

Technical Note

Project Name: Indurent Park, Knowsley

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Land to the East of Moorgate Point, Alchemy Way, Knowsley

Applicant's Response to National Highways comments

1 Introduction

- 1.1.1 This Technical Note has been prepared by Sweco, on behalf of Indurent Management Limited (the Applicant), and presents the written response to comments raised by National Highways (NH) in relation to a full planning application for development at "Land to the East of Moorgate Point", Knowsley Industrial Park (planning ref: 25/00464/FUL). This Note responds directly to requests for further information, raised by NH in its Planning Response (ref: NHPR 25-01 – NH/25/12694) dated 17/09/2025, and the additional detail provided in the WSP Transport Assessment Review – NW089 September 2025, issued under the same cover.
- 1.1.2 Each request for information has been addressed within this written response along with the provision of additional supporting information, as required.

2 NH Comments and Response

- 2.1.1 This section of the Note reproduces the requests for information / clarification, as detailed within NH letter and sets out Sweco's response to each. For ease of reference, the original requests are summarised below in **BOLD**.

As per Scoping requests, information should be provided on the current operation and existing conditions of the M57 Junction 4, noting the proposals at the junction due to come forward in the short term (it is stated that full signalisation of the junction circulatory and improvements for walking and cycling are to be implemented 2025 / 2026)

- 2.1.2 The potential impact of the proposed development has been considered for M57 J4. The TA demonstrates that the traffic generation arising from the proposed development has no material impact on the operational capacity of the M57 J4 roundabout, or at the adjacent M57

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J5 which provides access and egress from the A580 to the M57 north. It has therefore not been the subject of further operational assessment. In terms of sustainable transport infrastructure, the roundabout junction is 1.3 km walking distance from the site at its closest point, with no facilities or amenities along, or beyond, the route. As a large grade separated roundabout, the junction is also hostile to cyclists with no dedicated facilities and is bypassed by the national cycle route provided on Ribblers Lane.

- 2.1.3 As noted in the TA and re-iterated in the NH response, substantial improvement works are currently underway at the junction and the connected highway network which are expected to have a significant positive impact on its operation. Given the currently proposed programme (summer 2026) for completion of the works to M57 J4, the measures will be fully operational prior to the occupation of the proposed development. It is therefore not relevant to examine the existing layout.
- 2.1.4 In pre application consultations, Knowsley Council (KC) confirmed that significant modelling of the junction has been undertaken to validate the operational benefits of the improvements and this has comprised future year assessments including committed development and Local Plan allocations. As the application site is allocated and located within an identified Industrial Area growth zone in the Local Plan the estimated traffic arising has therefore already been included within the assessments undertaken by the Council.
- 2.1.5 Although pedestrian and cycle improvements are included within the wider improvement works, no facilities are planned on the M57 J4 roundabout itself.

No reference has been made to the Strategic Road Network: Planning for the Future (2023) document; it is recommended that the Transport Assessment is updated to include this Policy document identifying that this assessment presented has been written in adherence with Regional and Local policies

- 2.1.6 The Policy section of the TA presents the relevant national, regional and local policy affecting the proposed development. This demonstrates that the proposals align with these policies. The key document from the perspective of the assessment of impacts on the strategic highway network is the DfT Circular 01/2022 which has been included within this review.
- 2.1.7 The “Planning for the Future 2023” document sets out a vision to modernise and simplify the UK planning system. Its overarching intention is to streamline the process for new developments and to ensure community engagement and environmental protection.
- 2.1.8 The process encourages early engagement, so that measures can be considered during the design and planning of new developments from the outset. It also notes that minor developments or those with minimal expected impacts may be subject to a simpler, more proportionate review process, avoiding unnecessary delays.
- 2.1.9 It notes that the requirement for an impact assessment is generally triggered by the potential for significant effects on transport, environment, or infrastructure.
- 2.1.10 The developer team has engaged in pre-app discussions with KC as the planning and highways authority and NH as the strategic highway authority. The TA has therefore been

undertaken in accordance with and full cognisance of the Strategic Road Network: Planning for the Future (2023) document.

It has been noted as part of the LCRCA's LCWIP programme that Phase 2A of the A580 East Lancashire Road project will likely impact the site access in favour of walking and cycling to and from the site. It is recommended that this aspect be included within the Full Travel Plan, when that comes forward, for the site to encourage modal shift for workers and visitors to the site

2.1.11 The LCRCA's LCWIP is broken down into a number of stages, to reflect programme and funding commitments. Whilst it is noted that Stage 2 of the LCWIP is secured via Transforming Cities Funding (TCF), a business case is still being developed to enable funding submission should further funding opportunities arise. This point is referenced in both the TA and the ITP.

2.1.12 Reference can also be brought forward to be included within the Final TP, in due course, in agreement with KC and referenceable by NH, on request.

It was noted within Scoping discussions that a request was made by WSP that the GFA be confirmed by the TA rather than the presented GIA. The figures presented within the Transport Assessment and associated Appendix are presented in GIA rather than the requested GFA. This point is therefore still outstanding; Confirmation is required as to the vehicle trips generated by the proposed site for all three development scenarios as per GFA rather than GIA

2.1.13 Although it is acknowledged that Gross Floor Area (GFA) has been historically used as a defacto metric for building magnitude, across the transport industry, the RICS Code of Measuring Practice does not include Gross Floor Area (GFA) as a standard measurement. In order to ensure a unified set of metrics, it is now common to reference Gross Internal Area (GIA) across multiple disciplines throughout the planning application portfolio. GIA represents the largest possible "usable" floor area within a structure and is therefore useful in calculating a range of factors related to occupation.

2.1.14 GIA and GFA are largely similar although GFA can be interpreted in a number of ways, to either include or exclude the external wall build-up. However, for the purposes of this exercise, we interpret NH requirement is to include external walls in the calculations of GFA to give a higher area on which to calculate traffic generation. This approach more closely aligns with the RICS standardised metric of Gross External Area (GEA) which is therefore overly robust as it includes non-traffic generating space.

2.1.15 The adoption of GEA over GIA for a proxy of GFA, in the assessment of traffic generation, results in an increase in reported building footprint of 501 sqm across the full development, as detailed in Table 2-1.

Unit	GIA	GFA	Change
K135	11,966	12,262	+297
K72	6,418	6,622	+204

Table 2-1 - Change in Reported Floor Area (shown in metres squared [sqm])

- 2.1.16 Applying the revised areas to the trip rates identified within the TA results in the revised traffic generation numbers across the site as shown in Table 2-2. The value in brackets shows the uplift from the figures used within the TA.

