Tionscadal Soláthair Uisce
Water Supply Project

Environmental Impact Assessment Report (EIAR)

Volume 6 of 6: Appendices

(Appendix 7.1) Traffic and Transportation Assessment

Document no: 32105801/EIARA7.1
Version: Final

December 2025

Uisce Éireann
Irish Water

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Acronyms and Abbreviations

Acronym	Meaning
AADT	Annual Average Daily Traffic
AE	Access and Egress
ATC	Automatic Traffic Counts
BPS	Booster Pumping Station
BPT	Break Pressure Tank
CC	Construction Compound
EIAR	Environmental Impact Assessment Report
ESB	Electricity Supply Board
FCV	Flow Control Valve
FWD	Falling Weight Deflectometer
GDA WRZ	Greater Dublin Area Water Resource Zone
HV	Heavy Vehicle
LGV	Light Goods Vehicle
LV	Light Vehicle including cars and vans
MMQ	Mean Maximum Queue
PCU	Passenger Car Unit
PSD	Pipe Storage Depot
RDX	Road Crossing
RFC	Ratio of Flow to Capacity
RWI&PS	Raw Water Intake and Pumping Station
RWRM	Raw Water Rising Main
TII	Transport Infrastructure Ireland
TMP	Traffic Management Plan
TPR	Termination Point Reservoir
TTA	Traffic and Transport Assessment
WTP	Water Treatment Plant

1. Introduction

1.1 Background

1. To inform Chapter 7 (Traffic & Transport) of the Environmental Impact Assessment Report (EIAR), this Traffic and Transport Assessment (TTA) Report has been prepared to assess the traffic impacts of the proposed Water Supply Project Eastern and Midlands Region (the Proposed Project) for the Construction and Operational Phases.

2. The Proposed Project is a water supply pipeline involving the abstraction and pumping of raw water from the Lower River Shannon at Parteen Basin; treatment of the water nearby at Birdhill, County Tipperary; and pumping of the treated water to a high point near Cloughjordan, County Tipperary and on through the Midlands to a termination point at Peamount, in County Dublin (within the administrative area of South Dublin County Council).

3. In total the pipeline would be approximately 172km in length and would be supported by 6 permanent Infrastructure Sites. The pipeline would traverse the administrative areas of Tipperary County Council, Offaly County Council, Kildare County Council and South Dublin County Council. In, addition, the works needed to provide power to two of the Infrastructure Sites (referred to as the 38kV Uprate Works) would cross Clare County Council, Limerick City and County Council, (as well as Tipperary).

4. This TTA also includes an assessment of the Proposed Project in these county administrative areas and within County Laois, where the pipeline does not traverse but does include sections of the identified Haul Roads that will be utilised as part of the construction of the Proposed Project.

5. The objective of this TTA Report is to assess the potential traffic impacts associated with the Proposed Project. The assessment analysed the expected volume of traffic that would be generated during the Construction and Operational Phases of the Proposed Project and assessed the impact that this traffic would have on the operational capacity of the road network. The junctions analysed are listed in Section 3.1.2 and shown in more detail in Figure 2 to Figure 9 (Annex B).

6. This TTA Report has been prepared in accordance with the following exhaustive list of documentation:
    - Transport Infrastructure Ireland (TII) Planning and Development (PE-PDV-02045, May 2014) Traffic and Transport Assessment Guidelines
    - TII Project Appraisal Guidelines (PE-PAG-02017, Oct 2021) Unit 5.3: Travel Demand Projections
    - TII Publication (DN-GEO-03060, May 2023) Geometric Design of Junctions (priority junctions, direct accesses, roundabouts, grade separated, and compact grade separated junctions)
    - Clare County Development Plan 2023 - 2029
    - Limerick Development Plan 2022 - 2028
    - South Dublin County Development Plan 2022 - 2028
    - Kildare County Development Plan 2023 - 2029
    - Offaly County Development Plan 2021 - 2027
    - Laois County Development Plan 2021 - 2027
    - Tipperary County Development Plan 2022 - 2028.

7. This TTA Report has utilised the following EIAR documentation in understanding the Proposed Project:
    - Chapter 3 (Consideration of Reasonable Alternatives)
    - Chapter 4 (Proposed Project Description)

- Appendix A4.1 (Operational Strategy)
- Chapter 5 (Construction & Commissioning).

8. Figures cross referenced with the EIAR in this report are contained within Volume 5 of the EIAR.

9. This assessment presented in this TTA has been undertaken by the same team of competent experts as referenced in Chapter 2 (The Environmental Impact Assessment Process) of the EIAR.

10. The Proposed Project would deliver nationally important strategic infrastructure with individual elements designed with a lifespan of 80 to 100 years. The strategic importance of the Proposed Project for water supply in the Eastern and Midlands Region is such that there is no plan to decommission these structures and Uisce Éireann is committed to maintaining and repairing them into the future. On this basis it is not likely that the structures will be decommissioned and therefore, decommissioning of the Proposed Project has not been considered further in this assessment.

1.2 Scoping and Meetings

11. The local authorities affected by the construction and operation of the Proposed Project were consulted initially in 2017 with further correspondence and meetings in 2020, 2021 and 2025. Table 1.1 summarises the consultation dates with individual local authorities.

12. As noted in Section 1.1, there is no construction works proposed in the administrative area of Laois County Council however due to classification of the haul roads (R422,R420 and R419 regional roads), consultation was had with Laois County Council because assess was required from the motorway network to these haul roads and Laois County Council was included in the scoping meetings.

Table 1.1: Engagement with Local Authorities in 2017 to 2025

Local Authority	Meeting	Correspondence
Limerick City and County Council	25 September 2025	7 April 2025 6 September 2021 6 April 2020
Clare County Council	26 September 2025	7 April 2025 6 September 2021 1 April 2020
Tipperary County Council	25 September 2025 26 June 2021 1 November 2017 25 May 2017	7 April 2025 1 April 2020
Offaly County Council	30 September 2025 13 June 2021 9 November 2017 13 June 2017	7 April 2025
Laois County Council	3 October 2025 30 September 2025 25 June 2021 26 October 2017 25 May 2017	7 April 2025
Kildare County Council	18 September 2025 24 June 2021 18 October 2017 24 April 2017	7 April 2025

Local Authority	Meeting	Correspondence
South Dublin County Council	8 September 2025 24 June 2021 17 October 2017 12 July 2017	7 April 2025

13. The following matters were agreed at the meetings listed in Table 1.1:
    - The roads proposed to be used as Haul Roads during the construction of the Proposed Project
    - The potentially impacted junctions for assessment (along the agreed Haul Roads)
    - The 'high' growth rate has been agreed to be used in the assessment, in accordance with TII Project Appraisal Guidelines Unit 5.3
    - The committed developments identified by the consultants and LAs for inclusion in the traffic assessment
    - The requirement for pre and post-construction pavement condition surveys on Haul Roads to assess any deterioration during the Construction Phase
    - The requirement for a tracking system to monitor that only the agreed Haul Roads are utilised during the Construction Phase
    - The location of traffic counts to be undertaken for the assessment.

14. In addition to the principles agreed, Kildare County Council requested that Level 1 Falling Weight Deflectometer (FWD) surveys are completed on the regional and local Haul Road locations in the Kildare County area.

1.3 Structure of this Report

15. This TTA is divided into twelve sections:
    - Section 1 includes this introduction
    - Section 2 describes the infrastructure of the Proposed Project and its location in more detail and provides further information on the Construction and Operational Phases of Proposed Project
    - Section 3 provides an overview of the baseline traffic conditions and traffic data collection process
    - Section 4 provides an overview of the proposed Construction Phase traffic conditions
    - Section 5 provides an overview of the proposed Construction Phase trip generation, including the assumptions that have been made to estimate the traffic generated by the Proposed Project and the factors used to forecast the future road network traffic
    - Section 6 outlines the methods used for the Construction Phase traffic distribution onto the surrounding road network
    - Section 7 provides an overview of the Operational Phase Traffic conditions
    - Section 8 provides an overview of the Operational Phase trip generation
    - Section 9 outlines the methods used for the Operational Phase traffic distribution
    - Section 10 provides an overview of the assessment methods used and junctions analysis.
    - Section 11 addresses issues relating to road safety, parking provision, pedestrians and cyclists, and access for people with disabilities
    - Section 12 contains the construction and operational conclusions and mitigations of this TTA.

2. Proposed Project Description

2.1 Site Location

16. The Proposed Project is a water supply pipeline involving the abstraction and pumping of raw water from the Lower River Shannon at Parteen Basin; treatment of the water nearby at Birdhill, County Tipperary; and pumping of the treated water to a high point near Cloughjordan, County Tipperary and on through the Midlands to a termination point at Peamount, in County Dublin (within the administrative area of South Dublin County Council), where it would connect into the existing Greater Dublin Area Water Resource Zone (GDA WRZ) network.

2.2 Principal Infrastructure of Proposed Project

17. Table 2.1 outlines the principal Proposed Project infrastructure elements as shown in Figure 1 (Annex B).

Table 2.1: Summary of Principal Project Infrastructure

Proposed Project Infrastructure	Outline Description of Proposed Project Infrastructure*
Permanent Infrastructure	
Raw Water Intake and Pumping Station (RWI&PS) (Infrastructure Site) County Tipperary	• The RWI&PS would be located on a permanent site of approximately 4ha on the eastern shore of Parteen Basin in the townland of Garrynatineel, County Tipperary. In addition, approximately 1ha of land would be required on a temporary basis during construction. • The RWI&PS has been designed to abstract enough raw water from the River Shannon at Parteen Basin to provide up to 300Mld of treated water by 2050. • The RWI&PS site would include a bankside Inlet Chamber, the Raw Water Pumping Station Building, two Microfiltration Buildings, an Electricity Substation and Power Distribution Building, and Dewatering Settlement Basins. The tallest building on the RWI&PS site would be the Microfiltration Buildings which would be 10.9m above finished ground level. Additionally, there would be a telemetry mast, the top of which would be 14m above finished ground level. • Power for the RWI&PS would be supplied via an underground connection to the existing Birdhill 38 kV electricity substation. • A new permanent access road from the R494 would be constructed to access the proposed RWI&PS site. This access road would be 5m in width and 670m in length. • The RWI&PS site boundary would be fenced with a stock proof fence and a 2.4m high paladin security fence 5m inside the boundary. The site would be landscaped in line with the surrounding environment to reduce its visual impact.
Raw Water Rising Mains (RWRMs) (Pipeline) County Tipperary	• The RWRMs would consist of two 1,500mm underground pipelines made from steel that would carry the raw water approximately 2km from the RWI&PS to the Water Treatment Plant (WTP) at Incha Beg, County Tipperary. The water would be pumped from the pumping station at the RWI&PS to the WTP. • Twin RWRMs have been proposed so that one RWRM can be taken out of service for cleaning and maintenance while still providing an uninterrupted flow of raw water through the other RWRM. • The RWRMs would include Line Valves, a Lay-By, Air Valves and Cathodic Protection. • A 20m wide Permanent Wayleave would provide Uisce Éireann with operational access to the RWRMs.

Proposed Project Infrastructure	Outline Description of Proposed Project Infrastructure*
Water Treatment Plant (WTP) (Infrastructure Site) County Tipperary	• The WTP would be located on a permanent site of approximately 31ha at Incha Beg, County Tipperary, 2.6km north-east of the village of Birdhill, and 2km east of the proposed RWI&PS. In addition, approximately 2.5ha of land would be required on a temporary basis during construction. • The WTP would treat the raw water received from the RWI&PS via the RWRMs. Once treated, the High Lift Pumping Station (HLPS) would deliver the treated water onwards from the WTP to the Break Pressure Tank (BPT) at Knockanacree, County Tipperary, via the Treated Water Pipeline. • The WTP would comprise of a series of tanks and buildings including the Raw Water Balancing Tanks, Water Treatment Module Buildings, Sludge Dewatering Buildings, Sludge Storage Buildings, Clear Water Storage Tanks and HLPS, an Electricity Substation and Power Distribution Building, and the Control Building. The tallest building on the WTP site would be the Water Treatment Module Buildings which would be up to 15.6m above finished ground level. Additionally, there would be a telemetry mast, the top of which would be 14m above finished ground level. • There would also be a potential future water supply connection point at the junction between the permanent access road and the R445. • Power for the WTP would be supplied via an underground connection to the existing Birdhill 38 kV electricity substation. Solar panels would be placed on the roofs of the Chemical Dosing Manifold Building, the Water Treatment Module Buildings, Clear Water Storage Tanks and Sludge Storage Buildings, and at a number of locations on the ground to supplement the mains power supply. • A new permanent access road from the R445 would be constructed and would be 6m in width and 640m in length. • The WTP site boundary would be fenced with a stock proof fence and a 2.4m high palisade security fence 5m inside the boundary. The site would be landscaped in line with the surrounding environment to reduce its visual impact.
Treated Water Pipeline from the WTP to the BPT (Pipeline) County Tipperary	• The Treated Water Pipeline from the WTP to the BPT would consist of a single 1,600mm underground steel pipeline which would be approximately 37km long. The water would be pumped through this section of the Treated Water Pipeline by the HLPS. • The Treated Water Pipeline would include Line Valves, Washout Valves, Air Valves, Manways, Cathodic Protection and Lay-Bys. • A 20m wide Permanent Wayleave would provide Uisce Éireann with operational access to the pipeline (this Wayleave has been extended to approximately 30m at some Line Valves to provide access between the Lay-Bys and Line Valves). There would be an additional 10m wide Permanent Wayleave at certain locations for operational access to smaller pipes connecting Washout Valves with permanent discharge locations.
Break Pressure Tank (BPT) (Infrastructure Site) County Tipperary	• The BPT would be located on a permanent site of approximately 7ha in the townland of Knockanacree, County Tipperary. In addition, approximately 0.8ha of land would be required on a temporary basis during construction. • The BPT would be located at the highest point of the pipeline. It marks the end of the Treated Water Pipeline from the WTP to the BPT and the start of the Treated Water Pipeline from the BPT to the Termination Point Reservoir (TPR) in the townland of Loughtown Upper, at Peamount, County Dublin. It would act as a balancing tank and would be required to manage the water pressures in the entire Treated Water Pipeline during flow changes, particularly during start-up and shut-down. • The BPT site would include the BPT and a Control Building. The BPT would be a concrete tank divided into three cells covered with an earth embankment. The BPT tanks would be 5m in height and partially buried below finished ground levels. The Control Building would be 7.5m over finished ground level. Additionally, there would be a telemetry mast, the top of which would be 14m above finished ground level. • Access to the BPT site would be via a new permanent access road from the L1064 which would be 5m wide and 794m in length. • Power for the BPT would be supplied via an underground connection from the existing overhead power line. Solar panels would be placed on the south facing side of the control building roof, on the BPT and at ground level to the south of the site to supplement the mains power supply. • The BPT site boundary would be bounded by the existing hedgerow / tree line with a 2.4m high palisade security fence around the permanent infrastructure. The site would be landscaped in line with the surrounding environment to reduce its visual impact.

Proposed Project Infrastructure	Outline Description of Proposed Project Infrastructure*
Treated Water Pipeline from the BPT to the TPR (Pipeline) Counties Tipperary, Offaly, Kildare and Dublin (within the administrative area of South Dublin County Council)	• The Treated Water Pipeline from the BPT to the TPR would consist of a single 1,600mm underground steel pipeline, approximately 133km long. • The water would normally travel through the Treated Water Pipeline by gravity; however, flows greater than approximately 165Mld would require additional pumping from the Booster Pumping Station (BPS) in the townland of Coagh Upper, County Offaly. • The Treated Water Pipeline would include Line Valves, Washout Valves, Air Valves, Manways, Cathodic Protection, Lay-Bys and potential future connection points. • A 20m wide Permanent Wayleave would provide Uisce Éireann with operational access to the pipeline (this Wayleave has been extended to approximately 30m at some Line Valves to provide access between the Lay-Bys and Line Valves). There would be an additional 10m wide Permanent Wayleave at certain locations for operational access to smaller pipes connecting Washout Valves with permanent discharge locations.
Booster Pumping Station (BPS) (Infrastructure Site) County Offaly	• The BPS would be located on a permanent site of approximately 2.6ha in the townland of Coagh Upper, County Offaly. It would be located approximately 30km downstream from the BPT. In addition, approximately 3ha of land would be required on a temporary basis during construction. • The BPS would be required when the demand for water causes the flow through the pipeline to exceed approximately 165Mld. • The BPS site would consist of a single-storey Control Building with a basement below. It would have a finished height of 7.6m above finished ground level. There would also be a separate Electricity Substation and Power Distribution Building. Additionally, there would be a telemetry mast, the top of which would be 14m above finished ground level. • Power to the BPS would be supplied from an existing 38 kV electricity substation at Birr, through cable ducting laid within the public road network. There would be ground mounted solar panels on the southern side of the BPS site to supplement the mains power supply. • The site would be accessed directly from the L3003. • The BPS site boundary would be fenced with a stock proof fence and a 2.4m high palisade security fence between 5m -12m inside the boundary. The site itself would be landscaped in line with the surrounding environment to reduce its visual impact.
Flow Control Valve (FCV) (Infrastructure Site) County Kildare	• The FCV controls the flows in the Treated Water Pipeline from the BPT to the TPR. It would be a small permanent site of approximately 0.5ha in the townland of Commons Upper in County Kildare. In addition, approximately 0.6ha of land would be required on a temporary basis during construction. • It would consist of three 700mm diameter FCVs and three flow meters installed in parallel with the Line Valve and housed within an underground chamber. • Access to the FCV site would be directly off the L1016 Commons Road Upper. • Power supply to the FCV site would be provided from the existing low voltage network via a combination of overhead lines and buried cables. There would be ground mounted solar panels on the north-eastern side of the site to supplement the mains power supply. • Kiosks at the FCV site would house the Programmable Logic Controller, telemetry and power supply for the Line Valve. There would also be a telemetry mast, the top of which would be 14m above finished ground level. • The site boundary would be fenced with a stock proof fence and a 2.4m high palisade security fence 5m inside the boundary.

Proposed Project Infrastructure	Outline Description of Proposed Project Infrastructure*
Termination Point Reservoir (TPR) (Infrastructure Site) County Dublin (within the administrative area of South Dublin County Council)	• The TPR would be located on a permanent site of approximately 8.3ha adjacent to an existing treated water reservoir in the townland of Loughtown Upper, at Peamount, County Dublin (within the administrative area of South Dublin County Council) and would have capacity for 75Ml of treated water supply. In addition, approximately 1.1ha of land would be required on a temporary basis during construction. • It would be located at the downstream end of the Treated Water Pipeline from the BPT to the TPR and would be the termination point for the Proposed Project. It would be at this location that the Proposed Project would connect to the existing water supply network of the Greater Dublin Area Water Resource Zone (GDA WRZ). • The TPR would consist of an above-ground storage structure, associated underground Scour Water and Overflow Water tanks and a Chlorine Dosing Control Building. The TPR would be a concrete tank divided into three cells and covered with an earth embankment. The top of the TPR would be 11.2m above finished ground level. The Chlorine Dosing Control Building would be 8.4m over finished ground level. Additionally, there would be a telemetry mast, the top of which would be 14m above finished ground level. • Power for the TPR would be supplied via an underground connection to the existing electricity substation at Peamount Reservoir. There would be solar panels on top of a portion of the northern cell of the TPR to supplement the mains power supply. • A new permanent access road from the R120 would be constructed and would be 5m wide and 342m in length. • The TPR site would be bounded by the existing hedgerow to the west and existing fence to the east with a 2.4m high palisade security fence around the permanent infrastructure. The site itself would be landscaped in line with the surrounding environment to reduce its visual impact.
Proposed 38 kV Uprate Works – Power Supply to RWI&PS and WTP	
Proposed 38 kV Uprate Works Ardnacrusha – Birdhill (Power Supply) Counties Clare, Limerick and Tipperary	• The proposed 38 kV Uprate Works would be necessary to deliver adequate electrical power to the RWI&PS and WTP. • The proposed works would include the uprating of the existing Ardnacrusha – Birdhill Line and the replacement of polesets/structures with an underground cable along a section of the Ardnacrusha – Birdhill – Nenagh Line. • There would also be works at the existing Birdhill 38 kV electricity substation including the provision of a new 38 kV modular Gas Insulated Switchgear Modular Building, new electrical equipment and lighting, together with new fencing and associated works.
Temporary Infrastructure – Required for Construction Phase Only	
Construction Working Width Counties Tipperary, Offaly, Kildare and Dublin (within the administrative area of South Dublin County Council)	• A Construction Working Width would be temporarily required for the construction of the RWRMs and the Treated Water Pipeline, and the subsequent reinstatement of the land. • The Construction Working Width would generally be 50m in width but would be locally wider near features such as crossings, access and egress points from the public road network, Construction Compounds and Pipe Storage Depots.
Construction Compounds Counties Tipperary, Offaly, Kildare and Dublin (within the administrative area of South Dublin County Council)	• Eight Construction Compounds would be temporarily required to facilitate the works to construct the Proposed Project. Five Construction Compounds would be located along the route of the Treated Water Pipeline at the following Infrastructure Sites: RWI&PS, WTP, BPT, BPS and TPR, with an additional three Construction Compounds located at Lisgarriff (County Tipperary), Killananny (County Offaly) and Drummond (County Kildare). Construction Compounds would act as a hub for managing the works including plant/material/worker movement, general storage, administration and logistical support. • The Principal Construction Compound at the WTP would require 30ha of land during construction. • The other three Principal Construction Compounds would require land temporarily during construction ranging between approximately 12ha and 16ha. • The four Satellite Construction Compounds at the other permanent Infrastructure Sites (excluding the FCV) would require land during construction ranging between approximately 3ha and 12ha.
Pipe Storage Depots Counties Tipperary, Offaly and Kildare	• Nine Pipe Storage Depots would be temporarily required to supplement the Construction Compounds and would serve the installation of pipe between the WTP and the TPR. • Pipe Storage Depots would take direct delivery of the pipe for storage before onward journey to the required location along the Construction Working Width. • The Pipe Storage Depots would vary in size and require land temporarily during construction generally ranging between approximately 2ha and 7ha but with one site being larger at 11ha.

* Note all land take numbers in this table are affected by rounding to one decimal place.

2.2.1 Construction of the Proposed Project

18. Chapter 5 (Construction & Commissioning) outlines the full details of the Construction Phase of the Proposed Project. As outlined in Chapter 5, assumptions have been made with regard to the likely partitioning of the Construction Phase into sections.

19. As per Figure 1 (Annex B), as shown in Table 2.2 the Proposed Project has been assumed to be divided into four separate construction sections:

- Section 1 - RWI&PS, RWRM and WTP
- Section 2 - Treated Water Pipeline from WTP to the BPT and the construction of the BPT
- Section 3 - Treated Water Pipeline between the BPT and BPS, including the BPS itself
- Section 4 - Treated Water Pipeline from the BPS and TPR, including the FCV and TPR itself.

20. It should be noted the 38 kV Uprate works will be carried out via existing legal easement or permission by ESB, the body which installs, maintains, or modifies electricity distribution equipment.

Table 2.2: Assumed Sections for the Proposed Project

Section	Key Project Elements included in geographical section	Associated Construction Compounds and Pipe Storage Depots
Section 1	RWI&PS, RWRMs and WTP	Construction Compound 0 (CC0) RWI&PS Construction Compound 1 (CC1) WTP
Section 2	Treated Water Pipeline between TW – 0 and TWA – 2000, including BPT	Pipe Storage Depot 1 (PSD1) Carrigatogher Construction Compound 2 (CC2) Lisgarriff Construction Compound 3 (CC3) BPT
Section 3	Treated Water Pipeline between TWA - 2000 and TWC – 7860 (R420), including BPS	Pipe Storage Depot 2 (PSD2) Toora Pipe Storage Depot 3 (PSD3) Boveen Pipe Storage Depot 4 (PSD4) Fortel Construction Compound 4 (CC4) BPS Pipe Storage Depot (PSD5) Derrinboy Construction Compound 5 (CC5) Killananny Pipe Storage Depot (PSD6) Derryweelan
Section 4	Treated Water Pipeline between TWC – 7860 (R420) and TWE – 17870 (TPR) including TPR	Pipe Storage Depot 8 (PSD8) Rathlumber Construction Compound 6 (CC6) Drummond Pipe Storage Depot 9 (PSD9) Graiguepottle Pipe Storage Depot (PSD10) Barberstown Upper Construction Compound 7 (CC7) TPR

21. As shown in Image 2.1, the construction phase for the Proposed Project is five years. The Construction Phase is anticipated to commence in 2028.

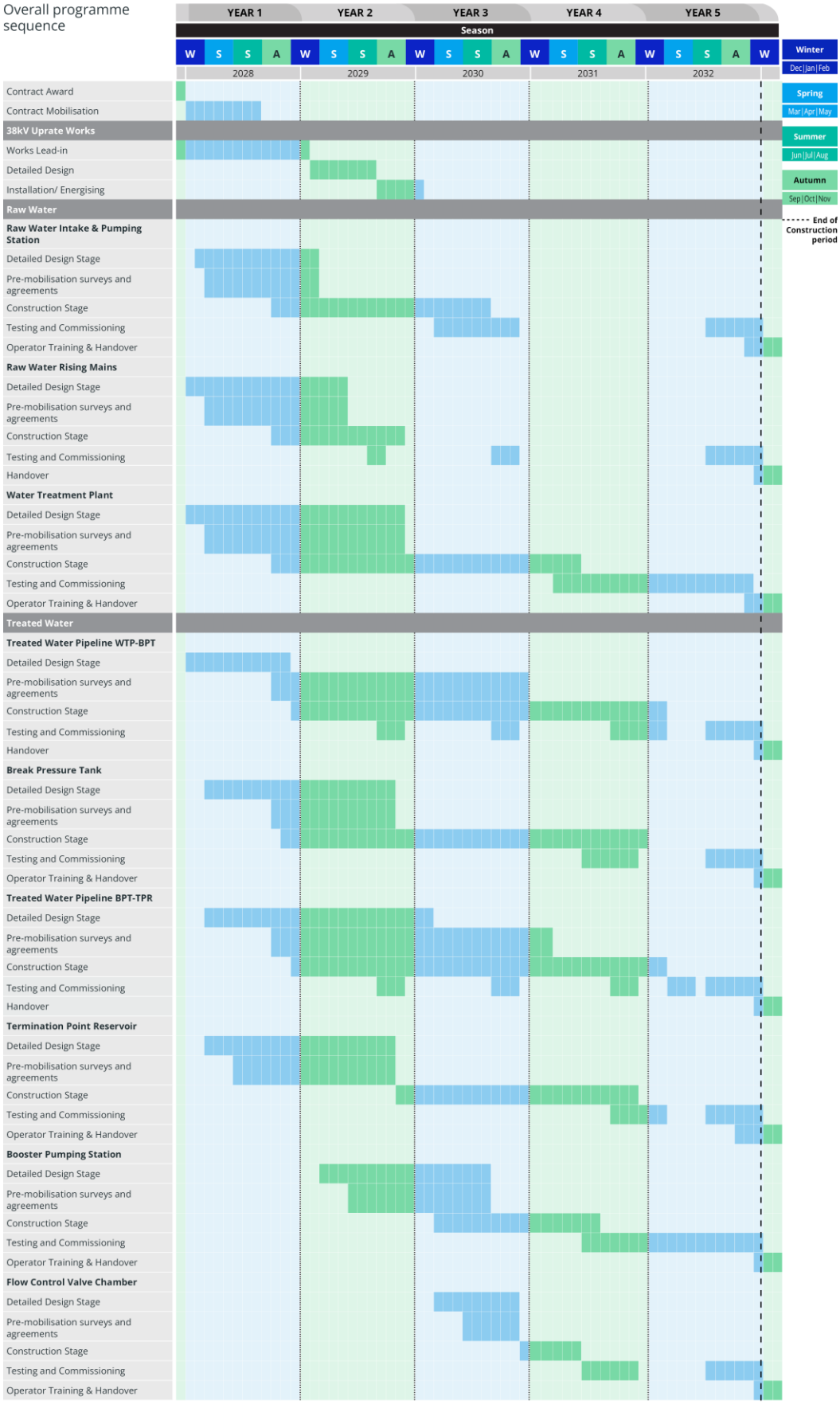


Image 2.1: Proposed Duration and Phasing of the Principal Infrastructure

22. The construction activities that may result in impacts on traffic and transport would be:

    - Construction of infrastructure sites and pipeline - RWI&PS, RWRMs, WTP, Treated Water Pipeline, BPT, BPS, FCV and TPR
    - Establishment of four Principal Construction Compounds and four secondary Satellite Construction Compounds, including parking areas, storage areas, power supply, welfare facilities. The Principal Construction Compound acts as the appointed Contractor's central strategic hub for plant/material/worker movements and the Satellite Construction Compounds is required to build the other Infrastructure Sites (RWI&PS, BPT, BPS and TPR)
    - Nine Pipe Storage Depots has been established
    - 38 kV Uprate Works
    - Construction of laybys off the existing road network, in conjunction with ancillary infrastructure, i.e. kiosks
    - Delivery of materials to site
    - Removal of surplus materials and waste from site
    - Construction workers travelling to and from each site
    - Site demobilisation and reinstatement.

23. Details for each of the principal elements are included in Chapter 5 (Construction & Commissioning) of the EIAR. The proposed duration and phasing of the principal elements of the Proposed Project has been outlined in Section 5.5 of Chapter 5.

2.2.1.1 Haul Roads

24. An initial desktop study of possible Haul Roads for the Construction Phase was carried out and discussed with the local authorities. As outlined in Section 1.2, scoping meetings were held with each local authority, where potential Haul Roads were refined and agreed. The agreed Haul Roads are shown in Figure 11 to 17 (Annex B).

25. The Haul Roads comprise national, regional, and local roads. Site visits were carried out in in 2018, 2020 2024 and 2025 in order to determine and confirm each road's characteristics and this information was utilised in the traffic assessments in Section 10. Over the consultation period, there has been no change to the haul roads. The details of the dates are shown in Table 2.3 below.

Table 2.3: Site Visits Dates

Site Visit Periods	
February 2018	February 2024
September 2020	November 2025
March 2022	-

26. As the pipes would be imported, they would arrive through a designated port. It is envisaged that these deliveries would make use of the national motorway network, primarily via the M7 or M4 corridors.

27. Similarly, all materials required for construction, including the below, would come from various sources and use the motorway network. From there, traffic would transition to the national road network to reach the Pipe Storage Depots, Construction Compounds and Access Egress Points:

    - Hardcore for structures, pipe bedding, and temporary construction roads
    - Precast concrete units and building supplies
    - Pavement materials, including kerbing

- Pipe materials, including valves
- In-situ concrete deliveries and materials for concrete batching plants
- Fencing, lighting, mechanical, electrical, and instrumentation equipment
- Ducting and other associated construction component.

2.2.1.2 Access Points along the Construction Working Width

28. As listed in Table 2.4 there are 54 no. access points required for the duration of the construction works and would interface directly with the designated Haul Roads. They provide direct access to the construction width for plant, labour and materials.

29. There is no provision for parking at the access points, but they would facilitate a drop off zone where loading and off-loading plant and materials by removing vehicles from the public road at all access points. In addition, they would enable drop-off and collection for labour who would be bused to and from the Construction Compounds at the start and end of the working day, or at lunch time to use the canteen facilities at the compounds. There would be a requirement to provide welfare facilities for labour within the Construction Working Width, and the access points provide a convenient location for siting these. It is not envisaged that welfare facilities would be sited at each access point as this would depend on their spatial separation.

30. Table 2.4 provides information about the location of the access points on the construction working width and in relation to the infrastructure sites. Table 2.5 provides further information on the function of the access points and anticipated duration they would be used for.

31. Four of the access points provide crossings for ducts to the WTP and RWI&PS, three of the access points are required to access tunnelling equipment only. The remaining 47 are required to access the five Construction Compounds related to the six infrastructure sites, 3 additional Construction Compounds, nine Pipe Storage Depots, and the remaining 30 provide access to works areas for the pipeline construction Temporary traffic management measures would be put in place to control the access/egress at the site accesses, as outlined in Appendix A7.2 (TMP).

32. Access locations are presented in Figures 7.2 to Figure 7.8 of Volume 5 of the EIAR.

Table 2.4: Access Points to the Construction Working Width and Infrastructure Sites

Access and Egress ID	Crossing Reference	Chainage (Approximate)	Figure Reference
AE053	N/A	N/A	Figure 7.4
AE054	N/A	N/A	Figure 7.4
AE051	N/A	N/A	Figure 7.4
AE052	N/A	N/A	Figure 7.4
AE001	R494	Access Road for the RWI&PS	Figure 7.4
AE002	R494	RW – 800	Figure 7.4
AE003	R445	Access Road for the WTP	Figure 7.4
AE004	R445	TW – 1900	Figure 7.4
AE041	R445	TW – 4100	Figure 7.4
AE042	R499	TW – 6000	Figure 7.4
AE005	R445	TW – 12700	Figure 7.4
AE006	R494	TW – 16500	Figure 7.4
AE007	R495	TW – 18500	Figure 7.4
AE008	R493	TW – 21500	Figure 7.4

Access and Egress ID	Crossing Reference	Chainage (Approximate)	Figure Reference
AE049	N/A	TW – 28900	Figure 7.4
AE009	N52	TW – 29100	Figure 7.4
AE010	R490	TW – 34700	Figure 7.4
AE011	L1058	TW – 35600	Figure 7.4
AE012	R491	TWA – 2000	Figure 7.4
AE013	R491	TWA – 4500	Figure 7.4
AE014	Unnamed Local Road	TWA – 5700	Figure 7.4
AE015	Unnamed Local Road	TWA – 6100	Figure 7.4
AE016	R492	TWA – 11400	Figure 7.4
AE017	N62	TWA – 14100	Figure 7.4
AE018	Unnamed Local Road	TWA – 23600	Figure 7.5
AE044	L8014	TWA – 25100	Figure 7.5
AE019	R440	TWA – 27900	Figure 7.5
AE047	L3003	Access Road for the BPS	Figure 7.5
AE020	Unnamed Local Road	TWB – 7400	Figure 7.5
AE043	Unnamed Local Road	TWB – 11700	Figure 7.5
AE021	R421	TWB – 18700	Figure 7.5
AE048	L2006	TWB – 24700	Figure 7.5
AE045	Unnamed Local Road	TWB – 25200	Figure 7.5
AE022	N80	TWC – 100	Figure 7.5
AE023	R420	TWC – 7800	Figure 7.5
AE050	L1020	TWC – 9000	Figure 7.5
AE024	Unnamed Local Road	TWC – 13400	Figure 7.5
AE025	R402	TWC – 19200	Figure 7.5
AE026	R400	TWC – 19800	Figure 7.5
AE027	R402	TWD – 100	Figure 7.5
AE028	R401	TWD – 3600	Figure 7.5
AE046	Unnamed Local Road	TWD – 16100	Figure 7.7
AE029	R403	TWD – 16200	Figure 7.7
AE030	L5025	TWD – 21500	Figure 7.7
AE031	L1017	TWD – 26500	Figure 7.7
AE032	L1017	TWD – 28700	Figure 7.7
AE033	R407	TWE – 100	Figure 7.7
AE034	R408	TWE – 3900	Figure 7.7
AE035	R406	TWE – 7700	Figure 7.7
AE036	R403	TWE – 8500	Figure 7.7
AE037	L1016	TWE – 12100	Figure 7.7
AE038	L5064	TWE – 12600	Figure 7.7
AE039	R405	TWE – 14900	Figure 7.7
AE040	R120	Access Road for the TPR	Figure 7.7

Table 2.5: Function of Access Points Along the Construction Working Width and Infrastructure Sites

Access ID	Function	Approximate Duration at Peak Construction
AE051	Access for railway crossing of 38 kV ducts to WTP	2 to 3 weeks
AE052	Access for railway crossing of 38 kV ducts to WTP	2 to 3 weeks
AE053	Access for railway crossing of 20 kV ducts to RWI&PS	2 to 3 weeks
AE054	Access for railway crossing of 20 kV ducts to RWI&PS	2 to 3 weeks
AE001	Access road for the RWI&PS (and CC0 during construction)	Permanent access
AE002	2,000m of pipeline	2 to 3 weeks (incl. tunnelling section)
AE003	Access road for the WTP (and CC1 during construction)	Permanent access
AE004	Serves 3,900m of pipeline construction	4 to 6 weeks (incl. tunnelling section)
AE041	Serves 300m of pipeline construction	6 weeks (for tunnelling section only)
AE042	Serves 1,500m of pipeline construction	6 weeks (for tunnelling section only)
AE005	Access for PSD1. Serves 7,000m of pipeline construction	72 weeks – required for PSD1 (incl. tunnelling section)
AE006	Serves 6,000m of pipeline construction	6 to 7 weeks (incl. tunnelling section)
AE007	Serves 2,800m of pipeline construction	3 to 6 weeks (incl. tunnelling section)
AE008	Serves 10,100m of pipeline construction	14 to 16 weeks (incl. tunnelling sections)
AE049	Access for CC2. Serves 38,800m of pipeline construction	216 weeks – required for CC2 (incl. tunnelling sections)
AE009	Serves 13,200m of pipeline construction	16 to 18 weeks (incl. tunnelling sections)
AE010	Serves 6,800m of pipeline construction	8 to 9 weeks
AE011	Serves 4,100m of pipeline construction	5 to 6 weeks (incl. tunnelling section)
AE012	Serves 5,000m of pipeline construction	5 to 6 weeks (incl. tunnelling section)
AE013	Serves 4,100m of pipeline construction	4 to 5 weeks
AE014	Serves 1,100m of pipeline construction	1 to 2 weeks
AE015	Access for PSD2. Serves 9,400m of pipeline construction	72 weeks – required for PSD2
AE016	Serves 8,100m of pipeline construction	9 to 10 weeks
AE017	Access for PSD3. Serves 12,100m of pipeline construction	72 weeks – required for PSD3 (incl. tunnelling section)
AE018	Access for PSD4. Serves 14,000m of pipeline construction	72 weeks – required for PSD4
AE044	Serves 4,600m of pipeline construction	5 to 6 weeks (incl. tunnelling section)
AE019	Serves 1,400m of pipeline construction	5 to 6 weeks (incl. tunnelling section)
AE047	Access for CC4 and BPS. Serves 7,600m of pipeline construction	216 weeks – required for CC4
AE020	Access for PSD5. Serves 13,000m of pipeline construction	72 weeks – required for PSD5
AE043	Serves 12,300m of pipeline construction	13 to 14 weeks
AE021	Access for CC5. Serves 62,100m of pipeline construction	216 weeks – required for CC5
AE048	Serves 5,900m of pipeline construction	6 to 7 weeks
AE045	Serves 500m of pipeline construction	6 weeks (for tunnelling section only)
AE022	Serves 7,900m of pipeline construction	6 to 7 weeks (incl. tunnelling section)
AE023	Access for PSD6. Serves 17,300m of pipeline construction	72 weeks – required for PSD6
AE050	Serves 5,500m of pipeline construction	8 to 9 weeks (incl. tunnelling sections)
AE024	Serves 10,200m of pipeline construction	18 to 20 weeks (peat area)
AE025	Serves 6,400m of pipeline construction	10 to 12 weeks (peat area)
AE026	Serves 5,600m of pipeline construction	8 to 10 weeks (peat area)

Access ID	Function	Approximate Duration at Peak Construction
AE027	Access for PSD8. Serves 29,300m of pipeline construction	72 weeks – required for PSD8
AE028	Serves 16,300m of pipeline construction	30 to 32 weeks (peat area)
AE029	Access for CC6. Serves 68,600m of pipeline construction	216 weeks – required for CC6
AE030	Serves 10,200m of pipeline construction	30 to 32 weeks (peat area)
AE031	Serves 7,200m of pipeline construction	12 to 14 weeks (peat area)
AE032	Serves 7,800m of pipeline construction	12 to 14 weeks (peat area)
AE033	Access for PSD9. Serves 22,000m of pipeline construction	72 weeks – required for PSD9
AE034	Serves 7,600m of pipeline construction	8 to 9 weeks
AE035	Access for PSD10. Serves 9,800m of pipeline construction	72 weeks – required for PSD10
AE036	Serves 4,900m of pipeline construction	12 to 13 weeks (incl. tunnelling sections)
AE037	Serves 3,400m of pipeline construction	6 to 7 weeks (incl. tunnelling section)
AE038	Serves 3,000m of pipeline construction	12 to 13 weeks (incl. tunnelling sections)
AE039	Serves 3,500m of pipeline construction	12 to 13 weeks (incl. tunnelling sections)
AE040	Access road for the TPR (and CC7 during construction)	Permanent access

2.2.2 Operational Phase of the Proposed Project

33. Chapter 4 (Proposed Project Description) outlines the full details of the Operational Phase of the Proposed Project. When fully developed and operational, it is expected that the following staffing, as outlined in Table 2.6, would be required to operate and maintain the WTP and the RWI&PS. Staff numbers are intended as full time equivalent personnel.

Table 2.6: Operational Staff Numbers to Operate the WTP and RWI&PS (based at the WTP)

Staff	No.
Plant Manager	1
Plant Caretakers	4
Plant Operators	6
Plant Technicians	2
Sludge Storage Drivers	3
Total	16

34. Staffing for the operation of the Treated Water Pipeline would be small compared to the staffing levels required for the WTP and RWI&PS. It is, however, expected there would be a small team to look after the pipeline valves, BPT, BPS and Flow Control Valve (FCV) as outlined in Table 2.7 The Treated Water Pipeline staff would be based at Uisce Éireann depots convenient to the pipeline route.

Table 2.7: Operational Staff Numbers to Maintain the Treated Water Pipelines, BPT, BPS and FCV

Staff	No.
Pipeline Supervisor	2
Pipeline Operatives	11
Total	13

35. The pipeline route would be traversed, and all valves and storages would be inspected at six-monthly intervals to check security, valve operation and to ensure no leaks are apparent. These are planned activities and will be carried out with the prior knowledge of any affected landowner. Inspectors will use a small van and, where necessary, proceed on foot to access the land, subject to agreement with landowners.

3. Baseline Traffic Conditions

3.1 Description of Existing Environment

3.1.1 Traffic Counts

36. In order to determine the existing traffic conditions, the following traffic surveys were carried at 76 locations: including 39 no. of the junction turning counts and 37 no. of the automatic traffic counts.

37. The 39 no. of the junction counts were agreed with the local authorities during scoping stage. 18 no. of the automatic traffic counts was used to determine baseline data for proposed junctions (infrastructure sites, CC's and PSD's). The additional automatic traffic counts were used to provide baselines information for air and noise modelling.

38. These surveys were carried out by TRACSIS in September 2024 and March 2025 as outlined in Table 3.1 and Image 3.1. The locations of the surveys are shown in Figure 2 to Figure 10 (Annex B).

39. The traffic counts were carried out as per TII Data Collection PE-PAG-02016 during a neutral period; Thursday in September for the junction counts and for a two-week period for automatic traffic counts.

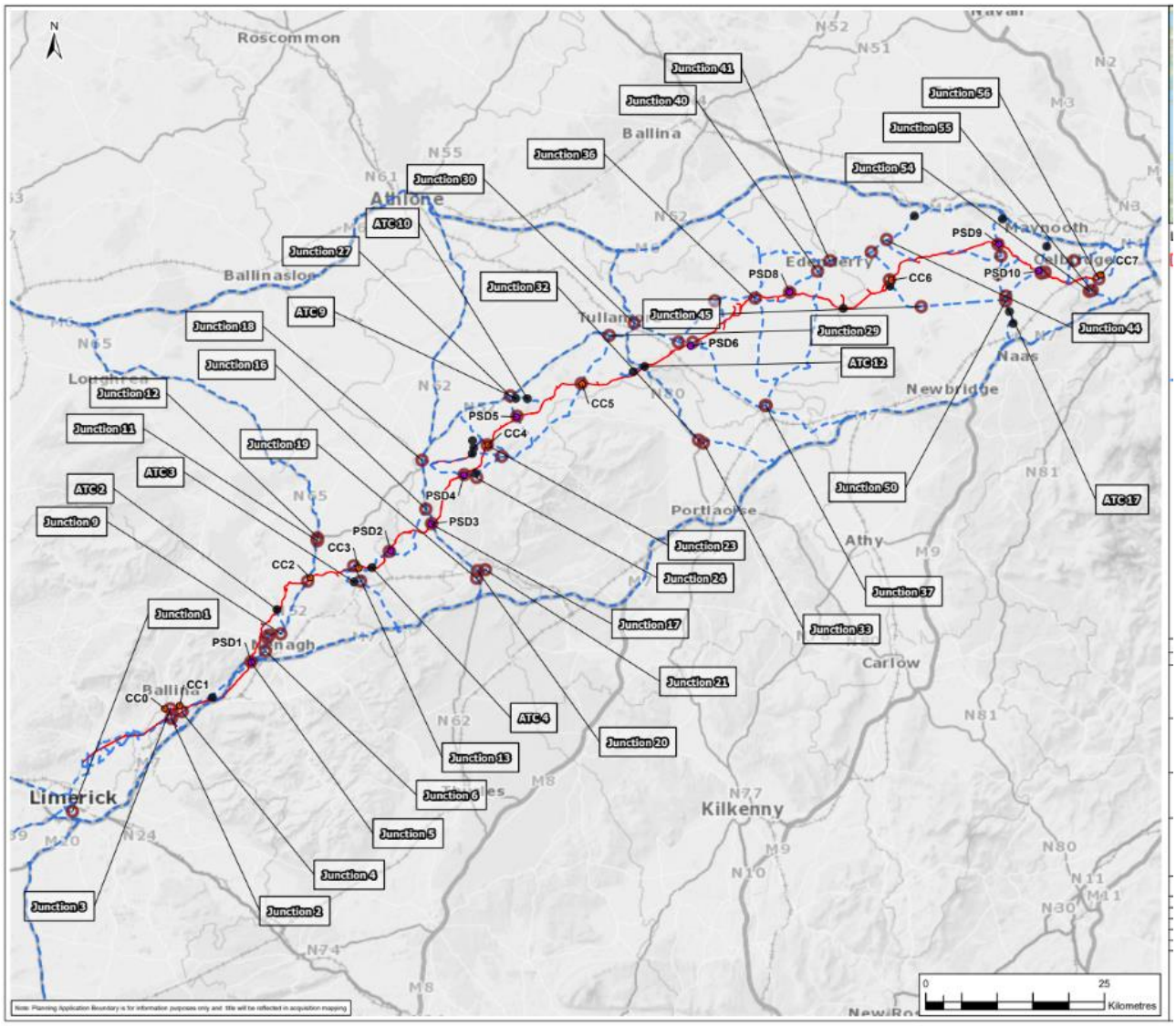


Image 3.1: Overview of Junction and ATC Count Locations

40. The results of this survey indicated the existing weekday morning and evening peak traffic levels through each junction. These peaks were utilised for the assessment of each junction.

