



**PROPOSED CHANGE OF LAND USE
BARNLEY 110,
PARK SPRINGS INDUSTRIAL ESTATE,
FERRYMOOR WAY, BARNLEY**

TRANSPORT STATEMENT

DECEMBER 2020

REPORT REF: 26178-08-TS-01



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FERRYMOOR WAY, BARNLEY**

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REPORT REF: 26178-08-TS-01

CLIENT: Countrywide Healthcare Supplies Ltd

ENGINEER: Mewies Engineering Consultants
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APPENDICES

- A. SITE RED LINE PLAN
- B. TRICS DATA FOR EXISTING LAND USE
- C. TRICS DATA FOR PROPOSED LAND USE

1.0 INTRODUCTION

- 1.1 Mewies Engineering Consultants Ltd (M-EC) has been commissioned by Countrywide Healthcare Supplies Ltd to produce a Transport Statement (TS) for a proposed change of use planning application at Barnsley 110, Park Springs Industrial Estate. The broad extent of the site is outlined in red within Figure 1, with a formal red line plan attached within Appendix A.

Figure 1: Contextual Site Location Plan



© Google Maps

- 1.2 The site is located within the unitary authority of Barnsley Metropolitan Borough Council (BMBC), who act as both the Local Planning Authority and the Local Highway Authority for the area. This report has therefore been prepared in accordance with the council's design guidance.

Methodology

- 1.3 This TS has been prepared in accordance with the National Planning Policy Framework (NPPF) and seeks to demonstrate that:

- Appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;
- Safe and suitable access to the site can be achieved for all users; and
- Any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.

1.4 In addition to the above, this report has been prepared with reference to the following national policy/guidance documents:

- National Planning Policy Framework (February 2019);
- Inclusive Mobility - A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure;
- Design Manual for Roads and Bridges, and;
- Manual for Streets / Manual for Streets 2.

Report Structure

1.5 This TS report will review all existing and proposed highway elements, providing appropriate conclusions in order to assess the impact of proposed development upon the local highway network. As structure of this report is as follows:

- A review of the existing site, alongside the local highway network, collision records and accessibility are covered within Section 2.0;
- The development proposals, which include for: development quantum, the proposed site access and car parking arrangements are included within Section 3.0;
- Analysis of the projected vehicle movements associated with the development proposals and their impact upon the highway network will be outlined within Section 4.0;
- A summary of all findings will be presented in the conclusions in Section 5.0.

Legality

1.6 M-EC has completed this report for the benefit of the individuals referred to in paragraph 1.1 and any relevant statutory authority which may require reference in relation to approvals for the proposed development. Other third parties should not use or rely upon the contents of this report unless explicit written approval has been gained from M-EC.

1.7 M-EC accepts no responsibility or liability for:

- a) The consequence of this documentation being used for any purpose or project other than that for which it was commissioned;
- b) The issue of this document to any third party with whom approval for use has not been agreed.

2.0 EXISTING SITE & HIGHWAY CONDITIONS

Existing Site

- 2.1 The development site, which is irregular in shape, is located circa 6.4km to the northeast of Barnsley, and 5km to the southwest of Hemsworth. The site currently comprises an existing factory building which was home to Sash Products UK Ltd, with a Gross Floor Area (GFA) of 10,235sq.m. A parking area is located to the front of the site which can cater for 140 vehicles, with storage areas/a service yard situated to the side and rear of the factory building.
- 2.2 The site is bound to the north by greenfield land and Ferrymoor Lane, with Engine Lane running parallel with the eastern boundary of the site. Ferrymoor Way forms the immediate southern boundary of the site with Cudworth Common located to the west of the site and beyond the Ferrymoor Way carriageway.
- 2.3 Access into the site is currently available directly off Ferrymoor Way via the existing priority-controlled T-junction which serves the site. The access, which has been designed in accordance with the use of the site, has private gates which open inward, offset approximately 18m from Ferrymoor Way. Photograph 1 outlines the existing access arrangements.

