

TRAFFIC & TRANSPORT ASSESSMENT

Residential Development Courtstown, Little Island, Cork

June 2024





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1.0 INTRODUCTION

1.1 INTRODUCTION

1.1.1 MHL Consulting Engineers has been instructed by Ruden Homes Ltd. to prepare a Traffic & Transport Assessment (TTA) in support of a planning application for the development of their lands at Courtstown, Little Island, Cork. This document is in response to items raised in the Council's opinion statement.

1.1.2 The revised scheme consists of the development of a mixed-use residential and creche scheme and all ancillary site development works at Courtstown, Little Island, Cork. The proposed development comprises of 172 no. residential units a 256 sq.m creche and a 311 sq.m retail offering.

Access to the proposed development will be via a new junction onto Ballytrasna Park Road by means of the partial construction of the main access road designated LI-U-05 which serves the wider zoned lands, refer Figure 1.1. The development lands can avail of the existing pedestrian footpaths extending along Ballytrasna Park Road on the same side as the development entrance. Cork County Council are currently developing construction stage works to upgrade the Ballytrasna Road to include pedestrian/cycle and public transport upgrades. These works extend to include the proposed development junction, Junction 2.

1.1.3 This TTA will assess how the proposed development will impact the surrounding roads network. It will consider appropriate access arrangements and the transport choices available to future users of the application site and how the existing/proposed transport infrastructure surrounding the site will influence that choice. The impact of traffic demand generated by the proposals will be considered and quantified.

1.1.4 The scope of this study has been agreed with Cork County Council's Traffic & Transportation Department. Technical Notes have been produced to agree the key parameters relating to the traffic modelling carried out including, junctions to be assessed, trip generation, modal shift targets, trip distribution, assessment years and the presentation of results.

1.1.5 The key junctions identified in the area surrounding the proposed development are shown in **Figure 1.2** and are as follows:

- Junction 1: The T-Junction of the Ballytrasna Park Road and R623
- Junction 2: Proposed Site Entrance
- Junction 3: Island Cross Junction

HIGH LEVEL DEVELOPMENT FRAMEWORK LINKAGES TO WIDER LITTLE ISLAND ZONING

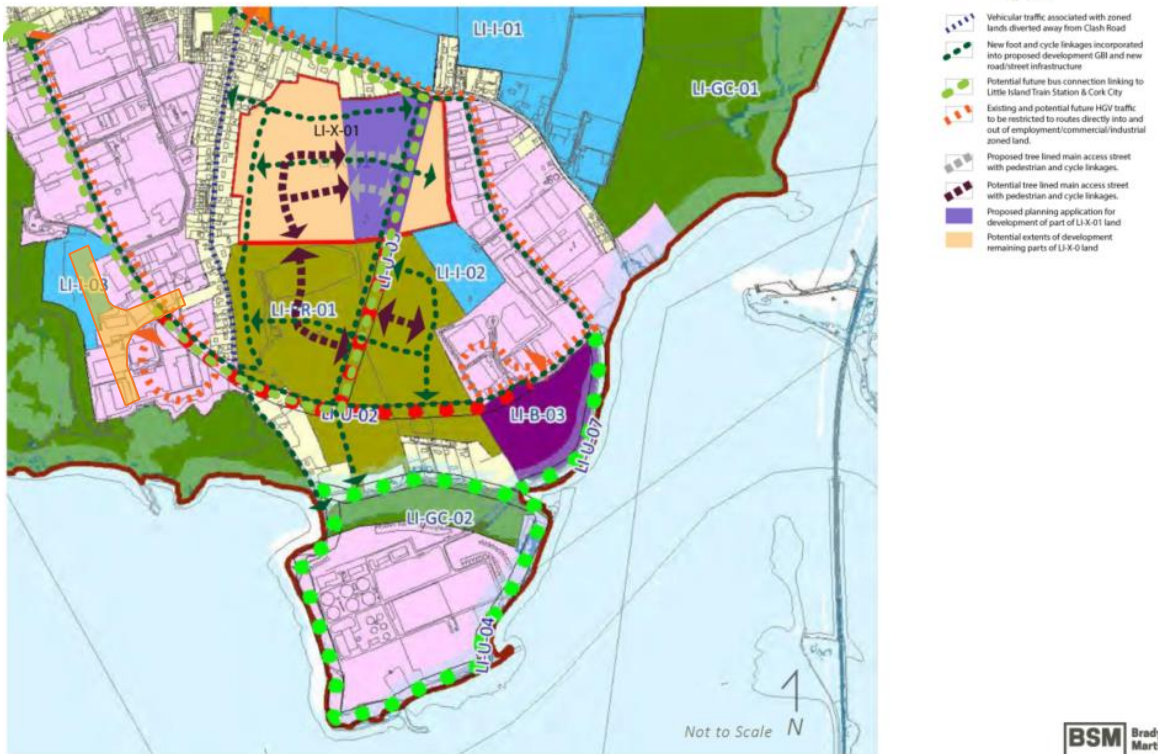


Figure 1.1: Context of Zoned Lands (Access Road Labelled LI-U-05)

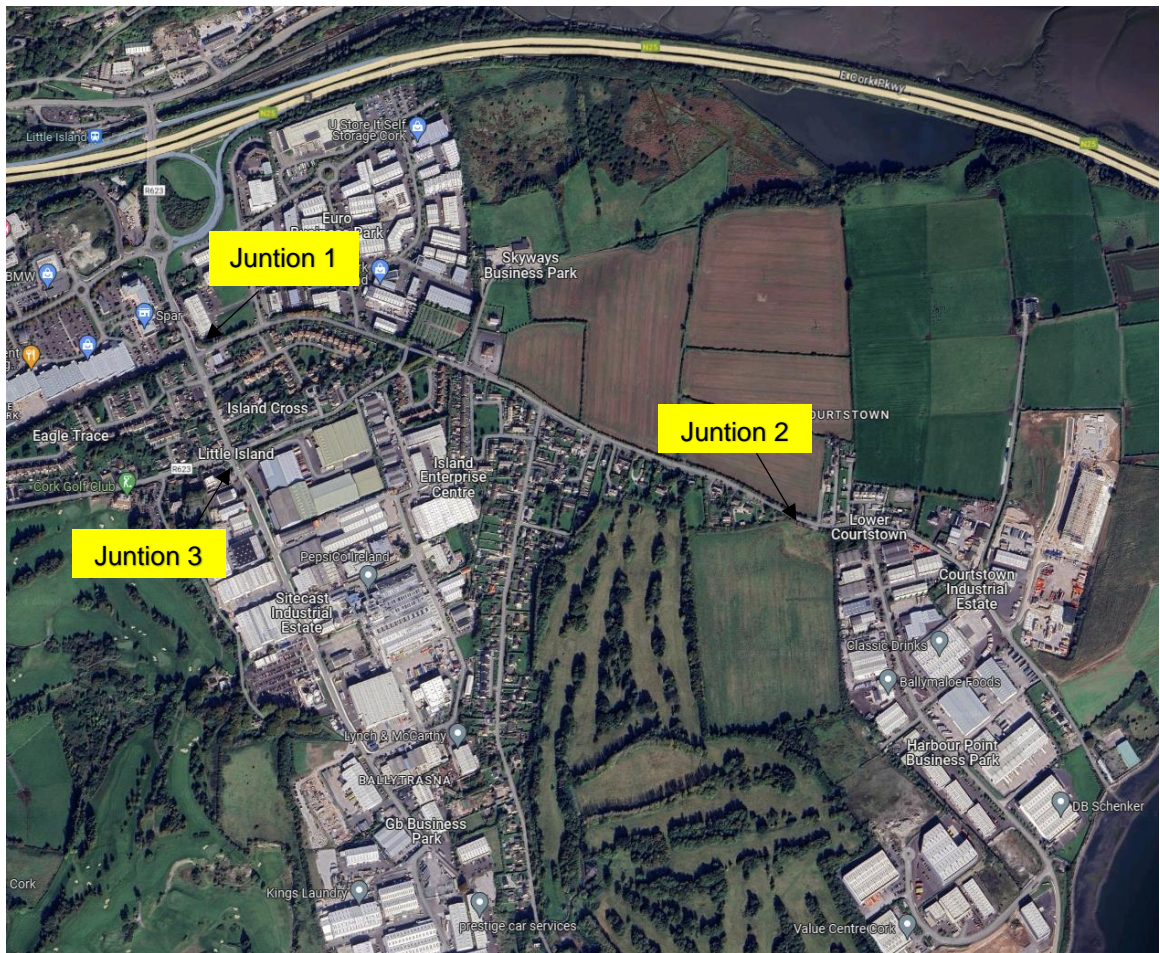


Figure 1.2: Junction Locations <https://earth.google.com>

1.2 PLANNING BACKGROUND

- 1.2.1 The strategic aim of the Cork County Development Plan is to establish key villages as the primary focus of development in rural areas and allow for the provision of local services. The development of the area and provision of local services can be achieved in part by the encouragement and facilitation of population growth, and by the supporting and retention of key facilities including physical infrastructure and public transport.
- 1.2.2 The subject site is located within the designated settlement boundary for Little Island and forms part of lands zoned 'LI-X-01' in the Cork County Development Plan 2022 where Medium 'A' residential development is required along with small scale, local neighbourhood centre, high quality public open space (including buffer between development and adjoining industrial use) and public realm. There is also a requirement to provide for future high quality pedestrian and cycle connectivity with lands zoned 'LI-RR-01'.
The zoning objective specifies that the development of this area will be subject to an approved framework plan for its overall development proposed development in this planning application is a plan led development that is entirely suitable at this location.

1.3 STATUTORY CONSULTEE CONSULTATION

- 1.3.1 Notwithstanding ongoing consultation with the Traffic & Transportation Department of Cork County Council, the Design Team have engaged with various departments within Cork County Council with a view to consider the respective issues raised as part of the design process of the scheme. The inclusion of traffic generated from a 'Master-Plan' of the wider area has now been included as a separate scenario.
- 1.3.2 These engagements have informed the final layout of the scheme including access arrangements for vehicular, pedestrian and cycle modes of transport. The issued 'Opinion' of Cork County Council as part of the LRD process has contributed to the submitted final scheme.

1.4 DOCUMENT STRUCTURE

- 1.4.1 A TTA is an appropriate form of assessment for the scale of the proposed development and the scope has been agreed with the Local Authority. The structure of this TTA is in accordance with TII (Transport Infrastructure Ireland) Document, Traffic and Transport Assessment Guidelines, 2014.

The aim of this TTA is to identify the characteristics of the application site and surrounding area, examine the likely transport implications, ensure sustainable accessibility is maximised and appropriate infrastructure provided.

The key issues that need to be addressed within this TTA, with reference to the size and location of the development proposal, are as follows:

- Review of the site location, composition and local roads network.
- Analysis of Road Safety data for the most recent five-year period available.
- Accessibility critique reviewing pedestrian, cycle and public transport access to the site, plus any infrastructure currently available to promote travel by sustainable means.
- A review of the relevant planning and transport policy.
- Description of the development proposal.
- Description and justification for the proposed access arrangement, internal layout, parking provision, public transport provision, fire tender/service/delivery access, including all necessary swept-path assessments and visibility splays.
- Forecast multi-modal trip rates and trip generation as agreed with the Local Authority.
- Modal split assumptions used in the trip generation process.
- The use of appropriate and agreed traffic modelling software for the assessment of individual junctions.
- Provide With/Without Development assessment for each of the critical junctions.
- Assess significance of development generated traffic upon the surrounding transport infrastructure and identify any necessary mitigation.

2.0 NON-TECHNICAL SUMMARY

- 2.1 A TTA has been prepared in support of an application to Cork County Council for the development of 172 no. residential units, commercial units, and a creche.
- 2.2 The TTA methodology including the scope and means of assessment of the identified key junctions has been agreed with the Local Authority as part of the pre-application process.
- 2.3 The TTA has demonstrated the following:
- (i) The proposed residential development is in accordance with the Local Area Plan and forms an important continuation in the delivery of planned growth in the area and has been previously assessed as part of the Little Island Transport Assessment (LITS).
 - (ii) A review of the existing roads network and collision data in the vicinity of the site indicates that there are no significant problems in relation to the current safety of the existing roads network.
 - (iii) Junction 1 is the proposed signal controlled access to the site.
 - (iv) Junction 2: R623/ Ballytrasna Park Road is shown to currently operate within capacity during morning & evening peaks with some delay occurring. The modelling results indicate that during AM Peak the junction will reach capacity in the design year 2031 and degrade both with and without development traffic up to design year 2041. The junction is shown to continue operating within capacity with/without development traffic for the PM peak up to design year 2041.
 - (v) Junction 3: Island Cross Junction will not be impacted by development traffic.
 - (vi) The proposed site layout is permeable to the roads network and is well connected to existing pedestrian linkages.
 - (vii) The proposed new access arrangements are safe and suitable and are in accordance with the Design Manual for Roads & Bridges (DMRB) and the Design Manual for Urban Roads & Streets (DMURS).
- 2.4 A modal shift of 30% (implying an anticipated increase in public transport usage or active travel in the immediate area of 17%) for future year models is deemed to be reasonable. This modal shift increases of 17% has been applied to proposed development traffic from the opening year (when the development is fully completed) 2026, up to the design year 2041. This same modal shift increase, of 17%, has not been applied to the background traffic of the modelled junctions, ensuring that a 9. active (worst-case) analysis has been carried out.

3.0 EXISTING CONDITIONS

3.1 INTRODUCTION

3.1.1 This section describes the base data used to develop the junction models, the critical links and junctions as agreed with the Local Authority, committed transport proposals to the area and other surrounding proposed development.

3.2 BASELINE TRAFFIC CONDITIONS

3.2.1 As part of the pre-application process the extent of data collection and the critical links and junctions was agreed with the Local Authority.

3.2.2 A variety of different data sources have been used, including:

- AM & PM peak hour traffic counts at Junction 2 (refer **Figure 3.1** below).
- Background OS Mapping and aerial photography.
- On-site junction measurements including saturation flows, link speeds, queue length measurements, pedestrian movements at signalled crossings and geometric data for each of the modelled junctions.

3.2.3 The peak hour traffic surveys at Junction 2 were undertaken on Tuesday 12th of Sept 2023 with the survey results being factored using TII Project Appraisal Guidelines (PE-PAG-02017) for use in future year scenarios.

3.2.4 On-site measurements including lane widths, junction turning radii, lane lengths and saturation flows were undertaken by MHL and were incorporated in the constructed models.



Figure 3.1: Traffic Count Survey Location

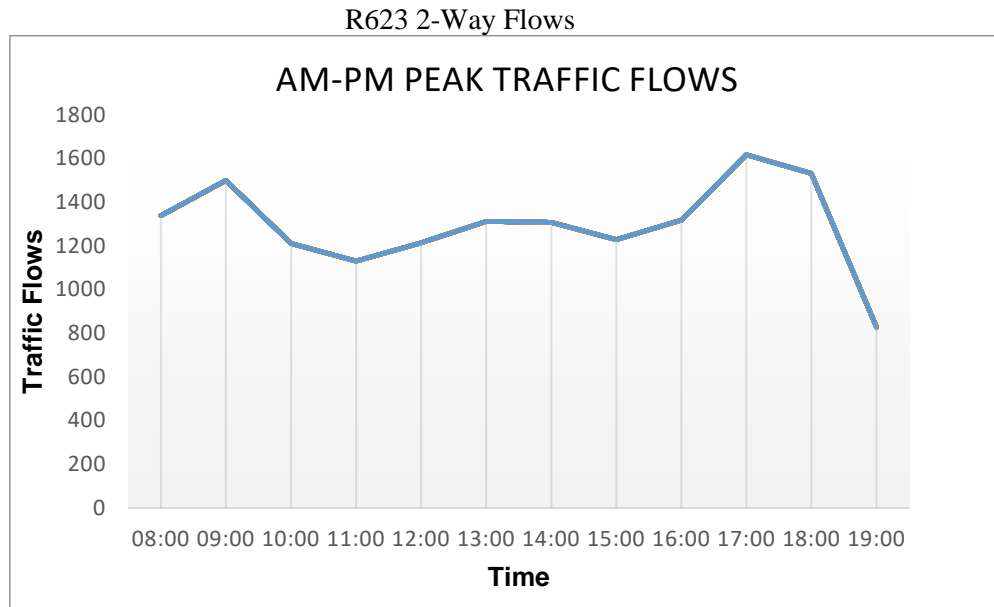


Figure 3.2: AM - PM peak traffic hour profile.

R623 2-way Flows

3.2.5 The data presented in the above figures shows the peak hour traffic periods for both morning and evening respectively at the nearest junction as follows:

- Junction 2: 08:00 – 09:00 and 17:00 – 18:00

For the purpose of the modelling analysis, each of the above peak hour traffic periods are included in order to obtain the worst-case traffic build-up results. This ensures a robust analysis of the road network is conducted.

3.2.6 The percentage of classified vehicles was used within the generated traffic models to accurately reflect existing conditions.

3.3 SITE LOCATION AND COMPOSITION

3.3.1 The application site is located in Courtstown, Little Island within a 50kph speed limit zone. Access to the site will be via a proposed entrance junction onto Ballytrasna Park Road.

3.4 LOCAL ROADS NETWORK

3.4.1 *Junction 2: Ballytrasna Park Road/ R623*

This T-junction junction serves as part of an important vehicular access between Little Island and the N25 and Eastgate. It also provides a link from Courtstown Industrial Estate to the wider roads network.

The measured two-way AADT (Annual Average Daily Traffic) at the T-junction is 18,774.



Image 3.4.1: Image of Junction 2: Ballytrasna Park Road/ R623

3.4.2 Junction 3: Island Cross Junction

This Cross Roads Junction serves as part of an important vehicular access between Little Island and the N25 via the newly redesigned Dunkettle Interchange. It also provides a link to the Sitecast Industrial Estate in Ballytrasna.



Image 3.4.2: Image of Junction 3: Island Cross Junction

4.0 PROPOSED DEVELOPMENT

4.1 INTRODUCTION

- 4.1.1 The proposed development on our client’s site is consistent with the zoning in the local area plan for medium density housing with a retail provision.
- 4.1.2 The proposed development comprises of 172 no. residential units, and a 256 sq.m creche and a 311 sq.m retail offering.
- 4.1.3 The proposed primary access to the site is via traffic signal controlled junction onto Ballytrasna Park Road as outlined in Figure 4.1.1.
- 4.1.4 There are 269 car spaces provided within the development.

Below is our car parking analysis.

- 172 Housing Units (Including 6No Duplex units) = 275 car parking spaces | Ratio of 1.8 spaces /per unit.
 - (We have attributed a number of 2 bed houses with a single car parking space, this helps to bring the car dependency ratio below 2)
 - 20 Apartments = 1.25 spaces per unit = 33 spaces | Provided = 29 spaces
 - Creche facility = Provided = 9 staff spaces + 5 Visitors = 14 spaces
 - Commercial Units = 16 spaces required, provided = 20 spaces
- 4.1.5 For full details of the scheme please refer to the Engenuiti Drawings 10277-PL-003, **Figure 4.1.2.**

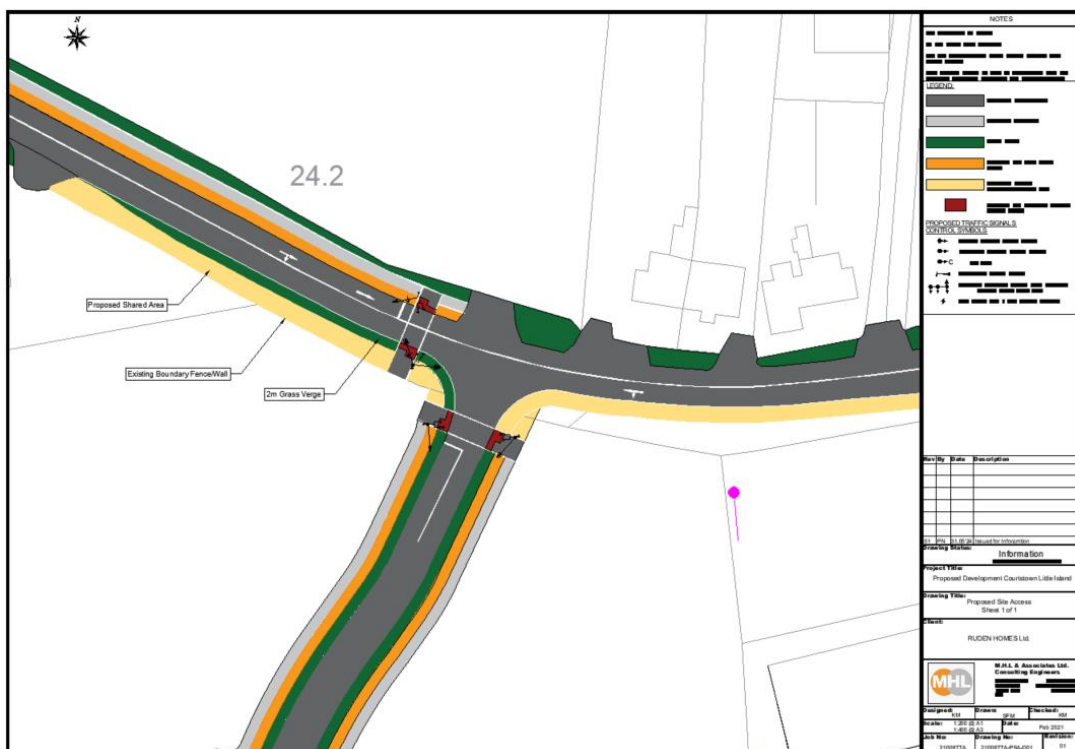


Fig 4.1.1: Junction 1: Proposed Development Junction



Fig 4.1.2: Proposed Site Layout

4.2 PHASING

- 4.2.1 The scheme of (172) residential units, associated retail development and creche, would be completed in a single phase starting in 2025 and finishing in 2026. The creche of the scheme will also be delivered in this timeframe. The Traffic Impact Assessment includes the proposed opening year of 2026, the design year +5 (2031) and the design year +15 (2041).

4.3 CONSTRUCTION STAGE TRAFFIC IMPACT

- 4.3.1 It is envisaged that working hours will be from 08:00 to 18:00, Monday to Friday (08:00 to 16:00 Saturday and not at all on Sundays and Public Holidays) for construction personnel through each phase of the development.
Generally, construction workers will travel to site before the measured peak hour of 08:00 – 09:00, to be on site for an 08:00 start-time. A very limited number of construction employees are likely to travel to the site during peak hours.

It is anticipated that heavy goods vehicles, HGV's, will be restricted to movements on the local road network during the off-peak periods. It is estimated that truck movements and general deliveries would arrive/leave at a steady rate during the course of the day.

In general, the impact of construction traffic will be temporary in nature and less significant than the final development operational stage.

- 4.3.4 The successful Contractor will develop a Construction Stage Traffic Management Plan including identified haulage routes in compliance with the Preliminary Temporary Traffic Management Plan developed in consultation with Cork County Council Roads & Transportation Department.

The surrounding road network is suitable to accommodate the construction traffic associated with the proposed development and the Construction Traffic Management Plan will include a range of mitigating measures to ensure the safety of the workforce on the site and accessing the site, and the public on the surrounding roads and to minimise construction traffic generation and disruption on the surrounding road network.

5.0 TRAFFIC GENERATION

- 5.1.1 Trip generation from the proposed development was garnered via the TRICS database. MHL are a licence holder for the TRICS database and employ it for traffic studies. TRICS is a well-established UK and Irish national database which holds in excess of 2,100 site locations and 7,000 survey counts with over 98 separate land use sub-categories. MHL & Associates Ltd. are one of over 300 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. Traffic counts conducted on the 12th of September 2023 by TRACSIS were utilised to establish the actual AM & PM Peak traffic hours for the local road network for the purposes of this assessment.
- 5.1.2 Sites from Sligo, Cork, Tipperary, Kilkenny and Dublin were included from the TRICS database to determine the trip rates for the residential element of the scheme as shown in Table 5.1 below.

TRIP RATE VALUE PER 1 DWELLS	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
	Total rate: 2.904			Total rate: 3.135			Total rate: 6.039		
	Peak: 17:00-18:00			Peak: 08:00-09:00			Peak: 17:00-18:00		
00:00-01:00									
01:00-02:00									
02:00-03:00									
03:00-04:00									
04:00-05:00									
05:00-06:00									
06:00-07:00									
07:00-08:00	2	53	0.048	2	53	0.257	2	53	0.305
08:00-09:00	2	53	0.133	2	53	0.552	2	53	0.685
09:00-10:00	2	53	0.229	2	53	0.267	2	53	0.496
10:00-11:00	2	53	0.190	2	53	0.133	2	53	0.323
11:00-12:00	2	53	0.152	2	53	0.229	2	53	0.381
12:00-13:00	2	53	0.181	2	53	0.200	2	53	0.381
13:00-14:00	2	53	0.276	2	53	0.248	2	53	0.524
14:00-15:00	2	53	0.238	2	53	0.305	2	53	0.543
15:00-16:00	2	53	0.362	2	53	0.229	2	53	0.591
16:00-17:00	2	53	0.257	2	53	0.229	2	53	0.486
17:00-18:00	2	53	0.448	2	53	0.248	2	53	0.696
18:00-19:00	2	53	0.390	2	53	0.238	2	53	0.628
19:00-20:00									
20:00-21:00									
21:00-22:00									
22:00-23:00									
23:00-24:00									

Table 5.1 Trip Generation Per Residential Unit (TRICS)

- 5.1.3 In the following chapter reference is made to the current (2022) Modal Shift by means of travel to work, school or college and is based on 2022 Census Data. The site is located in the Electoral Division of ‘Caherlag’, ref. Table 6.1, with 2022-year figures implying 13% of persons in the area use sustainable means of travel. Based on the proximity to public transport (bus routes and train station) in the area a future year target of 30% is deemed appropriate. A reduction in traffic generation of 17% is applied to proposed residential development traffic only and not to background traffic flows.
- 5.1.5 Trip Generation from the proposed 256 sq.m creche was derived using the TRICS database. The following table presents the peak hour trip rates for the creche.

TRIP RATE VALUE PER 100 SQM	ARRIVALS			DEPARTURES			TOTALS		
	Total rate: 17,588 Peak: 08:00-09:00			Total rate: 17,515 Peak: 17:00-18:00			Total rate: 35,103 Peak: 17:00-18:00		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00-01:00									
01:00-02:00									
02:00-03:00									
03:00-04:00									
04:00-05:00									
05:00-06:00									
06:00-07:00	1	509	0.000	1	509	0.000	1	509	0.000
07:00-08:00	2	660	0.227	2	660	0.152	2	660	0.379
08:00-09:00	2	660	3.942	2	660	2.426	2	660	6.368
09:00-10:00	2	660	3.184	2	660	3.412	2	660	6.596
10:00-11:00	2	660	0.152	2	660	0.152	2	660	0.304
11:00-12:00	2	660	0.910	2	660	0.152	2	660	1.062
12:00-13:00	2	660	1.440	2	660	2.274	2	660	3.714
13:00-14:00	2	660	0.910	2	660	0.986	2	660	1.896
14:00-15:00	2	660	1.440	2	660	0.758	2	660	2.198
15:00-16:00	2	660	1.289	2	660	0.682	2	660	1.971
16:00-17:00	2	660	1.289	2	660	1.820	2	660	3.109
17:00-18:00	2	660	2.805	2	660	4.246	2	660	7.051
18:00-19:00	2	660	0.000	2	660	0.455	2	660	0.455
19:00-20:00									
20:00-21:00									
21:00-22:00									
22:00-23:00									
23:00-24:00									

Table 5.2 Trip Generation Per 100 sq.m –Creche (TRICS)

6.0 MODAL SPLIT

- 6.1.1 This section describes the current level of modal shift (the use of sustainable modes of travel) based on available data and compares these to national targets.
- 6.1.2 The 2022 Census online SAP data was used to assess current modal shift patterns in Caherlag Area which encompasses the site. 13 % of people in this area said they were commuting on foot, bike or using public transport.

Population aged 5 years and over by means of travel to work, school or college.

Means of Travel	Usually resident by means of travel to work (Number)	Usually resident by means of travel to school, college or childcare (Number)	Usually resident by means of travel to work, school, college or childcare (total) (Number)
On Foot	8	0	8
Bicycle	7	1	8
Bus, minibus or coach	2	2	4
Train, DART or LUAS	3	1	4
Motorcycle or scooter	1	1	2
Car Driver	85	2	87
Car passenger	7	38	45
Van	6	0	6
Other (incl. lorry)	1	0	1
Work mainly at or from home	16	0	16
Not stated	1	2	3
Total	137	47	184

Table 6.1: 2022 Modal Shift by means of travel to work, school or college. (Electoral Division of Caherlag)

- 6.1.3 Future national targets in the range of 45% are being pursued by all Local Authorities. Given the location of the proposed development and based on the increased density of development in the wider area, a limited increase in sustainable transport is expected. A change in the local demographic to a younger population will also facilitate this change.
- 6.1.4 A future modal shift of 30% (implying an anticipated increase in public transport or active travel in the immediate area of 17%) for future year models is deemed to be reasonable. This modal shift increase of 17% will be applied to proposed development traffic from the opening year (when the development is fully completed) 2026, up to the design year 2041. It will not be applied to background network traffic.

7.0 TRAFFIC GENERATION / FORECASTING

- 7.1.1 This section describes the traffic generation from the development as outlined in Section 5 and accounts for future modal shift targets as described in Section 6.
- 7.1.2 Based on the above trip generation rates the following table presents residential development traffic for future years based on the proposed scheme, Scenario 1. This traffic has been added to existing background flows and distributed through the network to model each of the identified junctions. The results are presented in Section 9 of this report. The total amount of units in the proposed scheme is 172 residential units.

Full Development		AM PEAK		PM PEAK		
		Arrivals	Departures	Arrivals	Departures	
New Residential Units Trip Generation - based on TRICs database						
170	Peak Trips Trip Rates Per Unit	0.133	0.552	0.448	0.248	
	Peak Trips No. Units	23	94	76	42	
	TOTAL	116		118		
	Calculating modal shift increase from 13.00% to 30%					
	Factor for increase to 30% modal split	0.80				
	Peak Trips No. Units	18	76	61	34	
TOTAL w/ modal shift	94		95			
Creche Trip Generation - based on TRICs database						
2.56	Peak Trips Trip Rates Per 100sqm	3.942	2.426	2.805	2.246	
	Peak Trips No. Units	10	6	7	6	
	TOTAL	16		13		
	Internal trip reductions					
	New traffic generated %	0.20				
	Peak Trips No. Units	3	1	1	1	
TOTAL w/ reductions	4		3			
Trip Generation		AM PEAK		PM PEAK		
Commercial Trip Generation - based on TRICs database						
311	Peak Trips Trip Rates Per 100sqm	1.143	0.254	3.746	4.381	
	Peak Trips No. Units	4	1	12	14	
	TOTAL	4		25		
	Peak Trips TOTAL	25	78	74	49	
TOTAL		103		123		

Table 7.1 Proposed Development Traffic in 2026 (Scenario 1)

7.1.3 As requested in the opinion issued from Cork County Council a masterplan for the entire LI-X-01 lands was developed and is presented in Figure 7.1.

LAND ZONED LI-X-01 HIGH LEVEL DEVELOPMENT FRAMEWORK

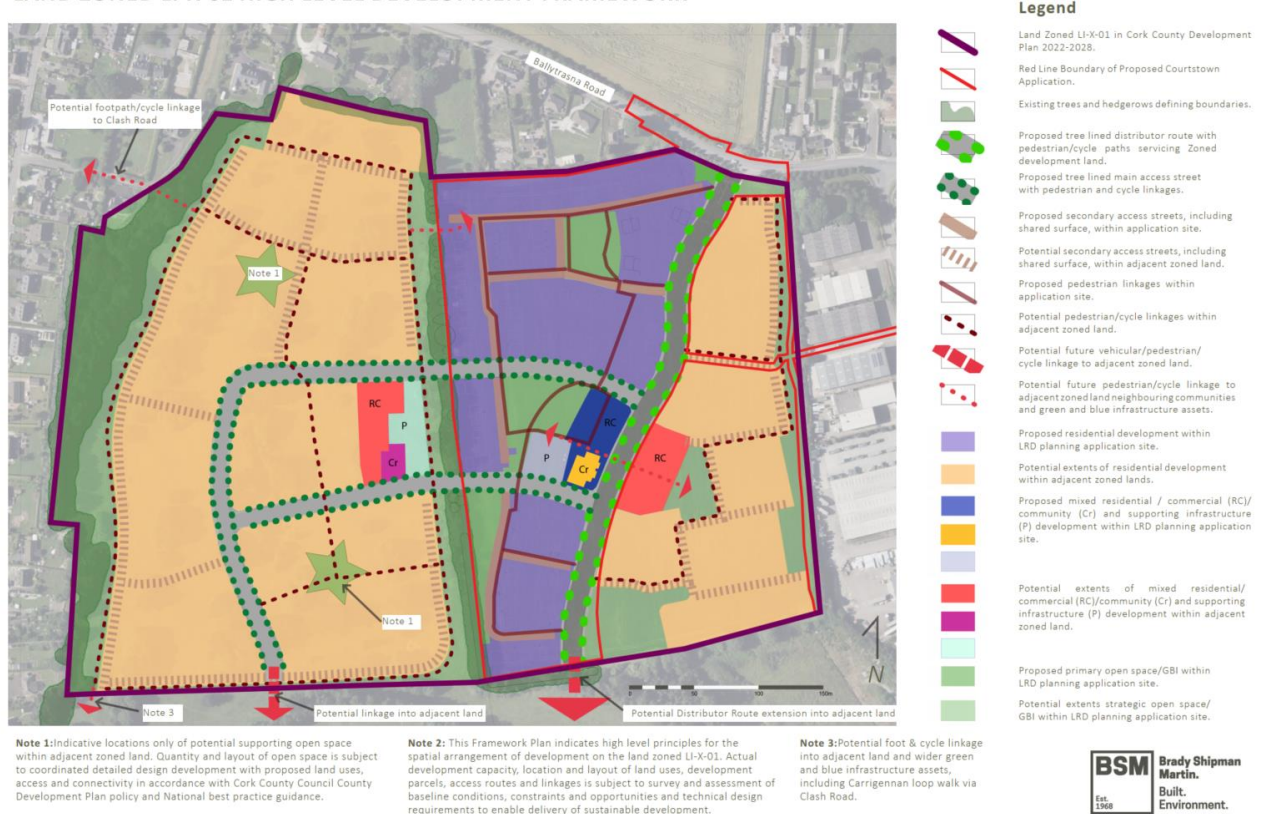


Figure 7.1, Masterplan of LI-X-01

7.1.4 Based on an architectural assessment the following additional development is anticipated on the remaining lands within the zoned area.

6835 Framework - Development Capacity (Background Information)			
Scally Land: High Level Approximate - See Development Capacity Plan			
	Area (Ha)	Area (Ha)	% of Site
Gross Site	12.610		
GBI - Strategic	2.970		23.55
Main Access Loop/Link	0.846		6.71
Excluded Items	3.816		30.26
Net Developable Area		8.794	69.74
Commercial/Community	0.395		4.49
Residential	8.400		95.52
Assume portion of additional Open Space (Exclude from Resi)	0.180		2.05
Residential Net	8.220		93.47
	Units per Ha. No. Units		
Resi Development Density/Units	35	288	Average applied across the site

Figure 7.2, Estimated Quantum of additional development (Scenario 2)

7.1.5 Table 7.2 presents the expected additional traffic that will ultimately be generated by a fully developed LI-X-01 site. This additional traffic was added to the proposed development traffic to generate matrices for each of the impacted junctions, the results which are presented as Scenario 2.

Full Development		AM PEAK		PM PEAK		
		Arrivals	Departures	Arrivals	Departures	
New Residential Units Trip Generation - based on TRICs database						
288	Peak Trips Trip Rates Per Unit	0.133	0.552	0.448	0.248	
	Peak Trips No. Units	38	159	129	71	
	TOTAL	197		200		
	Calculating modal shift increase from 13.00% to 30%					
	Factor for increase to 30% modal split	0.80				
Peak Trips No. Units	31	128	104	57		
TOTAL w/ modal shift	159		161			
Creche Trip Generation - based on TRICs database						
3.90	Peak Trips Trip Rates Per 100sqm	3.942	2.426	2.805	2.246	
	Peak Trips No. Units	15	9	11	9	
	TOTAL	25		20		
	Internal trip reductions					
	New traffic generated %	0.20				
Peak Trips No. Units	4	2	2	2		
TOTAL w/ reductions	6		4			
Trip Generation		AM PEAK		PM PEAK		
Commercial Trip Generation - based on TRICs database						
580	Peak Trips Trip Rates Per 100sqm	1.143	0.254	3.746	4.381	
	Peak Trips No. Units	7	1	22	25	
	TOTAL	8		47		
	Peak Trips	41	131	128	85	
	TOTAL	173		212		

Table 7.2 Future Year Traffic Generation from additional lands (Scenario 2)

7.1.6 It should be noted that the traffic volumes relating to the proposed creche (Scenario 1 and Scenario 2) used in the assessment was assumed to be 80% from within the residential development and the remaining 20% of trips will be modelled from external sources.

7.1.7 In addition to development traffic, recorded background traffic was factored using TII (Transport Infrastructure Ireland) Project Appraisal Guidelines (PE-PAG-02017) for use in future year scenarios. The following table presents the factors used on recorded vehicle counts based on Link Based Growth Rates (Central Growth) for the Cork Metropolitan Area.

		Cars/LGV	HGV	Combined
Count %		95%	5%	100%
2024	to 2026	1.038	1.077	1.040
2024	to 2031	1.140	1.298	1.148
2024	to 2041	1.217	1.438	1.228

TII Project Appraisal Guidelines for National Roads Unit 5.3
Travel Demand Projections (PE-PAG-0217)

Table 7.2 Background Traffic Growth Rates Per Annum

8.0 TRIP ATTRACTION AND DISTRIBUTION

8.1.1 This section describes the methodology used in the distribution of development specific traffic onto the modelled network. **Fig 8.1** outlines the location of each of the junctions where turning count movements were recorded over a 12-hour timeframe, presented for both AM peak and PM peak. This ‘snapshot’ of existing traffic movements provides a basis for determining desire lines which can be used to assign development traffic at each of the modelled junctions.

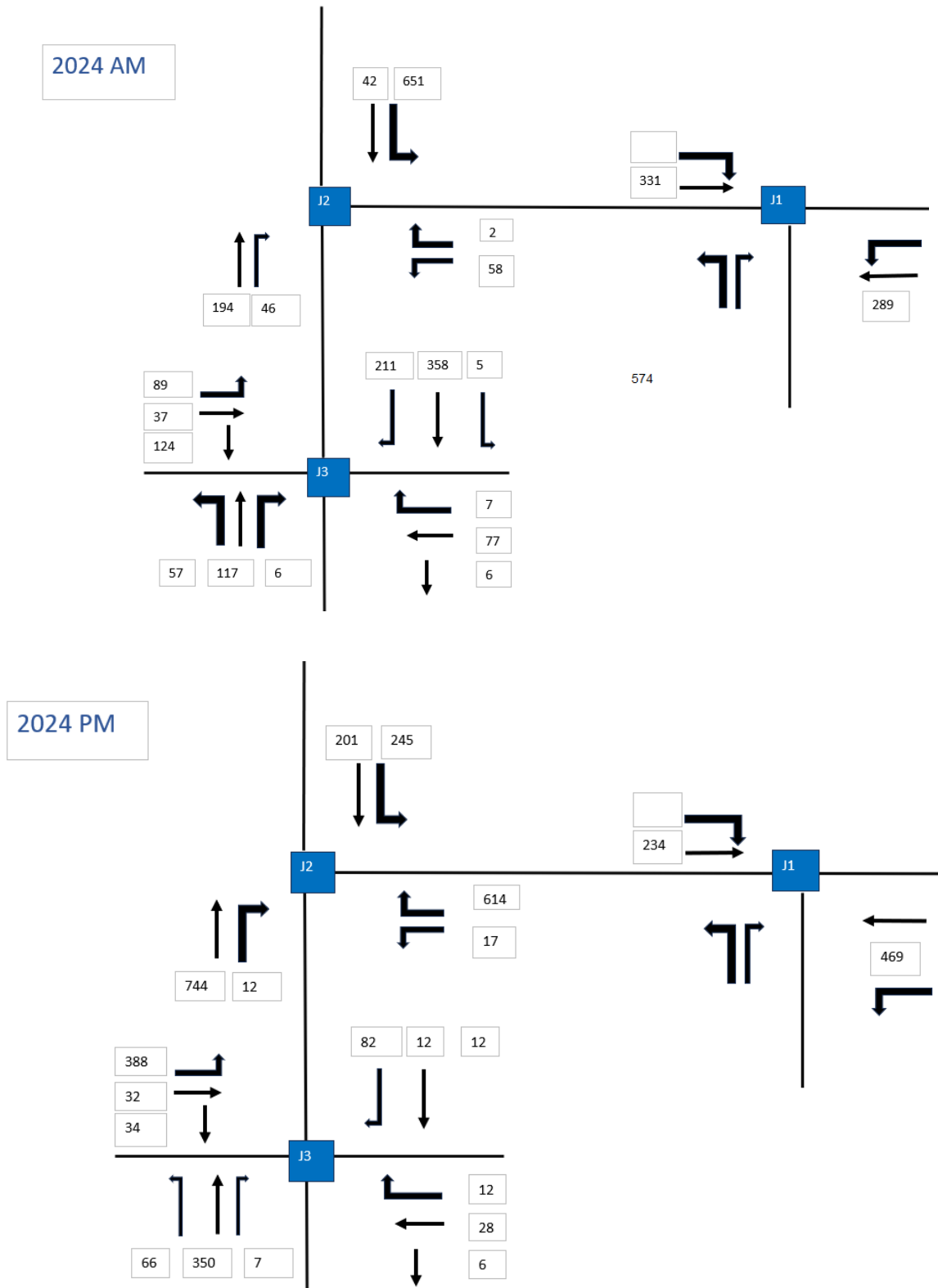


Fig 8.1: 2024 AM & PM Traffic Movements

8.1.2 The following Scenarios were assessed with traffic distributed onto the network based on recorded flows:

- 2024 AM/PM Current Scenario
- 2026 AM/PM With/Without Dev (Scenario 1)
- 2031 AM/PM With/Without Dev (Scenario 1 & Scenario 2)
- 2041 AM/PM With/Without Dev (Scenario 1 & Scenario 2)

8.1.3 Figure 8.2 presents the percentage distribution of traffic and the affected junctions for the AM & PM 2026 Scenario 1 (development traffic in red is the proposed scheme).