Table 3.1: Dates of Traffic Survey Counts

Count Type	No	Junction/ATC Number	County	Location	Date
Junction Count	1	Junction 1	Limerick	R848/ Existing ESB Depot	26/9/2024
Junction Turning Count	2	Junction 2	Tipperary	R494/R445 Birdhill Roundabout	26/9/2024
Automatic Traffic Count	3	Junction 3	Tipperary	Proposed T-Junction RWI&PS (CC0) on R494	Week 1 03/03/2025 Week 2 10/03/2025
Automatic Traffic Count	4	Junction 4	Tipperary	Proposed T-Junction WTP (CC1) on R445	Week 1 25/9/24 Week 2 2/10/24

Count Type	No	Junction/ATC Number	County	Location	Date
Automatic Traffic Count	5	Junction 5	Tipperary	Proposed Staggered Junction to PSD1 on R445	Week 1 25/9/24 Week 2 2/10/24
Junction Turning Count	6	Junction 6	Tipperary	N52/R445 Roundabout	26/9/2024
Junction Turning Count	7	Junction 7	Tipperary	N52/R494 Roundabout	26/9/2024
Junction Turning Count	8	Junction 8	Tipperary	N52/R495 Roundabout	26/9/2024
Junction Turning Count	9	Junction 9	Tipperary	N52/R497 Roundabout	26/9/2024
Automatic Traffic Count	10	Junction 10	Tipperary	Proposed T-Junction CC2 on N52	Week 1 25/9/24 Week 2 2/10/24
Junction Turning Count	11	Junction 11	Tipperary	N52R490 T-Junction	26/9/2024
Junction Turning Count	12	Junction 12	Tipperary	N65/N52/L1092 Crossroad	26/9/2024
Automatic Traffic Count	13	Junction 13	Tipperary	Proposed T-Junction BPT (CC3) on L1064	Week 1 25/9/24 Week 2 2/10/24
Junction Turning Count	14	Junction 14	Tipperary	R490/R491 T-Junction	26/9/2024
Automatic Traffic Count	15	Junction 15	Tipperary	Proposed T-Junction PSD2 on L4022	Week 1 25/9/24 Week 2 2/10/24
Junction Turning Count	16	Junction 16	Offaly	N62/R492 Crossroads	26/9/2024
Automatic Traffic Count	17	Junction 17	Offaly	Proposed T-Junction PSD3 on N62	Week 1 25/9/24 Week 2 2/10/24
Junction Turning Count	18	Junction 18	Offaly	N52/R440 Roundabout	26/9/2024
Junction Turning Count	19	Junction 19	Tipperary	N62/ R445 Roundabout	26/9/2024
Junction Turning Count	20	Junction 20	Tipperary	N62/ Dublin Road T-Junction	26/9/2024
Junction Turning Count	21	Junction 21	Tipperary	N62/R445 Roundabout	26/9/2024
Automatic Traffic Count	22	Junction 22	Offaly	Proposed T-Junctions PSD4 on L4004	Week 1 25/9/24 Week 2 2/10/24
Automatic Traffic Count	23	Junction 23	Offaly	Proposed T-Junction BPS (CC4) on L3003	Week 1 25/9/24 Week 2 2/10/24
Junction Turning Count	24	Junction 24	Offaly	R421/L4004 Crossroads	26/9/2024

Count Type	No	Junction/ATC Number	County	Location	Date
Junction Turning Count	25	Junction 25	Offaly	R440/R421 T-Junction	26/9/2024
Automatic Traffic Count	26	Junction 26	Offaly	Proposed T-Junction PSD5 on L2027	Week 1 25/9/24 Week 2 2/10/24
Junction Turning Count	27	Junction 27	Offaly	N52/L2027 T-Junction	26/9/2024
Automatic Traffic Count	28	Junction 28	Offaly	Proposed T-Junction CC5 on R421	Week 1 25/9/24 Week 2 2/10/24
Junction Turning Count	29	Junction 29	Offaly	N52/R421 Roundabout	26/9/2024
Junction Turning Count	30	Junction 30	Offaly	N52/R420 Roundabout	21/11/2024
Junction Turning Count	31	Junction 31	Offaly	R420/R402 T-Junction	21/11/2024
Junction Turning Count	32	Junction 32	Laois	N80/R422 Roundabout	21/11/2024
Junction Turning Count	33	Junction 33	Laois	R422/Connolly Street Roundabout	21/11/2024
Automatic Traffic Count	34	Junction 34	Offaly	Proposed T-Junction PSD6 on R420	Week 1 18/11/24 Week 2 25/11/24
Junction Turning Count	35	Junction 35	Offaly	R402/L1014 T-Junction	26/9/2024
Junction Turning Count	36	Junction 36	Offaly	R402/R400 Staggered Junction	26/9/2024
Junction Turning Count	37	Junction 37	Laois	R420/Main Street T-Junction	21/11/2024
Junction Turning Count	38	Junction 38	Laois	R419/R420 Staggered Junction	21/11/2024
Automatic Traffic Count	39	Junction 39	Offaly	Proposed T-Junction PSD8 on R402	Week 1 25/9/24 Week 2 2/10/24
Junction Turning Count	40	Junction 40	Offaly	R402/R401 T-Junction	26/9/2024
Junction Turning Count	41	Junction 41	Offaly	R402/R401 Roundabout	26/9/2024
Junction Turning Count	42	Junction 42	Kildare	R402/R403 Roundabout	26/9/2024
Automatic Traffic Count	43	Junction 43	Kildare	Proposed T-Junction CC6 on R403	Week 1 25/9/24 Week 2 2/10/24
Junction Turning Count	44	Junction 44	Kildare	R402/L5025/L5011 Staggered Junction	26/9/2024
Junction Turning Count	45	Junction 45	Kildare	R403/R415/L1020 Crossroads	26/9/2024
Junction Turning Count	46	Junction 46	Kildare	R407/L1010/L1017 Crossroads	26/9/2024

Count Type	No	Junction/ATC Number	County	Location	Date
Automatic Traffic Count	47	Junction 47	Kildare	Proposed T-Junction PSD9 on R407	Week 1 25/9/24 Week 2 2/10/24
Junction Turning Count	48	Junction 48	Kildare	R407/R408 T-Junction	26/9/2024
Junction Turning Count	49	Junction 49	Kildare	R403/Clane Ring Road Roundabout	26/9/2024
Junction Turning Count	50	Junction 50	Kildare	R407/ Clane Ring Road/ An Crochán Roundabout	26/9/2024
Junction Turning Count	51	Junction 51	Kildare	R403/R406 Roundabout	26/9/2024
Automatic Traffic Count	52	Junction 52	Kildare	Proposed T-Junction PSD10 on R403	Week 1 25/9/24 Week 2 2/10/24
Junction Turning Count	53	Junction 53	Kildare	R403/R405 Crossroads	26/9/2024
Junction Turning Count	54	Junction 54	South Dublin	R405/Hazelhatch Road T-Junction	26/9/2024
Junction Turning Count	55	Junction 55	South Dublin	R120/R405 T-Junction	26/9/2024
Automatic Traffic Count	56	Junction 56	South Dublin	Proposed T-Junction TPR (CC7) on R120	Week 1 25/9/24 Week 2 2/10/24
Automatic Traffic Count	57	Junction 57	Kildare	Proposed T-Junction FCV on L1016	Week 1 3/3/25Week 210/3/25
Automatic Traffic Count	1	ATC 1	Tipperary	R499	Week 1 25/9/24 Week 2 2/10/24
Automatic Traffic Count	2	ATC 2	Tipperary	R493	Week 1 25/9/24 Week 2 2/10/24
Automatic Traffic Count	3	ATC 3	Tipperary	R490	Week 1 25/9/24 Week 2 2/10/24
Automatic Traffic Count	4	ATC 4	Tipperary	R491	Week 1 25/9/24 Week 2 2/10/24
Automatic Traffic Count	5	ATC 5	Offaly	L8014	Week 1 25/9/24 Week 2 2/10/24
Automatic Traffic Count	6	ATC 6	Offaly	L7004	Week 1 25/9/24 Week 2 2/10/24

Count Type	No	Junction/ATC Number	County	Location	Date
Automatic Traffic Count	7	ATC 7	Offaly	Unnamed Local Road	Week 1 25/9/24 Week 2 2/10/24
Automatic Traffic Count	8	ATC 8	Offaly	L2021	Week 1 25/9/24 Week 2 2/10/24
Automatic Traffic Count	9	ATC 9	Offaly	L2021	Week 1 25/9/24 Week 2 2/10/24
Automatic Traffic Count	10	ATC 10	Offaly	L2002	Week 1 18/11/24 Week 2 25/11/24
Automatic Traffic Count	11	ATC 11	Offaly	N80	Week 1 18/11/24 Week 2 25/11/24
Automatic Traffic Count	12	ATC 12	Offaly	L1020	Week 1 18/11/24 Week 2 25/11/24
Automatic Traffic Count	13	ATC 13	Offaly	L1001	Week 1 25/9/24 Week 2 2/10/24
Automatic Traffic Count	14	ATC 14	Kildare	Unnamed Local Road	Week 1 25/9/24 Week 2 2/10/24
Automatic Traffic Count	15	ATC 15	Kildare	R402	Week 1 25/9/24 Week 2 2/10/24
Automatic Traffic Count	16	ATC 16	Kildare	R407	Week 1 25/9/24 Week 2 2/10/24
Automatic Traffic Count	17	ATC 17	Kildare	R407	Week 1 25/9/24 Week 2 2/10/24
Automatic Traffic Count	18	ATC 18	Kildare	R407	Week 1 25/9/24 Week 2 2/10/24
Automatic Traffic Count	19	ATC 19	Kildare	R406	Week 1 25/9/24 Week 2 2/10/24

3.1.2 Description of Existing Junctions

3.1.2.1 Junction 1: R848/Existing ESB Depot.

41. Junction 1 is a T-junction between the R858 regional road and the existing ESB depot. The R858 is the major road, which is a two-lane single carriageway. There are pedestrian facilities along the R858 with footpaths on both sides of the road. The arms of the junction are labelled on Image 3.2 as such: A - R858 (NE), B - ESB Depot and C - R858 (SW).

3.1.2.2 Junction 2: R494/R445 Birdhill Roundabout

42. Junction 2 is a four-arm roundabout on the R494 and the R445 regional roads with two-lane approach on each arm of the roundabout. All arms incorporate deflection islands and the R494 southern arm provides an uncontrolled pedestrian crossing, with dropped kerb and tactile paving. There are on road cycle lane facilities on the R445 eastern and western arms. The arms of the junction are labelled on Image 3.3 as such: A - R494 (NNW), B - R445 (ENE), C - R494 (SSE) and D - R445 (WSW).

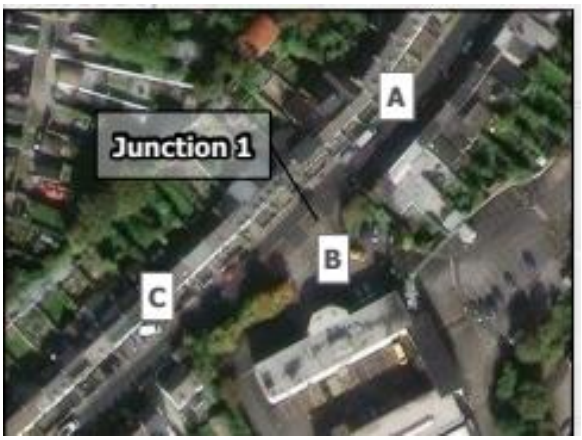


Image 3.2: Junction 1 R585/Existing ESB Depot Access [1]

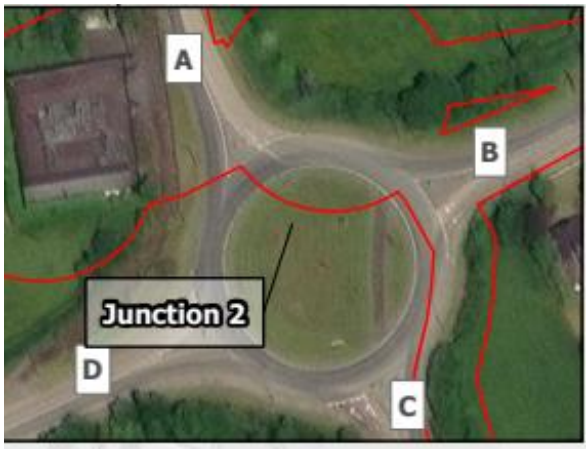


Image 3.3: Junction 2 R494/R445 Roundabout

43. Junctions 3, 4, and 5 are proposed and are detailed in Section 4.4. The junction numbering follows a west-to-east sequence and encompasses both existing and proposed junctions. Throughout this section of the report, other proposed junctions are also absent from the sequence; these are described in Section 4.4 and include Junctions 10, 13, 15, 17, 22, 23, 26, 28, 34, 39, 43, 47, 52, 56, and 57."

44. Junction 6 is a three-arm roundabout on the N52 and the R445 regional road. All three arms contain short two-lane approach to the roundabout. The N52 northern arm provides uncontrolled pedestrian crossing facilities, with deflection islands at all arms. The arms of the junction are labelled on Image 3.4 as such: A - R445, B - N52 (SW) and C - N52 (NNW).

3.1.2.3 Junction 7: N52/R494 Four Arm Roundabout in Nenagh

45. Junction 7 is a four-arm roundabout on the N52 and the R494 regional road. All four arms contain short two-lane approach to the roundabout, with uncontrolled pedestrian crossing facilities and deflection islands at all arms. The arms of the junction are labelled on Image 3.5 as such: A - N52 (N), B - R494 (E), C - N52 (SSW) and D - R494 (W).

[1] Image 3.2 to Image 3.40 (Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community). Letters shown on the Images refer to the junction arms.

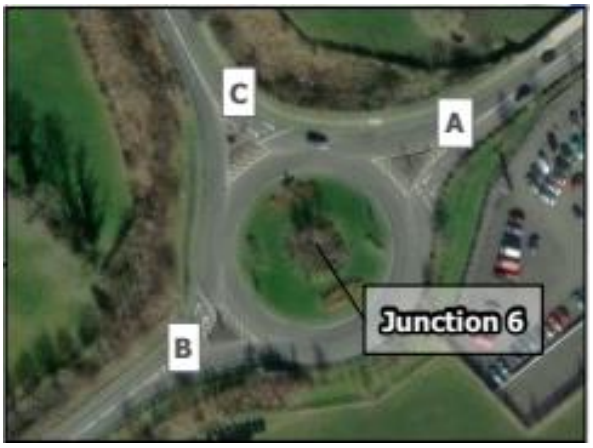


Image 3.4: Junction 6 N52/R445 Roundabout



Image 3.5: Junction 7 N52/R494 Roundabout

3.1.2.4 Junction 8: N52/R495 Four Arm Roundabout in Nenagh

46. Junction 8 is a four-arm roundabout on the N52 and the R495 regional road. All four arms contain a two-lane entry to the roundabout, with uncontrolled pedestrian crossing facilities and deflection islands at all arms. The arms of the junction are labelled on Image 3.6 as such: A - N52 (NE), B - R495 (SE), C - N52 (SSW) and D - R495 (WNW).

3.1.2.5 Junction 9: N52/R497 Three Arm Roundabout in Nenagh

47. Junction 9 is a three-arm roundabout on the N52 and the R497 regional road. All three arms contain a two-lane entry to the roundabout, with uncontrolled pedestrian crossing facilities and deflection islands at all arms. The arms of the junction are labelled on Image 3.7 as such: A - N52 (NNE), B - R497 and C - N52 (W).

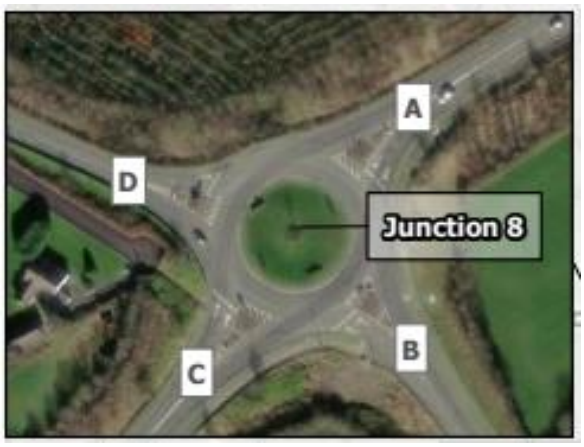


Image 3.6: Junction 8 N52/R495 Roundabout



Image 3.7: Junction 9 N52/R49 Roundabout

3.1.2.6 Junction 11: N52/R490 T-Junction in Borrisokane

48. Junction 11 is a T-junction between the N52 national road and the R490 regional road. The N52 is the major road, which is a two-lane single carriageway. The R490 (minor road) is also a two-lane single carriageway. There are no pedestrian crossing facilities at this junction. The arms of the junction are labelled on Image 3.8 as such: A - N52 Main Street, B - R490 and C - N52 Nenagh Road.

3.1.2.7 Junction 12: N65/N52/L1092 Crossroad Junction

49. Junction 12 is a crossroad junction between the N65, N52 national roads and L1092 local road. All four arms are two-lane single carriageways. The major arms are the N52 south and N65. The minor arms are the L1092 and N52 east. There are no pedestrian crossing facilities at this junction. The arms of the junction are labelled on Image 3.9 as such: A - N65, B - N52 Mill Street, C - N52 Main Street and D - L1092.



Image 3.8: Junction 11 N52/R490 T-Junction



Image 3.9: Junction 12 N65/N52/L1092 Crossroad

3.1.2.8 Junction 14: R490/R491 T-Junction in Cloughjordan

50. Junction 14 is a T-junction between the R490 and the R491 regional roads. The major road is the R490 and is a two-lane single carriageway. The R491 is also a two-lane single carriageway and is considered a minor road, giving way to traffic travelling on the R490. There are uncontrolled pedestrian crossing facilities via dropped kerbing and tactile paving on the R490 and R491 western arm. The arms of the junction are labelled on Image 3.10 as such: A - R490 Main Street, B - R491 and C - R490 Templemore Road.

3.1.2.9 Junction 16: N62/R492 Crossroads South of Birr

51. Junction 16 is a crossroads between the N62 national road, R492 regional road and the L4008 local road. The N62 major road contains ghost islands, which provide right turning lanes onto the R492 and L4008. Left turn deflection lanes are also provided from the N62 onto R492 and L4008. The arms of the junction are labelled on Image 3.11 as such: A - N62 (NNW), B - R492 (NNE), C - N62 (SSE) and D - R492 (SW).



Image 3.10: Junction 14 R490/R491 T-Junction

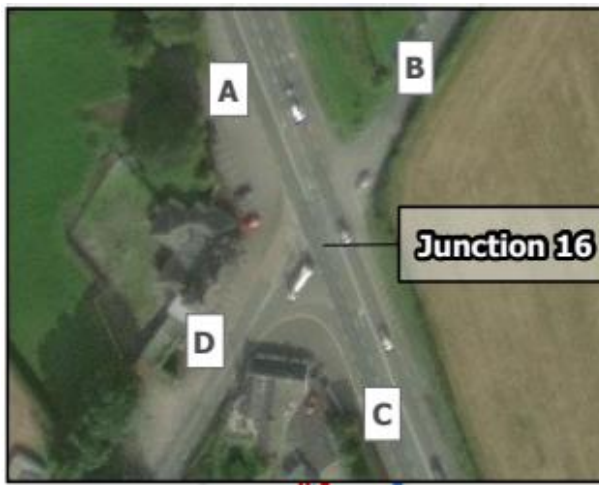


Image 3.11: Junction 16 N62/R492 Crossroads

3.1.2.10 Junction 18: N52/R440 Mini-Roundabout in Birr

52. Junction 18 is a four-arm mini-roundabout. The approaches from N52 north and south are single lane approach, with slight flares. The R440 has a two-lane approach to the junction. Connaught Street is a one-way street, which is an entry only and provides an uncontrolled pedestrian crossing. The arms of the junction are labelled on Image 3.12 as such: A - N52 John's Place, B - R440 John's Place, C - N52 Wilmer Road and D - Connaught Street.

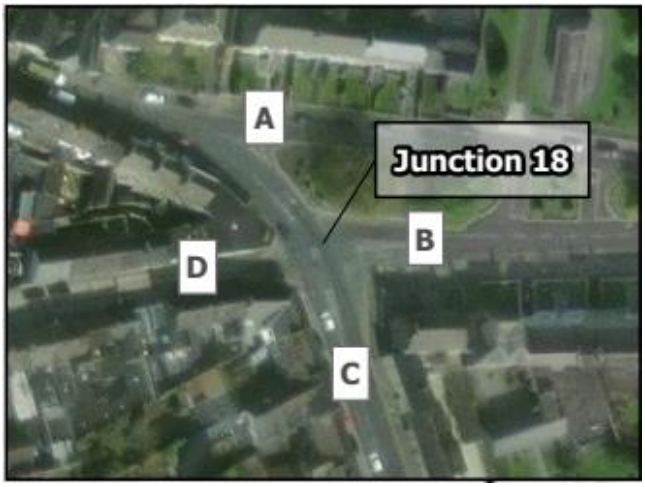


Image 3.12: Junction 18 N52/R440 Mini Roundabout

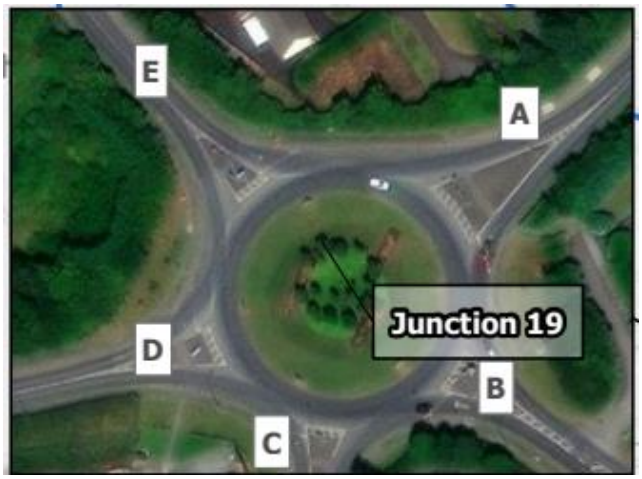


Image 3.13: Junction 19 N62/R445 Templemore Roundabout

3.1.2.11 Junction 19: N62/ R445 Templemore Five Arm Roundabout in Roscrea

53. Junction 19 is a five-arm roundabout on the N62 and the R445 regional road. All five arms contain a one-lane entry to the roundabout, with uncontrolled pedestrian crossing facilities, with deflection islands at all arms. The arms of the junction are labelled on Image 3.13 as such: A - R445 (NE), B - N62 Tullaskeagh Road, C - Carrig Road, D - R445 (W) and E - N62.

3.1.2.12 Junction 20: N62/Dublin Road T-Junction in Roscrea

54. Junction 20 is a T-junction between the N62 national road and the Dublin Road, L3142 local road. The major road is a two-lane single carriageway which contains the N62 and L3142. The major arm contains a ghost island, which provides a right turning lane onto the N62 north. The N62 north (minor arm) contains a short two-lane approach to the major road. There are no pedestrian crossing facilities at this junction. The arms of the junction are labelled on Image 3.14 as such: A - N62 Church Street, B - N62 Lourdes Road and C - L3142.

3.1.2.13 Junction 21: N62/R445 Four Arm Roundabout in Roscrea

55. Junction 21 is a four-arm roundabout on the N62 and the R445 regional road. All four arms contain a one-lane entry to the roundabout. The N62 north and R445 arms provide uncontrolled pedestrian crossing facilities, with deflection islands at all arms. The arms of the junction are labelled on Image 3.15 as such: A – N62, B – R445 (E), C – L3259 and D – R445 (W).

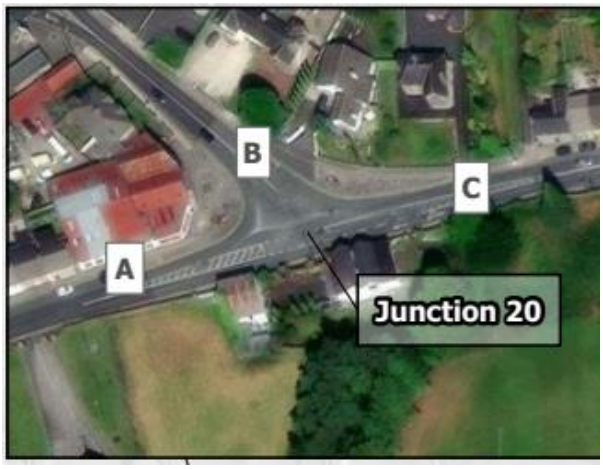


Image 3.14: Junction 20 N62/Dublin Road T Junction



Image 3.15: Junction 21 N62/R445 Roundabout

3.1.2.14 Junction 24: R421/L4004 Crossroads in Clareen

56. Junction 24 is a crossroads between the R421 regional road (major road), L8008 (minor road) and L4004 (minor road) local roads. All four arms are two-lane single carriageways. There are no pedestrian crossing facilities at this junction. The arms of the junction are labelled on Image 3.16 as such: A - R421 (NNE), B - L8008, C - R421 (SSW) and D - L4004.

3.1.2.15 Junction 25: R440/R421 T-Junction west of Kinnitty

57. Junction 25 is a T-junction between the R440 and the R421 regional roads. The major road is the R440 and is a two-lane single carriageway. The R421 is also a two-lane single carriageway and is considered a minor road, giving way to traffic travelling on the R440. The arms of the junction are labelled on Image 3.17 as such: A - R421 (E), B - R421 (SSW) and C - R440.



Image 3.16: Junction 24 R421/L4004 Crossroads

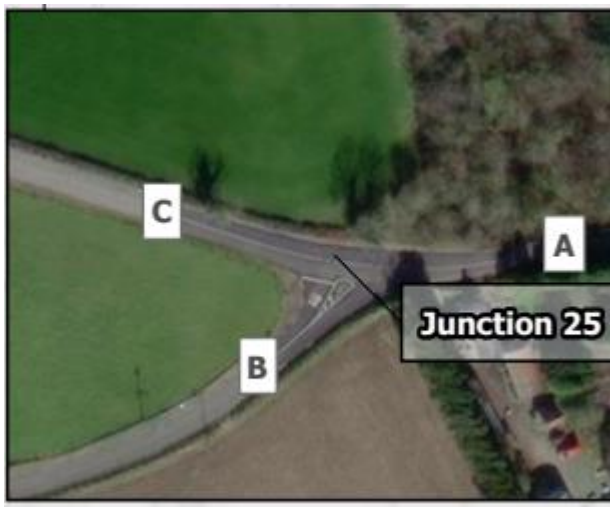


Image 3.17: Junction 25 R440/R421 T-Junction

3.1.2.16 Junction 27: N52/L2027 T-Junction in Kilcormac

58. Junction 27 is a T-junction between the N52 national road and the L2027 local road. The major road is a two-lane single carriageway, which contains the N52. The L2027 is also a two-lane single carriageway and is considered a minor road, giving way to traffic travelling on the N52. There are no pedestrian facilities at this junction. The arms of the junction are labelled on Image 3.18 as such: A - N52 Bridge Street, B - Kinnity Road and C - N52 Main Street.

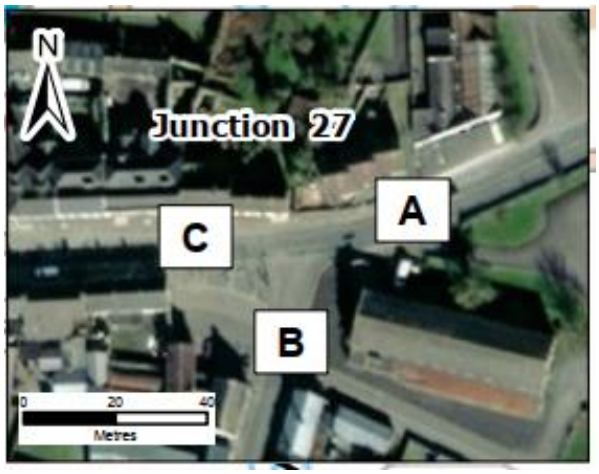


Image 3.18: Junction 27 N52/L2027 T-Junction

3.1.2.17 Junction 29: N52/R421 Three Arm Roundabout Tullamore

59. Junction 29 is a four-arm roundabout on the N52 and the R421 regional road. A fourth arm is currently closed to traffic, serving access to potential development lands. All three arms contain a two-lane entry to the roundabout, with uncontrolled pedestrian crossing facilities and deflection islands at all arms. The arms of the junction are labelled on Image 3.19 as such: A - N52 (ESE), B - R421 and C - N52 (WNW).

3.1.2.18 Junction 30: N52/R420 Four Arm Roundabout Tullamore

60. Junction 30 is a four-arm roundabout on the N52 and the R420 regional road. All four arms contain a two-lane entry to the roundabout, with uncontrolled pedestrian crossing facilities via dropped kerbing and tactile paving and deflection islands at all arms. The arms of the junction are labelled on Image 3.20 as such: A - N52 (N), B - R420 (ESE), C - N52 (SSW) and D - R420 (WNW).

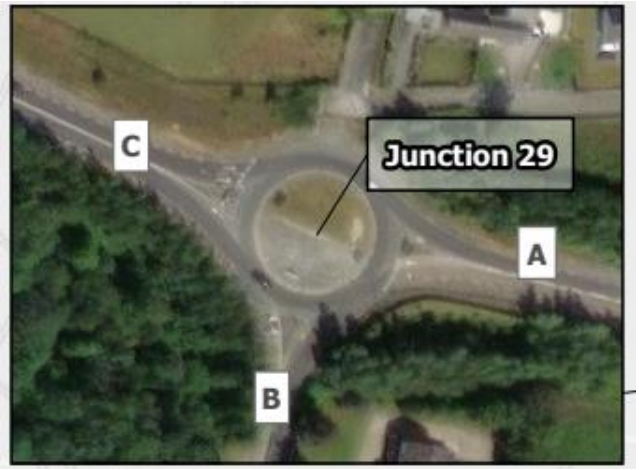


Image 3.19: Junction 29 N52/R421 Roundabout

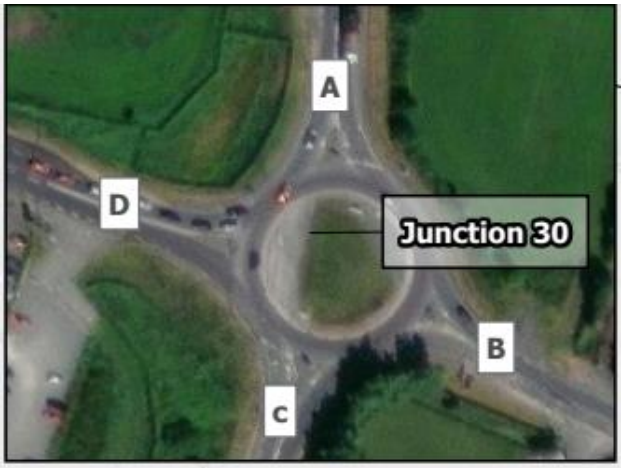


Image 3.20: Junction 30 N52/R420 Roundabout

3.1.2.19 Junction 31: R420/R402 T-Junction east of Tullamore

61. Junction 31 is a T-junction between the R420 and the R402 regional roads. The R420 is the major road, which is a two-lane single carriageway containing a left turn lane onto R402. The R402 is also a two-lane single carriageway and is considered a minor road, giving way to traffic travelling on the R420. There are no pedestrian facilities at this junction. The arms of the junction are labelled on Image 3.21 as such: A - R420 (W), B - R402 and C - R420 (E).

3.1.2.20 Junction 32: N80/R422 Mini-Roundabout in Mountmellick

62. Junction 32 is a three-arm mini-roundabout. The approaches from N80 and R422 are all single lane approach, with slight flares. The arms of the junction are labelled on Image 3.22 as such: A - N80 (S), B - R422 and C - N80 (N).

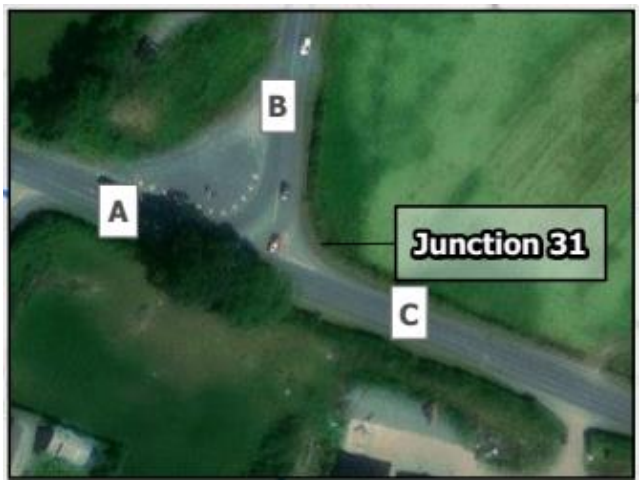


Image 3.21: Junction 31 R420/R402 T-Junction



Image 3.22: Junction 32 N80/R422 Mini Roundabout

3.1.2.21 Junction 33: R422/Connolly Street Mini-Roundabout in Mountmellick

63. Junction 33 is a three-arm mini-roundabout. The approaches from R422 and Connolly Street are all single lane approach, with slight flares. The R422 north has a signal-controlled pedestrian crossing. The arms of the junction are labelled on Image 3.23 as such: A - R422 Lord Edward Street, B - Connolly Street and C - R422 Sarsfield Street.

3.1.2.22 Junction 35: R402/L1014 T-Junction in Daingean

64. Junction 35 is a T-junction between the R402 regional road and the L1014 local road. The R402 (major road) and L1014 (minor road) are two-lane single carriageways. Pedestrian crossing facilities via dropped kerbing and tactile paving are provided on both roads. The arms of the junction are labelled on Image 3.24 as such: A - R402 Main Street (NNE), B - Church Road and C - R402 Main Street (SSW).

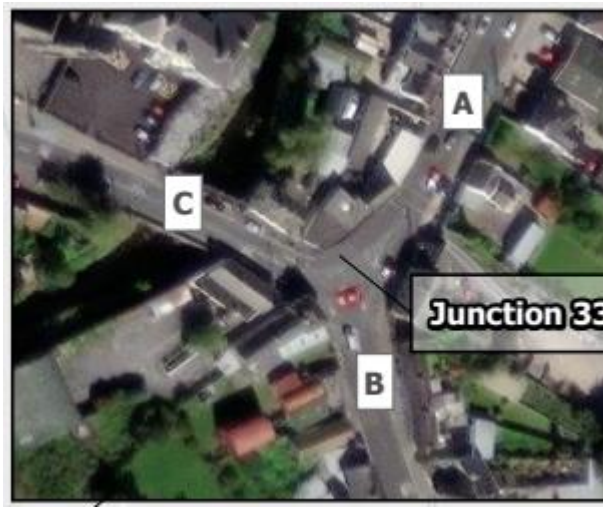


Image 3.23: Junction 33 R422/Connolly Street Mini-Roundabout



Image 3.24: Junction 35 R402/L1014 T-Junction

3.1.2.23 Junction 36: R402/R400 Staggered Junction West of Edenderry

65. Junction 36 is a staggered junction between the R402 and R400 regional road. The junction is located within a traffic calming zone. The R402 (major road) and R400 (minor road) are two-lane single carriageways. Pedestrian crossing facilities via dropped kerbing are only provided on the R400 southern arm. The arms of the junction are labelled on Image 3.25 as such: A - R402 (WNW), B - R400 (NNE), C - R402 (ESE) and D - R400 (SW).

3.1.2.24 Junction 37: R420/Main Street T-Junction in Portarlington

66. Junction 37 is a T-junction between the R420 and the main street in Portarlington. The R420 is the major road, which is a two-lane single carriageway. The main street is a one-lane exit only arm and is considered a minor road, giving way to traffic travelling on the R420 on the major road. The arms of the junction are labelled on Image 3.26 as such: A - R420 (NE), B - Main Street and C - R420 (W).

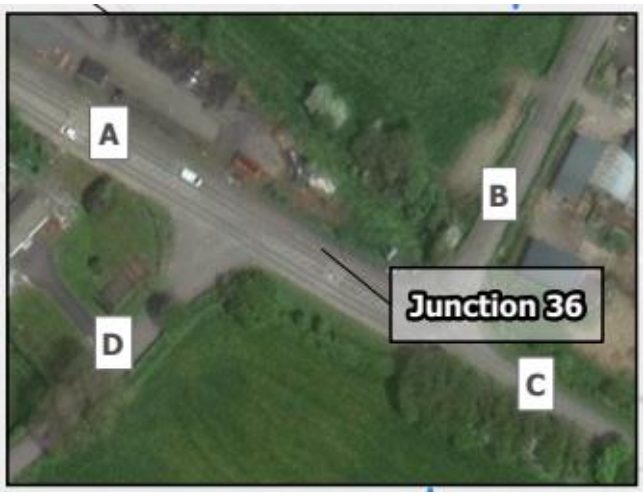


Image 3.25: Junction 36 R402/R400 Staggered Junction west of Edenderry



Image 3.26: Junction 37 R420/Main Street T-Junction in Portarlington1

3.1.2.25 Junction 38: R419/R420 Staggered Junction in Portarlington

67. Junction 38 is a staggered junction, with a ghost island between the R419 and R420 regional roads. There are zebra pedestrian crossings on the R420 major road, eastern and western arms. The R420 and R419 are both two-lane single carriageways, however the main street into Market Square is a one-lane entry only arm. The arms of the junction are labelled on Image 3.27 as such: A - R420, B - R419 Spa Street, C - R420 Link Road and D – Market Square.

3.1.2.26 Junction 40: R402/R401 T-Junction South of Edenderry

68. Junction 40 is a T-junction between the R401 and the R402 regional roads. The R402 is the major road, which is a two-lane single carriageway. The R401 is also a two-lane single carriageway and is considered a minor road, giving way to traffic travelling on the R402. There are no pedestrian facilities at this junction. The arms of the junction are labelled on Image 3.28 as such: A - R402 (NE), B - R401 and C - R402 (SW).



Image 3.27: Junction 38 R419/R420/Main Street Staggered Junction

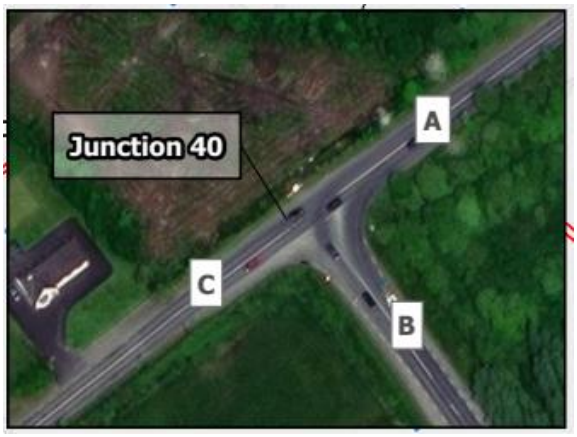


Image 3.28: Junction 40 R402/R401 T-Junction 2

3.1.2.27 Junction 41: R402/R401 Mini-Roundabout in Edenderry

69. Junction 41 is a three-arm mini-roundabout between the R402 and R401 regional roads. All approaches are single lane approach, with slight flares and zebra pedestrian crossings. The arms of the junction are labelled on Image 3.29 as such: A - R401 Gleann Na Carraige, B - R402 Father Kearns Street and C - R402 JKL Street.

3.1.2.28 Junction 42: R402/R403 Three Arm Roundabout (Carbury)

70. Junction 42 is a three-arm roundabout, where all the approaches are single lane with slight flares. All arms also include uncontrolled pedestrian crossing facilities and deflection islands. The R402 west includes a bus stop in the eastbound and westbound direction, approx. 50 metres from the roundabout. Street lighting is provided at this junction. The arms of the junction are labelled on Image 3.30 as such: A - R402 (ENE), B - R403 and C - R402 (WSW).



Image 3.29: Junction 41 R402/R401 Mini-Roundabout

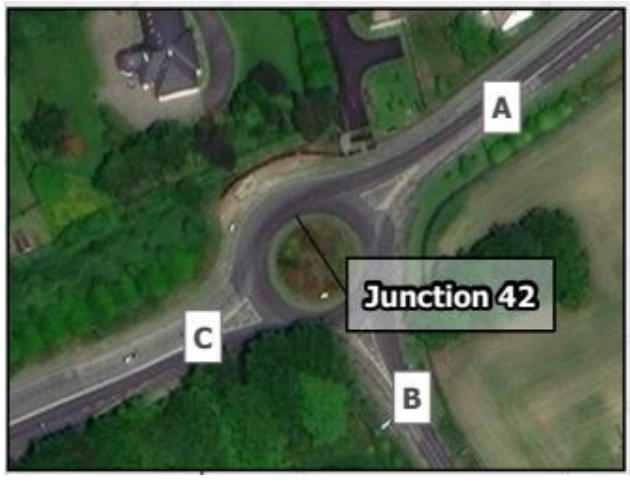


Image 3.30: Junction 42 R402/R403 Roundabout 3

3.1.2.29 Junction 44: R402/L5025/L5011 Derrymahon Staggered Junction

71. Junction 44 is a staggered junction, with a ghost island between the R402 regional road, L5025 and L5011 local roads. The ghost islands on the R402 provide right turning lanes onto the L5025 and L5011. Left turn lanes are provided from the R402 onto both minor roads; L5025 and L5011. The arms of the junction are labelled on Image 3.31 as such: A - R402 (NE), B - L5025, C - R402 (SW) and D - L5011.

3.1.2.30 Junction 45: R403/R415/L1020 Crossroads Allenwood

72. Junction 45 is a crossroad junction between the R413 regional road, R415 regional road and the L1020 local road. The R403 major road is a two-lane single carriageway with a signal-controlled pedestrian crossing on the western arm. The junction includes a raised table (or platform) as a traffic calming measure. The arms of the junction are labelled on Image 3.32 as such: A - R403 (W), B - L1020 Station Road, C - R403 (E) and D- R415.

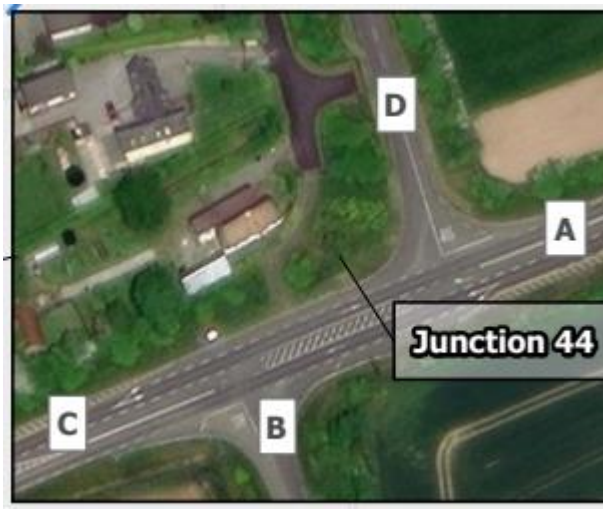


Image 3.31: Junction 44 R402/L5025/L5011 Derrymahon Staggered Junction

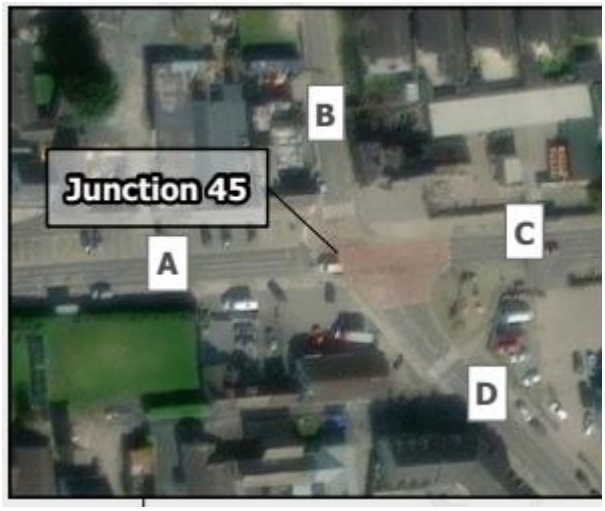


Image 3.32: Junction 45 R403/R415/L1020 Crossroads4

3.1.2.31 Junction 46: R407/L1010/L1017 Road Crossroads

73. Junction 46 is a crossroads between the R407 regional road, the L1010 and L1017 local roads. The R407 contains ghost islands which provide right turning lanes onto the minor roads; L1010 and L1017. The L1017 has a two-lane approach to the STOP line onto the R407. The arms of the junction are labelled on Image 3.33 as such: A - R407 (NNW), B - L1010, C - R407 (S) and D - Barberstown Road.

3.1.2.32 Junction 48: R407/R408 T-Junction

74. Junction 48 is a T-junction, with a ghost island between the R407 and R408 regional roads. The ghost islands on the R407 provide right turning lanes onto the minor roads. The arms of the junction are labelled on Image 3.34 as such: A - R407 (N), B - R408 and C - R407 (S).



Image 3.33: Junction 46 R407/L1010/L1017 Crossroads

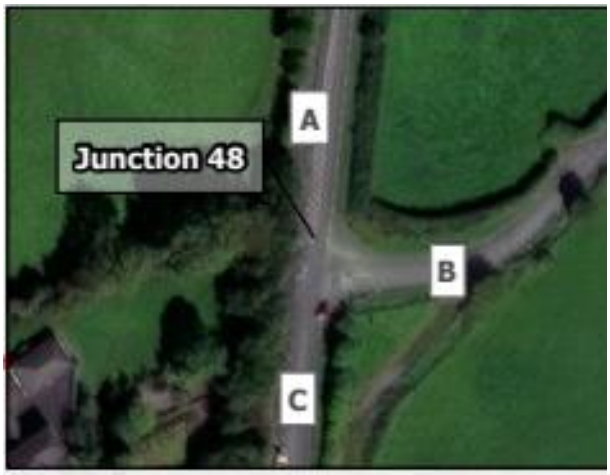


Image 3.34: Junction 48 R407/R408 T-Junction

3.1.2.33 Junction 49: R403/ Clane Ring Road Three Arm Roundabout

75. Junction 49 is a three-arm roundabout and is subject to a 50km/h speed limit. All the approaches from the R403 regional road and the Clane Ring Road are single lane, with slight flares. The R403 east and Clane Ring Road arms provide uncontrolled pedestrian crossing facilities and deflection islands. The R403 west has a signal-controlled pedestrian crossing, with a pedestrian guardrail guiding pedestrians to the crossing. The arms of the junction are labelled on Image 3.35 as such: A - R403 (NE), B - Clane Ring Road and C - R403 (SW).

3.1.2.34 Junction 50: R407/ Clane Ring Road/ An Crochán Four Arm Roundabout (Clane)

76. Junction 50 is a four-arm roundabout and subject to a 50km/h speed limit. All approaches from the R407 regional road, An Crochán and the Clane Ring Road are single lane, with slight flares. All arms provide uncontrolled pedestrian crossing facilities and deflection islands. The arms of the junction are labelled on Image 3.36 as such: A - R407 Main Street (NNW), B - Clane Ring Road, C - R407 Main Street (SSE) and D - An Crochán.

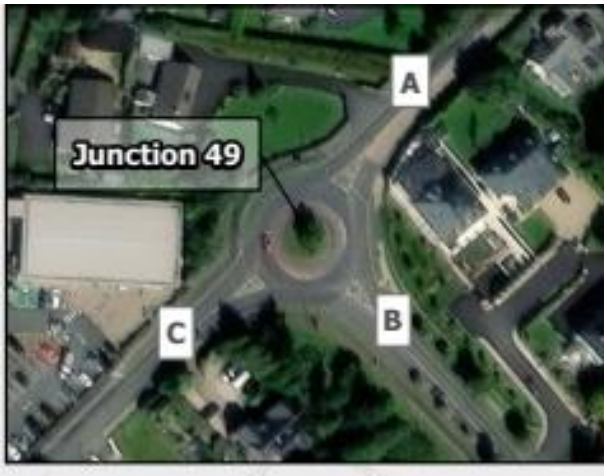


Image 3.35: Junction 49 R403/Clane Ring Road Roundabout



Image 3.36: Junction 50 R407/Clane Ring Road/An Crochan Roundabout

3.1.2.35 Junction 51: R403/ R406 Four Arm Roundabout

77. Junction 51 is a four-arm roundabout on the R403 and the R406 regional roads and subject to a 60km/h speed limit. All four arms contain short two-lane approach to the roundabout, with uncontrolled pedestrian crossing facilities and deflection islands on all arms. The arms of the junction are labelled on Image 3.37 as such: A - R406, B - R403 (ENE), C - Barberstown Road and D - R403 (WSW).

3.1.2.36 Junction 53: R403/ R405 Crossroads (Celbridge)

78. Junction 53 is a crossroads between the R405, R403 (two-lane single carriageway) and Newtown Road (two-lane single carriageway minor arm) and subject to a 50km/h speed limit. Zebra pedestrian crossings are included on the R403 and Newtown Road, in close proximity to the junction. This junction is 6 metres away from a T-junction. During scoping meetings with Kildare County Council, it was agreed that the Haul Road through Celbridge would be utilised for nighttime use only. The arms of the junction are labelled on Image 3.38 as such: A - Dublin Road, B - Newtown Road and C - R405 (NW).

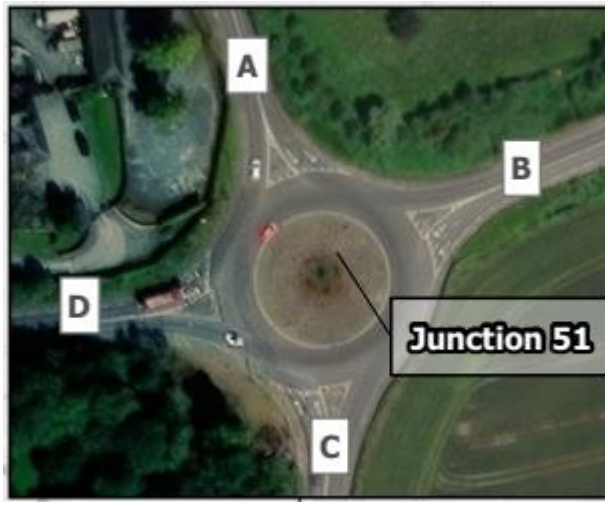


Image 3.37: Junction 51 R403/R406 Roundabout

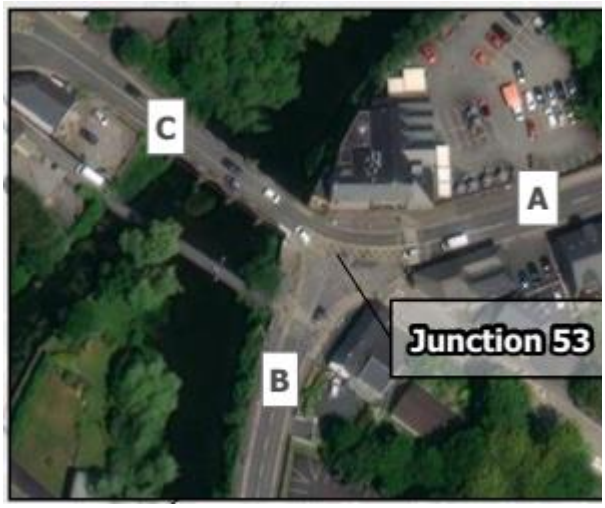


Image 3.38: Junction 53 R403/R405 Crossroads 5

3.1.2.37 Junction 54: R405/Hazelhatch Road T-Junction

79. Junction 54 is a T-junction between the R405 and the L6001 local road. The major road is a two-lane single carriageway which contains the R405 and the L6001. The northern section of the R405 is considered a minor road, giving way to traffic travelling on the eastern section of the R405 and the L6001 on the major road. The arms of the junction are labelled on Image 3.39 as such: A - L6002 Athgoe Road, B - R405 Hazelhatch Road and C - R405 Main Street.

3.1.2.38 Junction 55: R120/R405 T-Junction in Newcastle

80. Junction 55 is a T-junction of the R120 and the R405 regional roads. The major road is a two-lane single carriageway. The R120, which is also a two-lane single carriageway, continues north and is considered a minor road, giving way to traffic travelling on the R405 and R120 on the major road. The arms of the junction are labelled on Image 3.40 as such: A - R405 Athgoe, B - R120 Peamount Road and C - R120 Main Street.



Image 3.39: Junction 54 R405/Hazelhatch Road T-Junction

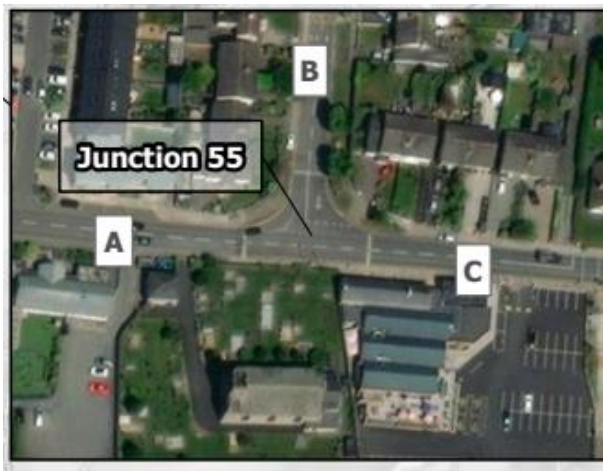


Image 3.40: Junction 55 R120/R405 T-Junction

4. Construction Phase Description

4.1 Proposed Haul Roads

81. The Proposed Project includes works in the administrative area of seven local authorities: Clare County Council, Limerick City and County Council, Tipperary County Council, Offaly County Council, Laois County Council, Kildare County Council and South Dublin County Council. The Proposed Project would be constructed and operated within predominantly open countryside, generally avoiding towns and villages, where possible.

