Appendix 15-1- Traffic and Transportation Assessment (TTA)

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Bord na Móna

Derryadd Wind Farm

Traffic and Transport Assessment

March 2025

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Traffic and Transport Assessment Report

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TOBIN Consulting Engineers

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1. NON-TECHNICAL SUMMARY

The Non-Technical Summary is a synopsis of the Traffic and Transport Assessment (TTA) for the proposed development of 22 no. wind turbines and all associated infrastructure. The proposed wind farm site is located within County Longford and will be accessed via the National Road N63 and Regional Road R392.

A scoping document was issued on the 08th of November 2022 and again on the 14th of October 2024 to the Longford County Council Roads Department. This document outlined the proposed approach that the Traffic and Transport Assessment would take and identified the junctions that would be included in the analysis. Five junctions had been previously scoped with Longford County Council, and traffic counts were carried out at the following locations:

- Junction 1: N63 / R392 / Rathcline Road, Co. Longford, Crossroad Junction
- Junction 2: R392 / R398 / L1155, Co. Longford, Staggered Junction
- Junction 3: N63 / R397 / N63, Co. Longford, T-Junction
- Junction 4: N63 / R371 / N63 / Waters Edge, Co. Roscommon, Staggered Junction
- Junction 5: N61/ N63 / Retail Park / Lanesborough St, Co. Roscommon, Roundabout

Traffic counts were carried out, and a seasonal adjustment check was undertaken on the traffic count data to determine if the traffic on the date of the traffic count survey is representative of the annual average traffic for the year. Since the traffic count on the day of the survey was similar to the annual average daily traffic (AADT), a seasonal adjustment was not required.

The construction phase of the proposed development will have the greatest impact in comparison to the operational phase. During the construction phase, the proposed development will generate trips of Abnormal Indivisible Load (AIL) and construction vehicles. AILs are proposed to be transported at night-time with traffic management and garda escort. For this reason, assessments were carried out based on the construction deliveries impact on the site as per the TII Traffic and Transport Assessment Guidelines. As the construction material haul route is not expected to pass in Roscommon town, this Traffic and Transport Assessment has not analysed Junction 5.

The assessment has focused on the construction phase as per the following:

- Base year: 2022 and 2028
- Peak construction phase: 2028
- Average construction phase: 2028

The traffic count data was forecasted using the TII Project Appraisal Guidelines Unit 5.3: Travel Demand Projections for central growth rates and scenarios with and without the proposed development were analysed.

The PICADY analysis results indicate the 4 existing junctions will operate within capacity during the construction phase. The maximum RFC of 0.53 encountered at Junction 1 for the peak construction phase is well below the maximum desired RFC of 0.85. The analysis indicates that there will be negligible queues and minimal delays during the AM and PM peak hours for all scenarios analysed (i.e., with and without the proposed development and during peak and average construction works).

2. INTRODUCTION

TOBIN has been appointed by Bord na Móna, to prepare a Traffic and Transportation Assessment (TTA) Report of the proposed development.

The proposed wind farm site is located across three bogs (Derryaroge, Derryadd and Lough Bannow) within the Mountdillon Bog Group in Co. Longford. Refer to Figure 2-2. There are works as part of the proposed development which will take place outside of the wind farm site along the turbine delivery route (TDR).

The proposed development will comprise of the following:

- 22 no. wind turbines with a blade tip height of 190 m, blade rotor diameter of 165 m, hub height of 107.5 m and the associated infrastructure including tower sections, nacelle, hub, and rotor blades and all associated foundations and hard-standing areas in respect of each turbine;
- New internal site access roads, approximately 27,500 m in length including passing bays and associated drainage;
- 2 no. permanent Meteorological Masts, both of which will be 120 m in height, and associated hardstanding areas for both masts, as well as the decommissioning and removal of an existing 100 m Meteorological Mast on site in Lough Barrow Bog;
- 4 no. Borrow pits in Derryadd Bog; All works associated with the opening, gravel and spoil extraction, and decommissioning of the borrow pits;
- 4 no. temporary construction compounds, including material storage, site welfare facilities, and site offices;
- 4 no. temporary security cabins at the main construction site entrances as well as at a number of access points around the proposed wind farm site;
- 1 no. 110 kV electrical substation compound in Derryaroge Bog. The substation will consist of 2 no. control buildings, a 36 m high telecommunications tower, associated electrical plant and equipment, ground water well, wastewater holding tank and welfare facilities.
- All associated underground electrical and communications cabling connecting the turbines and masts to the proposed electrical substation, including road crossing at N63 and associated grid connection via a 110 kV loop-in connection to the existing Lanesborough-Richmond 110 kV overhead line which traverses the proposed wind farm site;
- 1 no. 16 MW battery storage facility;
- 2 no. Peat Deposition Areas, one to the north of the proposed substation compound in Derryaroge Bog and one in Derryadd Bog;
- New site access entrances, temporary improvements and modifications to existing public road infrastructure to facilitate delivery of abnormal loads including locations on N6 Eastbound Slip Road, N6/N61 Roundabout at Athlone, N61/N63 Roundabout at Roscommon, N63 Roscommon Arts Centre Roundabout and N61/N63 Roundabout, Northeast of Roscommon.
- Hinge 3 No. permanent lighting fixtures in Folio RN40465F in Roscommon town to facilitate the delivery of abnormal loads (i.e. turbine blades);
- Approximately 7,500 m of dedicated amenity access tracks to provide linkages between the proposed wind farm site roads, royal canal greenway (to the east), the Corlea Visitor Centre amenity areas (to the south) and the Midlands Trail Networks project (to the north).;

- 3 no. permanent amenity carparks, one of which is situated in Derryaroge Bog (19 no. car parking spaces in total) and two carparks in Derryadd Bog (19 no. car parking spaces in each carpark);
- All associated site work and ancillary works including new drainage and updating existing drainage, access road, earthworks, site reinstatement and erosion control, which will be aligned with the existing and future site rehabilitation plans; and,
- A 10-year planning permission is being sought with a 30-year operational life from the date of commissioning of the entire wind farm.

Construction phase is expected to start in 2027, with a duration of approximately 24 months.

This report presents the likely significant effects on the road network in the vicinity of the proposed development during the construction phase.

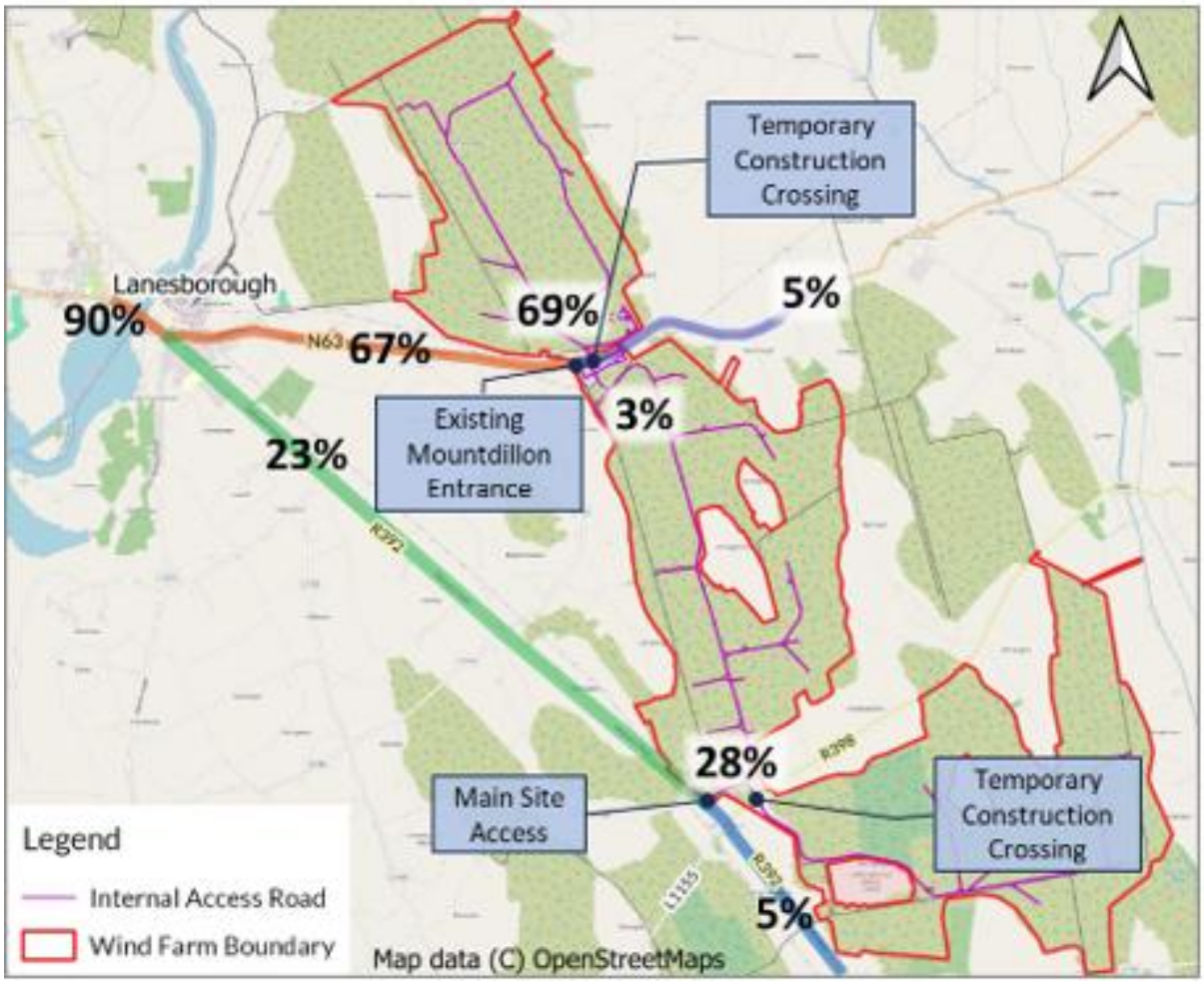


Figure 2-1: Layout of Proposed Wind Farm Site

2.1 OBJECTIVES

The objective of this report is to assess the impact the proposed development will have on the existing road network. This report presents the expected volume of traffic generated by the proposed development and assesses its impact on the operational capacity of the road network in the vicinity of the proposed development.

2.2 STRUCTURE OF THE REPORT

This report is divided into seven chapters:

- Chapter 1 is a non-technical summary,
- Chapter 2 presents this introduction,
- Chapter 3 presents the report method and describes the site location, existing road network, traffic survey, and traffic generated by the proposed development,
- Chapter 4 provides an overview of the existing and proposed traffic conditions, explaining how this information was obtained,
- Chapter 5 presents the analysis of baseline traffic and traffic generated by the proposed development on existing traffic conditions (i.e., with and without the proposed development and during peak and average construction works),
- Chapter 6 presents other road issues,
- Chapter 7 presents the conclusions.

2.3 STATEMENT OF AUTHORITY

This chapter of the EIAR has been prepared by Maria Rooney of TOBIN. TOBIN are in operation for over 70 years and have carried out numerous Traffic and Transportation Assessments (TTA's) for various residential, commercial, business, retail and leisure developments. TOBIN has also produced Traffic & Transport chapters for a number of EIAR's for various wind farms project.

Maria Rooney (Senior Engineer at Roads and Transportation) has a Bachelor of Engineering in Civil Engineering and a Master of Engineering in Roads and Transport Engineering. She is a Chartered Member of Engineers Ireland, and she has over ten years work experience in the roads and transport engineering with extensive experience in the preparation of TTA, EIAR and EIS for environmental projects including wind farms, solar farms, and numerous quarries.

3. METHODOLOGY

3.1 GUIDANCE AND LEGISLATIVE REVIEW

In preparing the Traffic and Transportation Assessment (TTA), the following references were consulted:

- Longford County Development Plan 2021-2027;
- Roscommon County Development Plan 2022-2028
- TII PE-PDV-02045 Traffic and Transport Assessment Guidelines (May 2014), and
- TII PE-PAG-02017 Project Appraisal Guidelines for National Roads Unit 5.3: Travel Demand Projections (October 2021).

Given that the construction phase is expected to cause higher traffic impacts to the site, this TTA has analysed the junction capacity, including queue lengths and reserve capacity, at the following assessments:

- Baseflow Traffic in 2022 and 2028
- Peak construction phase: 2028
- Average construction phase: 2028

3.2 ASSESSMENT METHODOLOGY

To assess the traffic and transportation impacts associated with the proposed development, the following approach was adopted:

- Data Collection:

  o Establish the baseline traffic flows of the existing roads,

  o Adjust traffic count data using standard growth rates to establish a do-nothing scenario,

  o Establish the traffic volumes generated by the proposed development during the Construction Phase,

- Assessment of Effects:

  o Determination of impacts on the surrounding road network during the peak and average construction activity.

3.3 SITE LOCATION & CONSTRUCTION SITE ACCESSES

The proposed wind farm site is approximately 12.1 km (Northern to Southern) in length and the width varies per bog Derryadd (Middle): 3 km; Lough Bannow (South): 3.8 km; Derryaroge (North): 3.8 km. The proposed wind farm site lies between the towns and villages of Lanesborough, Derraghan, Keenagh, and Killashee while the main urban centre in the region, Longford Town, is 9 km to the northeast from its nearest point. Derryaroge Bog to the north is adjacent to the River Shannon and Lough Bannow Bog is immediately west of the Royal Canal, which runs in a northwest-east direction. The closest settlements to the proposed wind farm site are Derraghan village and Lanesborough town, located approximately 200 m and 500 m west.

There will be a total of four proposed wind farm site entrances used to transport materials and equipment to the site as follows:

- New proposed main site access (Site Access A) to the southern part of Derryadd Bog, off the R392;
- New proposed site crossing (Site Access B) from the South of Derryadd Bog to the northern part of Lough Bannow Bog, off the R398;
- Proposed new temporary site crossing (Site Access C) from the northern part of Derryadd Bog (Machine pass from Mountdillon Works yard), off the N63 will also be required for large component transport across the N63 into Derryaroge; and,

- Existing Mountdillon Access will be utilised by Light Vehicles (LVs) and Heavy Vehicles (HVs).

Site Access A will be the main construction entrance to the site and will facilitate both materials delivery to the site (stone, steel, and concrete) as well as large oversize components such as turbine blades, tower sections, and substation components.

3.4 OPERATIONAL SITE ACCESSES

During the operation phase, Site Access A will remain open. Site Access B will be gated and used as necessary. Site access C will form a staggered junction in line with TII guidelines between the Existing Mountdillon Access and one arm (northern Arm) of Site Access C into Deryaroge. The southern arm of Site Access C will be permanently closed for the operational phase.

3.5 CONSULTATION

Scoping with Longford County Council's Roads Departments was undertaken on the 08th of November 2022, 14th of November 2022, 20th of April 2023 and 10th of November 2023. The liaison with the planning authority has facilitated agreement as to the nature and scale of the proposed development, including any required road network changes and/or enhancements. The main items identified during the scoping process included the following:

- A need to assess the traffic impact associated with the construction and decommissioning stage only, as these stages have the largest associated traffic volumes.
    - The location of the TTA is limited to the site access only.
    - TII Live traffic counters on the N63 to be used in the assessment.
- All construction trips to the site will be via the N63, R392 and a portion of R398.
    - Construction trips shall avoid the following roads, R398, L1163, L52512, L5260, L5269, L1162 and L1170.
- Suitable quarries in the vicinity of the site (i.e. currently / projected to be licensed at time of the construction stage).
- No Road Safety Audit was required at Mountdillon entrance as the site access is existing and is currently operating as an operational access.
- Discussed and agreed the construction haul route (separate from turbine delivery) with no further comments for the council.

Scoping with Roscommon County Council Roads Department was undertaken on the 09th of November 2022 and 31st of March 2023. The main items identified and agreed during the scoping process included the following:

- Traffic counts at:
    - i. N63 / R371 / Waters Edge
    - ii. N63 / N61 Lanesborough Roundabout.
- Swept Path analysis to consider future road improvements, Ballyleague Junction Improvement (i.e. N63 / R371), and Roscommon Town Public Realm (i.e. N61).
- Restriction HV movements on L1806.

On 16th May 2024, it was discussed and agreed with Longford County Council Roads Department that construction traffic will access Derryaroge via a new temporary site crossing (Site Access C). For operation one arm (northern arm) in Derryaroge of the new site crossing will form a staggered junction with the existing Mountdillon access in line with TII guidelines. The remaining southern arm of the new site crossing will be permanently closed post construction.

Lough Bannow (Site Access B) shall be accessed via gated access from Derryadd to Lough Bannow. The gated site accesses shall continue to be utilised during the operational phase for maintenance purposes. Site Access B will be gated and used as necessary.

3.6 TRAFFIC SURVEY

In order to determine the magnitude of the existing traffic flows, a manual classified junction turning count was undertaken at the 5 junctions previously scoped with Longford County Council. The traffic surveys were carried out by Nationwide Data Collection (NDC) on Tuesday the 22nd November 2022, between 07:00 hrs and 19:00 hrs. Count information was obtained at the following junctions:

- Junction 1: N63 / R392 / Rathcline Road, Co. Longford, Crossroad Junction
- Junction 2: R392 / R398 / L1155, Co. Longford, Staggered Junction
- Junction 3: N63 / R397 / N63, Co. Longford, T-Junction
- Junction 4: N63 / R371 / N63 / Waters Edge, Co. Roscommon, Staggered Junction
- Junction 5: N61/ N63 / Retail Park / Lanesborough St, Co. Roscommon, Roundabout

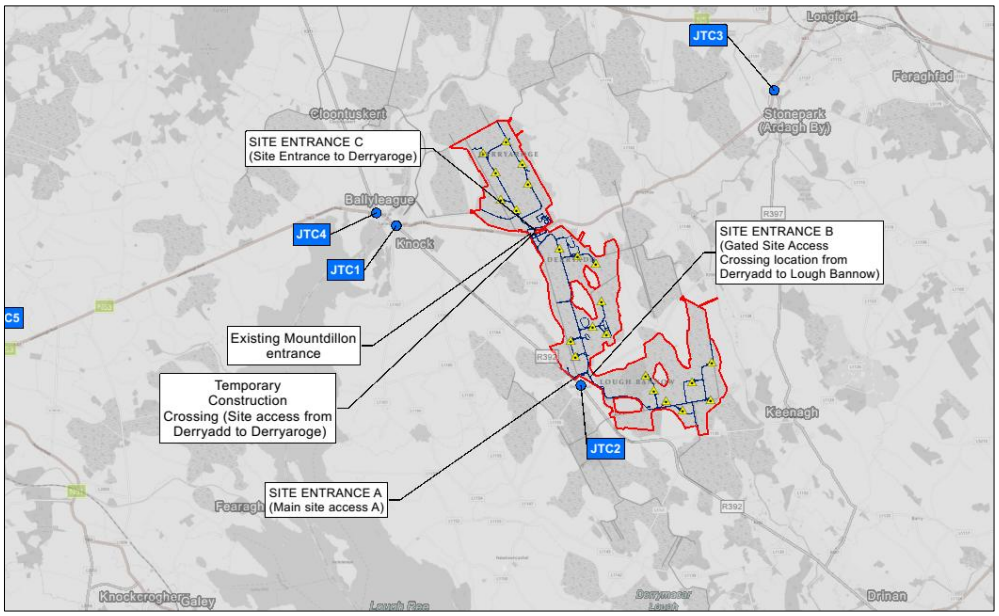


Figure 3-1 Traffic Count Location

This survey distinguished between light-good vehicles and heavy-good vehicles. The results of this survey indicated that the morning peak traffic levels occurred as presented in Table 3-1.

Table 3-1 Traffic Survey AM and PM Peak

Junction	AM Peak Time	PM Peak Time
Junction 1 Co. Longford	08:30 – 09:30	16:45 – 17:45
Junction 2 Co. Longford	08:00 – 09:00	16:00 – 17:00
Junction 3 Co. Longford	08:30 – 09:30	17:15 – 18:15
Junction 4 Co. Roscommon	08:15 – 09:15	17:00 – 18:00
Junction 5 Co. Roscommon	08:30 – 09:30	15:45 – 16:45

The traffic impact analysis applied the same peak time to all junctions for a robust assessment. It was considered the morning peak between 08:30 hrs and 09:30 hrs, and the evening peak between 16:45 hrs and 17:45 hrs. This was determined as Junction 1 has the highest traffic volumes and more likely to exceed capacity in peak hours as a result of construction phase traffic.

3.7 CONSTRUCTION PHASE

Given the nature of the proposed development, the construction phase will generate major impacts on traffic in the vicinity. Construction is expected to start in 2027 with a proposed construction programme of approximately 24 months.

For wind farm projects, there are two types of haul routes required for the transport of the materials to the site during the construction stage. These haul routes are:

- Construction Haul Route for standards axle-loaded vehicles and
- Construction Haul Route for Abnormal Indivisible Loads (AILs)[1];

The turbine component delivery and transformer delivery are a specialized operations due to the size of the loads transported. The AIL vehicles will accommodate transport of the tower, nacelle, blades, and substation transformers. The turbine deliveries will occur at night-time with traffic management and garda escort. As this traffic will be isolated from other daily traffic movements, it has not been added to the daily traffic volumes assessed in this report. The AILs and turbine delivery route is shown in Figure 3-2 and refer to Appendix 15-3 of this EIAR haul route assessment for swept path assessment drawings produced by Pell Frischman.

[1] A load which exceeds the weight, height, width, or length limit(s) outlined in S.I. No. 5 of 2003 of the Road Traffic Construction Equipment and Use of Vehicles Regulations 2003. (www.rsa.ie)

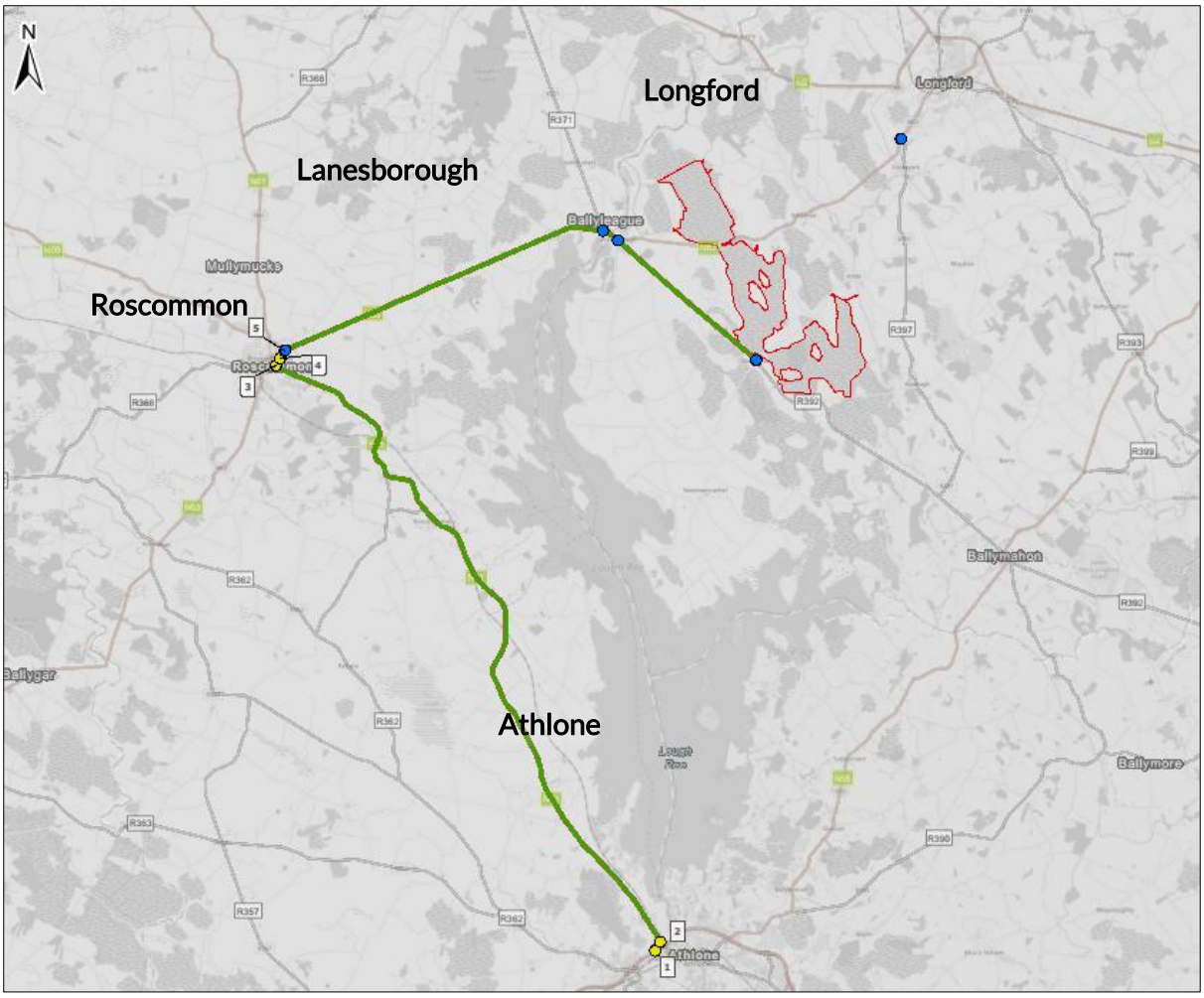


Figure 3-2 Abnormal Indivisible Load (AIL) Delivery Routes / Turbine Delivery Route (TDR) Traffic

3.7.1 Construction Phase Traffic

Based on the nature of the proposed development, various construction materials will be delivered to the site over the course of the construction programme. The materials will be delivered by standard Heavy Vehicles (HVs), including rigid lorries and articulated lorries. Other vehicles that will attend the site include standard construction machinery, i.e., cranes, excavators, stone crushers, concrete trucks, and tipper trucks.

The construction traffic with the largest daily impact (i.e., peak) is the combined construction activities during Month 3 as outlined in the Construction Programme. This traffic is associated with the importation of material for the substation platform and tree felling in the area.

The other materials required onsite will include two met masts, building materials, fencing, drainage, culverts, water treatment, substation materials, welfare facilities, etc., which are assumed to be sourced locally and arrive onsite. The majority of the construction traffic is assumed to travel from the direction of Lanesborough, with a small number will travel from Longford in the east and Ballymahon in the south. As illustrated in Figure 3-3.

During the scoping with Longford County Council (LCC), the haul route for these materials was identified and agreed as via the N63, and R392. A portion of the R398 was also agreed to not accommodate HV movements.

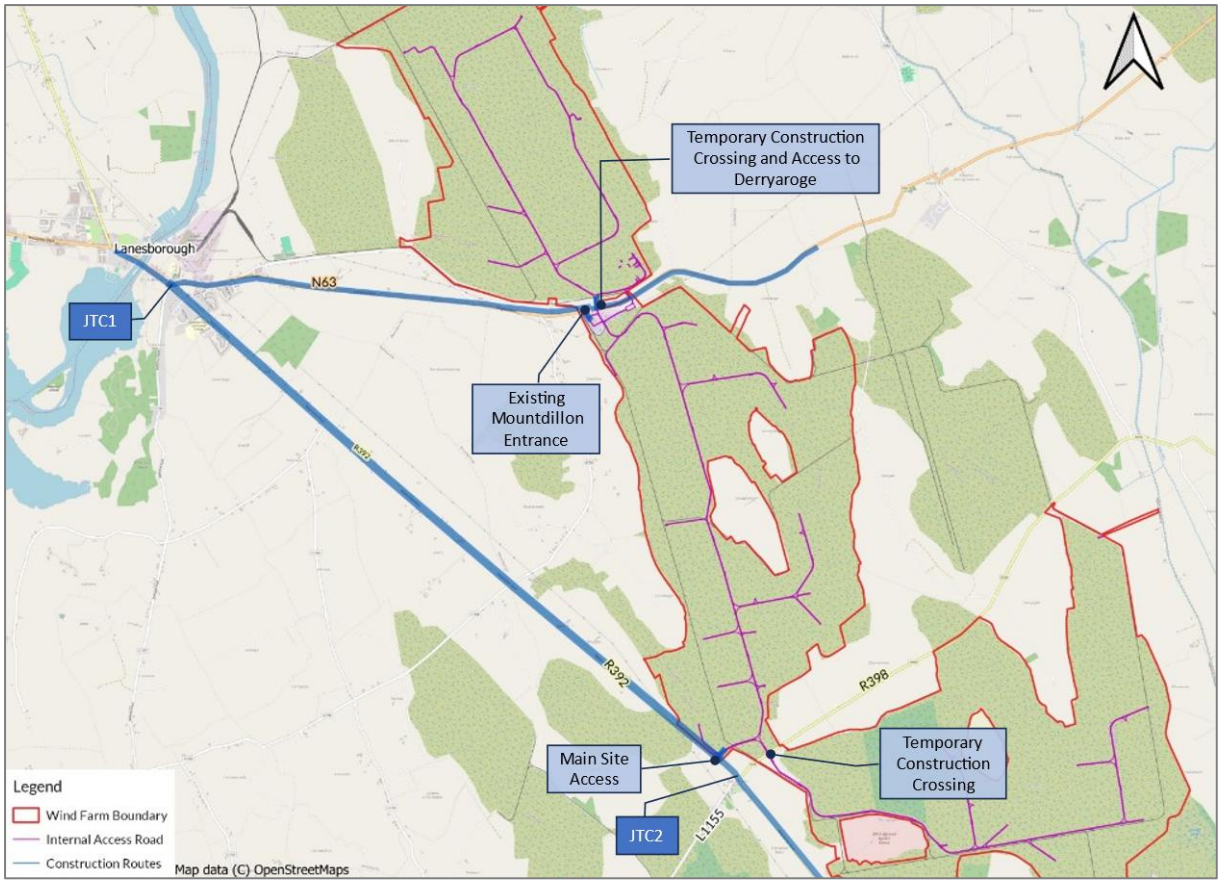


Figure 3-3 Construction Haul Route

3.7.2 Construction Traffic Calculations

The construction traffic has been developed based on the site layout, the construction materials required, the associated construction vehicle capacities, the construction programme, and the construction hours for the proposed development. Table 3-2 presents the construction traffic volumes per month for the proposed development.

The first phase of the civil works will include site preparation and clearance, the development of temporary construction compounds, and associated fencing. The next phase will include widening existing internal access tracks and building new internal site access roads to facilitate the construction of the substation base, the opening of borrow pits, and access for the operation of peat deposition areas.

The delivery of the materials for the hardstanding areas (i.e., parking, substation, lay-down areas for turbine components), blinding, and arrival to the site will occur next in the programme. The concrete pours for the foundation at the substations and turbine locations are sequenced next. The substation construction and associated electrical works, including cable laying, will overlap with the hardstanding and foundation works.

Prior to the final stage of commissioning the substation and turbines, the turbine components will be delivered to the site and erected. In parallel with these activities, backfilling and landscaping work will be undertaken.

As the construction activities progress inward from the site, various phases will become active and will overlap with each other in different areas within the site at different phases of the construction programme.

Table 3-2 shows the monthly construction HVs assigned to their corresponding activity in the construction programme.

The largest traffic volume effect is associated with the haulage of the materials for the combined construction activities for Month 3 of the proposed construction programme. Key deliveries during this period are aggregate and stone. The internal site access roads have been designed to utilise existing access tracks where feasible, reducing the volume of materials required for importation to the proposed wind farm site.

The second largest volume traffic effect is associated with the concrete pours for the turbine foundations. Other scheduled construction activities, per the proposed construction program will continue during these concrete pours, but only essential deliveries will be scheduled to occur on the same days as the concrete pours. To mitigate this effect, liaison with local authorities and the community in advance of the foundation pours will occur as well as minimising other works/deliveries as noted.

To mitigate the impact of the construction traffic on the road network and surrounding environment, during the days for the concrete pours all other construction HVs will be limited to essential deliveries and programmed to occur on other days of the construction programme.

Construction activities will be carried out during normal daytime working hours (i.e., weekdays 08:00 hrs – 20:00 hrs and Saturday 08:00 hrs – 13:00 hrs). However, to ensure that optimal use is made of good weather period or at critical periods within the programme (e.g., concrete pours) or to accommodate delivery of large turbine component along public routes it could be necessary on occasion to work outside of these hours. Any such out of hours working will be agreed in advance with the Local Authority.

The number of construction staff will vary dependant on the phase of the construction activities. At the peak construction, a maximum of 120 personnel is estimated. A reduction in construction staff on site is expected when the construction activities are more technical and less labour intensive. During average activities is expected 100 personnel onsite.

On the traffic assessment, it was assumed that 10 construction staff will commute to work per light vehicle (LV) and others will arrive onsite by minibus at a maximum occupancy of 15 staff per vehicle (HV), resulting in 8 HVs per day at the peak activity and 6 HVs per day during average construction phase. It was assumed that construction staff will arrive in the morning and depart in the afternoon.

Table 3-2 HV Monthly Construction Traffic Volumes (excluding Concrete Pours)

	HV Volumes (External Movements Only): Total Per Month (1 Way Movements) Month Number																							
Task Description	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**Total**
Tree Felling		15	30	25	10																				80
Entrance / Site Access Track to substation	532																								532
Passing Bays/layby	25																								25
Compound Setup	369																								369
Substation Platform		1,687	1,687	843																					4,217
Battery Storage / EBOP Compound					1,383																				1,383
Site Entrance Surface Dressing					3																				3
Site Access Track Capping													399	267	267	207	206								1,346
Foundation Blinding										49	98	98	74	98	98	25									540
Foundation reinforcement										6	12	12	9	12	12	3									66
Foundation Concrete										190	380	380	285	380	380	95									2,090
Foundation Backfill											310	310	310	155											1,085
Ducting											5	18	10	10	9	4	4								60
Drainage						2	6	6	6	3	3	3	2												31
Met Mast Foundation (Concrete)															2										2
Met Mast																6			6						12
Pump station upgrade																18									18
Amenity Track Capping																			122						122
Fencing & Reinstatement Works																			6	9	15	9	6		45
Pumping Station upgrade																26			6						32
Amenity capping																			23						23
Met Mast Foundation																			2						2
Total Monthly One Way Movements	926	1,702	1,717	868	1,396	2	6	6	6	248	808	821	1,089	922	768	384	210	0	165	9	15	9	6	0	12,083
Total Monthly Two Way Movements [Two Way Movement being HV in and then HV out]	1,852	3,404	3,434	1,736	2,792	4	12	12	12	496	1,616	1,642	2,178	1,844	1,536	768	420	0	330	18	30	18	12	0	
Total Monthly One Way Movements - Excluding Concrete Day	926	1,702	1,717	868	1,396	2	6	6	6	58	428	441	804	542	388	289	210	0	165	9	15	9	6	0	
Total Monthly Two Way Movements - Excluding Concrete Day [Two Way Movement being HV in and then HV out]	1,852	3,404	3,434	1,736	2,792	4	12	12	12	116	856	882	1,608	1,084	776	578	420	0	330	18	30	18	12	0	
Average HV Two Way Movements - Excluding Concreting Day	869	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833	

Considering 5.5 day working day per week

Peak HVs Two Way per day	156	Staff Minibus (one-way)	8	Total HVs (two way) per day	**172**
Average HVs Two Way per day	39		6		**51**

Considering 12 hours working per day

Peak HVs Two Way per peak hour	13
Average HVs Two Way per peak hour	4

Concreting day - HVs per turbine per day (one way)	95
Concreting day - HVs per turbine per day (two way)	190

Staff Level - Peak	120
Staff Level - Average	100
Assuming max of 15 staff per mini bus	
Mini bus - Peak per day [one way]	8
LVs - Peak per day [one way]	10
Mini bus - Average per day [one way]	6
LVs - Average per day [one way]	10

Notes:

(1) All construction deliveries (excl. concrete pours) have been averaged over the Monday-Friday and half day Saturday working week.

(2) The above does not assume any materials are obtained from the Borrow Pits onsite.

(3) Subbase material and concrete are assumed to be sourced locally.

- Concrete pours for each turbine foundation will occur on 1 day as required by the construction methodology.

(4) This construction traffic table is a simplified traffic volume table against programme and a more detailed delivery schedule will be developed by the appointed contractor.

(5) The turbine deliveries will occur during night-time with traffic management and garda escort. As this traffic will be isolated from other daily traffic movements, it has not been added into the daily traffic volumes in this table.

4. TRIP GENERATION AND DISTRIBUTION

4.1 SEASONAL ADJUSTMENT

In order to undertake an analysis of the key junction, it is sometimes necessary to apply a correction factor to convert the traffic count data into seasonally adjusted traffic flows to take account of the seasonal variation that is experienced with traffic volumes. A comparison was undertaken between the TII traffic count information for the day of the survey in November 2022 and the annual average daily traffic (AADT) for the previous year. The traffic count on the day of the survey was similar to the average for the year; therefore, a seasonal adjustment was not required.

4.2 TRAFFIC GROWTH

The TII Project Appraisal Guidelines for National Roads Unit 5.3 - Travel Demand Projections presents annual growth rates for County Longford and County Roscommon.

A Link-based Central Sensitivity Growth Rates were applied to 2022 traffic flows to estimate traffic flows for the future assessment year. Table 4-1 shows the growth rates for both counties, split into Light Vehicles (LV) and Heavy Vehicles (HV) for the construction year analysed (2028). The derived growth factors were applied to 2022 traffic flows to determine background traffic flows for the assessment year.

Table 4-1 Growth Factors for Light Vehicle (LV) and Heavy Vehicle (HV)

Central Growth Rates – 2016 - 2030		
County	LV	HV
Longford	1.0134	1.0313
Roscommon	1.0107	1.0284

4.3 TRIP GENERATION

As outlined in section 3.7, there are two types of haul routes for the proposed development. The Construction Haul Route and the AIL Haul Route. For the junction assessment, only the Construction Haul Route is assessed as the AIL will be delivered when traffic volumes are low, at night-time and under Garda escort. Therefore, Junction 5 was not assessed in this report as no construction haul routes pass through it.

The traffic associated with the construction of the proposed development on the Construction Haul Route is assessed under two scenarios, as a peak and an average traffic generation.

Peak: The daily peak traffic generation will be associated with the 79HVs arriving to the site with construction material, 79 HVs departing the site, and construction workers commuting to the site in 8 minibuses (HVs) and 10 LVs

Average: The daily average traffic generation will be associated with the 24 HVs arriving to the site with construction material, 24 HVs departing the site, and construction workers commuting to the site in 6 minibuses (HVs) and 10 LVs over the 2-year construction programme.

The number of HVs required to arrive to the site with construction material was split in the working hours. And it was assumed that construction staff will arrive at the morning peak and depart at the afternoon peak, resulting in the traffic distribution presented in Table 4-2.

Table 4-2 Traffic Volumes During the Construction Phase – Peak and Average Works

Trips	AM Peak (8:30 – 9:30)		PM Peak (16:45 – 17:45)	
	Arrivals	Departures	Arrivals	Departures
Peak construction phase				
LV	10	0	0	10
HV	15	7	7	15
Average construction phase				
LV	10	0	0	10
HV	8	2	2	8

The following assumptions have been made in the development of the construction phase's generated traffic:

- It is assumed that 10 construction staff will commute to work per LV, and others will arrive at the site by minibus at a maximum occupancy of 15 staff per vehicle (HV),
- Construction staff will arrive during the AM peak hour and depart during the PM peak hour,
- All HVs enter full and depart empty,
- HV Daily movements are split within construction working hours, and

- A worst-case scenario of HVs arriving and departing during AM peak and PM peak hours.

4.4 TRIP DISTRIBUTION

4.4.1 Trip Distribution – Do-Nothing Scenario

With the results of the traffic survey, it was possible to determine origin-destination matrices during morning and evening peak hours at Junctions 1, 2, 3 and 4.

Growth factors for light and heavy vehicles presented in Table 3-1 were applied in order to estimate traffic distribution on future assessment year. Figures 4-1 to 4-4 below illustrate these traffic flows. Origin-Destination matrices are provided in Appendix A.

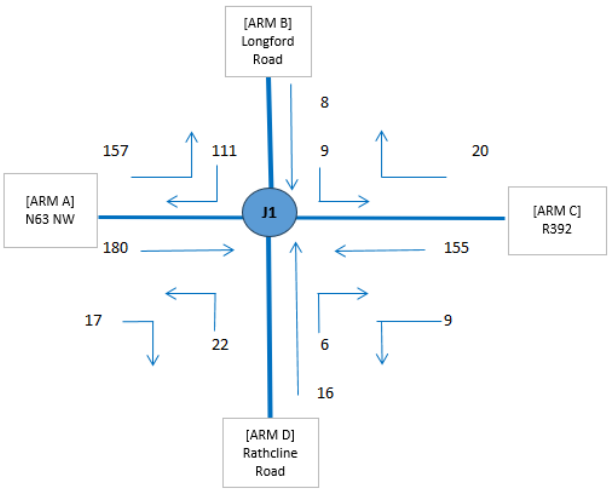
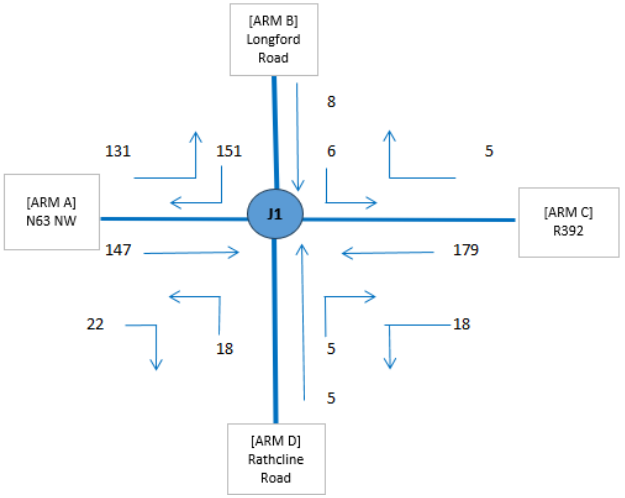
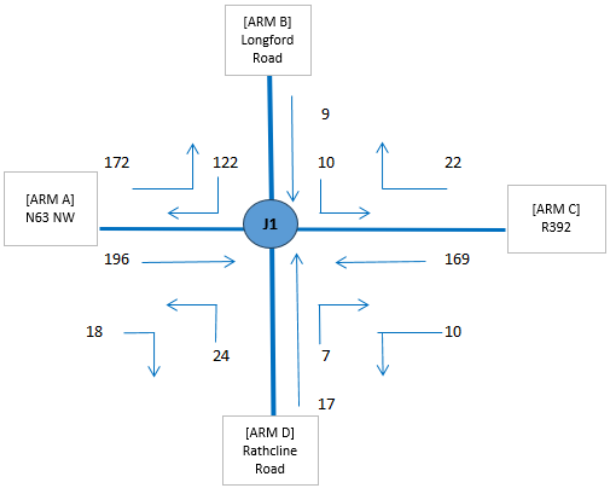
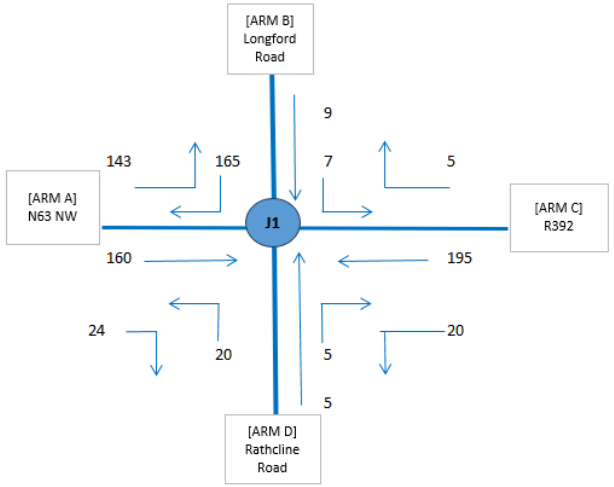
Assessment Year/ Peak Period	AM	PM
2022		
2027		

Figure 4-1 Traffic Distributions at Junction 1 (without Development)

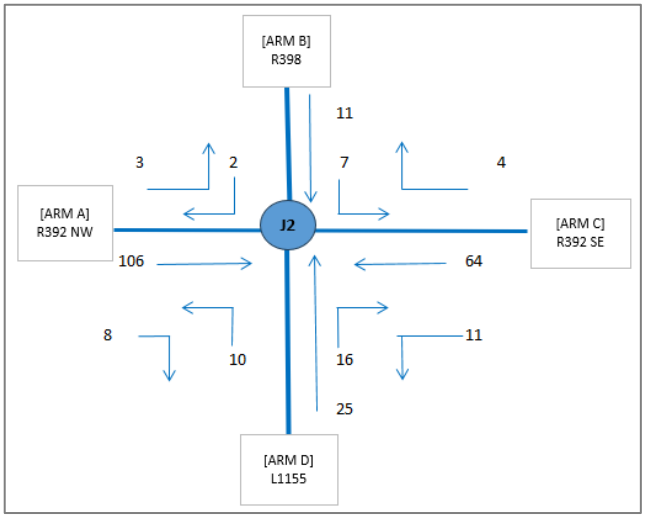
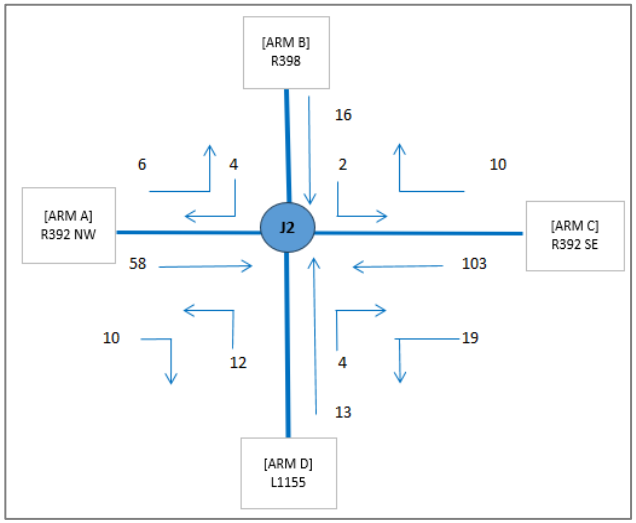
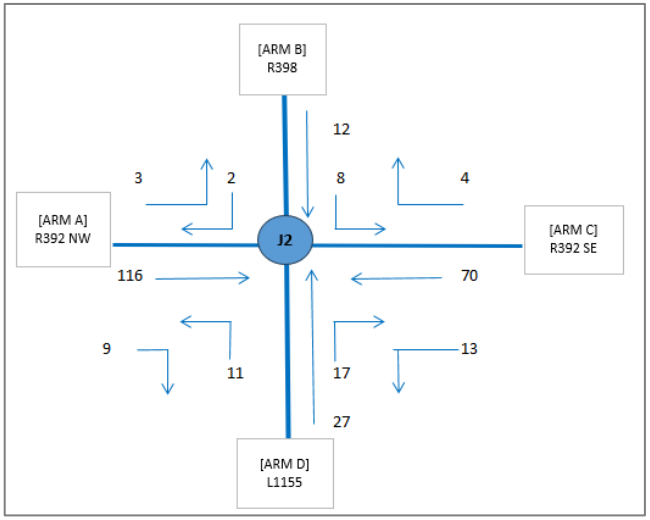
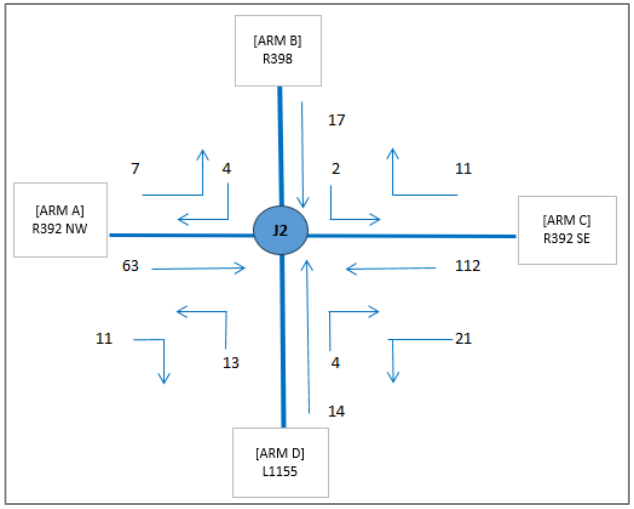
Assessment Year/ Peak Period	AM	PM
2022		
2027		

Figure 4-2 Traffic Distributions at Junction 2 (without Development)

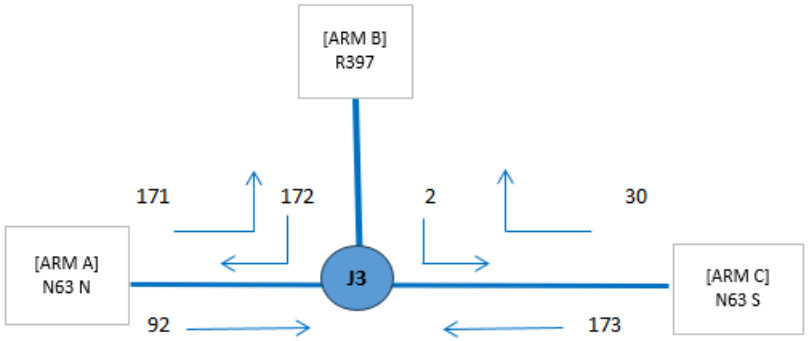
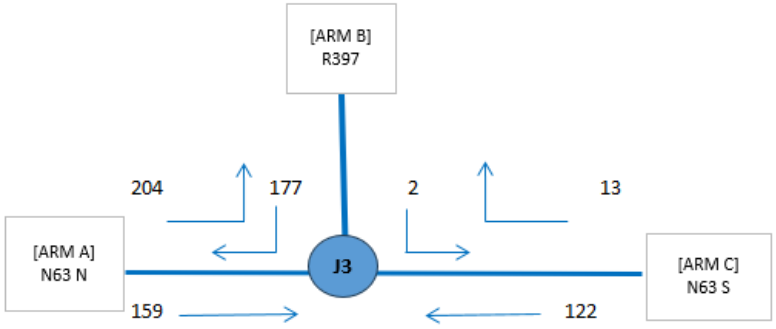
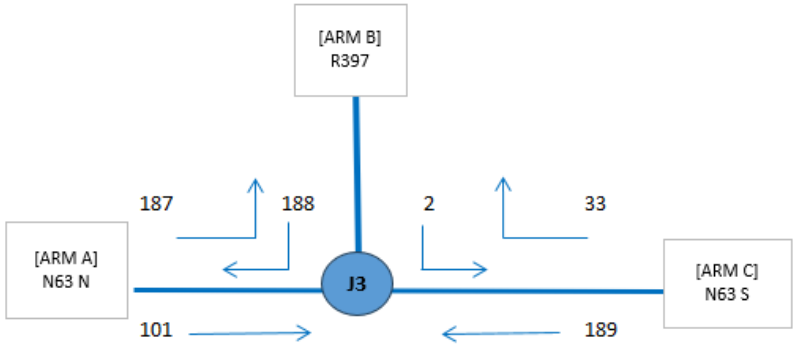
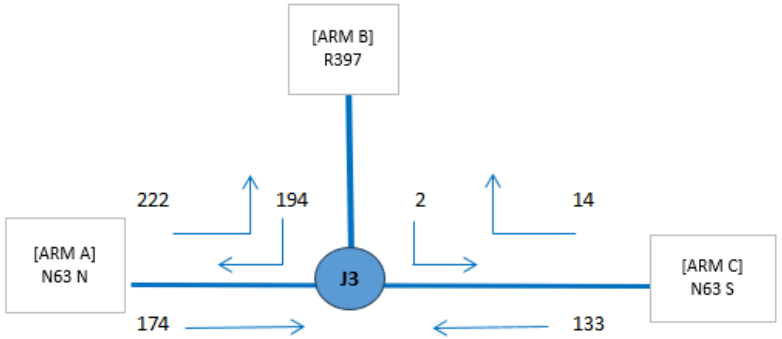
Assessment Year/ Peak Period	AM	PM
2022		
2027		

Figure 4-3 Traffic Distributions at Junction 3 (without Development)

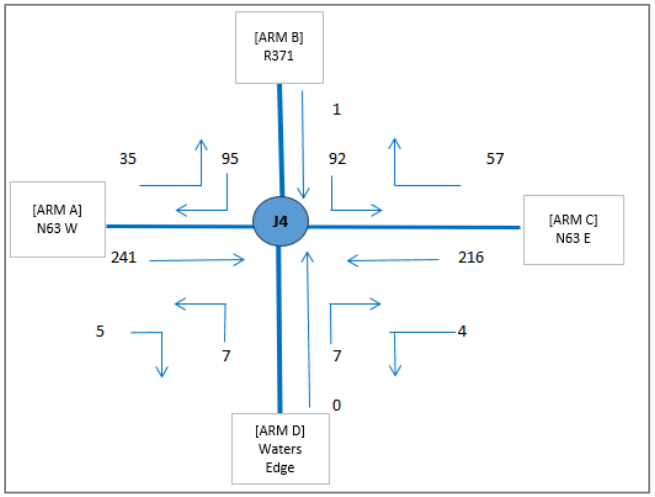
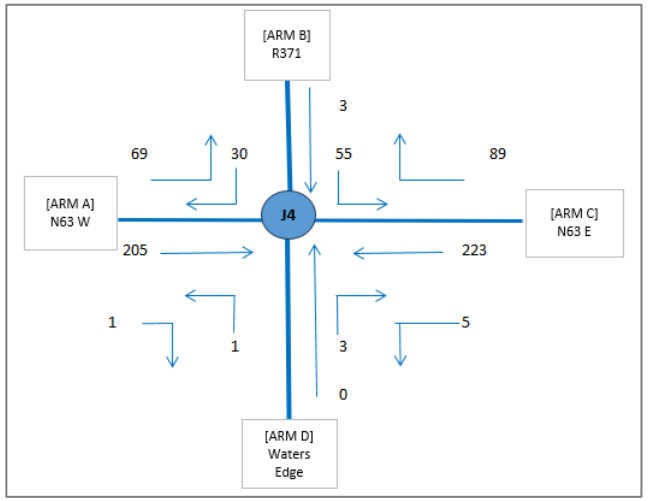
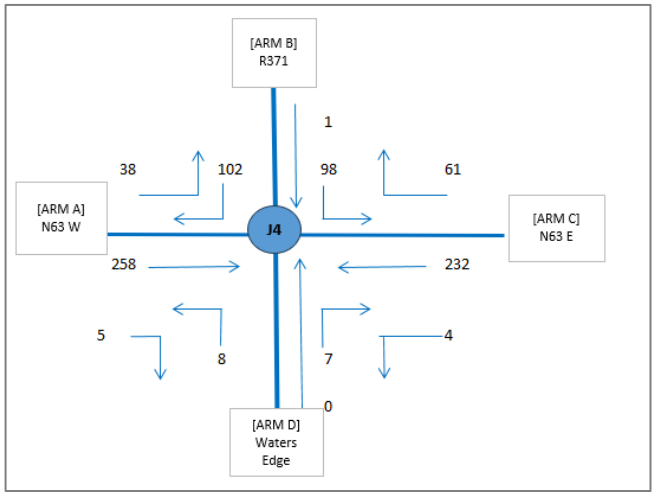
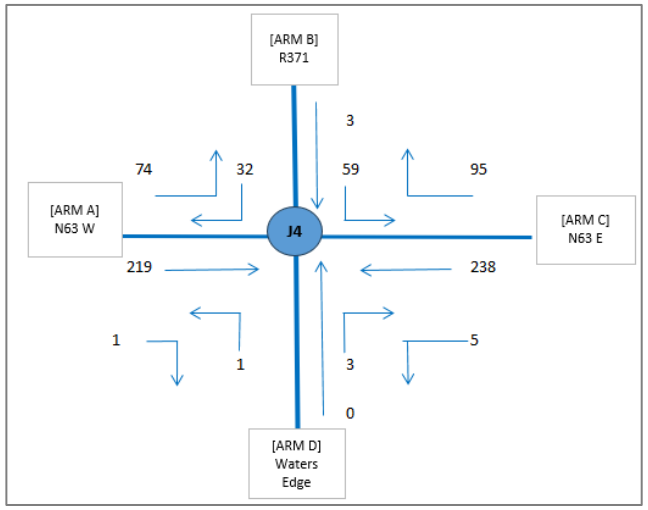
Assessment Year/ Peak Period	AM	PM
2022		
2027		

Figure 4-4 Traffic Distributions at Junction 4 (without Development)

4.4.2 *Trip Distribution – With Proposed Development*

As outlined in the Trip Generation section above, there are two different assessment scenarios. **Peak Traffic** and **Average Traffic**. These assessments are based on the materials being delivered (i.e., HV movements) and construction workers commuting to the site. This traffic will reach the site using its site entrances located on the National Road N63 and Regional Road R392.