Type	AM Peak			PM Peak		
	Arrivals	Departures	Total	Arrivals	Departures	Total
LGV	64(+2)	6(+0)	70	5(+0)	60(+1)	65
OGV	3(+0)	2(+0)	5	0(+0)	0(+0)	0
All Vehicles	67(+2)	8(+0)	75	6(+0)	60(+1)	65

Table 2-2 - Change in Trip Generation

- 2.1.17 Given the distribution of traffic across the wider highway network, the difference in traffic flows passing through junctions adjacent to the strategic network will be imperceptible from those reported in the TA.
- 2.1.18 The TA reports results arising from an all B2 development scenario as this provides the worst case scenario for traffic generation (i.e the highest number of trips) and therefore the greatest potential operational impact (See response below). As such, no additional assessment is required as an all B8, or B2/B8 mix of development would result in a lesser impact. The assessment is therefore robust and the actual impact is likely to be less than analysed but certainly not greater.

Confirmation is required as to if, using the trip rates presented, the figures demonstrated the highest number of vehicles and HGVs which may be generated by the site as per the three identified scenarios; Within the Transport Assessment for the 22/00348/FUL development, only the OGV TRICs outputs are provided. Confirmation is therefore required as to the origination of the Lights (LGV) trip rates.

- 2.1.19 It is noted NH requested an assessment of various B2/B8 use mixes for trip generation. As noted above, it is a generally accepted fact that B2 land uses result in significantly greater overall traffic generation than B8 uses. Therefore, in order to assess a worst case scenario for the proposals, a 100% B2 development scenario was adopted for assessment purposes within the TA.
- 2.1.20 However to satisfy NH request, the trip rates agreed with KC for use in the TA (approved via the recently consented adjacent B2 / B8 development at Knowsley Lane - reference

22/00348/FUL) are presented below in Table 2-3 The development was agreed by the Council to be an ideal comparator for the proposed development given its similar location, size and development mix.

Land Use	Vehicle	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
		Arrive	Depart	Two-way	Arrive	Depart	Two-way
B8	LGV	0.081	0.026	0.107	0.016	0.088	0.104
	OGV	0.036	0.04	0.076	0.033	0.019	0.052
	All Vehicles	0.117	0.066	0.183	0.049	0.107	0.156
B2	LGV	0.338	0.031	0.369	0.029	0.32	0.349
	OGV	0.015	0.013	0.028	0.001	0.001	0.002
	All Vehicles	0.353	0.044	0.397	0.03	0.321	0.351

Table 2-3 - Consented Trip Rates (per 100sqm) for Knowsley Lane Development

- 2.1.21 From a review of Table 2-3, it can be seen that a 100% B8 development, or a mix of B2/B8 uses could generate a greater number of OGV movements within each assessment period than a 100% B2 development. However, the level of generation for LGVs is significantly greater for an all B2 scenario which in all cases, fully outweighs the difference in OGV generation when considered as PCUs for assessment purposes.
- 2.1.22 The above trip rates have been applied to the proposed development quantum and the total trip generation for each land use can be seen for direct comparison in Table 2-4.

Land Use	Vehicle	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
		Arrive	Depart	Two-way	Arrive	Depart	Two-way
100% B8	LGV	15	5	20	3	16	19
	OGV	7	7	14	6	3	10
	All Vehicles	22	12	34	9	20	29
100% B2	LGV	62	6	68	5	59	64
	OGV	3	2	5	0	0	0
	All Vehicles	65	8	73	6	59	65

Table 2-4 – Vehicle trips comparison for each land use type

- 2.1.23 From Table 2-4 it can be seen that the two way flows for a 100% B2 development are more than double that anticipated for a 100% B8 development. The conversion of the vehicle trips into PCU trips marginally reduces the difference (given the greater OGV flows in a B8

scenario) however Table 2-5 shows that a 100% B2 development is still the worst case in terms of traffic generation by a significant amount.

- 2.1.24 Note: A PCU conversion factor of 2 has been applied across OGVs given the variety of vehicles captured in the TRICS data includes any vehicle over 3.5 t maximum gross weight.

Land Use	Vehicle (PCU Factor)	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
		Arrive	Depart	Two-way	Arrive	Depart	Two-way
B8	LGV (x1)	15	5	20	3	16	19
	OGV (x2)	17	17	34	14	7	24
	All Vehicles	32	22	54	17	23	43
B2	LGV (x1)	62	6	68	5	59	64
	OGV (x2)	6	4	12	0	0	0
	All Vehicles	68	10	80	5	59	64

Table 2-5 – PCU trips comparison for each land use

- 2.1.25 The above data confirms the position that a worst-case assessment has been undertaken, and further assessment of combinations of traffic generation for B2 and B8 land uses is not required.
- 2.1.26 The associated TRICS data for both B2 and B8 uses is included within this Technical Note as **Appendix A**. For clarity, the TA utilised “All vehicles” and “OGV vehicles” to ascertain trip rates for the individual vehicle types. With LGVs being calculated as “All vehicles” minus “OGV vehicles”, to represent a worst case position from the available data.

Whilst the HGV percentage split is shown within TA Appendix F, no further underlying assumptions are presented with regards to how these figures were arrived at. It is therefore requested that Sweco present further information on how the routing for HGVs was chosen outside of the statement of suitability and, therefore, the associated resultant split of vehicle movements

- 2.1.27 The TA sets out a description of how all traffic has been distributed on the network of interest. Specifically, the LGV traffic (assumed to be employees) uses “method of travel to work” 2011 census data. OGV traffic has no such data set to derive a distribution. Therefore, as stated, the TA uses professional judgement based on a review of the appropriateness of the local network to access key destinations, such as “the north”, “the south”, Liverpool, Manchester, local industrial areas etc. The weighting to each key destination has been informed by the applicant (who also owns and operates the adjacent Indurent Moorgate Point development) and their expectation of the likely uses at the site. This focuses on access to the SRN, local residential centres and employment zones.

- 2.1.28 This approach is typically used in the assessment of discrete industrial developments and was set out and accepted at the pre-app stage. As it has been identified that traffic flows onto the SRN and through M57 J4 & J5 would be insignificant, no further assessment was deemed necessary.

It is recommended that the queue count surveys used for the calibration of the TRANSYT model be included within the appendices of the document to provide WSP with confidence that queues on the A580 will not adversely impact the operation of the Junction 4 circulatory – although this is notwithstanding the future upgrades proposed at the junction

- 2.1.29 As requested, the queue survey data are included as **Appendix B**. The survey shows that queues do not block back along the A580 into the Moorgate Road junction, although as noted by NH the junction upgrades under construction have presumably been approved on the basis that they will improve junction operation and therefore queuing.

