

# EDF RENEWABLES IRELAND LTD

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## KELLYSTOWN WIND FARM

## COUNTY LOUTH

## TRAFFIC AND TRANSPORT ASSESSMENT

~~November 2024~~

August 2025

Job No. 6918



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**KELLYSTOWN WIND FARM**  
**TRAFFIC AND TRANSPORT ASSESSMENT**

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# 1 INTRODUCTION

## 1.1 Brief

This Traffic and Transport Assessment has been reviewed and updated where necessary considering any subsequent modifications, updates and additional information acquired for the Further information Request issued by Louth County Council (LCC) on the 6<sup>th</sup> February 2025 (Reference No: 2460766). It is noted that for ease of reference all changes from the original chapter are shown in orange. Where text has been removed it is shown as ~~strikethrough~~.

Following a review of the proposed development based on the Request for Further Information, it has been determined that site entrance 4 is not required for the construction, operation and decommissioning of the proposed development, as all works can be accommodated via the proposed site entrances 1-3. Therefore, it is proposed that entrance 4 will not be taken forward as part of the proposed development, and the initially proposed use of entrance 4 will instead be accommodated at entrance 2. The author of this chapter has reviewed the revision and made any necessary amendments accordingly.

Jennings O'Donovan & Partners Limited has been appointed by EDF Renewables Ireland Ltd to prepare a Traffic and Transport Assessment ("TTA") for the proposed Kellystown Wind Farm, Co. Louth. The Kellystown Wind Farm Site is located in the townlands of Brittas, Brownstown, Cartanstown, Drumshallon, Gallstown, Groom, Kearneystown, Keeverstown, Piperstown, Rokeby, Stonehouse and Swinestown. Co. Louth. The development will consist of 5 wind turbines with a maximum overall ground to blade tip height of up to 180 metres. 38kV on-site substation, Permanent Met Mast, underground Grid Connection from the onsite 38kV substation to Drybridge 110kV Substation.

## 1.2 Statement of Authority

The Traffic and Transport Assessment has been prepared by John Doogan of Jennings O'Donovan & Partners Limited, Finisklin, Sligo. Established in Sligo in 1950, Jennings O'Donovan & Partners Limited is a Clean Tech Company providing consulting engineering services in the areas of road design, renewable energy, civil and structural engineering, water supply, wastewater collection and treatment, environmental resource management and impact assessment and in the area of industrial and commercial development.

## 1.3 Design References / Standards

The TTA for the Proposed Development has been based on the following technical documents:

- Louth County Council Development Plan.

- Transport Infrastructure Ireland publications:
  - PE-PDV-02045 Traffic and Transport Assessment Guidelines.
  - PE-PAG-02017 Travel Demand Projections.
  - PE-PAG-02039, Expansion Factors for Short Period Traffic Counts.
  - Spatial Planning and National Roads.
  - Design Manual for Roads and Bridges.
  - Specification for Road Works.
- Design Manual for Urban Roads and Streets - DMURS
- Junctions 9 Traffic Analysis Software.

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## 1.4 Methodology

The methodology adopted for this Traffic and Transport Assessment involved:

A site visit was undertaken on Wednesday 26th October 2023 to record traffic volumes and turning movements of vehicles at the R132/L6274/L2254 junction and at the L6274/L2275 junction.

Traffic Counts were carried out between 7.45am and 11.00am in the morning.

A traffic analysis was carried out at the R132 / L6274 / L2254 junction and at the L6274 / L2275 junctions using the 2023 Existing traffic flows to determine if capacity problems exist at the junctions in the vicinity of the Proposed Development.

Future year traffic assessments were then carried out at the R132 / L6274 / L2254 and L6274 / L2275 junctions for the following scenarios to determine if capacity problems would arise at the junction with and without the Proposed Development in place.

2025 Projected traffic flows without the Proposed Development (Planning Approval)

2035 Projected traffic flows without the Proposed Development (Planning Period / Windfarm Construction)

2070 Projected traffic flows without the Proposed Development (Operations Period)

2035 Projected traffic flows with the Proposed Development (Wind Farm Construction Traffic)

2070 Projected traffic flows with the Proposed Development (Wind Farm Operations Traffic)

2070 Projected traffic flows with the Proposed Development (Wind Farm Decommissioning Traffic)

A traffic assessment was carried out with the Proposed Development under construction in 2035 with additional traffic from unrelated planned and consented developments to determine if capacity problems would arise at the junctions due to combined traffic volumes in the vicinity of the development.

Temporary traffic lights will be required for short periods on the R132 and L6274 for traffic management during the construction of the Proposed Development. A traffic analysis has been carried out to assess the impact of the temporary traffic lights on the R132 and L6274.

A traffic analysis has been carried out to assess the impact of projected traffic flows combined with peak construction traffic on L6274 existing accesses and local road junctions.

## 1.5 Consultation With Local authority

The design team for the Proposed Development held a pre planning meeting with representatives from Louth County Council roads department to discuss the project on 29th February 2024.

## 1.6 Site Location, Context and Proposed Development

Kellystown wind farm site is located to the east of the M1 motorway, approximately 8.3km to the north of Drogheda. The wind farm will have ~~four~~ three site entrances points from the public road network, two access points from the L6274 local road and ~~two~~ one access points from the L2275. The proposed wind farm will consist of 5 turbines with a maximum overall ground to blade tip height of up to 180 metres, 38kV substation, Meteorological Masts and underground grid connection from onsite 38kV substation to Drybridge 110kV Substation. Each turbine will be founded on a reinforced concrete foundation and will have a crane hardstand constructed from granular materials to accommodate cranes and store turbine components during turbine erection. Access to the turbines will be from two site entrances on the existing L6274 local road via a network of site roads constructed from granular materials. The L6274 access points will be constructed to accommodate the swept path and to withstand wheel loading from abnormal load vehicles delivering turbine components to the site. Access to the onsite 38kV substation will be from a realigned junction on the L2275 and access to the met mast will be from Site entrance 2 on the L6274 via the proposed development access track network. ~~an existing private access road with an existing junction on the L2275~~. The turbines will be linked to the onsite

38kV substation by underground electrical and communications cabling. The wind farm will be linked to the National Grid by an underground grid connection constructed from the onsite 38kV substation to the existing Drybridge 110kV substation. The wind farm site will be drained by an integrated site drainage network consisting of clean and dirty water drainage systems. The Location and layout of the wind farm site is shown on **Figure 1**. The wind farm Grid Connection route is shown on **Figure 2**.



**Figure 1 – Site Layout**

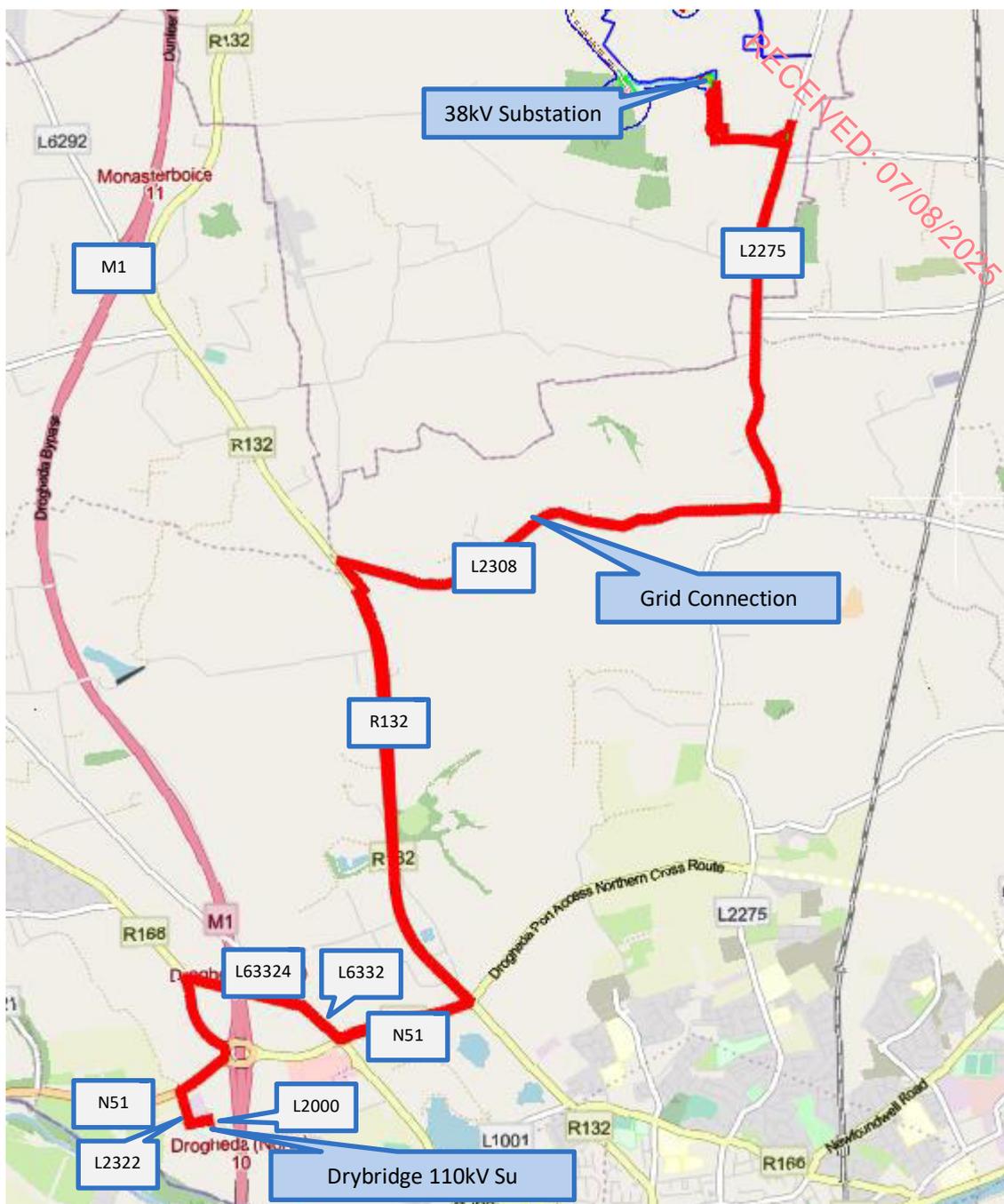


Figure 2 – Grid Connection Route

## 2 EXISTING PUBLIC ROAD NETWORK AND TRAFFIC

## 2.1 Existing Traffic Volumes

To assess the impact of the Proposed Development on the existing road network when the Proposed Development is constructed and fully occupied, baseline traffic volumes in the area are required. Jennings O'Donovan carried out classified traffic counts Wednesday 26th October 2023 to record traffic volumes and turning movements of vehicles at the R132/L6274/L2254 junction and at the L6274/L2275 junction.

The recorded traffic flows at the R132/L6274/L2254 junction are summarised in **Table 1**. The recorded traffic flows at the L6274/L2275 junction are summarised in **Table 2**.

R132 / L6274 / L2254			
Time	LGV	HGV	Total Vehicles Through Junction
7.45am to 8.00am	68	8	76
8.00am to 8.15am	91	11	102
8.15am to 8.30am	84	9	93
8.30am to 8.45am	111	15	126
8.45am to 9.00am	90	14	104
9.00am to 9.15am	49	9	58
9.15am to 9.30am	55	9	64
9.30am to 9.45am	38	16	54
9.45am to 10.00am	34	12	46
10.00am to 10.15am	36	11	47
10.15am to 10.30am	38	5	43
10.30am to 10.45am	48	7	55
10.45am to 11.00am	44	12	56

**Table 1 – R132/L6274/L2254 Junction Traffic Volumes**

L6274 / L2275			
Time	LGV	HGV	Total Vehicles Through Junction
7.45am to 8.00am	34	4	38
8.00am to 8.15am	34	9	43
8.15am to 8.30am	48	7	55
8.30am to 8.45am	58	3	61
8.45am to 9.00am	47	7	54
9.00am to 9.15am	35	6	41
9.15am to 9.30am	25	2	27
9.30am to 9.45am	18	2	20
9.45am to 10.00am	18	5	23
10.00am to 10.15am	13	2	16
10.15am to 10.30am	14	3	17

10.30am to 10.45am	16	3	19
10.45am to 11.00am	16	5	21

**Table 1 –L6274/L2275 Junction Traffic Volumes**

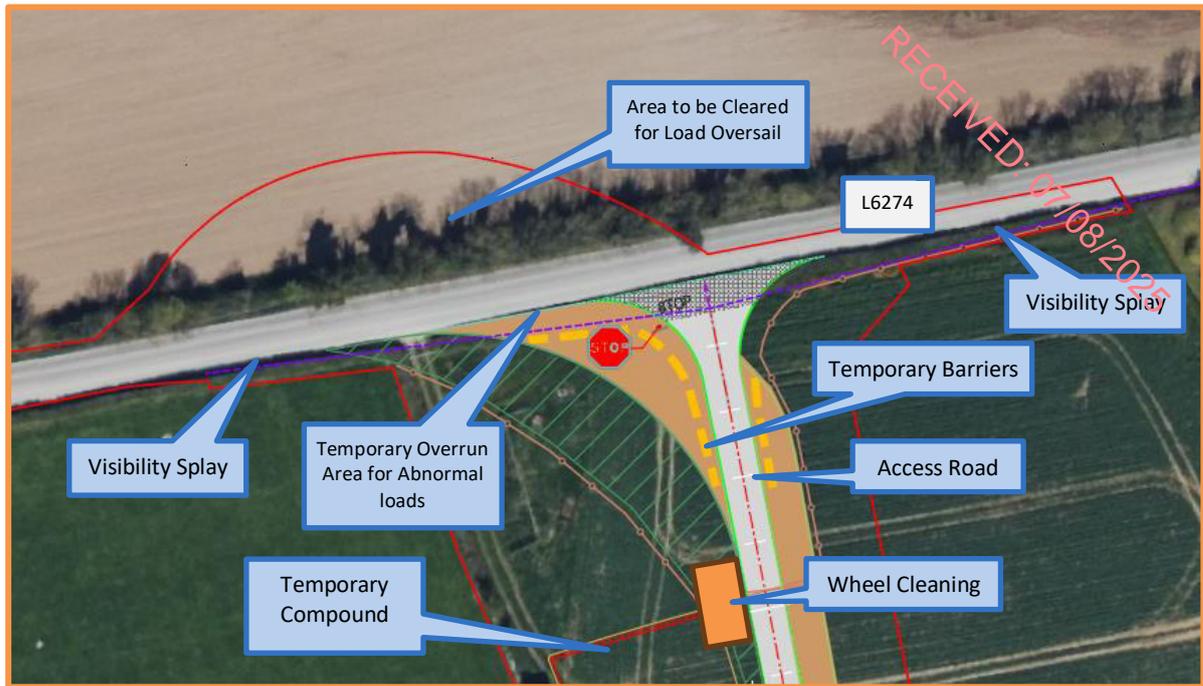
The morning peak hour traffic period on the public road network in the vicinity of the Proposed Development is obtained from the traffic count data in **Table 1 and Table 2**. The Traffic data shows that peak traffic occurs between 8.00am and 9.00am in the morning. The peak hour period shown in **Table 3** is used to carry out capacity analysis for the development.

