Sleaford Regeneration Area Modelling

Traffic Modelling Report

October 2015

Document Control Sheet

Project Title	Sleaford Regeneration Area Modelling
Report Title	Traffic Modelling Report
Revision	F
Status	Final
Control Date	27/10/15

Record of Issue

Issue	Status	Author	Date	Check	Date	Authorised	Date
A	Draft	NSS	12/08/15	AW	13/08/15	PR	15/08/15
B	Final	NSS	26/08/15	PR	26/08/15	PR	26/08/15
C	Final	NSS	10/09/15	PR	10/09/15	PR	10/09/15
D	Final	NSS	15/09/15	PR	15/09/15	PR	15/05/15
E	Final	NSS	08/10/15	PR	08/10/15	PR	08/05/15
F	Final – following stakeholder meeting	PR	27/10/15	PR	27/10/15	PR	27/10/15

Distribution

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1 Introduction

1.1 Background

Mouchel Consulting, working as part of Lincolnshire County Council Highways Alliance, has been appointed by the County Council (LCC) and North Kesteven District Council (NKDC) to undertake traffic modelling using Sleaford Traffic Model to help gain an understanding of various access strategies for the Sleaford Regeneration Area following the withdrawal of proposals for a new Tesco development.

1.2 Purpose of the Report

The purpose of this report is to present the findings of traffic modelling undertaken to investigate various access strategies discussed during a meeting on 6th March 2015 between representatives from LCC and NKDC and contained in the subsequently provided brief.

This report describes the proposals for the Sleaford Regeneration Area and the developments it will facilitate, particularly focussing on The Maltings and Tesco sites. The report describes the traffic modelling and analysis undertaken and the resulting outputs. Specifically, this report describes the impact of changes to the highway network in the various strategies and developments, in highway performance terms, both on the local network and on key individual junctions within the town centre.

The scope of this Traffic Modelling Report has been agreed with officers at LCC and NKDC.

1.3 Structure of the Report

Following on from this introduction, Section 2 describes the methodology and tools used to undertake the traffic modelling. Section 3 outlines the details of the proposed developments and changes to the highway network assessed through this modelling study. Section 4 to 6 describe the outputs from the traffic modelling in terms of the impact of the developments and changes on the highway network as a whole and on specific junctions. Finally, Section 7 presents a summary of the report and conclusions.

2 Methodology

2.1 Traffic Impact

The potential traffic impact of the various strategies can only be robustly assessed through the comparison of highway network operation before and after the implementation of the measures and the associated developments. This comparison can only be made through the use of traffic modelling at both a strategic and local level. For the purposes of this assessment, the Sleaford Traffic Model has been used to assess the traffic impact on the highway network as a whole within Sleaford and the immediately surrounding area.

It should be noted that no engineering assessment has been undertaken for the options being considered.

2.2 Traffic Model

The current base model for Sleaford, used in this commission, was developed in 2013 and was validated to observed traffic flows for the same year. The base model can be used to assess both AM and PM peak hours.

2.3 Traffic Forecasting

Demand matrices for the forecasting models have been derived by merging the background traffic matrices with the development traffic matrices.

TEMPRO growth factors have been applied to the calibrated base year matrices at the origin-destination level to create background traffic matrices.

Development trip matrices have been developed by estimating trip generation of developments by land use and applying trip distributions from a set of donor zones with similar land uses. The development trips information was procured from earlier studies submitted to LCC as part of the impact assessment of the South East Sleaford Regeneration Route (SESRR) phase 1 and 2 and other developments.

The model development process considers one forecast year scenario (2022) for the AM and PM peak hour assessments. The 2022 forecast traffic levels were estimated by applying growth factors to the 2013 base model matrices. These growth factors were derived from the Department for Transport's TEMPRO program (Trip End Model Presentation Program) Version 6.2.

The overall traffic growth between the 2013 base year and 2022 forecast year in the AM and PM peak hour models has been capped to TEMPRO (dataset 6.2). The growth factors summarised in the following table below (split by region and trip purpose) were used to derive the overall TEMPRO growth.

Table 2-1 – Growth Factors Summary – AM and PM Peak Hour

Trip Purpose	Region	Morning Peak Hour				Evening Peak Hour			
		Origin		Destination		Origin		Destination	
Commute Home Based and Non-Home Based	GB	1.06	6.3%	1.063	6.3%	1.1	5.9%	1.06	5.9%
	Lincs	1.05	4.6%	1.041	4.1%	1	4.0%	1.04	4.4%
	Sleaford	1.05	5.2%	1.055	5.5%	1.1	5.2%	1.05	5.1%
Other Employers Business and Non-Home Based	GB	1.09	8.7%	1.087	8.7%	1.1	8.6%	1.09	8.6%
	Lincs	1.09	8.6%	1.085	8.5%	1.1	8.2%	1.08	8.2%
	Sleaford	1.09	9.3%	1.089	8.9%	1.1	8.9%	1.09	9.0%
All Other Home Based and Non-Home Based	GB	1.06	6.4%	1.064	6.4%	1.1	6.5%	1.06	6.5%
	Lincs	1.04	4.4%	1.04	4.0%	1	4.3%	1.05	4.6%
	Sleaford	1.05	5.2%	1.05	5.0%	1.1	5.4%	1.05	5.3%
Source: TEMPRO 6.2									

The overall levels of traffic growth between the 2013 and 2022 generated by TEMPRO were 7.9% (AM peak) and 7.4% (PM peak). The committed/proposed developments in Sleaford account for 57% and 59% of this growth in the AM and PM peaks respectively. The details of the trips generated by the committed/proposed developments are summarised in Section 3 of this report.

The traffic forecasts do not make any adjustments for potential mode shift as a result of transport policy interventions. Furthermore, it has been assumed that the full forecast increases in traffic will occur in the peak periods and no account of the potential for peak spreading has been taken (peak spreading occurs when drivers alter their travel patterns to avoid the congested peak hours resulting in traffic growth occurring outside of the peaks and the peak periods therefore lengthening in time).

2.4 Assessment Methodology

The assessment considers one forecast year – 2022 for the AM and PM peak hour assessments. The assessment of the Sleaford Regeneration Area options can be split in into the following three parts:

2.4.1 Part A – Reference Case Scenarios

The Reference Case (Do-minimum) represents the future situation which includes all the trips from the committed and proposed developments along with their associated highway improvements. These scenarios provide the assumed future situation without any of the options implemented and enable the 'with options' (Do-Something) scenarios to be assessed against the scenario when none of the options have been implemented.

There are two primary reference case scenarios considered as a part of the assessments:

- Reference Case A1 – used for comparison with all options with exception of Option 7; and,

- Reference Case B – used for comparison with Option 7 only. Option 7 has been developed primarily to assess the impact of delivering the Maltings development alone but has been assessed alongside a significantly reduced level of committed development, therefore, a second reference case, 'B', has been developed purely for this option.

In addition, a secondary reference case, Reference Case A0, has been developed to demonstrate the impact of the proposed increases in level crossing downtime. Reference Case A1 uses the proposed future downtimes (see Section 2.4.4) proposed by Network Rail while A0 uses the current downtimes. Reference Case A0 has primarily been used for a comparison with A1. Reference Cases A1 and A0 differ only in the crossing downtimes used.

Reference Cases A1 and A0 include the following committed/proposed developments along with their associated highway improvements.

- King Edward Street

- Holdingham and alterations to A15/A17 (Holdingham Roundabout)

- Bass Maltings

- Sleaford South (Handley Chase)

- Sleaford West

- Grantham Road (both residential and employment)

- Pride Parkway

- Albourne development – alternative proposals for the Tesco site

Reference Cases A1 and A0 include the following changes to the existing highway network associated with the committed developments:

- Holdingham Roundabout Improvements

- Mareham Lane/Maltings Way traffic signals

- Carre Street traffic signals

- New four arm roundabout on Grantham Road associated with development either side of Grantham Road

- New four arm roundabout on A15 associated with the Sleaford West development
- Network changes associated with Sleaford South Development (site access)
- Proposed changes to the downtimes for railway crossings on South Gate and King Edward Street.

Reference Case B includes the following committed/proposed developments along with their associated highway improvements.

- King Edward Street
- Holdingham and alterations to A15/A17 (Holdingham Roundabout)
- Sleaford South (Handley Chase)

Reference Case B includes the following changes to the existing highway network associated with the committed developments:

- Holdingham Roundabout Improvements
- Network changes associated with Sleaford South Development (site accesses)
- Proposed changes to the downtimes for railway crossings on South Gate and King Edward Street.

2.4.2 Part B – Do-Something Test Scenarios

The following options, assessed for both the weekday AM and PM peak hours, constitute the Do-Something test scenarios (see Appendix A for diagrammatic representations of these options:

- Do-Something Option 1 – Link Road (South East Sleaford Regeneration Route (SESRR) Phase1 with railway overbridge) between Boston Road and Mareham Lane operational with railway crossing and South Gate level crossing permanently closed.
- Do-Something Option 2 – Link Road (SESRR Phase 1 Link Road with railway overbridge) extended to a signalised junction on East Gate (SESRR Phase 2) through current site of LCC offices. East Gate becomes two-way between Northgate and Carre Street. Level crossing on South Gate permanently closed.
- Do-Something Option 3 – No Link Road (SESRR Phase 1) over railway. Tesco site to be accessed from Boston Road and Bass Maltings development to be accessed via Mareham Lane. South Gate level crossing remains open.

- Do-Something Option 4a – No Link Road (SESRR Phase 1) over railway. Tesco site to be accessed from Boston Road also extended to East Gate (SESRR Phase 2) through current LCC offices. Bass Maltings development accessed via Mareham Lane. East Gate becomes two-way. South Gate level crossing remains open.

- Do-Something Option 4b – No Link Road (SESRR Phase 1) over railway. Tesco site to be accessed from Boston Road also extended to East Gate (SESRR Phase 2) through current LCC offices. Bass Maltings development accessed via Mareham Lane. Both East Gate and Boston Road become two-way. South Gate level crossing remains open.

- Do-Something Option 5 – No Link Road (SESRR Phase1) over railway. Tesco site to access via Boston Road and additional access to northern site via South Gate. Bass Maltings development accessed via Mareham Lane. Level crossing remains open. This is similar to Option 3 but with the addition of a second access to the Tesco site via a link to the southern extent of South Gate, immediately north of the level crossing.

- Do-Something Option 6 – No Link Road (SESRR Phase 1) over railway. Access to Bass Maltings development via Mareham Lane. South Gate level crossing remains open. New Sleaford Southern Distributor Road (SSDR) connecting A15 to A17, with new roundabout junctions with A15, London Road, Mareham Lane and A17. Access to Bass Maltings development via Mareham Lane with additional access to Mareham Lane from the south connecting to the Southern Distributor Road.

- Do-Something Option 7 – No Link Road (SESRR Phase 1) over railway. Access to Bass Maltings development via Mareham Lane. South Gate level crossing remains open (see Section 2.4.3).

- Do-Something Option 8 – No Link Road (SESRR Phase 1) over railway. Access to Bass Maltings development via Mareham Lane. South Gate level crossing is closed to trains with the crossing being permanently open. This option has not been taken forward for further analysis with the Sleaford Traffic Model. The closure of the South Gate level crossing to trains is unlikely to be supported by Network Rail or the Train Operating Companies as it would sever direct routes. Additional infrastructure (e.g. track, signalling, etc) as well as reversing movements would be required to enable to continue the operation of some services.

- Do-Something Option 9a – No Link Road (SESRR Phase 1) over railway. Access to Bass Maltings development via Mareham Lane. South Gate level crossing remains open. South Gate is pedestrianised between South Gate and Water Gate. Access to Jermyn Street maintained with South Gate operating as a two-way ‘access only’ link between Boston Road and Jermyn Street.

- Do-Something Option 9b – No Link Road (SESRR Phase 1) over railway. Access to Bass Maltings development via Mareham Lane. South Gate level crossing remains open. South Gate is pedestrianised between South Gate and East Gate. Access to Jermyn Street maintained with South Gate operating as a two-way 'access only' link between Boston Road and Jermyn Street.

All Do-Something (DS) scenarios (with the exception of Option 7) include all the committed/proposed developments along with their associated highway changes. It should be noted that the SESRR Phase 1 has planning permission but the second phase does not.

It should also be noted that a number of the individual elements included in the various scenarios could have significant impacts on the local highway network if implemented alone. Therefore, caution should be used when reviewing the outputs of the following analysis and in attributing impacts to any one of the component elements of the various scenarios.

2.4.3 Part C – Do Something Option 7

Option 7 has been tested separately to the other options presented in this report to provide an assessment of the development of the Maltings Development alongside only a limited number of committed developments.

In addition to developments and highway improvements in Reference Case Scenario B, this option includes only the trips and highway changes associated with Bass Maltings development, which include a new signal junction of Mareham Lane/ Maltings Way.

2.4.4 Level Crossing Downtimes

The Sleaford Traffic Base Model utilises level crossing downtime data from surveys undertaken in 2013. Network Rail has plans to change the level crossings at South Gate and King Edward Street from manual to automatic barriers and has provided the future estimated downtimes for both level crossings to allow for the options in this study to be appropriately modelled for the future situation.

Network Rail estimates that the downtime will increase to 5 minutes for eastbound trains and to around 3.5 minutes for westbound trains. For simplicity, the average future downtime in both directions has been calculated and used in the traffic modelling. An average downtime of 4.25 minutes per train has been used in the various modelling scenarios.

Network Rail has stated that, as a worst case, it estimates that a total of nine trains will pass through the level crossings per hour (both directions combined). The total downtime is applied pro rata to a 100second signal cycle.

These changes in crossing downtimes represent a very significant increase in delays and amount to the two crossings being closed for over 38 minutes in every hour. However, Network Rail has indicated that this is likely to be a worst case.

The only difference between the two 'A' reference cases is that Reference Case A0 uses the existing (2013) crossing downtimes while Reference Case A1 uses the future crossing downtimes suggested by Network Rail.

A summary of the information provided by Network Rail is included in Appendix B

2.5 Assessment of Highways impact

The AM and PM peak hours for a typical weekday have been assessed using the following model outputs:

- Overall Network Performance Statistics;
- Traffic Flows;
- Journey Time data
- Junction delay

2.5.1 Overall Traffic Model Network Performance Statistics

The indicators of overall network performances are as follows:

- Total Travel Time – Total journey time of all vehicles during the modelled period;
- Transient Queuing – Queues that occur at junctions operating within their designed capacity; for example vehicles stopping momentarily at a give-way line or during one traffic signal cycle;
- Over-Capacity Queuing – Queues that occur due to there being more traffic than there is network capacity to deal with; for example traffic can then be held for more than one cycle at a traffic signal junction;
- Total Trips on Network – The total number of vehicles on the network modelled in detail.

2.5.2 Traffic Flows

Traffic flow diagrams from the traffic model are presented in Appendix D, showing traffic flows for the town centre for all the scenarios for both the AM and PM peaks.

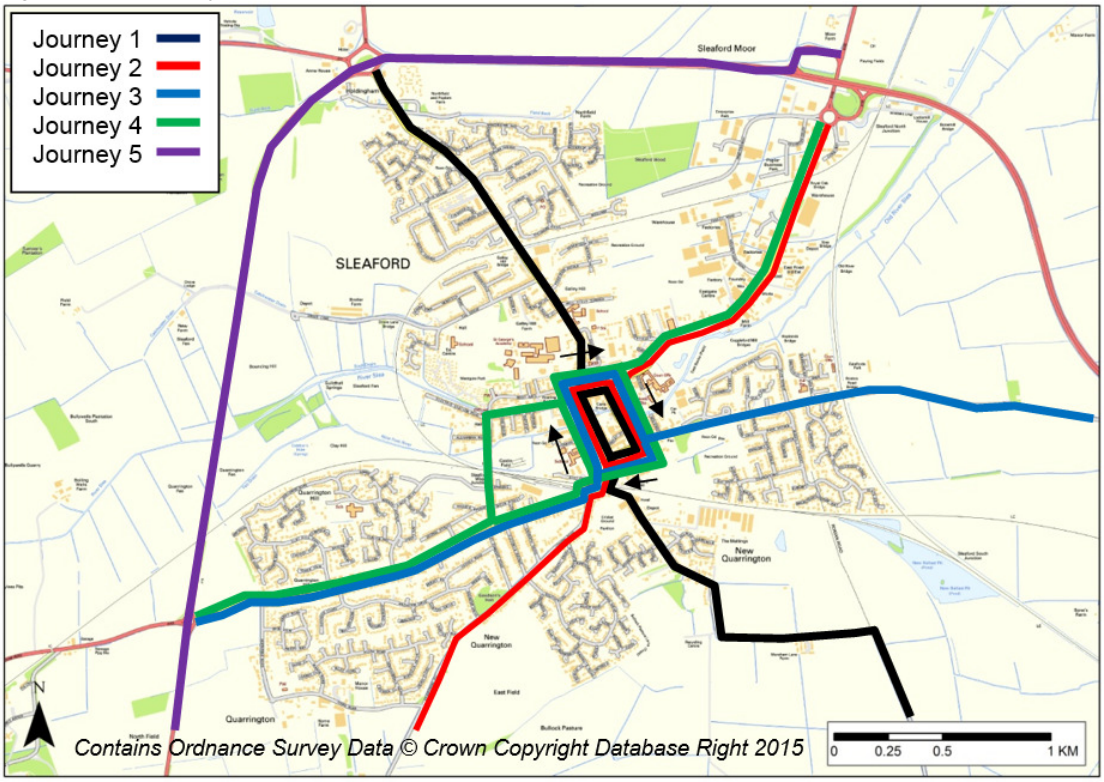
2.5.3 Journey Times

Five journey time routes were developed for the purposes of validating the SATURN Base Model. These have been used to compare the different scenario in terms of

their impact on journey times through the highway network but do not represent all journey options available.

The five journey time routes are shown on Figure 2-1 below.

Figure 2-1 – Journey Time Routes



The results for each of these outputs are detailed below separately for the Reference Case and Do-Something Options in Section 4, Section 5 and Section 6.

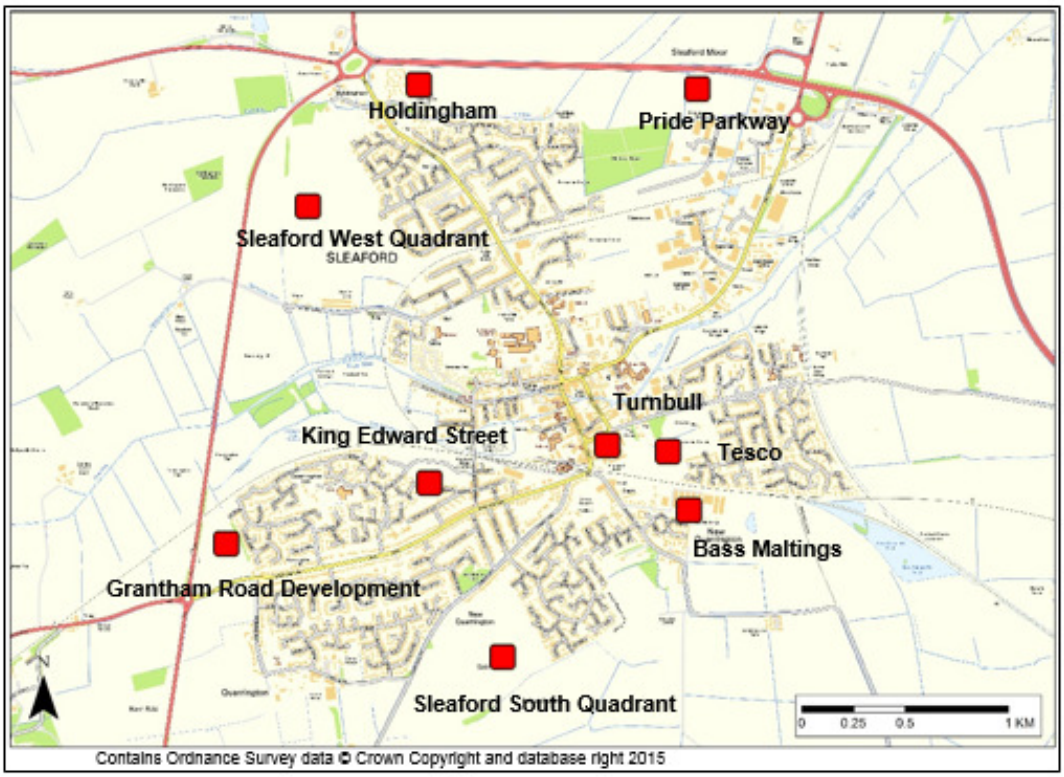
3 Proposed and Committed Developments

3.1 Background

Following the decision of Tesco not to pursue its consented development in Sleaford, Tesco has suggested that another proposal could provide an alternative for the future development of the site. The site in question currently remains in the ownership of Tesco.

Figure 3-1 below shows the locations of the various committed and proposed developments.

Figure 3-1 – Location of Developments



3.2 Description of Proposed Development

A potential alternative option to the consented Tesco scheme has been suggested and this has been used as the basis upon which to calculate vehicle trip generation for the site. The development quantum set out below has been used as the basis to assess vehicular trip generation for the Tesco site:

- Retail (non-food) approx. 57,500ft^2;
- Drive through restaurant
- Retirement Homes (approx. 36-40);
- Residential developments (high density houses or flats);

- Family pub /restaurant; and,
- possibility of development shops with flats above (approx. 15-20,000ft^2);

Access to the Tesco site will be taken from the SESRR or Boston Road and may potentially involve re-alignment of the northern section of the SESRR where it forms a junction with Boston Road. As no indicative plans showing the potential realignment are available, this has not been taken into account in the current model runs and would have only limited impact on the outputs from the model. It is understood that the potential realignment may hinder the development of SESRR Phase 2.

The number of vehicular trips expected to be generated by the potential alternative option for developing the Tesco site is based on analysis using the TRICS database and is shown in the table below. Appendix C shows the detailed TRICS assessment reports.

Table 3-1 – Indicative Alternative Development on Tesco – Vehicle Trip Generation

Development	Land Use	Trip Generation (PCUs per Hour)					
		AM Peak Trips			PM Peak Trips		
		In	Out	Total	In	Out	Total
Retirement homes	Residential	5	4	9	2	3	5
Flats (privately owned)	Residential	2	7	9	6	3	9
Retail Park (non-food)	Residential	22	10	32	17	24	41
Drive-thru restaurant	Restaurant	11	5	16	27	29	56
Public House	Restaurant	0	0	0	13	10	23

3.3 Committed and Proposed Developments

The following committed and proposed developments are included for all the assessment scenarios excluding Reference Case B and Option 7.

- Holdingham and alterations to A15/A17 (Holdingham Roundabout)
- Bass Maltings
- Sleaford South (Handley Chase)
- Sleaford West
- Grantham Road (both residential and employment)
- Pride Parkway
- King Edward Street

Reference Case B and Option 7 only include the following committed developments

- Holdingham and alterations to A15/A17 (Holdingham Roundabout)
- Sleaford South (Handley Chase)
- King Edward Street

The trips rates for these committed/proposed developments have been obtained from previous work undertaken to assess the SESRR scheme and are summarised below.

Table 3-2 – Committed/Proposed Development – Vehicle Trip Generation

Development Site	Morning peak			Evening peak		
	In	Out	Total	In	Out	Total
Holdingham	37	138	175	113	90	203
Bass Maltings	191	103	294	94	174	268
Sleaford South (Handley Chase)	256	525	781	558	342	900
Sleaford West	630	807	1437	678	578	1256
Grantham Road	385	130	515	112	343	455
Pride Parkway	376	88	464	58	309	367
King Edward Street	20	68	88	67	34	101
Total	**1,895**	**1,859**	**3,754**	**1,680**	**1,870**	**3,550**

These trips have been accounted for when calculating the traffic growth in the Sleaford model while ensuring that the total number of trips in the forecast matrices does not exceed the overall TEMPRO growth forecast.

In addition to the above developments, consideration was given to any proposals for the current Turnbull's site on South Gate. No specific details of any future land use proposals have been provided by or on behalf of Turnbull. However, it has been indicated that any future development of the site is likely to have less traffic impact than the current use. It has therefore been assumed, for the purposes of the modelling, that the current land use, and therefore trip generation already included in the base model, represents a worst case for the traffic generation of the site and no amendments have been made in the Reference Cases or Do-Something scenarios.

4 Highway Impacts: Part A – Reference Cases

This section summarises the performance of the highway network for the Reference Case A1, A0 and B scenarios for the AM (08:00-09:00) and PM (17:00-18:00) peak hours for year 2022.

4.1 Overall Traffic Model Network Performance Statistics

The network statistics quoted in this and later sections refer to the area of the network modelled in detail (the simulation network), which broadly comprises the area shown in Figure 3-1.

Table 4-1 below summarises the overall network performance statistics as generated by the model for Reference Case A1 for the AM and PM peak hour in year 2022.

Table 4-1 – Network Performance – Reference Case A1 AM & PM Peak Hour – 2022

Scenario	Total Distance Travelled (pcu km)	Total Travel Time (pcu hr)	Transient Queueing (pcu hr)	Over Capacity Queueing (pcu hr)	Total Trips on Network (pcu)
AM peak hour	46,903.8	1,519.7	393.1	293.6	69,577.5
PM peak hour	45,163.3	1,470.2	392.9	258.4	67,876.1

Note: The data contained in the table are presented as passenger car units (pcus) as per the industry standard methodology. The data contained in the table refer to the simulated time periods only

The results show that AM peak hour generates higher total distance travelled, total trips on the network, total travel time, transient queueing and over-capacity queueing compared to the PM peak hour.

Table 4-2 below summarises the overall network performance statistics as generated by the model for the Reference Case B scenario for the AM and PM peak hour in year 2022.