No TEMPro outputs have been supplied within the Appendices of the TA, or any information on the selection criteria and software version of TEMPro used, with confirmation of these aspects requested

- 2.1.30 The TEMPro assessment used V8.0, and the MSOA of E02001331 : Knowsley 005. Both AM and PM growth factors were derived from the average of the origin and the destination for car drivers. The model selection criteria and outputs are included as **Appendix C**.

- 2.1.31 It should be noted that TEMPro V8.0 does not provide access to the NTM calculation function available in other versions of the software. Instead the growth factors are derived using an average of the origin and the destination figures provided (see **Appendix C**). For review purposes and completeness, the growth calculation has been reviewed using TEMPro 8.1, using the same selection criteria, and the updated growth factors (accounting for NTM adjustments) are listed in Table 2-6.

Period	Previous Factor	Revised Factor (NTM -adjusted for A roads)	Difference
AM	1.03575	1.0546	+1.885%
PM	1.03455	1.0534	+1.885%

Table 2-6 - TEMPro Figures Comparison

- 2.1.32 Table 2-6 shows that the use of the NTM calculation available within Version 8.1 software alters the predicted growth factor. This increases the growth factor by 1.9% above that presented in the TA. However, the results of the assessment therein remain materially unchanged by the minor uplift in background traffic flow.

- 2.1.33 Notwithstanding the above, given that the traffic generated by the proposed development is not material at the SRN, the variation noted above does not impact the findings of the TA.

It is requested that the presented trip diagrams are updated to show the M57 Junctions demonstrating the projected trips to and from the Site for the three scenarios previously identified for both Vehicles and HGVs

- 2.1.34 A set of traffic flow diagrams has been prepared which shows the traffic flow for LGVs and OGVs through M57 J4 & J5, for the AM and PM peak hours. The diagram also includes total flow (in PCUs) which highlights that, as a worst case, less than 20 PCUs are expected through M57 J4 in the AM peak hour and less through J5. As stated in the TA, this level of flow will have no material impact on the operational capacity of the M57 J4 & J5 and will be undetectable within the daily variation in flow on the highway network. The diagrams are included as **Appendix D**.

Appendix A – TRICS Data

Calculation Reference: AUDIT-753001-220325-0337

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
	KC KENT	1 days
03	SOUTH WEST	
	DV DEVON	1 days
05	EAST MIDLANDS	
	LN LINCOLNSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	1 days
09	NORTH	
	TW TYNE & WEAR	1 days
10	WALES	
	WR WREXHAM	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 50000 (units: sqm)
Range Selected by User: 5000 to 80066 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/09 to 03/04/19

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:

Monday	1 days
Tuesday	1 days
Wednesday	1 days
Thursday	1 days
Friday	3 days

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

Selected survey types:

Manual count	7 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:

Edge of Town	5
Free Standing (PPS6 Out of Town)	2

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

Selected Location Sub Categories:

Industrial Zone	5
Out of Town	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.

Secondary Filtering selection:

Use Class:

n/a	1 days
B8	6 days

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

Filter by Site Operations Breakdown:

All Surveys Included

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,000 or Less	2 days
1,001 to 5,000	1 days
10,001 to 15,000	2 days
15,001 to 20,000	2 days

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

Population within 5 miles:

25,001 to 50,000	1 days
50,001 to 75,000	1 days
125,001 to 250,000	3 days
250,001 to 500,000	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	3 days
1.1 to 1.5	4 days

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

Travel Plan:

No	7 days
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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	7 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	DV-02-F-02	LIDL DISTRIBUTION CENTRE	DEVON
	CHILLPARK BRAKE		
	NEAR EXETER		
	CLYST HONITON		
	Free Standing (PPS6 Out of Town)		
	Out of Town		
	Total Gross floor area:	50000 sqm	
	Survey date: WEDNESDAY	03/04/19	Survey Type: MANUAL
2	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
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	LN-02-F-01	BOOK SERVICE	LINCOLNSHIRE
	TRENT ROAD		
	GRANTHAM		
	Edge of Town		
	No Sub Category		
	Total Gross floor area:	32300 sqm	
	Survey date: MONDAY	29/11/10	Survey Type: MANUAL
5	TW-02-F-01	ASDA DISTRIBUTION CENTRE	TYNE & WEAR
	MANDARIN WAY		
	WASHINGTON		
	PATTISON IND. ESTATE		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	31000 sqm	
	Survey date: FRIDAY	13/11/15	Survey Type: MANUAL
6	WR-02-F-01	WAREHOUSE	WREXHAM
	UNIT 1-2 PACIFIC PARK		
	NEAR WREXHAM		
	WREXHAM IND. ESTATE		
	Free Standing (PPS6 Out of Town)		
	Industrial Zone		
	Total Gross floor area:	9000 sqm	
	Survey date: TUESDAY	18/10/11	Survey Type: MANUAL
7	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 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	2	30223	0.081	2	30223	0.046	2	30223	0.127
06:00 - 07:00	2	30223	0.136	2	30223	0.068	2	30223	0.204
07:00 - 08:00	7	21501	0.120	7	21501	0.054	7	21501	0.174
08:00 - 09:00	7	21501	0.117	7	21501	0.066	7	21501	0.183
09:00 - 10:00	7	21501	0.106	7	21501	0.064	7	21501	0.170
10:00 - 11:00	7	21501	0.056	7	21501	0.060	7	21501	0.116
11:00 - 12:00	7	21501	0.060	7	21501	0.068	7	21501	0.128
12:00 - 13:00	7	21501	0.065	7	21501	0.070	7	21501	0.135
13:00 - 14:00	7	21501	0.100	7	21501	0.088	7	21501	0.188
14:00 - 15:00	7	21501	0.051	7	21501	0.089	7	21501	0.140
15:00 - 16:00	7	21501	0.058	7	21501	0.074	7	21501	0.132
16:00 - 17:00	7	21501	0.060	7	21501	0.110	7	21501	0.170
17:00 - 18:00	7	21501	0.049	7	21501	0.107	7	21501	0.156
18:00 - 19:00	7	21501	0.025	7	21501	0.070	7	21501	0.095
19:00 - 20:00	2	30223	0.028	2	30223	0.055	2	30223	0.083
20:00 - 21:00	2	30223	0.041	2	30223	0.033	2	30223	0.074
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.153			1.122			2.275

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 - 50000 (units: sqm)
Survey date range:	01/01/09 - 03/04/19
Number of weekdays (Monday-Friday):	7
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.

