Pirelli Derby Road Site, Burton-upon-Trent

Transport Assessment
St Modwen Developments Ltd.

10 November 2016

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1. Introduction

1.1. Background

Atkins has been commissioned by St Modwen Developments Ltd to prepare a Transport Assessment (TA) to support a planning application on the land adjacent to the Pirelli Factory, Derby Road, Stretton.

The development site is located approximately 2km north of Burton-upon-Trent and approximately 1.5km south of the A38 Burton North Junction (Clay Mills). The site is bounded to the south by the A5121 Burton Road, to the West by Princess Way and to the north by Beeches Park Business Park. A site location plan is provided in **Figure 1-1**.

A38

Pirelli
Development

A512

Weeners

Figure 1-1 Site Location Plan - Development Site, Burton upon Trent

1.2. Planning History

An outline planning application was submitted for the site in 2011 and was supported by a Transport Assessment (TA) and Travel Plan (TP) prepared by Halcrow, planning permission was subsequently granted. The planning permission granted was for outline consent with all matters reserved except access, this comprised a nominal development mix which included:

- 3,728 sq.m GFA B1 Office;
- 1,061 sq.m GFA B2 Industrial Units;
- 4,246 sq.m GFA B8 Distribution/Storage Units;
- 568 sq.m GFA A4 Public House;
- 583 sq.m GFA A3 Restaurant; and
- 90 bed C2 Hotel.

A proportion of the development mix outlined above has already been built out to deliver 5,310 sq.m of B2/B8 units with access from Derby Road.

1.3. Proposed Development

The development quantum included within the outline planning application has now been revised, the development proposals for the site as a whole now comprise the following development mix¹ (which includes the elements already built out):

- 7,010 sq.m GIA B2/B8 Units²;
- 1,244 sq.m GIA Builders' Merchant with outside storage (sui generis)
- 595 sq.m GIA D2 Leisure Unit (Gym)
- 465 sg.m GIA A1/A3/A5 Retail Units
- 156 sq.m GIA A3/A5 Coffee Shop Drive Through/ Restaurant and
- 1,857 sq.m GIA A1 Supermarket.

The previous TA assumed access to the Derby Road site would primarily be taken via two priority controlled junctions formed with Derby Road, with an additional access provided from Beech Avenue. The revised development proposals propose to provide access via only the two Derby Road site access points and no longer provide the secondary access from Beech Avenue. An indicative masterplan (Drawing Number: 0002) relating to the development proposals is presented in **Appendix A**.

1.4. Report Purpose

This TA builds on the outline consent already granted for the site for a mix of A3/A4/B1/B2/B8/C1 land uses. In particular this TA supports a full planning application for the development mix set out above in **Section 1.3**.

We have sought to agree the principle of the assessment with Staffordshire County Council (SCC) as the Local Highway Authority. This includes the area of assessment, trip rates and distribution methodologies. The Scoping Note is included in **Appendix B** of this report.

1.5. Report Structure

This report includes the following sections:

- Section 2 provides a review of the relevant local and national policy guidance applicable to the site;
- Section 3 describes the existing situation in terms of the highway network, accident data and multimodal accessibility;
- **Section 4** provides details relating to the development;
- Section 5 discusses the estimated trip generation and assignment;
- Section 6 presents the results of the junction capacity assessment; and
- Section 7 summarises the findings and conclusions.

¹ Note: The revised development mix is presented in GIA (Gross Internal Area).

² 50/50 split between B2/B8. Balance of employment uses assumed in circumstances where most proposed tenants currently unknown.

2. Policy Review

2.1. Introduction

This TA has been developed in accordance with national, sub-regional and local guidance which promotes the development of strategies to maximise access to developments by sustainable modes of transport. A summary of relevant policy documents is provided within this section.

2.2. National Policy

2.2.1. National Planning Policy Framework (2012)

The National Planning Policy Framework (NPPF) came into force on 27th March 2012. It aims to make the planning system less complex and more accessible, and to promote sustainable growth. The NPPF replaces all the previous Planning Policy Statements (PPSs) and Planning Policy Guidance (PPGs) including PPG13 (Transport).

The NPPF sets out the Government's economic, environmental and social planning policies for England. Taken together, these policies articulate the Government's vision of sustainable development, which should be interpreted and applied locally to meet local aspirations.

Section 4 of the NPPF covers 'Promoting Sustainable Transport'. Relevant elements of this section are summarised below.

Transport policies have an important role to play in facilitating sustainable development but also in contributing to wider sustainability and health objectives. The transport system needs to be balanced in favour of sustainable transport modes, giving people a real choice about how they travel. However, the Government recognises that different policies and measures will be required in different communities and opportunities to maximise sustainable transport solutions will vary from urban to rural areas.

The NPPF has retained the use of Transport Statements and Transport Assessments, and states that all developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment.

Planning decisions should take account of whether:

- The opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;
- Safe and suitable access to the site can be achieved for all people; and
- Improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe.

The NPPF advises that developments should be located and designed where practical to:

- Accommodate the efficient delivery of goods and supplies;
- Give priority to pedestrian and cycle movements, and have access to high quality public transport facilities;
- Create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians, avoiding street clutter and where appropriate establishing home zones;
- Incorporate facilities for charging plug-in and other ultra-low emission vehicles; and
- Consider the needs of people with disabilities by all modes of transport.

The NPPF recognises that a key tool to facilitate this will be a Travel Plan (TP). All developments which generate significant amounts of movement should be required to provide a TP. A Travel Plan was prepared as part of the 2011 planning application for the whole site (including the residential development) and therefore this will remain applicable for the current proposal.

The NPPF does not give any guidance on what should be considered as 'significant' or 'severe', but does provide further support for the requirement of TPs. TPs, in association with the parking standards for non-residential developments, provide an opportunity and mechanism to encourage the use to sustainable transport modes to access new non-residential development sites. Planning policies should aim for a balance of land uses within their area so that people can be encouraged to minimise journey lengths for employment, shopping, leisure, education and other activities.

If setting local parking standards for residential and non-residential development, local planning authorities should take into account:

- The accessibility of the development;
- The type, mix and use of development;
- The availability of and opportunities for public transport;
- Local car ownership levels; and
- An overall need to reduce the use of high-emission vehicles.

2.3. Local Policy

2.3.1. East Staffordshire Borough Council Local Plan (2012 – 2031)

The East Staffordshire Borough Council (ESBC) Local Plan was adopted on 15th October 2015, and replaced the 'saved' policies of the 2006 Local Plan, setting out a strategic framework for development in the Borough for the period 2012 to 2031.

In terms of transportation the objectives include:

- Encourage a continued move towards sustainable travel patterns and modes of travel, as well as a reduction in the need to travel, especially within the urban area of Burton;
- Reducing the reliance on the private car, in particular for short journeys;
- Supporting measures which facilitate the modal shift to public transport, cycling and walking demonstrated in a travel plan;
- Requiring developments which are likely to have an impact on the wider highway infrastructure to be accompanied by a transport assessment clearly setting out how the likely impacts of the development will be addressed: and
- Securing appropriate provision or contributions towards the cost of any necessary highway improvements, provision of public transport services and facilities, and walking and cycling facilities in line with the most up to date Staffordshire County Council Integrated Transport Strategy.

2.3.2. East Staffordshire Borough Council Local Development Framework: Pirelli Factory Development Brief (2011)

The Pirelli Factory Development Brief was adopted in July 2011 and sets out guidance to ensure that development at this site is a high quality, mixed use, and sympathetic to the surrounding land uses. Overall it aims to maximise the development potential of unused land and buildings at this site.

The brief sets out the requirements of the Local Planning Authority, the Highway Authority and other service providers, supplementing the adopted Local Plan and provides specific planning and design guidance to assist pre-application discussions. In addition, it sets out principles that should be adopted by developers including land uses, layouts, design, provision of open space, access, landscaping and provision for wildlife.

In paragraph 4.25, it states that 'the development of the site will demonstrate a sustainable transportation strategy and allow for the movement of pedestrians and cyclists within the site and to link with the surrounding area. The development proposals will also have an accompanying Travel Plan which will seek to promote modes of travel other than the private car wherever possible, and will encourage the use of walking, cycling and public transport for trips to and from the development'.

It sets out that in line with ESBC requirement for employment use on the site, the Derby Road site could contain a mix of uses.

2.3.3. Staffordshire Local Transport Plan Three (2011)

The third Local Transport Plan (LTP) for Staffordshire was published in March 2011 and sets out the council's proposals for transport provision within the county including walking, cycling, public transport, and car based travel and freight, together with the management and maintenance of local roads and footways.

In terms of transportation, relevant objectives include:

- Supporting developments that include or are located in areas with good public transport links and well connected to walking and cycling networks;
- Encouraging walking, cycling and public transport use, particularly on congested corridors which will promote the alternative to the private motor car;
- Support the adoption of sustainable land use planning policies and reduce the impact of development where it negatively affects the highway network;
- Encourage the design and layout of development that maximising access by smarter travel modes;
- Seek development mixes that are accessible to broad range of services and facilities to reduce the need to travel by private motor vehicle.

2.3.4. Parking Standards

Car parking will be provided in line with East Staffordshire Borough Council's (ESBC) 'Maximum Parking Standards' provided in Supplementary Planning Guidance adopted December 2004. The standards are outlined in **Table 2-1**.

Table 2-1 ESBC's Maximum Car Parking Standards (December 2004)

Land Use Class	Car Parking Standards
A1 Supermarket Development	1 per 14m²
A3/ A5 Coffee Shop Drive-through/ Restaurant	1 per 10m²
A1/A3//A5 Retail Unit	1 per 14m²
D2 Leisure Unit (Gym)	1 per 22m²
B2 Industrial Units	1 per 80m² (1,000m² +)
B8 Distribution/ Storage Units	1 per 80m² (1,000m² +)

3. Baseline Conditions

3.1. Introduction

This section describes the location of the site in the context of the wider and local transport networks, the existing level of accessibility and local sustainable transport links.

3.2. Local Highway Network

The site is located adjacent to the A5121 Derby Road, approximately 2km north of Burton upon Trent town centre.

3.2.1. **A5121 Derby Road**

The A5121 Derby Road is a single carriageway road which runs adjacent to the Pirelli development site. The A5121 provides vehicular access to the A38 to both the north and south of Burton upon Trent. There are pedestrian footways and lighting provided along the length of the A5121.

3.2.2. A38

The A38 is a dual carriageway which runs to the north of the Pirelli development site. The A38 provides vehicular access to Derby to the north and Lichfield to the south.

3.2.3. Burton Albion Roundabout (A5121 Derby Road/ Wetmore Road/ Hawkins Lane/ Princess Way)

The Burton Albion Roundabout is an at-grade five arm junction located south of the Pirelli development site. The junction had three lanes on the A5121 Derby Road North and Hawkins Lane approach arms. The remaining approach arms and the circulatory carriageway all had two lanes. There are dropped kerbs/ tactile paving and pedestrian footpaths on all approach arms.

As part of the previous TA, it was concluded that mitigation would be required in order to maximise capacity at the 'Burton Albion Roundabout'. The mitigation scheme comprised of geometry changes to the junction, including widening of the entry width and flare on the Princess Way approach, providing a three lane entry at the give way lane, whilst retaining a 3m wide shared footway and cycle route adjacent to the carriageway with a 0.5m safety strip. The Derby Road (S) approach arm is to be widened by 1m, whilst the entry width on Hawkins Lane was also proposed to increase. Full details of the mitigation measures identified within the previous TA are included in **Appendix C**. These measures have now been implemented and are in place.

3.3. Sustainable Transport

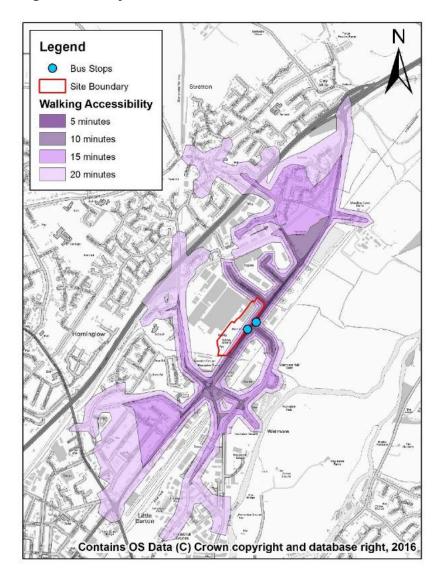
This section outlines the existing sustainable transport options in the vicinity of the site.

3.3.1. Pedestrian Access

Existing pedestrian access to the site is via Derby Road, which has a footway on both sides of the carriageway. Beech Avenue also has lighting on the southern side of the carriageway and a 30mph speed limit in place. There is existing pedestrian provision along both sides of the A5121 Derby Road and lighting is provided on the eastern side of the carriageway.

Figure 3-1 shows the distance which can be walked from the site in 20 minutes, based on a walking speed of 1.4m/s. It illustrates that from the site, it is possible to reach a number of residential areas in northern Burton upon Trent. It also shows that within five minutes it is possible to reach a number of bus stops on A5121 Derby Road.

Figure 3-1 Walking Accessibility

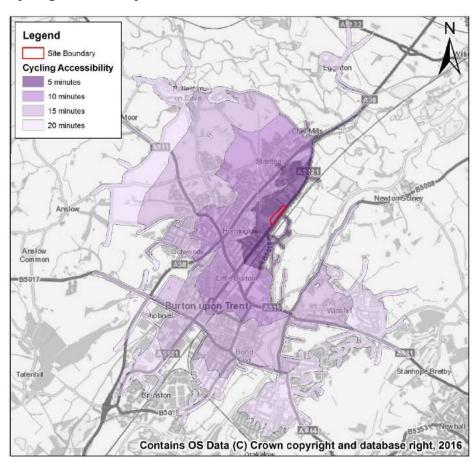


3.3.2. Cycle Access

Figure 3-2 shows that a range of local destinations, including residential areas across Burton-upon-Trent are within a 20 minute cycle ride (5280m), based on a cycling speed of 4.4m/s.

There are a number of local cycle routes, both on and off road, in the vicinity of the site. National Cycle Route 54 runs to the north of the site, along the route of the Trent and Mersey Canal, towards Derby to the north and Lichfield to the south.

Figure 3-2 Cycling Accessibility



3.3.3. Bus Access

The X38 provides a direct service between Derby and Burton. The X38 service can be accessed from the bus stops located along the A5121 Derby Road fronting the site. A summary of the X38 service is set out in **Table 3-1**.

Table 3-1 Summary of Bus Services

Route	Operator									
		Monday to Friday	Saturday	Sunday						
X38	Arriva	1-2 service:	s per hour	Hourly						
Burton – Derby		Towards Derby:								
Via Rowditch,		First: 07:00	First: 07:34	First 09:39						
Royal Derby Hospital, Pirelli Stadium and Railway Station								Last: 19:05	Last: 19:04	Last: 16:39
		Towards Burton:								
		First: 08:08	First: 08:34	First: 10:39						
		Last: 20:09	Last: 20:08	Last: 17:29						

3.3.4. Rail Access

The nearest railway station to the site is Burton upon Trent, which is 2.8km south west of the site. The station has regular services towards local destinations including Derby, Tamworth and Birmingham New Street, as well as national destinations such as Nottingham and Cheltenham Spa. The services from Burton-Upon Trent are summarised in **Table 3-2**.

The following station facilities are available at Burton upon Trent:

- Secure and sheltered Bicycle storage facilities;
- Manned Ticket office and self-service ticket machines;
- · Waiting room and facilities; and
- Station car park.

Table 3-2 Summary of Rail Services

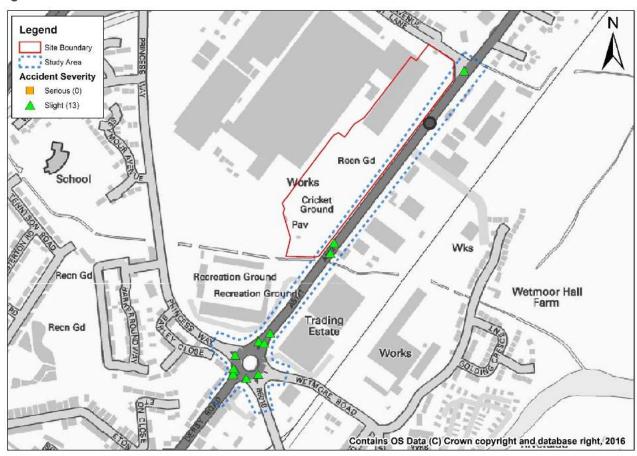
Route	Operator	Frequency				
		Monday to Friday	Saturday	Sunday		
Edinburgh to Exeter	Crosscountry	Twice hourly before 09:30, at least one service every two hours after	Twice hourly before 09:40, at least one service every two hours after	One service every two hours		
Via	Trains	Towards Exeter				
Chesterfield, Derby, Burton ,		First: 06:20 Last: 22:56	First: 06:20 Last: 22:37	First: 11:40 Last: 22:37		
Birmingham New Street,		Towards Edinburgh:				
Cheltenham Spa		First: 07:31 Last: 21:30	First: 06:24 Last: 21:30	First: 09:28 Last: 21:29		
(not all services stop at all stations and not all stations listed)						
Nottingham to Cardiff		At least one service every two hours	At least one service every two hours	At least one service an hour		
		Towards Nottingham				
Via Derby, Burton, Tamworth,		First: 06:51 Last: 23:40	First: 06:24 Last: 23:20	First: 09:28 Last: 21:29		
Wilnecote,	Crosscountry Trains	Towards Cardiff				
Birmingham New Street, University	Trains	First: 06:20 Last: 22:56	First: 06:20 Last: 22:37	First: 10:29 Last: 22:37		
(not all services stop at all stations and not all stations listed)						

Source: www.nationalrail.co.uk

3.4. Personal Injury Accident (PIA) Analysis

Personal Injury Accident (PIA) data for the area surrounding the site has been obtained from Staffordshire County Council for the most recent three year period available (1^{st} May $2012 - 30^{th}$ April 2015). The area for which PIA data was collected is shown in **Figure 3-3**, along with the location of the PIAs

Figure 3-3 Location of PIAs



PIAs have been analysed in terms of their severity, the results of which are shown in **Table 3-3**. The locations have been categorised by links and junctions.

Table 3-3 PIA Data

Location Description	Number of PIAs (by severity)				No. involving a pedestrian/cyclist	
	Slight	Serious	Fatal	Total		
Junctions:						
Roundabout between A5121, Princess Way, Hawkins Lane and Wetmore Road	9	0	0	9	3	
Junction between A5121 and Beech Avenue	1	0	0	1	0	
Links:						
A5121 Derby Road	3	0	0	3	0	
Total:	13	0	0	13	3	

As shown in **Table 3-3**, a total of 13 PIAs occurred in the study area during the period of May 2012 to April 2015. All of these PIAs were classified as slight.

3.4.1. Princess Way, A5121 Derby Road, Hawkins Lane and Wetmore Road Roundabout

During the study period, nine slight PIAs were recorded at this junction, at the locations shown in **Table 3-4**.

Table 3-4 Location of PIAs at Roundabout between Princess Way, A5121 Derby Road, Hawkins Lane and Wetmore Road

Location	Number of PIAs					
APPROACH						
A5121 Derby Road N	4					
Hawkins Lane	1					
A5121 Derby Road S	1					
EXIT	EXIT					
Hawkins Lane	1					
A5121 Derby Road N	1					
CIRCULATORY	1					
TOTAL	9					

Four of the nine PIAs occurred on the A5121 Derby Road North entry onto the roundabout. The narratives state that two of these PIAs involved a collision occurring upon entry to the roundabout, one of which involved a vehicle colliding with a cyclist. The information provided attributes partial causation of this PIA to the road environment, as the road was slippery due to adverse weather conditions. The other two PIA narratives state that a collision occurred as the vehicles were approaching the roundabout or waiting at the junction approach. The information provided does not suggest that there were common causation factors between these PIAs, other than driver error and behaviour.

One PIA occurred on the Hawkins Lane entry to the roundabout, which was classified as slight. The narratives state that this PIA involved a vehicle colliding with another upon entry to the main carriageway of the roundabout. Another PIA occurred on the Hawkins Lane exit to the roundabout, which was also classified as slight. The narrative states that this PIA involved a vehicle leaving the roundabout and upon doing so, collided with a cyclist on the main carriageway. The information provided for both of these PIAs does not suggest that there were common causation factors, other than driver error and behaviour.

During the study period, one slight PIA was recorded on the A5121 Derby Road South approach to the roundabout. The narrative states that the causation of this PIA was driver error and behaviour.

One slight PIA was also recorded on A5121 Derby Road N exit of the roundabout. The narrative states that this PIA occurred between two vehicles travelling south-west to north-east. The PIA narrative states that the causation factors for this accident were road layout (e.g. bend or hill) and driver error.

Overall, this would suggest that the majority of these PIAs have not occurred as a result of the layout of this junction with all at least partly attributable to driver error or behaviour.

3.4.2. A5121 Derby Road/Beech Avenue Junction

During the study period, one PIA was recorded at this junction. Narratives provided state that it involved two vehicles travelling south-west to north-east. The information provided for this PIA suggests that it occurred as a result of driver error or behaviour, rather than the layout of the junction.

3.4.3. A5121 Derby Road between Burton Albion Roundabout and A5121 Derby Road/Beech Avenue junction

During the study period, three PIAs were recorded along this section of the link, all classified as slight. The narratives state that two of these PIAs involved a collision between vehicles travelling along the major road (A5121 Derby Road) and a vehicle turning onto/off the main carriageway in the area surrounding the petrol station. No causation factors for these PIAs have been provided.

The other PIA along this link was reported to have occurred 40m north of the A5121 Derby Road entry onto the roundabout. The narrative states that this involved a stationary vehicle in the offside of the main carriageway masking a pedestrian crossing. The description states that another vehicle overtook this stationary vehicle, resulting in a slight injury to a pedestrian using the crossing, caused by driver/pedestrian error and behaviour.

3.4.4. PIA Summary

During the latest three year period, there has been a total of 13 recorded PIAs within the study area set out above. Of these, nine PIAs were recorded at the roundabout between A5121 Derby Road, Princess Way, Hawkins Lane and Wetmore Road. Although there were some common movements involved in the recorded PIAs, the causation factors suggest that they occurred as a result of driver error or behaviour, rather than the layout or geometry of the junction. Three PIAs were recorded along A5121 Derby Road during the latest three year period. Although narratives have identified common movements, causation factors again suggest that they all occurred as a result of driver or pedestrian error, rather than the road environment.

4. Development Proposals

4.1. Proposed Development

The extant planning permission granted was for outline consent with all matters reserved except access, this comprised a nominal development mix which included:

- 3,728 sq.m GFA B1 Office;
- 1,061 sq.m GFA B2 Industrial Units;
- 4,246 sq.m GFA B8 Distribution/Storage Units;
- 568 sq.m GFA A4 Public House;
- 583 sg.m GFA A3 Restaurant; and
- 90 bed C2 Hotel.

The development proposals included within the outline planning application and contained within the 2011 TA have now been revised. This TA contains an assessment of the revised development mix and compares this to the assessment contained in the 2011 TA³. The revised development mix across the whole site and including elements already built includes:

- 7,010 sq.m GIA B2/B8 Units;
- 1,244 sq.m GIA Builders' Merchant with outside storage (sui generis)
- 595 sq.m GIA D2 Leisure Unit (Gym)
- 465 sq.m GIA A1/A3/A5 Retail Units
- 156 sq.m GIA A3/A5 Coffee Shop Drive Through/ Restaurant and
- 1,857 sq.m GIA A1 Supermarket.

4.2. Sustainable Travel Access

The existing sustainable travel infrastructure (for pedestrians, cyclists and public transport users) is suitable and therefore it is not proposed to provide any improvements on the adjacent network.

4.3. Vehicular Access

The previous TA assumed access to the Derby Road site would primarily be taken via two priority controlled junctions formed with Derby Road, with an additional access provided from Beech Avenue.

The revised development proposals propose to provide access only via the two Derby Road site access points and no longer provide the secondary access from Beech Avenue. A Site Plan (Drawing Number: 0002) relating to the revised development proposals is presented in **Appendix A**.

4.4. Car and Cycle Parking Provision

In the absence of renewed guidance, on-site car parking provision will be provided in line with East Staffordshire Borough Council's (ESBC) 'Maximum Parking Standards' provided in Supplementary Planning Guidance adopted December 2004.

Car parking will be managed accordingly and will depend upon the occupiers/operators of the various units proposed on-site.

³ Note: The revised development mix is presented in GIA (Gross Internal Area).

4.4.1. Car Parking Provision

Table 4-1 outlines the parking standards for each land use proposed as part of the revised development mix and compares this to the quantum of parking provision proposed as part of the development. The distribution between B2 and B8 uses is assumed in circumstances where the tenant mix is currently unknown.

Table 4-1 Car Parking Standards

Use Class	GIA (m²)	Spaces		Resultant Spaces
		0 - 240 m ²	1 per 20 m ²	
B2 Industrial Units	3,505	240 - 1000 m ²	1 per 50 m ²	44
		1000 m ² +	1 per 80 m ²	
B8 Distribution/Storage Units	3,505	1 per	80 m ²	44
A1 Builders Merchant	1,244	1 per 20 m ²		62
A1 Supermarket Development	1,857	1 per 14 m ²		133
A3/A4/A5 Retail Unit	465	1 per 14 m ²		33
D2 Leisure Unit (Gym)	595	1 per 22 m ²		27
A3/ A5 Coffee Shop Drive-through/ Restaurant	156	1 per 10 m ²		16
	ı	ı		358

In total, based on East Staffordshire Borough Council's (ESBC) Parking Standards, this development should provide a maximum of 358 standard spaces (including disabled provision). The development is proposed to provide a total of 308 standard spaces across the whole site and is therefore in line with ESBC standards.

4.4.2. Disabled Parking Provision

East Staffordshire Borough Council's (ESBC) Parking Standards state that specialised, accessible parking spaces should be provided for staff and visitors of new developments. The bays should measure at least 3.6m wide by 6.0 metres long, inclusive of 1.2 metre wide cross hatched access zone to one side and to the rear.

Table 4-2 shows the disabled parking standards applicable to the development.

Table 4-2 Disabled Parking Standards

Use Class	Spaces	Resultant Spaces
Shopping, Recreation and Leisure	One per disabled member of staff*, 3 bays or 6% of total capacity, whichever is greater.	14
Employees and Visitors to Business Premises	One per disabled member of staff*, plus 2 bays or 5% of total capacity, whichever is greater.	4
Total		18

In addition to disabled spaces, there will be five designated parent and child spaces located at the front of the food store.

4.4.3. Cycle Parking Provision

Table 4-3 shows the minimum cycle parking standards for each land use within the development, alongside the resultant provision.

Table 4-3 Cycle Parking Standards

Use Class	GIA (m²)	Spaces	Resultant Spaces
B2 Industrial Units	3,505	1 stand per 300m ² of gross floor space in secure,	23
B8 Distribution/Storage Units	3,505	weather proof shelter	
A1 Supermarket Development	1,857	1 cycle stand per 10 employees in secure weatherproof shelter + 1 visitor stand per 200 m² gross floor space (shelter optional)	9 + 1 cycle stand per 10 employees
A3/A4/A5 Retail Unit	465	1 stand per 5 employees in secure, weatherproof shelter.	1 cycle stand per 5 employees
D2 Leisure Unit (Gym)	595	1 stand per 100m ² of gross floor space, shelter optional.	6
A3/ A5 Coffee Shop Drive-through/ Restaurant	156	1 stand per 5 employees in secure, weatherproof shelter.	1 cycle stand per 5 employees

Cycle parking is proposed to be provided adjacent to the Supermarket Development for the use of those visiting the facilities accessed from the southern access point. Further cycle parking is proposed within the employment area accessed from the northern access point. The proposed cycle parking would be covered, providing a secure and suitable location for cycling parking for use by staff, visitors and customers.

5. Trip Generation and Distribution

5.1. Vehicular Trip Generation

5.1.1. Consented Trip Generation

The previously agreed trip generation has been extracted from the Halcrow Transport Assessment and is presented in **Tables 5-1** and **5-2**, below. This information has been reproduced from Table 4.1 and Table 4.2 of the Halcrow report but excludes residential development proposed as part of the Pirelli Princess Way site as this traffic would not utilise the accesses on Derby Road and is not proposed to be revised as part of this application.

Table 5-1 Trip Rates – Consented Proposed Development (Pirelli Derby Road Site)

Landllag		AM Peak			PM Peak	
Land Use	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way
B1	1.634	0.206	1.84	0.218	1.327	1.545
B2	0.266	0.068	0.334	0.059	0.33	0.389
B8	0.219	0.102	0.321	0.12	0.315	0.435
A4	0	0	0	4.84	3.63	8.47
A3	0	0	0	3.393	0.183	3.576
C2	0.1	0.2	0.3	0.2	0.1	0.3

Table 5-2 Trip Generation - Consented Proposed Development (Pirelli Derby Road Site)

Land Use	AM Peak			PM Peak		
	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way
B1	61	8	69	8	49	58
B2	3	1	4	1	4	4
В8	9	4	14	5	13	18
A4	0	0	0	27	21	48
A3	0	0	0	20	1	21
C2	9	18	27	18	9	27
Total	82	31	113	79	97	176

5.1.2. Proposed Trip Generation – Revised Proposals

Trip rates have been obtained from the TRICS database in order to calculate the traffic generation of the revised development proposals⁴. For consistency the same trip rates have been extracted from the previous TA for the following Land Use Classifications:

- B2 Industrial Units; and
- B8 Distribution/Storage Units.

⁴ Note: Trip Generation has been calculated using GIA.

5.1.2.1. Food Store

Trip Rates have been extracted from the TRICS database in order to determine the traffic impact of the Discount Food store (A1). Sites have been selected from the 01 – C Discount Food store Category. Surveys were excluded from the assessment on the following basis:

- Sites surveyed on a weekend day;
- Sites located in Greater London, Northern Ireland and Republic of Ireland; and
- Sites located in an Edge of Town Centre and Neighbourhood Centre location.

The trip rates and trip generation for the proposed food store are presented in **Table 5-3**, and the full outputs are presented in **Appendix D**.

Table 5-3 Food store Trip Rates and Trip Generation

	Land Use		AM Peak			PM Peak	
	Land USE	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way
A1 Food Retail	Trip Rates per 100sq.m	0.992	0.714	1.706	3.151	3.673	6.824
	Trip Generation 1,857 sq.m	18	13	31	59	68	127

5.1.2.2. Drive-Through Coffee Retailer

Since the appearance of drive through coffee retailers has been relatively recent, such sites are not yet included in the TRICS database. As such trip rates have been obtained from the TRICS database from the 06 – D Fast Food Drive-Through Category which are considered to be representative.

Surveys were excluded from the assessment on the following basis:

- Sites surveyed on a weekend day;
- Sites located in Greater London, Northern Ireland, Republic of Ireland and Scotland;
- Sites located in an Edge of Town Centre location; and
- Sites which were not operational during the network peak hours assessed.

The trip rates and trip generation for the proposed drive through facility are presented in **Table 5-4**, below, and the full outputs are presented in **Appendix D**.

Table 5-4 Drive through Coffee Retailer Trip Rates and Trip Generation

	Land Use		AM Peak			PM Peak	
	Land Ose	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way
Drive Through	Trip Rates per 100sq.m	9.752	9.288	19.04	12.178	11.249	23.427
Coffee Retailer	Trip Generation 156 sq.m	15	14	29	19	18	37

5.1.2.3. Builders Merchants

Trip Rates have been extracted from the TRICS database in order to determine the traffic impact of the Builders Merchant. Sites have been selected from the 01 – L Builder's Merchants Category. Surveys were excluded from the assessment on the following basis:

- Sites surveyed on a weekend day;
- Sites located in Greater London, Northern Ireland and Republic of Ireland; and
- Sites located in a Neighbourhood Centre location.

The trip rates and trip generation for the proposed Builders Merchants are presented in **Table 5-5**, and the full outputs are presented in **Appendix D**.

Table 5-5 Builders Merchants Trip Rates and Trip Generation

Land Use			AM Peak			PM Peak	
	Land USE	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way
Builders	Trip Rates per 100sq.m	0.658	0.539	1.197	0.148	0.255	0.403
Merchant	Trip Generation 1,244 sq.m	8	7	15	2	3	5

5.1.2.4. Leisure Unit (Gym)

Trip Rates have been extracted from the TRICS database in order to determine the traffic impact of the Leisure Unit/ Gym (D1). Sites have been selected from the 07 – K Fitness Club (Private) Category. Surveys were excluded from the assessment on the following basis:

- Sites surveyed on a weekend day;
- Sites located in Greater London, Northern Ireland and Republic of Ireland; and
- Sites located in a Neighbourhood Centre location.

The trip rates and trip generation for the proposed gym are presented in **Table 5-6**, and the full outputs are presented in **Appendix D**.

Table 5-6 Leisure Unit (Gym) Trip Rates and Trip Generation

	and Use		AM Peak		PM Peak		
	Land Ose	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way
D2 Leisure Unit	Trip Rates per 100sq.m	0.842	0.745	1.587	1.850	1.000	2.850
	Trip Generation 595 sq.m	5	4	9	11	6	17

5.1.2.5. A1/A3/A5 Retail Units

Trip Rates have been extracted from the TRICS database in order to determine the traffic impact of the A1/A3/A5 Retail Units. Sites have been selected from the 01 – I Retail – Shopping Centre – Local Shops Category in order to reflect the expected retail offering and to provide a robust assessment. Surveys were excluded from the assessment on the following basis:

- Sites surveyed on a weekend day;
- Sites located in Greater London, Northern Ireland and Republic of Ireland; and
- Sites which have a food store element.

The trip rates and trip generation for the proposed A1/A3/A5 use are presented in **Table 5-7**, and the full outputs are presented in **Appendix D**.

Table 5-7 A1/A3/A5 Retail Units Trip Rates and Trip Generation

	and Use		AM Peak			PM Peak		
	.anu ose	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way	
A1/A3/A5 Retail Units	Trip Rates per 100sq.m	4.333	4.079	8.412	3.926	4.308	8.234	
	Trip Generation 465 sq.m	20	19	39	18	20	38	

5.1.2.6. Total Revised Trip Generation

The resultant revised trip generation for the Pirelli Derby Road site is presented in **Table 5-8**, below. It sets out the trip generation for the site as now envisaged following the current revised proposals and compares this with the trip generation associated with the site when outline planning permission was originally granted for a different form of development.

Table 5-8 Revised Trip Generation – Pirelli Derby Road Site

Land Use		AM Peak			PM Peak	
Land Ose	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way
Revised B2 Traffic (3,502 sq.m)	9	2	11	2	12	14
Revised B8 Traffic						
(3,502 sq.m)	8	4	12	4	11	15
A1 Food store Traffic (1,857 sq.m)	18	13	31	59	68	127
Drive Through Coffee Retailer (156 sq.m)	15	14	29	19	18	37
A1 Builders Merchants (1,244 sq.m)	8	7	15	2	3	5
D2 Leisure Unit (Gym) (595 sq.m)	5	4	9	11	6	17
A1/A3/A5 Retail Units (465 sq.m)	20	19	39	18	20	38
Revised Total Traffic	83	63	146	115	138	253
Consented Total Traffic	82	31	113	79	97	176
Net Difference	1	32	33	36	41	77

It can be seen from the above tables that the revised development proposals for the former Pirelli Derby Road site would generate an overall net increase of 110 two-way trips within the AM and PM peak hours when compared to the development quantum considered in the 2011 Halcrow TA. The revised development proposals would result in a net increase of 33 trips during the AM peak hour and a net increase of 77 trips in the PM peak. This is predominantly generated by trips associated with the proposed A1 Food Store.

5.2. Pass-By and Diverted Trips

During the AM and PM peak hours a proportion of the trips associated with the following land uses would inevitably be 'pass-by' or 'diverted' trips and therefore not all the trips generated would be considered primary or new trips on the highway network:

- 465 sq.m GIA A1/A3/A5 Retail Units
- 156 sq.m GIA A3/A5 Coffee Shop Drive Through/ Restaurant and
- 1,857 sq.m GIA A1 Supermarket.

The TRICS Research Report 95/2 – Pass-by and Diverted Trips, states that the proportion of trips generally accepted to be non-primary is 30%. Therefore, 30% of foodstore trips into the site will be deducted from the through movements on the A5121 to account for trips which would instead access the site on the way past.

In terms of the coffee drive through, 100% of trips are assumed to be pass-by due to the nature of the facility. In reality, the overall number of trips generated by this aspect of the development is likely to be lower still since there would be linked trips between the other land uses on-site, but no account has been made of this in order to provide a robust assessment.

Regarding the A1/A3/A5 Retail Units, 50% of trips are assumed to be pass-by trips due to the expected retail offering anticipated.

The resultant number of new trips on the network generated by the revised development are provided in **Table 6-5**.

5.3. Trip Distribution

The Halcrow Transport Assessment utilised the SCC SATURN Traffic Model to distribute development traffic. The outputs of the SATURN modelling have been utilised to determine the north/south split of arriving and departing traffic. A summary of the north/south proportional split is set out in **Table 5-9**, below.

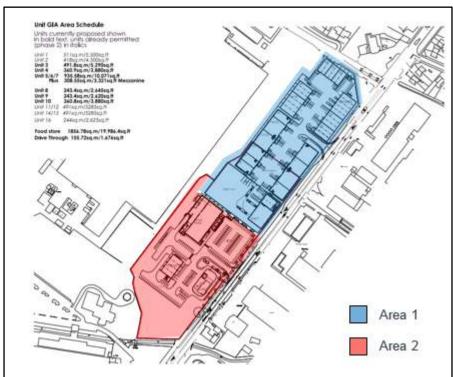
Table 5-9 Proportional Split of Revised Development Traffic

	AM	PM
Arrivals from North	51%	37%
Arrivals from South	49%	63%
Departures to North	52%	55%
Departures to South	48%	45%

Due to the strategic nature of the SATURN model, it was assumed that all traffic arriving from the north and departing to the north would utilise the northern access point and all traffic arriving from the south and departing to the south would utilise the southern access point.

In reality, due to the site layout, this would not be possible as traffic generated by development in Area 1 would utilise the northern access point and traffic generated by development in Area 2 would utilise the southern access point thus meaning all movements (left in, right in, left out and right out) would be performed at the two site access points formed with Derby Road). The indicative site layout is shown in **Figure 5-1**.

Figure 5-1 Indicative Site Masterplan Extract



A split of traffic by each access point has been undertaken on the basis of the proportion of trip generation originating in that particular area and based on SATURN data utilised in the previous TA; this is set out in **Table 5-10**, below.

Table 5-10 Assignment of Traffic to Each Access Point

Site Access Point	Movement	AM	PM
Northern Site Access	Left Out	15%	12%
(Area 1)	Right Out	14%	9%
	Left In	19%	5%
	Right In	20%	3%
Southern Site Access	Left Out	37%	44%
(Area 2)	Right Out	34%	35%
	Left In	30%	58%
	Right In	32%	34%

The proportions calculated in **Tables 5-9** and **5-10** have been utilised to assign traffic accordingly to the two site access points.

6. Traffic Impact Assessment

6.1. Introduction

It was suggested in the Scoping Note (**Appendix B**) that the development impact would be considered at the following junctions:

- Northern Site Access located off the A5121 Derby Road;
- Southern Site Access located off the A5121 Derby Road; and
- Burton Albion roundabout (Derby Road/ Princess Way/ Hawkins Lane).

6.2. Assessment Periods

The following assessment periods have been used, as per the previous assessment:

- AM Peak (08:00-09:00); and
- PM Peak (17:00-18:00).

6.3. Future Year Assessment

The local highway network was assessed in the previous TA for the future year of 2016. For the purposes of this assessment, it is proposed to assess a future year of 2021. Traffic growth factors have been extracted from TEMPRO, as follows:

• Geographical Area: Burton Upon Trent

Trip Purpose: All PurposeTransport Mode: Car Driver

Trip End Type: Origin/ Destination

• Time Period: Weekday AM Peak Period (0700-0959)/ Weekday PM Peak Period (1600-1859)

• NTM Adjustment: Dataset AF09, Urban Principal Network

The growth factors to growth 2016 SATURN data to 2021 are summarised in Table 6-1.

Table 6-1 TEMPRO Growth Factors 2016-2021

Weekday AM peak period	Weekday PM peak period
1.0698	1.0714

6.4. Committed Development

Although the growth factors above account for both background growth in traffic and growth as a result of development, further consideration will be given to development which would have a direct impact on the local network.

As such, the assessment will include the previously consented residential development accessed from Princess Way utilising the parameters adopted from the previous TA.

An application has been registered on behalf of Burton Albion Football Club for the erection of a detached community facility building for use as club room, changing facilities and toilets and the formation of a 3G artificial grass pitch with associated perimeter fencing. This application has not yet been determined but has been treated as committed to provide a robust assessment.

The planning documentation associated with this application did not include a Transport Assessment and therefore provided no indication of the quantum of trip generation associated with the development proposals.

For robustness, we have calculated an estimation of the trips generated by the development using trip rates from the TRICS database. **Table 6-2** sets out the trip rates used, and the trip generation calculated for the application at Burton Albion Football Club (see **Appendix D** for full TRICS outputs).

Table 6-2 Trip Rates and Trip Generation for the Committed Development

		AM	Peak (08:00-0	9:00)	PM Peak (17:00-18:00)			
Proposed Land Use	GFA (ha)	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way	
3G Artificial Grass Pitch (Trip Rates)		7.421	1.855	9.276	20.594	7.978	28.572	
3G Artificial Grass Pitch (Trip Generation)	0.6663	5	1	6	14	5	19	

The trip generation associated with the committed development has been distributed through Burton Albion roundabout (Derby Road/ Princess Way/ Hawkins Lane) in order to provide a robust assessment of the revised development proposals on the local highway network. For robustness, it has been assumed that 100% of the trip generation associated with the proposals at Burton Albion Football Club would arrive/ depart at the site via the Burton Albion Roundabout. The trips at this roundabout have been distributed using turning proportions to determine the volume of committed development traffic passing the site access points.

6.4.1. Traffic Flow Scenarios

The original Transport Assessment for the consented development proposals used a base assessment year of 2016. With regards to the revised development proposals it is considered appropriate to use a future base assessment year of 2021 (including committed development as discussed above). The following development scenarios have been considered for the junction capacity models of the site access junctions:

- 2021 AM Base + Committed Development and total revised development traffic (the proposed Pirelli Derby Road development traffic less the existing Pirelli trip generation); and
- 2021 PM Base + Committed Development and total revised development traffic (the proposed Pirelli Derby Road development traffic less the existing Pirelli trip generation).

The traffic flow diagrams for the above scenarios are included at **Appendix E**.

6.5. Development Impact Assessment

This section of the report summarises the findings of the development impact assessment undertaken for the junctions identified above. Detailed Junctions 9 outputs have been included in **Appendix F** of this report⁵.

Junctions 9 has been used to test the capacity at the two site access junctions. This assessment has been carried out for the weekday AM (08:00-09:00) and PM (17:00-18:00) peak hours in the future assessment year of 2021.

Junctions 9 software allows a range of traffic flow profiles to be adopted when undertaking peak period model runs. Generally an RFC (Ratio of Flow to Capacity) of below 0.85 (for roundabouts and priority junctions) indicates that a junction operates within capacity for the assessed flows. An RFC of over 1.0 indicates that a junction is over capacity.

6.5.1. Northern Site Access Junction

The northern site access is a priority 'T' junction formed with the A5121 Derby Road. The junction has been modelled in Junctions 9 and the capacity results are presented in **Table 6-3** for the '2021 base + committed development + total revised development traffic' scenario.

⁵ Note: Junction Capacity Assessment has been undertaken using GFA's.

Table 6-3 Capacity Analysis Summary - Northern Site Access

	AM PEA	K (08:00-	09:00)	PM PEAK (17:00-18:00)				
Movement	Queue (Vehicles)	Delay (s)	RFC	Queue (Vehicles)	Delay (s)	RFC		
2021 Base + committed development + total revised development traffic								
Site Access to Derby Road (N) (Stream B-C)	0.0	9.23	0.02	0.0	10.10	0.04		
Site Access to Derby Road (S) (Stream B-A)	0.0	24.15	0.04	0.1	25.20	0.07		
Derby Road (N) to Site Access (Stream C-B)	0.0	8.20	0.03	0.0	8.54	0.01		

The above results demonstrate that the Northern Site Access is forecast to operate well within acceptable thresholds of capacity. The site access is forecast to have minimal delays and queuing is minimal. In particular, the queuing is forecast to be easily accommodated within the proposed right turn bay on the Derby Road.

6.5.2. Southern Site Access Junction

The southern site access is a priority 'T' junction formed with the A5121 Derby Road. The junction has been modelled in Junctions 9 and the capacity results are presented in **Table 6-4** for the '2021 base + committed development + total revised development traffic' scenario.

Table 6-4 Capacity Analysis Summary – Southern Site Access

	AM PEAI	K (08:00-	09:00)	PM PEAK (17:00-18:00)				
Movement	Queue (Vehicles)	Delay (s)	RFC	Queue (Vehicles)	Delay (s)	RFC		
2021 Base + committed development + total revised development traffic								
Site Access to Derby Road (N) (Stream B-C)	0.1	10.14	0.07	0.2	13.01	0.18		
Site Access to Derby Road (S) (Stream B-A)	0.2	27.62	0.16	0.5	35.39	0.33		
Derby Road (N) to Site Access (Stream C-B)	0.1	8.55	0.07	0.1	9.39	0.09		

The above results demonstrate that the Southern Site Access is forecast to operate well within acceptable thresholds of capacity. The site access is forecast to have minimal delays and queuing is minimal. In particular, the queuing is forecast to be easily accommodated within the proposed right turn bay on the Derby Road.

6.5.3. Burton Albion Roundabout

A mitigation scheme was put forward as part of the previous Transport Assessment. This scheme has been constructed and is now in place.

As set out in **Table 5-8**, it is proposed that the revised development proposals would generate additional traffic based on the consented mix. Due to the nature of the consented development mix, it was assumed that all trips would be new on the local network.

However, due to the revised development proposals, in particular the retail uses, it is envisaged that there would be a proportion of trips which would be pass-by and would not be new on the local highway network considered.

A summary of the pass-by trips, resultant 'new' trip generation and the difference between the consented trip generation is provided in **Table 6-5**.

Table 6-5 Comparison of 'New' Trip Generation

Land Use	% New Trips	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)			
		Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way	
B2 Industrial Units	100%	9	2	12	2	12	14	
B8 Distribution/ Storage Units	100%	8	4	11	4	11	15	
A1 Builders Merchant	100%	8	7	15	2	3	5	
D2 24 Hr Gym	100%	5	4	9	11	6	17	
A1 Local Shops	50%	10	9	20	9	10	19	
A1 Discount Foodstore	70%	13	9	22	41	48	89	
A5 Fast Food (Drive-through)	0%	0	0	0	0	0	0	
Revised Development - 'New' Trip Generation		53	36	89	69	89	159	
Consented Development - 'New' Trip Generation		82	31	114	79	97	176	
Net 'New' Trip Generation		-29	5	-25	-10	-8	-17	

The table demonstrates that the total number of 'new' trips generated by the revised development proposals is less than the 'new' trips generated by the consented development. As such, the impact on the Burton Albion roundabout is less than the impact of the consented proposals and therefore no further assessment or mitigation is required.

7. Summary and Conclusions

7.1. Summary

Atkins has been commissioned by St Modwen Developments Ltd to prepare a Transport Assessment (TA) to support a planning application on the land adjacent to the Pirelli Factory, Derby Road, Stretton (previous planning ref: 2011/01130).

A review of local and national transport related policy has been undertaken to ensure that the proposed development accords.

A review of the local highway network has been undertaken which includes an assessment of sustainable travel availability. There is an established network of footways and cycle facilities. The site can be accessed by bus with a frequent service serving local bus stops within 300m of the site. Therefore the site can be accessed by sustainable modes of travel using existing infrastructure.

A review of accident data has been undertaken for the latest three year period. This concluded that all PIAs were attributed, at least partly to, driver error.

It is proposed to provide a development mix of employment, retail, food/drink and a builder's merchant. These would be accessed from two priority junctions formed with the A5121 Derby Road. The employment and builder's merchant would be accessed from the northern site access junction and the southern site access junction would provide access to the foodstore, retail and food/drink land uses. Local car parking standards have been reviewed and the total provision is compliant with these standards. Cycle parking is also proposed to be provided to encourage the use of bicycles to access the site. Separate provision is provided in each development area.

Trip generation has been based on trip rates set out in the Halcrow TA with additional trip rates extracted from the TRICS database. Traffic has been distributed using the previously used SATURN outputs.

The two site access junctions and the Burton Albion roundabout have been assessed using Junctions 9. It has been demonstrated that the proposed site access junctions are forecast to operate well within capacity. Queues are minimal and in particular, queuing is forecast to be easily accommodated within the right turn provision on Derby Road.

