

Oweninny Wind Farm Phase 3

Environmental Impact Assessment Report

Appendix 17.2 Traffic and Transportation Assessment (TTA)

TII Live Traffic Counter: TMU N59 070.S

Site CC6E1B8D323F

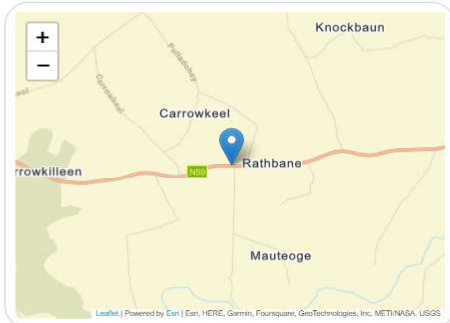
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Site Data

000000001592 - TMU N59 070.0 S

Description: N59 Between Crossmolina and Bangor-Erris, Moylaw, Co. Mayo

Coordinates: 54.09502, -9.37759



7-day Average Traffic Count

2,092

Weekly Traffic Count

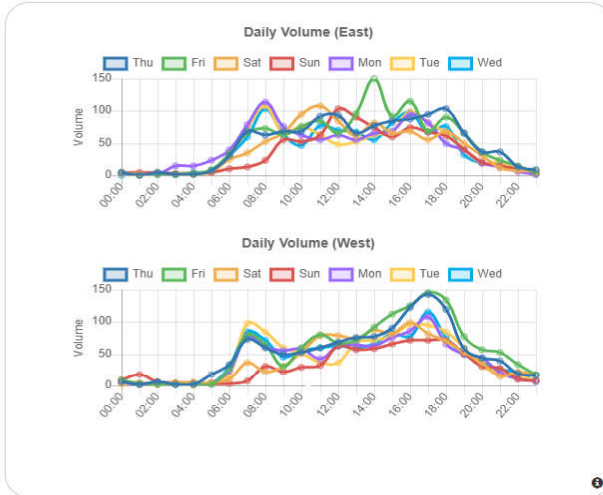
14,644

Traffic Statistics by Direction

Direction	Weekday average total traffic	7-day average traffic	Weekly traffic total
East	1,088	1,041	7,290
West	1,126	1,051	7,354

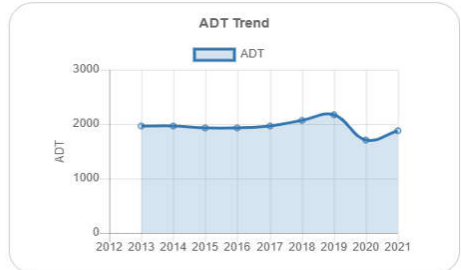
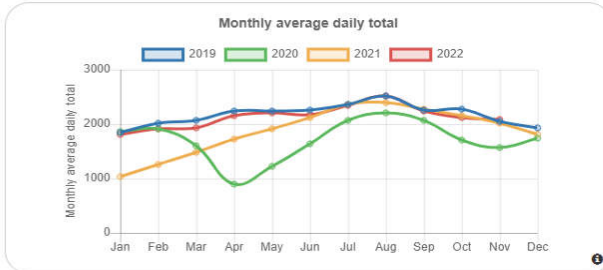
Weekday Average Traffic Count

2,214

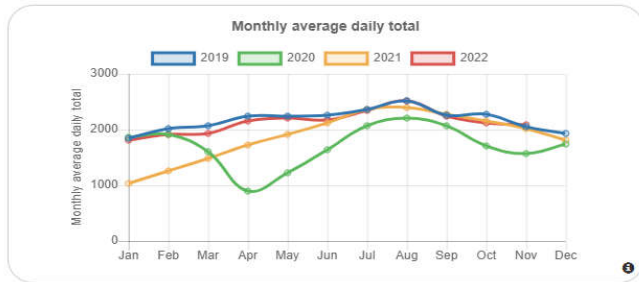


Vehicle Classification

1. Motorbike Motorbikes		0.36%
2. Car Passenger cars		77.27%
3. LGV Light goods vehicles		15.23%
4. Bus Buses or coaches		0.83%
5. HGV Heavy goods vehicles		2.94%
6. Articulated HGV Articulated heavy goods vehicles		1.49%
7. Caravan Vehicles pulling caravans		1.86%



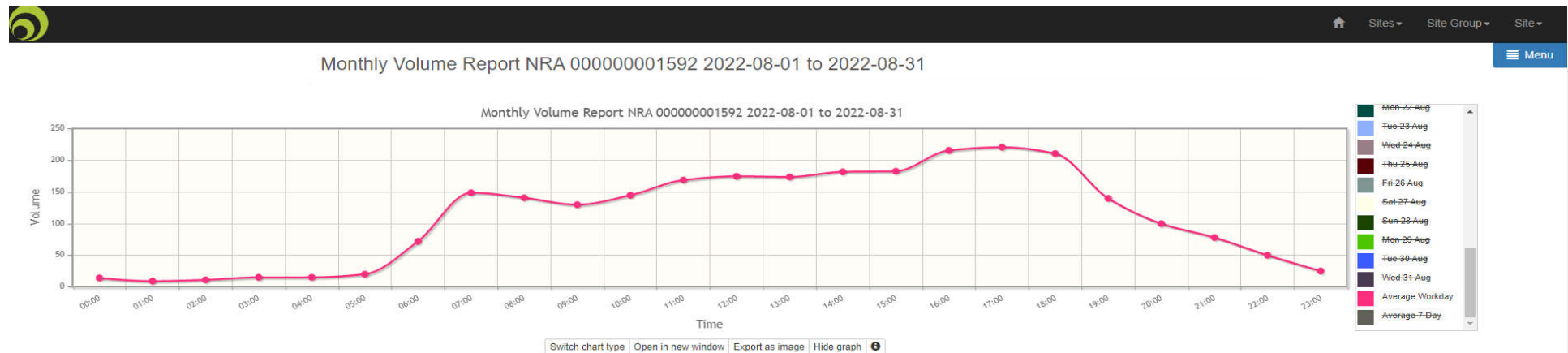
Selection of Traffic Count Data & Assessment Hours



Month: The peak monthly average daily total is in August of 2022

Seasonal Adjustment is not required as the peak month for traffic has been selected.

The average workday for the month of August in 2022 was selected for analysis, as per the graph below.



As evident in the figure above, the peak traffic flow on the N59 occurs at the following for the morning (i.e. AM) and evening (i.e. PM) peak hours:

- AM Peak:** 07:00-08:00 hrs
- PM Peak:** 17:00-18:00 hrs



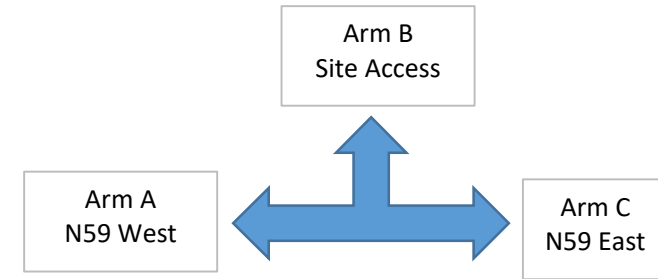
The average workday traffic volume for each direction of travel, each classification of vehicle for the peak hours was used as the baseflow traffic volume.

All Westbound - Arm C

Time	MBIKE	CAR	LGV	BUS	HGV_RIGID	HGV_ARTIC	CARAVAN	TOTAL
07:00-08:00	0	54	20	0	3	2	1	80
17:00-18:00	1	104	14	1	2	1	2	125
24-Hour	8	1021	192	9	42	24	28	1325

All Eastbound - Arm A

Time	MBIKE	CAR	LGV	BUS	HGV_RIGID	HGV_ARTIC	CARAVAN	TOTAL
07:00-08:00	0	49	12	1	2	1	2	68
17:00-18:00	1	71	18	0	2	1	1	94
24-Hour	9	976	209	11	45	23	22	1297



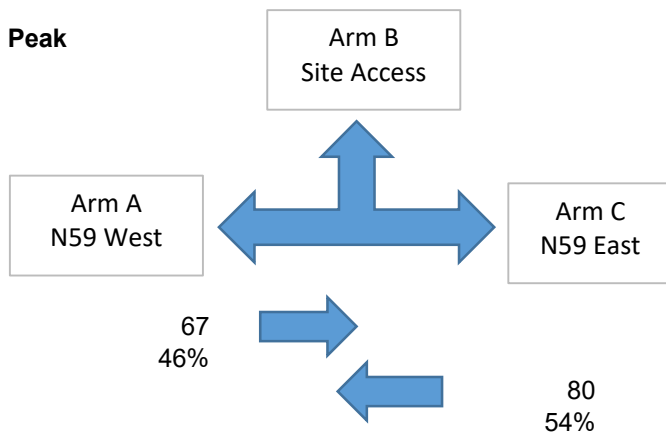
Existing Traffic Volume - N59

Existing N59 - AM Peak (07:00 - 08:00)						
Route	A - LV	A - HV	B - LV	B - HV	C - LV	C - HV
A					61	6
B						
C	74	6				

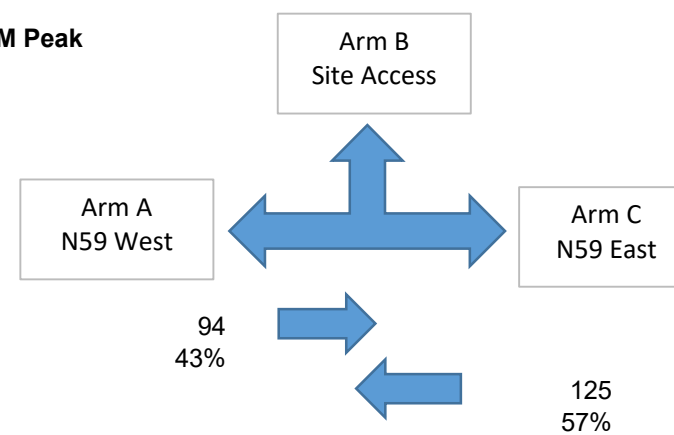
Existing N59 - PM Peak (17:00 - 18:00)						
Route	A - LV	A - HV	B - LV	B - HV	C - LV	C - HV
A					90	4
B						
C	119	6				

Existing Traffic Distribution - N59

AM Peak



PM Peak



Existing Traffic Volume - N59 / Site Access

As the TII Live Traffic Counters were used in the baseflow traffic, the trips to the Site Access under Oweninny Wind Farm Phase 1 are to be added to the Junction Matrix.

Operational Traffic

Information made available by the Client on the operational traffic at the Wind Farm is summarised below:

Estimated 8 light vehicle movements per day, with 4 arrivals and 4 departures.
 An additional 1 no. light vehicle movement to the site once a month is envisaged.
 Peak Operational Traffic is:

Operation Phase	Morning Peak				Evening Peak			
	Arrival		Departure		Arrival		Departure	
	LV	HV	LV	HV	LV	HV	LV	HV
	5	0	0	0	0	0	5	0

Based on the traffic distributions on the N59, the arrivals and departures trip distributions have been determined as shown in the matrices below:

Existing N59 - AM Peak (07:00 - 08:00)						
Route	A - LV	A - HV	B - LV	B - HV	C - LV	C - HV
A			2	0	61	6
B						
C	74	6	3	0		

Existing N59 - PM Peak (17:00 - 18:00)						
Route	A - LV	A - HV	B - LV	B - HV	C - LV	C - HV
A					90	4
B	3	0			2	0
C	119	6				



Development Traffic

Construction Materials & Associated Traffic Generations

Material	Units	Quantity Per Unit	Truck Type	Truck Loads	Delivery Days	1 Way movements per day
Civil Works - Ballacorrack Wind Farm Decommissioning - External movements						
Nacelle	21	1	Flat bed truck	21	4	5
Blades	21	3	Articulated trailer	63	13	5
Towers	21	4	Flat bed truck	84	17	5
Meteorological Mast - decommissioning existing	3	-	Flat bed truck & 13t excavator & tipper truck	3	2	3
Material	Total Volume (m3)	Truck Type	Truck capacity (m3)	Total Truck Loads	Working Days	1 Way movements per day
Groundworks - External movements						
Concrete	10,800	Concrete truck	8	1,350	18	75
Concrete blinding	1,800	Concrete truck	8	225	18	13
Reinforcing steel		Flat bed truck		18	18	1
Site setup / fencing		Flat bed truck		50	25	2
Meteorological Mast - new erection	2	Flat bed truck & crane		2	2	2
Crushed rock and sand - Access Roads	144,783	Articulated trailer	18	8,044	330	24
Crushed rock and sand - Turbines & Hardstands	157,606	Articulated trailer	18	8,756	352	25
Crushed rock and sand - Other	79,582	Articulated trailer	18	4,421	264	17
Ducting/cabbling		Flat bed truck		500	66	8
Cranes				10	2	5
Substation		Flat bed truck		90	45	2
Refuelling/maintenance		Articulated trailer		40	40	1
Total				23,677		
Groundworks - Internal movements						
Peat Transport	435,159	Tipper Truck	12	36,263	413	88
Total				36,263		

Abnormal Indivisible Load	Truck Type	Turbines	Blades	Segments	Total Components
Blades - Segmented	Extended artic	18	3	2	108
Blades - Non-Segmented	Blade Lifter	18	3	1	54

Bring the worst case scenarios forward to the table below (segmented blades)

Abnormal Indivisible Load	Units	Quantity Per Unit	Truck Type	Truck Loads	Delivery Days	1 Way movements per day
Nacelle	18	1	Extended artic	18	4	5
Blades - Segmented	18	6	Extended artic	108	22	5
Towers	18	5	Extended artic	90	18	5
Transformers	1	1	Extended artic	1	1	1
Total				217	45	

Staff Levels

Peak 100-120 per day
 Average 50-60 per day



Ref	Task Name	Task Description	Month																							
			Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26
1	Site Health & Safety		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
2	Site Compounds	Site compounds, site access, fencing, gates	■	■	■						■	■	■													
3	Site Roads	Construct roads, install drainage measures, install culverts, install water protection measures	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■									
4	Bellacorick decommissioning	Decommission Bellacorick turbines and remove turbine components from site, decommission existing meteorological mast		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
5	Turbine Hardstands	Excavate base, construct hardstand areas																								
6	Turbine Foundations	Fix steel, erect shuttering, concrete pouring																								
7	Substation Construction & Electrical Works	Construction substation, underground cabling between turbines, cabling from new substation to Bellacorick substation																								
8	Backfilling and Landscaping																									
9	Turbine Delivery and Erection																									
10	Substation Commissioning																									
11	Turbine Commissioning																									

