

For: Castle Peak Properties Ltd.

West City – Proposed Large Scale Development at Former DELL
EMC Premises, Innishmore, Ballincollig, Co. Cork



Traffic and Transportation Assessment

February 2026



MHL & Associates Ltd.
Consulting Engineers





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1 NON-TECHNICAL SUMMARY

M.H.L. & Associates Ltd. Consulting Engineers have been engaged by Castle Peak Properties Ltd. to produce a Traffic & Transport Assessment to supplement a planning application for a LRD at the site of the former DELL EMC premises, Innishmore, Ballincollig, Co. Cork.

The proposed development will consist of the demolition of the existing former 2 no. storey DELL EMC building (c. 3882 sq m) and ancillary plant area, with associated site clearance works. The proposed development will provide for the 130 no. residential units, arranged in 3 no. blocks in a development ranging in height from 3 to 6 no. storeys.

The development will comprise a mix of 108 no. apartments (total apartment blocks area - c. 10,657 sqm), arranged in 2 no. blocks, providing a unit mix of 52 no. 1-bed and 56 no. 2-bed apartment units. In addition, the proposed development will provide 22 no. duplex units (total duplex block area - c. 2,159 sqm), arranged in 1 no. block, providing a unit mix of 4 no. 1-bed, 9 no. 2-bed, and 9 no. 3 beds.

Vehicular, cyclist and pedestrian access to the proposed development will be via 2 no. entrances from Innishmore Lawn (to the north east) and Mechterstadt Road (to the south west) and the development will include for pedestrian and cyclist permeability. Additionally, pedestrian access points are provided to the west of the subject site and to the south, off Mechterstadt Road.

The development will also include the provision of private, communal and public open space (including all balconies); car parking at ground floor level and undercroft; bicycle parking; internal roads and pathways; bin stores; hard and soft landscaping; boundary treatments; the provision of new surface water and foul drainage pipes and any associated pipe diversion works; retaining walls; changes in level; services provision and related ducting, piping and cabling; electric vehicle charging points; attenuation tanks; SUDS; signage; 1 no. ESB substation; wayfinding structures; public realm works including public lighting; and all site development and excavation works above and below ground. The application contains a statement setting out how the proposal will be consistent with the objectives of the Cork City Development Plan 2022-2028..

Pre-application consultation is a mandatory step required in the Large Scale Residential Development process. The scope of this TTA was agreed with Cork City Council's Traffic & Transport Department at the TTA scoping stage. The methodology of the traffic assessment follows the May 2014, NRA Transport Assessment Guidelines format. Further requirements, at Section 32B application stage, were adopted in the latest report revision, including the adoption of a significantly high trip rate for the applicant site and also the adjoining Part 8 planning site and the adoption of revised trip distribution.

Traffic assessment was carried out at the following junctions in the vicinity of the site:

- J1 – Inniscarra Lawn / R608 Main Street / Parknamore Road Signalised Junction.
- J2 - R608 Main Street / Innishmore Lawn Signalised T-junction.
- J3 –Mechterstadt Road / Innishmore Lawn T-junction.
- J4 - Entrance to the RPS offices.

Traffic surveys were undertaken by a third-party traffic survey company, Irish Traffic Surveys, on Tuesday 29/04/2025. These 12-hour traffic counts allow for the assessment

of existing traffic conditions on the local road network at the development entrance and adjacent main road junction, and the determination of morning and evening peak traffic (08:00-09:00 in the AM and 17:00-18:00 in the PM).

In accordance with the NRA's "Traffic and Transport Assessment Guidelines", a traffic analysis is required to be undertaken for the Base Year (2025), Opening Year (2027), five years from this date i.e., Opening Year+5 (2032) and fifteen years from this opening year date i.e., the Opening Year+15 (2042). This report describes the existing traffic conditions, estimates the future traffic generated by the proposed development and assesses the impact of this generated traffic on the surrounding road network.

Junctions 11 PICADY analysis was carried out on 4 No. existing priority junctions in the vicinity of the proposed development (J1, J2, J3 and J4). This analysis presents the expected "Ratio of Flow to Capacity" RFC, "Level of Service" and "Queue Lengths" for the individual junctions. For traffic signalised junctions Linsig software has been employed. For Linsig analysis the Degree of Saturation (DOS), similar to RFC points to the percentage traffic capacity uptake at the respective junctions. This analysis serves to outline the actual traffic impact of the increase in traffic flows resultant from the proposed development.

The trips generated from the proposed development number 67No. vehicles in the morning peak and 67No. vehicles in the evening peak.

The trips generated from the permitted Part 8 development have been included in the "with development" traffic flows in the traffic modelling for the purposes of this TTA.

Traffic volumes at Junction 1 will increase by just 1% over both peaks due to traffic generated by the proposed development. This junction is a complex signalised junction and was found to be operating over capacity on some arms in the base year of 2025 with the max DOS seen in the AM peak on Arm D (91%) in the AM peak. In 2042 for the "without development" scenario, this same arm has a DOS of 100% and also 100% "with Development", pointing to the low level of traffic impact on the junction. It is likely that a level of modal shift, associated with active travel and public transport infrastructure (Cork Luas and BusConnects), will serve to reduce traffic volumes in the final design year scenario, thereby alleviating some of the modelled traffic flow volumes.

Junction 2 is currently operating under capacity in the base year of 2025, and it continues to do so up to the 2042 future year scenario. The maximum delay experienced is 44 seconds in the 2042 with development AM peak, an increase of 6 seconds for the same peak in the without development scenario.

Junction 3 is currently operating under capacity in the base year and continues to do so up to the 2042 future year scenario. The maximum RFC experienced is in the AM peak for the 2042 with development scenario (90%).

Junction 4 is currently operating under capacity in 2025 and will continue to do so in all the future year scenarios. In the 2042 with development scenario, the RFC reaches a maximum of 14% and 8% for the AM and PM peaks respectively.

2 EXISTING CONDITIONS

The proposed development is situated on the site of the former Dell EMC Building, Innishmore lawn, Ballincollig with the red line boundary indicated as shown in Figure 2.1. The site's location in context of adjoining road junctions J1, J2, J3 & J4 is also shown. The site is located in Ballincollig to the west of Cork City Centre, with Cork City suburbs such as Wilton located approximately a 25-minute cycle to the east.



Figure 2.1 Site location in context of adjoining road junctions

2.1 Wider Road Network

The surrounding road network in the vicinity of the site comprises of N22 Ballincollig Bypass, the N40 and the R608. The N40 is a national road linking Cork City to the N22 which goes all the way to Killarney. The R608 runs east west through Ballincollig, connecting to the N22 and is located to the south of the development site.

Junctions appraised in this TTA are:

- J1 – Inniscarra Lawn / R608 Main Street / Parknamore Road Signalised Junction.
- J2 – R608 Main Street / Innishmore Lawn Signalised T-junction.
- J3 – Mechterstadt Road / Innishmore Lawn T-junction.
- J4 – Entrance to the RPS offices.

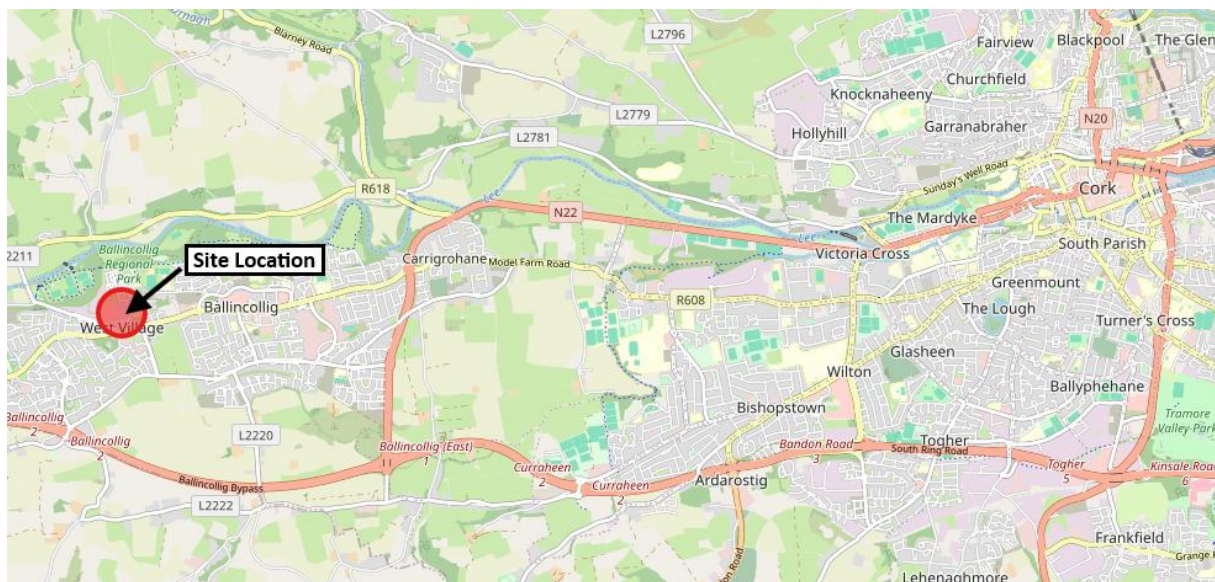


Figure 2.2 Site Location & Site Extents

3 PROPOSED DEVELOPMENT

The proposed development is for the demolition of the existing DELL EMC building, site clearance, and the construction of 130 no. residential units in a development ranging in height from 3 to 6 storeys. The proposed development will provide for the 130 no. residential units, arranged in 3 no. blocks in a development ranging in height from 3 to 6 no. storeys. The development will comprise a mix of 108 no. apartments, arranged in 2 no. blocks, providing a unit mix of 52 no. 1-bed and 56 no. 2-bed apartment units. In addition, the proposed development will provide 22 no. duplex units.

Vehicular, cyclist and pedestrian access to the proposed development will be via 2 no. entrances from Innishmore Lawn (to the north east) and Mechterstadt Road (to the south west) and the development will include for pedestrian and cyclist permeability. Additionally, pedestrian access points are provided to the west of the subject site and to the south, off Mechterstadt Road.

The development includes play areas, and open spaces/ amenity areas, car and bicycle parking, bin storage, lighting, and all associated and ancillary services and infrastructure required for the construction and operation of the development. The layout of the proposed new development is shown in Figure 3.1:



Figure 3.1 Site Layout Plan

The proposed development is located in lands zoned for sustainable residential neighbourhoods in the Cork City Development Plan 2022.

4 TRIP GENERATION

Trip Generation is the means by which the traffic “generated” by a proposed new development is estimated. This determination was arrived at by utilising traffic counts at a similar development in the vicinity of the site in addition to using the TRICS software.

TRICS is a well-established UK and Irish national database which holds in excess of 2,100 site locations and 4,700 survey counts with over 98 separate land use sub-categories. MHL & Associates Ltd. are one of approximately 230 worldwide licensed TRICS member organisations. The TRICS program was utilised for the land-use sub-category associated with the development proposal. The “Guidelines for Traffic and Transportation Assessments” state that for residential use the busiest hours are between 08:00-09:00 and 17:00-18:00. According to the TRICS database the busiest peak hour trip rates for the proposed development occur between 08.00-09.00.

A TRICS trip analysis was carried out for the residential units in the proposed development. The full TRICS output, is included in Appendix B of this report and outlines the likely trip rates for the proposed LRD development. Following the Section 32B opinion from Cork City Council the trip rate was further reviewed and a more conservative trip rate was adopted from a historic traffic count of a similar scheme.

This traffic count was conducted on Sarsfield Heights residential estate (P.A. Ref: 17/4877) on November 2024. This existing residential estate is of similar nature to the proposed development (at a smaller scale) and consists of 73no. units composed of 35no. houses and 38no. apartment/duplex units (split of 48% and 52%, respectively) with a much higher level of parking. Trip rates generated from this traffic count were determined to be appropriate for the proposed application. These trip rates have been used in a number of recent LRD applications, through agreement with Cork City Council. They represent a very conservative estimate of traffic flows given the significantly higher level of parking compared to the applicant proposals. These trip rates were also adopted for the adjoining Part 8 site traffic flows. A synopsis of the trip generation rates for the development is displayed in Table 4.1.

Table 4.1 Proposed LRD Generated Trips- Morning and Evening Arrival/Departure

North Access (DEV J1)	AM PEAK		PM PEAK	
	Arrivals	Departures	Arrivals	Departures
Duplexes				
Trip Rates Generated from TRICS (per Unit)	0.22	0.49	0.44	0.27
Peak Trips for 19 Parking Spaces (Equating to 35 Units)	8	17	15	9
Trips Generated	25		25	
Total Trips Generated (Arrival / Departure)	8	17	15	9
Total Trips Generated	25		25	
South Access (DEV J2)	AM PEAK		PM PEAK	
	Arrivals	Departures	Arrivals	Departures
Apartments				
Trip Rates Generated from TRICS (per Unit)	0.22	0.49	0.44	0.27
Peak Trips for 51 Parking Spaces (Equating to 95 Units)	21	47	42	26
Trips Generated	67		67	
Total Trips Generated (Arrival / Departure)	21	47	42	26
Total Trips Generated	67		67	

Cork City Council have submitted a Part 8 for a proposed residential development. This development will comprise of 56no. residential units and will be located directly north of the proposed development which is the subject of this report. This Part 8 development has been incorporated into the traffic analysis in this report. A summary of the trips generated by the development is shown below in Table 4.2 and a layout of the development is shown in Figure 4.1. In response to Cork City Council's Section 32B submission in respect of the proposed application, a higher trip rate has been applied for this scheme. This represents a very conservative estimation of the likely traffic impact of the site. The impact of this traffic is included in the "With Development" modelling scenario to ensure that a robust modelling assessment is presented.

Table 4.2 Proposed Part 8 Development Trips

	AM PEAK		PM PEAK	
	Arrivals	Departures	Arrivals	Departures
Houses				
Trip Rates Generated from TRICs (per Dwelling)	0.22	0.49	0.44	0.27
Peak Trips for 18 Dwelling	4	9	8	5
Trips Generated	13		13	
Apartments				
Trip Rates Generated from TRICs (per Unit)	0.22	0.49	0.44	0.27
Peak Trips for 38 Apartment Units	8	19	17	10
Trips Generated	27		27	
Total Trips Generated (Arrival / Departure)	12	27	25	15
Total Trips Generated	40		40	



5 TRAFFIC FORECASTING

The base year is 2025, when the counts were undertaken and when this report was first composed. The opening year of expected completion for the development is taken to be 2027. In accordance with the Guidelines for Traffic and Transportation Assessments as published by the NRA, a traffic analysis is required to be undertaken for the Base Year – 2024, Opening Year – 2027, Opening Year plus five from this date i.e., 2032, plus fifteen years from this date i.e., the Opening Year +15 – 2042.

The Transport Infrastructure Ireland 2016 publication “Project Appraisal Guidelines for National Roads Units 5.3,” was used to calculate growth factors for the road network traffic. Table 5.1 below shows the calculated growth factors to convert from 2025 to 2027 to be 1.033, 2025 to 2032 to be 1.098 and from 2025 to 2042 to be 1.160 respectively.

Table 5.1 Future Growth Rates for Base Year to Design Year Scenarios

Central Growth Rate			Cars/LGV	HGV	Combined
Vehicle Count %:			95%	5%	
2025	to	2027	1.032	1.064	1.033
2025	to	2032	1.093	1.193	1.098
2025	to	2042	1.151	1.347	1.160
TII Publication - Project Appraisal Guidelines for National Roads Unit 5.3 - Travel Demand Projections					
Table 6.1 Link-Based Growth Rates: Metropolitan Area Annual Growth Rates					

6 EXISTING SITUATION

Traffic counts taken at each of the assessed junctions, on Tuesday 29th of April 2025, were used as the basis of the modelling, producing morning and evening O/D matrices. The traffic flows through the junctions were assessed and it was determined that the morning and evening peaks occurred at 08:00-09:00am and 17:00-18:00pm, respectively, as shown in the following figures.

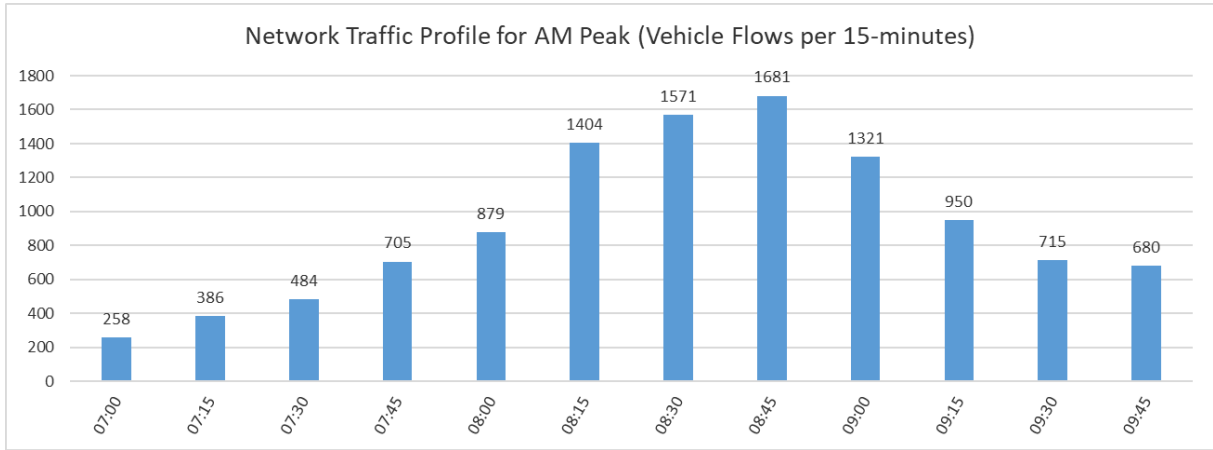


Figure 6.1 Network Traffic Profile for AM Peak Flow

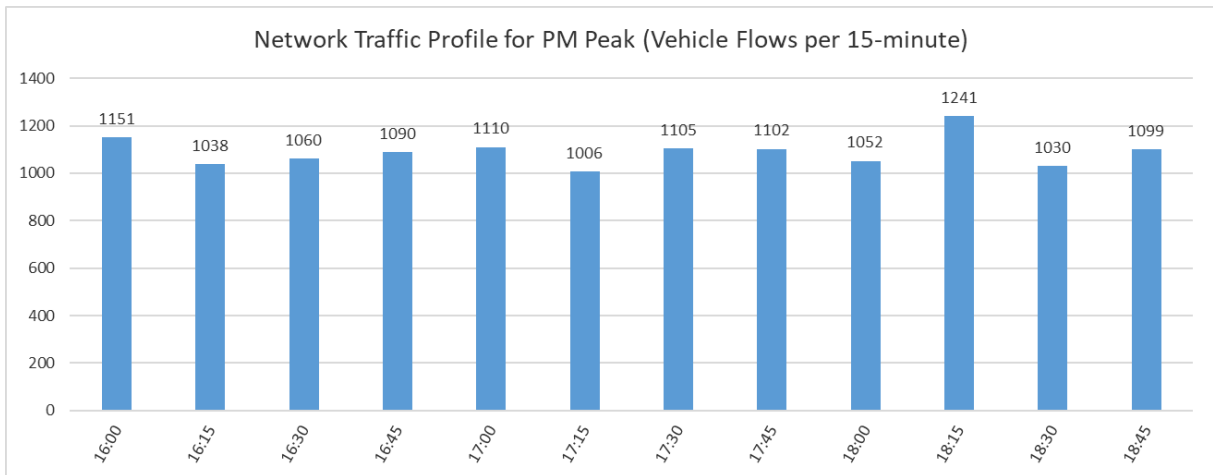


Figure 6.2 Network Traffic Profile for PM Peak Flow

7 MODAL SPLIT

In predicting the level of traffic that will be generated by the proposed development, the mode of transport (modal choice) and quantity of traffic generated (trip attraction) must be considered.

The 2022 Census online SAP data was used to assess current modal split patterns in the Ballincollig area. The small area A047016035 encompasses the proposed development site, this small area can be seen in Figure 7.1.

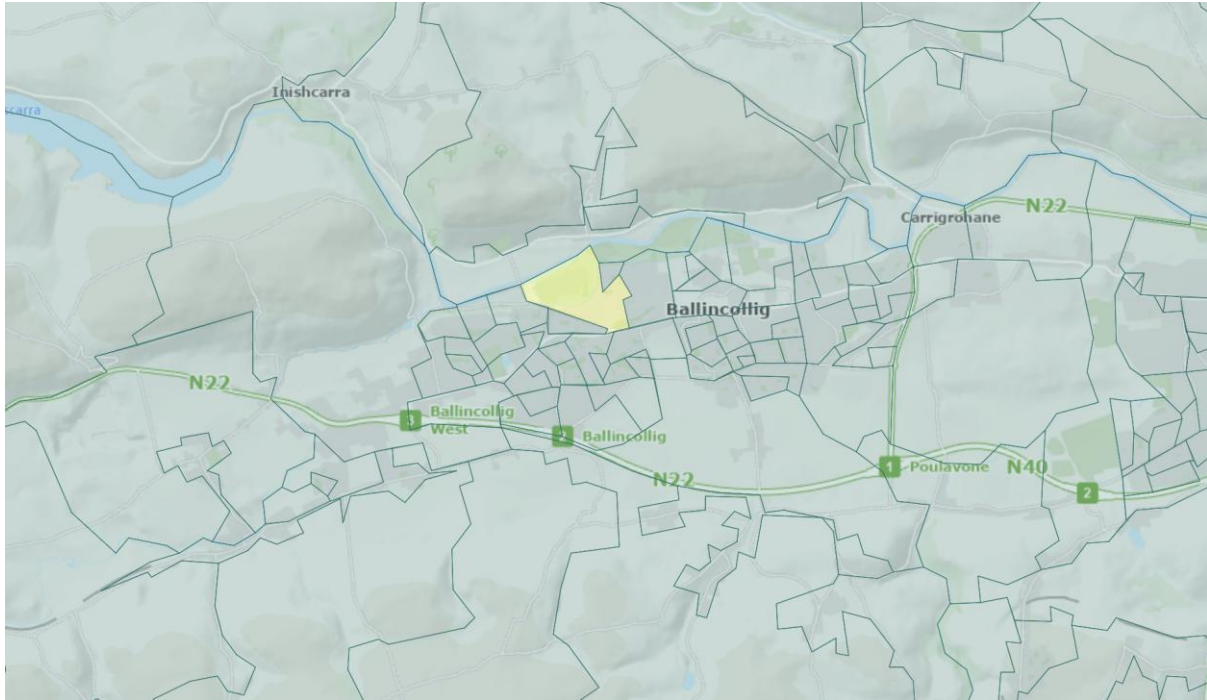


Figure 7.1 Small Area A047016035

Means of travel information for the population over five years old is presented in Figure 7.2 below. It shows that 32.0% of journeys are made by car drivers, with an additional 24.7% by car passengers. The proportion of people commuting on foot is 29.4%. Travel by bicycle accounts for 0.5%, while public transport use (including bus, minibus or coach) is 8.2%. No recorded use of train, DART or LUAS or motorcycle/scooter is observed in this dataset, 4.6% is the proportion of people commuting by van. Work from home and not stated percentages were removed from the below table to more accurately represent the modes used by commuters.