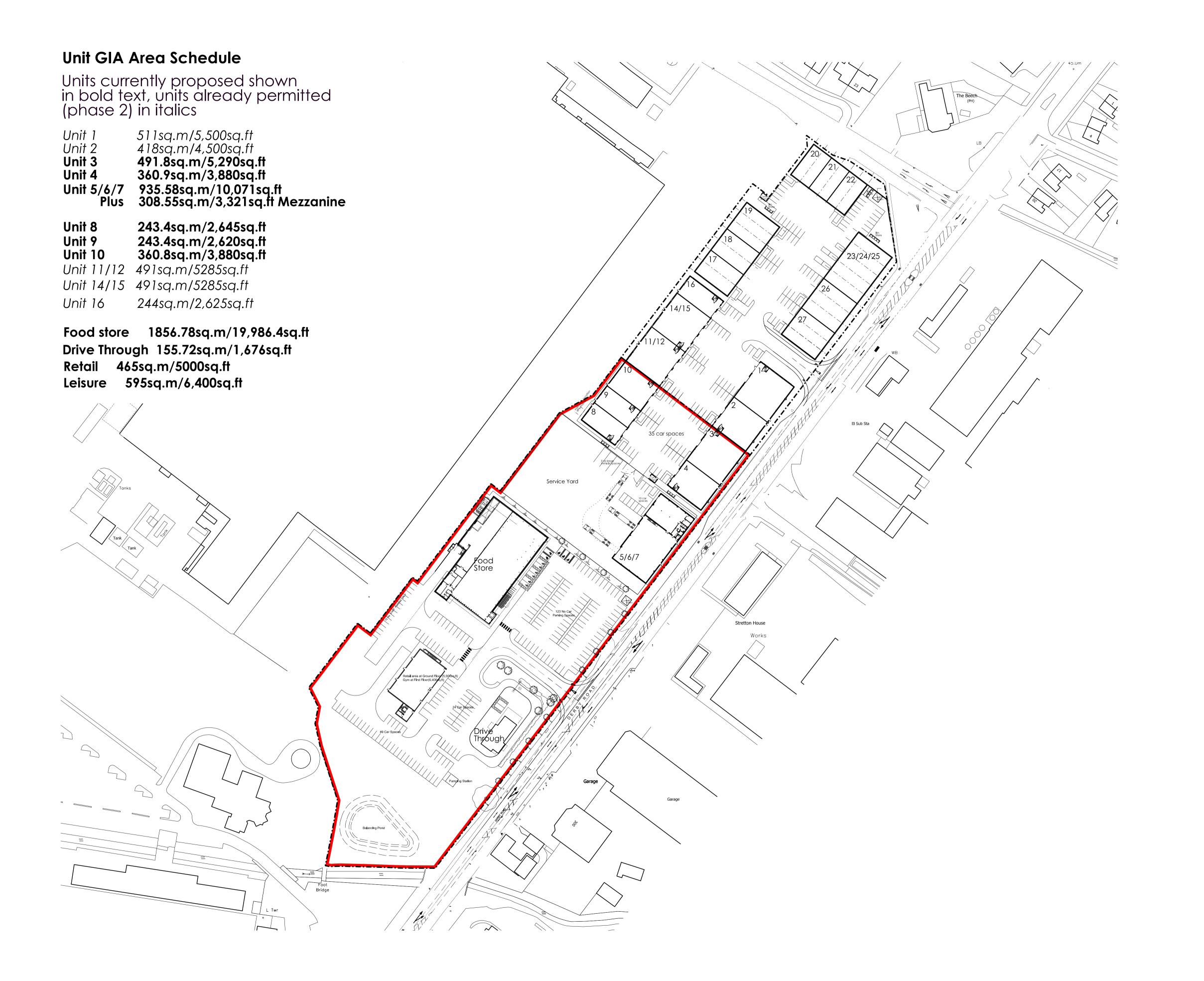
The vehicle impact of the revised development proposals on the Burton Albion roundabout is forecast to be less than the consented scheme and therefore no further assessment or mitigation is required.

7.2. Conclusion

It is not forecast that the proposals would have a material impact above and beyond the originally identified impact of the consented proposals on the surrounding highway network.



Appendix A. Site Plan



This drawing to be read in conjunction with all specifications and all other consultants design information. Any contradictions between this drawing and any other design information to be advised to the contract administrator and author immediately.

The contractor to site measure, check and verify all information issued, and confirm the correctness of the contents prior to the commencement on site.

The contractor to comply with all current statutory legislation, Building Regulations, British Standards, and good building practice.

Do not scale from this drawing.

Rev	ision	Date		
rev	description	date	dr	by
Α	Gia area schedule added	27-05-16	kd	
В	Gia area schedule updated	01-08-16	kd	
С	Foodstore position updated	16-08-16	kd	
D	Foodstore position updated Bin stores added	20-09-16	kd	
Е	Pumping Station and Balancing pond relocated, Retail terrace added	05-10-16	kd	j,
F	Retail/Leisure added to schedule	14-10-16	kd	j
G	Commercial Car Parking increased	19-10-16	kd	j
Н	Red line boundary amended	09-11-16	kd	j١
I	Red line boundary amended	10-11-16	kd	j۱

St Modwen Developments Ltd

project:

Albion Gateway
Phase 3

title:

Overall Proposed Site Plan

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Appendix B. Scoping Note

Project:	Pirelli - Derby Road, Burton-upon-Trent	To:	SCC, Highways	
Subject:	Transport Scoping Note	From:	Transportation, Atkins	
Date:	Mar 2016	cc:		

1.1. Introduction

Atkins has been commissioned to provide transport inputs for revised development proposals at the former Pirelli Derby Road site, Burton-upon-Trent.

A planning application was submitted in 2011 and was supported by a Transport Assessment prepared by Halcrow. Planning permission was subsequently granted. The following development mix formed the basis of the Transport Assessment for the Derby Road site:

- 3,728sqm GFA B1 Office;
- 1,061sqm GFA B2 Industrial Units;
- 4,246sqm GFA B8 Distribution/Storage Units;
- 568sqm GFA A4 Public House;
- 583sqm GFA A3 Restaurant; and
- 90 bed C2 Hotel.

The Transport Assessment assumed access to the Derby Road site would primarily be taken via two priority controlled junctions formed with Derby Road with a secondary access provided from Beech Avenue.

It is now proposed to provide access only via the two Derby Road site access points and no longer provide the secondary access from Beech Avenue.

It is also proposed to revise the development mix as follows:

- 4,599sqm GIA B2 Industrial Units;
- 4,599sqm GIA B8 Distribution/Storage Units;
- 582sqm GIA A4 Public House;
- 174sqm GIA A3/A4 Coffee Shop Drive Through; and
- 1,805sqm GIA A1 Discount Foodstore.

It is proposed to prepare a Transport Assessment (TA) in line with 'Travel Plans, Transport Assessments and Statements in Decision-Taking' to assess the proposed changes to the consented development mix. The suggested scope of assessment is included below.

1.2. Existing Situation

The TA would include the following:

- A brief review of background information including the existing consent, the trip generation of the consented uses and details of the impaction and mitigation identified in the previous Transport Assessment (prepared by Halcrow);
- A review of the existing road network;
- A review of the latest three years of personal injury accident data of the A5121 between and including the junctions formed with Beech Avenue and Princess Way; and
- A desktop review of the existing sustainable travel provision.

1.3. Proposed Development

The TA would include the following:

- Details of the proposed quantum of development,
- The resultant level of parking based on local parking standards and servicing requirements; and
- Details of the access proposals.

1.4. Trip Generation

1.4.1. Proposed Trip Generation – Consented Proposals

The existing trip generation has been extracted from the Halcrow Transport Assessment and is presented in **Tables 1** and **2**, below. This information has been reproduced from Table 4.1 and Table 4.2 of the Halcrow report but excludes residential development proposed as part of the Pirelli Princess Way site as this traffic would not utilise the accesses on Derby Road and is not proposed to change.

Table 1. Trip Rates - Consented Proposed Development (Pirelli Derby Road Site)

Land Use		AM Peak		PM Peak			
Land USE	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way	
B1	B1 1.634 0.206		1.84	0.218	1.327	1.545	
B2	0.266	0.068	0.334	0.059	0.33	0.389	
B8	0.219	0.102	0.321	0.12	0.315	0.435	
A4	0	0	0	4.84	3.63	8.47	
А3	A3 0 0		0	3.393	0.183	3.576	
C2	0.1	0.2	0.3	0.2	0.1	0.3	

Table 2. Trip Generation – Consented Proposed Development (Pirelli Derby Road Site)

Land Use		AM Peak		PM Peak			
Land USE	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way	
B1	61	8	69	8	49	58	
B2	3	1	4	1	4	4	
B8	9	4	14	5	13	18	
A4	0	0	0	27	21	48	
А3	0	0	0	20	1	21	
C2	9 18		27	18	9	27	
Total	82	31	113	79	97	176	

1.4.2. Proposed Trip Generation – Revised Proposals

1.4.2.1. Food Store

Trip rates have been obtained from the TRICS database in order to calculate the traffic generation of the revised proposals.

Sites have been selected from the 01 - C Discount Foodstore Category. Surveys were excluded from the assessment on the following basis:

- Sites surveyed on a weekend day;
- Sites located in Greater London, Northern Ireland and Republic of Ireland; and
- Sites located in an Edge of Town Centre and Neighbourhood Centre location.

The trip rates for the proposed foodstore are presented in **Table 3**, and the full outputs are presented in **Appendix A**.

 Table 3.
 Foodstore Trip Rates and Trip Generation

	Land Use		AM Peak		PM Peak			
	Land OSE	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way	
A1 Food Retail	Trip Rates per 100sqm	0.992	0.714	1.706	3.151	3.673	6.824	
	Trip Generation 1,805sqm	18	13	31	57	66	123	

1.4.2.2. Drive-Through Coffee Retailer

Since the appearance of drive through coffee retailers has been relatively recent, such sites are not yet included in the TRICS database. As such trip rates have been obtained from the TRICS database from the 06 – D Fast Food Drive-Through Category.

Surveys were excluded from the assessment on the following basis:

- Sites surveyed on a weekend day;
- Sites located in Greater London, Northern Ireland, Republic of Ireland and Scotland;
- Sites located in an Edge of Town Centre location; and
- Sites which were not operational during the network peak hours assessed.

The trip rates for the proposed drive through facility are presented in **Table 4**, below. The TRICS outputs are provided at **Appendix A**.

Table 4. Drive Through Coffee Retailer Trip Rates and Trip Generation

	Land Use		AM Peak		PM Peak			
	Land USe	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way	
Drive Through	Trip Rates per 100sqm	9.752	9.288	19.04	12.178	11.249	23.427	
Coffee Retailer (174sqm)	Trip Generation 189sqm	17	16	33	21	20	41	

1.4.2.3. Total Revised Trip Generation

The resultant revised trip generation for the Pirelli Derby Road site is presented in **Table 5**, below. This also assumes the revised GFAs for the A3/A4 and B1/B2/B8 land uses.

Table 5. Revised Trip Generation - Pirelli Derby Road Site

Land Use		AM Peak		PM Peak			
Land Ose	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way	
Revised A4 Traffic (582sqm)	0	0	0	28	21	49	
Revised B2 Traffic (4,599sqm)	12	3	15	6	14	20	
Revised B8 Traffic							
(4,599sqm)	10	5	15	6	14	20	
A1 Food store Traffic (1,805sqm)	18	13	31	57	66	123	
Drive Through Coffee Retailer (174sqm)	17	16	33	21	20	41	
Revised Total Traffic	57	37	94	114	137	251	
Consented Total Traffic	82	31	114	79	97	176	
Net Difference	-25	6	-20	35	40	75	

It can be seen from the above tables that the revised development proposals for the former Pirelli Derby Road site would generate an overall net increase of 55 trips within the AM and PM peak hours when compared to the development quantum considered in the 2011 Halcrow TA. The revised development proposals would result in a net decrease of approximately 20 trips during the AM peak hour, however there would be a net increase of approximately 75 trips in the PM peak. This is predominantly generated by trips associated with the proposed A1 land use.

1.4.3. Pass-By and Diverted Trips

During the AM and PM peak hours it is likely that a proportion of the trips associated with the A1 Land Use (Discount Food store) and the drive through coffee restaurant would be 'pass-by' or 'diverted' trips and therefore not all the trips generated would be considered primary or new trips on the highway network.

The TRICS Research Report 95/2 – Pass-by and Diverted Trips, states that the proportion of trips generally accepted to be non-primary is 30%. Therefore, it is proposed that 30% of foodstore trips into the site will be deducted from the through movements on the A5121 to account for trips which would instead access the site on the way past.

In terms of the coffee drive through, it is proposed that 100% of trips would be pass-by due to the nature of the facility. In reality, the overall number of trips generated by this aspect of the development is likely to be lower since there would be linked trips between the other land uses on-site.

1.4.4. Traffic Distribution

The Halcrow Transport Assessment utilised the SCC SATURN Traffic Model to distribute development traffic. The outputs of the SATURN modelling have been utilised to determine the north/south split of arriving and departing traffic. A summary of the north/south proportional split is set out in **Table 6**, below.

Table 6. Proportional Split of Revised Development Traffic

	AM	PM
Arrivals from North	51%	37%
Arrivals from South	49%	63%
Departures to North	52%	55%
Departures to South	48%	45%

Due to the strategic nature of the SATURN model, it was assumed that all traffic arriving from the north and departing to the north would utilise the northern access point and all traffic arriving from the south and departing to the south would utilise the southern access point.

In reality, due to the site layout, this would not be possible as traffic generated by development in Area 1 would utilise the northern access point and traffic generated by development in Area 2 would utilise the southern access point thus meaning all movements (left in, right in, left out and right out) would be performed at the two site access points formed with. Derby Road). The indicative site layout is shown in **Figure 1**.

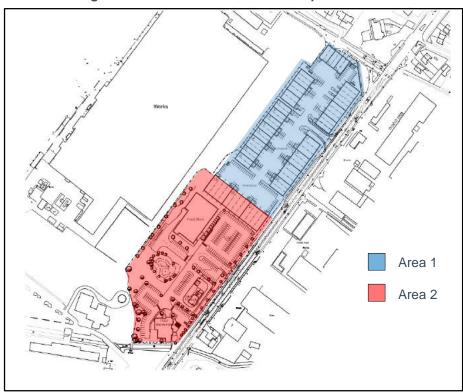


Figure 1. Indicative Site Masterplan Extract

A split of traffic by each access point has been undertaken on the basis of the proportion of trip generation originating in that particular area and based on SATURN data utilised in the previous TA; this is set out in **Table 7**, below.

Site Access Point	Movement	AM	PM	
Northern Site Access	Left Out	10%	12%	
	Right Out	9%	10%	
	Left In	19%	4%	
	Right In	20%	2%	
Southern Site Access	Left Out	42%	44%	
	Right Out	39%	35%	
	Left In	29%	60%	

31%

35%

Table 7. Assignment of Traffic to Each Access Point

Right In

The proportions calculated in **Tables 5** and **6** have been utilised to assign traffic accordingly to the two access points.

In order to assess impact of the revised development proposals on the Burton Albion roundabout (Derby Road/ Princess Way/ Hawkins Lane), the trips generated by the development proposals (based on the assigned traffic outlined in **Table 7**) have been distributed using the turning proportions from the SATURN model. The turning proportions used to distribute the traffic through the roundabout are outlined in **Table 8**. Cells highlighted green represent southbound departures from the site, cells highlighted orange represent northbound arrivals at the site.

Table 8. Proportional Distribution of Trips Generated through Burton Albion Roundabout

From/ To Derby Road North Derby Road North 0% (0%)		Wetmore Road	Hawkins Lane	Derby Road South	Princess Way
		1% (3%)	50% (44%)	44% (48%)	5% (5%)
Wetmore Road	2% (1%)	0% (0%)	0% (0%)	0% (0%)	0% (0%)
Hawkins Lane	57% (63%)	0% (0%)	0% (0%)	0% (0%)	0% (0%)
Derby Road South	38% (31%)	0% (0%)	0% (0%)	0% (0%)	0% (0%)
Princess Way 3% (4%)		0% (0%)	0% (0%)	0% (0%)	0% (0%)

^{*}Distribution based on SATURN Turning Proportions.

1.4.5. Peak Assessment Hours

It is proposed to assess the proposals for the AM and PM peak hours as per the previous assessment., as follows:

- AM Peak (08:00-09:00)
- PM Peak (17:00-18:00)

1.4.6. Future Year Assessment

The local highway network was assessed in the previous TA for the future year of 2016. For the purposes of this assessment, it is proposed to assess a future year of 2021. Traffic growth factors have been extracted from TEMPRO, as follows:

- Geographical Area: Burton Upon Trent
- Trip Purpose: All PurposeTransport Mode: Car Driver
- Trip End Type: Origin/ Destination
- Time Period: Weekday AM Peak Period (0700-0959)/ Weekday PM Peak Period (1600-1859)
- NTM Adjustment: Dataset AF09, Urban Principal Network

The growth factors to growth 2016 SATURN data to 2021 are summarised in Table 9.

Table 9. TEMPRO Growth Factors 2016-2021

Weekday AM peak period	Weekday PM peak period
1.0698	1.0714

1.4.7. Committed Development

Although the growth factors above account for both background growth in traffic and growth as a result of development, further consideration will be given to development which would have a direct impact on the local network.

As such, the assessment will include the previously consented residential development accessed from Princess Way utilising the parameters adopted from the previous TA.

An application has been registered on behalf of Burton Albion Football Club for the erection of a detached community facility building for use as club room, changing facilities and toilets and the formation of a 3G artificial grass pitch with associated perimeter fencing. This application has not yet been determined but has been treated as committed to provide a robust assessment.

The planning documentation associated with this application did not include a Transport Assessment and therefore provided no indication of the quantum of trip generation associated with the development proposals. For robustness, we have calculated an estimation of the trips generated by the development using trip rates from the TRICS database. **Table 10** sets out the trip rates used, and the trip generation calculated for the application at Burton Albion Football Club (see **Appendix A** for full TRICS outputs).

PM Peak (17:00-18:00) AM Peak (08:00-09:00) **GFA Proposed Land Use Arrivals Departures** Two-Way **Arrivals Departures** Two-Way (ha) 3G Artificial Grass Pitch 7.421 1.855 9.276 20.594 7.978 28.572 (Trip Rates) 0.6663 3G Artificial Grass Pitch 5 1 6 14 5 19 (Trip Generation)

Table 10. Trip Rates and Trip Generation for the Committed Development.

The trip generation associated with the committed development has been distributed through Burton Albion roundabout (Derby Road/ Princess Way/ Hawkins Lane) in order to provide a robust assessment of the revised development proposals on the local highway network. For robustness, it has been assumed that 100% of the trip generation associated with the proposals at Burton Albion Football Club would arrive/ depart at the site via Derby Road North.

1.4.8. Traffic Flow Scenarios

The original Transport Assessment for the consented development proposals used a base assessment year of 2016. With regards to the revised development proposals it is considered appropriate to use a future base assessment year of 2021 (including committed development as discussed above). The following development scenarios have been considered:

- 2021 AM Base + Committed Development;
- 2021 PM Base + Committed Development;
- 2021 AM Base + Committed Development and net revised development traffic (the proposed development traffic less the existing Pirelli trip generation potential); and
- 2021 PM Base + Committed Development and net revised development traffic (the proposed development traffic less the existing Pirelli trip generation potential).

1.5. Junction Capacity Modelling

The trip generation and land use assumptions outlined above will be used to assess the following junctions using 'standalone' junction modelling software:

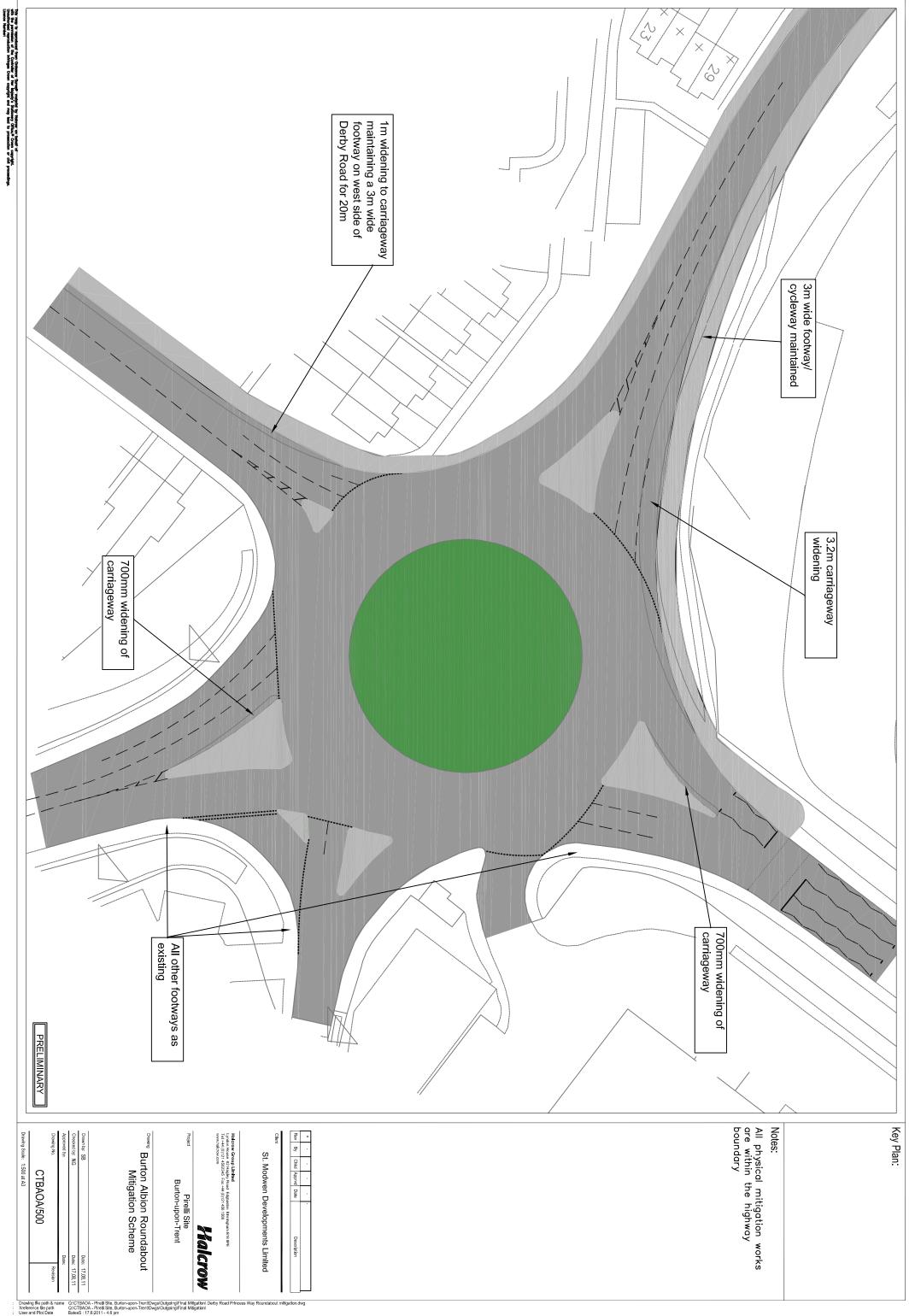
- Northern Site Access located off the A5121 Derby Road;
- Southern Site Access located off the A5121 Derby Road; and
- Burton Albion roundabout (Derby Road/ Princess Way/ Hawkins Lane).

Each junction will be assessed for the traffic flow scenarios set out previously. The Burton Albion roundabout will be assessed using the previously agreed mitigation model included in the Halcrow TA.

1.6. Travel Plan

The extant planning application submitted in 2011 for the development site was accompanied by a Framework Travel Plan in order to encourage residents/ visitors/ staff to travel by more sustainable modes and reduce the dependency on single occupancy car travel. The Framework Travel Plan was submitted alongside the extant application to provide guidance on the site-wide Travel Plan (and individual Travel Plans) should be developed once the end users of the site were identified. It is proposed that as part of this revised application, the existing Framework Travel Plan is still applicable.

Appendix C. Burton Albion Roundabout Mitigation



Appendix D. TRICS Outputs

Calculation Reference: AUDIT-803409-160329-0319

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL

Category : C - DISCOUNT FOOD STORES

VEHIČLES

Selected regions and areas:

03 SOUTH WEST

DC DORSET 1 days

05 EAST MIDLANDS

NR NORTHAMPTONSHIRE 1 days

06 WEST MIDLANDS

SH SHROPSHIRE 1 days

08 NORTH WEST

MS MERSEYSIDE 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: Gross floor area

Actual Range: 1165 to 1900 (units: sqm)
Range Selected by User: 865 to 1900 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/07 to 27/11/12

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

Selected survey days:

Tuesday 2 days Wednesday 2 days

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

Selected survey types:

Manual count 4 days
Directional ATC Count 0 days

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

Selected Locations:

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

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

Selected Location Sub Categories:

Industrial Zone 1
Commercial Zone 1
Residential Zone 1
No Sub Category 1

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

Filtering Stage 3 selection:

Use Class:

A1 4 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:

10,001 to 15,000 2 days 25,001 to 50,000 2 days

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

Population within 5 miles:

 50,001 to 75,000
 1 days

 100,001 to 125,000
 1 days

 250,001 to 500,000
 1 days

 500,001 or More
 1 days

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

Car ownership within 5 miles:

0.6 to 1.0 1 days 1.1 to 1.5 3 days

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

Petrol filling station:

Included in the survey count 0 days Excluded from count or no filling station 4 days

This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.

Travel Plan:

No 4 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 DC-01-C-02 LIDL DORSET

POOLE ROAD BRANKSOME BOURNEMOUTH

Suburban Area (PPS6 Out of Centre)

Commercial Zone

Total Gross floor area: 1334 sqm

Survey date: TUESDAY 15/07/08 Survey Type: MANUAL

MS-01-C-03 ALDI MERSEYSIDE

LAUREL ROAD ELM PARK LIVERPOOL

Suburban Area (PPS6 Out of Centre)

Residential Zone

Total Gross floor area: 1165 sqm

Survey date: WEDNESDAY 20/06/07 Survey Type: MANUAL NR-01-C-01 ALDI NORTHAMPTONSHIRE

DALTON ROAD

3

CORBY Edge of Town

Industrial Zone

Total Gross floor area: 1345 sqm

Survey date: WEDNESDAY 19/11/08 Survey Type: MANUAL

4 SH-01-C-01 LIDL SHROPSHIRE

CASTLE STREET

HADLEY TELFORD

Suburban Area (PPS6 Out of Centre)

No Sub Category

Total Gross floor area: 1900 sqm

Survey date: TUESDAY 16/06/09 Survey Type: MANUAL

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

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES

VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES	ò		TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	1617	0.309	2	1617	0.155	2	1617	0.464
08:00 - 09:00	4	1436	0.992	4	1436	0.714	4	1436	1.706
09:00 - 10:00	4	1436	2.577	4	1436	1.863	4	1436	4.440
10:00 - 11:00	4	1436	3.830	4	1436	3.517	4	1436	7.347
11:00 - 12:00	4	1436	4.439	4	1436	3.969	4	1436	8.408
12:00 - 13:00	4	1436	4.126	4	1436	4.318	4	1436	8.444
13:00 - 14:00	4	1436	3.604	4	1436	3.552	4	1436	7.156
14:00 - 15:00	4	1436	3.360	4	1436	3.325	4	1436	6.685
15:00 - 16:00	4	1436	3.360	4	1436	3.447	4	1436	6.807
16:00 - 17:00	4	1436	3.691	4	1436	3.743	4	1436	7.434
17:00 - 18:00	4	1436	3.151	4	1436	3.673	4	1436	6.824
18:00 - 19:00	4	1436	3.517	4	1436	3.482	4	1436	6.999
19:00 - 20:00	4	1436	1.358	4	1436	2.194	4	1436	3.552
20:00 - 21:00	1	1334	1.274	1	1334	1.649	1	1334	2.923
21:00 - 22:00									
22:00 - 23:00	<u> </u>		<u> </u>				·		·
23:00 - 24:00									<u> </u>
Total Rates:			39.588			39.601			79.189

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: 1165 - 1900 (units: sqm) Survey date date range: 01/01/07 - 27/11/12

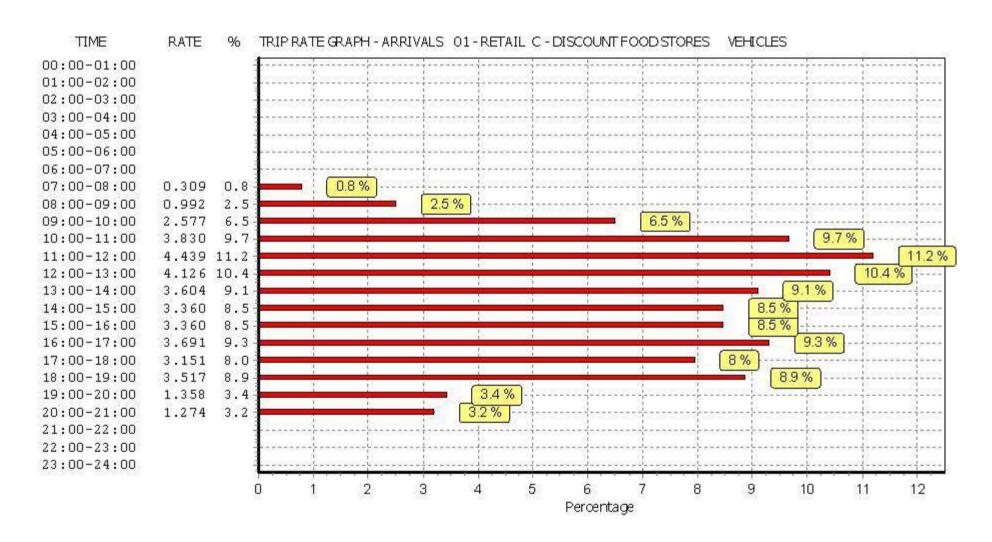
Number of weekdays (Monday-Friday): 4
Number of Saturdays: 0
Number of Sundays: 0
Surveys manually removed from selection: 0

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

Atkins

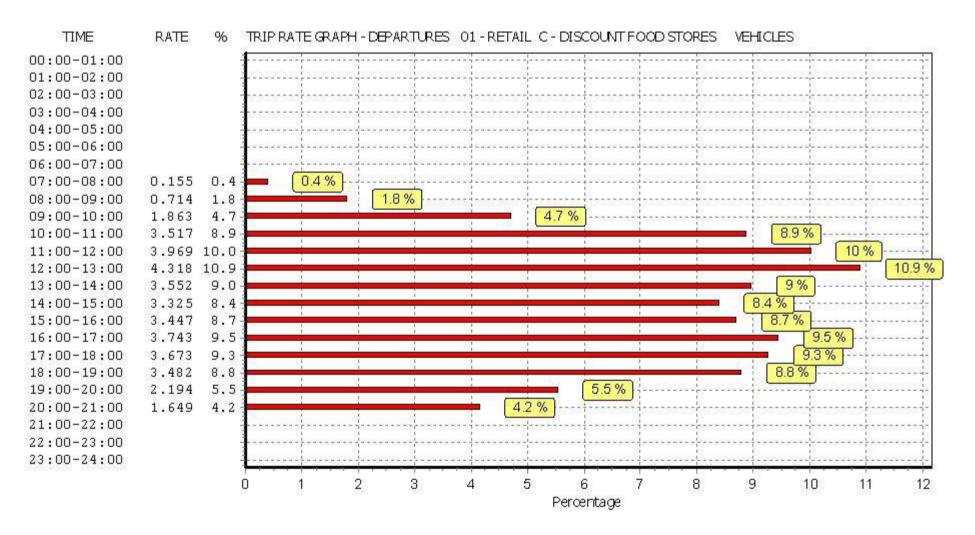
Axis

Licence No: 803409



Licence No: 803409

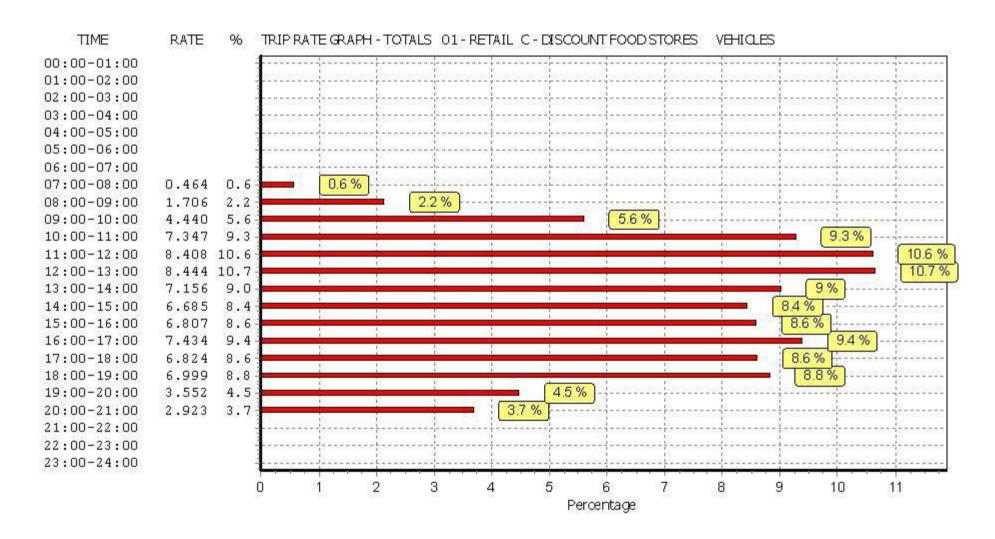
Birmingham Atkins Axis



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TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES

TAXIS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			[DEPARTURES			TOTALS		
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip	
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	Rate	
00:00 - 01:00										
01:00 - 02:00										
02:00 - 03:00										
03:00 - 04:00										
04:00 - 05:00										
05:00 - 06:00										
06:00 - 07:00										
07:00 - 08:00	2	1617	0.000	2	1617	0.000	2	1617	0.000	
08:00 - 09:00	4	1436	0.035	4	1436	0.035	4	1436	0.070	
09:00 - 10:00	4	1436	0.000	4	1436	0.000	4	1436	0.000	
10:00 - 11:00	4	1436	0.035	4	1436	0.035	4	1436	0.070	
11:00 - 12:00	4	1436	0.035	4	1436	0.035	4	1436	0.070	
12:00 - 13:00	4	1436	0.070	4	1436	0.070	4	1436	0.140	
13:00 - 14:00	4	1436	0.070	4	1436	0.070	4	1436	0.140	
14:00 - 15:00	4	1436	0.035	4	1436	0.017	4	1436	0.052	
15:00 - 16:00	4	1436	0.070	4	1436	0.087	4	1436	0.157	
16:00 - 17:00	4	1436	0.070	4	1436	0.052	4	1436	0.122	
17:00 - 18:00	4	1436	0.035	4	1436	0.052	4	1436	0.087	
18:00 - 19:00	4	1436	0.017	4	1436	0.017	4	1436	0.034	
19:00 - 20:00	4	1436	0.052	4	1436	0.052	4	1436	0.104	
20:00 - 21:00	1	1334	0.150	1	1334	0.150	1	1334	0.300	
21:00 - 22:00										
22:00 - 23:00										
23:00 - 24:00										
Total Rates:			0.674			0.672			1.346	

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

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

Parameter summary

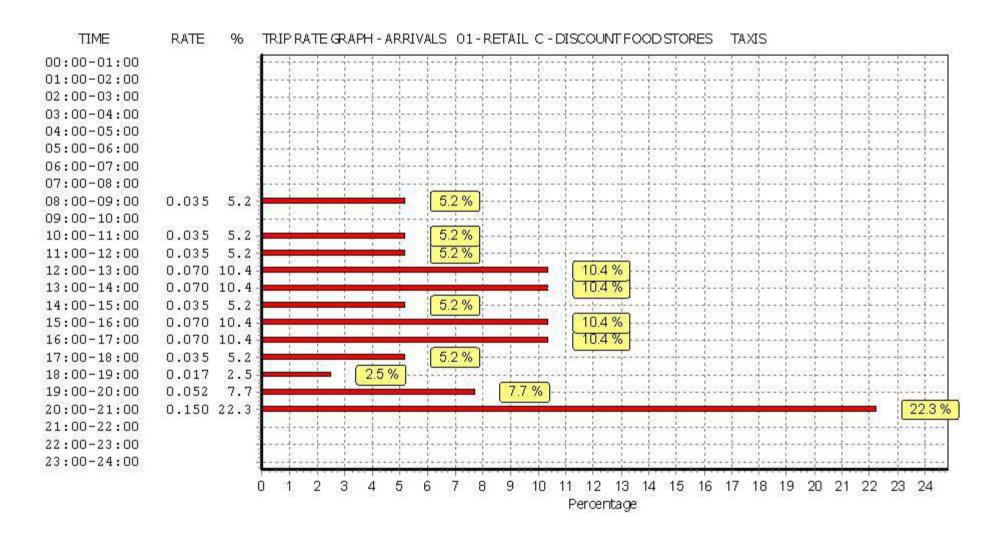
Trip rate parameter range selected: 1165 - 1900 (units: sqm) Survey date date range: 01/01/07 - 27/11/12

Number of weekdays (Monday-Friday): 4
Number of Saturdays: 0
Number of Sundays: 0
Surveys manually removed from selection: 0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are 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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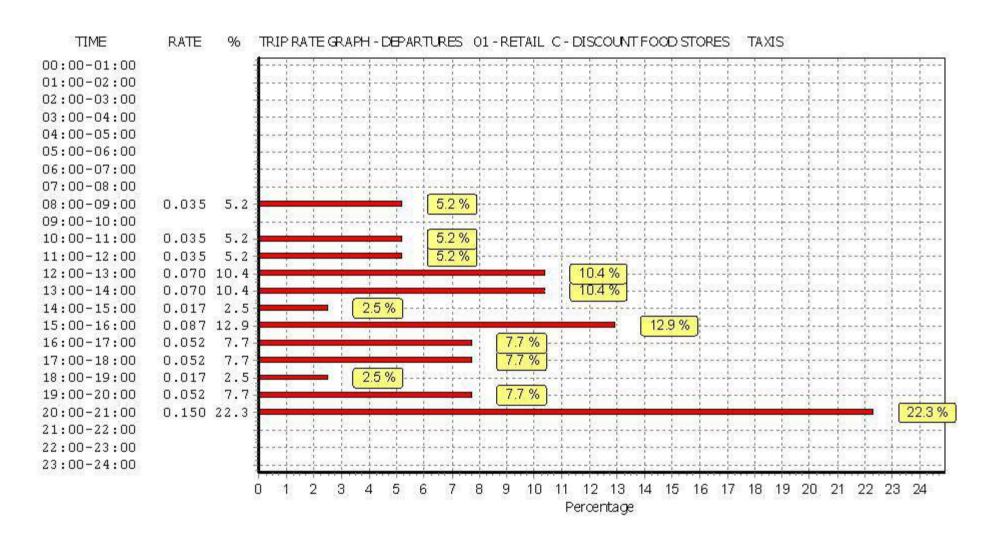
Axis Birmingham Licence No: 803409



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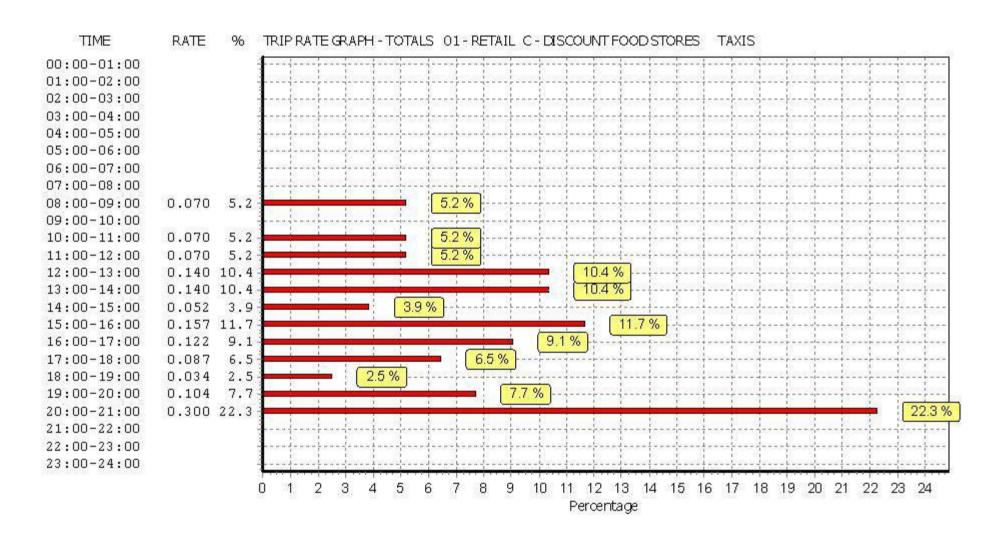
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TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES

OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	1617	0.031	2	1617	0.031	2	1617	0.062
08:00 - 09:00	4	1436	0.017	4	1436	0.017	4	1436	0.034
09:00 - 10:00	4	1436	0.017	4	1436	0.017	4	1436	0.034
10:00 - 11:00	4	1436	0.035	4	1436	0.035	4	1436	0.070
11:00 - 12:00	4	1436	0.070	4	1436	0.070	4	1436	0.140
12:00 - 13:00	4	1436	0.000	4	1436	0.000	4	1436	0.000
13:00 - 14:00	4	1436	0.000	4	1436	0.000	4	1436	0.000
14:00 - 15:00	4	1436	0.000	4	1436	0.000	4	1436	0.000
15:00 - 16:00	4	1436	0.017	4	1436	0.017	4	1436	0.034
16:00 - 17:00	4	1436	0.000	4	1436	0.000	4	1436	0.000
17:00 - 18:00	4	1436	0.000	4	1436	0.000	4	1436	0.000
18:00 - 19:00	4	1436	0.017	4	1436	0.017	4	1436	0.034
19:00 - 20:00	4	1436	0.000	4	1436	0.000	4	1436	0.000
20:00 - 21:00	1	1334	0.000	1	1334	0.000	1	1334	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.204			0.204			0.408

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: 1165 - 1900 (units: sqm) Survey date date range: 01/01/07 - 27/11/12

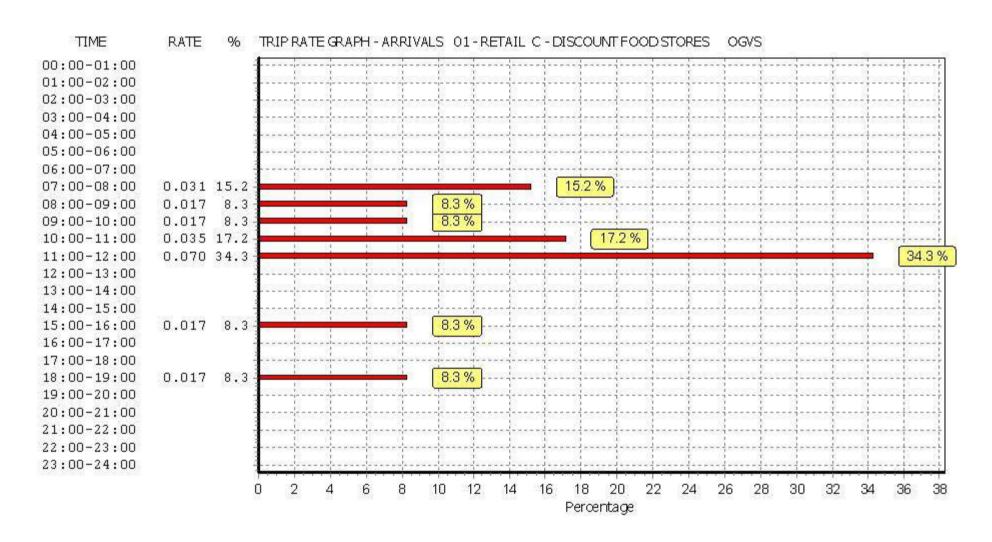
Number of weekdays (Monday-Friday): 4
Number of Saturdays: 0
Number of Sundays: 0
Surveys manually removed from selection: 0

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

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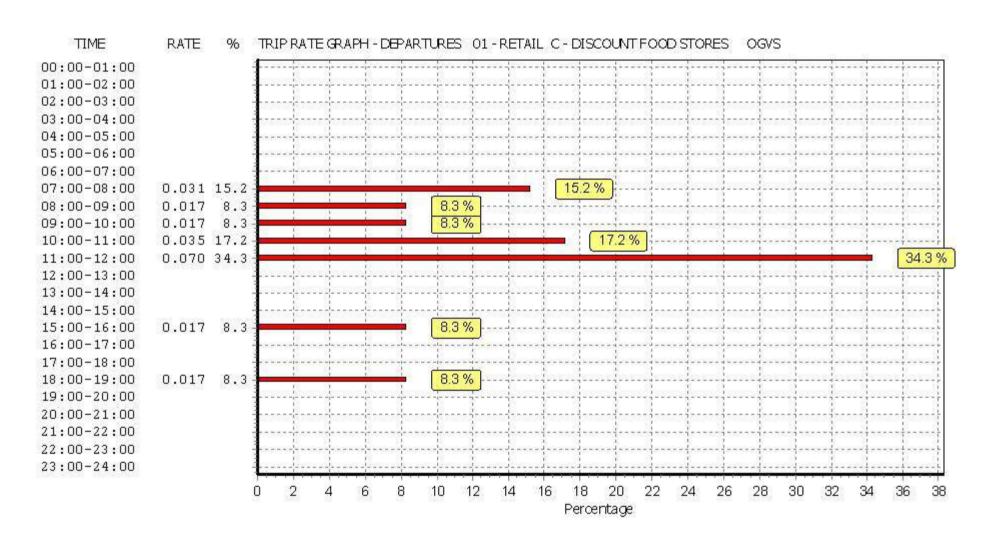
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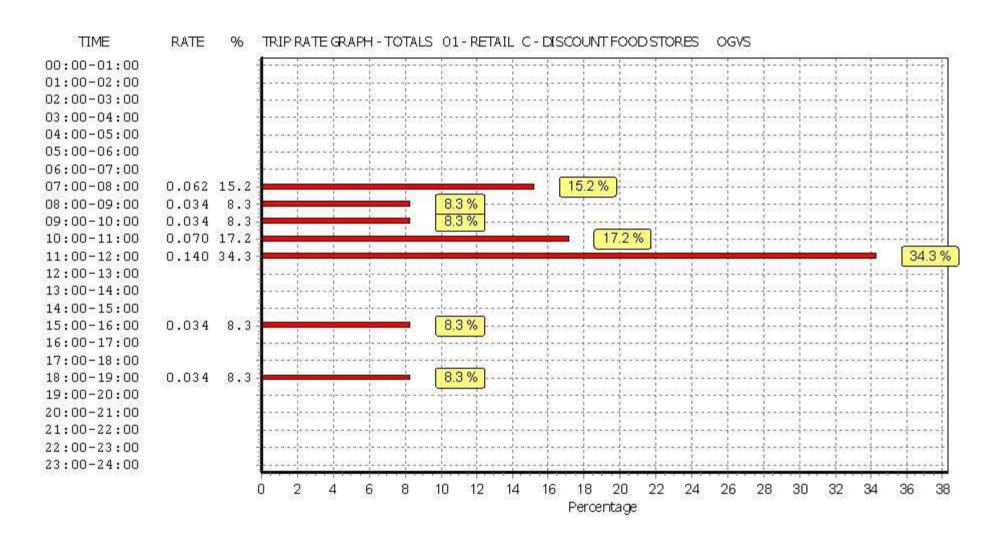
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TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES

PSVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS		DEPARTURES			TOTALS			
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	1617	0.000	2	1617	0.000	2	1617	0.000
08:00 - 09:00	4	1436	0.000	4	1436	0.000	4	1436	0.000
09:00 - 10:00	4	1436	0.000	4	1436	0.000	4	1436	0.000
10:00 - 11:00	4	1436	0.000	4	1436	0.000	4	1436	0.000
11:00 - 12:00	4	1436	0.000	4	1436	0.000	4	1436	0.000
12:00 - 13:00	4	1436	0.000	4	1436	0.000	4	1436	0.000
13:00 - 14:00	4	1436	0.000	4	1436	0.000	4	1436	0.000
14:00 - 15:00	4	1436	0.000	4	1436	0.000	4	1436	0.000
15:00 - 16:00	4	1436	0.000	4	1436	0.000	4	1436	0.000
16:00 - 17:00	4	1436	0.000	4	1436	0.000	4	1436	0.000
17:00 - 18:00	4	1436	0.000	4	1436	0.000	4	1436	0.000
18:00 - 19:00	4	1436	0.000	4	1436	0.000	4	1436	0.000
19:00 - 20:00	4	1436	0.000	4	1436	0.000	4	1436	0.000
20:00 - 21:00	1	1334	0.000	1	1334	0.000	1	1334	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00							<u> </u>		<u> </u>
Total Rates:			0.000			0.000			0.000

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

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

Parameter summary

Trip rate parameter range selected: 1165 - 1900 (units: sqm) Survey date date range: 01/01/07 - 27/11/12

