GARRANE GREEN ENERGY

GARRANE GREEN ENERGY PROJECT

COUNTY LIMERICK

APPENDIX 17.1

TRAFFIC AND TRANSPORT ASSESSMENT

August 2025

Jennings O'Donovan & Partners Limited,
Consulting Engineers,
Finisklin Business Park,
Sligo.
Tel.: 071 9161416
Fax: 071 9161080
email: info@jodireland.com

JENNINGS O'DONOVAN & PARTNERS LIMITED
Project, Civil and Structural Consulting Engineers,
FINISKLIN BUSINESS PARK,
SLIGO,
IRELAND.

Telephone (071) 9161416
Fax (071) 9161080

Email info@jodireland.com
Web Site www.jodireland.com

DOCUMENT APPROVAL

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GARRANE GREEN ENERGY PROJECT

TRAFFIC AND TRANSPORT ASSESSMENT

CONTENTS

1 INTRODUCTION

1.1 Brief

Jennings O'Donovan & Partners Limited has been appointed by Garrane Green Energy to prepare a Traffic and Transport Assessment ("TMP") for the proposed Garrane Green Energy Project (The Project), Co. Limerick.

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 Project has been based on the following technical documents:

- Limerick County Development Plan 2022 - 2028.
- 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.

1.4 Methodology

The methodology adopted for this Traffic and Transport Assessment involved:
A site visit was undertaken on 13th January 2023 to record traffic volumes and turning movements of vehicles at the N20 / R518 O'Rourke's Cross junction, R518 / L1537 junction in Bruree village and at the R515 / L1537 junction to the east of Charliville. The traffic counts were carried out between 7.30am and 9.30am in the morning to capture peak traffic flows during the morning period.

A site visit was undertaken on 20th November 2024 to record vehicle speeds on the L1537. The vehicle speed survey was carried out on a straight section of L1537 to the north of Site Entrance 2.

A traffic analysis was carried out at R518 / L1537 junction in Bruree village and at R515 / L1537 junction to the east of Charleville using the 2023 traffic volumes recorded during the onsite traffic counts to determine if capacity problems exist at the junction which will be required to accommodate Development traffic. The junctions will be used by construction, operation and decommissioning traffic associated with The Project.

Future year traffic assessments were then carried out at the R518 / L1537 and R515 / L1537 junctions for the following scenarios to determine if capacity problems would arise at the junctions with and without The Project in place.

- 2026 Projected traffic flows without The Project (Planning Approval)
- 2036 Projected traffic flows without The Project (Planning Period / Windfarm Construction - worst case scenario for traffic growth on the public road network)
- 2071 Projected traffic flows without The Project (Operations Period)
- 2036 Projected traffic flows with The Project (Wind Farm Construction Traffic - worst case scenario for traffic growth on the public road network)
- 2071 Projected traffic flows with The Project (Wind Farm Decommissioning Traffic)
- A traffic assessment was carried out at the R518 / L1537 and R515 / L1537 junctions with The Project under construction in 2036 with additional traffic from unrelated planned and consented developments to determine if capacity problems would arise at the junction due to combined traffic volumes in the vicinity of the development.
- A traffic assessment was carried out at the R518 / L1537 and R515 / L1537 junctions with decommissioning traffic in 2071 with additional traffic from unrelated planned and consented developments to determine if capacity problems would arise at the junction due to combined traffic volumes in the vicinity of the development.
- Temporary traffic lights will be required for short periods on the N20 and the L1537 for traffic management during the construction of The Project. A traffic analysis has been carried out to assess the impact of the temporary traffic lights on the N20 and the L1537.

1.5 Consultation With Local authority

The design team carried out a site visit with Limerick City and County Council staff to assess the proposed site entrances to the Development on the N20 and the L1537 and reviewed the construction haul routes in the vicinity of the site. The site visit was carried out on 09th August 2023. The design team consulted with Limerick City and County Council regarding the design of Site Entrance 1 on the N20 on 08th July 2024

1.6 Site Location, Context and Proposed Development

The Project Site is located 22.9km south of Limerick City, 46.9km north of Cork City and 2.5km (closest turbine) north of Charleville, Co. Cork. The Project will consist of the following main components:

- Erection of 9 No. wind turbines with a tip height of 170m. The wind turbines will have a rotor diameter of 150m and a hub height of 95m.
- Upgrade of existing Access Tracks and construction of new permanent Access Tracks, permanent turbine hardstand areas and turbine foundations.
- Construction of two new bridge crossings on-site, one over the River Maigue and one over the Charleville Stream.
- Upgrade of existing site drainage network and installation of new site drainage.
- Wind Farm Internal Cabling connecting the wind turbines to the electrical substation.
- Construction of a permanent on-site AIS 110kV Substation, with a 'loop in' Grid Connection to the existing 110kV overhead line between Charleville and Killonan, including two single-storey control buildings with welfare facilities, all associated electrical plant and equipment, security fencing, gates, signage, all associated underground cabling, private well for water supply, wastewater holding tank, and all ancillary structures and works.
- Construction of a permanent double circuit 110kV underground cable and two steel cable interface masts to connect to the existing overhead line OHL.
- Erection of a permanent 60m Meteorological Mast for monitoring wind speeds.
- Construction of a Temporary Construction Compound for use during construction.
- Upgrade of the existing entrance on the N20 (Site Entrance 1) (to be used for abnormal loads and turbine component delivery) and upgrade of an existing site entrance on the L1537 (Site Entrance 2) (to be used for all construction traffic except for abnormal loads and turbine component delivery).
- 6 No. temporary spoil storage areas and 1 No. permanent spoil storage area.
- Biodiversity enhancement and improvements associated with the Project.
- Landscaping, fencing and all associated ancillary works.

The Location and layout of the Project is shown on **Figure 1**.

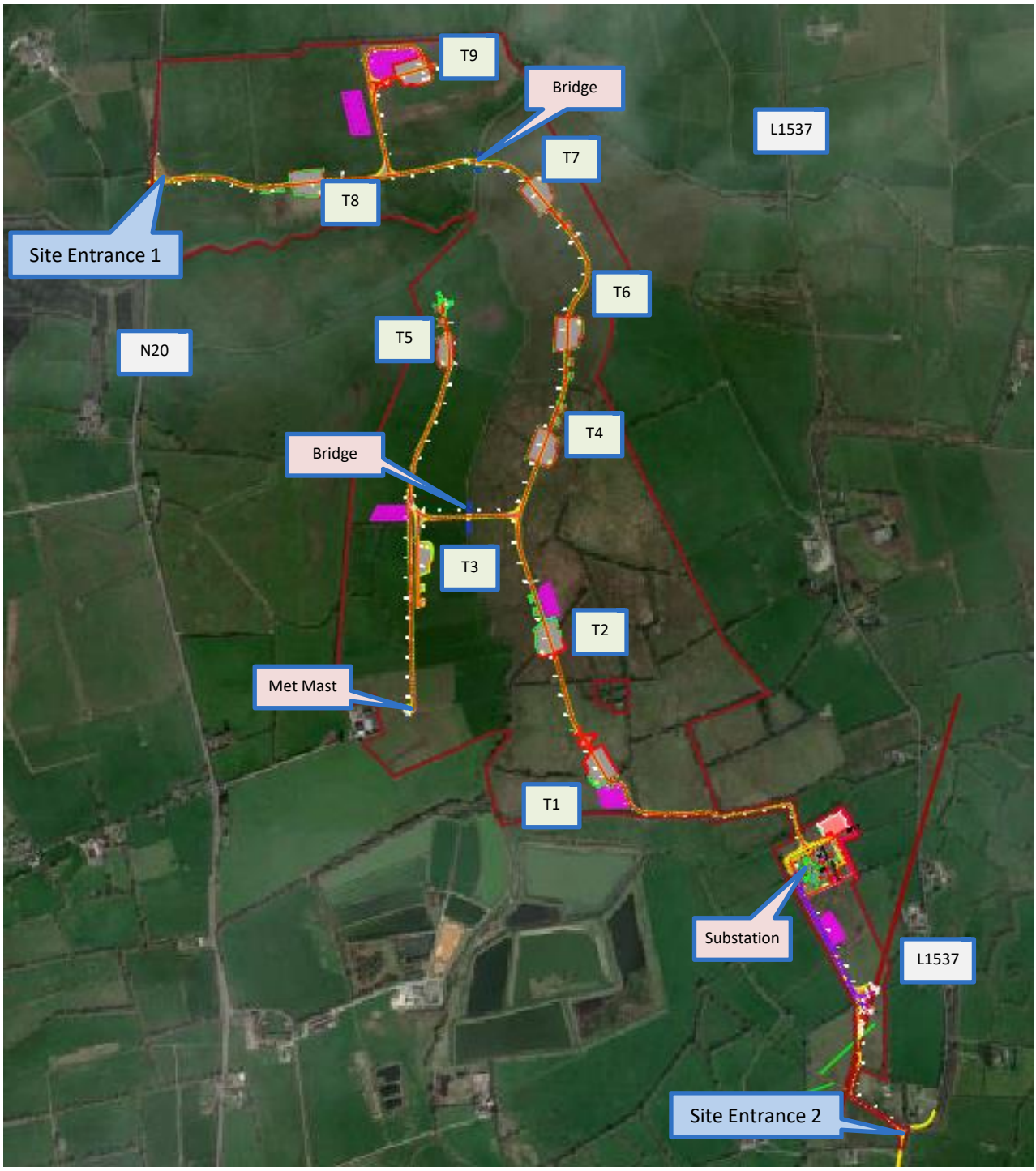


Figure 1 – Site Layout

2 EXISTING PUBLIC ROAD NETWORK AND TRAFFIC

2.1 Existing Traffic Volumes

To assess the impact of The Project on the existing road network when The Project is constructed and fully occupied, baseline traffic volumes in the area are required.

Jennings O'Donovan carried out classified traffic counts on 13th January 2023 to record traffic volumes and turning movements of vehicles at the N20 / R518 O'Rourke's Cross junction, R518 / L1537 junction in Bruree village and at the R515 / L1537 junction to the east of Charleville. The traffic counts were carried out between 7.30am and 9.30am in the morning to capture peak traffic flows during the morning period.

The morning peak hour traffic period on the public road network in the vicinity of The Project are obtained from the traffic counts. The Traffic counts show that peak traffic occurs between 8.00am and 9.00am in the morning. The peak hour period shown in **Table 1** is used to carry out capacity analysis for the development.

AM Peak Hour	8.00 – 9.00

Table 1 –Peak Hour Traffic Period

2.2 Access to The Project

The location of the site entrances to the Project are shown on **Figure 1.** Site Entrance 1 will be constructed as a temporary entrance for abnormal loads to access the Project from the N20 national primary road. Site Entrance 1 will consist of a simple T-Junction located at an existing field entrance. The existing field entrance will be gated and will be isolated from the abnormal load entrance. The existing field entrance will remain operational for agricultural use and will not be available for construction, operation or decommissioning traffic. The field access will be upgraded as part of the Project, upgrades will include 215m visibility splays, 4m access track, bound surfacing at N20 intersection and field gate set back from the carriageway edge. Site Entrance 1 will only be used during delivery of abnormal loads such as turbine components, cranes and transformers and will not be used for general construction traffic. A temporary overrun area will be constructed at the junction to accommodate the swept path and wheel loading from abnormal load vehicles delivering turbine components during the turbine delivery phase of the project. When Site Entrance 1 is not in use for abnormal load deliveries, access to the junction will be restricted using temporary fencing erected along the existing N20 boundary. The temporary fencing will be used to restrict access and to prevent parking at the junction in the vicinity of the N20. The overrun area at the junction will be reinstated with topsoil and seeded with grass following the delivery of turbine components and the removal of cranes from the

site. The layout of Site Entrance 1 during the construction phase of the Project is shown in **Figure 2.** During the operations phase of the project, Site entrance 1 will be closed and reinstated, operations traffic will access the development via Site Access 2 on the L1537. Site Entrance 1 will have a dwell area with a gradient of -2.5% at its intersection with the N20 with drainage falling towards the Project and away from the N20 carriageway. Visibility at Site Entrance 1 will be in accordance with TII standards and will have visibility splays of 215m measured from the carriageway edge at a 3.0m setback distance.

