

**PROPOSED RESIDENTIAL DEVELOPMENT  
OFF GROVE ROAD, BANHAM**

**Transport Statement Rev -**

**Rev - August 2018**

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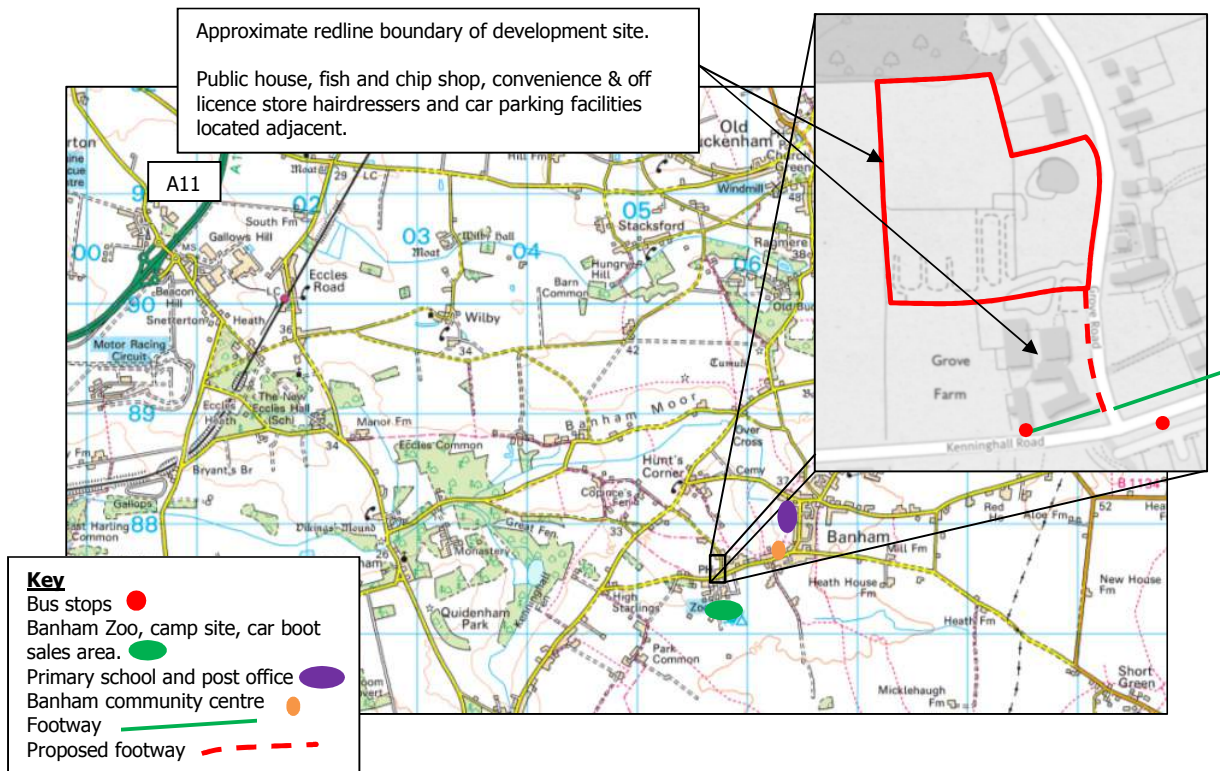
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## 1 INTRODUCTION

1.1.1 KingdomTP have been appointed by Goymour Properties Ltd to prepare a Transport Statement in support of an outline planning application for residential development located off Grove Road, Banham. The plan below details the location of the site.



1.1.2 The following google map web link will direct readers of this report to the site location.  
<https://www.google.co.uk/maps/@52.4477755,1.0266598,337m/data=!3m1!1e3>

1.1.3 It is understood that the site is being promoted for residential development as part of the Planning Authority's allocation process, SHLAA. This report has been prepared to support both the allocation process and to demonstrate the suitability of the site for residential development as part of a planning application.

1.1.4 It is proposed to build up to 50 dwellings on the site. A draft masterplan for the site has been prepared and readers of this report should refer to the masterplan submitted separately in support of the planning application.

1.1.5 This report sets out the context of the development in terms of its local environment, the access strategy, the likely generation of vehicle trips and their likely impact on the local highway network. For context the impact of the proposed development will be reviewed in relation to the Government's National Planning Policy Framework document.

## **1.2 Disclaimer**

1.2.1 KingdomTP disclaims any responsibility to the client and others in respect of any matters outside the scope of this report. This report is intended solely for the purpose of submission to the Planning Authority and the Highway Authority and may not be used for any other purpose.

1.2.2 The copyright of this report is vested in KingdomTP. The Client or his appointed representatives may copy this report for purposes in connection with the development described herein. It shall not be copied or distributed in any form by any other party or used for any other purpose without the written consent of KingdomTP.

## **2 PLANNING POLICY**

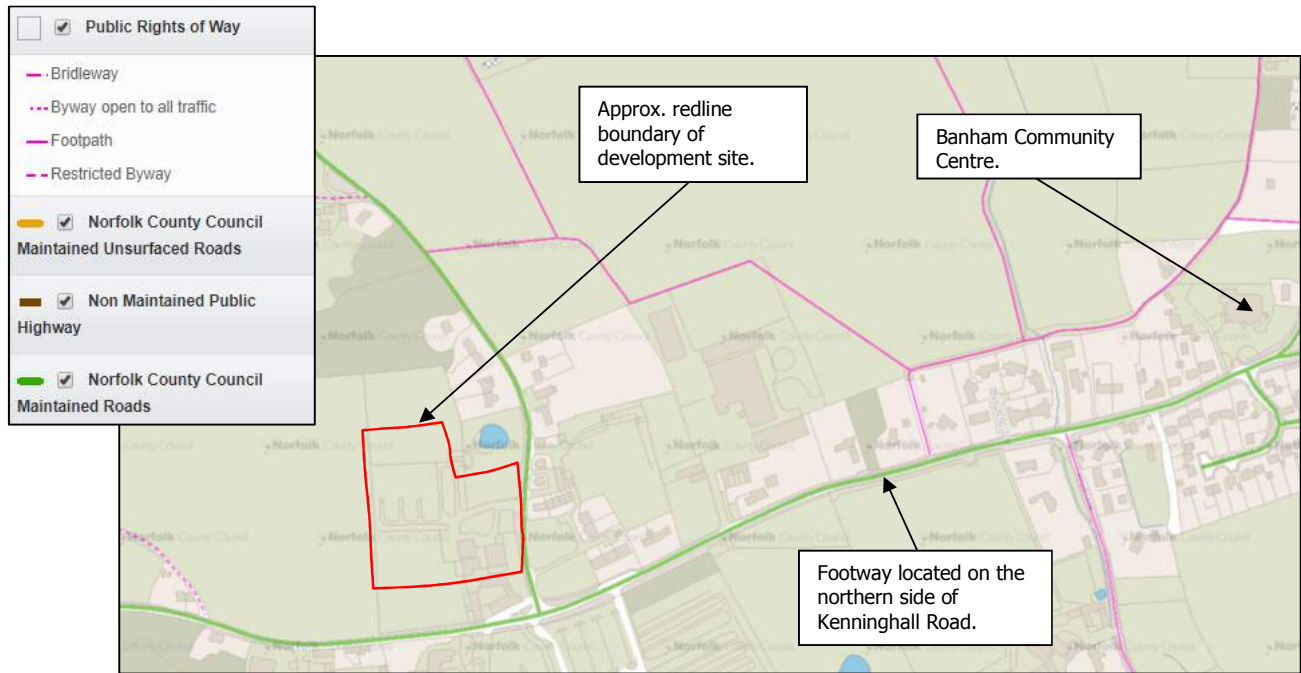
- 2.1.1 In 2012 the coalition Government reformed the planning system by replacing a plethora of Planning Policy Guidance documents to make it less complex and more accessible with the National Planning Policy Framework (NPPF). This document was updated in July 2018. The framework acts as guidance for local planning authorities and decision-takers, both in drawing up plans and making decisions about planning applications.
- 2.1.2 Although the decision for refusal was made when the previous version of the NPPF was in place the current document was being consulted upon. This notwithstanding it is considered that the key highways and transport elements between both versions of the document have not significantly changed therefore a review has been undertaken on the current NPPF guidance.
- 2.1.3 Key abstracts of the current NPPF are provided for reference below and are considered to be appropriate against which the context of the development should be assessed against.
- 2.1.4 There are three key areas for sustainable development which are as follows
- a) an economic objective – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;
  - b) a social objective – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and
  - c) an environmental objective – to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.
- 2.1.5 At the heart of the National Planning Policy Framework is a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking.
- 2.1.6 At paragraph 103 the NPPF recognises that transport solutions will vary between urban and rural areas and that this should be taken into account in both plan-making and decision-making.

- 2.1.7 When considering development proposals the NPPF states at paragraph 108 that “in assessing sites that may be allocated for:
- a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;
  - b) safe and suitable access to the site can be achieved for all users; and
  - c) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.
- 2.1.8 The NPPF goes on to state at paragraph 109 that “development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.
- 2.1.9 Within this context, the NPPF states at paragraph 110 that “applications for development should:
- a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;
  - b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;
  - c) create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;
  - d) allow for the efficient delivery of goods, and access by service and emergency vehicles; and
  - e) be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.

## **3 BRIEF DESCRIPTION OF THE SITE AND THE LOCAL AREA**

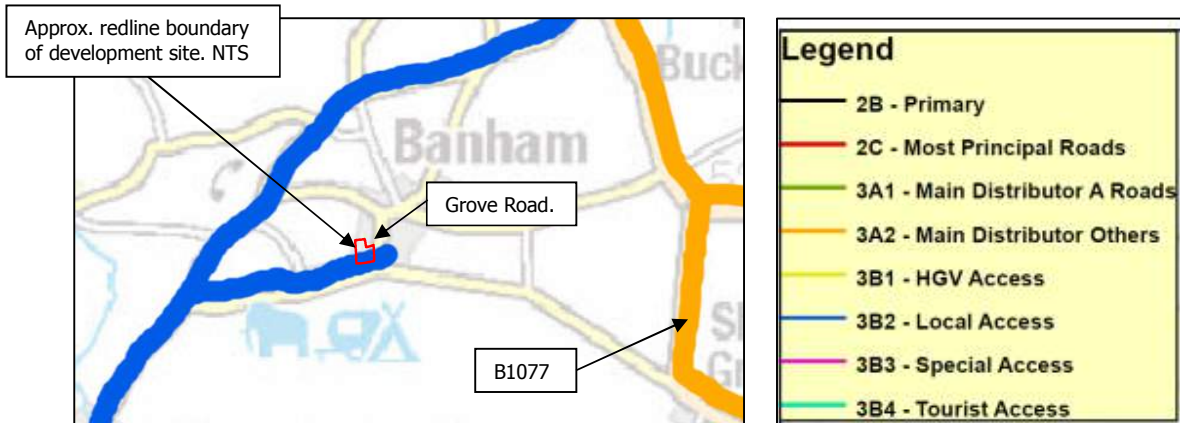
### **3.1 Site and Immediate Local Area review.**

- 3.1.1 The site is approximately 1.5ha in size and is 'L' shaped. The site is bounded to the south by an existing retail / leisure area which comprises a public house, fish and chip takeaway shop, convenience & off licence store, hairdressers and car parking facilities.
- 3.1.2 To the east the site is bounded by Grove Road and existing residential dwellings which front onto Grove Road. To the north the site is bounded by a wooded area and to the west the site is bounded by farmland.
- 3.1.3 Grove Road runs in a north south alignment and connects with Kenninghall Road to the south, which is the main route through Banham village, and the outlying rural area to the north. The site is located less than 100m walking distance from Kenninghall Road.
- 3.1.4 The site is located on the western end of Banham village in close proximity to Banham Zoo which is located on the southern side of Kenninghall Road. Within 200m walking distance of the site, located on Kenninghall Road, there are bus stops.
- 3.1.5 At present there are no footpaths on Grove Road leading to the site from Kenninghall Road; however, access is achieved via the thoroughfare of the adjacent retail area. As part of the development proposals a footway will be provided on the western side of Grove Road. This footway will connect to the existing footway provision located on the northern side of Kenninghall Road.
- 3.1.6 Footway access is available to Banham's community centre, (circa 730m walking distance), the primary school (circa 1km walking distance) and the Post Office (circa 1.2km).
- 3.1.7 According to Norfolk County Council's Definitive Map there are footpaths and restricted byways located in the vicinity of the site which can be used for leisure purposes. The plan below is an extract from Norfolk County Councils' online interactive plan.