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

TAXIS

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	2	30223	0.000	2	30223	0.000	2	30223	0.000
06:00 - 07:00	2	30223	0.002	2	30223	0.002	2	30223	0.004
07:00 - 08:00	7	21501	0.003	7	21501	0.003	7	21501	0.006
08:00 - 09:00	7	21501	0.000	7	21501	0.000	7	21501	0.000
09:00 - 10:00	7	21501	0.000	7	21501	0.000	7	21501	0.000
10:00 - 11:00	7	21501	0.000	7	21501	0.000	7	21501	0.000
11:00 - 12:00	7	21501	0.000	7	21501	0.000	7	21501	0.000
12:00 - 13:00	7	21501	0.000	7	21501	0.000	7	21501	0.000
13:00 - 14:00	7	21501	0.000	7	21501	0.000	7	21501	0.000
14:00 - 15:00	7	21501	0.000	7	21501	0.000	7	21501	0.000
15:00 - 16:00	7	21501	0.000	7	21501	0.000	7	21501	0.000
16:00 - 17:00	7	21501	0.001	7	21501	0.001	7	21501	0.002
17:00 - 18:00	7	21501	0.001	7	21501	0.001	7	21501	0.002
18:00 - 19:00	7	21501	0.000	7	21501	0.000	7	21501	0.000
19:00 - 20:00	2	30223	0.000	2	30223	0.000	2	30223	0.000
20:00 - 21:00	2	30223	0.000	2	30223	0.000	2	30223	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.007			0.007			0.014

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.

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	2	30223	0.026	2	30223	0.031	2	30223	0.057
06:00 - 07:00	2	30223	0.043	2	30223	0.043	2	30223	0.086
07:00 - 08:00	7	21501	0.030	7	21501	0.033	7	21501	0.063
08:00 - 09:00	7	21501	0.036	7	21501	0.040	7	21501	0.076
09:00 - 10:00	7	21501	0.040	7	21501	0.029	7	21501	0.069
10:00 - 11:00	7	21501	0.033	7	21501	0.031	7	21501	0.064
11:00 - 12:00	7	21501	0.021	7	21501	0.032	7	21501	0.053
12:00 - 13:00	7	21501	0.025	7	21501	0.031	7	21501	0.056
13:00 - 14:00	7	21501	0.021	7	21501	0.030	7	21501	0.051
14:00 - 15:00	7	21501	0.012	7	21501	0.017	7	21501	0.029
15:00 - 16:00	7	21501	0.027	7	21501	0.018	7	21501	0.045
16:00 - 17:00	7	21501	0.029	7	21501	0.022	7	21501	0.051
17:00 - 18:00	7	21501	0.033	7	21501	0.019	7	21501	0.052
18:00 - 19:00	7	21501	0.014	7	21501	0.014	7	21501	0.028
19:00 - 20:00	2	30223	0.010	2	30223	0.018	2	30223	0.028
20:00 - 21:00	2	30223	0.015	2	30223	0.015	2	30223	0.030
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.415			0.423			0.838

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.

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	2	30223	0.000	2	30223	0.000	2	30223	0.000
06:00 - 07:00	2	30223	0.002	2	30223	0.002	2	30223	0.004
07:00 - 08:00	7	21501	0.001	7	21501	0.000	7	21501	0.001
08:00 - 09:00	7	21501	0.005	7	21501	0.001	7	21501	0.006
09:00 - 10:00	7	21501	0.001	7	21501	0.000	7	21501	0.001
10:00 - 11:00	7	21501	0.000	7	21501	0.000	7	21501	0.000
11:00 - 12:00	7	21501	0.000	7	21501	0.001	7	21501	0.001
12:00 - 13:00	7	21501	0.001	7	21501	0.000	7	21501	0.001
13:00 - 14:00	7	21501	0.003	7	21501	0.003	7	21501	0.006
14:00 - 15:00	7	21501	0.001	7	21501	0.003	7	21501	0.004
15:00 - 16:00	7	21501	0.004	7	21501	0.001	7	21501	0.005
16:00 - 17:00	7	21501	0.001	7	21501	0.001	7	21501	0.002
17:00 - 18:00	7	21501	0.001	7	21501	0.003	7	21501	0.004
18:00 - 19:00	7	21501	0.000	7	21501	0.003	7	21501	0.003
19:00 - 20:00	2	30223	0.000	2	30223	0.000	2	30223	0.000
20:00 - 21:00	2	30223	0.000	2	30223	0.000	2	30223	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.020			0.018			0.038

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.

Calculation Reference: AUDIT-753001-220325-0341

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
08	NORTH WEST	
	CH CHESHIRE	2 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

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 67459 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/09 to 24/09/19

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:

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:

Edge of Town	5
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.

Secondary Filtering selection:

Use Class:

Not Known 6 days

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

Filter by Site Operations 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
50,001 to 100,000	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
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	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.

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	EB-02-C-02	FOOD PRODUCTION	CITY OF EDINBURGH
	CALDER ROAD		
	EDINBURGH		
	SIGHTHILL		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	19805 sqm	
	Survey date: MONDAY	25/10/10	Survey Type: MANUAL
5	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
6	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

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 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	1	11375	0.149	1	11375	0.044	1	11375	0.193
07:00 - 08:00	6	11835	0.204	6	11835	0.030	6	11835	0.234
08:00 - 09:00	6	11835	0.353	6	11835	0.044	6	11835	0.397
09:00 - 10:00	6	11835	0.115	6	11835	0.054	6	11835	0.169
10:00 - 11:00	6	11835	0.079	6	11835	0.058	6	11835	0.137
11:00 - 12:00	6	11835	0.038	6	11835	0.059	6	11835	0.097
12:00 - 13:00	6	11835	0.069	6	11835	0.096	6	11835	0.165
13:00 - 14:00	6	11835	0.152	6	11835	0.087	6	11835	0.239
14:00 - 15:00	6	11835	0.061	6	11835	0.137	6	11835	0.198
15:00 - 16:00	6	11835	0.044	6	11835	0.087	6	11835	0.131
16:00 - 17:00	6	11835	0.041	6	11835	0.196	6	11835	0.237
17:00 - 18:00	6	11835	0.030	6	11835	0.321	6	11835	0.351
18:00 - 19:00	6	11835	0.021	6	11835	0.131	6	11835	0.152
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:			1.400			1.476			2.876

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:	01/01/09 - 24/09/19
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.

