Stephen Reid Consulting
Traffic and Transportation

Proposed Warehouse Development

Kingswood Avenue/Kingswood Road,
Citywest, Dublin 24
Traffic Impact Assessment

Client: Rockface Developments Limited

JUNE 2022

Contents

Appendices

Rev	Date	Purpose of Issue	Approved
0	04.03.2022	Draft for Comment	
1	20.06.2022	Final for Planning Submission	SR

Stephen Reid Consulting Traffic and Transportation Limited
Estuary House, New Street, Malahide, Co Dublin K36 KH32
+353(0)87 979 3479
stephenreid@stephenreidconsulting.com
www.stephenreidconsulting.com

1 INTRODUCTION

1.1 BACKGROUND

Stephen Reid Consulting Traffic and Transportation Limited (SRC) have prepared this report on behalf of Rockface Developments Limited who intend to apply for permission for development at a 2.56 Ha site at Kingswood Road and Kingswood Avenue, Citywest Business Campus, Dublin 24. The lands are generally bounded to the south-east by Kingswood Avenue, south-west and north-west by existing built development and to the north-east by Kingswood Road.

The development will comprise the provision of a warehouse with ancillary office and staff facilities and associated development. The warehouse will have a maximum height of 18 metres with a gross floor area of 11,691 sq m including a warehouse area (10,604 sq m), ancillary staff facilities (499 sq m) and ancillary office area (588 sq m).

The development will also include: a vehicular and pedestrian entrance to the site from Kingswood Road, a separate HGV entrance from Kingswood Avenue; 64 No. ancillary car parking spaces; covered bicycle parking; HGV parking and yards; level access goods doors; dock levellers; access gates; hard and soft landscaping; canopy; lighting; boundary treatments; ESB substation; plant; and all associated site development works above and below ground.

The application site location is indicated in Figure 1.1.

Figure 1.1: Site Location, Kingswood, Citywest, Dublin 24
(source: https://trafficdata.tii.ie/publicmultinodemap.asp)

It is important to note that the Citywest Road has been downgraded from its previous function as the N82 between N7 Junction 3 (Brownsbarn) and the N81 Blessington Road. The southern section is the L2011, while the section between Citywest Avenue and the N7 Junction 3 is now the R838 Citywest Road. The R838 route continues eastwards from Citywest Road to the R136 Cheeverstown Road (part of the ORR) and then eastwards from there as Bóthar Katherine Tynan to Belgard Road. This designation is illustrated in the TII traffic count website mapping (other maps are still referencing the old N82 designation).

1.2 METHODOLOGY

This report is based on a standard methodology for traffic impact assessment, having regard for the TII Guidelines and the South Dublin County Development Plan.

Traffic counts for the R838 Citywest Road/N7 J3 westbound/Kingswood Avenue roundabout and the Kingswood Avenue/Kingswood Road roundabout were obtained for peak periods on Thursday 20th January 2022 (a school term-time weekday) and these were reviewed against the TII permanent traffic counter Average Daily Traffic (ADT) and hourly peak glows on the N7 between J2 and J3.

The 2022 counts were taken to be baseline flows, and these were factored up to opening year and design year flows using TII growth factors.

Development vehicle trip generation rates have been applied for the proposed land use area from TRICS rates and assigned to the network using the proportions of vehicle types in the TRICS data with the delivery vans and trucks utilising the southern access on Kingswood Avenue and the staff vehicles (cars/motorbikes/taxis) using the eastern access on Kingswood Road.

From this the percentage impact of the proposed warehouse development on the key road network can be determined, in the opening and future years.

If the impact is greater than defined thresholds, modelling of the junctions can be undertaken to confirm adequate capacity to accommodate the development.

2 SITE LOCATION & EXISTING CONDITIONS

2.1 GENERAL

The site is identified in Figures 1.1 and 2.1 and is formed by currently undeveloped lands accessed from the roads serving Kingswood Business Park, an area located generally east of the R838 Citywest Road and south of the Old Naas Road.

Figure 2.1: Site Location and Surrounding Lands (source: www.google.ie/maps)

2.2 ROAD NETWORK

The key links which will service the development site are Kingswood Avenue (which runs generally northeast from the Citywest Road at Roundabout 3) and Kingswood Road (which runs generally southeast from Old Naas Road to Citywest Avenue at Roundabout 5B). Kingswood Avenue and Kingswood Road intersect at Roundabout 3A adjacent to the southeast corner of the proposed development site.

Roundabout 3A has an 20m diameter central island and 42m outer diameter, and is a four-arm arrangement, with single-lane entries and exits on each arm. Kingswood Avenue to the east of the roundabout is a cul-de-sac roadway serving various business units.

Kingswood Road extends northwestwards from Roundabout 3A passing the site frontage, intersecting with the Kingswood Business Centre (office-based uses) and Silken Park Avenue (residential uses) at Roundabout 2A, some 160m from Roundabout 3A.

There is a concrete footpath behind a verge along the Kingswood Road frontage of the site, and an unbound path behind landscape/street tree verge along the Kingswood Avenue frontage, with a section of concrete footpath on the south side of Kingswood Avenue from Roundabout 3A to the westbound bus stop. The roadways are 9m wide (between kerbs) opposite the eastern and southern site frontages.

2.3 Existing Traffic Flows

SRC commissioned traffic counts which were undertaken on Thursday 20th January 2022. This data was obtained following the easing of lockdown restrictions and would therefore be more representative of current conditions. In addition, the TII permanent traffic counter sites located on the N7 were reviewed to determine peak period to daily factors.

The traffic survey data is appended to this report. The AM peak hour was identified as 08.00-09.00 and the PM peak hour was identified as 17.00-18.00, being the two hours with the highest volumes through the two key roundabouts (3 and 3A). Please reference Diagrams 1(a) and 1(b) appended to this report, and note HVs include OGV1, OGV2 and PSV categories.

Key baseline flows at Roundabout 3A (Kingswood Avenue/Kingswood Road) were as follows

- 08.00-09.00 AM peak hour (Roundabout 3A total inflow volume 624 vehicles):
    - 146 vehicles (6.8% HVs) eastbound from Roundabout 3 and 109 vehicles (4.6% HVs) westbound towards Roundabout 3 on Kingswood Avenue
    - 156 vehicles (1.3% HVs) northbound and 289 vehicles (2.4% HVs) southbound on Kingswood Road to the south of Roundabout 3A
    - 68 vehicles (5.9% HVs) eastbound and 14 vehicles (14.3% HVs) westbound on Kingswood Avenue to the east of Roundabout 3A
    - 308 vehicles (2.6% HVs) southbound and 156 vehicles (1.9% HVs) northbound on Kingswood Road to the north of Roundabout 3A
- 17.00-18.00 PM peak hour (Roundabout 3A total inflow volume 676 vehicles):
    - 77 vehicles (3.9% HVs) eastbound from Roundabout 3 and 198 vehicles (3.0% HVs) westbound towards Roundabout 3 on Kingswood Avenue
    - 344 vehicles (1.5% HVs) northbound and 214 vehicles (0.5% HVs) southbound on Kingswood Road to the south of Roundabout 3A
    - 9 vehicles (11.1% HVs) eastbound and 60 vehicles (5.0% HVs) westbound on Kingswood Avenue to the east of Roundabout 3A
    - 195 vehicles (2.6% HVs) southbound and 235 vehicles (3.1% HVs) northbound on Kingswood Road to the north of Roundabout 3A

Key baseline flows at Roundabout 3 (Citywest Road/N7 westbound slips/Kingswood Avenue) were as follows:

- 08.00-09.00 AM peak hour (Roundabout 3 total inflow volume 1,928 vehicles):
    - 932 vehicles (10.7% HVs) northbound and 784 vehicles (7.9% HVs) southbound on Citywest Road
    - 489 vehicles (8.6% HVs) southbound and 754 vehicles (10.7% HVs) northbound on Brownsbarn overbridge of N7
    - 416 vehicles (13.0% HVs) eastbound from N7 westbound exit slip and 215 vehicles (16.3% HVs) to N7 westbound
    - 91 vehicles (5.5% HVs) westbound and 145 vehicles (5.5% HVs) eastbound on Kingswood Avenue
- 17.00-18.00 AM peak hour (Roundabout 3 total inflow volume 1,718 vehicles):
    - 759 vehicles (2.6% HVs) northbound and 524 vehicles (5.6% HVs) southbound on Citywest Road
    - 467 vehicles (2.6% HVs) southbound and 611 vehicles (1.6% HVs) northbound on Brownsbarn overbridge of N7
    - 268 vehicles (5.2% HVs) eastbound from N7 westbound exit slip and 528 vehicles (1.9% HVs) to N7 westbound
    - 224 vehicles (3.1% HVs) westbound and 55 vehicles (7.3% HVs) eastbound on Kingswood Avenue

The existing volumes do not result in any undue queuing or delays at Roundabout 3A adjacent to the site and while there is peak period queuing at Roundabout 3, primarily on the N7 westbound exit to the roundabout in the AM peak hour and northbound on Citywest Road to the roundabout in the PM peak hour, it generally functions well for the traffic movements using it across the day.

2.4 Pedestrian and Cyclist Accessibility

There is a concrete footpath provision on the west side of Kingswood Road and an unbound path along the northern side of Kingswood Avenue, with a concrete footpath on the southern side connecting the westbound bus stop to Roundabout 3A and Kingswood Road.

There is street lighting along both road frontages of the site.

There are no dedicated cyclist provisions at the site area, although in the wider area there is cycle path provision on Citywest Avenue, and dedicated provision on the R136 Outer Ring Road.

2.5 Public Transport Accessibility

There are bus stops on Kingswood Avenue to the west of Roundabout 3A.

The stops are serviced by two routes operating between the City Centre and Citywest.

The Dublin Bus No.69 operates between Poolbeg Street and Rathcoole via Naas Road and Clondalkin Village. This service has a varying frequency, typically hourly with additional peak period services.

The Go Ahead No.175 operates between Kingswood Avenue and UCD Belfield, via Tallaght, Marlay Park and Dundrum. This service has an approximate hourly frequency across the weekday with additional peak hour services.

The Cheeverstown and Citywest Campus Luas Stops (on the Red Line Saggart Spur) are both a 1.1km walk from the site via Kingswood Road and Citywest Avenue to the south of Roundabout 3A.

3 PROPOSED DEVELOPMENT

3.1 GENERAL

As set out in the introduction section of this report, the development comprises the provision of a warehouse with ancillary office and staff facilities and associated development. The warehouse will have a maximum height of 18 metres with a gross floor area of 11,691 sq m, including a warehouse area (10,604 sq m), ancillary staff facilities (499 sq m) and ancillary office area (588 sq m).

The development will also include: a vehicular and pedestrian entrance to the site from Kingswood Road, a separate HGV entrance from Kingswood Avenue; 64 No. ancillary car parking spaces; covered bicycle parking; HGV parking and yards; level access goods doors; dock levellers; access gates; hard and soft landscaping; canopy; lighting; boundary treatments; ESB substation; plant; and all associated site development works above and below ground.

It should be noted that the office space is 5% of the overall gross floor area, confirming that it is ancillary to the primary function of development as commercial warehousing use.

3.2 ACCESS FOR VEHICLES AND PEDESTRIANS

The overall site layout including AutoTracking of the HGV yard is presented in the Kavanagh Burke Site layout plan D1736 D2 Site Plan PL1 submitted with the application.

The northern access on Kingswood Road will serve as the car park and pedestrian access (for staff and visitors) and is located southeast of Roundabout 2A.

The southern access on Kingswood Avenue will serve as a delivery access for vans and HGVs and is located 170m southwest of Roundabout 3A.

The car park access is 6m wide with radii in accordance with DMURS. A footpath is proposed to connect from the existing footpath on Kingswood Road to the Unit access/reception and to the cycle parking.

The HGV access on Kingswood Avenue is 9m wide with a setback sliding gate and kerb radii suitable for HGV movements. There is no pedestrian access to the development at this gate.

Stop control road markings and signage at the exit from the car park and the HGV yard will be installed as part of the site development works, in accordance with the Traffic Signs Manual (TSM).

3.3 CAR PARKING STANDARDS AND PROVISION

Car parking for the development is to be provided with reference to the South Dublin Development Plan 2016-2022 parking standards for development, which set out at Table 11.23 the maximum permissible for different land uses. This standard remains unchanged in the incoming Draft Plan.

There are two approaches to calculating the car parking requirement for this type of use, based on the SDCC Development Plan standards, which set out maximum requirements of 1/100 sq.m for commercial warehousing (employment), and 1/50 sq. m for office space, which would equate to either a) a maximum of 117 spaces if applying the warehouse standard to the overall 11,691 sq. m GFA, or b) a maximum of 118 spaces if applying the separate standards to the warehouse floor area (10,604 sq. m = 106 spaces) and office floor area (588 sq. m = 12 spaces) only (i.e. excluding the staff welfare/ancillary space).

It is proposed to provide 64 spaces (including 3 wheelchair accessible spaces). This provision is within the requirements of the Development Plan in either approach a) or b) to calculating the maximum requirement.

There is provision for 3.1% of the total spaces in the car park (2 spaces) to be for EV use and installed with EV charging points, with ducting to facilitate future expansion of the EV charging equipment, if demands arise.

The proposed level of parking is approximately 54% of the maxima standard from the Development Plan. This is a key element of managing car demand and is a proactive approach with regard to the expected employment population of the warehouse, and provision of disabled accessible spaces (which would be managed and therefore would not be used by staff who do not have a blue badge), resulting in 61 'standard' spaces including visitor spaces.

Typical employment density in a commercial warehouse development can vary from 1 person per 100 sq m GFA to 1 person per 200 sq. m GFA (with lower densities tending to occur in more modern facilities where there is a greater provision of automation in the picking from warehouse racking).

As this is a speculative development with no specific tenant and requirement it is considered that a worst case level of 1 person/100 sq. m, equating to an overall employment population of 117 persons (including delivery drivers) would be a reasonable assumption at this time.

There is provision for 6% of the total spaces in the car park (4 spaces) to be for EV use and installed with EV charging points, with ducting to facilitate future expansion of the EV charging equipment, if demands arise.

3.4 Cycle Parking Standards and Provision

The SDCC Development Plan standards out minimum requirements at Table 11.22 for Enterprise and Employment (manufacturing and offices) of 1 space/200 square metres GFA (long-term), which would equate to a minimum of 59 spaces. This standard remains unchanged in the incoming Draft Plan.

Cycle parking for the development is to be provided in accordance with the Development Plan. The total of 60 covered cycle spaces are located at the east side of the site and accessed from the car park and pedestrian entrance, close to the office/reception entrance, as illustrated on the Kavanagh Burke drawings.

The cycle parking will be covered as required in the Development Plan for long stay (staff) use.

Lockers, showers and changing rooms are provided within the staff welfare area.

This will ensure that the staff who are based locally have cycle parking and facilities available to them, should they choose to travel by bike to/from work. Additional cycle parking facilities can easily be provided within the site if there is an increased demand in the future.

4 DEVELOPMENT TRAFFIC GENERATION

4.1 Trip Generation

The predicted development traffic generation is based on TRICS data of existing surveyed sites for distribution warehouse uses, including a number in the Dublin and Leinster TRICS Regions.

The data in the TRICS site is for the overall floor area, and an element of ancillary office space (usually less than 10%) would be inherent in these surveyed sites.

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)
TOTAL VEHICLES
Calculation factor: 100 sqm
Estimated TRIP rate value per 11691 SQM shown in shaded columns
BOLD print indicates peak (busiest) period

	ARRIVALS				DEPARTURES				TOTALS			
Time Range	No. Days	Ave. GFA	Trip Rate	Estimated Trip Rate	No. Days	Ave. GFA	Trip Rate	Estimated Trip Rate	No. Days	Ave. GFA	Trip Rate	Estimated 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	6	12154	0.078	9.138	6	12154	0.040	4.649	6	12154	0.118	13.787
06:00 - 07:00	7	11109	0.140	16.387	7	11109	0.075	8.720	7	11109	0.215	25.107
07:00 - 08:00	**17**	**10754**	**0.228**	**26.666**	17	10754	0.080	9.400	**17**	**10754**	**0.308**	**36.066**
08:00 - 09:00	17	10754	0.189	22.126	17	10754	0.098	11.511	17	10754	0.287	33.637
09:00 - 10:00	17	10754	0.153	17.842	17	10754	0.097	11.319	17	10754	0.250	29.161
10:00 - 11:00	17	10754	0.107	12.534	17	10754	0.115	13.493	17	10754	0.222	26.027
11:00 - 12:00	17	10754	0.109	12.790	17	10754	0.131	15.284	17	10754	0.240	28.074
12:00 - 13:00	17	10754	0.108	12.662	17	10754	0.129	15.092	17	10754	0.237	27.754
13:00 - 14:00	17	10754	0.144	16.818	17	10754	0.144	16.882	17	10754	0.288	33.700
14:00 - 15:00	17	10754	0.112	13.109	17	10754	0.131	15.284	17	10754	0.243	28.393
15:00 - 16:00	17	10754	0.098	11.511	17	10754	0.121	14.133	17	10754	0.219	25.644
16:00 - 17:00	17	10754	0.107	12.470	**17**	**10754**	**0.195**	**22.766**	17	10754	0.302	35.236
17:00 - 18:00	17	10754	0.080	9.400	17	10754	0.185	21.614	17	10754	0.265	31.014
18:00 - 19:00	17	10754	0.064	7.482	17	10754	0.124	14.452	17	10754	0.188	21.934
19:00 - 20:00	7	13332	0.028	3.257	7	13332	0.088	10.272	7	13332	0.116	13.529
20:00 - 21:00	7	13332	0.031	3.633	7	13332	0.028	3.257	7	13332	0.059	6.890
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			1.776	207.825			1.781	208.128			3.557	415.953

Table 4.1 – TRICS Vehicle Trip Rates for Proposed Development

The estimated trip rate columns in Table 4.1 give the vehicle trips for 11,691 sq m GFA. It can be seen that there are arrivals over several hours in the morning as warehouse operators and drivers will arrive earlier for a morning shift, between 06.00 and 08.00, while office/admin staff will tend to arrive between 08.00 and 09.00.

The estimated total for the day (survey data from 05.00-21.00 only) is 208 arrivals and 208 departures. While the AM development peak is in the preceding hour to the AM network peak hour, it is noted that the difference in total generated vehicle trips is only marginal (36 v 33) so the cumulative traffic will be highest in the 08.00-09.00 hour, and similarly in the PM peak period the development peak is 16.00-17.00 while the network peak is 17.00-18.00, with a marginal difference in development traffic in each hour (35 v 31).