Means of Travel	Number	Percentage
On Foot	57	29.4%
Bicycle	1	0.5%
Bus, minibus or coach	16	8.2%
Train, DART or LUAS	0	0.0%
Motorcycle or scooter	0	0.0%
Car Driver	62	32.0%
Car Passenger	48	24.7%
Van	9	4.6%
Other (incl. lorry)	1	0.5%

Figure 7.2 Commuting Data for Small Area A047016035

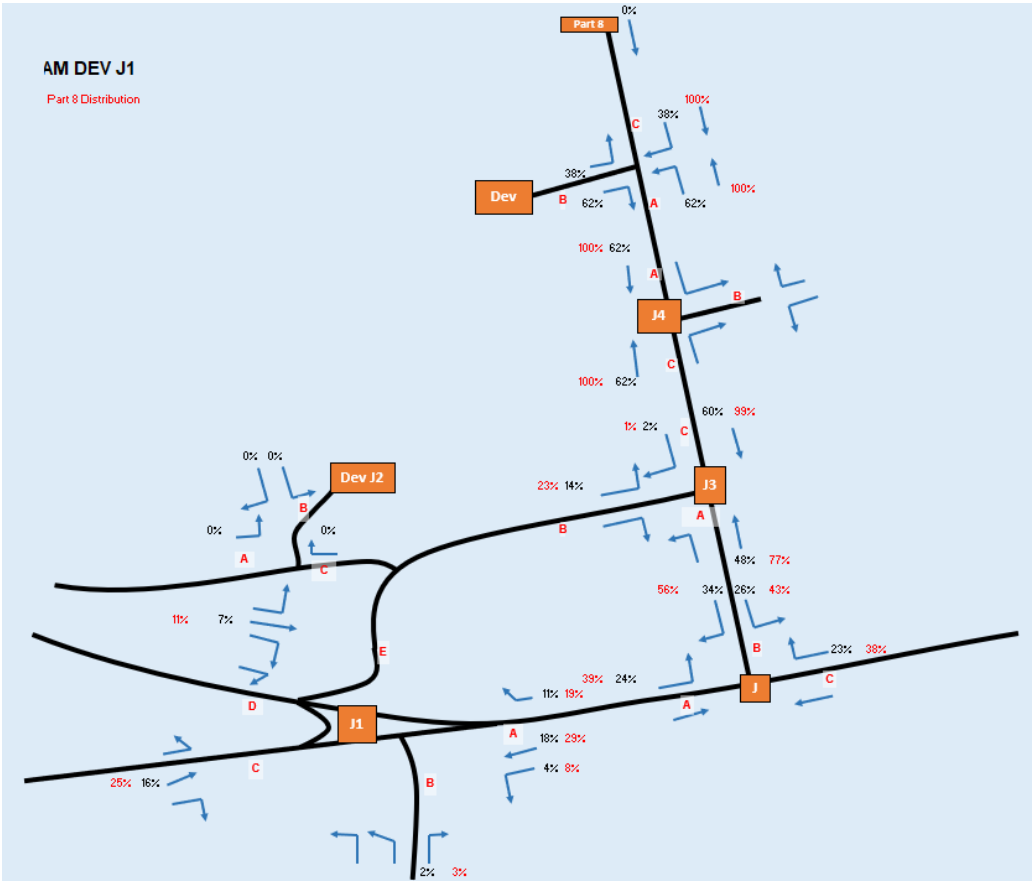


Figure 8.2 PM Peak Hour Traffic Distribution – Dev J1

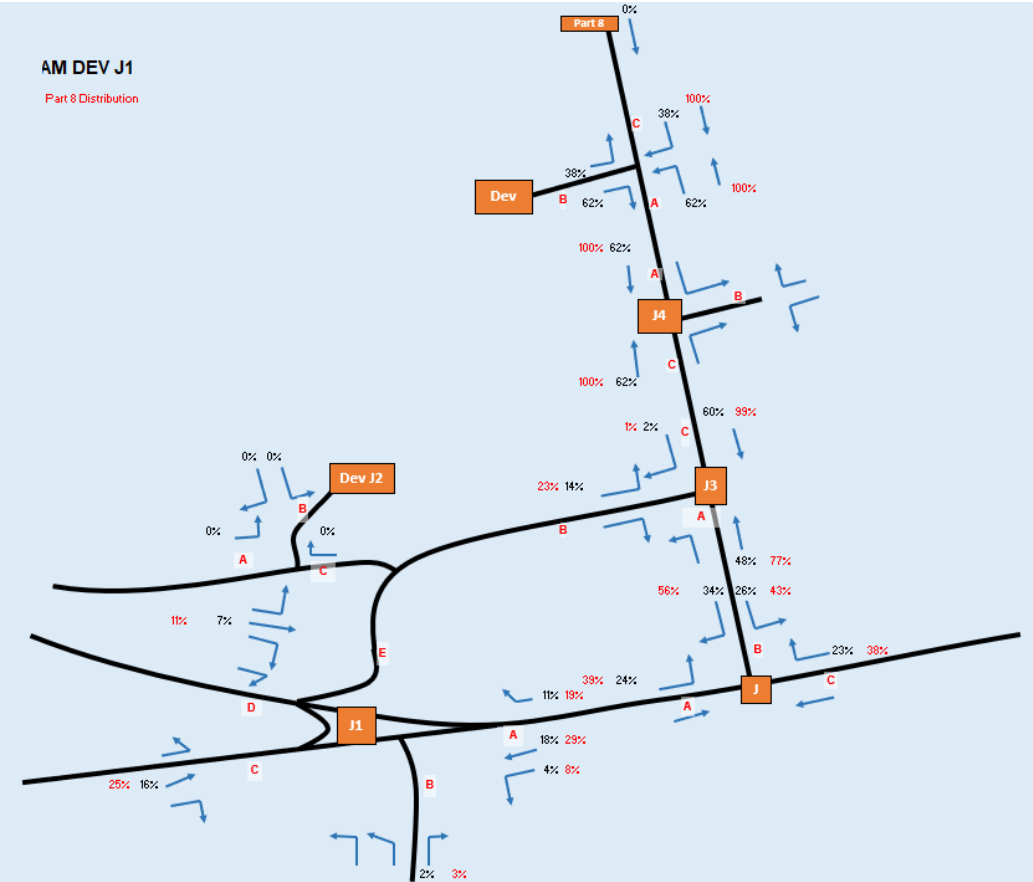


Figure 8.3 AM Peak Hour Traffic Distribution – Dev J2

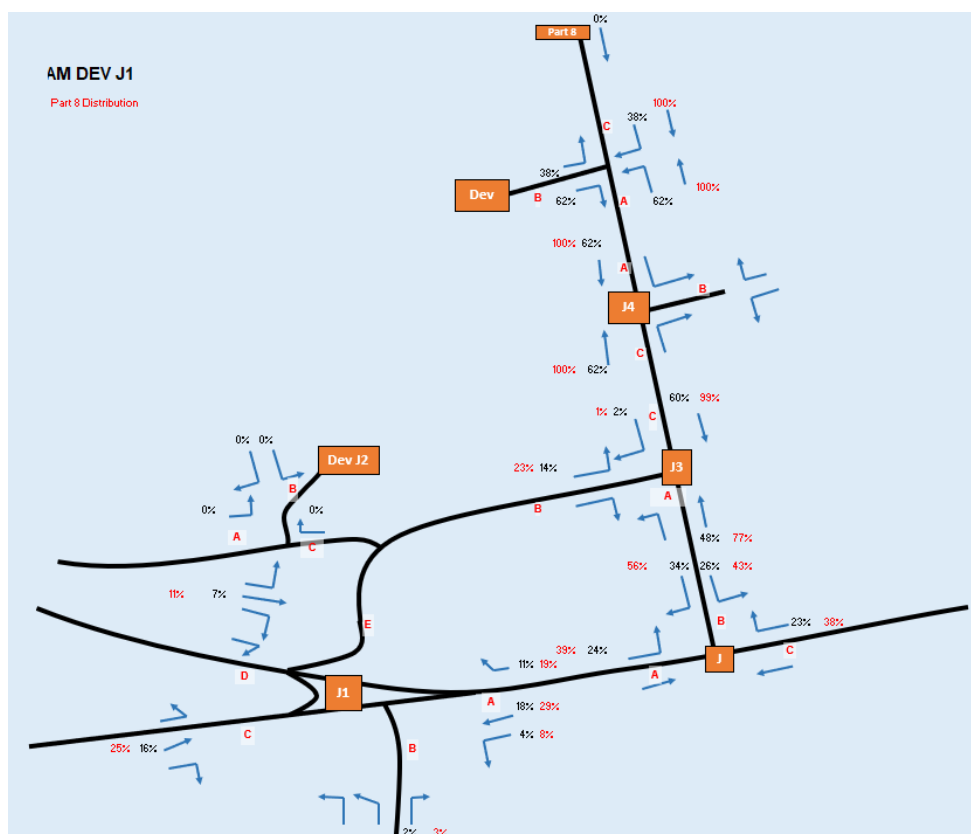


Figure 8.4 PM Peak Hour Traffic Distribution – Dev J2

9 TRIP ASSIGNMENT

The proposed development will generate traffic as outlined in Sections 4, 5 & 6; the distribution of generated traffic is as outlined in Section 8 of this report. Figures 9.1 and 9.2 show the existing movements through all the junctions during the AM and PM peaks. Figures 9.3 and 9.4 show the Opening Year +15 (2042) scenario both with and without the development traffic. Both the with and without scenarios include for the background growth in traffic as calculated in section 5.