AM Peak Hour	8.00 – 9.00
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**Table 3 –Peak Hour Traffic Period**

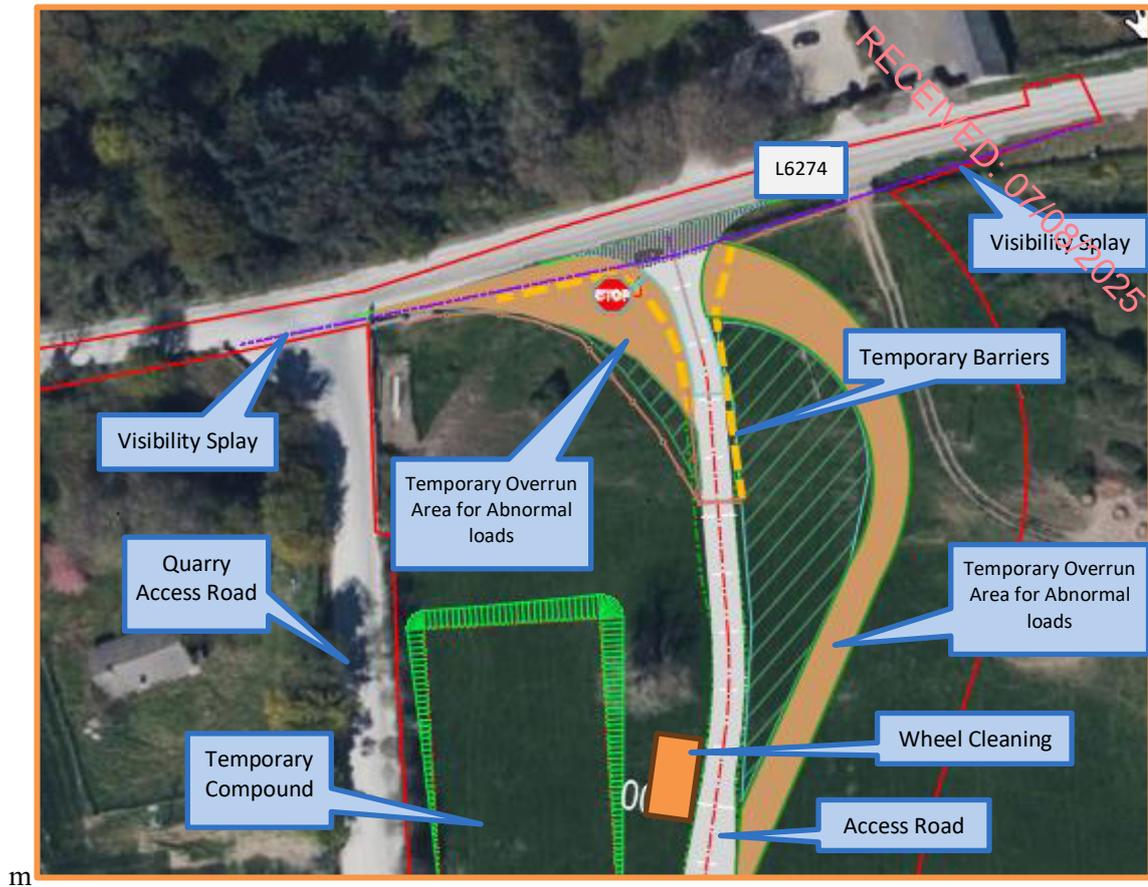
## 2.2 Access to the Proposed Development

The location of the site entrances to the Proposed Development are shown on **Figure 1**. Site entrance No. 1 will be constructed on the L6274 local road. The site entrance will consist of a simple T-Junction with priority for L6274 traffic. The junction will be constructed to access Turbine T1 during the construction and operation of the wind farm. The junction will be constructed to accommodate HGV vehicles with an extended overrun area to accommodate the swept path and wheel loading from abnormal load vehicles delivering turbine components during the turbine erection phase of the project. During the construction wind farm infrastructure such as roads and hardstands, the overrun area at the junctions for abnormal load vehicles will not be in use and access to the overrun areas will be restricted using temporary traffic barriers. The temporary traffic barriers will be used to channelise traffic at the junctions and to prevent parking in the vicinity of the L6274. The overrun area at the junction will be reinstated following the delivery of turbine components. The site entrance junction will have a dwell area with a gradient of -2.5% at its intersection with the L6274 with drainage falling towards the wind farm site and away from the L6274 carriageway. The site entrance junction will be gated and fenced with stock proof fencing during the construction period, the access gates will be set back 20m from the L6274 carriageway edge to accommodate HGV vehicles entering the wind farm site and to eliminate the possibility of vehicles blocking the L6274. Wheel cleaning facilities will be provided at site access junctions to prevent the spread of mud and debris onto the L6274 carriageway. The Layout of site entrance No.1 is shown on **Figure 3**. Visibility at the junction will be in accordance with Louth County Council Development Plan, Table 13.13 for a non-domestic development on a local road and will have visibility splays of 75m measured from a 4.5m setback.



**Figure 3 – Site Entrance No. 1**

Site entrance No. 2 will be constructed on the L6274 local road. The site entrance will consist of a simple T-Junction with priority for L6274 traffic. The junction will be constructed to access Turbines T2, T3, T4 and T5 during the construction and operation of the wind farm. The junction will be constructed to accommodate HGV vehicles with an extended overrun area to accommodate the swept path and wheel loading from abnormal load vehicles delivering turbine components during the turbine erection phase of the project. During the construction wind farm infrastructure such as roads and hardstands, the overrun area at the junctions for abnormal load vehicles will not be in use and access to the overrun areas will be restricted using temporary traffic barriers. The temporary traffic barriers will be used to channelise traffic at the junctions and to prevent parking in the vicinity of the L6274. The overrun area at the junction will be reinstated following the delivery of turbine components. The site entrance junction will have a dwell area with a gradient of -2.5% at its intersection with the L6274 with drainage falling towards the wind farm site and away from the L6274 carriageway. The site entrance junction will be gated and fenced with stock proof fencing during the construction period, the access gates will be set back 20m from the L6274 carriageway edge to accommodate HGV vehicles entering the wind farm site and to eliminate the possibility of vehicles blocking the L6274. Wheel cleaning facilities will be provided at site access junctions to prevent the spread of mud and debris onto the L6274 carriageway. The Layout of site entrance No.2 is shown on **Figure 4**. Visibility at the junction will be in accordance with Louth County Council Development Plan, Table 13.13 for a non-domestic development on a local road and will have visibility splays of 75m measured from a 4.5m setback.



**Figure 4 – Site Entrance No. 2**

Site entrance No. 3 is an existing priority access junction on the L2275 local road. The junction will be used during the construction and operation of the onsite 38kV substation. The existing access will be realigned to increase visibility splays at the junction. The Layout of site entrance No.3 is shown on **Figure 5**. Visibility at the junction will be in accordance with Louth County Council Development Plan, Table 13.13 for a non-domestic development on a local road with visibility splays of 75m measured from a 4.5m setback.



**Figure 5 – Site Entrance No. 3**

Site entrance No. 4 is an existing priority access junction on the L2275 local road. The junction will be used during the construction and operation of the permanent met mast. It is not proposed to modify the existing junction as part of the wind farm development. The Layout of site entrance No.4 is shown on **Figure 6.**



**Figure 6 – Site Entrance No. 4**

### 2.3 Existing Roads in the Vicinity of the Site

Site entrances No. 1 and No.2 are located on the L6274 local road (Reference Plate 1). The L6274 is a 6.0m wide single carriageway with grass verges. The L6274 runs between the R132 regional road and the L2275 local road and has an 80km/h speed limit classification. The L6274 is in good condition and will be the primary access road to the site during the construction of the wind farm. Existing traffic volumes on the L6274 were obtained from the classified traffic counts carried out by JOD on Wednesday 26th October 2023 at the R132 / L6274 junction. Using the methodology from TII publication PE-PAG-02039 to calculate annual average daily traffic (AADT) from short period traffic counts, the resulting AADT on the L6274 are calculated from the recorded traffic counts as follows. The L6274 local road has an AADT of 1,912 vehicles at its junction with the R132 which equates to a two-way traffic flow of approximately 142 vehicles during peak hour traffic periods with 3% HGV traffic.



**Plate 1 – L6274 Local Road**

Site entrance junction No. 3 ~~and No. 4 are~~ is located on the L2275 local road (Reference Plate 2). The L2275 is a 5.0m wide single carriageway with grass verges and has an 80km/h speed limit classification. The L2275 runs between the R170 near the village of Grangebellew and the L6302. The L2275 is in good condition and will be used by wind farm construction and operations traffic to access the onsite 38kV substation and met mast. Existing traffic volumes on the L2275 were obtained from the classified traffic counts carried out by JOD on Wednesday 26th October 2023 at the L2275 / L6274 junction. Using the methodology from TII publication PE-PAG-02039 to calculate annual average daily traffic (AADT) from short period traffic counts, the resulting AADT on the L2275 is calculated from the recorded traffic counts as follows. The L2275 local road has an AADT of 2,855 vehicles at its junction with the L6274 which equates to a two-way traffic flow of approximately 212 vehicles during peak hour traffic periods with 1.3% HGV traffic.



**Plate 2 – L2275 Local Road**

The R132 runs to the west of the wind farm site and links the site to the M1 motorway at junctions 11 and 12 (Reference Plate 3). The R132 is a 6.0m wide single carriageway with two lanes, hard strips and grass verges. Existing traffic volumes on the R132 were obtained from the classified traffic counts carried out by JOD on Wednesday 26th October 2023 at the R132 / L6274 junction. Using the methodology from TII publication PE-PAG-02039 to calculate annual average daily traffic (AADT) from short period traffic counts, the resulting AADT on the R132 is calculated from the recorded traffic counts as follows. The R132 local road has an AADT of 4,027 vehicles at its junction with the L6274 which equates to a two-way traffic flow of approximately 300 vehicles during peak hour traffic periods with 3% HGV traffic.



**Plate 3 – R132 Regional Road**

## 2.4 Existing Junctions in the Vicinity of the Site

The existing R132 / L6274/ L2254 (Reference Plate 4) is a staggered junction with priority for R132 traffic. The junction is signed and marked with regulatory and directional signage and roadmarkings. The junction is not lit by public lighting. Observations during the traffic counts and traffic analysis carried out at the R132 / L6274/ L2254 junction using the recorded traffic volumes show that there are no capacity problems at the junction under current traffic conditions. The results of the analysis are included in **Appendix A**.



**Plate 4 – R132 / L6274 /L2254 Priority junction**

The existing L2275 / L6274 (Reference Plate 5) is a simple junction with priority for L2275 traffic. The junction is signed and marked with regulatory and directional signage and roadmarkings. The junction is not lit by public lighting. Observations during the traffic counts and traffic analysis carried out at the L2275 / L6274 junction using the recorded traffic volumes show that there are no capacity problems at the junction under current traffic conditions. The results of the analysis are included in **Appendix A**.



**Plate 5 – L2275 / L6274 Priority Junction**

The existing L2275 / L6277 (Reference Plate 6) is a mini roundabout junction. The junction is signed and marked with regulatory and directional signage and roadmarkings. The junction is not lit by public lighting. Observations during the site visit carried out in October 2023 show that there are no capacity problems at the junction under current traffic conditions.



**Plate 6 – L2275 / L6277 Mini Roundabout Junction**

## 2.5 Accident Data

Mapped statistics for accident data in the area were not available from the RSA website in June 2023.

## 2.6 Parking Facilities

Parking facilities are provided within the wind farm site.

## 3 TRAFFIC GENERATION AND TRIP DISTRIBUTION

### 3.1 Trip Generation associated with the Proposed Development

During the construction of the wind farm, the maximum daily traffic generated by the development will occur during concrete pours for turbine foundations. The concrete pours will occur on five separate days during the 18 month construction period. During the concrete pours the wind farm development will generate 168 HGV trips and 40 LGV trips on the public road network. When concrete pours are not taking place on site, the development will generate a maximum 49 HGV trips and 30 LGV trips on a daily basis. The traffic profile for the development during turbine foundation concrete pours is shown

in **Table 4**. Full details of the traffic generated by the Proposed Development is included in the project Traffic Management Plan.

Time	Arrivals		Departures	
	HGV	LGV	HGV	LGV
06.00 – 07.00		20		
07.00 – 08.00	20	15	20	
08.00 – 09.00	15	5	15	2
09.00 – 10.00	15		15	
10.00 – 11.00	15		15	
11.00 – 12.00	20		20	
12.00 – 13.00	15		15	
13.00 – 14.00	10	5	10	5
14.00 – 15.00	20		20	
15.00 – 16.00	15		15	
16.00 – 17.00	10		10	
17.00 – 18.00	8	2	8	5
18.00 – 19.00	5		5	15
19.00 – 20.00				20

**Table 6 Development Traffic Profile**

### 3.2 Traffic Distribution

For the purpose of analysis all traffic generated by the wind farm development will arrive and depart at the site entrances on the L6274 from the R132 / L6274 junction. Traffic associated with the construction of the 38kV onsite substation and grid connection works will pass through the L2275 / L6274 junction.

### 3.3 Future Traffic Growth on the Public Road Network

Traffic Infrastructure Ireland (TII) forecasts for future traffic growth on the public road network are published in PE-PAG-02017 “Travel Demand Projections”. The growth factors are applied to the 2023 baseline traffic flows to approximate the traffic flows on the public road network in the future when the development is granted planning in 2025, 10 year planning grant and construction in 2035 and a 35 year

operational period and decommissioning in 2070. The growth factors for the relevant assessment years using the central-growth scenario for County Louth are shown in **Table 7**.

Year	LGV Growth Factor	HGV Growth Factor
2023	1.00	1.00
2025	1.05	1.11
2035	1.16	1.45
2070	1.46	2.85

**Table 7 – Traffic Growth Factors for Public Roads**

#### 4 TRAFFIC ANALYSIS

##### 4.1 Traffic Analysis at the R132 / L6274 / L2254 Junction

A traffic analysis of the proposed Kellystown Windfarm development has been carried out to determine if the junction will operate within capacity for the following scenarios;

- 2023 Baseline traffic counts
- 2025 Projected traffic flows without the Proposed Development (Planning Approval)
- 2035 Projected traffic flows without the Proposed Development (Planning Period / Windfarm Construction)
- 2070 Projected traffic flows without the Proposed Development (Operations Period)
- 2035 Projected traffic flows with the Proposed Development (Wind Farm Construction Traffic)
- 2070 Projected traffic flows with the Proposed Development (Wind Farm Operations Traffic)
- 2070 Projected traffic flows with the Proposed Development (Wind Farm Decommissioning Traffic)

The results of the analysis show that the R132 / L6274/ L2254 junction will not exceed the 0.85 ratio of flow to capacity (RFC) and will continue to operate with reserve capacity beyond 2070. The ratio of flow to capacity (RFC) is calculated from Junctions 9 PICADY software. An RFC value of 1.0 indicates that the junction is operating at full capacity with a value of 0.85 considered to be the maximum RFC value after which the junction will begin to experience some capacity issues. The results of the analysis are summarised in **Figure 7**, full results from the analysis are included in **Appendix A**.