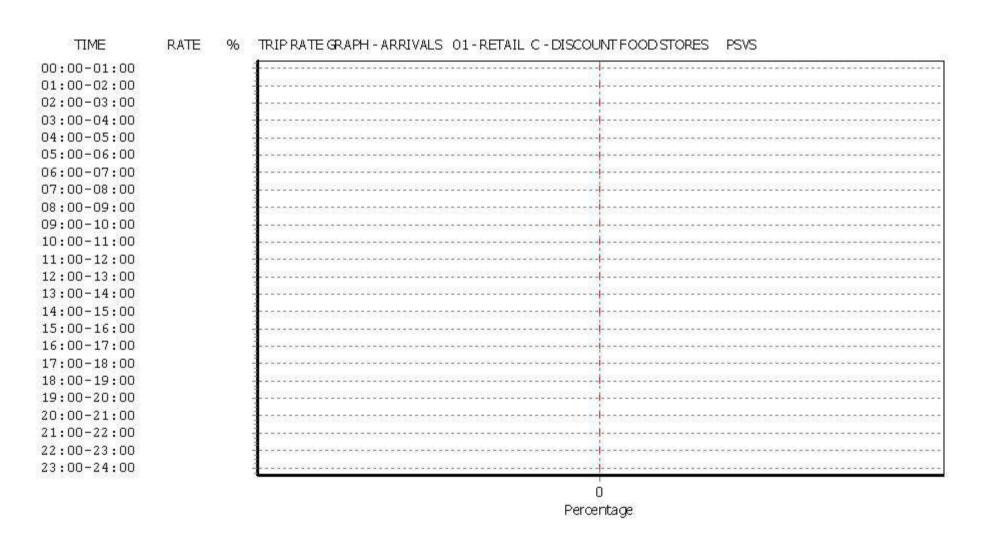
Number of weekdays (Monday-Friday): 4
Number of Saturdays: 0
Number of Sundays: 0
Surveys manually removed from selection: 0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are 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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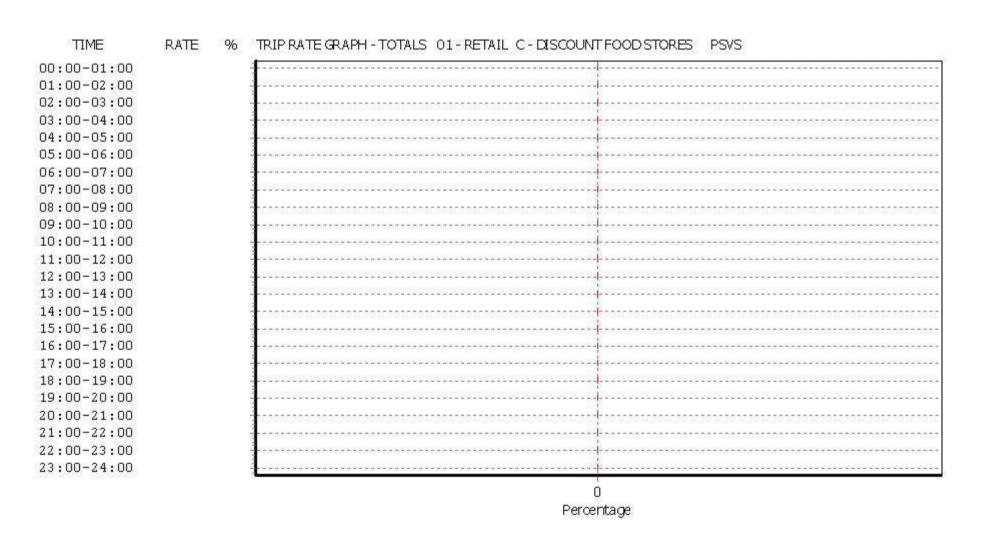
Licence No: 803409

TIME RATE TRIP RATE GRAPH - DEPARTURES 01 - RETAIL C - DISCOUNT FOOD STORES PSVS 00:00-01:00 01:00-02:00 02:00-03:00 03:00-04:00 04:00-05:00 05:00-06:00 06:00-07:00 07:00-08:00 08:00-09:00 09:00-10:00 10:00-11:00 11:00-12:00 12:00-13:00 13:00-14:00 14:00-15:00 15:00-16:00 16:00-17:00 17:00-18:00 18:00-19:00 19:00-20:00 20:00-21:00 21:00-22:00 22:00-23:00 23:00-24:00 Percentage

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TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES

CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			[DEPARTURES			TOTALS		
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip	
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	Rate	
00:00 - 01:00										
01:00 - 02:00										
02:00 - 03:00										
03:00 - 04:00										
04:00 - 05:00										
05:00 - 06:00										
06:00 - 07:00										
07:00 - 08:00	2	1617	0.031	2	1617	0.000	2	1617	0.031	
08:00 - 09:00	4	1436	0.017	4	1436	0.035	4	1436	0.052	
09:00 - 10:00	4	1436	0.017	4	1436	0.052	4	1436	0.069	
10:00 - 11:00	4	1436	0.000	4	1436	0.000	4	1436	0.000	
11:00 - 12:00	4	1436	0.139	4	1436	0.070	4	1436	0.209	
12:00 - 13:00	4	1436	0.052	4	1436	0.070	4	1436	0.122	
13:00 - 14:00	4	1436	0.070	4	1436	0.070	4	1436	0.140	
14:00 - 15:00	4	1436	0.052	4	1436	0.070	4	1436	0.122	
15:00 - 16:00	4	1436	0.052	4	1436	0.035	4	1436	0.087	
16:00 - 17:00	4	1436	0.087	4	1436	0.087	4	1436	0.174	
17:00 - 18:00	4	1436	0.139	4	1436	0.157	4	1436	0.296	
18:00 - 19:00	4	1436	0.070	4	1436	0.052	4	1436	0.122	
19:00 - 20:00	4	1436	0.070	4	1436	0.000	4	1436	0.070	
20:00 - 21:00	1	1334	0.000	1	1334	0.000	1	1334	0.000	
21:00 - 22:00										
22:00 - 23:00										
23:00 - 24:00										
Total Rates:			0.796			0.698			1.494	

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Parameter summary

Trip rate parameter range selected: 1165 - 1900 (units: sqm) Survey date date range: 01/01/07 - 27/11/12

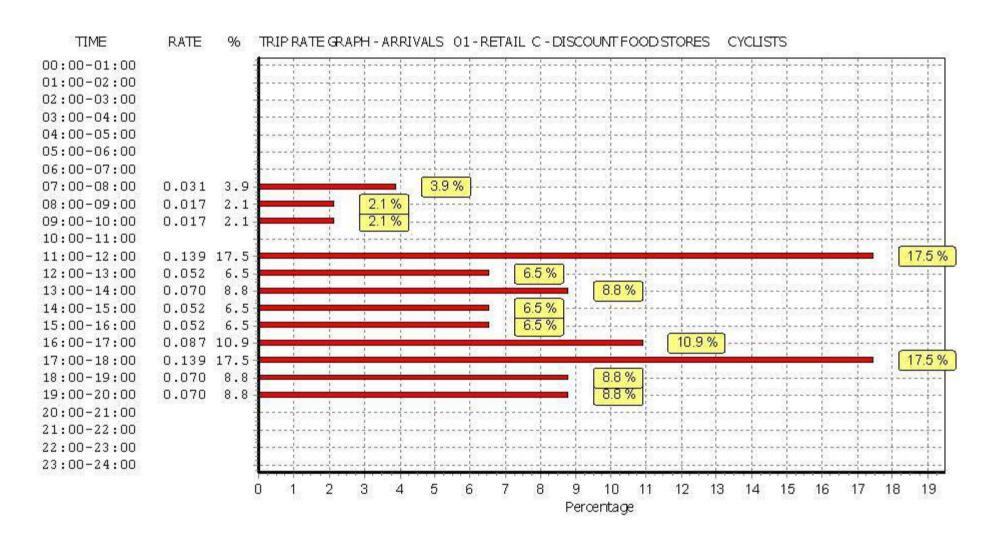
Number of weekdays (Monday-Friday): 4
Number of Saturdays: 0
Number of Sundays: 0
Surveys manually removed from selection: 0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are 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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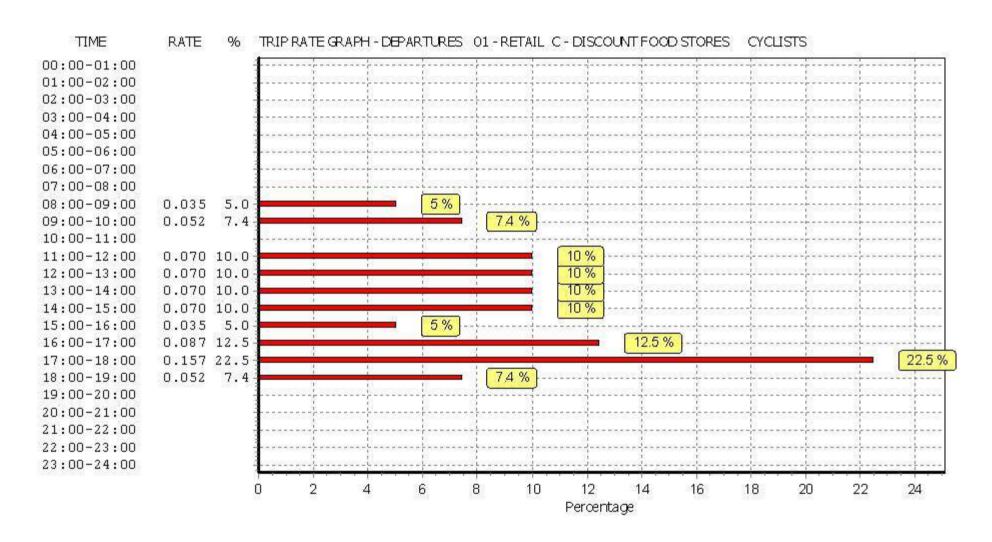
Licence No: 803409



Atkins

Axis

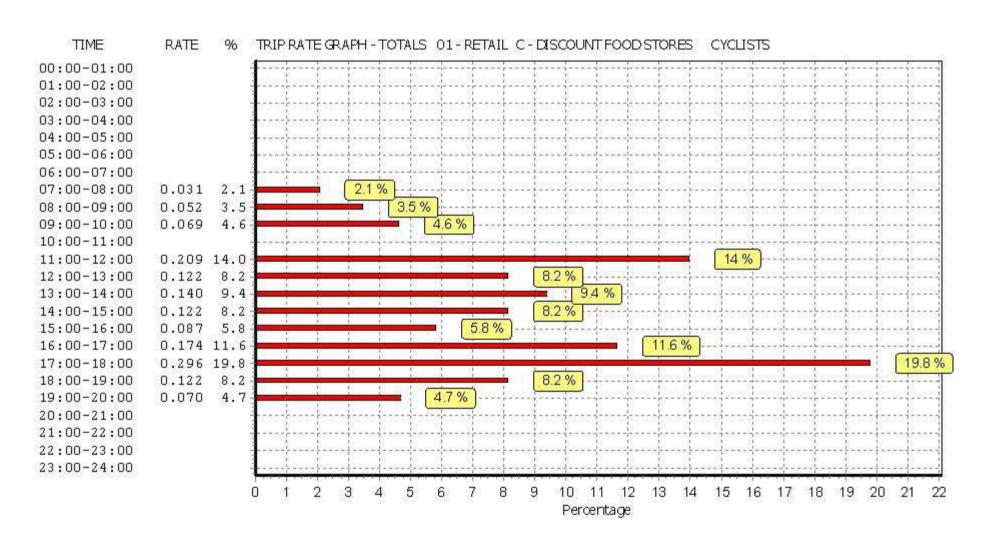
Licence No: 803409



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Licence No: 803409



Weekday Trip Rates Fast Food Drive-Through

Page 1 Atkins Axis Birmingham Licence No: 803409

Calculation Reference: AUDIT-803409-160308-0335

Tuesday 08/03/16

TRIP RATE CALCULATION SELECTION PARAMETERS:

: 06 - HOTEL, FOOD & DRINK Land Use : D - FAST FOOD - DRIVE THROUGH Category

VEHIČLES

Selected regions and areas:

GREATER LONDON

HOUNSLOW 1 days

02 **SOUTH EAST**

SO SLOUGH 1 days

EAST MIDLANDS 05

> NORTHAMPTONSHIRE NR 1 days

10 WALES

> CO CONWY 1 days

12 **CONNAUGHT**

CS **SLIGO** 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: Gross floor area 220 to 480 (units: sgm) Actual Range: Range Selected by User: 123 to 250 (units: sqm)

<u>Public Transport Provision:</u>

Selection by: Include all surveys

Date Range: 01/01/07 to 09/05/15

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:

Tuesday 2 days Wednesday 1 days Friday 2 days

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

Selected survey types:

Manual count 5 days **Directional ATC Count** 0 days

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

Selected Locations:

Edge of Town Centre 1 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:

Commercial Zone	1
Residential Zone	1
Retail Zone	1
Built-Up Zone	1
Out of Town	1

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

TRICS 7.2.4 250216 B17.31 (C) 2016 TRICS Consortium Ltd

Weekday Trip Rates Fast Food Drive-Through

Tuesday 08/03/16

Page 2

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Filtering Stage 3 selection:

Use Class:

A3 2 days A5 3 days

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

Population within 1 mile:

5,001 to 10,000 3 days 20,001 to 25,000 2 days

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

Population within 5 miles:

 5,001 to 25,000
 1 days

 25,001 to 50,000
 1 days

 100,001 to 125,000
 1 days

 125,001 to 250,000
 2 days

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

Car ownership within 5 miles:

0.6 to 1.0 1 days 1.1 to 1.5 4 days

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

Travel Plan:

No 5 days

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

TRICS 7.2.4 250216 B17.31 (C) 2016 TRICS Consortium Ltd Tuesday 08/03/16 Weekday Trip Rates Fast Food Drive-Through Page 3

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LIST OF SITES relevant to selection parameters

CO-06-D-01 MCDONALD'S **CONWY**

RHUDDLAN ROAD

ABERGELE Edge of Town Out of Town

Total Gross floor area: 410 sqm

> Survey date: FRIDAY 21/10/11 Survey Type: MANUAL

SLIGO CS-06-D-01 **MCDONALDS**

PEARSE ROAD SLIGO RETAIL PARK

SLIGO Edge of Town Retail Zone

Total Gross floor area: 450 sqm

Survey date: TUESDAY 21/09/10 Survey Type: MANUAL

HO-06-D-01 **HOUNSLOW** MCDONALD'S

HIGH STREET

BRENTFORD Edge of Town Centre

Built-Up Zone

Total Gross floor area: 378 sqm

Survey date: FRIDAY 07/12/12 Survey Type: MANUAL **NORTHAMPTONSHIRE** NR-06-D-01 **MCDONALDS**

MARQUEE DRIVE

NORTHAMPTON Edge of Town Commercial Zone

Total Gross floor area: 220 sqm

Survey date: TUESDAY 22/05/07 Survey Type: MANUAL

MCDONALD'S SO-06-D-01 **SLOUGH**

WINDSOR ROAD

SLOUGH Edge of Town Residential Zone

Total Gross floor area: 480 sqm

Survey date: WEDNESDAY 21/11/12 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
DN-06-D-01	Not open during AM network peak
HC-06-D-02	Not open during AM network peak

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TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES)		TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	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	2	429	0.583	2	429	0.000	2	429	0.583
06:00 - 07:00	3	423	3.076	3	423	2.129	3	423	5.205
07:00 - 08:00	4	372	8.669	4	372	7.191	4	372	15.860
08:00 - 09:00	5	388	9.752	5	388	9.288	5	388	19.040
09:00 - 10:00	5	388	8.824	5	388	8.927	5	388	17.751
10:00 - 11:00	5	388	8.256	5	388	8.566	5	388	16.822
11:00 - 12:00	5	388	9.391	5	388	8.978	5	388	18.369
12:00 - 13:00	5	388	16.151	5	388	14.757	5	388	30.908
13:00 - 14:00	5	388	14.654	5	388	15.686	5	388	30.340
14:00 - 15:00	5	388	12.074	5	388	13.261	5	388	25.335
15:00 - 16:00	5	388	12.281	5	388	11.300	5	388	23.581
16:00 - 17:00	5	388	12.332	5	388	13.158	5	388	25.490
17:00 - 18:00	5	388	12.178	5	388	11.249	5	388	23.427
18:00 - 19:00	5	388	12.590	5	388	13.364	5	388	25.954
19:00 - 20:00	5	388	10.114	5	388	10.733	5	388	20.847
20:00 - 21:00	5	388	6.708	5	388	7.327	5	388	14.035
21:00 - 22:00	5	388	4.644	5	388	4.438	5	388	9.082
22:00 - 23:00	5	388	2.580	5	388	3.302	5	388	5.882
23:00 - 24:00	3	436	0.000	3	436	0.459	3	436	0.459
Total Rates:			164.857			164.113			328.970

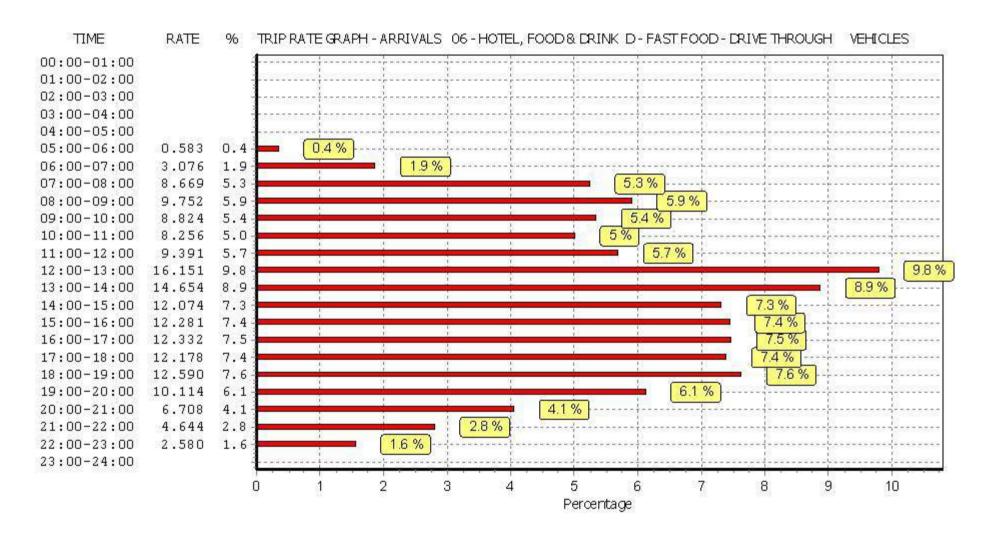
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are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

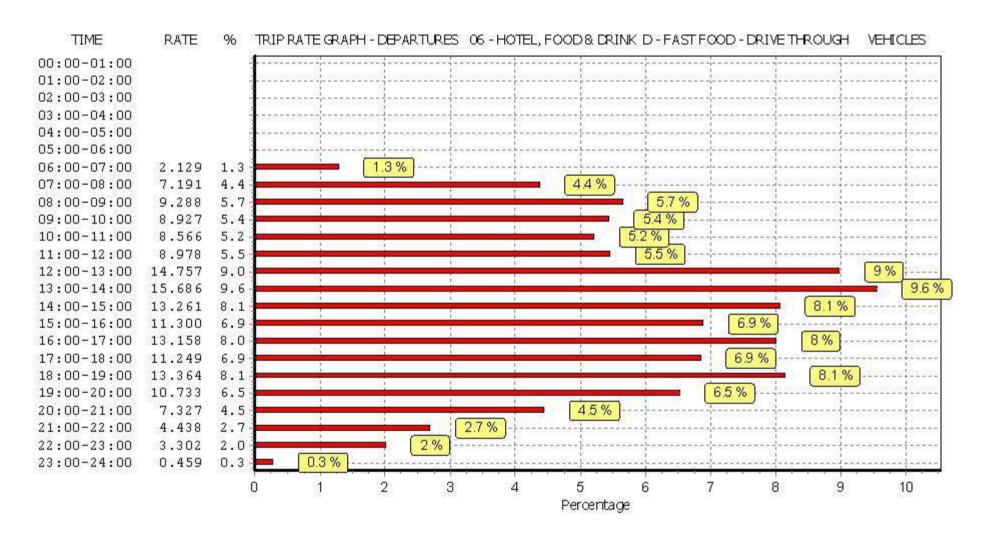
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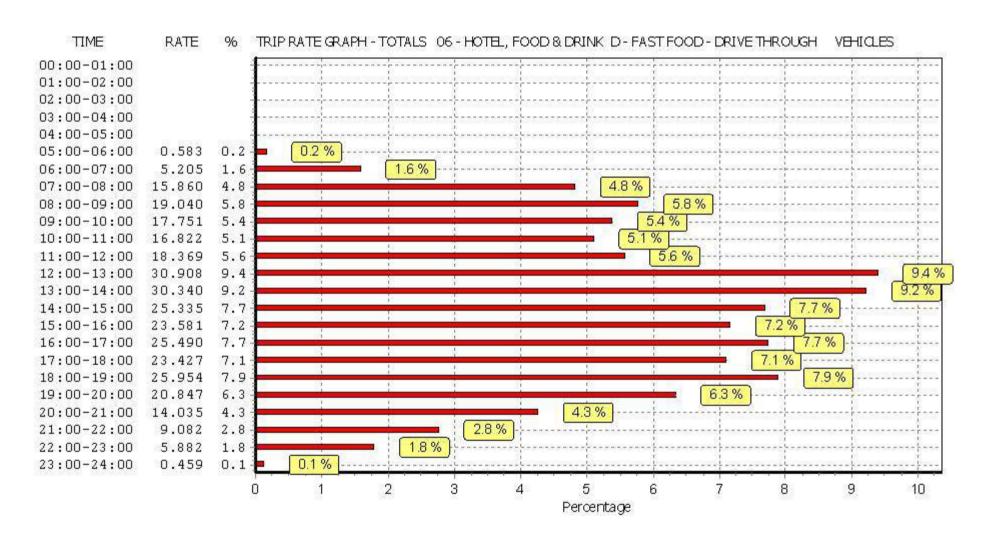
Parameter summary

Trip rate parameter range selected: 220 - 480 (units: sqm) Survey date date range: 01/01/07 - 09/05/15

Number of weekdays (Monday-Friday): 5
Number of Saturdays: 0
Number of Sundays: 0
Surveys manually removed from selection: 2







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TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH TAXIS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES)		TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	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	2	429	0.000	2	429	0.000	2	429	0.000
06:00 - 07:00	3	423	0.000	3	423	0.000	3	423	0.000
07:00 - 08:00	4	372	0.000	4	372	0.000	4	372	0.000
08:00 - 09:00	5	388	0.000	5	388	0.000	5	388	0.000
09:00 - 10:00	5	388	0.052	5	388	0.052	5	388	0.104
10:00 - 11:00	5	388	0.000	5	388	0.000	5	388	0.000
11:00 - 12:00	5	388	0.052	5	388	0.052	5	388	0.104
12:00 - 13:00	5	388	0.000	5	388	0.000	5	388	0.000
13:00 - 14:00	5	388	0.000	5	388	0.000	5	388	0.000
14:00 - 15:00	5	388	0.000	5	388	0.000	5	388	0.000
15:00 - 16:00	5	388	0.000	5	388	0.000	5	388	0.000
16:00 - 17:00	5	388	0.000	5	388	0.000	5	388	0.000
17:00 - 18:00	5	388	0.000	5	388	0.000	5	388	0.000
18:00 - 19:00	5	388	0.000	5	388	0.000	5	388	0.000
19:00 - 20:00	5	388	0.000	5	388	0.000	5	388	0.000
20:00 - 21:00	5	388	0.000	5	388	0.000	5	388	0.000
21:00 - 22:00	5	388	0.000	5	388	0.000	5	388	0.000
22:00 - 23:00	5	388	0.000	5	388	0.000	5	388	0.000
23:00 - 24:00	3	436	0.000	3	436	0.000	3	436	0.000
Total Rates:			0.104			0.104			0.208

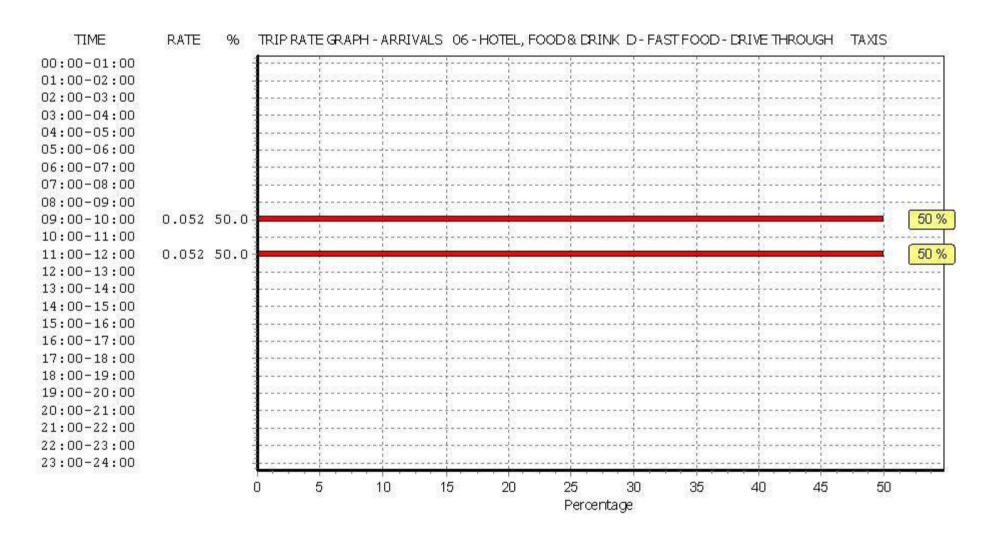
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are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

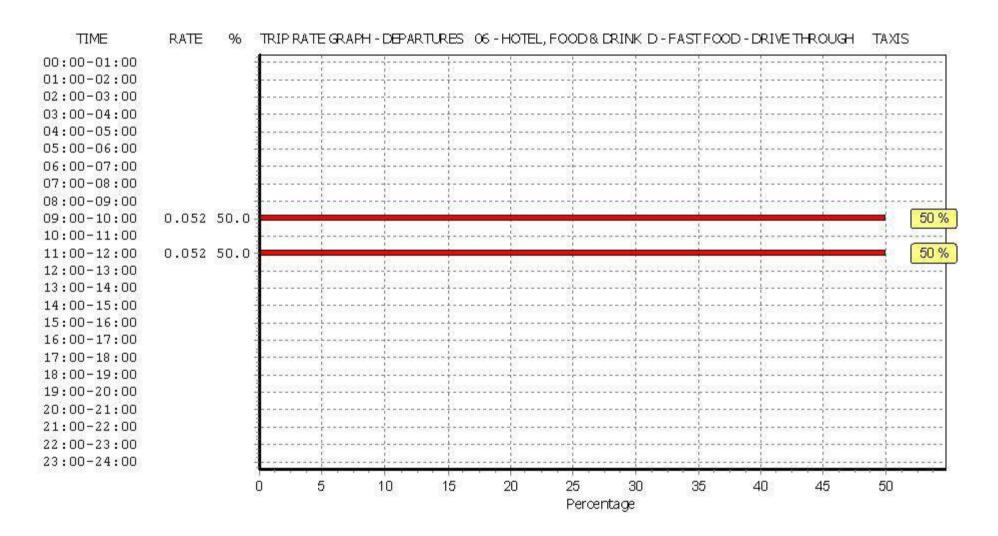
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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

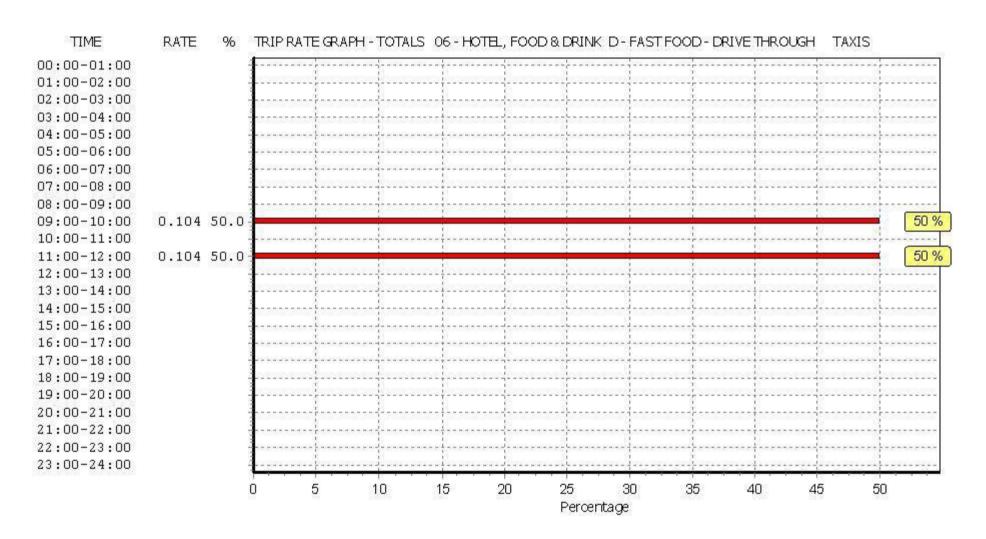
Parameter summary

Trip rate parameter range selected: 220 - 480 (units: sqm) Survey date date range: 01/01/07 - 09/05/15

Number of weekdays (Monday-Friday): 5
Number of Saturdays: 0
Number of Sundays: 0
Surveys manually removed from selection: 2







Atkins Axis Birmingham Licence No: 803409

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES			TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	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	2	429	0.000	2	429	0.000	2	429	0.000
06:00 - 07:00	3	423	0.000	3	423	0.000	3	423	0.000
07:00 - 08:00	4	372	0.000	4	372	0.000	4	372	0.000
08:00 - 09:00	5	388	0.000	5	388	0.000	5	388	0.000
09:00 - 10:00	5	388	0.000	5	388	0.000	5	388	0.000
10:00 - 11:00	5	388	0.052	5	388	0.052	5	388	0.104
11:00 - 12:00	5	388	0.000	5	388	0.000	5	388	0.000
12:00 - 13:00	5	388	0.000	5	388	0.000	5	388	0.000
13:00 - 14:00	5	388	0.052	5	388	0.052	5	388	0.104
14:00 - 15:00	5	388	0.000	5	388	0.000	5	388	0.000
15:00 - 16:00	5	388	0.052	5	388	0.052	5	388	0.104
16:00 - 17:00	5	388	0.052	5	388	0.000	5	388	0.052
17:00 - 18:00	5	388	0.000	5	388	0.052	5	388	0.052
18:00 - 19:00	5	388	0.000	5	388	0.000	5	388	0.000
19:00 - 20:00	5	388	0.000	5	388	0.000	5	388	0.000
20:00 - 21:00	5	388	0.000	5	388	0.000	5	388	0.000
21:00 - 22:00	5	388	0.000	5	388	0.000	5	388	0.000
22:00 - 23:00	5	388	0.000	5	388	0.000	5	388	0.000
23:00 - 24:00	3	436	0.000	3	436	0.000	3	436	0.000
Total Rates:			0.208			0.208			0.416

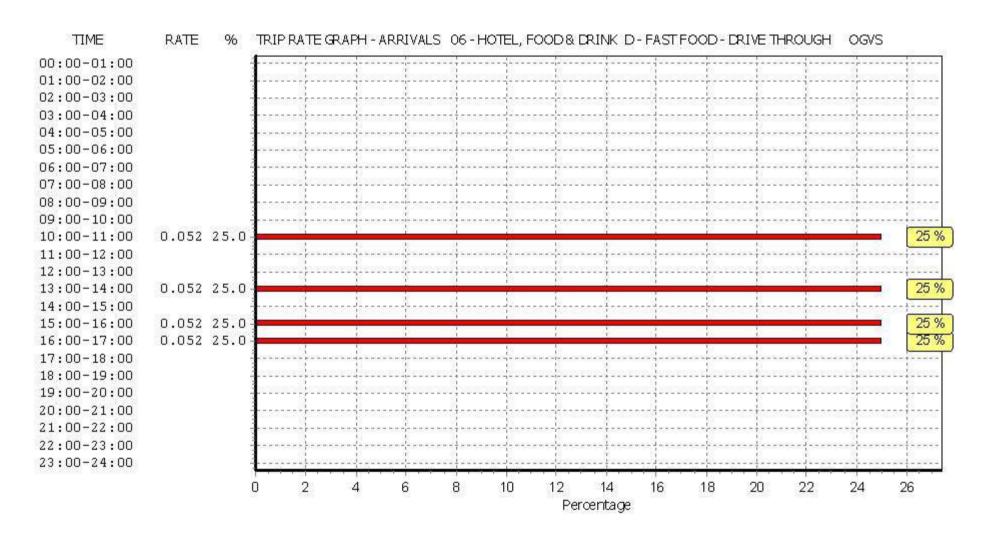
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are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

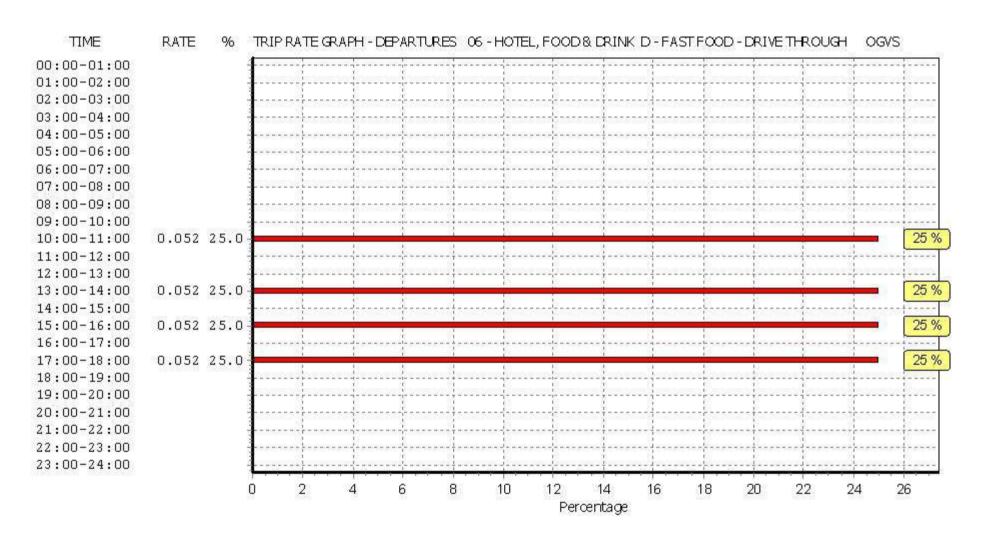
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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

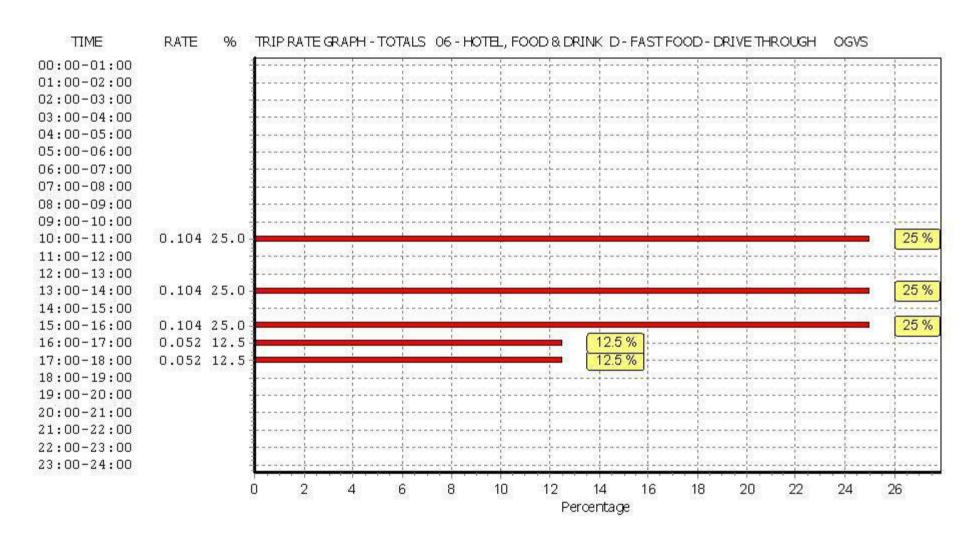
Parameter summary

Trip rate parameter range selected: 220 - 480 (units: sqm) Survey date date range: 01/01/07 - 09/05/15

Number of weekdays (Monday-Friday): 5
Number of Saturdays: 0
Number of Sundays: 0
Surveys manually removed from selection: 2







Atkins Axis Birmingham Licence No: 803409

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH

PSVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES)		TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	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	2	429	0.000	2	429	0.000	2	429	0.000
06:00 - 07:00	3	423	0.000	3	423	0.000	3	423	0.000
07:00 - 08:00	4	372	0.000	4	372	0.000	4	372	0.000
08:00 - 09:00	5	388	0.000	5	388	0.000	5	388	0.000
09:00 - 10:00	5	388	0.000	5	388	0.000	5	388	0.000
10:00 - 11:00	5	388	0.052	5	388	0.052	5	388	0.104
11:00 - 12:00	5	388	0.052	5	388	0.052	5	388	0.104
12:00 - 13:00	5	388	0.000	5	388	0.000	5	388	0.000
13:00 - 14:00	5	388	0.000	5	388	0.000	5	388	0.000
14:00 - 15:00	5	388	0.052	5	388	0.000	5	388	0.052
15:00 - 16:00	5	388	0.000	5	388	0.052	5	388	0.052
16:00 - 17:00	5	388	0.052	5	388	0.052	5	388	0.104
17:00 - 18:00	5	388	0.052	5	388	0.052	5	388	0.104
18:00 - 19:00	5	388	0.000	5	388	0.000	5	388	0.000
19:00 - 20:00	5	388	0.000	5	388	0.000	5	388	0.000
20:00 - 21:00	5	388	0.000	5	388	0.000	5	388	0.000
21:00 - 22:00	5	388	0.000	5	388	0.000	5	388	0.000
22:00 - 23:00	5	388	0.000	5	388	0.000	5	388	0.000
23:00 - 24:00	3	436	0.000	3	436	0.000	3	436	0.000
Total Rates:			0.260			0.260			0.520

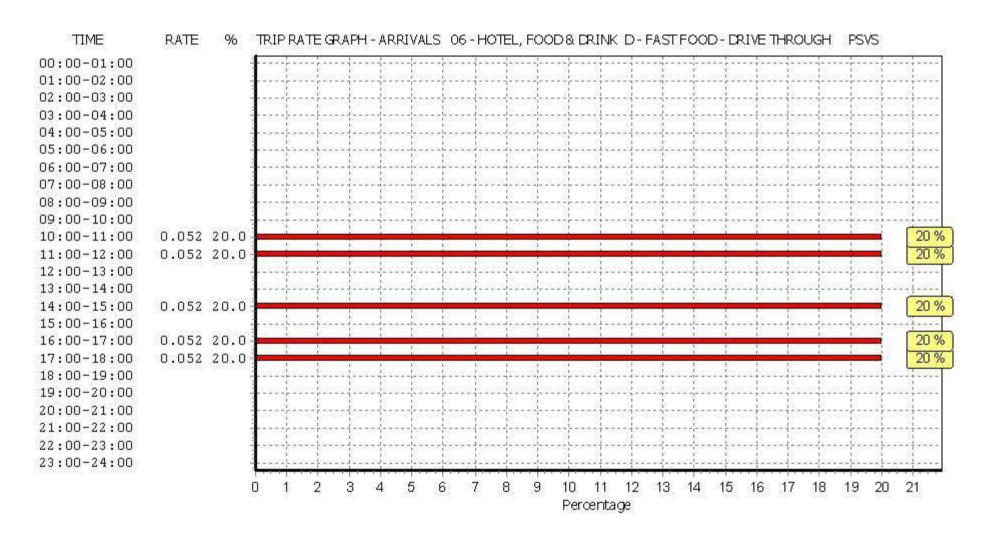
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are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

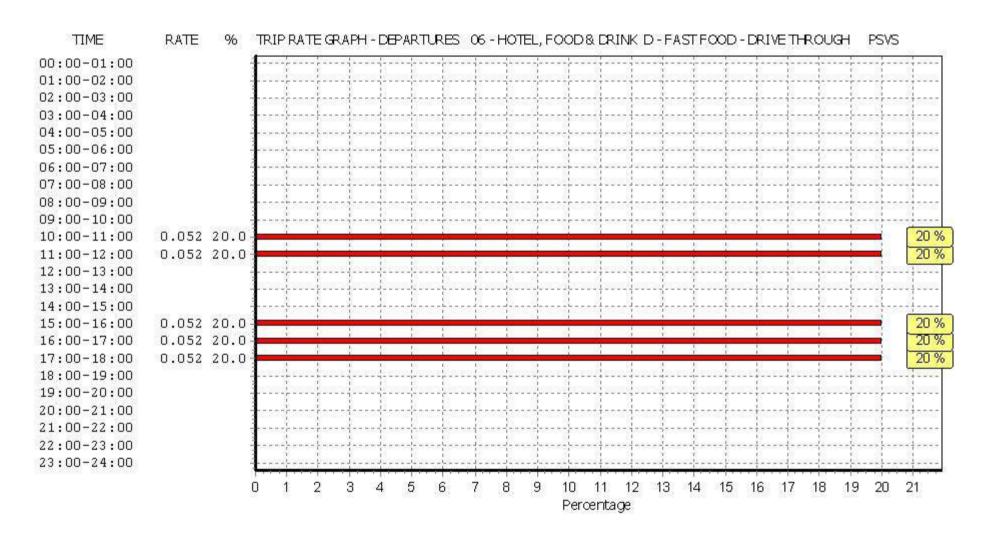
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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

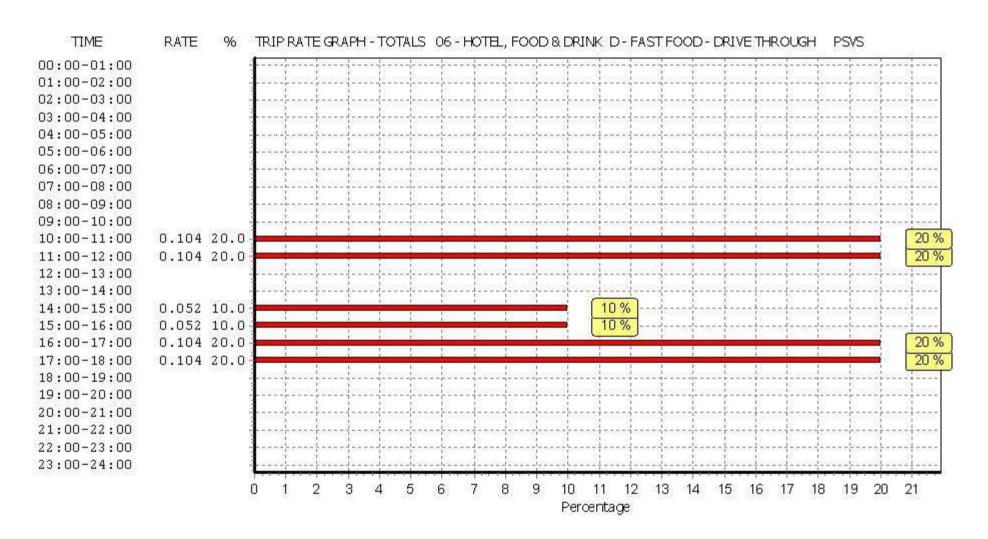
Parameter summary

Trip rate parameter range selected: 220 - 480 (units: sqm) Survey date date range: 01/01/07 - 09/05/15

Number of weekdays (Monday-Friday): 5
Number of Saturdays: 0
Number of Sundays: 0
Surveys manually removed from selection: 2







Atkins Axis Birmingham Licence No: 803409

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES)		TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	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	2	429	0.000	2	429	0.000	2	429	0.000
06:00 - 07:00	3	423	0.000	3	423	0.000	3	423	0.000
07:00 - 08:00	4	372	0.202	4	372	0.067	4	372	0.269
08:00 - 09:00	5	388	0.361	5	388	0.464	5	388	0.825
09:00 - 10:00	5	388	0.103	5	388	0.103	5	388	0.206
10:00 - 11:00	5	388	0.052	5	388	0.052	5	388	0.104
11:00 - 12:00	5	388	0.000	5	388	0.000	5	388	0.000
12:00 - 13:00	5	388	0.000	5	388	0.000	5	388	0.000
13:00 - 14:00	5	388	0.052	5	388	0.052	5	388	0.104
14:00 - 15:00	5	388	0.052	5	388	0.052	5	388	0.104
15:00 - 16:00	5	388	0.464	5	388	0.464	5	388	0.928
16:00 - 17:00	5	388	0.619	5	388	0.619	5	388	1.238
17:00 - 18:00	5	388	0.052	5	388	0.052	5	388	0.104
18:00 - 19:00	5	388	0.206	5	388	0.206	5	388	0.412
19:00 - 20:00	5	388	0.000	5	388	0.000	5	388	0.000
20:00 - 21:00	5	388	0.155	5	388	0.103	5	388	0.258
21:00 - 22:00	5	388	0.000	5	388	0.000	5	388	0.000
22:00 - 23:00	5	388	0.000	5	388	0.000	5	388	0.000
23:00 - 24:00	3	436	0.000	3	436	0.076	3	436	0.076
Total Rates:			2.318			2.310			4.628

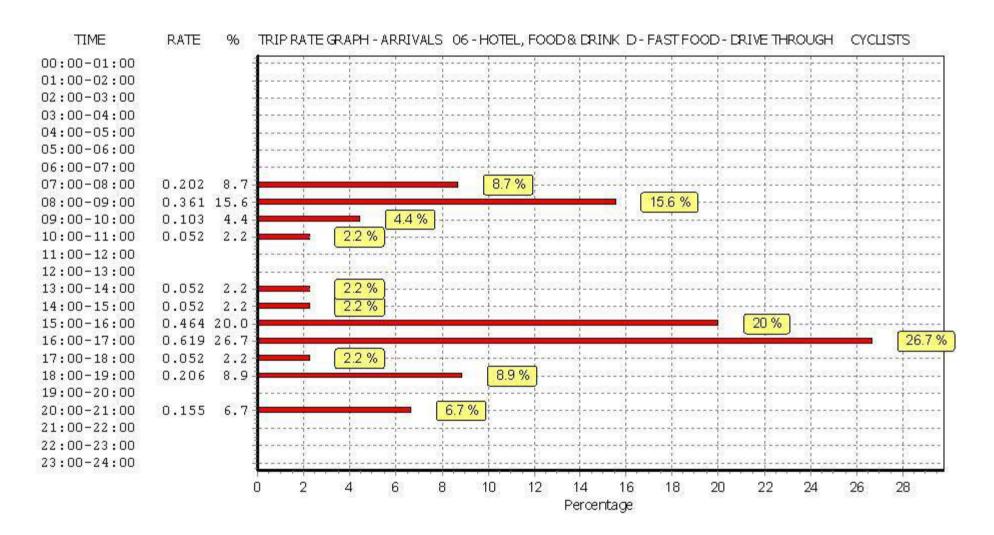
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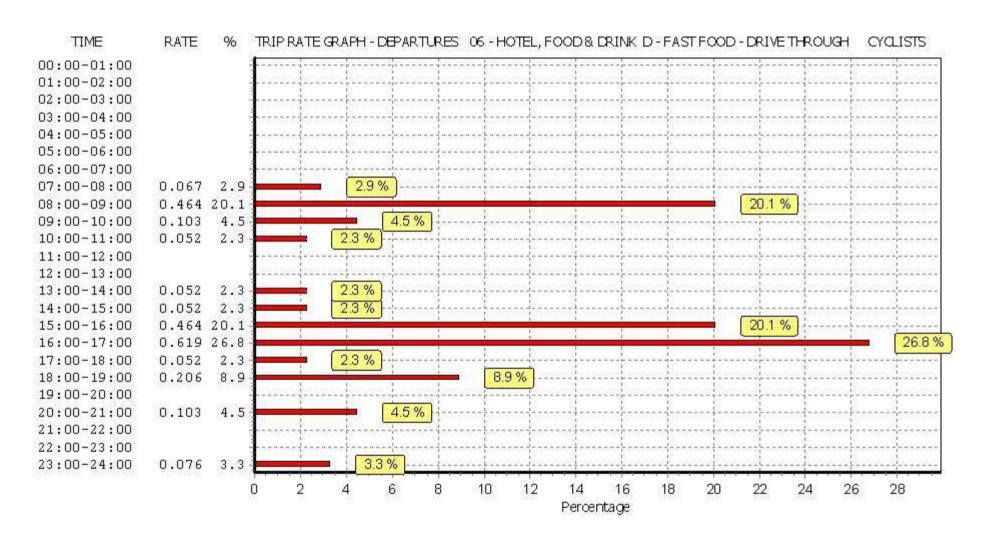
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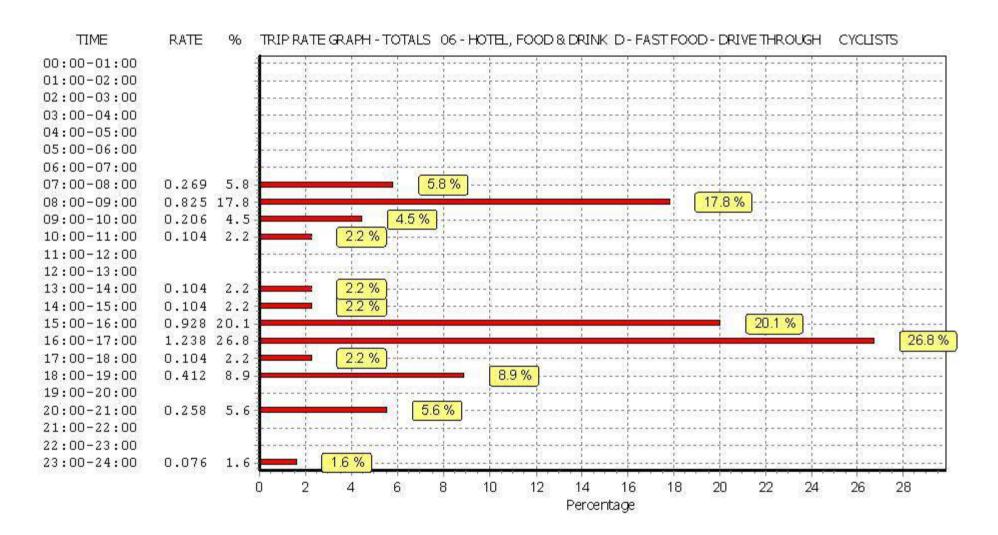
Parameter summary

Trip rate parameter range selected: 220 - 480 (units: sqm) Survey date date range: 01/01/07 - 09/05/15

Number of weekdays (Monday-Friday): 5
Number of Saturdays: 0
Number of Sundays: 0
Surveys manually removed from selection: 2







3G Artificial Grass Pitch Trip Rates

Atkins Axis Birmingham Licence No: 803409

Calculation Reference: AUDIT-803409-160317-0343

Thursday 17/03/16

Page 1

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 07 - LEISURE

Category : L - FOOTBALL (5-a-side)