TABLE BELOW INCLUDES ALL HGVS and the CONCRETE POURS (75HGV 1-WAY)

Ref	Task Name	Task Description	Month																							
			Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26
1	Site Health & Safety		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
2	Site Compounds	Site compounds, site access, fencing, gates	19	19	19						17	17	17													
3	Site Roads	Construct roads, install drainage measures, install culverts, install water protection measures	24	24	24	24	24	24	24	24	24	24	24	24	24	24										
4	Bellacorick decommissioning	Decommission Bellacorick turbines and remove turbine components from site, decommission existing meteorological mast		8	8	8																				
5	Turbine Hardstands	Excavate base, construct hardstand areas			25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25						
6	Turbine Foundations	Fix steel, erect shuttering, concrete pouring					75	75	75	75	75	75	75	75	75	75	75	75	75	75						
7	Substation Construction & Electrical Works	Construction substation, underground cabling between turbines, cabling from new substation to Bellacorick substation			2	2	2	2	2	2	2	2	2	2	2	2	8	2	8	2	8	2				
8	Backfilling and Landscaping																17	17	17	17	17	17	17			
9	Turbine Delivery and Erection																5	5						10		
10	Substation Commissioning																						2	0	2	
11	Turbine Commissioning																								0	
Total 1-way / day			43	51	78	59	126	126	126	126	143	143	143	126	126	126	137	124	124	119	24	19	19	10	2	0
Total 2-way / day			86	102	156	118	252	252	252	252	286	286	286	252	252	252	269	242	248	237	49	37	36	10	3	0
Average 1-way			88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
Average 2-way			177	177	177	177	177	177	177	177	177	177	177	177	177	177	177	177	177	177	177	177	177	177	177	177

Information for Graph Below: Don't Delete

Total	1-way HGV per Day Average	43	51	78	59	126	126	126	126	143	143	143	126	126	126	137	124	124	119	24	19	19	10	2	0
		88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88



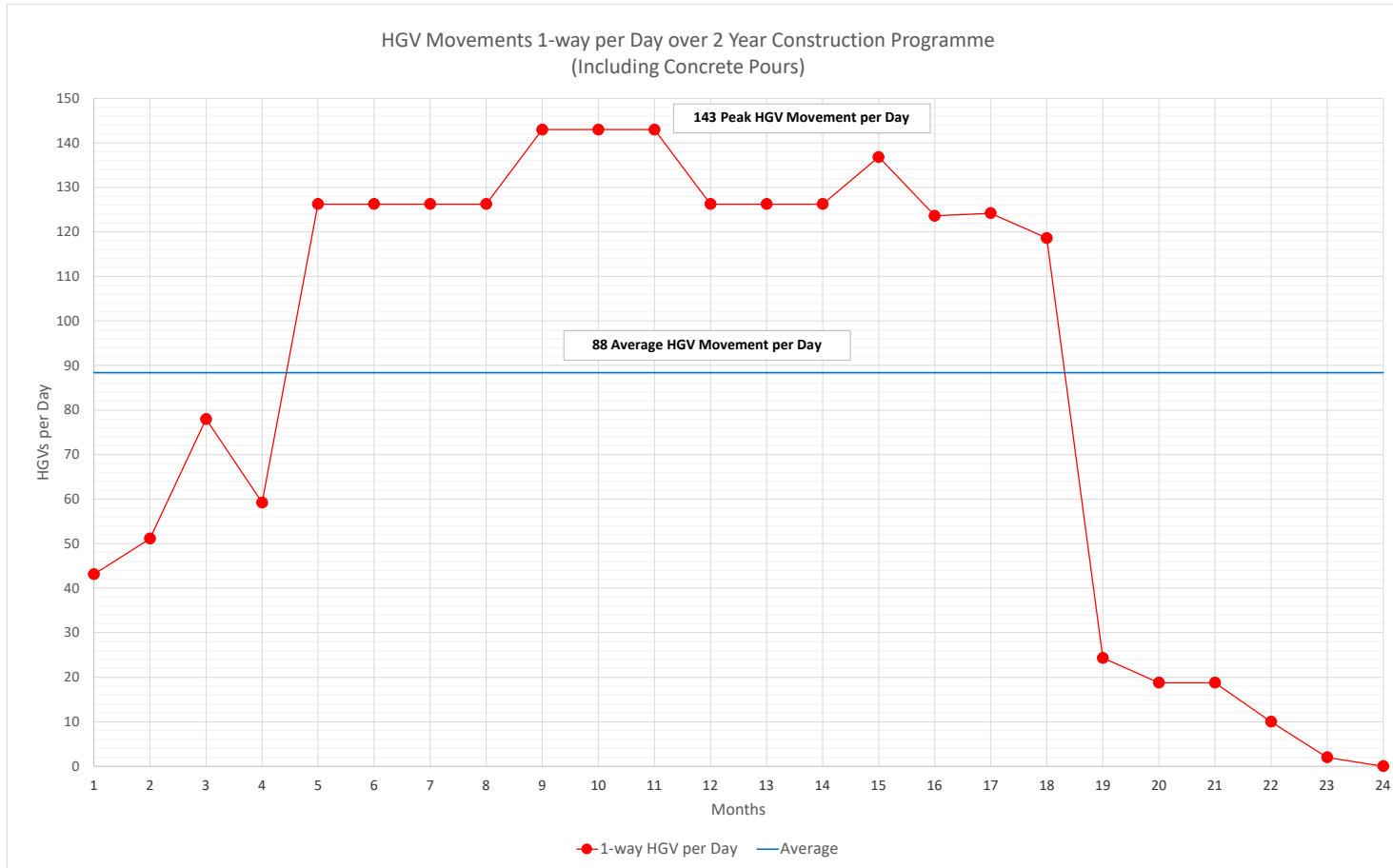


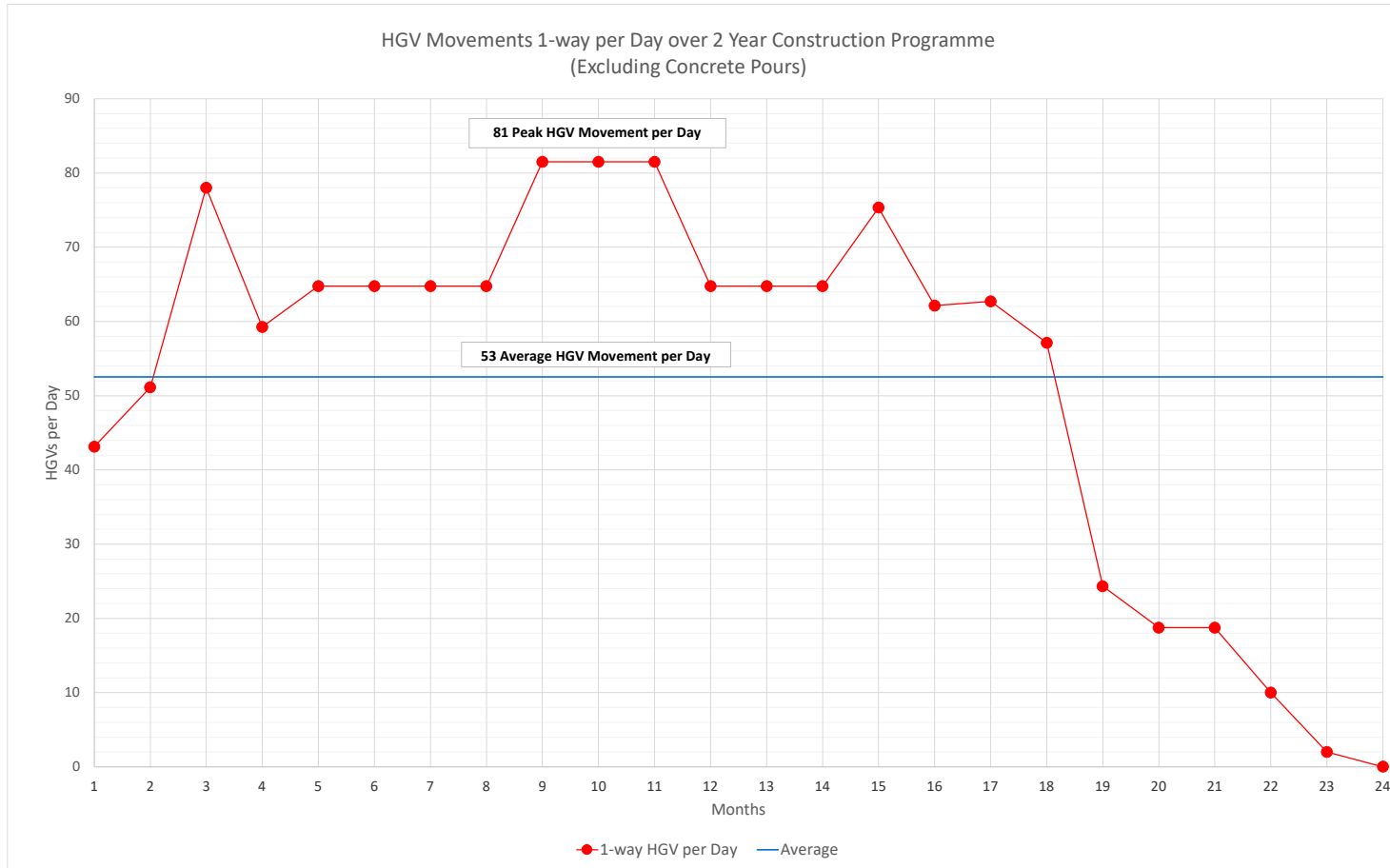
TABLE BELOW EXCLUDES THE CONCRETE POURS (75HGV 1-WAY) & INSTEAD INCLUDES THE 1 HGV FOR STEEL & 13 HGV FOR BLINDING (TOTAL 14 HGV)

Month			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Ref	Task Name	Task Description	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26
1	Site Health & Safety																									
2	Site Compounds	Site compounds, site access, fencing, gates	19	19	19						17	17	17													
3	Site Roads	Construct roads, install drainage measures, install culverts, install water protection measures	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24									
4	Bellaorick decommissioning	Decommission Bellaorick turbines and remove turbine components from site, decommission existing meteorological mast		8	8	8																				
5	Turbine Hardstands	Excavate base, construct hardstand areas			25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25						
6	Turbine Foundations	Fix steel, erect shuttering, concrete pouring					14	14	14	14	14	14	14	14	14	14	14	14	14	14						
7	Substation Construction & Electrical Works	Construction substation, underground cabling between turbines, cabling from new substation to Bellaorick substation			2	2	2	2	2	2	2	2	2	2	2	2	8	2	8	2	8	2				
8	Backfilling and Landscaping																	17	17	17	17	17	17			
9	Turbine Delivery and Erection																5	5						10		
10	Substation Commissioning																						2	0	2	
11	Turbine Commissioning																									0
Total 1-way / day			43	51	78	59	65	65	65	65	81	81	81	65	65	65	75	62	63	57	24	19	19	10	2	0
Total 2-way / day			86	102	156	118	129	129	129	129	163	163	163	129	129	129	146	119	125	114	49	37	36	10	3	0
Average 1-way			53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53
Average 2-way			106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106

Information for Graph Below: Don't Delete

Total	1-way HGV per Day	43	51	78	59	65	65	65	65	81	81	81	65	65	65	75	62	63	57	24	19	19	10	2	0
	Average	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53





Traffic Generations - Construction Phase

Construction Phase

Construction Hours: 08:00 - 20:00 hrs

Total Construction Hours

12 hrs

Traffic generations for the construction phase have been developed by using construction materials and the construction programme (i.e. working days) based on the information provided above and the Construction Programme.

HGV's

Peak: is associated combined construction activities in September to November 2025.
The duration is 3 months of the construction programme.

81 HGV per Day 1-way
7 HGV per hour 1-way

Average: is associated with the average combined construction activities.
The duration is 21 months of the construction programme.

53 HGV per Day 1-way
5 HGV per hour 1-way

Note the Peak and Average HGV's do not include for the concrete pours. These are envisaged to occur when other HGV movements are restricted to the site and hence the 75 HGVs one-way movements associated with the concrete pours will be below the peak construction traffic of 81 HGVs one-way identified over the 3 month period from September to November 2025.

LV's

Peak:

60 LV Per hour 1-way

Average:

30 LV per hour 1-way

Note, it is assumed that 2 people travel to work in the same vehicle.