As the development has two accesses which will result in a split of the vehicle trips, with vans and trucks using the southern access on Kingswood Avenue, it was necessary to drill down into the TRICS data for this set of rates to obtain separate rates for the two accesses based on the type of vehicles.

Proposed development traffic for the network peak hours and daily totals is based on the proposed rates using the two accesses.

In terms of daily movements generated, the TRICS data output tables provide the hourly breakdown in terms of total vehicles, and for sub categories cars, taxis, LGV (vans), OGV (HGVs). These are appended in full for reference.

Based on these data sheets the daily development trips by type are summarised as follows:

	AM Peak			PM Peak			Daily		
Type	In	Out	Total	In	Out	Total	In	Out	Total
Cars	13	2	15	3	16	19	103	103	206
Taxi	0	0	0	0	0	0	1	1	2
Motorcycle	0	0	0	0	0	0	2	2	4
Total using car park access	*13*	*2*	*15*	*3*	*16*	*19*	*106*	*106*	*212*
LGV (Vans)	4	3	7	2	2	4	41	41	82
HGV (Trucks)	5	6	11	4	3	7	61	61	122
Total using delivery access	*9*	*9*	*18*	*6*	*5*	*11*	*102*	*102*	*204*
Development total vehicles	**22**	**11**	**33**	**9**	**21**	**30**	**208**	**208**	**416**

Table 4.2 – TRICS Daily Vehicle Trips for Proposed Development by Type

4.2 Trip Distribution

The percentage impact of the development traffic on the links at Roundabouts 3A and 3 is set out in the following section.

The development traffic link flows are presented in 2a)-c).

All HGV traffic will arrive and depart by Roundabout 3 (to access the N7 interchange) while some vans and some staff cars will also arrive and depart via Kingswood Road and will therefore pass through Roundabout 3A, with the turning proportions based on the surveyed directional proportions during the peak hours.

Clearly the levels of traffic generation during the network peak hours are not significant having regard for the scale and capacity of the road network serving the site.

4.3 Committed Development Traffic

SRC reviewed committed development proposals for sites located to the south of Kingswood (SD21A/0150 & SD21A/0199, Rohan Developments), and noted that these would be accessed from the R136 and Kingswood Avenue only which provide more direct routes to the N7 and N81 and would therefore be unlikely to generate traffic through Roundabout 3A on Kingswood Road/Kingswood Avenue.

5 DEVELOPMENT IMPACT

5.1 ASSESSMENT YEARS

The earliest opening year for the proposed development allowing for planning and construction would be 2023, and a '+5' design year (2028) and '+15' (2038) has also been considered.

Construction impacts will be temporary in nature and would typically be lower than the operational traffic generation of the completed development. The developer will provide a detailed construction management plan (including traffic management for any roadworks if applicable) prior to construction.

In addition to the traffic generated by the proposed development there is also an expected increase in traffic flows due to general development and an increase in car ownership that needs to be taken into consideration when assessing future year junction capacity.

Traffic growth to 2023, 2028 and 2038 has been developed using the Project Appraisal Guidelines for National Roads Unit 5.3 - Travel Demand Projections PE-PAG-02017 (May 2019).

Figure 6.1 confirms that the site and road network are in the Dublin Metropolitan Area, and therefore Table 6.1. Central Growth Rates are utilised. The appropriate annual rates used are per the Table below which is reproduced from the TII document.

Table 6.1: Link-Based Growth Rates: Metropolitan Area Annual Growth Rates

Metropolitan Area	Low Sensitivity Growth Rates						Central Growth Rates						High Sensitivity Growth Rates					
	2016-2030		2030-2040		2040-2050		2016-2030		2030-2040		2040-2050		2016-2030		2030-2040		2040-2050	
	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV
Dublin	1.0146	1.0280	1.0034	1.0116	1.0028	1.0144	1.0162	1.0295	1.0051	1.0136	1.0044	1.0162	1.0191	1.0328	1.0087	1.0172	1.0093	1.0256

Figure 5.1: Table 6.1. of PE-PAG-02017 (TII)

The annual rate for each period is used to develop a compound factor for the required years.

Therefore, the January 2022 surveyed base year flows were factored up as follows:

- LV by 1.62% and HV by 2.95% from 2022 to an opening year of 2023 (see Diagram 3(a) and 3(b) appended)
- LV by 10.12% and HV by 19.06% from 2022 to a '+5' Design Year of 2028 (see Diagram 4(a) and 4(b) appended)
- LV by 17.8% and HV by 37.6% from 2022 to a '+15' Design Year of 2038 (see Diagram 5(a) and 5(b) appended)

5.2 PERCENTAGE IMPACT ON KEY JUNCTIONS

The TII Guidelines for Transport Assessments state that the thresholds for junction analysis in Transport Assessments are as follows:

- "Traffic to and from the development exceeds 10% of the existing two-way traffic flow on the adjoining highway."

- *"Traffic to and from the development exceeds 5% of the existing two-way traffic flow on the adjoining highway, where traffic congestion exists or will exist within the assessment period or in other sensitive locations".*

As noted in the previous section, the majority of operational development traffic (including the HGVs) will arrive and depart via Citywest Road at Roundabout 3, having travelled primarily from the N7 at Junction 3 or from the N81 to the south, with the vans and staff car movements also likely to be utilising the Kingswood Road north and south to access Old Naas Road and the R136.

Therefore, the impact on the links at Roundabout 3 and 3A, comparing the Do Nothing flows in Diagrams 3(a) to 5(b) with the additional traffic generated by the development from Diagrams 2(a) and 2(b) is as follows:

Link and Direction	**2023**		**2028**		**2038**	
Roundabout 3	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
Citywest Road (N)	+0.55%	+0.37%	+0.51%	+0.34%	+0.47%	+0.31%
Citywest Road (S)	+0.23%	+0.15%	+0.21%	+0.14%	+0.19%	+0.13%
Kingswood Avenue (E)	+7.11%	+5.30%	+6.49%	+4.81%	+6.07%	+4.53%
N7 Westbound slips (W)	+0.93%	+1.11%	+0.85%	+1.02%	+0.79%	+0.96%
Roundabout 3A	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
Kingswood Road (N)	+2.55%	+1.97%	+2.34%	+2.81%	+2.18%%	+2.62%
Kingswood Road (S)	+1.33%	+1.06%	+0.81%	+0.98%	+0.76%	+0.91%
Kingswood Avenue (W)	+2.60%	+2.87%	+2.48%	+2.64%	+2.30%	+2.46%

Table 5.1 – Development Impact - AM and PM Peak Hours – Do Nothing v Do Something

It should be noted that the percentage impact at each junction in the 2023 opening year will diminish slightly in the 2028 and 2038 design years as the background traffic growth increases the Do-Nothing total flow, while the development trips remain constant for each assessment year.

The highest percentage increase (impact) occurs on Kingswood Avenue to the east of Roundabout 3.

From the foregoing, it is clear that the proposed development will not have any significant traffic impacts on the road network during the AM or PM peak period, and the volume of off-peak movements are also at a level which will not result in operational issues for the road network or impact on road user safety.

5.3 Operational Traffic Mitigation Measures

It is submitted that there are no specific traffic mitigation measures required to accommodate the proposed development other than the proposed access junction kerbline tie-ins and crossings of the existing footpaths which are standard for any new development access.

6 SUMMARY

6.1 GENERAL

Stephen Reid Consulting Traffic and Transportation Limited (SRC) have prepared this report on behalf of Rockface Developments Limited in support of a planning application to be submitted to South Dublin County Council (SDCC) for development of lands adjacent to Roundabout 3A (Kingswood Road/Kingswood Avenue) Citywest, Dublin 24.

The development comprises construction of a commercial warehouse with ancillary office accommodation and staff welfare totalling 11,691 sq. m GFA.

An access on the northeast corner of the site (on Kingswood Road) will provide pedestrian, cycle and vehicle access to the car park with a separate access on the southwest corner of the site (on Kingswood Avenue) serving the delivery yard for vans and HGV access only.

The development will be served by 64 car parking spaces (including 3 disabled spaces and 2 EV charging spaces), and 60 cycle parking spaces. The parking provision is within the Maximum standards required in the Development Plan and is therefore appropriate for the site location and the proposed use.

No pedestrians, cyclists or staff/visitor cars will be permitted to use the HGV access to enter/exit the development.

Traffic count data from a term-time weekday in January 2022 was used to create baseline robust flows and factored using TII rates for the predicted opening and design years.

Development traffic generation has been based on TRICS data for similar land uses.

It can be seen from the commentary in this TIA that the volumes of traffic generated by the proposed development will not be significant during the network peak hours, and this can be accommodated by the existing public road network and the proposed access arrangements and internal layout measures without queuing or delays.

Therefore, it is submitted that the development as proposed is in accordance with the proper planning and sustainable development of the area.

Stephen Reid Consulting Traffic and Transportation
20.06.2022

Appendices

Stephen Reid Consulting
Traffic and Transportation

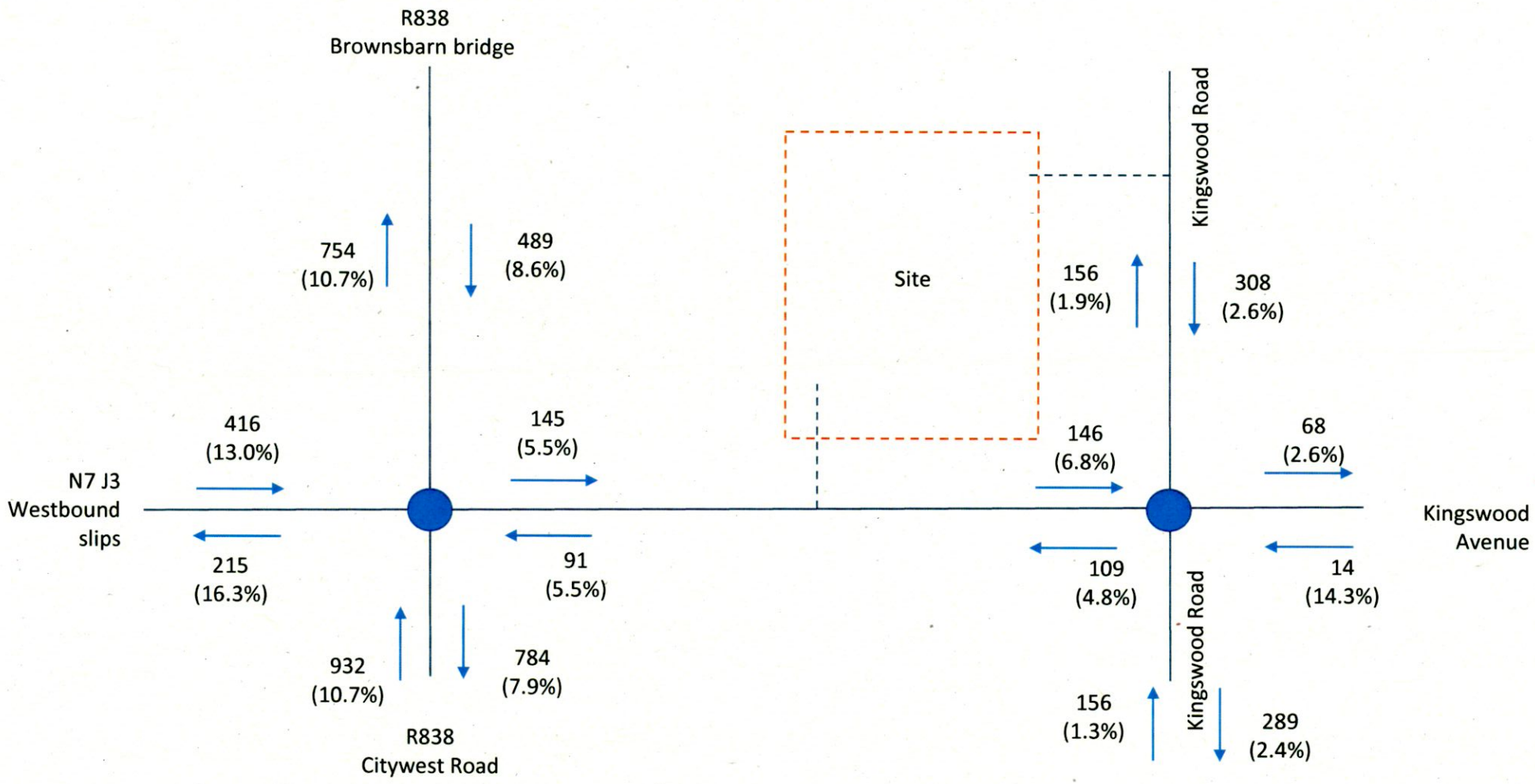


Diagram 1(a) 2022 Weekday AM Peak Period 08.00-09.00

Traffic Counts Thursday 20th January 2022
flows in veh/hr (%HVs)

Stephen Reid Consulting
Traffic and Transportation

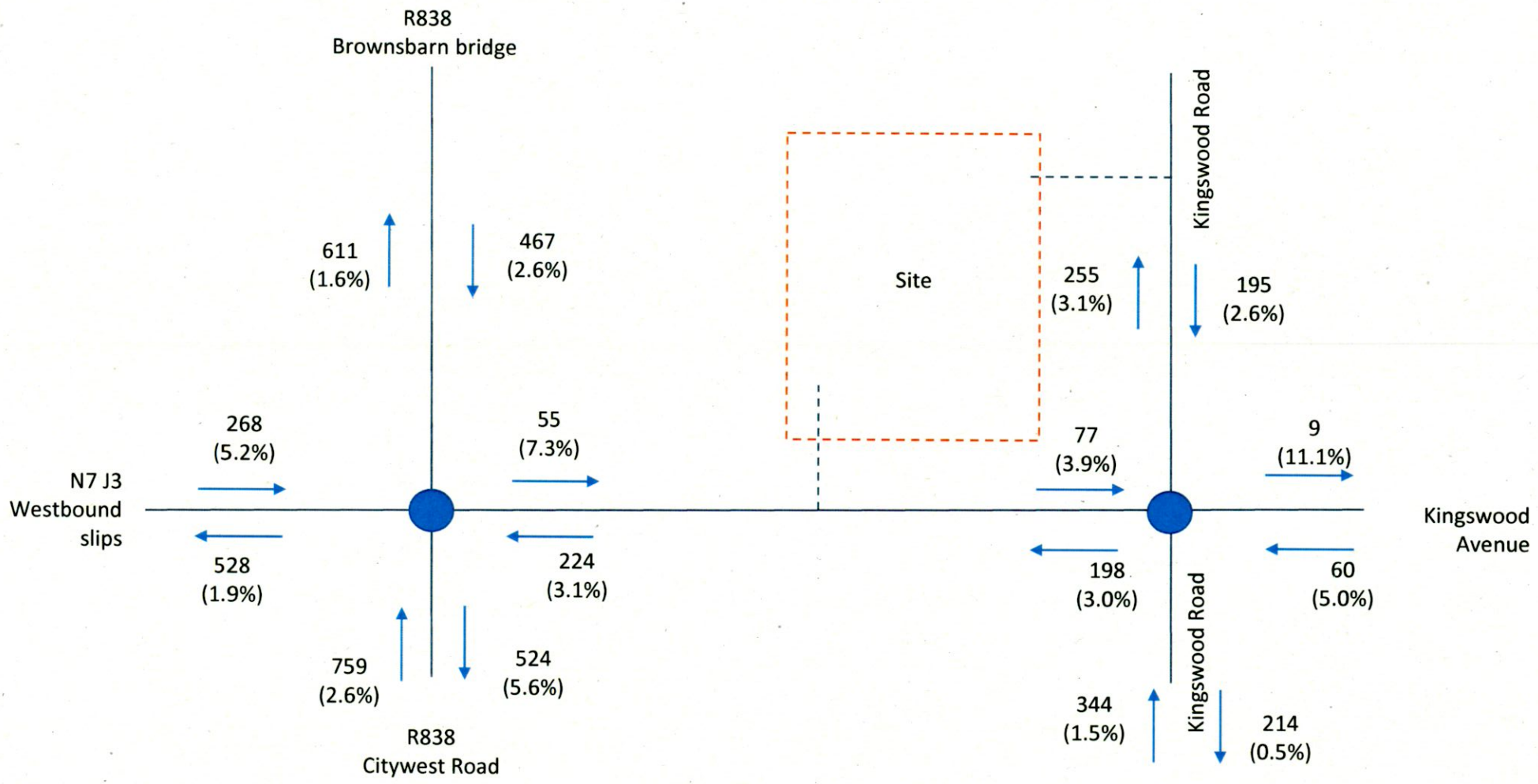


Diagram 1(b) 2022 Weekday PM Peak Period 17.00-18.00

Traffic Counts Thursday 20th January 2022
flows in veh/hr (%HVs)