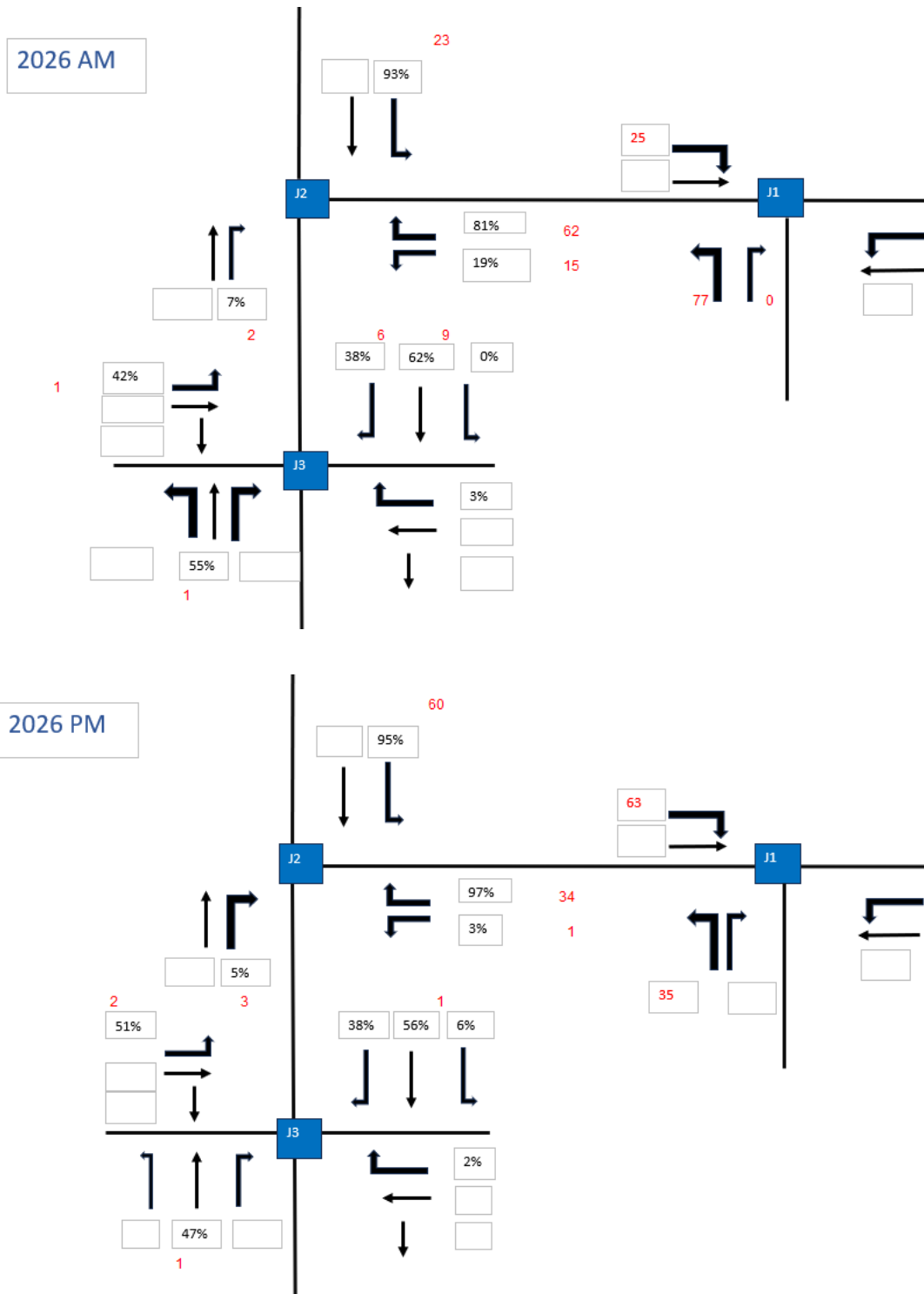


Fig 8.2: 2026 AM & PM Distribution of Development Traffic (Scenario 1)

8.1.4 Figure 8.3 presents the percentage distribution of traffic and the affected junctions for the AM & PM 2031 Scenario 2 (development traffic in red includes the proposed scheme & the Masterplan).

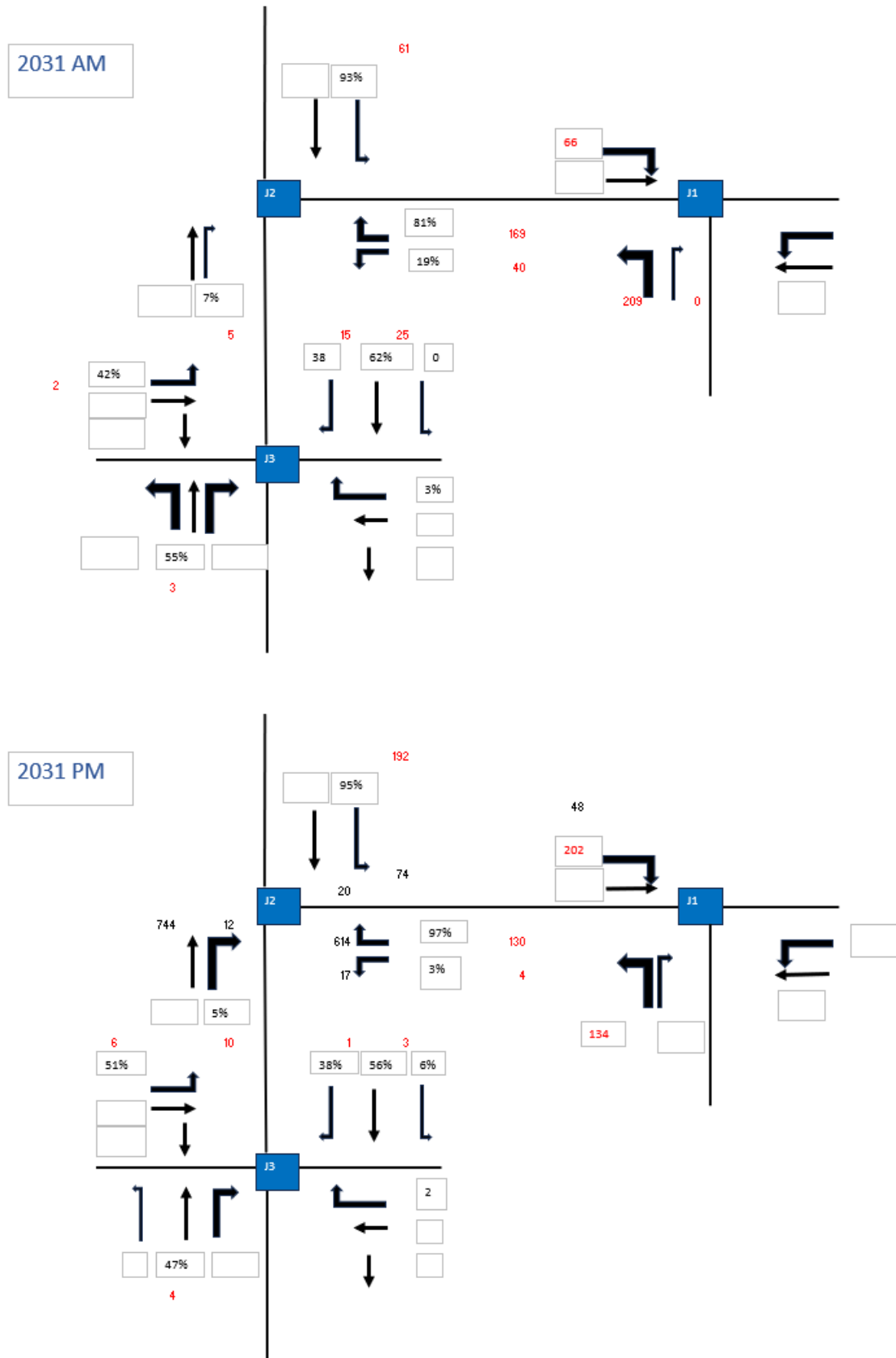


Fig 8.3: 2031 AM & PM Distribution of Development Traffic (Scenario 2)

9.0 NETWORK MODELLING RESULTS

9.1 INTRODUCTION

- 9.1.1 This section presents the results of the traffic modelling carried out on the three identified junctions (J1, J2 and J3), presented for AM/PM Peak both with/without development traffic for current and future year scenarios. The complete results sheets of the generated models are provided as an appendix (Appendix A).
- 9.1.2 The LinSig modelling software produces a PRC % (Practical Reserve Capacity) and a Delay figure which are used to compare the effects the development will have on the junction being modelled. A PRC of 10% implies that the junction has reached capacity but is still operational with delay incurred. The delay figure produced (pcuHr) is a measure of the overall delay incurred on all arms of the junction and is based on the Demand Flow per arm multiplied by the Average Delay per PCU.

9.2 Junction 1: *Proposed Development Access (Signal controlled junction)*

- 9.2.1 The Linsig results for the junction with development traffic is presented in **Table 9.1** below.
- 9.2.2 The results indicate that the junction will operate within capacity for both AM & PM peak up to and including the design year 2041. Future year results (2031 & 2041) include a fully developed masterplan within the LI-X-01 lands. The initial cycle time used to assess the junction was 60secs increasing to 90secs for the design year 2041.

2026							
Site	Scenario	MAX. DOS		MAX. QUEUE (PCU)		AVERAGE Delay	
		AM	PM	AM	PM	AM	PM
Proposed Site Entry Right Left	Without Development	0	0	0	0	0	0
	With Development	29.8	13.5	1.4	0.6	33	31
2031							
Site	Scenario	MAX. DOS		MAX. QUEUE (PCU)		AVERAGE Delay	
		AM	PM	AM	PM	AM	PM
Proposed Site Entry Right Left	Without Development	0	0	0	0	0	0
	With Development	80.4	69.6	5.3	4	58	72.8
2041							
Site	Scenario	MAX. DOS		MAX. QUEUE (PCU)		AVERAGE Delay	
		AM	PM	AM	PM	AM	PM
Proposed Site Entry Right Left	Without Development	0	0	0	0	0	0
	With Development	80.4	69.6	5.3	4	58	72.8

Table 9.1: Junction 1: Proposed Entrance

9.3 Junction 2: R623 & Ballytrasna Park Road

- 9.3.1 The Linsig results for Junction 2 are presented in the following tables.
- 9.3.2 The current year (2024) results, Table 9.2, are representative of how the junction currently operates during peak periods. This is borne out in terms of average measured queue lengths and observed delay recorded as part of the data collection process. The constructed model is deemed to be fit for purpose.
- 9.3.3 Table 9.3 presents the results of the traffic modelling carried out on the current junction both with and without traffic for Opening Year (2026), Base Year (2031) and the Design Year (2041), Scenario 1.
- 9.3.4 The results indicate that the junction currently operates close to capacity at peak periods. In future years the capacity of the junction deteriorates both with/without development traffic. The PM peak is seen to operate with the highest level of delay on the southern approach.

2024						
Baseline Year Junction Capacity Analysis						
Site	Max DOS		Max Queue (pcu)		Average Delay	
	AM	PM	AM	PM	AM	PM
R623 Little Island Road (N) Entry Left Ahead	86.2	49.2	15.2	4.4	21.6	17.6
Courtstown Road Entry Right Left	75.5	86.5	5.8	12.7	55.1	47.4
R623 Little Island Road (S) Entry Ahead Right	29.7	87.9	2.5	21	17.7	40.1

Table 9.2: Junction 2: R623/Ballytrasna Park Road

2026							
Site	Scenario	MAX. DOS		MAX. QUEUE (PCU)		AVERAGE Delay	
		AM	PM	AM	PM	AM	PM
R623 Little Island Road (N) Entry Left Ahead	Without Development	88	49.6	17.8	5.2	23	17.9
	With Development	92	54.8	21.6	5.5	29	17.8
Courtstown Road Entry Right Left	Without Development	80.2	88.2	6.5	17.5	61	53.7
	With Development	82.3	93.2	7.8	22.5	58.3	64
R623 Little Island Road (S) Entry Ahead Right	Without Development	32	87.6	2.6	25.6	18.1	43.1
	With Development	33.3	91.4	2.7	27.7	19.2	51.3

2031							
Site	Scenario	MAX. DOS		MAX. QUEUE (PCU)		AVERAGE Delay	
		AM	PM	AM	PM	AM	PM
R623 Little Island Road (N) Entry Left Ahead	Without Development	91.1	57.5	27.6	6.5	25.9	2.9
	With Development	95.9	62.2	35.4	6.8	13.6	20
Courtstown Road Entry Right Left	Without Development	88.8	102.5	9.5	43.1	83.4	27.4
	With Development	94	105.2	13.1	52.9	11.3	169.6
R623 Little Island Road (S) Entry Ahead Right	Without Development	43	101.5	3.2	48.7	21	27.3
	With Development	44.5	103.7	3.4	55.9	1.7	143.6

2041							
Site	Scenario	MAX. DOS		MAX. QUEUE (PCU)		AVERAGE Delay	
		AM	PM	AM	PM	AM	PM
R623 Little Island Road (N) Entry Left Ahead	Without Development	96.4	61.5	42	7.8	40	21.2
	With Development	100.9	66.3	60.3	8.3	75.8	21
Courtstown Road Entry Right Left	Without Development	93.7	110.3	12.2	69.7	102.2	243.9
	With Development	1001.9	116.3	23.4	93.8	156	335.2
R623 Little Island Road (S) Entry Ahead Right	Without Development	49.4	108.6	3.6	77.2	23.1	215
	With Development	51.1	110.9	3.9	86.3	24.8	251.4

Table 9.3: Junction 2: R623/Ballytrasna Park Road With/Without Development (Scenario 1)

9.3.5 Table 9.4 presents the results of Scenario 2, fully developed Masterplan for LI-X-01, for Junction 2. Only 2031 and 2041 results are presented.

2031							
Approach	Scenario	MAX. DOS		MAX. QUEUE (PCU)		AVERAGE Delay (s/pcu)	
		AM	PM	AM	PM	AM	PM
R623 Little Island Road (N) Entry Left Ahead	With Development	101.1	62.5	57.1	6.6	78.2	19.1
Courtstown Road Entry Right Left	With Development	104.6	104.1	34.8	50.4	176.8	151.9
R623 Little Island Road (S) Entry Ahead Right	With Development	49.8	103.1	3.8	53.2	26.1	134

2041							
Approach	Scenario	MAX. DOS		MAX. QUEUE (PCU)		AVERAGE Delay (s/pcu)	
		AM	PM	AM	PM	AM	PM
R623 Little Island Road (N) Entry Left Ahead	With Development	106.6	65.4	90.3	7.7	157.3	19.4
Courtstown Road Entry Right Left	With Development	115.1	116.1	60.9	92.7	323.6	323.8
R623 Little Island Road (S) Entry Ahead Right	With Development	52.4	108.2	4.1	75.3	26	208.3

Table 9.4: Junction 2: R623/Ballytrasna Park Road With/Without Development (Scenario 2)

9.3.6 Table 9.5 presents the results of Scenario 2, fully developed Masterplan for LI-X-01, with the LITS (Little Island Transport Study) interventions in place for junction 2. This scenario allows for a dedicated bus lane, creating a 4-way cross-roads junction to travel east/west through Junction 2.

2031							
Approach	Scenario	MAX. DOS		MAX. QUEUE (PCU)		AVERAGE Delay (s/pcu)	
		AM	PM	AM	PM	AM	PM
R623 Little Island Road (N) Entry Left Ahead	Without Development	72	27.1	12.9	3.1	15	8.2
	With Development	77.9	34.2	15.2	4.1	17.2	8.8
Ballytrasna Road Exit	Without Development	41.9	15.8	0.4	0.1	1.6	1.1
	With Development	45.3	19.7	0.4	0.1	1.7	1.2
Ballytrasna Road Entry Right Left	Without Development	71.8	116.4	12.5	84.3	54.4	336.1
	With Development	89.5	124.3	0.2	111.5	63.6	438.2
R623 Little Island Road (S) Entry Ahead Right	Without Development	57.2	106	5.8	63.8	36.3	181.4
	With Development	62.3	106.4	6.8	65.2	43.3	186.8

2041							
Approach	Scenario	MAX. DOS		MAX. QUEUE (PCU)		AVERAGE Delay (s/pcu)	
		AM	PM	AM	PM	AM	PM
R623 Little Island Road (N) Entry Left Ahead	Without Development	79	29	14.9	3.3	18.1	8.4
	With Development	82.9	36.1	17.6	4.4	19.9	9
Ballytrasna Road Exit	Without Development	44.7	16.8	0.4	0.1	1.7	1.1
	With Development	48.1	20.8	0.5	0.1	1.8	1.2
Ballytrasna Road Entry Right Left	Without Development	78.5	130.8	13.5	127.9	58	516.3
	With Development	93.4	139.1	25.3	156.7	74.2	609
R623 Little Island Road (S) Entry Ahead Right	Without Development	58	109	6.1	79.2	35.3	225.1
	With Development	65.6	109.4	7.5	80.8	44.3	230.5

Table 9.5: Junction 2: R623/Ballytrasna Park Road With/Without Development (Scenario 2) LITS

9.4 Junction 3: Island Cross Junction

- 9.3.1 A review of the expected increase in traffic flows on this junction directly attributed to the proposed development and Masterplan Area (LI-X-01) indicates that development traffic will contribute significantly less than the 5% threshold to warrant an assessment. This is borne out in the traffic distribution diagrams presented in Section 8.0 which would indicate that there would be little difference between the with/without scenarios.

Existing traffic distribution at Junction 3 is based on recorded flows when the Dunkettle Upgrade works were complete providing an alternative access to the Island. It is acknowledged that the nature of the proposed development (residential) is different to the current predominate use in the area (commercial/industrial) which may result in differing travel patterns in the future. It would be difficult to predict what this change would look like but is likely to be reflected in the traffic modelling that was carried out by the LITS (Little Island Transport Study) assessment.

9.4 TRAFFIC MODELLING CONCLUSIONS

- 9.4.1 The traffic modelling results indicate that the proposed access junction serving the development (Junction 1) operates well within capacity up to and including the design year 2041. The proposed signalised 'T' junction operates with the full development of the LI-X-01 lands.

Analysis of Junction 2: R623 and Ballytrasna Park Road shows that the junction currently operates within capacity but with some delay on approaches primarily during the PM peak. For future year scenarios, the results indicate that during AM Peak the junction will reach capacity in the design year 2031 and degrade both with and without development traffic up to the design year 2041. Following the introduction of a longer signal cycle time of 120 seconds the effects are minimised, but the junction still continues to exceed capacity and degrade for both scenarios with/without development.

The LITS (Dedicated Bus Route) impact on Junction 2 was assessed for the proposed development and the fully completed Masterplan Area. Evident is that the junction will reduce in capacity as expected and that delay for motorists will increase. The Bus route will operate with dedicated bus lanes and will be free-flow.

10.0 CUMULATIVE IMPACT

- 10.1.1 As outlined in **Section 7.0** of this report, industry standard growth rates have been applied to background traffic for future year assessments (to account for further development within the area). These growth rates make allowance for modal shift targets as set by national policy but do not take account of site-specific measures that may be implemented to mitigate against traffic generation from a particular development. In this instance the development of strategic transport corridors in-line with the CMATS study and Bus Connects. A modest increase in modal shift from the recorded 18.3% level (2022 census) to 30% for future years has been applied. The 30% figure falls well short of the national target of 45% implying that the analysis presented is robust.

11.0 ROAD SAFETY

- 11.1.1 Existing Road Network Safety

The Ballytrasna Park Road adjacent to the site operates at a 50kph speed limit and comprises a wide 6.0m carriageway. There are no cycle lane facilities on this stretch of road but there is a pedestrian footpath which connects the site entrance with junction 1 and further afield. This pedestrian footpath can be seen in **Figure 11.1**.



Figure 11.1: Existing Footpath at Site Entrance

11.1.2 Road Collision Database

A review of the RSA Road Collision Statistics was undertaken for the area in the vicinity of the applicants' site.

1 serious collision occurred in the wider area road network over the available 11-year period as shown in **Figure 11.2**. This collision involved one goods vehicle and a pedestrian in 2015 on a Wednesday morning. There have also been a number of minor incidents in the wider road network.

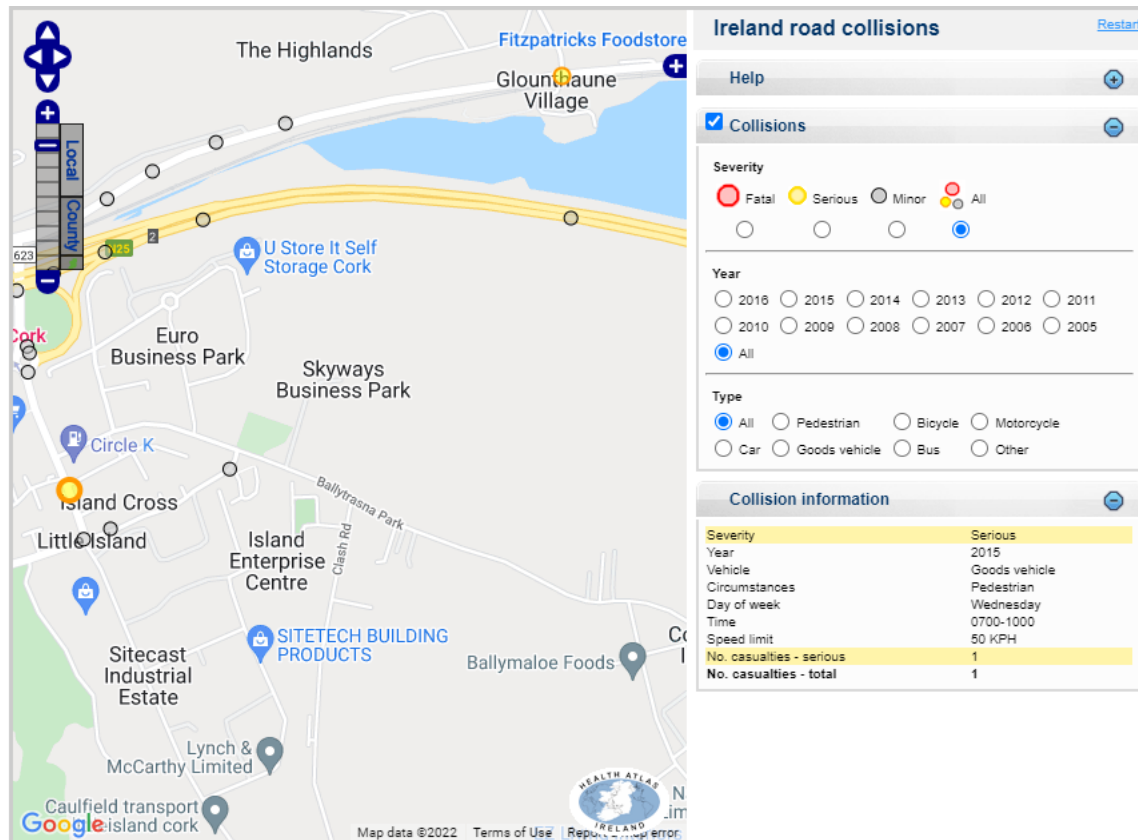


Fig 11.2: Collision statistics for Roads in the vicinity of the site

12.0 ENVIRONMENTAL IMPACT

- 12.1 The proposed development has been designed in accordance with the principles of DMURS (Design Manual for Urban Roads and Streets) with all internal roads having a gradient of not greater than 5% and good pedestrian connectivity throughout.
- 12.2 The close proximity to proposed public transport facilities, via connection to the existing footpath network and proposed links, in conjunction with the continued development of the Strategic Transport Corridors, should result in the scheme moving closer to the target modal split as set out by Government (45%).
- 12.3 The construction stage of the scheme proposes to re-use / relocate the bulk of the excavation within the site implying that there will be a significant reduction in construction traffic generated to and from the site over and above a site where importation or exportation of earthworks is required. This will minimise the impact the development will have on the existing roads network during this period.

13.0 INTERNAL LAYOUT & PARKING PROVISION

- 13.1 **Fig 4.1.2** presents the proposed layout which includes the provision of on-street and own curtilage parking, shared cycle/footpaths, pedestrian/cycle permeability throughout the site on designated off-road routes, and a raised shared surface serving as a speed control measure.
- 13.2 Parking is provided in accordance with the Development Plan and is suitably located on site.

14.0 PUBLIC TRANSPORT

- 14.1 There is currently no public transport offering passing adjacent to the site. However, bus stops are present on the R623 which is a 15-minute walk from the proposed site. The Little Island train station is also 23-minute walk from the site entrance.
- 14.2 The Cork Metropolitan Area Transport Strategy 2041 (CMATS) proposes significant improvements to the public transport facilities over and above what is currently available. With the provision of these facilities and other incentives as part of national policy, it is anticipated that a shift to public transport will occur over the construction phase of this scheme. CMATS has provided more certainty for the delivery of these enhancements. The Development Plan states that is an objective of the plan to *Support the achievement of **high levels of modal shift** by collaborating with other agencies to improve public transport services and influence patterns of employment development to support use of sustainable modes and travel by public transport*".

15.0 ACCESSIBILITY AND INTEGRATION

- 15.1 A desktop assessment of permeability for cyclists and pedestrians from the site was carried out. Presented in the following isochrone maps are the range of distances, for both pedestrians and cyclists, based on travel time. Pedestrians have the benefit of footpaths, but cyclists are required to use the existing regional roads and share with other vehicles.

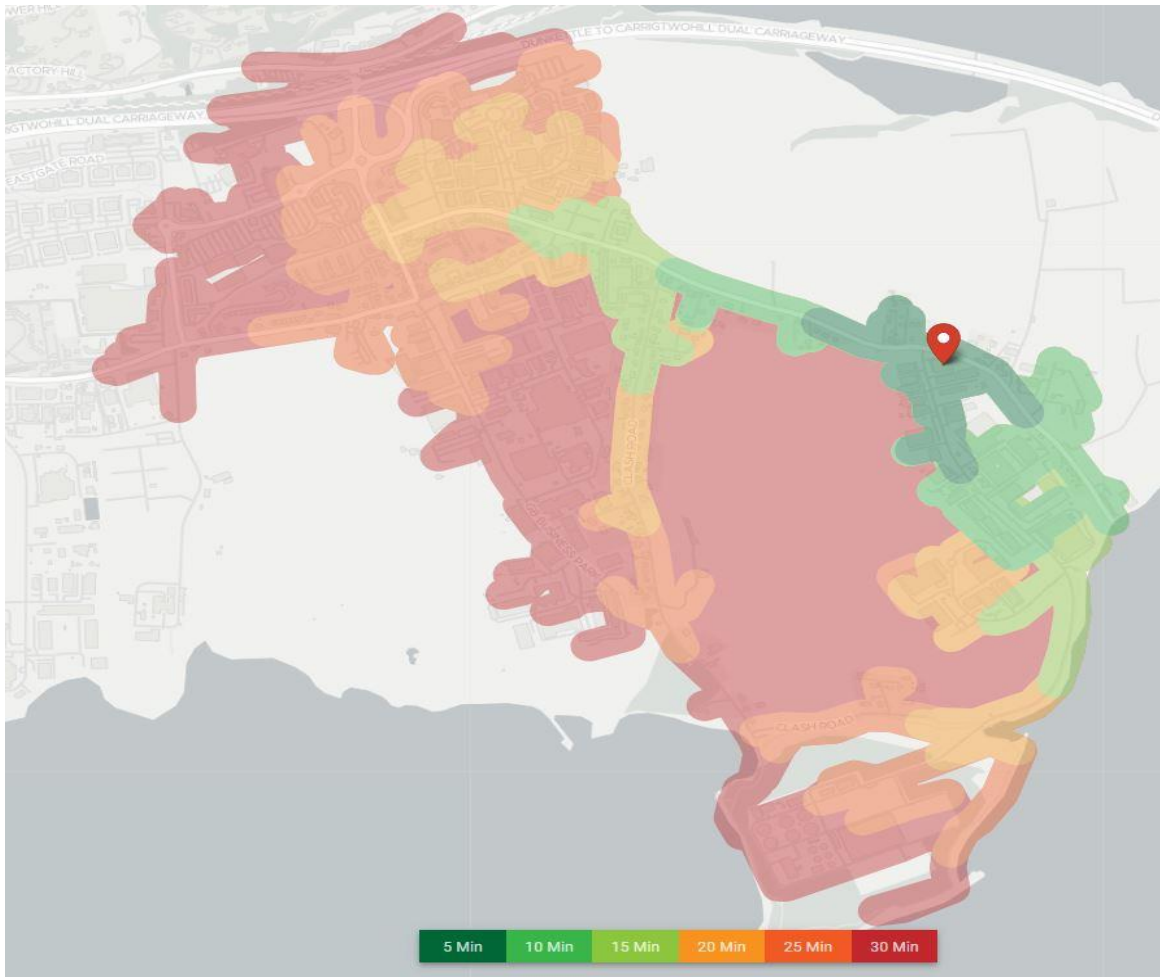


Fig 15.1: Proposed Development: Walking distance to local area

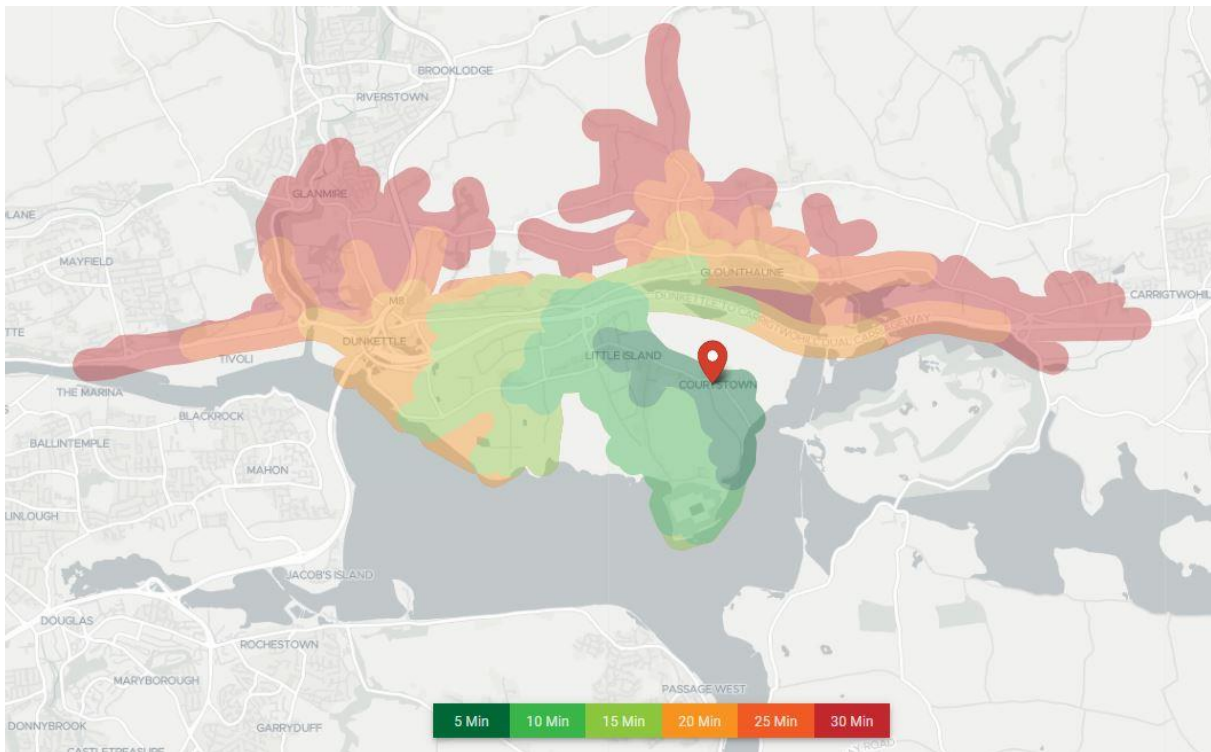


Fig 15.2: Proposed Development: Cycle distance to local area

- 15.2 Within 10 mins walk time from the site entrance on Ballytrasna Park Road encompasses the Local Church, and harbour point business park.

Within the 15 mins walk time you have the euro business park, bus stop, (210 & 211) and Circle K.

The 20-30 mins walking range includes Eastgate business park, the little island train station, Radisson Blue hotel & spa, a pharmacy, Spar and Cork Golf club..

Evident is the range of services within 'normal' walking distance (taken as 20 mins at moderate pace equating to 5.0 km/hr) of the site.

- 15.3 The cycle range presented relates to the average distance travelled in a specific time (16-19 kmh). Blarney and Ballincollig both fall within the 20 min category based on unrestricted flow through junctions.

Note: The travel speed used is on the low side, an experienced cyclist would have a 26-30kph average

16.0 ACCESS FOR PEOPLE WITH DISABILITIES

- 16.1 The internal layout of the development is designed to accommodate all road users and will adhere to national guidelines regarding people with disabilities. Proposed works to the public realm in the vicinity of the site will benefit all users both existing and future.

17.0 MOBILITY MANAGEMENT PLAN (SUSTAINABLE ACCESS STRATEGY)

- 17.1 A 'Mobility Management Plan/Travel Plan' is a strategy for managing multi-modal access to a site or development, focusing on promoting access by sustainable modes. The objective of national and local policy is to reduce reliance on the car for travel. Inducements and encouragement should be applied in order to influence change, and this can be achieved through the delivery of 'Mobility Management Plans'.

- 17.2 A mobility management plan relating to a residential development would form part of the sales/promotion package presented to would-be purchasers and would highlight the proximity of local services, public transport provision, schools and walking/cycle distances to same. The proposed 'hard measures', as outlined below, that will facilitate safer pedestrian, cycle and public bus access will be provided as part of the application and will be further complimented by scheduled Local Authority Works (CMATS) and Bus Connects.

- 17.3 An overview of the sustainable infrastructure proposed is as follows:

- Connection to existing pedestrian footpath network providing linkage to public schools, retail, and sporting destinations.
- Car parking provision within the site is as per County Council guidelines. While there is abundant space for cars on site, modes of active travel will be greatly encouraged through the sites proximity to public transport options.

18.0 REFERENCES

- National Roads Authority (May 2014) Traffic and Transport Assessment Guidelines NRA, Dublin
- Institution of Highways & Transportation (1994) Guidelines for Traffic Impact Assessment IHT, London
- National Roads Authority (2000) Road Geometry Handbook NRA, Dublin
- National Roads Authority (revised 2003) Design Manual For Roads and Bridges NRA, Dublin
- National Roads Authority (November 2004) Draft Traffic and Transport Assessment Guidelines NRA, Dublin
- RSA Ireland Road Collisions
<http://www.rsa.ie/RSA/Road-Safety/Our-Research/Ireland-Road-Collisions/>

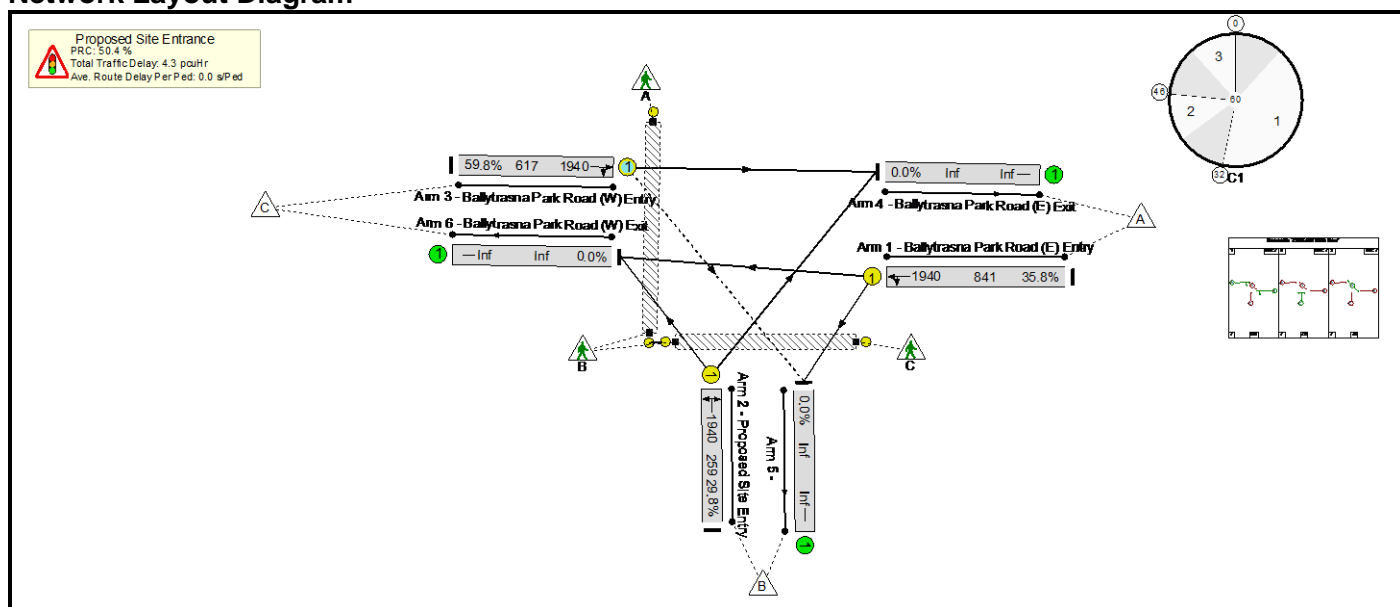
APPENDIX A: TRAFFIC MODEL OUTPUTS – LINSIG

Basic Results Summary
Basic Results Summary

User and Project Details

Project:	Residential Development Courtstown Little Island
Title:	Courtstown
Location:	Little Island
Client:	Ruden Homes Ltd.
Additional detail:	
File name:	Junction 1 Development 2024.lsg3x
Author:	D. Archer
Company:	MHL & Associates
Address:	

Scenario 1: '2026 AM With Dev' (FG1: '2026 AM With Development', Plan 1: 'Network Control Plan 1')
Network Layout Diagram



Basic Results Summary

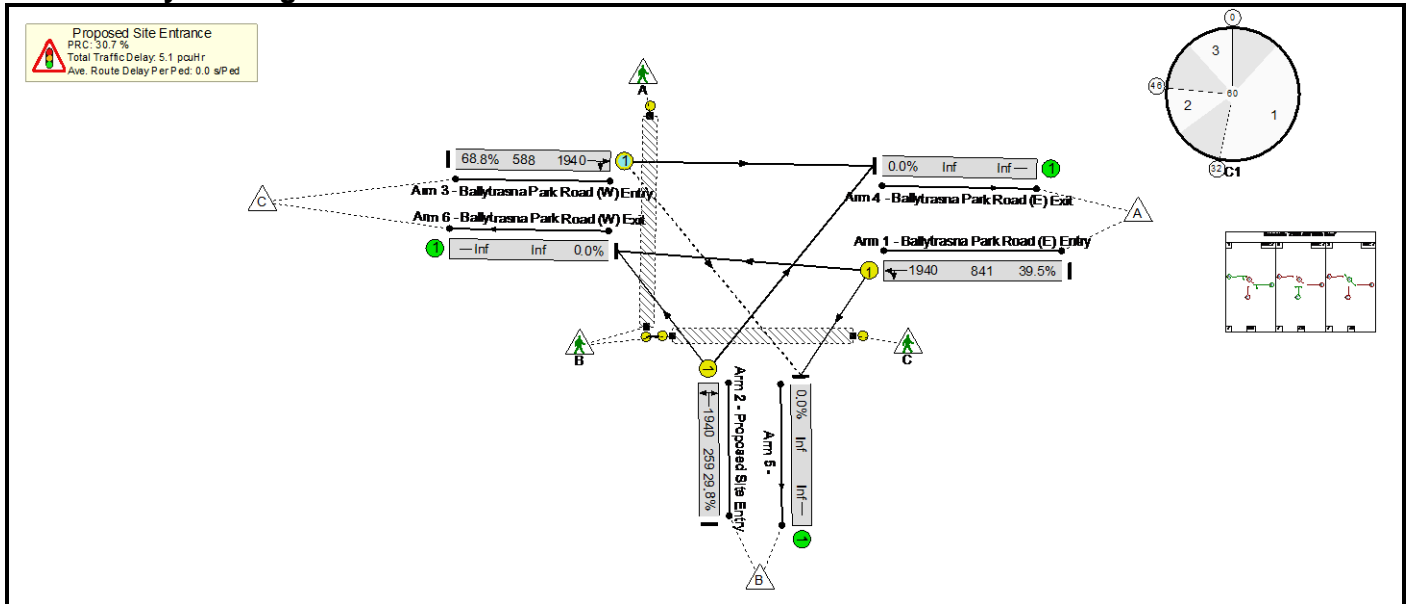
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)					
Network: Courtstown	-	-	-		-	-	-	-	-	-	59.8%	21	4	0	4.3	-	-					
Proposed Site Entrance	-	-	-		-	-	-	-	-	-	59.8%	21	4	0	4.3	-	-					
1/1	Ballytrasna Park Road (E) Entry Left Ahead	U	B		1	25	-	301	1940	841	35.8%	-	-	-	1.2	14.7	3.6					
2/1	Proposed Site Entry Right Left	U	C		1	7	-	77	1940	259	29.8%	-	-	-	0.7	33.4	1.4					
3/1	Ballytrasna Park Road (W) Entry Ahead Right	O	A		1	25	-	369	1940	617	59.8%	21	4	0	2.3	22.8	5.8					
Ped Link: P1	Unnamed Ped Link	-	D		1	7	-	0	-	8400	0.0%	-	-	-	0.0	0.0	0.0					
Ped Link: P2	Unnamed Ped Link	-	D		1	7	-	0	-	8400	0.0%	-	-	-	0.0	0.0	0.0					
		C1	PRC for Signalled Lanes (%):		50.4		PRC Over All Lanes (%):		50.4		Total Delay for Signalled Lanes (pcuHr):		4.28		Total Delay Over All Lanes(pcuHr):		4.28		Cycle Time (s):		60	