**Plan 2: Public Rights of Way Extracted From Norfolk County Interactive Highway Boundary Plan**

3.1.8 Below is a plan detailing an extract from Norfolk County Council’s Route Hierarchy Plan. As it can be seen Kenninghall Road to the west is classified as a local access route. To the east is the B1077 which is classified as a 3A2 Main Distributor Road Other which provides access to the A11 via Old Buckenham / Attleborough to the north and A1066 via Diss located to the south.

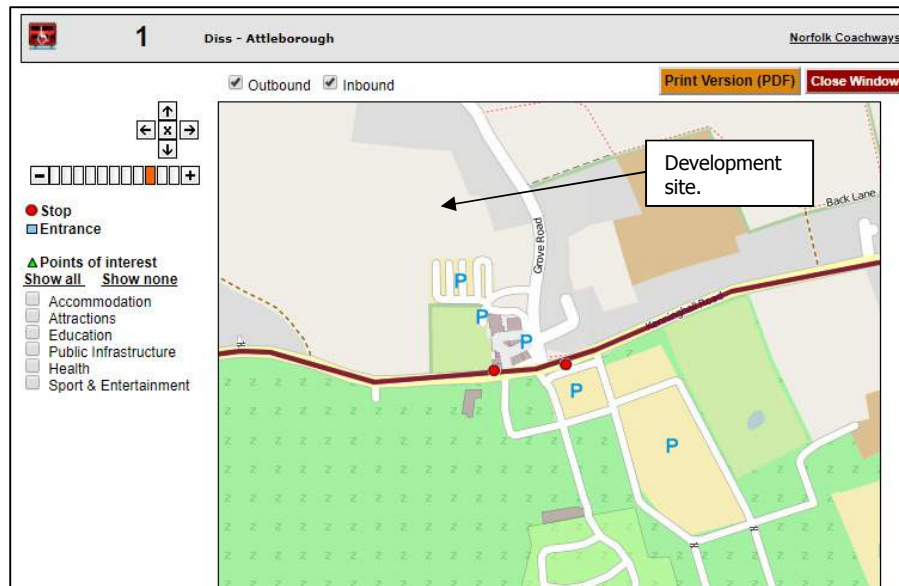


**Plan3: Extract from Norfolk county Council’s Route Hierarchy Plan**



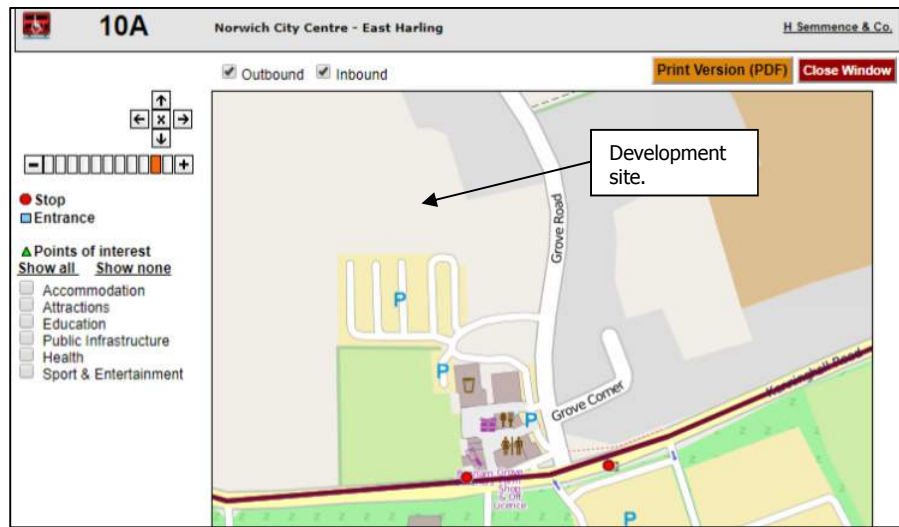
## 3.2 Bus Services

- 3.2.1 There are two bus stops on Kenninghall Road which are within 200m walking distance of the site. Bus services 1 and 10A uses these bus stops.
- 3.2.2 Bus service 1 connects the village with Diss and Attleborough. This bus service only operates on a Saturday. At 0923 hours the bus services travelling from Attleborough picks up passengers to takes them to Diss. At 1239 hours the bus service returns from Diss travelling via Banham to Attleborough. Below is the route plan of this bus service.



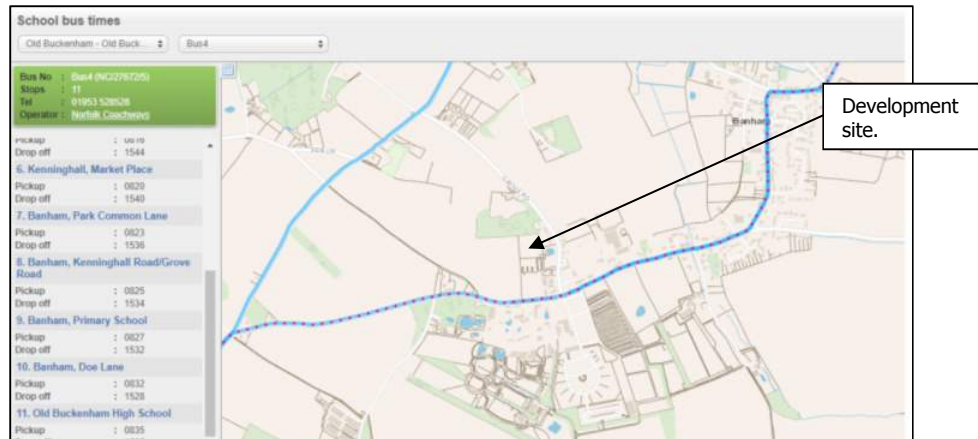
### Plan 4: Bus Service 1 Route Plan

- 3.2.3 Bus service 10A connects the village with Norwich city centre. This bus service operates Monday to Friday. At 0658 hours and 0926 hours bus services depart from East Harling. At 1415 hours, 1708 hours and 1843 hours the bus services returns to East Harling from Norwich city centre. In summary there are two departing services in the morning and three returning services in the evening peak period. Below is the route plan of this bus service.



**Plan 5: Bus Service 10A Route Plan**

3.2.4 Children attending Banham Primary School are within the catchment of Old Buckenham High School. Children from Banham attending this high school will use school bus service 4 to travel to school. Route 4 travels past the site on Kenninghall Road and stops at the existing bus tops which are within 200m walking distance of the site. Below is the route plan of this bus service.



**Plan 6: School Bus Service 4 Route Plan**

### **3.3 Railway Services**

- 3.3.1 The nearest railway station is at Attleborough located approximately 6.4 miles to the north. Attleborough is on the Cambridge, to Ely, Peterborough and Norwich line. Onward travel to London Liverpool Street can be undertaken if customers change at Cambridge. Onward travel to Great Yarmouth, Lowestoft, Cromer and Sheringham if passengers change at Norwich.
- 3.3.2 Diss Railway Station is located approximately 9 miles to the south east. Diss railway station is on the Norwich and Stowmarket to Ipswich and London line.
- 3.3.3 The Government's National Planning Policy Framework document recognises that public transport provision will change from rural to urban areas. It is considered that the level of available public transport is at an acceptable level when compared to other villages in the local area and therefore it is considered that the site is sustainable in terms of access to public transport.

### **3.4 Walking and Cycling Accessibility**

#### Walking

- 3.4.1 It is important to recognise that national Government guidance encourages accessibility to new developments by non-car travel modes. New proposals should attempt to influence the mode of travel to the development in terms of gaining a shift in modal split towards non car modes, thus assisting in meeting the aspirations of current national and local planning policy.
- 3.4.2 The accessibility of the proposed development site by the following modes of transport has, therefore, been considered:
- Accessibility on foot and cycle;
  - Accessibility by public transport.
- 3.4.3 The local area has local facilities to promote movement of pedestrians, i.e. connected footways and dropped kerb.
- 3.4.4 Experience from good practice in Travel Planning development generally suggests that pedestrians are prepared to walk up to 2kms between home and their destination, provided that accessible footway routes are identified.
- 3.4.5 The CIHT report provides guidance about journeys on foot. It does not provide a definitive view on distances, but does suggest a preferred maximum distance of 2000m for walk commuting trips this extends to cover a considerable part of the urban area.

ACCEPTABLE WALKING DISTANCES [INSTITUTE OF HIGHWAYS AND TRANSPORTATION]			
Walking Distance	Local Facilities *	District Facilities**	Other
Desirable	200m	500m	400m
Acceptable	400m	1000m	800m
Preferred Maximum	800m	2000m	1200m
* Includes food shops, public transport, primary schools, crèches, local play areas			
** Includes employment, secondary schools, health facilities, community / recreation facilities			

### Extract 1: CIHT Preferred Walking Distances

- 3.4.6 This is supported by the now superseded Planning Policy Guidance 13 and the National Travel Survey which suggests that most walking distances are within 1.6km thus accepted guidance states that walking is the most important mode of travel at the local level supporting the above statement.
- 3.4.7 The Department for Transport identifies that 78% of walk trips are less than 1km in length, (DfT Transport Statistics GB). Importantly, the 2km walk catchment extends to cover the centre of the village.
- 3.4.8 There are significant opportunities for travel on foot. Clearly, there is also potential for walking to form part of a longer journey for residents via the bus services.
- 3.4.9 From Plan 1 and the section above there are opportunities for residents to access a range of shopping, leisure, and service facilities on foot. Given this it is concluded that the proposed residential site can be considered as being accessible on foot.
- 3.4.10 Ideally bus stops should be within 400m walking distance of the site. The local bus routes and bus stops are within the recommended distance of 400m.

### Cycling

- 3.4.11 Historic guidance and perceived good practice suggests cycling also has potential to substitute for short car trips, particularly those less than 5km and to form part of a longer journey by public transport. The CIHT guidance 'Cycle Friendly Infrastructure' (2004) states that: "Most journeys are short. Three quarters of journeys by all modes are less than five miles (8km) and half under two miles (3.2km) (DOT 1993, table 2a). These are distances that can be cycled comfortably by a reasonably fit person." (para 2.3).