Stephen Reid Consulting
Traffic and Transportation

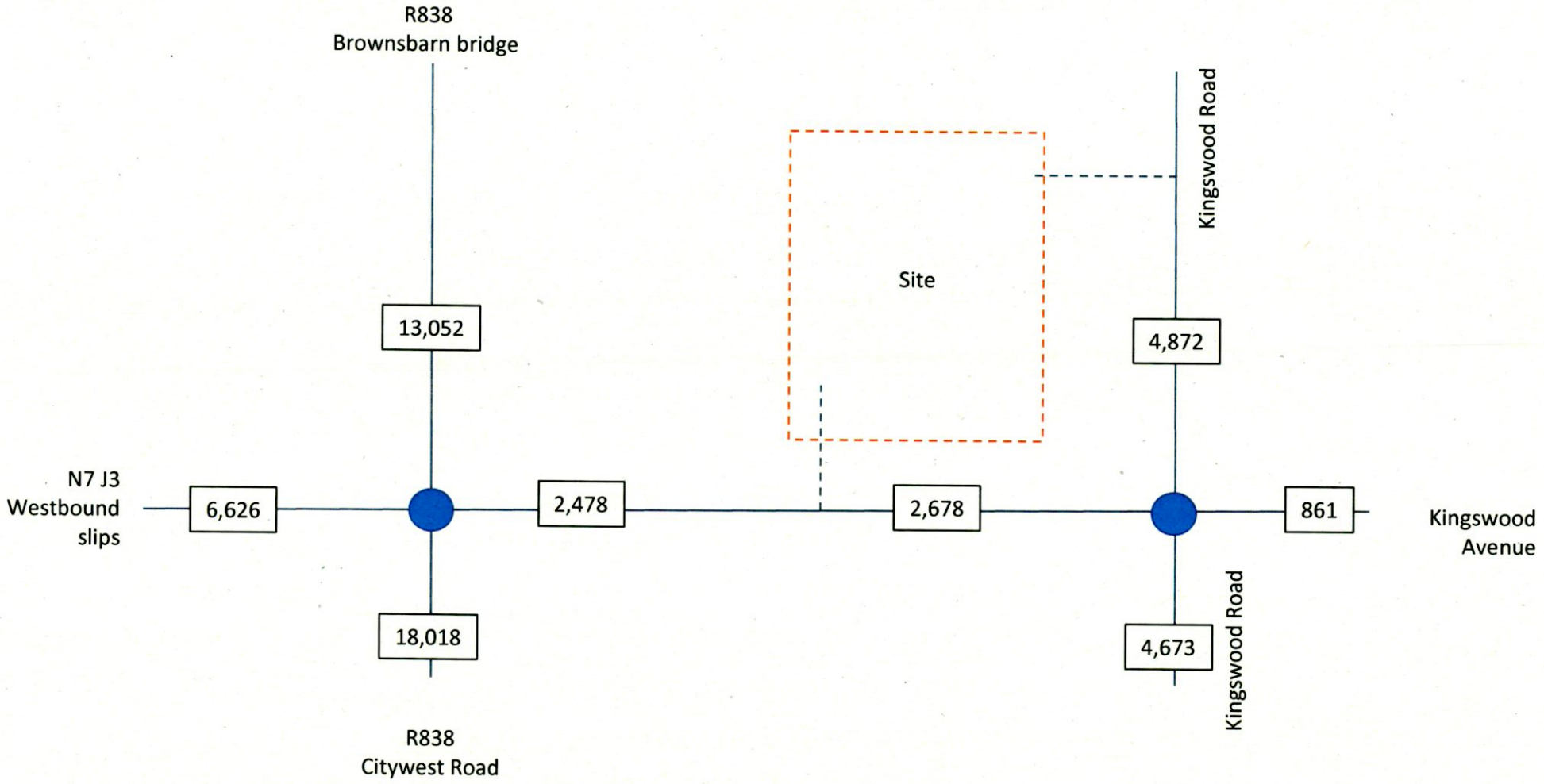


Diagram 1(c) 2022 Weekday 24hr Link Flows (factored from peak traffic counts using TII data)

Stephen Reid Consulting
Traffic and Transportation

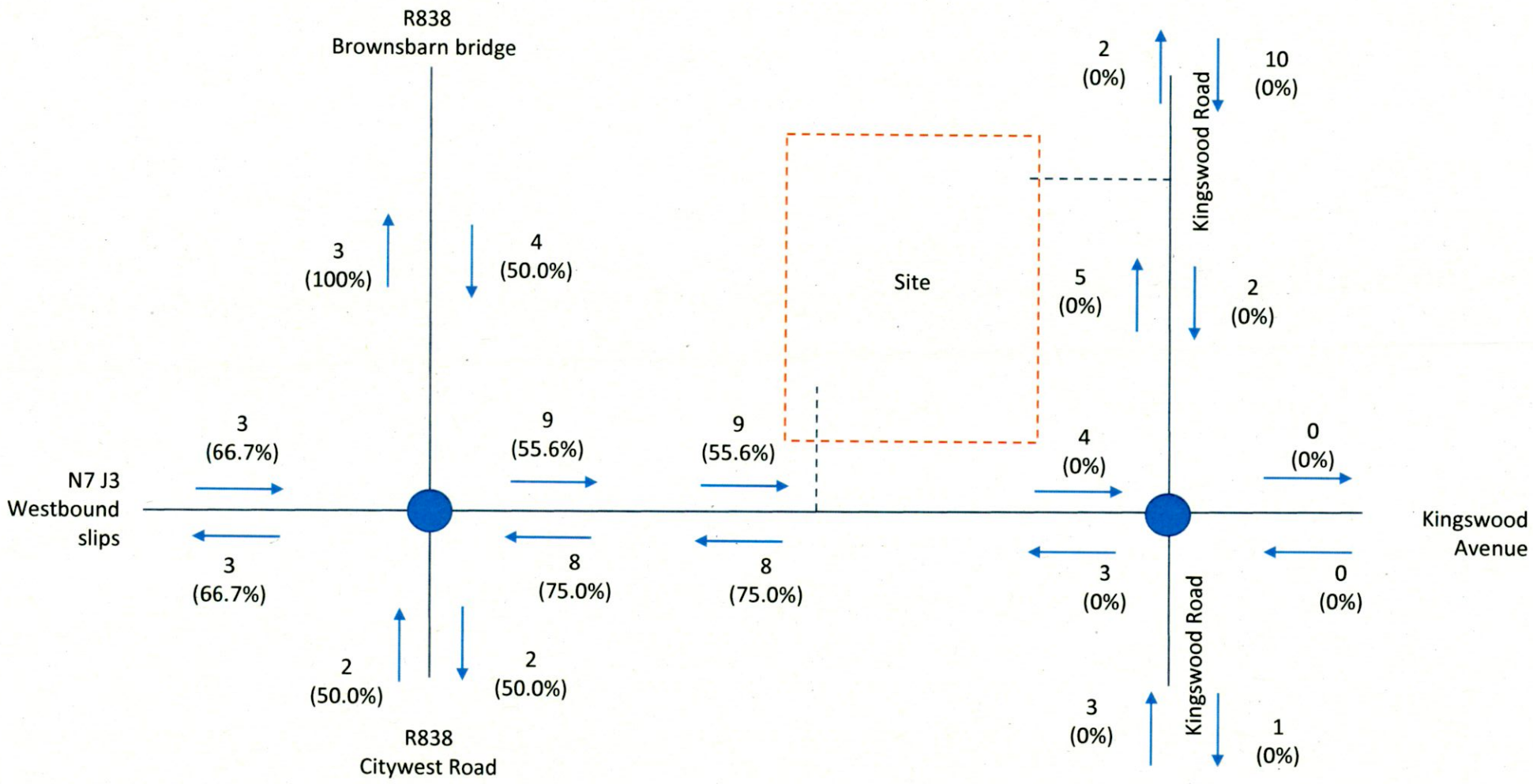


Diagram 2(a) Development Traffic AM Peak Period 08.00-09.00

Development Traffic from TRICS (see TIA)
flows in veh/hr (%HVs)

Stephen Reid Consulting
Traffic and Transportation

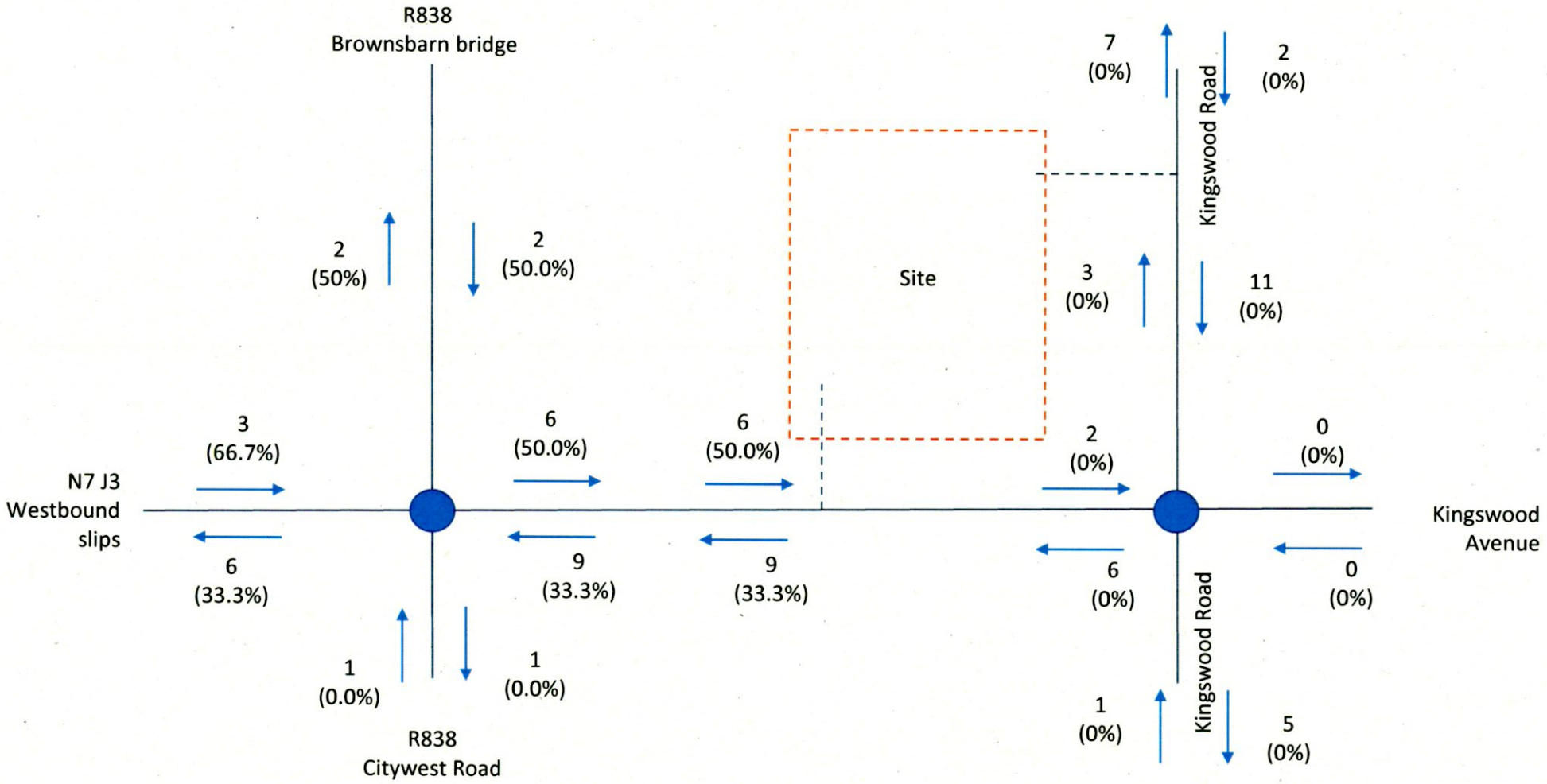


Diagram 2(b) Development Traffic PM Peak Period 17.00-18.00

Development Traffic from TRICS (see TIA)
flows in veh/hr (%HVs)

Stephen Reid Consulting
Traffic and Transportation

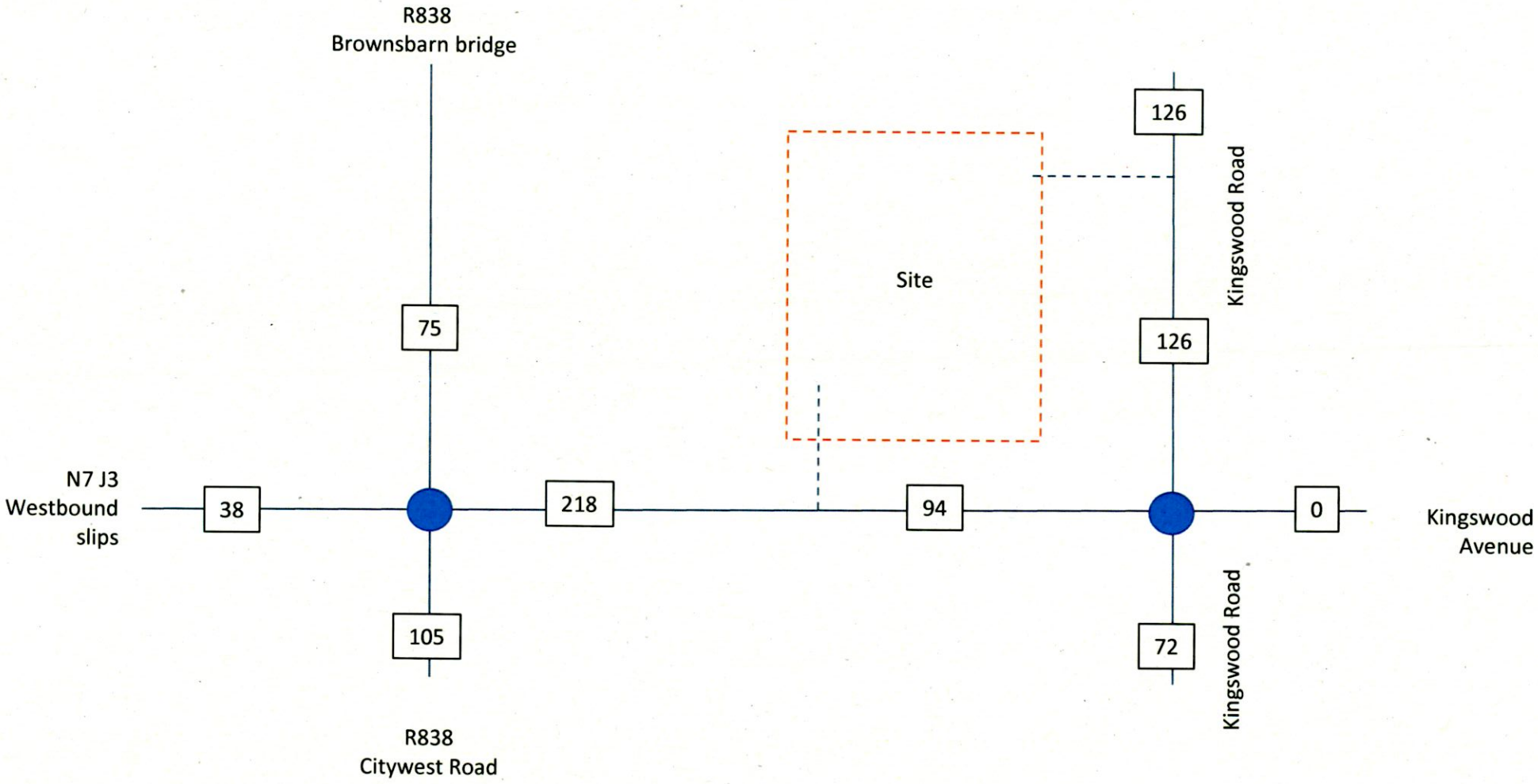


Diagram 2(c) Weekday 24hr Development Link Flows

Development Traffic from TRICS (see TIA)

Stephen Reid Consulting
Traffic and Transportation

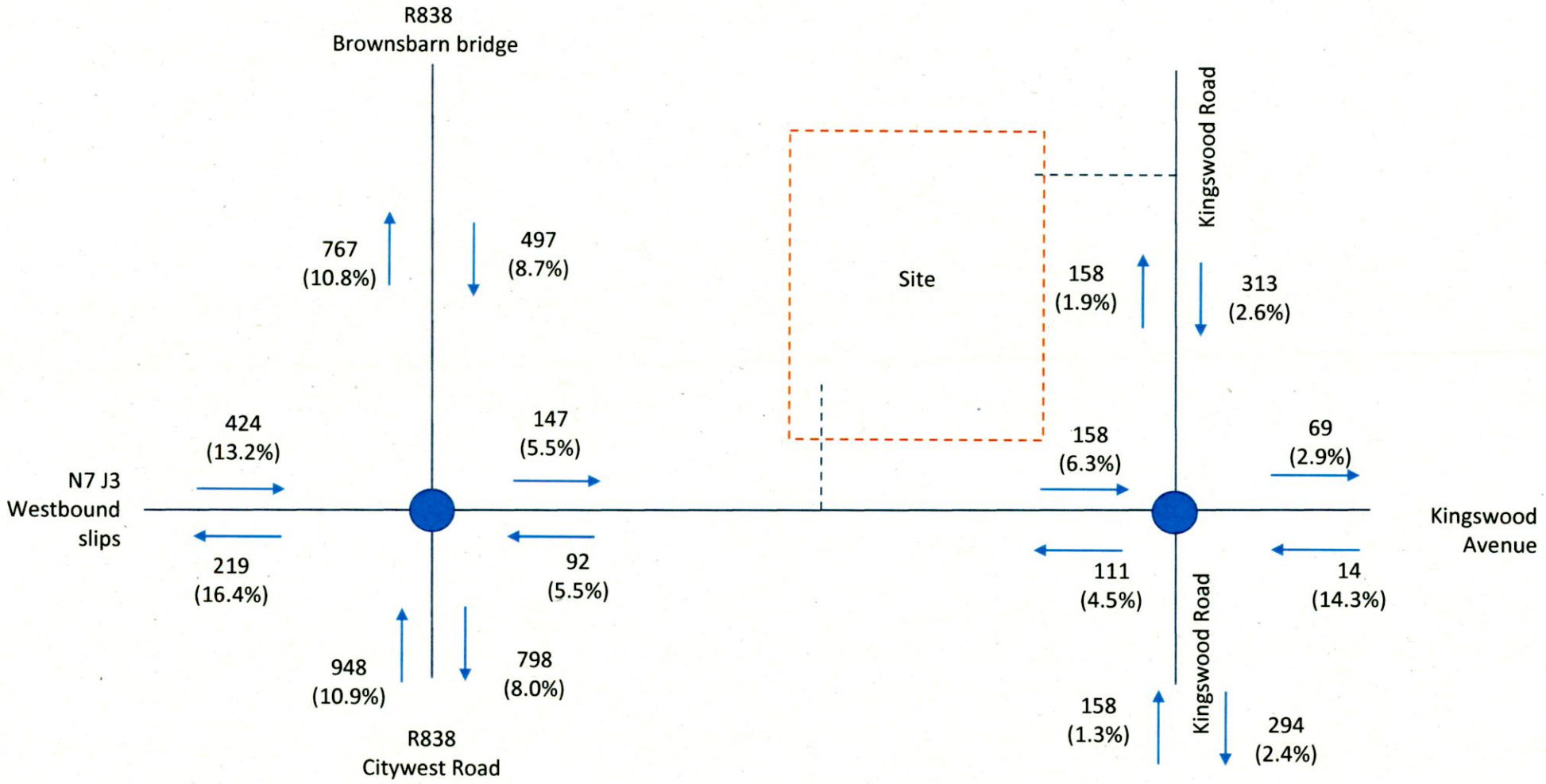


Diagram 3(a) 2023 Weekday AM Peak Period 08.00-09.00 – Do Nothing

Diagram 1(a) x TII PAG factors
flows in veh/hr (%HVs)