Basic Results Summary

Scenario 2: '2031 AM With Dev' (FG2: '2031 AM With Development', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

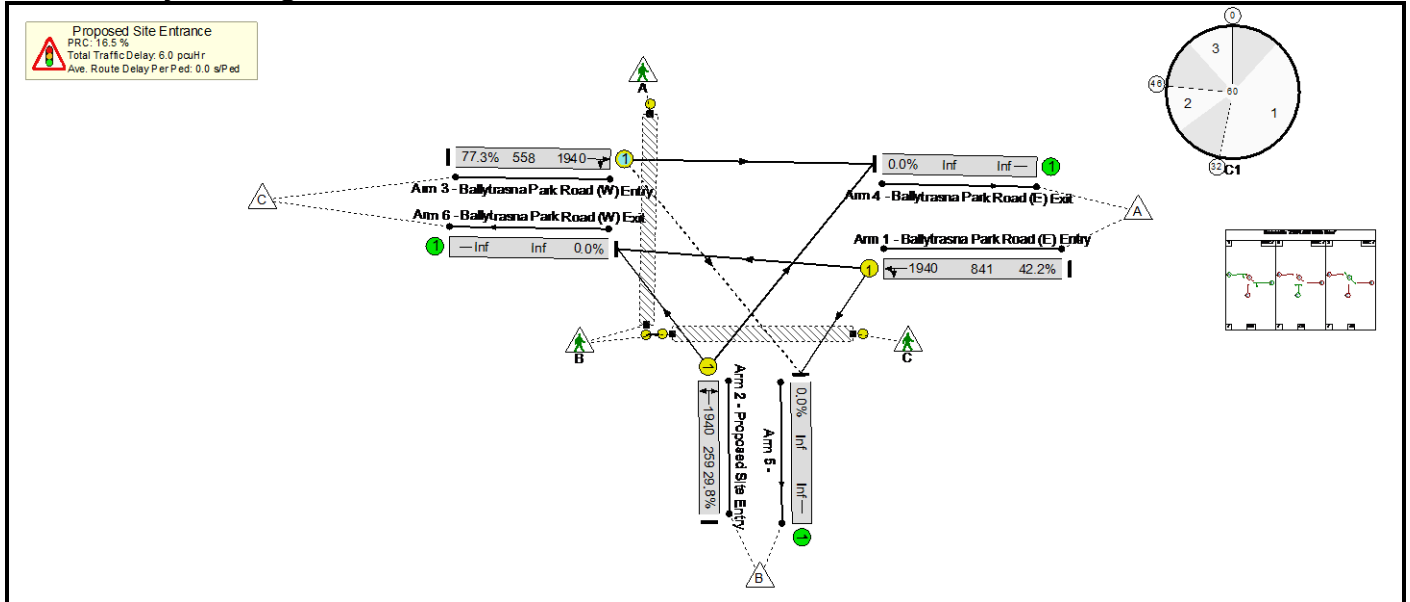
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Courtstown	-	-	-		-	-	-	-	-	-	68.8%	21	4	0	5.1	-	-
Proposed Site Entrance	-	-	-		-	-	-	-	-	-	68.8%	21	4	0	5.1	-	-
1/1	Ballytrasna Park Road (E) Entry Left Ahead	U	B		1	25	-	332	1940	841	39.5%	-	-	-	1.4	15.2	4.1
2/1	Proposed Site Entry Right Left	U	C		1	7	-	77	1940	259	29.8%	-	-	-	0.7	33.4	1.4
3/1	Ballytrasna Park Road (W) Entry Ahead Right	O	A		1	25	-	405	1940	588	68.8%	21	4	0	3.0	26.5	6.9
Ped Link: P1	Unnamed Ped Link	-	D		1	7	-	0	-	8400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	D		1	7	-	0	-	8400	0.0%	-	-	-	0.0	0.0	0.0
		C1			PRC for Signalled Lanes (%):		30.7	Total Delay for Signalled Lanes (pcuHr):				5.09	Cycle Time (s):		60		
				PRC Over All Lanes (%):		30.7		Total Delay Over All Lanes(pcuHr):				5.09					

Basic Results Summary

Scenario 3: '2041 AM With Dev' (FG3: '2041 AM With Development', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

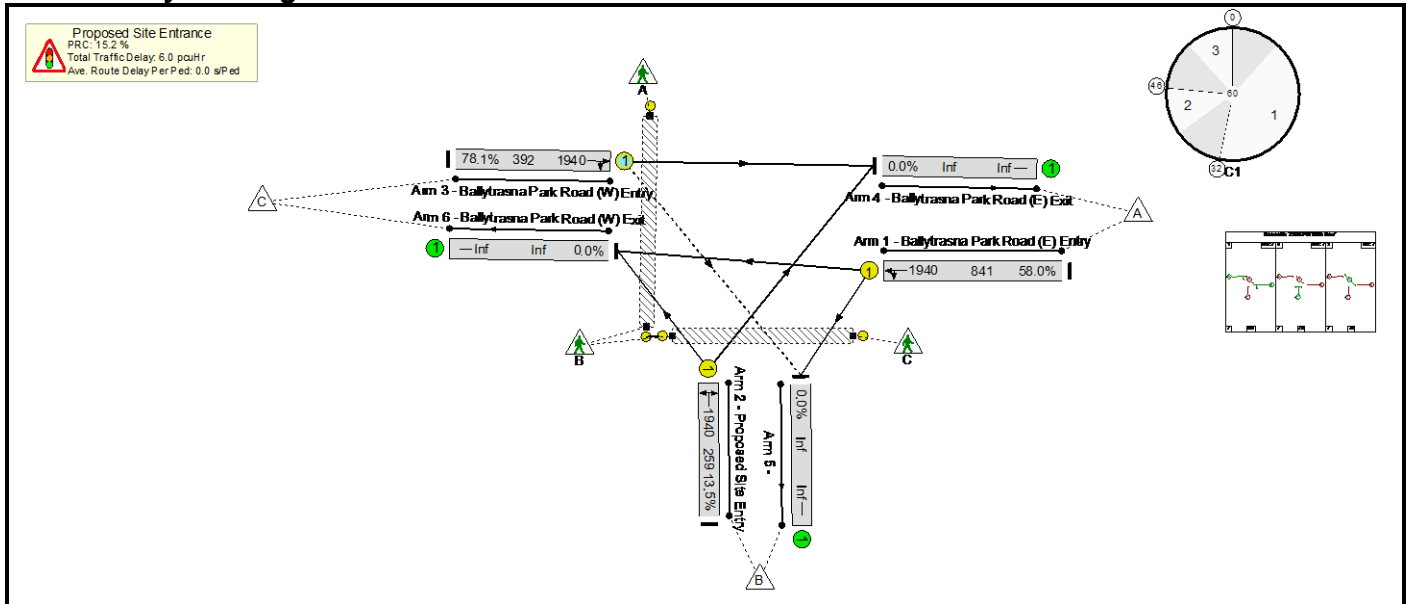
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	
Network: Courtstown	-	-	-		-	-	-	-	-	-	77.3%	21	4	0	6.0	-	-	
Proposed Site Entrance	-	-	-		-	-	-	-	-	-	77.3%	21	4	0	6.0	-	-	
1/1	Ballytrasna Park Road (E) Entry Left Ahead	U	B		1	25	-	355	1940	841	42.2%	-	-	-	1.5	15.5	4.4	
2/1	Proposed Site Entry Right Left	U	C		1	7	-	77	1940	259	29.8%	-	-	-	0.7	33.4	1.4	
3/1	Ballytrasna Park Road (W) Entry Ahead Right	O	A		1	25	-	431	1940	558	77.3%	21	4	0	3.8	31.7	8.1	
Ped Link: P1	Unnamed Ped Link	-	D		1	7	-	0	-	8400	0.0%	-	-	-	0.0	0.0	0.0	
Ped Link: P2	Unnamed Ped Link	-	D		1	7	-	0	-	8400	0.0%	-	-	-	0.0	0.0	0.0	
C1				PRC for Signalled Lanes (%):		16.5		Total Delay for Signalled Lanes (pcuHr):				6.04		Cycle Time (s): 60				
				PRC Over All Lanes (%):		16.5		Total Delay Over All Lanes(pcuHr):				6.04						

Basic Results Summary

Scenario 4: '2026 PM With Dev' (FG4: '2026 PM With Development', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

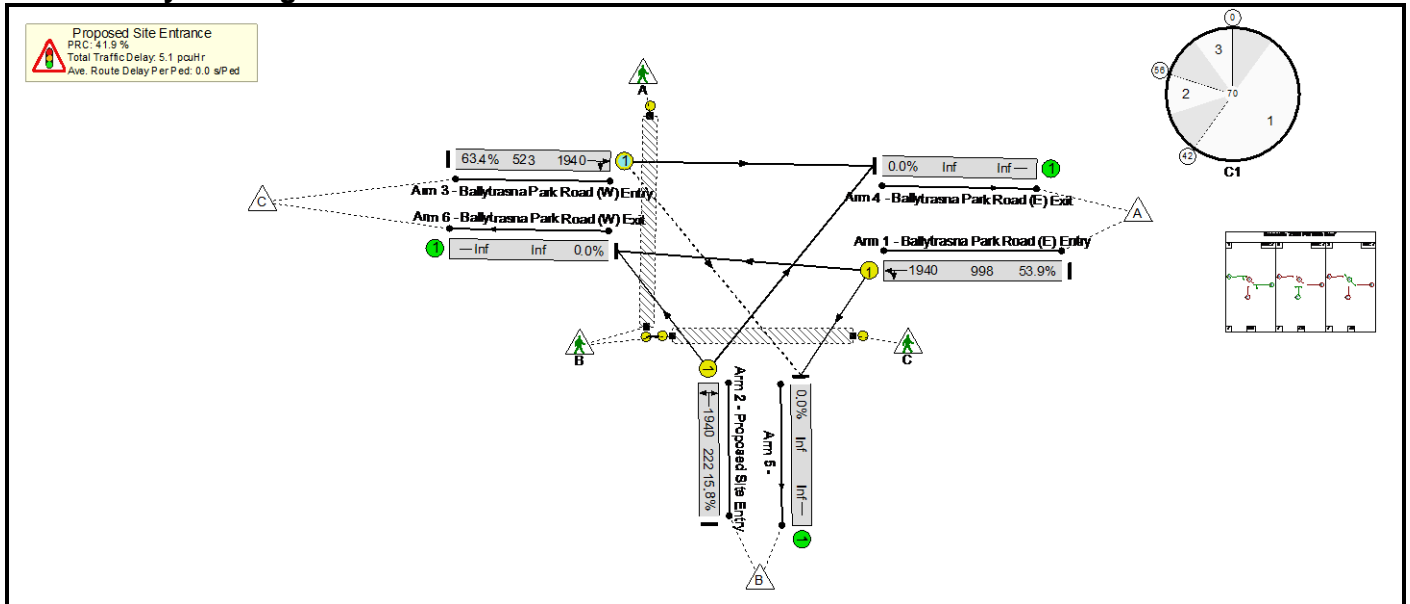
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Courtstown	-	-	-		-	-	-	-	-	-	78.1%	50	13	0	6.0	-	-
Proposed Site Entrance	-	-	-		-	-	-	-	-	-	78.1%	50	13	0	6.0	-	-
1/1	Ballytrasna Park Road (E) Entry Left Ahead	U	B		1	25	-	488	1940	841	58.0%	-	-	-	2.4	18.0	6.8
2/1	Proposed Site Entry Right Left	U	C		1	7	-	35	1940	259	13.5%	-	-	-	0.3	31.0	0.6
3/1	Ballytrasna Park Road (W) Entry Ahead Right	O	A		1	25	-	306	1940	392	78.1%	50	13	0	3.3	38.8	6.4
Ped Link: P1	Unnamed Ped Link	-	D		1	7	-	0	-	8400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	D		1	7	-	0	-	8400	0.0%	-	-	-	0.0	0.0	0.0
				C1	PRC for Signalled Lanes (%):		15.2	Total Delay for Signalled Lanes (pcuHr):				6.03	Cycle Time (s):		60		
					PRC Over All Lanes (%):		15.2	Total Delay Over All Lanes(pcuHr):				6.03					

Basic Results Summary

Scenario 5: '2031 PM With Dev' (FG5: '2031 PM With Development', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

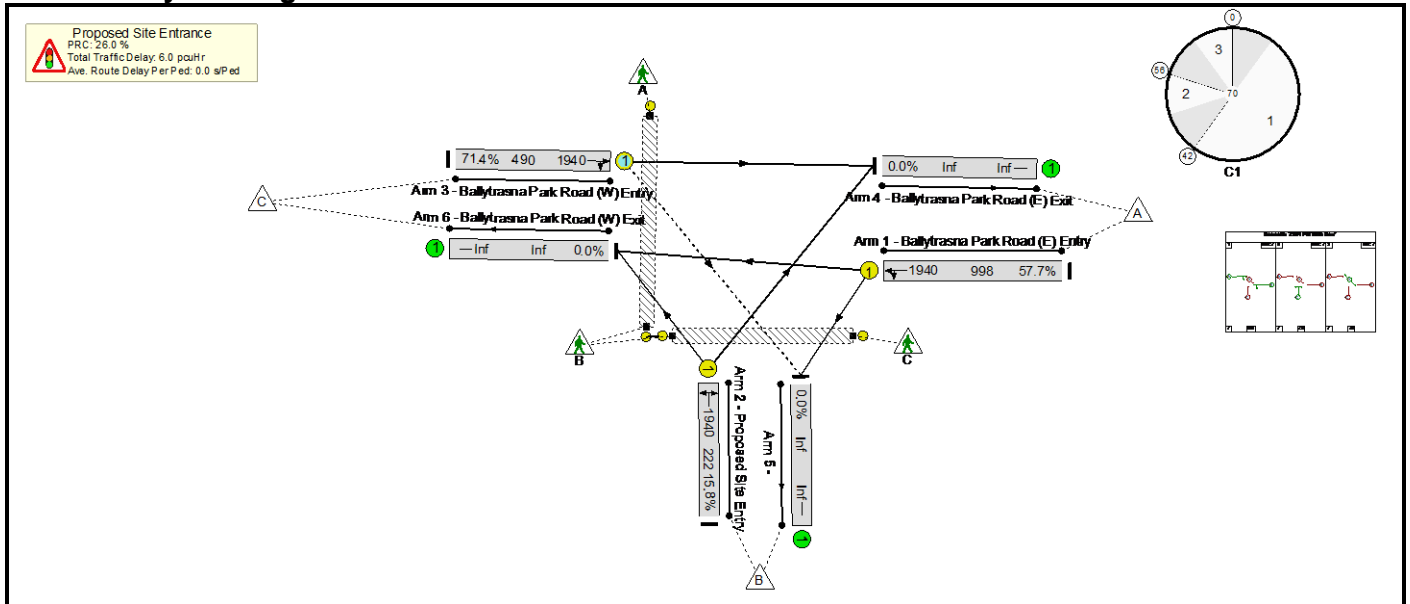
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Courtstown	-	-	-		-	-	-	-	-	-	63.4%	52	11	0	5.1	-	-
Proposed Site Entrance	-	-	-		-	-	-	-	-	-	63.4%	52	11	0	5.1	-	-
1/1	Ballytrasna Park Road (E) Entry Left Ahead	U	B		1	35	-	538	1940	998	53.9%	-	-	-	2.3	15.3	7.6
2/1	Proposed Site Entry Right Left	U	C		1	7	-	35	1940	222	15.8%	-	-	-	0.4	37.6	0.7
3/1	Ballytrasna Park Road (W) Entry Ahead Right	O	A		1	35	-	332	1940	523	63.4%	52	11	0	2.5	26.8	6.3
Ped Link: P1	Unnamed Ped Link	-	D		1	7	-	0	-	7200	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	D		1	7	-	0	-	7200	0.0%	-	-	-	0.0	0.0	0.0
		C1			PRC for Signalled Lanes (%):		41.9	Total Delay for Signalled Lanes (pcuHr):				5.13	Cycle Time (s):		70		
					PRC Over All Lanes (%):		41.9	Total Delay Over All Lanes(pcuHr):				5.13					

Basic Results Summary

Scenario 6: '2041 PM With Dev' (FG6: '2041 PM With Development', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

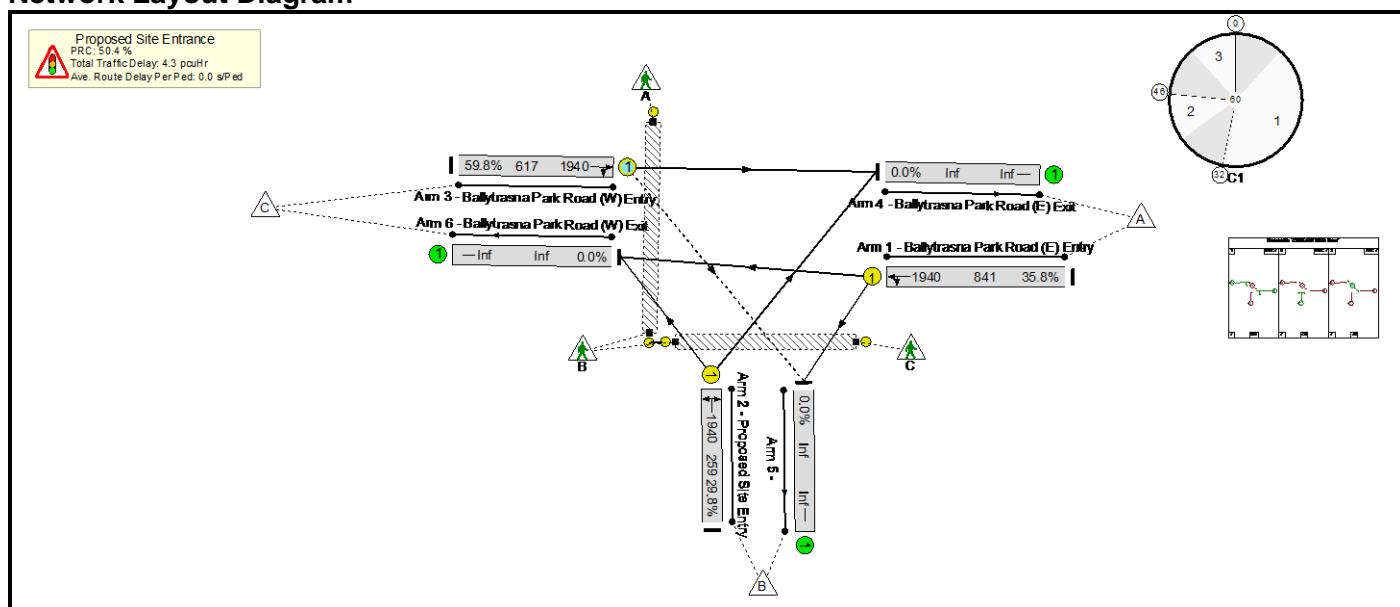
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Courtstown	-	-	-		-	-	-	-	-	-	71.4%	53	10	0	6.0	-	-
Proposed Site Entrance	-	-	-		-	-	-	-	-	-	71.4%	53	10	0	6.0	-	-
1/1	Ballytrasna Park Road (E) Entry Left Ahead	U	B		1	35	-	576	1940	998	57.7%	-	-	-	2.6	16.0	8.4
2/1	Proposed Site Entry Right Left	U	C		1	7	-	35	1940	222	15.8%	-	-	-	0.4	37.6	0.7
3/1	Ballytrasna Park Road (W) Entry Ahead Right	O	A		1	35	-	350	1940	490	71.4%	53	10	0	3.1	31.6	7.2
Ped Link: P1	Unnamed Ped Link	-	D		1	7	-	0	-	7200	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	D		1	7	-	0	-	7200	0.0%	-	-	-	0.0	0.0	0.0
		C1			PRC for Signalled Lanes (%):		26.0	Total Delay for Signalled Lanes (pcuHr):				5.99	Cycle Time (s):		70		
					PRC Over All Lanes (%):		26.0	Total Delay Over All Lanes(pcuHr):				5.99					

Basic Results Summary
Basic Results Summary

User and Project Details

Project:	Residential Development Courtstown Little Island
Title:	Courtstown
Location:	Little Island
Client:	Ruden Homes Ltd.
Additional detail:	
File name:	Junction 1 Development 2031 Masterplan.lsg3x
Author:	D. Archer
Company:	MHL & Associates
Address:	

Scenario 1: '2026 AM With Dev' (FG1: '2026 AM With Development', Plan 1: 'Network Control Plan 1')
Network Layout Diagram



Basic Results Summary

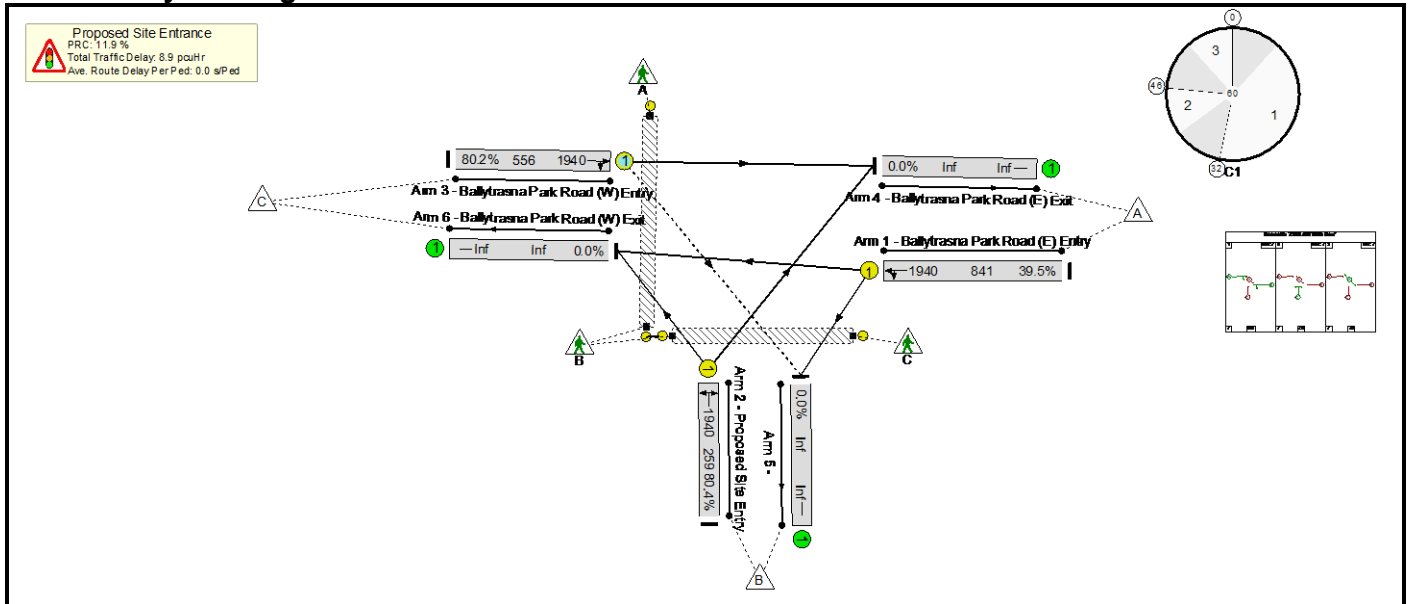
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)					
Network: Courtstown	-	-	-		-	-	-	-	-	-	59.8%	21	4	0	4.3	-	-					
Proposed Site Entrance	-	-	-		-	-	-	-	-	-	59.8%	21	4	0	4.3	-	-					
1/1	Ballytrasna Park Road (E) Entry Left Ahead	U	B		1	25	-	301	1940	841	35.8%	-	-	-	1.2	14.7	3.6					
2/1	Proposed Site Entry Right Left	U	C		1	7	-	77	1940	259	29.8%	-	-	-	0.7	33.4	1.4					
3/1	Ballytrasna Park Road (W) Entry Ahead Right	O	A		1	25	-	369	1940	617	59.8%	21	4	0	2.3	22.8	5.8					
Ped Link: P1	Unnamed Ped Link	-	D		1	7	-	0	-	8400	0.0%	-	-	-	0.0	0.0	0.0					
Ped Link: P2	Unnamed Ped Link	-	D		1	7	-	0	-	8400	0.0%	-	-	-	0.0	0.0	0.0					
		C1	PRC for Signalled Lanes (%):		50.4		PRC Over All Lanes (%):		50.4		Total Delay for Signalled Lanes (pcuHr):		4.28		Total Delay Over All Lanes(pcuHr):		4.28		Cycle Time (s):		60	

Basic Results Summary

Scenario 2: '2031 AM With Dev' (FG2: '2031 AM With Development', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

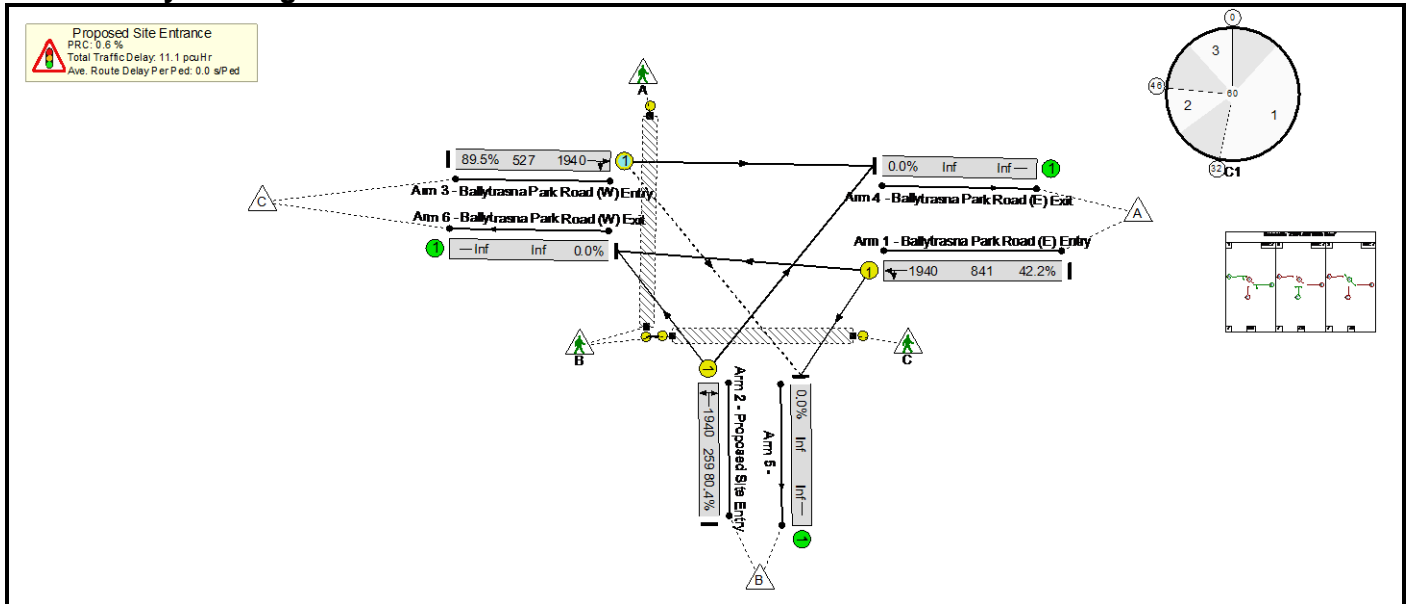
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Courtstown	-	-	-		-	-	-	-	-	-	80.4%	56	10	0	8.9	-	-
Proposed Site Entrance	-	-	-		-	-	-	-	-	-	80.4%	56	10	0	8.9	-	-
1/1	Ballytrasna Park Road (E) Entry Left Ahead	U	B		1	25	-	332	1940	841	39.5%	-	-	-	1.4	15.2	4.1
2/1	Proposed Site Entry Right Left	U	C		1	7	-	208	1940	259	80.4%	-	-	-	3.4	58.3	5.3
3/1	Ballytrasna Park Road (W) Entry Ahead Right	O	A		1	25	-	446	1940	556	80.2%	56	10	0	4.1	33.5	8.7
Ped Link: P1	Unnamed Ped Link	-	D		1	7	-	0	-	8400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	D		1	7	-	0	-	8400	0.0%	-	-	-	0.0	0.0	0.0
C1					PRC for Signalled Lanes (%):		11.9	Total Delay for Signalled Lanes (pcuHr):				8.91	Cycle Time (s): 60				
					PRC Over All Lanes (%):		11.9	Total Delay Over All Lanes(pcuHr):				8.91					

Basic Results Summary

Scenario 3: '2041 AM With Dev' (FG3: '2041 AM With Development', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

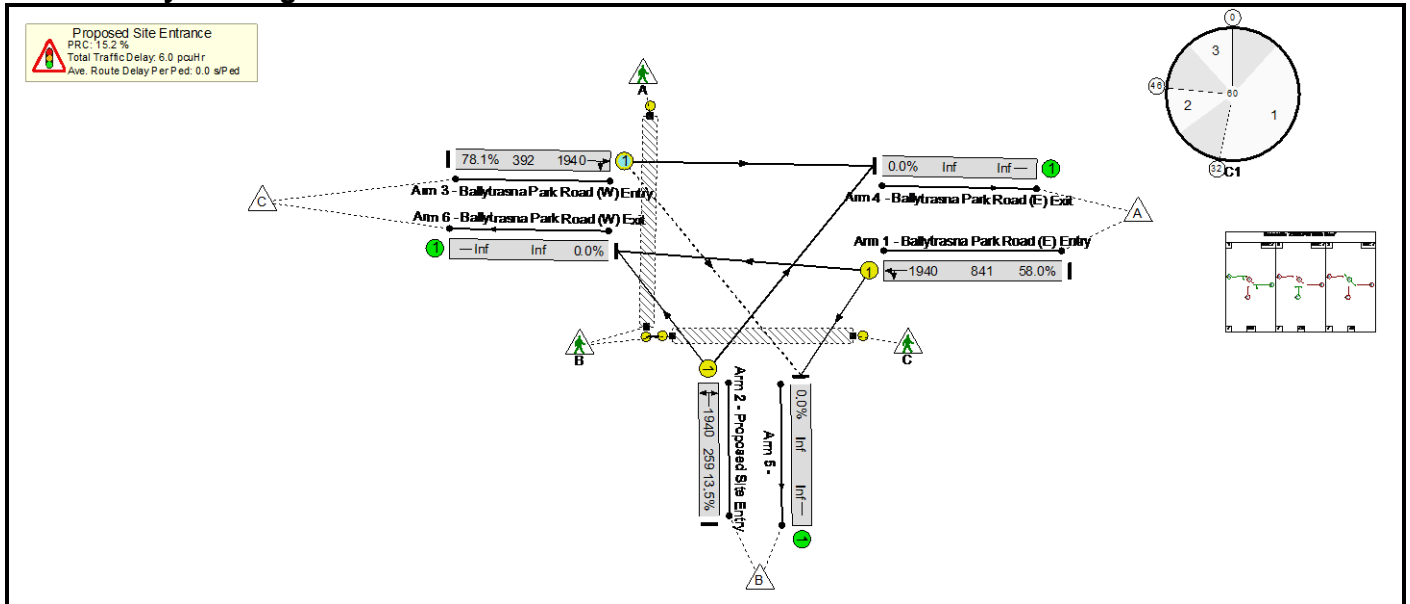
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Courtstown	-	-	-		-	-	-	-	-	-	89.5%	57	9	0	11.1	-	-
Proposed Site Entrance	-	-	-		-	-	-	-	-	-	89.5%	57	9	0	11.1	-	-
1/1	Ballytrasna Park Road (E) Entry Left Ahead	U	B		1	25	-	355	1940	841	42.2%	-	-	-	1.5	15.5	4.4
2/1	Proposed Site Entry Right Left	U	C		1	7	-	208	1940	259	80.4%	-	-	-	3.4	58.3	5.3
3/1	Ballytrasna Park Road (W) Entry Ahead Right	O	A		1	25	-	472	1940	527	89.5%	57	9	0	6.2	47.5	11.2
Ped Link: P1	Unnamed Ped Link	-	D		1	7	-	0	-	8400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	D		1	7	-	0	-	8400	0.0%	-	-	-	0.0	0.0	0.0
		C1	PRC for Signalled Lanes (%):		0.6		Total Delay for Signalled Lanes (pcuHr):		11.13		Cycle Time (s):		60				
			PRC Over All Lanes (%):		0.6		Total Delay Over All Lanes(pcuHr):		11.13								

Basic Results Summary

Scenario 4: '2026 PM With Dev' (FG4: '2026 PM With Development', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

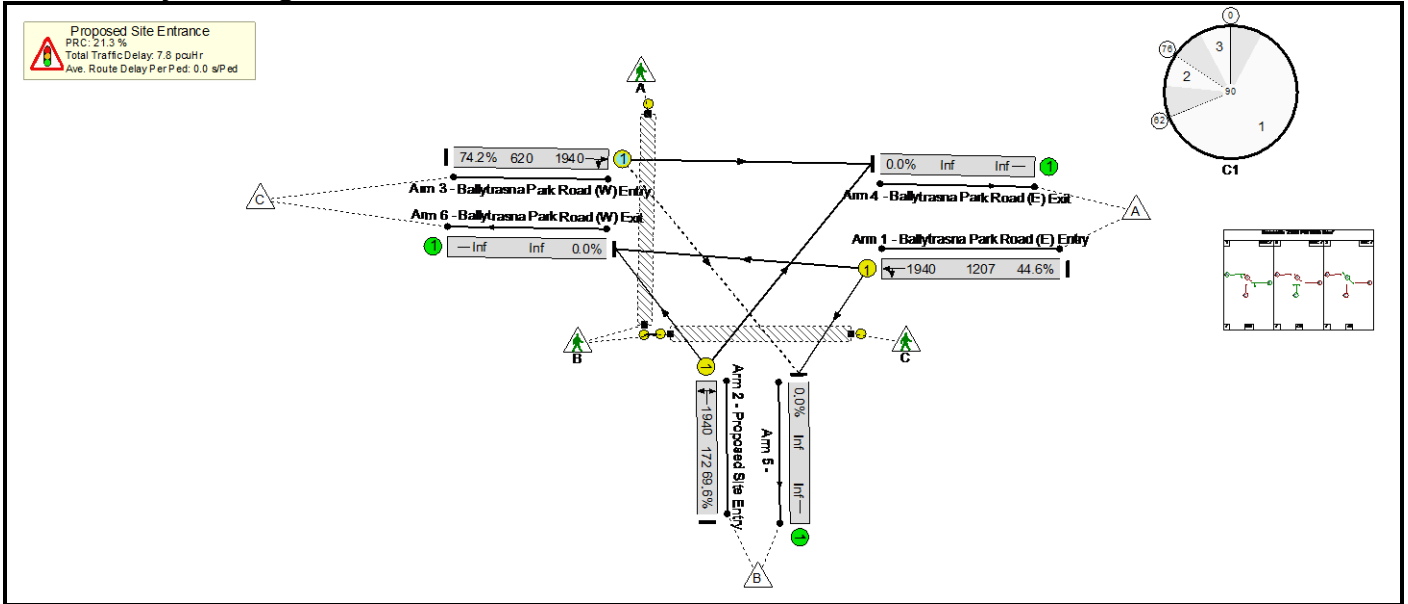
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Courtstown	-	-	-		-	-	-	-	-	-	78.1%	50	13	0	6.0	-	-
Proposed Site Entrance	-	-	-		-	-	-	-	-	-	78.1%	50	13	0	6.0	-	-
1/1	Ballytrasna Park Road (E) Entry Left Ahead	U	B		1	25	-	488	1940	841	58.0%	-	-	-	2.4	18.0	6.8
2/1	Proposed Site Entry Right Left	U	C		1	7	-	35	1940	259	13.5%	-	-	-	0.3	31.0	0.6
3/1	Ballytrasna Park Road (W) Entry Ahead Right	O	A		1	25	-	306	1940	392	78.1%	50	13	0	3.3	38.8	6.4
Ped Link: P1	Unnamed Ped Link	-	D		1	7	-	0	-	8400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	D		1	7	-	0	-	8400	0.0%	-	-	-	0.0	0.0	0.0
C1				PRC for Signalled Lanes (%):		15.2		Total Delay for Signalled Lanes (pcuHr):				6.03		Cycle Time (s): 60			
				PRC Over All Lanes (%):		15.2		Total Delay Over All Lanes(pcuHr):				6.03					

Basic Results Summary

Scenario 5: '2031 PM With Dev' (FG5: '2031 PM With Development', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

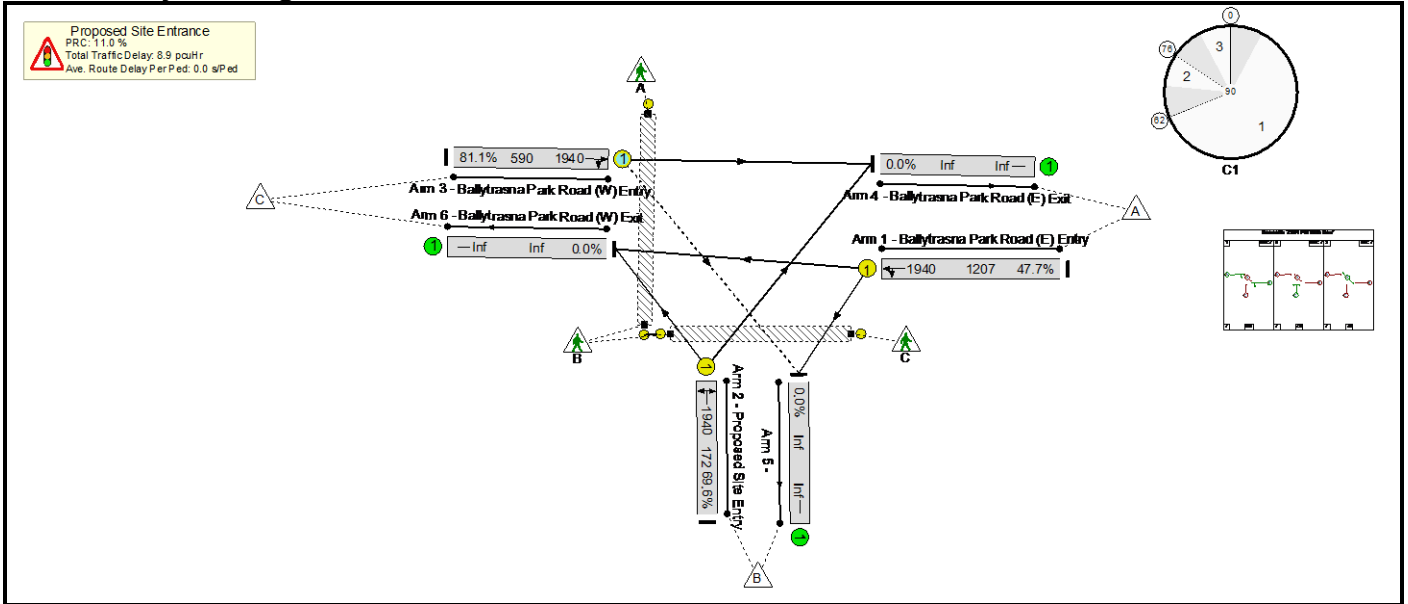
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	
Network: Courtstown	-	-	-		-	-	-	-	-	-	74.2%	173	18	0	7.8	-	-	
Proposed Site Entrance	-	-	-		-	-	-	-	-	-	74.2%	173	18	0	7.8	-	-	
1/1	Ballytrasna Park Road (E) Entry Left Ahead	U	B		1	55	-	538	1940	1207	44.6%	-	-	-	1.7	11.6	7.4	
2/1	Proposed Site Entry Right Left	U	C		1	7	-	120	1940	172	69.6%	-	-	-	2.4	72.8	4.0	
3/1	Ballytrasna Park Road (W) Entry Ahead Right	O	A		1	55	-	460	1940	620	74.2%	173	18	0	3.6	28.3	10.6	
Ped Link: P1	Unnamed Ped Link	-	D		1	7	-	0	-	5600	0.0%	-	-	-	0.0	0.0	0.0	
Ped Link: P2	Unnamed Ped Link	-	D		1	7	-	0	-	5600	0.0%	-	-	-	0.0	0.0	0.0	
C1							PRC for Signalled Lanes (%):	21.3	Total Delay for Signalled Lanes (pcuHr):			7.77	Cycle Time (s):		90			
							PRC Over All Lanes (%):	21.3	Total Delay Over All Lanes(pcuHr):			7.77						