82. During scoping meetings with the local authorities, the proposed Haul Roads were agreed, and the local authorities highlighted locations to the design team where amendments were required to reduce potential traffic impacts. These amendments to Haul Roads resulting from the initial consultation included the following:

- Haul Roads would utilise the realigned N62, bypassing Roscrea town which has a weight restriction
- Haul Roads would utilise the Nenagh Bypass, not Nenagh town
- No Haul Roads would pass through Rosenallis and Clonaslee
- No Haul Roads would pass through Portlaoise
- No Haul Roads would pass through Maynooth
- Construction traffic would only travel through Celbridge during the night
- Construction traffic would be restricted through Lucan village as per their existing weight restrictions. A school time weight restriction of 12.5T will be imposed along a section of the R120 in Lucan village between the times of 08:00 and 09:30 and 13:00 and 16:00 Monday to Friday during the school academic year.

83. The Haul Roads have been defined into principal and minor haul roads. Principal haul roads have been defined as major roads such as national roads and motorways (e.g. M7/N7) that form the strategic transport network. Minor haul roads have been defined as regional roads, local roads and streets which are serving residential areas or connecting to the principal haul roads.

4.1.1 County Clare

84. As shown in Figure 11 (Annex B), the agreed Haul Roads within the administrative area of Clare County Council include N18 national road, the following regional roads: R464, R463, R465, R471; and local roads L3056, L3046, L70382 and L7040. There are also two urban roads included in the haul roads: Lackyle Heights and Millbrook Road.

85. The agreed Haul Roads also allow access to all existing legal easements ESB have in place to install, inspect, upgrade and maintain their equipment. This includes the overhead line for the proposed 38 kV Uprate Works in County Clare.

86. Table 4.1 sets out the haul roads and the element of the Proposed Project the route is providing access to.

87. The Haul Roads would provide access to the national motorway network via the M18 Junction 18, M7 Junctions 30 and the M20 Junction 1.

Table 4.1: Clare Haul Roads

Activity / Element	Haul Roads
Overhead Line (38 kV Uprate Works)	R464
Overhead Line (38 kV Uprate Works)	R463
Overhead Line (38 kV Uprate Works)	R465
Overhead Line (38 kV Uprate Works)	R471
Overhead Line (38 kV Uprate Works)	L3056
Overhead Line (38 kV Uprate Works)	L3046
Overhead Line (38 kV Uprate Works)	L70382
Overhead Line (38 kV Uprate Works)	L7040
Overhead Line (38 kV Uprate Works)	Lackyle Heights
Overhead Line (38 kV Uprate Works)	Millbrook Road

4.1.2 County Limerick

88. As shown in Figure 12 (Annex B), the agreed Haul Roads within the administrative area of Limerick City and County Council include the N69, N18 and N20 national roads. The agreed Haul Roads also include the following local roads; L5001 and L6188, regional roads: R466, R525, R527, R858, R464; and four urban roads, New Street, Ashbourne Avenue, Courtbrack Avenue, and Cratloe Road.

89. The agreed Haul Roads also allow access to all necessary access points along the overhead line for the proposed 38 kV Uprate Works in County Limerick.

90. Table 4.2 sets out the haul roads and the element of the Proposed Project the route is providing access to.

91. The Haul Roads would provide access to the national motorway network via the M18 Junction 18, M7 Junctions 30 and the M20 Junction 1.

Table 4.2: Limerick Haul Roads

Activity / element	Haul Roads
Proposed 38 kV Uprate Works	N69
	R466
	R525
	R527
	R858
	R464
	New Street
	Ashbourne Avenue

4.1.3 County Tipperary

92. As shown in Figure 13 (Annex B), the agreed Haul Roads within the administrative area of Tipperary County Council include the N65 and N52 national roads. The agreed Haul Roads also include the following regional roads: R494, R445, R495, R493, R490, R491 and R499; and the L1064 local road.

93. The Haul Roads allow access to Construction Compound 2 (CC2), Pipe Storage Depot (PSD1) and to three of the infrastructure sites; RWI&PS (CC0), the WTP (CC1), and the BPT (CC3). The agreed Haul Roads would also allow access to the Construction Working Width via 14 Access and Egress Points along the route of the pipeline.

94. Table 4.3 sets out the haul roads and the element of the Proposed Project the route is providing access to. The Haul Roads provide access to the national motorway network via Junction 16 on the M6 and Junctions 22, 23, 26 and 27 on the M7.

Table 4.3: Tipperary Haul Roads

Activity / Element	Haul Roads
AE001, RWI &PS (CC0)	R494
AE002	R494
AE003, WTP (CC1)	R445
AE004	R445
AE005, PSD 1	R445
AE006	R494
AE007	R495
AE008	R493
AE009, CC2	N52
AE010	R490
AE011, BPT (CC3)	L1064
AE012	R491
AE041	Local Road (unnamed)
AE042	R499
AE051	R445
AE052	R445
AE053	R494
AE054	R494

4.1.4 County Offaly

95. As shown in Figure 14 (Annex B), the agreed Haul Roads within the administrative area of Offaly County Council include the following national roads: N62, N52 and N80. The agreed Haul Roads also include the following regional roads: R490, R491, R492, R440, R421, R420, R402, R400, R441, R442, R445, R401 and R419; and eight local roads, the L7004, L3003, L4007, L4004, L1020, L4022, L2002 and L1014.

96. The agreed Haul Roads allow access to a Construction Compound (CC5) and six of the Pipe Storage Depots (PSD2, PSD3, PSD4, PSD5, PSD6 and PSD8) and to one of the infrastructure sites which includes a Construction Compound; the BPS (CC4). The agreed Haul Roads would also allow access to 22 Access and Egress Points along the route of the pipeline.

97. Table 4.4 sets out the haul roads and the element of the Proposed Project the route is providing access to.

98. The Haul Roads provide access to the national motorway network via Junctions 3, 5 and 8 on the M6 and Junctions 15, 22 and 23 on the M7.

Table 4.4: Offaly Haul Roads

Activity / Element	Haul Roads
AE013	R491
AE014	Local Road (unnamed)
AE015, PSD2	L4022
AE016	R492
AE017, PSD3	N62
AE018, PSD4	L4007
AE019	R440
BPS (CC4), AE047	L3003
AE020, PSD5	L2027
AE021, CC5	R421
AE022	N82
AE023, PSD6	R420
AE024	Local Road (unnamed)
AE025	R402
AE026	R400
AE027, PSD8	R402
AE028	R402
AE043	Local Road (unnamed)
AE044	L8014
AE045	L2002
AE048	L2006
AE050	L1020

4.1.5 County Laois

99. As shown in Figure 15 (Annex B), the agreed Haul Roads within the administrative area of Laois County Council include the N80 national road and two regional roads: the R422 and R420. No access points to the Construction Working Width are proposed in County Laois, as the Construction Working Width do not pass through County Laois.

4.1.6 County Kildare

100. As shown in Figure 16 (Annex B), the agreed Haul Roads within the administrative area of Kildare County Council include the following regional roads: the R403, R402, R406, R407 and the R408, the Clane Relief Road; and four local roads: L1010, L1016, L5025 and an unknown local road.

101. The Haul Roads allow access to a Construction Compound (CC6) and two of the Pipe Storage Depots (PSD9 and PSD10). The agreed Haul Roads also allow access to 11 Access and Egress Points along the route of the pipeline.

102. Table 4.5 sets out the haul roads and the element of the Proposed Project the route is providing access to.

103. The Haul Roads provide access to the national motorway network via Junctions 7, 8 and 9 on the M4 and Junctions 9 and 14 on the M7.

Table 4.5: Kildare Haul Roads

Activity / Element	Haul Roads
AE029, CC6	R403 via R402
AE030	L5025 via R402
AE031	L1010
AE032	L1010
AE033, PSD9	R407
AE034	R408
AE035	R408
AE036, PSD10	R406
AE037	L1016
AE038	Local Road (unnamed)
AE046	Local Road (unnamed)

4.1.7 South Dublin County

104. As shown in Figure 17 (Annex B), the agreed Haul Roads within the administrative area of South Dublin County Council include the R405, R403 and R120 regional roads.

105. The Haul Roads allow access to the TPR and two Access and Egress Points along the route of the pipeline.

106. Table 4.6 sets out the haul roads and the element of the Proposed Project the route is providing access to.

107. The Haul Roads provide access to the national motorway network via Junctions 4 and 5 on the N4 and Junction 4 on the N7.

Table 4.6: South Dublin Haul Roads

Activity / Element	Haul Roads
AE039	R405
AE040	R120

4.2 Infrastructure Sites - Site Access Locations

108. As described in Section 2.1, the six infrastructure sites consist of the RWI&PS, WTP, BPT, BPS, FCV and TPR.

109. The existing ESB depot is located on the R858 regional road which is 6.0m in width. As described in Section 3.1.2 the access is a T-Junction as shown in Image 3.2.

110. The RWI&PS access is located on the R494 regional road which is 5.8m in width at the location of the proposed access. The proposed access into the RWI&PS is shown in Chapter 4 (Proposed Project Description) Figure 4.62, at the RDX120 road crossing location.

111. The WTP access is located on the R445 regional road, which is 9.2m in width (including hard strips) at the location of the proposed access. The proposed access into the WTP is shown in Chapter 4 (Proposed Project Description) Figure 4.64, which is west of the RDX003 road crossing location.

112. The BPT access is located on the L1064 local road, which is 4.6m in width at the location of the proposed access. The proposed access into the BPT is shown in Chapter 4 (Proposed Project Description) Figure 4.67, which is approximately 68km east of the proposed WTP.

113. The BPS access is located on the L3003 local road, which is 4.8m in width at the location of the proposed access. The proposed access into the BPS is shown in Chapter 4 (Proposed Project Description) Figure 4.68, which is north of the RDX032 road crossing location.

114. The FCV access is located on the L1016 local road, which is 6m in width at the location of the proposed access. The proposed access into the FCV is shown in Chapter 4 (Proposed Project Description) Figure 4.69, which is east of the RDX112 road crossing location.

115. The TPR access is located on the R120 regional road, which is 6m in width at the location of the proposed access. The proposed access into the TPR is shown in Chapter 4 (Proposed Project Description) Figure 4.71, which is at the RDX109 road crossing location.

4.3 Construction Compounds and Pipe Storage Depots

116. As detailed in Chapter 3 (Consideration of Reasonable Alternatives), a review of possible locations for Construction Compounds and Pipe Storage Depots was undertaken before compound locations where chosen. The Construction Compounds and Pipe Storage Depots that are included as part of the Proposed Project are shown in Table 4.7.

117. It is considered that the Proposed Project would be completed through four separate sections as this is considered to represent the best balance between project scale and grouping of various work elements while recognising the geographic linearity of the project across the country. Therefore, the Construction Compounds relate directly to the number of construction sections, as stated in Chapter 5 (Construction & Commissioning).

118. Each of these construction sections would have a Principal Construction Compound, which would act as the appointed Contractor's central strategic (operational) hub for plant/material/worker movement, general storage, administration, logistical support, technical (design) staff, etc. The Principal Construction Compounds would generally provide space for management and welfare facilities, plant storage, vehicle parking and traffic circulation. These Principal Construction Compound provides the hub for staff to park and be shuttled bused to their works area for each day.

119. In addition to these four Principal Construction Compounds, there would be four secondary Satellite Construction Compounds. These would be needed to build the Infrastructure Sites and so have been located at the RWI&PS, BPT, BPS and TPR (the WTP is a Principal Construction Compound). The Principal Construction Compound will serve as the sole support Construction Compound for the pipeline, in addition to the Pipe Storage Depots.

120. The Pipe Storage Depots will receive direct deliveries of pipe sections and prepare them for onward distribution to the required access point along the Construction Working Width. There are nine depots in total: one in Tipperary, six in Offaly, and two in Kildare.

Table 4.7: Assumed Sections for the Proposed Project

Section	Key Proposed Project Elements included in Section	Associated Construction Compounds and Pipe Storage Depots
Section 1	RWI&PS, RWRMs and WTP.	Satellite Construction Compound 0 (CC0) RWI&PS Principal Construction Compound 1 (CC1) WTP
Section 2	Treated Water Pipeline from the WTP to the BPT, and BPT.	Pipe Storage Depot 1 (PSD1) Carrigatogher Principal Construction Compound 2 (CC2) Lisgarriff Satellite Construction Compound 3 (CC3) BPT
Section 3	Treated Water Pipeline between the BPT and TPR, from the BPT to the BPS, including the BPS itself.	Pipe Storage Depot 2 (PSD2) Toora Pipe Storage Depot 3 (PSD3) Boveen Pipe Storage Depot 4 (PSD4) Fortel Satellite Construction Compound 4 (CC4) BPS Pipe Storage Depot (PSD5) Derrinboy Principal Construction Compound 5 (CC5) Killananny Pipe Storage Depot (PSD6) Derryweelan
Section 4	Treated Water Pipeline between the BPT and TPR, from the BPS to the TPR including the TPR itself.	Pipe Storage Depot 8 (PSD8) Rathlumber Principal Construction Compound 6 (CC6) Drummond Pipe Storage Depot 9 (PSD9) Graiguepottle Pipe Storage Depot (PSD10) Barberstown Upper Satellite Construction Compound 7 (CC7) TPR

121. Construction works are described further in in Chapter 5 (Construction & Commissioning). The following sections summarise the works in relation to how they interact with the road network.

4.3.1 Principal Construction Compounds

4.3.1.1 Construction Compound 1 (CC1) - WTP, County Tipperary

122. Construction Compound 1 would be located within the WTP, on the R445. A simple T-junction (Junction 4) is proposed for CC1 onto the R445, as shown in Figure 3 (Annex B). This Construction Compound would be allocated for construction Section 1.

4.3.1.2 Construction Compound 2 (CC2) - Lisgarriff, County Tipperary

123. Construction Compound 2 would be located on the N52. A simple T-junction (Junction 10) is proposed for CC2 onto the N52, as shown in in Figure 4 (Annex B). This Construction Compound would be allocated for construction Section 2.

4.3.1.3 Construction Compound 5 (CC5) - Killananny, County Offaly

124. Construction Compound 5 would be located in County Offaly, on the R421. CC4 is divided by the R421 regional road, as shown in in Figure 6 (Annex B) and therefore proposes two accesses which result in a staggered junction (Junction 28). This Construction Compound would be allocated for construction Section 3.

4.3.1.4 Construction Compound 6 (CC6) - Drummond, County Kildare

125. Construction Compound 6 would be located in County Kildare and would utilise the existing access on the R403. A simple T-junction (Junction 43) is proposed for CC6 onto the R403, as shown in in Figure 8 (Annex B). This Construction Compound would be allocated for construction Section 4.

4.3.2 Satellite Construction Compounds

4.3.2.1 Construction Compound 0 (CC0) - RWI&PS, County Tipperary

126. Construction Compound 0 would be located in County Tipperary and would be within the site for the RWI&PS. The site would utilise the proposed T-junction (Junction 3) on the R494 regional road as shown in in Figure 3 (Annex B).

4.3.2.2 Construction Compound 3 (CC3) - BPT, County Tipperary

127. Construction Compound 3 would be located in County Tipperary and would be within the site for the BPT. The site would utilise the proposed T-junction (Junction 13) on the L1064 local road as shown in in Figure 4 (Annex B).

4.3.2.3 Construction Compound 4 (CC4) - BPS, County Offaly

128. Construction Compound 4 would be located in County Offaly and would be within the site for the BPS. The site would utilise the proposed T-junction (Junction 23) on the L3003 local road as shown in in Figure 5 (Annex B).

4.3.2.4 Construction Compound 7 (CC7) - TPR, County Dublin

129. Construction Compound 7 would be located in County Dublin and would be within the site for the TPR. The site would utilise the proposed T-junction (Junction 56) on the R120 regional road as shown in in Figure 10 (Annex B).

4.3.3 Pipe Storage Depots

4.3.3.1 Pipe Storage Depot (PSD1) - Carrigatogher, County Tipperary

130. Pipe Storage Depot 1 in County Tipperary would require access off the R445 regional road. PSD1 is divided by the R445 regional road as shown in Figure 4 (Annex B) and therefore would have two accesses, which result in a staggered junction (Junction 5). This Pipe Storage Depot would be allocated for construction Section 2.

4.3.3.2 Pipe Storage Depot (PSD2) - Toora, County Offaly

131. Pipe Storage Depot 2 in County Offaly would require an access off the L4022 local road. The proposed T-junction (Junction 15) is located on the northern side of the L4022 as shown in in Figure 4 (Annex B). This Pipe Storage Depot would be allocated for construction Section 3.

4.3.3.3 Pipe Storage Depot (PSD3) - Boveen, County Offaly

132. Pipe Storage Depot 3 in County Offaly would require an access off the N62 national road. The proposed T-junction (Junction 17) is located on the eastern side of the N62, as shown in in Figure 5 (Annex B). This Pipe Storage Depot would be allocated for construction Section 3.

4.3.3.4 Pipe Storage Depot (PSD4) - Fortel, County Offaly

133. Pipe Storage Depot 4 in County Offaly would require an access off the L4004 local road. The proposed T-junction (Junction 22) is located on the southern side of the L4004, shown in in Figure 5 (Annex B). This Pipe Storage Depot would be allocated for construction Section 3.

4.3.3.5 Pipe Storage Depot (PSD5) - Derrinboy, County Offaly

134. Pipe Storage Depot 5 in County Offaly would utilise the existing gateway access (Junction 26) off the L2027 local road. The access is located on the western side of the L2027, as shown in in Figure 6 (Annex B). This Pipe Storage Depot would be allocated for construction Section 3.

4.3.3.6 Pipe Storage Depot (PSD6) - Derryweelan, County Offaly

135. Pipe Storage Depot 6 in County Offaly would require an access off the R420 regional road. The proposed T-junction (Junction 34) is located on the western side of the R420, as shown in in Figure 7 (Annex B). This Pipe Storage Depot would be allocated for construction Section 3.

4.3.3.7 Pipe Storage Depot (PSD8) – Rathlumber, County Offaly

136. Pipe Storage Depot 8 in County Offaly would require an access off the R402 regional road. The proposed access (Junction 39) is located on the western side of the R402. This Pipe Storage Depot would be allocated for construction Section 4.

4.3.3.8 Pipe Storage Depot (PSD9) - Graiguepottle, County Kildare

137. Pipe Storage Depot 9 in County Kildare would require an access off the R407 regional road. The proposed T-junction (Junction 47) is located on the eastern side of the R407, as shown in in Figure 9 (Annex B). This Pipe Storage Depot would be allocated for construction Section 4.

4.3.3.9 Pipe Storage Depot (PSD10) - Barberstown Upper, County Kildare

138. Pipe Storage Depot 10 in County Kildare would utilise the existing access off the R406 regional road. The proposed T-junction (Junction 52) is located on the western side of the R406, as shown in in Figure 10 (Annex B). This Pipe Storage Depot would be allocated for construction Section 4.

139. In order to assess the traffic impact of the Proposed Project on the existing road network, an estimate of the generated traffic volumes during the Construction Phase and Operational Phase was established. An assessment of the generated traffic was undertaken for the highest traffic flow periods in the AM and PM peak hours on the existing road network, which is outlined in this section.

4.4 Descriptions of Proposed Junctions

140. As described in Section 4.2 and 4.3, a number of proposed junctions are required to access each infrastructure sites, Construction Compounds and Pipe Storage Depots. A summary of these junctions is shown in Table 4.8 below.

Table 4.8: New Site Access Junctions

Section	Construction Compounds/ Pipe Storage Depot		Infrastructure Site	Access/Egress	Junction	County
1	CC0	**Satellite Construction Compound**	**RWI&PS**	**AE001**	**Junction 3**	**Tipperary**
	CC1	Principal Construction Compound	WTP	AE003	Junction 4	Tipperary
2	PSD 1	Pipe Storage Depot	-	AE005	Junction 5	Tipperary
	CC2	Principal Construction Compound	-	AE009	Junction 10	Tipperary
	CC3	Satellite Construction Compound	BPT	AE011	Junction 13	Tipperary
3	PSD 2	Pipe Storage Depot	-	AE015	Junction 15	Offaly
	PSD 3	Pipe Storage Depot	-	AE017	Junction 17	Offaly
	PSD 4	Pipe Storage Depot	-	AE018	Junction 22	Offaly
	CC4	Satellite Construction Compound	BPS	AE047	Junction 23	Offaly
	PSD 5	Pipe Storage Depot	-	AE020	Junction 26	Offaly
	CC5	Principal Construction Compound	-	AE021	Junction 28	Offaly
	PSD 6	Pipe Storage Depot	-	AE023	Junction 34	Offaly
4	PSD 8	Pipe Storage Depot	-	AE027	Junction 39	Offaly
	CC6	Principal Construction Compound	-	AE029	Junction 43	Kildare
	PSD 9	Pipe Storage Depot	-	AE033	Junction 47	Kildare
	PSD 10	Pipe Storage Depot	-	AE035	Junction 52	Kildare
	-	Flow Control Valve	FCV	AE037	Junction 57	Kildare
	CC7	Satellite Construction Compound	TPR	AE035	Junction 56	Dublin

5. Construction Phase Trip Generation

141. The number of vehicles required for the construction phase of the Proposed Project in Section 5 has been calculated based on the volume of materials outlined in Chapter 19 (Resource and Waste Management) that requires transportation.

142. As stated in Chapter 5 earthworks operations would generally be carried out using excavators and dump trucks that would transport material to identified filling locations. Filling operations would involve using tractor mounted flat lift rippers, bulldozers and vibratory rollers. Chapter 5 also determined the number of staff which will be on site.

143. The pipes would be transported to site via articulated lorries, or tractor and trailer, in individual lengths.

144. The full range of construction materials for the entire works was identified. This included all materials required for construction, such as:

- Hardcore for structures, pipe bedding, and temporary construction roads
- Delivery of precast concrete units and building supplies
- Pavement materials, including kerbing
- Pipe materials, including valves
- In situ concrete deliveries and materials for use within concrete batching plants
- Fencing, lighting, mechanical, electrical, and instrumentation equipment
- Ducting and other associated construction components.

145. In addition, allowances were made for materials that may not form part of the permanent works, such as fencing for site establishment, which would be removed upon completion of the works. The determination included quantifying surplus excavated materials which could not be reused on-site and therefore would need to be moved to another location for re-use/disposal.

146. The quantities of the construction materials were then used to calculate the number of HV traffic movements – This identified the number of traffic movements required to bring the materials to site (and for the removal of any waste or material to be re-used at another location).

147. The following assumptions have been made to estimate the Construction Phase trip generation:

- The construction traffic is anticipated to not include any abnormal loads as part of the Proposed Project
- For the purpose of this assessment, it has been assumed that the movement of HVs would be over an eight-hour day
- Heavy Vehicles (HVs) and Shuttle Buses would be assigned to the agreed Haul Roads only
- All construction staff cars relating to the principal construction compounds and satellite construction compounds are assumed to arrive in the AM peak periods (06:00-07:00) and depart in the PM peak periods (16:00-19:00)
- All construction LVs relating to the principal construction compounds and satellite construction compounds would arrive over an eight-hour day
- All construction staff arriving to the principal construction compounds by private vehicle will be shuttled to access points via shuttle buses carrying an average of 12 no. staff per shuttle buses

- Approx. 40% of LVs (cars and vans) have been allocated to drive directly to the access and egress points with miscellaneous items through the working day. They will park along the wayleave as no parking is permitted along the side of any road. These LVS have been distributed over eight hours
- In relation to the staff car share an occupancy of 1.3 has been assumed for staff travelling in their private vehicle. A list of commitment measures is include in the Construction Environmental Management Plan (Appendix 5.1 of the EIAR) and Traffic Management Plan (TMP) (Appendix 7.2 of the EIAR)
- A six-day work week was assumed. As outlined in Chapter 5 (Construction & Commissioning) of the EIAR, the typical working hours for the Construction Phase will be:
  - Monday to Friday – 07:00 to 19:00
  - Saturday – 08:00 to 16:30.

5.1 Generated Traffic

5.1.1 Light Vehicles Generated Traffic

148. Construction staff generate trips to and from the construction sites. Table 5.1 shows the cars and LVs construction generated traffic. Figure 5.1 below shows the programme of cars and vans over the five-year Construction Phase.

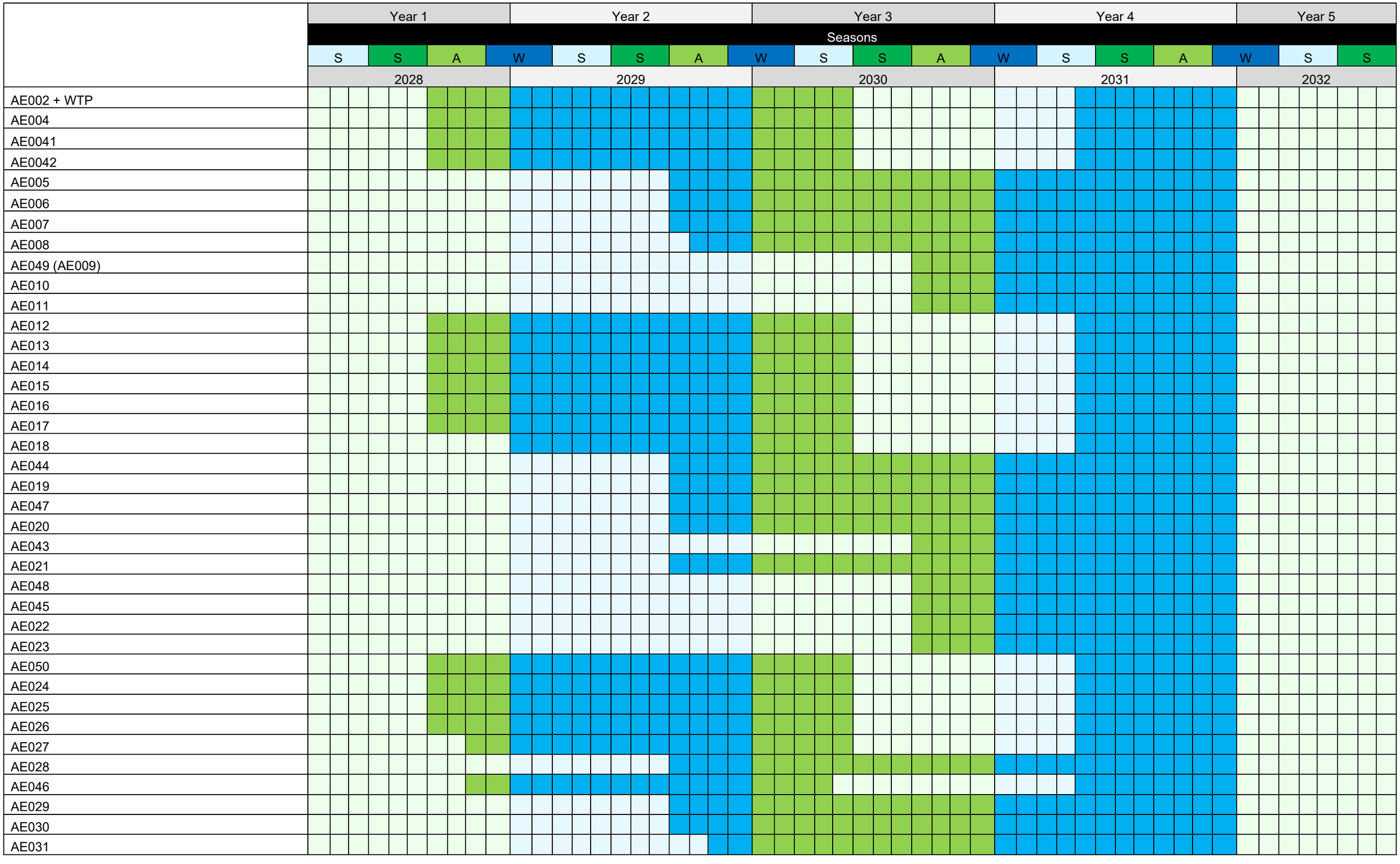
Table 5.1: Cars and LVs Generated Construction Traffic for the Proposed Project

Section of Proposed Project	Section	Total Construction Traffic (Two-way vehicle movements)		Duration	Average Daily Construction Traffic (Two-way vehicle movements)		Average Hourly Construction Traffic (Two-way vehicle movements)	
		Cars	Van	Weeks	Cars	Van	Cars	Van
AE001	1	-	-	-	-	-	-	-
AE002	1	10680	15120	126	14	20	7	3
AE003	1	-	-	-	-	-	-	-
AE004	2	10680	15120	126	14	20	7	3
AE041	2	10680	15120	126	14	20	7	3
AE042	2	10680	15120	126	14	20	7	3
AE005	2	10200	14640	122	14	20	7	3
AE006	2	10200	14640	122	14	20	7	3
AE007	2	10200	14640	122	14	20	7	3
AE008	2	8340	14539	117	12	22	6	3
AE009 (AE049)	2	10440	11520	70	25	27	12	3
AE010	2	10440	11520	70	25	27	12	3
AE011	2	10440	11520	70	25	27	12	3
AE012	3	10680	15120	126	14	20	7	3
AE013	3	10680	15120	126	14	20	7	3
AE014	3	10680	15120	126	14	20	7	3
AE015	3	10680	15120	126	14	20	7	3
AE016	3	10680	15120	126	14	20	7	3
AE017	3	10680	15120	126	14	20	7	3
AE018	3	10140	14040	117	14	20	7	3
AE044	3	10200	14640	122	14	20	7	3

Section of Proposed Project	Section	Total Construction Traffic (Two-way vehicle movements)		Duration	Average Daily Construction Traffic (Two-way vehicle movements)		Average Hourly Construction Traffic (Two-way vehicle movements)	
		Cars	Van	Weeks	Cars	Van	Cars	Van
AE019	3	10200	14640	122	14	20	7	3
AE047	3	10200	14640	122	14	20	7	3
AE020	3	10200	14640	122	14	20	7	3
AE043	3	10440	15120	70	25	27	12	3
AE021	3	10200	14640	122	14	20	7	2
AE048	3	6240	11520	70	15	27	7	3
AE045	3	10440	15120	70	25	27	12	3
AE022	3	10440	15120	70	25	27	12	3
AE023	3	10440	15120	70	25	15	12	2
AE050	4	10680	15120	207	9	12	4	2
AE024	4	10680	15120	126	14	20	7	3
AE025	4	10680	15120	126	14	20	7	3
AE026	4	10680	15120	126	14	20	7	3
AE027	4	10140	14040	117	14	20	7	3
AE028	4	10200	14640	122	14	20	7	2
AE046	4	10140	16035	111	15	24	8	3
AE029	4	10200	15000	122	14	20	7	3
AE030	4	7860	20760	122	14	28	7	4
AE031	4	7860	13560	113	12	20	6	3
AE032	4	7860	13440	113	12	20	6	3
AE033	4	10440	11520	113	15	17	8	2
AE034	4	10440	11520	70	25	27	12	3
AE035	4	10440	11520	70	25	27	12	3
AE036	4	10440	11520	70	25	27	12	3
AE037	4	10440	11520	70	25	27	12	3
AE038	4	10440	11520	70	25	27	12	3
AE039	4	10440	11520	70	25	27	12	3
AE040	4	10440	11520	70	25	27	12	3
AE051	1	-	-	-	-	-	-	-
AE052	1	-	-	-	-	-	-	-
AE053	1	-	-	-	-	-	-	-
AE054	1	-	-	-	-	-	-	-
CC 2	2	46200	21360	178	43	20	22	3
CC 5	3	46200	21360	178	43	20	22	3
CC 6	4	46200	21360	178	43	20	22	3
PSD 1	2	-	36360	165	-	35	-	18
PSD 2	3	-	36865	174	-	35	-	18
PSD 3	3	-	36865	174	-	35	-	18
PSD 4	3	-	36865	174	-	35	-	18
PSD 5	3	-	36865	174	-	35	-	18

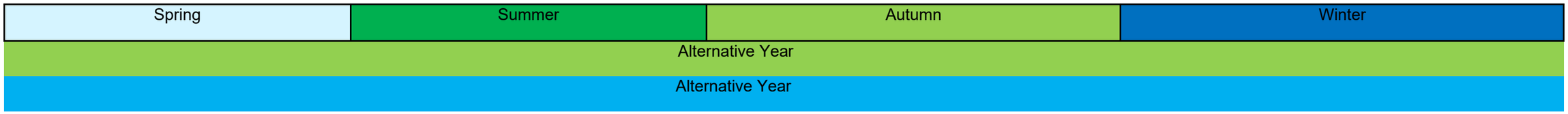
Section of Proposed Project	Section	Total Construction Traffic (Two-way vehicle movements)		Duration	Average Daily Construction Traffic (Two-way vehicle movements)		Average Hourly Construction Traffic (Two-way vehicle movements)	
		Cars	Van	Weeks	Cars	Van	Cars	Van
PSD 6	3	-	36865	174	-	35	-	18
PSD 8	4	-	36865	174	-	35	-	18
PSD 9	4	-	36865	174	-	35	-	18
PSD 10	4	-	36865	174	-	35	-	18
RWI & PS CC0	1	-	32284	174	-	31	-	15
WTP CC 1	1	-	53923	174	-	52	-	26
BPT CC 3	2	-	43453	117	-	62	-	31
TPR CC 7	4	-	24038	117	-	34	-	17
RWRM	1	-	12309	104	-	11	-	5
Treated Water Pipeline from the WTP to the BPT	2	-	87410	187	-	78	-	39
Treated Water Pipeline from the BPT to the TPR	3&4	-	174819	187	-	304	-	152
BPS CC 4	3	-	19028	96	-	33	-	17
R440 (BPS Power Supply)	3	-	588	28	-	1	-	-
Local Road (north of R440)	3	-	308	28	-	2	-	1
Local Road (east of L3003)	3	-	308	28	-	2	-	1
L3003 (BPS Power Supply)	3	-	588	28	-	4	-	2

Figure 5.1: Proposed Project Construction Programme for LVs



	Year 1				Year 2				Year 3				Year 4				Year 5	
	Seasons																	
	S	S	A	W	S	S	A	W	S	S	A	W	S	S	A	W	S	S
	2028				2029				2030				2031				2032	
AE032																		
AE033																		
AE034																		
AE035																		
AE036																		
AE037																		
AE038																		
AE039																		
AE040																		
CC2 (Lisgariff)																		
CC5 (Killananny)																		
CC6 (Drummond)																		
Carrigatogher Depot PSD1																		
Toora Depot PSD2																		
Boveen Depot PSD3																		
Fortel Depot PSD4																		
Derrinboy Depot PSD5																		
Derryweelan Depot PSD6																		
Rathlumber Depot PSD8																		
Graiguepottle Depot PSD9																		
Barberstown Upper Depot PSD10																		
Raw Water Intake & Pumping Station and Access																		
Water Treatment Plant Site and Access Road CC1																		
Break Pressure Tank Site CC3																		
Termination Point Reservoir Site CC7																		
Raw Water Rising Main																		
Treated Water Pipeline from WTP to BPT																		
Treated Water Pipeline from BPT to TPR																		
Booster Pumping Station CC4																		
R440																		
Local Road (north of R440)																		
Local Road (east of L3003)																		
L3003																		

Legend:


Spring
Summer
Autumn
Winter
Alternative Year
Alternative Year

5.1.2 Shuttle Bus Generated Traffic

149. Shuttle buses generate trips to and from the Principal Construction Compounds and AE locations. Table 5.2 shows the shuttle buses construction generated traffic. Figure 5.2 below shows the programme of shuttle buses over the five-year Construction Phase.

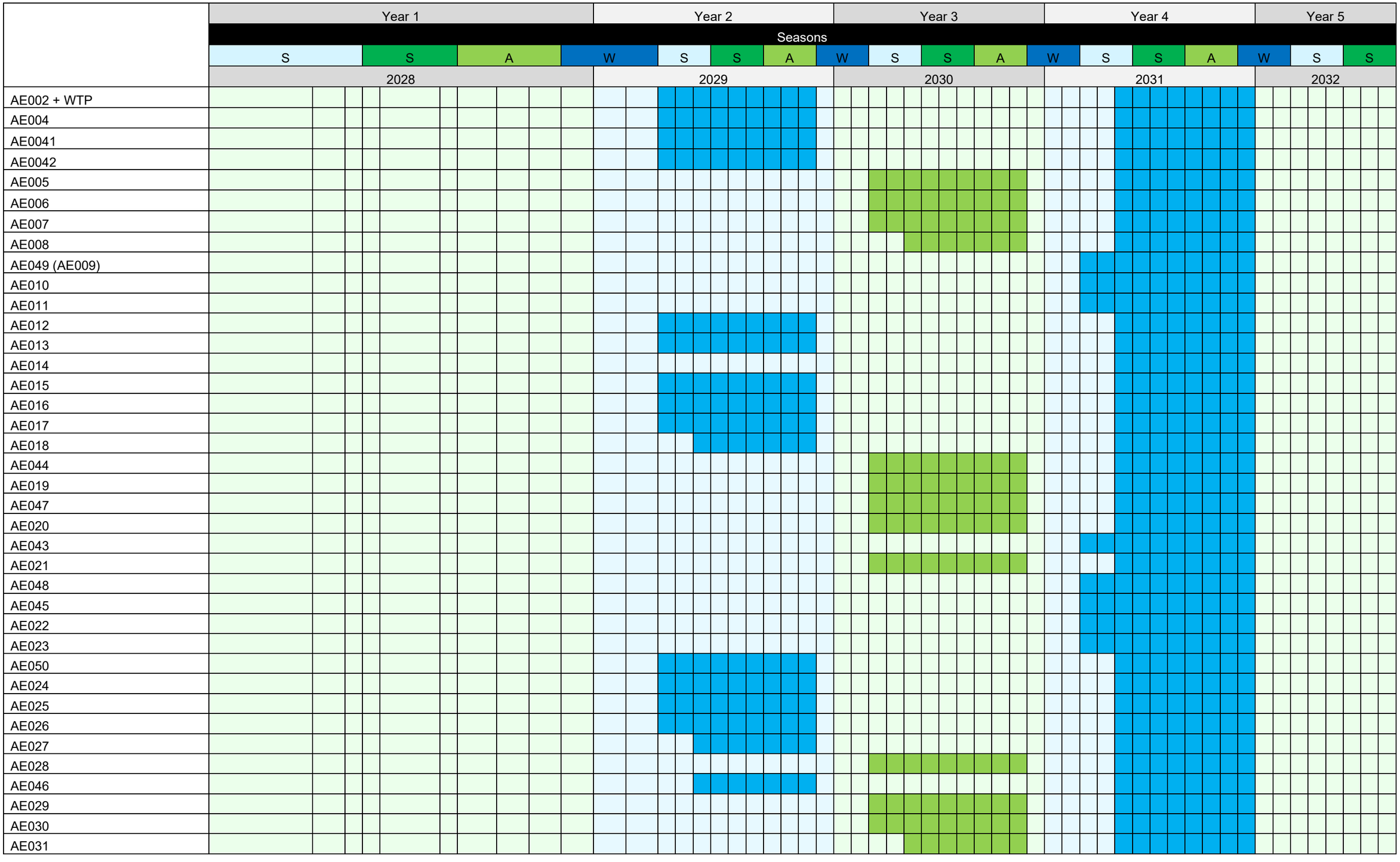
150. It is noted that shuttle buses will operate for a shorter duration than the LVs and HVs. Shuttle buses, which will be used to transport staff, will only be required after the pipes have been delivered. Prior to this, LVs and HVs will be required for mobilisation activities (e.g., pipe delivery, site clearance, archaeology, etc.) and during demobilisation activities.

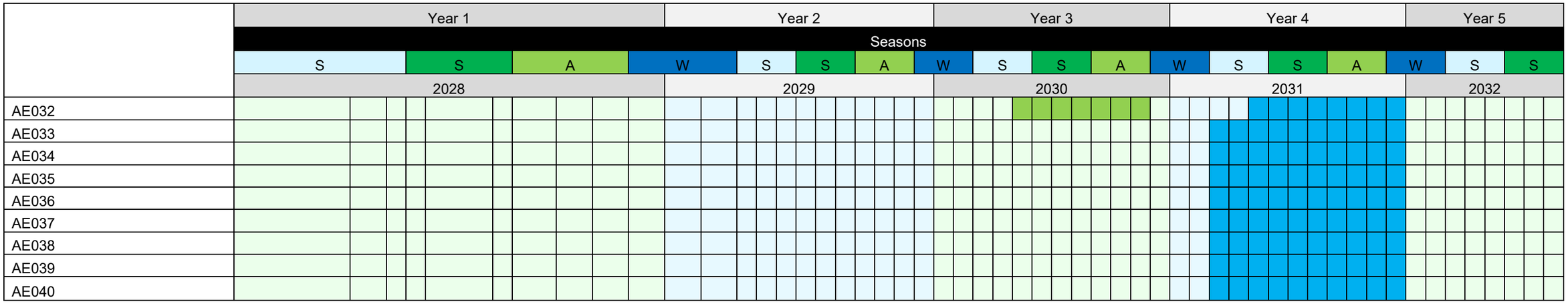
Table 5.2: Shuttle Buses Generated Construction Traffic for the Proposed Project

Section of Proposed Project	Section	Total Construction Traffic (Two-way vehicle movements)	Duration	Average Daily Construction Traffic (Two-way vehicle movements)	Average Hourly Construction Traffic (Two-way vehicle movements)
		Shuttle Bus	Weeks	Shuttle Bus	Shuttle Bus
AE001	1	-	-	-	-
AE002	1	1860	74	4	2
AE003	1	-	-	-	-
AE004	2	3384	74	8	4
AE041	2	1356	74	3	2
AE042	2	3300	74	7	4
AE005	2	2112	74	5	2
AE006	2	1824	74	4	2
AE007	2	1392	74	3	2
AE008	2	2364	65	6	3
AE009 (AE049)	2	3396	44	13	6
AE010	2	1272	44	5	2
AE011	2	900	44	3	2
AE012	3	1860	74	4	2
AE013	3	888	74	2	1
AE014	3	420	35	2	1
AE015	3	1356	74	3	2
AE016	3	1860	74	4	2
AE017	3	2328	74	5	3
AE018	3	1644	65	4	2
AE044	3	1392	74	3	3
AE019	3	1896	74	4	2
AE047	3	1860	74	4	2
AE020	3	1356	74	3	2
AE043	3	1908	44	7	4
AE021	3	2292	74	5	3
AE048	3	1404	44	5	3
AE045	3	528	44	2	1
AE022	3	2148	44	8	4
AE023	3	900	44	3	2

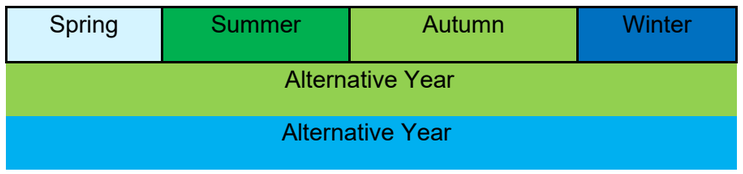
Section of Proposed Project	Section	Total Construction Traffic (Two-way vehicle movements)	Duration	Average Daily Construction Traffic (Two-way vehicle movements)	Average Hourly Construction Traffic (Two-way vehicle movements)
		Shuttle Bus	Weeks	Shuttle Bus	Shuttle Bus
AE050	4	1392	74	3	2
AE024	4	2328	74	5	3
AE025	4	888	74	2	1
AE026	4	1356	74	3	2
AE027	4	1500	65	3	2
AE028	4	3300	74	3	2
AE046	4	1284	65	8	4
AE029	4	1860	74	3	1
AE030	4	1284	74	4	2
AE031	4	1644	65	5	2
AE032	4	900	65	3	2
AE033	4	900	44	6	3
AE034	4	1404	44	3	2
AE035	4	1032	44	5	3
AE036	4	1032	44	4	2
AE037	4	1032	44	4	2
AE038	4	1032	44	4	2
AE039	4	1032	44	4	2
AE040	4	528	44	4	2
AE051	1	-	-	-	-
AE052	1	-	-	-	-
AE053	1	-	-	-	-
AE054	1	-	-	-	-

Figure 5.2: Proposed Project Construction Programme for Shuttle Buses




Year 1
Year 2
Year 3
Year 4
Year 5
Seasons
S S A W S S A W S S A W S S A W S S
2028
2029
2030
2031
2032
AE032
AE033
AE034
AE035
AE036
AE037
AE038
AE039
AE040

Legend:


Spring
Summer
Autumn
Winter
Alternative Year
Alternative Year

5.1.3 Heavy Vehicle Generated Traffic

151. HVs Construction generated traffic relating to each construction site (AEs, PSD and CCs) is shown in Table 5.3. Figure 5.3 below shows the programme of HVs over the five-year Construction Phase.