Photograph 1: Existing Site Access



© Google (Image May 2016)

Existing Highway Network

Ferrymoor Way

- 2.4 Ferrymoor Way is a 'C' Classified road, subject to a 30mph speed limit. The carriageway, which measures approximately 6.75m in width, has shared footways/cycleways of circa 2.5m in width either side. Tactile paving is also located at the junctions which surround the site, with the footways adjacent to the site being street-lit.

Road Collision Data

- 2.5 Personal Injury Collision (PIC) data has been obtained from Crashmap.co.uk for collisions recorded by local police forces using the STATS19 form. The results have been obtained for the most recently available five-year period (01/01/2015 to 31/12/2019) and indicate that four collisions occurred within close proximity of the site over the five-year period. Image 1 outlines the location of these collisions, with yellow markers indicating a 'slight' collision, with red markers outlining a 'serious collision'. No fatal collisions were recorded during the study period.

Image 1: Collision Records

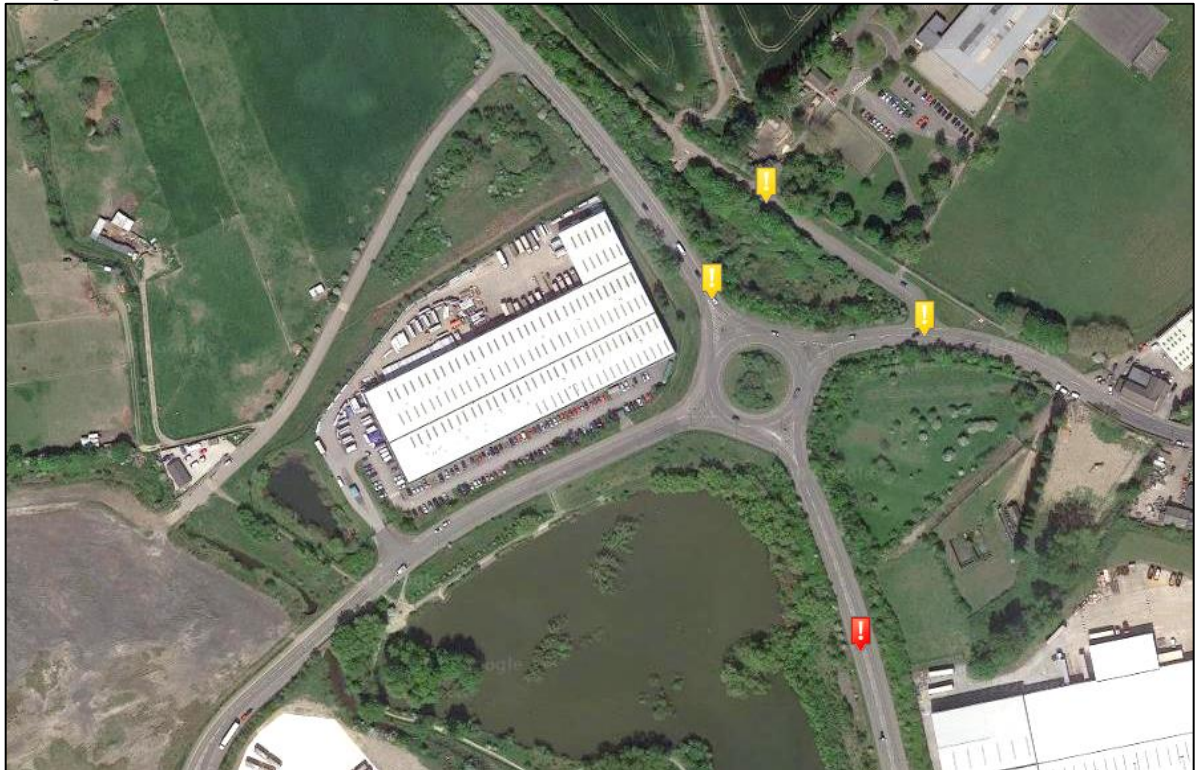


Image Source: Crashmap.co.uk (yellow 'slight', red 'serious')

- 2.6 The serious collision identified along Park Spring Road, occurred during the summer of 2019 and involved a single vehicle. The other three collisions, which were recorded as slight in severity, occurred between 2015 and 2016, with one of these collisions being a single vehicle, with the other two involving two vehicles.