Basic Results Summary

Scenario 6: '2041 PM With Dev' (FG6: '2041 PM With Development', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Courtstown	-	-	-		-	-	-	-	-	-	81.1%	174	17	0	8.9	-	-
Proposed Site Entrance	-	-	-		-	-	-	-	-	-	81.1%	174	17	0	8.9	-	-
1/1	Ballytrasna Park Road (E) Entry Left Ahead	U	B		1	55	-	576	1940	1207	47.7%	-	-	-	1.9	12.0	8.1
2/1	Proposed Site Entry Right Left	U	C		1	7	-	120	1940	172	69.6%	-	-	-	2.4	72.8	4.0
3/1	Ballytrasna Park Road (W) Entry Ahead Right	O	A		1	55	-	478	1940	590	81.1%	174	17	0	4.6	34.5	12.2
Ped Link: P1	Unnamed Ped Link	-	D		1	7	-	0	-	5600	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	D		1	7	-	0	-	5600	0.0%	-	-	-	0.0	0.0	0.0
C1					PRC for Signalled Lanes (%):		11.0	Total Delay for Signalled Lanes (pcuHr):				8.93	Cycle Time (s): 90				
					PRC Over All Lanes (%):		11.0	Total Delay Over All Lanes(pcuHr):				8.93					

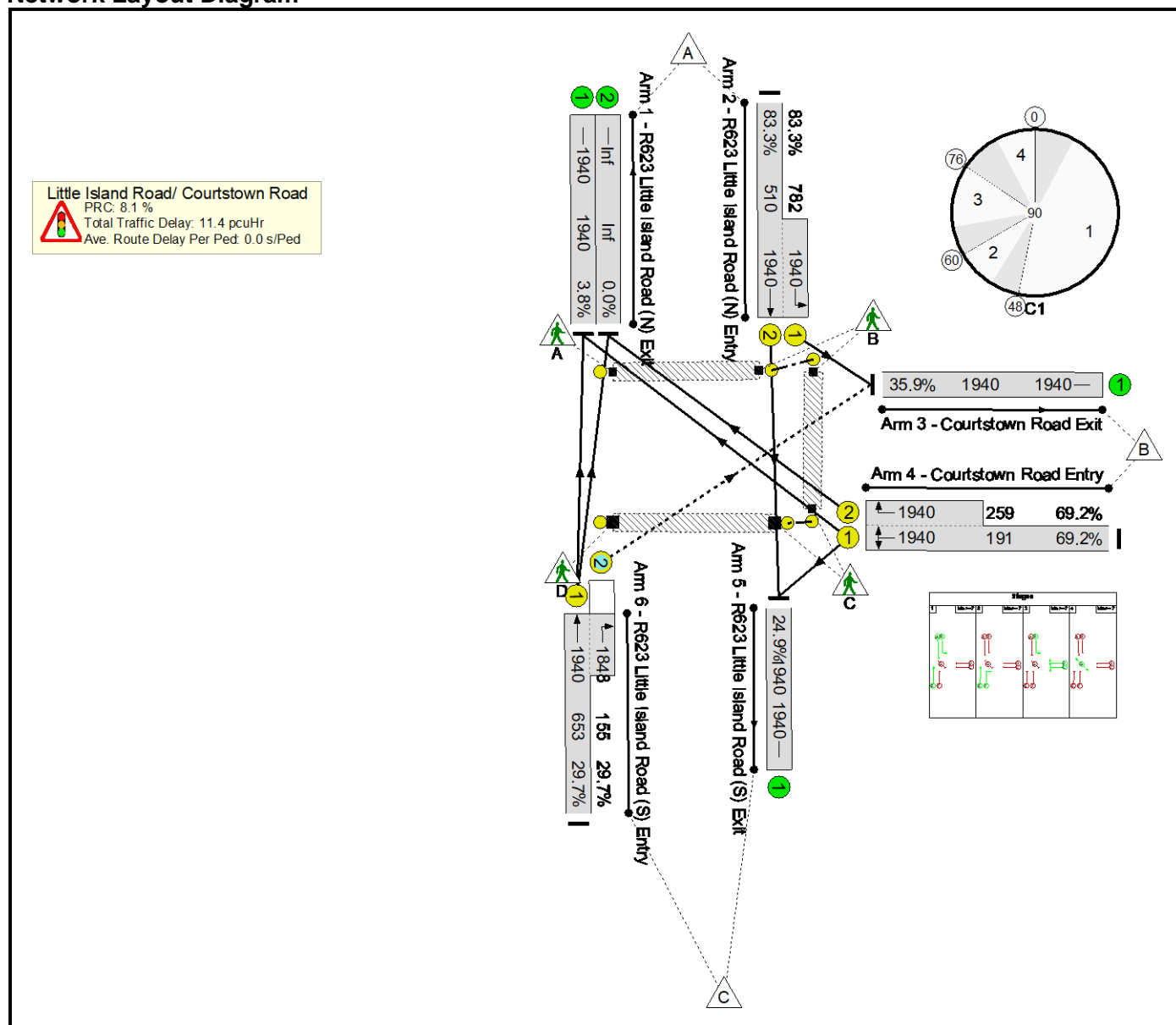
Basic Results Summary
Basic Results Summary

User and Project Details

Project:	Courtstown Distribution Centre Development
Title:	Traffic and Transportation Assessment
Location:	
Additional detail:	
File name:	Signalised Junction-2 (120sec).lsg3xKM 31052024.lsg3x
Author:	DM
Company:	MHL & Associates
Address:	Carrig Mór House, 10 High St., Douglas Rd., Cork

Scenario 1: 'AM 2024' (FG1: 'AM 2024', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

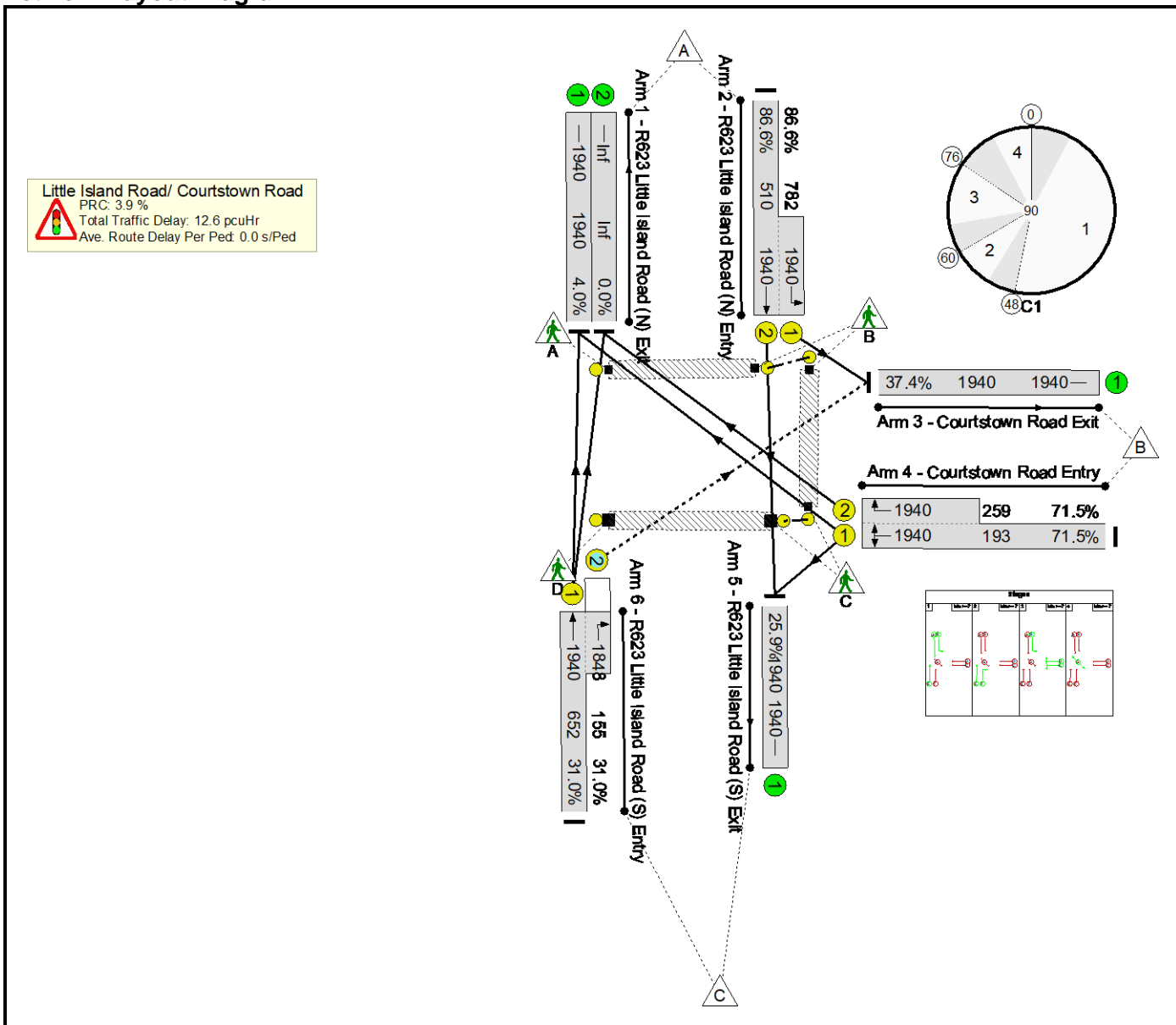
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)				
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	83.3%	0	45	1	11.4	-	-				
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	83.3%	0	45	1	11.4	-	-				
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	74	1940	1940	3.8%	-	-	-	0.0	1.0	0.0				
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	41:52	-	1076	1940:1940	510+782	83.3 : 83.3%	-	-	-	5.5	18.3	13.4				
3/1	Courtstown Road Exit	U	-		-	-	-	697	1940	1940	35.9%	-	-	-	0.3	1.4	0.3				
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	11	-	311	1940:1940	191+259	69.2 : 69.2%	-	-	-	4.3	49.6	5.3				
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	483	1940	1940	24.9%	-	-	-	0.2	1.2	0.2				
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	53:7	-	240	1940:1848	653+155	29.7 : 29.7%	0	45	1	1.1	17.0	2.4				
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	5600	0.0%	-	-	-	0.0	0.0	0.0				
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	5600	0.0%	-	-	-	0.0	0.0	0.0				
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	5600	0.0%	-	-	-	0.0	0.0	0.0				
C1		PRC for Signalled Lanes (%):		8.1		Total Delay for Signalled Lanes (pcuHr):		10.90		Cycle Time (s):		90		PRC Over All Lanes (%):		8.1		Total Delay Over All Lanes(pcuHr):		11.37	

Basic Results Summary

Scenario 2: 'AM 2026 Without Devt.' (FG2: 'AM 2026 Without Devt.', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

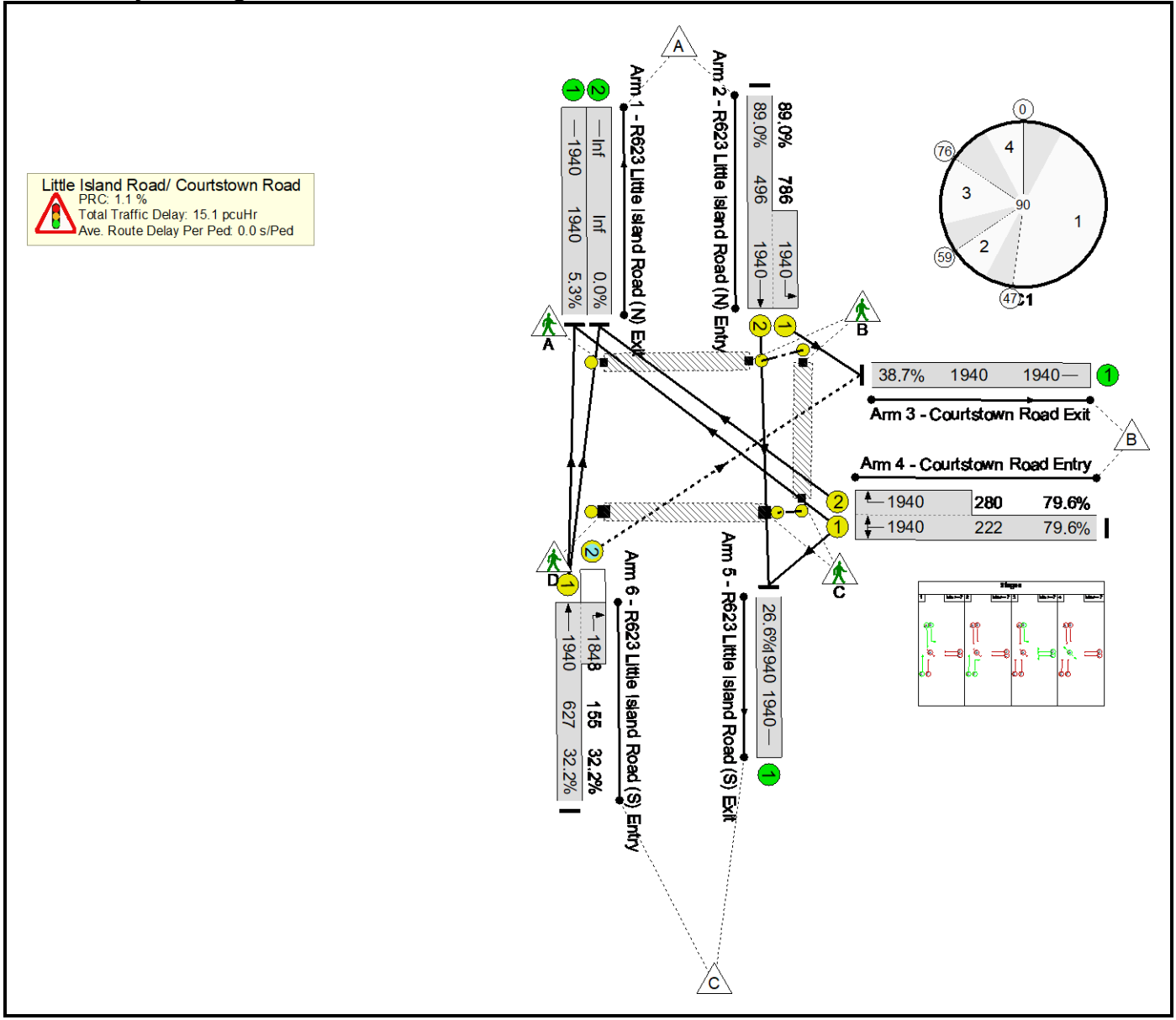
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)				
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	86.6%	0	47	1	12.6	-	-				
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	86.6%	0	47	1	12.6	-	-				
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	78	1940	1940	4.0%	-	-	-	0.0	1.0	0.0				
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	41:52	-	1119	1940:1940	510+782	86.6 : 86.6%	-	-	-	6.4	20.6	16.2				
3/1	Courtstown Road Exit	U	-		-	-	-	725	1940	1940	37.4%	-	-	-	0.3	1.5	0.3				
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	11	-	323	1940:1940	193+259	71.5 : 71.5%	-	-	-	4.5	50.7	5.7				
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	502	1940	1940	25.9%	-	-	-	0.2	1.3	0.2				
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	53:7	-	250	1940:1848	652+155	31.0 : 31.0%	0	47	1	1.2	17.1	2.5				
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	5600	0.0%	-	-	-	0.0	0.0	0.0				
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	5600	0.0%	-	-	-	0.0	0.0	0.0				
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	5600	0.0%	-	-	-	0.0	0.0	0.0				
C1		PRC for Signalled Lanes (%):		3.9		Total Delay for Signalled Lanes (pcuHr):		12.15		Cycle Time (s):		90		PRC Over All Lanes (%):		3.9		Total Delay Over All Lanes(pcuHr):		12.65	

Basic Results Summary

Scenario 3: 'AM 2026 With Devt.' (FG3: 'AM 2026 With Devt.', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

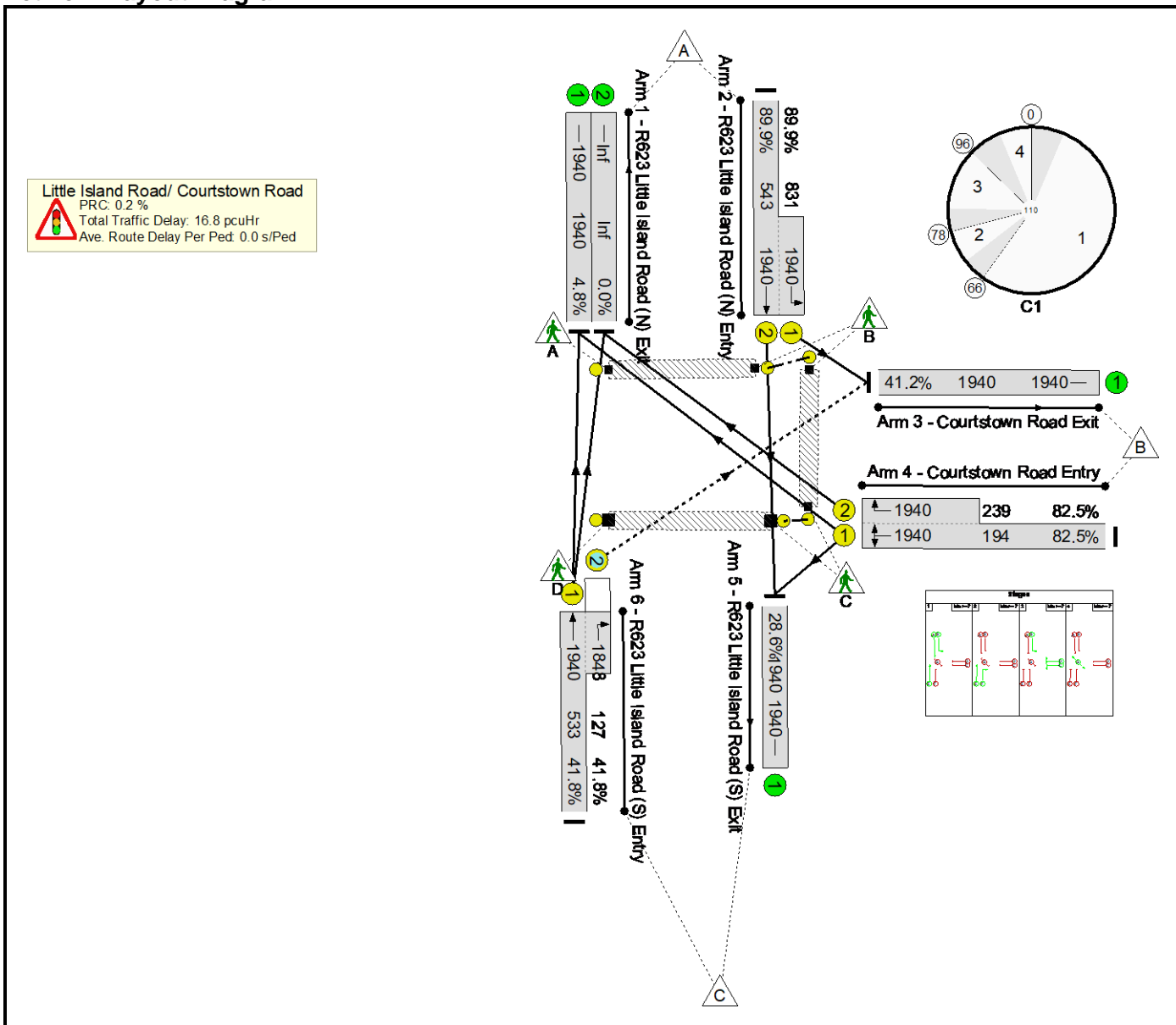
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)				
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	89.0%	0	49	1	15.1	-	-				
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	89.0%	0	49	1	15.1	-	-				
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	102	1940	1940	5.3%	-	-	-	0.0	1.0	0.0				
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	40:52	-	1142	1940:1940	496+786	89.0 : 89.0%	-	-	-	7.3	23.1	18.0				
3/1	Courtstown Road Exit	U	-		-	-	-	750	1940	1940	38.7%	-	-	-	0.3	1.5	0.3				
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	12	-	400	1940:1940	222+280	79.6 : 79.6%	-	-	-	6.0	53.8	7.3				
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	517	1940	1940	26.6%	-	-	-	0.2	1.3	0.2				
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	52:7	-	252	1940:1848	627+155	32.2 : 32.2%	0	49	1	1.2	17.8	2.5				
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	5600	0.0%	-	-	-	0.0	0.0	0.0				
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	5600	0.0%	-	-	-	0.0	0.0	0.0				
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	5600	0.0%	-	-	-	0.0	0.0	0.0				
C1		PRC for Signalled Lanes (%):		1.1		Total Delay for Signalled Lanes (pcuHr):		14.57		Cycle Time (s):		90		PRC Over All Lanes (%):		1.1		Total Delay Over All Lanes(pcuHr):		15.09	

Basic Results Summary

Scenario 4: 'AM 2030 Without Devt.' (FG4: 'AM 2031 Without Devt.', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

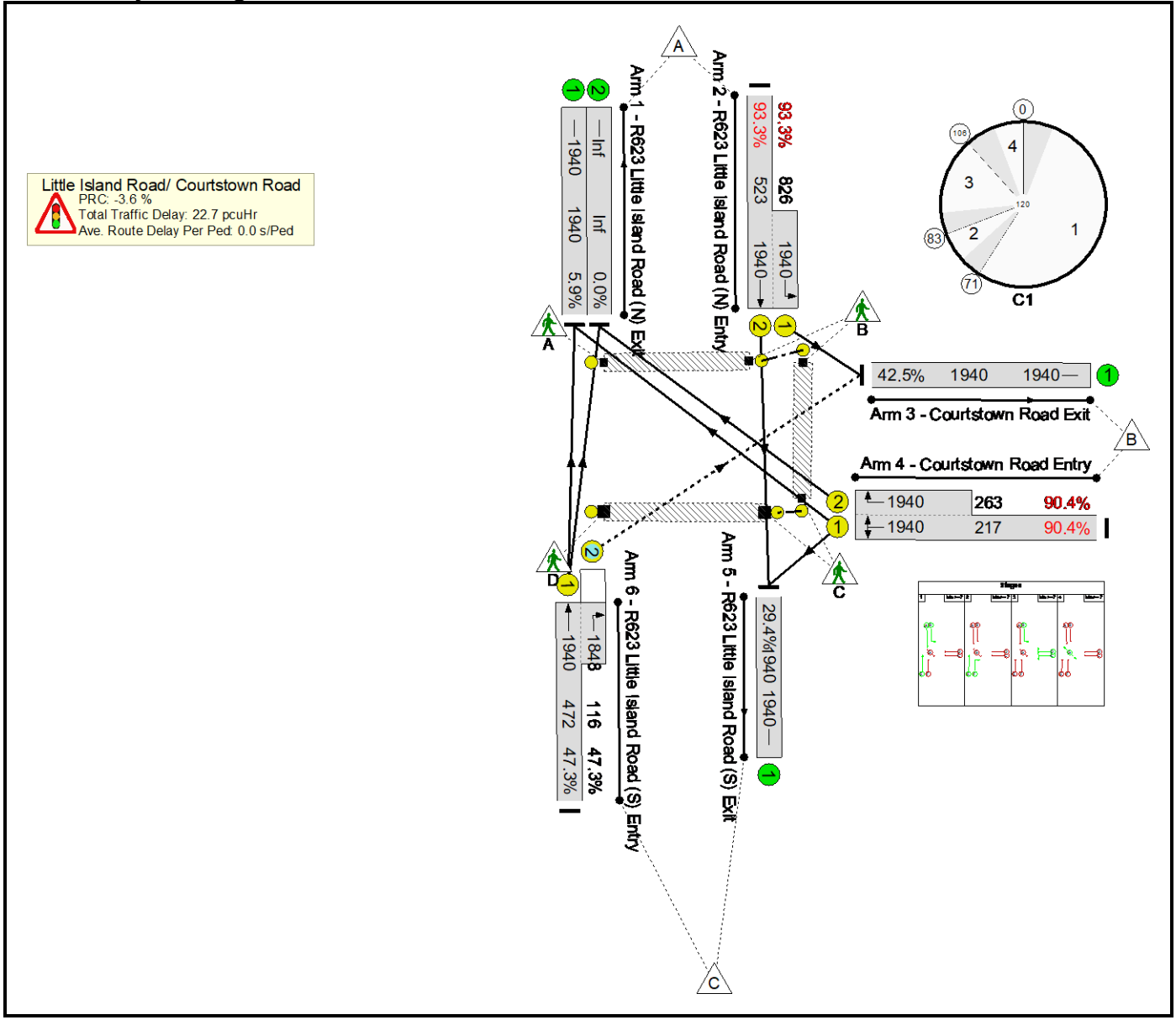
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)				
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	89.9%	0	52	1	16.8	-	-				
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	89.9%	0	52	1	16.8	-	-				
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	93	1940	1940	4.8%	-	-	-	0.0	1.0	0.0				
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	59:72	-	1235	1940:1940	543+831	89.9 : 89.9%	-	-	-	7.9	23.1	25.3				
3/1	Courtstown Road Exit	U	-		-	-	-	800	1940	1940	41.2%	-	-	-	0.4	1.6	0.4				
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	13	-	357	1940:1940	194+239	82.5 : 82.5%	-	-	-	6.8	68.6	8.0				
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	555	1940	1940	28.6%	-	-	-	0.2	1.3	0.2				
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	71:7	-	276	1940:1848	533+127	41.8 : 41.8%	0	52	1	1.5	20.0	3.0				
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	4582	0.0%	-	-	-	0.0	0.0	0.0				
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	4582	0.0%	-	-	-	0.0	0.0	0.0				
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	4582	0.0%	-	-	-	0.0	0.0	0.0				
C1		PRC for Signalled Lanes (%):		0.2		Total Delay for Signalled Lanes (pcuHr):		16.26		Cycle Time (s):		110		PRC Over All Lanes (%):		0.2		Total Delay Over All Lanes(pcuHr):		16.84	

Basic Results Summary

Scenario 5: 'AM 2030 With Devt.' (FG5: 'AM 2031 With Devt.', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

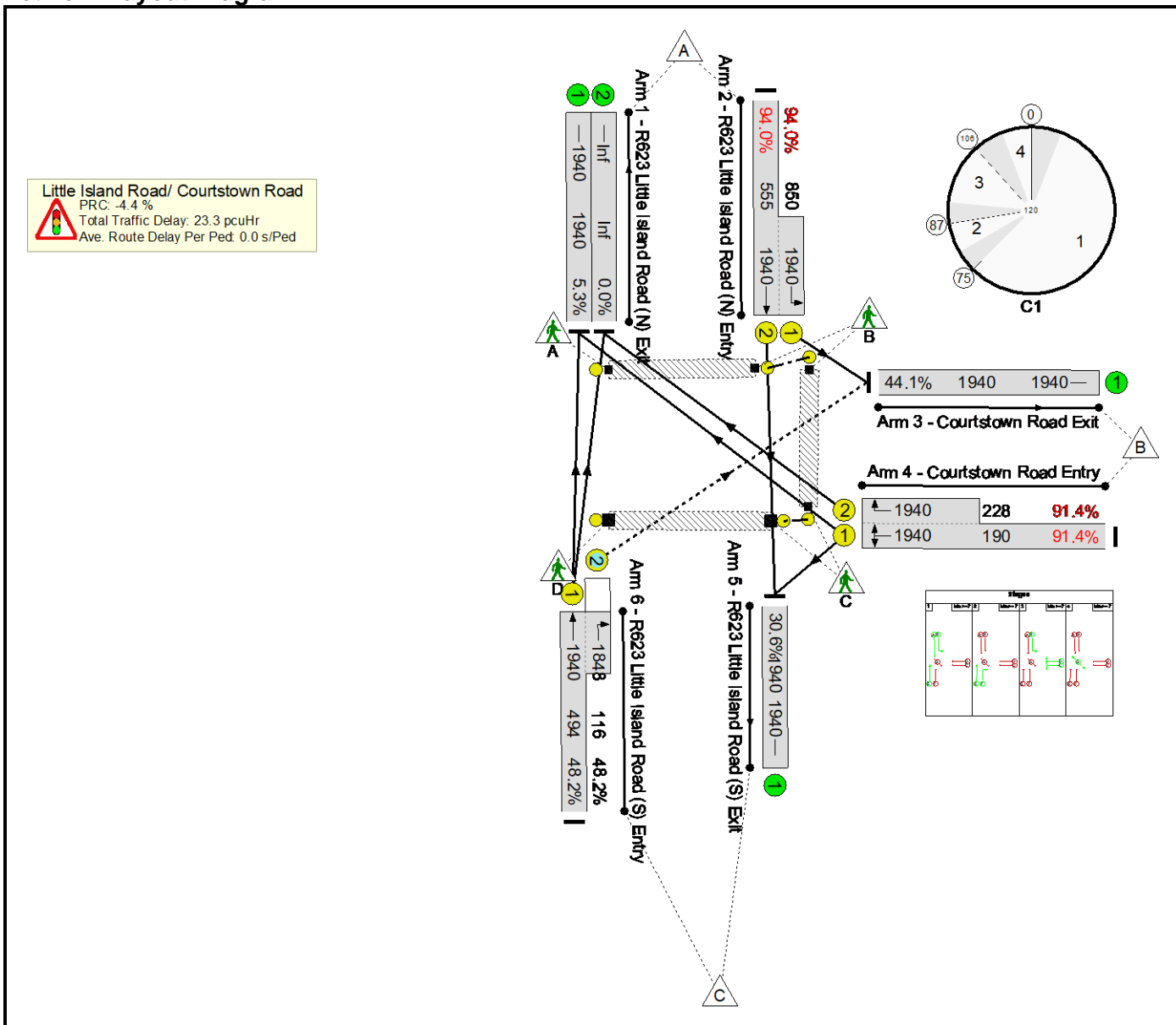
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	93.3%	0	54	1	22.7	-	-
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	93.3%	0	54	1	22.7	-	-
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	114	1940	1940	5.9%	-	-	-	0.0	1.0	0.0
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	64:82	-	1258	1940:1940	523+826	93.3 : 93.3%	-	-	-	10.5	30.1	32.8
3/1	Courtstown Road Exit	U	-		-	-	-	825	1940	1940	42.5%	-	-	-	0.4	1.6	0.4
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	18	-	434	1940:1940	217+263	90.4 : 90.4%	-	-	-	9.8	81.4	12.2
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	570	1940	1940	29.4%	-	-	-	0.2	1.3	0.2
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	76:7	-	278	1940:1848	472+116	47.3 : 47.3%	0	54	1	1.8	23.4	3.4
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0
C1					PRC for Signalled Lanes (%):		-3.6	Total Delay for Signalled Lanes (pcuHr):			22.13	Cycle Time (s):		120			
					PRC Over All Lanes (%):		-3.6	Total Delay Over All Lanes(pcuHr):			22.74						

Basic Results Summary

Scenario 6: 'AM 2041 Without Devt.' (FG6: 'AM 2041 Without Devt.', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

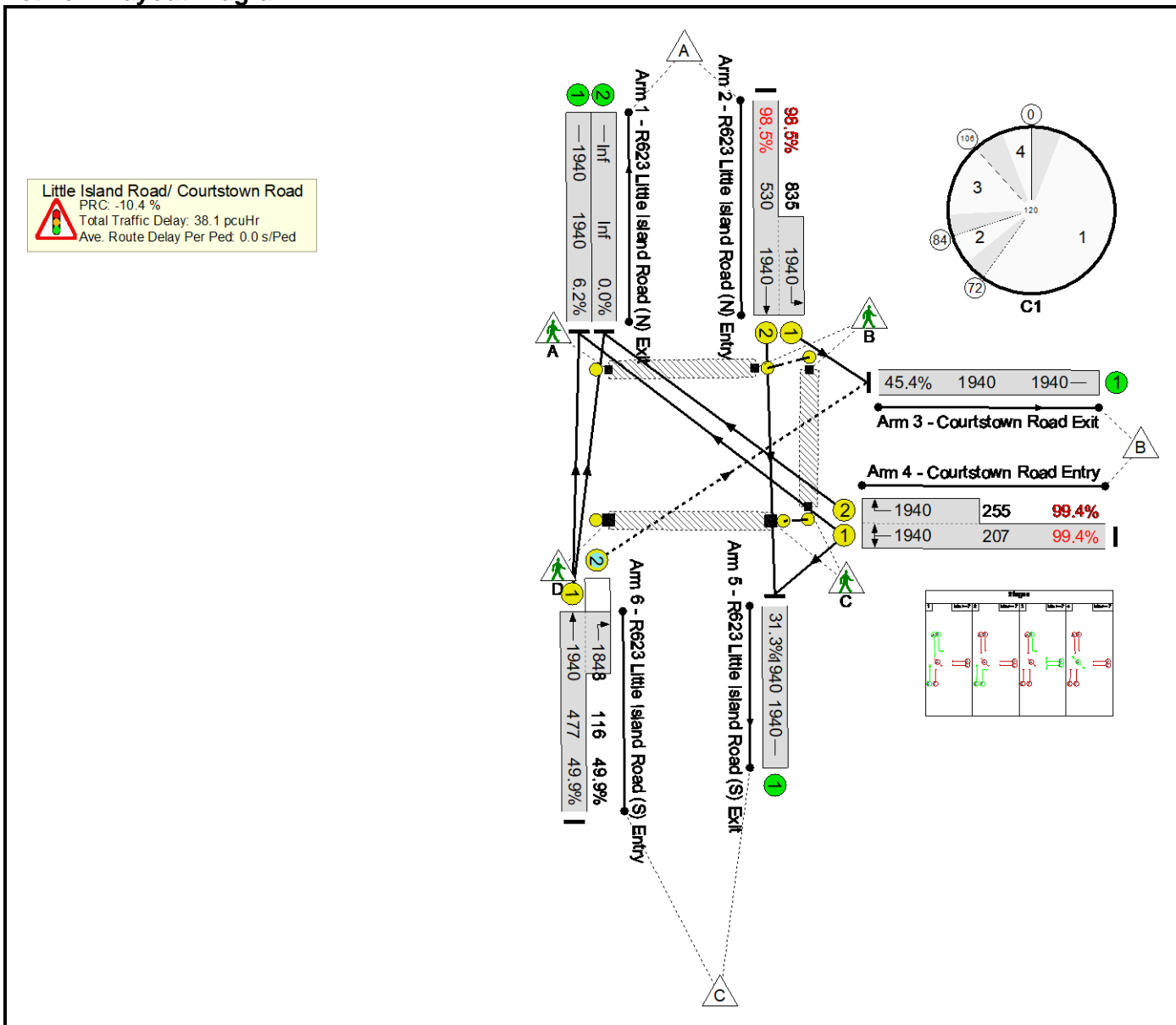
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	94.0%	0	55	1	23.3	-	-
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	94.0%	0	55	1	23.3	-	-
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	103	1940	1940	5.3%	-	-	-	0.0	1.0	0.0
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	68:82	-	1321	1940:1940	555+850	94.0 : 94.0%	-	-	-	11.2	30.5	35.5
3/1	Courtstown Road Exit	U	-		-	-	-	855	1940	1940	44.1%	-	-	-	0.4	1.7	0.4
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	14	-	382	1940:1940	190+228	91.4 : 91.4%	-	-	-	9.7	91.4	11.0
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	593	1940	1940	30.6%	-	-	-	0.2	1.3	0.2
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	80:7	-	294	1940:1848	494+116	48.2 : 48.2%	0	55	1	1.8	21.8	3.4
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0
C1					PRC for Signalled Lanes (%):		-4.4	Total Delay for Signalled Lanes (pcuHr):			22.65	Cycle Time (s):			120		
					PRC Over All Lanes (%):		-4.4	Total Delay Over All Lanes(pcuHr):			23.30						

Basic Results Summary

Scenario 7: 'AM 2041 With Devt.' (FG7: 'AM 2041 With Devt.', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

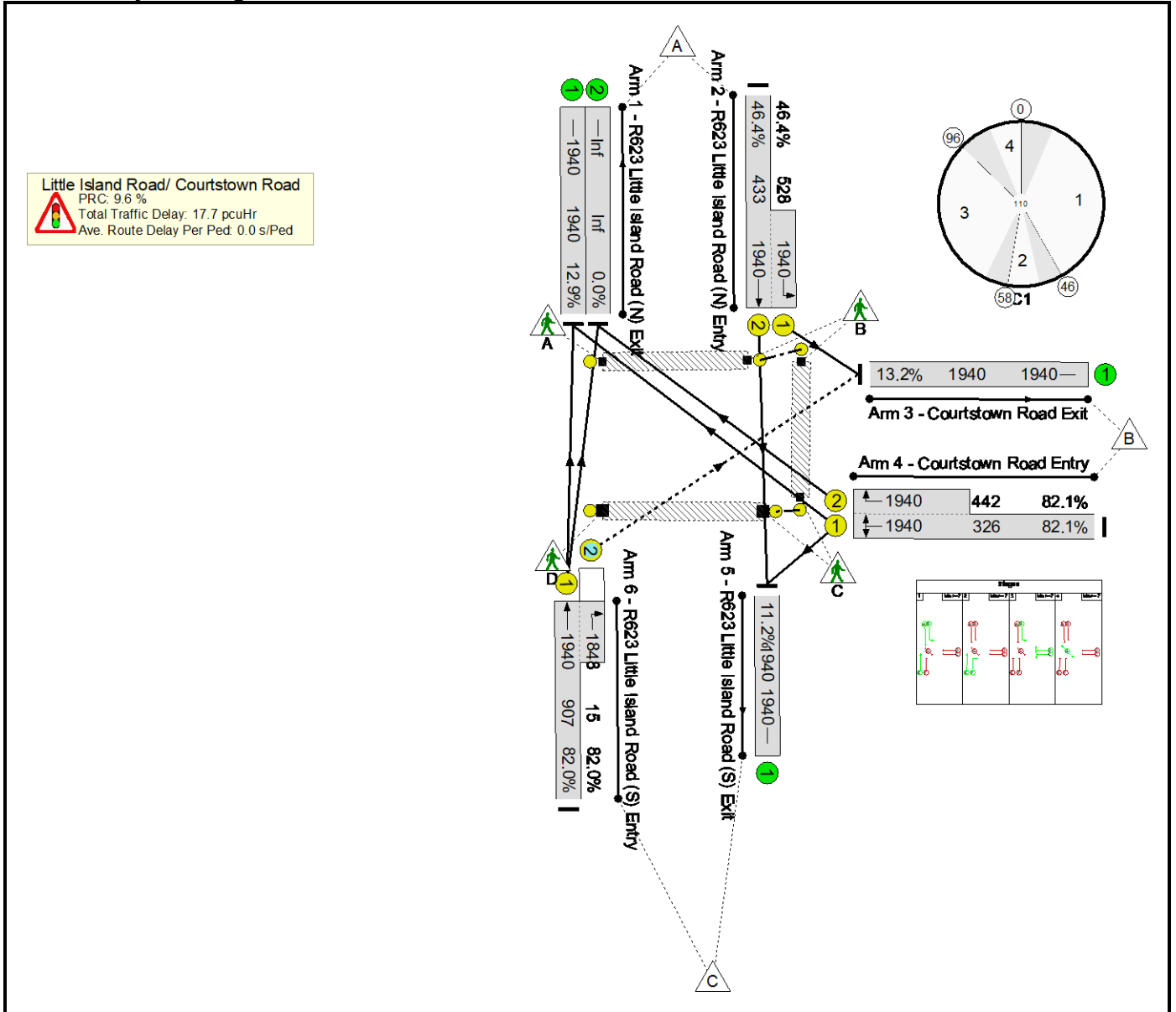
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	99.4%	0	57	1	38.1	-	-	
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	99.4%	0	57	1	38.1	-	-	
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	120	1940	1940	6.2%	-	-	-	0.0	1.0	0.0	
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	65:82	-	1344	1940:1940	530+835	98.5 : 98.5%	-	-	-	19.2	51.3	47.5	
3/1	Courtstown Road Exit	U	-		-	-	-	880	1940	1940	45.4%	-	-	-	0.4	1.7	0.4	
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	17	-	459	1940:1940	207+255	99.4 : 99.4%	-	-	-	16.3	128.2	19.5	
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	608	1940	1940	31.3%	-	-	-	0.2	1.4	0.2	
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	77:7	-	296	1940:1848	477+116	49.9 : 49.9%	0	57	1	1.9	23.4	3.6	
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
C1					PRC for Signalled Lanes (%): -10.4			Total Delay for Signalled Lanes (pcuHr): 37.43			Cycle Time (s): 120							
					PRC Over All Lanes (%): -10.4			Total Delay Over All Lanes(pcuHr): 38.10										

Basic Results Summary

Scenario 8: 'PM 2024' (FG8: 'PM 2024', Plan 1: 'Network Control Plan 1')