Traffic Generation Tables for Peak & Average Traffic during the Morning & Evening Peak Hours

Construction Phase - Peak	Morning Peak			
	Arrival		Departure	
	LV	HV	LV	HV
	60	7	0	7

Construction Phase - Peak	Evening Peak			
	Arrival		Departure	
	LV	HV	LV	HV
	0	7	60	7

Construction Phase - Average	Morning Peak			
	Arrival		Departure	
	LV	HV	LV	HV
	30	5	0	5

Construction Phase - Average	Evening Peak			
	Arrival		Departure	
	LV	HV	LV	HV
	0	5	30	5

Traffic Distributions - Construction Phase HGVs

Construction Phase

Scenarios:

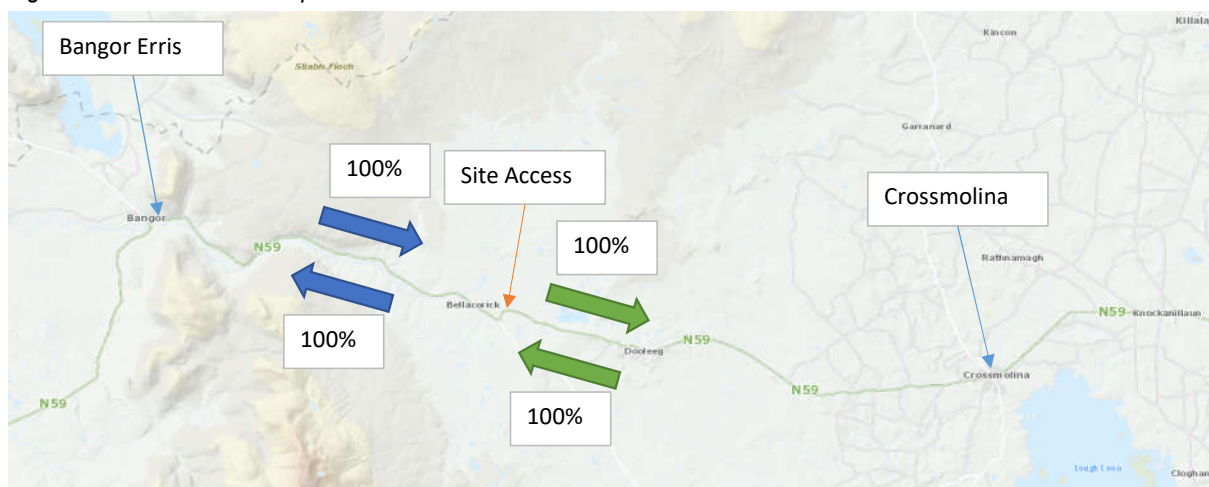
West Distribution

assume 100% of HGVs arrive from the direction of Crossmolina and depart towards Crossmolina. Shown in Green below

East Distribution

assume 100% of HGVs arrive from the direction of Bangor Erris and depart towards Bangor Erris. Shown in Blue below

Figure 1 - HV Distribution Map

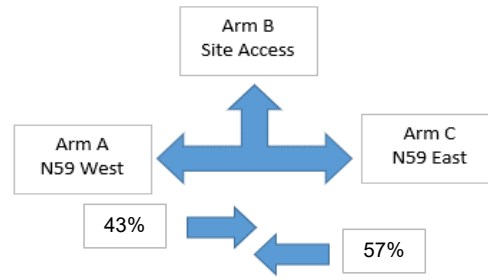
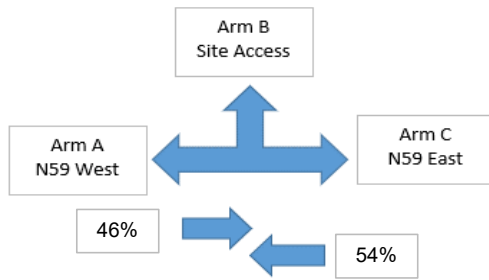


Traffic Distributions - Construction Phase LVs (i.e. Staff)

The traffic distributions are to match those on the existing road network, the N59

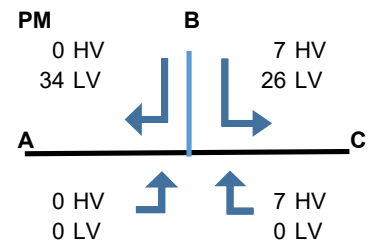
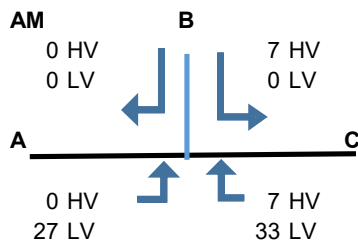
AM Peak

PM Peak

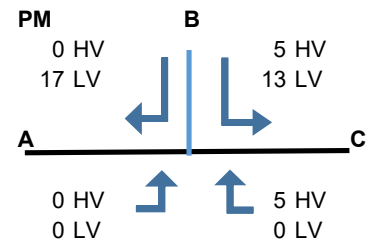
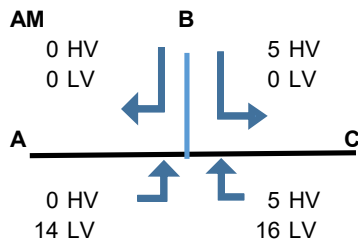


Traffic Distributions - Construction Phase

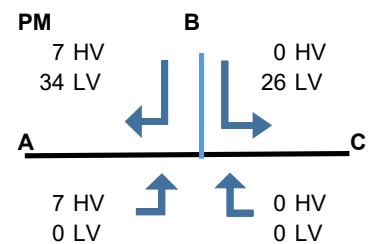
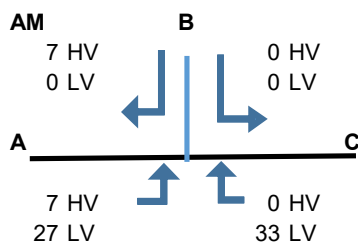
West Distribution Peak



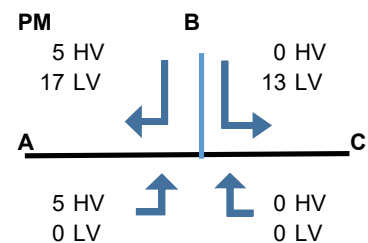
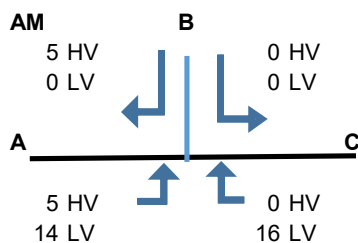
West Distribution Average



East Distribution Peak



East Distribution Average



Traffic Distributions - Construction Phase - Original Destination Matrix

West Distribution

Peak Construction Traffic - AM Peak

Route	A	HGV	B	HGV	C	HGV
A			27	0		
B	0	0			0	7
C			33	7		

Average Construction Traffic - AM Peak

Route	A	HGV	B	HGV	C	HGV
A			14	0		
B	0	0			0	5
C			16	5		

East Distribution

Peak Construction Traffic - AM Peak

Route	A	HGV	B	HGV	C	HGV
A			27	7		
B	0	7			0	0
C			33	0		

Average Construction Traffic - AM Peak

Route	A	HGV	B	HGV	C	HGV
A			14	5		
B	0	5			0	0
C			16	0		

Peak Construction Traffic - PM Peak

Route	A	HGV	B	HGV	C	HGV
A			0	0		
B	34	0			26	7
C			0	7		

Average Construction Traffic - PM Peak

Route	A	HGV	B	HGV	C	HGV
A			0	0		
B	17	0			13	5
C			0	5		

Peak Construction Traffic - PM Peak

Route	A	HGV	B	HGV	C	HGV
A			0	7		
B	34	7			26	0
C			0	0		

Average Construction Traffic - PM Peak

Route	A	HGV	B	HGV	C	HGV
A			0	5		
B	17	5			13	0
C			0	0		



Traffic Generation - Operational Phase

During the operational phase, the proposed development will be accessed by vehicles for the maintenance and operations of the Wind Farm and will also support the existing amenity use.

Wind Farm Operational Traffic

Information made available by the Client on the operational traffic at the Wind Farm is summarised below:

Estimated 8 light vehicle movements per day, with 4 arrivals and 4 departures.
 An additional 1 no. light vehicle movement to the site once a month is envisaged.
 Peak Operational Traffic is:

Operation Phase	Morning Peak			
	Arrival		Departure	
	LV	HV	LV	HV
	5	0	0	0

Operation Phase	Evening Peak			
	Arrival		Departure	
	LV	HV	LV	HV
	0	0	5	0

Review of the TTA Guidelines (TII PE-PAV-02045, May 2014) outlines the following thresholds requiring a TTA:

Table 2.1 TTA Guidelines

Table 2.1 Traffic Management Guidelines Thresholds For Transport Assessments

Traffic to and from the development exceeds 10% of the traffic flow on the adjoining road.
Traffic to and from the development exceeds 5% of the traffic flow on the adjoining road where congestion exists or the location is sensitive.*
Residential development in excess of 200 dwellings.
Retail and leisure development in excess of 1,000m ² .
Office, education and hospital development in excess of 2,500m ² .
Industrial development in excess of 5,000m ² .
Distribution and warehousing in excess of 10,000m ² .

* In locations that experience particularly heavy congestion and when traffic flows from a proposed development are less than 5% of the traffic flows on the adjoining road, a Transport Assessment may still be required. When in doubt, the requirement for a Transport Assessment should always be scoped with the relevant local authority.

N59 Traffic ADT	Development Traffic ADT
2,622 vehicles	10 vehicles

10% of N59 Traffic = 262 vehicles
 5% of N59 Traffic = 131 vehicles

The development operational traffic is below both the 10% traffic flow on the adjoining road and also below the 5% traffic flow on congested roads / sensitive locations.

Threshold Table 2.1 = Sub-threshold

Table 2.2 TTA Guidelines

Table 2.2 Advisory Thresholds for Traffic and Transport Assessment Where National Roads are Affected

Vehicle Movements	100 trips in / out combined in the peak hours for the proposed development	
	Development traffic exceeds 10% of turning movements at junctions with and on National Roads.	
	Development traffic exceeds 5% of turning movements at junctions with National Roads if location has potential to become congested or sensitive.	
Size	Retail	1,000m ² Gross Floor Area.
	Leisure facilities including hotels, conference centres and cinemas.	1,000m ² Gross Floor Area.
	Business	2,500m ² Gross Floor Area.
	Industry	5,000m ² Gross Floor Area.
	Distribution and warehousing	10,000m ² Gross Floor Area.
	Hospitals and education facilities	2,500m ² Gross Floor Area.
	Stadia	1,500 person capacity.
	Community Facilities including places of worship, community centres.	1,000m ² Gross Floor Area.
	Housing	50 dwellings within urban areas with a population less than 30,000. 100 dwellings within urban areas with a population equal to or greater than 30,000.
Parking Provided	100 on-site parking spaces.	

	N59 Traffic Peak Hour	Development Traffic
AM	148 vehicles	5 vehicles
PM	219 vehicles	5 vehicles

Total Development Traffic in / out combined in peak hour is 10 vehicles, below the 100 vehicle threshold.

The combined vehicles turning (i.e. 10 vehicle in both morning and evening peak hours is **0.4%**

The proposed car parking facilities on site will be less than 100 spaces.

Threshold Table 2.2 = Sub-threshold



Table 2.3 TTA Guidelines

Table 2.3 Sub-threshold Criteria for Traffic and Transport Assessment

Vehicle Movements	The character and total number of trips in / out combined per day are such that as to cause concern.
Location	The site is not consistent with national guidance or local plan policy or accessibility criteria contained in the Development Plan.
Other Considerations	The development is part of incremental development that will have significant transport implications.
	The development may generate traffic at peak times in a heavily trafficked/ congested area or near a junction with a main traffic route.
	The development may generate traffic, particularly heavy vehicles in a residential area.
	There are concerns over the development's potential effects on road safety.
	The development is in a tourist area with potential to cause congestion.
	The planning authority considers that the proposal will result in a material change in trips patterns or raises other significant transport implications.

The operational traffic is of a low volumes and by light vehicles which will not cause concern.

The site is consistent.

The Construction Phase will have implications and is assessed.

The operational development traffic will not result in heavy traffic.

The development is in a rural area.

The development is in a tourist area with low traffic volumes at operation.

Threshold Table 2.3 = Sub-threshold

Based on the above assessment to the thresholds in the TTA Guidelines, the operational traffic is sub-threshold and is **not assessed in the TTA.**



The following Committed developments were identified for investigation:

- 1 Oweninny Wind Farm Phase 1
- 2 Oweninny Wind Farm Phase 2
- 3 Corvaderry Wind Farm (formerly Gortnahurra Wind Farm)
- 4 Sheskin Wind Farm
- 5 Sheskin South Wind Farm
- 6 Kilsallagh Wind Farm
- 7 Crossmolina Diversion Channel
- 8 Mayo Hydrogen Production Plant
- 9 Open Cycle Gas Turbine (OCGT)
- 10 Oweninny Bog
- 11 Oweninny Wind Farm - Visitor Centre

1) Oweninny Wind Farm Phase 1

This wind farm is constructed and operational. The proposed Oweninny Wind Farm Phase 3 will utilise the same access as Oweninny Phase 1. The traffic associated with the operational phase will be low (i.e. approximately 2 to 5 vehicles per day). The traffic associated with the operational phase is accounted for in the traffic counts (i.e. baseflow) undertaken in 2022. Hence, no additional traffic is included for as a cumulative development.

2) Oweninny Wind Farm Phase 2

As Oweninny wind farm Phase 2 is currently under construction, the traffic associated with the windfarm development is accounted for in the baseflow traffic in 2022. The construction phase is envisaged to be completed before the construction phase of Oweninny Wind Farm Phase 3.

The operational traffic will be low and of similar volume to this development traffic and is assumed to be accounted for in the baseflow traffic (i.e. which accounts for the construction phase 2, no further action to account for Oweninny Wind Farm Phase 2 is required).

3) Corvaderry Wind Farm

This wind farm has a proposed site access via the existing operating Oweninny Wind Farm Phase 1 and the proposed Oweninny Wind Farm Phase 3 access on the N59. Oweninny Wind Farm Phase 1 operational traffic is part of the baseflow traffic volumes at the site access. Corvaderry Wind Farm planning permission has expired and therefore it has not been considered as a committed development.

4) Sheskin Wind Farm

This wind farm site access is located off the L52926, which has a junction with the N59 and is located approximately 5km west of the Proposed Development site access. The Sheskin Wind Farm development is under construction and the traffic associated with the construction phase is in part accounted for in the baseflow traffic. Their current construction programme, with start of construction activities in Quarter 3 (Q3) of 2021. The construction activities for the turbine commissioning are scheduled for Q4 of 2023 which occurs after the turbine foundations are construction. The turbine commissioning is a technical element of the construction work, with typically low traffic volumes and specialist workers. In 2024, the anticipated start date for Oweninny Wind Farm Phase 3, only these activities will be envisaged at Sheskin. The traffic associated with the construction phase is accounted for in the baseflow traffic and no additional cumulative effects for the construction traffic on the N59 are required.

The Sheskin Wind Farm operational traffic volumes will be low (i.e. approximately 2 to 5 vehicles per day) and hence, it is assumed to be accounted for in baseflow traffic annual growth factors.

5) Sheskin South Wind Farm

This a proposed planning application pending permission. The wind farm will be located west of the access to the Oweninny Wind Farm site access via the N59. The details within the permission indicate that the proposed construction programme will not commence onsite until January of 2028. The Construction Stage of this wind farm will be after construction works have concluded on the Oweninny Wind Farm Phase 3. As the peak traffic volumes associated with the Sheskin South and Oweninny Wind Farm do not overlap it is not assessed as a committed development.

6) Kilsallagh Wind Farm

A 13-turbine wind farm development is planned approximately 8km south-west of the proposed Oweninny Wind Farm Phase 3. The developers have stated that they plan to submit a planning application for the development in 2022. There is no information further available for the proposed Kilsallagh Wind Farm on An Bord Pleanála or Mayo County Council Planning portal.

In the absence of available information, this proposed development has been excluded from the committed development.

7) Crossmolina Diversion Channel

Estimated to be under construction in 2024 coinciding with the construction of the proposed development. MCC have advised that the construction haul route will run from Crossmolina and the Coolturk quarry. This route is located east of the proposed development and does not overlap with the haul route associated with the proposed construction haul route. Hence the Crossmolina HGV construction traffic will not be pass the site access under assessment and hence the HGV traffic has not been assessed as a committed development in this TTA. Minor LV movements by staff are assumed to be accounted for in the annual growth rates.