The traffic distribution proposed by the client assumes:

- 90 % of construction traffic will pass at Junctions 1 and 4, located North-western of the site,
- 5% will pass at Junction 2, located South-western of the site, and
- 5% will pass at Junction 3, located North-eastern of the site.

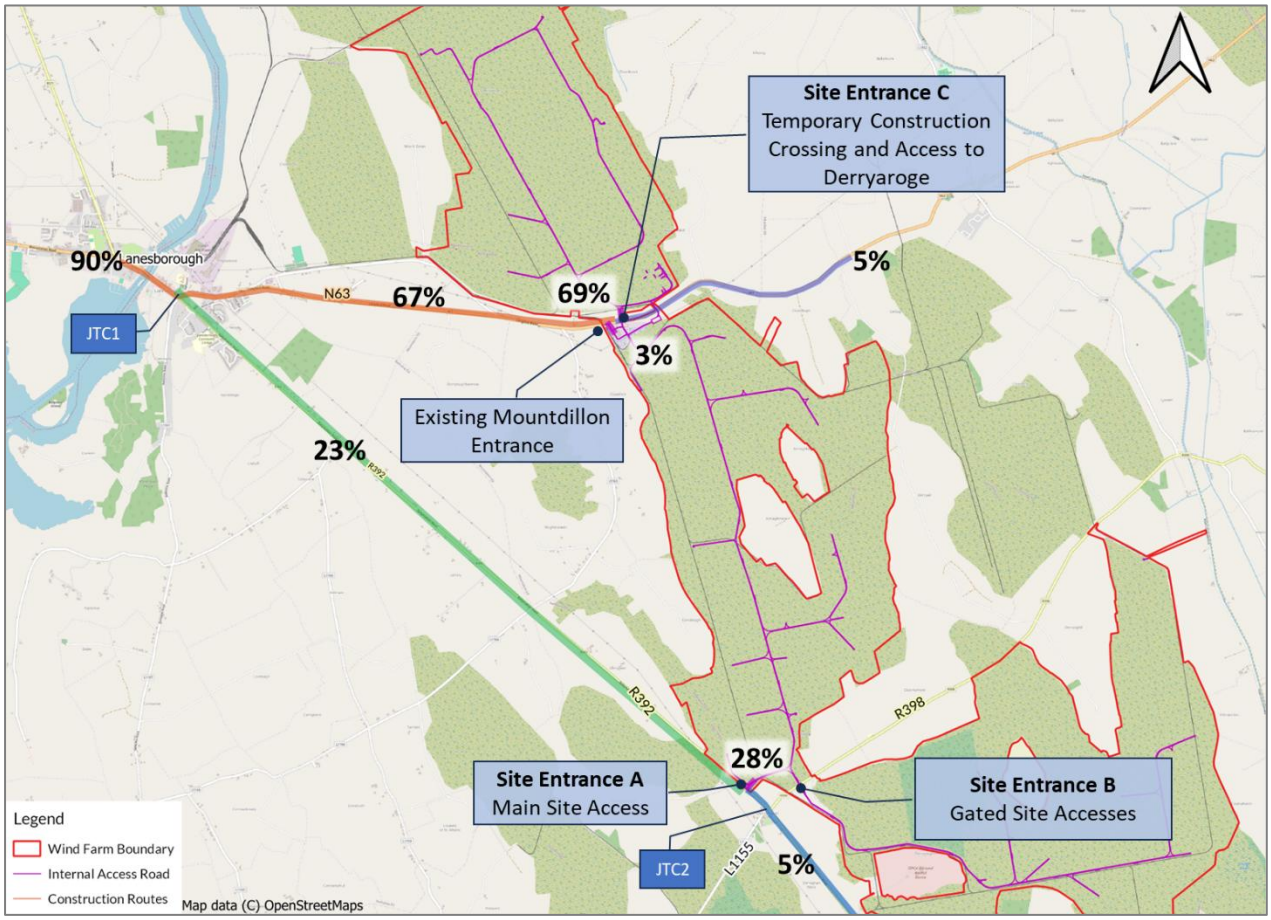


Figure 4-5 Construction Haul Route and Percentage HV Traffic Distribution

The expected traffic generated by the proposed development was added to the baseflow traffic flows, and the different scenarios were analysed, including the peak and average construction phases with and without the proposed development. Origin-destination matrices are provided in Appendix A.

5. TRAFFIC ANALYSIS

5.1 JUNCTION ANALYSIS

Junctions 1, 2, 3 and 4 have been analysed using the Transport Research Laboratory (TRL) computer program JUNCTION 10 PICADY, a widely accepted tool used for the analysis of priority junctions.

The key parameters examined in the results of the analysis are the Ratio of Flow to Capacity (RFC - desirable value for PICADY should be no greater than 0.85 – values over 1.00 indicate the approach arm is over capacity), the maximum queue length on any approach to the junction, and the average delay for each vehicle passing through the junction during the modelled period.

PICADY requires the following input data:

- Basic modelling parameters (usually peak hour traffic counts synthesised over a 90-minute model period),
- Geometric parameters (including lane numbers & widths, visibility, storage provision, etc.),
- Traffic demand data (usually peak hour origin/destination matrix with composition of heavy vehicles input).

For the TTA, the vehicle types have been segregated into light vehicles (LV) and heavy vehicles (HV) prior to input. Traffic volumes input into PICADY were in vehicles and, accordingly, commercial vehicle composition was set to the percentage of that arm.

The performance of the 4 junctions have been analysed for the critical AM peak hour (08:30 hrs - 09:30 hrs) and PM peak hour (16:45 hrs - 17:45 hrs). These analyses were carried out for the year 2022 and the construction peak activity year 2028.

5.2 ANALYSIS RESULTS

A summary of the analyses results for the 4 junctions for the AM and PM peak hours are provided below in Table 5-1 to Table 5-4 during the following scenarios:

- Baseflow 2022;
- Baseflow 2028;
- Baseflow 2028 plus peak construction generated traffic; and,
- Baseflow 2028 plus average construction generated traffic.

Full outputs from JUNCTION 10 PICADY are included in Appendix B.

5.2.1 Junction 1: N63 / R392 / Rathcline Road, Co. Longford, Crossroad Junction

Junction 1 is a crossroad located in Laneborough, County Longford, with Arm A representing N63 (W), arm B representing N63 (E), arm C representing R392 and arm D representing Rathcline Road as illustrated in Figure 5-1, and summary of traffic modelling results in Table 5-1.

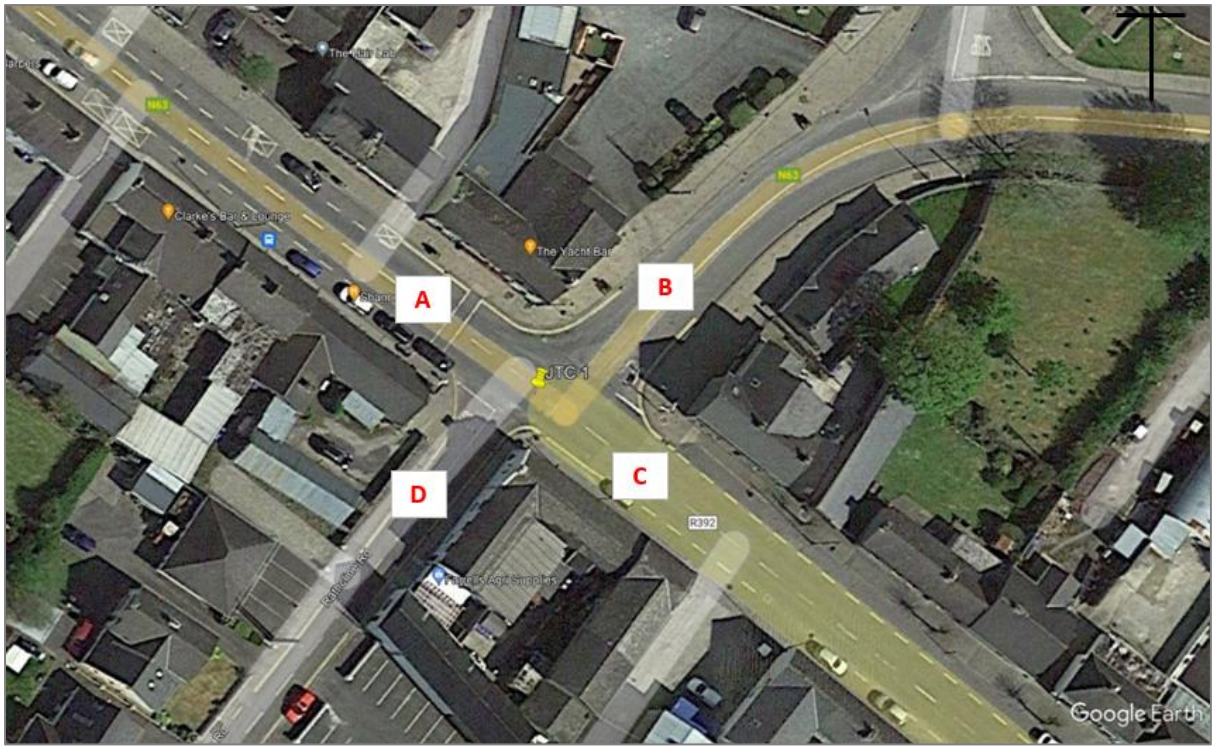


Figure 5-1 Junction 1 (Source: Google Earth)

Table 5-1 Summary Traffic Analysis Results – Junction 1

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)
	2022 Baseflow							
Stream B-ACD	0.6	14.25	0.36	3.56	0.7	14.2	0.42	3.93
Stream A-BCD	0	5.55	0.03		0	5.61	0.04	
Stream D-ABC	0.1	9.39	0.11		0.1	8.73	0.07	
Stream C-ABD	0	6.45	0.04		0	5.87	0.01	
	2028 Baseflow							
Stream B-ACD	0.7	15.94	0.41	3.95	0.9	15.85	0.47	4.33
Stream A-BCD	0	5.59	0.03		0	5.66	0.04	
Stream D-ABC	0.1	9.69	0.12		0.1	8.83	0.07	
Stream C-ABD	0	6.63	0.04		0	5.96	0.01	
	2028 Baseflow with Proposed Development - Peak Construction Phase							
Stream B-ACD	0.8	17.31	0.43	4.19	1.1	18.88	0.53	5.34
Stream A-BCD	0	5.6	0.03		0	5.68	0.04	
Stream D-ABC	0.1	9.78	0.13		0.1	8.9	0.08	
Stream C-ABD	0	6.73	0.04		0	5.99	0.01	
	2028 Baseflow with Proposed Development - Average Construction Phase							
Stream B-ACD	0.7	16.55	0.42	4.02	1	17.39	0.5	4.86
Stream A-BCD	0	5.59	0.03		0	5.67	0.04	

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)
Stream D-ABC	0.1	9.74	0.13		0.1	8.88	0.08	
Stream C-ABD	0	6.7	0.04		0	5.97	0.01	

Table 5-1 is the summary of Junction 1 performance analysis and indicates that the junction will operate within capacity during construction stage. The summary shows a maximum RFC of 0.43 during AM peak and 0.53 during PM peak, which is well below the maximum desired RFC of 0.85. The summary indicates that it is expected a queue less than 1 vehicle and a maximum delay of 17.3 seconds during the peak construction phase at the AM peak and 18.9 seconds during PM peak.

5.2.2 Junction 2: R392 / R398 / L1155, Co. Longford, Staggered Junction

Junction 2 is a staggered junction located in County Longford to the south of the proposed main site access, with Arm A representing R392 (NW), arm B representing R398, arm C representing R392 (SE) and arm D representing L1155 as illustrated in Figure 5-2, and summary of traffic modelling results in Table 5-2.

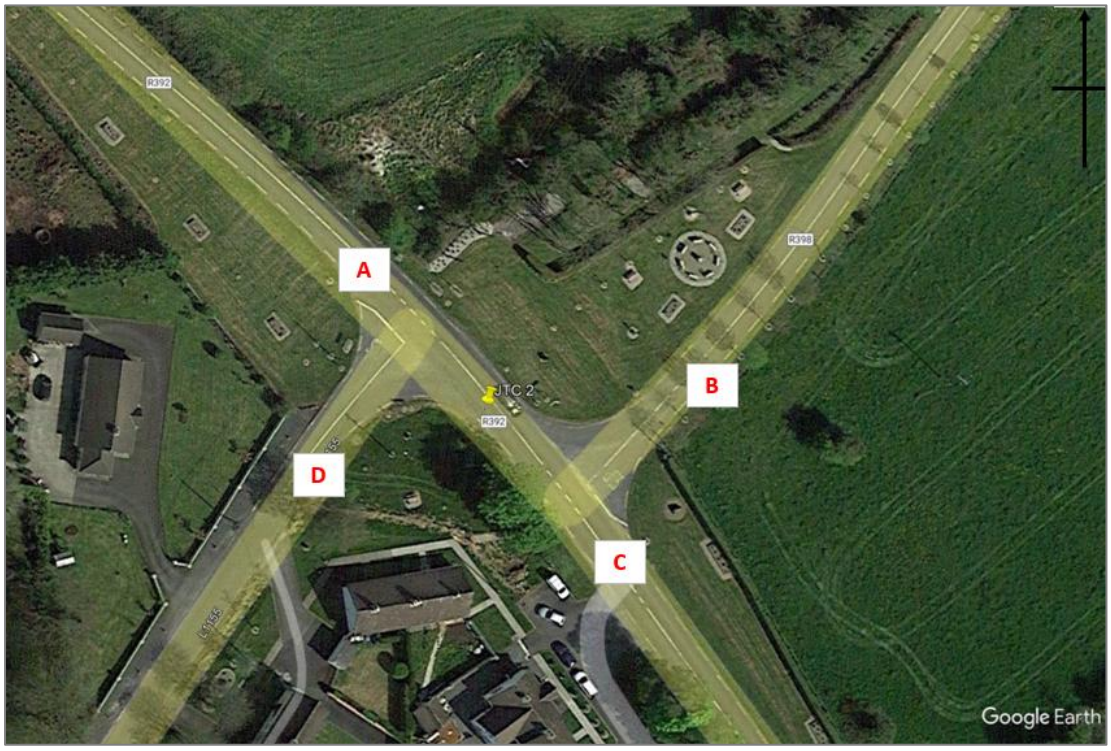


Figure 5-2 Junction 2 (Source: Google Earth)

Table 5-2 Summary Traffic Analysis Results – Junction 2

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)
	2022 Baseflow							
Stream B-ACD	0	5.75	0.03	2.1	0	5.66	0.04	1.76
Stream A-BCD	0	5.97	0.01		0	5.42	0.02	
Stream D-ABC	0.1	7.84	0.11		0.1	7.58	0.06	
Stream C-ABD	0	5.41	0.01		0	5.27	0.02	
	2028 Baseflow							
Stream B-ACD	0	5.85	0.04	2.12	0	5.72	0.04	1.76
Stream A-BCD	0	6.06	0.02		0	5.46	0.02	
Stream D-ABC	0.1	8.01	0.12		0.1	7.7	0.07	
Stream C-ABD	0	5.44	0.01		0	5.29	0.02	
	2028 Baseflow with Proposed Development - Peak Construction Phase							
Stream B-ACD	0	5.86	0.04	2.08	0	5.74	0.04	1.72
Stream A-BCD	0	6.07	0.02		0	5.46	0.02	
Stream D-ABC	0.1	8.04	0.12		0.1	7.72	0.07	
Stream C-ABD	0	5.44	0.01		0	5.3	0.02	
	2028 Baseflow with Proposed Development - Average Construction Phase							
Stream B-ACD	0	5.85	0.04	2.1	0	5.73	0.04	1.75
Stream A-BCD	0	6.07	0.02		0	5.46	0.02	
Stream D-ABC	0.1	8.02	0.12		0.1	7.71	0.07	
Stream C-ABD	0	5.44	0.01		0	5.29	0.02	

Table 5-2 is the summary of Junction 2 performance analysis and indicates that the junction will operate within capacity during construction stage. The summary shows a maximum RFC of 0.12 during AM peak and 0.07 during PM peak, which is well below the maximum desired RFC of 0.85. The summary indicates that it is expected a queue less than 1 vehicle and a maximum delay of 8.0 seconds during the peak construction phase at the AM peak and 7.7 seconds during PM peak.

5.2.3 Junction 3: N63 / R397 / N63, Co. Longford, T-Junction

Junction 3 is a T-junction located in County Longford to the south of the proposed main site access, with Arm A representing N63 (N), arm B representing R397 and arm C representing N63 (S) as illustrated in Figure 5-3, and summary of traffic modelling results in Table 5-3 Summary Traffic Analysis Results – Junction 3.

Figure 5-3 Junction 3 (Source: Google Earth)

Table 5-3 Summary Traffic Analysis Results – Junction 3

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)
	2022 Baseflow							
Stream B-C	0	6.27	0	4.06	0	6.53	0	4.18
Stream B-A	0.7	14.11	0.43		0.8	15.16	0.45	
Stream C-B	0.1	6.25	0.05		0	6.14	0.02	
	2028 Baseflow							
Stream B-C	0	6.41	0	4.49	0	6.72	0	4.82
Stream B-A	0.9	15.73	0.48		1	17.46	0.51	
Stream C-B	0.1	6.44	0.06		0	6.27	0.03	
	2028 Baseflow with Proposed Development - Peak Construction Phase							
Stream B-C	0	6.43	0	4.48	0	6.73	0	4.81
Stream B-A	0.9	15.86	0.48		1	17.57	0.51	
Stream C-B	0.1	6.46	0.06		0	6.28	0.03	
	2028 Baseflow with Proposed Development - Average Construction Phase							
Stream B-C	0	6.42	0	4.49	0	6.72	0	4.82
Stream B-A	0.9	15.79	0.48		1	17.51	0.51	
Stream C-B	0.1	6.45	0.06		0	6.27	0.03	

Table 5-3 is the summary of Junction 3 performance analysis and indicates that the junction will operate within capacity during construction stage. The summary shows a maximum RFC of 0.48

during AM peak and 0.51 during PM peak, which is well below the maximum desired RFC of 0.85. The summary indicates that it is expected a queue less than 1 vehicle and a maximum delay of 15.8 seconds during the peak construction phase at the AM peak and 17.5 seconds during PM peak.

5.2.4 Junction 4: N63 / R371 / N63 / Waters Edge, Co. Roscommon, Staggered Junction

Junction 4 is a staggered junction located in County Roscommon to the west side of Laneborough, with Arm A representing N63 (W), arm B representing R371, arm C representing N63 (E) and arm D representing Waters Edge as illustrated in Figure 5-4, and summary of traffic modelling results in Table 5-3 Summary Traffic Analysis Results – Junction 3.

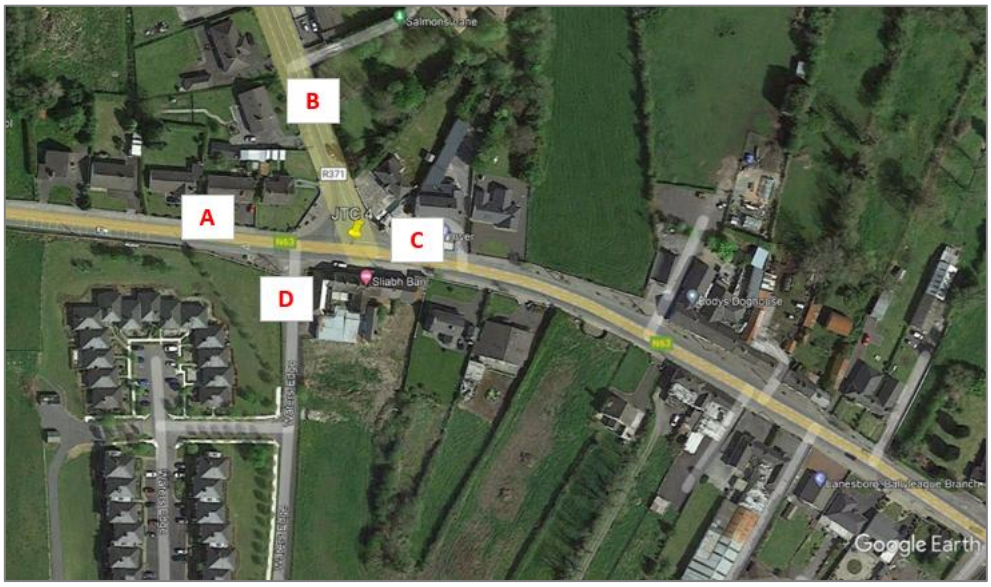


Figure 5-4 Junction 4 (Source: Google Earth)

Table 5-4 Summary Traffic Analysis Results – Junction 4

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)
	2022 Baseflow							
Stream B-ACD	0.8	14.14	0.45	4.09	0.3	9.38	0.2	2.05
Stream A-BCD	0	6.66	0.01		0	6.43	0	
Stream D-ABC	0	9.79	0.04		0	0	0	
Stream C-ABD	0.1	6.36	0.1		0.2	6.3	0.15	
	2028 Baseflow							
Stream B-ACD	0.9	15.59	0.49	4.42	0.3	9.71	0.22	2.11
Stream A-BCD	0	6.75	0.01		0	6.48	0	
Stream D-ABC	0	10.03	0.04		0	0	0	
Stream C-ABD	0.1	6.5	0.11		0.2	6.39	0.17	
	2028 Baseflow with Proposed Development - Peak Construction Phase							
Stream B-ACD	1	16.57	0.51	4.62	0.3	10.06	0.23	2.18

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)
Stream A-BCD	0	6.77	0.01		0	6.55	0	
Stream D-ABC	0	10.13	0.04		0	0	0	
Stream C-ABD	0.1	6.76	0.12		0.2	6.55	0.18	
	2028 Baseflow with Proposed Development - Average Construction Phase							
Stream B-ACD	1	16.01	0.5		0.3	9.79	0.22	
Stream A-BCD	0	6.76	0.01	4.45	0	6.53	0	2.08
Stream D-ABC	0	10.09	0.04		0	0	0	
Stream C-ABD	0.1	6.55	0.11		0.2	6.41	0.17	

Table 5-4 is the summary of Junction 4 performance analysis and indicates that the junction will operate within capacity during construction stage. The summary shows a maximum RFC of 0.51 during AM peak and 0.23 during PM peak, which is well below the maximum desired RFC of 0.85. The summary indicates that it is expected a queue less than 1 vehicle and a maximum delay of 17 seconds during the peak construction phase at the AM peak and 10 seconds during PM peak.

6. OTHER ROAD ISSUES

6.1 ROAD SAFETY AUDIT

The staggered junction (site access C northern arm and the existing Mountdillon access) on the national road is designed in accordance with the TII Geometric Design of Junctions - DN-GEO-03060 (May 2023) and will ensure visibility splays of 3.0 x 215 metres on N63 are met.

It is noted the main access (site access A & B) is within an 80 km/h zone on the regional roads and therefore visibility splays of 3.0 x 160 metres are met.

A Stage 1 Road Safety Audit was carried out on the proposed development design and its recommendations were incorporated into the final scheme design. Road Safety Audit report is provided in Chapter 15 (Traffic & Transportation – appendix 15.4.

6.2 PARKING PROVISION

The proposed development will provide car parking facilities as follows:

- Construction Phase:
  - 4 no. Construction Compounds are proposed:
    - 1 no. Type 1 with 45 no. parking spaces in total (4 no. electric spaces and 3 no. disabled spaces)
    - 3 no. Type 2 with 20 no. parking spaces in total
  - All Construction Compounds have been provided with bicycle parking.

- Operation Phase:
  - 3 no. amenity car parks are proposed:
    - 19 no. parking spaces in total (3 no. disabled spaces and 1 no bus parking space).

6.3 SWEPT PATH ANALYSIS

A Vehicle Swept Path Analysis (Refer to Appendix 15-3) has been completed for the proposed development. The purpose of the Swept Path Analysis is to identify and resolve potential issues and conflict points during the design stage. Details of this analysis on the final layout are shown on Drawings Number 11399-2051 and 11399-2057.

6.4 PEDESTRIANS AND CYCLISTS

During the construction phase, pedestrian facilities will be provided where required within the proposed development to facilitate safe pedestrian movements in accordance with the Health and Safety Plan. Once the proposed development construction phase has concluded, a total of approximately 18 km of site roads within the proposed wind farm site will provide permanent amenity access, including pedestrian and cyclist access.

6.5 PUBLIC TRANSPORT

There is no regular public transport service in operation in the immediate vicinity of the proposed wind farm site. Therefore, it is not expected that the staff working at the proposed wind farm site will utilise the bus services.

7. CONCLUSIONS

The 4 no. surveyed junctions along the proposed development haul route were analysed to ascertain the potential impact of the proposed development on the surrounding road network. The analysis indicates that there will be no queues and minimal delays during the peak hours for both peak and average construction stage generated traffic.

The junction assessments indicate 4 no. junctions are currently below the desirable capacity of 0.85 and will remain below capacity during the construction phase of the proposed development.

Appendix A ORIGIN/ DESTINATION MATRICES

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: JTC 1.j10
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Summary of junction performance

	AM						PM					
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS
	2022 Baseflow											
Stream B-ACD	0.6	14.25	0.36	B	3.56	A	0.7	14.20	0.42	B	3.93	A
Stream A-BCD	0.0	5.55	0.03	A			0.0	5.61	0.04	A		
Stream D-ABC	0.1	9.39	0.11	A			0.1	8.73	0.07	A		
Stream C-ABD	0.0	6.45	0.04	A			0.0	5.87	0.01	A		
	2028 Baseflow											
Stream B-ACD	0.7	15.94	0.41	C	3.95	A	0.9	15.85	0.47	C	4.33	A
Stream A-BCD	0.0	5.59	0.03	A			0.0	5.66	0.04	A		
Stream D-ABC	0.1	9.69	0.12	A			0.1	8.83	0.07	A		
Stream C-ABD	0.0	6.63	0.04	A			0.0	5.96	0.01	A		
	2028 Baseflow with Proposed Development - Peak Construction Phase											
Stream B-ACD	0.8	17.31	0.43	C	4.19	A	1.1	18.88	0.53	C	5.34	A
Stream A-BCD	0.0	5.60	0.03	A			0.0	5.68	0.04	A		
Stream D-ABC	0.1	9.78	0.13	A			0.1	8.90	0.08	A		
Stream C-ABD	0.0	6.73	0.04	A			0.0	5.99	0.01	A		
	2028 Baseflow with Proposed Development - Average Construction Phase											
Stream B-ACD	0.7	16.55	0.42	C	4.02	A	1.0	17.39	0.50	C	4.86	A
Stream A-BCD	0.0	5.59	0.03	A			0.0	5.67	0.04	A		
Stream D-ABC	0.1	9.74	0.13	A			0.1	8.88	0.08	A		
Stream C-ABD	0.0	6.70	0.04	A			0.0	5.97	0.01	A		

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.

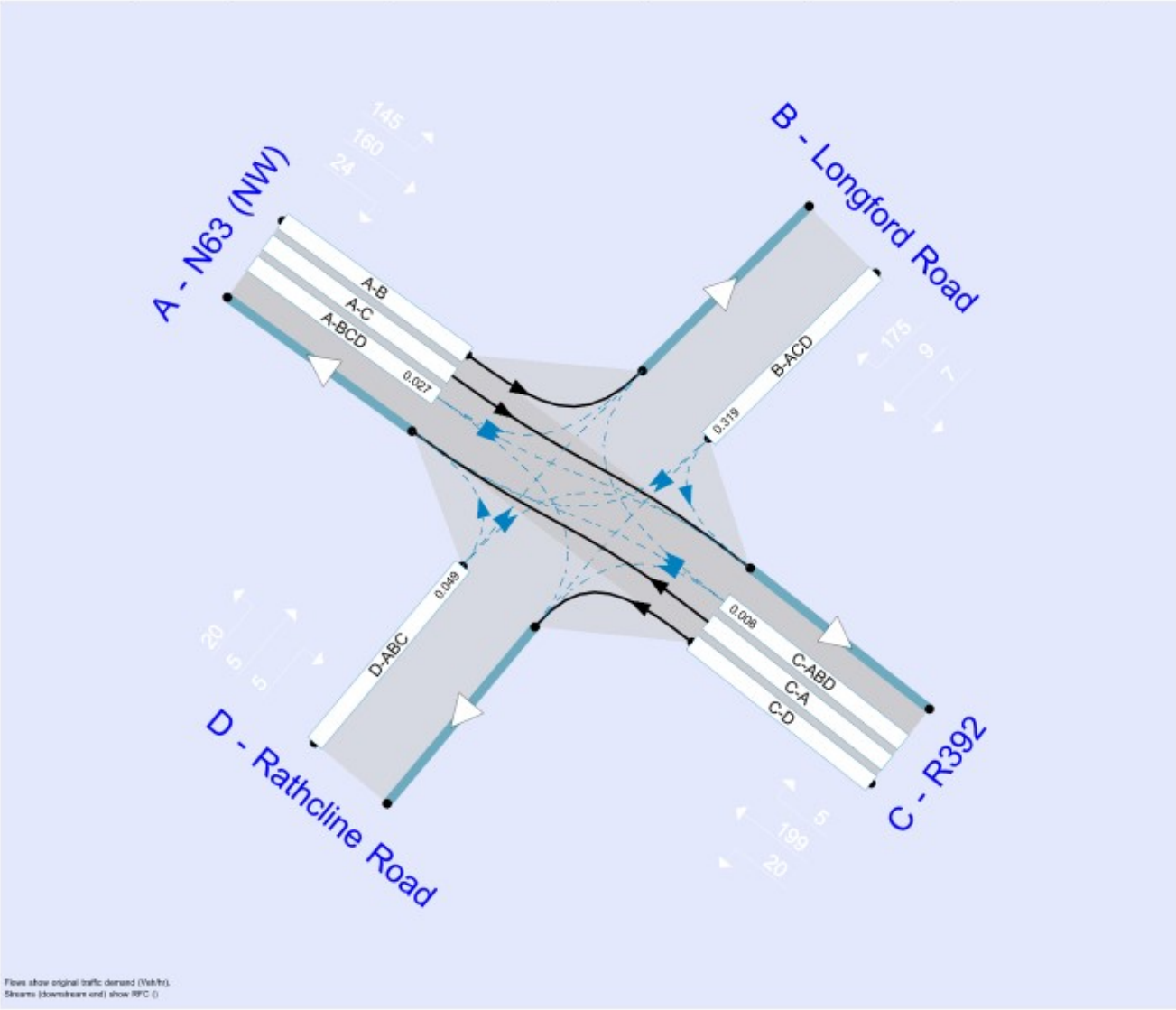
File summary

File Description

Title	Derryadd Wind Farm
Location	County Longford
Site number	
Date	30/11/2023
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	
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

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Baseflow	AM	ONE HOUR	08:15	09:45	15
D2	2028 Baseflow	AM	ONE HOUR	08:15	09:45	15
D3	2028 Baseflow with Proposed Development - Peak Construction Phase	AM	ONE HOUR	08:15	09:45	15
D4	2028 Baseflow with Proposed Development - Average Construction Phase	AM	ONE HOUR	08:15	09:45	15
D5	2022 Baseflow	PM	ONE HOUR	16:30	18:00	15
D6	2028 Baseflow	PM	ONE HOUR	16:30	18:00	15
D7	2028 Baseflow with Proposed Development - Peak Construction Phase	PM	ONE HOUR	16:30	18:00	15
D8	2028 Baseflow with Proposed Development - Average Construction Phase	PM	ONE HOUR	16:30	18:00	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Baseflow, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1		Crossroads	Two-way	Two-way	Two-way	Two-way		3.56	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.56	A

Arms

Arms

Arm	Name	Description	Arm type
A	N63 (NW)		Major
B	Longford Road		Minor
C	R392		Major
D	Rathcline Road		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A - N63 (NW)	6.40			250.0	✓	1.00
C - R392	6.40			240.0	✓	1.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Longford Road	One lane	3.90	30	35
D - Rathcline Road	One lane	2.20	25	19

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
A-D	719	-	-	-	-	-	-	0.274	0.391	0.274	-	-	-
B-A	550	0.098	0.249	0.249	-	-	-	0.157	0.355	-	0.249	0.249	0.124
B-C	704	0.106	0.268	-	-	-	-	-	-	-	-	-	-
B-D, nearside lane	550	0.098	0.249	0.249	-	-	-	0.157	0.355	0.157	-	-	-
B-D, offside lane	550	0.098	0.249	0.249	-	-	-	0.157	0.355	0.157	-	-	-
C-B	713	0.271	0.271	0.388	-	-	-	-	-	-	-	-	-
D-A	585	-	-	-	-	-	-	0.223	-	0.088	-	-	-
D-B, nearside lane	455	0.130	0.130	0.294	-	-	-	0.206	0.206	0.081	-	-	-
D-B, offside lane	455	0.130	0.130	0.294	-	-	-	0.206	0.206	0.081	-	-	-
D-C	455	-	0.130	0.294	0.103	0.206	0.206	0.206	0.206	0.081	-	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Baseflow	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (NW)		✓	354	100.000
B - Longford Road		✓	128	100.000
C - R392		✓	184	100.000
D - Rathcline Road		✓	44	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	157	180	17
	B - Longford Road	111	0	9	8
	C - R392	155	20	0	9
	D - Rathcline Road	22	16	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	6	3	0
	B - Longford Road	13	0	0	0
	C - R392	6	5	0	11
	D - Rathcline Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.36	14.25	0.6	B
A-BCD	0.03	5.55	0.0	A
A-B				
A-C				
D-ABC	0.11	9.39	0.1	A
C-ABD	0.04	6.45	0.0	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	96	428	0.225	95	0.3	10.789	B
A-BCD	13	681	0.019	13	0.0	5.384	A
A-B	118			118			
A-C	135			135			
D-ABC	33	458	0.072	33	0.1	8.461	A
C-ABD	15	609	0.025	15	0.0	6.056	A
C-D	7			7			
C-A	117			117			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	115	413	0.278	115	0.4	12.035	B
A-BCD	15	675	0.023	15	0.0	5.454	A
A-B	141			141			
A-C	162			162			
D-ABC	40	447	0.088	39	0.1	8.832	A
C-ABD	18	597	0.030	18	0.0	6.219	A
C-D	8			8			
C-A	139			139			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	141	394	0.358	140	0.5	14.172	B
A-BCD	19	668	0.028	19	0.0	5.549	A
A-B	173			173			
A-C	198			198			
D-ABC	48	432	0.112	48	0.1	9.383	A
C-ABD	22	580	0.039	22	0.0	6.454	A
C-D	10			10			
C-A	170			170			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	141	394	0.358	141	0.6	14.248	B
A-BCD	19	668	0.028	19	0.0	5.551	A
A-B	173			173			
A-C	198			198			
D-ABC	48	432	0.112	48	0.1	9.389	A
C-ABD	22	580	0.039	22	0.0	6.454	A
C-D	10			10			
C-A	170			170			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	115	413	0.278	116	0.4	12.123	B
A-BCD	15	675	0.023	15	0.0	5.455	A
A-B	141			141			
A-C	162			162			
D-ABC	40	447	0.088	40	0.1	8.839	A
C-ABD	18	597	0.030	18	0.0	6.220	A
C-D	8			8			
C-A	139			139			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	96	428	0.225	97	0.3	10.894	B
A-BCD	13	681	0.019	13	0.0	5.386	A
A-B	118			118			
A-C	135			135			
D-ABC	33	458	0.072	33	0.1	8.479	A
C-ABD	15	609	0.025	15	0.0	6.059	A
C-D	7			7			
C-A	117			117			

2028 Baseflow , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1		Crossroads	Two-way	Two-way	Two-way	Two-way		3.95	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.95	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2028 Baseflow	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (NW)		✓	386	100.000
B - Longford Road		✓	141	100.000
C - R392		✓	201	100.000
D - Rathcline Road		✓	48	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	172	196	18
	B - Longford Road	122	0	10	9
	C - R392	169	22	0	10
	D - Rathcline Road	24	17	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	6	3	0
	B - Longford Road	14	0	0	0
	C - R392	6	6	0	12
	D - Rathcline Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.41	15.94	0.7	C
A-BCD	0.03	5.59	0.0	A
A-B				
A-C				
D-ABC	0.12	9.69	0.1	A
C-ABD	0.04	6.63	0.0	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	106	418	0.254	105	0.3	11.448	B
A-BCD	14	678	0.020	14	0.0	5.416	A
A-B	129			129			
A-C	147			147			
D-ABC	36	453	0.080	36	0.1	8.622	A
C-ABD	17	598	0.028	17	0.0	6.190	A
C-D	8			8			
C-A	127			127			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	127	402	0.315	126	0.5	13.015	B
A-BCD	16	672	0.024	16	0.0	5.492	A
A-B	155			155			
A-C	176			176			
D-ABC	43	441	0.098	43	0.1	9.044	A
C-ABD	20	585	0.034	20	0.0	6.372	A
C-D	9			9			
C-A	152			152			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	155	381	0.407	154	0.7	15.823	C
A-BCD	20	664	0.030	20	0.0	5.594	A
A-B	189			189			
A-C	216			216			
D-ABC	53	424	0.125	53	0.1	9.686	A
C-ABD	25	567	0.043	25	0.0	6.634	A
C-D	11			11			
C-A	186			186			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	155	381	0.408	155	0.7	15.941	C
A-BCD	20	664	0.030	20	0.0	5.594	A
A-B	189			189			
A-C	216			216			
D-ABC	53	424	0.125	53	0.1	9.693	A
C-ABD	25	567	0.043	25	0.0	6.634	A
C-D	11			11			
C-A	186			186			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	127	402	0.315	128	0.5	13.141	B
A-BCD	16	672	0.024	16	0.0	5.493	A
A-B	155			155			
A-C	176			176			
D-ABC	43	441	0.098	43	0.1	9.055	A
C-ABD	20	585	0.034	20	0.0	6.373	A
C-D	9			9			
C-A	152			152			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	106	418	0.254	107	0.3	11.587	B
A-BCD	14	678	0.020	14	0.0	5.417	A
A-B	129			129			
A-C	147			147			
D-ABC	36	453	0.080	36	0.1	8.643	A
C-ABD	17	598	0.028	17	0.0	6.193	A
C-D	8			8			
C-A	127			127			

2028 Baseflow with Proposed Development - Peak Construction Phase, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1		Crossroads	Two-way	Two-way	Two-way	Two-way		4.19	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.19	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2028 Baseflow with Proposed Development - Peak Construction Phase	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (NW)		✓	405	100.000
B - Longford Road		✓	145	100.000
C - R392		✓	202	100.000
D - Rathcline Road		✓	48	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	186	201	18
	B - Longford Road	126	0	10	9
	C - R392	170	22	0	10
	D - Rathcline Road	24	17	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	10	4	0
	B - Longford Road	17	0	0	0
	C - R392	7	6	0	12
	D - Rathcline Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.43	17.31	0.8	C
A-BCD	0.03	5.60	0.0	A
A-B				
A-C				
D-ABC	0.13	9.78	0.1	A
C-ABD	0.04	6.73	0.0	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	109	405	0.270	108	0.4	12.053	B
A-BCD	14	678	0.020	14	0.0	5.418	A
A-B	140			140			
A-C	151			151			
D-ABC	36	451	0.080	36	0.1	8.667	A
C-ABD	17	593	0.028	17	0.0	6.248	A
C-D	8			8			
C-A	128			128			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	130	389	0.335	130	0.5	13.848	B
A-BCD	16	671	0.024	16	0.0	5.494	A
A-B	167			167			
A-C	181			181			
D-ABC	43	438	0.098	43	0.1	9.105	A
C-ABD	20	578	0.035	20	0.0	6.448	A
C-D	9			9			
C-A	153			153			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	160	367	0.434	159	0.7	17.152	C
A-BCD	20	663	0.030	20	0.0	5.596	A
A-B	205			205			
A-C	221			221			
D-ABC	53	421	0.126	53	0.1	9.773	A
C-ABD	25	559	0.044	25	0.0	6.735	A
C-D	11			11			
C-A	187			187			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	160	367	0.435	160	0.8	17.311	C
A-BCD	20	663	0.030	20	0.0	5.598	A
A-B	205			205			
A-C	221			221			
D-ABC	53	421	0.126	53	0.1	9.780	A
C-ABD	25	559	0.044	25	0.0	6.735	A
C-D	11			11			
C-A	187			187			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	130	389	0.335	131	0.5	14.016	B
A-BCD	16	672	0.024	16	0.0	5.497	A
A-B	167			167			
A-C	181			181			
D-ABC	43	438	0.098	43	0.1	9.118	A
C-ABD	20	578	0.035	20	0.0	6.449	A
C-D	9			9			
C-A	153			153			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	109	405	0.270	110	0.4	12.219	B
A-BCD	14	678	0.020	14	0.0	5.421	A
A-B	140			140			
A-C	151			151			
D-ABC	36	451	0.080	36	0.1	8.688	A
C-ABD	17	593	0.028	17	0.0	6.251	A
C-D	8			8			
C-A	128			128			

2028 Baseflow with Proposed Development - Average Construction Phase, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1		Crossroads	Two-way	Two-way	Two-way	Two-way		4.02	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.02	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2028 Baseflow with Proposed Development - Average Construction Phase	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (NW)		✓	400	100.000
B - Longford Road		✓	143	100.000
C - R392		✓	201	100.000
D - Rathcline Road		✓	48	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	182	200	18
	B - Longford Road	124	0	10	9
	C - R392	169	22	0	10
	D - Rathcline Road	24	17	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	8	4	0
	B - Longford Road	15	0	0	0
	C - R392	6	6	0	12
	D - Rathcline Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.42	16.55	0.7	C
A-BCD	0.03	5.59	0.0	A
A-B				
A-C				
D-ABC	0.13	9.74	0.1	A
C-ABD	0.04	6.70	0.0	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	108	413	0.261	106	0.3	11.702	B
A-BCD	14	678	0.020	14	0.0	5.414	A
A-B	137			137			
A-C	151			151			
D-ABC	36	452	0.080	36	0.1	8.647	A
C-ABD	17	594	0.028	17	0.0	6.229	A
C-D	8			8			
C-A	127			127			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	129	397	0.324	128	0.5	13.374	B
A-BCD	16	672	0.024	16	0.0	5.490	A
A-B	164			164			
A-C	180			180			
D-ABC	43	440	0.098	43	0.1	9.077	A
C-ABD	20	580	0.034	20	0.0	6.425	A
C-D	9			9			
C-A	152			152			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	157	375	0.420	157	0.7	16.410	C
A-BCD	20	664	0.030	20	0.0	5.590	A
A-B	200			200			
A-C	220			220			
D-ABC	53	422	0.125	53	0.1	9.734	A
C-ABD	25	562	0.044	25	0.0	6.704	A
C-D	11			11			
C-A	186			186			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	157	375	0.420	157	0.7	16.546	C
A-BCD	20	664	0.030	20	0.0	5.592	A
A-B	200			200			
A-C	220			220			
D-ABC	53	422	0.125	53	0.1	9.740	A
C-ABD	25	562	0.044	25	0.0	6.704	A
C-D	11			11			
C-A	186			186			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	129	397	0.324	129	0.5	13.517	B
A-BCD	16	672	0.024	16	0.0	5.490	A
A-B	164			164			
A-C	180			180			
D-ABC	43	440	0.098	43	0.1	9.088	A
C-ABD	20	580	0.034	20	0.0	6.428	A
C-D	9			9			
C-A	152			152			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	108	412	0.261	108	0.4	11.853	B
A-BCD	14	678	0.020	14	0.0	5.417	A
A-B	137			137			
A-C	151			151			
D-ABC	36	452	0.080	36	0.1	8.666	A
C-ABD	17	594	0.028	17	0.0	6.233	A
C-D	8			8			
C-A	127			127			