VEHIČLES

Selected regions and areas:

02 SOUTH EAST

HC HAMPSHIRE 1 days

03 SOUTH WEST

DV DEVON 1 days

05 EAST MIDLANDS

LE LEICESTERSHIRE 1 days

07 YORKSHIRE & NORTH LINCOLNSHIRE

WY WEST YORKSHIRE 1 days

09 NORTH

TV TEES VALLEY 1 days

11 SCOTLAND

GC GLASGOW CITY 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: Site area

Actual Range: 1.00 to 4.02 (units: hect) Range Selected by User: 0.60 to 4.02 (units: hect)

Public Transport Provision:

Selection by: Include all surveys

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

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

Selected survey days:

Tuesday 2 days Wednesday 3 days Friday 1 days

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

Selected survey types:

Manual count 6 days
Directional ATC Count 0 days

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

<u>Selected Locations:</u>

Suburban Area (PPS6 Out of Centre) 4
Edge of Town 2

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

Selected Location Sub Categories:

Industrial Zone	1
Residential Zone	2
No Sub Category	3

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

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3G Artificial Grass Pitch Trip Rates
Thursday 17/03/16
Page 2

Atkins Axis Birmingham Licence No: 803409

Filtering Stage 3 selection:

Use Class:

D2 6 days

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

Population within 1 mile:

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

Population within 5 miles:

250,001 to 500,000 4 days 500,001 or More 2 days

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

Car ownership within 5 miles:

0.6 to 1.0 3 days 1.1 to 1.5 3 days

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

Travel Plan:

No 6 days

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

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3G Artificial Grass Pitch Trip Rates
Thursday 17/03/16
Page 3

Atkins Axis Birmingham Licence No: 803409

LIST OF SITES relevant to selection parameters

1 DV-07-L-01 GOALS DEVON

OUTLAND ROAD CENTRAL PARK PLYMOUTH

Suburban Area (PPS6 Out of Centre)

Residential Zone

Total Site area: 1.17 hect

Survey date: WEDNESDAY 18/07/12 Survey Type: MANUAL

2 GC-07-L-01 GOALS GLASGOW CITY

POLLOKSHAW ROAD STRATHBUNGO GLASGOW

Suburban Area (PPS6 Out of Centre)

Residential Zone

Total Site area: 1.00 hect

Survey date: FRIDAY 03/10/08 Survey Type: MANUAL

3 HC-07-L-01 GOALS HAMPSHIRE

MILLBROOK POINT ROAD

SOUTHAMPTON Edge of Town Industrial Zone

Total Site area: 1.10 hect

Survey date: WEDNESDAY 21/11/07 Survey Type: MANUAL

4 LE-07-L-01 GOALS LEICESTERSHIRE

WAKERLEY ROAD

LEICESTER

Suburban Area (PPS6 Out of Centre)

No Sub Category

Total Site area: 1.40 hect

Survey date: TUESDAY 25/11/08 Survey Type: MANUAL

5 TV-07-L-02 GOALS TEES VALLEY

STOCKTON ROAD

MIDDLESBROUGH Edge of Town No Sub Category

Total Site area: 2.09 hect

Survey date: TUESDAY 18/09/07 Survey Type: MANUAL WEST YORKSHIRE

6 WY-07-L-02 GOF REDCOTE LANE BURLEY

LEEDS

Suburban Area (PPS6 Out of Centre)

No Sub Category

Total Site area: 4.02 hect

Survey date: WEDNESDAY 09/06/10 Survey Type: MANUAL

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

3G Artificial Grass Pitch Trip Rates

Atkins Axis Birmingham

Licence No: 803409

TRIP RATE for Land Use 07 - LEISURE/L - FOOTBALL (5-a-side)

VEHICLES

Calculation factor: 1 hect

BOLD print indicates peak (busiest) period

		ARRIVALS			DEPARTURES			TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	AREA	Rate	Days	AREA	Rate	Days	AREA	Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00	6	1.80	7.421	6	1.80	1.855	6	1.80	9.276
09:00 - 10:00	6	1.80	2.968	6	1.80	1.020	6	1.80	3.988
10:00 - 11:00	6	1.80	1.948	6	1.80	1.577	6	1.80	3.525
11:00 - 12:00	6	1.80	3.803	6	1.80	2.597	6	1.80	6.400
12:00 - 13:00	6	1.80	3.154	6	1.80	3.154	6	1.80	6.308
13:00 - 14:00	6	1.80	2.597	6	1.80	2.319	6	1.80	4.916
14:00 - 15:00	6	1.80	5.102	6	1.80	5.380	6	1.80	10.482
15:00 - 16:00	6	1.80	7.328	6	1.80	3.989	6	1.80	11.317
16:00 - 17:00	6	1.80	7.885	6	1.80	6.586	6	1.80	14.471
17:00 - 18:00	6	1.80	20.594	6	1.80	7.978	6	1.80	28.572
18:00 - 19:00	6	1.80	28.200	6	1.80	12.152	6	1.80	40.352
19:00 - 20:00	6	1.80	31.262	6	1.80	32.096	6	1.80	63.358
20:00 - 21:00	6	1.80	22.820	6	1.80	30.241	6	1.80	53.061
21:00 - 22:00	6	1.80	9.555	6	1.80	28.015	6	1.80	37.570
22:00 - 23:00	6	1.80	2.226	6	1.80	16.419	6	1.80	18.645
23:00 - 24:00	4	2.17	0.000	4	2.17	2.189	4	2.17	2.189
Total Rates:			156.863			157.567			314.430

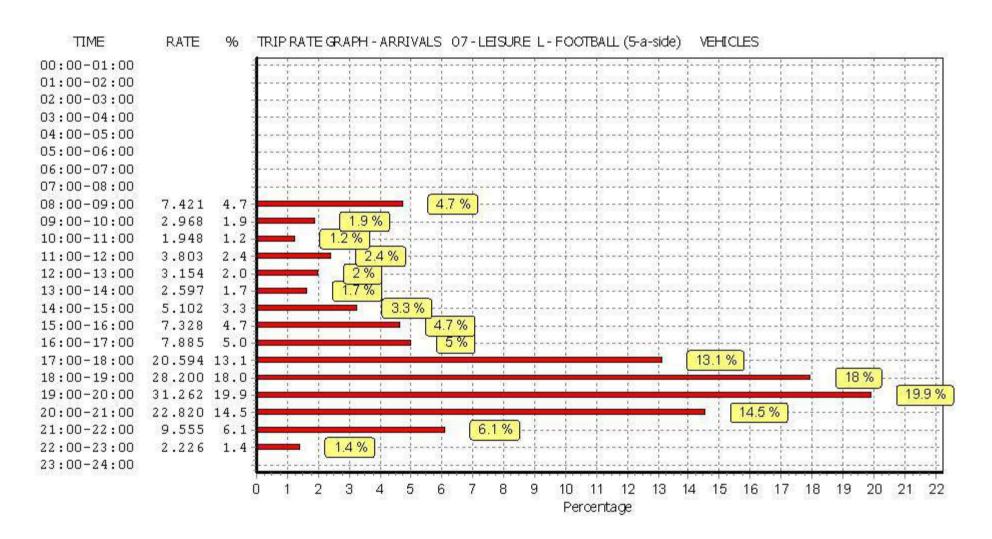
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are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

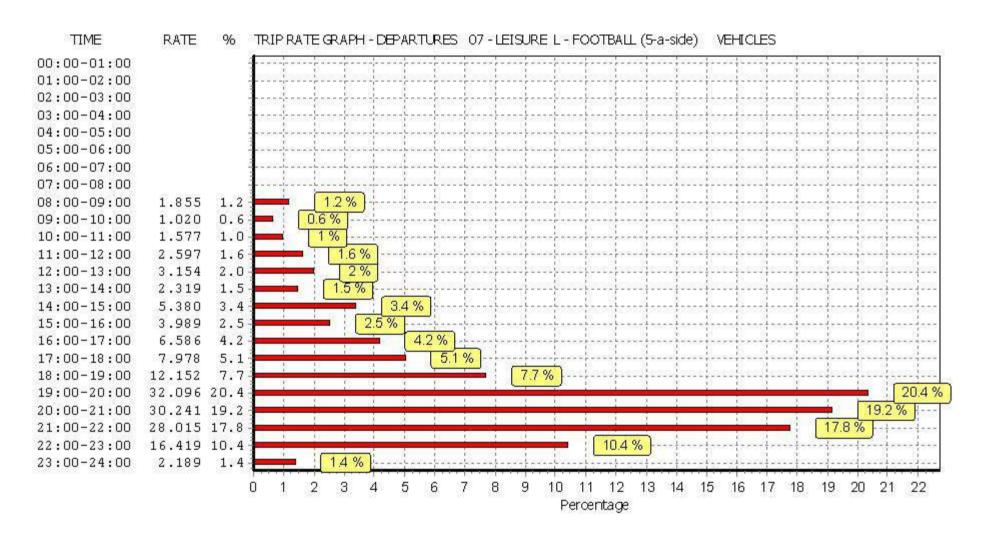
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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

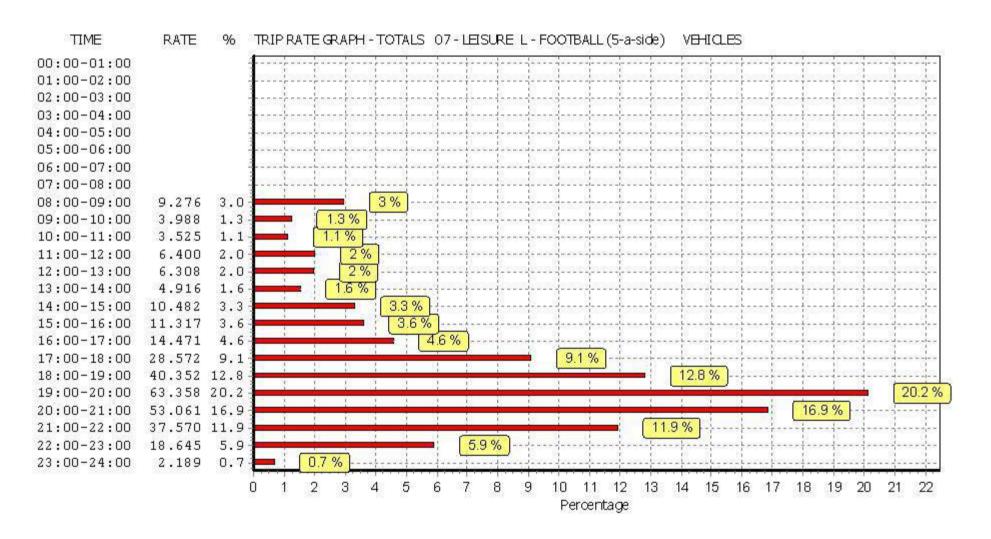
Parameter summary

Trip rate parameter range selected: 1.00 to 4.02 (units: hect) Survey date date range: 01/01/07 - 18/07/12

Number of weekdays (Monday-Friday): 6
Number of Saturdays: 0
Number of Sundays: 0
Surveys manually removed from selection: 0







Atkins Axis Birmingham Licence No: 803409

TRIP RATE for Land Use 07 - LEISURE/L - FOOTBALL (5-a-side)

TAXIS

Calculation factor: 1 hect

BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES)		TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	AREA	Rate	Days	AREA	Rate	Days	AREA	Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00	6	1.80	0.000	6	1.80	0.000	6	1.80	0.000
09:00 - 10:00	6	1.80	0.093	6	1.80	0.093	6	1.80	0.186
10:00 - 11:00	6	1.80	0.186	6	1.80	0.186	6	1.80	0.372
11:00 - 12:00	6	1.80	0.000	6	1.80	0.000	6	1.80	0.000
12:00 - 13:00	6	1.80	0.186	6	1.80	0.186	6	1.80	0.372
13:00 - 14:00	6	1.80	0.000	6	1.80	0.000	6	1.80	0.000
14:00 - 15:00	6	1.80	0.000	6	1.80	0.000	6	1.80	0.000
15:00 - 16:00	6	1.80	0.000	6	1.80	0.000	6	1.80	0.000
16:00 - 17:00	6	1.80	0.093	6	1.80	0.093	6	1.80	0.186
17:00 - 18:00	6	1.80	0.278	6	1.80	0.278	6	1.80	0.556
18:00 - 19:00	6	1.80	0.278	6	1.80	0.278	6	1.80	0.556
19:00 - 20:00	6	1.80	1.206	6	1.80	1.020	6	1.80	2.226
20:00 - 21:00	6	1.80	0.464	6	1.80	0.649	6	1.80	1.113
21:00 - 22:00	6	1.80	0.464	6	1.80	0.464	6	1.80	0.928
22:00 - 23:00	6	1.80	0.835	6	1.80	0.742	6	1.80	1.577
23:00 - 24:00	4	2.17	0.000	4	2.17	0.115	4	2.17	0.115
Total Rates:			4.083			4.104			8.187

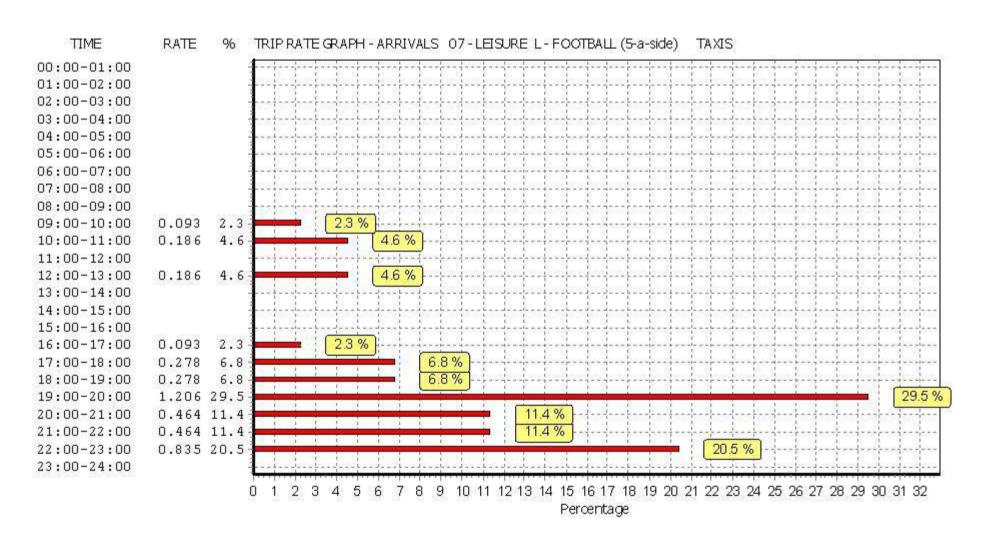
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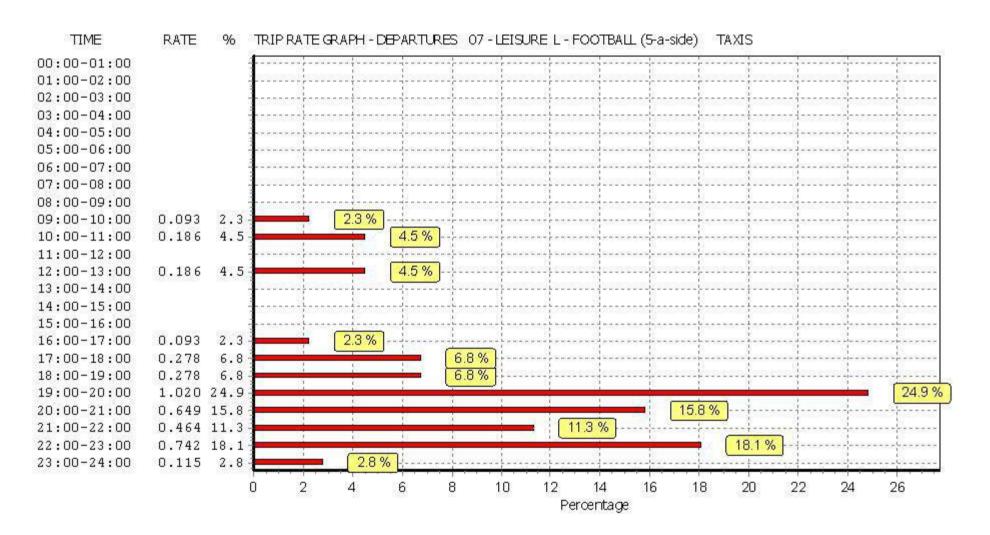
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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

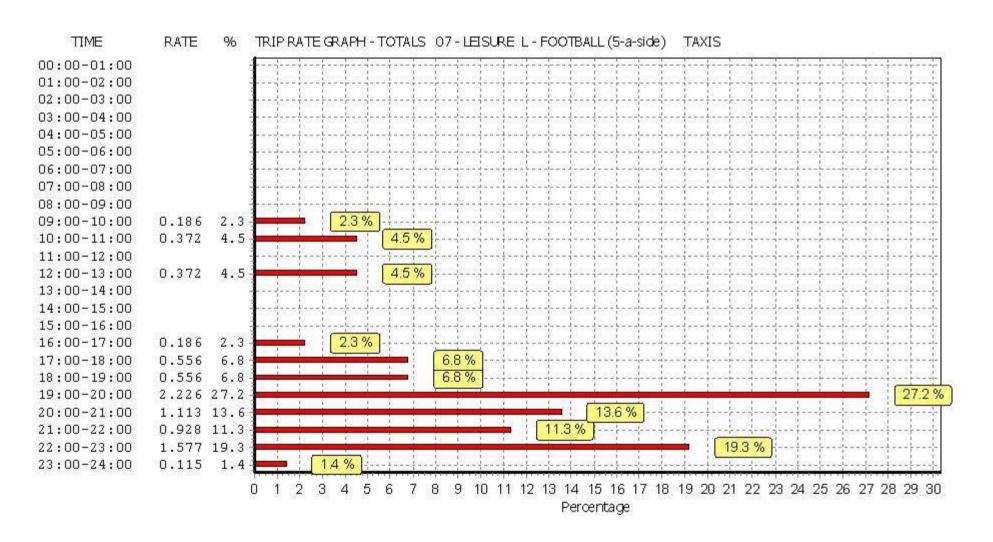
Parameter summary

Trip rate parameter range selected: 1.00 to 4.02 (units: hect) Survey date date range: 01/01/07 - 18/07/12

Number of weekdays (Monday-Friday): 6
Number of Saturdays: 0
Number of Sundays: 0
Surveys manually removed from selection: 0







Atkins Axis Birmingham Licence No: 803409

TRIP RATE for Land Use 07 - LEISURE/L - FOOTBALL (5-a-side)

OGVS

Calculation factor: 1 hect

BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES			TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	AREA	Rate	Days	AREA	Rate	Days	AREA	Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00	6	1.80	0.186	6	1.80	0.186	6	1.80	0.372
09:00 - 10:00	6	1.80	0.278	6	1.80	0.093	6	1.80	0.371
10:00 - 11:00	6	1.80	0.186	6	1.80	0.278	6	1.80	0.464
11:00 - 12:00	6	1.80	0.186	6	1.80	0.278	6	1.80	0.464
12:00 - 13:00	6	1.80	0.093	6	1.80	0.093	6	1.80	0.186
13:00 - 14:00	6	1.80	0.000	6	1.80	0.000	6	1.80	0.000
14:00 - 15:00	6	1.80	0.000	6	1.80	0.000	6	1.80	0.000
15:00 - 16:00	6	1.80	0.000	6	1.80	0.000	6	1.80	0.000
16:00 - 17:00	6	1.80	0.093	6	1.80	0.093	6	1.80	0.186
17:00 - 18:00	6	1.80	0.000	6	1.80	0.000	6	1.80	0.000
18:00 - 19:00	6	1.80	0.093	6	1.80	0.093	6	1.80	0.186
19:00 - 20:00	6	1.80	0.000	6	1.80	0.000	6	1.80	0.000
20:00 - 21:00	6	1.80	0.000	6	1.80	0.000	6	1.80	0.000
21:00 - 22:00	6	1.80	0.000	6	1.80	0.000	6	1.80	0.000
22:00 - 23:00	6	1.80	0.000	6	1.80	0.000	6	1.80	0.000
23:00 - 24:00	4	2.17	0.000	4	2.17	0.000	4	2.17	0.000
Total Rates:			1.115			1.114			2.229

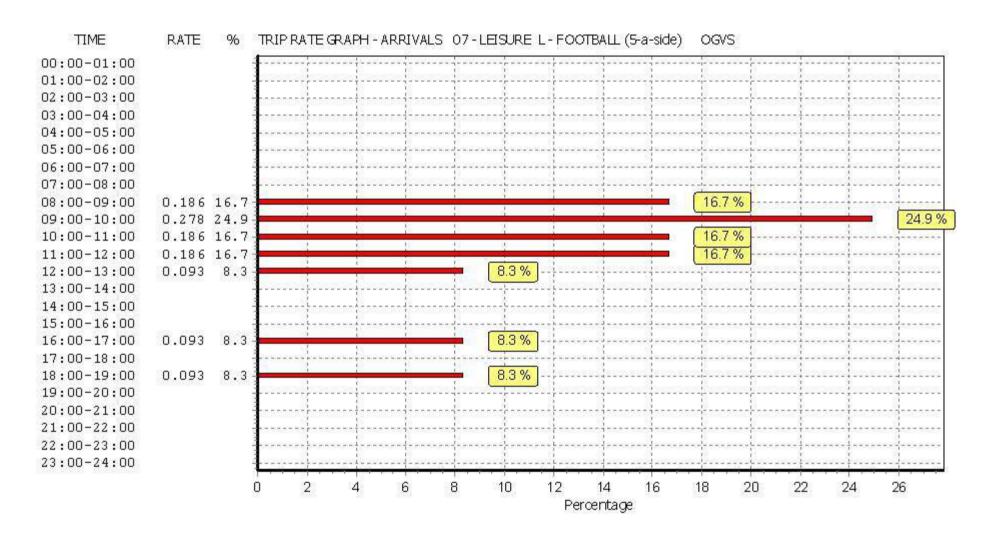
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are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

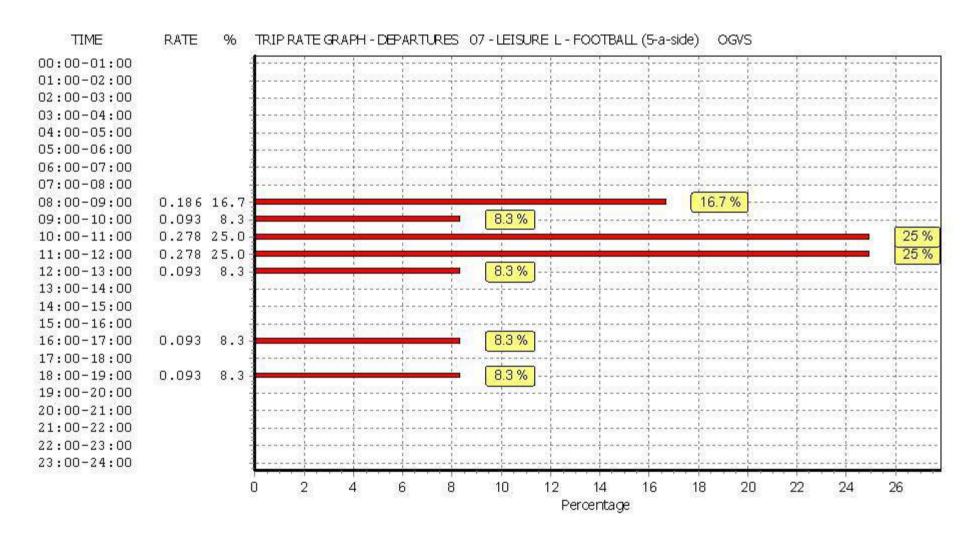
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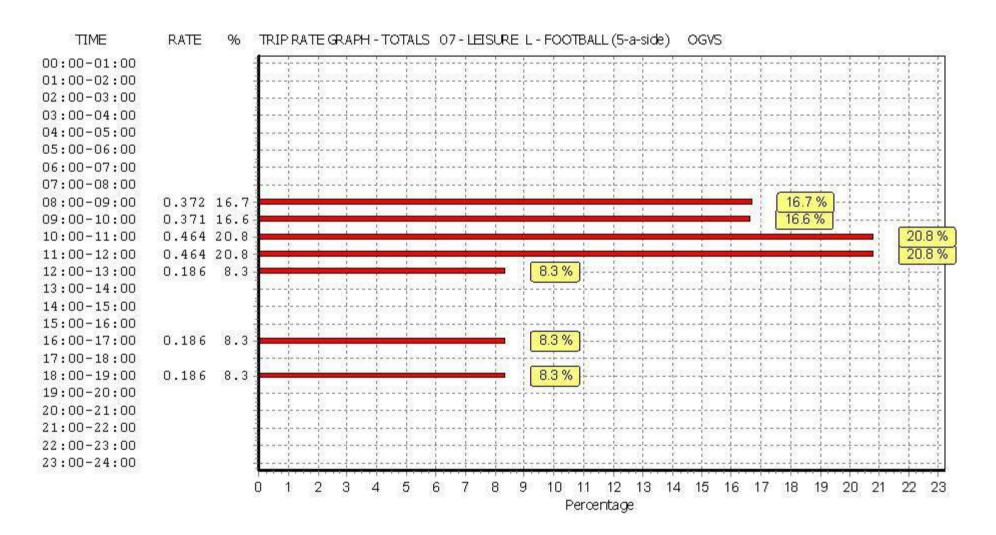
Parameter summary

Trip rate parameter range selected: 1.00 to 4.02 (units: hect) Survey date date range: 01/01/07 - 18/07/12

Number of weekdays (Monday-Friday): 6
Number of Saturdays: 0
Number of Sundays: 0
Surveys manually removed from selection: 0







Atkins Axis Birmingham Licence No: 803409

TRIP RATE for Land Use 07 - LEISURE/L - FOOTBALL (5-a-side)

PSVS

Calculation factor: 1 hect

BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES			TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	AREA	Rate	Days	AREA	Rate	Days	AREA	Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00	6	1.80	0.000	6	1.80	0.000	6	1.80	0.000
09:00 - 10:00	6	1.80	0.000	6	1.80	0.000	6	1.80	0.000
10:00 - 11:00	6	1.80	0.000	6	1.80	0.000	6	1.80	0.000
11:00 - 12:00	6	1.80	0.093	6	1.80	0.000	6	1.80	0.093
12:00 - 13:00	6	1.80	0.000	6	1.80	0.000	6	1.80	0.000
13:00 - 14:00	6	1.80	0.093	6	1.80	0.186	6	1.80	0.279
14:00 - 15:00	6	1.80	0.093	6	1.80	0.093	6	1.80	0.186
15:00 - 16:00	6	1.80	0.000	6	1.80	0.000	6	1.80	0.000
16:00 - 17:00	6	1.80	0.000	6	1.80	0.000	6	1.80	0.000
17:00 - 18:00	6	1.80	0.000	6	1.80	0.000	6	1.80	0.000
18:00 - 19:00	6	1.80	0.000	6	1.80	0.000	6	1.80	0.000
19:00 - 20:00	6	1.80	0.000	6	1.80	0.000	6	1.80	0.000
20:00 - 21:00	6	1.80	0.000	6	1.80	0.000	6	1.80	0.000
21:00 - 22:00	6	1.80	0.000	6	1.80	0.000	6	1.80	0.000
22:00 - 23:00	6	1.80	0.000	6	1.80	0.000	6	1.80	0.000
23:00 - 24:00	4	2.17	0.000	4	2.17	0.000	4	2.17	0.000
Total Rates:			0.279			0.279			0.558

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

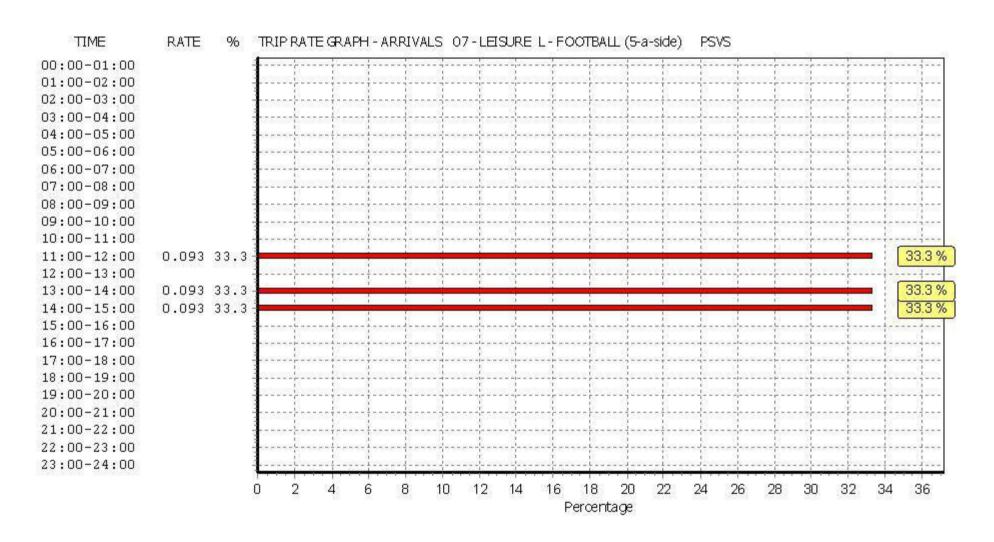
Trip rate parameter range selected: 1.00 to 4.02 (units: hect) Survey date date range: 01/01/07 - 18/07/12

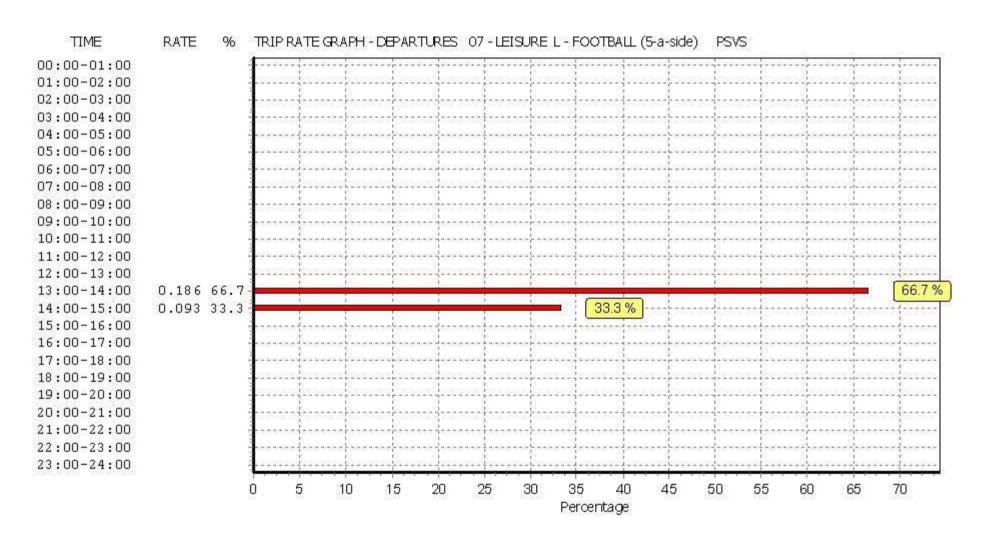
Number of weekdays (Monday-Friday): 6
Number of Saturdays: 0
Number of Sundays: 0
Surveys manually removed from selection: 0

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

Thursday 17/03/16 Page 17

Licence No: 803409





TIME RATE TRIP RATE GRAPH - TOTALS 07 - LEISURE L - FOOTBALL (5-a-side) 00:00-01:00 01:00-02:00 02:00-03:00 03:00-04:00 04:00-05:00 05:00-06:00 06:00-07:00 07:00-08:00 08:00-09:00 09:00-10:00 10:00-11:00 11:00-12:00 0.093 16.7 16.7 % 12:00-13:00 50 % 13:00-14:00 0.279 50.0 33.3 % 0.186 33.3 14:00-15:00 15:00-16:00 16:00-17:00 17:00-18:00 18:00-19:00 19:00-20:00 20:00-21:00 21:00-22:00 22:00-23:00 23:00-24:00 15 20 25 30 35 40 45 55 5 10 50 Percentage

Atkins Axis Birmingham Licence No: 803409

TRIP RATE for Land Use 07 - LEISURE/L - FOOTBALL (5-a-side)

CICLISIS

Calculation factor: 1 hect

BOLD print indicates peak (busiest) period

		ARRIVALS			DEPARTURES			TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	AREA	Rate	Days	AREA	Rate	Days	AREA	Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00	6	1.80	0.649	6	1.80	0.093	6	1.80	0.742
09:00 - 10:00	6	1.80	0.557	6	1.80	0.278	6	1.80	0.835
10:00 - 11:00	6	1.80	0.186	6	1.80	0.000	6	1.80	0.186
11:00 - 12:00	6	1.80	0.093	6	1.80	0.093	6	1.80	0.186
12:00 - 13:00	6	1.80	0.000	6	1.80	0.000	6	1.80	0.000
13:00 - 14:00	6	1.80	0.186	6	1.80	0.186	6	1.80	0.372
14:00 - 15:00	6	1.80	0.093	6	1.80	0.093	6	1.80	0.186
15:00 - 16:00	6	1.80	0.093	6	1.80	0.835	6	1.80	0.928
16:00 - 17:00	6	1.80	0.186	6	1.80	0.278	6	1.80	0.464
17:00 - 18:00	6	1.80	0.371	6	1.80	0.371	6	1.80	0.742
18:00 - 19:00	6	1.80	0.742	6	1.80	0.000	6	1.80	0.742
19:00 - 20:00	6	1.80	0.093	6	1.80	0.464	6	1.80	0.557
20:00 - 21:00	6	1.80	0.000	6	1.80	0.000	6	1.80	0.000
21:00 - 22:00	6	1.80	0.000	6	1.80	0.186	6	1.80	0.186
22:00 - 23:00	6	1.80	0.093	6	1.80	0.278	6	1.80	0.371
23:00 - 24:00	4	2.17	0.000	4	2.17	0.230	4	2.17	0.230
Total Rates:			3.342			3.385			6.727

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.

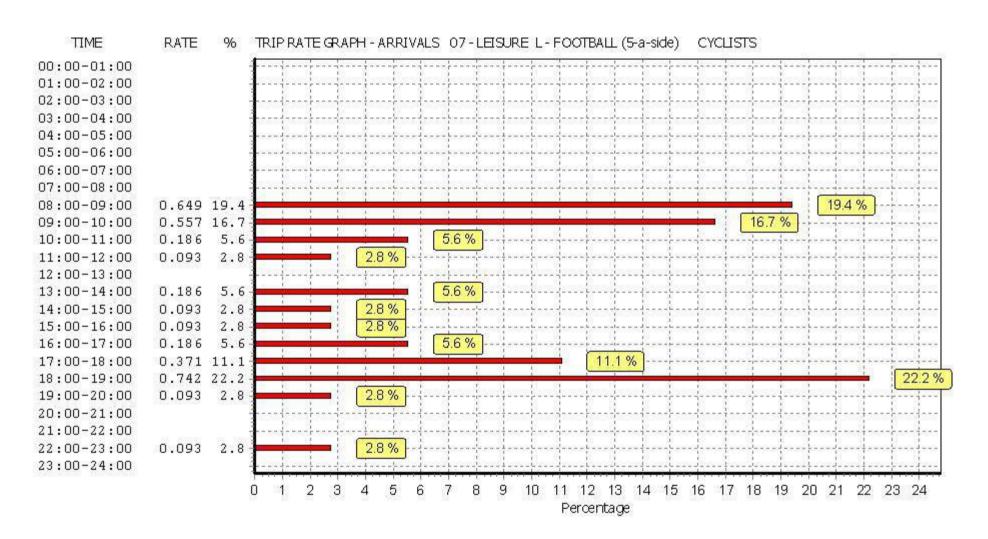
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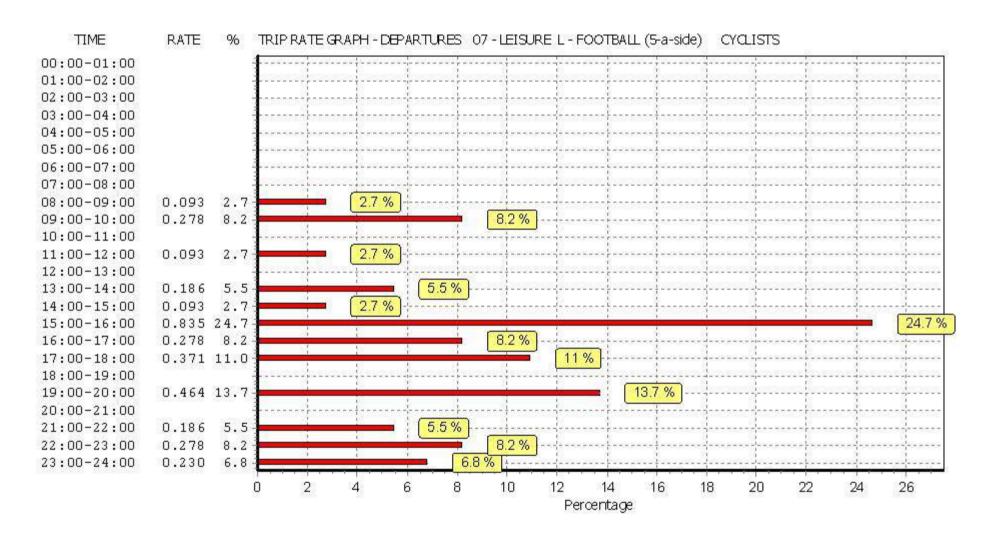
Parameter summary

Trip rate parameter range selected: 1.00 to 4.02 (units: hect) Survey date date range: 01/01/07 - 18/07/12

Number of weekdays (Monday-Friday): 6
Number of Saturdays: 0
Number of Sundays: 0
Surveys manually removed from selection: 0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are 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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Thursday 03/11/16 Page 1 Licence No: 803409

Calculation Reference: AUDIT-803409-161103-1156

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL

Birmingham

Category : I - SHOPPING CENTRE - LOCAL SHOPS

VEHIČLES

Selected regions and areas:

SOUTH WEST **GLOUCESTERSHIRE** 1 days 04 **EAST ANGLIA CAMBRIDGESHIRE** CA 1 days WEST MIDLANDS 06 WEST MIDLANDS WM 1 days 80 **NORTH WEST** CH CHESHIRE 2 days LC LANCASHIRE 1 days 09 NORTH TEES VALLEY 1 days TV

TW TYNE & WEAR 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: Gross floor area
Actual Range: 260 to 720 (units: sqm)
Range Selected by User: 210 to 8310 (units: sqm)

<u>Public Transport Provision:</u>

Selection by: Include all surveys

Date Range: 01/01/08 to 10/11/15

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 4 days Tuesday 2 days Wednesday 1 days Thursday 1 days

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

Selected survey types:

Manual count 8 days
Directional ATC Count 0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre) 2
Edge of Town 1
Neighbourhood Centre (PPS6 Local Centre) 5

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 7
Retail Zone 1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Pasidential Zone, Retail Zone, Ruill-Lin Zone, Village, Out

TRICS 7.3.3 240916 B17.41 (C) 2016 TRICS Consortium Ltd

Pirelli Local Shops

Thursday 03/11/16
Page 2

Atkins Axis Birmingham Licence No: 803409

Filtering Stage 3 selection:

Use Class:

A1 6 days

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

Population within 1 mile:

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

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

Population within 5 miles:

100,001 to 125,000	2 days
125,001 to 250,000	4 days
250,001 to 500,000	1 days
500,001 or More	1 days

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

Car ownership within 5 miles:

0.6 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.

Petrol filling station:

Included in the survey count	0 days
Excluded from count or no filling station	8 days

This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.

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.

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Birmingham Atkins Licence No: 803409 Axis

LIST OF SITES relevant to selection parameters

CA-01-I-01 LOCAL SHOPS **CAMBRIDGESHIRE**

WARWICK ROAD

PETERBOROUGH

Suburban Area (PPS6 Out of Centre)

Residential Zone

Total Gross floor area: 478 sqm

> Survey date: MONDAY 17/10/11 Survey Type: MANUAL

CH-01-I-02 LOCAL SHOPS **CHESHIRE**

CHRISTLETON ROAD **BOUGHTON HEATH**

CHESTER

Neighbourhood Centre (PPS6 Local Centre)

Residential Zone

Total Gross floor area: 260 sqm

Survey date: TUESDAY 15/05/12 Survey Type: MANUAL

CH-01-I-03 CHESHIRE 3 LOCAL SHOPS

MILL LANE **BACHE CHESTER**

Neighbourhood Centre (PPS6 Local Centre)

Residential Zone

Total Gross floor area: 365 sqm

Survey date: THURSDAY 17/05/12 Survey Type: MANUAL **GLOUCESTERSHIRE**

GS-01-I-01 LOCAL SHOPS

SALISBURY AVENUE WARDEN HILL **CHELTENHAM**

Suburban Area (PPS6 Out of Centre)

Residential Zone

Total Gross floor area: 525 sqm

Survey Type: MANUAL Survey date: MONDAY 26/04/10

LC-01-I-01 LOCAL SHOPS **LANCASHIRE**

TALBOT ROW EUXTON

NEAR CHORLEY

Neighbourhood Centre (PPS6 Local Centre)

Residential Zone

Total Gross floor area: 720 sgm

Survey date: MONDAY 17/10/11 Survey Type: MANUAL

TV-01-I-04 LOCAL SHOPS TEES VALLEY

CARGO FLEET LANE

ORMESBY MIDDLESBROUGH

Neighbourhood Centre (PPS6 Local Centre)

Residential Zone

Total Gross floor area: 585 sqm

Survey date: MONDAY 07/10/13 Survey Type: MANUAL

TYNE & WEAR TW-01-I-02 LOCAL SHOPS

DURHAM ROAD BARNES PARK SUNDERLAND

Neighbourhood Centre (PPS6 Local Centre)

Residential Zone

Total Gross floor area: 540 sqm

Survey date: WEDNESDAY 21/11/12 Survey Type: MANUAL TRICS 7.3.3 240916 B17.41 (C) 2016 TRICS Consortium Ltd

Pirelli Local Shops

Thursday 03/11/16

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LIST OF SITES relevant to selection parameters (Cont.)

8 WM-01-I-03 LOCAL SHOPS WEST MIDLANDS BRISTOL ROAD SOUTH

BIRMINGHAM Edge of Town Retail Zone

Total Gross floor area: 450 sqm

Survey date: TUESDAY 10/11/15 Survey Type: MANUAL

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

MANUALLY DESELECTED SITES

Site Ref		Reason for Deselection
BR-01-I-01	Food Store Element	
DV-01-I-01	Food Store Element	
LE-01-I-02	Food Store Element	
NR-01-I-01	Food Store Element	
SH-01-I-02	Food Store Element	
TV-01-I-03	Food Store Element	
WO-01-I-02	Food Store Element	

Thursday 03/11/16 Pirelli Local Shops Atkins Birmingham Licence No: 803409

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS			DEPARTURES			TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	540	1.296	1	540	1.296	1	540	2.592
07:00 - 08:00	8	490	4.028	8	490	3.722	8	490	7.750
08:00 - 09:00	8	490	4.333	8	490	4.079	8	490	8.412
09:00 - 10:00	8	490	4.563	8	490	4.079	8	490	8.642
10:00 - 11:00	8	490	3.696	8	490	3.033	8	490	6.729
11:00 - 12:00	8	490	3.900	8	490	4.104	8	490	8.004
12:00 - 13:00	8	490	5.404	8	490	5.379	8	490	10.783
13:00 - 14:00	8	490	5.200	8	490	4.818	8	490	10.018
14:00 - 15:00	8	490	3.263	8	490	3.773	8	490	7.036
15:00 - 16:00	8	490	3.671	8	490	4.079	8	490	7.750
16:00 - 17:00	8	490	4.690	8	490	4.053	8	490	8.743
17:00 - 18:00	8	490	3.926	8	490	4.308	8	490	8.234
18:00 - 19:00	8	490	4.563	8	490	4.971	8	490	9.534
19:00 - 20:00	6	550	3.517	6	550	3.881	6	550	7.398
20:00 - 21:00	6	550	2.244	6	550	2.547	6	550	4.791
21:00 - 22:00	4	525	3.667	4	525	3.619	4	525	7.286
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			61.961			61.741			123.702

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

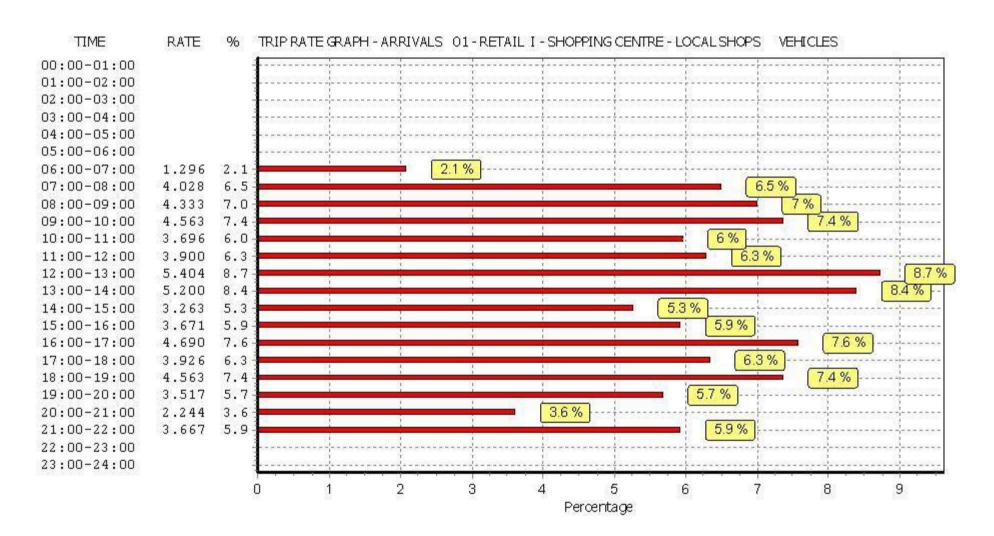
260 - 720 (units: sqm) Trip rate parameter range selected: Survey date date range: 01/01/08 - 10/11/15

Number of weekdays (Monday-Friday): Number of Saturdays: 0 Number of Sundays: 0 Surveys automatically removed from selection: 3 Surveys manually removed from selection:

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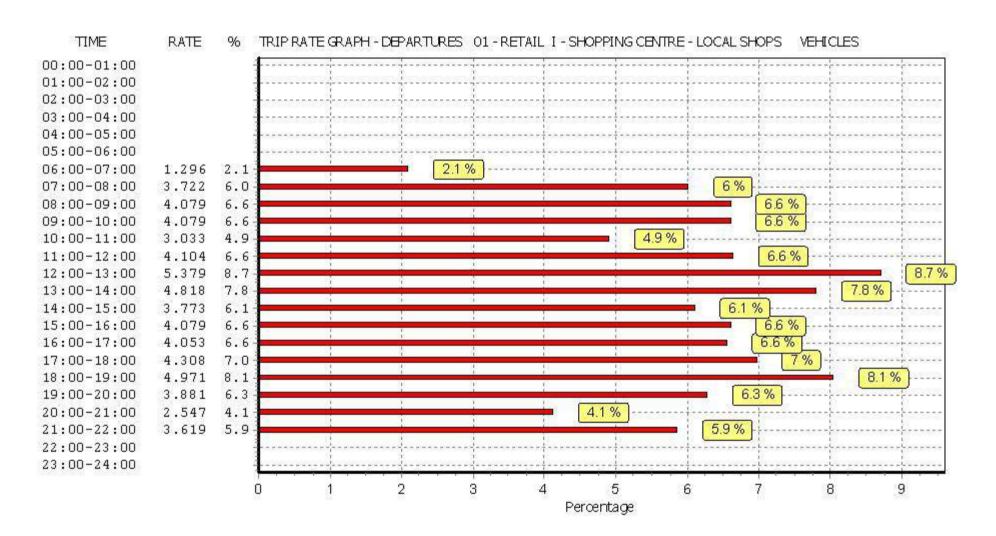
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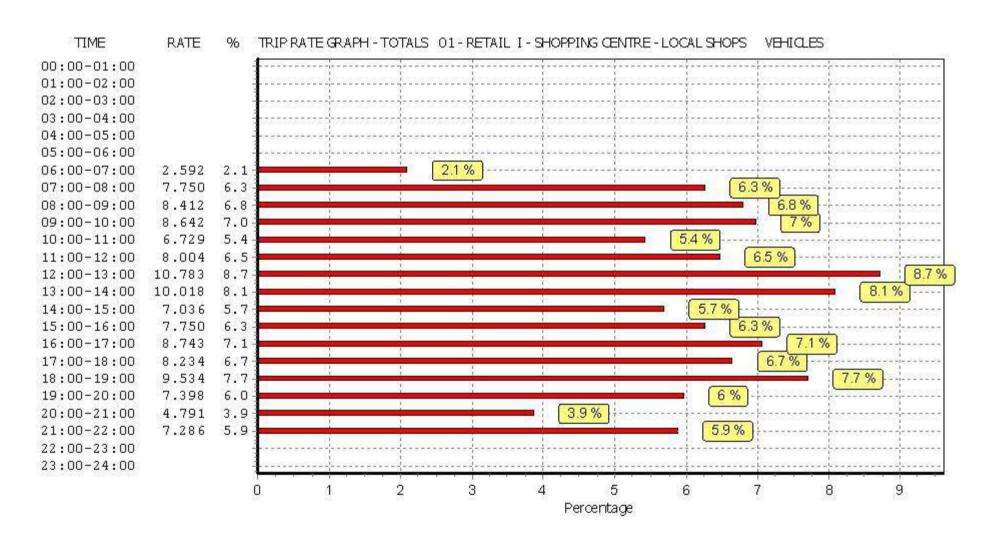
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Thursday 03/11/16 Pirelli Local Shops Atkins Birmingham Licence No: 803409