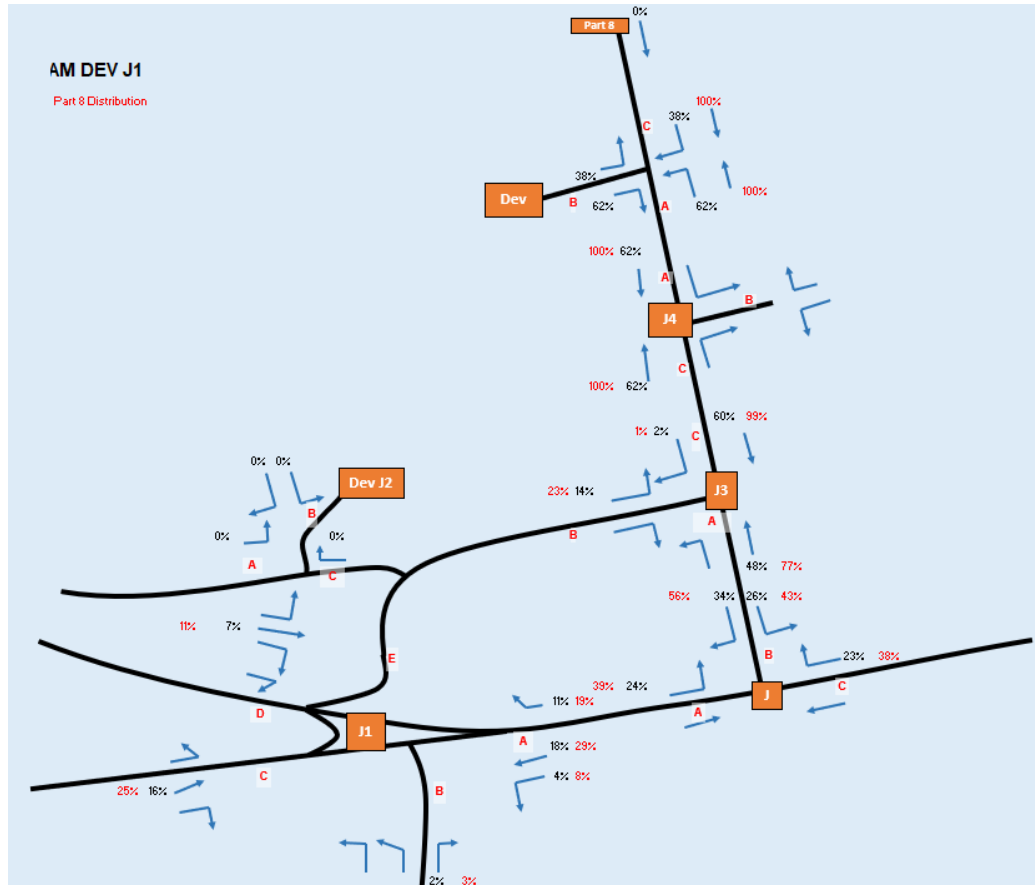


Figure 9.1 2025 AM Peak Hour

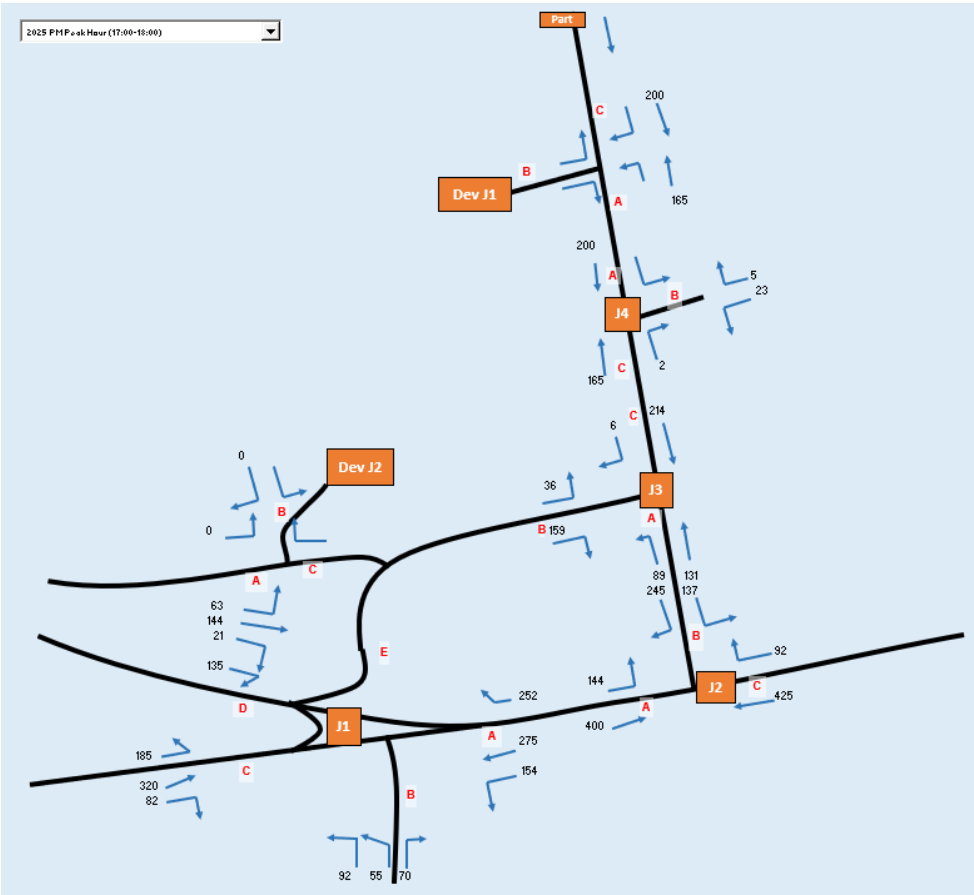


Figure 9.2 2025 PM Peak Hour

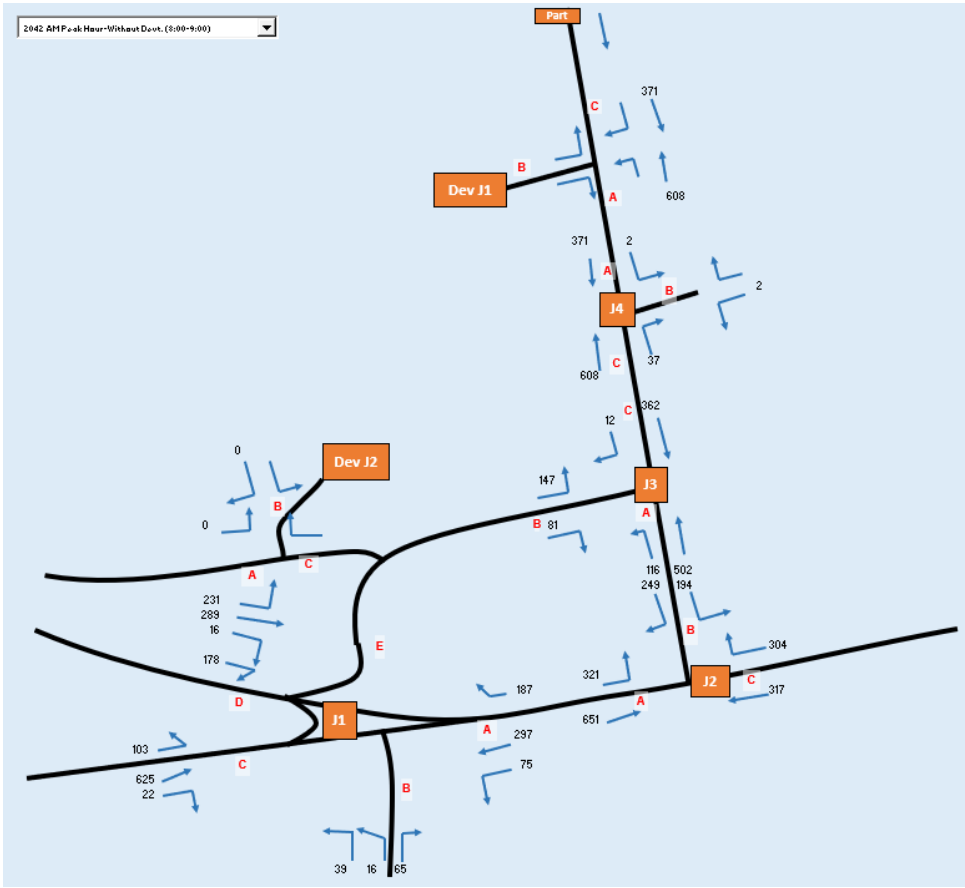


Figure 9.3 2042 Am Peak without Development

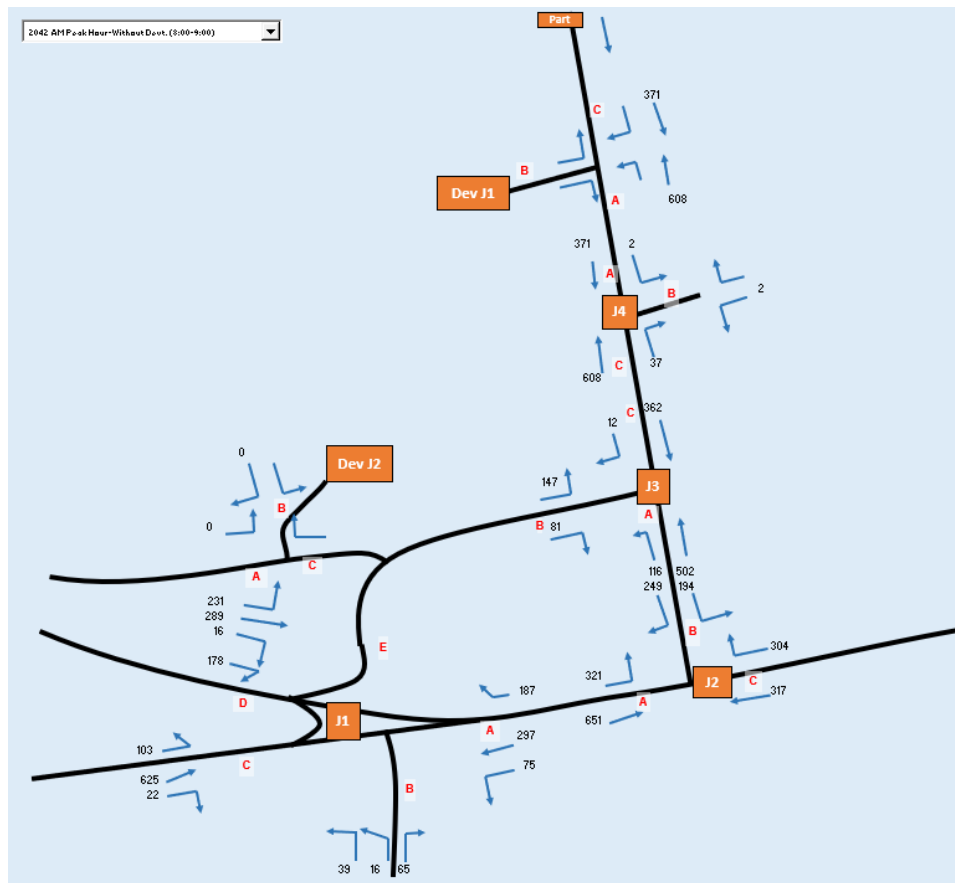


Figure 9.4 2042 AM Peak with Development

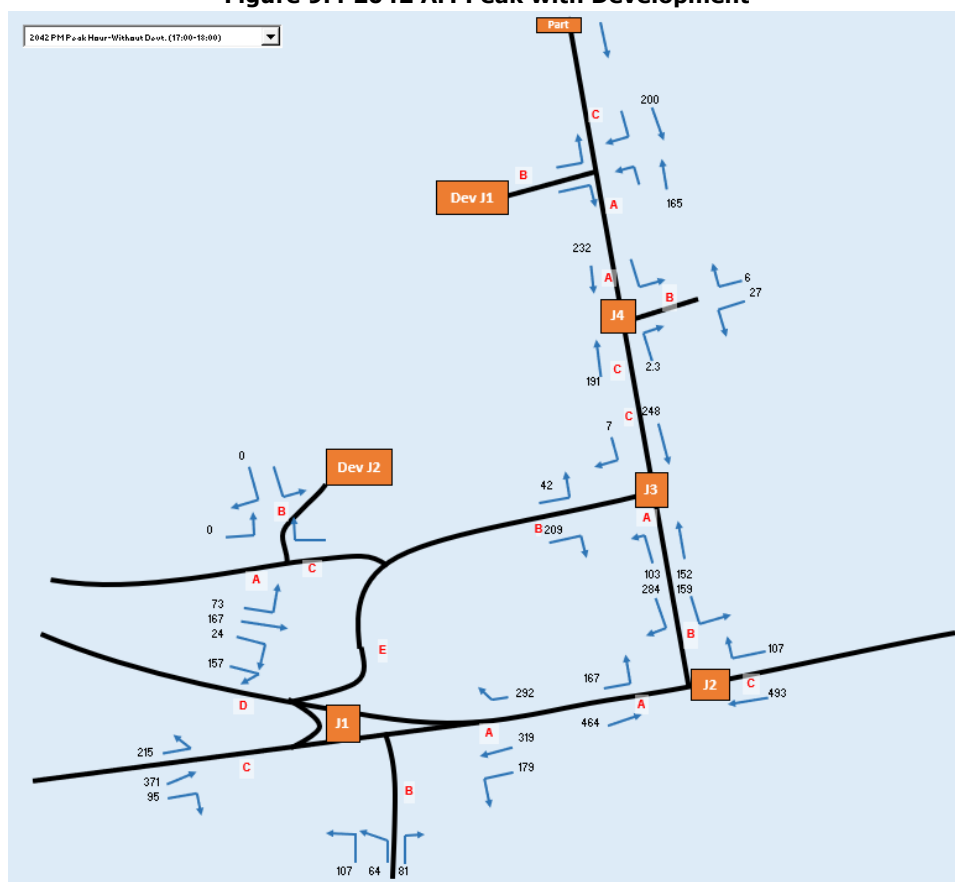
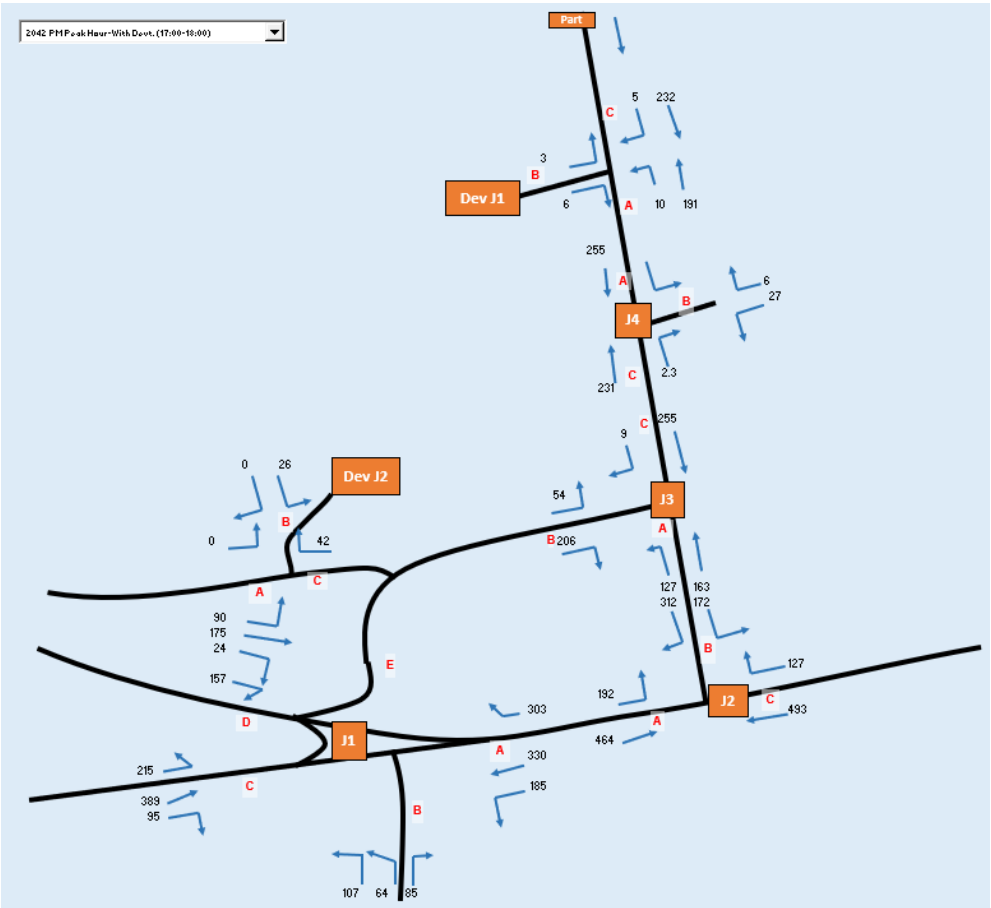


Figure 9.5 2042 PM Peak without Development



10 TRAFFIC MODELLING

10.1 Junction 11 Analysis

The purpose of this Traffic and Transport Assessment is to determine if the capacity of the existing road network is sufficient to cater for the traffic generated by the proposed development.

In order to assess the capacity of the proposed development on the adjoining network junctions, traffic models of the junctions have been produced using traffic modelling software JUNCTIONS 11 incorporating PICADY (Priority Intersection Capacity and Delay) and OSCADY (Optimised Signals Capacity and Delay). Junctions 1 and 2 are signalised junctions and were modelled using the OSCADY traffic modelling software. Junctions 3, and 4 are priority junctions and were modelled using the PICADY traffic modelling software.

The output movements from the models are based on the junction arms. The arms are designated A to C for T-junctions as shown below. All priority junctions have been modelled as simple priority "T" junctions.

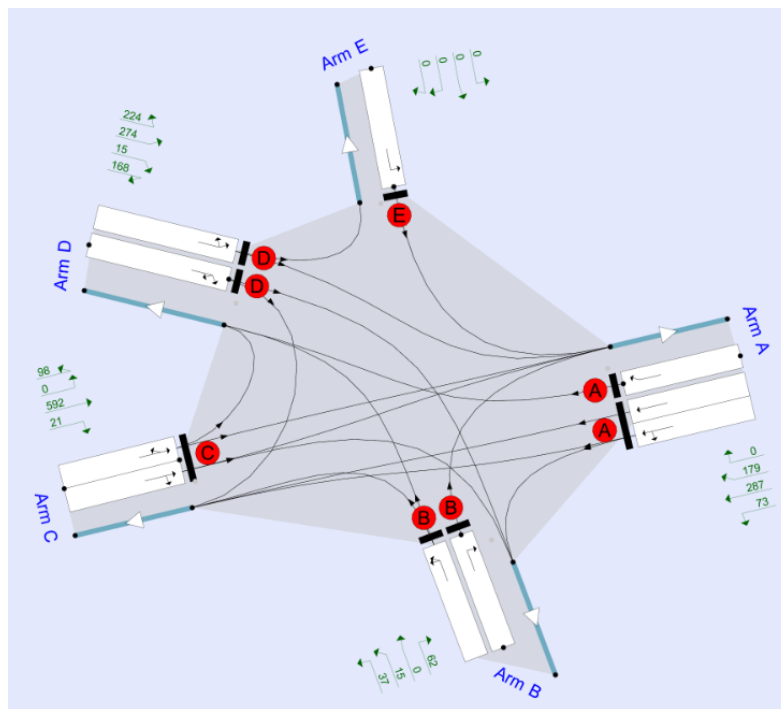


Figure 10.1 Junction 1 – Inniscarra Lawn / R608 Main Street / Parknamore Road Signalised Junction

(Arm A – R608 E, Arm B – Parknamore, Arm C – R608 W, Arm D – Innishcarra Road, Arm E – Mechterstadt Road)

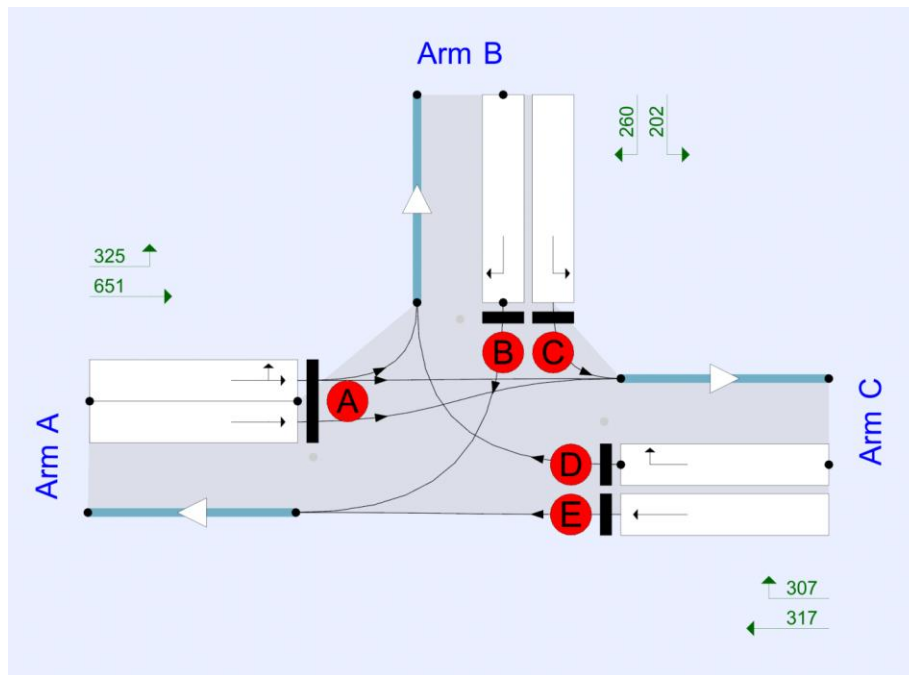


Figure 10.2 Junction 2 – R608 Main Street / Innishmore Lawn Signalised T-junction
(Arm A – R608 W, Arm B – Innishmore Lawn, Arm C – R608 E)

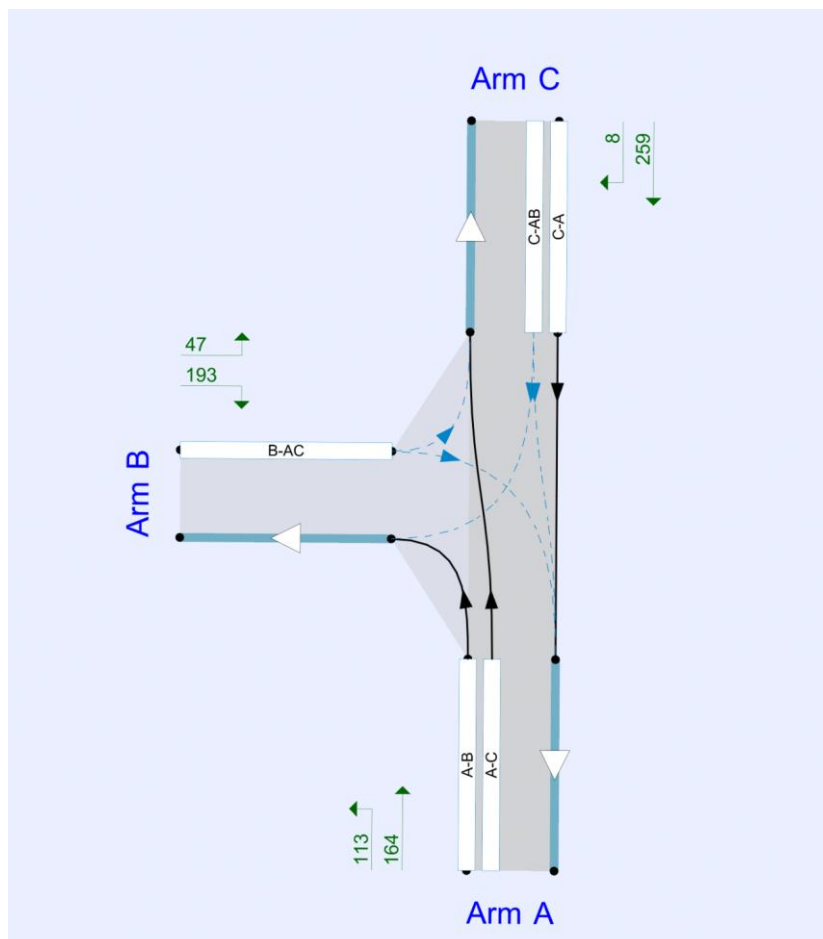


Figure 10.3 Junction 3 – Mechterstadt Road / Innishmore Lawn T-junction
(Arm A – Innishmore Lawn S, Arm B – Mechterstadt Road, Arm C – Innishmore Lawn N)

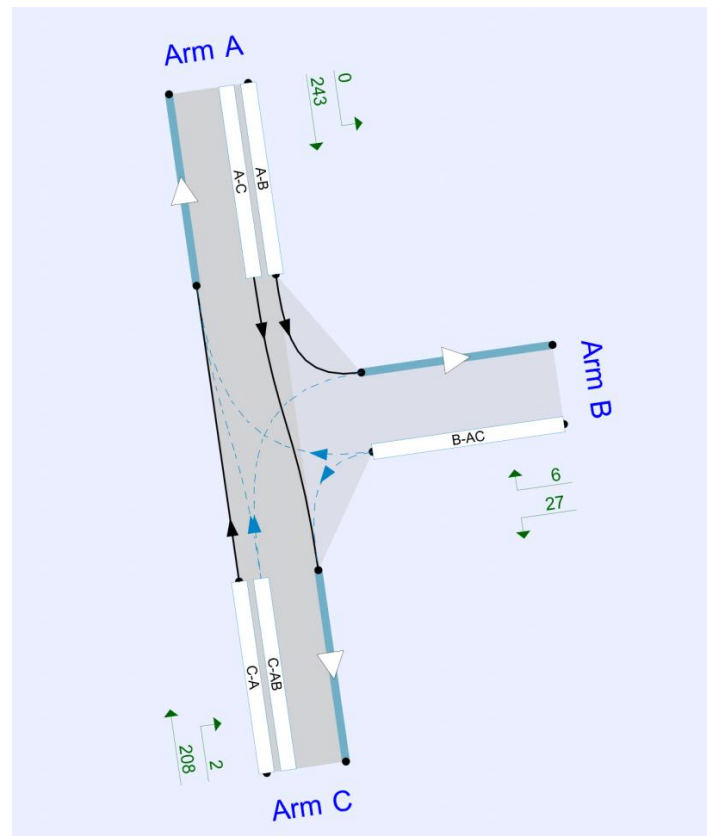


Figure 10.4 Junction 4 – Entrance to the RPS offices

(Arm A – Innishmore Lawn N, Arm B – RPS Offices, Arm C – Innishmore Lawn S)

The output result sheets from JUNCTIONS 11, (PICADY 11) consist of tables of demand flow, capacities, queues and delays for each 15-minute time segment of the peak hour analysis. These tables contain start and finish times of each arm, traffic demand, 'Ratio of Flow to Capacity' (RFC), start queue length and queueing delay.

The RFC provides the basis for judging the acceptability of junction design and the capacity of existing junctions. Generally, an RFC of 0.85 or less is considered acceptable during the peak period for a priority junction and 0.95 or less is considered acceptable for a signalised junction. An RFC of these values indicates that at peak times the junction is at 85% or 95% of its operational capacity and therefore has a practical reserve capacity at a junction required to cater for periods of unusually high traffic flow, such as bank holiday weekends, etc. The degree of saturation of a junction is a measure of the capacity of the junction. A junction with an RFC of 0.85 would be considered to be operating at a degree of saturation of 100%.

The following are the results of the traffic model analysis for the peak hours 08:00-9:00 and 17:00-18:00 for the base year and future opening years. See Appendix A for the full Junctions 11 output data.

Junction 1 – Inniscarra Lawn / R608 Main Street / Parknamore Road

	AM							PM						
	Set ID	Queue (PCU)	Delay (s)	DOS	LOS	Junction LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	DOS	LOS	Junction LOS	Network Residual Capacity
	2025 - Base													
Arm A	D1	9.5	33.94	0.64	C	D	-13 % [Arm A - Traffic Stream 2]	D2	9.9	24.67	0.69	C	C	-19 % [Arm D - Traffic Stream 1]
Arm B		2.0	30.95	0.30	C				3.8	32.12	0.63	C		
Arm C		14.6	47.13	0.89	D				10.8	38.25	0.86	D		
Arm D		13.3	46.50	0.91	D				7.3	42.27	0.81	D		
Arm E		0.0	0.00	0.00	A				0.0	0.00	0.00	A		
	2027 - without dev													
Arm A	D3	10.6	37.85	0.69	D	D	-26 % [Arm A - Traffic Stream 2]	D5	10.7	26.48	0.73	C	C	-24 % [Arm D - Traffic Stream 1]
Arm B		2.2	33.13	0.32	C				4.1	34.49	0.66	C		
Arm C		15.8	49.39	0.90	D				10.5	34.13	0.84	C		
Arm D		15.8	55.41	0.94	E				8.3	48.67	0.85	D		
Arm E		0.0	0.00	0.00	A				0.0	0.00	0.00	A		
	2027 - with dev													
Arm A	D4	11.4	37.86	0.69	D	D	-25 % [Arm A - Traffic Stream 2]	D6	11.3	26.70	0.73	C	D	-27 % [Arm D - Traffic Stream 1]
Arm B		2.3	34.57	0.34	C				4.4	37.29	0.69	D		
Arm C		15.3	45.23	0.88	D				12.5	42.82	0.89	D		
Arm D		17.8	62.33	0.96	E				9.7	54.40	0.89	D		
Arm E		0.0	0.00	0.00	A				0.0	0.00	0.00	A		
	2032 - without dev													
Arm A	D7	12.1	41.24	0.73	D	E	-35 % [Arm A - Traffic Stream 2]	D9	11.1	24.54	0.70	C	C	-23 % [Arm D - Traffic Stream 1]
Arm B		2.5	37.04	0.36	D				4.8	40.21	0.73	D		
Arm C		17.5	51.23	0.91	D				11.5	35.51	0.85	D		
Arm D		21.3	73.03	0.99	E				8.7	46.82	0.85	D		
Arm E		0.0	0.00	0.00	A				0.0	0.00	0.00	A		
	2032 - with dev													
Arm A	D8	12.7	40.09	0.72	D	E	-32 % [Arm A - Traffic Stream 2]	D10	12.0	27.28	0.76	C	D	-38 % [Arm D - Traffic Stream 1]
Arm B		2.6	37.87	0.37	D				4.7	38.42	0.71	D		
Arm C		19.0	57.00	0.93	E				14.6	50.27	0.93	D		
Arm D		22.9	76.84	1.00	E				17.2	99.91	1.02	F		
Arm E		0.0	0.00	0.00	A				0.0	0.00	0.00	A		
	2042 - without dev													
Arm A	D11	13.7	44.82	0.76	D	E	-54 % [Arm B - Traffic Stream 2]	D13	13.0	30.16	0.79	C	D	-39 % [Arm D - Traffic Stream 1]
Arm B		2.9	41.44	0.41	D				5.5	46.33	0.77	D		
Arm C		24.1	72.72	0.97	E				13.9	44.54	0.90	D		
Arm D		24.0	77.24	1.00	E				15.4	90.26	0.99	F		
Arm E		0.0	0.00	0.00	A				0.0	0.00	0.00	A		
	2042 - with dev													
Arm A	D12	15.0	46.17	0.77	D	E	-74 % [Arm B - Traffic Stream 2]	D14	14.4	32.33	0.82	C	D	-35 % [Arm B - Traffic Stream 1]
Arm B		3.1	43.91	0.43	D				6.4	54.57	0.82	D		
Arm C		23.8	70.07	0.96	E				15.3	47.88	0.92	D		
Arm D		24.5	76.64	1.00	E				10.5	51.70	0.89	D		
Arm E		0.0	0.00	0.00	A				0.0	0.00	0.00	A		

Figure 10.5 Development Junction Summary Table

The modelling shows that in the base year of 2025 some arms of the junction are over capacity. Arms C and D are over capacity in the AM peak and Arm C is over capacity in the PM peak. The maximum LOS experienced in 2025 is 91% on Arm D in the AM peak.

In 2042, the traffic added in the with development scenario equates to a minimal increase over the AM and PM peaks when compared to the traffic in the without development scenario. This additional traffic causes a maximum increase in delays of 2 seconds and 5 seconds for the AM and PM peaks respectively.

Junction 2 – R608 Main Street / Innishmore Lawn

	AM							PM						
	Set ID	Queue (PCU)	Delay (s)	DOS	LOS	Junction LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	DOS	LOS	Junction LOS	Network Residual Capacity
	2025 - Base													
Arm A	D1	12.6	20.77	0.62	C	C	-33 % [Arm B - Traffic Stream 2]	D2	7.0	13.63	0.35	B	B	-36 % [Arm C - Traffic Stream 2]
Arm B		7.7	33.92	0.73	C				7.4	30.57	0.66	C		
Arm C		8.0	22.86	0.71	C				5.9	13.45	0.46	B		
	2027 - without dev													
Arm A	D3	13.1	21.22	0.64	C	C	-35 % [Arm B - Traffic Stream 2]	D5	7.4	14.44	0.37	B	B	-38 % [Arm C - Traffic Stream 2]
Arm B		8.1	35.42	0.76	D				7.4	29.16	0.65	C		
Arm C		8.4	23.87	0.74	C				6.3	14.11	0.48	B		
	2027 - with dev													
Arm A	D4	14.0	23.84	0.69	C	C	-30 % [Arm B - Traffic Stream 2]	D6	8.2	16.11	0.41	B	B	-36 % [Arm C - Traffic Stream 2]
Arm B		9.3	34.95	0.79	C				8.1	29.55	0.69	C		
Arm C		9.0	25.90	0.76	C				6.9	15.70	0.53	B		
	2032 - without dev													
Arm A	D7	14.4	23.46	0.70	C	C	-39 % [Arm B - Traffic Stream 2]	D9	7.9	14.70	0.39	B	B	-42 % [Arm C - Traffic Stream 2]
Arm B		9.0	39.36	0.81	D				8.0	30.82	0.69	C		
Arm C		9.4	26.40	0.78	C				6.8	14.59	0.51	B		
	2032 - with dev													
Arm A	D8	15.6	26.77	0.75	C	C	-33 % [Arm B - Traffic Stream 2]	D10	8.9	17.20	0.44	B	C	-39 % [Arm C - Traffic Stream 2]
Arm B		10.3	38.74	0.83	D				8.8	31.38	0.73	C		
Arm C		10.0	28.73	0.81	C				7.6	16.64	0.56	B		
	2042 - without dev													
Arm A	D11	15.5	24.72	0.74	C	C	-34 % [Arm B - Traffic Stream 2]	D13	8.6	15.70	0.42	B	C	-45 % [Arm C - Traffic Stream 2]
Arm B		9.2	37.23	0.80	D				8.7	32.70	0.73	C		
Arm C		10.4	29.43	0.82	C				7.4	15.60	0.54	B		
	2042 - with dev													
Arm A	D12	16.9	28.73	0.80	C	C	-36 % [Arm B - Traffic Stream 2]	D14	9.4	17.53	0.47	B	C	-42 % [Arm C - Traffic Stream 2]
Arm B		11.5	43.59	0.87	D				9.1	30.55	0.73	C		
Arm C		11.3	32.75	0.85	C				8.0	17.20	0.58	B		

Figure 10.6 Junction 2 Summary Table

This junction is currently operating under capacity and will continue to do so in all future year scenarios.