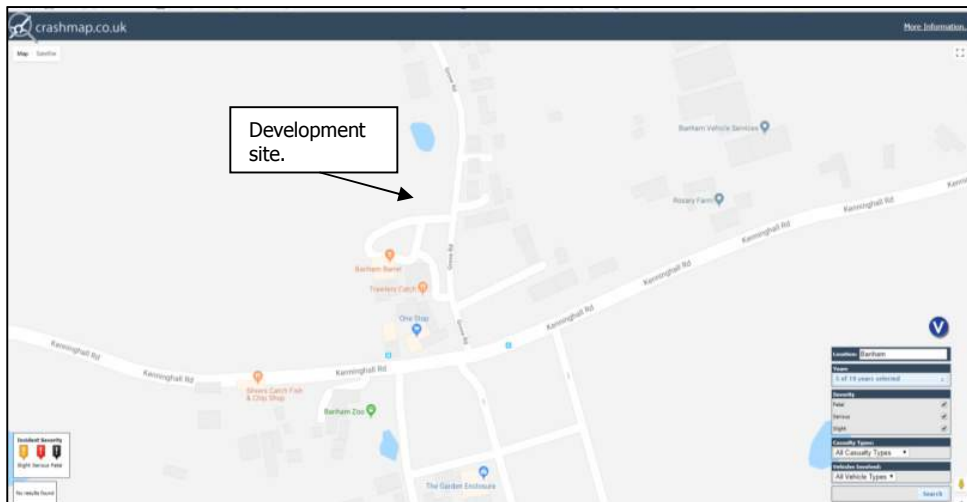
3.4.12 The National Travel Survey NTS (undertaken annually by the DfT) has identified that bicycle use depends on topography, but a mean distance of between 5 – 10 km (3 to 6 miles)

3.4.13 The closest large settlement area with services, facilities and employment opportunities is Attleborough which is located approximately 6.4 miles to the north. Cycling to this destination is on the upper threshold as described above.

### 3.5 Accident Statistics Review

3.5.1 Using the website known as crashmap.co.uk a review of accident statistics for the local area has been undertaken. Crashmap uses data collected by the police about road traffic crashes where someone is injured. The data is approved by the National Statistics Authority and reported on by the Department for Transport. Therefore it is considered reasonable to use this data to determine if there is a propensity for accidents to occur in the local area.

3.5.2 It is usually the case that road safety reviews assess the accident records for a particular area over a three year period. The plan below has been extracted from the website called crashmap.co.uk and details the number of accidents over a five year period.



#### Plan 7: Crashmap.co.uk View

3.5.3 In the last five years there have not been any accidents in the region of the site or on Kenninghall Road.

## **4 PROPOSED DEVELOPMENT, ACCESS STRATEGY & IMPACT ASSESSMENT**

### **4.1 Vehicle Access Strategy and Visibility Splays**

- 4.1.1 Appendix B contains the proposed access strategy for the site based on a topographical survey.
- 4.1.2 It is proposed to create 5.8m wide access which will serve the residential element of the site and also as the rear access to the car park. Within the site the access road will reduce to 4.8m to serve the residential site.
- 4.1.3 Two 1.8m wide footways either side of the access road will be provided. The footway will continue from the site access junction on the western side of Grove Road to the junction with Kenninghall Road. The existing access point to the retail area adjacent the development site to the south will be retained albeit converted into over footway access points.
- 4.1.4 In addition it is understood that the HA, as part of the SHLAA process, stated that the site could not be adequately served given the width of Grove Road, i.e. currently 4.3m. The client controls the land on both sides of Grove Road therefore it is proposed to widen it to 5.5m which is considered wide enough to facilitate two way vehicle movement.
- 4.1.5 The proposed footway link will connect with the existing footway located on the northern side of Kenninghall Road.
- 4.1.6 Post planning approval a detailed design of the access strategy will be prepared on a topographical survey for submission to the Highway Authority for approval.

### **4.2 Trip Generation and Impact Assessment**

- 4.2.1 TRICS is an industry standard database which allows a trip rate for various land uses to be defined for a proposed development taking into account the site characteristics in terms of location and population nearby for example.
- 4.2.2 The table below summarises the derived residential trip rates and the corresponding vehicle trips that would be generated by 50 dwellings in the traditional weekday peak periods. Appendix C contains a TRICS output for the proposed residential dwellings.

Time Period	TRICS Residential Trip Rate		Predicted Vehicle Trips Associated with 50 Residential Dwellings	
	Arr	Dep	Arr	Dep
AM	0.115	0.402	6	20
PM	0.381	0.197	19	10

**Table 1: TRICS Residential Trip Rate and Corresponding Vehicle Trips**

4.2.3 It is predicted that in any peak hour period the site would not generate more than 30 two way vehicle movements. It is considered that the impact of the development on the local highway network will be transient in nature and will not be materially noticeable.

## **5 CONCLUSIONS**

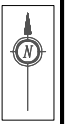
- 5.1.1 KingdomTP have been appointed by Goymour Properties Ltd to prepare a Transport Statement in support of an outline planning application for residential development for up to 50 dwellings located off Grove Road, Banham.
- 5.1.2 An access strategy has been developed for the site which accords with the Highway Authorities design guidelines. Furthermore a footway link will be provided from the site access to the existing footway infrastructure on Kenninghall Road. This link, in part, will allow persons living on site to walk to the nearby services and facilities, such as Banham Primary School, which are within an easy and acceptable walking distance from the site.
- 5.1.3 In addition Grove Road will be widened to 5.5m to facilitate two way vehicle access to site thereby addressing a criticism raised by the Highway Authority as part of the SHLAA process.
- 5.1.4 It can be concluded that access to the local bus stops and bus services is also achievable and therefore the site is sustainable by public transport, albeit as considered reasonable by the National Planning Policy Framework document.
- 5.1.5 Given that a viable safe access strategy for pedestrians and vehicles is achievable and that the site is sustainable in terms of access to local services, facilities and public transport it is considered that there are no Highways or Transportation reasons why the proposed development cannot be supported by the Highway Authority and Planning Authority.

**Report Prepared by**  
**Tony Doyle BEng (Hons), MSc MCIHT, TPS**  
**Report Dated 20/08/18**



## APPENDICES

AppendixA  
Access Strategy



Approximate site boundary.

Development site for upto 50 dwellings.

Internal layout of residential development will make existing access to informal car park area redundant.

Proposed 4.8m wide access to public house car park. A 0.5m margin to be provided adjacent building and 1.8m wide footway on northern side of access.

Existing access to be widened to 4.8m from 3.5m

Existing access to be widened to 5.8m with 10.5m radii kerbs to serve both the residential development and the public house.

Minimum visibility splays of 2.4m x 43m to be provided.

Existing unkerbed access edge to be retained.

Proposed 1.8m wide footway.

Proposed widening of Grove Road to a minimum of 5.5m to serve site.

Land within the control of the client.

Existing private drive access.

Existing two way access to be converted to over footway type.

Existing visibility splays of circa 2.4m x 8m in both directions to be improved to 2.4m x 43m looking right and 2.4m x to adjacent priority T junction looking left.

Approximate location of bus stop.

Existing access to be signed entry only.

Approximate location of bus stop.

Kenninghall Road - 30mph

Grove Road - 30mph

Based on Topographic survey data. Where applicable (OS licence number WL1005153).

B	Drive Road widened to 5.8m	TD	20/07/18	CC
A	Visibility splays added and note changes	TD	19/04/18	CC
Rev	Description	Drawn	Date	Checked

**KingdomTP**

Client: **Goymour Properties**

Project: **Proposed Residential Site Off Grove Road, Banham**

Drawing Title: **Access Strategy**

Southon House, Lopham Road, East Woking, Norfolk NG18 2PL  
mail@kingdomtp.co.uk  
01485 20997

Drawn	Checked by	Date
TD	CC	27/02/18
Scale	Drawing Number	Revision
Various	J03191/15/001	B

Appendix B  
TRICS Output

Calculation Reference: AUDIT-550501-160407-0449

## TRIP RATE CALCULATION SELECTION PARAMETERS:

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

**Selected regions and areas:**

03	SOUTH WEST	
	WL WILTSHIRE	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	1 days
	SF SUFFOLK	2 days
05	EAST MIDLANDS	
	LN LINCOLNSHIRE	1 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	2 days
	WO WORCESTERSHIRE	3 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NE NORTH EAST LINCOLNSHIRE	1 days
	NY NORTH YORKSHIRE	3 days
08	NORTH WEST	
	CH CHESHIRE	2 days
	LC LANCASHIRE	1 days
09	NORTH	
	CB CUMBRIA	1 days
	TW TYNE & WEAR	1 days
11	SCOTLAND	
	EA EAST AYRSHIRE	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: 9 to 792 (units: )  
 Range Selected by User: 5 to 200 (units: )

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/00 to 30/09/15

***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	7 days
Tuesday	8 days
Wednesday	2 days
Thursday	3 days
Friday	2 days

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

**Selected survey types:**

Manual count	22 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)	6
Edge of Town	16

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

**Selected Location Sub Categories:**

Residential Zone	16
Out of Town	1
No Sub Category	5

***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	21 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@.***

Filtering Stage 3 selection (Cont.):

**Population within 1 mile:**

1,001 to 5,000	2 days
5,001 to 10,000	8 days
10,001 to 15,000	12 days

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

**Population within 5 miles:**

50,001 to 75,000	6 days
75,001 to 100,000	7 days
100,001 to 125,000	4 days
125,001 to 250,000	5 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	10 days
1.1 to 1.5	12 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:**

Not Known	2 days
No	20 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	CA-03-A-04	DETACHED		CAMBRIDGESHIRE
	THORPE PARK ROAD PETERBOROUGH Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 9			
		<b>Survey date: TUESDAY</b>	<b>18/10/11</b>	<b>Survey Type: MANUAL</b>
2	CB-03-A-02	SEMI DETACHED		CUMBRIA
	HAWKSHEAD AVENUE  WORKINGTON Edge of Town Residential Zone Total Number of dwellings: 40			
		<b>Survey date: MONDAY</b>	<b>20/06/05</b>	<b>Survey Type: MANUAL</b>
3	CH-03-A-02	HOUSES/FLATS		CHESHIRE
	SYDNEY ROAD  CREWE Edge of Town Residential Zone Total Number of dwellings: 174			
		<b>Survey date: TUESDAY</b>	<b>14/10/08</b>	<b>Survey Type: MANUAL</b>
4	CH-03-A-05	DETACHED		CHESHIRE
	SYDNEY ROAD SYDNEY CREWE Edge of Town Residential Zone Total Number of dwellings: 17			
		<b>Survey date: TUESDAY</b>	<b>14/10/08</b>	<b>Survey Type: MANUAL</b>
5	EA-03-A-01	DETACHED		EAST AYRSHIRE
	TALISKER AVENUE  KILMARNOCK Edge of Town Residential Zone Total Number of dwellings: 39			
		<b>Survey date: THURSDAY</b>	<b>05/06/08</b>	<b>Survey Type: MANUAL</b>
6	LC-03-A-22	BUNGALOWS		LANCASHIRE
	CLIFTON DRIVE NORTH  BLACKPOOL Edge of Town Residential Zone Total Number of dwellings: 98			
		<b>Survey date: TUESDAY</b>	<b>18/10/05</b>	<b>Survey Type: MANUAL</b>
7	LN-03-A-03	SEMI DETACHED		LINCOLNSHIRE
	ROOKERY LANE BOULTHAM LINCOLN Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 22			
		<b>Survey date: TUESDAY</b>	<b>18/09/12</b>	<b>Survey Type: MANUAL</b>



