

# Old Nangor Road Signalised Junction

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## Section 38 Report

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## 1 INTRODUCTION

### 1.1 BACKGROUND

DBFL Consulting Engineers were commissioned to prepare a Section 38 report for the proposed upgrade of the existing priority-controlled junction at St Cuthbert's Road (N)/Old Nangor Road (W)/ Old Nangor Road(E)/Kilcarbery Grange Avenue. The scheme proposes to convert the junction to a signalised arrangement, including the provision of dedicated pedestrian and cyclist crossing facilities.

### 1.2 NEED FOR THE SCHEME

Recent development in the area of Old Nangor Road includes the recent opening of the new Lidl store and the emerging / future residential settlements to the south and southeast of this junction. The combination of these trip generators are expected to increase the quantity of pedestrians and cyclists travelling through this junction. The existing priority-controlled arrangement does not provide for crossing facilities for vulnerable road users which is expected to become more of a concern as emerging and future residential units become occupied in the area. In addition, the emerging developments are expected to generate more car trips through this junction which in the current priority arrangement could lead to dominant traffic flows emerging making it difficult for traffic from non-priority approaches to enter the junction. Accordingly, the introduction of traffic signal control at this junction will ensure that all approaches are afforded the appropriate signal times to enter the junction. Accordingly, the subject junction upgrade is considered necessary to improve the safety of vulnerable road users and to manage vehicle traffic flows. The location of the subject junction is indicated in **Figure 1-1** below.

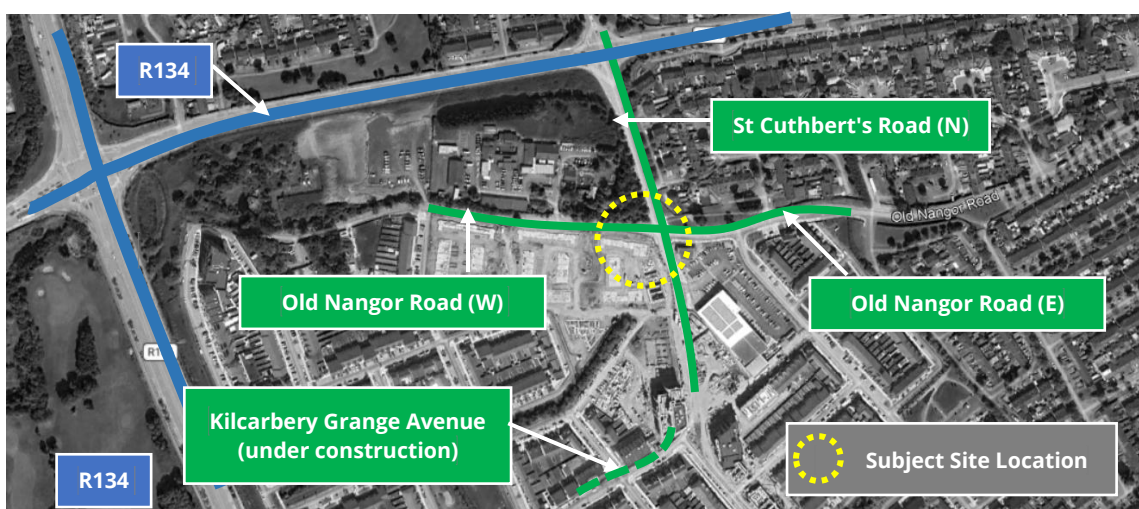


Figure 1-1: Location of subject Junction

## 2 EXISTING CONDITIONS

### 2.1 OVERVIEW

An assessment of the existing conditions at St Cuthbert's Road (N)/Old Nangor Road (W)/ Old Nangor Road(E)/Kilcarbery Grange Avenue junction has been undertaken to understand the current operational and infrastructural characteristics. The following subsections provide an overview of the existing junction arrangement, the extent and quality of active travel infrastructure in the surrounding area, and the findings of traffic surveys undertaken to establish baseline traffic conditions. This review forms the basis for identifying potential constraints and opportunities to inform the proposed junction improvement scheme.

### 2.2 EXISTING JUNCTION ARRANGEMENT

The existing junction between St Cuthbert's Road (N)/Old Nangor Road (W)/ Old Nangor Road(E)/Kilcarbery Grange Avenue currently operate as a four-arm priority-controlled junction as illustrated in **Figure 2-1**. The main north-south movement is facilitated along St Cuthbert's Road and Kilcarbery Grange, while Old Nangor Road (W) and Old Nangor Road (E) forms the minor arm. Grange Avenue Road (S) to the south is under construction and is expected to open by year 2026.



Figure 2-1: Existing *Old Nangor Road / Upper Nangor Road Junction*

## 2.3 EXISTING ACTIVE TRAVEL INFRASTRUCTURE

The existing active travel facilities at subject junction is briefed in the following section.

### 2.3.1 Old Nangoor Road (Western Arm)

Along this section of Old Nangoor Road, the existing active travel infrastructure is limited. A narrow footpath is provided along the one side of the carriageway. No dedicated cycling facilities are present, and cyclists are required to share the carriageway with general traffic. There are no formal pedestrian crossing facilities at or near the junction ahead, limiting safe connectivity between both sides of the road. Street lighting are provided along the route.



Existing Old Nangoor Road

### 2.3.2 St Cuthbert's Road (Northern Arm)

Pedestrian Footpath are available on both sides of the carriageway. On one side, footpath includes a grass verge, offering segregation from vehicular traffic. No formal pedestrian or cyclist crossing facilities are provided at the junction. Street lighting is present along the southern side. Overall, the existing provision caters primarily to pedestrian movement, with scope for improvement to enhance safety and connectivity for both pedestrians and cyclists.



St Cuthbert's Road

### 2.3.3 Old Nangor Road (Eastern Arm)

The existing active travel infrastructure along Old Nangor Road (East) comprises footpaths on both sides of the carriageway, providing pedestrian connectivity within the area. A bus stop with pole signage and timetable information is located on the northern verge; however, no shelter or dedicated

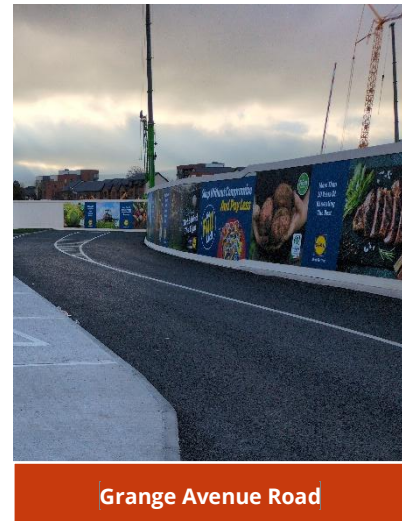


Old Nangor Road

bus bay is provided. There are currently no marked pedestrian crossing facilities or dedicated cycle lanes along this section, with cyclists sharing the carriageway with general traffic. Street lighting is present on both sides of the road. The surrounding area is predominantly residential.

### 2.3.4 Grange Avenue Road (S)

The southern arm of the junction, Grange Avenue Road (South), is currently under construction and forms part of the connection linking the R136 to the west and the R134 to the north. This road scheme incorporates provision for dedicated cycle lanes and pedestrian footpaths on both sides of the carriageway, supporting active travel infrastructure within the Cherrywood area. At present, this arm primarily facilitates vehicular access to and from the recently opened Lidl store, with construction works ongoing along sections of the route.



Grange Avenue Road

## 2.4 ADJOINING LANDS

The design development process has also considered emerging developments that are in the process of being constructed on the adjoining lands to the south west. These third party schemes have resulted in changes to the street features that replace the baseline conditions picked on the topographical surveys. To ensure coordination and appropriate tie in with these emerging residential developments drawings have been obtained of these schemes to enable integration with the junction design process.

## 3 OPTIONS IDENTIFICATION

### 3.1 INTRODUCTION

This section presents an overview of the proposed junction upgrade at St Cuthbert's Road (N)/Old Nangoor Road (W)/ Old Nangor Road(E)/Kilcarbery Grange Avenue and outlines the options considered as part of the scheme development. The primary objective of the scheme is to improve road safety, enhance pedestrian and cyclist connectivity, and provide a more efficient and controlled junction arrangement in accordance with current design standards and policy guidance, including DMURS and relevant NTA guidance.

As part of the option development process, two design options were considered to assess their suitability in addressing existing deficiencies at the junction, including limited crossing facilities, substandard pedestrian permeability and the absence of dedicated cycling infrastructure.

The options presented in this section include a Do-Minimum scenario, which establishes a baseline for comparison, and two design options that introduce varying levels of signalisation and active travel infrastructure.

### 3.2 OPTIONS

#### 3.2.1 Do-Minimum

The Do-Minimum scenario assumes that the existing priority junction arrangement between St Cuthbert's Road (N)/ Old Nangoor Road (W)/ Old Nangor Road(E)/Kilcarbery Grange Avenue and Grange Avenue Spine Road (S) remains unchanged. Under this scenario, the junction would continue to operate as a priority-controlled junction, with the main north-south movement facilitated along St Cuthbert's Road (N) and Kilcarbery Grange Avenue Road. The Old Nangor Road (W) and Old Nangor Road (E) will operate as minor arms.



No upgrades to junction control, geometric layout, or active travel infrastructure would be implemented. As such, the existing limitations associated with the junction would persist, including the absence of controlled pedestrian crossing facilities, lack of dedicated cycling infrastructure, and constrained accessibility for vulnerable road users.

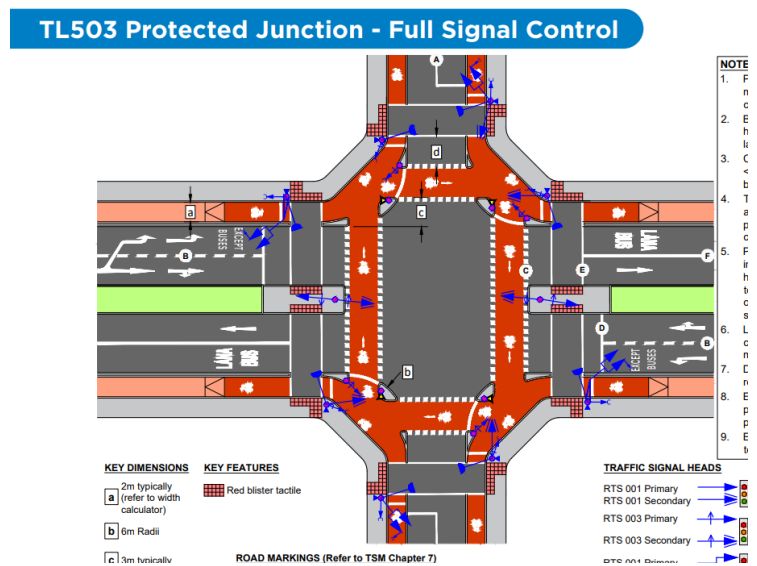
### 3.2.2 Option A – Cycle Crossings on all Arms

Option A proposes the upgrade of the existing priority-controlled junction to a fully signalised protected junction arrangement, incorporating dedicated cycle crossing facilities on all four arms at subject junction.

The design is based on a protected junction layout, where all vehicular, pedestrian, and cyclist movements are controlled via traffic signals. Dedicated cycle tracks are provided on each immediate approach, with cycle crossings set back from the

junction to enhance visibility and safety. Separate signal stages for cyclists and pedestrians are incorporated, supported by appropriate signal heads and push-button facilities.

This option provides the highest level of provision for active travel modes by ensuring continuous, safe, and legible cycling infrastructure across all arms of the junction. The inclusion of protected corner islands and defined crossing points reduces conflict between turning vehicles and vulnerable road users, thereby significantly improving overall junction safety.



### 3.2.3 Option B – Cycle Crossings on Eastern and Northern Arms

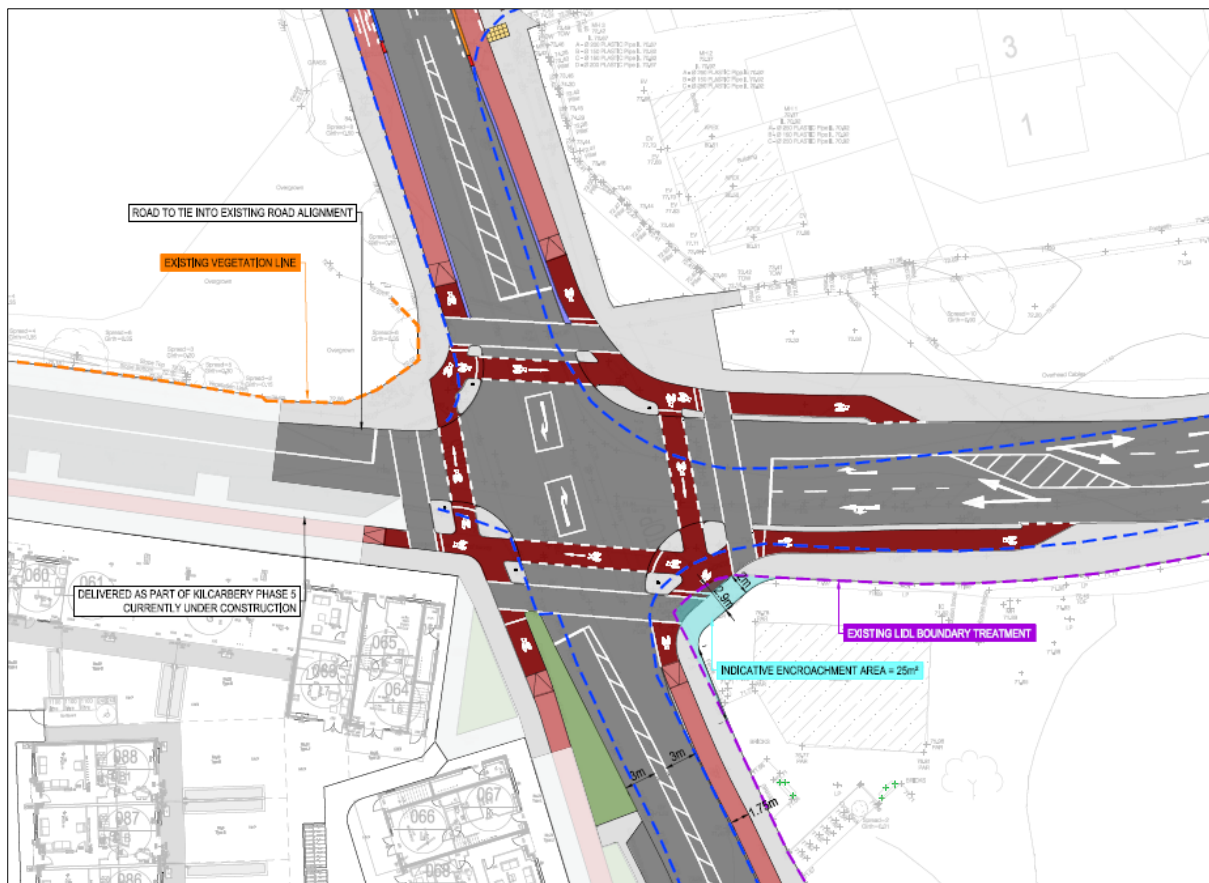
Option B proposes a signalised junction upgrade with provision for shared pedestrian/cycle crossings constructed on only the Eastern arm (Old Nangor Road (E) and Northern arm (Old Nangor Road). Under this arrangement, dedicated cycling infrastructure is incorporated only where existing or anticipated cycling demand is considered highest, while the Western (Old Nangor Road) and Southern (Grange Avenue Road) arms do not include formal cycle crossing facilities.

The junction would operate under full signal control, with pedestrian crossings provided on all arms and cycle crossings integrated within the signal staging on the eastern and northern approaches. The layout maintains elements of a protected junction design at these locations, including set-back crossings and defined waiting areas, thereby enhancing safety for cyclists where provision is made.

### 3.2.4 Preferred Option

Following a review, Option A – Pedestrian and Cycle Crossings on All Arms has been identified as the preferred option for the proposed junction upgrade in reference to DMURS objectives.

Option B provides a partial improvement by introducing shared cycle crossings on the two key selected arms only. However, this approach results in a discontinuity of cycling infrastructure and does not provide a consistent layout for cyclists navigating the junction. Option A, delivers fully signalised protected junction with cycle crossings on all arms, ensuring a high level of safety, accessibility, and permeability for all users. The provision of continuous cycling infrastructure aligns with the principles of DMURS and the Cycle Design Manual, supporting sustainable transport objectives. Furthermore, the adoption of Option A ensures consistency with other signal-controlled junctions delivered by South Dublin County Council. The junction layout of preferred option arrangement is indicated in **Figure 3-1** below which is an extract from DBFL drawing 250094-X-04-Z00-DTM-DR-DBFL-CE-9001.



*Figure 3-1: Preferred Junction Layout Option*

The layout ensures safe and direct pedestrian crossings at key desire lines, while corner radii have been tightened to reduce turning speeds, enhance crossing safety and accommodate the

appropriate vehicle swept path in a safe manner. The proposed arrangement also maintains access to the adjoining commercial development, including the Lidl food store site, where a minor boundary adjustment (indicative encroachment area of approximately 25m<sup>2</sup>) is required to accommodate the improved alignment and active travel corridor continuity. A dedicated right turn lane has been provided for the eastern arm (Old Nangor Road) to enhance operational efficiency on this dominant recorded vehicle movement. The preferred layout provides a safer, more efficient, and sustainable junction arrangement that prioritises active travel, improves visibility, and supports the long-term transport objectives for the Old Nangor Road corridor.

## 4 TRAFFIC ASSESSMENT

### 4.1 OVERVIEW

The following paragraph will discuss the potential impact and operational assessment of subject junction with associated development proposals. The operational assessment of the junction has been undertaken using the Transport Research Laboratory (TRL) computer package Junctions 9 and the PICADY suite.

### 4.2 TRAFFIC SURVEYS

In order to establish the existing local road networks traffic characteristics and subsequently enable the identification of the potential impact of the proposed development at the junction, traffic survey data recorded on **9<sup>th</sup> September 2025, Tuesday** was used for the purpose of this assessment.

The aforementioned traffic survey (weekday classified junction turning counts) was conducted by IDASO between 07:00 to 19:00. The surveys undertaken included Junction Turning Counts (JTC). JTCs were carried out at Upper Nangor Road/Old Nangor Road/Cherrywood Villas.

The local weekday AM and PM peak hour flows have been identified by the commissioned traffic survey as occurring between **08:15 - 09:15** and **15:45 - 16:45** respectively. These peak hour periods form the basis of the network assessments.

It should be noted that the Grange Avenue Spine Road (South) is currently under construction. The traffic survey flow in the southern arm (Grange Avenue Road (South)) accommodates construction related traffic and Lidl-generated traffic only.

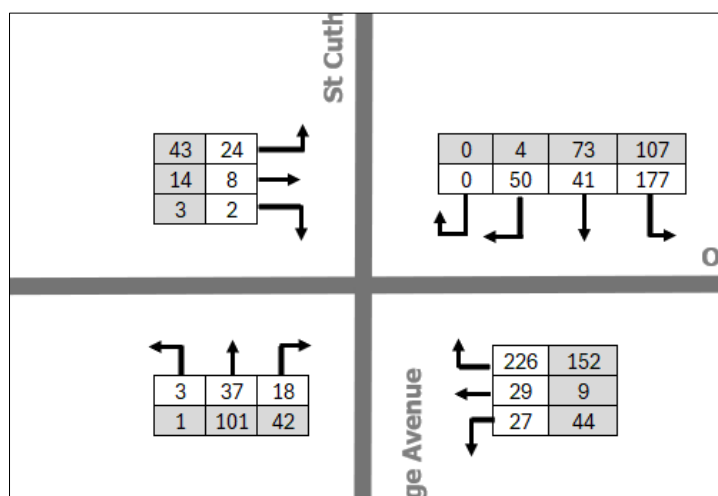


Figure 4-1: Peak Hour Vehicle Flows Recorded 9th September 2025, Tuesday

### 4.3 TRAFFIC GROWTH

An Opening Year of 2026 has been adopted for this traffic assessment. In accordance with TII (NRA) Guidance, Future Design years (+5 and +15 years) of 2031 and 2041 have also been adopted.

The TII Project Appraisal Guidelines (PAG) have been utilised to determine the traffic growth forecast rates. The traffic growth forecast rates within the PAG ensures local and regional variations and demographic patterns are accounted for.

Table 6.1: Link Based Growth Rates within the PAG (2021) provides Annual National Traffic Growth Factors for the different regions within Ireland. The subject site lies within Dublin metropolitan area with the PAG growth factors as outlined within **Table 5-1** below.

Metropolitan Area	Central Growth Rate					
	2016-2030		2030-2040		2040-2050	
	LV	HV	LV	HV	LV	HV
Dublin	1.0162	1.0295	1.0051	1.0136	1.0044	1.0162

*Table 4-1: National Traffic Growth Forecasts: Annual Growth*

Applying the annual factors (central growth) as outlined in Table 5-1 above for the adopted Opening Year of 2026 and Future Horizon Years of 2031 (+5 years) and 2041 (+15 years), the following growth rates have been adopted to establish corresponding 2026, 2031 and 2041 baseline network flows: -

- 2025 to 2026 – 1.01620 (or 1.62%);
- 2025 to 2031 – 1.08919 (or 8.92%); and
- 2025 to 2041 – 1.14524 (or 14.52%).