The design and layout of the proposed site entrance has been subject to an independent Stage 1 Road Safety Audit carried out by CST consulting Engineers who are accredited by TII to carry out audits on the national road network. The road safety audit is included in EIA **Chapter 17 Appendix 17.5**.

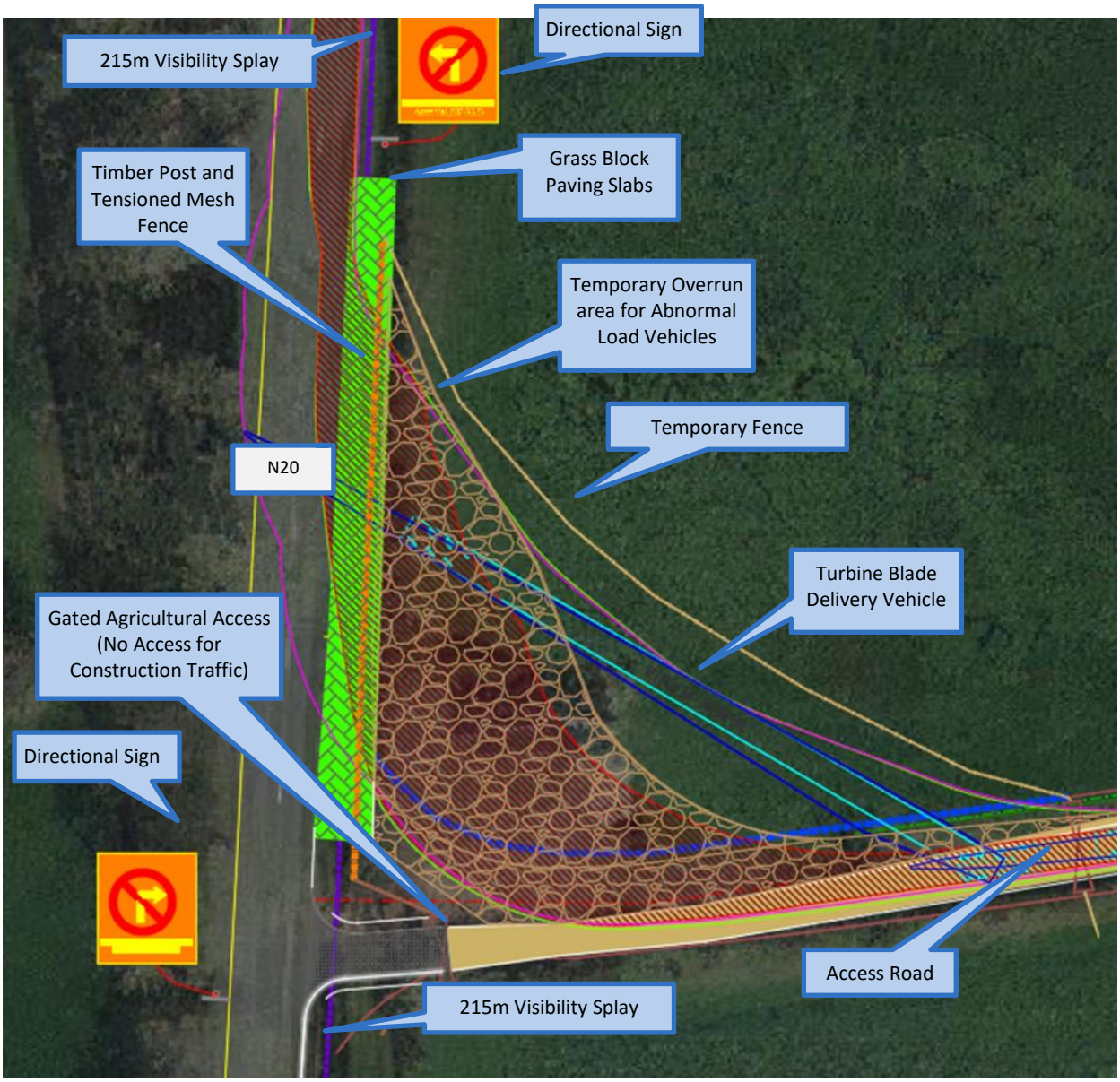


Figure 2 – Site Entrance 1 on the N20

Site Entrance 2 will be constructed on the L1537 local road. Site Entrance 2 will consist of a simple T-Junction located at an existing field entrance which will be upgraded as part of The Project. Site Entrance 2 will be the primary access to The Project during the construction, operations and decommissioning phases of The Project. The layout of Site Entrance 2 is shown in **Figure 3.** Site Entrance 2 will have a dwell area with a gradient of -2.5% at its intersection with the L1537 with drainage falling towards The Project and away from the L1537 carriageway. Wheel wash cleaning facilities will be provided at the junction to prevent the spread of mud and debris onto the L1537 carriageway. Visibility at Site Entrance 2 will be available at a distance of 90m to the right and 70m to the left measured at a 3.0m setback from the L1537 carriageway edge. The visibility splays are in accordance with vehicle speeds obtained from a traffic speed survey carried out over a seven-day period at the junction and resultant design speed survey which calculated a design speed to the north of 50km/h.

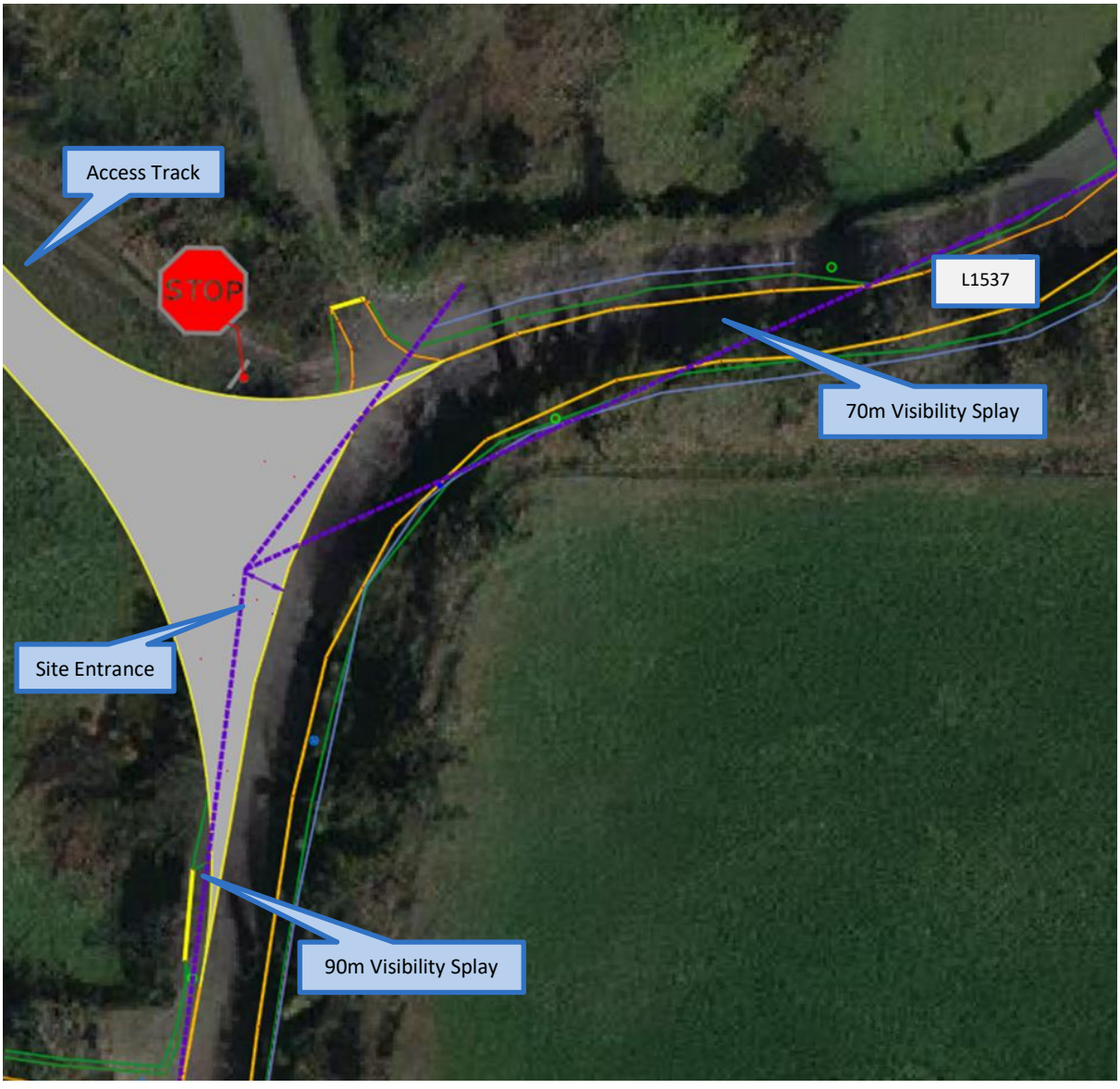


Figure 3 – Site Entrance 2 on the L1537

2.3 Existing Roads in the Vicinity of the Site

The location of the Site entrances to The Project is shown on Figure 16.1. Site Entrance 1 on the N20 is located at an existing farm entrance which will be upgraded as part of The Project. The N20 (Plate 1) is a 6.0m wide Type 3 single carriageway with hard strips and grass verges. The N20 runs between Limerick and Cork and has a 100km/h speed limit classification at the proposed site entrance. The proposed site entrance on the N20 will be used during turbine delivery, delivery of cranes and transformers under controlled Garda escort. Existing traffic volumes on the N20 were obtained from the TII traffic counter on the N20 at Rockhill which is located to the north of site Entrance 1. The results from the automatic traffic counter show that in 2024 the N20 had an AADT of 11,555 vehicles with 8.4% HGV traffic.

Plate 1 – N20 National Primary Road

Site Entrance 2 on the L1537 is located at an existing farm entrance which will be upgraded as part of The Project. The L1537 local road (**Plate 2**) is a 3.0m wide single carriageway with grass verges and has an 60km/h speed limit classification. The L1537 runs between the R518 in the village of Brulee and the R515 to the east of Charleville. The L1537 will be used by wind farm construction, operations and decommissioning traffic to access The Project. Existing traffic volumes on the L1537 are calculated from the classified traffic counts carried out by JOD on 13th January 2023 at the R518 and R515 junctions. 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 L1537 is calculated from the recorded traffic counts. The L1537 local road has an AADT of 610 vehicles at its junction with the R518 in Bruree village which equates to a two-way traffic flow of approximately 52 vehicles during peak hour traffic periods with 2% HGV traffic. The L1537 local road has an AADT of 400 vehicles at its junction with the R515 to the east of Charleville which equates to a two-way traffic flow of approximately 34 vehicles during peak hour traffic periods with 6% HGV traffic. A survey of vehicle speeds on the L1537 recorded on 20th November 2024 is shown in **Table 2.** The vehicle speeds were measured on a straight section of the L1537 to the north of Site entrance 2 over a one hour period.