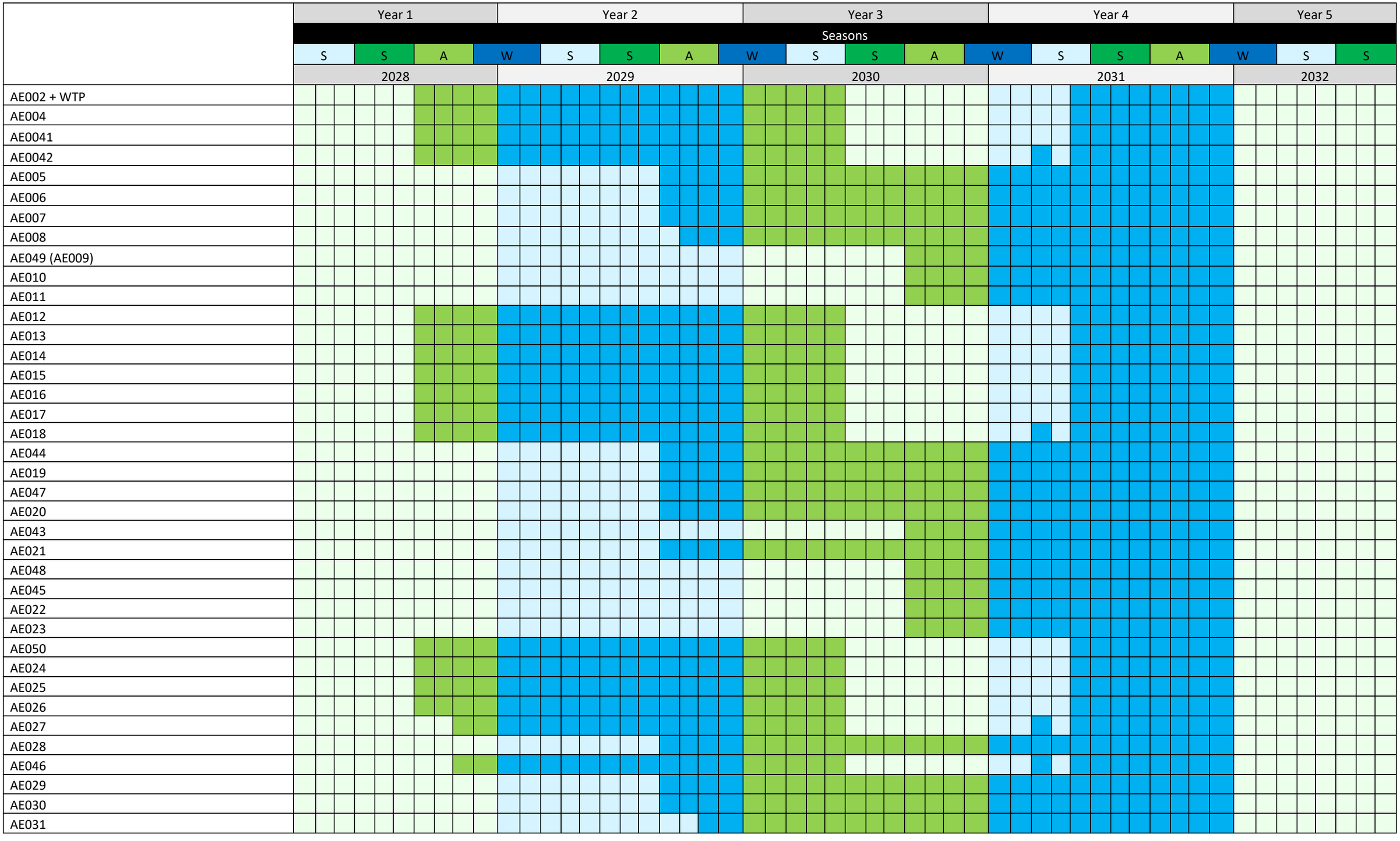
Table 5.3: HVs Generated Construction Traffic for the Proposed Project

Section of Proposed Project	Section	Total Construction Traffic (Two-way vehicle movements)	Duration	Average Daily Construction Traffic (Two-way vehicle movements)	Average Hourly Construction Traffic (Two-way vehicle movements)
		HV	Weeks	HV	HV
AE001	1	-	-	-	-
AE002	1	8190	126	11	1
AE003	1	-	-	-	-
AE004	2	11771	126	16	2
AE041	2	3235	126	4	1
AE042	2	7720	126	10	1
AE005	2	12699	122	17	2
AE006	2	9749	122	13	2
AE007	2	4682	122	6	1
AE008	2	14119	117	20	3
AE009 (AE049)	2	15140	70	36	5
AE010	2	6812	70	16	2
AE011	2	3108	70	7	1
AE012	3	9585	126	13	9
AE013	3	6506	126	9	1
AE014	3	1523	126	2	1
AE015	3	8656	126	11	1
AE016	3	10439	126	14	2
AE017	3	16846	126	22	3
AE018	3	17128	117	24	3
AE044	3	10141	122	14	2
AE019	3	5887	122	8	1
AE047	3	10277	122	14	2
AE020	3	13658	122	19	2
AE043	3	9208	70	22	3
AE021	3	26939	122	37	5
AE048	3	9007	70	21	3
AE045	3	6077	70	14	2
AE022	3	15454	70	37	5
AE023	3	10543	70	25	3
AE050	4	11398	126	15	2
AE024	4	27310	126	36	5
AE025	4	6724	126	9	1
AE026	4	15100	126	20	2

Section of Proposed Project	Section	Total Construction Traffic (Two-way vehicle movements)	Duration	Average Daily Construction Traffic (Two-way vehicle movements)	Average Hourly Construction Traffic (Two-way vehicle movements)
		HV	Weeks	HV	HV
AE027	4	19266	117	27	3
AE028	4	39659	122	54	7
AE046	4	14176	117	20	3
AE029	4	15554	122	21	3
AE030	4	26208	122	36	4
AE031	4	15267	113	23	3
AE032	4	12137	113	18	2
AE033	4	10215	70	24	3
AE034	4	10894	70	26	3
AE035	4	5061	70	12	2
AE036	4	3786	70	9	1
AE037	4	8496	70	20	3
AE038	4	5096	70	12	2
AE039	4	4483	70	11	1
AE040	4	4711	70	11	1
AE051	1	-	-	-	-
AE052	1	-	-	-	-
AE053	1	-	-	-	-
AE054	1	-	-	-	-
CC 2	2	5232	178	5	1
CC 5	3	5232	178	5	1
CC 6	4	5232	178	5	1
PSD 1	2	4608	165	5	1
PSD 2	3	4608	165	5	1
PSD 3	3	4608	165	5	1
PSD 4	3	4608	165	5	1
PSD 5	3	4608	165	5	1
PSD 6	3	4608	165	5	1
PSD 8	4	4608	165	5	1
PSD 9	4	4608	165	5	1
PSD 10	4	4608	165	5	1
RWI & PS CC0	1	3553	104	6	1
WTP CC 1	1	136593	174	131	16
BPT CC 3	2	21834	117	31	4
TPR CC 7	4	35744	117	51	6
FCV	4	1839	25	12	2
BPS CC 4	3	6358	96	11	1
R440 (BPS Power Supply)	3	5676	28	34	4
Local Road (north of R440)	3	2838	28	17	2

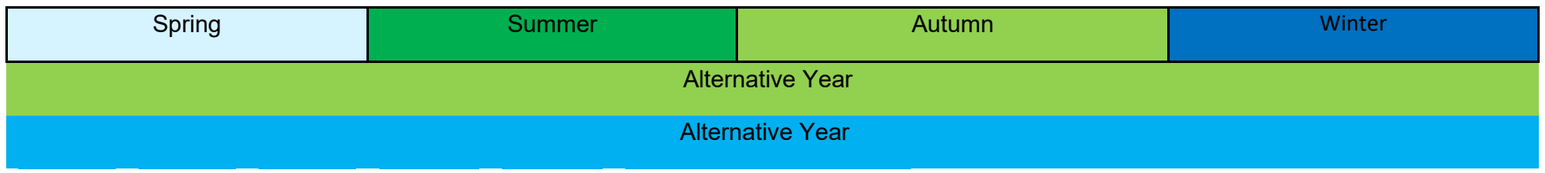
Section of Proposed Project	Section	Total Construction Traffic (Two-way vehicle movements)	Duration	Average Daily Construction Traffic (Two-way vehicle movements)	Average Hourly Construction Traffic (Two-way vehicle movements)
		HV	Weeks	HV	HV
Local Road (east of L3003)	3	2838	28	17	2
L3003 (BPS Power Supply)	3	5676	28	34	4

Figure 5.3: Proposed Project Construction Programme for HVs



	Year 1				Year 2				Year 3				Year 4				Year 5	
	Seasons																	
	S	S	A	W	S	S	A	W	S	S	A	W	S	S	A	W	S	S
	2028				2029				2030				2031				2032	
AE032																		
AE033																		
AE034																		
AE035																		
AE036																		
AE037																		
AE038																		
AE039																		
AE040																		
CC2 (Lisgariff)																		
CC5 (Killananny)																		
CC6 (Drummond)																		
Carrigatogher Depot PSD1																		
Toora Depot PSD2																		
Boveen Depot PSD3																		
Fortel Depot PSD4																		
Derrinboy Depot PSD5																		
Derryweelan Depot PSD6																		
Rathlumber Depot PSD8																		
Graiguepottle Depot PSD9																		
Barberstown Upper Depot PSD10																		
Raw Water Intake & Pumping Station CC0																		
Water Treatment Plant Site and Access Road CC1																		
Break Pressure Tank Site CC3																		
Termination Point Reservoir Site CC7																		
Flow Control Valve																		
Booster Pumping Station CC4																		
R440																		
Local Road (North of R440)																		
Local Road (East of L3003)																		
L3003																		

Legend:


Spring
Summer
Autumn
Winter
Alternative Year
Alternative Year

152. As outlined in Chapter 5 (Construction & Commissioning), the typical working hours for the Construction Phase would be:

    - Monday to Friday – 07:00 to 19:00
    - 08:00 to 16:30 on a Saturday.

153. It is noted that certain activities may have to take place outside these hours and on these occasions the local authorities would be notified in advance. It is also anticipated that there would be a requirement for 24-hour working during tunnelling works and would have no impact on traffic as no traffic management is required at these locations i.e. a road closure. The tunnelling works associated with road crossings are proposed at the locations outlined in Table 3.2 of Chapter 5 Appendix A5.4.

154. The remaining road crossing locations are outlined in Table 3.1 and Table 3.3 of Chapter 5 Appendix A5.4. Table 3.1 outlines open trench excavation which is the majority of the road crossings. It is envisaged in the majority of cases that roads would be closed for between 24 and 48 hours. Table 3.3 list 6 no. significant road crossings which are anticipated to require to take longer than 48 hours.

155. As outlined in Chapter 5 there are two types of closure:

    - Where a road can be closed with a diversion on the local road network, these diversions will be agreed in advance of works taking place at any road crossing with the Local Authority. The length of time a road needs to be closed, and a diversion put in place, will depend on the road width and standard. Sign boards will be set up in advance of any diversions taking place giving dates of the disruption. Diversion routes will cater for every type of vehicle that could be expected on the road that is to be closed
    - Where a road needs to be closed and there is no available diversion on the local road network, for example a dead-end access servicing one or more properties, an alternative route or diversion will be provided by providing a temporary road bypass (4m in width) across the Construction Working Width for the duration of the crossing. The temporary bypass will be made of a 300mm deep layer of stone hardcore compacted with stone dust to provide a clean level surface for trafficking. Prior to the temporary road bypass taking place, all property owners will be notified of the pending temporary traffic changes and signage will be put in place before the temporary road bypass is put into effect. On completion of the road crossing, the existing road will be reinstated to its previous standard and then re-opened to through-traffic and the temporary road bypass will be reinstated.

156. The anticipated construction programme, as shown in Image 2.1, includes the associated infrastructure works being constructed in parallel that would generate the highest traffic volumes.

157. To ensure a robust assessment, a worst-case scenario was assumed, evaluating peak construction activity at each junction as if all construction activities affecting that junction were occurring simultaneously. All junctions were assessed based on their individual peak construction periods during the anticipated Construction Phase (2028–2032). As shown in Table 5.4, the year and duration of peak construction activity vary for each junction.

Table 5.4: Assessment Year and Duration of Peak Construction for each Junction

County	Junction	Peak Construction Year	Duration of Peak Construction
Limerick	Junction 1	Year 1	-
Tipperary	Junction 2	Year 1	5 weeks
Tipperary	Junction 3	Year 1	15 weeks
Tipperary	Junction 4	Year 1	5 weeks
Tipperary	Junction 5	Year 1	9 weeks
Tipperary	Junction 6	Year 1	5 weeks
Tipperary	Junction 7	Year 1	5 weeks
Tipperary	Junction 8	Year 1	5 weeks
Tipperary	Junction 9	Year 1	5 weeks
Tipperary	Junction 10	Year 1	5 weeks
Tipperary	Junction 11	Year 1	11 weeks
Tipperary	Junction 12	Year 1	5 weeks
Tipperary	Junction 13	Year 3	13 weeks
Tipperary	Junction 14	Year 1	4 weeks
Offaly	Junction 15	Year 1	9 weeks
Offaly	Junction 16	Year 1	9 weeks
Offaly	Junction 17	Year 4	9 weeks
Offaly	Junction 18	Year 2	5 weeks
Laois	Junction 19	Year 3	9 weeks
Laois	Junction 20	Year 3	9 week
Laois	Junction 21	Year 3	9 weeks
Offaly	Junction 22	Year 2	5 weeks
Offaly	Junction 23	Year 3	28 weeks
Offaly	Junction 24	Year 2	5 weeks
Offaly	Junction 25	Year 2	5weeks
Offaly	Junction 26	Year 1	9 weeks
Offaly	Junction 27	Year 3	9 weeks
Offaly	Junction 28	Year 3	9 weeks
Offaly	Junction 29	Year 3	9 weeks
Offaly	Junction 30	Year 2	4 weeks
Offaly	Junction 31	Year 2	4 weeks
Laois	Junction 32	Year 4	4 weeks
Laois	Junction 33	Year 4	4 weeks
Offaly	Junction 34	Year 2	4 weeks
Offaly	Junction 35	Year 2	4 weeks
Offaly	Junction 36	Year 2	5 weeks
Laois	Junction 37	Year 2	9 weeks
Laois	Junction 38	Year 2	5 weeks
Offaly	Junction 39	Year 2	5 weeks
Offaly	Junction 40	Year 2	5 weeks
Offaly	Junction 41	Year 2	5 weeks

County	Junction	Peak Construction Year	Duration of Peak Construction
Kildare	Junction 42	Year 2	5 weeks
Kildare	Junction 43	Year 3	9 weeks
Kildare	Junction 44	Year 3	9 weeks
Kildare	Junction 45	Year 3	5 weeks
Kildare	Junction 46	Year 3	5 weeks
Kildare	Junction 47	Year 3	5 weeks
Kildare	Junction 48	Year 3	5 weeks
Kildare	Junction 49	Year 4	5 weeks
Kildare	Junction 50	Year 3	5 weeks
Kildare	Junction 51	Year 4	5 weeks
Kildare	Junction 52	Year 4	5 weeks
Kildare	Junction 53	Year 4	1 week
South Dublin	Junction 54	Year 4	1 week
South Dublin	Junction 55	Year 3	4 weeks
South Dublin	Junction 56	Year 4	4 weeks
Kildare	Junction 57	Year 4	1 week

6. Construction Phase Distribution

158. In analysing the effect that the traffic generated by the Proposed Project would have on the surrounding public road network, the traffic was distributed between the 54 temporary access points, Construction Compounds, Pipe Storage Depots and the six infrastructure sites. All junctions and links have been assessed for peak construction activity year within the five-year Construction Phase programme (2028–2032). This assessment robustly assumes a reasonable worst-case scenario in which the peak activities of all construction sections overlap at these junctions.

159. As previously stated, Haul Roads have been agreed with the local authorities, as shown in Figures 11 to 17, which would be utilised during the Construction Phase. The likely distribution pattern of traffic generated by the Proposed Project is not fully known. However, the following sections describe how each mode of transport has been distributed for the traffic assessment.

6.1 Light Vehicle Construction Profile

160. The LV generated traffic was distributed considering the location of the surrounding towns and using the latest Central Statistics Office (CSO) data from 2022 to determine the population for the surrounding towns so that a percentage could be allocated from each origin.

161. Table 6.1 shows the percentage of LVs estimated from each town and the destination (AEs, CCs and PSDs) for each construction section.

Table 6.1: LV Distribution

Construction Section 1			Construction Section 2			Construction Section 3			Construction Section 4		
Urban Area	**%**	**AEs, CCs and PSDs**	**Urban Area**	**%**	**AEs, CCs and PSDs**	**Urban Area**	**%**	**AEs, CCs and PSDs**	**Urban Area**	**%**	**AEs, CCs and PSDs**
Killaloe +Ballina	46%	CC0 (RWI)	Nenagh	90%	AE004	Athlone	30%	AE012	Portarlington	9%	AE050
Nenagh	64%	-	Borrisokane	10%	AE041	Birr	6%	AE013	Edenderry	7%	AE024
		AE002			AE042	Kilcormac	1%	AE014	Enfield	3%	AE025
		CC1 (WTP)			AE005	Tullamore	20%	AE015	Kilcock	8%	AE026
		-			PSD1	Mountmellick	6%	PSD2	Maynooth	16%	PSD8
		-			AE006	Portlaoise	30%	AE016	Clane	8%	AE027
		-			AE007	Roscrea	7%	PSD3	Naas	25%	AE028
		-			AE008			AE017	Celbridge	20%	AE046
		-			CC2			PSD4	Newcastle	4%	CC6
-					AE009 (AE049)			AE018			AE029
					AE010			AE044			AE030
					AE011			AE019			AE031
					CC3 (BPT)			CC4			AE032
			-					AE047			PSD9
								PSD5			AE033
								AE020			AE034
								AE043			PSD10
								CC5			AE035
								AE021			AE036
								AE048			AE037
								AE045			AE038
								AE022			AE039
								PSD6			CC7 (TPR)
								AE023			AE040

162. As stated in Chapter 5 the typical working hours staff are between 07:00 and 19:00 Monday to Friday and 08:00 and 16:30 on a Saturday. However, considering the typical weekday traffic is higher compared to Saturday, junction modelling considers typical weekday background traffic.

163. The junction modelling follows the anticipated spread of construction staff arrival and departure profile with 70% of construction related staff LVs trips arriving and departing during the AM and PM peak periods respectively.

164. Table 6.2 shows the construction profile assuming majority of the core construction staff arriving between 07:00 and 08:00 (70%) and 20% arriving and departing between 06:00 and 07:00 (pre peak) and the remaining 10% (administrative staff and visitors) between 08:00 and 09:00 (post peak).

165. In the PM peak period, the departures follow the AM peak period arrival profile where 20% of core construction staff will depart between 16:00 and 17:00 with the majority of the core construction staff departing between 17:00 and 18:00 and the remaining 10% between 18:00 and 19:00.

166. A different arrival profile was assumed for the LVs, with arrivals distributed evenly over the eight-hour day.

Table 6.2: Construction Staff Arriving and Departing Profile

AM Construction Staff Profile		PM Construction Staff Profile	
AM Period	**% Distribution**	**PM Period**	**% Distribution**
06:00-07:00	20%	16:00-17:00	20%
07:00-08:00	70%	17:00-18:00	70%
08:00-09:00	10%	18:00-19:00	10%

6.2 Shuttle Bus Construction Profile

167. The shuttle bus generated traffic was distributed where the origin for each construction section is the Principal Construction Compound for that section. As shown in Table 6.3 each shuttle bus route has a number of access points to shuttle staff to.

Table 6.3: Shuttle Bus Distribution

Construction Section 1		Construction Section 2		Construction Section 3		Construction Section 4	
Principal Construction Compound	**Access Egress**	**Principal Construction Compound**	**Access Egress**	**Principal Construction Compound**	**Access Egress**	**Principal Construction Compound**	**Access Egress**
WTP (CC1)	AE001 (CC0 RWI)	CC2	AE004	CC5	AE012	CC6	AE050
	AE002		AE041		AE013		AE024
	AE003 (CC1 WTP)		AE042		AE014		AE025
	AE051 (38KV)		AE005		AE015		AE026
	AE052 (38KV)		AE006		AE016		AE027
	AE053 (38KV)		AE007		AE017		AE028
	AE054 (38KV)		AE008		AE018		AE046
-			AE009 (AE049)		AE044		AE029
			AE010		AE019		AE030
			AE011		AE047		AE031
		-			AE020		AE032
					AE043		AE033
					AE021		AE034
					AE048		AE035
					AE045		AE036
					AE022		AE037
					AE023		AE038
				-			AE039
							AE040

168. In relation to the construction traffic profile, 100% of construction-related shuttle buses have been assigned to the junction morning and evening peak hours.

6.3 HV Construction Profile

169. HV traffic was assessed by considering each junction separately. It was assumed that HVs would travel to and from either the M4/M6 or the M7 motorway network. This approach represents a reasonable worst-case scenario, as the exact source of construction materials (e.g. pipelines and other infrastructure components) is unknown.

170. As shown in Table 5.3, the required HVs for each destination have been determined. The planning stage design calculated the expected number of HVs per week for each location over the 5-year programme, based on the function of each infrastructure site, PSD, CC and access points.

171. For each junction, total HV traffic was estimated by adding together the reasonable worst-case volumes from all relevant infrastructure sites, PSDs, CCs and access points passing through each junction. For example, at Junction 2 (R494/R445 Birdhill roundabout), the total includes AE001, AE002, AE003, AE004, AE051, AE052, AE053, AE054, AE041, RWI & PS (CC0) and WTP (CC1).

172. As stated in Section 5, HVs would typically operate over a 12-hour period; however, for the purposes of this assessment, it was robustly assumed that all HGVs would arrive and depart within an 8-hour period. If arrivals and departures were evenly distributed over this period, this would equate to 12.5% of movements occurring during the AM peak hour and 12.5% during the PM peak hour. For a robust assessment it was assumed that double the amount (25%) of HGVs would arrive and depart during the AM peak hour and 25% during the PM peak hour. To enforce this, clauses requiring compliance will be included in the construction contract, along with a penalty points system.

173. Additionally, traffic movements may be monitored through site traffic logs, GPS tracking of HV vehicles, and coordination with the Traffic Management Team to ensure that the restrictions are observed in practice.

7. Operational Phase Description

7.1 Permanent Infrastructure Sites - Site Access Locations

174. There are six main infrastructure sites which would require access during the Operational Phase of the Proposed Project.

7.1.1 Proposed Raw Water Intake and Pumping Station (RWI&PS) Access

175. A simple T-junction is proposed to serve access to the RWI&PS and is located on the R494 regional road, as shown in Chapter 4 (Proposed Project Description) Figure 4.62. It is proposed to provide gates at the access junction in order to restrict unauthorised access to the proposed RWI&PS. The access road junction will include a pull-in area before the security gates to avoid vehicles waiting to access the RWI&PS impacting vehicle movements along the R494 road. Details of these gates will be developed at Detailed Design stage, with proposals to be included within the scope of the Stage 2 Road Safety Audit[2].

7.1.2 Proposed Water Treatment Plant (WTP) Access

176. A simple priority T-junction is proposed to serve access to the WTP and is located on the R445 regional road, as shown in Chapter 4 (Proposed Project Description) Figure 4.64. It is proposed to provide gates at the access junction in order to restrict unauthorised access to the proposed WTP. The access road junction will include a pull-in area before the security gates to avoid vehicles waiting to access the WTP impacting vehicle movements along the R445 road. Details of these gates will be developed at Detailed Design Stage, with proposals to be included within the scope of the Stage 2 Road Safety Audit.

7.1.3 Break Pressure Tank (BPT)

177. A simple priority T-junction is proposed to serve access for the BPT and is located on the L1064 local road, as shown in Chapter 4 (Proposed Project Description) Figure 4.67. It is proposed to provide gates at the access junction in order to restrict unauthorised access to the proposed BPT. The access road junction will include a pull-in area before the security gates to avoid vehicles waiting to access the BPT impacting vehicle movements along the L1064 Road. Details of these gates will be developed at Detailed Design stage, with proposals to be included within the scope of the Stage 2 Road Safety Audit.

7.1.4 Booster Pumping Station (BPS)

178. A simple priority T-junction is proposed to serve access for the BPS and is located on the L3006 local road, as shown in Chapter 4 (Proposed Project Description) Figure 4.68. It is proposed to provide gates at the access junction in order to restrict unauthorised access to the proposed BPS. The access road junction will include a pull-in area before the security gates to avoid vehicles waiting to access the BPS impacting vehicle movements along the L3003 Road. Details of these gates will be developed at Detailed Design stage, with proposals to be included within the scope of the Stage 2 Road Safety Audit.

7.1.5 Flow Control Valve (FCV)

179. A simple priority T-junction is proposed to serve access for the FCV and is located on the L1016 local road, as shown in Chapter 4 (Proposed Project Description) Figure 4.69. It is proposed to provide gates at the access junction in order to restrict unauthorised access to the proposed FCV. The access road junction will include a pull-in area before the security gates to avoid vehicles waiting to access the FCV impacting vehicle movements along the L1016 local road. Details of these gates will be developed at Detailed Design stage, with proposals to be included within the scope of the Stage 2 Road Safety Audit.

[2] Road Safety Audit (RSA) involves the evaluation of road schemes during design and construction to identify potential hazards to all road users. Stage 2 is the completion of detailed design, prior to construction taking place. TII Publications describes RSA under TII GE-STY-01024 - Road Safety Audit, December 2017.

7.1.6 Termination Point Reservoir (TPR)

180. A simple priority T-junction is proposed to serve the TPR and is located on the R120 regional road, as shown in Chapter 4 (Proposed Project Description) Figure 4.71. It is also proposed to provide gates at the access junction in order to restrict unauthorised access to the proposed TPR. The access road junction will include a pull-in area before the security gates to avoid vehicles waiting to access the TPR impacting vehicle movements along the R120 Road. Details of these gates will be developed at Detailed Design stage, with proposals to be included within the scope of the Stage 2 Road Safety Audit.

7.2 Permanent Wayleaves

181. As discussed in Chapter 4 (Proposed Project Description), the 20m wide Permanent Wayleave would allow access for inspection, operation, maintenance and repair of the pipeline. The Permanent Wayleave is generally 20m in width[3] and is normally positioned centred on the pipeline[4]. This 20m wide Permanent Wayleave would not be fenced and would be returned to the landowner with limited restrictions on use, precluding development within that Permanent Wayleave, or particular forms of tree planting. It is envisaged that the traffic volumes associated with operation and inspections of the 20m wide Permanent Wayleave would be occasional and therefore have a negligible impact on the surrounding road network.

[3] For some Line Valves this wayleave extends to 30m in width to allow for operational access. Additional 10m wide Permanent Wayleaves are needed for the connection of Washouts to a Permanent Discharge Location.
[4] The final wayleave could be anywhere within the Construction Working Width as agreed with the Landowner and subject to site constraints.

8. Operational Phase Trip Generation

182. The volume of traffic expected to be generated for the Proposed Project during the Operational Phase has been determined from Appendix A4.1 (Operational Strategy).

8.1 Assumptions

183. The following assumptions have been made in estimating the Operational Phase traffic:

- All operational phase staff would arrive in the AM peak and depart in the PM peak
- Assumed all treatment processes and sludge management would occur at the same time
- Assumed that operational phase staff would travel to work in their own vehicle (single occupancy)
- The HV movements would be within an eight-hour period per day.

8.2 Generated Traffic

184. After completion of the Construction Phase, the traffic generated during the Operational Phase of the Proposed Project would be related to the fleet of trucks delivering treatment process chemicals to and removing sludge from the proposed WTP and by the staff travelling daily to and from the proposed WTP, RWI&PS, BPT, BPS, FCV and TPR. The trip generation for the Operational Phase is detailed in Table 8.1.

185. To inform a robust assessment, operational traffic has been modelled with the peak AM and PM hours however it is expected the LV traffic will distribute over the full working day.

186. A worst case for the sludge removal at the WTP, where six months of sludge is stored on site and then needed to be cleared out all at once, has been assumed.

187. The WTP includes a Visitors/Interpretive Centre, which is located at the southern end of the Control Building. Therefore, traffic generated relating to this has been included into the volumes shows in Table 8.1.

Table 8.1: Generated Operational Phase Traffic for the Proposed Project

Section of Proposed Project	Peak Hourly Operation Traffic (one way)	
	LV	HV
Raw Water Intake and Pumping Station	16	1
Water Treatment Plant	16	15*
Booster Pumping Station	10	1
Break Pressure Tank	-	1
Flow Control Valve	1	-
Termination Point Reservoir	10	1

*15 HV is the summation of sludge traffic (once every six months) and treatment process chemicals occurring at the same time

9. Operational Phase Trip Distribution

188. As per the Construction Phase, the exact distribution pattern of traffic generated by the Proposed Project in the Operational Phase is not fully known. However, the effect of the traffic generated by the Proposed Project was assessed for the six infrastructure sites during the Operational Phase.

9.1 Light Vehicle Operational Profile

189. It was envisaged the proposed traffic distribution will match the existing traffic distribution patterns obtained by traffic counts passing the proposed accesses into the six infrastructure sites.

9.2 Heavy Vehicle Operational Profile

190. As shown in Table 8.1, the WTP generates the largest volume of HV traffic. It is assumed that the majority of WTP HVs (95%) will use the M7 motorway, with the remaining 5% using the R445 regional road.

10. Traffic and Transport Assessment

10.1 Seasonal Adjustment of Baseline Traffic

191. It is standard practice, when analysing junctions, to apply a correction factor to traffic count data, where necessary, to produce seasonally adjusted flows that reflect variations in traffic volumes. These seasonally adjusted conversion factors were calculated using data taken from the following TII automatic traffic counters installed across motorways, national and regional roads to monitor traffic patterns in Ireland:

- M7 between Junction 29 and Junction 30, Rossbrien, County Limerick
- M7 between Junction 26 Nenagh (West) and Junction 27, Birdhill, County Tipperary
- N65 between Portumna and Borrisokane, Ballycasey, County Tipperary
- N52 south-west of Tullamore, County Offaly
- N52 between Birr and Kilcormac, Kilcormac, County Offaly
- N62 between Roscrea and Birr, Sharavogue, County Offaly
- M07 between Junction 23 Moneygall and Junction 24 Toomevara, County Offaly
- N80 south N80/N52 Junction, Tullamore, County Offaly
- M4 between Junction 11 and Junction 12, Kinnegad, County WestmeathM4 Junction 9 Enfield
- M4 between Junction 6 Celbridge and Junction 7 Maynooth, Maynooth, County Kildare
- M4, Maynooth, west County Kildare
- M7 between Junction 13 Kildare and Junction 14 Monasterevin, Kildare Town, County Kildare
- N4 between Junction 3 Newcastle and Junction 4 Lucan, Lucan, County Dublin.

192. A seasonal adjustment factor was determined by comparing the traffic flows on the actual date of the surveys to the annual average weekday traffic (Monday to Friday) over the previous year of the traffic count. As listed below, peaks in the annual average daily traffic were identified at a few junctions, which resulted in a minor seasonal adjustment factor:

- 1.02 for junctions included in the traffic assessment that relate to N62 between Roscrea and Birr, Sharavogue, County Offaly
- 1.01 for junctions included in the traffic assessment that relate to N80 south N80/N52 Junction, Tullamore, County Offaly
- 1.02 for junctions included in the traffic assessment that relate to M4 between Junction 11 and Junction 12, Kinnegad, County Westmeath.

193. The factor was applied to traffic count data to allow for a robust analysis.

10.2 Assessment Years

10.2.1 Construction Phase Assessment Years

194. As outlined in Chapter 5 (Construction & Commissioning), the Construction Phase of the Proposed Project is currently anticipated to commence in 2028, subject to planning approval. The Construction Phase is expected to last for an estimated duration of five years.

10.2.2 Operational Phase Assessment Years

195. The years assessed as part of the Operational Phase Assessment have been derived from the requirements of the TII TTA Guidelines (PE-PDV-02045, May 2014):

- 2033 - Envisaged opening year
- 2038 - 5 years after year of opening
- 2048 - 15 years beyond the year of opening.

10.3 Traffic Growth of Baseline Traffic

196. In order to undertake a robust and comparable traffic assessment, it is necessary for baseline traffic data to be factored, based on nationally adopted growth rates detailed in the TII PAG Unit 5.3 Travel Demand Projections (PE-PAG-02017, Oct 2021).

197. During the scoping meetings with the local authorities, it was agreed that 'high' growth rates be applied to the baseline traffic. Based on the assessment years outlined in Section 10.2, Table 10.1 shows the associated high growth rates, from the TII PAG-02017 Unit 5.3 utilised in the traffic assessment. These factors have been applied to the seasonally adjusted baseline traffic flows on the existing road network.

Table 10.1: Traffic Growth Rates Applied to the Seasonally Adjusted Baseline Traffic - Light Vehicle (LV) and Heavy Vehicle (HV)

Region	County	2016-2030		2030-2040		2040-2050	
		LV	HV	LV	HV	LV	HV
Metropolitan	Limerick	1.0218	1.0364	1.0106	1.0171	1.0146	1.0273
County	County Clare	1.0191	1.0451	1.0075	1.0193	1.0105	1.0292
County	County Tipperary	1.0152	1.0340	1.0073	1.0152	1.0084	1.0250
County	County Offaly	1.0152	1.0357	1.0081	1.0176	1.0100	1.0272
County	County Laois	1.0179	1.0314	1.0082	1.0160	1.0090	1.0248
County	County Kildare	1.0229	1.0413	1.0098	1.0191	1.0107	1.0283
Metropolitan	County Dublin	1.0191	1.0328	1.0087	1.0172	1.0093	1.0256

10.4 Junction Analysis

10.4.1 Traffic Assessment Parameters

198. In accordance with the TII TTA Guidelines (TII 2014), junction capacity analysis has been carried out using Junctions 10 software for the assessment of priority-controlled junctions. The assessment has been undertaken using Junctions 10 'Lane Simulation' advanced modelling feature, which allows lane utilisation on roundabout and priority-controlled T-junction approaches to be realistically modelled and simulated.

199. Junctions 10 requires the following data:

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

200. The junction capacity and operational performance for priority-controlled junctions have been summarised as Ratio of Flow to Capacity (RFC) and 'Mean Maximum Queue (MMQ) over the model period. Vehicle queue lengths, expressed as passenger car unit (PCU), have been rounded up to the nearest whole number.

201. The key parameters examined in the results of the analysis are:

- The Ratio of Flow to Capacity Value (RFC) - The design RFC values for junctions assessed is less than 0.85. Values over 1.00 indicate that the approach arm is over capacity
- Maximum queue length on any approach to the junctions
- Average delay for each vehicle passing through the junction during the modelled period.

202. For the purpose of this report, the varying vehicle types have been segregated into LV and HV prior to input. Traffic volumes input into the assessment software were in number of vehicles and, accordingly, commercial vehicle composition was set to the percentage of that arm.

203. All traffic flows are converted from vehicles to passenger car units (PCUs). A PCU is a common unit used in traffic modelling to ensure that larger vehicles such as HVs are proportionally represented when compared with the general traffic. When converting vehicles to PCU, a factor of 1.0 is used for LVs (staff cars and Vans), while a factor of 2.0 is used for HVs and Shuttle Buses.

204. All junction capacity analysis models, for roundabout junctions, were calibrated to 2024 observed queue lengths for the road network morning and evening peak hours, before being used for the future year reference and development case scenario assessments.

10.4.2 Committed Developments

205. From the Chapter 21 longlist of other projects potentially contributing to combined traffic effects (e.g. projects under construction, permitted applications, submitted applications but not yet determined etc.) a shortlist was developed. This short list identifies projects that may overlap in time or location and therefore require detailed assessment. These short listed projects has been incorporated into the Do Minimum scenario of the traffic assessment. Therefore, the committed developments has been considered in the traffic assessment. It is anticipated that construction of these developments will be substantially completed prior to the construction of the Proposed Project. The operational traffic generated by these committed developments was included in the traffic assessments.

206. In general, the potential for changes in junction performance as a result of these projects is minimal. The nature of these projects is consistent with typical development and any construction-related impacts from them would be temporary in nature. However, the projects which have been granted permission have been incorporated into the traffic modelling and with the application of a high growth rate in the traffic model would cover the potential increased development along the Haul Roads of the Proposed Project.

207. A list of all the project's granted planning has since been developed and projects which result in potential traffic growth on the Proposed Project are identified in Table 10.2.

Table 10.2: Committed Developments

County	Project	Stage of Development
Kildare	366 no. residential units (184 no. houses, 182 no. apartments), creche and associated site works.	Permission Granted (304632) 26/09/2019.
Kildare	333 no. residential units (121 no. houses, 212 no. apartments), creche and associated site works.	Permission Granted (308943) 13/04/2021.
Kildare	251 no. residential units (167 no. houses and 84 no. apartments), creche and all associated site works.	Permission Granted (303295) 12/04/2019.
Kildare	345 no. residential units (69 no. duplex units, 182 no. houses and 94 no. apartments), creche and associated site works.	Permission Granted (306826) 19/08/2020.
Kildare	Demolition of existing buildings, construction of 137 no. residential units and associated site works.	Permission Granted (315138) 13/03/2023.
Offaly	Construction of 102 dwellings in a mix of houses, duplex, and apartments.	Permission Granted (317318) 02/10/2023.
Offaly	Construction of primary care centre to accommodate HSE facilities and all associated site development works	Permission Granted (22404) 10/03/2023.
South Dublin	Demolition of 5 no. structures, construction of 406 no. residential units (281 no. houses, 125 no. apartments) creche and associated site works.	Permission Granted (305343) 23/12/2019.
South Dublin	Construction of five logistics/ warehousing units with associated office accommodation, service yards, ancillary structures/areas, and substations.	Permission Granted (SD23A/0301) 1/03/2024.

208. Table 10.3 shows the operational traffic on Haul Roads from the committed development listed in Table 10.2. As can be seen from Table 10.3, there is minimal potential for impacts on junction performance as a result of these projects.

Table 10.3: Requirements of Transport Assessment (Construction)

Route	Peak Year	Committed Development Generated traffic		Existing + Committed Development AADT		% Difference in AADT
		LV	HV	AADT[1]	%HV	
N52	2029	48	0	16964	-	0.3%
N52 Wilmer Road	2029	65	0	17881	-	0.4%
N52 N	2029	63	0	18163	-	0.3%
R407 S	2030	61	0	16036	-	0.4%
R403 SW	2031	200	0	13199	-	1.5%
R403 NE	2031	353	0	20666	-	1.7%
R407	2030	0	80	19978	0.4%	0.4%
R403 Dublin Road	2031	33	0	14032	-	0.2%
R405 Hazelhatch Road	2031	69	0	5670	-	1.2%
L6002 Athgoe Road	2031	117	0	8071	-	1.5%
R120 Main Street	2030	119	0	14126	-	0.8%
R120	2031	285	126	7614	1.7%	5.7%

[1] Annual average daily traffic (AADT)

209. Minor developments (e.g. single dwellings, extensions, etc.) were reviewed and the nature of these projects was considered consistent with typical development and any construction related impacts from them would be temporary in nature. Therefore, for the purpose of the assessment, traffic volumes associated with these developments were not included in the traffic model as the provision of a high growth rate, as set out in Section 10.3, would cover the potential increased development along the Haul Roads to be used by the Proposed Project.

10.4.3 Construction Phase

10.4.3.1 Determination if Transport Assessment Required

210. In order to determine if a Transport Assessment is needed, it is necessary to consider the thresholds at which the need for a TTA. TTA Guidelines (PE-PDV-02045, May 2014) outlines that when traffic to and from the development exceeds 10% of the traffic flow on the adjoining roads, a Transport Assessment is required. The guidelines also states that a Transport Assessment is required when traffic to and from the development exceeds 5% of the traffic flow on the adjoining roads where congestion exists or the location is sensitive.

211. Therefore, the extent of the traffic assessments has been determined in accordance with the guidelines. The threshold of 10% was used to determine if the junction should be modelled in the traffic assessment. An additional review of junctions where congestion exists was carried out using the more robust threshold of 5% and determined if the junction was modelled as part of the traffic assessment. Table 10.4 shows the % increase for each junction and which junctions were modelled.

Table 10.4: Requirements of Transport Assessment (Construction)

Junction	AM Peak	AM Constructed Generated Traffic	% Increase	PM Peak	PM Constructed Generated Traffic	% Increase
Junction 1	500	16	3%	436	16	4%
Junction 2	1037	132	13%	865	132	15%
Junction 3	561	33	6%	490	33	7%
Junction 4	458	97	21%	429	97	23%
Junction 5	536	59	11%	568	59	10%
Junction 6	1393	94	7%	1357	94	7%
Junction 7	1245	82	7%	1109	82	7%
Junction 8	1294	82	6%	993	82	8%
Junction 9	1412	177	13%	1422	177	12%
Junction 10	696	194	28%	663	194	29%
Junction 11	1049	53	5%	957	53	6%
Junction 12	1121	53	5%	1036	53	5%
Junction 13	28	32	112%	28	32	112%
Junction 14	346	41	12%	330	41	12%
Junction 15	82	47	57%	70	47	67%
Junction 16	693	81	12%	724	81	11%
Junction 17	651	49	8%	711	49	7%
Junction 18	1809	105	6%	1769	105	6%
Junction 19	1729	41	2%	1715	41	2%
Junction 20	1064	41	4%	1523	41	3%
Junction 21	968	42	4%	1085	42	4%

Junction	AM Peak	AM Constructed Generated Traffic	% Increase	PM Peak	PM Constructed Generated Traffic	% Increase
Junction 22	107	70	65%	95	70	73%
Junction 23	38	52	137%	35	52	147%
Junction 24	198	61	31%	162	61	38%
Junction 25	167	69	41%	154	69	45%
Junction 26	39	22	57%	42	22	52%
Junction 27	938	99	11%	880	99	11%
Junction 28	133	132	100%	142	132	93%
Junction 29	937	180	19%	875	180	21%
Junction 30	2378	97	4%	2840	97	3%
Junction 31	862	26	3%	951	26	3%
Junction 32	1116	66	6%	1427	66	5%
Junction 33	1348	66	5%	1445	66	5%
Junction 34	593	23	4%	598	23	4%
Junction 35	791	25	3%	764	25	3%
Junction 36	753	85	11%	679	85	13%
Junction 37	958	35	4%	1306	35	3%
Junction 38	1138	53	5%	1375	53	4%
Junction 39	452	79	18%	393	79	20%
Junction 40	759	79	10%	776	79	10%
Junction 41	1519	79	5%	1578	79	5%
Junction 42	1210	91	8%	1489	91	6%
Junction 43	583	302	52%	646	302	47%
Junction 44	840	48	6%	911	48	5%
Junction 45	1060	179	17%	1151	179	16%
Junction 46	1328	33	3%	1323	33	3%
Junction 47	1000	38	4%	975	38	4%
Junction 48	1576	60	4%	1648	60	4%
Junction 49	2114	106	5%	2146	106	5%
Junction 50	2387	130	5%	2091	130	6%
Junction 51	2483	22	1%	2342	22	1%
Junction 52	1707	97	6%	1697	97	6%
Junction 53*	1857	87	5%	1846	87	5%
Junction 54	1470	42	3%	1434	42	3%
Junction 55	1726	18	1%	1695	18	1%
Junction 56	1003	28	3%	955	28	3%
Junction 57	583	45	8%	430	45	10%

*Junction 53 is located in Celbridge which is only accessible during night-time hours (19:00 to 07:00)

212. The junctions shown in Table 10.4 which exceed the 10% threshold and 5% threshold (where congestion exists) have been assessed (31 out of the 57 junctions). A complete set of outputs from JUNCTIONS 10 for the 31 junctions modelled are included in Annex A.

Junction 2

213. A summary of the results for the existing roundabout between the R445 and R494 regional roads (Junction 2) for the AM peak (07:45 - 08:45) and PM peak (16:45 - 17:45) hours during the Construction Phase are provided in Table 10.5.

Table 10.5: Junction 2, R445 and R494 Regional Roads – Roundabout

Junction 2: R445 and R494 Regional Roads – Roundabout												
Year & Time	Arm A – R494 (NNW)			Arm B – R445 (ENE)			Arm C – R494 (SSE)			Arm D - R445 (WSW)		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2024 AM	1	7.34	0.28	3	30.38	0.71	< 1	4.76	0.13	1	5.51	0.23
2024 PM	< 1	6.62	0.19	1	11.27	0.32	< 1	4.55	0.19	1	5.55	0.25
2028 AM no Construction	1	8.04	0.30	5	37.43	0.77	< 1	4.82	0.14	1	5.71	0.25
2028 PM no Construction	< 1	7.08	0.22	1	11.43	0.34	<1	4.54	0.21	1	5.62	0.27
2028 AM with Construction	1	8.59	0.36	6	50.4	0.88	1	5.4	0.22	1	5.90	0.26
2028 PM with Construction	1	7.46	0.25	1	14.73	0.48	1	5.0	0.23	1	5.61	0.27

214. The summary of junction performance analysis indicates that Junction 2 is predicted to operate below the design 0.85 RFC during peak construction year in 2028. The RFC reaches 0.77 in 2028 on arm B in the AM peak.

215. During peak construction in 2028 there would be a temporary increase in the AM peak of 0.06 RFC therefore the RFC reaches 0.88 which is slightly above the design 0.85 RFC. However, this corresponds to an increase of one 1 PCU in queue length and 12.97 seconds of delay.

Junction 4

216. A summary of the results for the junction proposed junction into the WTP on the R445 regional road (Junction 4) for the AM peak (07:30 - 08:30) and PM peak (16:30 - 17:30) hours during the Construction Phase are provided in Table 10.6.

Table 10.6: Junction 4, Proposed WTP on the R445 Regional Road – T-Junction

Junction 4: Proposed WTP on the R445 Regional Road - T-Junction									
Year & Time	Arm A – R445 (W)			Arm B – WTP			Arm C – R445 (E)		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2028 AM with Construction	-	-	-	< 1	14.74	0.03	-	-	-
2028 PM with Construction	-	-	-	< 1	9.58	0.16	-	-	-

217. The summary of junction performance analysis indicates that proposed Junction 4 would be operating with negligible queues and delays and within capacity (i.e. RFC < 0.85) during the peak hours in 2028, during the Construction Phase. This equates to increase of one PCU in queue length and 14.74 seconds in delay.

Junction 5

218. A summary of the results for the proposed junction into the PSD1 on the R445 regional road (Junction 5) for the AM peak (08:00 - 09:00) and PM peak (16:30 - 17:30) hours during the Construction Phase are provided in Table 10.7.

Table 10.7: Junction 5, Proposed PSD1 on the R445 Regional Road – Staggered Junction

Junction 5: Proposed PSD1 on the R445 Regional Road – Staggered Junction												
Year & Time	Arm A – R445 (W)			Arm B – PSD1 south			Arm C – R445 (E)			Arm D – PSD1 north		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2028 AM with Construction	-	7.90	-	-	-	-	-	-	-	-	-	-
2028 PM with Construction	-	8.93	-	-	11.16	0.02	-	-	-	-	-	-

219. The summary of junction performance analysis indicates that proposed Junction 5 would be with no queues, negligible delays and within capacity (i.e. RFC < 0.85) during the peak hours in 2028, during the Construction Phase. This equates to increase of 11.16 seconds in delay.

Junction 9

220. A summary of the results for the existing roundabout between the N52 national road and R497 regional road (Junction 9) for the AM peak (08:00 - 09:00) and PM peak (16:30 - 17:30) hours during the Construction Phase are provided in Table 10.8.

Table 10.8: Junction 9, N52 National Road and R497 Regional Road – Roundabout

Junction 9: N52 National Road and R497 Regional Road – Roundabout									
Year & Time	Arm A – N52 (NNE)			Arm B – R497			Arm C – N52 (W)		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2024 AM	2	7.22	0.51	1	6.83	0.36	1	5.07	0.24
2024 PM	1	6.72	0.40	1	7.04	0.40	1	5.57	0.38
2028 AM no Construction	2	8.14	0.53	1	7.72	0.39	1	5.22	0.27
2028 PM no Construction	1	6.98	0.42	1	7.19	0.45	1	5.72	0.38
2028 AM with Construction	2	9.41	0.56	2	8.15	0.50	1	6.06	0.31
2028 PM with Construction	2	8.75	0.56	1	7.40	0.46	1	6.98	0.42

221. The summary of performance analysis indicates that Junction 9 is expected to operate below the design 0.85 RFC during peak construction in 2028. During peak construction there would be a temporary increase, with the highest increase expected to be 0.56 RFC in 2028 on Arm A in the AM peak. This equates to no increase in queue length and 1.27 seconds in delay.

Junction 10

222. A summary of the results for the proposed junction for Construction Compound (CC2) on the N52 national road (Junction 10) for the AM peak (08:15 - 09:15) and PM peak (16:45 - 17:45) hours during the Construction Phase are provided in Table 10.9.

Table 10.9: Junction 10, Proposed Construction Compound (CC2) on the N52 National Road – T-Junction

Junction 10: Proposed Construction Compound (CC2) on the N52 National Road - T-Junction									
Year & Time	Arm A - N52 (N)			Arm B – CC2			Arm C - N52 (S)		
	Queue Length (Veh)	Delay (s)	RFC	Queue Length (Veh)	Delay (s)	RFC	Queue Length (Veh)	Delay (s)	RFC
2028 AM with Construction	-	-	-	< 1	15.39	0.05	1	4.06	-
2028 PM with Construction	-	-	-	1	12.03	0.30	-	-	-

223. The summary of performance analysis indicates that proposed Junction 10 would be with no queues, negligible delays and within capacity (i.e. RFC < 0.85) during the peak hours in 2028, during the Construction Phase. This equates to increase of 15.39 seconds in delay.

Junction 13

224. A summary of the results for the proposed junction for the BPT on the L1064 local road (Junction 13) for the AM peak (08:45 - 09:45) and PM peak (17:00 - 18:00) hours during the Construction Phase are provided in Table 10.10.

Table 10.10: Junction 13, Proposed BPT on the L1064 Local Road – T-Junction

Junction 13: Proposed BPT on the L1064 Local Road – T-Junction									
Year & Time	Arm A- L1064 (N)			Arm B – BPT			Arm C – L1064 (S)		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2030 AM with Construction	-	-	-	-	-	-	< 1	4.54	-
2030 PM with Construction	-	-	-	< 1	6.34	0.06	0	0.95	-

225. The summary of performance analysis indicates that proposed Junction 13 would be operating with negligible queues and delays and within capacity (RFC < 0.85) during the peak hours in 2030, during the Construction Phase. There would be a maximum increase of one to two PCU in queue length and 6.34 seconds in delay.

Junction 14

226. A summary of the results for the existing T- junction between the R490 and R491 regional roads (Junction 14) for the AM peak (08:30 - 09:30) and PM peak (14:30 - 15:30) hours during the Construction Phase are provided in Table 10.11.

Table 10.11: Junction 14, R490 and R491 Regional Roads – T-Junction

Junction 14: R490 and R491 Regional Roads - T-Junction									
Year & Time	Arm A - R490 Main Street			Arm B - R491			Arm C - R490 Templemore Road		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2024 AM	-	-	-	< 1	8.69	0.15	< 1	1.88	-
2024 PM	-	-	-	< 1	8.83	0.13	< 1	2.48	-
2028 AM no Construction	-	-	-	< 1	8.92	0.17	< 1	2.09	-
2028 PM no Construction	-	-	-	< 1	9.06	0.14	< 1	2.76	-
2028 AM with Construction	-	-	-	< 1	9.12	0.18	< 1	2.02	-
2028 PM with Construction	-	-	-	< 1	9.68	0.15	< 1	2.27	-

227. The summary of performance analysis indicates that Junction 14 is expected to operate below the design 0.85 RFC during peak construction in 2028. During peak construction there would be a temporary increase, with the highest increase expected to be 0.01 RFC in 2028 on Arm B in the AM peak. This equates to no increase in queue length and 0.62 seconds in delay.

Junction 15

228. A summary of the results for the proposed junction for the Pipe Storage Depot (PSD2) on the L4022 local road (Junction 15) for the AM peak (08:15 - 09:15) and PM peak (16:15 - 17:15) hours during the Construction Phase are provided in Table 10.12.

Table 10.12: Junction 15, Proposed Pipe Storage Depot (PSD2) on the L4022 Local Road – T-Junction

Junction 15: Proposed Pipe Storage Depot (PSD2) on the L4022 Local Road - T-Junction									
Year & Time	Arm A - L4022 (W)			Arm B – PSD 2			Arm C – L4022 (E)		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2028 AM with Construction	-	-	-	< 1	10.74	0.02	-	2.36	-
2028 PM with Construction	-	-	-	< 1	9.63	0.04	-	1.39	-

229. The summary of performance analysis indicates that proposed Junction 15 would be operating with negligible queues and delays and within capacity (RFC < 0.85) during the peak hours in 2029, during the Construction Phase. There would be no increase in queue length and a maximum increase of 10.74 seconds in delay.

Junction 16

230. A summary of the results for the existing crossroads between the N62 national road, R492 regional road and L4008 local road (Junction 16) for the AM peak (07:45 - 08:45) and PM peak (16:45 - 17:45) hours during the Construction Phase are provided in Table 10.13.

Table 10.13: Junction 16, N62 National Road, R492 Regional Road and L4008 Local Road – Crossroads

Junction 16: N62 National Road, R492 Regional Road and L4008 Local Road – Crossroads												
Year & Time	Arm A - N62 (NNW)			Arm B - N62 (NNW)			Arm C - N62 (SSE)			Arm D – L4008		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2024 AM	< 1	7.13	0.07	< 1	9.22	0.02	< 1	4.65	0.01	< 1	10.15	0.01
2024 PM	< 1	6.94	0.11	< 1	8.69	0.02	< 1	5.02	0.02	< 1	11.45	0.01
2028 AM no Construction	< 1	7.33	0.07	< 1	9.52	0.03	< 1	4.62	0.01	< 1	10.48	0.01
2028 PM no Construction	< 1	7.15	0.12	< 1	8.96	0.02	< 1	4.99	0.02	< 1	11.95	0.01
2028 AM with Construction	<1	9.46	0.15	< 1	10.18	0.03	< 1	4.66	0.01	< 1	11.26	0.02
2028 PM with Construction	<1	9.19	0.20	< 1	9.51	0.02	< 1	5.04	0.02	< 1	12.83	0.02

231. The summary of performance analysis indicates that Junction 16 is expected to operate below the design 0.85 RFC during peak construction in 2028. During peak construction there would be a temporary increase, with the highest increase expected to be 0.08 RFC in 2028 on Arm A in the AM peak. This equates to increase of 2.14 seconds in delay.

