015**'.
- 4.4 Growth factors used are contained in **Appendix D**. These have been applied to the 2016 base year matrices.
- 4.5 This background growth has been modelled as the 2031 Core Forecast Scenario (SC0). This scenario contains 47.3% more traffic than the base year and excludes the proposed local development growth in the Crossways area.

Local Development Growth

- 4.6 Future local development growth levels have been mainly based on two recent Transport Assessments;
- Land South of Warmwell Road Crossways, C&G Properties, January 2016
 - Silverlake Warmwell, Entran Ltd, July 2013
- 4.7 Chapter 6 of the 'Land South of Warmwell Road' report contains information on Trip Generation and Distribution. Future generation of residential trips has been calculated using the TRICS (Trip Rate Information Computer System) database.
- 4.8 The proposed numbers of future dwellings was set out in the brief for the following five scenarios:

Scenario 1 (SC1)

The 'do nothing' scenario – comprises of approximately 640 dwellings (and 8 commercial units) plus further infilling / intensification within the existing settlement boundaries of Moreton and Crossways. Total: approximately 640 dwellings

Scenario 2 (SC2)

Low growth scenario – In addition to the 640 residential units identified at Crossways in Scenario 1, Scenario 2 would test the impacts if around 500 dwellings were to be provided at Moreton through the Purbeck Local Plan review. Total: approximately 1140 dwellings.

Scenario 3 (SC3)

Medium growth scenario – In addition to the 640 identified in Scenario 1, Scenario 3 will test a slightly higher level of development at Moreton (650 dwellings) alongside an additional 500 dwellings at Crossways. Total: approximately 1790 dwellings.

Scenario 4 (SC4)

High growth scenario – In addition to the 640 identified in Scenario 1, the 500 suggested at Moreton in Scenario 2 and the 500 suggested at Crossways through Scenario 3, an additional 400 (i.e. the maximum potential allocation) could be allocated at Moreton. Total: approximately 2040 dwellings.

Scenario 5 (SC5)

Maximum growth scenario – In addition to the 640 identified in Scenario 1, the maximum identified potential at Moreton (900 dwellings) and the maximum identified potential at Crossways (1260 dwellings) would be allocated. Total: approximately 2800 dwellings.

- 4.9 All scenarios include trips attributed to the ‘Silverlake’ development.
- 4.10 Trips rates applied to the number of developments have been calculated using TRICS (a widely used web-based database). These are the predicted number of car trips for each household by time period. The trip rates have not been reduced to take account of multi modal trip methods or travel plans thus represent a worst case scenario. The calculated trip rates are contained in **Table 4.1**. Full TRICS output is contained in **Appendix E**.

Development	Zone	Type	Percent	AM Arr.	AM Dep.	IP Arr.	IP Dep.	PM Arr.	PM Dep.
Crossways	10	Privately Owned	0.65	0.130	0.430	0.189	0.178	0.519	0.338
Crossways	10	Affordable	0.35	0.099	0.210	0.112	0.108	0.193	0.121
Crossways	10			0.229	0.640	0.301	0.286	0.712	0.459
Moreton	45	Privately Owned	0.65	0.130	0.430	0.189	0.178	0.519	0.338
Moreton	45	Affordable	0.35	0.099	0.210	0.112	0.108	0.193	0.121
Moreton	45			0.229	0.640	0.301	0.286	0.712	0.459

Table 4.1 – Calculated Trip Rates

- 4.11 The additional trips attributed to the Silverlake development have been taken directly from the report ‘Silverlake Warmwell, Entran Ltd, July 2013’. These are based on (worst case) Friday trips.
- 4.12 Total additional development trips for each scenario are contained in **Tables 4.2 to 4.6**.

Scenario 1	Zone	AM Arrive	AM Depart	IP Arrive	IP Depart	PM Arrive	PM Depart
Crossways South of B3390	10	59	177	81	77	203	131
Moreton	45	17	49	23	21	56	37
Silverlake	17	39	33	39	33	39	33
TOTAL		115	259	143	131	298	201

Table 4.2 – Scenario 1 Development Trips

Scenario 2	Zone	AM Arrive	AM Depart	IP Arrive	IP Depart	PM Arrive	PM Depart
Crossways South of B3390	10	59	177	81	77	203	131
Moreton	45	17	49	23	21	56	37
Moreton 500	45	59	177	81	77	203	131
Silverlake	17	39	33	39	33	39	33
TOTAL		174	436	224	208	501	332

Table 4.3 – Scenario 2 Development Trips

Scenario 3	Zone	AM Arrive	AM Depart	IP Arrive	IP Depart	PM Arrive	PM Depart
Crossways South of B3390	10	59	177	81	77	203	131
Moreton	45	17	49	23	21	56	37
Crossways 500	10	59	177	81	77	203	131
Moreton 650	45	78	230	106	100	263	171
Silverlake	17	39	33	39	33	39	33
TOTAL		252	666	330	308	764	503

Table 4.4 – Scenario 3 Development Trips

Scenario 4	Zone	AM Arrive	AM Depart	IP Arrive	IP Depart	PM Arrive	PM Depart
Crossways South of B3390	10	59	177	81	77	203	131
Moreton	45	17	49	23	21	56	37
Crossways 500	10	59	177	81	77	203	131
Moreton 900	45	107	318	145	138	365	236
Silverlake	17	39	33	39	33	39	33
TOTAL		281	754	369	346	866	568

Table 4.5 – Scenario 4 Development Trips

Scenario 5	Zone	AM Arrive	AM Depart	IP Arrive	IP Depart	PM Arrive	PM Depart
Crossways South of B3390	10	59	177	81	77	203	131
Moreton	45	17	49	23	21	56	37
Crossways 1260	10	150	445	205	194	510	330
Moreton 900	45	107	318	145	138	365	236
Silverlake	17	39	33	39	33	39	33
TOTAL		372	1022	493	463	1173	767

Table 4.6 – Scenario 5 Development Trips

Quarry Traffic

4.13 Additional trips attributed to the future quarries have been taken from the brief.

- Woodsford Extension – No change (60 in and 60 out per day)
- Station Road Moreton – (40 in and 40 out per day)
- Hurst Farm Moreton – (40 in and 40 out per day)

4.14 Locations of the quarries are shown in **Figure 4.1**.

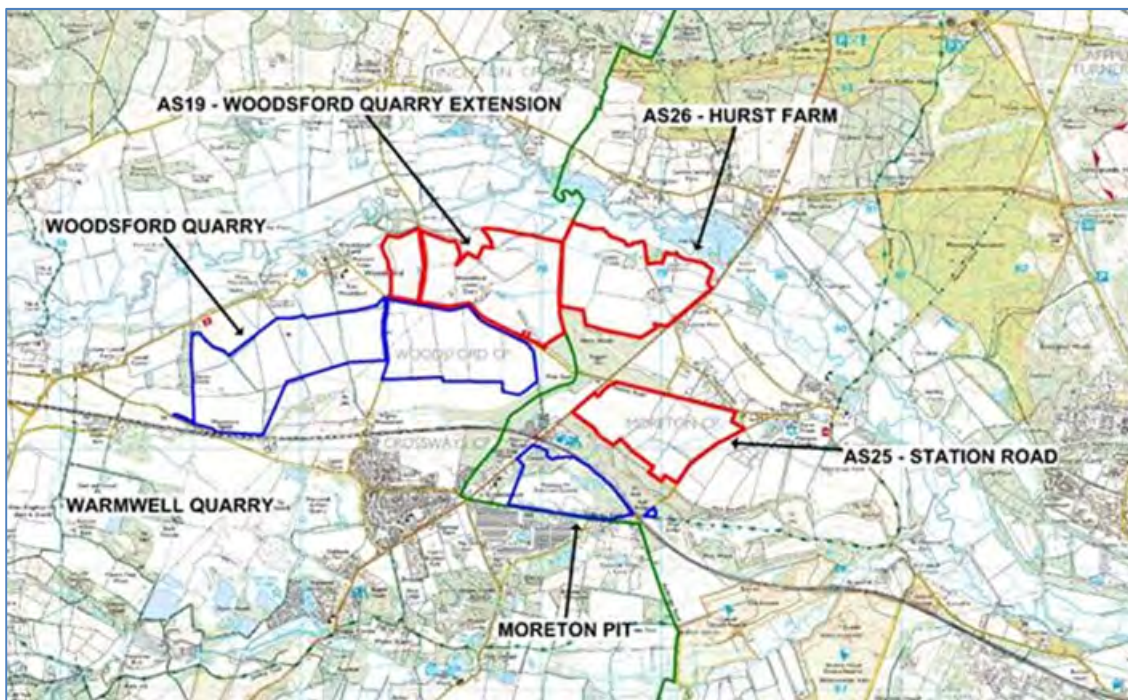


Figure 4.1 – Location of Modelled Quarries

- 4.15 Station Road and Hurst Farm quarries will not be working simultaneously. Only Station Road has been modelled for the purpose of this study as the two proposed sites are situated so close each other the model results will be similar for either quarry.
- 4.16 It is understood that quarry related traffic does not always have the same destinations, therefore future trip distribution of quarry related lorries has been based on observed traffic movements to/from Moreton Pit (Zone 24) and the manual traffic counts undertaken in May 2016.

Model Convergence

- 4.17 The forecast models all ran successfully with assignments converging well. Networks are comparatively uncongested in all future scenarios. Convergence statistics are contained in **Appendix F**.

5.0 MODEL RESULTS

Overall Network Statistics

- 5.1 Each model run produces overall network statistic outputs. The network wide statistics are a useful way of comparing scenarios and give an indication of any congestion problems.
- 5.2 The network statistics for the base year, core forecast year, and each of the six forecast scenarios are contained in Table 5.1.

	2016 AM	2031 AM					
	BASE	SC0	SC1	SC2	SC3	SC4	SC5
Assigned Matrix Total	5162.4	6051.7	6425.7	6583.7	6969.7	7086.7	7445.7
Increase in Trips (Percent)	0	47.3	56.4	60.3	69.7	72.5	81.3
Transient Queues (pcu hrs)	25.7	40.2	45.3	47.2	54.4	56.7	64.5
Over-Capacity Queues (pcu hrs)	0.0	6.5	6.7	6.8	7.1	7.3	7.1
Total Travel Time (pcu hrs)	598.5	714.0	762.3	786.7	836.8	855.2	898.9
Travel Distance (pcu km)	54264.3	63758.8	67151.4	68907.8	72386.0	73656.6	76534.3
Average Speed (km/h)	90.7	89.3	88.1	87.6	86.5	86.1	85.1
Total Trips Loaded (pcu's)	5162.4	6051.7	6425.7	6583.7	6969.7	7086.7	7445.7

Table 5.1 – Network Wide Statistics 2016 & 2031

- 5.3 PCUs mentioned in **Table 5.1** are Passenger Car Units. For modelling purposes all vehicles are modelled as PCUs. Cars and light vans are represented as 1.0 PCU. Smaller lorries as 1.5 PCUs and larger lorries as 2.3 PCUs.
- 5.4 The overall network statistics vary slightly for each scenario. Transient queues increase and average speeds decrease as the total trips loaded increases. However, even in the worst case Scenario 5, speeds are relatively high and transient queues low. None of the figures above raise any cause for concern.
- 5.5 The 'Core' 2031 forecast scenario (SC0) contains 47.3% more trips than the base 2016 year. The worst case SC5 scenario contains 81.3% more trips than the base.

Overall Difference Plots

5.6 Difference plots have been produced comparing traffic flows for each forecast scenario with the base model. The plots show increases in peak hour traffic in green and decreases in blue. Comparisons of each scenario against the base 2016 and core 2031 are shown in **Figure 5.2 to Figure 5.12**.

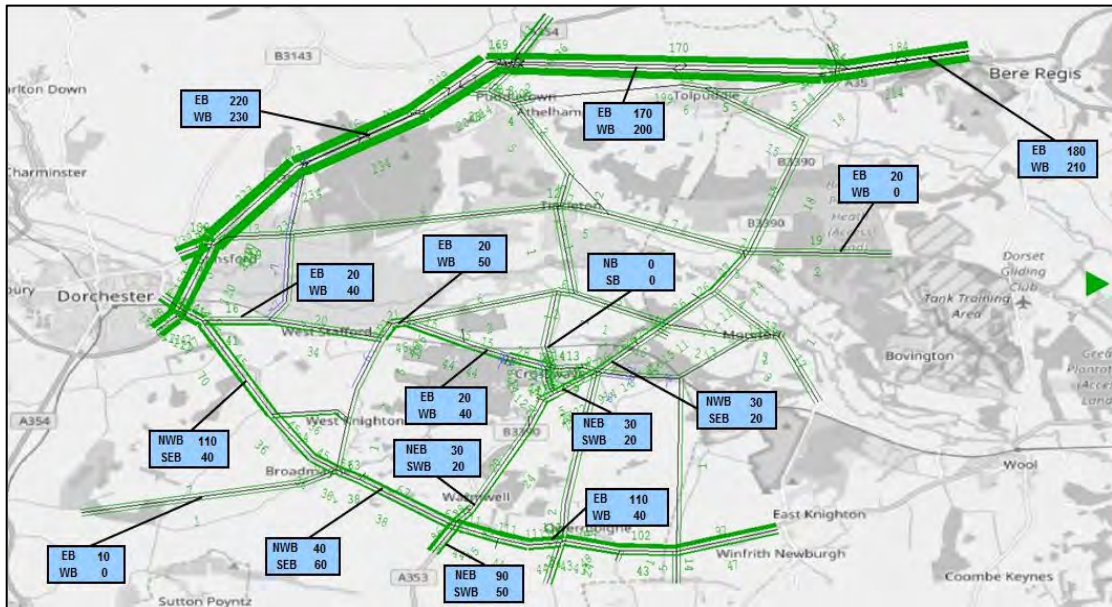


Figure 5.2 – Scenario SC0 2031 vs. Base 2016 AM Peak

5.7 Scenario SC0 is the Core 2031 forecast which does not include local development trips in Crossways and Moreton (i.e. background growth only). This scenario contains 47.3% more trips than the 2016 base model. The greatest increase is along the A35 trunk road with an additional 220 to 230 PCUs in each direction. There is an increase of between 40 to 110 PCUs using the A352 between Max Gate and East Knighton in each direction. There are only small increases predicted in the B3390 / Crossways area.

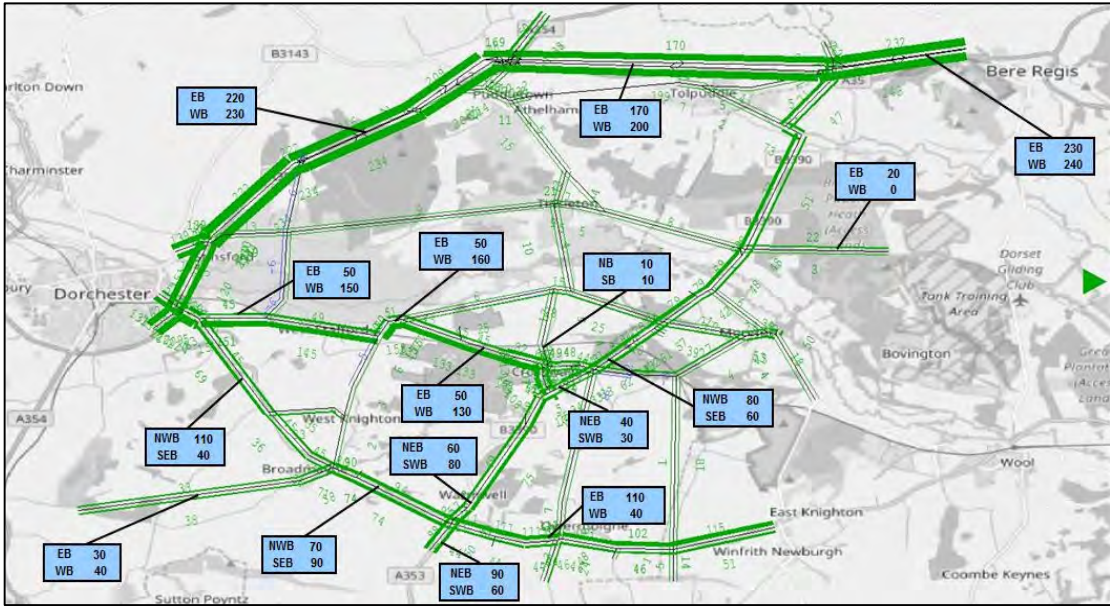


Figure 5.3 – Scenario SC1 2031 vs. Base 2016 AM Peak

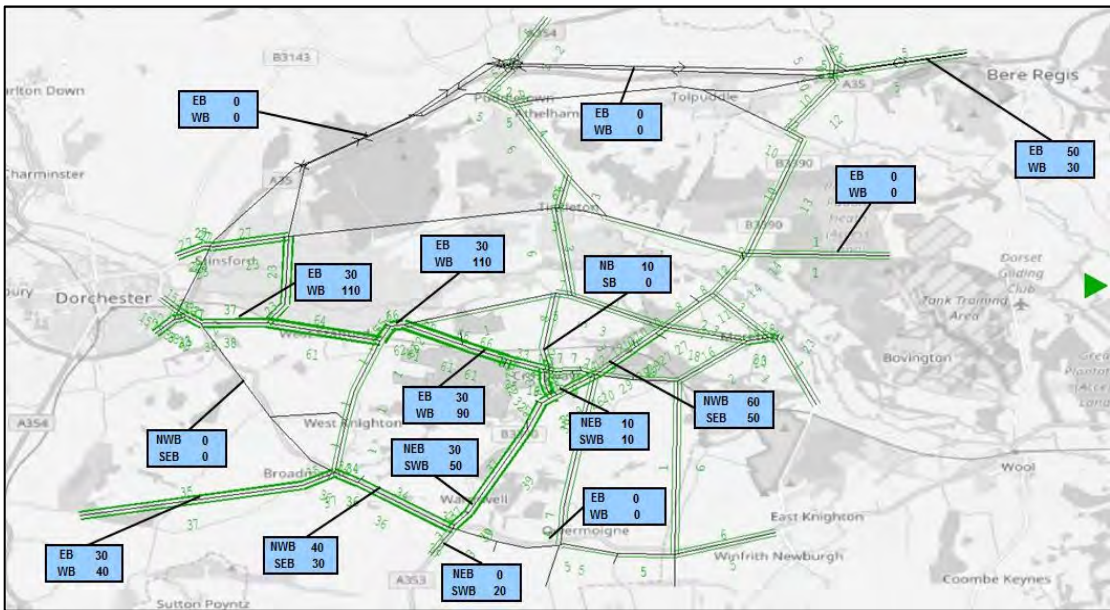


Figure 5.4 – Scenario SC1 2031 vs. Scenario SC0 2031 AM Peak

5.8 Scenario SC1 contains 640 dwellings in Crossways and Moreton area in addition to the ‘Core’ background growth. This scenario contains 56.4% more trips than the 2016 base model. **Figure 5.3** shows the overall impact and **Figure 5.4** shows the impact of the 640 dwelling in isolation.

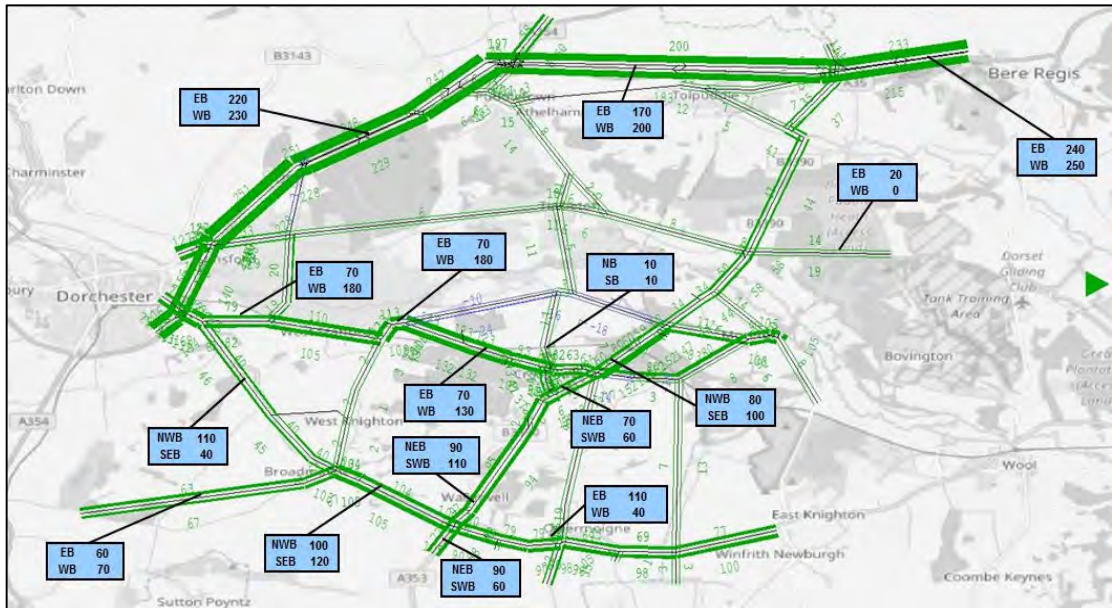


Figure 5.5 – Scenario SC2 2031 vs. Base 2016 AM Peak

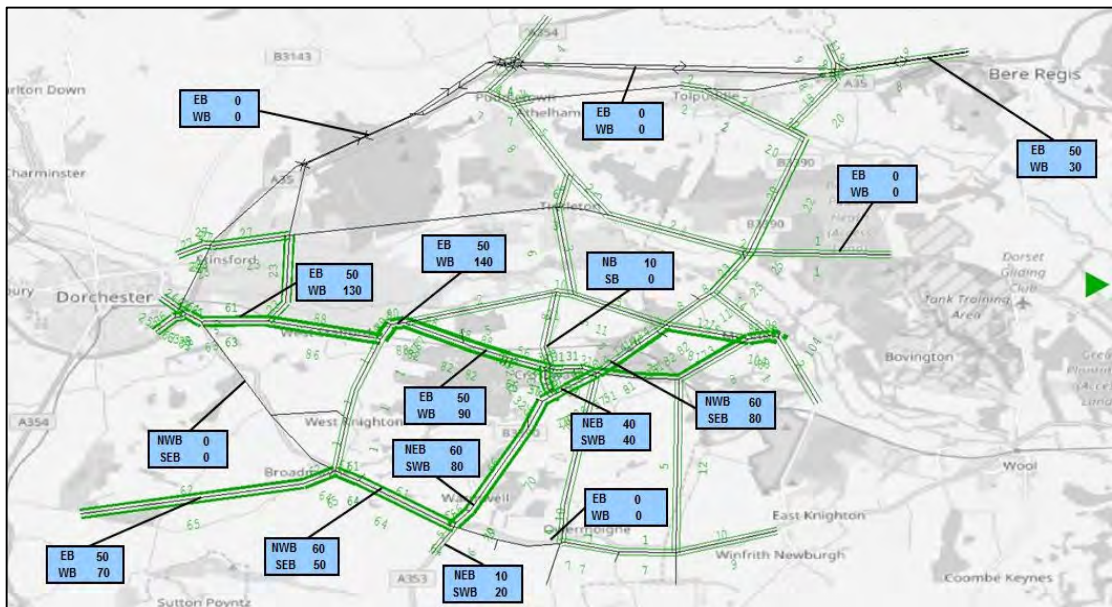


Figure 5.6 – Scenario SC2 2031 vs. Scenario SC0 2031 AM Peak

5.9 Scenario SC2 contains 1,140 dwellings in Crossways and Moreton area in addition to the ‘Core’ background growth. This scenario contains 60.3% more trips than the 2016 base model. **Figure 5.5** shows the overall impact and **Figure 5.6** shows the impact of the 1,140 dwellings in isolation.

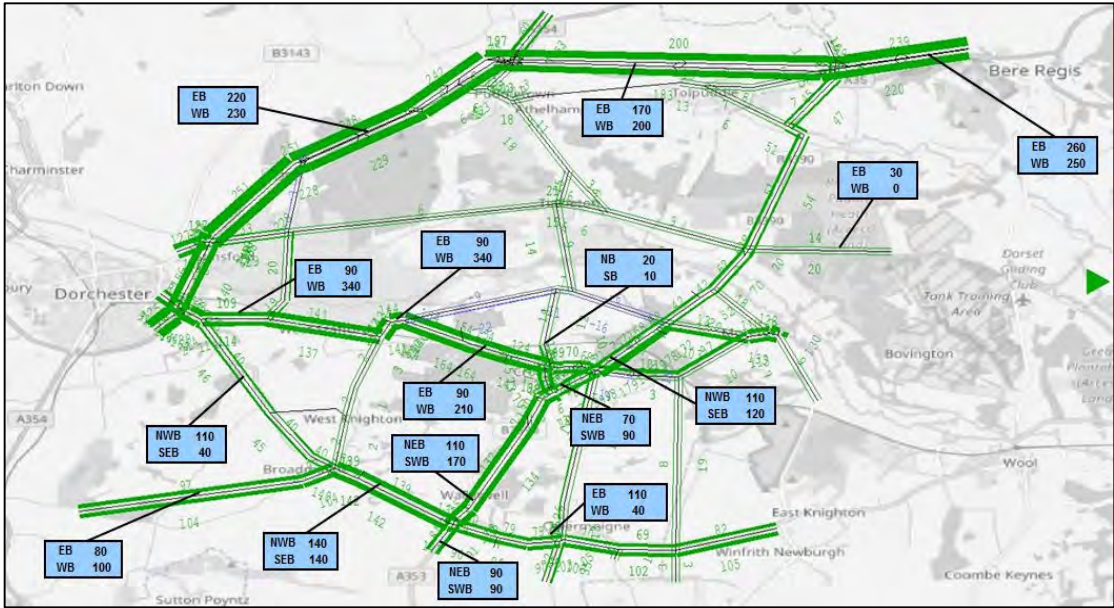


Figure 5.7 – Scenario SC3 2031 vs. Base 2016 AM Peak

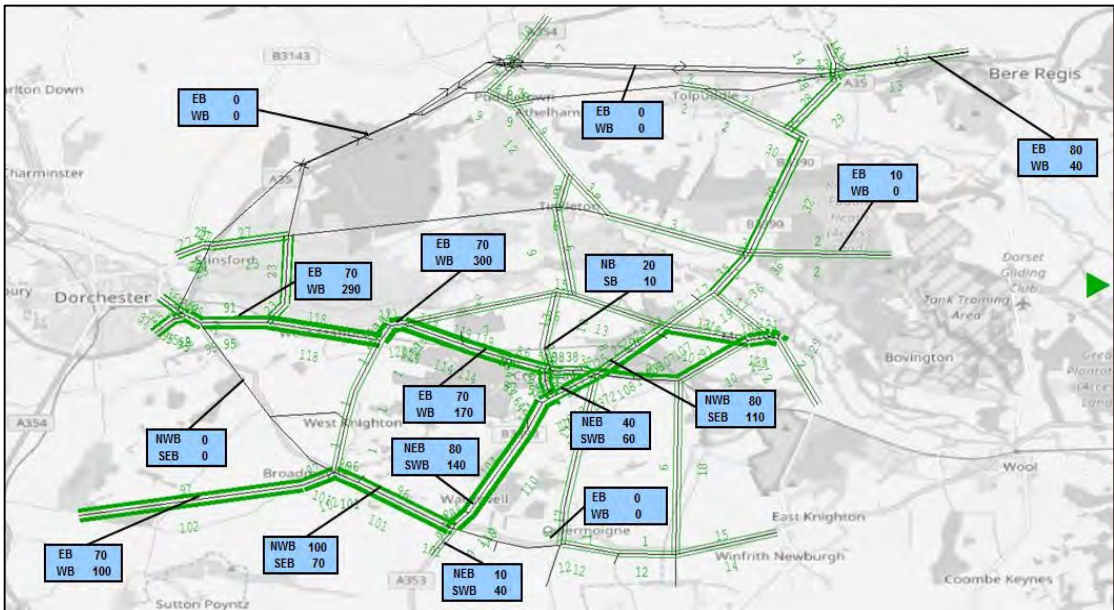


Figure 5.8 – Scenario SC3 2031 vs. Scenario SC0 2031 AM Peak

5.10 Scenario SC3 contains 1,790 dwellings in Crossways and Moreton area in addition to the ‘Core’ background growth. This scenario contains 69.7% more trips than the 2016 base model. **Figure 5.7** shows the overall impact and **Figure 5.8** shows the impact of the 1,790 dwellings in isolation.

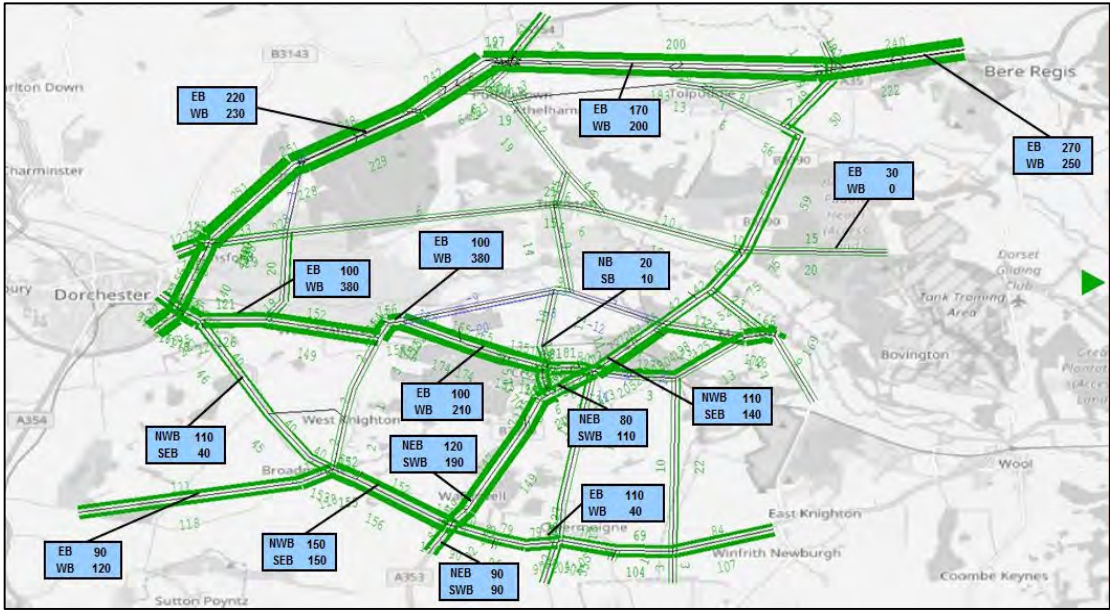


Figure 5.9 – Scenario SC4 2031 vs. Base 2016 AM Peak

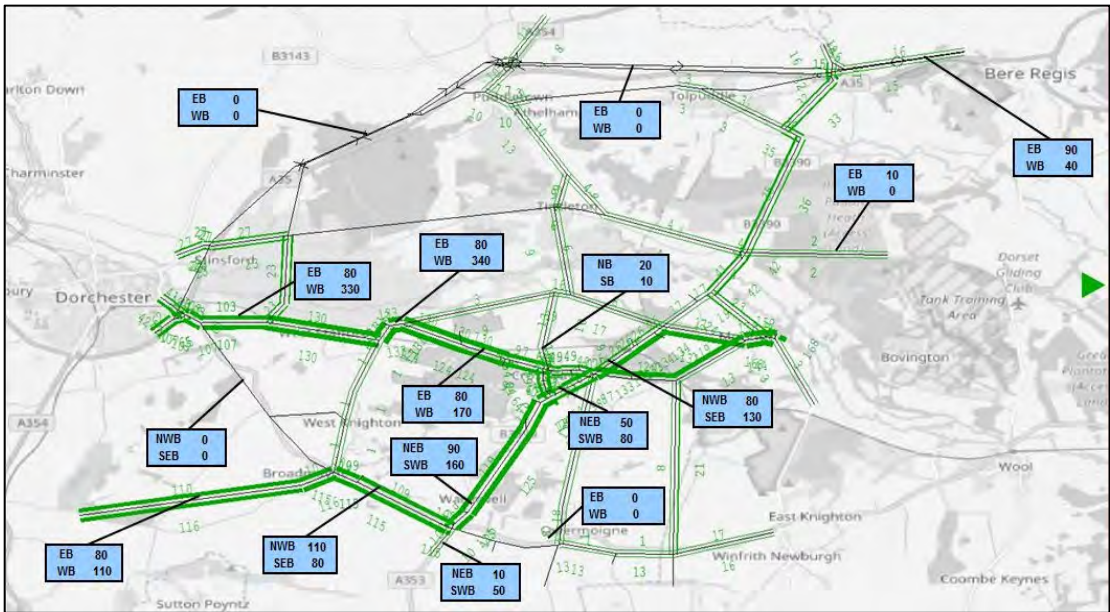


Figure 5.10 – Scenario SC4 2031 vs. Scenario SC0 2031 AM Peak

5.11 Scenario SC4 contains 2,040 dwellings in Crossways and Moreton area in addition to the ‘Core’ background growth. This scenario contains 72.5% more trips than the 2016 base model. **Figure 5.9** shows the overall impact and **Figure 5.10** shows the impact of the 2,040 dwellings in isolation.