**LIST OF SITES relevant to selection parameters (Cont.)**

8	NE-03-A-02 HANOVER WALK	SEMI DETACHED & DETACHED		NORTH EAST LINCOLNSHIRE
	SCUNTHORPE Edge of Town No Sub Category			
	Total Number of dwellings:	432		
	<b>Survey date: MONDAY</b>	<b>12/05/14</b>		<b>Survey Type: MANUAL</b>
9	NF-03-A-01 YARMOUTH ROAD	SEMI DET. & BUNGALOWS		NORFOLK
	CAISTER-ON-SEA Suburban Area (PPS6 Out of Centre) Residential Zone			
	Total Number of dwellings:	27		
	<b>Survey date: TUESDAY</b>	<b>16/10/12</b>		<b>Survey Type: MANUAL</b>
10	NY-03-A-08 NICHOLAS STREET	TERRACED HOUSES		NORTH YORKSHIRE
	YORK Suburban Area (PPS6 Out of Centre) Residential Zone			
	Total Number of dwellings:	21		
	<b>Survey date: MONDAY</b>	<b>16/09/13</b>		<b>Survey Type: MANUAL</b>
11	NY-03-A-09 GRAMMAR SCHOOL LANE	MIXED HOUSING		NORTH YORKSHIRE
	NORTHALLERTON Suburban Area (PPS6 Out of Centre) Residential Zone			
	Total Number of dwellings:	52		
	<b>Survey date: MONDAY</b>	<b>16/09/13</b>		<b>Survey Type: MANUAL</b>
12	NY-03-A-10 BOROUGHBRIDGE ROAD	HOUSES AND FLATS		NORTH YORKSHIRE
	RIPON Edge of Town No Sub Category			
	Total Number of dwellings:	71		
	<b>Survey date: TUESDAY</b>	<b>17/09/13</b>		<b>Survey Type: MANUAL</b>
13	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		
	<b>Survey date: MONDAY</b>	<b>15/05/06</b>		<b>Survey Type: MANUAL</b>
14	SF-03-A-05 VALE LANE	DETACHED HOUSES		SUFFOLK
	BURY ST EDMUNDS Edge of Town Residential Zone			
	Total Number of dwellings:	18		
	<b>Survey date: WEDNESDAY</b>	<b>09/09/15</b>		<b>Survey Type: MANUAL</b>

**LIST OF SITES relevant to selection parameters (Cont.)**

15	SH-03-A-03 SOMERBY DRIVE BICTON HEATH SHREWSBURY Edge of Town No Sub Category Total Number of dwellings: <b>Survey date: FRIDAY</b>	DETACHED      10 <b>26/06/09</b>	SHROPSHIRE      <b>Survey Type: MANUAL</b>
16	SH-03-A-06 ELLESMERE ROAD  SHREWSBURY Edge of Town Residential Zone Total Number of dwellings: <b>Survey date: THURSDAY</b>	BUNGALOWS      16 <b>22/05/14</b>	SHROPSHIRE      <b>Survey Type: MANUAL</b>
17	SR-03-A-01 BENVIEW  STIRLING Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: <b>Survey date: MONDAY</b>	DETACHED      115 <b>23/04/07</b>	STIRLING      <b>Survey Type: MANUAL</b>
18	TW-03-A-01 LEECHMERE ROAD HILLVIEW SUNDERLAND Edge of Town Residential Zone Total Number of dwellings: <b>Survey date: WEDNESDAY</b>	SEMI DETACHED      81 <b>18/09/02</b>	TYNE & WEAR      <b>Survey Type: MANUAL</b>
19	WL-03-A-01 MAPLE DRIVE  WOOTTON BASSETT Edge of Town Residential Zone Total Number of dwellings: <b>Survey date: MONDAY</b>	SEMI D./TERRACED W. BASSETT      99 <b>02/10/06</b>	WILTSHIRE      <b>Survey Type: MANUAL</b>
20	WO-03-A-02 MEADOWHILL ROAD  REDDITCH Edge of Town No Sub Category Total Number of dwellings: <b>Survey date: TUESDAY</b>	SEMI DETACHED      48 <b>02/05/06</b>	WORCESTERSHIRE      <b>Survey Type: MANUAL</b>
21	WO-03-A-04 MALVERN ROAD  WORCESTER Edge of Town Residential Zone Total Number of dwellings: <b>Survey date: FRIDAY</b>	MIXED HOUSES      792 <b>24/05/02</b>	WORCESTERSHIRE      <b>Survey Type: MANUAL</b>

**LIST OF SITES relevant to selection parameters (Cont.)**

22	WO-03-A-06	DET./TERRACED	WORCESTERSHIRE
	ST GODWALDS ROAD		
	ASTON FIELDS		
	BROMSGROVE		
	Edge of Town		
	No Sub Category		
	Total Number of dwellings:	232	
	<b>Survey date: THURSDAY</b>	<b>30/06/05</b>	<b>Survey Type: MANUAL</b>

***This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.***

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

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

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	22	114	0.064	22	114	0.248	22	114	0.312
08:00 - 09:00	22	114	0.115	22	114	0.402	22	114	0.517
09:00 - 10:00	22	114	0.153	22	114	0.190	22	114	0.343
10:00 - 11:00	22	114	0.141	22	114	0.166	22	114	0.307
11:00 - 12:00	22	114	0.163	22	114	0.160	22	114	0.323
12:00 - 13:00	22	114	0.193	22	114	0.165	22	114	0.358
13:00 - 14:00	22	114	0.170	22	114	0.170	22	114	0.340
14:00 - 15:00	22	114	0.191	22	114	0.199	22	114	0.390
15:00 - 16:00	22	114	0.273	22	114	0.208	22	114	0.481
16:00 - 17:00	22	114	0.315	22	114	0.192	22	114	0.507
17:00 - 18:00	22	114	0.381	22	114	0.197	22	114	0.578
18:00 - 19:00	22	114	0.270	22	114	0.206	22	114	0.476
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.429			2.503			4.932

**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.**

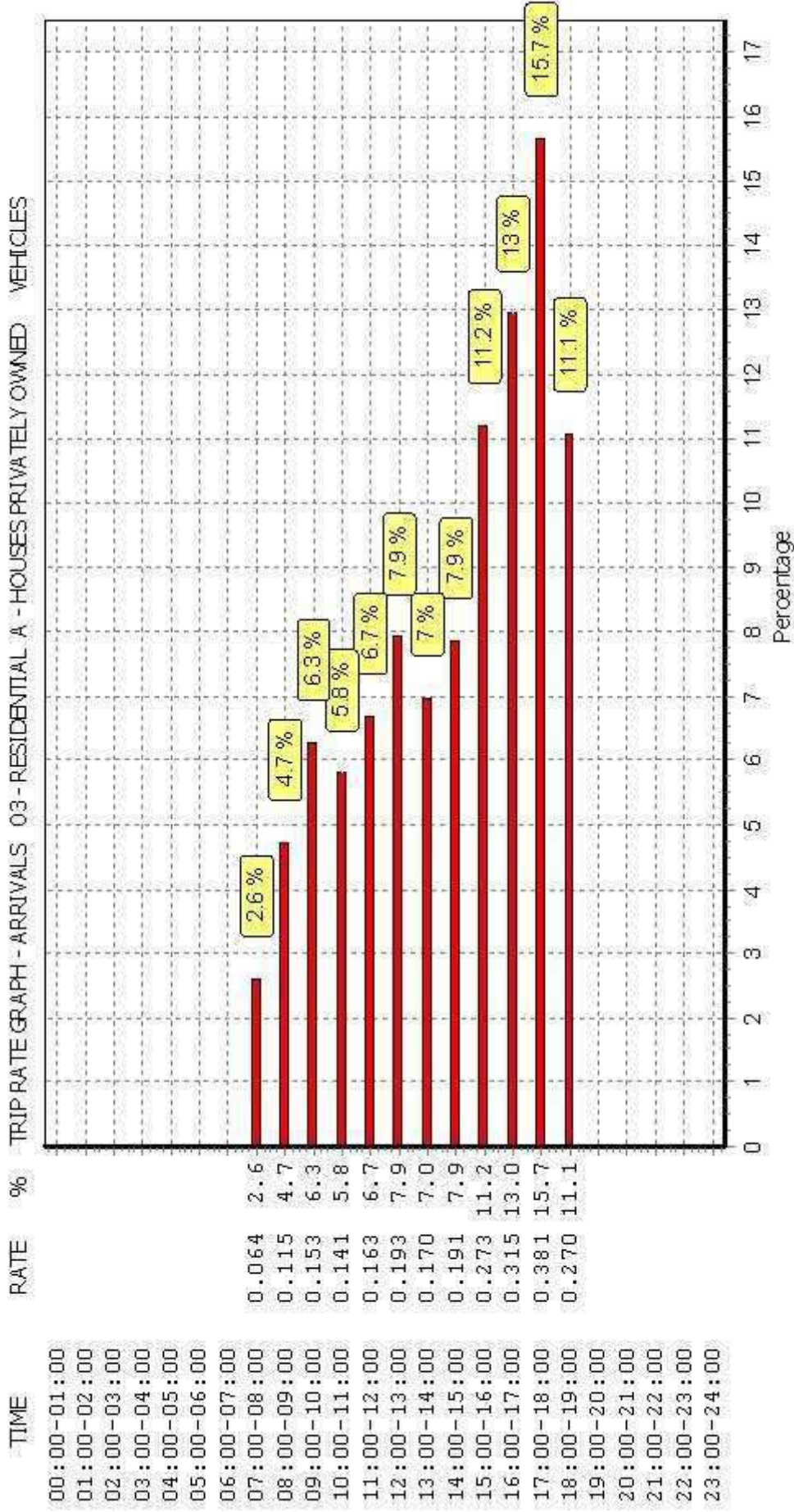
#### Parameter summary

Trip rate parameter range selected: 9 - 792 (units: )  
 Survey date date range: 01/01/00 - 30/09/15  
 Number of weekdays (Monday-Friday): 22  
 Number of Saturdays: 0  
 Number of Sundays: 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.**