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

TAXIS

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	1	11375	0.000	1	11375	0.000	1	11375	0.000
07:00 - 08:00	6	11835	0.000	6	11835	0.000	6	11835	0.000
08:00 - 09:00	6	11835	0.000	6	11835	0.000	6	11835	0.000
09:00 - 10:00	6	11835	0.000	6	11835	0.000	6	11835	0.000
10:00 - 11:00	6	11835	0.001	6	11835	0.001	6	11835	0.002
11:00 - 12:00	6	11835	0.000	6	11835	0.000	6	11835	0.000
12:00 - 13:00	6	11835	0.000	6	11835	0.000	6	11835	0.000
13:00 - 14:00	6	11835	0.000	6	11835	0.000	6	11835	0.000
14:00 - 15:00	6	11835	0.000	6	11835	0.000	6	11835	0.000
15:00 - 16:00	6	11835	0.000	6	11835	0.000	6	11835	0.000
16:00 - 17:00	6	11835	0.003	6	11835	0.003	6	11835	0.006
17:00 - 18:00	6	11835	0.000	6	11835	0.000	6	11835	0.000
18:00 - 19:00	6	11835	0.000	6	11835	0.000	6	11835	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:			0.004			0.004			0.008

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.

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	1	11375	0.000	1	11375	0.000	1	11375	0.000
07:00 - 08:00	6	11835	0.004	6	11835	0.007	6	11835	0.011
08:00 - 09:00	6	11835	0.015	6	11835	0.013	6	11835	0.028
09:00 - 10:00	6	11835	0.018	6	11835	0.011	6	11835	0.029
10:00 - 11:00	6	11835	0.023	6	11835	0.020	6	11835	0.043
11:00 - 12:00	6	11835	0.013	6	11835	0.023	6	11835	0.036
12:00 - 13:00	6	11835	0.008	6	11835	0.008	6	11835	0.016
13:00 - 14:00	6	11835	0.013	6	11835	0.013	6	11835	0.026
14:00 - 15:00	6	11835	0.008	6	11835	0.004	6	11835	0.012
15:00 - 16:00	6	11835	0.006	6	11835	0.006	6	11835	0.012
16:00 - 17:00	6	11835	0.003	6	11835	0.008	6	11835	0.011
17:00 - 18:00	6	11835	0.001	6	11835	0.001	6	11835	0.002
18:00 - 19:00	6	11835	0.000	6	11835	0.000	6	11835	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:			0.112			0.114			0.226

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.

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT
 PSVS
 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	1	11375	0.000	1	11375	0.000	1	11375	0.000
07:00 - 08:00	6	11835	0.000	6	11835	0.000	6	11835	0.000
08:00 - 09:00	6	11835	0.000	6	11835	0.000	6	11835	0.000
09:00 - 10:00	6	11835	0.001	6	11835	0.001	6	11835	0.002
10:00 - 11:00	6	11835	0.001	6	11835	0.000	6	11835	0.001
11:00 - 12:00	6	11835	0.000	6	11835	0.001	6	11835	0.001
12:00 - 13:00	6	11835	0.001	6	11835	0.001	6	11835	0.002
13:00 - 14:00	6	11835	0.000	6	11835	0.000	6	11835	0.000
14:00 - 15:00	6	11835	0.000	6	11835	0.000	6	11835	0.000
15:00 - 16:00	6	11835	0.000	6	11835	0.000	6	11835	0.000
16:00 - 17:00	6	11835	0.000	6	11835	0.000	6	11835	0.000
17:00 - 18:00	6	11835	0.000	6	11835	0.000	6	11835	0.000
18:00 - 19:00	6	11835	0.000	6	11835	0.000	6	11835	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:			0.003			0.003			0.006

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.

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	1	11375	0.000	1	11375	0.000	1	11375	0.000
07:00 - 08:00	6	11835	0.003	6	11835	0.000	6	11835	0.003
08:00 - 09:00	6	11835	0.003	6	11835	0.000	6	11835	0.003
09:00 - 10:00	6	11835	0.000	6	11835	0.000	6	11835	0.000
10:00 - 11:00	6	11835	0.000	6	11835	0.000	6	11835	0.000
11:00 - 12:00	6	11835	0.000	6	11835	0.000	6	11835	0.000
12:00 - 13:00	6	11835	0.000	6	11835	0.000	6	11835	0.000
13:00 - 14:00	6	11835	0.000	6	11835	0.000	6	11835	0.000
14:00 - 15:00	6	11835	0.006	6	11835	0.004	6	11835	0.010
15:00 - 16:00	6	11835	0.000	6	11835	0.000	6	11835	0.000
16:00 - 17:00	6	11835	0.001	6	11835	0.007	6	11835	0.008
17:00 - 18:00	6	11835	0.000	6	11835	0.008	6	11835	0.008
18:00 - 19:00	6	11835	0.000	6	11835	0.006	6	11835	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:			0.013			0.025			0.038