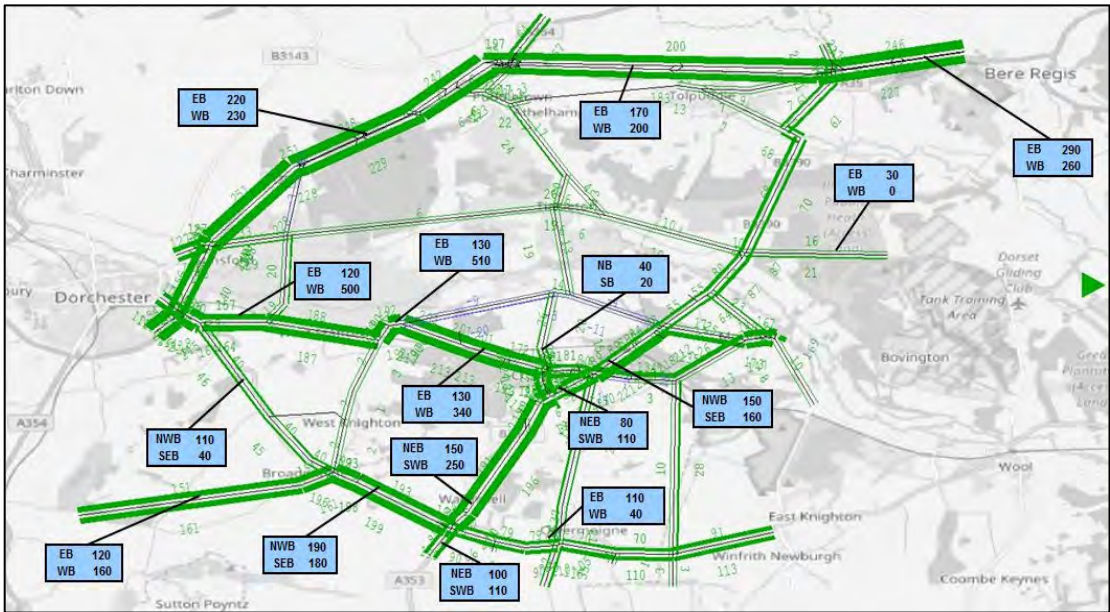


Figure 5.11 – Scenario SC5 2031 vs. Base 2016 AM Peak

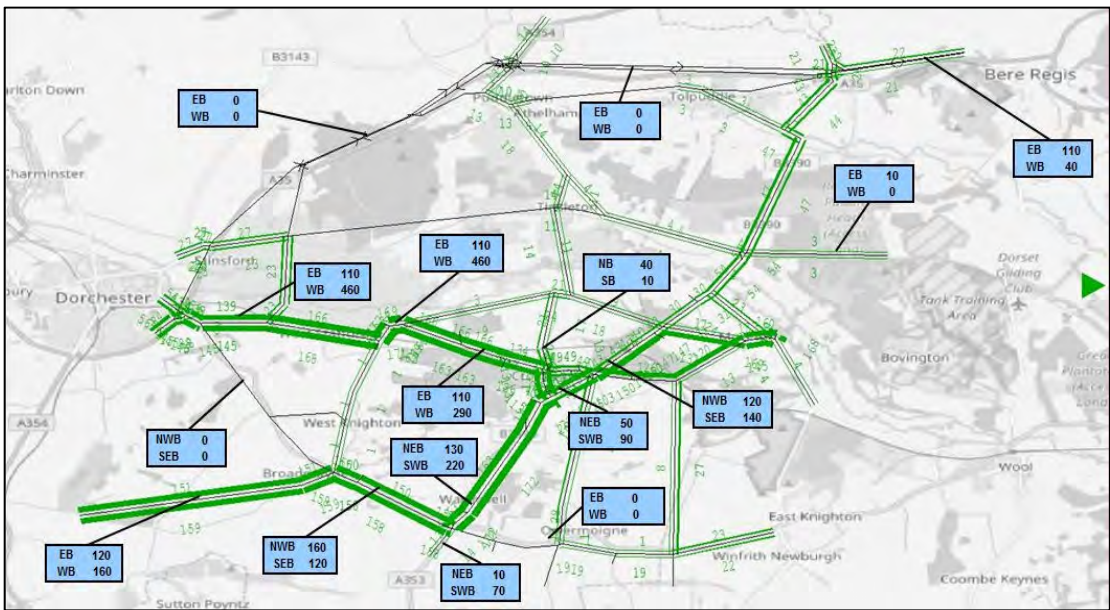


Figure 5.12 – Scenario SC5 2031 vs. Scenario SC0 2031 AM Peak

5.12 Scenario SC5 contains 2,800 dwellings in Crossways and 81.3% more trips than the 2016 base model. **Figure 5.11** shows the overall impact and **Figure 5.12** shows the impact of the 2,800 dwellings in isolation.

Quarry Traffic Difference Plots

- 5.13 A difference plot has been produced comparing quarry traffic flows for 2031 Scenario SC0 against the Base 2016 model. The plots are shown in **Figure 5.13**.

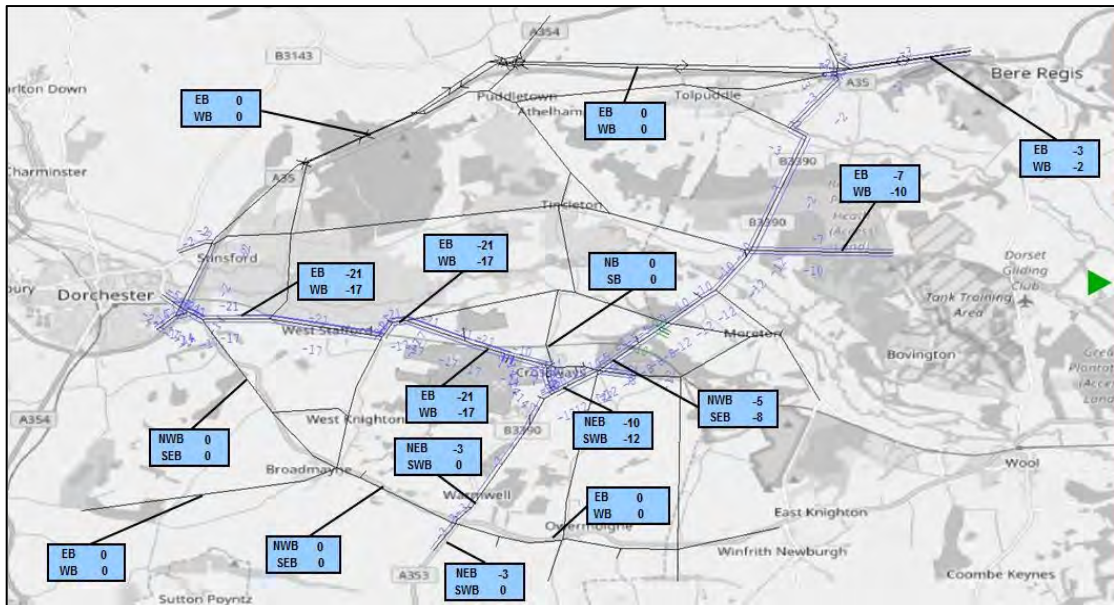


Figure 5.13 Quarry HGV Traffic 2031 Forecast vs. 2016 Base AM

- 5.14 It has been stated that the proposed quarries at Hurst Farm and Station Road will not operate simultaneously. Therefore, the plot shows the effect of only Woodsford and Station Road quarries being operational in 2031. The plot would be almost identical if only Woodsford and Hurst Farm quarries were open.
- 5.15 It is predicted that only two quarries will be operating simultaneously from 2020 (compared with three in 2016). Therefore, quarry related traffic is predicted to be lower than current levels.

Key Locations

- 5.17 As the overall model statistics did not show any causes for concern, only traffic impacts for the worst-case future scenario have been compared against the 'Core' future scenario (SC0) at the following key locations:

Links

- B3390 North of Crossways (ATC 355) (Moreton Level Crossing)
- B3390 South of Crossways (ATC 1451)
- C33 West Stafford Bypass (ATC 1395)
- C80 East of B3390 (ATC 1394)
- A35 East of A354 (ATC 2464)
- Highgate Lane (ATC 1450) (Woodsford No.38 Level Crossing)

Junctions

- Dorchester Bypass / Wareham Road Junction (Site 5138-0311)
 - Max Gate Roundabout (Site 5138-0211)
 - Warmwell Roundabout (Node 50162)
 - A31 / A35 Bere Regis Roundabout
 - B3390 North of Crossways
- 5.18 To provide an indication of the predicted traffic impact on the key links, graphs of weekday traffic profiles have been produced (**Figure 5.14 to Figure 5.25**). Each graph shows observed traffic data from 2016 and 2008 (when traffic flows were generally greater in the Crossways area). Also plotted are modelled flows for the worst case forecast scenario (SC5).
- 5.19 The model shows the highway network will be able to accommodate the predicted future traffic however; the traffic flow profile graphs should give an idea of how busy roads may be compared with current conditions.
- 5.20 To provide an indication of the predicted traffic impact on the key junctions, node diagrams have been produced (**Figure 5.24 to Figure 5.31**). The diagrams show the predicted increase in traffic (PCUs) and the predicted volume over capacity (V/C) ratio for each movement.
- 5.21 The volume over capacity ratio is a common measure to show possible congestion. Any movement with a volume over capacity ratio greater than 85% is likely to experience congestion. One of the junctions assessed for this study, Dorchester Bypass / Wareham Road, shows a V/C ratio of 94%, suggestion some congestion in the AM peak.

5.22 Average weekday traffic flow profiles for the B3390 North of Crossways are shown in **Figure 5.14** and **Figure 5.15** for north-eastbound and south-westbound directions respectively.

5.23 Current (2016) traffic flow profiles on the B3390 North of Crossways show peak flows of approximately 270 and 330 vehicles per hour. The model predicts an AM peak increase of approximately 45% in the NB direction and 60% in the SB direction for SC5 forecast. The graphs below show the predicted NB and SB AM peak traffic in SC5 forecast is likely to be much higher than the current highest peaks. This could cause additional queuing, particularly southbound towards Moreton Level Crossing.

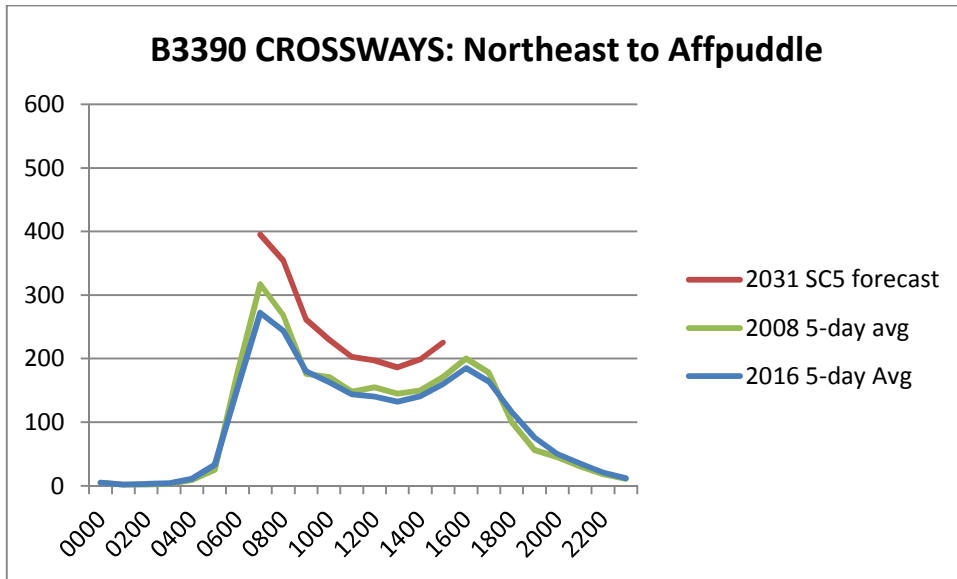


Figure 5.14 B3390 North of Crossways Traffic Flow Profiles (North-Eastbound)

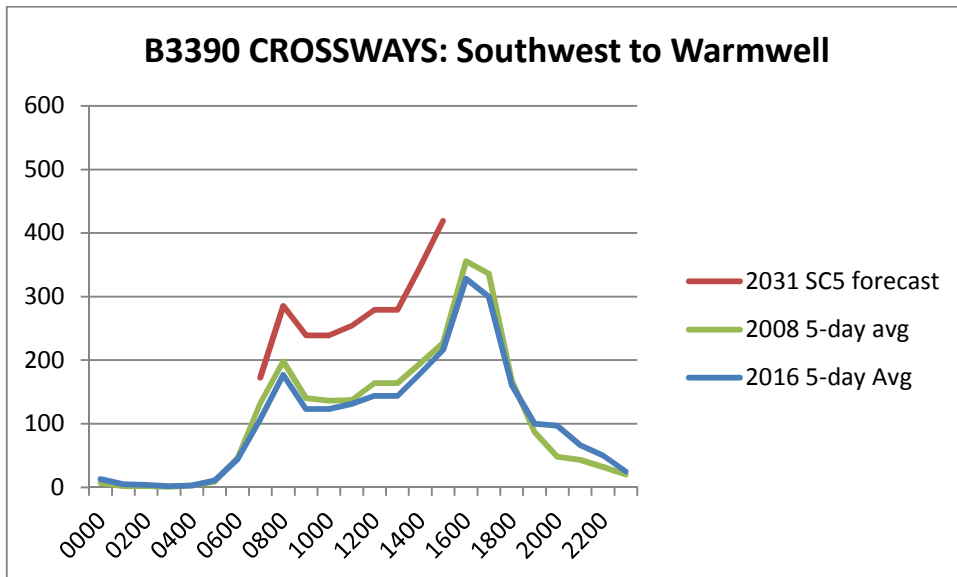


Figure 5.15 B3390 North of Crossways Traffic Flow Profiles (South-Westbound)

B3390 South of Crossways

- 5.24 Average weekday traffic flow profiles for the B3390 South of Crossways are shown in **Figure 5.16** and **Figure 5.17** for north-eastbound and south-westbound directions respectively.
- 5.25 Current (2016) traffic flow profiles on the B3390 South of Crossways show peak flows of approximately 165 and 230 vehicles per hour. The model predicts an AM peak increase of approximately 75% in the north-eastbound direction and 175% in the south-westbound direction for SC5 forecast. The graphs below show the predicted AM traffic in SC5 forecast is likely to be higher than both the current AM and PM peaks. This could cause additional queuing, particularly southbound at Woodsford No.38 Level Crossing.

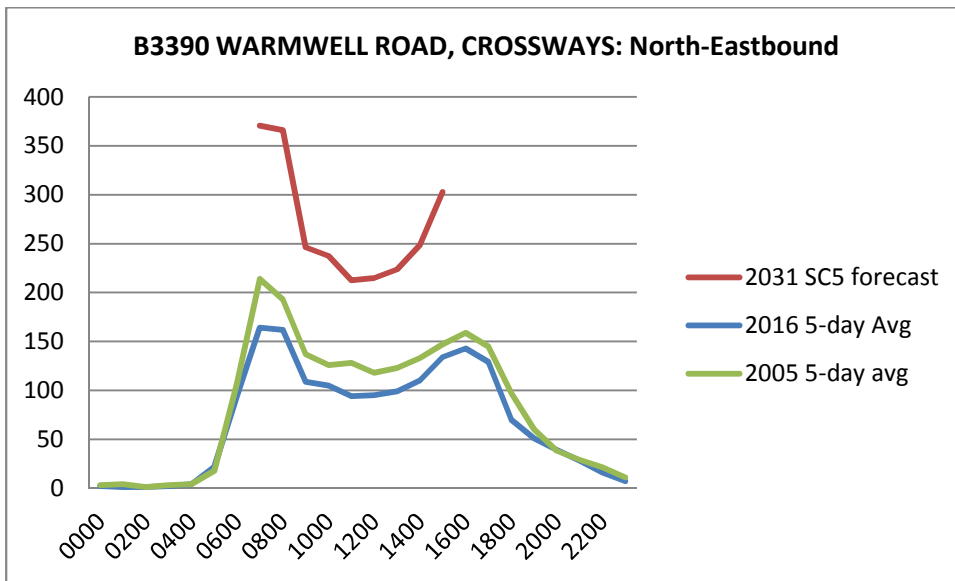


Figure 5.16 B3390 South of Crossways Traffic Flow Profiles (North-Eastbound)

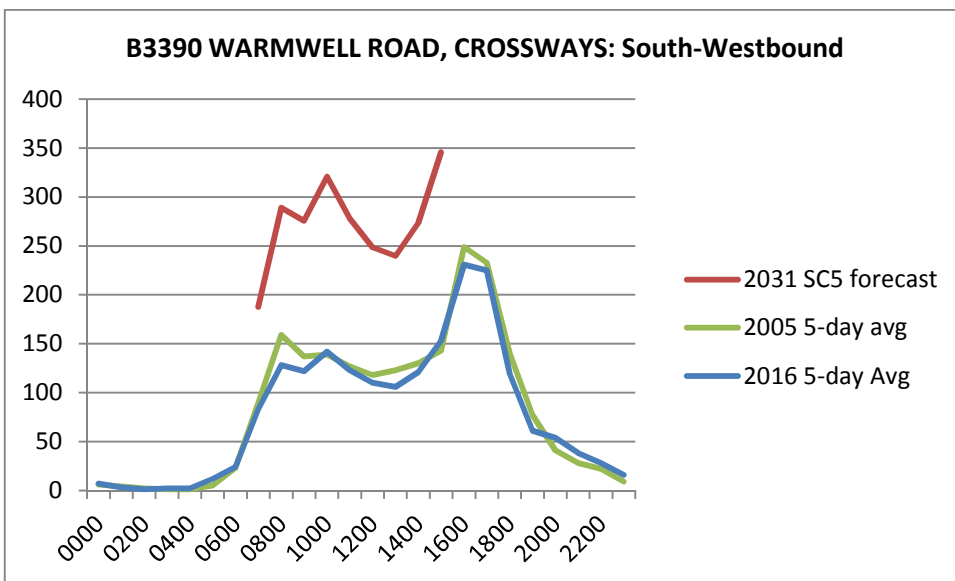


Figure 5.17 B3390 South of Crossways Traffic Flow Profiles (South-Westbound)

D21322 West of Crossways (Highgate Lane)

- 5.26 Average weekday traffic flow profiles for the D21322 West of Crossways are shown in **Figure 5.18** and **Figure 5.19** for eastbound and westbound directions respectively.
- 5.27 Current (2016) traffic flow profiles on the D21322 West of Crossways show peak flows of approximately 250 and 300 vehicles per hour. The model predicts an AM peak increase of approximately 75% in the EB and 110% in the WB direction for SC5 forecast. The graphs below show the predicted EB and WB AM traffic in SC5 forecast is likely to be higher than all current peaks. The predicted 500 vehicles per hour WB flow would likely pass through the shuttle-working traffic signals at the bridge over Highgate Lane.

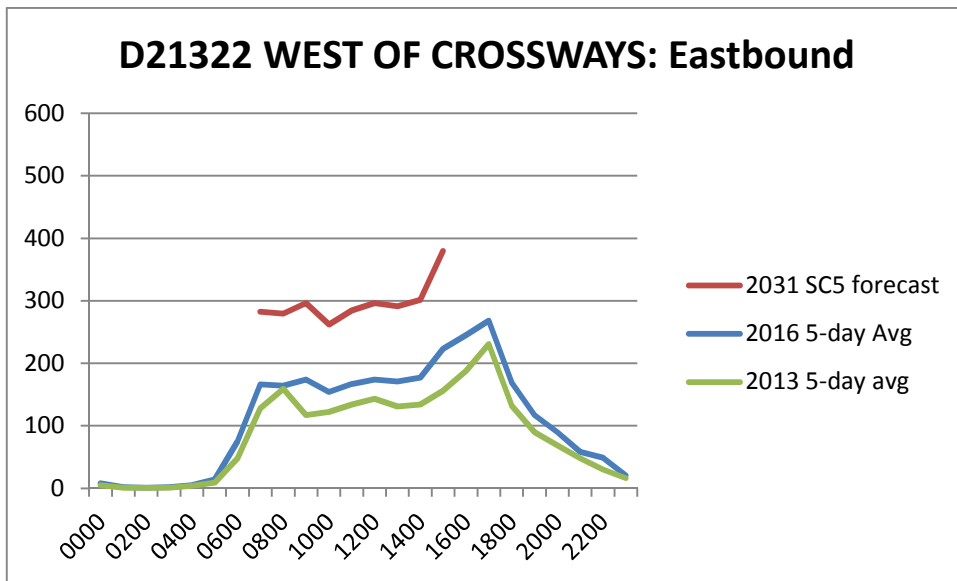


Figure 5.18 West of Crossways Traffic Flow Profiles (Eastbound)

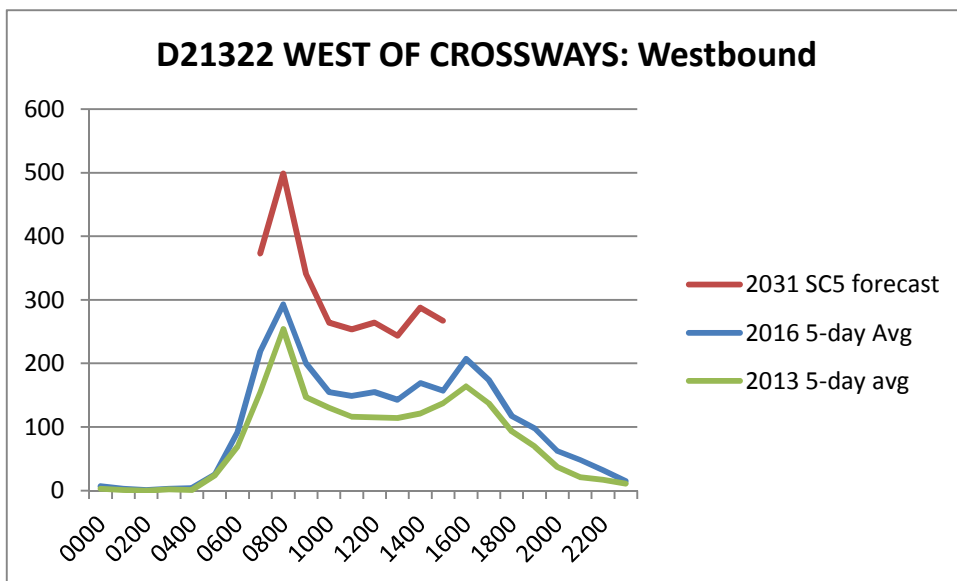


Figure 5.19 West of Crossways Traffic Flow Profiles (Westbound)

C33 West Stafford Bypass

- 5.28 Average weekday traffic flow profiles for the C33 West Stafford Bypass are shown in **Figure 5.20** and **Figure 5.21** for eastbound and westbound directions respectively.
- 5.29 Current (2016) traffic flow profiles on the C33 West Stafford Bypass show peak flows of approximately 320 and 270 vehicles per hour. The model predicts an AM peak increase of approximately 75-80% in each direction for the SC5 forecast. The graphs below show the predicted EB and WB AM traffic in SC5 forecast is likely to be higher than all current peaks. The predicted 600 vehicles per hour WB flow would likely pass through the shuttle-working traffic signals at the bridge over Highgate Lane. There were no issues in the current model but further investigation is suggested.

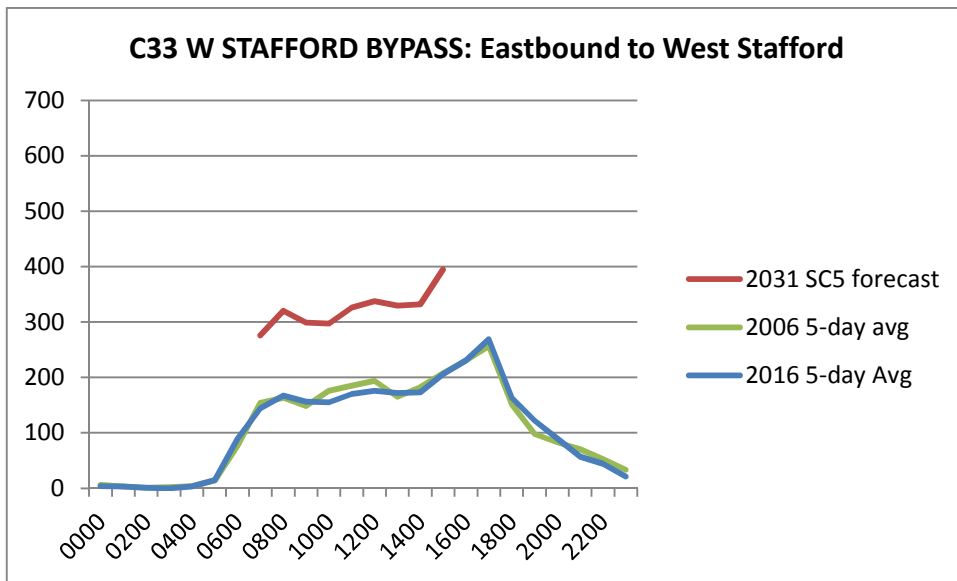


Figure 5.20 C33 West Stafford Bypass Traffic Flow Profiles (Eastbound)

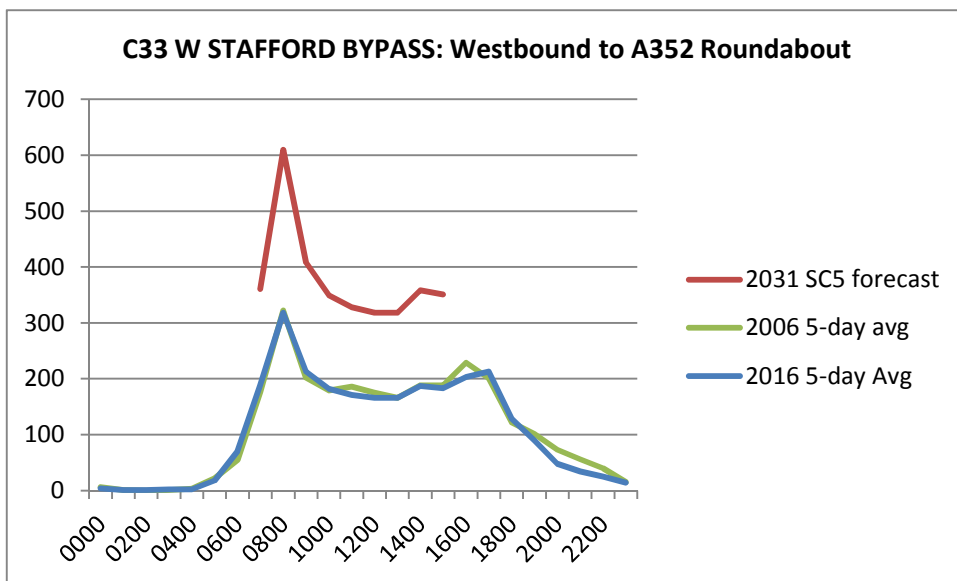


Figure 5.21 C33 West Stafford Bypass Traffic Flow Profiles (Westbound)

C80 East of B3390

- 5.30 Average weekday traffic flow profiles for the C80 East of B3390 are shown in **Figure 5.22** and **Figure 5.23** for eastbound and westbound directions respectively.
- 5.31 Current (2016) traffic flow profiles on the C33 West Stafford Bypass show peak flows of approximately 270 and 310 vehicles per hour. The model predicts an AM peak decrease of over 15% in the EB direction and less than 10% in the WB direction for SC5 forecast. The graphs below show the predicted EB AM peak traffic in SC5 forecast is likely to be slightly higher than the current AM peak.

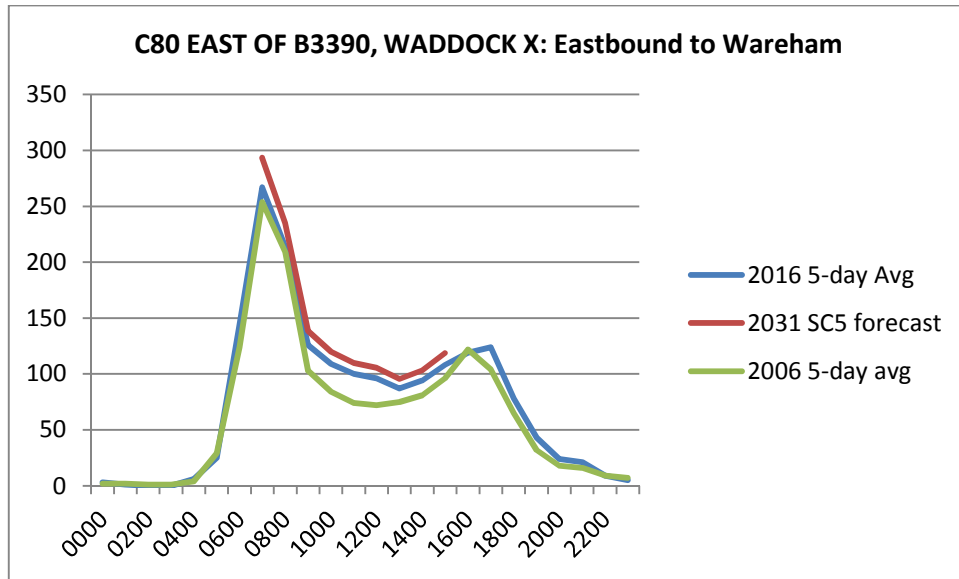


Figure 5.22 C80 East of B3390 Traffic Flow Profiles (Eastbound)

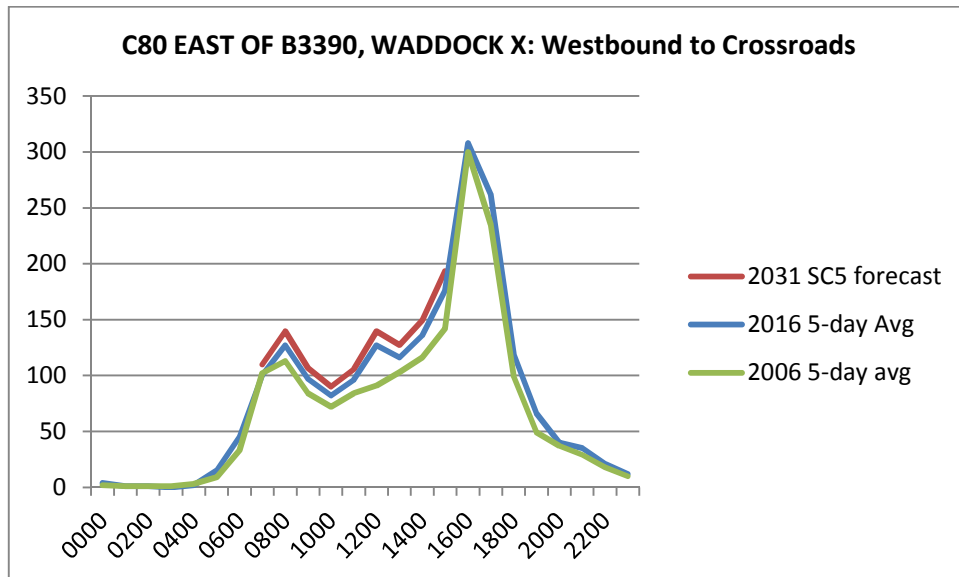


Figure 5.23 C80 East of B3390 Traffic Flow Profiles (Westbound)

A35 East of A354 Northbrook Interchange (Puddletown Bypass)

- 5.32 Average weekday traffic flow profiles for the A35 East of A354 are shown in **Figure 5.24** and **Figure 5.25** for eastbound and westbound directions respectively.
- 5.33 Current (2016) traffic flow profiles on the A35 East of A354 show peak flows of between 1000 and 1100 vehicles per hour. The model predicts an AM peak increase of approximately 15% in each direction for the SC5 forecast. The graphs below show the predicted EB and WB traffic in SC5 forecast is likely to be higher than the current AM and PM peaks.

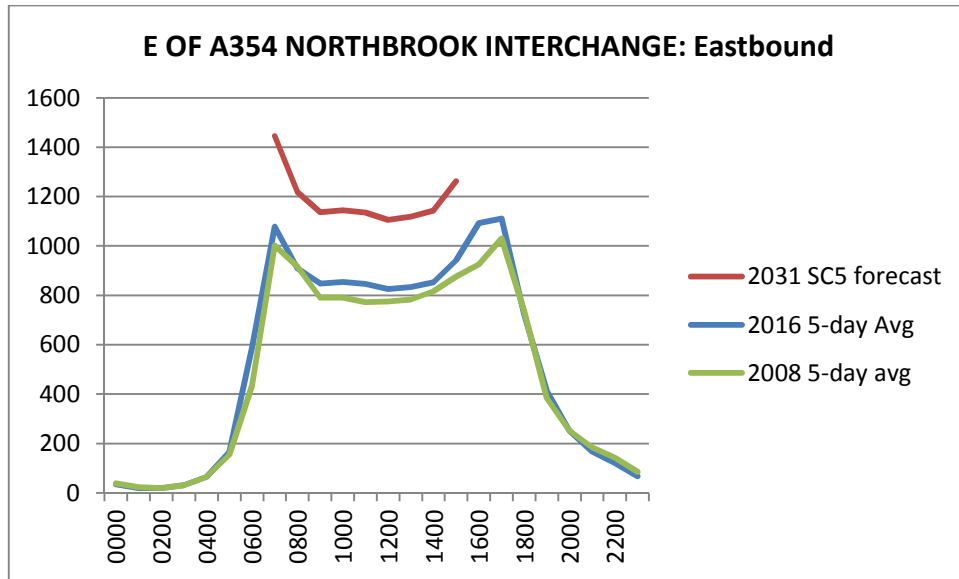


Figure 5.24 A35 East of A354 Traffic Flow Profiles (Eastbound)

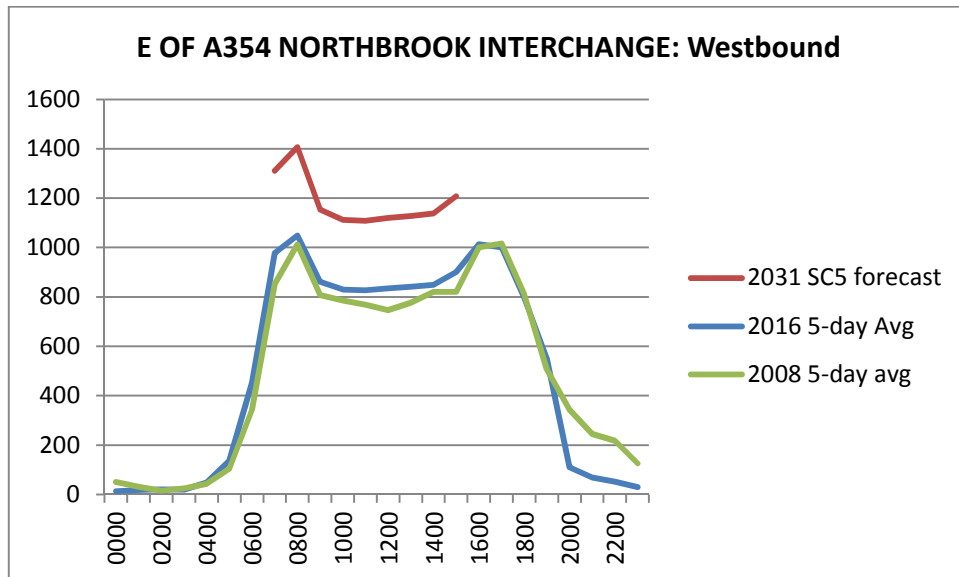


Figure 5.25 A35 East of A354 Traffic Flow Profiles (Westbound)

A35 Dorchester Bypass / A352 Wareham Road Junction

- 5.34 Model output diagrams for the A35 / A352 junction are shown **Figure 5.26** and **Figure 5.27** for demand flows and volume over capacity percentages respectively.
- 5.35 A comparison of predicted worst case scenario SC5 flows against background growth scenario SC0 flows shows an impact of an additional 189 PCU’s entering the A35 and 66 PCUs exiting the A35 at this junction.