Tony Doyle KTP

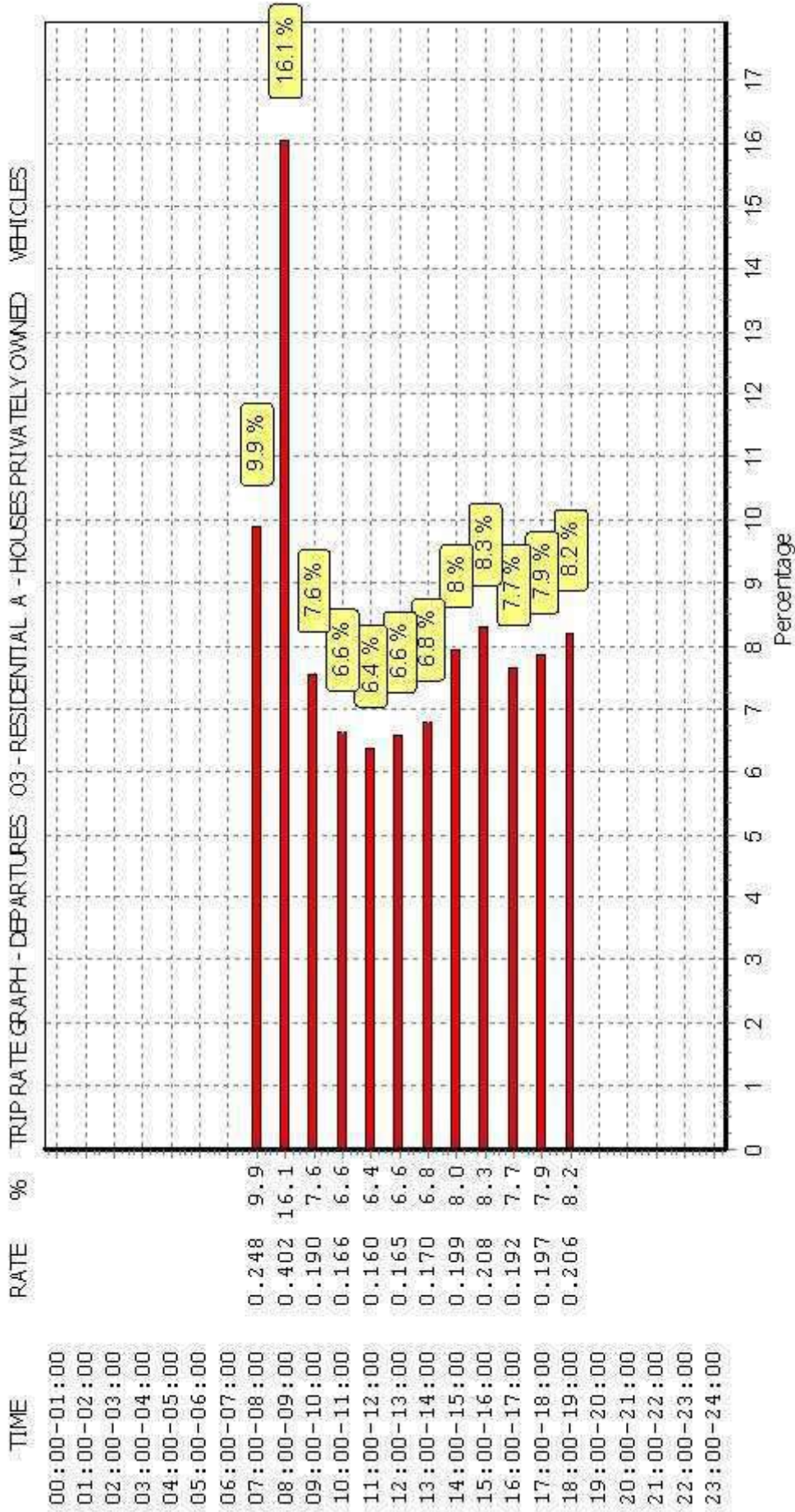
Licence No: 550501



*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.*

Tony Doyle KTP

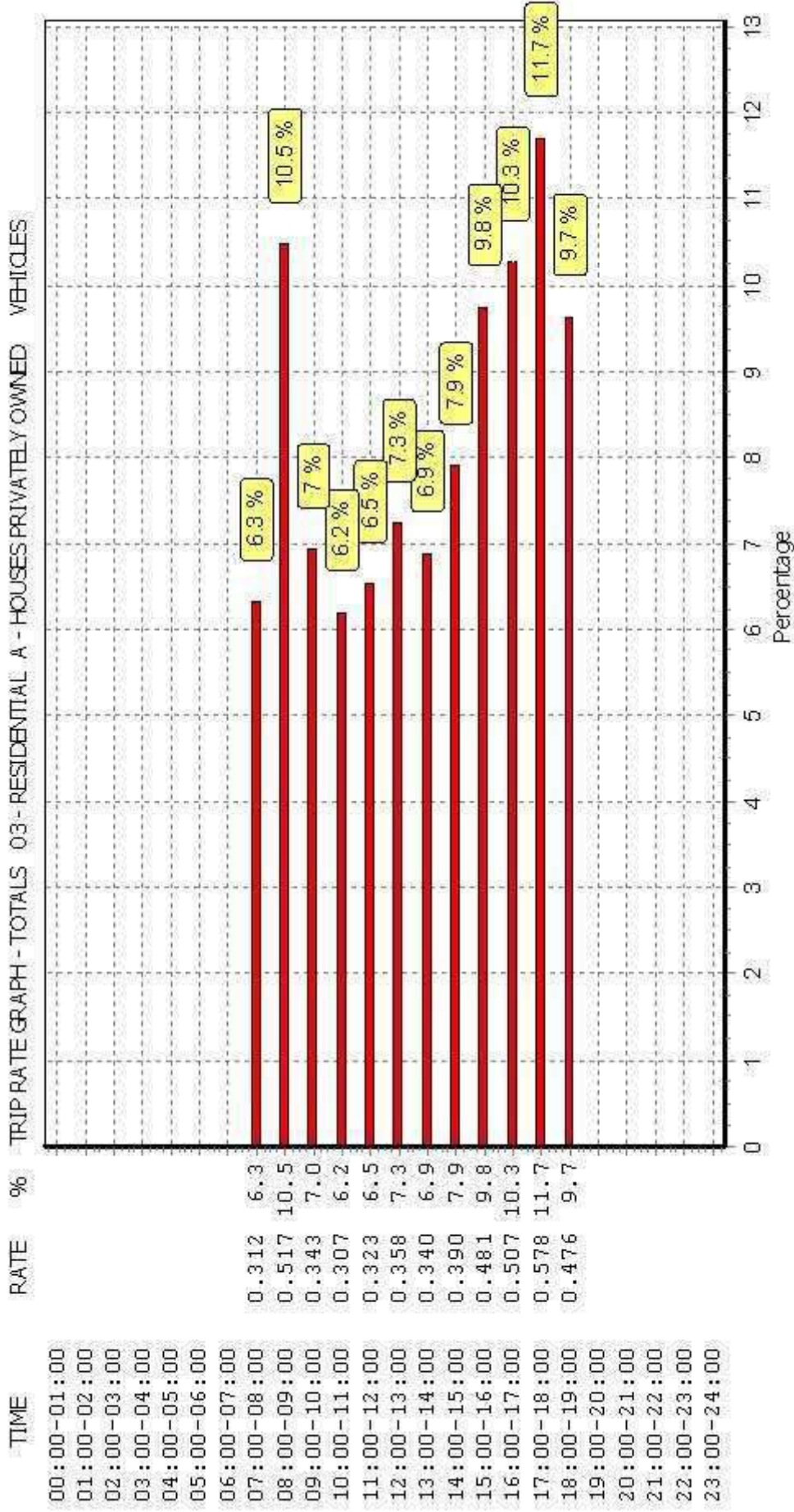
Licence No: 550501



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Tony Doyle KTP

Licence No: 550501



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

OGVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

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	22	114	0.004	22	114	0.003	22	114	0.007
08:00 - 09:00	22	114	0.002	22	114	0.001	22	114	0.003
09:00 - 10:00	22	114	0.004	22	114	0.002	22	114	0.006
10:00 - 11:00	22	114	0.003	22	114	0.005	22	114	0.008
11:00 - 12:00	22	114	0.002	22	114	0.001	22	114	0.003
12:00 - 13:00	22	114	0.004	22	114	0.005	22	114	0.009
13:00 - 14:00	22	114	0.001	22	114	0.002	22	114	0.003
14:00 - 15:00	22	114	0.002	22	114	0.002	22	114	0.004
15:00 - 16:00	22	114	0.001	22	114	0.001	22	114	0.002
16:00 - 17:00	22	114	0.002	22	114	0.002	22	114	0.004
17:00 - 18:00	22	114	0.002	22	114	0.001	22	114	0.003
18:00 - 19:00	22	114	0.001	22	114	0.001	22	114	0.002
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.028			0.026			0.054

**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

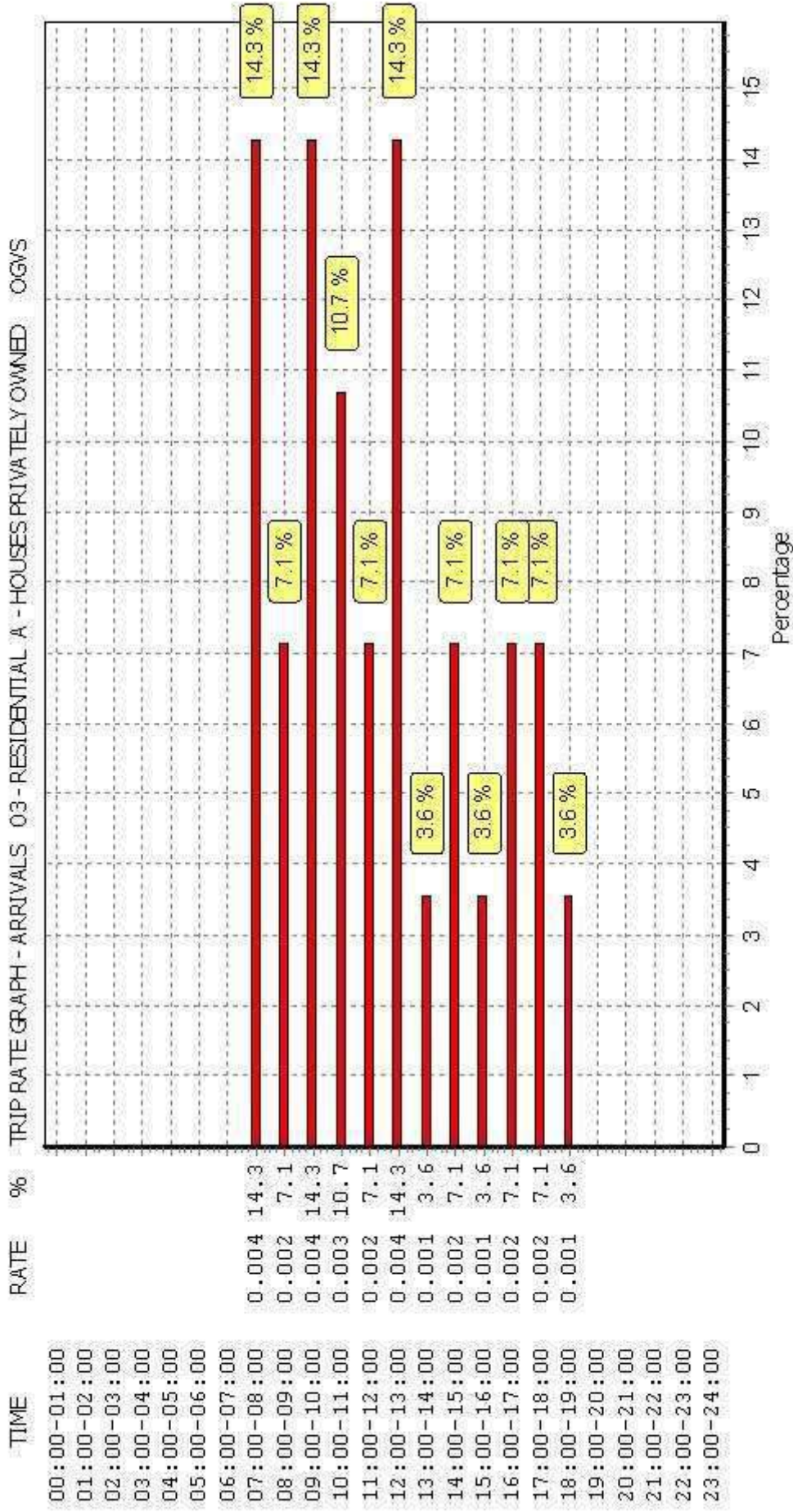
Trip rate parameter range selected: 9 - 792 (units: )  
 Survey date date range: 01/01/00 - 30/09/15  
 Number of weekdays (Monday-Friday): 22  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 1