Table 4-2 – Network Performance – Reference Case B AM & PM Peak Hour – 2022

Scenario	Total Distance Travelled (pcu km)	Total Travel Time (pcu hr)	Transient Queueing (pcu hr)	Over Capacity Queueing (pcu hr)	Total Trips on Network (pcu)
AM peak hour	41,505.4	1,077.3	239.6	130.8	68,982.1
PM peak hour	41,170.7	1,078.2	246.1	113.2	67,366.6

Note: The data contained in the table are presented as passenger car units (pcus) as per the industry standard methodology. The data contained in the table refer to the simulated time periods only

The results show that AM peak hour generates higher total distance travelled, total trips on the network and over-capacity queueing compared to the PM peak hour, while the PM peak hour generates slightly higher total travel time and transient queueing compared to the AM peak hour.

4.2 Changes in Traffic Flows

Traffic flow diagrams from the SATURN traffic model are presented in Appendix D, showing traffic flows for the town centre for all the scenarios for both the AM and PM peaks.

4.3 Journey Times

Journey times for selected routes across Sleaford have been summarised for Reference Case A1 and B in the table below for the AM and PM peak hours.

The five routes are shown on Figure 2-1 in Section 2 above.

Table 4-3 – Journey Time – Ref. Cases A1 & B AM & PM Peak Hour (mm:ss) – 2022

Route		Dir	Journey Time Reference Case A1		Journey Time Reference Case B	
			AM peak hour	PM peak hour	AM peak hour	PM peak hour
1	Mareham Lane to Holdingham Roundabout	SE – N	22:49	20:22	18:37	14:47
	Holdingham Roundabout to Mareham Lane	N – SE	24:09	28:34	17:48	21:51
2	London Road/Gorse Lane to East Road/Pride Parkway	S – NE	22:16	17:48	18:50	13:49
	East Road/Pride Parkway to London Road/Gorse Lane	NE – S	18:26	21:05	13:28	17:25
3	A15/Grantham Road to A17/Boston Road	W – E	23:15	19:47	19:17	14:42
	A17/Boston Road to A15/Grantham Road	E – W	13:46	17:05	11:16	15:47
4	A15/Grantham Road to East Road/Pride Parkway (Via King Edward Street)	W – NE	21:20	18:13	17:38	13:39
	East Road/Pride Parkway to A15/Grantham Road	NE – W	15:24	20:13	12:20	16:24
5	A15/London Road to A17/East Road (Via A15 and A17)	SW – NE	07:18	07:14	08:29	06:36
	A17/East Road to A15/London Road (Via A17 and A15)	NE – SW	05:36	11:49	05:00	07:38

4.4 Comparison of Reference Cases A1 and A0

The following tables present a comparison of Reference Cases A1 and A0 which represent the situations with future forecast level crossing downtimes (Reference Case A1) and with current level crossing downtimes (Reference Case A0). The table below shows that the forecast increased downtimes will increase travel time by 7.7% in the AM peak hour and 5.5% in the PM peak hour while over-capacity queuing will almost double with the forecast increases in downtimes.

Table 4-4 – Comparison of Reference Cases A1 and A0 – Network Statistics – 2022

Peak Hour	Scenario	Total Distance Travelled (pcu km)	Total Travel Time (pcu hr)	Transient Queueing (pcu hr)	Over Capacity Queueing (pcu hr)	Total Trips on Network (pcu)
AM Peak	A1 – Future Downtimes	46,903.8	1,519.5	393.1	293.6	69,577.5
	A0 – Current Downtimes	47,962.3	1,411.4	405.3	160.8	69,577.5
PM Peak	A1 – Future Downtimes	45,163.3	1,470.2	392.9	258.4	67,876.1
	A0 – Current Downtimes	46,115.7	1,393.6	429.0	132.5	67,876.1

The following table shows the change in travel times between Reference Cases A1 and A0 for the AM and PM peak hours. The data shows that there would be significant journey time increases as a result of the increases in level crossing downtimes amounting to an average 30% increase in the AM peak hour for the routes analysed and 33% in the PM peak hour.

Table 4-5 – Comparison of Reference Cases A1 and A0 – Journey Times – 2022

Description		Direction	AM Peak hour		PM Peak hour	
			A0 Current Downtimes	A1 Future Downtimes	A0 Current Downtimes	A1 Future Downtimes
1	Mareham Lane to Holdingham Roundabout	SE – N	15:49	22:49	14:18	20:22
	Holdingham Roundabout to Mareham Lane	N – SE	19:36	24:09	23:33	28:34
2	London Road/Gorse Lane to East Road/Pride Parkway	S – NE	15:44	22:16	12:42	17:48
	East Road/Pride Parkway to London Road/Gorse Lane	NE – S	14:07	18:26	16:25	21:05
3	A15/Grantham Road to A17/Boston Road	W – E	16:29	23:15	14:39	19:47
	A17/Boston Road to A15/Grantham Road	E – W	09:35	13:46	11:11	17:05
4	A15/Grantham Road to East Road/Pride Parkway (Via King Edward Street)	W – NE	14:52	21:25	12:37	18:13
	East Road/Pride Parkway to A15/Grantham Road	NE – W	11:45	15:24	15:27	20:13
5	A15/London Road to A17/East Road (Via A15 and A17)	SW – NE	08:10	07:18	06:50	07:14
	A17/East Road to A15/London Road (Via A17 and A15)	NE – SW	05:04	05:36	09:10	11:49
Average Percentage Change			30%		33%	

5 Highway Impacts: Part B – Do-Something Options

This section summarises the outputs from the modelling of Options 1 to 6 and Options 9a and 9b.

The statistics in this section compare the modelling results for each option to Reference Case A1 and figures highlighted in green denote an improvement in performance and red a worsening of performance. The statistics for Reference Case A0 (with existing level crossing downtimes) are also provided for comparison.

5.1 Overall Traffic Model Network Performance Statistics

Table 5-1 below summarises the overall network performance statistics as generated by the model for each option for the AM peak hour in year 2022. Of primary interest in this table are the figures for over-capacity queuing which indicate the amount of time spent by traffic queuing at junctions operating above their capacity.

Table 5-1 – Network Performance – AM Peak Hour – 2022

Scenario	Total Distance Travelled (pcu km)	Total Travel Time (pcu hr)	Transient Queueing (pcu hr)	Over Capacity Queueing (pcu hr)	% Change in Over Capacity Queueing
Reference Case A0	47,962.3	1,411.4	405.3	160.8	-
Reference Case A1	46,903.8	1,519.5	393.1	293.6	-
Option 1	47,710.4	1,535.2	434.5	255.7	-13%
Option 2	47,298.9	1,516.5	415.4	274.2	-7%
Option 3	46,559.7	1,533.9	410.4	297.9	1%
Option 4a	47,114.9	1,542.8	390.8	328.2	12%
Option 4b	46,581.3	1528.5	407.5	302.5	3%
Option 5	46,448.1	1,531.6	409.8	298.1	2%
Option 6	51,234.6	1,402.7	374.6	176.6	-40%
Option 9a	48,531.9	1,644.4	450.3	342.3	17%
Option 9b	49,016.2	1,789	487.4	435.3	48%

Note: The data contained in the table are presented as passenger car units (pcus) as per the industry standard methodology. The data contained in the table refer to the simulated time periods only
Note: Green shading denotes an improvement compared to Reference Case A1 and Red a worsening of performance

The table above shows that Option 6, which includes the introduction of a Sleaford Southern Distributor Road (SSDR) has the most significant impact on reducing over-capacity queuing, with a reduction of 40% in the AM peak hour. Options 1 and 2, with the SESRR Phase 1 and SESRR Phases 1 and 2 respectively, and both with the South Gate level crossing closed, are the only other options to generate reduced

over-capacity queueing, with reductions of 13% and 7% in the AM peak hour respectively.

Options 3 through to 5 are variations on providing access to the Tesco site, as well as providing access to the Maltings site via Mareham Lane. None of these options include a bridge across the railway line and the South Gate level crossing remains open. All four of these options show a worsening performance of the network with 4a having the worst network impacts. 4a and 4b include the provision of SESRR Phase 2 and the two way operation of East Gate between South Gate and Carre Street. 4b is an improvement on 4a due to the two-way operation of Boston Road between South Gate and Carre Street.

Options 9a and 9b, including the pedestrianisation of South Gate, between Boston Road and Water Gate, and Boston Road and East Gate respectively, generate the most significant worsening of network performance.

Table 5-2 – Network Performance – PM Peak Hour – 2022

Scenario	Total Distance Travelled (pcu km)	Total Travel Time (pcu hr)	Transient Queueing (pcu hr)	Over Capacity Queueing (pcu hr)	% Change in Over Capacity Queueing
2022 Reference Case A0	46,115.7	1,393.6	429.0	132.5	-
2022 Reference Case A1	45,163.3	1,470.2	392.9	258.4	-
Option 1	46,566.9	1,487.3	429.4	212.3	-18%
Option 2	46,437.8	1,486	458.9	185.2	-28%
Option 3	45,192.3	1,498.6	405.3	274.6	6%
Option 4a	45,194.7	1,602.4	443.2	344.7	33%
Option 4b	46,581.3	1,528.5	407.5	302.5	17%
Option 5	44,960.9	1,492.3	413.5	263.8	2%
Option 6	50,666.6	1,316.8	362.8	99.6	-61%
Option 9a	48,531.9	1,644.4	450.3	342.3	32%
Option 9b	49,016.2	1,789.0	487.4	435.3	68%

Note: The data contained in the table are presented as passenger car units (pcus) as per the industry standard methodology. The data contained in the table refer to the simulated time periods only
Note: Green shading denotes an improvement compared to Reference Case A1 and Red a worsening of performance.

The modelling results for the PM peak hour show significantly greater impacts than the AM peak. Option 6, the SSDR, again shows the greatest benefits with over-capacity queueing reducing by 61%. Options 1 and 2 also show greater benefits than in the AM peak hour with reductions in over-capacity queueing of 18% and 28% respectively.

The most significant worsening of performance is shown by Options 9a, 9b and 4a. Option 9b increases over-capacity queueing by 68% with Option 9a increasing it by 32%. Option 4a also increases over-capacity queueing by over 30% and while 4b, adding the two-way operation of Boston Road to Option 4a, would reduce this level of queuing, it would still lead to a 17% increase.

Similarly to the AM peak hour, Options 3 and 5 have significantly lower increases in over-capacity queueing. However, this needs to be considered in the context of already increased queuing as a result of the significantly longer level crossing down times (i.e. the difference between Reference Cases A0 and A1).

5.2 Changes in Traffic Flows

Traffic flow diagrams from the traffic model are presented in Appendix D, showing traffic flows for the town centre for all the scenarios for both the AM and PM peaks.

5.3 Journey Times

Journey times for selected routes across Sleaford have been compared between the Reference Case A1 and Do-Something Scenarios. The five routes are shown on Figure 2-1 in Section 2 above.

For the majority of the journeys made on these routes, drivers will have a choice of routes with the A15/A17 bypass being a realistic alternative in many cases.
A number of the routes show considerable increases in journey times between the options and the Reference Cases, resulting from greater journey distance, greater delays at some existing junctions and the need to pass through a number of new junctions, each of which will individually cause some delay.

The following table compares the journey times for Reference Case A1 with the various option scenarios assessed as part of the LCC assessment options, for the AM peak. The journey times for Reference Case A0 are also included for information. Times highlighted in light green show improvements compared to Reference Case A1 and those highlighted in red show worsening of performance compared to Reference Case A1. Times highlighted in dark green are those that show improvements compared to Reference Case A0 (with existing level crossing downtimes).

With the exception of Journey 5, the routes used in this analysis pass through the town centre, either via South Gate or King Edward Street level crossings. Option 9b will result in changes to the highway network that prevent routes passing through the town centre in the northbound direction across the level crossings; these routes have therefore been discounted from the analysis for Option 9b.

The results of journey analysis show that in the AM peak hour, Option 6, the introduction of the SSDR, improves journey times substantially through the town centre. Those journey times highlighted in dark green represent routes that are quicker than both Reference Case A1 and A0, A0 being the scenario with existing level crossing downtimes. Overall, on average, Option 6 reduces the journey times

on analysed routes by nearly 13% in the AM peak hour. Options 1 and 2 also provide benefits to journey times with average reductions in journey times across routes analysed of 6.24% and 8.6% respectively.

Table 5-3 – Journey Time – AM Peak (mm:ss) – 2022

Route		Dir	Reference Case		Options								
			A0	A1	1	2	3	4a	4b	5	6	9a	9b
1	Mareham Lane to Holdingham Roundabout	SE – N	15:49	22:49	16:35	16:31	23:25	21:38	22:01	23:34	18:24	32:03	N/A
	Holdingham Roundabout to Mareham Lane	N – SE	19:36	24:09	22:13	22:53	22:59	23:05	23:21	23:01	**19:32**	31:20	31:59
2	London Road/Gorse Lane to East Road/Pride Parkway	S – NE	15:44	22:16	21:22	20:05	22:41	25:11	23:51	22:49	18:05	29:20	N/A
	East Road/Pride Parkway to London Road/Gorse Lane	NE – S	14:07	18:26	18:40	17:00	17:34	17:46	18:04	17:36	**13:51**	20:05	20:10
3	A15/Grantham Road to A17/Boston Road	W – E	16:29	23:15	17:19	18:48	23:59	26:46	22:41	24:05	19:34	29:55	N/A
	A17/Boston Road to A15/Grantham Road	E – W	09:35	13:46	13:32	13:18	15:02	14:04	14:22	15:03	12:52	16:10	17:06
4	A15/Grantham Road to East Road/Pride Parkway (Via King Edward Street)	W – NE	14:52	21:25	20:52	20:23	21:53	25:06	22:59	21:57	17:33	28:38	N/A
	East Road/Pride Parkway to A15/Grantham Road	NE – W	11:45	15:24	15:40	13:52	14:25	14:29	14:50	14:20	**11:32**	17:11	18:09
5	A15/London Road to A17/East Road (Via A15 and A17)	SW – NE	08:10	07:18	07:28	07:45	07:52	07:33	07:19	07:55	08:38	08:02	08:38
	A17/East Road to A15/London Road (Via A17 and A15)	NE – SW	05:04	05:36	05:41	05:21	05:40	05:11	05:22	05:41	05:41	06:14	05:43
Average Percentage Change					-6.24%	-8.60%	1.21%	2.44%	0.23%	1.49%	-12.79%	25.24%	N/A

Note: Green shading denotes an improvement compared to Reference Case A1 and Red a worsening of performance

Options 9a and 9b have the worst performance in terms of journey times on the five routes analysed with 9b being the most poorly performing on the routes that remain possible. Option 9a generates an average increase in journey times on the analysed routes of 25.24%.

Options 3 to 5 have a less significant impact on journey times with average increases on the routes analysed of between 0.23% and 2.44%. Option 4b, which included the addition of the two-way operation of Boston Road between South Gate and Carre Street to Option 4a, shows better performance than 4a.

The following table presents journey time information for the PM peak hour and shows that the changes are more significant than in the AM peak hour. Again Option 6 (the SSDR) shows significant reductions in journey times and a number of routes will be quicker than Reference Case A0 as well as A1. The average change in journey times on the routes analysed was a reduction of over 21% for Option 6.

Options 1 and 2, the introduction of the SESRR Phase 1 and SESRR Phases 1 and 2 respectively, and both with the South Gate level crossing closed, resulted in significant reductions in journey times on the routes analysed and greater reductions than in the AM peak hour. Options 1 and 2 generate average reductions in journey times of 11.6% and 14.4% respectively in the PM peak hour. Option 2, similarly to Option 6, reduces journey times on some routes to below those of Reference Case A0 which uses the current level crossing downtimes.

Options 9a and 9b again generate the worst journey times across the five routes with Option 9a increasing journey times by nearly 52%. On the routes that remain open, Option 9b has longer journey times than 9a.

Options 3 to 5, as is the case for the other options, have poorer performance in the PM peak hour. Option 5 increases journey times by an average of 2%, Option 3 by 3% and Option 4a by nearly 16%. By comparison, Option 4b, which adds the two-way operation of Boston Road, between South Gate and Carre Street to Option 4a, increases journey times by 5.4%

Table 5-4 – Journey Time – PM Peak (mm:ss) – 2022

Route		Dir	Reference Case		Options								
			A0	A1	1	2	3	4a	4b	5	6	9a	9b
1	Mareham Lane to Holdingham Roundabout	SE – N	14:18	20:22	14:54	17:38	20:03	22:01	21:22	20:16	15:51	32:00	N/A
	Holdingham Roundabout to Mareham Lane	N – SE	23:33	28:34	**23:03**	**23:07**	28:37	27:39	27:39	28:38	**22:28**	42:34	42:53
2	London Road/Gorse Lane to East Road/Pride Parkway	S – NE	12:42	17:48	18:08	19:17	17:42	22:11	20:08	17:52	13:56	26:42	N/A
	East Road/Pride Parkway to London Road/Gorse Lane	NE – S	16:25	21:05	17:52	**14:23**	20:51	20:16	20:28	20:54	**15:37**	30:29	30:37
3	A15/Grantham Road to A17/Boston Road	W – E	14:39	19:47	14:45	18:24	20:26	29:40	19:36	20:26	15:55	28:22	N/A
	A17/Boston Road to A15/Grantham Road	E – W	11:11	17:05	12:46	12:35	18:23	19:08	19:16	18:26	13:29	29:27	29:47
4	A15/Grantham Road to East Road/Pride Parkway (Via King Edward Street)	W – NE	12:37	18:13	18:12	20:32	18:04	32:53	25:52	18:14	14:11	26:06	N/A
	East Road/Pride Parkway to A15/Grantham Road	NE – W	15:27	20:13	17:10	**13:37**	19:59	19:31	19:39	19:57	**14:38**	29:58	30:23
5	A15/London Road to A17/East Road (Via A15 and A17)	SW – NE	06:50	07:14	07:15	07:19	07:14	07:42	07:27	07:14	06:59	07:41	09:38
	A17/East Road to A15/London Road (Via A17 and A15)	NE – SW	09:10	11:49	12:55	**07:37**	14:42	10:18	10:32	13:16	**08:17**	23:13	22:11
Average Percentage Change					-11.59%	-14.36%	3.03%	15.83%	5.40%	2.15%	-21.29%	51.80%	N/A

Note: Green shading denotes an improvement compared to Reference Case A1 and Red a worsening of performance

6 Highway Impacts: Part C – Option 7

This section summarises the outputs from the modelling of Option 7, which is compared to Reference Case B. As explained previously, Reference Case A1 is used for comparison for all options with the exception of Option 7. Option 7 is assessing the impact of delivering the Maltings development, alongside a significantly reduced level of committed development, therefore, a second reference case, 'B', has been developed purely for this option.

6.1 Overall Traffic Model Network Performance Statistics

Table 6-1 below summarises the overall network performance statistics as generated by the model for Option 7 and Reference Case B for the AM peak hour in year 2022.

Table 6-1 – Network Performance – Option 7 AM Peak Hour – 2022

Scenario	Total Distance Travelled (pcu km)	Total Travel Time (pcu hr)	Transient Queueing (pcu hr)	Over Capacity Queueing (pcu hr)	% Change in Over Capacity Queueing
Reference Case B	41,505.40	1,077.30	239.60	130.80	
Option 7	42,374.00	1,134.10	260.60	144.80	11%

Notes: The data contained in the table are presented as passenger car units (pcus) as per the industry standard methodology. The data contained in the table refer to the simulated time periods only
Note: Green shading denotes an improvement compared to Reference Case B and Red a worsening of performance

The results show that, compared to Reference Case B, for the AM peak hour, Option 7 generates higher total travel distance, total travel time, transient queueing, over-capacity queueing and total trips on the network, indicating that the vehicles have to travel further to reach their destinations due to congestion at some junctions on the network. Over Reference Case B, Option 7 shows an increase of around 2% in the total distance travelled by vehicles and increase of 0.04% in the total trips on the network. Option 7 also shows increase of around 5.27% in total travel time while the transient queuing and over-capacity queuing show an increase of around 8.76% and 10.7% respectively compared to Reference Case B.

Table 6-2 below summarises the overall network performance statistics as generated by the model for Option 7 and Reference Case B for the PM peak hour in year 2022.

Table 6-2 – Network Performance – Options 7 PM Peak Hour – 2022

Scenario	Total Distance Travelled (pcu km)	Total Travel Time (pcu hr)	Transient Queueing (pcu hr)	Over Capacity Queueing (pcu hr)	% Change in Over Capacity Queueing
Reference Case B	41,170.70	1,078.20	246.10	113.20	
Option 7	42,094.50	1,141.20	278.90	120.70	7%

Note: The data contained in the table are presented as passenger car units (pcus) as per the industry standard methodology. The data contained in the table refer to the simulated time periods only
Note: Green shading denotes an improvement compared to Reference Case B and Red a worsening of performance

The results show that, compared to Reference Case B, for the PM peak hour, Option 7 generates higher total travel distance, total travel time, transient queueing, over-capacity queueing and total trips on the network, indicating that the vehicles have to travel further to reach their destinations due to congestion at some junctions on the network. Over Reference Case B, Option 7 shows an increase of around 2% in the total distance travelled by vehicles and increase of 0.04% in the total trips on the network. Option 7 also shows increase of around 5.84% in total travel time while the transient queuing and over-capacity queuing show an increase of around 13.3% and 6.63% respectively compared to Reference case B.

6.2 Changes in Traffic Flows

Traffic flow diagrams from the SATURN traffic model are presented in Appendix C, showing traffic flows for the town centre for all the scenarios for both the AM and PM peaks for Options 7.

6.3 Journey Times

Journey times for selected routes across Sleaford have been compared between the respective Reference Case and Do-Something Scenarios. The five routes are shown on Figure 2-1 in Section 2 above.

The following table summarises the journey times for the Option 7, for the AM peak.

Table 6-3 – Journey Time – AM Peak (mm:ss) – Option 7 – 2022

Route		Dir	Journey Time	
			Ref Case B	Option 7
1	Mareham Lane to Holdingham Roundabout	SE – N	18:37	20:01
	Holdingham Roundabout to Mareham Lane	N – SE	17:48	20:23
2	London Road/Gorse Lane to East Road/Pride Parkway	S – NE	18:50	19:12
	East Road/Pride Parkway to London Road/Gorse Lane	NE – S	13:28	14:49
3	A15/Grantham Road to A17/Boston Road	W – E	19:17	19:40
	A17/Boston Road to A15/Grantham Road	E – W	11:16	12:24
4	A15/Grantham Road to East Road/Pride Parkway (Via King Edward Street)	W – NE	17:38	18:03
	East Road/Pride Parkway to A15/Grantham Road	NE – W	12:20	13:36
5	A15/London Road to A17/East Road (Via A15 and A17)	SW – NE	08:29	08:42

	A17/East Road to A15/London Road (Via A17 and A15)	NE – SW	05:00	05:05
Average Percentage Change			-	6.29%

Note: Green shading denotes an improvement compared to Reference Case B and Red a worsening of performance

In the AM peak hour, compared to the Reference Case B, Option 7 shows an increase in journey time across all the routes. The increase in journey times for all other routes is of around one to two minutes, except for Route 2 northbound, Route 5 eastbound and Route 5 westbound where the decrease is of 22 seconds, 13 seconds and 5 seconds respectively implying that is an increase in congestion which causes an increase in journey times along these routes.

The above table shows that on average, across the routes assessed, journey times were 6.29% slower in the AM peak for Option 7.

The following table compares the journey times for Option 7, for the PM peak.

Table 6-4 – Journey Time – PM Peak (mm:ss) – Option 7 – 2022

Route*		Dir	Journey Time	
			Ref Case B	Option 7
1	Mareham Lane to Holdingham Roundabout	SE – N	14:47	16:39
	Holdingham Roundabout to Mareham Lane	N – SE	21:51	23:41
2	London Road/Gorse Lane to East Road /Pride Parkway	S – NE	13:49	14:40
	East Road/Pride Parkway to London Road /Gorse Lane	NE – S	17:25	17:43
3	A15/Grantham Road to A17/Boston Road	W – E	14:42	15:33
	A17/Boston Road to A15/Grantham Road	E – W	15:47	16:08
4	A15/Grantham Road to East Road/Pride Parkway (Via King Edward Street)	W – NE	13:39	14:34
	East Road/Pride Parkway to A15/Grantham Road	NE – W	16:24	16:46
5	A15/London Road to A17/East Road (Via A15 and A17)	SW – NE	06:36	06:43
	A17/East Road to A15/London Road (Via A17 and A15)	NE – SW	07:38	07:41
Average Percentage Change			-	4.83%

Note: Green shading denotes an improvement compared to Reference Case B and Red a worsening of performance

In the PM peak hour, compared to the Reference Case B, Option 7 shows an increase in journey time across all the routes. The increase in journey times for all

other routes is of around 7 seconds to two minutes implying that is an increase in congestion which causes an increase in journey times along these routes.

The above table shows that on average, across the routes assessed, journey times were 4.83% slower in the AM peak for Option 7.

7 Summary and Conclusions

7.1 Summary

Mouchel Consulting, working as part of Lincolnshire County Council Highways Alliance, has been appointed by the County Council (LCC) and North Kesteven District Council (NKDC) to undertake traffic modelling using Sleaford Traffic Model to help gain an understanding of various access strategies for the Sleaford Regeneration Area following the withdrawal of proposals for a new Tesco development.

The assessment considers a forecast year of 2022 for the AM and PM peak hours. As part of the assessments in addition to three Reference Cases, 11 options for altering the highway network have been assessed, including 'a' and 'b' versions of two options. All options were compared with Reference Case A1 with the exception of Option 7 which was compared against Reference Case B only.

In the assessments, the development trips for the Tesco site have been generated using the development quantum for the potential alternative proposals for the site. It should be noted that Tesco continues to own the site and ultimately, the development proposals will be promoted by them.