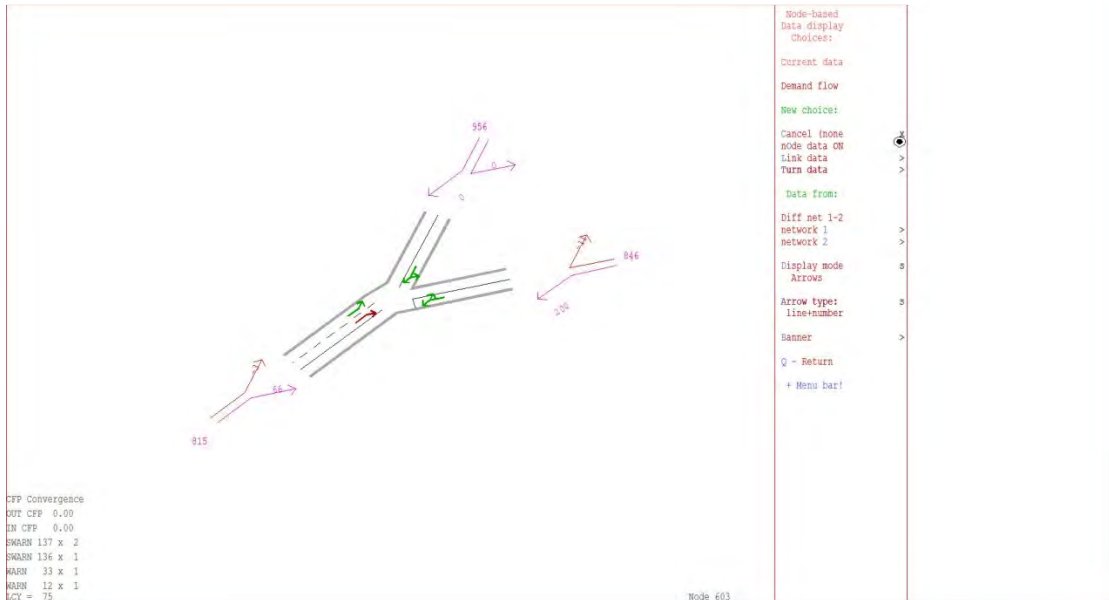


Figure 5.26 A35 /A352 Junction SC5 vs. SC0 Demand Flow Impact (PCUs)

- 5.36 The greatest volume over capacity figure in worst case scenario SC5 is 94% to traffic turning left onto the A35. This is above the 85% considered to be an issue and may require further examination.

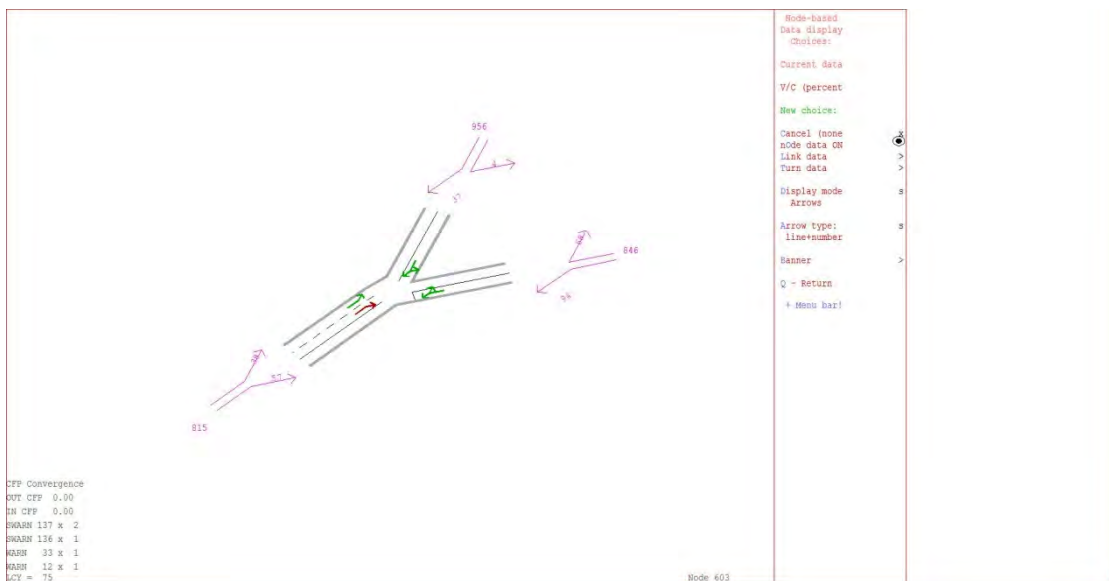


Figure 5.27 A35 /A352 Junction Volume over Capacity Percentages

A352 / B3144 Max Gate Roundabout

- 5.37 Model output diagrams for the A352 / B3144 junction are shown **Figure 5.28** and **Figure 5.29** for demand flows and volume over capacity percentages respectively.
- 5.38 A comparison of predicted worst case scenario SC5 flows against background growth scenario SC0 flows shows an impact of an additional 549 PCU’s entering the junction in the AM peak.

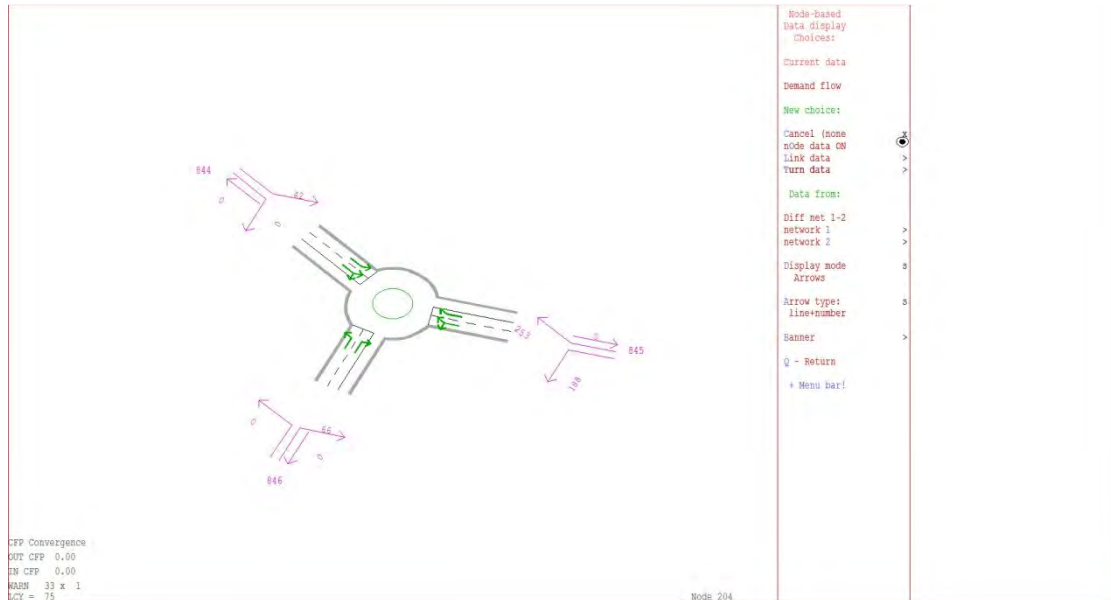


Figure 5.28 Max Gate Roundabout SC5 vs. SC0 Demand Flow Impact (PCUs)

- 5.39 The greatest volume over capacity figure in worst case scenario SC5 is 60% for traffic entering Dorchester. This is below the 85% considered to be an issue.

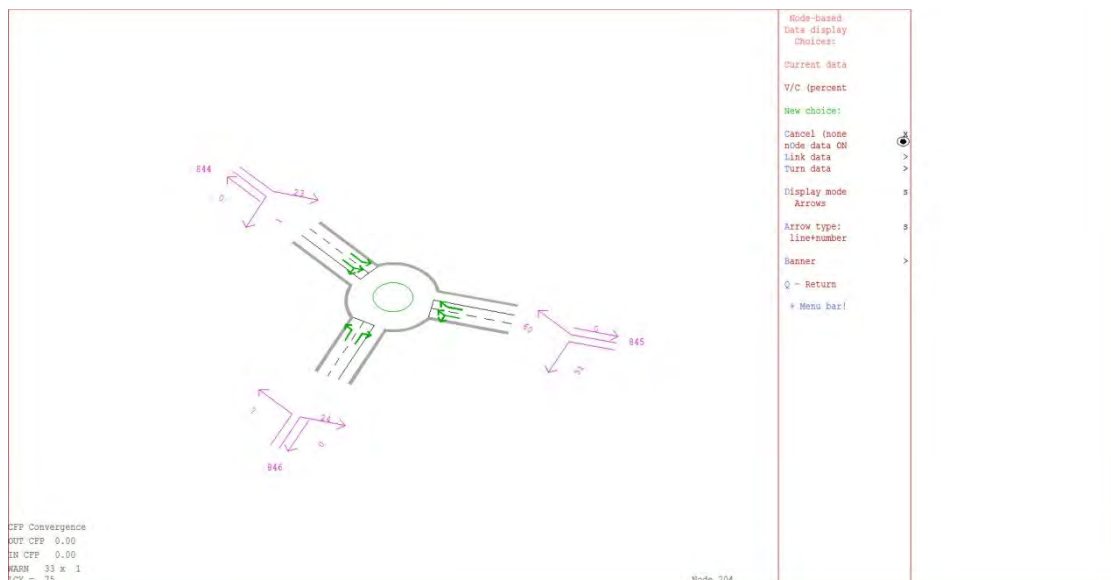


Figure 5.29 Max Gate Roundabout Volume over Capacity Percentages

A352 / C33 West Stafford Bypass Roundabout

- 5.40 Model output diagrams for the A352 / C33 junction are shown **Figure 5.30** and **Figure 5.31** for demand flows and volume over capacity percentages respectively.
- 5.41 A comparison of predicted worst case scenario SC5 flows against background growth scenario SC0 flows shows an impact of an additional 549 PCU’s entering the junction in the AM peak.

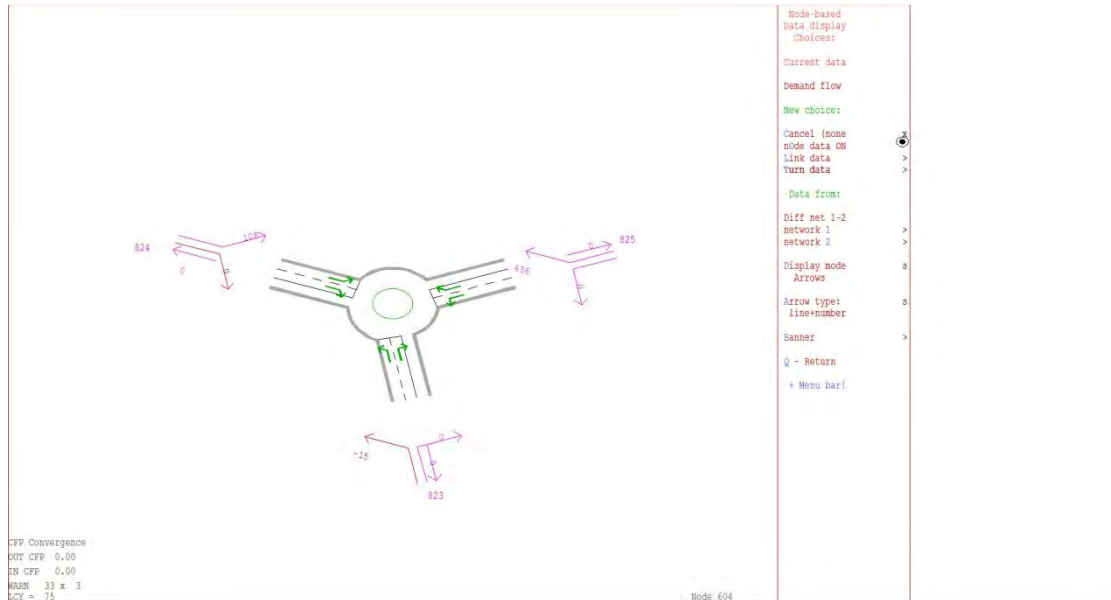


Figure 5.30 West Stafford Bypass SC5 vs. SC0 Demand Flow Impact (PCUs)

- 5.42 The greatest volume over capacity figure in worst case scenario SC5 is 48% for traffic heading from West Stafford. This is below the 85% considered to be an issue.

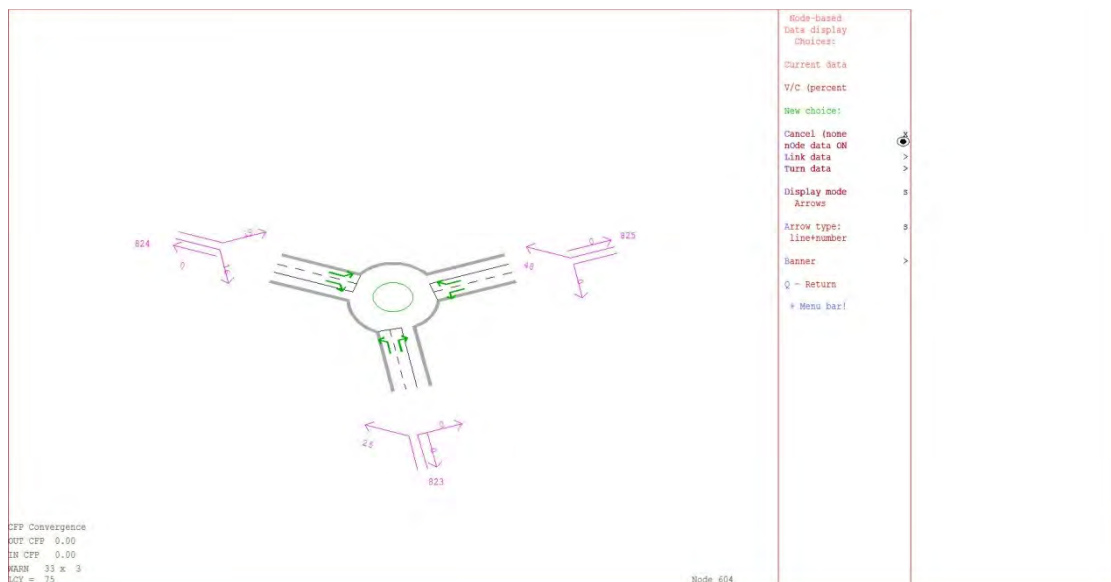


Figure 5.31 West Stafford Bypass Volume over Capacity Percentages

A352 / B3390 Warmwell Roundabout

- 5.43 Model output diagrams for the A352 / B3390 junction are shown **Figure 5.32** and **Figure 5.33** for demand flows and volume over capacity percentages respectively.
- 5.44 A comparison of predicted worst case scenario SC5 flows against background growth scenario SC0 flows shows an impact of an additional 348 PCU’s entering the junction in the AM peak. The majority of additional traffic is travelling to/from the B3390 Warmwell to/from A352 Broadmayne.

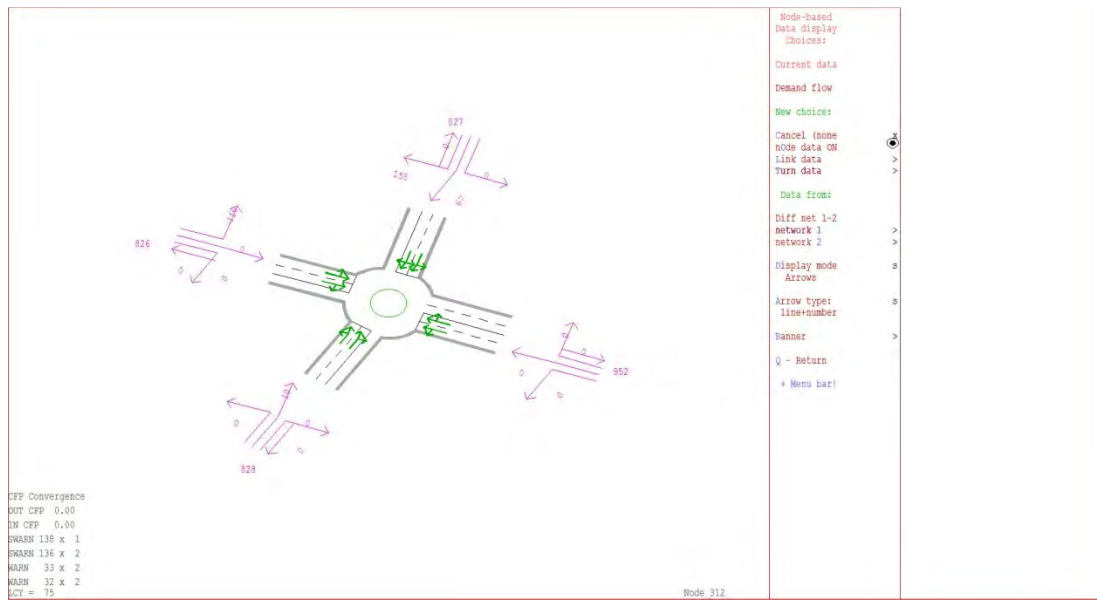


Figure 5.32 Warmwell Roundabout SC5 vs. SC0 Demand Flow Impact (PCUs)

- 5.45 The greatest volume over capacity figure in worst case scenario SC5 is 28% for traffic coming from the A352. This is below the 85% considered to be an issue.

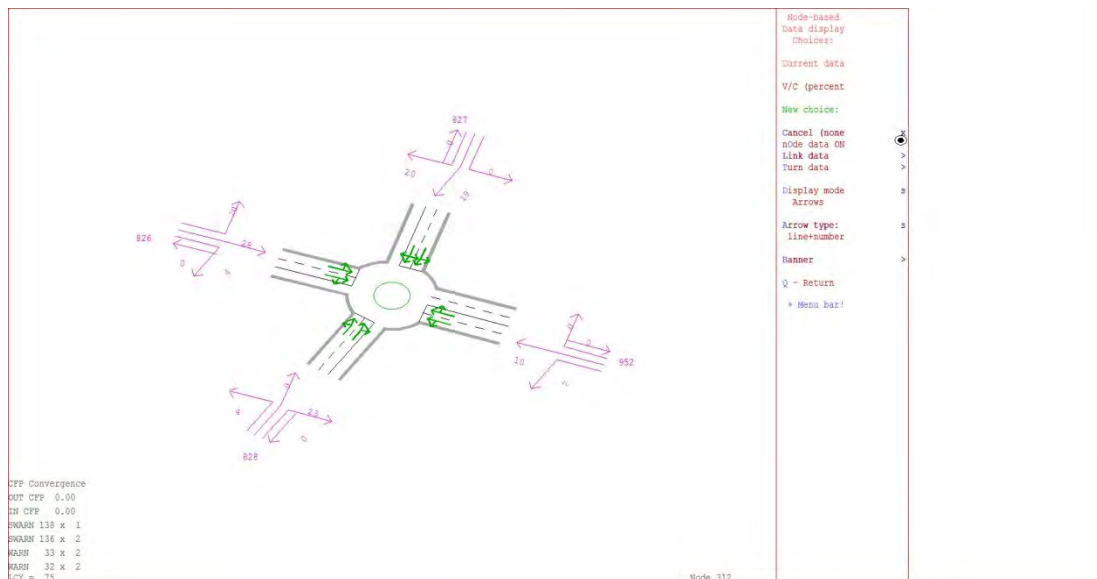


Figure 5.33 Warmwell Roundabout Volume over Capacity Percentages

A31 / A35 Bere Regis Roundabout

5.46 The A31 / A35 Bere Regis Roundabout is not in the modelled area. However, a worst case assumption would be to assume all traffic using Zones 205 and 206 attached to the A35 and Zone 207 attached to the C80 would travel through the junction.

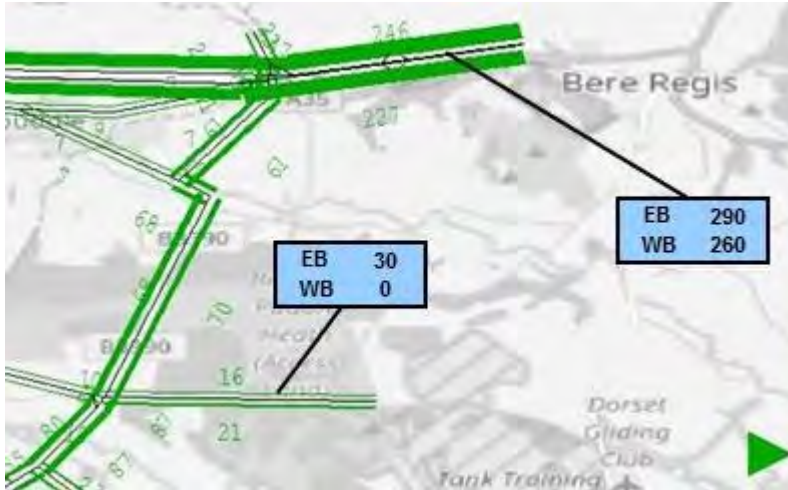


Figure 5.34 – Scenario SC5 2031 vs. Base 2016 AM

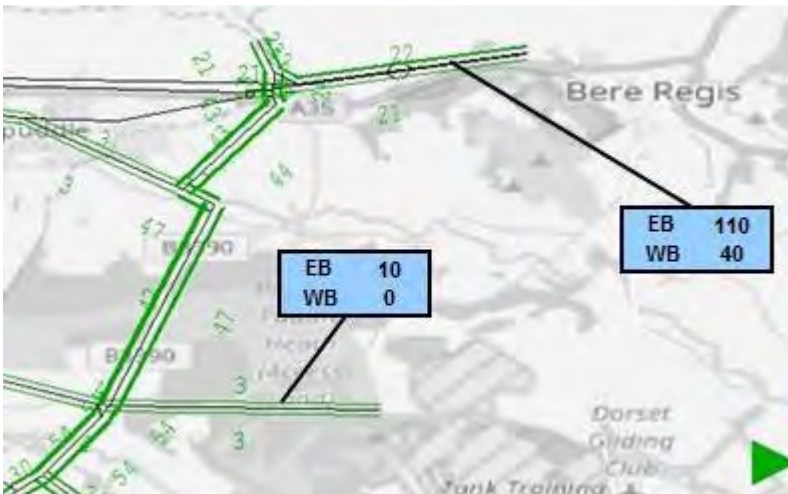


Figure 5.35 - Scenario SC5 2031 vs. Scenario SC0 2031 AM

5.47 Looking at the modelled flows on the links mentioned above, the increases in traffic would be 580 PCUs by 2031 with just background growth. The proposed ‘worst case’ Scenario SC5 would add an additional 160 PCUs per hour in the AM period.

6.0 CONCLUSIONS

- 6.1 Existing traffic levels have been established on the B3390 and surrounding area. New traffic count data was collected at twenty locations. (Para 2.1)
- 6.2 Traffic on the B3390 north of Crossways reduced by around 20 percent between 2007 and 2014, reducing from 5,300 to 4,100 vehicles per day. (Para 2.4)
- 6.3 Traffic on the A35 Trunk Road, west of Puddletown has increased by around 8 percent between 2005 and 2014, increasing from 27,100 to 29,200 vehicles per day. (Para 2.5)
- 6.4 An AM peak SATURN traffic model was created and calibrated to appropriate standards adequately reflecting current traffic flows. (Chapter 3)
- 6.5 Forecast increases in traffic were calculated using data from a number of sources; NTM TEMPRO database, TRICS database and existing Transport Assessments. (Chapter 4)
- 6.6 The 'Core' 2031 forecast scenario contains 47.3% more trips than the base 2016 year and excludes the proposed local development growth in the Crossways area. The worst case SC5 scenario contains 81.3% more trips than the base. (Para 4.5)
- 6.7 All AM peak forecast models performed well and generally showed no signs of excessive queuing or deterioration of vehicle speeds (increasing congestion) in any scenario (Table 5.1), the exception being the A35/A352 junction near Max Gate Roundabout predicted to reach 94% capacity in Scenario 5.
- 6.8 The figures provided for quarry related HGV traffic show there will be fewer lorry movements with only two quarries open simultaneously instead of three. (Para 5.14)
- 6.9 In the worst case SC5 development scenario (2800 dwellings), significant increases in traffic are noted on the B3390 south of Crossways, the D21322 west of Crossways, and the C33 West Stafford Bypass. However, the highest predicted future flows on these roads are around 600 PCUs per hour which should be comfortably accommodated in terms of capacity. (Figure 5.21).
- 6.10 All scenarios exhibited increases in traffic could cause some additional queuing at the Moreton and Woodsford No. 38 Level Crossings (Paras 5.23 and 5.25)
- 6.11 The increased traffic in Scenario 5 could lead to additional queuing at the shuttle-working traffic signals on Highgate Lane where it is crossed by the railway bridge. Although the model showed that this flow could be accommodated, it may be prudent to investigate further.
- 6.12 The proposed developments in the worst case scenario SC5 has some effect on the key junctions, the biggest impact being on the A35/A352 Dorchester Bypass junction. The modelled volume over capacity figures show that the other junctions can cope with the predicted AM peak traffic. (Para 5.32 to Para 5.45).

APPENDIX A
Model Zone List

MODEL ZONE LIST

Zone	Level	Name
1	Crossways C - Bingham Rd	West Dorset
2	Crossways C - Green Ln	West Dorset
3	Crossways C - Warmwell Rd NE	West Dorset
4	Crossways C - Crossways Ct	West Dorset
5	Crossways C - Heathland Cl	West Dorset
6	Crossways C - Old Farm Way	West Dorset
7	Crossways C - Coombe Way and Hope Cl	West Dorset
8	Crossways C - Airfield and Empool Cl	West Dorset
9	Crossways C - Spitfire Cl	West Dorset
10	Crossways C - The Scotton Way	West Dorset
11	Crossways C - Hurricane Cl	West Dorset
12	Crossways C - Moynton Cl	West Dorset
13	Crossways C - Pauls Way	West Dorset
14	Crossways C - Briars End	West Dorset
15	Crossways C - Dick O'Th'Banks Rd	West Dorset
16	Crossways C - Egdon Glen	West Dorset
17	Warmwell quarry: west of Crossways	West Dorset
18	Warmwell N: incl. Warmwell Leisure	West Dorset
19	Crossways C - Mount Skippet Way	West Dorset
20	Crossways NW	West Dorset
21	Crossways N - Woodsford Rd	West Dorset
22	Crossways NE	Purbeck
23	Crossways E	Purbeck
24	Moreton Pit	Purbeck
25	Moreton Station	Purbeck
26	Owermoigne outer E	West Dorset
27	Owermoigne outer W	West Dorset
28	Warmwell E	West Dorset
29	Warmwell W	West Dorset
30	Fryer Mayne	West Dorset
31	Warmwell village	West Dorset
32	West Knighton outer W	West Dorset
33	West Knighton outer N	West Dorset
34	West Knighton S	West Dorset
35	West Knighton N	West Dorset
36	West Knighton C	West Dorset
37	Broadmayne NW	West Dorset
38	Broadmayne NE	West Dorset
39	Broadmayne C	West Dorset
40	Broadmayne S	West Dorset
41	Broadmayne SE	West Dorset
44	Owermoigne C	West Dorset
45	Moreton and Hurst	Purbeck
48	Owermoigne S	West Dorset
49	West Stafford S	West Dorset
50	West Stafford N	West Dorset
51	West Stafford S and surrounding	West Dorset
52	West Stafford N and surrounding	West Dorset
53	West Knighton N and surrounding	West Dorset
54	Woodsford	West Dorset
61	Dorchester S: roads south of the station between Weymouth Ave and B3144	West Dorset 010
62	Puddletown ward: incl. Stinsford, Athelhampton, Tincleton, Tolpuddle, and Burleston	West Dorset
77	Chaldon Herring	Purbeck

80	Gillingham: north of A30 up to Dorset's north border	West Dorset
101	Spare zone for proposed development	
102	Spare zone for proposed development	
103	Proposed Station Rd Quarry	Purbeck
104	Proposed Hurst Farm Quarry	Purbeck
105	Spare zone for proposed development	
201	A35 SW of A352	SW
202	B3144 Dorchester	West Dorset 010
203	B3150 Dorchester	West Dorset 009
204	A354 Blandford	West Dorset
205	A35 Bere Regis EB	Dorset
206	A35 Bere Regis WB	Dorset
207	C80 Clouds Hill	Purbeck
208	Chalky Road, Weymouth	Weymouth and Portland
209	South of Moreton	Purbeck
210	A352 Wool	Purbeck
211	A353 Weymouth	Weymouth and Portland

APPENDIX B

Model Calibration Results

CALIBRATION RESULTS - AM PEAK

Road	Location	Count	Direction	DATE	Node A	Node B		Observed				Modelled				Dif.(%)	Dif. (Abs.)	GEH
								Car	LGV	OGV	Obs. Total	Car	LGV	OGV	Asgn. Total			
A352	Owermoigne	10	EB	2016-05-23 to 2016-05-29	829	836	82908360000	368	59	50	477	453	81	25	559	17.1%	82	3.58
A352	Owermoigne	10	WB	2016-05-23 to 2016-05-29	836	829	83608290000	241	54	29	324	230	29	6	266	-18.0%	-58	3.39
A352	Came	317	NWB	2016-04-18 to 2016-04-24	697	823	69708230000	282	62	33	377	245	8	20	273	-27.6%	-104	5.77
A352	Came	317	SEB	2016-04-18 to 2016-04-24	823	697	82306970000	185	38	21	244	145	43	13	200	-17.9%	-44	2.93
B3390	Crossways	355	NWB	2016-05-17 to 2016-05-23	402	865	40208650000	177	48	21	246	163	22	27	212	-13.9%	-34	2.27
B3390	Crossways	355	SEB	2016-05-17 to 2016-05-23	865	402	86504020000	105	52	33	190	77	15	56	149	-21.6%	-41	3.15
C80	C80 East of B3390, Waddock Cross	1394	EB	2010-05-13 to 2010-05-19	401	442	40104420000	176	32	10	218	113	21	16	151	-30.9%	-67	4.96
C80	C80 East of B3390, Waddock Cross	1394	WB	2010-05-13 to 2010-05-19	442	401	44204010000	89	29	12	130	91	2	20	113	-12.7%	-17	1.50
C33	West Stafford Bypass	1395	EB	2014-03-17 to 2014-03-30	825	605	82506050000	117	31	32	180	108	42	38	188	4.2%	8	0.55
C33	West Stafford Bypass	1395	WB	2014-03-17 to 2014-03-30	605	825	60508250000	382	44	40	466	245	42	45	332	-28.8%	-134	6.72
D21322	West of Crossways	1450	EB	2016-05-17 to 2016-05-23	856	866	85608660000	104	47	24	175	96	45	40	181	3.5%	6	0.46
D21322	West of Crossways	1450	WB	2016-05-17 to 2016-05-23	866	856	86608560000	205	64	44	313	235	49	39	323	3.2%	10	0.57
B3390	Warmwell Rd, Crossways	1451	NEB	2016-05-17 to 2016-05-23	922	832	92208320000	113	41	11	165	111	12	18	141	-14.8%	-24	1.98
B3390	Warmwell Rd, Crossways	1451	SWB	2016-05-17 to 2016-05-23	832	922	83209220000	93	26	11	130	87	17	9	113	-12.9%	-17	1.52
C33	East of West Stafford	1634	EB	2016-05-17 to 2016-05-23	710	441	71004410000	88	47	8	143	119	50	38	207	45.0%	64	4.86
C33	East of West Stafford	1634	WB	2016-05-17 to 2016-05-23	441	710	44107100000	244	53	30	327	254	49	45	347	6.2%	20	1.11
D21324	Higher Woodford	1636	NB	2013-03-07 to 2013-03-13	834	641	83406410000	10	7	0	17	0	3	0	3	-81.6%	-14	4.38
D21324	Higher Woodford	1636	SB	2013-03-07 to 2013-03-13	641	834	64108340000	15	3	0	18	6	0	0	6	-68.6%	-12	3.59
A35	Yellowham Hill	2004	EB	7-20 March 2016	634	665	63406650000	782	191	132	1105	884	119	134	1136	2.8%	31	0.94
A35	Yellowham Hill	2004	WB	7-20 March 2016	666	635	66606350000	1122	208	126	1456	965	108	197	1271	-12.7%	-185	5.02
A35	Rogers Hill Farm	2005	EB	May 2016	687	688	68706880000	781	82	87	950	730	125	149	1005	5.8%	55	1.75
A35	Rogers Hill Farm	2005	WB	May 2016	692	684	69206840000	652	284	192	1128	886	122	74	1082	-4.1%	-46	1.39
B3390	Warmwell Rd, Crossways	2054	NEB	2016-05-17 to 2016-05-23	830	907	83009070000	159	54	27	240	137	48	28	214	-11.0%	-26	1.75
B3390	Warmwell Rd, Crossways	2054	SWB	2016-05-17 to 2016-05-23	907	830	90708300000	108	32	38	178	73	48	26	147	-17.5%	-31	2.44
B3390	Warmwell Road, Crossways	2137	NEB	2016-05-18 to 2016-05-24	827	922	82709220000	123	32	20	175	110	30	21	162	-7.5%	-13	1.01
B3390	Warmwell Road, Crossways	2137	SWB	2016-05-18 to 2016-05-24	922	827	92208270000	88	28	6	122	85	14	27	126	3.6%	4	0.39
U/C	Dick 'O' The Banks Road	2240	EB	2015-06-01 to 2015-06-07	905	402	90504020000	73	22	0	95	64	8	0	72	-24.6%	-23	2.57
U/C	Dick 'O' The Banks Road	2240	WB	2015-06-01 to 2015-06-07	402	905	40209050000	50	26	0	76	17	0	0	17	-77.8%	-59	8.68
A35	E OF A354 NORTHBROOK INTERCHANG	2464	EB	May 2016	673	687	67306870000	775	102	39	916	631	118	134	884	-3.5%	-32	1.08
A35	E OF A354 NORTHBROOK INTERCHANG	2464	WB	May 2016	684	674	68406740000	764	214	86	1064	834	106	65	1005	-5.6%	-59	1.85
A352	Broadmayne	2596	NWB	2014-11-29 to 2014-12-05	950	820	95008200000	189	42	23	254	210	9	20	239	-6.1%	-15	0.99
A352	Broadmayne	2596	SEB	2014-11-29 to 2014-12-05	820	950	82009500000	198	41	21	260	250	50	13	313	20.4%	53	3.13
B3390	Warmwell Road, Crossways	2866	NEB	2014-10-01 to 2014-10-07	907	695	90706950000	145	43	18	206	146	39	28	213	3.4%	7	0.48
B3390	Warmwell Road, Crossways	2866	SWB	2014-10-01 to 2014-10-07	695	907	69509070000	106	38	30	174	65	22	29	116	-33.5%	-58	4.85
A352	South of Whitcombe	2965	NWB	2016-04-18 to 2016-04-24	819	697	81906970000	239	53	28	320	195	8	20	223	-30.3%	-97	5.89
A352	South of Whitcombe	2965	SEB	2016-04-18 to 2016-04-24	697	819	69708190000	169	35	20	224	145	43	13	200	-10.6%	-24	1.63
D21322	West Link Rd, Crossways	3018	NB	2016-05-17 to 2016-05-23	909	911	90909110000	85	39	36	160	74	35	29	138	-13.7%	-22	1.80
D21322	West Link Rd, Crossways	3018	SB	2016-05-17 to 2016-05-23	911	909	91109090000	100	32	24	156	107	37	23	167	6.7%	11	0.83