8) Mayo Hydrogen Production Plant

Mayo Hydrogen is estimated to be under Construction in 2026. This application has not been granted planning and is not considered as a Committed Development.

9) Open Cycle Gas Turbine (OCGT)

A planning application was made to Mayo County Council for a 114MW gas fired peaking power plant (which will be capable of running on a mix of natural gas and hydrogen). The electricity generating station will comprise of 2 no. open cycle gas turbine (OCGT) generators. As this project has not been granted planning at the time of this submission, it has not been assessed as a cumulative development.

10) Oweninny Bog

Bord na Móna made an application to An Bord Pleanála for leave to apply for Substitute Consent in respect of the historical peat extraction on the Oweninny Bog, which ceased in 2003 and this application is expected to be submitted in 2023. Given the fact that there is no potential overlap between the historical peat extraction, and this proposed development, there is no potential for a negative cumulative.

11) Oweninny Wind Farm - Visitor Centre

On the Oweninny Wind Farm is an existing permitted Visitors Centre, which will be operational during the Oweninny Wind Farm Phase 3 operational phase. Based on previous data at similar sites, an additional 300 visitors are anticipated at the Visitor Centre with a mix of tour buses and passenger cars.

Estimates for the vehicle numbers are based on 3 no. buses with occupancy of 52 visitors and 72 no. passenger cars with 2 visitors per car. Staff during the peak tourist season are envisaged to be 3 no. staff and are assumed to arrive / depart by individual passenger car. The estimated associated traffic volume is 156 vehicles per day, with peak activities on weekends.

Visitor Centre Generated Traffic

On an average day it is anticipated 300 visitors will attend the Visitor Centre.

The breakdown of these visitors is assumed to be as follows:

300 Visitors by :

3 no.	Tour Bus with	52 visitors per bus for a total of	156 visitors
72 no.	Passenger Car	2 visitors per car for a total of	144 visitors

75 Total Vehicles arriving per day for Visitors

3 Staff by individual passenger car

Total Vehiles for Amenity Traffic = **78 one-way per day**
156 two-way per day

Operational Wind Farm & Visitor Centre Generated Traffic

The total two-way movements for the traffic associated with the site access for the operational phase is the combined Wind Farm Staff and those at the Visitors Centre.

A comparison of the total vehicles against the Thresholds in the TTA are:

Total Vehicles	156	N59 ADT	2,622
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The total vehicles is 6% of the traffic on the N59. **This is sub-threshold and a TTA is not required**

Other sub-thresholds:

Car Parking will be less than 100 spaces.
 The location is not congested and the 5% turning does not apply.
 The location although in a "sensitive area" with tourism, will not result in congestion.
 The amenity traffic is not envisaged to all arrive in the AM or PM peak hours. With less than 100 movements per peak hour.

**Traffic Calculations for
Site 1 - N59 / Site Access
At Present AM Peak (07:00- 08:00)**

Seasonally Adjusted 2022

Arm A N59 W
Arm B Site Access
Arm C N59 E

2027 Construction Year

Table 6.2: Link-Based Growth Rates: County Annual Growth Rates (excluding Metropolitan Area)

<u>Mayo Co</u>		<u>LG</u>	<u>VG</u>
2016 - 2030 index		1.0127	1.0330
Years		5	5
Central Growth Factor		1.0651	1.1763

2027 Construction Year

Table 9.2: Link-Based Growth Rates: County Annual Growth Rates (excluding Metropolitan Area) - Alternative Future Demand Sensitivity Scenario

<u>Mayo Co</u>		<u>LG</u>	<u>VG</u>
2016-2030		1.0102	1.0330
Years		5	5
Central Growth Factor		1.0521	1.1763

Baseflow Traffic

Year 2022

Route	A	HGV	B	HGV	C	HGV
A	0	0	2	0	61	6
B	0	0	0	0	0	0
C	74	6	3	0	0	0

HV %			
Route	A	B	C
A		0%	9%
B	#DIV/0!		#DIV/0!
C	8%	0%	

Year 2027 - Central Growth

Route	A	HGV	B	HGV	C	HGV
A	0	0	2	0	65	7
B	0	0	0	0	0	0
C	79	7	3	0	0	0

HV %			
Route	A	B	C
A		0%	10%
B	#DIV/0!		#DIV/0!
C	8%	0%	

Year 2027 - Central Growth Alternative Future Demand

Route	A	HGV	B	HGV	C	HGV
A	0	0	2	0	64	7
B	0	0	0	0	0	0
C	78	7	3	0	0	0

HV %			
Route	A	B	C
A		0%	10%
B	#DIV/0!		#DIV/0!
C	8%	0%	

Proposed Development Construction Traffic - Peak - West Distribution

Route	A	HGV	B	HGV	C	HGV
A	0	0	27	0	0	0
B	0	0	0	0	0	7
C	0	0	33	7	0	0

HV %			
Route	A	B	C
A		0%	#DIV/0!
B	#DIV/0!		100%
C	#DIV/0!	18%	

Proposed Development - Construction Traffic Peak (with Baseflow) - Scenario West Distribution

Year 2027 - Central Growth

Route	A	HGV	B	HGV	C	HGV
A	0	0	29	0	65	7
B	0	0	0	0	0	7
C	79	7	36	7	0	0

HV %			
Route	A	B	C
A		0%	10%
B	#DIV/0!		100%
C	8%	16%	

Year 2027 - Central Growth Alternative Future Demand

Route	A	HGV	B	HGV	C	HGV
A	0	0	29	0	64	7
B	0	0	0	0	0	7
C	78	7	36	7	0	0

HV %			
Route	A	B	C
A		0%	10%
B	#DIV/0!		100%
C	8%	16%	

Proposed Development Construction Traffic - Peak - East Distribution

Route	A	HGV	B	HGV	C	HGV
A	0	0	27	7	0	0
B	0	7	0	0	0	0
C	0	0	33	0	0	0

HV %			
Route	A	B	C
A		20%	#DIV/0!
B	100%		#DIV/0!
C	#DIV/0!	0%	#DIV/0!

Proposed Development - Construction Traffic Peak (with Baseflow) - Scenario East Distribution

Year 2027 - Central Growth

Route	A	HGV	B	HGV	C	HGV
A	0	0	30	7	65	7
B	0	7	0	0	0	0
C	79	7	36	0	0	0

HV %			
Route	A	B	C
A		19%	10%
B	100%		#DIV/0!
C	8%	0%	

Year 2027 - Central Growth Alternative Future Demand

Route	A	HGV	B	HGV	C	HGV
A	0	0	30	7	64	7
B	0	7	0	0	0	0
C	78	7	36	0	0	0

HV %			
Route	A	B	C
A		19%	10%
B	100%		#DIV/0!
C	8%	0%	



Proposed Development - Construction Traffic Average (with Baseflow) - Scenario West Distribution

Proposed Development Construction Traffic - Average - West Distribution

Route	A	HGV	B	HGV	C	HGV
A	0	0	14	0	0	0
B	0	0	0	0	0	5
C	0	0	16	5	0	0

HV %						
Route	A		B		C	
A			0%		#DIV/0!	
B	#DIV/0!				100%	
C	#DIV/0!		23%			

Year 2027 - Central Growth

Route	A	HGV	B	HGV	C	HGV
A	0	0	16	0	65	7
B	0	0	0	0	0	5
C	79	7	19	5	0	0

HV %						
Route	A		B		C	
A			0%		10%	
B	#DIV/0!				100%	
C	8%		21%			

Year 2027 - Central Growth Alternative Future Demand

Route	A	HGV	B	HGV	C	HGV
A	0	0	16	0	64	7
B	0	0	0	0	0	5
C	78	7	19	5	0	0

HV %						
Route	A		B		C	
A			0%		10%	
B	#DIV/0!				100%	
C	8%		21%			

Proposed Development - Construction Traffic Average (with Baseflow) - Scenario East Distribution

Proposed Development Construction Traffic - Average - East Distribution

Route	A	HGV	B	HGV	C	HGV
A	0	0	14	5	0	0
B	0	5	0	0	0	0
C	0	0	16	0	0	0

HV %						
Route	A		B		C	
A			27%		#DIV/0!	
B	100%				#DIV/0!	
C	#DIV/0!		0%			

Year 2027 - Central Growth

Route	A	HGV	B	HGV	C	HGV
A	0	0	16	5	65	7
B	0	5	0	0	0	0
C	79	7	19	0	0	0

HV %						
Route	A		B		C	
A			24%		10%	
B	100%				#DIV/0!	
C	8%		0%			

Year 2027 - Central Growth Alternative Future Demand

Route	A	HGV	B	HGV	C	HGV
A	0	0	16	5	64	7
B	0	5	0	0	0	0
C	78	7	19	0	0	0

HV %						
Route	A		B		C	
A			24%		10%	
B	100%				#DIV/0!	
C	8%		0%			



**Traffic Calculations for
Site 1 - N59 / Site Access
At Present PM Peak (17:00- 18:00)**

Seasonally Adjusted 2022

Arm A N59 W
Arm B Site Access
Arm C N59 E

2027 Construction Year

Table 6.2: Link-Based Growth Rates: County Annual Growth Rates (excluding Metropolitan Area)

Mayo Co	LGW	HGV
2016 - 2030 index	1.0127	1.0330
Years	5	5
Central Growth Factor	1.0651	1.1763

2027 Construction Year

Table 9.2: Link-Based Growth Rates: County Annual Growth Rates (excluding Metropolitan Area) - Alternative Future Demand Sensitivity Scenario

Mayo Co	LGW	HGV
2016-2030	1.0102	1.0330
Years	5	5
Central Growth Factor	1.0521	1.1763

Baseflow Traffic

Year 2022

Route	A	HGV	B	HGV	C	HGV
A	0	0	0	0	90	4
B	3	0	0	0	2	0
C	119	6	0	0	0	0

HV %			
Route	A	B	C
A		#DIV/0!	4%
B	0%		0%
C	5%	#DIV/0!	

Year 2027 - Central Growth

Route	A	HGV	B	HGV	C	HGV
A	0	0	0	0	96	5
B	3	0	0	0	2	0
C	127	7	0	0	0	0

HV %			
Route	A	B	C
A		#DIV/0!	5%
B	0%		0%
C	5%	#DIV/0!	

Year 2027 - Central Growth Alternative Future Demand

Route	A	HGV	B	HGV	C	HGV
A	0	0	0	0	95	5
B	3	0	0	0	2	0
C	125	7	0	0	0	0

HV %			
Route	A	B	C
A		#DIV/0!	5%
B	0%		0%
C	5%	#DIV/0!	

Proposed Development Construction Traffic - Peak - West Distribution

Route	A	HGV	B	HGV	C	HGV
A	0	0	0	0	0	0
B	34	0	0	0	26	7
C	0	0	0	7	0	0

HV %			
Route	A	B	C
A		#DIV/0!	#DIV/0!
B	0%		21%
C	#DIV/0!	100%	

Proposed Development - Construction Traffic Peak (with Baseflow) - Scenario West Distribution

Year 2027 - Central Growth

Route	A	HGV	B	HGV	C	HGV
A	0	0	0	0	96	5
B	37	0	0	0	28	7
C	127	7	0	7	0	0

HV %			
Route	A	B	C
A		#DIV/0!	5%
B	0%		20%
C	5%	100%	

Year 2027 - Central Growth Alternative Future Demand

Route	A	HGV	B	HGV	C	HGV
A	0	0	0	0	95	5
B	37	0	0	0	28	7
C	125	7	0	7	0	0

HV %			
Route	A	B	C
A		#DIV/0!	5%
B	0%		20%
C	5%	100%	

Proposed Development Construction Traffic - Peak - East Distribution

Route	A	HGV	B	HGV	C	HGV
A	0	0	0	7	0	0
B	34	7	0	0	26	0
C	0	0	0	0	0	0

HV %			
Route	A	B	C
A		100%	#DIV/0!
B	17%		0%
C	#DIV/0!	#DIV/0!	

Proposed Development - Construction Traffic Peak (with Baseflow) - Scenario East Distribution

Year 2027 - Central Growth

Route	A	HGV	B	HGV	C	HGV
A	0	0	0	7	96	5
B	38	7	0	0	28	0
C	127	7	0	0	0	0

HV %			
Route	A	B	C
A		100%	5%
B	16%		0%
C	5%	#DIV/0!	

Year 2027 - Central Growth Alternative Future Demand

Route	A	HGV	B	HGV	C	HGV
A	0	0	0	7	95	5
B	37	7	0	0	28	0
C	125	7	0	0	0	0

HV %			
Route	A	B	C
A		100%	5%
B	16%		0%
C	5%	#DIV/0!	



Proposed Development - Construction Traffic Average (with Baseflow) - Scenario West Distribution

Proposed Development Construction Traffic - Average - West Distribution

Route	A	HGV	B	HGV	C	HGV
A	0	0	0	0	0	0
B	17	0	0	0	13	5
C	0	0	0	5	0	0

HV %						
Route	A		B		C	
A			#DIV/0!		#DIV/0!	
B	0%				28%	
C	#DIV/0!		100%			

Year 2027 - Central Growth

Route	A	HGV	B	HGV	C	HGV
A	0	0	0	0	96	5
B	20	0	0	0	15	5
C	127	7	0	5	0	0

HV %						
Route	A		B		C	
A			#DIV/0!		5%	
B	0%				25%	
C	5%		100%			

Year 2027 - Central Growth Alternative Future Demand

Route	A	HGV	B	HGV	C	HGV
A	0	0	0	0	95	5
B	20	0	0	0	15	5
C	125	7	0	5	0	0

HV %						
Route	A		B		C	
A			#DIV/0!		5%	
B	0%				25%	
C	5%		100%			

Proposed Development - Construction Traffic Average (with Baseflow) - Scenario East Distribution

Proposed Development Construction Traffic - Average - East Distribution

Route	A	HGV	B	HGV	C	HGV
A	0	0	0	5	0	0
B	17	5	0	0	13	0
C	0	0	0	0	0	0

HV %						
Route	A		B		C	
A			100%		#DIV/0!	
B	23%				0%	
C	#DIV/0!		#DIV/0!			

Year 2027 - Central Growth

Route	A	HGV	B	HGV	C	HGV
A	0	0	0	5	96	5
B	20	5	0	0	15	0
C	127	7	0	0	0	0

HV %						
Route	A		B		C	
A			100%		5%	
B	20%				0%	
C	5%		#DIV/0!			