The results for the majority of options are summarised in Part A below, while the results for Option 7 are summarised in Part B.

7.2 Part A – Summary of Results

The SATURN model for Sleaford predicts that the total travel distance, total travel time, transient and over-capacity queuing will vary depending on the nature of the interventions for each scenario.

Tables 7-1 and 7-2 below shows the change in various network parameters between each scenario and the Reference Case A1 for the AM and PM peak hours. Of particular interest are the figures for over-capacity queueing.

Table 7-1 – Network Performance Percentage Change – AM Peak – 2022

Scenario	Total Distance Travelled (pcu km)	Total Travel Time (pcu hr)	Transient Queueing (pcu hr)	Over Capacity Queueing (pcu hr)
Option 1	1.72%	1.03%	10.53%	-12.91%
Option 2	0.84%	-0.20%	5.67%	-6.61%
Option 3	-0.73%	0.95%	4.40%	1.46%
Option 4a	0.45%	1.53%	-0.59%	11.78%
Option 4b	-0.69%	0.59%	3.66%	3.03%
Option 5	-0.97%	0.80%	4.25%	1.53%
Option 6	9.23%	-7.69%	-4.71%	-39.85%
Option 9a	3.47%	8.22%	14.55%	16.59%
Option 9b	4.50%	17.74%	23.99%	48.26%

Table 7-2 – Network Performance Percentage Change – PM Peak – 2022

Scenario	Total Distance Travelled (pcu km)	Total Travel Time (pcu hr)	Transient Queueing (pcu hr)	Over Capacity Queueing (pcu hr)
Option 1	3.11%	1.16%	9.29%	-17.84%
Option 2	2.82%	1.07%	16.80%	-28.33%
Option 3	0.06%	1.93%	3.16%	6.27%
Option 4a	0.07%	8.99%	12.80%	33.40%
Option 4b	3.14%	3.97%	3.72%	17.07%
Option 5	-0.45%	1.50%	5.24%	2.09%
Option 6	12.19%	-10.43%	-7.64%	-61.47%
Option 9a	7.46%	11.85%	14.61%	32.47%
Option 9b	8.53%	21.68%	24.05%	68.46%

Option 6, the implementation of the Sleaford Southern Distributor Road, has the most significant positive impacts on the highway network with considerable reductions in travel time and over-capacity queueing.

It can be observed from the above tables that for the AM and PM peak hour, Options 1 and 2 where the South Gate crossing is closed and SESRR is operational, the total distance travelled and total travel time increases slightly but there is also a considerable reduction in the over-capacity queuing, the main indicator of interest. This indicates that even though the traffic has to travel further, there is less congestion in the network compared to the Reference Case. Option 1 and 2 also show decreases in journey time along most of the journey time routes.

In Options 3, 4 and 5 where the railway crossing at South Gate is operational and there is no SESRR link over the railway, there is slight reduction in total distance travelled on the network, but an increase in total travel time and considerable increase in over-capacity queuing. The journey times along the analysed routes mostly show an increase for Option 3, 4 and 5.

Options 9a and 9b show very significant deteriorations of network performance resulting from the closure of South Gate to traffic between Boston Road and Water Gate, and Boston Road and East Gate respectively. The implementation of 9b would mean that it would not be possible to travel northbound through the town centre, resulting in all traffic having to use the A15 and A17 bypasses.

7.3 Part B – Summary of results for Option 7

Tables 7-3 and 7-4 below show the change in various network parameters between Option 7 and Reference Case B for the AM and PM peak hours.

Table 7-3 – Network Performance Percentage Change – AM Peak Option 7 – 2022

Scenario	Total Distance Travelled (pcu km)	Total Travel Time (pcu hr)	Transient Queueing (pcu hr)	Over Capacity Queueing (pcu hr)
Option 7	2.09%	5.27%	8.76%	10.70%

Table 7-4 – Network Performance Percentage Change – PM Peak Option 7 – 2022

Scenario	Total Distance Travelled (pcu km)	Total Travel Time (pcu hr)	Transient Queueing (pcu hr)	Over Capacity Queueing (pcu hr)
Option 7	2.24%	5.84%	13.33%	6.63%

In the AM peak hour the total travel distance will increase in Option 7 by 2% over the Reference Case B, while total travel time and transient queuing will increase by around 5.27% and 8.76% respectively. The over-capacity queuing will also increase by around 10.70% over Reference Case B.

In the PM peak hour the total travel distance will increase in Option 7 by 2.24% over the Reference Case B, while total travel time and transient queueing will increase by 5.84% and 13.33% respectively. The over-capacity queuing will also increase by around 6.63% over Reference Case B.

In Option 7, the journey times along all routes show an increase in journey times by around 7 seconds to 2 minutes in the AM and PM peak hours over Reference case B.

7.4 Costings

The following table provides outline cost estimates for each of the options.

Table 7-5 – Outline Cost Estimates

Option	Cost Range
1	£5m to £20m
2	Over £20m
3	Up to £1m
4a	£1m to £5m
4b	£1m to £5m
5	£1m to £5m
6	Over £20m
7	£1m to £5m
8	Over £20m
9a	Up to £1m
9b	Up to £1m

7.5 Conclusion

The traffic analysis undertaken assesses not only the impact of the increased length of railway crossing closures (assessed as a worst case) but the combined impact of other network interventions including SESRR and the bringing forward of a range of land use developments.

The results of the analysis should therefore be taken as providing an insight, in traffic terms, into the combined potential impacts of all of these highway network changes and developments and not of any individual element alone. Caution should therefore be used in attributing impacts to any individual element of the various scenarios.

Based on the network and journey time statistics, the following Tables 7-5 and 7-6 summarise the operation of the various combinations of options assessed for the AM and PM peak hours respectively compared to the Reference Case. For the purposes of this comparison, changes of between -5.00% and 5.00% have been categorised as slight, changes of between -5.00% and -10.00% and between 5.00% and 10.00% have been categorised as moderate and greater than either plus or minus 10.00% have been categorised as large. The overall result of the comparison has been assessed based primarily on over-capacity queuing and journey time routes assessment with the other indicators given less prominence.

The rating system has been developed for this report and can be used a guide to the level of impact of that each option will have and is a broad aid to understanding and decision-making. The ratings are not related to the 'severity' test set out in the National Planning Policy Framework.

Table 7-6 – Network Statistic Comparison – AM Peak – 2022

Option	Total Travel distance	Total Travel times	Transient Queuing	Over Capacity Queuing	Journey Time	Overall
Option 1	Slight Adverse	Slight Adverse	**Large Adverse**	**Large Beneficial**	Moderate Beneficial	Moderate Beneficial
Option 2	Slight Adverse	Slight Beneficial	Moderate Adverse	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial
Option 3	Slight Beneficial	Slight Adverse	Slight Adverse	Slight Adverse	Slight Adverse	Slight Adverse
Option 4a	Slight Adverse	Slight Adverse	Slight Beneficial	**Large Adverse**	Slight Adverse	Moderate Adverse
Option 4b	Slight Adverse	Slight Adverse	Slight Adverse	Slight Adverse	Slight Adverse	Slight Adverse
Option 5	Slight Beneficial	Slight Adverse	Slight Adverse	Slight Adverse	Slight Adverse	Slight Adverse
Option 6	Moderate Adverse	Moderate Beneficial	Slight Beneficial	**Large Beneficial**	**Large Beneficial**	**Large Beneficial**
Option 9a	Slight Adverse	Moderate Adverse	**Large Adverse**	**Large Adverse**	**Large Adverse**	**Large Adverse**

Option 9b	Slight Adverse	**Large Adverse**	**Large Adverse**	**Large Adverse**	**Large Adverse**	**Large Adverse**

Table 7-5 above, shows that for the AM peak hour the closure of South Gate level crossing and opening of SESRR has a slight to moderate positive impact on the operation of the network. Whereas with the South Gate crossing operational along with the other network interventions, the operation of the networks in Options 3, 4 and 5 show slight to large adverse impacts compared to the Reference Case.

Table 7-7 – Network Statistic Comparison – PM Peak – 2022

Option	Total Travel distance	Total Travel times	Transient Queuing	Over Capacity Queuing	Journey Time	Overall
Option 1	Slight Adverse	Slight Adverse	Moderate Adverse	**Large Beneficial**	**Large Beneficial**	**Large Beneficial**
Option 2	Slight Adverse	Slight Adverse	Large Adverse	**Large Beneficial**	**Large Beneficial**	**Large Beneficial**
Option 3	Slight Adverse	Slight Adverse	Slight Adverse	Moderate Adverse	Slight Adverse	Slight Adverse
Option 4a	Slight Adverse	Moderate Adverse	**Large Adverse**	**Large Adverse**	**Large Adverse**	**Large Adverse**
Option 4b	Slight Adverse	Slight Adverse	Slight Adverse	**Large Adverse**	Moderate Adverse	Moderate Adverse
Option 5	Slight Beneficial	Slight Adverse	Moderate Adverse	Slight Adverse	Slight Adverse	Slight Adverse
Option 6	**Large Adverse**	**Large Beneficial**	Moderate Beneficial	**Large Beneficial**	**Large Beneficial**	**Large Beneficial**
Option 9a	Moderate Adverse	**Large Adverse**	**Large Adverse**	**Large Adverse**	**Large Adverse**	**Large Adverse**
Option 9b	Moderate Adverse	**Large Adverse**	**Large Adverse**	**Large Adverse**	**Large Adverse**	**Large Adverse**

Table 7-6 above, shows that for the PM peak hour the closure of South Gate railway crossing and opening of SESRR primarily has a moderate positive impact on the operation of the network. Whereas with the South Gate crossing operational along with the other network interventions, the operation of the networks in Options 3, 4 and 5 show moderate to large adverse impacts compared to the Reference Case A1.

Based on the network statistics, the following Tables 7-7 and 7-8 summarise the operation Option 7 in the AM and PM peak hours compared to the Reference Case B and A respectively.

Table 7-8 – Network Statistic Comparison – AM Peak Option 7 – 2022

Option	Total Travel distance	Total Travel times	Transient Queuing	Over Capacity Queuing	Journey Time	Overall
Option 7	Slight Adverse	Moderate Adverse	Moderate Adverse	**Large Adverse**	Moderate Adverse	Moderate Adverse

Table 7-9 – Network Statistic Comparison – PM Peak Option 7 – 2022

Option	Total Travel distance	Total Travel times	Transient Queuing	Over Capacity Queuing	Journey Time	Overall
Option 7	Slight Adverse	Moderate Adverse	**Large Adverse**	Moderate Adverse	Slight Adverse	Moderate Adverse

Tables 7-7 and 7-8 above show that for the AM and PM peak hour Option 7 has a moderate adverse impact on the operation of the network.

Overall the result of the analysis shows the following conclusion for each option:

- Option 1 – Moderate/Large Beneficial
- Option 2 – Moderate/Large Beneficial
- Option 3 – Slight Adverse
- Option 4a – Moderate/Large Adverse
- Option 4b – Slight/Moderate Adverse
- Option 5 – Slight Adverse
- Option 6 – Large Beneficial
- Option 7 – Moderate Adverse
- Option 8 – Not Assessed
- Option 9a – Large Adverse
- Option 9b – Large Adverse

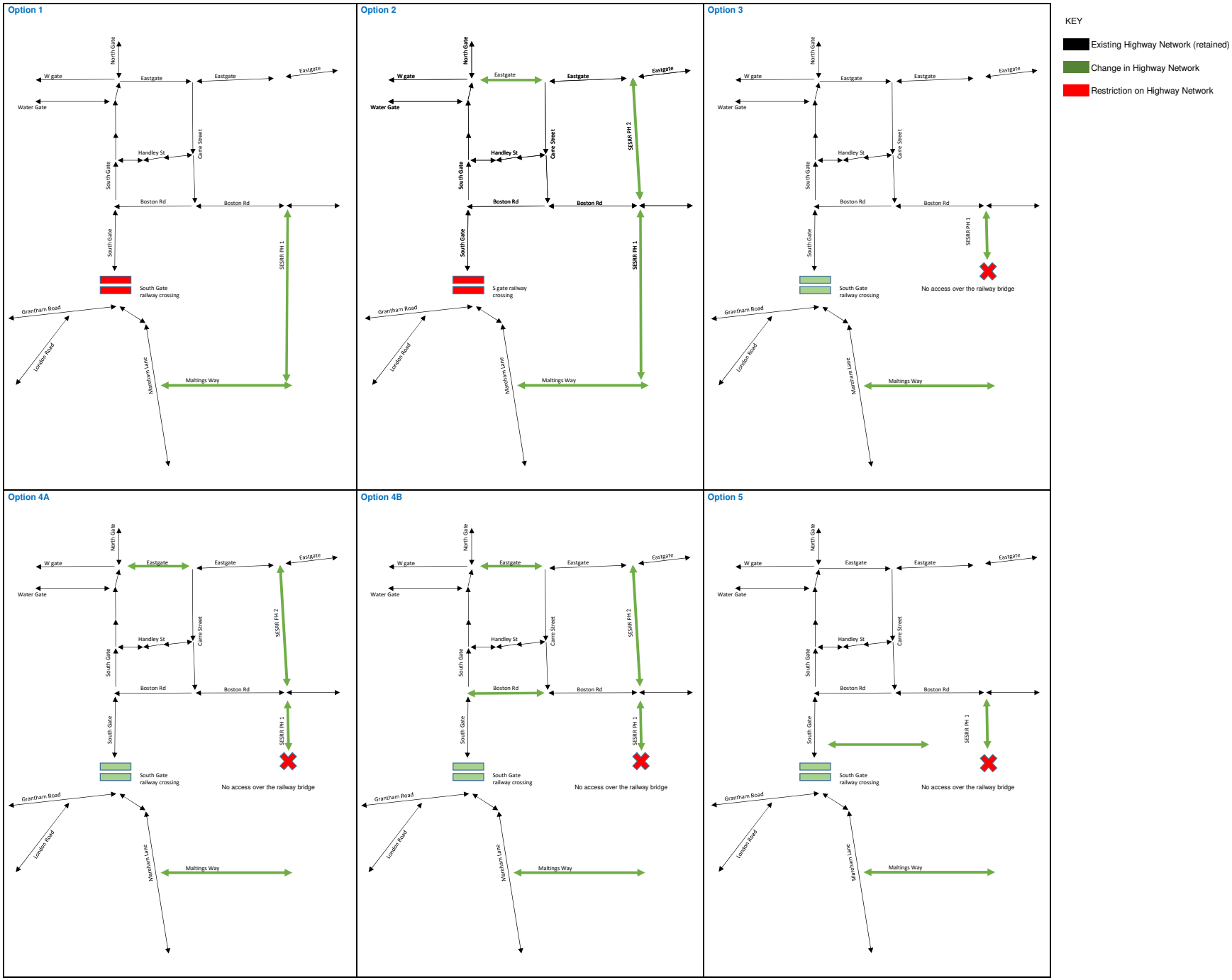
It should be noted that the Reference Cases A1 and B, against which the Do-Something options have been compared, represent scenarios with worse network operation and journey times than currently experienced. This is not only due to projected traffic growth (both background and from development) but also due to the increased level crossing closures. Section 4.4 shows that the projected increase in level crossing downtimes will have a significant effect on the highway network in and around Sleaford. Overall travel times will increase by between 5.5% and 7.7%, overcapacity queuing will double and, on average, journey times on specific routes analysed will increase by over 30%. Therefore, in reviewing the outputs from the above analysis, consideration should be given to the extent to which options generate improvements to that significantly worsened situation.

Overall, the modelling has shown that options that incorporate a new bridge over the railway line and closure of the South Gate level crossing, or the introduction of the

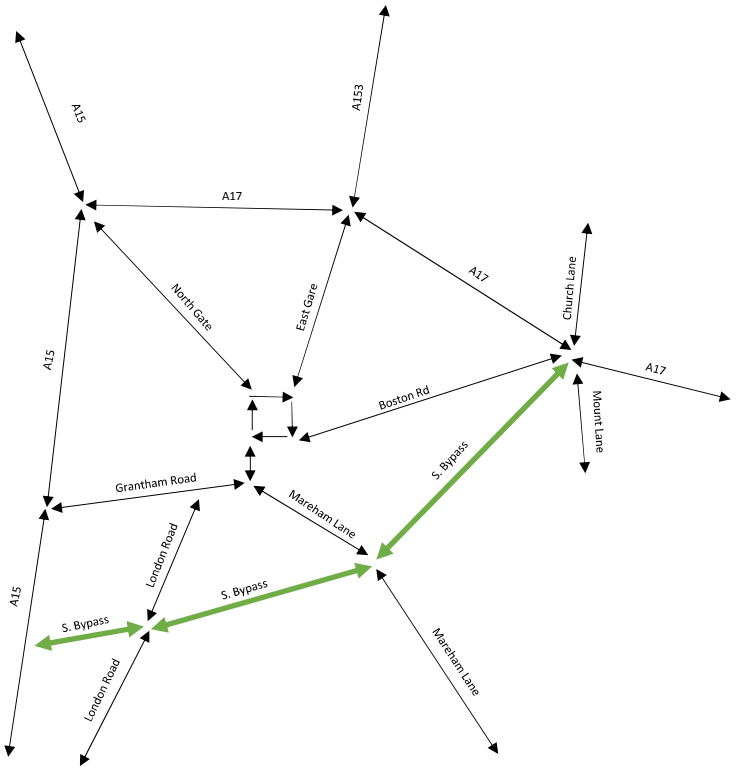
Sleaford Southern Distributor Road, would provide the greatest benefits and deliver some level of mitigation for the impact of the increased level crossing downtimes.

We have used our reasonable endeavours to provide information that is correct and accurate and have discussed above the reasonable conclusions that can be reached on the basis of the information available. Having issued the range of conclusions it is for the client to decide how to proceed with this project.

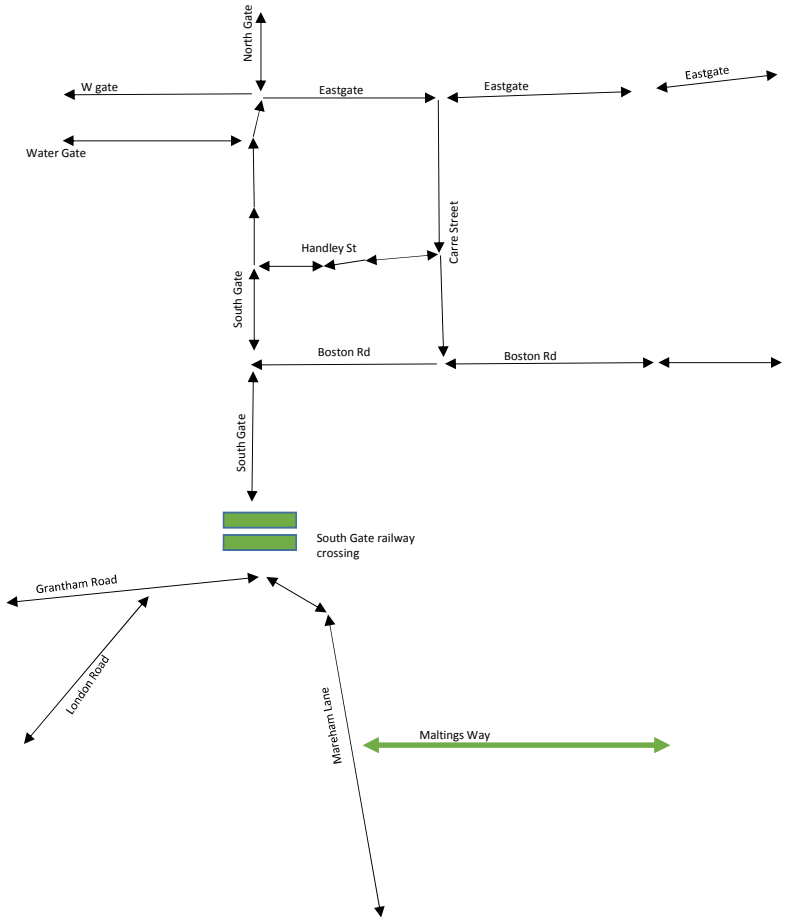
Appendix A – Summary of Network Changes


Option 1
North Gate
W gate
Eastgate
Eastgate
Eastgate
Water Gate
Handley St
Carre Street
South Gate
Boston Rd
Boston Rd
South Gate
SESRR PH 1
South Gate
railway crossing
Grantham Road
London Road
Marcham Lane
Maltings Way
Option 2
North Gate
W gate
Eastgate
Eastgate
Eastgate
Water Gate
Handley St
Carre Street
SESRR PH 2
South Gate
Boston Rd
Boston Rd
South Gate
SESRR PH 1
S gate railway
crossing
Grantham Road
London Road
Marcham Lane
Maltings Way
Option 3
North Gate
W gate
Eastgate
Eastgate
Eastgate
Water Gate
Handley St
Carre Street
South Gate
Boston Rd
Boston Rd
South Gate
SESRR PH 1
South Gate
railway crossing
No access over the railway bridge
Grantham Road
London Road
Marcham Lane
Maltings Way
Option 4A
North Gate
W gate
Eastgate
Eastgate
Eastgate
Water Gate
Handley St
Carre Street
SESRR PH 2
South Gate
Boston Rd
Boston Rd
South Gate
SESRR PH 1
South Gate
railway crossing
No access over the railway bridge
Grantham Road
London Road
Marcham Lane
Maltings Way
Option 4B
North Gate
W gate
Eastgate
Eastgate
Eastgate
Water Gate
Handley St
Carre Street
SESRR PH 2
South Gate
Boston Rd
Boston Rd
South Gate
SESRR PH 1
South Gate
railway crossing
No access over the railway bridge
Grantham Road
London Road
Marcham Lane
Maltings Way
Option 5
North Gate
W gate
Eastgate
Eastgate
Eastgate
Water Gate
Handley St
Carre Street
South Gate
Boston Rd
Boston Rd
South Gate
SESRR PH 1
South Gate
railway crossing
No access over the railway bridge
Grantham Road
London Road
Marcham Lane
Maltings Way
KEY
Existing Highway Network (retained)
Change in Highway Network
Restriction on Highway Network

Option 6



Option 7

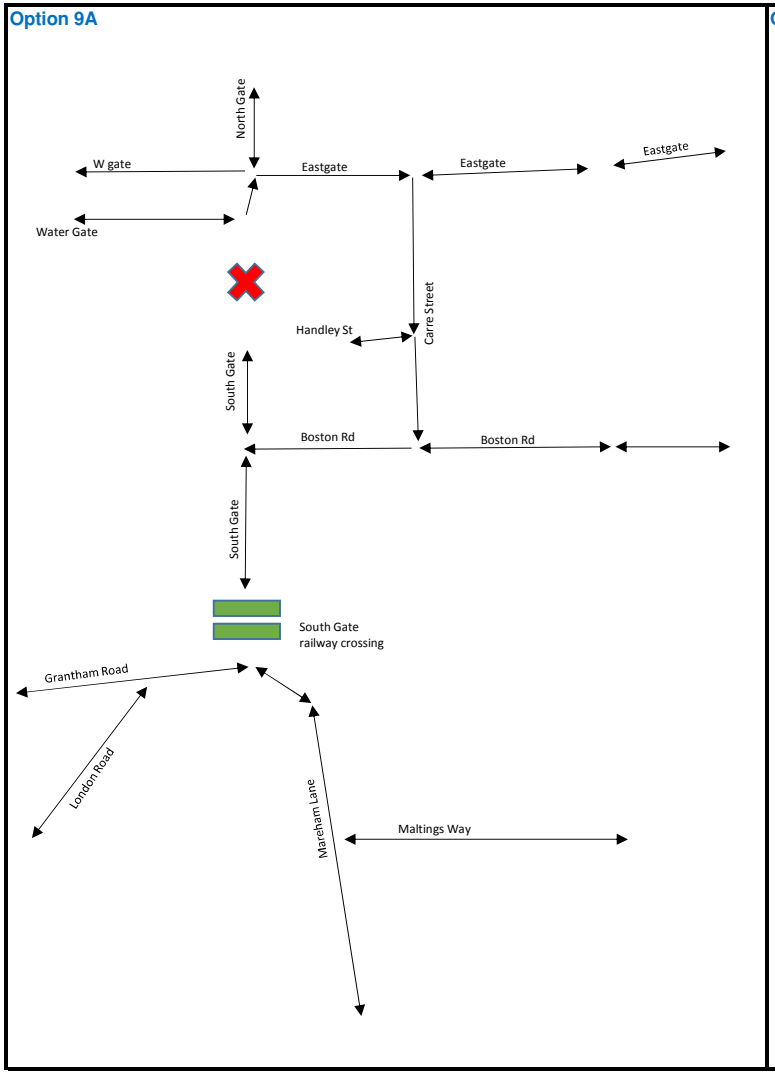


KEY

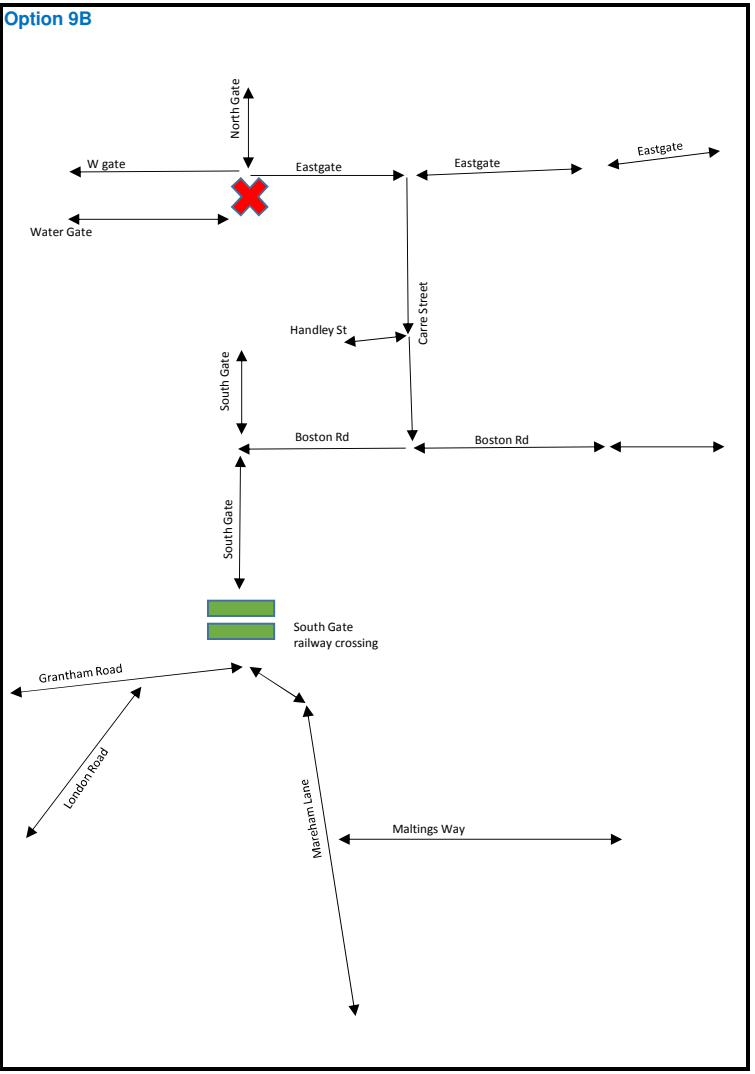
Existing Highway N

Change in Highway

Option 9A



Option 9B



KEY

- Existing Highway Network (retained)
- Change in Highway Network
- Restriction on Highway Network

Appendix B – Correspondence from Network Rail

Appendix B – Summary of correspondence from Network Rail

Network Rail, in their email dated 21st May, 2015, summarised the following changes proposed at the railway signal crossings in Sleaford.