APPENDIX C
Model Validation Results

Site no.	Road	Location	Dir	Count date	Observed			Modelled				Dif.(%)	Dif. (Abs.)	GEH				
					Node A	Node B	Node C	Car	LGV	OGV	Total				Car	LGV	OGV	Total
Junction 3 West Stafford Bypass	C33	West Stafford Bypass	L	12-Mar-15	825	604	823	3	0	2	5	0	0	0	0	-100.0%	-5	3.14
Junction 3 West Stafford Bypass	C33	West Stafford Bypass	A	12-Mar-15	825	604	824	267	40	27	334	245	42	45	332	-0.6%	-2	0.12
Junction 3 West Stafford Bypass	A352	South	L	12-Mar-15	823	604	824	251	38	40	329	245	8	20	273	-17.1%	-56	3.24
Junction 3 West Stafford Bypass	A352	South	R	12-Mar-15	823	604	825	32	5	4	41	0	0	0	0	-100.0%	-41	9.04
Junction 3 West Stafford Bypass	A352	West	A	12-Mar-15	824	604	825	161	24	27	212	108	42	38	188	-11.5%	-24	1.72
Junction 3 West Stafford Bypass	A352	West	R	12-Mar-15	824	604	823	281	43	17	341	145	43	13	200	-41.3%	-141	8.56
	C33	West Stafford Bypass	EB	12-Mar-15	604	825		193	29	31	253	108	42	38	188	-25.8%	-65	4.39
	C33	West Stafford Bypass	WB	12-Mar-15	825	604		269	41	29	339	245	42	45	332	-2.1%	-7	0.38
	A352	South	NB	12-Mar-15	823	604		283	43	44	370	245	8	20	273	-26.2%	-97	5.42
	A352	South	SB	12-Mar-15	604	823		284	43	19	346	145	43	13	200	-42.1%	-146	8.82
	A352	West	NWB	12-Mar-15	604	824		518	78	67	663	490	50	65	605	-8.8%	-58	2.32
	A352	West	SEB	12-Mar-15	824	604		442	67	44	553	252	84	51	388	-29.9%	-165	7.62
Junction 8AC	B3390	North	L	12-Mar-15	965	686	687	2	0	0	2	0	0	0	0	-100.0%	-2	2.00
Junction 8AC	B3390	North	A	12-Mar-15	965	686	681	18	4	0	22	0	0	30	30	36.7%	8	1.58
Junction 8AC	A35	Eastbound Slips	L	12-Mar-15	687	686	681	28	6	0	34	0	0	0	0	-100.0%	-34	8.25
Junction 8AC	A35	Eastbound Slips	R	12-Mar-15	687	686	965	0	0	0	0	0	0	0	0	0.0%	0	0.00
Junction 8AC	B3390	South	A	12-Mar-15	681	686	965	12	2	0	14	0	0	0	0	-100.0%	-14	5.29
Junction 8AC	B3390	South	R	12-Mar-15	681	686	687	68	15	0	83	99	7	15	121	45.9%	38	3.77
	B3390	North	NB	12-Mar-15	686	965		12	2	0	14	0	0	0	0	-100.0%	-14	5.29
	B3390	North	SB	12-Mar-15	965	686		20	4	0	24	0	0	30	30	25.3%	6	1.17
	A35	Eastbound Slips	EB	12-Mar-15	686	687		69	16	0	85	99	7	15	121	42.5%	36	3.56
	A35	Eastbound Slips	WB	12-Mar-15	687	686		28	6	0	34	0	0	0	0	-100.0%	-34	8.25
	B3390	South	NB	12-Mar-15	681	686		79	18	0	97	99	7	15	121	24.9%	24	2.31
	B3390	South	SB	12-Mar-15	686	681		46	10	0	56	0	0	30	30	-46.3%	-26	3.95
Junction 8AC	B3390	North	A	12-Mar-15	686	681	682	28	6	0	34	0	0	30	30	-11.5%	-4	0.69
Junction 8AC	B3390	North	R	12-Mar-15	686	681	680	18	4	0	22	0	0	0	0	-100.0%	-22	6.63
Junction 8AC	B3390	South	L	12-Mar-15	682	681	680	12	3	0	15	0	0	0	0	-100.0%	-15	5.48
Junction 8AC	B3390	South	A	12-Mar-15	682	681	686	60	14	2	76	99	7	15	121	60.0%	45	4.58
Junction 8AC	B3390	Dorchester Road	L	12-Mar-15	680	681	686	19	4	2	25	0	0	0	0	-100.0%	-25	7.03
Junction 8AC	B3390	Dorchester Road	R	12-Mar-15	680	681	682	39	9	3	51	34	13	7	53	3.6%	2	0.26
	B3390	North	NB	12-Mar-15	681	686		79	18	3	100	99	7	15	121	20.6%	21	1.97
	B3390	North	SB	12-Mar-15	686	681		46	10	0	56	0	0	30	30	-46.3%	-26	3.95
	B3390	South	NB	12-Mar-15	682	681		73	16	2	91	99	7	15	121	33.5%	30	2.95
	B3390	South	SB	12-Mar-15	681	682		67	15	3	85	34	13	37	83	-2.4%	-2	0.22
	B3390	Dorchester Road	EB	12-Mar-15	680	681		58	13	5	76	34	13	7	53	-30.0%	-23	2.84
	B3390	Dorchester Road	WB	12-Mar-15	681	680		31	6	0	37	0	0	0	0	-100.0%	-37	8.60
Junction 8B	A35	Westbound Slips	L	12-Mar-15	684	680	681	42	10	5	57	34	13	7	53	-6.7%	-4	0.52
Junction 8B	A35	Westbound Slips	R	12-Mar-15	684	680	212	18	4	2	24	18	4	2	24	1.2%	0	0.06
Junction 8B	C34	Dorchester Rd East	A	12-Mar-15	681	680	212	12	3	0	15	0	0	0	0	-100.0%	-15	5.48
Junction 8B	C34	Dorchester Rd East	R	12-Mar-15	681	680	684	18	4	0	22	0	0	0	0	-100.0%	-22	6.63
Junction 8B	C34	Dorchester Rd West	L	12-Mar-15	212	680	684	1	0	0	1	0	0	0	0	-100.0%	-1	1.41
Junction 8B	C34	Dorchester Rd West	A	12-Mar-15	212	680	681	16	3	0	19	0	0	0	0	-100.0%	-19	6.16
	A35	Westbound Slips	NB	12-Mar-15	680	684		19	4	0	23	0	0	0	0	-100.0%	-23	6.78
	A35	Westbound Slips	SB	12-Mar-15	684	680		61	13	7	81	52	17	9	77	-4.4%	-4	0.40
	C34	Dorchester Rd East	EB	12-Mar-15	680	681		58	13	5	76	34	13	7	53	-30.0%	-23	2.84
	C34	Dorchester Rd East	WB	12-Mar-15	681	680		30	7	0	37	0	0	0	0	-100.0%	-37	8.60
	C34	Dorchester Rd West	EB	12-Mar-15	212	680		16	4	0	20	0	0	0	0	-100.0%	-20	6.32
	C34	Dorchester Rd West	WB	12-Mar-15	680	212		31	6	2	39	18	4	2	24	-38.0%	-15	2.63

APPENDIX D
Growth Factors

Zone	Description	2016-31-Origin-AM	2016-31-Dest-AM
1	Crossways C - Bingham Rd	1.152	1.191
2	Crossways C - Green Ln	1.152	1.191
3	Crossways C - Warmwell Rd NE	1.152	1.191
4	Crossways C - Crossways Ct	1.152	1.191
5	Crossways C - Heathland Cl	1.152	1.191
6	Crossways C - Old Farm Way	1.152	1.191
7	Crossways C - Coombe Way and Hope Cl	1.152	1.191
8	Crossways C - Airfield and Empool Cl	1.152	1.191
9	Crossways C - Spitfire Cl	1.152	1.191
10	Crossways C - The Scotton Way	1.152	1.191
11	Crossways C - Hurricane Cl	1.152	1.191
12	Crossways C - Moynton Cl	1.152	1.191
13	Crossways C - Pauls Way	1.152	1.191
14	Crossways C - Briars End	1.152	1.191
15	Crossways C - Dick O'Th'Banks Rd	1.152	1.191
16	Crossways C - Egdon Glen	1.152	1.191
17	Warmwell quarry: west of Crossways	1.152	1.191
18	Warmwell N: incl. Warmwell Leisure	1.152	1.191
19	Crossways C - Mount Skippet Way	1.152	1.191
20	Crossways NW	1.152	1.191
21	Crossways N - Woodsford Rd	1.152	1.191
22	Crossways NE	1.116	1.164
23	Crossways E	1.116	1.164
24	Moreton Pit	1.116	1.164
25	Moreton Station	1.116	1.164
26	Owermoigne outer E	1.152	1.191
27	Owermoigne outer W	1.152	1.191
28	Warmwell E	1.152	1.191
29	Warmwell W	1.152	1.191
30	Fryer Mayne	1.152	1.191
31	Warmwell village	1.152	1.191
32	West Knighton outer W	1.152	1.191
33	West Knighton outer N	1.152	1.191
34	West Knighton S	1.152	1.191
35	West Knighton N	1.152	1.191
36	West Knighton C	1.152	1.191
37	Broadmayne NW	1.152	1.191
38	Broadmayne NE	1.152	1.191
39	Broadmayne C	1.152	1.191
40	Broadmayne S	1.152	1.191
41	Broadmayne SE	1.152	1.191
44	Owermoigne C	1.152	1.191
45	Moreton and Hurst	1.116	1.164
48	Owermoigne S	1.152	1.191
49	Kingston Maurward	1.152	1.191
50	West Stafford N	1.152	1.191
51	West Stafford S and surrounding	1.152	1.191
52	West Stafford N and surrounding	1.152	1.191
53	West Knighton N and surrounding	1.152	1.191
54	Woodsford	1.152	1.191
61	Dorchester S: roads south of the station between Weymouth Ave and B3144	1.162	1.192
62	Puddletown ward: incl. Stinsford, Athelhampton, Tincton, Tolpuddle, and Burleston	1.152	1.191
77	Chaldon Herring	1.116	1.164
80	Gillingham: north of A30 up to Dorset's north border	1.152	1.191
101	Spare zone for proposed development	1.060	1.060
102	Spare zone for proposed development	1.060	1.060
103	Proposed Station Rd Quarry	1.116	1.164
104	Proposed Hurst Farm Quarry	1.116	1.164
105	Spare zone for proposed development	1.060	1.060
201	A35 SW of A352	1.175	1.175
202	B3144 Dorchester	1.162	1.192
203	B3150 Dorchester	1.188	1.188
204	A354 Blandford	1.152	1.191
205	A35 Bere Regis EB	1.175	1.174

206	A35 Bere Regis WB	1.175	1.174
207	C80 Clouds Hill	1.116	1.164
208	Chalky Road, Weymouth	1.161	1.170
209	South of Moreton	1.116	1.164
210	A352 Wool	1.116	1.164
211	A353 Weymouth	1.161	1.170

APPENDIX E
TRICS Output

Calculation Reference: AUDIT-645801-160802-0849

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

04	EAST ANGLIA	
	SF SUFFOLK	1 days
05	EAST MIDLANDS	
	LN LINCOLNSHIRE	2 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NE NORTH EAST LINCOLNSHIRE	1 days
	NY NORTH YORKSHIRE	1 days
08	NORTH WEST	
	CH CHESHIRE	1 days
11	SCOTLAND	
	FI FIFE	1 days
	SR STIRLING	1 days

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

Filtering Stage 2 selection:

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

Parameter: Number of dwellings
Actual Range: 101 to 432 (units:)
Range Selected by User: 100 to 700 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/06 to 20/05/15

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	5 days
Tuesday	2 days
Friday	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 undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	4
Edge of Town	4

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
Out of Town	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.

Filtering Stage 3 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:

1,001 to 5,000	1 days
5,001 to 10,000	1 days
10,001 to 15,000	2 days
15,001 to 20,000	4 days

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

Population within 5 miles:

5,001 to 25,000	1 days
50,001 to 75,000	3 days
75,001 to 100,000	1 days
100,001 to 125,000	3 days

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

Car ownership within 5 miles:

0.6 to 1.0	3 days
1.1 to 1.5	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:

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.

LIST OF SITES relevant to selection parameters

1	CH-03-A-06 CREWE ROAD	SEMI-DET./BUNGALOWS		CESHIRE
	CREWE Suburban Area (PPS6 Out of Centre) No Sub Category Total Number of dwellings: 129 Survey date: TUESDAY 14/10/08 Survey Type: MANUAL			
2	FI-03-A-03 WOODMILL ROAD	MIXED HOUSES		FIFE
	DUNFERMLINE Edge of Town Residential Zone Total Number of dwellings: 155 Survey date: MONDAY 30/04/07 Survey Type: MANUAL			
3	LN-03-A-01 BRANT ROAD BRACEBRIDGE LINCOLN	MIXED HOUSES		LINCOLNSHIRE
	Edge of Town Residential Zone Total Number of dwellings: 150 Survey date: TUESDAY 15/05/07 Survey Type: MANUAL			
4	LN-03-A-02 HYKEHAM ROAD	MIXED HOUSES		LINCOLNSHIRE
	LINCOLN Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 186 Survey date: MONDAY 14/05/07 Survey Type: MANUAL			
5	NE-03-A-02 HANOVER WALK	SEMI DETACHED & DETACHED		NORTH EAST LINCOLNSHIRE
	SCUNTHORPE Edge of Town No Sub Category Total Number of dwellings: 432 Survey date: MONDAY 12/05/14 Survey Type: MANUAL			
6	NY-03-A-06 HORSEFAIR	BUNGALOWS & SEMI DET.		NORTH YORKSHIRE
	BOROUGHBRIDGE Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 115 Survey date: FRIDAY 14/10/11 Survey Type: MANUAL			
7	SF-03-A-03 BARTON HILL FORNHAM ST MARTIN BURY ST EDMUNDS	MIXED HOUSES		SUFFOLK
	Edge of Town Out of Town Total Number of dwellings: 101 Survey date: MONDAY 15/05/06 Survey Type: MANUAL			

LIST OF SITES relevant to selection parameters (Cont.)

8 SR-03-A-01 DETACHED STIRLING
BENVIEW

STIRLING
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 115
Survey date: MONDAY 23/04/07 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.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
NE-03-A-03	not included in developers selections

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	173	0.069	8	173	0.258	8	173	0.327
08:00 - 09:00	8	173	0.130	8	173	0.430	8	173	0.560
09:00 - 10:00	8	173	0.166	8	173	0.203	8	173	0.369
10:00 - 11:00	8	173	0.147	8	173	0.178	8	173	0.325
11:00 - 12:00	8	173	0.155	8	173	0.142	8	173	0.297
12:00 - 13:00	8	173	0.195	8	173	0.181	8	173	0.376
13:00 - 14:00	8	173	0.179	8	173	0.169	8	173	0.348
14:00 - 15:00	8	173	0.182	8	173	0.195	8	173	0.377
15:00 - 16:00	8	173	0.275	8	173	0.204	8	173	0.479
16:00 - 17:00	8	173	0.341	8	173	0.194	8	173	0.535
17:00 - 18:00	8	173	0.362	8	173	0.218	8	173	0.580
18:00 - 19:00	8	173	0.256	8	173	0.218	8	173	0.474
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.457			2.590			5.047

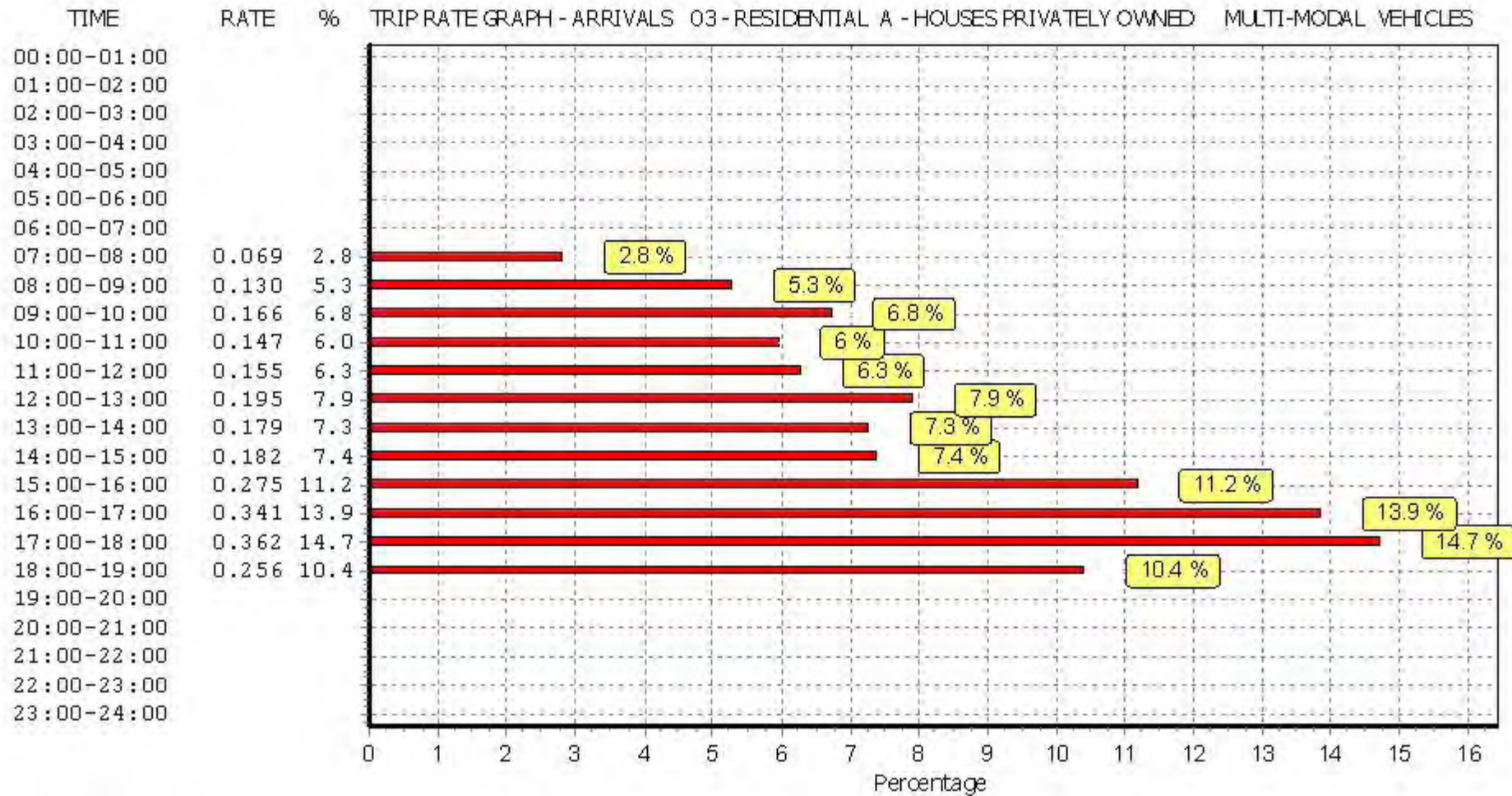
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are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

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

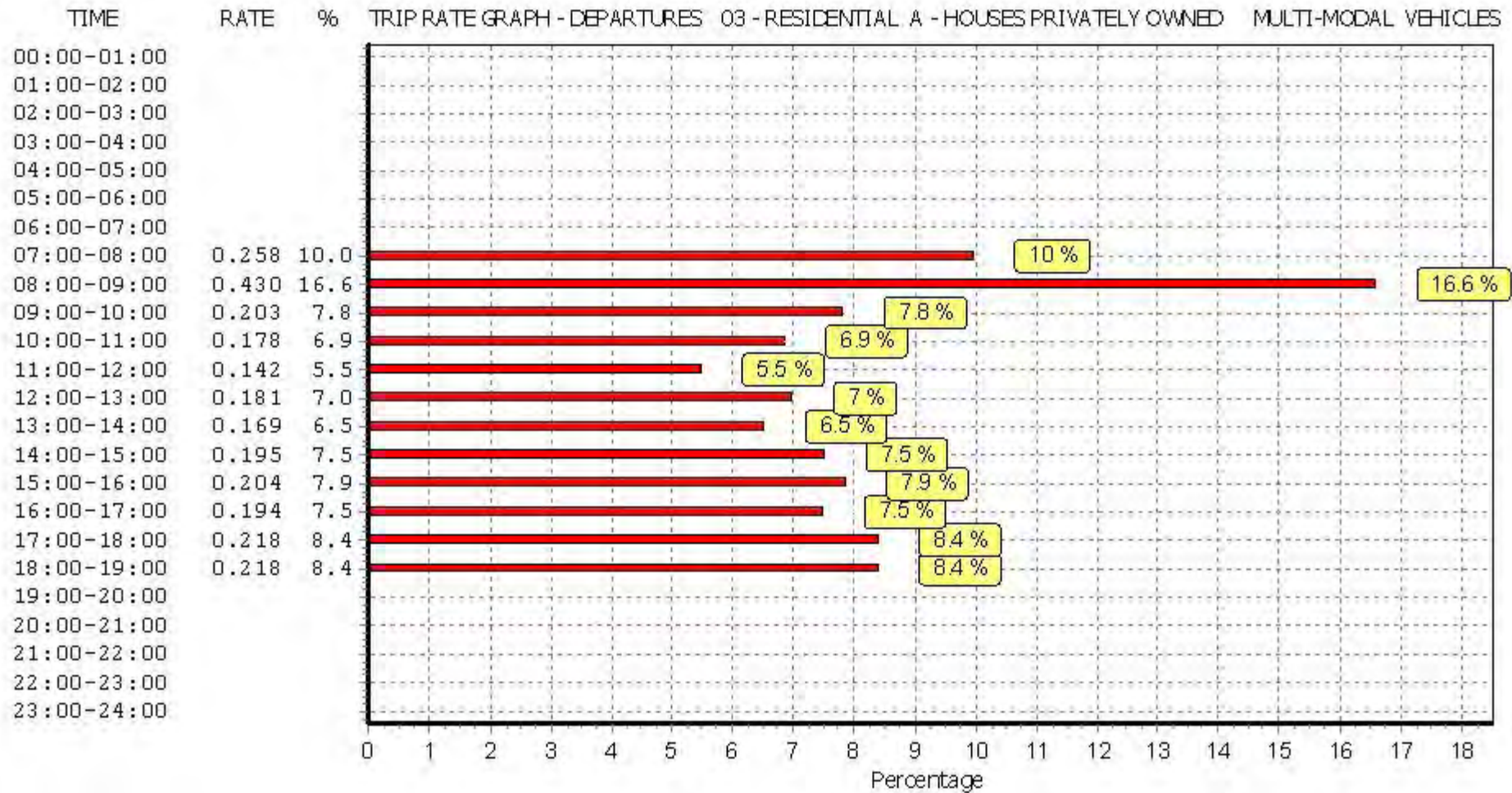
Parameter summary

Trip rate parameter range selected: 101 - 432 (units:)
 Survey date date range: 01/01/06 - 20/05/15
 Number of weekdays (Monday-Friday): 8
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 1

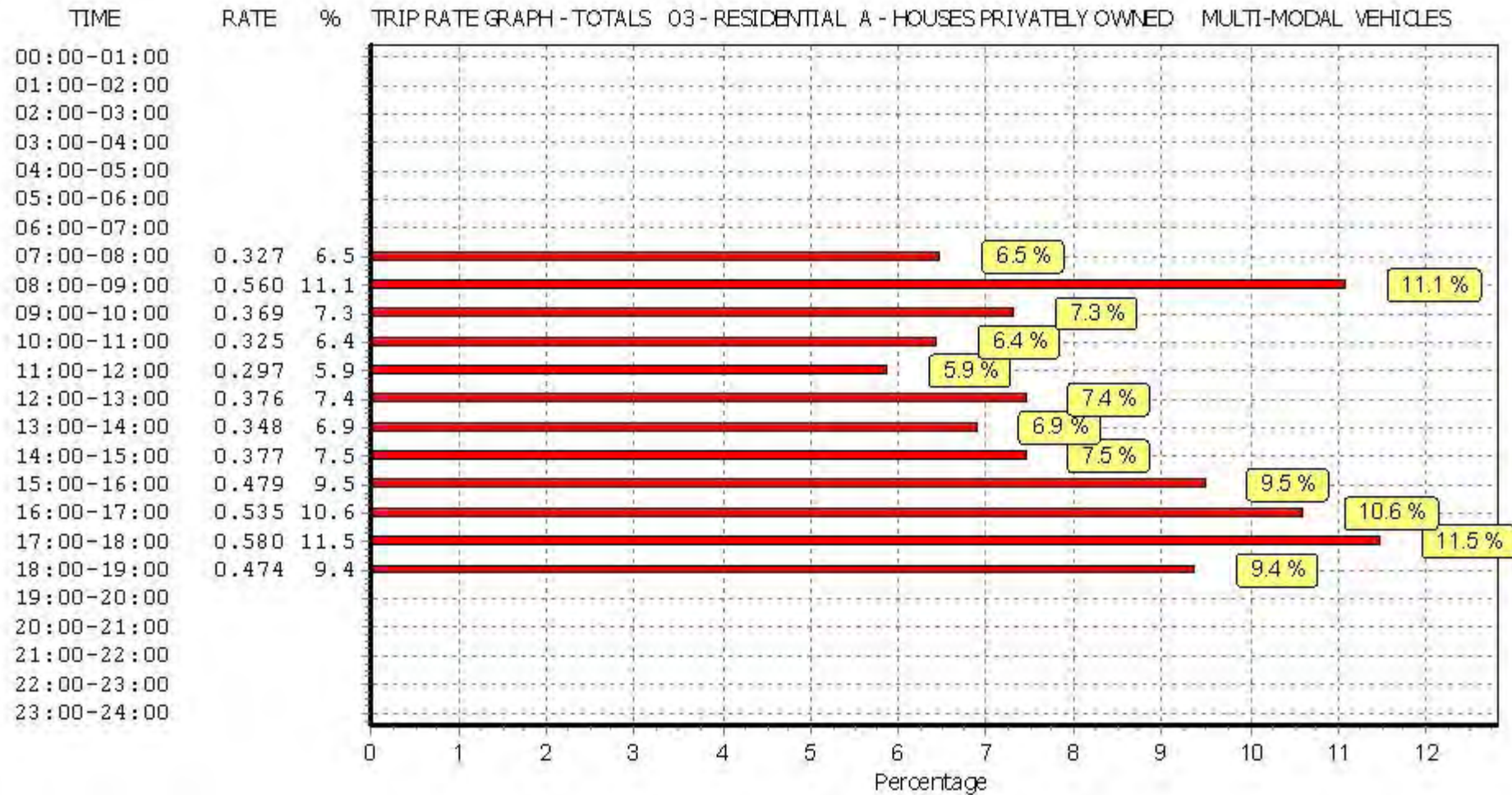
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected 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 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TAXIS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	173	0.001	8	173	0.001	8	173	0.002
08:00 - 09:00	8	173	0.000	8	173	0.000	8	173	0.000
09:00 - 10:00	8	173	0.001	8	173	0.001	8	173	0.002
10:00 - 11:00	8	173	0.002	8	173	0.002	8	173	0.004
11:00 - 12:00	8	173	0.000	8	173	0.000	8	173	0.000
12:00 - 13:00	8	173	0.001	8	173	0.001	8	173	0.002
13:00 - 14:00	8	173	0.000	8	173	0.000	8	173	0.000
14:00 - 15:00	8	173	0.002	8	173	0.001	8	173	0.003
15:00 - 16:00	8	173	0.001	8	173	0.003	8	173	0.004
16:00 - 17:00	8	173	0.001	8	173	0.001	8	173	0.002
17:00 - 18:00	8	173	0.001	8	173	0.001	8	173	0.002
18:00 - 19:00	8	173	0.001	8	173	0.001	8	173	0.002
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.011			0.012			0.023

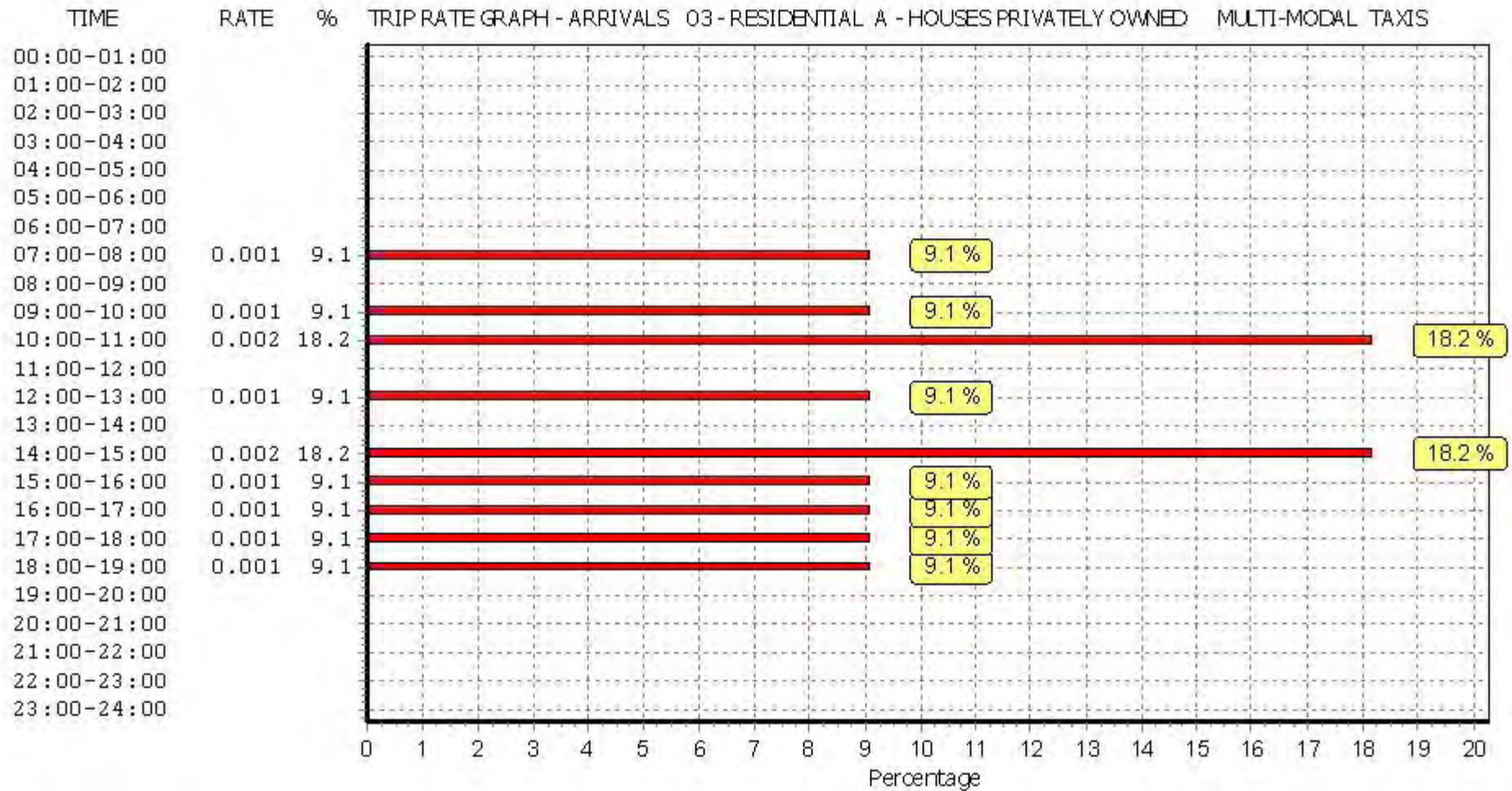
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are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