**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.**



Tony Doyle KTP

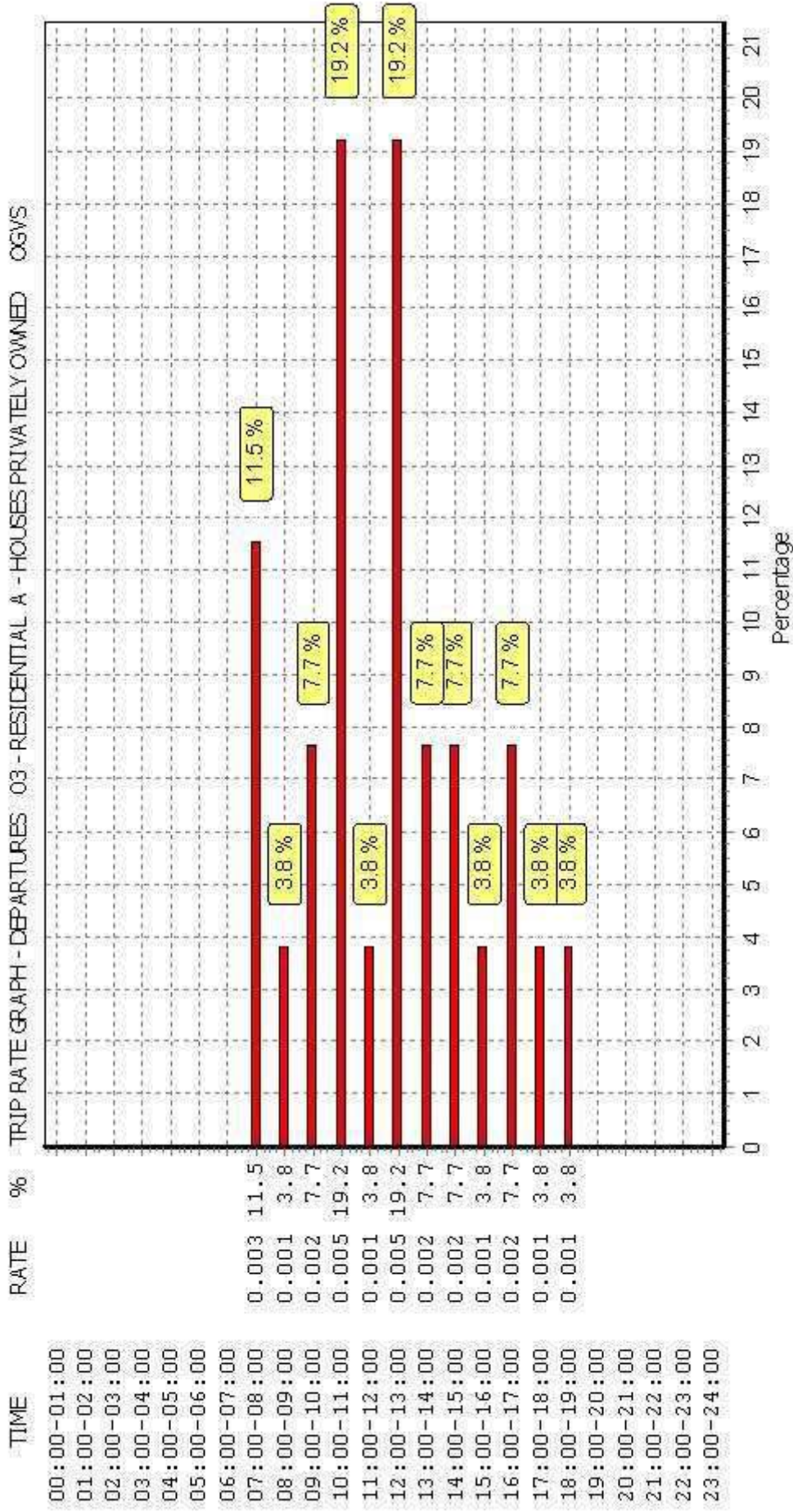
Licence No: 550501



*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.*

Tony Doyle KTP

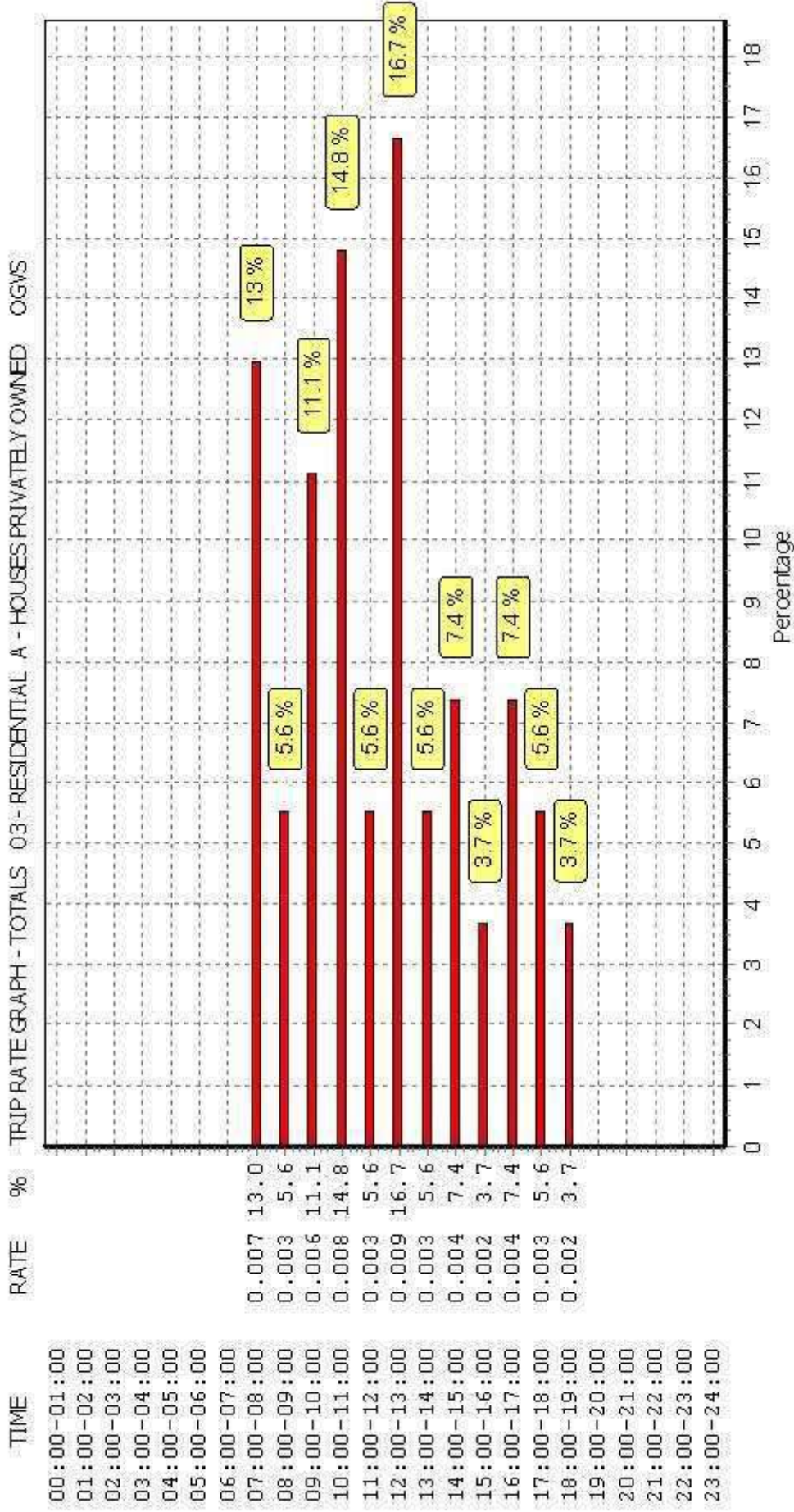
Licence No: 550501



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Tony Doyle KTP

Licence No: 550501



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TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED  
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	22	114	0.001	22	114	0.001	22	114	0.002
08:00 - 09:00	22	114	0.002	22	114	0.002	22	114	0.004
09:00 - 10:00	22	114	0.002	22	114	0.002	22	114	0.004
10:00 - 11:00	22	114	0.002	22	114	0.002	22	114	0.004
11:00 - 12:00	22	114	0.002	22	114	0.002	22	114	0.004
12:00 - 13:00	22	114	0.002	22	114	0.002	22	114	0.004
13:00 - 14:00	22	114	0.002	22	114	0.002	22	114	0.004
14:00 - 15:00	22	114	0.002	22	114	0.002	22	114	0.004
15:00 - 16:00	22	114	0.002	22	114	0.002	22	114	0.004
16:00 - 17:00	22	114	0.002	22	114	0.002	22	114	0.004
17:00 - 18:00	22	114	0.002	22	114	0.002	22	114	0.004
18:00 - 19:00	22	114	0.002	22	114	0.002	22	114	0.004
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.023			0.023			0.046

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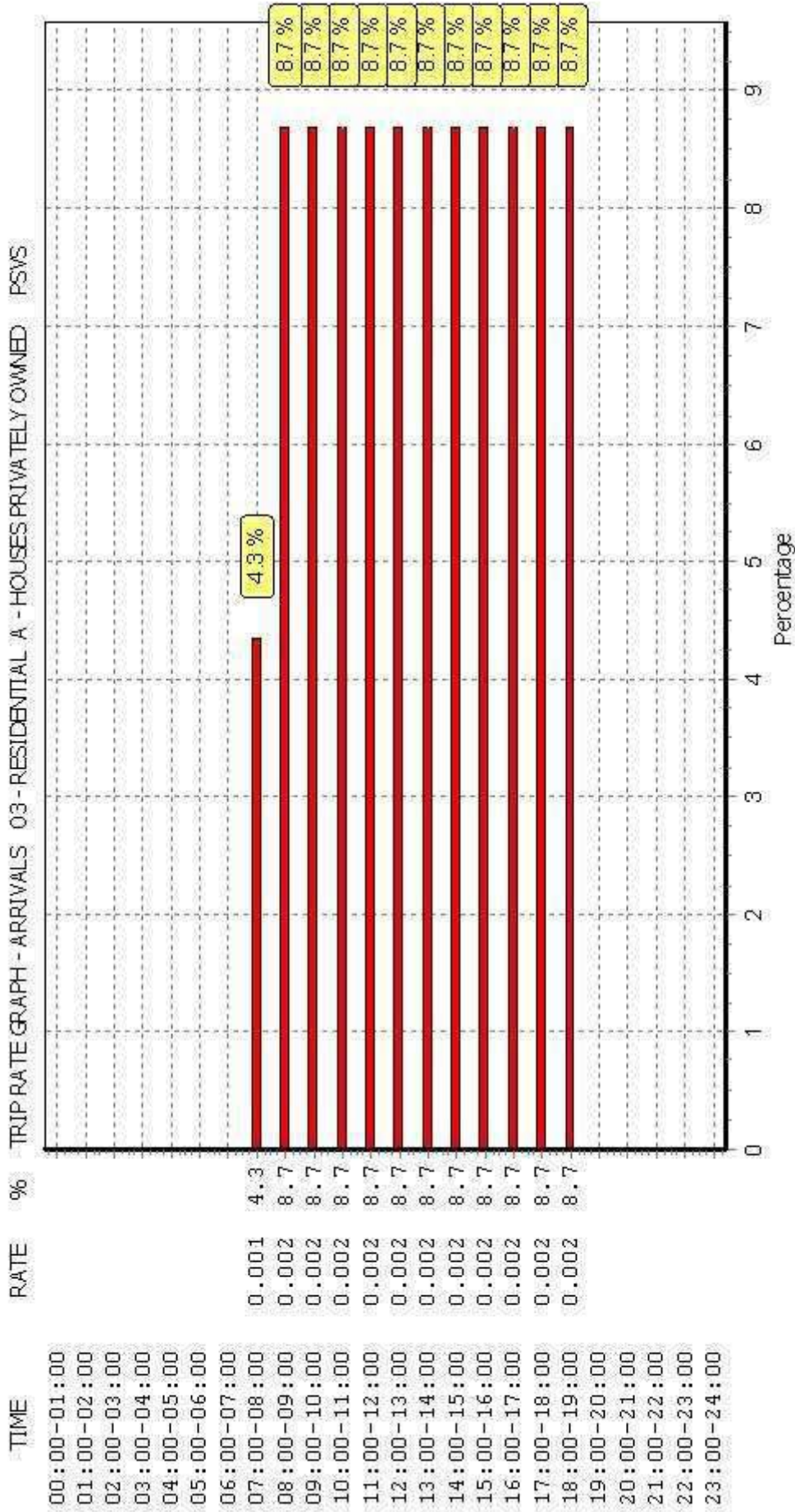
#### Parameter summary