Year 2027 - Central Growth Alternative Future Demand

Route	A	HGV	B	HGV	C	HGV
A	0	0	0	5	95	5
B	20	5	0	0	15	0
C	125	7	0	0	0	0

HV %						
Route	A		B		C	
A			100%		5%	
B	20%				0%	
C	5%		#DIV/0!			



	AM							PM						
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS
2022 - Existing														
Stream B-C	D1	0.0	0.0	0.0	A	0.10	A	D2	0.0	4.05	0.00	A	0.10	A
Stream B-A		0.0	0.0	0.0	A				0.0	4.95	0.00	A		
Stream C-AB		0.0	4.89	0.01	A				0.0	0.00	0.00	A		
2027 - Baseflow - Central Growth														
Stream B-C	D3	0.0	0.00	0.00	A	0.09	A	D4	0.0	4.06	0.00	A	0.09	A
Stream B-A		0.0	0.00	0.00	A				0.0	4.98	0.00	A		
Stream C-AB		0.0	4.89	0.01	A				0.0	0.00	0.00	A		
2027 - Proposed Dev. Construction Peak - West Distribution														
Stream B-C	D5	0	8.12	0.02	A	1.57	A	D6	0.1	5.10	0.06	A	1.42	A
Stream B-A		0	0.00	0.00	A				0.0	5.40	0.05	A		
Stream C-AB		0	5.90	0.09	A				0.0	8.63	0.03	A		
2027 - Proposed Dev. Construction Peak - East Distribution														
Stream B-C	D7	0.0	0.00	0.00	A	1.33	A	D8	0.1	5.07	0.06	A	1.46	A
Stream B-A		0.0	10.21	0.20	B				0.0	5.37	0.05	A		
Stream C-AB		0.1	5.20	0.06	A				0.0	8.62	0.03	A		
2027 - Proposed Dev. Construction Average - West Distribution														
Stream B-C	D9	0.0	0.00	0.00	A	0.60	A	D10	0.00	4.73	0.02	A	0.79	A
Stream B-A		0.0	0.00	0.00	A				0.00	5.48	0.03	A		
Stream C-AB		0.1	5.35	0.04	A				0.00	8.48	0.01	A		
2027 - Proposed Dev. Construction Average - East Distribution														
Stream B-C	D11	0.0	0.00	0.00	A	0.62	A	D12	0.0	4.18	0.02	A	0.83	A
Stream B-A		0.0	0.00	0.00	A				0.0	6.25	0.05	A		
Stream C-AB		0.1	5.38	0.04	A				0.0	0.00	0.00	A		

[There are warnings associated with one or more model runs - see the Task List 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.



<h1>Junctions 9</h1>
<h2>PICADY 9 - Priority Intersection Module</h2>
Version: 9.5.1.7462 © Copyright TRL Limited, 2019
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: 10889 Junction 9 PICADY_C_Client_Copy.j9

Path: J:\Projects\10889 - Oweninny Wind Farm\05-Design\01-Calculations\Traffic\TTA

Report generation date: 29/03/2023 10:41:45

-
- »2022 - Existing, AM
 - »2022 - Existing, PM
 - »2027 - Baseflow - Central Growth, AM
 - »2027 - Baseflow - Central Growth, PM
 - »2027 - Proposed Dev. Construction Peak - West Distribution, AM
 - »2027 - Proposed Dev. Construction Peak - West Distribution, PM
 - »2027 - Proposed Dev. Construction Peak - East Distribution, AM
 - »2027 - Proposed Dev. Construction Peak - East Distribution, PM
 - »2027 - Proposed Dev. Construction Average - West Distribution, AM
 - »2027 - Proposed Dev. Construction Average - West Distribution, PM
 - »2027 - Proposed Dev. Construction Average - East Distribution, AM
 - »2027 - Proposed Dev. Construction Average - East Distribution, PM

Summary of junction performance

	AM						PM							
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS
2022 - Existing														
Stream B-C	D1	0.0	0.00	0.00	A	0.10	A	D2	0.0	4.05	0.00	A	0.10	A
Stream B-A		0.0	0.00	0.00	A				0.0	4.95	0.00	A		
Stream C-AB		0.0	4.89	0.01	A				0.0	0.00	0.00	A		
2027 - Baseflow - Central Growth														
Stream B-C	D3	0.0	0.00	0.00	A	0.09	A	D4	0.0	4.06	0.00	A	0.09	A
Stream B-A		0.0	0.00	0.00	A				0.0	4.98	0.00	A		
Stream C-AB		0.0	4.88	0.01	A				0.0	0.00	0.00	A		
2027 - Proposed Dev. Construction Peak - West Distribution														
Stream B-C	D5	0.0	8.11	0.02	A	1.71	A	D6	0.1	5.15	0.05	A	1.65	A
Stream B-A		0.0	0.00	0.00	A				0.1	5.36	0.06	A		
Stream C-AB		0.1	6.02	0.08	A				0.0	8.52	0.02	A		
2027 - Proposed Dev. Construction Peak - East Distribution														
Stream B-C	D7	0.0	0.00	0.00	A	1.33	A	D8	0.0	4.29	0.04	A	1.31	A
Stream B-A		0.0	10.21	0.02	B				0.1	6.27	0.08	A		
Stream C-AB		0.1	5.20	0.06	A				0.0	0.00	0.00	A		
2027 - Proposed Dev. Construction Average - West Distribution														
Stream B-C	D9	0.0	8.05	0.01	A	1.22	A	D10	0.0	5.22	0.03	A	1.12	A
Stream B-A		0.0	0.00	0.00	A				0.0	5.20	0.03	A		
Stream C-AB		0.1	5.99	0.05	A				0.0	8.48	0.02	A		
2027 - Proposed Dev. Construction Average - East Distribution														
Stream B-C	D11	0.0	0.00	0.00	A	0.91	A	D12	0.0	4.18	0.02	A	0.83	A
Stream B-A		0.0	9.97	0.02	A				0.0	6.25	0.05	A		
Stream C-AB		0.0	5.01	0.03	A				0.0	0.00	0.00	A		

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

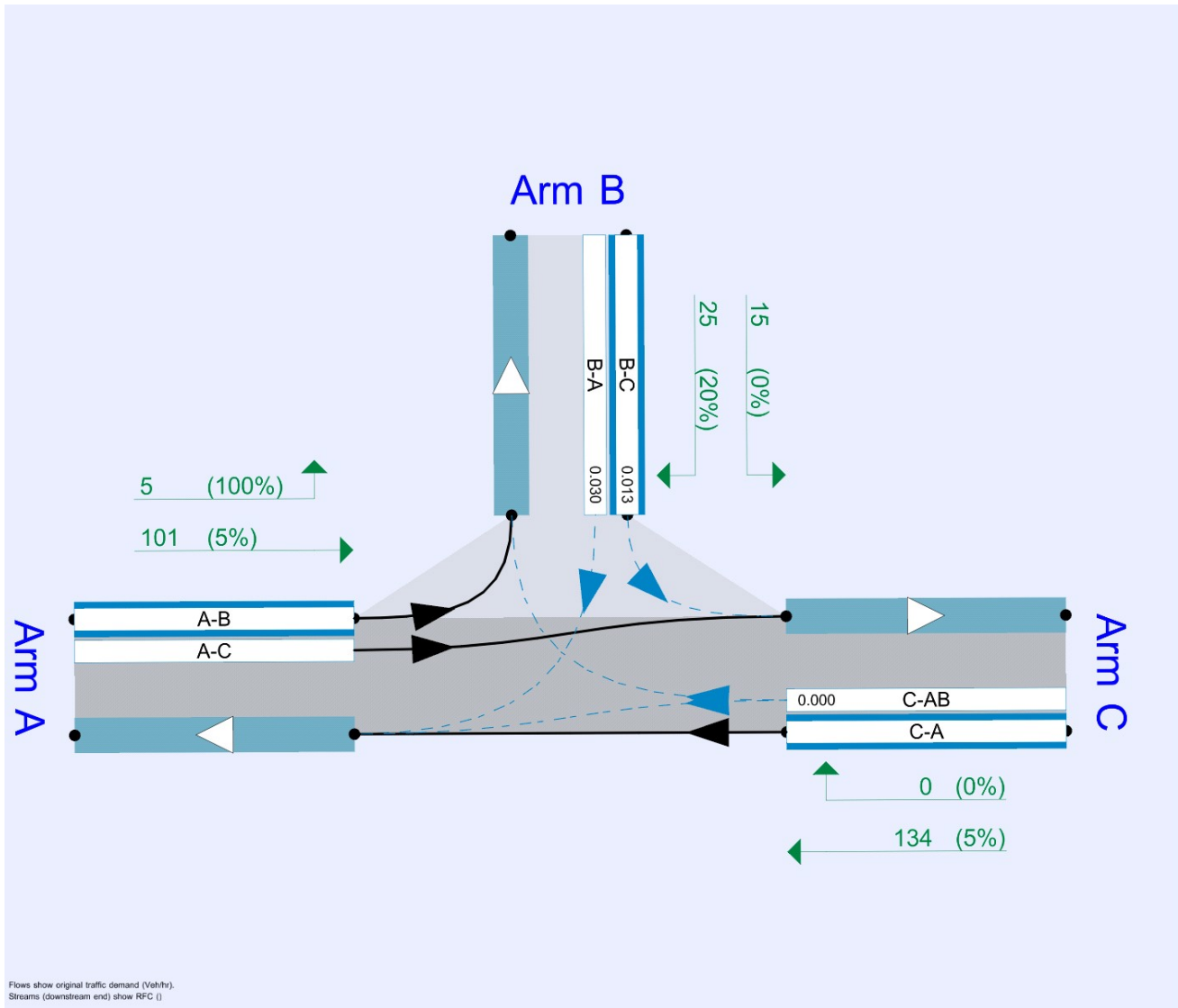
File summary

File Description

Title	Oweninny Wind Farm Phase 3
Location	N59/Site Access
Site number	Junction 1
Date	02/03/2023
Version	C
Status	Revised on client request
Identifier	
Client	
Jobnumber	10889
Enumerator	TOBIN\Laura Gaffney
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	Veh	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 - Existing	AM	ONE HOUR	06:45	08:15	15	✓
D2	2022 - Existing	PM	ONE HOUR	16:45	18:15	15	✓
D3	2027 - Baseflow - Central Growth	AM	ONE HOUR	06:45	08:15	15	✓
D4	2027 - Baseflow - Central Growth	PM	ONE HOUR	16:45	18:15	15	✓
D5	2027 - Proposed Dev. Construction Peak - West Distribution	AM	ONE HOUR	06:45	08:15	15	✓
D6	2027 - Proposed Dev. Construction Peak - West Distribution	PM	ONE HOUR	16:45	18:15	15	✓
D7	2027 - Proposed Dev. Construction Peak - East Distribution	AM	ONE HOUR	06:45	08:15	15	✓
D8	2027 - Proposed Dev. Construction Peak - East Distribution	PM	ONE HOUR	16:45	18:15	15	✓
D9	2027 - Proposed Dev. Construction Average - West Distribution	AM	ONE HOUR	06:45	08:15	15	✓
D10	2027 - Proposed Dev. Construction Average - West Distribution	PM	ONE HOUR	16:45	18:15	15	✓
D11	2027 - Proposed Dev. Construction Average - East Distribution	AM	ONE HOUR	06:45	08:15	15	✓
D12	2027 - Proposed Dev. Construction Average - East Distribution	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2022 - Existing, 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	N59/ Site Access	T-Junction	Two-way		0.10	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	N59	Eastbound	Major
B	Site Access		Minor
C	N59	Westbound	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	7.00			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	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	10.00	10.00	10.00	9.50	✓	3.00	175	250

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	798	0.139	0.351	0.221	0.502
B-C	934	0.137	0.346	-	-
C-B	719	0.266	0.266	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 - Existing	AM	ONE HOUR	06:45	08:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	69	100.000
B		ONE HOUR	✓	0	100.000
C		ONE HOUR	✓	83	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
	A	B	C	
From	A	0	2	67
	B	0	0	0
	C	80	3	0

Proportions

	To			
	A	B	C	
From	A	0.00	0.03	0.97
	B	0.33	0.33	0.33
	C	0.96	0.04	0.00

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	9
	B	0	0	0
	C	8	0	0

Average PCU Per Veh

	To			
	A	B	C	
From	A	1.000	1.000	1.090
	B	1.000	1.000	1.000
	C	1.080	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
06:45-07:00	A	52	56
	B	0	0
	C	62	67
07:00-07:15	A	62	67
	B	0	0
	C	75	80
07:15-07:30	A	76	83
	B	0	0
	C	91	98
07:30-07:45	A	76	83
	B	0	0
	C	91	98
07:45-08:00	A	62	67
	B	0	0
	C	75	80
08:00-08:15	A	52	56
	B	0	0
	C	62	67

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.00	0.00	0.0	~1	A	0	0
B-A	0.00	0.00	0.0	~1	A	0	0
C-AB	0.01	4.89	0.0	0.5	A	3	5
C-A						73	110
A-B						2	3
A-C						61	92

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	915	0.000	0	0.0	0.0	0.000	A
B-A	0	0	763	0.000	0	0.0	0.0	0.000	A
C-AB	2	0.61	738	0.003	2	0.0	0.0	4.890	A
C-A	60	15			60				
A-B	2	0.38			2				
A-C	50	13			50				

07:00 - 07:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	911	0.000	0	0.0	0.0	0.000	A
B-A	0	0	756	0.000	0	0.0	0.0	0.000	A
C-AB	3	0.75	742	0.004	3	0.0	0.0	4.865	A
C-A	72	18			72				
A-B	2	0.45			2				
A-C	60	15			60				

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	906	0.000	0	0.0	0.0	0.000	A
B-A	0	0	746	0.000	0	0.0	0.0	0.000	A
C-AB	4	0.94	748	0.005	4	0.0	0.0	4.833	A
C-A	88	22			88				
A-B	2	0.55			2				
A-C	74	18			74				

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	906	0.000	0	0.0	0.0	0.000	A
B-A	0	0	746	0.000	0	0.0	0.0	0.000	A
C-AB	4	0.94	748	0.005	4	0.0	0.0	4.838	A
C-A	88	22			88				
A-B	2	0.55			2				
A-C	74	18			74				

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	911	0.000	0	0.0	0.0	0.000	A
B-A	0	0	756	0.000	0	0.0	0.0	0.000	A
C-AB	3	0.75	742	0.004	3	0.0	0.0	4.874	A
C-A	72	18			72				
A-B	2	0.45			2				
A-C	60	15			60				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	915	0.000	0	0.0	0.0	0.000	A
B-A	0	0	763	0.000	0	0.0	0.0	0.000	A
C-AB	2	0.62	738	0.003	2	0.0	0.0	4.894	A
C-A	60	15			60				
A-B	2	0.38			2				
A-C	50	13			50				