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

TAXIS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS			DEPARTURES)	TOTALS		
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	540	0.000	1	540	0.000	1	540	0.000
07:00 - 08:00	8	490	0.000	8	490	0.000	8	490	0.000
08:00 - 09:00	8	490	0.127	8	490	0.127	8	490	0.254
09:00 - 10:00	8	490	0.127	8	490	0.102	8	490	0.229
10:00 - 11:00	8	490	0.102	8	490	0.127	8	490	0.229
11:00 - 12:00	8	490	0.153	8	490	0.153	8	490	0.306
12:00 - 13:00	8	490	0.127	8	490	0.102	8	490	0.229
13:00 - 14:00	8	490	0.102	8	490	0.102	8	490	0.204
14:00 - 15:00	8	490	0.076	8	490	0.051	8	490	0.127
15:00 - 16:00	8	490	0.051	8	490	0.076	8	490	0.127
16:00 - 17:00	8	490	0.102	8	490	0.076	8	490	0.178
17:00 - 18:00	8	490	0.051	8	490	0.076	8	490	0.127
18:00 - 19:00	8	490	0.051	8	490	0.076	8	490	0.127
19:00 - 20:00	6	550	0.000	6	550	0.000	6	550	0.000
20:00 - 21:00	6	550	0.000	6	550	0.000	6	550	0.000
21:00 - 22:00	4	525	0.000	4	525	0.000	4	525	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.069			1.068			2.137

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

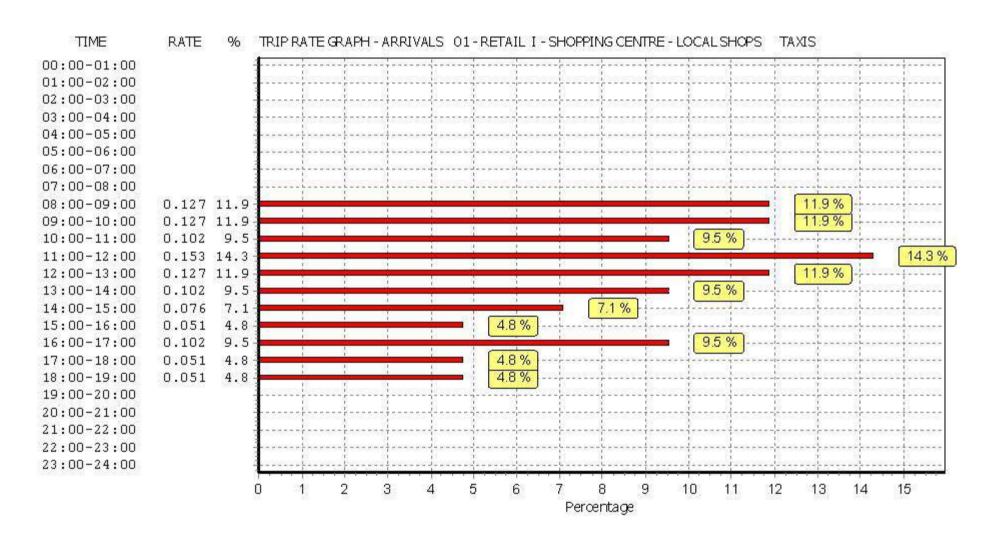
260 - 720 (units: sqm) Trip rate parameter range selected: Survey date date range: 01/01/08 - 10/11/15

Number of weekdays (Monday-Friday): Number of Saturdays: 0 Number of Sundays: 0 Surveys automatically removed from selection: 3 Surveys manually removed from selection:

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

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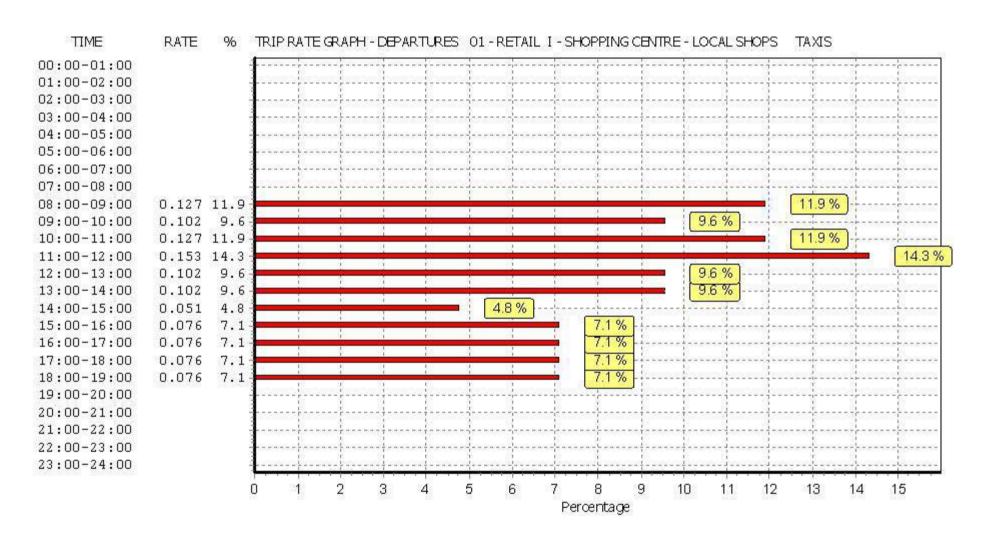
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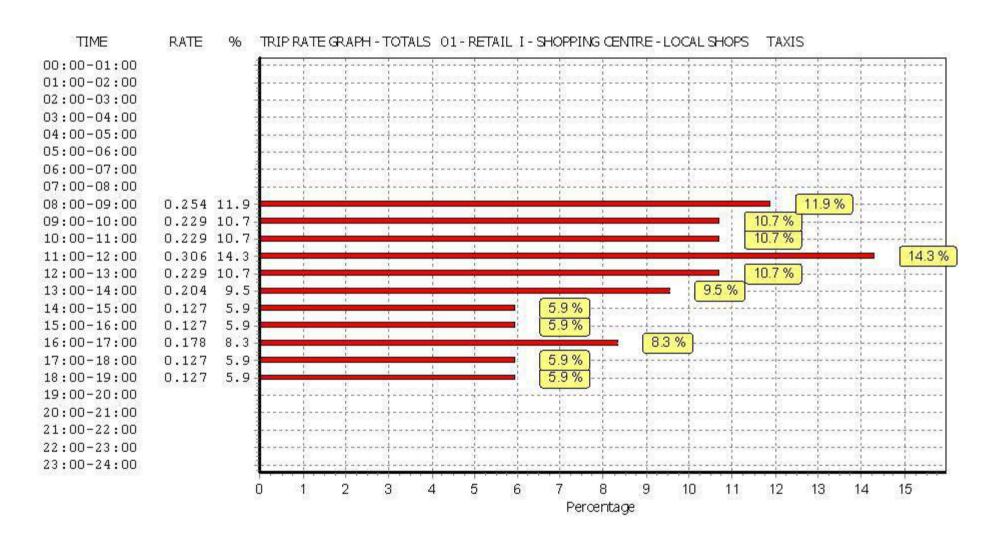
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Thursday 03/11/16

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES)	TOTALS		
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	540	0.000	1	540	0.000	1	540	0.000
07:00 - 08:00	8	490	0.000	8	490	0.025	8	490	0.025
08:00 - 09:00	8	490	0.051	8	490	0.000	8	490	0.051
09:00 - 10:00	8	490	0.178	8	490	0.127	8	490	0.305
10:00 - 11:00	8	490	0.025	8	490	0.025	8	490	0.050
11:00 - 12:00	8	490	0.000	8	490	0.025	8	490	0.025
12:00 - 13:00	8	490	0.076	8	490	0.076	8	490	0.152
13:00 - 14:00	8	490	0.025	8	490	0.025	8	490	0.050
14:00 - 15:00	8	490	0.000	8	490	0.000	8	490	0.000
15:00 - 16:00	8	490	0.025	8	490	0.025	8	490	0.050
16:00 - 17:00	8	490	0.051	8	490	0.025	8	490	0.076
17:00 - 18:00	8	490	0.000	8	490	0.051	8	490	0.051
18:00 - 19:00	8	490	0.000	8	490	0.025	8	490	0.025
19:00 - 20:00	6	550	0.030	6	550	0.061	6	550	0.091
20:00 - 21:00	6	550	0.000	6	550	0.000	6	550	0.000
21:00 - 22:00	4	525	0.048	4	525	0.048	4	525	0.096
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.509			0.538			1.047

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.

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Parameter summary

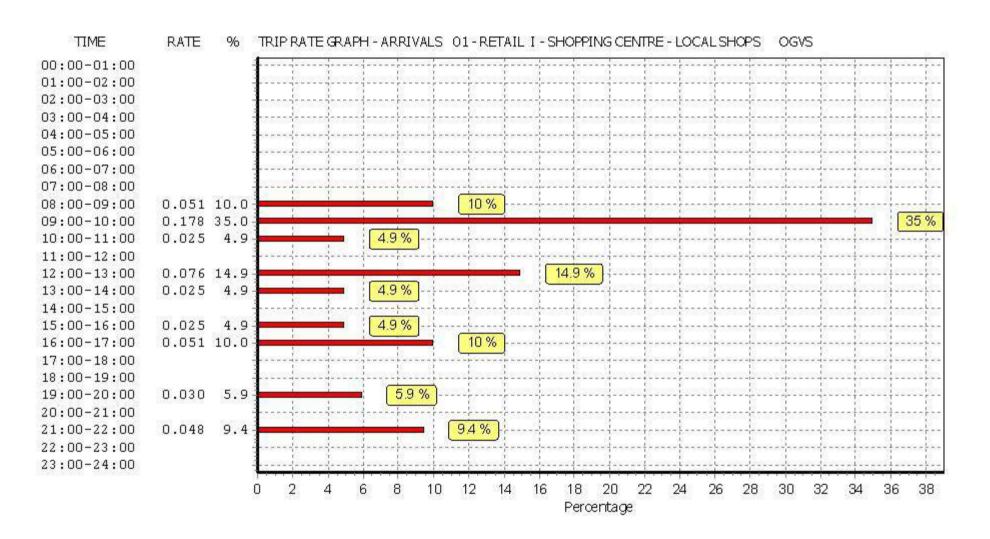
260 - 720 (units: sqm) Trip rate parameter range selected: Survey date date range: 01/01/08 - 10/11/15

Number of weekdays (Monday-Friday): Number of Saturdays: 0 Number of Sundays: 0 Surveys automatically removed from selection: 3 Surveys manually removed from selection:

This section displays a guick 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.

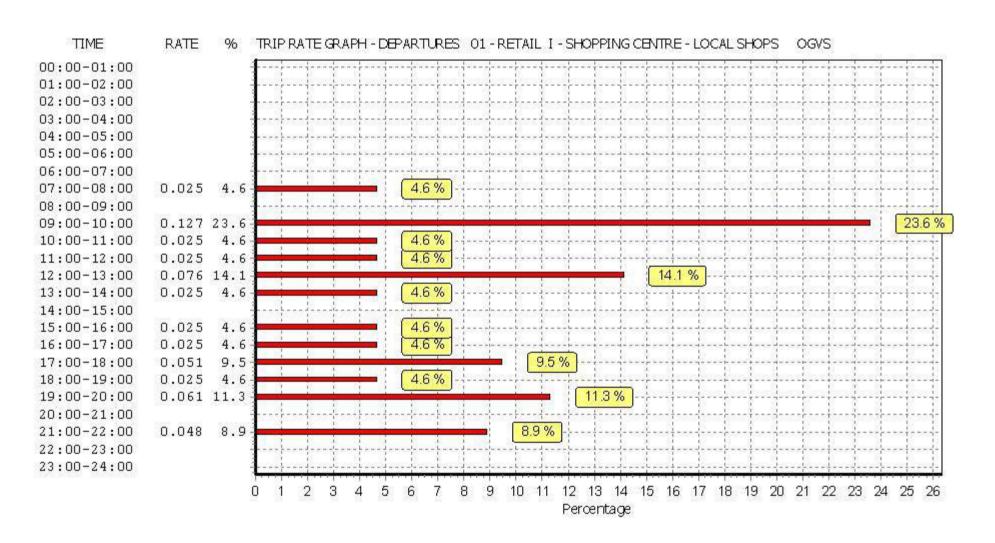
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Pirelli Local Shops Page 17 Atkins Birmingham Licence No: 803409 Axis

Thursday 03/11/16

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

PSVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES)	TOTALS		
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	540	0.000	1	540	0.000	1	540	0.000
07:00 - 08:00	8	490	0.025	8	490	0.025	8	490	0.050
08:00 - 09:00	8	490	0.051	8	490	0.051	8	490	0.102
09:00 - 10:00	8	490	0.000	8	490	0.000	8	490	0.000
10:00 - 11:00	8	490	0.000	8	490	0.000	8	490	0.000
11:00 - 12:00	8	490	0.025	8	490	0.025	8	490	0.050
12:00 - 13:00	8	490	0.000	8	490	0.000	8	490	0.000
13:00 - 14:00	8	490	0.025	8	490	0.025	8	490	0.050
14:00 - 15:00	8	490	0.025	8	490	0.000	8	490	0.025
15:00 - 16:00	8	490	0.000	8	490	0.025	8	490	0.025
16:00 - 17:00	8	490	0.025	8	490	0.025	8	490	0.050
17:00 - 18:00	8	490	0.000	8	490	0.000	8	490	0.000
18:00 - 19:00	8	490	0.000	8	490	0.000	8	490	0.000
19:00 - 20:00	6	550	0.000	6	550	0.000	6	550	0.000
20:00 - 21:00	6	550	0.000	6	550	0.000	6	550	0.000
21:00 - 22:00	4	525	0.000	4	525	0.000	4	525	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.176			0.176			0.352

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

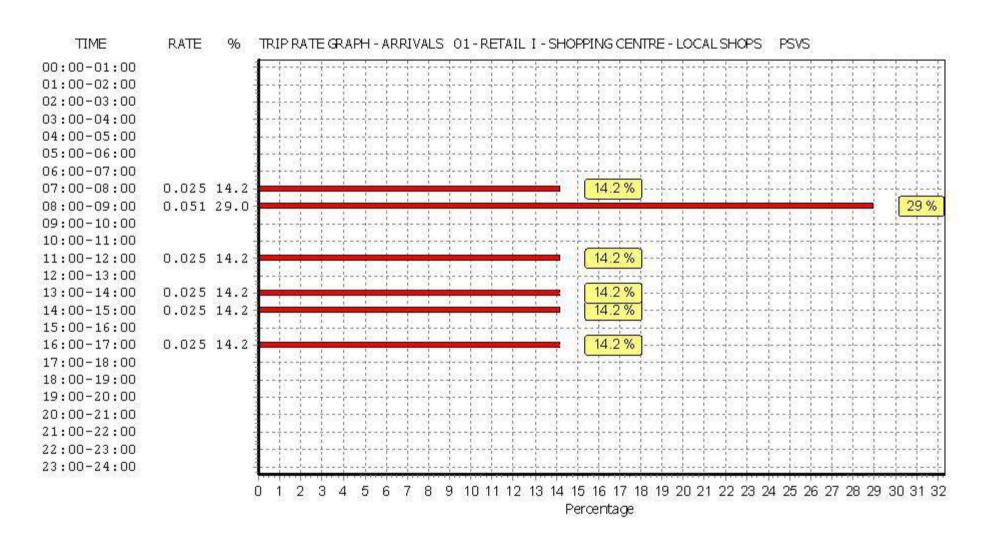
260 - 720 (units: sqm) Trip rate parameter range selected: Survey date date range: 01/01/08 - 10/11/15

Number of weekdays (Monday-Friday): Number of Saturdays: 0 Number of Sundays: 0 Surveys automatically removed from selection: 3 Surveys manually removed from selection:

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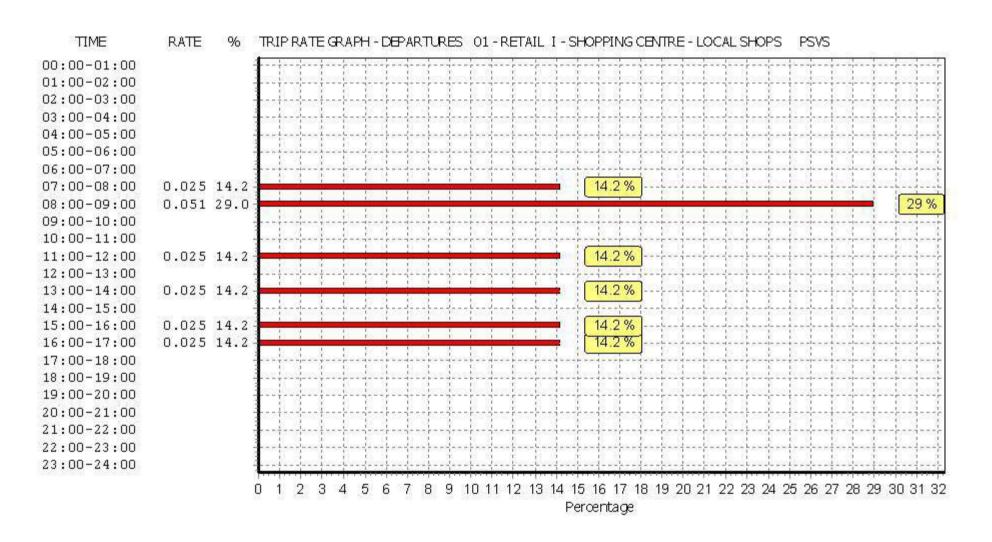
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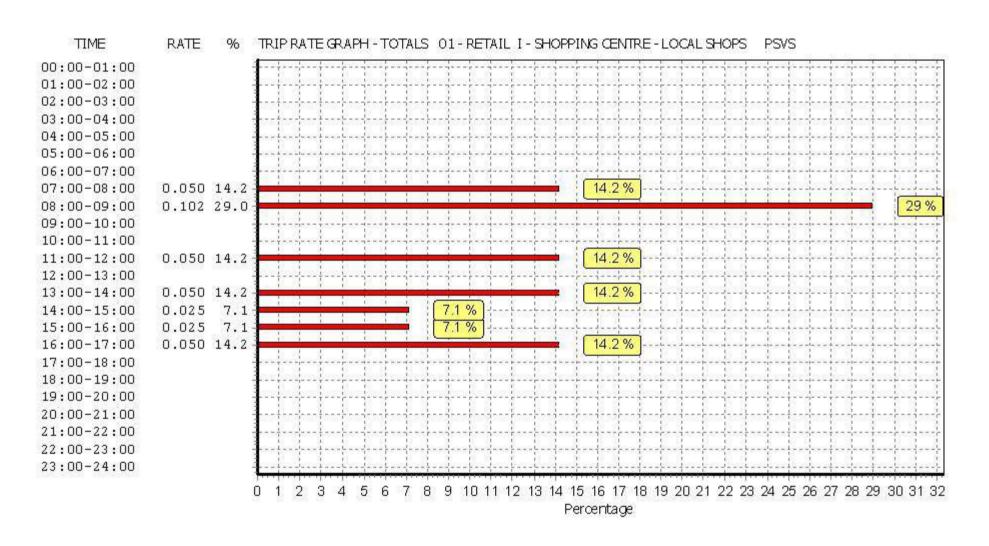
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Thursday 03/11/16 Pirelli Local Shops Birmingham

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Licence No: 803409

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES			TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	540	0.185	1	540	0.000	1	540	0.185
07:00 - 08:00	8	490	0.255	8	490	0.153	8	490	0.408
08:00 - 09:00	8	490	0.280	8	490	0.280	8	490	0.560
09:00 - 10:00	8	490	0.127	8	490	0.153	8	490	0.280
10:00 - 11:00	8	490	0.229	8	490	0.178	8	490	0.407
11:00 - 12:00	8	490	0.153	8	490	0.204	8	490	0.357
12:00 - 13:00	8	490	0.102	8	490	0.153	8	490	0.255
13:00 - 14:00	8	490	0.178	8	490	0.153	8	490	0.331
14:00 - 15:00	8	490	0.255	8	490	0.331	8	490	0.586
15:00 - 16:00	8	490	0.637	8	490	0.535	8	490	1.172
16:00 - 17:00	8	490	0.612	8	490	0.535	8	490	1.147
17:00 - 18:00	8	490	0.204	8	490	0.306	8	490	0.510
18:00 - 19:00	8	490	0.535	8	490	0.510	8	490	1.045
19:00 - 20:00	6	550	0.243	6	550	0.303	6	550	0.546
20:00 - 21:00	6	550	0.061	6	550	0.152	6	550	0.213
21:00 - 22:00	4	525	0.286	4	525	0.238	4	525	0.524
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.342			4.184			8.526

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

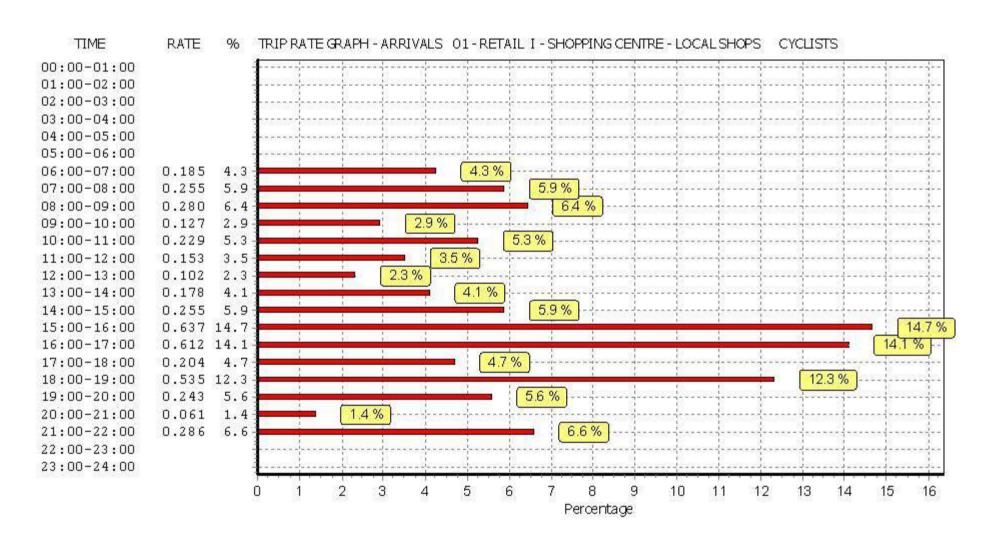
260 - 720 (units: sqm) Trip rate parameter range selected: Survey date date range: 01/01/08 - 10/11/15

Number of weekdays (Monday-Friday): Number of Saturdays: 0 Number of Sundays: 0 Surveys automatically removed from selection: 3 Surveys manually removed from selection:

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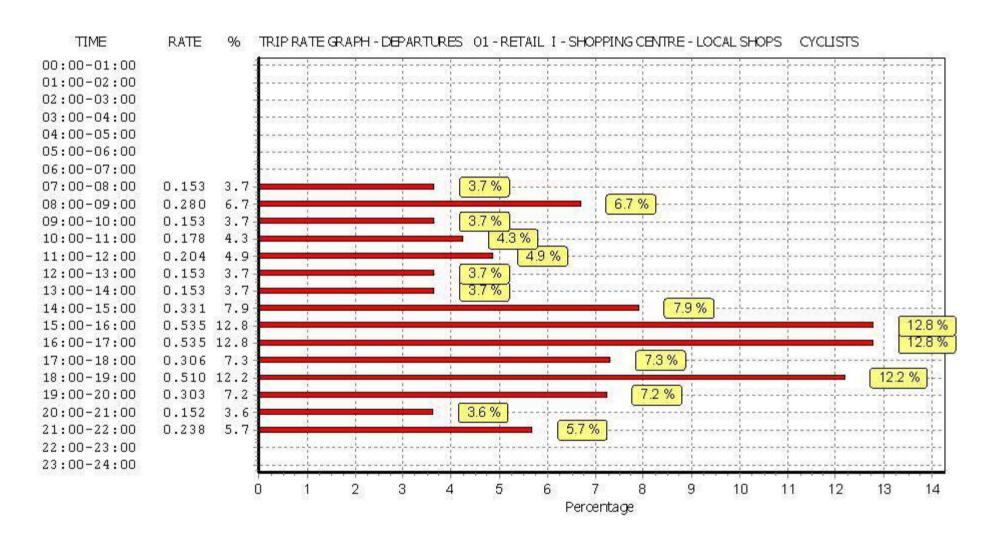
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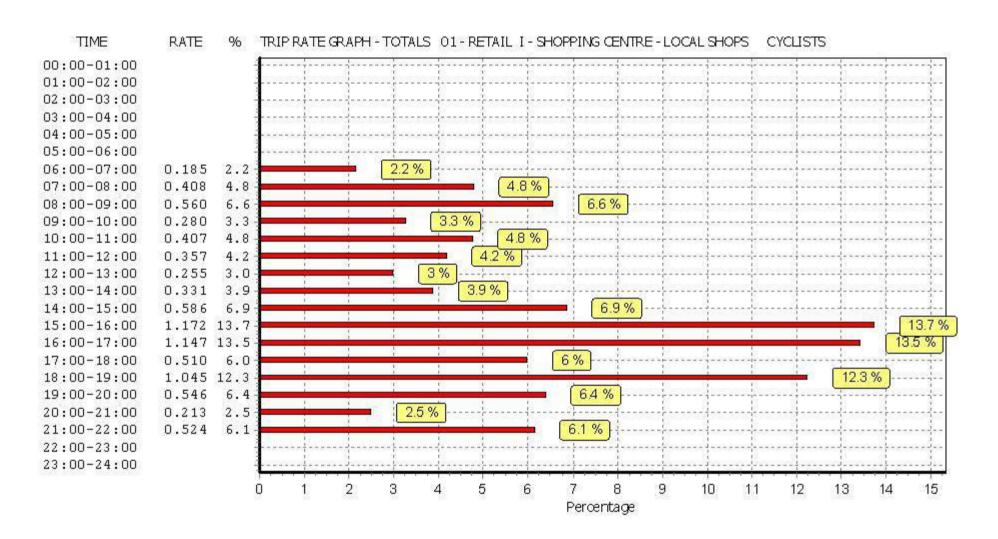
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Licence No: 803409



Wednesday 26/10/16 Page 1

Atkins Axis Birmingham Licence No: 803409

Calculation Reference: AUDIT-803409-161026-1052

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL

: L - BUILDER'S MERCHANTS Category

MULTI-MODAL VEHICLES

Selected regions and areas:

SOUTH EAST

Pirelli Builders Merchant A1

KC **KENT** 1 days

06 **WEST MIDLANDS**

WEST MIDLANDS 1 days WM WO WORCESTERSHIRE 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.

Gross floor area Parameter:

Actual Range: 5000 to 6275 (units: sqm) Range Selected by User: 5000 to 6275 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/08 to 19/10/11

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

Selected survey days:

Monday 2 days Wednesday 1 days

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

Selected survey types:

Manual count 3 days **Directional ATC Count** 0 days

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

Selected Locations:

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

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

Selected Location Sub Categories:

Industrial Zone 2 Residential Zone

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.

TRICS 7.3.3 240916 B17.41 (C) 2016 TRICS Consortium Ltd Wednesday 26/10/16 Pirelli Builders Merchant A1 Page 2

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Filtering Stage 3 selection:

Use Class:

A1 3 days

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

Population within 1 mile:

 10,001 to 15,000
 1 days

 15,001 to 20,000
 1 days

 25,001 to 50,000
 1 days

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

Population within 5 miles:

 50,001 to 75,000
 1 days

 100,001 to 125,000
 1 days

 500,001 or More
 1 days

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

Car ownership within 5 miles:

0.6 to 1.0 2 days 1.1 to 1.5 1 days

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

Petrol filling station:

Included in the survey count 0 days Excluded from count or no filling station 3 days

This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.

Travel Plan:

No 3 days

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

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LIST OF SITES relevant to selection parameters

1 KC-01-L-01 TRAVIS PERKINS KENT

ENTERPRISE WAY WESTWOOD MARGATE Edge of Town Industrial Zone

Total Gross floor area: 6275 sqm

Survey date: MONDAY 07/12/09 Survey Type: MANUAL

2 WM-01-L-02 SELCO WEST MIDLANDS

CHARLOTTE ROAD STIRCHLEY BIRMINGHAM

Suburban Area (PPS6 Out of Centre)

Residential Zone

Total Gross floor area: 5600 sqm

Survey date: WEDNESDAY 19/10/11 Survey Type: MANUAL WO-01-L-02 JEWSON WORCESTERSHIRE

NAVIGATION ROAD

WORCESTER Edge of Town Industrial Zone

Total Gross floor area: 5000 sqm

Survey date: MONDAY 15/06/09 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.

Pirelli Builders Merchant A1

Atkins Axis Birmingham

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Licence No: 803409

TRIP RATE for Land Use 01 - RETAIL/L - BUILDER'S MERCHANTS

MULTI-MODAL VEHICLES Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES		TOTALS		
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	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	1	5600	0.000	1	5600	0.000	1	5600	0.000
06:00 - 07:00	1	5600	0.375	1	5600	0.036	1	5600	0.411
07:00 - 08:00	3	5625	0.350	3	5625	0.219	3	5625	0.569
08:00 - 09:00	3	5625	0.658	3	5625	0.539	3	5625	1.197
09:00 - 10:00	3	5625	0.735	3	5625	0.747	3	5625	1.482
10:00 - 11:00	3	5625	0.640	3	5625	0.604	3	5625	1.244
11:00 - 12:00	3	5625	0.681	3	5625	0.575	3	5625	1.256
12:00 - 13:00	3	5625	0.527	3	5625	0.604	3	5625	1.131
13:00 - 14:00	3	5625	0.527	3	5625	0.658	3	5625	1.185
14:00 - 15:00	3	5625	0.468	3	5625	0.468	3	5625	0.936
15:00 - 16:00	3	5625	0.439	3	5625	0.427	3	5625	0.866
16:00 - 17:00	3	5625	0.296	3	5625	0.421	3	5625	0.717
17:00 - 18:00	3	5625	0.148	3	5625	0.255	3	5625	0.403
18:00 - 19:00	2	5300	0.245	2	5300	0.255	2	5300	0.500
19:00 - 20:00	1	5600	0.214	1	5600	0.357	1	5600	0.571
20:00 - 21:00	1	5600	0.000	1	5600	0.036	1	5600	0.036
21:00 - 22:00									
22:00 - 23:00	<u> </u>			·		·			·
23:00 - 24:00									<u> </u>
Total Rates:			6.303			6.201			12.504

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.

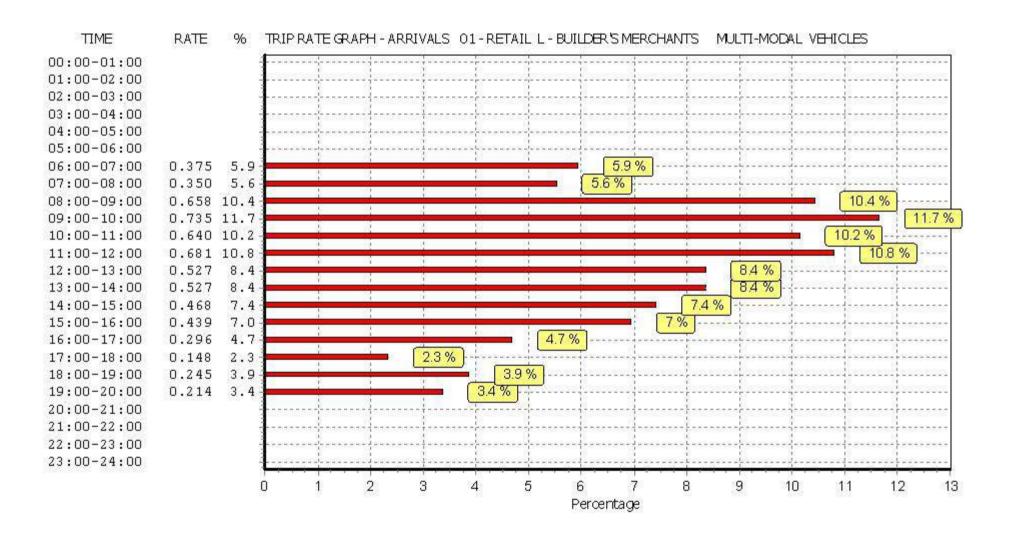
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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

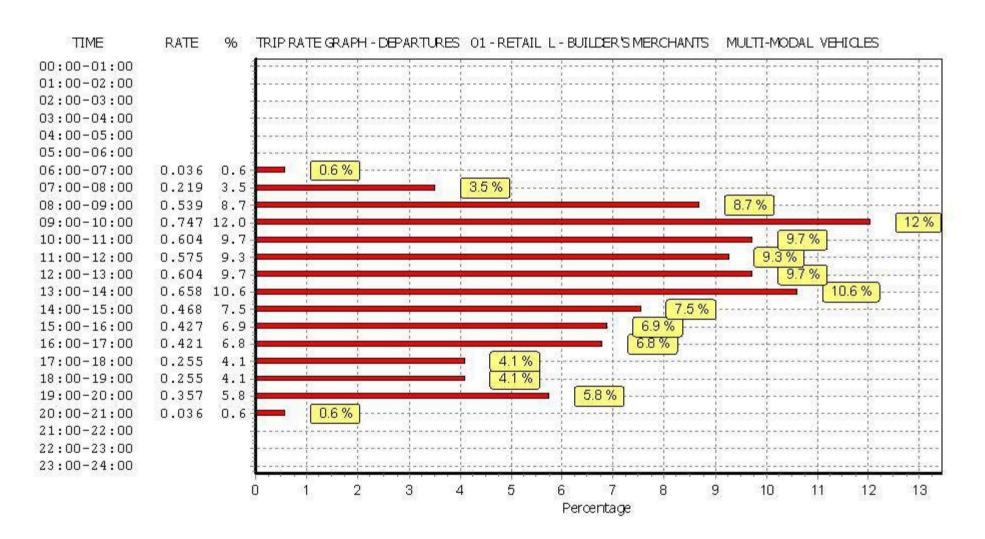
Trip rate parameter range selected: 5000 - 6275 (units: sqm) Survey date date range: 01/01/08 - 19/10/11

Number of weekdays (Monday-Friday): 3
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

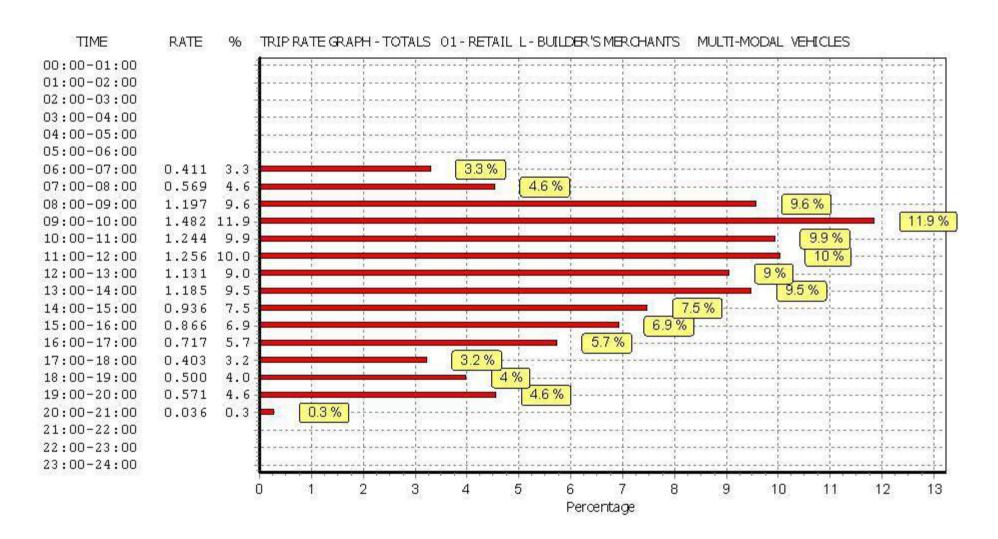
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Pirelli Builders Merchant A1

Atkins Axis Birmingham

Licence No: 803409

TRIP RATE for Land Use 01 - RETAIL/L - BUILDER'S MERCHANTS

MULTI-MODAL TAXIS
Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES		TOTALS		
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	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	1	5600	0.000	1	5600	0.000	1	5600	0.000
06:00 - 07:00	1	5600	0.000	1	5600	0.000	1	5600	0.000
07:00 - 08:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
08:00 - 09:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
09:00 - 10:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
10:00 - 11:00	3	5625	0.006	3	5625	0.006	3	5625	0.012
11:00 - 12:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
12:00 - 13:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
13:00 - 14:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
14:00 - 15:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
15:00 - 16:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
16:00 - 17:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
17:00 - 18:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
18:00 - 19:00	2	5300	0.000	2	5300	0.000	2	5300	0.000
19:00 - 20:00	1	5600	0.000	1	5600	0.000	1	5600	0.000
20:00 - 21:00	1	5600	0.000	1	5600	0.000	1	5600	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.006			0.006			0.012

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

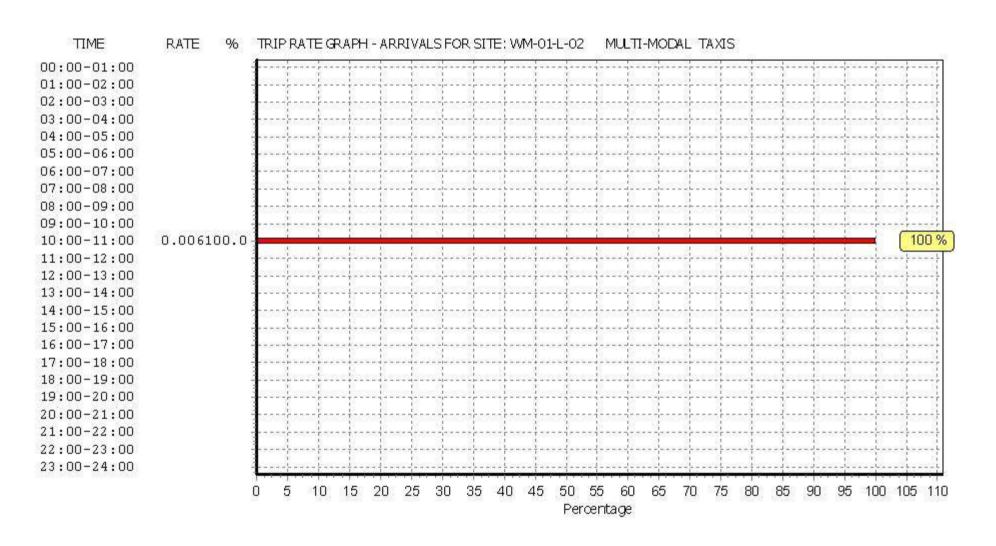
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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

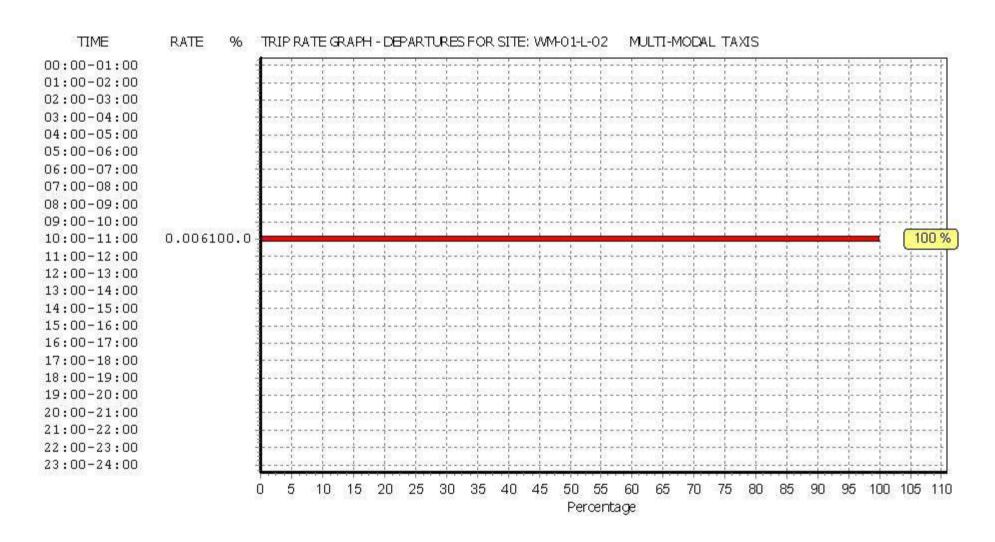
Trip rate parameter range selected: 5000 - 6275 (units: sqm) Survey date date range: 01/01/08 - 19/10/11

Number of weekdays (Monday-Friday): 3
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

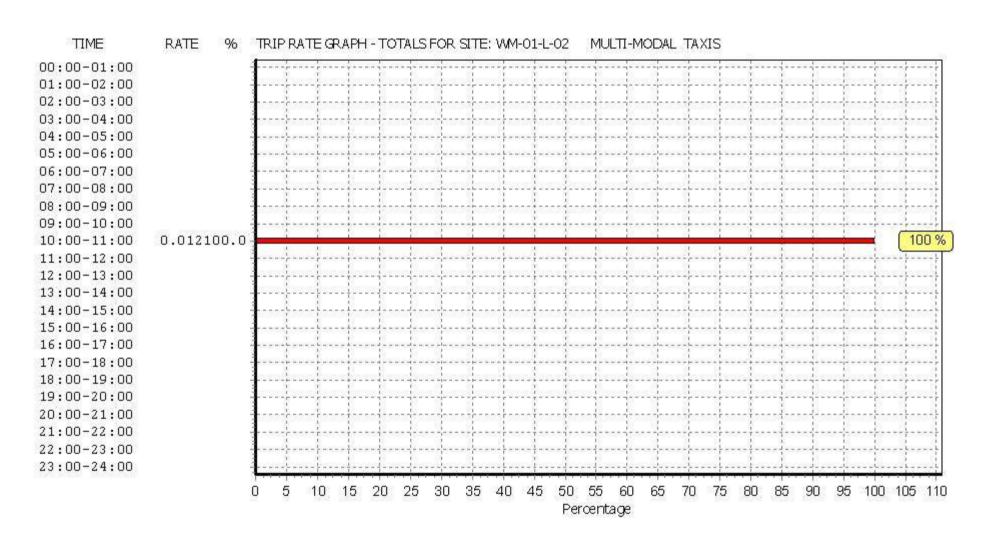
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TRIP RATE for Land Use 01 - RETAIL/L - BUILDER'S MERCHANTS

MULTI-MODAL OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES)		TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	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	1	5600	0.000	1	5600	0.000	1	5600	0.000
06:00 - 07:00	1	5600	0.000	1	5600	0.000	1	5600	0.000
07:00 - 08:00	3	5625	0.018	3	5625	0.030	3	5625	0.048
08:00 - 09:00	3	5625	0.053	3	5625	0.041	3	5625	0.094
09:00 - 10:00	3	5625	0.071	3	5625	0.059	3	5625	0.130
10:00 - 11:00	3	5625	0.065	3	5625	0.071	3	5625	0.136
11:00 - 12:00	3	5625	0.089	3	5625	0.047	3	5625	0.136
12:00 - 13:00	3	5625	0.047	3	5625	0.077	3	5625	0.124
13:00 - 14:00	3	5625	0.030	3	5625	0.036	3	5625	0.066
14:00 - 15:00	3	5625	0.024	3	5625	0.024	3	5625	0.048
15:00 - 16:00	3	5625	0.030	3	5625	0.024	3	5625	0.054
16:00 - 17:00	3	5625	0.041	3	5625	0.036	3	5625	0.077
17:00 - 18:00	3	5625	0.006	3	5625	0.024	3	5625	0.030
18:00 - 19:00	2	5300	0.000	2	5300	0.009	2	5300	0.009
19:00 - 20:00	1	5600	0.000	1	5600	0.000	1	5600	0.000
20:00 - 21:00	1	5600	0.000	1	5600	0.000	1	5600	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.474			0.478			0.952

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.