Traffic flow diagrams for the 2026, 2031 and 2041 flows are illustrated in Appendix A of this report.

### 4.4 COMMITTED DEVELOPMENT TRAFFIC GENERATION

With the objective of providing a robust appraisal, DBFL have established that there are 2 No. committed developments located in the area of the subject site that would generate traffic on the surrounding road network and ultimately have an impact on the junctions assessed. The location of the committed developments is shown in the **Figure 4-2** below. The assignment of the predicted vehicle trips generated by the independent committed scheme's TTA is detailed within **Figure 5** and **Figure 6** in Appendix A of this TTA. A brief description of the development and its trips generated on the road network is provided in the following section.



Figure 4-2: Committed Development near subject site

The review of ABP and SDCC online planning portal, revealed that the subject development's receiving environment benefits from having a number of permitted developments which are not yet occupied/completed. As per good practice this assessment has imported these local permitted schemes as 'Committed' developments with the objective of providing a robust appraisal of the local road network. As detailed in following section, a total of 2 separate 'Committed' development schemes have been included within this assessment.

#### 4.4.1 Committed Development 1(SHD3ABP-305267-19)

The committed development includes the proposal to include the provision of 1034 residential unit consisting of 578 no houses, 105 no. duplex units, 351 apartments with 9 no. apartment block, 1 no. 178sqm GFA retail unit, 909 sqm creche and community building 785 sqm GFA. **Table 4-2** below summarises the total predicted peak hour AM and PM traffic generated by the proposed development for each of the assessment years.

LAND USE	AM Peak Hour			PM Peak Hour		
	Arr	Dep	Two-Way	Arr	Dep	Two-Way
Phase 1- (Opening year-2020)	13	35	48	40	30	70
Phase 2- (Opening year- 2025)	64	200	264	218	150	368
Phase 3-(Opening year- 2035)	64	200	264	218	150	368

Table 4-2: Trip generation from committed development 1

#### 4.4.2 Committed Development 2 (SD179A23/0004)

The committed development includes construction of Social and Affordable Housing Development consisting of 88 Residential Units and all associated site and development works at Old Nangor Road (West) Road and Kilcarbery Grange, Dublin 22. Accordingly, the trips generated are illustrated in **Table 4-3**.

LAND USE	AM Peak Hour			PM Peak Hour		
	Arr	Dep	Two-Way	Arr	Dep	Two-Way
Residential - Houses	9	14	23	16	11	27
Residential- Flats	3	6	9	7	5	12
<b>Total</b>	<b>12</b>	<b>20</b>	<b>32</b>	<b>23</b>	<b>16</b>	<b>39</b>

*Table 4-3: Trip generation from committed development 2*

#### 4.5 TRAFFIC DISTRIBUTION

The southern arm Kilcarbery Grange Avenue Road is under construction. It is assumed that once the construction of this link road is completed, the 20% of the trips from Old Nangoor Road (East) will be directed along this link.

#### 4.6 ASSESSMENT SCOPE

##### 4.6.1 Assessment Scenarios

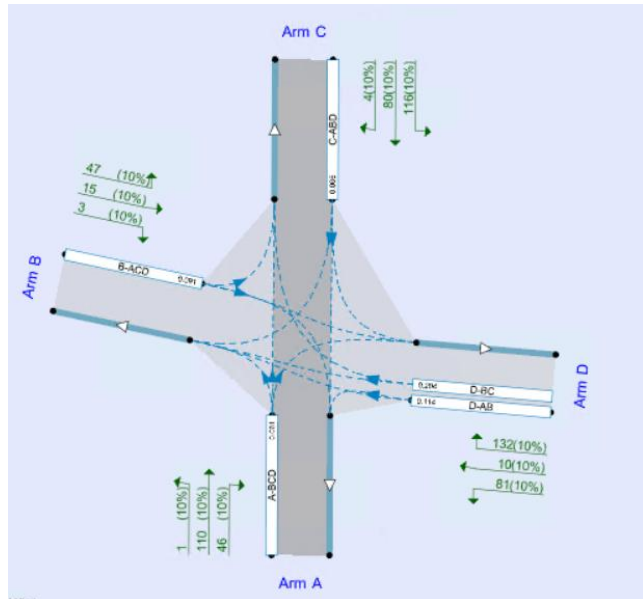
Two traffic scenarios have been assessed within this report, namely: (a) the 'Base' (Do Minimum) scenario, and (b) the 'Post Development' (Do Something) scenario.

The Do-Minimum scenario reflects the existing priority-controlled junction arrangement, with Grange Avenue Road open to traffic. The Do-Something scenario also assumes Grange Avenue Road is open, but incorporates the proposed signal-controlled junction arrangement. In both scenarios, traffic flows associated with committed developments have been included to ensure a robust assessment of future network performance.

##### 4.6.2 Junction Modelling - Do Minimum

The operational assessment of the subject junction has been undertaken using the Transport Research Laboratory (TRL) computer package Junctions 9 and the PICADY suite for priority-controlled junctions. When considering priority-controlled junctions/roundabouts a Ratio of Flow to Capacity (RFC) greater than 85% (0.85) would indicate a junction to be approaching capacity, as operation above this RFC value is poor and deteriorates quickly.

For the PICADY analysis, a 90-minute AM and PM period has been simulated, from 08:00 to 09:30 and 15:30 to 17:00. For the PICADY analyses traffic flows were entered using an Origin-Destination table format for the peak hours. The operational assessment of the Do-Nothing Scenario was undertaken for the forecast years 2026, 2031, and 2041 during the AM (08:15–09:15) and PM (15:45–16:45) peak periods using PICADY software. For the PICADY assessment, the Arms are named as follow



- Arm A: Grange Avenue Road
- Arm B: Old Nangor Road (W)
- Arm C: St Cuthbert's Road (N)
- Arm D: Old Nangor Road(E)

The results indicate that the junction is expected to operate well within practical capacity across all assessment years, with RFC values remaining below 0.60. The D-BC movement records the highest RFC, increasing slightly from 0.51 in 2026 to 0.60 in 2041, representing a rise in demand but remaining within efficient operational thresholds.

Scenario	Stream	AM PEAK (08:15-09:15)		PM PEAK (15:45-16:45)	
		Queue (PCU)	RFC	Queue (PCU)	RFC
2026 Do Minimum Scenario	B-ACD	0.1	0.11	0.2	0.13
	B-BCD	0.2	0.14	0.3	0.09
	D-AB	0.5	0.31	0.5	0.17
	D-BC	1.1	0.51	0.7	0.30
	C-ABD	0.3	0.13	0.1	0.01
2031 Do Minimum Scenario	B-ACD	0.1	0.12	0.2	0.15
	B-BCD	0.2	0.15	0.3	0.10
	D-AB	0.6	0.35	0.6	0.19

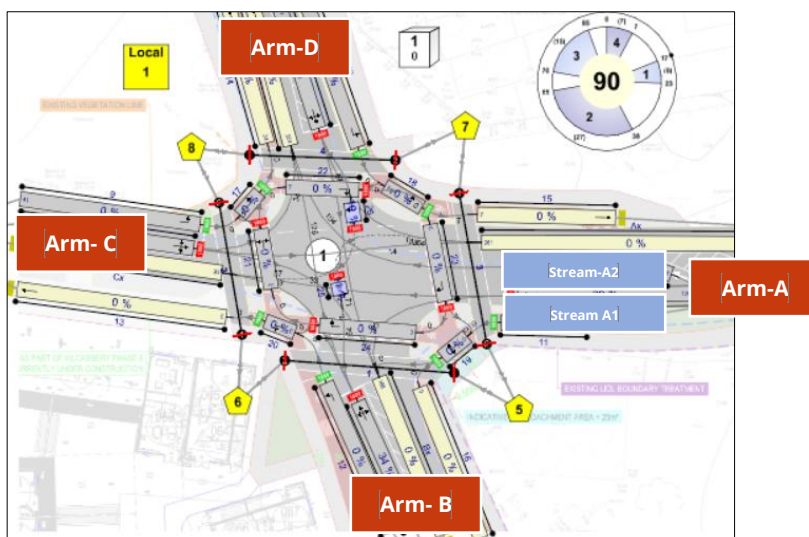
Scenario	Stream	AM PEAK (08:15-09:15)		PM PEAK (15:45-16:45)	
		Queue (PCU)	RFC	Queue (PCU)	RFC
	D-BC	1.4	0.56	0.8	0.33
	C-ABD	0.3	0.14	0.1	0.01
2041 Do Minimum Scenario	B-ACD	0.2	0.12	0.3	0.15
	B-BCD	0.3	0.15	0.4	0.10
	D-AB	0.7	0.39	0.6	0.20
	D-BC	1.6	0.60	0.9	0.35
	C-ABD	0.3	0.15	0.1	0.01

Table 4-4: Do Minimum Modelling Results

### 4.6.3 Junction Modelling – Do Something

The operational assessment of this junction has been undertaken using the Transport Research Laboratory (TRL) computer package TRANSYT for signal-controlled junctions.

When considering a signal-controlled junctions a degree of saturation (DoS) value of greater than 90% would indicate a junction to be approaching capacity, as operation above this DoS value is poor and deteriorates quickly.



For the TRANSYT assessment, the Arms are named as follow

- Arm A: Old Nangor Road(E)
- Arm B: Grange Avenue Road
- Arm C: Old Nangor Road (W)
- Arm D: St Cuthbert's Road (N)

**Table 4-5** presents the results of the Do Something Scenario for the forecast years 2026, 2031, and 2041 during the AM (08:15–09:15) and PM (15:45–16:45) peak periods. The results of the analysis indicate that the junction will operate within capacity for the AM and PM Peak Hour for all the design years. The highest DoS recorded is during the 2041 AM peak hour is 68% on Eastern

Arm A (Old Nangoor Road East), while the highest DoS recorded during the PM peak hour is 59%, on Arm D (St Cuthbert's Road (N)). A mean maximum queue of 5.76 PCUs (Arm A) and 7.46 PCUs (Arm D) was observed during the AM and PM peak hour respectively.

Scenario	Stream	AM PEAK (08:15-09:15)			PM PEAK (15:45-16:45)		
		DoS	Mean Delay(s)	Queue (PCU)	DoS	Mean Delay(s)	Queue (PCU)
2026 Do Something Scenario	A1	39	36.36	2.89	47	41.14	3.56
	A2	61	42.62	4.88	41	36.63	2.99
	B	34	25.62	3.79	43	29.10	4.96
	C	31	43.54	1.24	46	51.00	1.94
	D	56	29.80	6.74	55	31.51	6.66
2031 Do Something Scenario	A1	42	36.90	3.09	49	38.79	3.79
	A2	65	44.47	5.35	43	37.27	3.25
	B	35	25.76	3.89	45	27.53	5.27
	C	33	44.06	1.32	49	49.59	2.07
	D	59	30.72	7.29	58	30.33	7.09
2041 Do Something Scenario	A1	44	37.35	3.28	51	39.16	3.90
	A2	68	46.14	5.76	46	37.81	3.43
	B	36	25.84	3.95	47	27.81	5.44
	C	34	44.24	1.35	51	50.74	2.20
	D	62	31.53	7.77	59	30.88	7.46

Table 4-5: Do Something Modelling Results

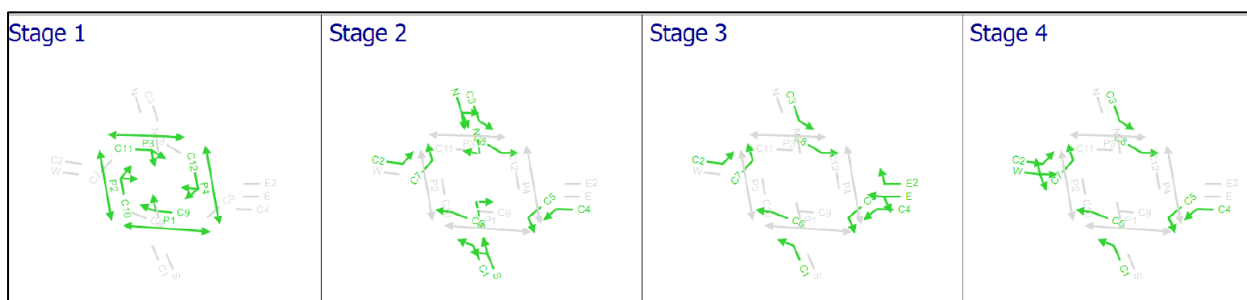


Figure 4-3: Stages sequence diagram

The stage sequence diagram for proposed upgrade is indicated in **Figure 4-3**. Stage 1 is dedicated to pedestrian and cyclist movements, providing an exclusive phase that allows safe and direct crossings on all arms without conflict from vehicular traffic. Stage 2 facilitates the northbound and southbound vehicular movements, primarily accommodating the mainline through flows . Stage 3 provides a dedicated phase for vehicular movements from the eastern arm (Old Nangor Road),

allowing these movements to operate without conflict from opposing traffic. Similarly, Stage 4 accommodates vehicular movements from the western arm. All the stages support conflict free movement of cyclist.

#### **4.7 Conclusion**

In conclusion, the assessment demonstrates that the proposed upgrade to a signal-controlled junction will operate efficiently and well within capacity across all adopted assessment years (2026, 2031, and 2041) during both AM and PM peak periods. The TRANSYT modelling results indicate that the degree of saturation remains well below the critical threshold of 90%, with the highest value recorded at 68%, confirming robust operational performance in 2041 design year. Furthermore, the introduction of signal control, along with a structured four-stage phasing arrangement, significantly enhances safety by segregating conflicting vehicular movements and providing dedicated stages for pedestrians and cyclists.

## **5 SURFACE WATER DRAINAGE**

### **5.1 EXISTING SURFACE WATER INFRASTRUCTURE**

The existing surface water drainage at the Old Nangor Road / Upper Nangor Road junction comprises a number of recorded network and unknown networks. Surface water runoff from the junction is currently collected via existing road gullies and discharges into the local surface water network.

To the north of the junction, at the entrance to the Court Way Estate, available records indicate the presence of a 225mm diameter surface water sewer of unknown material. The condition and exact alignment of this pipe are not fully verified.

To the south of the junction, the adjoining Lidl commercial development and the Kilcarbery residential development (currently under construction) include a 300mm diameter uPVC surface water sewer along the "Kilcarbery Grange Avenue".

To the west of the junction bounding the Old Nangor Road, a separate scheme referred to as Phase 5 of the wider Kilcarbery development, includes its own surface water drainage network. This consists of a 300mm diameter uPVC pipe conveying runoff southwards through a series of SuDS features and attenuation systems, ultimately discharging into the broader Kilcarbery development drainage network.

Within the junction itself, there is a lack of available record information for the surface water infrastructure. While a number of existing gullies are present and operational, the downstream connections, pipe sizes, materials, and exact routing of these systems are unknown.

Given the incomplete nature of the available records, it is proposed that targeted site investigations, including CCTV surveys, be undertaken as part of the construction works to confirm and establish the condition and connections, of the existing surface water infrastructure located at the junction.

### **5.2 PROPOSED SURFACE WATER DRAINAGE**

The proposed junction upgrades will involve minor adjustments to the existing surface water drainage infrastructure associated with the upgrade of the Old Nangor Road / Upper Nangor Road junction. The extent of new impermeable surface is limited and, as such, the overall increase in impact on the existing drainage network is projected to be minor.

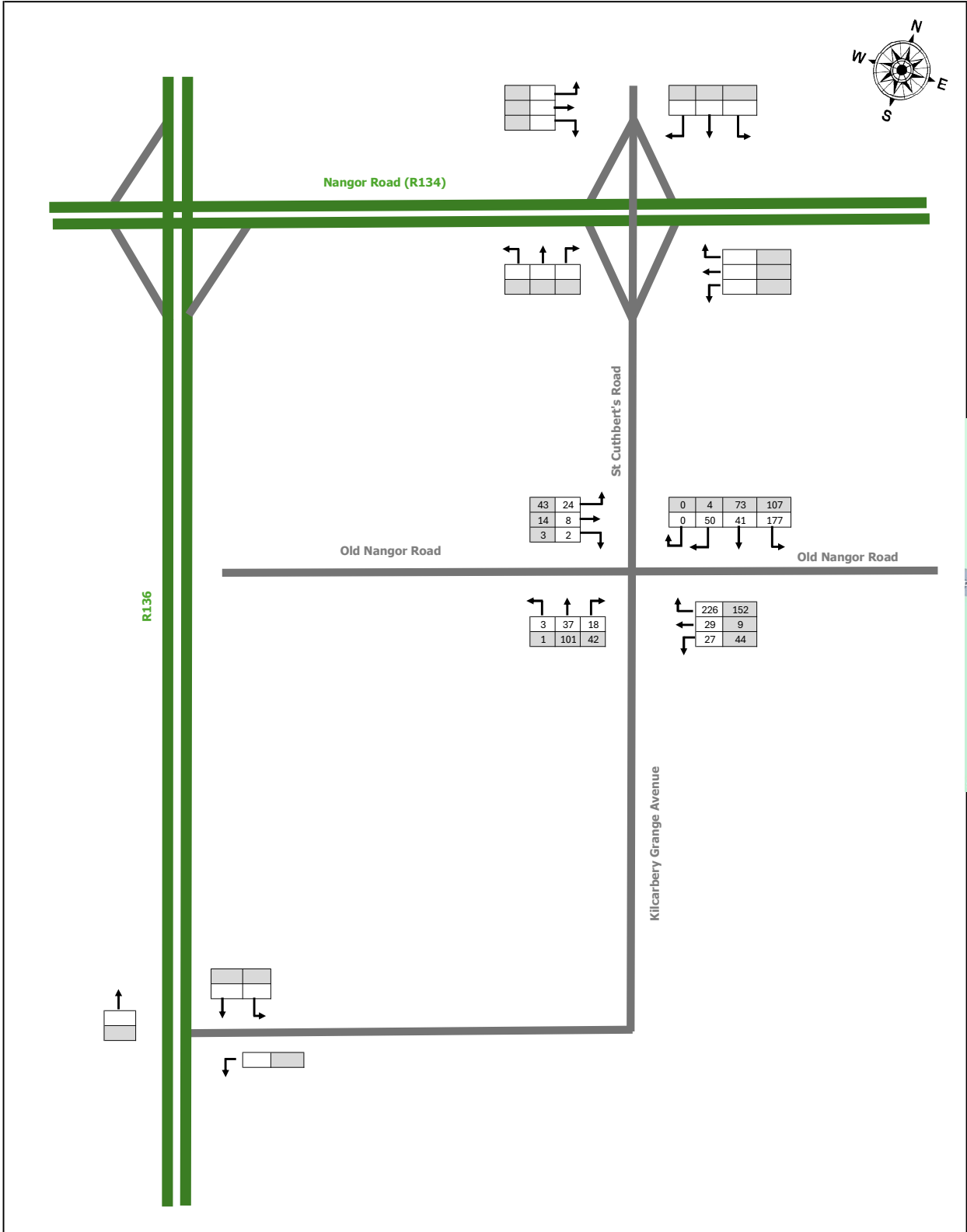
Surface water runoff arising from the proposed carriageway and hardstanding areas will be collected via the existing gullies located in the carriageway which will be location adjusted to the new kerb alignment, with a number of new road gullies to provide appropriate coverage for the upgraded junction, in particular the additional barriers to drainage, i.e. kerbs, islands, and is discharged to the existing surface water drainage network.

The drainage design will ensure adequate provision of gullies to capture runoff, appropriate spacing of gullies, prevention of ponding within the carriageway and appropriate placement at pedestrian crossing points.

