Rochestown Avenue - Active Travel Scheme

Transport Statement

Project number	Client	Subject	Date
60661468	Dun Laoghaire Rathdown County Council	Rochestown Avenue	7th June 2023
Reason for issue	**Approved by**	**Issued by**	**Prepared by**
Public Consultation	Eoin Greene	Shaun Grima	Zachary Cave

1. Introduction

1.1 Overview

AECOM on behalf of Dun Laoghaire-Rathdown County Council (DLRCC) have prepared a Transport Statement for the Rochestown Avenue Active Travel Scheme. The length of the study area is along Rochestown Avenue from the Bakers Corner junction (Kill Avenue / Kill Lane / Abbey Road) extending 2.2km towards the Graduate Roundabout junction.

The scheme proposes to improve the current infrastructure to promote walking and cycling to cater for the increasing demand for sustainable travel. The existing pedestrian infrastructure along the scheme has gaps in the network, with no existing pedestrian footpaths along the southern side of Rochestown Avenue between Pottery Road and the National Rehabilitation Hospital (NRH) and also between the NRH and the Sefton junction, in total 800m along the southern side of Rochestown Avenue is without pedestrian infrastructure, restricting permeability to shops, residential area and employment locations (NRH).

The need for the scheme was identified as part of the DLRCC Development Plan, which aims to promote and provide for the development of cycling and walking as healthy sustainable attractive transport modes in the County for commuting, short utility trips, recreation trips and trips to schools/colleges. Rochestown Avenue connects onto the strategic pedestrian and cycle network routes in the County including the Mountain to Metals Safe Routes to School, the Dun Laoghaire Central Active Travel Scheme and Kill Lane Rapid Deployment Scheme. Figure 1.1 illustrates the scheme extents.

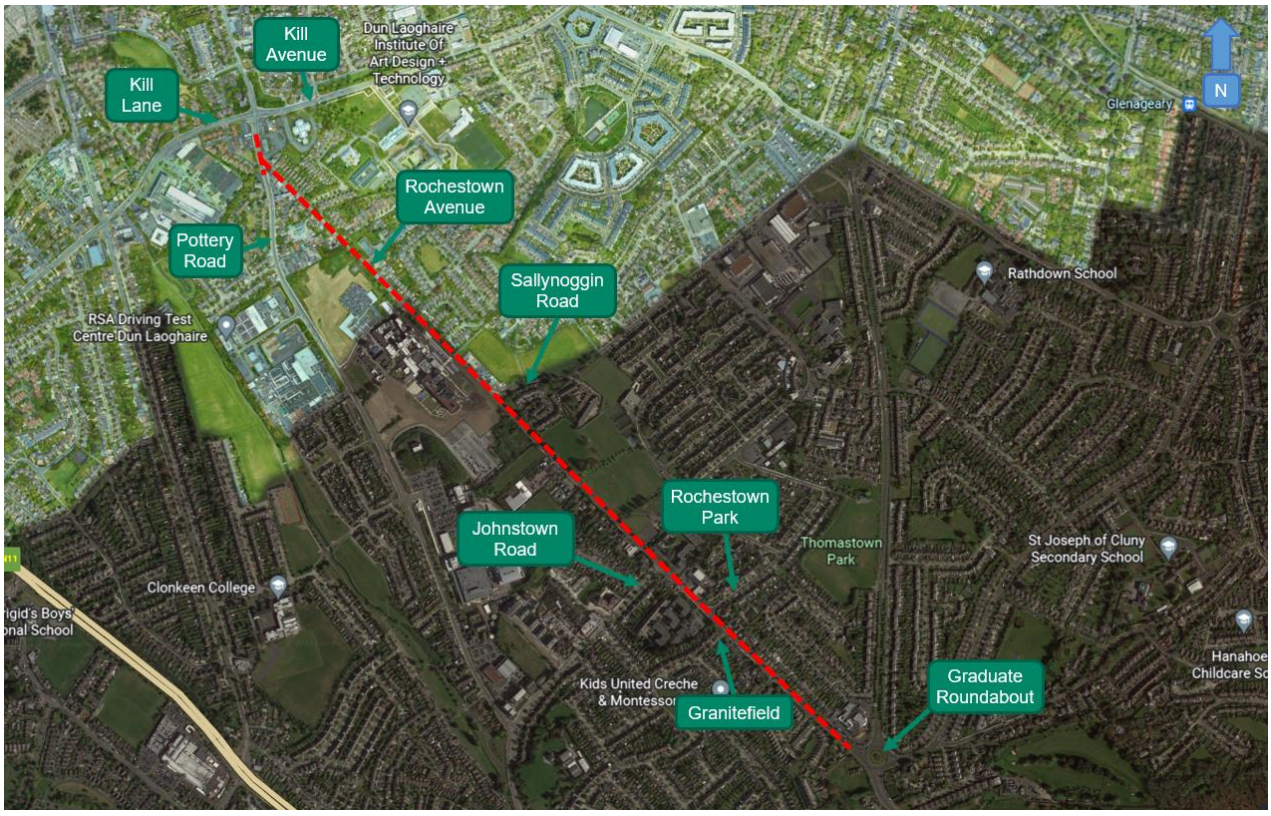


Figure 1.1 – Scheme Extents, Bakers Corner to Graduate Roundabout (Source: Google Earth)

1.2 Objectives

The project objectives for the Rochestown Avenue scheme include:

- Providing continuous and high-quality walking and cycling facilities;
- Promote modal shift from private vehicles to more sustainable modes including walking, cycling and public transport;
- Providing enhanced permeability for sustainable modes;
- Enhancing public realm and improving the overall visual quality of public spaces and street layout;
- Creating a place for all, which provides infrastructure for all ages and abilities in particular more vulnerable groups including the elderly and children;
- Protecting and enhancing sensitive existing landscapes; and
- Improving biodiversity.

1.3 Purpose of Report

The aim of this technical note is to assess the traffic impacts associated with the emerging scheme proposals. The focus of the assessment will be the impacts upon the existing signalised junctions located along Rochestown Avenue, which are as follows:

1. Pottery Road / Rochestown Avenue;
2. Sallynoggin Road / Rochestown Avenue;
3. Johnstown Road / Rochestown Avenue; and
4. Rochestown Park / Granitefield / Rochestown Avenue (R828).

Figure 1.2 illustrates the location of the signalised junctions in respect of the wider scheme and section 1.4 describes each junction in further detail.

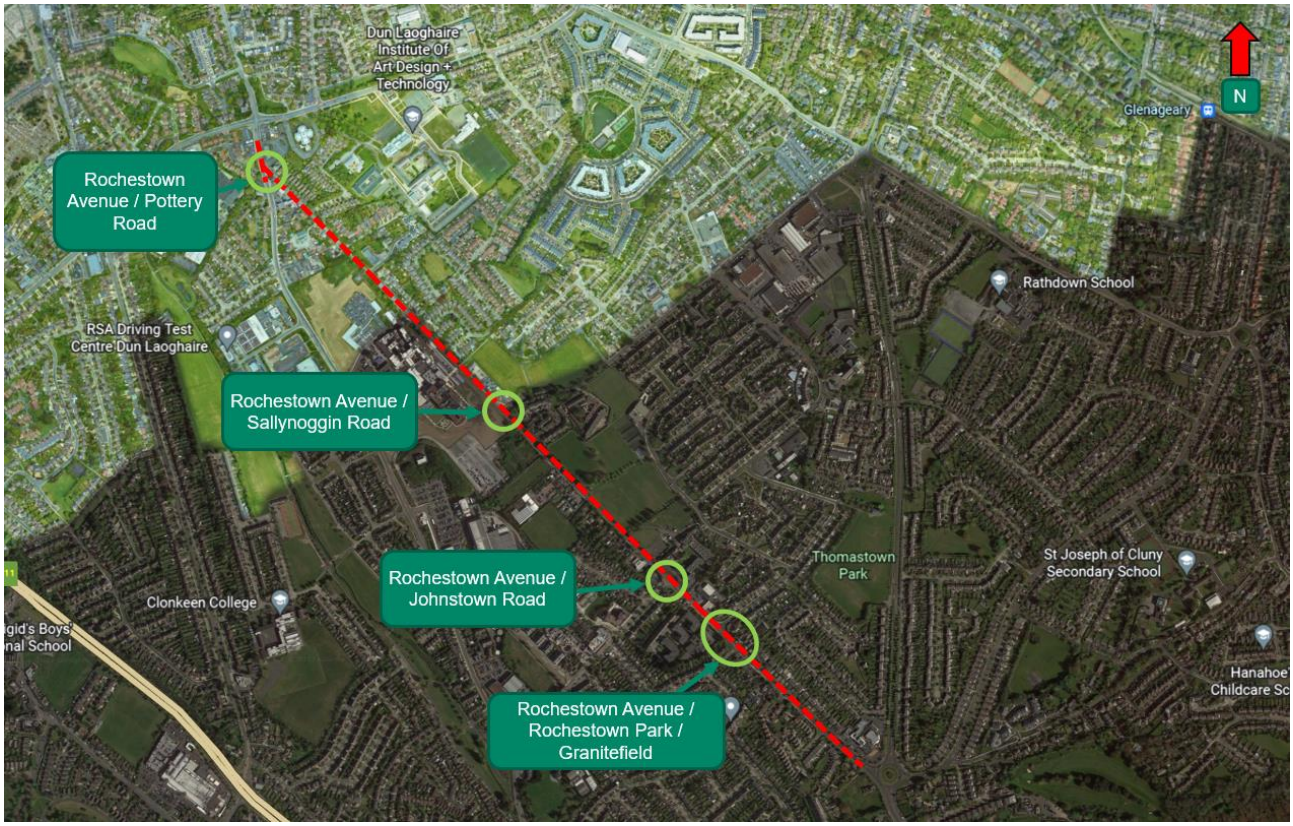


Figure 1.2 – Existing Signalised Junctions along the Scheme (Source: Google Earth)

1.4 Existing Conditions

1.4.1 Pottery Road / Rochestown Avenue Junction

The Pottery Road / Rochestown Avenue junction is a three-arm signalised junction. The junction layout can be summarised as follows:

- Rochestown Avenue Northern Arm: Lane 1 comprises an ahead lane for traffic travelling onto Rochestown Avenue. Lane 2 comprises a right turn lane for traffic turning onto Pottery Road. An Advanced Stop Line (ASL) is also located for cyclists;
- The Rochestown Avenue South Eastern Arm: comprises a single lane for ahead movements towards Bakers Corner, with a short left turn filter lane for traffic turning onto Pottery Road. An ASL is also located on this arm;
- The Pottery Road Arm: comprises a single lane for traffic for ahead movements only. A No Right Turn ban prohibits right turning from Pottery Lane to Rochestown Avenue. Pottery Road comprises a cycle track on the western side and an on road cycle lane on the eastern side of the carriageway; and
- There is existing toucan crossings at the junction with an island in the middle of the junction, which requires pedestrians to cross in a staggered two stage crossing arrangement.

The existing junction arrangement is illustrated in Figure 1.3.

Figure 1.3 – Pottery Road / Rochestown Avenue Existing Conditions (Source: Google Earth)

1.4.2 Sallynoggin Road / Rochestown Avenue Junction

The Sallynoggin Road / Rochestown Avenue is a three-arm signalised junction. The junction layout can be summarised as follows:

- Rochestown Avenue (Northern Arm): comprises a single lane approach facilitating left and ahead movements;
- Sallynoggin Road: comprises a single lane approach, facilitating left and right turn movements;
- Rochestown Avenue (Southern Arm): comprises a single lane approach facilitating ahead and right turn movements. No right turn lane or right turn pocket is available at the junction; and
- There are no cycle provisions at this junction. Footpaths are provided on the northern side of Rochestown Avenue with footpaths provided along both sides of the road on the Sallynoggin Road approach to this junction. There is a pelican crossing provided on the Sallynoggin Road arm of the junction. There is an inline bus stop provided along the Sallynoggin Road in the vicinity of the junction.

The existing junction arrangement is illustrated in Figure 1.4.

Figure 1.4 –Existing Arrangement (Source: Google Earth)

1.4.3 Johnstown Road / Rochestown Avenue

The Johnstown Road / Rochestown Avenue is a three-arm signalised junction. The junction layout comprises the following:

- Rochestown Avenue (north-western arm) features a straight through lane with a short right turn lane for traffic turning onto Johnstown Road;
- The Rochestown Avenue (south-eastern arm) features a straight through lane with a left turn filter lane for traffic turning onto Johnstown Road;
- Johnstown Road comprises a single lane, widening to two lanes approximately 40m up to the junction. Lane 1 comprises left turn only onto Rochestown Avenue northbound and Lane 2 comprises right turn only onto Rochestown Avenue southbound. An ASL is located on this arm of the junction. Cycle lanes are located along both sides of the carriageway; and
- There are controlled pedestrian crossings on Johnstown Road and the Rochestown Avenue (southern arm). There are inline bus stops provided along the Rochestown Avenue in vicinity of the junction. A bus layby is located on Johnstown Road (southern arm of the junction.

The existing junction arrangement is illustrated in Figure 1.5.

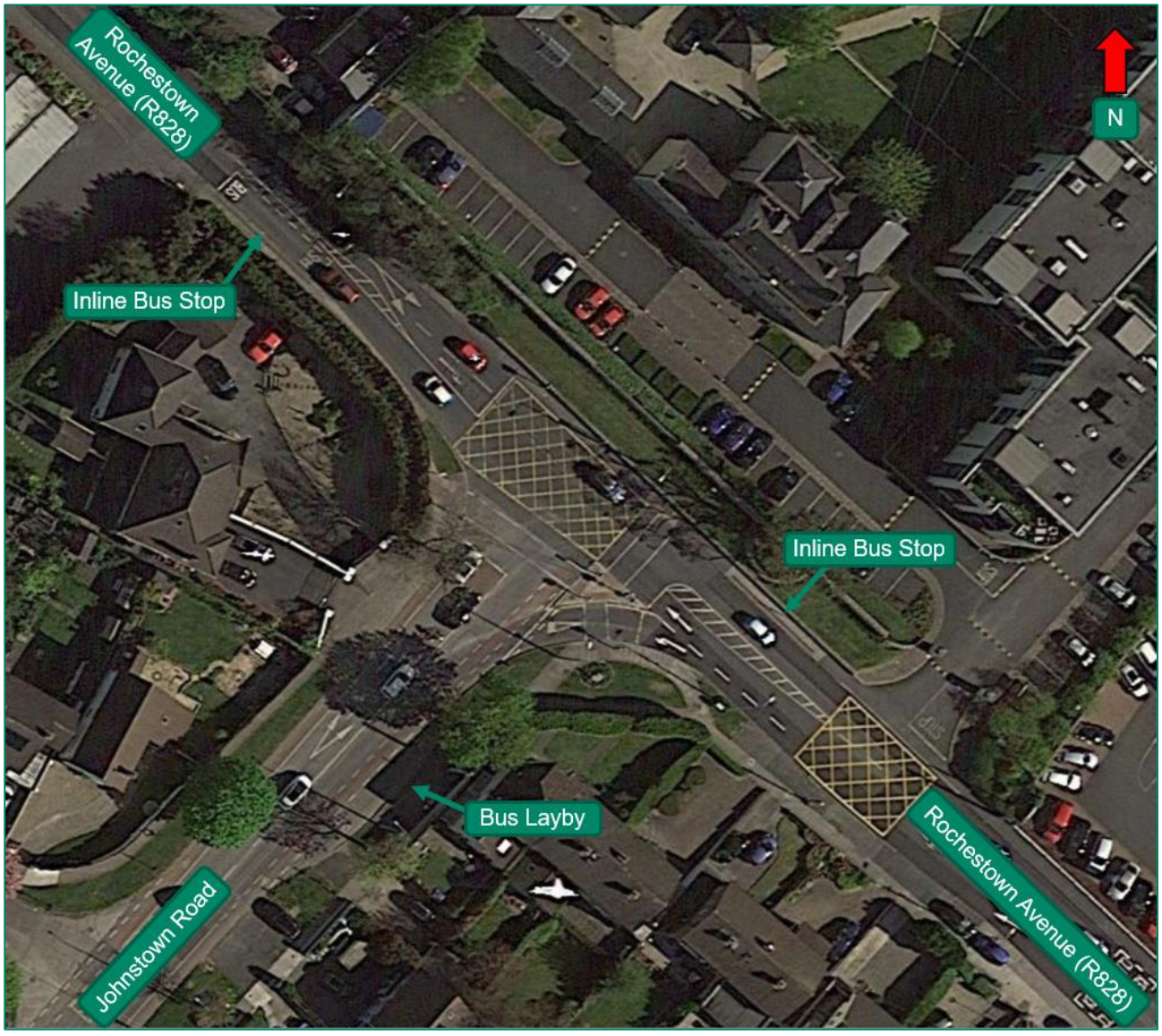


Figure 1.5 – Junction 3 Existing Arrangement (Source: Google Earth)

1.4.4 Rochestown Avenue / Rochestown Park / Granitefield

The Rochestown Avenue / Rochestown Park / Granitefield is a staggered four-arm signalised junction. The junction layout can be summarised as follows:

- The Rochestown Avenue (north-western) arm is a single lane approach, facilitating a left turn onto Rochestown Park and an ahead towards Rochestown Avenue southbound;
- Between the Rochestown Park and Granitefield there are straight through and right turn lanes provided in both directions for traffic turning into Rochestown Park and Granitefield;
- Rochestown Park comprises a single lane road with a left turn lane and a short right turn flare arm at the junction;
- The Granitefield arm is a single vehicle lane, facilitating left and right turning movements;
- There is no cycle infrastructure at this junction. There are controlled pedestrian crossings at this junction on Rochestown Park, across Rochestown Avenue and on the Granitefield arm. There is an inline bus stop and a bus layby along Rochestown Avenue in the vicinity of the junction.

The existing junction arrangement is illustrated in Figure 1.6.