2022 Baseflow , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1		Crossroads	Two-way	Two-way	Two-way	Two-way		3.93	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.93	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2022 Baseflow	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (NW)		✓	300	100.000
B - Longford Road		✓	165	100.000
C - R392		✓	202	100.000
D - Rathcline Road		✓	28	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	131	147	22
	B - Longford Road	151	0	6	8
	C - R392	179	5	0	18
	D - Rathcline Road	18	5	5	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	5	4	0
	B - Longford Road	4	0	0	0
	C - R392	3	0	0	6
	D - Rathcline Road	6	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.42	14.20	0.7	B
A-BCD	0.04	5.61	0.0	A
A-B				
A-C				
D-ABC	0.07	8.73	0.1	A
C-ABD	0.01	5.87	0.0	A
C-D				
C-A				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	124	467	0.266	123	0.4	10.426	B
A-BCD	17	680	0.025	17	0.0	5.422	A
A-B	99			99			
A-C	111			111			
D-ABC	21	466	0.045	21	0.0	8.083	A
C-ABD	4	648	0.006	4	0.0	5.587	A
C-D	14			14			
C-A	135			135			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	148	453	0.327	148	0.5	11.761	B
A-BCD	20	674	0.030	20	0.0	5.501	A
A-B	118			118			
A-C	132			132			
D-ABC	25	457	0.055	25	0.1	8.342	A
C-ABD	5	636	0.007	4	0.0	5.703	A
C-D	16			16			
C-A	161			161			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	182	435	0.417	181	0.7	14.100	B
A-BCD	25	667	0.037	25	0.0	5.607	A
A-B	144			144			
A-C	162			162			
D-ABC	31	443	0.070	31	0.1	8.723	A
C-ABD	6	619	0.009	6	0.0	5.870	A
C-D	20			20			
C-A	197			197			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	182	435	0.417	182	0.7	14.196	B
A-BCD	25	667	0.037	25	0.0	5.607	A
A-B	144			144			
A-C	162			162			
D-ABC	31	443	0.070	31	0.1	8.725	A
C-ABD	6	619	0.009	6	0.0	5.870	A
C-D	20			20			
C-A	197			197			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	148	453	0.327	149	0.5	11.865	B
A-BCD	20	674	0.030	20	0.0	5.501	A
A-B	118			118			
A-C	132			132			
D-ABC	25	457	0.055	25	0.1	8.347	A
C-ABD	5	636	0.007	5	0.0	5.706	A
C-D	16			16			
C-A	161			161			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	124	467	0.266	125	0.4	10.546	B
A-BCD	17	681	0.025	17	0.0	5.425	A
A-B	99			99			
A-C	111			111			
D-ABC	21	466	0.045	21	0.0	8.093	A
C-ABD	4	648	0.006	4	0.0	5.587	A
C-D	14			14			
C-A	135			135			

2028 Baseflow , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1		Crossroads	Two-way	Two-way	Two-way	Two-way		4.33	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.33	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2028 Baseflow	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (NW)		✓	327	100.000
B - Longford Road		✓	181	100.000
C - R392		✓	220	100.000
D - Rathcline Road		✓	30	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	143	160	24
	B - Longford Road	165	0	7	9
	C - R392	195	5	0	20
	D - Rathcline Road	20	5	5	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	6	5	0
	B - Longford Road	4	0	0	0
	C - R392	3	0	0	6
	D - Rathcline Road	6	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.47	15.85	0.9	C
A-BCD	0.04	5.66	0.0	A
A-B				
A-C				
D-ABC	0.07	8.83	0.1	A
C-ABD	0.01	5.96	0.0	A
C-D				
C-A				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	136	461	0.296	135	0.4	10.985	B
A-BCD	18	678	0.027	18	0.0	5.458	A
A-B	108			108			
A-C	120			120			
D-ABC	23	465	0.049	22	0.1	8.130	A
C-ABD	4	642	0.006	4	0.0	5.643	A
C-D	15			15			
C-A	147			147			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	163	446	0.365	162	0.6	12.641	B
A-BCD	22	671	0.033	22	0.0	5.543	A
A-B	128			128			
A-C	144			144			
D-ABC	27	455	0.059	27	0.1	8.412	A
C-ABD	5	628	0.007	4	0.0	5.773	A
C-D	18			18			
C-A	175			175			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	199	426	0.468	198	0.9	15.697	C
A-BCD	27	663	0.041	27	0.0	5.657	A
A-B	157			157			
A-C	176			176			
D-ABC	33	441	0.075	33	0.1	8.831	A
C-ABD	6	609	0.009	6	0.0	5.961	A
C-D	22			22			
C-A	215			215			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	199	426	0.468	199	0.9	15.847	C
A-BCD	27	663	0.041	27	0.0	5.657	A
A-B	157			157			
A-C	176			176			
D-ABC	33	441	0.075	33	0.1	8.833	A
C-ABD	6	609	0.009	6	0.0	5.962	A
C-D	22			22			
C-A	215			215			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	163	446	0.365	164	0.6	12.798	B
A-BCD	22	671	0.033	22	0.0	5.546	A
A-B	128			128			
A-C	144			144			
D-ABC	27	455	0.059	27	0.1	8.418	A
C-ABD	5	628	0.007	5	0.0	5.774	A
C-D	18			18			
C-A	175			175			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	136	461	0.296	137	0.4	11.140	B
A-BCD	18	678	0.027	18	0.0	5.459	A
A-B	108			108			
A-C	120			120			
D-ABC	23	465	0.049	23	0.1	8.141	A
C-ABD	4	642	0.006	4	0.0	5.646	A
C-D	15			15			
C-A	147			147			

2028 Baseflow with Proposed Development - Peak Construction Phase, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1		Crossroads	Two-way	Two-way	Two-way	Two-way		5.34	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.34	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2028 Baseflow with Proposed Development - Peak Construction Phase	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (NW)		✓	332	100.000
B - Longford Road		✓	195	100.000
C - R392		✓	225	100.000
D - Rathcline Road		✓	30	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	147	161	24
	B - Longford Road	179	0	7	9
	C - R392	200	5	0	20
	D - Rathcline Road	20	5	5	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	8	5	0
	B - Longford Road	9	0	0	0
	C - R392	5	0	0	6
	D - Rathcline Road	6	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.53	18.88	1.1	C
A-BCD	0.04	5.68	0.0	A
A-B				
A-C				
D-ABC	0.08	8.90	0.1	A
C-ABD	0.01	5.99	0.0	A
C-D				
C-A				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	147	439	0.334	145	0.5	12.163	B
A-BCD	18	676	0.027	18	0.0	5.473	A
A-B	111			111			
A-C	121			121			
D-ABC	23	463	0.049	22	0.1	8.169	A
C-ABD	4	640	0.006	4	0.0	5.658	A
C-D	15			15			
C-A	151			151			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	175	425	0.413	175	0.7	14.343	B
A-BCD	22	669	0.033	22	0.0	5.561	A
A-B	132			132			
A-C	145			145			
D-ABC	27	452	0.060	27	0.1	8.463	A
C-ABD	5	626	0.007	4	0.0	5.792	A
C-D	18			18			
C-A	180			180			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	215	405	0.530	213	1.1	18.592	C
A-BCD	27	661	0.041	27	0.0	5.679	A
A-B	162			162			
A-C	177			177			
D-ABC	33	437	0.076	33	0.1	8.901	A
C-ABD	6	607	0.009	6	0.0	5.985	A
C-D	22			22			
C-A	220			220			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	215	405	0.530	215	1.1	18.877	C
A-BCD	27	661	0.041	27	0.0	5.679	A
A-B	162			162			
A-C	177			177			
D-ABC	33	437	0.076	33	0.1	8.904	A
C-ABD	6	607	0.009	6	0.0	5.985	A
C-D	22			22			
C-A	220			220			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	175	425	0.413	177	0.7	14.614	B
A-BCD	22	669	0.033	22	0.0	5.561	A
A-B	132			132			
A-C	145			145			
D-ABC	27	452	0.060	27	0.1	8.469	A
C-ABD	5	626	0.007	5	0.0	5.792	A
C-D	18			18			
C-A	180			180			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	147	439	0.335	148	0.5	12.400	B
A-BCD	18	676	0.027	18	0.0	5.476	A
A-B	111			111			
A-C	121			121			
D-ABC	23	463	0.049	23	0.1	8.181	A
C-ABD	4	640	0.006	4	0.0	5.658	A
C-D	15			15			
C-A	151			151			

2028 Baseflow with Proposed Development - Average Construction Phase, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1		Crossroads	Two-way	Two-way	Two-way	Two-way		4.86	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.86	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2028 Baseflow with Proposed Development - Average Construction Phase	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (NW)		✓	329	100.000
B - Longford Road		✓	191	100.000
C - R392		✓	224	100.000
D - Rathcline Road		✓	30	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	145	160	24
	B - Longford Road	175	0	7	9
	C - R392	199	5	0	20
	D - Rathcline Road	20	5	5	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	7	5	0
	B - Longford Road	6	0	0	0
	C - R392	4	0	0	6
	D - Rathcline Road	6	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.50	17.39	1.0	C
A-BCD	0.04	5.67	0.0	A
A-B				
A-C				
D-ABC	0.08	8.88	0.1	A
C-ABD	0.01	5.97	0.0	A
C-D				
C-A				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	144	451	0.319	142	0.5	11.567	B
A-BCD	18	676	0.027	18	0.0	5.468	A
A-B	109			109			
A-C	120			120			
D-ABC	23	464	0.049	22	0.1	8.154	A
C-ABD	4	641	0.006	4	0.0	5.649	A
C-D	15			15			
C-A	150			150			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	172	437	0.393	171	0.6	13.498	B
A-BCD	22	670	0.033	22	0.0	5.555	A
A-B	130			130			
A-C	144			144			
D-ABC	27	453	0.060	27	0.1	8.444	A
C-ABD	5	627	0.007	4	0.0	5.781	A
C-D	18			18			
C-A	179			179			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	210	417	0.504	209	1.0	17.172	C
A-BCD	27	661	0.041	27	0.0	5.672	A
A-B	159			159			
A-C	176			176			
D-ABC	33	439	0.075	33	0.1	8.874	A
C-ABD	6	608	0.009	6	0.0	5.972	A
C-D	22			22			
C-A	219			219			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	210	417	0.504	210	1.0	17.388	C
A-BCD	27	662	0.041	27	0.0	5.674	A
A-B	159			159			
A-C	176			176			
D-ABC	33	439	0.075	33	0.1	8.877	A
C-ABD	6	608	0.009	6	0.0	5.972	A
C-D	22			22			
C-A	219			219			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	172	437	0.393	173	0.7	13.713	B
A-BCD	22	670	0.033	22	0.0	5.556	A
A-B	130			130			
A-C	144			144			
D-ABC	27	453	0.060	27	0.1	8.451	A
C-ABD	5	627	0.007	5	0.0	5.784	A
C-D	18			18			
C-A	179			179			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	144	451	0.319	145	0.5	11.765	B
A-BCD	18	677	0.027	18	0.0	5.469	A
A-B	109			109			
A-C	120			120			
D-ABC	23	464	0.049	23	0.1	8.165	A
C-ABD	4	641	0.006	4	0.0	5.652	A
C-D	15			15			
C-A	150			150			

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: JTC 2.j10
Path: W:\Projects\11399 - BnaM Derryadd Wind Farm_Revised_2022\05-Design\01-Calculations\Traffic\TIA
Report generation date: 05/12/2023 10:45:16

Summary of junction performance

	AM						PM					
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS
	2022 Baseflow											
Stream B-ACD	0.0	5.75	0.03	A	2.10	A	0.0	5.66	0.04	A	1.76	A
Stream A-BCD	0.0	5.97	0.01	A			0.0	5.42	0.02	A		
Stream D-ABC	0.1	7.84	0.11	A			0.1	7.58	0.06	A		
Stream C-ABD	0.0	5.41	0.01	A			0.0	5.27	0.02	A		
	2028 Baseflow											
Stream B-ACD	0.0	5.85	0.04	A	2.12	A	0.0	5.72	0.04	A	1.76	A
Stream A-BCD	0.0	6.06	0.02	A			0.0	5.46	0.02	A		
Stream D-ABC	0.1	8.01	0.12	A			0.1	7.70	0.07	A		
Stream C-ABD	0.0	5.44	0.01	A			0.0	5.29	0.02	A		
	2028 Baseflow with Proposed Development - Peak Construction Phase											
Stream B-ACD	0.0	5.86	0.04	A	2.08	A	0.0	5.74	0.04	A	1.72	A
Stream A-BCD	0.0	6.07	0.02	A			0.0	5.46	0.02	A		
Stream D-ABC	0.1	8.04	0.12	A			0.1	7.72	0.07	A		
Stream C-ABD	0.0	5.44	0.01	A			0.0	5.30	0.02	A		
	2028 Baseflow with Proposed Development - Average Construction Phase											
Stream B-ACD	0.0	5.85	0.04	A	2.10	A	0.0	5.73	0.04	A	1.75	A
Stream A-BCD	0.0	6.07	0.02	A			0.0	5.46	0.02	A		
Stream D-ABC	0.1	8.02	0.12	A			0.1	7.71	0.07	A		
Stream C-ABD	0.0	5.44	0.01	A			0.0	5.29	0.02	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.

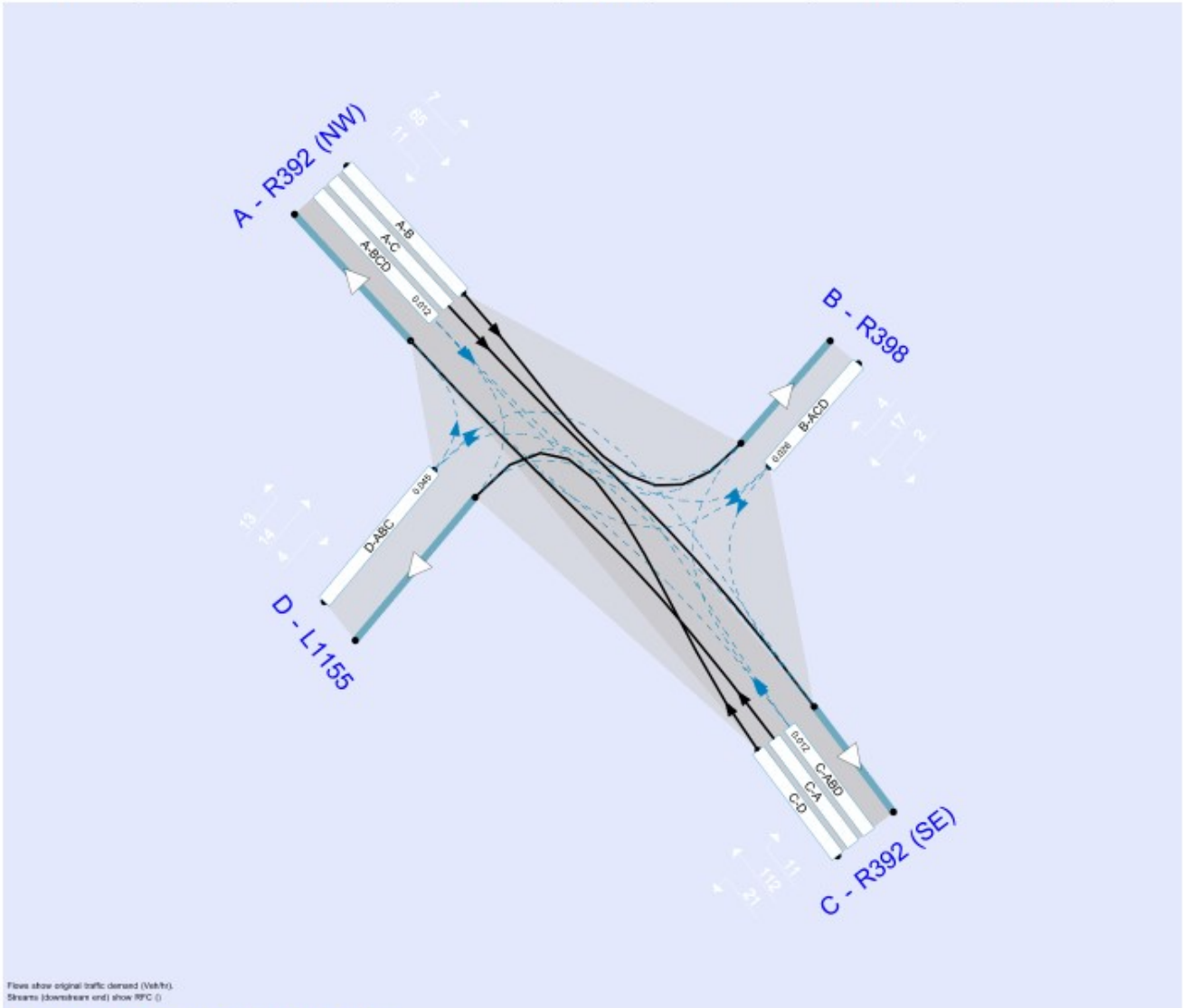
File summary

File Description

Title	Derryadd Wind Farm
Location	County Longford
Site number	
Date	30/11/2023
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	
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

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Baseflow	AM	ONE HOUR	08:15	09:45	15
D2	2028 Baseflow	AM	ONE HOUR	08:15	09:45	15
D3	2028 Baseflow with Proposed Development - Peak Construction Phase	AM	ONE HOUR	08:15	09:45	15
D4	2028 Baseflow with Proposed Development - Average Construction Phase	AM	ONE HOUR	08:15	09:45	15
D5	2022 Baseflow	PM	ONE HOUR	16:30	18:00	15
D6	2028 Baseflow	PM	ONE HOUR	16:30	18:00	15
D7	2028 Baseflow with Proposed Development - Peak Construction Phase	PM	ONE HOUR	16:30	18:00	15
D8	2028 Baseflow with Proposed Development - Average Construction Phase	PM	ONE HOUR	16:30	18:00	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Baseflow, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R392 (SE) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
2		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		2.10	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.10	A

Arms

Arms

Arm	Name	Description	Arm type
A	R392 (NW)		Major
B	R398		Minor
C	R392 (SE)		Major
D	L1155		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A - R392 (NW)	6.10			250.0	✓	1.00
C - R392 (SE)	5.40			250.0	✓	1.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - R398	One lane	3.90	160	230
D - L1155	One lane	2.20	190	115

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
A-D	719	-	-	-	0.277	0.277	0.277	-	0.277	-	-
B-AD	709	0.133	0.335	-	-	-	0.211	0.479	0.211	0.133	0.335
B-C	838	0.132	0.333	-	-	-	-	-	-	0.132	0.333
C-B	719	0.286	0.286	-	-	-	-	-	-	0.286	0.286
D-A	641	-	-	-	0.247	0.098	0.247	-	0.098	-	-
D-BC	552	0.159	0.159	0.361	0.253	0.100	0.253	-	0.100	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Baseflow	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - R392 (NW)		✓	117	100.000
B - R398		✓	20	100.000
C - R392 (SE)		✓	79	100.000
D - L1155		✓	51	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	3	106	8
	B - R398	2	0	7	11
	C - R392 (SE)	64	4	0	11
	D - L1155	10	25	16	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	0	5	13
	B - R398	0	0	0	9
	C - R392 (SE)	11	0	0	45
	D - L1155	10	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.03	5.75	0.0	A
A-BCD	0.01	5.97	0.0	A
A-B				
A-C				
D-ABC	0.11	7.84	0.1	A
C-ABD	0.01	5.41	0.0	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	15	668	0.023	15	0.0	5.511	A
A-BCD	6	619	0.010	6	0.0	5.874	A
A-B	2			2			
A-C	80			80			
D-ABC	38	529	0.073	38	0.1	7.333	A
C-ABD	3	686	0.004	3	0.0	5.273	A
C-D	8			8			
C-A	48			48			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	18	659	0.027	18	0.0	5.611	A
A-BCD	7	616	0.012	7	0.0	5.915	A
A-B	3			3			
A-C	95			95			
D-ABC	46	523	0.088	46	0.1	7.544	A
C-ABD	4	679	0.005	4	0.0	5.328	A
C-D	10			10			
C-A	58			58			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	22	648	0.034	22	0.0	5.754	A
A-BCD	9	612	0.014	9	0.0	5.972	A
A-B	3			3			
A-C	117			117			
D-ABC	56	515	0.109	56	0.1	7.840	A
C-ABD	4	670	0.007	4	0.0	5.405	A
C-D	12			12			
C-A	70			70			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	22	647	0.034	22	0.0	5.755	A
A-BCD	9	612	0.014	9	0.0	5.972	A
A-B	3			3			
A-C	117			117			
D-ABC	56	515	0.109	56	0.1	7.843	A
C-ABD	4	670	0.007	4	0.0	5.405	A
C-D	12			12			
C-A	70			70			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	18	659	0.027	18	0.0	5.614	A
A-BCD	7	616	0.012	7	0.0	5.918	A
A-B	3			3			
A-C	95			95			
D-ABC	46	523	0.088	46	0.1	7.547	A
C-ABD	4	679	0.005	4	0.0	5.328	A
C-D	10			10			
C-A	58			58			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	15	668	0.023	15	0.0	5.514	A
A-BCD	6	619	0.010	6	0.0	5.877	A
A-B	2			2			
A-C	80			80			
D-ABC	38	529	0.073	38	0.1	7.347	A
C-ABD	3	685	0.004	3	0.0	5.274	A
C-D	8			8			
C-A	48			48			

2028 Baseflow , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R392 (SE) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
2		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		2.12	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.12	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2028 Baseflow	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - R392 (NW)		✓	128	100.000
B - R398		✓	22	100.000
C - R392 (SE)		✓	87	100.000
D - L1155		✓	55	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	3	116	9
	B - R398	2	0	8	12
	C - R392 (SE)	70	4	0	13
	D - L1155	11	27	17	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	0	5	14
	B - R398	0	0	0	10
	C - R392 (SE)	12	0	0	48
	D - L1155	11	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.04	5.85	0.0	A
A-BCD	0.02	6.06	0.0	A
A-B				
A-C				
D-ABC	0.12	8.01	0.1	A
C-ABD	0.01	5.44	0.0	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	662	0.025	16	0.0	5.574	A
A-BCD	7	612	0.011	7	0.0	5.952	A
A-B	2			2			
A-C	87			87			
D-ABC	41	525	0.079	41	0.1	7.435	A
C-ABD	3	683	0.004	3	0.0	5.295	A
C-D	10			10			
C-A	53			53			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	20	653	0.030	20	0.0	5.686	A
A-BCD	8	608	0.013	8	0.0	5.998	A
A-B	3			3			
A-C	104			104			
D-ABC	49	519	0.095	49	0.1	7.671	A
C-ABD	4	676	0.005	4	0.0	5.355	A
C-D	12			12			
C-A	63			63			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	24	640	0.038	24	0.0	5.847	A
A-BCD	10	604	0.017	10	0.0	6.061	A
A-B	3			3			
A-C	128			128			
D-ABC	61	510	0.119	60	0.1	8.005	A
C-ABD	4	666	0.007	4	0.0	5.439	A
C-D	14			14			
C-A	77			77			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	24	640	0.038	24	0.0	5.847	A
A-BCD	10	604	0.017	10	0.0	6.061	A
A-B	3			3			
A-C	128			128			
D-ABC	61	510	0.119	61	0.1	8.008	A
C-ABD	4	666	0.007	4	0.0	5.439	A
C-D	14			14			
C-A	77			77			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	20	653	0.030	20	0.0	5.687	A
A-BCD	8	608	0.013	8	0.0	5.998	A
A-B	3			3			
A-C	104			104			
D-ABC	49	519	0.095	50	0.1	7.674	A
C-ABD	4	676	0.005	4	0.0	5.358	A
C-D	12			12			
C-A	63			63			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	662	0.025	17	0.0	5.578	A
A-BCD	7	611	0.011	7	0.0	5.954	A
A-B	2			2			
A-C	87			87			
D-ABC	41	525	0.079	41	0.1	7.450	A
C-ABD	3	683	0.004	3	0.0	5.298	A
C-D	10			10			
C-A	53			53			

2028 Baseflow with Proposed Development - Peak Construction Phase, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R392 (SE) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
2		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		2.08	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.08	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2028 Baseflow with Proposed Development - Peak Construction Phase	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - R392 (NW)		✓	129	100.000
B - R398		✓	22	100.000
C - R392 (SE)		✓	90	100.000
D - L1155		✓	55	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	3	117	9
	B - R398	2	0	8	12
	C - R392 (SE)	73	4	0	13
	D - L1155	11	27	17	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	0	6	14
	B - R398	0	0	0	10
	C - R392 (SE)	14	0	0	48
	D - L1155	11	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.04	5.86	0.0	A
A-BCD	0.02	6.07	0.0	A
A-B				
A-C				
D-ABC	0.12	8.04	0.1	A
C-ABD	0.01	5.44	0.0	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	661	0.025	16	0.0	5.584	A
A-BCD	7	611	0.011	7	0.0	5.960	A
A-B	2			2			
A-C	88			88			
D-ABC	41	524	0.079	41	0.1	7.452	A
C-ABD	3	682	0.004	3	0.0	5.299	A
C-D	10			10			
C-A	55			55			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	20	652	0.030	20	0.0	5.697	A
A-BCD	8	607	0.013	8	0.0	6.008	A
A-B	3			3			
A-C	105			105			
D-ABC	49	517	0.096	49	0.1	7.692	A
C-ABD	4	675	0.005	4	0.0	5.360	A
C-D	12			12			
C-A	66			66			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	24	638	0.038	24	0.0	5.862	A
A-BCD	10	603	0.017	10	0.0	6.074	A
A-B	3			3			
A-C	129			129			
D-ABC	61	508	0.119	60	0.1	8.035	A
C-ABD	4	665	0.007	4	0.0	5.445	A
C-D	14			14			
C-A	80			80			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	24	638	0.038	24	0.0	5.862	A
A-BCD	10	603	0.017	10	0.0	6.074	A
A-B	3			3			
A-C	129			129			
D-ABC	61	508	0.119	61	0.1	8.038	A
C-ABD	4	665	0.007	4	0.0	5.445	A
C-D	14			14			
C-A	80			80			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	20	651	0.030	20	0.0	5.700	A
A-BCD	8	607	0.013	8	0.0	6.009	A
A-B	3			3			
A-C	105			105			
D-ABC	49	517	0.096	50	0.1	7.699	A
C-ABD	4	675	0.005	4	0.0	5.362	A
C-D	12			12			
C-A	66			66			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	661	0.025	17	0.0	5.585	A
A-BCD	7	611	0.011	7	0.0	5.961	A
A-B	2			2			
A-C	88			88			
D-ABC	41	524	0.079	41	0.1	7.464	A
C-ABD	3	682	0.004	3	0.0	5.302	A
C-D	10			10			
C-A	55			55			

2028 Baseflow with Proposed Development - Average Construction Phase, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R392 (SE) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
2		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		2.10	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.10	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2028 Baseflow with Proposed Development - Average Construction Phase	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - R392 (NW)		✓	128	100.000
B - R398		✓	22	100.000
C - R392 (SE)		✓	89	100.000
D - L1155		✓	55	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	3	116	9
	B - R398	2	0	8	12
	C - R392 (SE)	72	4	0	13
	D - L1155	11	27	17	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	0	5	14
	B - R398	0	0	0	10
	C - R392 (SE)	13	0	0	48
	D - L1155	11	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.04	5.85	0.0	A
A-BCD	0.02	6.07	0.0	A
A-B				
A-C				
D-ABC	0.12	8.02	0.1	A
C-ABD	0.01	5.44	0.0	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	662	0.025	16	0.0	5.577	A
A-BCD	7	611	0.011	7	0.0	5.957	A
A-B	2			2			
A-C	87			87			
D-ABC	41	524	0.079	41	0.1	7.444	A
C-ABD	3	683	0.004	3	0.0	5.295	A
C-D	10			10			
C-A	54			54			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	20	652	0.030	20	0.0	5.689	A
A-BCD	8	608	0.013	8	0.0	6.004	A
A-B	3			3			
A-C	104			104			
D-ABC	49	518	0.095	49	0.1	7.681	A
C-ABD	4	676	0.005	4	0.0	5.355	A
C-D	12			12			
C-A	65			65			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	24	639	0.038	24	0.0	5.852	A
A-BCD	10	603	0.017	10	0.0	6.069	A
A-B	3			3			
A-C	128			128			
D-ABC	61	509	0.119	60	0.1	8.020	A
C-ABD	4	666	0.007	4	0.0	5.439	A
C-D	14			14			
C-A	79			79			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	24	639	0.038	24	0.0	5.852	A
A-BCD	10	603	0.017	10	0.0	6.069	A
A-B	3			3			
A-C	128			128			
D-ABC	61	509	0.119	61	0.1	8.023	A
C-ABD	4	666	0.007	4	0.0	5.439	A
C-D	14			14			
C-A	79			79			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	20	652	0.030	20	0.0	5.690	A
A-BCD	8	608	0.013	8	0.0	6.007	A
A-B	3			3			
A-C	104			104			
D-ABC	49	518	0.095	50	0.1	7.686	A
C-ABD	4	676	0.005	4	0.0	5.358	A
C-D	12			12			
C-A	65			65			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	662	0.025	17	0.0	5.578	A
A-BCD	7	611	0.011	7	0.0	5.957	A
A-B	2			2			
A-C	87			87			
D-ABC	41	524	0.079	41	0.1	7.455	A
C-ABD	3	683	0.004	3	0.0	5.298	A
C-D	10			10			
C-A	54			54			

2022 Baseflow , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R392 (SE) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
2		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		1.76	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.76	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2022 Baseflow	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - R392 (NW)		✓	74	100.000
B - R398		✓	22	100.000
C - R392 (SE)		✓	132	100.000
D - L1155		✓	29	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	6	58	10
	B - R398	4	0	2	16
	C - R392 (SE)	103	10	0	19
	D - L1155	12	13	4	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	0	2	0
	B - R398	0	0	0	0
	C - R392 (SE)	3	0	0	5
	D - L1155	8	0	25	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.04	5.66	0.0	A
A-BCD	0.02	5.42	0.0	A
A-B				
A-C				
D-ABC	0.06	7.58	0.1	A
C-ABD	0.02	5.27	0.0	A
C-D				
C-A				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	679	0.024	16	0.0	5.431	A
A-BCD	8	689	0.011	7	0.0	5.283	A
A-B	5			5			
A-C	44			44			
D-ABC	22	520	0.042	22	0.0	7.220	A
C-ABD	8	702	0.011	7	0.0	5.184	A
C-D	14			14			
C-A	78			78			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	20	671	0.029	20	0.0	5.524	A
A-BCD	9	683	0.013	9	0.0	5.340	A
A-B	5			5			
A-C	52			52			
D-ABC	26	515	0.051	26	0.1	7.368	A
C-ABD	9	699	0.013	9	0.0	5.218	A
C-D	17			17			
C-A	93			93			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	24	661	0.037	24	0.0	5.656	A
A-BCD	11	675	0.016	11	0.0	5.419	A
A-B	7			7			
A-C	64			64			
D-ABC	32	507	0.063	32	0.1	7.579	A
C-ABD	11	695	0.016	11	0.0	5.265	A
C-D	21			21			
C-A	113			113			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	24	661	0.037	24	0.0	5.657	A
A-BCD	11	675	0.016	11	0.0	5.419	A
A-B	7			7			
A-C	64			64			
D-ABC	32	507	0.063	32	0.1	7.579	A
C-ABD	11	695	0.016	11	0.0	5.265	A
C-D	21			21			
C-A	113			113			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	20	671	0.029	20	0.0	5.527	A
A-BCD	9	683	0.013	9	0.0	5.340	A
A-B	5			5			
A-C	52			52			
D-ABC	26	515	0.051	26	0.1	7.373	A
C-ABD	9	699	0.013	9	0.0	5.221	A
C-D	17			17			
C-A	93			93			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	679	0.024	17	0.0	5.434	A
A-BCD	8	689	0.011	8	0.0	5.286	A
A-B	5			5			
A-C	44			44			
D-ABC	22	520	0.042	22	0.0	7.224	A
C-ABD	8	702	0.011	8	0.0	5.185	A
C-D	14			14			
C-A	78			78			

2028 Baseflow , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R392 (SE) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
2		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		1.76	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.76	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2028 Baseflow	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - R392 (NW)		✓	81	100.000
B - R398		✓	23	100.000
C - R392 (SE)		✓	144	100.000
D - L1155		✓	31	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	7	63	11
	B - R398	4	0	2	17
	C - R392 (SE)	112	11	0	21
	D - L1155	13	14	4	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	0	2	0
	B - R398	0	0	0	0
	C - R392 (SE)	3	0	0	6
	D - L1155	9	0	27	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.04	5.72	0.0	A
A-BCD	0.02	5.46	0.0	A
A-B				
A-C				
D-ABC	0.07	7.70	0.1	A
C-ABD	0.02	5.29	0.0	A
C-D				
C-A				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	675	0.026	17	0.0	5.471	A
A-BCD	8	686	0.012	8	0.0	5.309	A
A-B	5			5			
A-C	47			47			
D-ABC	23	516	0.045	23	0.0	7.304	A
C-ABD	8	700	0.012	8	0.0	5.200	A
C-D	16			16			
C-A	84			84			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	21	667	0.031	21	0.0	5.572	A
A-BCD	10	680	0.015	10	0.0	5.371	A
A-B	6			6			
A-C	57			57			
D-ABC	28	510	0.055	28	0.1	7.467	A
C-ABD	10	697	0.014	10	0.0	5.237	A
C-D	19			19			
C-A	101			101			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	25	655	0.039	25	0.0	5.718	A
A-BCD	12	672	0.018	12	0.0	5.457	A
A-B	8			8			
A-C	69			69			
D-ABC	34	502	0.068	34	0.1	7.700	A
C-ABD	12	693	0.018	12	0.0	5.288	A
C-D	23			23			
C-A	123			123			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	25	655	0.039	25	0.0	5.719	A
A-BCD	12	672	0.018	12	0.0	5.457	A
A-B	8			8			
A-C	69			69			
D-ABC	34	502	0.068	34	0.1	7.702	A
C-ABD	12	693	0.018	12	0.0	5.288	A
C-D	23			23			
C-A	123			123			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	21	667	0.031	21	0.0	5.575	A
A-BCD	10	680	0.015	10	0.0	5.371	A
A-B	6			6			
A-C	57			57			
D-ABC	28	510	0.055	28	0.1	7.472	A
C-ABD	10	697	0.014	10	0.0	5.237	A
C-D	19			19			
C-A	101			101			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	675	0.026	17	0.0	5.474	A
A-BCD	8	686	0.012	8	0.0	5.311	A
A-B	5			5			
A-C	47			47			
D-ABC	23	516	0.045	23	0.0	7.311	A
C-ABD	8	700	0.012	8	0.0	5.202	A
C-D	16			16			
C-A	84			84			

2028 Baseflow with Proposed Development - Peak Construction Phase, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R392 (SE) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
2		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		1.72	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.72	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2028 Baseflow with Proposed Development - Peak Construction Phase	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - R392 (NW)		✓	84	100.000
B - R398		✓	23	100.000
C - R392 (SE)		✓	145	100.000
D - L1155		✓	31	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	7	66	11
	B - R398	4	0	2	17
	C - R392 (SE)	113	11	0	21
	D - L1155	13	14	4	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	0	5	0
	B - R398	0	0	0	0
	C - R392 (SE)	4	0	0	6
	D - L1155	9	0	27	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.04	5.74	0.0	A
A-BCD	0.02	5.46	0.0	A
A-B				
A-C				
D-ABC	0.07	7.72	0.1	A
C-ABD	0.02	5.30	0.0	A
C-D				
C-A				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	674	0.026	17	0.0	5.485	A
A-BCD	8	686	0.012	8	0.0	5.312	A
A-B	5			5			
A-C	50			50			
D-ABC	23	515	0.045	23	0.0	7.315	A
C-ABD	8	699	0.012	8	0.0	5.208	A
C-D	16			16			
C-A	85			85			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	21	665	0.031	21	0.0	5.589	A
A-BCD	10	680	0.015	10	0.0	5.375	A
A-B	6			6			
A-C	59			59			
D-ABC	28	509	0.055	28	0.1	7.481	A
C-ABD	10	696	0.014	10	0.0	5.247	A
C-D	19			19			
C-A	102			102			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	25	652	0.039	25	0.0	5.740	A
A-BCD	12	671	0.018	12	0.0	5.462	A
A-B	8			8			
A-C	73			73			
D-ABC	34	500	0.068	34	0.1	7.719	A
C-ABD	12	691	0.018	12	0.0	5.300	A
C-D	23			23			
C-A	124			124			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	25	652	0.039	25	0.0	5.740	A
A-BCD	12	671	0.018	12	0.0	5.462	A
A-B	8			8			
A-C	73			73			
D-ABC	34	500	0.068	34	0.1	7.720	A
C-ABD	12	691	0.018	12	0.0	5.300	A
C-D	23			23			
C-A	124			124			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	21	665	0.031	21	0.0	5.592	A
A-BCD	10	680	0.015	10	0.0	5.375	A
A-B	6			6			
A-C	59			59			
D-ABC	28	509	0.055	28	0.1	7.483	A
C-ABD	10	696	0.014	10	0.0	5.247	A
C-D	19			19			
C-A	102			102			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	674	0.026	17	0.0	5.485	A
A-BCD	8	686	0.012	8	0.0	5.315	A
A-B	5			5			
A-C	50			50			
D-ABC	23	515	0.045	23	0.0	7.323	A
C-ABD	8	699	0.012	8	0.0	5.210	A
C-D	16			16			
C-A	85			85			

2028 Baseflow with Proposed Development - Average Construction Phase, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R392 (SE) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
2		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		1.75	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.75	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2028 Baseflow with Proposed Development - Average Construction Phase	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - R392 (NW)		✓	83	100.000
B - R398		✓	23	100.000
C - R392 (SE)		✓	144	100.000
D - L1155		✓	31	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	7	65	11
	B - R398	4	0	2	17
	C - R392 (SE)	112	11	0	21
	D - L1155	13	14	4	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	0	3	0
	B - R398	0	0	0	0
	C - R392 (SE)	3	0	0	6
	D - L1155	9	0	27	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.04	5.73	0.0	A
A-BCD	0.02	5.46	0.0	A
A-B				
A-C				
D-ABC	0.07	7.71	0.1	A
C-ABD	0.02	5.29	0.0	A
C-D				
C-A				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	674	0.026	17	0.0	5.477	A
A-BCD	8	686	0.012	8	0.0	5.309	A
A-B	5			5			
A-C	49			49			
D-ABC	23	516	0.045	23	0.0	7.307	A
C-ABD	8	700	0.012	8	0.0	5.204	A
C-D	16			16			
C-A	84			84			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	21	666	0.031	21	0.0	5.579	A
A-BCD	10	680	0.015	10	0.0	5.370	A
A-B	6			6			
A-C	58			58			
D-ABC	28	510	0.055	28	0.1	7.471	A
C-ABD	10	697	0.014	10	0.0	5.242	A
C-D	19			19			
C-A	101			101			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	25	654	0.039	25	0.0	5.727	A
A-BCD	12	672	0.018	12	0.0	5.457	A
A-B	8			8			
A-C	72			72			
D-ABC	34	501	0.068	34	0.1	7.705	A
C-ABD	12	692	0.018	12	0.0	5.294	A
C-D	23			23			
C-A	123			123			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	25	654	0.039	25	0.0	5.728	A
A-BCD	12	672	0.018	12	0.0	5.457	A
A-B	8			8			
A-C	72			72			
D-ABC	34	501	0.068	34	0.1	7.707	A
C-ABD	12	692	0.018	12	0.0	5.294	A
C-D	23			23			
C-A	123			123			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	21	666	0.031	21	0.0	5.582	A
A-BCD	10	680	0.015	10	0.0	5.371	A
A-B	6			6			
A-C	58			58			
D-ABC	28	510	0.055	28	0.1	7.476	A
C-ABD	10	697	0.014	10	0.0	5.245	A
C-D	19			19			
C-A	101			101			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	674	0.026	17	0.0	5.478	A
A-BCD	8	686	0.012	8	0.0	5.309	A
A-B	5			5			
A-C	49			49			
D-ABC	23	516	0.045	23	0.0	7.311	A
C-ABD	8	700	0.012	8	0.0	5.207	A
C-D	16			16			
C-A	84			84			

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: JTC 3.j10
Path: W:\Projects\11399 - BnaM Derryadd Wind Farm_Revised_2022\05-Design\01-Calculations\Traffic\TIA
Report generation date: 04/12/2023 09:32:58

Summary of junction performance

	AM						PM					
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS
	2022 Baseflow											
Stream B-C	0.0	6.27	0.00	A	4.06	A	0.0	6.53	0.00	A	4.18	A
Stream B-A	0.7	14.11	0.43	B			0.8	15.16	0.45	C		
Stream C-B	0.1	6.25	0.05	A			0.0	6.14	0.02	A		
	2028 Baseflow											
Stream B-C	0.0	6.41	0.00	A	4.49	A	0.0	6.72	0.00	A	4.82	A
Stream B-A	0.9	15.73	0.48	C			1.0	17.46	0.51	C		
Stream C-B	0.1	6.44	0.06	A			0.0	6.27	0.03	A		
	2028 Baseflow with Proposed Development - Peak Construction Phase											
Stream B-C	0.0	6.43	0.00	A	4.48	A	0.0	6.73	0.00	A	4.81	A
Stream B-A	0.9	15.86	0.48	C			1.0	17.57	0.51	C		
Stream C-B	0.1	6.46	0.06	A			0.0	6.28	0.03	A		
	2028 Baseflow with Proposed Development - Average Construction Phase											
Stream B-C	0.0	6.42	0.00	A	4.49	A	0.0	6.72	0.00	A	4.82	A
Stream B-A	0.9	15.79	0.48	C			1.0	17.51	0.51	C		
Stream C-B	0.1	6.45	0.06	A			0.0	6.27	0.03	A		

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.

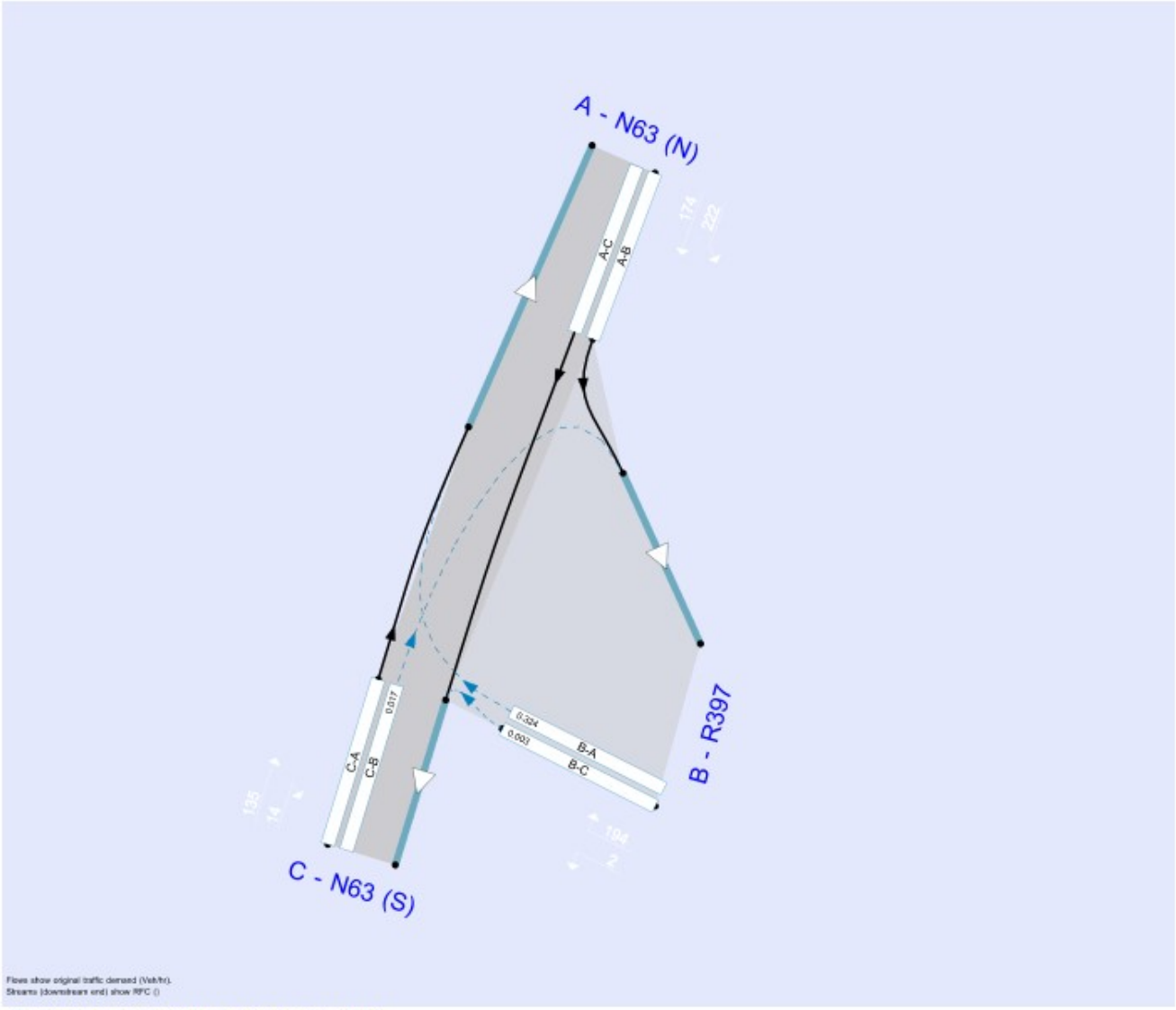
File summary

File Description

Title	Derryadd Wind Farm
Location	County Longford
Site number	
Date	30/11/2023
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	
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

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Baseflow	AM	ONE HOUR	08:15	09:45	15
D2	2028 Baseflow	AM	ONE HOUR	08:15	09:45	15
D3	2028 Baseflow with Proposed Development - Peak Construction Phase	AM	ONE HOUR	08:15	09:45	15
D4	2028 Baseflow with Proposed Development - Average Construction Phase	AM	ONE HOUR	08:15	09:45	15
D5	2022 Baseflow	PM	ONE HOUR	16:30	18:00	15
D6	2028 Baseflow	PM	ONE HOUR	16:30	18:00	15
D7	2028 Baseflow with Proposed Development - Peak Construction Phase	PM	ONE HOUR	16:30	18:00	15
D8	2028 Baseflow with Proposed Development - Average Construction Phase	PM	ONE HOUR	16:30	18:00	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Baseflow, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
3		T-Junction	Two-way	Two-way	Two-way		4.06	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.06	A

Arms

Arms

Arm	Name	Description	Arm type
A	N63 (N)		Major
B	R397		Minor
C	N63 (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - N63 (S)	6.60			240.0		-

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

Minor Arm Geometry

Arm	Minor arm type	Lane Width (Left) (m)	Lane Width (Right) (m)	Visibility to left (m)	Visibility to right (m)
B - R397	Two lanes	2.80	2.80	85	140

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	564	0.100	0.253	0.159	0.361
B-C	698	0.104	0.263	-	-
C-B	713	0.269	0.269	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Baseflow	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (N)		✓	263	100.000
B - R397		✓	174	100.000
C - N63 (S)		✓	203	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	171	92
	B - R397	172	0	2
	C - N63 (S)	173	30	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	8	13
	B - R397	6	0	0
	C - N63 (S)	4	3	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	6.27	0.0	A
B-A	0.43	14.11	0.7	B
C-A				
C-B	0.05	6.25	0.1	A
A-B				
A-C				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	617	0.002	1	0.0	5.845	A
B-A	129	472	0.274	128	0.4	10.411	B
C-A	130			130			
C-B	23	635	0.036	22	0.0	5.871	A
A-B	129			129			
A-C	69			69			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	600	0.003	2	0.0	6.013	A
B-A	155	461	0.336	154	0.5	11.724	B
C-A	156			156			
C-B	27	624	0.043	27	0.0	6.025	A
A-B	154			154			
A-C	83			83			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	577	0.004	2	0.0	6.263	A
B-A	189	444	0.426	188	0.7	14.008	B
C-A	190			190			
C-B	33	609	0.054	33	0.1	6.247	A
A-B	188			188			
A-C	101			101			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	577	0.004	2	0.0	6.266	A
B-A	189	444	0.426	189	0.7	14.105	B
C-A	190			190			
C-B	33	609	0.054	33	0.1	6.247	A
A-B	188			188			
A-C	101			101			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	600	0.003	2	0.0	6.021	A
B-A	155	461	0.336	155	0.5	11.832	B
C-A	156			156			
C-B	27	624	0.043	27	0.0	6.028	A
A-B	154			154			
A-C	83			83			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	617	0.002	2	0.0	5.852	A
B-A	129	472	0.274	130	0.4	10.536	B
C-A	130			130			
C-B	23	635	0.036	23	0.0	5.876	A
A-B	129			129			
A-C	69			69			

2028 Baseflow , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
3		T-Junction	Two-way	Two-way	Two-way		4.49	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.49	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2028 Baseflow	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (N)		✓	288	100.000
B - R397		✓	190	100.000
C - N63 (S)		✓	222	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	187	101
	B - R397	188	0	2
	C - N63 (S)	189	33	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	8	14
	B - R397	6	0	0
	C - N63 (S)	4	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	6.41	0.0	A
B-A	0.48	15.73	0.9	C
C-A				
C-B	0.06	6.44	0.1	A
A-B				
A-C				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	609	0.002	1	0.0	5.923	A
B-A	142	466	0.304	140	0.4	10.970	B
C-A	142			142			
C-B	25	624	0.040	25	0.0	6.007	A
A-B	141			141			
A-C	76			76			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	590	0.003	2	0.0	6.116	A
B-A	169	453	0.373	168	0.6	12.600	B
C-A	170			170			
C-B	30	612	0.048	30	0.1	6.183	A
A-B	168			168			
A-C	91			91			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	564	0.004	2	0.0	6.404	A
B-A	207	436	0.475	206	0.9	15.574	C
C-A	208			208			
C-B	36	595	0.061	36	0.1	6.440	A
A-B	206			206			
A-C	111			111			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	564	0.004	2	0.0	6.409	A
B-A	207	436	0.475	207	0.9	15.726	C
C-A	208			208			
C-B	36	595	0.061	36	0.1	6.440	A
A-B	206			206			
A-C	111			111			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	590	0.003	2	0.0	6.125	A
B-A	169	453	0.373	170	0.6	12.760	B
C-A	170			170			
C-B	30	612	0.048	30	0.1	6.184	A
A-B	168			168			
A-C	91			91			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	608	0.002	2	0.0	5.934	A
B-A	142	466	0.304	142	0.4	11.130	B
C-A	142			142			
C-B	25	624	0.040	25	0.0	6.010	A
A-B	141			141			
A-C	76			76			

2028 Baseflow with Proposed Development - Peak Construction Phase, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
3		T-Junction	Two-way	Two-way	Two-way		4.48	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.48	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2028 Baseflow with Proposed Development - Peak Construction Phase	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (N)		✓	291	100.000
B - R397		✓	190	100.000
C - N63 (S)		✓	223	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	187	104
	B - R397	188	0	2
	C - N63 (S)	190	33	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	8	16
	B - R397	6	0	0
	C - N63 (S)	5	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	6.43	0.0	A
B-A	0.48	15.86	0.9	C
C-A				
C-B	0.06	6.46	0.1	A
A-B				
A-C				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	608	0.002	1	0.0	5.935	A
B-A	142	465	0.304	140	0.4	11.014	B
C-A	143			143			
C-B	25	623	0.040	25	0.0	6.018	A
A-B	141			141			
A-C	78			78			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	589	0.003	2	0.0	6.130	A
B-A	169	452	0.374	168	0.6	12.668	B
C-A	171			171			
C-B	30	611	0.049	30	0.1	6.197	A
A-B	168			168			
A-C	93			93			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	563	0.004	2	0.0	6.424	A
B-A	207	434	0.477	206	0.9	15.704	C
C-A	209			209			
C-B	36	594	0.061	36	0.1	6.458	A
A-B	206			206			
A-C	115			115			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	562	0.004	2	0.0	6.429	A
B-A	207	434	0.477	207	0.9	15.860	C
C-A	209			209			
C-B	36	594	0.061	36	0.1	6.458	A
A-B	206			206			
A-C	115			115			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	588	0.003	2	0.0	6.138	A
B-A	169	452	0.374	170	0.6	12.831	B
C-A	171			171			
C-B	30	611	0.049	30	0.1	6.198	A
A-B	168			168			
A-C	93			93			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	607	0.002	2	0.0	5.943	A
B-A	142	465	0.304	142	0.4	11.178	B
C-A	143			143			
C-B	25	623	0.040	25	0.0	6.021	A
A-B	141			141			
A-C	78			78			