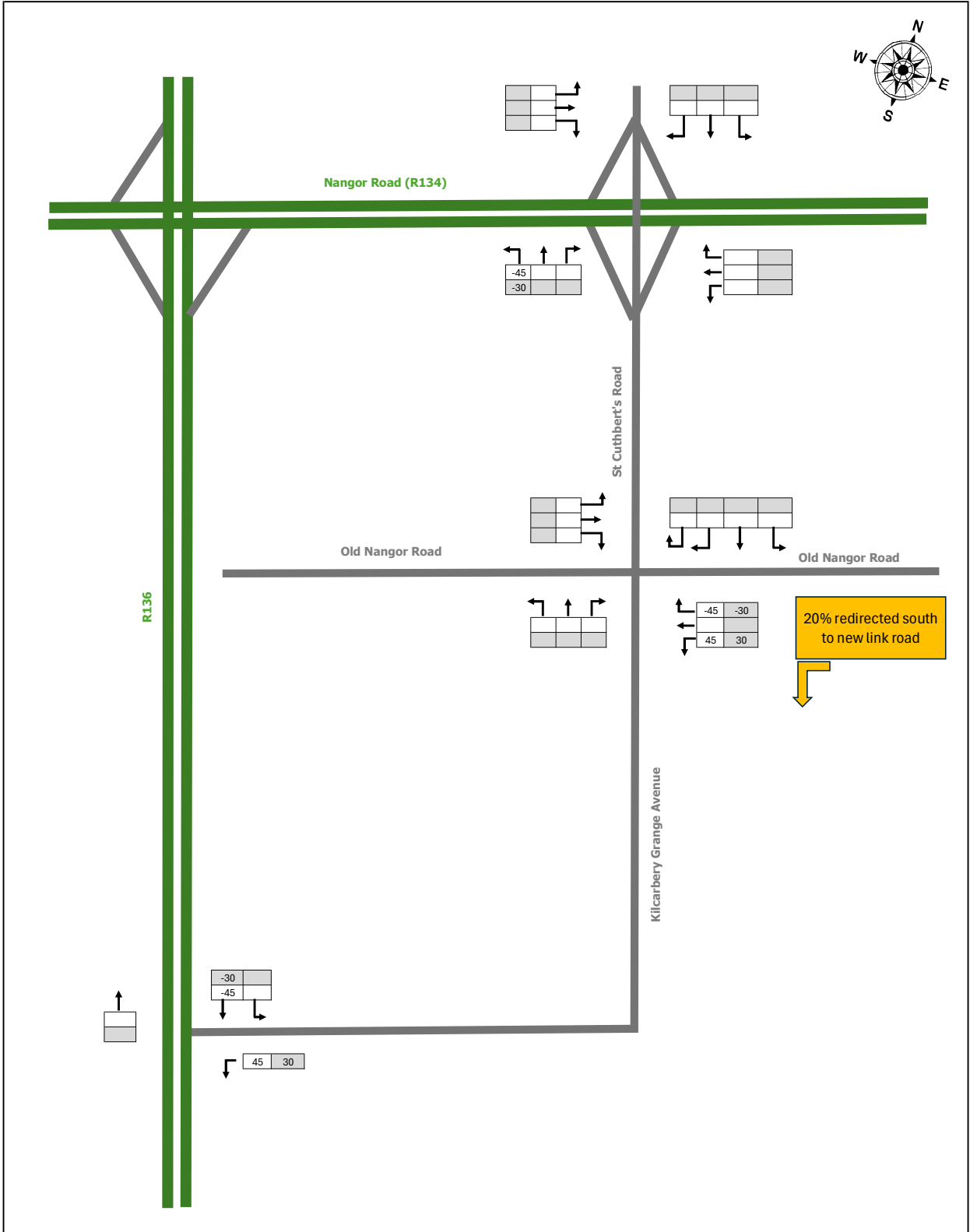
In line with the principles of Nature based Systems (NBS), consideration has been given to incorporating small-scale SuDS features where feasible, in accordance with South Dublin County Council (SDCC) SuDS guidance. Given the constrained nature of the site and the limited scope of works, opportunities for SuDS are limited; however, elements such as tree pits and SuDS gullies can provide localised attenuation and water quality benefits.

Tree pits, where included as part of the streetscape improvements, can be designed to function as bioretention features. These allow for interception, filtration, and partial attenuation of surface water runoff prior to discharge to the drainage network. Runoff can be directed into tree pits via SuDS gullies before either infiltrating or overflowing into the surface water network.

## Appendix A : Traffic Flow Diagram



	<b>Dublin Office</b>	<b>Cork Office</b>	<b>Waterford Office</b>	<b>Galway Office</b>	<b>Project :</b>	<b>Key:</b> AM Peak Hour (08:15 to 09:15) PM Peak Hour (15:45 to 16:45)	<b>Dwn:</b>	<b>Ckd:</b>	<b>Date:</b>
	Ormond House, Upper Ormond Quay Dublin 7 D07 W704	14 South Mall, Cork T12 CT91	Suite 8b The Atrium, Maritana Gate, Canada Street, Waterford, X91 WQ28	Odeon House 7 Eyre Square Galway H91 YN8	<b>Old Nangor Road</b>		<b>Ref:</b>	250094	
	<b>phone:</b> +353 1 400 4000	<b>phone:</b> +353 21 202 4538	<b>phone:</b> +353 309 500	<b>phone:</b> +353 91 33 55 99	<b>DRG. Title :</b>	<b>Figure:</b> 1	<b>Rev:</b>		
	<b>email:</b> info@dbfl.ie				2025 Base Traffic Flows (PCUs)				
	<b>website:</b> www.dbfl.ie								

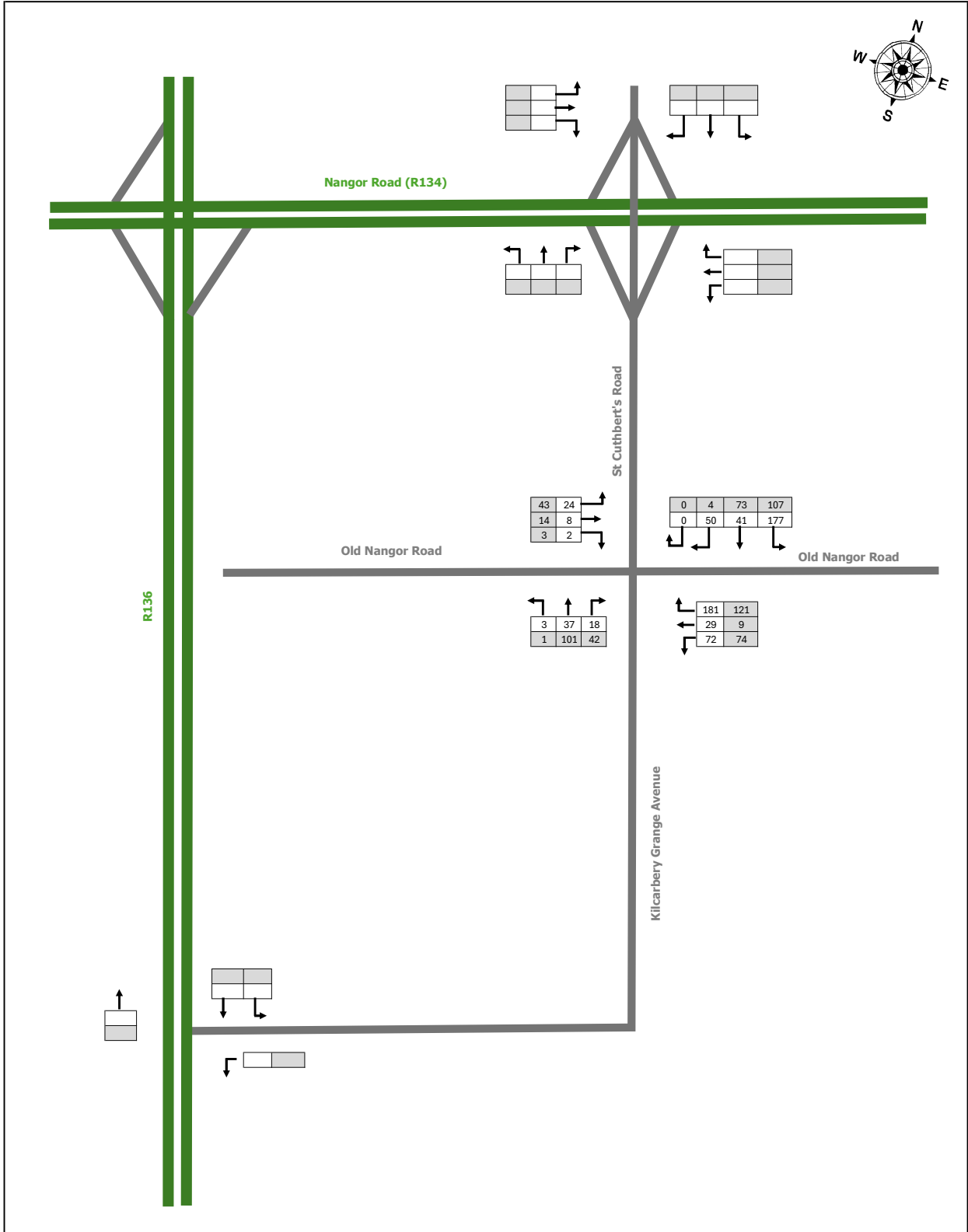


<b>Dublin Office</b> Ormond House, Upper Ormond Quay Dublin 7 D07 W704  phone: +353 1 400 4000	<b>Cork Office</b> 14 South Mall, Cork T12 CT91  phone: +353 21 202 4538	<b>Waterford Office</b> Suite 8b The Atrium, Maritana Gate, Canada Street, Waterford, X91 WQ28  phone: +353 309 500	<b>Galway Office</b> Odeon House 7 Eyre Square Galway H91 YN8  phone: +353 91 33 55 99
email: info@dbfl.ie			
website: www.dbfl.ie			

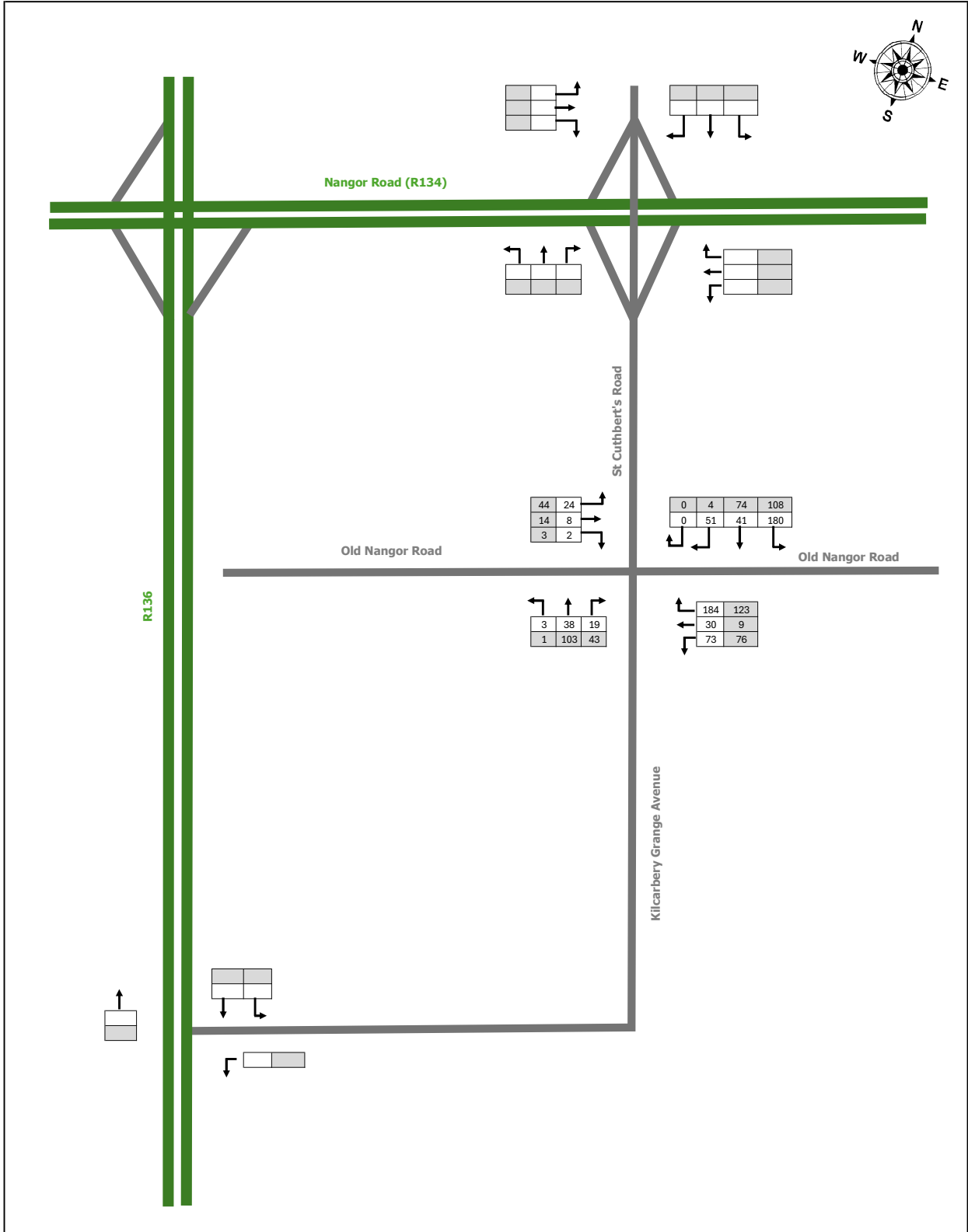
<b>Project :</b>  Old Nangor Road
<b>DRG. Title :</b> Redistributed Traffic (PCUs)

<b>Key:</b>
AM Peak Hour (08:15 to 09:15)
PM Peak Hour (15:45 to 16:45)

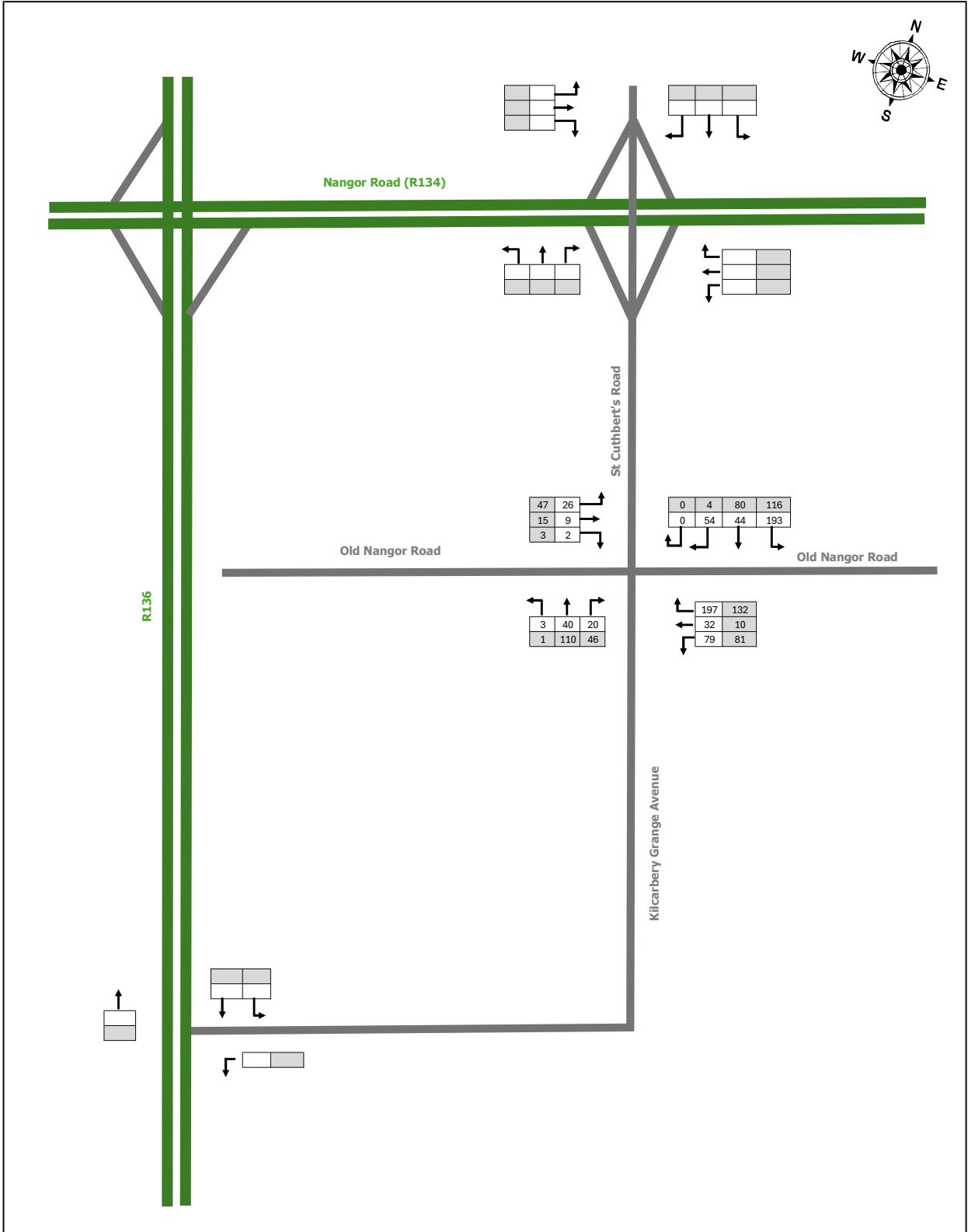
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<b>Ref:</b> 250094		
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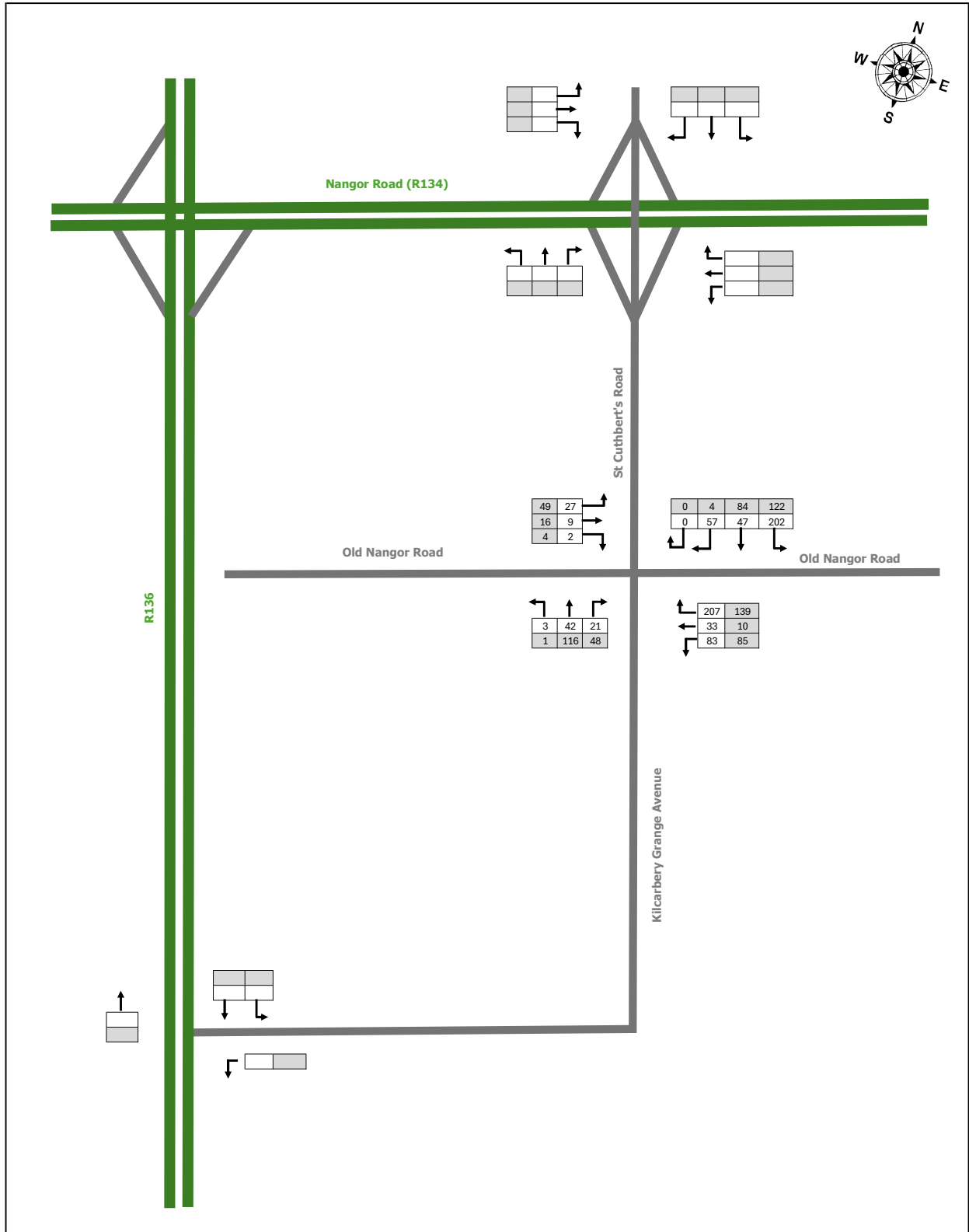
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	<b>phone:</b> +353 1 400 4000	<b>phone:</b> +353 21 202 4538	<b>phone:</b> +353 309 500	<b>phone:</b> +353 91 33 55 99	<b>DRG. Title :</b>						250094
	<b>email:</b> info@dbfl.ie				<b>2025 Adjusted Base Traffic Flows (PCUs)</b>			<b>Figure:</b>		<b>Rev:</b>	
	<b>website:</b> www.dbfl.ie							<b>3</b>			