Time	Northbound			Southbound		
	Car	Van	Truck	Car	Van	Truck
14.45	50, 65, 81	70		62, 56, 90		
15.00	46, 58	75		70, 48		
15.15	67, 82, 92, 52			68		
15.30				47, 68		
15.45	88, 105, 71,65, 63	62	68	63, 82, 70, 72		
Average	**70**	**67**	**68**	**66**		

Table 2 –L1537 Vehicle Speeds

Plate 2 – L1537 Local Road

The R518 regional road (Plate 3) is a 6.0m wide single carriageway with grass verges and an 80km/h speed limit classification. The R518 runs between the N69 at Askeaton and Kilmallock. The R518 will be used by wind farm construction, operations and decommissioning traffic to access The Project. Existing traffic volumes on the R518 are calculated from the classified traffic counts carried out by JOD on 13th January 2023 at the R518 / L1537 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 R518 is calculated from the recorded traffic counts. The R518 regional road has an AADT of 3,520 vehicles at its junction with the L1537 in Bruree village which equates to a two-way traffic flow of approximately 300 vehicles during peak hour traffic periods with 5% HGV traffic.

Plate 3 – R518 Regional Road

The R515 regional road (Plate 4) is a 6.0m wide single carriageway with grass verges and an 80km/h speed limit classification. The R515 runs between the N24 at Tipperary to Charleville. The R515 will be used by wind farm construction, operations and decommissioning traffic to access The Project. Existing traffic volumes on the R515 are calculated from the classified traffic counts carried out by JOD on 13th January 2023 at the R515 / L1537 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 R515 is calculated from the recorded traffic counts. The R515 regional road has an AADT of 4,470 vehicles at its junction with the L1537 to the east of Charleville which equates to a two-way traffic flow of approximately 290 vehicles during peak hour traffic periods with 4% HGV traffic.

Plate 4 – R515 Regional Road

2.4 Existing Junctions in the Vicinity of the Site

The existing junction between the R518 and the L1537 (**Plate 5**) is a simple T-junction with priority for R518 traffic. The junction is located in Bruree village in a 50km/h speed limit zone. The junction is lit by public lighting. Observations during the traffic counts and traffic analysis carried out at the junction using the recorded traffic volumes show that there are no capacity problems at the junction under current traffic conditions. The junction is currently operating at free flow conditions with a level of service of A. Road network and junction capacity is measured in terms of level of service (LOS) thresholds which are based on the queuing delay on each arm of the junction. The transportation LOS system uses the letters A through F with the following definitions, A = Free flow, B = Reasonably free flow, C = Stable flow, , D = Approaching unstable flow, E = Unstable flow, F = Forced or breakdown flow. The results of the analysis are included **Appendix A**.

Plate 5 – R518 / L1537 Priority Junction

The existing junction between the R515 and the L1537 (**Plate 6**) is a simple T-junction with priority for R515 traffic. The junction is located to the east of Charleville in an 80km/h speed limit zone. The junction is lit by public lighting. Observations during the traffic counts and traffic analysis carried out at the junction using the recorded traffic volumes show that there are no capacity problems at the junction under current traffic conditions. The junction is currently operating at free flow conditions with a level of service of A. Road network and junction capacity is measured in terms of level of service (LOS) thresholds which are based on the queuing delay on each arm of the junction. The transportation LOS system uses the letters A through F as described in **Section 14.2.19** of this report. The results of the analysis are included in the TTA, **Appendix 16.1**.

Plate 6 – R515 / L1537 Priority Junction

The existing junction between the N20 and the R518 at ORourke's Cross (**Plate 7**) is a staggered T-junction with priority for N20 traffic. The junction is located in a 60km/h speed limit zone. The junction is lit by public lighting. Observations during the traffic counts show that there are no significant delays or capacity problems at the junction under current traffic conditions. Right turning traffic from the R518 experience delays of approximately 5 seconds during the morning peak hour.

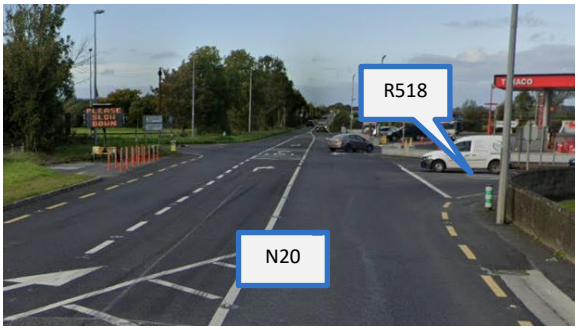


Plate 7 – N20 / R518 Priority Junction

2.5 Accident Data

Mapped statistics for accident data in the area were not available from the RSA website in October 2024.

2.6 Parking Facilities

Parking facilities are to be provided within The Project Site. Parking will not be permitted at site entrances or on the public road network.

3 TRAFFIC GENERATION AND TRIP DISTRIBUTION

3.1 Trip Generation associated with The Project

During the construction of The Project, the maximum daily traffic generated by the development will occur during concrete pours for turbine foundations. The concrete pours will occur on nine separate days during the 18-month construction period. During the concrete pours the wind farm development will generate a maximum of 165 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 of 45 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 3.** Full details of the traffic generated by The Project is included in the project Traffic Management Plan (TMP).

Time	Arrivals		Departures	
	HGV	LGV	HGV	LGV
06.00 – 07.00		35		
07.00 – 08.00	20	20	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	

Time	Arrivals		Departures	
	HGV	LGV	HGV	LGV
12.00 – 13.00	15		15	
13.00 – 14.00	10	5	10	5
14.00 – 15.00	15		15	
15.00 – 16.00	15		15	
16.00 – 17.00	10		10	
17.00 – 18.00	10	2	10	5
18.00 – 19.00	5		5	20
19.00 – 20.00				35

Table 3 Development Traffic Profile

3.2 Traffic Distribution

During concrete pours all traffic generated by The Project will arrive and depart from Site Entrance 2 on the L1537 via the R518 / L1537 and the R515 / L1537 junctions.

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 2026, 10 year planning grant and construction in 2036 and a 35 year operational period and decommissioning in 2071. The growth factors for the relevant assessment years using the central-growth scenario for County Offaly are shown in **Table 4**.

Year	LGV Growth Factor	HGV Growth Factor
2023	1.000	1.000
2026	1.053	1.100
2036	1.181	1.350
2071	1.607	2.460

Table 4 – Traffic Growth Factors for Public Roads

4 TRAFFIC ANALYSIS

4.1 Traffic Analysis at the R518 / L1537 Junction

A traffic analysis has been carried out to determine if the R518 / L1537 junction will operate within capacity for the following senarios;

- 2023 Baseline traffic counts
- 2026 Projected traffic flows without The Project (Planning Approval)
- 2036 Projected traffic flows without The Project (Planning Period)
- 2071 Projected traffic flows without The Project (Operations Period)
- 2036 Projected traffic flows with The Project (Wind Farm Construction Traffic, worst case scenario allowing for projected traffic growth on the public road network.)
- 2071 Projected traffic flows with The Project (Wind Farm Decommissioning Traffic)

The results of the analysis show that the R518 / L1537 junction will not exceed the 0.85 ratio of flow to capacity (RFC) and will continue to operate with reserve capacity beyond 2075. 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** and summarised in **Figure 4**.

	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	0.1	0.5	8.76	0.08	A	1.03	A	321 %
Stream C-AB		0.0	0.5	4.96	0.03	A			[Stream B-AC]
	2026 - Forecast Traffic Flows (No Development) - Planning Grant								
Stream B-AC	D2	0.1	0.5	8.89	0.08	A	1.05	A	297 %
Stream C-AB		0.0	0.5	4.96	0.03	A			[Stream B-AC]
	2036 - Forecast Traffic Flows (No Development) - Planning Period								
Stream B-AC	D3	0.1	0.5	9.20	0.10	A	1.08	A	252 %
Stream C-AB		0.0	0.5	4.95	0.03	A			[Stream B-AC]
	2071 - Forecast Traffic Flows (No Development) - Operational Lifespan								
Stream B-AC	D4	0.2	0.5	10.85	0.15	B	1.24	A	136 %
Stream C-AB		0.1	0.5	4.93	0.05	A			[Stream B-AC]
	2036 - Forecast Traffic Flows - Development Construction Traffic								
Stream B-AC	D5	0.3	1.6	13.79	0.20	B	2.74	A	130 %
Stream C-AB		0.1	0.8	6.62	0.07	A			[Stream B-AC]
	2076 - Forecast Traffic Flows - Development Decomissioning Traffic								
Stream B-AC	D6	0.5	1.7	15.74	0.27	C	2.68	A	74 %
Stream C-AB		0.2	1.2	6.16	0.09	A			[Stream B-AC]
	2036 - Forecast Traffic Flows - Development Construction Traffic - Additional Developments								
Stream B-AC	D7	0.4	1.8	14.47	0.22	B	2.87	A	109 %
Stream C-AB		0.2	1.0	6.60	0.08	A			[Stream B-AC]
	2071 - Forecast Traffic Flows - Development Decomissioning Traffic - Additional Developments								
Stream B-AC	**D8**	**0.6**	**2.3**	**16.84**	**0.30**	**C**	**2.75**	**A**	**60 %**
Stream C-AB		**0.2**	**1.1**	**6.03**	**0.08**	**A**			**[Stream B-AC]**

Figure 4 – Traffic Analysis Summary for the R518 / L1537 Junction

4.2 Traffic Analysis at the R515 / L1537 Junction

A traffic analysis has been carried out to determine if the R515 / L1537 junction will operate within capacity for the following senarios;

- 2023 Baseline traffic counts
- 2026 Projected traffic flows without The Project (Planning Approval)
- 2036 Projected traffic flows without The Project (Planning Period)
- 2071 Projected traffic flows without The Project (Operations Period)
- 2036 Projected traffic flows with The Project (Wind Farm Construction Traffic, worst case scenario allowing for projected traffic growth on the public road network)
- 2071 Projected traffic flows with The Project (Wind Farm Decommissioning Traffic)

The results of the analysis show that the R518 / L1535 junction will not exceed the 0.85 ratio of flow to capacity (RFC) and will continue to operate with reserve capacity beyond 2075. 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** and summarised in **Figure 5**.

	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	0.1	0.5	9.69	0.06	A	0.55	A	283 %
Stream C-AB		0.0	0.5	4.88	0.00	A			[Stream B-AC]
	2026 - Forecast Traffic Flows (No Development) - Planning Grant								
Stream B-AC	D2	0.1	0.5	9.84	0.07	A	0.55	A	

Stream C-AB		0.0	0.5	4.85	0.00	A			262 % [Stream B-AC]
	2036 - Forecast Traffic Flows (No Development) - Planning Period								
Stream B-AC	D3	0.1	0.5	10.24	0.08	B	0.56	A	220 % [Stream B-AC]
Stream C-AB		0.0	0.5	4.79	0.00	A			
	2076 - Forecast Traffic Flows (No Development) - Operational Lifespan								
Stream B-AC	D4	0.1	0.5	12.00	0.12	B	0.64	A	119 % [Stream B-AC]
Stream C-AB		0.0	0.5	4.54	0.01	A			
	2036 - Forecast Traffic Flows - Development Construction Traffic								
Stream B-AC	D5	0.3	1.6	15.43	0.18	C	2.23	A	112 % [Stream B-AC]
Stream C-AB		0.2	1.0	6.58	0.07	A			
	2071 - Forecast Traffic Flows - Development Decomissioning Traffic								
Stream B-AC	D6	0.4	1.9	17.32	0.24	C	2.00	A	64 % [Stream B-AC]
Stream C-AB		0.2	1.3	5.89	0.08	A			
	2036 - Forecast Traffic Flows - Development Construction Traffic - Additional Developments								
Stream B-AC	D7	0.6	2.4	15.67	0.27	C	6.57	A	118 % [Stream B-AC]
Stream C-AB		0.1	0.7	8.32	0.08	A			
	2071 - Forecast Traffic Flows - Development Decomissioning Traffic - Additional Developments								
Stream B-AC	**D8**	**0.6**	**2.6**	**15.73**	**0.29**	**C**	**5.60**	**A**	**100 % [Stream B-AC]**
Stream C-AB		**0.2**	**0.7**	**8.02**	**0.10**	**A**			