Junction 18

232. A summary of the results for the existing crossroads between the N52 national road, R440 regional road and Connaught Street Local Road (Junction 18) for the AM peak (08:30 - 09:30) and PM peak (17:00 - 18:00) hours during the Construction Phase are provided in Table 10.14.

Table 10.14: Junction 18, N52 National Road and R440 Regional Road – mini roundabout

Junction 18: N52 National Road and R440 Regional Road – mini roundabout												
Year & Time	Arm A - N52 (N) - John's Place			Arm B - R440 John's Place			Arm C - N52 (S) - Wilmer Road			Arm D - Connaught Street (one-way)		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2024 AM	6	31.33	0.80	4	33.68	0.73	5	21.76	0.79	-	-	-
2024 PM	4	21.61	0.76	2	24.29	0.67	4	17.28	0.77	-	-	-
2029 AM no Construction	11	66.70	0.87	8	57.20	0.89	11	43.47	0.93	-	-	-
2029 PM no Construction	7	36.08	0.87	4	36.71	0.75	8	31.96	0.88	-	-	-
2029 AM with Construction	19	101.08	0.99	12	76.23	0.89	20	64.14	0.95	-	-	-
2029 PM with Construction	10	48.45	0.89	6	49.43	0.81	15	52.65	0.96	-	-	-

233. The summary of performance analysis indicates Junction 18 will operate above the design 0.85 RFC in 2029 without the construction phase of the Proposed Project. Arm A N52 (N), Arm B R440 and Arm C N52(S) exceed 0.85 RFC in the AM Peak. In the PM Arm A N52 (N) and Arm C N52(S) exceed 0.85 RFC.

234. During the AM peak of the construction phase there would be a temporary increase of 0.12 RFC on Arm A N52 (N) and 0.02 RFC on Arm C N52(S). This would result in a queue length increase of eight PCU's on Arm A N52 (N), four PCU on Arm B R440 and nine PCU in Arm C N52 (S), and maximum increase in delays of 34.35 seconds, 19.03 seconds and 20.67 seconds respectively.

235. During the PM peak of the construction phase the temporary increase of 0.02 RFC on Arm A N52 (N), 0.07 RFC on Arm B R440 and 0.04 RFC on Arm C N52(S). This would result in a queue length increase of three PCU's on Arm A N52 (N), two PCU on Arm B R440 and six PCU in Arm C N52 (S), and maximum increase in delays of 12.37 seconds, 12.72 seconds and 21.69 seconds respectively.

236. As outlined in TMP (Appendix 7.2 of the EIAR), active monitoring will be carried out during construction stage by the appointed Contractor(s). The appointed Contractor(s) will liaise with the local authority to mitigate the impacts of any additional traffic delays at Junction 18.

237. The mitigation measures include installing temporary signals to optimise junction movements and limiting the HV movements.

Junction 20

238. A summary of the results for the existing T-junction between the N62 national road and Dublin Road (Junction 20) for the AM peak (08:30 - 09:30) and PM peak (15:15 - 16:15) hours during the Construction Phase are provided in Table 10.15.

Table 10.15: Junction 20, N62 National Road and Dublin Road – T-Junction

Junction 20: N62 National Road and Dublin Road – T-Junction									
Year & Time	Arm A - N62 Church Street			Arm B - N62 Lourdes Road			Arm C - Dublin Road		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2024 AM	-	-	-	2	18.34	0.57	1	7.81	-
2024 PM	-	-	-	4	35.34	0.77	4	20.12	-
2030 AM no Construction	-	-	-	4	22.85	0.68	1	9.28	0
2030 PM no Construction	-	-	-	13	93.69	1.00	9	36.98	-
2030 AM with Construction	-	-	-	3	25.84	0.71	2	10.83	-
2030 PM with Construction	-	-	-	18	112.23	1.00	9	41.90	-

239. The summary of performance analysis indicates Junction 20 will operate above the design 0.85 RFC in the PM Peak in 2030 without the construction phase of the Proposed Project. Arm B N62 exceed 0.85 RFC in the PM Peak with an RFC of 1.00.

240. During the PM peak of the construction phase the temporary increase in queue length increase of five PCU on Arm B N62 and a maximum increase in delays of 18.54 seconds respectively.

241. During the AM Peak Junction 20 would be operating with negligible queues and delays and within capacity (i.e. RFC < 0.85) during the peak hours in 2030.

242. As outlined in TMP (Appendix 7.2 of the EIAR), active monitoring during the will be carried out during Construction Phase by the appointed Contractor(s). The appointed Contractor(s) will liaise with the local authority to mitigate the impacts of any additional traffic delays at Junction 20.

Junction 22

243. A summary of the results for the proposed junction for the Pipe Storage Depot (PSD4) on the L4004 local road (Junction 22) for the AM peak (08:00 - 09:00) and PM peak (17:00 - 18:00) hours during the Construction Phase are provided in Table 10.16.

Table 10.16: Junction 22, Proposed Pipe Storage Depot (PSD4) on the L4004 Local Road - T-Junction

Junction 22: Proposed Pipe Storage Depot (PSD4) on the L4004 Local Road - T-Junction									
Year & Time	Arm A - L4004 (W)			Arm B - PSD 4			Arm C - L4004 (E)		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2029 AM with Construction	-	-	-	< 1	11.66	0.02	< 1	0.88	-
2029 PM with Construction	-	-	-	< 1	8.32	0.02	< 1	0.79	-

244. The summary of performance analysis indicates that proposed Junction 22 would be operating with negligible queues and delays and within capacity (i.e. RFC<0.85) during the peak hours in 2029, during the Construction Phase. There would be a maximum increase of one PCU in queue length and 11.66 seconds in delay.

Junction 23

245. A summary of the results for the proposed junction for the BPS (CC4) on the L3003 local road (Junction 23) for the AM peak (08:30 - 09:30) and PM peak (17:30 - 18:30) hours during the Construction Phase are provided in Table 10.17.

Table 10.17: Junction 23, Proposed BPS (CC4) on the L3003 Local Road - T-Junction

Junction 23: Proposed BPS (CC4) on the L3003 Local Road - T-Junction									
Year & Time	Arm A – L3003 (W)			Arm B - BPS			Arm C – L3003 (E)		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2030 AM with Construction	-	-	-	< 1	9.40	0.01	< 1	4.68	-
2030 PM with Construction	-	-	-	< 1	6.60	0.07	< 1	2.78	-

246. The summary of performance analysis indicates that proposed Junction 23 would be operating with negligible queues and delays and within capacity (i.e. RFC<0.85) during the peak hours in 2030, during the Construction Phase. There would be no increase in queue length and a maximum increase of 9.40 seconds in delay.

Junction 24

247. A summary of the results for the existing crossroads between the R421 regional road, L8008 and L4004 local roads (Junction 24) for the AM peak (08:00 - 09:00) and PM peak (17:00 - 18:00) hours during the Construction Phase are provided in Table 10.18.

Table 10.18: Junction 24, R421 Regional Road, L8008 and L4004 Local Roads - Crossroads

Junction 24: R421 Regional Road, L8008 and L4004 Local Roads - Crossroads												
Year & Time	Arm A - R421 (NNE)			Arm B - L8008			Arm C – R421 (SSW)			Arm D - L4004		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2024 AM	< 1	7.31	0.02	< 1	7.94	0.05	< 1	4.97	0.01	< 1	8.25	0.05
2024 PM	< 1	5.88	0.04	< 1	8.24	0.02	< 1	5.02	0.00	< 1	8.70	0.05
2029 AM no Construction	< 1	7.43	0.03	< 1	8.04	0.05	< 1	4.97	0.01	< 1	8.38	0.05
2029 PM no Construction	< 1	5.90	0.04	0	8.36	0.02	< 1	5.03	0	< 1	8.86	0.05
2029 AM with Construction	< 1	8.31	0.03	< 1	8.24	0.05	< 1	5.04	0.01	< 1	8.58	0.05
2029 PM with Construction	< 1	6.71	0.06	0	8.57	0.02	< 1	5.08	0	< 1	9.11	0.05

248. The summary of performance analysis indicates that Junction 24 is expected to operate below the design 0.85 RFC during peak construction in 2029. During peak construction there would be a temporary increase, with the highest increase expected to be 0.02 RFC in 2030 on Arm A in the PM Peak. This equates to no increase in queue length and 0.81 seconds in delay.

Junction 25

249. A summary of the results for the existing T-junction between the R440 and R421 regional roads (Junction 25) for the AM peak (08:15 - 09:15) and PM peak (16:30 - 17:30) hours during the Construction Phase are provided in Table 10.19.

Table 10.19: Junction 25, R440 and R421 Regional Roads - T-Junction

Junction 25: R440 and R421 Regional Roads - T- Junction									
Year & Time	Arm A – R421 (E)			Arm B - R421 (SSW)			Arm C - R440		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2024 AM	-	-	-	< 1	8.14	0.09	-	-	-
2024 PM	-	-	-	< 1	9.28	0.03	-	-	-
2029 AM no Construction	-	-	-	< 1	8.18	0.10	-	-	-
2029 PM no Construction	-	-	-	< 1	9.63	0.05	-	-	-
2029 AM with Construction	-	-	-	< 1	12.09	0.15	-	0.41	-
2029 PM with Construction	-	-	-	< 1	12.21	0.11	-	0.47	-

250. The summary of performance analysis indicates that Junction 25 is expected to operate below the design 0.85 RFC during peak construction in 2030. During peak construction there would be a temporary increase, with the highest increase expected to be 0.11 RFC in 2029 on Arm B in the PM peak. This equates to no increase in queue length and 2.58 seconds in delay.

Junction 26

251. A summary of the results for the proposed junction for the Pipe Storage Depot (PSD5) on the L2027 local road (Junction 26) for the AM peak (08:15 - 09:15) and PM peak (16:15 - 17:15) hours during the Construction Phase are provided in Table 10.20.

Table 10.20: Junction 26, Proposed Pipe Storage Depot (PSD5) on the L2027 Local Road – T-Junction

Junction 26: Proposed Pipe Storage Depot (PSD5) on the L2027 Local Road – T-Junction									
Year & Time	Arm A – L2027 (S)			Arm B - PSD5			Arm C – L2027 (N)		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2028 AM with Construction	-	-	-	< 1	17.22	0.02	< 1	2.80	-
2028 PM with Construction	-	-	-	< 1	10.40	0.03	< 1	1.77	-

252. The summary of performance analysis indicates that proposed Junction 26 would be operating with negligible queues and delays and within capacity (i.e. RFC<0.85) during the peak hours in 2028, during the Construction Phase. There would be no increase in queue length and a maximum increase of 17.22 seconds in delay.

Junction 27

253. A summary of the results for the existing T- junction between the N52 and Kinnity Road (Junction 27) for the AM peak (08:30 - 09:30) and PM peak (15:00 - 16:00) hours during the Construction Phase are provided in Table 10.21.

Table 10.21: Junction 27, N52 and Kinnity Road - T-Junction

Junction 27: N52 and Kinnity Road - T-Junction									
Year & Time	Arm A - N52 (E)			Arm B - Kinnity Road			Arm C - N52 (W)		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2024 AM	-	-	-	1	16.53	0.47	< 1	1.91	-
2024 PM	-	-	-	1	14.93	0.40	< 1	1.61	-
2030 AM no Construction	-	-	-	1	19.48	0.55	1	2.08	-
2030 PM no Construction	-	-	-	1	17.15	0.47	< 1	2.05	-
2030 AM with Construction	-	-	-	2	23.89	0.59	< 1	2.31	-
2030 PM with Construction	-	-	-	2	20.31	0.52	< 1	1.92	-

254. The summary of performance analysis indicates that Junction 27 would be operating with negligible queues and delays and within capacity (i.e. RFC<0.85) during the peak hours in 2030, during the Construction Phase. There would be a maximum increase of one PCU in queue length and 4.41 seconds in delay.

Junction 28

255. A summary of the results for the proposed junction for the Construction Compound (CC5) on the R421 regional road (Junction 28) for the AM peak (08:15 - 09:15) and PM peak (17:00 - 18:00) hours during the Construction Phase are provided in Table 10.22.

Table 10.22: Junction 28, Proposed Construction Compound (CC5) on the R421 Regional Road - Staggered Junction

Junction 28: Proposed Construction Compound (CC5) on the R421 Regional Road – Staggered Junction												
Year & Time	Arm A - R421 (N)			Arm B – CC5 West			Arm C – R421 (S)			Arm D – CC5 East		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2030 AM with Construction	< 1	6.45	0.12	-	-	-	-	-	-	< 1	15.94	0.05
2030 PM with Construction	< 1	8.48	0.02	-	-	-	-	-	-	< 1	9.24	0.17

256. The summary of performance analysis indicates that proposed Junction 28 would be operating with negligible queues and delays and within capacity (i.e. RFC<0.85) during the peak hours in 2030, during the Construction Phase. There would be a maximum increase of one PCU in queue length and 15.94 seconds in delay.

Junction 29

257. A summary of the results for the existing roundabout between the N52 national road and R421 regional road (Junction 29) for the AM peak (08:00 - 09:00) and PM peak (16:45 - 17:45) hours during the Construction Phase are provided in Table 10.23.

Table 10.23: Junction 29, N52 National Road and R421 Regional Road – Roundabout

Junction 29: N52 National Road and R421 Regional Road – Roundabout									
Year & Time	Arm A - N52 (ESE)			Arm B - R421			Arm C - N52 (WNW)		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2024 AM	< 1	5.38	0.25	< 1	6.00	0.20	1	6.95	0.37
2024 PM	1	5.64	0.34	< 1	5.22	0.09	< 1	5.29	0.27
2030 AM no Construction	1	5.84	0.28	< 1	6.23	0.22	1	7.43	0.41
2030 PM no Construction	1	6.14	0.38	< 1	5.46	0.10	1	5.57	0.30
2030 AM with Construction	1	6.33	0.38	1	7.00	0.24	1	7.48	0.44
2030 PM with Construction	1	6.43	0.42	< 1	6.26	0.17	1	6.39	0.38

258. The summary of performance analysis indicates that Junction 29 is expected to operate below the design capacity 0.85 RFC during peak construction in 2030. During peak construction there would be a temporary increase, with the highest increase expected to be 0.10 RFC in 2030 on Arm A in the AM peak. This equates to no increase in queue length and 0.47 seconds in delay.

Junction 30

259. A summary of the results for the existing roundabout between the N52 national road and R420 regional road (Junction 30) for the AM peak (08:15 - 09:15) and PM peak (16:30 - 17:30) hours during the Construction Phase are provided in Table 10.24.

Table 10.24: Junction 30, N52 National Road and R420 Regional Road - Roundabout

Junction 30: N52 National Road and R420 Regional Road - Roundabout												
Year & Time	Arm A - N52 (N)			Arm B - R420 (E)			Arm C - N52 (S)			Arm D - R420 (W)		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2024 AM	5	20.48	0.75	9	57.7	0.88	8	42.73	0.86	4	32.21	0.66
2024 PM	18	68.93	0.96	9	82.13	0.88	12	50.21	0.94	15	64.01	0.95
2029 AM no Construction	9	40.11	0.86	27	141.17	1.03	19	87.47	0.98	6	49.38	0.77
2029 PM no Construction	50	165.45	1.07	19	142.63	0.99	33	121.36	1.02	37	149.87	1.06
2029 AM with Construction	15	53.02	0.96	41	211.78	1.09	22	106.18	0.98	7	51.85	0.81
2029 PM with Construction	50	167.12	1.12	22	160.29	1.02	36	129.09	1.04	53	208.18	1.14

260. The summary of performance analysis indicates that Junction 30 is currently operating above the design 0.85 RFC in 2024 in the AM and PM peak.

261. This continues to increase in 2029 without the construction phase of the Proposed Project. Arm A N52 (N), Arm B R420 (E) and Arm C N52(S) exceed 0.85 RFC in the AM Peak. In the PM Arm B R420 (E) Arm C N52(S) and Arm D R420 (W) exceed 0.85 RFC.

262. During the AM peak of the construction phase there would be a temporary increase of 0.10 RFC on Arm A N52 (N), 0.06 RFC on Arm B R420 (E) and 0.04 RFC Arm D R420 (W). This would result in a queue length increase of four PCU on Arm A N52 (N), fourteen PCU on Arm B R420 (E), three PCU in Arm C N52 (S) and one PCU in Arm D R420 (W), and maximum increase in delays of 12.91 seconds, 70.61 seconds, 18.71 seconds and 2.47 seconds respectively.

263. During the PM peak of the construction phase there would be a temporary increase of 0.05 RFC on Arm A N52 (N), 0.03 RFC on Arm B R420 (E), 0.02 RFC on Arm C N52(S) and 0.08 RFC Arm D R420 (W). This would result in a queue length increase of three PCU on Arm B R420 (E), three PCU in Arm C N52 (S) and sixteen PCU in Arm D R420 (W), and maximum increase in delays of 1.67 seconds, 17.66 seconds, 7.73 seconds and 58.31 seconds respectively.

264. As outlined in TMP (Appendix 7.2 of the EIAR), active monitoring will be carried out during Construction Phase by the appointed Contractor(s). The appointed Contractor(s) will liaise with the local authority to mitigate the impacts of any additional traffic delays at Junction 30.

265. The mitigation measures include installing temporary signals to optimise junction movements and limiting the HV movements.

Junction 32

266. A summary of the results for the existing roundabout between the N80 national road and R422 regional road (Junction 32) for the AM peak (08:30 - 09:30) and PM peak (16:45 - 17:45) hours during the Construction Phase are provided in Table 10.25.

Table 10.25: Junction 32, N80 National Road and R422 Regional Road - Roundabout

Junction 32: N80 National Road and R422 Regional Road - Roundabout									
Year & Time	Arm A - N80 (S)			Arm B - R422			Arm C - N80 (N)		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2024 AM	1	6.14	0.42	1	19.17	0.53	3	20.59	0.66
2024 PM	3	9.38	0.62	2	29.71	0.65	3	23.59	0.70
2031 AM no Construction	1	7.15	0.48	2	29	0.60	4	27.3	0.72
2031 PM no Construction	3	11.96	0.73	5	71.3	0.77	6	39.25	0.87
2031 AM with Construction	1	7.74	0.51	3	40.15	0.66	5	32.24	0.75
2031 PM with Construction	4	13.49	0.72	7	91.70	0.85	11	69.21	0.88

267. The summary of performance analysis indicates Junction 32 will operate above the design 0.85 RFC in the PM Peak in 2031 without the construction phase of the Proposed Project. Arm C N80 (N) exceed 0.85 RFC in the PM Peak with an RFC of 0.87.

268. During the PM peak of the construction phase the temporary increase of RFC 0.01 on Arm C N80 (N) and 0.08 RFC on Arm B R422. The equates to an increase in queue length five PCU on Arm C N80 (N) and a maximum increase in delays of 29.96 seconds respectively. For Arm B R422 this equates to an increase in queue length two PCU and a maximum increase in delays of 20.4 seconds respectively

269. During the AM Peak Junction 32 would be operating with negligible queues and delays and within capacity (i.e. RFC<0.85) during the peak hours in 2031.

Junction 33

270. A summary of the results for the existing roundabout between the R422 regional road and Connolly Street (Junction 33) for the AM peak (08:15 - 09:15) and PM peak (16:45 - 17:45) hours during the Construction Phase are provided in Table 10.26.

Table 10.26: Junction 33, R422 regional road and Connolly Street - Roundabout

Junction 33: R422 regional road and Connolly Street - Roundabout									
Year & Time	Arm A – R422 (NE)			Arm B – Connolly Street			Arm C – R422 (W) Sarsfield Street		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2024 AM	3	21.46	0.71	3	24.76	0.74	3	27.40	0.74
2024 PM	5	32.73	0.82	3	26.23	0.77	3	22.69	0.71
2031 AM no Construction	7	38.75	0.85	7	57.91	0.88	6	46.50	0.86
2031 PM no Construction	12	60.59	0.93	7	47.92	0.87	6	41.89	0.82
2031 AM with Construction	10	56.45	0.93	10	72.38	0.92	8	56.67	0.88
2031 PM with Construction	15	80.66	0.97	9	60.23	0.89	11	68.42	0.92

271. The summary of performance analysis indicates Junction 33 will operate above the design 0.85 RFC in the AM and PM Peak in 2031 without the construction phase of the Proposed Project.

272. During the AM peak of the construction phase the temporary increase of RFC 0.08 on Arm A R422 (NE), 0.04 RFC on Arm B Connolly Street and 0.02 RFC on Arm C R422 (W). The equates to an increase in queue length three PCU on Arm A R422 (NE), three PCU on Arm B Connolly Street and two PCU on Arm C R422 (W) and maximum increase in delays of 17.7 seconds, 14.47 seconds, and 10.17 seconds respectively.

273. During the PM peak of the construction phase the temporary increase of RFC 0.05 on Arm A R422 (NE), 0.02 RFC on Arm B Connolly Street and 0.10 RFC on Arm C R422 (W). The equates to an increase in queue length three PCU on Arm A R422 (NE), two PCU on Arm B Connolly Street and five PCU on Arm C R422 (W) and maximum increase in delays of 20.7 seconds, 12.31 seconds, and 26.53 seconds respectively.

Junction 36

274. A summary of the results for the existing staggered junction between the R400 and R402 regional roads, (Junction 36) for the AM peak (07:45 - 08:45) and PM peak (16:45 - 17:45) hours during the Construction Phase are provided in Table 10.27.

Table 10.27: Junction 36, R400 and R402 Regional Roads – Staggered Junction

Junction 36: R400 and R402 Regional Roads – Staggered Junction												
Year & Time	Arm A - R402 (WNW)			Arm B - R400 (NNE)			Arm C - R402 (ESE)			Arm D - R400 (SW)		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2024 AM	< 1	5.19	0.06	< 1	12.25	0.22	< 1	5.33	0.05	< 1	9.28	0.05
2024 PM	< 1	4.77	0.02	< 1	9.83	0.11	< 1	4.92	0.05	< 1	9.39	0.09
2029 AM no Construction	< 1	5.21	0.06	< 1	13.34	0.26	< 1	5.37	0.06	< 1	9.78	0.06
2029 PM no Construction	< 1	4.75	0.02	< 1	10.30	0.12	< 1	4.91	0.05	< 1	9.92	0.11
2029 AM with Construction	< 1	5.84	0.09	1	14.54	0.28	< 1	5.87	0.07	< 1	11.66	0.11
2029 PM with Construction	< 1	6.16	0.04	< 1	11.33	0.14	< 1	5.41	0.07	< 1	10.99	0.13

275. The summary of performance analysis indicates that Junction 36 is expected to operate below the design capacity 0.85 RFC during peak construction in 2029. During peak construction there would be no increase in queue length and a temporary increase 1.88 seconds in delay.

Junction 38

276. A summary of the results for the existing staggered junction between the R419 and R420 regional roads, (Junction 38) for the AM peak (08:00 - 09:00) and PM peak (16:45 - 17:45) hours during the Construction Phase are provided in Table 10.28.

Table 10.28: Junction 38, R419 and R420 Regional Roads – Staggered Junction

Junction 38: R419 and R420 Regional Roads – Staggered Junction												
Year & Time	Arm A - R420			Arm B - R419 Spa Street			Arm C - R420 Link Road			Arm D – Market Square One Way		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2024 AM	< 1	4.26	0.02	4	37.83	0.80	< 1	9.11	0.22	-	-	-
2024 PM	< 1	4.63	0.07	1	19.70	0.57	1	9.97	0.47	-	-	-
2029 AM no Construction	< 1	4.15	0.02	8	67.25	0.90	1	9.51	0.25	-	-	-
2029 PM no Construction	< 1	4.55	0.08	2	25.50	0.65	2	11.32	0.54	-	-	-
2029 AM with Construction	< 1	4.18	0.02	10	87.91	0.94	1	10.34	0.27	-	-	-
2029 PM with Construction	< 1	4.57	0.08	3	36.5	0.75	2	12.55	0.57	-	-	-

277. The summary of performance analysis indicates Arm B R419 of Junction 33 will operate above the design 0.85 RFC in the AM in 2029 without the construction phase of the Proposed Project.

278. During the AM peak of the construction phase the temporary increase of RFC 0.04 on Arm B R419. The equates to an increase in queue length two PCU and increase in delays of 20.66 seconds.

279. During the PM Peak Junction 38 would be operating with negligible queues and delays and within capacity (i.e. RFC<0.85) during the peak hours in 2029.

Junction 39

280. A summary of the results for the proposed junction for the Pipe Storage Depot (PSD8) T-junction on the R402 regional road (Junction 39) for the AM peak (07:45 - 08:45) and PM peak (16:45 - 17:45) hours during the Construction Phase are provided in Table 10.29.

Table 10.29: Junction 39, Proposed Pipe Storage Dept (PSD8) on the R402 Regional Road – T-Junction

Junction 39: Proposed Pipe Storage Dept (PSD8) on the R402 Regional Road – T-Junction									
Year & Time	Arm A - R402 (S)			Arm B – PSD8			Arm C – R402 (N)		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2029 AM with Construction	-	-	-	< 1	12.02	0.02	< 1	1.13	-
2029 PM with Construction	-	-	-	< 1	10.31	0.03	< 1	0.68	-

281. The summary of performance analysis indicates that proposed Junction 39 would be operating with negligible queues and delays and within capacity (i.e. RFC<0.85) during the peak hours in 2029, during the Construction Phase. There would be a maximum increase of one PCU in queue length and 12.02 seconds in delay.

Junction 40

282. A summary of the results for the existing T-junction between the R401 and R402 regional roads (Junction 40) for the AM peak (08:00 - 09:00) and PM peak (16:30 - 17:30) hours during the Construction Phase are provided in Table 10.30.

Table 10.30: Junction 40, R401 and R402 Regional Roads - T-Junction

Junction 40: R401 and R402 Regional Roads - T- Junction									
Year & Time	Arm A – R402 (NE)			Arm B - R401			Arm C - R402 (SW)		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2024 AM	-	-	-	< 1	12.41	0.18	< 1	1.21	-
2024 PM	-	-	-	1	13.38	0.26	< 1	0.39	-
2029 AM no Construction	-	-	-	1	13.63	0.21	< 1	1.40	-
2029 PM no Construction	-	-	-	1	15.14	0.32	< 1	0.39	-
2029 AM with Construction	-	-	-	1	13.42	0.21	< 1	1.33	-
2029 PM with Construction	-	-	-	1	15.96	0.32	< 1	0.49	-

283. The summary of performance analysis indicates that Junction 40 is expected to operate below the design capacity 0.85 RFC during peak construction in 2029. During peak construction there would be no increase in queue length and 0.82 seconds in delay.

Junction 43

284. A summary of the results for the proposed junction for the Construction Compound (CC6) on the R403 regional road (Junction 43) for the AM peak (07:30 – 08:30) and PM peak (17:00 – 18:00) hours during the Construction Phase are provided in Table 10.31.

Table 10.31: Junction 43, Proposed Construction Compound (CC6) on the R403 – T-Junction

Junction 43: Proposed Construction Compound (CC6) on the R403 - T-Junction									
Year & Time	Arm A - R403 (N)			Arm B - CC6			Arm C - R403 (S)		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2030 AM with Construction	-	-	-	2	25.38	0.63	< 1	1.66	-
2030 PM with Construction	-	-	-	< 1	13.28	0.09	1	6.93	-

285. The summary of performance analysis indicates that proposed Junction 43 would be operating with negligible queues and delays and within capacity (i.e. RFC<0.85) during the peak hours in 2030, during the Construction Phase. There would be a maximum increase of two PCU in queue length and 25.38 seconds in delay.

Junction 45

286. A summary of the results for the existing crossroads between the R403, R415 regional roads and L1020 local road, (Junction 45) for the AM peak (07:45 - 08:45) and PM peak (16:00 - 17:00) hours during the Construction Phase are provided in Table 10.32.

Table 10.32: Junction 45, R403, R415 Regional Roads and L1020 Local Road - Crossroads

Junction 45: R403, R415 Regional Roads and L1020 Local Road - Crossroads												
Year & Time	Arm A - R403 (W)			Arm B - L1020			Arm C - R403 (E)			Arm D - R415		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2024 AM	4	3.51	0.32	< 1	8.15	0.22	< 1	4.03	0.17	1	11.16	0.32
2024 PM	2	2.76	0.20	< 1	9.34	0.16	3	7.19	0.41	3	19.47	0.49
2030 AM no Construction	5	4.01	0.38	1	9.44	0.27	1	4.60	0.21	1	14.42	0.41
2030 PM no Construction	2	3.00	0.24	1	10.34	0.19	5	8.72	0.48	4	28.16	0.62
2030 AM with Construction	5	4.46	0.41	1	11.87	0.30	2	5.84	0.33	3	24.01	0.51
2030 PM with Construction	4	3.74	0.35	1	11.68	0.21	6	10.02	0.53	5	35.07	0.67

287. The summary of performance analysis indicates that Junction 45 is expected to operate below the design capacity 0.85 RFC during peak construction in 2030. There would be a maximum increase of two PCU in queue length and 9.59 seconds in delay.

Junction 50

288. A summary of the results for the existing roundabout between the R407, Clane Ring Road and An Crochán (Junction 50) for the AM peak (07:15 - 08:15) and PM peak (17:15 - 18:15) hours during the Construction Phase are provided in Table 10.33.

Table 10.33: Junction 50 R407, Clane Ring Road and An Crochán - Roundabout

Junction 50: R407, Clane Ring Road and An Crochán - Roundabout												
Year & Time	Arm A - R407 (NW)			Arm B - Clane Ring Road			Arm C - R407 (SE)			Arm D - An Crochán		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2024 AM	5	24.98	0.80	7	37.96	0.89	5	15.38	0.80	< 1	11.46	0.21
2024 PM	7	47.92	0.85	4	20.47	0.78	13	52.83	0.93	< 1	9.05	0.20
2030 AM no Construction	17	71.63	0.94	30	146.41	1.05	13	40.35	0.93	1	16.34	0.33
2030 PM no Construction	25	158.90	1.03	9	37.89	0.91	53	188.88	1.08	< 1	10.01	0.25
2030 AM with Construction	28	114.45	1.02	59	302.25	1.14	16	48.93	0.99	1	20.47	0.36
2030 PM with Construction	47	313.74	1.20	16	64.01	0.96	77	316.51	1.16	< 1	10.81	0.27

289. The summary of performance analysis indicates that Junction 50 is currently operating above the design 0.85 RFC in 2024 in the AM and PM peak.

290. This continues to increase in 2030 without the construction phase of the Proposed Project. Arm A R407(NW), Arm B Clane Ring Road and Arm C R407 (SE) exceed 0.85 RFC in the AM and PM Peak. Am D An Crochán does not exceed 0.85 RFC at any stage.

291. During the AM peak of the construction phase there would be a temporary increase of 0.08 RFC on Arm A R407(NW), 0.09 RFC on Arm B Clane Ring Road and 0.06 RFC Arm C R407 (SE). This would result in a queue length increase of ten PCU on Arm A R407(NW), 19 PCU on Arm B Clane Ring Road and three PCU on Arm C R407 (SE) and maximum increase in delays of 42.82 seconds, 155.84 seconds, and 8.58 seconds respectively.

292. During the PM peak of the construction phase there would be a temporary increase of 0.17 RFC on Arm A R407(NW), 0.05 RFC on Arm B Clane Ring Road and 0.08 RFC Arm C R407 (SE). This would result in a queue length increase of twenty two PCU on Arm A R407(NW), seven PCU on Arm B Clane Ring Road and twenty four PCU on Arm C R407 (SE) and maximum increase in delays of 154.84 seconds, 26.12 seconds, and 127.63 seconds respectively.

293. As outlined in TMP (Appendix 7.2 of the EIAR), active monitoring will be carried out during Construction Phase by the appointed Contractor(s). The appointed Contractor(s) will liaise with the local authority to mitigate the impacts of any additional traffic delays at Junction 50.

294. The mitigation measures include installing temporary signals to optimise junction movements and limiting the HV movements.

Junction 57

295. A summary of the results for the proposed junction for the Flow Control Valve (FCV) on the L1016 local road (Junction 57) for the AM peak (08:15 – 09:15) and PM peak (17:00 – 18:00) hours during the Construction Phase are provided in Table 10.34.

Table 10.34: Junction 57, Proposed Flow Control Valve (FCV) on the L1016 – T-Junction

Junction 57: Proposed Flow Control Valve (FCV) on the L1016 - T-Junction									
Year & Time	Arm A – L1016 (N)			Arm B - FCV			Arm C – L1016 (S)		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2031 AM with Construction	-	-	-	< 1	13.98	0.06	-	-	-
2031 PM with Construction	-	-	-	< 1	14.58	0.06	-	-	-

296. The summary of performance analysis indicates that proposed Junction 57 would be operating with negligible queues and delays and within capacity (i.e. RFC<0.85) during the peak hours in 2031, during the Construction Phase. There would be a maximum increase of 14.58 seconds in delay.

10.4.3.2 Summary of Construction Phase Traffic Assessment

297. Eight junctions would exceed the design capacity of 0.85 RFC during the Construction Phase peak year as shown in Table 10.5, Table 10.14, Table 10.15, Table 10.24, Table 10.25, Table 10.26, Table 10.28 and Table 10.33.

298. It is noted that, with the exception of Junction 2 (Birdhill Roundabout), these junctions are likely to operate above capacity in the future assessment year in the absence of Construction Phase traffic. Further, additional Construction Phase related traffic contribute only marginally to the future baseline conditions that are already constrained.

299. The eight junctions that would exceed the design capacity are:

- Junction 2 (Birdhill Roundabout) (Figure 3, Annex B)
- Junction 18 (mini-Roundabout in Birr) (Figure 5, Annex B)

- Junction 20 (T-junction in Roscrea) (Figure 5, Annex B)
- Junction 30 (Roundabout in Tullamore) (Figure 6, Annex B)
- Junction 32 (N80/R422 Roundabout Mountmellick) (Figure 7, Annex B)
- Junction 33 (R422/Connolly Street Roundabout Mountmellick) (Figure 7, Annex B)
- Junction 38 (R419/R420 Staggered Junction Portarlington) (Figure 7, Annex B)
- Junction 50 (Roundabout in Clane) (Figure 9, Annex B).

300. Junction 18, 30 and 50 shows significant temporary increase in PCU's lengths that may require monitoring during the Construction Phase.

301. Junction 18 is central location providing access to both the M7 and M4/M6 motorways to CC0 (RWI&PS), CC1 (WTP), PSD 1 and 12 no. access points. For the purposes of the assessment, a reasonable worst-case scenario has been considered in which this junction is assumed to accommodate traffic for CC0 (RWI&PS), CC1 (WTP), PSD 1 and 12 no. access points. This approach ensures a robustly assessment.

302. Junction 30 is also a central location providing access to the M7 motorways to CC5, PSD6 and 5 no. access points. For the purposes of the assessment, a reasonable worst-case scenario has been considered in which this junction is assumed to accommodate traffic for CC5, PSD6 and 5 no. access points. This approach ensures a robustly assessment.

303. Junction 50 provides a link to the M7 motorway to PSD9, PSD10 and 5 no. access points. For the purposes of the assessment, a reasonable worst-case scenario has been considered in which this junction is assumed to accommodate traffic for PSD9, PSD10 and 5 no. access points. This approach ensures a robustly assessment.

304. As outlined in TMP (Appendix 7.2 of the EIAR), active monitoring will be carried out during Construction Phase by the appointed Contractor(s). The appointed Contractor(s) will liaise with the local authority to mitigate the impacts of any additional traffic delays.

305. The predicted increases in queue lengths from the junction models are temporary in nature. In addition, the actual queues at the junctions are expected to fluctuate from minute to minute as traffic flows vary.

306. The mitigation measures include use of temporary signals to manage junction movements and limiting the HV movements during the peak hours.

10.4.4 Operational Phase

10.4.4.1 Determination if Transport Assessment Required

307. As per the Construction Phase the TTA thresholds were applied as shown in Table 10.35.

Table 10.35: Requirements of Transport Assessment (Operation)

Junction	AM Peak	AM Operation Generated Traffic	% Increase	PM Peak	PM Operation Generated Traffic	% Increase
Junction 3	592	91	15%	517	23	4%
Junction 4	483	33	7%	453	33	7%
Junction 13	29	14	48%	29	14	48%
Junction 23	39	6	16%	36	6	17%
Junction 56	1013	14	1%	965	14	1%
Junction 57	590	1	0%	436	1	0%

308. The junctions shown in Table 10.35 have been assessed (three out of the six junctions). A complete set of outputs from JUNCTIONS 10 for 3 junctions modelled are included in Annex A.

Junction 3

309. A summary of the results for the proposed junction into the CC0 on the R494 regional road (Junction 3) for the AM peak (07:30 – 08:30) and PM peak (16:15 - 17:15) hours during the Operational Phase are provided in Table 10.36.

Table 10.36: Junction 3, Proposed CC0 on the R494 Regional Road – T-Junction

Junction 3: Proposed CC0 on the R494 Regional Road – T-Junction									
Year & Time	Arm A – R494 (S)			Arm B – CC0			Arm C – R494 (N)		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2032 AM with Development	-	-	-	-	-	-	< 1	0.44	-
2032 PM with Development	-	-	-	< 1	9.11	0.06	-	-	-
2037 AM with Development	-	-	-	-	-	-	< 1	0.42	-
2037 PM with Development	-	-	-	< 1	9.88	0.06	-	-	-
2047 AM with Development	-	-	-	-	-	-	< 1	0.44	-
2047 PM with Development	-	-	-	< 1	9.44	0.05	-	-	-

310. The summary of performance analysis indicates that proposed Junction 3 would be operating with negligible queues and delays and within capacity (i.e. RFC <0.85) during the peak hours of 2047, during the Operational Phase. There would be an increase in queue length of 1 PCU and a maximum increase of 9.44 seconds in delay.

Junction 13

311. A summary of the results for the proposed junction into the BPT on the L1064 local road (Junction 13) for the AM peak (08:45 - 09:45) and PM peak (17:00 - 18:00) hours during the Operational Phase are provided in Table 10.37.

Table 10.37: Junction 13, Proposed BPT on the L1064 Local Road – T-Junction

Junction 13: Proposed BPT on the L1064 Local Road – T-Junction									
Year & Time	Arm A - L1064 (N)			Arm B - BPT			Arm C - L1064 (S)		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2032 AM with Development	-	-	-	-	-	-	< 1	3.61	-
2032 PM with Development	-	-	-	< 1	7.32	0.02	< 1	1.03	-
2037 AM with Development	-	-	-	-	-	-	-	3.27	-
2037 PM with Development	-	-	-	< 1	7.45	0.02	< 1	0.99	-
2047 AM with Development	-	-	-	-	-	-	-	3.40	-
2047 PM with Development	-	-	-	< 1	7.66	0.02	< 1	0.70	-

312. The summary of performance analysis indicates that proposed Junction 13 would be operating with negligible queues and delays and within capacity (i.e. RFC <0.85) during the peak hours of 2047, during the Operational Phase. There would be no increase in queue length and a maximum increase of 0.70 seconds in delay.

Junction 23

313. A summary of the results for the proposed junction into the BPS on the L3003 local road (Junction 23) for the AM peak (08:30 - 09:30) and PM peak (17:30 - 18:30) hours during the Operational Phase are provided in Table 10.38.

Table 10.38: Junction 23, Proposed BPS on the L3003 Local Road – T-Junction

Junction 23: Proposed Booster Pumping Station on the L3003 - T-Junction									
Year & Time	Arm A - L3003 (W)			Arm B - BPS			Arm C - L3003 (E)		
	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC	Queue Length (PCU)	Delay (s)	RFC
2032 AM with Development	-	-	-	< 1	< 1	< 1	< 1	0.36	-
2032 PM with Development	-	-	-	-	-	-	-	-	-
2037 AM with Development	-	-	-	< 1	< 1	< 1	< 1	0.32	-
2037 PM with Development	-	-	-	-	-	-	-	-	-
2047 AM with Development	-	-	-	< 1	< 1	< 1	< 1	0.28	-
2047 PM with Development	-	-	-	-	-	-	-	-	-

314. The summary of performance analysis indicates that proposed Junction 23 would be operating with negligible queues and delays and within capacity (RFC<0.85) during the peak hours of 2047, during the Operational Phase. There would be no increase in queue length and a maximum increase of 0.28 seconds in delay

11. Other Road Issues

11.1 Construction Phase

11.1.1 Road Safety

315. An investigation was undertaken of road collision data between 2006 and 2016 from the Road Safety Authority online statistics, which provided details of all collisions on the Haul Roads of the Proposed Project. No recent data can be obtained from the Road Safety Authority due to General Data Protection Regulation restrictions. All collision data is shown in Figure 18 to Figure 21 (Annex B), which is subdivided into fatal, serious and minor; 4% of collisions were fatal and 8% were serious, with the remaining collisions along the Haul Roads in the minor category. This data has been considered for the Road Safety Audits undertaken for the Proposed Project.

11.1.2 Road Safety Audit Stage 1

316. Stage 1 Road Safety Audits have been completed to inform the design of the Proposed Project.

11.1.3 Parking Provision

317. Table 11.1 shows the parking spaces provided at the infrastructure sites as outlined in Chapter 5.

Table 11.1: Construction Phase Car Parking

CC and PSD	Principal/Satellite	Proposed Parking
RWI&PS (CC0)	Satellite Construction Compound	62
WTP (CC1)	Principal Construction Compound	300
CC2	Principal Construction Compound	300
BPT (CC3)	Satellite Construction Compound	57
BPS (CC4)	Satellite Construction Compound	57
CC5	Principal Construction Compound	300
CC6	Principal Construction Compound	300
FCV	-	-
TPR (CC7)	Satellite Construction Compound	57
PSD1-PSD10	-	25

11.2 Operational Phase

11.2.1 Parking Provision

318. Specific guidelines for car parking at the proposed Infrastructure Sites are not set out in the Tipperary County Council Development Plan, Offaly Development Plan or South Dublin Development Plan, but considering the number of employees, the number of parking spaces provided is sufficient to provide adequate parking for both staff and visitors. Table 11.2 shows a summary of the parking provided.

Table 11.2: Operation Phase Car Parking

Infrastructure Site	Proposed Parking	
	Standard Parking	Electric Vehicle Parking
RWI&PS	14	2
WTP	44	8
BPT	8	2
BPS	3	1
FCV	4	-
TPR	10	-

319. There are 16 car parking spaces proposed at the RWI&PS. This is considered sufficient to cater for the number of staff that would be accessing the RWI&PS at any given time.

320. There are 44 car parking spaces proposed at the WTP, of which 26 car parking spaces at the future Visitors/Interpretive Centre, which is located at the southern end of the Control Building. This is considered sufficient to cater for the number of staff that would be accessing the WTP at any given time.

321. A minimum of four car parking spaces would be provided on site for staff members at the BPT.

322. A minimum of four car parking spaces would be provided on site for staff members at the BPS.

323. A minimum of four car parking spaces would be provided on site for staff members at the FCV.

324. A minimum of 10 car parking spaces would be provided on site for staff members at the TPR.

11.2.2 Pedestrians and Cyclists

325. As part of the Proposed Project, drop kerbs and tactile paving will be provided at the proposed infrastructure site accesses. Internal to the infrastructure sites, footways and pedestrian crossing points will be included in the design.

326. No specific provision has been made to accommodate cyclists within the proposed infrastructure sites.

327. Improvements to existing pedestrian and cycle infrastructure beyond the infrastructure site entrances will not be delivered as part of the Proposed Project.

11.2.3 Public Transport

328. The next sections describe how feasible it would be for staff to travel to the infrastructure sites via public transport.

11.2.3.1 RWI&PI and WTP

329. There is no regular public transport service in operation in the immediate vicinity of the RWI&PS or the WTP, however there are public bus services that run from Birdhill to Limerick or Athlone, via Nenagh and Birr. Birdhill is a 2km to 2.5km walk from the RWI&PS and the WTP. Typically, within Transport Strategies that have been produced by, for example, the National Transport Authority, the expectation is that people would walk up to 3km and cycle 5km to their place of work. Therefore, including the length of the entrance roads into the RWI&PS and WTP, the total walking distance is 3km to 3.5km from the nearest bus stop. Due to the length of the walk (3 to 3.5km), combined with the bus journey time it is not considered as a potential means of accessing work for the majority of RWI&PI and WTP staff. Therefore, it is not expected that the staff working at the RWI&PS or the WTP would utilise the existing bus services.

11.2.3.2 BPT

330. There is no regular public transport service in operation in the immediate vicinity of the BPT, however there are public bus services that run from Nenagh to Birr via the N52. From the N52 in Borrisokane would be an 8km walk to the BPT. There is also a train station in Cloughjordan, from Cloughjordan would be a 5km walk to the BPT. This exceeds the distance people would typically walk or cycle to their place of work. For the majority of BPT staff this is not considered as a potential means of accessing work, and it is therefore not expected that the staff working at the BPT would utilise the existing public services.

11.2.3.3 BPS

331. There is no regular public transport service in operation in the immediate vicinity of the BPS, however there are public bus services that run from Kinnitty to Birr, via the R440. From Kinnitty would be a 4 km walk to the BPS. This exceeds the distance people would typically walk or cycle to their place of work and as a result it is not considered practical for the majority of staff to make a combined journey of a 4km walk and a bus journey. Therefore, it is not expected that the staff working at the BPS would utilise the existing bus services.

11.2.3.4 FCV

332. There is no regular public transport service in operation in the immediate vicinity of the FCV, however there are public bus services in Celbridge a 3.6 km walk to the BPS. This exceeds the distance people would typically walk or cycle to their place of work and as a result it is not considered practical for the majority of staff to make a combined journey of a 3.6km walk and a bus journey. Therefore, it is not expected that the staff working at the FCV would utilise the existing bus services.

11.2.3.5 TPR

333. There are numerous bus stops located along the R120 regional road within 200m of the proposed TPR entrance. The bus route provides a link between Newcastle and Dublin City Centre, which is a viable option for the staff working at the TPR.

12. Conclusions and Mitigations

334. The Proposed Project is a water supply pipeline involving the abstraction and pumping of raw water from the Lower River Shannon at Parteen Basin; treatment of the water nearby at Birdhill, County Tipperary; and pumping of the treated water to a high point near Cloughjordan, County Tipperary and on through the Midlands to a termination point at Peamount, in County Dublin (within the administrative area of South Dublin County Council).

335. In total the pipeline would be approximately 172km in length and would be supported by 6 permanent Infrastructure Sites. The pipeline would traverse the administrative areas of Tipperary County Council, Offaly County Council, Kildare County Council and South Dublin County Council. In, addition, the works needed to provide power to two of the Infrastructure Sites (referred to as the 38kV Uprate Works) would cross Clare County Council, Limerick City and County Council, (as well as Tipperary).

336. The 6 no. infrastructure sites which consist of the Raw Water Intake and Pumping Station (RWI&PS), Water Treatment Plant (WTP), Break Pressure Tank (BPT), Booster Pumping Station (BPS), Flow Control Valve (FCV) and Termination Point Reservoir (TPR).

337. The objective of this TTA Report was to assess the potential traffic impacts associated with the Proposed Project. The assessment analysed the expected volume of traffic that would be generated during the Construction and Operational Phases of the Proposed Project and assessed the impact that this traffic would have on the operational capacity of the road network.

338. The TTA includes a total of 57 junctions, comprising both existing and proposed junctions across the Proposed Project.

339. An assessment to determine if a Transport Assessments was required for the construction and operation phase of the Proposed Project was completed. The assessment utilised the thresholds set out in TII TTA Guidelines (PE-PDV-02045, May 2014), that a Transport Assessment is required if traffic to and from the development exceeds 10% of the traffic flow on the adjoining roads.

12.1 Construction Phase

12.1.1 Conclusions

340. Traffic surveys were carried at 76 locations: including 39 no. junction turning counts and 37 no. automatic traffic counts as agreed with the local authorities during scoping stage. 18 no. of the automatic traffic counts was used to determine baseline data for proposed junctions (infrastructure sites, CCs and PSDs). The additional automatic traffic counts were used to provide baselines information for air and noise modelling.

341. These surveys were carried out by TRACSIS in September 2024 and March 2025. The traffic counts were carried out as per TII Data Collection PE-PAG-02016 during a neutral period; Thursday in September or November for the junction counts and for a two week period for automatic traffic counts.

342. During scoping meetings with the local authorities, the proposed Haul Roads were agreed, and the local authorities highlighted locations to the design team where amendments were required to reduce potential traffic impacts. These amendments to the Haul Roads were implanted.

343. It was considered that the Proposed Project would be completed through four separate sections as this was considered to represent the best balance between project scale and grouping of various work elements while recognising the geographic linearity of the project across the country.

344. Each of these construction sections would have a Principal Construction Compound, which would act as the appointed Contractor's central strategic. In addition to these four Principal Construction Compounds, there would be four secondary Satellite Construction Compounds needed to build the other Infrastructure Sites. There are also 9 no. Pipe Storage Depots that would take direct delivery of sections of pipe.

345. The LVs generated traffic was distributed considering the location of the surrounding towns and using the latest Central Statistics Office (CSO) from 2022 to determine the population for the surrounding towns a percentage could be allocated from each origin.

346. The shuttle bus generated traffic was distributed where the origin for each construction section is the Principal Construction Compound for that section.

347. The HVs generated traffic was distributed by considering each junction individually and assuming the origin of the HVs travelling to/from the M4/M6 motorway, or to/from the M7 motorway network. This allows for a reasonable worst-case as the origin of construction material i.e. pipeline for infrastructure and surrounding material is unknown. The required HVs for each destination have been determined and applied to the respective junctions in reverse sequence, working back from the construction site to the motorway network.

348. Following the application of the thresholds defined in the TTA Guidelines, it was determined that 31 of the 57 junctions warranted detailed analysis.

349. In order to assess the reasonable worst-case all junctions were assessed considering the individual junction peaks during respective peak construction activity year for each junction location during the anticipated Construction Phase (2028-2032).