Network Layout Diagram

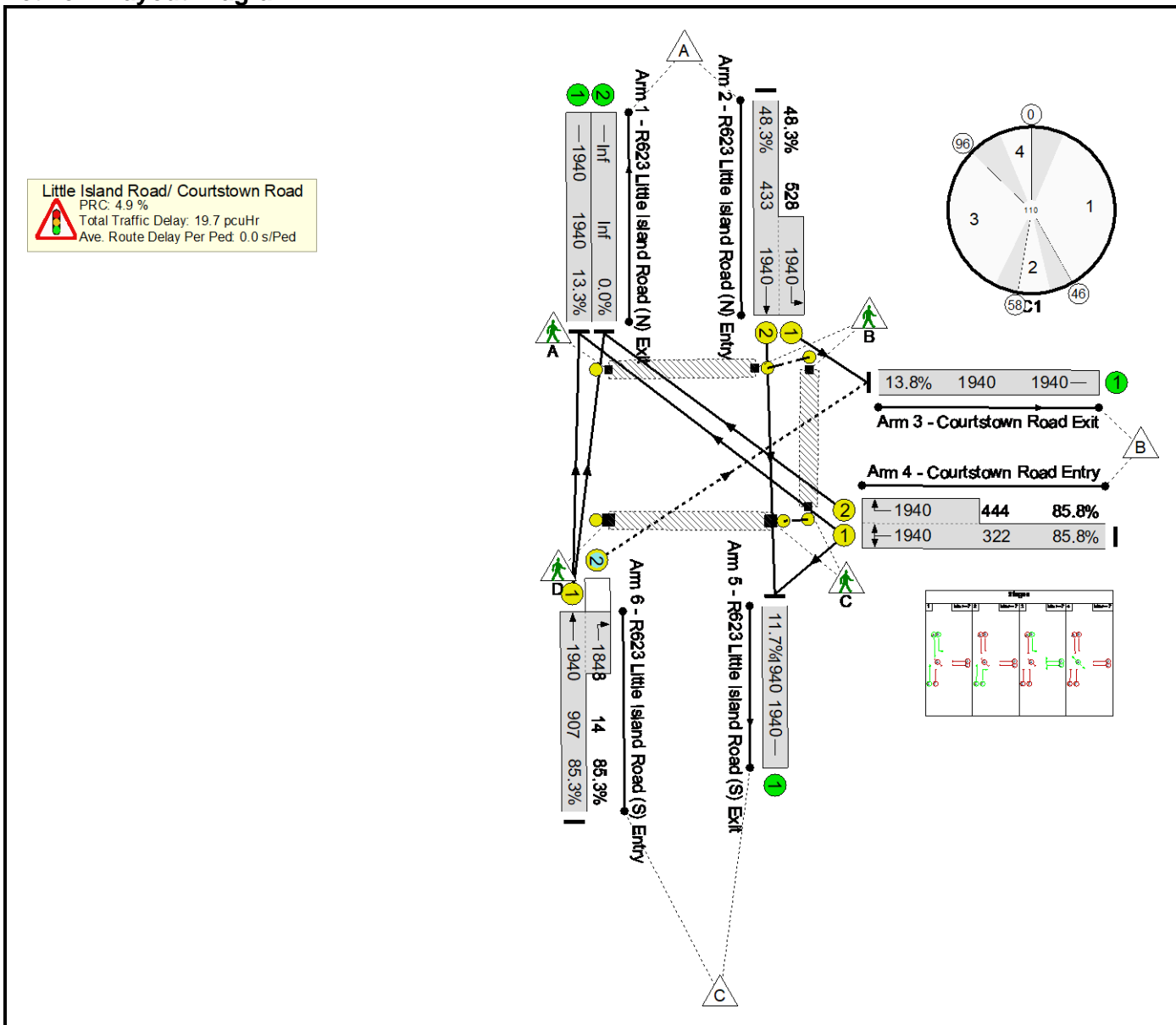


Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	82.1%	0	12	0	17.7	-	-
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	82.1%	0	12	0	17.7	-	-
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	251	1940	1940	12.9%	-	-	-	0.1	1.1	0.1
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	39:72	-	446	1940:1940	433+528	46.4 : 46.4%	-	-	-	2.1	16.6	4.8
3/1	Courtstown Road Exit	U	-		-	-	-	257	1940	1940	13.2%	-	-	-	0.1	1.1	0.1
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	33	-	631	1940:1940	326+442	82.1 : 82.1%	-	-	-	7.9	45.0	14.2
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	218	1940	1940	11.2%	-	-	-	0.1	1.0	0.1
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	51:7	-	756	1940:1848	907+15	82.0 : 82.0%	0	12	0	7.5	35.8	21.9
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	4582	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	4582	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	4582	0.0%	-	-	-	0.0	0.0	0.0
C1					PRC for Signalled Lanes (%):		9.6	Total Delay for Signalled Lanes (pcuHr):			17.46	Cycle Time (s):			110		
					PRC Over All Lanes (%):		9.6	Total Delay Over All Lanes(pcuHr):			17.67						

Network Layout Diagram



Basic Results Summary

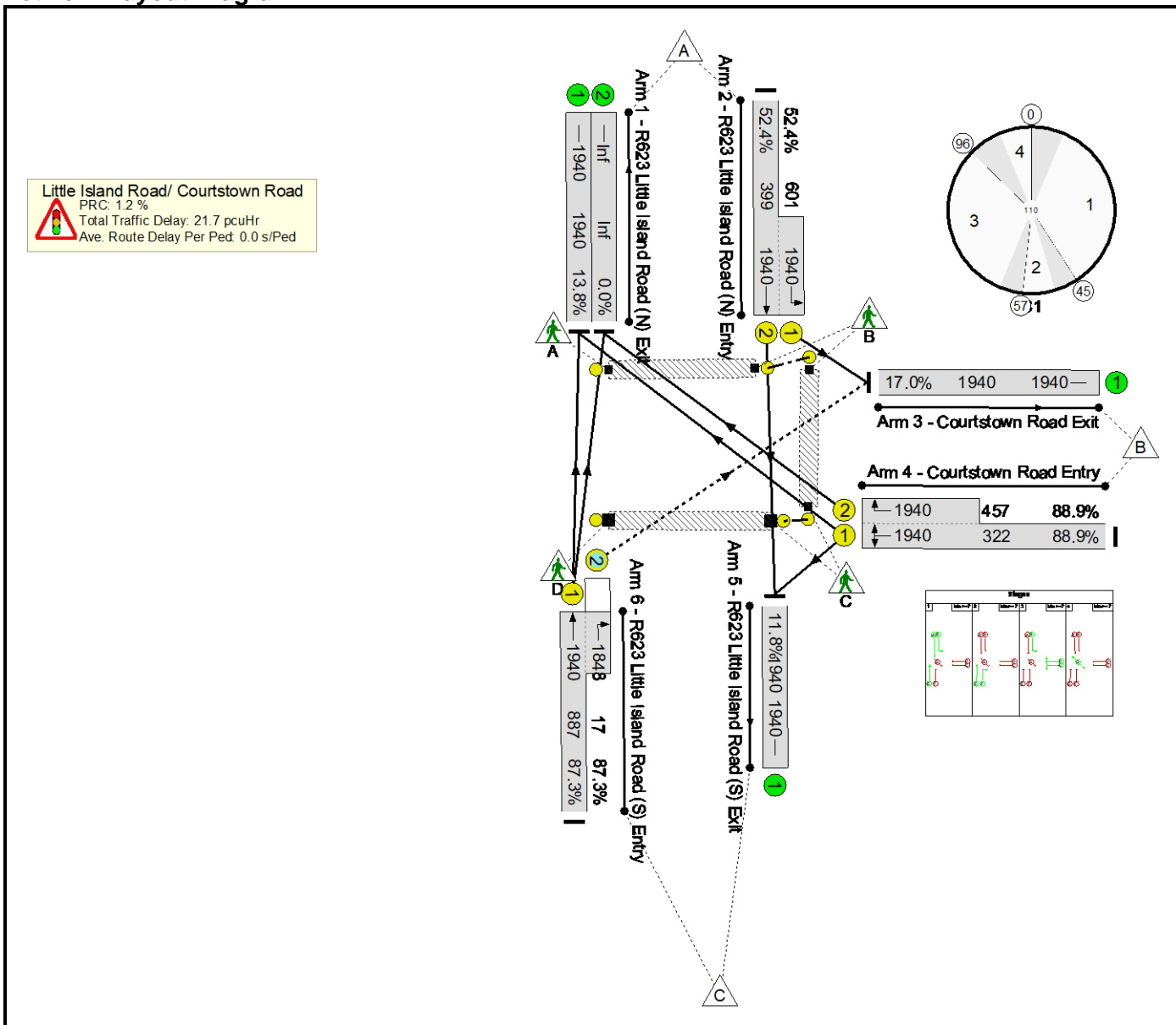
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)				
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	85.8%	0	12	0	19.7	-	-				
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	85.8%	0	12	0	19.7	-	-				
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	258	1940	1940	13.3%	-	-	-	0.1	1.1	0.1				
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	39:72	-	464	1940:1940	433+528	48.3 : 48.3%	-	-	-	2.2	16.8	5.0				
3/1	Courtstown Road Exit	U	-		-	-	-	267	1940	1940	13.8%	-	-	-	0.1	1.1	0.1				
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	33	-	657	1940:1940	322+444	85.8 : 85.8%	-	-	-	8.9	48.6	16.1				
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	227	1940	1940	11.7%	-	-	-	0.1	1.1	0.1				
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	51:7	-	786	1940:1848	907+14	85.3 : 85.3%	0	12	0	8.4	38.6	23.9				
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	4582	0.0%	-	-	-	0.0	0.0	0.0				
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	4582	0.0%	-	-	-	0.0	0.0	0.0				
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	4582	0.0%	-	-	-	0.0	0.0	0.0				
C1		PRC for Signalled Lanes (%):		4.9		Total Delay for Signalled Lanes (pcuHr):		19.47		Cycle Time (s):		110		PRC Over All Lanes (%):		4.9		Total Delay Over All Lanes(pcuHr):		19.69	

Basic Results Summary

Scenario 10: 'PM 2026 With Devt.' (FG10: 'PM 2026 With Devt.', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

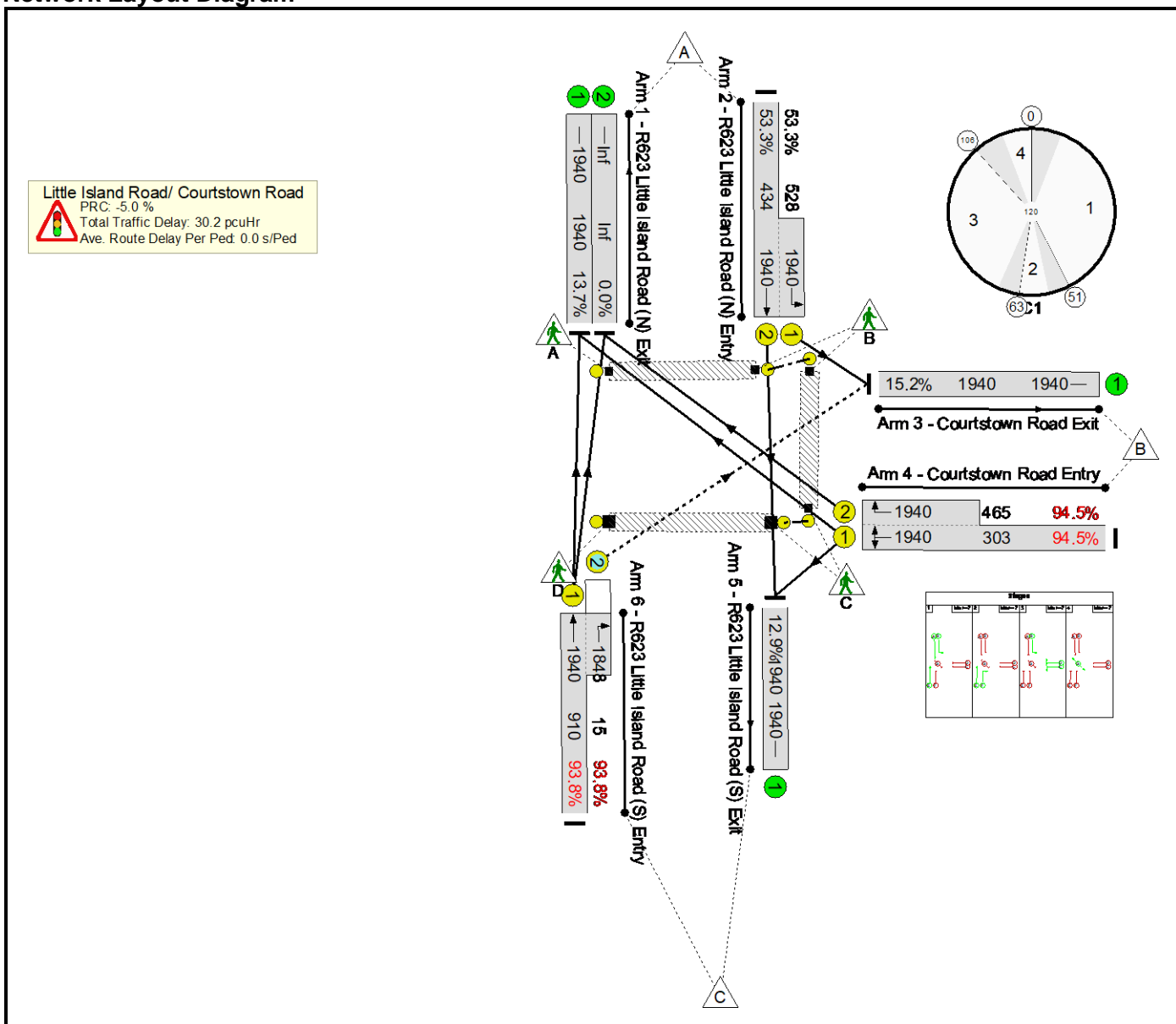
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)				
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	88.9%	0	15	0	21.7	-	-				
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	88.9%	0	15	0	21.7	-	-				
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	267	1940	1940	13.8%	-	-	-	0.1	1.1	0.1				
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	38:72	-	524	1940:1940	399+601	52.4 : 52.4%	-	-	-	2.4	16.2	5.1				
3/1	Courtstown Road Exit	U	-		-	-	-	330	1940	1940	17.0%	-	-	-	0.1	1.1	0.1				
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	34	-	692	1940:1940	322+457	88.9 : 88.9%	-	-	-	10.0	52.0	18.4				
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	228	1940	1940	11.8%	-	-	-	0.1	1.1	0.1				
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	50:7	-	789	1940:1848	887+17	87.3 : 87.3%	0	15	0	9.1	41.7	24.7				
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	4582	0.0%	-	-	-	0.0	0.0	0.0				
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	4582	0.0%	-	-	-	0.0	0.0	0.0				
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	4582	0.0%	-	-	-	0.0	0.0	0.0				
C1		PRC for Signalled Lanes (%):		1.2		Total Delay for Signalled Lanes (pcuHr):		21.47		Cycle Time (s):		110		PRC Over All Lanes (%):		1.2		Total Delay Over All Lanes(pcuHr):		21.72	

Basic Results Summary

Scenario 11: 'PM 2031 Without Devt.' (FG11: 'PM 2031 Without Devt.', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

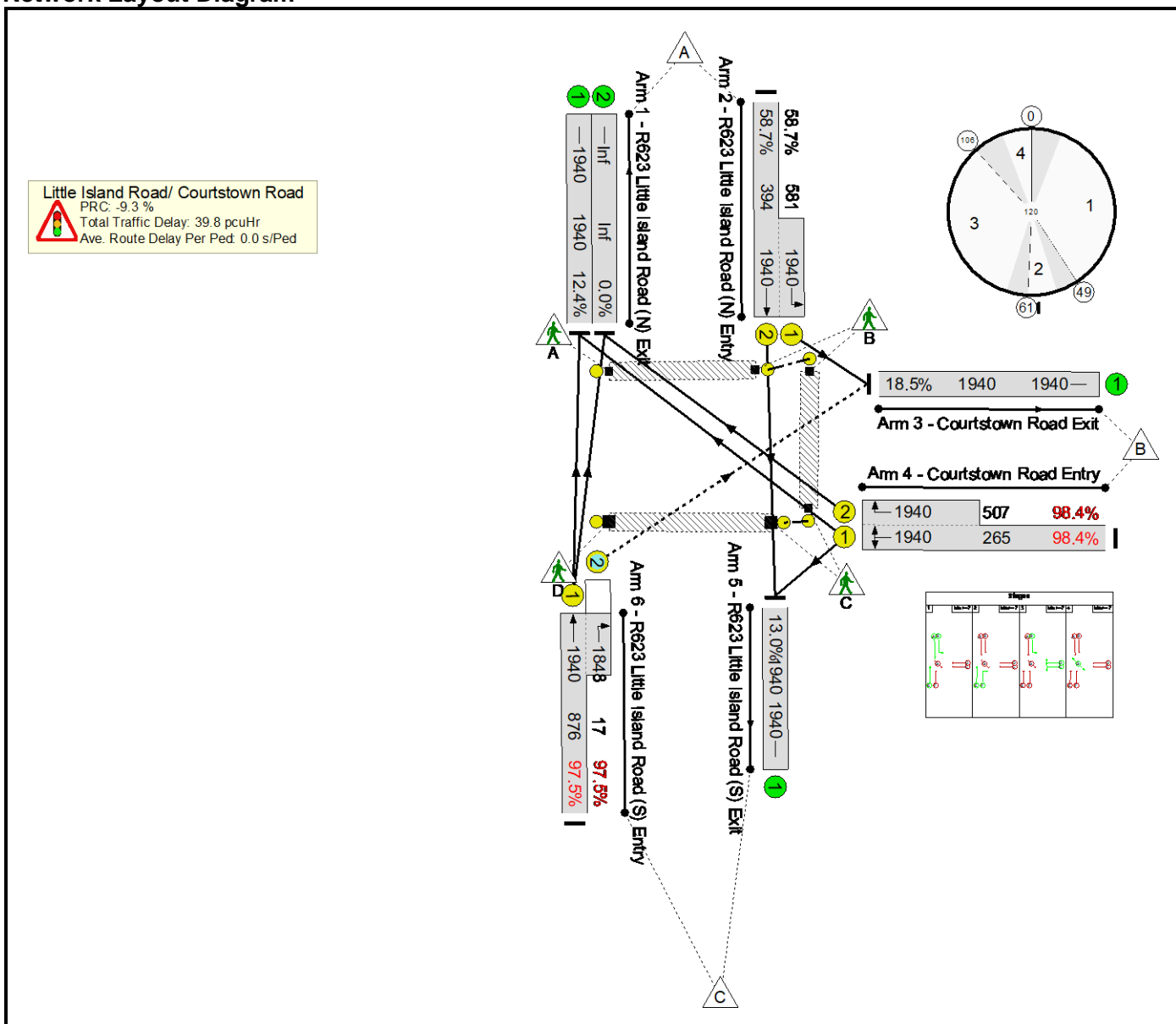
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	94.5%	0	14	0	30.2	-	-	
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	94.5%	0	14	0	30.2	-	-	
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	266	1940	1940	13.7%	-	-	-	0.1	1.1	0.1	
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	44:82	-	512	1940:1940	434+528	53.3 : 53.3%	-	-	-	2.5	17.8	6.0	
3/1	Courtstown Road Exit	U	-		-	-	-	295	1940	1940	15.2%	-	-	-	0.1	1.1	0.1	
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	38	-	725	1940:1940	303+465	94.5 : 94.5%	-	-	-	13.9	69.2	25.2	
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	251	1940	1940	12.9%	-	-	-	0.1	1.1	0.1	
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	56:7	-	868	1940:1848	910+15	93.8 : 93.8%	0	14	0	13.5	55.9	33.4	
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
C1					PRC for Signalled Lanes (%):		-5.0	Total Delay for Signalled Lanes (pcuHr):			29.93	Cycle Time (s):		120				
					PRC Over All Lanes (%):		-5.0	Total Delay Over All Lanes(pcuHr):			30.17							

Basic Results Summary

Scenario 12: 'PM 2031 With Devt.' (FG12: 'PM 2031 With Devt.', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

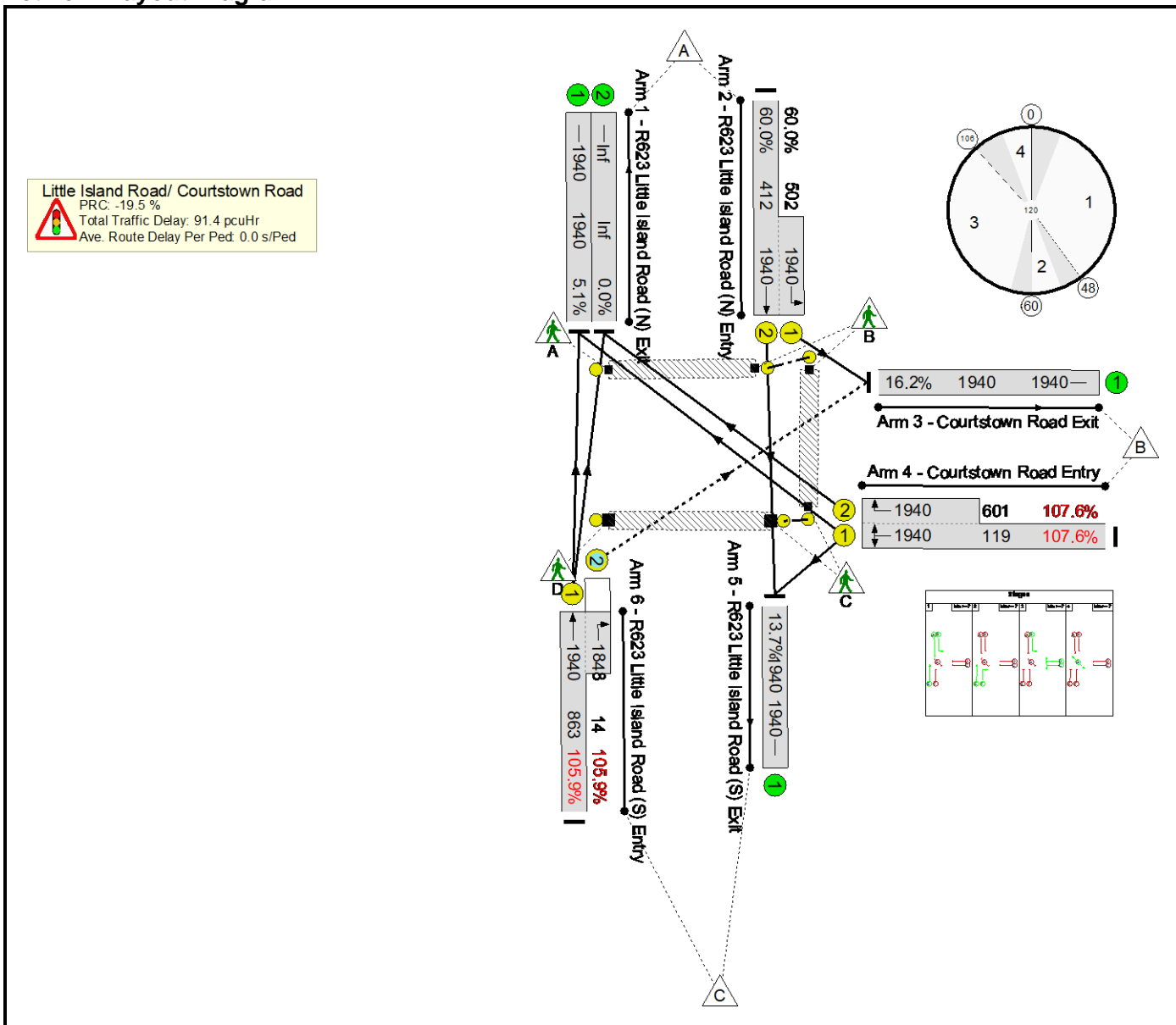
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	98.4%	0	17	0	39.8	-	-	
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	98.4%	0	17	0	39.8	-	-	
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	240	1940	1940	12.4%	-	-	-	0.1	1.1	0.1	
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	42:82	-	572	1940:1940	394+581	58.7 : 58.7%	-	-	-	2.8	17.8	6.3	
3/1	Courtstown Road Exit	U	-		-	-	-	358	1940	1940	18.5%	-	-	-	0.1	1.1	0.1	
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	40	-	760	1940:1940	265+507	98.4 : 98.4%	-	-	-	18.8	88.8	32.3	
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	252	1940	1940	13.0%	-	-	-	0.1	1.1	0.1	
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	54:7	-	871	1940:1848	876+17	97.5 : 97.5%	0	17	0	18.0	74.2	38.4	
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
C1					PRC for Signalled Lanes (%): -9.3			Total Delay for Signalled Lanes (pcuHr): 39.54			Cycle Time (s): 120							
					PRC Over All Lanes (%): -9.3			Total Delay Over All Lanes(pcuHr): 39.80										

Basic Results Summary

Scenario 13: 'PM 2041 Without Devt.' (FG13: 'PM 2041 Without Devt.', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

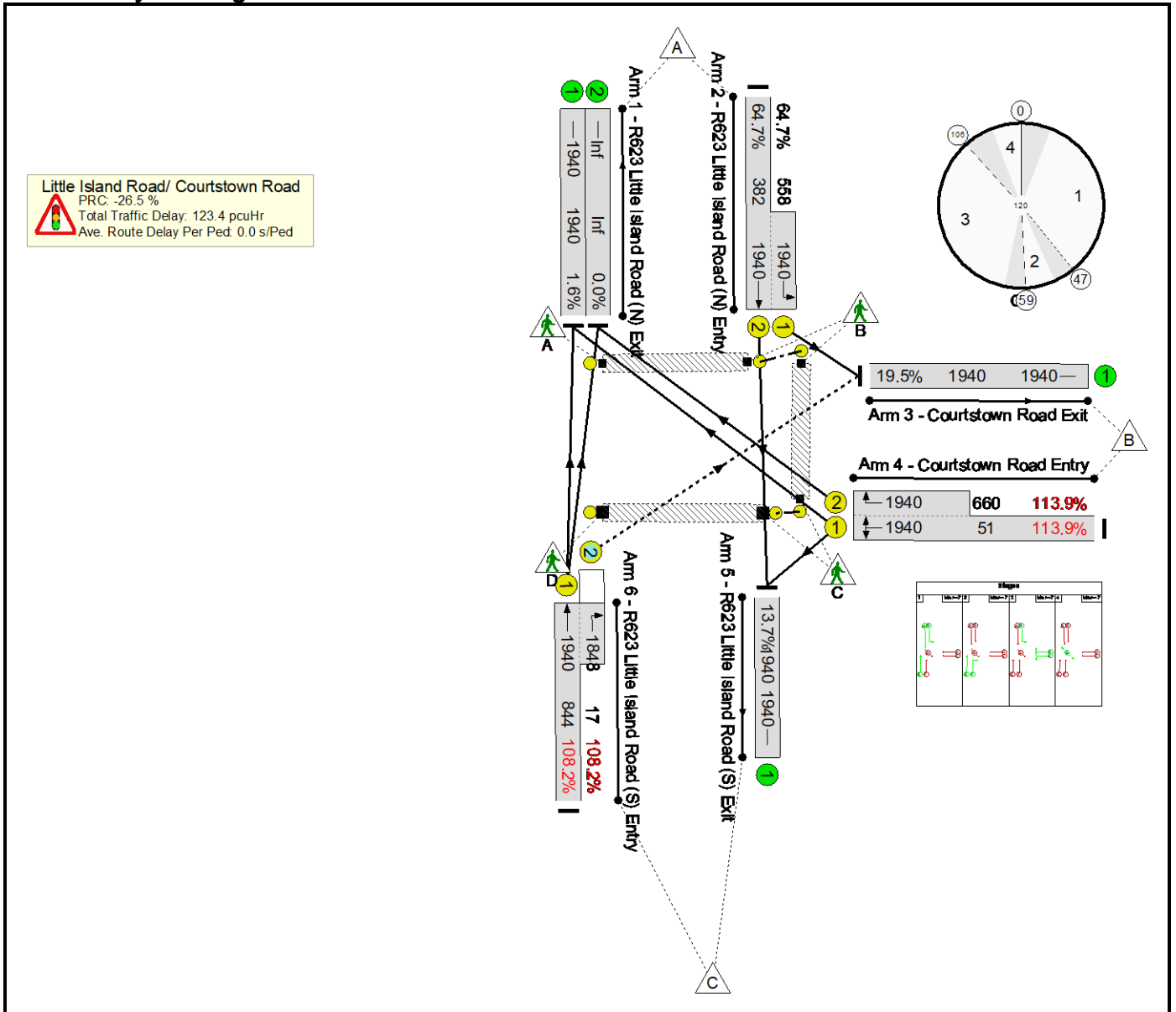
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	107.6%	0	14	1	91.4	-	-	
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	107.6%	0	14	1	91.4	-	-	
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	107	1940	1940	5.1%	-	-	-	0.0	1.0	0.0	
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	41:82	-	548	1940:1940	412+502	60.0 : 60.0%	-	-	-	3.0	19.8	7.1	
3/1	Courtstown Road Exit	U	-		-	-	-	316	1940	1940	16.2%	-	-	-	0.1	1.1	0.1	
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	41	-	775	1940:1940	119+601	107.6 : 107.6%	-	-	-	43.6	202.7	60.7	
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	268	1940	1940	13.7%	-	-	-	0.1	1.1	0.1	
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	53:7	-	929	1940:1848	863+14	105.9 : 105.9%	0	14	1	44.6	172.8	66.5	
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
C1					PRC for Signalled Lanes (%): -19.5			Total Delay for Signalled Lanes (pcuHr): 91.23			91.23		Cycle Time (s): 120					
					PRC Over All Lanes (%): -19.5			Total Delay Over All Lanes(pcuHr): 91.43			91.43							

Basic Results Summary

Scenario 14: 'PM 2041 With Devt.' (FG14: 'PM 2041 With Devt.', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	113.9%	0	16	1	123.4	-	-	
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	113.9%	0	16	1	123.4	-	-	
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	36	1940	1940	1.6%	-	-	-	0.0	0.9	0.0	
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	40:82	-	608	1940:1940	382+558	64.7 : 64.7%	-	-	-	3.3	19.5	7.7	
3/1	Courtstown Road Exit	U	-		-	-	-	379	1940	1940	19.5%	-	-	-	0.1	1.2	0.1	
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	42	-	810	1940:1940	51+660	113.9 : 113.9%	-	-	-	66.0	293.2	84.3	
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	269	1940	1940	13.7%	-	-	-	0.1	1.1	0.1	
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	52:7	-	932	1940:1848	844+17	108.2 : 108.2%	0	16	1	53.9	208.3	75.3	
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
C1					PRC for Signalled Lanes (%): -26.5			Total Delay for Signalled Lanes (pcuHr): 123.19			123.19		Cycle Time (s): 120					
					PRC Over All Lanes (%): -26.5			Total Delay Over All Lanes(pcuHr): 123.40			123.40							

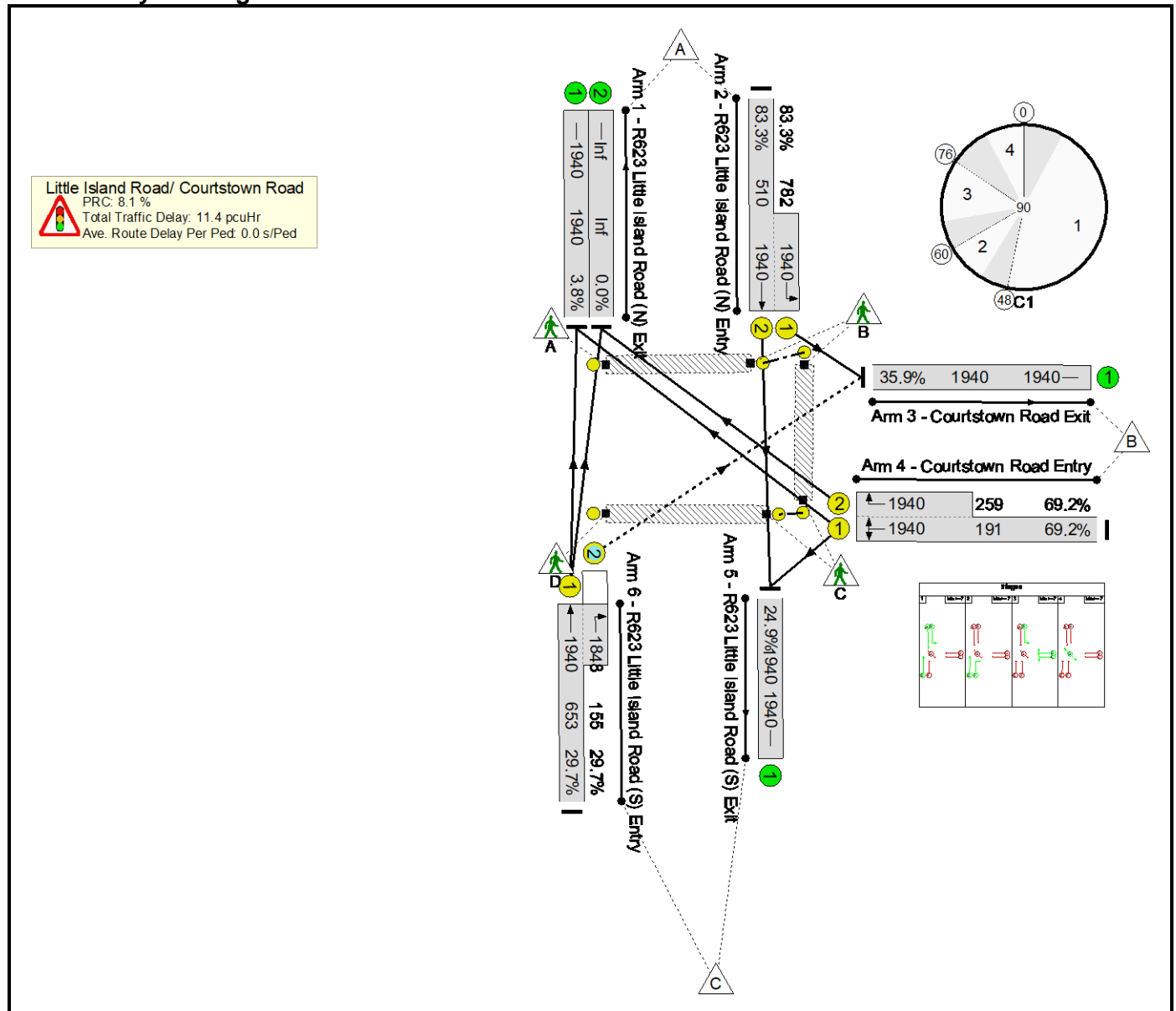
Basic Results Summary
Basic Results Summary

User and Project Details

Project:	Courtstown Distribution Centre Development
Title:	Traffic and Transportation Assessment
Location:	
Additional detail:	
File name:	Signalised Junction-2 (120sec).lsg3xKM 13062024 Scenario 2.lsg3x
Author:	DM
Company:	MHL & Associates
Address:	Carrig Mór House, 10 High St., Douglas Rd., Cork

Scenario 1: 'AM 2024' (FG1: 'AM 2024', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

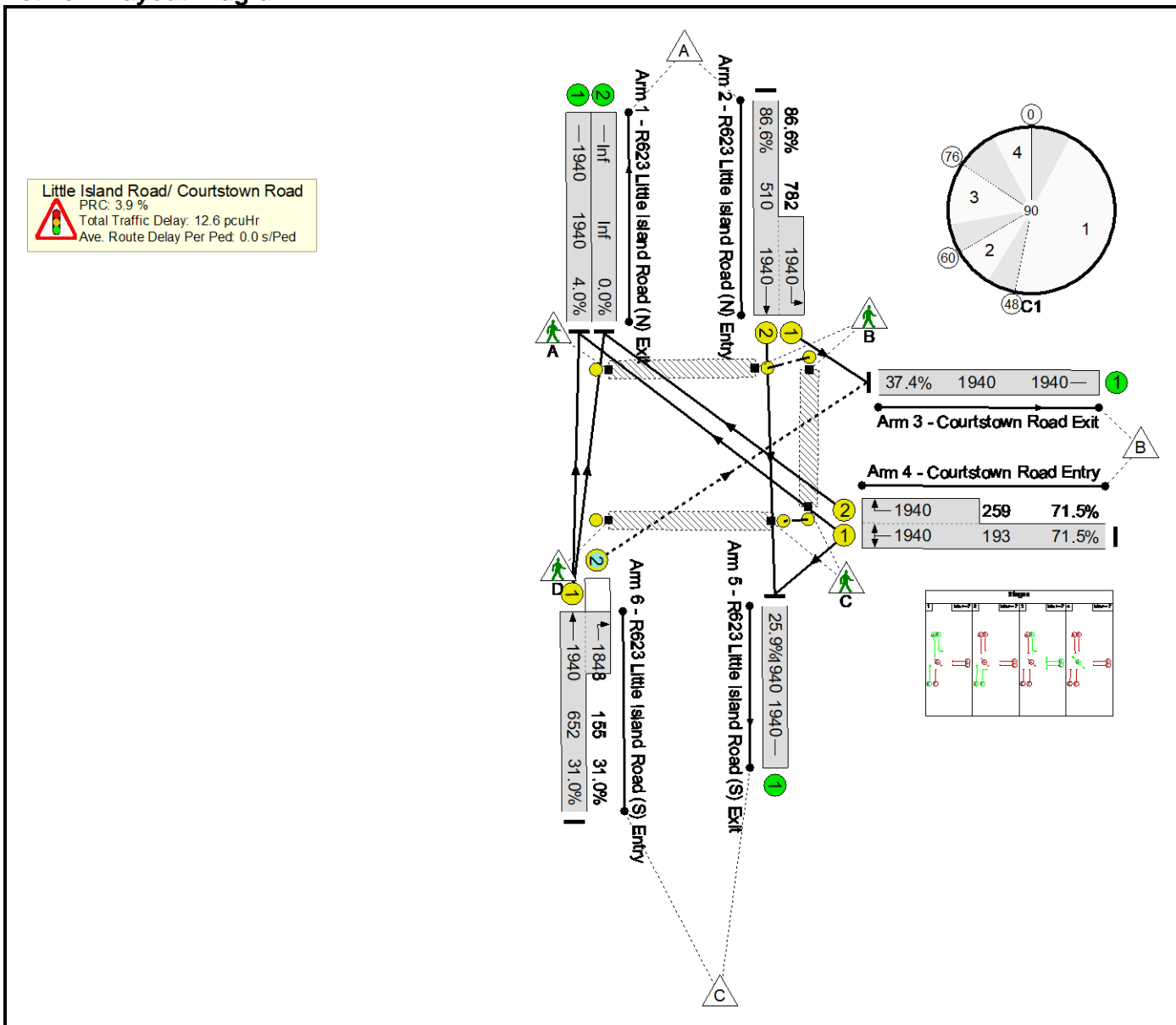
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)				
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	83.3%	0	45	1	11.4	-	-				
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	83.3%	0	45	1	11.4	-	-				
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	74	1940	1940	3.8%	-	-	-	0.0	1.0	0.0				
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	41:52	-	1076	1940:1940	510+782	83.3 : 83.3%	-	-	-	5.5	18.3	13.4				
3/1	Courtstown Road Exit	U	-		-	-	-	697	1940	1940	35.9%	-	-	-	0.3	1.4	0.3				
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	11	-	311	1940:1940	191+259	69.2 : 69.2%	-	-	-	4.3	49.6	5.3				
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	483	1940	1940	24.9%	-	-	-	0.2	1.2	0.2				
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	53:7	-	240	1940:1848	653+155	29.7 : 29.7%	0	45	1	1.1	17.0	2.4				
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	5600	0.0%	-	-	-	0.0	0.0	0.0				
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	5600	0.0%	-	-	-	0.0	0.0	0.0				
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	5600	0.0%	-	-	-	0.0	0.0	0.0				
C1		PRC for Signalled Lanes (%):		8.1		Total Delay for Signalled Lanes (pcuHr):		10.90		Cycle Time (s):		90		PRC Over All Lanes (%):		8.1		Total Delay Over All Lanes(pcuHr):		11.37	

Basic Results Summary

Scenario 2: 'AM 2026 Without Devt.' (FG2: 'AM 2026 Without Devt.', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