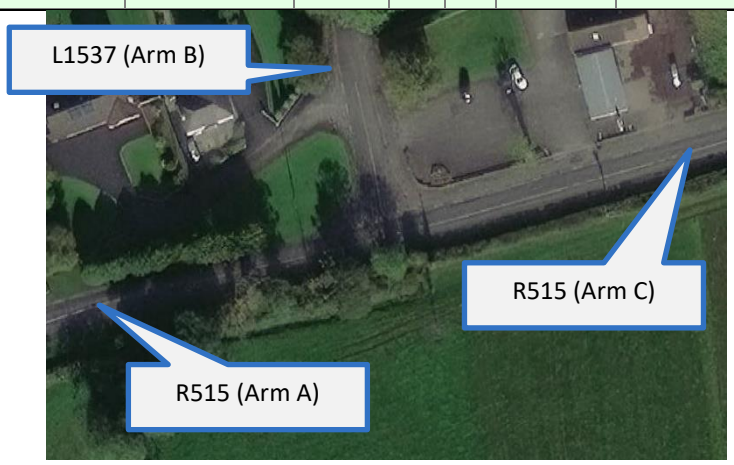


Figure 5 – Traffic Analysis Summary for the R515 / L1537 Junction

4.3 Traffic Analysis with Unrelated Consented and Proposed Developments

A traffic assessment was carried out for the construction (2036) and decommissioning (2071) of The Project 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 residential or commercial developments planned or consented in the vicinity of The Project which would generate significant volumes of new trips on the public road network. A proposed upgrade of the N/M20 and a proposed upgrade of the existing O'Rourkes Cross junction would generate short term construction traffic in the area. The preferred option for the proposed upgrade of the N/M20 would consist of a new offline motorway constructed to the west of Charleville. The new M20 motorway would reduce traffic at Site Entrance 1 when the motorway is completed. The proposed upgrade to O'Rourkes Cross junction from a staggered priority junction to a roundabout junction is currently at CPO stage and would improve traffic movements and

reduce queuing at the junction when completed. 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 forecast traffic growth (TII) plus construction / decommissioning traffic to test the capacity of the public road network. The results of the analysis show that the R518 / L1537 and R515 / L1537 junctions will not exceed the 0.85 ratio of flow to capacity (RFC) in 2036 or 2071 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** and summarised in **Table 4** and **Table 5**.

4.4 Traffic Analysis for Temporary Traffic Lights

Temporary traffic lights will be required on the N20 to carry out works on the public road network during the construction of Site Entrance 1 to The Project. The site entrance works will be carried out over a three day period during off-peak hours to minimize disruption. The traffic analysis shows that motorists will experience delays of approximately 95 seconds when the temporary traffic lights are installed on the road network. The results of the analysis are summarised in **Figure 6**. The location and duration of traffic management using temporary traffic lights is detailed in the Traffic Management Plan, **Appendix 16.2**.

	AM					
	Queue (PCU)	95% Queue (PCU)	Delay (s)	DOS	Junction Delay (s)	Network Residual Capacity
N20 Temporary Traffic Lights - AM Peak Hour - Construction Traffic 2035						
Arm A	28.7		95.54	0.77	95.37	-100 %
Arm C	28.5		95.20	0.77		[Arm A - Traffic Stream 1]

Figure 6 – N20 Temporary Traffic Lights

5 SUMMARY

This TTA has been undertaken to outline the management of traffic movements during the construction, operation and decommissioning phases of the Garrane Green Energy Project.

Increased volumes of traffic will be generated by the Project 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 Project during the construction, operation and

decommissioning phases of the Garrane Green Energy Project can be accommodated on the existing public road network.

APPENDIX A

TRAFFIC ANALYSIS

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: R515 - L1537 Junction.j9
Path: P:\Jod-jobs\6839 Fort East Garrane WF\500 Environmental\503 EIA\17 Traffic and Transportation\01 Appendices\Appendix 17.1 Traffic and Transport Assessment\Files which may need to be added\Traffic analysis
Report generation date: 07/08/2025 17:55:34

Summary of junction performance

	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	0.1	0.5	9.69	0.06	A	0.55	A	283 % [Stream B-AC]
Stream C-AB		0.0	0.5	4.88	0.00	A			
	2026 - Forecast Traffic Flows (No Development) - Planning Grant								
Stream B-AC	D2	0.1	0.5	9.84	0.07	A	0.55	A	262 % [Stream B-AC]
Stream C-AB		0.0	0.5	4.85	0.00	A			
	2036 - Forecast Traffic Flows (No Development) - Planning Period								
Stream B-AC	D3	0.1	0.5	10.24	0.08	B	0.56	A	220 % [Stream B-AC]
Stream C-AB		0.0	0.5	4.79	0.00	A			
	2076 - Forecast Traffic Flows (No Development) - Operational Lifespan								
Stream B-AC	D4	0.1	0.5	12.00	0.12	B	0.64	A	119 % [Stream B-AC]
Stream C-AB		0.0	0.5	4.54	0.01	A			
	2036 - Forecast Traffic Flows - Development Construction Traffic								
Stream B-AC	D5	0.3	1.6	15.43	0.18	C	2.23	A	112 % [Stream B-AC]
Stream C-AB		0.2	1.0	6.58	0.07	A			
	2076 - Forecast Traffic Flows - Development Decomissioning Traffic								
Stream B-AC	D6	0.4	1.9	17.32	0.24	C	2.00	A	64 % [Stream B-AC]
Stream C-AB		0.2	1.3	5.89	0.08	A			
	2036 - Forecast Traffic Flows - Development Construction Traffic - Additional Developments								
Stream B-AC	D7	0.6	2.4	15.67	0.27	C	6.57	A	118 % [Stream B-AC]
Stream C-AB		0.1	0.7	8.32	0.08	A			
	2076 - Forecast Traffic Flows - Development Decomissioning Traffic - Additional Developments								
Stream B-AC	D8	0.6	2.6	15.73	0.29	C	5.60	A	100 % [Stream B-AC]
Stream C-AB		0.2	0.7	8.02	0.10	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.

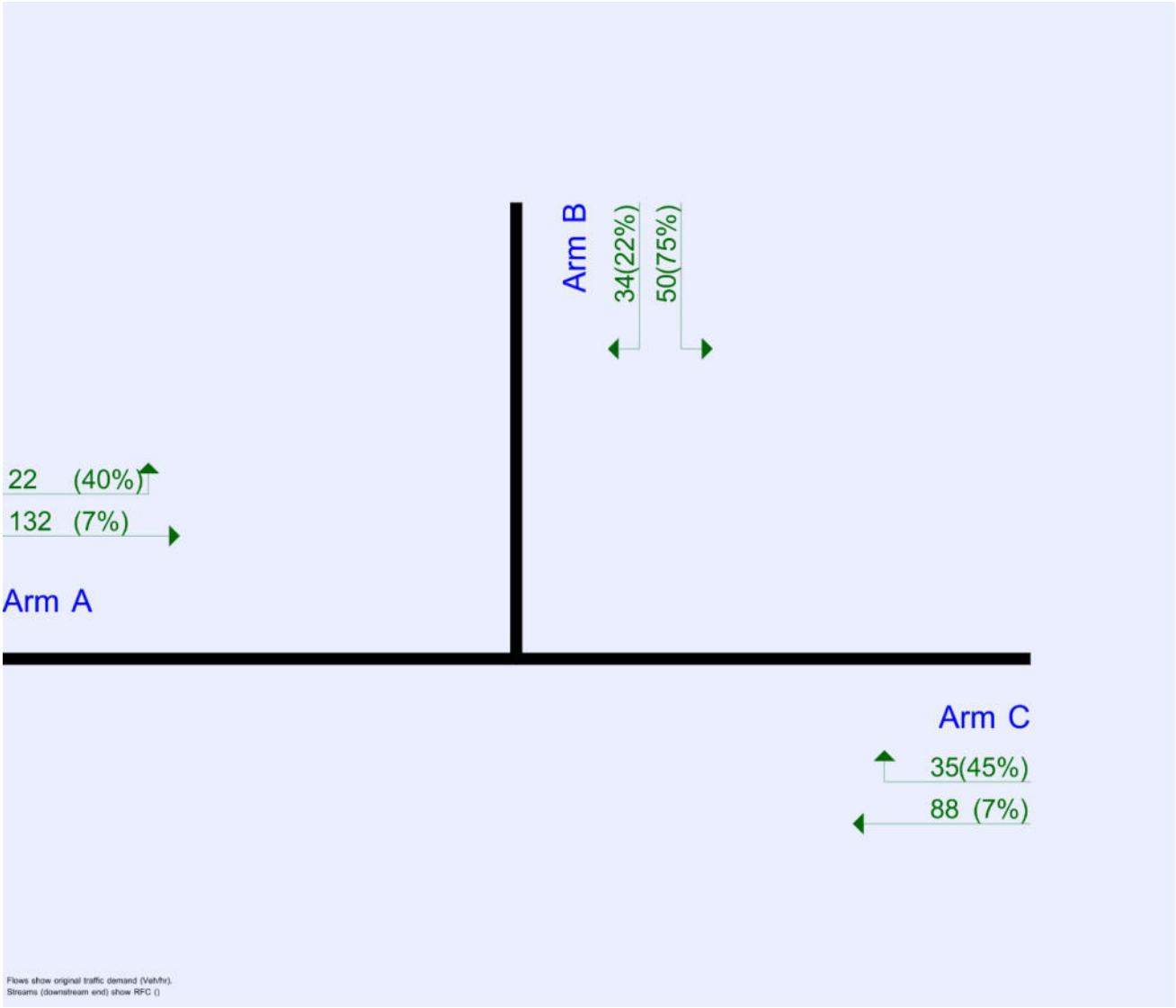
File summary

File Description

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

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	2026 - Forecast Traffic Flows (No Development) - Planning Grant	AM	ONE HOUR	08:00	09:30	15
D3	2036 - Forecast Traffic Flows (No Development) - Planning Period	AM	ONE HOUR	08:00	09:30	15
D4	2076 - Forecast Traffic Flows (No Development) - Operational Lifespan	AM	ONE HOUR	08:00	09:30	15
D5	2036 - Forecast Traffic Flows - Development Construction Traffic	AM	ONE HOUR	08:00	09:30	15
D6	2076 - Forecast Traffic Flows - Development Decomissioning Traffic	AM	ONE HOUR	08:00	09:30	15
D7	2036 - Forecast Traffic Flows - Development Construction Traffic - Additional Developments	AM	ONE HOUR	08:00	09:30	15
D8	2076 - Forecast Traffic Flows - Development Decomissioning 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

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	L6274 / L2275 Junction	T-Junction	Two-way		0.55	A

Junction Network Options

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

Arms

Arms

Arm	Name	Description	Arm type
A	R515		Major
B	L1537		Minor
C	R515		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	6.00			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	2.50	10	10

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	462	0.084	0.212	0.134	0.304
B-C	599	0.092	0.232	-	-
C-B	667	0.258	0.258	-	-

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		✓	152	100.000
B		✓	23	100.000
C		✓	231	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	10	142
	B	21	0	2
	C	230	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	20	4
	B	1	0	1
	C	4	1	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	114	120
	B	17	17
	C	174	181
08:15-08:30	A	137	144
	B	21	21
	C	208	216
08:30-08:45	A	167	176
	B	25	26
	C	254	264
08:45-09:00	A	167	176
	B	25	26
	C	254	264
09:00-09:15	A	137	144
	B	21	21
	C	208	216
09:15-09:30	A	114	120
	B	17	17
	C	174	181