- 2.7 Upon reviewing the collisions, with only four collisions occurring within the study area over the five-year period, all of which were situated within different locations along the highway network, it is considered that there are no highway safety issues within the study area which will be exacerbated by the proposed change in land use at the site.

Site Sustainability

- 2.8 Given the existing land use at the site, it is considered that the development is located within a suitable location for employment use. Residential areas within Grimethorpe are located within a 1km distance of the site, with additional facilities and amenities located within Grimethorpe which could be utilised by employees.
- 2.9 The site is well catered for in regards to pedestrian and cycle infrastructure, with a shared footway/cycleway located along both sides of Ferrymoor Way. This route links with the footways and cycleways along Engine Road, Park Spring Road and High Street, the latter of which provides access into Grimethorpe.
- 2.10 A series of Public Rights of Way are also located within close proximity of the site, with many of these providing access in and around Cudworth Common.

Public Transport Infrastructure

Bus

- 2.11 The nearest bus stops to the site, are located along Engine Lane, circa 200m walking distance from the centre of the site. Both bus stops are of flag-and-pole design, with timetable information provided. A summary of the services operating at these stops is provided within Table 1.

Table 1: Summary of Public Transport Services

Service	Operating Days	Operating Times *	Frequency (up to)	Route	Provider
28/28c	Mon – Fri	05:40 – 22:43	30 Minutes	Barnsley - Pontefract	Stagecoach
	Sat	06:41 – 22:43			
	Sun	05:44 – 22:43	Hourly		
37	Mon - Fri	09:21 – 15:21		Barnsley - Grimethorpe	R & S Waterson Ltd
38	Mon - Fri	08:34 – 14:59		Grimethorpe - Barnsley	
	Sat	08:34 – 14:04			

Timetable data taken from 'traveline.info' accessed 01/12/2020

- 2.12 The above bus timetable information demonstrates that employees will be able to use the easily accessible bus services along Engine Lane and High Street as a possible commute to and from work.

Rail

- 2.13 Barnsley Railway Station is the nearest station to the site, located approximately 9.8km to the southwest of the site when measured along potential travel routes. The station can be most easily

accessed by utilising the aforementioned bus services within Table 1, which stop at the bus interchange adjacent to the station.

2.14 The station, which is managed by Northern Railway, provides 76 vehicle spaces with 24 sheltered cycle storage spaces.

2.15 A summary of the key services operating from Barnsley Railway Station are provided below:

- Sheffield – Circa one every 30 minutes. Approximate 28-minute journey time.
- Leeds – Circa one every 30 minutes. Approximate 55-minute journey time.
- Huddersfield – Circa one every hour. Approximate 50-minute journey time.

2.16 Accessibility to the railway stations identified demonstrates that rail journeys are a realistic alternative travel mode for commuting employees.

Sustainability Conclusion

2.17 Upon reviewing the information within this chapter, the site can be described as being in accordance with Paragraph 103 of the NPPF which states;

'Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes.'

2.18 It is apparent that the proposed change of planning use would be accommodated by the existing infrastructure within the site's locale, with direct access to public transport links as well as existing amenities.

3.0 PROPOSED DEVELOPMENT

- 3.1 The development proposals are to change the current land use associated with the site from B2 (factory) to B8 (warehousing).

Vehicular Access

- 3.2 Access into the site will remain unchanged therefore, it is proposed to keep the existing priority access onto Ferrymoor Way. No changes will be made to the existing gates which are setback from the access, with no additional points of access onto the highway proposed.

- 3.3 Visibility splays in excess of 2.4m x 43m appear achievable from the existing site access, with the access width of circa 7.5m being suitable to cater for the anticipated vehicles which will use the site.

Pedestrian Access

- 3.4 Access into the site will be via the shared footway/cycle way along Ferrymoor Way, which links with the internal footway of the site.

Vehicle Parking

- 3.5 A review of the vehicle parking standards within BMBC's Supplementary Planning Document for Parking outlines for B8 land uses, approximately one vehicle space per 60sq.m should be provided for the first 300sq.m of development, with an additional space provided for every 100sq.m thereafter. The existing development of 10,235sq.m would therefore need to provide a minimum of 104 vehicle spaces. As outlined within this report, a greater number of vehicle spaces are available.