1. It is proposed to convert the Sleaford east crossing (Southgate) from manual control barrier to obstacle detection to be achieved by upgrading it to a laser controlled crossing, triggered by the approach of the train. He further explained that such an arrangement is complicated due to the proximity of the crossing to the railway station as it requires that at least two signals are cleared following the lowering of the barriers.
2. The current barrier downtime is around 2.5/3 minutes for all trains which is expected to increase to around 5 minutes for eastbound trains and 3 minutes 30 seconds for westbound trains.
3. Theoretically, the absolute number of trains which could be run through both the crossing per hour in both directions is 18; 4 trains per hour (tph) on Skegness route and 12tph on Peterborough route. He further expressed that it is highly unlikely that this capacity of will be reached as currently only 20 trains travel on the Peterborough route and 30 on the Skegness route, in additional to 4 freight trains; which is an average of 3.6 tph as opposed to a worst case of 18 tph.
4. Network Rail expressed that for modelling purposes it may be prudent to model a worst case of 9 tph as it is not expected that re-franchising or upsurges in freight traffic will lead to use the theoretical capacity of the network. The doubling of train services from current would yield approximately 5.2 tph.

Mouchel, in their email dated 21st May, 2015, requested further clarification on the proposals for railway crossing on King Edward Street and whether 4tph constitutes of 2 tph in both direction?

Network Rail, in their reply dated 21st May, 2015, confirmed that 4tph constitutes of 2 tph in both directions the railway crossing on King Edward Street will also be upgraded to obstacle detection system similar to the crossing on Southgate with similar downtimes. He further explained that minor modification to the crossing (yellow box markings and better signage) are also proposed as part of the improvements.

Network Rail also provided the following information regarding Option 8 in their e-mail of 9th October 2015:

"There are two issues – firstly is the actual cost of the work, and secondly is the operational impacts on the timetable.

We have an example of a curve recently constructed at Todmorden (2013) so is quite realistic in terms of possible costs – 350 yds came out at just under £10 million but that did include a lot of re-signalling work, track renewal and a new footbridge – but even stripping out a number of items and if it was timed to be in the same window as the re-signalling, we are still talking around £6 million or so (and this does not include the cost of purchase of the land in question) for one curve alone – and of course two would be needed in this instance. A curve from the Sleaford avoiding line onto the Lincoln line would also necessitate the re-grading of East Road and a second bridge (because the curvature would otherwise be too sharp for a freight train) and so would probably exceed £6 million. Costs in excess of £12 million dwarf the cost of automation of the crossing (around £1.5 million). This is currently programmed for 2019.

The second issue relates to operational matters and capacity. Currently a passenger train takes on average 4 minutes to pass from Sleaford West to Sleaford North junction, along a length of single track. Using the two new curves a Skegness train, assuming it had clear signals, would take on average an additional 10 minutes from leaving the station to regain its former route east of the avoiding line. A Lincoln – Peterborough train would take a similar time, along with further dwell time at the station as the driver & guard change ends. This length eats into the capacity available, exacerbated by the passage of freight trains over the avoiding line itself so the risk of perturbation increases significantly. This also reduces the dwell time at the terminals which in some cases could require a further unit in order to work the same level of service. A further issue is the length of time for a freight train to traverse the curves, which would also be longer, with increased risk of disruption to the timetable especially given the gradients required for the curves – which in turn also has a disbenefit in terms of noise from flange squeal and if a freight train is either stopped or stalls on the curves themselves.

All in all we consider the likely benefits to be gained from closure of the crossing using this solution are significantly outweighed by the costs of the proposed curves and the disbenefits it presents to the timetabling of trains and impact on the network. Bridging the railway in the vicinity of Sleaford East is by far a better and effective solution to solving the problem of congestion in the vicinity of the crossing."

Appendix C – TRICS reports – Proposed Development

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST		
	EX	ESSEX	2 days
	HC	HAMPSHIRE	1 days
	HF	HERTFORDSHIRE	1 days
	OX	OXFORDSHIRE	1 days
	SC	SURREY	2 days
03	SOUTH WEST		
	BR	BRISTOL CITY	1 days
	DC	DORSET	2 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
05	EAST MIDLANDS		
	DS	DERBYSHIRE	1 days
	NR	NORTHAMPTONSHIRE	1 days
06	WEST MIDLANDS		
	ST	STAFFORDSHIRE	1 days
	WM	WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	RI	EAST RIDING OF YORKSHIRE	1 days
08	NORTH WEST		
	CH	CHESHIRE	1 days
09	NORTH		
	TV	TEES VALLEY	2 days
10	WALES		
	FS	FLINTSHIRE	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:	0.07 to 1.33 (units: hect)
Range Selected by User:	0.05 to 3.40 (units: hect)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/07 to 13/05/14

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

Selected survey days:

Monday	4 days
Tuesday	5 days
Wednesday	5 days
Thursday	2 days
Friday	4 days

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

Selected survey types:

Manual count	20 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	7
Suburban Area (PPS6 Out of Centre)	12
Edge of Town	1

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

Selected Location Sub Categories:

Residential Zone	13
Built-Up Zone	2
No Sub Category	5

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

Filtering Stage 3 selection:

Use Class:

C3	20 days

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

Filtering Stage 3 selection (Cont.):

Population within 1 mile:

1,001 to 5,000	2 days
10,001 to 15,000	6 days
15,001 to 20,000	2 days
20,001 to 25,000	3 days
25,001 to 50,000	7 days

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

Population within 5 miles:

50,001 to 75,000	5 days
100,001 to 125,000	1 days
125,001 to 250,000	8 days
250,001 to 500,000	6 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	17 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	20 days

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

LIST OF SITES relevant to selection parameters

1 BR-03-C-01 FLATS & TERRACED BRISTOL CITY
CLARENCE ROAD

BRISTOL
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Site area: 1.33 hect
Survey date: MONDAY 09/11/09 Survey Type: MANUAL

2 CA-03-C-02 BLOCK OF FLATS CAMBRIDGESHIRE
WESTFIELD ROAD
NETHERTON
PETERBOROUGH
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Site area: 0.51 hect
Survey date: TUESDAY 18/10/11 Survey Type: MANUAL

3 CH-03-C-01 BLOCKS OF FLATS CHESHIRE
NEW CRANE STREET

CHESTER
Edge of Town Centre
Residential Zone
Total Site area: 0.30 hect
Survey date: FRIDAY 17/10/08 Survey Type: MANUAL

4 DC-03-C-01 BLOCKS OF FLATS DORSET
ABBOTSBURY ROAD

WEYMOUTH
Edge of Town Centre
Residential Zone
Total Site area: 0.18 hect
Survey date: TUESDAY 08/07/08 Survey Type: MANUAL

5 DC-03-C-02 FLATS IN BLOCKS DORSET
PALM COURT
SPA ROAD
WEYMOUTH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Site area: 0.14 hect
Survey date: FRIDAY 28/03/14 Survey Type: MANUAL

6 DS-03-C-01 BLOCK OF FLATS DERBYSHIRE
DRAGE STREET
LITTLE CHESTER
DERBY
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Site area: 0.18 hect
Survey date: THURSDAY 25/06/09 Survey Type: MANUAL

7 EX-03-C-01 FLATS ESSEX
WESTCLIFF PARADE
WESTCLIFF
SOUTHEND-ON-SEA
Edge of Town Centre
Residential Zone
Total Site area: 0.07 hect
Survey date: TUESDAY 22/10/13 Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

8 EX-03-C-02 BLOCK OF FLATS ESSEX
WESTCLIFF PARADE
WESTCLIFF
SOUTHEND-ON-SEA
Edge of Town Centre
Residential Zone
Total Site area: 0.37 hect
Survey date: TUESDAY 22/10/13 Survey Type: MANUAL

9 FS-03-C-01 BLOCK OF FLATS FLINTSHIRE
WREXHAM STREET

MOLD
Edge of Town Centre
Built-Up Zone
Total Site area: 0.21 hect
Survey date: MONDAY 06/07/09 Survey Type: MANUAL

10 HC-03-C-02 FLATS HAMPSHIRE
WORTING ROAD

BASINGSTOKE
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Site area: 0.22 hect
Survey date: THURSDAY 21/10/10 Survey Type: MANUAL

11 HF-03-C-02 FLATS HERTFORDSHIRE
BRIDGE ROAD EAST

WELWYN GARDEN CITY
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Site area: 0.76 hect
Survey date: WEDNESDAY 16/07/08 Survey Type: MANUAL

12 NR-03-C-01 BLOCK OF FLATS NORTHAMPTONSHIRE
ROCKINGHAM ROAD

CORBY
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Site area: 0.20 hect
Survey date: FRIDAY 21/11/08 Survey Type: MANUAL

13 OX-03-C-01 BLOCK OF FLATS OXFORDSHIRE
OXFORD ROAD
COWLEY
OXFORD
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Site area: 0.13 hect
Survey date: WEDNESDAY 20/10/10 Survey Type: MANUAL

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

HULL
Edge of Town
Residential Zone
Total Site area: 0.72 hect
Survey date: TUESDAY 13/05/14 Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

15 SC-03-C-01 FLATS SURREY
HEATHCOTE ROAD

CAMBERLEY
Edge of Town Centre
Residential Zone
Total Site area: 1.25 hect
Survey date: MONDAY 21/07/08 Survey Type: MANUAL

16 SC-03-C-02 FLATS SURREY
CONSTITUTION HILL

WOKING
Suburban Area (PPS6 Out of Centre)
Built-Up Zone
Total Site area: 0.24 hect
Survey date: WEDNESDAY 23/07/08 Survey Type: MANUAL

17 ST-03-C-01 BLOCKS OF FLATS STAFFORDSHIRE
ETRURIA COURT
HUMBERT ROAD
STOKE-ON-TRENT
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Site area: 0.27 hect
Survey date: WEDNESDAY 26/11/08 Survey Type: MANUAL

18 TV-03-C-01 APARTMENTS BLOCKS TEES VALLEY
OXFORD ROAD
LINTHORPE
MIDDLESBROUGH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Site area: 0.85 hect
Survey date: MONDAY 06/10/08 Survey Type: MANUAL

19 TV-03-C-02 FLATS TEES VALLEY
ACKLAM ROAD
LINTHORPE
MIDDLESBROUGH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Site area: 0.85 hect
Survey date: WEDNESDAY 29/06/11 Survey Type: MANUAL

20 WM-03-C-03 FLATS WEST MIDLANDS
LODE LANE

SOLIHULL
Edge of Town Centre
No Sub Category
Total Site area: 1.18 hect
Survey date: FRIDAY 21/09/07 Survey Type: MANUAL

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	20	0.50	3.414	20	0.50	14.859	20	0.50	18.273
08:00 - 09:00	20	0.50	7.831	20	0.50	25.904	20	0.50	33.735
09:00 - 10:00	20	0.50	7.129	20	0.50	10.241	20	0.50	17.370
10:00 - 11:00	20	0.50	8.735	20	0.50	9.639	20	0.50	18.374
11:00 - 12:00	20	0.50	8.133	20	0.50	8.233	20	0.50	16.366
12:00 - 13:00	20	0.50	9.538	20	0.50	10.944	20	0.50	20.482
13:00 - 14:00	20	0.50	10.643	20	0.50	10.442	20	0.50	21.085
14:00 - 15:00	20	0.50	9.940	20	0.50	9.940	20	0.50	19.880
15:00 - 16:00	20	0.50	11.847	20	0.50	9.036	20	0.50	20.883
16:00 - 17:00	20	0.50	13.253	20	0.50	10.040	20	0.50	23.293
17:00 - 18:00	20	0.50	24.398	20	0.50	11.647	20	0.50	36.045
18:00 - 19:00	20	0.50	17.169	20	0.50	10.944	20	0.50	28.113
19:00 - 20:00	2	0.17	28.571	2	0.17	17.143	2	0.17	45.714
20:00 - 21:00	2	0.17	8.571	2	0.17	2.857	2	0.17	11.428
21:00 - 22:00	2	0.17	11.429	2	0.17	8.571	2	0.17	20.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			180.601			170.440			351.041

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:	0.07 to 1.33 (units: hect)
Survey date date range:	01/01/07 - 13/05/14
Number of weekdays (Monday-Friday):	20
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	20	0.50	0.502	20	0.50	0.502	20	0.50	1.004
08:00 - 09:00	20	0.50	0.402	20	0.50	0.402	20	0.50	0.804
09:00 - 10:00	20	0.50	0.201	20	0.50	0.201	20	0.50	0.402
10:00 - 11:00	20	0.50	0.201	20	0.50	0.201	20	0.50	0.402
11:00 - 12:00	20	0.50	0.201	20	0.50	0.201	20	0.50	0.402
12:00 - 13:00	20	0.50	0.201	20	0.50	0.201	20	0.50	0.402
13:00 - 14:00	20	0.50	0.301	20	0.50	0.301	20	0.50	0.602
14:00 - 15:00	20	0.50	0.602	20	0.50	0.502	20	0.50	1.104
15:00 - 16:00	20	0.50	0.100	20	0.50	0.201	20	0.50	0.301
16:00 - 17:00	20	0.50	0.100	20	0.50	0.201	20	0.50	0.301
17:00 - 18:00	20	0.50	0.402	20	0.50	0.402	20	0.50	0.804
18:00 - 19:00	20	0.50	0.502	20	0.50	0.502	20	0.50	1.004
19:00 - 20:00	2	0.17	0.000	2	0.17	0.000	2	0.17	0.000
20:00 - 21:00	2	0.17	0.000	2	0.17	0.000	2	0.17	0.000
21:00 - 22:00	2	0.17	0.000	2	0.17	0.000	2	0.17	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.715			3.817			7.532

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:	0.07 to 1.33 (units: hect)
Survey date date range:	01/01/07 - 13/05/14
Number of weekdays (Monday-Friday):	20
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	20	0.50	0.000	20	0.50	0.000	20	0.50	0.000
08:00 - 09:00	20	0.50	0.100	20	0.50	0.100	20	0.50	0.200
09:00 - 10:00	20	0.50	0.100	20	0.50	0.100	20	0.50	0.200
10:00 - 11:00	20	0.50	0.201	20	0.50	0.201	20	0.50	0.402
11:00 - 12:00	20	0.50	0.402	20	0.50	0.301	20	0.50	0.703
12:00 - 13:00	20	0.50	0.201	20	0.50	0.301	20	0.50	0.502
13:00 - 14:00	20	0.50	0.100	20	0.50	0.100	20	0.50	0.200
14:00 - 15:00	20	0.50	0.201	20	0.50	0.000	20	0.50	0.201
15:00 - 16:00	20	0.50	0.100	20	0.50	0.201	20	0.50	0.301
16:00 - 17:00	20	0.50	0.201	20	0.50	0.201	20	0.50	0.402
17:00 - 18:00	20	0.50	0.000	20	0.50	0.000	20	0.50	0.000
18:00 - 19:00	20	0.50	0.100	20	0.50	0.000	20	0.50	0.100
19:00 - 20:00	2	0.17	0.000	2	0.17	0.000	2	0.17	0.000
20:00 - 21:00	2	0.17	0.000	2	0.17	0.000	2	0.17	0.000
21:00 - 22:00	2	0.17	0.000	2	0.17	0.000	2	0.17	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.706			1.505			3.211

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:	0.07 to 1.33 (units: hect)
Survey date date range:	01/01/07 - 13/05/14
Number of weekdays (Monday-Friday):	20
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	20	0.50	0.000	20	0.50	0.000	20	0.50	0.000
08:00 - 09:00	20	0.50	0.000	20	0.50	0.000	20	0.50	0.000
09:00 - 10:00	20	0.50	0.000	20	0.50	0.000	20	0.50	0.000
10:00 - 11:00	20	0.50	0.000	20	0.50	0.000	20	0.50	0.000
11:00 - 12:00	20	0.50	0.000	20	0.50	0.000	20	0.50	0.000
12:00 - 13:00	20	0.50	0.000	20	0.50	0.000	20	0.50	0.000
13:00 - 14:00	20	0.50	0.000	20	0.50	0.000	20	0.50	0.000
14:00 - 15:00	20	0.50	0.000	20	0.50	0.000	20	0.50	0.000
15:00 - 16:00	20	0.50	0.000	20	0.50	0.000	20	0.50	0.000
16:00 - 17:00	20	0.50	0.000	20	0.50	0.000	20	0.50	0.000
17:00 - 18:00	20	0.50	0.000	20	0.50	0.000	20	0.50	0.000
18:00 - 19:00	20	0.50	0.000	20	0.50	0.000	20	0.50	0.000
19:00 - 20:00	2	0.17	0.000	2	0.17	0.000	2	0.17	0.000
20:00 - 21:00	2	0.17	0.000	2	0.17	0.000	2	0.17	0.000
21:00 - 22:00	2	0.17	0.000	2	0.17	0.000	2	0.17	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

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

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

Parameter summary

Trip rate parameter range selected:	0.07 to 1.33 (units: hect)
Survey date date range:	01/01/07 - 13/05/14
Number of weekdays (Monday-Friday):	20
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	20	0.50	0.201	20	0.50	0.703	20	0.50	0.904
08:00 - 09:00	20	0.50	0.100	20	0.50	0.703	20	0.50	0.803
09:00 - 10:00	20	0.50	0.100	20	0.50	0.301	20	0.50	0.401
10:00 - 11:00	20	0.50	0.301	20	0.50	0.502	20	0.50	0.803
11:00 - 12:00	20	0.50	0.301	20	0.50	0.602	20	0.50	0.903
12:00 - 13:00	20	0.50	0.402	20	0.50	0.402	20	0.50	0.804
13:00 - 14:00	20	0.50	0.502	20	0.50	0.602	20	0.50	1.104
14:00 - 15:00	20	0.50	0.402	20	0.50	0.602	20	0.50	1.004
15:00 - 16:00	20	0.50	0.602	20	0.50	0.402	20	0.50	1.004
16:00 - 17:00	20	0.50	0.803	20	0.50	0.502	20	0.50	1.305
17:00 - 18:00	20	0.50	0.502	20	0.50	0.301	20	0.50	0.803
18:00 - 19:00	20	0.50	0.803	20	0.50	0.000	20	0.50	0.803
19:00 - 20:00	2	0.17	0.000	2	0.17	0.000	2	0.17	0.000
20:00 - 21:00	2	0.17	0.000	2	0.17	0.000	2	0.17	0.000
21:00 - 22:00	2	0.17	0.000	2	0.17	0.000	2	0.17	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			5.019			5.622			10.641

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:	0.07 to 1.33 (units: hect)
Survey date date range:	01/01/07 - 13/05/14
Number of weekdays (Monday-Friday):	20
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	1

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

Calculation Reference: AUDIT-203601-150619-0615

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	HC	HAMPSHIRE	1 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
06	WEST MIDLANDS		
	WM	WEST MIDLANDS	1 days
11	SCOTLAND		
	EB	CITY OF EDINBURGH	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: 250 to 475 (units: sqm)
Range Selected by User: 182 to 800 (units: sqm)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/07 to 21/11/12

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	1 days
Wednesday	3 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:

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

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

Selected Location Sub Categories:

Residential Zone	2
Built-Up Zone	1
No Sub Category	1

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

Filtering Stage 3 selection:

Use Class:

A3	1 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	2 days
20,001 to 25,000	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:

75,001 to 100,000	1 days
100,001 to 125,000	1 days
125,001 to 250,000	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	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	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 CA-06-D-01 MCDONALDS CAMBRIDGESHIRE
NEWMARKET ROAD

CAMBRIDGE
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 450 sqm
Survey date: WEDNESDAY 19/10/11 Survey Type: MANUAL

2 EB-06-D-01 MCDONALDS CITY OF EDINBURGH
GYLEMUIR ROAD

EDINBURGH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 475 sqm
Survey date: WEDNESDAY 18/06/08 Survey Type: MANUAL

3 HC-06-D-02 BURGER KING HAMPSHIRE
WELLINGTON AVENUE

ALDERSHOT
Edge of Town Centre
Built-Up Zone
Total Gross floor area: 465 sqm
Survey date: WEDNESDAY 20/10/10 Survey Type: MANUAL

4 WM-06-D-01 BURGER KING WEST MIDLANDS
KINGSBURY ROAD
ERDINGTON
BIRMINGHAM
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Gross floor area: 250 sqm
Survey date: TUESDAY 25/11/08 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 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH
VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 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	450	0.889	1	450	0.667	1	450	1.556
07:00 - 08:00	1	450	3.556	1	450	2.000	1	450	5.556
08:00 - 09:00	2	458	2.842	2	458	1.311	2	458	4.153
09:00 - 10:00	3	388	2.318	3	388	2.318	3	388	4.636
10:00 - 11:00	4	410	4.817	4	410	4.207	4	410	9.024
11:00 - 12:00	4	410	6.768	4	410	5.915	4	410	12.683
12:00 - 13:00	4	410	10.976	4	410	10.854	4	410	21.830
13:00 - 14:00	4	410	11.585	4	410	11.829	4	410	23.414
14:00 - 15:00	4	410	6.402	4	410	7.378	4	410	13.780
15:00 - 16:00	4	410	6.280	4	410	6.220	4	410	12.500
16:00 - 17:00	4	410	7.073	4	410	6.707	4	410	13.780
17:00 - 18:00	4	410	6.768	4	410	7.195	4	410	13.963
18:00 - 19:00	4	410	9.024	4	410	8.720	4	410	17.744
19:00 - 20:00	4	410	7.256	4	410	8.110	4	410	15.366
20:00 - 21:00	4	410	5.488	4	410	5.427	4	410	10.915
21:00 - 22:00	4	410	3.841	4	410	4.756	4	410	8.597
22:00 - 23:00	2	470	3.617	2	470	3.617	2	470	7.234
23:00 - 24:00	2	470	0.957	2	470	1.915	2	470	2.872
Total Rates:			100.457			99.146			199.603

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:	250 - 475 (units: sqm)
Survey date date range:	01/01/07 - 21/11/12
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.

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		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	450	0.000	1	450	0.000	1	450	0.000
07:00 - 08:00	1	450	0.000	1	450	0.000	1	450	0.000
08:00 - 09:00	2	458	0.000	2	458	0.000	2	458	0.000
09:00 - 10:00	3	388	0.000	3	388	0.000	3	388	0.000
10:00 - 11:00	4	410	0.061	4	410	0.061	4	410	0.122
11:00 - 12:00	4	410	0.000	4	410	0.000	4	410	0.000
12:00 - 13:00	4	410	0.061	4	410	0.061	4	410	0.122
13:00 - 14:00	4	410	0.061	4	410	0.000	4	410	0.061
14:00 - 15:00	4	410	0.244	4	410	0.244	4	410	0.488
15:00 - 16:00	4	410	0.061	4	410	0.122	4	410	0.183
16:00 - 17:00	4	410	0.183	4	410	0.183	4	410	0.366
17:00 - 18:00	4	410	0.000	4	410	0.000	4	410	0.000
18:00 - 19:00	4	410	0.061	4	410	0.061	4	410	0.122
19:00 - 20:00	4	410	0.061	4	410	0.061	4	410	0.122
20:00 - 21:00	4	410	0.122	4	410	0.122	4	410	0.244
21:00 - 22:00	4	410	0.061	4	410	0.061	4	410	0.122
22:00 - 23:00	2	470	0.000	2	470	0.000	2	470	0.000
23:00 - 24:00	2	470	0.000	2	470	0.000	2	470	0.000
Total Rates:			0.976			0.976			1.952

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:	250 - 475 (units: sqm)
Survey date date range:	01/01/07 - 21/11/12
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.