In 2042, during the AM peak, the maximum LOS experienced is 87% on both Arm B for the with development scenario. This is an increase of 7% on Arm B from the scenario with no development. The maximum increase in delay is 6 seconds on Arm B.

The PM peak in 2042 doesn't experience any significant delays in either of the with or without development scenarios.

Junction 3 – Mechterstadt Road / Innishmore Lawn

	AM							PM						
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Network Residual Capacity
	2025 - Base													
Stream B-AC	D1	1.3	22.24	0.57	C	A	17 %	D2	1.2	20.18	0.55	C	A	28 %
Stream C-AB		0.0	8.32	0.02	A		[Stream B-AC]		0.0	7.01	0.01	A		[Stream B-AC]
	2027 - without dev													
Stream B-AC	D3	1.4	23.85	0.60	C	A	13 %	D5	1.3	21.21	0.57	C	A	24 %
Stream C-AB		0.0	8.40	0.03	A		[Stream B-AC]		0.0	7.03	0.01	A		[Stream B-AC]
	2027 - with dev													
Stream B-AC	D4	3.2	43.34	0.78	E	A	-5 %	D6	1.9	27.63	0.67	D	A	9 %
Stream C-AB		0.0	8.55	0.03	A		[Stream B-AC]		0.0	7.19	0.02	A		[Stream B-AC]
	2032 - without dev													
Stream B-AC	D7	1.8	28.34	0.65	D	A	6 %	D9	1.6	24.98	0.63	C	A	14 %
Stream C-AB		0.0	8.60	0.03	A		[Stream B-AC]		0.0	7.10	0.01	A		[Stream B-AC]
	2032 - with dev													
Stream B-AC	D8	4.3	57.24	0.84	F	B	-9 %	D10	2.3	32.22	0.71	D	B	3 %
Stream C-AB		0.0	8.73	0.03	A		[Stream B-AC]		0.0	7.25	0.02	A		[Stream B-AC]
	2042 - without dev													
Stream B-AC	D11	2.3	34.12	0.71	D	A	1 %	D13	2.5	34.21	0.73	D	B	1 %
Stream C-AB		0.0	8.79	0.03	A		[Stream B-AC]		0.0	7.14	0.02	A		[Stream B-AC]
	2042 - with dev													
Stream B-AC	D12	6.2	79.21	0.90	F	C	-13 %	D14	2.9	37.93	0.76	E	B	-2 %
Stream C-AB		0.0	8.93	0.03	A		[Stream B-AC]		0.0	7.30	0.02	A		[Stream B-AC]

Figure 10.7 Junction 3 Summary Table

Junction 3 is currently operating under capacity and will continue to do so in all future year scenarios.

In 2042, during the AM peak, the maximum LOS experienced is 90% on Arm B for the with development scenario. This is an increase of 19% on Arm B from the scenario with no development.

The PM peak in 2042 doesn't experience any significant delays in either of the with or without development scenarios.

Junction 4 – Entrance to the RPS offices

	AM							PM						
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Network Residual Capacity
	2025 - Base													
Stream B-AC	D1	0.0	0.00	0.00	A	A	132 %	D2	0.1	7.86	0.06	A	A	381 %
Stream C-AB		0.2	4.79	0.11	A		[Stream C-AB]		0.0	5.76	0.00	A		[Stream B-AC]
	2027 - without dev													
Stream B-AC	D3	0.0	0.00	0.00	A	A	125 %	D5	0.1	7.89	0.07	A	A	366 %
Stream C-AB		0.2	4.75	0.11	A		[Stream C-AB]		0.0	5.74	0.00	A		[Stream B-AC]
	2027 - with dev													
Stream B-AC	D4	0.0	0.00	0.00	A	A	113 %	D6	0.1	8.02	0.07	A	A	323 %
Stream C-AB		0.3	4.69	0.12	A		[Stream C-AB]		0.0	5.58	0.00	A		[Stream B-AC]
	2032 - without dev													
Stream B-AC	D7	0.0	0.00	0.00	A	A	112 %	D9	0.1	7.95	0.07	A	A	344 %
Stream C-AB		0.3	4.69	0.12	A		[Stream C-AB]		0.0	5.71	0.00	A		[Stream B-AC]
	2032 - with dev													
Stream B-AC	D8	0.0	0.00	0.00	A	A	101 %	D10	0.1	8.08	0.07	A	A	305 %
Stream C-AB		0.3	4.63	0.13	A		[Stream C-AB]		0.0	5.56	0.00	A		[Stream B-AC]
	2042 - without dev													
Stream B-AC	D11	0.0	0.00	0.00	A	A	100 %	D13	0.1	8.13	0.08	A	A	312 %
Stream C-AB		0.3	4.63	0.14	A		[Stream C-AB]		0.0	5.68	0.00	A		[Stream B-AC]
	2042 - with dev													
Stream B-AC	D12	0.0	0.00	0.00	A	A	91 %	D14	0.1	8.27	0.08	A	A	277 %
Stream C-AB		0.4	4.57	0.14	A		[Stream C-AB]		0.0	5.52	0.01	A		[Stream B-AC]

Figure 10.8 Junction 4 Summary Table

The analysis shows that the junction is currently operating within capacity during the peak hours. A maximum RFC of 11% and 6% are experienced for the current junction layout for AM and PM peaks, respectively.

In the 2042 with development scenario, the RFC reaches a maximum of 14% and 8% for the AM and PM peaks respectively.

11 CUMULATIVE IMPACT

The cumulative impact of the scheme on the surrounding roads network for future years is determined by modelling future scenarios on existing traffic data and allowing for committed infrastructure projects in the proximity of the scheme as well. In this instance, the network was tested to 2042 by adding development trip generated traffic to the analysed scenarios along the surrounding road network, adding development traffic and growth rates on existing traffic flows to 2042. No allowance has been made for modal shift in the presented analysis, thus providing a worst-case scenario.

The overall impact of this proposed development in 2042 on the adjoining road network and the assessed junctions is to increase traffic % by an average of 1.1% at the Junction 1, 1.7% at Junction 2, 3.1% at Junction 3 and 4.6% at Junction 4.

It should be noted that by the year 2032, BusConnects routes should be in place which aims to significantly reduce the number of vehicles on the road and improve the public service infrastructure for the Cork City. In addition to this, the planned Cork City LRT (Light Rail Transit) route, as identified in CMATS, is proposed to commence at Ballincollig. Both of these public transport schemes will see a significant reduction in the number of vehicles in the area.

12 ROAD SAFETY

The existing roads, footpaths and cycle facilities in the vicinity of the site are of a good standard and are appropriate to the urban nature of the surrounding area. The Road Safety Authority traffic collision statistics for the surrounding road network are currently unavailable due to GDPR reasons.

A Road Safety Audit will be carried out as part of the planning application and any issues raised from this report will be addressed as part of the development.

13 ENVIRONMENTAL IMPACT

The proposed improvements to the pedestrian and cyclist infrastructure outlined, along with the provision of bicycle storage and EV charging facilities, and the relatively close proximity of the site to existing bus corridors should lead to the development being more sustainable in terms of lower traffic generation, reducing single occupancy vehicle usage and CO2 production, helping to mitigate the environmental impact of the proposed development.

The Innishmore Ballincollig Active Travel Improvement Works, recently completed, introduces fully segregated cycle lanes along Innishmore (from its junction with the R608 Main Street up to Ballincollig Community School) and a Toucan crossing to link these facilities for pedestrians. These improvements are intended to provide safe, connected walking and cycling routes for commuters, residents and students, thereby promoting non-motorised transport for short trips to schools, businesses and Ballincollig Regional Park and reducing reliance on car travel. It is anticipated that this scheme will lead to reduced local traffic volumes, lower emissions and improved local air quality, as well as enhanced safety for vulnerable road users.

14 INTERNAL LAYOUT & PARKING PROVISION

The site is to have a hard tarmac or concrete surface with adequate foundation to withstand the wheel loads involved. The overall drainage of the site should be adequate to cope with storm water. The whole site is to be well lit to ensure the safe execution of manoeuvres, the safety of passengers and the security of vehicles. The lighting should be from a high level to prevent glare during manoeuvres and reduce the potential for vandalism. The layout of the site is to be designed to reduce the need for reversing manoeuvres. Where these are unavoidable, there should be an adequate area to safely execute the reversing or turning manoeuvres necessary.

Parking for the development will fully be facilitated within each site. All parking spaces are required to be a minimum 2.4m x 4.9m in size. There are to be a total of 68no. parking spaces, inclusive of 4no. accessible spaces and 19 EV charging spaces, provided at the development.

The location of the development is under Cork City Council remit. The provision of parking at the development is in line with the maximum requirements set out in Variation 1 of the Cork City Development Plan (CCDP) 2022-2028 whereby the proposed maximum parking standard for the use case is dependent upon the nature and location of use.

The Department of Housing, Local Government and Heritage released the Sustainable Urban Housing: Design Standards for New Apartments Guidelines in 2023 which states that 'in suburban/urban locations served by public transport or close to town centres or employment areas and particularly for housing schemes with more than 45 dwellings per hectare net (18 per acre), planning authorities must consider a reduced overall car parking standard and apply an appropriate maximum car parking standard'. The proposed development exceeds 45 dwellings per hectare therefore the parking provided is minimised, as discussed below. The guidelines outline particular commentary in relation to Central and/or Accessible Urban Locations, areas within walking distance (approx. 10-15 mins) of city centres or high-frequency public transport (DART, Luas, or Quality Bus Corridors), similar to the subject site where there is a high level of bus provision and planned Luas service. The guidelines state that parking should be minimised, substantially reduced, or wholly eliminated.

The Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities prepared by the Department of Housing, Local Government and Heritage states that in city centres and urban neighbourhoods of the five cities, car-parking provision should be minimised, substantially reduced or wholly eliminated. The maximum rate of car parking provision for residential development at these locations, where such provision is justified to the satisfaction of the planning authority, shall be 1 no. space per dwelling.

Urban neighbourhoods are highly accessible urban locations with good access to employment, education and institutional uses and public transport. The site location of the proposed development is located in 'Zone 3' of the CCDP car parking zones map which states maximum parking standards as 1.25 spaces for 1-2 bed units and 2.25 spaces for 3-3+ bed units. However, the location classes as an urban neighbourhood of Cork City based on the above definition and therefore the maximum rate of car parking provision for this Large Scale Residential Development shall be 1no. space per dwelling.

The provision of 68 spaces for 130 residential units translates to 0.52 parking spaces per unit. This level of car parking is not merely a design preference but a policy requirement under the National Planning Framework's "Compact Growth" objectives. Providing a surplus of parking in an area where the State is actively investing in BusConnects and the Cork Luas would undermine national climate targets and exacerbate local traffic congestion.

Table 14.1 Maximum Parking Standards

	All Units (130 no.)	TOTAL Spaces
Sustainable Residential Development and Compact Settlements Guidelines Maximum Parking Standard	0 - 1 space per Unit	0 - 130
Maximum Parking Spaces (per Compact Settlements Guidelines)	130	130
Proposed Provision		68

The CCDP also outlines bicycle parking requirements for residential units, the minimum in city centre / inner urban areas is 1 per unit and for suburbs the minimum is 0.50 per unit. The Sustainable Residential Development and Compact Settlements Guidelines states that for residential units that do not have ground level open space or have smaller terraces, a general minimum standard of 1 cycle storage per bedroom should be applied. With these minimum bicycle parking standards in mind, a total of 220no. spaces provided for the 130no. units with an additional 28no. visitor spaces provided. See table 14.2 below which sets out a breakdown of the bicycle parking provision for the site, per the requirement of table SPR4 in the Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities. See the Architectural Design Statement, produced by Meitheal Architects, which presents details of the proposal bicycle parking provision.

Table 14.2 Schedule of Bicycle Parking Provision

Schedule of Cycle Parking Spaces					
Unit Type	Minimum Requirement	Number of Units	Long Stay Minimum	Long Stay Provided	Visitor Parking Provided
Apartment (1 Bed)	1 Space Per Bedroom	56	56	58	28
Apartment (2 Bed)		65	130	130	
Apartment (3 Bed)		09	27	32	
Total			213	220	28

15 PUBLIC TRANSPORT

The development area is served by three existing Bus Éireann services. These services are:

Route No.	Route Description	Weekday Frequency	Weekend Frequency
220X	Ovens – Ballincollig – Cork City – Carrigaline – Crosshaven (24hr service)	1hr	1hr
220	Ovens (EMC) to Fort Camden (24 hr service)	15-30min	15-30min
233	Cork to Macroom	Daily service	Daily Service

The 220-bus route is a very high quality, high frequency 24 -hour service, the first 24-hour bus service made available in Ireland. The frequency of service (15 – 30-minute intervals) translates to approximately 80 bus service runs per weekday. Figure 15.1 shows the existing bus routes that serve the proposed development.

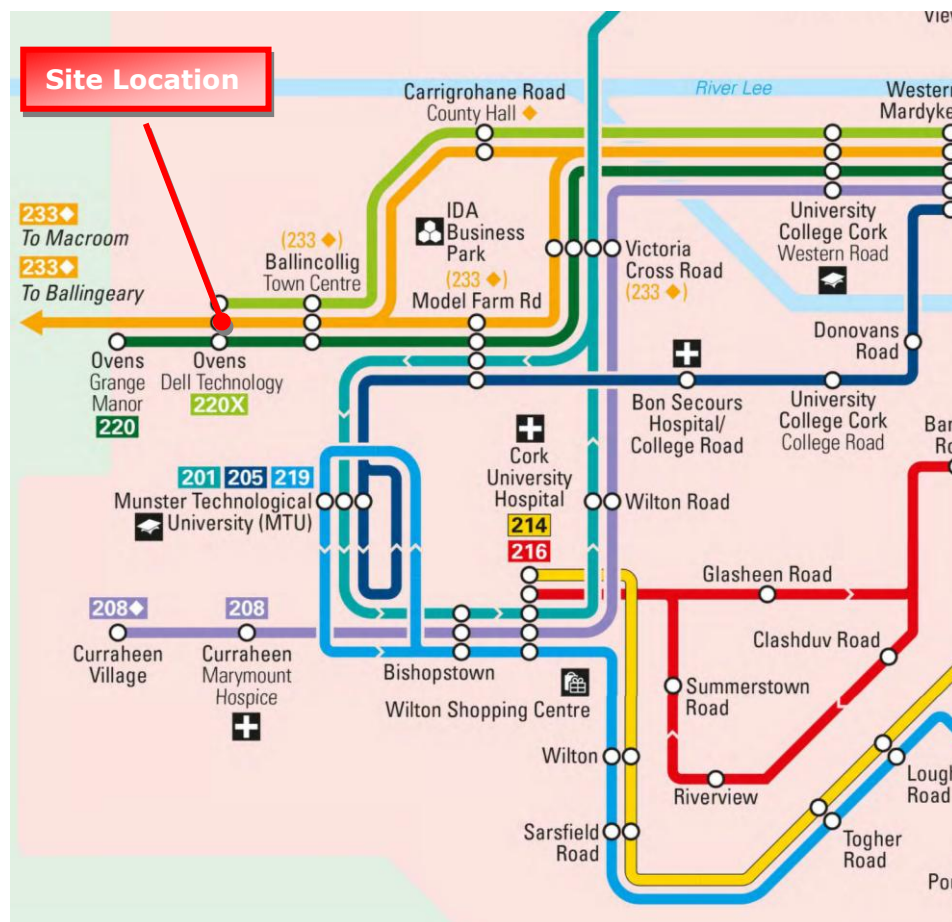


Figure 15.1 Existing Bus Services for the Area (Source: Bus Éireann Route Map – Cork City)

The National Transport Authority (NTA) has published its final new bus network for Cork. This new bus network will enable more people to avail of public transport resulting in increased access to a greater number of schools and workplaces across Cork City and County. There will be a couple of new routes in the Ballincollig area replacing the existing routes, see the table below for details.

Route No.	Route Description	Weekday Frequency	Weekend Frequency
1	Model Farm Road (MTU) - College Road (UCC) - St. Patrick's Street - City Hall - Boreenmanna Road - Skehard Road	10min	10min
16	Tower - Blarney - Blackpool Shopping Centre - MacCurtain Street	30min	30min
2B	Curraheen Road - Bishopstown Road - CUH - Western Road - St. Patrick's Street - MacCurtain Street - Old Youghal Road - Boherboy Road	15min	15min

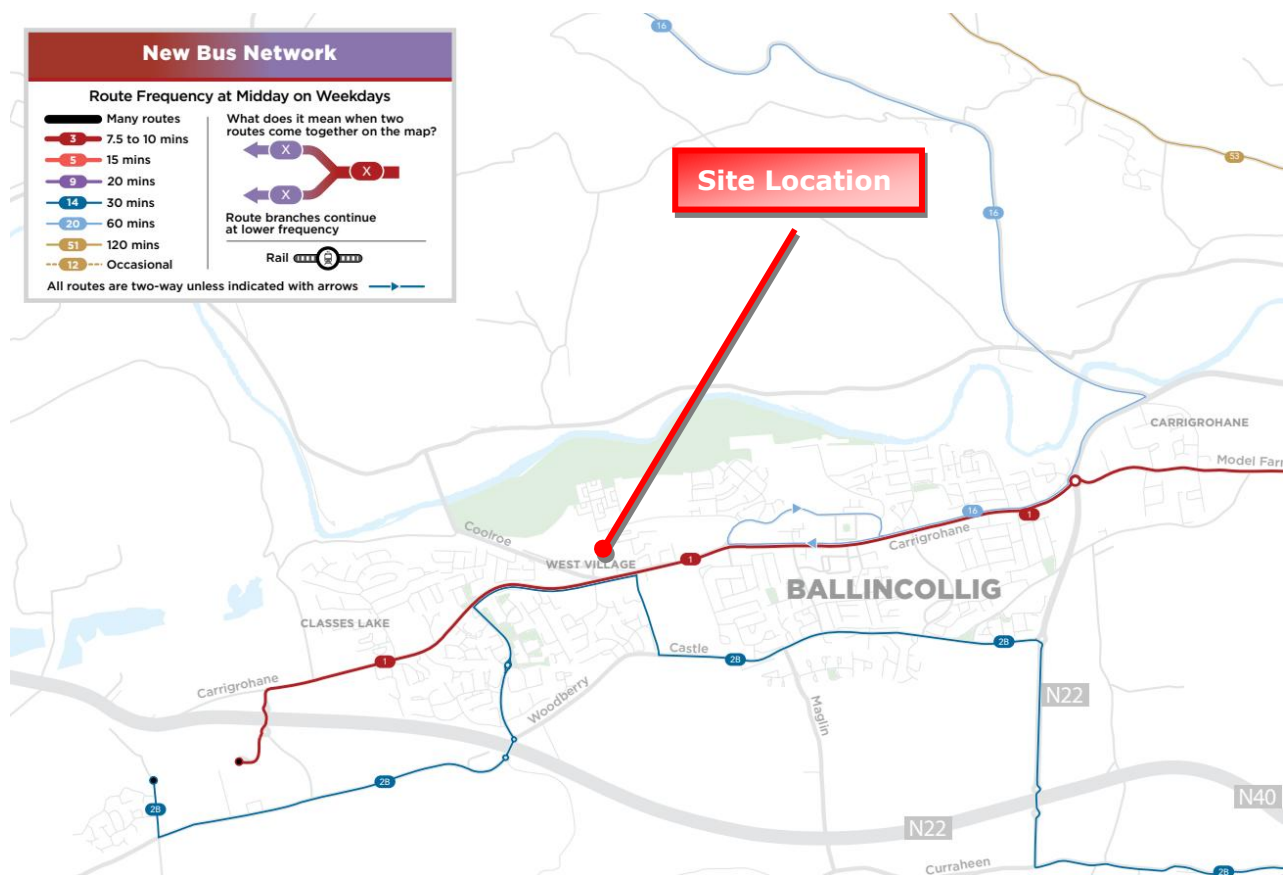


Figure 15.2 New Bus Routes Proposed for the Area (Source: BusConnects Sustainable Transport Corridor E (STC E), Ballincollig to Cork City)

The NTA BusConnects South West Sustainable Transport Corridor (STC), more specifically Route E – Ballincollig to Cork City, passes right next to the proposed development. This sustainable transport corridor will have bus priority for the majority of the route so that buses can operate efficiently, reliably and punctually, it will also have cycle lanes (segregated where possible) running along both sides of the route. The STC in Cork are planned to be constructed by 2030.

The construction of this STC and the provision of new, and more frequent, bus services will encourage more people to switch to sustainable modes of transport for commuting purposes. Figure 15.3 below shows a map of the three STCs planned for Cork City.