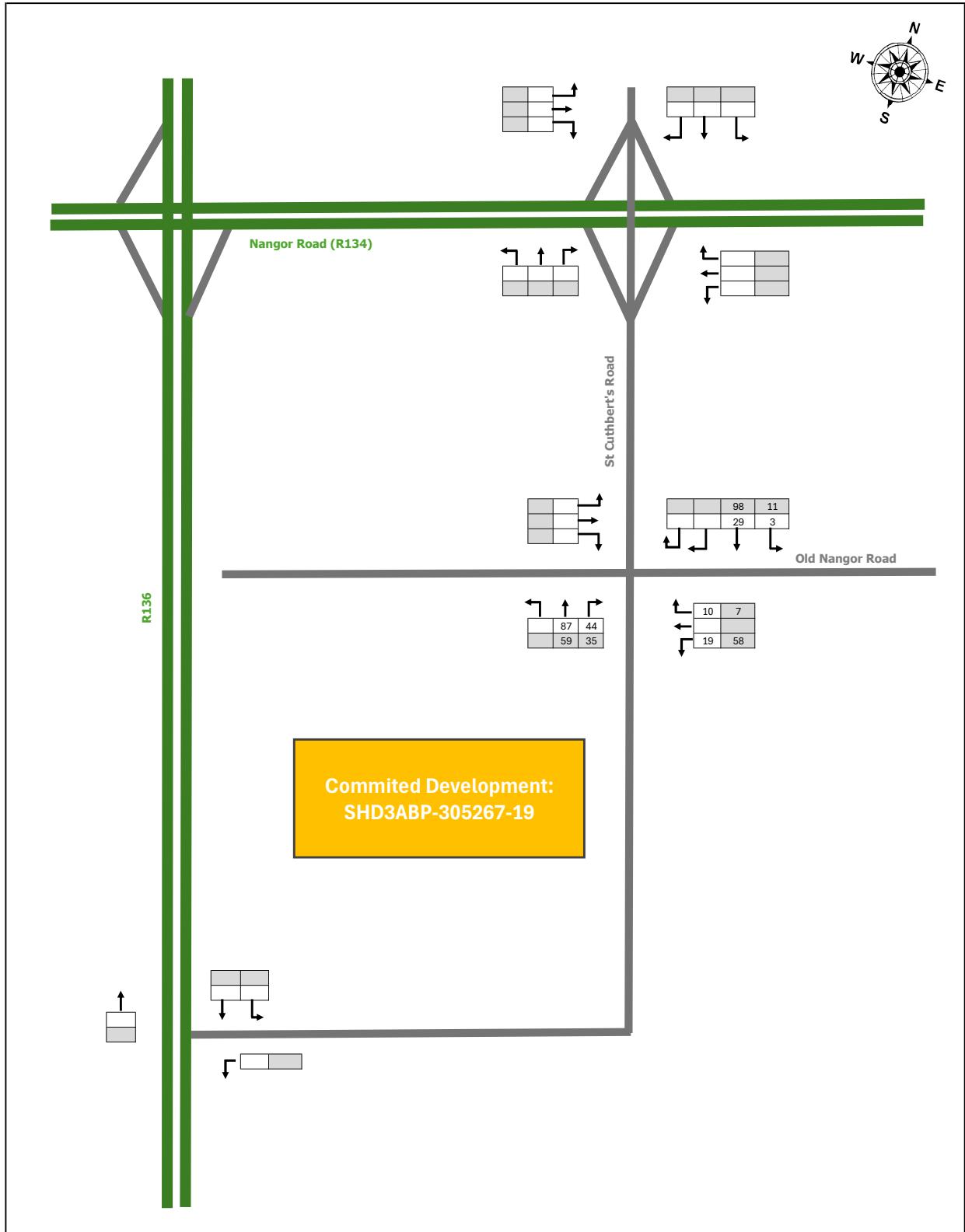
	<b>Dublin Office</b>	<b>Cork Office</b>	<b>Waterford Office</b>	<b>Galway Office</b>	<b>Project :</b>	<b>Key:</b> AM Peak Hour (08:15 to 09:15) PM Peak Hour (15:45 to 16:45)	<b>Dwn:</b>	<b>Ckd:</b>	<b>Date:</b>	
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	<b>phone:</b> +353 1 400 4000	<b>phone:</b> +353 21 202 4538	<b>phone:</b> +353 309 500	<b>phone:</b> +353 91 33 55 99	<b>DRG. Title :</b>	<b>GROWTH RATE</b> 1.0162	<b>Figure:</b>	<b>Rev:</b>		
	<b>email:</b> info@dbfl.ie				<b>2026 Do Nothing (PCU)</b>		<b>4</b>			
	<b>website:</b> www.dbfl.ie									



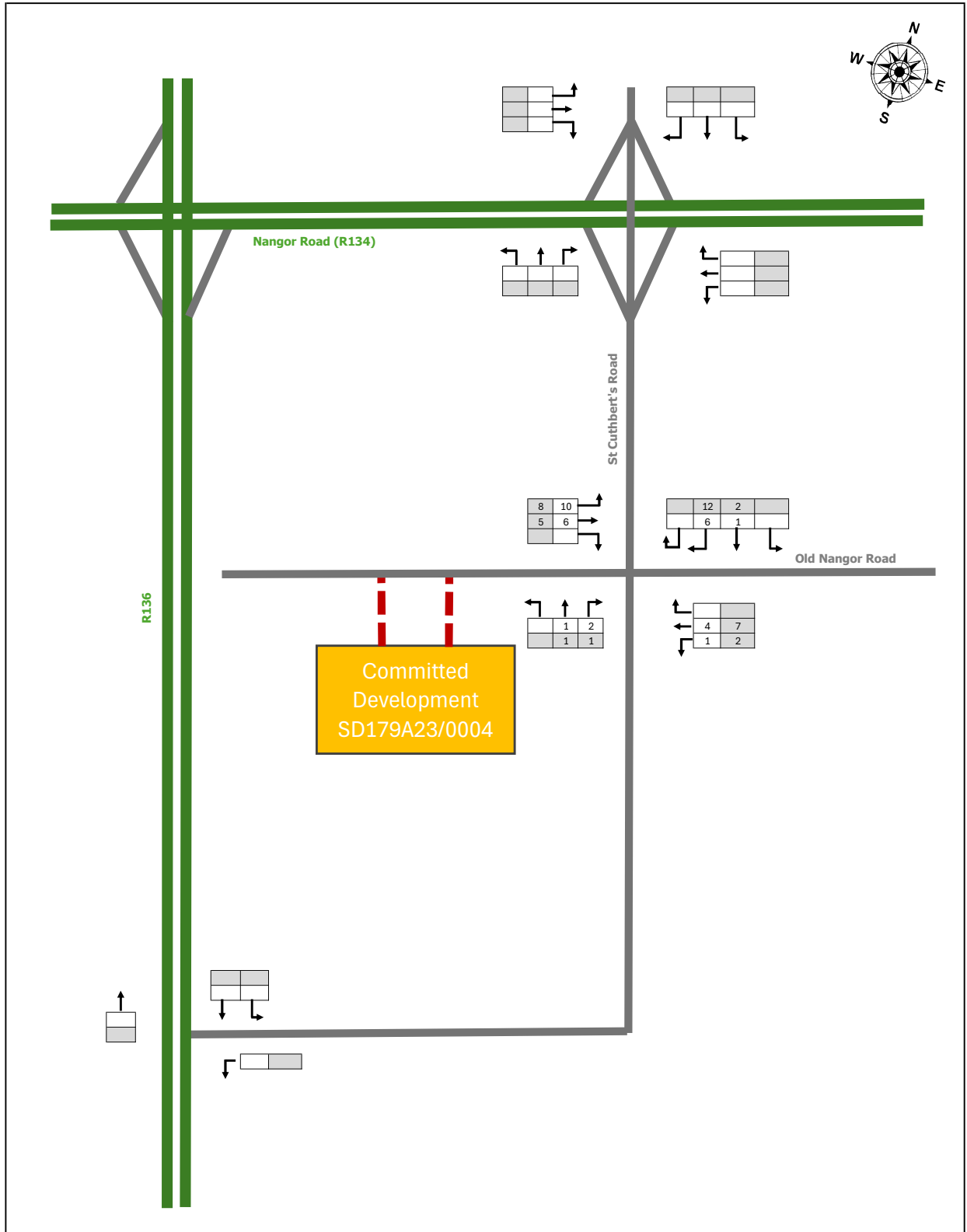
	<b>Dublin Office</b>	<b>Cork Office</b>	<b>Waterford Office</b>	<b>Galway Office</b>	<b>Project :</b>	<b>Key:</b> AM Peak Hour (08:15 to 09:15) PM Peak Hour (15:45 to 16:45)	<b>Dwn:</b>	<b>Ckd:</b>	<b>Date:</b>
	Ormond House, Upper Ormond Quay Dublin 7 D07 W704	14 South Mall, Cork T12 CT91	Suite 8b The Atrium, Maritana Gate, Canada Street, Waterford, X91 WQ28	Odeon House 7 Eyre Square Galway H91 YN8	<b>Old Nangor Road</b>		VJ	MMK	25/03/2026
	<b>phone:</b> +353 1 400 4000	<b>phone:</b> +353 21 202 4538	<b>phone:</b> +353 309 500	<b>phone:</b> +353 91 33 55 99	<b>DRG. Title :</b>	<b>GROWTH RATE</b> 1.0892	<b>Ref:</b>		<b>Figure:</b> 5
	<b>email:</b> info@dbfl.ie				2031 Do Nothing (PCU)		250094		
	<b>website:</b> www.dbfl.ie						<b>Rev:</b>		



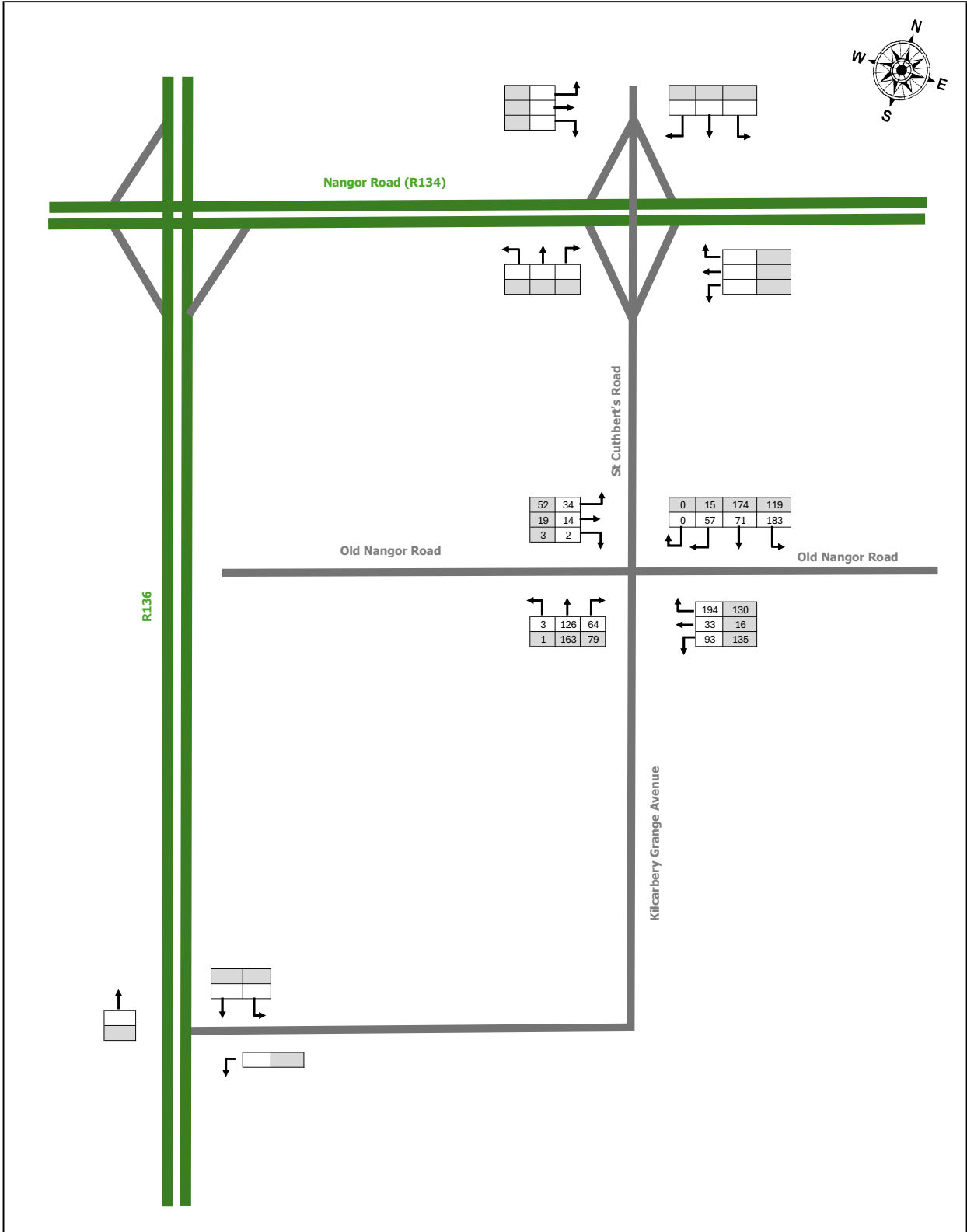
	<b>Dublin Office</b>	<b>Cork Office</b>	<b>Waterford Office</b>	<b>Galway Office</b>	<b>Project :</b>	<b>Key:</b> AM Peak Hour (08:15 to 09:15) PM Peak Hour (15:45 to 16:45)	<b>Dwn:</b>	<b>Ckd:</b>	<b>Date:</b>
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	<b>phone:</b> +353 1 400 4000	<b>phone:</b> +353 21 202 4538	<b>phone:</b> +353 309 500	<b>phone:</b> +353 91 33 55 99	<b>DRG. Title :</b>	<b>GROWTH RATE</b> 1.1452	<b>Ref:</b>		<b>Figure:</b> 6
	<b>email:</b> info@dbfl.ie				<b>2041 Do Nothing (PCU)</b>		250094		
	<b>website:</b> www.dbfl.ie						Rev:		



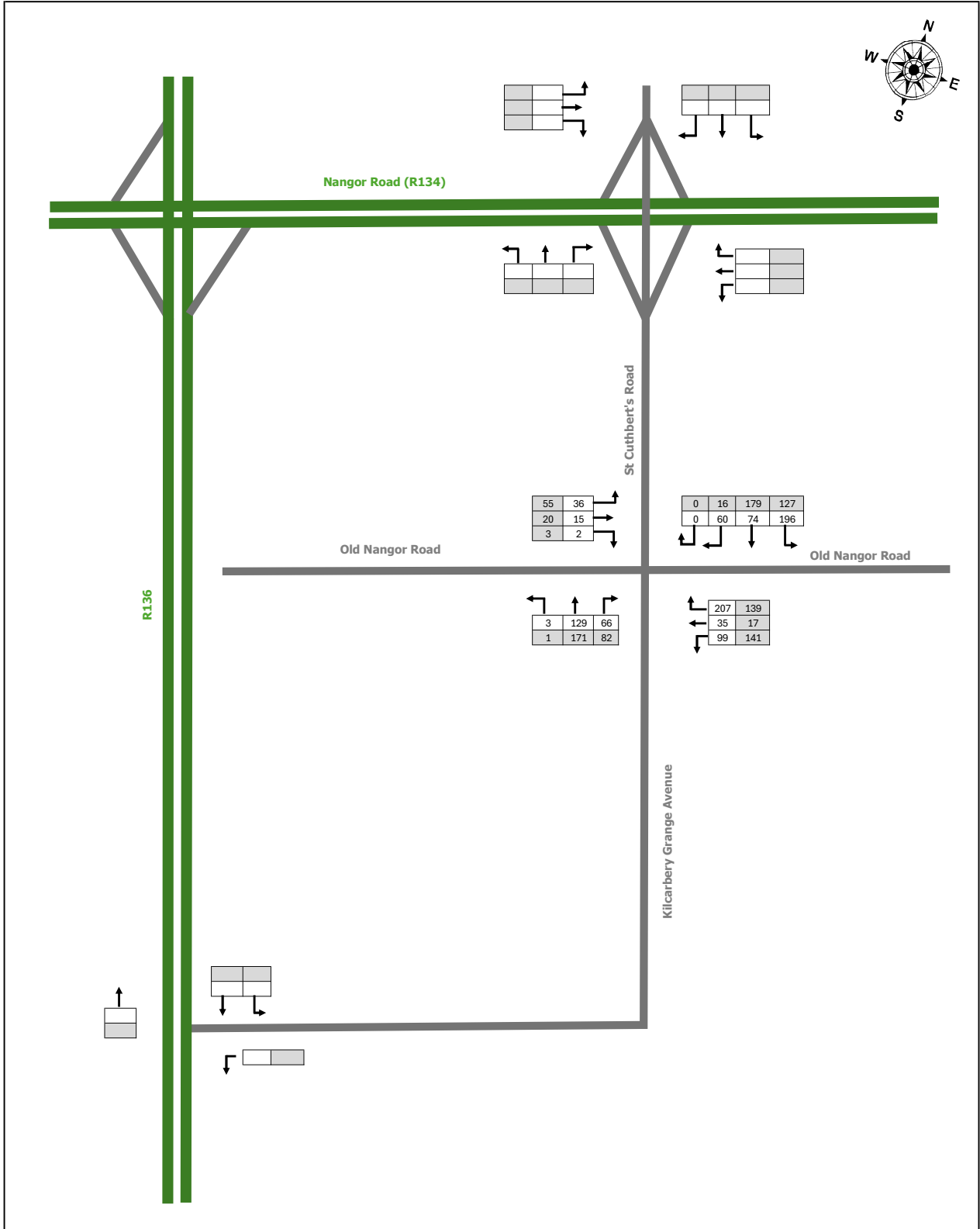
	<b>Dublin Office</b> Ormond House, Upper Ormond Quay Dublin 7 D07 W704  <b>phone:</b> +353 1 400 4000	<b>Cork Office</b> 14 South Mall, Cork T12 CT91  <b>phone:</b> +353 21 202 4538	<b>Waterford Office</b> Suite 8b The Atrium, Maritana Gate, Canada Street, Waterford, X91 W028  <b>phone:</b> +353 309 500	<b>Galway Office</b> Odeon House 7 Eyre Square Galway H91 YNC8  <b>phone:</b> +353 91 33 55 99	<b>Project:</b>  Old Nangor Road	<b>Key:</b> <table border="1"> <tr><td></td><td>AM Peak Hour (08:15 to 09:15)</td></tr> <tr><td></td><td>PM Peak Hour (15:45 to 16:45)</td></tr> </table>		AM Peak Hour (08:15 to 09:15)		PM Peak Hour (15:45 to 16:45)	<b>Dwn:</b> VJ	<b>Ckd:</b> MMK	<b>Date:</b> 25/03/2026
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		PM Peak Hour (15:45 to 16:45)											
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<b>email:</b> info@dbfl.ie <b>website:</b> www.dbfl.ie					<b>Figure:</b> 7		<b>Rev:</b>						



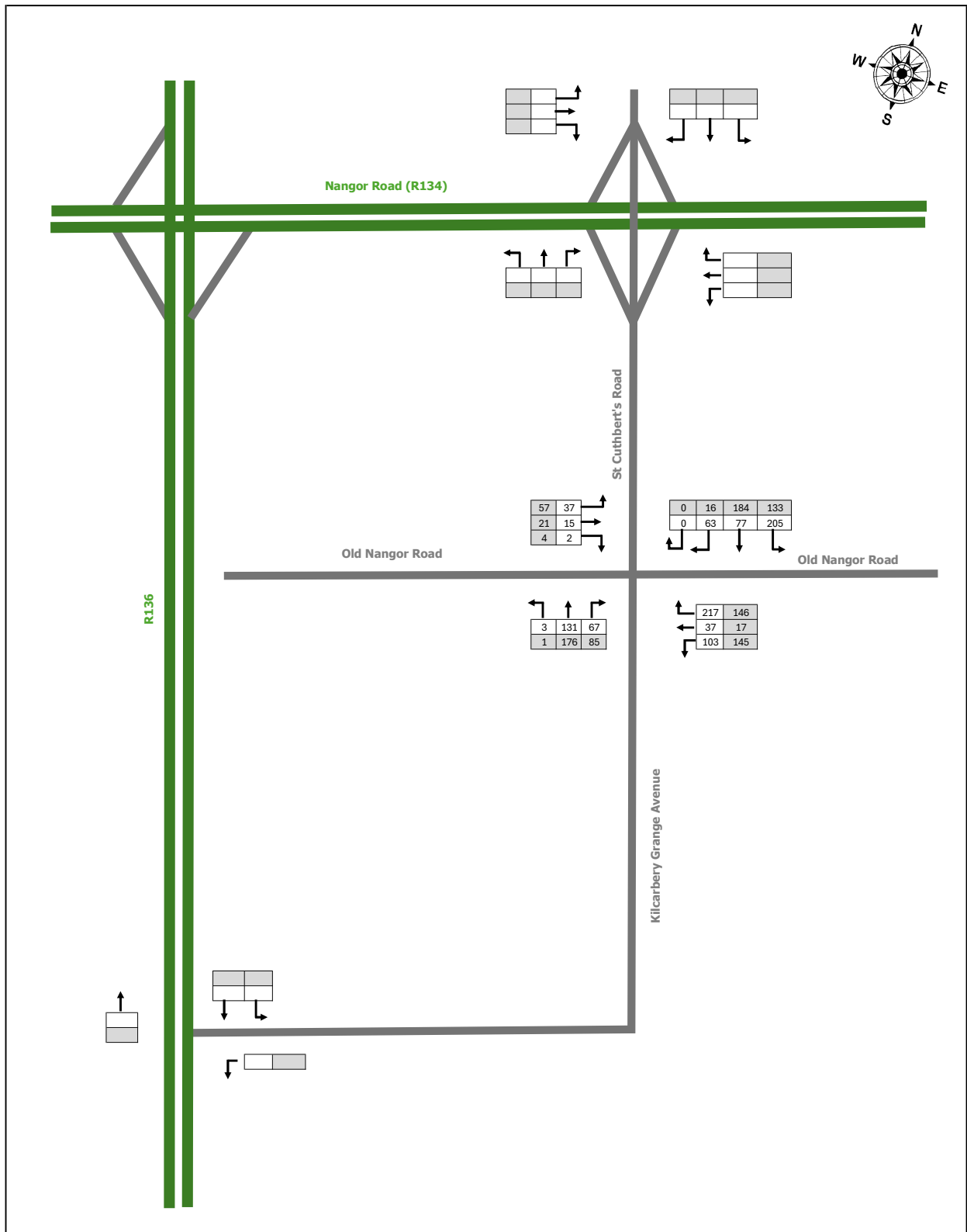
	<b>Dublin Office</b> Ormond House, Upper Ormond Quay Dublin 7 D07 W704  phone: +353 1 400 4000	<b>Cork Office</b> 14 South Mall, Cork T12 CT91  phone: +353 21 202 4538	<b>Waterford Office</b> Suite 8b The Atrium, Maritana Gate, Canada Street, Waterford, X91 W028  phone: +353 309 500	<b>Galway Office</b> Odeon House 7 Eyre Square Galway H91 YNC8  phone: +353 91 33 55 99	<b>Project:</b>  Old Nangor Road	<b>Key:</b> AM Peak Hour (08:15 to 09:15) PM Peak Hour (15:45 to 16:45)	<b>Dwn:</b> VJ	<b>Ckd:</b> MMK	<b>Date:</b> 25/03/2026												
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	email: info@dbfl.ie website: www.dbfl.ie					<b>Figure:</b> 8	<b>Rev:</b>														
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AM Peak		PM Peak																			
Arr	Dep	Arr	Dep																		
12	20	23	16																		