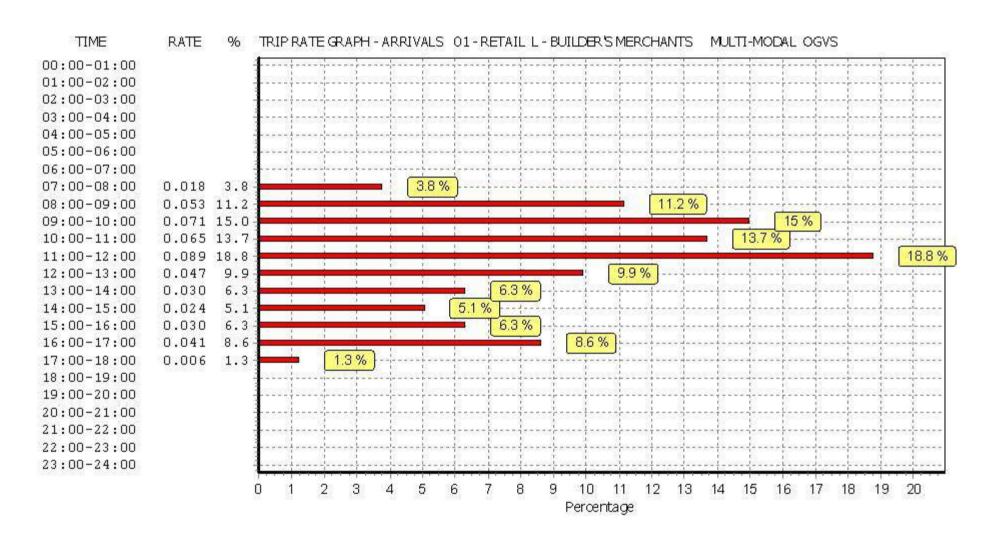
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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

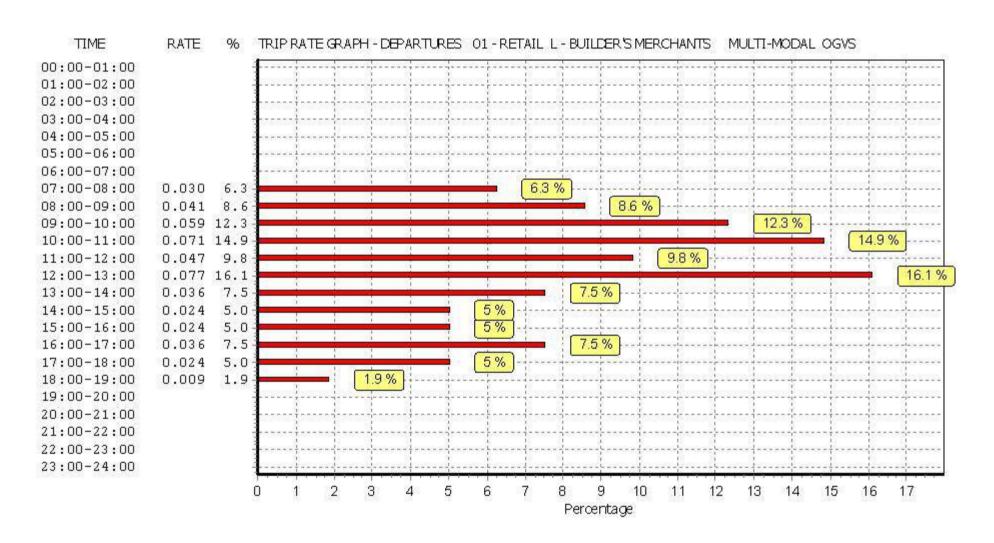
Trip rate parameter range selected: 5000 - 6275 (units: sqm) Survey date date range: 01/01/08 - 19/10/11

Number of weekdays (Monday-Friday): 3
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

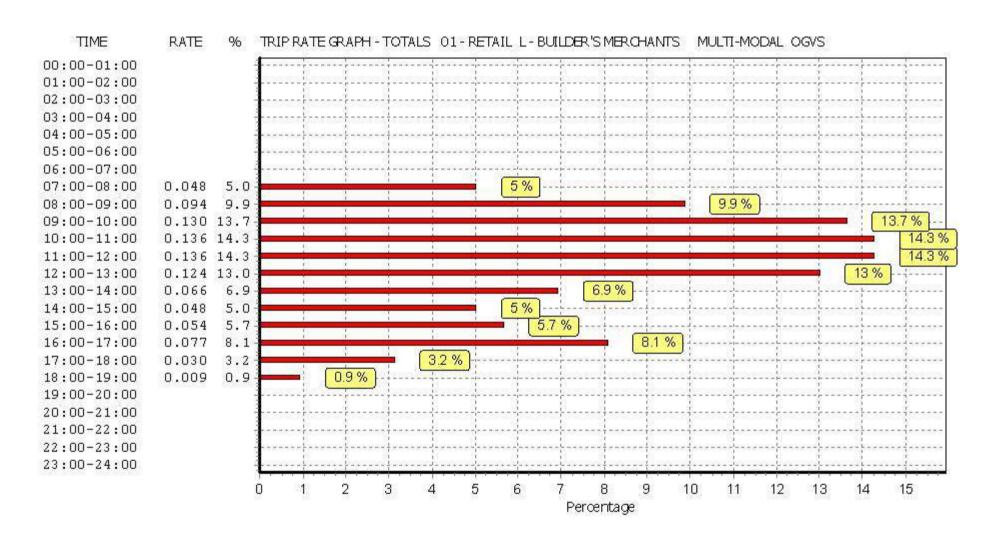
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TRIP RATE for Land Use 01 - RETAIL/L - BUILDER'S MERCHANTS

MULTI-MODAL PSVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES)		TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	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	1	5600	0.000	1	5600	0.000	1	5600	0.000
06:00 - 07:00	1	5600	0.000	1	5600	0.000	1	5600	0.000
07:00 - 08:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
08:00 - 09:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
09:00 - 10:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
10:00 - 11:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
11:00 - 12:00	3	5625	0.006	3	5625	0.006	3	5625	0.012
12:00 - 13:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
13:00 - 14:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
14:00 - 15:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
15:00 - 16:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
16:00 - 17:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
17:00 - 18:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
18:00 - 19:00	2	5300	0.000	2	5300	0.000	2	5300	0.000
19:00 - 20:00	1	5600	0.000	1	5600	0.000	1	5600	0.000
20:00 - 21:00	1	5600	0.000	1	5600	0.000	1	5600	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.006			0.006			0.012

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

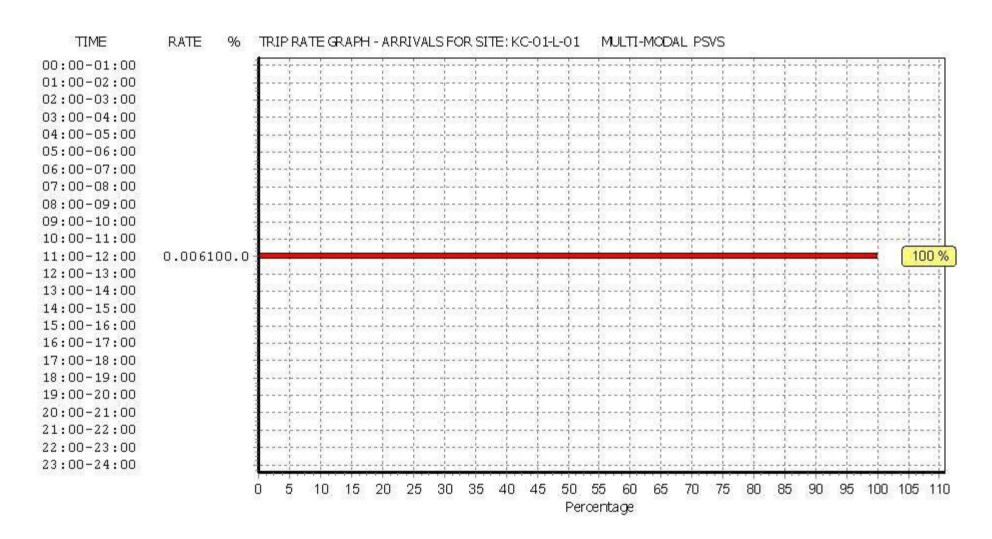
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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

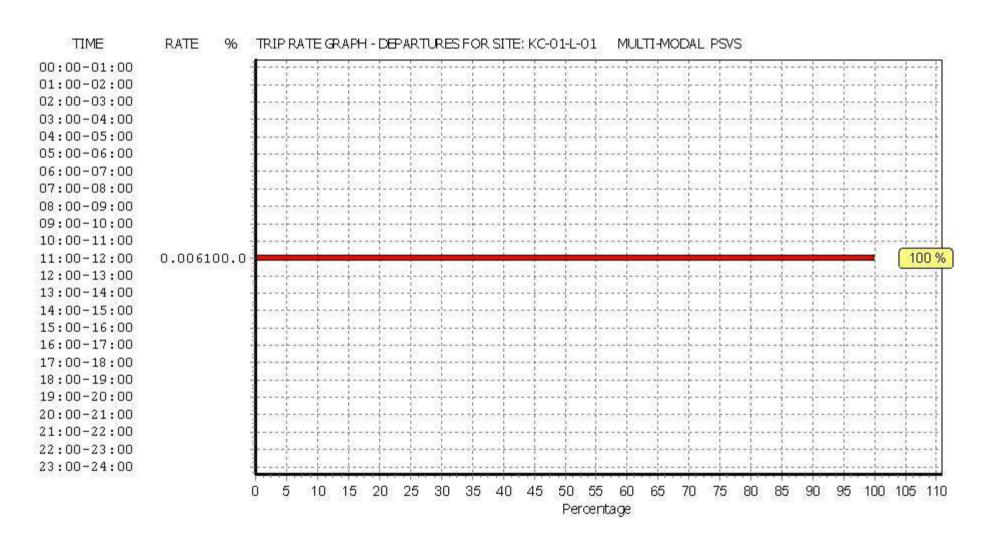
Trip rate parameter range selected: 5000 - 6275 (units: sqm) Survey date date range: 01/01/08 - 19/10/11

Number of weekdays (Monday-Friday): 3
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

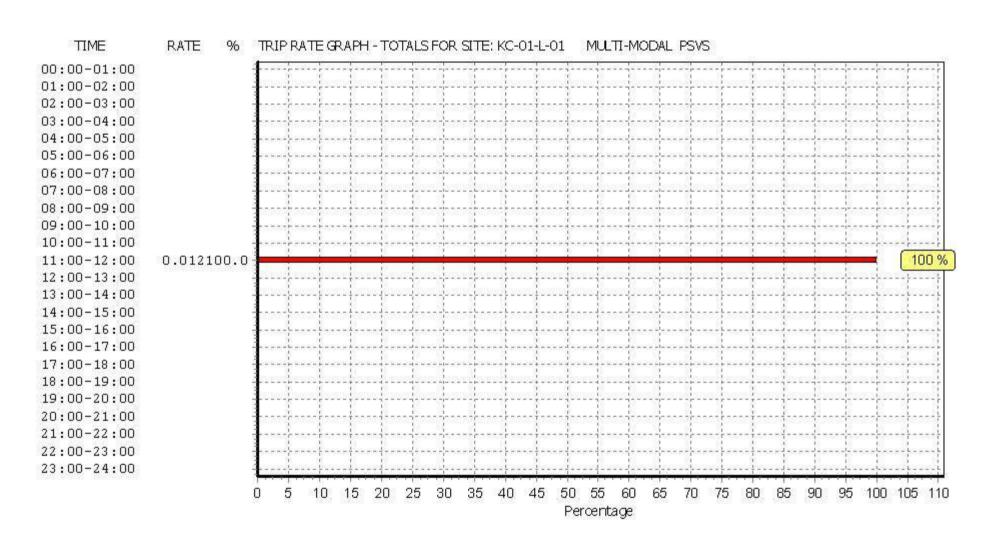
Licence No: 803409



Licence No: 803409



Licence No: 803409



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TRIP RATE for Land Use 01 - RETAIL/L - BUILDER'S MERCHANTS

MULTI-MODAL CYCLISTS
Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES			TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	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	1	5600	0.000	1	5600	0.000	1	5600	0.000
06:00 - 07:00	1	5600	0.000	1	5600	0.000	1	5600	0.000
07:00 - 08:00	3	5625	0.006	3	5625	0.006	3	5625	0.012
08:00 - 09:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
09:00 - 10:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
10:00 - 11:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
11:00 - 12:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
12:00 - 13:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
13:00 - 14:00	3	5625	0.012	3	5625	0.006	3	5625	0.018
14:00 - 15:00	3	5625	0.000	3	5625	0.006	3	5625	0.006
15:00 - 16:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
16:00 - 17:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
17:00 - 18:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
18:00 - 19:00	2	5300	0.000	2	5300	0.000	2	5300	0.000
19:00 - 20:00	1	5600	0.000	1	5600	0.000	1	5600	0.000
20:00 - 21:00	1	5600	0.000	1	5600	0.000	1	5600	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.018			0.018			0.036

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.

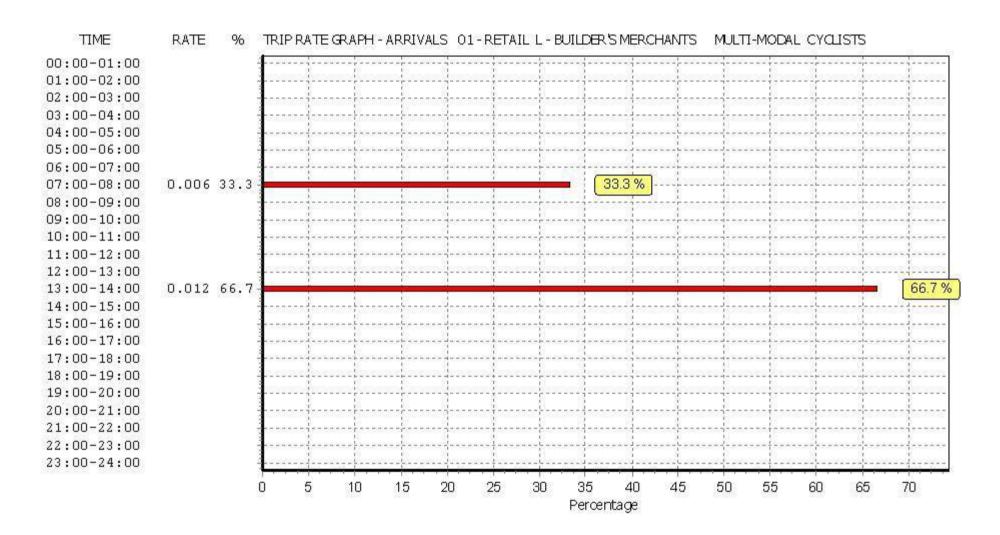
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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

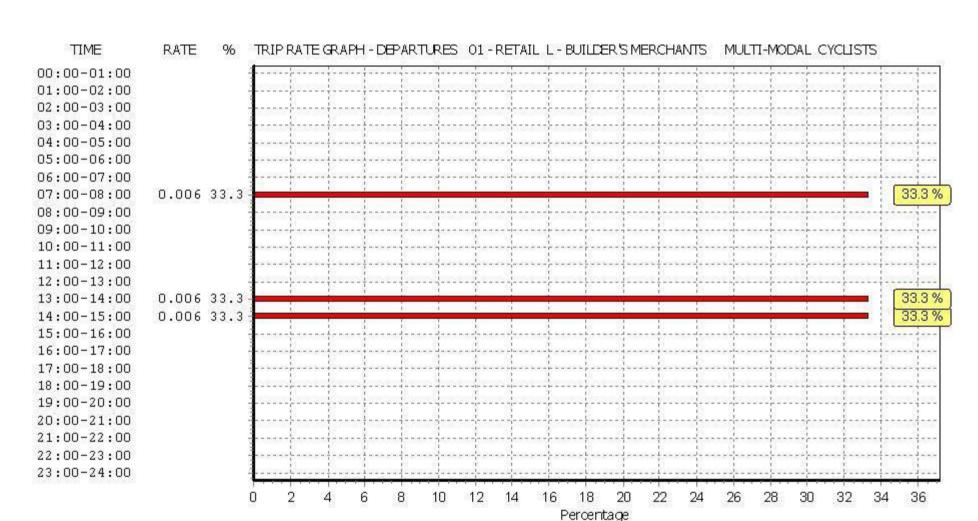
Trip rate parameter range selected: 5000 - 6275 (units: sqm) Survey date date range: 01/01/08 - 19/10/11

Number of weekdays (Monday-Friday): 3
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

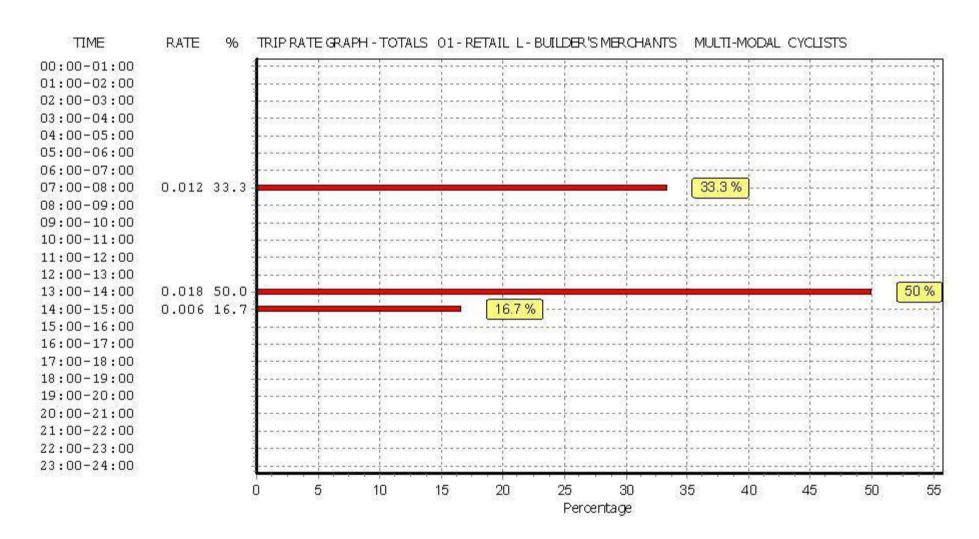
Licence No: 803409



Licence No: 803409



Licence No: 803409



Atkins Axis Birmingham Licence No: 803409

TRIP RATE for Land Use 01 - RETAIL/L - BUILDER'S MERCHANTS MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES	ò		TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	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	1	5600	0.000	1	5600	0.000	1	5600	0.000
06:00 - 07:00	1	5600	0.446	1	5600	0.036	1	5600	0.482
07:00 - 08:00	3	5625	0.474	3	5625	0.279	3	5625	0.753
08:00 - 09:00	3	5625	0.859	3	5625	0.658	3	5625	1.517
09:00 - 10:00	3	5625	0.913	3	5625	0.924	3	5625	1.837
10:00 - 11:00	3	5625	0.764	3	5625	0.723	3	5625	1.487
11:00 - 12:00	3	5625	0.764	3	5625	0.664	3	5625	1.428
12:00 - 13:00	3	5625	0.628	3	5625	0.729	3	5625	1.357
13:00 - 14:00	3	5625	0.646	3	5625	0.776	3	5625	1.422
14:00 - 15:00	3	5625	0.545	3	5625	0.557	3	5625	1.102
15:00 - 16:00	3	5625	0.527	3	5625	0.533	3	5625	1.060
16:00 - 17:00	3	5625	0.356	3	5625	0.521	3	5625	0.877
17:00 - 18:00	3	5625	0.172	3	5625	0.284	3	5625	0.456
18:00 - 19:00	2	5300	0.292	2	5300	0.349	2	5300	0.641
19:00 - 20:00	1	5600	0.214	1	5600	0.482	1	5600	0.696
20:00 - 21:00	1	5600	0.000	1	5600	0.054	1	5600	0.054
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			7.600			7.569			15.169

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.

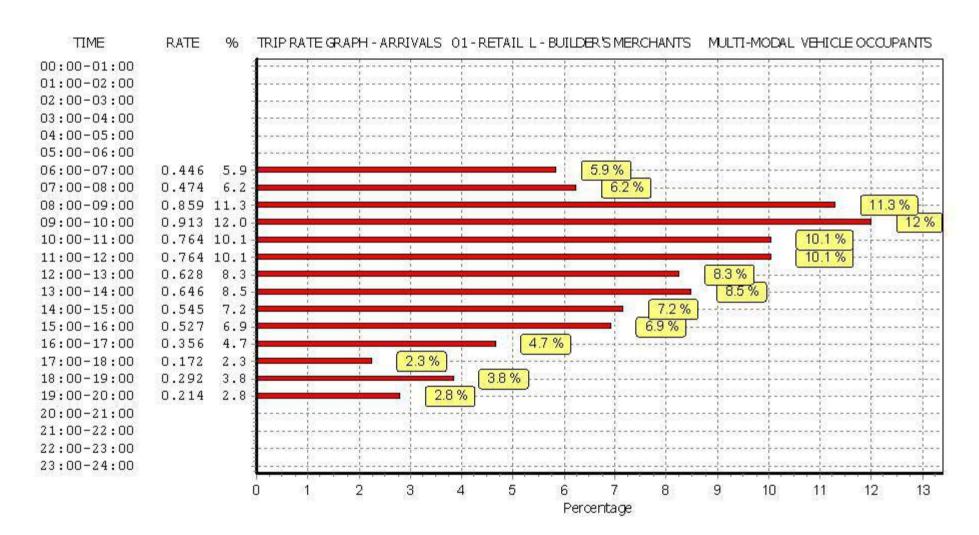
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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

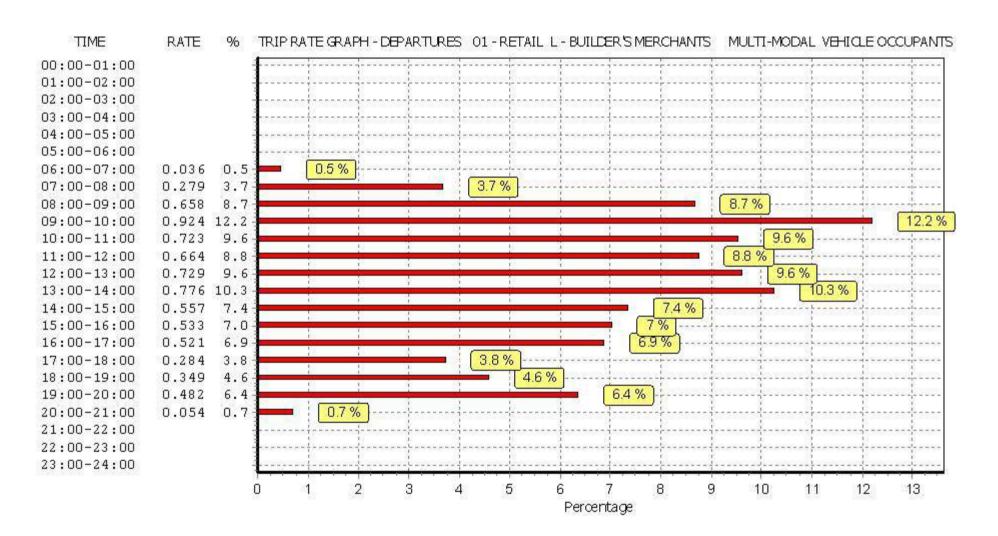
Trip rate parameter range selected: 5000 - 6275 (units: sqm) Survey date date range: 01/01/08 - 19/10/11

Number of weekdays (Monday-Friday): 3
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

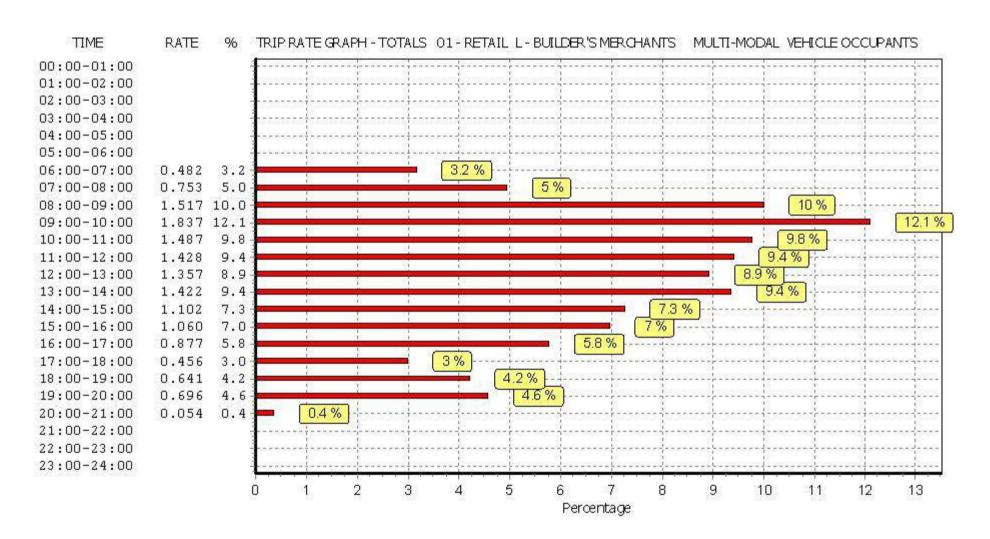
Licence No: 803409



Licence No: 803409



Licence No: 803409



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Atkins Axis Birmingham Licence No: 803409

TRIP RATE for Land Use 01 - RETAIL/L - BUILDER'S MERCHANTS MULTI-MODAL PEDESTRIANS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES			TOTALS	TOTALS		
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip		
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	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	1	5600	0.000	1	5600	0.000	1	5600	0.000		
06:00 - 07:00	1	5600	0.018	1	5600	0.000	1	5600	0.018		
07:00 - 08:00	3	5625	0.024	3	5625	0.000	3	5625	0.024		
08:00 - 09:00	3	5625	0.000	3	5625	0.000	3	5625	0.000		
09:00 - 10:00	3	5625	0.018	3	5625	0.012	3	5625	0.030		
10:00 - 11:00	3	5625	0.012	3	5625	0.006	3	5625	0.018		
11:00 - 12:00	3	5625	0.018	3	5625	0.012	3	5625	0.030		
12:00 - 13:00	3	5625	0.024	3	5625	0.018	3	5625	0.042		
13:00 - 14:00	3	5625	0.006	3	5625	0.012	3	5625	0.018		
14:00 - 15:00	3	5625	0.012	3	5625	0.018	3	5625	0.030		
15:00 - 16:00	3	5625	0.018	3	5625	0.012	3	5625	0.030		
16:00 - 17:00	3	5625	0.000	3	5625	0.024	3	5625	0.024		
17:00 - 18:00	3	5625	0.006	3	5625	0.018	3	5625	0.024		
18:00 - 19:00	2	5300	0.000	2	5300	0.009	2	5300	0.009		
19:00 - 20:00	1	5600	0.000	1	5600	0.000	1	5600	0.000		
20:00 - 21:00	1	5600	0.000	1	5600	0.018	1	5600	0.018		
21:00 - 22:00											
22:00 - 23:00											
23:00 - 24:00											
Total Rates:			0.156			0.159			0.315		

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.

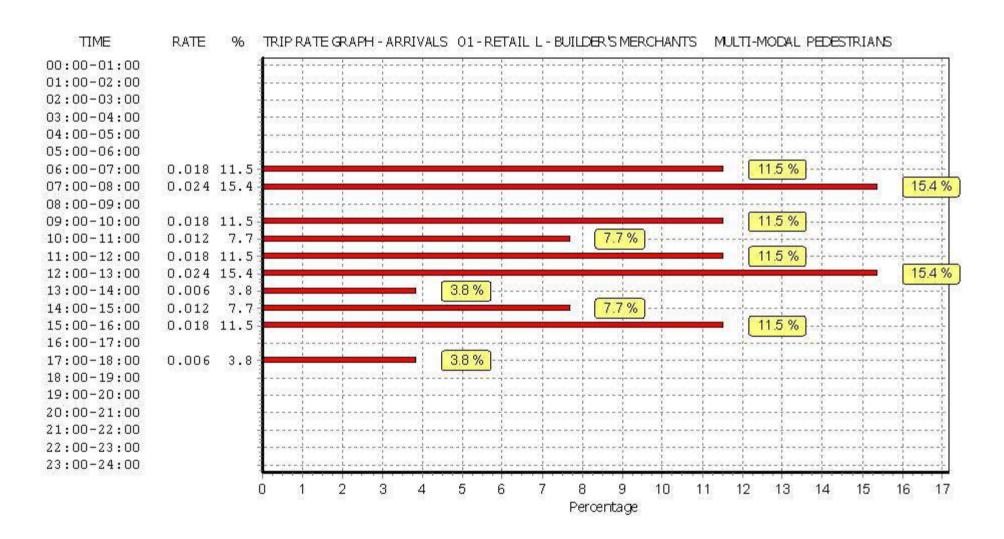
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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

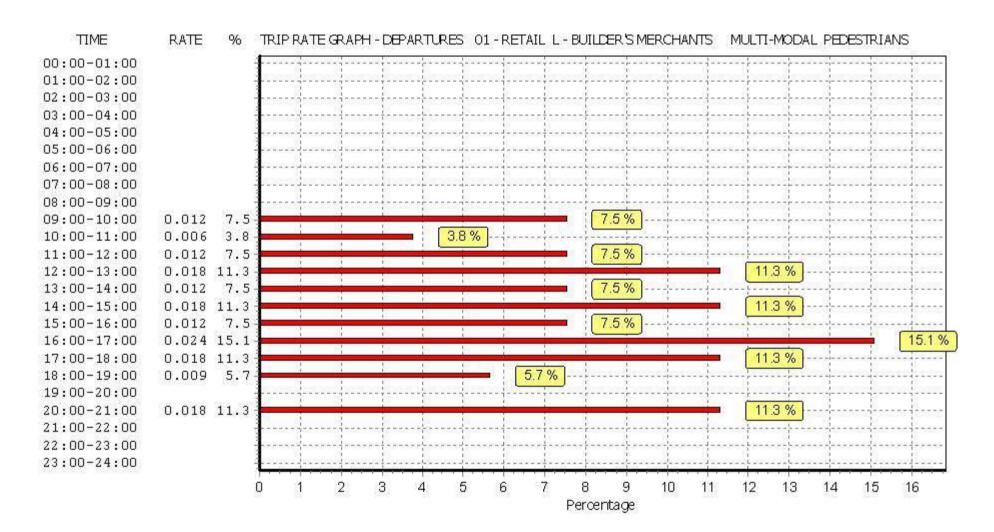
Trip rate parameter range selected: 5000 - 6275 (units: sqm) Survey date date range: 01/01/08 - 19/10/11

Number of weekdays (Monday-Friday): 3
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

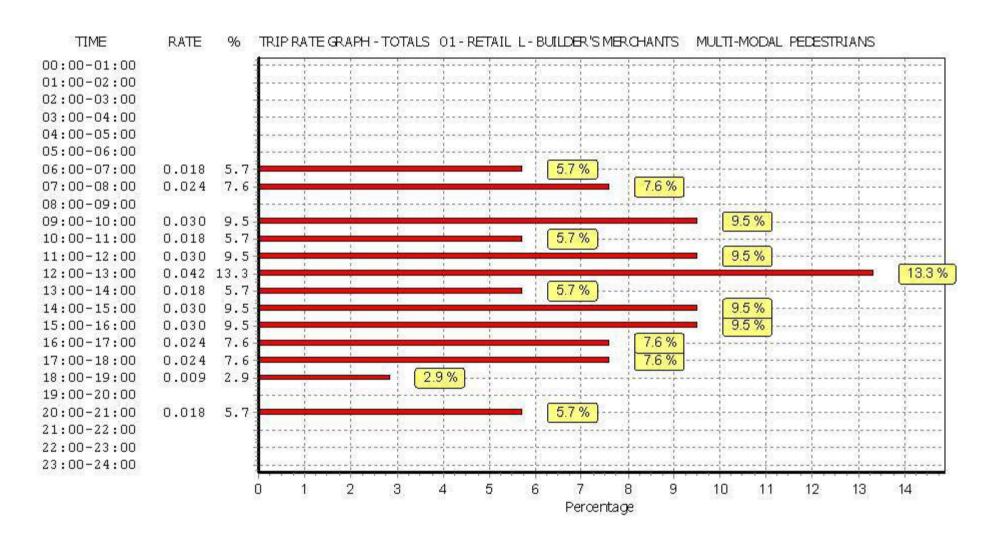
Licence No: 803409



Licence No: 803409



Licence No: 803409



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Atkins Axis Birmingham Licence No: 803409

TRIP RATE for Land Use 01 - RETAIL/L - BUILDER'S MERCHANTS MULTI-MODAL BUS/TRAM PASSENGERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES	ò		TOTALS	TOTALS			
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip			
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	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	1	5600	0.000	1	5600	0.000	1	5600	0.000			
06:00 - 07:00	1	5600	0.000	1	5600	0.000	1	5600	0.000			
07:00 - 08:00	3	5625	0.012	3	5625	0.000	3	5625	0.012			
08:00 - 09:00	3	5625	0.030	3	5625	0.006	3	5625	0.036			
09:00 - 10:00	3	5625	0.012	3	5625	0.000	3	5625	0.012			
10:00 - 11:00	3	5625	0.000	3	5625	0.006	3	5625	0.006			
11:00 - 12:00	3	5625	0.000	3	5625	0.012	3	5625	0.012			
12:00 - 13:00	3	5625	0.006	3	5625	0.000	3	5625	0.006			
13:00 - 14:00	3	5625	0.006	3	5625	0.006	3	5625	0.012			
14:00 - 15:00	3	5625	0.000	3	5625	0.006	3	5625	0.006			
15:00 - 16:00	3	5625	0.000	3	5625	0.000	3	5625	0.000			
16:00 - 17:00	3	5625	0.000	3	5625	0.012	3	5625	0.012			
17:00 - 18:00	3	5625	0.000	3	5625	0.006	3	5625	0.006			
18:00 - 19:00	2	5300	0.000	2	5300	0.000	2	5300	0.000			
19:00 - 20:00	1	5600	0.000	1	5600	0.000	1	5600	0.000			
20:00 - 21:00	1	5600	0.000	1	5600	0.036	1	5600	0.036			
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00							·					
Total Rates:			0.066			0.090			0.156			

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.

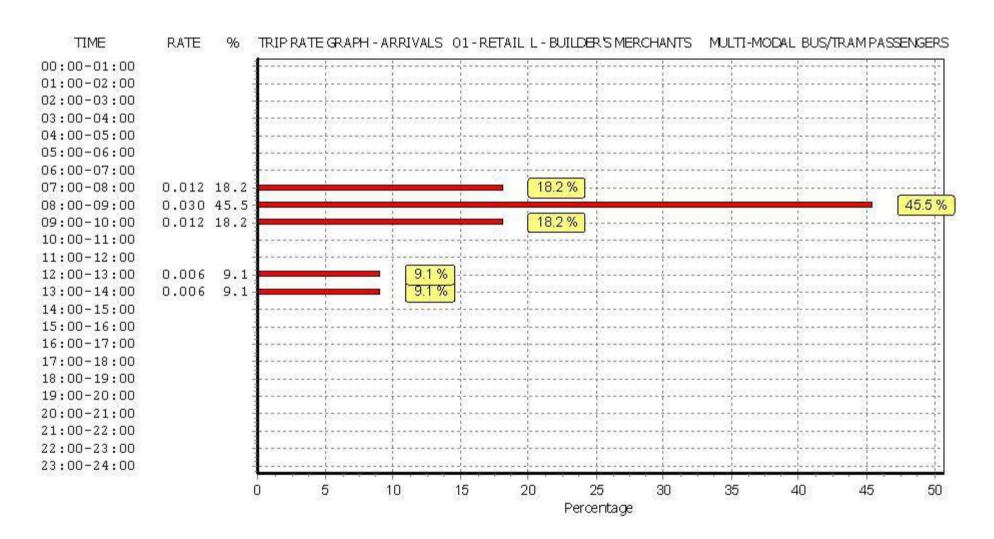
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected 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: 5000 - 6275 (units: sqm) Survey date date range: 01/01/08 - 19/10/11

Number of weekdays (Monday-Friday): 3
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

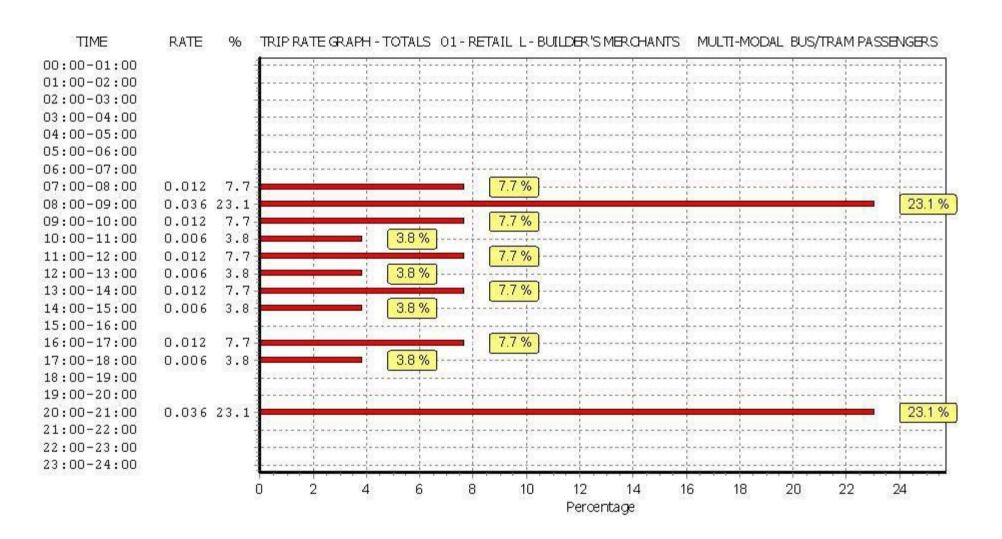
Licence No: 803409



Licence No: 803409



Licence No: 803409



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Atkins Axis Birmingham Licence No: 803409

TRIP RATE for Land Use 01 - RETAIL/L - BUILDER'S MERCHANTS MULTI-MODAL TOTAL RAIL PASSENGERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES	ò		TOTALS	
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	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	1	5600	0.000	1	5600	0.000	1	5600	0.000
06:00 - 07:00	1	5600	0.000	1	5600	0.000	1	5600	0.000
07:00 - 08:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
08:00 - 09:00	3	5625	0.006	3	5625	0.000	3	5625	0.006
09:00 - 10:00	3	5625	0.000	3	5625	0.006	3	5625	0.006
10:00 - 11:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
11:00 - 12:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
12:00 - 13:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
13:00 - 14:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
14:00 - 15:00	3	5625	0.006	3	5625	0.000	3	5625	0.006
15:00 - 16:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
16:00 - 17:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
17:00 - 18:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
18:00 - 19:00	2	5300	0.000	2	5300	0.000	2	5300	0.000
19:00 - 20:00	1	5600	0.000	1	5600	0.000	1	5600	0.000
20:00 - 21:00	1	5600	0.000	1	5600	0.018	1	5600	0.018
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00	<u> </u>			<u> </u>			<u> </u>		·
Total Rates:			0.012			0.024			0.036

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.

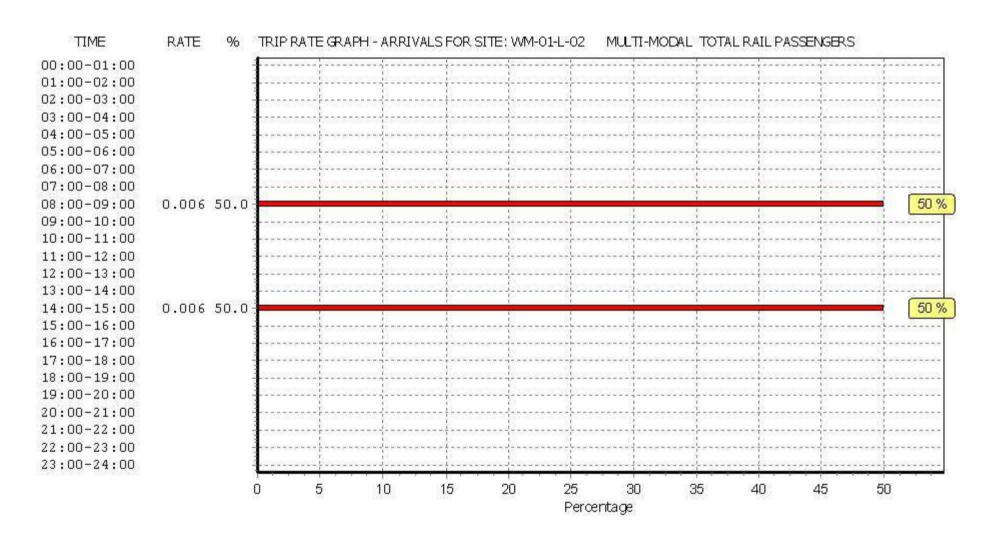
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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

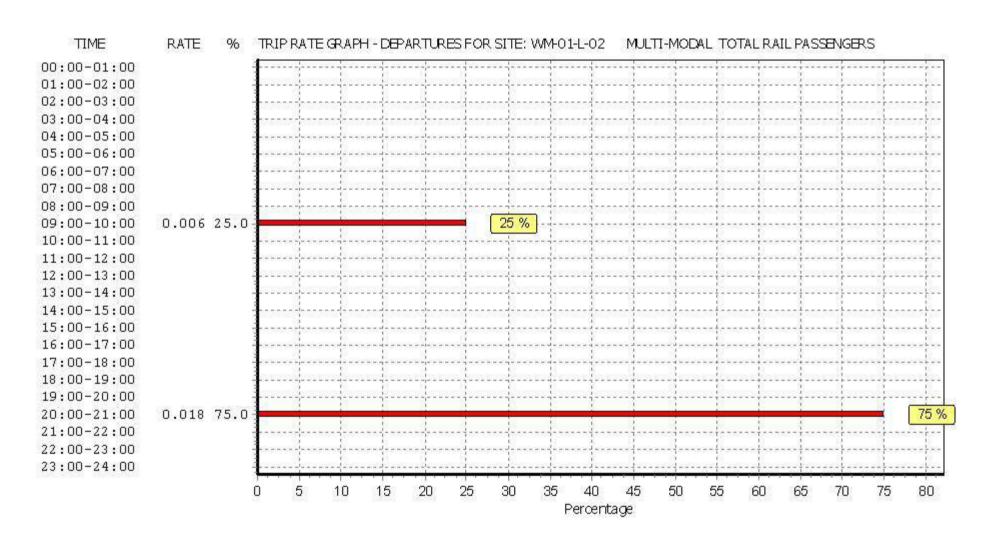
Trip rate parameter range selected: 5000 - 6275 (units: sqm) Survey date date range: 01/01/08 - 19/10/11

Number of weekdays (Monday-Friday): 3
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

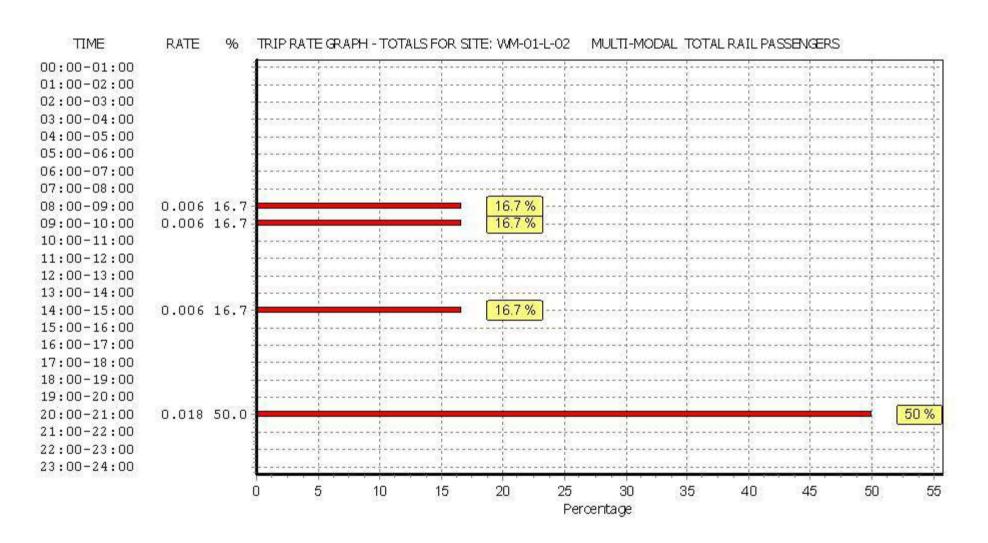
Licence No: 803409



Licence No: 803409



Licence No: 803409



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Atkins Axis Birmingham Licence No: 803409

TRIP RATE for Land Use 01 - RETAIL/L - BUILDER'S MERCHANTS MULTI-MODAL COACH PASSENGERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS		[DEPARTURES			TOTALS		
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	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	1	5600	0.000	1	5600	0.000	1	5600	0.000
06:00 - 07:00	1	5600	0.000	1	5600	0.000	1	5600	0.000
07:00 - 08:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
08:00 - 09:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
09:00 - 10:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
10:00 - 11:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
11:00 - 12:00	3	5625	0.006	3	5625	0.006	3	5625	0.012
12:00 - 13:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
13:00 - 14:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
14:00 - 15:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
15:00 - 16:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
16:00 - 17:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
17:00 - 18:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
18:00 - 19:00	2	5300	0.000	2	5300	0.000	2	5300	0.000
19:00 - 20:00	1	5600	0.000	1	5600	0.000	1	5600	0.000
20:00 - 21:00	1	5600	0.000	1	5600	0.000	1	5600	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.006			0.006			0.012

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

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.

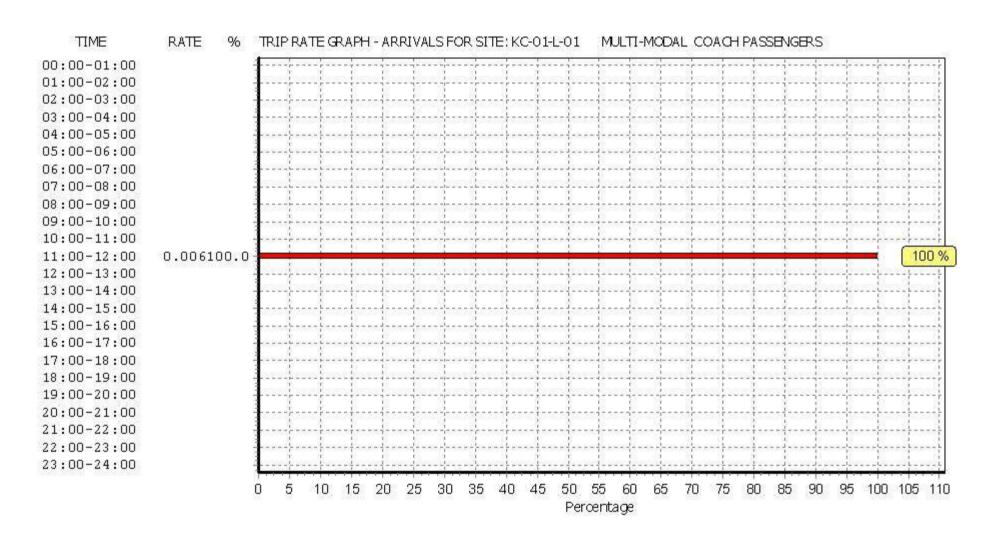
Parameter summary

Trip rate parameter range selected: 5000 - 6275 (units: sqm) Survey date date range: 01/01/08 - 19/10/11

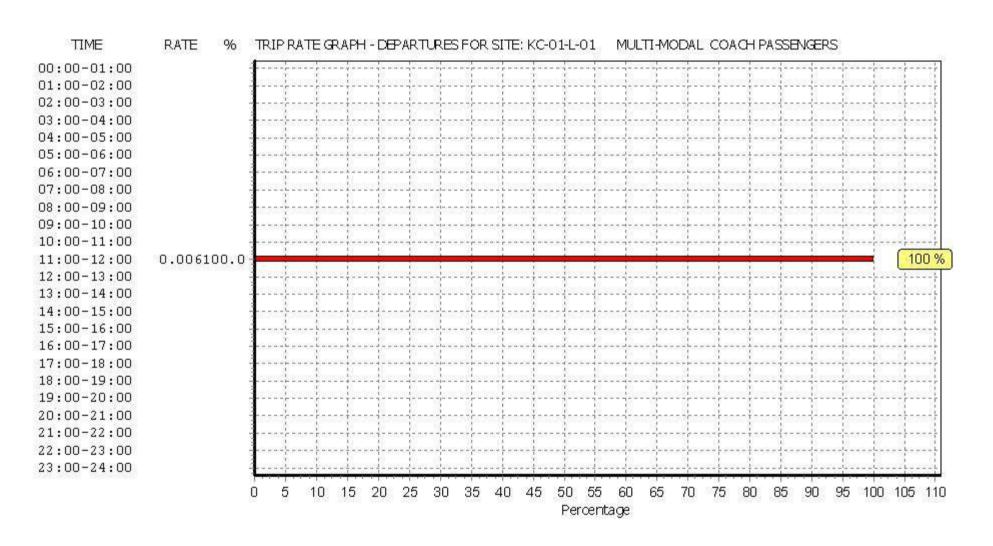
Number of weekdays (Monday-Friday): 3
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

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

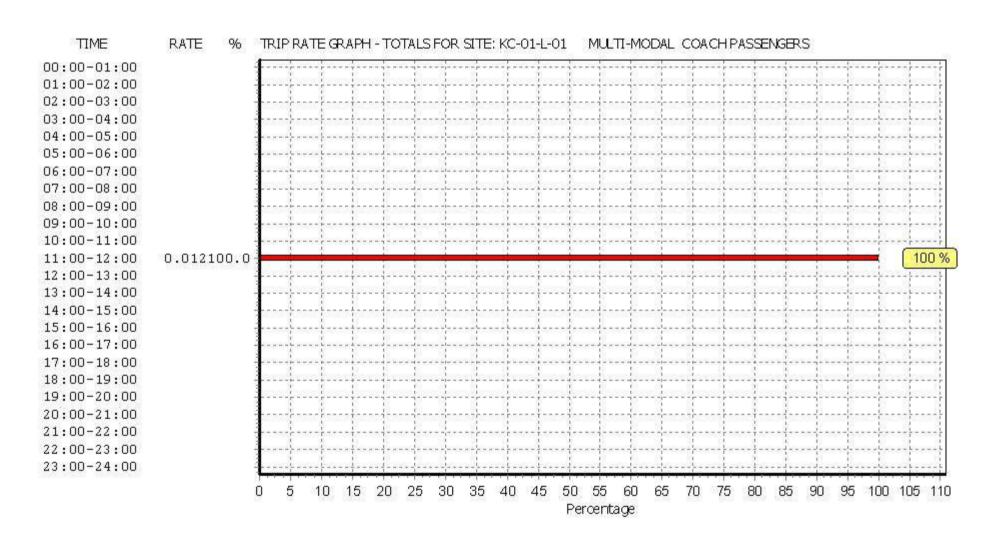
Licence No: 803409



Licence No: 803409



Licence No: 803409



Atkins Axis Birmingham Licence No: 803409

TRIP RATE for Land Use 01 - RETAIL/L - BUILDER'S MERCHANTS MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS		[DEPARTURES			TOTALS		
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	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	1	5600	0.000	1	5600	0.000	1	5600	0.000
06:00 - 07:00	1	5600	0.000	1	5600	0.000	1	5600	0.000
07:00 - 08:00	3	5625	0.012	3	5625	0.000	3	5625	0.012
08:00 - 09:00	3	5625	0.036	3	5625	0.006	3	5625	0.042
09:00 - 10:00	3	5625	0.012	3	5625	0.006	3	5625	0.018
10:00 - 11:00	3	5625	0.000	3	5625	0.006	3	5625	0.006
11:00 - 12:00	3	5625	0.006	3	5625	0.018	3	5625	0.024
12:00 - 13:00	3	5625	0.006	3	5625	0.000	3	5625	0.006
13:00 - 14:00	3	5625	0.006	3	5625	0.006	3	5625	0.012
14:00 - 15:00	3	5625	0.006	3	5625	0.006	3	5625	0.012
15:00 - 16:00	3	5625	0.000	3	5625	0.000	3	5625	0.000
16:00 - 17:00	3	5625	0.000	3	5625	0.012	3	5625	0.012
17:00 - 18:00	3	5625	0.000	3	5625	0.006	3	5625	0.006
18:00 - 19:00	2	5300	0.000	2	5300	0.000	2	5300	0.000
19:00 - 20:00	1	5600	0.000	1	5600	0.000	1	5600	0.000
20:00 - 21:00	1	5600	0.000	1	5600	0.054	1	5600	0.054
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00							<u> </u>		·
Total Rates:			0.084			0.120			0.204

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.