Trip rate parameter range selected: 9 - 792 (units: )  
 Survey date date range: 01/01/00 - 30/09/15  
 Number of weekdays (Monday-Friday): 22  
 Number of Saturdays: 0  
 Number of Sundays: 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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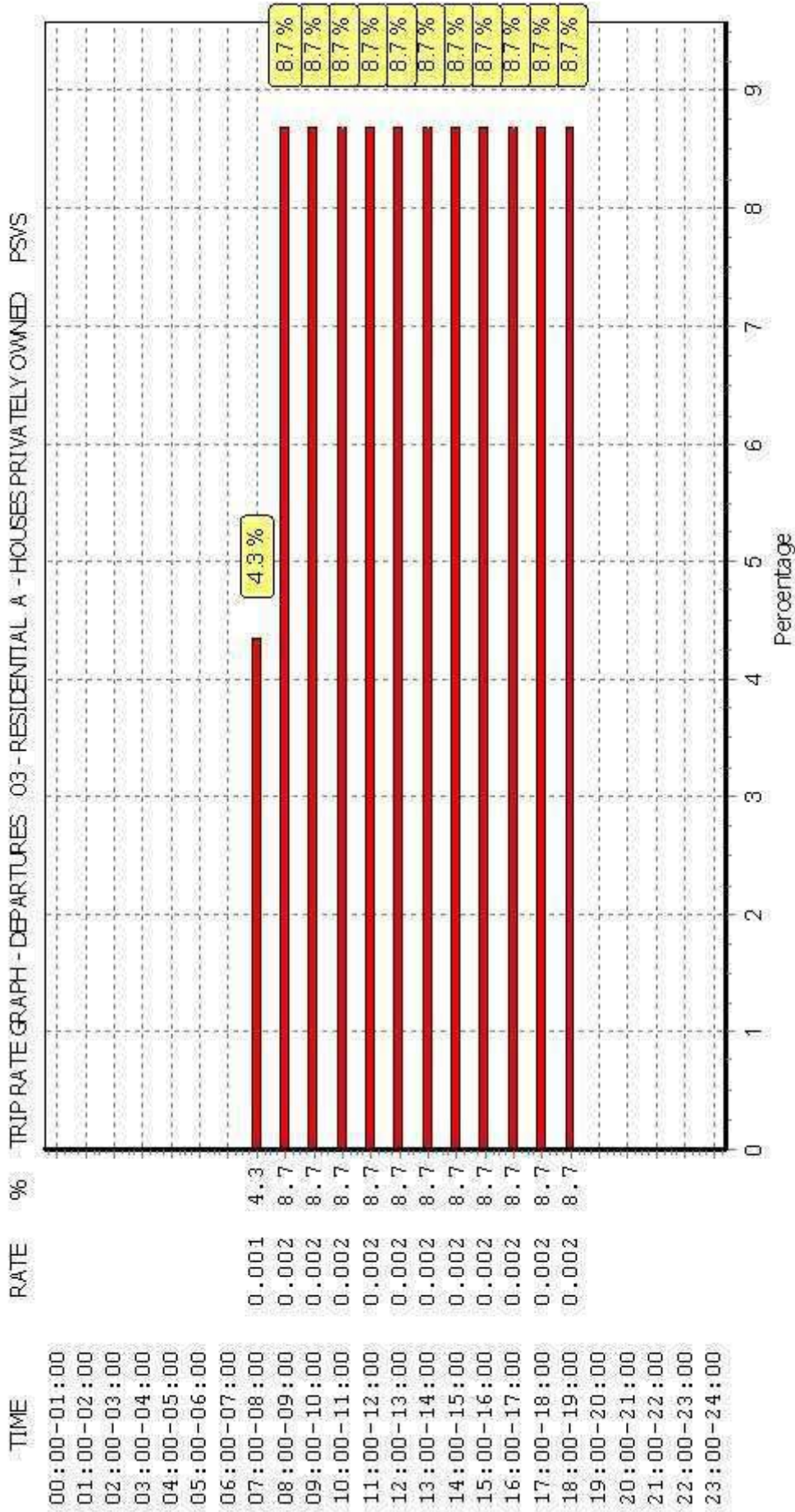
Tony Doyle KTP



*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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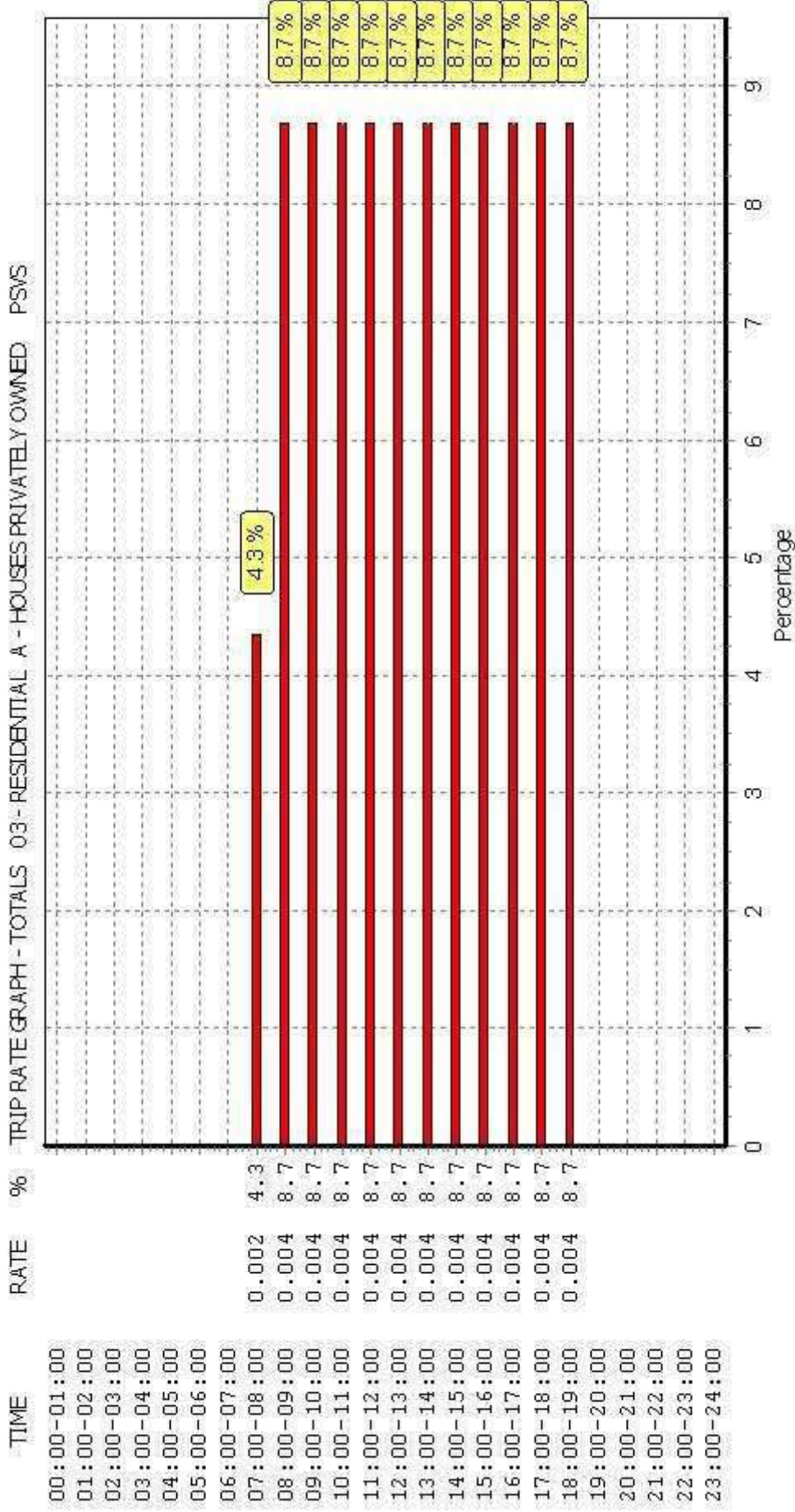
Tony Doyle KTP



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Tony Doyle KTP

Licence No: 550501



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

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

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	22	114	0.003	22	114	0.010	22	114	0.013
08:00 - 09:00	22	114	0.001	22	114	0.012	22	114	0.013
09:00 - 10:00	22	114	0.003	22	114	0.003	22	114	0.006
10:00 - 11:00	22	114	0.003	22	114	0.006	22	114	0.009
11:00 - 12:00	22	114	0.002	22	114	0.003	22	114	0.005
12:00 - 13:00	22	114	0.004	22	114	0.001	22	114	0.005
13:00 - 14:00	22	114	0.004	22	114	0.004	22	114	0.008
14:00 - 15:00	22	114	0.003	22	114	0.002	22	114	0.005
15:00 - 16:00	22	114	0.005	22	114	0.001	22	114	0.006
16:00 - 17:00	22	114	0.014	22	114	0.004	22	114	0.018
17:00 - 18:00	22	114	0.008	22	114	0.005	22	114	0.013
18:00 - 19:00	22	114	0.004	22	114	0.003	22	114	0.007
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.054			0.054			0.108