2028 Baseflow with Proposed Development - Average Construction Phase, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
3		T-Junction	Two-way	Two-way	Two-way		4.49	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.49	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2028 Baseflow with Proposed Development - Average Construction Phase	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (N)		✓	290	100.000
B - R397		✓	190	100.000
C - N63 (S)		✓	222	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	187	103
	B - R397	188	0	2
	C - N63 (S)	189	33	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	8	15
	B - R397	6	0	0
	C - N63 (S)	4	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	6.42	0.0	A
B-A	0.48	15.79	0.9	C
C-A				
C-B	0.06	6.45	0.1	A
A-B				
A-C				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	608	0.002	1	0.0	5.930	A
B-A	142	466	0.304	140	0.4	10.990	B
C-A	142			142			
C-B	25	623	0.040	25	0.0	6.014	A
A-B	141			141			
A-C	78			78			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	590	0.003	2	0.0	6.124	A
B-A	169	453	0.373	168	0.6	12.632	B
C-A	170			170			
C-B	30	611	0.049	30	0.1	6.191	A
A-B	168			168			
A-C	93			93			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	563	0.004	2	0.0	6.415	A
B-A	207	435	0.476	206	0.9	15.632	C
C-A	208			208			
C-B	36	594	0.061	36	0.1	6.451	A
A-B	206			206			
A-C	113			113			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	563	0.004	2	0.0	6.420	A
B-A	207	435	0.476	207	0.9	15.786	C
C-A	208			208			
C-B	36	594	0.061	36	0.1	6.451	A
A-B	206			206			
A-C	113			113			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	589	0.003	2	0.0	6.131	A
B-A	169	453	0.373	170	0.6	12.791	B
C-A	170			170			
C-B	30	611	0.049	30	0.1	6.192	A
A-B	168			168			
A-C	93			93			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	608	0.002	2	0.0	5.939	A
B-A	142	466	0.304	142	0.4	11.151	B
C-A	142			142			
C-B	25	623	0.040	25	0.0	6.017	A
A-B	141			141			
A-C	78			78			

2022 Baseflow , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
3		T-Junction	Two-way	Two-way	Two-way		4.18	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.18	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2022 Baseflow	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (N)		✓	363	100.000
B - R397		✓	179	100.000
C - N63 (S)		✓	135	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	204	159
	B - R397	177	0	2
	C - N63 (S)	122	13	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	5	4
	B - R397	8	0	0
	C - N63 (S)	6	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	6.53	0.0	A
B-A	0.45	15.16	0.8	C
C-A				
C-B	0.02	6.14	0.0	A
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	601	0.003	1	0.0	6.000	A
B-A	133	461	0.289	132	0.4	10.886	B
C-A	92			92			
C-B	10	636	0.015	10	0.0	5.747	A
A-B	154			154			
A-C	120			120			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	581	0.003	2	0.0	6.209	A
B-A	159	449	0.355	159	0.5	12.376	B
C-A	110			110			
C-B	12	621	0.019	12	0.0	5.906	A
A-B	183			183			
A-C	143			143			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	554	0.004	2	0.0	6.522	A
B-A	195	432	0.451	194	0.8	15.031	C
C-A	134			134			
C-B	14	601	0.024	14	0.0	6.140	A
A-B	225			225			
A-C	175			175			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	554	0.004	2	0.0	6.527	A
B-A	195	432	0.451	195	0.8	15.156	C
C-A	134			134			
C-B	14	601	0.024	14	0.0	6.140	A
A-B	225			225			
A-C	175			175			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	581	0.003	2	0.0	6.216	A
B-A	159	449	0.355	160	0.6	12.512	B
C-A	110			110			
C-B	12	621	0.019	12	0.0	5.908	A
A-B	183			183			
A-C	143			143			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	601	0.003	2	0.0	6.010	A
B-A	133	461	0.289	134	0.4	11.029	B
C-A	92			92			
C-B	10	636	0.015	10	0.0	5.747	A
A-B	154			154			
A-C	120			120			

2028 Baseflow , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
3		T-Junction	Two-way	Two-way	Two-way		4.82	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.82	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2028 Baseflow	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (N)		✓	396	100.000
B - R397		✓	196	100.000
C - N63 (S)		✓	147	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	222	174
	B - R397	194	0	2
	C - N63 (S)	133	14	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	6	5
	B - R397	9	0	0
	C - N63 (S)	6	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	6.72	0.0	A
B-A	0.51	17.46	1.0	C
C-A				
C-B	0.03	6.27	0.0	A
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	591	0.003	1	0.0	6.105	A
B-A	146	451	0.324	144	0.5	11.679	B
C-A	100			100			
C-B	11	628	0.017	10	0.0	5.827	A
A-B	167			167			
A-C	131			131			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	569	0.003	2	0.0	6.348	A
B-A	174	438	0.399	174	0.6	13.606	B
C-A	120			120			
C-B	13	612	0.021	13	0.0	6.006	A
A-B	200			200			
A-C	156			156			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	538	0.004	2	0.0	6.715	A
B-A	214	419	0.509	212	1.0	17.245	C
C-A	146			146			
C-B	15	589	0.026	15	0.0	6.274	A
A-B	244			244			
A-C	192			192			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	538	0.004	2	0.0	6.721	A
B-A	214	419	0.509	214	1.0	17.463	C
C-A	146			146			
C-B	15	589	0.026	15	0.0	6.274	A
A-B	244			244			
A-C	192			192			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	568	0.003	2	0.0	6.359	A
B-A	174	438	0.399	176	0.7	13.826	B
C-A	120			120			
C-B	13	612	0.021	13	0.0	6.009	A
A-B	200			200			
A-C	156			156			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	590	0.003	2	0.0	6.118	A
B-A	146	451	0.324	147	0.5	11.884	B
C-A	100			100			
C-B	11	628	0.017	11	0.0	5.827	A
A-B	167			167			
A-C	131			131			

2028 Baseflow with Proposed Development - Peak Construction Phase, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
3		T-Junction	Two-way	Two-way	Two-way		4.81	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.81	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2028 Baseflow with Proposed Development - Peak Construction Phase	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (N)		✓	397	100.000
B - R397		✓	196	100.000
C - N63 (S)		✓	150	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	222	175
	B - R397	194	0	2
	C - N63 (S)	138	14	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	6	5
	B - R397	9	0	0
	C - N63 (S)	8	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	6.73	0.0	A
B-A	0.51	17.57	1.0	C
C-A				
C-B	0.03	6.28	0.0	A
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	591	0.003	1	0.0	6.108	A
B-A	146	450	0.325	144	0.5	11.711	B
C-A	102			102			
C-B	11	628	0.017	10	0.0	5.829	A
A-B	167			167			
A-C	132			132			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	568	0.003	2	0.0	6.352	A
B-A	174	437	0.400	174	0.6	13.658	B
C-A	122			122			
C-B	13	612	0.021	13	0.0	6.009	A
A-B	200			200			
A-C	157			157			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	538	0.004	2	0.0	6.721	A
B-A	214	418	0.511	212	1.0	17.329	C
C-A	150			150			
C-B	15	589	0.026	15	0.0	6.277	A
A-B	244			244			
A-C	193			193			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	537	0.004	2	0.0	6.727	A
B-A	214	418	0.511	214	1.0	17.568	C
C-A	150			150			
C-B	15	589	0.026	15	0.0	6.277	A
A-B	244			244			
A-C	193			193			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	568	0.003	2	0.0	6.361	A
B-A	174	437	0.400	176	0.7	13.878	B
C-A	122			122			
C-B	13	612	0.021	13	0.0	6.012	A
A-B	200			200			
A-C	157			157			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	590	0.003	2	0.0	6.119	A
B-A	146	450	0.325	147	0.5	11.914	B
C-A	102			102			
C-B	11	628	0.017	11	0.0	5.829	A
A-B	167			167			
A-C	132			132			

2028 Baseflow with Proposed Development - Average Construction Phase, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
3		T-Junction	Two-way	Two-way	Two-way		4.82	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.82	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2028 Baseflow with Proposed Development - Average Construction Phase	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (N)		✓	396	100.000
B - R397		✓	196	100.000
C - N63 (S)		✓	149	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	222	174
	B - R397	194	0	2
	C - N63 (S)	135	14	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	6	5
	B - R397	9	0	0
	C - N63 (S)	7	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	6.72	0.0	A
B-A	0.51	17.51	1.0	C
C-A				
C-B	0.03	6.27	0.0	A
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	591	0.003	1	0.0	6.106	A
B-A	146	450	0.324	144	0.5	11.694	B
C-A	102			102			
C-B	11	628	0.017	10	0.0	5.827	A
A-B	167			167			
A-C	131			131			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	569	0.003	2	0.0	6.349	A
B-A	174	437	0.399	174	0.6	13.630	B
C-A	121			121			
C-B	13	612	0.021	13	0.0	6.006	A
A-B	200			200			
A-C	156			156			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	538	0.004	2	0.0	6.716	A
B-A	214	419	0.510	212	1.0	17.289	C
C-A	149			149			
C-B	15	589	0.026	15	0.0	6.274	A
A-B	244			244			
A-C	192			192			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	538	0.004	2	0.0	6.722	A
B-A	214	419	0.510	214	1.0	17.511	C
C-A	149			149			
C-B	15	589	0.026	15	0.0	6.274	A
A-B	244			244			
A-C	192			192			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	568	0.003	2	0.0	6.360	A
B-A	174	437	0.399	176	0.7	13.848	B
C-A	121			121			
C-B	13	612	0.021	13	0.0	6.009	A
A-B	200			200			
A-C	156			156			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	590	0.003	2	0.0	6.116	A
B-A	146	450	0.324	147	0.5	11.896	B
C-A	102			102			
C-B	11	628	0.017	11	0.0	5.827	A
A-B	167			167			
A-C	131			131			

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: JTC 4.j10
Path: W:\Projects\11399 - BnaM Derryadd Wind Farm_Revised_2022\05-Design\01-Calculations\Traffic\TIA
Report generation date: 04/12/2023 09:22:03

Summary of junction performance

	AM						PM					
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS
	2022 Baseflow											
Stream B-ACD	0.8	14.14	0.45	B	4.09	A	0.3	9.38	0.20	A	2.05	A
Stream A-BCD	0.0	6.66	0.01	A			0.0	6.43	0.00	A		
Stream D-ABC	0.0	9.79	0.04	A			0.0	0.00	0.00	A		
Stream C-ABD	0.1	6.36	0.10	A			0.2	6.30	0.15	A		
	2028 Baseflow											
Stream B-ACD	0.9	15.59	0.49	C	4.42	A	0.3	9.71	0.22	A	2.11	A
Stream A-BCD	0.0	6.75	0.01	A			0.0	6.48	0.00	A		
Stream D-ABC	0.0	10.03	0.04	B			0.0	0.00	0.00	A		
Stream C-ABD	0.1	6.50	0.11	A			0.2	6.39	0.17	A		
	2028 Baseflow with Proposed Development - Peak Construction Phase											
Stream B-ACD	1.0	16.57	0.51	C	4.62	A	0.3	10.06	0.23	B	2.18	A
Stream A-BCD	0.0	6.77	0.01	A			0.0	6.55	0.00	A		
Stream D-ABC	0.0	10.13	0.04	B			0.0	0.00	0.00	A		
Stream C-ABD	0.1	6.76	0.12	A			0.2	6.55	0.18	A		
	2028 Baseflow with Proposed Development - Average Construction Phase											
Stream B-ACD	1.0	16.01	0.50	C	4.45	A	0.3	9.79	0.22	A	2.08	A
Stream A-BCD	0.0	6.76	0.01	A			0.0	6.53	0.00	A		
Stream D-ABC	0.0	10.09	0.04	B			0.0	0.00	0.00	A		
Stream C-ABD	0.1	6.55	0.11	A			0.2	6.41	0.17	A		

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.

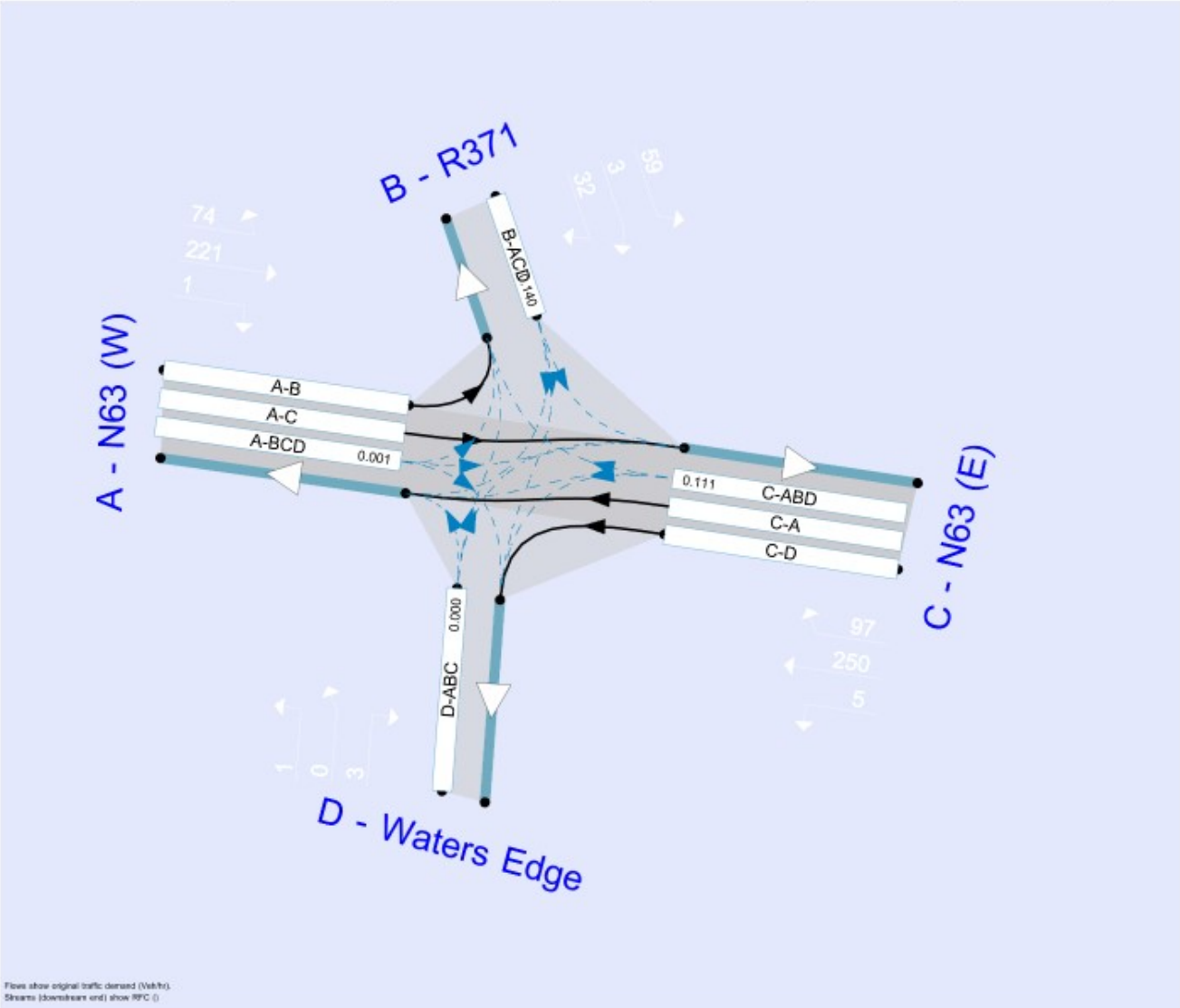
File summary

File Description

Title	Derryadd Wind Farm
Location	County Longford
Site number	
Date	30/11/2023
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	
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

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Baseflow	AM	ONE HOUR	08:15	09:45	15
D2	2028 Baseflow	AM	ONE HOUR	08:15	09:45	15
D3	2028 Baseflow with Proposed Development - Peak Construction Phase	AM	ONE HOUR	08:15	09:45	15
D4	2028 Baseflow with Proposed Development - Average Construction Phase	AM	ONE HOUR	08:15	09:45	15
D5	2022 Baseflow	PM	ONE HOUR	16:30	18:00	15
D6	2028 Baseflow	PM	ONE HOUR	16:30	18:00	15
D7	2028 Baseflow with Proposed Development - Peak Construction Phase	PM	ONE HOUR	16:30	18:00	15
D8	2028 Baseflow with Proposed Development - Average Construction Phase	PM	ONE HOUR	16:30	18:00	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Baseflow, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		4.09	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.09	A

Arms

Arms

Arm	Name	Description	Arm type
A	N63 (W)		Major
B	R371		Minor
C	N63 (E)		Major
D	Waters Edge		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A - N63 (W)	6.95			98.0	✓	1.00
C - N63 (E)	7.50			250.0	✓	1.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - R371	One lane	3.20	52	38
D - Waters Edge	One lane	2.20	20	20

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
A-D	631	-	-	-	0.234	0.234	0.234	-	0.234	-	-
B-AD	523	0.089	0.225	-	-	-	0.142	0.322	0.142	0.089	0.225
B-C	661	0.095	0.239	-	-	-	-	-	-	0.095	0.239
C-B	719	0.260	0.260	-	-	-	-	-	-	0.260	0.260
D-A	586	-	-	-	0.217	0.086	0.217	-	0.086	-	-
D-BC	454	0.126	0.126	0.286	0.201	0.079	0.201	-	0.079	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Baseflow	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (W)		✓	281	100.000
B - R371		✓	188	100.000
C - N63 (E)		✓	277	100.000
D - Waters Edge		✓	14	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	35	241	5
	B - R371	95	0	92	1
	C - N63 (E)	216	57	0	4
	D - Waters Edge	7	0	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	6	5	0
	B - R371	3	0	1	0
	C - N63 (E)	10	5	0	0
	D - Waters Edge	14	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.45	14.14	0.8	B
A-BCD	0.01	6.66	0.0	A
A-B				
A-C				
D-ABC	0.04	9.79	0.0	A
C-ABD	0.10	6.36	0.1	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	142	497	0.285	140	0.4	10.045	B
A-BCD	4	572	0.007	4	0.0	6.334	A
A-B	26			26			
A-C	181			181			
D-ABC	11	415	0.025	10	0.0	8.894	A
C-ABD	44	642	0.068	43	0.1	6.013	A
C-D	3			3			
C-A	162			162			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	169	482	0.351	168	0.5	11.458	B
A-BCD	5	561	0.008	5	0.0	6.470	A
A-B	31			31			
A-C	217			217			
D-ABC	13	402	0.031	13	0.0	9.251	A
C-ABD	53	637	0.083	53	0.1	6.164	A
C-D	4			4			
C-A	193			193			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	207	462	0.449	206	0.8	14.027	B
A-BCD	6	546	0.010	6	0.0	6.663	A
A-B	39			39			
A-C	265			265			
D-ABC	15	383	0.040	15	0.0	9.788	A
C-ABD	66	631	0.104	66	0.1	6.362	A
C-D	4			4			
C-A	235			235			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	207	461	0.449	207	0.8	14.136	B
A-BCD	6	546	0.010	6	0.0	6.665	A
A-B	39			39			
A-C	265			265			
D-ABC	15	383	0.040	15	0.0	9.793	A
C-ABD	66	631	0.104	66	0.1	6.362	A
C-D	4			4			
C-A	235			235			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	169	482	0.351	170	0.6	11.577	B
A-BCD	5	561	0.008	5	0.0	6.473	A
A-B	31			31			
A-C	217			217			
D-ABC	13	402	0.031	13	0.0	9.259	A
C-ABD	53	637	0.083	53	0.1	6.166	A
C-D	4			4			
C-A	193			193			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	142	497	0.285	142	0.4	10.168	B
A-BCD	4	572	0.007	4	0.0	6.337	A
A-B	26			26			
A-C	181			181			
D-ABC	11	415	0.025	11	0.0	8.905	A
C-ABD	44	642	0.068	44	0.1	6.022	A
C-D	3			3			
C-A	162			162			

2028 Baseflow , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		4.42	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.42	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2028 Baseflow	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (W)		✓	301	100.000
B - R371		✓	201	100.000
C - N63 (E)		✓	297	100.000
D - Waters Edge		✓	15	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	38	258	5
	B - R371	102	0	98	1
	C - N63 (E)	232	61	0	4
	D - Waters Edge	8	0	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	6	6	0
	B - R371	3	0	1	0
	C - N63 (E)	11	6	0	0
	D - Waters Edge	16	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.49	15.59	0.9	C
A-BCD	0.01	6.75	0.0	A
A-B				
A-C				
D-ABC	0.04	10.03	0.0	B
C-ABD	0.11	6.50	0.1	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	151	490	0.309	150	0.4	10.508	B
A-BCD	4	567	0.007	4	0.0	6.386	A
A-B	29			29			
A-C	194			194			
D-ABC	11	409	0.028	11	0.0	9.040	A
C-ABD	47	634	0.074	47	0.1	6.127	A
C-D	3			3			
C-A	174			174			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	181	474	0.381	180	0.6	12.199	B
A-BCD	5	555	0.008	5	0.0	6.535	A
A-B	34			34			
A-C	232			232			
D-ABC	13	395	0.034	13	0.0	9.432	A
C-ABD	57	629	0.090	57	0.1	6.288	A
C-D	4			4			
C-A	207			207			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	221	452	0.489	220	0.9	15.418	C
A-BCD	6	539	0.010	6	0.0	6.748	A
A-B	42			42			
A-C	284			284			
D-ABC	17	375	0.044	16	0.0	10.026	B
C-ABD	71	624	0.114	71	0.1	6.500	A
C-D	4			4			
C-A	252			252			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	221	452	0.490	221	0.9	15.586	C
A-BCD	6	539	0.010	6	0.0	6.750	A
A-B	42			42			
A-C	284			284			
D-ABC	17	375	0.044	17	0.0	10.032	B
C-ABD	71	625	0.114	71	0.1	6.503	A
C-D	4			4			
C-A	252			252			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	181	474	0.381	182	0.6	12.362	B
A-BCD	5	555	0.008	5	0.0	6.541	A
A-B	34			34			
A-C	232			232			
D-ABC	13	395	0.034	14	0.0	9.439	A
C-ABD	57	629	0.090	57	0.1	6.292	A
C-D	4			4			
C-A	207			207			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	151	490	0.309	152	0.5	10.664	B
A-BCD	4	567	0.007	4	0.0	6.390	A
A-B	29			29			
A-C	194			194			
D-ABC	11	409	0.028	11	0.0	9.053	A
C-ABD	47	634	0.074	47	0.1	6.136	A
C-D	3			3			
C-A	174			174			

2028 Baseflow with Proposed Development - Peak Construction Phase, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		4.62	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.62	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2028 Baseflow with Proposed Development - Peak Construction Phase	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (W)		✓	316	100.000
B - R371		✓	205	100.000
C - N63 (E)		✓	302	100.000
D - Waters Edge		✓	15	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	38	273	5
	B - R371	102	0	102	1
	C - N63 (E)	235	63	0	4
	D - Waters Edge	8	0	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	6	9	0
	B - R371	3	0	3	0
	C - N63 (E)	12	9	0	0
	D - Waters Edge	16	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.51	16.57	1.0	C
A-BCD	0.01	6.77	0.0	A
A-B				
A-C				
D-ABC	0.04	10.13	0.0	B
C-ABD	0.12	6.76	0.1	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	154	483	0.319	152	0.5	10.832	B
A-BCD	4	566	0.007	4	0.0	6.397	A
A-B	29			29			
A-C	206			206			
D-ABC	11	407	0.028	11	0.0	9.090	A
C-ABD	49	615	0.079	48	0.1	6.350	A
C-D	3			3			
C-A	176			176			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	184	466	0.395	184	0.6	12.703	B
A-BCD	5	554	0.008	5	0.0	6.548	A
A-B	34			34			
A-C	245			245			
D-ABC	13	392	0.034	13	0.0	9.498	A
C-ABD	59	610	0.097	59	0.1	6.527	A
C-D	4			4			
C-A	209			209			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	226	443	0.510	224	1.0	16.363	C
A-BCD	6	538	0.010	6	0.0	6.764	A
A-B	42			42			
A-C	301			301			
D-ABC	17	372	0.044	16	0.0	10.119	B
C-ABD	74	607	0.122	74	0.1	6.752	A
C-D	4			4			
C-A	254			254			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	226	443	0.510	226	1.0	16.570	C
A-BCD	6	537	0.010	6	0.0	6.766	A
A-B	42			42			
A-C	301			301			
D-ABC	17	372	0.044	17	0.0	10.125	B
C-ABD	74	607	0.122	74	0.1	6.755	A
C-D	4			4			
C-A	254			254			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	184	466	0.395	186	0.7	12.899	B
A-BCD	5	554	0.008	5	0.0	6.552	A
A-B	34			34			
A-C	245			245			
D-ABC	13	392	0.034	14	0.0	9.507	A
C-ABD	59	611	0.097	59	0.1	6.530	A
C-D	4			4			
C-A	209			209			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	154	483	0.320	155	0.5	11.007	B
A-BCD	4	566	0.007	4	0.0	6.401	A
A-B	29			29			
A-C	206			206			
D-ABC	11	407	0.028	11	0.0	9.101	A
C-ABD	49	615	0.079	49	0.1	6.360	A
C-D	3			3			
C-A	176			176			

2028 Baseflow with Proposed Development - Average Construction Phase, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		4.45	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.45	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2028 Baseflow with Proposed Development - Average Construction Phase	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (W)		✓	313	100.000
B - R371		✓	203	100.000
C - N63 (E)		✓	299	100.000
D - Waters Edge		✓	15	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	38	270	5
	B - R371	102	0	100	1
	C - N63 (E)	234	61	0	4
	D - Waters Edge	8	0	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	6	8	0
	B - R371	3	0	1	0
	C - N63 (E)	11	6	0	0
	D - Waters Edge	16	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.50	16.01	1.0	C
A-BCD	0.01	6.76	0.0	A
A-B				
A-C				
D-ABC	0.04	10.09	0.0	B
C-ABD	0.11	6.55	0.1	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	153	488	0.313	151	0.4	10.628	B
A-BCD	4	567	0.007	4	0.0	6.390	A
A-B	29			29			
A-C	203			203			
D-ABC	11	408	0.028	11	0.0	9.070	A
C-ABD	47	631	0.075	47	0.1	6.160	A
C-D	3			3			
C-A	175			175			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	182	471	0.387	182	0.6	12.402	B
A-BCD	5	555	0.008	5	0.0	6.540	A
A-B	34			34			
A-C	243			243			
D-ABC	13	394	0.034	13	0.0	9.472	A
C-ABD	57	625	0.091	57	0.1	6.330	A
C-D	4			4			
C-A	208			208			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	224	448	0.499	222	1.0	15.827	C
A-BCD	6	538	0.010	6	0.0	6.753	A
A-B	42			42			
A-C	297			297			
D-ABC	17	373	0.044	16	0.0	10.083	B
C-ABD	71	620	0.115	71	0.1	6.553	A
C-D	4			4			
C-A	254			254			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	224	448	0.499	223	1.0	16.009	C
A-BCD	6	538	0.010	6	0.0	6.755	A
A-B	42			42			
A-C	297			297			
D-ABC	17	373	0.044	17	0.0	10.089	B
C-ABD	71	620	0.115	71	0.1	6.553	A
C-D	4			4			
C-A	254			254			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	182	471	0.387	184	0.6	12.581	B
A-BCD	5	555	0.008	5	0.0	6.546	A
A-B	34			34			
A-C	243			243			
D-ABC	13	393	0.034	14	0.0	9.480	A
C-ABD	57	626	0.091	57	0.1	6.333	A
C-D	4			4			
C-A	208			208			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	153	488	0.313	154	0.5	10.789	B
A-BCD	4	567	0.007	4	0.0	6.396	A
A-B	29			29			
A-C	203			203			
D-ABC	11	408	0.028	11	0.0	9.083	A
C-ABD	47	631	0.075	47	0.1	6.167	A
C-D	3			3			
C-A	175			175			

2022 Baseflow , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		2.05	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.05	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2022 Baseflow	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (W)		✓	275	100.000
B - R371		✓	88	100.000
C - N63 (E)		✓	317	100.000
D - Waters Edge		✓	4	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	69	205	1
	B - R371	30	0	55	3
	C - N63 (E)	223	89	0	5
	D - Waters Edge	1	0	3	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	4	5	0
	B - R371	7	0	2	0
	C - N63 (E)	4	0	0	0
	D - Waters Edge	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.20	9.38	0.3	A
A-BCD	0.00	6.43	0.0	A
A-B				
A-C				
D-ABC	0.00	0.00	0.0	A
C-ABD	0.15	6.30	0.2	A
C-D				
C-A				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	66	513	0.129	66	0.1	8.038	A
A-BCD	0.75	583	0.001	0.75	0.0	6.182	A
A-B	52			52			
A-C	154			154			
D-ABC	0	451	0.000	0	0.0	0.000	A
C-ABD	69	680	0.101	68	0.1	5.883	A
C-D	4			4			
C-A	166			166			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	79	500	0.158	79	0.2	8.560	A
A-BCD	0.90	574	0.002	0.90	0.0	6.283	A
A-B	62			62			
A-C	184			184			
D-ABC	0	439	0.000	0	0.0	0.000	A
C-ABD	83	677	0.123	83	0.1	6.063	A
C-D	4			4			
C-A	197			197			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	97	481	0.202	97	0.2	9.366	A
A-BCD	1	561	0.002	1	0.0	6.428	A
A-B	76			76			
A-C	226			226			
D-ABC	0	423	0.000	0	0.0	0.000	A
C-ABD	104	675	0.154	104	0.2	6.299	A
C-D	5			5			
C-A	240			240			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	97	481	0.202	97	0.3	9.378	A
A-BCD	1	561	0.002	1	0.0	6.428	A
A-B	76			76			
A-C	226			226			
D-ABC	0	422	0.000	0	0.0	0.000	A
C-ABD	104	675	0.154	104	0.2	6.305	A
C-D	5			5			
C-A	240			240			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	79	499	0.158	79	0.2	8.575	A
A-BCD	0.90	574	0.002	0.90	0.0	6.286	A
A-B	62			62			
A-C	184			184			
D-ABC	0	439	0.000	0	0.0	0.000	A
C-ABD	83	677	0.123	83	0.1	6.070	A
C-D	4			4			
C-A	197			197			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	66	513	0.129	66	0.1	8.068	A
A-BCD	0.75	583	0.001	0.75	0.0	6.183	A
A-B	52			52			
A-C	154			154			
D-ABC	0	451	0.000	0	0.0	0.000	A
C-ABD	69	680	0.101	69	0.1	5.895	A
C-D	4			4			
C-A	166			166			

2028 Baseflow , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		2.11	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.11	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2028 Baseflow	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (W)		✓	294	100.000
B - R371		✓	94	100.000
C - N63 (E)		✓	338	100.000
D - Waters Edge		✓	4	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	74	219	1
	B - R371	32	0	59	3
	C - N63 (E)	238	95	0	5
	D - Waters Edge	1	0	3	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	5	5	0
	B - R371	7	0	2	0
	C - N63 (E)	4	0	0	0
	D - Waters Edge	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.22	9.71	0.3	A
A-BCD	0.00	6.48	0.0	A
A-B				
A-C				
D-ABC	0.00	0.00	0.0	A
C-ABD	0.17	6.39	0.2	A
C-D				
C-A				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	71	509	0.139	70	0.2	8.197	A
A-BCD	0.75	580	0.001	0.75	0.0	6.215	A
A-B	56			56			
A-C	165			165			
D-ABC	0	447	0.000	0	0.0	0.000	A
C-ABD	74	678	0.109	73	0.1	5.943	A
C-D	4			4			
C-A	177			177			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	85	494	0.171	84	0.2	8.776	A
A-BCD	0.90	570	0.002	0.90	0.0	6.324	A
A-B	67			67			
A-C	197			197			
D-ABC	0	434	0.000	0	0.0	0.000	A
C-ABD	89	675	0.132	89	0.2	6.138	A
C-D	4			4			
C-A	210			210			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	103	474	0.218	103	0.3	9.695	A
A-BCD	1	557	0.002	1	0.0	6.480	A
A-B	81			81			
A-C	241			241			
D-ABC	0	416	0.000	0	0.0	0.000	A
C-ABD	112	675	0.166	112	0.2	6.391	A
C-D	5			5			
C-A	255			255			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	103	474	0.218	103	0.3	9.711	A
A-BCD	1	556	0.002	1	0.0	6.481	A
A-B	81			81			
A-C	241			241			
D-ABC	0	416	0.000	0	0.0	0.000	A
C-ABD	112	675	0.166	112	0.2	6.394	A
C-D	5			5			
C-A	255			255			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	85	494	0.171	85	0.2	8.798	A
A-BCD	0.90	570	0.002	0.90	0.0	6.327	A
A-B	67			67			
A-C	197			197			
D-ABC	0	434	0.000	0	0.0	0.000	A
C-ABD	89	676	0.132	89	0.2	6.145	A
C-D	4			4			
C-A	210			210			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	71	509	0.139	71	0.2	8.230	A
A-BCD	0.75	580	0.001	0.75	0.0	6.218	A
A-B	56			56			
A-C	165			165			
D-ABC	0	447	0.000	0	0.0	0.000	A
C-ABD	74	679	0.109	74	0.1	5.958	A
C-D	4			4			
C-A	177			177			

2028 Baseflow with Proposed Development - Peak Construction Phase, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		2.18	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.18	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2028 Baseflow with Proposed Development - Peak Construction Phase	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (W)		✓	297	100.000
B - R371		✓	96	100.000
C - N63 (E)		✓	357	100.000
D - Waters Edge		✓	4	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	74	222	1
	B - R371	32	0	61	3
	C - N63 (E)	253	99	0	5
	D - Waters Edge	1	0	3	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	5	7	0
	B - R371	7	0	5	0
	C - N63 (E)	7	2	0	0
	D - Waters Edge	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.23	10.06	0.3	B
A-BCD	0.00	6.55	0.0	A
A-B				
A-C				
D-ABC	0.00	0.00	0.0	A
C-ABD	0.18	6.55	0.2	A
C-D				
C-A				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	72	499	0.145	72	0.2	8.411	A
A-BCD	0.75	576	0.001	0.75	0.0	6.259	A
A-B	56			56			
A-C	167			167			
D-ABC	0	443	0.000	0	0.0	0.000	A
C-ABD	77	668	0.116	77	0.1	6.088	A
C-D	4			4			
C-A	188			188			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	86	484	0.178	86	0.2	9.038	A
A-BCD	0.90	565	0.002	0.90	0.0	6.379	A
A-B	67			67			
A-C	200			200			
D-ABC	0	429	0.000	0	0.0	0.000	A
C-ABD	94	666	0.141	94	0.2	6.285	A
C-D	4			4			
C-A	223			223			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	106	464	0.228	105	0.3	10.040	B
A-BCD	1	551	0.002	1	0.0	6.551	A
A-B	81			81			
A-C	244			244			
D-ABC	0	410	0.000	0	0.0	0.000	A
C-ABD	118	668	0.177	118	0.2	6.543	A
C-D	5			5			
C-A	270			270			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	106	464	0.228	106	0.3	10.059	B
A-BCD	1	551	0.002	1	0.0	6.551	A
A-B	81			81			
A-C	244			244			
D-ABC	0	410	0.000	0	0.0	0.000	A
C-ABD	118	668	0.177	118	0.2	6.550	A
C-D	5			5			
C-A	270			270			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	86	484	0.178	87	0.2	9.062	A
A-BCD	0.90	565	0.002	0.90	0.0	6.379	A
A-B	67			67			
A-C	200			200			
D-ABC	0	429	0.000	0	0.0	0.000	A
C-ABD	94	667	0.141	94	0.2	6.293	A
C-D	4			4			
C-A	223			223			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	72	499	0.145	72	0.2	8.447	A
A-BCD	0.75	576	0.001	0.75	0.0	6.262	A
A-B	56			56			
A-C	167			167			
D-ABC	0	443	0.000	0	0.0	0.000	A
C-ABD	77	668	0.116	77	0.1	6.103	A
C-D	4			4			
C-A	188			188			

2028 Baseflow with Proposed Development - Average Construction Phase, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		2.08	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.08	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2028 Baseflow with Proposed Development - Average Construction Phase	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (W)		✓	296	100.000
B - R371		✓	94	100.000
C - N63 (E)		✓	352	100.000
D - Waters Edge		✓	4	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	74	221	1
	B - R371	32	0	59	3
	C - N63 (E)	250	97	0	5
	D - Waters Edge	1	0	3	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	5	6	0
	B - R371	7	0	2	0
	C - N63 (E)	6	0	0	0
	D - Waters Edge	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.22	9.79	0.3	A
A-BCD	0.00	6.53	0.0	A
A-B				
A-C				
D-ABC	0.00	0.00	0.0	A
C-ABD	0.17	6.41	0.2	A
C-D				
C-A				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	71	507	0.140	70	0.2	8.236	A
A-BCD	0.75	577	0.001	0.75	0.0	6.248	A
A-B	56			56			
A-C	166			166			
D-ABC	0	444	0.000	0	0.0	0.000	A
C-ABD	75	679	0.111	75	0.1	5.954	A
C-D	4			4			
C-A	186			186			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	85	492	0.172	84	0.2	8.831	A
A-BCD	0.90	566	0.002	0.90	0.0	6.365	A
A-B	67			67			
A-C	199			199			
D-ABC	0	430	0.000	0	0.0	0.000	A
C-ABD	91	676	0.135	91	0.2	6.149	A
C-D	4			4			
C-A	221			221			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	103	471	0.220	103	0.3	9.779	A
A-BCD	1	552	0.002	1	0.0	6.533	A
A-B	81			81			
A-C	243			243			
D-ABC	0	412	0.000	0	0.0	0.000	A
C-ABD	115	677	0.170	115	0.2	6.401	A
C-D	5			5			
C-A	267			267			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	103	471	0.220	103	0.3	9.795	A
A-BCD	1	552	0.002	1	0.0	6.534	A
A-B	81			81			
A-C	243			243			
D-ABC	0	412	0.000	0	0.0	0.000	A
C-ABD	115	677	0.170	115	0.2	6.407	A
C-D	5			5			
C-A	267			267			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	85	492	0.172	85	0.2	8.851	A
A-BCD	0.90	566	0.002	0.90	0.0	6.366	A
A-B	67			67			
A-C	199			199			
D-ABC	0	430	0.000	0	0.0	0.000	A
C-ABD	91	677	0.135	92	0.2	6.155	A
C-D	4			4			
C-A	221			221			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	71	507	0.140	71	0.2	8.268	A
A-BCD	0.75	577	0.001	0.75	0.0	6.251	A
A-B	56			56			
A-C	166			166			
D-ABC	0	444	0.000	0	0.0	0.000	A
C-ABD	75	679	0.111	76	0.1	5.969	A
C-D	4			4			
C-A	186			186			

Appendix B JUNCTION 10 PICADY

Traffic Calculations for Derryadd Wind Farm

Site 1 - N63 (NW) / N64(NE) / R392 / Rathcline Rd

AM Peak (08:30 - 09:30)

Seasonally Adjusted ***2022*** ***2028*** ***Construction Phase***

	Longford	***LGV***	***HGV***
	2016 - 2030 index	*1.0134*	*1.0313*
	Years	*6*	*6*
	High Growth Factor	***1.0831***	***1.2031***

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	148	9	175	5	17	0
B	97	14	0	0	9	0	8	0
C	146	9	19	1	0	0	8	1
D	22	0	16	0	6	0	0	0

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	161	11	190	6	18	0
B	105	17	0	0	10	0	9	0
C	159	11	21	1	0	0	9	1
D	24	0	17	0	7	0	0	0

AM PEAK GENERATED TRAFFIC

CONSTRUCTION PHASE - PEAK

Generated Traffic

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	6	8	2	3	0	0
B	0	4	0	0	0	0	0	0
C	0	1	0	0	0	0	0	0
D	0	0	0	0	0	0	0	0

2028 Construction Phase - Peak

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	167	19	192	9	18	0
B	105	21	0	0	10	0	9	0
C	159	12	21	1	0	0	9	1
D	24	0	17	0	7	0	0	0

Traffic Calculations for Derryadd Wind Farm

Site 1 - N63 (NW) / N64(NE) / R392 / Rathcline Rd

PM Peak (16:45 - 17:45)

Seasonally Adjusted ***2022*** ***2028***

Construction Phase

	Longford	***LGV***	***HGV***
	2016 - 2030 index	*1.0134*	*1.0313*
	Years	*6*	*6*
	High Growth Factor	***1.0831***	***1.2031***

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	124	7	141	6	22	0
B	145	6	0	0	6	0	8	0
C	174	5	5	0	0	0	17	1
D	17	1	5	0	5	0	0	0

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	135	8	153	7	24	0
B	157	7	0	0	7	0	9	0
C	189	6	5	0	0	0	18	1
D	18	1	5	0	5	0	0	0

PM PEAK GENERATED TRAFFIC

CONSTRUCTION PHASE - PEAK

Generated Traffic

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	0	4	0	1	0	0
B	6	8	0	0	0	0	0	0
C	2	3	0	0	0	0	0	0
D	0	0	0	0	0	0	0	0

2028 Construction Phase - Peak

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	135	12	153	8	24	0
B	163	15	0	0	7	0	9	0
C	191	9	5	0	0	0	18	1
D	18	1	5	0	5	0	0	0

Traffic Calculations for Derryadd Wind Farm

Site 2 - NR392(NW) / R398 / R392(SE) / L1155

AM Peak (08:30 - 09:30)

Seasonally Adjusted ***2022*** ***2028*** ***Construction Phase***

	Longford	***LGV***	***HGV***
	2016 - 2030 index	*1.0134*	*1.0313*
	Years	*6*	*6*
	High Growth Factor	***1.0831***	***1.2031***

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	3	0	101	5	7	1
B	2	0	0	0	7	0	10	1
C	57	7	4	0	0	0	6	5
D	9	1	25	0	16	0	0	0

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	3	0	110	6	8	1
B	2	0	0	0	8	0	11	1
C	62	8	4	0	0	0	7	6
D	10	1	27	0	17	0	0	0

AM PEAK GENERATED TRAFFIC

CONSTRUCTION PHASE - PEAK

Generated Traffic

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	0	0	0	1	0	0
B	0	0	0	0	0	0	0	0
C	1	2	0	0	0	0	0	0
D	0	0	0	0	0	0	0	0

2028 Construction Phase - Peak

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	3	0	110	7	8	1
B	2	0	0	0	8	0	11	1
C	63	10	4	0	0	0	7	6
D	10	1	27	0	17	0	0	0

Traffic Calculations for Derryadd Wind Farm

Site 2 - NR392(NW) / R398 / R392(SE) / L1155

PM Peak (16:45 - 17:45)

Seasonally Adjusted ***2022*** ***2028***

Construction Phase

Longford	***LGV***	***HGV***
2016 - 2030 index	*1.0134*	*1.0313*
Years	*6*	*6*
High Growth Factor	***1.0831***	***1.2031***

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	6	0	57	1	10	0
B	4	0	0	0	2	0	16	0
C	100	3	10	0	0	0	18	1
D	11	1	13	0	3	1	0	0

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	7	0	62	1	11	0
B	4	0	0	0	2	0	17	0
C	109	4	11	0	0	0	20	1
D	12	1	14	0	3	1	0	0

PM PEAK GENERATED TRAFFIC

CONSTRUCTION PHASE - PEAK

Generated Traffic

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	0	0	1	2	0	0
B	0	0	0	0	0	0	0	0
C	0	1	0	0	0	0	0	0
D	0	0	0	0	0	0	0	0

2028 Construction Phase - Peak

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	7	0	63	3	11	0
B	4	0	0	0	2	0	17	0
C	109	5	11	0	0	0	20	1
D	12	1	14	0	3	1	0	0

Traffic Calculations for Derryadd Wind Farm

Site 3 - N63 (N) / R397 / N63(S)

AM Peak (08:30 - 09:30)

Seasonally Adjusted ***2022*** ***2028***

Construction Phase		
Longford	***LGV***	***HGV***
2016 - 2030 index	*1.0134*	*1.0313*
Years	*6*	*6*
High Growth Factor	***1.0831***	***1.2031***

Route	A	HGV	B	HGV	C	HGV
A	0	0	158	13	80	12
B	162	10	0	0	2	0
C	166	7	29	1	0	0

Route	A	HGV	B	HGV	C	HGV
A	0	0	172	16	87	14
B	176	12	0	0	2	0
C	180	8	31	1	0	0

AM PEAK GENERATED TRAFFIC

CONSTRUCTION PHASE - PEAK

Generated Traffic

Route	A	HGV	B	HGV	C	HGV
A	0	0	0	0	1	2
B	0	0	0	0	0	0
C	0	1	0	0	0	0

2028 Construction Phase - Peak

Route	A	HGV	B	HGV	C	HGV
A	0	0	172	16	88	16
B	176	12	0	0	2	0
C	180	9	31	1	0	0

Traffic Calculations for Derryadd Wind Farm

Site 3 - N63 (N) / R397 / N63(S)

PM Peak (16:45 - 17:45)

Seasonally Adjusted ***2022*** ***2028***

Construction Phase		
Longford	***LGV***	***HGV***
2016 - 2030 index	*1.0134*	*1.0313*
Years	*6*	*6*
High Growth Factor	***1.0831***	***1.2031***

Route	A	HGV	B	HGV	C	HGV
A	0	0	193	11	152	7
B	163	14	0	0	2	0
C	115	7	13	0	0	0

Sum of LV and HV

0	204	159
177	0	2
122	13	0

% of HGV

#DIV/0!	0.05	0.04
0.08	#DIV/0!	0.00
0.06	0.00	#DIV/0!

Route	A	HGV	B	HGV	C	HGV
A	0	0	209	13	165	8
B	177	17	0	0	2	0
C	125	8	14	0	0	0

Sum of LV and HV

0	222	174
194	0	2
133	14	0

% of HGV

#DIV/0!	0.06	0.05
0.09	#DIV/0!	0.00
0.06	0.00	#DIV/0!

PM PEAK GENERATED TRAFFIC

CONSTRUCTION PHASE - PEAK

Generated Traffic

Route	A	HGV	B	HGV	C	HGV
A	0	0	0	0	0	1
B	0	0	0	0	0	0
C	1	2	0	0	0	0

2028 Construction Phase - Peak

Route	A	HGV	B	HGV	C	HGV
A	0	0	209	13	165	9
B	177	17	0	0	2	0
C	126	10	14	0	0	0

Traffic Calculations for Derryadd Wind Farm

Site 4 - N63 (W) / R371 / N63(E) / Waters Edge

AM Peak (08:30 - 09:30)

Seasonally Adjusted ***2022*** ***2028***

Construction Phase

Roscommon	***LGV***	***HGV***
2016 - 2030 index	*1.0107*	*1.0284*
Years	*6*	*6*
High Growth Factor	***1.0659***	***1.1830***

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	33	2	228	13	5	0
B	92	3	0	0	91	1	1	0
C	195	21	54	3	0	0	4	0
D	6	1	0	0	7	0	0	0

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	35	2	243	15	5	0
B	98	4	0	0	97	1	1	0
C	207	25	58	4	0	0	4	0
D	6	1	0	0	7	0	0	0

AM PEAK GENERATED TRAFFIC

CONSTRUCTION PHASE - PEAK

Generated Traffic

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	0	0	6	9	0	0
B	0	0	0	0	2	2	0	0
C	0	3	0	2	0	0	0	0
D	0	0	0	0	0	0	0	0

2028 Construction Phase - Peak

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	35	2	249	24	5	0
B	98	4	0	0	99	3	1	0
C	207	28	58	6	0	0	4	0
D	6	1	0	0	7	0	0	0

Traffic Calculations for Derryadd Wind Farm

Site 4 - N63 (W) / R371 / N63(E) / Waters Edge

PM Peak (16:45 - 17:45)

Seasonally Adjusted ***2022*** ***2028*** ***Construction Phase***

Roscommon	***LGV***	***HGV***
2016 - 2030 index	*1.0107*	*1.0284*
Years	*6*	*6*
High Growth Factor	***1.0659***	***1.1830***

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	66	3	195	10	1	0
B	28	2	0	0	54	1	3	0
C	215	8	89	0	0	0	5	0
D	1	0	0	0	3	0	0	0

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	71	4	207	12	1	0
B	30	2	0	0	58	1	3	0
C	229	9	95	0	0	0	5	0
D	1	0	0	0	3	0	0	0

Sum of LV and HV

0	69	205	1
30	0	55	3
223	89	0	5
1	0	3	0

% of HGV

#DIV/0!	0.04	0.05	0.00
0.07	#DIV/0!	0.02	0.00
0.04	0.00	#DIV/0!	0.00
0.00	#DIV/0!	0.00	#DIV/0!

Sum of LV and HV

0	74	219	1
32	0	59	3
238	95	0	5
1	0	3	0

% of HGV

#DIV/0!	0.05	0.05	0.00
0.07	#DIV/0!	0.02	0.00
0.04	0.00	#DIV/0!	0.00
0.00	#DIV/0!	0.00	#DIV/0!

PM PEAK GENERATED TRAFFIC

CONSTRUCTION PHASE - PEAK

Generated Traffic

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	0	0	0	3	0	0
B	0	0	0	0	0	2	0	0
C	6	9	2	2	0	0	0	0
D	0	0	0	0	0	0	0	0

2028 Construction Phase - Peak

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	71	4	207	15	1	0
B	30	2	0	0	58	3	3	0
C	235	18	97	2	0	0	5	0
D	1	0	0	0	3	0	0	0

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Bord na Móna

Derryadd Wind Farm

Traffic and Transport Assessment

March 2025

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Traffic and Transport Assessment Report

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TOBIN Consulting Engineers

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1. NON-TECHNICAL SUMMARY

The Non-Technical Summary is a synopsis of the Traffic and Transport Assessment (TTA) for the proposed development of 22 no. wind turbines and all associated infrastructure. The proposed wind farm site is located within County Longford and will be accessed via the National Road N63 and Regional Road R392.