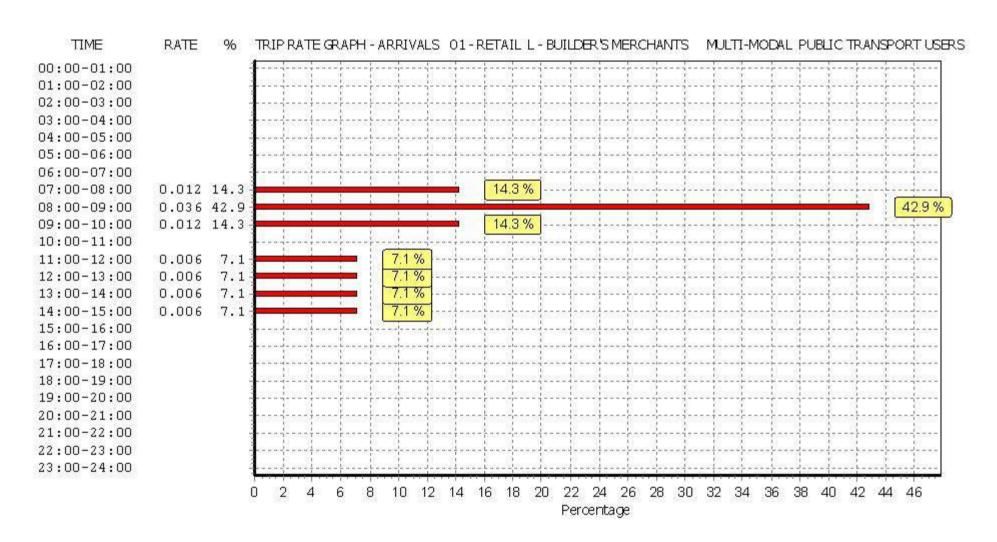
Parameter summary

Trip rate parameter range selected: 5000 - 6275 (units: sqm) Survey date date range: 01/01/08 - 19/10/11

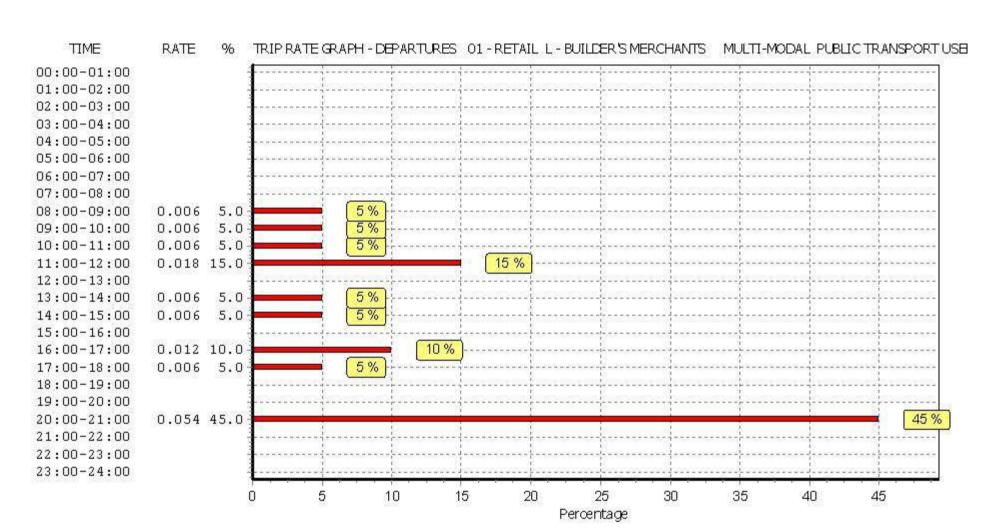
Number of weekdays (Monday-Friday): 3
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

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

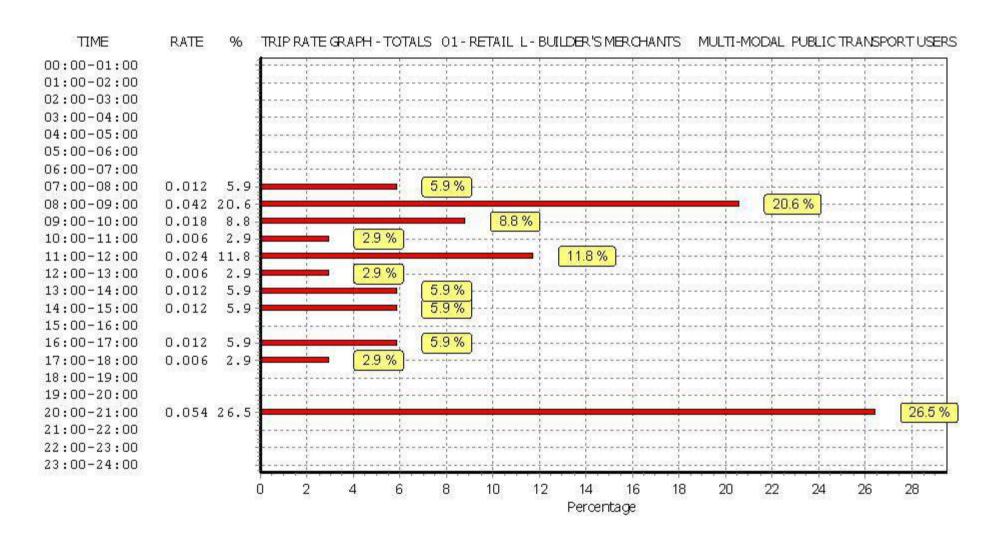
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Pirelli Builders Merchant A1 Page 48
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TRIP RATE for Land Use 01 - RETAIL/L - BUILDER'S MERCHANTS MULTI-MODAL TOTAL PEOPLE

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS		[DEPARTURES)	TOTALS			
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	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	1	5600	0.000	1	5600	0.000	1	5600	0.000
06:00 - 07:00	1	5600	0.464	1	5600	0.036	1	5600	0.500
07:00 - 08:00	3	5625	0.516	3	5625	0.284	3	5625	0.800
08:00 - 09:00	3	5625	0.895	3	5625	0.664	3	5625	1.559
09:00 - 10:00	3	5625	0.942	3	5625	0.942	3	5625	1.884
10:00 - 11:00	3	5625	0.776	3	5625	0.735	3	5625	1.511
11:00 - 12:00	3	5625	0.788	3	5625	0.693	3	5625	1.481
12:00 - 13:00	3	5625	0.658	3	5625	0.747	3	5625	1.405
13:00 - 14:00	3	5625	0.670	3	5625	0.800	3	5625	1.470
14:00 - 15:00	3	5625	0.563	3	5625	0.587	3	5625	1.150
15:00 - 16:00	3	5625	0.545	3	5625	0.545	3	5625	1.090
16:00 - 17:00	3	5625	0.356	3	5625	0.557	3	5625	0.913
17:00 - 18:00	3	5625	0.178	3	5625	0.308	3	5625	0.486
18:00 - 19:00	2	5300	0.292	2	5300	0.358	2	5300	0.650
19:00 - 20:00	1	5600	0.214	1	5600	0.482	1	5600	0.696
20:00 - 21:00	1	5600	0.000	1	5600	0.125	1	5600	0.125
21:00 - 22:00									
22:00 - 23:00	<u> </u>			·			·		
23:00 - 24:00									
Total Rates:			7.857			7.863			15.720

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.

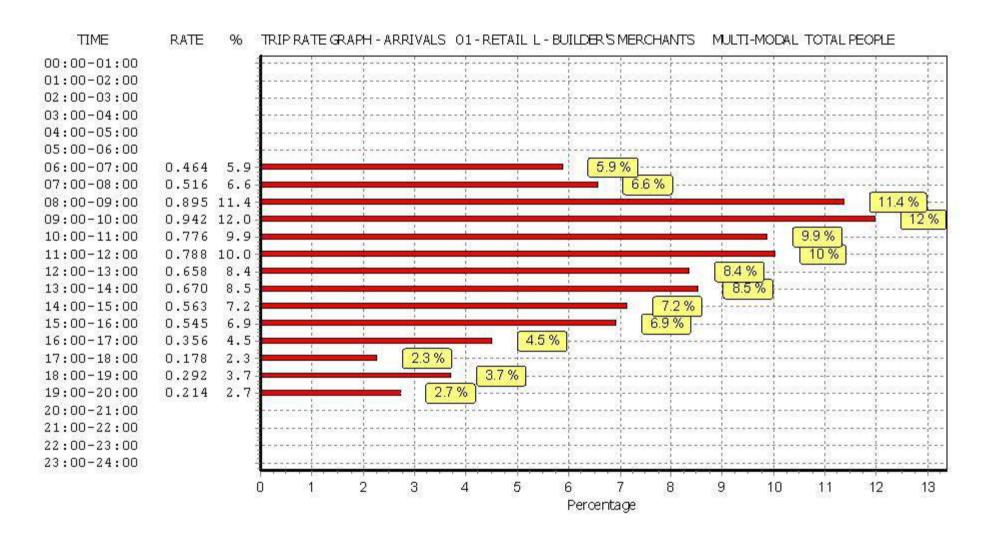
Parameter summary

Trip rate parameter range selected: 5000 - 6275 (units: sqm) Survey date date range: 01/01/08 - 19/10/11

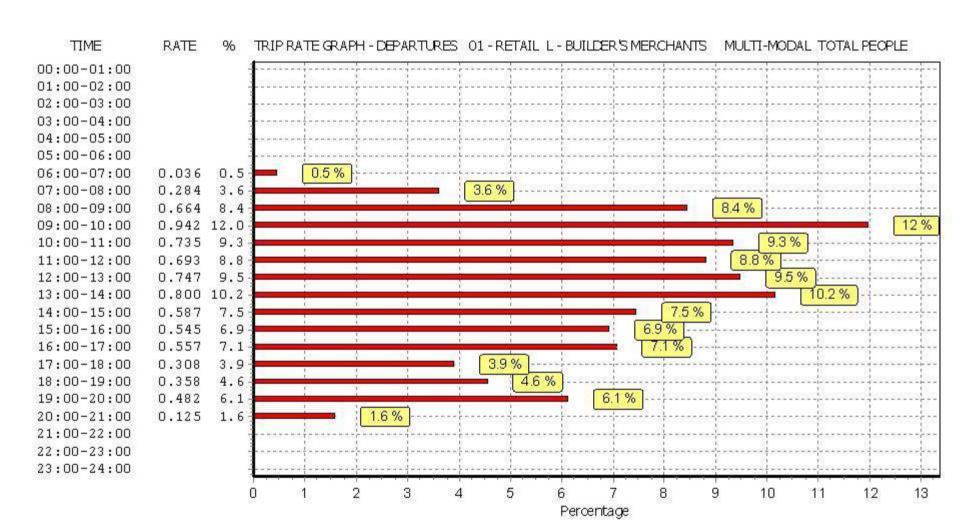
Number of weekdays (Monday-Friday): 3
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

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

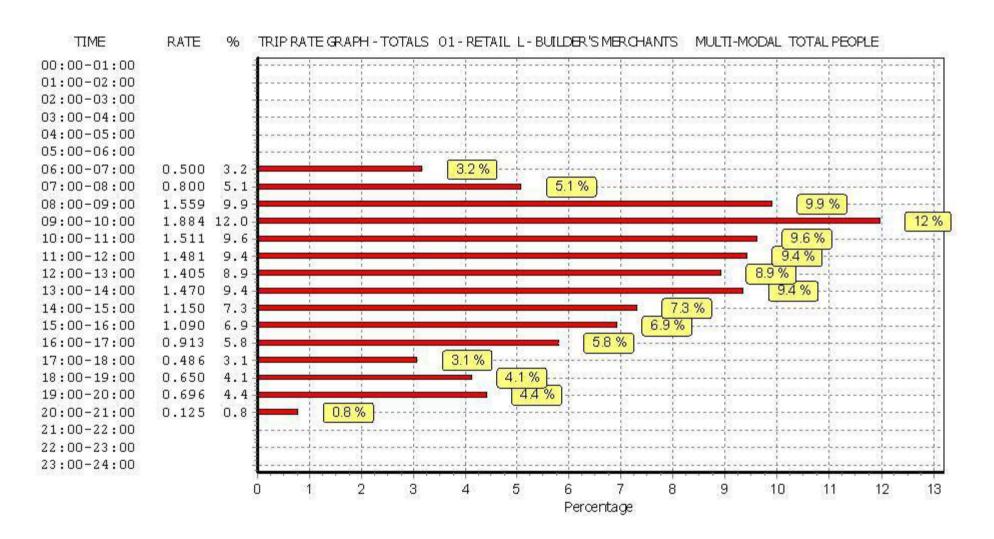
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Calculation Reference: AUDIT-803409-161027-1040

Thursday 27/10/16

TRIP RATE CALCULATION SELECTION PARAMETERS:

: 07 - LEISURE Land Use

: K - FITNESS CLUB (PRIVATE) Category

VEHIČLES

Selected regions and areas:

SOUTH EAST **HAMPSHIRE** 1 days 04 **EAST ANGLIA** CAMBRIDGESHIRE 1 days CA **EAST MIDLANDS** 05 DERBYSHIRE 1 days DS LE LEICESTERSHIRE 1 days NT NOTTINGHAMSHIRE 1 days 06 **WEST MIDLANDS** 1 days SH **SHROPSHIRE** WK WARWICKSHIRE 1 days YORKSHIRE & NORTH LINCOLNSHIRE 07 WEST YORKSHIRE WY 2 days 80 **NORTH WEST GREATER MANCHESTER** 1 days 09 **NORTH** CUMBRIA CB 1 days WALES 10 PS **POWYS** 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: Gross floor area

Actual Range: 554 to 9000 (units: sqm) 554 to 13856 (units: sqm) Range Selected by User:

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/08 to 24/11/15

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 1 days Tuesday 5 days Wednesday 1 days Thursday 4 days Friday 1 days

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

Selected survey types:

Manual count 12 days **Directional ATC Count** 0 days

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

Selected Locations:

Edge of Town Centre	4
Suburban Area (PPS6 Out of Centre)	1
Edge of Town	6
Free Standing (PPS6 Out of Town)	1

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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:

1
1
3
3
2
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:

A1	1 days
D2	11 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	2 days
10,001 to 15,000	3 days
15,001 to 20,000	2 days
20,001 to 25,000	2 days
25,001 to 50,000	2 days

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

Population within 5 miles:

3 days
1 days
1 days
1 days
3 days
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	7 days
1.1 to 1.5	5 days

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

Travel Plan:

Yes	1 days
No	11 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.

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Thursday 27/10/16

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LIST OF SITES relevant to selection parameters

1 CA-07-K-01 FITNESS FIRST CAMBRIDGESHIRE

LIME KILN CLOSE NETHERTON PETERBOROUGH

Suburban Area (PPS6 Out of Centre)

No Sub Category

Total Gross floor area: 2500 sqm

Survey date: TUESDAY 20/05/08 Survey Type: MANUAL

2 CB-07-K-01 FITNESS CLUB CUMBRIA

COWPER ROAD GILWILLY IND. ESTATE

PENRITH
Edge of Town
Industrial Zone

Total Gross floor area: 650 sqm

Survey date: TUESDAY 10/06/14 Survey Type: MANUAL

DS-07-K-03 LA FITNESS DERBYSHIRE

CARRINGTON STREET

CASTLE WARD DERBY

Edge of Town Centre

Built-Up Zone

Total Gross floor area: 4000 sqm

Survey date: THURSDAY 25/06/15 Survey Type: MANUAL
4 GM-07-K-02 VIRGIN ACTIVE GREATER MANCHESTER

HEYWOOD OLD ROAD

MIDDLETON Edge of Town

Out of Town

Total Gross floor area: 9000 sqm

Survey date: THURSDAY 22/10/15 Survey Type: MANUAL

5 HC-07-K-01 VIRGIN ACTIVE HAMPSHIRE

BOTLEY ROAD WEST END SOUTHAMPTON Edge of Town

No Sub Category

Total Gross floor area: 8000 sqm

Survey date: TUESDAY 24/11/15 Survey Type: MANUAL LE-07-K-01 DAVID LLOYD CLUB LEICESTERSHIRE

CARLTON PARK
NARBOROUGH
LEICESTER
Edge of Town

Residential Zone

Total Gross floor area: 8200 sqm

Survey date: TUESDAY 04/11/14 Survey Type: MANUAL 7 NT-07-K-02 VIRGIN ACTIVE NOTTINGHAMSHIRE

LONDON ROAD

NOTTINGHAM Edge of Town Centre Commercial Zone

Total Gross floor area: 6000 sqm

Survey date: THURSDAY 27/06/13 Survey Type: MANUAL

8 PS-07-K-01 SPORTS CENTRE POWYS

BROOK STREET

WELSHPOOL Edge of Town Residential Zone

Total Gross floor area: 950 sqm

Survey date: MONDAY 11/05/15 Survey Type: MANUAL

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Thursday 27/10/16

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LIST OF SITES relevant to selection parameters (Cont.)

9 SH-07-K-01 FITNESS, TENNIS & LEISURE SHROPSHIRE

SUNDORNE ROAD

SHREWSBURY Edge of Town Residential Zone

Total Gross floor area: 4500 sqm

Survey date: WEDNESDAY 21/05/14 Survey Type: MANUAL 10 WK-07-K-01 STRENGTH & FITNESS GYM WARWICKSHIRE

FAR GOSFORD STREET

COVENTRY

Edge of Town Centre Built-Up Zone

Total Gross floor area: 554 sqm

Survey date: THURSDAY 17/10/13 Survey Type: MANUAL WY-07-K-01 FITNESS FIRST WEST YORKSHIRE

REDCOTE LANE

BURLEY LEEDS

11

Free Standing (PPS6 Out of Town)

Out of Town

Total Gross floor area: 1570 sqm

Survey date: FRIDAY 11/06/10 Survey Type: MANUAL 12 WY-07-K-02 FITNESS CLUB WEST YORKSHIRE

GELDERD ROAD

BIRSTALL

Edge of Town Centre Built-Up Zone

Total Gross floor area: 2400 sqm

Survey date: TUESDAY 22/04/14 Survey Type: MANUAL

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

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Thursday 27/10/16

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)

VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS		[DEPARTURES	ò	TOTALS		
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	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	1	1570	0.000	1	1570	0.000	1	1570	0.000
06:00 - 07:00	12	4027	0.917	12	4027	0.052	12	4027	0.969
07:00 - 08:00	12	4027	0.602	12	4027	0.604	12	4027	1.206
08:00 - 09:00	12	4027	0.842	12	4027	0.745	12	4027	1.587
09:00 - 10:00	12	4027	1.260	12	4027	0.606	12	4027	1.866
10:00 - 11:00	12	4027	1.041	12	4027	0.809	12	4027	1.850
11:00 - 12:00	12	4027	0.650	12	4027	1.076	12	4027	1.726
12:00 - 13:00	12	4027	0.563	12	4027	0.892	12	4027	1.455
13:00 - 14:00	12	4027	0.604	12	4027	0.757	12	4027	1.361
14:00 - 15:00	12	4027	0.625	12	4027	0.608	12	4027	1.233
15:00 - 16:00	12	4027	0.848	12	4027	0.708	12	4027	1.556
16:00 - 17:00	12	4027	1.306	12	4027	0.906	12	4027	2.212
17:00 - 18:00	12	4027	1.850	12	4027	1.000	12	4027	2.850
18:00 - 19:00	12	4027	1.655	12	4027	1.604	12	4027	3.259
19:00 - 20:00	12	4027	1.175	12	4027	1.786	12	4027	2.961
20:00 - 21:00	12	4027	0.584	12	4027	1.289	12	4027	1.873
21:00 - 22:00	12	4027	0.101	12	4027	0.828	12	4027	0.929
22:00 - 23:00	1	6000	0.017	1	6000	0.267	1	6000	0.284
23:00 - 24:00									
Total Rates:			14.640			14.537			29.177

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: 554 - 9000 (units: sqm) Survey date date range: 01/01/08 - 24/11/15

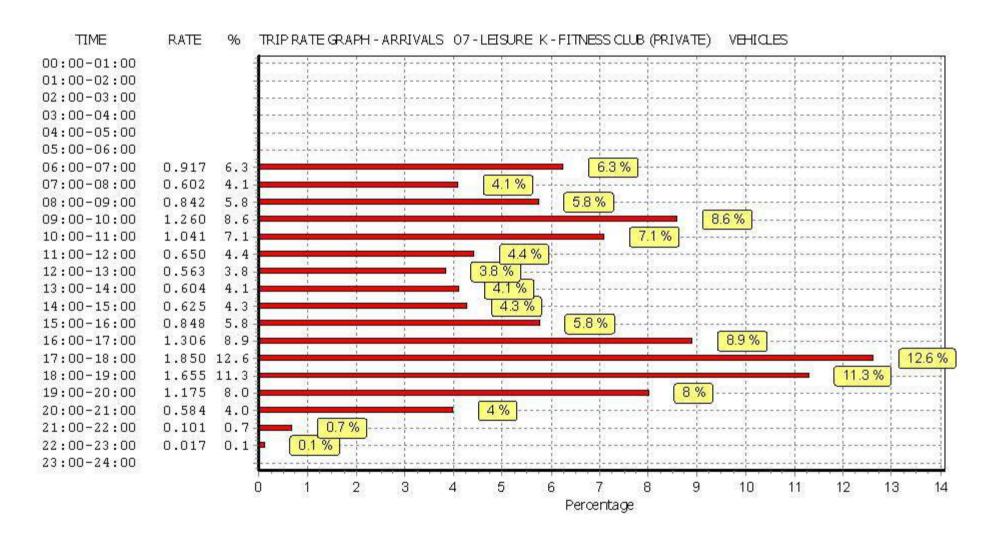
Number of weekdays (Monday-Friday): 12
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

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

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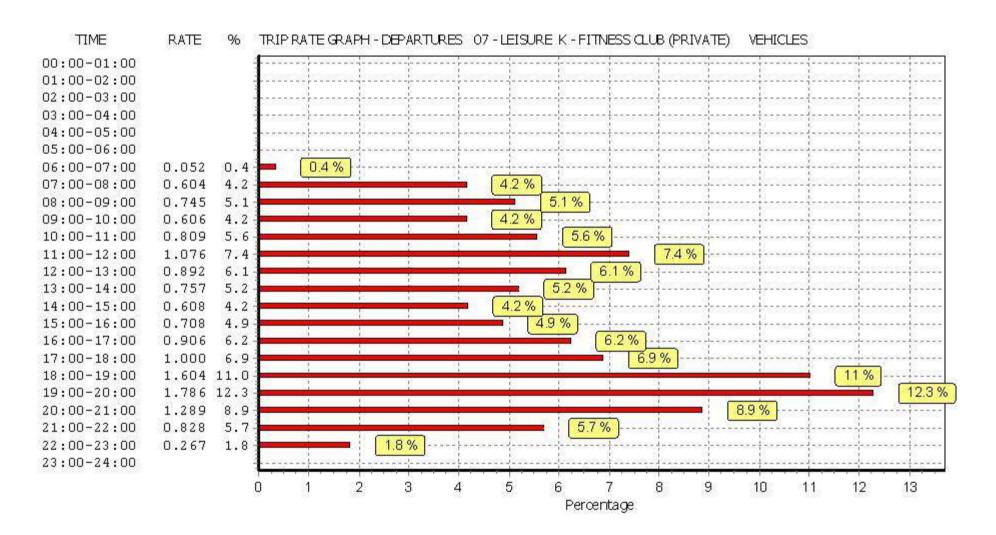
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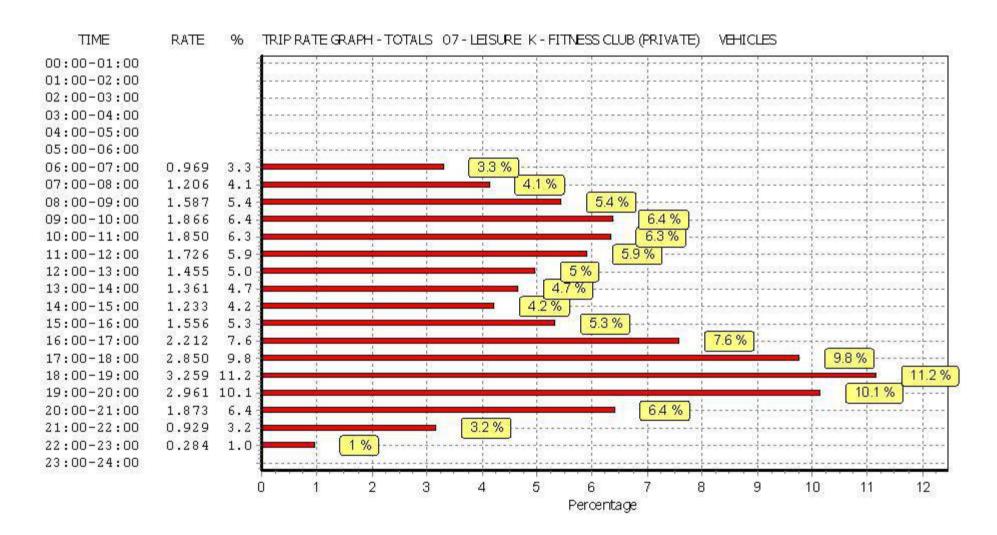
Licence No: 803409



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Thursday 27/10/16

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)

TAXIS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS		[DEPARTURES		TOTALS			
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	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	1	1570	0.000	1	1570	0.000	1	1570	0.000
06:00 - 07:00	12	4027	0.004	12	4027	0.004	12	4027	0.008
07:00 - 08:00	12	4027	0.000	12	4027	0.000	12	4027	0.000
08:00 - 09:00	12	4027	0.000	12	4027	0.000	12	4027	0.000
09:00 - 10:00	12	4027	0.017	12	4027	0.008	12	4027	0.025
10:00 - 11:00	12	4027	0.004	12	4027	0.010	12	4027	0.014
11:00 - 12:00	12	4027	0.004	12	4027	0.004	12	4027	0.008
12:00 - 13:00	12	4027	0.006	12	4027	0.006	12	4027	0.012
13:00 - 14:00	12	4027	0.004	12	4027	0.006	12	4027	0.010
14:00 - 15:00	12	4027	0.006	12	4027	0.004	12	4027	0.010
15:00 - 16:00	12	4027	0.000	12	4027	0.002	12	4027	0.002
16:00 - 17:00	12	4027	0.006	12	4027	0.006	12	4027	0.012
17:00 - 18:00	12	4027	0.004	12	4027	0.004	12	4027	0.008
18:00 - 19:00	12	4027	0.010	12	4027	0.008	12	4027	0.018
19:00 - 20:00	12	4027	0.008	12	4027	0.008	12	4027	0.016
20:00 - 21:00	12	4027	0.002	12	4027	0.004	12	4027	0.006
21:00 - 22:00	12	4027	0.002	12	4027	0.002	12	4027	0.004
22:00 - 23:00	1	6000	0.000	1	6000	0.000	1	6000	0.000
23:00 - 24:00									
Total Rates:			0.077			0.076			0.153

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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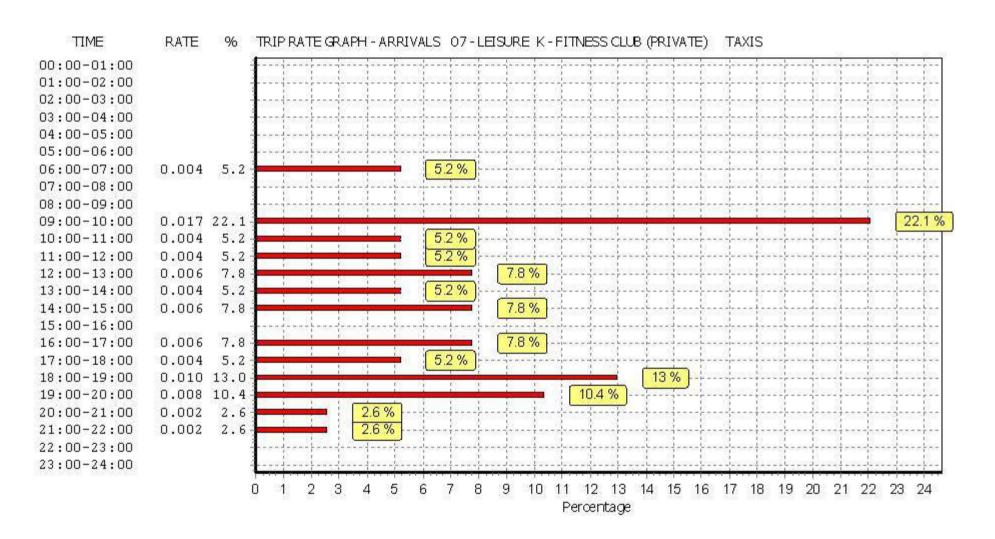
Parameter summary

Trip rate parameter range selected: 554 - 9000 (units: sqm) Survey date date range: 01/01/08 - 24/11/15

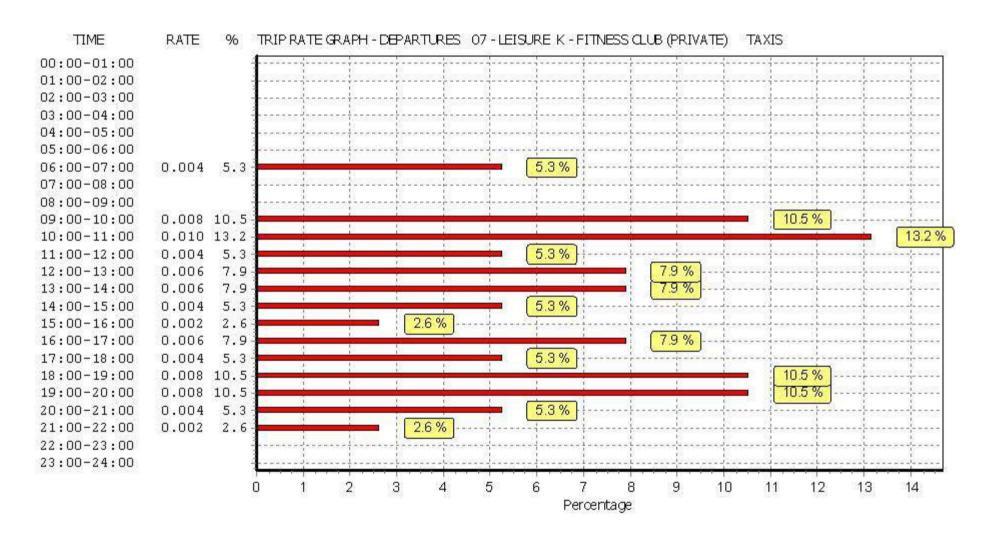
Number of weekdays (Monday-Friday): 12
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

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

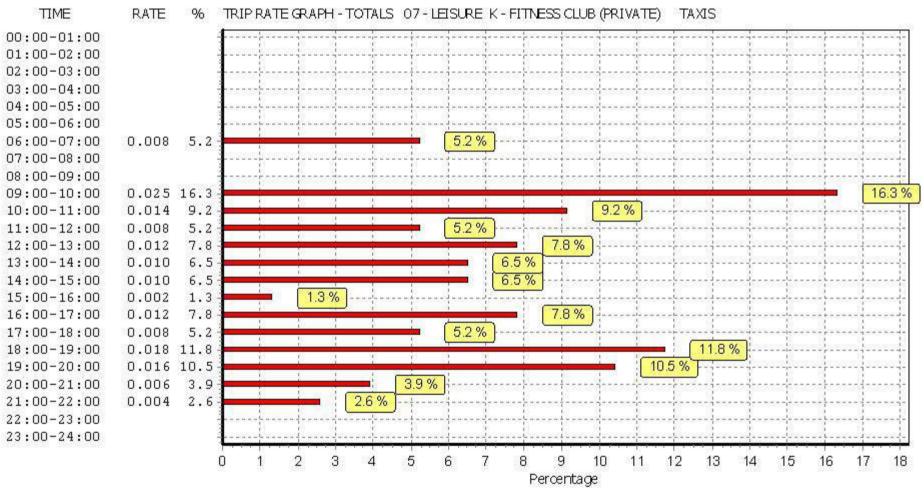
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Atkins Axis Birmingham Licence No: 803409



Atkins Axis Birmingham Licence No: 803409



Pirelli - Gym - Prvaite Fitness Page 13 Atkins Licence No: 803409

Thursday 27/10/16

Birmingham Axis

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)

OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	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	1	1570	0.000	1	1570	0.000	1	1570	0.000
06:00 - 07:00	12	4027	0.000	12	4027	0.000	12	4027	0.000
07:00 - 08:00	12	4027	0.004	12	4027	0.004	12	4027	0.008
08:00 - 09:00	12	4027	0.004	12	4027	0.002	12	4027	0.006
09:00 - 10:00	12	4027	0.002	12	4027	0.000	12	4027	0.002
10:00 - 11:00	12	4027	0.006	12	4027	0.004	12	4027	0.010
11:00 - 12:00	12	4027	0.006	12	4027	0.006	12	4027	0.012
12:00 - 13:00	12	4027	0.000	12	4027	0.004	12	4027	0.004
13:00 - 14:00	12	4027	0.002	12	4027	0.000	12	4027	0.002
14:00 - 15:00	12	4027	0.002	12	4027	0.002	12	4027	0.004
15:00 - 16:00	12	4027	0.000	12	4027	0.004	12	4027	0.004
16:00 - 17:00	12	4027	0.000	12	4027	0.000	12	4027	0.000
17:00 - 18:00	12	4027	0.000	12	4027	0.000	12	4027	0.000
18:00 - 19:00	12	4027	0.000	12	4027	0.000	12	4027	0.000
19:00 - 20:00	12	4027	0.000	12	4027	0.000	12	4027	0.000
20:00 - 21:00	12	4027	0.000	12	4027	0.000	12	4027	0.000
21:00 - 22:00	12	4027	0.000	12	4027	0.000	12	4027	0.000
22:00 - 23:00	1	6000	0.000	1	6000	0.000	1	6000	0.000
23:00 - 24:00									
Total Rates: 0.026						0.026			0.052

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

554 - 9000 (units: sgm) Trip rate parameter range selected: Survey date date range: 01/01/08 - 24/11/15

Number of weekdays (Monday-Friday): 12 Number of Saturdays: 0 Number of Sundays: 0 Surveys automatically removed from selection: 0 Surveys manually removed from selection: 0

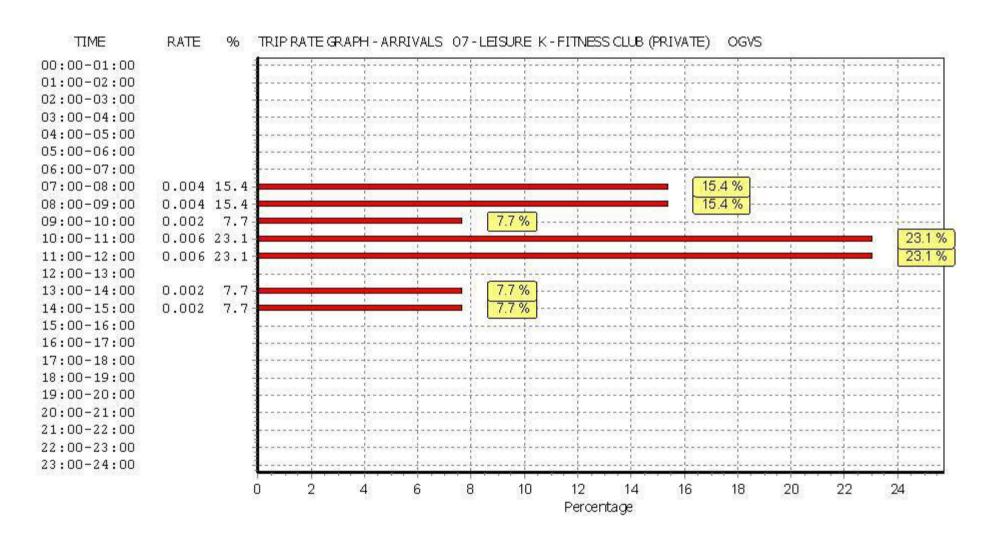
This section displays a guick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected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

Atkins

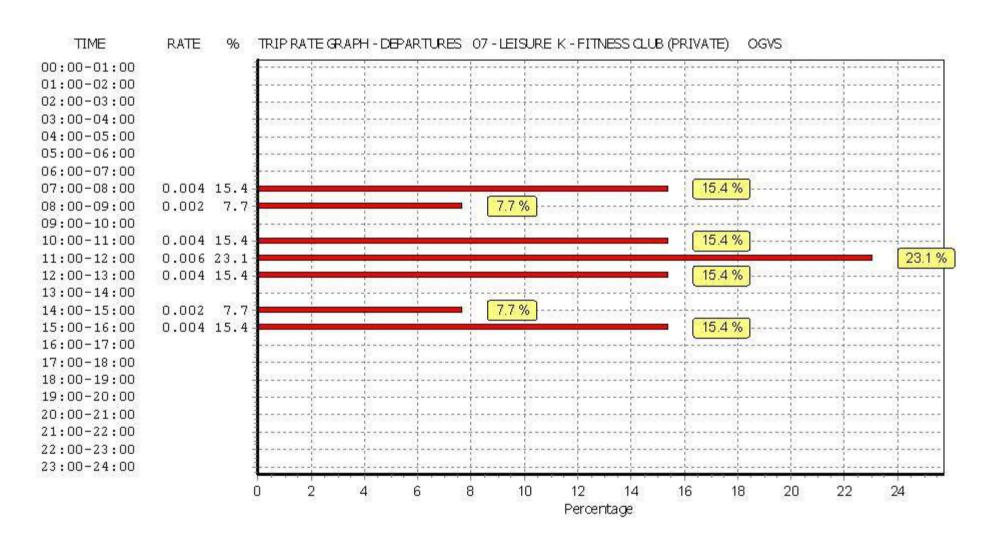
Licence No: 803409



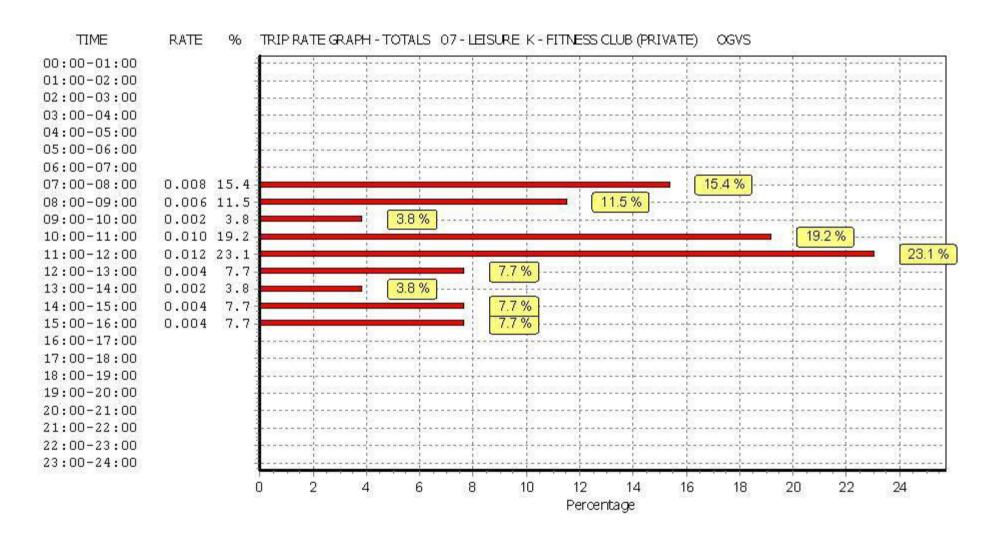
Axis Birmingham

Atkins

Licence No: 803409



Licence No: 803409



Thursday 27/10/16 Pirelli - Gym - Prvaite Fitness

Atkins Birmingham Licence No: 803409 Axis

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)

PSVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS		DEPARTURES			TOTALS			
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	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	1	1570	0.000	1	1570	0.000	1	1570	0.000
06:00 - 07:00	12	4027	0.000	12	4027	0.000	12	4027	0.000
07:00 - 08:00	12	4027	0.000	12	4027	0.000	12	4027	0.000
08:00 - 09:00	12	4027	0.000	12	4027	0.000	12	4027	0.000
09:00 - 10:00	12	4027	0.000	12	4027	0.000	12	4027	0.000
10:00 - 11:00	12	4027	0.000	12	4027	0.000	12	4027	0.000
11:00 - 12:00	12	4027	0.000	12	4027	0.000	12	4027	0.000
12:00 - 13:00	12	4027	0.000	12	4027	0.000	12	4027	0.000
13:00 - 14:00	12	4027	0.002	12	4027	0.000	12	4027	0.002
14:00 - 15:00	12	4027	0.004	12	4027	0.000	12	4027	0.004
15:00 - 16:00	12	4027	0.000	12	4027	0.000	12	4027	0.000
16:00 - 17:00	12	4027	0.000	12	4027	0.004	12	4027	0.004
17:00 - 18:00	12	4027	0.000	12	4027	0.000	12	4027	0.000
18:00 - 19:00	12	4027	0.000	12	4027	0.000	12	4027	0.000
19:00 - 20:00	12	4027	0.000	12	4027	0.000	12	4027	0.000
20:00 - 21:00	12	4027	0.000	12	4027	0.000	12	4027	0.000
21:00 - 22:00	12	4027	0.000	12	4027	0.000	12	4027	0.000
22:00 - 23:00	1	6000	0.000	1	6000	0.000	1	6000	0.000
23:00 - 24:00									
Total Rates: 0.006 0.004							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.

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.

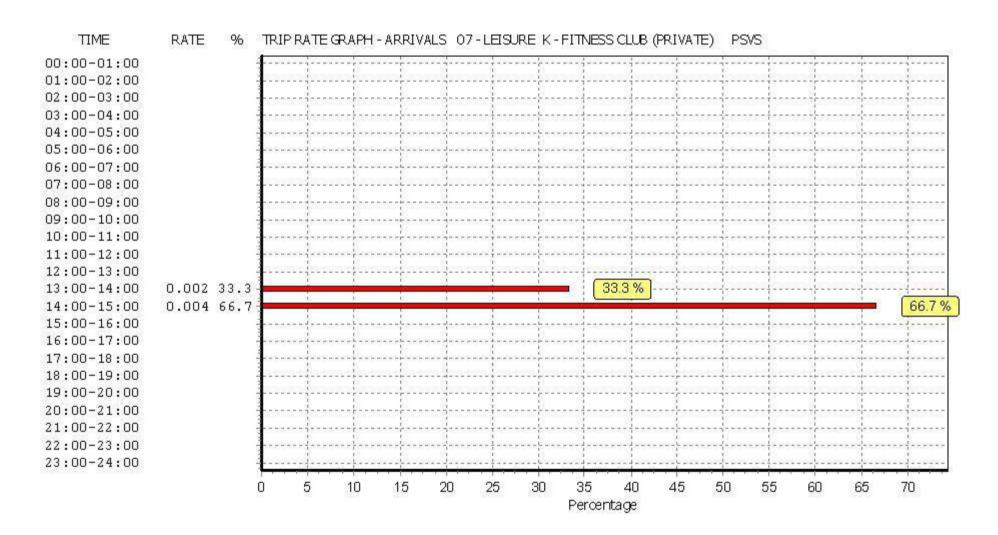
Parameter summary

554 - 9000 (units: sgm) Trip rate parameter range selected: Survey date date range: 01/01/08 - 24/11/15

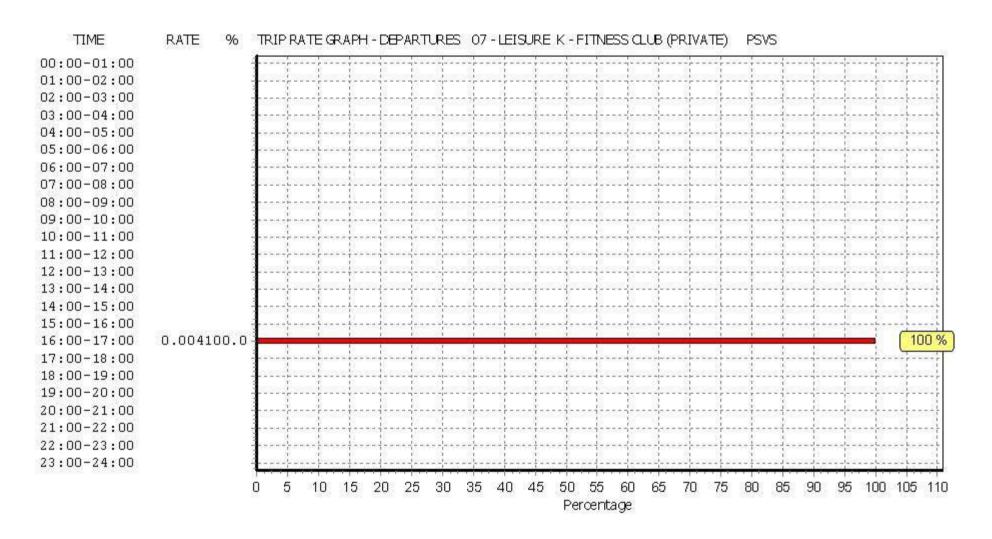
Number of weekdays (Monday-Friday): 12 Number of Saturdays: 0 Number of Sundays: 0 Surveys automatically removed from selection: 0 Surveys manually removed from selection: 0

This section displays a guick 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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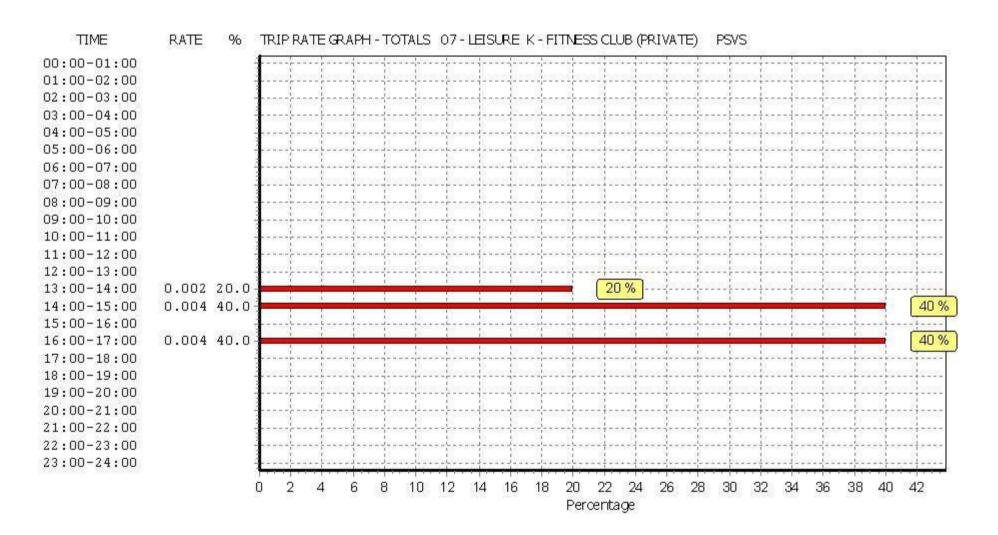


Thursday 27/10/16

Page 20

Pirelli - Gym - Prvaite Fitness Atkins Axis Birmingham

Licence No: 803409



Pirelli - Gym - Prvaite Fitness Page 21 Atkins Birmingham Licence No: 803409 Axis

Thursday 27/10/16

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)

CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS			
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip	
Time Range	Days	GFA	Rate	Days	GFA	Rate	Days	GFA	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	1	1570	0.000	1	1570	0.000	1	1570	0.000	
06:00 - 07:00	12	4027	0.017	12	4027	0.002	12	4027	0.019	
07:00 - 08:00	12	4027	0.014	12	4027	0.008	12	4027	0.022	
08:00 - 09:00	12	4027	0.010	12	4027	0.008	12	4027	0.018	
09:00 - 10:00	12	4027	0.039	12	4027	0.008	12	4027	0.047	
10:00 - 11:00	12	4027	0.010	12	4027	0.012	12	4027	0.022	
11:00 - 12:00	12	4027	0.012	12	4027	0.029	12	4027	0.041	
12:00 - 13:00	12	4027	0.014	12	4027	0.012	12	4027	0.026	
13:00 - 14:00	12	4027	0.012	12	4027	0.019	12	4027	0.031	
14:00 - 15:00	12	4027	0.006	12	4027	0.010	12	4027	0.016	
15:00 - 16:00	12	4027	0.010	12	4027	0.008	12	4027	0.018	
16:00 - 17:00	12	4027	0.010	12	4027	0.006	12	4027	0.016	
17:00 - 18:00	12	4027	0.012	12	4027	0.019	12	4027	0.031	
18:00 - 19:00	12	4027	0.025	12	4027	0.025	12	4027	0.050	
19:00 - 20:00	12	4027	0.014	12	4027	0.014	12	4027	0.028	
20:00 - 21:00	12	4027	0.008	12	4027	0.023	12	4027	0.031	
21:00 - 22:00	12	4027	0.000	12	4027	0.012	12	4027	0.012	
22:00 - 23:00	1	6000	0.000	1	6000	0.000	1	6000	0.000	
23:00 - 24:00										
Total Rates:			0.213			0.215			0.428	

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

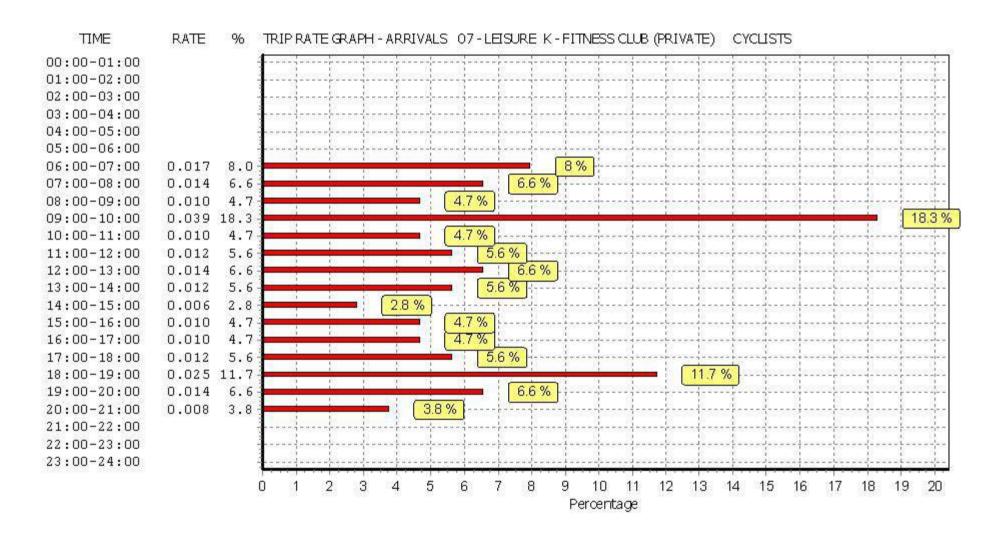
554 - 9000 (units: sgm) Trip rate parameter range selected: Survey date date range: 01/01/08 - 24/11/15

Number of weekdays (Monday-Friday): 12 Number of Saturdays: 0 Number of Sundays: 0 Surveys automatically removed from selection: 0 Surveys manually removed from selection:

This section displays a guick 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.