	<b>Dublin Office</b> Ormond House, Upper Ormond Quay Dublin 7 D07 W704 phone: +353 1 400 4000	<b>Cork Office</b> 14 South Mall, Cork T12 CT91 phone: +353 21 202 4538	<b>Waterford Office</b> Suite 8b The Atrium, Maritana Gate, Canada Street, Waterford, X91 WQ28 phone: +353 309 500	<b>Galway Office</b> Odeon House 7 Eyre Square Galway H91 YN8 phone: +353 91 33 55 99	<b>Project:</b> Old Nangor Road	<b>Key:</b> AM Peak Hour (08:15 to 09:15) PM Peak Hour (15:45 to 16:45)	<b>Dwn:</b> VJ <b>Ckd:</b> MMK <b>Date:</b> 25/03/2026
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	<b>email:</b> info@dbfl.ie <b>website:</b> www.dbfl.ie					<b>Figure:</b> 9 <b>Rev:</b>	



	<b>Dublin Office</b> Ormond House, Upper Ormond Quay Dublin 7 D07 W704 <b>phone:</b> +353 1 400 4000	<b>Cork Office</b> 14 South Mall, Cork T12 CT91 <b>phone:</b> +353 21 202 4538	<b>Waterford Office</b> Suite 8b The Atrium, Maritana Gate, Canada Street, Waterford, X91 W028 <b>phone:</b> +353 309 500	<b>Galway Office</b> Odeon House 7 Eyre Square Galway H91 YNC8 <b>phone:</b> +353 91 33 55 99	<b>Project :</b> Old Nangor Road  <b>DRG. Title :</b> 2031 Do Minimum (PCU)	<b>Key:</b> <table border="1"> <tr><td>AM Peak Hour (08:15 to 09:15)</td></tr> <tr><td>PM Peak Hour (15:45 to 16:45)</td></tr> </table>	AM Peak Hour (08:15 to 09:15)	PM Peak Hour (15:45 to 16:45)	<b>Dwn:</b> VJ <b>Ckd:</b> MMK <b>Date:</b> 25/03/2026  <b>Ref:</b> 250094
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	PM Peak Hour (15:45 to 16:45)								
	<b>email:</b> info@dbfl.ie <b>website:</b> www.dbfl.ie							<b>Figure:</b> 10  <b>Rev:</b>	



	<b>Dublin Office</b> Ormond House, Upper Ormond Quay Dublin 7 D07 W704 phone: +353 1 400 4000	<b>Cork Office</b> 14 South Mall, Cork T12 CT91 phone: +353 21 202 4538	<b>Waterford Office</b> Suite 8b The Atrium, Maritana Gate, Canada Street, Waterford, X91 WQ28 phone: +353 309 500	<b>Galway Office</b> Odeon House 7 Eyre Square Galway H91 YN8 phone: +353 91 33 55 99	<b>Project:</b> Old Nangor Road	<b>Key:</b> <table border="1"> <tr><td>AM Peak Hour (08:15 to 09:15)</td></tr> <tr><td>PM Peak Hour (15:45 to 16:45)</td></tr> </table>	AM Peak Hour (08:15 to 09:15)	PM Peak Hour (15:45 to 16:45)	<b>Dwn:</b> VJ <b>Ckd:</b> MMK <b>Date:</b> 25/03/2026
	AM Peak Hour (08:15 to 09:15)								
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	<b>DRG. Title:</b> 2041 Do Minimum (PCU)					<b>Ref:</b> 250094			
	<b>email:</b> info@dbfl.ie <b>website:</b> www.dbfl.ie					<b>Figure:</b> 11 <b>Rev:</b>			

## Appendix B : PICADY Results

Junctions 9
PICADY 9 - Priority Intersection Module
Version: 9.5.2.1013 © Copyright TRL Limited, 2019
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

**Filename:** Old Nangoor Road\_2025 Survey Data\_DN.j9  
**Path:** G:\2025\p250094\calcs\picady  
**Report generation date:** 25/03/2026 17:50:26

- »DO MINIMUM - 2026 DM, AM
- »DO MINIMUM - 2026 DM, PM
- »DO MINIMUM - 2031 DM, AM
- »DO MINIMUM - 2031 DM, PM
- »DO MINIMUM - 2041 DM, AM
- »DO MINIMUM - 2041 DM, PM

**Summary of junction performance**

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
<b>DO MINIMUM - 2026 DM</b>										
Stream B-ACD	D7	0.1	9.11	0.11	A	D8	0.2	9.75	0.17	A
Stream A-BCD		0.2	7.21	0.14	A		0.3	7.16	0.18	A
Stream D-AB		0.5	13.74	0.31	B		0.5	11.31	0.31	B
Stream D-BC		1.1	18.77	0.51	C		0.7	17.22	0.39	C
Stream C-ABD		0.3	6.14	0.13	A		0.1	5.66	0.04	A
<b>DO MINIMUM - 2031 DM</b>										
Stream B-ACD	D9	0.1	9.25	0.12	A	D10	0.2	9.93	0.18	A
Stream A-BCD		0.2	7.29	0.15	A		0.3	7.21	0.19	A
Stream D-AB		0.6	15.45	0.35	C		0.6	12.16	0.34	B
Stream D-BC		1.4	21.19	0.56	C		0.8	18.78	0.43	C
Stream C-ABD		0.3	6.11	0.14	A		0.1	5.63	0.04	A
<b>DO MINIMUM - 2041 DM</b>										
Stream B-ACD	D11	0.2	9.29	0.12	A	D12	0.3	10.20	0.19	B
Stream A-BCD		0.3	7.35	0.15	A		0.4	7.27	0.19	A
Stream D-AB		0.7	17.23	0.39	C		0.6	12.88	0.36	B
Stream D-BC		1.6	23.56	0.60	C		0.9	20.19	0.46	C
Stream C-ABD		0.3	6.10	0.15	A		0.1	5.60	0.04	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

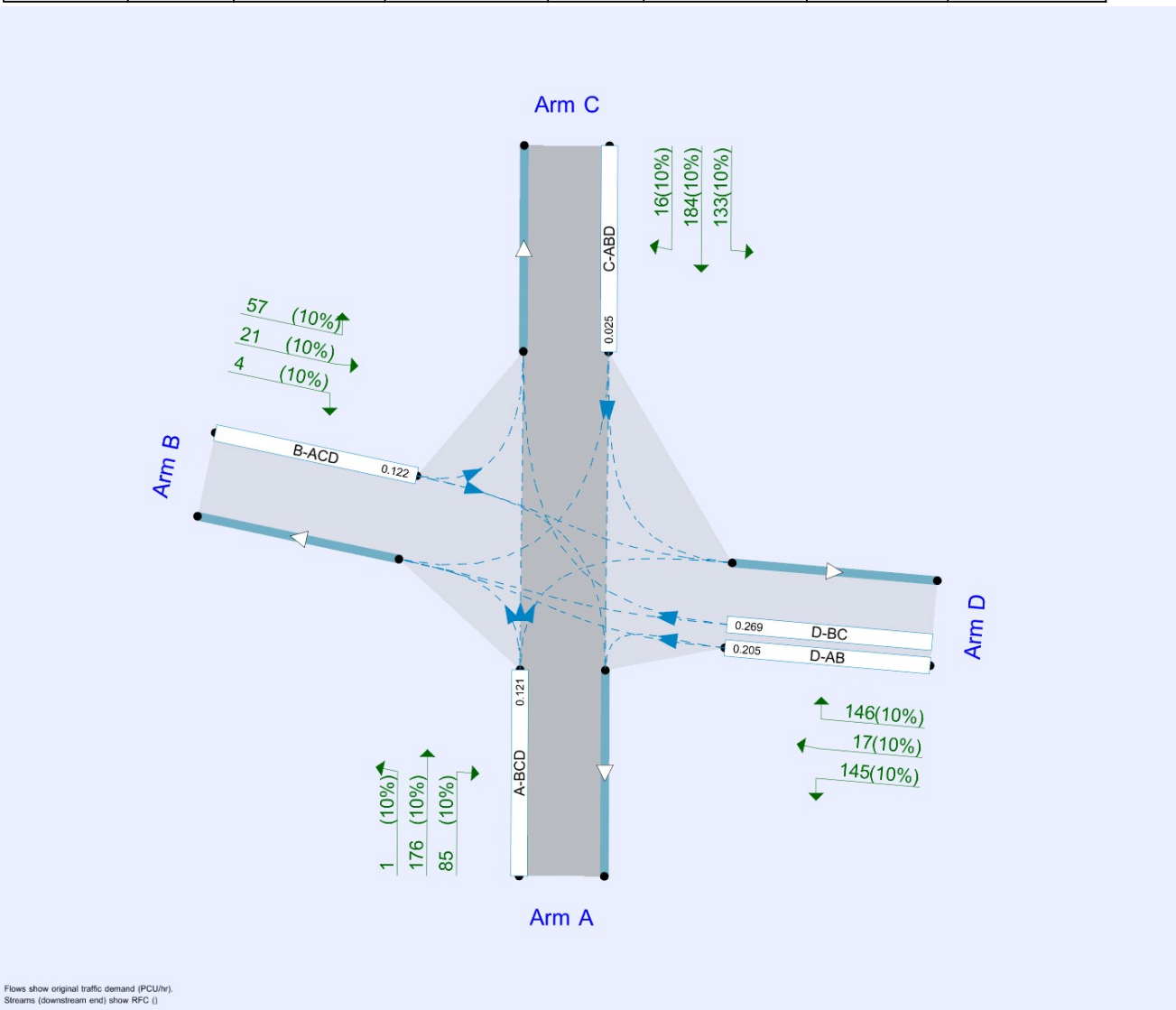
## File summary

### File Description

Title	OLD NANGOOR ROAD
Location	
Site number	
Date	24/09/2025
Version	
Status	
Identifier	
Client	
Jobnumber	250094
Enumerator	VJ
Description	

### Units

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



### Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

### Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2026 DM	AM	ONE HOUR	08:00	09:30	15	✓
D8	2026 DM	PM	ONE HOUR	15:30	17:00	15	✓
D9	2031 DM	AM	ONE HOUR	08:00	09:30	15	✓
D10	2031 DM	PM	ONE HOUR	15:30	17:00	15	✓
D11	2041 DM	AM	ONE HOUR	08:00	09:30	15	✓
D12	2041 DM	PM	ONE HOUR	15:30	17:00	15	✓

### Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	DO MINIMUM	✓	✓	D7,D8,D9,D10,D11,D12	100.000	100.000

# DO MINIMUM - 2026 DM, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way		7.98	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description	Arm type
A	New Link Road		Major
B	Upper Nangoor Road		Minor
C	Old Nangor Road		Major
D	Cherrywood Villas		Minor

### Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A	6.00			100.0	✓	0.00
C	6.00			70.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

### Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane	2.50								19	36
D	One lane plus flare		7.90	5.60	3.80	3.00	3.00	✓	1.00	17	70

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
A-D	632	-	-	-	-	-	-	0.245	0.350	0.245	-	-	-
B-A	476	0.087	0.219	0.219	-	-	-	0.138	0.313	-	0.219	0.219	0.110
B-C	614	0.094	0.238	-	-	-	-	-	-	-	-	-	-
B-D, nearside lane	476	0.087	0.219	0.219	-	-	-	0.138	0.313	0.138	-	-	-
B-D, offside lane	476	0.087	0.219	0.219	-	-	-	0.138	0.313	0.138	-	-	-
C-B	615	0.238	0.238	0.340	-	-	-	-	-	-	-	-	-
D-A	645	-	-	-	-	-	-	0.250	-	0.099	-	-	-
D-B, nearside lane	500	0.145	0.145	0.329	-	-	-	0.230	0.230	0.091	-	-	-
D-B, offside lane	574	0.166	0.166	0.377	-	-	-	0.264	0.264	0.105	-	-	-
D-C	574	-	0.166	0.377	0.132	0.264	0.264	0.264	0.264	0.105	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.  
 Streams may be combined, in which case capacity will be adjusted.  
 Values are shown for the first time segment only; they may differ for subsequent time segments.

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2026 DM	AM	ONE HOUR	08:00	09:30	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	193	100.000
B		ONE HOUR	✓	50	100.000
C		ONE HOUR	✓	311	100.000
D		ONE HOUR	✓	320	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	3	126	64
	B	2	0	34	14
	C	71	57	0	183
	D	93	33	194	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	10	10	10	10
	B	10	10	10	10
	C	10	10	10	10
	D	10	10	10	10

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.11	9.11	0.1	A	46	69
A-BCD	0.14	7.21	0.2	A	73	109
D-AB	0.31	13.74	0.5	B	106	160
D-BC	0.51	18.77	1.1	C	187	281
C-ABD	0.13	6.14	0.3	A	78	117

## Main Results for each time segment

### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	38	9	514	0.073	37	0.0	0.1	8.299	A
A-BCD	57	14	636	0.089	56	0.0	0.1	6.824	A
D-AB	86	22	510	0.169	85	0.0	0.2	9.294	A
D-BC	155	39	486	0.318	153	0.0	0.5	11.806	B
C-ABD	59	15	705	0.084	58	0.0	0.1	6.119	A

### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	45	11	504	0.089	45	0.1	0.1	8.623	A
A-BCD	70	18	638	0.110	70	0.1	0.2	6.976	A
D-AB	104	26	476	0.218	104	0.2	0.3	10.612	B
D-BC	184	46	466	0.394	183	0.5	0.7	13.960	B
C-ABD	75	19	724	0.104	75	0.1	0.2	6.108	A

### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	55	14	490	0.112	55	0.1	0.1	9.098	A
A-BCD	91	23	641	0.142	90	0.2	0.2	7.199	A
D-AB	129	32	419	0.308	129	0.3	0.5	13.577	B
D-BC	223	56	434	0.514	221	0.7	1.1	18.469	C
C-ABD	100	25	750	0.134	100	0.2	0.3	6.098	A

### 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	55	14	490	0.112	55	0.1	0.1	9.106	A
A-BCD	91	23	641	0.142	91	0.2	0.2	7.208	A
D-AB	129	32	417	0.310	129	0.5	0.5	13.739	B
D-BC	223	56	434	0.514	223	1.1	1.1	18.771	C
C-ABD	101	25	750	0.134	100	0.3	0.3	6.106	A

### 09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	45	11	504	0.089	45	0.1	0.1	8.632	A
A-BCD	70	18	638	0.110	71	0.2	0.2	6.987	A
D-AB	104	26	474	0.220	105	0.5	0.3	10.744	B
D-BC	184	46	465	0.395	185	1.1	0.7	14.219	B
C-ABD	75	19	724	0.104	75	0.3	0.2	6.118	A

### 09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	38	9	514	0.073	38	0.1	0.1	8.319	A
A-BCD	57	14	636	0.090	57	0.2	0.1	6.843	A
D-AB	86	22	508	0.170	87	0.3	0.2	9.404	A
D-BC	155	39	486	0.318	156	0.7	0.5	12.024	B
C-ABD	59	15	705	0.084	59	0.2	0.1	6.136	A

# DO MINIMUM - 2026 DM, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way		6.15	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2026 DM	PM	ONE HOUR	15:30	17:00	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	243	100.000
B		ONE HOUR	✓	74	100.000
C		ONE HOUR	✓	308	100.000
D		ONE HOUR	✓	281	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To				
		A	B	C	D	
From	A	0	1	163	79	
	B	3	0	52	19	
	C	174	15	0	119	
	D	135	16	130	0	

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		A	B	C	D	
From	A	10	10	10	10	
	B	10	10	10	10	
	C	10	10	10	10	
	D	10	10	10	10	

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.17	9.75	0.2	A	68	102
A-BCD	0.18	7.16	0.3	A	95	142
D-AB	0.31	11.31	0.5	B	133	200
D-BC	0.39	17.22	0.7	C	124	187
C-ABD	0.04	5.66	0.1	A	22	33

### Main Results for each time segment

#### 15:30 - 15:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	56	14	514	0.108	55	0.0	0.1	8.629	A
A-BCD	73	18	658	0.111	73	0.0	0.2	6.760	A
D-AB	109	27	584	0.187	108	0.0	0.2	8.298	A
D-BC	103	26	436	0.235	101	0.0	0.3	11.807	B
C-ABD	16	4	716	0.023	16	0.0	0.0	5.657	A

#### 15:45 - 16:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	67	17	503	0.132	66	0.1	0.2	9.069	A
A-BCD	91	23	664	0.138	91	0.2	0.2	6.914	A
D-AB	131	33	557	0.234	130	0.2	0.3	9.274	A
D-BC	122	31	413	0.296	122	0.3	0.5	13.572	B
C-ABD	21	5	737	0.029	21	0.0	0.0	5.528	A

#### 16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	81	20	488	0.167	81	0.2	0.2	9.736	A
A-BCD	119	30	673	0.177	119	0.2	0.3	7.150	A
D-AB	161	40	512	0.314	160	0.3	0.5	11.236	B
D-BC	149	37	379	0.392	148	0.5	0.7	17.059	C
C-ABD	29	7	767	0.037	29	0.0	0.1	5.360	A

#### 16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	81	20	488	0.167	81	0.2	0.2	9.747	A
A-BCD	119	30	673	0.177	119	0.3	0.3	7.157	A
D-AB	161	40	511	0.315	161	0.5	0.5	11.311	B
D-BC	149	37	379	0.393	149	0.7	0.7	17.218	C
C-ABD	29	7	767	0.037	29	0.1	0.1	5.362	A

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	67	17	503	0.132	67	0.2	0.2	9.088	A
A-BCD	92	23	664	0.138	92	0.3	0.2	6.927	A
D-AB	131	33	556	0.235	131	0.5	0.3	9.344	A
D-BC	122	31	412	0.296	123	0.7	0.5	13.728	B
C-ABD	21	5	737	0.029	21	0.1	0.0	5.531	A

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	56	14	513	0.109	56	0.2	0.1	8.658	A
A-BCD	73	18	658	0.112	74	0.2	0.2	6.779	A
D-AB	109	27	583	0.187	109	0.3	0.3	8.370	A
D-BC	103	26	435	0.236	103	0.5	0.3	11.950	B
C-ABD	16	4	716	0.023	16	0.0	0.0	5.662	A

# DO MINIMUM - 2031 DM, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way		8.86	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2031 DM	AM	ONE HOUR	08:00	09:30	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	198	100.000
B		ONE HOUR	✓	53	100.000
C		ONE HOUR	✓	330	100.000
D		ONE HOUR	✓	341	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	3	129	66
	B	2	0	36	15
	C	74	60	0	196
	D	99	35	207	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	10	10	10	10
	B	10	10	10	10
	C	10	10	10	10
	D	10	10	10	10

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.12	9.25	0.1	A	49	73
A-BCD	0.15	7.29	0.2	A	75	113
D-AB	0.35	15.45	0.6	C	114	171
D-BC	0.56	21.19	1.4	C	199	299
C-ABD	0.14	6.11	0.3	A	84	127

### Main Results for each time segment

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	40	10	512	0.078	40	0.0	0.1	8.376	A
A-BCD	59	15	634	0.093	58	0.0	0.1	6.872	A
D-AB	92	23	501	0.183	91	0.0	0.2	9.627	A
D-BC	165	41	482	0.342	163	0.0	0.6	12.324	B
C-ABD	63	16	712	0.089	63	0.0	0.2	6.092	A