Stephen Reid Consulting
Traffic and Transportation

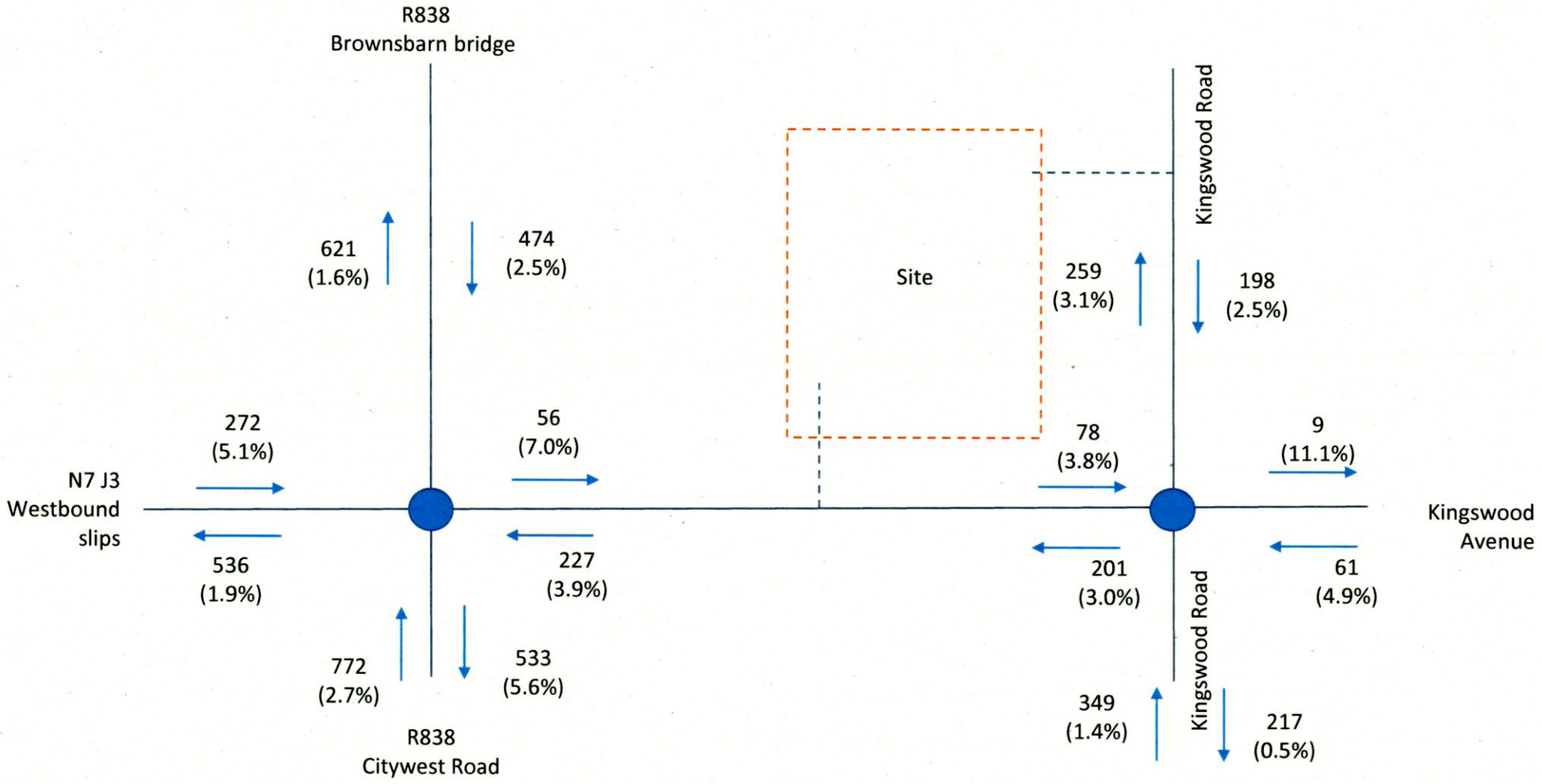


Diagram 3(b) 2023 Weekday PM Peak Period 17.00-18.00 – Do Nothing

Diagram 1(b) x TII PAG factors
flows in veh/hr (%HVs)

Stephen Reid Consulting
Traffic and Transportation

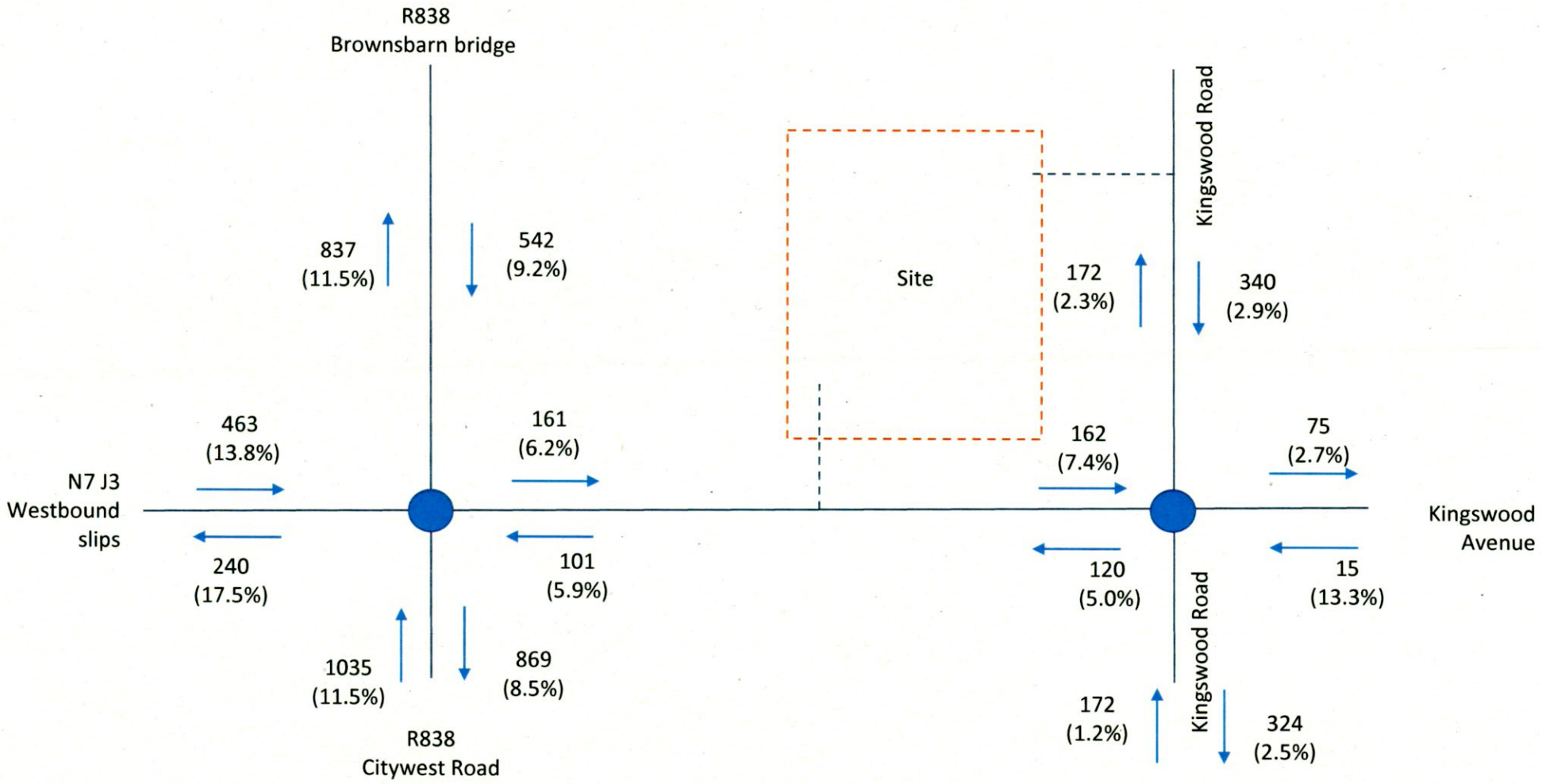


Diagram 4(a) 2028 Weekday AM Peak Period 08.00-09.00 – Do Nothing

Diagram 1(a) x TII PAG factors
flows in veh/hr (%HVs)

Stephen Reid Consulting
Traffic and Transportation

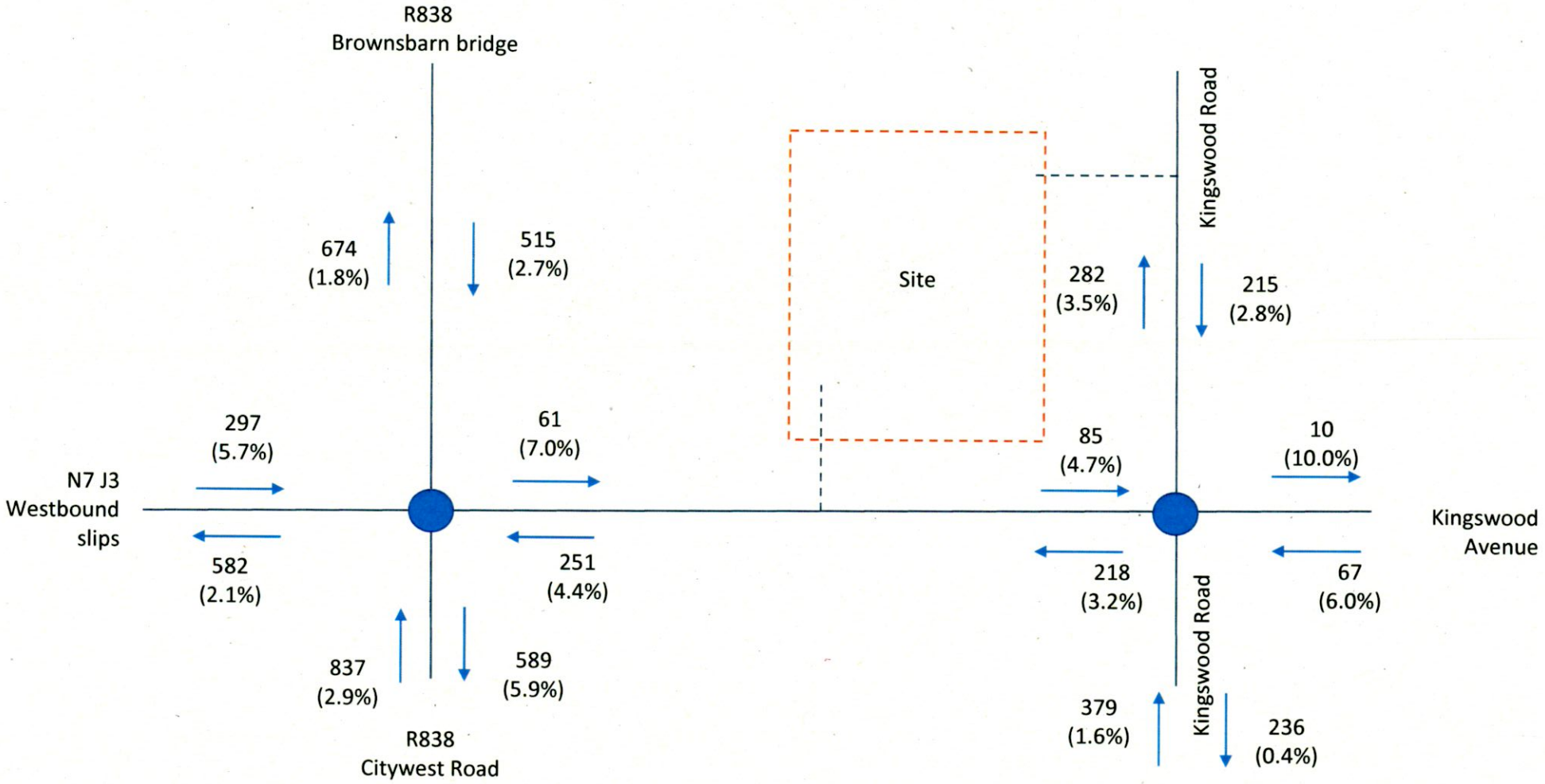


Diagram 4(b) 2028 Weekday PM Peak Period 17.00-18.00 – Do Nothing

Diagram 1(b) x TII PAG factors
flows in veh/hr (%HVs)

Stephen Reid Consulting
Traffic and Transportation

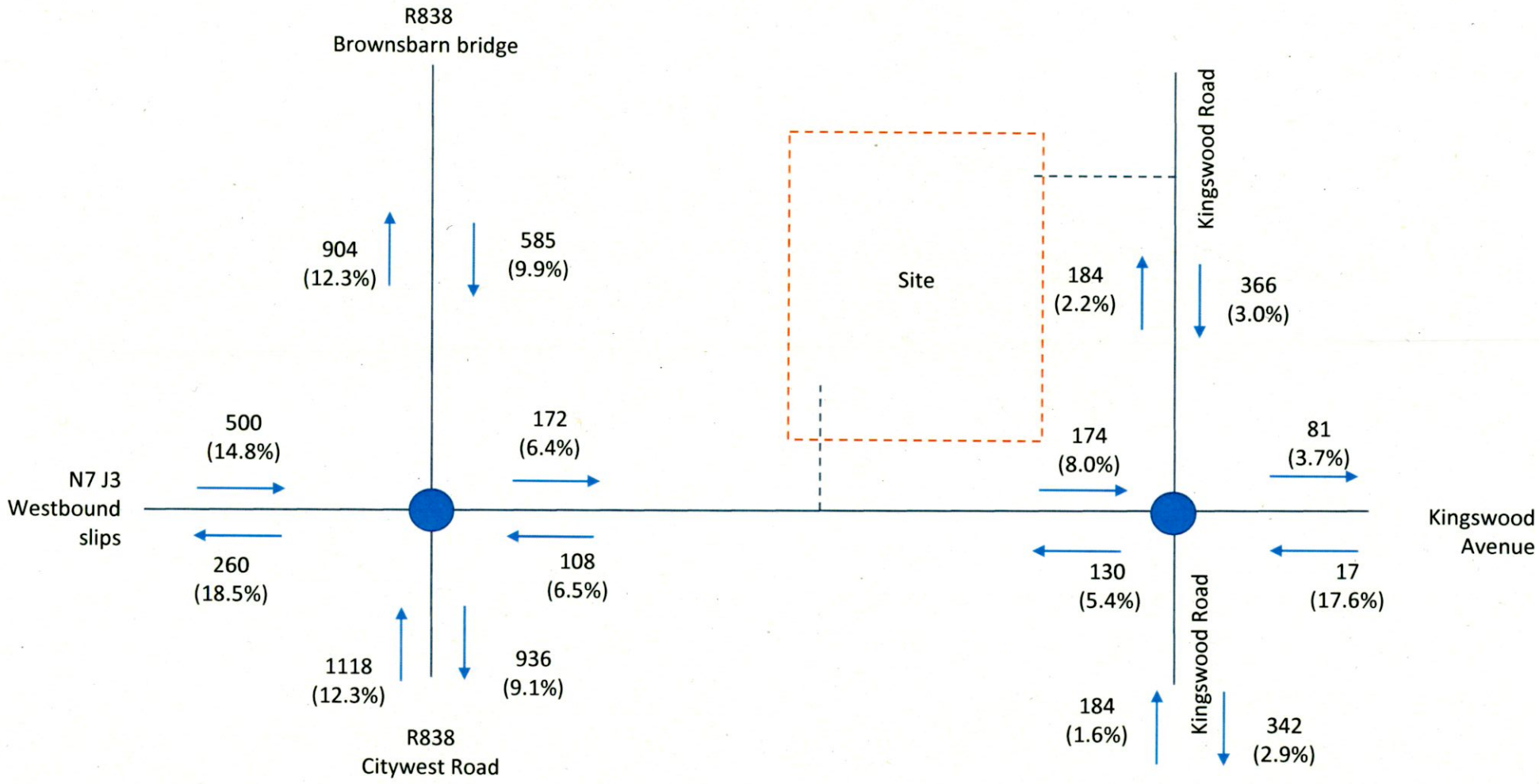


Diagram 5(a) 2038 Weekday AM Peak Period 08.00-09.00 – Do Nothing

Diagram 1(a) x TII PAG factors
flows in veh/hr (%HVs)