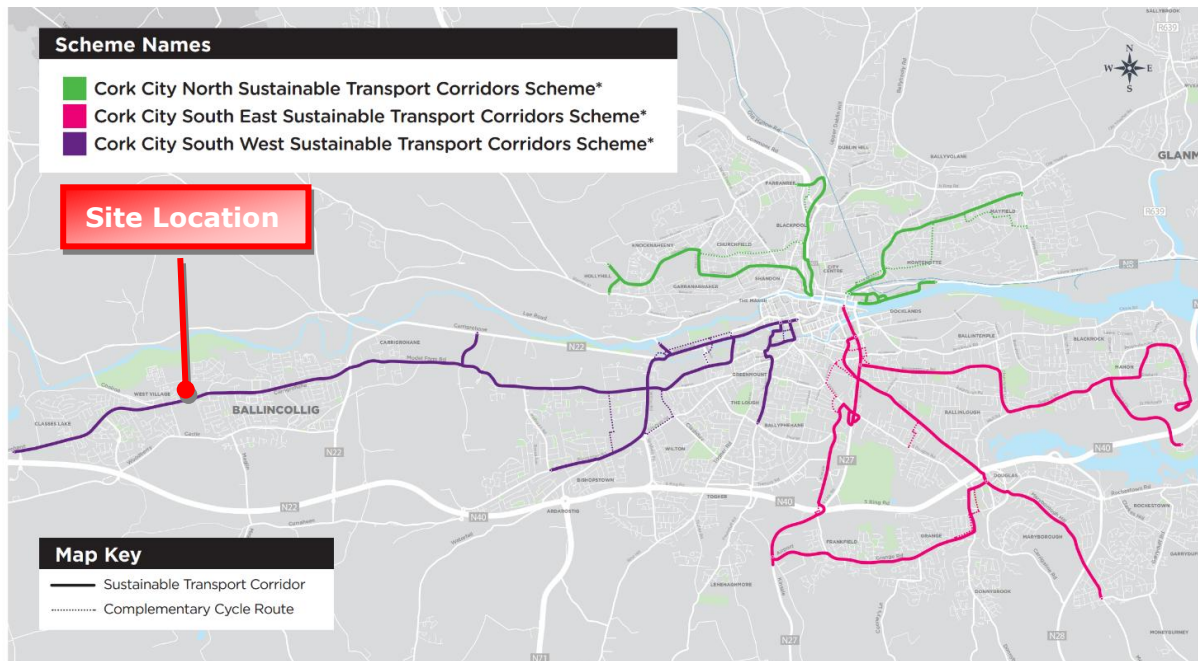


Figure 15.3 Planned Sustainable Transport Corridors for Cork City (Source: BusConnects Cork Schemes Map)

The Luas Cork is a proposed light rail running from Ballincollig to Mahon Point connecting key locations such as MTU, CUH, UCC, Cork City Centre, Kent Station, Cork Docklands, Blackrock and Mahon. The proposed route starts in Ballincollig with a single-track loop beginning on Station Road.

The proposed development is approximately 1km west of the start of the Cork Luas line, 15-20min walk or 5min cycle. Upon completion, the Cork Luas will provide a reliable and sustainable means of travel into Cork City and on to Mahon from Ballincollig.

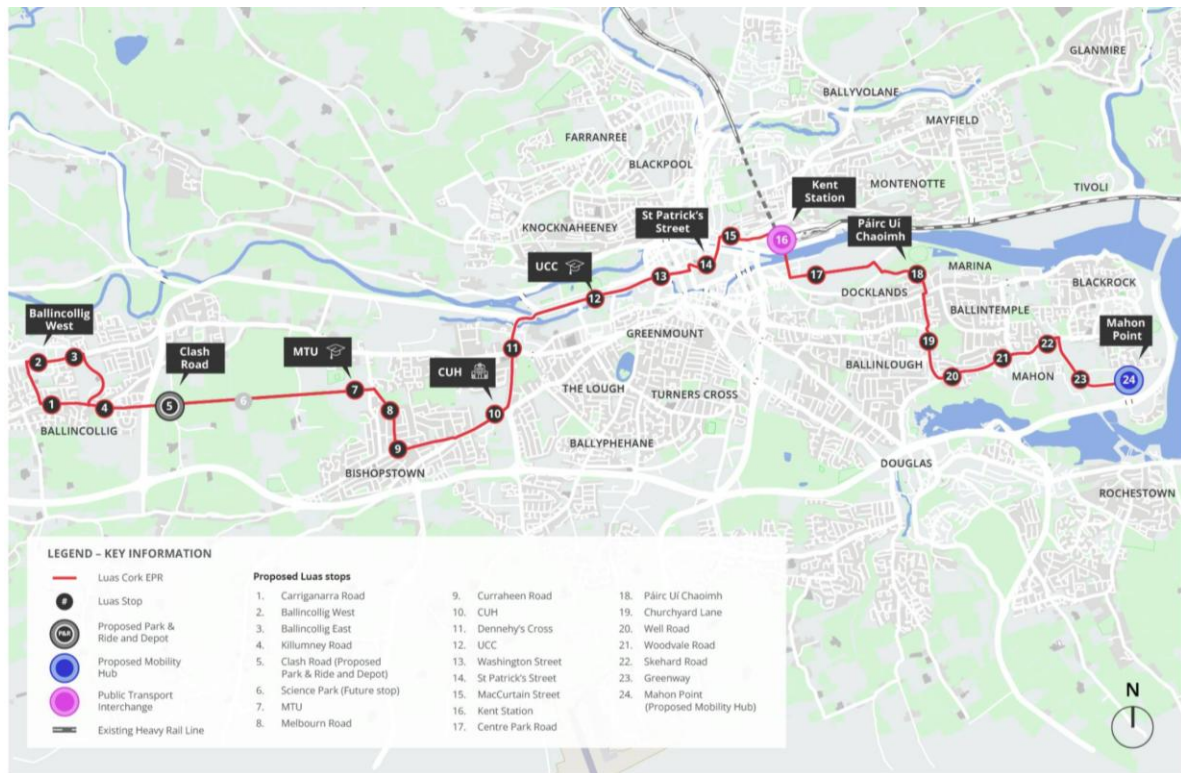


Figure 15.4 Emerging Preferred Cork Luas Route (Source: Luas Cork project website - Emerging Preferred Route Map)

16 ACCESSIBILITY AND INTEGRATION

16.1 Pedestrian/Cycle Accessibility & Integration

As this site is located in an urban area, the pedestrian and cycle facilities provided are quite good. There is an existing cycle lane provided on the eastern boundary of the site, this cycle lane runs along the R608 adjacent to the site. This greenway forms part of the "Innishmore Ballincollig Active Travel Improvement project" which provides safe and connected segregated cycle lanes through Innishmore and improved pedestrian crossing facilities. These facilities will encourage commuters, residents and students to use sustainable modes of transport and reduce local car-based journeys for short trips to Ballincollig Regional Park, schools and businesses. The layout of the site provides direct access for pedestrians to the West City Retail Park directly west of the development.

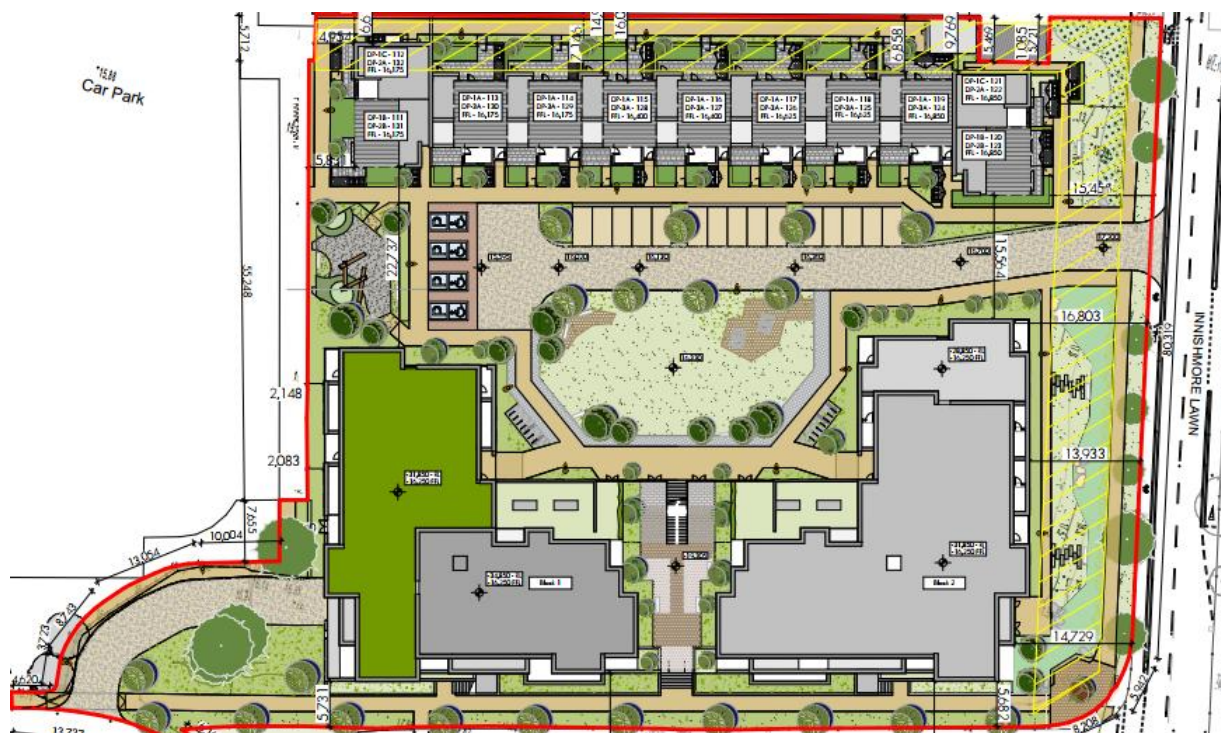


Figure 16.1 Proposed Development Layout

Cork CycleConnects sets out intended cycle network areas for the Cork Metropolitan Area. A graphic from this plan is shown in Figure 16.2. The existing cycle lane mentioned above forms part of a primary route which, when completed, will connect Ballincollig to Cork City Centre.

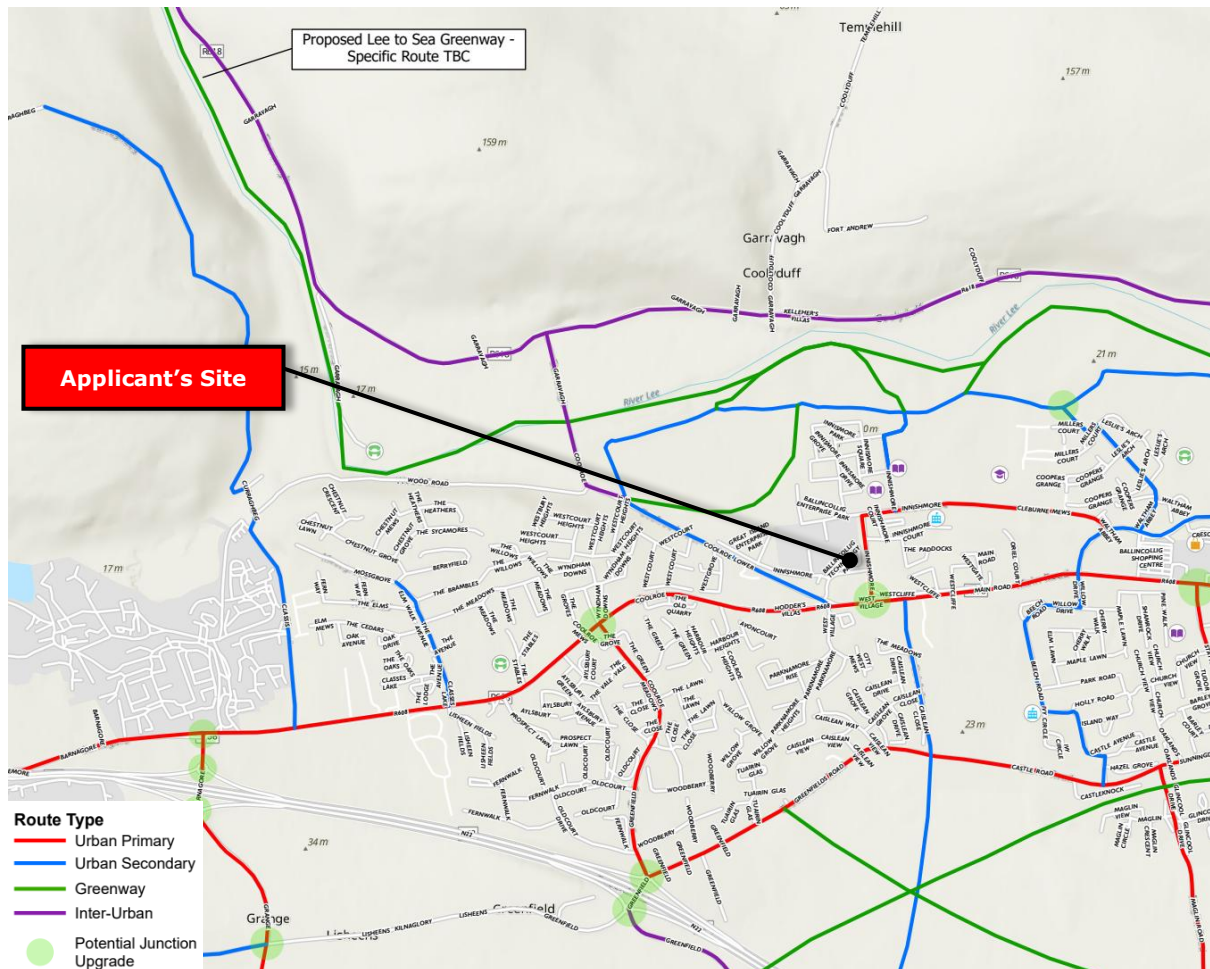


Figure 16.2 Cork CycleConnects Ballincollig Area Cycle Network

As outlined in the graphic shown above it is proposed to improve cycle network facilities in the vicinity of the site with a proposal to provide the 'Lee to Sea' northwest of the site. This greenway will link Inniscarra to Crosshaven via Cork City, Blackrock, Rochestown, Ringaskiddy and Carrigaline. This facility will present excellent opportunities to future residents to commute by sustainable travel modes. The Urban Primary Greenway abounding the site is also to connect to the main east-west greenway running along Main Street through Ballincollig.

17 ACCESS FOR PEOPLE WITH DISABILITIES

All crossing points and footpath, public lighting, signage and road markings should be provided in accordance with the required standards. All footpaths will have adequate width to accommodate the mobility impaired and gradients and cross-falls will be designed to the National Disability Authority (NDA) guidelines as well all crossing points, with drop kerbs and tactile paving for the visually impaired.

18 REFERENCES

- National Roads Authority (2014) Traffic and Transport Assessment Guidelines NRA, Dublin
- Institution of Highways & Transportation (1994) Guidelines for Traffic Impact Assessment IHT, London
- Transport Infrastructure Ireland (2016) Project Appraisal Guidelines for National Roads Unit 16.0- Estimating AADT on National Roads
- Transport Infrastructure Ireland (2016) Project Appraisal Guidelines for National Roads Unit 5.3- Travel Demand Projections
- Communities and Local Government Department for Transport 2007 Guidance on Transport Assessment
- Guidelines for Traffic Impact Assessments" as published by the Institution of Highways & Transportation U.K. in 1994
- Aerial photography by Google.
- National Disability Authority (NDA) guidelines – Towards Best Practice in Provision of Transport Services
- Cork City Development Plan (2022-2028) published by Cork City Council
- TII approved junction simulation modelling program (PICADY 9 of the TRL Junction 9 traffic modelling suite)
- Trip Rate Information Computer System (TRICS)
- Irish Traffic Surveys

19 APPENDIX A – JUNCTION 11 TRAFFIC MODELLING OUTPUTS

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Junctions 11	
OSCADY 11 - Signalised Intersection Module	
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Filename: Junction 1.j11

Path: N:\TIA\25016TT OCP Ballincollig\02. Traffic\Modelling\Models\Updated Modells

Report generation date: 30/01/2026 15:16:44

-
- »D1 - 2025 | Base | AM
 - »D2 - 2025 | Base | PM
 - »D3 - 2027 | without dev | AM
 - »D4 - 2027 | with dev | AM
 - »D5 - 2027 | without dev | PM
 - »D6 - 2027 | with dev | PM
 - »D7 - 2032 | without dev | AM
 - »D8 - 2032 | with dev | AM
 - »D9 - 2032 | without dev | PM
 - »D10 - 2032 | with dev | PM
 - »D11 - 2042 | without dev | AM
 - »D12 - 2042 | with dev | AM
 - »D13 - 2042 | without dev | PM
 - »D14 - 2042 | with dev | PM

Summary of junction performance

	AM							PM						
	Set ID	Queue (PCU)	Delay (s)	DOS	LOS	Junction LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	DOS	LOS	Junction LOS	Network Residual Capacity
	2025 - Base													
Arm A	D1	9.5	33.94	0.64	C	D	-13 % [Arm A - Traffic Stream 2]	D2	9.9	24.67	0.69	C	C	-19 % [Arm D - Traffic Stream 1]
Arm B		2.0	30.95	0.30	C				3.8	32.12	0.63	C		
Arm C		14.6	47.13	0.89	D				10.8	38.25	0.86	D		
Arm D		13.3	46.50	0.91	D				7.3	42.27	0.81	D		
Arm E		0.0	0.00	0.00	A				0.0	0.00	0.00	A		
	2027 - without dev													
Arm A	D3	10.6	37.85	0.69	D	D	-26 % [Arm A - Traffic Stream 2]	D5	10.7	26.48	0.73	C	C	-24 % [Arm D - Traffic Stream 1]
Arm B		2.2	33.13	0.32	C				4.1	34.49	0.66	C		
Arm C		15.8	49.39	0.90	D				10.5	34.13	0.84	C		
Arm D		15.8	55.41	0.94	E				8.3	48.67	0.85	D		
Arm E		0.0	0.00	0.00	A				0.0	0.00	0.00	A		
	2027 - with dev													
Arm A	D4	11.4	37.86	0.69	D	D	-25 % [Arm A - Traffic Stream 2]	D6	11.3	26.70	0.73	C	D	-27 % [Arm D - Traffic Stream 1]
Arm B		2.3	34.57	0.34	C				4.4	37.29	0.69	D		
Arm C		15.3	45.23	0.88	D				12.5	42.82	0.89	D		
Arm D		17.8	62.33	0.96	E				9.7	54.40	0.89	D		
Arm E		0.0	0.00	0.00	A				0.0	0.00	0.00	A		
	2032 - without dev													
Arm A	D7	12.1	41.24	0.73	D	E	-35 % [Arm A - Traffic Stream 2]	D9	11.1	24.54	0.70	C	C	-23 % [Arm D - Traffic Stream 1]
Arm B		2.5	37.04	0.36	D				4.8	40.21	0.73	D		
Arm C		17.5	51.23	0.91	D				11.5	35.51	0.85	D		
Arm D		21.3	73.03	0.99	E				8.7	46.82	0.85	D		
Arm E		0.0	0.00	0.00	A				0.0	0.00	0.00	A		
	2032 - with dev													
Arm A	D8	12.7	40.09	0.72	D	E	-32 % [Arm A - Traffic Stream 2]	D10	12.0	27.28	0.76	C	D	-38 % [Arm D - Traffic Stream 1]
Arm B		2.6	37.87	0.37	D				4.7	38.42	0.71	D		
Arm C		19.0	57.00	0.93	E				14.6	50.27	0.93	D		
Arm D		22.9	76.84	1.00	E				17.2	99.91	1.02	F		
Arm E		0.0	0.00	0.00	A				0.0	0.00	0.00	A		
	2042 - without dev													
Arm A	D11	13.7	44.82	0.76	D	E	-54 % [Arm B - Traffic Stream 2]	D13	13.0	30.16	0.79	C	D	-39 % [Arm D - Traffic Stream 1]
Arm B		2.9	41.44	0.41	D				5.5	46.33	0.77	D		
Arm C		24.1	72.72	0.97	E				13.9	44.54	0.90	D		
Arm D		24.0	77.24	1.00	E				15.4	90.26	0.99	F		
Arm E		0.0	0.00	0.00	A				0.0	0.00	0.00	A		
	2042 - with dev													
Arm A	D12	15.0	46.17	0.77	D	E	-74 % [Arm B - Traffic Stream 2]	D14	14.4	32.33	0.82	C	D	-35 % [Arm B - Traffic Stream 1]
Arm B		3.1	43.91	0.43	D				6.4	54.57	0.82	D		
Arm C		23.8	70.07	0.96	E				15.3	47.88	0.92	D		
Arm D		24.5	76.64	1.00	E				10.5	51.70	0.89	D		
Arm E		0.0	0.00	0.00	A				0.0	0.00	0.00	A		

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

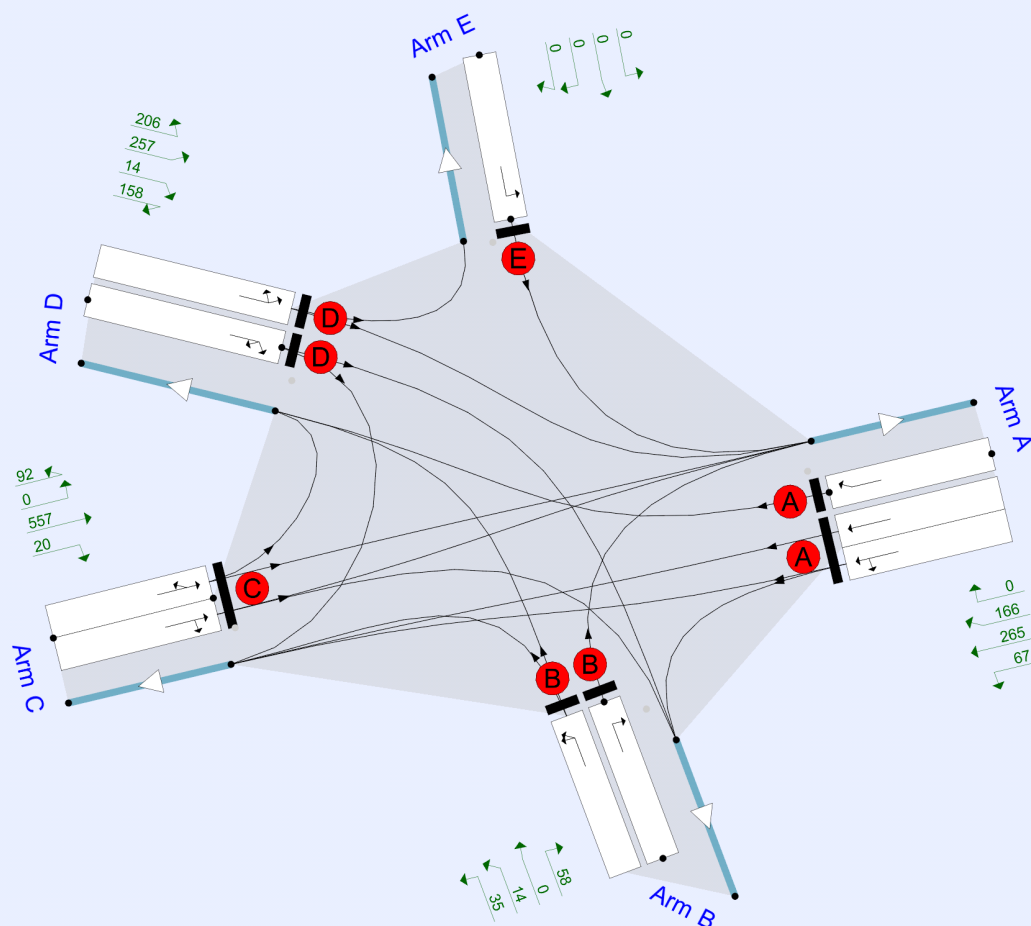
File summary

File Description

Title	
Location	
Site number	
Date	25/08/2025
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	MHL\cdring
Description	