AM									
	Set ID	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
2023 - Existing Traffic Flows									
Stream B-ACD	D1	0.1	0.6	11.02	0.08	B	3.80	A	

Stream A-BCD		0.1	0.5	5.64	0.04	A	3.93	A	146 % [Stream D-ABC]
Stream D-ABC		0.4	1.7	11.19	0.24	B			
Stream C-ABD		0.0	~1	0.00	0.00	A			
<b>2025 - Forecast Traffic Flows - Planning Grant</b>									
Stream B-ACD	D2	0.1	0.6	11.26	0.08	B	3.93	A	131 % [Stream D-ABC]
Stream A-BCD		0.1	0.5	5.64	0.04	A			
Stream D-ABC		0.4	1.4	11.58	0.26	B			
Stream C-ABD		0.0	~1	0.00	0.00	A			
<b>2035 - Forecast Traffic Flows - Planning Period</b>									
Stream B-ACD	D3	0.2	0.6	12.44	0.12	B	4.66	A	69 % [Stream D-ABC]
Stream A-BCD		0.1	0.5	5.59	0.06	A			
Stream D-ABC		0.7	3.2	14.20	0.37	B			
Stream C-ABD		0.0	~1	0.00	0.00	A			
<b>2070 - Forecast Traffic Flows - Operational Lifespan</b>									
Stream B-ACD	D4	0.3	1.5	15.43	0.18	C	7.14	A	28 % [Stream D-ABC]
Stream A-BCD		0.1	0.9	5.97	0.07	A			
Stream D-ABC		1.3	5.4	20.88	0.51	C			
Stream C-ABD		0.0	~1	0.00	0.00	A			
<b>2035 - Forecast Traffic Flows - Construction Traffic</b>									
Stream B-ACD	D5	0.2	0.6	12.60	0.12	B	5.65	A	48 % [Stream D-ABC]
Stream A-BCD		0.2	0.9	6.19	0.08	A			
Stream D-ABC		0.9	4.0	16.60	0.44	C			
Stream C-ABD		0.0	~1	0.00	0.00	A			
<b>2070 - Forecast Traffic Flows - Decommissioning Traffic</b>									
Stream B-ACD	D6	0.3	1.5	15.90	0.18	C	9.89	A	9 % [Stream D-ABC]
Stream A-BCD		0.2	1.0	6.14	0.10	A			
Stream D-ABC		2.1	10.0	27.97	0.63	D			
Stream C-ABD		0.0	~1	0.00	0.00	A			

**Table 7 – Traffic Analysis Summary for the R132 / L6274 / L2254 Junction**

#### 4.2 Traffic Analysis at the L2275 / L6274 Junction

A traffic analysis of the Proposed Development has been carried out to determine if the junction will operate within capacity for the following scenarios;

- 2023 Baseline traffic counts

- 2025 Projected traffic flows without the Proposed Development (Planning Approval)
- 2035 Projected traffic flows without the Proposed Development (Planning Period / Windfarm Construction)
- 2070 Projected traffic flows without the Proposed Development (Operations Period)
- 2035 Projected traffic flows with the Proposed Development (Wind Farm Construction Traffic)
- 2070 Projected traffic flows with the Proposed Development (Wind Farm Operations Traffic)
- 2070 Projected traffic flows with the Proposed Development (Wind Farm Decommissioning Traffic)

The results of the analysis show that the L2275 / L6274 junction will not exceed the 0.85 ratio of flow to capacity (RFC) and will continue to operate with reserve capacity beyond 2070. The ratio of flow to capacity (RFC) is calculated from Junctions 9 PICADY software. An RFC value of 1.0 indicates that the junction is operating at full capacity with a value of 0.85 considered to be the maximum RFC value after which the junction will begin to experience some capacity issues. The results of the analysis are summarised in **Figure 8**, full results from the analysis are included in **Appendix A**.

AM									
	Set ID	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
2023 Existing Traffic Flows									
Stream B-AC	D1	0.2	0.6	9.89	0.14	A	3.61	A	313 %
Stream C-AB		0.1	0.5	5.91	0.05	A			[Stream B-AC]
2025 - Forecast Traffic Flows - Planning Grant									
Stream B-AC	D2	0.2	0.6	10.20	0.15	B	3.75	A	283 %
Stream C-AB		0.1	0.5	5.98	0.05	A			[Stream B-AC]
2035 - Forecast Traffic Flows - Planning Period									
Stream B-AC	D3	0.3	1.6	11.04	0.21	B	3.98	A	184 %
Stream C-AB		0.1	0.5	5.99	0.08	A			[Stream B-AC]
2070 - Forecast Traffic Flows - Operational Lifespan									
Stream B-AC	D4	0.6	2.6	14.42	0.31	B	5.11	A	99 %
Stream C-AB		0.1	0.6	6.54	0.09	A			[Stream B-AC]
2035 - Forecast Traffic Flows - Construction Traffic									
Stream B-AC	D5	0.4	1.8	11.72	0.23	B	4.21	A	161 %
Stream C-AB		0.1	0.5	5.64	0.07	A			[Stream B-AC]
2070 - Forecast Traffic Flows - Decommissioning Traffic									
Stream B-AC	D6	0.7	3.0	14.94	0.33	B	5.24	A	90 %
Stream C-AB		0.1	0.5	5.84	0.08	A			[Stream B-AC]



**Table 8 – Traffic Analysis Summary for the L2275 / L6274 Junction**

### **4.3 Traffic Analysis with Unrelated Consented and Proposed Developments**

A traffic assessment was carried out during the construction (2035) and decommissioning (2070) of the the Proposed Development with additional traffic from unrelated planned and consented developments to determine if capacity problems would arise on the road network due to combined traffic volumes in the vicinity of the development. There are currently no major developments planned or consented in the vicinity of the Kellystown Windfarm which would generate significant volumes of new trips on the public road network. In order to test the ability of the road network to cater for additional developments which may coincide with wind farm construction and decommissioning traffic, an analysis has been carried out with a 10% increase in public road traffic in addition to construction and decommissioning traffic to test the capacity of the public road network. The results of the analysis show that the R132 / L6274/ L2254 junction and the L2275 / L6274 junction will not exceed the 0.85 ratio of flow to capacity (RFC) in 2035 or 2070 when wind farm construction / decommissioning traffic is combined with forecast traffic and traffic from future developments. The ratio of flow to capacity (RFC) is calculated from Junctions 9 PICADY software. An RFC value of 1.0 indicates that the junction is operating at full capacity with a value of 0.85 considered to be the maximum RFC value after which the junction will begin to experience some capacity issues. The results of the analysis are included in Appendix A.

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#### 4.4 Traffic Analysis for Temporary Traffic Lights

Temporary traffic lights will be required on the R132, L6274 and the L2275 to carry out works on the public road network during the construction of the Proposed Development. The traffic analysis shows that motorists will experience delays of approximately 75 seconds when the temporary traffic lights are installed on the road network. The location and duration of traffic management using temporary traffic lights is detailed in the Traffic Management Plan.

### 5 SUMMARY

This TMP has been undertaken to outline the management of traffic movements during the construction, operation and decommissioning phases of the Kellystown Wind Farm.

Increased volumes of traffic will be generated by the Proposed Development during the construction and decommissioning periods. Traffic analysis carried out in the Traffic and Transport Assessment (TTA) report for the project shows that traffic generated by the Proposed Development during the construction, operation and decommissioning phases of the Kellystown Wind Farm can be accommodated on the existing public road network.

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## **APPENDIX A**

### **TRAFFIC ANALYSIS - R132 / L6274 / L2254 Junction**

<h1>Junctions 9</h1>
<h2>PICADY 9 - Priority Intersection Module</h2>
Version: 9.5.1.7462 © Copyright TRL Limited, 2019
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**Filename:** R132-L6274-L2254 Junction.j9

**Path:** P:\Jod-jobs\6918 Kellystown WF\500 Environmental\503 EIA\16 Traffic and Transportation\ss\TTA

**Report generation date:** 07/08/2025 11:38:30

- 
- »2023 - Existing Traffic Flows, AM
  - »2025 - Forecast Traffic Flows - Planning Grant, AM
  - »2035 - Forecast Traffic Flows - Planning Period, AM
  - »2070 - Forecast Traffic Flows - Operational Lifespan, AM
  - »2035 - Forecast Traffic Flows - Construction Traffic, AM
  - »2070 - Forecast Traffic Flows - Decomissioning Traffic , AM
  - »2035 - Forecast Traffic Flows - Construction Traffic - Additional Developments, AM
  - »2070 - Forecast Traffic Flows - Decomissioning Traffic - Additional Developments, AM

Summary of junction performance

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AM									
Set ID	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	
<b>2023 - Existing Traffic Flows</b>									
Stream B-ACD	D1	0.1	0.6	11.02	0.08	B	3.80	A	146 % [Stream D-ABC]
Stream A-BCD		0.1	0.5	5.64	0.04	A			
Stream D-ABC		0.4	1.7	11.19	0.24	B			
Stream C-ABD		0.0	~1	0.00	0.00	A			
<b>2025 - Forecast Traffic Flows - Planning Grant</b>									
Stream B-ACD	D2	0.1	0.6	11.26	0.08	B	3.93	A	131 % [Stream D-ABC]
Stream A-BCD		0.1	0.5	5.64	0.04	A			
Stream D-ABC		0.4	1.4	11.58	0.26	B			
Stream C-ABD		0.0	~1	0.00	0.00	A			
<b>2025 - Forecast Traffic Flows - Planning Period</b>									
Stream B-ACD	D3	0.2	0.6	12.44	0.12	B	4.66	A	69 % [Stream D-ABC]
Stream A-BCD		0.1	0.5	5.59	0.06	A			
Stream D-ABC		0.7	3.2	14.20	0.37	B			
Stream C-ABD		0.0	~1	0.00	0.00	A			
<b>2070 - Forecast Traffic Flows - Operational Lifespan</b>									
Stream B-ACD	D4	0.3	1.5	15.43	0.18	C	7.14	A	28 % [Stream D-ABC]
Stream A-BCD		0.1	0.9	5.97	0.07	A			
Stream D-ABC		1.3	5.4	20.88	0.51	C			
Stream C-ABD		0.0	~1	0.00	0.00	A			
<b>2035 - Forecast Traffic Flows - Construction Traffic</b>									
Stream B-ACD	D5	0.2	0.6	12.60	0.12	B	5.65	A	48 % [Stream D-ABC]
Stream A-BCD		0.2	0.9	6.19	0.08	A			
Stream D-ABC		0.9	4.0	16.60	0.44	C			
Stream C-ABD		0.0	~1	0.00	0.00	A			
<b>2070 - Forecast Traffic Flows - Decommissioning Traffic</b>									
Stream B-ACD	D6	0.3	1.5	15.90	0.18	C	9.89	A	9 % [Stream D-ABC]
Stream A-BCD		0.2	1.0	6.14	0.10	A			
Stream D-ABC		2.1	10.0	27.97	0.63	D			
Stream C-ABD		0.0	~1	0.00	0.00	A			
<b>2035 - Forecast Traffic Flows - Construction Traffic - Additional Developments</b>									
Stream B-ACD	D7	0.2	0.6	13.08	0.14	B	6.63	A	30 % [Stream D-ABC]
Stream A-BCD		0.2	1.0	6.16	0.09	A			
Stream D-ABC		1.2	4.9	19.64	0.51	C			
Stream C-ABD		0.0	~1	0.00	0.00	A			
<b>2070 - Forecast Traffic Flows - Decommissioning Traffic - Additional Developments</b>									
Stream B-ACD	D8	0.4	1.7	16.66	0.21	C	11.86	B	1 % [Stream D-ABC]
Stream A-BCD		0.2	1.1	6.14	0.11	A			
Stream D-ABC		2.8	14.2	34.67	0.70	D			
Stream C-ABD		0.0	~1	0.00	0.00	A			

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

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

**File summary**

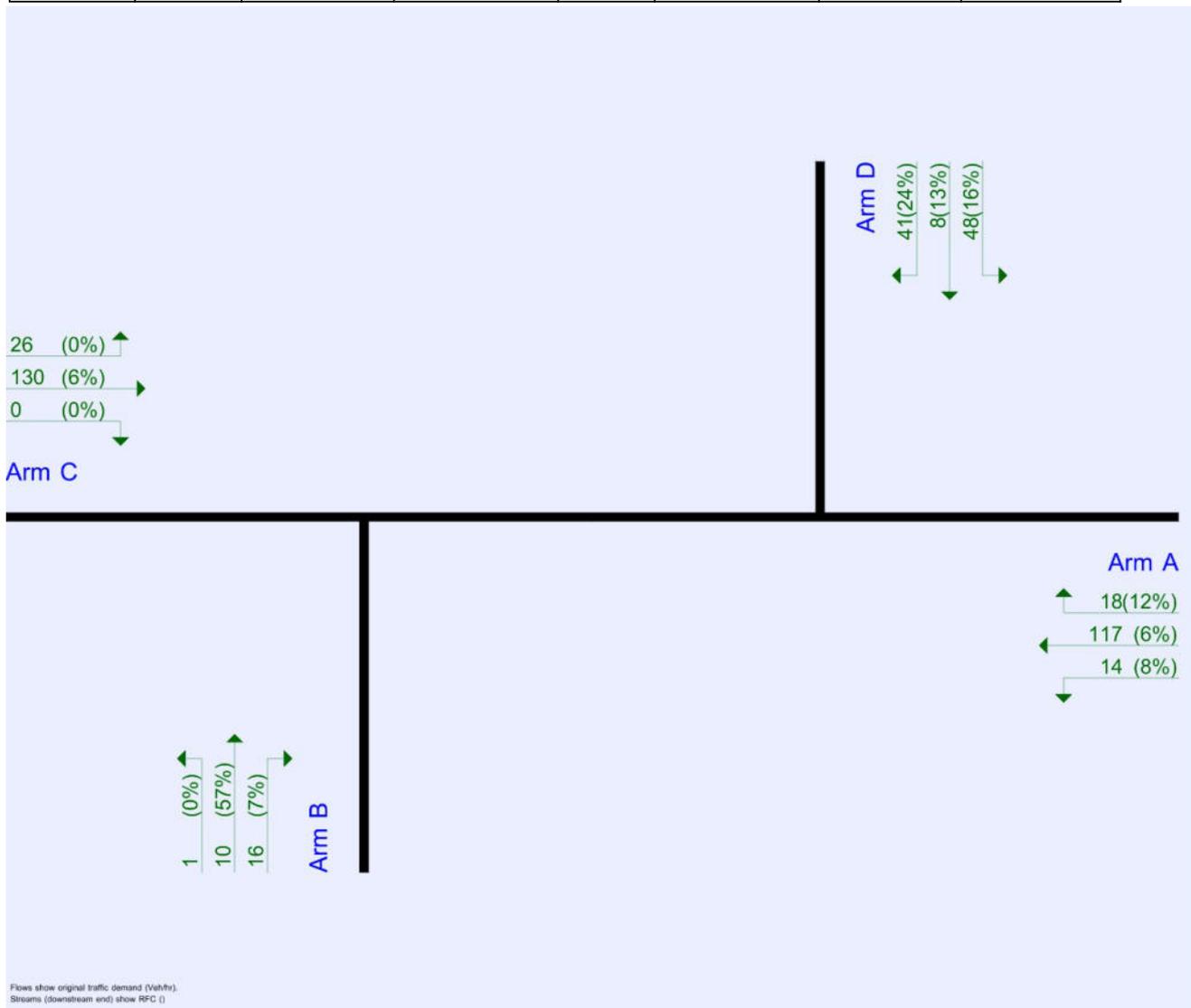
**File Description**

Title	
Location	
Site number	
Date	30/08/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	JODIRELAND\jdoogan
Description	