A scoping document was issued on the 08th of November 2022 and again on the 14th of October 2024 to the Longford County Council Roads Department. This document outlined the proposed approach that the Traffic and Transport Assessment would take and identified the junctions that would be included in the analysis. Five junctions had been previously scoped with Longford County Council, and traffic counts were carried out at the following locations:

- Junction 1: N63 / R392 / Rathcline Road, Co. Longford, Crossroad Junction
- Junction 2: R392 / R398 / L1155, Co. Longford, Staggered Junction
- Junction 3: N63 / R397 / N63, Co. Longford, T-Junction
- Junction 4: N63 / R371 / N63 / Waters Edge, Co. Roscommon, Staggered Junction
- Junction 5: N61/ N63 / Retail Park / Lanesborough St, Co. Roscommon, Roundabout

Traffic counts were carried out, and a seasonal adjustment check was undertaken on the traffic count data to determine if the traffic on the date of the traffic count survey is representative of the annual average traffic for the year. Since the traffic count on the day of the survey was similar to the annual average daily traffic (AADT), a seasonal adjustment was not required.

The construction phase of the proposed development will have the greatest impact in comparison to the operational phase. During the construction phase, the proposed development will generate trips of Abnormal Indivisible Load (AIL) and construction vehicles. AILs are proposed to be transported at night-time with traffic management and garda escort. For this reason, assessments were carried out based on the construction deliveries impact on the site as per the TII Traffic and Transport Assessment Guidelines. As the construction material haul route is not expected to pass in Roscommon town, this Traffic and Transport Assessment has not analysed Junction 5.

The assessment has focused on the construction phase as per the following:

- Base year: 2022 and 2028
- Peak construction phase: 2028
- Average construction phase: 2028

The traffic count data was forecasted using the TII Project Appraisal Guidelines Unit 5.3: Travel Demand Projections for central growth rates and scenarios with and without the proposed development were analysed.

The PICADY analysis results indicate the 4 existing junctions will operate within capacity during the construction phase. The maximum RFC of 0.53 encountered at Junction 1 for the peak construction phase is well below the maximum desired RFC of 0.85. The analysis indicates that there will be negligible queues and minimal delays during the AM and PM peak hours for all scenarios analysed (i.e., with and without the proposed development and during peak and average construction works).

2. INTRODUCTION

TOBIN has been appointed by Bord na Móna, to prepare a Traffic and Transportation Assessment (TTA) Report of the proposed development.

The proposed wind farm site is located across three bogs (Derryaroge, Derryadd and Lough Bannow) within the Mountdillon Bog Group in Co. Longford. Refer to Figure 2-2. There are works as part of the proposed development which will take place outside of the wind farm site along the turbine delivery route (TDR).

The proposed development will comprise of the following:

- 22 no. wind turbines with a blade tip height of 190 m, blade rotor diameter of 165 m, hub height of 107.5 m and the associated infrastructure including tower sections, nacelle, hub, and rotor blades and all associated foundations and hard-standing areas in respect of each turbine;
- New internal site access roads, approximately 27,500 m in length including passing bays and associated drainage;
- 2 no. permanent Meteorological Masts, both of which will be 120 m in height, and associated hardstanding areas for both masts, as well as the decommissioning and removal of an existing 100 m Meteorological Mast on site in Lough Barrow Bog;
- 4 no. Borrow pits in Derryadd Bog; All works associated with the opening, gravel and spoil extraction, and decommissioning of the borrow pits;
- 4 no. temporary construction compounds, including material storage, site welfare facilities, and site offices;
- 4 no. temporary security cabins at the main construction site entrances as well as at a number of access points around the proposed wind farm site;
- 1 no. 110 kV electrical substation compound in Derryaroge Bog. The substation will consist of 2 no. control buildings, a 36 m high telecommunications tower, associated electrical plant and equipment, ground water well, wastewater holding tank and welfare facilities.
- All associated underground electrical and communications cabling connecting the turbines and masts to the proposed electrical substation, including road crossing at N63 and associated grid connection via a 110 kV loop-in connection to the existing Lanesborough-Richmond 110 kV overhead line which traverses the proposed wind farm site;
- 1 no. 16 MW battery storage facility;
- 2 no. Peat Deposition Areas, one to the north of the proposed substation compound in Derryaroge Bog and one in Derryadd Bog;
- New site access entrances, temporary improvements and modifications to existing public road infrastructure to facilitate delivery of abnormal loads including locations on N6 Eastbound Slip Road, N6/N61 Roundabout at Athlone, N61/N63 Roundabout at Roscommon, N63 Roscommon Arts Centre Roundabout and N61/N63 Roundabout, Northeast of Roscommon.
- Hinge 3 No. permanent lighting fixtures in Folio RN40465F in Roscommon town to facilitate the delivery of abnormal loads (i.e. turbine blades);
- Approximately 7,500 m of dedicated amenity access tracks to provide linkages between the proposed wind farm site roads, royal canal greenway (to the east), the Corlea Visitor Centre amenity areas (to the south) and the Midlands Trail Networks project (to the north).;

- 3 no. permanent amenity carparks, one of which is situated in Derryaroge Bog (19 no. car parking spaces in total) and two carparks in Derryadd Bog (19 no. car parking spaces in each carpark);
- All associated site work and ancillary works including new drainage and updating existing drainage, access road, earthworks, site reinstatement and erosion control, which will be aligned with the existing and future site rehabilitation plans; and,
- A 10-year planning permission is being sought with a 30-year operational life from the date of commissioning of the entire wind farm.

Construction phase is expected to start in 2027, with a duration of approximately 24 months.

This report presents the likely significant effects on the road network in the vicinity of the proposed development during the construction phase.

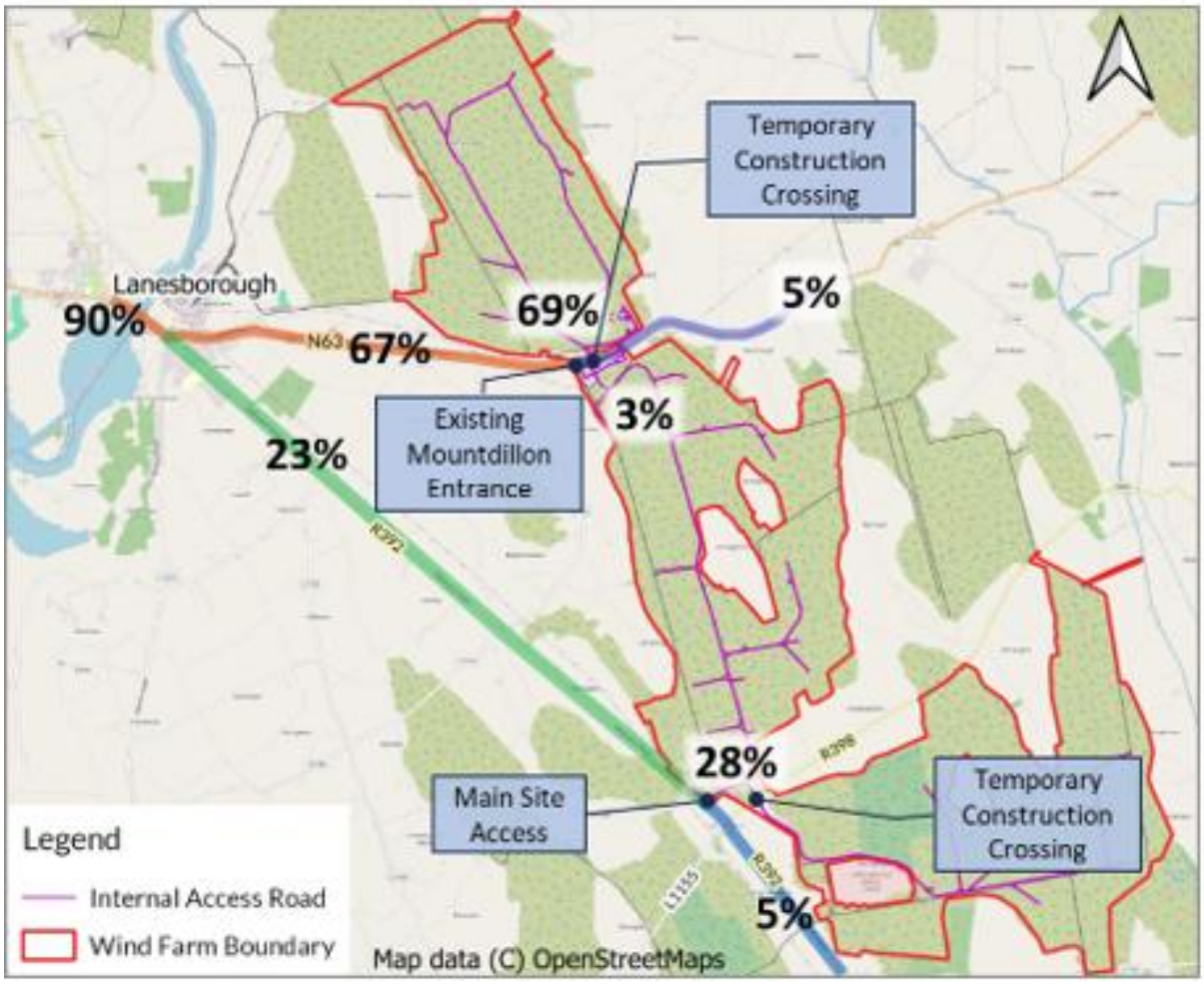


Figure 2-1: Layout of Proposed Wind Farm Site

2.1 OBJECTIVES

The objective of this report is to assess the impact the proposed development will have on the existing road network. This report presents the expected volume of traffic generated by the proposed development and assesses its impact on the operational capacity of the road network in the vicinity of the proposed development.

2.2 STRUCTURE OF THE REPORT

This report is divided into seven chapters:

- Chapter 1 is a non-technical summary,
- Chapter 2 presents this introduction,
- Chapter 3 presents the report method and describes the site location, existing road network, traffic survey, and traffic generated by the proposed development,
- Chapter 4 provides an overview of the existing and proposed traffic conditions, explaining how this information was obtained,
- Chapter 5 presents the analysis of baseline traffic and traffic generated by the proposed development on existing traffic conditions (i.e., with and without the proposed development and during peak and average construction works),
- Chapter 6 presents other road issues,
- Chapter 7 presents the conclusions.

2.3 STATEMENT OF AUTHORITY

This chapter of the EIAR has been prepared by Maria Rooney of TOBIN. TOBIN are in operation for over 70 years and have carried out numerous Traffic and Transportation Assessments (TTA's) for various residential, commercial, business, retail and leisure developments. TOBIN has also produced Traffic & Transport chapters for a number of EIAR's for various wind farms project.

Maria Rooney (Senior Engineer at Roads and Transportation) has a Bachelor of Engineering in Civil Engineering and a Master of Engineering in Roads and Transport Engineering. She is a Chartered Member of Engineers Ireland, and she has over ten years work experience in the roads and transport engineering with extensive experience in the preparation of TTA, EIAR and EIS for environmental projects including wind farms, solar farms, and numerous quarries.

3. METHODOLOGY

3.1 GUIDANCE AND LEGISLATIVE REVIEW

In preparing the Traffic and Transportation Assessment (TTA), the following references were consulted:

- Longford County Development Plan 2021-2027;
- Roscommon County Development Plan 2022-2028
- TII PE-PDV-02045 Traffic and Transport Assessment Guidelines (May 2014), and
- TII PE-PAG-02017 Project Appraisal Guidelines for National Roads Unit 5.3: Travel Demand Projections (October 2021).

Given that the construction phase is expected to cause higher traffic impacts to the site, this TTA has analysed the junction capacity, including queue lengths and reserve capacity, at the following assessments:

- Baseflow Traffic in 2022 and 2028
- Peak construction phase: 2028
- Average construction phase: 2028

3.2 ASSESSMENT METHODOLOGY

To assess the traffic and transportation impacts associated with the proposed development, the following approach was adopted:

- Data Collection:

  o Establish the baseline traffic flows of the existing roads,

  o Adjust traffic count data using standard growth rates to establish a do-nothing scenario,

  o Establish the traffic volumes generated by the proposed development during the Construction Phase,

- Assessment of Effects:

  o Determination of impacts on the surrounding road network during the peak and average construction activity.

3.3 SITE LOCATION & CONSTRUCTION SITE ACCESSES

The proposed wind farm site is approximately 12.1 km (Northern to Southern) in length and the width varies per bog Derryadd (Middle): 3 km; Lough Bannow (South): 3.8 km; Derryaroge (North): 3.8 km. The proposed wind farm site lies between the towns and villages of Lanesborough, Derraghan, Keenagh, and Killashee while the main urban centre in the region, Longford Town, is 9 km to the northeast from its nearest point. Derryaroge Bog to the north is adjacent to the River Shannon and Lough Bannow Bog is immediately west of the Royal Canal, which runs in a northwest-east direction. The closest settlements to the proposed wind farm site are Derraghan village and Lanesborough town, located approximately 200 m and 500 m west.

There will be a total of four proposed wind farm site entrances used to transport materials and equipment to the site as follows:

- New proposed main site access (Site Access A) to the southern part of Derryadd Bog, off the R392;
- New proposed site crossing (Site Access B) from the South of Derryadd Bog to the northern part of Lough Bannow Bog, off the R398;
- Proposed new temporary site crossing (Site Access C) from the northern part of Derryadd Bog (Machine pass from Mountdillon Works yard), off the N63 will also be required for large component transport across the N63 into Derryaroge; and,

- Existing Mountdillon Access will be utilised by Light Vehicles (LVs) and Heavy Vehicles (HVs).

Site Access A will be the main construction entrance to the site and will facilitate both materials delivery to the site (stone, steel, and concrete) as well as large oversize components such as turbine blades, tower sections, and substation components.

3.4 OPERATIONAL SITE ACCESSES

During the operation phase, Site Access A will remain open. Site Access B will be gated and used as necessary. Site access C will form a staggered junction in line with TII guidelines between the Existing Mountdillon Access and one arm (northern Arm) of Site Access C into Deryaroge. The southern arm of Site Access C will be permanently closed for the operational phase.

3.5 CONSULTATION

Scoping with Longford County Council's Roads Departments was undertaken on the 08th of November 2022, 14th of November 2022, 20th of April 2023 and 10th of November 2023. The liaison with the planning authority has facilitated agreement as to the nature and scale of the proposed development, including any required road network changes and/or enhancements. The main items identified during the scoping process included the following:

- A need to assess the traffic impact associated with the construction and decommissioning stage only, as these stages have the largest associated traffic volumes.
    - The location of the TTA is limited to the site access only.
    - TII Live traffic counters on the N63 to be used in the assessment.
- All construction trips to the site will be via the N63, R392 and a portion of R398.
    - Construction trips shall avoid the following roads, R398, L1163, L52512, L5260, L5269, L1162 and L1170.
- Suitable quarries in the vicinity of the site (i.e. currently / projected to be licensed at time of the construction stage).
- No Road Safety Audit was required at Mountdillon entrance as the site access is existing and is currently operating as an operational access.
- Discussed and agreed the construction haul route (separate from turbine delivery) with no further comments for the council.

Scoping with Roscommon County Council Roads Department was undertaken on the 09th of November 2022 and 31st of March 2023. The main items identified and agreed during the scoping process included the following:

- Traffic counts at:
    - i. N63 / R371 / Waters Edge
    - ii. N63 / N61 Lanesborough Roundabout.
- Swept Path analysis to consider future road improvements, Ballyleague Junction Improvement (i.e. N63 / R371), and Roscommon Town Public Realm (i.e. N61).
- Restriction HV movements on L1806.

On 16th May 2024, it was discussed and agreed with Longford County Council Roads Department that construction traffic will access Derryaroge via a new temporary site crossing (Site Access C). For operation one arm (northern arm) in Derryaroge of the new site crossing will form a staggered junction with the existing Mountdillon access in line with TII guidelines. The remaining southern arm of the new site crossing will be permanently closed post construction.

Lough Bannow (Site Access B) shall be accessed via gated access from Derryadd to Lough Bannow. The gated site accesses shall continue to be utilised during the operational phase for maintenance purposes. Site Access B will be gated and used as necessary.

3.6 TRAFFIC SURVEY

In order to determine the magnitude of the existing traffic flows, a manual classified junction turning count was undertaken at the 5 junctions previously scoped with Longford County Council. The traffic surveys were carried out by Nationwide Data Collection (NDC) on Tuesday the 22nd November 2022, between 07:00 hrs and 19:00 hrs. Count information was obtained at the following junctions:

- Junction 1: N63 / R392 / Rathcline Road, Co. Longford, Crossroad Junction
- Junction 2: R392 / R398 / L1155, Co. Longford, Staggered Junction
- Junction 3: N63 / R397 / N63, Co. Longford, T-Junction
- Junction 4: N63 / R371 / N63 / Waters Edge, Co. Roscommon, Staggered Junction
- Junction 5: N61/ N63 / Retail Park / Lanesborough St, Co. Roscommon, Roundabout

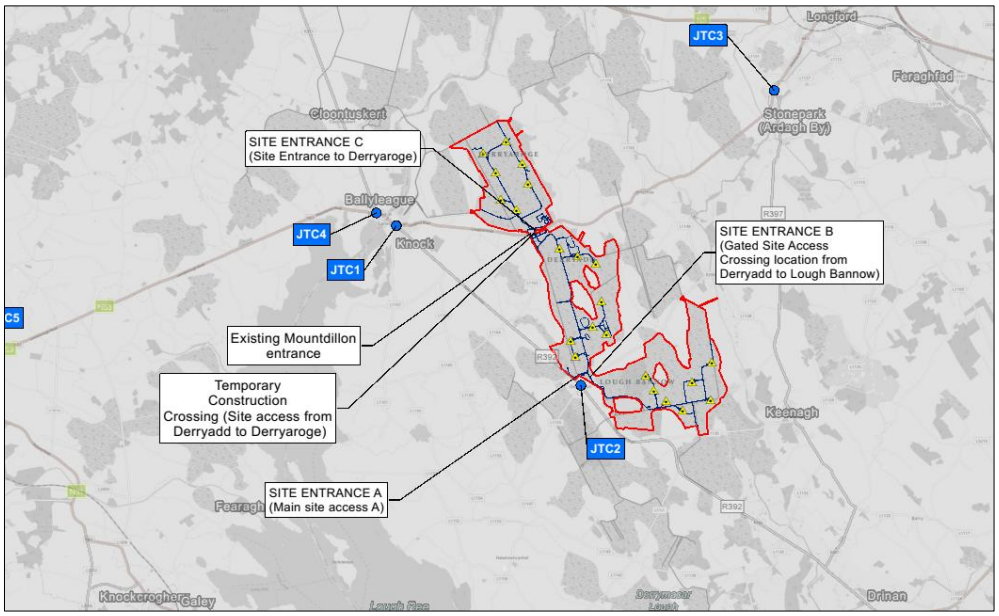


Figure 3-1 Traffic Count Location

This survey distinguished between light-good vehicles and heavy-good vehicles. The results of this survey indicated that the morning peak traffic levels occurred as presented in Table 3-1.

Table 3-1 Traffic Survey AM and PM Peak

Junction	AM Peak Time	PM Peak Time
Junction 1 Co. Longford	08:30 – 09:30	16:45 – 17:45
Junction 2 Co. Longford	08:00 – 09:00	16:00 – 17:00
Junction 3 Co. Longford	08:30 – 09:30	17:15 – 18:15
Junction 4 Co. Roscommon	08:15 – 09:15	17:00 – 18:00
Junction 5 Co. Roscommon	08:30 – 09:30	15:45 – 16:45

The traffic impact analysis applied the same peak time to all junctions for a robust assessment. It was considered the morning peak between 08:30 hrs and 09:30 hrs, and the evening peak between 16:45 hrs and 17:45 hrs. This was determined as Junction 1 has the highest traffic volumes and more likely to exceed capacity in peak hours as a result of construction phase traffic.

3.7 CONSTRUCTION PHASE

Given the nature of the proposed development, the construction phase will generate major impacts on traffic in the vicinity. Construction is expected to start in 2027 with a proposed construction programme of approximately 24 months.

For wind farm projects, there are two types of haul routes required for the transport of the materials to the site during the construction stage. These haul routes are:

- Construction Haul Route for standards axle-loaded vehicles and
- Construction Haul Route for Abnormal Indivisible Loads (AILs)[1];

The turbine component delivery and transformer delivery are a specialized operations due to the size of the loads transported. The AIL vehicles will accommodate transport of the tower, nacelle, blades, and substation transformers. The turbine deliveries will occur at night-time with traffic management and garda escort. As this traffic will be isolated from other daily traffic movements, it has not been added to the daily traffic volumes assessed in this report. The AILs and turbine delivery route is shown in Figure 3-2 and refer to Appendix 15-3 of this EIAR haul route assessment for swept path assessment drawings produced by Pell Frischman.

[1] A load which exceeds the weight, height, width, or length limit(s) outlined in S.I. No. 5 of 2003 of the Road Traffic Construction Equipment and Use of Vehicles Regulations 2003. (www.rsa.ie)

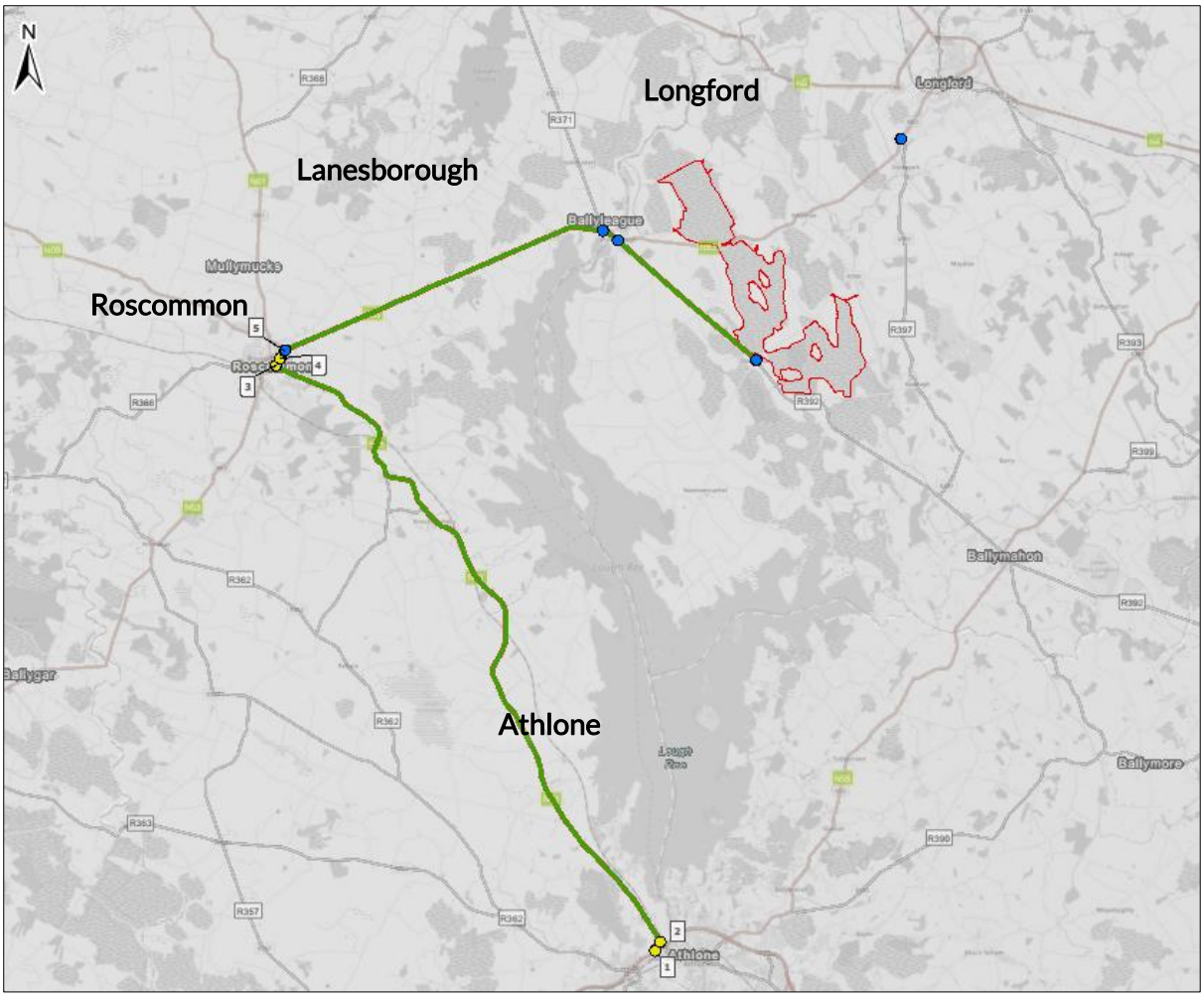


Figure 3-2 Abnormal Indivisible Load (AIL) Delivery Routes / Turbine Delivery Route (TDR) Traffic

3.7.1 Construction Phase Traffic

Based on the nature of the proposed development, various construction materials will be delivered to the site over the course of the construction programme. The materials will be delivered by standard Heavy Vehicles (HVs), including rigid lorries and articulated lorries. Other vehicles that will attend the site include standard construction machinery, i.e., cranes, excavators, stone crushers, concrete trucks, and tipper trucks.

The construction traffic with the largest daily impact (i.e., peak) is the combined construction activities during Month 3 as outlined in the Construction Programme. This traffic is associated with the importation of material for the substation platform and tree felling in the area.

The other materials required onsite will include two met masts, building materials, fencing, drainage, culverts, water treatment, substation materials, welfare facilities, etc., which are assumed to be sourced locally and arrive onsite. The majority of the construction traffic is assumed to travel from the direction of Lanesborough, with a small number will travel from Longford in the east and Ballymahon in the south. As illustrated in Figure 3-3.

During the scoping with Longford County Council (LCC), the haul route for these materials was identified and agreed as via the N63, and R392. A portion of the R398 was also agreed to not accommodate HV movements.

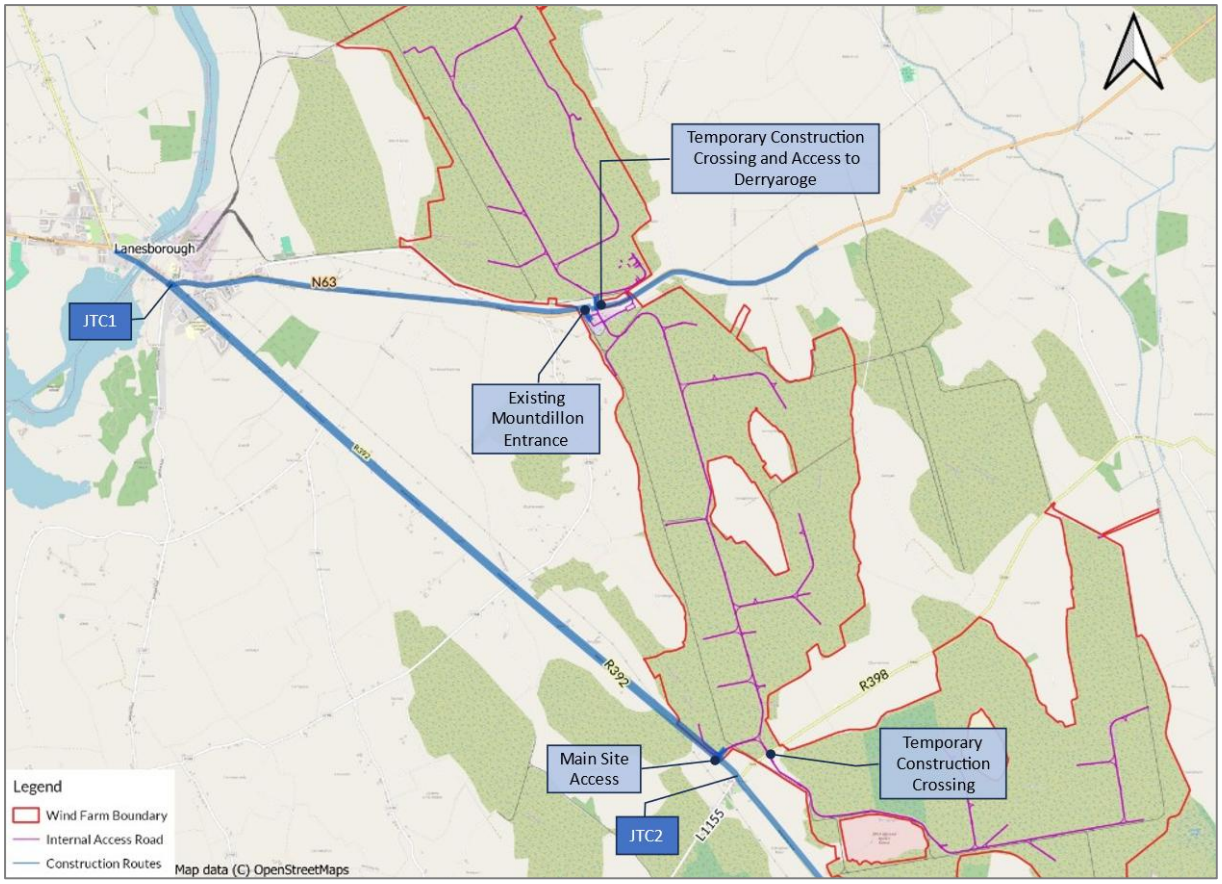


Figure 3-3 Construction Haul Route

3.7.2 Construction Traffic Calculations

The construction traffic has been developed based on the site layout, the construction materials required, the associated construction vehicle capacities, the construction programme, and the construction hours for the proposed development. Table 3-2 presents the construction traffic volumes per month for the proposed development.

The first phase of the civil works will include site preparation and clearance, the development of temporary construction compounds, and associated fencing. The next phase will include widening existing internal access tracks and building new internal site access roads to facilitate the construction of the substation base, the opening of borrow pits, and access for the operation of peat deposition areas.

The delivery of the materials for the hardstanding areas (i.e., parking, substation, lay-down areas for turbine components), blinding, and arrival to the site will occur next in the programme. The concrete pours for the foundation at the substations and turbine locations are sequenced next. The substation construction and associated electrical works, including cable laying, will overlap with the hardstanding and foundation works.

Prior to the final stage of commissioning the substation and turbines, the turbine components will be delivered to the site and erected. In parallel with these activities, backfilling and landscaping work will be undertaken.

As the construction activities progress inward from the site, various phases will become active and will overlap with each other in different areas within the site at different phases of the construction programme.

Table 3-2 shows the monthly construction HVs assigned to their corresponding activity in the construction programme.

The largest traffic volume effect is associated with the haulage of the materials for the combined construction activities for Month 3 of the proposed construction programme. Key deliveries during this period are aggregate and stone. The internal site access roads have been designed to utilise existing access tracks where feasible, reducing the volume of materials required for importation to the proposed wind farm site.

The second largest volume traffic effect is associated with the concrete pours for the turbine foundations. Other scheduled construction activities, per the proposed construction program will continue during these concrete pours, but only essential deliveries will be scheduled to occur on the same days as the concrete pours. To mitigate this effect, liaison with local authorities and the community in advance of the foundation pours will occur as well as minimising other works/deliveries as noted.

To mitigate the impact of the construction traffic on the road network and surrounding environment, during the days for the concrete pours all other construction HVs will be limited to essential deliveries and programmed to occur on other days of the construction programme.

Construction activities will be carried out during normal daytime working hours (i.e., weekdays 08:00 hrs – 20:00 hrs and Saturday 08:00 hrs – 13:00 hrs). However, to ensure that optimal use is made of good weather period or at critical periods within the programme (e.g., concrete pours) or to accommodate delivery of large turbine component along public routes it could be necessary on occasion to work outside of these hours. Any such out of hours working will be agreed in advance with the Local Authority.

The number of construction staff will vary dependant on the phase of the construction activities. At the peak construction, a maximum of 120 personnel is estimated. A reduction in construction staff on site is expected when the construction activities are more technical and less labour intensive. During average activities is expected 100 personnel onsite.

On the traffic assessment, it was assumed that 10 construction staff will commute to work per light vehicle (LV) and others will arrive onsite by minibus at a maximum occupancy of 15 staff per vehicle (HV), resulting in 8 HVs per day at the peak activity and 6 HVs per day during average construction phase. It was assumed that construction staff will arrive in the morning and depart in the afternoon.

Table 3-2 HV Monthly Construction Traffic Volumes (excluding Concrete Pours)

	HV Volumes (External Movements Only): Total Per Month (1 Way Movements) Month Number																							
Task Description	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**Total**
Tree Felling		15	30	25	10																				80
Entrance / Site Access Track to substation	532																								532
Passing Bays/layby	25																								25
Compound Setup	369																								369
Substation Platform		1,687	1,687	843																					4,217
Battery Storage / EBOP Compound					1,383																				1,383
Site Entrance Surface Dressing					3																				3
Site Access Track Capping													399	267	267	207	206								1,346
Foundation Blinding										49	98	98	74	98	98	25									540
Foundation reinforcement										6	12	12	9	12	12	3									66
Foundation Concrete										190	380	380	285	380	380	95									2,090
Foundation Backfill											310	310	310	155											1,085
Ducting											5	18	10	10	9	4	4								60
Drainage						2	6	6	6	3	3	3	2												31
Met Mast Foundation (Concrete)															2										2
Met Mast																6			6						12
Pump station upgrade																18									18
Amenity Track Capping																			122						122
Fencing & Reinstatement Works																			6	9	15	9	6		45
Pumping Station upgrade																26			6						32
Amenity capping																			23						23
Met Mast Foundation																			2						2
Total Monthly One Way Movements	926	1,702	1,717	868	1,396	2	6	6	6	248	808	821	1,089	922	768	384	210	0	165	9	15	9	6	0	12,083
Total Monthly Two Way Movements [Two Way Movement being HV in and then HV out]	1,852	3,404	3,434	1,736	2,792	4	12	12	12	496	1,616	1,642	2,178	1,844	1,536	768	420	0	330	18	30	18	12	0	
Total Monthly One Way Movements - Excluding Concrete Day	926	1,702	1,717	868	1,396	2	6	6	6	58	428	441	804	542	388	289	210	0	165	9	15	9	6	0	
Total Monthly Two Way Movements - Excluding Concrete Day [Two Way Movement being HV in and then HV out]	1,852	3,404	3,434	1,736	2,792	4	12	12	12	116	856	882	1,608	1,084	776	578	420	0	330	18	30	18	12	0	
Average HV Two Way Movements - Excluding Concreting Day	869	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833	833	

Considering 5.5 day working day per week

Peak HVs Two Way per day	156	Staff Minibus (one-way)	8	Total HVs (two way) per day	**172**
Average HVs Two Way per day	39		6		**51**

Considering 12 hours working per day

Peak HVs Two Way per peak hour	13
Average HVs Two Way per peak hour	4

Concreting day - HVs per turbine per day (one way)	95
Concreting day - HVs per turbine per day (two way)	190

Staff Level - Peak	120
Staff Level - Average	100
Assuming max of 15 staff per mini bus	
Mini bus - Peak per day [one way]	8
LVs - Peak per day [one way]	10
Mini bus - Average per day [one way]	6
LVs - Average per day [one way]	10

Notes:

(1) All construction deliveries (excl. concrete pours) have been averaged over the Monday-Friday and half day Saturday working week.

(2) The above does not assume any materials are obtained from the Borrow Pits onsite.

(3) Subbase material and concrete are assumed to be sourced locally.

- Concrete pours for each turbine foundation will occur on 1 day as required by the construction methodology.

(4) This construction traffic table is a simplified traffic volume table against programme and a more detailed delivery schedule will be developed by the appointed contractor.

(5) The turbine deliveries will occur during night-time with traffic management and garda escort. As this traffic will be isolated from other daily traffic movements, it has not been added into the daily traffic volumes in this table.

4. TRIP GENERATION AND DISTRIBUTION

4.1 SEASONAL ADJUSTMENT

In order to undertake an analysis of the key junction, it is sometimes necessary to apply a correction factor to convert the traffic count data into seasonally adjusted traffic flows to take account of the seasonal variation that is experienced with traffic volumes. A comparison was undertaken between the TII traffic count information for the day of the survey in November 2022 and the annual average daily traffic (AADT) for the previous year. The traffic count on the day of the survey was similar to the average for the year; therefore, a seasonal adjustment was not required.

4.2 TRAFFIC GROWTH

The TII Project Appraisal Guidelines for National Roads Unit 5.3 - Travel Demand Projections presents annual growth rates for County Longford and County Roscommon.

A Link-based Central Sensitivity Growth Rates were applied to 2022 traffic flows to estimate traffic flows for the future assessment year. Table 4-1 shows the growth rates for both counties, split into Light Vehicles (LV) and Heavy Vehicles (HV) for the construction year analysed (2028). The derived growth factors were applied to 2022 traffic flows to determine background traffic flows for the assessment year.

Table 4-1 Growth Factors for Light Vehicle (LV) and Heavy Vehicle (HV)

Central Growth Rates – 2016 - 2030		
County	LV	HV
Longford	1.0134	1.0313
Roscommon	1.0107	1.0284

4.3 TRIP GENERATION

As outlined in section 3.7, there are two types of haul routes for the proposed development. The Construction Haul Route and the AIL Haul Route. For the junction assessment, only the Construction Haul Route is assessed as the AIL will be delivered when traffic volumes are low, at night-time and under Garda escort. Therefore, Junction 5 was not assessed in this report as no construction haul routes pass through it.

The traffic associated with the construction of the proposed development on the Construction Haul Route is assessed under two scenarios, as a peak and an average traffic generation.

Peak: The daily peak traffic generation will be associated with the 79HVs arriving to the site with construction material, 79 HVs departing the site, and construction workers commuting to the site in 8 minibuses (HVs) and 10 LVs

Average: The daily average traffic generation will be associated with the 24 HVs arriving to the site with construction material, 24 HVs departing the site, and construction workers commuting to the site in 6 minibuses (HVs) and 10 LVs over the 2-year construction programme.

The number of HVs required to arrive to the site with construction material was split in the working hours. And it was assumed that construction staff will arrive at the morning peak and depart at the afternoon peak, resulting in the traffic distribution presented in Table 4-2.

Table 4-2 Traffic Volumes During the Construction Phase – Peak and Average Works

Trips	AM Peak (8:30 – 9:30)		PM Peak (16:45 – 17:45)	
	Arrivals	Departures	Arrivals	Departures
Peak construction phase				
LV	10	0	0	10
HV	15	7	7	15
Average construction phase				
LV	10	0	0	10
HV	8	2	2	8

The following assumptions have been made in the development of the construction phase's generated traffic:

- It is assumed that 10 construction staff will commute to work per LV, and others will arrive at the site by minibus at a maximum occupancy of 15 staff per vehicle (HV),
- Construction staff will arrive during the AM peak hour and depart during the PM peak hour,
- All HVs enter full and depart empty,
- HV Daily movements are split within construction working hours, and

- A worst-case scenario of HVs arriving and departing during AM peak and PM peak hours.

4.4 TRIP DISTRIBUTION

4.4.1 Trip Distribution – Do-Nothing Scenario

With the results of the traffic survey, it was possible to determine origin-destination matrices during morning and evening peak hours at Junctions 1, 2, 3 and 4.

Growth factors for light and heavy vehicles presented in Table 3-1 were applied in order to estimate traffic distribution on future assessment year. Figures 4-1 to 4-4 below illustrate these traffic flows. Origin-Destination matrices are provided in Appendix A.

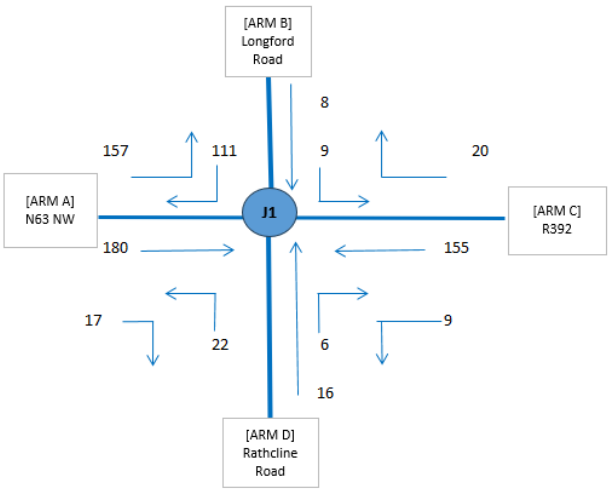
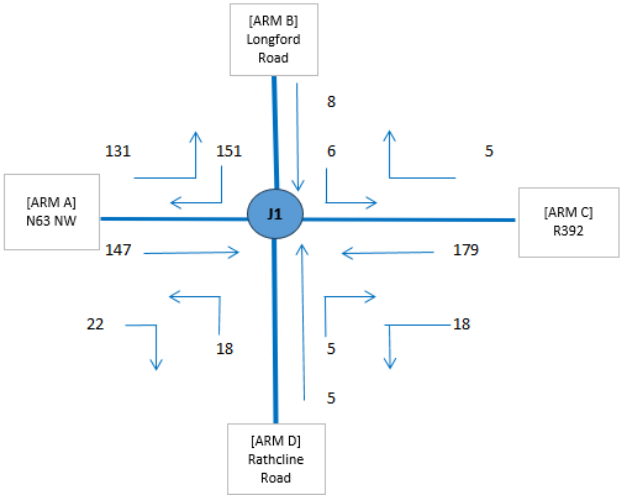
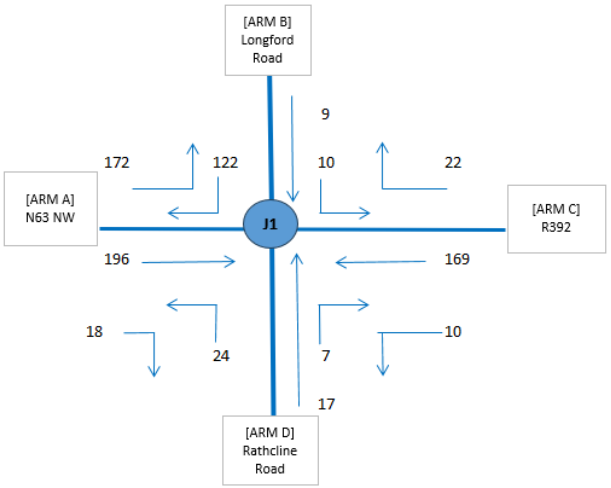
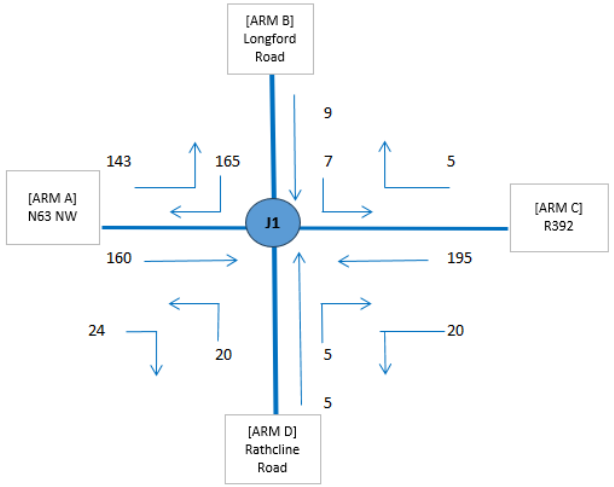
Assessment Year/ Peak Period	AM	PM
2022		
2027		

Figure 4-1 Traffic Distributions at Junction 1 (without Development)

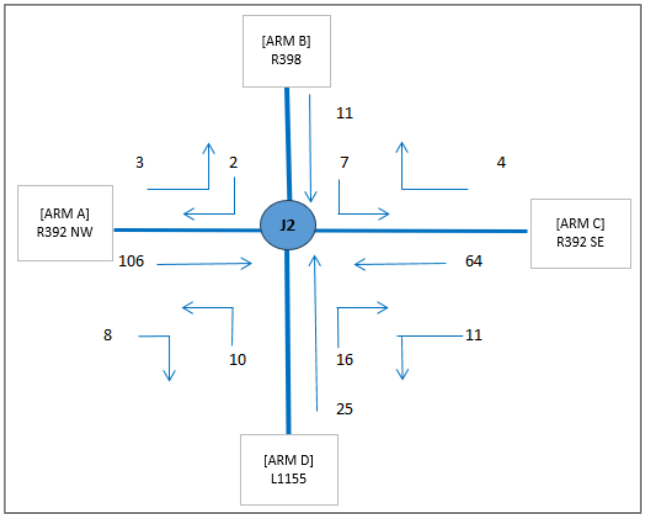
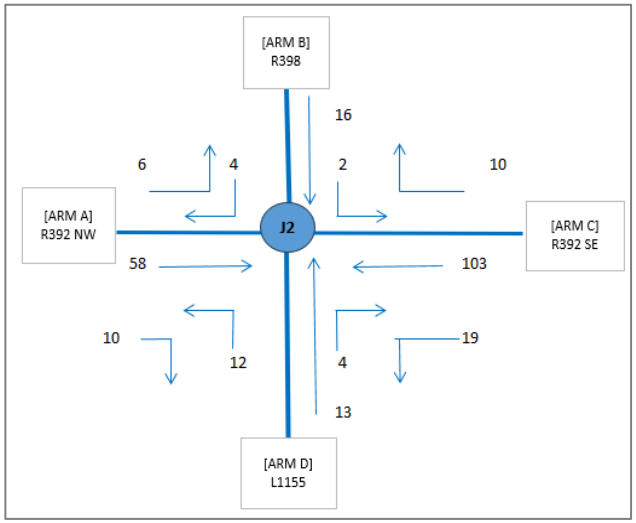
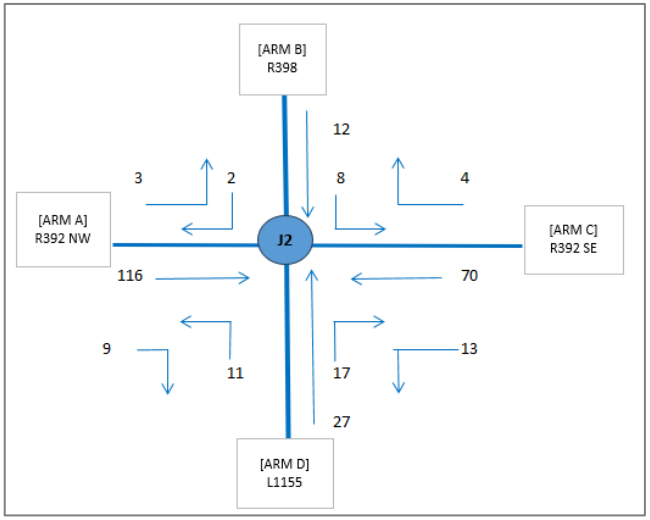
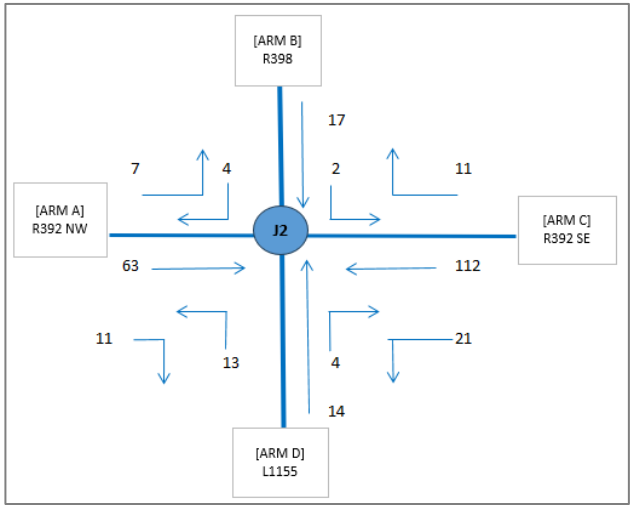
Assessment Year/ Peak Period	AM	PM
2022		
2027		

Figure 4-2 Traffic Distributions at Junction 2 (without Development)

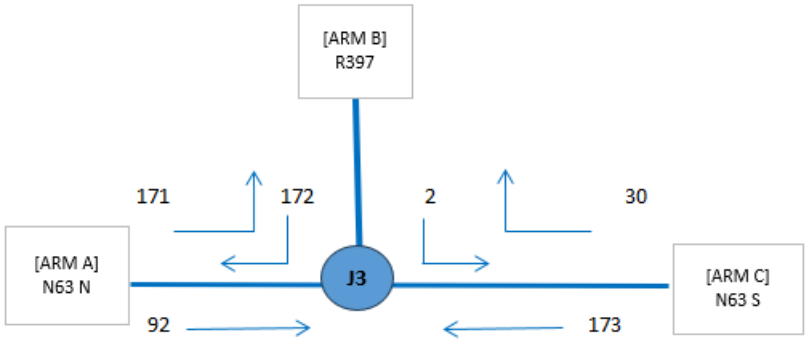
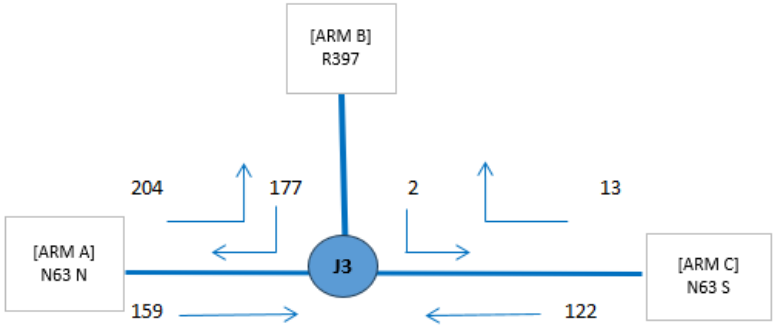
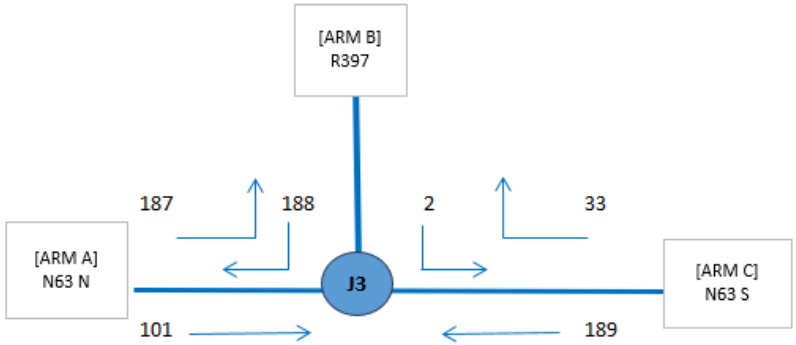
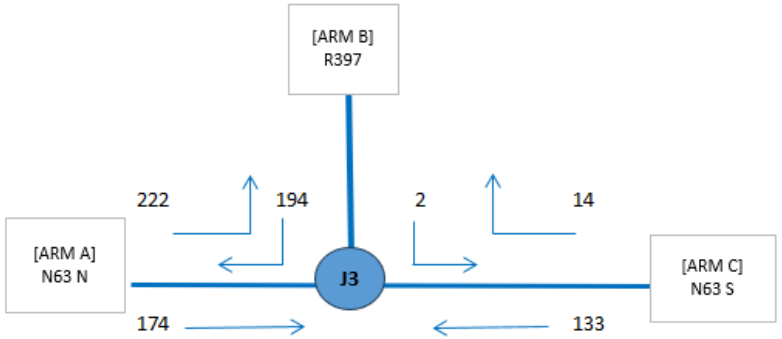
Assessment Year/ Peak Period	AM	PM
2022		
2027		

Figure 4-3 Traffic Distributions at Junction 3 (without Development)

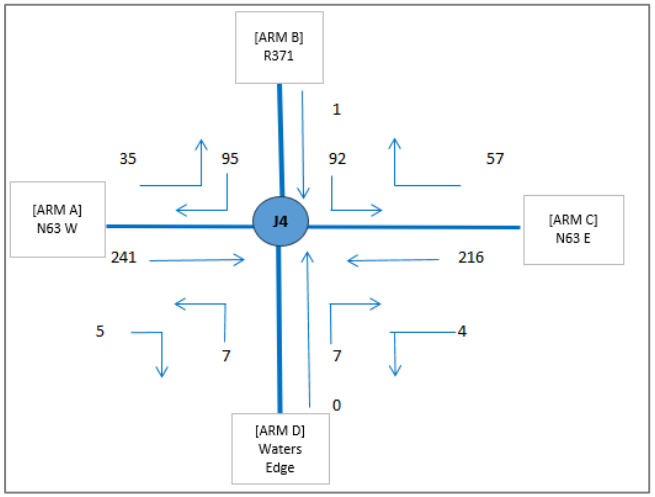
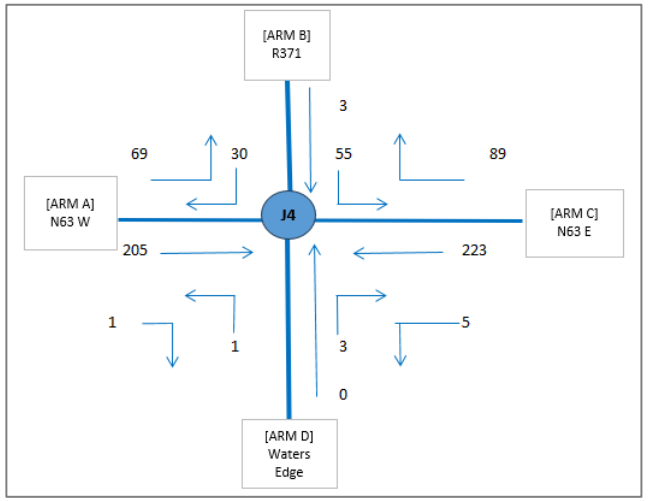
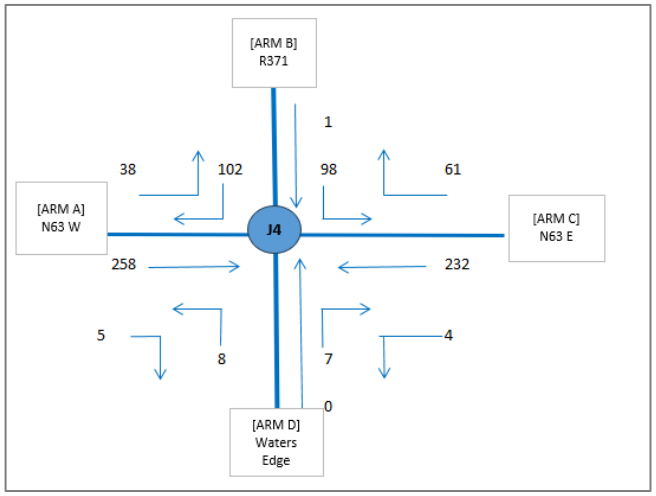
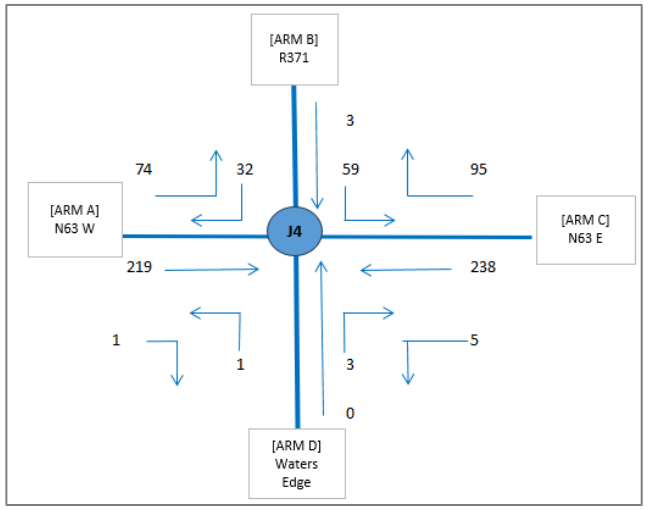
Assessment Year/ Peak Period	AM	PM
2022		
2027		

Figure 4-4 Traffic Distributions at Junction 4 (without Development)

4.4.2 *Trip Distribution – With Proposed Development*

As outlined in the Trip Generation section above, there are two different assessment scenarios. **Peak Traffic** and **Average Traffic**. These assessments are based on the materials being delivered (i.e., HV movements) and construction workers commuting to the site. This traffic will reach the site using its site entrances located on the National Road N63 and Regional Road R392.