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH
OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 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	450	0.000	1	450	0.000	1	450	0.000
07:00 - 08:00	1	450	0.000	1	450	0.000	1	450	0.000
08:00 - 09:00	2	458	0.000	2	458	0.000	2	458	0.000
09:00 - 10:00	3	388	0.000	3	388	0.000	3	388	0.000
10:00 - 11:00	4	410	0.000	4	410	0.000	4	410	0.000
11:00 - 12:00	4	410	0.061	4	410	0.061	4	410	0.122
12:00 - 13:00	4	410	0.061	4	410	0.061	4	410	0.122
13:00 - 14:00	4	410	0.061	4	410	0.061	4	410	0.122
14:00 - 15:00	4	410	0.000	4	410	0.000	4	410	0.000
15:00 - 16:00	4	410	0.000	4	410	0.000	4	410	0.000
16:00 - 17:00	4	410	0.061	4	410	0.061	4	410	0.122
17:00 - 18:00	4	410	0.000	4	410	0.000	4	410	0.000
18:00 - 19:00	4	410	0.000	4	410	0.000	4	410	0.000
19:00 - 20:00	4	410	0.000	4	410	0.000	4	410	0.000
20:00 - 21:00	4	410	0.000	4	410	0.000	4	410	0.000
21:00 - 22:00	4	410	0.000	4	410	0.000	4	410	0.000
22:00 - 23:00	2	470	0.000	2	470	0.000	2	470	0.000
23:00 - 24:00	2	470	0.000	2	470	0.000	2	470	0.000
Total Rates:			0.244			0.244			0.488

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:	250 - 475 (units: sqm)
Survey date date range:	01/01/07 - 21/11/12
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.

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		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	450	0.000	1	450	0.000	1	450	0.000
07:00 - 08:00	1	450	0.000	1	450	0.000	1	450	0.000
08:00 - 09:00	2	458	0.000	2	458	0.000	2	458	0.000
09:00 - 10:00	3	388	0.000	3	388	0.000	3	388	0.000
10:00 - 11:00	4	410	0.000	4	410	0.000	4	410	0.000
11:00 - 12:00	4	410	0.000	4	410	0.000	4	410	0.000
12:00 - 13:00	4	410	0.000	4	410	0.000	4	410	0.000
13:00 - 14:00	4	410	0.000	4	410	0.000	4	410	0.000
14:00 - 15:00	4	410	0.000	4	410	0.000	4	410	0.000
15:00 - 16:00	4	410	0.000	4	410	0.000	4	410	0.000
16:00 - 17:00	4	410	0.000	4	410	0.000	4	410	0.000
17:00 - 18:00	4	410	0.000	4	410	0.000	4	410	0.000
18:00 - 19:00	4	410	0.000	4	410	0.000	4	410	0.000
19:00 - 20:00	4	410	0.000	4	410	0.000	4	410	0.000
20:00 - 21:00	4	410	0.000	4	410	0.000	4	410	0.000
21:00 - 22:00	4	410	0.000	4	410	0.000	4	410	0.000
22:00 - 23:00	2	470	0.000	2	470	0.000	2	470	0.000
23:00 - 24:00	2	470	0.000	2	470	0.000	2	470	0.000
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.

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Parameter summary

Trip rate parameter range selected:	250 - 475 (units: sqm)
Survey date date range:	01/01/07 - 21/11/12
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.

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		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	450	0.000	1	450	0.000	1	450	0.000
07:00 - 08:00	1	450	0.000	1	450	0.000	1	450	0.000
08:00 - 09:00	2	458	0.000	2	458	0.000	2	458	0.000
09:00 - 10:00	3	388	0.000	3	388	0.000	3	388	0.000
10:00 - 11:00	4	410	0.000	4	410	0.000	4	410	0.000
11:00 - 12:00	4	410	0.000	4	410	0.000	4	410	0.000
12:00 - 13:00	4	410	0.000	4	410	0.000	4	410	0.000
13:00 - 14:00	4	410	0.061	4	410	0.061	4	410	0.122
14:00 - 15:00	4	410	0.000	4	410	0.000	4	410	0.000
15:00 - 16:00	4	410	0.000	4	410	0.000	4	410	0.000
16:00 - 17:00	4	410	0.000	4	410	0.000	4	410	0.000
17:00 - 18:00	4	410	0.000	4	410	0.000	4	410	0.000
18:00 - 19:00	4	410	0.061	4	410	0.061	4	410	0.122
19:00 - 20:00	4	410	0.000	4	410	0.000	4	410	0.000
20:00 - 21:00	4	410	0.000	4	410	0.000	4	410	0.000
21:00 - 22:00	4	410	0.000	4	410	0.000	4	410	0.000
22:00 - 23:00	2	470	0.000	2	470	0.000	2	470	0.000
23:00 - 24:00	2	470	0.000	2	470	0.000	2	470	0.000
Total Rates:			0.122			0.122			0.244

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:	250 - 475 (units: sqm)
Survey date date range:	01/01/07 - 21/11/12
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.

Calculation Reference: AUDIT-203601-150619-0616

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
Category : K - RETAIL PARK - EXCLUDING FOOD
VEHICLES

Selected regions and areas:

03	SOUTH WEST		
	GS	GLOUCESTERSHIRE	1 days
17	ULSTER (NORTHERN IRELAND)		
	AN	ANTRIM	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:	8177 to 8687 (units: sqm)
Range Selected by User:	2057 to 35244 (units: sqm)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/07 to 07/06/14

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

Selected survey days:

Thursday	1 days
Friday	1 days

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

Selected survey types:

Manual count	2 days
Directional ATC Count	0 days

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

Selected Locations:

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

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

Selected Location Sub Categories:

Retail 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	2 days

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

Population within 1 mile:

1,001 to 5,000	1 days
10,001 to 15,000	1 days

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

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	1 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	2 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	2 days

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

LIST OF SITES relevant to selection parameters

1 AN-01-K-01 RETAIL PARK ANTRIM
18 YOUNG STREET

LISBURN
Edge of Town Centre
Retail Zone
Total Gross floor area: 8177 sqm
Survey date: FRIDAY 11/10/13 Survey Type: MANUAL

2 GS-01-K-02 RETAIL PARK GLOUCESTERSHIRE
EASTERN AVENUE
BARNWOOD
GLOUCESTER
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Gross floor area: 8687 sqm
Survey date: THURSDAY 28/11/13 Survey Type: MANUAL

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

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
DL-01-K-02	Edge of town site inappropriate

TRIP RATE for Land Use 01 - RETAIL/K - RETAIL PARK - EXCLUDING FOOD
VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 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	8432	0.225	2	8432	0.030	2	8432	0.255
08:00 - 09:00	2	8432	0.421	2	8432	0.178	2	8432	0.599
09:00 - 10:00	2	8432	0.557	2	8432	0.332	2	8432	0.889
10:00 - 11:00	2	8432	0.528	2	8432	0.427	2	8432	0.955
11:00 - 12:00	2	8432	0.433	2	8432	0.374	2	8432	0.807
12:00 - 13:00	2	8432	0.427	2	8432	0.385	2	8432	0.812
13:00 - 14:00	2	8432	0.385	2	8432	0.380	2	8432	0.765
14:00 - 15:00	2	8432	0.356	2	8432	0.421	2	8432	0.777
15:00 - 16:00	2	8432	0.795	2	8432	0.901	2	8432	1.696
16:00 - 17:00	2	8432	0.771	2	8432	0.943	2	8432	1.714
17:00 - 18:00	2	8432	0.320	2	8432	0.451	2	8432	0.771
18:00 - 19:00	2	8432	0.380	2	8432	0.540	2	8432	0.920
19:00 - 20:00	2	8432	0.196	2	8432	0.344	2	8432	0.540
20:00 - 21:00	2	8432	0.172	2	8432	0.130	2	8432	0.302
21:00 - 22:00	2	8432	0.000	2	8432	0.089	2	8432	0.089
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			5.966			5.925			11.891

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:	8177 - 8687 (units: sqm)
Survey date date range:	01/01/07 - 07/06/14
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

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.

TRIP RATE for Land Use 01 - RETAIL/K - RETAIL PARK - EXCLUDING FOOD
TAXIS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 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	8432	0.000	2	8432	0.000	2	8432	0.000
08:00 - 09:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
09:00 - 10:00	2	8432	0.018	2	8432	0.018	2	8432	0.036
10:00 - 11:00	2	8432	0.006	2	8432	0.006	2	8432	0.012
11:00 - 12:00	2	8432	0.012	2	8432	0.012	2	8432	0.024
12:00 - 13:00	2	8432	0.006	2	8432	0.006	2	8432	0.012
13:00 - 14:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
14:00 - 15:00	2	8432	0.006	2	8432	0.006	2	8432	0.012
15:00 - 16:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
16:00 - 17:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
17:00 - 18:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
18:00 - 19:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
19:00 - 20:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
20:00 - 21:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
21:00 - 22:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.048			0.048			0.096

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:	8177 - 8687 (units: sqm)
Survey date date range:	01/01/07 - 07/06/14
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

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.

TRIP RATE for Land Use 01 - RETAIL/K - RETAIL PARK - EXCLUDING FOOD
OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 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	8432	0.006	2	8432	0.000	2	8432	0.006
08:00 - 09:00	2	8432	0.012	2	8432	0.018	2	8432	0.030
09:00 - 10:00	2	8432	0.000	2	8432	0.006	2	8432	0.006
10:00 - 11:00	2	8432	0.006	2	8432	0.006	2	8432	0.012
11:00 - 12:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
12:00 - 13:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
13:00 - 14:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
14:00 - 15:00	2	8432	0.006	2	8432	0.006	2	8432	0.012
15:00 - 16:00	2	8432	0.006	2	8432	0.000	2	8432	0.006
16:00 - 17:00	2	8432	0.036	2	8432	0.042	2	8432	0.078
17:00 - 18:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
18:00 - 19:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
19:00 - 20:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
20:00 - 21:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
21:00 - 22:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.072			0.078			0.150

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

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:	8177 - 8687 (units: sqm)
Survey date date range:	01/01/07 - 07/06/14
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

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.

TRIP RATE for Land Use 01 - RETAIL/K - RETAIL PARK - EXCLUDING FOOD
PSVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 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	8432	0.000	2	8432	0.000	2	8432	0.000
08:00 - 09:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
09:00 - 10:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
10:00 - 11:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
11:00 - 12:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
12:00 - 13:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
13:00 - 14:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
14:00 - 15:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
15:00 - 16:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
16:00 - 17:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
17:00 - 18:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
18:00 - 19:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
19:00 - 20:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
20:00 - 21:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
21:00 - 22:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

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

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

Parameter summary

Trip rate parameter range selected:	8177 - 8687 (units: sqm)
Survey date date range:	01/01/07 - 07/06/14
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

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.

TRIP RATE for Land Use 01 - RETAIL/K - RETAIL PARK - EXCLUDING FOOD
CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 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	8432	0.000	2	8432	0.000	2	8432	0.000
08:00 - 09:00	2	8432	0.036	2	8432	0.000	2	8432	0.036
09:00 - 10:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
10:00 - 11:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
11:00 - 12:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
12:00 - 13:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
13:00 - 14:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
14:00 - 15:00	2	8432	0.000	2	8432	0.012	2	8432	0.012
15:00 - 16:00	2	8432	0.000	2	8432	0.006	2	8432	0.006
16:00 - 17:00	2	8432	0.030	2	8432	0.006	2	8432	0.036
17:00 - 18:00	2	8432	0.024	2	8432	0.042	2	8432	0.066
18:00 - 19:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
19:00 - 20:00	2	8432	0.012	2	8432	0.006	2	8432	0.018
20:00 - 21:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
21:00 - 22:00	2	8432	0.000	2	8432	0.000	2	8432	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.102			0.072			0.174

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:	8177 - 8687 (units: sqm)
Survey date date range:	01/01/07 - 07/06/14
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	2

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.

Calculation Reference: AUDIT-203601-150619-0627

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : N - RETIREMENT FLATS
VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	KC	KENT	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	SY	SOUTH YORKSHIRE	1 days
10	WALES		
	PS	POWYS	1 days
	VG	VALE OF GLAMORGAN	1 days

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

Filtering Stage 2 selection:

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

Parameter: Number of dwellings
Actual Range: 28 to 52 (units:)
Range Selected by User: 28 to 76 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/07 to 19/12/12

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:

Monday	2 days
Wednesday	1 days
Friday	1 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:

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

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

Selected Location Sub Categories:

Residential Zone	2
No Sub Category	2

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

Filtering Stage 3 selection:

Use Class:

C3	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:

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

5,001 to 25,000	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	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	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 KC-03-N-05 RETIREMENT FLATS KENT
HARDRES STREET

RAMSGATE
Edge of Town Centre
No Sub Category
Total Number of dwellings: 41
Survey date: MONDAY 07/12/09 Survey Type: MANUAL

2 PS-03-N-01 RETIREMENT FLATS POWYS
HEOL GOUESNOU

BRECON
Edge of Town Centre
No Sub Category
Total Number of dwellings: 52
Survey date: FRIDAY 05/09/08 Survey Type: MANUAL

3 SY-03-N-01 RETIREMENT FLATS SOUTH YORKSHIRE
MOSS CLOSE
WICKERSLEY
NEAR ROTHERHAM
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 28
Survey date: WEDNESDAY 19/12/12 Survey Type: MANUAL

4 VG-03-N-01 RETIREMENT FLATS VALE OF GLAMORGAN
BRADFORD PLACE

PENARTH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 46
Survey date: MONDAY 16/07/12 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.

TRIP RATE for Land Use 03 - RESIDENTIAL/N - RETIREMENT FLATS
VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	42	0.054	4	42	0.066	4	42	0.120
08:00 - 09:00	4	42	0.114	4	42	0.096	4	42	0.210
09:00 - 10:00	4	42	0.060	4	42	0.060	4	42	0.120
10:00 - 11:00	4	42	0.072	4	42	0.096	4	42	0.168
11:00 - 12:00	4	42	0.108	4	42	0.132	4	42	0.240
12:00 - 13:00	4	42	0.102	4	42	0.108	4	42	0.210
13:00 - 14:00	4	42	0.054	4	42	0.072	4	42	0.126
14:00 - 15:00	4	42	0.084	4	42	0.066	4	42	0.150
15:00 - 16:00	4	42	0.066	4	42	0.066	4	42	0.132
16:00 - 17:00	4	42	0.132	4	42	0.102	4	42	0.234
17:00 - 18:00	4	42	0.054	4	42	0.066	4	42	0.120
18:00 - 19:00	4	42	0.078	4	42	0.048	4	42	0.126
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.978			0.978			1.956

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:	28 - 52 (units:)
Survey date date range:	01/01/07 - 19/12/12
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.

TRIP RATE for Land Use 03 - RESIDENTIAL/N - RETIREMENT FLATS

TAXIS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	42	0.006	4	42	0.006	4	42	0.012
08:00 - 09:00	4	42	0.006	4	42	0.006	4	42	0.012
09:00 - 10:00	4	42	0.000	4	42	0.000	4	42	0.000
10:00 - 11:00	4	42	0.006	4	42	0.006	4	42	0.012
11:00 - 12:00	4	42	0.006	4	42	0.006	4	42	0.012
12:00 - 13:00	4	42	0.000	4	42	0.000	4	42	0.000
13:00 - 14:00	4	42	0.000	4	42	0.000	4	42	0.000
14:00 - 15:00	4	42	0.006	4	42	0.006	4	42	0.012
15:00 - 16:00	4	42	0.006	4	42	0.006	4	42	0.012
16:00 - 17:00	4	42	0.018	4	42	0.018	4	42	0.036
17:00 - 18:00	4	42	0.000	4	42	0.000	4	42	0.000
18:00 - 19:00	4	42	0.000	4	42	0.000	4	42	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.054			0.054			0.108

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:	28 - 52 (units:)
Survey date date range:	01/01/07 - 19/12/12
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.

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	42	0.000	4	42	0.000	4	42	0.000
08:00 - 09:00	4	42	0.000	4	42	0.000	4	42	0.000
09:00 - 10:00	4	42	0.000	4	42	0.000	4	42	0.000
10:00 - 11:00	4	42	0.006	4	42	0.000	4	42	0.006
11:00 - 12:00	4	42	0.000	4	42	0.000	4	42	0.000
12:00 - 13:00	4	42	0.000	4	42	0.000	4	42	0.000
13:00 - 14:00	4	42	0.000	4	42	0.000	4	42	0.000
14:00 - 15:00	4	42	0.000	4	42	0.000	4	42	0.000
15:00 - 16:00	4	42	0.000	4	42	0.000	4	42	0.000
16:00 - 17:00	4	42	0.000	4	42	0.000	4	42	0.000
17:00 - 18:00	4	42	0.000	4	42	0.006	4	42	0.006
18:00 - 19:00	4	42	0.000	4	42	0.000	4	42	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.006			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:	28 - 52 (units:)
Survey date date range:	01/01/07 - 19/12/12
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.

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	42	0.000	4	42	0.000	4	42	0.000
08:00 - 09:00	4	42	0.000	4	42	0.000	4	42	0.000
09:00 - 10:00	4	42	0.006	4	42	0.000	4	42	0.006
10:00 - 11:00	4	42	0.000	4	42	0.006	4	42	0.006
11:00 - 12:00	4	42	0.000	4	42	0.000	4	42	0.000
12:00 - 13:00	4	42	0.000	4	42	0.000	4	42	0.000
13:00 - 14:00	4	42	0.000	4	42	0.000	4	42	0.000
14:00 - 15:00	4	42	0.000	4	42	0.000	4	42	0.000
15:00 - 16:00	4	42	0.000	4	42	0.000	4	42	0.000
16:00 - 17:00	4	42	0.006	4	42	0.006	4	42	0.012
17:00 - 18:00	4	42	0.000	4	42	0.000	4	42	0.000
18:00 - 19:00	4	42	0.000	4	42	0.000	4	42	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.012			0.012			0.024

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:	28 - 52 (units:)
Survey date date range:	01/01/07 - 19/12/12
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.

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	42	0.012	4	42	0.006	4	42	0.018
08:00 - 09:00	4	42	0.000	4	42	0.006	4	42	0.006
09:00 - 10:00	4	42	0.000	4	42	0.000	4	42	0.000
10:00 - 11:00	4	42	0.000	4	42	0.000	4	42	0.000
11:00 - 12:00	4	42	0.006	4	42	0.006	4	42	0.012
12:00 - 13:00	4	42	0.000	4	42	0.000	4	42	0.000
13:00 - 14:00	4	42	0.006	4	42	0.000	4	42	0.006
14:00 - 15:00	4	42	0.000	4	42	0.006	4	42	0.006
15:00 - 16:00	4	42	0.000	4	42	0.000	4	42	0.000
16:00 - 17:00	4	42	0.000	4	42	0.000	4	42	0.000
17:00 - 18:00	4	42	0.000	4	42	0.000	4	42	0.000
18:00 - 19:00	4	42	0.000	4	42	0.000	4	42	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.024			0.024			0.048

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

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:	28 - 52 (units:)
Survey date date range:	01/01/07 - 19/12/12
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.

Calculation Reference: AUDIT-203601-150619-0625

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 06 - HOTEL, FOOD & DRINK
Category : C - PUB/RESTAURANT

VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	BF	BRACKNELL FOREST	1 days
	HC	HAMPSHIRE	1 days
03	SOUTH WEST		
	CW	CORNWALL	1 days
05	EAST MIDLANDS		
	NT	NOTTINGHAMSHIRE	1 days
09	NORTH		
	TV	TEES VALLEY	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: 285 to 1200 (units: sqm)
Range Selected by User: 112 to 2384 (units: sqm)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/07 to 25/05/14

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

Selected survey days:

Friday	5 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
Suburban Area (PPS6 Out of Centre)	4

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

Selected Location Sub Categories:

Residential Zone	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.

Filtering Stage 3 selection:

Use Class:

A3	1 days
A4	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	1 days
15,001 to 20,000	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	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	2 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	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.

LIST OF SITES relevant to selection parameters

1	BF-06-C-01	HARVESTER		BRACKNELL FOREST
	BAGSHOT ROAD			
	BRACKNELL			
	Edge of Town Centre			
	Residential Zone			
	Total Gross floor area:		725 sqm	
	Survey date: FRIDAY		23/11/12	Survey Type: MANUAL
2	CW-06-C-01	PUB/RESTAURANT		CORNWALL
	FORE STREET			
	POOL			
	CAMBORNE			
	Suburban Area (PPS6 Out of Centre)			
	No Sub Category			
	Total Gross floor area:		285 sqm	
	Survey date: FRIDAY		21/09/07	Survey Type: MANUAL
3	HC-06-C-02	BEEFEATER		HAMPSHIRE
	BOURNEMOUTH ROAD			
	AMPFIELD			
	EASTLEIGH			
	Suburban Area (PPS6 Out of Centre)			
	No Sub Category			
	Total Gross floor area:		450 sqm	
	Survey date: FRIDAY		16/11/07	Survey Type: MANUAL
4	NT-06-C-02	PUB/RESTAURANT		NOTTINGHAMSHIRE
	MANSFIELD ROAD			
	DAYBROOK			
	NOTTINGHAM			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:		1185 sqm	
	Survey date: FRIDAY		18/05/07	Survey Type: MANUAL
5	TV-06-C-01	PUB/RES.		TEES VALLEY
	MARTON ROAD			
	MIDDLESBROUGH			
	Suburban Area (PPS6 Out of Centre)			
	No Sub Category			
	Total Gross floor area:		1200 sqm	
	Survey date: FRIDAY		21/09/07	Survey Type: MANUAL

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

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/C - PUB/RESTAURANT
VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 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	5	769	0.286	5	769	0.156	5	769	0.442
11:00 - 12:00	5	769	0.936	5	769	0.416	5	769	1.352
12:00 - 13:00	5	769	2.471	5	769	1.014	5	769	3.485
13:00 - 14:00	5	769	1.899	5	769	2.055	5	769	3.954
14:00 - 15:00	5	769	1.274	5	769	2.237	5	769	3.511
15:00 - 16:00	5	769	0.910	5	769	1.222	5	769	2.132
16:00 - 17:00	5	769	1.352	5	769	1.118	5	769	2.470
17:00 - 18:00	5	769	2.211	5	769	1.664	5	769	3.875
18:00 - 19:00	5	769	2.705	5	769	1.769	5	769	4.474
19:00 - 20:00	5	769	2.549	5	769	2.003	5	769	4.552
20:00 - 21:00	5	769	1.274	5	769	1.925	5	769	3.199
21:00 - 22:00	5	769	0.624	5	769	1.456	5	769	2.080
22:00 - 23:00	5	769	0.390	5	769	1.118	5	769	1.508
23:00 - 24:00	5	769	0.156	5	769	1.066	5	769	1.222
Total Rates:			19.037			19.219			38.256

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:	285 - 1200 (units: sqm)
Survey date date range:	01/01/07 - 25/05/14
Number of weekdays (Monday-Friday):	5
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.

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/C - PUB/RESTAURANT
TAXIS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 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	5	769	0.000	5	769	0.000	5	769	0.000
11:00 - 12:00	5	769	0.026	5	769	0.026	5	769	0.052
12:00 - 13:00	5	769	0.052	5	769	0.052	5	769	0.104
13:00 - 14:00	5	769	0.000	5	769	0.000	5	769	0.000
14:00 - 15:00	5	769	0.000	5	769	0.000	5	769	0.000
15:00 - 16:00	5	769	0.026	5	769	0.026	5	769	0.052
16:00 - 17:00	5	769	0.000	5	769	0.000	5	769	0.000
17:00 - 18:00	5	769	0.104	5	769	0.078	5	769	0.182
18:00 - 19:00	5	769	0.052	5	769	0.052	5	769	0.104
19:00 - 20:00	5	769	0.156	5	769	0.182	5	769	0.338
20:00 - 21:00	5	769	0.026	5	769	0.026	5	769	0.052
21:00 - 22:00	5	769	0.052	5	769	0.052	5	769	0.104
22:00 - 23:00	5	769	0.104	5	769	0.104	5	769	0.208
23:00 - 24:00	5	769	0.026	5	769	0.026	5	769	0.052
Total Rates:			0.624			0.624			1.248

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:	285 - 1200 (units: sqm)
Survey date date range:	01/01/07 - 25/05/14
Number of weekdays (Monday-Friday):	5
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.

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/C - PUB/RESTAURANT
OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 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	5	769	0.026	5	769	0.052	5	769	0.078
11:00 - 12:00	5	769	0.130	5	769	0.078	5	769	0.208
12:00 - 13:00	5	769	0.026	5	769	0.026	5	769	0.052
13:00 - 14:00	5	769	0.000	5	769	0.052	5	769	0.052
14:00 - 15:00	5	769	0.000	5	769	0.000	5	769	0.000
15:00 - 16:00	5	769	0.026	5	769	0.026	5	769	0.052
16:00 - 17:00	5	769	0.000	5	769	0.000	5	769	0.000
17:00 - 18:00	5	769	0.000	5	769	0.000	5	769	0.000
18:00 - 19:00	5	769	0.026	5	769	0.026	5	769	0.052
19:00 - 20:00	5	769	0.000	5	769	0.000	5	769	0.000
20:00 - 21:00	5	769	0.000	5	769	0.000	5	769	0.000
21:00 - 22:00	5	769	0.000	5	769	0.000	5	769	0.000
22:00 - 23:00	5	769	0.000	5	769	0.000	5	769	0.000
23:00 - 24:00	5	769	0.000	5	769	0.000	5	769	0.000
Total Rates:			0.234			0.260			0.494

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:	285 - 1200 (units: sqm)
Survey date date range:	01/01/07 - 25/05/14
Number of weekdays (Monday-Friday):	5
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.