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**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	Veh	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

### Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
✓	✓	Delay	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)
D1	2023 - Existing Traffic Flows	AM	ONE HOUR	08:00	09:30	15
D2	2025 - Forecast Traffic Flows - Planning Grant	AM	ONE HOUR	08:00	09:30	15
D3	2035 - Forecast Traffic Flows - Planning Period	AM	ONE HOUR	08:00	09:30	15
D4	2070 - Forecast Traffic Flows - Operational Lifespan	AM	ONE HOUR	08:00	09:30	15
D5	2035 - Forecast Traffic Flows - Construction Traffic	AM	ONE HOUR	08:00	09:30	15
D6	2070 - Forecast Traffic Flows - Decommissioning Traffic	AM	ONE HOUR	08:00	09:30	15
D7	2035 - Forecast Traffic Flows - Construction Traffic - Additional Developments	AM	ONE HOUR	08:00	09:30	15
D8	2070 - Forecast Traffic Flows - Decommissioning Traffic - Additional Developments	AM	ONE HOUR	08:00	09:30	15

### Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

# 2023 - Existing Traffic Flows, AM

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## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	R132 / L6274 / L2254 Junction	Right-Left Stagger	Two-way		3.80	A

### Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	146	Stream D-ABC

## Arms

### Arms

Arm	Name	Description	Arm type
A	R132 South Arm		Major
B	L2254		Minor
C	R132 North Arm		Major
D	L6274		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	7.30			215.0	✓	0.00
C	7.30			215.0	✓	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)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	30	30
D	One lane	3.00	30	30

## 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-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
A-D	698	-	-	-	0.255	0.255	0.255	-	0.255	-	-
B-AD	502	0.086	0.218	-	-	-	0.137	0.312	0.137	0.086	0.218
B-C	643	0.093	0.235	-	-	-	-	-	-	0.093	0.235
C-B	698	0.255	0.255	-	-	-	-	-	-	0.255	0.255
D-A	643	-	-	-	0.235	0.093	0.235	-	0.093	-	-
D-BC	502	0.137	0.137	0.312	0.218	0.086	0.218	-	0.086	-	-

*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

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### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 - Existing Traffic Flows	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	141	100.000
B		✓	25	100.000
C		✓	148	100.000
D		✓	92	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	13	111	17
	B	15	0	1	9
	C	124	0	0	24
	D	45	8	39	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	8	5	12
	B	7	0	0	56
	C	6	0	0	0
	D	16	13	23	0

## Detailed Demand Data

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### Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	106	113
	B	19	23
	C	111	117
	D	69	82
08:15-08:30	A	127	135
	B	22	28
	C	133	140
	D	83	98
08:30-08:45	A	155	165
	B	28	34
	C	163	171
	D	101	120
08:45-09:00	A	155	165
	B	28	34
	C	163	171
	D	101	120
09:00-09:15	A	127	135
	B	22	28
	C	133	140
	D	83	98
09:15-09:30	A	106	113
	B	19	23
	C	111	117
	D	69	82

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-ACD	0.08	11.02	0.1	0.6	B
A-BCD	0.04	5.64	0.1	0.5	A
A-B					
A-C					
D-ABC	0.24	11.19	0.4	1.7	B
C-ABD	0.00	0.00	0.0	~1	A
C-D					
C-A					

### Main Results for each time segment

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	23	461	0.051	23	0.1	10.211	B
ABCD	17	725	0.023	16	0.0	5.643	A
A-B	10			10			
A-C	86			86			
D-ABC	82	521	0.158	81	0.2	9.702	A
C-ABD	0	662	0.000	0	0.0	0.000	A
C-D	18			18			
C-A	99			99			

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	28	453	0.062	28	0.1	10.541	B
ABCD	20	730	0.028	20	0.0	5.624	A
A-B	12			12			
A-C	102			102			
D-ABC	98	513	0.191	98	0.3	10.289	B
C-ABD	0	655	0.000	0	0.0	0.000	A
C-D	22			22			
C-A	118			118			

#### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	34	441	0.078	34	0.1	11.012	B
ABCD	26	738	0.035	26	0.1	5.595	A
A-B	15			15			
A-C	124			124			
D-ABC	120	502	0.239	120	0.4	11.163	B
C-ABD	0	646	0.000	0	0.0	0.000	A
C-D	26			26			
C-A	145			145			

#### 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	34	441	0.078	34	0.1	11.017	B
ABCD	26	738	0.035	26	0.1	5.593	A
A-B	15			15			
A-C	124			124			
D-ABC	120	502	0.239	120	0.4	11.187	B
C-ABD	0	646	0.000	0	0.0	0.000	A
C-D	26			26			
C-A	145			145			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	28	452	0.062	28	0.1	10.549	B
A-BCD	20	730	0.028	20	0.0	5.614	A
A-B	12			12			
A-C	102			102			
D-ABC	98	513	0.191	99	0.3	10.319	B
C-ABD	0	655	0.000	0	0.0	0.000	A
C-D	22			22			
C-A	118			118			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	23	461	0.051	23	0.1	10.230	B
A-BCD	17	725	0.023	17	0.0	5.641	A
A-B	10			10			
A-C	86			86			
D-ABC	82	521	0.158	82	0.2	9.752	A
C-ABD	0	662	0.000	0	0.0	0.000	A
C-D	18			18			
C-A	99			99			

Queue Variation Results for each time segment

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.07	0.00	0.00	0.07	0.07			N/A	N/A
A-BCD	0.03	0.00	0.00	0.03	0.03			N/A	N/A
D-ABC	0.22	0.00	0.00	0.22	0.22			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.08	0.03	0.31	0.56	0.60			N/A	N/A
A-BCD	0.04	0.03	0.28	0.50	0.53			N/A	N/A
D-ABC	0.28	0.00	0.00	0.28	0.28			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.10	0.03	0.32	0.58	0.61			N/A	N/A
A-BCD	0.05	0.03	0.28	0.50	0.53			N/A	N/A
D-ABC	0.37	0.03	0.30	0.55	0.58			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.10	0.03	0.31	0.56	0.59			N/A	N/A
A-BCD	0.05	0.00	0.00	0.05	0.05			N/A	N/A
D-ABC	0.37	0.04	0.37	1.31	1.71			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.08	0.00	0.00	0.08	0.08			N/A	N/A
A-BCD	0.04	0.00	0.00	0.04	0.04			N/A	N/A
D-ABC	0.28	0.00	0.00	0.28	0.28			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

09:15 - 09:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.07	0.00	0.00	0.07	0.07			N/A	N/A
A-BCD	0.03	0.00	0.00	0.03	0.03			N/A	N/A
D-ABC	0.23	0.00	0.00	0.23	0.23			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

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# 2025 - Forecast Traffic Flows - Planning Grant, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	R132 / L6274 / L2254 Junction	Right-Left Stagger	Two-way		3.93	A

### Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	131	Stream D-ABC

## 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)
D2	2025 - Forecast Traffic Flows - Planning Grant	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	149	100.000
B		✓	27	100.000
C		✓	156	100.000
D		✓	98	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	14	117	18
	B	16	0	1	10
	C	130	0	0	26
	D	48	8	41	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	8	6	12
	B	7	0	0	57
	C	6	0	0	0
	D	16	13	24	0

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## Detailed Demand Data

### Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	112	120
	B	20	25
	C	118	124
	D	73	88
08:15-08:30	A	134	143
	B	24	30
	C	141	148
	D	88	105
08:30-08:45	A	164	175
	B	29	37
	C	172	181
	D	107	128
08:45-09:00	A	164	175
	B	29	37
	C	172	181
	D	107	128
09:00-09:15	A	134	143
	B	24	30
	C	141	148
	D	88	105
09:15-09:30	A	112	120
	B	20	25
	C	118	124
	D	73	88

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-ACD	0.08	11.26	0.1	0.6	B
A-BCD	0.04	5.64	0.1	0.5	A
A-B					
A-C					
D-ABC	0.26	11.58	0.4	1.4	B
C-ABD	0.00	0.00	0.0	~1	A
C-D					
C-A					

### Main Results for each time segment

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	25	458	0.055	25	0.1	10.375	B
ABCD	18	727	0.024	18	0.0	5.641	A
A-B	11			11			
A-C	91			91			
D-ABC	88	518	0.169	87	0.2	9.914	A
C-ABD	0	660	0.000	0	0.0	0.000	A
C-D	20			20			
C-A	104			104			

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	30	449	0.067	30	0.1	10.734	B
ABCD	22	733	0.030	22	0.0	5.622	A
A-B	13			13			
A-C	108			108			
D-ABC	105	510	0.205	104	0.3	10.567	B
C-ABD	0	652	0.000	0	0.0	0.000	A
C-D	23			23			
C-A	124			124			

#### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	37	436	0.084	37	0.1	11.253	B
ABCD	28	741	0.038	28	0.1	5.592	A
A-B	16			16			
A-C	131			131			
D-ABC	128	498	0.257	128	0.4	11.553	B
C-ABD	0	642	0.000	0	0.0	0.000	A
C-D	29			29			
C-A	152			152			

#### 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	37	436	0.084	37	0.1	11.259	B
ABCD	28	741	0.038	28	0.1	5.591	A
A-B	16			16			
A-C	131			131			
D-ABC	128	498	0.257	128	0.4	11.579	B
C-ABD	0	642	0.000	0	0.0	0.000	A
C-D	29			29			
C-A	152			152			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	30	449	0.067	30	0.1	10.743	B
A-BCD	22	733	0.030	22	0.0	5.613	A
A-B	13			13			
A-C	108			108			
D-ABC	105	510	0.205	105	0.3	10.601	B
C-ABD	0	652	0.000	0	0.0	0.000	A
C-D	23			23			
C-A	124			124			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	25	458	0.055	25	0.1	10.393	B
A-BCD	18	727	0.024	18	0.0	5.639	A
A-B	11			11			
A-C	91			91			
D-ABC	88	518	0.169	88	0.2	9.972	A
C-ABD	0	660	0.000	0	0.0	0.000	A
C-D	20			20			
C-A	104			104			

Queue Variation Results for each time segment

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.07	0.00	0.00	0.07	0.07			N/A	N/A
A-BCD	0.03	0.00	0.00	0.03	0.03			N/A	N/A
D-ABC	0.24	0.00	0.00	0.24	0.24			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.09	0.03	0.32	0.57	0.60			N/A	N/A
A-BCD	0.04	0.03	0.28	0.50	0.53			N/A	N/A
D-ABC	0.30	0.00	0.00	0.30	0.30			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.11	0.03	0.33	0.59	0.62			N/A	N/A
A-BCD	0.06	0.03	0.28	0.50	0.53			N/A	N/A
D-ABC	0.41	0.03	0.31	0.55	0.58			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.11	0.03	0.31	0.56	0.59			N/A	N/A
A-BCD	0.06	0.00	0.00	0.06	0.06			N/A	N/A
D-ABC	0.41	0.04	0.37	1.41	1.42			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.09	0.00	0.00	0.09	0.09			N/A	N/A
A-BCD	0.04	0.00	0.00	0.04	0.04			N/A	N/A
D-ABC	0.31	0.00	0.00	0.31	0.31			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

09:15 - 09:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.07	0.00	0.00	0.07	0.07			N/A	N/A
A-BCD	0.03	0.00	0.00	0.03	0.03			N/A	N/A
D-ABC	0.25	0.00	0.00	0.25	0.25			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

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# 2035 - Forecast Traffic Flows - Planning Period, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	R132 / L6274 / L2254 Junction	Right-Left Stagger	Two-way		4.66	A

### Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	69	Stream D-ABC

## 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)
D3	2035 - Forecast Traffic Flows - Planning Period	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	204	100.000
B		✓	36	100.000
C		✓	215	100.000
D		✓	133	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	19	161	25
	B	22	0	1	13
	C	180	0	0	35
	D	65	12	57	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	8	6	12
	B	7	0	0	57
	C	6	0	0	0
	D	16	13	23	0

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## Detailed Demand Data

### Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	154	165
	B	27	34
	C	162	170
	D	100	119
08:15-08:30	A	184	196
	B	33	41
	C	193	203
	D	120	142
08:30-08:45	A	225	241
	B	40	50
	C	236	248
	D	147	174
08:45-09:00	A	225	241
	B	40	50
	C	236	248
	D	147	174
09:00-09:15	A	184	196
	B	33	41
	C	193	203
	D	120	142
09:15-09:30	A	154	165
	B	27	34
	C	162	170
	D	100	119

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-ACD	0.12	12.44	0.2	0.6	B
A-BCD	0.06	5.59	0.1	0.5	A
A-B					
A-C					
D-ABC	0.37	14.20	0.7	3.2	B
C-ABD	0.00	0.00	0.0	~1	A
C-D					
C-A					

**Main Results for each time segment**

**08:00 - 08:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	34	441	0.077	34	0.1	11.011	B
A-BCD	26	739	0.035	26	0.1	5.592	A
A-B	15			15			
A-C	124			124			
D-ABC	119	503	0.237	118	0.4	11.062	B
C-ABD	0	646	0.000	0	0.0	0.000	A
C-D	26			26			
C-A	143			143			

**08:15 - 08:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	41	428	0.095	41	0.1	11.578	B
A-BCD	32	748	0.043	32	0.1	5.571	A
A-B	18			18			
A-C	147			147			
D-ABC	142	491	0.290	142	0.5	12.219	B
C-ABD	0	635	0.000	0	0.0	0.000	A
C-D	31			31			
C-A	171			171			

**08:30 - 08:45**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	50	411	0.121	50	0.2	12.424	B
A-BCD	42	760	0.055	42	0.1	5.538	A
A-B	21			21			
A-C	177			177			
D-ABC	174	475	0.367	174	0.7	14.127	B
C-ABD	0	621	0.000	0	0.0	0.000	A
C-D	38			38			
C-A	210			210			

**08:45 - 09:00**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	50	411	0.121	50	0.2	12.437	B
A-BCD	42	760	0.055	42	0.1	5.534	A
A-B	21			21			
A-C	177			177			
D-ABC	174	475	0.367	174	0.7	14.198	B
C-ABD	0	621	0.000	0	0.0	0.000	A
C-D	38			38			
C-A	210			210			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	41	428	0.095	41	0.1	11.598	B
A-BCD	32	748	0.043	32	0.1	5.562	A
A-B	18			18			
A-C	147			147			
D-ABC	142	491	0.290	143	0.5	12.306	B
C-ABD	0	635	0.000	0	0.0	0.000	A
C-D	31			31			
C-A	171			171			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	34	441	0.077	34	0.1	11.044	B
A-BCD	26	739	0.035	26	0.1	5.590	A
A-B	15			15			
A-C	124			124			
D-ABC	119	503	0.237	120	0.4	11.175	B
C-ABD	0	646	0.000	0	0.0	0.000	A
C-D	26			26			
C-A	143			143			