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	0.06	9.69	0.1	0.5	A
C-AB	0.00	4.88	0.0	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	17	423	0.041	17	0.0	8.957	A
C-AB	1.00	752	0.001	0.99	0.0	4.874	A
C-A	180			180			
A-B	9			9			
A-C	111			111			

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	21	414	0.050	21	0.1	9.252	A
C-AB	1	769	0.002	1	0.0	4.769	A
C-A	215			215			
A-B	11			11			
A-C	133			133			

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	26	401	0.064	26	0.1	9.685	A
C-AB	2	794	0.002	2	0.0	4.631	A
C-A	263			263			
A-B	13			13			
A-C	163			163			

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	26	401	0.064	26	0.1	9.687	A
C-AB	2	794	0.002	2	0.0	4.634	A
C-A	263			263			
A-B	13			13			
A-C	163			163			

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	21	414	0.050	21	0.1	9.258	A
C-AB	1	769	0.002	1	0.0	4.777	A
C-A	215			215			
A-B	11			11			
A-C	133			133			

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	17	423	0.041	18	0.0	8.966	A
C-AB	1	752	0.001	1	0.0	4.879	A
C-A	180			180			
A-B	9			9			
A-C	111			111			

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	0.04	0.00	0.00	0.04	0.04			N/A	N/A
C-AB	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-AC	0.05	0.03	0.25	0.46	0.48			N/A	N/A
C-AB	0.00	0.00	0.25	0.46	0.48			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	0.07	0.03	0.26	0.47	0.50			N/A	N/A
C-AB	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-AC	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-AB	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-AC	0.05	0.00	0.00	0.05	0.05			N/A	N/A
C-AB	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-AC	0.04	0.00	0.00	0.04	0.04			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

2026 - Forecast Traffic Flows (No Development) - 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	L6274 / L2275 Junction	T-Junction	Two-way		0.55	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	262	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	2026 - Forecast Traffic Flows (No Development) - 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		✓	161	100.000
B		✓	24	100.000
C		✓	244	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	11	150
	B	22	0	2
	C	243	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	21	4
	B	1	0	1
	C	5	1	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	121	127
	B	18	18
	C	184	193
08:15-08:30	A	144	152
	B	22	22
	C	219	230
08:30-08:45	A	177	186
	B	26	27
	C	269	282
08:45-09:00	A	177	186
	B	26	27
	C	269	282
09:00-09:15	A	144	152
	B	22	22
	C	219	230
09:15-09:30	A	121	127
	B	18	18
	C	184	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-AC	0.07	9.84	0.1	0.5	A
C-AB	0.00	4.85	0.0	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	18	420	0.043	18	0.0	9.049	A
C-AB	1	758	0.001	1	0.0	4.848	A
C-A	192			192			
A-B	10			10			
A-C	117			117			

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	22	410	0.053	22	0.1	9.368	A
C-AB	1	777	0.002	1	0.0	4.738	A
C-A	229			229			
A-B	12			12			
A-C	140			140			

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	27	396	0.067	27	0.1	9.840	A
C-AB	2	803	0.002	2	0.0	4.595	A
C-A	280			280			
A-B	14			14			
A-C	172			172			

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	27	396	0.067	27	0.1	9.842	A
C-AB	2	803	0.002	2	0.0	4.601	A
C-A	280			280			
A-B	14			14			
A-C	172			172			

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	22	410	0.053	22	0.1	9.373	A
C-AB	1	777	0.002	1	0.0	4.749	A
C-A	229			229			
A-B	12			12			
A-C	140			140			

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	18	420	0.043	18	0.0	9.058	A
C-AB	1	758	0.001	1	0.0	4.853	A
C-A	192			192			
A-B	10			10			
A-C	117			117			

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	0.05	0.00	0.00	0.05	0.05			N/A	N/A
C-AB	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-AC	0.06	0.03	0.25	0.46	0.48			N/A	N/A
C-AB	0.00	0.00	0.26	0.46	0.49			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	0.07	0.03	0.26	0.47	0.50			N/A	N/A
C-AB	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-AC	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-AB	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-AC	0.06	0.00	0.00	0.06	0.06			N/A	N/A
C-AB	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-AC	0.05	0.00	0.00	0.05	0.05			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

2036 - Forecast Traffic Flows (No Development) - 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	L6274 / L2275 Junction	T-Junction	Two-way		0.56	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	220	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	2036 - Forecast Traffic Flows (No Development) - 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		✓	181	100.000
B		✓	27	100.000
C		✓	274	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	12	169
	B	25	0	2
	C	273	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	22	5
	B	1	0	1
	C	5	1	0

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	145
	B	20	21
	C	206	217
08:15-08:30	A	163	173
	B	24	25
	C	246	259
08:30-08:45	A	199	211
	B	30	30
	C	302	317
08:45-09:00	A	199	211
	B	30	30
	C	302	317
09:00-09:15	A	163	173
	B	24	25
	C	246	259
09:15-09:30	A	136	145
	B	20	21
	C	206	217

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	0.08	10.24	0.1	0.5	B
C-AB	0.00	4.79	0.0	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	21	412	0.050	20	0.1	9.279	A
C-AB	1	770	0.001	1	0.0	4.781	A
C-A	216			216			
A-B	11			11			
A-C	134			134			

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	25	401	0.061	24	0.1	9.662	A
C-AB	1	791	0.002	1	0.0	4.660	A
C-A	257			257			
A-B	13			13			
A-C	160			160			

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	30	385	0.078	30	0.1	10.231	B
C-AB	2	820	0.002	2	0.0	4.503	A
C-A	315			315			
A-B	16			16			
A-C	195			195			

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	30	385	0.078	30	0.1	10.235	B
C-AB	2	820	0.002	2	0.0	4.508	A
C-A	315			315			
A-B	16			16			
A-C	195			195			

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	25	401	0.061	25	0.1	9.669	A
C-AB	1	791	0.002	1	0.0	4.672	A
C-A	257			257			
A-B	13			13			
A-C	160			160			

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	21	412	0.050	21	0.1	9.293	A
C-AB	1	770	0.001	1	0.0	4.788	A
C-A	216			216			
A-B	11			11			
A-C	134			134			

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	0.05	0.00	0.00	0.05	0.05			N/A	N/A
C-AB	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-AC	0.07	0.03	0.25	0.46	0.48			N/A	N/A
C-AB	0.00	0.00	0.26	0.46	0.49			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	0.08	0.03	0.26	0.47	0.50			N/A	N/A
C-AB	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-AC	0.08	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	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-AC	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-AB	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-AC	0.05	0.00	0.00	0.05	0.05			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

2076 - Forecast Traffic Flows (No Development) - Operational Lifespan, 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	L6274 / L2275 Junction	T-Junction	Two-way		0.64	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	119	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	2076 - Forecast Traffic Flows (No Development) - 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		✓	263	100.000
B		✓	38	100.000
C		✓	398	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	19	244
	B	35	0	3
	C	396	2	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	29	7
	B	1	0	1
	C	7	1	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	198	215
	B	29	29
	C	300	321
08:15-08:30	A	236	257
	B	34	35
	C	358	383
08:30-08:45	A	290	314
	B	42	42
	C	438	469
08:45-09:00	A	290	314
	B	42	42
	C	438	469
09:00-09:15	A	236	257
	B	34	35
	C	358	383
09:15-09:30	A	198	215
	B	29	29
	C	300	321

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	0.12	12.00	0.1	0.5	B
C-AB	0.01	4.54	0.0	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	29	385	0.075	29	0.1	10.196	B
C-AB	2	822	0.003	2	0.0	4.536	A
C-A	318			318			
A-B	18			18			
A-C	197			197			

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	35	368	0.094	34	0.1	10.891	B
C-AB	3	854	0.004	3	0.0	4.376	A
C-A	379			379			
A-B	22			22			
A-C	235			235			

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	42	345	0.122	42	0.1	11.994	B
C-AB	5	900	0.005	5	0.0	4.174	A
C-A	464			464			
A-B	27			27			
A-C	287			287			

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	42	345	0.122	42	0.1	12.003	B
C-AB	5	900	0.005	5	0.0	4.183	A
C-A	464			464			
A-B	27			27			
A-C	287			287			

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	35	368	0.094	35	0.1	10.904	B
C-AB	3	854	0.004	3	0.0	4.393	A
C-A	379			379			
A-B	22			22			
A-C	235			235			

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	29	385	0.075	29	0.1	10.222	B
C-AB	2	822	0.003	2	0.0	4.545	A
C-A	318			318			
A-B	18			18			
A-C	197			197			

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	0.08	0.00	0.00	0.08	0.08			N/A	N/A
C-AB	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-AC	0.10	0.00	0.00	0.10	0.10			N/A	N/A
C-AB	0.00	0.00	0.26	0.47	0.49			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	0.14	0.03	0.26	0.47	0.50			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			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	0.14	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			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	0.11	0.00	0.00	0.11	0.11			N/A	N/A
C-AB	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-AC	0.08	0.00	0.00	0.08	0.08			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

2036 - Forecast Traffic Flows - Development 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	L6274 / L2275 Junction	T-Junction	Two-way		2.23	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	112	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	2036 - Forecast Traffic Flows - Development 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		✓	201	100.000
B		✓	47	100.000
C		✓	294	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	32	169
	B	35	0	12
	C	273	21	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	41	5
	B	30	0	81
	C	5	50	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	151	168
	B	35	51
	C	221	240
08:15-08:30	A	181	200
	B	42	60
	C	264	286
08:30-08:45	A	221	245
	B	52	74
	C	324	350
08:45-09:00	A	221	245
	B	52	74
	C	324	350
09:00-09:15	A	181	200
	B	42	60
	C	264	286
09:15-09:30	A	151	168
	B	35	51
	C	221	240

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	0.18	15.43	0.3	1.6	C
C-AB	0.07	6.58	0.2	1.0	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	437	0.116	50	0.2	13.280	B
C-AB	33	764	0.043	33	0.1	6.583	A
C-A	206			206			
A-B	34			34			
A-C	134			134			

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	60	425	0.142	60	0.2	14.124	B
C-AB	42	785	0.054	42	0.1	6.427	A
C-A	244			244			
A-B	41			41			
A-C	160			160			

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	74	408	0.182	74	0.3	15.405	C
C-AB	57	813	0.070	57	0.2	6.181	A
C-A	293			293			
A-B	50			50			
A-C	195			195			

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	74	408	0.182	74	0.3	15.433	C
C-AB	57	813	0.070	57	0.2	6.121	A
C-A	293			293			
A-B	50			50			
A-C	195			195			

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	60	425	0.142	61	0.2	14.165	B
C-AB	42	785	0.054	43	0.1	6.291	A
C-A	244			244			
A-B	41			41			
A-C	160			160			

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	437	0.116	51	0.2	13.350	B
C-AB	33	765	0.043	33	0.1	6.517	A
C-A	206			206			
A-B	34			34			
A-C	134			134			

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	0.18	0.00	0.00	0.18	0.18			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	0.23	0.00	0.00	0.23	0.23			N/A	N/A
C-AB	0.11	0.03	0.33	0.60	0.63			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	0.31	0.04	0.37	0.67	0.70			N/A	N/A
C-AB	0.16	0.03	0.34	0.62	1.04			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	0.31	0.04	0.41	0.95	1.56			N/A	N/A
C-AB	0.16	0.00	0.00	0.16	0.16			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	0.24	0.00	0.00	0.24	0.24			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	0.19	0.00	0.00	0.19	0.19			N/A	N/A
C-AB	0.08	0.00	0.00	0.08	0.08			N/A	N/A