Stephen Reid Consulting
Traffic and Transportation

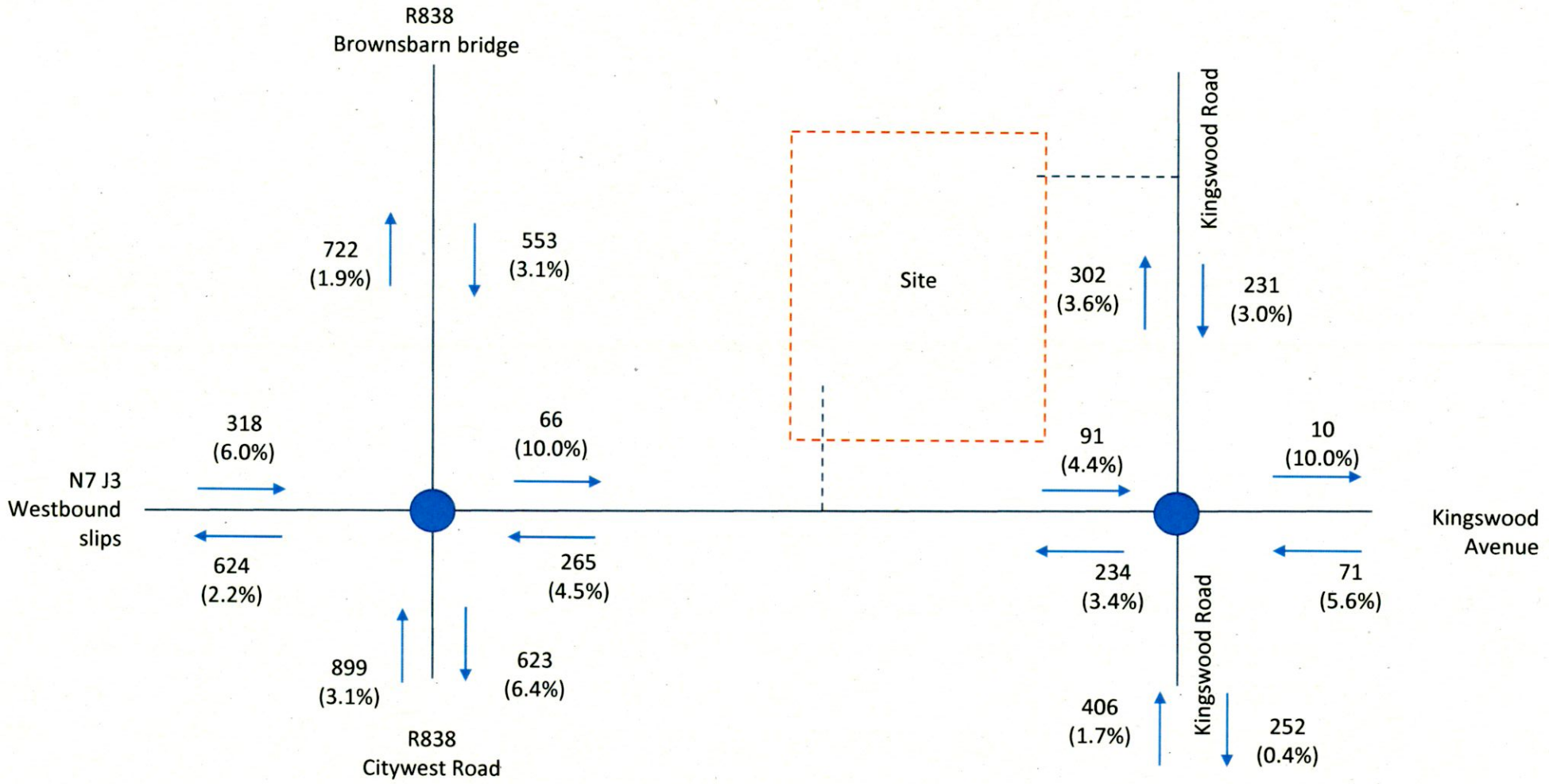
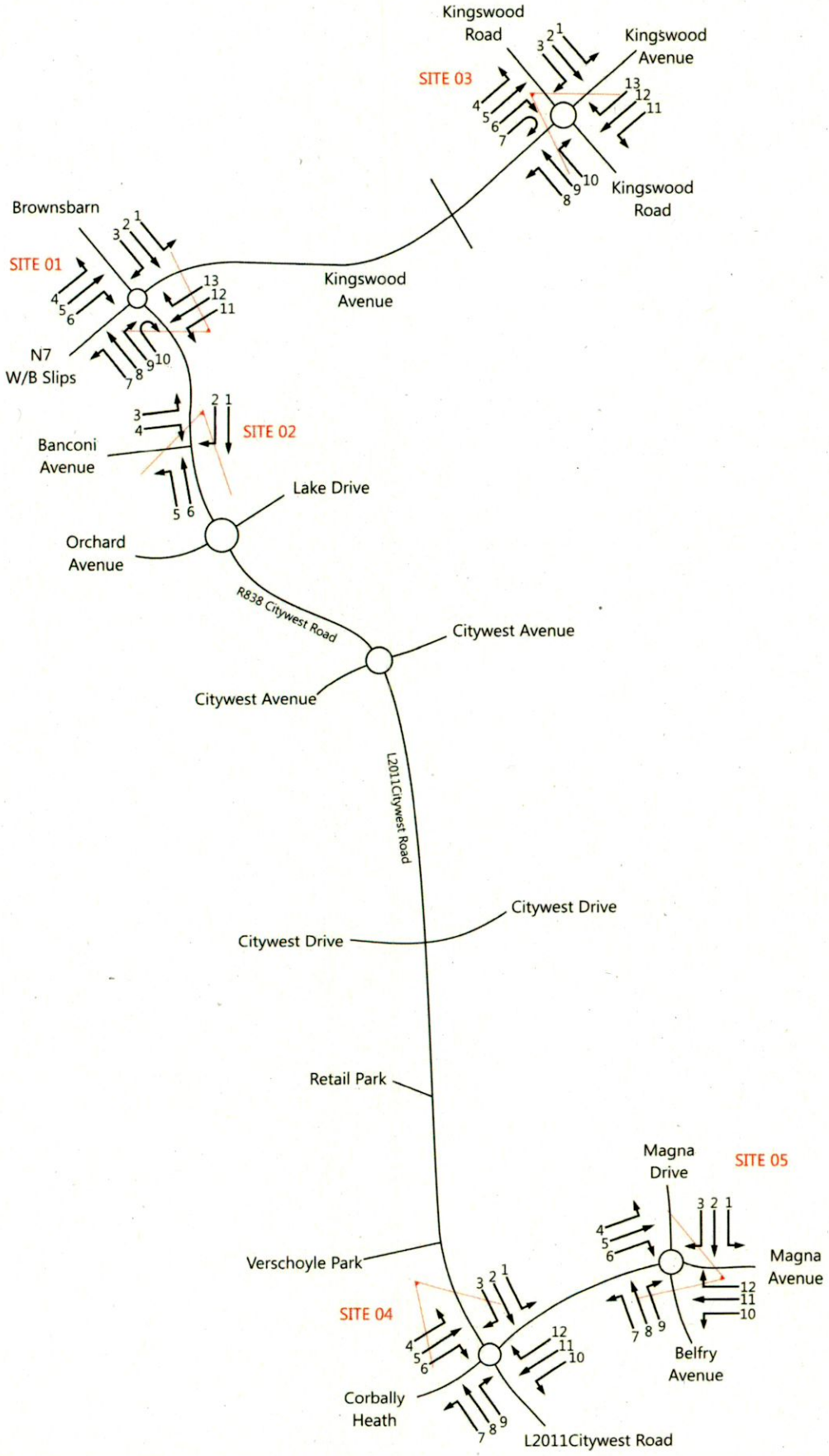


Diagram 5(b) 2038 Weekday PM Peak Period 17.00-18.00 – Do Nothing

Diagram 1(b) x TII PAG factors
flows in veh/hr (%HVs)

Site/Movement Numbering



Job number: TRA/22/015	Job Date: 20th January 2022	Drawing No: TRA/22/015-02	traffinomics.ie
Client: Stephen Reid	Job Day: Thursday	Author: SPW	

TRAFFINOMICS LIMITED

CITYWEST TRAFFIC COUNTS **JANUARY 2022**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/22/015**

SITE: 01 DATE: 20th January 2022

LOCATION: Brownsbarn/N7 WB Slips/R838 Citywest Road/Kingswood Avenue DAY: Thursday

	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3						
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
07:00	10	2	2	0	0	14	15	21	7	1	2	0	31	34	3	2	1	2	0	8	11
07:15	11	2	2	0	0	15	16	38	13	1	2	0	54	57	3	1	1	9	0	14	26
07:30	23	4	2	0	0	29	30	37	14	3	1	1	56	60	4	2	3	3	0	12	17
07:45	19	7	0	0	0	26	26	58	14	3	2	1	78	83	3	4	2	1	0	10	12
H/TOT	63	15	6	0	0	84	87	154	48	8	7	2	219	234	13	9	7	15	0	44	67
08:00	14	5	0	0	0	19	19	78	9	1	8	1	97	109	5	3	1	2	2	13	18
08:15	30	5	1	0	0	36	37	80	9	0	2	0	91	94	4	2	0	1	1	8	10
08:30	15	0	0	0	0	15	15	74	4	2	2	1	83	88	3	3	3	2	2	13	19
08:45	18	1	1	1	0	21	23	71	9	1	0	0	81	82	3	2	1	3	3	12	19
H/TOT	77	11	2	1	0	91	93	303	31	4	12	2	352	372	15	10	5	8	8	46	67
09:00	11	1	0	0	0	12	12	50	8	2	4	1	65	72	5	4	0	4	0	13	18
09:15	3	0	0	0	0	3	3	43	5	2	5	1	56	65	7	1	1	1	0	10	12
09:30	5	0	0	0	0	5	5	33	9	0	3	0	45	49	6	0	1	0	0	7	8
09:45	3	1	1	0	0	5	6	21	10	1	7	0	39	49	9	3	1	3	0	16	20
H/TOT	22	2	1	0	0	25	26	147	32	5	19	2	205	234	27	8	3	8	0	46	58
P/TOT	162	28	9	1	0	200	205.8	604	111	17	38	6	776	839.9	55	27	15	31	8	136	191.8

	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3						
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
14:00	4	5	0	1	0	10	11	33	7	3	6	1	50	60	9	1	1	3	0	14	18
14:15	3	0	0	0	0	3	3	30	2	5	5	0	42	51	12	5	0	5	1	23	31
14:30	7	0	0	0	0	7	7	32	8	2	2	1	45	50	2	4	0	3	0	9	13
14:45	4	3	1	0	0	8	9	41	7	2	4	0	54	60	7	5	3	0	0	15	17
H/TOT	18	8	1	1	0	28	30	136	24	12	17	2	191	221	30	15	4	11	1	61	78
15:00	7	1	4	0	0	12	14	25	4	0	2	0	31	34	12	3	3	1	0	19	22
15:15	2	1	0	0	0	3	3	25	8	2	4	0	39	45	19	3	1	4	0	27	33
15:30	3	1	0	0	0	4	4	48	6	0	1	0	55	56	24	5	1	0	0	30	31
15:45	7	0	1	1	0	9	11	30	5	3	0	0	38	40	10	6	0	1	0	17	18
H/TOT	19	3	5	1	0	28	32	128	23	5	7	0	163	175	65	17	5	6	0	93	103
16:00	10	1	0	0	0	11	11	46	6	3	1	1	57	61	26	11	0	0	0	37	37
16:15	7	4	0	1	0	12	13	31	7	1	2	1	42	46	27	11	1	0	0	39	40
16:30	6	3	1	0	0	10	11	46	7	0	3	0	56	60	62	9	0	0	0	71	71
16:45	7	1	0	0	0	8	8	32	7	0	4	0	43	48	23	7	0	4	0	34	39
H/TOT	30	9	1	1	0	41	43	155	27	4	10	2	198	215	138	38	1	4	0	181	187
17:00	7	0	0	0	0	7	7	68	11	1	0	0	80	81	56	9	0	1	0	66	67
17:15	9	1	0	0	0	10	10	48	8	1	1	0	58	60	33	4	0	3	0	40	44
17:30	3	0	0	0	1	4	5	58	8	0	0	0	66	66	62	5	1	0	0	68	69
17:45	8	1	0	0	0	9	9	30	5	1	2	0	38	41	20	1	0	0	0	21	21
H/TOT	27	2	0	0	1	30	31	204	32	3	3	0	242	247	171	19	1	4	0	195	201
18:00	4	0	0	1	0	5	6	41	4	0	1	1	47	49	38	5	1	1	0	45	47
18:15	4	1	0	0	0	5	5	33	2	0	0	0	35	35	22	3	1	1	0	27	29
18:30	2	0	0	1	0	3	4	30	2	1	0	0	33	34	23	3	0	1	0	27	28
18:45	1	0	1	0	0	2	3	31	1	3	0	0	35	37	14	1	0	1	0	16	17
H/TOT	11	1	1	2	0	15	18	135	9	4	1	1	150	154	97	12	2	4	0	115	121
P/TOT	105	23	8	5	1	142	153.5	758	115	28	38	5	944	1012	501	101	13	29	1	645	690.2

TRAFFINOMICS LIMITED

CITYWEST TRAFFIC COUNTS **JANUARY 2022**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/22/015**

SITE: 01 DATE: 20th January 2022

LOCATION: Brownsbarn/N7 WB Slips/R838 Citywest Road/Kingswood Avenue DAY: Thursday

	MOVEMENT 4							MOVEMENT 5							MOVEMENT 6						
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
07:00	7	0	0	0	0	7	7	5	1	0	0	0	6	6	45	13	3	11	0	72	88
07:15	6	2	1	0	0	9	10	2	1	0	1	0	4	5	34	16	2	7	2	61	73
07:30	4	3	1	0	0	8	9	4	1	0	0	0	5	5	49	25	5	3	2	84	92
07:45	1	3	0	0	0	4	4	7	5	0	0	0	12	12	60	18	1	10	1	90	105
H/TOT	18	8	2	0	0	28	29	18	8	0	1	0	27	28	188	72	11	31	5	307	358
08:00	3	1	0	0	0	4	4	0	1	0	2	0	3	6	61	9	3	9	2	84	99
08:15	7	1	0	0	0	8	8	7	2	0	0	0	9	9	78	16	3	10	0	107	122
08:30	0	1	0	0	0	1	1	2	1	0	0	0	3	3	76	10	2	9	1	98	112
08:45	2	1	0	0	1	4	5	3	1	1	0	0	5	6	71	8	1	10	0	90	104
H/TOT	12	4	0	0	1	17	18	12	5	1	2	0	20	23	286	43	9	38	3	379	436
09:00	4	0	0	0	0	4	4	2	2	0	0	0	4	4	68	17	6	13	0	104	124
09:15	5	0	0	0	0	5	5	3	1	1	0	0	5	6	48	15	4	8	0	75	87
09:30	5	1	0	0	0	6	6	1	1	0	0	0	2	2	42	8	2	20	0	72	99
09:45	2	1	0	0	0	3	3	1	0	0	0	0	1	1	32	4	0	6	0	42	50
H/TOT	16	2	0	0	0	18	18	7	4	1	0	0	12	13	190	44	12	47	0	293	360
P/TOT	46	14	2	0	1	63	65	37	17	2	3	0	59	63.9	664	159	32	116	8	979	1154

	MOVEMENT 4							MOVEMENT 5							MOVEMENT 6						
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
14:00	7	1	0	1	0	9	10	1	2	1	0	0	4	5	34	12	3	13	0	62	80
14:15	1	1	1	0	0	3	4	1	0	0	1	0	2	3	44	14	3	15	2	78	101
14:30	3	1	0	0	0	4	4	4	2	0	1	0	7	8	46	6	3	8	0	63	75
14:45	9	0	1	0	0	10	11	1	0	0	0	0	1	1	33	11	3	12	0	59	76
H/TOT	20	3	2	1	0	26	28	7	4	1	2	0	14	17	157	43	12	48	2	262	332
15:00	3	2	1	0	0	6	7	0	0	0	0	0	0	0	64	8	4	14	0	90	110
15:15	3	0	0	0	0	3	3	2	0	0	0	0	2	2	44	7	4	6	0	61	71
15:30	3	1	1	1	0	6	8	0	2	0	0	0	2	2	49	11	7	9	1	77	93
15:45	4	1	0	2	0	7	10	1	0	0	0	0	1	1	48	10	2	10	0	70	84
H/TOT	13	4	2	3	0	22	27	3	2	0	0	0	5	5	205	36	17	39	1	298	358
16:00	2	1	0	0	0	3	3	2	0	0	1	0	3	4	52	9	5	5	1	72	82
16:15	4	2	0	0	0	6	6	1	0	0	0	0	1	1	48	13	4	1	0	66	69
16:30	5	0	0	1	0	6	7	1	0	0	0	0	1	1	24	10	1	2	0	37	40
16:45	3	0	1	0	0	4	5	3	0	0	0	0	3	3	49	11	1	2	0	63	66
H/TOT	14	3	1	1	0	19	21	7	0	0	1	0	8	9	173	43	11	10	1	238	258
17:00	8	2	0	0	0	10	10	0	0	0	0	0	0	0	36	3	0	1	1	41	43
17:15	3	0	0	0	0	3	3	2	0	1	0	0	3	4	63	7	2	0	0	72	73
17:30	6	0	0	0	0	6	6	0	0	0	0	0	0	0	43	6	2	2	1	54	59
17:45	3	1	0	0	0	4	4	3	0	0	0	0	3	3	60	7	5	0	0	72	75
H/TOT	20	3	0	0	0	23	23	5	0	1	0	0	6	7	202	23	9	3	2	239	249
18:00	2	0	0	0	0	2	2	0	0	0	0	0	0	0	44	6	1	1	0	52	54
18:15	3	1	0	0	0	4	4	1	0	0	0	0	1	1	45	9	0	1	0	55	56
18:30	3	0	0	0	0	3	3	0	0	1	0	0	1	2	39	0	1	0	0	40	41
18:45	2	1	1	0	0	4	5	0	0	0	0	1	1	2	40	3	1	0	1	45	47
H/TOT	10	2	1	0	0	13	14	1	0	1	0	1	3	5	168	18	3	2	1	192	197
P/TOT	77	15	6	5	0	103	112.5	23	6	3	3	1	36	42.4	905	163	52	102	7	1229	1395

TRAFFINOMICS LIMITED

CITYWEST TRAFFIC COUNTS **JANUARY 2022**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/22/015**

SITE: 01 DATE20th January 2022

LOCATION: Brownsbarn/N7 WB Slips/R838 Citywest Road/Kingswood Avenue DAY: Thursday

	MOVEMENT 7							MOVEMENT 8							MOVEMENT 9							MOVEMENT 10						
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
07:00	7	4	0	0	0	11	11	111	32	5	13	3	164	186	3	1	0	0	1	5	6	0	0	0	0	1	1	2
07:15	11	4	0	1	0	16	17	114	41	8	23	2	188	224	2	1	0	0	2	5	7	0	0	0	0	3	3	6
07:30	14	1	4	2	0	21	26	105	43	7	16	2	173	199	3	2	0	0	3	8	11	0	0	0	0	1	1	2
07:45	10	5	1	0	0	16	17	110	28	7	15	2	162	187	8	2	0	0	1	11	12	0	0	0	0	2	2	4
H/TOT	42	14	5	3	0	64	70	440	144	27	67	9	687	797	16	6	0	0	7	29	36	0	0	0	0	7	7	14
08:00	24	7	1	2	0	34	37	137	41	1	15	2	196	218	4	1	0	0	0	5	5	0	0	0	0	1	1	2
08:15	33	11	1	0	0	45	46	125	33	5	11	0	174	191	8	0	0	0	0	8	8	0	0	0	0	1	1	2
08:30	38	7	4	0	0	49	51	122	25	3	18	1	169	195	6	0	0	0	1	7	8	0	0	0	0	1	1	2
08:45	24	4	1	5	0	34	41	137	32	6	16	2	193	219	12	1	1	0	0	14	15	0	0	0	0	1	1	2
H/TOT	119	29	7	7	0	162	175	521	131	15	60	5	732	823	30	2	1	0	1	34	36	0	0	0	0	4	4	8
09:00	20	3	1	4	0	28	34	104	15	4	10	1	134	150	8	0	0	1	1	10	12	0	0	0	0	0	0	0
09:15	18	5	0	3	0	26	30	115	18	10	6	1	150	164	8	0	0	0	1	9	10	0	0	0	0	0	0	0
09:30	16	3	2	2	0	23	27	93	16	3	14	1	127	148	2	0	0	0	1	3	4	0	0	0	0	2	2	4
09:45	9	2	1	0	0	12	13	79	18	4	10	1	112	128	3	1	0	0	0	4	4	0	0	0	0	0	0	0
H/TOT	63	13	4	9	0	89	103	391	67	21	40	4	523	590	21	1	0	1	3	26	30	0	0	0	0	2	2	4
P/TOT	224	56	16	19	0	315	347.7	1352	342	63	167	18	1942	2209	67	9	1	1	11	89	101.8	0	0	0	0	13	13	26