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

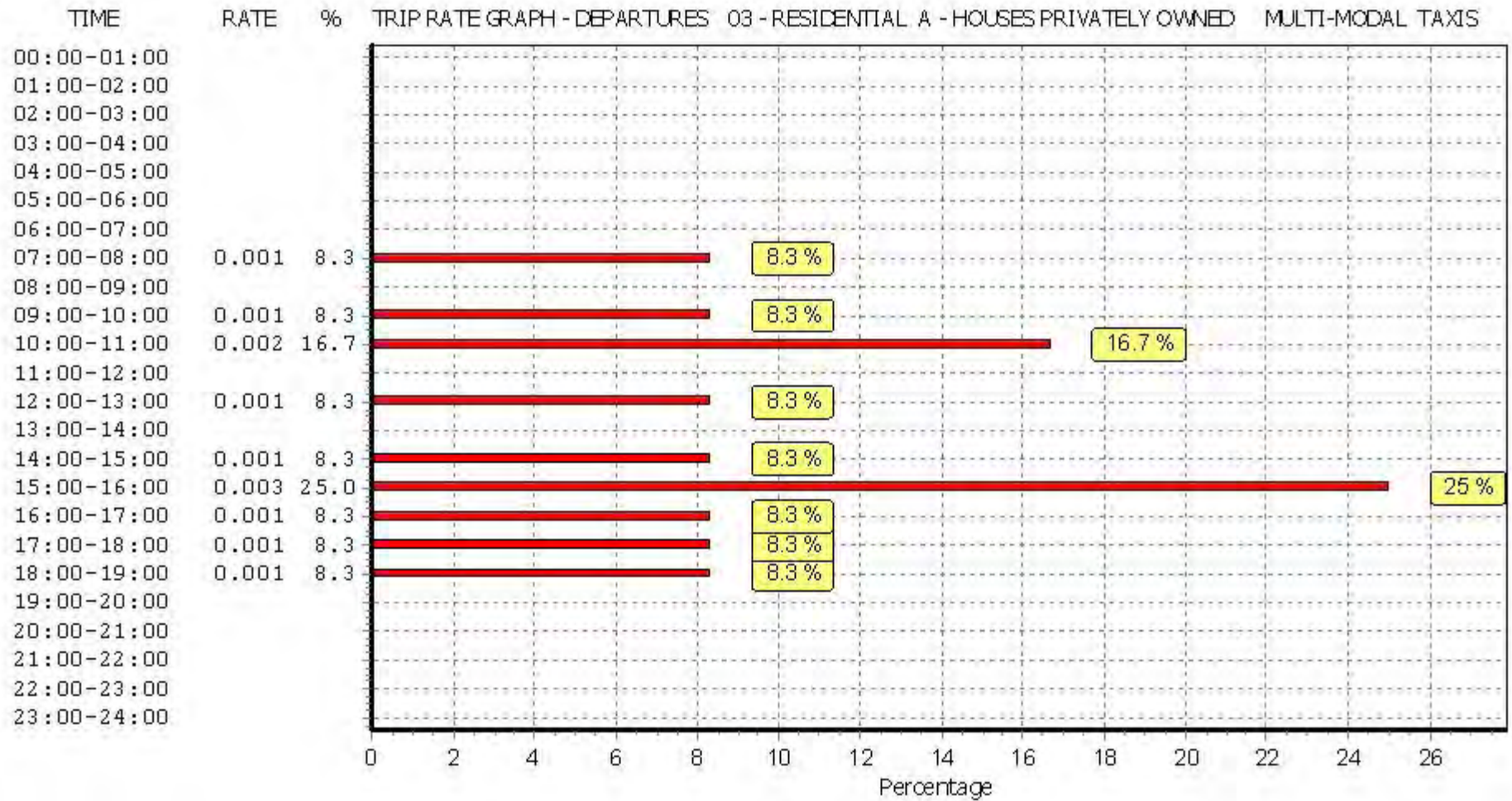
Parameter summary

Trip rate parameter range selected: 101 - 432 (units:)
 Survey date date range: 01/01/06 - 20/05/15
 Number of weekdays (Monday-Friday): 8
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 1

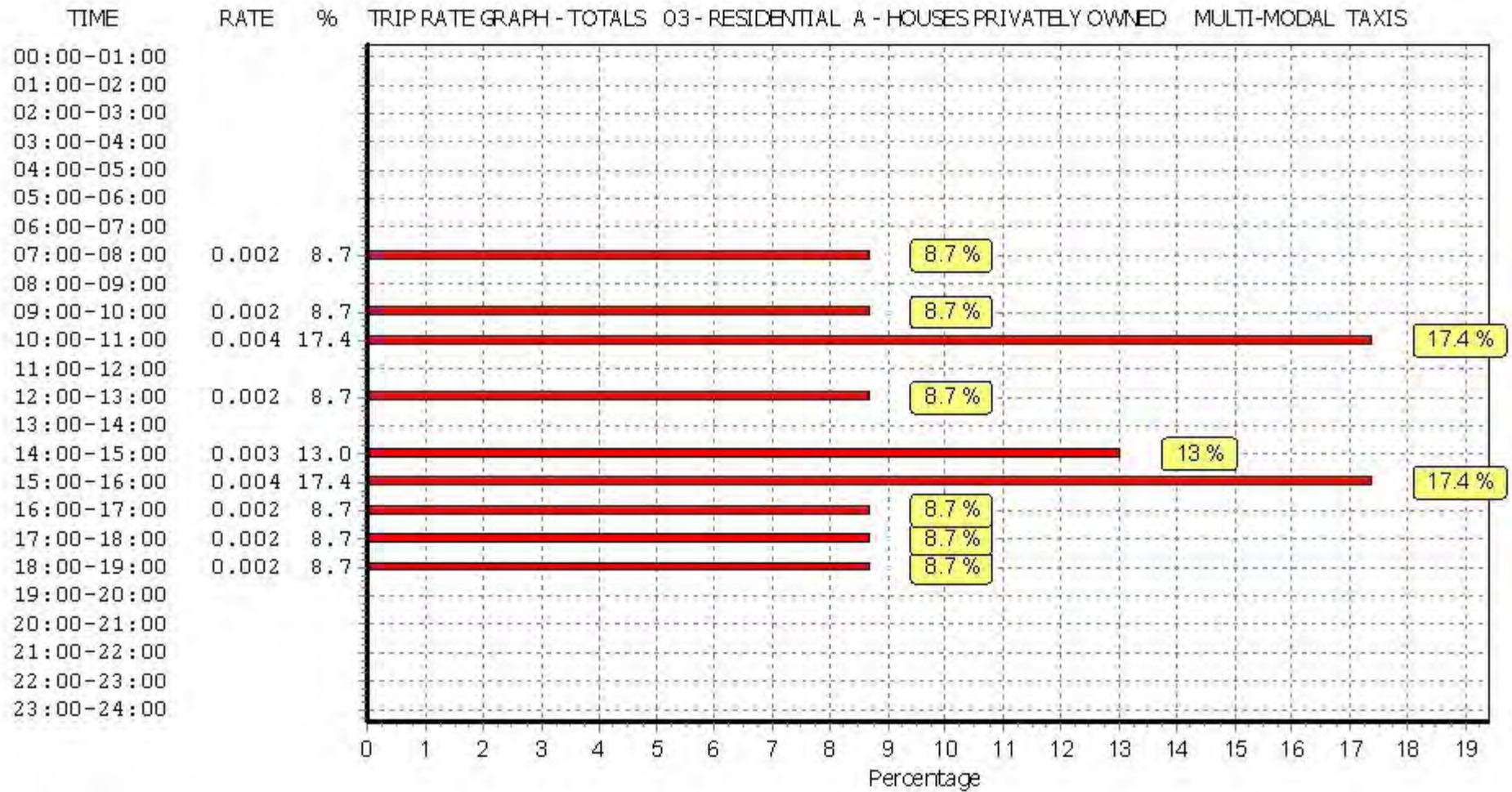
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected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



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



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



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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	173	0.002	8	173	0.001	8	173	0.003
08:00 - 09:00	8	173	0.003	8	173	0.004	8	173	0.007
09:00 - 10:00	8	173	0.003	8	173	0.001	8	173	0.004
10:00 - 11:00	8	173	0.004	8	173	0.005	8	173	0.009
11:00 - 12:00	8	173	0.001	8	173	0.001	8	173	0.002
12:00 - 13:00	8	173	0.003	8	173	0.002	8	173	0.005
13:00 - 14:00	8	173	0.001	8	173	0.003	8	173	0.004
14:00 - 15:00	8	173	0.001	8	173	0.004	8	173	0.005
15:00 - 16:00	8	173	0.001	8	173	0.001	8	173	0.002
16:00 - 17:00	8	173	0.003	8	173	0.000	8	173	0.003
17:00 - 18:00	8	173	0.000	8	173	0.001	8	173	0.001
18:00 - 19:00	8	173	0.000	8	173	0.000	8	173	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.022			0.023			0.045

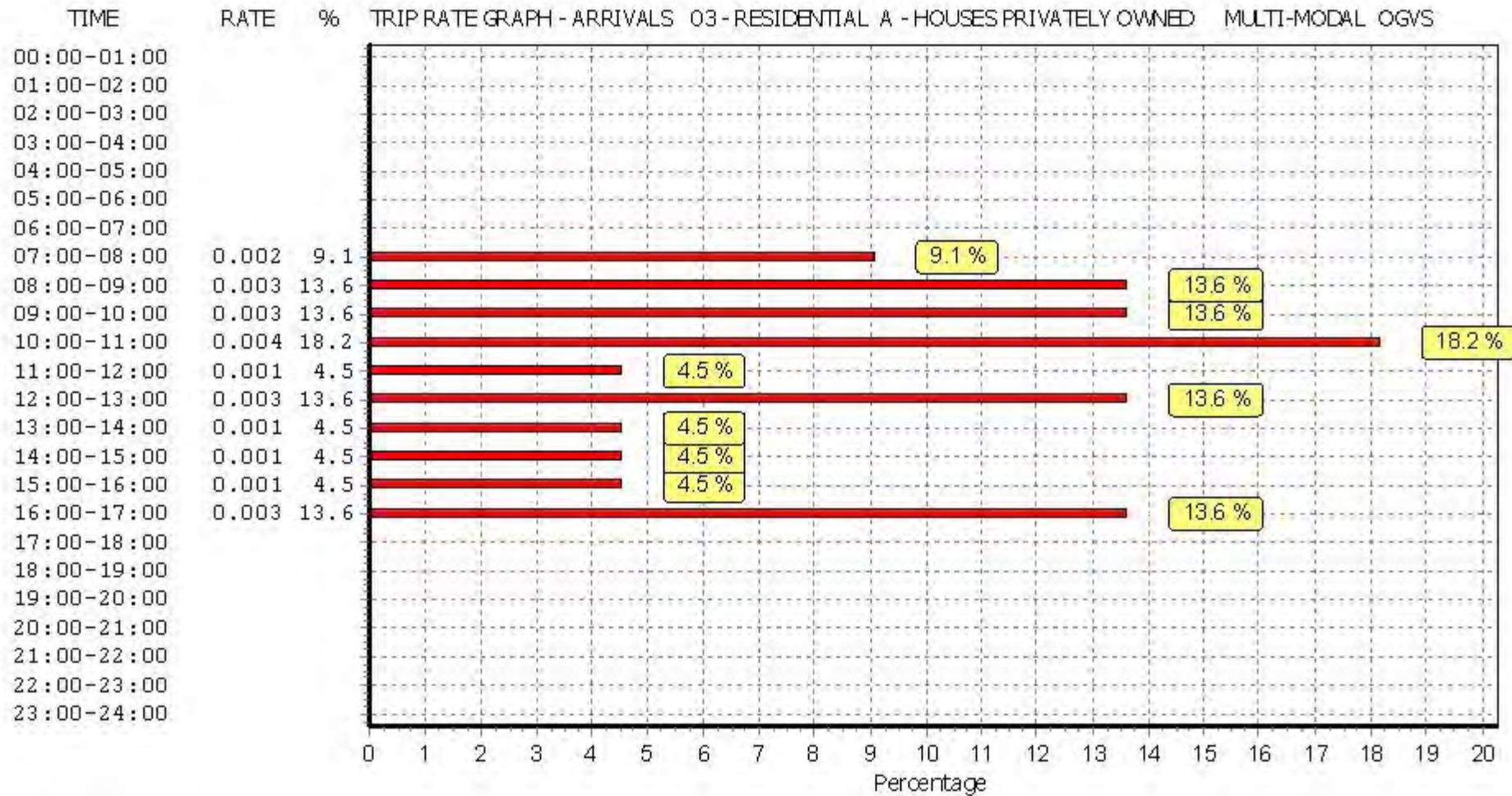
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are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

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

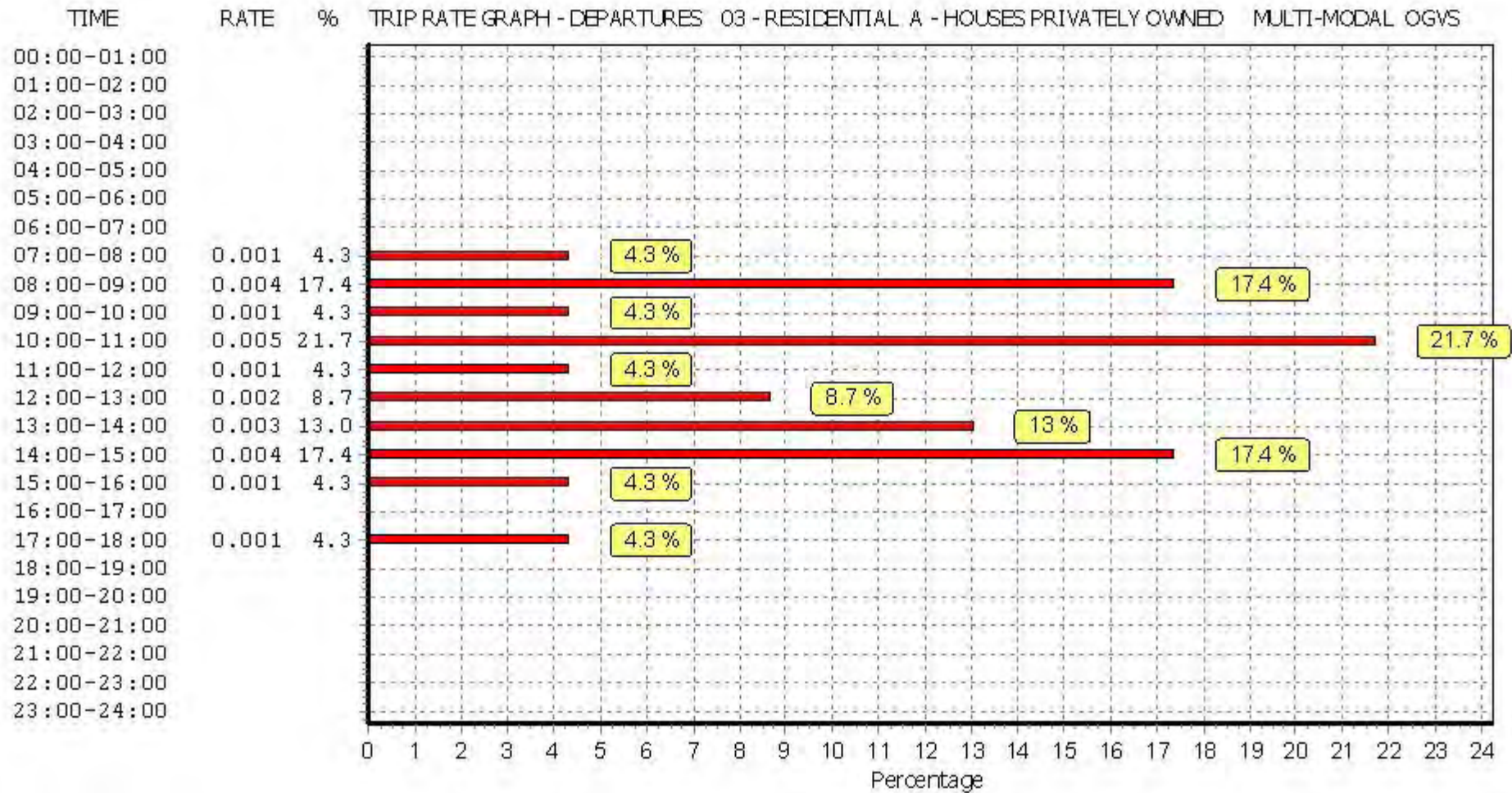
Parameter summary

Trip rate parameter range selected: 101 - 432 (units:)
 Survey date date range: 01/01/06 - 20/05/15
 Number of weekdays (Monday-Friday): 8
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 1

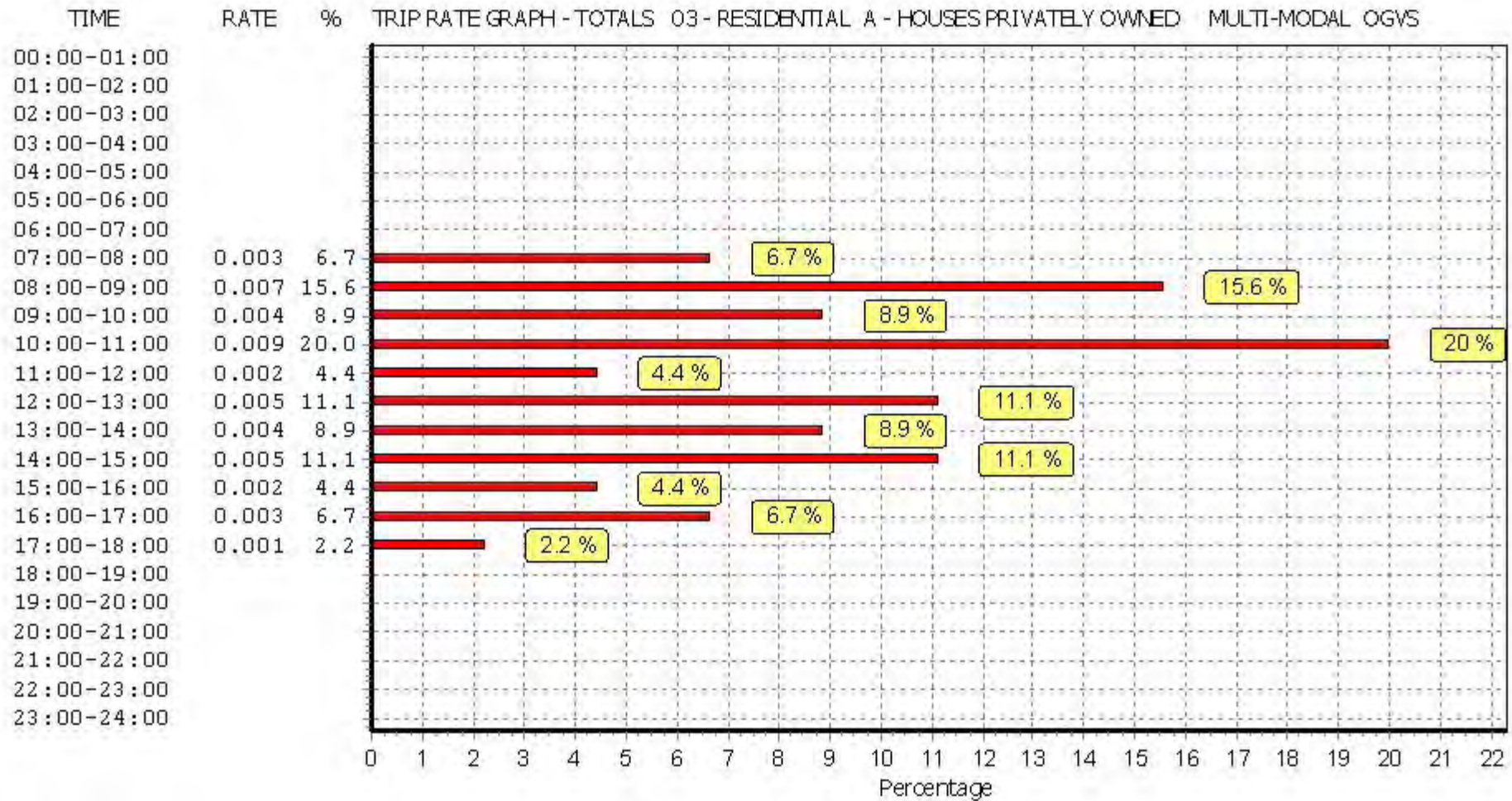
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected 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 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL PSVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	173	0.000	8	173	0.000	8	173	0.000
08:00 - 09:00	8	173	0.002	8	173	0.002	8	173	0.004
09:00 - 10:00	8	173	0.000	8	173	0.000	8	173	0.000
10:00 - 11:00	8	173	0.000	8	173	0.000	8	173	0.000
11:00 - 12:00	8	173	0.001	8	173	0.001	8	173	0.002
12:00 - 13:00	8	173	0.000	8	173	0.000	8	173	0.000
13:00 - 14:00	8	173	0.000	8	173	0.000	8	173	0.000
14:00 - 15:00	8	173	0.001	8	173	0.000	8	173	0.001
15:00 - 16:00	8	173	0.000	8	173	0.001	8	173	0.001
16:00 - 17:00	8	173	0.000	8	173	0.000	8	173	0.000
17:00 - 18:00	8	173	0.000	8	173	0.000	8	173	0.000
18:00 - 19:00	8	173	0.001	8	173	0.001	8	173	0.002
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.005			0.005			0.010

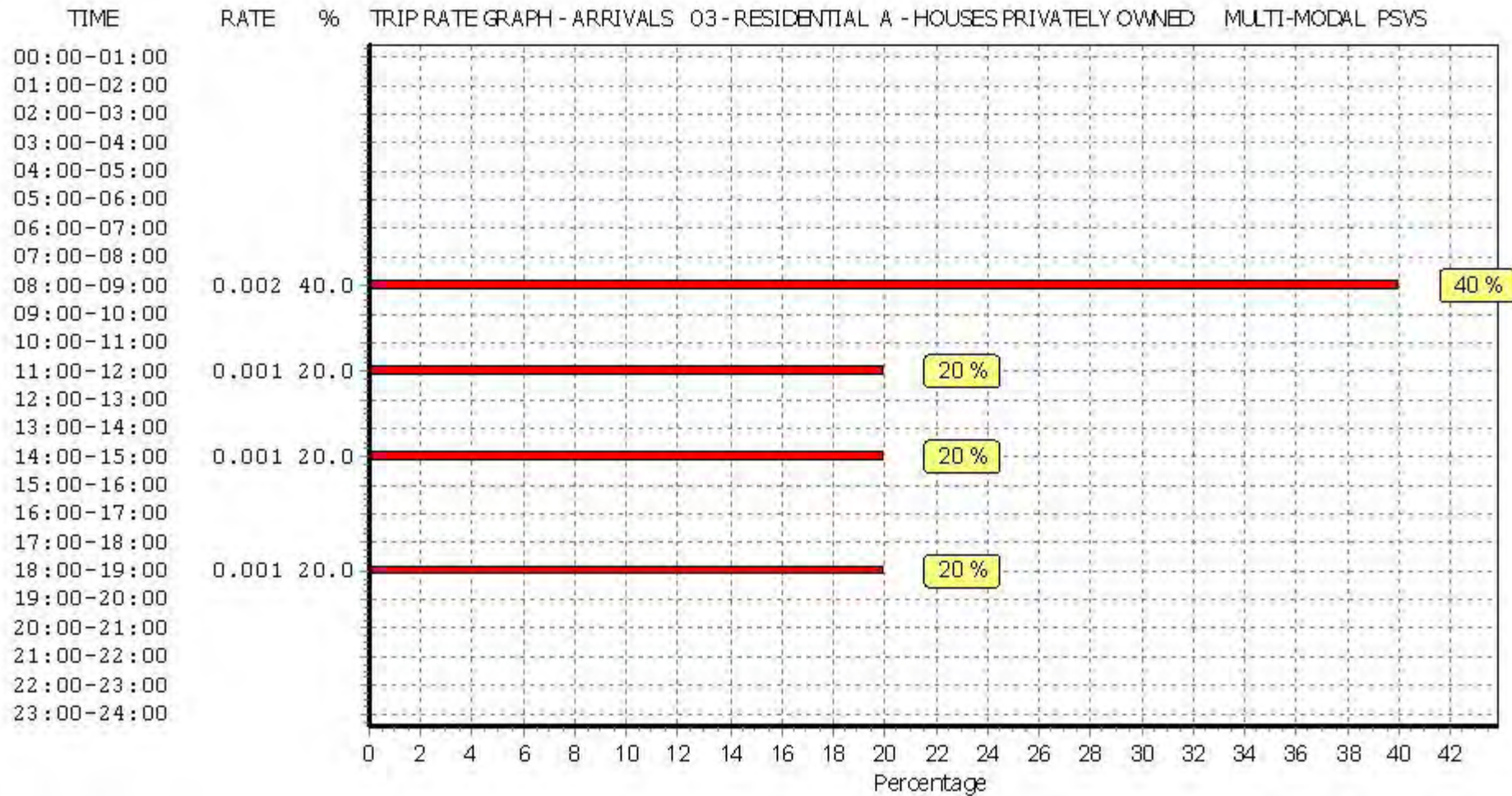
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are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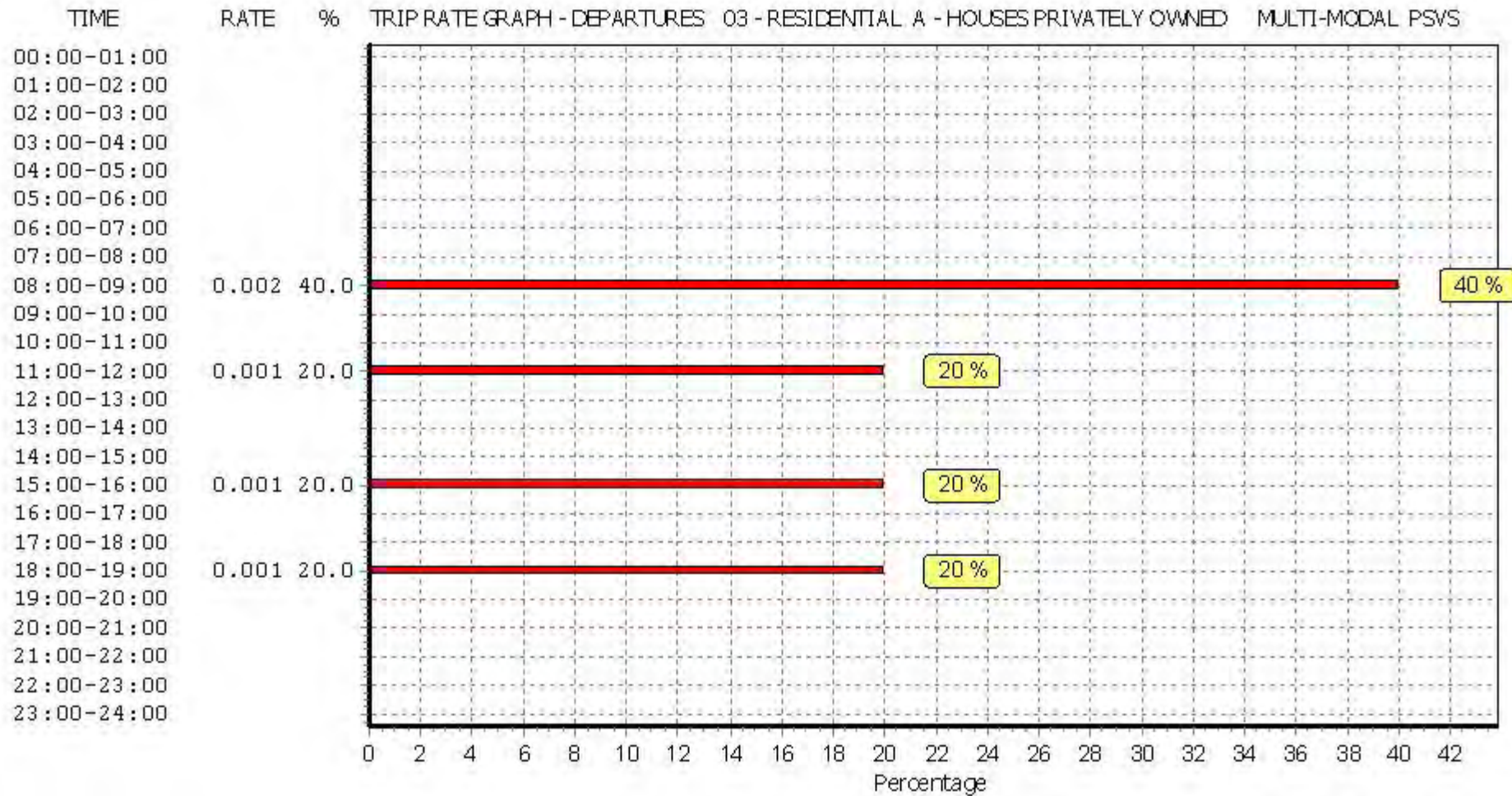
Parameter summary

Trip rate parameter range selected: 101 - 432 (units:)
 Survey date date range: 01/01/06 - 20/05/15
 Number of weekdays (Monday-Friday): 8
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 1

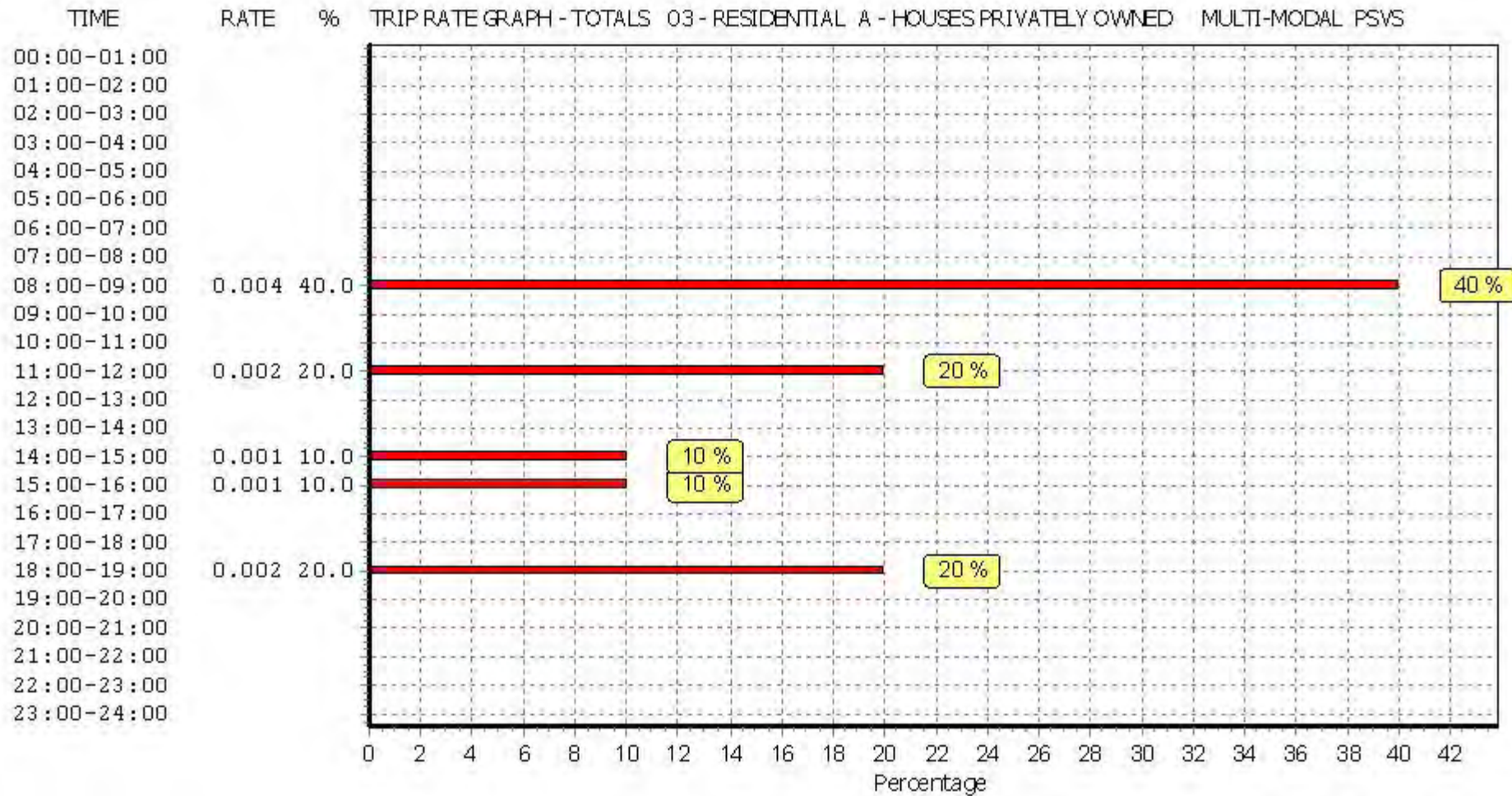
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected 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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TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
 MULTI-MODAL CYCLISTS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	173	0.006	8	173	0.009	8	173	0.015
08:00 - 09:00	8	173	0.006	8	173	0.022	8	173	0.028
09:00 - 10:00	8	173	0.005	8	173	0.005	8	173	0.010
10:00 - 11:00	8	173	0.001	8	173	0.007	8	173	0.008
11:00 - 12:00	8	173	0.004	8	173	0.000	8	173	0.004
12:00 - 13:00	8	173	0.003	8	173	0.006	8	173	0.009
13:00 - 14:00	8	173	0.005	8	173	0.004	8	173	0.009
14:00 - 15:00	8	173	0.004	8	173	0.003	8	173	0.007
15:00 - 16:00	8	173	0.014	8	173	0.004	8	173	0.018
16:00 - 17:00	8	173	0.012	8	173	0.004	8	173	0.016
17:00 - 18:00	8	173	0.007	8	173	0.011	8	173	0.018
18:00 - 19:00	8	173	0.007	8	173	0.001	8	173	0.008
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.074			0.076			0.150