Queue Variation Results for each time segment

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.10	0.00	0.00	0.10	0.10			N/A	N/A
A-BCD	0.05	0.00	0.00	0.05	0.05			N/A	N/A
D-ABC	0.36	0.00	0.00	0.36	0.36			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.13	0.00	0.00	0.13	0.13			N/A	N/A
A-BCD	0.07	0.03	0.28	0.50	0.53			N/A	N/A
D-ABC	0.48	0.00	0.00	0.48	0.48			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.17	0.03	0.32	0.58	0.61			N/A	N/A
A-BCD	0.10	0.03	0.29	0.52	0.55			N/A	N/A
D-ABC	0.67	0.03	0.31	0.67	0.67			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.17	0.03	0.31	0.56	0.59			N/A	N/A
A-BCD	0.10	0.00	0.00	0.10	0.10			N/A	N/A
D-ABC	0.68	0.03	0.35	1.55	3.17			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.13	0.00	0.00	0.13	0.13			N/A	N/A
A-BCD	0.07	0.00	0.00	0.07	0.07			N/A	N/A
D-ABC	0.49	0.04	0.35	1.02	1.40			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

09:15 - 09:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.11	0.00	0.00	0.11	0.11			N/A	N/A
A-BCD	0.05	0.00	0.00	0.05	0.05			N/A	N/A
D-ABC	0.37	0.03	0.30	0.54	0.57			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

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# 2070 - Forecast Traffic Flows - Operational Lifespan, AM

RECEIVED: 07/08/2025

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	R132 / L6274 / L2254 Junction	Right-Left Stagger	Two-way		7.14	A

### Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	28	Stream D-ABC

## 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)
D4	2070 - Forecast Traffic Flows - Operational Lifespan	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	228	100.000
B		✓	46	100.000
C		✓	248	100.000
D		✓	163	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	21	178	29
	B	24	0	2	20
	C	195	0	0	53
	D	78	14	72	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	13	10	20
	B	12	0	0	70
	C	10	0	0	0
	D	26	21	36	0

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## Detailed Demand Data

### Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	172	191
	B	35	48
	C	187	201
	D	123	160
08:15-08:30	A	205	229
	B	42	57
	C	223	240
	D	147	191
08:30-08:45	A	251	280
	B	51	70
	C	273	295
	D	180	234
08:45-09:00	A	251	280
	B	51	70
	C	273	295
	D	180	234
09:00-09:15	A	205	229
	B	42	57
	C	223	240
	D	147	191
09:15-09:30	A	172	191
	B	35	48
	C	187	201
	D	123	160

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-ACD	0.18	15.43	0.3	1.5	C
A-BCD	0.07	5.97	0.1	0.9	A
A-B					
A-C					
D-ABC	0.51	20.88	1.3	5.4	C
C-ABD	0.00	0.00	0.0	~1	A
C-D					
C-A					

**Main Results for each time segment**

**08:00 - 08:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	48	427	0.112	47	0.2	12.989	B
A-BCD	33	742	0.045	33	0.1	5.973	A
A-B	17			17			
A-C	141			141			
D-ABC	160	490	0.326	157	0.6	13.962	B
C-ABD	0	634	0.000	0	0.0	0.000	A
C-D	40			40			
C-A	162			162			

**08:15 - 08:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	57	411	0.139	57	0.2	13.933	B
A-BCD	42	752	0.056	42	0.1	5.956	A
A-B	20			20			
A-C	166			166			
D-ABC	191	476	0.401	190	0.8	16.276	C
C-ABD	0	622	0.000	0	0.0	0.000	A
C-D	47			47			
C-A	193			193			

**08:30 - 08:45**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	70	390	0.179	70	0.3	15.393	C
A-BCD	56	766	0.073	55	0.1	5.927	A
A-B	25			25			
A-C	200			200			
D-ABC	234	458	0.511	232	1.3	20.569	C
C-ABD	0	604	0.000	0	0.0	0.000	A
C-D	58			58			
C-A	237			237			

**08:45 - 09:00**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	70	390	0.179	70	0.3	15.434	C
A-BCD	56	766	0.073	56	0.1	5.918	A
A-B	25			25			
A-C	200			200			
D-ABC	234	457	0.511	234	1.3	20.882	C
C-ABD	0	604	0.000	0	0.0	0.000	A
C-D	58			58			
C-A	237			237			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	57	411	0.139	57	0.2	13.985	B
A-BCD	42	752	0.056	42	0.1	5.935	A
A-B	20			20			
A-C	166			166			
D-ABC	191	476	0.401	193	0.9	16.593	C
C-ABD	0	621	0.000	0	0.0	0.000	A
C-D	47			47			
C-A	193			193			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	48	426	0.112	48	0.2	13.066	B
A-BCD	33	742	0.045	34	0.1	5.970	A
A-B	17			17			
A-C	141			141			
D-ABC	160	490	0.326	161	0.6	14.264	B
C-ABD	0	634	0.000	0	0.0	0.000	A
C-D	40			40			
C-A	162			162			

Queue Variation Results for each time segment

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.17	0.00	0.00	0.17	0.17			N/A	N/A
A-BCD	0.08	0.00	0.00	0.08	0.08			N/A	N/A
D-ABC	0.61	0.00	0.00	0.61	0.61			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.22	0.00	0.00	0.22	0.22			N/A	N/A
A-BCD	0.10	0.03	0.30	0.53	0.56			N/A	N/A
D-ABC	0.85	0.71	1.30	1.82	1.88			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.29	0.04	0.36	0.64	0.68			N/A	N/A
A-BCD	0.14	0.03	0.31	0.56	0.95			N/A	N/A
D-ABC	1.30	0.04	0.36	1.30	2.99			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.30	0.04	0.39	0.84	1.46			N/A	N/A
A-BCD	0.14	0.00	0.00	0.14	0.14			N/A	N/A
D-ABC	1.33	0.04	0.37	1.53	5.40			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.22	0.00	0.00	0.22	0.22			N/A	N/A
A-BCD	0.11	0.00	0.00	0.11	0.11			N/A	N/A
D-ABC	0.89	0.08	0.85	1.65	1.65			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

09:15 - 09:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.18	0.00	0.00	0.18	0.18			N/A	N/A
A-BCD	0.08	0.00	0.00	0.08	0.08			N/A	N/A
D-ABC	0.64	0.05	0.53	1.68	1.86			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

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# 2035 - Forecast Traffic Flows - Construction Traffic, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	R132 / L6274 / L2254 Junction	Right-Left Stagger	Two-way		5.65	A

### Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	48	Stream D-ABC

## 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)
D5	2035 - Forecast Traffic Flows - Construction Traffic	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	213	100.000
B		✓	36	100.000
C		✓	227	100.000
D		✓	152	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
From		A	B	C	D
	A	0	19	161	33
	B	22	0	1	13
	C	180	0	0	47
	D	72	12	68	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	8	5	24
	B	7	0	0	56
	C	9	0	0	0
	D	22	13	24	0

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## Detailed Demand Data

### Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	160	173
	B	27	34
	C	171	183
	D	114	139
08:15-08:30	A	191	207
	B	33	41
	C	204	218
	D	136	167
08:30-08:45	A	234	254
	B	40	50
	C	250	268
	D	167	204
08:45-09:00	A	234	254
	B	40	50
	C	250	268
	D	167	204
09:00-09:15	A	191	207
	B	33	41
	C	204	218
	D	136	167
09:15-09:30	A	160	173
	B	27	34
	C	171	183
	D	114	139

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-ACD	0.12	12.60	0.2	0.6	B
A-BCD	0.08	6.19	0.2	0.9	A
A-B					
A-C					
D-ABC	0.44	16.60	0.9	4.0	C
C-ABD	0.00	0.00	0.0	~1	A
C-D					
C-A					

**Main Results for each time segment**

**08:00 - 08:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	34	437	0.078	34	0.1	11.084	B
A-BCD	38	735	0.052	38	0.1	6.190	A
A-B	15			15			
A-C	121			121			
D-ABC	139	498	0.280	138	0.5	12.138	B
C-ABD	0	643	0.000	0	0.0	0.000	A
C-D	35			35			
C-A	148			148			

**08:15 - 08:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	41	423	0.096	40	0.1	11.684	B
A-BCD	48	743	0.064	48	0.1	6.186	A
A-B	17			17			
A-C	142			142			
D-ABC	167	486	0.343	166	0.6	13.720	B
C-ABD	0	632	0.000	0	0.0	0.000	A
C-D	42			42			
C-A	176			176			

**08:30 - 08:45**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	50	405	0.123	49	0.2	12.587	B
A-BCD	62	755	0.083	62	0.2	6.169	A
A-B	21			21			
A-C	171			171			
D-ABC	204	469	0.435	203	0.9	16.461	C
C-ABD	0	617	0.000	0	0.0	0.000	A
C-D	52			52			
C-A	216			216			

**08:45 - 09:00**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	50	405	0.123	50	0.2	12.602	B
A-BCD	62	755	0.083	62	0.2	6.149	A
A-B	21			21			
A-C	171			171			
D-ABC	204	469	0.435	204	0.9	16.599	C
C-ABD	0	617	0.000	0	0.0	0.000	A
C-D	52			52			
C-A	216			216			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	41	423	0.096	41	0.1	11.708	B
A-BCD	48	743	0.064	48	0.1	6.142	A
A-B	17			17			
A-C	142			142			
D-ABC	167	486	0.343	168	0.7	13.877	B
C-ABD	0	632	0.000	0	0.0	0.000	A
C-D	42			42			
C-A	176			176			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	34	437	0.078	34	0.1	11.122	B
A-BCD	38	735	0.052	38	0.1	6.176	A
A-B	15			15			
A-C	121			121			
D-ABC	139	498	0.280	140	0.5	12.315	B
C-ABD	0	643	0.000	0	0.0	0.000	A
C-D	35			35			
C-A	148			148			

Queue Variation Results for each time segment

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.10	0.00	0.00	0.10	0.10			N/A	N/A
A-BCD	0.09	0.00	0.00	0.09	0.09			N/A	N/A
D-ABC	0.47	0.00	0.00	0.47	0.47			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.13	0.00	0.00	0.13	0.13			N/A	N/A
A-BCD	0.11	0.03	0.30	0.54	0.57			N/A	N/A
D-ABC	0.62	0.62	1.22	1.71	1.77			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.17	0.03	0.32	0.58	0.61			N/A	N/A
A-BCD	0.15	0.03	0.31	0.57	0.92			N/A	N/A
D-ABC	0.91	0.03	0.32	0.91	0.91			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.17	0.03	0.31	0.56	0.59			N/A	N/A
A-BCD	0.15	0.00	0.00	0.15	0.15			N/A	N/A
D-ABC	0.93	0.04	0.35	1.44	3.98			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.13	0.00	0.00	0.13	0.13			N/A	N/A
A-BCD	0.12	0.00	0.00	0.12	0.12			N/A	N/A
D-ABC	0.65	0.06	0.65	1.60	1.72			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

09:15 - 09:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.11	0.00	0.00	0.11	0.11			N/A	N/A
A-BCD	0.09	0.00	0.00	0.09	0.09			N/A	N/A
D-ABC	0.48	0.04	0.40	1.33	1.58			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

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# 2070 - Forecast Traffic Flows - Decomissioning Traffic , AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	R132 / L6274 / L2254 Junction	Right-Left Stagger	Two-way		9.89	A

### Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	9	Stream D-ABC

## 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)
D6	2070 - Forecast Traffic Flows - Decomissioning Traffic	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	239	100.000
B		✓	46	100.000
C		✓	261	100.000
D		✓	197	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
From		A	B	C	D
	A	0	21	178	40
	B	24	0	2	20
	C	195	0	0	66
	D	90	14	93	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	13	10	20
	B	12	0	0	70
	C	10	0	0	0
	D	26	21	36	0

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## Detailed Demand Data

### Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	180	202
	B	35	48
	C	197	211
	D	148	193
08:15-08:30	A	215	241
	B	42	57
	C	235	253
	D	177	230
08:30-08:45	A	263	295
	B	51	70
	C	288	309
	D	216	282
08:45-09:00	A	263	295
	B	51	70
	C	288	309
	D	216	282
09:00-09:15	A	215	241
	B	42	57
	C	235	253
	D	177	230
09:15-09:30	A	180	202
	B	35	48
	C	197	211
	D	148	193

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-ACD	0.18	15.90	0.3	1.5	C
A-BCD	0.10	6.14	0.2	1.0	A
A-B					
A-C					
D-ABC	0.63	27.97	2.1	10.0	D
C-ABD	0.00	0.00	0.0	~1	A
C-D					
C-A					

**Main Results for each time segment**

**08:00 - 08:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	48	420	0.114	47	0.2	13.204	B
A-BCD	47	740	0.063	46	0.1	6.104	A
A-B	17			17			
A-C	138			138			
D-ABC	193	484	0.399	190	0.8	15.797	C
C-ABD	0	629	0.000	0	0.0	0.000	A
C-D	50			50			
C-A	162			162			

**08:15 - 08:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	57	404	0.141	57	0.2	14.229	B
A-BCD	59	749	0.078	59	0.1	6.123	A
A-B	20			20			
A-C	162			162			
D-ABC	230	469	0.491	229	1.2	19.419	C
C-ABD	0	615	0.000	0	0.0	0.000	A
C-D	59			59			
C-A	193			193			

**08:30 - 08:45**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	70	381	0.183	69	0.3	15.849	C
A-BCD	78	763	0.102	77	0.2	6.143	A
A-B	24			24			
A-C	194			194			
D-ABC	282	449	0.628	279	2.1	27.027	D
C-ABD	0	596	0.000	0	0.0	0.000	A
C-D	73			73			
C-A	237			237			

**08:45 - 09:00**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	70	380	0.184	70	0.3	15.901	C
A-BCD	78	763	0.102	78	0.2	6.134	A
A-B	24			24			
A-C	194			194			
D-ABC	282	449	0.629	282	2.1	27.972	D
C-ABD	0	595	0.000	0	0.0	0.000	A
C-D	73			73			
C-A	237			237			

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09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	57	403	0.141	57	0.2	14.298	B
A-BCD	59	749	0.078	59	0.1	6.102	A
A-B	20			20			
A-C	162			162			
D-ABC	230	469	0.491	234	1.3	20.220	C
C-ABD	0	614	0.000	0	0.0	0.000	A
C-D	59			59			
C-A	193			193			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	48	420	0.114	48	0.2	13.291	B
A-BCD	47	740	0.063	47	0.1	6.104	A
A-B	17			17			
A-C	138			138			
D-ABC	193	483	0.399	195	0.9	16.356	C
C-ABD	0	628	0.000	0	0.0	0.000	A
C-D	50			50			
C-A	162			162			

Queue Variation Results for each time segment

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.17	0.00	0.00	0.17	0.17			N/A	N/A
A-BCD	0.11	0.00	0.00	0.11	0.11			N/A	N/A
D-ABC	0.84	0.72	1.30	1.83	1.89			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.22	0.00	0.00	0.22	0.22			N/A	N/A
A-BCD	0.14	0.03	0.31	0.57	0.90			N/A	N/A
D-ABC	1.21	0.30	1.28	1.80	1.80			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.30	0.04	0.36	0.64	0.68			N/A	N/A
A-BCD	0.20	0.03	0.31	0.56	1.02			N/A	N/A
D-ABC	2.05	0.04	0.40	2.74	9.99			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.31	0.04	0.39	0.94	1.51			N/A	N/A
A-BCD	0.20	0.00	0.00	0.20	0.20			N/A	N/A
D-ABC	2.12	0.04	0.38	2.12	9.04			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.23	0.00	0.00	0.23	0.23			N/A	N/A
A-BCD	0.15	0.00	0.00	0.15	0.15			N/A	N/A
D-ABC	1.31	0.07	0.72	2.78	4.06			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