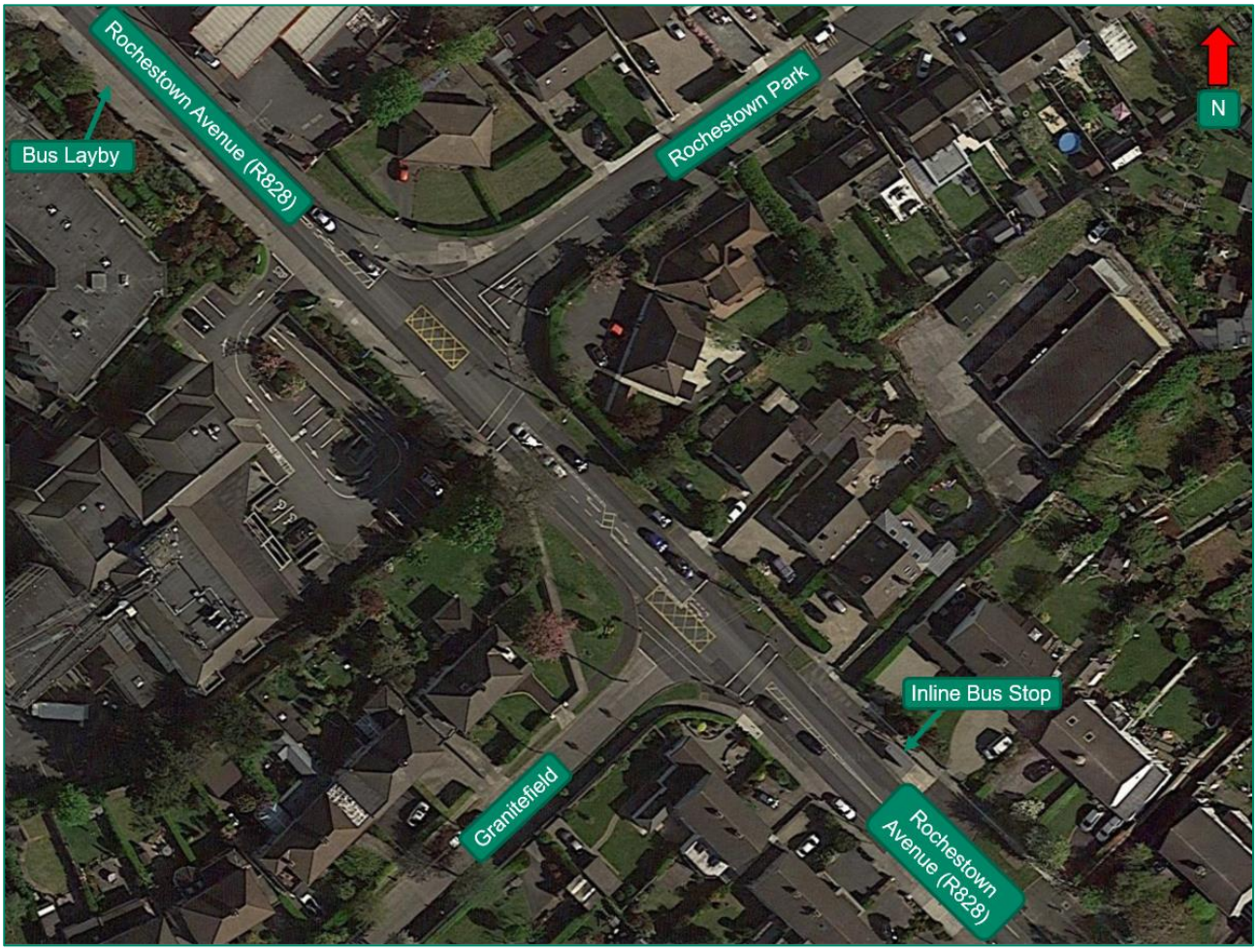


Figure 1.6 – Existing Arrangement (Source: Google Earth)

2. Proposed Scheme

2.1 Overview

AECOM have prepared General Arrangement drawings illustrating the Rochestown Avenue Active Travel scheme proposals, which should be read in conjunction with this section.

The scheme proposes implementing a continuous 3.0m wide two-way cycle track running on northern side of Rochestown Avenue from Bakers Corner junction at its northern end to the Graduate Roundabout at its southern end.

Where the two-way cycle track passes through Pearse Park, the scheme converts into a 4.0m wide shared path for pedestrians and cyclists, which is akin to the pedestrian and cycle facilities in DLRCC Public Parks. When the scheme exits Pearse Park and connects back onto Rochestown Avenue, the scheme converts back to a segregated pedestrian and two-way cycle track along the northern side of Rochestown Avenue.

The proposal will introduce a new footpath on the southern side of Rochestown Avenue, where gaps existing in the existing pedestrian infrastructure. Approximately 800m of new pedestrian infrastructure will be introduced on the southern side of Rochestown Avenue, including a new footpath connecting Pottery Road and the NRH (approximately 550m) and a new footpath between NRH and Sefton (approximately 250m).

The scheme ties in at its northern end with the Dun Laoghaire Central Active Travel Scheme, a recently approved Part 8 (2022) for high quality pedestrian and cycle infrastructure. At its southern end the scheme will tie into the Graduate Roundabout, where existing cycle infrastructure is located along Church Road (R118).

The proposal will comprise of the upgrade to the existing signalised junctions along the scheme to enhance pedestrian and cycle-controlled crossings.

New mid-block controlled crossings are also proposed at 5no. locations including the following:

- At Grangewood, across Rochestown Avenue – to facilitate the existing pedestrian desire line towards the existing Applegreen retail area on the southern side of Rochestown Avenue;
- At Sefton / NRH entrance across Rochestown Avenue – toucan crossing to facilitate pedestrian and cycle crossing between NRH and Sefton, which will cater for the desire line associated with the Mountain to Metals Safe Route to Schools Route;
- Pearse Park entrance across Rochestown Avenue – a new pedestrian crossing is proposed to cater for the desire line into Pearse Park, also with the existing bus stops, and the nearby garden centre which all generate pedestrian crossing movements at this location;
- South eastern end of Pearse Park, across Rochestown Avenue – the proposal will create a new pedestrian and cycle entrance into Pearse Park, a new pedestrian crossing is proposed to cater for the anticipated desire line across Rochestown Avenue into the Park; and
- Glenview across Rochestown Avenue – a new toucan crossing is proposed to cater for pedestrian and cyclist movements across Rochestown Avenue.

2.2 Scheme Details

This subsection will present the scheme details in sections, which should be read in conjunction with the General Arrangement drawings.

2.3 Section 1, Bakers Corner to Grangewood

Section 1 ties in with Kill Avenue at its north western extents. This section runs from Bakers Corner to the Grangewood estate entrance. Existing footpath and cycle track on the south side of the road from Bakers Corner as far as the junction with Pottery Road will be maintained (2m each). On the north side of the road, a 2m footpath and 3m two-way cycle track will be provided, along with 1 southbound general traffic lane (3m) and 2 northbound general traffic lanes (3m each).

The existing left turn slip lane from Rochestown Avenue onto Pottery Road will be removed to facilitate space for the pedestrian and cycle improvements. The north side of the junction will have kerb buildouts to provide a waiting area for pedestrians and cyclists to cross at the toucan crossing. A raised table will be provided for pedestrians crossing the cycle track from the footpath to the pedestrian island waiting area. The three-arm junction will have toucan crossings on each arm. A short stretch of shared area for pedestrians and cyclists is proposed to connect cyclists from Rochestown Avenue onto Pottery Road.

The pedestrian footpath will run inside the two-way cycle lane on Rochestown Avenue. Landscaping will be implemented between the cycle lane and path. On Pottery Road, the scheme will tie in with the existing layout, with one-way cycle tracks and footpath on both sides of the road. On Rochestown Avenue between the Pottery Road Junction and the Grangewood estate entrance, the footpath and cycle track (2m and 3m respectively) will continue on the north side of the road, separated from the carriageway by 2-4.5m of landscaping/street furniture.

On the southern side of Rochestown Avenue, a new 2m footpath will be installed to enhance pedestrian permeability to the existing petrol filling station, the existing residential units and towards the National Rehabilitation Hospital. To accommodate the footpath, it is necessary to remove an existing short left turn slip lane.

A new toucan crossing will be provided to the west of the entrance to the Grangewood estate. A raised table pedestrian crossing with tactile will be provided for pedestrians to cross the cycle track to reach the toucan crossing. A raised table pedestrian and cycle crossing will also be provided across the entrance to the estate.

Figure 2.1 – Proposed Layout at Section 1

2.4 Section 2, Grangewood to National Rehabilitation Hospital entrance

From the entrance to the Grangewood estate to the entrance to the National Rehabilitation Hospital, the proposed layout continues with the following design principles:

- 2m wide footpath on each side of the road. The proposal will introduce a new footpath on the southern side of Rochestown Avenue to enhance pedestrian permeability;
- A new 3m wide two-way cycle lane on north side of the road;
- Landscaping between cycle lane and road carriageway; and
- 3m single way general traffic lane in each direction.

Entrances to Ruby Hall and Kensington Lodge estates will have raised continuous pedestrian and cycle crossings.

Figure 2.2 – Proposed layout at Section 2

2.5 Section 3, National Rehabilitation Hospital to the junction with the Sallynoggin Road

Section 3 runs from the entrance to the National Rehabilitation Hospital to the junction with the Sallynoggin Road. The existing pedestrian crossing to the east of the Sefton estate will be removed and a new toucan crossing on the western side of the estate. The proposed crossing will tie into the DLRCC Mountain to Metals Safe Routes to School scheme, to cater for the pedestrian and cycle desire line from the NRH to Sefton.

At this point also, the landscaping will be behind the footpath on the north side of the road, with the two-way cycle path adjacent to the road carriageway. For approximately 100m after the entrance to the Sefton estate, there will be landscaping between the two-way cycle track and the carriageway, with a pedestrian footpath both adjacent to the road carriageway and behind the cycle track. This will allow pedestrians to access the bus stop at this location. At all points where pedestrians cross the cycle track, tactile paving is to be provided.

The existing pedestrian crossing at the pedestrian entrance to the NRH will be maintained. Between this pedestrian crossing and the Sallynoggin Road junction, there will be no landscaping on the north side of the road. Pedestrian crossings will be introduced on all arms of this junction, with a cycle crossing also on the northern arm.

At the Sallynoggin Road junction, it is proposed to widen the carriageway to accommodate a new right turn lane along Rochestown Avenue into Sallynoggin Road. The right turn lane will have capacity for approximately 5 vehicles, enhancing capacity at the respective junction.

The south side of the road on this section will have a pedestrian footpath for the entire length, with landscaping provided in sections between the path and the road carriageway.

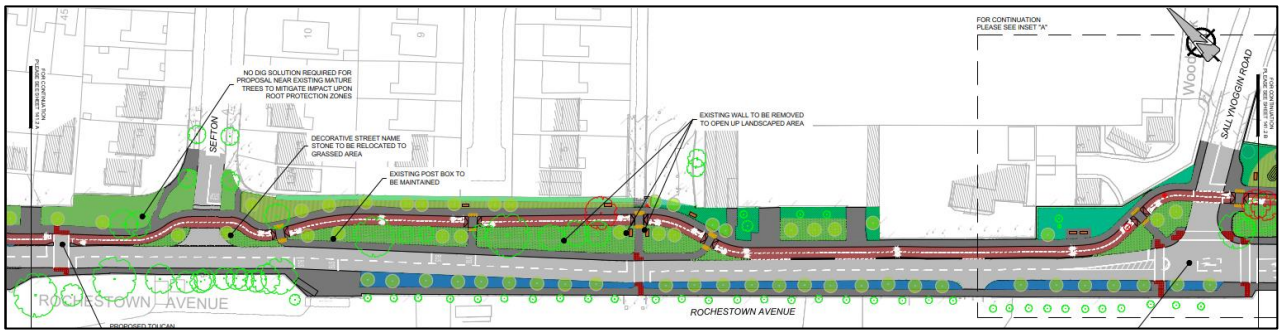


Figure 2.3 – Proposed layout, Section 3

2.6 Section 4, Sallynoggin Road to Pearse Park

The two-way cycle track will continue along the northern side off Rochestown Avenue alongside a proposed 2m wide footpath. At Pearse Park, it is proposed that the scheme will convert into a shared pedestrian and cycle path, 4.0m wide, an upgrade to the existing footpath within the park. The shared path arrangement is consistent with DLRCC's approach to pedestrian and cycle design in nearby public parks i.e. Kilbogget. Public lighting will be included within the scheme for the proposed path within the park.

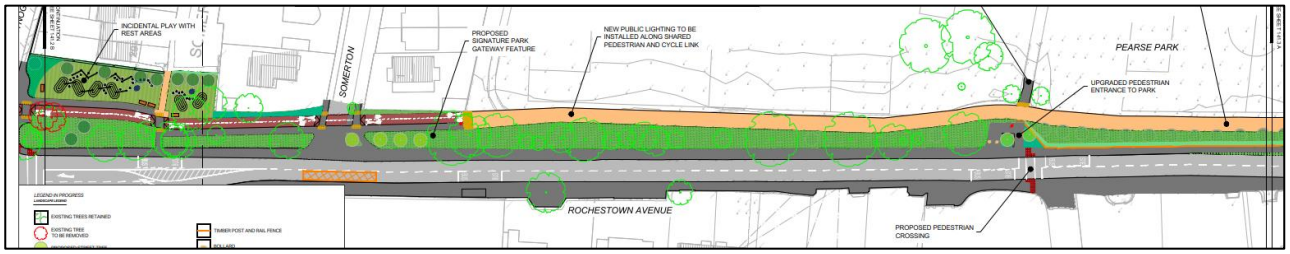


Figure 2.4 – Proposed layout, Section 4

2.7 Section 5, Pearse Park to Sallynoggin Road

The shared path continues within Pearse Park up to its eastern boundary and then returns onto the northern side of Rochestown Avenue. It is proposed to continue the shared space for a short stretch on Rochestown Avenue due to the constraints in the available widths. After the entrance to Sefton horse riding school, the shared space returns to segregated footpath and two way cycle track. Due to the constrained widths, the two way cycle track will narrow to 2.5m for a short stretch, approximately 50m, and will widen to 3.0m width after the pinch point.

The existing Rochestown Avenue and Johnstown Road junction is proposed to be upgraded to enhance pedestrian and cycle infrastructure. The proposals comprise of segregated pedestrian and cycle crossings across the Rochestown Avenue arms of the junction. A segregated and single pedestrian crossing is proposed across the Johnstown Road arm of the junction, thus removing the existing staggered pedestrian crossing.

To accommodate the proposed active travel improvements, it will be necessary to reallocate road space. The existing left turn slip from Rochestown Avenue onto Johnstown Road is proposed to be omitted as per DMURS. A traffic impact assessment has been prepared which is included within this report, which assesses the impacts of the proposed mitigation.

On the eastern side of Johnstown Road, a former bus layby is proposed to be removed to facilitate the new cycle track, which will eventually connect into the existing protected cycle lanes on Johnstown Road. After the Johnstown Road junction, the proposed two way cycle track continues along the northern side of Rochestown Avenue, with a continuous footpath and cycle track proposed across Eaglewood apartment access.

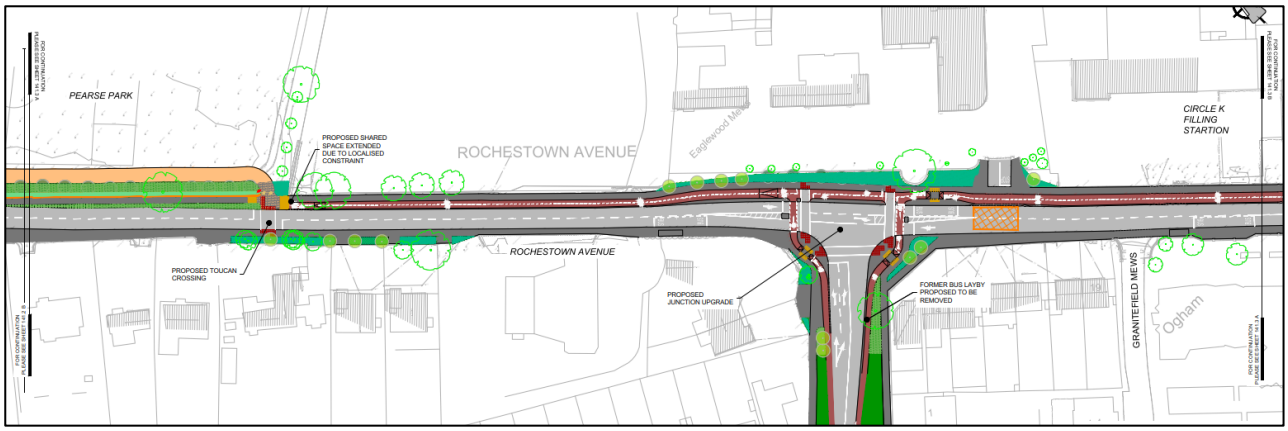


Figure 2.5 – Proposed layout, Section 5

2.8 Section 6, Rochestown Park to Drumkeen Manor

At the junction with Rochestown Park / Rochestown Avenue, it is proposed to enhance pedestrian and cycle infrastructure at this junction, by reducing the crossing distances and introducing controlled crossings for pedestrians and cyclists on all arms of the junction. On Rochestown Park, the existing short left turn flare is proposed to be omitted to facilitate a single lane approach to the junction.

At the Granitefield junction, the radius to the junction is proposed to be reduced as per DMURS to approximately 6m to encourage reduced vehicular turning speeds. The proposed two-way cycle track continues on the northern side of Rochestown Avenue along this section, providing continuous infrastructure for cyclists.

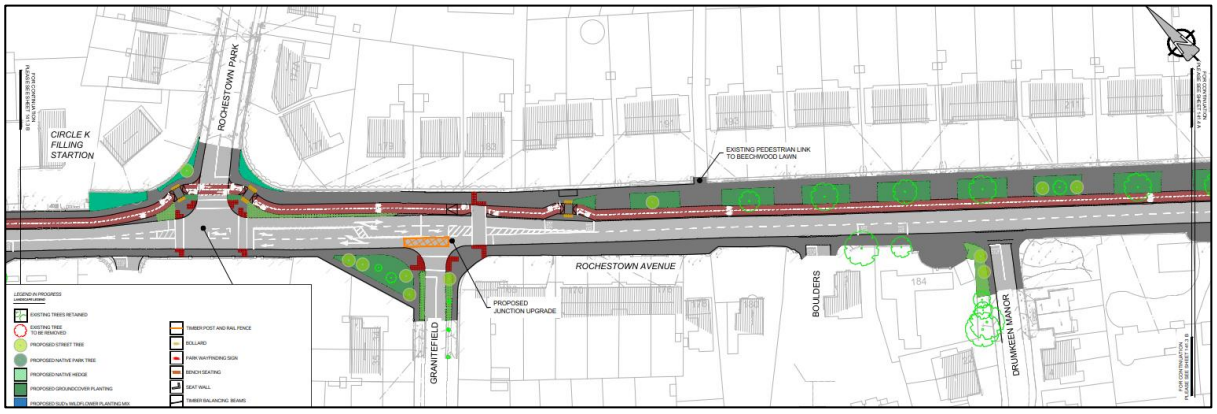


Figure 2.6 – Proposed Layout, Section 6

2.9 Section 7, Glenview to the Graduate Roundabout

The final section of the proposed scheme comprises a continuation of the two way cycle track on the northern side of the Rochestown Avenue. The scheme will require the removal of the existing informal car parking on the northern side of Rochestown Avenue. The car parking can be well utilised as it acts as an overflow car park to the Killiney Shopping Centre.

It is proposed to upgrade the entrances to the Killiney Shopping Centre to introduce continuous pedestrian and cycle infrastructure, enhancing priority for sustainable modes at this conflict point.

Controlled crossing is proposed connecting Glenview to the northern side of Rochestown Avenue. The scheme ties into the existing toucan crossing prior to the Graduate Roundabout.

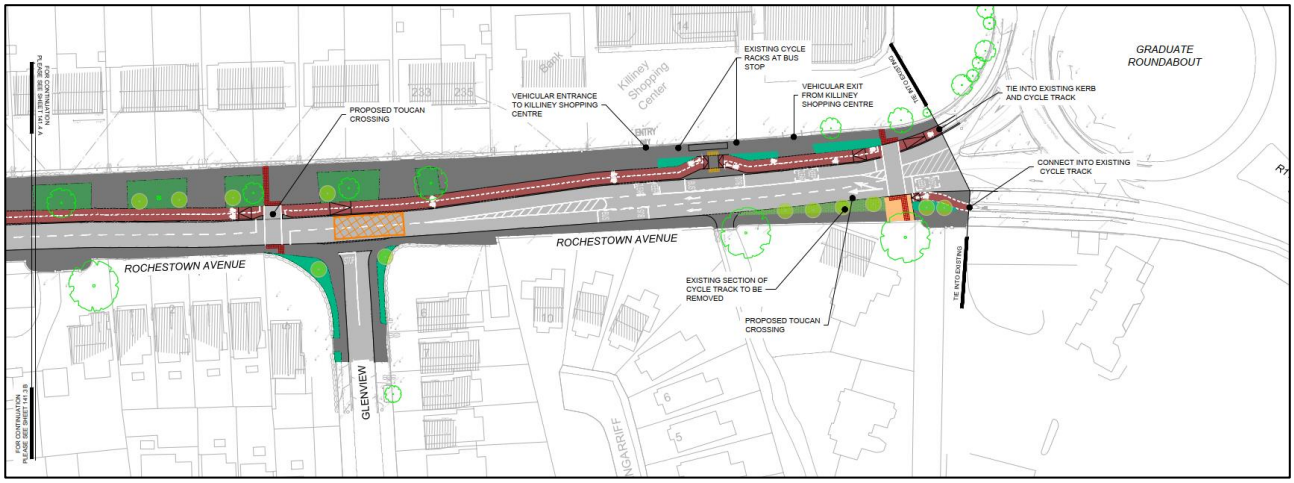


Figure 2.7 – Proposed Layout, Section 7

3. Traffic Impact Assessment

This section presents an overview of the base traffic surveys that were undertaken to identify the existing conditions, and the impact analysis of the proposed development upon the existing road network.