Queue Variation Results for each time segment
06:45 - 07:00

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

07:00 - 07:15

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

07:15 - 07:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.00	0.00	0.00	0.00	0.00			N/A	N/A
B-A	0.00	0.00	0.00	0.00	0.00			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

07:30 - 07:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.00	0.00	0.00	0.00	0.00			N/A	N/A
B-A	0.00	0.00	0.00	0.00	0.00			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

07:45 - 08:00

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

08:00 - 08:15

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

2022 - Existing, PM

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	N59/ Site Access	T-Junction	Two-way		0.10	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2022 - Existing	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	94	100.000
B		ONE HOUR	✓	5	100.000
C		ONE HOUR	✓	125	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	
From	A	0	0	94	
	B	3	0	2	
	C	125	0	0	

Proportions

		To			
		A	B	C	
From	A	0.00	0.00	1.00	
	B	0.60	0.00	0.40	
	C	1.00	0.00	0.00	

Vehicle Mix

Heavy Vehicle Percentages

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

Average PCU Per Veh

		To			
		A	B	C	
From	A	1.000	1.000	1.040	
	B	1.000	1.000	1.000	
	C	1.050	1.000	1.000	

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A	71	74
	B	4	4
	C	94	99
17:00-17:15	A	85	88
	B	4	4
	C	112	118
17:15-17:30	A	103	108
	B	6	6
	C	138	145
17:30-17:45	A	103	108
	B	6	6
	C	138	145
17:45-18:00	A	85	88
	B	4	4
	C	112	118
18:00-18:15	A	71	74
	B	4	4
	C	94	99

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.00	4.05	0.0	0.5	A	2	3
B-A	0.00	4.95	0.0	0.5	A	3	4
C-AB	0.00	0.00	0.0	~1	A	0	0
C-A						115	172
A-B						0	0
A-C						86	129

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	0.38	904	0.002	1	0.0	0.0	3.989	A
B-A	2	0.56	753	0.003	2	0.0	0.0	4.793	A
C-AB	0	0	682	0.000	0	0.0	0.0	0.000	A
C-A	94	24			94				
A-B	0	0			0				
A-C	71	18			71				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	0.45	899	0.002	2	0.0	0.0	4.012	A
B-A	3	0.67	744	0.004	3	0.0	0.0	4.856	A
C-AB	0	0	678	0.000	0	0.0	0.0	0.000	A
C-A	112	28			112				
A-B	0	0			0				
A-C	85	21			85				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	0.55	892	0.002	2	0.0	0.0	4.046	A
B-A	3	0.83	731	0.005	3	0.0	0.0	4.946	A
C-AB	0	0	673	0.000	0	0.0	0.0	0.000	A
C-A	138	34			138				
A-B	0	0			0				
A-C	103	26			103				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	0.55	892	0.002	2	0.0	0.0	4.046	A
B-A	3	0.83	731	0.005	3	0.0	0.0	4.946	A
C-AB	0	0	673	0.000	0	0.0	0.0	0.000	A
C-A	138	34			138				
A-B	0	0			0				
A-C	103	26			103				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	0.45	899	0.002	2	0.0	0.0	4.014	A
B-A	3	0.67	744	0.004	3	0.0	0.0	4.858	A
C-AB	0	0	678	0.000	0	0.0	0.0	0.000	A
C-A	112	28			112				
A-B	0	0			0				
A-C	85	21			85				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	0.38	904	0.002	2	0.0	0.0	3.989	A
B-A	2	0.56	753	0.003	2	0.0	0.0	4.793	A
C-AB	0	0	682	0.000	0	0.0	0.0	0.000	A
C-A	94	24			94				
A-B	0	0			0				
A-C	71	18			71				

Queue Variation Results for each time segment

16:45 - 17:00

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

17:00 - 17:15

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

17:15 - 17:30

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

17:30 - 17:45

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

17:45 - 18:00

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

18:00 - 18:15

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

2027 - Baseflow - Central Growth, 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	N59/ Site Access	T-Junction	Two-way		0.09	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2027 - Baseflow - Central Growth	AM	ONE HOUR	06:45	08:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	74	100.000
B		ONE HOUR	✓	0	100.000
C		ONE HOUR	✓	89	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
	A	B	C	
From	A	0	2	72
	B	0	0	0
	C	86	3	0

Proportions

	To			
	A	B	C	
From	A	0.00	0.03	0.97
	B	0.33	0.33	0.33
	C	0.97	0.03	0.00

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	10
	B	0	0	0
	C	8	0	0

Average PCU Per Veh

	To			
	A	B	C	
From	A	1.000	1.000	1.100
	B	1.000	1.000	1.000
	C	1.080	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
06:45-07:00	A	56	61
	B	0	0
	C	67	72
07:00-07:15	A	67	73
	B	0	0
	C	80	86
07:15-07:30	A	81	89
	B	0	0
	C	98	106
07:30-07:45	A	81	89
	B	0	0
	C	98	106
07:45-08:00	A	67	73
	B	0	0
	C	80	86
08:00-08:15	A	56	61
	B	0	0
	C	67	72

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.00	0.00	0.0	~1	A	0	0
B-A	0.00	0.00	0.0	~1	A	0	0
C-AB	0.01	4.88	0.0	0.5	A	3	5
C-A						79	118
A-B						2	3
A-C						66	99

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	913	0.000	0	0.0	0.0	0.000	A
B-A	0	0	760	0.000	0	0.0	0.0	0.000	A
C-AB	2	0.62	740	0.003	2	0.0	0.0	4.881	A
C-A	65	16			65				
A-B	2	0.38			2				
A-C	54	14			54				

07:00 - 07:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	909	0.000	0	0.0	0.0	0.000	A
B-A	0	0	753	0.000	0	0.0	0.0	0.000	A
C-AB	3	0.75	744	0.004	3	0.0	0.0	4.854	A
C-A	77	19			77				
A-B	2	0.45			2				
A-C	65	16			65				

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	903	0.000	0	0.0	0.0	0.000	A
B-A	0	0	743	0.000	0	0.0	0.0	0.000	A
C-AB	4	0.95	750	0.005	4	0.0	0.0	4.819	A
C-A	94	24			94				
A-B	2	0.55			2				
A-C	79	20			79				

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	903	0.000	0	0.0	0.0	0.000	A
B-A	0	0	743	0.000	0	0.0	0.0	0.000	A
C-AB	4	0.95	750	0.005	4	0.0	0.0	4.825	A
C-A	94	24			94				
A-B	2	0.55			2				
A-C	79	20			79				

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	909	0.000	0	0.0	0.0	0.000	A
B-A	0	0	753	0.000	0	0.0	0.0	0.000	A
C-AB	3	0.75	744	0.004	3	0.0	0.0	4.861	A
C-A	77	19			77				
A-B	2	0.45			2				
A-C	65	16			65				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	913	0.000	0	0.0	0.0	0.000	A
B-A	0	0	760	0.000	0	0.0	0.0	0.000	A
C-AB	2	0.62	740	0.003	2	0.0	0.0	4.885	A
C-A	65	16			65				
A-B	2	0.38			2				
A-C	54	14			54				

Queue Variation Results for each time segment
06:45 - 07:00

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

07:00 - 07:15

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

07:15 - 07:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.00	0.00	0.00	0.00	0.00			N/A	N/A
B-A	0.00	0.00	0.00	0.00	0.00			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

07:30 - 07:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.00	0.00	0.00	0.00	0.00			N/A	N/A
B-A	0.00	0.00	0.00	0.00	0.00			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

07:45 - 08:00

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

08:00 - 08:15

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

2027 - Baseflow - Central Growth, PM

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	N59/ Site Access	T-Junction	Two-way		0.09	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2027 - Baseflow - Central Growth	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	101	100.000
B		ONE HOUR	✓	5	100.000
C		ONE HOUR	✓	134	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
	A	B	C	
From	A	0	0	101
	B	3	0	2
	C	134	0	0

Proportions

	To			
	A	B	C	
From	A	0.00	0.00	1.00
	B	0.60	0.00	0.40
	C	1.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	5
	B	0	0	0
	C	5	0	0

Average PCU Per Veh

	To			
	A	B	C	
From	A	1.000	1.000	1.050
	B	1.000	1.000	1.000
	C	1.050	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A	76	80
	B	4	4
	C	101	106
17:00-17:15	A	91	95
	B	4	4
	C	120	126
17:15-17:30	A	111	117
	B	6	6
	C	148	155
17:30-17:45	A	111	117
	B	6	6
	C	148	155
17:45-18:00	A	91	95
	B	4	4
	C	120	126
18:00-18:15	A	76	80
	B	4	4
	C	101	106

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.00	4.06	0.0	0.5	A	2	3
B-A	0.00	4.98	0.0	0.5	A	3	4
C-AB	0.00	0.00	0.0	~1	A	0	0
C-A						123	184
A-B						0	0
A-C						93	139

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	0.38	902	0.002	1	0.0	0.0	3.998	A
B-A	2	0.56	749	0.003	2	0.0	0.0	4.817	A
C-AB	0	0	680	0.000	0	0.0	0.0	0.000	A
C-A	101	25			101				
A-B	0	0			0				
A-C	76	19			76				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	0.45	896	0.002	2	0.0	0.0	4.024	A
B-A	3	0.67	739	0.004	3	0.0	0.0	4.886	A
C-AB	0	0	676	0.000	0	0.0	0.0	0.000	A
C-A	120	30			120				
A-B	0	0			0				
A-C	91	23			91				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	0.55	889	0.002	2	0.0	0.0	4.060	A
B-A	3	0.83	726	0.005	3	0.0	0.0	4.984	A
C-AB	0	0	671	0.000	0	0.0	0.0	0.000	A
C-A	148	37			148				
A-B	0	0			0				
A-C	111	28			111				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	0.55	889	0.002	2	0.0	0.0	4.060	A
B-A	3	0.83	726	0.005	3	0.0	0.0	4.984	A
C-AB	0	0	671	0.000	0	0.0	0.0	0.000	A
C-A	148	37			148				
A-B	0	0			0				
A-C	111	28			111				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	0.45	896	0.002	2	0.0	0.0	4.024	A
B-A	3	0.67	739	0.004	3	0.0	0.0	4.886	A
C-AB	0	0	676	0.000	0	0.0	0.0	0.000	A
C-A	120	30			120				
A-B	0	0			0				
A-C	91	23			91				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	0.38	902	0.002	2	0.0	0.0	3.998	A
B-A	2	0.56	749	0.003	2	0.0	0.0	4.819	A
C-AB	0	0	680	0.000	0	0.0	0.0	0.000	A
C-A	101	25			101				
A-B	0	0			0				
A-C	76	19			76				

Queue Variation Results for each time segment

16:45 - 17:00

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

17:00 - 17:15

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

17:15 - 17:30

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

17:30 - 17:45

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

17:45 - 18:00

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

18:00 - 18:15

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

2027 - Proposed Dev. Construction Peak - West Distribution, 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	N59/ Site Access	T-Junction	Two-way		1.71	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2027 - Proposed Dev. Construction Peak - West Distribution	AM	ONE HOUR	06:45	08:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	101	100.000
B		ONE HOUR	✓	7	100.000
C		ONE HOUR	✓	129	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
	A	B	C	
From	A	0	29	72
	B	0	0	7
	C	86	43	0

Proportions

	To			
	A	B	C	
From	A	0.00	0.29	0.71
	B	0.00	0.00	1.00
	C	0.67	0.33	0.00

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	10
	B	0	0	100
	C	8	16	0

Average PCU Per Veh

	To			
	A	B	C	
From	A	1.000	1.000	1.100
	B	1.000	1.000	2.000
	C	1.080	1.160	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
06:45-07:00	A	76	81
	B	5	11
	C	97	107
07:00-07:15	A	91	97
	B	6	13
	C	116	128
07:15-07:30	A	111	119
	B	8	15
	C	142	157
07:30-07:45	A	111	119
	B	8	15
	C	142	157
07:45-08:00	A	91	97
	B	6	13
	C	116	128
08:00-08:15	A	76	81
	B	5	11
	C	97	107

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.02	8.11	0.0	0.5	A	6	10
B-A	0.00	0.00	0.0	~1	A	0	0
C-AB	0.08	6.02	0.1	0.5	A	45	68
C-A						73	110
A-B						27	40
A-C						66	99

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	5	1	457	0.012	5	0.0	0.0	7.967	A
B-A	0	0	736	0.000	0	0.0	0.0	0.000	A
C-AB	36	9	642	0.056	36	0.0	0.1	5.935	A
C-A	61	15			61				
A-B	22	5			22				
A-C	54	14			54				

07:00 - 07:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6	2	455	0.014	6	0.0	0.0	8.027	A
B-A	0	0	725	0.000	0	0.0	0.0	0.000	A
C-AB	44	11	647	0.068	44	0.1	0.1	5.973	A
C-A	72	18			72				
A-B	26	7			26				
A-C	65	16			65				

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	8	2	452	0.017	8	0.0	0.0	8.110	A
B-A	0	0	709	0.000	0	0.0	0.0	0.000	A
C-AB	55	14	653	0.085	55	0.1	0.1	6.025	A
C-A	87	22			87				
A-B	32	8			32				
A-C	79	20			79				

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	8	2	452	0.017	8	0.0	0.0	8.110	A
B-A	0	0	709	0.000	0	0.0	0.0	0.000	A
C-AB	55	14	653	0.085	55	0.1	0.1	6.023	A
C-A	87	22			87				
A-B	32	8			32				
A-C	79	20			79				

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6	2	455	0.014	6	0.0	0.0	8.029	A
B-A	0	0	725	0.000	0	0.0	0.0	0.000	A
C-AB	44	11	647	0.068	44	0.1	0.1	5.966	A
C-A	72	18			72				
A-B	26	7			26				
A-C	65	16			65				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	5	1	457	0.012	5	0.0	0.0	7.970	A
B-A	0	0	736	0.000	0	0.0	0.0	0.000	A
C-AB	36	9	642	0.056	36	0.1	0.1	5.934	A
C-A	61	15			61				
A-B	22	5			22				
A-C	54	14			54				

Queue Variation Results for each time segment
06:45 - 07:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.00	0.00	0.00	0.00	0.00			N/A	N/A
C-AB	0.07	0.00	0.00	0.07	0.07			N/A	N/A