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/C - PUB/RESTAURANT
PSVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 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	5	769	0.000	5	769	0.000	5	769	0.000
11:00 - 12:00	5	769	0.052	5	769	0.000	5	769	0.052
12:00 - 13:00	5	769	0.000	5	769	0.000	5	769	0.000
13:00 - 14:00	5	769	0.000	5	769	0.052	5	769	0.052
14:00 - 15:00	5	769	0.000	5	769	0.000	5	769	0.000
15:00 - 16:00	5	769	0.000	5	769	0.000	5	769	0.000
16:00 - 17:00	5	769	0.000	5	769	0.000	5	769	0.000
17:00 - 18:00	5	769	0.000	5	769	0.000	5	769	0.000
18:00 - 19:00	5	769	0.000	5	769	0.000	5	769	0.000
19:00 - 20:00	5	769	0.000	5	769	0.000	5	769	0.000
20:00 - 21:00	5	769	0.000	5	769	0.000	5	769	0.000
21:00 - 22:00	5	769	0.000	5	769	0.000	5	769	0.000
22:00 - 23:00	5	769	0.000	5	769	0.000	5	769	0.000
23:00 - 24:00	5	769	0.000	5	769	0.000	5	769	0.000
Total Rates:			0.052			0.052			0.104

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

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:	285 - 1200 (units: sqm)
Survey date date range:	01/01/07 - 25/05/14
Number of weekdays (Monday-Friday):	5
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.

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/C - PUB/RESTAURANT
CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 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	5	769	0.000	5	769	0.000	5	769	0.000
11:00 - 12:00	5	769	0.026	5	769	0.026	5	769	0.052
12:00 - 13:00	5	769	0.026	5	769	0.000	5	769	0.026
13:00 - 14:00	5	769	0.000	5	769	0.000	5	769	0.000
14:00 - 15:00	5	769	0.026	5	769	0.026	5	769	0.052
15:00 - 16:00	5	769	0.026	5	769	0.000	5	769	0.026
16:00 - 17:00	5	769	0.000	5	769	0.052	5	769	0.052
17:00 - 18:00	5	769	0.000	5	769	0.000	5	769	0.000
18:00 - 19:00	5	769	0.000	5	769	0.000	5	769	0.000
19:00 - 20:00	5	769	0.052	5	769	0.000	5	769	0.052
20:00 - 21:00	5	769	0.026	5	769	0.078	5	769	0.104
21:00 - 22:00	5	769	0.026	5	769	0.026	5	769	0.052
22:00 - 23:00	5	769	0.000	5	769	0.000	5	769	0.000
23:00 - 24:00	5	769	0.000	5	769	0.000	5	769	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

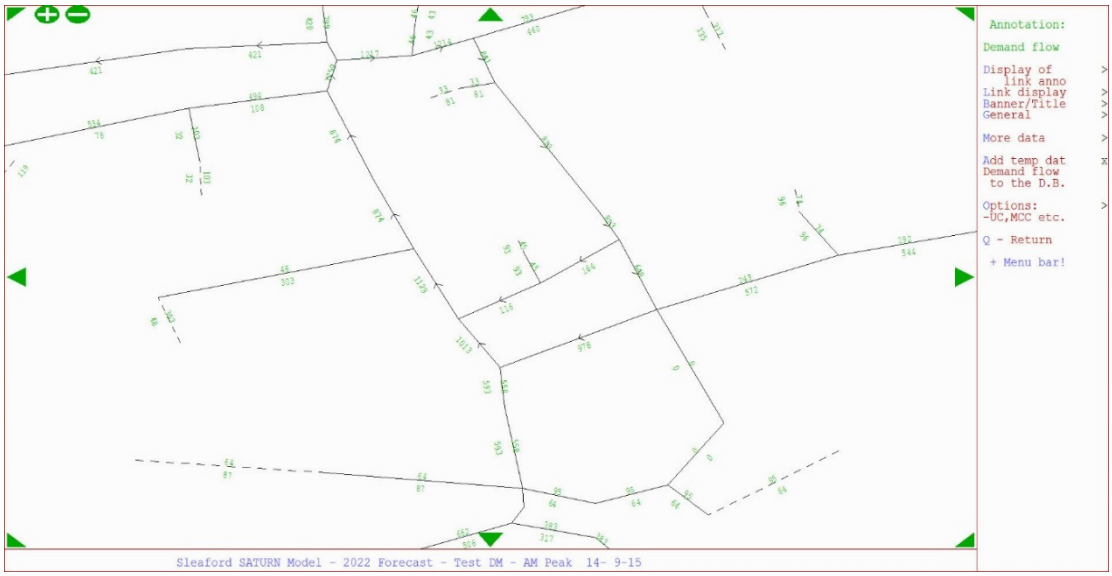
Trip rate parameter range selected:	285 - 1200 (units: sqm)
Survey date date range:	01/01/07 - 25/05/14
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

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.