	MOVEMENT 7							MOVEMENT 8							MOVEMENT 9							MOVEMENT 10						
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
14:00	23	7	1	4	0	35	41	127	16	7	16	2	168	194	5	2	0	0	0	7	7	0	0	0	0	0	0	0
14:15	22	2	2	4	0	30	36	85	18	3	16	0	122	144	2	3	2	0	2	9	12	0	0	0	0	0	0	0
14:30	39	4	1	3	0	47	51	118	14	7	11	0	150	168	4	0	0	0	0	4	4	0	0	0	0	1	1	2
14:45	13	4	5	3	0	25	31	135	12	3	10	0	160	175	12	2	0	0	1	15	16	0	0	0	0	0	0	0
H/TOT	97	17	9	14	0	137	160	465	60	20	53	2	600	681	23	7	2	0	3	35	39	0	0	0	0	1	1	2
15:00	28	7	3	3	0	41	46	114	22	3	13	3	155	176	5	0	0	0	1	6	7	0	0	0	0	1	1	2
15:15	27	7	1	3	0	38	42	122	22	2	7	1	154	165	6	0	1	0	0	7	8	0	0	0	0	1	1	2
15:30	20	8	0	1	0	29	30	98	14	9	8	1	130	146	4	0	0	0	1	5	6	0	0	0	0	1	1	2
15:45	17	9	3	3	0	32	37	115	21	6	4	0	146	154	3	0	0	0	2	5	7	0	0	0	0	2	2	4
H/TOT	92	31	7	10	0	140	157	449	79	20	32	5	585	642	18	0	1	0	4	23	28	0	0	0	0	5	5	10
16:00	36	5	1	0	0	42	43	118	28	5	4	3	158	169	8	1	0	0	1	10	11	0	0	0	0	0	0	0
16:15	40	9	0	5	0	54	61	116	15	2	3	0	136	141	3	0	0	0	0	3	3	0	0	0	0	1	1	2
16:30	32	8	1	2	0	43	46	126	20	3	1	2	152	157	6	0	0	0	0	6	6	0	0	0	0	1	1	2
16:45	33	6	1	1	0	41	43	111	24	2	3	1	141	147	1	0	0	0	2	3	5	0	0	0	0	0	0	0
H/TOT	141	28	3	8	0	180	192	471	87	12	11	6	587	613	18	1	0	0	3	22	25	0	0	0	0	2	2	4
17:00	50	8	0	2	0	60	63	110	21	3	2	0	136	140	3	0	0	0	0	3	3	0	0	0	0	0	0	0
17:15	37	1	0	0	0	38	38	95	17	2	0	0	114	115	5	1	0	0	1	7	8	0	0	0	0	2	2	4
17:30	41	3	0	1	0	45	46	128	13	0	0	0	141	141	5	0	0	0	0	5	5	0	0	0	0	3	3	6
17:45	33	3	0	0	0	36	36	145	17	1	0	1	164	166	3	0	0	0	1	4	5	0	0	0	0	1	1	2
H/TOT	161	15	0	3	0	179	183	478	68	6	2	1	555	562	16	1	0	0	2	19	21	0	0	0	0	6	6	12
18:00	33	2	0	0	0	35	35	93	15	1	0	0	109	110	6	0	0	0	0	6	6	0	0	0	0	0	0	0
18:15	24	4	0	0	0	28	28	101	10	1	3	0	115	119	2	0	0	0	1	3	4	0	0	0	0	2	2	4
18:30	32	4	2	0	0	38	39	91	6	0	1	0	98	99	2	0	0	0	1	3	4	0	0	0	0	1	1	2
18:45	24	1	0	1	0	26	27	62	5	1	0	1	69	71	3	0	0	0	1	4	5	0	0	0	0	0	0	0
H/TOT	113	11	2	1	0	127	129	347	36	3	4	1	391	399	13	0	0	0	3	16	19	0	0	0	0	3	3	6
P/TOT	604	102	21	36	0	763	820.3	2210	330	61	102	15	2718	2896	88	9	3	0	15	115	131.5	0	0	0	0	17	17	34

TRAFFINOMICS LIMITED

CITYWEST TRAFFIC COUNTS **JANUARY 2022**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/22/015**

SITE: 01 DATE: 20th January 2022

LOCATION: Brownsbarn/N7 WB Slips/R838 Citywest Road/Kingswood Avenue DAY: Thursday

	MOVEMENT 11							MOVEMENT 12							MOVEMENT 13							PCU's Through Junction
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	
07:00	1	1	0	0	1	3	4	0	4	0	0	0	4	4	2	0	0	0	0	2	2	376
07:15	3	1	0	0	0	4	4	5	2	0	0	0	7	7	2	0	0	1	0	3	4	457
07:30	2	1	0	0	0	3	3	5	1	1	0	0	7	8	1	0	1	0	0	2	3	464
07:45	2	2	0	0	0	4	4	7	3	0	1	0	11	12	2	1	0	1	0	4	5	483
H/TOT	8	5	0	0	1	14	15	17	10	1	1	0	29	31	7	1	1	2	0	11	14	1780
08:00	4	0	0	0	2	6	8	7	4	0	0	0	11	11	1	0	0	0	0	1	1	537
08:15	6	2	0	0	1	9	10	8	1	0	0	0	9	9	0	0	0	0	0	0	0	544
08:30	11	0	0	0	1	12	13	14	0	0	0	0	14	14	1	1	0	0	0	2	2	522
08:45	21	0	1	0	0	22	23	3	0	0	0	0	3	3	1	1	0	0	0	2	2	542
H/TOT	42	2	1	0	4	49	54	32	5	0	0	0	37	37	3	2	0	0	0	5	5	**2145**
09:00	7	1	1	0	2	11	14	7	1	1	0	0	9	10	0	1	0	1	0	2	3	457
09:15	3	1	1	0	0	5	6	2	2	0	0	0	4	4	1	2	0	2	0	5	8	398
09:30	8	1	1	0	1	11	13	5	1	1	0	0	7	8	1	1	0	0	0	2	2	373
09:45	2	1	0	0	1	4	5	7	1	0	1	0	9	10	4	2	0	0	1	7	8	296
H/TOT	20	4	3	0	4	31	37	21	5	2	1	0	29	31	6	6	0	3	1	16	21	1523
P/TOT	70	11	4	0	9	94	105	70	20	3	2	0	95	99.1	16	9	1	5	1	32	40	5448

	MOVEMENT 11							MOVEMENT 12							MOVEMENT 13							PCU's Through Junction
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	
14:00	12	1	1	0	1	15	17	12	2	0	0	0	14	14	3	2	0	0	0	5	5	463
14:15	6	1	0	0	0	7	7	7	2	3	0	0	12	14	2	0	1	1	0	4	6	411
14:30	2	2	0	0	1	5	6	6	2	1	2	0	11	14	3	2	1	1	0	7	9	411
14:45	1	0	0	0	1	2	3	10	1	0	1	0	12	13	0	1	1	0	0	2	3	414
H/TOT	21	4	1	0	3	29	33	35	7	4	3	0	49	55	8	5	3	2	0	18	22	1698
15:00	2	1	1	0	0	4	5	9	1	0	0	0	10	10	2	0	0	0	0	2	2	434
15:15	8	0	0	0	1	9	10	9	1	0	0	0	10	10	3	1	0	0	0	4	4	398
15:30	4	0	0	0	1	5	6	9	2	0	0	0	11	11	3	0	0	1	0	4	5	400
15:45	5	1	1	0	1	8	10	18	1	1	0	0	20	21	4	3	0	0	0	7	7	403
H/TOT	19	2	2	0	3	26	30	45	5	1	0	0	51	52	12	4	0	1	0	17	18	1635
16:00	7	1	0	1	1	10	12	24	7	3	0	0	34	36	3	1	0	0	0	4	4	472
16:15	6	5	0	0	0	11	11	33	5	0	1	0	39	40	6	3	1	0	0	10	11	443
16:30	2	1	0	0	1	4	5	36	6	1	0	0	43	44	8	4	0	0	0	12	12	461
16:45	11	3	0	0	0	14	14	28	1	0	0	0	29	29	6	3	1	1	0	11	13	420
H/TOT	26	10	0	1	2	39	42	121	19	4	1	0	145	148	23	11	2	1	0	37	39	1796
17:00	9	2	0	0	2	13	15	48	4	1	0	0	53	54	5	3	0	0	0	8	8	490
17:15	7	0	0	0	0	7	7	38	6	0	0	1	45	46	3	2	0	0	0	5	5	416
17:30	7	0	0	0	1	8	9	29	4	0	0	0	33	33	5	0	0	0	0	5	5	449
17:45	8	0	0	0	1	9	10	19	4	0	0	0	23	23	12	2	0	0	1	15	16	410
H/TOT	31	2	0	0	4	37	41	134	18	1	0	1	154	156	25	7	0	0	1	33	34	**1766**
18:00	4	0	0	0	0	4	4	18	2	0	0	0	20	20	6	2	0	0	0	8	8	341
18:15	3	0	0	0	1	4	5	22	1	1	0	0	24	25	2	0	0	0	0	2	2	317
18:30	3	0	0	0	1	4	5	10	7	0	0	0	17	17	2	1	0	0	0	3	3	280
18:45	2	0	0	0	1	3	4	21	1	0	0	0	22	22	1	1	0	0	0	2	2	240
H/TOT	12	0	0	0	3	15	18	71	11	1	0	0	83	84	11	4	0	0	0	15	15	1178
P/TOT	109	18	3	1	15	146	163.8	406	60	11	4	1	482	493.7	79	31	5	4	1	120	128.7	8074

TRAFFINOMICS LIMITED

CITYWEST TRAFFIC COUNTS **JANUARY 2022**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/22/015**

SITE: 03 DATE: 20th January 2022

LOCATION: Kingswood Road/Kingswood Avenue DAY: Thursday

	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3						
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
07:00	4	0	0	0	1	5	6	22	3	1	0	0	26	27	4	0	0	0	0	4	4
07:15	4	2	0	0	1	7	8	16	7	1	1	0	25	27	3	3	0	0	0	6	6
08:30	3	0	0	1	0	4	5	11	6	0	0	0	17	17	5	0	0	0	0	5	5
08:45	5	4	0	0	0	9	9	26	11	2	1	0	40	42	4	3	0	0	0	7	7
H/TOT	16	6	0	1	2	25	28	75	27	4	2	0	108	113	16	6	0	0	0	22	22
08:00	6	0	0	0	0	6	6	39	6	0	1	0	46	47	7	2	0	0	1	10	11
08:15	6	1	0	0	0	7	7	45	5	1	0	0	51	52	13	1	1	0	2	17	20
08:30	11	3	1	0	0	15	16	34	2	1	0	0	37	38	13	1	0	0	0	14	14
08:45	5	1	0	0	0	6	6	63	7	0	0	0	70	70	27	2	0	0	0	29	29
H/TOT	28	5	1	0	0	34	35	181	20	2	1	0	204	206	60	6	1	0	3	70	74
09:00	6	1	0	0	0	7	7	30	8	0	1	0	39	40	8	0	0	1	1	10	12
09:15	3	0	2	0	0	5	6	24	1	3	0	0	28	30	7	0	0	0	0	7	7
09:30	1	1	0	0	0	2	2	27	7	3	0	0	37	39	8	3	0	0	0	11	11
09:45	1	0	0	0	0	1	1	18	4	3	0	0	25	27	4	1	1	0	1	7	9
H/TOT	11	2	2	0	0	15	16	99	20	9	1	0	129	135	27	4	1	1	2	35	39
P/TOT	55	13	3	1	2	74	78.8	355	67	15	4	0	441	453.7	103	16	2	1	5	127	134.3

	MOVEMENT 1							MOVEMENT 2							MOVEMENT 3						
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
14:00	2	0	1	0	0	3	4	25	4	1	1	0	31	33	11	2	0	0	0	13	13
14:15	1	0	2	1	0	4	6	21	6	2	2	0	31	35	7	1	1	0	0	9	10
14:30	1	2	1	1	0	5	7	21	3	3	0	1	28	31	2	4	0	1	0	7	8
14:45	1	1	0	0	0	2	2	25	5	1	0	1	32	34	3	0	0	0	1	4	5
H/TOT	5	3	4	2	0	14	19	92	18	7	3	2	122	131	23	7	1	1	1	33	36
15:00	2	1	0	0	0	3	3	27	4	0	0	0	31	31	3	1	1	0	0	5	6
15:15	0	1	0	1	0	2	3	22	5	0	0	0	27	27	2	0	0	0	0	2	2
15:30	1	2	0	0	0	3	3	8	6	0	3	0	17	21	4	0	0	0	0	4	4
15:45	1	0	1	0	0	2	3	21	3	1	1	0	26	28	4	1	0	0	1	6	7
H/TOT	4	4	1	1	0	10	12	78	18	1	4	0	101	107	13	2	1	0	1	17	19
16:00	0	0	0	0	0	0	0	18	1	2	0	0	21	22	6	1	0	0	1	8	9
16:15	1	0	0	0	0	1	1	31	1	0	0	0	32	32	6	2	0	0	0	8	8
16:30	3	0	1	0	0	4	5	25	2	0	0	0	27	27	9	0	0	0	0	9	9
16:45	0	0	1	0	0	1	2	40	3	1	0	0	44	45	8	3	0	0	1	12	13
H/TOT	4	0	2	0	0	6	7	114	7	3	0	0	124	126	29	6	0	0	2	37	39
17:00	2	0	0	0	0	2	2	43	3	1	0	0	47	48	9	1	1	0	1	12	14
17:15	1	0	1	0	0	2	3	38	1	0	0	0	39	39	10	0	0	0	0	10	10
17:30	1	0	0	0	0	1	1	32	1	0	0	0	33	33	6	0	0	0	0	6	6
17:45	0	0	0	0	0	0	0	30	7	0	0	0	37	37	5	0	0	0	1	6	7
H/TOT	4	0	1	0	0	5	6	143	12	1	0	0	156	157	30	1	1	0	2	34	37
18:00	1	0	0	0	0	1	1	17	1	0	0	0	18	18	6	1	0	0	0	7	7
18:15	0	0	0	0	0	0	0	27	0	0	0	0	27	27	3	0	0	0	1	4	5
18:30	0	0	0	0	0	0	0	21	0	0	0	0	21	21	1	0	0	0	0	1	1
18:45	0	0	0	0	0	0	0	14	2	1	0	0	17	18	1	0	0	0	1	2	3
H/TOT	1	0	0	0	0	1	1	79	3	1	0	0	83	84	11	1	0	0	2	14	16
P/TOT	18	7	8	3	0	36	43.9	506	58	13	7	2	586	603.6	106	17	3	1	8	135	145.8

TRAFFINOMICS LIMITED

CITYWEST TRAFFIC COUNTS **JANUARY 2022**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/22/015**

SITE: 03 DATE: 20th January 2022

LOCATION: Kingswood Road/Kingswood Avenue DAY: Thursday

	MOVEMENT 4							MOVEMENT 5							MOVEMENT 6							MOVEMENT 7						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
07:00	3	0	0	0	1	4	5	1	0	0	0	0	1	1	2	2	2	0	0	6	7	0	0	0	0	0	0	0
07:15	3	1	1	1	1	7	10	1	0	0	0	0	1	1	8	5	1	0	0	14	15	0	0	0	0	0	0	0
08:30	3	3	1	0	1	8	10	2	0	1	0	0	3	4	21	3	0	1	1	26	28	0	0	0	0	1	1	2
08:45	6	0	0	0	0	6	6	3	2	0	0	0	5	5	17	4	0	0	0	21	21	0	0	0	0	0	0	0
H/TOT	15	4	2	1	3	25	30	7	2	1	0	0	10	11	48	14	3	1	1	67	71	0	0	0	0	1	1	2
08:00	9	4	0	0	1	14	15	2	0	0	1	0	3	4	14	2	0	0	0	16	16	0	0	0	0	0	0	0
08:15	8	4	0	0	0	12	12	6	0	1	0	0	7	8	32	5	0	1	0	38	39	0	0	0	0	1	1	2
08:30	6	2	0	0	0	8	8	4	1	0	0	0	5	5	5	1	0	1	0	7	8	0	0	0	0	0	0	0
08:45	12	2	0	0	0	14	14	0	0	1	0	0	1	2	16	1	1	1	0	19	21	0	0	0	0	1	1	2
H/TOT	35	12	0	0	1	48	49	12	1	2	1	0	16	18	67	9	1	3	0	80	84	0	0	0	0	2	2	4
09:00	11	1	1	0	1	14	16	1	0	1	0	0	2	3	10	1	0	0	0	11	11	0	0	0	0	0	0	0
09:15	6	0	0	0	0	6	6	3	1	1	0	0	5	6	2	0	0	0	0	2	2	0	0	0	0	1	1	2
09:30	3	0	0	0	0	3	3	0	0	0	0	0	0	0	4	2	0	0	0	6	6	0	0	0	0	0	0	0
09:45	3	1	0	0	0	4	4	0	0	0	0	0	0	0	2	1	1	0	0	4	5	0	0	0	0	1	1	2
H/TOT	23	2	1	0	1	27	29	4	1	2	0	0	7	8	18	4	1	0	0	23	24	0	0	0	0	2	2	4
P/TOT	73	18	3	1	5	100	107.8	23	4	5	1	0	33	36.8	133	27	5	4	1	170	178.7	0	0	0	0	5	5	10