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 B – Queue Surveys



ADVANCED
TRANSPORT
RESEARCH

Job Number & Name: 43692 Knowsley

Site Number/Name: A580/Alchemy Way

Client: Sweco

Date: 17/06/2025

Weather: AM: Sunny

PM: Cloudy & Dry

Advanced Transport Research

A580/Alchemy Way

Job Number & Name: 43692 Knowsley

Date: Tuesday 17 Jun 2025

Job Type: Queue Lengths

Co-ordinates: 53.465507°N, 2.864671°W

Postcode: L33 7AQ

Times: 0700-0930
1600-1830



	Alchemy Way		Alchemy Way Internal NB		Alchemy Way Internal SB		A580 WB			A580 EB			Site Access	
Times	Lane 1	Lane 2	Lane 1	Lane 2	Lane 1	Lane 2	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2
07:00 - 07:05	0	0	0	0	2	2	0	4	1	2	1	2	0	0
07:05 - 07:10	0	0	0	0	3	0	0	8	1	0	1	1	0	0
07:10 - 07:15	0	0	0	0	1	1	1	13	1	4	2	2	0	0
07:15 - 07:20	0	0	0	0	1	0	0	11	2	0	3	2	0	0
07:20 - 07:25	0	0	0	0	1	0	0	15	1	0	2	1	0	0
07:25 - 07:30	0	0	0	0	1	1	1	4	1	3	1	0	0	0
07:30 - 07:35	0	0	0	0	1	1	1	14	2	0	5	5	0	0
07:35 - 07:40	0	0	0	0	2	0	2	15	2	1	0	1	0	0
07:40 - 07:45	0	0	0	0	1	1	0	7	4	1	3	3	0	0
07:45 - 07:50	0	0	0	0	2	1	0	6	1	1	5	4	1	0
07:50 - 07:55	0	0	0	0	1	1	0	6	2	1	1	5	0	0
07:55 - 08:00	0	0	0	0	1	1	2	8	2	3	5	5	0	0
08:00 - 08:05	0	0	0	0	0	1	0	0	2	1	2	2	0	0
08:05 - 08:10	0	0	0	0	2	3	0	0	1	0	2	2	0	0
08:10 - 08:15	0	0	0	0	1	1	0	1	2	2	4	2	0	0
08:15 - 08:20	0	0	0	0	1	1	0	2	2	1	3	3	0	0
08:20 - 08:25	0	0	0	0	1	1	0	2	1	1	6	5	0	0
08:25 - 08:30	0	0	0	0	1	1	1	3	1	0	1	1	0	0
08:30 - 08:35	0	0	0	0	1	1	0	7	1	1	1	0	0	0
08:35 - 08:40	0	0	0	0	2	0	0	1	1	1	3	2	0	0
08:40 - 08:45	0	0	0	0	1	0	0	0	1	0	0	0	0	0
08:45 - 08:50	0	0	0	0	1	1	1	4	1	0	1	0	0	0
08:50 - 08:55	0	0	0	0	1	0	1	5	2	0	3	3	0	0
08:55 - 09:00	0	0	0	0	1	0	0	7	1	1	3	2	0	0
09:00 - 09:05	0	0	0	0	1	0	0	16	1	1	3	2	0	0
09:05 - 09:10	0	0	0	0	2	1	0	17	1	2	9	10	0	0
09:10 - 09:15	0	0	0	0	1	1	1	9	1	2	1	0	0	0
09:15 - 09:20	0	0	0	0	2	2	1	15	0	4	3	1	0	0
09:20 - 09:25	0	0	0	0	1	0	0	4	1	2	5	5	0	0
09:25 - 09:30	0	0	0	0	2	1	1	0	1	1	0	0	0	0

	Alchemy Way		Alchemy Way Internal NB		Alchemy Way Internal SB		A580 WB			A580 EB			Site Access	
Times	Lane 1	Lane 2	Lane 1	Lane 2	Lane 1	Lane 2	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2
16:00 - 16:05	2	0	0	0	5	3	0	2	0	2	4	6	0	0
16:05 - 16:10	0	0	0	0	2	1	0	1	1	1	2	0	0	0
16:10 - 16:15	0	0	0	0	2	1	1	3	1	0	6	2	0	0
16:15 - 16:20	0	0	0	0	1	0	0	1	1	0	0	0	0	0
16:20 - 16:25	0	0	0	0	5	1	0	3	1	0	9	16	0	0
16:25 - 16:30	0	0	0	0	2	0	2	7	1	0	5	4	0	0
16:30 - 16:35	0	0	0	0	2	4	1	2	1	0	2	2	0	0
16:35 - 16:40	0	0	0	0	3	4	1	13	1	0	2	2	0	0
16:40 - 16:45	0	0	0	0	1	1	0	5	1	0	1	0	0	0
16:45 - 16:50	0	0	0	0	1	1	0	1	1	0	8	5	0	0
16:50 - 16:55	1	0	0	0	2	2	0	5	0	1	2	5	0	0
16:55 - 17:00	0	0	0	0	2	0	2	3	0	0	1	1	0	0
17:00 - 17:05	0	0	0	0	4	6	1	10	0	0	3	2	0	0
17:05 - 17:10	0	0	0	0	1	2	0	4	1	0	2	2	0	0
17:10 - 17:15	0	0	0	0	3	1	0	5	1	2	2	1	0	0
17:15 - 17:20	0	0	0	0	2	2	0	4	0	4	5	2	0	0
17:20 - 17:25	0	0	0	0	2	1	0	9	1	0	3	3	0	0
17:25 - 17:30	0	0	0	0	1	1	1	5	0	0	5	4	1	0
17:30 - 17:35	0	0	0	0	2	1	1	4	1	0	1	1	0	0
17:35 - 17:40	0	0	0	0	1	2	1	2	1	1	3	4	0	0
17:40 - 17:45	0	0	0	0	1	2	1	0	1	0	3	4	0	0
17:45 - 17:50	0	0	0	0	1	1	1	1	1	0	5	2	0	0
17:50 - 17:55	0	0	0	0	2	2	2	4	1	1	1	1	0	0
17:55 - 18:00	0	0	0	0	1	2	0	4	0	0	1	3	0	0
18:00 - 18:05	0	0	0	0	1	1	1	2	1	0	1	1	0	0
18:05 - 18:10	0	0	0	0	2	1	1	7	0	0	0	0	0	0
18:10 - 18:15	0	0	0	0	2	1	0	3	0	0	2	0	0	0
18:15 - 18:20	0	0	0	0	1	1	1	0	0	0	0	0	0	0
18:20 - 18:25	0	0	0	0	1	2	0	2	1	0	1	0	0	0
18:25 - 18:30	0	0	0	0	1	0	0	2	1	0	0	0	0	0

Count in Vehicles

Lane 1 = Nearest Kerb

Appendix C – TEMPro Data

Dataset Version:	80
Dataset Scenario:	Core
Result Type:	Trip ends by time period
Base Year:	2025
Future Year:	2030
Trip Purpose Group:	All purposes
Time Period:	Weekday AM peak period (0700 - 0959)
Trip End Type:	Origin/Destination
Alternative Assumptions Applied:	No

Growth Factor (2030 Data/2025 Data)

Area Description		All purposes	
Level	Name	Origin	Destination
E02001331	Knowsley 005	1.0408	1.0307

average
1.03575

Future Year (2030) - Base Year (2025)

Area Description		All purposes	
Level	Name	Origin	Destination
E02001331	Knowsley 005	91	153

Base Year (2025)

Area Description		All purposes	
Level	Name	Origin	Destination
E02001331	Knowsley 005	2,225	4,990

Future Year (2030)

Area Description		All purposes	
Level	Name	Origin	Destination
E02001331	Knowsley 005	2,316	5,144

Dataset Version:	80
Dataset Scenario:	Core
Result Type:	Trip ends by time period
Base Year:	2025
Future Year:	2030
Trip Purpose Group:	All purposes
Time Period:	Weekday PM peak period (1600 - 1859)
Trip End Type:	Origin/Destination
Alternative Assumptions Applied:	No