Cycle Parking

- 3.6 Cycle facilities are likely to be provided within the site associated with the current land use. These spaces will be utilised as part of the proposals.

Servicing

- 3.7 Suitable turning areas within the site will allow vehicles which are likely to use the site to safely enter/egress the site whilst travelling in a forward gear.

4.0 HIGHWAY IMPACT

Traffic Generation

Existing Site

- 4.1 As previously mentioned, the development site is currently occupied by an existing factory unit under the B2 land use, with a GFA of 10,235sq.m therefore, vehicle movements to and from the site will be occurring in association with business operations. The type of vehicles which currently use the site vary from cars to HGVs, both rigid and articulated.
- 4.2 Due to the impacts of Covid-19 and the government guidance in regards to home working, no traffic surveys have been undertaken of the site access and therefore, to determine vehicle movements associated with the current land use, an analysis of the Trip Rate Information Computer System (TRICS®), a computer program which assists in estimating trip rates to and from sites, has been undertaken.
- 4.3 A summary of the vehicle trip rates for the existing land use during the average weekday peak hours, using a GFA of 10,235sq.m, can be found within Table 2, with the full TRICS data available in Appendix B.

Table 2: Anticipated Development Vehicle Trip Rates and Generation (Existing Use)

	AM Peak (8am to 9am)			PM Peak (5pm to 6pm)		
	Arrival	Departure	Two-Way	Arrival	Departure	Two-Way
Trip Rates (per 100sq.m)	0.428	0.048	0.476	0.028	0.349	0.377
Vehicle Trips	44	5	49	3	39	42

- 4.4 The above table outlines that the existing land use at the site could yield 49 two-way vehicle trips during the generic AM peak period and 42 two-way vehicle trips during the generic PM peak period. This is in keeping with business operational hours likely to be experienced at the site.

Proposed Use

- 4.5 In order to ascertain the number of vehicle movements likely to be generated from the proposed development, further analysis of the TRICS database has been undertaken, using the same methodology and rates for the existing use. A summary of the likely projected vehicle trip rates can be found within Table 3, with the full TRICS data available in Appendix C.

Table 3: Anticipated Development Vehicle Trip Rates and Generation (Proposed Use)

	AM Peak (8am to 9am)			PM Peak (5pm to 6pm)		
	Arrival	Departure	Two-Way	Arrival	Departure	Two-Way
Trip Rates (per 100sq.m)	0.210	0.184	0.384	0.167	0.266	0.433
Vehicle Trips	21	19	40	17	27	44

- 4.6 It can be seen from the above that the proposed change in land use of the site would generate approximately 40 two-way vehicle movements during the generic AM peak period, and 44 two-way vehicle movements during the generic PM peak period, over a typical weekday.
- 4.7 Similar to the existing land use, the type of vehicles which will use the site will be cars and both rigid and articulated HGVs.

Site Comparison

- 4.8 A comparison of the vehicle trip generation during the generic AM and PM weekday peak periods are shown with in Table 4.

Table 4: Net Vehicle Trip Generation

	AM Peak (8am to 9am)			PM Peak (5pm to 6pm)		
	Arrival	Departure	Two-Way	Arrival	Departure	Two-Way
Existing Site	44	5	49	3	39	42
Proposed Development	21	19	40	17	27	44
Net (+/-) *	-23	+14	-9	+14	-12	+2

*Rounding has occurred

- 4.9 A review of the projected vehicle trip rates for the proposals outline that the change in use of the site could bring a reduction of nine vehicle movements during the generic AM peak period, with a slight increase of two vehicle trips during the generic PM peak period.
- 4.10 Given the forecasts provided, it is considered that the proposed development would have a negligible impact upon highway operations in comparison to the existing use of the site. The proposals should therefore not be refused on highway grounds as it is not considered to represent a severe impact in accordance with Paragraph 109 of the NPPF.

Vehicle Distribution

- 4.11 It is likely that the distribution of vehicles associated with the proposals will be similar to that of the existing land use. It is therefore likely vehicle movements will travel predominantly north and south of the site, along Engine Lane (towards the A628), and along Part Spring Road (towards the A635).
- 4.12 Give the use of the site, it is unlikely many vehicle movements will travel to and from Grimethorpe unless it is part of staff travel patterns.