350. Analysis of the 31 junctions indicated that 8 would exceed the design capacity of 0.85 RFC during the Construction Phase peak year. Of these, Junctions 18, 30, and 50 are predicted to experience significant increases in RFC, queue lengths, and delays, necessitating mitigation measures.

351. The summary of performance analysis indicates Junction 18 will operate above the design 0.85 RFC in 2029 without the construction phase of the Proposed Project. During the AM peak of the construction phase there would be a maximum temporary increase of 0.12 RFC This would result in a queue length increase of eight PCU.

352. The summary of performance analysis indicates that Junction 30 is currently operating above the design 0.85 RFC in 2024 in the AM and PM peak. During the AM peak of the construction phase there would be a maximum temporary increase of 0.10 RFC. This would result in a queue length increase of four PCU.

353. The summary of performance analysis indicates that Junction 50 is currently operating above the design 0.85 RFC in 2024 in the AM and PM peak. During the PM peak of the construction phase there would be a maximum temporary increase 0.17 RFC. This would result in a queue length increase of twenty two PCU.

354. The significance of these effects is presented in Chapter 7 of the EIAR, titled 'Traffic and Transport'.

12.1.2 Mitigation

355. These recommendations from the Traffic and Transportation Assessment have been applied as mitigation measures within the Traffic Chapter of the EIAR and are hereafter referred to as the mitigation measures.

356. As outlined in TMP (Appendix 7.2 of the EIAR), active monitoring will be carried out during Construction Phase by the appointed Contractor(s). The appointed Contractor(s) will liaise with the local authority to mitigate the impacts of any additional traffic delays at Junction 18, Junction 30 and Junction 50.

357. The mitigation measures include installing temporary signals to optimise junction movements and limiting the HV movements.

358. Sufficient parking would be provided to cater for the parking needs of construction staff of the Proposed Project.

359. The following are measures explained further in the Traffic Management Plan (TMP) (EIAR Appendix A7.2) that will be implemented to mitigate the impacts associated with the Construction Phase of the Proposed Project:

- A pre-condition photographic survey of Haul Roads will be carried out prior to construction commencement to record the condition of the roads, and a post-construction survey will be carried out after the works are completed
- Continuous monitoring of Haul Roads throughout the Construction Phase
- All Contractors and their suppliers will be issued with a map of the permitted Haul Roads, such that all materials imported and exported are transported via one of the identified Haul Roads
- Utilisation of wheel wash facilities and road sweepers during the Construction Phase
- Maintenance of warning signage on the approach to the access points
- Maintenance of access points, ensuring visibility splays remain intact
- Monitoring of Haul Roads for problems such as congestion and refining the routes where required
- Development of the TMP during the Construction Phase by the appointed Contractors
- Traffic Management Operatives to be employed at all access points, due to Construction Phase traffic crossing the public road from one section of 20m wide permanent wayleave to another
- Liaison with local authorities for night-time scheduling of works.

12.2 Operational Phase

12.2.1 Conclusions

360. The analysis of the three junctions analysed for the Operation Phase of the Proposed Project in the AM and PM peaks showed they do not have capacity issues at present and are expected to operate within capacity during the Operation Phase of the Proposed Project.

361. Sufficient parking would be provided in accordance with Development Plan standards to cater for the parking needs of the staff of the Proposed Project.

12.2.2 Mitigation

362. Similar to the construction recommendations, the operational recommendations from the Traffic and Transportation Assessment have also been applied as mitigation measures within the Traffic Chapter of the EIAR and are hereafter referred to as the mitigation measures.

363. For all of the infrastructure accesses, the junction's visibility splays will provide the minimum requirement set out in each local authority Development Plans. The visibility envelope will be kept free of all restrictions including signage.

364. Stop markings and stop signs will be installed at the five proposed accesses.

365. Pedestrian footway links with associated dropped kerbing and tactile paving will be provided at all pedestrian crossing points internally to the four sites.

13. References

Department of Transport, Tourism and Sport (2019). Traffic Signs Manual - Chapter 8 - Temporary Traffic Measures and Signs for Roadworks.

Clare County Council (2023). Clare County Development Plan 2023 – 2029.

Kildare County Council (2023). Kildare County Development Plan 2023 – 2029.

Laois County Council (2021). Laois County Development Plan 2021 – 2027.

Limerick City and County Council (2022). Limerick Development Plan 2022 – 2028.

Offaly County Council (2021). Offaly County Development Plan 2021 – 2027.

South Dublin County Council (2022). South Dublin County Development Plan 2022 – 2028.

Tipperary County Council (2022). Tipperary County Development Plan 2022 - 2028.

Transport Infrastructure Ireland (2014). TII Publications. Traffic and Transport Assessment Guidelines. PE-PDV-02045 (May 2014).

Transport Infrastructure Ireland (2021). TII Publications. Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projections. PE-PAG-02017. (October 2021).

Transport Infrastructure Ireland (2023). TII Publication. Geometric Design of Junctions (Priority Junctions, Direct Accesses, Roundabouts, Grade Separated, and Compact Grade Separated Junctions). DN-GEO-03060. (May 2023).

Annex A. Traffic Assessment Results

Tionscadal Soláthair Uisce
Water Supply Project

Environmental Impact Assessment Report (EIAR)

Volume 6 of 6: Appendices

(Appendix 7.1) Annex A Traffic Assessment Results

Document no: 32105801/EIARA7.1

Version: Final

December 2025

Uisce Éireann
Irish Water

Jacobs

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Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.1.1.1905
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Filename: Junction 2_R494-R445 Rbt_LS.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 14:26:20

»Lane Simulation_Que - 2024, AM
»Lane Simulation_Que - 2024, PM
»Lane Simulation_Que - 2028 No Construction , AM
»Lane Simulation_Que - 2028 No Construction , PM
»Lane Simulation_Que - 2028 With Construction Peak, AM
»Lane Simulation_Que - 2028 With Construction Peak, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	Lane Simulation_Que [Lane Simulation] - 2024									
A - R494(NNW)	0.7	7.34	0.28	A	14.14	0.3	6.62	0.19	A	6.57
B - R445(ENE)	2.9	30.38	0.71	D		0.5	11.27	0.32	B	
C - R494 (SSE)	0.3	4.76	0.13	A		0.3	4.55	0.19	A	
D - R445(WSW)	0.5	5.51	0.23	A		0.5	5.55	0.25	A	
	Lane Simulation_Que [Lane Simulation] - 2028 No Construction									
A - R494(NNW)	0.7	8.04	0.30	A	16.79	0.4	7.08	0.22	A	6.70
B - R445(ENE)	4.7	37.43	0.77	E		0.7	11.43	0.34	B	
C - R494 (SSE)	0.3	4.82	0.14	A		0.4	4.54	0.21	A	
D - R445(WSW)	0.5	5.71	0.25	A		0.5	5.62	0.27	A	
	Lane Simulation_Que [Lane Simulation] - 2028 With Construction Peak									
A - R494(NNW)	0.9	8.59	0.36	A	20.39	0.5	7.46	0.25	A	8.14
B - R445(ENE)	5.6	50.40	0.88	F		1.2	14.73	0.48	B	
C - R494 (SSE)	0.5	5.40	0.22	A		0.6	5.00	0.23	A	
D - R445(WSW)	0.6	5.90	0.26	A		0.5	5.61	0.27	A	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	Water Supply Project
Location	
Site number	Junction 2
Date	19/03/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Calculate RFCs	Relaxation factor for capacity/RFC runs	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)	Last run total time taken (s)
Delay	1.00	100000	100000	Calculate for all arms	3.00	-1	3	1	60	✓			1693609147	145	5.43	17.21

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	07:30	09:00	15	✓
D2	2024	PM	ONE HOUR	16:30	18:00	15	✓
D3	2028 No Construction	AM	ONE HOUR	07:30	09:00	15	✓
D4	2028 No Construction	PM	ONE HOUR	16:30	18:00	15	✓
D5	2028 With Construction Peak	AM	ONE HOUR	07:30	09:00	15	✓
D6	2028 With Construction Peak	PM	ONE HOUR	16:30	18:00	15	✓

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A3	Lane Simulation_Que	✓	✓	100.000	100.000

Lane Simulation_Que - 2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A3 - Lane Simulation_Que [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
2		Standard Roundabout		A, B, C, D	14.14	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	14.14	B

Arms

Arms

Arm	Name	Description	No give-way line
A	R494(NNW)		
B	R445(ENE)		
C	R494 (SSE)		
D	R445(WSW)		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - R494(NNW)	3.30	7.04	10.1	30.4	69.0	25.8		
B - R445(ENE)	5.01	7.88	4.6	26.2	69.2	5.4		
C - R494 (SSE)	6.08	7.66	4.1	28.3	69.0	22.5		
D - R445(WSW)	5.22	6.37	12.5	21.8	69.1	19.4		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - R494(NNW)	0.496	1566
B - R445(ENE)	0.577	1984
C - R494 (SSE)	0.590	2140
D - R445(WSW)	0.555	1926

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
B - R445(ENE)	Direct		-400

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - R494(NNW)	Evenly split	10.00
B - R445(ENE)	Evenly split	10.00
C - R494 (SSE)	Evenly split	10.00
D - R445(WSW)	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - R494(NNW)	Entry	1	1	B, C	✓	3.00			0	99999	
			2	A, D	✓	3.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					
B - R445(ENE)	Entry	1	1	C, D	✓	3.00			0	99999	
			2	A, B	✓	3.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					
C - R494 (SSE)	Entry	1	1	D	✓	3.00			0	99999	
			2	A, B, C	✓	3.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					
D - R445(WSW)	Entry	1	1	A	✓	3.00			0	99999	
			2	B, C, D	✓	3.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - R494(NNW)	Entry	1	1	0.248	783
			2	0.248	783
B - R445(ENE)	Entry	1	1	0.289	992
			2	0.289	992
C - R494 (SSE)	Entry	1	1	0.295	1070
			2	0.295	1070
D - R445(WSW)	Entry	1	1	0.278	963
			2	0.278	963

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm			
			R494 (NNW)	R445 (ENE)	R494 (SSE)	R445 (WSW)
A - R494 (NNW)	1	1		✓	✓	
		2	✓			✓
	2	1	✓	✓	✓	✓
B - R445 (ENE)	1	1			✓	✓
		2	✓	✓		
	2	1	✓	✓	✓	✓
C - R494 (SSE)	1	1				✓
		2	✓	✓	✓	
	2	1	✓	✓	✓	✓
D - R445 (WSW)	1	1	✓			
		2		✓	✓	✓
	2	1	✓	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	07:30	09:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R494(NNW)		ONE HOUR	✓	239	100.000
B - R445(ENE)		ONE HOUR	✓	325	100.000
C - R494 (SSE)		ONE HOUR	✓	155	100.000
D - R445(WSW)		ONE HOUR	✓	248	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R494(NNW)	B - R445(ENE)	C - R494 (SSE)	D - R445(WSW)
From	A - R494(NNW)	1	6	164	68
	B - R445(ENE)	13	0	169	143
	C - R494 (SSE)	83	24	0	48
	D - R445(WSW)	56	80	111	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
2	0.20	0.80

Heavy Vehicle %

		To			
		A - R494(NNW)	B - R445(ENE)	C - R494 (SSE)	D - R445(WSW)
From	A - R494(NNW)	0	0	9	20
	B - R445(ENE)	0	0	5	14
	C - R494 (SSE)	20	22	0	5
	D - R445(WSW)	32	9	5	0

Cyclist %

		To			
		A - R494(NNW)	B - R445(ENE)	C - R494 (SSE)	D - R445(WSW)
From	A - R494(NNW)	0	0	0	0
	B - R445(ENE)	0	0	0	0
	C - R494 (SSE)	0	0	0	0
	D - R445(WSW)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R494(NNW)	0.28	7.34	0.7	A	219	329
B - R445(ENE)	0.71	30.38	2.9	D	293	440
C - R494 (SSE)	0.13	4.76	0.3	A	140	210
D - R445(WSW)	0.23	5.51	0.5	A	226	339

Lane Simulation_Que - 2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A3 - Lane Simulation_Que [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
2		Standard Roundabout		A, B, C, D	6.57	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.57	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)	Run automatically
D2	2024	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R494(NNW)		ONE HOUR	✓	160	100.000
B - R445(ENE)		ONE HOUR	✓	158	100.000
C - R494 (SSE)		ONE HOUR	✓	246	100.000
D - R445(WSW)		ONE HOUR	✓	246	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R494(NNW)	B - R445(ENE)	C - R494 (SSE)	D - R445(WSW)
From	A - R494(NNW)	2	26	95	37
	B - R445(ENE)	7	0	38	113
	C - R494 (SSE)	88	77	0	81
	D - R445(WSW)	48	150	48	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
2	0.20	0.80

Heavy Vehicle %

		To			
		A - R494(NNW)	B - R445(ENE)	C - R494 (SSE)	D - R445(WSW)
From	A - R494(NNW)	100	23	7	6
	B - R445(ENE)	23	0	0	11
	C - R494 (SSE)	3	8	0	6
	D - R445(WSW)	0	7	5	0

Cyclist %

		To			
		A - R494(NNW)	B - R445(ENE)	C - R494 (SSE)	D - R445(WSW)
From	A - R494(NNW)	0	0	0	0
	B - R445(ENE)	0	0	0	0
	C - R494 (SSE)	0	0	0	0
	D - R445(WSW)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R494(NNW)	0.19	6.62	0.3	A	144	215
B - R445(ENE)	0.32	11.27	0.5	B	143	215
C - R494 (SSE)	0.19	4.55	0.3	A	223	334
D - R445(WSW)	0.25	5.55	0.5	A	230	345

Lane Simulation_Que - 2028 No Construction , AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A3 - Lane Simulation_Que [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
2		Standard Roundabout		A, B, C, D	16.79	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	16.79	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2028 No Construction	AM	ONE HOUR	07:30	09:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R494(NNW)		ONE HOUR	✓	256	100.000
B - R445(ENE)		ONE HOUR	✓	348	100.000
C - R494 (SSE)		ONE HOUR	✓	166	100.000
D - R445(WSW)		ONE HOUR	✓	267	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R494(NNW)	B - R445(ENE)	C - R494 (SSE)	D - R445(WSW)
From	A - R494(NNW)	1	6	176	73
	B - R445(ENE)	14	0	181	153
	C - R494 (SSE)	89	26	0	51
	D - R445(WSW)	61	86	119	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
2	0.20	0.80

Heavy Vehicle %

		To			
		A - R494(NNW)	B - R445(ENE)	C - R494 (SSE)	D - R445(WSW)
From	A - R494(NNW)	0	0	10	22
	B - R445(ENE)	0	0	5	15
	C - R494 (SSE)	21	23	0	5
	D - R445(WSW)	34	10	6	0

Cyclist %

		To			
		A - R494(NNW)	B - R445(ENE)	C - R494 (SSE)	D - R445(WSW)
From	A - R494(NNW)	0	0	0	0
	B - R445(ENE)	0	0	0	0
	C - R494 (SSE)	0	0	0	0
	D - R445(WSW)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R494(NNW)	0.30	8.04	0.7	A	231	347
B - R445(ENE)	0.77	37.43	4.7	E	316	474
C - R494 (SSE)	0.14	4.82	0.3	A	153	230
D - R445(WSW)	0.25	5.71	0.5	A	241	362

Lane Simulation_Que - 2028 No Construction , PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A3 - Lane Simulation_Que [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
2		Standard Roundabout		A, B, C, D	6.70	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.70	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)	Run automatically
D4	2028 No Construction	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R494(NNW)		ONE HOUR	✓	171	100.000
B - R445(ENE)		ONE HOUR	✓	168	100.000
C - R494 (SSE)		ONE HOUR	✓	262	100.000
D - R445(WSW)		ONE HOUR	✓	262	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R494(NNW)	B - R445(ENE)	C - R494 (SSE)	D - R445(WSW)
From	A - R494(NNW)	2	28	101	40
	B - R445(ENE)	7	0	40	121
	C - R494 (SSE)	94	82	0	86
	D - R445(WSW)	51	160	51	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
2	0.20	0.80

Heavy Vehicle %

		To			
		A - R494(NNW)	B - R445(ENE)	C - R494 (SSE)	D - R445(WSW)
From	A - R494(NNW)	100	25	8	7
	B - R445(ENE)	24	0	0	12
	C - R494 (SSE)	3	8	0	6
	D - R445(WSW)	0	8	5	0

Cyclist %

		To			
		A - R494(NNW)	B - R445(ENE)	C - R494 (SSE)	D - R445(WSW)
From	A - R494(NNW)	0	0	0	0
	B - R445(ENE)	0	0	0	0
	C - R494 (SSE)	0	0	0	0
	D - R445(WSW)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R494(NNW)	0.22	7.08	0.4	A	155	233
B - R445(ENE)	0.34	11.43	0.7	B	153	230
C - R494 (SSE)	0.21	4.54	0.4	A	241	362
D - R445(WSW)	0.27	5.62	0.5	A	242	364

Lane Simulation_Que - 2028 With Construction Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A3 - Lane Simulation_Que [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
2		Standard Roundabout		A, B, C, D	20.39	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	20.39	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2028 With Construction Peak	AM	ONE HOUR	07:30	09:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R494(NNW)		ONE HOUR	✓	296	100.000
B - R445(ENE)		ONE HOUR	✓	364	100.000
C - R494 (SSE)		ONE HOUR	✓	241	100.000
D - R445(WSW)		ONE HOUR	✓	267	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R494(NNW)	B - R445(ENE)	C - R494 (SSE)	D - R445(WSW)
From	A - R494(NNW)	1	40	182	73
	B - R445(ENE)	18	0	193	153
	C - R494 (SSE)	111	79	0	51
	D - R445(WSW)	61	86	119	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
2	0.20	0.80

Heavy Vehicle %

		To			
		A - R494(NNW)	B - R445(ENE)	C - R494 (SSE)	D - R445(WSW)
From	A - R494(NNW)	0	10	13	22
	B - R445(ENE)	22	0	11	15
	C - R494 (SSE)	22	23	0	5
	D - R445(WSW)	34	10	6	0

Cyclist %

		To			
		A - R494(NNW)	B - R445(ENE)	C - R494 (SSE)	D - R445(WSW)
From	A - R494(NNW)	0	0	0	0
	B - R445(ENE)	0	0	0	0
	C - R494 (SSE)	0	0	0	0
	D - R445(WSW)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R494(NNW)	0.36	8.59	0.9	A	272	408
B - R445(ENE)	0.88	50.40	5.6	F	337	505
C - R494 (SSE)	0.22	5.40	0.5	A	224	336
D - R445(WSW)	0.26	5.90	0.6	A	244	366

Lane Simulation_Que - 2028 With Construction Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A3 - Lane Simulation_Que [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
2		Standard Roundabout		A, B, C, D	8.14	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	8.14	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)	Run automatically
D6	2028 With Construction Peak	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R494(NNW)		ONE HOUR	✓	197	100.000
B - R445(ENE)		ONE HOUR	✓	255	100.000
C - R494 (SSE)		ONE HOUR	✓	282	100.000
D - R445(WSW)		ONE HOUR	✓	262	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R494(NNW)	B - R445(ENE)	C - R494 (SSE)	D - R445(WSW)
From	A - R494(NNW)	2	32	123	40
	B - R445(ENE)	41	0	93	121
	C - R494 (SSE)	101	95	0	86
	D - R445(WSW)	51	160	51	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
2	0.20	0.80

Heavy Vehicle %

		To			
		A - R494(NNW)	B - R445(ENE)	C - R494 (SSE)	D - R445(WSW)
From	A - R494(NNW)	100	34	11	7
	B - R445(ENE)	14	0	13	12
	C - R494 (SSE)	8	20	0	6
	D - R445(WSW)	0	8	5	0

Cyclist %

		To			
		A - R494(NNW)	B - R445(ENE)	C - R494 (SSE)	D - R445(WSW)
From	A - R494(NNW)	0	0	0	0
	B - R445(ENE)	0	0	0	0
	C - R494 (SSE)	0	0	0	0
	D - R445(WSW)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R494(NNW)	0.25	7.46	0.5	A	180	270
B - R445(ENE)	0.48	14.73	1.2	B	234	352
C - R494 (SSE)	0.23	5.00	0.6	A	258	387
D - R445(WSW)	0.27	5.61	0.5	A	241	361

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.1.1.1905
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Filename: Junction 3_R494-RWA Tjct_LS.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 12:59:42

»LS - 2025, AM
»LS - 2025, PM
»LS - 2028 No Construction , AM
»LS - 2028 No Construction , PM
»LS - 2032 Year of Opening No Dev, AM
»LS - 2032 Year of Opening No Dev, PM
»LS - 2037 (5 Years after Opening) No Dev, AM
»LS - 2037 (5 Years after Opening) No Dev, PM
»LS - 2047 (15 Years after Opening) No Dev, AM
»LS - 2047 (15 Years after Opening) No Dev, PM
»LS - 2028 With Construction Peak, AM
»LS - 2028 With Construction Peak, PM
»LS - 2032 Year of Opening With Dev, AM
»LS - 2032 Year of Opening With Dev, PM
»LS - 2037 (5 Years after Opening) With Dev, AM
»LS - 2037 (5 Years after Opening) With Dev, PM
»LS - 2047 (15 Years after Opening) With Dev, AM
»LS - 2047 (15 Years after Opening) With Dev, PM

Summary of junction performance

	AM					PM				

	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
LS [Lane Simulation] - 2025										
A - R494 (S)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - CC0	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - R494 (N)	0.0	0.00		A		0.0	0.00		A	
LS [Lane Simulation] - 2028 No Construction										
A - R494 (S)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - CC0	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - R494 (N)	0.0	0.00		A		0.0	0.00		A	
LS [Lane Simulation] - 2032 Year of Opening No Dev										
A - R494 (S)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - CC0	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - R494 (N)	0.0	0.00		A		0.0	0.00		A	
LS [Lane Simulation] - 2037 (5 Years after Opening) No Dev										
A - R494 (S)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - CC0	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - R494 (N)	0.0	0.00		A		0.0	0.00		A	
LS [Lane Simulation] - 2047 (15 Years after Opening) No Dev										
A - R494 (S)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - CC0	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - R494 (N)	0.0	0.00		A		0.0	0.00		A	
LS [Lane Simulation] - 2028 With Construction Peak										
A - R494 (S)	0.0	0.00		A	0.05	0.0	0.00		A	0.22
B - CC0	0.0	0.00	0.00	A		0.0	12.34	0.02	B	
C - R494 (N)	0.0	0.07		A		0.0	0.00		A	
LS [Lane Simulation] - 2032 Year of Opening With Dev										
A - R494 (S)	0.0	0.00		A	0.31	0.0	0.00		A	0.38
B - CC0	0.0	0.00	0.00	A		0.1	9.11	0.06	A	
C - R494 (N)	0.1	0.44		A		0.0	0.00		A	
LS [Lane Simulation] - 2037 (5 Years after Opening) With Dev										
A - R494 (S)	0.0	0.00		A	0.29	0.0	0.00		A	0.39
B - CC0	0.0	0.00	0.00	A		0.1	9.88	0.06	A	
C - R494 (N)	0.1	0.42		A		0.0	0.00		A	
LS [Lane Simulation] - 2047 (15 Years after Opening) With Dev										
A - R494 (S)	0.0	0.00		A	0.31	0.0	0.00		A	0.34
B - CC0	0.0	0.00	0.00	A		0.1	9.44	0.05	A	
C - R494 (N)	0.1	0.44		A		0.0	0.00		A	

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	Water Supply Project
Location	
Site number	Junction 3
Date	19/03/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Calculate RFCs	Relaxation factor for capacity/RFC runs	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)	Last run total time taken (s)
Delay	1.00	100000	100000	Calculate for all arms	3.00	-1	3	1	60	✓			1622320455	21	0.10	2.08

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	AM	ONE HOUR	07:00	08:30	15	✓
D2	2025	PM	ONE HOUR	15:45	17:15	15	✓
D3	2028 No Construction	AM	ONE HOUR	07:00	08:30	15	✓
D4	2028 No Construction	PM	ONE HOUR	15:45	17:15	15	✓
D5	2032 Year of Opening No Dev	AM	ONE HOUR	07:00	08:30	15	✓
D6	2032 Year of Opening No Dev	PM	ONE HOUR	15:45	17:15	15	✓
D7	2037 (5 Years after Opening) No Dev	AM	ONE HOUR	07:00	08:30	15	✓
D8	2037 (5 Years after Opening) No Dev	PM	ONE HOUR	15:45	17:15	15	✓
D9	2047 (15 Years after Opening) No Dev	AM	ONE HOUR	07:00	08:30	15	✓
D10	2047 (15 Years after Opening) No Dev	PM	ONE HOUR	15:45	17:15	15	✓
D11	2028 With Construction Peak	AM	ONE HOUR	07:00	08:30	15	✓
D12	2028 With Construction Peak	PM	ONE HOUR	15:45	17:15	15	✓
D13	2032 Year of Opening With Dev	AM	ONE HOUR	07:00	08:30	15	✓
D14	2032 Year of Opening With Dev	PM	ONE HOUR	15:45	17:15	15	✓
D15	2037 (5 Years after Opening) With Dev	AM	ONE HOUR	07:00	08:30	15	✓
D16	2037 (5 Years after Opening) With Dev	PM	ONE HOUR	15:45	17:15	15	✓
D17	2047 (15 Years after Opening) With Dev	AM	ONE HOUR	07:00	08:30	15	✓
D18	2047 (15 Years after Opening) With Dev	PM	ONE HOUR	15:45	17:15	15	✓

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	LS	✓	✓	100.000	100.000

LS - 2025, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R494 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

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		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	R494 (S)		Major
B	CC0		Minor
C	R494 (N)		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)	Vehicles causing blocking (%)
C - R494 (N)	4.80			110.0	✓	0.00	100

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 - CC0	One lane	2.50	120	103

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	541	0.104	0.262	0.165	0.374
B-C	654	0.106	0.267	-	-
C-B	638	0.260	0.260	-	-

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.

Lane Simulation: Arm options

Arm	Traffic considering secondary lanes (%)
A - R494 (S)	10.00
B - CC0	10.00
C - R494 (N)	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - R494 (S)	Entry	1	1	B, C		Infinity			0	99999	
	Exit	1	1			Infinity					
B - CC0	Entry	1	1	A, C		Infinity			0	99999	
	Exit	1	1			Infinity					
C - R494 (N)	Entry	1	1	A, B		Infinity			0	99999	
	Exit	1	1			Infinity					

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			R494 (S)	CC0	R494 (N)
A - R494 (S)	1	1		✓	✓
B - CC0	1	1	✓		✓
C - R494 (N)	1	1	✓	✓	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	AM	ONE HOUR	07:00	08:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R494 (S)		ONE HOUR	✓	148	100.000
B - CC0		ONE HOUR	✓	0	100.000
C - R494 (N)		ONE HOUR	✓	384	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	148
	B - CC0	0	0	0
	C - R494 (N)	384	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
3	0.20	0.80

Heavy Vehicle %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	26
	B - CC0	0	0	0
	C - R494 (N)	12	0	0

Cyclist %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	0
	B - CC0	0	0	0
	C - R494 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R494 (S)		0.00	0.0	A	144	216
B - CC0	0.00	0.00	0.0	A	0	0
C - R494 (N)		0.00	0.0	A	351	526

LS - 2025, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R494 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

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		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D2	2025	PM	ONE HOUR	15:45	17:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R494 (S)		ONE HOUR	✓	304	100.000
B - CC0		ONE HOUR	✓	0	100.000
C - R494 (N)		ONE HOUR	✓	162	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	304
	B - CC0	0	0	0
	C - R494 (N)	162	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
3	0.20	0.80

Heavy Vehicle %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	12
	B - CC0	0	0	0
	C - R494 (N)	17	0	0

Cyclist %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	0
	B - CC0	0	0	0
	C - R494 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R494 (S)		0.00	0.0	A	286	429
B - CC0	0.00	0.00	0.0	A	0	0
C - R494 (N)		0.00	0.0	A	144	217

LS - 2028 No Construction , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R494 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

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		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D3	2028 No Construction	AM	ONE HOUR	07:00	08:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R494 (S)		ONE HOUR	✓	157	100.000
B - CC0		ONE HOUR	✓	0	100.000
C - R494 (N)		ONE HOUR	✓	404	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	157
	B - CC0	0	0	0
	C - R494 (N)	404	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
3	0.20	0.80

Heavy Vehicle %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	27
	B - CC0	0	0	0
	C - R494 (N)	12	0	0

Cyclist %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	0
	B - CC0	0	0	0
	C - R494 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R494 (S)		0.00	0.0	A	145	218
B - CC0	0.00	0.00	0.0	A	0	0
C - R494 (N)		0.00	0.0	A	356	535

LS - 2028 No Construction , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R494 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

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		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D4	2028 No Construction	PM	ONE HOUR	15:45	17:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R494 (S)		ONE HOUR	✓	320	100.000
B - CC0		ONE HOUR	✓	0	100.000
C - R494 (N)		ONE HOUR	✓	171	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	320
	B - CC0	0	0	0
	C - R494 (N)	171	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
3	0.20	0.80

Heavy Vehicle %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	12
	B - CC0	0	0	0
	C - R494 (N)	18	0	0

Cyclist %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	0
	B - CC0	0	0	0
	C - R494 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R494 (S)		0.00	0.0	A	298	447
B - CC0	0.00	0.00	0.0	A	0	0
C - R494 (N)		0.00	0.0	A	159	239

LS - 2032 Year of Opening No Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R494 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

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		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D5	2032 Year of Opening No Dev	AM	ONE HOUR	07:00	08:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R494 (S)		ONE HOUR	✓	167	100.000
B - CC0		ONE HOUR	✓	0	100.000
C - R494 (N)		ONE HOUR	✓	425	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	167
	B - CC0	0	0	0
	C - R494 (N)	425	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
3	0.20	0.80

Heavy Vehicle %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	28
	B - CC0	0	0	0
	C - R494 (N)	13	0	0

Cyclist %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	0
	B - CC0	0	0	0
	C - R494 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R494 (S)		0.00	0.0	A	149	223
B - CC0	0.00	0.00	0.0	A	0	0
C - R494 (N)		0.00	0.0	A	388	582

LS - 2032 Year of Opening No Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R494 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

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		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D6	2032 Year of Opening No Dev	PM	ONE HOUR	15:45	17:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R494 (S)		ONE HOUR	✓	336	100.000
B - CC0		ONE HOUR	✓	0	100.000
C - R494 (N)		ONE HOUR	✓	180	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	336
	B - CC0	0	0	0
	C - R494 (N)	180	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
3	0.20	0.80

Heavy Vehicle %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	13
	B - CC0	0	0	0
	C - R494 (N)	19	0	0

Cyclist %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	0
	B - CC0	0	0	0
	C - R494 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R494 (S)		0.00	0.0	A	307	460
B - CC0	0.00	0.00	0.0	A	0	0
C - R494 (N)		0.00	0.0	A	162	243

LS - 2037 (5 Years after Opening) No Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R494 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

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		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D7	2037 (5 Years after Opening) No Dev	AM	ONE HOUR	07:00	08:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R494 (S)		ONE HOUR	✓	175	100.000
B - CC0		ONE HOUR	✓	0	100.000
C - R494 (N)		ONE HOUR	✓	443	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	175
	B - CC0	0	0	0
	C - R494 (N)	443	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
3	0.20	0.80

Heavy Vehicle %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	29
	B - CC0	0	0	0
	C - R494 (N)	13	0	0

Cyclist %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	0
	B - CC0	0	0	0
	C - R494 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R494 (S)		0.00	0.0	A	160	240
B - CC0	0.00	0.00	0.0	A	0	0
C - R494 (N)		0.00	0.0	A	416	624

LS - 2037 (5 Years after Opening) No Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R494 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

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		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D8	2037 (5 Years after Opening) No Dev	PM	ONE HOUR	15:45	17:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R494 (S)		ONE HOUR	✓	351	100.000
B - CC0		ONE HOUR	✓	0	100.000
C - R494 (N)		ONE HOUR	✓	188	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	351
	B - CC0	0	0	0
	C - R494 (N)	188	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
3	0.20	0.80

Heavy Vehicle %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	13
	B - CC0	0	0	0
	C - R494 (N)	19	0	0

Cyclist %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	0
	B - CC0	0	0	0
	C - R494 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R494 (S)		0.00	0.0	A	318	478
B - CC0	0.00	0.00	0.0	A	0	0
C - R494 (N)		0.00	0.0	A	173	259

LS - 2047 (15 Years after Opening) No Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R494 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

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		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D9	2047 (15 Years after Opening) No Dev	AM	ONE HOUR	07:00	08:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R494 (S)		ONE HOUR	✓	197	100.000
B - CC0		ONE HOUR	✓	0	100.000
C - R494 (N)		ONE HOUR	✓	490	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	197
	B - CC0	0	0	0
	C - R494 (N)	490	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
3	0.20	0.80

Heavy Vehicle %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	32
	B - CC0	0	0	0
	C - R494 (N)	15	0	0

Cyclist %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	0
	B - CC0	0	0	0
	C - R494 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R494 (S)		0.00	0.0	A	187	280
B - CC0	0.00	0.00	0.0	A	0	0
C - R494 (N)		0.00	0.0	A	453	680

LS - 2047 (15 Years after Opening) No Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R494 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

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		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D10	2047 (15 Years after Opening) No Dev	PM	ONE HOUR	15:45	17:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R494 (S)		ONE HOUR	✓	387	100.000
B - CC0		ONE HOUR	✓	0	100.000
C - R494 (N)		ONE HOUR	✓	210	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	387
	B - CC0	0	0	0
	C - R494 (N)	210	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
3	0.20	0.80

Heavy Vehicle %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	15
	B - CC0	0	0	0
	C - R494 (N)	21	0	0

Cyclist %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	0
	B - CC0	0	0	0
	C - R494 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R494 (S)		0.00	0.0	A	351	527
B - CC0	0.00	0.00	0.0	A	0	0
C - R494 (N)		0.00	0.0	A	188	281

LS - 2028 With Construction Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R494 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

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		0.05	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.05	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)	Run automatically
D11	2028 With Construction Peak	AM	ONE HOUR	07:00	08:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R494 (S)		ONE HOUR	✓	165	100.000
B - CC0		ONE HOUR	✓	4	100.000
C - R494 (N)		ONE HOUR	✓	424	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	7	158
	B - CC0	4	0	0
	C - R494 (N)	422	2	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
3	0.20	0.80

Heavy Vehicle %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	52	27
	B - CC0	100	0	0
	C - R494 (N)	12	0	0

Cyclist %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	0
	B - CC0	0	0	0
	C - R494 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R494 (S)		0.00	0.0	A	150	225
B - CC0	0.00	0.00	0.0	A	0	0
C - R494 (N)		0.07	0.0	A	386	579

LS - 2028 With Construction Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R494 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

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		0.22	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.22	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)	Run automatically
D12	2028 With Construction Peak	PM	ONE HOUR	15:45	17:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R494 (S)		ONE HOUR	✓	342	100.000
B - CC0		ONE HOUR	✓	9	100.000
C - R494 (N)		ONE HOUR	✓	172	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	4	338
	B - CC0	7	0	2
	C - R494 (N)	172	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
3	0.20	0.80

Heavy Vehicle %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	100	11
	B - CC0	52	0	0
	C - R494 (N)	18	0	0

Cyclist %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	0
	B - CC0	0	0	0
	C - R494 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R494 (S)		0.00	0.0	A	317	476
B - CC0	0.02	12.34	0.0	B	9	13
C - R494 (N)		0.00	0.0	A	159	239

LS - 2032 Year of Opening With Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R494 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

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		0.31	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.31	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)	Run automatically
D13	2032 Year of Opening With Dev	AM	ONE HOUR	07:00	08:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R494 (S)		ONE HOUR	✓	179	100.000
B - CC0		ONE HOUR	✓	2	100.000
C - R494 (N)		ONE HOUR	✓	435	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	12	167
	B - CC0	2	0	0
	C - R494 (N)	425	10	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
3	0.20	0.80

Heavy Vehicle %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	17	28
	B - CC0	100	0	0
	C - R494 (N)	13	0	0

Cyclist %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	0
	B - CC0	0	0	0
	C - R494 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R494 (S)		0.00	0.0	A	169	254
B - CC0	0.00	0.00	0.0	A	0	0
C - R494 (N)		0.44	0.1	A	399	598

LS - 2032 Year of Opening With Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R494 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

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		0.38	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.38	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)	Run automatically
D14	2032 Year of Opening With Dev	PM	ONE HOUR	15:45	17:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R494 (S)		ONE HOUR	✓	338	100.000
B - CC0		ONE HOUR	✓	22	100.000
C - R494 (N)		ONE HOUR	✓	180	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	2	336
	B - CC0	12	0	10
	C - R494 (N)	180	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
3	0.20	0.80

Heavy Vehicle %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	100	13
	B - CC0	17	0	0
	C - R494 (N)	19	0	0

Cyclist %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	0
	B - CC0	0	0	0
	C - R494 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R494 (S)		0.00	0.0	A	310	465
B - CC0	0.06	9.11	0.1	A	21	31
C - R494 (N)		0.00	0.0	A	166	249

LS - 2037 (5 Years after Opening) With Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R494 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

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		0.29	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.29	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)	Run automatically
D15	2037 (5 Years after Opening) With Dev	AM	ONE HOUR	07:00	08:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R494 (S)		ONE HOUR	✓	187	100.000
B - CC0		ONE HOUR	✓	2	100.000
C - R494 (N)		ONE HOUR	✓	453	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	12	175
	B - CC0	2	0	0
	C - R494 (N)	443	10	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
3	0.20	0.80

Heavy Vehicle %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	17	29
	B - CC0	100	0	0
	C - R494 (N)	13	0	0

Cyclist %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	0
	B - CC0	0	0	0
	C - R494 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R494 (S)		0.00	0.0	A	173	260
B - CC0	0.00	0.00	0.0	A	0	0
C - R494 (N)		0.42	0.1	A	409	613

LS - 2037 (5 Years after Opening) With Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R494 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

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		0.39	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.39	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)	Run automatically
D16	2037 (5 Years after Opening) With Dev	PM	ONE HOUR	15:45	17:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R494 (S)		ONE HOUR	✓	353	100.000
B - CC0		ONE HOUR	✓	22	100.000
C - R494 (N)		ONE HOUR	✓	188	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	2	351
	B - CC0	12	0	10
	C - R494 (N)	188	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
3	0.20	0.80

Heavy Vehicle %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	100	13
	B - CC0	17	0	0
	C - R494 (N)	19	0	0

Cyclist %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	0
	B - CC0	0	0	0
	C - R494 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R494 (S)		0.00	0.0	A	319	479
B - CC0	0.06	9.88	0.1	A	20	30
C - R494 (N)		0.00	0.0	A	176	264

LS - 2047 (15 Years after Opening) With Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R494 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

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		0.31	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.31	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)	Run automatically
D17	2047 (15 Years after Opening) With Dev	AM	ONE HOUR	07:00	08:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R494 (S)		ONE HOUR	✓	209	100.000
B - CC0		ONE HOUR	✓	2	100.000
C - R494 (N)		ONE HOUR	✓	500	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	12	197
	B - CC0	2	0	0
	C - R494 (N)	490	10	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
3	0.20	0.80

Heavy Vehicle %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	17	32
	B - CC0	100	0	0
	C - R494 (N)	15	0	0

Cyclist %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	0
	B - CC0	0	0	0
	C - R494 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R494 (S)		0.00	0.0	A	188	283
B - CC0	0.00	0.00	0.0	A	0	0
C - R494 (N)		0.44	0.1	A	455	682

LS - 2047 (15 Years after Opening) With Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R494 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

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		0.34	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.34	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)	Run automatically
D18	2047 (15 Years after Opening) With Dev	PM	ONE HOUR	15:45	17:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R494 (S)		ONE HOUR	✓	389	100.000
B - CC0		ONE HOUR	✓	22	100.000
C - R494 (N)		ONE HOUR	✓	210	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	2	387
	B - CC0	12	0	10
	C - R494 (N)	210	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
3	0.20	0.80

Heavy Vehicle %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	100	15
	B - CC0	17	0	0
	C - R494 (N)	21	0	0

Cyclist %

		To		
		A - R494 (S)	B - CC0	C - R494 (N)
From	A - R494 (S)	0	0	0
	B - CC0	0	0	0
	C - R494 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R494 (S)		0.00	0.0	A	356	534
B - CC0	0.05	9.44	0.1	A	20	31
C - R494 (N)		0.00	0.0	A	196	294

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.1.1.1905
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Filename: Junction 4_R445-Proposed WTP Tjct_LS.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 13:01:20

»LS - 2024, AM
»LS - 2024, PM
»LS - 2028 No Construction , AM
»LS - 2028 No Construction , PM
»LS - 2028 With Construction Peak, AM
»LS - 2028 With Construction Peak, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
LS [Lane Simulation] - 2024										
A - R445 (W)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - Proposed Water Treatment Plant	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - R445 (E)	0.0	0.00		A		0.0	0.00		A	
LS [Lane Simulation] - 2028 No Construction										
A - R445 (W)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - Proposed Water Treatment Plant	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - R445 (E)	0.0	0.00		A		0.0	0.00		A	
LS [Lane Simulation] - 2028 With Construction Peak										
A - R445 (W)	0.0	0.00		A	0.38	0.0	0.00		A	1.47
B - Proposed Water Treatment Plant	0.1	14.74	0.03	B		0.2	9.58	0.16	A	
C - R445 (E)	0.0	0.00		A		0.0	0.00		A	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	Water Supply Project
Location	
Site number	Junction 4
Date	19/03/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Calculate RFCs	Relaxation factor for capacity/RFC runs	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)	Last run total time taken (s)
Delay	1.00	100000	100000	Calculate for all arms	3.00	-1	3	1	60	✓			1300685851	21	0.08	1.85

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	07:15	08:45	15	✓
D2	2024	PM	ONE HOUR	16:15	17:45	15	✓
D3	2028 No Construction	AM	ONE HOUR	07:15	08:45	15	✓
D4	2028 No Construction	PM	ONE HOUR	16:15	17:45	15	✓
D11	2028 With Construction Peak	AM	ONE HOUR	07:15	08:45	15	✓
D12	2028 With Construction Peak	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	LS	✓	✓	100.000	100.000

LS - 2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	R445 (W)		Major
B	Proposed Water Treatment Plant		Minor
C	R445 (E)		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)	Vehicles causing blocking (%)
C - R445 (E)	9.20			250.0	✓	0.00	100

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 - Proposed Water Treatment Plant	One lane	3.00	200	200

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	650	0.102	0.258	0.162	0.368
B-C	750	0.099	0.250	-	-
C-B	719	0.240	0.240	-	-

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.