2076 - Forecast Traffic Flows - Development 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	L6274 / L2275 Junction	T-Junction	Two-way		2.00	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	64	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	2076 - Forecast Traffic Flows - Development 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		✓	282	100.000
B		✓	58	100.000
C		✓	418	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	38	244
	B	45	0	13
	C	396	22	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	40	7
	B	22	0	75
	C	7	45	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	212	237
	B	44	58
	C	315	343
08:15-08:30	A	254	283
	B	52	70
	C	376	410
08:30-08:45	A	310	346
	B	64	85
	C	460	502
08:45-09:00	A	310	346
	B	64	85
	C	460	502
09:00-09:15	A	254	283
	B	52	70
	C	376	410
09:15-09:30	A	212	237
	B	44	58
	C	315	343

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	0.24	17.32	0.4	1.9	C
C-AB	0.08	5.89	0.2	1.3	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	58	406	0.144	58	0.2	13.795	B
C-AB	39	817	0.048	39	0.1	5.891	A
C-A	304			304			
A-B	40			40			
A-C	197			197			

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	70	388	0.180	70	0.3	15.103	C
C-AB	52	849	0.061	52	0.1	5.697	A
C-A	357			357			
A-B	48			48			
A-C	235			235			

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	85	364	0.235	85	0.4	17.264	C
C-AB	74	894	0.082	73	0.2	5.419	A
C-A	428			428			
A-B	59			59			
A-C	287			287			

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	85	364	0.235	85	0.4	17.321	C
C-AB	74	894	0.083	74	0.2	5.368	A
C-A	428			428			
A-B	59			59			
A-C	287			287			

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	70	388	0.180	70	0.3	15.175	C
C-AB	52	849	0.062	53	0.1	5.573	A
C-A	357			357			
A-B	48			48			
A-C	235			235			

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	58	406	0.144	59	0.2	13.892	B
C-AB	40	817	0.048	40	0.1	5.830	A
C-A	303			303			
A-B	40			40			
A-C	197			197			

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	0.22	0.00	0.00	0.22	0.22			N/A	N/A
C-AB	0.09	0.00	0.00	0.09	0.09			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	0.13	0.03	0.32	0.57	0.60			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	0.40	0.03	0.35	0.62	0.66			N/A	N/A
C-AB	0.19	0.03	0.33	0.60	1.27			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	0.41	0.04	0.41	1.45	1.90			N/A	N/A
C-AB	0.19	0.00	0.00	0.19	0.19			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	0.13	0.00	0.00	0.13	0.13			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	0.23	0.00	0.00	0.23	0.23			N/A	N/A
C-AB	0.09	0.00	0.00	0.09	0.09			N/A	N/A

2036 - Forecast Traffic Flows - Development Construction 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	L6274 / L2275 Junction	T-Junction	Two-way		6.57	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	118	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	2036 - Forecast Traffic Flows - Development 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		✓	116	100.000
B		✓	78	100.000
C		✓	88	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	20	96
	B	28	0	50
	C	60	28	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	41	5
	B	30	0	81
	C	5	50	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	87	97
	B	59	96
	C	66	79
08:15-08:30	A	104	116
	B	70	114
	C	79	94
08:30-08:45	A	128	142
	B	86	140
	C	97	116
08:45-09:00	A	128	142
	B	86	140
	C	97	116
09:00-09:15	A	104	116
	B	70	114
	C	79	94
09:15-09:30	A	87	97
	B	59	96
	C	66	79

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	0.27	15.67	0.6	2.4	C
C-AB	0.08	8.32	0.1	0.7	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	96	526	0.182	94	0.4	13.528	B
C-AB	34	672	0.051	34	0.1	8.208	A
C-A	45			45			
A-B	21			21			
A-C	76			76			

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	114	521	0.219	114	0.4	14.381	B
C-AB	41	673	0.061	41	0.1	8.267	A
C-A	53			53			
A-B	25			25			
A-C	91			91			

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	140	514	0.272	139	0.6	15.617	C
C-AB	52	675	0.076	51	0.1	8.323	A
C-A	64			64			
A-B	31			31			
A-C	111			111			

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	140	514	0.272	140	0.6	15.665	C
C-AB	52	675	0.076	52	0.1	8.294	A
C-A	64			64			
A-B	31			31			
A-C	111			111			

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	114	521	0.219	115	0.5	14.449	B
C-AB	41	673	0.061	41	0.1	8.209	A
C-A	53			53			
A-B	25			25			
A-C	91			91			

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	96	526	0.182	96	0.4	13.643	B
C-AB	34	672	0.051	34	0.1	8.188	A
C-A	45			45			
A-B	21			21			
A-C	76			76			

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	0.35	0.00	0.00	0.35	0.35			N/A	N/A
C-AB	0.09	0.00	0.00	0.09	0.09			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	0.45	0.00	0.00	0.45	0.45			N/A	N/A
C-AB	0.11	0.04	0.36	0.66	0.69			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	0.59	0.04	0.42	0.76	0.80			N/A	N/A
C-AB	0.13	0.04	0.38	0.68	0.71			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	0.05	0.50	1.99	2.42			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	0.47	0.00	0.00	0.47	0.47			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	0.37	0.00	0.00	0.37	0.37			N/A	N/A
C-AB	0.09	0.00	0.00	0.09	0.09			N/A	N/A

2076 - Forecast Traffic Flows - Development Decomissioning 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	L6274 / L2275 Junction	T-Junction	Two-way		5.60	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	100	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	2076 - Forecast Traffic Flows - Development Decomissioning 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		✓	154	100.000
B		✓	84	100.000
C		✓	123	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	22	132
	B	34	0	50
	C	88	35	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	40	7
	B	22	0	75
	C	7	45	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	116	130
	B	63	97
	C	93	109
08:15-08:30	A	138	155
	B	76	116
	C	111	130
08:30-08:45	A	170	189
	B	92	142
	C	135	160
08:45-09:00	A	170	189
	B	92	142
	C	135	160
09:00-09:15	A	138	155
	B	76	116
	C	111	130
09:15-09:30	A	116	130
	B	63	97
	C	93	109

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	15.73	0.6	2.6	C
C-AB	0.10	8.02	0.2	0.7	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	510	0.190	96	0.4	13.286	B
C-AB	43	679	0.063	42	0.1	7.901	A
C-A	66			66			
A-B	23			23			
A-C	106			106			

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	503	0.230	116	0.5	14.246	B
C-AB	52	682	0.076	52	0.1	7.963	A
C-A	78			78			
A-B	28			28			
A-C	127			127			

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	493	0.288	141	0.6	15.680	C
C-AB	66	686	0.096	66	0.2	8.024	A
C-A	94			94			
A-B	34			34			
A-C	156			156			

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	493	0.288	142	0.6	15.733	C
C-AB	66	686	0.096	66	0.2	7.990	A
C-A	94			94			
A-B	34			34			
A-C	156			156			

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	503	0.230	117	0.5	14.322	B
C-AB	52	682	0.077	52	0.1	7.897	A
C-A	78			78			
A-B	28			28			
A-C	127			127			

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	510	0.190	98	0.4	13.405	B
C-AB	43	679	0.063	43	0.1	7.877	A
C-A	66			66			
A-B	23			23			
A-C	106			106			

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	0.35	0.00	0.00	0.35	0.35			N/A	N/A
C-AB	0.11	0.00	0.00	0.11	0.11			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	0.45	0.00	0.00	0.45	0.45			N/A	N/A
C-AB	0.13	0.04	0.36	0.65	0.69			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	0.61	0.04	0.40	0.71	0.75			N/A	N/A
C-AB	0.17	0.04	0.36	0.65	0.69			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	0.61	0.05	0.47	1.94	2.58			N/A	N/A
C-AB	0.18	0.03	0.34	0.62	0.65			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	0.47	0.00	0.00	0.47	0.47			N/A	N/A
C-AB	0.14	0.00	0.00	0.14	0.14			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	0.37	0.00	0.00	0.37	0.37			N/A	N/A
C-AB	0.11	0.00	0.00	0.11	0.11			N/A	N/A

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: R518 - I1537 Junction.j9
Path: P:\Jod-jobs\6839 Fort East Garrane WF\500 Environmental\503 EIA\17 Traffic and Transportation\01 Appendices\Appendix 17.1 Traffic and Transport Assessment\Files which may need to be added\Traffic analysis
Report generation date: 07/08/2025 18:07:15

Summary of junction performance

	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	0.1	0.5	8.76	0.08	A	1.03	A	321 % [Stream B-AC]
Stream C-AB		0.0	0.5	4.96	0.03	A			
	2026 - Forecast Traffic Flows (No Development) - Planning Grant								
Stream B-AC	D2	0.1	0.5	8.89	0.08	A	1.05	A	297 % [Stream B-AC]
Stream C-AB		0.0	0.5	4.96	0.03	A			
	2036 - Forecast Traffic Flows (No Development) - Planning Period								
Stream B-AC	D3	0.1	0.5	9.20	0.10	A	1.08	A	252 % [Stream B-AC]
Stream C-AB		0.0	0.5	4.95	0.03	A			
	2076 - Forecast Traffic Flows (No Development) - Operational Lifespan								
Stream B-AC	D4	0.2	0.5	10.85	0.15	B	1.24	A	136 % [Stream B-AC]
Stream C-AB		0.1	0.5	4.93	0.05	A			
	2036 - Forecast Traffic Flows - Development Construction Traffic								
Stream B-AC	D5	0.3	1.6	13.79	0.20	B	2.74	A	130 % [Stream B-AC]
Stream C-AB		0.1	0.8	6.62	0.07	A			
	2076 - Forecast Traffic Flows - Development Decomissioning Traffic								
Stream B-AC	D6	0.5	1.7	15.74	0.27	C	2.68	A	74 % [Stream B-AC]
Stream C-AB		0.2	1.2	6.16	0.09	A			
	2036 - Forecast Traffic Flows - Development Construction Traffic - Additional Developments								
Stream B-AC	D7	0.4	1.8	14.47	0.22	B	2.87	A	109 % [Stream B-AC]
Stream C-AB		0.2	1.0	6.60	0.08	A			
	2076 - Forecast Traffic Flows - Development Decomissioning Traffic - Additional Developments								
Stream B-AC	D8	0.6	2.3	16.84	0.30	C	2.75	A	60 % [Stream B-AC]
Stream C-AB		0.2	1.1	6.03	0.08	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.