	MOVEMENT 4							MOVEMENT 5							MOVEMENT 6							MOVEMENT 7						
TIME	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**	**CAR**	**LGV**	**OGV1**	**OGV2**	**BUS**	**TOT**	**PCU**
14:00	6	1	0	0	0	7	7	2	2	0	0	0	4	4	4	3	1	1	0	9	11	0	0	0	0	0	0	0
14:15	4	0	1	0	0	5	6	0	0	0	0	0	0	0	3	1	1	1	0	6	8	0	0	0	0	0	0	0
14:30	7	1	0	0	0	8	8	0	1	0	0	0	1	1	8	0	1	0	0	9	10	0	0	0	0	0	0	0
14:45	13	5	1	0	1	20	22	0	1	0	1	0	2	3	3	0	0	0	0	3	3	0	0	0	0	0	0	0
H/TOT	30	7	2	0	1	40	42	2	4	0	1	0	7	8	18	4	3	2	0	27	31	0	0	0	0	0	0	0
15:00	9	1	0	0	0	10	10	1	0	0	0	0	1	1	6	1	4	0	0	11	13	0	0	0	0	1	1	2
15:15	6	2	0	0	0	8	8	1	0	0	0	0	1	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0
15:30	12	2	1	0	0	15	16	0	0	0	0	0	0	0	2	3	0	0	0	5	5	0	0	0	0	1	1	2
15:45	4	0	0	1	3	8	12	1	0	0	0	0	1	1	9	0	1	0	0	10	11	0	0	0	0	0	0	0
H/TOT	31	5	1	1	3	41	46	3	0	0	0	0	3	3	18	4	5	0	0	27	30	0	0	0	0	2	2	4
16:00	11	2	0	0	0	13	13	1	1	0	0	0	2	2	11	1	0	1	0	13	14	0	0	0	0	0	0	0
16:15	4	1	0	0	0	5	5	0	0	0	0	0	0	0	3	3	0	1	0	7	8	0	0	0	0	0	0	0
16:30	8	0	0	0	1	9	10	1	0	0	0	0	1	1	12	3	1	0	0	16	17	0	0	0	0	1	1	2
16:45	7	0	0	0	1	8	9	0	0	0	0	0	0	0	9	2	0	0	0	11	11	0	0	0	0	1	1	2
H/TOT	30	3	0	0	2	35	37	2	1	0	0	0	3	3	35	9	1	2	0	47	50	0	0	0	0	2	2	4
17:00	11	1	0	0	0	12	12	0	0	0	0	0	0	0	10	0	0	0	0	10	10	0	0	0	0	1	1	2
17:15	4	0	0	0	0	4	4	1	1	0	0	0	2	2	10	1	0	0	0	11	11	0	0	0	0	0	0	0
17:30	5	1	0	0	0	6	6	0	0	0	0	0	0	0	9	1	0	0	0	10	10	0	0	0	0	1	1	2
17:45	10	1	0	0	1	12	13	0	0	0	0	0	0	0	6	2	0	0	0	8	8	0	0	0	0	0	0	0
H/TOT	30	3	0	0	1	34	35	1	1	0	0	0	2	2	35	4	0	0	0	39	39	0	0	0	0	2	2	4
18:00	8	1	0	0	0	9	9	0	0	0	0	0	0	0	14	0	0	1	0	15	16	0	0	0	0	0	0	0
18:15	4	0	0	0	0	4	4	0	0	0	0	0	0	0	3	1	0	0	0	4	4	0	0	0	0	0	0	0
18:30	3	0	0	0	0	3	3	0	0	0	0	0	0	0	3	0	0	1	0	4	5	0	0	0	0	1	1	2
18:45	3	0	0	0	1	4	5	1	0	0	0	0	1	1	1	0	0	0	1	2	3	0	0	0	0	1	1	2
H/TOT	18	1	0	0	1	20	21	1	0	0	0	0	1	1	21	1	0	2	1	25	29	0	0	0	0	2	2	4
P/TOT	139	19	3	1	8	170	180.8	9	6	0	1	0	16	17.3	127	22	9	6	1	165	178.3	0	0	0	0	8	8	16

TRAFFINOMICS LIMITED

CITYWEST TRAFFIC COUNTS **JANUARY 2022**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/22/015**

SITE: 03 DATE: 20th January 2022

LOCATION: Kingswood Road/Kingswood Avenue DAY: Thursday

	MOVEMENT 8							MOVEMENT 9							MOVEMENT 10						
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
07:00	4	4	0	1	0	9	10	6	6	0	0	0	12	12	1	0	0	0	0	1	1
07:15	4	1	0	0	0	5	5	11	6	0	0	1	18	19	3	1	0	0	0	4	4
08:30	11	1	1	0	0	13	14	16	7	1	1	0	25	27	1	0	0	0	0	1	1
08:45	7	3	0	0	0	10	10	18	5	2	1	0	26	28	0	1	0	0	0	1	1
H/TOT	26	9	1	1	0	37	39	51	24	3	2	1	81	86	5	2	0	0	0	7	7
08:00	8	2	0	0	0	10	10	19	6	0	1	0	26	27	3	2	0	0	0	5	5
08:15	8	1	0	0	0	9	9	17	5	0	0	0	22	22	9	0	0	0	0	9	9
08:30	10	0	0	0	0	10	10	25	6	0	0	0	31	31	3	0	0	0	0	3	3
08:45	5	0	1	0	0	6	7	19	5	0	0	0	24	24	1	0	0	0	0	1	1
H/TOT	31	3	1	0	0	35	36	80	22	0	1	0	103	104	16	2	0	0	0	18	18
09:00	7	3	0	0	0	10	10	23	2	1	2	0	28	31	3	0	0	0	0	3	3
09:15	4	2	3	0	0	9	11	14	4	1	0	0	19	20	1	1	0	0	0	2	2
09:30	3	5	0	0	0	8	8	15	2	3	0	0	20	22	1	1	0	0	0	2	2
09:45	3	3	1	1	0	8	10	8	1	1	0	0	10	11	1	0	0	0	0	1	1
H/TOT	17	13	4	1	0	35	38	60	9	6	2	0	77	83	6	2	0	0	0	8	8
P/TOT	74	25	6	2	0	107	112.6	191	55	9	5	1	261	273	27	6	0	0	0	33	33

	MOVEMENT 8							MOVEMENT 9							MOVEMENT 10						
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
14:00	16	2	1	0	0	19	20	18	7	1	1	0	27	29	3	1	0	0	0	4	4
14:15	8	0	2	1	0	11	13	17	6	1	0	0	24	25	0	1	0	0	0	1	1
14:30	4	4	0	1	0	9	10	17	6	2	1	0	26	28	1	1	0	0	0	2	2
14:45	11	1	1	0	0	13	14	26	6	1	1	0	34	36	1	0	0	0	0	1	1
H/TOT	39	7	4	2	0	52	57	78	25	5	3	0	111	117	5	3	0	0	0	8	8
15:00	12	2	0	0	0	14	14	21	2	2	0	0	25	26	0	0	0	0	0	0	0
15:15	7	2	0	1	0	10	11	19	1	0	0	0	20	20	0	0	0	0	0	0	0
15:30	4	2	0	0	0	6	6	23	4	3	0	0	30	32	0	0	0	0	0	0	0
15:45	18	3	2	0	0	23	24	22	3	1	0	0	26	27	1	0	0	0	0	1	1
H/TOT	41	9	2	1	0	53	55	85	10	6	0	0	101	104	1	0	0	0	0	1	1
16:00	21	6	3	0	0	30	32	33	1	1	0	0	35	36	1	1	0	0	0	2	2
16:15	27	6	1	1	0	35	37	27	2	0	0	0	29	29	0	0	0	0	0	0	0
16:30	35	8	0	0	0	43	43	36	10	1	0	0	47	48	0	1	0	0	0	1	1
16:45	26	2	0	1	0	29	30	29	9	0	0	0	38	38	1	0	1	0	0	2	3
H/TOT	109	22	4	2	0	137	142	125	22	2	0	0	149	150	2	2	1	0	0	5	6
17:00	48	3	0	0	0	51	51	65	9	1	0	0	75	76	0	0	0	0	0	0	0
17:15	32	4	0	0	1	37	38	25	4	1	1	0	31	33	0	0	0	0	0	0	0
17:30	31	5	0	0	0	36	36	44	3	0	0	0	47	47	0	2	0	0	0	2	2
17:45	19	4	0	0	0	23	23	37	4	1	0	0	42	43	0	0	0	0	0	0	0
H/TOT	130	16	0	0	1	147	148	171	20	3	1	0	195	198	0	2	0	0	0	2	2
18:00	10	1	0	0	0	11	11	25	2	0	3	0	30	34	0	0	0	0	0	0	0
18:15	23	1	1	0	0	25	26	23	1	1	0	0	25	26	0	0	0	0	0	0	0
18:30	13	7	0	0	0	20	20	26	4	0	0	0	30	30	0	0	0	0	0	0	0
18:45	17	1	0	0	0	18	18	23	0	0	1	0	24	25	0	0	0	0	0	0	0
H/TOT	63	10	1	0	0	74	75	97	7	1	4	0	109	115	0	0	0	0	0	0	0
P/TOT	382	64	11	5	1	463	476	556	84	17	8	0	665	683.9	8	7	1	0	0	16	16.5

TRAFFINOMICS LIMITED

CITYWEST TRAFFIC COUNTS **JANUARY 2022**
MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/22/015**

SITE: 03 DATE: 20th January 2022

LOCATION: Kingswood Road/Kingswood Avenue DAY: Thursday

	MOVEMENT 11							MOVEMENT 12							MOVEMENT 13							PCU's Through Junction
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	
07:00	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	74
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	94
08:30	2	0	0	0	0	2	2	1	0	0	0	0	1	1	0	0	0	0	0	0	0	115
08:45	0	0	0	0	0	0	0	0	0	0	1	0	1	2	0	1	0	0	0	1	1	133
H/TOT	2	0	0	0	0	2	2	2	0	0	1	0	3	4	0	1	0	0	0	1	1	416
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	142
08:15	1	1	0	0	0	2	2	1	0	0	0	0	1	1	1	0	0	0	0	1	1	183
08:30	1	2	0	0	0	3	3	0	0	0	0	0	0	0	3	0	1	0	0	4	5	140
08:45	0	0	0	0	0	0	0	0	0	1	0	0	1	2	1	1	0	0	0	2	2	178
H/TOT	2	3	0	0	0	5	5	1	0	1	0	0	2	3	5	1	1	0	0	7	8	**643**
09:00	0	2	0	0	0	2	2	1	0	1	1	0	3	5	1	0	0	0	0	1	1	141
09:15	3	1	0	0	0	4	4	1	2	0	0	0	3	3	0	0	1	0	0	1	2	99
09:30	1	2	0	0	0	3	3	1	0	1	0	0	2	3	0	2	0	0	0	2	2	100
09:45	1	4	0	0	0	5	5	1	0	0	0	0	1	1	2	0	0	0	0	2	2	76
H/TOT	5	9	0	0	0	14	14	4	2	2	1	0	9	11	3	2	1	0	0	6	7	414
P/TOT	9	12	0	0	0	21	21	7	2	3	2	0	14	18.1	8	4	2	0	0	14	15	1473

	MOVEMENT 11							MOVEMENT 12							MOVEMENT 13							PCU's Through Junction
TIME	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	
14:00	1	1	0	0	0	2	2	1	1	1	0	0	3	4	0	0	0	0	0	0	0	129
14:15	0	1	1	0	0	2	3	0	1	0	1	0	2	3	1	2	1	0	0	4	5	113
14:30	0	1	0	0	0	1	1	1	0	1	0	0	2	3	1	1	0	0	0	2	2	110
14:45	1	2	0	1	0	4	5	0	0	0	1	0	1	2	0	0	1	0	0	1	2	128
H/TOT	2	5	1	1	0	9	11	2	2	2	2	0	8	12	2	3	2	0	0	7	8	480
15:00	2	0	0	0	0	2	2	0	0	0	0	0	0	0	2	3	0	0	0	5	5	113
15:15	0	0	0	0	0	0	0	2	0	0	0	0	2	2	1	0	1	0	0	2	3	78
15:30	1	0	0	0	0	1	1	0	0	0	0	0	0	0	1	3	0	0	0	4	4	93
15:45	1	0	0	0	0	1	1	0	1	0	0	0	1	1	4	0	0	0	0	4	4	119
H/TOT	4	0	0	0	0	4	4	2	1	0	0	0	3	3	8	6	1	0	0	15	16	402
16:00	0	0	0	0	0	0	0	3	2	0	0	0	5	5	5	2	0	0	0	7	7	141
16:15	1	0	0	0	0	1	1	2	0	0	0	0	2	2	3	1	0	0	0	4	4	127
16:30	2	1	0	0	0	3	3	1	0	1	0	0	2	3	8	1	0	0	0	9	9	176
16:45	2	0	1	0	0	3	4	3	0	0	0	0	3	3	2	0	0	0	0	2	2	160
H/TOT	5	1	1	0	0	7	8	9	2	1	0	0	12	13	18	4	0	0	0	22	22	605
17:00	13	0	0	0	0	13	13	5	0	0	0	0	5	5	9	2	1	0	0	12	13	244
17:15	0	0	0	0	0	0	0	3	1	0	0	0	4	4	1	0	1	1	0	3	5	148
17:30	2	0	0	0	0	2	2	1	1	0	0	0	2	2	5	1	0	0	0	6	6	153
17:45	4	0	0	0	0	4	4	4	0	0	0	0	4	4	5	0	0	0	0	5	5	144
H/TOT	19	0	0	0	0	19	19	13	2	0	0	0	15	15	20	3	2	1	0	26	28	**689**
18:00	1	0	0	0	0	1	1	3	2	0	0	0	5	5	2	2	0	0	0	4	4	106
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	91
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	83
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	76
H/TOT	1	0	0	0	0	1	1	3	2	0	0	0	5	5	4	2	0	0	0	6	6	356
P/TOT	31	6	2	1	0	40	42.3	29	9	3	2	0	43	47.1	52	18	5	1	0	76	79.8	2531

Calculation Reference: AUDIT-758001-220207-0214

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

01	**GREATER LONDON**		
	BE	BEXLEY	1 days
	HD	HILLINGDON	1 days
02	**SOUTH EAST**		
	BD	BEDFORDSHIRE	1 days
	EX	ESSEX	1 days
	KC	KENT	1 days
03	**SOUTH WEST**		
	DV	DEVON	2 days
04	**EAST ANGLIA**		
	SF	SUFFOLK	1 days
06	**WEST MIDLANDS**		
	WM	WEST MIDLANDS	1 days
07	**YORKSHIRE & NORTH LINCOLNSHIRE**		
	WY	WEST YORKSHIRE	1 days
09	**NORTH**		
	TW	TYNE & WEAR	1 days
10	**WALES**		
	BG	BRIDGEND	1 days
	NW	NEWPORT	1 days
13	**MUNSTER**		
	CR	CORK	1 days
14	**LEINSTER**		
	CC	CARLOW	1 days
	LU	LOUTH	1 days
15	**GREATER DUBLIN**		
	DL	DUBLIN	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:	190 to 50000 (units: sqm)
Range Selected by User:	190 to 80066 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/13 to 19/05/21

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	1 days
Wednesday	4 days
Thursday	4 days
Friday	6 days

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

Selected survey types:

Manual count	17 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town	15
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	14
Commercial Zone	1
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	3 days
B8	14 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

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,000 or Less	3 days
1,001 to 5,000	1 days
5,001 to 10,000	4 days
10,001 to 15,000	1 days
15,001 to 20,000	4 days
20,001 to 25,000	1 days
25,001 to 50,000	3 days

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

Population within 5 miles:

5,000 or Less	1 days
5,001 to 25,000	1 days
25,001 to 50,000	1 days
50,001 to 75,000	1 days
75,001 to 100,000	1 days
125,001 to 250,000	6 days
250,001 to 500,000	4 days
500,001 or More	2 days

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

Car ownership within 5 miles:

0.6 to 1.0	10 days
1.1 to 1.5	7 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	16 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	15 days
1a (Low) Very poor	1 days
2 Poor	1 days

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

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions

LIST OF SITES relevant to selection parameters

1 **BD-02-F-02** **DRINKS WHOLESALER** **BEDFORDSHIRE**
CAMBRIDGE ROAD
BEDFORD

Edge of Town
Industrial Zone
Total Gross floor area: 3500 sqm
Survey date: THURSDAY *15/10/20* *Survey Type: MANUAL*

2 **BE-02-F-01** **FRESH FRUIT DISTRIBUTOR** **BEXLEY**
THAMES ROAD
CRAYFORD

Edge of Town
Industrial Zone
Total Gross floor area: 20400 sqm
Survey date: THURSDAY *20/09/18* *Survey Type: MANUAL*

3 **BG-02-F-01** **LOGISTICS COMPANY** **BRIDGEND**
PARC CRESCENT
BRIDGEND
WATERTON IND. EST.
Edge of Town
Industrial Zone
Total Gross floor area: 3050 sqm
Survey date: MONDAY *13/10/14* *Survey Type: MANUAL*

4 **CC-02-F-01** **HYDRAULIC CYCLINDERS** **CARLOW**
O'BRIEN ROAD
CARLOW

Edge of Town
Industrial Zone
Total Gross floor area: 10500 sqm
Survey date: WEDNESDAY *25/05/16* *Survey Type: MANUAL*

5 **CR-02-F-03** **FURNITURE DISTRIBUTION** **CORK**
POULADUFF ROAD
CORK
SOUTHSIDE IND. ESTATE
Edge of Town
Industrial Zone
Total Gross floor area: 4800 sqm
Survey date: TUESDAY *15/10/19* *Survey Type: MANUAL*

6 **DL-02-F-04** **LOGISTICS COMPANY** **DUBLIN**
SWORDS ROAD
DUBLIN

Edge of Town
Industrial Zone
Total Gross floor area: 3990 sqm
Survey date: WEDNESDAY *19/05/21* *Survey Type: MANUAL*

7 **DV-02-F-01** **OPTICS WAREHOUSE** **DEVON**
ALDERS WAY
PAIGNTON

Edge of Town
Industrial Zone
Total Gross floor area: 190 sqm
Survey date: FRIDAY *29/03/19* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

8 **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*

9 **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*

10 **HD-02-F-01** **FOOD DISTRIBUTOR** **HILLINGDON**
NINE ACRES CLOSE
HAYES

Edge of Town
Industrial Zone
Total Gross floor area: 8673 sqm
Survey date: THURSDAY *27/09/18* *Survey Type: MANUAL*

11 **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*

12 **LU-02-F-01** **PACKAGING COMPANY** **LOUTH**
MATTHEWS LANE
DROGHEDA
LAGAVOOREN
Edge of Town
No Sub Category
Total Gross floor area: 5350 sqm
Survey date: FRIDAY *19/06/15* *Survey Type: MANUAL*

13 **NW-02-F-02** **AMAZON DEPOT** **NEWPORT**
LLANWERN WORKS
NEWPORT

Free Standing (PPS6 Out of Town)
Industrial Zone
Total Gross floor area: 4836 sqm
Survey date: WEDNESDAY *25/11/20* *Survey Type: MANUAL*

14 **SF-02-F-03** **ROAD HAULAGE** **SUFFOLK**
CENTRAL AVENUE
IPSWICH
WARREN HEATH
Edge of Town
Industrial Zone
Total Gross floor area: 4700 sqm
Survey date: FRIDAY *18/09/15* *Survey Type: MANUAL*

15 **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*

LIST OF SITES relevant to selection parameters (Cont.)