Lane Simulation: Arm options

Arm	Traffic considering secondary lanes (%)
A - R445 (W)	10.00
B - Proposed Water Treatment Plant	10.00
C - R445 (E)	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - R445 (W)	Entry	1	1	B, C		Infinity			0	99999	
	Exit	1	1			Infinity					
B - Proposed Water Treatment Plant	Entry	1	1	A, C		Infinity			0	99999	
	Exit	1	1			Infinity					
C - R445 (E)	Entry	1	1	A, B		Infinity			0	99999	
	Exit	1	1			Infinity					

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			R445 (W)	Proposed Water Treatment Plant	R445 (E)
A - R445 (W)	1	1		✓	✓
B - Proposed Water Treatment Plant	1	1	✓		✓
C - R445 (E)	1	1	✓	✓	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	07:15	08:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R445 (W)		ONE HOUR	✓	105	100.000
B - Proposed Water Treatment Plant		ONE HOUR	✓	0	100.000
C - R445 (E)		ONE HOUR	✓	321	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R445 (W)	B - Proposed Water Treatment Plant	C - R445 (E)
From	A - R445 (W)	0	0	105
	B - Proposed Water Treatment Plant	0	0	0
	C - R445 (E)	321	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
4	0.20	0.80

Heavy Vehicle %

		To		
		A - R445 (W)	B - Proposed Water Treatment Plant	C - R445 (E)
From	A - R445 (W)	0	0	24
	B - Proposed Water Treatment Plant	0	0	0
	C - R445 (E)	15	0	0

Cyclist %

		To		
		A - R445 (W)	B - Proposed Water Treatment Plant	C - R445 (E)
From	A - R445 (W)	0	0	0
	B - Proposed Water Treatment Plant	0	0	0
	C - R445 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R445 (W)		0.00	0.0	A	91	137
B - Proposed Water Treatment Plant	0.00	0.00	0.0	A	0	0
C - R445 (E)		0.00	0.0	A	304	456

LS - 2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D2	2024	PM	ONE HOUR	16:15	17:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R445 (W)		ONE HOUR	✓	251	100.000
B - Proposed Water Treatment Plant		ONE HOUR	✓	0	100.000
C - R445 (E)		ONE HOUR	✓	149	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R445 (W)	B - Proposed Water Treatment Plant	C - R445 (E)
From	A - R445 (W)	0	0	251
	B - Proposed Water Treatment Plant	0	0	0
	C - R445 (E)	149	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
4	0.20	0.80

Heavy Vehicle %

		To		
		A - R445 (W)	B - Proposed Water Treatment Plant	C - R445 (E)
From	A - R445 (W)	0	0	16
	B - Proposed Water Treatment Plant	0	0	0
	C - R445 (E)	15	0	0

Cyclist %

		To		
		A - R445 (W)	B - Proposed Water Treatment Plant	C - R445 (E)
From	A - R445 (W)	0	0	0
	B - Proposed Water Treatment Plant	0	0	0
	C - R445 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R445 (W)		0.00	0.0	A	234	352
B - Proposed Water Treatment Plant	0.00	0.00	0.0	A	0	0
C - R445 (E)		0.00	0.0	A	133	200

LS - 2028 No Construction , AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D3	2028 No Construction	AM	ONE HOUR	07:15	08:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R445 (W)		ONE HOUR	✓	113	100.000
B - Proposed Water Treatment Plant		ONE HOUR	✓	0	100.000
C - R445 (E)		ONE HOUR	✓	344	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R445 (W)	B - Proposed Water Treatment Plant	C - R445 (E)
From	A - R445 (W)	0	0	113
	B - Proposed Water Treatment Plant	0	0	0
	C - R445 (E)	344	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
4	0.20	0.80

Heavy Vehicle %

		To		
		A - R445 (W)	B - Proposed Water Treatment Plant	C - R445 (E)
From	A - R445 (W)	0	0	26
	B - Proposed Water Treatment Plant	0	0	0
	C - R445 (E)	16	0	0

Cyclist %

		To		
		A - R445 (W)	B - Proposed Water Treatment Plant	C - R445 (E)
From	A - R445 (W)	0	0	0
	B - Proposed Water Treatment Plant	0	0	0
	C - R445 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R445 (W)		0.00	0.0	A	100	151
B - Proposed Water Treatment Plant	0.00	0.00	0.0	A	0	0
C - R445 (E)		0.00	0.0	A	317	476

LS - 2028 No Construction , PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D4	2028 No Construction	PM	ONE HOUR	16:15	17:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R445 (W)		ONE HOUR	✓	269	100.000
B - Proposed Water Treatment Plant		ONE HOUR	✓	0	100.000
C - R445 (E)		ONE HOUR	✓	160	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R445 (W)	B - Proposed Water Treatment Plant	C - R445 (E)
From	A - R445 (W)	0	0	269
	B - Proposed Water Treatment Plant	0	0	0
	C - R445 (E)	160	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
4	0.20	0.80

Heavy Vehicle %

		To		
		A - R445 (W)	B - Proposed Water Treatment Plant	C - R445 (E)
From	A - R445 (W)	0	0	17
	B - Proposed Water Treatment Plant	0	0	0
	C - R445 (E)	16	0	0

Cyclist %

		To		
		A - R445 (W)	B - Proposed Water Treatment Plant	C - R445 (E)
From	A - R445 (W)	0	0	0
	B - Proposed Water Treatment Plant	0	0	0
	C - R445 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R445 (W)		0.00	0.0	A	248	373
B - Proposed Water Treatment Plant	0.00	0.00	0.0	A	0	0
C - R445 (E)		0.00	0.0	A	152	227

LS - 2028 With Construction Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4		T-Junction	Two-way	Two-way	Two-way		0.38	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.38	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)	Run automatically
D11	2028 With Construction Peak	AM	ONE HOUR	07:15	08:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R445 (W)		ONE HOUR	✓	194	100.000
B - Proposed Water Treatment Plant		ONE HOUR	✓	14	100.000
C - R445 (E)		ONE HOUR	✓	347	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R445 (W)	B - Proposed Water Treatment Plant	C - R445 (E)
From	A - R445 (W)	0	78	116
	B - Proposed Water Treatment Plant	14	0	0
	C - R445 (E)	347	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
4	0.20	0.80

Heavy Vehicle %

		To		
		A - R445 (W)	B - Proposed Water Treatment Plant	C - R445 (E)
From	A - R445 (W)	0	18	27
	B - Proposed Water Treatment Plant	100	0	0
	C - R445 (E)	17	0	0

Cyclist %

		To		
		A - R445 (W)	B - Proposed Water Treatment Plant	C - R445 (E)
From	A - R445 (W)	0	0	0
	B - Proposed Water Treatment Plant	0	0	0
	C - R445 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R445 (W)		0.00	0.0	A	177	266
B - Proposed Water Treatment Plant	0.03	14.74	0.1	B	13	19
C - R445 (E)		0.00	0.0	A	316	474

LS - 2028 With Construction Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
4		T-Junction	Two-way	Two-way	Two-way		1.47	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.47	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)	Run automatically
D12	2028 With Construction Peak	PM	ONE HOUR	16:15	17:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R445 (W)		ONE HOUR	✓	286	100.000
B - Proposed Water Treatment Plant		ONE HOUR	✓	78	100.000
C - R445 (E)		ONE HOUR	✓	162	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R445 (W)	B - Proposed Water Treatment Plant	C - R445 (E)
From	A - R445 (W)	0	14	272
	B - Proposed Water Treatment Plant	78	0	0
	C - R445 (E)	162	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
4	0.20	0.80

Heavy Vehicle %

		To		
		A - R445 (W)	B - Proposed Water Treatment Plant	C - R445 (E)
From	A - R445 (W)	0	100	18
	B - Proposed Water Treatment Plant	18	0	0
	C - R445 (E)	17	0	0

Cyclist %

		To		
		A - R445 (W)	B - Proposed Water Treatment Plant	C - R445 (E)
From	A - R445 (W)	0	0	0
	B - Proposed Water Treatment Plant	0	0	0
	C - R445 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R445 (W)		0.00	0.0	A	257	385
B - Proposed Water Treatment Plant	0.16	9.58	0.2	A	74	111
C - R445 (E)		0.00	0.0	A	151	226

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.1.1.1905
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Filename: Junction 5_R445-PSD1 Cross.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 13:02:42

»2024, AM
»2024, PM
»2028 No Construction , AM
»2028 No Construction , PM
»2028 With Construction Peak, AM
»2028 With Construction Peak, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	2024									
Stream B-ACD	0.0	0.00	0.00	A	0.00	0.0	0.00	0.00	A	0.00
Stream A-BCD	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
Stream D-ABC	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
Stream C-ABD	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
	2028 No Construction									
Stream B-ACD	0.0	0.00	0.00	A	0.00	0.0	0.00	0.00	A	0.00
Stream A-BCD	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
Stream D-ABC	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
Stream C-ABD	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
	2028 With Construction Peak									
Stream B-ACD	0.0	0.00	0.00	A	0.02	0.0	11.16	0.02	B	0.11
Stream A-BCD	0.0	7.90	0.00	A		0.0	8.93	0.00	A	
Stream D-ABC	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
Stream C-ABD	0.0	0.00	0.00	A		0.0	0.00	0.00	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	Water Supply Project
Location	
Site number	Junction 5
Date	19/03/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	08:00	09:30	15	✓
D2	2024	PM	ONE HOUR	16:00	17:30	15	✓
D3	2028 No Construction	AM	ONE HOUR	08:00	09:30	15	✓
D4	2028 No Construction	PM	ONE HOUR	16:00	17:30	15	✓
D5	2028 With Construction Peak	AM	ONE HOUR	08:00	09:30	15	✓
D6	2028 With Construction Peak	PM	ONE HOUR	16:00	17:30	15	✓

Analysis Set Details

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

2024, 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
5		Crossroads	Two-way	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	R445 (W)		Major
B	PSD 1 (a) south of R445		Minor
C	R445 (E)		Major
D	PSD 1 (b) north of R445		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 - R445 (W)	6.00			0.0	✓	0.00
C - R445 (E)	6.00			0.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - PSD 1 (a) south of R445	One lane	2.20	0	0
D - PSD 1 (b) north of R445	One lane	2.20	0	0

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
A-D	574	-	-	-	-	-	-	0.222	0.318	0.222	-	-	-
B-A	440	0.080	0.202	0.202	-	-	-	0.127	0.289	-	0.202	0.202	0.101
B-C	574	0.088	0.222	-	-	-	-	-	-	-	-	-	-
B-D, nearside lane	440	0.080	0.202	0.202	-	-	-	0.127	0.289	0.127	-	-	-
B-D, offside lane	440	0.080	0.202	0.202	-	-	-	0.127	0.289	0.127	-	-	-
C-B	574	0.222	0.222	0.318	-	-	-	-	-	-	-	-	-
D-A	574	-	-	-	-	-	-	0.222	-	0.088	-	-	-
D-B, nearside lane	440	0.127	0.127	0.289	-	-	-	0.202	0.202	0.080	-	-	-
D-B, offside lane	440	0.127	0.127	0.289	-	-	-	0.202	0.202	0.080	-	-	-
D-C	440	-	0.127	0.289	0.101	0.202	0.202	0.202	0.202	0.080	-	-	-

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)	Run automatically
D1	2024	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R445 (W)		ONE HOUR	✓	307	100.000
B - PSD 1 (a) south of R445		ONE HOUR	✓	0	100.000
C - R445 (E)		ONE HOUR	✓	192	100.000
D - PSD 1 (b) north of R445		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R445 (W)	B - PSD 1 (a) south of R445	C - R445 (E)	D - PSD 1 (b) north of R445
From	A - R445 (W)	0	0	307	0
	B - PSD 1 (a) south of R445	0	0	0	0
	C - R445 (E)	192	0	0	0
	D - PSD 1 (b) north of R445	0	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
		A - R445 (W)	B - PSD 1 (a) south of R445	C - R445 (E)	D - PSD 1 (b) north of R445
From	A - R445 (W)	0	0	12	0
	B - PSD 1 (a) south of R445	0	0	0	0
	C - R445 (E)	27	0	0	0
	D - PSD 1 (b) north of R445	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.00	0.00	0.0	A	0	0
A-BCD	0.00	0.00	0.0	A	0	0
A-B					0	0
A-C					282	423
D-ABC	0.00	0.00	0.0	A	0	0
C-ABD	0.00	0.00	0.0	A	0	0
C-D					0	0
C-A					176	264

2024, 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
5		Crossroads	Two-way	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D2	2024	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R445 (W)		ONE HOUR	✓	249	100.000
B - PSD 1 (a) south of R445		ONE HOUR	✓	0	100.000
C - R445 (E)		ONE HOUR	✓	279	100.000
D - PSD 1 (b) north of R445		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R445 (W)	B - PSD 1 (a) south of R445	C - R445 (E)	D - PSD 1 (b) north of R445
From	A - R445 (W)	0	0	249	0
	B - PSD 1 (a) south of R445	0	0	0	0
	C - R445 (E)	279	0	0	0
	D - PSD 1 (b) north of R445	0	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
		A - R445 (W)	B - PSD 1 (a) south of R445	C - R445 (E)	D - PSD 1 (b) north of R445
From	A - R445 (W)	0	0	19	0
	B - PSD 1 (a) south of R445	0	0	0	0
	C - R445 (E)	17	0	0	0
	D - PSD 1 (b) north of R445	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.00	0.00	0.0	A	0	0
A-BCD	0.00	0.00	0.0	A	0	0
A-B					0	0
A-C					228	343
D-ABC	0.00	0.00	0.0	A	0	0
C-ABD	0.00	0.00	0.0	A	0	0
C-D					0	0
C-A					256	384

2028 No Construction , 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
5		Crossroads	Two-way	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D3	2028 No Construction	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R445 (W)		ONE HOUR	✓	329	100.000
B - PSD 1 (a) south of R445		ONE HOUR	✓	0	100.000
C - R445 (E)		ONE HOUR	✓	208	100.000
D - PSD 1 (b) north of R445		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R445 (W)	B - PSD 1 (a) south of R445	C - R445 (E)	D - PSD 1 (b) north of R445
From	A - R445 (W)	0	0	329	0
	B - PSD 1 (a) south of R445	0	0	0	0
	C - R445 (E)	208	0	0	0
	D - PSD 1 (b) north of R445	0	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
		A - R445 (W)	B - PSD 1 (a) south of R445	C - R445 (E)	D - PSD 1 (b) north of R445
From	A - R445 (W)	0	0	13	0
	B - PSD 1 (a) south of R445	0	0	0	0
	C - R445 (E)	29	0	0	0
	D - PSD 1 (b) north of R445	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.00	0.00	0.0	A	0	0
A-BCD	0.00	0.00	0.0	A	0	0
A-B					0	0
A-C					302	453
D-ABC	0.00	0.00	0.0	A	0	0
C-ABD	0.00	0.00	0.0	A	0	0
C-D					0	0
C-A					191	286

2028 No Construction , 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
5		Crossroads	Two-way	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D4	2028 No Construction	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R445 (W)		ONE HOUR	✓	268	100.000
B - PSD 1 (a) south of R445		ONE HOUR	✓	0	100.000
C - R445 (E)		ONE HOUR	✓	300	100.000
D - PSD 1 (b) north of R445		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R445 (W)	B - PSD 1 (a) south of R445	C - R445 (E)	D - PSD 1 (b) north of R445
From	A - R445 (W)	0	0	268	0
	B - PSD 1 (a) south of R445	0	0	0	0
	C - R445 (E)	300	0	0	0
	D - PSD 1 (b) north of R445	0	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
		A - R445 (W)	B - PSD 1 (a) south of R445	C - R445 (E)	D - PSD 1 (b) north of R445
From	A - R445 (W)	0	0	20	0
	B - PSD 1 (a) south of R445	0	0	0	0
	C - R445 (E)	18	0	0	0
	D - PSD 1 (b) north of R445	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.00	0.00	0.0	A	0	0
A-BCD	0.00	0.00	0.0	A	0	0
A-B					0	0
A-C					246	369
D-ABC	0.00	0.00	0.0	A	0	0
C-ABD	0.00	0.00	0.0	A	0	0
C-D					0	0
C-A					275	413

2028 With Construction Peak, 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
5		Crossroads	Two-way	Two-way	Two-way	Two-way		0.02	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.02	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)	Run automatically
D5	2028 With Construction Peak	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R445 (W)		ONE HOUR	✓	361	100.000
B - PSD 1 (a) south of R445		ONE HOUR	✓	0	100.000
C - R445 (E)		ONE HOUR	✓	234	100.000
D - PSD 1 (b) north of R445		ONE HOUR	✓	1	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R445 (W)	B - PSD 1 (a) south of R445	C - R445 (E)	D - PSD 1 (b) north of R445
From	A - R445 (W)	0	5	355	1
	B - PSD 1 (a) south of R445	0	0	0	0
	C - R445 (E)	234	0	0	0
	D - PSD 1 (b) north of R445	1	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
		A - R445 (W)	B - PSD 1 (a) south of R445	C - R445 (E)	D - PSD 1 (b) north of R445
From	A - R445 (W)	0	0	18	100
	B - PSD 1 (a) south of R445	0	0	0	0
	C - R445 (E)	35	0	0	0
	D - PSD 1 (b) north of R445	100	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.00	0.00	0.0	A	0	0
A-BCD	0.00	7.90	0.0	A	2	2
A-B					5	7
A-C					325	488
D-ABC	0.00	0.00	0.0	A	0	0
C-ABD	0.00	0.00	0.0	A	0	0
C-D					0	0
C-A					215	322

2028 With Construction Peak, 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
5		Crossroads	Two-way	Two-way	Two-way	Two-way		0.11	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.11	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)	Run automatically
D6	2028 With Construction Peak	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R445 (W)		ONE HOUR	✓	296	100.000
B - PSD 1 (a) south of R445		ONE HOUR	✓	5	100.000
C - R445 (E)		ONE HOUR	✓	326	100.000
D - PSD 1 (b) north of R445		ONE HOUR	✓	1	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R445 (W)	B - PSD 1 (a) south of R445	C - R445 (E)	D - PSD 1 (b) north of R445
From	A - R445 (W)	0	0	295	1
	B - PSD 1 (a) south of R445	5	0	0	0
	C - R445 (E)	326	0	0	0
	D - PSD 1 (b) north of R445	1	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
		A - R445 (W)	B - PSD 1 (a) south of R445	C - R445 (E)	D - PSD 1 (b) north of R445
From	A - R445 (W)	0	0	26	100
	B - PSD 1 (a) south of R445	0	0	0	0
	C - R445 (E)	23	0	0	0
	D - PSD 1 (b) north of R445	100	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.02	11.16	0.0	B	5	7
A-BCD	0.00	8.93	0.0	A	2	2
A-B					0	0
A-C					270	405
D-ABC	0.00	0.00	0.0	A	0	0
C-ABD	0.00	0.00	0.0	A	0	0
C-D					0	0
C-A					299	449

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.1.1.1905
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Filename: Junction 9_N52-R497 Rbt_LS.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 28/07/2025 17:06:19

»LS - 2024, AM
»LS - 2024, PM
»LS - 2028 No Construction , AM
»LS - 2028 No Construction , PM
»LS - 2028 With Construction Peak, AM
»LS - 2028 With Construction Peak, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	LS [Lane Simulation] - 2024									
A - N52 (NNE)	1.5	7.22	0.51	A	6.56	0.9	6.72	0.40	A	6.45
B - R497	1.0	6.83	0.36	A		1.3	7.04	0.40	A	
C - N52 (W)	0.6	5.07	0.24	A		0.8	5.57	0.38	A	
	LS [Lane Simulation] - 2028 No Construction									
A - N52 (NNE)	2.1	8.14	0.53	A	7.28	1.2	6.98	0.42	A	6.64
B - R497	0.9	7.72	0.39	A		1.0	7.19	0.45	A	
C - N52 (W)	0.5	5.22	0.27	A		0.9	5.72	0.38	A	
	LS [Lane Simulation] - 2028 With Construction Peak									
A - N52 (NNE)	2.0	9.41	0.56	A	8.16	2.0	8.75	0.56	A	7.80
B - R497	1.6	8.15	0.50	A		1.2	7.40	0.46	A	
C - N52 (W)	0.8	6.06	0.31	A		1.3	6.98	0.42	A	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	Water Supply Project
Location	
Site number	Junction 9
Date	19/03/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Calculate RFCs	Relaxation factor for capacity/RFC runs	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials
Delay	1.00	100000	100000	Calculate for all arms	3.00	-1	3	1	60	✓			223981534	51

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	07:45	09:15	15	✓
D2	2024	PM	ONE HOUR	16:15	17:45	15	✓
D3	2028 No Construction	AM	ONE HOUR	07:45	09:15	15	✓
D4	2028 No Construction	PM	ONE HOUR	16:15	17:45	15	✓
D7	2028 With Construction Peak	AM	ONE HOUR	07:45	09:15	15	✓
D8	2028 With Construction Peak	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	LS	✓	✓	100.000	100.000

LS - 2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
9		Standard Roundabout		A, B, C	6.56	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.56	A

Arms

Arms

Arm	Name	Description	No give-way line
A	N52 (NNE)		
B	R497		
C	N52 (W)		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - N52 (NNE)	4.41	7.68	7.6	29.2	58.9	10.7		
B - R497	3.91	7.01	19.0	33.0	58.8	24.7		
C - N52 (W)	5.40	8.27	9.1	27.5	58.1	17.7		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - N52 (NNE)	0.619	1895
B - R497	0.604	1869
C - N52 (W)	0.668	2185

The slope and intercept shown above include any corrections and adjustments.

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - N52 (NNE)	Evenly split	10.00
B - R497	Evenly split	10.00
C - N52 (W)	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - N52 (NNE)	Entry	1	1	B	✓	3.00			0	99999	
			2	A, C	✓	3.00			0	99999	
		2	1	(A, B, C)		Infinity					
	Exit	1	1			Infinity					
B - R497	Entry	1	1	C	✓	3.00			0	99999	
			2	A, B	✓	3.00			0	99999	
		2	1	(A, B, C)		Infinity					
	Exit	1	1			Infinity					
C - N52 (W)	Entry	1	1	A	✓	3.00			0	99999	
			2	B, C	✓	3.00			0	99999	
		2	1	(A, B, C)		Infinity					
	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - N52 (NNE)	Entry	1	1	0.310	948
			2	0.310	948
B - R497	Entry	1	1	0.302	934
			2	0.302	934
C - N52 (W)	Entry	1	1	0.334	1093
			2	0.334	1093

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			N52 (NNE)	R497	N52 (W)
A - N52 (NNE)	1	1		✓	
		2	✓		✓
	2	1	✓	✓	✓
B - R497	1	1			✓
		2	✓	✓	
	2	1	✓	✓	✓
C - N52 (W)	1	1	✓		
		2		✓	✓
	2	1	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52 (NNE)		ONE HOUR	✓	590	100.000
B - R497		ONE HOUR	✓	403	100.000
C - N52 (W)		ONE HOUR	✓	327	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N52 (NNE)	B - R497	C - N52 (W)
From	A - N52 (NNE)	0	263	327
	B - R497	177	4	222
	C - N52 (W)	200	126	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
9	0.20	0.80

Heavy Vehicle %

		To		
		A - N52 (NNE)	B - R497	C - N52 (W)
From	A - N52 (NNE)	0	14	5
	B - R497	17	0	3
	C - N52 (W)	16	6	0

Cyclist %

		To		
		A - N52 (NNE)	B - R497	C - N52 (W)
From	A - N52 (NNE)	0	0	0
	B - R497	0	0	0
	C - N52 (W)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52 (NNE)	0.51	7.22	1.5	A	543	814
B - R497	0.36	6.83	1.0	A	361	542
C - N52 (W)	0.24	5.07	0.6	A	303	454

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	441	110	95	1370	0.322	439	442	297	0.0	0.7	5.757	A
B - R497	297	74	245	1256	0.237	296	306	290	0.0	0.5	5.599	A
C - N52 (W)	263	66	128	1470	0.179	264	253	413	0.0	0.4	4.870	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	546	137	105	1348	0.405	542	529	320	0.7	1.3	6.352	A
B - R497	345	86	301	1190	0.290	349	355	346	0.5	0.5	6.092	A
C - N52 (W)	274	69	149	1466	0.187	276	283	501	0.4	0.2	4.388	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	642	160	141	1320	0.486	643	646	398	1.3	1.4	7.072	A
B - R497	439	110	356	1210	0.363	434	435	428	0.5	1.0	6.832	A
C - N52 (W)	353	88	190	1469	0.240	349	352	600	0.2	0.6	4.903	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	644	161	150	1271	0.507	641	649	407	1.4	1.5	7.223	A
B - R497	431	108	364	1212	0.355	428	442	427	1.0	0.9	6.814	A
C - N52 (W)	367	92	188	1501	0.244	368	371	604	0.6	0.5	5.066	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	540	135	122	1336	0.405	537	532	346	1.5	1.3	6.349	A
B - R497	359	90	307	1284	0.280	359	365	352	0.9	0.6	6.455	A
C - N52 (W)	311	78	160	1506	0.206	309	302	507	0.5	0.3	4.590	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	443	111	99	1386	0.320	444	446	284	1.3	0.8	5.647	A
B - R497	298	74	243	1315	0.226	299	302	300	0.6	0.4	5.586	A
C - N52 (W)	250	62	132	1517	0.165	252	252	410	0.3	0.3	4.483	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	196	918	0.213	195	201	0.0	0.2	5.602	A
			2	A, C	245	918	0.267	244	241	0.0	0.5	5.408	A
		2	1	(A, B, C)	441			441	445	0.0	0.0	0.265	A
	Exit	1	1		297			297	294	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	168	861	0.196	168	170	0.0	0.3	5.310	A
			2	A, B	129	861	0.150	128	136	0.0	0.3	5.784	A
		2	1	(A, B, C)	297			297	308	0.0	0.0	0.091	A
	Exit	1	1		290			290	296	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	171	1050	0.163	171	160	0.0	0.3	5.020	A
			2	B, C	92	1050	0.088	93	92	0.0	0.0	4.349	A
		2	1	(A, B, C)	263			264	254	0.0	0.0	0.101	A
	Exit	1	1		413			413	412	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	243	915	0.265	242	234	0.2	0.5	5.923	A
			2	A, C	300	915	0.328	300	296	0.5	0.4	5.870	A
		2	1	(A, B, C)	546			543	530	0.0	0.4	0.435	A
	Exit	1	1		320			320	327	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	199	843	0.236	200	198	0.3	0.2	5.608	A
			2	A, B	148	843	0.175	149	156	0.3	0.3	6.119	A
		2	1	(A, B, C)	345			346	355	0.0	0.0	0.275	A
	Exit	1	1		346			346	344	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	171	1043	0.164	174	174	0.3	0.2	4.528	A
			2	B, C	103	1043	0.099	103	109	0.0	0.1	3.884	A
		2	1	(A, B, C)	274			274	282	0.0	0.0	0.130	A
	Exit	1	1		501			501	495	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	289	904	0.320	287	297	0.5	0.7	6.346	A
			2	A, C	351	904	0.388	356	349	0.4	0.4	6.235	A
		2	1	(A, B, C)	642			640	647	0.4	0.2	0.798	A
	Exit	1	1		398			398	407	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	248	827	0.300	244	239	0.2	0.6	6.154	A
			2	A, B	191	827	0.231	190	196	0.3	0.4	6.700	A
		2	1	(A, B, C)	439			439	437	0.0	0.0	0.450	A
	Exit	1	1		428			428	437	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	216	1029	0.210	214	216	0.2	0.4	5.153	A
			2	B, C	136	1029	0.133	135	135	0.1	0.2	4.223	A
		2	1	(A, B, C)	353			353	353	0.0	0.0	0.129	A
	Exit	1	1		600			600	589	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	282	901	0.313	280	293	0.7	0.6	6.175	A
			2	A, C	363	901	0.403	361	356	0.4	0.8	6.387	A
		2	1	(A, B, C)	644			645	650	0.2	0.1	0.931	A
	Exit	1	1		407			407	416	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	239	825	0.290	240	248	0.6	0.4	6.313	A
			2	A, B	191	825	0.231	188	194	0.4	0.4	6.294	A
		2	1	(A, B, C)	431			430	441	0.0	0.1	0.504	A
	Exit	1	1		427			427	441	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	218	1030	0.212	221	226	0.4	0.3	5.188	A
			2	B, C	148	1030	0.144	147	146	0.2	0.3	4.473	A
		2	1	(A, B, C)	367			366	371	0.0	0.0	0.175	A
	Exit	1	1		604			604	606	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	232	910	0.254	231	234	0.6	0.3	6.065	A
			2	A, C	307	910	0.337	306	298	0.8	0.8	5.741	A
		2	1	(A, B, C)	540			539	531	0.1	0.2	0.481	A
	Exit	1	1		346			346	343	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	202	842	0.240	200	206	0.4	0.4	5.894	A
			2	A, B	158	842	0.187	160	160	0.4	0.2	6.510	A
		2	1	(A, B, C)	359			360	365	0.1	0.0	0.317	A
	Exit	1	1		352			352	351	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	192	1039	0.185	191	187	0.3	0.2	4.781	A
			2	B, C	118	1039	0.113	119	115	0.3	0.1	4.103	A
		2	1	(A, B, C)	311			310	301	0.0	0.1	0.078	A
	Exit	1	1		507			507	505	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	202	917	0.220	201	199	0.3	0.3	5.228	A
			2	A, C	243	917	0.265	243	248	0.8	0.4	5.664	A
		2	1	(A, B, C)	443			444	445	0.2	0.0	0.166	A
	Exit	1	1		284			284	288	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	167	861	0.194	168	167	0.4	0.2	5.087	A
			2	A, B	130	861	0.151	132	136	0.2	0.2	6.011	A
		2	1	(A, B, C)	298			298	302	0.0	0.0	0.113	A
	Exit	1	1		300			300	298	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	156	1049	0.148	156	156	0.2	0.2	4.593	A
			2	B, C	93	1049	0.089	96	96	0.1	0.0	4.110	A
		2	1	(A, B, C)	250			249	252	0.1	0.0	0.087	A
	Exit	1	1		410			410	415	0.0	0.0	0.000	A

Lane movements: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	196	49	948	918	0.213	195	201	0.0	0.2	5.602	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	245	61	948	918	0.267	244	241	0.0	0.5	5.408	A
		2	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	196	49	-	-	-	196	202	0.0	0.0	0.222	A
				C	245	61	-	-	-	245	243	0.0	0.0	0.297	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	168	42	934	860	0.196	168	170	0.0	0.3	5.310	A
			2	A	126	32	934	860	0.147	126	133	0.0	0.3	5.815	A
				B	2	0.59	495	451	0.005	2	3	0.0	0.0	4.686	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	126	32	-	-	-	126	134	0.0	0.0	0.103	A
				B	2	0.59	-	-	-	2	3	0.0	0.0	0.308	A
				C	168	42	-	-	-	168	171	0.0	0.0	0.078	A
C - N52 (W)	Entry	1	1	A	171	43	1093	1050	0.163	171	160	0.0	0.3	5.020	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	91	23	1093	1051	0.087	92	91	0.0	0.0	4.339	A
				C	0.94	0.24	257	246	0.004	0.94	0.94	0.0	0.0	5.317	A
		2	1	A	171	43	-	-	-	171	161	0.0	0.0	0.122	A
				B	91	23	-	-	-	91	92	0.0	0.0	0.065	A
				C	0.94	0.24	-	-	-	0.94	0.94	0.0	0.0	0.147	A

08:00 - 08:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	243	61	948	915	0.265	242	234	0.2	0.5	5.923	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	300	75	948	916	0.328	300	296	0.5	0.4	5.870	A
		2	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	245	61	-	-	-	243	235	0.0	0.2	0.458	A
				C	301	75	-	-	-	300	296	0.0	0.2	0.419	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	199	50	934	843	0.236	200	198	0.3	0.2	5.608	A
			2	A	145	36	934	844	0.172	147	154	0.3	0.3	6.143	A
				B	3	0.65	513	467	0.006	3	3	0.0	0.0	5.034	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	144	36	-	-	-	145	154	0.0	0.0	0.389	A
				B	3	0.65	-	-	-	3	3	0.0	0.0	0.064	A
				C	198	50	-	-	-	199	198	0.0	0.0	0.201	A
C - N52 (W)	Entry	1	1	A	171	43	1093	1042	0.164	174	174	0.3	0.2	4.528	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	102	26	1093	1041	0.098	102	108	0.0	0.1	3.884	A
				C	1	0.29	300	286	0.004	1	1	0.0	0.0	3.850	A
		2	1	A	171	43	-	-	-	171	173	0.0	0.0	0.160	A
				B	102	26	-	-	-	102	108	0.0	0.0	0.088	A
				C	1	0.29	-	-	-	1	1	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	289	72	948	904	0.320	287	297	0.5	0.7	6.346	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	351	88	948	904	0.388	356	349	0.4	0.4	6.235	A
		2	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	290	73	-	-	-	289	298	0.2	0.1	0.833	A
				C	351	88	-	-	-	351	349	0.2	0.1	0.770	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	248	62	934	828	0.299	244	239	0.2	0.6	6.154	A
			2	A	185	46	934	825	0.225	184	191	0.3	0.4	6.699	A
				B	6	1	641	567	0.010	6	5	0.0	0.0	6.732	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	185	46	-	-	-	185	191	0.0	0.0	0.502	A
				B	6	1	-	-	-	6	5	0.0	0.0	0.575	A
				C	248	62	-	-	-	248	240	0.0	0.0	0.411	A
C - N52 (W)	Entry	1	1	A	216	54	1093	1030	0.210	214	216	0.2	0.4	5.153	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	136	34	1093	1030	0.133	135	135	0.1	0.2	4.229	A
				C	0	0	107	101	0.000	0	0.47	0.0	0.0	2.545	A
		2	1	A	216	54	-	-	-	216	217	0.0	0.0	0.144	A
				B	136	34	-	-	-	136	135	0.0	0.0	0.105	A
				C	0	0	-	-	-	0	0.47	0.0	0.0	0.523	A

08:30 - 08:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	282	70	948	901	0.313	280	293	0.7	0.6	6.175	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	363	91	948	901	0.403	361	356	0.4	0.8	6.387	A
		2	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	281	70	-	-	-	282	293	0.1	0.0	0.926	A
				C	363	91	-	-	-	363	358	0.1	0.1	0.935	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	239	60	934	827	0.289	240	248	0.6	0.4	6.313	A
			2	A	187	47	934	825	0.227	185	190	0.4	0.4	6.326	A
				B	4	0.94	513	457	0.008	4	4	0.0	0.0	4.916	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	187	47	-	-	-	187	190	0.0	0.0	0.485	A
				B	4	0.94	-	-	-	4	4	0.0	0.0	0.101	A
				C	240	60	-	-	-	239	247	0.0	0.1	0.523	A
C - N52 (W)	Entry	1	1	A	218	55	1093	1029	0.212	221	226	0.4	0.3	5.188	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	145	36	1093	1029	0.141	144	144	0.2	0.3	4.469	A
				C	3	0.65	321	302	0.009	3	1	0.0	0.0	4.954	A
		2	1	A	219	55	-	-	-	218	225	0.0	0.0	0.240	A
				B	145	36	-	-	-	145	144	0.0	0.0	0.085	A
				C	3	0.65	-	-	-	3	1	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	232	58	948	910	0.254	231	234	0.6	0.3	6.065	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	307	77	948	910	0.338	306	298	0.8	0.8	5.741	A
		2	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	232	58	-	-	-	232	233	0.0	0.1	0.532	A
				C	308	77	-	-	-	307	298	0.1	0.1	0.444	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	202	50	934	843	0.239	200	206	0.4	0.4	5.894	A
			2	A	155	39	934	843	0.184	156	156	0.4	0.2	6.489	A
				B	3	0.76	513	461	0.007	3	3	0.0	0.0	7.376	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	154	39	-	-	-	155	156	0.0	0.0	0.356	A
				B	3	0.76	-	-	-	3	3	0.0	0.0	0.000	A
				C	202	50	-	-	-	202	206	0.1	0.0	0.296	A
C - N52 (W)	Entry	1	1	A	192	48	1093	1039	0.184	191	187	0.3	0.2	4.781	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	117	29	1093	1041	0.112	118	114	0.3	0.1	4.088	A
				C	0.94	0.24	236	224	0.004	0.94	1	0.0	0.0	5.435	A
		2	1	A	192	48	-	-	-	192	186	0.0	0.0	0.091	A
				B	117	29	-	-	-	117	113	0.0	0.0	0.058	A
				C	0.94	0.24	-	-	-	0.94	1	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	202	50	948	918	0.220	201	199	0.3	0.3	5.228	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	243	61	948	918	0.265	243	248	0.8	0.4	5.664	A
		2	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	202	50	-	-	-	202	199	0.1	0.0	0.123	A
				C	242	60	-	-	-	243	246	0.1	0.0	0.197	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	167	42	934	862	0.194	168	167	0.4	0.2	5.087	A
			2	A	127	32	934	860	0.148	128	132	0.2	0.2	5.976	A
				B	3	0.82	550	507	0.007	3	4	0.0	0.0	7.124	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	127	32	-	-	-	127	132	0.0	0.0	0.175	A
				B	3	0.82	-	-	-	3	4	0.0	0.0	0.046	A
				C	167	42	-	-	-	167	166	0.0	0.0	0.071	A
C - N52 (W)	Entry	1	1	A	156	39	1093	1048	0.148	156	156	0.2	0.2	4.593	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	93	23	1093	1048	0.089	96	96	0.1	0.0	4.113	A
				C	0	0	86	82	0.000	0	0.31	0.0	0.0	3.212	A
		2	1	A	156	39	-	-	-	156	156	0.0	0.0	0.121	A
				B	93	23	-	-	-	93	95	0.0	0.0	0.037	A
				C	0	0	-	-	-	0	0.31	0.0	0.0	0.000	A

LS - 2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
9		Standard Roundabout		A, B, C	6.45	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.45	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)	Run automatically
D2	2024	PM	ONE HOUR	16:15	17:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52 (NNE)		ONE HOUR	✓	463	100.000
B - R497		ONE HOUR	✓	441	100.000
C - N52 (W)		ONE HOUR	✓	429	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N52 (NNE)	B - R497	C - N52 (W)
From	A - N52 (NNE)	1	253	209
	B - R497	314	0	127
	C - N52 (W)	285	143	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
9	0.20	0.80

Heavy Vehicle %

		To		
		A - N52 (NNE)	B - R497	C - N52 (W)
From	A - N52 (NNE)	0	10	10
	B - R497	5	0	2
	C - N52 (W)	7	1	0

Cyclist %

		To		
		A - N52 (NNE)	B - R497	C - N52 (W)
From	A - N52 (NNE)	0	0	0
	B - R497	0	0	0
	C - N52 (W)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52 (NNE)	0.40	6.72	0.9	A	422	633
B - R497	0.40	7.04	1.3	A	400	600
C - N52 (W)	0.38	5.57	0.8	A	395	592

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	344	86	107	1391	0.248	342	346	458	0.0	0.6	5.524	A
B - R497	325	81	157	1196	0.271	327	324	292	0.0	0.4	5.410	A
C - N52 (W)	326	81	242	1443	0.226	322	319	242	0.0	0.6	4.752	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	397	99	120	1316	0.302	398	406	537	0.6	0.8	5.695	A
B - R497	398	99	181	1183	0.336	396	396	337	0.4	0.6	5.809	A
C - N52 (W)	382	96	275	1434	0.266	382	380	302	0.6	0.6	4.785	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	518	130	150	1312	0.395	519	514	660	0.8	0.9	6.162	A
B - R497	487	122	243	1216	0.401	485	486	427	0.6	0.9	6.619	A
C - N52 (W)	461	115	346	1391	0.331	464	472	383	0.6	0.8	5.571	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	507	127	157	1304	0.389	509	516	667	0.9	0.9	6.721	A
B - R497	481	120	228	1193	0.403	479	473	438	0.9	1.3	7.036	A
C - N52 (W)	483	121	344	1285	0.376	480	480	364	0.8	0.8	5.449	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	410	103	135	1347	0.305	414	425	528	0.9	0.4	5.898	A
B - R497	386	97	185	1167	0.331	386	397	363	1.3	0.8	6.067	A
C - N52 (W)	386	96	277	1378	0.280	386	389	294	0.8	0.5	5.042	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	352	88	110	1355	0.260	351	351	464	0.4	0.4	5.612	A
B - R497	324	81	159	1246	0.260	325	335	302	0.8	0.6	5.635	A
C - N52 (W)	332	83	242	1392	0.238	331	331	242	0.5	0.5	4.600	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:15 - 16:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	186	915	0.203	185	192	0.0	0.4	5.545	A
			2	A, C	158	915	0.173	157	154	0.0	0.2	5.096	A
		2	1	(A, B, C)	344			344	349	0.0	0.0	0.177	A
	Exit	1	1		458			458	445	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	85	887	0.096	86	94	0.0	0.0	4.423	A
			2	A, B	240	887	0.270	241	230	0.0	0.3	5.573	A
		2	1	(A, B, C)	325			324	325	0.0	0.0	0.178	A
	Exit	1	1		292			292	297	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	219	1011	0.216	215	215	0.0	0.5	4.890	A
			2	B, C	107	1011	0.106	107	105	0.0	0.1	3.930	A
		2	1	(A, B, C)	326			326	322	0.0	0.0	0.189	A
	Exit	1	1		242			242	248	0.0	0.0	0.000	A

16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	218	911	0.240	218	218	0.4	0.5	5.623	A
			2	A, C	181	911	0.199	181	188	0.2	0.3	5.217	A
		2	1	(A, B, C)	397			399	407	0.0	0.0	0.262	A
	Exit	1	1		537			537	533	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	122	880	0.138	121	120	0.0	0.2	5.026	A
			2	A, B	276	880	0.314	274	276	0.3	0.4	5.842	A
		2	1	(A, B, C)	398			398	397	0.0	0.0	0.223	A
	Exit	1	1		337			337	341	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	261	1001	0.261	262	256	0.5	0.4	4.866	A
			2	B, C	121	1001	0.121	120	124	0.1	0.2	4.122	A
		2	1	(A, B, C)	382			382	380	0.0	0.0	0.171	A
	Exit	1	1		302			302	308	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	276	901	0.306	277	282	0.5	0.4	5.726	A
			2	A, C	243	901	0.269	242	232	0.3	0.4	5.629	A
		2	1	(A, B, C)	518			519	514	0.0	0.1	0.478	A
	Exit	1	1		660			660	668	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	140	861	0.162	140	136	0.2	0.2	5.167	A
			2	A, B	348	861	0.404	345	350	0.4	0.8	6.548	A
		2	1	(A, B, C)	487			488	487	0.0	0.0	0.466	A
	Exit	1	1		427			427	436	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	314	977	0.321	314	317	0.4	0.6	5.696	A
			2	B, C	150	977	0.153	150	156	0.2	0.2	4.409	A
		2	1	(A, B, C)	461			462	473	0.0	0.0	0.315	A
	Exit	1	1		383			383	368	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	281	899	0.313	281	279	0.4	0.4	6.393	A
			2	A, C	226	899	0.251	227	238	0.4	0.3	5.911	A
		2	1	(A, B, C)	507			507	516	0.1	0.2	0.552	A
	Exit	1	1		667			667	657	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	136	866	0.157	136	137	0.2	0.3	4.750	A
			2	A, B	343	866	0.397	343	337	0.8	1.0	6.881	A
		2	1	(A, B, C)	481			480	475	0.0	0.1	0.786	A
	Exit	1	1		438			438	438	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	323	978	0.330	322	320	0.6	0.5	5.629	A
			2	B, C	158	978	0.162	157	160	0.2	0.2	4.374	A
		2	1	(A, B, C)	483			481	480	0.0	0.1	0.256	A
	Exit	1	1		364			364	375	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	226	906	0.250	230	231	0.4	0.2	5.547	A
			2	A, C	184	906	0.204	184	194	0.3	0.3	5.660	A
		2	1	(A, B, C)	410			410	424	0.2	0.0	0.302	A
	Exit	1	1		528			528	542	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	109	879	0.125	109	114	0.3	0.2	4.731	A
			2	A, B	277	879	0.315	277	283	1.0	0.6	6.215	A
		2	1	(A, B, C)	386			386	395	0.1	0.0	0.295	A
	Exit	1	1		363			363	361	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	252	1000	0.252	251	258	0.5	0.4	5.202	A
			2	B, C	134	1000	0.134	135	131	0.2	0.1	4.310	A
		2	1	(A, B, C)	386			386	388	0.1	0.0	0.150	A
	Exit	1	1		294			294	309	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	194	914	0.212	193	190	0.2	0.2	5.527	A
			2	A, C	159	914	0.174	158	161	0.3	0.3	5.359	A
		2	1	(A, B, C)	352			352	351	0.0	0.0	0.161	A
	Exit	1	1		464			464	465	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	84	886	0.095	83	92	0.2	0.2	4.952	A
			2	A, B	240	886	0.271	242	243	0.6	0.4	5.771	A
		2	1	(A, B, C)	324			324	335	0.0	0.0	0.095	A
	Exit	1	1		302			302	298	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	222	1011	0.219	221	221	0.4	0.3	4.693	A
			2	B, C	110	1011	0.109	110	110	0.1	0.2	4.166	A
		2	1	(A, B, C)	332			332	331	0.0	0.0	0.091	A
	Exit	1	1		242			242	254	0.0	0.0	0.000	A

Lane movements: Main Results for each time segment

16:15 - 16:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	186	47	948	915	0.203	185	192	0.0	0.4	5.545	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0.98	0.24	174	168	0.006	0.98	0.82	0.0	0.0	2.946	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	157	39	948	915	0.172	156	153	0.0	0.2	5.108	A
		2	1	A	0.98	0.24	-	-	-	0.98	0.82	0.0	0.0	0.000	A
				B	186	47	-	-	-	186	194	0.0	0.0	0.185	A
				C	157	39	-	-	-	157	154	0.0	0.0	0.167	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	85	21	934	887	0.096	86	94	0.0	0.0	4.423	A
			2	A	240	60	934	887	0.270	241	230	0.0	0.3	5.573	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	240	60	-	-	-	240	231	0.0	0.0	0.206	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	85	21	-	-	-	85	94	0.0	0.0	0.112	A
C - N52 (W)	Entry	1	1	A	219	55	1093	1012	0.216	215	215	0.0	0.5	4.890	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	107	27	1093	1010	0.105	107	104	0.0	0.1	3.924	A
				C	0.24	0.06	111	103	0.002	0.24	0.49	0.0	0.0	5.377	A
		2	1	A	219	55	-	-	-	219	217	0.0	0.0	0.207	A
				B	107	27	-	-	-	107	105	0.0	0.0	0.155	A
				C	0.24	0.06	-	-	-	0.24	0.49	0.0	0.0	0.000	A

16:30 - 16:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	218	55	948	911	0.239	218	218	0.4	0.5	5.623	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0.73	0.18	193	186	0.004	0.73	0.82	0.0	0.0	5.611	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	181	45	948	911	0.198	180	187	0.2	0.3	5.215	A
		2	1	A	0.73	0.18	-	-	-	0.73	0.82	0.0	0.0	1.329	A
				B	216	54	-	-	-	218	218	0.0	0.0	0.284	A
				C	180	45	-	-	-	181	188	0.0	0.0	0.231	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	122	30	934	879	0.139	121	120	0.0	0.2	5.026	A
			2	A	276	69	934	880	0.314	274	276	0.3	0.4	5.842	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	276	69	-	-	-	276	276	0.0	0.0	0.280	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	122	30	-	-	-	122	121	0.0	0.0	0.097	A
C - N52 (W)	Entry	1	1	A	261	65	1093	1000	0.261	262	256	0.5	0.4	4.866	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	121	30	1093	1000	0.121	120	123	0.1	0.2	4.124	A
				C	0	0	134	122	0.000	0	0.49	0.0	0.0	3.522	A
		2	1	A	261	65	-	-	-	261	256	0.0	0.0	0.171	A
				B	121	30	-	-	-	121	124	0.0	0.0	0.171	A
				C	0	0	-	-	-	0	0.49	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	276	69	948	901	0.306	277	282	0.5	0.4	5.726	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0.98	0.24	155	147	0.007	0.98	0.73	0.0	0.0	8.219	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	242	60	948	901	0.268	241	231	0.3	0.4	5.620	A
		2	1	A	0.98	0.24	-	-	-	0.98	0.73	0.0	0.0	0.660	A
				B	275	69	-	-	-	276	282	0.0	0.0	0.509	A
				C	241	60	-	-	-	242	232	0.0	0.0	0.439	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	140	35	934	862	0.162	140	136	0.2	0.2	5.167	A
			2	A	348	87	934	861	0.404	345	350	0.4	0.8	6.548	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	347	87	-	-	-	348	352	0.0	0.0	0.509	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	140	35	-	-	-	140	136	0.0	0.0	0.356	A
C - N52 (W)	Entry	1	1	A	314	78	1093	978	0.321	314	317	0.4	0.6	5.696	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	148	37	1093	977	0.152	149	154	0.2	0.2	4.409	A
				C	0.98	0.24	268	239	0.004	0.98	1	0.0	0.0	4.416	A
		2	1	A	313	78	-	-	-	314	318	0.0	0.0	0.376	A
				B	148	37	-	-	-	148	154	0.0	0.0	0.196	A
				C	0.98	0.24	-	-	-	0.98	1	0.0	0.0	0.622	A

17:00 - 17:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	281	70	948	898	0.313	281	279	0.4	0.4	6.393	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0.98	0.24	193	184	0.005	0.98	0.98	0.0	0.0	5.401	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	225	56	948	899	0.250	226	237	0.4	0.3	5.913	A
		2	1	A	0.98	0.24	-	-	-	0.98	0.98	0.0	0.0	0.000	A
				B	281	70	-	-	-	281	279	0.0	0.1	0.542	A
				C	226	56	-	-	-	225	236	0.0	0.1	0.567	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	136	34	934	865	0.157	136	137	0.2	0.3	4.750	A
			2	A	343	86	934	865	0.397	343	337	0.8	1.0	6.881	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	344	86	-	-	-	343	337	0.0	0.1	0.914	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	136	34	-	-	-	136	137	0.0	0.0	0.482	A
C - N52 (W)	Entry	1	1	A	323	81	1093	977	0.331	322	320	0.6	0.5	5.629	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	157	39	1093	975	0.161	157	159	0.2	0.2	4.379	A
				C	0.98	0.24	334	299	0.003	0.98	1	0.0	0.0	3.753	A
		2	1	A	324	81	-	-	-	323	319	0.0	0.1	0.313	A
				B	157	39	-	-	-	157	159	0.0	0.0	0.149	A
				C	1	0.31	-	-	-	0.98	1	0.0	0.0	0.286	A

17:15 - 17:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	226	57	948	906	0.249	230	231	0.4	0.2	5.547	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0.24	0.06	116	110	0.002	0.24	0.49	0.0	0.0	10.391	B
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	184	46	948	906	0.203	184	194	0.3	0.3	5.646	A
		2	1	A	0.24	0.06	-	-	-	0.24	0.49	0.0	0.0	0.000	A
				B	226	57	-	-	-	226	230	0.1	0.0	0.272	A
				C	184	46	-	-	-	184	194	0.1	0.0	0.339	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	109	27	934	877	0.125	109	114	0.3	0.2	4.731	A
			2	A	277	69	934	878	0.315	277	283	1.0	0.6	6.215	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	277	69	-	-	-	277	282	0.1	0.0	0.336	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	109	27	-	-	-	109	114	0.0	0.0	0.197	A
C - N52 (W)	Entry	1	1	A	252	63	1093	1000	0.252	251	258	0.5	0.4	5.202	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	133	33	1093	999	0.133	134	130	0.2	0.1	4.306	A
				C	1	0.31	245	222	0.006	1	1	0.0	0.0	4.752	A
		2	1	A	252	63	-	-	-	252	258	0.1	0.0	0.180	A
				B	133	33	-	-	-	133	129	0.0	0.0	0.090	A
				C	1	0.31	-	-	-	1	1	0.0	0.0	0.536	A

17:30 - 17:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	194	48	948	913	0.212	193	190	0.2	0.2	5.527	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0.49	0.12	135	131	0.004	0.49	0.57	0.0	0.0	3.859	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	158	40	948	913	0.173	158	160	0.3	0.3	5.365	A
		2	1	A	0.49	0.12	-	-	-	0.49	0.57	0.0	0.0	0.000	A
				B	194	48	-	-	-	194	190	0.0	0.0	0.160	A
				C	158	40	-	-	-	158	160	0.0	0.0	0.162	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	84	21	934	886	0.095	83	92	0.2	0.2	4.952	A
			2	A	240	60	934	887	0.270	242	243	0.6	0.4	5.771	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	240	60	-	-	-	240	243	0.0	0.0	0.120	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	84	21	-	-	-	84	92	0.0	0.0	0.031	A
C - N52 (W)	Entry	1	1	A	222	55	1093	1009	0.220	221	221	0.4	0.3	4.693	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	109	27	1093	1010	0.108	109	108	0.1	0.2	4.185	A
				C	1	0.31	290	268	0.005	1	1	0.0	0.0	2.563	A
		2	1	A	222	55	-	-	-	222	221	0.0	0.0	0.115	A
				B	109	27	-	-	-	109	109	0.0	0.0	0.046	A
				C	1	0.31	-	-	-	1	1	0.0	0.0	0.000	A

LS - 2028 No Construction , AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
9		Standard Roundabout		A, B, C	7.28	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.28	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)	Run automatically
D3	2028 No Construction	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52 (NNE)		ONE HOUR	✓	631	100.000
B - R497		ONE HOUR	✓	430	100.000
C - N52 (W)		ONE HOUR	✓	351	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N52 (NNE)	B - R497	C - N52 (W)
From	A - N52 (NNE)	0	282	349
	B - R497	190	4	236
	C - N52 (W)	215	135	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
9	0.20	0.80

Heavy Vehicle %

		To		
		A - N52 (NNE)	B - R497	C - N52 (W)
From	A - N52 (NNE)	0	15	5
	B - R497	19	0	4
	C - N52 (W)	17	7	0

Cyclist %

		To		
		A - N52 (NNE)	B - R497	C - N52 (W)
From	A - N52 (NNE)	0	0	0
	B - R497	0	0	0
	C - N52 (W)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52 (NNE)	0.53	8.14	2.1	A	575	862
B - R497	0.39	7.72	0.9	A	394	591
C - N52 (W)	0.27	5.22	0.5	A	322	483