5.0 CONCLUSION

5.1 This Transport Statement (TS) has been produced to provide information in support of for a proposed change of use planning application at Barnsley 110, Park Springs Industrial Estate.

5.2 The following points are considered of key relevance to transport matters:

- A review of available collision data supplied by crashmap.co.uk highlights that there are no road safety concerns within the study area.
- The site is well located in terms of access to local amenities and facilities by foot, cycle or public transport. Access to both residential areas and local facilities areas within a suitable commute via alternative transport modes other than use of the car.
- Access into the site will remain unchanged therefore, it is proposed to keep the existing priority access onto Ferrymoor Way. No changes will be made to the existing gates which are setback from the access, with no additional points of access proposed.
- Sufficient car parking provision will be provided within the site for the proposed change in land use, adhering to standards within BMBC's Supplementary Planning Document for Parking.
- The proposed change in land use of the site could bring a reduction of nine vehicle movements during the generic AM peak period, with a slight increase of two vehicle trips during the generic PM peak period. It is considered that the proposed development would have a negligible impact upon highway operations in comparison to the existing use of the site.
- Vehicle distributions from the site will be similar to those of the existing land use and therefore, the proposals are not considered to represent a severe impact upon the local highway network in accordance with Paragraph 109 of the NPPF.

5.3 Based on the information provided above and attached, it is considered that there are no highways or transportation reasons why the Local Highway Authority cannot provide an 'in principle' support for the proposed planning application.

APPENDIX A



TITLE NUMBER
SYK 419063



ORDNANCE SURVEY MAP REFERENCE:

SE4008NW

SCALE 1:2500

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APPENDIX B

Calculation Reference: AUDIT-350901-201202-1239

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST	
	WS WEST SUSSEX	1 days
03	SOUTH WEST	
	DV DEVON	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	1 days
08	NORTH WEST	
	CH CHESHIRE	2 days

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

Primary Filtering selection:

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

Parameter: Gross floor area
 Actual Range: 5070 to 20000 (units: sqm)
 Range Selected by User: 5000 to 20000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/12 to 19/09/16

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

Selected survey days:

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

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

Selected survey types:

Manual count	6 days
Directional ATC Count	0 days

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

Selected Locations:

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

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

Selected Location Sub Categories:

Industrial Zone	4
Development Zone	1
Out of Town	1

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

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Secondary Filtering selection:

Use Class:

B1	3 days
B2	1 days

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

Filter by Use Class Breakdown:

All Surveys Included

Population within 500m Range:

All Surveys Included

Population within 1 mile:

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

50,001 to 75,000	2 days
125,001 to 250,000	3 days
500,001 or More	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	2 days
1.1 to 1.5	3 days
1.6 to 2.0	1 days

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

Travel Plan:

Yes	1 days
No	5 days

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

PTAL Rating:

No PTAL Present	6 days
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This data displays the number of selected surveys with PTAL Ratings.

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LIST OF SITES relevant to selection parameters

1	CH-02-C-02	INDUSTRIAL MATERIALS	CESHIRE
	JUPITER DRIVE		
	CHESTER		
	CHESTER W. EMP. PARK		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	8100 sqm	
	Survey date: WEDNESDAY	19/11/14	Survey Type: MANUAL
2	CH-02-C-03	OFFICE FURNITURE	CESHIRE
	BRUNEL ROAD		
	MACCLESFIELD		
	LYME GREEN BUS. PARK		
	Edge of Town		
	Development Zone		
	Total Gross floor area:	6658 sqm	
	Survey date: MONDAY	19/09/16	Survey Type: MANUAL
3	DV-02-C-01	TUBE MANUFACTURE	DEVON
	PLYMBRIDGE ROAD		
	PLYMOUTH		
	ESTOVER		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	20000 sqm	
	Survey date: TUESDAY	17/07/12	Survey Type: MANUAL
4	WM-02-C-03	INDUSTRIAL GLASS	WEST MIDLANDS
	DOWNING STREET		
	SMETHWICK		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	5070 sqm	
	Survey date: TUESDAY	06/11/12	Survey Type: MANUAL
5	WS-02-C-02	AVIATION COMPANY	WEST SUSSEX
	MAYDWELL AVENUE		
	NEAR HORSHAM		
	SLINFOLD		
	Free Standing (PPS6 Out of Town)		
	Out of Town		
	Total Gross floor area:	11375 sqm	
	Survey date: THURSDAY	23/01/14	Survey Type: MANUAL
6	WY-02-C-02	FLUID SYSTEMS	WEST YORKSHIRE
	BROWN LANE WEST		
	LEEDS		
	HOLBECK		
	Suburban Area (PPS6 Out of Centre)		
	Industrial Zone		
	Total Gross floor area:	13350 sqm	
	Survey date: MONDAY	19/10/15	Survey Type: MANUAL