Units

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



Flows show original traffic demand (PCU/hr)

The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	Residual capacity criteria type	DOS Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75					✓	Delay	0.85	36.00	20.00		

Demand Set Summary

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	Base	AM	ONE HOUR	08:00	09:30	15	✓
D2	2025	Base	PM	ONE HOUR	17:00	18:30	15	✓
D3	2027	without dev	AM	ONE HOUR	08:00	09:30	15	✓
D4	2027	with dev	AM	ONE HOUR	08:00	09:30	15	✓
D5	2027	without dev	PM	ONE HOUR	17:00	18:30	15	✓
D6	2027	with dev	PM	ONE HOUR	17:00	18:30	15	✓
D7	2032	without dev	AM	ONE HOUR	08:00	09:30	15	✓
D8	2032	with dev	AM	ONE HOUR	08:00	09:30	15	✓
D9	2032	without dev	PM	ONE HOUR	17:00	18:30	15	✓
D10	2032	with dev	PM	ONE HOUR	17:00	18:30	15	✓
D11	2042	without dev	AM	ONE HOUR	08:00	09:30	15	✓
D12	2042	with dev	AM	ONE HOUR	08:00	09:30	15	✓
D13	2042	without dev	PM	ONE HOUR	17:00	18:30	15	✓
D14	2042	with dev	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

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

Junctions 11		
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Filename: Junction 2.j11
Path: N:\TIA\25016TT OCP Ballincollig\02. Traffic\Modelling\Models\Updated Models
Report generation date: 30/01/2026 15:13:22

- »D1 - 2025 | Base | AM
- »D2 - 2025 | Base | PM
- »D3 - 2027 | without dev | AM
- »D4 - 2027 | with dev | AM
- »D5 - 2027 | without dev | PM
- »D6 - 2027 | with dev | PM
- »D7 - 2032 | without dev | AM
- »D8 - 2032 | with dev | AM
- »D9 - 2032 | without dev | PM
- »D10 - 2032 | with dev | PM
- »D11 - 2042 | without dev | AM
- »D12 - 2042 | with dev | AM
- »D13 - 2042 | without dev | PM
- »D14 - 2042 | with dev | PM

Summary of junction performance

	AM							PM						
	Set ID	Queue (PCU)	Delay (s)	DOS	LOS	Junction LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	DOS	LOS	Junction LOS	Network Residual Capacity
	2025 - Base													
Arm A	D1	12.6	20.77	0.62	C	C	-33 %	D2	7.0	13.63	0.35	B	B	-36 %
Arm B		7.7	33.92	0.73	C		[Arm B - Traffic Stream 2]		7.4	30.57	0.66	C		[Arm C - Traffic Stream 2]
Arm C		8.0	22.86	0.71	C		5.9		13.45	0.46	B			
	2027 - without dev													
Arm A	D3	13.1	21.22	0.64	C	C	-35 %	D5	7.4	14.44	0.37	B	B	-38 %
Arm B		8.1	35.42	0.76	D		[Arm B - Traffic Stream 2]		7.4	29.16	0.65	C		[Arm C - Traffic Stream 2]
Arm C		8.4	23.87	0.74	C		6.3		14.11	0.48	B			
	2027 - with dev													
Arm A	D4	14.0	23.84	0.69	C	C	-30 %	D6	8.2	16.11	0.41	B	B	-36 %
Arm B		9.3	34.95	0.79	C		[Arm B - Traffic Stream 2]		8.1	29.55	0.69	C		[Arm C - Traffic Stream 2]
Arm C		9.0	25.90	0.76	C		6.9		15.70	0.53	B			
	2032 - without dev													
Arm A	D7	14.4	23.46	0.70	C	C	-39 %	D9	7.9	14.70	0.39	B	B	-42 %
Arm B		9.0	39.36	0.81	D		[Arm B - Traffic Stream 2]		8.0	30.82	0.69	C		[Arm C - Traffic Stream 2]
Arm C		9.4	26.40	0.78	C		6.8		14.59	0.51	B			
	2032 - with dev													
Arm A	D8	15.6	26.77	0.75	C	C	-33 %	D10	8.9	17.20	0.44	B	C	-39 %
Arm B		10.3	38.74	0.83	D		[Arm B - Traffic Stream 2]		8.8	31.38	0.73	C		[Arm C - Traffic Stream 2]
Arm C		10.0	28.73	0.81	C		7.6		16.64	0.56	B			
	2042 - without dev													
Arm A	D11	15.5	24.72	0.74	C	C	-34 %	D13	8.6	15.70	0.42	B	C	-45 %
Arm B		9.2	37.23	0.80	D		[Arm B - Traffic Stream 2]		8.7	32.70	0.73	C		[Arm C - Traffic Stream 2]
Arm C		10.4	29.43	0.82	C		7.4		15.60	0.54	B			
	2042 - with dev													
Arm A	D12	16.9	28.73	0.80	C	C	-36 %	D14	9.4	17.53	0.47	B	C	-42 %
Arm B		11.5	43.59	0.87	D		[Arm B - Traffic Stream 2]		9.1	30.55	0.73	C		[Arm C - Traffic Stream 2]
Arm C		11.3	32.75	0.85	C		8.0		17.20	0.58	B			

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

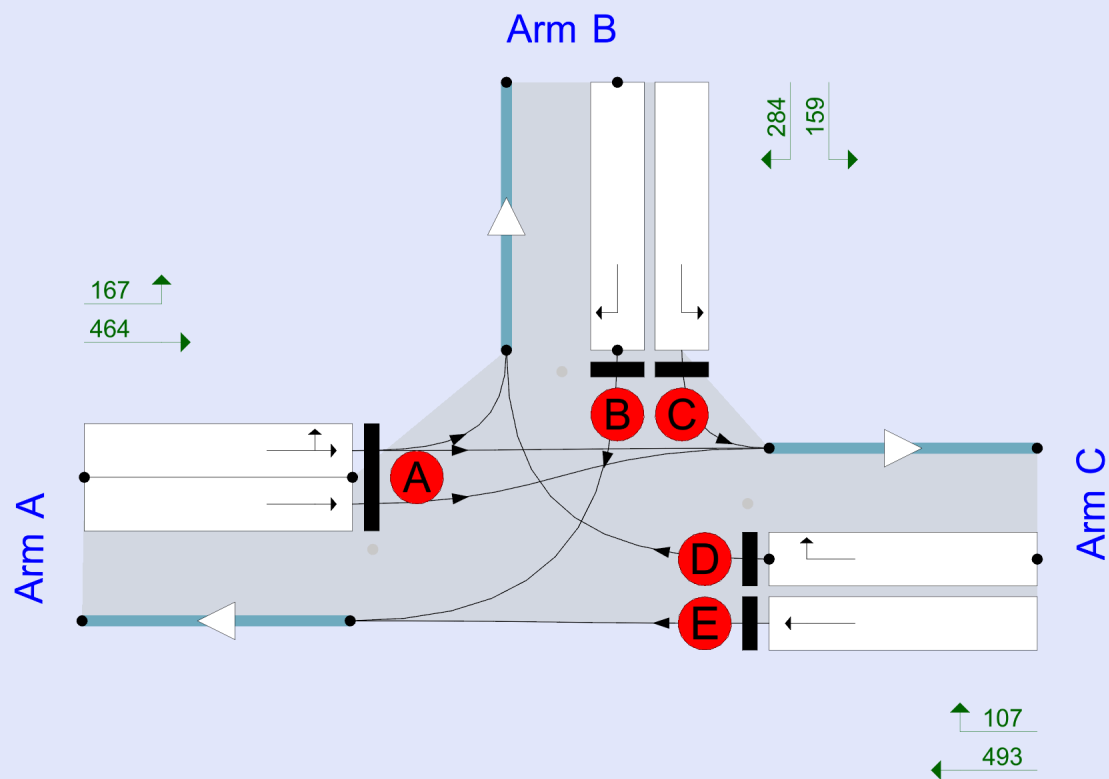
File summary

File Description

Title	
Location	
Site number	
Date	25/08/2025
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	MHL\cdring
Description	

Units

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



Flows show original traffic demand (PCU/hr)

The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	Residual capacity criteria type	DOS Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75					✓	Delay	0.85	36.00	20.00		

Demand Set Summary

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	Base	AM	ONE HOUR	08:00	09:30	15	✓
D2	2025	Base	PM	ONE HOUR	17:00	18:30	15	✓
D3	2027	without dev	AM	ONE HOUR	08:00	09:30	15	✓
D4	2027	with dev	AM	ONE HOUR	08:00	09:30	15	✓
D5	2027	without dev	PM	ONE HOUR	17:00	18:30	15	✓
D6	2027	with dev	PM	ONE HOUR	17:00	18:30	15	✓
D7	2032	without dev	AM	ONE HOUR	08:00	09:30	15	✓
D8	2032	with dev	AM	ONE HOUR	08:00	09:30	15	✓
D9	2032	without dev	PM	ONE HOUR	17:00	18:30	15	✓
D10	2032	with dev	PM	ONE HOUR	17:00	18:30	15	✓
D11	2042	without dev	AM	ONE HOUR	08:00	09:30	15	✓
D12	2042	with dev	AM	ONE HOUR	08:00	09:30	15	✓
D13	2042	without dev	PM	ONE HOUR	17:00	18:30	15	✓
D14	2042	with dev	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

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

Junctions 11	
PICADY 11 - Priority Intersection Module	
Version: 11.1.0.2307	
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Filename: Junction 3.j11

Path: N:\TIA\25016TT OCP Ballincollig\02. Traffic\Modelling\Models\Updated Modells

Report generation date: 30/01/2026 15:22:55

-
- »D1 - 2025 | Base | AM
 - »D2 - 2025 | Base | PM
 - »D3 - 2027 | without dev | AM
 - »D4 - 2027 | with dev | AM
 - »D5 - 2027 | without dev | PM
 - »D6 - 2027 | with dev | PM
 - »D7 - 2032 | without dev | AM
 - »D8 - 2032 | with dev | AM
 - »D9 - 2032 | without dev | PM
 - »D10 - 2032 | with dev | PM
 - »D11 - 2042 | without dev | AM
 - »D12 - 2042 | with dev | AM
 - »D13 - 2042 | without dev | PM
 - »D14 - 2042 | with dev | PM

Summary of junction performance

	AM							PM						
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Network Residual Capacity
	2025 - Base													
Stream B-AC	D1	1.3	22.24	0.57	C	A	17 %	D2	1.2	20.18	0.55	C	A	28 %
Stream C-AB		0.0	8.32	0.02	A		[Stream B-AC]		0.0	7.01	0.01	A		[Stream B-AC]
	2027 - without dev													
Stream B-AC	D3	1.4	23.85	0.60	C	A	13 %	D5	1.3	21.21	0.57	C	A	24 %
Stream C-AB		0.0	8.40	0.03	A		[Stream B-AC]		0.0	7.03	0.01	A		[Stream B-AC]
	2027 - with dev													
Stream B-AC	D4	3.2	43.34	0.78	E	A	-5 %	D6	1.9	27.63	0.67	D	A	9 %
Stream C-AB		0.0	8.55	0.03	A		[Stream B-AC]		0.0	7.19	0.02	A		[Stream B-AC]
	2032 - without dev													
Stream B-AC	D7	1.8	28.34	0.65	D	A	6 %	D9	1.6	24.98	0.63	C	A	14 %
Stream C-AB		0.0	8.60	0.03	A		[Stream B-AC]		0.0	7.10	0.01	A		[Stream B-AC]
	2032 - with dev													
Stream B-AC	D8	4.3	57.24	0.84	F	B	-9 %	D10	2.3	32.22	0.71	D	B	3 %
Stream C-AB		0.0	8.73	0.03	A		[Stream B-AC]		0.0	7.25	0.02	A		[Stream B-AC]
	2042 - without dev													
Stream B-AC	D11	2.3	34.12	0.71	D	A	1 %	D13	2.5	34.21	0.73	D	B	1 %
Stream C-AB		0.0	8.79	0.03	A		[Stream B-AC]		0.0	7.14	0.02	A		[Stream B-AC]
	2042 - with dev													
Stream B-AC	D12	6.2	79.21	0.90	F	C	-13 %	D14	2.9	37.93	0.76	E	B	-2 %
Stream C-AB		0.0	8.93	0.03	A		[Stream B-AC]		0.0	7.30	0.02	A		[Stream B-AC]

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

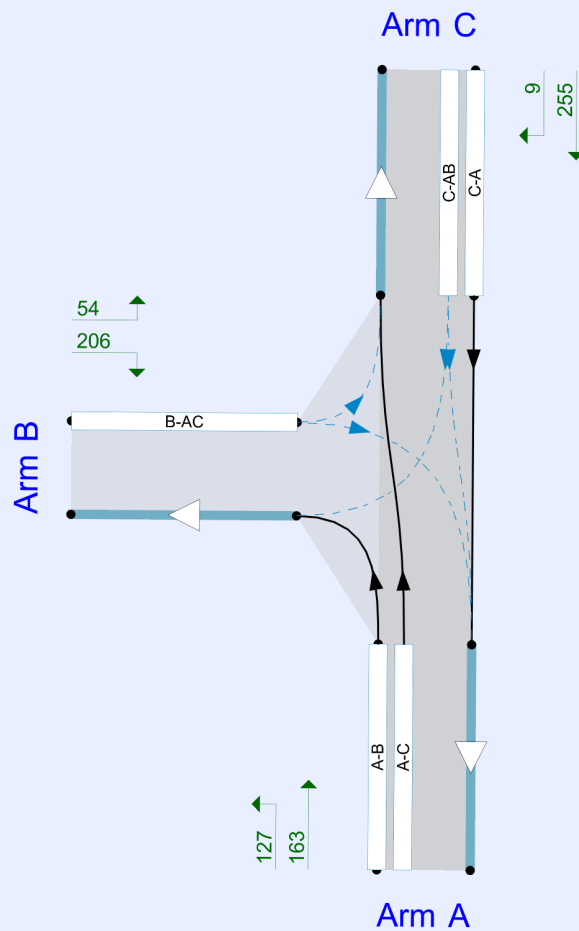
File summary

File Description

Title	
Location	
Site number	
Date	25/08/2025
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	MHL\cdring
Description	

Units

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



Flows show original traffic demand (PCU/hr)
Streams (downstream end) show RFC ()

The junction diagram reflects the last run of Junctions.

Analysis Options

PICADY short flare model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
JUNCTIONS 11.1	5.75					✓	Delay	0.85	36.00	20.00		

Demand Set Summary

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	Base	AM	ONE HOUR	00:00	01:30	15	✓
D2	2025	Base	PM	ONE HOUR	00:00	01:30	15	✓
D3	2027	without dev	AM	ONE HOUR	00:00	01:30	15	✓
D4	2027	with dev	AM	ONE HOUR	00:00	01:30	15	✓
D5	2027	without dev	PM	ONE HOUR	00:00	01:30	15	✓
D6	2027	with dev	PM	ONE HOUR	00:00	01:30	15	✓
D7	2032	without dev	AM	ONE HOUR	00:00	01:30	15	✓
D8	2032	with dev	AM	ONE HOUR	00:00	01:30	15	✓
D9	2032	without dev	PM	ONE HOUR	00:00	01:30	15	✓
D10	2032	with dev	PM	ONE HOUR	00:00	01:30	15	✓
D11	2042	without dev	AM	ONE HOUR	00:00	01:30	15	✓
D12	2042	with dev	AM	ONE HOUR	00:00	01:30	15	✓
D13	2042	without dev	PM	ONE HOUR	00:00	01:30	15	✓
D14	2042	with dev	PM	ONE HOUR	00:00	01:30	15	✓

Analysis Set Details

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

Junctions 11	
PICADY 11 - Priority Intersection Module	
Version: 11.1.0.2307	
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Filename: Junction 4.j11

Path: N:\TIA\25016TT OCP Ballincollig\02. Traffic\Modelling\Models\Updated Modells

Report generation date: 30/01/2026 15:26:56

-
- »D1 - 2025 | Base | AM
 - »D2 - 2025 | Base | PM
 - »D3 - 2027 | without dev | AM
 - »D4 - 2027 | with dev | AM
 - »D5 - 2027 | without dev | PM
 - »D6 - 2027 | with dev | PM
 - »D7 - 2032 | without dev | AM
 - »D8 - 2032 | with dev | AM
 - »D9 - 2032 | without dev | PM
 - »D10 - 2032 | with dev | PM
 - »D11 - 2042 | without dev | AM
 - »D12 - 2042 | with dev | AM
 - »D13 - 2042 | without dev | PM
 - »D14 - 2042 | with dev | PM

Summary of junction performance

	AM							PM						
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Junction LOS	Network Residual Capacity
	2025 - Base													
Stream B-AC	D1	0.0	0.00	0.00	A	A	132 %	D2	0.1	7.86	0.06	A	A	381 %
Stream C-AB		0.2	4.79	0.11	A		[Stream C-AB]		0.0	5.76	0.00	A		[Stream B-AC]
	2027 - without dev													
Stream B-AC	D3	0.0	0.00	0.00	A	A	125 %	D5	0.1	7.89	0.07	A	A	366 %
Stream C-AB		0.2	4.75	0.11	A		[Stream C-AB]		0.0	5.74	0.00	A		[Stream B-AC]
	2027 - with dev													
Stream B-AC	D4	0.0	0.00	0.00	A	A	113 %	D6	0.1	8.02	0.07	A	A	323 %
Stream C-AB		0.3	4.69	0.12	A		[Stream C-AB]		0.0	5.58	0.00	A		[Stream B-AC]
	2032 - without dev													
Stream B-AC	D7	0.0	0.00	0.00	A	A	112 %	D9	0.1	7.95	0.07	A	A	344 %
Stream C-AB		0.3	4.69	0.12	A		[Stream C-AB]		0.0	5.71	0.00	A		[Stream B-AC]
	2032 - with dev													
Stream B-AC	D8	0.0	0.00	0.00	A	A	101 %	D10	0.1	8.08	0.07	A	A	305 %
Stream C-AB		0.3	4.63	0.13	A		[Stream C-AB]		0.0	5.56	0.00	A		[Stream B-AC]
	2042 - without dev													
Stream B-AC	D11	0.0	0.00	0.00	A	A	100 %	D13	0.1	8.13	0.08	A	A	312 %
Stream C-AB		0.3	4.63	0.14	A		[Stream C-AB]		0.0	5.68	0.00	A		[Stream B-AC]
	2042 - with dev													
Stream B-AC	D12	0.0	0.00	0.00	A	A	91 %	D14	0.1	8.27	0.08	A	A	277 %
Stream C-AB		0.4	4.57	0.14	A		[Stream C-AB]		0.0	5.52	0.01	A		[Stream B-AC]

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	
Location	
Site number	
Date	25/08/2025
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	MHL\cdring
Description	

Units

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

Analysis Options

PICADY short flare model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
JUNCTIONS 11.1	5.75					✓	Delay	0.85	36.00	20.00		

Demand Set Summary

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	Base	AM	ONE HOUR	00:00	01:30	15	✓
D2	2025	Base	PM	ONE HOUR	00:00	01:30	15	✓
D3	2027	without dev	AM	ONE HOUR	00:00	01:30	15	✓
D4	2027	with dev	AM	ONE HOUR	00:00	01:30	15	✓
D5	2027	without dev	PM	ONE HOUR	00:00	01:30	15	✓
D6	2027	with dev	PM	ONE HOUR	00:00	01:30	15	✓
D7	2032	without dev	AM	ONE HOUR	00:00	01:30	15	✓
D8	2032	with dev	AM	ONE HOUR	00:00	01:30	15	✓
D9	2032	without dev	PM	ONE HOUR	00:00	01:30	15	✓
D10	2032	with dev	PM	ONE HOUR	00:00	01:30	15	✓
D11	2042	without dev	AM	ONE HOUR	00:00	01:30	15	✓
D12	2042	with dev	AM	ONE HOUR	00:00	01:30	15	✓
D13	2042	without dev	PM	ONE HOUR	00:00	01:30	15	✓
D14	2042	with dev	PM	ONE HOUR	00:00	01:30	15	✓

Analysis Set Details

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

20 APPENDIX B – TRICS OUTPUTS

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Calculation Reference: AUDIT-761701-250520-0528

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

14	LEINSTER	
	LU LOUTH	1 days
15	GREATER DUBLIN	
	DL DUBLIN	3 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: No of Dwellings
Actual Range: 31 to 332 (units:)
Range Selected by User: 18 to 372 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/16 to 20/04/23

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

Selected survey days:

Tuesday 1 days
Wednesday 2 days
Friday 1 days

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

Selected survey types:

Manual count 4 days
Directional ATC Count 0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre) 3
Neighbourhood Centre (PPS6 Local Centre) 1

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

Selected Location Sub Categories:

Residential Zone 4

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.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included X days - Selected
Servicing vehicles Excluded 4 days - Selected

Secondary Filtering selection:

Use Class:

C3 4 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

5,001 to 10,000	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:

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

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

Car ownership within 5 miles:

0.6 to 1.0	3 days
1.1 to 1.5	1 days

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

Travel Plan:

No	4 days
----	--------

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

PTAL Rating:

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

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

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	DL-03-C-16	BLOCKS OF FLATS	DUBLIN
	BOTANIC AVENUE		
	DUBLIN		
	DRUMCONDRA		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	31	
	Survey date: TUESDAY	22/11/16	Survey Type: MANUAL
2	DL-03-C-17	BLOCKS OF FLATS	DUBLIN
	FINGLAS ROAD		
	DUBLIN		
	FINGLAS		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	332	
	Survey date: FRIDAY	23/10/20	Survey Type: MANUAL
3	DL-03-C-18	BLOCKS OF FLATS	DUBLIN
	HAROLD'S CROSS ROAD		
	DUBLIN		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	102	
	Survey date: WEDNESDAY	19/05/21	Survey Type: MANUAL
4	LU-03-C-04	BLOCKS OF FLATS	LOUTH
	RIVER COURT		
	DROGHEDA		
	Neighbourhood Centre (PPS6 Local Centre)		
	Residential Zone		
	Total No of Dwellings:	42	
	Survey date: WEDNESDAY	22/09/21	Survey Type: MANUAL