07:00 - 07:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.01	0.25	0.45	0.48			N/A	N/A
B-A	0.00	0.00	0.00	0.00	0.00			N/A	N/A
C-AB	0.08	0.03	0.25	0.45	0.48			N/A	N/A

07:15 - 07:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.02	0.00	0.00	0.02	0.02			N/A	N/A
B-A	0.00	0.00	0.00	0.00	0.00			N/A	N/A
C-AB	0.11	0.03	0.26	0.47	0.50			N/A	N/A

07:30 - 07:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.02	0.00	0.00	0.02	0.02			N/A	N/A
B-A	0.00	0.00	0.00	0.00	0.00			N/A	N/A
C-AB	0.11	0.00	0.00	0.11	0.11			N/A	N/A

07:45 - 08:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.00	0.00	0.00	0.00	0.00			N/A	N/A
C-AB	0.09	0.00	0.00	0.09	0.09			N/A	N/A

08:00 - 08:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.00	0.00	0.00	0.00	0.00			N/A	N/A
C-AB	0.07	0.00	0.00	0.07	0.07			N/A	N/A

2027 - Proposed Dev. Construction Peak - West Distribution, PM

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	N59/ Site Access	T-Junction	Two-way		1.65	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2027 - Proposed Dev. Construction Peak - West Distribution	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	101	100.000
B		ONE HOUR	✓	72	100.000
C		ONE HOUR	✓	141	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
	A	B	C	
From	A	0	0	101
	B	37	0	35
	C	134	7	0

Proportions

	To			
	A	B	C	
From	A	0.00	0.00	1.00
	B	0.51	0.00	0.49
	C	0.95	0.05	0.00

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	5
	B	0	0	20
	C	5	100	0

Average PCU Per Veh

	To			
	A	B	C	
From	A	1.000	1.000	1.050
	B	1.000	1.000	1.200
	C	1.050	2.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A	76	80
	B	54	59
	C	106	116
17:00-17:15	A	91	95
	B	65	71
	C	127	139
17:15-17:30	A	111	117
	B	79	87
	C	155	170
17:30-17:45	A	111	117
	B	79	87
	C	155	170
17:45-18:00	A	91	95
	B	65	71
	C	127	139
18:00-18:15	A	76	80
	B	54	59
	C	106	116

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.05	5.15	0.1	0.5	A	32	48
B-A	0.06	5.36	0.1	0.5	A	34	51
C-AB	0.02	8.52	0.0	0.5	A	9	13
C-A						120	181
A-B						0	0
A-C						93	139

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	26	7	751	0.035	26	0.0	0.0	4.964	A
B-A	28	7	738	0.038	28	0.0	0.0	5.067	A
C-AB	7	2	429	0.016	7	0.0	0.0	8.524	A
C-A	99	25			99				
A-B	0	0			0				
A-C	76	19			76				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	31	8	745	0.042	31	0.0	0.0	5.043	A
B-A	33	8	727	0.046	33	0.0	0.0	5.189	A
C-AB	9	2	443	0.020	9	0.0	0.0	8.363	A
C-A	118	30			118				
A-B	0	0			0				
A-C	91	23			91				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	39	10	737	0.052	38	0.0	0.1	5.154	A
B-A	41	10	712	0.057	41	0.0	0.1	5.365	A
C-AB	11	3	462	0.025	11	0.0	0.0	8.078	A
C-A	144	36			144				
A-B	0	0			0				
A-C	111	28			111				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	39	10	737	0.052	39	0.1	0.1	5.154	A
B-A	41	10	712	0.057	41	0.1	0.1	5.365	A
C-AB	11	3	462	0.025	11	0.0	0.0	7.983	A
C-A	144	36			144				
A-B	0	0			0				
A-C	111	28			111				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	31	8	745	0.042	32	0.1	0.0	5.046	A
B-A	33	8	727	0.046	33	0.1	0.0	5.190	A
C-AB	9	2	444	0.020	9	0.0	0.0	8.158	A
C-A	118	30			118				
A-B	0	0			0				
A-C	91	23			91				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	26	7	751	0.035	26	0.0	0.0	4.968	A
B-A	28	7	738	0.038	28	0.0	0.0	5.072	A
C-AB	7	2	430	0.016	7	0.0	0.0	8.420	A
C-A	99	25			99				
A-B	0	0			0				
A-C	76	19			76				

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.04	0.00	0.00	0.04	0.04			N/A	N/A
B-A	0.04	0.00	0.00	0.04	0.04			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

17:00 - 17:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.04	0.03	0.25	0.45	0.48			N/A	N/A
B-A	0.05	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.02	0.02	0.25	0.45	0.48			N/A	N/A

17:15 - 17:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.05	0.03	0.26	0.46	0.49			N/A	N/A
B-A	0.06	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

17:30 - 17:45

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

17:45 - 18:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.04	0.00	0.00	0.04	0.04			N/A	N/A
B-A	0.05	0.00	0.00	0.05	0.05			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

18:00 - 18:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.04	0.00	0.00	0.04	0.04			N/A	N/A
B-A	0.04	0.00	0.00	0.04	0.04			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

2027 - Proposed Dev. Construction Peak - East Distribution, 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	N59/ Site Access	T-Junction	Two-way		1.33	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2027 - Proposed Dev. Construction Peak - East Distribution	AM	ONE HOUR	06:45	08:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	109	100.000
B		ONE HOUR	✓	7	100.000
C		ONE HOUR	✓	122	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
	A	B	C	
From	A	0	37	72
	B	7	0	0
	C	86	36	0

Proportions

	To			
	A	B	C	
From	A	0.00	0.34	0.66
	B	1.00	0.00	0.00
	C	0.70	0.30	0.00

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	19	10
	B	100	0	0
	C	8	0	0

Average PCU Per Veh

	To			
	A	B	C	
From	A	1.000	1.190	1.100
	B	2.000	1.000	1.000
	C	1.080	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
06:45-07:00	A	82	93
	B	5	11
	C	92	97
07:00-07:15	A	98	111
	B	6	13
	C	110	116
07:15-07:30	A	120	136
	B	8	15
	C	134	142
07:30-07:45	A	120	136
	B	8	15
	C	134	142
07:45-08:00	A	98	111
	B	6	13
	C	110	116
08:00-08:15	A	82	93
	B	5	11
	C	92	97

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.00	0.00	0.0	~1	A	0	0
B-A	0.02	10.21	0.0	0.5	B	6	10
C-AB	0.06	5.20	0.1	0.5	A	37	56
C-A						75	112
A-B						34	51
A-C						66	99

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	902	0.000	0	0.0	0.0	0.000	A
B-A	5	1	373	0.014	5	0.0	0.0	9.784	A
C-AB	30	7	732	0.041	30	0.0	0.0	5.125	A
C-A	62	16			62				
A-B	28	7			28				
A-C	54	14			54				

07:00 - 07:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	896	0.000	0	0.0	0.0	0.000	A
B-A	6	2	368	0.017	6	0.0	0.0	9.959	A
C-AB	36	9	735	0.049	36	0.0	0.1	5.151	A
C-A	73	18			73				
A-B	33	8			33				
A-C	65	16			65				

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	888	0.000	0	0.0	0.0	0.000	A
B-A	8	2	360	0.021	8	0.0	0.0	10.207	B
C-AB	45	11	738	0.062	45	0.1	0.1	5.189	A
C-A	89	22			89				
A-B	41	10			41				
A-C	79	20			79				

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	888	0.000	0	0.0	0.0	0.000	A
B-A	8	2	360	0.021	8	0.0	0.0	10.207	B
C-AB	46	11	738	0.062	46	0.1	0.1	5.197	A
C-A	89	22			89				
A-B	41	10			41				
A-C	79	20			79				

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	896	0.000	0	0.0	0.0	0.000	A
B-A	6	2	368	0.017	6	0.0	0.0	9.960	A
C-AB	36	9	735	0.049	36	0.1	0.1	5.161	A
C-A	73	18			73				
A-B	33	8			33				
A-C	65	16			65				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	902	0.000	0	0.0	0.0	0.000	A
B-A	5	1	373	0.014	5	0.0	0.0	9.788	A
C-AB	30	7	732	0.041	30	0.1	0.0	5.132	A
C-A	62	16			62				
A-B	28	7			28				
A-C	54	14			54				

Queue Variation Results for each time segment

06:45 - 07:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.00	0.00	0.00	0.00	0.00			N/A	N/A
B-A	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.05	0.00	0.00	0.05	0.05			N/A	N/A

07:00 - 07:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.00	0.00	0.00	0.00	0.00			N/A	N/A
B-A	0.02	0.02	0.25	0.45	0.48			N/A	N/A
C-AB	0.06	0.03	0.25	0.45	0.48			N/A	N/A

07:15 - 07:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.00	0.00	0.00	0.00	0.00			N/A	N/A
B-A	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	0.08	0.03	0.26	0.47	0.50			N/A	N/A

07:30 - 07:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.00	0.00	0.00	0.00	0.00			N/A	N/A
B-A	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	0.08	0.00	0.00	0.08	0.08			N/A	N/A

07:45 - 08:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.00	0.00	0.00	0.00	0.00			N/A	N/A
B-A	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	0.06	0.00	0.00	0.06	0.06			N/A	N/A

08:00 - 08:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.00	0.00	0.00	0.00	0.00			N/A	N/A
B-A	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.05	0.00	0.00	0.05	0.05			N/A	N/A

2027 - Proposed Dev. Construction Peak - East Distribution, PM

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	N59/ Site Access	T-Junction	Two-way		1.31	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2027 - Proposed Dev. Construction Peak - East Distribution	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	108	100.000
B		ONE HOUR	✓	73	100.000
C		ONE HOUR	✓	134	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
	A	B	C	
From	A	0	7	101
	B	45	0	28
	C	134	0	0

Proportions

	To			
	A	B	C	
From	A	0.00	0.06	0.94
	B	0.62	0.00	0.38
	C	1.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	100	5
	B	16	0	0
	C	5	0	0

Average PCU Per Veh

	To			
	A	B	C	
From	A	1.000	2.000	1.050
	B	1.160	1.000	1.000
	C	1.050	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A	81	90
	B	55	60
	C	101	106
17:00-17:15	A	97	108
	B	66	72
	C	120	126
17:15-17:30	A	119	132
	B	80	88
	C	148	155
17:30-17:45	A	119	132
	B	80	88
	C	148	155
17:45-18:00	A	97	108
	B	66	72
	C	120	126
18:00-18:15	A	81	90
	B	55	60
	C	101	106

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.04	4.29	0.0	0.5	A	26	39
B-A	0.08	6.27	0.1	0.5	A	41	62
C-AB	0.00	0.00	0.0	~1	A	0	0
C-A						123	184
A-B						6	10
A-C						93	139

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	21	5	889	0.024	21	0.0	0.0	4.146	A
B-A	34	8	645	0.053	34	0.0	0.1	5.890	A
C-AB	0	0	678	0.000	0	0.0	0.0	0.000	A
C-A	101	25			101				
A-B	5	1			5				
A-C	76	19			76				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	25	6	881	0.029	25	0.0	0.0	4.205	A
B-A	40	10	636	0.064	40	0.1	0.1	6.045	A
C-AB	0	0	673	0.000	0	0.0	0.0	0.000	A
C-A	120	30			120				
A-B	6	2			6				
A-C	91	23			91				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	31	8	870	0.035	31	0.0	0.0	4.290	A
B-A	50	12	624	0.079	49	0.1	0.1	6.270	A
C-AB	0	0	667	0.000	0	0.0	0.0	0.000	A
C-A	148	37			148				
A-B	8	2			8				
A-C	111	28			111				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	31	8	870	0.035	31	0.0	0.0	4.290	A
B-A	50	12	624	0.079	50	0.1	0.1	6.270	A
C-AB	0	0	667	0.000	0	0.0	0.0	0.000	A
C-A	148	37			148				
A-B	8	2			8				
A-C	111	28			111				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	25	6	881	0.029	25	0.0	0.0	4.208	A
B-A	40	10	636	0.064	41	0.1	0.1	6.046	A
C-AB	0	0	673	0.000	0	0.0	0.0	0.000	A
C-A	120	30			120				
A-B	6	2			6				
A-C	91	23			91				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	21	5	889	0.024	21	0.0	0.0	4.149	A
B-A	34	8	645	0.053	34	0.1	0.1	5.895	A
C-AB	0	0	678	0.000	0	0.0	0.0	0.000	A
C-A	101	25			101				
A-B	5	1			5				
A-C	76	19			76				

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.02	0.00	0.00	0.02	0.02			N/A	N/A
B-A	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

17:00 - 17:15

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

17:15 - 17:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.04	0.03	0.25	0.45	0.48			N/A	N/A
B-A	0.09	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

17:30 - 17:45

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

17:45 - 18:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.03	0.00	0.00	0.03	0.03			N/A	N/A
B-A	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

18:00 - 18:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.02	0.00	0.00	0.02	0.02			N/A	N/A
B-A	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

2027 - Proposed Dev. Construction Average - West Distribution, 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	N59/ Site Access	T-Junction	Two-way		1.22	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2027 - Proposed Dev. Construction Average - West Distribution	AM	ONE HOUR	06:45	08:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	88	100.000
B		ONE HOUR	✓	5	100.000
C		ONE HOUR	✓	110	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	16	72
	B	0	0	5
	C	86	24	0

Proportions

		To		
		A	B	C
From	A	0.00	0.18	0.82
	B	0.00	0.00	1.00
	C	0.78	0.22	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	10
	B	0	0	100
	C	8	21	0

Average PCU Per Veh

		To		
		A	B	C
From	A	1.000	1.000	1.100
	B	1.000	1.000	2.000
	C	1.080	1.210	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
06:45-07:00	A	66	72
	B	4	8
	C	83	92
07:00-07:15	A	79	86
	B	4	9
	C	99	110
07:15-07:30	A	97	105
	B	6	11
	C	121	134
07:30-07:45	A	97	105
	B	6	11
	C	121	134
07:45-08:00	A	79	86
	B	4	9
	C	99	110
08:00-08:15	A	66	72
	B	4	8
	C	83	92

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.01	8.05	0.0	0.5	A	5	7
B-A	0.00	0.00	0.0	~1	A	0	0
C-AB	0.05	5.99	0.1	0.5	A	25	38
C-A						76	113
A-B						15	22
A-C						66	99

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	4	1	458	0.008	4	0.0	0.0	7.930	A
B-A	0	0	746	0.000	0	0.0	0.0	0.000	A
C-AB	20	5	621	0.033	20	0.0	0.0	5.993	A
C-A	63	16			63				
A-B	12	3			12				
A-C	54	14			54				