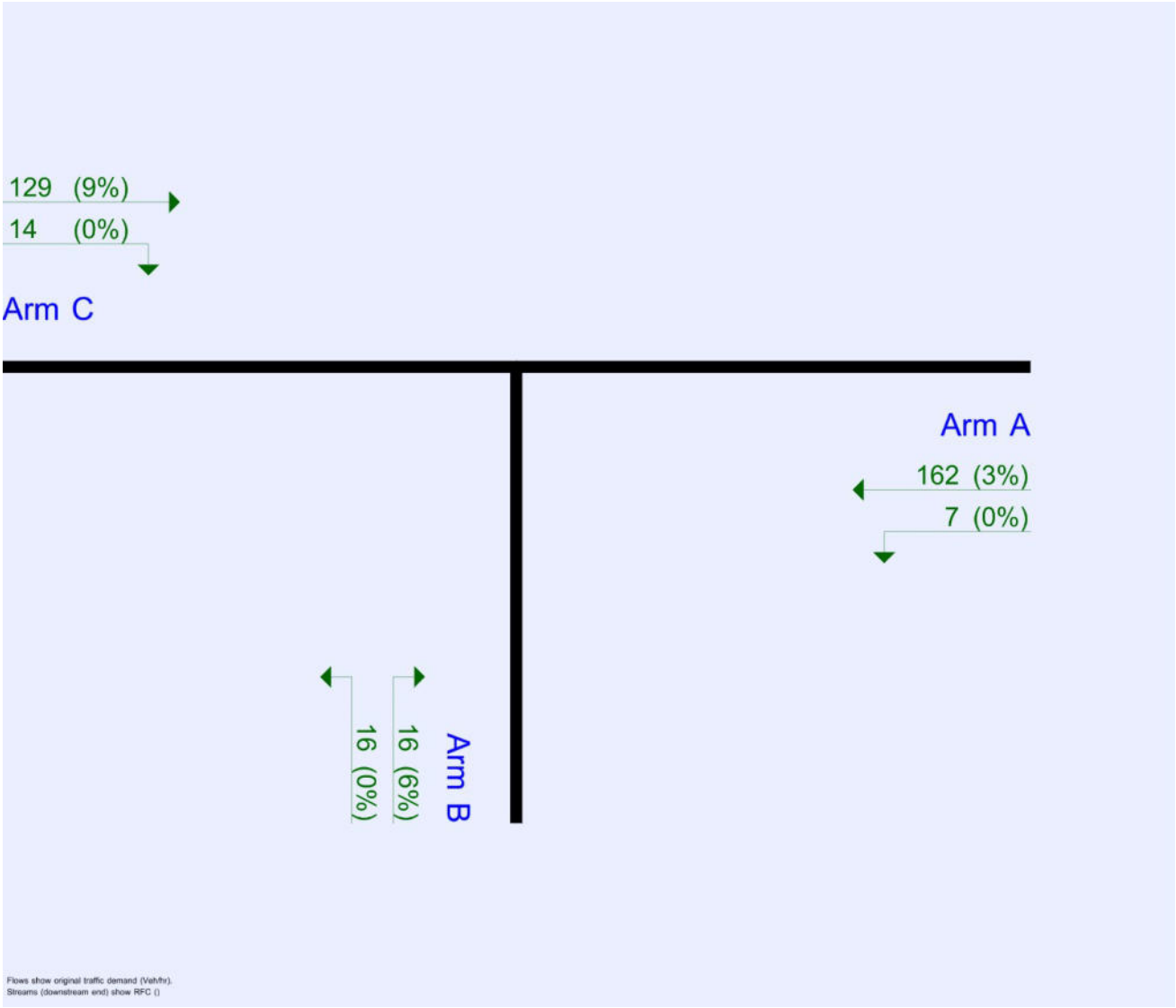
File summary

File Description

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

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	2026 - Forecast Traffic Flows (No Development) - Planning Grant	AM	ONE HOUR	08:00	09:30	15
D3	2036 - Forecast Traffic Flows (No Development) - Planning Period	AM	ONE HOUR	08:00	09:30	15
D4	2076 - Forecast Traffic Flows (No Development) - Operational Lifespan	AM	ONE HOUR	08:00	09:30	15
D5	2036 - Forecast Traffic Flows - Development Construction Traffic	AM	ONE HOUR	08:00	09:30	15
D6	2076 - Forecast Traffic Flows - Development Decomissioning Traffic	AM	ONE HOUR	08:00	09:30	15
D7	2036 - Forecast Traffic Flows - Development Construction Traffic - Additional Developments	AM	ONE HOUR	08:00	09:30	15
D8	2076 - Forecast Traffic Flows - Development Decomissioning 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

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	L6274 / L2275 Junction	T-Junction	Two-way		1.03	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	321	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm type
A	R518		Major
B	L1537		Minor
C	R518		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	6.00			250.0	✓	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	2.50	10	10

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	462	0.084	0.212	0.134	0.304
B-C	599	0.092	0.232	-	-
C-B	719	0.278	0.278	-	-

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		✓	169	100.000
B		✓	32	100.000
C		✓	143	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	7	162
	B	16	0	16
	C	129	14	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	3
	B	6	0	0
	C	9	0	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	127	131
	B	24	25
	C	108	116
08:15-08:30	A	152	156
	B	29	30
	C	129	138
08:30-08:45	A	186	192
	B	35	36
	C	157	170
08:45-09:00	A	186	192
	B	35	36
	C	157	170
09:00-09:15	A	152	156
	B	29	30
	C	129	138
09:15-09:30	A	127	131
	B	24	25
	C	108	116

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	0.08	8.76	0.1	0.5	A
C-AB	0.03	4.96	0.0	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	25	479	0.052	25	0.1	8.168	A
C-AB	12	748	0.016	12	0.0	4.949	A
C-A	104			104			
A-B	5			5			
A-C	126			126			

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	30	471	0.063	30	0.1	8.407	A
C-AB	15	754	0.020	15	0.0	4.933	A
C-A	123			123			
A-B	6			6			
A-C	150			150			

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	36	460	0.079	36	0.1	8.756	A
C-AB	19	763	0.025	19	0.0	4.915	A
C-A	150			150			
A-B	8			8			
A-C	184			184			

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	36	460	0.079	36	0.1	8.758	A
C-AB	19	763	0.025	19	0.0	4.922	A
C-A	150			150			
A-B	8			8			
A-C	184			184			

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	30	471	0.063	30	0.1	8.412	A
C-AB	15	754	0.020	15	0.0	4.948	A
C-A	123			123			
A-B	6			6			
A-C	150			150			

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	25	479	0.052	25	0.1	8.178	A
C-AB	12	748	0.016	12	0.0	4.957	A
C-A	104			104			
A-B	5			5			
A-C	126			126			

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	0.06	0.00	0.00	0.06	0.06			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			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	0.07	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.02	0.02	0.25	0.46	0.48			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	0.09	0.03	0.27	0.48	0.51			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			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	0.09	0.03	0.26	0.46	0.49			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			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	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			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	0.06	0.00	0.00	0.06	0.06			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

2026 - Forecast Traffic Flows (No Development) - 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	L6274 / L2275 Junction	T-Junction	Two-way		1.05	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	297	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	2026 - Forecast Traffic Flows (No Development) - 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		✓	178	100.000
B		✓	34	100.000
C		✓	151	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	7	171
	B	17	0	17
	C	136	15	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	3
	B	7	0	0
	C	9	0	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	134	138
	B	26	26
	C	113	123
08:15-08:30	A	160	165
	B	31	32
	C	136	146
08:30-08:45	A	196	202
	B	37	39
	C	166	179
08:45-09:00	A	196	202
	B	37	39
	C	166	179
09:00-09:15	A	160	165
	B	31	32
	C	136	146
09:15-09:30	A	134	138
	B	26	26
	C	113	123

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	0.08	8.89	0.1	0.5	A
C-AB	0.03	4.96	0.0	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	26	477	0.055	26	0.1	8.245	A
C-AB	13	750	0.017	13	0.0	4.947	A
C-A	110			110			
A-B	6			6			
A-C	133			133			

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	32	468	0.067	32	0.1	8.506	A
C-AB	16	756	0.021	16	0.0	4.930	A
C-A	130			130			
A-B	7			7			
A-C	159			159			

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	39	457	0.085	39	0.1	8.883	A
C-AB	21	765	0.027	21	0.0	4.912	A
C-A	159			159			
A-B	8			8			
A-C	194			194			

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	39	457	0.085	39	0.1	8.887	A
C-AB	21	765	0.027	21	0.0	4.919	A
C-A	159			159			
A-B	8			8			
A-C	194			194			

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	32	468	0.067	32	0.1	8.513	A
C-AB	16	756	0.021	16	0.0	4.947	A
C-A	130			130			
A-B	7			7			
A-C	159			159			

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	26	477	0.055	26	0.1	8.258	A
C-AB	13	750	0.017	13	0.0	4.956	A
C-A	110			110			
A-B	6			6			
A-C	133			133			

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	0.06	0.00	0.00	0.06	0.06			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			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	0.07	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.03	0.03	0.25	0.46	0.48			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	0.09	0.03	0.27	0.48	0.51			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			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	0.09	0.03	0.26	0.46	0.49			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			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	0.08	0.00	0.00	0.08	0.08			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			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	0.06	0.00	0.00	0.06	0.06			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

2036 - Forecast Traffic Flows (No Development) - 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	L6274 / L2275 Junction	T-Junction	Two-way		1.08	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	252	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	2036 - Forecast Traffic Flows (No Development) - 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		✓	200	100.000
B		✓	38	100.000
C		✓	171	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	8	192
	B	19	0	19
	C	154	17	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	4
	B	7	0	0
	C	10	0	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	151	156
	B	29	30
	C	129	140
08:15-08:30	A	180	186
	B	34	35
	C	154	167
08:30-08:45	A	220	228
	B	42	43
	C	188	205
08:45-09:00	A	220	228
	B	42	43
	C	188	205
09:00-09:15	A	180	186
	B	34	35
	C	154	167
09:15-09:30	A	151	156
	B	29	30
	C	129	140

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	0.10	9.20	0.1	0.5	A
C-AB	0.03	4.95	0.0	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	30	471	0.063	29	0.1	8.436	A
C-AB	15	755	0.020	15	0.0	4.941	A
C-A	124			124			
A-B	6			6			
A-C	150			150			

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	35	462	0.077	35	0.1	8.745	A
C-AB	19	763	0.025	19	0.0	4.922	A
C-A	148			148			
A-B	7			7			
A-C	179			179			

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	43	448	0.097	43	0.1	9.198	A
C-AB	25	774	0.032	25	0.0	4.902	A
C-A	180			180			
A-B	9			9			
A-C	219			219			

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	43	448	0.097	43	0.1	9.202	A
C-AB	25	774	0.032	25	0.0	4.911	A
C-A	180			180			
A-B	9			9			
A-C	219			219			

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	35	461	0.077	35	0.1	8.753	A
C-AB	19	763	0.025	19	0.0	4.941	A
C-A	148			148			
A-B	7			7			
A-C	179			179			

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	30	471	0.063	30	0.1	8.451	A
C-AB	15	755	0.020	15	0.0	4.951	A
C-A	124			124			
A-B	6			6			
A-C	150			150			

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	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			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	0.09	0.03	0.27	0.48	0.51			N/A	N/A
C-AB	0.03	0.03	0.26	0.46	0.49			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	0.11	0.03	0.27	0.48	0.51			N/A	N/A
C-AB	0.04	0.00	0.00	0.04	0.04			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	0.11	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.04	0.00	0.00	0.04	0.04			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	0.09	0.00	0.00	0.09	0.09			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			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	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			N/A	N/A

2076 - Forecast Traffic Flows (No Development) - Operational Lifespan, 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	L6274 / L2275 Junction	T-Junction	Two-way		1.24	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	136	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	2076 - Forecast Traffic Flows (No Development) - 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		✓	289	100.000
B		✓	55	100.000
C		✓	252	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	12	277
	B	28	0	27
	C	228	24	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	5
	B	10	0	0
	C	13	0	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	218	228
	B	41	43
	C	190	212
08:15-08:30	A	260	272
	B	49	52
	C	227	253
08:30-08:45	A	318	333
	B	61	64
	C	277	310
08:45-09:00	A	318	333
	B	61	64
	C	277	310
09:00-09:15	A	260	272
	B	49	52
	C	227	253
09:15-09:30	A	218	228
	B	41	43
	C	190	212

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	10.85	0.2	0.5	B
C-AB	0.05	4.93	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	43	446	0.097	43	0.1	9.370	A
C-AB	24	779	0.031	24	0.0	4.910	A
C-A	188			188			
A-B	9			9			
A-C	219			219			

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	52	431	0.120	52	0.1	9.943	A
C-AB	31	792	0.039	30	0.1	4.882	A
C-A	223			223			
A-B	11			11			
A-C	261			261			

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	64	412	0.154	63	0.2	10.836	B
C-AB	41	811	0.050	41	0.1	4.854	A
C-A	269			269			
A-B	13			13			
A-C	320			320			

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	64	412	0.154	64	0.2	10.847	B
C-AB	41	811	0.050	41	0.1	4.870	A
C-A	269			269			
A-B	13			13			
A-C	320			320			