Growth Factor (2030 Data/2025 Data)

Area Description		All purposes	
Level	Name	Origin	Destination
E02001331	Knowsley 005	1.0310	1.0381

average
1.03455

Future Year (2030) - Base Year (2025)

Area Description		All purposes	
Level	Name	Origin	Destination
E02001331	Knowsley 005	141	93

Base Year (2025)

Area Description		All purposes	
Level	Name	Origin	Destination
E02001331	Knowsley 005	4,556	2,431

Future Year (2030)

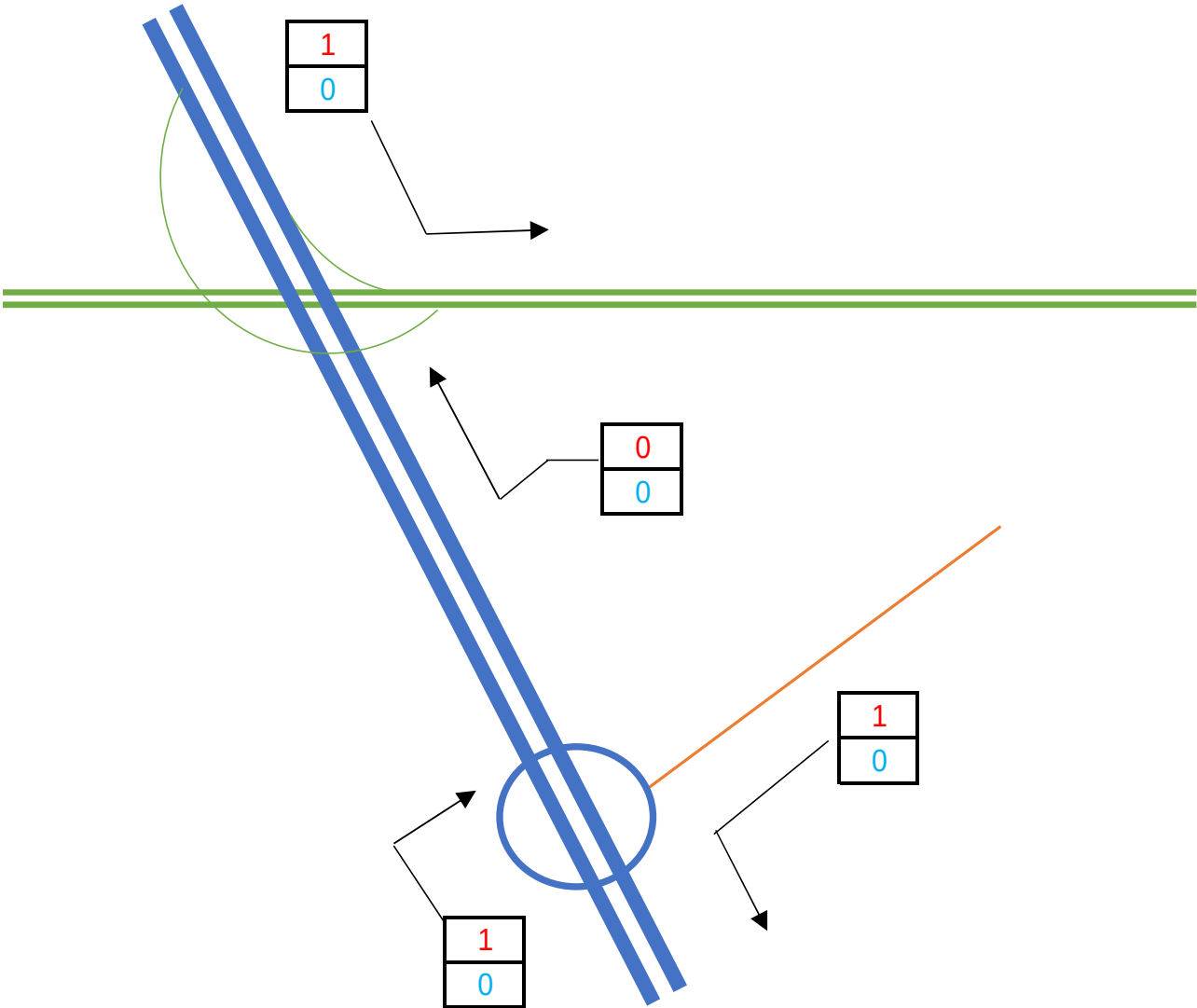
Area Description		All purposes	
Level	Name	Origin	Destination
E02001331	Knowsley 005	4,697	2,524