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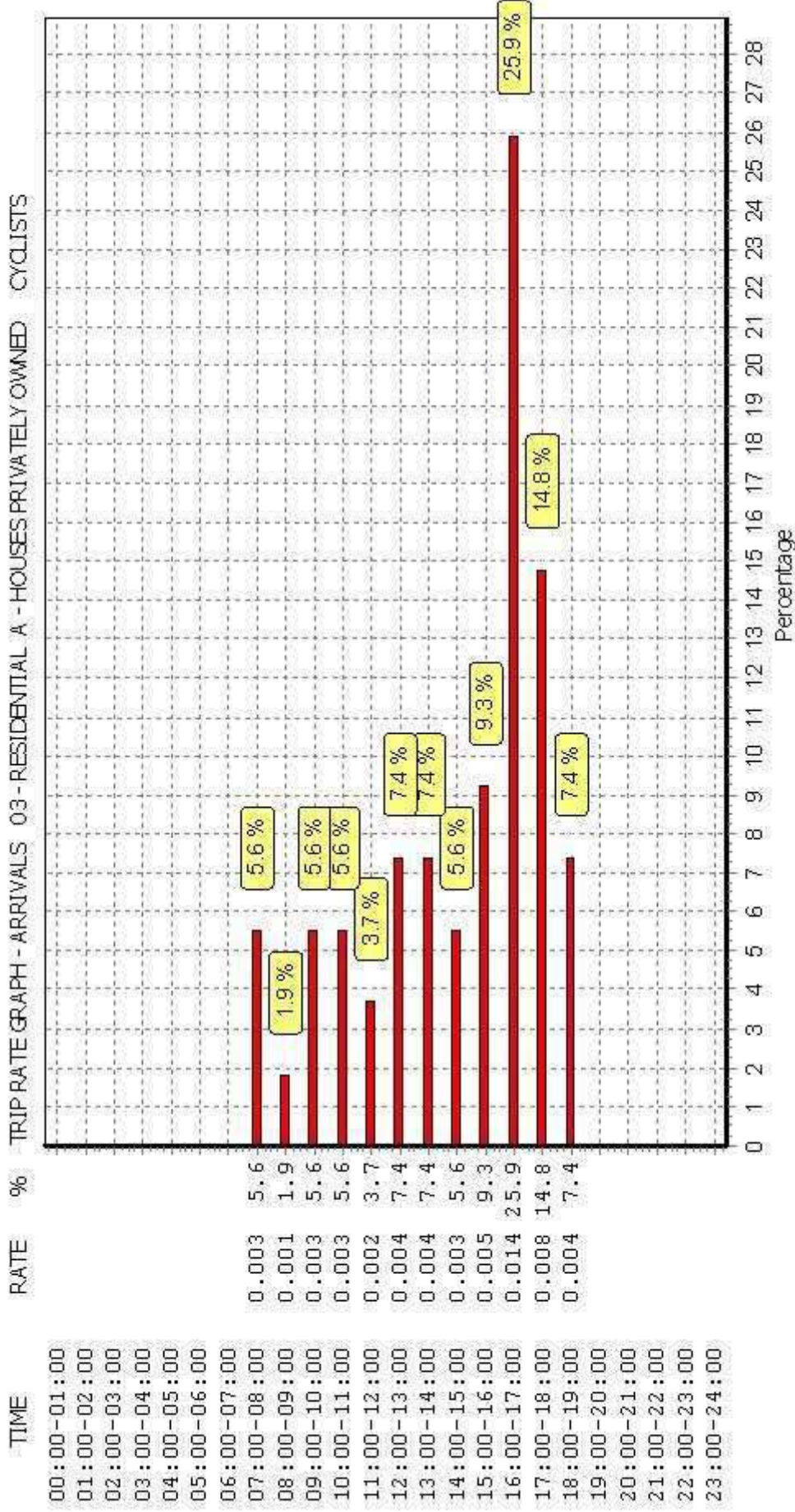
***To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected 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: 9 - 792 (units: )  
 Survey date date range: 01/01/00 - 30/09/15  
 Number of weekdays (Monday-Friday): 22  
 Number of Saturdays: 0  
 Number of Sundays: 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.***

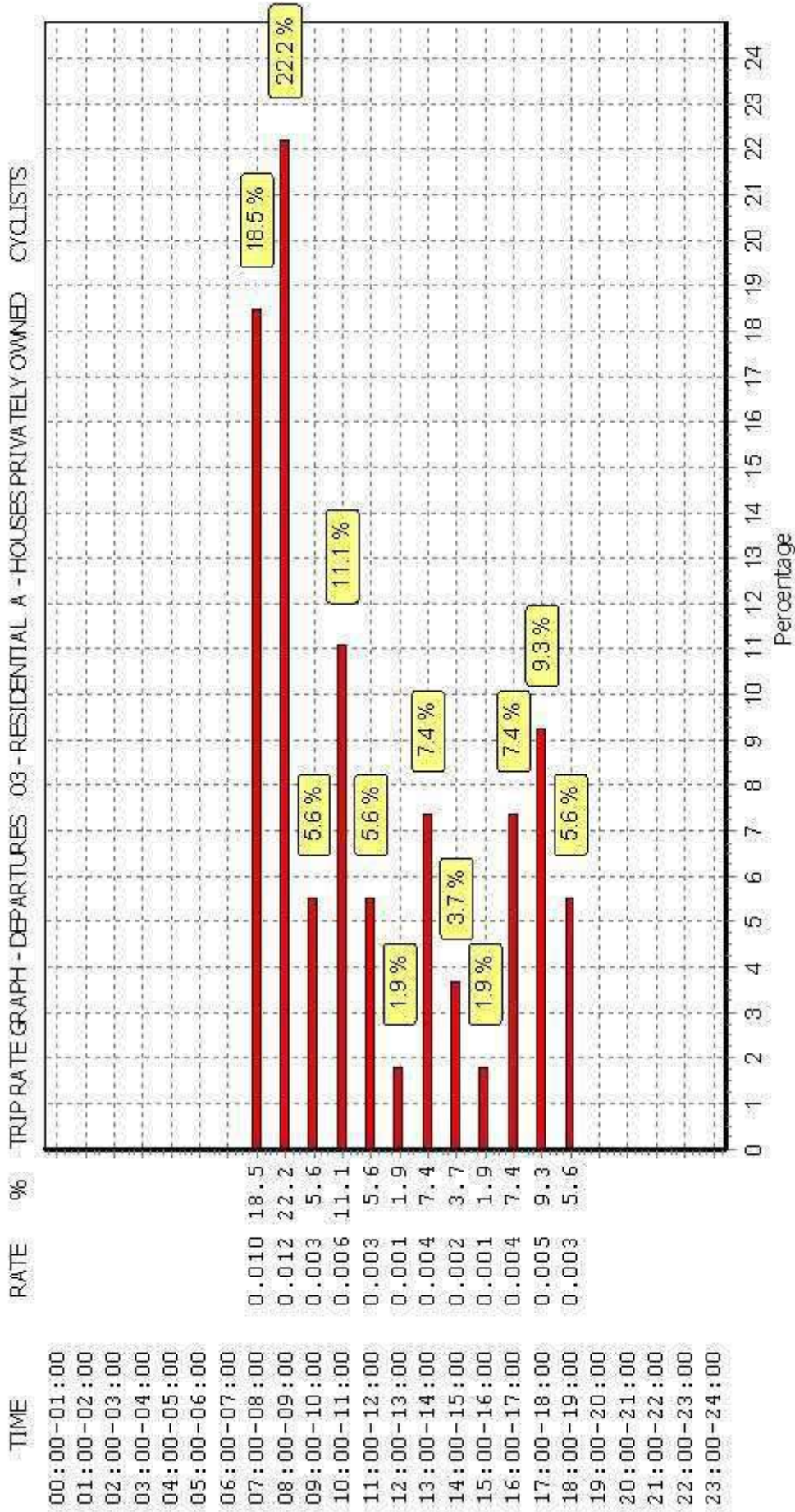




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Tony Doyle KTP

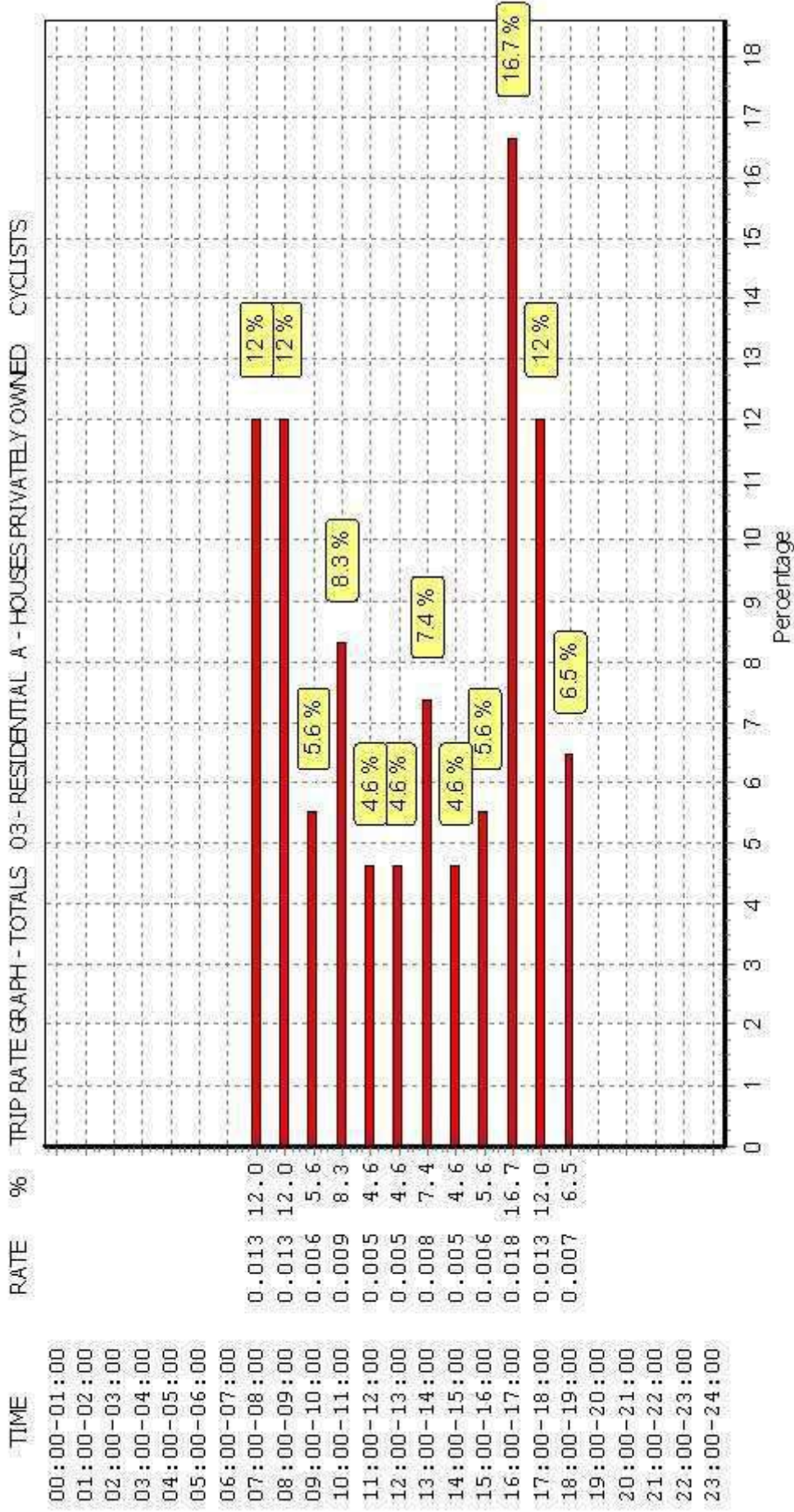
Licence No: 550501



*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.*

Tony Doyle KTP

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