09:15 - 09:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.18	0.00	0.00	0.18	0.18			N/A	N/A
A-BCD	0.11	0.00	0.00	0.11	0.11			N/A	N/A
D-ABC	0.89	0.05	0.52	1.94	2.95			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

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# 2035 - Forecast Traffic Flows - Construction Traffic - Additional Developments, AM

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## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	R132 / L6274 / L2254 Junction	Right-Left Stagger	Two-way		6.63	A

### Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	30	Stream D-ABC

## 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)
D7	2035 - Forecast Traffic Flows - Construction Traffic - Additional Developments	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	233	100.000
B		✓	40	100.000
C		✓	249	100.000
D		✓	174	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
From		A	B	C	D
	A	0	21	177	35
	B	24	0	2	14
	C	198	0	0	51
	D	78	23	73	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To			
	A	B	C	D
A	0	8	5	24
B	7	0	0	56
C	9	0	0	0
D	22	13	24	0

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## Detailed Demand Data

### Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	175	190
	B	30	37
	C	187	201
	D	131	159
08:15-08:30	A	209	226
	B	36	45
	C	224	240
	D	156	190
08:30-08:45	A	257	277
	B	44	55
	C	274	294
	D	192	233
08:45-09:00	A	257	277
	B	44	55
	C	274	294
	D	192	233
09:00-09:15	A	209	226
	B	36	45
	C	224	240
	D	156	190
09:15-09:30	A	175	190
	B	30	37
	C	187	201
	D	131	159

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-ACD	0.14	13.08	0.2	0.6	B
A-BCD	0.09	6.16	0.2	1.0	A
A-B					
A-C					
D-ABC	0.51	19.64	1.2	4.9	C
C-ABD	0.00	0.00	0.0	~1	A
C-D					
C-A					

### Main Results for each time segment

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	37	431	0.087	37	0.1	11.300	B
A-BCD	41	739	0.056	41	0.1	6.157	A
A-B	16			16			
A-C	132			132			
D-ABC	159	488	0.326	157	0.6	13.131	B
C-ABD	0	636	0.000	0	0.0	0.000	A
C-D	38			38			
C-A	162			162			

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	45	416	0.107	44	0.1	11.994	B
A-BCD	52	749	0.070	52	0.1	6.158	A
A-B	19			19			
A-C	155			155			
D-ABC	190	475	0.401	189	0.8	15.304	C
C-ABD	0	624	0.000	0	0.0	0.000	A
C-D	46			46			
C-A	194			194			

#### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	55	395	0.138	54	0.2	13.058	B
A-BCD	69	762	0.090	68	0.2	6.137	A
A-B	23			23			
A-C	186			186			
D-ABC	233	456	0.511	231	1.2	19.360	C
C-ABD	0	607	0.000	0	0.0	0.000	A
C-D	56			56			
C-A	238			238			

#### 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	55	395	0.138	55	0.2	13.082	B
A-BCD	69	762	0.090	69	0.2	6.113	A
A-B	23			23			
A-C	186			186			
D-ABC	233	456	0.511	233	1.2	19.638	C
C-ABD	0	606	0.000	0	0.0	0.000	A
C-D	56			56			
C-A	238			238			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	45	416	0.107	45	0.2	12.026	B
A-BCD	52	749	0.070	52	0.1	6.108	A
A-B	19			19			
A-C	155			155			
D-ABC	190	475	0.401	192	0.8	15.587	C
C-ABD	0	623	0.000	0	0.0	0.000	A
C-D	46			46			
C-A	194			194			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	37	430	0.087	37	0.1	11.342	B
A-BCD	42	739	0.056	42	0.1	6.142	A
A-B	16			16			
A-C	132			132			
D-ABC	159	488	0.326	160	0.6	13.398	B
C-ABD	0	635	0.000	0	0.0	0.000	A
C-D	38			38			
C-A	162			162			

Queue Variation Results for each time segment

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.12	0.00	0.00	0.12	0.12			N/A	N/A
A-BCD	0.10	0.00	0.00	0.10	0.10			N/A	N/A
D-ABC	0.58	0.00	0.00	0.58	0.58			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.15	0.00	0.00	0.15	0.15			N/A	N/A
A-BCD	0.13	0.03	0.30	0.54	0.57			N/A	N/A
D-ABC	0.79	0.67	1.22	1.70	1.76			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.19	0.03	0.32	0.58	0.61			N/A	N/A
A-BCD	0.17	0.03	0.31	0.57	1.00			N/A	N/A
D-ABC	1.22	0.03	0.33	1.22	2.47			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.20	0.03	0.31	0.56	0.60			N/A	N/A
A-BCD	0.17	0.00	0.00	0.17	0.17			N/A	N/A
D-ABC	1.25	0.03	0.35	1.36	4.93			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.15	0.00	0.00	0.15	0.15			N/A	N/A
A-BCD	0.13	0.00	0.00	0.13	0.13			N/A	N/A
D-ABC	0.84	0.07	0.81	1.44	1.44			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

09:15 - 09:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.12	0.00	0.00	0.12	0.12			N/A	N/A
A-BCD	0.10	0.00	0.00	0.10	0.10			N/A	N/A
D-ABC	0.60	0.05	0.50	1.57	1.73			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

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# 2070 - Forecast Traffic Flows - Decommissioning Traffic - Additional Developments, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	R132 / L6274 / L2254 Junction	Right-Left Stagger	Two-way		11.86	B

### Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	1	Stream D-ABC

## 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)
D8	2070 - Forecast Traffic Flows - Decommissioning Traffic - Additional Developments	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	262	100.000
B		✓	51	100.000
C		✓	286	100.000
D		✓	213	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	23	196	43
	B	26	0	3	22
	C	215	0	0	71
	D	98	15	100	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To				
	A	B	C	D	
A	0	13	10	20	
B	12	0	0	70	
C	10	0	0	0	
D	26	21	36	0	

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## Detailed Demand Data

### Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	197	221
	B	38	52
	C	215	232
	D	160	209
08:15-08:30	A	236	264
	B	46	62
	C	257	276
	D	191	250
08:30-08:45	A	288	323
	B	56	77
	C	315	339
	D	235	306
08:45-09:00	A	288	323
	B	56	77
	C	315	339
	D	235	306
09:00-09:15	A	236	264
	B	46	62
	C	257	276
	D	191	250
09:15-09:30	A	197	221
	B	38	52
	C	215	232
	D	160	209

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-ACD	0.21	16.66	0.4	1.7	C
A-BCD	0.11	6.14	0.2	1.1	A
A-B					
A-C					
D-ABC	0.70	34.67	2.8	14.2	D
C-ABD	0.00	0.00	0.0	~1	A
C-D					
C-A					

**Main Results for each time segment**

**08:00 - 08:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	52	415	0.126	52	0.2	13.478	B
A-BCD	51	745	0.069	51	0.1	6.090	A
A-B	18			18			
A-C	151			151			
D-ABC	209	477	0.438	205	1.0	17.022	C
C-ABD	0	622	0.000	0	0.0	0.000	A
C-D	53			53			
C-A	178			178			

**08:15 - 08:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	62	397	0.158	62	0.3	14.668	B
A-BCD	65	756	0.086	65	0.2	6.114	A
A-B	21			21			
A-C	177			177			
D-ABC	250	461	0.541	248	1.5	21.763	C
C-ABD	0	607	0.000	0	0.0	0.000	A
C-D	64			64			
C-A	213			213			

**08:30 - 08:45**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	77	372	0.206	76	0.3	16.587	C
A-BCD	87	772	0.113	87	0.2	6.140	A
A-B	25			25			
A-C	210			210			
D-ABC	306	439	0.696	301	2.7	32.738	D
C-ABD	0	586	0.000	0	0.0	0.000	A
C-D	78			78			
C-A	260			260			

**08:45 - 09:00**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	77	371	0.206	77	0.4	16.661	C
A-BCD	87	772	0.113	87	0.2	6.129	A
A-B	25			25			
A-C	210			210			
D-ABC	306	439	0.696	305	2.8	34.668	D
C-ABD	0	586	0.000	0	0.0	0.000	A
C-D	78			78			
C-A	260			260			

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09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	62	396	0.158	63	0.3	14.762	B
A-BCD	65	756	0.086	66	0.2	6.090	A
A-B	21			21			
A-C	177			177			
D-ABC	250	461	0.541	254	1.6	23.204	C
C-ABD	0	606	0.000	0	0.0	0.000	A
C-D	64			64			
C-A	213			213			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	52	414	0.126	53	0.2	13.583	B
A-BCD	52	745	0.069	52	0.1	6.088	A
A-B	18			18			
A-C	151			151			
D-ABC	209	477	0.438	211	1.1	17.820	C
C-ABD	0	621	0.000	0	0.0	0.000	A
C-D	53			53			
C-A	178			178			

Queue Variation Results for each time segment

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.19	0.00	0.00	0.19	0.19			N/A	N/A
A-BCD	0.12	0.00	0.00	0.12	0.12			N/A	N/A
D-ABC	0.98	0.72	1.30	1.82	1.89			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.25	0.00	0.00	0.25	0.25			N/A	N/A
A-BCD	0.16	0.03	0.29	0.53	0.56			N/A	N/A
D-ABC	1.47	0.22	1.40	2.19	2.52			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.35	0.04	0.35	0.64	0.67			N/A	N/A
A-BCD	0.23	0.03	0.31	0.56	1.06			N/A	N/A
D-ABC	2.69	0.04	0.44	5.88	14.21			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.35	0.04	0.41	1.25	1.72			N/A	N/A
A-BCD	0.23	0.00	0.00	0.23	0.23			N/A	N/A
D-ABC	2.82	0.04	0.39	3.41	13.36			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.26	0.00	0.00	0.26	0.26			N/A	N/A
A-BCD	0.16	0.00	0.00	0.16	0.16			N/A	N/A
D-ABC	1.61	0.06	0.60	3.93	6.21			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

09:15 - 09:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-ACD	0.20	0.00	0.00	0.20	0.20			N/A	N/A
A-BCD	0.13	0.00	0.00	0.13	0.13			N/A	N/A
D-ABC	1.05	0.05	0.48	2.47	4.30			N/A	N/A
C-ABD	0.00	0.00	0.00	0.00	0.00			N/A	N/A

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## **APPENDIX B**

### **TRAFFIC ANALYSIS – L2275 / L6274 Junction**

<h1>Junctions 9</h1>
<h2>PICADY 9 - Priority Intersection Module</h2>
Version: 9.5.1.7462 © 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
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**Filename:** L6274-L2275 Junction.j9

**Path:** P:\Jod-jobs\6918 Kellystown WF\500 Environmental\503 EIA\16 Traffic and Transportation\ss\TTA

**Report generation date:** 07/08/2025 11:55:33

- 
- »2023 Existing Traffic Flows, AM
  - »2025 - Forecast Traffic Flows - Planning Grant, AM
  - »2035 - Forecast Traffic Flows - Planning Period, AM
  - »2070 - Forecast Traffic Flows - Operational Lifespan, AM
  - »2035 - Forecast Traffic Flows - Construction Traffic, AM
  - »2070 - Forecast Traffic Flows - Decomissioning Traffic , AM
  - »2035 - Forecast Traffic Flows - Construction Traffic - Additional Developments, AM
  - »2070 - Forecast Traffic Flows - Decomissioning Traffic - Additional Developments, AM

**Summary of junction performance**

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AM									
Set ID	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	
<b>2023 Existing Traffic Flows</b>									
Stream B-AC	D1	0.2	0.6	9.89	0.14	A	3.61	A	313 %
Stream C-AB		0.1	0.5	5.91	0.05	A			[Stream B-AC]
<b>2025 - Forecast Traffic Flows - Planning Grant</b>									
Stream B-AC	D2	0.2	0.6	10.20	0.15	B	3.75	A	283 %
Stream C-AB		0.1	0.5	5.98	0.05	A			[Stream B-AC]
<b>2035 - Forecast Traffic Flows - Planning Period</b>									
Stream B-AC	D3	0.3	1.6	11.04	0.21	B	3.98	A	184 %
Stream C-AB		0.1	0.5	5.99	0.08	A			[Stream B-AC]
<b>2070 - Forecast Traffic Flows - Operational Lifespan</b>									
Stream B-AC	D4	0.6	2.6	14.42	0.31	B	5.11	A	99 %
Stream C-AB		0.1	0.6	6.54	0.09	A			[Stream B-AC]
<b>2035 - Forecast Traffic Flows - Construction Traffic</b>									
Stream B-AC	D5	0.4	1.8	11.72	0.23	B	4.21	A	161 %
Stream C-AB		0.1	0.5	5.64	0.07	A			[Stream B-AC]
<b>2070 - Forecast Traffic Flows - Decommissioning Traffic</b>									
Stream B-AC	D6	0.7	3.0	14.94	0.33	B	5.24	A	90 %
Stream C-AB		0.1	0.5	5.84	0.08	A			[Stream B-AC]
<b>2035 - Forecast Traffic Flows - Construction Traffic - Additional Developments</b>									
Stream B-AC	D7	0.5	2.1	12.77	0.29	B	4.59	A	117 %
Stream C-AB		0.1	0.5	5.70	0.09	A			[Stream B-AC]
<b>2070 - Forecast Traffic Flows - Decommissioning Traffic - Additional Developments</b>									
Stream B-AC	D8	0.8	3.6	15.86	0.36	C	5.51	A	74 %
Stream C-AB		0.1	0.5	5.89	0.09	A			[Stream B-AC]