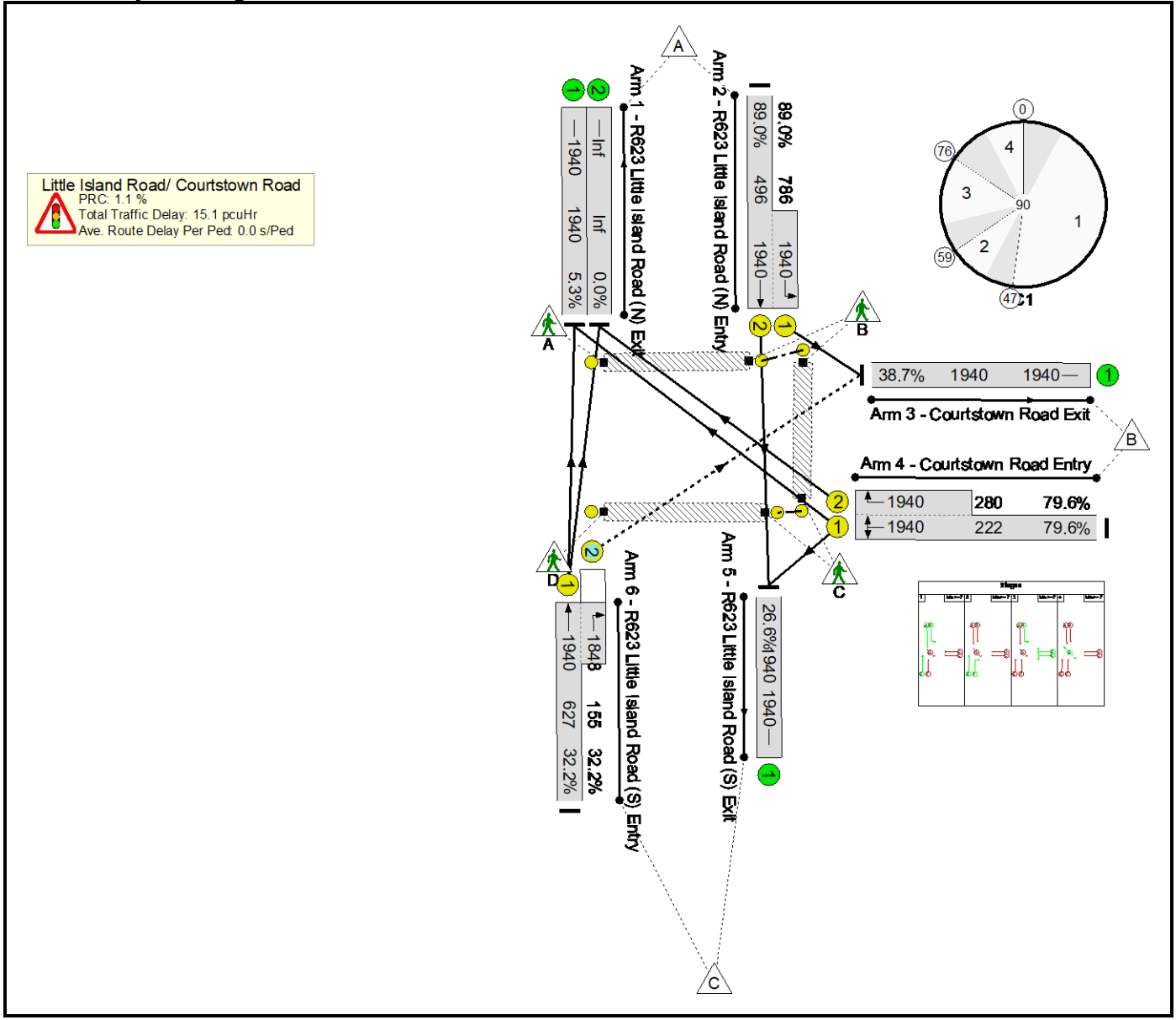
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)				
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	86.6%	0	47	1	12.6	-	-				
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	86.6%	0	47	1	12.6	-	-				
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	78	1940	1940	4.0%	-	-	-	0.0	1.0	0.0				
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	41:52	-	1119	1940:1940	510+782	86.6 : 86.6%	-	-	-	6.4	20.6	16.2				
3/1	Courtstown Road Exit	U	-		-	-	-	725	1940	1940	37.4%	-	-	-	0.3	1.5	0.3				
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	11	-	323	1940:1940	193+259	71.5 : 71.5%	-	-	-	4.5	50.7	5.7				
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	502	1940	1940	25.9%	-	-	-	0.2	1.3	0.2				
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	53:7	-	250	1940:1848	652+155	31.0 : 31.0%	0	47	1	1.2	17.1	2.5				
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	5600	0.0%	-	-	-	0.0	0.0	0.0				
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	5600	0.0%	-	-	-	0.0	0.0	0.0				
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	5600	0.0%	-	-	-	0.0	0.0	0.0				
C1		PRC for Signalled Lanes (%):		3.9		Total Delay for Signalled Lanes (pcuHr):		12.15		Cycle Time (s):		90		PRC Over All Lanes (%):		3.9		Total Delay Over All Lanes(pcuHr):		12.65	

Basic Results Summary

Scenario 3: 'AM 2026 With Devt.' (FG3: 'AM 2026 With Devt.', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

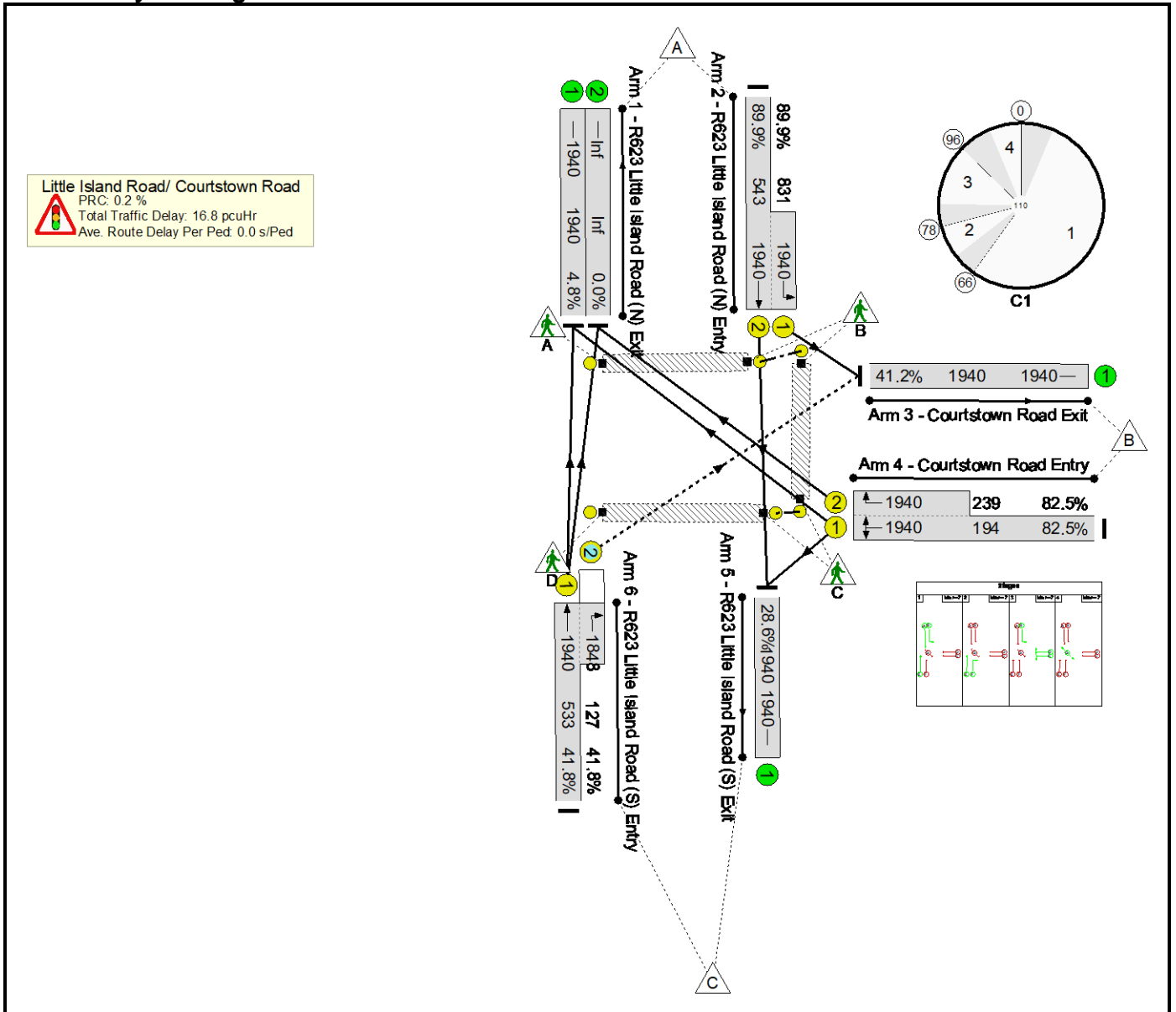
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)				
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	89.0%	0	49	1	15.1	-	-				
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	89.0%	0	49	1	15.1	-	-				
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	102	1940	1940	5.3%	-	-	-	0.0	1.0	0.0				
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	40:52	-	1142	1940:1940	496+786	89.0 : 89.0%	-	-	-	7.3	23.1	18.0				
3/1	Courtstown Road Exit	U	-		-	-	-	750	1940	1940	38.7%	-	-	-	0.3	1.5	0.3				
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	12	-	400	1940:1940	222+280	79.6 : 79.6%	-	-	-	6.0	53.8	7.3				
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	517	1940	1940	26.6%	-	-	-	0.2	1.3	0.2				
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	52:7	-	252	1940:1848	627+155	32.2 : 32.2%	0	49	1	1.2	17.8	2.5				
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	5600	0.0%	-	-	-	0.0	0.0	0.0				
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	5600	0.0%	-	-	-	0.0	0.0	0.0				
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	5600	0.0%	-	-	-	0.0	0.0	0.0				
C1		PRC for Signalled Lanes (%):		1.1		Total Delay for Signalled Lanes (pcuHr):		14.57		Cycle Time (s):		90		PRC Over All Lanes (%):		1.1		Total Delay Over All Lanes(pcuHr):		15.09	

Basic Results Summary

Scenario 4: 'AM 2030 Without Devt.' (FG4: 'AM 2031 Without Devt.', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

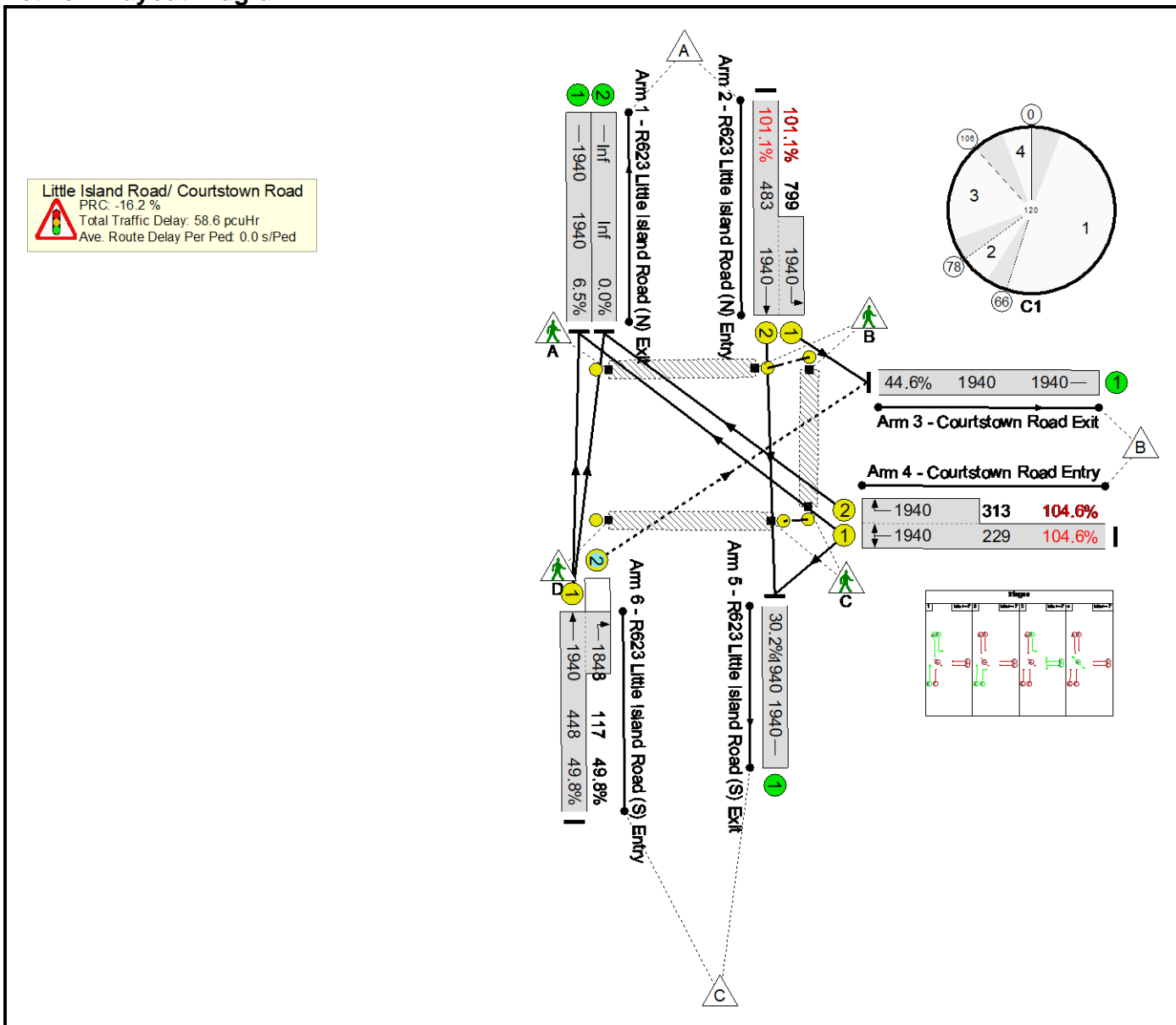
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)				
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	89.9%	0	52	1	16.8	-	-				
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	89.9%	0	52	1	16.8	-	-				
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	93	1940	1940	4.8%	-	-	-	0.0	1.0	0.0				
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	59:72	-	1235	1940:1940	543+831	89.9 : 89.9%	-	-	-	7.9	23.1	25.3				
3/1	Courtstown Road Exit	U	-		-	-	-	800	1940	1940	41.2%	-	-	-	0.4	1.6	0.4				
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	13	-	357	1940:1940	194+239	82.5 : 82.5%	-	-	-	6.8	68.6	8.0				
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	555	1940	1940	28.6%	-	-	-	0.2	1.3	0.2				
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	71:7	-	276	1940:1848	533+127	41.8 : 41.8%	0	52	1	1.5	20.0	3.0				
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	4582	0.0%	-	-	-	0.0	0.0	0.0				
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	4582	0.0%	-	-	-	0.0	0.0	0.0				
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	4582	0.0%	-	-	-	0.0	0.0	0.0				
C1		PRC for Signalled Lanes (%):		0.2		Total Delay for Signalled Lanes (pcuHr):		16.26		Cycle Time (s):		110		PRC Over All Lanes (%):		0.2		Total Delay Over All Lanes(pcuHr):		16.84	

Basic Results Summary

Scenario 5: 'AM 2030 With Devt.' (FG5: 'AM 2031 With Devt.', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

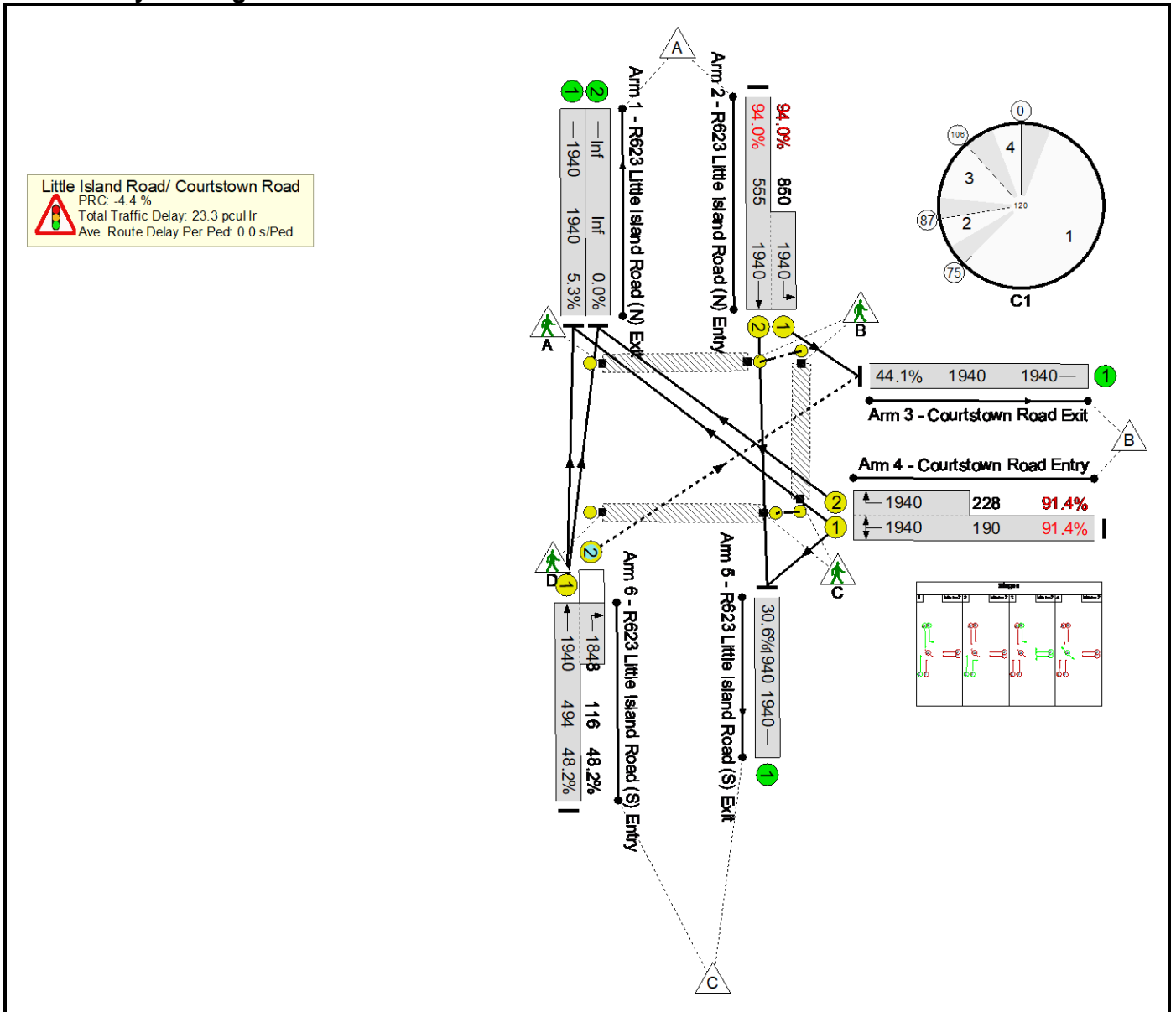
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	104.6%	0	57	1	58.6	-	-	
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	104.6%	0	57	1	58.6	-	-	
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	131	1940	1940	6.5%	-	-	-	0.0	1.0	0.0	
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	59:82	-	1296	1940:1940	483+799	101.1 : 101.1%	-	-	-	28.1	78.2	57.1	
3/1	Courtstown Road Exit	U	-		-	-	-	866	1940	1940	44.6%	-	-	-	0.4	1.7	0.4	
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	23	-	566	1940:1940	229+313	104.6 : 104.6%	-	-	-	27.8	176.8	34.8	
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	596	1940	1940	30.2%	-	-	-	0.2	1.3	0.2	
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	71:7	-	281	1940:1848	448+117	49.8 : 49.8%	0	57	1	2.0	26.1	3.8	
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
C1					PRC for Signalled Lanes (%): -16.2			Total Delay for Signalled Lanes (pcuHr): 57.96			57.96		Cycle Time (s): 120					
					PRC Over All Lanes (%): -16.2			Total Delay Over All Lanes(pcuHr): 58.62			58.62							

Basic Results Summary

Scenario 6: 'AM 2041 Without Devt.' (FG6: 'AM 2041 Without Devt.', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

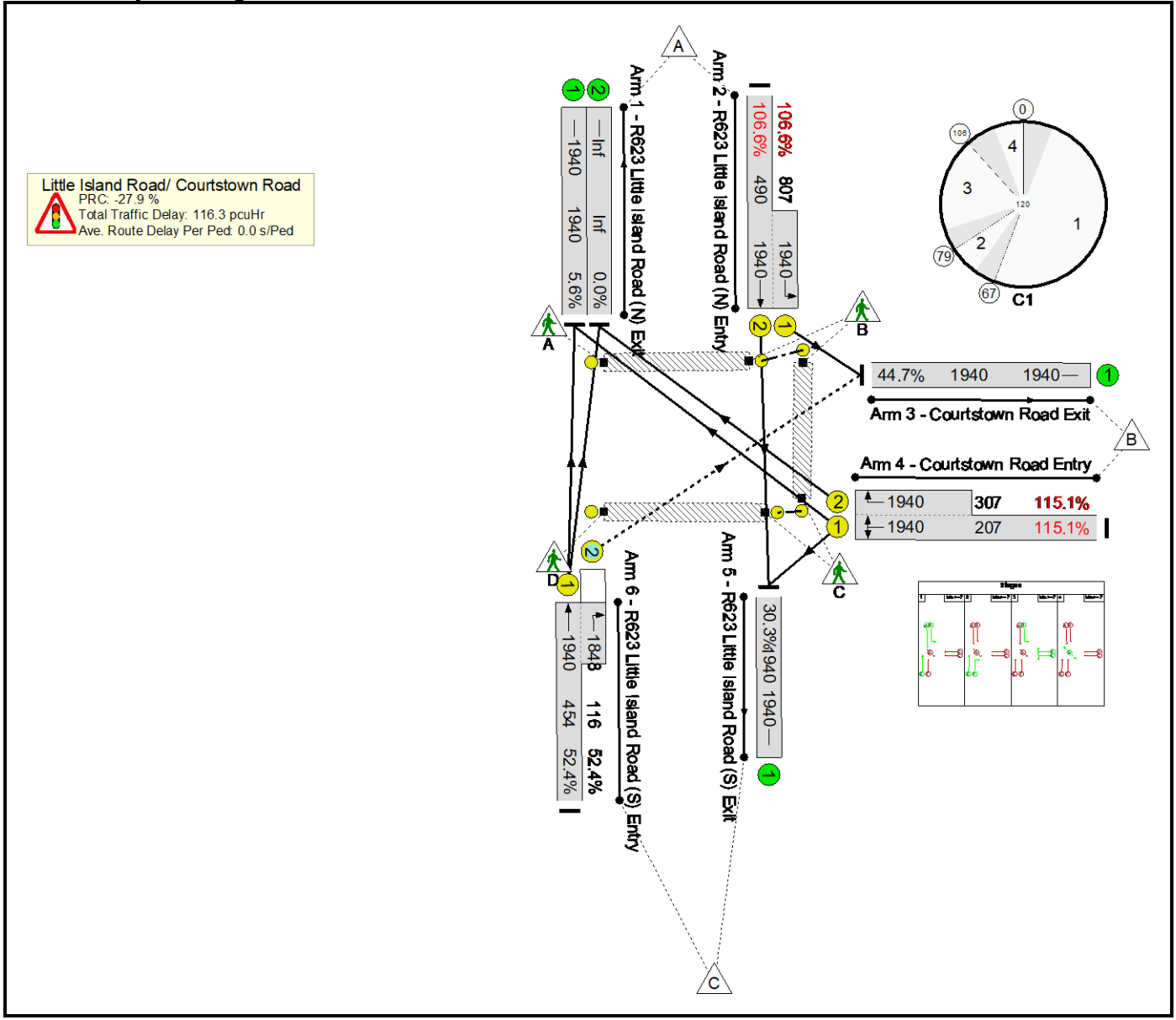
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	94.0%	0	55	1	23.3	-	-
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	94.0%	0	55	1	23.3	-	-
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	103	1940	1940	5.3%	-	-	-	0.0	1.0	0.0
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	68:82	-	1321	1940:1940	555+850	94.0 : 94.0%	-	-	-	11.2	30.5	35.5
3/1	Courtstown Road Exit	U	-		-	-	-	855	1940	1940	44.1%	-	-	-	0.4	1.7	0.4
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	14	-	382	1940:1940	190+228	91.4 : 91.4%	-	-	-	9.7	91.4	11.0
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	593	1940	1940	30.6%	-	-	-	0.2	1.3	0.2
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	80:7	-	294	1940:1848	494+116	48.2 : 48.2%	0	55	1	1.8	21.8	3.4
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0
C1					PRC for Signalled Lanes (%):		-4.4	Total Delay for Signalled Lanes (pcuHr):			22.65	Cycle Time (s):			120		
					PRC Over All Lanes (%):		-4.4	Total Delay Over All Lanes(pcuHr):			23.30						

Basic Results Summary

Scenario 7: 'AM 2041 With Devt.' (FG7: 'AM 2041 With Devt.', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

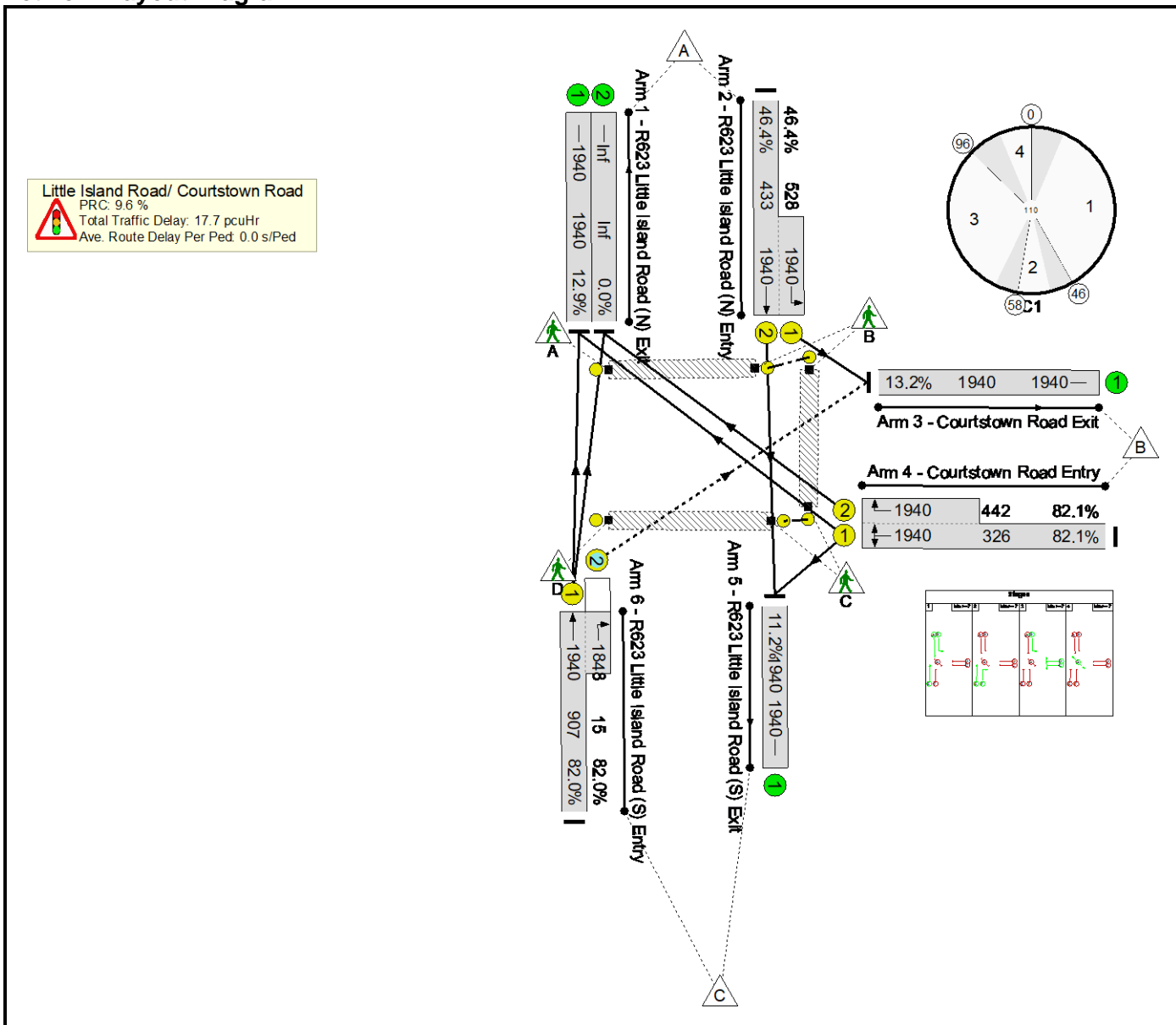
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	115.1%	0	60	1	116.3	-	-	
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	115.1%	0	60	1	116.3	-	-	
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	126	1940	1940	5.6%	-	-	-	0.0	1.0	0.0	
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	60:82	-	1382	1940:1940	490+807	106.6 : 106.6%	-	-	-	60.4	157.3	90.3	
3/1	Courtstown Road Exit	U	-		-	-	-	921	1940	1940	44.7%	-	-	-	0.4	1.7	0.4	
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	22	-	591	1940:1940	207+307	115.1 : 115.1%	-	-	-	53.1	323.6	60.9	
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	634	1940	1940	30.3%	-	-	-	0.2	1.3	0.2	
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	72:7	-	299	1940:1848	454+116	52.4 : 52.4%	0	60	1	2.2	26.0	4.1	
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
C1					PRC for Signalled Lanes (%): -27.9			Total Delay for Signalled Lanes (pcuHr): 115.66			Cycle Time (s): 120							
					PRC Over All Lanes (%): -27.9			Total Delay Over All Lanes(pcuHr): 116.31										

Basic Results Summary

Scenario 8: 'PM 2024' (FG8: 'PM 2024', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

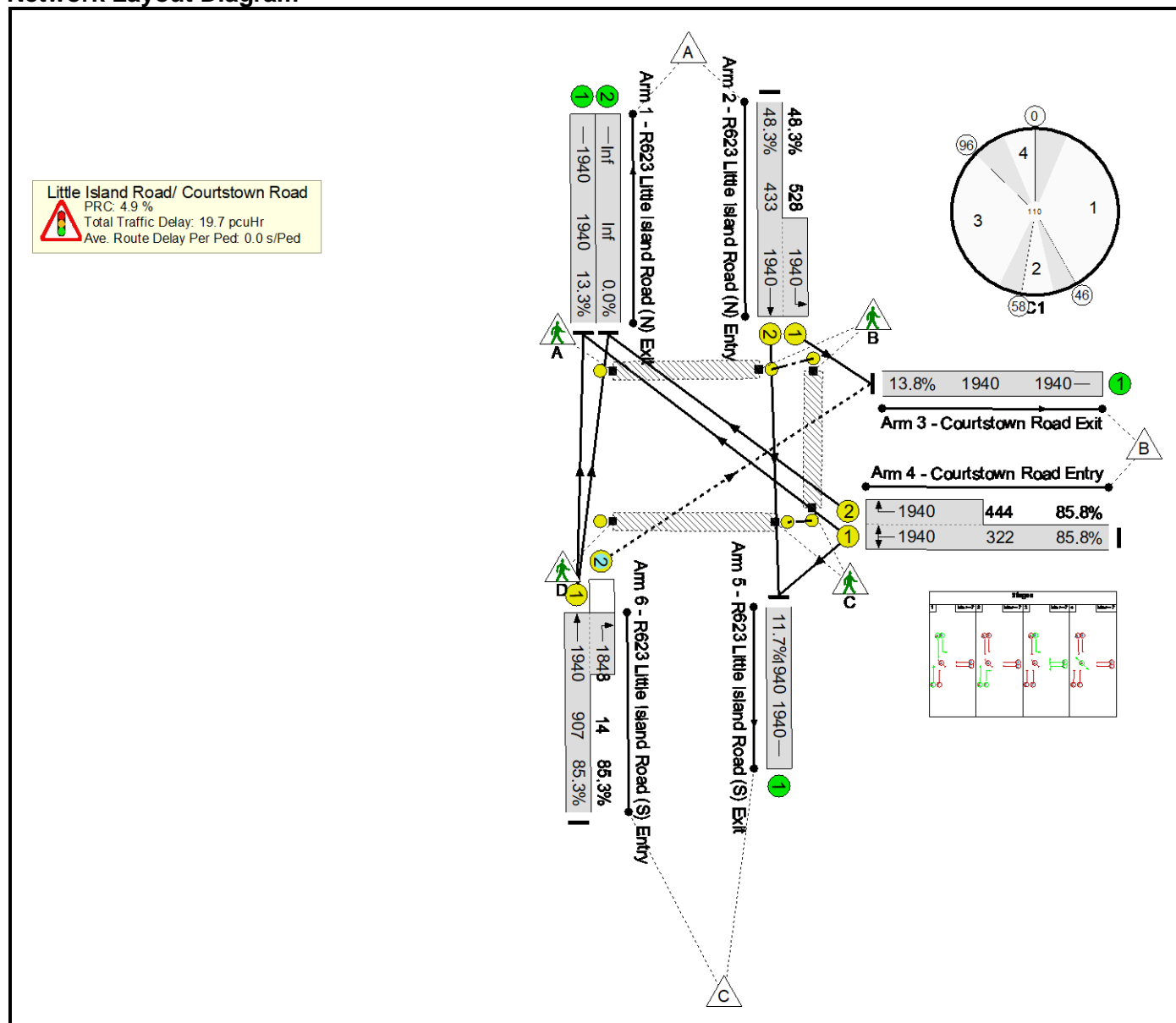
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)				
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	82.1%	0	12	0	17.7	-	-				
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	82.1%	0	12	0	17.7	-	-				
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	251	1940	1940	12.9%	-	-	-	0.1	1.1	0.1				
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	39:72	-	446	1940:1940	433+528	46.4 : 46.4%	-	-	-	2.1	16.6	4.8				
3/1	Courtstown Road Exit	U	-		-	-	-	257	1940	1940	13.2%	-	-	-	0.1	1.1	0.1				
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	33	-	631	1940:1940	326+442	82.1 : 82.1%	-	-	-	7.9	45.0	14.2				
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	218	1940	1940	11.2%	-	-	-	0.1	1.0	0.1				
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	51:7	-	756	1940:1848	907+15	82.0 : 82.0%	0	12	0	7.5	35.8	21.9				
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	4582	0.0%	-	-	-	0.0	0.0	0.0				
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	4582	0.0%	-	-	-	0.0	0.0	0.0				
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	4582	0.0%	-	-	-	0.0	0.0	0.0				
C1		PRC for Signalled Lanes (%):		9.6		Total Delay for Signalled Lanes (pcuHr):		17.46		Cycle Time (s):		110		PRC Over All Lanes (%):		9.6		Total Delay Over All Lanes(pcuHr):		17.67	

Basic Results Summary

Scenario 9: 'PM 2026 Without Devt.' (FG9: 'PM 2026 Without Devt.', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

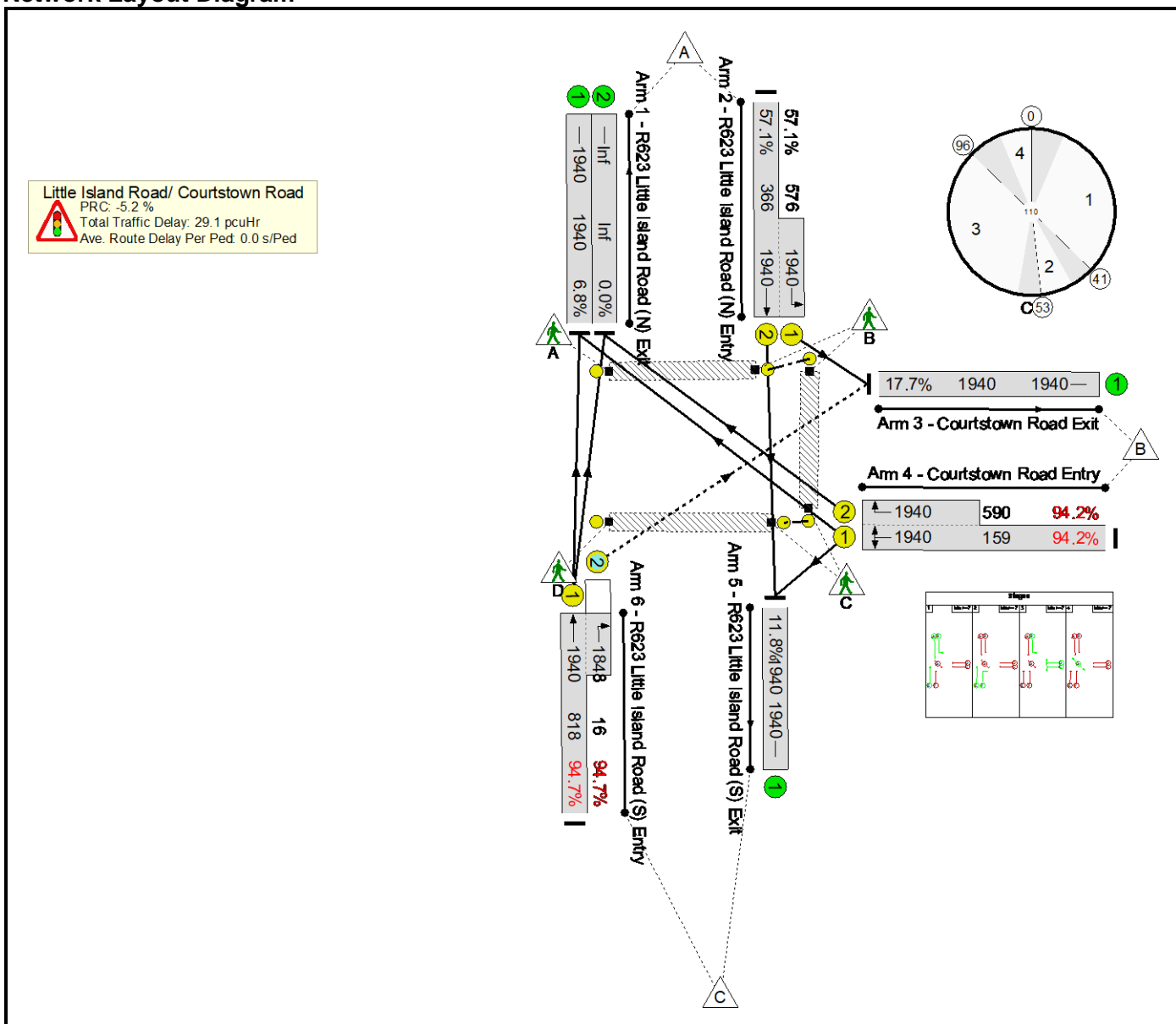
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)				
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	85.8%	0	12	0	19.7	-	-				
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	85.8%	0	12	0	19.7	-	-				
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	258	1940	1940	13.3%	-	-	-	0.1	1.1	0.1				
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	39:72	-	464	1940:1940	433+528	48.3 : 48.3%	-	-	-	2.2	16.8	5.0				
3/1	Courtstown Road Exit	U	-		-	-	-	267	1940	1940	13.8%	-	-	-	0.1	1.1	0.1				
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	33	-	657	1940:1940	322+444	85.8 : 85.8%	-	-	-	8.9	48.6	16.1				
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	227	1940	1940	11.7%	-	-	-	0.1	1.1	0.1				
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	51:7	-	786	1940:1848	907+14	85.3 : 85.3%	0	12	0	8.4	38.6	23.9				
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	4582	0.0%	-	-	-	0.0	0.0	0.0				
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	4582	0.0%	-	-	-	0.0	0.0	0.0				
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	4582	0.0%	-	-	-	0.0	0.0	0.0				
C1		PRC for Signalled Lanes (%):		4.9		Total Delay for Signalled Lanes (pcuHr):		19.47		Cycle Time (s):		110		PRC Over All Lanes (%):		4.9		Total Delay Over All Lanes(pcuHr):		19.69	

Basic Results Summary

Scenario 10: 'PM 2026 With Devt.' (FG10: 'PM 2026 With Devt.', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

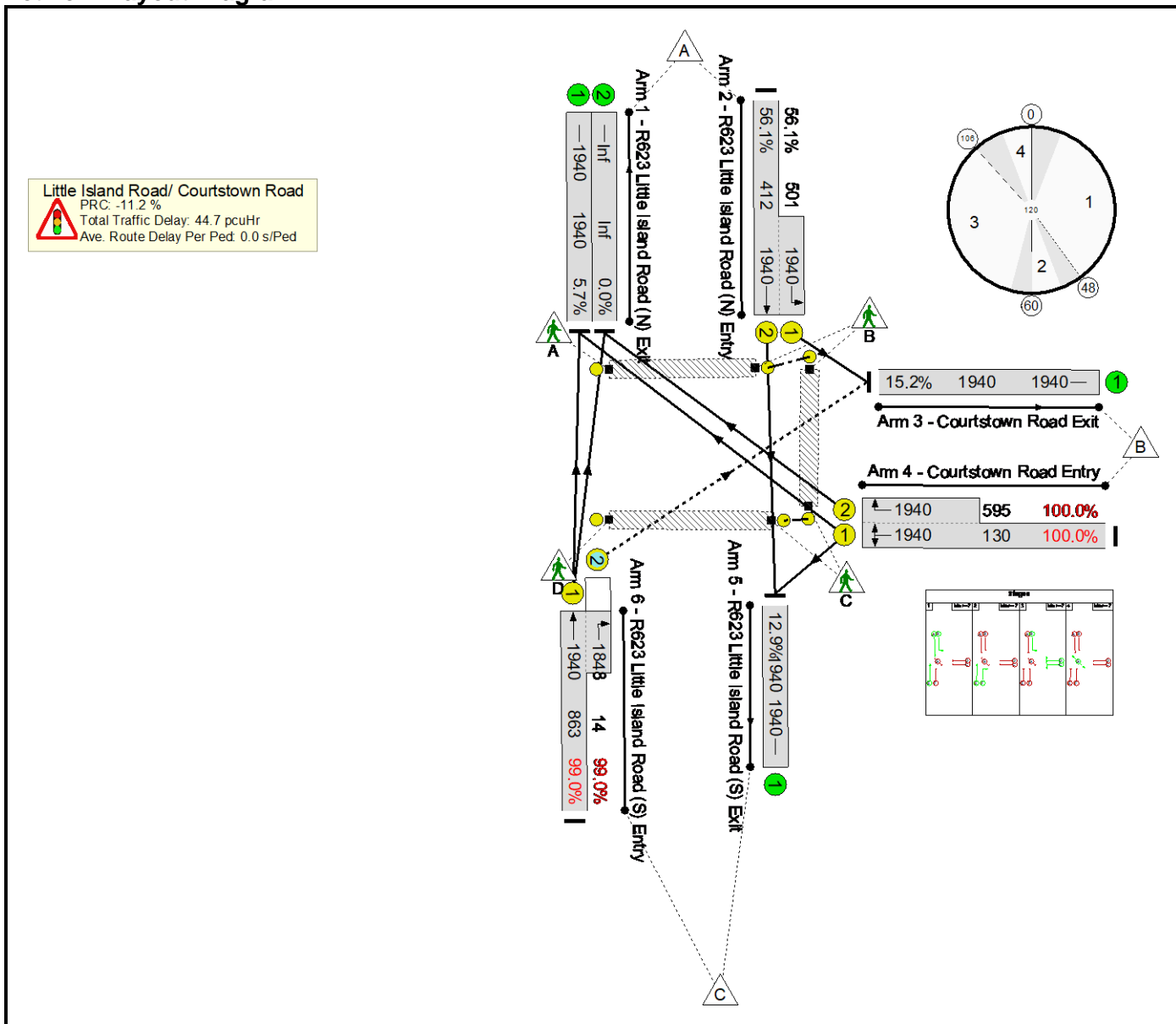
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)				
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	94.7%	0	15	0	29.1	-	-				
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	94.7%	0	15	0	29.1	-	-				
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	131	1940	1940	6.8%	-	-	-	0.0	1.0	0.0				
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	34:72	-	538	1940:1940	366+576	57.1 : 57.1%	-	-	-	2.7	17.8	5.5				
3/1	Courtstown Road Exit	U	-		-	-	-	344	1940	1940	17.7%	-	-	-	0.1	1.1	0.1				
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	38	-	706	1940:1940	159+590	94.2 : 94.2%	-	-	-	12.7	65.0	25.2				
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	228	1940	1940	11.8%	-	-	-	0.1	1.1	0.1				
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	46:7	-	789	1940:1848	818+16	94.7 : 94.7%	0	15	0	13.5	61.5	29.7				
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	4582	0.0%	-	-	-	0.0	0.0	0.0				
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	4582	0.0%	-	-	-	0.0	0.0	0.0				
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	4582	0.0%	-	-	-	0.0	0.0	0.0				
C1		PRC for Signalled Lanes (%):		-5.2		Total Delay for Signalled Lanes (pcuHr):		28.87		Cycle Time (s):		110		PRC Over All Lanes (%):		-5.2		Total Delay Over All Lanes(pcuHr):		29.08	