3.1 Base Traffic Surveys

Traffic surveys were carried out on Tuesday the 7th of March 2023 at each signalised junction along the scheme route. The surveys were undertaken over a 12hr period from 07:00hrs to 19:00hrs.

From a review of the base traffic survey data, the morning and evening peak hour periods were identified as follows:

- Morning peak occurs between 08:15 – 09:15; and
- Evening peak occurs between 16:45 – 17:45.

Figure 3.1 and Figure 3.2 illustrates the recorded peak hour flows at the junctions.

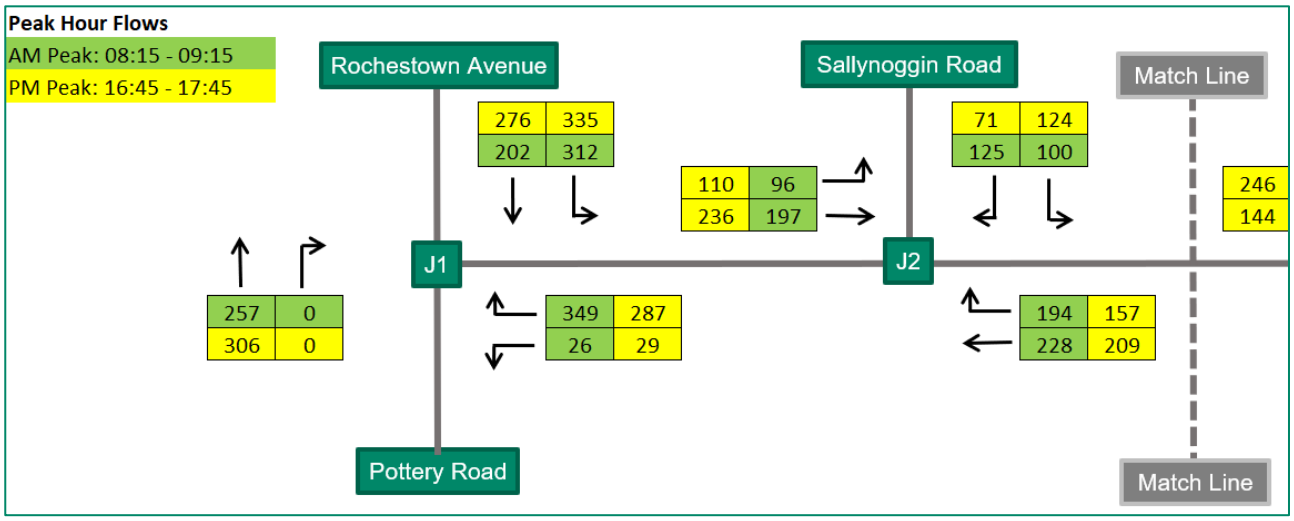


Figure 3.1 – Recorded Peak Hour Flows (Junction 1 and Junction 2)

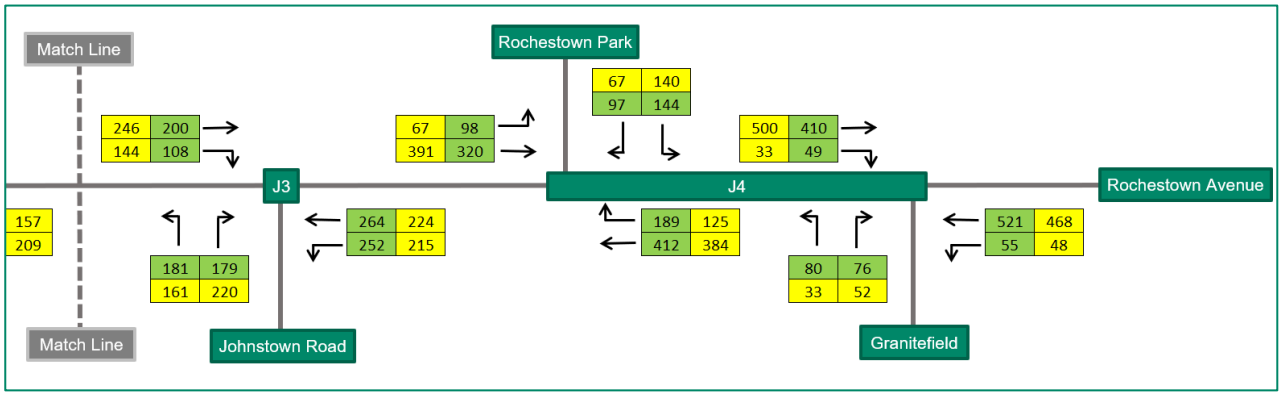


Figure 3.2 – Recorded Peak Hour Flows (Junction 3 and Junction 4)

3.2 Scenarios Analysed

As part of this analysis, models were completed of the existing and proposed arrangements of the four signalised junctions for the morning and evening peak hour periods.

3.3 Junction Analysis

The scenarios that were tested were as follows:

- **DN (Do Nothing) Scenario**, existing arrangement; and
- **DS (Do Something) Scenario**, proposed scheme.

The operational assessment of the local road network has been undertaken using LinSig (Version 3.2.40.0) to appraise the signalised junctions along the scheme in terms of capacity and Mean Max Queuing. The meaning of the acronyms used within the capacity assessment results are discussed below.

- DoS Degree of Saturation
- Q Queue length (PCU's)
- PRC Practical Reserve Capacity

It is generally accepted that DoS values of 90% and less are indicators that a junction is operating within capacity. Although a junction would be said to be operating at capacity at values of 100%, the use of 90% allow for a margin of error and typical fluctuations in traffic flows. Junctions are therefore only identified as operating over capacity if these values are exceeded.

PRC is a term used to denote the maximum desirable flow through a signalised junction and 0% PRC is reached when one or more of the approaches to the junction are operating at 90% of their capacity.

With regard to the above, it is noted that DMURS acknowledges that the above thresholds cannot always be achieved in urban areas and that "*In areas where pedestrian activity is high junctions may have to operate at saturation levels for short periods i.e. above 93% during peak periods".*

3.4 Modelling Assumptions

To construct the baseline models, AECOM utilised a recent topographical survey of the study area to inform accurate geometric properties for each junction.

DLRCC provided the signal staging for the junctions. As part of the traffic surveys commissioned by AECOM, the video footage was reviewed to ascertain the signal timings for the respective stages.

The proposed arrangement geometric properties are based on the general arrangement layouts that AECOM have prepared with the signal staging and timings being modified, where appropriate, to cater for the proposed arrangements.

4. Junction Modelling Results

The following subsections present the results of the junction analysis for the Do Nothing (Existing) and the Do Something (Proposed) scenarios.

4.1 Pottery Road / Rochestown Avenue

Table 4.1 below presents the results of the junction modelling analysis for the Pottery Road / Rochestown Avenue junction. For the purposes of analysis, as there is an existing Right Turn Ban for traffic turning from Pottery Road onto Rochestown Avenue, it has been assumed that 150 PCU would turn right from Pottery Road onto Rochestown Avenue.

Table 4.1 – Junction 1 (Pottery Road / Rochestown Avenue) LinSig Results

Peak Period	Junction Arm and Link	Existing		Proposed	
		Queue (PCU)	DoS (%)	Queue (PCU)	DoS (%)
Weekday AM (08:15 - 09:15)	Rochestown Avenue (Northern Arm) Ahead Right	4.5	38.4%	13.7	62.1%
	Rochestown Avenue (Southern Arm)	7.9	61.7%	12.5	72.9%
	Rochestown Avenue (Southern Arm) Left Turn Slip	0	1.2%	-	-
	Pottery Rd Ahead	2.8	27.4%	9.6	44.9%
	PRC	**45.8%**		**23.4%**	
Weekday PM (16:45-17:45)	Rochestown Avenue (Northern Arm) Ahead Right	7.4	56.0%	15.7	65.2%
	Rochestown Avenue (Southern Arm)	4.4	38.4%	11.1	74.3%
	Rochestown Avenue (Southern Arm) Left Turn Slip	0	1.4%	-	-
	Pottery Rd Ahead	4.2	41.0%	9.9	44.4%
	PRC	**60.8%**		**21.1%**	

From the junction analysis, the junction reduces in capacity by 22.4% and 39.7% during the morning and evening peak hours, respectively. There is an increase in the anticipated Mean Max Queue lengths queuing for traffic travelling southbound along Rochestown Avenue by 9.2 PCU and 8.3 PCU during the morning and evening peak respectively.

Overall the junction remains within capacity thresholds and should continue to operate without any adverse impacts to the surrounding road network. The proposals at this junction will introduce high quality pedestrian and cycle crossings include new direct single crossings at the junction, to enhance permeability and safety.

4.2 Sallynoggin Road / Rochestown Avenue

Table 4.2 presents the results of the junction modelling analysis for the Sallynoggin Road / Rochestown Avenue junction.

Table 4.2 – Sallynoggin Road / Rochestown Avenue LinSig Results

Peak Period	Junction Arm and Link	Existing		Proposed	
		Queue (PCU)	DoS (%)	Queue (PCU)	DoS (%)
Weekday AM (08:15 - 09:15)	Rochestown Avenue (Northern Arm) Ahead Left	4.8	32.8%	5.7	42.2%
	Sallynoggin Road Left Right	5.3	50.9%	5.0	44.1%
	Rochestown Avenue (Southern Arm) Ahead Right	7.9	49.9%	4.0	43.3%
	PRC	**76.8%**		**103.9%**	
Weekday PM (16:45-17:45)	Rochestown Avenue (Northern Arm) Ahead Left	5.9	38.7%	6.7	45.7%
	Sallynoggin Road Left Right	4.5	44.4%	4.5	44.1%
	Rochestown Avenue (Southern Arm) Ahead Right	6.7	44.7%	3.4	35.8%
	PRC	**101.2%**		**96.9%**	

From the junction analysis, it is evident that the junction PRC improves in capacity by 27.1% during the morning peak and reduces slightly in capacity during the evening peak hour by 4.3%. This is due to the additional vehicular capacity the proposal will give into the junction due to the new right turn lane on Rochestown Avenue southern arm. There is a reduction

in the Mean Max Queue lengths along the Rochestown Avenue southern arm by 3.9 and 3.3 PCUs during the morning and evening peak hours, respectively. Overall the junction remains within the acceptable capacity thresholds and should continue to operate without any adverse impacts to the surrounding road network

4.3 Johnstown Road / Rochestown Avenue

Table 4.3 presents the results of the junction modelling analysis for the Johnstown Road / Rochestown Avenue junction.

Table 4.3 – Johnstown Road / Rochestown Avenue LinSig Results

Peak Period	Junction Arm and Link	Existing		Proposed	
		Queue (PCU)	DoS (%)	Queue (PCU)	DoS (%)
Weekday AM (08:15 - 09:15)	Rochestown Avenue (Northern Arm) Ahead Right	3.6	50.3%	-	-
	Rochestown Avenue (Northern Arm) Ahead	-	-	5	33.2%
	Rochestown Avenue (Northern Arm) Right Turn Pocket	-	-	2.5	38.0%
	Rochestown Avenue (Southern Arm) Ahead	6	49.6%	10.9	62.2%
	Rochestown Avenue (Southern Arm) Left Turn Slip	1.4	18.9%	-	-
	Johnstown Road Left Right	4	49.3%	4.6	60.0%
	PRC	**78.9%**		**44.7%**	
Weekday PM (16:45-17:45)	Rochestown Avenue (Northern Arm) Ahead Right	4.5	55.0%	-	-
	Rochestown Avenue (Northern Arm) Ahead	-	-	7.3	46.4%
	Rochestown Avenue (Northern Arm) Right Turn Pocket	-	-	3.6	50.0%
	Rochestown Avenue (Southern Arm) Ahead	5.6	55.4%	9.5	59.1%
	Rochestown Avenue (Southern Arm) Left Turn Slip	1.2	17.7%	-	-
	Johnstown Road Left Right	5	56.5%	5.4	60.4%
	PRC	**59.3%**		**49.0%**	

The proposal at the junction as noted previously in the report will introduced new direct controlled pedestrian and cycle crossings at the junction. To accommodate the proposal, the existing staggered crossing and left turn slip on Rochestown Avenue was omitted to enhance pedestrian and cycle permeability.

From the junction analysis, the junction reduces in capacity by 34.2% and 10.3% during the morning and evening peak hours, respectively. There is an increase in the Mean Max Queue for traffic travelling northbound along Rochestown Avenue by 4.7 PCU during the morning peak hour and an increase of 3.9 PCU for traffic travelling northbound during the evening peak hour. Overall the junction remains within the acceptable capacity thresholds and should continue to operate without any adverse impacts to the surrounding road network, whilst delivering significant pedestrian and cycle improvements.

4.4 Rochestown Avenue / Rochestown Park / Granitefield

Table 4.4 presents the results of the modelling analysis for the Rochestown Avenue / Rochestown Park / Granitefield.

Table 4.4 – Rochestown Avenue / Rochestown Park / Granitefield LinSig Results

Peak Period	Junction Arm and Link	Existing		Proposed	
		Queue (PCU)	DoS (%)	Queue (PCU)	DoS (%)
Weekday AM (08:15 - 09:15)	Rochestown Avenue (Northern Arm) Ahead Left	12.8	66.8%	12.5	64.1%
	Rochestown Park Left Right	3.8	57.9%	3.7	58.0%
	Rochestown Avenue (Northern Arm) Ahead Right	1.9	36.9%	1.9	37.1%
	Rochestown Avenue (Southern Arm) Ahead Left	19.7	82.4%	19.8	82.8%
	Granitefield Left Right	7.3	83.6%	7	81.1%
	Rochestown Avenue (Southern Arm) Ahead Right	14.6	83.6%	14.3	81.9%
	PRC	**7.6%**		**8.7%**	
Weekday PM (16:45-17:45)	Rochestown Avenue (Northern Arm) Ahead Left	13.2	63.1%	12.6	59.6%
	Rochestown Park Left Right	3.7	50.9%	3.8	51.8%
	Rochestown Avenue (Northern Arm) Ahead Right	1.4	38.0%	1.4	39.2%
	Rochestown Avenue (Southern Arm) Ahead Left	14.8	64.6%	14.4	64.0%
	Granitefield Left Right	3.6	65.2%	3.6	63.7%
	Rochestown Avenue (Southern Arm) Ahead Right	7	64.8%	7	64.9%
	PRC	**23.4%**		**38.6%**	

From the junction analysis, the junction increases in capacity by 1.1% and 15.2% during the morning and evening peak hours, respectively. The results of the analysis indicate that the junction is to continue to operate with similar levels of queuing on the arms of the junction.

Overall the junction remains within the acceptable capacity thresholds and should continue to operate without any adverse impacts to the surrounding road network. The proposals at this junction will introduce high quality pedestrian and cycle crossings include new direct single crossings at the junction, to enhance permeability and safety.

5. Conclusion

In summary, the junction analysis has determined the following:

- Pottery Road / Rochestown Avenue would continue to operate within capacity;
- Sallynoggin Road / Rochestown Avenue would operate better than the existing arrangement in the morning peak due to the proposed additional capacity designed into the junction upgrade via the new right turn lane from Rochestown Avenue onto Sallynoggin Road;
- Johnstown Road / Rochestown Avenue would continue to operate within capacity; and
- Rochestown Avenue / Rochestown Park / Granitefield would operate better than the existing arrangement in the morning and evening peak hour periods.

On the basis of capacity and queuing, the analysis indicates that the proposed pedestrian and cycle infrastructure enhancements at the respective signalised junctions will not have a material impact upon traffic capacity and all junctions will continue to operate within capacity during both the morning and evening peak hour periods.

Appendix A Proposed Arrangement Outputs

Appendix B Junction Modelling Outputs

Basic Results Summary

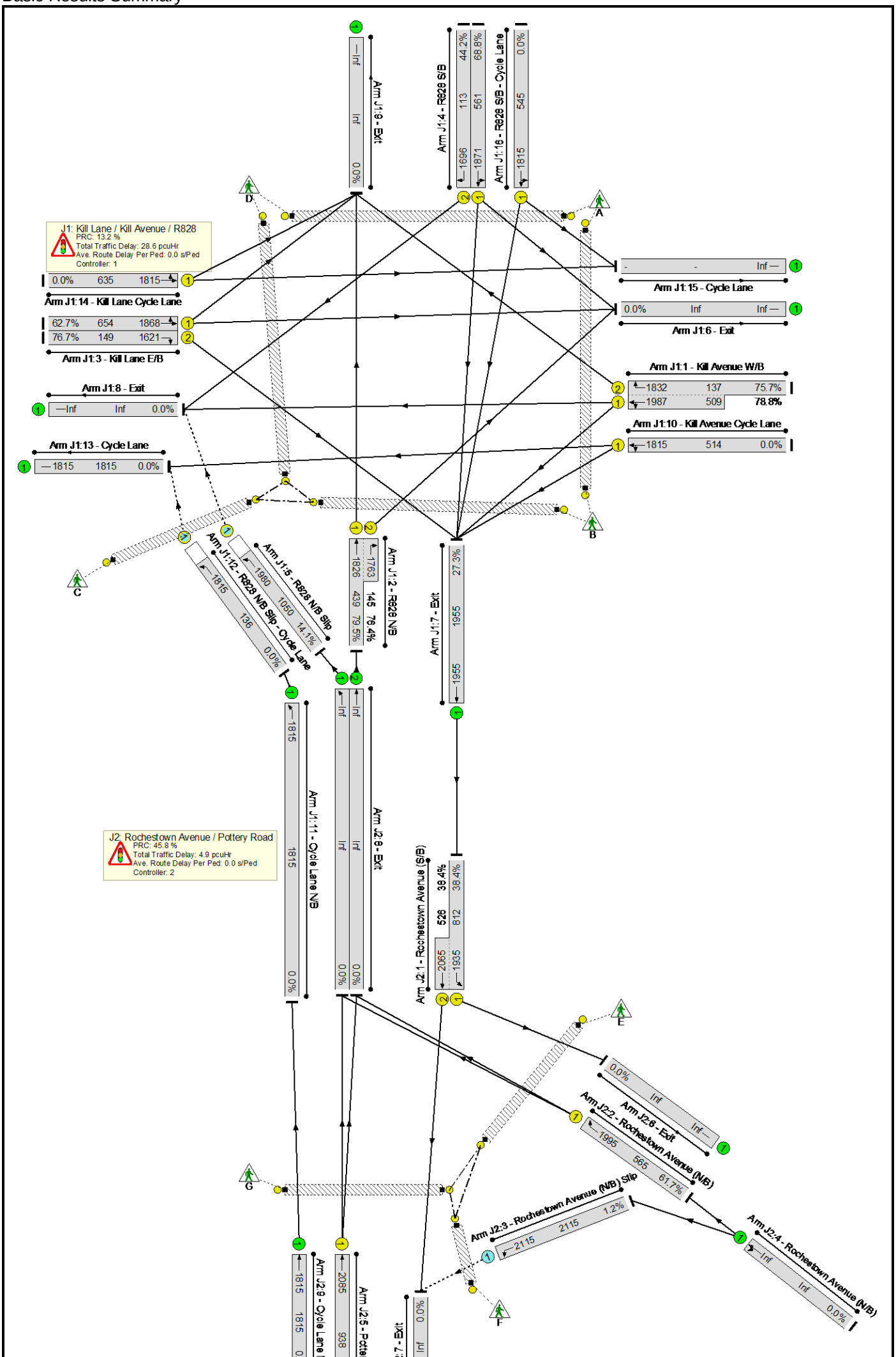
User and Project Details

Project:	**Rochestown Avenue**
Title:	
Location:	Pottery Road / Rochestown Avenue, Dun Laoghaire, Dublin
Client:	Dun Laoghaire Rathdown County Council
Site Ref(s):	Pottery Road
Date Started:	06.06.2023
Date Completed:	07.06.2023
Model Purpose:	Existing Capacity Check
Checked By:	Shaun Grima
Checked By Date:	07.06.2023
Additional detail:	
File name:	Rochestown_Bakers Corner - Existing_V2.lsg3x
Author:	Zachary Cave
Company:	AECOM
Address:	Adelphi Plaza, Dun Laoghaire, Co. Dublin