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

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

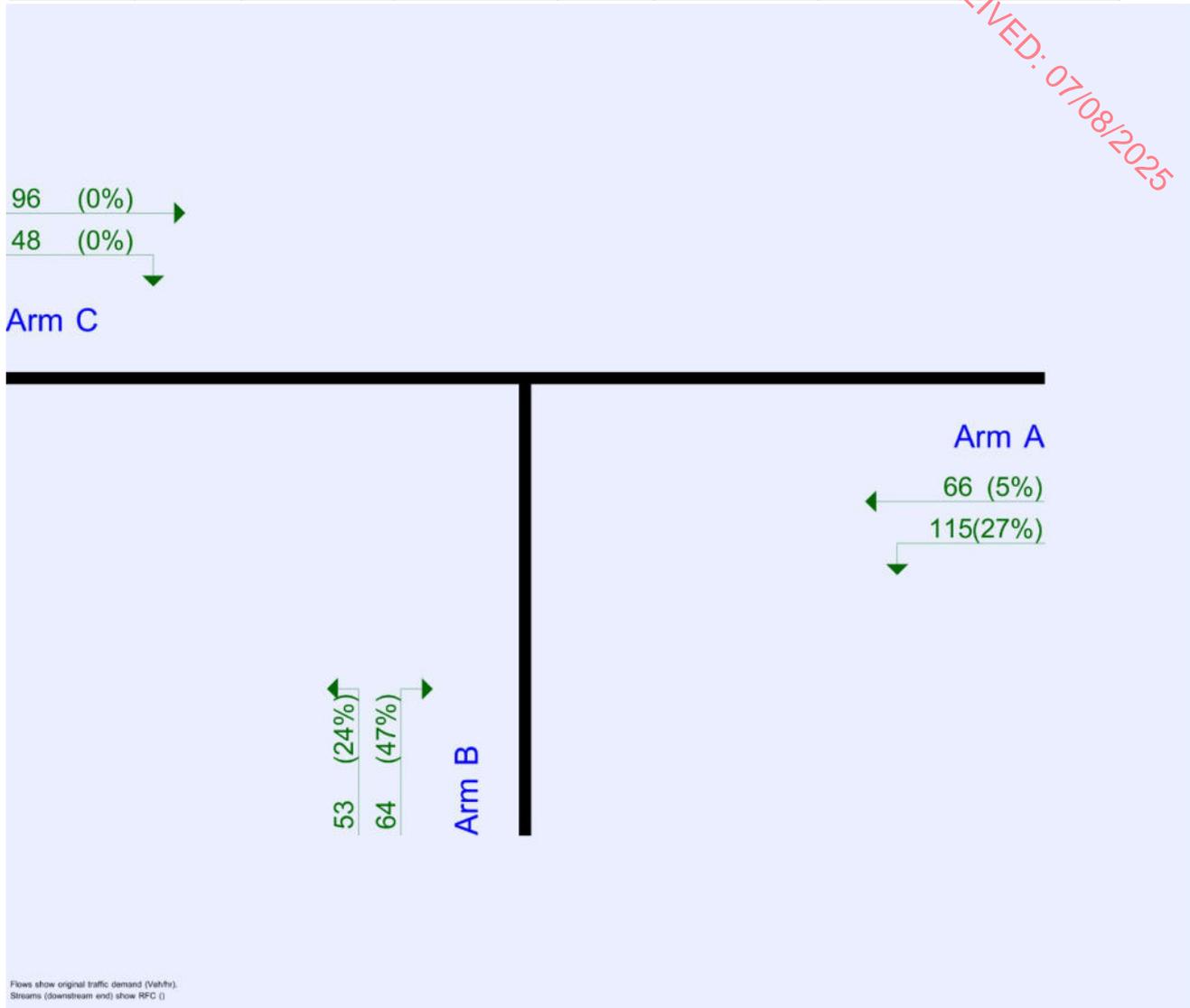
**File summary**

**File Description**

Title	
Location	
Site number	
Date	30/08/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	JODIRELAND\jdoogan
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	Veh	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

**Analysis Options**

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
✓	✓	Delay	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)
D1	2023 Existing Traffic Flows	AM	ONE HOUR	08:00	09:30	15
D2	2025 - Forecast Traffic Flows - Planning Grant	AM	ONE HOUR	08:00	09:30	15
D3	2035 - Forecast Traffic Flows - Planning Period	AM	ONE HOUR	08:00	09:30	15
D4	2070 - Forecast Traffic Flows - Operational Lifespan	AM	ONE HOUR	08:00	09:30	15
D5	2035 - Forecast Traffic Flows - Construction Traffic	AM	ONE HOUR	08:00	09:30	15
D6	2070 - Forecast Traffic Flows - Decommissioning Traffic	AM	ONE HOUR	08:00	09:30	15
D7	2035 - Forecast Traffic Flows - Construction Traffic - Additional Developments	AM	ONE HOUR	08:00	09:30	15
D8	2070 - Forecast Traffic Flows - Decommissioning Traffic - Additional Developments	AM	ONE HOUR	08:00	09:30	15

**Analysis Set Details**

ID	Network flow scaling factor (%)
A1	100.000

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# 2023 Existing Traffic Flows, AM

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## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	L6274 / L2275 Junction	T-Junction	Two-way		3.61	A

### Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	313	Stream B-AC

## Arms

### Arms

Arm	Name	Description	Arm type
A	L2275 South		Major
B	L6274		Minor
C	L2275 North		Major

### 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)
C	5.50			160.0	✓	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)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	20	20

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	494	0.092	0.232	0.146	0.332
B-C	637	0.100	0.252	-	-
C-B	667	0.264	0.264	-	-

*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)
D1	2023 Existing Traffic Flows	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	73	100.000
B		✓	55	100.000
C		✓	84	100.000

## Origin-Destination Data

### Demand (Veh/hr)

	To			
	A	B	C	
From	A	0	35	38
	B	27	0	28
	C	57	27	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	26	3
	B	33	0	14
	C	0	7	0

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## Detailed Demand Data

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### Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	55	63
	B	41	51
	C	63	65
08:15-08:30	A	66	75
	B	49	61
	C	76	77
08:30-08:45	A	80	92
	B	61	75
	C	92	95
08:45-09:00	A	80	92
	B	61	75
	C	92	95
09:00-09:15	A	66	75
	B	49	61
	C	76	77
09:15-09:30	A	55	63
	B	41	51
	C	63	65

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	0.14	9.89	0.2	0.6	A
C-AB	0.05	5.91	0.1	0.5	A
C-A					
A-B					
A-C					

### Main Results for each time segment

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	51	533	0.096	51	0.1	9.199	A
C-AB	23	677	0.034	23	0.0	5.858	A
C-A	41			41			
A-B	33			33			
A-C	29			29			

**08:15 - 08:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	61	529	0.115	61	0.2	9.484	A
C-AB	28	680	0.041	28	0.1	5.882	A
C-A	49			49			
A-B	40			40			
A-C	35			35			

**08:30 - 08:45**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	75	524	0.143	75	0.2	9.881	A
C-AB	35	683	0.051	35	0.1	5.911	A
C-A	60			60			
A-B	49			49			
A-C	43			43			

**08:45 - 09:00**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	75	524	0.143	75	0.2	9.889	A
C-AB	35	683	0.051	35	0.1	5.908	A
C-A	60			60			
A-B	49			49			
A-C	43			43			

**09:00 - 09:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	61	529	0.115	61	0.2	9.496	A
C-AB	28	680	0.041	28	0.1	5.879	A
C-A	49			49			
A-B	40			40			
A-C	35			35			

**09:15 - 09:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	51	533	0.096	51	0.1	9.224	A
C-AB	23	678	0.034	23	0.0	5.858	A
C-A	41			41			
A-B	33			33			
A-C	29			29			

**Queue Variation Results for each time segment**
**08:00 - 08:15**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.13	0.00	0.00	0.13	0.13			N/A	N/A
C-AB	0.04	0.00	0.00	0.04	0.04			N/A	N/A

**08:15 - 08:30**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.16	0.00	0.00	0.16	0.16			N/A	N/A
C-AB	0.05	0.03	0.27	0.48	0.51			N/A	N/A

**08:30 - 08:45**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.20	0.03	0.32	0.57	0.60			N/A	N/A
C-AB	0.07	0.03	0.27	0.49	0.52			N/A	N/A

**08:45 - 09:00**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.20	0.03	0.31	0.56	0.59			N/A	N/A
C-AB	0.07	0.00	0.00	0.07	0.07			N/A	N/A

**09:00 - 09:15**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.16	0.00	0.00	0.16	0.16			N/A	N/A
C-AB	0.05	0.00	0.00	0.05	0.05			N/A	N/A

**09:15 - 09:30**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.13	0.00	0.00	0.13	0.13			N/A	N/A
C-AB	0.04	0.00	0.00	0.04	0.04			N/A	N/A

# 2025 - Forecast Traffic Flows - Planning Grant, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	L6274 / L2275 Junction	T-Junction	Two-way		3.75	A

### Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	283	Stream B-AC

## 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)
D2	2025 - Forecast Traffic Flows - Planning Grant	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	77	100.000
B		✓	59	100.000
C		✓	88	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A	B	C
From	A	0	37	40
	B	29	0	30
	C	60	28	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	27	3
	B	35	0	15
	C	0	8	0

## Detailed Demand Data

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### Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	58	67
	B	44	55
	C	66	68
08:15-08:30	A	69	80
	B	53	66
	C	79	81
08:30-08:45	A	85	97
	B	64	80
	C	97	100
08:45-09:00	A	85	97
	B	64	80
	C	97	100
09:00-09:15	A	69	80
	B	53	66
	C	79	81
09:15-09:30	A	58	67
	B	44	55
	C	66	68

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	0.15	10.20	0.2	0.6	B
C-AB	0.05	5.98	0.1	0.5	A
C-A					
A-B					
A-C					

### Main Results for each time segment

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	55	531	0.104	54	0.1	9.422	A
C-AB	25	678	0.037	25	0.0	5.919	A
C-A	43			43			
A-B	36			36			
A-C	31			31			

**08:15 - 08:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	66	527	0.125	66	0.2	9.741	A
C-AB	30	680	0.044	30	0.1	5.945	A
C-A	51			51			
A-B	43			43			
A-C	37			37			

**08:30 - 08:45**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	80	521	0.154	80	0.2	10.189	B
C-AB	37	683	0.055	37	0.1	5.976	A
C-A	62			62			
A-B	52			52			
A-C	45			45			

**08:45 - 09:00**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	80	521	0.154	80	0.2	10.197	B
C-AB	37	683	0.055	37	0.1	5.973	A
C-A	62			62			
A-B	52			52			
A-C	45			45			

**09:00 - 09:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	66	527	0.125	66	0.2	9.757	A
C-AB	30	680	0.044	30	0.1	5.941	A
C-A	51			51			
A-B	43			43			
A-C	37			37			

**09:15 - 09:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	55	531	0.104	55	0.1	9.453	A
C-AB	25	678	0.037	25	0.0	5.921	A
C-A	43			43			
A-B	36			36			
A-C	31			31			

**Queue Variation Results for each time segment**
**08:00 - 08:15**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.14	0.00	0.00	0.14	0.14			N/A	N/A
C-AB	0.05	0.00	0.00	0.05	0.05			N/A	N/A

**08:15 - 08:30**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.18	0.00	0.00	0.18	0.18			N/A	N/A
C-AB	0.06	0.03	0.27	0.49	0.51			N/A	N/A

**08:30 - 08:45**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.23	0.03	0.32	0.58	0.61			N/A	N/A
C-AB	0.07	0.03	0.28	0.50	0.53			N/A	N/A

**08:45 - 09:00**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.23	0.03	0.32	0.58	0.62			N/A	N/A
C-AB	0.07	0.00	0.00	0.07	0.07			N/A	N/A

**09:00 - 09:15**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.18	0.00	0.00	0.18	0.18			N/A	N/A
C-AB	0.06	0.00	0.00	0.06	0.06			N/A	N/A

**09:15 - 09:30**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.15	0.00	0.00	0.15	0.15			N/A	N/A
C-AB	0.05	0.00	0.00	0.05	0.05			N/A	N/A

# 2035 - Forecast Traffic Flows - Planning Period, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	L6274 / L2275 Junction	T-Junction	Two-way		3.98	A

### Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	184	Stream B-AC

## 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)
D3	2035 - Forecast Traffic Flows - Planning Period	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	106	100.000
B		✓	80	100.000
C		✓	122	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A	B	C
From	A	0	51	55
	B	39	0	41
	C	83	39	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	26	3
	B	33	0	14
	C	0	7	0

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## Detailed Demand Data

### Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	80	91
	B	60	74
	C	92	94
08:15-08:30	A	95	109
	B	72	88
	C	109	112
08:30-08:45	A	117	133
	B	88	108
	C	134	137
08:45-09:00	A	117	133
	B	88	108
	C	134	137
09:00-09:15	A	95	109
	B	72	88
	C	109	112
09:15-09:30	A	80	91
	B	60	74
	C	92	94

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	0.21	11.04	0.3	1.6	B
C-AB	0.08	5.99	0.1	0.5	A
C-A					
A-B					
A-C					

### Main Results for each time segment

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	74	524	0.141	73	0.2	9.836	A
C-AB	35	683	0.051	34	0.1	5.904	A
C-A	59			59			
A-B	48			48			
A-C	43			43			

**08:15 - 08:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	88	518	0.171	88	0.3	10.319	B
C-AB	42	686	0.062	42	0.1	5.941	A
C-A	70			70			
A-B	57			57			
A-C	51			51			

**08:30 - 08:45**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	108	511	0.212	108	0.3	11.010	B
C-AB	53	691	0.077	53	0.1	5.991	A
C-A	84			84			
A-B	70			70			
A-C	62			62			

**08:45 - 09:00**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	108	511	0.212	108	0.3	11.035	B
C-AB	53	691	0.077	53	0.1	5.989	A
C-A	84			84			
A-B	70			70			
A-C	62			62			

**09:00 - 09:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	88	518	0.171	89	0.3	10.342	B
C-AB	42	686	0.062	42	0.1	5.937	A
C-A	70			70			
A-B	57			57			
A-C	51			51			

**09:15 - 09:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	74	524	0.141	74	0.2	9.879	A
C-AB	35	683	0.051	35	0.1	5.904	A
C-A	59			59			
A-B	48			48			
A-C	43			43			

**Queue Variation Results for each time segment**
**08:00 - 08:15**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.20	0.00	0.00	0.20	0.20			N/A	N/A
C-AB	0.06	0.00	0.00	0.06	0.06			N/A	N/A

**08:15 - 08:30**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.25	0.00	0.00	0.25	0.25			N/A	N/A
C-AB	0.08	0.03	0.27	0.48	0.51			N/A	N/A

**08:30 - 08:45**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.33	0.03	0.32	0.57	0.60			N/A	N/A
C-AB	0.10	0.03	0.28	0.50	0.53			N/A	N/A

**08:45 - 09:00**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.33	0.04	0.37	1.18	1.59			N/A	N/A
C-AB	0.10	0.00	0.00	0.10	0.10			N/A	N/A

**09:00 - 09:15**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.26	0.00	0.00	0.26	0.26			N/A	N/A
C-AB	0.08	0.00	0.00	0.08	0.08			N/A	N/A

**09:15 - 09:30**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.21	0.00	0.00	0.21	0.21			N/A	N/A
C-AB	0.07	0.00	0.00	0.07	0.07			N/A	N/A

# 2070 - Forecast Traffic Flows - Operational Lifespan, AM

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## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	L6274 / L2275 Junction	T-Junction	Two-way		5.11	A

### Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	99	Stream B-AC

## 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)
D4	2070 - Forecast Traffic Flows - Operational Lifespan	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	159	100.000
B		✓	101	100.000
C		✓	131	100.000

## Origin-Destination Data

### Demand (Veh/hr)

	To			
	A	B	C	
From	A	0	100	60
	B	53	0	48
	C	87	44	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	26	5
	B	48	0	24
	C	0	13	0

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## Detailed Demand Data

### Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	120	142
	B	76	104
	C	99	103
08:15-08:30	A	143	169
	B	91	125
	C	118	123
08:30-08:45	A	175	207
	B	112	153
	C	145	151
08:45-09:00	A	175	207
	B	112	153
	C	145	151
09:00-09:15	A	143	169
	B	91	125
	C	118	123
09:15-09:30	A	120	142
	B	76	104
	C	99	103

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	0.31	14.42	0.6	2.6	B
C-AB	0.09	6.54	0.1	0.6	A
C-A					
A-B					
A-C					

### Main Results for each time segment

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	104	511	0.204	103	0.3	12.026	B
C-AB	42	672	0.062	41	0.1	6.365	A
C-A	62			62			
A-B	95			95			
A-C	47			47			

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**08:15 - 08:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	125	503	0.247	124	0.4	12.954	B
C-AB	51	673	0.075	51	0.1	6.441	A
C-A	73			73			
A-B	113			113			
A-C	56			56			

**08:30 - 08:45**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	153	493	0.309	152	0.6	14.368	B
C-AB	64	675	0.095	64	0.1	6.540	A
C-A	87			87			
A-B	138			138			
A-C	69			69			