Basic Results Summary

Scenario 11: 'PM 2031 Without Devt.' (FG11: 'PM 2031 Without Devt.', Plan 1: 'Network Control Plan 1')

Network Layout Diagram

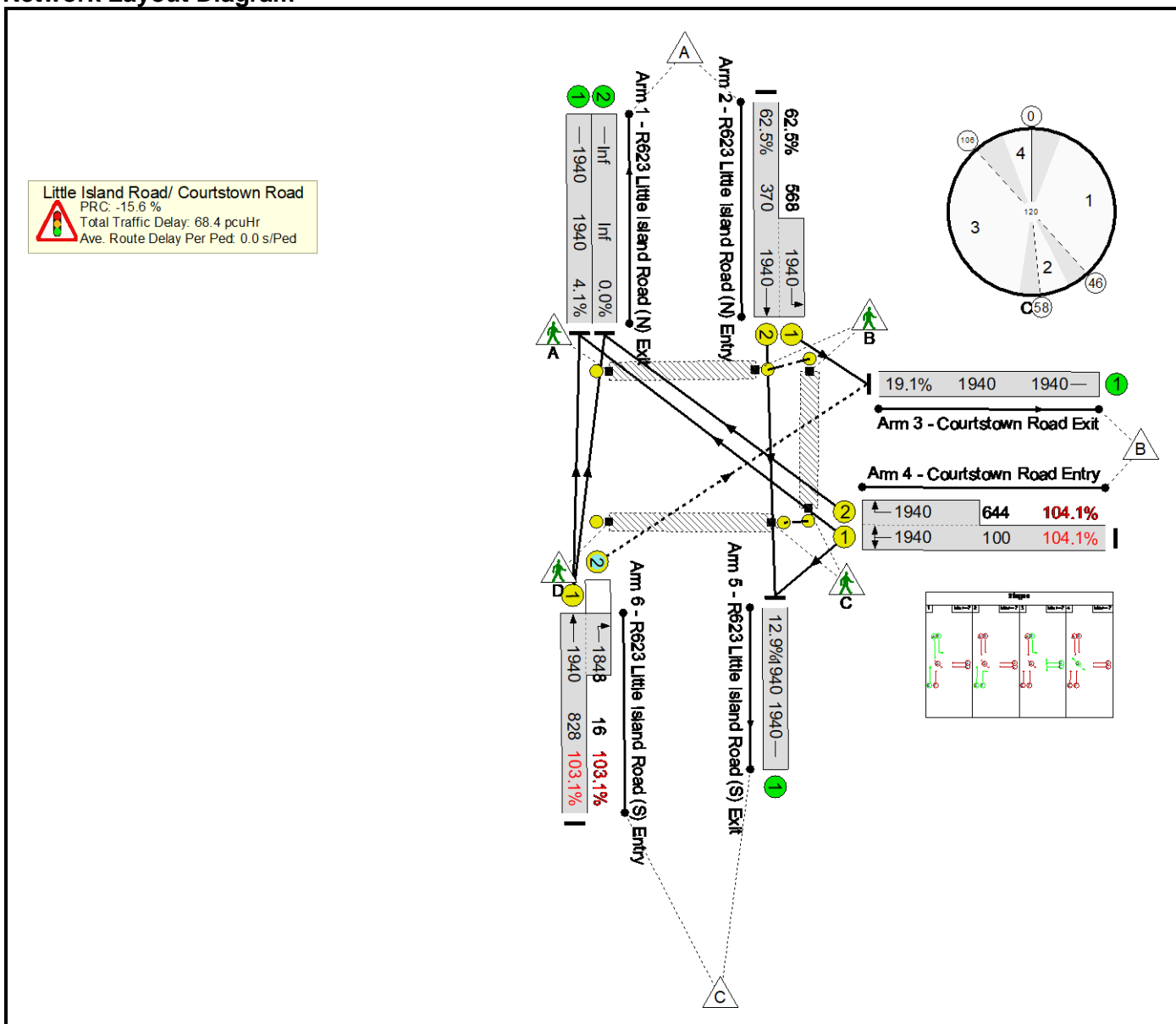


Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	100.0%	0	14	0	44.7	-	-	
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	100.0%	0	14	0	44.7	-	-	
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	110	1940	1940	5.7%	-	-	-	0.0	1.0	0.0	
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	41:82	-	512	1940:1940	412+501	56.1 : 56.1%	-	-	-	2.7	19.2	6.3	
3/1	Courtstown Road Exit	U	-		-	-	-	295	1940	1940	15.2%	-	-	-	0.1	1.1	0.1	
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	41	-	725	1940:1940	130+595	100.0 : 100.0%	-	-	-	21.2	105.0	36.2	
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	251	1940	1940	12.9%	-	-	-	0.1	1.1	0.1	
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	53:7	-	868	1940:1848	863+14	99.0 : 99.0%	0	14	0	20.6	85.5	41.1	
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
C1					PRC for Signalled Lanes (%): -11.2			Total Delay for Signalled Lanes (pcuHr): 44.49			Cycle Time (s): 120							
					PRC Over All Lanes (%): -11.2			Total Delay Over All Lanes(pcuHr): 44.69										

Network Layout Diagram



Basic Results Summary

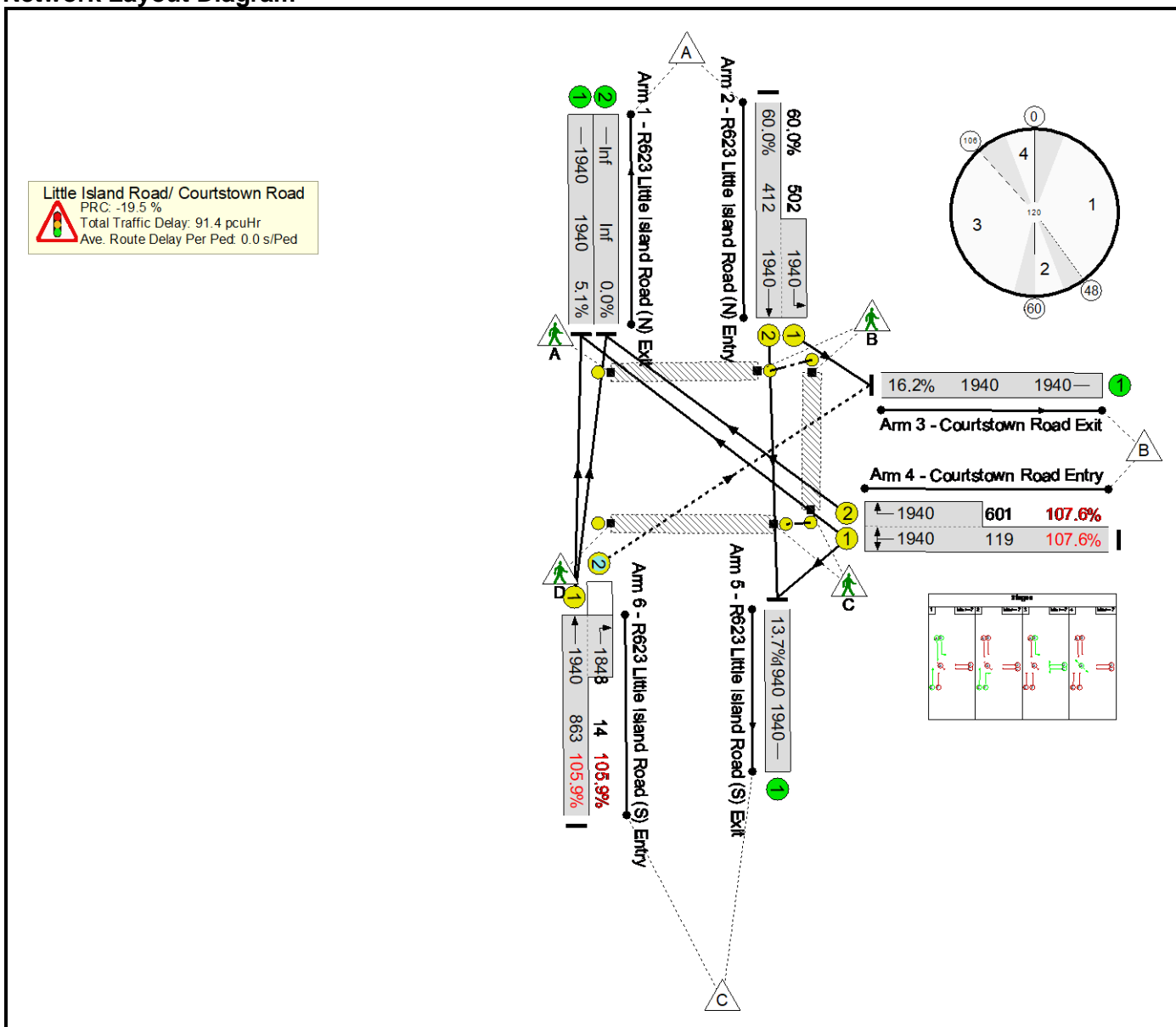
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	104.1%	0	16	1	68.4	-	-	
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	104.1%	0	16	1	68.4	-	-	
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	83	1940	1940	4.1%	-	-	-	0.0	1.0	0.0	
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	39:82	-	586	1940:1940	370+568	62.5 : 62.5%	-	-	-	3.1	19.1	6.6	
3/1	Courtstown Road Exit	U	-		-	-	-	372	1940	1940	19.1%	-	-	-	0.1	1.1	0.1	
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	43	-	774	1940:1940	100+644	104.1 : 104.1%	-	-	-	32.7	151.9	50.4	
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	252	1940	1940	12.9%	-	-	-	0.1	1.1	0.1	
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	51:7	-	871	1940:1848	828+16	103.1 : 103.1%	0	16	1	32.4	134.0	53.2	
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
C1					PRC for Signalled Lanes (%): -15.6			Total Delay for Signalled Lanes (pcuHr): 68.19			68.19			Cycle Time (s): 120				
					PRC Over All Lanes (%): -15.6			Total Delay Over All Lanes(pcuHr): 68.41			68.41							

Basic Results Summary

Scenario 13: 'PM 2041 Without Devt.' (FG13: 'PM 2041 Without Devt.', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

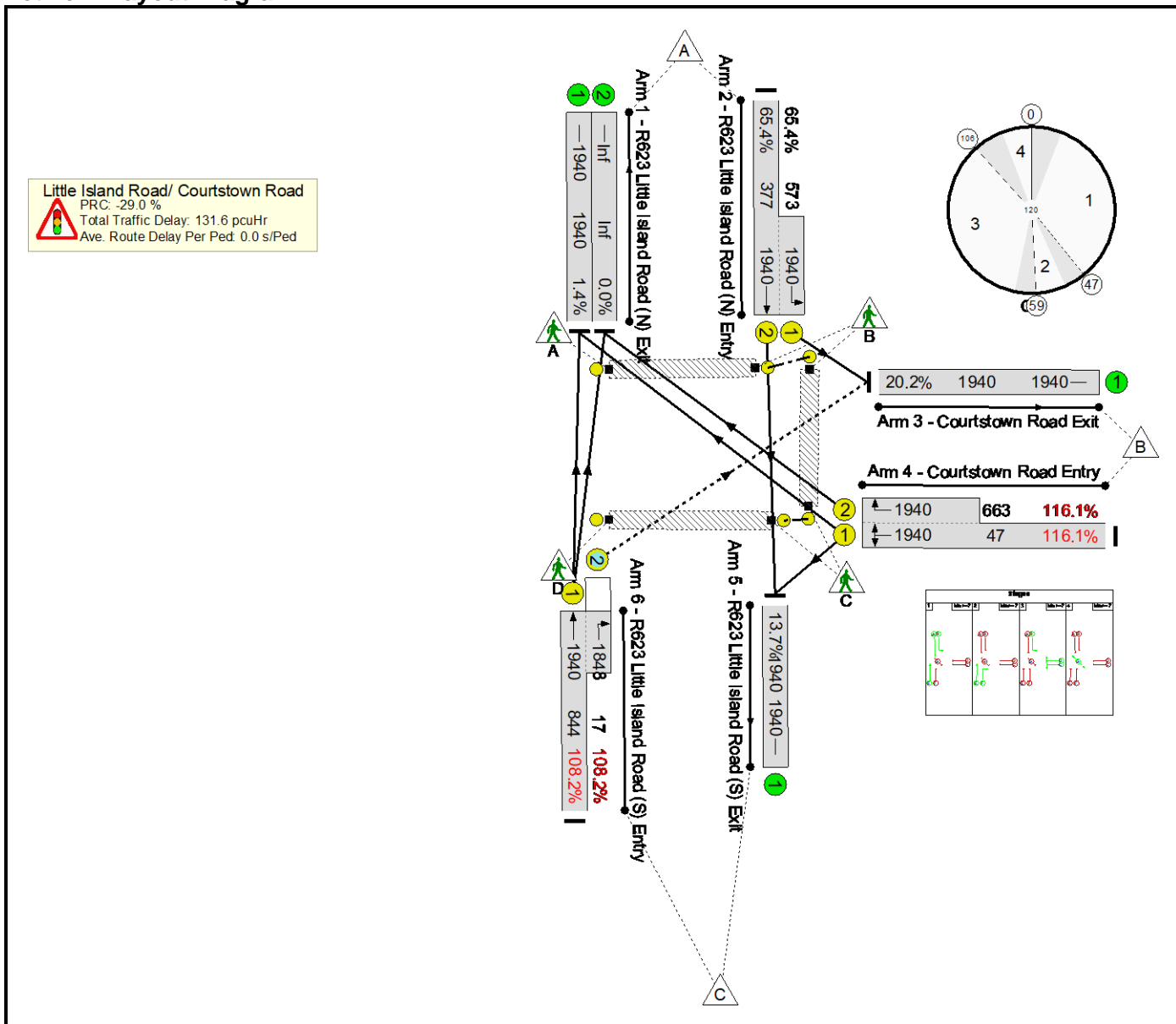
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	107.6%	0	14	1	91.4	-	-	
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	107.6%	0	14	1	91.4	-	-	
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	107	1940	1940	5.1%	-	-	-	0.0	1.0	0.0	
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	41:82	-	548	1940:1940	412+502	60.0 : 60.0%	-	-	-	3.0	19.8	7.1	
3/1	Courtstown Road Exit	U	-		-	-	-	316	1940	1940	16.2%	-	-	-	0.1	1.1	0.1	
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	41	-	775	1940:1940	119+601	107.6 : 107.6%	-	-	-	43.6	202.7	60.7	
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	268	1940	1940	13.7%	-	-	-	0.1	1.1	0.1	
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	53:7	-	929	1940:1848	863+14	105.9 : 105.9%	0	14	1	44.6	172.8	66.5	
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
C1					PRC for Signalled Lanes (%): -19.5			Total Delay for Signalled Lanes (pcuHr): 91.23			91.23		Cycle Time (s): 120					
					PRC Over All Lanes (%): -19.5			Total Delay Over All Lanes(pcuHr): 91.43			91.43							

Basic Results Summary

Scenario 14: 'PM 2041 With Devt.' (FG14: 'PM 2041 With Devt.', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	116.1%	0	16	1	131.6	-	-	
Little Island Road/ Courtstown Road	-	-	-		-	-	-	-	-	-	116.1%	0	16	1	131.6	-	-	
1/1	R623 Little Island Road (N) Exit	U	-		-	-	-	32	1940	1940	1.4%	-	-	-	0.0	0.9	0.0	
2/2+2/1	R623 Little Island Road (N) Entry Left Ahead	U	A B		1:2	40:82	-	622	1940:1940	377+573	65.4 : 65.4%	-	-	-	3.3	19.4	7.7	
3/1	Courtstown Road Exit	U	-		-	-	-	393	1940	1940	20.2%	-	-	-	0.1	1.2	0.1	
4/1+4/2	Courtstown Road Entry Right Left	U	C D		1	42	-	824	1940:1940	47+663	116.1 : 116.1%	-	-	-	74.1	323.8	92.7	
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	269	1940	1940	13.7%	-	-	-	0.1	1.1	0.1	
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	E F		1	52:7	-	932	1940:1848	844+17	108.2 : 108.2%	0	16	1	53.9	208.3	75.3	
Ped Link: P1	Ped Link (N Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
Ped Link: P2	Ped Link (E Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
Ped Link: P3	Ped Link (C Arm)	-	G		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0	
C1					PRC for Signalled Lanes (%): -29.0			Total Delay for Signalled Lanes (pcuHr): 131.38			Cycle Time (s): 120							
					PRC Over All Lanes (%): -29.0			Total Delay Over All Lanes(pcuHr): 131.59										

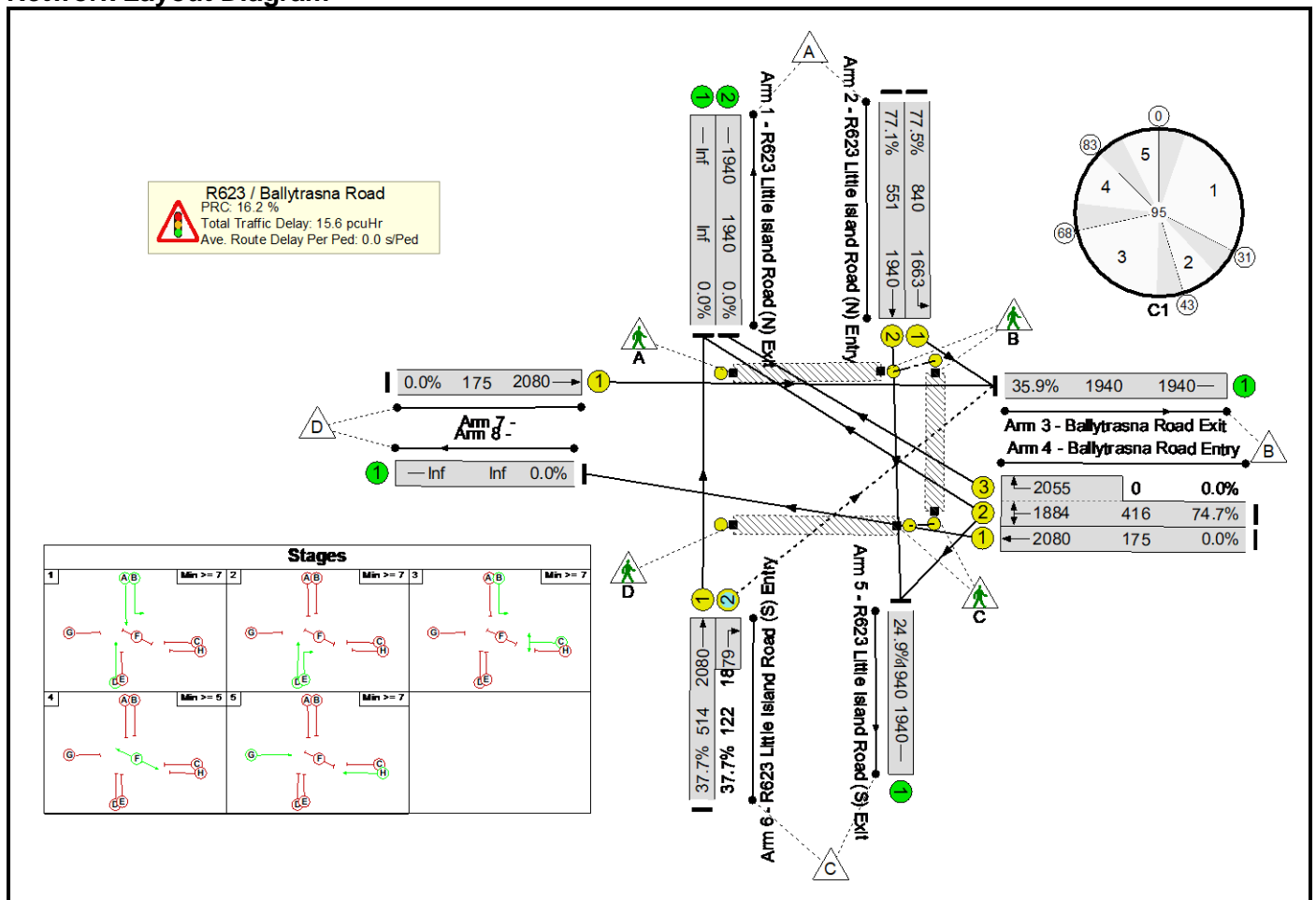
Basic Results Summary
Basic Results Summary

User and Project Details

Project:	Courtstown Distribution Centre Development
Title:	Traffic and Transportation Assessment
Location:	
Additional detail:	
File name:	Signalised Junction-3 (120sec)- Sceanrio 2 Masterplan.lsg3x
Author:	DM
Company:	MHL & Associates
Address:	Unit 1b, The Atrium, Blackpool, Cork

Scenario 1: 'AM 2024' (FG1: 'AM 2024', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	77.5%	0	46	0	15.6	-	-
R623 / Ballytrasna Road	-	-	-		-	-	-	-	-	-	77.5%	0	46	0	15.6	-	-
1/2	R623 Little Island Road (N) Exit	U	-		-	-	-	0	1940	1940	0.0%	-	-	-	0.0	0.0	0.0
2/1	R623 Little Island Road (N) Entry Left	U	B		2	46	-	651	1663	840	77.5%	-	-	-	3.6	19.9	10.7
2/2	R623 Little Island Road (N) Entry Ahead	U	A		1	26	-	425	1940	551	77.1%	-	-	-	5.3	45.0	11.9
3/1	Ballytrasna Road Exit	U	-		-	-	-	697	1940	1940	35.9%	-	-	-	0.3	1.4	0.3
4/1	Ballytrasna Road Entry Ahead	U	H		1	7	-	0	2080	175	0.0%	-	-	-	0.0	0.0	0.0
4/2+4/3	Ballytrasna Road Entry Right Left	U	C		1	20	-	311	1884:2055	416+0	74.7 : 0.0%	-	-	-	4.4	51.1	9.0
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	483	1940	1940	24.9%	-	-	-	0.2	1.2	0.2
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	D E		1	38:7	-	240	2080:1879	514+122	37.7 : 37.7%	0	46	0	1.8	27.1	3.7
7/1	Ahead	U	G		1	7	-	0	2080	175	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P1	Ped Link (N Arm)	-	F		1	10	-	0	-	7579	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Ped Link (E Arm)	-	F		1	10	-	0	-	7579	0.0%	-	-	-	0.0	0.0	0.0

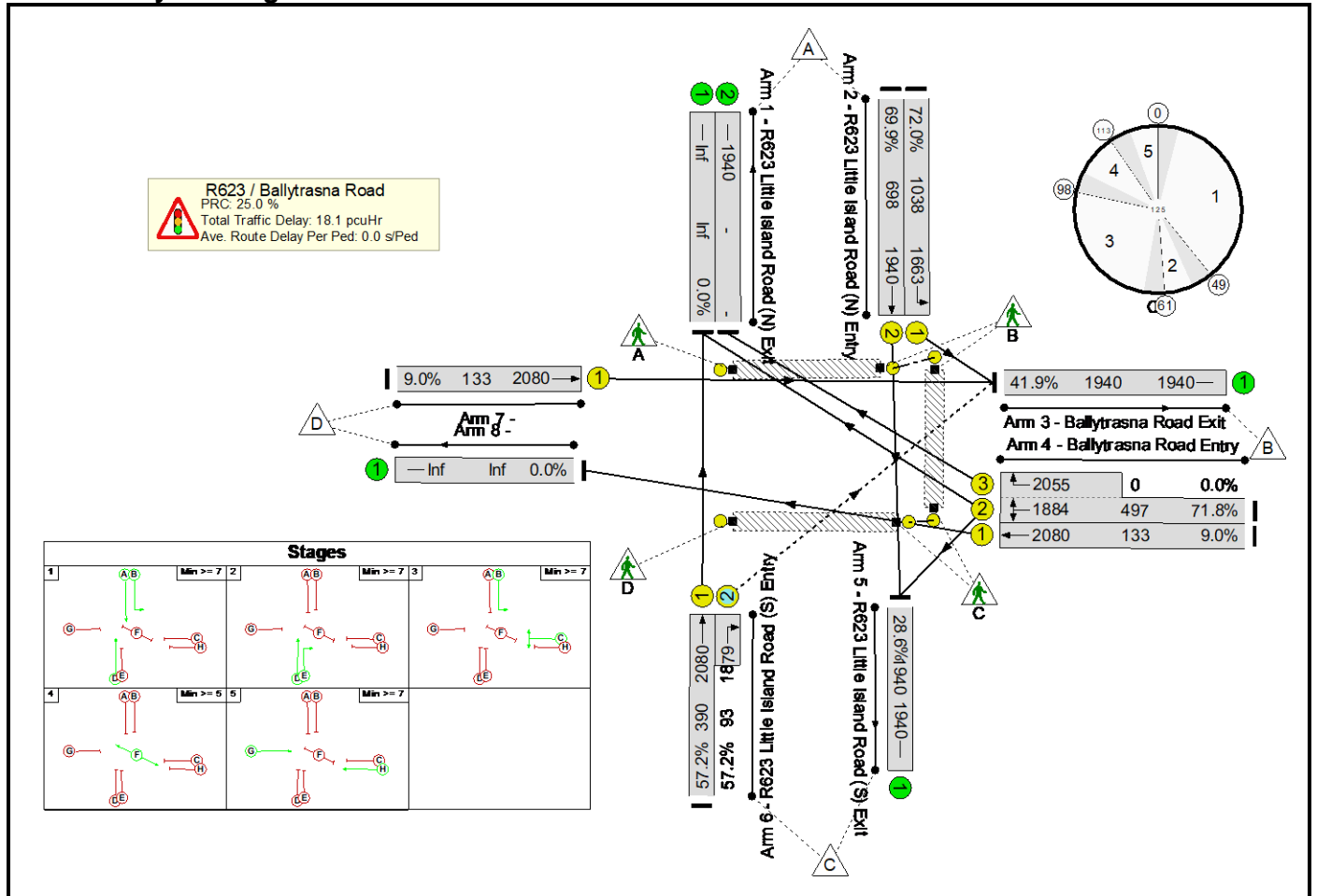
Basic Results Summary

Ped Link: P3	Ped Link (C Arm)	-	F		1	10	-	0	-	7579	0.0%	-	-	-	0.0	0.0	0.0
C1		PRC for Signalled Lanes (%):		16.2		Total Delay for Signalled Lanes (pcuHr):		15.14		Cycle Time (s):		95					
		PRC Over All Lanes (%):		16.2		Total Delay Over All Lanes(pcuHr):		15.58									

Basic Results Summary

Scenario 2: 'AM 2031 No Dev' (FG2: 'AM 2031 Without Devt.', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	72.0%	0	53	0	18.1	-	-
R623 / Ballytrasna Road	-	-	-		-	-	-	-	-	-	72.0%	0	53	0	18.1	-	-
1/2	R623 Little Island Road (N) Exit	U	-		-	-	-	0	1940	-	-	-	-	-	-	-	-
2/1	R623 Little Island Road (N) Entry Left	U	B		2	76	-	747	1663	1038	72.0%	-	-	-	3.1	15.0	12.9
2/2	R623 Little Island Road (N) Entry Ahead	U	A		1	44	-	488	1940	698	69.9%	-	-	-	5.8	42.7	15.5
3/1	Ballytrasna Road Exit	U	-		-	-	-	812	1940	1940	41.9%	-	-	-	0.4	1.6	0.4
4/1	Ballytrasna Road Entry Ahead	U	H		1	7	-	12	2080	133	9.0%	-	-	-	0.2	70.1	0.4
4/2+4/3	Ballytrasna Road Entry Right Left	U	C		1	32	-	357	1884:2055	497+0	71.8 : 0.0%	-	-	-	5.4	54.4	12.5
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	555	1940	1940	28.6%	-	-	-	0.2	1.3	0.2
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	D E		1	56:7	-	276	2080:1879	390+93	57.2 : 57.2%	0	53	0	2.8	36.3	5.8
7/1	Ahead	U	G		1	7	-	12	2080	133	9.0%	-	-	-	0.2	70.1	0.4
Ped Link: P1	Ped Link (N Arm)	-	F		1	10	-	0	-	5760	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Ped Link (E Arm)	-	F		1	10	-	0	-	5760	0.0%	-	-	-	0.0	0.0	0.0

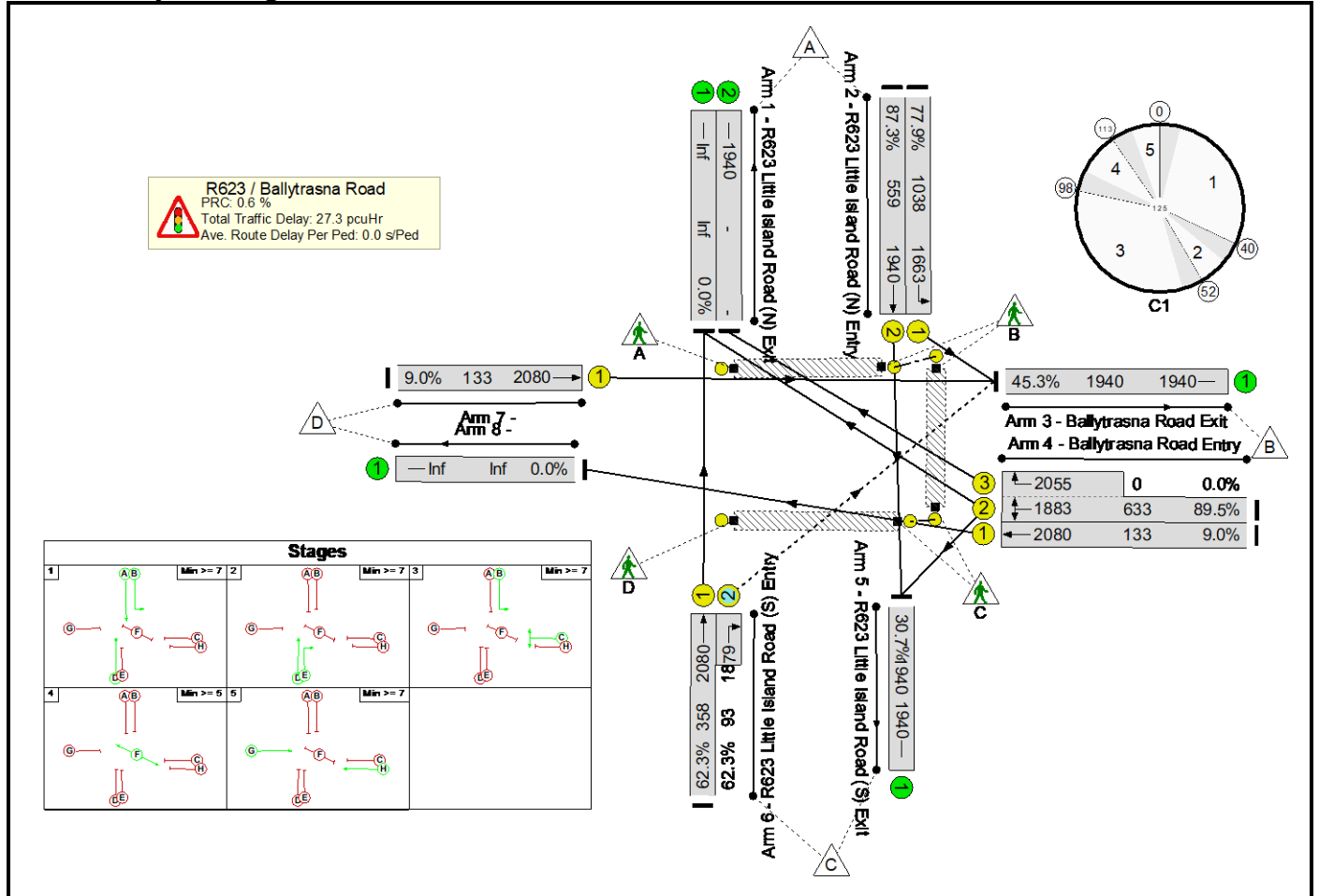
Basic Results Summary

Ped Link: P3	Ped Link (C Arm)	-	F		1	10	-	0	-	5760	0.0%	-	-	-	0.0	0.0	0.0
C1		PRC for Signalled Lanes (%):		25.0		Total Delay for Signalled Lanes (pcuHr):		17.53		Cycle Time (s):		125					
		PRC Over All Lanes (%):		25.0		Total Delay Over All Lanes(pcuHr):		18.09									

Basic Results Summary

Scenario 3: 'AM 2031 With Dev' (FG3: 'AM 2031 With Devt.', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	89.5%	0	58	0	27.3	-	-
R623 / Ballytrasna Road	-	-	-		-	-	-	-	-	-	89.5%	0	58	0	27.3	-	-
1/2	R623 Little Island Road (N) Exit	U	-		-	-	-	0	1940	-	-	-	-	-	-	-	-
2/1	R623 Little Island Road (N) Entry Left	U	B		2	76	-	808	1663	1038	77.9%	-	-	-	3.9	17.2	15.2
2/2	R623 Little Island Road (N) Entry Ahead	U	A		1	35	-	488	1940	559	87.3%	-	-	-	8.9	65.7	19.2
3/1	Ballytrasna Road Exit	U	-		-	-	-	878	1940	1940	45.3%	-	-	-	0.4	1.7	0.4
4/1	Ballytrasna Road Entry Ahead	U	H		1	7	-	12	2080	133	9.0%	-	-	-	0.2	70.1	0.4
4/2+4/3	Ballytrasna Road Entry Right Left	U	C		1	41	-	566	1883:2055	633+0	89.5 : 0.0%	-	-	-	10.0	63.6	22.4
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	596	1940	1940	30.7%	-	-	-	0.2	1.3	0.2
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	D E		1	47:7	-	281	2080:1879	358+93	62.3 : 62.3%	0	58	0	3.4	43.3	6.8
7/1	Ahead	U	G		1	7	-	12	2080	133	9.0%	-	-	-	0.2	70.1	0.4
Ped Link: P1	Ped Link (N Arm)	-	F		1	10	-	0	-	5760	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Ped Link (E Arm)	-	F		1	10	-	0	-	5760	0.0%	-	-	-	0.0	0.0	0.0

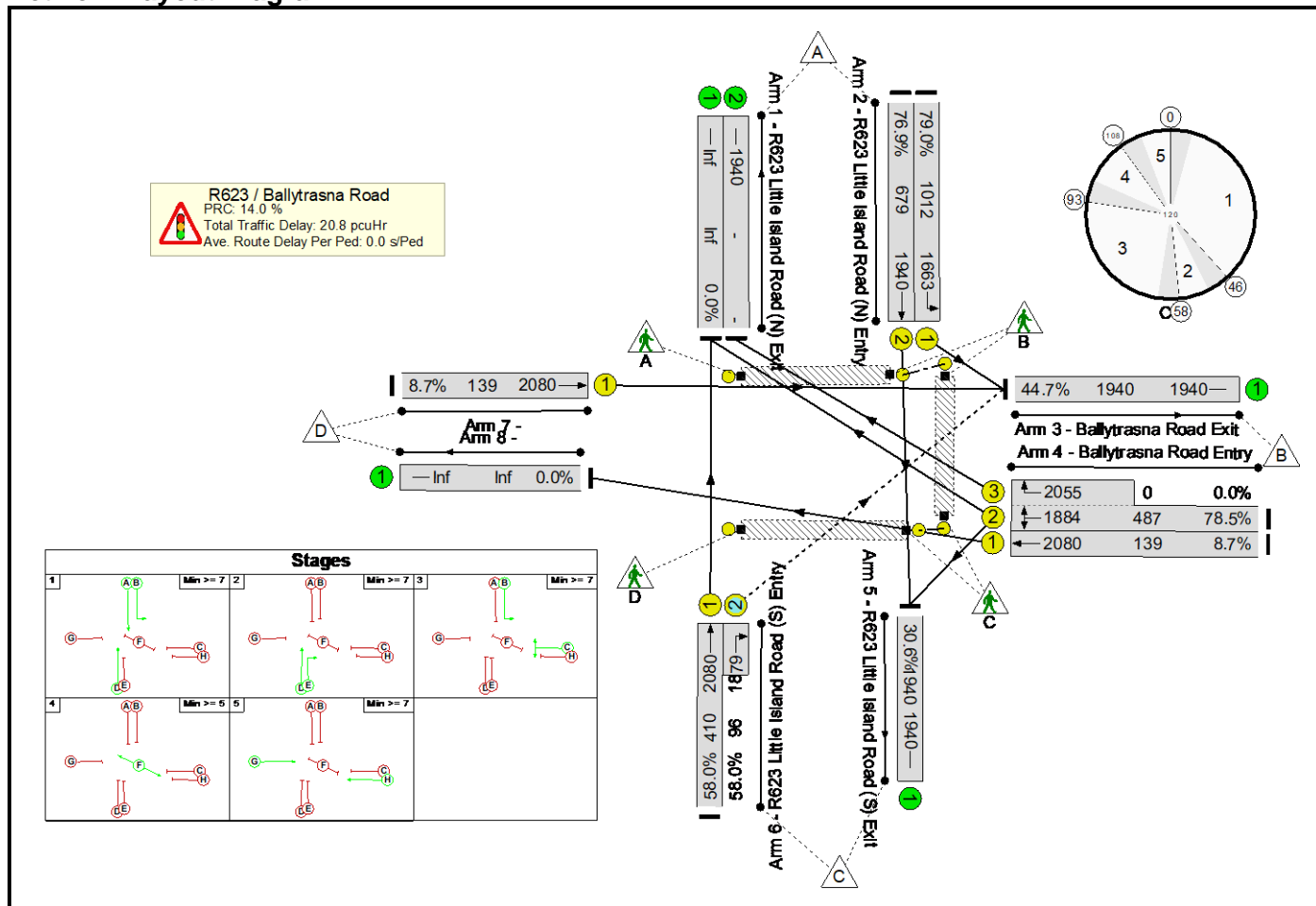
Basic Results Summary

Ped Link: P3	Ped Link (C Arm)	-	F		1	10	-	0	-	5760	0.0%	-	-	-	0.0	0.0	0.0
C1		PRC for Signalled Lanes (%):		0.6		Total Delay for Signalled Lanes (pcuHr):		26.62		Cycle Time (s):		125					
		PRC Over All Lanes (%):		0.6		Total Delay Over All Lanes(pcuHr):		27.25									

Basic Results Summary

Scenario 4: 'AM 2041 No Dev' (FG4: 'AM 2041 Without Dev', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	79.0%	0	56	0	20.8	-	-
R623 / Ballytrasna Road	-	-	-		-	-	-	-	-	-	79.0%	0	56	0	20.8	-	-
1/2	R623 Little Island Road (N) Exit	U	-		-	-	-	0	1940	-	-	-	-	-	-	-	-
2/1	R623 Little Island Road (N) Entry Left	U	B		2	71	-	799	1663	1012	79.0%	-	-	-	4.0	18.1	14.9
2/2	R623 Little Island Road (N) Entry Ahead	U	A		1	41	-	522	1940	679	76.9%	-	-	-	6.7	45.9	17.0
3/1	Ballytrasna Road Exit	U	-		-	-	-	867	1940	1940	44.7%	-	-	-	0.4	1.7	0.4
4/1	Ballytrasna Road Entry Ahead	U	H		1	7	-	12	2080	139	8.7%	-	-	-	0.2	66.9	0.4
4/2+4/3	Ballytrasna Road Entry Right Left	U	C		1	30	-	382	1884:2055	487+0	78.5 : 0.0%	-	-	-	6.2	58.0	13.5
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	593	1940	1940	30.6%	-	-	-	0.2	1.3	0.2
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	D E		1	53:7	-	294	2080:1879	410+96	58.0 : 58.0%	0	56	0	2.9	35.3	6.1
7/1	Ahead	U	G		1	7	-	12	2080	139	8.7%	-	-	-	0.2	66.9	0.4
Ped Link: P1	Ped Link (N Arm)	-	F		1	10	-	0	-	6000	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Ped Link (E Arm)	-	F		1	10	-	0	-	6000	0.0%	-	-	-	0.0	0.0	0.0