Basic Results Summary

Scenario 1: 'Existing AM Scenario' (FG1: 'AM Peak', Plan 1: 'Network Control Plan 1')
Network Layout Diagram

Basic Results Summary



Basic Results Summary

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	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**79.5%**	**2**	**169**	**3**	**33.4**	**-**	**-**
J1: Kill Lane / Kill Avenue / R828	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**79.5%**	**2**	**143**	**3**	**28.6**	**-**	**-**
1/2+1/1	Kill Avenue W/B Left Ahead Right	U	C1:A C1:B		1	8:33	-	505	1832:1987	137+509	75.7 : 78.8%	-	-	-	7.6	54.4	14.4
2/1+2/2	R828 N/B Right Ahead	U	C1:D C1:C		1	34:10	-	460	1826:1763	439+145	79.5 : 76.4%	-	-	-	6.4	50.0	13.4
3/1	Kill Lane E/B Ahead Left	U	C1:E		1	41	-	410	1868	654	62.7%	-	-	-	4.5	39.8	12.1
3/2	Kill Lane E/B Right	U	C1:F		1	10	-	114	1621	149	76.7%	-	-	-	3.2	101.1	5.2
4/1	R828 S/B Left Ahead	U	C1:G		1	35	-	386	1871	561	68.8%	-	-	-	5.1	47.2	12.3
4/2	R828 S/B Right	U	C1:H		1	7	-	50	1696	113	44.2%	-	-	-	1.1	82.1	2.0
5/1	R828 N/B Slip Left	O	C1:A	C1:I	3	62	54	148	1980	1050	14.1%	2	143	3	0.5	11.0	2.5
7/1	Exit Ahead	U	-		-	-	-	533	1955	1955	27.3%	-	-	-	0.2	1.3	0.2
10/1	Kill Avenue Cycle Lane Left Ahead	U	C1:B		1	33	-	0	1815	514	0.0%	-	-	-	0.0	0.0	0.0
11/1	Cycle Lane N/B Ahead	U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
12/1	R828 N/B Slip - Cycle Lane Left	O	C1:A		1	8	-	0	1815	136	0.0%	0	0	0	0.0	0.0	0.0
13/1	Cycle Lane	U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
14/1	Kill Lane Cycle Lane Left Ahead	U	C1:E		1	41	-	0	1815	635	0.0%	-	-	-	0.0	0.0	0.0
16/1	R828 S/B - Cycle Lane Ahead Left	U	C1:G		1	35	-	0	1815	545	0.0%	-	-	-	0.0	0.0	0.0

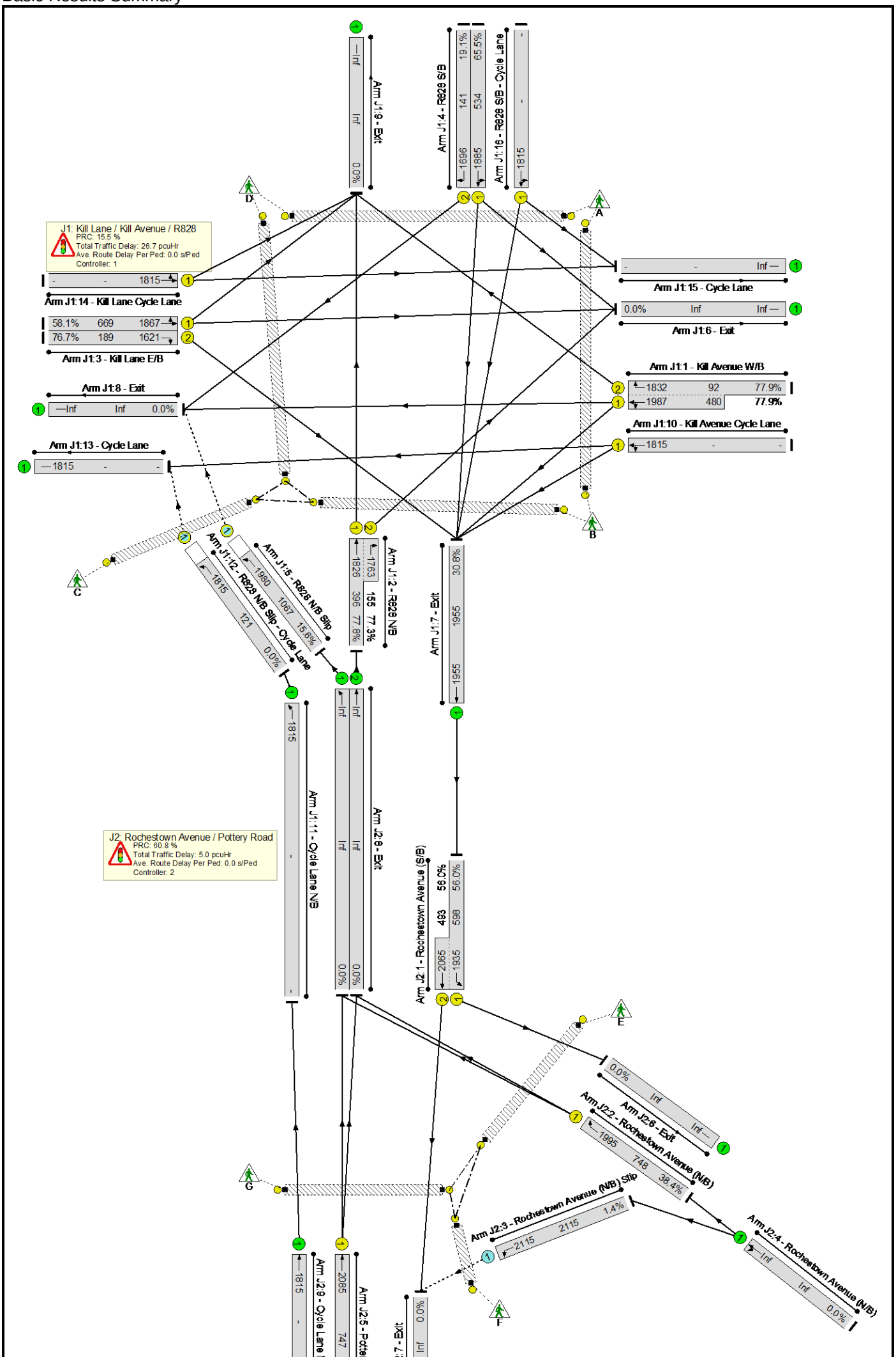
Basic Results Summary

Ped Link: P1	Unnamed Ped Link	-	C1:J		1	9	-	0	-	5400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	C1:N		1	9	-	0	-	5400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P3	Unnamed Ped Link	-	C1:M		1	9	-	0	-	5400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P4	Unnamed Ped Link	-	C1:L		1	9	-	0	-	5400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P5	Unnamed Ped Link	-	C1:K		1	9	-	0	-	5400	0.0%	-	-	-	0.0	0.0	0.0
J2: Rochestown Avenue / Pottery Road	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**61.7%**	**0**	**26**	**0**	**4.9**	**-**	**-**
1/1+1/2	Rochestown Avenue (S/B) Left Ahead	U	C2:A C2:B		2	72:50	-	514	1935:2065	812+526	38.4 : 38.4%	-	-	-	1.0	6.9	4.5
2/1	Rochestown Avenue (N/B) Right	U	C2:C		2	32	-	349	1995	565	61.7%	-	-	-	2.9	30.2	7.9
3/1	Rochestown Avenue (N/B) Slip Left	O	-		-	-	-	26	2115	2115	1.2%	0	26	0	0.0	0.9	0.0
5/1	Pottery Rd Ahead	U	C2:D		2	52	-	257	2085	938	27.4%	-	-	-	0.9	13.0	2.8
9/1	Cycle Lane N/B Ahead	U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P1	Unnamed Ped Link	-	C2:G		2	30	-	0	-	18000	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	C2:E		2	12	-	0	-	7200	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P3	Unnamed Ped Link	-	C2:F		1	48	-	0	-	28800	0.0%	-	-	-	0.0	0.0	0.0

C1 - Kill Lane / Kill Avenue / R828	PRC for Signalled Lanes (%):	13.2	Total Delay for Signalled Lanes (pcuHr):	28.40	Cycle Time (s): 120
C2 - Rochestown / Pottery Road	PRC for Signalled Lanes (%):	45.8	Total Delay for Signalled Lanes (pcuHr):	4.85	Cycle Time (s): 120
	PRC Over All Lanes (%):	13.2	Total Delay Over All Lanes(pcuHr):	33.44	

Basic Results Summary
Scenario 2: 'Existing PM Scenario' (FG2: 'PM Peak', Plan 1: 'Network Control Plan 1')
Network Layout Diagram

Basic Results Summary



Basic Results Summary

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	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.9%**	**8**	**177**	**10**	**31.7**	**-**	**-**
J1: Kill Lane / Kill Avenue / R828	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.9%**	**8**	**148**	**10**	**26.7**	**-**	**-**
1/2+1/1	Kill Avenue W/B Left Ahead Right	U	C1:A C1:B		1	7:30	-	446	1832:1987	92+480	77.9 : 77.9%	-	-	-	7.0	56.8	13.3
2/1+2/2	R828 N/B Right Ahead	U	C1:D C1:C		1	32:12	-	428	1826:1763	396+155	77.8 : 77.3%	-	-	-	6.4	53.7	10.9
3/1	Kill Lane E/B Ahead Left	U	C1:E		1	42	-	389	1867	669	58.1%	-	-	-	4.1	37.6	11.2
3/2	Kill Lane E/B Right	U	C1:F		1	13	-	145	1621	189	76.7%	-	-	-	3.6	89.6	6.2
4/1	R828 S/B Left Ahead	U	C1:G		1	33	-	350	1885	534	65.5%	-	-	-	4.6	47.5	11.1
4/2	R828 S/B Right	U	C1:H		1	9	-	27	1696	141	19.1%	-	-	-	0.5	67.0	1.0
5/1	R828 N/B Slip Left	O	C1:A	C1:I	3	62	55	166	1980	1067	15.6%	8	148	10	0.3	6.6	1.4
7/1	Exit Ahead	U	-		-	-	-	602	1955	1955	30.8%	-	-	-	0.2	1.3	0.2
10/1	Kill Avenue Cycle Lane Left Ahead	U	C1:B		1	30	-	0	1815	-	-	-	-	-	-	-	-
11/1	Cycle Lane N/B Ahead	U	-		-	-	-	0	1815	-	-	-	-	-	-	-	-
12/1	R828 N/B Slip - Cycle Lane Left	O	C1:A		1	7	-	0	1815	121	0.0%	0	0	0	0.0	0.0	0.0
13/1	Cycle Lane	U	-		-	-	-	0	1815	-	-	-	-	-	-	-	-
14/1	Kill Lane Cycle Lane Left Ahead	U	C1:E		1	42	-	0	1815	-	-	-	-	-	-	-	-
16/1	R828 S/B - Cycle Lane Ahead Left	U	C1:G		1	33	-	0	1815	-	-	-	-	-	-	-	-

Basic Results Summary

Ped Link: P1	Unnamed Ped Link	-	C1:J		1	9	-	0	-	5400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	C1:N		1	9	-	0	-	5400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P3	Unnamed Ped Link	-	C1:M		1	9	-	0	-	5400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P4	Unnamed Ped Link	-	C1:L		1	9	-	0	-	5400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P5	Unnamed Ped Link	-	C1:K		1	9	-	0	-	5400	0.0%	-	-	-	0.0	0.0	0.0
J2: Rochestown Avenue / Pottery Road	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**56.0%**	**0**	**29**	**0**	**5.0**	**-**	**-**
1/1+1/2	Rochestown Avenue (S/B) Left Ahead	U	C2:A C2:B		2	64:39	-	611	1935:2065	598+493	56.0 : 56.0%	-	-	-	1.9	11.4	7.4
2/1	Rochestown Avenue (N/B) Right	U	C2:C		2	43	-	287	1995	748	38.4%	-	-	-	1.4	18.0	4.4
3/1	Rochestown Avenue (N/B) Slip Left	O	-		-	-	-	29	2115	2115	1.4%	0	29	0	0.0	0.9	0.0
5/1	Pottery Rd Ahead	U	C2:D		2	41	-	306	2085	747	41.0%	-	-	-	1.6	18.6	4.2
9/1	Cycle Lane N/B Ahead	U	-		-	-	-	0	1815	-	-	-	-	-	-	-	-
Ped Link: P1	Unnamed Ped Link	-	C2:G		2	41	-	0	-	24600	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	C2:E		2	20	-	0	-	12000	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P3	Unnamed Ped Link	-	C2:F		1	31	-	0	-	18600	0.0%	-	-	-	0.0	0.0	0.0

C1 - Kill Lane / Kill Avenue / R828	PRC for Signalled Lanes (%):	15.5	Total Delay for Signalled Lanes (pcuHr):	26.51	Cycle Time (s): 120
C2 - Rochestown / Pottery Road	PRC for Signalled Lanes (%):	60.8	Total Delay for Signalled Lanes (pcuHr):	4.95	Cycle Time (s): 120
	PRC Over All Lanes (%):	15.5	Total Delay Over All Lanes(pcuHr):	31.69	

Basic Results Summary

User and Project Details

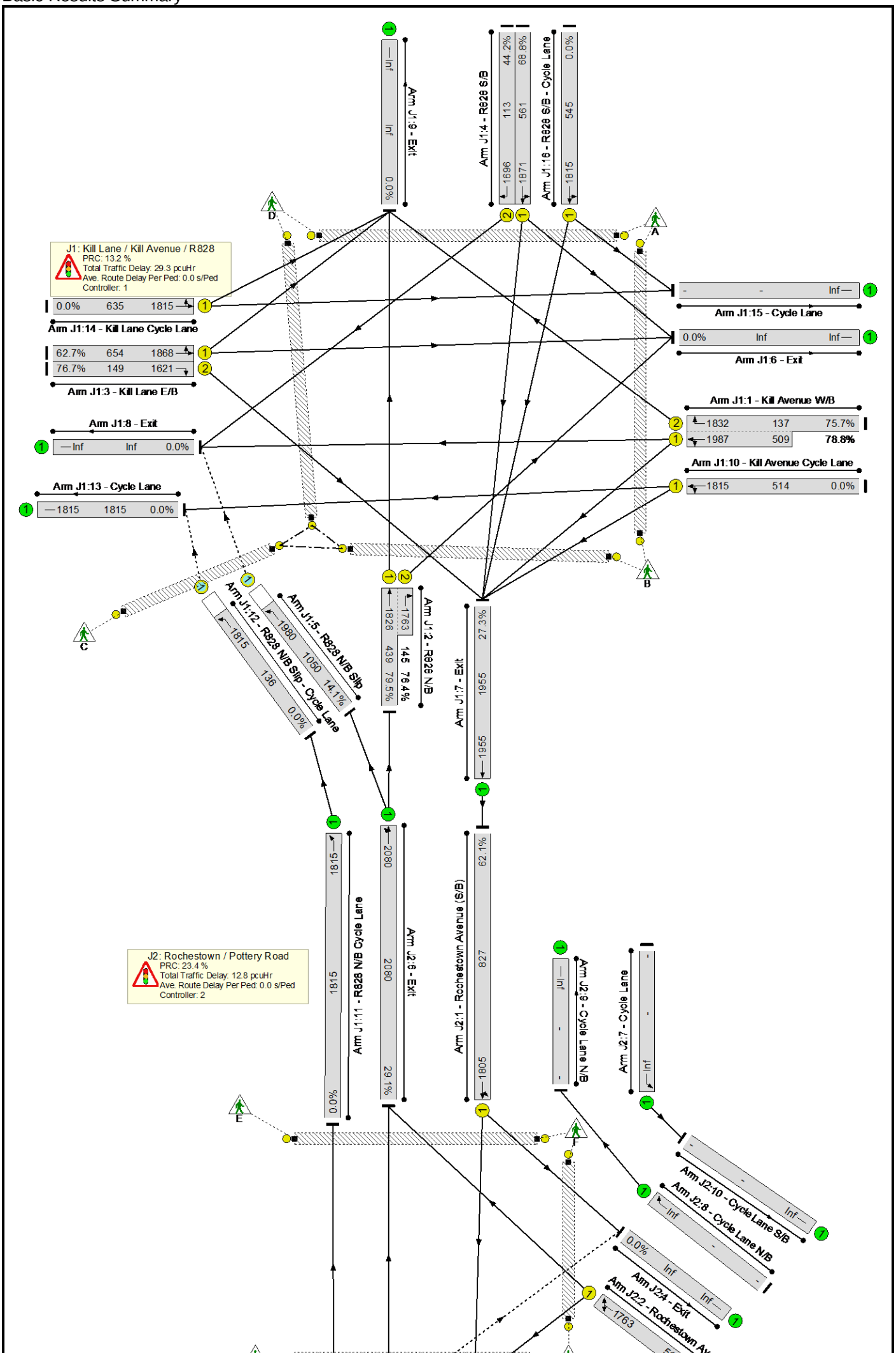
Project:	**Rochestown Avenue**
Title:	
Location:	Rochestown Avenue / Pottery Road, Dun Laoghaire, Dublin
Client:	Dun Laoghaire Rathdown County Council
Site Ref(s):	Pottery Road
Date Started:	06.06.2023
Date Completed:	07.06.2023
Model Purpose:	Proposed Arrangment Capacity Check
Checked By:	Shaun Grima
Checked By Date:	07.06.2023
Additional detail:	
File name:	Rochestown_Bakers Corner - Proposed_V2.lsg3x
Author:	Zachary Cave
Company:	AECOM
Address:	Adelphi Plaza, Dun Laoghaire, Co. Dublin

Basic Results Summary

Scenario 1: 'Proposed AM' (FG1: 'AM Peak', Plan 1: 'Network Control Plan 1-Existing AM Network Control Plan-Proposed AM')