The traffic distribution proposed by the client assumes:

- 90 % of construction traffic will pass at Junctions 1 and 4, located North-western of the site,
- 5% will pass at Junction 2, located South-western of the site, and
- 5% will pass at Junction 3, located North-eastern of the site.

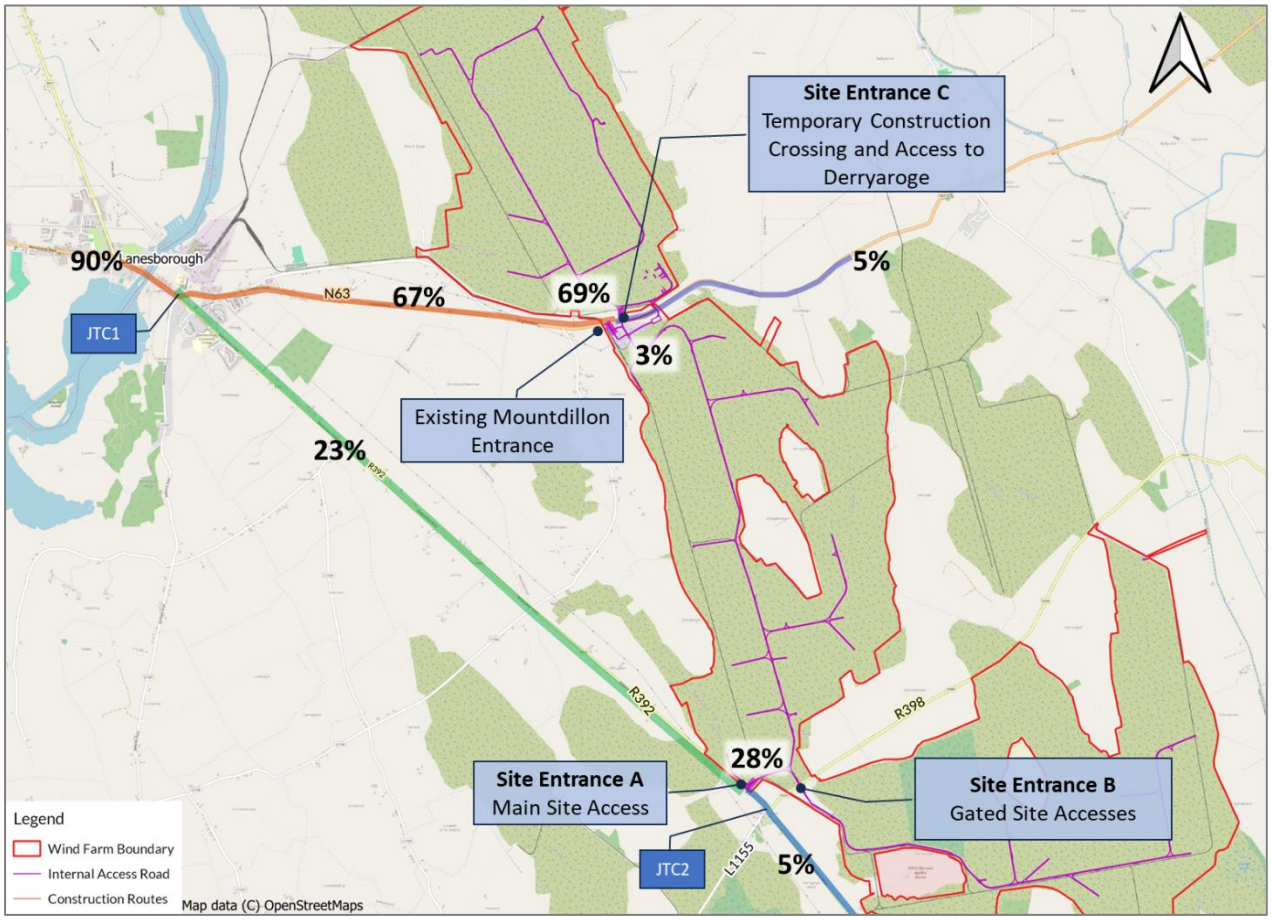


Figure 4-5 Construction Haul Route and Percentage HV Traffic Distribution

The expected traffic generated by the proposed development was added to the baseflow traffic flows, and the different scenarios were analysed, including the peak and average construction phases with and without the proposed development. Origin-destination matrices are provided in Appendix A.

5. TRAFFIC ANALYSIS

5.1 JUNCTION ANALYSIS

Junctions 1, 2, 3 and 4 have been analysed using the Transport Research Laboratory (TRL) computer program JUNCTION 10 PICADY, a widely accepted tool used for the analysis of priority junctions.

The key parameters examined in the results of the analysis are the Ratio of Flow to Capacity (RFC - desirable value for PICADY should be no greater than 0.85 – values over 1.00 indicate the approach arm is over capacity), the maximum queue length on any approach to the junction, and the average delay for each vehicle passing through the junction during the modelled period.

PICADY requires the following input data:

- Basic modelling parameters (usually peak hour traffic counts synthesised over a 90-minute model period),
- Geometric parameters (including lane numbers & widths, visibility, storage provision, etc.),
- Traffic demand data (usually peak hour origin/destination matrix with composition of heavy vehicles input).

For the TTA, the vehicle types have been segregated into light vehicles (LV) and heavy vehicles (HV) prior to input. Traffic volumes input into PICADY were in vehicles and, accordingly, commercial vehicle composition was set to the percentage of that arm.

The performance of the 4 junctions have been analysed for the critical AM peak hour (08:30 hrs - 09:30 hrs) and PM peak hour (16:45 hrs - 17:45 hrs). These analyses were carried out for the year 2022 and the construction peak activity year 2028.

5.2 ANALYSIS RESULTS

A summary of the analyses results for the 4 junctions for the AM and PM peak hours are provided below in Table 5-1 to Table 5-4 during the following scenarios:

- Baseflow 2022;
- Baseflow 2028;
- Baseflow 2028 plus peak construction generated traffic; and,
- Baseflow 2028 plus average construction generated traffic.

Full outputs from JUNCTION 10 PICADY are included in Appendix B.

5.2.1 Junction 1: N63 / R392 / Rathcline Road, Co. Longford, Crossroad Junction

Junction 1 is a crossroad located in Laneborough, County Longford, with Arm A representing N63 (W), arm B representing N63 (E), arm C representing R392 and arm D representing Rathcline Road as illustrated in Figure 5-1, and summary of traffic modelling results in Table 5-1.

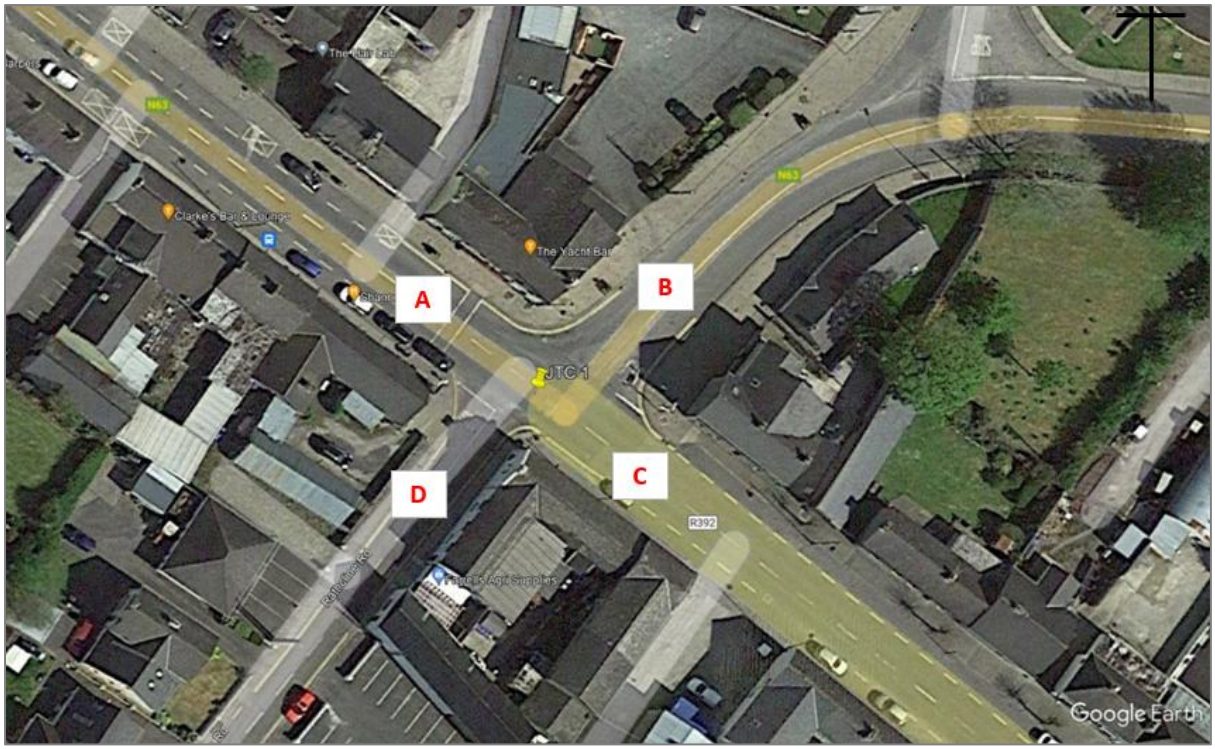


Figure 5-1 Junction 1 (Source: Google Earth)

Table 5-1 Summary Traffic Analysis Results – Junction 1

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)
	2022 Baseflow							
Stream B-ACD	0.6	14.25	0.36	3.56	0.7	14.2	0.42	3.93
Stream A-BCD	0	5.55	0.03		0	5.61	0.04	
Stream D-ABC	0.1	9.39	0.11		0.1	8.73	0.07	
Stream C-ABD	0	6.45	0.04		0	5.87	0.01	
	2028 Baseflow							
Stream B-ACD	0.7	15.94	0.41	3.95	0.9	15.85	0.47	4.33
Stream A-BCD	0	5.59	0.03		0	5.66	0.04	
Stream D-ABC	0.1	9.69	0.12		0.1	8.83	0.07	
Stream C-ABD	0	6.63	0.04		0	5.96	0.01	
	2028 Baseflow with Proposed Development - Peak Construction Phase							
Stream B-ACD	0.8	17.31	0.43	4.19	1.1	18.88	0.53	5.34
Stream A-BCD	0	5.6	0.03		0	5.68	0.04	
Stream D-ABC	0.1	9.78	0.13		0.1	8.9	0.08	
Stream C-ABD	0	6.73	0.04		0	5.99	0.01	
	2028 Baseflow with Proposed Development - Average Construction Phase							
Stream B-ACD	0.7	16.55	0.42	4.02	1	17.39	0.5	4.86
Stream A-BCD	0	5.59	0.03		0	5.67	0.04	

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)
Stream D-ABC	0.1	9.74	0.13		0.1	8.88	0.08	
Stream C-ABD	0	6.7	0.04		0	5.97	0.01	

Table 5-1 is the summary of Junction 1 performance analysis and indicates that the junction will operate within capacity during construction stage. The summary shows a maximum RFC of 0.43 during AM peak and 0.53 during PM peak, which is well below the maximum desired RFC of 0.85. The summary indicates that it is expected a queue less than 1 vehicle and a maximum delay of 17.3 seconds during the peak construction phase at the AM peak and 18.9 seconds during PM peak.

5.2.2 Junction 2: R392 / R398 / L1155, Co. Longford, Staggered Junction

Junction 2 is a staggered junction located in County Longford to the south of the proposed main site access, with Arm A representing R392 (NW), arm B representing R398, arm C representing R392 (SE) and arm D representing L1155 as illustrated in Figure 5-2, and summary of traffic modelling results in Table 5-2.

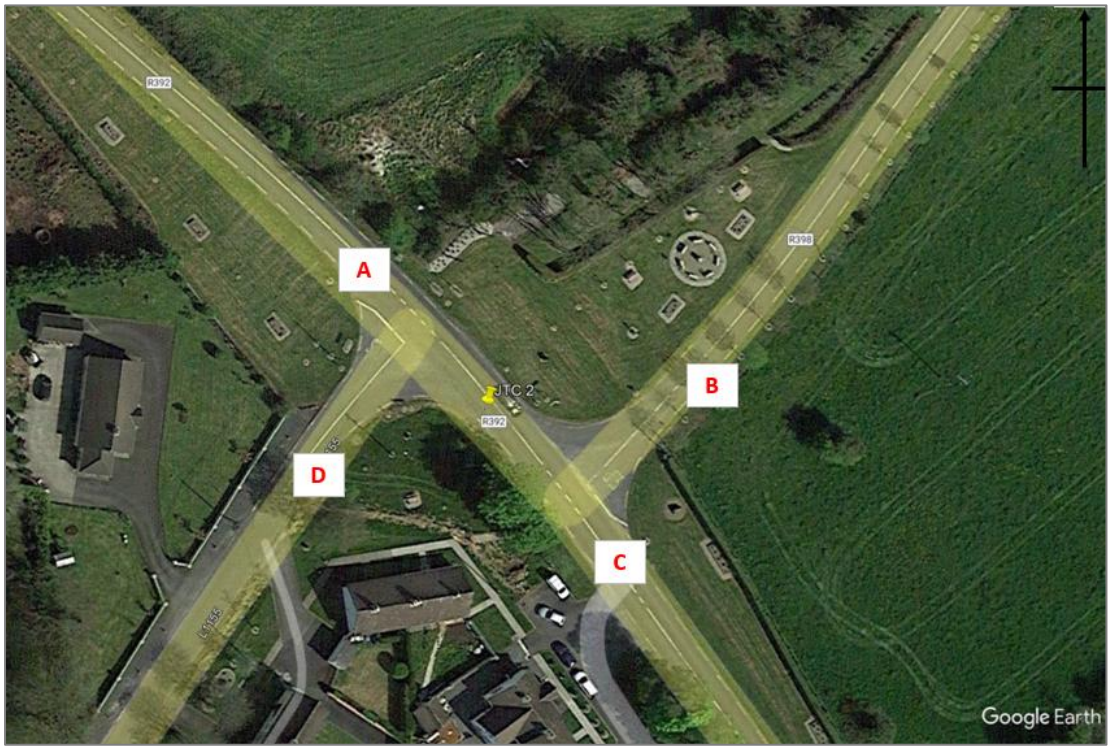


Figure 5-2 Junction 2 (Source: Google Earth)

Table 5-2 Summary Traffic Analysis Results – Junction 2

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)
	2022 Baseflow							
Stream B-ACD	0	5.75	0.03	2.1	0	5.66	0.04	1.76
Stream A-BCD	0	5.97	0.01		0	5.42	0.02	
Stream D-ABC	0.1	7.84	0.11		0.1	7.58	0.06	
Stream C-ABD	0	5.41	0.01		0	5.27	0.02	
	2028 Baseflow							
Stream B-ACD	0	5.85	0.04	2.12	0	5.72	0.04	1.76
Stream A-BCD	0	6.06	0.02		0	5.46	0.02	
Stream D-ABC	0.1	8.01	0.12		0.1	7.7	0.07	
Stream C-ABD	0	5.44	0.01		0	5.29	0.02	
	2028 Baseflow with Proposed Development - Peak Construction Phase							
Stream B-ACD	0	5.86	0.04	2.08	0	5.74	0.04	1.72
Stream A-BCD	0	6.07	0.02		0	5.46	0.02	
Stream D-ABC	0.1	8.04	0.12		0.1	7.72	0.07	
Stream C-ABD	0	5.44	0.01		0	5.3	0.02	
	2028 Baseflow with Proposed Development - Average Construction Phase							
Stream B-ACD	0	5.85	0.04	2.1	0	5.73	0.04	1.75
Stream A-BCD	0	6.07	0.02		0	5.46	0.02	
Stream D-ABC	0.1	8.02	0.12		0.1	7.71	0.07	
Stream C-ABD	0	5.44	0.01		0	5.29	0.02	

Table 5-2 is the summary of Junction 2 performance analysis and indicates that the junction will operate within capacity during construction stage. The summary shows a maximum RFC of 0.12 during AM peak and 0.07 during PM peak, which is well below the maximum desired RFC of 0.85. The summary indicates that it is expected a queue less than 1 vehicle and a maximum delay of 8.0 seconds during the peak construction phase at the AM peak and 7.7 seconds during PM peak.

5.2.3 Junction 3: N63 / R397 / N63, Co. Longford, T-Junction

Junction 3 is a T-junction located in County Longford to the south of the proposed main site access, with Arm A representing N63 (N), arm B representing R397 and arm C representing N63 (S) as illustrated in Figure 5-3, and summary of traffic modelling results in Table 5-3 Summary Traffic Analysis Results – Junction 3.

Figure 5-3 Junction 3 (Source: Google Earth)

Table 5-3 Summary Traffic Analysis Results – Junction 3

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)
	2022 Baseflow							
Stream B-C	0	6.27	0	4.06	0	6.53	0	4.18
Stream B-A	0.7	14.11	0.43		0.8	15.16	0.45	
Stream C-B	0.1	6.25	0.05		0	6.14	0.02	
	2028 Baseflow							
Stream B-C	0	6.41	0	4.49	0	6.72	0	4.82
Stream B-A	0.9	15.73	0.48		1	17.46	0.51	
Stream C-B	0.1	6.44	0.06		0	6.27	0.03	
	2028 Baseflow with Proposed Development - Peak Construction Phase							
Stream B-C	0	6.43	0	4.48	0	6.73	0	4.81
Stream B-A	0.9	15.86	0.48		1	17.57	0.51	
Stream C-B	0.1	6.46	0.06		0	6.28	0.03	
	2028 Baseflow with Proposed Development - Average Construction Phase							
Stream B-C	0	6.42	0	4.49	0	6.72	0	4.82
Stream B-A	0.9	15.79	0.48		1	17.51	0.51	
Stream C-B	0.1	6.45	0.06		0	6.27	0.03	

Table 5-3 is the summary of Junction 3 performance analysis and indicates that the junction will operate within capacity during construction stage. The summary shows a maximum RFC of 0.48

during AM peak and 0.51 during PM peak, which is well below the maximum desired RFC of 0.85. The summary indicates that it is expected a queue less than 1 vehicle and a maximum delay of 15.8 seconds during the peak construction phase at the AM peak and 17.5 seconds during PM peak.

5.2.4 Junction 4: N63 / R371 / N63 / Waters Edge, Co. Roscommon, Staggered Junction

Junction 4 is a staggered junction located in County Roscommon to the west side of Laneborough, with Arm A representing N63 (W), arm B representing R371, arm C representing N63 (E) and arm D representing Waters Edge as illustrated in Figure 5-4, and summary of traffic modelling results in Table 5-3 Summary Traffic Analysis Results – Junction 3.

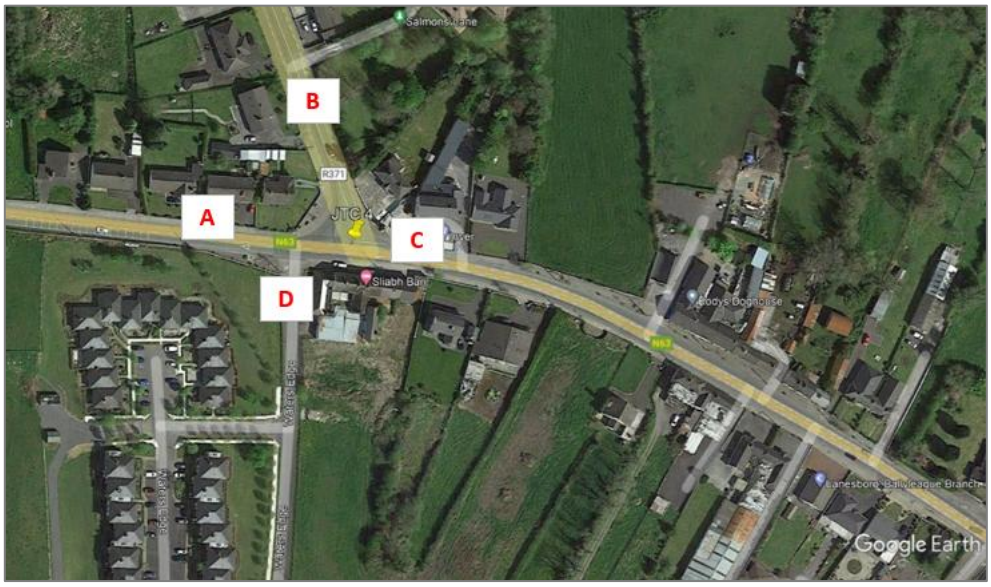


Figure 5-4 Junction 4 (Source: Google Earth)

Table 5-4 Summary Traffic Analysis Results – Junction 4

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)
	2022 Baseflow							
Stream B-ACD	0.8	14.14	0.45	4.09	0.3	9.38	0.2	2.05
Stream A-BCD	0	6.66	0.01		0	6.43	0	
Stream D-ABC	0	9.79	0.04		0	0	0	
Stream C-ABD	0.1	6.36	0.1		0.2	6.3	0.15	
	2028 Baseflow							
Stream B-ACD	0.9	15.59	0.49	4.42	0.3	9.71	0.22	2.11
Stream A-BCD	0	6.75	0.01		0	6.48	0	
Stream D-ABC	0	10.03	0.04		0	0	0	
Stream C-ABD	0.1	6.5	0.11		0.2	6.39	0.17	
	2028 Baseflow with Proposed Development - Peak Construction Phase							
Stream B-ACD	1	16.57	0.51	4.62	0.3	10.06	0.23	2.18

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)	Queue (Veh)	Delay (s)	RFC	Junction Delay (s)
Stream A-BCD	0	6.77	0.01		0	6.55	0	
Stream D-ABC	0	10.13	0.04		0	0	0	
Stream C-ABD	0.1	6.76	0.12		0.2	6.55	0.18	
	2028 Baseflow with Proposed Development - Average Construction Phase							
Stream B-ACD	1	16.01	0.5		0.3	9.79	0.22	
Stream A-BCD	0	6.76	0.01	4.45	0	6.53	0	2.08
Stream D-ABC	0	10.09	0.04		0	0	0	
Stream C-ABD	0.1	6.55	0.11		0.2	6.41	0.17	

Table 5-4 is the summary of Junction 4 performance analysis and indicates that the junction will operate within capacity during construction stage. The summary shows a maximum RFC of 0.51 during AM peak and 0.23 during PM peak, which is well below the maximum desired RFC of 0.85. The summary indicates that it is expected a queue less than 1 vehicle and a maximum delay of 17 seconds during the peak construction phase at the AM peak and 10 seconds during PM peak.

6. OTHER ROAD ISSUES

6.1 ROAD SAFETY AUDIT

The staggered junction (site access C northern arm and the existing Mountdillon access) on the national road is designed in accordance with the TII Geometric Design of Junctions - DN-GEO-03060 (May 2023) and will ensure visibility splays of 3.0 x 215 metres on N63 are met.

It is noted the main access (site access A & B) is within an 80 km/h zone on the regional roads and therefore visibility splays of 3.0 x 160 metres are met.

A Stage 1 Road Safety Audit was carried out on the proposed development design and its recommendations were incorporated into the final scheme design. Road Safety Audit report is provided in Chapter 15 (Traffic & Transportation – appendix 15.4.

6.2 PARKING PROVISION

The proposed development will provide car parking facilities as follows:

- Construction Phase:
  - 4 no. Construction Compounds are proposed:
    - 1 no. Type 1 with 45 no. parking spaces in total (4 no. electric spaces and 3 no. disabled spaces)
    - 3 no. Type 2 with 20 no. parking spaces in total
  - All Construction Compounds have been provided with bicycle parking.

- Operation Phase:
  - 3 no. amenity car parks are proposed:
    - 19 no. parking spaces in total (3 no. disabled spaces and 1 no bus parking space).

6.3 SWEPT PATH ANALYSIS

A Vehicle Swept Path Analysis (Refer to Appendix 15-3) has been completed for the proposed development. The purpose of the Swept Path Analysis is to identify and resolve potential issues and conflict points during the design stage. Details of this analysis on the final layout are shown on Drawings Number 11399-2051 and 11399-2057.

6.4 PEDESTRIANS AND CYCLISTS

During the construction phase, pedestrian facilities will be provided where required within the proposed development to facilitate safe pedestrian movements in accordance with the Health and Safety Plan. Once the proposed development construction phase has concluded, a total of approximately 18 km of site roads within the proposed wind farm site will provide permanent amenity access, including pedestrian and cyclist access.

6.5 PUBLIC TRANSPORT

There is no regular public transport service in operation in the immediate vicinity of the proposed wind farm site. Therefore, it is not expected that the staff working at the proposed wind farm site will utilise the bus services.

7. CONCLUSIONS

The 4 no. surveyed junctions along the proposed development haul route were analysed to ascertain the potential impact of the proposed development on the surrounding road network. The analysis indicates that there will be no queues and minimal delays during the peak hours for both peak and average construction stage generated traffic.

The junction assessments indicate 4 no. junctions are currently below the desirable capacity of 0.85 and will remain below capacity during the construction phase of the proposed development.

Appendix A ORIGIN/ DESTINATION MATRICES

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: JTC 1.j10
Path: W:\Projects\11399 - BnaM Derryadd Wind Farm_Revised_2022\05-Design\01-Calculations\Traffic\TIA
Report generation date: 04/12/2023 09:40:00

Summary of junction performance

	AM						PM					
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS
	2022 Baseflow											
Stream B-ACD	0.6	14.25	0.36	B	3.56	A	0.7	14.20	0.42	B	3.93	A
Stream A-BCD	0.0	5.55	0.03	A			0.0	5.61	0.04	A		
Stream D-ABC	0.1	9.39	0.11	A			0.1	8.73	0.07	A		
Stream C-ABD	0.0	6.45	0.04	A			0.0	5.87	0.01	A		
	2028 Baseflow											
Stream B-ACD	0.7	15.94	0.41	C	3.95	A	0.9	15.85	0.47	C	4.33	A
Stream A-BCD	0.0	5.59	0.03	A			0.0	5.66	0.04	A		
Stream D-ABC	0.1	9.69	0.12	A			0.1	8.83	0.07	A		
Stream C-ABD	0.0	6.63	0.04	A			0.0	5.96	0.01	A		
	2028 Baseflow with Proposed Development - Peak Construction Phase											
Stream B-ACD	0.8	17.31	0.43	C	4.19	A	1.1	18.88	0.53	C	5.34	A
Stream A-BCD	0.0	5.60	0.03	A			0.0	5.68	0.04	A		
Stream D-ABC	0.1	9.78	0.13	A			0.1	8.90	0.08	A		
Stream C-ABD	0.0	6.73	0.04	A			0.0	5.99	0.01	A		
	2028 Baseflow with Proposed Development - Average Construction Phase											
Stream B-ACD	0.7	16.55	0.42	C	4.02	A	1.0	17.39	0.50	C	4.86	A
Stream A-BCD	0.0	5.59	0.03	A			0.0	5.67	0.04	A		
Stream D-ABC	0.1	9.74	0.13	A			0.1	8.88	0.08	A		
Stream C-ABD	0.0	6.70	0.04	A			0.0	5.97	0.01	A		

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.

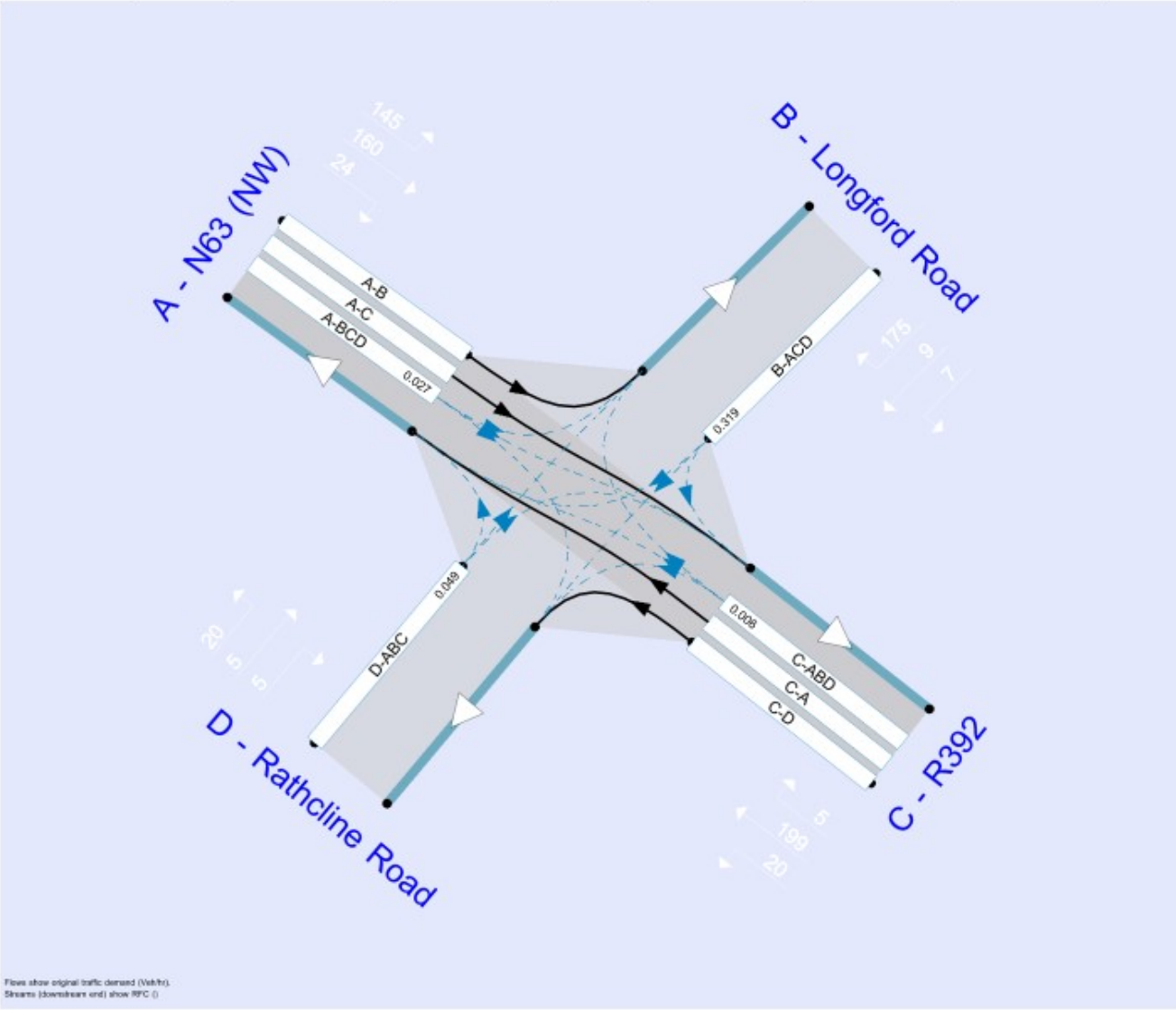
File summary

File Description

Title	Derryadd Wind Farm
Location	County Longford
Site number	
Date	30/11/2023
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	
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

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Baseflow	AM	ONE HOUR	08:15	09:45	15
D2	2028 Baseflow	AM	ONE HOUR	08:15	09:45	15
D3	2028 Baseflow with Proposed Development - Peak Construction Phase	AM	ONE HOUR	08:15	09:45	15
D4	2028 Baseflow with Proposed Development - Average Construction Phase	AM	ONE HOUR	08:15	09:45	15
D5	2022 Baseflow	PM	ONE HOUR	16:30	18:00	15
D6	2028 Baseflow	PM	ONE HOUR	16:30	18:00	15
D7	2028 Baseflow with Proposed Development - Peak Construction Phase	PM	ONE HOUR	16:30	18:00	15
D8	2028 Baseflow with Proposed Development - Average Construction Phase	PM	ONE HOUR	16:30	18:00	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Baseflow, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1		Crossroads	Two-way	Two-way	Two-way	Two-way		3.56	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.56	A

Arms

Arms

Arm	Name	Description	Arm type
A	N63 (NW)		Major
B	Longford Road		Minor
C	R392		Major
D	Rathcline Road		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A - N63 (NW)	6.40			250.0	✓	1.00
C - R392	6.40			240.0	✓	1.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Longford Road	One lane	3.90	30	35
D - Rathcline Road	One lane	2.20	25	19

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
A-D	719	-	-	-	-	-	-	0.274	0.391	0.274	-	-	-
B-A	550	0.098	0.249	0.249	-	-	-	0.157	0.355	-	0.249	0.249	0.124
B-C	704	0.106	0.268	-	-	-	-	-	-	-	-	-	-
B-D, nearside lane	550	0.098	0.249	0.249	-	-	-	0.157	0.355	0.157	-	-	-
B-D, offside lane	550	0.098	0.249	0.249	-	-	-	0.157	0.355	0.157	-	-	-
C-B	713	0.271	0.271	0.388	-	-	-	-	-	-	-	-	-
D-A	585	-	-	-	-	-	-	0.223	-	0.088	-	-	-
D-B, nearside lane	455	0.130	0.130	0.294	-	-	-	0.206	0.206	0.081	-	-	-
D-B, offside lane	455	0.130	0.130	0.294	-	-	-	0.206	0.206	0.081	-	-	-
D-C	455	-	0.130	0.294	0.103	0.206	0.206	0.206	0.206	0.081	-	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Baseflow	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (NW)		✓	354	100.000
B - Longford Road		✓	128	100.000
C - R392		✓	184	100.000
D - Rathcline Road		✓	44	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	157	180	17
	B - Longford Road	111	0	9	8
	C - R392	155	20	0	9
	D - Rathcline Road	22	16	6	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	6	3	0
	B - Longford Road	13	0	0	0
	C - R392	6	5	0	11
	D - Rathcline Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.36	14.25	0.6	B
A-BCD	0.03	5.55	0.0	A
A-B				
A-C				
D-ABC	0.11	9.39	0.1	A
C-ABD	0.04	6.45	0.0	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	96	428	0.225	95	0.3	10.789	B
A-BCD	13	681	0.019	13	0.0	5.384	A
A-B	118			118			
A-C	135			135			
D-ABC	33	458	0.072	33	0.1	8.461	A
C-ABD	15	609	0.025	15	0.0	6.056	A
C-D	7			7			
C-A	117			117			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	115	413	0.278	115	0.4	12.035	B
A-BCD	15	675	0.023	15	0.0	5.454	A
A-B	141			141			
A-C	162			162			
D-ABC	40	447	0.088	39	0.1	8.832	A
C-ABD	18	597	0.030	18	0.0	6.219	A
C-D	8			8			
C-A	139			139			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	141	394	0.358	140	0.5	14.172	B
A-BCD	19	668	0.028	19	0.0	5.549	A
A-B	173			173			
A-C	198			198			
D-ABC	48	432	0.112	48	0.1	9.383	A
C-ABD	22	580	0.039	22	0.0	6.454	A
C-D	10			10			
C-A	170			170			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	141	394	0.358	141	0.6	14.248	B
A-BCD	19	668	0.028	19	0.0	5.551	A
A-B	173			173			
A-C	198			198			
D-ABC	48	432	0.112	48	0.1	9.389	A
C-ABD	22	580	0.039	22	0.0	6.454	A
C-D	10			10			
C-A	170			170			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	115	413	0.278	116	0.4	12.123	B
A-BCD	15	675	0.023	15	0.0	5.455	A
A-B	141			141			
A-C	162			162			
D-ABC	40	447	0.088	40	0.1	8.839	A
C-ABD	18	597	0.030	18	0.0	6.220	A
C-D	8			8			
C-A	139			139			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	96	428	0.225	97	0.3	10.894	B
A-BCD	13	681	0.019	13	0.0	5.386	A
A-B	118			118			
A-C	135			135			
D-ABC	33	458	0.072	33	0.1	8.479	A
C-ABD	15	609	0.025	15	0.0	6.059	A
C-D	7			7			
C-A	117			117			

2028 Baseflow , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1		Crossroads	Two-way	Two-way	Two-way	Two-way		3.95	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.95	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2028 Baseflow	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (NW)		✓	386	100.000
B - Longford Road		✓	141	100.000
C - R392		✓	201	100.000
D - Rathcline Road		✓	48	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	172	196	18
	B - Longford Road	122	0	10	9
	C - R392	169	22	0	10
	D - Rathcline Road	24	17	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	6	3	0
	B - Longford Road	14	0	0	0
	C - R392	6	6	0	12
	D - Rathcline Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.41	15.94	0.7	C
A-BCD	0.03	5.59	0.0	A
A-B				
A-C				
D-ABC	0.12	9.69	0.1	A
C-ABD	0.04	6.63	0.0	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	106	418	0.254	105	0.3	11.448	B
A-BCD	14	678	0.020	14	0.0	5.416	A
A-B	129			129			
A-C	147			147			
D-ABC	36	453	0.080	36	0.1	8.622	A
C-ABD	17	598	0.028	17	0.0	6.190	A
C-D	8			8			
C-A	127			127			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	127	402	0.315	126	0.5	13.015	B
A-BCD	16	672	0.024	16	0.0	5.492	A
A-B	155			155			
A-C	176			176			
D-ABC	43	441	0.098	43	0.1	9.044	A
C-ABD	20	585	0.034	20	0.0	6.372	A
C-D	9			9			
C-A	152			152			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	155	381	0.407	154	0.7	15.823	C
A-BCD	20	664	0.030	20	0.0	5.594	A
A-B	189			189			
A-C	216			216			
D-ABC	53	424	0.125	53	0.1	9.686	A
C-ABD	25	567	0.043	25	0.0	6.634	A
C-D	11			11			
C-A	186			186			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	155	381	0.408	155	0.7	15.941	C
A-BCD	20	664	0.030	20	0.0	5.594	A
A-B	189			189			
A-C	216			216			
D-ABC	53	424	0.125	53	0.1	9.693	A
C-ABD	25	567	0.043	25	0.0	6.634	A
C-D	11			11			
C-A	186			186			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	127	402	0.315	128	0.5	13.141	B
A-BCD	16	672	0.024	16	0.0	5.493	A
A-B	155			155			
A-C	176			176			
D-ABC	43	441	0.098	43	0.1	9.055	A
C-ABD	20	585	0.034	20	0.0	6.373	A
C-D	9			9			
C-A	152			152			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	106	418	0.254	107	0.3	11.587	B
A-BCD	14	678	0.020	14	0.0	5.417	A
A-B	129			129			
A-C	147			147			
D-ABC	36	453	0.080	36	0.1	8.643	A
C-ABD	17	598	0.028	17	0.0	6.193	A
C-D	8			8			
C-A	127			127			

2028 Baseflow with Proposed Development - Peak Construction Phase, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1		Crossroads	Two-way	Two-way	Two-way	Two-way		4.19	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.19	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2028 Baseflow with Proposed Development - Peak Construction Phase	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (NW)		✓	405	100.000
B - Longford Road		✓	145	100.000
C - R392		✓	202	100.000
D - Rathcline Road		✓	48	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	186	201	18
	B - Longford Road	126	0	10	9
	C - R392	170	22	0	10
	D - Rathcline Road	24	17	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	10	4	0
	B - Longford Road	17	0	0	0
	C - R392	7	6	0	12
	D - Rathcline Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.43	17.31	0.8	C
A-BCD	0.03	5.60	0.0	A
A-B				
A-C				
D-ABC	0.13	9.78	0.1	A
C-ABD	0.04	6.73	0.0	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	109	405	0.270	108	0.4	12.053	B
A-BCD	14	678	0.020	14	0.0	5.418	A
A-B	140			140			
A-C	151			151			
D-ABC	36	451	0.080	36	0.1	8.667	A
C-ABD	17	593	0.028	17	0.0	6.248	A
C-D	8			8			
C-A	128			128			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	130	389	0.335	130	0.5	13.848	B
A-BCD	16	671	0.024	16	0.0	5.494	A
A-B	167			167			
A-C	181			181			
D-ABC	43	438	0.098	43	0.1	9.105	A
C-ABD	20	578	0.035	20	0.0	6.448	A
C-D	9			9			
C-A	153			153			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	160	367	0.434	159	0.7	17.152	C
A-BCD	20	663	0.030	20	0.0	5.596	A
A-B	205			205			
A-C	221			221			
D-ABC	53	421	0.126	53	0.1	9.773	A
C-ABD	25	559	0.044	25	0.0	6.735	A
C-D	11			11			
C-A	187			187			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	160	367	0.435	160	0.8	17.311	C
A-BCD	20	663	0.030	20	0.0	5.598	A
A-B	205			205			
A-C	221			221			
D-ABC	53	421	0.126	53	0.1	9.780	A
C-ABD	25	559	0.044	25	0.0	6.735	A
C-D	11			11			
C-A	187			187			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	130	389	0.335	131	0.5	14.016	B
A-BCD	16	672	0.024	16	0.0	5.497	A
A-B	167			167			
A-C	181			181			
D-ABC	43	438	0.098	43	0.1	9.118	A
C-ABD	20	578	0.035	20	0.0	6.449	A
C-D	9			9			
C-A	153			153			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	109	405	0.270	110	0.4	12.219	B
A-BCD	14	678	0.020	14	0.0	5.421	A
A-B	140			140			
A-C	151			151			
D-ABC	36	451	0.080	36	0.1	8.688	A
C-ABD	17	593	0.028	17	0.0	6.251	A
C-D	8			8			
C-A	128			128			

2028 Baseflow with Proposed Development - Average Construction Phase, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1		Crossroads	Two-way	Two-way	Two-way	Two-way		4.02	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.02	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2028 Baseflow with Proposed Development - Average Construction Phase	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (NW)		✓	400	100.000
B - Longford Road		✓	143	100.000
C - R392		✓	201	100.000
D - Rathcline Road		✓	48	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	182	200	18
	B - Longford Road	124	0	10	9
	C - R392	169	22	0	10
	D - Rathcline Road	24	17	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	8	4	0
	B - Longford Road	15	0	0	0
	C - R392	6	6	0	12
	D - Rathcline Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.42	16.55	0.7	C
A-BCD	0.03	5.59	0.0	A
A-B				
A-C				
D-ABC	0.13	9.74	0.1	A
C-ABD	0.04	6.70	0.0	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	108	413	0.261	106	0.3	11.702	B
A-BCD	14	678	0.020	14	0.0	5.414	A
A-B	137			137			
A-C	151			151			
D-ABC	36	452	0.080	36	0.1	8.647	A
C-ABD	17	594	0.028	17	0.0	6.229	A
C-D	8			8			
C-A	127			127			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	129	397	0.324	128	0.5	13.374	B
A-BCD	16	672	0.024	16	0.0	5.490	A
A-B	164			164			
A-C	180			180			
D-ABC	43	440	0.098	43	0.1	9.077	A
C-ABD	20	580	0.034	20	0.0	6.425	A
C-D	9			9			
C-A	152			152			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	157	375	0.420	157	0.7	16.410	C
A-BCD	20	664	0.030	20	0.0	5.590	A
A-B	200			200			
A-C	220			220			
D-ABC	53	422	0.125	53	0.1	9.734	A
C-ABD	25	562	0.044	25	0.0	6.704	A
C-D	11			11			
C-A	186			186			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	157	375	0.420	157	0.7	16.546	C
A-BCD	20	664	0.030	20	0.0	5.592	A
A-B	200			200			
A-C	220			220			
D-ABC	53	422	0.125	53	0.1	9.740	A
C-ABD	25	562	0.044	25	0.0	6.704	A
C-D	11			11			
C-A	186			186			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	129	397	0.324	129	0.5	13.517	B
A-BCD	16	672	0.024	16	0.0	5.490	A
A-B	164			164			
A-C	180			180			
D-ABC	43	440	0.098	43	0.1	9.088	A
C-ABD	20	580	0.034	20	0.0	6.428	A
C-D	9			9			
C-A	152			152			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	108	412	0.261	108	0.4	11.853	B
A-BCD	14	678	0.020	14	0.0	5.417	A
A-B	137			137			
A-C	151			151			
D-ABC	36	452	0.080	36	0.1	8.666	A
C-ABD	17	594	0.028	17	0.0	6.233	A
C-D	8			8			
C-A	127			127			

2022 Baseflow , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1		Crossroads	Two-way	Two-way	Two-way	Two-way		3.93	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.93	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2022 Baseflow	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (NW)		✓	300	100.000
B - Longford Road		✓	165	100.000
C - R392		✓	202	100.000
D - Rathcline Road		✓	28	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	131	147	22
	B - Longford Road	151	0	6	8
	C - R392	179	5	0	18
	D - Rathcline Road	18	5	5	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	5	4	0
	B - Longford Road	4	0	0	0
	C - R392	3	0	0	6
	D - Rathcline Road	6	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.42	14.20	0.7	B
A-BCD	0.04	5.61	0.0	A
A-B				
A-C				
D-ABC	0.07	8.73	0.1	A
C-ABD	0.01	5.87	0.0	A
C-D				
C-A				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	124	467	0.266	123	0.4	10.426	B
A-BCD	17	680	0.025	17	0.0	5.422	A
A-B	99			99			
A-C	111			111			
D-ABC	21	466	0.045	21	0.0	8.083	A
C-ABD	4	648	0.006	4	0.0	5.587	A
C-D	14			14			
C-A	135			135			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	148	453	0.327	148	0.5	11.761	B
A-BCD	20	674	0.030	20	0.0	5.501	A
A-B	118			118			
A-C	132			132			
D-ABC	25	457	0.055	25	0.1	8.342	A
C-ABD	5	636	0.007	4	0.0	5.703	A
C-D	16			16			
C-A	161			161			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	182	435	0.417	181	0.7	14.100	B
A-BCD	25	667	0.037	25	0.0	5.607	A
A-B	144			144			
A-C	162			162			
D-ABC	31	443	0.070	31	0.1	8.723	A
C-ABD	6	619	0.009	6	0.0	5.870	A
C-D	20			20			
C-A	197			197			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	182	435	0.417	182	0.7	14.196	B
A-BCD	25	667	0.037	25	0.0	5.607	A
A-B	144			144			
A-C	162			162			
D-ABC	31	443	0.070	31	0.1	8.725	A
C-ABD	6	619	0.009	6	0.0	5.870	A
C-D	20			20			
C-A	197			197			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	148	453	0.327	149	0.5	11.865	B
A-BCD	20	674	0.030	20	0.0	5.501	A
A-B	118			118			
A-C	132			132			
D-ABC	25	457	0.055	25	0.1	8.347	A
C-ABD	5	636	0.007	5	0.0	5.706	A
C-D	16			16			
C-A	161			161			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	124	467	0.266	125	0.4	10.546	B
A-BCD	17	681	0.025	17	0.0	5.425	A
A-B	99			99			
A-C	111			111			
D-ABC	21	466	0.045	21	0.0	8.093	A
C-ABD	4	648	0.006	4	0.0	5.587	A
C-D	14			14			
C-A	135			135			