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	48	12	501	0.095	48	0.1	0.1	8.720	A
A-BCD	73	18	636	0.115	73	0.1	0.2	7.038	A
D-AB	111	28	463	0.240	111	0.2	0.3	11.241	B
D-BC	196	49	459	0.426	195	0.6	0.8	14.898	B
C-ABD	81	20	732	0.110	81	0.2	0.2	6.081	A

#### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	58	15	487	0.120	58	0.1	0.1	9.237	A
A-BCD	94	24	638	0.148	94	0.2	0.2	7.283	A
D-AB	138	35	397	0.348	137	0.3	0.6	15.186	C
D-BC	237	59	424	0.559	235	0.8	1.3	20.702	C
C-ABD	109	27	761	0.143	108	0.2	0.3	6.074	A

#### 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	58	15	487	0.120	58	0.1	0.1	9.245	A
A-BCD	94	24	638	0.148	94	0.2	0.2	7.293	A
D-AB	138	35	394	0.351	138	0.6	0.6	15.455	C
D-BC	237	59	423	0.560	237	1.3	1.4	21.190	C
C-ABD	109	27	761	0.143	109	0.3	0.3	6.081	A

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	48	12	501	0.095	48	0.1	0.1	8.733	A
A-BCD	73	18	636	0.115	73	0.2	0.2	7.052	A
D-AB	111	28	459	0.242	112	0.6	0.4	11.434	B
D-BC	195	49	459	0.426	198	1.4	0.8	15.272	C
C-ABD	81	20	733	0.111	81	0.3	0.2	6.091	A

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	40	10	512	0.078	40	0.1	0.1	8.397	A
A-BCD	59	15	634	0.093	59	0.2	0.1	6.889	A
D-AB	92	23	498	0.185	92	0.4	0.3	9.772	A
D-BC	165	41	481	0.342	166	0.8	0.6	12.598	B
C-ABD	63	16	712	0.089	64	0.2	0.2	6.111	A

# DO MINIMUM - 2031 DM, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way		6.60	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2031 DM	PM	ONE HOUR	15:30	17:00	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	254	100.000
B		ONE HOUR	✓	78	100.000
C		ONE HOUR	✓	322	100.000
D		ONE HOUR	✓	297	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To				
		A	B	C	D	
From	A	0	1	171	82	
	B	3	0	55	20	
	C	179	16	0	127	
	D	141	17	139	0	

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		A	B	C	D	
From	A	10	10	10	10	
	B	10	10	10	10	
	C	10	10	10	10	
	D	10	10	10	10	

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.18	9.93	0.2	A	72	107
A-BCD	0.19	7.21	0.3	A	100	149
D-AB	0.34	12.16	0.6	B	140	210
D-BC	0.43	18.78	0.8	C	133	199
C-ABD	0.04	5.63	0.1	A	24	36

### Main Results for each time segment

#### 15:30 - 15:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	59	15	512	0.115	58	0.0	0.1	8.722	A
A-BCD	77	19	660	0.116	76	0.0	0.2	6.782	A
D-AB	114	29	577	0.198	113	0.0	0.3	8.515	A
D-BC	110	27	431	0.254	108	0.0	0.4	12.221	B
C-ABD	18	4	721	0.025	18	0.0	0.0	5.629	A

#### 15:45 - 16:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	70	18	500	0.140	70	0.1	0.2	9.197	A
A-BCD	96	24	666	0.144	96	0.2	0.2	6.947	A
D-AB	137	34	547	0.250	136	0.3	0.4	9.645	A
D-BC	130	33	406	0.321	130	0.4	0.5	14.282	B
C-ABD	23	6	743	0.031	23	0.0	0.0	5.497	A

#### 16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	86	21	485	0.177	86	0.2	0.2	9.922	A
A-BCD	126	31	676	0.186	125	0.2	0.3	7.201	A
D-AB	168	42	495	0.340	168	0.4	0.6	12.056	B
D-BC	159	40	370	0.429	157	0.5	0.8	18.550	C
C-ABD	31	8	775	0.040	31	0.0	0.1	5.326	A

#### 16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	86	21	484	0.177	86	0.2	0.2	9.934	A
A-BCD	126	31	676	0.186	126	0.3	0.3	7.210	A
D-AB	168	42	494	0.341	168	0.6	0.6	12.165	B
D-BC	159	40	369	0.430	159	0.8	0.8	18.783	C
C-ABD	31	8	775	0.040	31	0.1	0.1	5.328	A

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	70	18	500	0.140	70	0.2	0.2	9.215	A
A-BCD	96	24	666	0.145	97	0.3	0.2	6.964	A
D-AB	137	34	545	0.251	138	0.6	0.4	9.737	A
D-BC	130	33	406	0.321	131	0.8	0.5	14.488	B
C-ABD	23	6	743	0.031	23	0.1	0.0	5.502	A

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	59	15	511	0.115	59	0.2	0.1	8.754	A
A-BCD	77	19	660	0.117	77	0.2	0.2	6.806	A
D-AB	114	29	575	0.198	115	0.4	0.3	8.600	A
D-BC	109	27	430	0.255	110	0.5	0.4	12.406	B
C-ABD	18	4	721	0.025	18	0.0	0.0	5.633	A

# DO MINIMUM - 2041 DM, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way		9.73	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2041 DM	AM	ONE HOUR	08:00	09:30	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	201	100.000
B		ONE HOUR	✓	54	100.000
C		ONE HOUR	✓	345	100.000
D		ONE HOUR	✓	357	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	3	131	67
	B	2	0	37	15
	C	77	63	0	205
	D	103	37	217	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	10	10	10	10
	B	10	10	10	10
	C	10	10	10	10
	D	10	10	10	10

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.12	9.29	0.2	A	50	74
A-BCD	0.15	7.35	0.3	A	77	115
D-AB	0.39	17.23	0.7	C	119	179
D-BC	0.60	23.56	1.6	C	208	313
C-ABD	0.15	6.10	0.3	A	90	135

### Main Results for each time segment

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	41	10	512	0.079	40	0.0	0.1	8.387	A
A-BCD	60	15	633	0.095	59	0.0	0.1	6.900	A
D-AB	96	24	493	0.195	95	0.0	0.3	9.935	A
D-BC	173	43	478	0.361	170	0.0	0.6	12.753	B
C-ABD	67	17	718	0.094	67	0.0	0.2	6.078	A

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	49	12	501	0.097	48	0.1	0.1	8.749	A
A-BCD	74	19	634	0.118	74	0.1	0.2	7.082	A
D-AB	116	29	451	0.258	116	0.3	0.4	11.814	B
D-BC	205	51	455	0.450	204	0.6	0.9	15.707	C
C-ABD	86	22	739	0.117	86	0.2	0.2	6.069	A

#### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	59	15	486	0.122	59	0.1	0.2	9.282	A
A-BCD	96	24	635	0.151	96	0.2	0.3	7.344	A
D-AB	145	36	378	0.383	144	0.4	0.7	16.816	C
D-BC	248	62	416	0.596	246	0.9	1.5	22.825	C
C-ABD	117	29	769	0.152	116	0.2	0.3	6.073	A

#### 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	59	15	486	0.122	59	0.2	0.2	9.291	A
A-BCD	96	24	635	0.152	96	0.3	0.3	7.351	A
D-AB	145	36	375	0.387	145	0.7	0.7	17.235	C
D-BC	248	62	415	0.597	248	1.5	1.6	23.559	C
C-ABD	117	29	769	0.152	117	0.3	0.3	6.080	A

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	49	12	501	0.097	49	0.2	0.1	8.763	A
A-BCD	75	19	633	0.118	75	0.3	0.2	7.097	A
D-AB	116	29	446	0.261	118	0.7	0.4	12.083	B
D-BC	205	51	454	0.451	207	1.6	0.9	16.212	C
C-ABD	87	22	739	0.117	87	0.3	0.2	6.081	A

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	41	10	511	0.079	41	0.1	0.1	8.414	A
A-BCD	60	15	632	0.095	60	0.2	0.1	6.927	A
D-AB	96	24	489	0.197	97	0.4	0.3	10.099	B
D-BC	172	43	478	0.361	174	0.9	0.6	13.077	B
C-ABD	68	17	718	0.094	68	0.2	0.2	6.098	A

# DO MINIMUM - 2041 DM, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way		6.99	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2041 DM	PM	ONE HOUR	15:30	17:00	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	262	100.000
B		ONE HOUR	✓	82	100.000
C		ONE HOUR	✓	333	100.000
D		ONE HOUR	✓	308	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	1	176	85
	B	4	0	57	21
	C	184	16	0	133
	D	145	17	146	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	10	10	10	10
	B	10	10	10	10
	C	10	10	10	10
	D	10	10	10	10

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.19	10.20	0.3	B	75	113
A-BCD	0.19	7.27	0.4	A	104	156
D-AB	0.36	12.88	0.6	B	144	215
D-BC	0.46	20.19	0.9	C	139	209
C-ABD	0.04	5.60	0.1	A	24	37

### Main Results for each time segment

#### 15:30 - 15:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	62	15	507	0.122	61	0.0	0.2	8.863	A
A-BCD	80	20	660	0.121	79	0.0	0.2	6.811	A
D-AB	117	29	572	0.205	116	0.0	0.3	8.669	A
D-BC	115	29	427	0.269	113	0.0	0.4	12.566	B
C-ABD	18	4	725	0.025	18	0.0	0.0	5.597	A

#### 15:45 - 16:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	74	18	495	0.149	74	0.2	0.2	9.386	A
A-BCD	101	25	667	0.151	100	0.2	0.3	6.989	A
D-AB	140	35	539	0.261	140	0.3	0.4	9.923	A
D-BC	136	34	401	0.340	136	0.4	0.6	14.882	B
C-ABD	23	6	748	0.031	23	0.0	0.0	5.461	A

#### 16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	90	23	479	0.189	90	0.2	0.3	10.181	B
A-BCD	132	33	677	0.195	131	0.3	0.4	7.265	A
D-AB	173	43	482	0.359	172	0.4	0.6	12.736	B
D-BC	166	42	362	0.458	165	0.6	0.9	19.883	C
C-ABD	32	8	781	0.041	32	0.0	0.1	5.285	A

#### 16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	90	23	479	0.189	90	0.3	0.3	10.196	B
A-BCD	132	33	677	0.195	132	0.4	0.4	7.274	A
D-AB	173	43	480	0.360	173	0.6	0.6	12.879	B
D-BC	166	42	362	0.459	166	0.9	0.9	20.195	C
C-ABD	32	8	781	0.041	32	0.1	0.1	5.289	A

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	74	18	495	0.149	74	0.3	0.2	9.403	A
A-BCD	101	25	667	0.151	101	0.4	0.3	7.005	A
D-AB	141	35	537	0.262	141	0.6	0.4	10.036	B
D-BC	136	34	401	0.340	138	0.9	0.6	15.142	C
C-ABD	23	6	748	0.031	23	0.1	0.0	5.464	A

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	62	15	507	0.122	62	0.2	0.2	8.898	A
A-BCD	80	20	660	0.122	81	0.3	0.2	6.838	A
D-AB	117	29	570	0.206	118	0.4	0.3	8.762	A
D-BC	115	29	426	0.269	115	0.6	0.4	12.780	B
C-ABD	18	5	725	0.025	18	0.0	0.0	5.601	A

## Appendix C : TRANSYT Results

TRANSYT 17
Version: 17.0.0.2525 © Copyright TRL Software Limited, 2024
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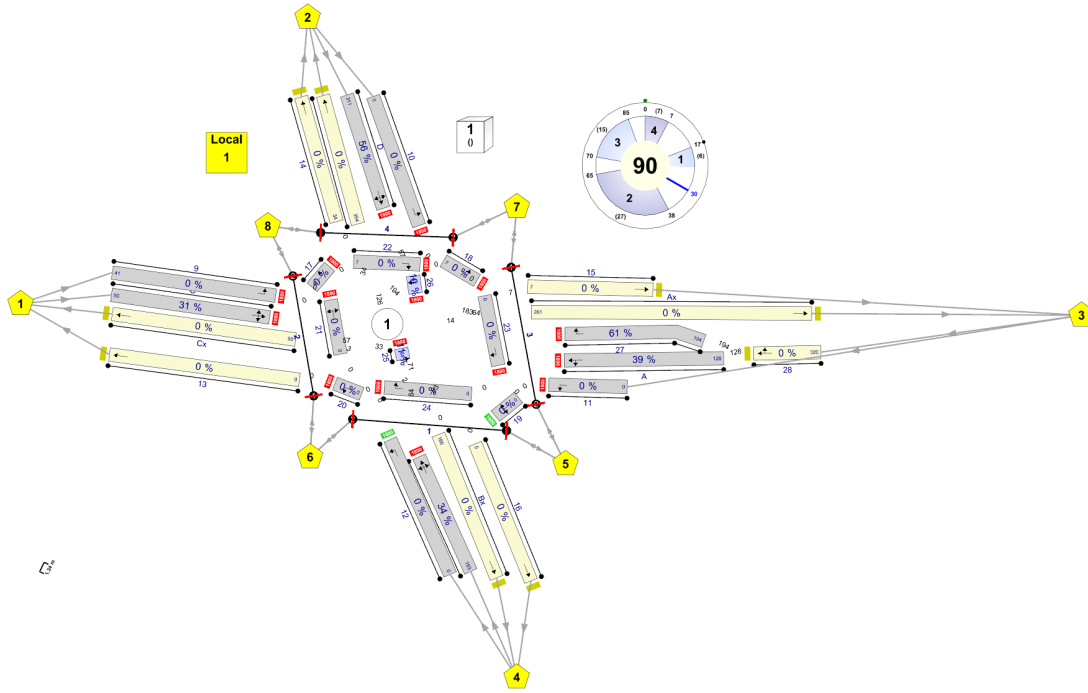
**Filename:** Old nangoor Road Protected Junction.t17  
**Path:** \\DBFL-SERVER4\Documents\2025\p250094\calcs\transyt  
**Report generation date:** 07/04/2026 18:03:44

- »A1 - DO SOMETHING : D1 - 2026 | DO SOMETHING | AM :
- »A1 - DO SOMETHING : D2 - 2026 | DO SOMETHING | PM :
- »A1 - DO SOMETHING : D3 - 2031 | DO SOMETHING | AM :
- »A1 - DO SOMETHING : D4 - 2031 | DO SOMETHING | PM :
- »A1 - DO SOMETHING : D5 - 2041 | DO SOMETHING | AM :
- »A1 - DO SOMETHING : D6 - 2041 | DO SOMETHING | PM :

**Summary of network performance**

	AM					PM				
	Set ID	PI (£ per hr)	Total delay (PCU-hr/hr)	Highest DOS	Number oversaturated	Set ID	PI (£ per hr)	Total delay (PCU-hr/hr)	Highest DOS	Number oversaturated
	DO SOMETHING - 2026 - DO SOMETHING									
<b>Network</b>	D1	125.66	8.17	61% (TS 27/1)	0 (0%)	D2	128.26	8.33	55% (TS D/1)	0 (0%)
	DO SOMETHING - 2031 - DO SOMETHING									
<b>Network</b>	D3	136.19	8.86	65% (TS 27/1)	0 (0%)	D4	137.13	8.91	58% (TS D/1)	0 (0%)
	DO SOMETHING - 2041 - DO SOMETHING									
<b>Network</b>	D5	144.58	9.41	68% (TS 27/1)	0 (0%)	D6	144.17	9.37	59% (TS D/1)	0 (0%)

# Network Diagrams



Old Nangor Road  
Diagram produced using TRANSYT 17.0.0.2525

# A1 - DO SOMETHING D1 - 2026 | DO SOMETHING | AM

## Signal Timings

Network Default: 90s cycle time; 90 steps

### Intergreen Matrix for Controller Stream 1

		To																							
		E	N	S	W	C1	P1	C2	E2	P2	C3	P3	C4	P4	C5	C6	C7	C8	C9	C10	C11	C12			
From	E		5	5			7			7		6		5					7	9	9	5			
	N	5			5		7		5	6		6		7					8	9	7	7			
	S	5			5		5		5	6		7		6					5	7	9	7			
	W		5	5			5		5	5		5		5					7	5	7	9			
	C1						5			7		10													
	P1	15	15	15	15	0																			
	C2									5															
	E2		5	0	5																				
	P2	12	12	12	12	0		12									12								
	C3												5												
	P3	13	13	13	13	0						13						13							
	C4														5										
P4	12	0	12	12									12					12							
C5																									
C6									5																
C7											5														
C8														5											
C9	10	9	5	10																					
C10	10	10	9	5																					
C11	9	5	9	10																					
C12	5	10	9	9																					

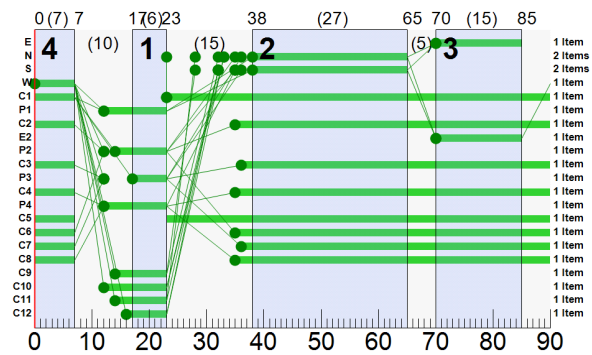
### Resultant Stages

Controller Stream	Resultant Stage	Is Base Stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	P1,P2,P3,P4,C9,C10,C11,C12	17	23	6	1	6
	2	✓	2	C1,C2,C3,C4,C5,C6,C8,S,N,C7	38	65	27	1	7
	3	✓	3	C1,C2,C3,C4,C5,C6,C7,C8,E,E2	70	85	15	1	7
	4	✓	4	C1,C2,C3,C4,C5,C6,C7,C8,W	0	7	7	1	7

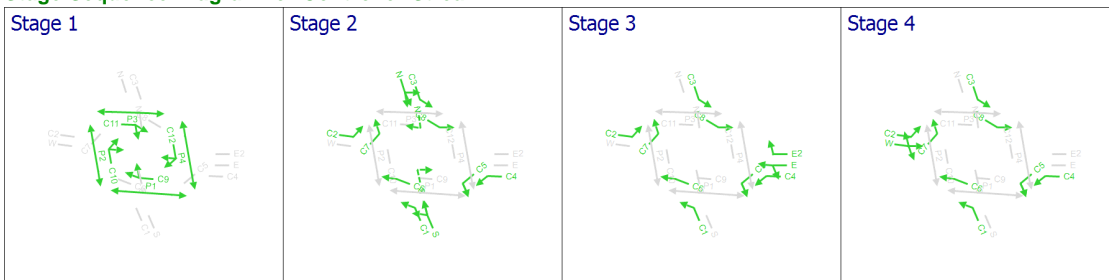
### Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	E	70	85	15
B	1	1	1	S	38	65	27
C	1	1	1	W	0	7	7
D	1	1	1	N	38	65	27
9	1	1	1	C2	35	7	62
10	1	1	1	C3	36	7	61
11	1	1	1	C4	35	7	62
12	1	1	1	C1	23	7	74
17	1	1	1	C7	36	7	61
18	1	1	1	C8	35	7	62
19	1	1	1	C5	23	7	74
20	1	1	1	C6	35	7	62
21	1	1	1	C10	12	23	11
22	1	1	1	C11	14	23	9
23	1	1	1	C12	16	23	7
24	1	1	1	C9	14	23	9
25	1	1	1	S	38	65	27
26	1	1	1	N	38	65	27
27	1	1	1	E2	70	85	15

### Phase Timings Diagram for Controller Stream 1



### Stage Sequence Diagram for Controller Stream 1



## Final Prediction Table

### Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Wasted time total (s per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)
A	1	(untitled)	1	1	E	126	1800	15	0.00	39	129	39.30	36.36	90.45	2.89
Ax	1	(untitled)				261	Unrestricted	90	52.00	0	Unrestricted	7.57	0.00	0.00	0.00
B	1	(untitled)	1	1	S	193 <	1800	27	0.00	34	161	27.56	25.62	77.06	3.79 +
Bx	1	(untitled)				166	Unrestricted	90	46.00	0	Unrestricted	5.12	0.00	0.00	0.00
C	1	(untitled)	1	1	W	50	1800	7	5.00	31	188	46.02	43.54	97.58	1.24
Cx	1	(untitled)				93	Unrestricted	90	52.00	0	Unrestricted	6.00	0.00	0.00	0.00
D	1	(untitled)	1	1	N	311 <	1800	27	0.00	56	62	31.64	29.80	85.18	6.74 +
Dx	1	(untitled)				354	Unrestricted	90	35.00	0	Unrestricted	5.48	0.00	0.00	0.00
9	1 C	Cycle Lane	1	1	C2	0	1800	62	63.00	0	Unrestricted	0.00	0.00	0.00	0.00
10	1 C		1	1	C3	0	1800	61	62.00	0	Unrestricted	0.00	0.00	0.00	0.00
11	1 C		1	1	C4	0	1800	62	63.00	0	Unrestricted	0.00	0.00	0.00	0.00
12	1 C		1	1	C1	0	1800	74	75.00	0	Unrestricted	0.00	0.00	0.00	0.00
13	1					0	Unrestricted	90	90.00	0	Unrestricted	0.00	0.00	0.00	0.00
14	1					0	Unrestricted	90	90.00	0	Unrestricted	0.00	0.00	0.00	0.00
15	1					0	Unrestricted	90	90.00	0	Unrestricted	0.00	0.00	0.00	0.00
16	1					0	Unrestricted	90	90.00	0	Unrestricted	0.00	0.00	0.00	0.00
17	1		1	1	C7	0	1800	61	62.00	0	Unrestricted	0.00	0.00	0.00	0.00
18	1 C		1	1	C8	0	1800	62	63.00	0	Unrestricted	0.00	0.00	0.00	0.00
19	1 C		1	1	C5	0	1800	74	75.00	0	Unrestricted	0.00	0.00	0.00	0.00
20	1 C		1	1	C6	0	1800	62	63.00	0	Unrestricted	0.00	0.00	0.00	0.00
21	1 C		1	1	C10	0	1800	11	12.00	0	Unrestricted	0.00	0.00	0.00	0.00
22	1 C		1	1	C11	0	1800	9	10.00	0	Unrestricted	0.00	0.00	0.00	0.00
23	1		1	1	C12	0	1800	7	8.00	0	Unrestricted	0.00	0.00	0.00	0.00
24	1 C		1	1	C9	0	1800	9	10.00	0	Unrestricted	0.00	0.00	0.00	0.00
25	1		1	1	S	64	1800	27	0.00	11	688	3.15	1.43	2.11	0.03
26	1		1	1	N	57	1800	27	11.00	10	784	2.75	1.32	1.96	0.03
27	1		1	1	E2	194 <	1800	15	0.00	61	48	45.61	42.62	99.03	4.88 +
28	1					320	Unrestricted	90	11.00	0	Unrestricted	1.04	0.00	0.00	0.00

### Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	65.58	10.35	6.33	7.06	1.10	115.99	9.67	0.00	125.66
Bus									
Cycle	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	65.58	10.35	6.33	7.06	1.10	115.99	9.67	0.00	125.66

- | N = at least one source for this link/traffic stream carries normal traffic
- | C = at least one source for this link/traffic stream carries Cycle traffic
- | < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- | \* = stop or delay weighting has been set to a value other than 100%
- | ^ = stop or delay path weighting has been set to a value other than 100%
- | + = average link/traffic stream excess queue is greater than 0
- | P.I. = PERFORMANCE INDEX

# A1 - DO SOMETHING D2 - 2026 | DO SOMETHING | PM

## Signal Timings

Network Default: 90s cycle time; 90 steps

### Intergreen Matrix for Controller Stream 1

		To																							
		E	N	S	W	C1	P1	C2	E2	P2	C3	P3	C4	P4	C5	C6	C7	C8	C9	C10	C11	C12			
From	E		5	5			7			7		6		5					7	9	9	5			
	N	5			5		7		5	6		6		7					8	9	7	7			
	S	5			5		5		5	6		7		6					5	7	9	7			
	W		5	5			5		5	5		5		5					7	5	7	9			
	C1						5				7		10												
	P1	15	15	15	15	0																			
	C2										5														
	E2			5	0	5																			
	P2	12	12	12	12	0			12									12							
	C3												5												
	P3	13	13	13	13	0						13							13						
	C4														5										
	P4	12	0	12	12									12					12						
	C5																								
	C6										5														
	C7												5												
	C8														5										
C9	10	9	5	10																					
C10	10	10	9	5																					
C11	9	5	9	10																					
C12	5	10	9	9																					

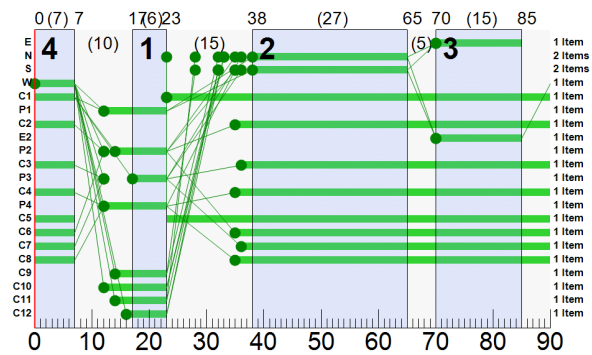
### Resultant Stages

Controller Stream	Resultant Stage	Is Base Stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	P1,P2,P3,P4,C9,C10,C11,C12	17	23	6	1	6
	2	✓	2	C1,C2,C3,C4,C5,C6,C8,S,N,C7	38	65	27	1	7
	3	✓	3	C1,C2,C3,C4,C5,C6,C7,C8,E,E2	70	85	15	1	7
	4	✓	4	C1,C2,C3,C4,C5,C6,C7,C8,W	0	7	7	1	7

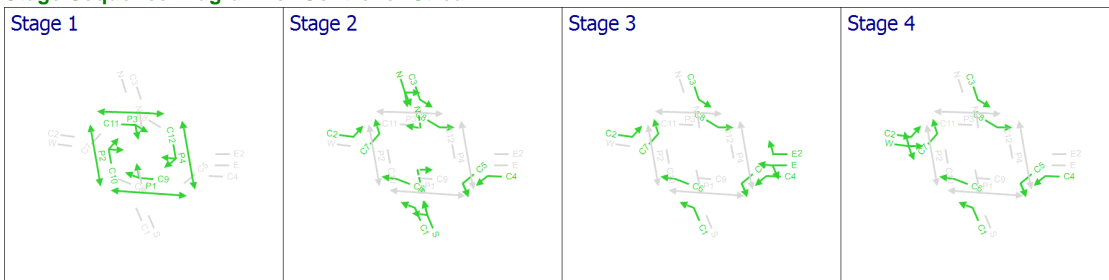
### Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	E	70	85	15
B	1	1	1	S	38	65	27
C	1	1	1	W	0	7	7
D	1	1	1	N	38	65	27
9	1	1	1	C2	35	7	62
10	1	1	1	C3	36	7	61
11	1	1	1	C4	35	7	62
12	1	1	1	C1	23	7	74
17	1	1	1	C7	36	7	61
18	1	1	1	C8	35	7	62
19	1	1	1	C5	23	7	74
20	1	1	1	C6	35	7	62
21	1	1	1	C10	12	23	11
22	1	1	1	C11	14	23	9
23	1	1	1	C12	16	23	7
24	1	1	1	C9	14	23	9
25	1	1	1	S	38	65	27
26	1	1	1	N	38	65	27
27	1	1	1	E2	70	85	15

### Phase Timings Diagram for Controller Stream 1



### Stage Sequence Diagram for Controller Stream 1



## Final Prediction Table

### Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Wasted time total (s per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)
A	1	(untitled)	1	1	E	151	1800	15	0.00	47	91	41.14	38.20	93.04	3.56
Ax	1	(untitled)				217	Unrestricted	90	51.00	0	Unrestricted	7.57	0.00	0.00	0.00
B	1	(untitled)	1	1	S	243 <	1800	27	0.00	43	107	29.10	27.15	80.17	4.96 +
Bx	1	(untitled)				312	Unrestricted	90	42.00	0	Unrestricted	5.12	0.00	0.00	0.00
C	1	(untitled)	1	1	W	74	1800	7	0.00	46	95	51.00	48.52	103.45	1.94
Cx	1	(untitled)				32	Unrestricted	90	69.00	0	Unrestricted	6.00	0.00	0.00	0.00
D	1	(untitled)	1	1	N	308 <	1800	27	0.00	55	64	31.51	29.67	85.05	6.66 +
Dx	1	(untitled)				345	Unrestricted	90	35.00	0	Unrestricted	5.48	0.00	0.00	0.00
9	1 C	Cycle Lane	1	1	C2	0	1800	62	63.00	0	Unrestricted	0.00	0.00	0.00	0.00
10	1 C		1	1	C3	0	1800	61	62.00	0	Unrestricted	0.00	0.00	0.00	0.00
11	1 C		1	1	C4	0	1800	62	63.00	0	Unrestricted	0.00	0.00	0.00	0.00
12	1 C		1	1	C1	0	1800	74	75.00	0	Unrestricted	0.00	0.00	0.00	0.00
13	1					0	Unrestricted	90	90.00	0	Unrestricted	0.00	0.00	0.00	0.00
14	1					0	Unrestricted	90	90.00	0	Unrestricted	0.00	0.00	0.00	0.00
15	1					0	Unrestricted	90	90.00	0	Unrestricted	0.00	0.00	0.00	0.00
16	1					0	Unrestricted	90	90.00	0	Unrestricted	0.00	0.00	0.00	0.00
17	1		1	1	C7	0	1800	61	62.00	0	Unrestricted	0.00	0.00	0.00	0.00
18	1 C		1	1	C8	0	1800	62	63.00	0	Unrestricted	0.00	0.00	0.00	0.00
19	1 C		1	1	C5	0	1800	74	75.00	0	Unrestricted	0.00	0.00	0.00	0.00
20	1 C		1	1	C6	0	1800	62	63.00	0	Unrestricted	0.00	0.00	0.00	0.00
21	1 C		1	1	C10	0	1800	11	12.00	0	Unrestricted	0.00	0.00	0.00	0.00
22	1 C		1	1	C11	0	1800	9	10.00	0	Unrestricted	0.00	0.00	0.00	0.00
23	1		1	1	C12	0	1800	7	8.00	0	Unrestricted	0.00	0.00	0.00	0.00
24	1 C		1	1	C9	0	1800	9	10.00	0	Unrestricted	0.00	0.00	0.00	0.00
25	1		1	1	S	79	1800	27	0.00	14	538	3.26	1.54	2.23	0.04
26	1		1	1	N	15	1800	27	15.00	3	3260	2.47	1.05	1.65	0.01
27	1		1	1	E2	130	1800	15	0.00	41	122	39.62	36.63	90.67	2.99
28	1					281	Unrestricted	90	0.00	0	Unrestricted	1.04	0.00	0.00	0.00

### Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	65.23	10.51	6.21	7.28	1.05	118.31	9.95	0.00	128.26
Bus									
Cycle	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	65.23	10.51	6.21	7.28	1.05	118.31	9.95	0.00	128.26

- | N = at least one source for this link/traffic stream carries normal traffic
- | C = at least one source for this link/traffic stream carries Cycle traffic
- | < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- | \* = stop or delay weighting has been set to a value other than 100%
- | ^ = stop or delay path weighting has been set to a value other than 100%
- | + = average link/traffic stream excess queue is greater than 0
- | P.I. = PERFORMANCE INDEX

# A1 - DO SOMETHING D3 - 2031 | DO SOMETHING | AM

## Signal Timings

Network Default: 90s cycle time; 90 steps

### Intergreen Matrix for Controller Stream 1

		To																							
		E	N	S	W	C1	P1	C2	E2	P2	C3	P3	C4	P4	C5	C6	C7	C8	C9	C10	C11	C12			
From	E		5	5			7			7		6		5					7	9	9	5			
	N	5			5		7		5	6		6		7					8	9	7	7			
	S	5			5		5		5	6		7		6					5	7	9	7			
	W		5	5			5		5	5		5		5					7	5	7	9			
	C1						5			7		10													
	P1	15	15	15	15	0																			
	C2									5															
	E2		5	0	5																				
	P2	12	12	12	12	0		12									12								
	C3												5												
	P3	13	13	13	13	0						13						13							
	C4														5										
P4	12	0	12	12									12					12							
C5																									
C6									5																
C7											5														
C8														5											
C9	10	9	5	10																					
C10	10	10	9	5																					
C11	9	5	9	10																					
C12	5	10	9	9																					

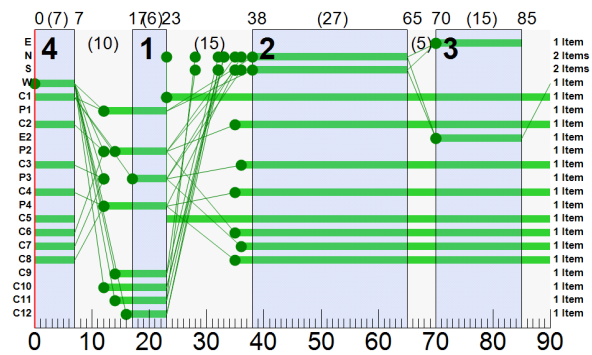
### Resultant Stages

Controller Stream	Resultant Stage	Is Base Stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	P1,P2,P3,P4,C9,C10,C11,C12	17	23	6	1	6
	2	✓	2	C1,C2,C3,C4,C5,C6,C8,S,N,C7	38	65	27	1	7
	3	✓	3	C1,C2,C3,C4,C5,C6,C7,C8,E,E2	70	85	15	1	7
	4	✓	4	C1,C2,C3,C4,C5,C6,C7,C8,W	0	7	7	1	7

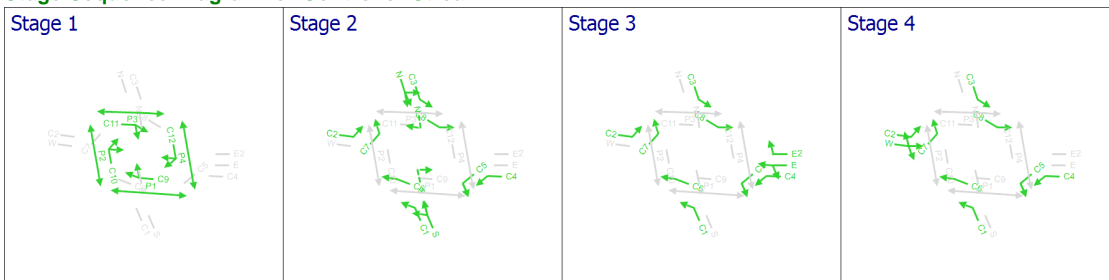
### Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	E	70	85	15
B	1	1	1	S	38	65	27
C	1	1	1	W	0	7	7
D	1	1	1	N	38	65	27
9	1	1	1	C2	35	7	62
10	1	1	1	C3	36	7	61
11	1	1	1	C4	35	7	62
12	1	1	1	C1	23	7	74
17	1	1	1	C7	36	7	61
18	1	1	1	C8	35	7	62
19	1	1	1	C5	23	7	74
20	1	1	1	C6	35	7	62
21	1	1	1	C10	12	23	11
22	1	1	1	C11	14	23	9
23	1	1	1	C12	16	23	7
24	1	1	1	C9	14	23	9
25	1	1	1	S	38	65	27
26	1	1	1	N	38	65	27
27	1	1	1	E2	70	85	15

### Phase Timings Diagram for Controller Stream 1



### Stage Sequence Diagram for Controller Stream 1



## Final Prediction Table

### Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Wasted time total (s per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)
A	1	(untitled)	1	1	E	134	1800	15	0.00	42	115	39.84	36.90	90.89	3.09
Ax	1	(untitled)				277	Unrestricted	90	52.00	0	Unrestricted	7.57	0.00	0.00	0.00
B	1	(untitled)	1	1	S	198 <	1800	27	0.00	35	155	27.70	25.76	77.23	3.89 +
Bx	1	(untitled)				175	Unrestricted	90	45.00	0	Unrestricted	5.12	0.00	0.00	0.00
C	1	(untitled)	1	1	W	53	1800	7	5.00	33	172	46.54	44.06	98.07	1.32
Cx	1	(untitled)				98	Unrestricted	90	52.00	0	Unrestricted	6.00	0.00	0.00	0.00
D	1	(untitled)	1	1	N	330 <	1800	27	0.00	59	53	32.56	30.72	86.90	7.29 +
Dx	1	(untitled)				372	Unrestricted	90	34.00	0	Unrestricted	5.48	0.00	0.00	0.00
9	1 C	Cycle Lane	1	1	C2	0	1800	62	63.00	0	Unrestricted	0.00	0.00	0.00	0.00
10	1 C		1	1	C3	0	1800	61	62.00	0	Unrestricted	0.00	0.00	0.00	0.00
11	1 C		1	1	C4	0	1800	62	63.00	0	Unrestricted	0.00	0.00	0.00	0.00
12	1 C		1	1	C1	0	1800	74	75.00	0	Unrestricted	0.00	0.00	0.00	0.00
13	1					0	Unrestricted	90	90.00	0	Unrestricted	0.00	0.00	0.00	0.00
14	1					0	Unrestricted	90	90.00	0	Unrestricted	0.00	0.00	0.00	0.00
15	1					0	Unrestricted	90	90.00	0	Unrestricted	0.00	0.00	0.00	0.00
16	1					0	Unrestricted	90	90.00	0	Unrestricted	0.00	0.00	0.00	0.00
17	1		1	1	C7	0	1800	61	62.00	0	Unrestricted	0.00	0.00	0.00	0.00
18	1 C		1	1	C8	0	1800	62	63.00	0	Unrestricted	0.00	0.00	0.00	0.00
19	1 C		1	1	C5	0	1800	74	75.00	0	Unrestricted	0.00	0.00	0.00	0.00
20	1 C		1	1	C6	0	1800	62	63.00	0	Unrestricted	0.00	0.00	0.00	0.00
21	1 C		1	1	C10	0	1800	11	12.00	0	Unrestricted	0.00	0.00	0.00	0.00
22	1 C		1	1	C11	0	1800	9	10.00	0	Unrestricted	0.00	0.00	0.00	0.00
23	1		1	1	C12	0	1800	7	8.00	0	Unrestricted	0.00	0.00	0.00	0.00
24	1 C		1	1	C9	0	1800	9	10.00	0	Unrestricted	0.00	0.00	0.00	0.00
25	1		1	1	S	66	1800	27	0.00	12	664	3.17	1.44	2.12	0.04
26	1		1	1	N	60	1800	27	0.00	11	740	2.77	1.34	1.98	0.03
27	1		1	1	E2	207 <	1800	15	0.00	65	39	47.46	44.47	101.71	5.35 +
28	1					341	Unrestricted	90	18.00	0	Unrestricted	1.04	0.00	0.00	0.00

### Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	69.25	11.17	6.20	7.52	1.34	125.83	10.36	0.00	136.19
Bus									
Cycle	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	69.25	11.17	6.20	7.52	1.34	125.83	10.36	0.00	136.19

- | N = at least one source for this link/traffic stream carries normal traffic
- | C = at least one source for this link/traffic stream carries Cycle traffic
- | < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- | \* = stop or delay weighting has been set to a value other than 100%
- | ^ = stop or delay path weighting has been set to a value other than 100%
- | + = average link/traffic stream excess queue is greater than 0
- | P.I. = PERFORMANCE INDEX

# A1 - DO SOMETHING D4 - 2031 | DO SOMETHING | PM

## Signal Timings

Network Default: 90s cycle time; 90 steps

### Intergreen Matrix for Controller Stream 1

		To																							
		E	N	S	W	C1	P1	C2	E2	P2	C3	P3	C4	P4	C5	C6	C7	C8	C9	C10	C11	C12			
From	E		5	5			7			7		6		5					7	9	9	5			
	N	5			5		7		5	6		6		7					8	9	7	7			
	S	5			5		5		5	6		7		6					5	7	9	7			
	W		5	5			5		5	5		5		5					7	5	7	9			
	C1						5			7		10													
	P1	15	15	15	15	0																			
	C2									5															
	E2		5	0	5																				
	P2	12	12	12	12	0		12									12								
	C3												5												
	P3	13	13	13	13	0						13						13							
	C4														5										
P4	12	0	12	12									12					12							
C5																									
C6									5																
C7											5														
C8														5											
C9	10	9	5	10																					
C10	10	10	9	5																					
C11	9	5	9	10																					
C12	5	10	9	9																					

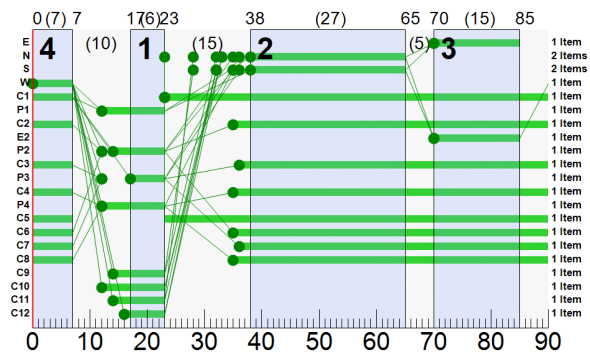
### Resultant Stages

Controller Stream	Resultant Stage	Is Base Stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	P1,P2,P3,P4,C9,C10,C11,C12	17	23	6	1	6
	2	✓	2	C1,C2,C3,C4,C5,C6,C8,S,N,C7	38	65	27	1	7
	3	✓	3	C1,C2,C3,C4,C5,C6,C7,C8,E,E2	70	85	15	1	7
	4	✓	4	C1,C2,C3,C4,C5,C6,C7,C8,W	0	7	7	1	7