Network Layout Diagram

Basic Results Summary



Basic Results Summary

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	-	-	-		-	-	-	-	-	-	**79.5%**	**6**	**544**	**5**	**42.0**	-	-
J1: Kill Lane / Kill Avenue / R828	-	-	-		-	-	-	-	-	-	**79.5%**	**6**	**137**	**5**	**29.3**	-	-
1/2+1/1	Kill Avenue W/B Left Ahead Right	U	C1:A C1:B		1	8:33	-	505	1832:1987	137+509	75.7 : 78.8%	-	-	-	7.6	54.4	14.4
2/1+2/2	R828 N/B Right Ahead	U	C1:D C1:C		1	34:10	-	460	1826:1763	439+145	79.5 : 76.4%	-	-	-	7.1	55.6	14.3
3/1	Kill Lane E/B Ahead Left	U	C1:E		1	41	-	410	1868	654	62.7%	-	-	-	4.5	39.8	12.1
3/2	Kill Lane E/B Right	U	C1:F		1	10	-	114	1621	149	76.7%	-	-	-	3.2	101.1	5.2
4/1	R828 S/B Left Ahead	U	C1:G		1	35	-	386	1871	561	68.8%	-	-	-	5.1	47.2	12.3
4/2	R828 S/B Right	U	C1:H		1	7	-	50	1696	113	44.2%	-	-	-	1.1	82.1	2.0
5/1	R828 N/B Slip Left	O	C1:A	C1:I	3	62	54	148	1980	1050	14.1%	6	137	5	0.4	10.0	1.6
7/1	Exit Ahead	U	-		-	-	-	533	1955	1955	27.3%	-	-	-	0.2	1.3	0.2
10/1	Kill Avenue Cycle Lane Left Ahead	U	C1:B		1	33	-	0	1815	514	0.0%	-	-	-	0.0	0.0	0.0
11/1	R828 N/B Cycle Lane Ahead	U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
12/1	R828 N/B Slip - Cycle Lane Left	O	C1:A		1	8	-	0	1815	136	0.0%	0	0	0	0.0	0.0	0.0
13/1	Cycle Lane	U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
14/1	Kill Lane Cycle Lane Left Ahead	U	C1:E		1	41	-	0	1815	635	0.0%	-	-	-	0.0	0.0	0.0

Basic Results Summary

16/1	R828 S/B - Cycle Lane Ahead Left	U	C1:G		1	35	-	0	1815	545	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P1	Unnamed Ped Link	-	C1:J		1	9	-	0	-	5400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	C1:N		1	9	-	0	-	5400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P3	Unnamed Ped Link	-	C1:M		1	9	-	0	-	5400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P4	Unnamed Ped Link	-	C1:L		1	9	-	0	-	5400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P5	Unnamed Ped Link	-	C1:K		1	9	-	0	-	5400	0.0%	-	-	-	0.0	0.0	0.0
J2: Rochestown / Pottery Road	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**72.9%**	**0**	**407**	**0**	**12.8**	**-**	**-**
1/1	Rochestown Avenue (S/B) Left Ahead	U	C2:A		1	54	-	514	1805	827	62.1%	-	-	-	4.3	30.3	13.7
2/1	Rochestown Avenue (N/B) Left Right	U	C2:B		1	34	-	375	1763	514	72.9%	-	-	-	5.3	50.9	12.5
3/1	Pottery Rd Right Ahead	O	C2:C		1	54	-	407	1979	907	44.9%	0	407	0	2.9	25.8	9.6
6/1	Exit Ahead Ahead2	U	-		-	-	-	605	2080	2080	29.1%	-	-	-	0.2	1.2	0.2
11/1	Cycle Lane N/B Ahead	U	-		-	-	-	0	1815	-	-	-	-	-	-	-	-
Ped Link: P1	Unnamed Ped Link	-	C2:D		1	5	-	0	-	3000	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	C2:E		1	7	-	0	-	4200	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P3	Unnamed Ped Link	-	C2:F		1	6	-	0	-	3600	0.0%	-	-	-	0.0	0.0	0.0

C1 - Kill Lane / Kill Avenue / R828
C2 - Rochestown Avenue

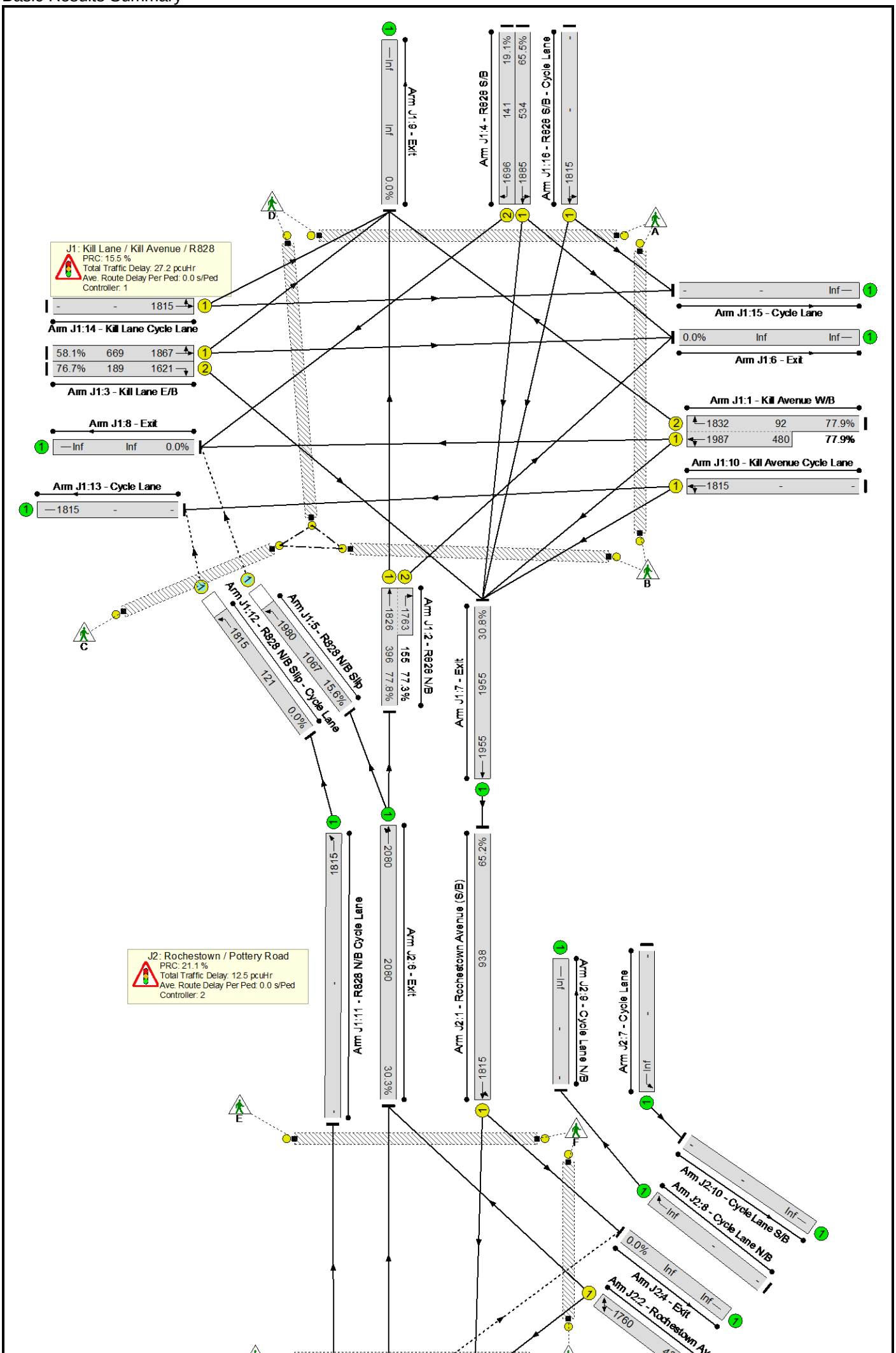
PRC for Signalled Lanes (%): 13.2
PRC for Signalled Lanes (%): 23.4
PRC Over All Lanes (%): 13.2

Total Delay for Signalled Lanes (pcuHr): 29.08
Total Delay for Signalled Lanes (pcuHr): 12.55
Total Delay Over All Lanes(pcuHr): 42.02

Cycle Time (s): 120
Cycle Time (s): 120

Basic Results Summary
Scenario 2: 'Proposed PM' (FG2: 'PM Peak', Plan 1: 'Network Control Plan 1-Existing AM Network Control Plan-Proposed AM')
Network Layout Diagram

Basic Results Summary



Basic Results Summary

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	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.9%**	**6**	**611**	**6**	**39.7**	**-**	**-**
J1: Kill Lane / Kill Avenue / R828	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.9%**	**6**	**155**	**6**	**27.2**	**-**	**-**
1/2+1/1	Kill Avenue W/B Left Ahead Right	U	C1:A C1:B		1	7:30	-	446	1832:1987	92+480	77.9 : 77.9%	-	-	-	7.0	56.8	13.3
2/1+2/2	R828 N/B Right Ahead	U	C1:D C1:C		1	32:12	-	428	1826:1763	396+155	77.8 : 77.3%	-	-	-	6.7	56.3	12.8
3/1	Kill Lane E/B Ahead Left	U	C1:E		1	42	-	389	1867	669	58.1%	-	-	-	4.1	37.6	11.2
3/2	Kill Lane E/B Right	U	C1:F		1	13	-	145	1621	189	76.7%	-	-	-	3.6	89.6	6.2
4/1	R828 S/B Left Ahead	U	C1:G		1	33	-	350	1885	534	65.5%	-	-	-	4.6	47.5	11.1
4/2	R828 S/B Right	U	C1:H		1	9	-	27	1696	141	19.1%	-	-	-	0.5	67.0	1.0
5/1	R828 N/B Slip Left	O	C1:A	C1:I	3	62	55	166	1980	1067	15.6%	6	155	6	0.4	9.1	1.8
7/1	Exit Ahead	U	-		-	-	-	602	1955	1955	30.8%	-	-	-	0.2	1.3	0.2
10/1	Kill Avenue Cycle Lane Left Ahead	U	C1:B		1	30	-	0	1815	-	-	-	-	-	-	-	-
11/1	R828 N/B Cycle Lane Ahead	U	-		-	-	-	0	1815	-	-	-	-	-	-	-	-
12/1	R828 N/B Slip - Cycle Lane Left	O	C1:A		1	7	-	0	1815	121	0.0%	0	0	0	0.0	0.0	0.0
13/1	Cycle Lane	U	-		-	-	-	0	1815	-	-	-	-	-	-	-	-
14/1	Kill Lane Cycle Lane Left Ahead	U	C1:E		1	42	-	0	1815	-	-	-	-	-	-	-	-

Basic Results Summary

16/1	R828 S/B - Cycle Lane Ahead Left	U	C1:G		1	33	-	0	1815	-	-	-	-	-	-	-	-
Ped Link: P1	Unnamed Ped Link	-	C1:J		1	9	-	0	-	5400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	C1:N		1	9	-	0	-	5400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P3	Unnamed Ped Link	-	C1:M		1	9	-	0	-	5400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P4	Unnamed Ped Link	-	C1:L		1	9	-	0	-	5400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P5	Unnamed Ped Link	-	C1:K		1	9	-	0	-	5400	0.0%	-	-	-	0.0	0.0	0.0
J2: Rochestown / Pottery Road	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**74.3%**	**0**	**456**	**0**	**12.5**	**-**	**-**
1/1	Rochestown Avenue (S/B) Left Ahead	U	C2:A		1	61	-	611	1815	938	65.2%	-	-	-	4.5	26.6	15.7
2/1	Rochestown Avenue (N/B) Left Right	U	C2:B		1	28	-	316	1760	425	74.3%	-	-	-	5.1	58.1	11.1
3/1	Pottery Rd Right Ahead	O	C2:C		1	61	-	456	1987	1027	44.4%	0	456	0	2.7	21.3	9.9
6/1	Exit Ahead Ahead2	U	-		-	-	-	631	2080	2080	30.3%	-	-	-	0.2	1.2	0.2
11/1	Cycle Lane N/B Ahead	U	-		-	-	-	0	1815	-	-	-	-	-	-	-	-
Ped Link: P1	Unnamed Ped Link	-	C2:D		1	4	-	0	-	2400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	C2:E		1	6	-	0	-	3600	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P3	Unnamed Ped Link	-	C2:F		1	5	-	0	-	3000	0.0%	-	-	-	0.0	0.0	0.0

C1 - Kill Lane / Kill Avenue / R828
C2 - Rochestown Avenue

PRC for Signalled Lanes (%): 15.5
PRC for Signalled Lanes (%): 21.1
PRC Over All Lanes (%): 15.5

Total Delay for Signalled Lanes (pcuHr): 26.94
Total Delay for Signalled Lanes (pcuHr): 12.32
Total Delay Over All Lanes(pcuHr): 39.70

Cycle Time (s): 120
Cycle Time (s): 120

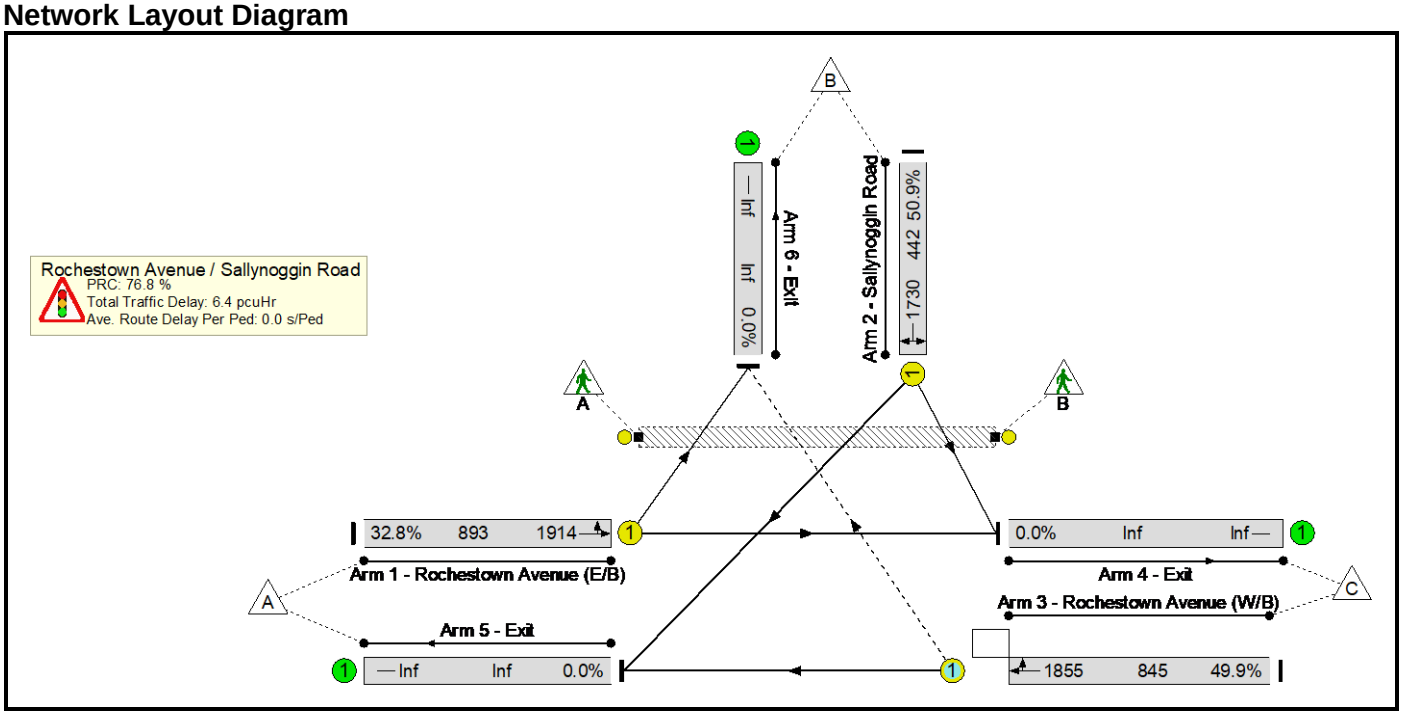
Basic Results Summary

User and Project Details

Project:	**Rochestown Avenue**
Title:	
Location:	Rochestown Avenue / Sallynoggin Road, Dun Laoghaire, Dublin
Client:	Dun Laoghaire Rathdown County Council
Site Ref(s):	Sallynoggin Road
Date Started:	06.06.2023
Date Completed:	07.06.2023
Model Purpose:	Existing Capacity Check
Checked By:	Zachary Cave
Checked By Date:	07.06.2023
Additional detail:	
File name:	Rochestown_Sallynoggin Road - Existing_V2.lsg3x
Author:	Cliona Murphy
Company:	AECOM
Address:	Adelphi Plaza, Dun Laoghaire, Co. Dublin

Scenario 1: 'AM Existing' (FG1: 'AM Peak', 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	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**50.9%**	**192**	**0**	**2**	**6.4**	**-**	**-**
Rochestown Avenue / Sallynoggin Road	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**50.9%**	**192**	**0**	**2**	**6.4**	**-**	**-**
1/1	Rochestown Avenue (E/B) Ahead Left	U	A		1	41	-	293	1914	893	32.8%	-	-	-	1.5	18.1	4.8
2/1	Sallynoggin Road Left Right	U	C		1	22	-	225	1730	442	50.9%	-	-	-	2.3	36.9	5.3
3/1	Rochestown Avenue (W/B) Ahead Right	O	B		1	42	-	422	1855	845	49.9%	192	0	2	2.6	22.4	7.9
Ped Link: P1	Pedestrian Link	-	D		1	4	-	0	-	3200	0.0%	-	-	-	0.0	0.0	0.0

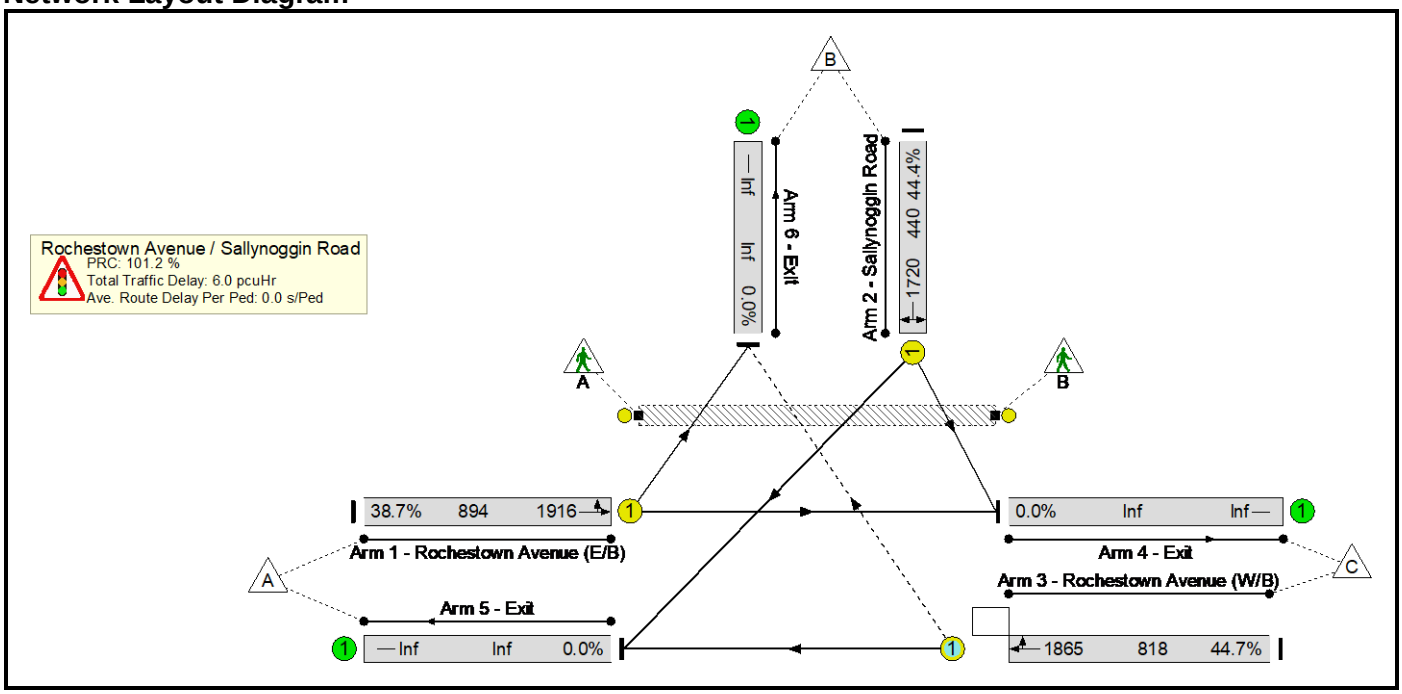
C1 PRC for Signalled Lanes (%): 76.8 Total Delay for Signalled Lanes (pcuHr): 6.41 Cycle Time (s): 90