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

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Trip Rates for Key Periods		Trips per 100 sqm GFA	
Period	Inbound	Outbound	Total
0800-0900	0.428	0.048	0.476
1700-1800	0.028	0.349	0.377

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT

TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	2	12363	0.315	2	12363	0.020	2	12363	0.335
07:00 - 08:00	6	10759	0.297	6	10759	0.036	6	10759	0.333
08:00 - 09:00	6	10759	0.428	6	10759	0.048	6	10759	0.476
09:00 - 10:00	6	10759	0.135	6	10759	0.068	6	10759	0.203
10:00 - 11:00	6	10759	0.090	6	10759	0.067	6	10759	0.157
11:00 - 12:00	6	10759	0.051	6	10759	0.065	6	10759	0.116
12:00 - 13:00	6	10759	0.091	6	10759	0.127	6	10759	0.218
13:00 - 14:00	6	10759	0.161	6	10759	0.087	6	10759	0.248
14:00 - 15:00	6	10759	0.074	6	10759	0.136	6	10759	0.210
15:00 - 16:00	6	10759	0.050	6	10759	0.156	6	10759	0.206
16:00 - 17:00	6	10759	0.048	6	10759	0.338	6	10759	0.386
17:00 - 18:00	6	10759	0.028	6	10759	0.349	6	10759	0.377
18:00 - 19:00	6	10759	0.023	6	10759	0.144	6	10759	0.167
19:00 - 20:00	1	11375	0.044	1	11375	0.132	1	11375	0.176
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		1.835			1.773				3.608

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

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

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Parameter summary

Trip rate parameter range selected:	5070 - 20000 (units: sqm)
Survey date range:	01/01/12 - 19/09/16
Number of weekdays (Monday-Friday):	6
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
Surveys manually removed from selection:	0

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

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TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT

OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	2	12363	0.000	2	12363	0.000	2	12363	0.000
07:00 - 08:00	6	10759	0.011	6	10759	0.008	6	10759	0.019
08:00 - 09:00	6	10759	0.017	6	10759	0.012	6	10759	0.029
09:00 - 10:00	6	10759	0.019	6	10759	0.014	6	10759	0.033
10:00 - 11:00	6	10759	0.022	6	10759	0.020	6	10759	0.042
11:00 - 12:00	6	10759	0.012	6	10759	0.020	6	10759	0.032
12:00 - 13:00	6	10759	0.008	6	10759	0.011	6	10759	0.019
13:00 - 14:00	6	10759	0.017	6	10759	0.014	6	10759	0.031
14:00 - 15:00	6	10759	0.014	6	10759	0.008	6	10759	0.022
15:00 - 16:00	6	10759	0.011	6	10759	0.009	6	10759	0.020
16:00 - 17:00	6	10759	0.005	6	10759	0.014	6	10759	0.019
17:00 - 18:00	6	10759	0.002	6	10759	0.002	6	10759	0.004
18:00 - 19:00	6	10759	0.000	6	10759	0.000	6	10759	0.000
19:00 - 20:00	1	11375	0.000	1	11375	0.000	1	11375	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		0.138			0.132				0.270

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.