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	52	431	0.120	52	0.1	9.961	A
C-AB	31	792	0.039	31	0.1	4.916	A
C-A	223			223			
A-B	11			11			
A-C	261			261			

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	43	445	0.097	44	0.1	9.399	A
C-AB	24	779	0.031	24	0.0	4.927	A
C-A	188			188			
A-B	9			9			
A-C	219			219			

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	0.11	0.00	0.00	0.11	0.11			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	0.14	0.00	0.00	0.14	0.14			N/A	N/A
C-AB	0.06	0.03	0.26	0.47	0.49			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	0.19	0.03	0.27	0.49	0.51			N/A	N/A
C-AB	0.08	0.03	0.27	0.48	0.51			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	0.19	0.03	0.27	0.49	0.51			N/A	N/A
C-AB	0.08	0.00	0.00	0.08	0.08			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	0.15	0.00	0.00	0.15	0.15			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	0.11	0.00	0.00	0.11	0.11			N/A	N/A
C-AB	0.04	0.00	0.00	0.04	0.04			N/A	N/A

2036 - Forecast Traffic Flows - Development 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	L6274 / L2275 Junction	T-Junction	Two-way		2.74	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	130	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	2036 - Forecast Traffic Flows - Development 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		✓	210	100.000
B		✓	58	100.000
C		✓	181	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	18	192
	B	29	0	29
	C	154	27	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	55	4
	B	38	0	35
	C	10	38	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	158	171
	B	44	60
	C	136	155
08:15-08:30	A	189	204
	B	52	71
	C	163	185
08:30-08:45	A	231	249
	B	64	87
	C	199	227
08:45-09:00	A	231	249
	B	64	87
	C	199	227
09:00-09:15	A	189	204
	B	52	71
	C	163	185
09:15-09:30	A	158	171
	B	44	60
	C	136	155

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	0.20	13.79	0.3	1.6	B
C-AB	0.07	6.62	0.1	0.8	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	60	468	0.127	59	0.2	11.981	B
C-AB	34	751	0.045	33	0.1	6.620	A
C-A	121			121			
A-B	21			21			
A-C	150			150			

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	71	458	0.155	71	0.2	12.695	B
C-AB	42	758	0.055	42	0.1	6.606	A
C-A	143			143			
A-B	25			25			
A-C	179			179			

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	87	443	0.197	87	0.3	13.767	B
C-AB	54	768	0.070	54	0.1	6.565	A
C-A	173			173			
A-B	31			31			
A-C	219			219			

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	87	443	0.197	87	0.3	13.792	B
C-AB	54	768	0.070	54	0.1	6.536	A
C-A	173			173			
A-B	31			31			
A-C	219			219			

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	71	458	0.155	71	0.3	12.729	B
C-AB	42	758	0.055	42	0.1	6.547	A
C-A	143			143			
A-B	25			25			
A-C	179			179			

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	60	468	0.127	60	0.2	12.040	B
C-AB	34	751	0.045	34	0.1	6.594	A
C-A	121			121			
A-B	21			21			
A-C	150			150			

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	0.08	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	0.25	0.00	0.00	0.25	0.25			N/A	N/A
C-AB	0.10	0.03	0.33	0.59	0.63			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	0.04	0.35	0.63	0.67			N/A	N/A
C-AB	0.14	0.03	0.34	0.62	0.84			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	0.40	1.15	1.64			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	0.26	0.00	0.00	0.26	0.26			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	0.20	0.00	0.00	0.20	0.20			N/A	N/A
C-AB	0.08	0.00	0.00	0.08	0.08			N/A	N/A

2076 - Forecast Traffic Flows - Development 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	L6274 / L2275 Junction	T-Junction	Two-way		2.68	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)
D6	2076 - Forecast Traffic Flows - Development 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		✓	299	100.000
B		✓	75	100.000
C		✓	262	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	22	277
	B	38	0	37
	C	228	34	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	46	5
	B	34	0	27
	C	13	30	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	225	243
	B	56	74
	C	197	227
08:15-08:30	A	269	290
	B	67	88
	C	236	271
08:30-08:45	A	329	355
	B	83	108
	C	288	332
08:45-09:00	A	329	355
	B	83	108
	C	288	332
09:00-09:15	A	269	290
	B	67	88
	C	236	271
09:15-09:30	A	225	243
	B	56	74
	C	197	227

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	0.27	15.74	0.5	1.7	C
C-AB	0.09	6.16	0.2	1.2	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	443	0.167	73	0.3	12.672	B
C-AB	44	775	0.057	44	0.1	6.160	A
C-A	183			183			
A-B	24			24			
A-C	219			219			

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	428	0.206	88	0.3	13.820	B
C-AB	56	788	0.072	56	0.1	6.142	A
C-A	215			215			
A-B	29			29			
A-C	261			261			

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	407	0.265	107	0.5	15.684	C
C-AB	75	806	0.093	75	0.2	6.101	A
C-A	257			257			
A-B	35			35			
A-C	320			320			

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	406	0.265	108	0.5	15.739	C
C-AB	75	806	0.093	75	0.2	6.078	A
C-A	257			257			
A-B	35			35			
A-C	320			320			

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	428	0.206	89	0.3	13.889	B
C-AB	56	788	0.072	57	0.1	6.097	A
C-A	215			215			
A-B	29			29			
A-C	261			261			

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	443	0.167	74	0.3	12.767	B
C-AB	44	775	0.057	45	0.1	6.147	A
C-A	183			183			
A-B	24			24			
A-C	219			219			

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	0.26	0.00	0.00	0.26	0.26			N/A	N/A
C-AB	0.11	0.00	0.00	0.11	0.11			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	0.33	0.00	0.00	0.33	0.33			N/A	N/A
C-AB	0.14	0.03	0.32	0.57	0.61			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	0.46	0.03	0.34	0.61	0.64			N/A	N/A
C-AB	0.20	0.03	0.33	0.60	1.20			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	0.47	0.04	0.40	1.58	1.74			N/A	N/A
C-AB	0.20	0.00	0.00	0.20	0.20			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	0.34	0.00	0.00	0.34	0.34			N/A	N/A
C-AB	0.15	0.00	0.00	0.15	0.15			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	0.27	0.00	0.00	0.27	0.27			N/A	N/A
C-AB	0.11	0.00	0.00	0.11	0.11			N/A	N/A

2036 - Forecast Traffic Flows - Development Construction 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	L6274 / L2275 Junction	T-Junction	Two-way		2.87	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	109	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	2036 - Forecast Traffic Flows - Development 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		✓	230	100.000
B		✓	64	100.000
C		✓	200	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	20	210
	B	32	0	32
	C	170	30	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	55	4
	B	38	0	35
	C	10	38	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	173	187
	B	48	66
	C	151	171
08:15-08:30	A	207	223
	B	58	79
	C	180	205
08:30-08:45	A	253	273
	B	70	96
	C	220	251
08:45-09:00	A	253	273
	B	70	96
	C	220	251
09:00-09:15	A	207	223
	B	58	79
	C	180	205
09:15-09:30	A	173	187
	B	48	66
	C	151	171

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	0.22	14.47	0.4	1.8	B
C-AB	0.08	6.60	0.2	1.0	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	66	463	0.142	65	0.2	12.317	B
C-AB	38	755	0.051	38	0.1	6.599	A
C-A	133			133			
A-B	23			23			
A-C	164			164			

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	79	451	0.174	78	0.3	13.158	B
C-AB	48	763	0.062	48	0.1	6.586	A
C-A	157			157			
A-B	28			28			
A-C	195			195			

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	96	436	0.221	96	0.4	14.435	B
C-AB	62	775	0.080	62	0.2	6.547	A
C-A	189			189			
A-B	34			34			
A-C	239			239			

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	96	435	0.221	96	0.4	14.475	B
C-AB	62	775	0.080	62	0.2	6.516	A
C-A	189			189			
A-B	34			34			
A-C	239			239			

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	79	451	0.174	79	0.3	13.201	B
C-AB	48	763	0.063	48	0.1	6.518	A
C-A	157			157			
A-B	28			28			
A-C	195			195			

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	66	463	0.142	66	0.2	12.391	B
C-AB	38	755	0.051	38	0.1	6.569	A
C-A	133			133			
A-B	23			23			
A-C	164			164			

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	0.22	0.00	0.00	0.22	0.22			N/A	N/A
C-AB	0.09	0.00	0.00	0.09	0.09			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	0.28	0.00	0.00	0.28	0.28			N/A	N/A
C-AB	0.12	0.03	0.33	0.59	0.62			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	0.38	0.04	0.35	0.63	0.67			N/A	N/A
C-AB	0.16	0.03	0.34	0.62	0.97			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	0.41	1.38	1.84			N/A	N/A
C-AB	0.16	0.00	0.00	0.16	0.16			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	0.29	0.00	0.00	0.29	0.29			N/A	N/A
C-AB	0.12	0.00	0.00	0.12	0.12			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	0.23	0.00	0.00	0.23	0.23			N/A	N/A
C-AB	0.09	0.00	0.00	0.09	0.09			N/A	N/A

2076 - Forecast Traffic Flows - Development Decomissioning 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	L6274 / L2275 Junction	T-Junction	Two-way		2.75	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	60	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	2076 - Forecast Traffic Flows - Development Decomissioning 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		✓	329	100.000
B		✓	83	100.000
C		✓	277	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	24	305
	B	42	0	41
	C	250	27	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	46	5
	B	34	0	27
	C	13	30	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A	248	267
	B	62	82
	C	209	239
08:15-08:30	A	296	319
	B	75	97
	C	249	285
08:30-08:45	A	362	391
	B	91	119
	C	305	350
08:45-09:00	A	362	391
	B	91	119
	C	305	350
09:00-09:15	A	296	319
	B	75	97
	C	249	285
09:15-09:30	A	248	267
	B	62	82
	C	209	239

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	0.30	16.84	0.6	2.3	C
C-AB	0.08	6.03	0.2	1.1	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	82	437	0.187	80	0.3	13.127	B
C-AB	36	781	0.046	36	0.1	6.027	A
C-A	203			203			
A-B	26			26			
A-C	241			241			

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	421	0.231	97	0.4	14.494	B
C-AB	46	795	0.058	46	0.1	5.978	A
C-A	239			239			
A-B	32			32			
A-C	287			287			

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	119	399	0.299	119	0.5	16.773	C
C-AB	63	816	0.077	62	0.2	5.893	A
C-A	287			287			
A-B	39			39			
A-C	352			352			

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	119	399	0.299	119	0.6	16.837	C
C-AB	63	816	0.077	63	0.2	5.873	A
C-A	287			287			
A-B	39			39			
A-C	352			352			

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	421	0.231	98	0.4	14.581	B
C-AB	46	795	0.058	47	0.1	5.931	A
C-A	239			239			
A-B	32			32			
A-C	287			287			

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	82	437	0.187	82	0.3	13.247	B
C-AB	36	781	0.047	37	0.1	6.007	A
C-A	203			203			
A-B	26			26			
A-C	241			241			

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	0.09	0.00	0.00	0.09	0.09			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	0.39	0.00	0.00	0.39	0.39			N/A	N/A
C-AB	0.12	0.03	0.31	0.56	0.59			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	0.54	0.03	0.34	0.61	0.64			N/A	N/A
C-AB	0.17	0.03	0.33	0.60	1.15			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	0.55	0.04	0.40	1.71	2.33			N/A	N/A
C-AB	0.17	0.00	0.00	0.17	0.17			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	0.40	0.00	0.00	0.40	0.40			N/A	N/A
C-AB	0.12	0.00	0.00	0.12	0.12			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	0.09	0.00	0.00	0.09	0.09			N/A	N/A