2028 Baseflow , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1		Crossroads	Two-way	Two-way	Two-way	Two-way		4.33	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.33	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2028 Baseflow	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (NW)		✓	327	100.000
B - Longford Road		✓	181	100.000
C - R392		✓	220	100.000
D - Rathcline Road		✓	30	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	143	160	24
	B - Longford Road	165	0	7	9
	C - R392	195	5	0	20
	D - Rathcline Road	20	5	5	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	6	5	0
	B - Longford Road	4	0	0	0
	C - R392	3	0	0	6
	D - Rathcline Road	6	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.47	15.85	0.9	C
A-BCD	0.04	5.66	0.0	A
A-B				
A-C				
D-ABC	0.07	8.83	0.1	A
C-ABD	0.01	5.96	0.0	A
C-D				
C-A				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	136	461	0.296	135	0.4	10.985	B
A-BCD	18	678	0.027	18	0.0	5.458	A
A-B	108			108			
A-C	120			120			
D-ABC	23	465	0.049	22	0.1	8.130	A
C-ABD	4	642	0.006	4	0.0	5.643	A
C-D	15			15			
C-A	147			147			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	163	446	0.365	162	0.6	12.641	B
A-BCD	22	671	0.033	22	0.0	5.543	A
A-B	128			128			
A-C	144			144			
D-ABC	27	455	0.059	27	0.1	8.412	A
C-ABD	5	628	0.007	4	0.0	5.773	A
C-D	18			18			
C-A	175			175			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	199	426	0.468	198	0.9	15.697	C
A-BCD	27	663	0.041	27	0.0	5.657	A
A-B	157			157			
A-C	176			176			
D-ABC	33	441	0.075	33	0.1	8.831	A
C-ABD	6	609	0.009	6	0.0	5.961	A
C-D	22			22			
C-A	215			215			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	199	426	0.468	199	0.9	15.847	C
A-BCD	27	663	0.041	27	0.0	5.657	A
A-B	157			157			
A-C	176			176			
D-ABC	33	441	0.075	33	0.1	8.833	A
C-ABD	6	609	0.009	6	0.0	5.962	A
C-D	22			22			
C-A	215			215			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	163	446	0.365	164	0.6	12.798	B
A-BCD	22	671	0.033	22	0.0	5.546	A
A-B	128			128			
A-C	144			144			
D-ABC	27	455	0.059	27	0.1	8.418	A
C-ABD	5	628	0.007	5	0.0	5.774	A
C-D	18			18			
C-A	175			175			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	136	461	0.296	137	0.4	11.140	B
A-BCD	18	678	0.027	18	0.0	5.459	A
A-B	108			108			
A-C	120			120			
D-ABC	23	465	0.049	23	0.1	8.141	A
C-ABD	4	642	0.006	4	0.0	5.646	A
C-D	15			15			
C-A	147			147			

2028 Baseflow with Proposed Development - Peak Construction Phase, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1		Crossroads	Two-way	Two-way	Two-way	Two-way		5.34	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.34	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2028 Baseflow with Proposed Development - Peak Construction Phase	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (NW)		✓	332	100.000
B - Longford Road		✓	195	100.000
C - R392		✓	225	100.000
D - Rathcline Road		✓	30	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	147	161	24
	B - Longford Road	179	0	7	9
	C - R392	200	5	0	20
	D - Rathcline Road	20	5	5	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	8	5	0
	B - Longford Road	9	0	0	0
	C - R392	5	0	0	6
	D - Rathcline Road	6	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.53	18.88	1.1	C
A-BCD	0.04	5.68	0.0	A
A-B				
A-C				
D-ABC	0.08	8.90	0.1	A
C-ABD	0.01	5.99	0.0	A
C-D				
C-A				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	147	439	0.334	145	0.5	12.163	B
A-BCD	18	676	0.027	18	0.0	5.473	A
A-B	111			111			
A-C	121			121			
D-ABC	23	463	0.049	22	0.1	8.169	A
C-ABD	4	640	0.006	4	0.0	5.658	A
C-D	15			15			
C-A	151			151			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	175	425	0.413	175	0.7	14.343	B
A-BCD	22	669	0.033	22	0.0	5.561	A
A-B	132			132			
A-C	145			145			
D-ABC	27	452	0.060	27	0.1	8.463	A
C-ABD	5	626	0.007	4	0.0	5.792	A
C-D	18			18			
C-A	180			180			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	215	405	0.530	213	1.1	18.592	C
A-BCD	27	661	0.041	27	0.0	5.679	A
A-B	162			162			
A-C	177			177			
D-ABC	33	437	0.076	33	0.1	8.901	A
C-ABD	6	607	0.009	6	0.0	5.985	A
C-D	22			22			
C-A	220			220			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	215	405	0.530	215	1.1	18.877	C
A-BCD	27	661	0.041	27	0.0	5.679	A
A-B	162			162			
A-C	177			177			
D-ABC	33	437	0.076	33	0.1	8.904	A
C-ABD	6	607	0.009	6	0.0	5.985	A
C-D	22			22			
C-A	220			220			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	175	425	0.413	177	0.7	14.614	B
A-BCD	22	669	0.033	22	0.0	5.561	A
A-B	132			132			
A-C	145			145			
D-ABC	27	452	0.060	27	0.1	8.469	A
C-ABD	5	626	0.007	5	0.0	5.792	A
C-D	18			18			
C-A	180			180			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	147	439	0.335	148	0.5	12.400	B
A-BCD	18	676	0.027	18	0.0	5.476	A
A-B	111			111			
A-C	121			121			
D-ABC	23	463	0.049	23	0.1	8.181	A
C-ABD	4	640	0.006	4	0.0	5.658	A
C-D	15			15			
C-A	151			151			

2028 Baseflow with Proposed Development - Average Construction Phase, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1		Crossroads	Two-way	Two-way	Two-way	Two-way		4.86	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.86	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2028 Baseflow with Proposed Development - Average Construction Phase	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (NW)		✓	329	100.000
B - Longford Road		✓	191	100.000
C - R392		✓	224	100.000
D - Rathcline Road		✓	30	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	145	160	24
	B - Longford Road	175	0	7	9
	C - R392	199	5	0	20
	D - Rathcline Road	20	5	5	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (NW)	B - Longford Road	C - R392	D - Rathcline Road
From	A - N63 (NW)	0	7	5	0
	B - Longford Road	6	0	0	0
	C - R392	4	0	0	6
	D - Rathcline Road	6	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.50	17.39	1.0	C
A-BCD	0.04	5.67	0.0	A
A-B				
A-C				
D-ABC	0.08	8.88	0.1	A
C-ABD	0.01	5.97	0.0	A
C-D				
C-A				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	144	451	0.319	142	0.5	11.567	B
A-BCD	18	676	0.027	18	0.0	5.468	A
A-B	109			109			
A-C	120			120			
D-ABC	23	464	0.049	22	0.1	8.154	A
C-ABD	4	641	0.006	4	0.0	5.649	A
C-D	15			15			
C-A	150			150			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	172	437	0.393	171	0.6	13.498	B
A-BCD	22	670	0.033	22	0.0	5.555	A
A-B	130			130			
A-C	144			144			
D-ABC	27	453	0.060	27	0.1	8.444	A
C-ABD	5	627	0.007	4	0.0	5.781	A
C-D	18			18			
C-A	179			179			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	210	417	0.504	209	1.0	17.172	C
A-BCD	27	661	0.041	27	0.0	5.672	A
A-B	159			159			
A-C	176			176			
D-ABC	33	439	0.075	33	0.1	8.874	A
C-ABD	6	608	0.009	6	0.0	5.972	A
C-D	22			22			
C-A	219			219			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	210	417	0.504	210	1.0	17.388	C
A-BCD	27	662	0.041	27	0.0	5.674	A
A-B	159			159			
A-C	176			176			
D-ABC	33	439	0.075	33	0.1	8.877	A
C-ABD	6	608	0.009	6	0.0	5.972	A
C-D	22			22			
C-A	219			219			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	172	437	0.393	173	0.7	13.713	B
A-BCD	22	670	0.033	22	0.0	5.556	A
A-B	130			130			
A-C	144			144			
D-ABC	27	453	0.060	27	0.1	8.451	A
C-ABD	5	627	0.007	5	0.0	5.784	A
C-D	18			18			
C-A	179			179			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	144	451	0.319	145	0.5	11.765	B
A-BCD	18	677	0.027	18	0.0	5.469	A
A-B	109			109			
A-C	120			120			
D-ABC	23	464	0.049	23	0.1	8.165	A
C-ABD	4	641	0.006	4	0.0	5.652	A
C-D	15			15			
C-A	150			150			

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: JTC 2.j10
Path: W:\Projects\11399 - BnaM Derryadd Wind Farm_Revised_2022\05-Design\01-Calculations\Traffic\TIA
Report generation date: 05/12/2023 10:45:16

Summary of junction performance

	AM						PM					
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS
	2022 Baseflow											
Stream B-ACD	0.0	5.75	0.03	A	2.10	A	0.0	5.66	0.04	A	1.76	A
Stream A-BCD	0.0	5.97	0.01	A			0.0	5.42	0.02	A		
Stream D-ABC	0.1	7.84	0.11	A			0.1	7.58	0.06	A		
Stream C-ABD	0.0	5.41	0.01	A			0.0	5.27	0.02	A		
	2028 Baseflow											
Stream B-ACD	0.0	5.85	0.04	A	2.12	A	0.0	5.72	0.04	A	1.76	A
Stream A-BCD	0.0	6.06	0.02	A			0.0	5.46	0.02	A		
Stream D-ABC	0.1	8.01	0.12	A			0.1	7.70	0.07	A		
Stream C-ABD	0.0	5.44	0.01	A			0.0	5.29	0.02	A		
	2028 Baseflow with Proposed Development - Peak Construction Phase											
Stream B-ACD	0.0	5.86	0.04	A	2.08	A	0.0	5.74	0.04	A	1.72	A
Stream A-BCD	0.0	6.07	0.02	A			0.0	5.46	0.02	A		
Stream D-ABC	0.1	8.04	0.12	A			0.1	7.72	0.07	A		
Stream C-ABD	0.0	5.44	0.01	A			0.0	5.30	0.02	A		
	2028 Baseflow with Proposed Development - Average Construction Phase											
Stream B-ACD	0.0	5.85	0.04	A	2.10	A	0.0	5.73	0.04	A	1.75	A
Stream A-BCD	0.0	6.07	0.02	A			0.0	5.46	0.02	A		
Stream D-ABC	0.1	8.02	0.12	A			0.1	7.71	0.07	A		
Stream C-ABD	0.0	5.44	0.01	A			0.0	5.29	0.02	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.

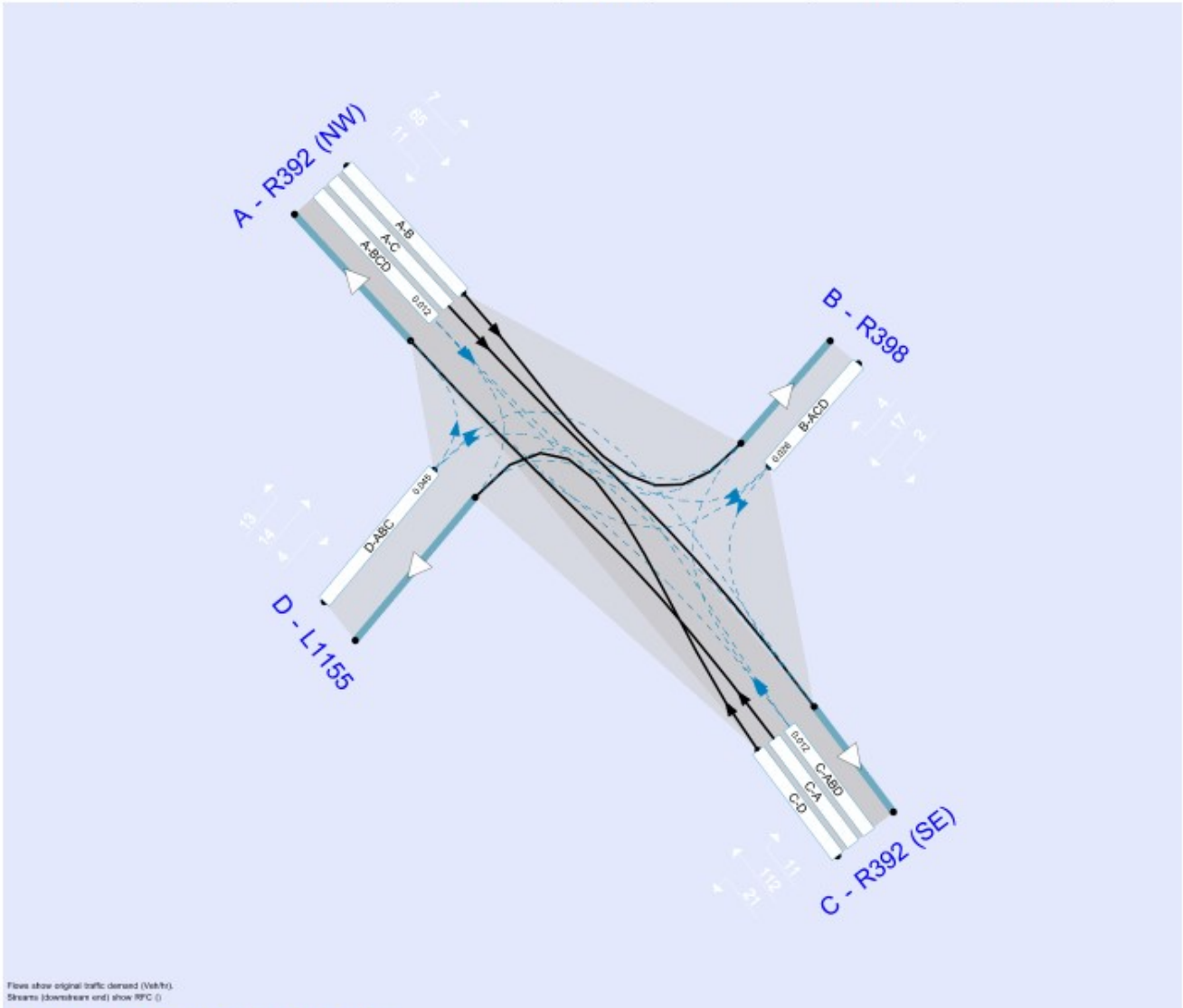
File summary

File Description

Title	Derryadd Wind Farm
Location	County Longford
Site number	
Date	30/11/2023
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	
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

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Baseflow	AM	ONE HOUR	08:15	09:45	15
D2	2028 Baseflow	AM	ONE HOUR	08:15	09:45	15
D3	2028 Baseflow with Proposed Development - Peak Construction Phase	AM	ONE HOUR	08:15	09:45	15
D4	2028 Baseflow with Proposed Development - Average Construction Phase	AM	ONE HOUR	08:15	09:45	15
D5	2022 Baseflow	PM	ONE HOUR	16:30	18:00	15
D6	2028 Baseflow	PM	ONE HOUR	16:30	18:00	15
D7	2028 Baseflow with Proposed Development - Peak Construction Phase	PM	ONE HOUR	16:30	18:00	15
D8	2028 Baseflow with Proposed Development - Average Construction Phase	PM	ONE HOUR	16:30	18:00	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Baseflow, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R392 (SE) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
2		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		2.10	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.10	A

Arms

Arms

Arm	Name	Description	Arm type
A	R392 (NW)		Major
B	R398		Minor
C	R392 (SE)		Major
D	L1155		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A - R392 (NW)	6.10			250.0	✓	1.00
C - R392 (SE)	5.40			250.0	✓	1.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - R398	One lane	3.90	160	230
D - L1155	One lane	2.20	190	115

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
A-D	719	-	-	-	0.277	0.277	0.277	-	0.277	-	-
B-AD	709	0.133	0.335	-	-	-	0.211	0.479	0.211	0.133	0.335
B-C	838	0.132	0.333	-	-	-	-	-	-	0.132	0.333
C-B	719	0.286	0.286	-	-	-	-	-	-	0.286	0.286
D-A	641	-	-	-	0.247	0.098	0.247	-	0.098	-	-
D-BC	552	0.159	0.159	0.361	0.253	0.100	0.253	-	0.100	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Baseflow	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - R392 (NW)		✓	117	100.000
B - R398		✓	20	100.000
C - R392 (SE)		✓	79	100.000
D - L1155		✓	51	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	3	106	8
	B - R398	2	0	7	11
	C - R392 (SE)	64	4	0	11
	D - L1155	10	25	16	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	0	5	13
	B - R398	0	0	0	9
	C - R392 (SE)	11	0	0	45
	D - L1155	10	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.03	5.75	0.0	A
A-BCD	0.01	5.97	0.0	A
A-B				
A-C				
D-ABC	0.11	7.84	0.1	A
C-ABD	0.01	5.41	0.0	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	15	668	0.023	15	0.0	5.511	A
A-BCD	6	619	0.010	6	0.0	5.874	A
A-B	2			2			
A-C	80			80			
D-ABC	38	529	0.073	38	0.1	7.333	A
C-ABD	3	686	0.004	3	0.0	5.273	A
C-D	8			8			
C-A	48			48			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	18	659	0.027	18	0.0	5.611	A
A-BCD	7	616	0.012	7	0.0	5.915	A
A-B	3			3			
A-C	95			95			
D-ABC	46	523	0.088	46	0.1	7.544	A
C-ABD	4	679	0.005	4	0.0	5.328	A
C-D	10			10			
C-A	58			58			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	22	648	0.034	22	0.0	5.754	A
A-BCD	9	612	0.014	9	0.0	5.972	A
A-B	3			3			
A-C	117			117			
D-ABC	56	515	0.109	56	0.1	7.840	A
C-ABD	4	670	0.007	4	0.0	5.405	A
C-D	12			12			
C-A	70			70			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	22	647	0.034	22	0.0	5.755	A
A-BCD	9	612	0.014	9	0.0	5.972	A
A-B	3			3			
A-C	117			117			
D-ABC	56	515	0.109	56	0.1	7.843	A
C-ABD	4	670	0.007	4	0.0	5.405	A
C-D	12			12			
C-A	70			70			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	18	659	0.027	18	0.0	5.614	A
A-BCD	7	616	0.012	7	0.0	5.918	A
A-B	3			3			
A-C	95			95			
D-ABC	46	523	0.088	46	0.1	7.547	A
C-ABD	4	679	0.005	4	0.0	5.328	A
C-D	10			10			
C-A	58			58			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	15	668	0.023	15	0.0	5.514	A
A-BCD	6	619	0.010	6	0.0	5.877	A
A-B	2			2			
A-C	80			80			
D-ABC	38	529	0.073	38	0.1	7.347	A
C-ABD	3	685	0.004	3	0.0	5.274	A
C-D	8			8			
C-A	48			48			

2028 Baseflow , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R392 (SE) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
2		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		2.12	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.12	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2028 Baseflow	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - R392 (NW)		✓	128	100.000
B - R398		✓	22	100.000
C - R392 (SE)		✓	87	100.000
D - L1155		✓	55	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	3	116	9
	B - R398	2	0	8	12
	C - R392 (SE)	70	4	0	13
	D - L1155	11	27	17	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	0	5	14
	B - R398	0	0	0	10
	C - R392 (SE)	12	0	0	48
	D - L1155	11	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.04	5.85	0.0	A
A-BCD	0.02	6.06	0.0	A
A-B				
A-C				
D-ABC	0.12	8.01	0.1	A
C-ABD	0.01	5.44	0.0	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	662	0.025	16	0.0	5.574	A
A-BCD	7	612	0.011	7	0.0	5.952	A
A-B	2			2			
A-C	87			87			
D-ABC	41	525	0.079	41	0.1	7.435	A
C-ABD	3	683	0.004	3	0.0	5.295	A
C-D	10			10			
C-A	53			53			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	20	653	0.030	20	0.0	5.686	A
A-BCD	8	608	0.013	8	0.0	5.998	A
A-B	3			3			
A-C	104			104			
D-ABC	49	519	0.095	49	0.1	7.671	A
C-ABD	4	676	0.005	4	0.0	5.355	A
C-D	12			12			
C-A	63			63			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	24	640	0.038	24	0.0	5.847	A
A-BCD	10	604	0.017	10	0.0	6.061	A
A-B	3			3			
A-C	128			128			
D-ABC	61	510	0.119	60	0.1	8.005	A
C-ABD	4	666	0.007	4	0.0	5.439	A
C-D	14			14			
C-A	77			77			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	24	640	0.038	24	0.0	5.847	A
A-BCD	10	604	0.017	10	0.0	6.061	A
A-B	3			3			
A-C	128			128			
D-ABC	61	510	0.119	61	0.1	8.008	A
C-ABD	4	666	0.007	4	0.0	5.439	A
C-D	14			14			
C-A	77			77			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	20	653	0.030	20	0.0	5.687	A
A-BCD	8	608	0.013	8	0.0	5.998	A
A-B	3			3			
A-C	104			104			
D-ABC	49	519	0.095	50	0.1	7.674	A
C-ABD	4	676	0.005	4	0.0	5.358	A
C-D	12			12			
C-A	63			63			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	662	0.025	17	0.0	5.578	A
A-BCD	7	611	0.011	7	0.0	5.954	A
A-B	2			2			
A-C	87			87			
D-ABC	41	525	0.079	41	0.1	7.450	A
C-ABD	3	683	0.004	3	0.0	5.298	A
C-D	10			10			
C-A	53			53			

2028 Baseflow with Proposed Development - Peak Construction Phase, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R392 (SE) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
2		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		2.08	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.08	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2028 Baseflow with Proposed Development - Peak Construction Phase	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - R392 (NW)		✓	129	100.000
B - R398		✓	22	100.000
C - R392 (SE)		✓	90	100.000
D - L1155		✓	55	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	3	117	9
	B - R398	2	0	8	12
	C - R392 (SE)	73	4	0	13
	D - L1155	11	27	17	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	0	6	14
	B - R398	0	0	0	10
	C - R392 (SE)	14	0	0	48
	D - L1155	11	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.04	5.86	0.0	A
A-BCD	0.02	6.07	0.0	A
A-B				
A-C				
D-ABC	0.12	8.04	0.1	A
C-ABD	0.01	5.44	0.0	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	661	0.025	16	0.0	5.584	A
A-BCD	7	611	0.011	7	0.0	5.960	A
A-B	2			2			
A-C	88			88			
D-ABC	41	524	0.079	41	0.1	7.452	A
C-ABD	3	682	0.004	3	0.0	5.299	A
C-D	10			10			
C-A	55			55			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	20	652	0.030	20	0.0	5.697	A
A-BCD	8	607	0.013	8	0.0	6.008	A
A-B	3			3			
A-C	105			105			
D-ABC	49	517	0.096	49	0.1	7.692	A
C-ABD	4	675	0.005	4	0.0	5.360	A
C-D	12			12			
C-A	66			66			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	24	638	0.038	24	0.0	5.862	A
A-BCD	10	603	0.017	10	0.0	6.074	A
A-B	3			3			
A-C	129			129			
D-ABC	61	508	0.119	60	0.1	8.035	A
C-ABD	4	665	0.007	4	0.0	5.445	A
C-D	14			14			
C-A	80			80			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	24	638	0.038	24	0.0	5.862	A
A-BCD	10	603	0.017	10	0.0	6.074	A
A-B	3			3			
A-C	129			129			
D-ABC	61	508	0.119	61	0.1	8.038	A
C-ABD	4	665	0.007	4	0.0	5.445	A
C-D	14			14			
C-A	80			80			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	20	651	0.030	20	0.0	5.700	A
A-BCD	8	607	0.013	8	0.0	6.009	A
A-B	3			3			
A-C	105			105			
D-ABC	49	517	0.096	50	0.1	7.699	A
C-ABD	4	675	0.005	4	0.0	5.362	A
C-D	12			12			
C-A	66			66			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	661	0.025	17	0.0	5.585	A
A-BCD	7	611	0.011	7	0.0	5.961	A
A-B	2			2			
A-C	88			88			
D-ABC	41	524	0.079	41	0.1	7.464	A
C-ABD	3	682	0.004	3	0.0	5.302	A
C-D	10			10			
C-A	55			55			

2028 Baseflow with Proposed Development - Average Construction Phase, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R392 (SE) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
2		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		2.10	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.10	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2028 Baseflow with Proposed Development - Average Construction Phase	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - R392 (NW)		✓	128	100.000
B - R398		✓	22	100.000
C - R392 (SE)		✓	89	100.000
D - L1155		✓	55	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	3	116	9
	B - R398	2	0	8	12
	C - R392 (SE)	72	4	0	13
	D - L1155	11	27	17	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	0	5	14
	B - R398	0	0	0	10
	C - R392 (SE)	13	0	0	48
	D - L1155	11	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.04	5.85	0.0	A
A-BCD	0.02	6.07	0.0	A
A-B				
A-C				
D-ABC	0.12	8.02	0.1	A
C-ABD	0.01	5.44	0.0	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	662	0.025	16	0.0	5.577	A
A-BCD	7	611	0.011	7	0.0	5.957	A
A-B	2			2			
A-C	87			87			
D-ABC	41	524	0.079	41	0.1	7.444	A
C-ABD	3	683	0.004	3	0.0	5.295	A
C-D	10			10			
C-A	54			54			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	20	652	0.030	20	0.0	5.689	A
A-BCD	8	608	0.013	8	0.0	6.004	A
A-B	3			3			
A-C	104			104			
D-ABC	49	518	0.095	49	0.1	7.681	A
C-ABD	4	676	0.005	4	0.0	5.355	A
C-D	12			12			
C-A	65			65			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	24	639	0.038	24	0.0	5.852	A
A-BCD	10	603	0.017	10	0.0	6.069	A
A-B	3			3			
A-C	128			128			
D-ABC	61	509	0.119	60	0.1	8.020	A
C-ABD	4	666	0.007	4	0.0	5.439	A
C-D	14			14			
C-A	79			79			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	24	639	0.038	24	0.0	5.852	A
A-BCD	10	603	0.017	10	0.0	6.069	A
A-B	3			3			
A-C	128			128			
D-ABC	61	509	0.119	61	0.1	8.023	A
C-ABD	4	666	0.007	4	0.0	5.439	A
C-D	14			14			
C-A	79			79			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	20	652	0.030	20	0.0	5.690	A
A-BCD	8	608	0.013	8	0.0	6.007	A
A-B	3			3			
A-C	104			104			
D-ABC	49	518	0.095	50	0.1	7.686	A
C-ABD	4	676	0.005	4	0.0	5.358	A
C-D	12			12			
C-A	65			65			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	662	0.025	17	0.0	5.578	A
A-BCD	7	611	0.011	7	0.0	5.957	A
A-B	2			2			
A-C	87			87			
D-ABC	41	524	0.079	41	0.1	7.455	A
C-ABD	3	683	0.004	3	0.0	5.298	A
C-D	10			10			
C-A	54			54			

2022 Baseflow , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R392 (SE) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
2		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		1.76	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.76	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2022 Baseflow	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - R392 (NW)		✓	74	100.000
B - R398		✓	22	100.000
C - R392 (SE)		✓	132	100.000
D - L1155		✓	29	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	6	58	10
	B - R398	4	0	2	16
	C - R392 (SE)	103	10	0	19
	D - L1155	12	13	4	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	0	2	0
	B - R398	0	0	0	0
	C - R392 (SE)	3	0	0	5
	D - L1155	8	0	25	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.04	5.66	0.0	A
A-BCD	0.02	5.42	0.0	A
A-B				
A-C				
D-ABC	0.06	7.58	0.1	A
C-ABD	0.02	5.27	0.0	A
C-D				
C-A				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	679	0.024	16	0.0	5.431	A
A-BCD	8	689	0.011	7	0.0	5.283	A
A-B	5			5			
A-C	44			44			
D-ABC	22	520	0.042	22	0.0	7.220	A
C-ABD	8	702	0.011	7	0.0	5.184	A
C-D	14			14			
C-A	78			78			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	20	671	0.029	20	0.0	5.524	A
A-BCD	9	683	0.013	9	0.0	5.340	A
A-B	5			5			
A-C	52			52			
D-ABC	26	515	0.051	26	0.1	7.368	A
C-ABD	9	699	0.013	9	0.0	5.218	A
C-D	17			17			
C-A	93			93			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	24	661	0.037	24	0.0	5.656	A
A-BCD	11	675	0.016	11	0.0	5.419	A
A-B	7			7			
A-C	64			64			
D-ABC	32	507	0.063	32	0.1	7.579	A
C-ABD	11	695	0.016	11	0.0	5.265	A
C-D	21			21			
C-A	113			113			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	24	661	0.037	24	0.0	5.657	A
A-BCD	11	675	0.016	11	0.0	5.419	A
A-B	7			7			
A-C	64			64			
D-ABC	32	507	0.063	32	0.1	7.579	A
C-ABD	11	695	0.016	11	0.0	5.265	A
C-D	21			21			
C-A	113			113			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	20	671	0.029	20	0.0	5.527	A
A-BCD	9	683	0.013	9	0.0	5.340	A
A-B	5			5			
A-C	52			52			
D-ABC	26	515	0.051	26	0.1	7.373	A
C-ABD	9	699	0.013	9	0.0	5.221	A
C-D	17			17			
C-A	93			93			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	679	0.024	17	0.0	5.434	A
A-BCD	8	689	0.011	8	0.0	5.286	A
A-B	5			5			
A-C	44			44			
D-ABC	22	520	0.042	22	0.0	7.224	A
C-ABD	8	702	0.011	8	0.0	5.185	A
C-D	14			14			
C-A	78			78			

2028 Baseflow , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R392 (SE) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
2		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		1.76	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.76	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2028 Baseflow	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - R392 (NW)		✓	81	100.000
B - R398		✓	23	100.000
C - R392 (SE)		✓	144	100.000
D - L1155		✓	31	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	7	63	11
	B - R398	4	0	2	17
	C - R392 (SE)	112	11	0	21
	D - L1155	13	14	4	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	0	2	0
	B - R398	0	0	0	0
	C - R392 (SE)	3	0	0	6
	D - L1155	9	0	27	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.04	5.72	0.0	A
A-BCD	0.02	5.46	0.0	A
A-B				
A-C				
D-ABC	0.07	7.70	0.1	A
C-ABD	0.02	5.29	0.0	A
C-D				
C-A				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	675	0.026	17	0.0	5.471	A
A-BCD	8	686	0.012	8	0.0	5.309	A
A-B	5			5			
A-C	47			47			
D-ABC	23	516	0.045	23	0.0	7.304	A
C-ABD	8	700	0.012	8	0.0	5.200	A
C-D	16			16			
C-A	84			84			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	21	667	0.031	21	0.0	5.572	A
A-BCD	10	680	0.015	10	0.0	5.371	A
A-B	6			6			
A-C	57			57			
D-ABC	28	510	0.055	28	0.1	7.467	A
C-ABD	10	697	0.014	10	0.0	5.237	A
C-D	19			19			
C-A	101			101			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	25	655	0.039	25	0.0	5.718	A
A-BCD	12	672	0.018	12	0.0	5.457	A
A-B	8			8			
A-C	69			69			
D-ABC	34	502	0.068	34	0.1	7.700	A
C-ABD	12	693	0.018	12	0.0	5.288	A
C-D	23			23			
C-A	123			123			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	25	655	0.039	25	0.0	5.719	A
A-BCD	12	672	0.018	12	0.0	5.457	A
A-B	8			8			
A-C	69			69			
D-ABC	34	502	0.068	34	0.1	7.702	A
C-ABD	12	693	0.018	12	0.0	5.288	A
C-D	23			23			
C-A	123			123			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	21	667	0.031	21	0.0	5.575	A
A-BCD	10	680	0.015	10	0.0	5.371	A
A-B	6			6			
A-C	57			57			
D-ABC	28	510	0.055	28	0.1	7.472	A
C-ABD	10	697	0.014	10	0.0	5.237	A
C-D	19			19			
C-A	101			101			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	675	0.026	17	0.0	5.474	A
A-BCD	8	686	0.012	8	0.0	5.311	A
A-B	5			5			
A-C	47			47			
D-ABC	23	516	0.045	23	0.0	7.311	A
C-ABD	8	700	0.012	8	0.0	5.202	A
C-D	16			16			
C-A	84			84			

2028 Baseflow with Proposed Development - Peak Construction Phase, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R392 (SE) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
2		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		1.72	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.72	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2028 Baseflow with Proposed Development - Peak Construction Phase	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - R392 (NW)		✓	84	100.000
B - R398		✓	23	100.000
C - R392 (SE)		✓	145	100.000
D - L1155		✓	31	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	7	66	11
	B - R398	4	0	2	17
	C - R392 (SE)	113	11	0	21
	D - L1155	13	14	4	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	0	5	0
	B - R398	0	0	0	0
	C - R392 (SE)	4	0	0	6
	D - L1155	9	0	27	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.04	5.74	0.0	A
A-BCD	0.02	5.46	0.0	A
A-B				
A-C				
D-ABC	0.07	7.72	0.1	A
C-ABD	0.02	5.30	0.0	A
C-D				
C-A				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	674	0.026	17	0.0	5.485	A
A-BCD	8	686	0.012	8	0.0	5.312	A
A-B	5			5			
A-C	50			50			
D-ABC	23	515	0.045	23	0.0	7.315	A
C-ABD	8	699	0.012	8	0.0	5.208	A
C-D	16			16			
C-A	85			85			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	21	665	0.031	21	0.0	5.589	A
A-BCD	10	680	0.015	10	0.0	5.375	A
A-B	6			6			
A-C	59			59			
D-ABC	28	509	0.055	28	0.1	7.481	A
C-ABD	10	696	0.014	10	0.0	5.247	A
C-D	19			19			
C-A	102			102			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	25	652	0.039	25	0.0	5.740	A
A-BCD	12	671	0.018	12	0.0	5.462	A
A-B	8			8			
A-C	73			73			
D-ABC	34	500	0.068	34	0.1	7.719	A
C-ABD	12	691	0.018	12	0.0	5.300	A
C-D	23			23			
C-A	124			124			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	25	652	0.039	25	0.0	5.740	A
A-BCD	12	671	0.018	12	0.0	5.462	A
A-B	8			8			
A-C	73			73			
D-ABC	34	500	0.068	34	0.1	7.720	A
C-ABD	12	691	0.018	12	0.0	5.300	A
C-D	23			23			
C-A	124			124			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	21	665	0.031	21	0.0	5.592	A
A-BCD	10	680	0.015	10	0.0	5.375	A
A-B	6			6			
A-C	59			59			
D-ABC	28	509	0.055	28	0.1	7.483	A
C-ABD	10	696	0.014	10	0.0	5.247	A
C-D	19			19			
C-A	102			102			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	674	0.026	17	0.0	5.485	A
A-BCD	8	686	0.012	8	0.0	5.315	A
A-B	5			5			
A-C	50			50			
D-ABC	23	515	0.045	23	0.0	7.323	A
C-ABD	8	699	0.012	8	0.0	5.210	A
C-D	16			16			
C-A	85			85			

2028 Baseflow with Proposed Development - Average Construction Phase, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R392 (SE) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
2		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		1.75	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.75	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2028 Baseflow with Proposed Development - Average Construction Phase	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - R392 (NW)		✓	83	100.000
B - R398		✓	23	100.000
C - R392 (SE)		✓	144	100.000
D - L1155		✓	31	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	7	65	11
	B - R398	4	0	2	17
	C - R392 (SE)	112	11	0	21
	D - L1155	13	14	4	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - R392 (NW)	B - R398	C - R392 (SE)	D - L1155
From	A - R392 (NW)	0	0	3	0
	B - R398	0	0	0	0
	C - R392 (SE)	3	0	0	6
	D - L1155	9	0	27	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.04	5.73	0.0	A
A-BCD	0.02	5.46	0.0	A
A-B				
A-C				
D-ABC	0.07	7.71	0.1	A
C-ABD	0.02	5.29	0.0	A
C-D				
C-A				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	674	0.026	17	0.0	5.477	A
A-BCD	8	686	0.012	8	0.0	5.309	A
A-B	5			5			
A-C	49			49			
D-ABC	23	516	0.045	23	0.0	7.307	A
C-ABD	8	700	0.012	8	0.0	5.204	A
C-D	16			16			
C-A	84			84			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	21	666	0.031	21	0.0	5.579	A
A-BCD	10	680	0.015	10	0.0	5.370	A
A-B	6			6			
A-C	58			58			
D-ABC	28	510	0.055	28	0.1	7.471	A
C-ABD	10	697	0.014	10	0.0	5.242	A
C-D	19			19			
C-A	101			101			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	25	654	0.039	25	0.0	5.727	A
A-BCD	12	672	0.018	12	0.0	5.457	A
A-B	8			8			
A-C	72			72			
D-ABC	34	501	0.068	34	0.1	7.705	A
C-ABD	12	692	0.018	12	0.0	5.294	A
C-D	23			23			
C-A	123			123			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	25	654	0.039	25	0.0	5.728	A
A-BCD	12	672	0.018	12	0.0	5.457	A
A-B	8			8			
A-C	72			72			
D-ABC	34	501	0.068	34	0.1	7.707	A
C-ABD	12	692	0.018	12	0.0	5.294	A
C-D	23			23			
C-A	123			123			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	21	666	0.031	21	0.0	5.582	A
A-BCD	10	680	0.015	10	0.0	5.371	A
A-B	6			6			
A-C	58			58			
D-ABC	28	510	0.055	28	0.1	7.476	A
C-ABD	10	697	0.014	10	0.0	5.245	A
C-D	19			19			
C-A	101			101			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	17	674	0.026	17	0.0	5.478	A
A-BCD	8	686	0.012	8	0.0	5.309	A
A-B	5			5			
A-C	49			49			
D-ABC	23	516	0.045	23	0.0	7.311	A
C-ABD	8	700	0.012	8	0.0	5.207	A
C-D	16			16			
C-A	84			84			

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: JTC 3.j10
Path: W:\Projects\11399 - BnaM Derryadd Wind Farm_Revised_2022\05-Design\01-Calculations\Traffic\TIA
Report generation date: 04/12/2023 09:32:58

Summary of junction performance

	AM						PM					
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS
	2022 Baseflow											
Stream B-C	0.0	6.27	0.00	A	4.06	A	0.0	6.53	0.00	A	4.18	A
Stream B-A	0.7	14.11	0.43	B			0.8	15.16	0.45	C		
Stream C-B	0.1	6.25	0.05	A			0.0	6.14	0.02	A		
	2028 Baseflow											
Stream B-C	0.0	6.41	0.00	A	4.49	A	0.0	6.72	0.00	A	4.82	A
Stream B-A	0.9	15.73	0.48	C			1.0	17.46	0.51	C		
Stream C-B	0.1	6.44	0.06	A			0.0	6.27	0.03	A		
	2028 Baseflow with Proposed Development - Peak Construction Phase											
Stream B-C	0.0	6.43	0.00	A	4.48	A	0.0	6.73	0.00	A	4.81	A
Stream B-A	0.9	15.86	0.48	C			1.0	17.57	0.51	C		
Stream C-B	0.1	6.46	0.06	A			0.0	6.28	0.03	A		
	2028 Baseflow with Proposed Development - Average Construction Phase											
Stream B-C	0.0	6.42	0.00	A	4.49	A	0.0	6.72	0.00	A	4.82	A
Stream B-A	0.9	15.79	0.48	C			1.0	17.51	0.51	C		
Stream C-B	0.1	6.45	0.06	A			0.0	6.27	0.03	A		

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.

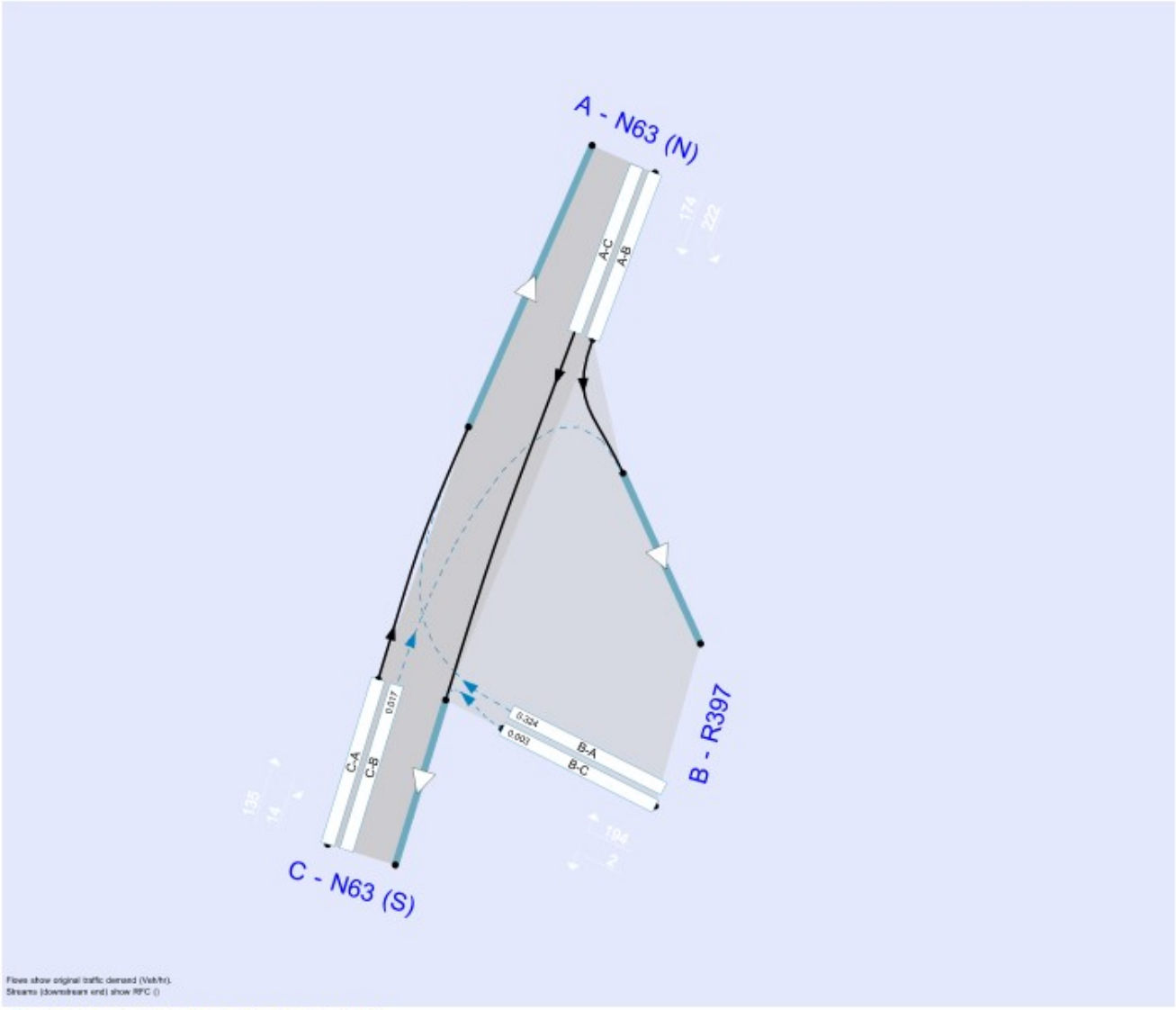
File summary

File Description

Title	Derryadd Wind Farm
Location	County Longford
Site number	
Date	30/11/2023
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	
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

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Baseflow	AM	ONE HOUR	08:15	09:45	15
D2	2028 Baseflow	AM	ONE HOUR	08:15	09:45	15
D3	2028 Baseflow with Proposed Development - Peak Construction Phase	AM	ONE HOUR	08:15	09:45	15
D4	2028 Baseflow with Proposed Development - Average Construction Phase	AM	ONE HOUR	08:15	09:45	15
D5	2022 Baseflow	PM	ONE HOUR	16:30	18:00	15
D6	2028 Baseflow	PM	ONE HOUR	16:30	18:00	15
D7	2028 Baseflow with Proposed Development - Peak Construction Phase	PM	ONE HOUR	16:30	18:00	15
D8	2028 Baseflow with Proposed Development - Average Construction Phase	PM	ONE HOUR	16:30	18:00	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Baseflow, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
3		T-Junction	Two-way	Two-way	Two-way		4.06	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.06	A

Arms

Arms

Arm	Name	Description	Arm type
A	N63 (N)		Major
B	R397		Minor
C	N63 (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - N63 (S)	6.60			240.0		-

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

Minor Arm Geometry

Arm	Minor arm type	Lane Width (Left) (m)	Lane Width (Right) (m)	Visibility to left (m)	Visibility to right (m)
B - R397	Two lanes	2.80	2.80	85	140

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	564	0.100	0.253	0.159	0.361
B-C	698	0.104	0.263	-	-
C-B	713	0.269	0.269	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Baseflow	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (N)		✓	263	100.000
B - R397		✓	174	100.000
C - N63 (S)		✓	203	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	171	92
	B - R397	172	0	2
	C - N63 (S)	173	30	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	8	13
	B - R397	6	0	0
	C - N63 (S)	4	3	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	6.27	0.0	A
B-A	0.43	14.11	0.7	B
C-A				
C-B	0.05	6.25	0.1	A
A-B				
A-C				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	617	0.002	1	0.0	5.845	A
B-A	129	472	0.274	128	0.4	10.411	B
C-A	130			130			
C-B	23	635	0.036	22	0.0	5.871	A
A-B	129			129			
A-C	69			69			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	600	0.003	2	0.0	6.013	A
B-A	155	461	0.336	154	0.5	11.724	B
C-A	156			156			
C-B	27	624	0.043	27	0.0	6.025	A
A-B	154			154			
A-C	83			83			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	577	0.004	2	0.0	6.263	A
B-A	189	444	0.426	188	0.7	14.008	B
C-A	190			190			
C-B	33	609	0.054	33	0.1	6.247	A
A-B	188			188			
A-C	101			101			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	577	0.004	2	0.0	6.266	A
B-A	189	444	0.426	189	0.7	14.105	B
C-A	190			190			
C-B	33	609	0.054	33	0.1	6.247	A
A-B	188			188			
A-C	101			101			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	600	0.003	2	0.0	6.021	A
B-A	155	461	0.336	155	0.5	11.832	B
C-A	156			156			
C-B	27	624	0.043	27	0.0	6.028	A
A-B	154			154			
A-C	83			83			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	617	0.002	2	0.0	5.852	A
B-A	129	472	0.274	130	0.4	10.536	B
C-A	130			130			
C-B	23	635	0.036	23	0.0	5.876	A
A-B	129			129			
A-C	69			69			

2028 Baseflow , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
3		T-Junction	Two-way	Two-way	Two-way		4.49	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.49	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2028 Baseflow	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (N)		✓	288	100.000
B - R397		✓	190	100.000
C - N63 (S)		✓	222	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	187	101
	B - R397	188	0	2
	C - N63 (S)	189	33	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	8	14
	B - R397	6	0	0
	C - N63 (S)	4	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	6.41	0.0	A
B-A	0.48	15.73	0.9	C
C-A				
C-B	0.06	6.44	0.1	A
A-B				
A-C				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	609	0.002	1	0.0	5.923	A
B-A	142	466	0.304	140	0.4	10.970	B
C-A	142			142			
C-B	25	624	0.040	25	0.0	6.007	A
A-B	141			141			
A-C	76			76			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	590	0.003	2	0.0	6.116	A
B-A	169	453	0.373	168	0.6	12.600	B
C-A	170			170			
C-B	30	612	0.048	30	0.1	6.183	A
A-B	168			168			
A-C	91			91			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	564	0.004	2	0.0	6.404	A
B-A	207	436	0.475	206	0.9	15.574	C
C-A	208			208			
C-B	36	595	0.061	36	0.1	6.440	A
A-B	206			206			
A-C	111			111			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	564	0.004	2	0.0	6.409	A
B-A	207	436	0.475	207	0.9	15.726	C
C-A	208			208			
C-B	36	595	0.061	36	0.1	6.440	A
A-B	206			206			
A-C	111			111			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	590	0.003	2	0.0	6.125	A
B-A	169	453	0.373	170	0.6	12.760	B
C-A	170			170			
C-B	30	612	0.048	30	0.1	6.184	A
A-B	168			168			
A-C	91			91			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	608	0.002	2	0.0	5.934	A
B-A	142	466	0.304	142	0.4	11.130	B
C-A	142			142			
C-B	25	624	0.040	25	0.0	6.010	A
A-B	141			141			
A-C	76			76			

2028 Baseflow with Proposed Development - Peak Construction Phase, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
3		T-Junction	Two-way	Two-way	Two-way		4.48	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.48	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2028 Baseflow with Proposed Development - Peak Construction Phase	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (N)		✓	291	100.000
B - R397		✓	190	100.000
C - N63 (S)		✓	223	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	187	104
	B - R397	188	0	2
	C - N63 (S)	190	33	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	8	16
	B - R397	6	0	0
	C - N63 (S)	5	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	6.43	0.0	A
B-A	0.48	15.86	0.9	C
C-A				
C-B	0.06	6.46	0.1	A
A-B				
A-C				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	608	0.002	1	0.0	5.935	A
B-A	142	465	0.304	140	0.4	11.014	B
C-A	143			143			
C-B	25	623	0.040	25	0.0	6.018	A
A-B	141			141			
A-C	78			78			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	589	0.003	2	0.0	6.130	A
B-A	169	452	0.374	168	0.6	12.668	B
C-A	171			171			
C-B	30	611	0.049	30	0.1	6.197	A
A-B	168			168			
A-C	93			93			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	563	0.004	2	0.0	6.424	A
B-A	207	434	0.477	206	0.9	15.704	C
C-A	209			209			
C-B	36	594	0.061	36	0.1	6.458	A
A-B	206			206			
A-C	115			115			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	562	0.004	2	0.0	6.429	A
B-A	207	434	0.477	207	0.9	15.860	C
C-A	209			209			
C-B	36	594	0.061	36	0.1	6.458	A
A-B	206			206			
A-C	115			115			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	588	0.003	2	0.0	6.138	A
B-A	169	452	0.374	170	0.6	12.831	B
C-A	171			171			
C-B	30	611	0.049	30	0.1	6.198	A
A-B	168			168			
A-C	93			93			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	607	0.002	2	0.0	5.943	A
B-A	142	465	0.304	142	0.4	11.178	B
C-A	143			143			
C-B	25	623	0.040	25	0.0	6.021	A
A-B	141			141			
A-C	78			78			