16	**WM-02-F-02**	**LOGISTICS FIRM**	**WEST MIDLANDS**
	SOVEREIGN ROAD		
	BIRMINGHAM		
	KINGS NORTON		
	Edge of Town		
	Commercial Zone		
	Total Gross floor area:	3625 sqm	
	Survey date: MONDAY	*09/11/15*	*Survey Type: MANUAL*
17	**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

Estimated TRIP rate value per 11691 SQM shown in shaded columns
BOLD print indicates peak (busiest) period

	ARRIVALS				DEPARTURES				TOTALS			
Time Range	No. Days	Ave. GFA	Trip Rate	Estimated Trip Rate	No. Days	Ave. GFA	Trip Rate	Estimated Trip Rate	No. Days	Ave. GFA	Trip Rate	Estimated 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	6	12154	0.078	9.138	6	12154	0.040	4.649	6	12154	0.118	13.787
06:00 - 07:00	7	11109	0.140	16.387	7	11109	0.075	8.720	7	11109	0.215	25.107
07:00 - 08:00	**17**	**10754**	**0.228**	**26.666**	17	10754	0.080	9.400	**17**	**10754**	**0.308**	**36.066**
08:00 - 09:00	17	10754	0.189	22.126	17	10754	0.098	11.511	17	10754	0.287	33.637
09:00 - 10:00	17	10754	0.153	17.842	17	10754	0.097	11.319	17	10754	0.250	29.161
10:00 - 11:00	17	10754	0.107	12.534	17	10754	0.115	13.493	17	10754	0.222	26.027
11:00 - 12:00	17	10754	0.109	12.790	17	10754	0.131	15.284	17	10754	0.240	28.074
12:00 - 13:00	17	10754	0.108	12.662	17	10754	0.129	15.092	17	10754	0.237	27.754
13:00 - 14:00	17	10754	0.144	16.818	17	10754	0.144	16.882	17	10754	0.288	33.700
14:00 - 15:00	17	10754	0.112	13.109	17	10754	0.131	15.284	17	10754	0.243	28.393
15:00 - 16:00	17	10754	0.098	11.511	17	10754	0.121	14.133	17	10754	0.219	25.644
16:00 - 17:00	17	10754	0.107	12.470	**17**	**10754**	**0.195**	**22.766**	17	10754	0.302	35.236
17:00 - 18:00	17	10754	0.080	9.400	17	10754	0.185	21.614	17	10754	0.265	31.014
18:00 - 19:00	17	10754	0.064	7.482	17	10754	0.124	14.452	17	10754	0.188	21.934
19:00 - 20:00	7	13332	0.028	3.257	7	13332	0.088	10.272	7	13332	0.116	13.529
20:00 - 21:00	7	13332	0.031	3.633	7	13332	0.028	3.257	7	13332	0.059	6.890
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			1.776	207.825			1.781	208.128			3.557	415.953

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

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

Parameter summary

Trip rate parameter range selected:	190 - 50000 (units: sqm)
Survey date date range:	01/01/13 - 19/05/21
Number of weekdays (Monday-Friday):	17
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

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

TAXIS

Calculation factor: 100 sqm

Estimated TRIP rate value per 11691 SQM shown in shaded columns
BOLD print indicates peak (busiest) period

	ARRIVALS				DEPARTURES				TOTALS			
Time Range	No. Days	Ave. GFA	Trip Rate	Estimated Trip Rate	No. Days	Ave. GFA	Trip Rate	Estimated Trip Rate	No. Days	Ave. GFA	Trip Rate	Estimated 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	6	12154	0.000	0.000	6	12154	0.000	0.000	6	12154	0.000	0.000
06:00 - 07:00	7	11109	0.001	0.150	7	11109	0.001	0.150	7	11109	0.002	0.300
07:00 - 08:00	**17**	**10754**	**0.002**	**0.256**	**17**	**10754**	**0.002**	**0.256**	**17**	**10754**	**0.004**	**0.512**
08:00 - 09:00	17	10754	0.001	0.064	17	10754	0.001	0.064	17	10754	0.002	0.128
09:00 - 10:00	17	10754	0.000	0.000	17	10754	0.000	0.000	17	10754	0.000	0.000
10:00 - 11:00	17	10754	0.001	0.064	17	10754	0.001	0.064	17	10754	0.002	0.128
11:00 - 12:00	17	10754	0.000	0.000	17	10754	0.000	0.000	17	10754	0.000	0.000
12:00 - 13:00	17	10754	0.000	0.000	17	10754	0.000	0.000	17	10754	0.000	0.000
13:00 - 14:00	17	10754	0.000	0.000	17	10754	0.000	0.000	17	10754	0.000	0.000
14:00 - 15:00	17	10754	0.001	0.064	17	10754	0.001	0.064	17	10754	0.002	0.128
15:00 - 16:00	17	10754	0.000	0.000	17	10754	0.000	0.000	17	10754	0.000	0.000
16:00 - 17:00	17	10754	0.002	0.192	17	10754	0.002	0.192	17	10754	0.004	0.384
17:00 - 18:00	17	10754	0.001	0.128	17	10754	0.001	0.128	17	10754	0.002	0.256
18:00 - 19:00	17	10754	0.001	0.064	17	10754	0.001	0.064	17	10754	0.002	0.128
19:00 - 20:00	7	13332	0.000	0.000	7	13332	0.000	0.000	7	13332	0.000	0.000
20:00 - 21:00	7	13332	0.000	0.000	7	13332	0.000	0.000	7	13332	0.000	0.000
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			0.010	0.982			0.010	0.982			0.020	1.964

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

Estimated TRIP rate value per 11691 SQM shown in shaded columns
BOLD print indicates peak (busiest) period

	ARRIVALS				DEPARTURES				TOTALS			
Time Range	No. Days	Ave. GFA	Trip Rate	Estimated Trip Rate	No. Days	Ave. GFA	Trip Rate	Estimated Trip Rate	No. Days	Ave. GFA	Trip Rate	Estimated 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	6	12154	0.023	2.725	6	12154	0.027	3.206	6	12154	0.050	5.931
06:00 - 07:00	7	11109	0.033	3.909	7	11109	0.040	4.661	7	11109	0.073	8.570
07:00 - 08:00	17	10754	0.034	4.029	17	10754	0.045	5.308	17	10754	0.079	9.337
08:00 - 09:00	17	10754	0.045	5.244	**17**	**10754**	**0.049**	**5.755**	**17**	**10754**	**0.094**	**10.999**
09:00 - 10:00	**17**	**10754**	**0.046**	**5.436**	17	10754	0.039	4.540	17	10754	0.085	9.976
10:00 - 11:00	17	10754	0.040	4.668	17	10754	0.044	5.180	17	10754	0.084	9.848
11:00 - 12:00	17	10754	0.036	4.157	17	10754	0.044	5.116	17	10754	0.080	9.273
12:00 - 13:00	17	10754	0.038	4.412	17	10754	0.039	4.540	17	10754	0.077	8.952
13:00 - 14:00	17	10754	0.036	4.221	17	10754	0.039	4.540	17	10754	0.075	8.761
14:00 - 15:00	17	10754	0.028	3.261	17	10754	0.025	2.878	17	10754	0.053	6.139
15:00 - 16:00	17	10754	0.039	4.540	17	10754	0.028	3.325	17	10754	0.067	7.865
16:00 - 17:00	17	10754	0.040	4.732	17	10754	0.033	3.901	17	10754	0.073	8.633
17:00 - 18:00	17	10754	0.033	3.901	17	10754	0.027	3.197	17	10754	0.060	7.098
18:00 - 19:00	17	10754	0.021	2.430	17	10754	0.019	2.238	17	10754	0.040	4.668
19:00 - 20:00	7	13332	0.011	1.253	7	13332	0.019	2.255	7	13332	0.030	3.508
20:00 - 21:00	7	13332	0.014	1.629	7	13332	0.011	1.253	7	13332	0.025	2.882
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			0.517	60.547			0.528	61.893			1.045	122.440

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

Estimated TRIP rate value per 11691 SQM shown in shaded columns
BOLD print indicates peak (busiest) period

	ARRIVALS				DEPARTURES				TOTALS			
Time Range	No. Days	Ave. GFA	Trip Rate	Estimated Trip Rate	No. Days	Ave. GFA	Trip Rate	Estimated Trip Rate	No. Days	Ave. GFA	Trip Rate	Estimated 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	6	12154	0.000	0.000	6	12154	0.000	0.000	6	12154	0.000	0.000
06:00 - 07:00	7	11109	0.004	0.451	7	11109	0.001	0.150	7	11109	0.005	0.601
07:00 - 08:00	**17**	**10754**	**0.009**	**1.023**	17	10754	0.001	0.128	17	10754	0.010	1.151
08:00 - 09:00	17	10754	0.007	0.767	17	10754	0.001	0.064	17	10754	0.008	0.831
09:00 - 10:00	17	10754	0.000	0.000	17	10754	0.000	0.000	17	10754	0.000	0.000
10:00 - 11:00	17	10754	0.000	0.000	17	10754	0.000	0.000	17	10754	0.000	0.000
11:00 - 12:00	17	10754	0.001	0.128	17	10754	0.001	0.064	17	10754	0.002	0.192
12:00 - 13:00	17	10754	0.001	0.128	17	10754	0.000	0.000	17	10754	0.001	0.128
13:00 - 14:00	17	10754	0.004	0.448	17	10754	0.002	0.256	17	10754	0.006	0.704
14:00 - 15:00	17	10754	0.004	0.448	17	10754	0.002	0.192	17	10754	0.006	0.640
15:00 - 16:00	17	10754	0.003	0.384	17	10754	0.005	0.639	17	10754	0.008	1.023
16:00 - 17:00	17	10754	0.004	0.512	**17**	**10754**	**0.009**	**1.023**	**17**	**10754**	**0.013**	**1.535**
17:00 - 18:00	17	10754	0.002	0.192	17	10754	0.004	0.512	17	10754	0.006	0.704
18:00 - 19:00	17	10754	0.002	0.192	17	10754	0.006	0.703	17	10754	0.008	0.895
19:00 - 20:00	7	13332	0.000	0.000	7	13332	0.000	0.000	7	13332	0.000	0.000
20:00 - 21:00	7	13332	0.000	0.000	7	13332	0.001	0.125	7	13332	0.001	0.125
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			0.041	4.673			0.033	3.856			0.074	8.529

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)

CARS

Calculation factor: 100 sqm

Estimated TRIP rate value per 11691 SQM shown in shaded columns
BOLD print indicates peak (busiest) period

	ARRIVALS				DEPARTURES				TOTALS			
Time Range	No. Days	Ave. GFA	Trip Rate	Estimated Trip Rate	No. Days	Ave. GFA	Trip Rate	Estimated Trip Rate	No. Days	Ave. GFA	Trip Rate	Estimated 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	6	12154	0.052	6.092	6	12154	0.010	1.122	6	12154	0.062	7.214
06:00 - 07:00	7	11109	0.085	9.923	7	11109	0.018	2.105	7	11109	0.103	12.028
07:00 - 08:00	**17**	**10754**	**0.155**	**18.161**	17	10754	0.017	1.982	17	10754	0.172	20.143
08:00 - 09:00	17	10754	0.112	13.109	17	10754	0.021	2.430	17	10754	0.133	15.539
09:00 - 10:00	17	10754	0.060	7.034	17	10754	0.028	3.325	17	10754	0.088	10.359
10:00 - 11:00	17	10754	0.034	3.965	17	10754	0.032	3.709	17	10754	0.066	7.674
11:00 - 12:00	17	10754	0.040	4.732	17	10754	0.044	5.116	17	10754	0.084	9.848
12:00 - 13:00	17	10754	0.037	4.348	17	10754	0.054	6.267	17	10754	0.091	10.615
13:00 - 14:00	17	10754	0.084	9.848	17	10754	0.077	8.953	17	10754	0.161	18.801
14:00 - 15:00	17	10754	0.057	6.715	17	10754	0.075	8.761	17	10754	0.132	15.476
15:00 - 16:00	17	10754	0.033	3.901	17	10754	0.067	7.802	17	10754	0.100	11.703
16:00 - 17:00	17	10754	0.039	4.540	17	10754	0.134	15.667	**17**	**10754**	**0.173**	**20.207**
17:00 - 18:00	17	10754	0.029	3.389	**17**	**10754**	**0.139**	**16.307**	17	10754	0.168	19.696
18:00 - 19:00	17	10754	0.033	3.837	17	10754	0.096	11.255	17	10754	0.129	15.092
19:00 - 20:00	7	13332	0.015	1.754	7	13332	0.063	7.391	7	13332	0.078	9.145
20:00 - 21:00	7	13332	0.014	1.629	7	13332	0.015	1.754	7	13332	0.029	3.383
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			0.879	102.977			0.890	103.946			1.769	206.923

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)

LGVS

Calculation factor: 100 sqm

Estimated TRIP rate value per 11691 SQM shown in shaded columns
BOLD print indicates peak (busiest) period

	ARRIVALS				DEPARTURES				TOTALS			
Time Range	No. Days	Ave. GFA	Trip Rate	Estimated Trip Rate	No. Days	Ave. GFA	Trip Rate	Estimated Trip Rate	No. Days	Ave. GFA	Trip Rate	Estimated 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	6	12154	0.001	0.160	6	12154	0.003	0.321	6	12154	0.004	0.481
06:00 - 07:00	7	11109	0.019	2.255	7	11109	0.014	1.654	7	11109	0.033	3.909
07:00 - 08:00	17	10754	0.032	3.773	17	10754	0.015	1.791	17	10754	0.047	5.564
08:00 - 09:00	17	10754	0.030	3.517	17	10754	0.028	3.261	17	10754	0.058	6.778
09:00 - 10:00	**17**	**10754**	**0.045**	**5.308**	17	10754	0.030	3.453	**17**	**10754**	**0.075**	**8.761**
10:00 - 11:00	17	10754	0.033	3.837	17	10754	0.038	4.476	17	10754	0.071	8.313
11:00 - 12:00	17	10754	0.032	3.773	**17**	**10754**	**0.043**	**4.988**	17	10754	0.075	8.761
12:00 - 13:00	17	10754	0.030	3.453	17	10754	0.036	4.157	17	10754	0.066	7.610
13:00 - 14:00	17	10754	0.021	2.494	17	10754	0.028	3.261	17	10754	0.049	5.755
14:00 - 15:00	17	10754	0.026	3.006	17	10754	0.027	3.197	17	10754	0.053	6.203
15:00 - 16:00	17	10754	0.023	2.686	17	10754	0.024	2.750	17	10754	0.047	5.436
16:00 - 17:00	17	10754	0.024	2.750	17	10754	0.021	2.494	17	10754	0.045	5.244
17:00 - 18:00	17	10754	0.015	1.791	17	10754	0.014	1.599	17	10754	0.029	3.390
18:00 - 19:00	17	10754	0.009	1.087	17	10754	0.008	0.895	17	10754	0.017	1.982
19:00 - 20:00	7	13332	0.002	0.251	7	13332	0.005	0.626	7	13332	0.007	0.877
20:00 - 21:00	7	13332	0.003	0.376	7	13332	0.002	0.251	7	13332	0.005	0.627
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			0.345	40.517			0.336	39.174			0.681	79.691

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)

MOTOR CYCLES

Calculation factor: 100 sqm

Estimated TRIP rate value per 11691 SQM shown in shaded columns
BOLD print indicates peak (busiest) period

	ARRIVALS				DEPARTURES				TOTALS			
Time Range	No. Days	Ave. GFA	Trip Rate	Estimated Trip Rate	No. Days	Ave. GFA	Trip Rate	Estimated Trip Rate	No. Days	Ave. GFA	Trip Rate	Estimated 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	6	12154	0.001	0.160	6	12154	0.000	0.000	6	12154	0.001	0.160
06:00 - 07:00	7	11109	0.001	0.150	7	11109	0.001	0.150	7	11109	0.002	0.300
07:00 - 08:00	**17**	**10754**	**0.004**	**0.448**	17	10754	0.001	0.064	17	10754	0.005	0.512
08:00 - 09:00	17	10754	0.002	0.192	17	10754	0.000	0.000	17	10754	0.002	0.192
09:00 - 10:00	17	10754	0.001	0.064	17	10754	0.000	0.000	17	10754	0.001	0.064
10:00 - 11:00	17	10754	0.000	0.000	17	10754	0.001	0.064	17	10754	0.001	0.064
11:00 - 12:00	17	10754	0.001	0.128	17	10754	0.001	0.064	17	10754	0.002	0.192
12:00 - 13:00	17	10754	0.003	0.320	17	10754	0.000	0.000	17	10754	0.003	0.320
13:00 - 14:00	17	10754	0.002	0.256	17	10754	0.001	0.128	17	10754	0.003	0.384
14:00 - 15:00	17	10754	0.000	0.000	17	10754	0.003	0.320	17	10754	0.003	0.320
15:00 - 16:00	17	10754	0.003	0.320	17	10754	0.002	0.192	17	10754	0.005	0.512
16:00 - 17:00	17	10754	0.002	0.256	**17**	**10754**	**0.004**	**0.512**	**17**	**10754**	**0.006**	**0.768**
17:00 - 18:00	17	10754	0.001	0.064	17	10754	0.002	0.256	17	10754	0.003	0.320
18:00 - 19:00	17	10754	0.001	0.064	17	10754	0.000	0.000	17	10754	0.001	0.064
19:00 - 20:00	7	13332	0.000	0.000	7	13332	0.000	0.000	7	13332	0.000	0.000
20:00 - 21:00	7	13332	0.000	0.000	7	13332	0.000	0.000	7	13332	0.000	0.000
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			0.022	2.422			0.016	1.750			0.038	4.172

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.*