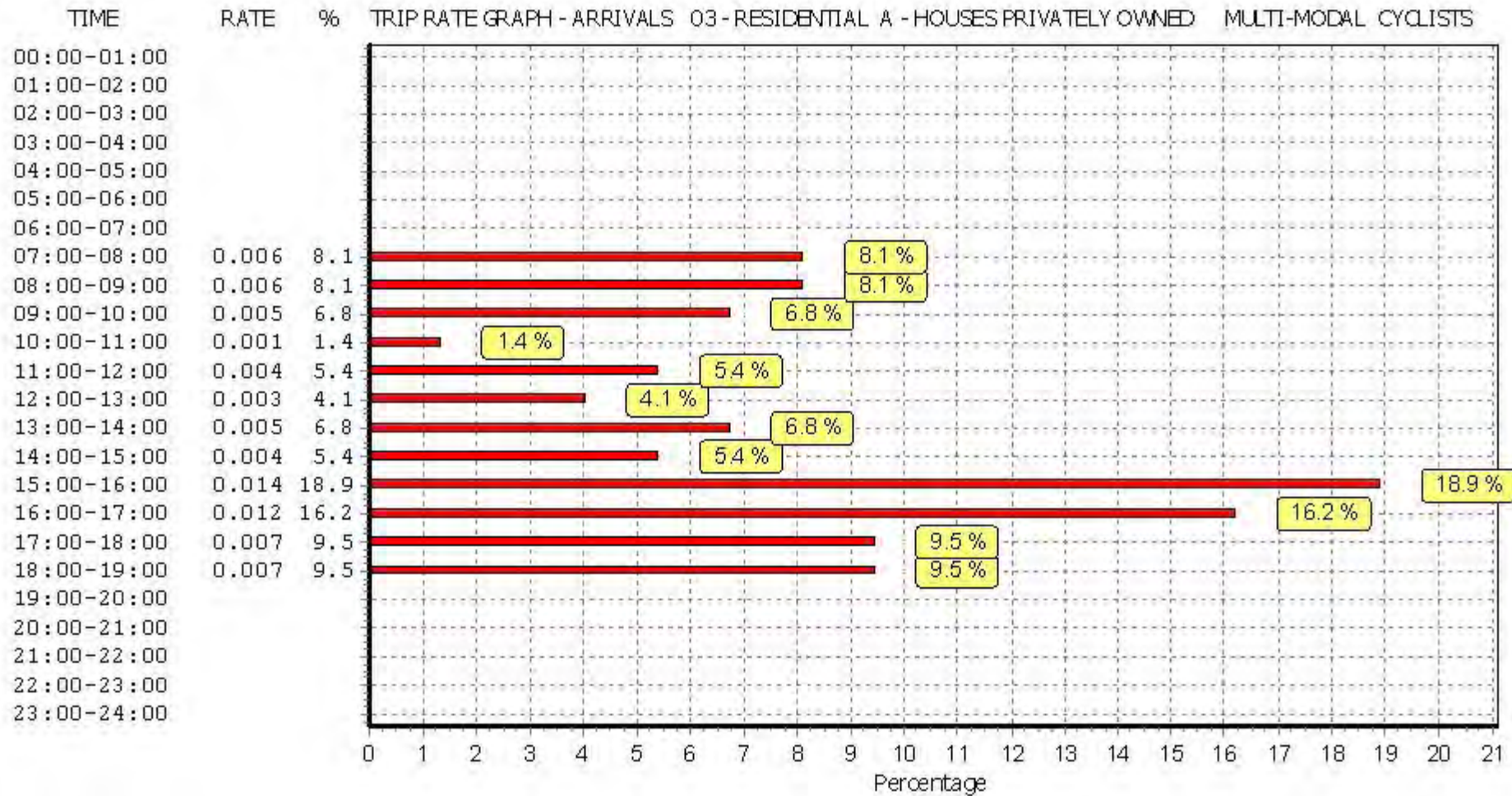
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are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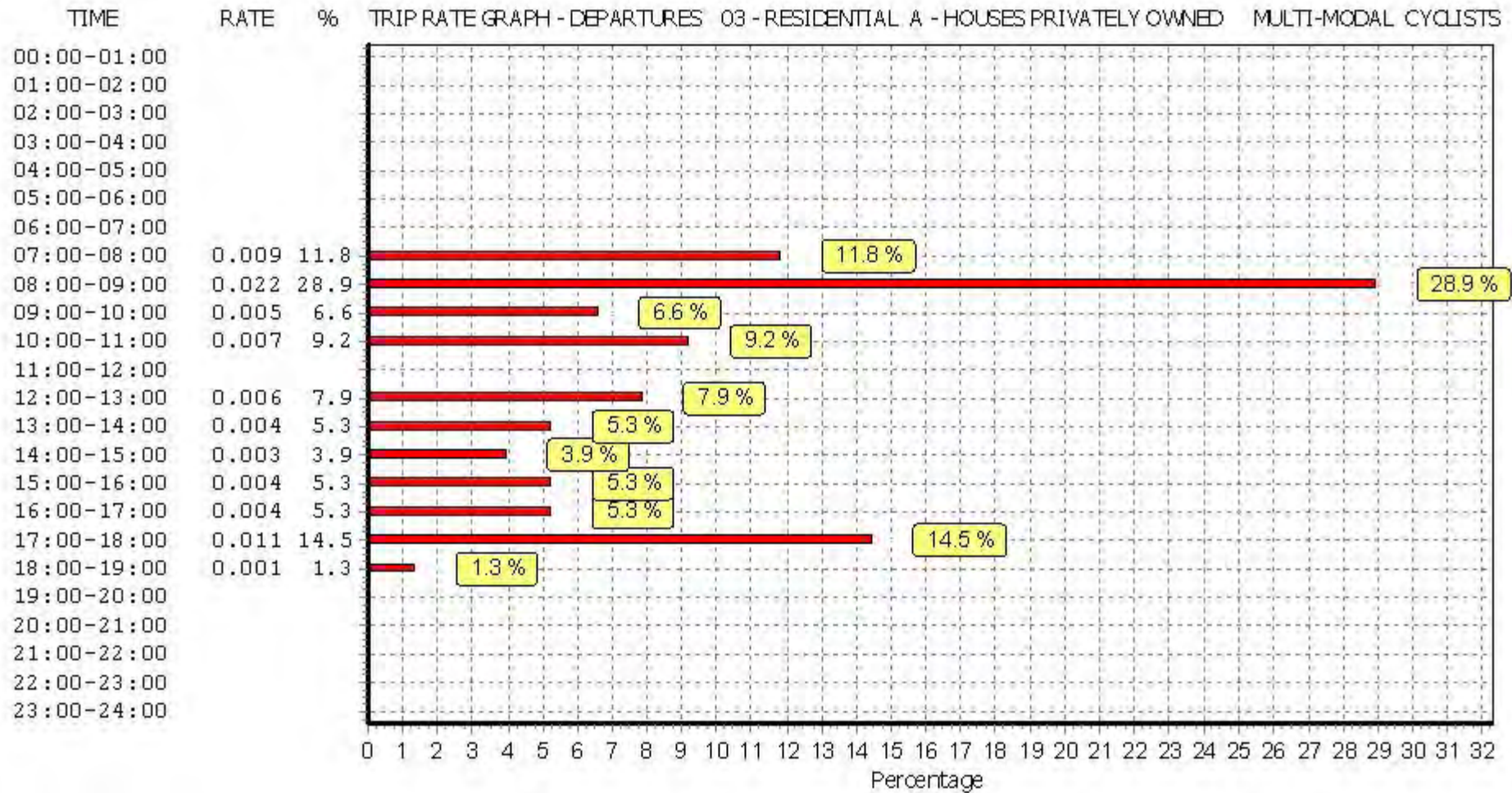
Parameter summary

Trip rate parameter range selected: 101 - 432 (units:)
 Survey date date range: 01/01/06 - 20/05/15
 Number of weekdays (Monday-Friday): 8
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 1

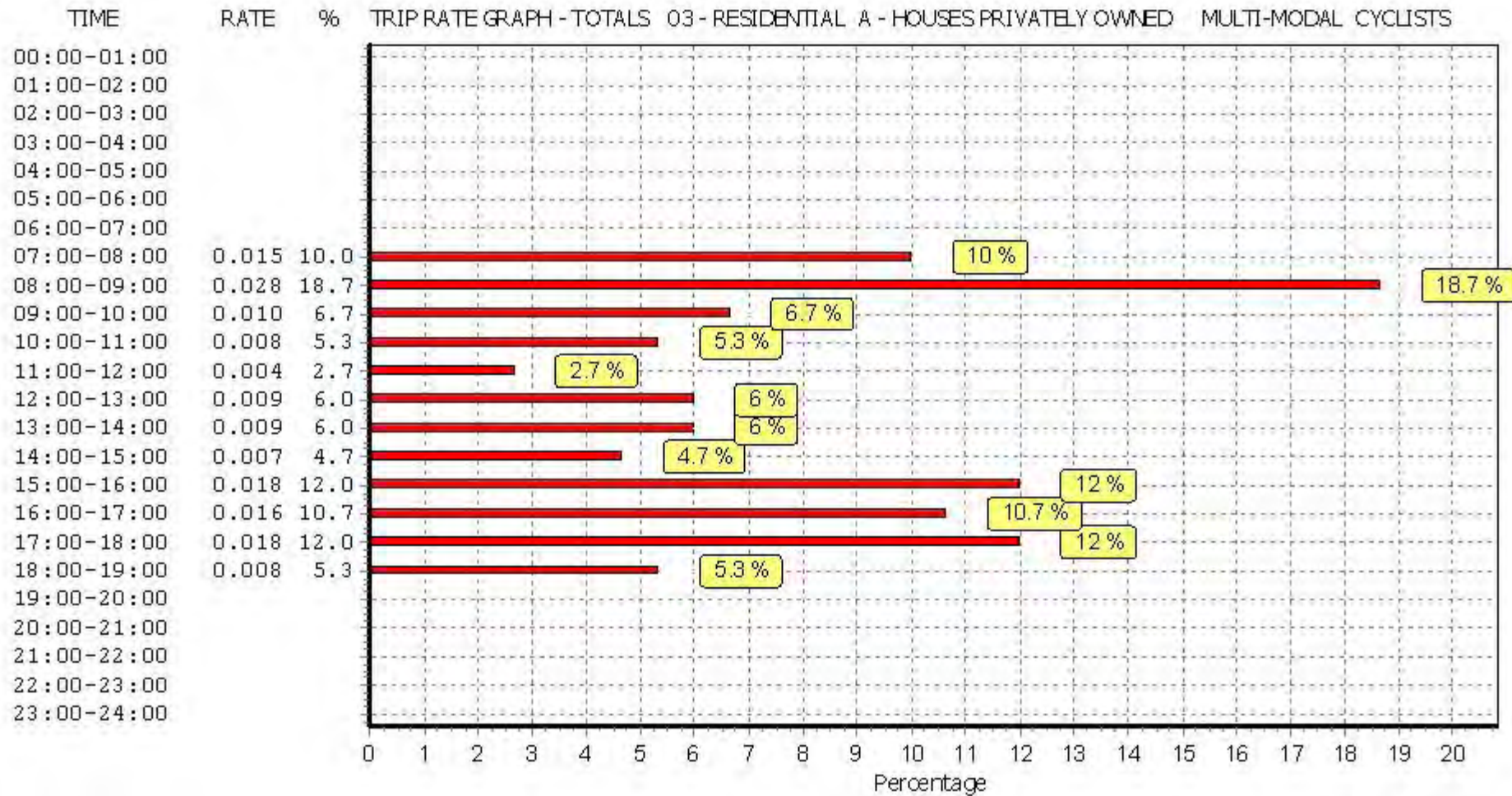
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected 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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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/A - HOUSES PRIVATELY OWNED
 MULTI-MODAL VEHICLE OCCUPANTS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	173	0.084	8	173	0.307	8	173	0.391
08:00 - 09:00	8	173	0.156	8	173	0.620	8	173	0.776
09:00 - 10:00	8	173	0.191	8	173	0.264	8	173	0.455
10:00 - 11:00	8	173	0.179	8	173	0.228	8	173	0.407
11:00 - 12:00	8	173	0.189	8	173	0.179	8	173	0.368
12:00 - 13:00	8	173	0.240	8	173	0.231	8	173	0.471
13:00 - 14:00	8	173	0.211	8	173	0.218	8	173	0.429
14:00 - 15:00	8	173	0.228	8	173	0.262	8	173	0.490
15:00 - 16:00	8	173	0.437	8	173	0.270	8	173	0.707
16:00 - 17:00	8	173	0.492	8	173	0.265	8	173	0.757
17:00 - 18:00	8	173	0.473	8	173	0.296	8	173	0.769
18:00 - 19:00	8	173	0.328	8	173	0.311	8	173	0.639
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.208			3.451			6.659

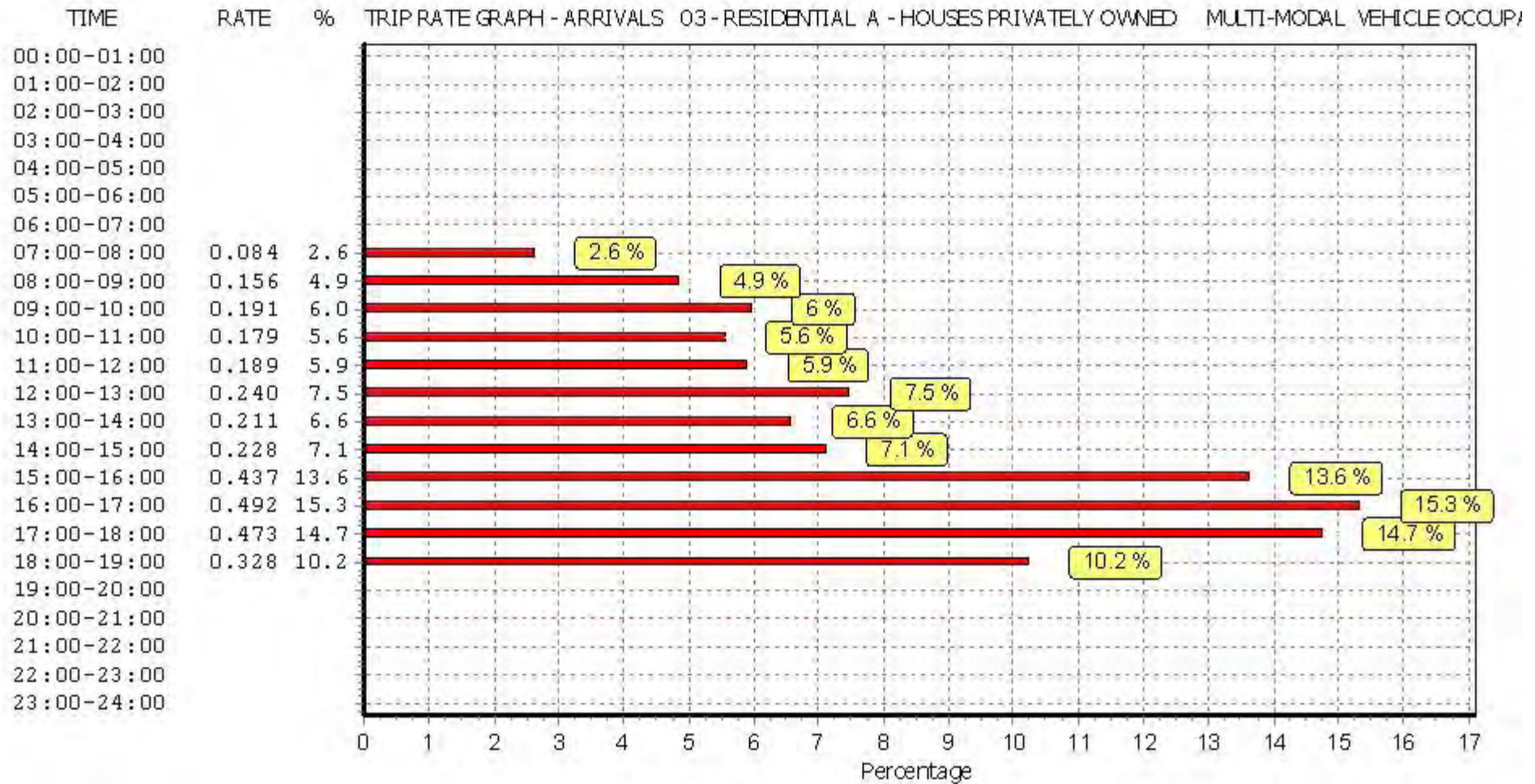
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are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

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

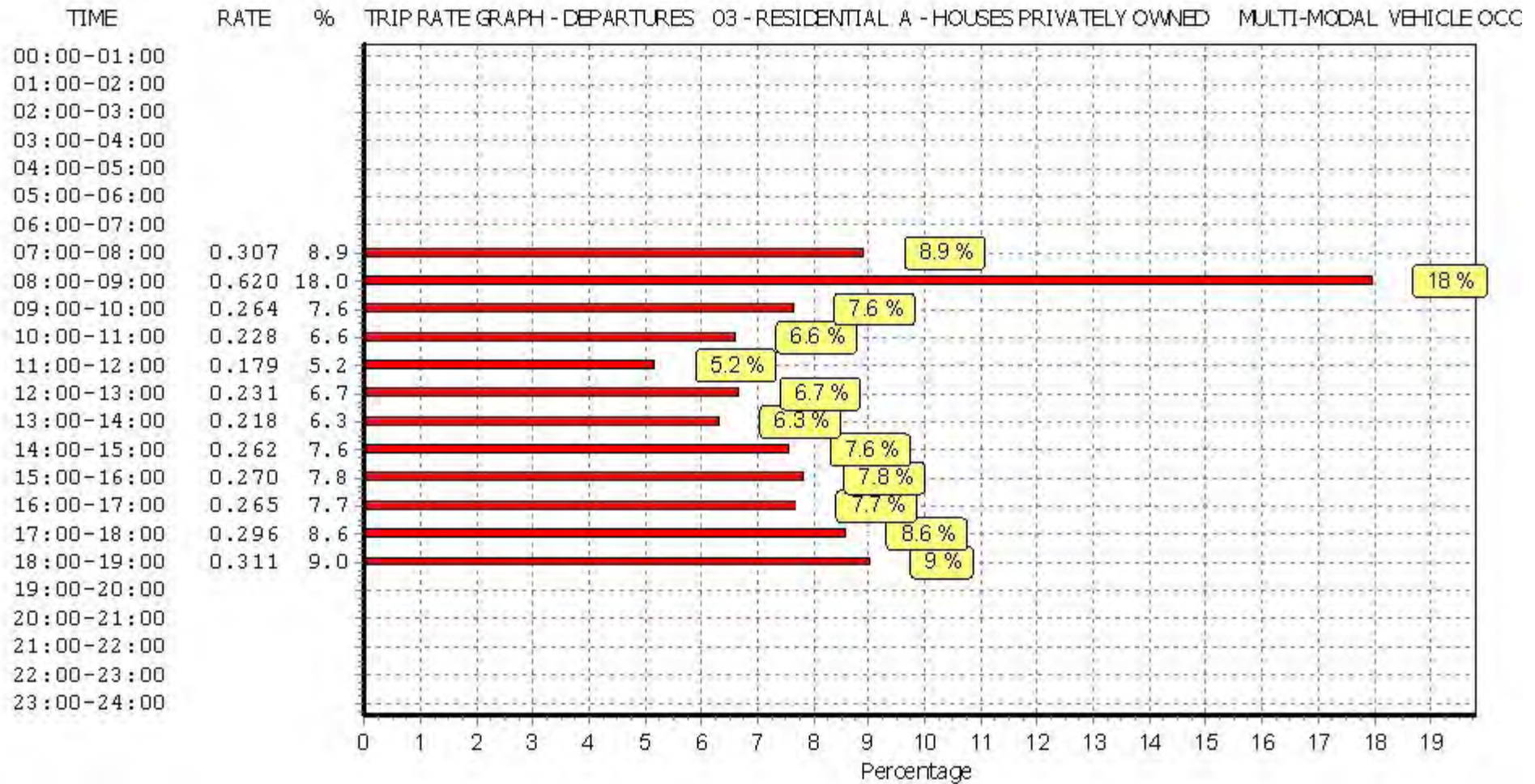
Parameter summary

Trip rate parameter range selected: 101 - 432 (units:)
 Survey date date range: 01/01/06 - 20/05/15
 Number of weekdays (Monday-Friday): 8
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 1

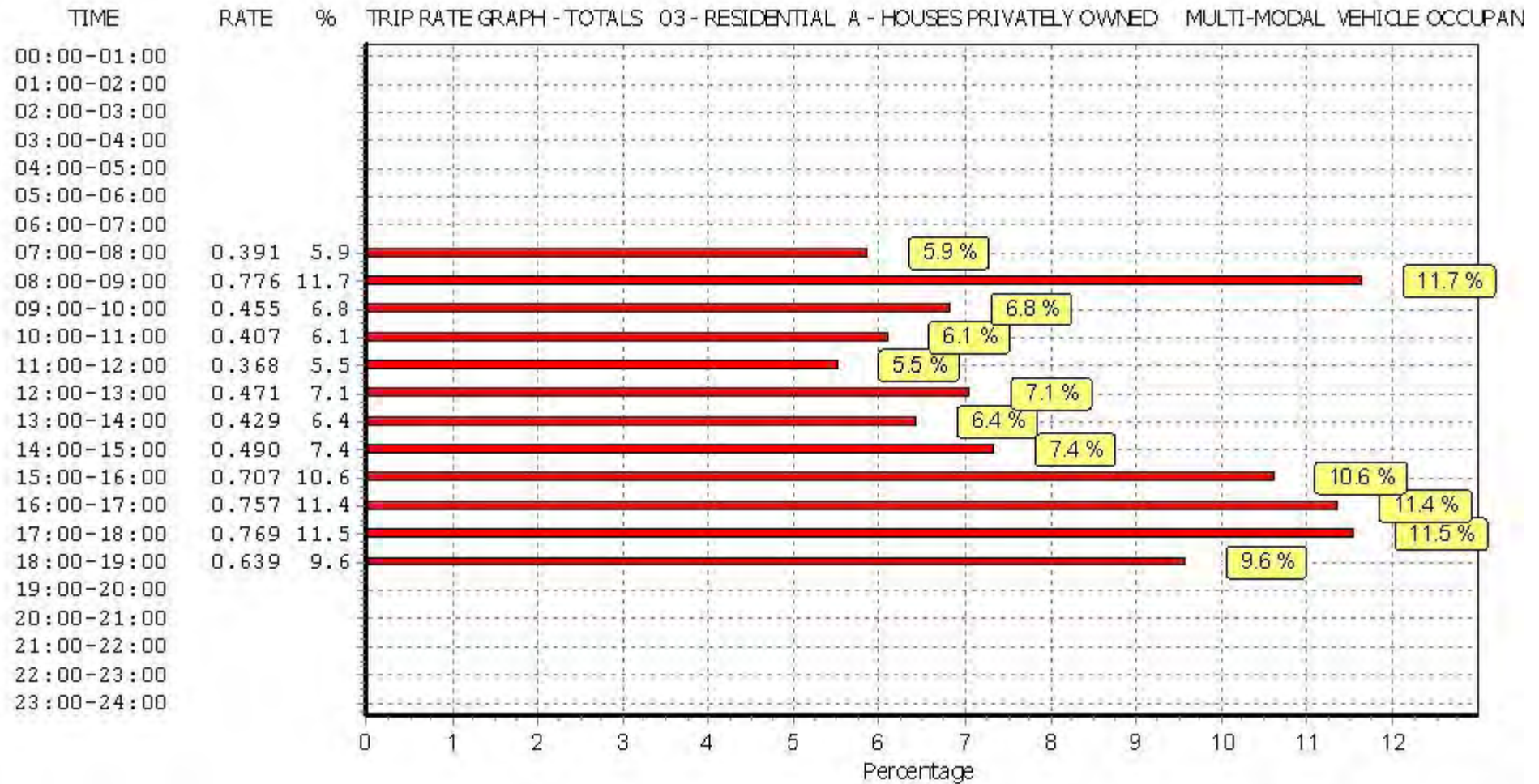
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected 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 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL PEDESTRIANS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	173	0.025	8	173	0.039	8	173	0.064
08:00 - 09:00	8	173	0.022	8	173	0.101	8	173	0.123
09:00 - 10:00	8	173	0.036	8	173	0.041	8	173	0.077
10:00 - 11:00	8	173	0.036	8	173	0.040	8	173	0.076
11:00 - 12:00	8	173	0.027	8	173	0.026	8	173	0.053
12:00 - 13:00	8	173	0.024	8	173	0.025	8	173	0.049
13:00 - 14:00	8	173	0.020	8	173	0.034	8	173	0.054
14:00 - 15:00	8	173	0.043	8	173	0.039	8	173	0.082
15:00 - 16:00	8	173	0.082	8	173	0.045	8	173	0.127
16:00 - 17:00	8	173	0.061	8	173	0.035	8	173	0.096
17:00 - 18:00	8	173	0.035	8	173	0.030	8	173	0.065
18:00 - 19:00	8	173	0.043	8	173	0.041	8	173	0.084
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.454			0.496			0.950

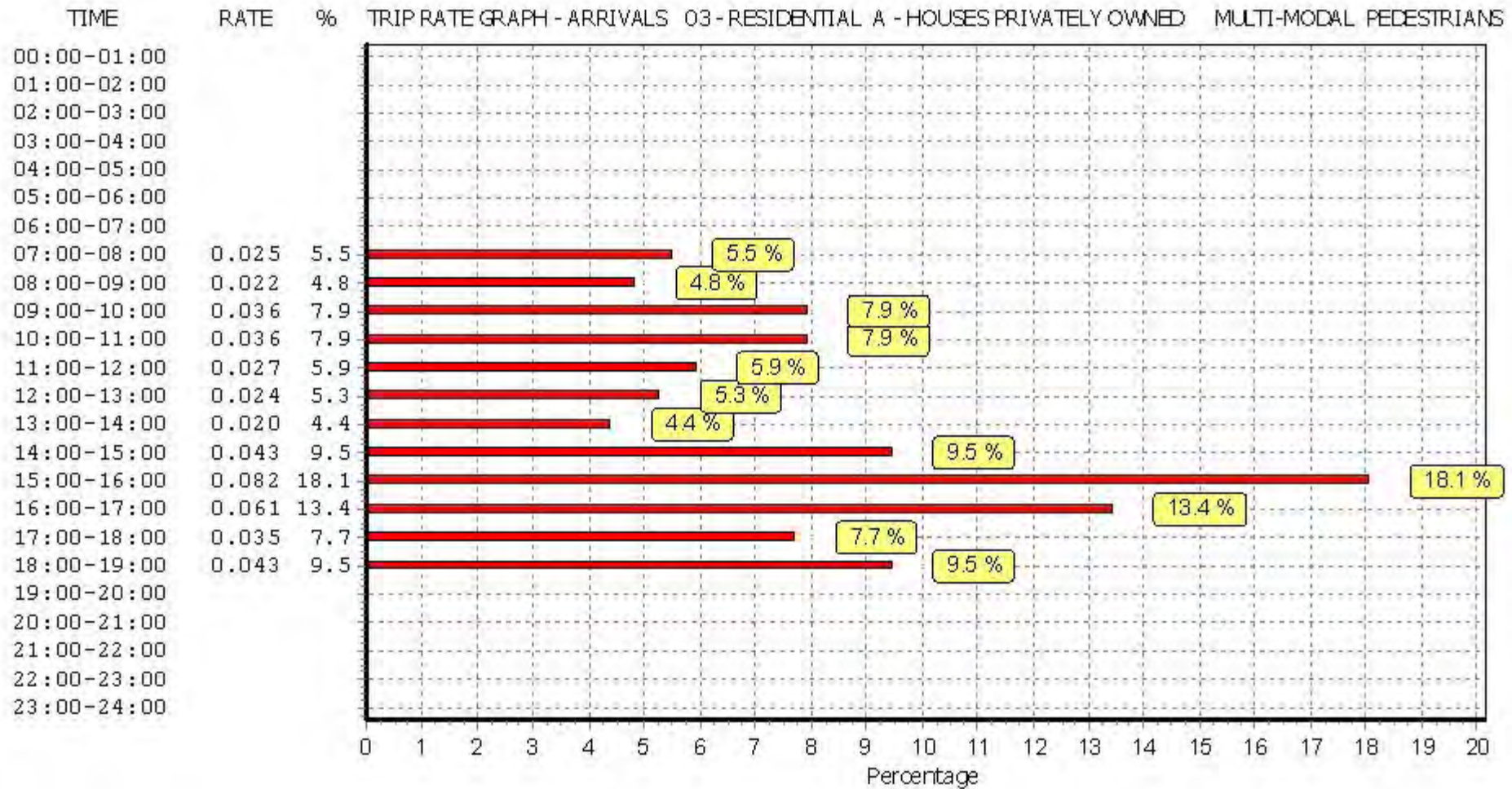
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are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

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

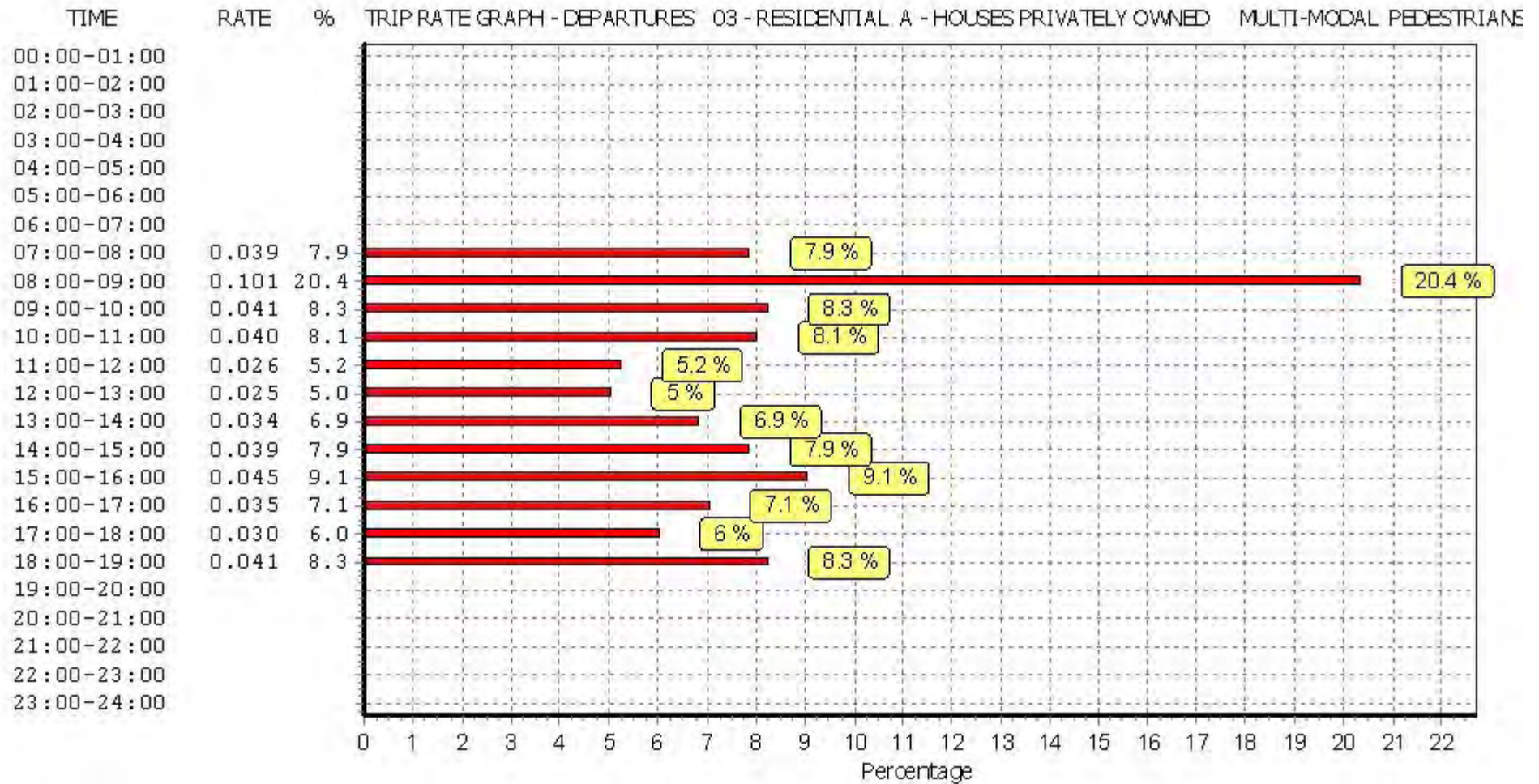
Parameter summary

Trip rate parameter range selected: 101 - 432 (units:)
 Survey date date range: 01/01/06 - 20/05/15
 Number of weekdays (Monday-Friday): 8
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 1