PRC Over All Lanes (%): 76.8 Total Delay Over All Lanes(pcuHr): 6.41

Basic Results Summary

Scenario 2: 'PM Existing' (FG2: 'PM Peak', 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	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**44.7%**	**155**	**0**	**2**	**6.0**	**-**	**-**
Rochestown Avenue / Sallynoggin Road	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**44.7%**	**155**	**0**	**2**	**6.0**	**-**	**-**
1/1	Rochestown Avenue (E/B) Ahead Left	U	A		1	41	-	346	1916	894	38.7%	-	-	-	1.8	18.9	5.9
2/1	Sallynoggin Road Left Right	U	C		1	22	-	195	1720	440	44.4%	-	-	-	1.9	35.5	4.5
3/1	Rochestown Avenue (W/B) Ahead Right	O	B		1	42	-	366	1865	818	44.7%	155	0	2	2.2	22.1	6.7
Ped Link: P1	Pedestrian Link	-	D		1	4	-	0	-	3200	0.0%	-	-	-	0.0	0.0	0.0

C1

PRC for Signalled Lanes (%): 101.2
PRC Over All Lanes (%): 101.2

Total Delay for Signalled Lanes (pcuHr): 5.98
Total Delay Over All Lanes(pcuHr): 5.98

Cycle Time (s): 90

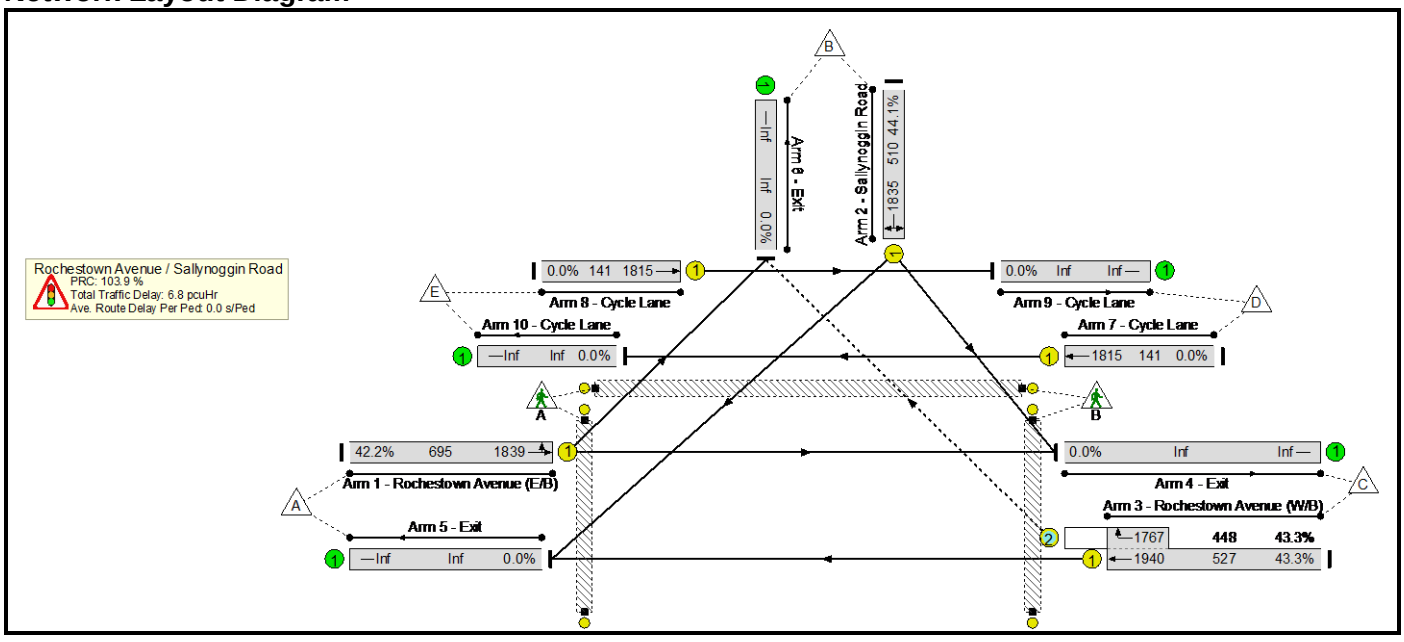
Basic Results Summary

User and Project Details

Project:	**Rochestown Avenue**
Title:	
Location:	Rochestown Avenue / Sallynoggin Road, Dun Laoghaire, Dublin
Client:	Dun Laoghaire Rathdown County Council
Site Ref(s):	Sallynoggin Road
Date Started:	06.06.2023
Date Completed:	07.06.2023
Model Purpose:	Proposed Arrangement Capacity Check
Checked By:	Zachary Cave
Checked By Date:	07.06.2023
Additional detail:	
File name:	Rochestown_Sallynoggin Road - Proposed_V2.lsg3x
Author:	Cliona Murphy
Company:	AECOM
Address:	Adelphi Plaza, Dun Laoghaire, Co. Dublin

Scenario 1: 'AM Proposed' (FG1: 'AM Peak', 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	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**44.1%**	**181**	**6**	**6**	**6.8**	**-**	**-**
Rochestown Avenue / Sallynoggin Road	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**44.1%**	**181**	**6**	**6**	**6.8**	**-**	**-**
1/1	Rochestown Avenue (E/B) Ahead Left	U	A		1	33	-	293	1839	695	42.2%	-	-	-	2.1	25.2	5.7
2/1	Sallynoggin Road Left Right	U	D		1	24	-	225	1835	510	44.1%	-	-	-	2.1	33.1	5.0
3/1+3/2	Rochestown Avenue (W/B) Ahead Right	U+O	B C		1	38	-	422	1940:1767	527+448	43.3 : 43.3%	181	6	6	2.7	22.9	4.0
7/1	Cycle Lane Ahead	U	I		1	6	-	0	1815	141	0.0%	-	-	-	0.0	0.0	0.0
8/1	Cycle Lane Ahead	U	H		1	6	-	0	1815	141	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P1	Pedestrian Link	-	E		1	6	-	0	-	4800	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	G		1	5	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	F		1	4	-	0	-	0	0.0%	-	-	-	-	-	-

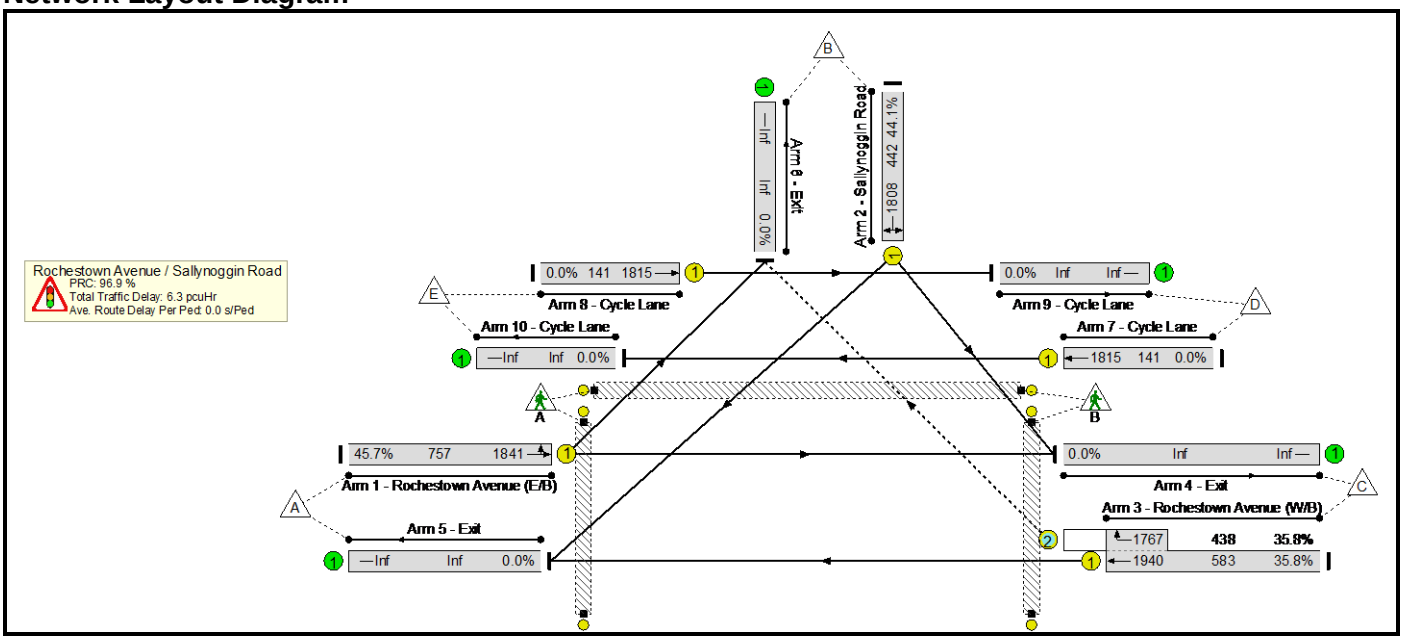
C1 PRC for Signalled Lanes (%): 103.9 Total Delay for Signalled Lanes (pcuHr): 6.80 Cycle Time (s): 90

PRC Over All Lanes (%): 103.9 Total Delay Over All Lanes(pcuHr): 6.80

Basic Results Summary

Scenario 2: 'PM Proposed' (FG2: 'PM Peak', 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	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**45.7%**	**147**	**5**	**5**	**6.3**	**-**	**-**
Rochestown Avenue / Sallynoggin Road	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**45.7%**	**147**	**5**	**5**	**6.3**	**-**	**-**
1/1	Rochestown Avenue (E/B) Ahead Left	U	A		1	36	-	346	1841	757	45.7%	-	-	-	2.3	23.6	6.7
2/1	Sallynoggin Road Left Right	U	D		1	21	-	195	1808	442	44.1%	-	-	-	2.0	36.1	4.5
3/1+3/2	Rochestown Avenue (W/B) Ahead Right	U+O	B C		1	41	-	366	1940:1767	583+438	35.8 : 35.8%	147	5	5	2.1	20.3	3.4
7/1	Cycle Lane Ahead	U	I		1	6	-	0	1815	141	0.0%	-	-	-	0.0	0.0	0.0
8/1	Cycle Lane Ahead	U	H		1	6	-	0	1815	141	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P1	Pedestrian Link	-	E		1	6	-	0	-	4800	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	G		1	5	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	F		1	4	-	0	-	0	0.0%	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 96.9 Total Delay for Signalled Lanes (pcuHr): 6.28 Cycle Time (s): 90
PRC Over All Lanes (%): 96.9 Total Delay Over All Lanes(pcuHr): 6.28

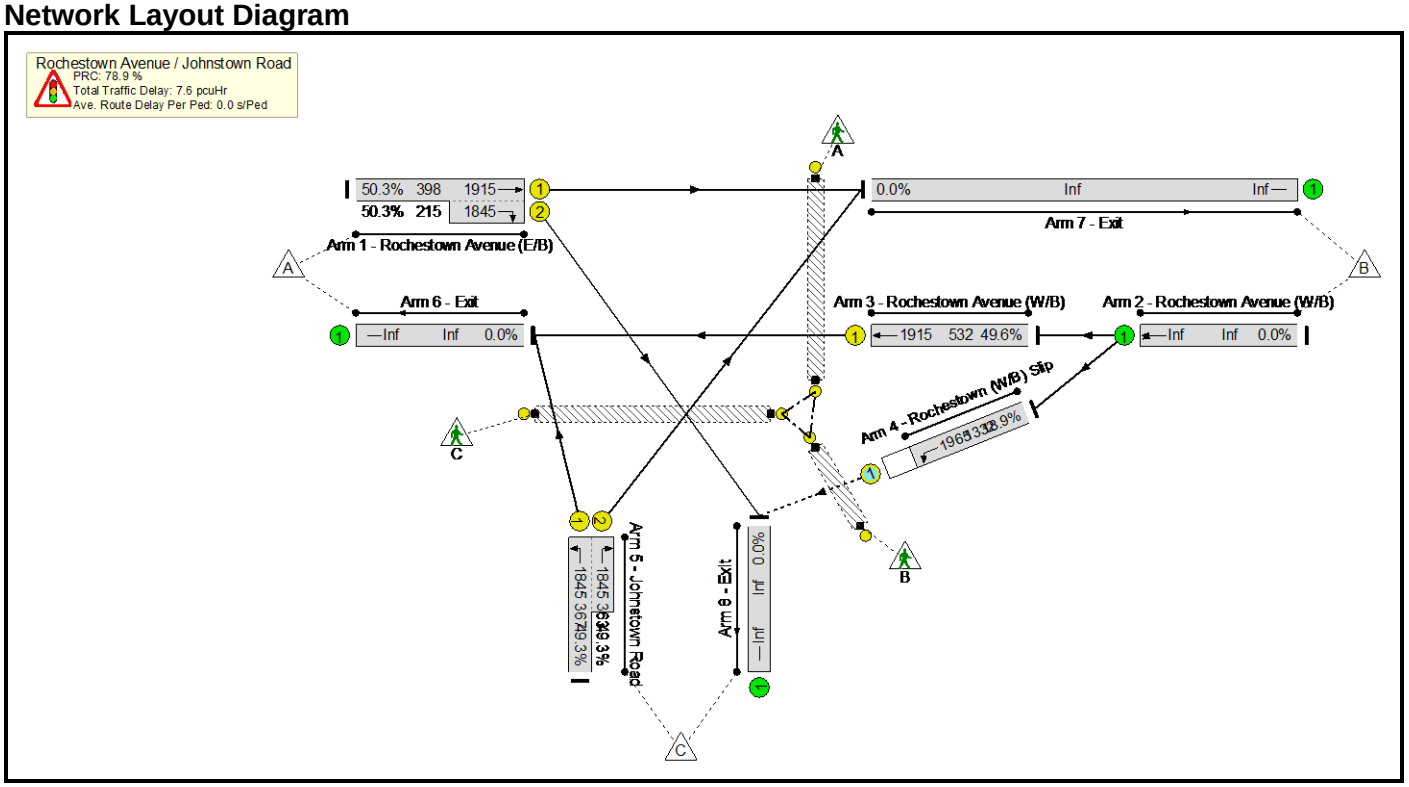
Basic Results Summary

User and Project Details

Project:	**Rochestown Avenue**
Title:	
Location:	Johnstown Road / Rochestown Avenue, Dun Laoghaire, Dublin
Client:	Dun Laoghaire Rathdown County Council
Site Ref(s):	Johnstown Road
Date Started:	06.06.2023
Date Completed:	07.06.2023
Model Purpose:	Existing capacity check
Checked By:	Shaun Grima
Checked By Date:	07.06.2023
Additional detail:	
File name:	Rochestown_Johnstown Rd - Existing_V2.lsg3x
Author:	Zachary Cave
Company:	AECOM
Address:	Adelphi Plaza, Dun Laoghaire, Co. Dublin

Scenario 1: 'Baseline AM' (FG1: 'AM Peak', 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	-	-	-		-	-	-	-	-	-	**50.3%**	**8**	**238**	**6**	**7.6**	-	-
Rochestown Avenue / Johnstown Road	-	-	-		-	-	-	-	-	-	**50.3%**	**8**	**238**	**6**	**7.6**	-	-
1/1+1/2	Rochestown Avenue (E/B) Ahead Right	U	A B		1	39:11	-	308	1915:1845	398+215	50.3 : 50.3%	-	-	-	2.4	28.6	3.6
3/1	Rochestown Avenue (W/B) Ahead	U	C		1	24	-	264	1915	532	49.6%	-	-	-	2.5	33.9	6.0
4/1	Rochestown (W/B) Slip Left	O	D		2	59	-	252	1965	1332	18.9%	8	238	6	0.3	4.6	1.4
5/1+5/2	Johnstown Road Left Right	U	F E		1	46:25	-	360	1845:1845	367+363	49.3 : 49.3%	-	-	-	2.3	23.1	4.0
Ped Link: P1	Unnamed Ped Link	-	I		1	23	-	0	-	18400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	H		1	4	-	0	-	3200	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P3	Unnamed Ped Link	-	G		1	4	-	0	-	3200	0.0%	-	-	-	0.0	0.0	0.0

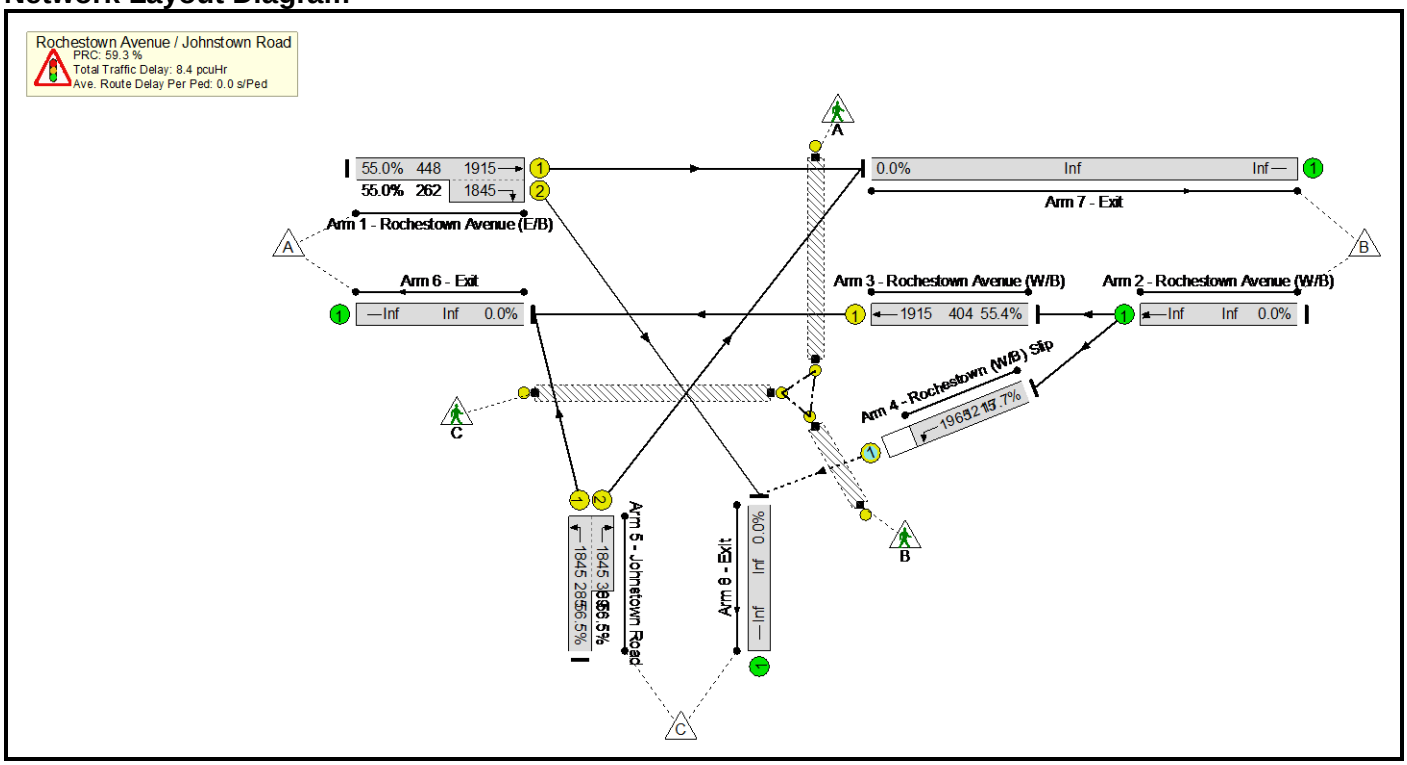
C1 PRC for Signalled Lanes (%): 78.9 Total Delay for Signalled Lanes (pcuHr): 7.57 Cycle Time (s): 90