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	127	0.039	4	127	0.140	4	127	0.179
08:00 - 09:00	4	127	0.081	4	127	0.203	4	127	0.284
09:00 - 10:00	4	127	0.103	4	127	0.057	4	127	0.160
10:00 - 11:00	4	127	0.065	4	127	0.069	4	127	0.134
11:00 - 12:00	4	127	0.051	4	127	0.077	4	127	0.128
12:00 - 13:00	4	127	0.061	4	127	0.079	4	127	0.140
13:00 - 14:00	4	127	0.097	4	127	0.095	4	127	0.192
14:00 - 15:00	4	127	0.126	4	127	0.107	4	127	0.233
15:00 - 16:00	4	127	0.107	4	127	0.089	4	127	0.196
16:00 - 17:00	4	127	0.116	4	127	0.067	4	127	0.183
17:00 - 18:00	4	127	0.164	4	127	0.095	4	127	0.259
18:00 - 19:00	4	127	0.110	4	127	0.101	4	127	0.211
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.120			1.179			2.299

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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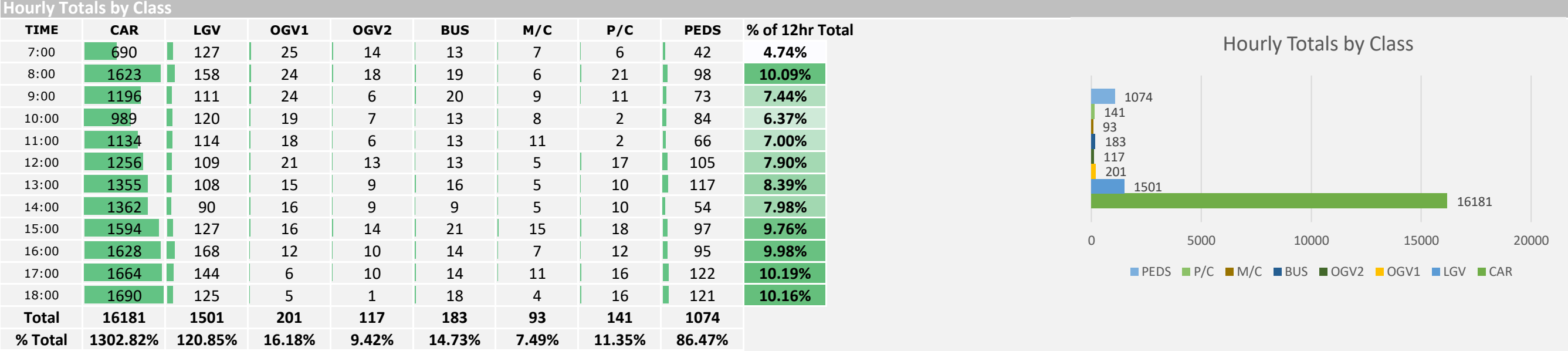
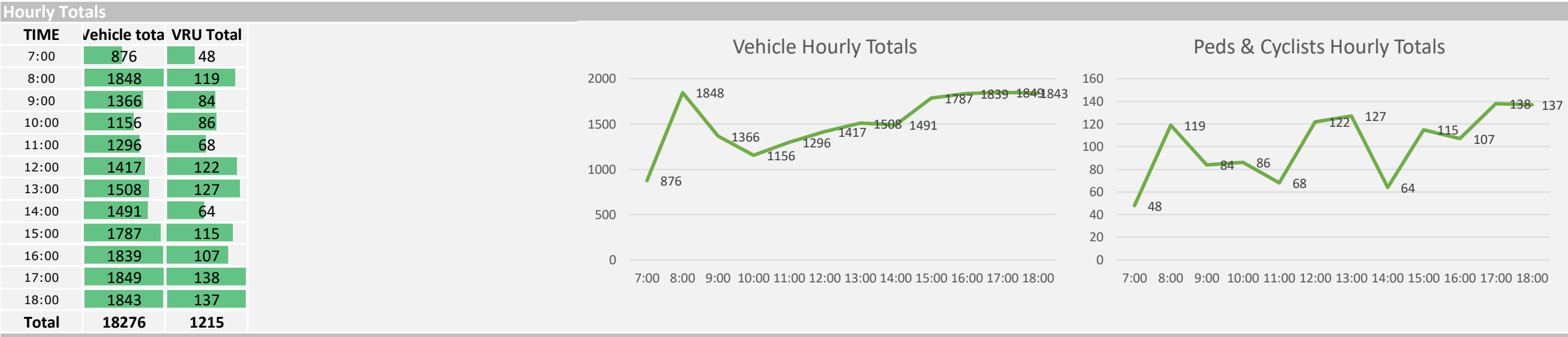
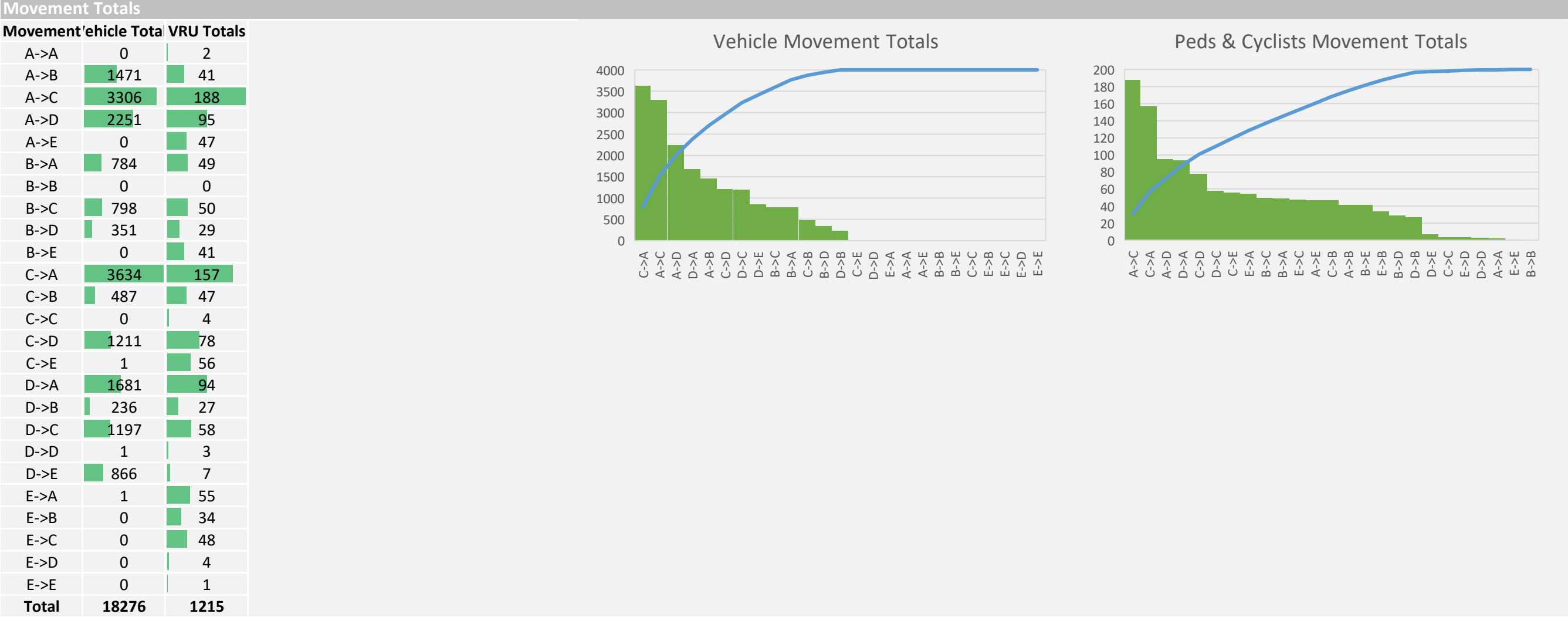
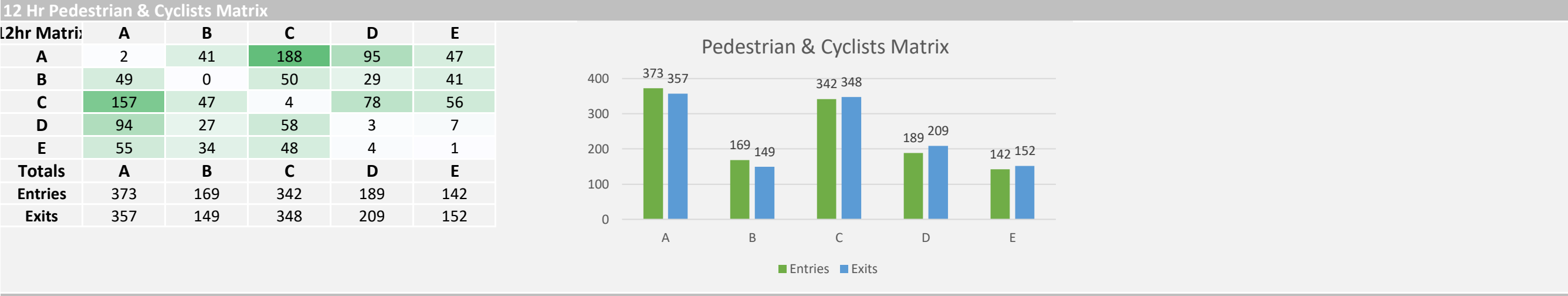
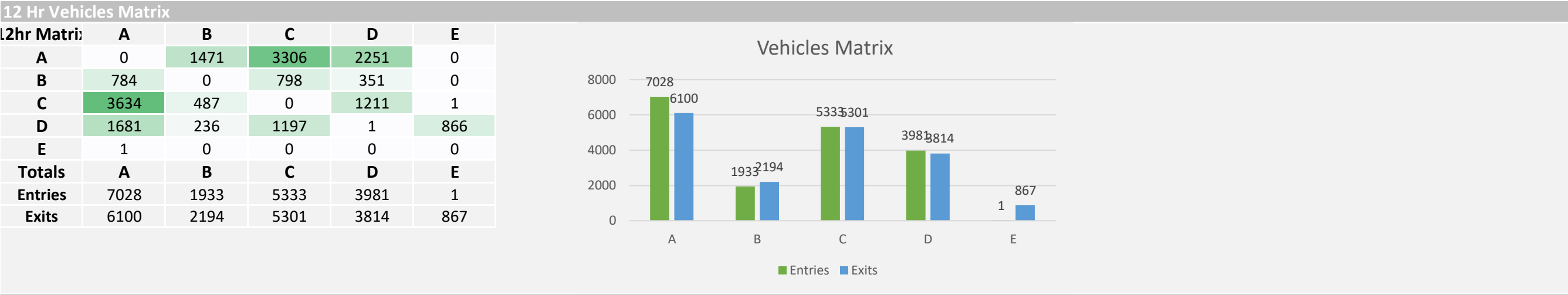
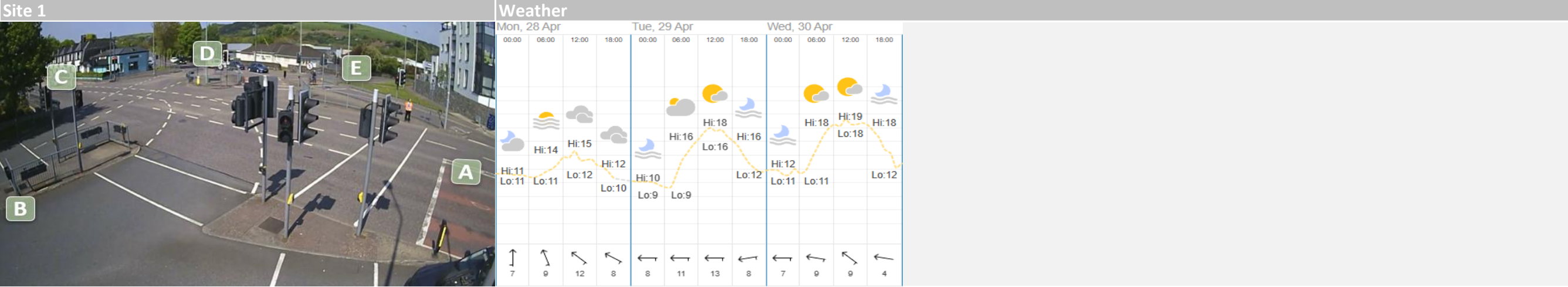
Parameter summary

Trip rate parameter range selected: 31 - 332 (units:)
Survey date range: 01/01/16 - 20/04/23
Number of weekdays (Monday-Friday): 4
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

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

21 APPENDIX C – TRAFFIC SURVEYS

Available on request.



Irish Traffic Surveys LTD

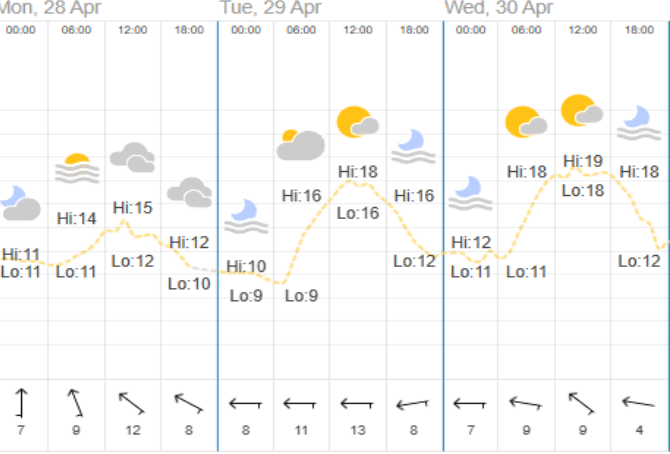
Survey Name : ITS J-971 Ballincollig
Site: JTC 2
Date: 29.04.2025
Time: 07:00 - 19:00
Location: 51.886361, -8.607083
Classification: CAR, LGV, OGV1, OGV2, BUS, MC, PC,PEDS



Site 2



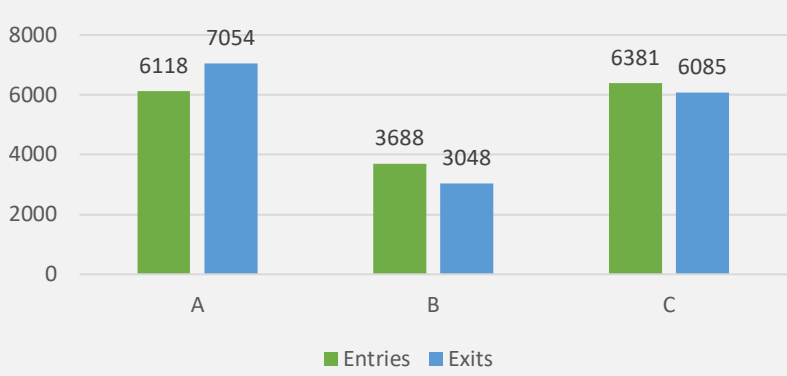
Weather



12 Hr Vehicles Matrix

Arm	A	B	C
A	0	1531	4587
B	2189	1	1498
C	4865	1516	0
Totals	A	B	C
Entries	6118	3688	6381
Exits	7054	3048	6085

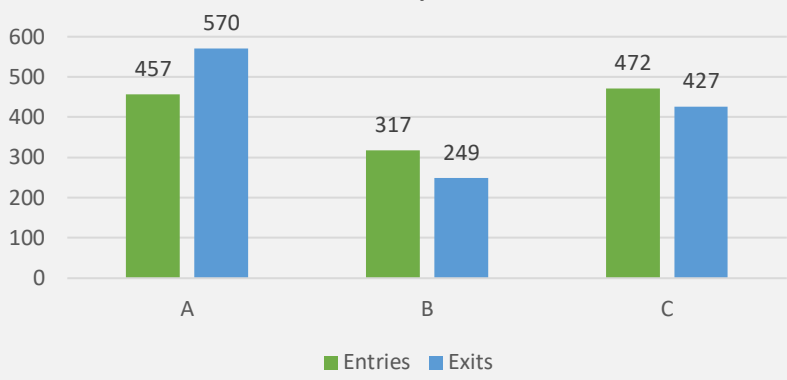
Vehicles Matrix



12 Hr Pedestrian & Cyclists Matrix

Arm	A	B	C
A	5	132	320
B	210	3	104
C	355	114	3
Totals	A	B	C
Entries	457	317	472
Exits	570	249	427

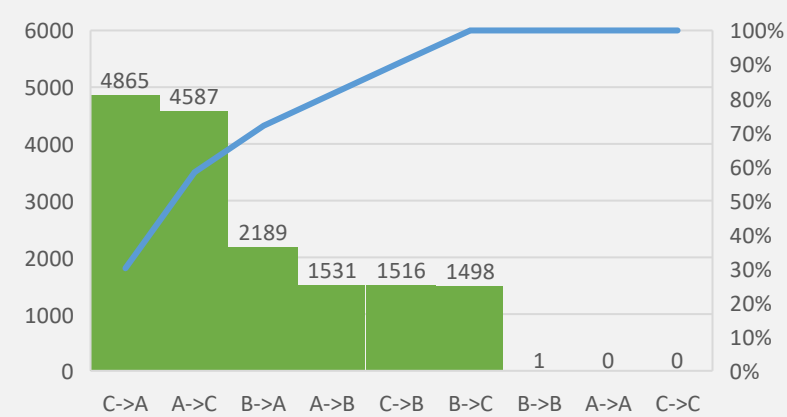
Pedestrian & Cyclists Matrix



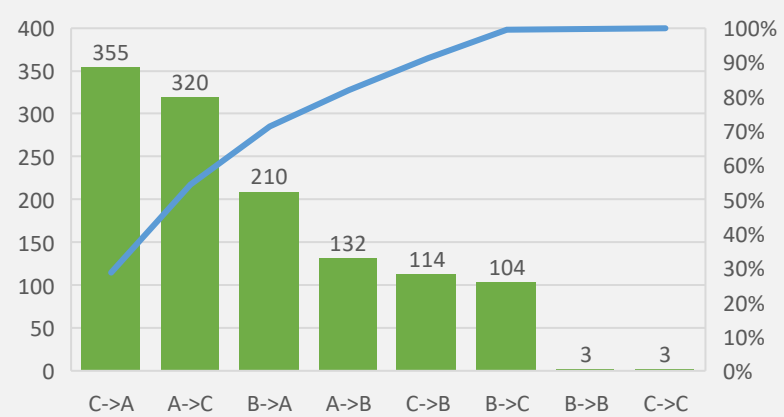
Movement Totals

Arm	Vehicle Totals Pedestrian & Cyclists	
A->A	0	5
A->B	1531	132
A->C	4587	320
B->A	2189	210
B->B	1	3
B->C	1498	104
C->A	4865	355
C->B	1516	114
C->C	0	3
Total	16187	1246

Vehicle Movement Totals



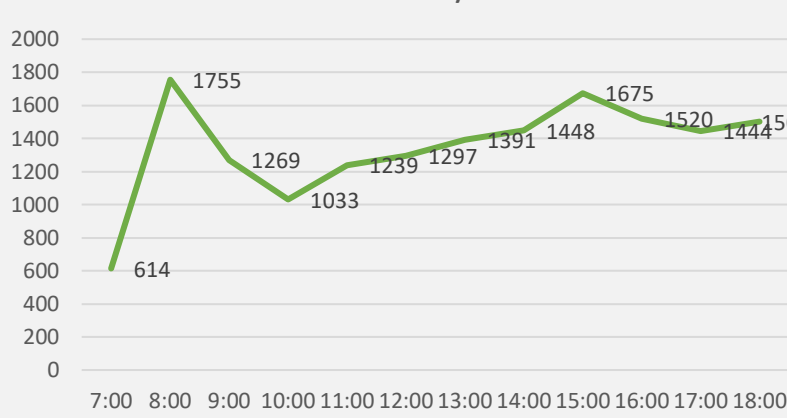
Peds & Cyclists Movement Totals



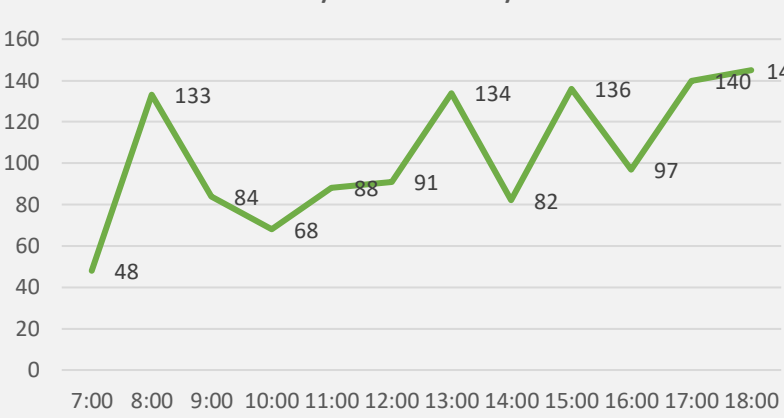
Hourly Totals

TIME	Vehicle Total	Pedestrian & Cyclists
7:00	614	48
8:00	1755	133
9:00	1269	84
10:00	1033	68
11:00	1239	88
12:00	1297	91
13:00	1391	134
14:00	1448	82
15:00	1675	136
16:00	1520	97
17:00	1444	140
18:00	1502	145
Total	16187	1246

Vehicle Hourly Totals



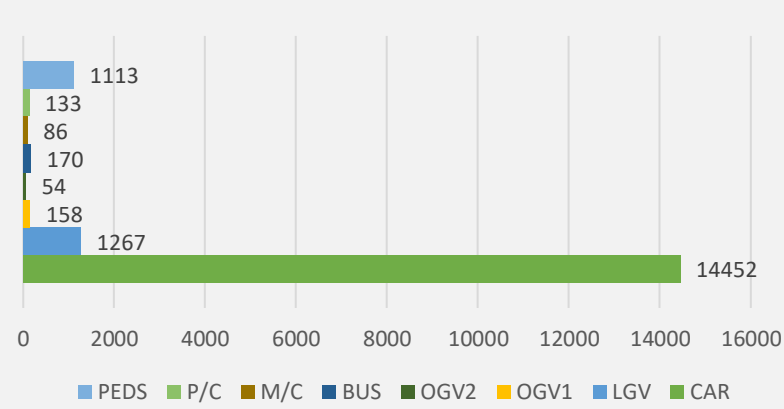
Peds & Cyclists Hourly Totals



Hourly Totals by Class

TIME	CAR	LGV	OGV1	OGV2	BUS	M/C	P/C	PEDS	% of 12hr Total
7:00	484	93	16	6	11	4	8	40	4%
8:00	1573	132	17	7	20	6	18	115	11%
9:00	1112	100	24	4	17	12	6	78	8%
10:00	895	98	14	5	13	8	1	67	6%
11:00	1091	110	16	2	12	8	2	86	8%
12:00	1148	106	18	7	13	5	11	80	8%
13:00	1241	113	12	2	15	8	10	124	9%
14:00	1319	91	15	7	9	7	12	70	9%
15:00	1510	120	12	2	18	13	18	118	10%
16:00	1362	126	8	5	12	7	13	84	9%
17:00	1323	96	3	7	11	4	20	120	9%
18:00	1394	82	3	0	19	4	14	131	9%
Total	14452	1267	158	54	170	86	133	1113	
% Total	82.90%	7.27%	0.91%	0.31%	0.98%	0.49%	0.76%	6.38%	