07:00 - 07:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	4	1	456	0.010	4	0.0	0.0	7.981	A
B-A	0	0	736	0.000	0	0.0	0.0	0.000	A
C-AB	25	6	626	0.039	25	0.0	0.0	5.993	A
C-A	74	19			74				
A-B	14	4			14				
A-C	65	16			65				

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6	1	453	0.012	5	0.0	0.0	8.053	A
B-A	0	0	723	0.000	0	0.0	0.0	0.000	A
C-AB	31	8	633	0.049	31	0.0	0.1	5.985	A
C-A	90	23			90				
A-B	18	4			18				
A-C	79	20			79				

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	6	1	453	0.012	6	0.0	0.0	8.053	A
B-A	0	0	723	0.000	0	0.0	0.0	0.000	A
C-AB	31	8	633	0.049	31	0.1	0.1	5.981	A
C-A	90	23			90				
A-B	18	4			18				
A-C	79	20			79				

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	4	1	456	0.010	5	0.0	0.0	7.983	A
B-A	0	0	736	0.000	0	0.0	0.0	0.000	A
C-AB	25	6	626	0.039	25	0.1	0.0	5.978	A
C-A	74	19			74				
A-B	14	4			14				
A-C	65	16			65				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	4	1	458	0.008	4	0.0	0.0	7.932	A
B-A	0	0	745	0.000	0	0.0	0.0	0.000	A
C-AB	20	5	621	0.033	20	0.0	0.0	5.991	A
C-A	63	16			63				
A-B	12	3			12				
A-C	54	14			54				

Queue Variation Results for each time segment
06:45 - 07:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.00	0.00	0.00	0.00	0.00			N/A	N/A
C-AB	0.04	0.00	0.00	0.04	0.04			N/A	N/A

07:00 - 07:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.01	0.25	0.45	0.48			N/A	N/A
B-A	0.00	0.00	0.00	0.00	0.00			N/A	N/A
C-AB	0.05	0.03	0.25	0.45	0.48			N/A	N/A

07:15 - 07:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.00	0.00	0.00	0.00	0.00			N/A	N/A
C-AB	0.06	0.03	0.26	0.46	0.49			N/A	N/A

07:30 - 07:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.00	0.00	0.00	0.00	0.00			N/A	N/A
C-AB	0.06	0.00	0.00	0.06	0.06			N/A	N/A

07:45 - 08:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.00	0.00	0.00	0.00	0.00			N/A	N/A
C-AB	0.05	0.00	0.00	0.05	0.05			N/A	N/A

08:00 - 08:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.00	0.00	0.00	0.00	0.00			N/A	N/A
C-AB	0.04	0.00	0.00	0.04	0.04			N/A	N/A

2027 - Proposed Dev. Construction Average - West Distribution, PM

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	N59/ Site Access	T-Junction	Two-way		1.12	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2027 - Proposed Dev. Construction Average - West Distribution	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	101	100.000
B		ONE HOUR	✓	40	100.000
C		ONE HOUR	✓	139	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
	A	B	C	
From	A	0	0	101
	B	20	0	20
	C	134	5	0

Proportions

	To			
	A	B	C	
From	A	0.00	0.00	1.00
	B	0.50	0.00	0.50
	C	0.96	0.04	0.00

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	A	B	C	
	A	0	0	5
	B	0	0	25
C	5	100	0	

Average PCU Per Veh

From	To			
	A	B	C	
	A	1.000	1.000	1.050
	B	1.000	1.000	1.250
C	1.050	2.000	1.000	

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A	76	80
	B	30	34
	C	105	113
17:00-17:15	A	91	95
	B	36	40
	C	125	135
17:15-17:30	A	111	117
	B	44	50
	C	153	166
17:30-17:45	A	111	117
	B	44	50
	C	153	166
17:45-18:00	A	91	95
	B	36	40
	C	125	135
18:00-18:15	A	76	80
	B	30	34
	C	105	113

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.03	5.22	0.0	0.5	A	18	28
B-A	0.03	5.20	0.0	0.5	A	18	28
C-AB	0.02	8.48	0.0	0.5	A	6	10
C-A						121	182
A-B						0	0
A-C						93	139

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	4	724	0.021	15	0.0	0.0	5.075	A
B-A	15	4	739	0.020	15	0.0	0.0	4.969	A
C-AB	5	1	429	0.011	5	0.0	0.0	8.485	A
C-A	100	25			100				
A-B	0	0			0				
A-C	76	19			76				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	18	4	719	0.025	18	0.0	0.0	5.133	A
B-A	18	4	729	0.025	18	0.0	0.0	5.064	A
C-AB	6	2	443	0.014	6	0.0	0.0	8.315	A
C-A	119	30			119				
A-B	0	0			0				
A-C	91	23			91				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	22	6	712	0.031	22	0.0	0.0	5.215	A
B-A	22	6	714	0.031	22	0.0	0.0	5.202	A
C-AB	8	2	462	0.018	8	0.0	0.0	8.020	A
C-A	145	36			145				
A-B	0	0			0				
A-C	111	28			111				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	22	6	712	0.031	22	0.0	0.0	5.215	A
B-A	22	6	714	0.031	22	0.0	0.0	5.202	A
C-AB	8	2	462	0.018	8	0.0	0.0	7.926	A
C-A	145	36			145				
A-B	0	0			0				
A-C	111	28			111				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	18	4	719	0.025	18	0.0	0.0	5.133	A
B-A	18	4	729	0.025	18	0.0	0.0	5.067	A
C-AB	6	2	444	0.014	6	0.0	0.0	8.113	A
C-A	119	30			119				
A-B	0	0			0				
A-C	91	23			91				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	15	4	724	0.021	15	0.0	0.0	5.077	A
B-A	15	4	739	0.020	15	0.0	0.0	4.970	A
C-AB	5	1	430	0.011	5	0.0	0.0	8.384	A
C-A	100	25			100				
A-B	0	0			0				
A-C	76	19			76				

Queue Variation Results for each time segment

16:45 - 17:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.02	0.00	0.00	0.02	0.02			N/A	N/A
B-A	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

17:00 - 17:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.03	0.03	0.25	0.45	0.48			N/A	N/A
B-A	0.03	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.02	0.02	0.25	0.45	0.48			N/A	N/A

17:15 - 17:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.03	0.00	0.00	0.03	0.03			N/A	N/A
B-A	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

17:30 - 17:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.03	0.00	0.00	0.03	0.03			N/A	N/A
B-A	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

17:45 - 18:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.03	0.00	0.00	0.03	0.03			N/A	N/A
B-A	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

18:00 - 18:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.02	0.00	0.00	0.02	0.02			N/A	N/A
B-A	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

2027 - Proposed Dev. Construction Average - East Distribution, 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	N59/ Site Access	T-Junction	Two-way		0.91	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2027 - Proposed Dev. Construction Average - East Distribution	AM	ONE HOUR	06:45	08:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	93	100.000
B		ONE HOUR	✓	5	100.000
C		ONE HOUR	✓	105	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	21	72
	B	5	0	0
	C	86	19	0

Proportions

		To		
		A	B	C
From	A	0.00	0.23	0.77
	B	1.00	0.00	0.00
	C	0.82	0.18	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	24	10
	B	100	0	0
	C	8	0	0

Average PCU Per Veh

		To		
		A	B	C
From	A	1.000	1.240	1.100
	B	2.000	1.000	1.000
	C	1.080	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
06:45-07:00	A	70	79
	B	4	8
	C	79	84
07:00-07:15	A	84	95
	B	4	9
	C	94	101
07:15-07:30	A	102	116
	B	6	11
	C	116	123
07:30-07:45	A	102	116
	B	6	11
	C	116	123
07:45-08:00	A	84	95
	B	4	9
	C	94	101
08:00-08:15	A	70	79
	B	4	8
	C	79	84

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.00	0.00	0.0	~1	A	0	0
B-A	0.02	9.97	0.0	0.5	A	5	7
C-AB	0.03	5.01	0.0	0.5	A	20	29
C-A						77	115
A-B						19	29
A-C						66	99

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	904	0.000	0	0.0	0.0	0.000	A
B-A	4	1	377	0.010	4	0.0	0.0	9.635	A
C-AB	16	4	735	0.021	16	0.0	0.0	5.002	A
C-A	63	16			63				
A-B	16	4			16				
A-C	54	14			54				

07:00 - 07:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	899	0.000	0	0.0	0.0	0.000	A
B-A	4	1	373	0.012	4	0.0	0.0	9.775	A
C-AB	19	5	739	0.026	19	0.0	0.0	4.999	A
C-A	75	19			75				
A-B	19	5			19				
A-C	65	16			65				

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	893	0.000	0	0.0	0.0	0.000	A
B-A	6	1	367	0.015	5	0.0	0.0	9.971	A
C-AB	24	6	743	0.032	24	0.0	0.0	4.999	A
C-A	92	23			92				
A-B	23	6			23				
A-C	79	20			79				

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	893	0.000	0	0.0	0.0	0.000	A
B-A	6	1	366	0.015	6	0.0	0.0	9.972	A
C-AB	24	6	743	0.032	24	0.0	0.0	5.003	A
C-A	92	23			92				
A-B	23	6			23				
A-C	79	20			79				

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	899	0.000	0	0.0	0.0	0.000	A
B-A	4	1	373	0.012	5	0.0	0.0	9.778	A
C-AB	19	5	739	0.026	19	0.0	0.0	5.010	A
C-A	75	19			75				
A-B	19	5			19				
A-C	65	16			65				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	0	904	0.000	0	0.0	0.0	0.000	A
B-A	4	1	377	0.010	4	0.0	0.0	9.640	A
C-AB	16	4	735	0.021	16	0.0	0.0	5.006	A
C-A	63	16			63				
A-B	16	4			16				
A-C	54	14			54				

Queue Variation Results for each time segment
06:45 - 07:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.00	0.00	0.00	0.00	0.00			N/A	N/A
B-A	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			N/A	N/A

07:00 - 07:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.00	0.00	0.00	0.00	0.00			N/A	N/A
B-A	0.01	0.01	0.25	0.45	0.48			N/A	N/A
C-AB	0.03	0.03	0.25	0.45	0.48			N/A	N/A

07:15 - 07:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.00	0.00	0.00	0.00	0.00			N/A	N/A
B-A	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	0.04	0.00	0.00	0.04	0.04			N/A	N/A

07:30 - 07:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.00	0.00	0.00	0.00	0.00			N/A	N/A
B-A	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	0.04	0.00	0.00	0.04	0.04			N/A	N/A

07:45 - 08:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.00	0.00	0.00	0.00	0.00			N/A	N/A
B-A	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			N/A	N/A

08:00 - 08:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.00	0.00	0.00	0.00	0.00			N/A	N/A
B-A	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			N/A	N/A

2027 - Proposed Dev. Construction Average - East Distribution, PM

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	N59/ Site Access	T-Junction	Two-way		0.83	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2027 - Proposed Dev. Construction Average - East Distribution	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	106	100.000
B		ONE HOUR	✓	40	100.000
C		ONE HOUR	✓	134	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	5	101
	B	25	0	15
	C	134	0	0

Proportions

		To		
		A	B	C
From	A	0.00	0.05	0.95
	B	0.63	0.00	0.38
	C	1.00	0.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	100	5
	B	20	0	0
	C	5	0	0

Average PCU Per Veh

		To		
		A	B	C
From	A	1.000	2.000	1.050
	B	1.200	1.000	1.000
	C	1.050	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A	80	87
	B	30	34
	C	101	106
17:00-17:15	A	95	104
	B	36	40
	C	120	126
17:15-17:30	A	117	128
	B	44	50
	C	148	155
17:30-17:45	A	117	128
	B	44	50
	C	148	155
17:45-18:00	A	95	104
	B	36	40
	C	120	126
18:00-18:15	A	80	87
	B	30	34
	C	101	106

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-C	0.02	4.18	0.0	0.5	A	14	21
B-A	0.05	6.25	0.0	0.5	A	23	34
C-AB	0.00	0.00	0.0	~1	A	0	0
C-A						123	184
A-B						5	7
A-C						93	139

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	11	3	895	0.013	11	0.0	0.0	4.075	A
B-A	19	5	624	0.030	19	0.0	0.0	5.949	A
C-AB	0	0	679	0.000	0	0.0	0.0	0.000	A
C-A	101	25			101				
A-B	4	1			4				
A-C	76	19			76				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	13	3	888	0.015	13	0.0	0.0	4.117	A
B-A	22	6	615	0.037	22	0.0	0.0	6.073	A
C-AB	0	0	674	0.000	0	0.0	0.0	0.000	A
C-A	120	30			120				
A-B	4	1			4				
A-C	91	23			91				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	17	4	878	0.019	17	0.0	0.0	4.178	A
B-A	28	7	603	0.046	27	0.0	0.0	6.251	A
C-AB	0	0	668	0.000	0	0.0	0.0	0.000	A
C-A	148	37			148				
A-B	6	1			6				
A-C	111	28			111				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	17	4	878	0.019	17	0.0	0.0	4.178	A
B-A	28	7	603	0.046	28	0.0	0.0	6.251	A
C-AB	0	0	668	0.000	0	0.0	0.0	0.000	A
C-A	148	37			148				
A-B	6	1			6				
A-C	111	28			111				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	13	3	888	0.015	13	0.0	0.0	4.119	A
B-A	22	6	615	0.037	23	0.0	0.0	6.077	A
C-AB	0	0	674	0.000	0	0.0	0.0	0.000	A
C-A	120	30			120				
A-B	4	1			4				
A-C	91	23			91				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	11	3	895	0.013	11	0.0	0.0	4.077	A
B-A	19	5	624	0.030	19	0.0	0.0	5.954	A
C-AB	0	0	679	0.000	0	0.0	0.0	0.000	A
C-A	101	25			101				
A-B	4	1			4				
A-C	76	19			76				

Queue Variation Results for each time segment
16:45 - 17:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

17:00 - 17:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.02	0.02	0.25	0.45	0.48			N/A	N/A
B-A	0.04	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

17:15 - 17:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.02	0.00	0.00	0.02	0.02			N/A	N/A
B-A	0.05	0.03	0.26	0.46	0.49			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A

17:30 - 17:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.02	0.00	0.00	0.02	0.02			N/A	N/A
B-A	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

17:45 - 18:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.02	0.00	0.00	0.02	0.02			N/A	N/A
B-A	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

18:00 - 18:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.01	0.00	0.00	0.01	0.01			N/A	N/A
B-A	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	0.00	0.00	0.00	0.00	0.00			N/A	N/A