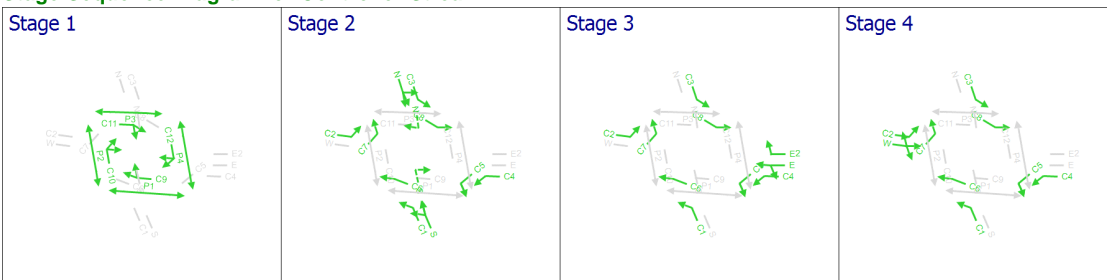
**Traffic Stream Green Times**

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	E	70	85	15
B	1	1	1	S	38	65	27
C	1	1	1	W	0	7	7
D	1	1	1	N	38	65	27
9	1	1	1	C2	35	7	62
10	1	1	1	C3	36	7	61
11	1	1	1	C4	35	7	62
12	1	1	1	C1	23	7	74
17	1	1	1	C7	36	7	61
18	1	1	1	C8	35	7	62
19	1	1	1	C5	23	7	74
20	1	1	1	C6	35	7	62
21	1	1	1	C10	12	23	11
22	1	1	1	C11	14	23	9
23	1	1	1	C12	16	23	7
24	1	1	1	C9	14	23	9
25	1	1	1	S	38	65	27
26	1	1	1	N	38	65	27
27	1	1	1	E2	70	85	15

**Phase Timings Diagram for Controller Stream 1**



**Stage Sequence Diagram for Controller Stream 1**



## Final Prediction Table

### Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Wasted time total (s per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)
A	1	(untitled)	1	1	E	158	1800	15	0.00	49	82	41.73	38.79	94.18	3.79
Ax	1	(untitled)				229	Unrestricted	90	51.00	0	Unrestricted	7.57	0.00	0.00	0.00
B	1	(untitled)	1	1	S	254 <	1800	27	0.00	45	98	29.47	27.53	81.12	5.27 +
Bx	1	(untitled)				323	Unrestricted	90	43.00	0	Unrestricted	5.12	0.00	0.00	0.00
C	1	(untitled)	1	1	W	78	1800	7	0.00	49	85	52.06	49.59	104.48	2.07
Cx	1	(untitled)				34	Unrestricted	90	67.00	0	Unrestricted	6.00	0.00	0.00	0.00
D	1	(untitled)	1	1	N	322 <	1800	27	0.00	58	57	32.17	30.33	86.45	7.09 +
Dx	1	(untitled)				365	Unrestricted	90	33.00	0	Unrestricted	5.48	0.00	0.00	0.00
9	1 C	Cycle Lane	1	1	C2	0	1800	62	63.00	0	Unrestricted	0.00	0.00	0.00	0.00
10	1 C		1	1	C3	0	1800	61	62.00	0	Unrestricted	0.00	0.00	0.00	0.00
11	1 C		1	1	C4	0	1800	62	63.00	0	Unrestricted	0.00	0.00	0.00	0.00
12	1 C		1	1	C1	0	1800	74	75.00	0	Unrestricted	0.00	0.00	0.00	0.00
13	1					0	Unrestricted	90	90.00	0	Unrestricted	0.00	0.00	0.00	0.00
14	1					0	Unrestricted	90	90.00	0	Unrestricted	0.00	0.00	0.00	0.00
15	1					0	Unrestricted	90	90.00	0	Unrestricted	0.00	0.00	0.00	0.00
16	1					0	Unrestricted	90	90.00	0	Unrestricted	0.00	0.00	0.00	0.00
17	1		1	1	C7	0	1800	61	62.00	0	Unrestricted	0.00	0.00	0.00	0.00
18	1 C		1	1	C8	0	1800	62	63.00	0	Unrestricted	0.00	0.00	0.00	0.00
19	1 C		1	1	C5	0	1800	74	75.00	0	Unrestricted	0.00	0.00	0.00	0.00
20	1 C		1	1	C6	0	1800	62	63.00	0	Unrestricted	0.00	0.00	0.00	0.00
21	1 C		1	1	C10	0	1800	11	12.00	0	Unrestricted	0.00	0.00	0.00	0.00
22	1 C		1	1	C11	0	1800	9	10.00	0	Unrestricted	0.00	0.00	0.00	0.00
23	1		1	1	C12	0	1800	7	8.00	0	Unrestricted	0.00	0.00	0.00	0.00
24	1 C		1	1	C9	0	1800	9	10.00	0	Unrestricted	0.00	0.00	0.00	0.00
25	1		1	1	S	82	1800	27	0.00	15	515	3.29	1.56	2.26	0.05
26	1		1	1	N	16	1800	27	14.00	3	3050	2.48	1.05	1.66	0.01
27	1		1	1	E2	139	1800	15	0.00	43	107	40.26	37.27	92.00	3.25
28	1					297	Unrestricted	90	0.00	0	Unrestricted	1.04	0.00	0.00	0.00

### Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	68.54	11.20	6.12	7.69	1.22	126.54	10.59	0.00	137.13
Bus									
Cycle	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	68.54	11.20	6.12	7.69	1.22	126.54	10.59	0.00	137.13

- | N = at least one source for this link/traffic stream carries normal traffic
- | C = at least one source for this link/traffic stream carries Cycle traffic
- | < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- | \* = stop or delay weighting has been set to a value other than 100%
- | ^ = stop or delay path weighting has been set to a value other than 100%
- | + = average link/traffic stream excess queue is greater than 0
- | P.I. = PERFORMANCE INDEX

# A1 - DO SOMETHING D5 - 2041 | DO SOMETHING | AM

## Signal Timings

Network Default: 90s cycle time; 90 steps

### Intergreen Matrix for Controller Stream 1

		To																							
		E	N	S	W	C1	P1	C2	E2	P2	C3	P3	C4	P4	C5	C6	C7	C8	C9	C10	C11	C12			
From	E		5	5			7			7		6		5					7	9	9	5			
	N	5			5		7		5	6		6		7					8	9	7	7			
	S	5			5		5		5	6		7		6					5	7	9	7			
	W		5	5			5		5	5		5		5					7	5	7	9			
	C1						5			7		10													
	P1	15	15	15	15	0																			
	C2									5															
	E2		5	0	5																				
	P2	12	12	12	12	0		12									12								
	C3											5													
	P3	13	13	13	13	0						13						13							
	C4													5											
P4	12	0	12	12								12					12								
C5																									
C6									5																
C7											5														
C8													5												
C9	10	9	5	10																					
C10	10	10	9	5																					
C11	9	5	9	10																					
C12	5	10	9	9																					

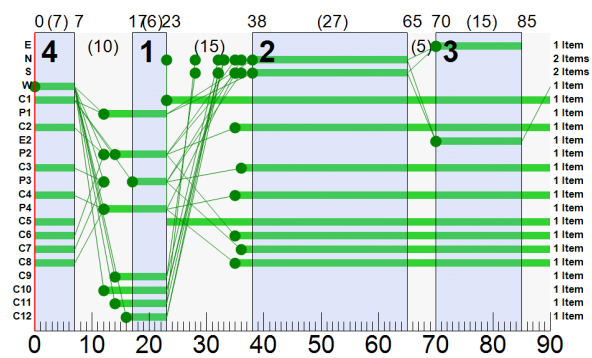
### Resultant Stages

Controller Stream	Resultant Stage	Is Base Stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	P1,P2,P3,P4,C9,C10,C11,C12	17	23	6	1	6
	2	✓	2	C1,C2,C3,C4,C5,C6,C8,S,N,C7	38	65	27	1	7
	3	✓	3	C1,C2,C3,C4,C5,C6,C7,C8,E,E2	70	85	15	1	7
	4	✓	4	C1,C2,C3,C4,C5,C6,C7,C8,W	0	7	7	1	7

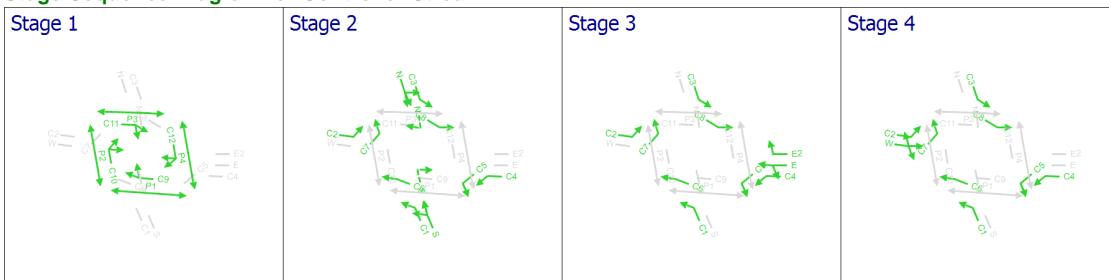
### Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	E	70	85	15
B	1	1	1	S	38	65	27
C	1	1	1	W	0	7	7
D	1	1	1	N	38	65	27
9	1	1	1	C2	35	7	62
10	1	1	1	C3	36	7	61
11	1	1	1	C4	35	7	62
12	1	1	1	C1	23	7	74
17	1	1	1	C7	36	7	61
18	1	1	1	C8	35	7	62
19	1	1	1	C5	23	7	74
20	1	1	1	C6	35	7	62
21	1	1	1	C10	12	23	11
22	1	1	1	C11	14	23	9
23	1	1	1	C12	16	23	7
24	1	1	1	C9	14	23	9
25	1	1	1	S	38	65	27
26	1	1	1	N	38	65	27
27	1	1	1	E2	70	85	15

### Phase Timings Diagram for Controller Stream 1



### Stage Sequence Diagram for Controller Stream 1



## Final Prediction Table

### Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Wasted time total (s per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)
A	1	(untitled)	1	1	E	140	1800	15	0.00	44	106	40.29	37.35	92.12	3.28
Ax	1	(untitled)				287	Unrestricted	90	52.00	0	Unrestricted	7.57	0.00	0.00	0.00
B	1	(untitled)	1	1	S	201 <	1800	27	0.00	36	151	27.79	25.84	77.30	3.95 +
Bx	1	(untitled)				182	Unrestricted	90	45.00	0	Unrestricted	5.12	0.00	0.00	0.00
C	1	(untitled)	1	1	W	54	1800	7	5.00	34	167	46.71	44.24	98.24	1.35
Cx	1	(untitled)				103	Unrestricted	90	51.00	0	Unrestricted	6.00	0.00	0.00	0.00
D	1	(untitled)	1	1	N	345 <	1800	27	0.00	62	46	33.37	31.53	88.49	7.77 +
Dx	1	(untitled)				385	Unrestricted	90	34.00	0	Unrestricted	5.48	0.00	0.00	0.00
9	1 C	Cycle Lane	1	1	C2	0	1800	62	63.00	0	Unrestricted	0.00	0.00	0.00	0.00
10	1 C		1	1	C3	0	1800	61	62.00	0	Unrestricted	0.00	0.00	0.00	0.00
11	1 C		1	1	C4	0	1800	62	63.00	0	Unrestricted	0.00	0.00	0.00	0.00
12	1 C		1	1	C1	0	1800	74	75.00	0	Unrestricted	0.00	0.00	0.00	0.00
13	1					0	Unrestricted	90	90.00	0	Unrestricted	0.00	0.00	0.00	0.00
14	1					0	Unrestricted	90	90.00	0	Unrestricted	0.00	0.00	0.00	0.00
15	1					0	Unrestricted	90	90.00	0	Unrestricted	0.00	0.00	0.00	0.00
16	1					0	Unrestricted	90	90.00	0	Unrestricted	0.00	0.00	0.00	0.00
17	1		1	1	C7	0	1800	61	62.00	0	Unrestricted	0.00	0.00	0.00	0.00
18	1 C		1	1	C8	0	1800	62	63.00	0	Unrestricted	0.00	0.00	0.00	0.00
19	1 C		1	1	C5	0	1800	74	75.00	0	Unrestricted	0.00	0.00	0.00	0.00
20	1 C		1	1	C6	0	1800	62	63.00	0	Unrestricted	0.00	0.00	0.00	0.00
21	1 C		1	1	C10	0	1800	11	12.00	0	Unrestricted	0.00	0.00	0.00	0.00
22	1 C		1	1	C11	0	1800	9	10.00	0	Unrestricted	0.00	0.00	0.00	0.00
23	1		1	1	C12	0	1800	7	8.00	0	Unrestricted	0.00	0.00	0.00	0.00
24	1 C		1	1	C9	0	1800	9	10.00	0	Unrestricted	0.00	0.00	0.00	0.00
25	1		1	1	S	67	1800	27	0.00	12	652	3.17	1.45	2.13	0.04
26	1		1	1	N	63	1800	27	0.00	11	700	2.79	1.36	2.01	0.03
27	1		1	1	E2	217 <	1800	15	0.00	68	33	49.13	46.14	103.94	5.76 +
28	1					357	Unrestricted	90	24.00	0	Unrestricted	1.04	0.00	0.00	0.00

### Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	71.91	11.81	6.09	7.86	1.55	133.66	10.92	0.00	144.58
Bus									
Cycle	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	71.91	11.81	6.09	7.86	1.55	133.66	10.92	0.00	144.58

- | N = at least one source for this link/traffic stream carries normal traffic
- | C = at least one source for this link/traffic stream carries Cycle traffic
- | < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- | \* = stop or delay weighting has been set to a value other than 100%
- | ^ = stop or delay path weighting has been set to a value other than 100%
- | + = average link/traffic stream excess queue is greater than 0
- | P.I. = PERFORMANCE INDEX

# A1 - DO SOMETHING D6 - 2041 | DO SOMETHING | PM

## Signal Timings

Network Default: 90s cycle time; 90 steps

### Intergreen Matrix for Controller Stream 1

		To																							
		E	N	S	W	C1	P1	C2	E2	P2	C3	P3	C4	P4	C5	C6	C7	C8	C9	C10	C11	C12			
From	E		5	5			7			7		6		5					7	9	9	5			
	N	5			5		7		5	6		6		7					8	9	7	7			
	S	5			5		5		5	6		7		6					5	7	9	7			
	W		5	5			5		5	5		5		5					7	5	7	9			
	C1						5			7		10													
	P1	15	15	15	15	0																			
	C2									5															
	E2		5	0	5																				
	P2	12	12	12	12	0		12									12								
	C3												5												
	P3	13	13	13	13	0						13						13							
	C4														5										
P4	12	0	12	12									12					12							
C5																									
C6									5																
C7											5														
C8													5												
C9	10	9	5	10																					
C10	10	10	9	5																					
C11	9	5	9	10																					
C12	5	10	9	9																					

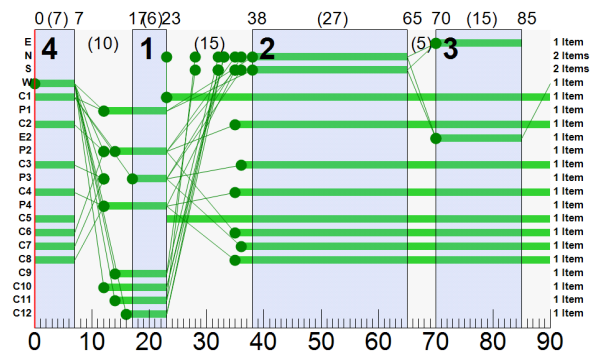
### Resultant Stages

Controller Stream	Resultant Stage	Is Base Stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	P1,P2,P3,P4,C9,C10,C11,C12	17	23	6	1	6
	2	✓	2	C1,C2,C3,C4,C5,C6,C8,S,N,C7	38	65	27	1	7
	3	✓	3	C1,C2,C3,C4,C5,C6,C7,C8,E,E2	70	85	15	1	7
	4	✓	4	C1,C2,C3,C4,C5,C6,C7,C8,W	0	7	7	1	7

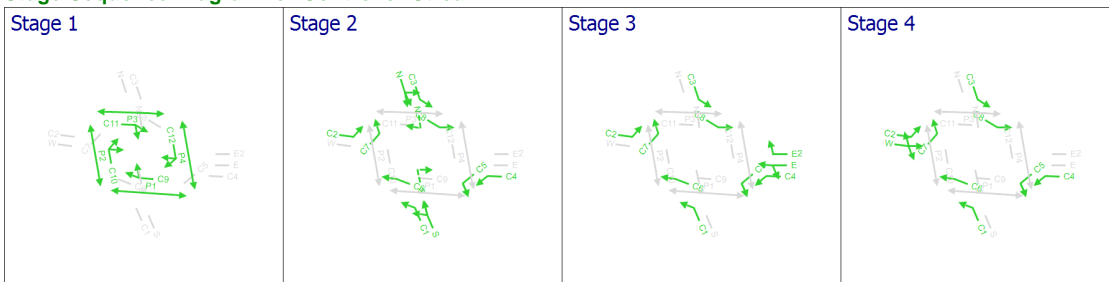
### Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
A	1	1	1	E	70	85	15
B	1	1	1	S	38	65	27
C	1	1	1	W	0	7	7
D	1	1	1	N	38	65	27
9	1	1	1	C2	35	7	62
10	1	1	1	C3	36	7	61
11	1	1	1	C4	35	7	62
12	1	1	1	C1	23	7	74
17	1	1	1	C7	36	7	61
18	1	1	1	C8	35	7	62
19	1	1	1	C5	23	7	74
20	1	1	1	C6	35	7	62
21	1	1	1	C10	12	23	11
22	1	1	1	C11	14	23	9
23	1	1	1	C12	16	23	7
24	1	1	1	C9	14	23	9
25	1	1	1	S	38	65	27
26	1	1	1	N	38	65	27
27	1	1	1	E2	70	85	15

### Phase Timings Diagram for Controller Stream 1



### Stage Sequence Diagram for Controller Stream 1



## Final Prediction Table

### Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Wasted time total (s per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)
A	1	(untitled)	1	1	E	162	1800	15	0.00	51	78	42.09	39.16	94.74	3.90
Ax	1	(untitled)				239	Unrestricted	90	50.00	0	Unrestricted	7.57	0.00	0.00	0.00
B	1	(untitled)	1	1	S	262 <	1800	27	0.00	47	92	29.76	27.81	81.60	5.44 +
Bx	1	(untitled)				333	Unrestricted	90	40.00	0	Unrestricted	5.12	0.00	0.00	0.00
C	1	(untitled)	1	1	W	82	1800	7	0.00	51	76	53.22	50.74	105.61	2.20
Cx	1	(untitled)				34	Unrestricted	90	67.00	0	Unrestricted	6.00	0.00	0.00	0.00
D	1	(untitled)	1	1	N	333 <	1800	27	0.00	59	51	32.72	30.88	87.25	7.46 +
Dx	1	(untitled)				379	Unrestricted	90	33.00	0	Unrestricted	5.48	0.00	0.00	0.00
9	1 C	Cycle Lane	1	1	C2	0	1800	62	63.00	0	Unrestricted	0.00	0.00	0.00	0.00
10	1 C		1	1	C3	0	1800	61	62.00	0	Unrestricted	0.00	0.00	0.00	0.00
11	1 C		1	1	C4	0	1800	62	63.00	0	Unrestricted	0.00	0.00	0.00	0.00
12	1 C		1	1	C1	0	1800	74	75.00	0	Unrestricted	0.00	0.00	0.00	0.00
13	1					0	Unrestricted	90	90.00	0	Unrestricted	0.00	0.00	0.00	0.00
14	1					0	Unrestricted	90	90.00	0	Unrestricted	0.00	0.00	0.00	0.00
15	1					0	Unrestricted	90	90.00	0	Unrestricted	0.00	0.00	0.00	0.00
16	1					0	Unrestricted	90	90.00	0	Unrestricted	0.00	0.00	0.00	0.00
17	1		1	1	C7	0	1800	61	62.00	0	Unrestricted	0.00	0.00	0.00	0.00
18	1 C		1	1	C8	0	1800	62	63.00	0	Unrestricted	0.00	0.00	0.00	0.00
19	1 C		1	1	C5	0	1800	74	75.00	0	Unrestricted	0.00	0.00	0.00	0.00
20	1 C		1	1	C6	0	1800	62	63.00	0	Unrestricted	0.00	0.00	0.00	0.00
21	1 C		1	1	C10	0	1800	11	12.00	0	Unrestricted	0.00	0.00	0.00	0.00
22	1 C		1	1	C11	0	1800	9	10.00	0	Unrestricted	0.00	0.00	0.00	0.00
23	1		1	1	C12	0	1800	7	8.00	0	Unrestricted	0.00	0.00	0.00	0.00
24	1 C		1	1	C9	0	1800	9	10.00	0	Unrestricted	0.00	0.00	0.00	0.00
25	1		1	1	S	85	1800	27	0.00	15	493	3.31	1.59	2.28	0.05
26	1		1	1	N	16	1800	27	14.00	3	3050	2.48	1.05	1.66	0.01
27	1		1	1	E2	146	1800	15	0.00	46	97	40.80	37.81	92.67	3.43
28	1					308	Unrestricted	90	0.00	0	Unrestricted	1.04	0.00	0.00	0.00

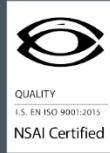
### Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	71.02	11.74	6.05	8.01	1.36	133.11	11.06	0.00	144.17
Bus									
Cycle	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	71.02	11.74	6.05	8.01	1.36	133.11	11.06	0.00	144.17

- | N = at least one source for this link/traffic stream carries normal traffic
- | C = at least one source for this link/traffic stream carries Cycle traffic
- | < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- | \* = stop or delay weighting has been set to a value other than 100%
- | ^ = stop or delay path weighting has been set to a value other than 100%
- | + = average link/traffic stream excess queue is greater than 0
- | P.I. = PERFORMANCE INDEX







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