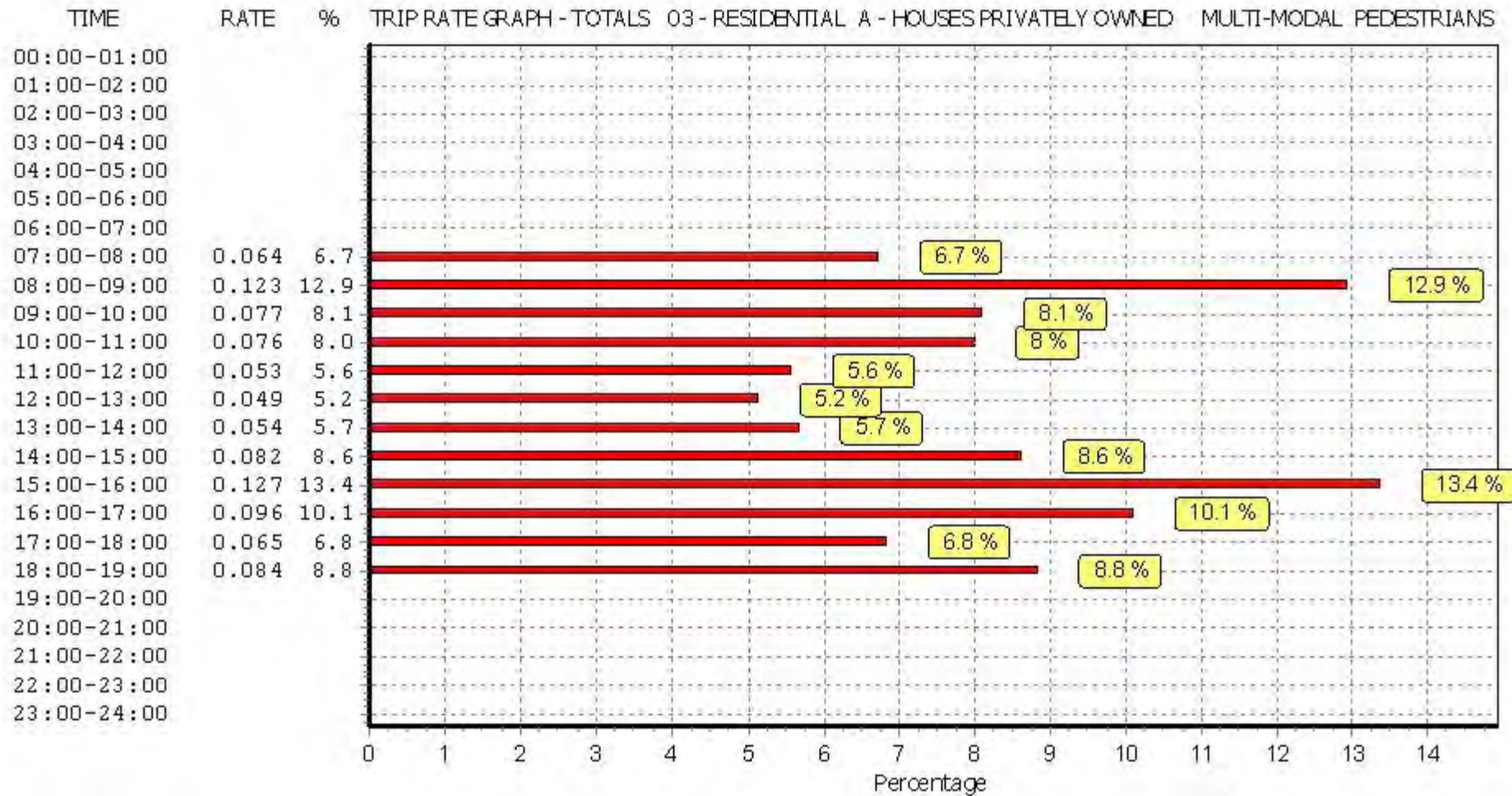
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected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



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



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/A - HOUSES PRIVATELY OWNED
 MULTI-MODAL BUS/TRAM PASSENGERS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	173	0.000	8	173	0.004	8	173	0.004
08:00 - 09:00	8	173	0.000	8	173	0.005	8	173	0.005
09:00 - 10:00	8	173	0.001	8	173	0.007	8	173	0.008
10:00 - 11:00	8	173	0.003	8	173	0.002	8	173	0.005
11:00 - 12:00	8	173	0.004	8	173	0.004	8	173	0.008
12:00 - 13:00	8	173	0.004	8	173	0.004	8	173	0.008
13:00 - 14:00	8	173	0.007	8	173	0.003	8	173	0.010
14:00 - 15:00	8	173	0.002	8	173	0.003	8	173	0.005
15:00 - 16:00	8	173	0.006	8	173	0.001	8	173	0.007
16:00 - 17:00	8	173	0.004	8	173	0.001	8	173	0.005
17:00 - 18:00	8	173	0.004	8	173	0.001	8	173	0.005
18:00 - 19:00	8	173	0.004	8	173	0.000	8	173	0.004
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.039			0.035			0.074

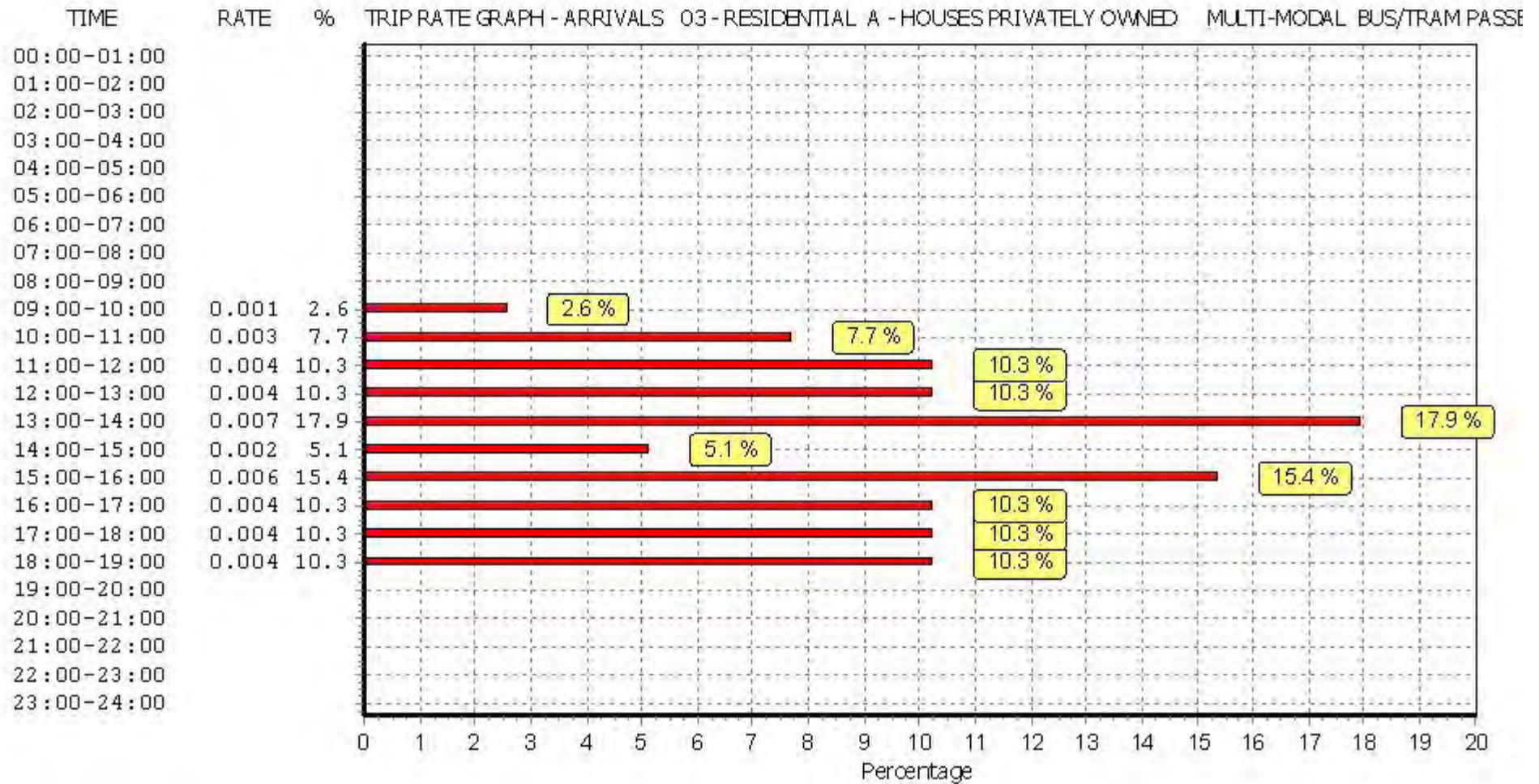
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are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

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

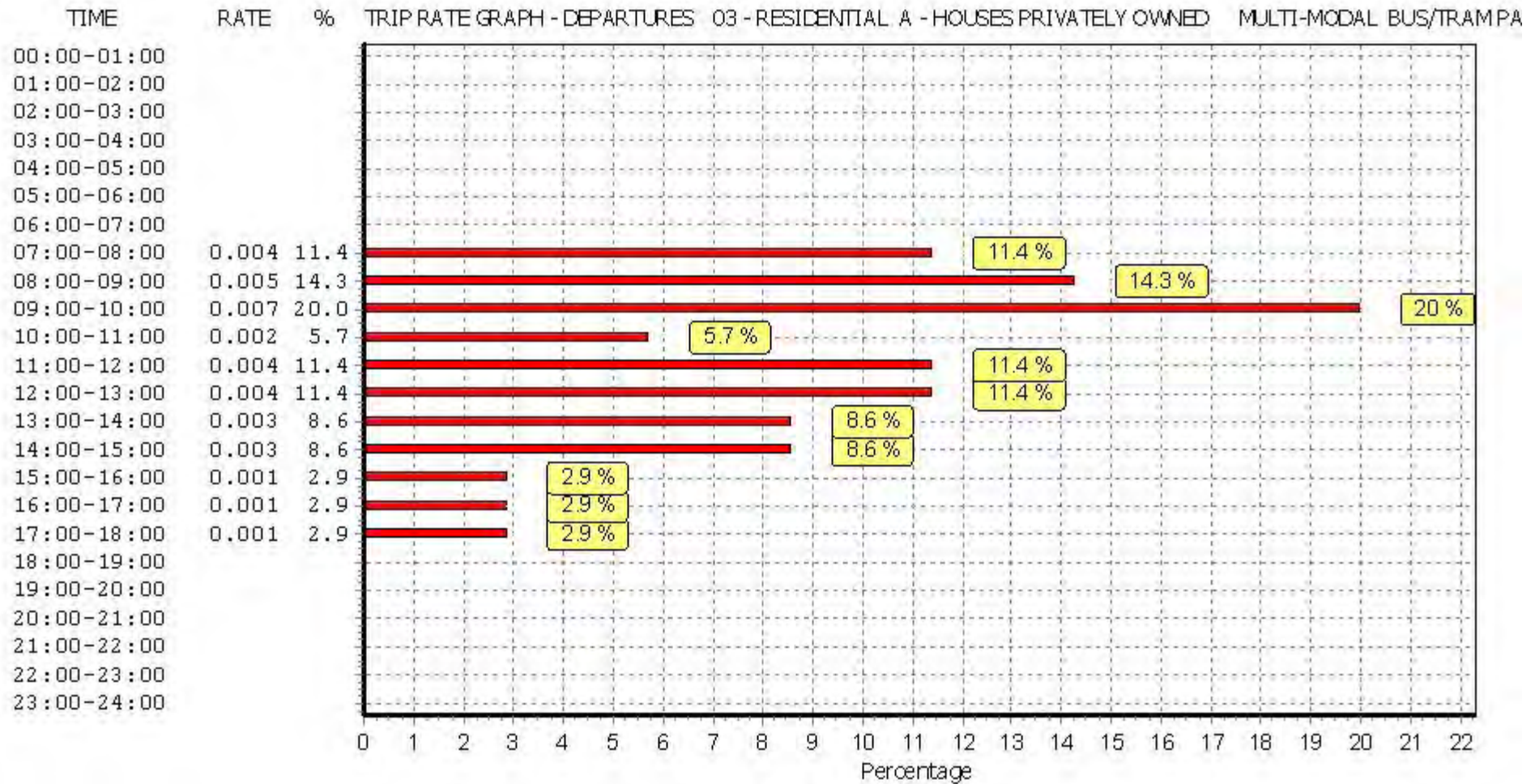
Parameter summary

Trip rate parameter range selected: 101 - 432 (units:)
 Survey date date range: 01/01/06 - 20/05/15
 Number of weekdays (Monday-Friday): 8
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 1

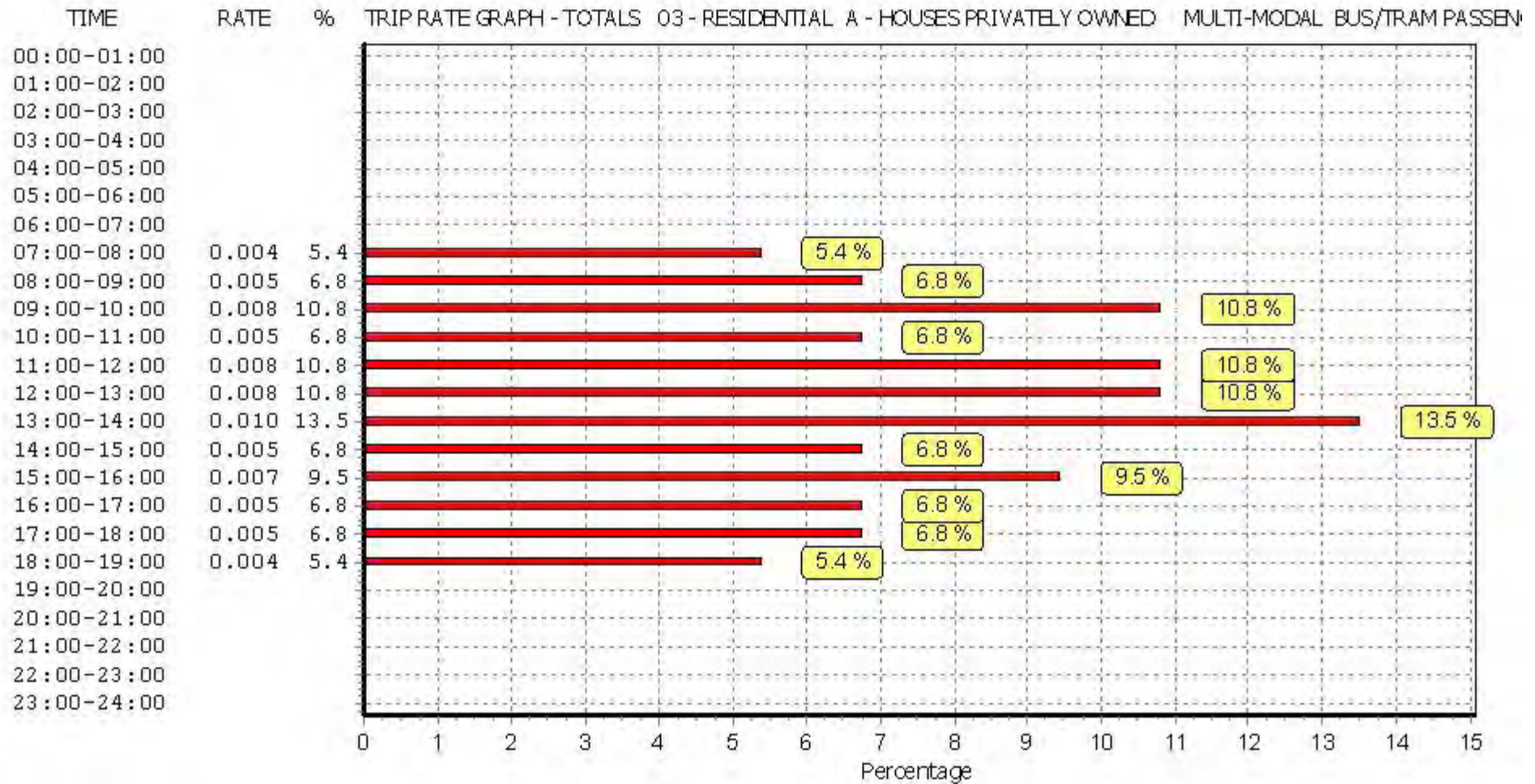
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected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



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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	173	0.000	8	173	0.000	8	173	0.000
08:00 - 09:00	8	173	0.000	8	173	0.001	8	173	0.001
09:00 - 10:00	8	173	0.000	8	173	0.001	8	173	0.001
10:00 - 11:00	8	173	0.000	8	173	0.000	8	173	0.000
11:00 - 12:00	8	173	0.000	8	173	0.000	8	173	0.000
12:00 - 13:00	8	173	0.000	8	173	0.000	8	173	0.000
13:00 - 14:00	8	173	0.000	8	173	0.000	8	173	0.000
14:00 - 15:00	8	173	0.000	8	173	0.000	8	173	0.000
15:00 - 16:00	8	173	0.001	8	173	0.000	8	173	0.001
16:00 - 17:00	8	173	0.000	8	173	0.000	8	173	0.000
17:00 - 18:00	8	173	0.000	8	173	0.000	8	173	0.000
18:00 - 19:00	8	173	0.000	8	173	0.000	8	173	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

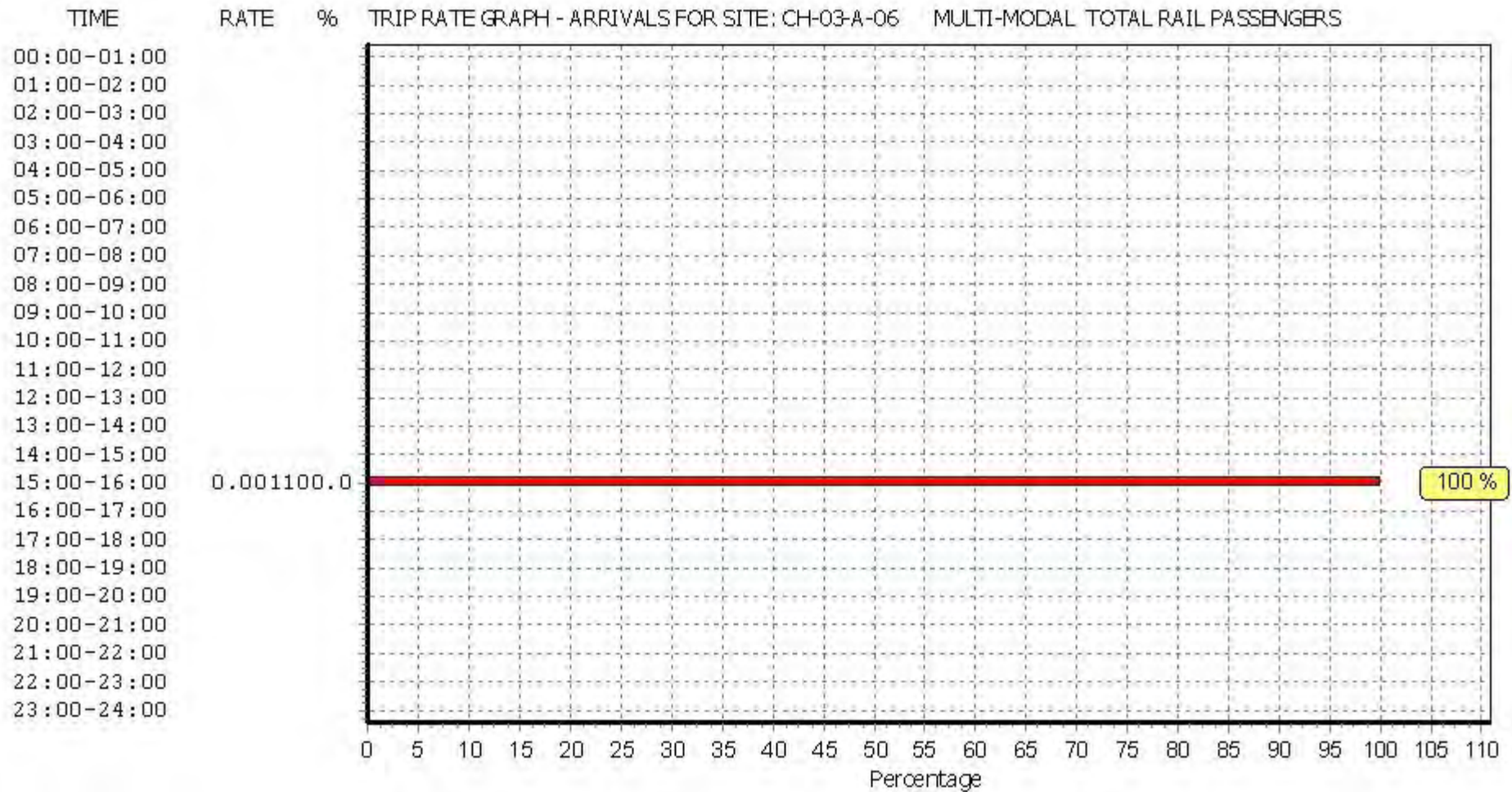
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are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

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

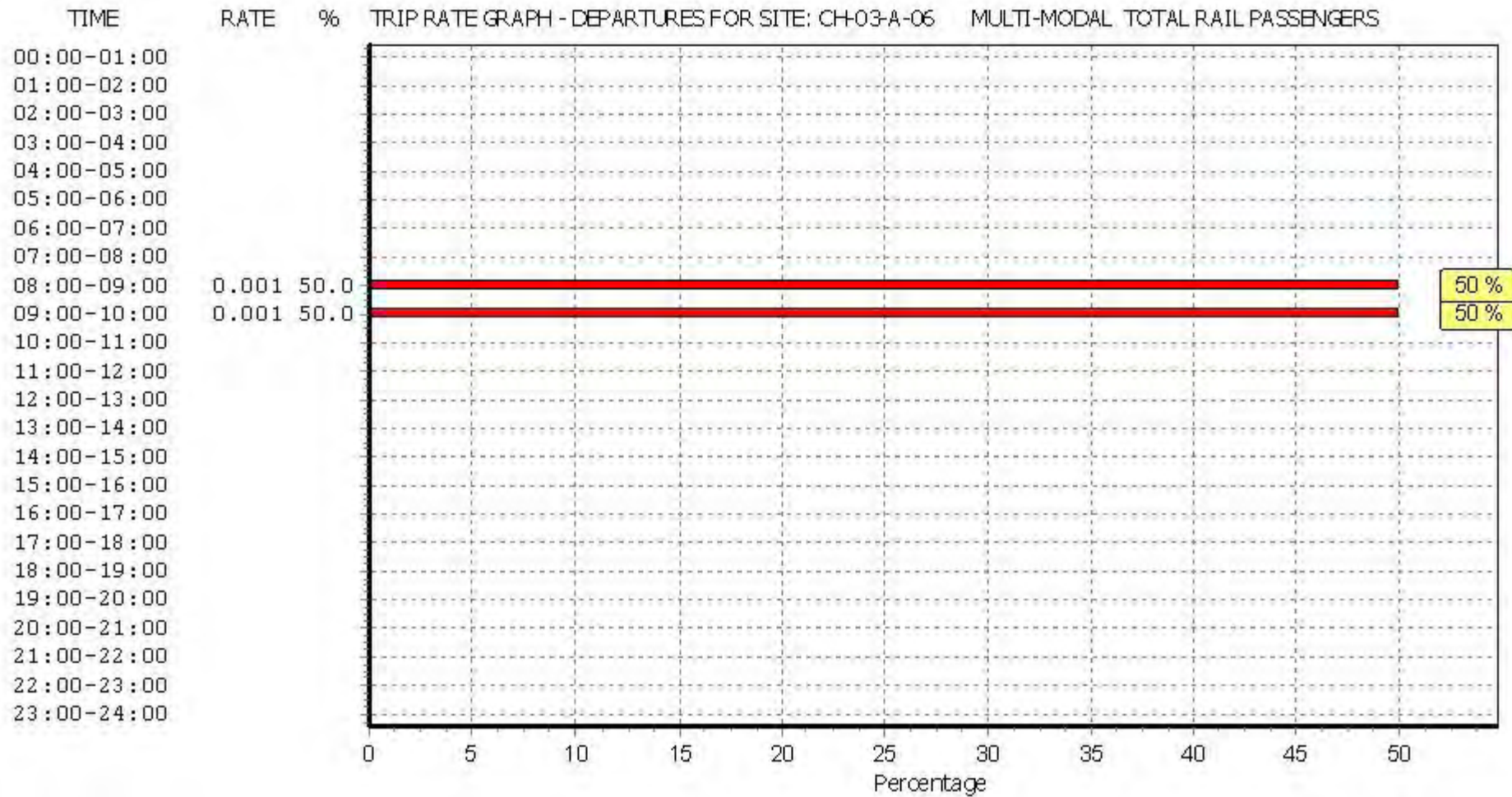
Parameter summary

Trip rate parameter range selected: 101 - 432 (units:)
 Survey date date range: 01/01/06 - 20/05/15
 Number of weekdays (Monday-Friday): 8
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 1

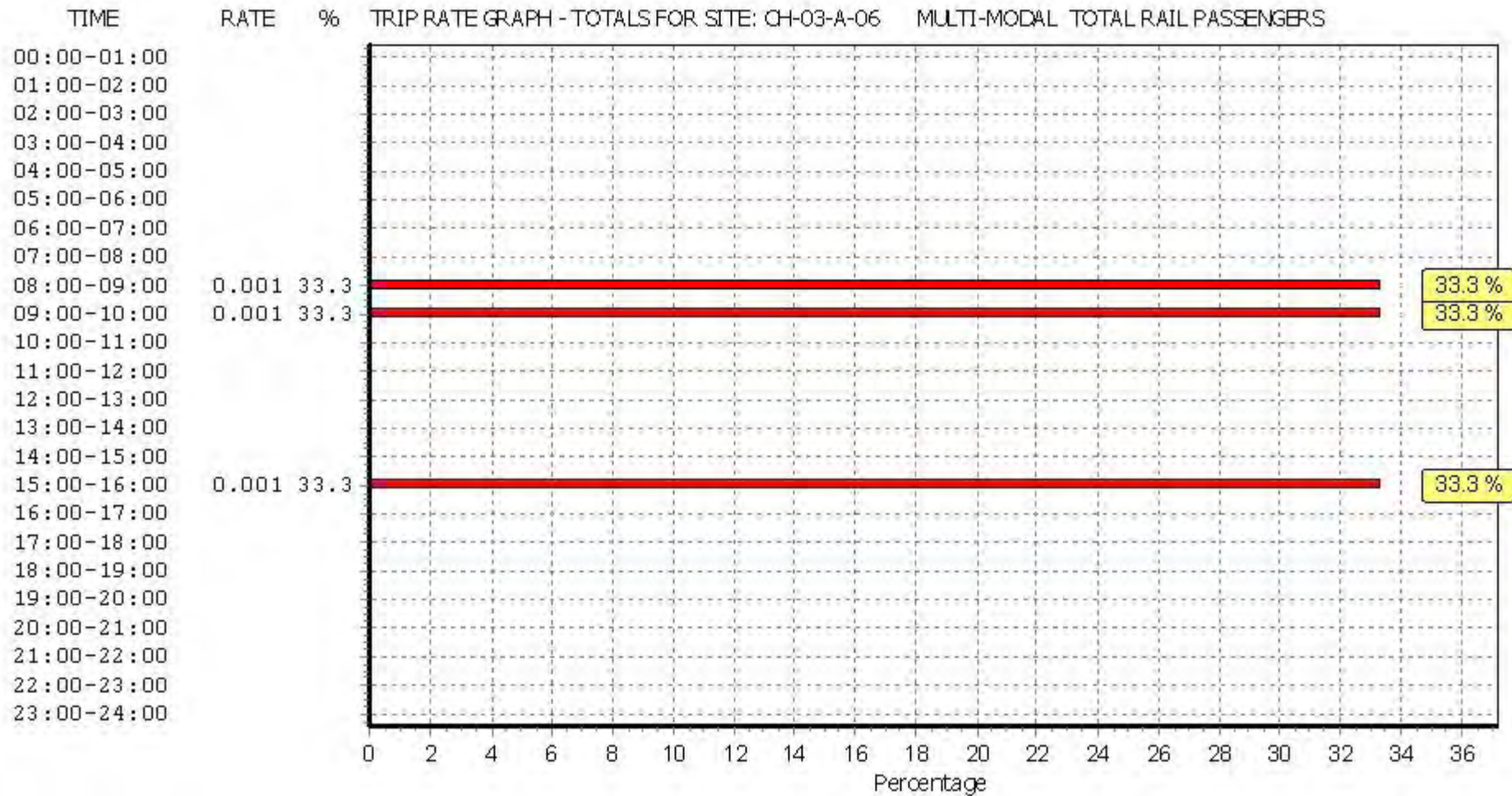
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected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



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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	173	0.000	8	173	0.000	8	173	0.000
08:00 - 09:00	8	173	0.001	8	173	0.006	8	173	0.007
09:00 - 10:00	8	173	0.000	8	173	0.000	8	173	0.000
10:00 - 11:00	8	173	0.000	8	173	0.000	8	173	0.000
11:00 - 12:00	8	173	0.003	8	173	0.001	8	173	0.004
12:00 - 13:00	8	173	0.000	8	173	0.000	8	173	0.000
13:00 - 14:00	8	173	0.000	8	173	0.000	8	173	0.000
14:00 - 15:00	8	173	0.001	8	173	0.000	8	173	0.001
15:00 - 16:00	8	173	0.000	8	173	0.000	8	173	0.000
16:00 - 17:00	8	173	0.000	8	173	0.000	8	173	0.000
17:00 - 18:00	8	173	0.000	8	173	0.000	8	173	0.000
18:00 - 19:00	8	173	0.001	8	173	0.000	8	173	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

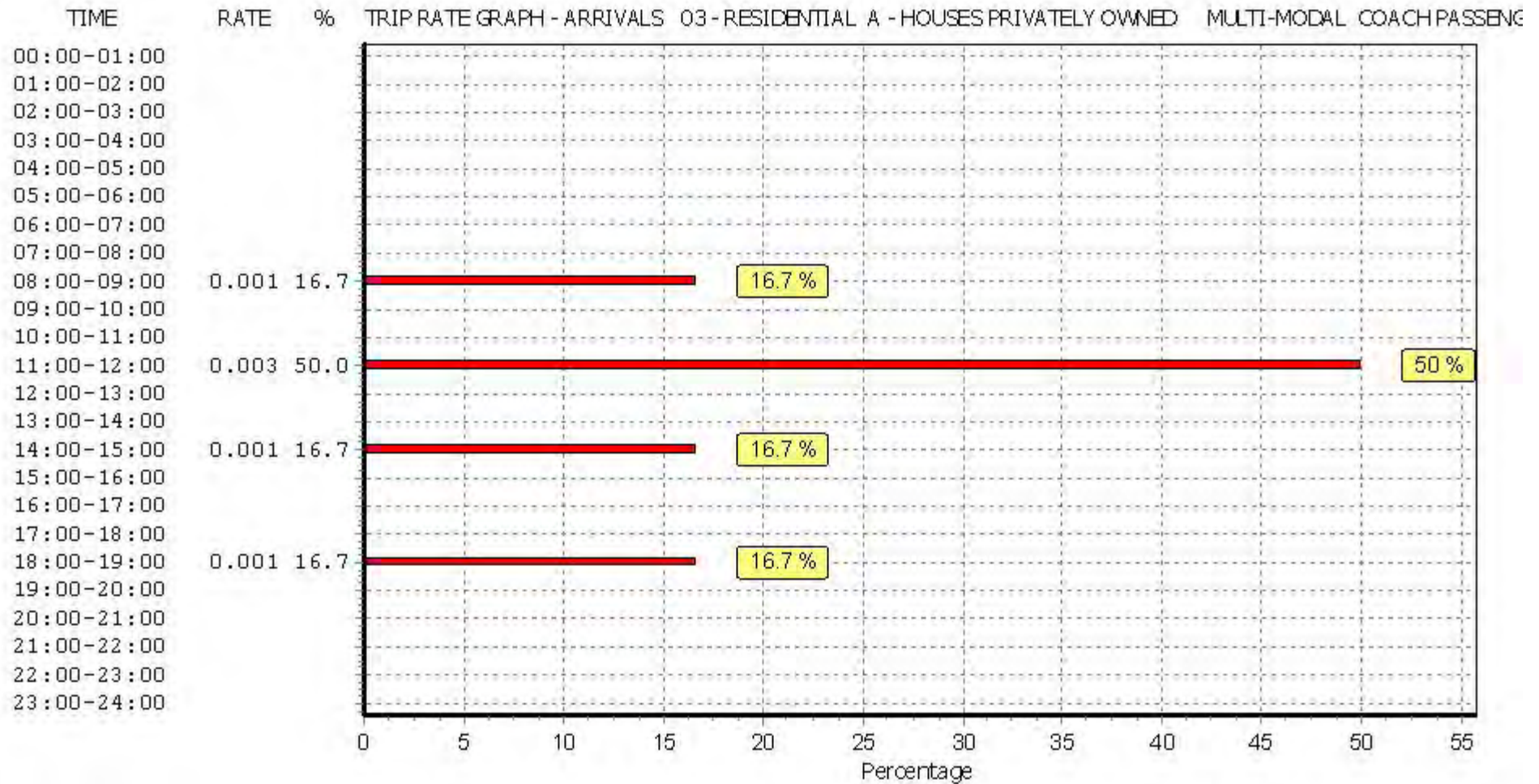
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are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

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

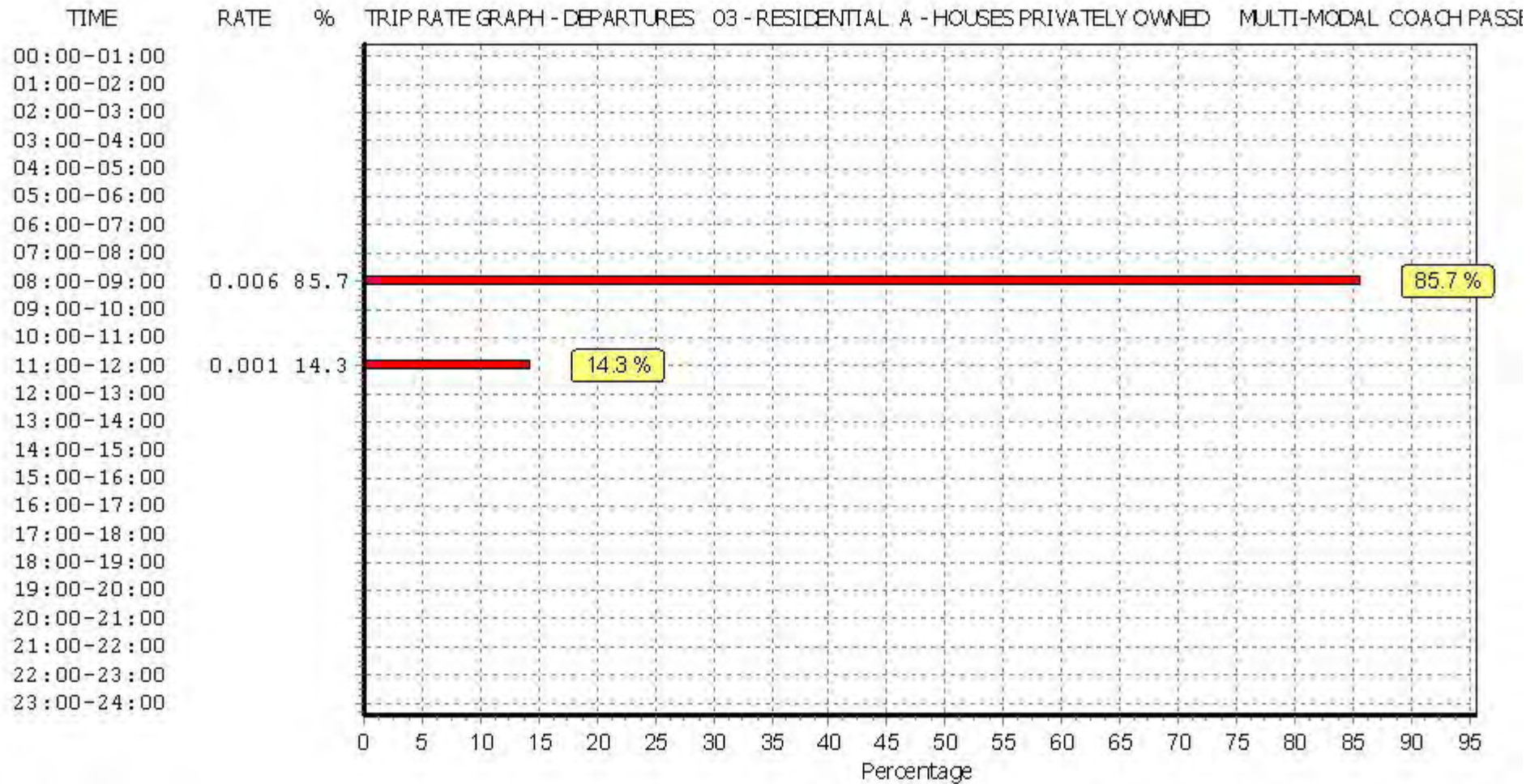
Parameter summary

Trip rate parameter range selected: 101 - 432 (units:)
 Survey date date range: 01/01/06 - 20/05/15
 Number of weekdays (Monday-Friday): 8
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 1