M-EC Wellington House Ibstock

Licence No: 350901

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT

CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	2	12363	0.008	2	12363	0.000	2	12363	0.008
07:00 - 08:00	6	10759	0.005	6	10759	0.000	6	10759	0.005
08:00 - 09:00	6	10759	0.003	6	10759	0.000	6	10759	0.003
09:00 - 10:00	6	10759	0.000	6	10759	0.000	6	10759	0.000
10:00 - 11:00	6	10759	0.000	6	10759	0.000	6	10759	0.000
11:00 - 12:00	6	10759	0.000	6	10759	0.000	6	10759	0.000
12:00 - 13:00	6	10759	0.000	6	10759	0.000	6	10759	0.000
13:00 - 14:00	6	10759	0.000	6	10759	0.000	6	10759	0.000
14:00 - 15:00	6	10759	0.006	6	10759	0.005	6	10759	0.011
15:00 - 16:00	6	10759	0.000	6	10759	0.003	6	10759	0.003
16:00 - 17:00	6	10759	0.002	6	10759	0.009	6	10759	0.011
17:00 - 18:00	6	10759	0.000	6	10759	0.009	6	10759	0.009
18:00 - 19:00	6	10759	0.000	6	10759	0.006	6	10759	0.006
19:00 - 20:00	1	11375	0.000	1	11375	0.000	1	11375	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.024			0.032			0.056

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.

APPENDIX C

Calculation Reference: AUDIT-350901-201202-1257

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : F - WAREHOUSING (COMMERCIAL)
TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	EX ESSEX	1 days
	HC HAMPSHIRE	1 days
	KC KENT	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	1 days

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

Primary Filtering selection:

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

Parameter: Gross floor area
 Actual Range: 6560 to 13200 (units: sqm)
 Range Selected by User: 5000 to 20000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/12 to 14/03/19

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

Selected survey days:

Thursday	2 days
Friday	2 days

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

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

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

Selected Locations:

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

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

Selected Location Sub Categories:

Industrial Zone	3
Commercial Zone	1

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

Secondary Filtering selection:

Use Class:

B8	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®.

Filter by Use Class Breakdown:

All Surveys Included

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Licence No: 350901

Secondary Filtering selection (Cont.):

Population within 500m Range:

All Surveys Included

Population within 1 mile:

10,001 to 15,000	1 days
15,001 to 20,000	2 days
20,001 to 25,000	1 days

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

Population within 5 miles:

125,001 to 250,000	3 days
250,001 to 500,000	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	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.

PTAL Rating:

No PTAL Present	4 days
-----------------	--------

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

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LIST OF SITES relevant to selection parameters

1	EX-02-F-01	SPORTS SUPPLEMENTS	ESSEX
	BRUNEL WAY		
	COLCHESTER		
	SEVERALLS INDUSTRIAL PK		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	6560 sqm	
	Survey date: FRIDAY	18/05/18	Survey Type: MANUAL
2	HC-02-F-02	LOGISTICS	HAMPSHIRE
	RUTHERFORD ROAD		
	BASINGSTOKE		
	Suburban Area (PPS6 Out of Centre)		
	Commercial Zone		
	Total Gross floor area:	13200 sqm	
	Survey date: THURSDAY	16/06/16	Survey Type: MANUAL
3	KC-02-F-02	COMMERCIAL WAREHOUSING	KENT
	MILLS ROAD		
	AYLESFORD		
	QUARRY WOOD		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	11200 sqm	
	Survey date: FRIDAY	22/09/17	Survey Type: MANUAL
4	WY-02-F-02	DISTRIBUTION COMPANY	WEST YORKSHIRE
	STAITHGATE LANE		
	BRADFORD		
	NEWHALL		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	10446 sqm	
	Survey date: THURSDAY	14/03/19	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 Rates for Key Periods		Trips per 100 sqm GFA	
Period	Inbound	Outbound	Total
0800-0900	0.210	0.174	0.384
1700-1800	0.167	0.266	0.433

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)

TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	1	10446	0.354	1	10446	0.172	1	10446	0.526
06:00 - 07:00	1	10446	0.565	1	10446	0.249	1	10446	0.814
07:00 - 08:00	4	10352	0.309	4	10352	0.184	4	10352	0.493
08:00 - 09:00	4	10352	0.210	4	10352	0.174	4	10352	0.384
09:00 - 10:00	4	10352	0.246	4	10352	0.145	4	10352	0.391
10:00 - 11:00	4	10352	0.155	4	10352	0.150	4	10352	0.305
11:00 - 12:00	4	10352	0.164	4	10352	0.184	4	10352	0.348
12:00 - 13:00	4	10352	0.167	4	10352	0.138	4	10352	0.305
13:00 - 14:00	4	10352	0.162	4	10352	0.210	4	10352	0.372
14:00 - 15:00	4	10352	0.147	4	10352	0.217	4	10352	0.364
15:00 - 16:00	4	10352	0.155	4	10352	0.191	4	10352	0.346
16:00 - 17:00	4	10352	0.155	4	10352	0.266	4	10352	0.421
17:00 - 18:00	4	10352	0.167	4	10352	0.266	4	10352	0.433
18:00 - 19:00	4	10352	0.072	4	10352	0.176	4	10352	0.248
19:00 - 20:00	1	10446	0.096	1	10446	0.249	1	10446	0.345
20:00 - 21:00	1	10446	0.105	1	10446	0.086	1	10446	0.191
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.229			3.057			6.286

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

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

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Parameter summary

Trip rate parameter range selected:	6560 - 13200 (units: sqm)
Survey date date range:	01/01/12 - 14/03/19
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

M-EC Wellington House Ibstock

Licence No: 350901

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)

OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	1	10446	0.077	1	10446	0.115	1	10446	0.192
06:00 - 07:00	1	10446	0.086	1	10446	0.163	1	10446	0.249
07:00 - 08:00	4	10352	0.056	4	10352	0.092	4	10352	0.148
08:00 - 09:00	4	10352	0.046	4	10352	0.089	4	10352	0.135
09:00 - 10:00	4	10352	0.070	4	10352	0.041	4	10352	0.111
10:00 - 11:00	4	10352	0.087	4	10352	0.051	4	10352	0.138
11:00 - 12:00	4	10352	0.072	4	10352	0.068	4	10352	0.140
12:00 - 13:00	4	10352	0.065	4	10352	0.039	4	10352	0.104
13:00 - 14:00	4	10352	0.036	4	10352	0.077	4	10352	0.113
14:00 - 15:00	4	10352	0.048	4	10352	0.065	4	10352	0.113
15:00 - 16:00	4	10352	0.065	4	10352	0.060	4	10352	0.125
16:00 - 17:00	4	10352	0.085	4	10352	0.060	4	10352	0.145
17:00 - 18:00	4	10352	0.109	4	10352	0.048	4	10352	0.157
18:00 - 19:00	4	10352	0.053	4	10352	0.029	4	10352	0.082
19:00 - 20:00	1	10446	0.019	1	10446	0.057	1	10446	0.076
20:00 - 21:00	1	10446	0.029	1	10446	0.048	1	10446	0.077
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.003			1.102			2.105

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.

M-EC Wellington House Ibstock

Licence No: 350901

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)

CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	1	10446	0.000	1	10446	0.000	1	10446	0.000
06:00 - 07:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
07:00 - 08:00	4	10352	0.000	4	10352	0.000	4	10352	0.000
08:00 - 09:00	4	10352	0.012	4	10352	0.000	4	10352	0.012
09:00 - 10:00	4	10352	0.000	4	10352	0.000	4	10352	0.000
10:00 - 11:00	4	10352	0.000	4	10352	0.000	4	10352	0.000
11:00 - 12:00	4	10352	0.000	4	10352	0.000	4	10352	0.000
12:00 - 13:00	4	10352	0.000	4	10352	0.000	4	10352	0.000
13:00 - 14:00	4	10352	0.000	4	10352	0.000	4	10352	0.000
14:00 - 15:00	4	10352	0.000	4	10352	0.002	4	10352	0.002
15:00 - 16:00	4	10352	0.000	4	10352	0.000	4	10352	0.000
16:00 - 17:00	4	10352	0.000	4	10352	0.002	4	10352	0.002
17:00 - 18:00	4	10352	0.000	4	10352	0.010	4	10352	0.010
18:00 - 19:00	4	10352	0.000	4	10352	0.002	4	10352	0.002
19:00 - 20:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
20:00 - 21:00	1	10446	0.000	1	10446	0.000	1	10446	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.012			0.016			0.028

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

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

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