PRC Over All Lanes (%): 78.9 Total Delay Over All Lanes(pcuHr): 7.57

Basic Results Summary

Scenario 2: 'Baseline PM' (FG2: 'PM Peak', 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	-	-	-		-	-	-	-	-	-	**56.5%**	**22**	**167**	**27**	**8.4**	-	-
Rochestown Avenue / Johnstown Road	-	-	-		-	-	-	-	-	-	**56.5%**	**22**	**167**	**27**	**8.4**	-	-
1/1+1/2	Rochestown Avenue (E/B) Ahead Right	U	A B		1	39:17	-	390	1915:1845	448+262	55.0 : 55.0%	-	-	-	2.9	27.2	4.5
3/1	Rochestown Avenue (W/B) Ahead	U	C		1	18	-	224	1915	404	55.4%	-	-	-	2.6	41.6	5.6
4/1	Rochestown (W/B) Slip Left	O	D		2	59	-	215	1965	1215	17.7%	22	167	27	0.3	5.0	1.2
5/1+5/2	Johnstown Road Left Right	U	F E		1	52:25	-	381	1845:1845	285+389	56.5 : 56.5%	-	-	-	2.6	24.6	5.0
Ped Link: P1	Unnamed Ped Link	-	I		1	17	-	0	-	13600	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	H		1	4	-	0	-	3200	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P3	Unnamed Ped Link	-	G		1	4	-	0	-	3200	0.0%	-	-	-	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 59.3 Total Delay for Signalled Lanes (pcuHr): 8.43 Cycle Time (s): 90

PRC Over All Lanes (%): 59.3 Total Delay Over All Lanes(pcuHr): 8.43

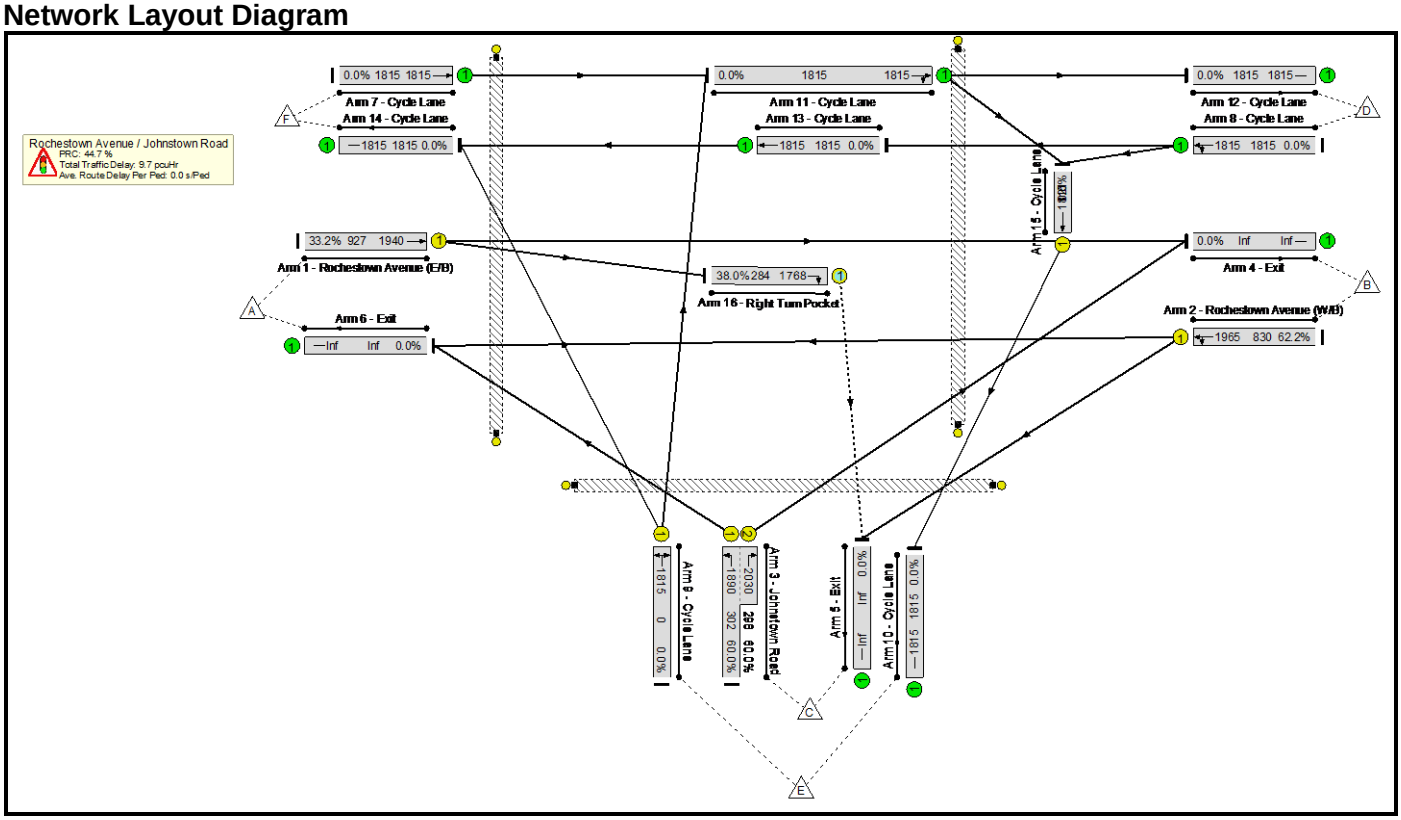
Basic Results Summary

User and Project Details

Project:	**Rochestown Avenue**
Title:	
Location:	Johnstown Road / Rochestown Avenue, Dun Laoghaire, Dublin
Client:	Dun Laoghaire Rathdown County Council
Site Ref(s):	Johnstown Road
Date Started:	06.06.2023
Date Completed:	07.06.2023
Model Purpose:	Proposed Arrangement Capacity Check
Checked By:	Shaun Grima
Checked By Date:	07.06.2023
Additional detail:	
File name:	Rochestown_Johnstown Rd - Proposed_V3.lsg3x
Author:	Zachary Cave
Company:	AECOM
Address:	Adelphi Plaza, Dun Laoghaire, Co. Dublin

Scenario 1: 'Proposed AM' (FG1: 'AM Peak', 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	-	-	-		-	-	-	-	-	-	**62.2%**	**101**	**7**	**0**	**9.7**	-	-
Rochestown Avenue / Johnstown Road	-	-	-		-	-	-	-	-	-	**62.2%**	**101**	**7**	**0**	**9.7**	-	-
1/1	Rochestown Avenue (E/B) Ahead Ahead2	U	A		1	42	-	308	1940	927	33.2%	-	-	-	1.5	17.5	5.0
2/1	Rochestown Avenue (W/B) Left Ahead	U	B		1	37	-	516	1965	830	62.2%	-	-	-	3.7	26.1	10.9
3/1+3/2	Johnstown Road Right Left	U	D C		1	20:17	-	360	1890:2030	302+298	60.0 : 60.0%	-	-	-	3.8	37.9	4.6
7/1	Cycle Lane Ahead	U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
8/1	Cycle Lane Ahead Left	U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
9/1	Cycle Lane Right Left	U	I		0	0	-	0	1815	0	0.0%	-	-	-	0.0	0.0	0.0
10/1	Cycle Lane	U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
11/1	Cycle Lane Ahead Right	U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
12/1	Cycle Lane	U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
13/1	Cycle Lane Ahead	U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
14/1	Cycle Lane	U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
15/1	Cycle Lane Ahead	U	H		1	5	-	0	1815	121	0.0%	-	-	-	0.0	0.0	0.0
16/1	Right Turn Pocket Right	O	A		1	42	-	108	1768	284	38.0%	101	7	0	0.7	24.0	2.5
Ped Link: P1	Unnamed Ped Link	-	E		1	5	-	0	-	0	0.0%	-	-	-	-	-	-

Basic Results Summary

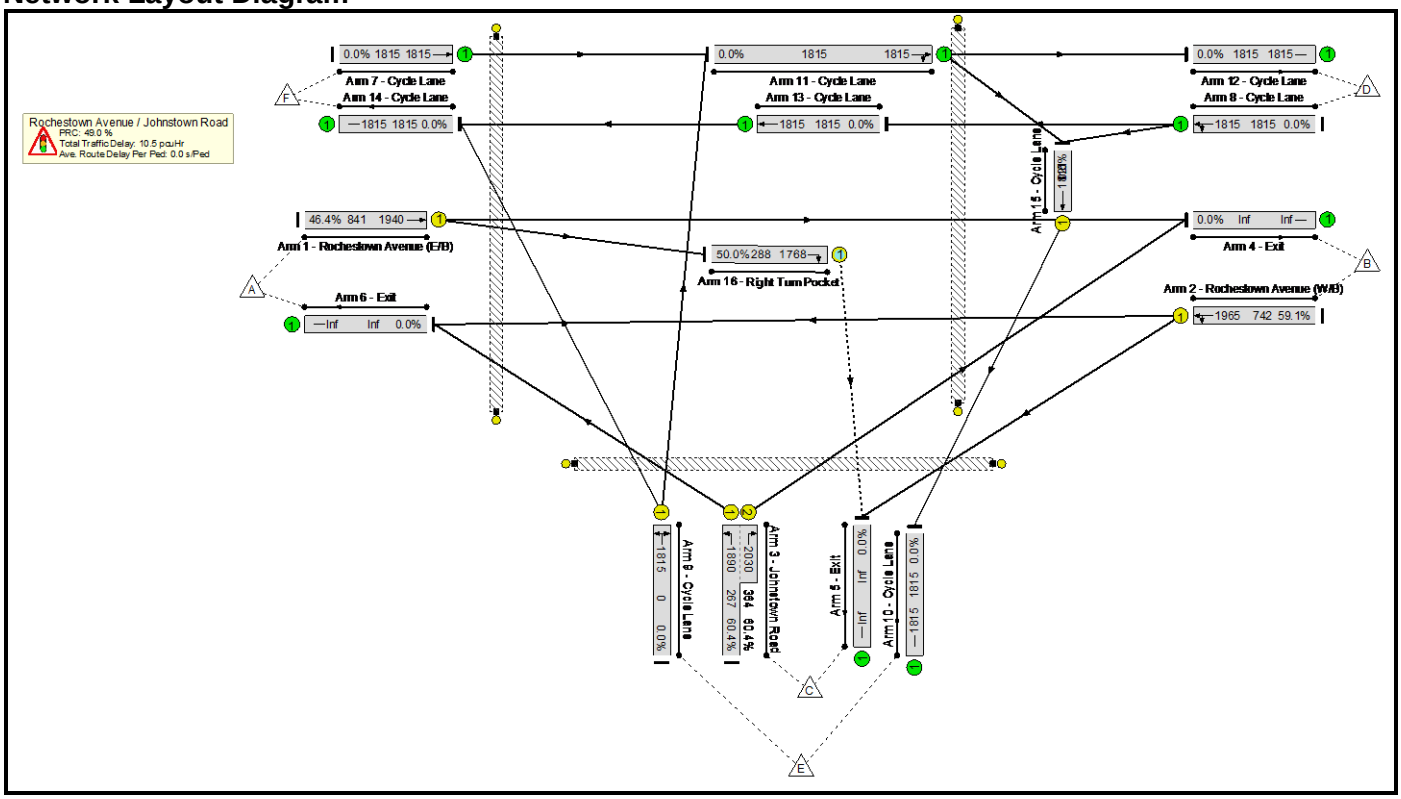
Ped Link: P2	Unnamed Ped Link	-	F		1	4	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	G		1	7	-	0	-	0	0.0%	-	-	-	-	-	-

C1	PRC for Signalled Lanes (%):	44.7	Total Delay for Signalled Lanes (pcuHr):	9.74	Cycle Time (s):	90			
	PRC Over All Lanes (%):	44.7	Total Delay Over All Lanes(pcuHr):	9.74					

Basic Results Summary

Scenario 2: 'Proposed PM' (FG2: 'PM Peak', 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	-	-	-		-	-	-	-	-	-	**60.4%**	**135**	**9**	**0**	**10.5**	-	-
Rochestown Avenue / Johnstown Road	-	-	-		-	-	-	-	-	-	**60.4%**	**135**	**9**	**0**	**10.5**	-	-
1/1	Rochestown Avenue (E/B) Ahead Ahead2	U	A		1	38	-	390	1940	841	46.4%	-	-	-	2.4	22.1	7.3
2/1	Rochestown Avenue (W/B) Left Ahead	U	B		1	33	-	439	1965	742	59.1%	-	-	-	3.5	28.3	9.5
3/1+3/2	Johnstown Road Right Left	U	D C		1	24:21	-	381	1890:2030	267+364	60.4 : 60.4%	-	-	-	3.7	34.7	5.4
7/1	Cycle Lane Ahead	U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
8/1	Cycle Lane Ahead Left	U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
9/1	Cycle Lane Right Left	U	I		0	0	-	0	1815	0	0.0%	-	-	-	0.0	0.0	0.0
10/1	Cycle Lane	U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
11/1	Cycle Lane Ahead Right	U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
12/1	Cycle Lane	U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
13/1	Cycle Lane Ahead	U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
14/1	Cycle Lane	U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
15/1	Cycle Lane Ahead	U	H		1	5	-	0	1815	121	0.0%	-	-	-	0.0	0.0	0.0
16/1	Right Turn Pocket Right	O	A		1	38	-	144	1768	288	50.0%	135	9	0	1.0	24.7	3.6
Ped Link: P1	Unnamed Ped Link	-	E		1	5	-	0	-	0	0.0%	-	-	-	-	-	-

Basic Results Summary

Ped Link: P2	Unnamed Ped Link	-	F		1	4	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	G		1	7	-	0	-	0	0.0%	-	-	-	-	-	-

C1	PRC for Signalled Lanes (%):	49.0	Total Delay for Signalled Lanes (pcuHr):	10.50	Cycle Time (s):	90	
	PRC Over All Lanes (%):	49.0	Total Delay Over All Lanes(pcuHr):	10.50			

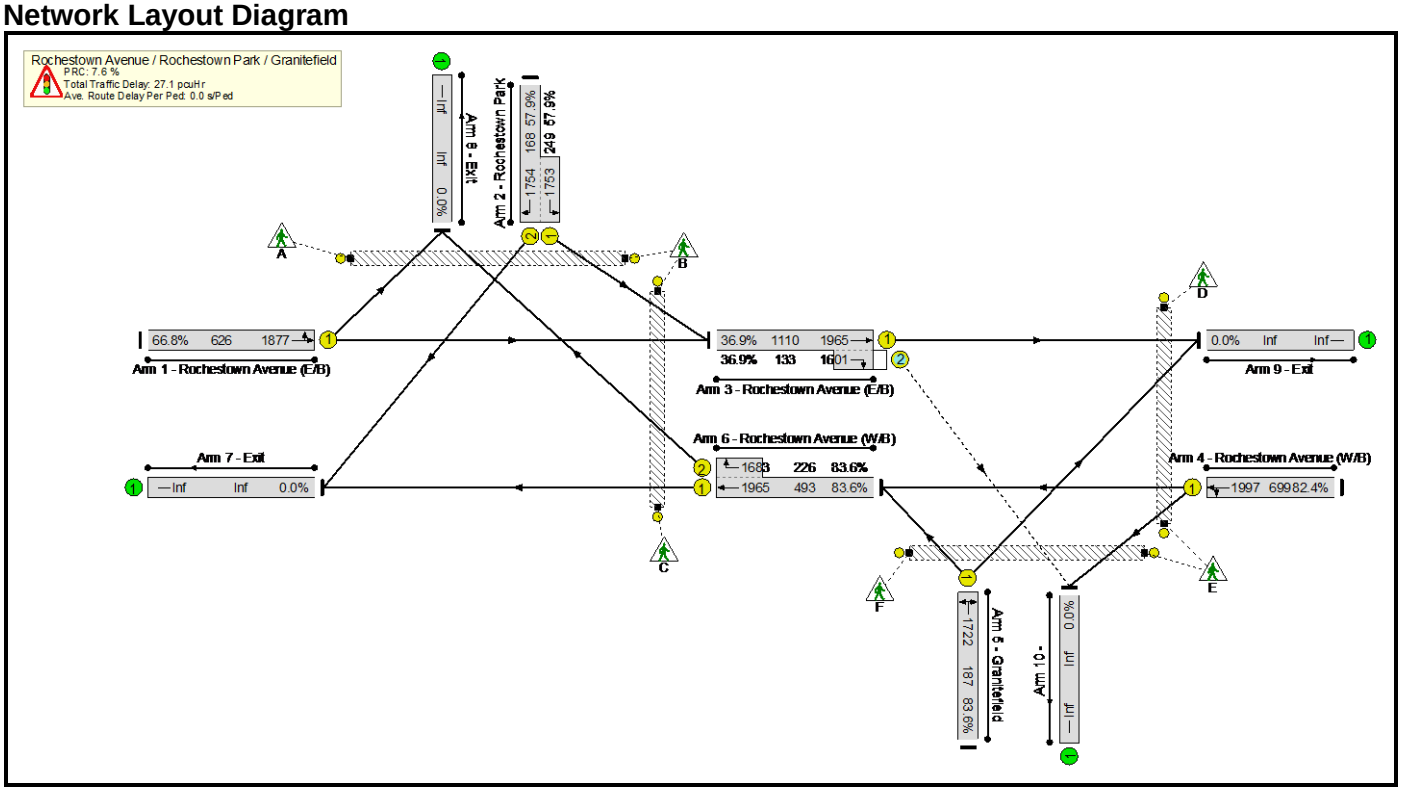
Basic Results Summary

User and Project Details

Project:	**Rochestown Avenue**
Title:	
Location:	Rochestown Avenue / Granitefield / Rochestown Park, Dun Laoghaire, Dublin
Client:	Dun Laoghaire Rathdown County Council
Site Ref(s):	Rochestown Park & Granitefield
Date Started:	06.06.2023
Date Completed:	07.06.2023
Model Purpose:	Existing capacity check
Checked By:	Shaun Grima
Checked By Date:	07.06.2023
Additional detail:	
File name:	Rochestown_Granitefield - Existing_V2.lsg3x
Author:	Zachary Cave
Company:	AECOM
Address:	Adelphi Plaza, Dun Laoghaire, Co. Dublin