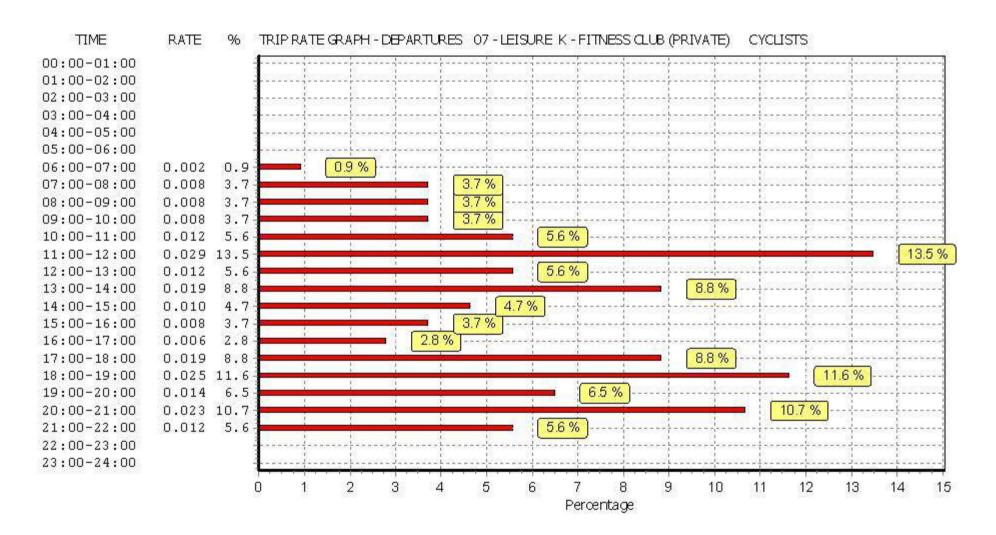
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TRICS 7.3.3 240916 B17.41 (C) 2016 TRICS Consortium Ltd Pirelli - Gym - Prvaite Fitness Atkins Axis Birmingham

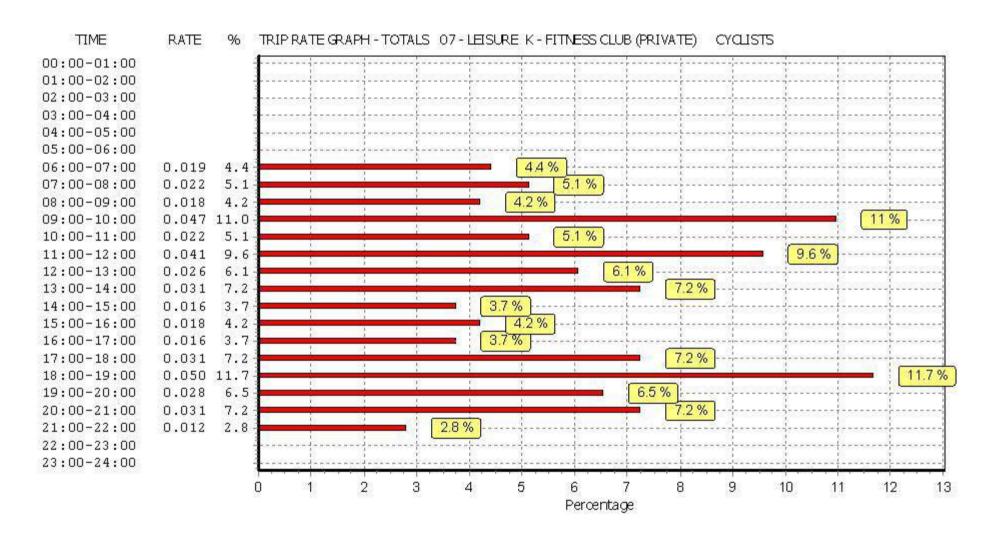
Licence No: 803409



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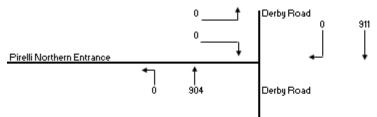


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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

Appendix E. Traffic Flow Scenarios

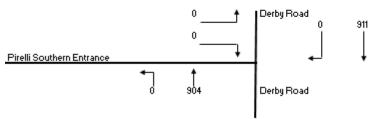
2021 AM Base + Committed Development

A5121 Derby Rd Pirelli Northern Employment Entrance



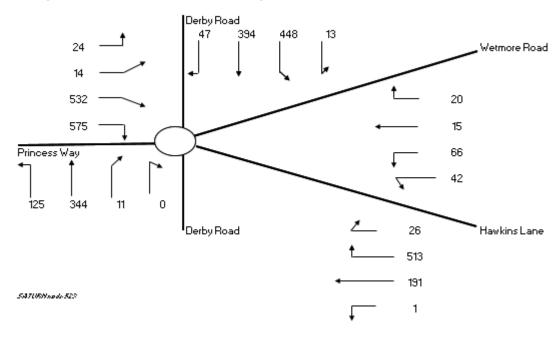
547105Nnado 7004

A5121 Derby Rdl Pirelli Southern Employment Entrance



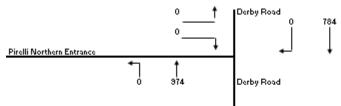
547UEN nada 7005

Derby Rd / Hawkins Lane / Princess Way/ Wetmor- Road



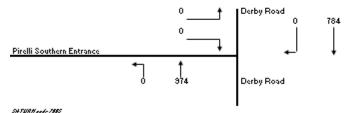
2021 PM Base + Committed Development

A5121 Derby Rdł Pirelli Northern Employment Entrance

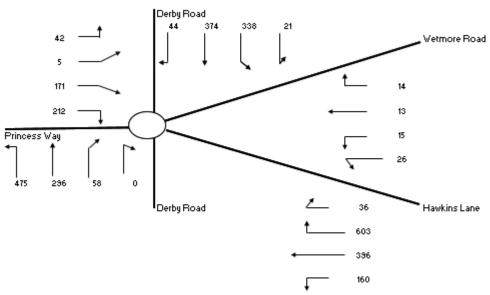


50 TURK ------- 7885

A5121 Derby Rd/ Pirelli Southern Employment Entrance

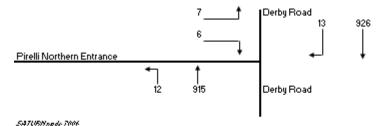


Derby Rd / Hawkins Lane / Princess Way/ Wetmore 'Road

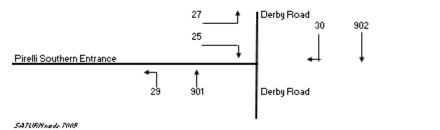


2021 AM Base + Committed Development and net revised development traffic

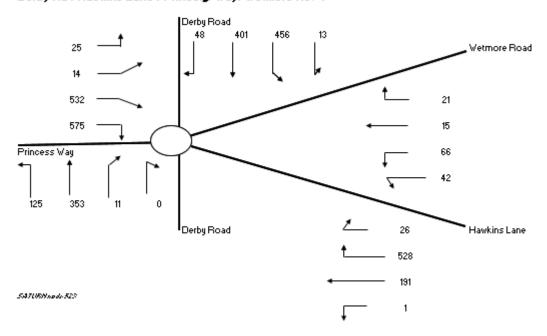
A5121 Derby Rd/ Pirelli Northern Employment Entrance



A5121 Derby Rd/ Pirelli Southern Employment Entrance

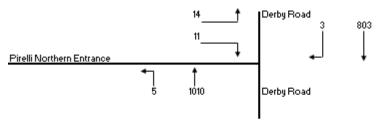


Derby Rd / Hawkins Lane / Princess Way/ Wetmore Ro: 1



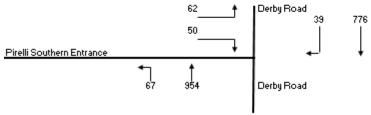
2021 PM Base + Committed Development and net revised development traffic

A5121 Derby Rd? Pirelli Northern Employment Entrance



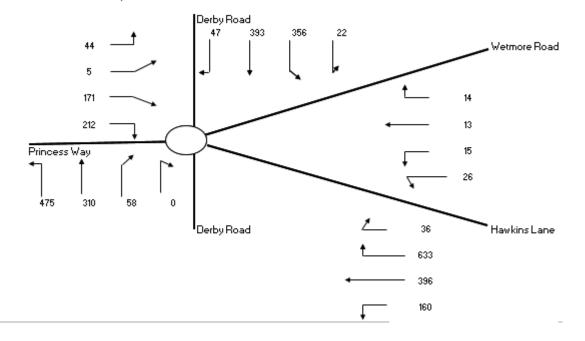
54706Napda7004

A5121 Derby Rd/ Pirelli Southern Employment Entrance



SATURNADA 1995

Derby Rd / Hawkins Lane / Princess Way/ Wetmore Roa '



Appendix F. Junction Modelling Outputs



Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.1.4646 [] © Copyright TRL Limited, 2016

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Filename: Northern Pirelli Site Access.j9 **Path:** P:\GBBMA\HandT\CS\Projects\5121643

Pirelli\10_Technical\161027_Pirelli_Update\161031_Pirelli_ Junction Capacity

Report generation date: 03/11/2016 12:05:53

»Pirelli Site Access - 2021 Base + ComDev, AM
»Pirelli Site Access - 2021 Base + ComDev, PM
»Pirelli Site Access - 2021 Base + ComDev + Proposed, AM
»Pirelli Site Access - 2021 Base + ComDev + Proposed, PM

Summary of junction performance

		AM			PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	Pirelli Site Access - 20		2021 Base + ComDev					
Stream B-C	0.0	0.00	0.00	А	0.0	0.00	0.00	Α
Stream B-A	0.0	0.00	0.00	Α	0.0	0.00	0.00	Α
Stream C-B	0.0	0.00	0.00	Α	0.0	0.00	0.00	Α
	Pirelli Sit	e Acces	s - 20	21 B	ase + ComE	ev + Pro	pos	ed
Stream B-C	0.0	9.23	0.02	Α	0.0	10.10	0.04	В
Stream B-A	0.0	24.15	0.04	С	0.1	25.20	0.07	D
Stream C-B	0.0	8.20	0.03	Α	0.0	8.54	0.01	Α

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

2 3 3 3 p 1	
Title	(untitled)
Location	
Site number	
Date	23/03/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WSATKINS\kosk1699
Description	



Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	S	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2021 Base + ComDev	AM	ONE HOUR	07:45	09:15	15
D2	2021 Base + ComDev	PM	ONE HOUR	16:45	18:15	15
D3	2021 Base + ComDev + Proposed	AM	ONE HOUR	07:45	09:15	15
D4	2021 Base + ComDev + Proposed	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Pirelli Site Access	100.000



Pirelli Site Access - 2021 Base + ComDev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	0.00	Α

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
Α	Derby Road (S)		Major
В	Site Access		Minor
С	Derby Road (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
С	6.10	✓	3.50	✓	3.50	250.0		-

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

A	Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
	В	One lane plus flare	10.00	7.00	4.00	3.30	3.30		1.00	19	20

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B	
1	B-A	599	0.101	0.254	0.160	0.364	
1	B-C	716	0.109	0.276	-	-	
1	С-В	820	0.317	0.317	-	-	

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.



Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2021 Base + ComDev	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	rm Linked arm Use O-D data		Average Demand (PCU/hr)	Scaling Factor (%)	
Α		✓	904	100.000	
В		√	0	100.000	
С		√	911	100.000	

Origin-Destination Data

Demand (PCU/hr)

		Т	ō	
-		Α	В	C
	Α	0	0	904
From	В	0	0	0
	С	911	0	0

Vehicle Mix

Heavy Vehicle Percentages

		То					
		Α	В	С			
From	Α	10	10	10			
From	В	10	10	10			
	С	10	10	10			

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.00	0.00	0.0	А
B-A	0.00	0.00	0.0	Α
C-A				
С-В	0.00	0.00	0.0	А
A-B				
A-C				



Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	528	0.000	0	0.0	0.000	Α
B-A	0	316	0.000	0	0.0	0.000	А
C-A	686			686			
С-В	0	605	0.000	0	0.0	0.000	Α
A-B	0			0			
A-C	681			681			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	492	0.000	0	0.0	0.000	А
B-A	0	261	0.000	0	0.0	0.000	А
C-A	819			819			
С-В	0	563	0.000	0	0.0	0.000	Α
A-B	0			0			
A-C	813			813			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	441	0.000	0	0.0	0.000	А
B-A	0	185	0.000	0	0.0	0.000	А
C-A	1003			1003			
С-В	0	505	0.000	0	0.0	0.000	А
A-B	0			0			
A-C	995			995			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	441	0.000	0	0.0	0.000	Α
B-A	0	185	0.000	0	0.0	0.000	А
C-A	1003			1003			
С-В	0	505	0.000	0	0.0	0.000	А
A-B	0			0			
A-C	995			995			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	492	0.000	0	0.0	0.000	А
B-A	0	261	0.000	0	0.0	0.000	А
C-A	819			819			
С-В	0	563	0.000	0	0.0	0.000	А
A-B	0			0			
A-C	813			813			



09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	528	0.000	0	0.0	0.000	А
B-A	0	316	0.000	0	0.0	0.000	Α
C-A	686			686			
С-В	0	605	0.000	0	0.0	0.000	А
A-B	0			0			
A-C	681			681			



Pirelli Site Access - 2021 Base + ComDev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	0.00	Α

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2021 Base + ComDev	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)	
Α		✓	974	100.000	
В		✓	0	100.000	
С		✓	784	100.000	

Origin-Destination Data

Demand (PCU/hr)

	То				
From		Α	В	С	
	Α	0	0	974	
	В	0	0	0	
	С	784	0	0	

Vehicle Mix

Heavy Vehicle Percentages

	То				
From		Α	В	С	
	Α	10	10	10	
	В	10	10	10	
	С	10	10	10	



Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.00	0.00	0.0	Α
B-A	0.00	0.00	0.0	А
C-A				
С-В	0.00	0.00	0.0	Α
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	514	0.000	0	0.0	0.000	А
B-A	0	317	0.000	0	0.0	0.000	А
C-A	590			590			
С-В	0	588	0.000	0	0.0	0.000	А
A-B	0			0			
A-C	733			733			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	474	0.000	0	0.0	0.000	Α
B-A	0	263	0.000	0	0.0	0.000	А
C-A	705			705			
С-В	0	543	0.000	0	0.0	0.000	А
A-B	0			0			
A-C	876			876			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	420	0.000	0	0.0	0.000	Α
B-A	0	187	0.000	0	0.0	0.000	А
C-A	863			863			
С-В	0	481	0.000	0	0.0	0.000	А
A-B	0			0			
A-C	1072			1072			



17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	420	0.000	0	0.0	0.000	А
B-A	0	187	0.000	0	0.0	0.000	А
C-A	863			863			
С-В	0	481	0.000	0	0.0	0.000	А
A-B	0			0			
A-C	1072			1072			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	474	0.000	0	0.0	0.000	А
B-A	0	263	0.000	0	0.0	0.000	А
C-A	705			705			
С-В	0	543	0.000	0	0.0	0.000	А
A-B	0			0			
A-C	876			876			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	514	0.000	0	0.0	0.000	А
B-A	0	317	0.000	0	0.0	0.000	А
C-A	590			590			
С-В	0	588	0.000	0	0.0	0.000	А
A-B	0			0			
A-C	733			733			



Pirelli Site Access - 2021 Base + ComDev + Proposed, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction Name Junction Type		Major road direction	Junction Delay (s)	Junction LOS	
1	untitled	T-Junction	Two-way	0.17	Α

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

I	ID Sce	enario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
[2021 Base +	ComDev + Proposed	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
Α		✓	927	100.000
В		✓	13	100.000
С		✓	939	100.000

Origin-Destination Data

Demand (PCU/hr)

	То				
		Α	В	С	
Erom	Α	0	12	915	
From	В	6	0	7	
	С	926	13	0	

Vehicle Mix

Heavy Vehicle Percentages

		То				
		Α	В	С		
Erom	Α	10	10	10		
From	В	10	10	10		
	С	10	10	10		



Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.02	9.23	0.0	А
B-A	0.04	24.15	0.0	С
C-A				
С-В	0.03	8.20	0.0	А
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	5	529	0.010	5	0.0	7.558	А
B-A	5	304	0.015	4	0.0	13.237	В
C-A	697			697			
С-В	10	600	0.016	10	0.0	6.713	Α
A-B	9			9			
A-C	689			689			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
В-С	6	491	0.013	6	0.0	8.175	А
B-A	5	248	0.022	5	0.0	16.338	С
C-A	832			832			
С-В	12	557	0.021	12	0.0	7.265	А
A-B	11			11			
A-C	823			823			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	8	437	0.018	8	0.0	9.224	Α
B-A	7	170	0.039	7	0.0	24.148	С
C-A	1020			1020			
С-В	14	497	0.029	14	0.0	8.196	Α
A-B	13			13			
A-C	1007			1007			



08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	8	437	0.018	8	0.0	9.231	А
B-A	7	171	0.039	7	0.0	24.154	С
C-A	1020			1020			
С-В	14	497	0.029	14	0.0	8.196	А
A-B	13			13			
A-C	1007			1007			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	6	490	0.013	6	0.0	8.188	А
B-A	5	248	0.022	5	0.0	16.335	С
C-A	832			832			
С-В	12	557	0.021	12	0.0	7.269	Α
A-B	11			11			
A-C	823			823			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	5	529	0.010	5	0.0	7.565	А
B-A	5	304	0.015	5	0.0	13.235	В
C-A	697			697			
С-В	10	600	0.016	10	0.0	6.716	А
A-B	9			9			
A-C	689			689			



Pirelli Site Access - 2021 Base + ComDev + Proposed , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	0.24	Α

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

	ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
ı	D4	2021 Base + ComDev + Proposed	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
Α		✓	1015	100.000
В		✓	25	100.000
С		✓	806	100.000

Origin-Destination Data

Demand (PCU/hr)

	То				
From		Α	В	С	
	Α	0	5	1010	
	В	11	0	14	
	C	803	3	0	

Vehicle Mix

Heavy Vehicle Percentages

	То			
		Α	В	С
Erom	Α	10	10	10
From	В	10	10	10
	С	10	10	10



Results

Results Summary for whole modelled period

,								
Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS				
B-C	0.04	10.10	0.0	В				
B-A	0.07	25.20	0.1	D				
C-A								
С-В	0.01	8.54	0.0	А				
A-B								
A-C								

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	11	512	0.021	10	0.0	7.902	А
B-A	8	301	0.027	8	0.0	13.500	В
C-A	605			605			
С-В	2	579	0.004	2	0.0	6.870	А
A-B	4			4			
A-C	760			760			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	13	468	0.027	13	0.0	8.686	А
B-A	10	246	0.040	10	0.0	16.768	С
C-A	722			722			
С-В	3	532	0.005	3	0.0	7.485	А
A-B	4			4			
A-C	908			908			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	15	408	0.038	15	0.0	10.085	В
B-A	12	169	0.072	12	0.1	25.171	D
C-A	884			884			
С-В	3	467	0.007	3	0.0	8.544	Α
A-B	6			6			
A-C	1112			1112			



17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Los
B-C	15	408	0.038	15	0.0	10.096	В
B-A	12	169	0.072	12	0.1	25.197	D
C-A	884			884			
С-В	3	467	0.007	3	0.0	8.544	А
A-B	6			6			
A-C	1112			1112			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	13	468	0.027	13	0.0	8.701	А
B-A	10	246	0.040	10	0.0	16.779	С
C-A	722			722			
С-В	3	532	0.005	3	0.0	7.488	А
A-B	4			4			
A-C	908			908			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	11	511	0.021	11	0.0	7.914	А
B-A	8	302	0.027	8	0.0	13.507	В
C-A	605			605			
С-В	2	579	0.004	2	0.0	6.870	А
A-B	4			4			
A-C	760			760			



Junctions 9

PICADY 9 - Priority Intersection Module

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Filename: Southern Pirelli Site Access.j9 **Path:** P:\GBBMA\HandT\CS\Projects\5121643

Pirelli\10_Technical\161027_Pirelli_Update\161031_Pirelli_Junction Capacity

Report generation date: 03/11/2016 12:09:25

»Pirelli Site Access - 2021 Base + ComDev, AM
»Pirelli Site Access - 2021 Base + ComDev, PM
»Pirelli Site Access - 2021 Base + ComDev + Proposed, AM
»Pirelli Site Access - 2021 Base + ComDev + Proposed, PM

Summary of junction performance

		AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	
	Pir	elli Site	Acce	ss - 2	2021 Base +	ComDe	V		
Stream B-C	0.0	0.00	0.00	А	0.0	0.00	0.00	Α	
Stream B-A	0.0	0.00	0.00	Α	0.0	0.00	0.00	Α	
Stream C-B	0.0	0.00	0.00	Α	0.0	0.00	0.00	Α	
	Pirelli Sit	e Acces	s - 20	21 B	ase + ComE	ev + Pro	pos	ed	
Stream B-C	0.1	10.14	0.07	В	0.2	13.01	0.18	В	
Stream B-A	0.2	27.62	0.16	D	0.5	35.39	0.33	Е	
Stream C-B	0.1	8.55	0.07	Α	0.1	9.39	0.09	Α	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

2 3 3 3 p 1	
Title	(untitled)
Location	
Site number	
Date	23/03/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WSATKINS\kosk1699
Description	



Units

	Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
ſ	m	kph	PCU	PCU	perHour	S	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2021 Base + ComDev	AM	ONE HOUR	07:45	09:15	15
D2	2021 Base + ComDev	PM	ONE HOUR	16:45	18:15	15
D3	2021 Base + ComDev + Proposed	AM	ONE HOUR	07:45	09:15	15
D4	2021 Base + ComDev + Proposed	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Pirelli Site Access	100.000



Pirelli Site Access - 2021 Base + ComDev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	0.00	Α

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
Α	Derby Road (S)		Major
В	Site Access		Minor
С	Derby Road (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
С	6.10	✓	3.50	✓	3.50	250.0		-

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
В	One lane plus flare	10.00	7.00	4.00	3.30	3.30		1.00	19	20

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B	
1	B-A	599	0.101	0.254	0.160	0.364	
1	B-C	716	0.109	0.276	-	-	
1	С-В	820	0.317	0.317	-	-	

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.



Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2021 Base + ComDev	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
Α		✓	904	100.000
В		✓	0	100.000
С		√	911	100.000

Origin-Destination Data

Demand (PCU/hr)

	То				
		Α	В	С	
From	Α	0	0	904	
FIOIII	В	0	0	0	
	U	911	0	0	

Vehicle Mix

Heavy Vehicle Percentages

	То				
		Α	В	С	
From	Α	10	10	10	
From	В	10	10	10	
	С	10	10	10	

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.00	0.00	0.0	Α
B-A	0.00	0.00	0.0	Α
C-A				
С-В	0.00	0.00	0.0	А
A-B				
A-C				



Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	528	0.000	0	0.0	0.000	Α
B-A	0	316	0.000	0	0.0	0.000	А
C-A	686			686			
С-В	0	605	0.000	0	0.0	0.000	А
A-B	0			0			
A-C	681			681			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	492	0.000	0	0.0	0.000	А
B-A	0	261	0.000	0	0.0	0.000	А
C-A	819			819			
С-В	0	563	0.000	0	0.0	0.000	Α
A-B	0			0			
A-C	813			813			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	441	0.000	0	0.0	0.000	А
B-A	0	185	0.000	0	0.0	0.000	А
C-A	1003			1003			
С-В	0	505	0.000	0	0.0	0.000	А
A-B	0			0			
A-C	995			995			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	441	0.000	0	0.0	0.000	Α
B-A	0	185	0.000	0	0.0	0.000	А
C-A	1003			1003			
С-В	0	505	0.000	0	0.0	0.000	А
A-B	0			0			
A-C	995			995			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS		
B-C	0	492	0.000	0	0.0	0.000	Α		
B-A	0	261	0.000	0	0.0	0.000	Α		
C-A	819			819					
С-В	0	563	0.000	0	0.0	0.000	А		
A-B	0			0					
A-C	813			813					



09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
В-С	0	528	0.000	0	0.0	0.000	А
B-A	0	316	0.000	0	0.0	0.000	Α
C-A	686			686			
С-В	0	605	0.000	0	0.0	0.000	А
A-B	0			0			
A-C	681			681			



Pirelli Site Access - 2021 Base + ComDev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	0.00	Α

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2021 Base + ComDev	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
Α		✓	974	100.000
В		✓	0	100.000
С		✓	784	100.000

Origin-Destination Data

Demand (PCU/hr)

	То				
From		Α	В	С	
	Α	0	0	974	
	В	0	0	0	
	C	784	0	0	

Vehicle Mix

Heavy Vehicle Percentages

	То				
		Α	В	С	
From	Α	10	10	10	
FIOIII	В	10	10	10	
	С	10	10	10	



Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.00	0.00	0.0	Α
B-A	0.00	0.00	0.0	А
C-A				
С-В	0.00	0.00	0.0	А
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	514	0.000	0	0.0	0.000	А
B-A	0	317	0.000	0	0.0	0.000	А
C-A	590			590			
С-В	0	588	0.000	0	0.0	0.000	А
A-B	0			0			
A-C	733			733			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	474	0.000	0	0.0	0.000	А
B-A	0	263	0.000	0	0.0	0.000	А
C-A	705			705			
С-В	0	543	0.000	0	0.0	0.000	А
A-B	0			0			
A-C	876			876			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	420	0.000	0	0.0	0.000	А
B-A	0	187	0.000	0	0.0	0.000	А
C-A	863			863			
С-В	0	481	0.000	0	0.0	0.000	А
A-B	0			0			
A-C	1072			1072			



17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
В-С	0	420	0.000	0	0.0	0.000	Α
B-A	0	187	0.000	0	0.0	0.000	Α
C-A	863			863			
С-В	0	481	0.000	0	0.0	0.000	А
A-B	0			0			
A-C	1072			1072			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	474	0.000	0	0.0	0.000	Α
B-A	0	263	0.000	0	0.0	0.000	Α
C-A	705			705			
С-В	0	543	0.000	0	0.0	0.000	А
A-B	0			0			
A-C	876			876			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	514	0.000	0	0.0	0.000	А
B-A	0	317	0.000	0	0.0	0.000	А
C-A	590			590			
С-В	0	588	0.000	0	0.0	0.000	А
A-B	0			0			
A-C	733			733			



Pirelli Site Access - 2021 Base + ComDev + Proposed, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	0.64	Α

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

I	ID Sce	enario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
[2021 Base +	ComDev + Proposed	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
Α		✓	930	100.000
В		✓	52	100.000
С		✓	932	100.000

Origin-Destination Data

Demand (PCU/hr)

		Т	о	
		Α	В	С
From	Α	0	29	901
FIOIII	В	25	0	27
	C	902	30	0

Vehicle Mix

Heavy Vehicle Percentages

		Т	o	
		Α	В	С
From	Α	10	10	10
FIOIII	В	10	10	10
	С	10	10	10



Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.07	10.14	0.1	В
B-A	0.16	27.62	0.2	D
C-A				
С-В	0.07	8.55	0.1	А
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Los
B-C	20	521	0.039	20	0.0	7.901	А
B-A	19	305	0.062	19	0.1	13.809	В
C-A	679			679			
С-В	23	599	0.038	22	0.0	6.868	А
A-B	22			22			
A-C	678			678			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	24	481	0.051	24	0.1	8.677	Α
B-A	22	249	0.090	22	0.1	17.483	С
C-A	811			811			
С-В	27	556	0.049	27	0.1	7.486	А
A-B	26			26			
A-C	810			810			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	30	421	0.071	30	0.1	10.118	В
B-A	28	171	0.161	27	0.2	27.500	D
C-A	993			993			
С-В	33	496	0.067	33	0.1	8.545	Α
A-B	32			32			
A-C	992			992			



08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	30	420	0.071	30	0.1	10.139	В
B-A	28	171	0.161	28	0.2	27.621	D
C-A	993			993			
С-В	33	496	0.067	33	0.1	8.546	А
A-B	32			32			
A-C	992			992			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	24	480	0.051	24	0.1	8.700	А
B-A	22	249	0.090	23	0.1	17.543	С
C-A	811			811			
С-В	27	556	0.049	27	0.1	7.492	Α
A-B	26			26			
A-C	810			810			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	20	520	0.039	20	0.0	7.918	А
B-A	19	305	0.062	19	0.1	13.843	В
C-A	679			679			
С-В	23	599	0.038	23	0.0	6.875	А
A-B	22			22			
A-C	678			678			



Pirelli Site Access - 2021 Base + ComDev + Proposed , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	1.51	Α

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2021 Base + ComDev + Proposed	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm Use O-D data		Average Demand (PCU/hr)	Scaling Factor (%)	
Α		✓	1021	100.000	
В		✓	112	100.000	
С		✓	815	100.000	

Origin-Destination Data

Demand (PCU/hr)

	То				
F		Α	В	С	
	Α	0	67	954	
From	В	50	0	62	
	C	776	39	0	

Vehicle Mix

Heavy Vehicle Percentages

	То					
		Α	В	С		
From	Α	10	10	10		
FIOIII	В	10	10	10		
	С	10	10	10		



Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.18	13.01	0.2	В
B-A	0.33	35.39	0.5	E
C-A				
С-В	0.09	9.39	0.1	А
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	47	503	0.093	46	0.1	8.657	Α
B-A	38	301	0.125	37	0.2	14.967	В
C-A	584			584			
С-В	29	577	0.051	29	0.1	7.222	А
A-B	50			50			
A-C	718			718			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	56	455	0.123	56	0.2	9.919	Α
B-A	45	245	0.184	45	0.2	19.734	С
C-A	698			698			
С-В	35	530	0.066	35	0.1	8.000	А
A-B	60			60			
A-C	858			858			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	68	374	0.182	68	0.2	12.901	В
B-A	55	167	0.330	54	0.5	34.807	D
C-A	854			854			
С-В	43	465	0.092	43	0.1	9.384	Α
A-B	74			74			
A-C	1050			1050			



17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	68	373	0.183	68	0.2	13.013	В
B-A	55	167	0.330	55	0.5	35.393	E
C-A	854			854			
С-В	43	465	0.092	43	0.1	9.390	А
A-B	74			74			
A-C	1050			1050			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	56	453	0.123	56	0.2	9.988	А
B-A	45	245	0.183	46	0.3	19.989	С
C-A	698			698			
С-В	35	530	0.066	35	0.1	8.006	А
A-B	60			60			
A-C	858			858			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	47	502	0.093	47	0.1	8.698	А
B-A	38	301	0.125	38	0.2	15.067	С
C-A	584			584			
С-В	29	577	0.051	29	0.1	7.230	А
A-B	50			50			
A-C	718			718			



Junctions 9

ARCADY 9 - Roundabout Module

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Filename: 2021 mitigation Model_ Burton Albion Roundabout.j9

Path: P:\GBBMA\HandT\CS\Projects\5121643

Pirelli\10_Technical\161027_Pirelli_Update\161031_Pirelli_ Junction Capacity

Report generation date: 03/11/2016 12:12:51

»2021 Base + Com Dev, AM

»2021 Base + Com Dev, PM

»2021 Base + Com + Pref Dev, AM

»2021 Base + Com + Pref Dev, PM

Summary of junction performance

		AM				PM		
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
		2	021 E	Base	+ Com Dev			
Arm A	1.1	3.85	0.50	Α	0.6	2.45	0.35	Α
Arm C	18.2	364.25	1.25	F	0.1	7.20	0.12	Α
Arm D	34.6	144.13	1.06	F	158.1	493.43	1.28	F
Arm E	1.4	9.25	0.56	Α	33.8	128.13	1.04	F
Arm F	5.6	16.54	0.84	С	0.5	3.77	0.31	Α
		2021	Bas	e + C	om + Pref D	ev		
Arm A	1.1	3.92	0.50	Α	0.6	2.52	0.37	Α
Arm C	22.4	436.22	1.36	F	0.2	7.52	0.12	Α
Arm D	42.0	169.45	1.08	F	187.4	600.17	1.33	F
Arm E	1.4	9.43	0.57	Α	38.8	143.20	1.06	F
Arm F	5.8	17.19	0.85	С	0.5	3.82	0.32	Α

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.



File summary

File Description

Title	(untitled)
Location	
Site number	
Date	22/03/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WSATKINS\kosk1699
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021 Base + Com Dev	AM	2021 Base Traffic + Commited Dev	ONE HOUR	07:45	09:15	15	✓
D2	2021 Base + Com Dev	PM	2021 Base + Commited Development	ONE HOUR	16:45	18:15	15	✓
D3	2021 Base + Com + Pref Dev	AM	2021 Base Traffic + Commited Dev + Proposed Dev	ONE HOUR	07:45	09:15	15	✓
D4	2021 Base + Com + Pref Dev	PM	2021 Base + Commited Development + Proposed Development	ONE HOUR	16:45	18:15	15	√

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000



2021 Base + Com Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm D - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm F - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Signalised Crossing	Arm A - Pelican/Puffin Details	'Amber time regarded as green' should not be larger than 'Amber time preceding red'.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A,B,C,D,E,F	53.93	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
Α	A5121 Derby Road North	
В	Ryknild Trading Estate	
С	Wetmore Road	
D	Hawkins Lane	
Е	A5121 Derby Road South	
F	Princess Way	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
Α	6.60	9.70	27.0	8.0	58.0	48.0	
В							✓
С	3.00	6.40	10.0	38.0	60.0	23.0	
D	4.60	9.80	33.0	20.0	56.0	80.0	
Е	4.90	7.00	22.0	43.0	58.0	39.0	
F	3.80	10.20	49.0	62.0	60.0	44.0	

Pelican/Puffin Crossings

Arm	Space between crossing and junction entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
Α	1.00	1.00	2.90	1.00	4.00	6.00	20.00



Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Туре	Reason	Direct intercept adjustment (PCU/hr)
Α	Direct	replicate original model	600
В			
С	Direct		-180
D	Direct		-540
E	Direct		-480
F	Direct		-300

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
Α	0.642	2922
В		
С	0.529	1289
D	0.589	1478
Е	0.613	1482
F	0.688	2180

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Туре	Reason	Direct capacity adjustment (PCU/hr)
Α	Direct		0

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021 Base + Com Dev	AM	2021 Base Traffic + Commited Dev	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
Α		ONE HOUR	✓	918	100.000
В					
С		ONE HOUR	✓	143	100.000
D		ONE HOUR	✓	739	100.000
Е		ONE HOUR	✓	490	100.000
F		ONE HOUR	✓	1154	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
Α	Global	60.00
В		
С		
D		
Е		
F		



Origin-Destination Data

Demand (PCU/hr)

		То									
		Α	В	С	D	E	F				
	Α	0	16	13	448	394	47				
	В	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only				
From	С	20	0	0	42	66	15				
	D	513	8	26	0	1	191				
	Е	344	10	11	0	0	125				
	F	24	9	14	532	575	0				

Vehicle Mix

Heavy Vehicle Percentages

		То									
		Α	В	С	D	E	F				
	Α	10	10	10	10	10	10				
	В	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only				
From	С	10	10	10	10	10	10				
	D	10	10	10	10	10	10				
	Е	10	10	10	10	10	10				
	F	10	10	10	10	10	10				

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
Α	0.50	3.85	1.1	Α	842	1264
В						
С	1.25	364.25	18.2	F	131	197
D	1.06	144.13	34.6	F	678	1017
E	0.56	9.25	1.4	А	450	674
F	0.84	16.54	5.6	С	1059	1588

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
Α	691	173	887	45.17	2278	0.303	689	673	0.0	0.5	2.489	Α
В			1544					32				
С	108	27	1496		497	0.217	106	48	0.0	0.3	10.121	В
D	556	139	837		985	0.565	551	766	0.0	1.4	9.012	Α
E	369	92	611		1107	0.333	367	776	0.0	0.5	5.333	Α
F	869	217	696		1701	0.511	864	282	0.0	1.1	4.706	Α



08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
Α	825	206	1062	53.94	2174	0.380	824	804	0.5	0.7	2.933	Α
В			1848					39				
С	129	32	1790		341	0.377	127	57	0.3	0.6	18.409	С
D	664	166	1001		888	0.748	658	916	1.4	3.0	16.729	С
Е	440	110	730		1034	0.426	439	929	0.5	0.8	6.643	Α
F	1037	259	832		1608	0.645	1034	338	1.1	2.0	6.866	Α

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
Α	1011	253	1289	66.06	2039	0.496	1009	936	0.7	1.1	3.832	Α
В			2251					46				
С	157	39	2184		133	1.186	121	68	0.6	9.8	200.640	F
D	814	203	1197		773	1.053	742	1108	3.0	20.9	74.212	F
Е	540	135	823		978	0.552	537	1117	0.8	1.3	8.951	Α
F	1271	318	967		1515	0.839	1258	393	2.0	5.2	14.708	В

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
Α	1011	253	1301	66.06	2039	0.496	1011	949	1.1	1.1	3.850	Α
В			2265					47				
С	157	39	2196		126	1.248	124	69	9.8	18.2	364.248	F
D	814	203	1205		768	1.060	759	1115	20.9	34.6	144.133	F
E	540	135	840		967	0.558	539	1124	1.3	1.4	9.249	Α
F	1271	318	981		1505	0.844	1269	398	5.2	5.6	16.535	С

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
Α	825	206	1084	53.94	2175	0.380	827	904	1.1	0.7	2.943	Α
В			1870					40				
С	129	32	1808		331	0.388	198	62	18.2	0.7	47.318	Е
D	664	166	1061		853	0.779	784	946	34.6	4.7	77.849	F
E	440	110	874		946	0.465	442	971	1.4	1.0	7.876	Α
F	1037	259	937		1535	0.676	1050	379	5.6	2.4	8.379	Α

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
Α	691	173	897	45.17	2285	0.302	692	689	0.7	0.5	2.487	Α
В			1557					33				
С	108	27	1508		490	0.219	109	49	0.7	0.3	10.435	В
D	556	139	845		980	0.568	569	772	4.7	1.5	9.921	Α
Е	369	92	631		1096	0.337	371	783	1.0	0.6	5.476	Α
F	869	217	713		1690	0.514	874	289	2.4	1.2	4.880	Α



2021 Base + Com Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm D - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm F - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Signalised Crossing	Arm A - Pelican/Puffin Details	'Amber time regarded as green' should not be larger than 'Amber time preceding red'.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A,B,C,D,E,F	212.27	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2021 Base + Com Dev	PM	2021 Base + Commited Development	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
Α		ONE HOUR	✓	788	100.000
В					
С		ONE HOUR	✓	68	100.000
D		ONE HOUR	✓	1208	100.000
Е		ONE HOUR	✓	833	100.000
F		ONE HOUR	✓	433	100.000



Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
Α	Global	60.00
В		
С		
D		
Е		
F		

Origin-Destination Data

Demand (PCU/hr)

				То			
		Α	В	С	D	E	F
	Α	0	11	21	338	374	44
	В	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
From	С	14	0	0	26	15	13
	D	603	13	36	0	160	396
	Е	296	4	58	0	0	475
	F	42	3	5	171	212	0

Vehicle Mix

Heavy Vehicle Percentages

				То			
		Α	В	С	D	E	F
	Α	10	10	10	10	10	10
	В	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
From	С	10	10	10	10	10	10
	D	10	10	10	10	10	10
	Е	10	10	10	10	10	10
	F	10	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
Α	0.35	2.45	0.6	Α	723	1085
В						
С	0.12	7.20	0.1	А	62	94
D	1.28	493.43	158.1	F	1108	1663
E	1.04	128.13	33.8	F	764	1147
F	0.31	3.77	0.5	Α	397	596



Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
Α	593	148	376	45.17	2591	0.229	592	709	0.0	0.3	1.979	Α
В			945					23				
С	51	13	855		836	0.061	51	89	0.0	0.1	5.042	Α
D	909	227	505		1181	0.770	896	402	0.0	3.5	13.321	В
E	627	157	830		973	0.644	619	570	0.0	1.9	10.974	В
F	326	81	760		1657	0.197	325	690	0.0	0.3	2.969	Α

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
Α	708	177	448	53.94	2542	0.279	708	834	0.3	0.4	2.159	Α
В			1129					27				
С	61	15	1023		747	0.082	61	106	0.1	0.1	5.771	Α
D	1086	271	604		1122	0.968	1047	481	3.5	13.2	39.899	Е
E	749	187	972		886	0.845	736	679	1.9	5.1	24.535	С
F	389	97	894		1565	0.249	389	814	0.3	0.4	3.367	Α

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
Α	868	217	536	66.06	2479	0.350	867	883	0.4	0.6	2.455	Α
В			1372					31				
С	75	19	1253		626	0.120	75	119	0.1	0.1	7.187	Α
D	1330	333	739		1042	1.276	1039	588	13.2	86.0	183.013	F
Е	917	229	979		882	1.040	851	799	5.1	21.6	71.675	F
F	477	119	942		1532	0.311	476	889	0.4	0.5	3.749	Α

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
Α	868	217	537	66.06	2482	0.350	868	890	0.6	0.6	2.452	Α
В			1374					31				
С	75	19	1254		625	0.120	75	120	0.1	0.1	7.198	Α
D	1330	333	740		1042	1.276	1042	589	86.0	158.1	419.958	F
E	917	229	982		880	1.042	869	800	21.6	33.8	128.127	F
F	477	119	951		1526	0.312	477	899	0.5	0.5	3.774	Α

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
Α	708	177	459	53.94	2542	0.279	709	901	0.6	0.4	2.161	Α
В			1139					29				
С	61	15	1025		746	0.082	61	114	0.1	0.1	5.782	Α
D	1086	271	605		1121	0.968	1114	481	158.1	151.2	493.427	F
Е	749	187	1030		850	0.881	829	688	33.8	13.8	112.569	F
F	389	97	970		1513	0.257	390	889	0.5	0.4	3.530	Α



18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
Α	593	148	392	45.17	2590	0.229	594	864	0.4	0.3	1.985	Α
В			959					26				
С	51	13	858		835	0.061	51	101	0.1	0.1	5.058	Α
D	909	227	506		1179	0.771	1171	403	151.2	85.8	365.937	F
E	627	157	1069		826	0.759	667	608	13.8	3.8	29.435	D
F	326	81	929		1541	0.212	326	807	0.4	0.3	3.263	Α



2021 Base + Com + Pref Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm D - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm F - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Signalised Crossing	Arm A - Pelican/Puffin Details	'Amber time regarded as green' should not be larger than 'Amber time preceding red'.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A,B,C,D,E,F	62.80	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name Period name		Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically	
D3	2021 Base + Com + Pref Dev	АМ	2021 Base Traffic + Commited Dev + Proposed Dev	ONE HOUR	07:45	09:15	15	✓	

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
Α		ONE HOUR	✓	934	100.000
В					
С		ONE HOUR	✓	144	100.000
D		ONE HOUR	✓	754	100.000
Е		ONE HOUR	✓	497	100.000
F		ONE HOUR	✓	1155	100.000



Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
Α	Global	60.00
В		
С		
D		
Е		
F		

Origin-Destination Data

Demand (PCU/hr)

				То			
		Α	В	С	D	E	F
	Α	0	16	13	456	401	48
	В	Exit-only Exit-only Exit-or		Exit-only	Exit-only	Exit-only	Exit-only
From	С	21	0	0	42	66	15
	D	528	8	26	0	1	191
	Е	351	10	11	0	0	125
	F	25	9	14	532	575	0

Vehicle Mix

Heavy Vehicle Percentages

				То			
		Α	В	С	D	E	F
	Α	10	10	10	10	10	10
	В	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
From	С	10	10	10	10	10	10
	D	10	10	10	10	10	10
	Е	10	10	10	10	10	10
	F	10	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
Α	0.50	3.92	1.1	Α	857	1286
В						
С	1.36	436.22	22.4	F	132	198
D	1.08	169.45	42.0	F	692	1038
E	0.57	9.43	1.4	А	456	684
F	0.85	17.19	5.8	С	1060	1590



Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
Α	703	176	887	45.17	2278	0.309	701	690	0.0	0.5	2.507	Α
В			1556					32				
С	108	27	1508		490	0.221	107	48	0.0	0.3	10.305	В
D	568	142	844		981	0.579	562	772	0.0	1.5	9.324	Α
E	374	94	624		1100	0.340	372	782	0.0	0.6	5.426	Α
F	870	217	713		1690	0.515	865	283	0.0	1.2	4.775	Α

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
Α	840	210	1062	53.94	2175	0.386	839	825	0.5	0.7	2.963	Α
В			1862					39				
С	129	32	1805		333	0.388	128	57	0.3	0.7	19.143	С
D	678	169	1009		883	0.767	670	924	1.5	3.3	17.978	С
Е	447	112	745		1026	0.436	446	935	0.6	0.8	6.816	Α
F	1038	260	852		1594	0.651	1035	338	1.2	2.0	7.041	Α

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
Α	1028	257	1288	66.06	2041	0.504	1027	951	0.7	1.1	3.896	Α
В			2268					46				
С	159	40	2201		124	1.281	115	67	0.7	11.6	241.901	F
D	830	208	1201		770	1.078	746	1114	3.3	24.5	83.504	F
Е	547	137	826		976	0.561	545	1121	0.8	1.4	9.150	Α
F	1272	318	980		1505	0.845	1258	391	2.0	5.4	15.244	С

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
Α	1028	257	1300	66.06	2040	0.504	1028	963	1.1	1.1	3.916	Α
В			2282					47				
С	159	40	2214		117	1.357	116	68	11.6	22.4	436.220	F
D	830	208	1208		766	1.084	760	1121	24.5	42.0	169.448	F
E	547	137	841		967	0.566	547	1128	1.4	1.4	9.431	Α
F	1272	318	993		1497	0.850	1270	395	5.4	5.8	17.190	С

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
Α	840	210	1085	53.94	2175	0.386	841	944	1.1	0.7	2.974	Α
В			1886					40				
С	129	32	1823		324	0.400	216	63	22.4	0.8	70.000	F
D	678	169	1081		841	0.806	818	958	42.0	7.0	115.405	F
E	447	112	914		922	0.485	448	985	1.4	1.1	8.391	Α
F	1038	260	977		1508	0.689	1052	386	5.8	2.5	8.916	Α



09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Los
Α	703	176	898	45.17	2285	0.308	704	713	0.7	0.5	2.506	Α
В			1570					33				
С	108	27	1521		484	0.224	110	49	0.8	0.3	10.650	В
D	568	142	852		976	0.582	589	779	7.0	1.6	10.785	В
Е	374	94	652		1082	0.346	376	789	1.1	0.6	5.621	Α
F	870	217	737	·	1673	0.520	875	292	2.5	1.2	4.991	Α



2021 Base + Com + Pref Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm D - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm F - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Signalised Crossing	Arm A - Pelican/Puffin Details	'Amber time regarded as green' should not be larger than 'Amber time preceding red'.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	A,B,C,D,E,F	254.19	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ı	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
C	4 2021 Base + Com + Pref Dev	PM	2021 Base + Commited Development + Proposed Development	ONE HOUR	16:45	18:15	15	√

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

		•			
Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
Α		ONE HOUR	✓	829	100.000
В					
С		ONE HOUR	✓	68	100.000
D		ONE HOUR	✓	1238	100.000
Е		ONE HOUR	✓	847	100.000
F		ONE HOUR	✓	435	100.000



Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
Α	Global	60.00
В		
С		
D		
Е		
F		

Origin-Destination Data

Demand (PCU/hr)

				То			
		Α	В	С	D	E	F
	Α	0	11	22	356	393	47
	В	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
From	U	14	0	0	26	15	13
	D	633	13	36	0	160	396
	Е	310	4	58	0	0	475
	F	44	3	5	171	212	0

Vehicle Mix

Heavy Vehicle Percentages

				То			
		Α	В	С	D	E	F
	Α	10	10	10	10	10	10
	В	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
From	С	10	10	10	10	10	10
	D	10	10	10	10	10	10
	Е	10	10	10	10	10	10
	F	10	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
Α	0.37	2.52	0.6	Α	761	1141
В						
С	0.12	7.52	0.2	А	62	94
D	1.33	600.17	187.4	F	1136	1704
Е	1.06	143.20	38.8	F	777	1166
F	0.32	3.82	0.5	Α	399	599



Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
Α	624	156	376	45.17	2592	0.241	623	742	0.0	0.3	2.010	Α
В			975					23				
С	51	13	885		820	0.062	51	90	0.0	0.1	5.147	Α
D	932	233	521		1171	0.796	916	415	0.0	4.0	14.755	В
E	638	159	853		959	0.665	629	584	0.0	2.1	11.735	В
F	327	82	792		1635	0.200	326	691	0.0	0.3	3.022	Α

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
Α	745	186	448	53.94	2544	0.293	745	866	0.3	0.5	2.201	Α
В			1165					27				
С	61	15	1059		728	0.084	61	106	0.1	0.1	5.936	Α
D	1113	278	623		1111	1.002	1057	497	4.0	17.8	49.841	Е
Е	761	190	987		877	0.868	746	694	2.1	5.9	27.591	D
F	391	98	923		1545	0.253	391	811	0.3	0.4	3.430	Α

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
Α	913	228	534	66.06	2482	0.368	912	903	0.5	0.6	2.520	Α
В			1415					30				
С	75	19	1297		602	0.124	75	118	0.1	0.2	7.502	Α
D	1363	341	763		1028	1.326	1026	608	17.8	102.1	220.726	F
E	933	233	975		884	1.054	859	815	5.9	24.3	78.580	F
F	479	120	958		1521	0.315	478	876	0.4	0.5	3.796	Α

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
Α	913	228	535	66.06	2486	0.367	913	909	0.6	0.6	2.516	Α
В			1418					30				
С	75	19	1298		602	0.124	75	120	0.2	0.2	7.516	Α
D	1363	341	764		1028	1.326	1027	609	102.1	186.0	498.293	F
Е	933	233	976		884	1.055	875	815	24.3	38.8	143.205	F
F	479	120	966		1516	0.316	479	885	0.5	0.5	3.819	Α

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
Α	745	186	456	53.94	2545	0.293	746	921	0.6	0.5	2.201	Α
В			1174					28				
С	61	15	1061		727	0.084	61	113	0.2	0.1	5.951	Α
D	1113	278	625		1110	1.003	1107	498	186.0	187.4	600.172	F
E	761	190	1031		850	0.896	827	701	38.8	22.5	137.342	F
F	391	98	986		1502	0.260	392	872	0.5	0.4	3.570	Α



18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
Α	624	156	393	45.17	2591	0.241	625	898	0.5	0.4	2.014	Α
В			991					26				
С	51	13	888		819	0.063	51	103	0.1	0.1	5.163	Α
D	932	233	523		1170	0.797	1163	417	187.4	129.7	491.902	F
E	638	159	1068		827	0.771	711	617	22.5	4.2	46.168	Е
F	327	82	963		1517	0.216	328	816	0.4	0.3	3.332	Α

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