**08:45 - 09:00**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	153	493	0.309	153	0.6	14.420	B
C-AB	64	675	0.095	64	0.1	6.534	A
C-A	87			87			
A-B	138			138			
A-C	69			69			

**09:00 - 09:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	125	503	0.247	125	0.5	13.022	B
C-AB	51	673	0.075	51	0.1	6.424	A
C-A	73			73			
A-B	113			113			
A-C	56			56			

**09:15 - 09:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	104	510	0.204	105	0.4	12.133	B
C-AB	42	672	0.062	42	0.1	6.363	A
C-A	62			62			
A-B	95			95			
A-C	47			47			

**Queue Variation Results for each time segment**

**08:00 - 08:15**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.34	0.00	0.00	0.34	0.34			N/A	N/A
C-AB	0.08	0.00	0.00	0.08	0.08			N/A	N/A

**08:15 - 08:30**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.44	0.00	0.00	0.44	0.44			N/A	N/A
C-AB	0.10	0.03	0.29	0.52	0.54			N/A	N/A

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**08:30 - 08:45**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.60	0.04	0.35	0.63	0.67			N/A	N/A
C-AB	0.14	0.03	0.29	0.52	0.55			N/A	N/A

**08:45 - 09:00**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.60	0.04	0.41	1.78	2.62			N/A	N/A
C-AB	0.14	0.00	0.00	0.14	0.14			N/A	N/A

**09:00 - 09:15**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.46	0.00	0.00	0.46	0.46			N/A	N/A
C-AB	0.11	0.00	0.00	0.11	0.11			N/A	N/A

**09:15 - 09:30**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.36	0.00	0.00	0.36	0.36			N/A	N/A
C-AB	0.09	0.00	0.00	0.09	0.09			N/A	N/A

# 2035 - Forecast Traffic Flows - Construction Traffic, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	L6274 / L2275 Junction	T-Junction	Two-way		4.21	A

### Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	161	Stream B-AC

## 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)
D5	2035 - Forecast Traffic Flows - Construction Traffic	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	111	100.000
B		✓	86	100.000
C		✓	122	100.000

## Origin-Destination Data

### Demand (Veh/hr)

From	To		
	A	B	C
A	0	56	55
B	45	0	41
C	83	39	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	29	3
	B	36	0	14
	C	0	0	0

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## Detailed Demand Data

### Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	84	97
	B	64	81
	C	92	92
08:15-08:30	A	100	116
	B	77	97
	C	109	109
08:30-08:45	A	122	142
	B	94	118
	C	134	134
08:45-09:00	A	122	142
	B	94	118
	C	134	134
09:00-09:15	A	100	116
	B	77	97
	C	109	109
09:15-09:30	A	84	97
	B	64	81
	C	92	92

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	0.23	11.72	0.4	1.8	B
C-AB	0.07	5.64	0.1	0.5	A
C-A					
A-B					
A-C					

### Main Results for each time segment

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	81	518	0.156	80	0.2	10.306	B
C-AB	32	681	0.048	32	0.1	5.547	A
C-A	59			59			
A-B	54			54			
A-C	43			43			

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**08:15 - 08:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	97	512	0.189	96	0.3	10.869	B
C-AB	40	684	0.058	39	0.1	5.584	A
C-A	70			70			
A-B	65			65			
A-C	51			51			

**08:30 - 08:45**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	118	504	0.235	118	0.4	11.699	B
C-AB	50	688	0.072	50	0.1	5.636	A
C-A	84			84			
A-B	80			80			
A-C	62			62			

**08:45 - 09:00**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	118	504	0.235	118	0.4	11.719	B
C-AB	50	688	0.072	50	0.1	5.639	A
C-A	84			84			
A-B	80			80			
A-C	62			62			

**09:00 - 09:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	97	512	0.189	97	0.3	10.904	B
C-AB	40	684	0.058	40	0.1	5.586	A
C-A	70			70			
A-B	65			65			
A-C	51			51			

**09:15 - 09:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	81	518	0.156	81	0.2	10.364	B
C-AB	32	681	0.048	33	0.1	5.551	A
C-A	59			59			
A-B	54			54			
A-C	43			43			

**Queue Variation Results for each time segment**

**08:00 - 08:15**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.23	0.00	0.00	0.23	0.23			N/A	N/A
C-AB	0.06	0.00	0.00	0.06	0.06			N/A	N/A

**08:15 - 08:30**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.29	0.00	0.00	0.29	0.29			N/A	N/A
C-AB	0.07	0.03	0.25	0.45	0.48			N/A	N/A

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**08:30 - 08:45**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.38	0.03	0.32	0.58	0.61			N/A	N/A
C-AB	0.09	0.03	0.26	0.47	0.50			N/A	N/A

**08:45 - 09:00**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.38	0.04	0.39	1.36	1.79			N/A	N/A
C-AB	0.09	0.00	0.00	0.09	0.09			N/A	N/A

**09:00 - 09:15**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.30	0.00	0.00	0.30	0.30			N/A	N/A
C-AB	0.07	0.00	0.00	0.07	0.07			N/A	N/A

**09:15 - 09:30**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.24	0.00	0.00	0.24	0.24			N/A	N/A
C-AB	0.06	0.00	0.00	0.06	0.06			N/A	N/A

# 2070 - Forecast Traffic Flows - Decommissioning Traffic , AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	L6274 / L2275 Junction	T-Junction	Two-way		5.24	A

### Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	90	Stream B-AC

## 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)
D6	2070 - Forecast Traffic Flows - Decommissioning Traffic	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	165	100.000
B		✓	107	100.000
C		✓	131	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A	B	C
From	A	0	105	60
	B	59	0	48
	C	87	44	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	27	5
	B	47	0	24
	C	0	0	0

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## Detailed Demand Data

### Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	124	147
	B	81	110
	C	99	99
08:15-08:30	A	148	176
	B	96	132
	C	118	118
08:30-08:45	A	181	216
	B	118	161
	C	145	145
08:45-09:00	A	181	216
	B	118	161
	C	145	145
09:00-09:15	A	148	176
	B	96	132
	C	118	118
09:15-09:30	A	124	147
	B	81	110
	C	99	99

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	0.33	14.94	0.7	3.0	B
C-AB	0.08	5.84	0.1	0.5	A
C-A					
A-B					
A-C					

### Main Results for each time segment

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	110	508	0.217	109	0.4	12.293	B
C-AB	37	671	0.055	36	0.1	5.677	A
C-A	62			62			
A-B	100			100			
A-C	47			47			

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**08:15 - 08:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	132	500	0.263	131	0.5	13.310	B
C-AB	45	672	0.067	45	0.1	5.742	A
C-A	73			73			
A-B	120			120			
A-C	56			56			

**08:30 - 08:45**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	161	491	0.329	161	0.7	14.875	B
C-AB	57	673	0.084	57	0.1	5.836	A
C-A	88			88			
A-B	147			147			
A-C	69			69			

**08:45 - 09:00**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	161	491	0.329	161	0.7	14.937	B
C-AB	57	673	0.084	57	0.1	5.840	A
C-A	88			88			
A-B	147			147			
A-C	69			69			

**09:00 - 09:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	132	500	0.263	132	0.5	13.391	B
C-AB	45	672	0.067	45	0.1	5.745	A
C-A	73			73			
A-B	120			120			
A-C	56			56			

**09:15 - 09:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	110	507	0.217	111	0.4	12.414	B
C-AB	37	671	0.055	37	0.1	5.681	A
C-A	62			62			
A-B	100			100			
A-C	47			47			

**Queue Variation Results for each time segment**

**08:00 - 08:15**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.37	0.00	0.00	0.37	0.37			N/A	N/A
C-AB	0.07	0.00	0.00	0.07	0.07			N/A	N/A

**08:15 - 08:30**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.48	0.00	0.00	0.48	0.48			N/A	N/A
C-AB	0.08	0.03	0.25	0.45	0.48			N/A	N/A

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**08:30 - 08:45**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.65	0.04	0.35	0.65	0.67			N/A	N/A
C-AB	0.11	0.03	0.26	0.47	0.50			N/A	N/A

**08:45 - 09:00**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.66	0.04	0.41	1.79	2.97			N/A	N/A
C-AB	0.11	0.00	0.00	0.11	0.11			N/A	N/A

**09:00 - 09:15**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.50	0.00	0.00	0.50	0.50			N/A	N/A
C-AB	0.08	0.00	0.00	0.08	0.08			N/A	N/A

**09:15 - 09:30**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.39	0.00	0.00	0.39	0.39			N/A	N/A
C-AB	0.07	0.00	0.00	0.07	0.07			N/A	N/A

# 2035 - Forecast Traffic Flows - Construction Traffic - Additional Developments, AM

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## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	L6274 / L2275 Junction	T-Junction	Two-way		4.59	A

### Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	117	Stream B-AC

## 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)
D7	2035 - Forecast Traffic Flows - Construction Traffic - Additional Developments	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	131	100.000
B		✓	103	100.000
C		✓	146	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To		
		A	B	C
From	A	0	66	65
	B	54	0	49
	C	99	47	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	29	3
	B	36	0	14
	C	0	0	0

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## Detailed Demand Data

### Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	99	115
	B	78	97
	C	110	110
08:15-08:30	A	118	137
	B	93	116
	C	131	131
08:30-08:45	A	144	167
	B	113	142
	C	161	161
08:45-09:00	A	144	167
	B	113	142
	C	161	161
09:00-09:15	A	118	137
	B	93	116
	C	131	131
09:15-09:30	A	99	115
	B	78	97
	C	110	110

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	0.29	12.77	0.5	2.1	B
C-AB	0.09	5.70	0.1	0.5	A
C-A					
A-B					
A-C					

### Main Results for each time segment

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	97	512	0.190	96	0.3	10.825	B
C-AB	40	685	0.058	39	0.1	5.579	A
C-A	70			70			
A-B	64			64			
A-C	50			50			

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**08:15 - 08:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	116	506	0.230	116	0.4	11.589	B
C-AB	49	688	0.071	48	0.1	5.626	A
C-A	83			83			
A-B	77			77			
A-C	60			60			

**08:30 - 08:45**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	142	496	0.287	142	0.5	12.736	B
C-AB	61	694	0.089	61	0.1	5.692	A
C-A	99			99			
A-B	94			94			
A-C	74			74			

**08:45 - 09:00**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	142	496	0.287	142	0.5	12.772	B
C-AB	61	694	0.089	61	0.1	5.696	A
C-A	99			99			
A-B	94			94			
A-C	74			74			

**09:00 - 09:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	116	506	0.230	117	0.4	11.640	B
C-AB	49	688	0.071	49	0.1	5.631	A
C-A	83			83			
A-B	77			77			
A-C	60			60			

**09:15 - 09:30**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	97	512	0.190	98	0.3	10.907	B
C-AB	40	685	0.058	40	0.1	5.583	A
C-A	70			70			
A-B	64			64			
A-C	50			50			

**Queue Variation Results for each time segment**
**08:00 - 08:15**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.29	0.00	0.00	0.29	0.29			N/A	N/A
C-AB	0.07	0.00	0.00	0.07	0.07			N/A	N/A

**08:15 - 08:30**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.37	0.00	0.00	0.37	0.37			N/A	N/A
C-AB	0.09	0.03	0.25	0.45	0.48			N/A	N/A

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**08:30 - 08:45**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.50	0.03	0.32	0.58	0.61			N/A	N/A
C-AB	0.12	0.03	0.26	0.47	0.50			N/A	N/A

**08:45 - 09:00**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.50	0.04	0.38	1.59	2.09			N/A	N/A
C-AB	0.12	0.00	0.00	0.12	0.12			N/A	N/A

**09:00 - 09:15**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.38	0.00	0.00	0.38	0.38			N/A	N/A
C-AB	0.09	0.00	0.00	0.09	0.09			N/A	N/A

**09:15 - 09:30**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.30	0.00	0.00	0.30	0.30			N/A	N/A
C-AB	0.07	0.00	0.00	0.07	0.07			N/A	N/A

# 2070 - Forecast Traffic Flows - Decommissioning Traffic - Additional Developments, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	L6274 / L2275 Junction	T-Junction	Two-way		5.51	A

### Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	74	Stream B-AC

## 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)
D8	2070 - Forecast Traffic Flows - Decommissioning Traffic - Additional Developments	AM	ONE HOUR	08:00	09:30	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	181	100.000
B		✓	117	100.000
C		✓	144	100.000

## Origin-Destination Data

### Demand (Veh/hr)

	To			
	A	B	C	
From	A	0	115	66
	B	64	0	53
	C	96	48	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	27	5
	B	47	0	24
	C	0	0	0

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## Detailed Demand Data

### Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	136	162
	B	88	120
	C	108	108
08:15-08:30	A	163	194
	B	105	144
	C	129	129
08:30-08:45	A	199	237
	B	129	176
	C	159	159
08:45-09:00	A	199	237
	B	129	176
	C	159	159
09:00-09:15	A	163	194
	B	105	144
	C	129	129
09:15-09:30	A	136	162
	B	88	120
	C	108	108

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	0.36	15.86	0.8	3.6	C
C-AB	0.09	5.89	0.1	0.5	A
C-A					
A-B					
A-C					

### Main Results for each time segment

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	120	504	0.238	119	0.4	12.691	B
C-AB	40	671	0.060	40	0.1	5.704	A
C-A	68			68			
A-B	110			110			
A-C	52			52			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	144	497	0.289	143	0.5	13.889	B
C-AB	50	672	0.074	49	0.1	5.779	A
C-A	80			80			
A-B	131			131			
A-C	62			62			

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08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	176	486	0.362	175	0.8	15.780	C
C-AB	63	674	0.093	63	0.1	5.885	A
C-A	96			96			
A-B	161			161			
A-C	76			76			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	176	486	0.362	176	0.8	15.864	C
C-AB	63	674	0.093	63	0.1	5.887	A
C-A	96			96			
A-B	161			161			
A-C	76			76			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	144	497	0.289	144	0.6	13.995	B
C-AB	50	672	0.074	50	0.1	5.785	A
C-A	80			80			
A-B	131			131			
A-C	62			62			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	120	504	0.239	121	0.4	12.837	B
C-AB	41	671	0.060	41	0.1	5.713	A
C-A	68			68			
A-B	110			110			
A-C	52			52			

Queue Variation Results for each time segment

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.42	0.00	0.00	0.42	0.42			N/A	N/A
C-AB	0.07	0.00	0.00	0.07	0.07			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.54	0.00	0.00	0.54	0.54			N/A	N/A
C-AB	0.09	0.03	0.25	0.46	0.48			N/A	N/A

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**08:30 - 08:45**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.76	0.04	0.35	0.76	0.76			N/A	N/A
C-AB	0.12	0.03	0.26	0.47	0.50			N/A	N/A

**08:45 - 09:00**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.77	0.04	0.40	1.78	3.57			N/A	N/A
C-AB	0.12	0.00	0.00	0.12	0.12			N/A	N/A

**09:00 - 09:15**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.57	0.04	0.41	1.28	1.66			N/A	N/A
C-AB	0.10	0.00	0.00	0.10	0.10			N/A	N/A

**09:15 - 09:30**

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.44	0.03	0.35	0.63	0.66			N/A	N/A
C-AB	0.08	0.00	0.00	0.08	0.08			N/A	N/A