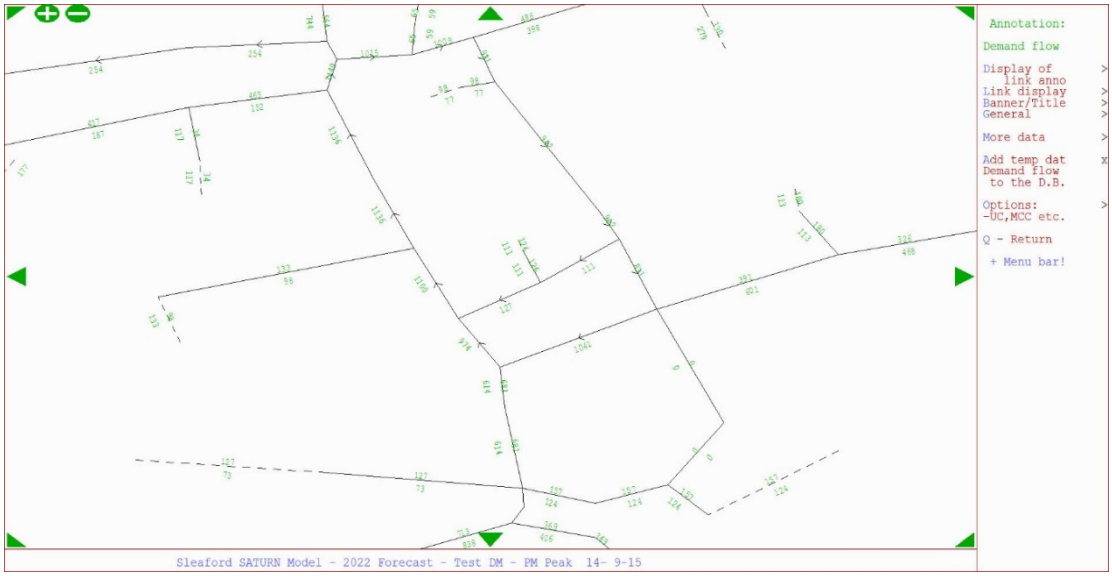
Appendix D – Flow Diagrams

Appendix D – Network Flow Diagrams

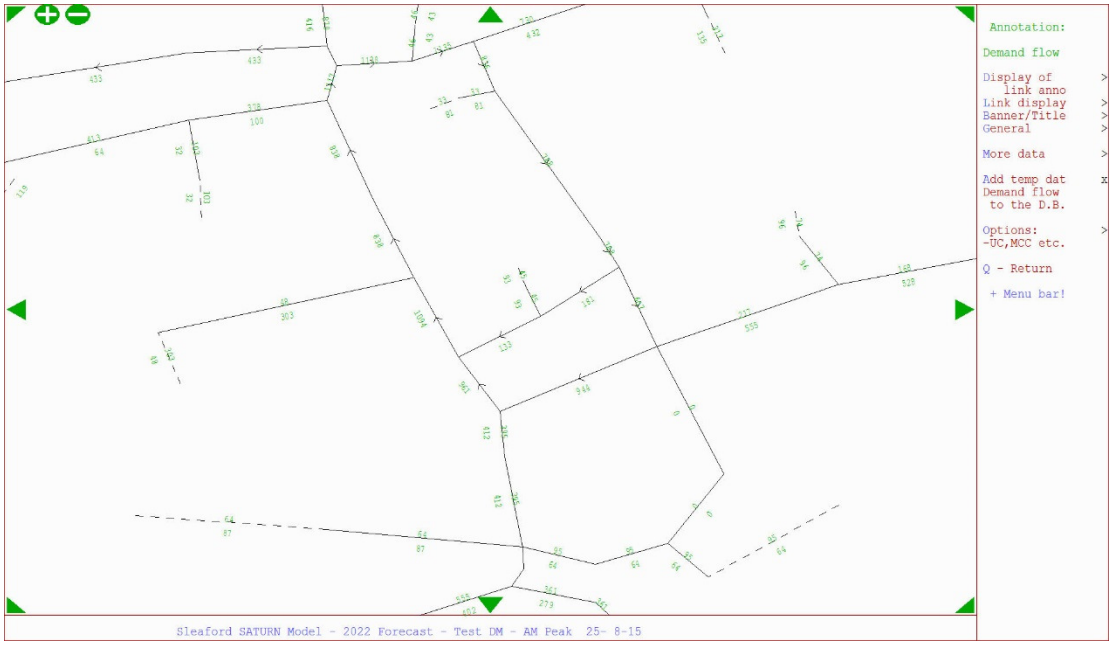
Reference Case A0 2022 AM



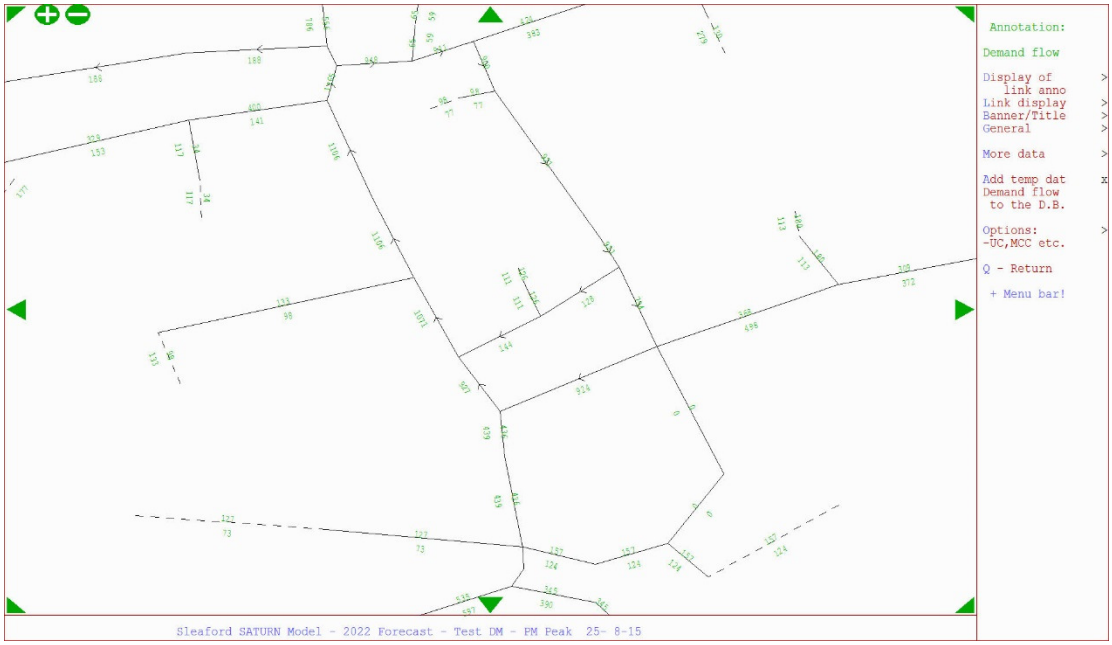
Reference Case A0 2022 PM



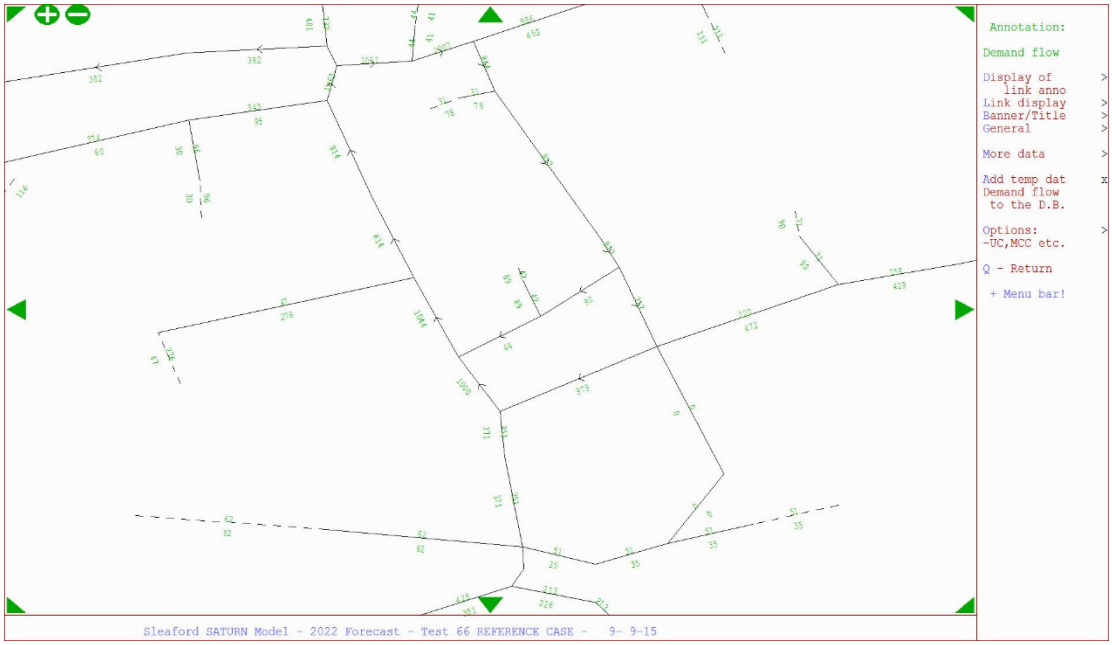
Reference Case A1 2022 AM



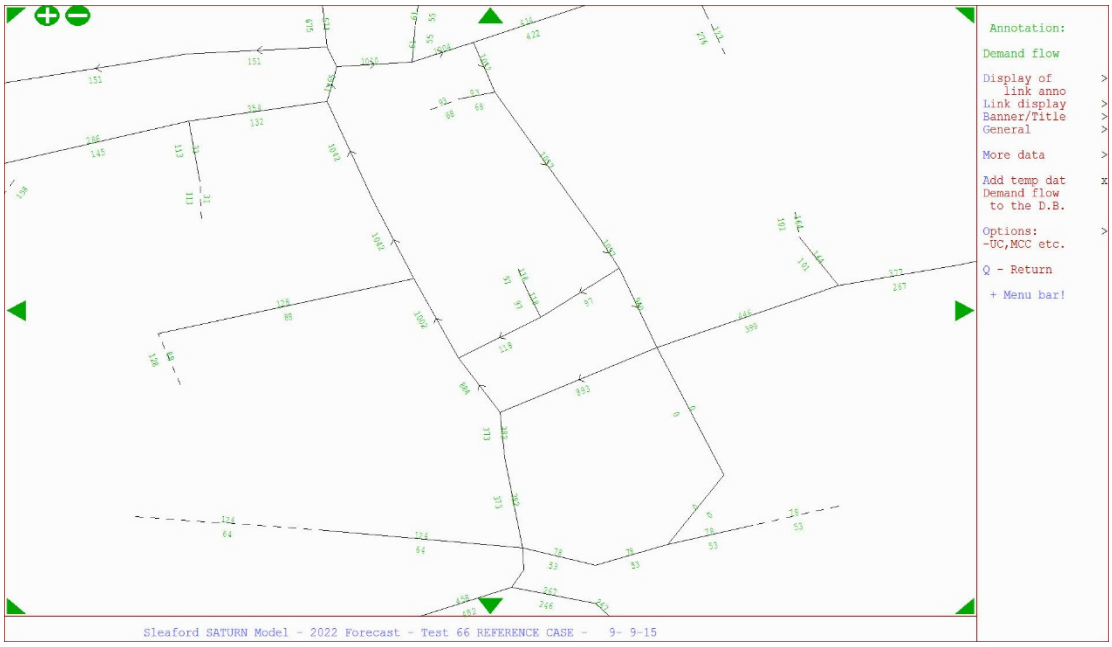
Reference Case A1 2022 PM



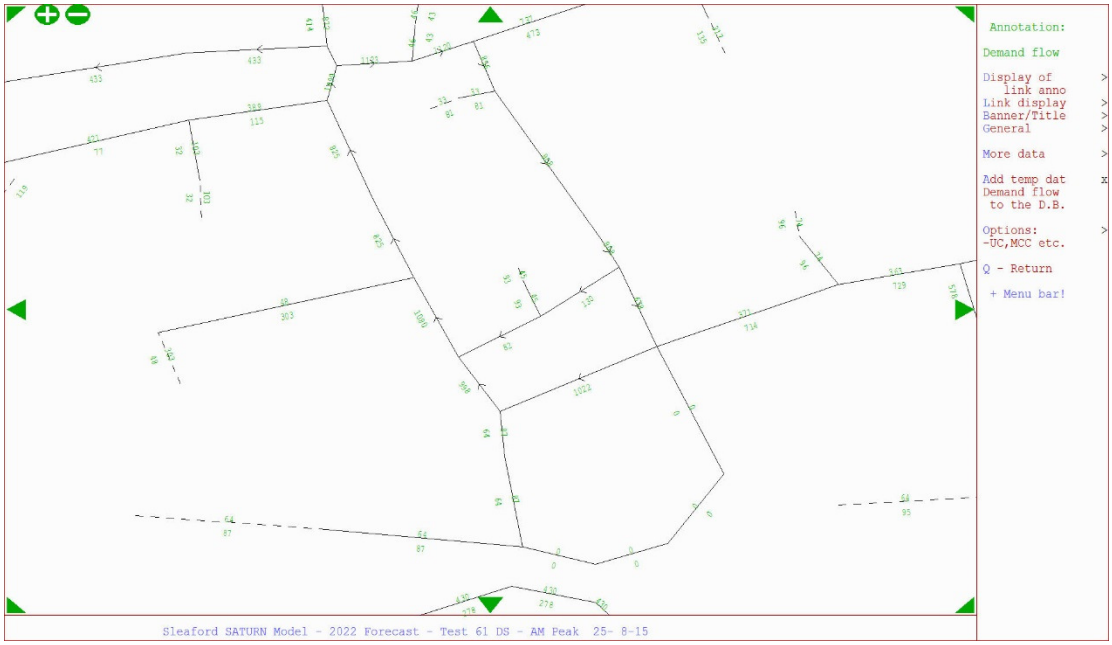
Reference Case B 2022 AM



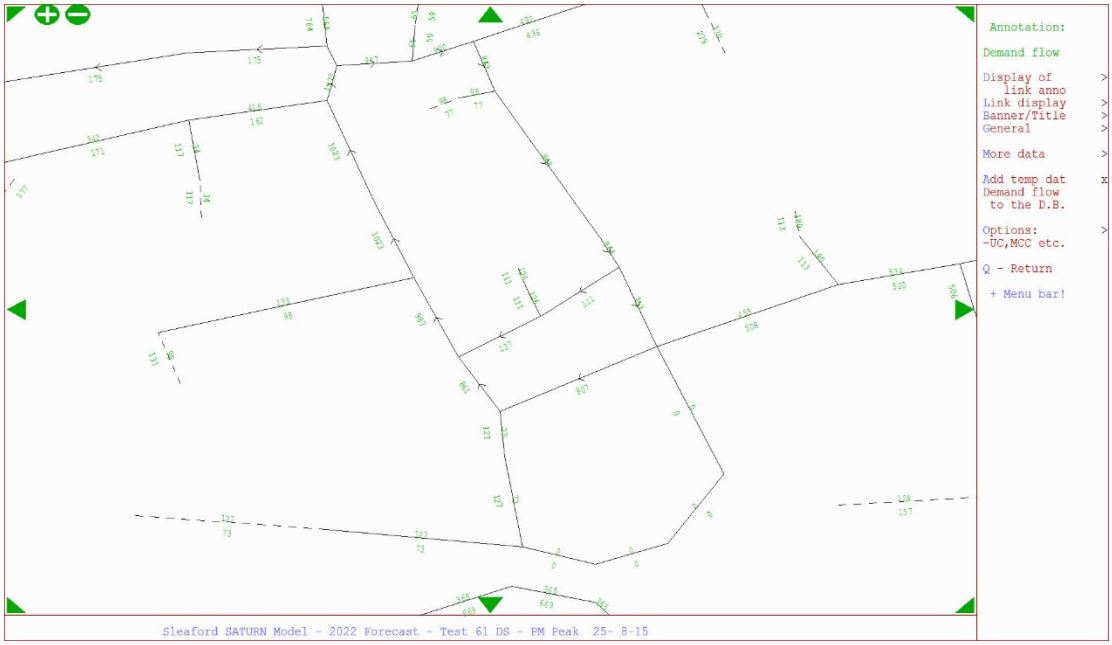
Reference Case B 2022 PM



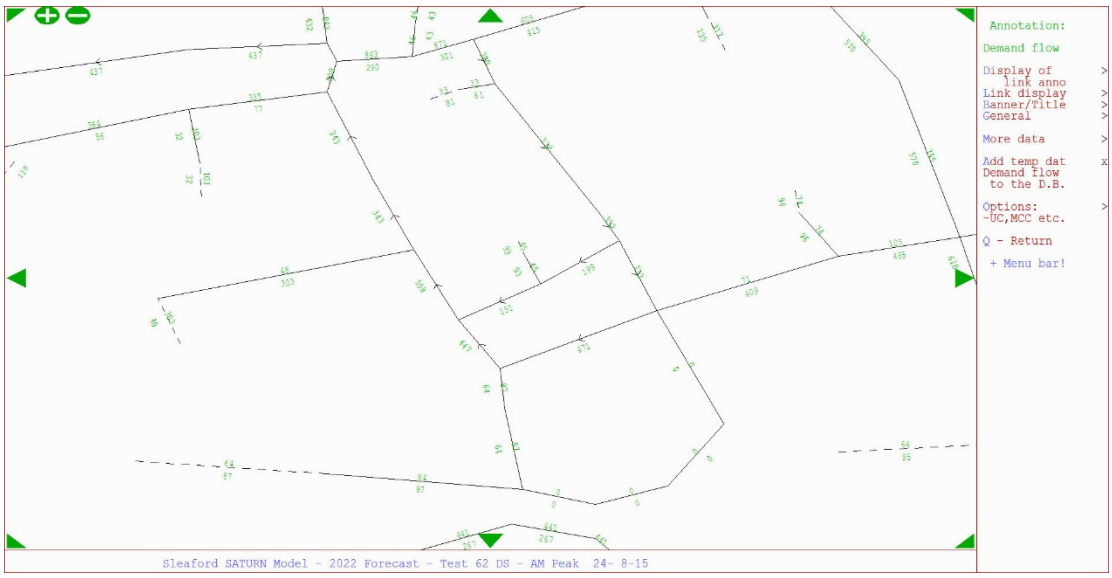
Option1 2022 AM



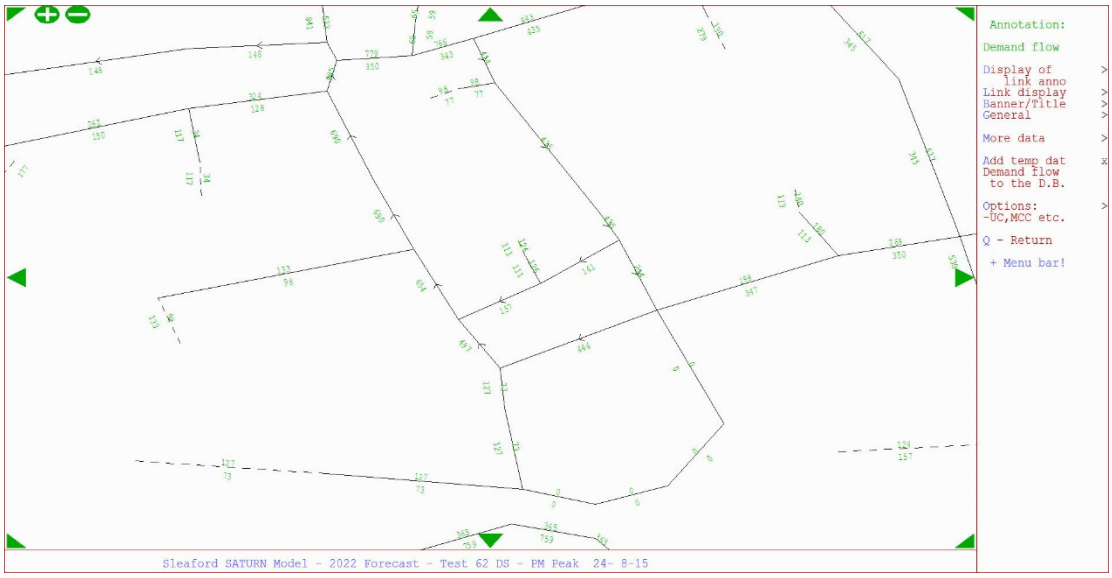
Option1 2022 PM



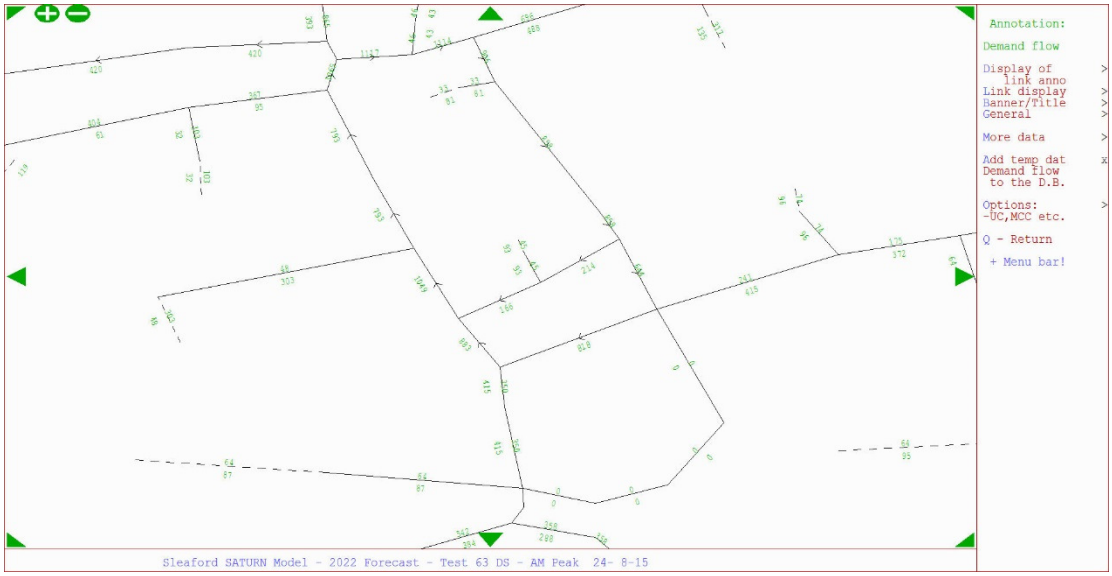
Option2 2022 AM



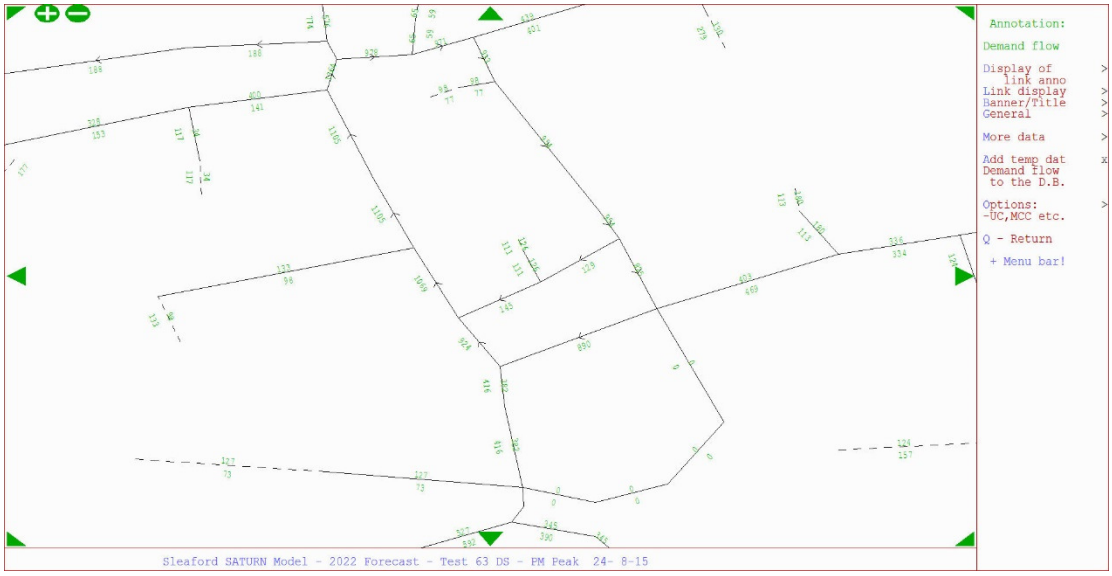
Option2 2022 PM



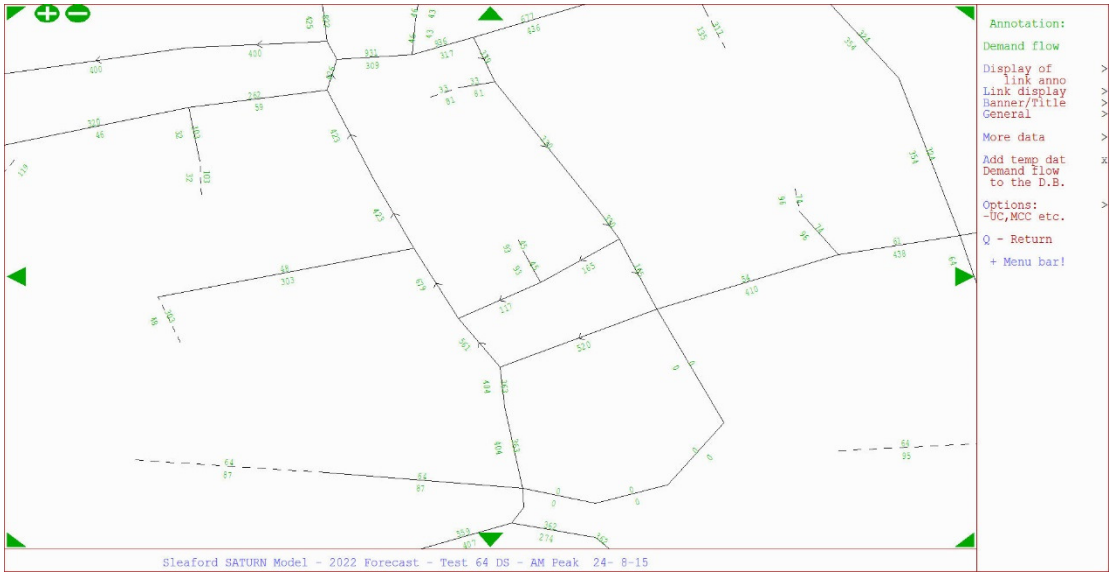
Option3 2022 AM



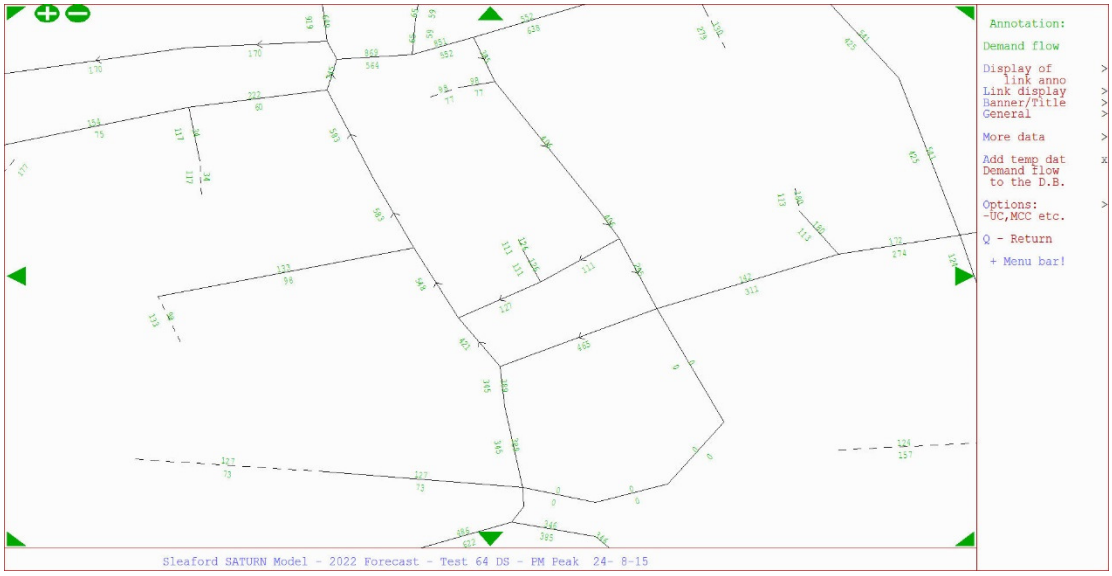
Option3 2022 PM



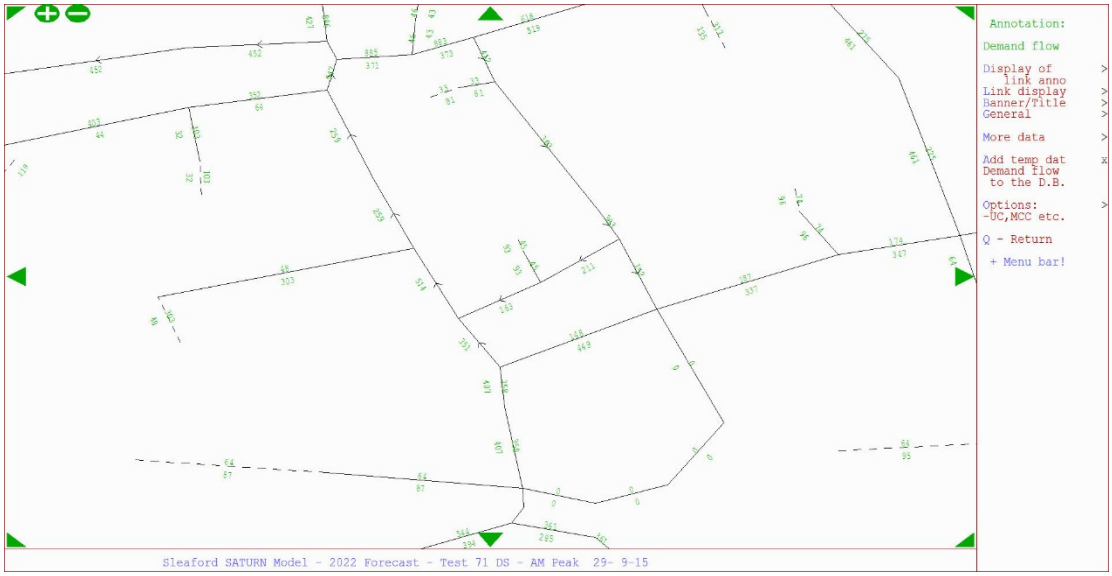
Option4A 2022 AM



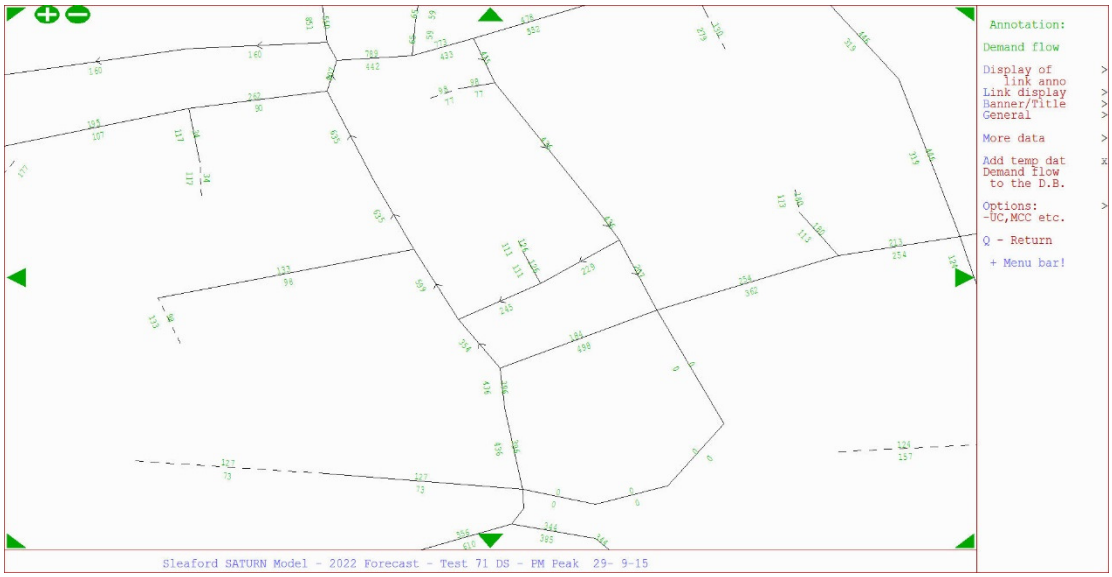
Option4A 2022 PM



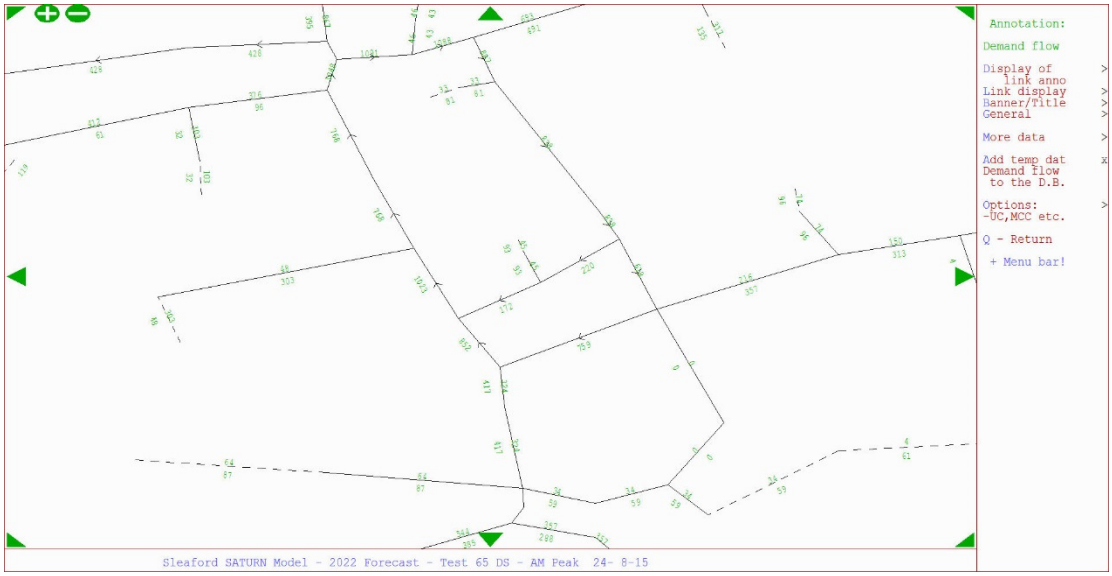
Option 4B 2022 AM



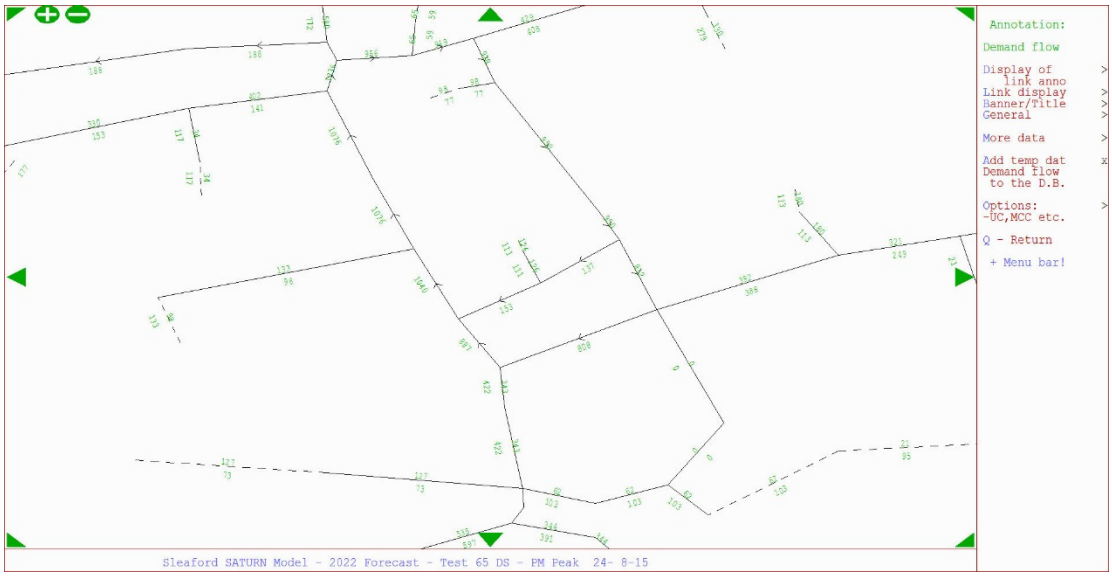
Option 4B 2022 PM



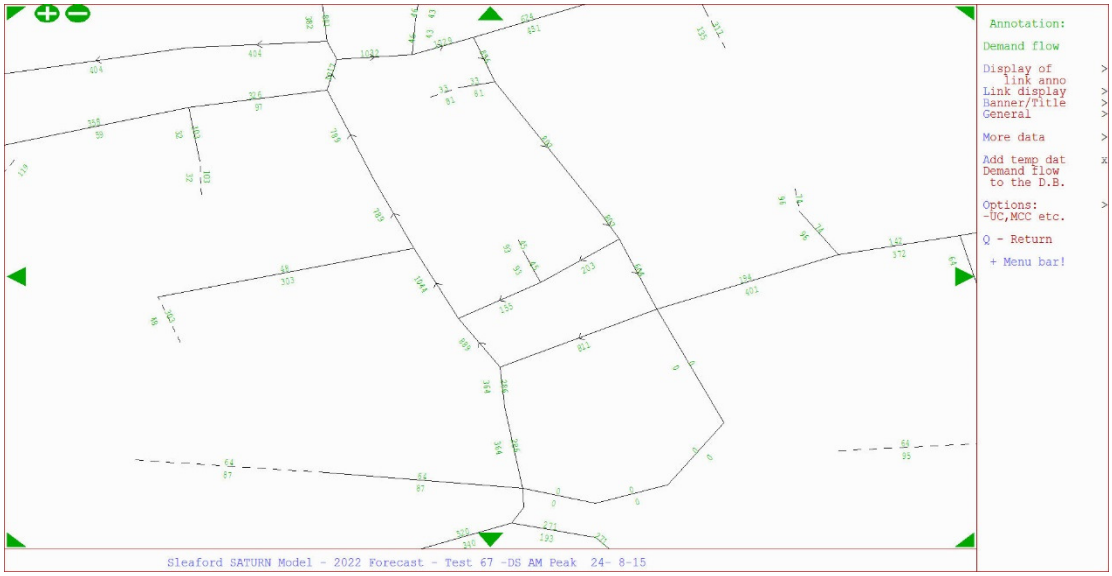
Option5 2022 AM



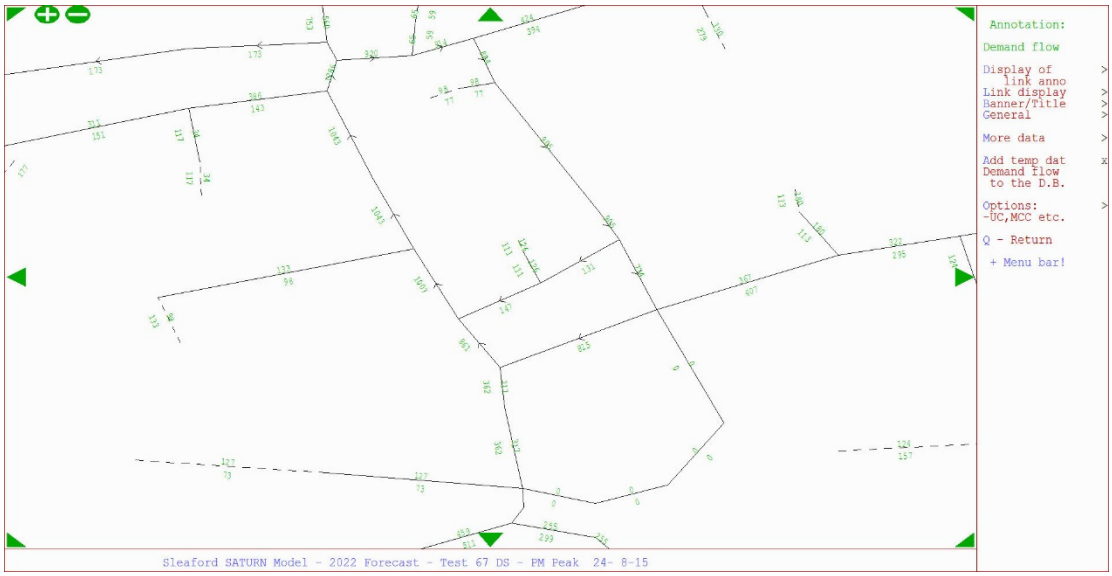
Option5 2022 PM



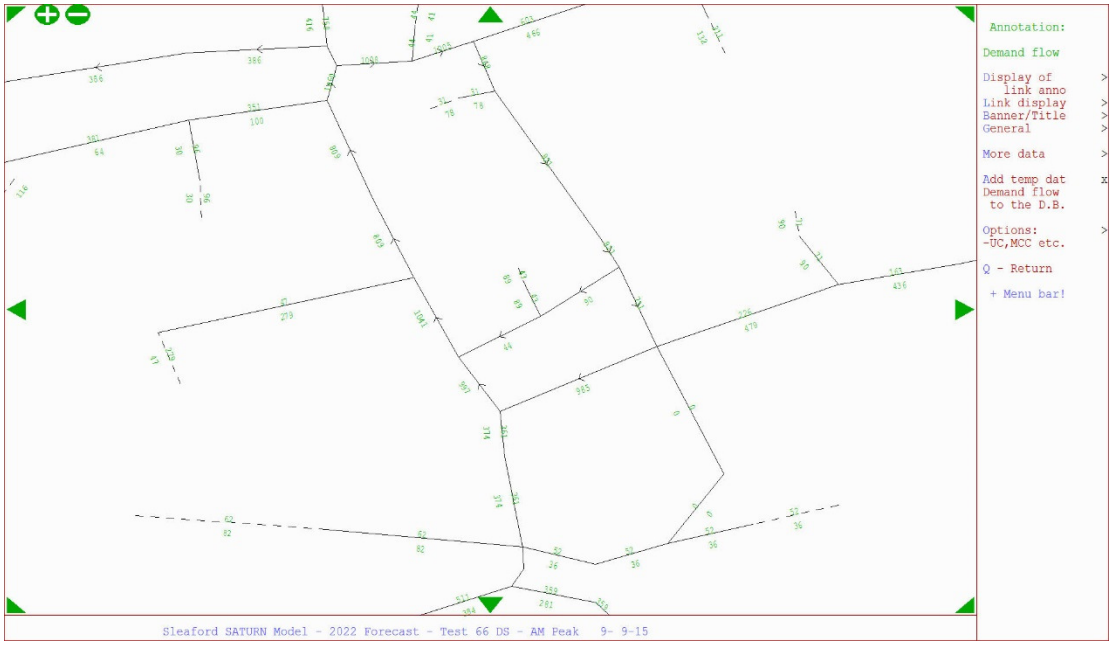
Option6 2022 AM



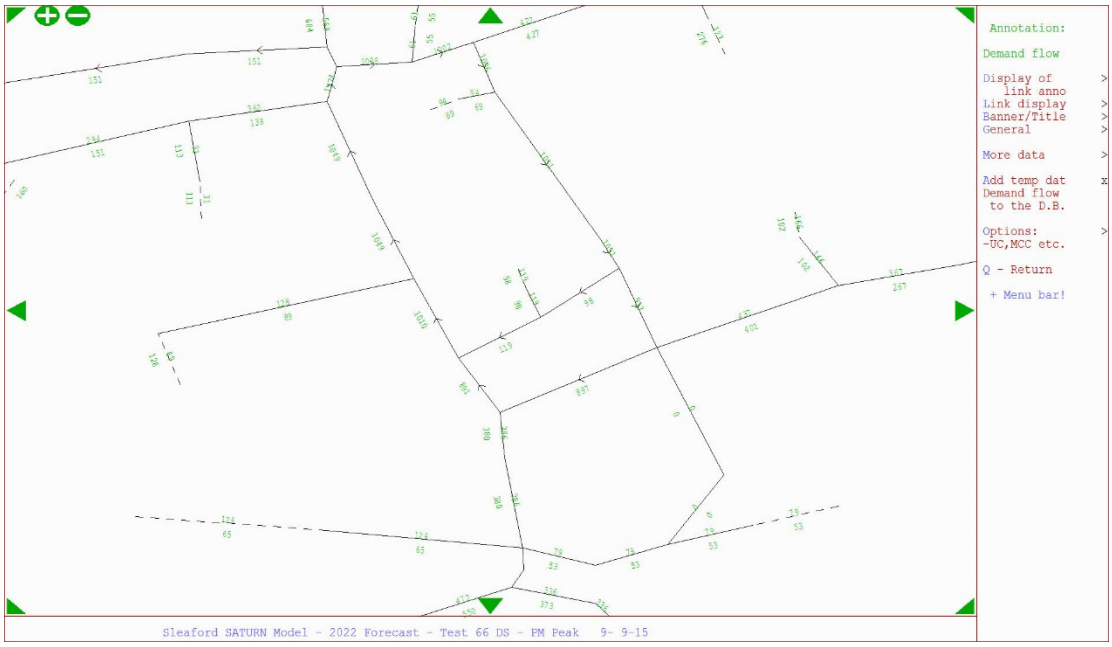
Option6 2022 PM



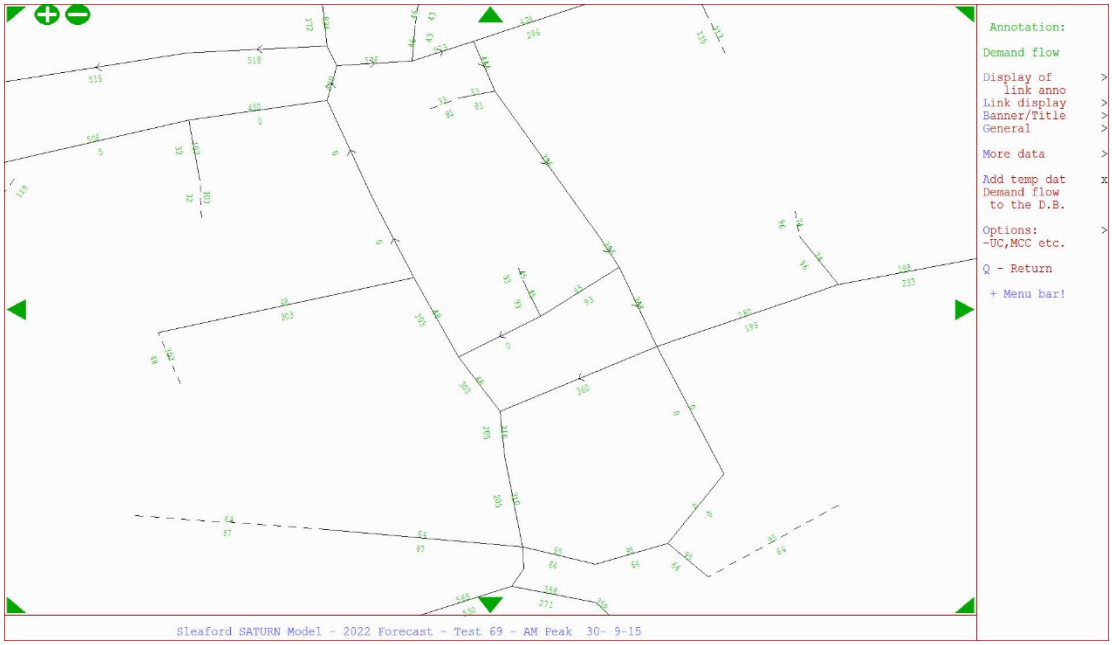
Option7 2022 AM



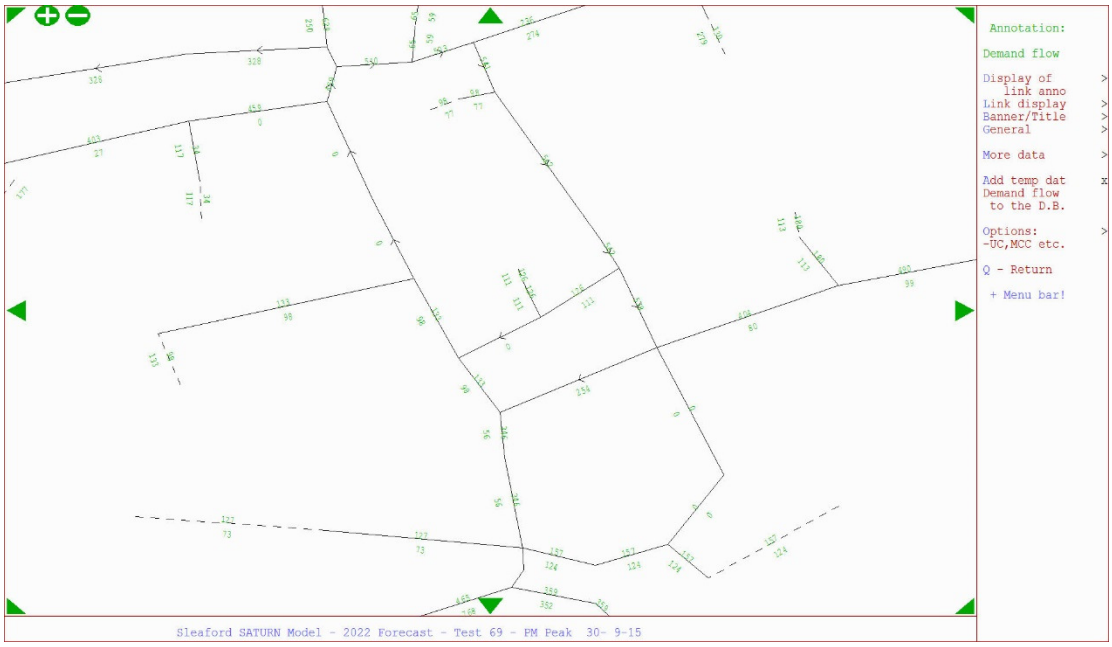
Option7 2022 PM



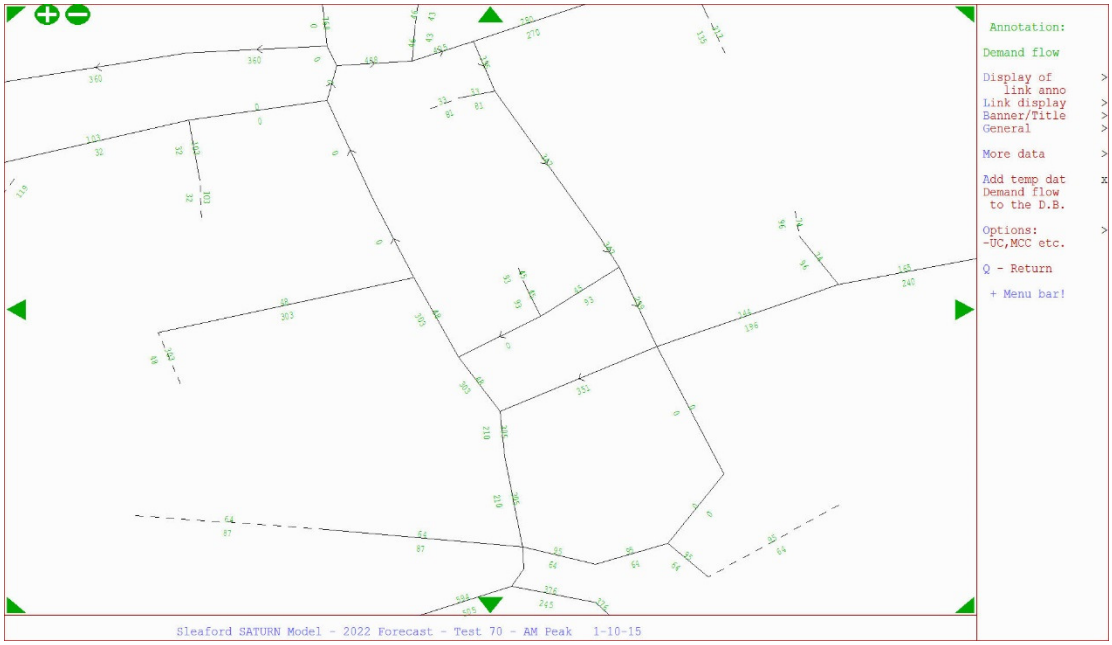
Option 9A 2022 AM



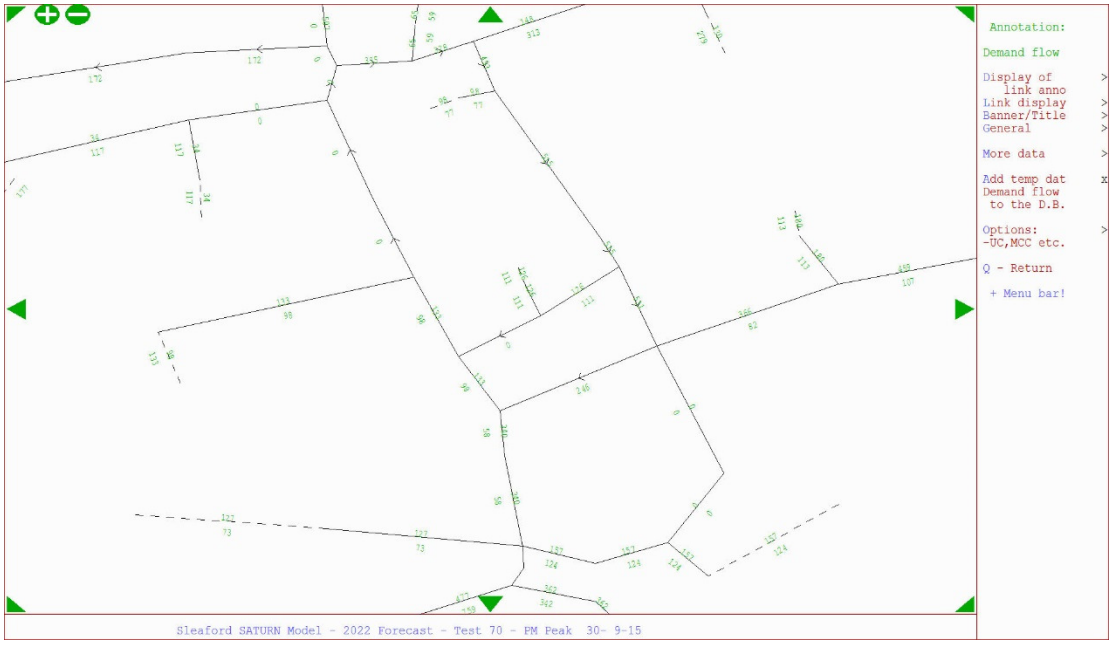
Option 9A 2022 PM



Option 9B 2022 AM



Option 9B 2022 PM



Appendix E – Junction Operation Summary

AM Peak hour 08:00-09:00
PM Peak hour 17:00-18:00

JUNCTION OPERATION SUMMARY

	Junction Description	Arm From	Arm To	Reference Case A0		Reference Case A1		Reference Case B		Option 1		Option 2		Option 3		Option 4A		Option 4B		Option 5		Option 6		Option 7		Option 9A		Option 9B	
				AM peak hr	PM peak hr	AM peak hr	PM peak hr	AM peak hr	PM peak hr	AM peak hr	PM peak hr	AM peak hr	PM peak hr	AM peak hr	PM peak hr	AM peak hr	PM peak hr	AM peak hr	PM peak hr	AM peak hr	PM peak hr	AM peak hr	PM peak hr	AM peak hr	PM peak hr	AM peak hr	PM peak hr	AM peak hr	PM peak hr
J1	Grantham Road/King Edward Street																												
	Grantham Road W	Arm A	Arm B	48	37	37	33	35	25	38	30	36	27	36	30	37	37	38	36	37	32	39	26	37	27	38	36	41	36
			Arm C	38	43	33	43	24	31	25	35	24	31	32	42	33	50	32	50	33	42	30	33	31	34	43	50	43	57
	King Edward St	Arm B	Arm A	59	106	43	70	31	51	37	70	37	71	42	67	45	83	43	82	42	69	37	65	36	56	58	80	74	105
			Arm C	20	106	17	42	10	21	14	36	14	34	16	37	18	37	19	46	17	42	16	30	13	25	27	53	28	105
	Grantham Road E	Arm C	Arm A	39	35	40	34	33	24	32	35	31	35	39	33	39	34	39	33	39	34	32	31	36	31	53	42	54	44
			Arm B	43	23	24	15	13	15	14	19	14	19	24	15	22	18	23	17	24	15	14	14	19	16	53	26	40	28
J2	Eastgate/Carre Street																												
	Eastgate W	Arm A	Arm B	85	51	76	43	64	43	78	51	98	75	72	45	101	78	98	73	72	44	67	45	64	44	42	22	29	14
			Arm C	54	65	51	64	53	74	49	51	96	72	52	65	101	70	96	66	49	64	52	62	51	73	17	30	15	20
	Eastgate E	Arm B	Arm A	0	0	0	0	0	0	0	0	59	61	0	0	64	96	80	82	0	0	0	0	0	0	0	0	0	0
			Arm C	84	72	82	69	87	76	89	78	40	33	92	72	45	80	66	60	93	73	84	71	90	77	55	48	49	55
	Carre Street	Arm C	Arm A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Arm B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
J3	Mareham Lane/Maltings Way																												
	Mareham Lane N	Arm A	Arm B	73	90	62	71	1	2	108	108	108	108	63	71	61	67	62	68	63	70	35	32	67	68	62	76	63	74
			Arm C	37	91	30	72	6	16	108	108	108	108	31	72	30	70	31	70	31	71	31	59	24	70	33	82	42	82
			Arm D	21	89	15	70	0	0	108	108	108	108	16	70	15	66	15	67	16	69	10	49	14	65	16	74	16	72
	Malting Way	Arm B	Arm A	39	21	39	21	1	1	106	81	108	105	39	21	39	21	39	21	39	21	20	13	39	21	38	19	34	19
			Arm C	8	5	8	5	0	0	106	55	108	105	8	5	8	5	8	5	8	5	0	0	7	5	9	8	14	9
			Arm D	0	0	0	0	0	0	106	25	108	105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Mareham Lane S	Arm C	Arm A	69	39	60	36	15	9	106	55	109	51	66	36	58	35	63	35	66	36	47	33	57	32	62	32	57	32
			Arm B	16	5	31	8	0	0	106	84	109	77	35	8	30	8	33	8	35	8	1	1	13	7	32	9	30	9
			Arm D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Access Road	Arm D	Arm A	0	0	0	0	0	0	78	40	91	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Arm B	0	0	0	0	0	0	69	19	88	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Arm C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
J4	Boston Road/Southgate																												
	Boston Road E	Arm A	Arm B	31	37	22	24	20	22	5	4	5	4	19	21	20	21	58	66	18	19	16	18	20	22	35	31	35	30
			Arm C	23	19	30	26	35	28	49	40	20	20	25	27	8	4	34	45	23	25	28	27	34	28	18	7	17	7
	Southgate S	Arm B	Arm A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	24	0	0	0	0	0	0	0	0	0	0
			Arm C	48	54	31	35	32	32	10	15	6	11	28	32	28	30	14	15	29	33	28	31	32	32	18	5	17	5
	Southgate N	Arm C	Arm A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Arm B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	12	4	12
J5	Southgate/Watergate																												
	Southgate S	Arm A	Arm B	29	92	23	67	23	61	28	61	10	20	19	65	7	112	7	27	19	60	21	62	23	62	0	0	0	0
			Arm C	71	98	65	92	65	90	67	87	24	63	59	91	49	112	16	84	57	89	62	90	64	90	0	0	0	0
	Watergate	Arm B	Arm A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Arm C	92	104	65	84	61	76	68	85	51	111	62	84	113	123	51	116	63	83	58	82	62	77	55	63	0	0
	Southgate N	Arm C	Arm A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Arm B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
J6	Southgate/Northgate/Eastgate																									0	0	0	0
	Southgate S	Arm A	Arm B	30	42	30	44	31	39	31	44	59	99	27	43	46	77	46	88	28	43	29	43	30	39	8	13	0	0
			Arm C	43	44	32	35	30	37	32	32	84	101	31	36	104	104	99	103	30	34	29	33	30	37	14	12	0	0
	Northgate	Arm B	Arm A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Arm C	88	55	79	54	67	64	79	54	54	39	75	57	53	49	53	41	73	56	71	56	67	64	29	25	33	25
	Eastgate	Arm C	Arm A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Arm B	0	0	0	0	0	0	0	0	25	31	0	0	27	30	32	24	0	0	0	0	0	0	0	0	0	0
J7	Grantham Road/Mareham Lane/Southgate																												
	Grantham Road	Arm A	Arm B	52	52	36	29	33	27	0	0	0	0	36	28	37	25	36	33	37	29	35	27	32	24	34	19	32	19
			Arm C	30	38	29	31	16	23	38	32	39	32	27	31	28	27	28	29	27	30	26	23	27	28	33	29	32	28
	Southgate	Arm B	Arm A	55	63	30	29	37	28	0	0	0	0	28	29	30	27	29	26	28	28	32	29	29	27	38	30	39	30
			Arm C	30	17	19	6	12	6	0	0	0	0	21	6	19	8	20	8	21	6	10	5	20	7	11	5	11	5
	Mareham Lane	Arm C	Arm A	28	78	32	89	23	58	23	57	22	65	32	88	33	100	32	100	32	91	23	74	31	82	41	107	36	103
			Arm B	28	58	15	40	16	22	0	0	0	0	17	41	13	25	16	25	17	38	10	23	17	42	4	4	4	4
J8	Carre Street/Boston Road																												
	Boston Road	Arm A	Arm B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Arm C	77	81	75	67	45	37	92	67	52	46	55	63	55	41	76	82	47	52	53	55	45	38	25	11	26	11