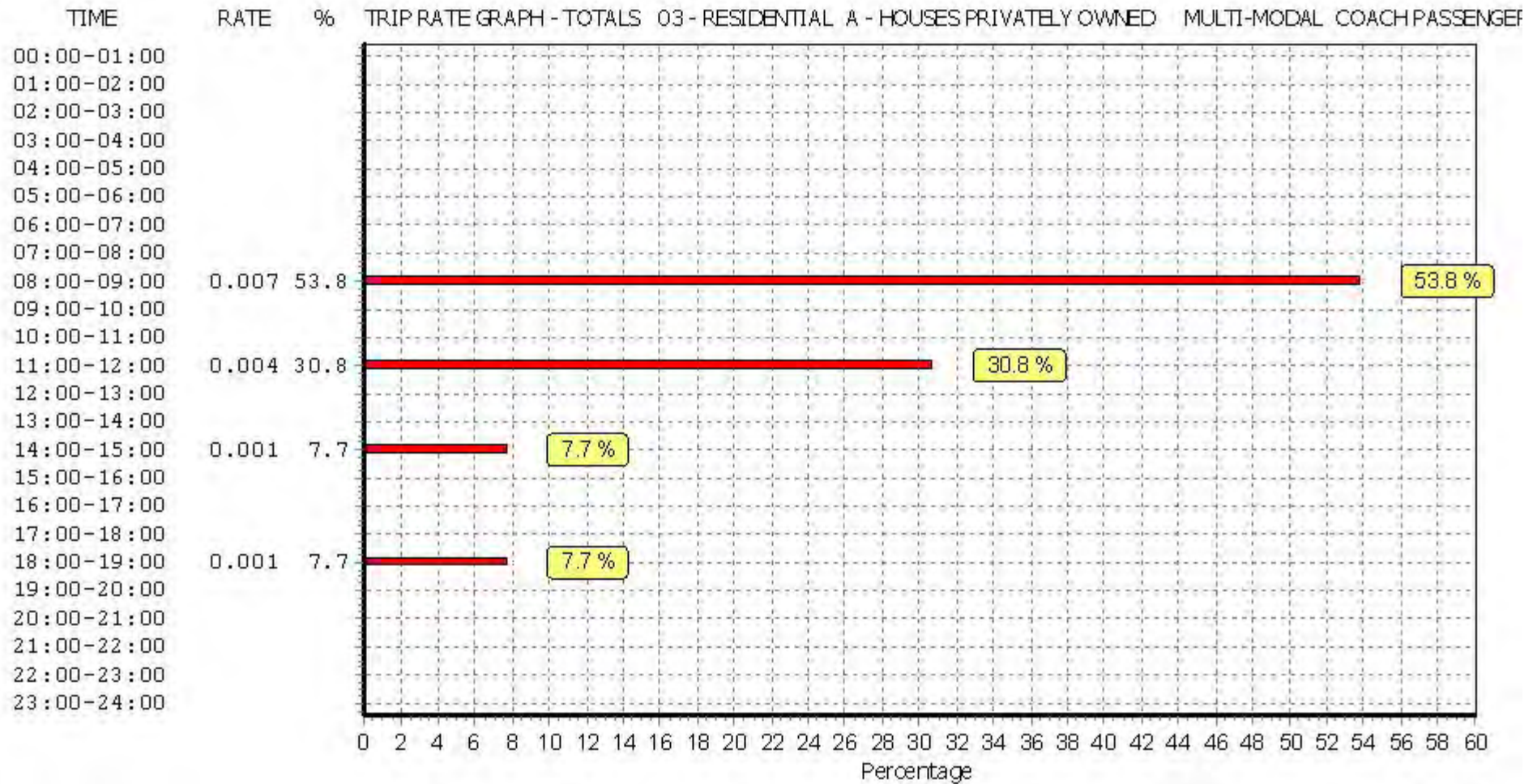
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected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



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



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/A - HOUSES PRIVATELY OWNED
 MULTI-MODAL PUBLIC TRANSPORT USERS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	173	0.000	8	173	0.004	8	173	0.004
08:00 - 09:00	8	173	0.001	8	173	0.012	8	173	0.013
09:00 - 10:00	8	173	0.001	8	173	0.007	8	173	0.008
10:00 - 11:00	8	173	0.003	8	173	0.002	8	173	0.005
11:00 - 12:00	8	173	0.007	8	173	0.005	8	173	0.012
12:00 - 13:00	8	173	0.004	8	173	0.004	8	173	0.008
13:00 - 14:00	8	173	0.007	8	173	0.003	8	173	0.010
14:00 - 15:00	8	173	0.003	8	173	0.003	8	173	0.006
15:00 - 16:00	8	173	0.007	8	173	0.001	8	173	0.008
16:00 - 17:00	8	173	0.004	8	173	0.001	8	173	0.005
17:00 - 18:00	8	173	0.004	8	173	0.001	8	173	0.005
18:00 - 19:00	8	173	0.006	8	173	0.000	8	173	0.006
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.047			0.043			0.090

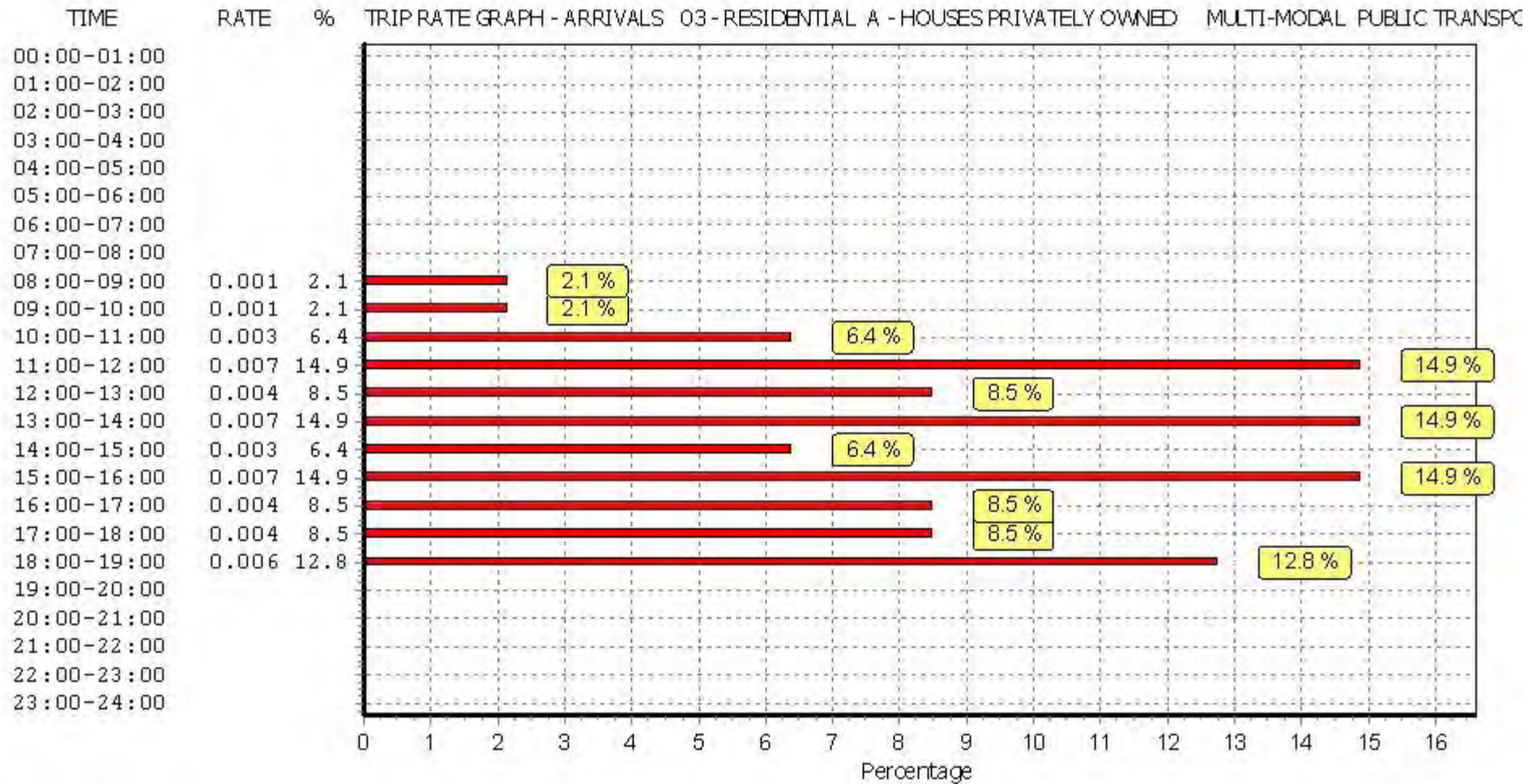
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are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

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

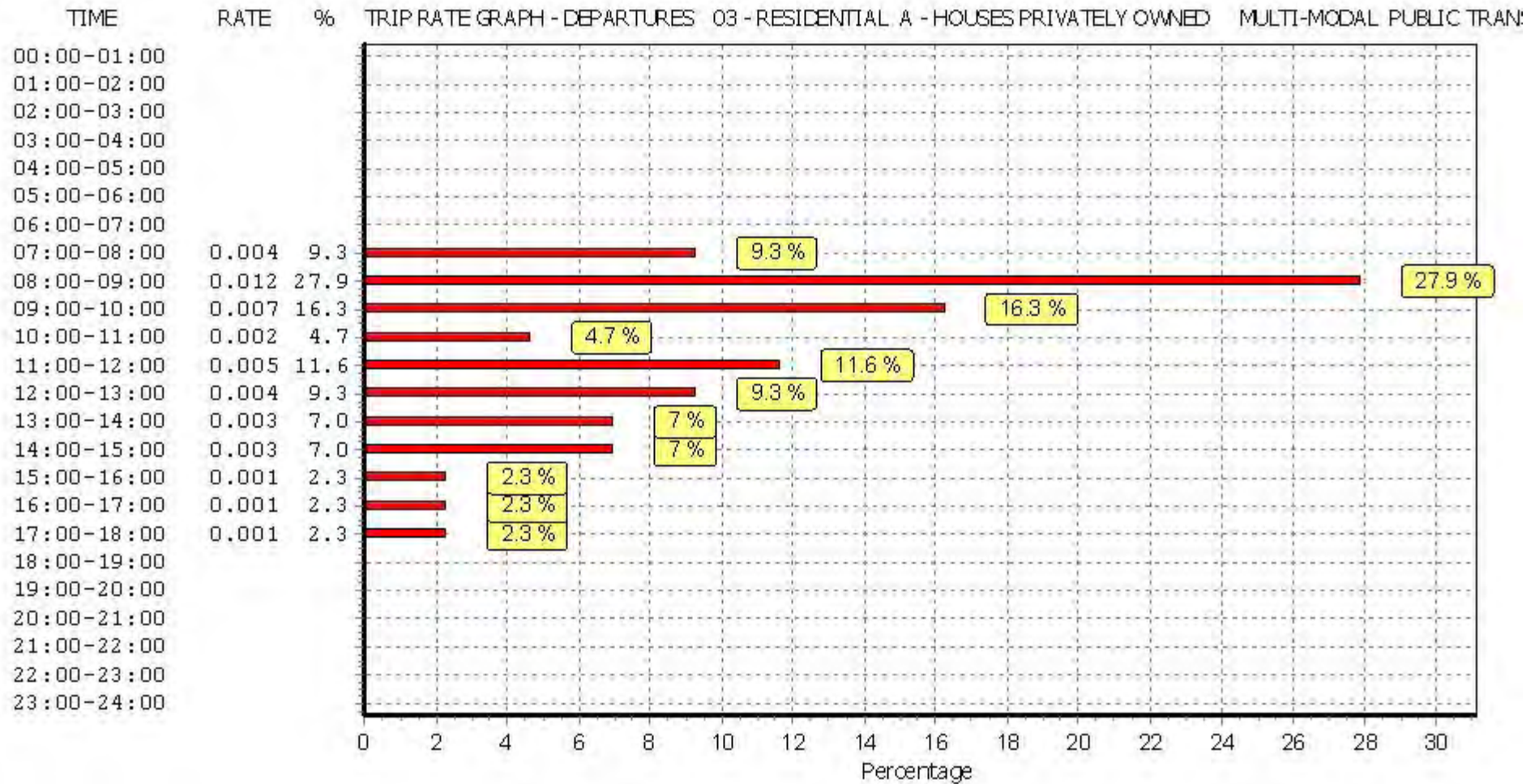
Parameter summary

Trip rate parameter range selected: 101 - 432 (units:)
 Survey date date range: 01/01/06 - 20/05/15
 Number of weekdays (Monday-Friday): 8
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 1

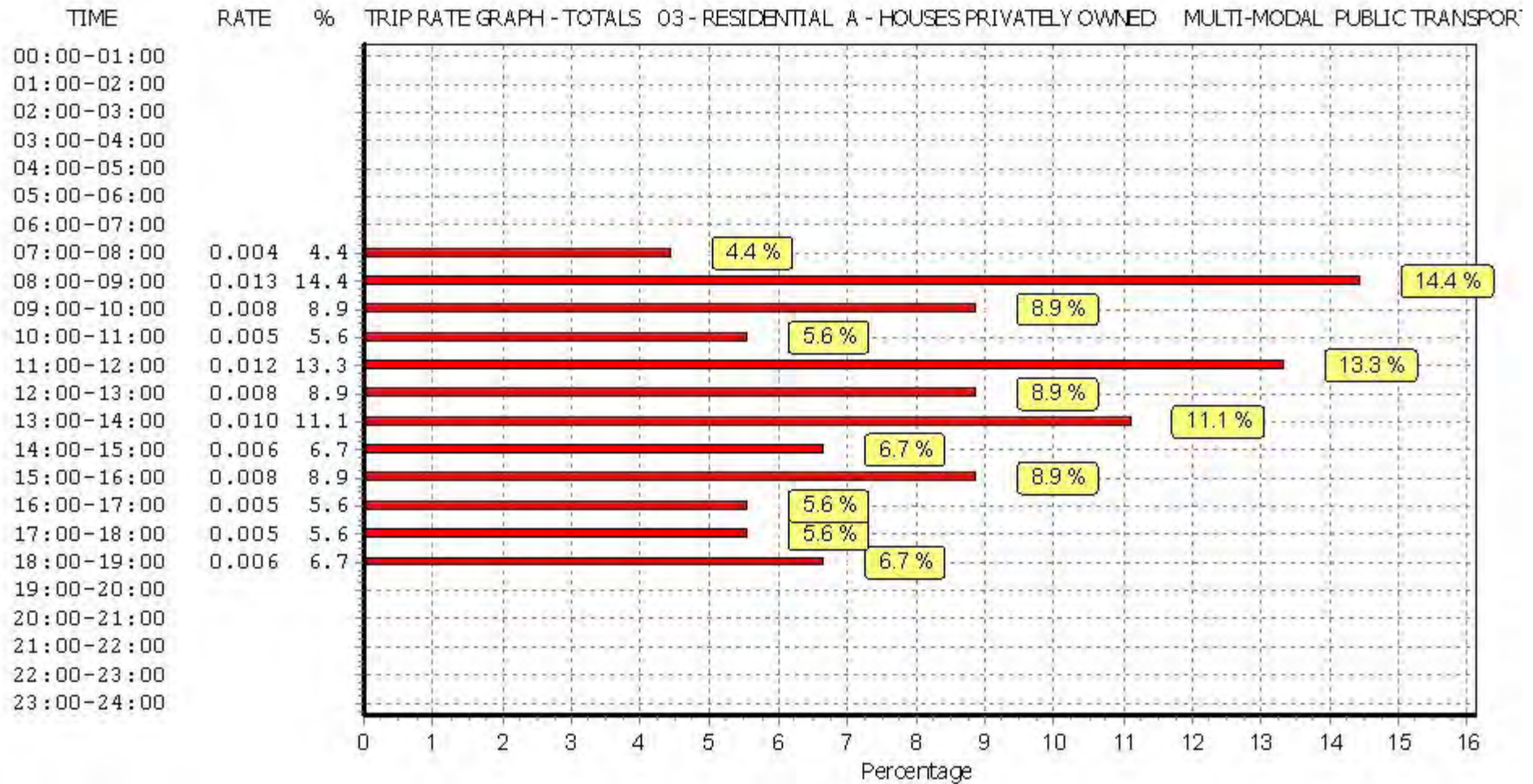
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected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



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

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	173	0.114	8	173	0.359	8	173	0.473
08:00 - 09:00	8	173	0.184	8	173	0.753	8	173	0.937
09:00 - 10:00	8	173	0.234	8	173	0.317	8	173	0.551
10:00 - 11:00	8	173	0.219	8	173	0.278	8	173	0.497
11:00 - 12:00	8	173	0.228	8	173	0.210	8	173	0.438
12:00 - 13:00	8	173	0.271	8	173	0.265	8	173	0.536
13:00 - 14:00	8	173	0.242	8	173	0.260	8	173	0.502
14:00 - 15:00	8	173	0.277	8	173	0.307	8	173	0.584
15:00 - 16:00	8	173	0.539	8	173	0.320	8	173	0.859
16:00 - 17:00	8	173	0.568	8	173	0.304	8	173	0.872
17:00 - 18:00	8	173	0.519	8	173	0.338	8	173	0.857
18:00 - 19:00	8	173	0.383	8	173	0.354	8	173	0.737
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.778			4.065			7.843

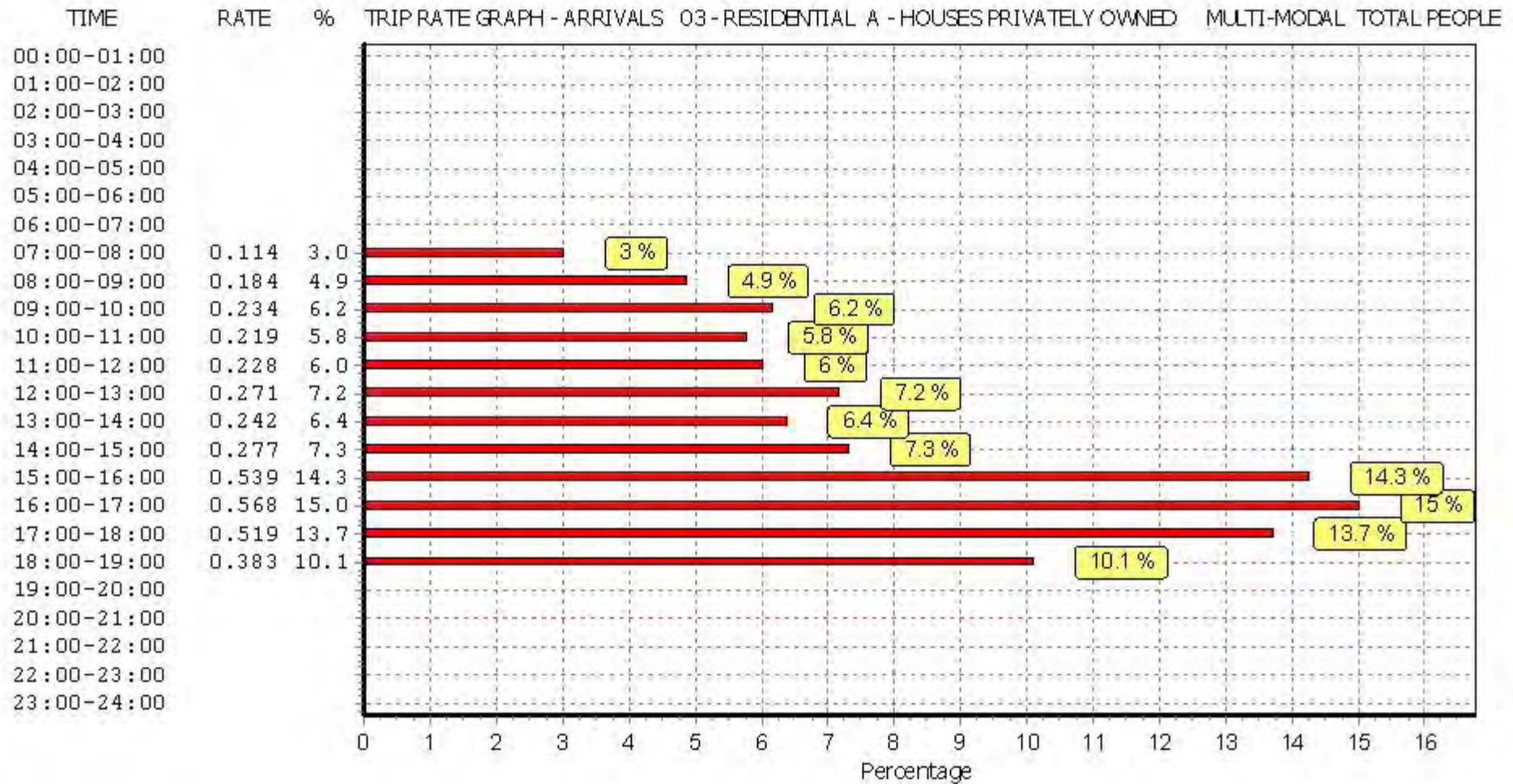
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are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

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

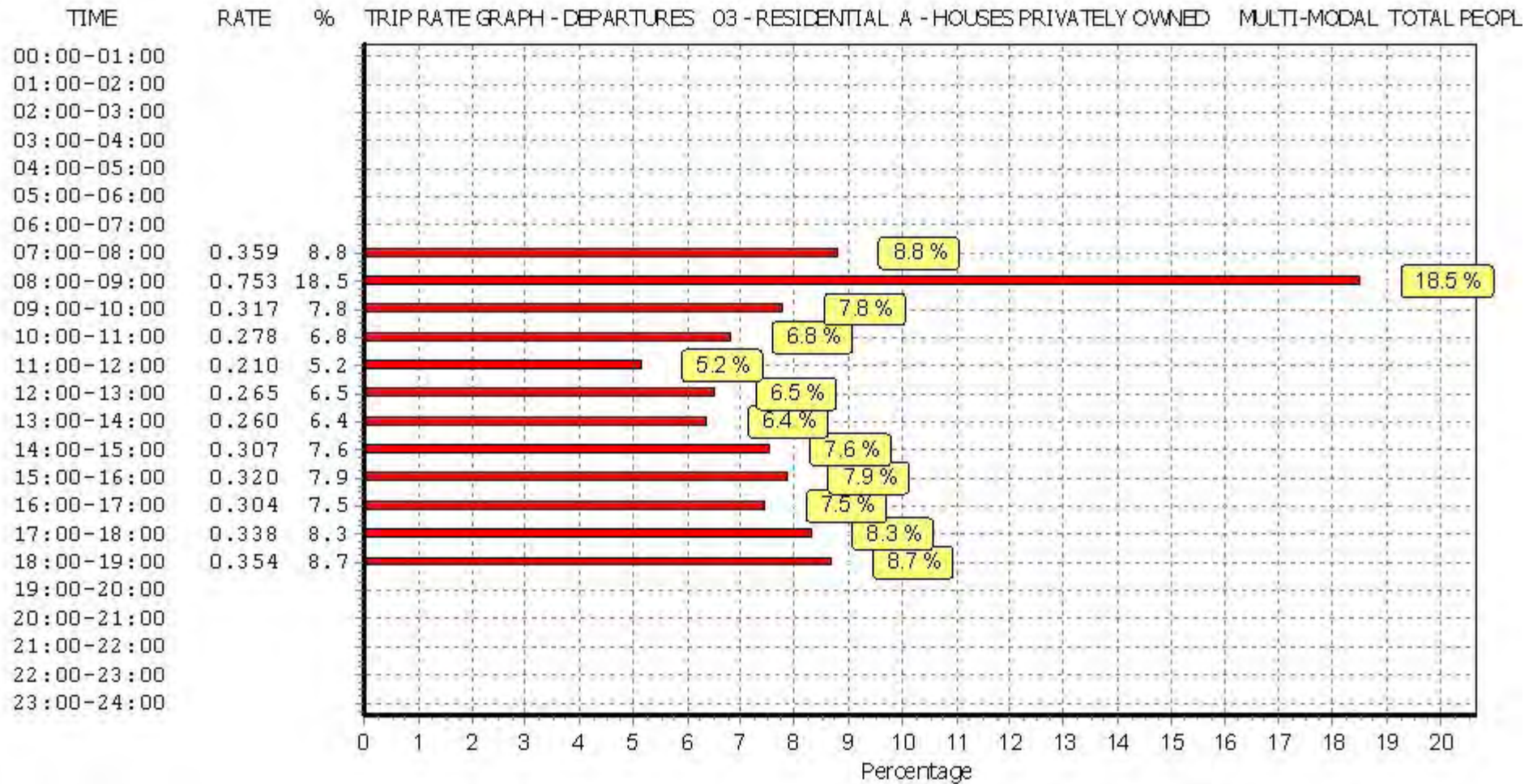
Parameter summary

Trip rate parameter range selected: 101 - 432 (units:)
 Survey date date range: 01/01/06 - 20/05/15
 Number of weekdays (Monday-Friday): 8
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 1

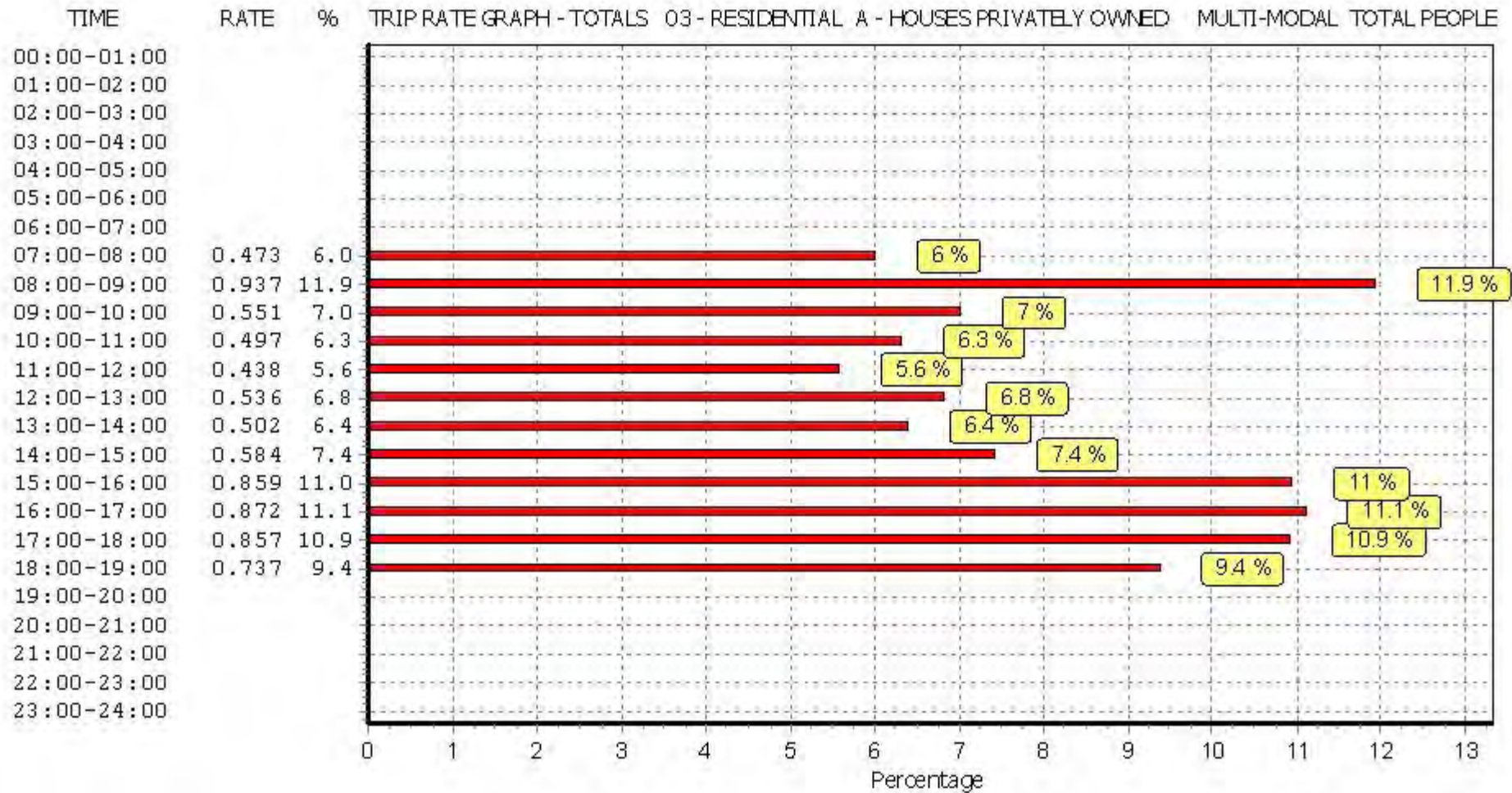
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected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

Table A.E.1 – 2031 IP SC0 Convergence Statistics

AM Peak			Inter Peak			PM Peak		
Iteration	Delta (δ)	% Flow	Iteration	Delta (δ)	% Flow	Iteration	Delta (δ)	% Flow
5	0.047	97.3	1	0.056	-			
6	0.023	98.3	2	0.00000	95.7			
7	0.011	99.6	3	0.00000	100.0			
8	0.0057	99.8	4	0.00000	100.0			
9	0.0053	100.0	5	0.00000	100.0			
10	0.0023	100.0	6	0.00000	100.0			

Table A.E.2 – 2031 IP SC1 Convergence Statistics

AM Peak			Inter Peak			PM Peak		
Iteration	Delta (δ)	% Flow	Iteration	Delta (δ)	% Flow	Iteration	Delta (δ)	% Flow
5	0.041	97.6	1	0.053	-			
6	0.023	97.6	2	0.00000	88.4			
7	0.013	99.5	3	0.00000	100.0			
8	0.0074	99.8	4	0.00000	100.0			
9	0.0036	99.8	5	0.00000	100.0			
10	0.0034	100.0	6	0.00000	100.0			

Table A.E.3 – 2031 IP SC2 Convergence Statistics

AM Peak			Inter Peak			PM Peak		
Iteration	Delta (δ)	% Flow	Iteration	Delta (δ)	% Flow	Iteration	Delta (δ)	% Flow
5	0.038	97.6	1	0.050	-			
6	0.021	97.6	2	0.00000	87.7			
7	0.012	99.7	3	0.00000	100.0			
8	0.0069	99.8	4	0.00000	100.0			
9	0.0033	99.8	5	0.00000	100.0			
10	0.0032	100.0	6	0.00000	100.0			

Table A.E.4 – 2031 IP SC3 Convergence Statistics

AM Peak			Inter Peak			PM Peak		
Iteration	Delta (δ)	% Flow	Iteration	Delta (δ)	% Flow	Iteration	Delta (δ)	% Flow
4	0.058	96.8	1	0.048	-			
5	0.026	97.6	2	0.00000	87.7			
6	0.015	98.8	3	0.00000	100.0			
7	0.0092	99.7	4	0.00000	100.0			
8	0.0063	99.9	5	0.00000	100.0			
9	0.0028	99.8	6	0.00000	100.0			

Table A.E.5– 2031 IP SC4 Convergence Statistics

AM Peak			Inter Peak			PM Peak		
Iteration	Delta (δ)	% Flow	Iteration	Delta (δ)	% Flow	Iteration	Delta (δ)	% Flow
3	0.054	96.8	1	0.046	-			
4	0.023	97.6	2	0.00000	87.0			
5	0.011	98.9	3	0.00000	100.0			
6	0.0077	99.5	4	0.00000	100.0			
7	0.0041	99.8	5	0.00000	100.0			
8	0.0043	99.8	6	0.00000	100.0			

Table A.E.6 – 2031 IP SC5 Convergence Statistics

AM Peak			Inter Peak			PM Peak		
Iteration	Delta (δ)	% Flow	Iteration	Delta (δ)	% Flow	Iteration	Delta (δ)	% Flow
5	0.022	97.2	1	0.045	-			
6	0.014	97.8	2	0.00000	86.6			
7	0.0065	99.8	3	0.00000	100.0			
8	0.0049	99.5	4	0.00000	100.0			
9	0.0041	99.8	5	0.00000	100.0			
10	0.0018	99.8	6	0.00000	100.0			