Hourly Totals by Class



Irish Traffic Surveys LTD

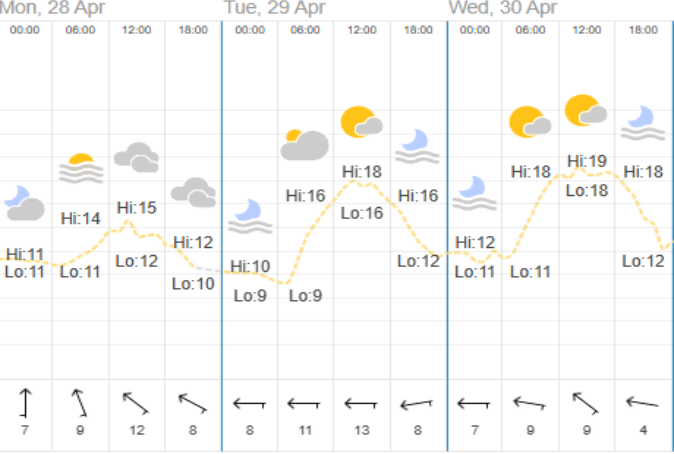
Survey Name : ITS J-971 Ballincollig
Site: JTC 3
Date: 29.04.2025
Time: 07:00 - 19:00
Location: 51.887250, -8.607306
Classification: CAR, LGV, OGV1, OGV2, BUS, MC, PC,PEDS



Site 3



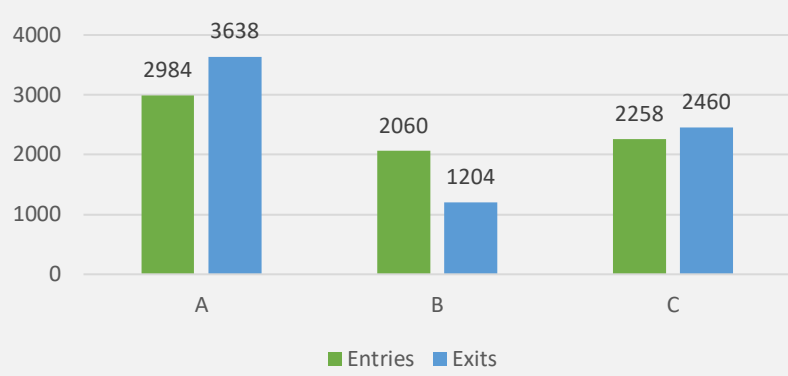
Weather



12 Hr Vehicles Matrix

Arm	A	B	C
A	0	1080	1904
B	1504	0	556
C	2134	124	0
Totals	A	B	C
Entries	2984	2060	2258
Exits	3638	1204	2460

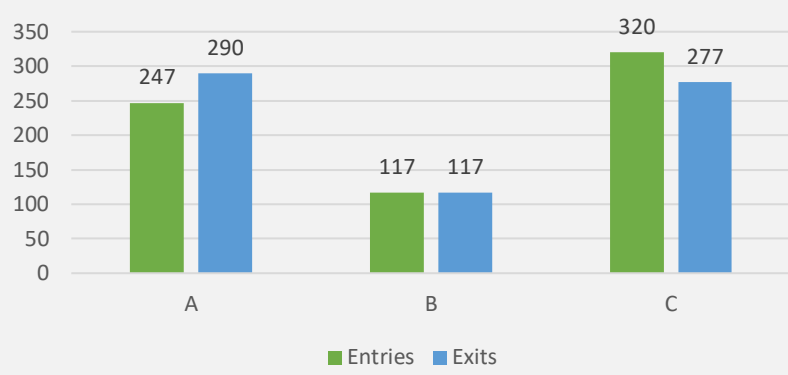
Vehicles Matrix



12 Hr Pedestrian & Cyclists Matrix

Arm	A	B	C
A	0	52	195
B	35	0	82
C	255	65	0
Totals	A	B	C
Entries	247	117	320
Exits	290	117	277

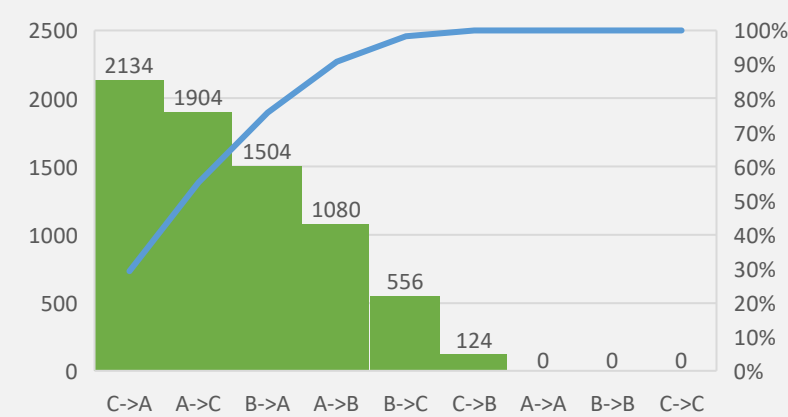
Pedestrian & Cyclists Matrix



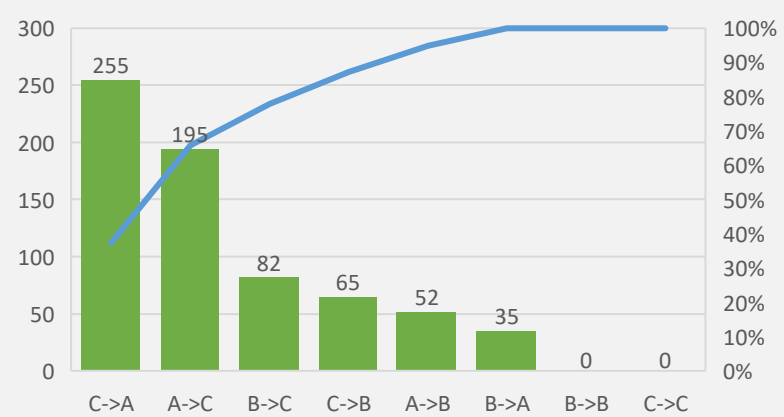
Movement Totals

Arm	Vehicle Totals Pedestrian & Cyclists	
A->A	0	0
A->B	1080	52
A->C	1904	195
B->A	1504	35
B->B	0	0
B->C	556	82
C->A	2134	255
C->B	124	65
C->C	0	0
Total	7302	684

Vehicle Movement Totals



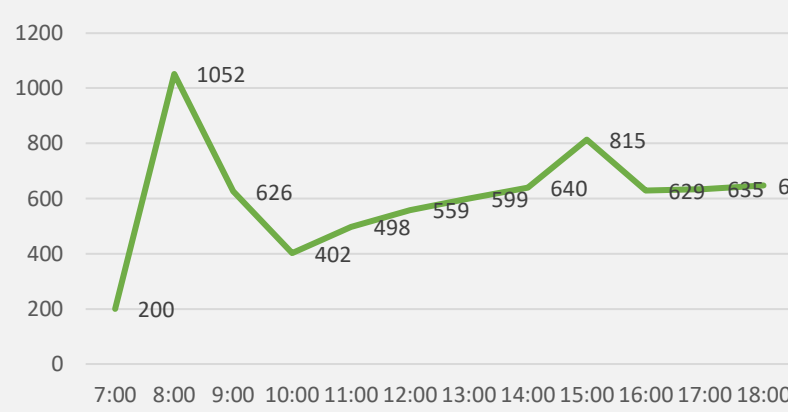
Peds & Cyclists Movement Totals



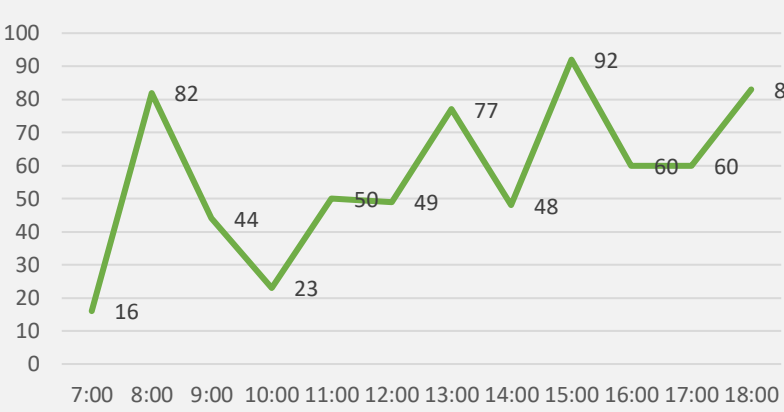
Hourly Totals

TIME	Vehicle Total	Pedestrian & Cyclists
7:00	200	16
8:00	1052	82
9:00	626	44
10:00	402	23
11:00	498	50
12:00	559	49
13:00	599	77
14:00	640	48
15:00	815	92
16:00	629	60
17:00	635	60
18:00	647	83
Total	7302	684

Vehicle Hourly Totals



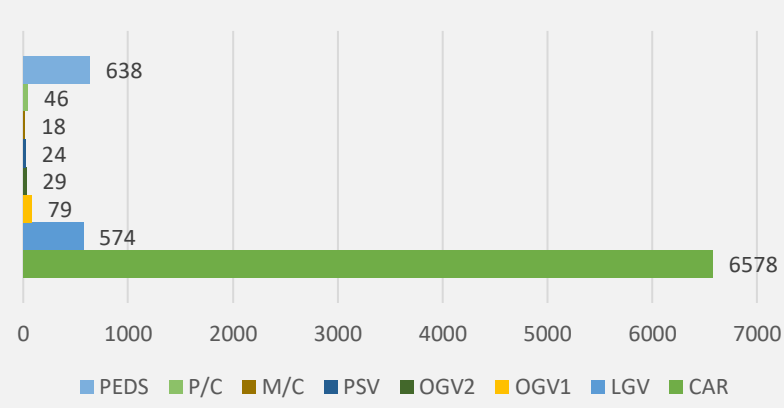
Peds & Cyclists Hourly Totals



Hourly Totals by Class

TIME	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	PEDS	% of 12hr Total
7:00	153	36	6	4	0	1	0	16	3%
8:00	961	66	12	2	8	3	6	76	14%
9:00	549	52	15	4	3	3	3	41	9%
10:00	354	39	4	3	2	0	0	23	6%
11:00	430	55	9	2	1	1	1	49	7%
12:00	499	49	8	2	1	0	4	45	8%
13:00	533	53	5	3	0	5	4	73	8%
14:00	580	51	7	2	0	0	6	42	9%
15:00	751	53	4	1	6	0	5	87	11%
16:00	565	55	4	2	1	2	5	55	9%
17:00	587	40	3	4	0	1	8	52	9%
18:00	616	25	2	0	2	2	4	79	9%
Total	6578	574	79	29	24	18	46	638	
% Total	82.37%	7.19%	0.99%	0.36%	0.30%	0.23%	0.58%	7.99%	

Hourly Totals by Class



Irish Traffic Surveys LTD

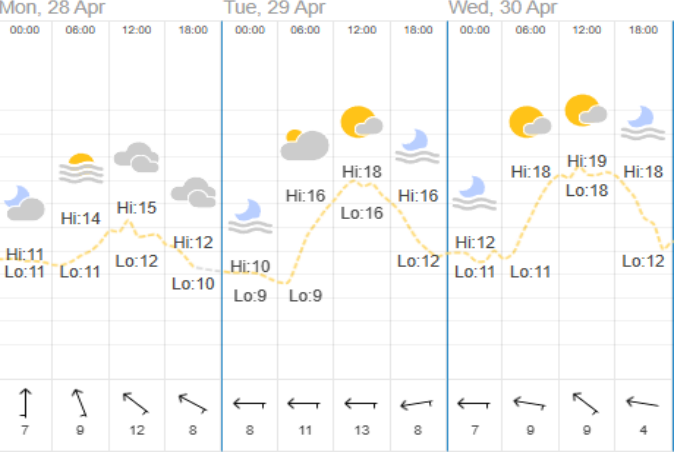
Survey Name : ITS J-971 Ballincollig
Site: JTC 4
Date: 29.04.2025
Time: 07:00 - 19:00
Location: 51.887694, -8.607472
Classification: CAR, LGV, OGV1, OGV2, BUS, MC, PC,PEDS



Site 4



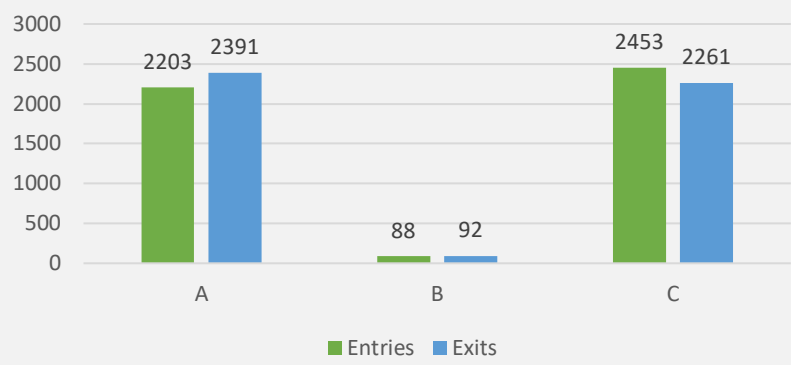
Weather



12 Hr Vehicles Matrix

Arm	A	B	C
A	0	13	2190
B	20	0	68
C	2371	79	3
Totals	A	B	C
Entries	2203	88	2453
Exits	2391	92	2261

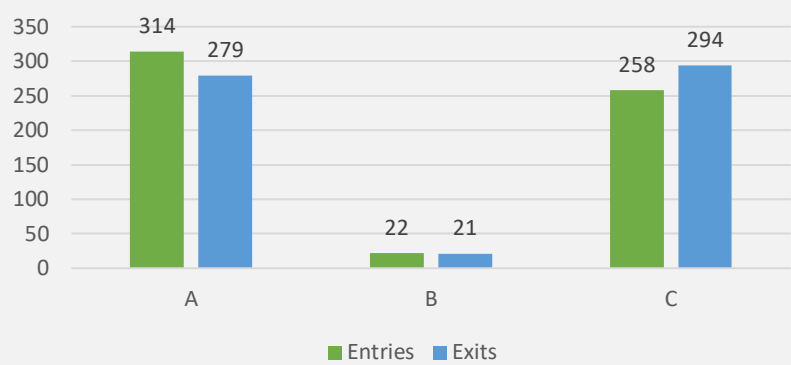
Vehicles Matrix



12 Hr Pedestrian & Cyclists Matrix

Arm	A	B	C
A	0	21	293
B	21	0	1
C	258	0	0
Totals	A	B	C
Entries	314	22	258
Exits	279	21	294

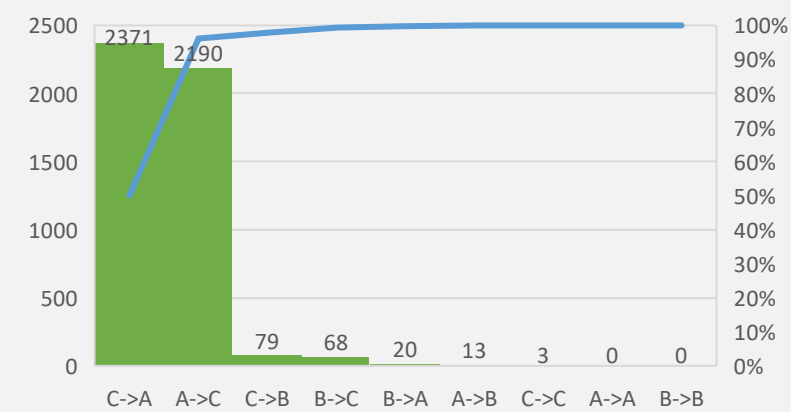
Pedestrian & Cyclists Matrix



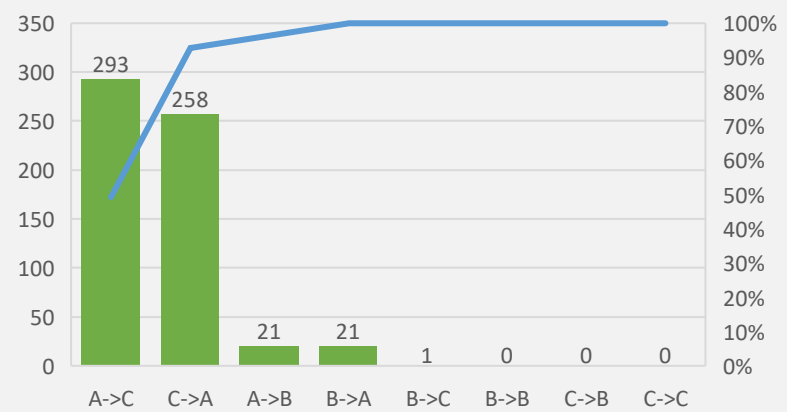
Movement Totals

Arm	Vehicle Totals Pedestrian & Cyclists	
A->A	0	0
A->B	13	21
A->C	2190	293
B->A	20	21
B->B	0	0
B->C	68	1
C->A	2371	258
C->B	79	0
C->C	3	0
Total	4744	594

Vehicle Movement Totals



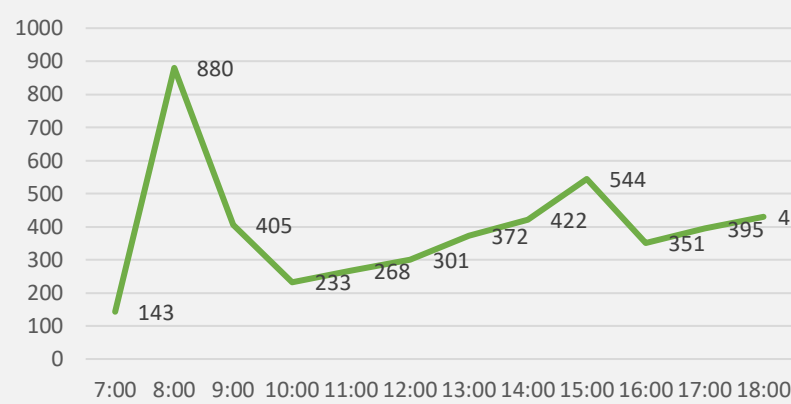
Peds & Cyclists Movement Totals



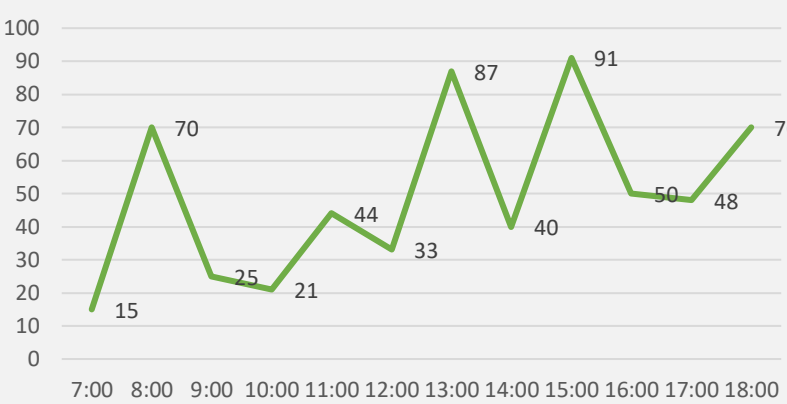
Hourly Totals

TIME	Vehicle Total	Pedestrian & Cyclists
7:00	143	15
8:00	880	70
9:00	405	25
10:00	233	21
11:00	268	44
12:00	301	33
13:00	372	87
14:00	422	40
15:00	544	91
16:00	351	50
17:00	395	48
18:00	430	70
Total	4744	594

Vehicle Hourly Totals



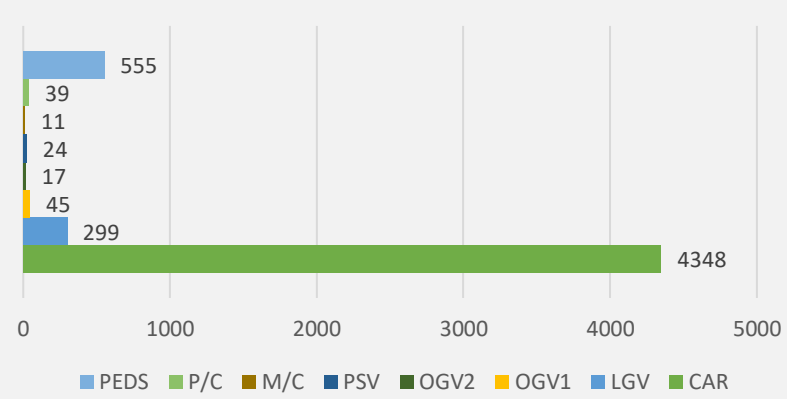
Peds & Cyclists Hourly Totals



Hourly Totals by Class

TIME	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	PEDS	% of 12hr Total
7:00	118	20	4	1	0	0	0	15	3%
8:00	828	33	6	2	8	3	6	64	19%
9:00	362	28	7	2	3	3	3	22	9%
10:00	211	16	1	3	2	0	0	21	5%
11:00	223	35	7	2	1	0	0	44	6%
12:00	271	22	5	2	1	0	4	29	6%
13:00	335	29	4	2	0	2	2	85	8%
14:00	397	20	4	1	0	0	5	35	9%
15:00	505	30	1	1	7	0	6	85	12%
16:00	318	30	2	0	0	1	5	45	8%
17:00	367	23	3	1	0	1	5	43	8%
18:00	413	13	1	0	2	1	3	67	9%
Total	4348	299	45	17	24	11	39	555	
% Total	81.45%	5.60%	0.84%	0.32%	0.45%	0.21%	0.73%	10.40%	

Hourly Totals by Class





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