Appendix D – M57 J4 & J5 Flow Diagrams

AM Peak	07:30-08:30
PM Peak	16:30-17:30

AM Peak		PM Peak	
IN	OUT	IN	OUT
3	2	0	0

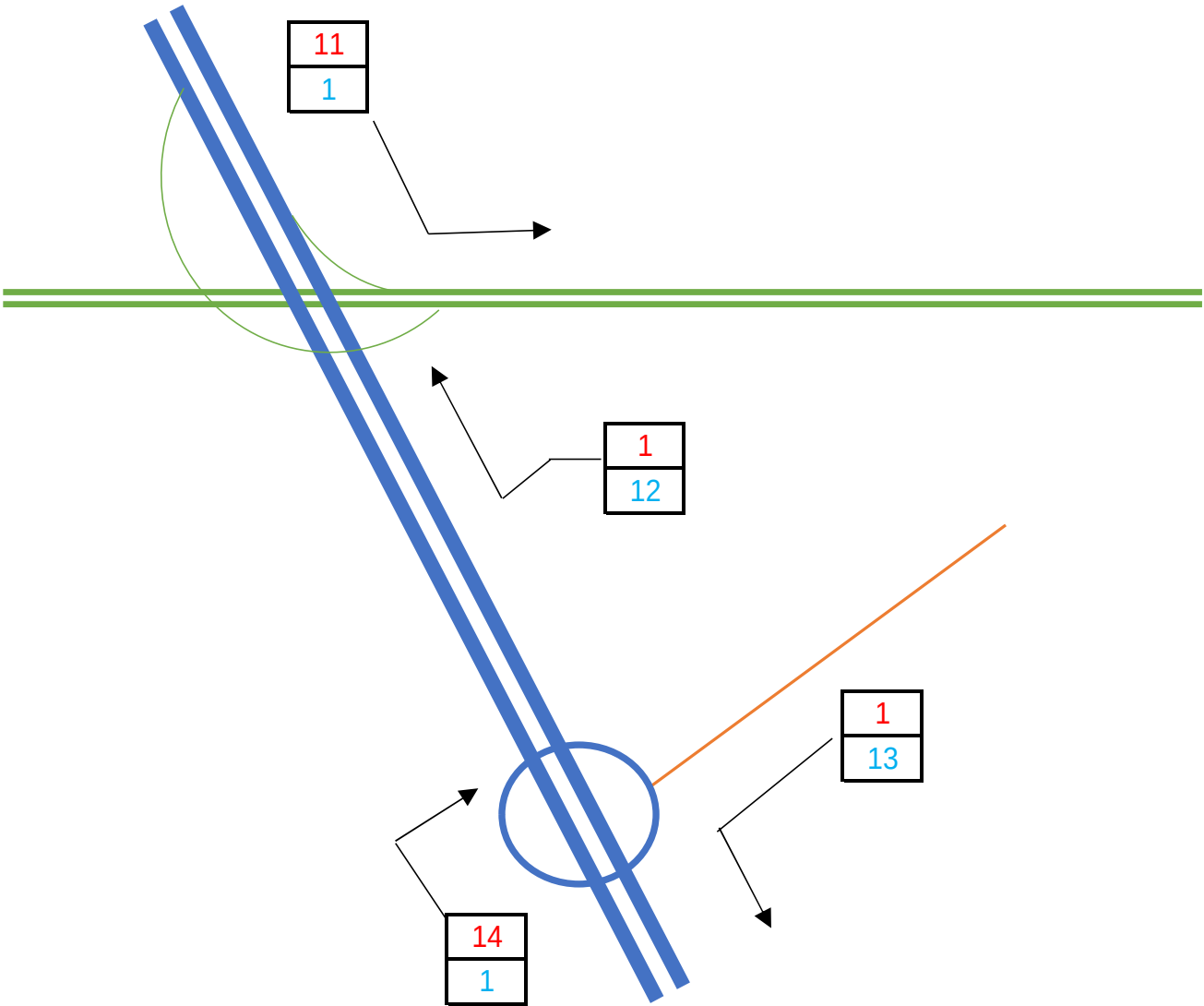
All flows shown in Vehicles



AM Peak	07:30-08:30
PM Peak	16:30-17:30

All flows shown in Vehicles

AM Peak		PM Peak	
IN	OUT	IN	OUT
62	6	5	59

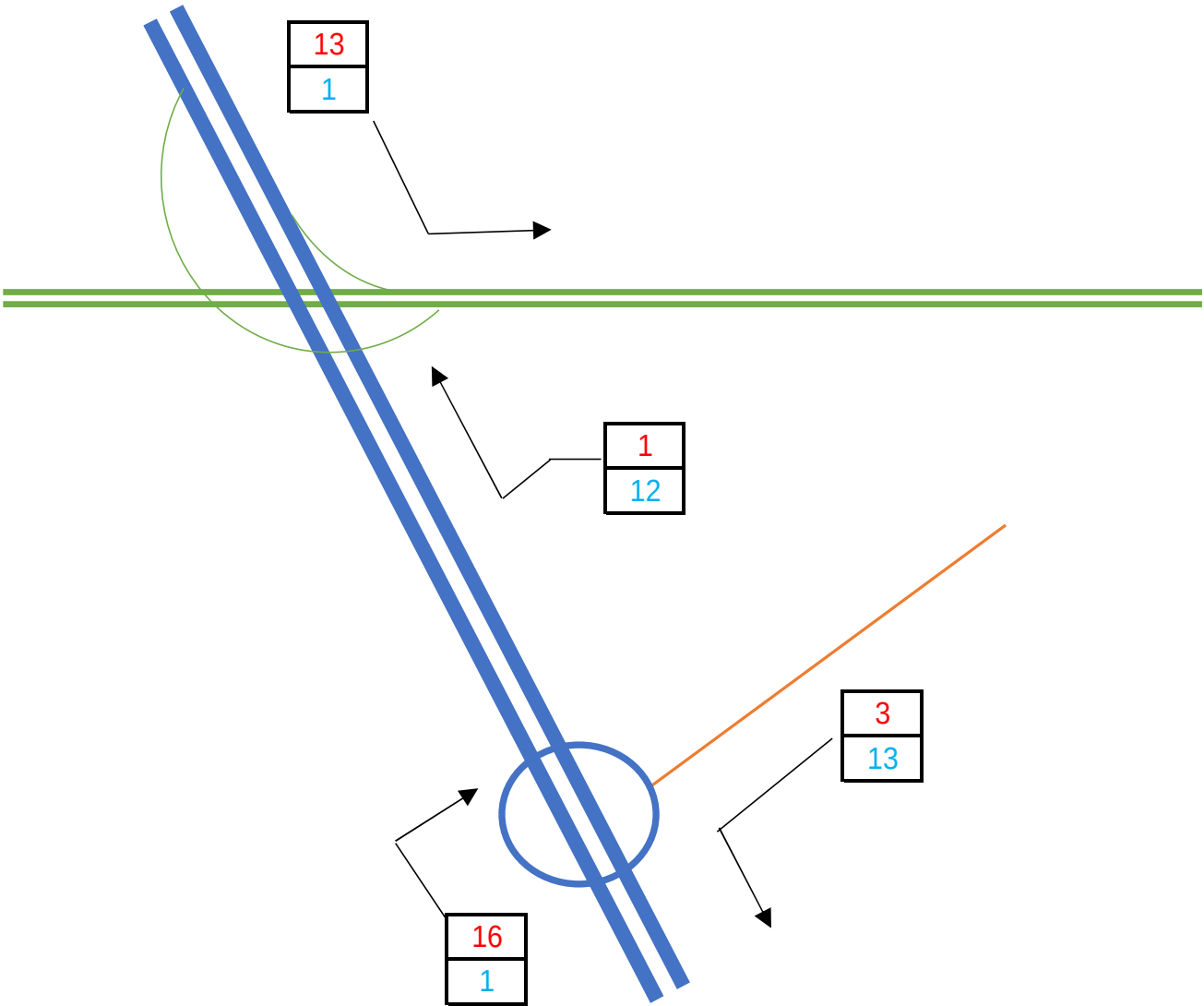


SRN Flows (LGVs) - In Vehicles

AM Peak	07:30-08:30
PM Peak	16:30-17:30

All flows shown in PCUs

AM Peak		PM Peak	
IN	OUT	IN	OUT
68	10	5	59



SRN Flows (Total) - In PCUs