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

Network Layout Diagram



Basic Results Summary

Network Results

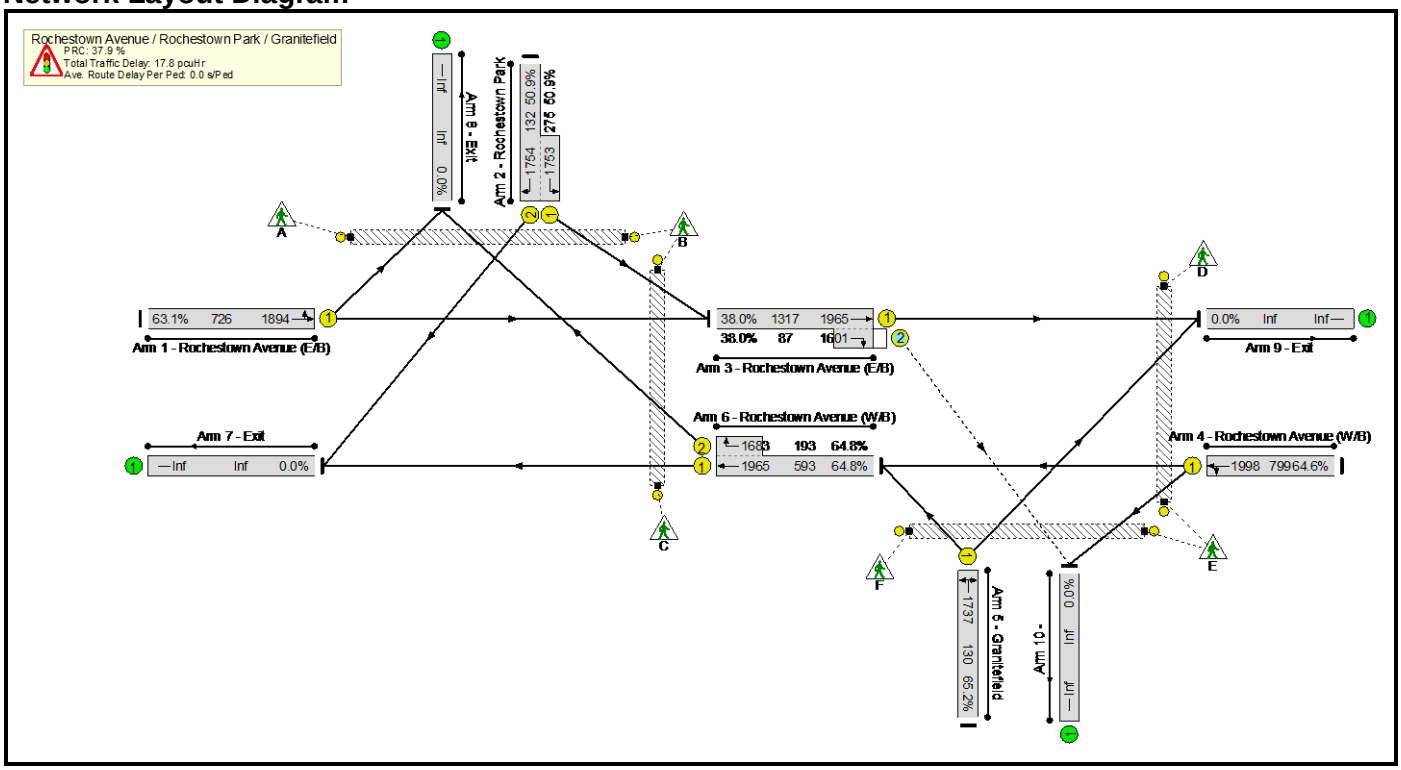
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**83.6%**	**0**	**49**	**0**	**27.1**	-	-
Rochestown Avenue / Rochestown Park / Granitefield	-	-	-		-	-	-	-	-	-	**83.6%**	**0**	**49**	**0**	**27.1**	-	-
1/1	Rochestown Avenue (E/B) Ahead Left	U	A		1	39	-	418	1877	626	66.8%	-	-	-	5.0	42.9	12.8
2/2+2/1	Rochestown Park Left Right	U	B C		1	12:48	-	241	1754:1753	168+249	57.9 : 57.9%	-	-	-	3.0	44.2	3.8
3/1+3/2	Rochestown Avenue (E/B) Ahead Right	U+O	D E		1	81:31	-	459	1965:1601	1110+133	36.9 : 36.9%	0	49	0	0.8	6.7	1.9
4/1	Rochestown Avenue (W/B) Ahead Left	U	F		1	41	-	576	1997	699	82.4%	-	-	-	8.0	49.7	19.7
5/1	Granitefield Left Right	U	G		1	12	-	156	1722	187	83.6%	-	-	-	4.5	103.9	7.3
6/1+6/2	Rochestown Avenue (W/B) Ahead Right	U	H I		1	81:30	-	601	1965:1683	493+226	83.6 : 83.6%	-	-	-	5.8	35.0	14.6
Ped Link: P1	Unnamed Ped Link	-	J		1	6	-	0	-	3600	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	K		1	4	-	0	-	2400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P3	Unnamed Ped Link	-	M		1	6	-	0	-	3600	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P4	Unnamed Ped Link	-	L		1	4	-	0	-	2400	0.0%	-	-	-	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 7.6 Total Delay for Signalled Lanes (pcuHr): 27.08 Cycle Time (s): 120
PRC Over All Lanes (%): 7.6 Total Delay Over All Lanes(pcuHr): 27.08

Basic Results Summary

Scenario 2: 'Baseline PM' (FG2: 'PM Peak', 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	-	-	-		-	-	-	-	-	-	**65.2%**	**0**	**33**	**0**	**17.8**	-	-
Rochestown Avenue / Rochestown Park / Granitefield	-	-	-		-	-	-	-	-	-	**65.2%**	**0**	**33**	**0**	**17.8**	-	-
1/1	Rochestown Avenue (E/B) Ahead Left	U	A		1	45	-	458	1894	726	63.1%	-	-	-	4.7	36.8	13.2
2/2+2/1	Rochestown Park Left Right	U	B C		1	8:42	-	207	1754:1753	132+275	50.9 : 50.9%	-	-	-	2.6	44.4	3.7
3/1+3/2	Rochestown Avenue (E/B) Ahead Right	U+O	D E		1	85:29	-	533	1965:1601	1317+87	38.0 : 38.0%	0	33	0	0.7	4.9	1.4
4/1	Rochestown Avenue (W/B) Ahead Left	U	F		1	47	-	516	1998	799	64.6%	-	-	-	5.1	35.4	14.8
5/1	Granitefield Left Right	U	G		1	8	-	85	1737	130	65.2%	-	-	-	2.2	92.2	3.6
6/1+6/2	Rochestown Avenue (W/B) Ahead Right	U	H I		1	85:28	-	509	1965:1683	593+193	64.8 : 64.8%	-	-	-	2.6	18.5	7.0
Ped Link: P1	Unnamed Ped Link	-	J		1	6	-	0	-	3600	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	K		1	4	-	0	-	2400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P3	Unnamed Ped Link	-	M		1	6	-	0	-	3600	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P4	Unnamed Ped Link	-	L		1	4	-	0	-	2400	0.0%	-	-	-	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 37.9 Total Delay for Signalled Lanes (pcuHr): 17.83 Cycle Time (s): 120
PRC Over All Lanes (%): 37.9 Total Delay Over All Lanes(pcuHr): 17.83

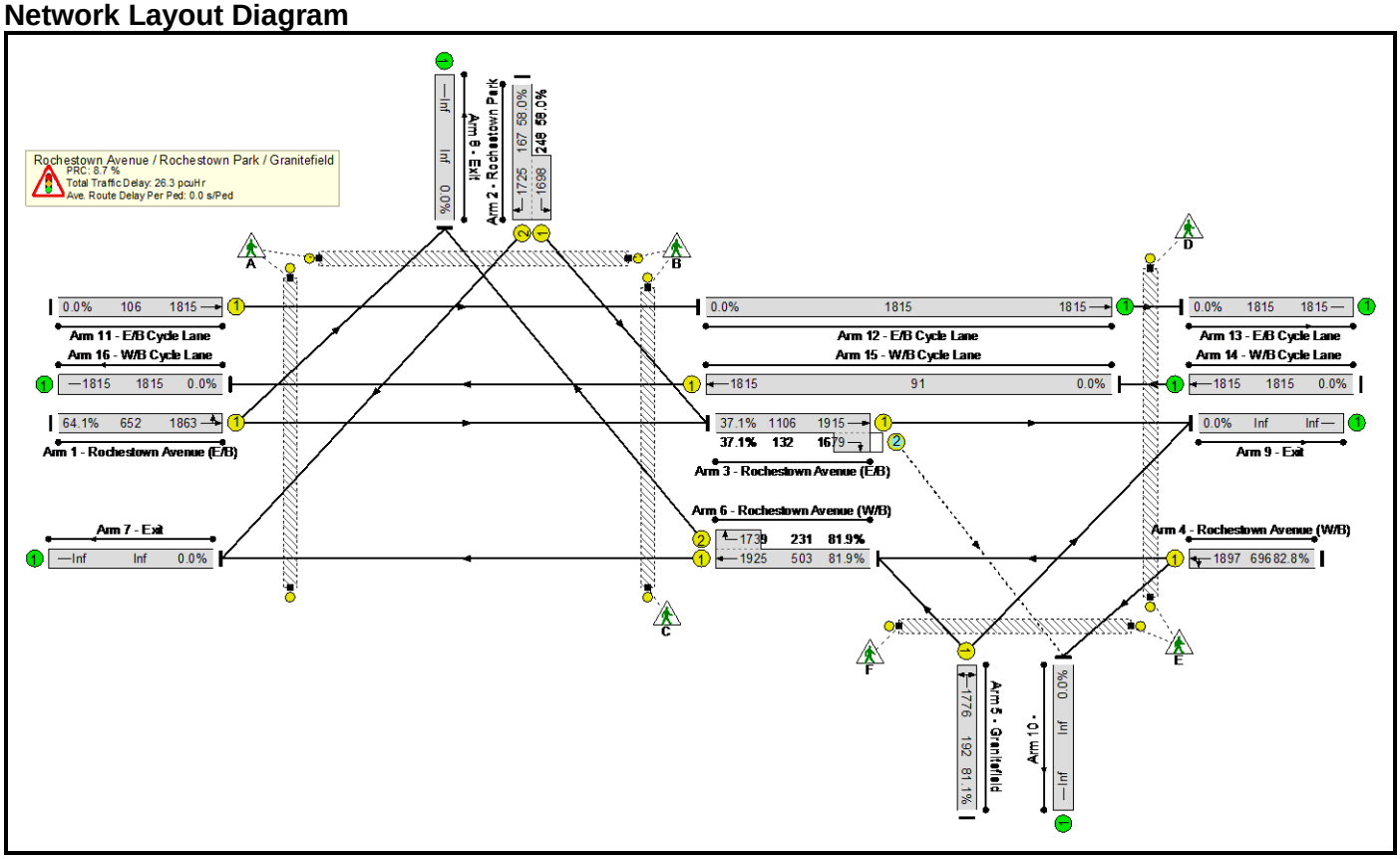
Basic Results Summary

User and Project Details

Project:	**Rochestown Avenue**
Title:	
Location:	Rochestown Avenue / Granitefield / Rochestown Park, Dun Laoghaire, Dublin
Client:	Dun Laoghaire Rathdown County Council
Site Ref(s):	Rochestown Park & Granitefield
Date Started:	06.06.2023
Date Completed:	07.06.2023
Model Purpose:	Proposed Arrangement Capacity Check
Checked By:	Shaun Grima
Checked By Date:	07.06.2023
Additional detail:	
File name:	Rochestown_Granitefield - Proposed_V2.lsg3x
Author:	Zachary Cave
Company:	AECOM
Address:	Adelphi Plaza, Dun Laoghaire, Co. Dublin

Scenario 1: 'Proposed AM' (FG1: 'AM Peak', 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	-	-	-		-	-	-	-	-	-	**82.8%**	**0**	**49**	**0**	**26.3**	-	-
Rochestown Avenue / Rochestown Park / Granitefield	-	-	-		-	-	-	-	-	-	**82.8%**	**0**	**49**	**0**	**26.3**	-	-
1/1	Rochestown Avenue (E/B) Ahead Left	U	A		1	41	-	418	1863	652	64.1%	-	-	-	4.7	40.3	12.5
2/2+2/1	Rochestown Park Left Right	U	B C		1	12:49	-	241	1725:1698	167+248	58.0 : 58.0%	-	-	-	2.9	43.9	3.7
3/1+3/2	Rochestown Avenue (E/B) Ahead Right	U+O	D E		1	80:32	-	459	1915:1679	1106+132	37.1 : 37.1%	0	49	0	0.9	7.0	1.9
4/1	Rochestown Avenue (W/B) Ahead Left	U	F		1	43	-	576	1897	696	82.8%	-	-	-	7.8	49.1	19.8
5/1	Granitefield Left Right	U	G		1	12	-	156	1776	192	81.1%	-	-	-	4.2	97.0	7.0
6/1+6/2	Rochestown Avenue (W/B) Ahead Right	U	H I		1	78:31	-	601	1925:1739	503+231	81.9 : 81.9%	-	-	-	5.7	34.2	14.3
11/1	E/B Cycle Lane Ahead	U	O		1	6	-	0	1815	106	0.0%	-	-	-	0.0	0.0	0.0
12/1	E/B Cycle Lane Ahead	U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
13/1	E/B Cycle Lane	U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
14/1	W/B Cycle Lane Ahead	U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
15/1	W/B Cycle Lane Ahead	U	P		1	5	-	0	1815	91	0.0%	-	-	-	0.0	0.0	0.0
16/1	W/B Cycle Lane	U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P1	Unnamed Ped Link	-	J		1	6	-	0	-	3600	0.0%	-	-	-	0.0	0.0	0.0

Basic Results Summary

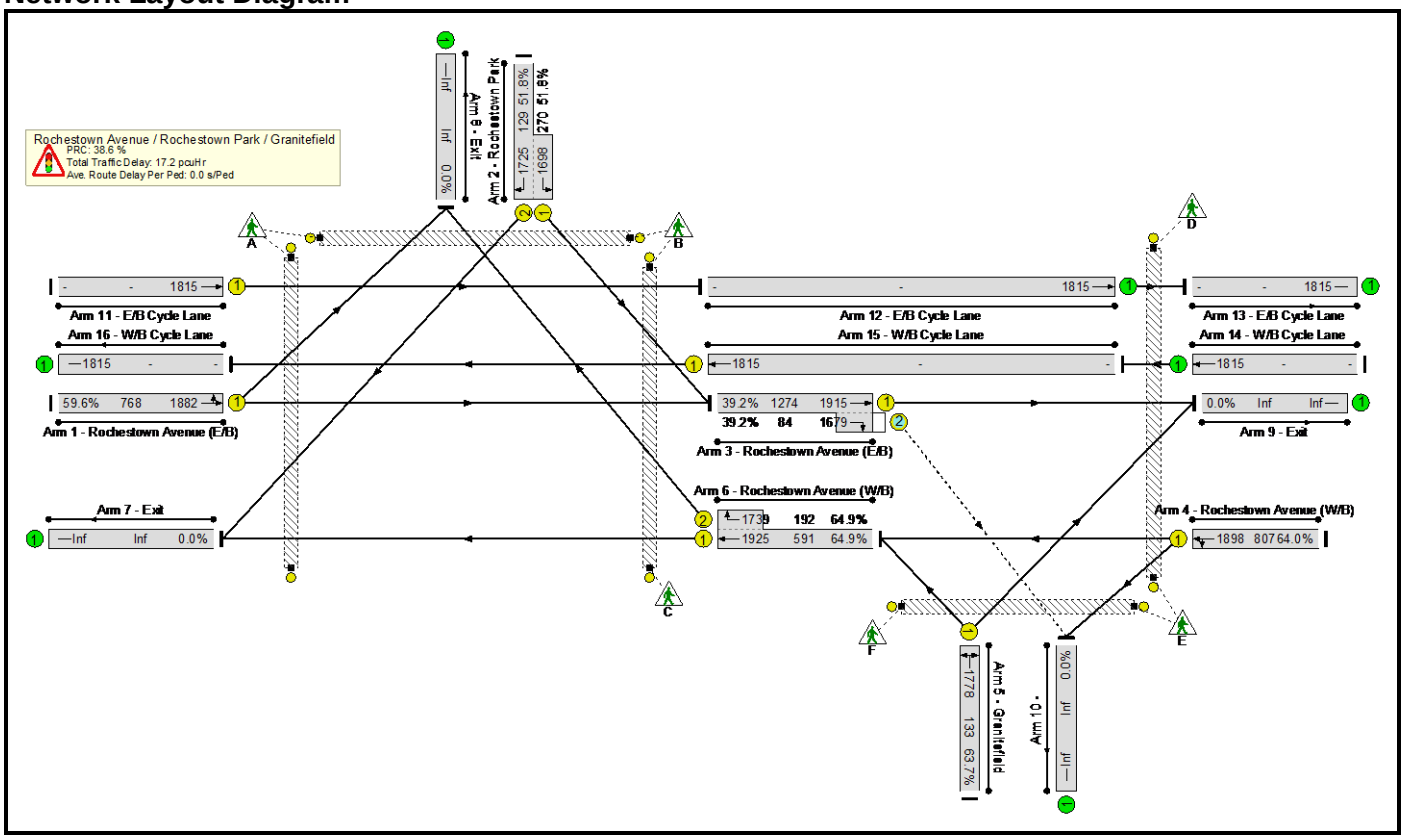
Ped Link: P2	Unnamed Ped Link	-	K		1	4	-	0	-	2400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P3	Unnamed Ped Link	-	M		1	6	-	0	-	3600	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P4	Unnamed Ped Link	-	L		1	4	-	0	-	2400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P5	Unnamed Ped Link	-	N		1	4	-	0	-	0	0.0%	-	-	-	-	-	-

C1	PRC for Signalled Lanes (%):	8.7	Total Delay for Signalled Lanes (pcuHr):	26.27	Cycle Time (s):	120	
	PRC Over All Lanes (%):	8.7	Total Delay Over All Lanes(pcuHr):	26.27			

Basic Results Summary

Scenario 2: 'Proposed PM' (FG2: 'PM Peak', 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	-	-	-		-	-	-	-	-	-	**64.9%**	**0**	**33**	**0**	**17.2**	-	-
Rochestown Avenue / Rochestown Park / Granitefield	-	-	-		-	-	-	-	-	-	**64.9%**	**0**	**33**	**0**	**17.2**	-	-
1/1	Rochestown Avenue (E/B) Ahead Left	U	A		1	48	-	458	1882	768	59.6%	-	-	-	4.3	33.5	12.6
2/2+2/1	Rochestown Park Left Right	U	B C		1	8:42	-	207	1725:1698	129+270	51.8 : 51.8%	-	-	-	2.6	44.8	3.8
3/1+3/2	Rochestown Avenue (E/B) Ahead Right	U+O	D E		1	84:29	-	533	1915:1679	1274+84	39.2 : 39.2%	0	33	0	0.8	5.3	1.4
4/1	Rochestown Avenue (W/B) Ahead Left	U	F		1	50	-	516	1898	807	64.0%	-	-	-	4.8	33.4	14.4
5/1	Granitefield Left Right	U	G		1	8	-	85	1778	133	63.7%	-	-	-	2.1	89.9	3.6
6/1+6/2	Rochestown Avenue (W/B) Ahead Right	U	H I		1	82:28	-	509	1925:1739	591+192	64.9 : 64.9%	-	-	-	2.7	19.1	7.0
11/1	E/B Cycle Lane Ahead	U	O		1	6	-	0	1815	-	-	-	-	-	-	-	-
12/1	E/B Cycle Lane Ahead	U	-		-	-	-	0	1815	-	-	-	-	-	-	-	-
13/1	E/B Cycle Lane	U	-		-	-	-	0	1815	-	-	-	-	-	-	-	-
14/1	W/B Cycle Lane Ahead	U	-		-	-	-	0	1815	-	-	-	-	-	-	-	-
15/1	W/B Cycle Lane Ahead	U	P		1	5	-	0	1815	-	-	-	-	-	-	-	-
16/1	W/B Cycle Lane	U	-		-	-	-	0	1815	-	-	-	-	-	-	-	-
Ped Link: P1	Unnamed Ped Link	-	J		1	6	-	0	-	3600	0.0%	-	-	-	0.0	0.0	0.0

Basic Results Summary

Ped Link: P2	Unnamed Ped Link	-	K		1	4	-	0	-	2400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P3	Unnamed Ped Link	-	M		1	6	-	0	-	3600	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P4	Unnamed Ped Link	-	L		1	4	-	0	-	2400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P5	Unnamed Ped Link	-	N		1	4	-	0	-	0	0.0%	-	-	-	-	-	-

C1	PRC for Signalled Lanes (%):	38.6	Total Delay for Signalled Lanes (pcuHr):	17.23	Cycle Time (s): 120
	PRC Over All Lanes (%):	38.6	Total Delay Over All Lanes(pcuHr):	17.23	