2028 Baseflow with Proposed Development - Average Construction Phase, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
3		T-Junction	Two-way	Two-way	Two-way		4.49	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.49	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2028 Baseflow with Proposed Development - Average Construction Phase	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (N)		✓	290	100.000
B - R397		✓	190	100.000
C - N63 (S)		✓	222	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	187	103
	B - R397	188	0	2
	C - N63 (S)	189	33	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	8	15
	B - R397	6	0	0
	C - N63 (S)	4	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	6.42	0.0	A
B-A	0.48	15.79	0.9	C
C-A				
C-B	0.06	6.45	0.1	A
A-B				
A-C				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	608	0.002	1	0.0	5.930	A
B-A	142	466	0.304	140	0.4	10.990	B
C-A	142			142			
C-B	25	623	0.040	25	0.0	6.014	A
A-B	141			141			
A-C	78			78			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	590	0.003	2	0.0	6.124	A
B-A	169	453	0.373	168	0.6	12.632	B
C-A	170			170			
C-B	30	611	0.049	30	0.1	6.191	A
A-B	168			168			
A-C	93			93			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	563	0.004	2	0.0	6.415	A
B-A	207	435	0.476	206	0.9	15.632	C
C-A	208			208			
C-B	36	594	0.061	36	0.1	6.451	A
A-B	206			206			
A-C	113			113			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	563	0.004	2	0.0	6.420	A
B-A	207	435	0.476	207	0.9	15.786	C
C-A	208			208			
C-B	36	594	0.061	36	0.1	6.451	A
A-B	206			206			
A-C	113			113			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	589	0.003	2	0.0	6.131	A
B-A	169	453	0.373	170	0.6	12.791	B
C-A	170			170			
C-B	30	611	0.049	30	0.1	6.192	A
A-B	168			168			
A-C	93			93			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	608	0.002	2	0.0	5.939	A
B-A	142	466	0.304	142	0.4	11.151	B
C-A	142			142			
C-B	25	623	0.040	25	0.0	6.017	A
A-B	141			141			
A-C	78			78			

2022 Baseflow , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
3		T-Junction	Two-way	Two-way	Two-way		4.18	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.18	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2022 Baseflow	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (N)		✓	363	100.000
B - R397		✓	179	100.000
C - N63 (S)		✓	135	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	204	159
	B - R397	177	0	2
	C - N63 (S)	122	13	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	5	4
	B - R397	8	0	0
	C - N63 (S)	6	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	6.53	0.0	A
B-A	0.45	15.16	0.8	C
C-A				
C-B	0.02	6.14	0.0	A
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	601	0.003	1	0.0	6.000	A
B-A	133	461	0.289	132	0.4	10.886	B
C-A	92			92			
C-B	10	636	0.015	10	0.0	5.747	A
A-B	154			154			
A-C	120			120			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	581	0.003	2	0.0	6.209	A
B-A	159	449	0.355	159	0.5	12.376	B
C-A	110			110			
C-B	12	621	0.019	12	0.0	5.906	A
A-B	183			183			
A-C	143			143			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	554	0.004	2	0.0	6.522	A
B-A	195	432	0.451	194	0.8	15.031	C
C-A	134			134			
C-B	14	601	0.024	14	0.0	6.140	A
A-B	225			225			
A-C	175			175			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	554	0.004	2	0.0	6.527	A
B-A	195	432	0.451	195	0.8	15.156	C
C-A	134			134			
C-B	14	601	0.024	14	0.0	6.140	A
A-B	225			225			
A-C	175			175			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	581	0.003	2	0.0	6.216	A
B-A	159	449	0.355	160	0.6	12.512	B
C-A	110			110			
C-B	12	621	0.019	12	0.0	5.908	A
A-B	183			183			
A-C	143			143			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	601	0.003	2	0.0	6.010	A
B-A	133	461	0.289	134	0.4	11.029	B
C-A	92			92			
C-B	10	636	0.015	10	0.0	5.747	A
A-B	154			154			
A-C	120			120			

2028 Baseflow , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
3		T-Junction	Two-way	Two-way	Two-way		4.82	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.82	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2028 Baseflow	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (N)		✓	396	100.000
B - R397		✓	196	100.000
C - N63 (S)		✓	147	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	222	174
	B - R397	194	0	2
	C - N63 (S)	133	14	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	6	5
	B - R397	9	0	0
	C - N63 (S)	6	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	6.72	0.0	A
B-A	0.51	17.46	1.0	C
C-A				
C-B	0.03	6.27	0.0	A
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	591	0.003	1	0.0	6.105	A
B-A	146	451	0.324	144	0.5	11.679	B
C-A	100			100			
C-B	11	628	0.017	10	0.0	5.827	A
A-B	167			167			
A-C	131			131			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	569	0.003	2	0.0	6.348	A
B-A	174	438	0.399	174	0.6	13.606	B
C-A	120			120			
C-B	13	612	0.021	13	0.0	6.006	A
A-B	200			200			
A-C	156			156			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	538	0.004	2	0.0	6.715	A
B-A	214	419	0.509	212	1.0	17.245	C
C-A	146			146			
C-B	15	589	0.026	15	0.0	6.274	A
A-B	244			244			
A-C	192			192			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	538	0.004	2	0.0	6.721	A
B-A	214	419	0.509	214	1.0	17.463	C
C-A	146			146			
C-B	15	589	0.026	15	0.0	6.274	A
A-B	244			244			
A-C	192			192			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	568	0.003	2	0.0	6.359	A
B-A	174	438	0.399	176	0.7	13.826	B
C-A	120			120			
C-B	13	612	0.021	13	0.0	6.009	A
A-B	200			200			
A-C	156			156			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	590	0.003	2	0.0	6.118	A
B-A	146	451	0.324	147	0.5	11.884	B
C-A	100			100			
C-B	11	628	0.017	11	0.0	5.827	A
A-B	167			167			
A-C	131			131			

2028 Baseflow with Proposed Development - Peak Construction Phase, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
3		T-Junction	Two-way	Two-way	Two-way		4.81	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.81	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2028 Baseflow with Proposed Development - Peak Construction Phase	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (N)		✓	397	100.000
B - R397		✓	196	100.000
C - N63 (S)		✓	150	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	222	175
	B - R397	194	0	2
	C - N63 (S)	138	14	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	6	5
	B - R397	9	0	0
	C - N63 (S)	8	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	6.73	0.0	A
B-A	0.51	17.57	1.0	C
C-A				
C-B	0.03	6.28	0.0	A
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	591	0.003	1	0.0	6.108	A
B-A	146	450	0.325	144	0.5	11.711	B
C-A	102			102			
C-B	11	628	0.017	10	0.0	5.829	A
A-B	167			167			
A-C	132			132			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	568	0.003	2	0.0	6.352	A
B-A	174	437	0.400	174	0.6	13.658	B
C-A	122			122			
C-B	13	612	0.021	13	0.0	6.009	A
A-B	200			200			
A-C	157			157			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	538	0.004	2	0.0	6.721	A
B-A	214	418	0.511	212	1.0	17.329	C
C-A	150			150			
C-B	15	589	0.026	15	0.0	6.277	A
A-B	244			244			
A-C	193			193			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	537	0.004	2	0.0	6.727	A
B-A	214	418	0.511	214	1.0	17.568	C
C-A	150			150			
C-B	15	589	0.026	15	0.0	6.277	A
A-B	244			244			
A-C	193			193			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	568	0.003	2	0.0	6.361	A
B-A	174	437	0.400	176	0.7	13.878	B
C-A	122			122			
C-B	13	612	0.021	13	0.0	6.012	A
A-B	200			200			
A-C	157			157			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	590	0.003	2	0.0	6.119	A
B-A	146	450	0.325	147	0.5	11.914	B
C-A	102			102			
C-B	11	628	0.017	11	0.0	5.829	A
A-B	167			167			
A-C	132			132			

2028 Baseflow with Proposed Development - Average Construction Phase, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
3		T-Junction	Two-way	Two-way	Two-way		4.82	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.82	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2028 Baseflow with Proposed Development - Average Construction Phase	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (N)		✓	396	100.000
B - R397		✓	196	100.000
C - N63 (S)		✓	149	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	222	174
	B - R397	194	0	2
	C - N63 (S)	135	14	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - N63 (N)	B - R397	C - N63 (S)
From	A - N63 (N)	0	6	5
	B - R397	9	0	0
	C - N63 (S)	7	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	6.72	0.0	A
B-A	0.51	17.51	1.0	C
C-A				
C-B	0.03	6.27	0.0	A
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	591	0.003	1	0.0	6.106	A
B-A	146	450	0.324	144	0.5	11.694	B
C-A	102			102			
C-B	11	628	0.017	10	0.0	5.827	A
A-B	167			167			
A-C	131			131			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	569	0.003	2	0.0	6.349	A
B-A	174	437	0.399	174	0.6	13.630	B
C-A	121			121			
C-B	13	612	0.021	13	0.0	6.006	A
A-B	200			200			
A-C	156			156			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	538	0.004	2	0.0	6.716	A
B-A	214	419	0.510	212	1.0	17.289	C
C-A	149			149			
C-B	15	589	0.026	15	0.0	6.274	A
A-B	244			244			
A-C	192			192			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	538	0.004	2	0.0	6.722	A
B-A	214	419	0.510	214	1.0	17.511	C
C-A	149			149			
C-B	15	589	0.026	15	0.0	6.274	A
A-B	244			244			
A-C	192			192			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	568	0.003	2	0.0	6.360	A
B-A	174	437	0.399	176	0.7	13.848	B
C-A	121			121			
C-B	13	612	0.021	13	0.0	6.009	A
A-B	200			200			
A-C	156			156			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	2	590	0.003	2	0.0	6.116	A
B-A	146	450	0.324	147	0.5	11.896	B
C-A	102			102			
C-B	11	628	0.017	11	0.0	5.827	A
A-B	167			167			
A-C	131			131			

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: JTC 4.j10
Path: W:\Projects\11399 - BnaM Derryadd Wind Farm_Revised_2022\05-Design\01-Calculations\Traffic\TIA
Report generation date: 04/12/2023 09:22:03

Summary of junction performance

	AM						PM					
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS
	2022 Baseflow											
Stream B-ACD	0.8	14.14	0.45	B	4.09	A	0.3	9.38	0.20	A	2.05	A
Stream A-BCD	0.0	6.66	0.01	A			0.0	6.43	0.00	A		
Stream D-ABC	0.0	9.79	0.04	A			0.0	0.00	0.00	A		
Stream C-ABD	0.1	6.36	0.10	A			0.2	6.30	0.15	A		
	2028 Baseflow											
Stream B-ACD	0.9	15.59	0.49	C	4.42	A	0.3	9.71	0.22	A	2.11	A
Stream A-BCD	0.0	6.75	0.01	A			0.0	6.48	0.00	A		
Stream D-ABC	0.0	10.03	0.04	B			0.0	0.00	0.00	A		
Stream C-ABD	0.1	6.50	0.11	A			0.2	6.39	0.17	A		
	2028 Baseflow with Proposed Development - Peak Construction Phase											
Stream B-ACD	1.0	16.57	0.51	C	4.62	A	0.3	10.06	0.23	B	2.18	A
Stream A-BCD	0.0	6.77	0.01	A			0.0	6.55	0.00	A		
Stream D-ABC	0.0	10.13	0.04	B			0.0	0.00	0.00	A		
Stream C-ABD	0.1	6.76	0.12	A			0.2	6.55	0.18	A		
	2028 Baseflow with Proposed Development - Average Construction Phase											
Stream B-ACD	1.0	16.01	0.50	C	4.45	A	0.3	9.79	0.22	A	2.08	A
Stream A-BCD	0.0	6.76	0.01	A			0.0	6.53	0.00	A		
Stream D-ABC	0.0	10.09	0.04	B			0.0	0.00	0.00	A		
Stream C-ABD	0.1	6.55	0.11	A			0.2	6.41	0.17	A		

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.

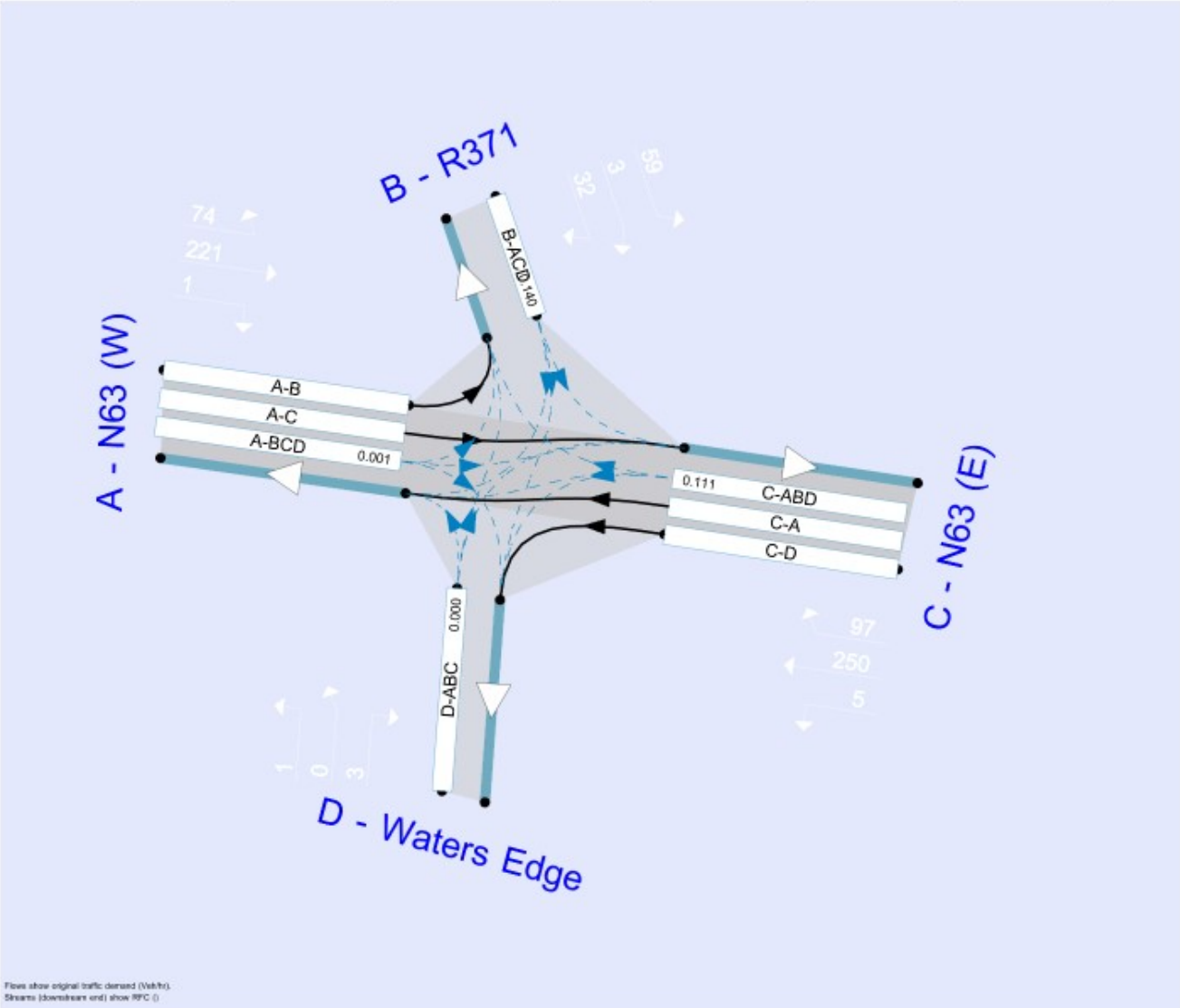
File summary

File Description

Title	Derryadd Wind Farm
Location	County Longford
Site number	
Date	30/11/2023
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	
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

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Baseflow	AM	ONE HOUR	08:15	09:45	15
D2	2028 Baseflow	AM	ONE HOUR	08:15	09:45	15
D3	2028 Baseflow with Proposed Development - Peak Construction Phase	AM	ONE HOUR	08:15	09:45	15
D4	2028 Baseflow with Proposed Development - Average Construction Phase	AM	ONE HOUR	08:15	09:45	15
D5	2022 Baseflow	PM	ONE HOUR	16:30	18:00	15
D6	2028 Baseflow	PM	ONE HOUR	16:30	18:00	15
D7	2028 Baseflow with Proposed Development - Peak Construction Phase	PM	ONE HOUR	16:30	18:00	15
D8	2028 Baseflow with Proposed Development - Average Construction Phase	PM	ONE HOUR	16:30	18:00	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Baseflow, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		4.09	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.09	A

Arms

Arms

Arm	Name	Description	Arm type
A	N63 (W)		Major
B	R371		Minor
C	N63 (E)		Major
D	Waters Edge		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A - N63 (W)	6.95			98.0	✓	1.00
C - N63 (E)	7.50			250.0	✓	1.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - R371	One lane	3.20	52	38
D - Waters Edge	One lane	2.20	20	20

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
A-D	631	-	-	-	0.234	0.234	0.234	-	0.234	-	-
B-AD	523	0.089	0.225	-	-	-	0.142	0.322	0.142	0.089	0.225
B-C	661	0.095	0.239	-	-	-	-	-	-	0.095	0.239
C-B	719	0.260	0.260	-	-	-	-	-	-	0.260	0.260
D-A	586	-	-	-	0.217	0.086	0.217	-	0.086	-	-
D-BC	454	0.126	0.126	0.286	0.201	0.079	0.201	-	0.079	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Baseflow	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (W)		✓	281	100.000
B - R371		✓	188	100.000
C - N63 (E)		✓	277	100.000
D - Waters Edge		✓	14	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	35	241	5
	B - R371	95	0	92	1
	C - N63 (E)	216	57	0	4
	D - Waters Edge	7	0	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	6	5	0
	B - R371	3	0	1	0
	C - N63 (E)	10	5	0	0
	D - Waters Edge	14	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.45	14.14	0.8	B
A-BCD	0.01	6.66	0.0	A
A-B				
A-C				
D-ABC	0.04	9.79	0.0	A
C-ABD	0.10	6.36	0.1	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	142	497	0.285	140	0.4	10.045	B
A-BCD	4	572	0.007	4	0.0	6.334	A
A-B	26			26			
A-C	181			181			
D-ABC	11	415	0.025	10	0.0	8.894	A
C-ABD	44	642	0.068	43	0.1	6.013	A
C-D	3			3			
C-A	162			162			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	169	482	0.351	168	0.5	11.458	B
A-BCD	5	561	0.008	5	0.0	6.470	A
A-B	31			31			
A-C	217			217			
D-ABC	13	402	0.031	13	0.0	9.251	A
C-ABD	53	637	0.083	53	0.1	6.164	A
C-D	4			4			
C-A	193			193			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	207	462	0.449	206	0.8	14.027	B
A-BCD	6	546	0.010	6	0.0	6.663	A
A-B	39			39			
A-C	265			265			
D-ABC	15	383	0.040	15	0.0	9.788	A
C-ABD	66	631	0.104	66	0.1	6.362	A
C-D	4			4			
C-A	235			235			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	207	461	0.449	207	0.8	14.136	B
A-BCD	6	546	0.010	6	0.0	6.665	A
A-B	39			39			
A-C	265			265			
D-ABC	15	383	0.040	15	0.0	9.793	A
C-ABD	66	631	0.104	66	0.1	6.362	A
C-D	4			4			
C-A	235			235			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	169	482	0.351	170	0.6	11.577	B
A-BCD	5	561	0.008	5	0.0	6.473	A
A-B	31			31			
A-C	217			217			
D-ABC	13	402	0.031	13	0.0	9.259	A
C-ABD	53	637	0.083	53	0.1	6.166	A
C-D	4			4			
C-A	193			193			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	142	497	0.285	142	0.4	10.168	B
A-BCD	4	572	0.007	4	0.0	6.337	A
A-B	26			26			
A-C	181			181			
D-ABC	11	415	0.025	11	0.0	8.905	A
C-ABD	44	642	0.068	44	0.1	6.022	A
C-D	3			3			
C-A	162			162			

2028 Baseflow , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		4.42	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.42	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2028 Baseflow	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (W)		✓	301	100.000
B - R371		✓	201	100.000
C - N63 (E)		✓	297	100.000
D - Waters Edge		✓	15	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	38	258	5
	B - R371	102	0	98	1
	C - N63 (E)	232	61	0	4
	D - Waters Edge	8	0	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	6	6	0
	B - R371	3	0	1	0
	C - N63 (E)	11	6	0	0
	D - Waters Edge	16	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.49	15.59	0.9	C
A-BCD	0.01	6.75	0.0	A
A-B				
A-C				
D-ABC	0.04	10.03	0.0	B
C-ABD	0.11	6.50	0.1	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	151	490	0.309	150	0.4	10.508	B
A-BCD	4	567	0.007	4	0.0	6.386	A
A-B	29			29			
A-C	194			194			
D-ABC	11	409	0.028	11	0.0	9.040	A
C-ABD	47	634	0.074	47	0.1	6.127	A
C-D	3			3			
C-A	174			174			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	181	474	0.381	180	0.6	12.199	B
A-BCD	5	555	0.008	5	0.0	6.535	A
A-B	34			34			
A-C	232			232			
D-ABC	13	395	0.034	13	0.0	9.432	A
C-ABD	57	629	0.090	57	0.1	6.288	A
C-D	4			4			
C-A	207			207			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	221	452	0.489	220	0.9	15.418	C
A-BCD	6	539	0.010	6	0.0	6.748	A
A-B	42			42			
A-C	284			284			
D-ABC	17	375	0.044	16	0.0	10.026	B
C-ABD	71	624	0.114	71	0.1	6.500	A
C-D	4			4			
C-A	252			252			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	221	452	0.490	221	0.9	15.586	C
A-BCD	6	539	0.010	6	0.0	6.750	A
A-B	42			42			
A-C	284			284			
D-ABC	17	375	0.044	17	0.0	10.032	B
C-ABD	71	625	0.114	71	0.1	6.503	A
C-D	4			4			
C-A	252			252			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	181	474	0.381	182	0.6	12.362	B
A-BCD	5	555	0.008	5	0.0	6.541	A
A-B	34			34			
A-C	232			232			
D-ABC	13	395	0.034	14	0.0	9.439	A
C-ABD	57	629	0.090	57	0.1	6.292	A
C-D	4			4			
C-A	207			207			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	151	490	0.309	152	0.5	10.664	B
A-BCD	4	567	0.007	4	0.0	6.390	A
A-B	29			29			
A-C	194			194			
D-ABC	11	409	0.028	11	0.0	9.053	A
C-ABD	47	634	0.074	47	0.1	6.136	A
C-D	3			3			
C-A	174			174			

2028 Baseflow with Proposed Development - Peak Construction Phase, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		4.62	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.62	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2028 Baseflow with Proposed Development - Peak Construction Phase	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (W)		✓	316	100.000
B - R371		✓	205	100.000
C - N63 (E)		✓	302	100.000
D - Waters Edge		✓	15	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	38	273	5
	B - R371	102	0	102	1
	C - N63 (E)	235	63	0	4
	D - Waters Edge	8	0	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	6	9	0
	B - R371	3	0	3	0
	C - N63 (E)	12	9	0	0
	D - Waters Edge	16	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.51	16.57	1.0	C
A-BCD	0.01	6.77	0.0	A
A-B				
A-C				
D-ABC	0.04	10.13	0.0	B
C-ABD	0.12	6.76	0.1	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	154	483	0.319	152	0.5	10.832	B
A-BCD	4	566	0.007	4	0.0	6.397	A
A-B	29			29			
A-C	206			206			
D-ABC	11	407	0.028	11	0.0	9.090	A
C-ABD	49	615	0.079	48	0.1	6.350	A
C-D	3			3			
C-A	176			176			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	184	466	0.395	184	0.6	12.703	B
A-BCD	5	554	0.008	5	0.0	6.548	A
A-B	34			34			
A-C	245			245			
D-ABC	13	392	0.034	13	0.0	9.498	A
C-ABD	59	610	0.097	59	0.1	6.527	A
C-D	4			4			
C-A	209			209			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	226	443	0.510	224	1.0	16.363	C
A-BCD	6	538	0.010	6	0.0	6.764	A
A-B	42			42			
A-C	301			301			
D-ABC	17	372	0.044	16	0.0	10.119	B
C-ABD	74	607	0.122	74	0.1	6.752	A
C-D	4			4			
C-A	254			254			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	226	443	0.510	226	1.0	16.570	C
A-BCD	6	537	0.010	6	0.0	6.766	A
A-B	42			42			
A-C	301			301			
D-ABC	17	372	0.044	17	0.0	10.125	B
C-ABD	74	607	0.122	74	0.1	6.755	A
C-D	4			4			
C-A	254			254			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	184	466	0.395	186	0.7	12.899	B
A-BCD	5	554	0.008	5	0.0	6.552	A
A-B	34			34			
A-C	245			245			
D-ABC	13	392	0.034	14	0.0	9.507	A
C-ABD	59	611	0.097	59	0.1	6.530	A
C-D	4			4			
C-A	209			209			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	154	483	0.320	155	0.5	11.007	B
A-BCD	4	566	0.007	4	0.0	6.401	A
A-B	29			29			
A-C	206			206			
D-ABC	11	407	0.028	11	0.0	9.101	A
C-ABD	49	615	0.079	49	0.1	6.360	A
C-D	3			3			
C-A	176			176			

2028 Baseflow with Proposed Development - Average Construction Phase, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		4.45	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.45	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2028 Baseflow with Proposed Development - Average Construction Phase	AM	ONE HOUR	08:15	09:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (W)		✓	313	100.000
B - R371		✓	203	100.000
C - N63 (E)		✓	299	100.000
D - Waters Edge		✓	15	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	38	270	5
	B - R371	102	0	100	1
	C - N63 (E)	234	61	0	4
	D - Waters Edge	8	0	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	6	8	0
	B - R371	3	0	1	0
	C - N63 (E)	11	6	0	0
	D - Waters Edge	16	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.50	16.01	1.0	C
A-BCD	0.01	6.76	0.0	A
A-B				
A-C				
D-ABC	0.04	10.09	0.0	B
C-ABD	0.11	6.55	0.1	A
C-D				
C-A				

Main Results for each time segment

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	153	488	0.313	151	0.4	10.628	B
A-BCD	4	567	0.007	4	0.0	6.390	A
A-B	29			29			
A-C	203			203			
D-ABC	11	408	0.028	11	0.0	9.070	A
C-ABD	47	631	0.075	47	0.1	6.160	A
C-D	3			3			
C-A	175			175			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	182	471	0.387	182	0.6	12.402	B
A-BCD	5	555	0.008	5	0.0	6.540	A
A-B	34			34			
A-C	243			243			
D-ABC	13	394	0.034	13	0.0	9.472	A
C-ABD	57	625	0.091	57	0.1	6.330	A
C-D	4			4			
C-A	208			208			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	224	448	0.499	222	1.0	15.827	C
A-BCD	6	538	0.010	6	0.0	6.753	A
A-B	42			42			
A-C	297			297			
D-ABC	17	373	0.044	16	0.0	10.083	B
C-ABD	71	620	0.115	71	0.1	6.553	A
C-D	4			4			
C-A	254			254			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	224	448	0.499	223	1.0	16.009	C
A-BCD	6	538	0.010	6	0.0	6.755	A
A-B	42			42			
A-C	297			297			
D-ABC	17	373	0.044	17	0.0	10.089	B
C-ABD	71	620	0.115	71	0.1	6.553	A
C-D	4			4			
C-A	254			254			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	182	471	0.387	184	0.6	12.581	B
A-BCD	5	555	0.008	5	0.0	6.546	A
A-B	34			34			
A-C	243			243			
D-ABC	13	393	0.034	14	0.0	9.480	A
C-ABD	57	626	0.091	57	0.1	6.333	A
C-D	4			4			
C-A	208			208			

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	153	488	0.313	154	0.5	10.789	B
A-BCD	4	567	0.007	4	0.0	6.396	A
A-B	29			29			
A-C	203			203			
D-ABC	11	408	0.028	11	0.0	9.083	A
C-ABD	47	631	0.075	47	0.1	6.167	A
C-D	3			3			
C-A	175			175			

2022 Baseflow , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		2.05	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.05	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2022 Baseflow	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (W)		✓	275	100.000
B - R371		✓	88	100.000
C - N63 (E)		✓	317	100.000
D - Waters Edge		✓	4	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	69	205	1
	B - R371	30	0	55	3
	C - N63 (E)	223	89	0	5
	D - Waters Edge	1	0	3	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	4	5	0
	B - R371	7	0	2	0
	C - N63 (E)	4	0	0	0
	D - Waters Edge	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.20	9.38	0.3	A
A-BCD	0.00	6.43	0.0	A
A-B				
A-C				
D-ABC	0.00	0.00	0.0	A
C-ABD	0.15	6.30	0.2	A
C-D				
C-A				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	66	513	0.129	66	0.1	8.038	A
A-BCD	0.75	583	0.001	0.75	0.0	6.182	A
A-B	52			52			
A-C	154			154			
D-ABC	0	451	0.000	0	0.0	0.000	A
C-ABD	69	680	0.101	68	0.1	5.883	A
C-D	4			4			
C-A	166			166			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	79	500	0.158	79	0.2	8.560	A
A-BCD	0.90	574	0.002	0.90	0.0	6.283	A
A-B	62			62			
A-C	184			184			
D-ABC	0	439	0.000	0	0.0	0.000	A
C-ABD	83	677	0.123	83	0.1	6.063	A
C-D	4			4			
C-A	197			197			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	97	481	0.202	97	0.2	9.366	A
A-BCD	1	561	0.002	1	0.0	6.428	A
A-B	76			76			
A-C	226			226			
D-ABC	0	423	0.000	0	0.0	0.000	A
C-ABD	104	675	0.154	104	0.2	6.299	A
C-D	5			5			
C-A	240			240			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	97	481	0.202	97	0.3	9.378	A
A-BCD	1	561	0.002	1	0.0	6.428	A
A-B	76			76			
A-C	226			226			
D-ABC	0	422	0.000	0	0.0	0.000	A
C-ABD	104	675	0.154	104	0.2	6.305	A
C-D	5			5			
C-A	240			240			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	79	499	0.158	79	0.2	8.575	A
A-BCD	0.90	574	0.002	0.90	0.0	6.286	A
A-B	62			62			
A-C	184			184			
D-ABC	0	439	0.000	0	0.0	0.000	A
C-ABD	83	677	0.123	83	0.1	6.070	A
C-D	4			4			
C-A	197			197			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	66	513	0.129	66	0.1	8.068	A
A-BCD	0.75	583	0.001	0.75	0.0	6.183	A
A-B	52			52			
A-C	154			154			
D-ABC	0	451	0.000	0	0.0	0.000	A
C-ABD	69	680	0.101	69	0.1	5.895	A
C-D	4			4			
C-A	166			166			

2028 Baseflow , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		2.11	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.11	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2028 Baseflow	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (W)		✓	294	100.000
B - R371		✓	94	100.000
C - N63 (E)		✓	338	100.000
D - Waters Edge		✓	4	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	74	219	1
	B - R371	32	0	59	3
	C - N63 (E)	238	95	0	5
	D - Waters Edge	1	0	3	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	5	5	0
	B - R371	7	0	2	0
	C - N63 (E)	4	0	0	0
	D - Waters Edge	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.22	9.71	0.3	A
A-BCD	0.00	6.48	0.0	A
A-B				
A-C				
D-ABC	0.00	0.00	0.0	A
C-ABD	0.17	6.39	0.2	A
C-D				
C-A				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	71	509	0.139	70	0.2	8.197	A
A-BCD	0.75	580	0.001	0.75	0.0	6.215	A
A-B	56			56			
A-C	165			165			
D-ABC	0	447	0.000	0	0.0	0.000	A
C-ABD	74	678	0.109	73	0.1	5.943	A
C-D	4			4			
C-A	177			177			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	85	494	0.171	84	0.2	8.776	A
A-BCD	0.90	570	0.002	0.90	0.0	6.324	A
A-B	67			67			
A-C	197			197			
D-ABC	0	434	0.000	0	0.0	0.000	A
C-ABD	89	675	0.132	89	0.2	6.138	A
C-D	4			4			
C-A	210			210			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	103	474	0.218	103	0.3	9.695	A
A-BCD	1	557	0.002	1	0.0	6.480	A
A-B	81			81			
A-C	241			241			
D-ABC	0	416	0.000	0	0.0	0.000	A
C-ABD	112	675	0.166	112	0.2	6.391	A
C-D	5			5			
C-A	255			255			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	103	474	0.218	103	0.3	9.711	A
A-BCD	1	556	0.002	1	0.0	6.481	A
A-B	81			81			
A-C	241			241			
D-ABC	0	416	0.000	0	0.0	0.000	A
C-ABD	112	675	0.166	112	0.2	6.394	A
C-D	5			5			
C-A	255			255			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	85	494	0.171	85	0.2	8.798	A
A-BCD	0.90	570	0.002	0.90	0.0	6.327	A
A-B	67			67			
A-C	197			197			
D-ABC	0	434	0.000	0	0.0	0.000	A
C-ABD	89	676	0.132	89	0.2	6.145	A
C-D	4			4			
C-A	210			210			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	71	509	0.139	71	0.2	8.230	A
A-BCD	0.75	580	0.001	0.75	0.0	6.218	A
A-B	56			56			
A-C	165			165			
D-ABC	0	447	0.000	0	0.0	0.000	A
C-ABD	74	679	0.109	74	0.1	5.958	A
C-D	4			4			
C-A	177			177			

2028 Baseflow with Proposed Development - Peak Construction Phase, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		2.18	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.18	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2028 Baseflow with Proposed Development - Peak Construction Phase	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (W)		✓	297	100.000
B - R371		✓	96	100.000
C - N63 (E)		✓	357	100.000
D - Waters Edge		✓	4	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	74	222	1
	B - R371	32	0	61	3
	C - N63 (E)	253	99	0	5
	D - Waters Edge	1	0	3	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	5	7	0
	B - R371	7	0	5	0
	C - N63 (E)	7	2	0	0
	D - Waters Edge	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.23	10.06	0.3	B
A-BCD	0.00	6.55	0.0	A
A-B				
A-C				
D-ABC	0.00	0.00	0.0	A
C-ABD	0.18	6.55	0.2	A
C-D				
C-A				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	72	499	0.145	72	0.2	8.411	A
A-BCD	0.75	576	0.001	0.75	0.0	6.259	A
A-B	56			56			
A-C	167			167			
D-ABC	0	443	0.000	0	0.0	0.000	A
C-ABD	77	668	0.116	77	0.1	6.088	A
C-D	4			4			
C-A	188			188			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	86	484	0.178	86	0.2	9.038	A
A-BCD	0.90	565	0.002	0.90	0.0	6.379	A
A-B	67			67			
A-C	200			200			
D-ABC	0	429	0.000	0	0.0	0.000	A
C-ABD	94	666	0.141	94	0.2	6.285	A
C-D	4			4			
C-A	223			223			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	106	464	0.228	105	0.3	10.040	B
A-BCD	1	551	0.002	1	0.0	6.551	A
A-B	81			81			
A-C	244			244			
D-ABC	0	410	0.000	0	0.0	0.000	A
C-ABD	118	668	0.177	118	0.2	6.543	A
C-D	5			5			
C-A	270			270			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	106	464	0.228	106	0.3	10.059	B
A-BCD	1	551	0.002	1	0.0	6.551	A
A-B	81			81			
A-C	244			244			
D-ABC	0	410	0.000	0	0.0	0.000	A
C-ABD	118	668	0.177	118	0.2	6.550	A
C-D	5			5			
C-A	270			270			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	86	484	0.178	87	0.2	9.062	A
A-BCD	0.90	565	0.002	0.90	0.0	6.379	A
A-B	67			67			
A-C	200			200			
D-ABC	0	429	0.000	0	0.0	0.000	A
C-ABD	94	667	0.141	94	0.2	6.293	A
C-D	4			4			
C-A	223			223			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	72	499	0.145	72	0.2	8.447	A
A-BCD	0.75	576	0.001	0.75	0.0	6.262	A
A-B	56			56			
A-C	167			167			
D-ABC	0	443	0.000	0	0.0	0.000	A
C-ABD	77	668	0.116	77	0.1	6.103	A
C-D	4			4			
C-A	188			188			

2028 Baseflow with Proposed Development - Average Construction Phase, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		2.08	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.08	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2028 Baseflow with Proposed Development - Average Construction Phase	PM	ONE HOUR	16:30	18:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N63 (W)		✓	296	100.000
B - R371		✓	94	100.000
C - N63 (E)		✓	352	100.000
D - Waters Edge		✓	4	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	74	221	1
	B - R371	32	0	59	3
	C - N63 (E)	250	97	0	5
	D - Waters Edge	1	0	3	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - N63 (W)	B - R371	C - N63 (E)	D - Waters Edge
From	A - N63 (W)	0	5	6	0
	B - R371	7	0	2	0
	C - N63 (E)	6	0	0	0
	D - Waters Edge	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-ACD	0.22	9.79	0.3	A
A-BCD	0.00	6.53	0.0	A
A-B				
A-C				
D-ABC	0.00	0.00	0.0	A
C-ABD	0.17	6.41	0.2	A
C-D				
C-A				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	71	507	0.140	70	0.2	8.236	A
A-BCD	0.75	577	0.001	0.75	0.0	6.248	A
A-B	56			56			
A-C	166			166			
D-ABC	0	444	0.000	0	0.0	0.000	A
C-ABD	75	679	0.111	75	0.1	5.954	A
C-D	4			4			
C-A	186			186			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	85	492	0.172	84	0.2	8.831	A
A-BCD	0.90	566	0.002	0.90	0.0	6.365	A
A-B	67			67			
A-C	199			199			
D-ABC	0	430	0.000	0	0.0	0.000	A
C-ABD	91	676	0.135	91	0.2	6.149	A
C-D	4			4			
C-A	221			221			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	103	471	0.220	103	0.3	9.779	A
A-BCD	1	552	0.002	1	0.0	6.533	A
A-B	81			81			
A-C	243			243			
D-ABC	0	412	0.000	0	0.0	0.000	A
C-ABD	115	677	0.170	115	0.2	6.401	A
C-D	5			5			
C-A	267			267			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	103	471	0.220	103	0.3	9.795	A
A-BCD	1	552	0.002	1	0.0	6.534	A
A-B	81			81			
A-C	243			243			
D-ABC	0	412	0.000	0	0.0	0.000	A
C-ABD	115	677	0.170	115	0.2	6.407	A
C-D	5			5			
C-A	267			267			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	85	492	0.172	85	0.2	8.851	A
A-BCD	0.90	566	0.002	0.90	0.0	6.366	A
A-B	67			67			
A-C	199			199			
D-ABC	0	430	0.000	0	0.0	0.000	A
C-ABD	91	677	0.135	92	0.2	6.155	A
C-D	4			4			
C-A	221			221			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-ACD	71	507	0.140	71	0.2	8.268	A
A-BCD	0.75	577	0.001	0.75	0.0	6.251	A
A-B	56			56			
A-C	166			166			
D-ABC	0	444	0.000	0	0.0	0.000	A
C-ABD	75	679	0.111	76	0.1	5.969	A
C-D	4			4			
C-A	186			186			

Appendix B JUNCTION 10 PICADY

Traffic Calculations for Derryadd Wind Farm

Site 1 - N63 (NW) / N64(NE) / R392 / Rathcline Rd

AM Peak (08:30 - 09:30)

Seasonally Adjusted ***2022*** ***2028*** ***Construction Phase***

	Longford	***LGV***	***HGV***
	2016 - 2030 index	*1.0134*	*1.0313*
	Years	*6*	*6*
	High Growth Factor	***1.0831***	***1.2031***

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	148	9	175	5	17	0
B	97	14	0	0	9	0	8	0
C	146	9	19	1	0	0	8	1
D	22	0	16	0	6	0	0	0

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	161	11	190	6	18	0
B	105	17	0	0	10	0	9	0
C	159	11	21	1	0	0	9	1
D	24	0	17	0	7	0	0	0

AM PEAK GENERATED TRAFFIC

CONSTRUCTION PHASE - PEAK

Generated Traffic

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	6	8	2	3	0	0
B	0	4	0	0	0	0	0	0
C	0	1	0	0	0	0	0	0
D	0	0	0	0	0	0	0	0

2028 Construction Phase - Peak

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	167	19	192	9	18	0
B	105	21	0	0	10	0	9	0
C	159	12	21	1	0	0	9	1
D	24	0	17	0	7	0	0	0

Traffic Calculations for Derryadd Wind Farm

Site 1 - N63 (NW) / N64(NE) / R392 / Rathcline Rd

PM Peak (16:45 - 17:45)

Seasonally Adjusted ***2022*** ***2028***

Construction Phase

	Longford	***LGV***	***HGV***
	2016 - 2030 index	*1.0134*	*1.0313*
	Years	*6*	*6*
	High Growth Factor	***1.0831***	***1.2031***

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	124	7	141	6	22	0
B	145	6	0	0	6	0	8	0
C	174	5	5	0	0	0	17	1
D	17	1	5	0	5	0	0	0

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	135	8	153	7	24	0
B	157	7	0	0	7	0	9	0
C	189	6	5	0	0	0	18	1
D	18	1	5	0	5	0	0	0

PM PEAK GENERATED TRAFFIC

CONSTRUCTION PHASE - PEAK

Generated Traffic

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	0	4	0	1	0	0
B	6	8	0	0	0	0	0	0
C	2	3	0	0	0	0	0	0
D	0	0	0	0	0	0	0	0

2028 Construction Phase - Peak

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	135	12	153	8	24	0
B	163	15	0	0	7	0	9	0
C	191	9	5	0	0	0	18	1
D	18	1	5	0	5	0	0	0

Traffic Calculations for Derryadd Wind Farm

Site 2 - NR392(NW) / R398 / R392(SE) / L1155

AM Peak (08:30 - 09:30)

Seasonally Adjusted ***2022*** ***2028*** ***Construction Phase***

	Longford	***LGV***	***HGV***
	2016 - 2030 index	*1.0134*	*1.0313*
	Years	*6*	*6*
	High Growth Factor	***1.0831***	***1.2031***

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	3	0	101	5	7	1
B	2	0	0	0	7	0	10	1
C	57	7	4	0	0	0	6	5
D	9	1	25	0	16	0	0	0

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	3	0	110	6	8	1
B	2	0	0	0	8	0	11	1
C	62	8	4	0	0	0	7	6
D	10	1	27	0	17	0	0	0

AM PEAK GENERATED TRAFFIC

CONSTRUCTION PHASE - PEAK

Generated Traffic

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	0	0	0	1	0	0
B	0	0	0	0	0	0	0	0
C	1	2	0	0	0	0	0	0
D	0	0	0	0	0	0	0	0

2028 Construction Phase - Peak

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	3	0	110	7	8	1
B	2	0	0	0	8	0	11	1
C	63	10	4	0	0	0	7	6
D	10	1	27	0	17	0	0	0

Traffic Calculations for Derryadd Wind Farm

Site 2 - NR392(NW) / R398 / R392(SE) / L1155

PM Peak (16:45 - 17:45)

Seasonally Adjusted ***2022*** ***2028***

Construction Phase

Longford	***LGV***	***HGV***
2016 - 2030 index	*1.0134*	*1.0313*
Years	*6*	*6*
High Growth Factor	***1.0831***	***1.2031***

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	6	0	57	1	10	0
B	4	0	0	0	2	0	16	0
C	100	3	10	0	0	0	18	1
D	11	1	13	0	3	1	0	0

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	7	0	62	1	11	0
B	4	0	0	0	2	0	17	0
C	109	4	11	0	0	0	20	1
D	12	1	14	0	3	1	0	0

PM PEAK GENERATED TRAFFIC

CONSTRUCTION PHASE - PEAK

Generated Traffic

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	0	0	1	2	0	0
B	0	0	0	0	0	0	0	0
C	0	1	0	0	0	0	0	0
D	0	0	0	0	0	0	0	0

2028 Construction Phase - Peak

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	7	0	63	3	11	0
B	4	0	0	0	2	0	17	0
C	109	5	11	0	0	0	20	1
D	12	1	14	0	3	1	0	0

Traffic Calculations for Derryadd Wind Farm

Site 3 - N63 (N) / R397 / N63(S)

AM Peak (08:30 - 09:30)

Seasonally Adjusted ***2022*** ***2028***

Construction Phase		
Longford	***LGV***	***HGV***
2016 - 2030 index	*1.0134*	*1.0313*
Years	*6*	*6*
High Growth Factor	***1.0831***	***1.2031***

Route	A	HGV	B	HGV	C	HGV
A	0	0	158	13	80	12
B	162	10	0	0	2	0
C	166	7	29	1	0	0

Route	A	HGV	B	HGV	C	HGV
A	0	0	172	16	87	14
B	176	12	0	0	2	0
C	180	8	31	1	0	0

AM PEAK GENERATED TRAFFIC

CONSTRUCTION PHASE - PEAK

Generated Traffic

Route	A	HGV	B	HGV	C	HGV
A	0	0	0	0	1	2
B	0	0	0	0	0	0
C	0	1	0	0	0	0

2028 Construction Phase - Peak

Route	A	HGV	B	HGV	C	HGV
A	0	0	172	16	88	16
B	176	12	0	0	2	0
C	180	9	31	1	0	0

Traffic Calculations for Derryadd Wind Farm

Site 3 - N63 (N) / R397 / N63(S)

PM Peak (16:45 - 17:45)

Seasonally Adjusted ***2022*** ***2028***

Construction Phase		
Longford	***LGV***	***HGV***
2016 - 2030 index	*1.0134*	*1.0313*
Years	*6*	*6*
High Growth Factor	***1.0831***	***1.2031***

Route	A	HGV	B	HGV	C	HGV
A	0	0	193	11	152	7
B	163	14	0	0	2	0
C	115	7	13	0	0	0

Sum of LV and HV

0	204	159
177	0	2
122	13	0

% of HGV

#DIV/0!	0.05	0.04
0.08	#DIV/0!	0.00
0.06	0.00	#DIV/0!

Route	A	HGV	B	HGV	C	HGV
A	0	0	209	13	165	8
B	177	17	0	0	2	0
C	125	8	14	0	0	0

Sum of LV and HV

0	222	174
194	0	2
133	14	0

% of HGV

#DIV/0!	0.06	0.05
0.09	#DIV/0!	0.00
0.06	0.00	#DIV/0!

PM PEAK GENERATED TRAFFIC

CONSTRUCTION PHASE - PEAK

Generated Traffic

Route	A	HGV	B	HGV	C	HGV
A	0	0	0	0	0	1
B	0	0	0	0	0	0
C	1	2	0	0	0	0

2028 Construction Phase - Peak

Route	A	HGV	B	HGV	C	HGV
A	0	0	209	13	165	9
B	177	17	0	0	2	0
C	126	10	14	0	0	0

Traffic Calculations for Derryadd Wind Farm

Site 4 - N63 (W) / R371 / N63(E) / Waters Edge

AM Peak (08:30 - 09:30)

Seasonally Adjusted ***2022*** ***2028***

Construction Phase

Roscommon	***LGV***	***HGV***
2016 - 2030 index	*1.0107*	*1.0284*
Years	*6*	*6*
High Growth Factor	***1.0659***	***1.1830***

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	33	2	228	13	5	0
B	92	3	0	0	91	1	1	0
C	195	21	54	3	0	0	4	0
D	6	1	0	0	7	0	0	0

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	35	2	243	15	5	0
B	98	4	0	0	97	1	1	0
C	207	25	58	4	0	0	4	0
D	6	1	0	0	7	0	0	0

AM PEAK GENERATED TRAFFIC

CONSTRUCTION PHASE - PEAK

Generated Traffic

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	0	0	6	9	0	0
B	0	0	0	0	2	2	0	0
C	0	3	0	2	0	0	0	0
D	0	0	0	0	0	0	0	0

2028 Construction Phase - Peak

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	35	2	249	24	5	0
B	98	4	0	0	99	3	1	0
C	207	28	58	6	0	0	4	0
D	6	1	0	0	7	0	0	0

Traffic Calculations for Derryadd Wind Farm

Site 4 - N63 (W) / R371 / N63(E) / Waters Edge

PM Peak (16:45 - 17:45)

Seasonally Adjusted ***2022*** ***2028*** ***Construction Phase***

Roscommon	***LGV***	***HGV***
2016 - 2030 index	*1.0107*	*1.0284*
Years	*6*	*6*
High Growth Factor	***1.0659***	***1.1830***

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	66	3	195	10	1	0
B	28	2	0	0	54	1	3	0
C	215	8	89	0	0	0	5	0
D	1	0	0	0	3	0	0	0

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	71	4	207	12	1	0
B	30	2	0	0	58	1	3	0
C	229	9	95	0	0	0	5	0
D	1	0	0	0	3	0	0	0

Sum of LV and HV

0	69	205	1
30	0	55	3
223	89	0	5
1	0	3	0

% of HGV

#DIV/0!	0.04	0.05	0.00
0.07	#DIV/0!	0.02	0.00
0.04	0.00	#DIV/0!	0.00
0.00	#DIV/0!	0.00	#DIV/0!

Sum of LV and HV

0	74	219	1
32	0	59	3
238	95	0	5
1	0	3	0

% of HGV

#DIV/0!	0.05	0.05	0.00
0.07	#DIV/0!	0.02	0.00
0.04	0.00	#DIV/0!	0.00
0.00	#DIV/0!	0.00	#DIV/0!

PM PEAK GENERATED TRAFFIC

CONSTRUCTION PHASE - PEAK

Generated Traffic

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	0	0	0	3	0	0
B	0	0	0	0	0	2	0	0
C	6	9	2	2	0	0	0	0
D	0	0	0	0	0	0	0	0

2028 Construction Phase - Peak

Route	A	HGV	B	HGV	C	HGV	D	HGV
A	0	0	71	4	207	15	1	0
B	30	2	0	0	58	3	3	0
C	235	18	97	2	0	0	5	0
D	1	0	0	0	3	0	0	0