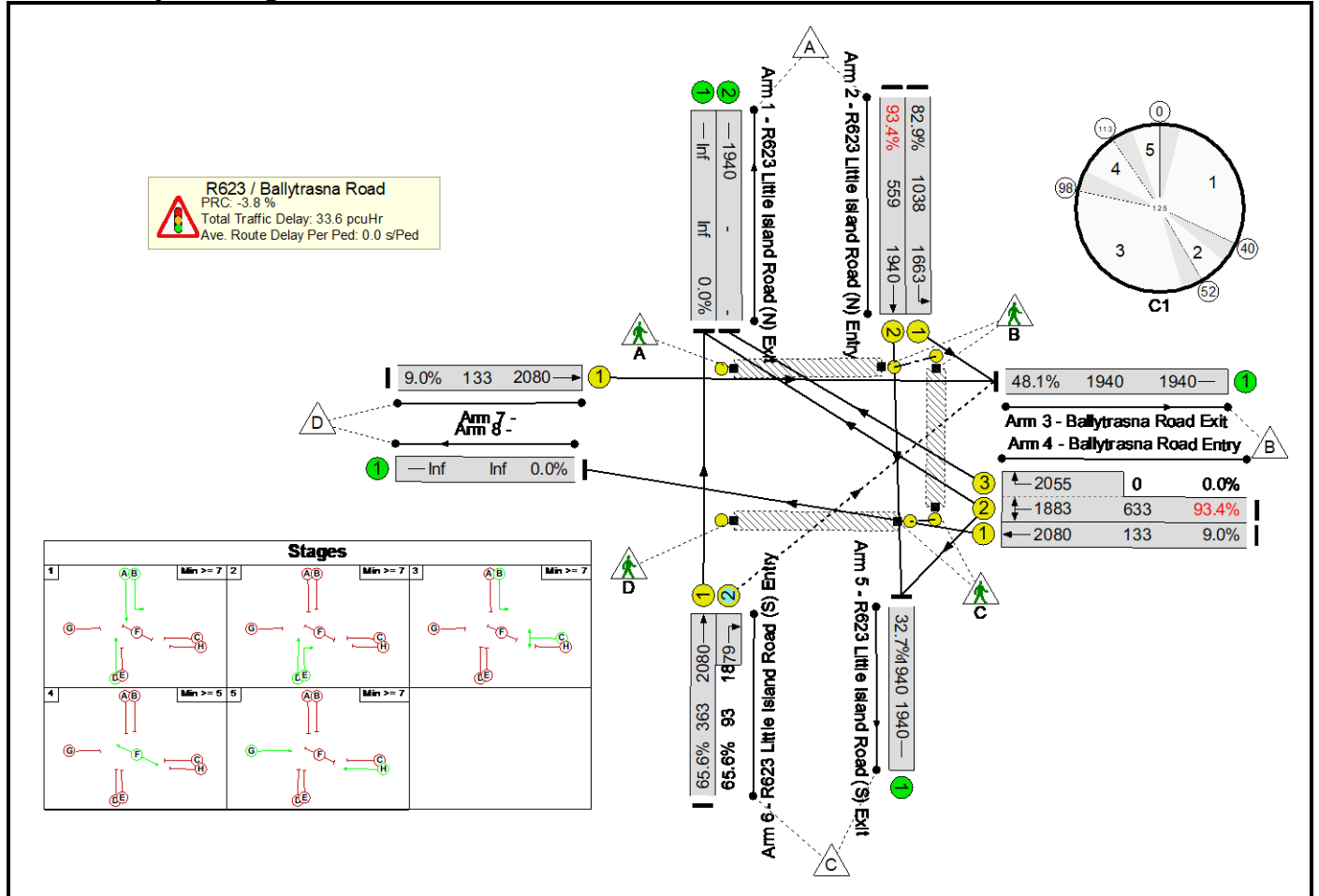
Basic Results Summary

Ped Link: P3	Ped Link (C Arm)	-	F		1	10	-	0	-	6000	0.0%	-	-	-	0.0	0.0	0.0
C1		PRC for Signalled Lanes (%):		14.0		Total Delay for Signalled Lanes (pcuHr):		20.16		Cycle Time (s):		120					
		PRC Over All Lanes (%):		14.0		Total Delay Over All Lanes(pcuHr):		20.78									

Basic Results Summary

Scenario 5: 'AM 2041 With Dev' (FG5: 'AM 2041 With Dev', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	93.4%	0	61	0	33.6	-	-
R623 / Ballytrasna Road	-	-	-		-	-	-	-	-	-	93.4%	0	61	0	33.6	-	-
1/2	R623 Little Island Road (N) Exit	U	-		-	-	-	0	1940	-	-	-	-	-	-	-	-
2/1	R623 Little Island Road (N) Entry Left	U	B		2	76	-	860	1663	1038	82.9%	-	-	-	4.8	19.9	17.6
2/2	R623 Little Island Road (N) Entry Ahead	U	A		1	35	-	522	1940	559	93.4%	-	-	-	11.8	81.1	23.0
3/1	Ballytrasna Road Exit	U	-		-	-	-	933	1940	1940	48.1%	-	-	-	0.5	1.8	0.5
4/1	Ballytrasna Road Entry Ahead	U	H		1	7	-	12	2080	133	9.0%	-	-	-	0.2	70.1	0.4
4/2+4/3	Ballytrasna Road Entry Right Left	U	C		1	41	-	591	1883:2055	633+0	93.4 : 0.0%	-	-	-	12.2	74.2	25.3
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	634	1940	1940	32.7%	-	-	-	0.2	1.4	0.2
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	D E		1	47:7	-	299	2080:1879	363+93	65.6 : 65.6%	0	61	0	3.7	44.3	7.5
7/1	Ahead	U	G		1	7	-	12	2080	133	9.0%	-	-	-	0.2	70.1	0.4
Ped Link: P1	Ped Link (N Arm)	-	F		1	10	-	0	-	5760	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Ped Link (E Arm)	-	F		1	10	-	0	-	5760	0.0%	-	-	-	0.0	0.0	0.0

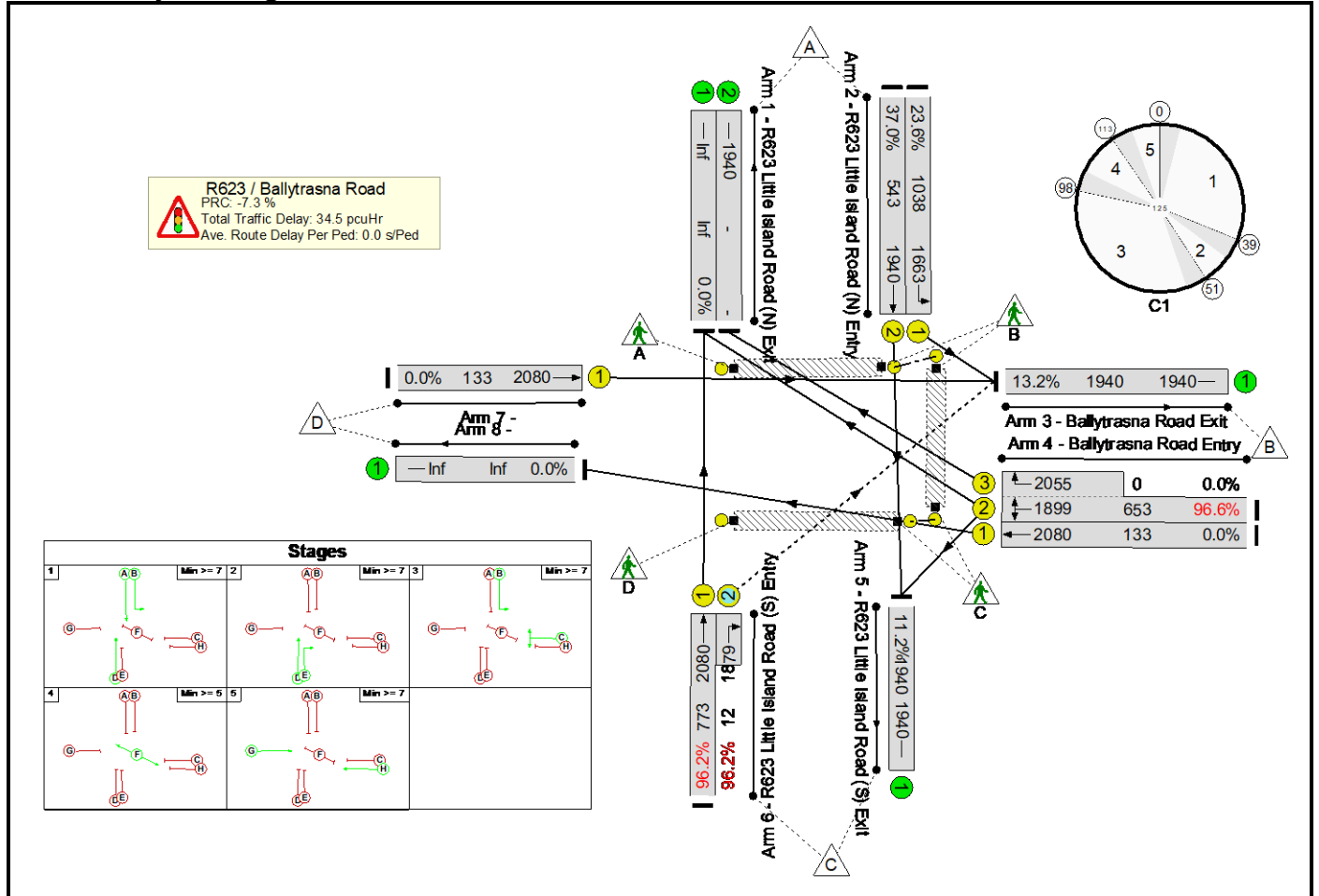
Basic Results Summary

Ped Link: P3	Ped Link (C Arm)	-	F		1	10	-	0	-	5760	0.0%	-	-	-	0.0	0.0	0.0
C1		PRC for Signalled Lanes (%):		-3.8		Total Delay for Signalled Lanes (pcuHr):		32.86		Cycle Time (s):		125					
		PRC Over All Lanes (%):		-3.8		Total Delay Over All Lanes(pcuHr):		33.56									

Basic Results Summary

Scenario 6: 'PM 2024' (FG6: 'PM 2024', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	96.6%	0	12	0	34.5	-	-
R623 / Ballytrasna Road	-	-	-		-	-	-	-	-	-	96.6%	0	12	0	34.5	-	-
1/2	R623 Little Island Road (N) Exit	U	-		-	-	-	0	1940	-	-	-	-	-	-	-	-
2/1	R623 Little Island Road (N) Entry Left	U	B		2	76	-	245	1663	1038	23.6%	-	-	-	0.5	8.0	2.6
2/2	R623 Little Island Road (N) Entry Ahead	U	A		1	34	-	201	1940	543	37.0%	-	-	-	2.3	41.4	5.9
3/1	Ballytrasna Road Exit	U	-		-	-	-	257	1940	1940	13.2%	-	-	-	0.1	1.1	0.1
4/1	Ballytrasna Road Entry Ahead	U	H		1	7	-	0	2080	133	0.0%	-	-	-	0.0	0.0	0.0
4/2+4/3	Ballytrasna Road Entry Right Left	U	C		1	42	-	631	1899:2055	653+0	96.6 : 0.0%	-	-	-	15.2	86.9	29.6
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	218	1940	1940	11.2%	-	-	-	0.1	1.0	0.1
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	D E		1	46:7	-	756	2080:1879	773+12	96.2 : 96.2%	0	12	0	16.3	77.5	33.8
7/1	Ahead	U	G		1	7	-	0	2080	133	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P1	Ped Link (N Arm)	-	F		1	10	-	0	-	5760	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Ped Link (E Arm)	-	F		1	10	-	0	-	5760	0.0%	-	-	-	0.0	0.0	0.0

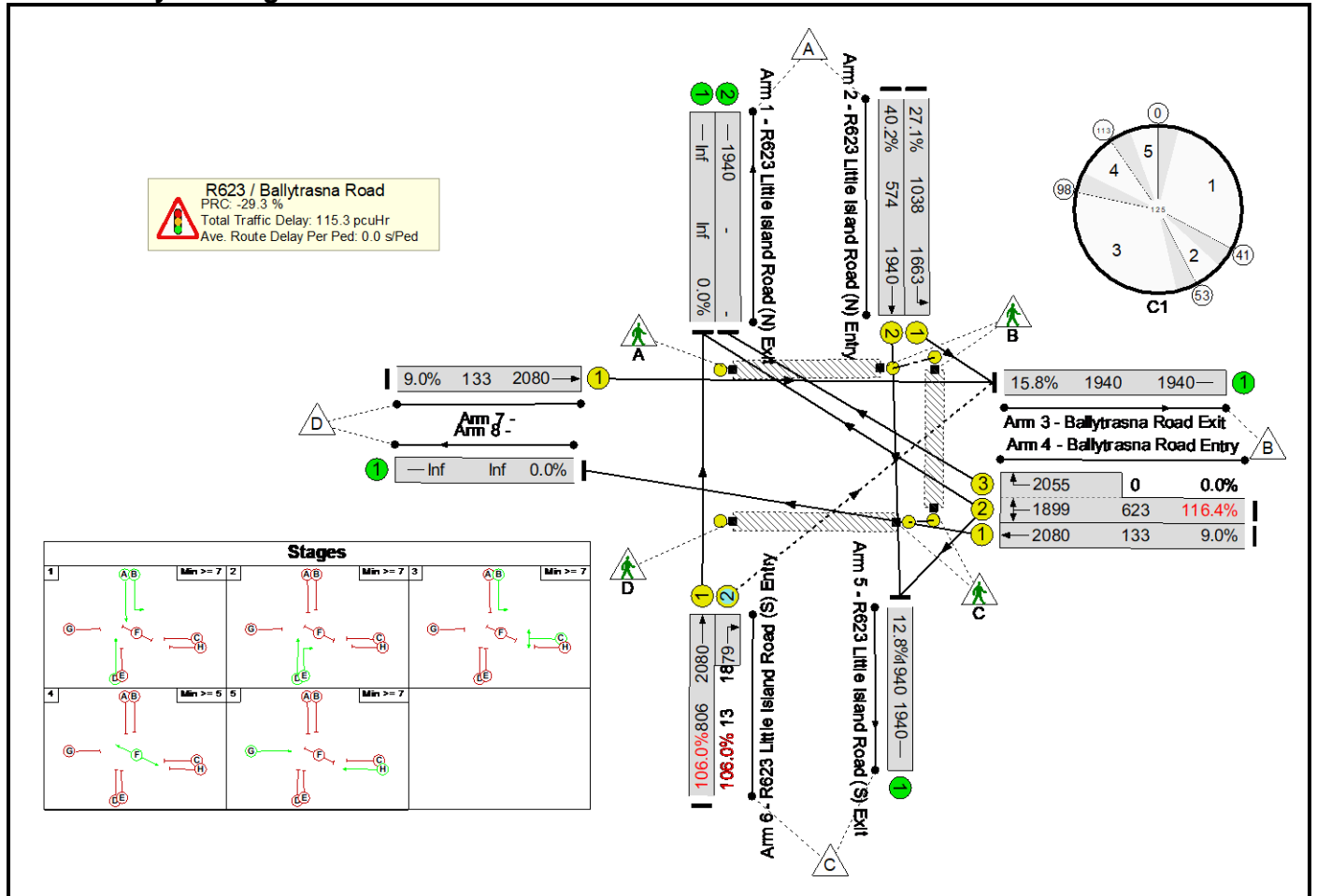
Basic Results Summary

Ped Link: P3	Ped Link (C Arm)	-	F		1	10	-	0	-	5760	0.0%	-	-	-	0.0	0.0	0.0
C1		PRC for Signalled Lanes (%):		-7.3		Total Delay for Signalled Lanes (pcuHr):		34.36		Cycle Time (s):		125					
		PRC Over All Lanes (%):		-7.3		Total Delay Over All Lanes(pcuHr):		34.50									

Basic Results Summary

Scenario 7: 'PM 2031 no Dev' (FG7: 'PM 2031 Without Devt.', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	116.4%	0	13	0	115.3	-	-
R623 / Ballytrasna Road	-	-	-		-	-	-	-	-	-	116.4%	0	13	0	115.3	-	-
1/2	R623 Little Island Road (N) Exit	U	-		-	-	-	0	1940	-	-	-	-	-	-	-	-
2/1	R623 Little Island Road (N) Entry Left	U	B		2	76	-	281	1663	1038	27.1%	-	-	-	0.6	8.2	3.1
2/2	R623 Little Island Road (N) Entry Ahead	U	A		1	36	-	231	1940	574	40.2%	-	-	-	2.6	40.4	6.7
3/1	Ballytrasna Road Exit	U	-		-	-	-	307	1940	1940	15.8%	-	-	-	0.1	1.1	0.1
4/1	Ballytrasna Road Entry Ahead	U	H		1	7	-	12	2080	133	9.0%	-	-	-	0.2	70.1	0.4
4/2+4/3	Ballytrasna Road Entry Right Left	U	C		1	40	-	725	1899:2055	623+0	116.4 : 0.0%	-	-	-	67.7	336.1	84.3
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	251	1940	1940	12.8%	-	-	-	0.1	1.1	0.1
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	D E		1	48:7	-	868	2080:1879	806+13	106.0 : 106.0%	0	13	0	43.7	181.4	63.8
7/1	Ahead	U	G		1	7	-	12	2080	133	9.0%	-	-	-	0.2	70.1	0.4
Ped Link: P1	Ped Link (N Arm)	-	F		1	10	-	0	-	5760	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Ped Link (E Arm)	-	F		1	10	-	0	-	5760	0.0%	-	-	-	0.0	0.0	0.0

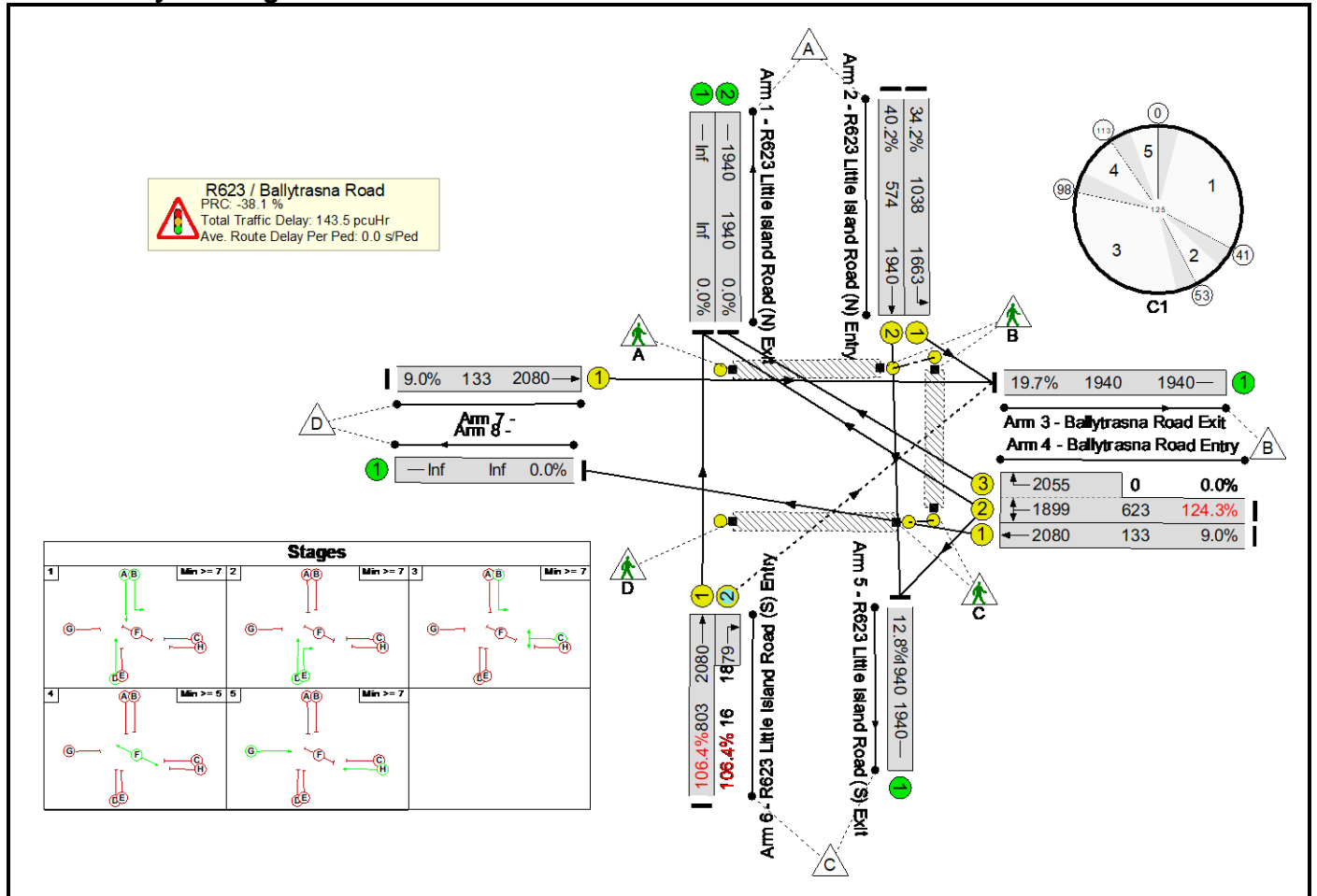
Basic Results Summary

Ped Link: P3	Ped Link (C Arm)	-	F		1	10	-	0	-	5760	0.0%	-	-	-	0.0	0.0	0.0
		C1	PRC for Signalled Lanes (%):		-29.3		Total Delay for Signalled Lanes (pcuHr):		115.11		Cycle Time (s):		125				
			PRC Over All Lanes (%):		-29.3		Total Delay Over All Lanes(pcuHr):		115.28								

Basic Results Summary

Scenario 8: 'PM 2031 With Dev' (FG8: 'PM 2031 With Devt.', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	124.3%	0	16	0	143.5	-	-
R623 / Ballytrasna Road	-	-	-		-	-	-	-	-	-	124.3%	0	16	0	143.5	-	-
1/2	R623 Little Island Road (N) Exit	U	-		-	-	-	0	1940	1940	0.0%	-	-	-	0.0	0.0	0.0
2/1	R623 Little Island Road (N) Entry Left	U	B		2	76	-	355	1663	1038	34.2%	-	-	-	0.9	8.8	4.1
2/2	R623 Little Island Road (N) Entry Ahead	U	A		1	36	-	231	1940	574	40.2%	-	-	-	2.6	40.4	6.7
3/1	Ballytrasna Road Exit	U	-		-	-	-	384	1940	1940	19.7%	-	-	-	0.1	1.2	0.1
4/1	Ballytrasna Road Entry Ahead	U	H		1	7	-	12	2080	133	9.0%	-	-	-	0.2	70.1	0.4
4/2+4/3	Ballytrasna Road Entry Right Left	U	C		1	40	-	774	1899:2055	623+0	124.3 : 0.0%	-	-	-	94.2	438.2	111.5
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	252	1940	1940	12.8%	-	-	-	0.1	1.1	0.1
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	D E		1	48:7	-	871	2080:1879	803+16	106.4 : 106.4%	0	16	0	45.2	186.8	65.2
7/1	Ahead	U	G		1	7	-	12	2080	133	9.0%	-	-	-	0.2	70.1	0.4
Ped Link: P1	Ped Link (N Arm)	-	F		1	10	-	0	-	5760	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Ped Link (E Arm)	-	F		1	10	-	0	-	5760	0.0%	-	-	-	0.0	0.0	0.0

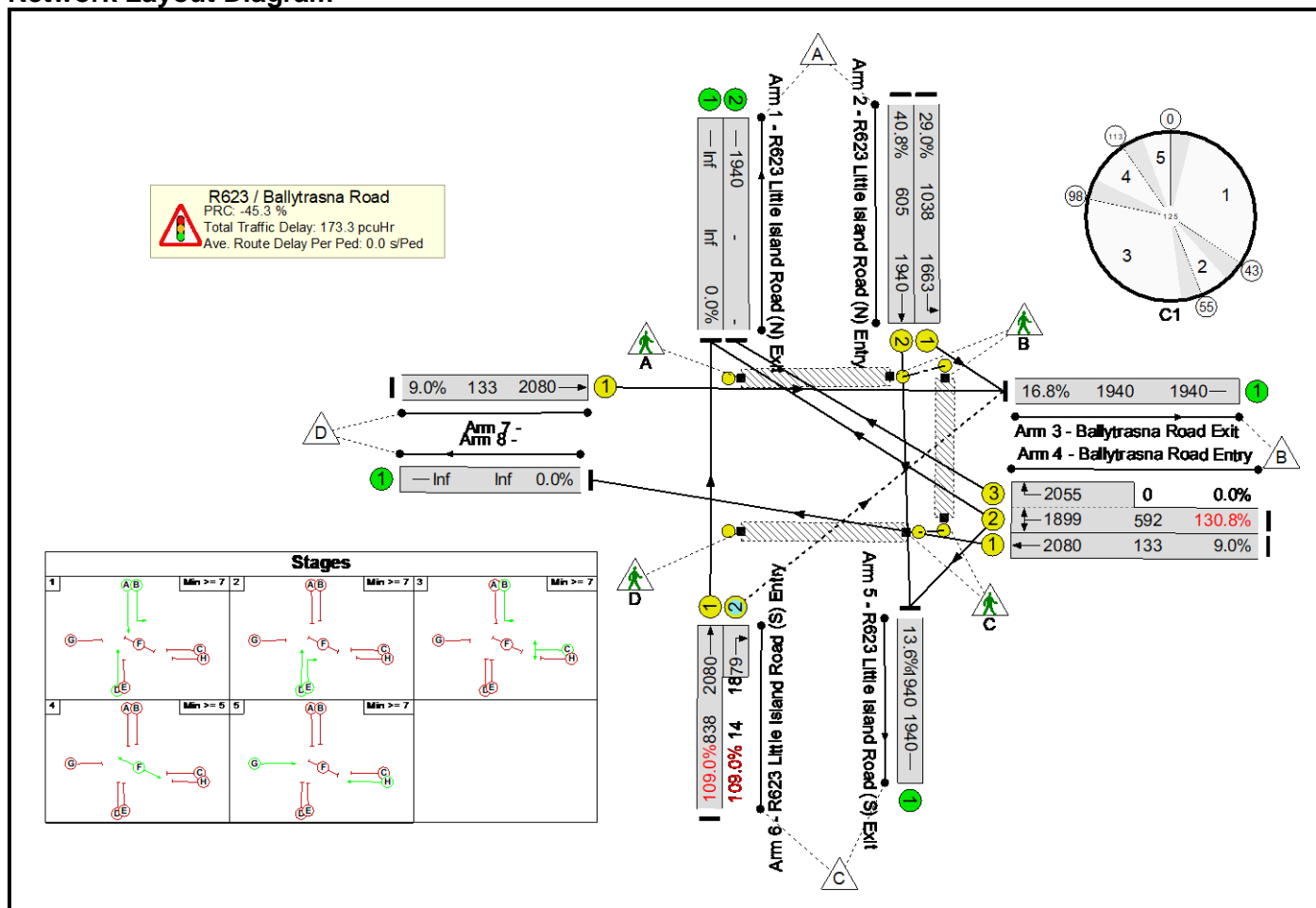
Basic Results Summary

Ped Link: P3	Ped Link (C Arm)	-	F		1	10	-	0	-	5760	0.0%	-	-	-	0.0	0.0	0.0
		C1	PRC for Signalled Lanes (%):		-38.1		Total Delay for Signalled Lanes (pcuHr):		143.34		Cycle Time (s):		125				
			PRC Over All Lanes (%):		-38.1		Total Delay Over All Lanes(pcuHr):		143.54								

Basic Results Summary

Scenario 9: 'PM 2041 No Dev' (FG9: 'PM 2041 Without Dev', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

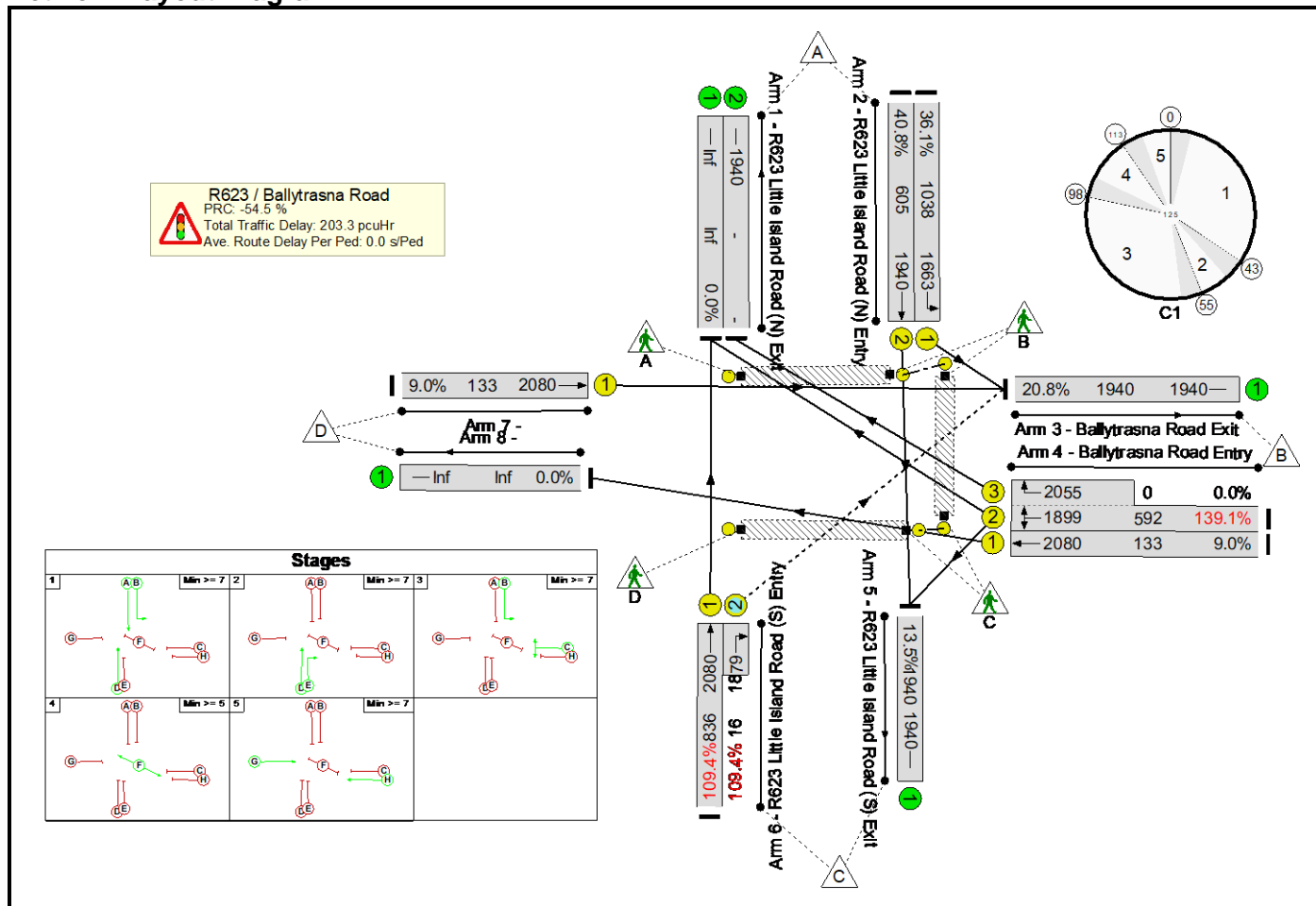
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	130.8%	0	14	0	173.3	-	-
R623 / Ballytrasna Road	-	-	-		-	-	-	-	-	-	130.8%	0	14	0	173.3	-	-
1/2	R623 Little Island Road (N) Exit	U	-		-	-	-	0	1940	-	-	-	-	-	-	-	-
2/1	R623 Little Island Road (N) Entry Left	U	B		2	76	-	301	1663	1038	29.0%	-	-	-	0.7	8.4	3.3
2/2	R623 Little Island Road (N) Entry Ahead	U	A		1	38	-	247	1940	605	40.8%	-	-	-	2.7	38.9	7.1
3/1	Ballytrasna Road Exit	U	-		-	-	-	328	1940	1940	16.8%	-	-	-	0.1	1.1	0.1
4/1	Ballytrasna Road Entry Ahead	U	H		1	7	-	12	2080	133	9.0%	-	-	-	0.2	70.1	0.4
4/2+4/3	Ballytrasna Road Entry Right Left	U	C		1	38	-	775	1899:2055	592+0	130.8 : 0.0%	-	-	-	111.2	516.3	127.9
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	268	1940	1940	13.6%	-	-	-	0.1	1.1	0.1
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	D E		1	50:7	-	929	2080:1879	838+14	109.0 : 109.0%	0	14	0	58.1	225.1	79.2
7/1	Ahead	U	G		1	7	-	12	2080	133	9.0%	-	-	-	0.2	70.1	0.4
Ped Link: P1	Ped Link (N Arm)	-	F		1	10	-	0	-	5760	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Ped Link (E Arm)	-	F		1	10	-	0	-	5760	0.0%	-	-	-	0.0	0.0	0.0

Basic Results Summary

Ped Link: P3	Ped Link (C Arm)	-	F		1	10	-	0	-	5760	0.0%	-	-	-	0.0	0.0	0.0
		C1	PRC for Signalled Lanes (%):		-45.3		Total Delay for Signalled Lanes (pcuHr):		173.09		Cycle Time (s):		125				
			PRC Over All Lanes (%):		-45.3		Total Delay Over All Lanes(pcuHr):		173.27								

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Traffic and Transportation Assessment	-	-	-		-	-	-	-	-	-	139.1%	0	16	0	203.3	-	-
R623 / Ballytrasna Road	-	-	-		-	-	-	-	-	-	139.1%	0	16	0	203.3	-	-
1/2	R623 Little Island Road (N) Exit	U	-		-	-	-	0	1940	-	-	-	-	-	-	-	-
2/1	R623 Little Island Road (N) Entry Left	U	B		2	76	-	375	1663	1038	36.1%	-	-	-	0.9	9.0	4.4
2/2	R623 Little Island Road (N) Entry Ahead	U	A		1	38	-	247	1940	605	40.8%	-	-	-	2.7	38.9	7.1
3/1	Ballytrasna Road Exit	U	-		-	-	-	405	1940	1940	20.8%	-	-	-	0.1	1.2	0.1
4/1	Ballytrasna Road Entry Ahead	U	H		1	7	-	12	2080	133	9.0%	-	-	-	0.2	70.1	0.4
4/2+4/3	Ballytrasna Road Entry Right Left	U	C		1	38	-	824	1899:2055	592+0	139.1 : 0.0%	-	-	-	139.4	609.0	156.7
5/1	R623 Little Island Road (S) Exit	U	-		-	-	-	269	1940	1940	13.5%	-	-	-	0.1	1.1	0.1
6/1+6/2	R623 Little Island Road (S) Entry Ahead Right	U+O	D E		1	50:7	-	932	2080:1879	836+16	109.4 : 109.4%	0	16	0	59.7	230.5	80.8
7/1	Ahead	U	G		1	7	-	12	2080	133	9.0%	-	-	-	0.2	70.1	0.4
Ped Link: P1	Ped Link (N Arm)	-	F		1	10	-	0	-	5760	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Ped Link (E Arm)	-	F		1	10	-	0	-	5760	0.0%	-	-	-	0.0	0.0	0.0

Basic Results Summary

Ped Link: P3	Ped Link (C Arm)	-	F		1	10	-	0	-	5760	0.0%	-	-	-	0.0	0.0	0.0
		C1	PRC for Signalled Lanes (%):		-54.5		Total Delay for Signalled Lanes (pcuHr):		203.13		Cycle Time (s):		125				
			PRC Over All Lanes (%):		-54.5		Total Delay Over All Lanes(pcuHr):		203.34								

APPENDIX B: TRICS

Calculation Reference: AUDIT-761701-220308-0320

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : K - MIXED PRIV HOUS (FLATS AND HOUSES)
 TOTAL VEHICLES

Selected regions and areas:

12	CONNAUGHT CS SLIGO	1 days
13	MUNSTER CR CORK TI TIPPERARY	2 days 1 days
14	LEINSTER KK KILKENNY	2 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: 27 to 322 (units:)
 Range Selected by User: 21 to 322 (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: 01/01/13 to 23/09/20

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	3 days
Wednesday	2 days
Friday	2 days

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

Selected survey types:

Manual count	9 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)	4
Edge of Town	4
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:

Industrial Zone	1
Residential Zone	7
Village	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:

C3 9 days

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

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	3 days
10,001 to 15,000	2 days
25,001 to 50,000	2 days
50,001 to 100,000	1 days

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

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	3 days
100,001 to 125,000	1 days
125,001 to 250,000	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	5 days
1.1 to 1.5	4 days

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

Travel Plan:

No 9 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 9 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
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LIST OF SITES relevant to selection parameters (Cont.)

9	TI -03-K-01	DETACHED HOUSES & FLATS	TIPPERARY
	SLIEVENAMON ROAD		
	THURLES		
	CLONGOWER		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	58	
	Survey date: WEDNESDAY	23/09/20	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/K - MIXED PRIV HOUS (FLATS AND HOUSES)

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	9	119	0.048	9	119	0.179	9	119	0.227
08:00 - 09:00	9	119	0.108	9	119	0.303	9	119	0.411
09:00 - 10:00	9	119	0.118	9	119	0.146	9	119	0.264
10:00 - 11:00	9	119	0.092	9	119	0.112	9	119	0.204
11:00 - 12:00	9	119	0.100	9	119	0.118	9	119	0.218
12:00 - 13:00	9	119	0.114	9	119	0.125	9	119	0.239
13:00 - 14:00	9	119	0.219	9	119	0.180	9	119	0.399
14:00 - 15:00	9	119	0.168	9	119	0.168	9	119	0.336
15:00 - 16:00	9	119	0.173	9	119	0.123	9	119	0.296
16:00 - 17:00	9	119	0.185	9	119	0.141	9	119	0.326
17:00 - 18:00	9	119	0.256	9	119	0.142	9	119	0.398
18:00 - 19:00	9	119	0.221	9	119	0.135	9	119	0.356
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.802			1.872			3.674

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: 27 - 322 (units:)
 Survey date range: 01/01/13 - 23/09/20
 Number of weekdays (Monday-Friday): 9
 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.

Calculation Reference: AUDIT-761701-220309-0318

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION
 Category : D - NURSERY
 TOTAL VEHICLES

Selected regions and areas:

12 CONNAUGHT
 RO ROSCOMMON 2 days

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

Primary Filtering selection:

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

Parameter: Gross floor area
 Actual Range: 500 to 509 (units: sqm)
 Range Selected by User: 256 to 510 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 27/04/18

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

Selected survey days:

Friday 2 days

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

Selected survey types:

Manual count 2 days
 Directional ATC Count 0 days

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

Selected Locations:

Edge of Town Centre 1
 Edge of Town 1

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

Selected Location Sub Categories:

Residential Zone 2

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

Secondary Filtering selection:

Use Class:

E(f) 2 days

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

Population within 500m Range:

All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

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

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

Population within 5 miles:

5,001 to 25,000	2 days
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This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

1.1 to 1.5	2 days
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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	2 days
----	--------

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

PTAL Rating:

No PTAL Present	2 days
-----------------	--------

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

LIST OF SITES relevant to selection parameters

1	RO-04-D-01	NURSERY		ROSCOMMON
	PARK VIEW			
	ROSCOMMON			
	CRUBY HILL			
	Edge of Town			
	Residential Zone			
	Total Gross floor area:		500 sqm	
	<i>Survey date: FRIDAY</i>		<i>26/09/14</i>	<i>Survey Type: MANUAL</i>
2	RO-04-D-02	NURSERY		ROSCOMMON
	CIRCULAR ROAD			
	ROSCOMMON			
	BALLYPHEASAN			
	Edge of Town Centre			
	Residential Zone			
	Total Gross floor area:		509 sqm	
	<i>Survey date: FRIDAY</i>		<i>27/04/18</i>	<i>Survey Type: MANUAL</i>

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 04 - EDUCATION/D - NURSERY

TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	505	0.496	2	505	0.297	2	505	0.793
08:00 - 09:00	2	505	5.946	2	505	3.271	2	505	9.217
09:00 - 10:00	2	505	5.649	2	505	6.244	2	505	11.893
10:00 - 11:00	2	505	0.396	2	505	0.793	2	505	1.189
11:00 - 12:00	2	505	1.586	2	505	0.396	2	505	1.982
12:00 - 13:00	2	505	3.271	2	505	4.460	2	505	7.731
13:00 - 14:00	2	505	1.982	2	505	1.982	2	505	3.964
14:00 - 15:00	2	505	2.279	2	505	1.288	2	505	3.567
15:00 - 16:00	2	505	0.892	2	505	1.982	2	505	2.874
16:00 - 17:00	2	505	1.982	2	505	2.081	2	505	4.063
17:00 - 18:00	2	505	3.766	2	505	5.055	2	505	8.821
18:00 - 19:00	2	505	0.000	2	505	0.793	2	505	0.793
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			28.245			28.642			56.887

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:	500 - 509 (units: sqm)
Survey date range:	01/01/13 - 27/04/18
Number of weekdays (Monday-Friday):	2
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.