			Arm D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Aldion Terrace	Arm B	Arm A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Arm C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Arm D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Southgate	Arm C	Arm A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	38	0	0	0	0	0	0	0	0	0	0
			Arm B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Arm D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Carre Street	Arm D	Arm A	59	96	52	90	18	37	90	109	17	48	57	98	13	33	13	23	52	96	47	91	18	36	43	96	34	88
			Arm B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Arm C	99	108	93	104	41	41	74	72	15	23	96	103	26	35	37	45	96	102	99	101	41	41	40	42	37	39

	Junction Description	Arm From	Arm To	Reference Case A0		Reference Case A1		Reference Case B		Option 1		Option 2		Option 3		Option 4A		Option 4B		Option 5		Option 6		Option 7		Option 9A		Option 9B	
				AM peak hr	PM peak hr	AM peak hr	PM peak hr	AM peak hr	PM peak hr	AM peak hr	PM peak hr	AM peak hr	PM peak hr	AM peak hr	PM peak hr	AM peak hr	PM peak hr	AM peak hr	PM peak hr	AM peak hr	PM peak hr	AM peak hr	PM peak hr	AM peak hr	PM peak hr	AM peak hr	PM peak hr	AM peak hr	PM peak hr
J9	Boston Road/SESSR																												
	Boston Road E	Arm A	Arm B	0	0	0	0	0	0	0	0	34	71	0	0	34	109	83	81	0	0	0	0	0	0	0	0	0	0
			Arm C	17	29	14	27	14	33	13	10	11	84	11	22	10	109	62	85	11	24	9	22	14	32	17	42	14	40
			Arm D	0	0	0	0	0	0	28	49	31	90	6	13	1	2	12	38	4	7	4	12	0	0	0	0	0	0
	SESRR N	Arm B	Arm A	0	0	0	0	0	0	0	0	18	14	0	0	19	24	14	19	0	0	0	0	0	0	0	0	0	0
			Arm C	0	0	0	0	0	0	0	0	29	36	0	0	22	46	22	41	0	0	0	0	0	0	0	0	0	0
			Arm D	0	0	0	0	0	0	0	0	36	81	0	0	7	25	6	16	0	0	0	0	0	0	0	0	0	0
	Boston Road W	Arm C	Arm A	48	42	47	33	38	24	85	65	33	10	102	81	44	14	36	16	103	82	104	67	39	24	20	8	21	9
			Arm B	0	0	0	0	0	0	0	0	33	23	0	0	43	31	48	28	0	0	0	0	0	0	0	0	0	0
			Arm D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SESRR S	Arm D	Arm A	0	0	0	0	0	0	56	40	34	36	8	11	5	5	4	5	0	0	8	12	0	0	0	0	0	0
			Arm B	0	0	0	0	0	0	0	0	48	102	0	0	4	13	5	12	0	0	0	0	0	0	0	0	0	0
			Arm C	0	0	0	0	0	0	40	72	25	102	2	15	1	6	1	5	2	8	2	13	0	0	0	0	0	0
J10	London Road/Grantham Road																												
	Grantham Road E	Arm A	Arm B	25	53	14	25	16	23	8	36	8	48	14	26	15	26	14	26	14	25	13	22	14	25	15	18	14	19
			Arm C	33	56	26	36	23	24	18	43	17	48	25	35	26	37	25	37	25	36	22	33	25	32	37	46	34	45
	London Road	Arm B	Arm A	81	82	54	55	39	48	40	31	41	35	54	54	55	45	53	53	54	56	49	44	47	47	43	32	45	32
			Arm C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Grantham Road W	Arm C	Arm A	35	43	31	29	24	22	23	22	23	20	30	29	31	28	31	32	31	29	30	26	30	26	39	31	36	31
			Arm B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
J11	London Road/North Site Access																												
	London Road N	Arm A	Arm B	14	24	14	20	16	18	14	24	13	27	14	19	15	21	14	20	14	20	9	16	14	18	15	19	15	15
			Arm C	14	15	13	9	11	8	9	8	9	10	12	10	13	9	13	9	12	9	16	12	12	9	15	7	16	10
	North Site Access	Arm B	Arm A	72	47	73	38	63	46	65	33	63	33	72	39	78	37	74	36	72	39	49	33	64	44	81	35	64	33
			Arm C	22	20	16	24	21	19	17	23	19	23	17	23	12	22	15	24	17	23	2	2	22	20	11	22	5	19
	London Road S	Arm C	Arm A	11	13	6	13	5	12	3	6	4	6	7	12	7	11	6	13	6	13	7	20	5	12	6	11	8	12
			Arm B	7	21	4	20	4	22	4	16	4	14	5	20	3	16	4	19	5	20	1	2	5	22	3	12	3	7
J12	London Road/South Site Access																												
	London Road N	Arm A	Arm B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Arm C	12	8	12	5	10	5	8	4	9	5	12	6	12	6	12	6	12	5	0	0	11	5	14	4	15	8
	South Site Access	Arm B	Arm A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Arm C	11	6	11	5	11	5	11	5	12	5	11	5	11	5	11	5	11	5	0	0	11	5	12	5	33	10
	London Road S	Arm C	Arm A	8	11	4	13	3	10	2	5	2	5	5	12	5	12	5	13	5	12	0	0	4	10	4	12	7	15
			Arm B	2	3	3	6	1	5	3	4	3	4	3	5	3	8	3	7	3	6	0	0	2	5	3	12	3	21
J13	Town Road/London Road																												
	London Road S	Arm A	Arm B	1	1	1	2	1	2	1	2	1	1	1	2	1	2	1	2	1	2	2	5	1	2	1	2	1	2
			Arm C	8	10	3	10	3	8	1	3	1	3	5	9	4	9	4	10	4	10	4	17	3	8	3	9	5	10
	Town Road	Arm B	Arm A	7	2	6	2	6	1	6	2	6	2	7	2	7	2	6	2	7	2	11	7	6	1	8	2	9	3
			Arm C	18	40	12	39	10	43	12	31	13	28	12	39	10	29	11	37	12	39	7	8	13	43	10	24	10	15
	London Road N	Arm C	Arm A	12	9	11	6	9	5	7	3	7	4	10	6	11	6	11	6	10	5	14	8	10	5	12	4	13	7
			Arm B	25	28	17	31	22	25	18	29	20	29	19	30	14	29	17	31	18	30	5	9	23	27	13	28	8	24
J14	Northfield Road/Grantham Road																												
	Grantham Road E	Arm A	Arm B	3	2	4	3	3	2	3	3	3	3	4	2	3	3	4	3	4	3	2	2	3	2	0	4	91	1
			Arm C	71	46	77	50	63	34	71	52	67	52	76	49	82	62	78	55	76	50	60	43	64	40	89	71	100	85
	Northfield Road	Arm B	Arm A	9	1	10	1	7	1	8	1	7	1	9	1	1	2	10	1	10	1	6	2	8	1	1	2	1	0
			Arm C	83	43	86	55	73	35	82	55	78	55	86	52	91	69	88	59	86	53	34	16	73	39	95	77	102	87
	Grantham Road W	Arm C	Arm A	53	80	50	85	35	75	45	75	42	67	49	84	51	86	50	86	50	85	41	57	41	78	59	88	67	86
			Arm B	45	80	45	86	27	72	41	80	39	74	44	85	43	89	43	88	44	86	21	32	33	76	50	93	62	93
J15	A15/Silk Willoughby																												
	A15 N	Arm A	Arm B	1	5	1	5	1	3	2	6	2	5	1	5	1	6	1	6	1	5	0	0	1	3	2	10	1	20
			Arm C	19	21	17	20	21	20	17	21	17	21	17	20	17	21	17	20	17	20	16	15	21	20	16	19	15	18
	Silk Willoughby	Arm B	Arm A	5	1	5	1	4	1	5	1	5	1	4	1	6	2	5	1	4	1	0	0	4	1	8	2	40	11
			Arm C	32	25	29	17	29	17	21	13	22	15	29	17	30	17	29	17	29	17	22	11	30	17	32	13	37	19
	A15 S	Arm C	Arm A	23	21	22	21	23	21	20	20	21	20	22	21	22	20	21	21	22	21	17	18	24	22	23	21	21	20
			Arm B	22	27	12	27	11	27	7	15	8	16	15	25	14	29	13	28	14	26	8	15	13	24	10	30	16	31
J16	Grantham Road/ A15 Roundabout																												
	Grantham Road E	Arm A	All	76	67	82	75	69	40	78	76	75	76	82	74	85	86	82	79	82	75	59	58	69	46	91	94	96	102
	A15 S	Arm B	All	37	28	37	28	32	21	33	32	31	32	37	28	40	35	38	32	38	28	0	0	34	23	45	42	51	46
	Grantham Road W	Arm C	All	50	55	51	60	38	43	46	58	43	57	49	60	52	64	51	62	49	60	40	48	40	47	58	69	73	73
	A15 N	Arm D	All	80	85	83	87	59	94	81	87	81	84	81	87	82	92	83	91	81	87	68	74	64	95	81	84	82	87
J17	Holdingham Roundabout																												
	A17 E	Arm A	All	92	109	100	110	74	105	101	110	98	106	101	110	95	108	97	108	101	110	96	105	79	105	103	123	101	123
	Lincoln Road	Arm B	All	106	89	107	92	74	95	108	89	113	100	105	89	113	94	110	98	104	88	101	88	81	94	96	53	87	48
	A15 S	Arm C	All	103	95	100	100	104	74	101	100	102	100	102	100	101	100	100	100	102	100	105	91	105	80	102	100	100	100
	A17 W	Arm D	All	105	100	109	103	104	80	109	103	109	108	110	102	110	103	110	103	110	101	104	103	104	84	110	103	110	103
	A15 N	Arm E	All	108	107	110	108	108	107	110	108	110	108	110	108	110	109	110	108	110	108	108	107	108	107	111	109	111	110
J18	SWQ / A15 Roundabout																												
	A15 N	Arm A	All	87	98	91	100	0	0	89	100	89	98	89	100	89	100	90	100	89	100	78	89	0	0	86	94	83	94
	SWQ Access	Arm B	All	66	48	66	48	0	0	66	48	66	48	66	48	66	48	66	48	66	48	66	48	0	0	66	48	66	48
	A15 S	Arm C	All	82	85	90	93	0	0	88	93	87	94	89	94	91	100	91	97	89	93	66	79	0	0	94	100	100	100