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	455	114	111	1326	0.343	456	473	290	0.0	0.8	5.920	A
B - R497	328	82	257	1283	0.256	326	320	309	0.0	0.7	5.791	A
C - N52 (W)	263	66	136	1423	0.185	264	269	447	0.0	0.2	4.507	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	573	143	122	1349	0.425	576	554	357	0.8	1.0	6.926	A
B - R497	375	94	321	1239	0.302	373	379	377	0.7	0.6	6.059	A
C - N52 (W)	310	78	166	1509	0.206	313	309	528	0.2	0.4	4.682	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	679	170	164	1349	0.503	678	684	428	1.0	1.5	7.614	A
B - R497	467	117	377	1197	0.390	465	465	466	0.6	0.9	7.718	A
C - N52 (W)	387	97	205	1493	0.259	387	386	637	0.4	0.5	4.969	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	691	173	156	1317	0.525	687	697	458	1.5	2.1	8.143	A
B - R497	459	115	395	1193	0.385	462	479	448	0.9	0.9	7.567	A
C - N52 (W)	391	98	218	1448	0.270	396	388	639	0.5	0.4	5.215	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	563	141	132	1349	0.417	564	576	368	2.1	0.9	6.814	A
B - R497	400	100	323	1235	0.324	398	397	373	0.9	0.9	6.446	A
C - N52 (W)	319	80	181	1427	0.224	319	316	539	0.4	0.4	4.701	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	487	122	111	1394	0.349	477	471	310	0.9	1.3	6.085	A
B - R497	333	83	261	1270	0.263	334	332	326	0.9	0.4	6.306	A
C - N52 (W)	264	66	156	1509	0.175	264	271	439	0.4	0.3	4.419	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	198	913	0.216	199	213	0.0	0.3	5.572	A
			2	A, C	256	913	0.280	257	260	0.0	0.4	5.626	A
		2	1	(A, B, C)	455			454	476	0.0	0.1	0.316	A
	Exit	1	1		290			290	302	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	190	857	0.222	189	177	0.0	0.3	5.443	A
			2	A, B	138	857	0.161	136	143	0.0	0.3	5.888	A
		2	1	(A, B, C)	328			327	322	0.0	0.1	0.161	A
	Exit	1	1		309			309	321	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	156	1047	0.149	156	162	0.0	0.2	4.865	A
			2	B, C	107	1047	0.102	107	107	0.0	0.1	3.828	A
		2	1	(A, B, C)	263			263	270	0.0	0.0	0.076	A
	Exit	1	1		447			447	438	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	255	910	0.280	255	245	0.3	0.6	5.830	A
			2	A, C	320	910	0.352	321	310	0.4	0.4	6.422	A
		2	1	(A, B, C)	573			575	556	0.1	0.0	0.755	A
	Exit	1	1		357			357	355	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	208	837	0.248	207	210	0.3	0.3	5.503	A
			2	A, B	167	837	0.199	166	169	0.3	0.3	6.294	A
		2	1	(A, B, C)	375			375	379	0.1	0.0	0.230	A
	Exit	1	1		377			377	367	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	193	1037	0.186	196	190	0.2	0.2	4.925	A
			2	B, C	119	1037	0.114	118	120	0.1	0.2	4.091	A
		2	1	(A, B, C)	310			311	310	0.0	0.0	0.100	A
	Exit	1	1		528			528	521	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	305	897	0.340	304	307	0.6	0.7	6.604	A
			2	A, C	373	897	0.416	374	376	0.4	0.4	6.478	A
		2	1	(A, B, C)	679			678	684	0.0	0.3	1.079	A
	Exit	1	1		428			428	435	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	261	821	0.317	260	260	0.3	0.4	6.508	A
			2	A, B	207	821	0.252	205	205	0.3	0.6	7.146	A
		2	1	(A, B, C)	467			467	466	0.0	0.0	0.951	A
	Exit	1	1		466			466	461	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	227	1024	0.222	227	234	0.2	0.3	5.047	A
			2	B, C	160	1024	0.156	161	152	0.2	0.2	4.364	A
		2	1	(A, B, C)	387			387	386	0.0	0.0	0.205	A
	Exit	1	1		637			637	638	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	297	900	0.330	293	304	0.7	0.7	6.287	A
			2	A, C	395	900	0.439	394	393	0.4	0.9	7.065	A
		2	1	(A, B, C)	691			691	699	0.3	0.5	1.393	A
	Exit	1	1		458			458	454	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	245	815	0.301	244	261	0.4	0.6	6.888	A
			2	A, B	215	815	0.263	218	218	0.6	0.2	6.813	A
		2	1	(A, B, C)	459			460	479	0.0	0.1	0.711	A
	Exit	1	1		448			448	455	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	242	1020	0.237	245	240	0.3	0.3	5.209	A
			2	B, C	149	1020	0.146	152	148	0.2	0.1	4.549	A
		2	1	(A, B, C)	391			391	387	0.0	0.0	0.271	A
	Exit	1	1		639			639	656	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	241	907	0.266	242	251	0.7	0.3	6.077	A
			2	A, C	322	907	0.355	322	324	0.9	0.5	6.111	A
		2	1	(A, B, C)	563			563	573	0.5	0.1	0.719	A
	Exit	1	1		368			368	364	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	218	837	0.261	217	218	0.6	0.5	5.909	A
			2	A, B	183	837	0.218	181	180	0.2	0.4	6.510	A
		2	1	(A, B, C)	400			401	398	0.1	0.0	0.282	A
	Exit	1	1		373			373	382	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	192	1032	0.186	191	189	0.3	0.2	4.952	A
			2	B, C	127	1032	0.123	127	127	0.1	0.1	4.100	A
		2	1	(A, B, C)	319			319	316	0.0	0.0	0.106	A
	Exit	1	1		539			539	543	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	219	913	0.239	217	209	0.3	0.5	5.575	A
			2	A, C	267	913	0.292	261	262	0.5	0.7	5.829	A
		2	1	(A, B, C)	487			485	472	0.1	0.1	0.379	A
	Exit	1	1		310			310	313	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	177	856	0.207	178	180	0.5	0.2	5.747	A
			2	A, B	156	856	0.183	156	152	0.4	0.2	6.358	A
		2	1	(A, B, C)	333			333	330	0.0	0.0	0.302	A
	Exit	1	1		326			326	318	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	157	1040	0.151	156	164	0.2	0.2	4.357	A
			2	B, C	106	1040	0.102	108	107	0.1	0.1	4.279	A
		2	1	(A, B, C)	264			264	271	0.0	0.0	0.095	A
	Exit	1	1		439			439	443	0.0	0.0	0.000	A

Lane movements: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	198	49	948	913	0.216	199	213	0.0	0.3	5.572	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	256	64	948	913	0.280	257	260	0.0	0.4	5.626	A
		2	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	198	49	-	-	-	198	214	0.0	0.0	0.309	A
				C	257	64	-	-	-	256	262	0.0	0.1	0.321	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	190	47	934	858	0.221	189	177	0.0	0.3	5.443	A
			2	A	134	34	934	857	0.157	133	140	0.0	0.3	5.935	A
				B	3	0.80	420	383	0.008	3	3	0.0	0.0	4.053	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	135	34	-	-	-	134	141	0.0	0.0	0.182	A
				B	3	0.80	-	-	-	3	3	0.0	0.0	0.209	A
				C	190	48	-	-	-	190	178	0.0	0.1	0.146	A
C - N52 (W)	Entry	1	1	A	156	39	1093	1048	0.149	156	162	0.0	0.2	4.865	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	106	26	1093	1048	0.101	107	106	0.0	0.1	3.828	A
				C	0.73	0.18	268	255	0.003	0.73	1	0.0	0.0	3.824	A
		2	1	A	156	39	-	-	-	156	163	0.0	0.0	0.084	A
				B	106	26	-	-	-	106	106	0.0	0.0	0.065	A
				C	0.73	0.18	-	-	-	0.73	1	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	255	64	948	910	0.280	255	245	0.3	0.6	5.830	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	320	80	948	909	0.352	321	310	0.4	0.4	6.422	A
		2	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	255	64	-	-	-	255	246	0.0	0.0	0.643	A
				C	319	80	-	-	-	320	310	0.1	0.0	0.837	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	208	52	934	838	0.248	207	210	0.3	0.3	5.503	A
			2	A	162	41	934	836	0.194	162	165	0.3	0.3	6.298	A
				B	5	1	458	411	0.011	5	3	0.0	0.0	6.130	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	162	41	-	-	-	162	165	0.0	0.0	0.287	A
				B	5	1	-	-	-	5	3	0.0	0.0	0.000	A
				C	208	52	-	-	-	208	210	0.1	0.0	0.195	A
C - N52 (W)	Entry	1	1	A	193	48	1093	1039	0.186	196	190	0.2	0.2	4.925	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	118	30	1093	1036	0.114	117	118	0.1	0.2	4.099	A
				C	0.24	0.06	268	255	0.001	0.24	1	0.0	0.0	3.371	A
		2	1	A	192	48	-	-	-	193	190	0.0	0.0	0.137	A
				B	118	30	-	-	-	118	119	0.0	0.0	0.049	A
				C	0.24	0.06	-	-	-	0.24	1	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	305	76	948	898	0.340	304	307	0.6	0.7	6.604	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	373	93	948	897	0.416	374	376	0.4	0.4	6.478	A
		2	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	304	76	-	-	-	305	308	0.0	0.1	1.113	A
				C	374	93	-	-	-	373	376	0.0	0.2	1.053	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	261	65	934	822	0.317	260	260	0.3	0.4	6.508	A
			2	A	203	51	934	824	0.246	201	201	0.3	0.5	7.158	A
				B	4	0.92	648	574	0.006	4	4	0.0	0.0	6.650	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	203	51	-	-	-	203	202	0.0	0.0	0.942	A
				B	4	0.92	-	-	-	4	4	0.0	0.0	1.547	A
				C	261	65	-	-	-	261	260	0.0	0.0	0.947	A
C - N52 (W)	Entry	1	1	A	227	57	1093	1024	0.222	227	234	0.2	0.3	5.047	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	158	39	1093	1023	0.154	158	150	0.2	0.2	4.352	A
				C	2	0.55	357	338	0.007	2	2	0.0	0.0	5.424	A
		2	1	A	227	57	-	-	-	227	234	0.0	0.0	0.235	A
				B	158	39	-	-	-	158	150	0.0	0.0	0.163	A
				C	2	0.55	-	-	-	2	2	0.0	0.0	0.141	A

08:30 - 08:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	297	74	948	899	0.330	293	304	0.7	0.7	6.287	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	395	99	948	899	0.439	394	393	0.4	0.9	7.065	A
		2	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	297	74	-	-	-	297	304	0.1	0.2	1.348	A
				C	396	99	-	-	-	395	395	0.2	0.3	1.424	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	245	61	934	814	0.301	244	261	0.4	0.6	6.888	A
			2	A	211	53	934	815	0.259	214	214	0.5	0.2	6.821	A
				B	4	1	553	482	0.009	4	4	0.0	0.0	6.443	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	210	52	-	-	-	211	213	0.0	0.0	0.649	A
				B	4	1	-	-	-	4	4	0.0	0.0	0.379	A
				C	245	61	-	-	-	245	262	0.0	0.1	0.761	A
C - N52 (W)	Entry	1	1	A	242	60	1093	1018	0.237	245	240	0.3	0.3	5.209	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	148	37	1093	1021	0.145	150	147	0.2	0.1	4.546	A
				C	1	0.37	245	230	0.006	1	1	0.0	0.0	5.021	A
		2	1	A	242	60	-	-	-	242	240	0.0	0.0	0.333	A
				B	147	37	-	-	-	148	147	0.0	0.0	0.179	A
				C	1	0.37	-	-	-	1	1	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	241	60	948	906	0.266	242	251	0.7	0.3	6.077	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	322	80	948	907	0.355	322	324	0.9	0.5	6.111	A
		2	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	241	60	-	-	-	241	250	0.2	0.0	0.760	A
				C	322	80	-	-	-	322	323	0.3	0.1	0.691	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	218	55	934	837	0.261	217	218	0.6	0.5	5.909	A
			2	A	178	44	934	835	0.213	176	175	0.2	0.4	6.483	A
				B	5	1	706	628	0.007	5	4	0.0	0.0	7.434	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	177	44	-	-	-	178	176	0.0	0.0	0.359	A
				B	5	1	-	-	-	5	4	0.0	0.0	0.000	A
				C	218	55	-	-	-	218	217	0.1	0.0	0.233	A
C - N52 (W)	Entry	1	1	A	192	48	1093	1034	0.185	191	189	0.3	0.2	4.952	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	126	32	1093	1032	0.122	127	126	0.1	0.1	4.092	A
				C	0.49	0.12	223	211	0.002	0.49	0.82	0.0	0.0	5.310	A
		2	1	A	192	48	-	-	-	192	189	0.0	0.0	0.130	A
				B	126	32	-	-	-	126	126	0.0	0.0	0.073	A
				C	0.49	0.12	-	-	-	0.49	0.82	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	219	55	948	914	0.239	217	209	0.3	0.5	5.575	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	267	67	948	914	0.292	261	262	0.5	0.7	5.829	A
		2	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	219	55	-	-	-	219	210	0.0	0.0	0.289	A
				C	268	67	-	-	-	267	263	0.1	0.1	0.444	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	177	44	934	857	0.207	178	180	0.5	0.2	5.747	A
			2	A	154	38	934	858	0.179	154	148	0.4	0.2	6.400	A
				B	3	0.67	515	473	0.006	2	3	0.0	0.0	4.686	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	154	38	-	-	-	154	148	0.0	0.0	0.384	A
				B	3	0.67	-	-	-	3	3	0.0	0.0	0.000	A
				C	177	44	-	-	-	177	179	0.0	0.0	0.249	A
C - N52 (W)	Entry	1	1	A	157	39	1093	1039	0.151	156	164	0.2	0.2	4.357	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	106	26	1093	1041	0.102	108	106	0.1	0.1	4.265	A
				C	0.49	0.12	223	214	0.002	0.73	0.90	0.0	0.0	5.792	A
		2	1	A	157	39	-	-	-	157	164	0.0	0.0	0.105	A
				B	106	26	-	-	-	106	106	0.0	0.0	0.082	A
				C	0.49	0.12	-	-	-	0.49	0.90	0.0	0.0	0.000	A

LS - 2028 No Construction , PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
9		Standard Roundabout		A, B, C	6.64	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.64	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)	Run automatically
D4	2028 No Construction	PM	ONE HOUR	16:15	17:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52 (NNE)		ONE HOUR	✓	495	100.000
B - R497		ONE HOUR	✓	470	100.000
C - N52 (W)		ONE HOUR	✓	456	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N52 (NNE)	B - R497	C - N52 (W)
From	A - N52 (NNE)	1	270	224
	B - R497	335	0	135
	C - N52 (W)	304	151	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
9	0.20	0.80

Heavy Vehicle %

		To		
		A - N52 (NNE)	B - R497	C - N52 (W)
From	A - N52 (NNE)	0	11	11
	B - R497	6	0	2
	C - N52 (W)	8	1	0

Cyclist %

		To		
		A - N52 (NNE)	B - R497	C - N52 (W)
From	A - N52 (NNE)	0	0	0
	B - R497	0	0	0
	C - N52 (W)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52 (NNE)	0.42	6.98	1.2	A	447	670
B - R497	0.45	7.19	1.0	A	425	638
C - N52 (W)	0.38	5.72	0.9	A	415	622

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	369	92	117	1334	0.277	372	374	473	0.0	0.5	5.629	A
B - R497	357	89	168	1166	0.306	355	359	322	0.0	0.7	5.757	A
C - N52 (W)	336	84	255	1439	0.234	335	343	267	0.0	0.4	4.489	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	431	108	130	1343	0.321	434	442	575	0.5	0.8	6.052	A
B - R497	418	104	195	1172	0.357	416	418	370	0.7	0.7	6.274	A
C - N52 (W)	406	101	299	1375	0.295	407	407	312	0.4	0.5	5.006	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	546	136	182	1311	0.416	542	537	692	0.8	1.2	6.471	A
B - R497	519	130	239	1154	0.450	523	512	485	0.7	0.9	7.188	A
C - N52 (W)	502	126	373	1325	0.379	501	501	388	0.5	0.9	5.466	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	533	133	163	1335	0.399	532	544	680	1.2	1.2	6.978	A
B - R497	491	123	254	1223	0.401	492	507	441	0.9	1.0	7.120	A
C - N52 (W)	487	122	355	1359	0.358	488	494	390	0.9	0.7	5.718	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	436	109	143	1310	0.333	435	451	558	1.2	0.8	6.365	A
B - R497	416	104	193	1221	0.340	419	428	385	1.0	0.8	5.985	A
C - N52 (W)	399	100	302	1383	0.289	399	407	309	0.7	0.5	5.105	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	366	91	119	1355	0.270	368	374	486	0.8	0.5	5.746	A
B - R497	352	88	166	1213	0.290	350	350	321	0.8	0.6	5.581	A
C - N52 (W)	358	89	251	1409	0.254	355	351	266	0.5	0.7	4.795	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:15 - 16:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	205	911	0.225	207	208	0.0	0.3	5.423	A
			2	A, C	164	911	0.180	166	166	0.0	0.2	5.365	A
		2	1	(A, B, C)	369			369	376	0.0	0.0	0.232	A
	Exit	1	1		473			473	482	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	102	884	0.115	101	104	0.0	0.2	4.702	A
			2	A, B	256	884	0.289	254	254	0.0	0.4	5.972	A
		2	1	(A, B, C)	357			357	361	0.0	0.0	0.165	A
	Exit	1	1		322			322	323	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	218	1007	0.217	218	227	0.0	0.2	4.730	A
			2	B, C	118	1007	0.117	117	116	0.0	0.2	3.813	A
		2	1	(A, B, C)	336			336	345	0.0	0.0	0.084	A
	Exit	1	1		267			267	270	0.0	0.0	0.000	A

16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	238	907	0.263	240	243	0.3	0.4	5.781	A
			2	A, C	192	907	0.212	194	198	0.2	0.3	5.601	A
		2	1	(A, B, C)	431			431	442	0.0	0.1	0.346	A
	Exit	1	1		575			575	575	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	118	876	0.135	118	118	0.2	0.1	4.673	A
			2	A, B	300	876	0.343	298	300	0.4	0.5	6.389	A
		2	1	(A, B, C)	418			418	418	0.0	0.0	0.380	A
	Exit	1	1		370			370	376	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	275	993	0.277	276	273	0.2	0.3	5.102	A
			2	B, C	131	993	0.132	130	134	0.2	0.2	4.165	A
		2	1	(A, B, C)	406			406	407	0.0	0.0	0.223	A
	Exit	1	1		312			312	316	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	307	892	0.345	304	299	0.4	0.7	6.047	A
			2	A, C	238	892	0.267	237	238	0.3	0.4	5.923	A
		2	1	(A, B, C)	546			545	539	0.1	0.2	0.481	A
	Exit	1	1		692			692	690	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	148	862	0.171	150	151	0.1	0.1	5.401	A
			2	A, B	373	862	0.433	372	361	0.5	0.7	6.873	A
		2	1	(A, B, C)	519			521	513	0.0	0.1	0.759	A
	Exit	1	1		485			485	473	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	319	968	0.330	319	327	0.3	0.5	5.373	A
			2	B, C	180	968	0.186	182	175	0.2	0.1	4.500	A
		2	1	(A, B, C)	502			500	502	0.0	0.2	0.406	A
	Exit	1	1		388			388	388	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	279	897	0.310	279	297	0.7	0.7	6.317	A
			2	A, C	254	897	0.283	253	248	0.4	0.4	6.133	A
		2	1	(A, B, C)	533			532	545	0.2	0.0	0.745	A
	Exit	1	1		680			680	691	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	138	858	0.161	139	143	0.1	0.2	5.104	A
			2	A, B	354	858	0.412	353	364	0.7	0.7	6.879	A
		2	1	(A, B, C)	491			491	508	0.1	0.1	0.751	A
	Exit	1	1		441			441	464	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	325	974	0.334	325	325	0.5	0.5	5.647	A
			2	B, C	162	974	0.166	163	168	0.1	0.2	4.567	A
		2	1	(A, B, C)	487			487	494	0.2	0.0	0.459	A
	Exit	1	1		390			390	390	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	244	904	0.270	243	248	0.7	0.4	5.902	A
			2	A, C	192	904	0.213	192	203	0.4	0.4	5.873	A
		2	1	(A, B, C)	436			436	450	0.0	0.0	0.476	A
	Exit	1	1		558			558	571	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	117	876	0.134	118	125	0.2	0.2	4.957	A
			2	A, B	300	876	0.342	301	303	0.7	0.6	6.032	A
		2	1	(A, B, C)	416			416	427	0.1	0.0	0.280	A
	Exit	1	1		385			385	387	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	257	992	0.259	255	267	0.5	0.4	5.225	A
			2	B, C	142	992	0.143	143	140	0.2	0.1	4.435	A
		2	1	(A, B, C)	399			399	406	0.0	0.0	0.161	A
	Exit	1	1		309			309	328	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	202	911	0.221	203	207	0.4	0.2	5.548	A
			2	A, C	165	911	0.181	165	166	0.4	0.2	5.512	A
		2	1	(A, B, C)	366			366	373	0.0	0.0	0.219	A
	Exit	1	1		486			486	486	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	101	884	0.114	101	100	0.2	0.1	4.847	A
			2	A, B	252	884	0.285	250	250	0.6	0.5	5.660	A
		2	1	(A, B, C)	352			352	350	0.0	0.0	0.159	A
	Exit	1	1		321			321	322	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	238	1009	0.236	236	235	0.4	0.5	4.899	A
			2	B, C	120	1009	0.119	119	116	0.1	0.1	4.170	A
		2	1	(A, B, C)	358			358	352	0.0	0.0	0.149	A
	Exit	1	1		266			266	267	0.0	0.0	0.000	A

Lane movements: Main Results for each time segment

16:15 - 16:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	205	51	948	912	0.225	207	208	0.0	0.3	5.423	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	1	0.30	218	209	0.006	1	0.98	0.0	0.0	4.939	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	163	41	948	911	0.179	165	165	0.0	0.2	5.368	A
		2	1	A	1	0.30	-	-	-	1	0.98	0.0	0.0	0.180	A
				B	205	51	-	-	-	205	209	0.0	0.0	0.251	A
				C	163	41	-	-	-	163	166	0.0	0.0	0.208	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	102	25	934	885	0.115	101	104	0.0	0.2	4.702	A
			2	A	256	64	934	884	0.289	254	254	0.0	0.4	5.972	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	255	64	-	-	-	256	256	0.0	0.0	0.179	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	102	25	-	-	-	102	105	0.0	0.0	0.132	A
C - N52 (W)	Entry	1	1	A	218	55	1093	1008	0.216	218	227	0.0	0.2	4.730	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	116	29	1093	1008	0.116	115	115	0.0	0.2	3.804	A
				C	2	0.44	197	180	0.010	2	0.92	0.0	0.0	5.036	A
		2	1	A	218	55	-	-	-	218	228	0.0	0.0	0.098	A
				B	116	29	-	-	-	116	116	0.0	0.0	0.058	A
				C	2	0.44	-	-	-	2	0.92	0.0	0.0	0.000	A

16:30 - 16:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	238	60	948	907	0.263	240	243	0.3	0.4	5.781	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	1	0.30	202	194	0.006	1	0.92	0.0	0.0	5.190	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	192	48	948	908	0.211	193	198	0.2	0.3	5.603	A
		2	1	A	1	0.30	-	-	-	1	0.92	0.0	0.0	0.137	A
				B	239	60	-	-	-	238	244	0.0	0.1	0.361	A
				C	192	48	-	-	-	192	198	0.0	0.0	0.328	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	118	29	934	876	0.135	118	118	0.2	0.1	4.673	A
			2	A	300	75	934	876	0.343	298	300	0.4	0.5	6.389	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	300	75	-	-	-	300	301	0.0	0.0	0.438	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	118	30	-	-	-	118	117	0.0	0.0	0.236	A
C - N52 (W)	Entry	1	1	A	275	69	1093	993	0.277	276	273	0.2	0.3	5.102	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	130	32	1093	992	0.131	129	132	0.2	0.2	4.168	A
				C	0.98	0.25	251	228	0.004	0.98	1	0.0	0.0	3.821	A
		2	1	A	275	69	-	-	-	275	274	0.0	0.0	0.274	A
				B	130	32	-	-	-	130	133	0.0	0.0	0.127	A
				C	0.98	0.25	-	-	-	0.98	1	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	307	77	948	891	0.345	304	299	0.4	0.7	6.047	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0.79	0.20	264	249	0.003	0.79	1	0.0	0.0	3.583	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	237	59	948	891	0.266	237	237	0.3	0.4	5.936	A
		2	1	A	0.79	0.20	-	-	-	0.79	1	0.0	0.0	0.473	A
				B	308	77	-	-	-	307	300	0.1	0.1	0.504	A
				C	237	59	-	-	-	237	237	0.0	0.1	0.453	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	148	37	934	862	0.172	150	151	0.1	0.1	5.401	A
			2	A	373	93	934	862	0.433	372	361	0.5	0.7	6.873	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	372	93	-	-	-	373	362	0.0	0.1	0.803	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	147	37	-	-	-	148	151	0.0	0.0	0.656	A
C - N52 (W)	Entry	1	1	A	319	80	1093	967	0.330	319	327	0.3	0.5	5.373	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	179	45	1093	965	0.186	180	174	0.2	0.1	4.510	A
				C	1	0.34	233	207	0.007	1	0.98	0.0	0.0	2.789	A
		2	1	A	321	80	-	-	-	319	328	0.0	0.2	0.446	A
				B	180	45	-	-	-	179	173	0.0	0.0	0.338	A
				C	1	0.34	-	-	-	1	0.98	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	279	70	948	896	0.311	279	297	0.7	0.7	6.317	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	2	0.49	311	294	0.007	2	2	0.0	0.0	6.460	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	252	63	948	897	0.281	251	246	0.4	0.4	6.130	A
		2	1	A	2	0.49	-	-	-	2	2	0.0	0.0	0.000	A
				B	279	70	-	-	-	279	297	0.1	0.0	0.771	A
				C	252	63	-	-	-	252	246	0.1	0.0	0.719	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	138	35	934	858	0.161	139	143	0.1	0.2	5.104	A
			2	A	354	88	934	858	0.412	353	364	0.7	0.7	6.879	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	353	88	-	-	-	354	364	0.1	0.0	0.823	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	138	35	-	-	-	138	143	0.0	0.0	0.576	A
C - N52 (W)	Entry	1	1	A	325	81	1093	975	0.333	325	325	0.5	0.5	5.647	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	162	40	1093	973	0.166	162	167	0.1	0.2	4.574	A
				C	0.59	0.15	197	174	0.003	0.59	0.85	0.0	0.0	3.065	A
		2	1	A	325	81	-	-	-	325	325	0.2	0.0	0.537	A
				B	162	40	-	-	-	162	168	0.0	0.0	0.318	A
				C	0.59	0.15	-	-	-	0.59	0.85	0.0	0.0	0.271	A

17:15 - 17:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	244	61	948	904	0.270	243	248	0.7	0.4	5.902	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0.98	0.25	218	207	0.005	0.98	1	0.0	0.0	3.065	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	191	48	948	904	0.212	191	202	0.4	0.4	5.889	A
		2	1	A	0.98	0.25	-	-	-	0.98	1	0.0	0.0	0.168	A
				B	244	61	-	-	-	244	246	0.0	0.0	0.495	A
				C	191	48	-	-	-	191	202	0.0	0.0	0.454	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	117	29	934	877	0.133	118	125	0.2	0.2	4.957	A
			2	A	300	75	934	877	0.342	301	303	0.7	0.6	6.032	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	299	75	-	-	-	300	302	0.0	0.0	0.340	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	117	29	-	-	-	117	125	0.0	0.0	0.138	A
C - N52 (W)	Entry	1	1	A	257	64	1093	991	0.259	255	267	0.5	0.4	5.225	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	141	35	1093	992	0.143	142	139	0.2	0.1	4.419	A
				C	0.39	0.10	215	195	0.002	0.39	0.98	0.0	0.0	6.650	A
		2	1	A	257	64	-	-	-	257	266	0.0	0.0	0.204	A
				B	141	35	-	-	-	141	139	0.0	0.0	0.086	A
				C	0.39	0.10	-	-	-	0.39	0.98	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	202	50	948	911	0.221	203	207	0.4	0.2	5.548	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0.79	0.20	171	165	0.005	0.79	0.85	0.0	0.0	8.667	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	164	41	948	911	0.180	165	166	0.4	0.2	5.494	A
		2	1	A	0.79	0.20	-	-	-	0.79	0.85	0.0	0.0	0.000	A
				B	201	50	-	-	-	202	207	0.0	0.0	0.247	A
				C	164	41	-	-	-	164	165	0.0	0.0	0.187	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	101	25	934	885	0.114	101	100	0.2	0.1	4.847	A
			2	A	252	63	934	885	0.284	250	250	0.6	0.5	5.660	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	252	63	-	-	-	252	250	0.0	0.0	0.203	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	101	25	-	-	-	101	100	0.0	0.0	0.054	A
C - N52 (W)	Entry	1	1	A	238	59	1093	1008	0.236	236	235	0.4	0.5	4.899	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	119	30	1093	1010	0.118	119	115	0.1	0.1	4.171	A
				C	0.79	0.20	233	214	0.004	0.79	0.85	0.0	0.0	4.133	A
		2	1	A	238	60	-	-	-	238	235	0.0	0.0	0.190	A
				B	119	30	-	-	-	119	116	0.0	0.0	0.074	A
				C	0.79	0.20	-	-	-	0.79	0.85	0.0	0.0	0.000	A

LS - 2028 With Construction Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
9		Standard Roundabout		A, B, C	8.16	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	8.16	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)	Run automatically
D7	2028 With Construction Peak	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52 (NNE)		ONE HOUR	✓	671	100.000
B - R497		ONE HOUR	✓	525	100.000
C - N52 (W)		ONE HOUR	✓	393	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N52 (NNE)	B - R497	C - N52 (W)
From	A - N52 (NNE)	0	282	389
	B - R497	285	4	236
	C - N52 (W)	257	135	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
9	0.20	0.80

Heavy Vehicle %

		To		
		A - N52 (NNE)	B - R497	C - N52 (W)
From	A - N52 (NNE)	0	15	15
	B - R497	12	0	4
	C - N52 (W)	30	7	0

Cyclist %

		To		
		A - N52 (NNE)	B - R497	C - N52 (W)
From	A - N52 (NNE)	0	0	0
	B - R497	0	0	0
	C - N52 (W)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52 (NNE)	0.56	9.41	2.0	A	611	917
B - R497	0.50	8.15	1.6	A	480	721
C - N52 (W)	0.31	6.06	0.8	A	362	543

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	514	128	101	1343	0.383	517	506	400	0.0	0.8	6.744	A
B - R497	396	99	295	1265	0.313	393	397	323	0.0	0.9	6.385	A
C - N52 (W)	285	71	219	1386	0.206	283	294	469	0.0	0.5	5.065	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	597	149	125	1288	0.463	602	599	487	0.8	1.2	7.374	A
B - R497	467	117	355	1227	0.381	468	473	373	0.9	0.9	6.965	A
C - N52 (W)	352	88	259	1410	0.250	354	348	564	0.5	0.5	5.313	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	737	184	158	1311	0.562	736	737	603	1.2	1.9	9.409	A
B - R497	577	144	424	1145	0.504	578	576	470	0.9	1.5	8.155	A
C - N52 (W)	445	111	316	1414	0.315	444	434	685	0.5	0.8	6.061	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	719	180	154	1302	0.552	716	727	611	1.9	2.0	9.224	A
B - R497	580	145	415	1204	0.482	576	577	456	1.5	1.6	8.068	A
C - N52 (W)	442	110	323	1406	0.314	443	440	668	0.8	0.7	6.027	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	593	148	128	1337	0.444	593	600	481	2.0	1.4	7.780	A
B - R497	467	117	339	1269	0.368	467	468	382	1.6	0.9	6.719	A
C - N52 (W)	353	88	258	1406	0.251	351	351	549	0.7	0.6	5.554	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	508	127	109	1334	0.381	511	509	407	1.4	0.9	6.924	A
B - R497	395	99	299	1256	0.314	396	385	322	0.9	0.6	6.251	A
C - N52 (W)	295	74	220	1408	0.210	297	295	475	0.6	0.5	5.197	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	222	916	0.242	223	217	0.0	0.3	5.609	A
			2	A, C	293	916	0.320	294	288	0.0	0.4	6.456	A
		2	1	(A, B, C)	514			515	509	0.0	0.1	0.646	A
	Exit	1	1		400			400	412	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	176	845	0.209	174	176	0.0	0.5	5.596	A
			2	A, B	220	845	0.260	219	222	0.0	0.4	6.259	A
		2	1	(A, B, C)	396			396	401	0.0	0.0	0.433	A
	Exit	1	1		323			323	320	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	186	1019	0.182	185	193	0.0	0.4	5.359	A
			2	B, C	99	1019	0.097	98	101	0.0	0.1	4.338	A
		2	1	(A, B, C)	285			284	296	0.0	0.0	0.100	A
	Exit	1	1		469			469	465	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	247	909	0.272	248	250	0.3	0.4	5.877	A
			2	A, C	350	909	0.385	354	349	0.4	0.7	6.739	A
		2	1	(A, B, C)	597			597	600	0.1	0.1	0.990	A
	Exit	1	1		487			487	486	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	209	827	0.253	209	213	0.5	0.3	5.892	A
			2	A, B	259	827	0.313	259	261	0.4	0.5	6.766	A
		2	1	(A, B, C)	467			468	473	0.0	0.0	0.607	A
	Exit	1	1		373			373	372	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	230	1006	0.228	232	229	0.4	0.3	5.681	A
			2	B, C	123	1006	0.122	122	119	0.1	0.2	4.313	A
		2	1	(A, B, C)	352			352	348	0.0	0.0	0.161	A
	Exit	1	1		564			564	562	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	314	899	0.349	314	313	0.4	0.6	6.775	A
			2	A, C	422	899	0.470	422	424	0.7	0.9	7.332	A
		2	1	(A, B, C)	737			736	739	0.1	0.4	2.306	A
	Exit	1	1		603			603	597	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	260	807	0.322	262	259	0.3	0.5	6.517	A
			2	A, B	315	807	0.391	316	317	0.5	0.7	7.467	A
		2	1	(A, B, C)	577			575	578	0.0	0.3	1.126	A
	Exit	1	1		470			470	466	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	292	987	0.296	290	284	0.3	0.6	6.330	A
			2	B, C	153	987	0.155	154	150	0.2	0.1	4.403	A
		2	1	(A, B, C)	445			445	435	0.0	0.0	0.478	A
	Exit	1	1		685			685	685	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	304	900	0.337	304	306	0.6	0.6	6.871	A
			2	A, C	415	900	0.461	413	421	0.9	1.0	7.332	A
		2	1	(A, B, C)	719			717	728	0.4	0.4	2.096	A
	Exit	1	1		611			611	602	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	255	809	0.315	253	257	0.5	0.6	6.575	A
			2	A, B	325	809	0.402	323	320	0.7	0.8	7.441	A
		2	1	(A, B, C)	580			580	578	0.3	0.2	1.036	A
	Exit	1	1		456			456	463	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	293	985	0.297	295	287	0.6	0.4	6.315	A
			2	B, C	148	985	0.150	148	153	0.1	0.2	4.543	A
		2	1	(A, B, C)	442			441	439	0.0	0.1	0.409	A
	Exit	1	1		668			668	679	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	256	908	0.282	255	258	0.6	0.5	6.276	A
			2	A, C	337	908	0.371	338	342	1.0	0.8	6.938	A
		2	1	(A, B, C)	593			594	598	0.4	0.1	1.132	A
	Exit	1	1		481			481	481	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	211	832	0.254	210	213	0.6	0.4	5.973	A
			2	A, B	257	832	0.308	258	254	0.8	0.5	6.632	A
		2	1	(A, B, C)	467			468	465	0.2	0.0	0.401	A
	Exit	1	1		382			382	381	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	228	1006	0.227	227	230	0.4	0.4	5.955	A
			2	B, C	124	1006	0.123	124	120	0.2	0.1	4.223	A
		2	1	(A, B, C)	353			353	350	0.1	0.0	0.275	A
	Exit	1	1		549			549	556	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	214	914	0.235	214	214	0.5	0.4	5.733	A
			2	A, C	295	914	0.322	298	294	0.8	0.4	6.488	A
		2	1	(A, B, C)	508			509	507	0.1	0.0	0.754	A
	Exit	1	1		407			407	401	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	176	844	0.209	177	173	0.4	0.2	5.386	A
			2	A, B	219	844	0.260	220	212	0.5	0.4	6.319	A
		2	1	(A, B, C)	395			395	384	0.0	0.0	0.375	A
	Exit	1	1		322			322	320	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	191	1019	0.188	191	192	0.4	0.4	5.500	A
			2	B, C	104	1019	0.102	105	104	0.1	0.1	4.366	A
		2	1	(A, B, C)	295			296	295	0.0	0.0	0.145	A
	Exit	1	1		475			475	467	0.0	0.0	0.000	A

Lane movements: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	222	55	948	916	0.242	223	217	0.0	0.3	5.609	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	293	73	948	916	0.320	294	288	0.0	0.4	6.456	A
		2	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	221	55	-	-	-	222	218	0.0	0.0	0.536	A
				C	293	73	-	-	-	293	290	0.0	0.1	0.729	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	176	44	934	846	0.209	174	176	0.0	0.5	5.596	A
			2	A	216	54	934	845	0.256	216	218	0.0	0.4	6.257	A
				B	3	0.82	510	462	0.007	3	3	0.0	0.0	6.327	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	216	54	-	-	-	216	220	0.0	0.0	0.453	A
				B	3	0.82	-	-	-	3	3	0.0	0.0	2.001	A
				C	176	44	-	-	-	176	178	0.0	0.0	0.380	A
C - N52 (W)	Entry	1	1	A	186	46	1093	1020	0.182	185	193	0.0	0.4	5.359	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	98	25	1093	1022	0.096	97	100	0.0	0.1	4.325	A
				C	0.82	0.20	174	162	0.005	0.82	0.77	0.0	0.0	5.890	A
		2	1	A	185	46	-	-	-	186	195	0.0	0.0	0.130	A
				B	98	25	-	-	-	98	101	0.0	0.0	0.053	A
				C	0.82	0.20	-	-	-	0.82	0.77	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	247	62	948	909	0.272	248	250	0.3	0.4	5.877	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	350	87	948	909	0.385	354	349	0.4	0.7	6.739	A
		2	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	248	62	-	-	-	247	250	0.0	0.0	0.834	A
				C	349	87	-	-	-	350	350	0.1	0.1	1.103	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	209	52	934	827	0.253	209	213	0.5	0.3	5.892	A
			2	A	256	64	934	827	0.309	255	257	0.4	0.5	6.783	A
				B	3	0.78	520	462	0.007	3	4	0.0	0.0	5.685	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	256	64	-	-	-	256	257	0.0	0.0	0.701	A
				B	3	0.78	-	-	-	3	4	0.0	0.0	0.044	A
				C	209	52	-	-	-	209	212	0.0	0.0	0.511	A
C - N52 (W)	Entry	1	1	A	230	57	1093	1006	0.228	232	229	0.4	0.3	5.681	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	122	31	1093	1007	0.121	121	119	0.1	0.2	4.314	A
				C	0.55	0.14	161	148	0.004	0.55	0.59	0.0	0.0	4.227	A
		2	1	A	229	57	-	-	-	230	229	0.0	0.0	0.211	A
				B	122	31	-	-	-	122	119	0.0	0.0	0.081	A
				C	0.55	0.14	-	-	-	0.55	0.59	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	314	79	948	899	0.349	314	313	0.4	0.6	6.775	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	422	106	948	899	0.470	422	424	0.7	0.9	7.332	A
		2	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	314	79	-	-	-	314	313	0.0	0.2	2.196	A
				C	423	106	-	-	-	422	425	0.1	0.3	2.387	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	260	65	934	807	0.322	262	259	0.3	0.5	6.517	A
			2	A	312	78	934	807	0.386	312	313	0.5	0.7	7.498	A
				B	4	0.92	605	524	0.007	4	5	0.0	0.0	5.643	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	313	78	-	-	-	312	313	0.0	0.2	1.258	A
				B	4	0.95	-	-	-	4	5	0.0	0.0	0.747	A
				C	260	65	-	-	-	260	260	0.0	0.1	0.986	A
C - N52 (W)	Entry	1	1	A	292	73	1093	985	0.297	290	284	0.3	0.6	6.330	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	151	38	1093	987	0.153	152	149	0.2	0.1	4.421	A
				C	1	0.34	273	245	0.006	1	1	0.0	0.0	2.181	A
		2	1	A	293	73	-	-	-	292	285	0.0	0.0	0.571	A
				B	151	38	-	-	-	151	148	0.0	0.0	0.334	A
				C	1	0.34	-	-	-	1	1	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	304	76	948	900	0.337	304	306	0.6	0.6	6.871	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	415	104	948	900	0.461	413	421	0.9	1.0	7.332	A
		2	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	305	76	-	-	-	304	307	0.2	0.1	2.013	A
				C	415	104	-	-	-	415	421	0.3	0.2	2.157	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	255	64	934	808	0.315	253	257	0.5	0.6	6.575	A
			2	A	318	80	934	809	0.394	316	315	0.7	0.8	7.474	A
				B	7	2	584	504	0.014	7	5	0.0	0.0	5.448	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	318	80	-	-	-	318	316	0.2	0.1	1.195	A
				B	7	2	-	-	-	7	5	0.0	0.0	0.662	A
				C	255	64	-	-	-	255	258	0.1	0.1	0.863	A
C - N52 (W)	Entry	1	1	A	293	73	1093	984	0.297	295	287	0.6	0.4	6.315	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	146	37	1093	985	0.149	146	152	0.1	0.2	4.544	A
				C	2	0.48	273	245	0.008	2	1	0.0	0.0	4.471	A
		2	1	A	293	73	-	-	-	293	286	0.0	0.1	0.513	A
				B	146	37	-	-	-	146	152	0.0	0.0	0.251	A
				C	2	0.48	-	-	-	2	1	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	256	64	948	909	0.282	255	258	0.6	0.5	6.276	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	337	84	948	908	0.371	338	342	1.0	0.8	6.938	A
		2	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	256	64	-	-	-	256	257	0.1	0.0	1.057	A
				C	337	84	-	-	-	337	341	0.2	0.1	1.189	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	211	53	934	832	0.254	210	213	0.6	0.4	5.973	A
			2	A	253	63	934	832	0.304	254	251	0.8	0.5	6.641	A
				B	4	0.92	531	470	0.008	4	3	0.0	0.0	5.988	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	253	63	-	-	-	253	250	0.1	0.0	0.477	A
				B	4	0.92	-	-	-	4	3	0.0	0.0	0.074	A
				C	211	53	-	-	-	211	212	0.1	0.0	0.323	A
C - N52 (W)	Entry	1	1	A	228	57	1093	1006	0.227	227	230	0.4	0.4	5.955	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	123	31	1093	1007	0.122	123	119	0.2	0.1	4.232	A
				C	1	0.27	211	194	0.006	1	0.77	0.0	0.0	2.858	A
		2	1	A	228	57	-	-	-	228	230	0.1	0.0	0.346	A
				B	123	31	-	-	-	123	119	0.0	0.0	0.163	A
				C	1	0.27	-	-	-	1	0.77	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	214	54	948	914	0.235	214	214	0.5	0.4	5.733	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	295	74	948	914	0.322	298	294	0.8	0.4	6.488	A
		2	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	214	53	-	-	-	214	214	0.0	0.0	0.703	A
				C	294	73	-	-	-	295	293	0.1	0.0	0.791	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	176	44	934	843	0.209	177	173	0.4	0.2	5.386	A
			2	A	216	54	934	844	0.256	216	209	0.5	0.4	6.316	A
				B	4	0.89	446	403	0.009	4	3	0.0	0.0	6.522	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	215	54	-	-	-	216	209	0.0	0.0	0.406	A
				B	4	0.89	-	-	-	4	3	0.0	0.0	0.243	A
				C	176	44	-	-	-	176	172	0.0	0.0	0.341	A
C - N52 (W)	Entry	1	1	A	191	48	1093	1019	0.188	191	192	0.4	0.4	5.500	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	104	26	1093	1018	0.102	105	103	0.1	0.1	4.365	A
				C	0.82	0.20	149	140	0.006	0.82	0.55	0.0	0.0	4.675	A
		2	1	A	191	48	-	-	-	191	192	0.0	0.0	0.199	A
				B	104	26	-	-	-	104	103	0.0	0.0	0.061	A
				C	0.82	0.20	-	-	-	0.82	0.55	0.0	0.0	0.213	A

LS - 2028 With Construction Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
9		Standard Roundabout		A, B, C	7.80	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.80	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)	Run automatically
D8	2028 With Construction Peak	PM	ONE HOUR	16:15	17:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52 (NNE)		ONE HOUR	✓	631	100.000
B - R497		ONE HOUR	✓	470	100.000
C - N52 (W)		ONE HOUR	✓	497	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N52 (NNE)	B - R497	C - N52 (W)
From	A - N52 (NNE)	1	365	265
	B - R497	335	0	135
	C - N52 (W)	345	151	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
9	0.20	0.80

Heavy Vehicle %

		To		
		A - N52 (NNE)	B - R497	C - N52 (W)
From	A - N52 (NNE)	0	8	24
	B - R497	6	0	2
	C - N52 (W)	18	1	0

Cyclist %

		To		
		A - N52 (NNE)	B - R497	C - N52 (W)
From	A - N52 (NNE)	0	0	0
	B - R497	0	0	0
	C - N52 (W)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52 (NNE)	0.56	8.75	2.0	A	588	882
B - R497	0.46	7.40	1.2	A	434	650
C - N52 (W)	0.42	6.98	1.3	A	463	694

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	486	122	115	1314	0.370	490	482	523	0.0	0.8	6.413	A
B - R497	346	86	216	1167	0.296	346	350	389	0.0	0.7	5.828	A
C - N52 (W)	389	97	247	1363	0.285	391	378	316	0.0	0.6	5.326	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	578	144	138	1336	0.433	575	571	613	0.8	1.4	7.242	A
B - R497	420	105	242	1184	0.355	419	425	471	0.7	0.8	6.474	A
C - N52 (W)	456	114	299	1327	0.344	452	445	362	0.6	0.9	5.856	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	709	177	171	1277	0.556	712	703	744	1.4	1.7	8.750	A
B - R497	518	130	294	1161	0.446	520	518	589	0.8	1.1	7.398	A
C - N52 (W)	552	138	368	1313	0.420	547	542	447	0.9	1.3	6.773	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	689	172	163	1307	0.528	687	688	756	1.7	2.0	8.541	A
B - R497	522	130	296	1122	0.465	518	519	554	1.1	1.2	7.254	A
C - N52 (W)	546	136	374	1288	0.424	546	547	441	1.3	1.2	6.985	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	589	147	137	1321	0.446	590	580	626	2.0	1.1	7.528	A
B - R497	432	108	256	1132	0.382	432	431	471	1.2	0.8	6.461	A
C - N52 (W)	457	114	309	1379	0.332	455	453	379	1.2	0.9	6.094	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	475	119	115	1319	0.360	476	479	518	1.1	1.0	6.709	A
B - R497	364	91	201	1167	0.312	364	355	390	0.8	0.6	5.927	A
C - N52 (W)	377	94	254	1367	0.276	379	379	310	0.9	0.6	5.705	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:15 - 16:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	273	912	0.299	275	276	0.0	0.5	5.878	A
			2	A, C	214	912	0.235	215	206	0.0	0.3	5.871	A
		2	1	(A, B, C)	486			487	485	0.0	0.0	0.538	A
	Exit	1	1		523			523	516	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	100	869	0.115	100	99	0.0	0.2	4.817	A
			2	A, B	246	869	0.283	246	251	0.0	0.5	5.901	A
		2	1	(A, B, C)	346			346	353	0.0	0.0	0.241	A
	Exit	1	1		389			389	389	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	274	1010	0.271	276	264	0.0	0.5	5.632	A
			2	B, C	115	1010	0.114	115	114	0.0	0.1	3.968	A
		2	1	(A, B, C)	389			389	381	0.0	0.0	0.253	A
	Exit	1	1		316			316	305	0.0	0.0	0.000	A

16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	333	905	0.368	333	326	0.5	0.6	6.383	A
			2	A, C	243	905	0.268	242	244	0.3	0.5	6.541	A
		2	1	(A, B, C)	578			576	572	0.0	0.3	0.790	A
	Exit	1	1		613			613	616	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	120	861	0.140	120	120	0.2	0.2	4.871	A
			2	A, B	299	861	0.347	299	305	0.5	0.6	6.464	A
		2	1	(A, B, C)	420			420	425	0.0	0.1	0.472	A
	Exit	1	1		471			471	460	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	317	993	0.319	314	311	0.5	0.7	5.894	A
			2	B, C	140	993	0.141	138	134	0.1	0.2	4.381	A
		2	1	(A, B, C)	456			456	446	0.0	0.0	0.471	A
	Exit	1	1		362			362	365	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	420	895	0.469	419	404	0.6	0.9	7.087	A
			2	A, C	292	895	0.327	293	298	0.5	0.6	6.891	A
		2	1	(A, B, C)	709			712	704	0.3	0.2	1.742	A
	Exit	1	1		744			744	745	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	153	846	0.181	154	152	0.2	0.2	5.364	A
			2	A, B	366	846	0.432	367	367	0.6	0.8	7.114	A
		2	1	(A, B, C)	518			519	519	0.1	0.1	0.813	A
	Exit	1	1		589			589	568	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	380	970	0.392	376	377	0.7	0.8	6.621	A
			2	B, C	172	970	0.177	171	165	0.2	0.3	4.644	A
		2	1	(A, B, C)	552			550	543	0.0	0.2	0.821	A
	Exit	1	1		447			447	450	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	390	897	0.435	392	395	0.9	0.7	6.852	A
			2	A, C	294	897	0.328	294	293	0.6	0.7	6.847	A
		2	1	(A, B, C)	689			684	688	0.2	0.7	1.681	A
	Exit	1	1		756			756	755	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	146	845	0.173	146	146	0.2	0.3	5.397	A
			2	A, B	375	845	0.444	373	372	0.8	0.8	6.931	A
		2	1	(A, B, C)	522			521	519	0.1	0.1	0.763	A
	Exit	1	1		554			554	559	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	382	968	0.394	383	381	0.8	0.7	6.633	A
			2	B, C	164	968	0.169	163	166	0.3	0.2	4.352	A
		2	1	(A, B, C)	546			545	546	0.2	0.3	1.114	A
	Exit	1	1		441			441	440	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	334	905	0.369	335	337	0.7	0.5	6.416	A
			2	A, C	256	905	0.283	255	243	0.7	0.5	6.661	A
		2	1	(A, B, C)	589			590	579	0.7	0.1	1.030	A
	Exit	1	1		626			626	623	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	125	857	0.145	124	125	0.3	0.2	5.170	A
			2	A, B	308	857	0.359	308	306	0.8	0.6	6.382	A
		2	1	(A, B, C)	432			433	429	0.1	0.0	0.440	A
	Exit	1	1		471			471	472	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	319	989	0.322	318	317	0.7	0.6	6.124	A
			2	B, C	137	989	0.139	137	136	0.2	0.2	4.365	A
		2	1	(A, B, C)	457			456	452	0.3	0.1	0.565	A
	Exit	1	1		379			379	369	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	B	276	912	0.303	277	275	0.5	0.5	5.912	A
			2	A, C	200	912	0.219	200	204	0.5	0.4	6.374	A
		2	1	(A, B, C)	475			476	479	0.1	0.0	0.622	A
	Exit	1	1		518			518	515	0.0	0.0	0.000	A
B - R497	Entry	1	1	C	109	874	0.125	110	103	0.2	0.1	4.647	A
			2	A, B	254	874	0.291	254	252	0.6	0.4	6.016	A
		2	1	(A, B, C)	364			364	354	0.0	0.0	0.323	A
	Exit	1	1		390			390	391	0.0	0.0	0.000	A
C - N52 (W)	Entry	1	1	A	263	1007	0.261	264	262	0.6	0.5	5.543	A
			2	B, C	115	1007	0.114	115	117	0.2	0.2	4.287	A
		2	1	(A, B, C)	377			379	378	0.1	0.0	0.593	A
	Exit	1	1		310			310	307	0.0	0.0	0.000	A

Lane movements: Main Results for each time segment

16:15 - 16:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	273	68	948	912	0.299	275	276	0.0	0.5	5.878	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0.95	0.24	169	163	0.006	0.95	0.79	0.0	0.0	5.682	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	213	53	948	912	0.234	214	205	0.0	0.3	5.872	A
		2	1	A	0.95	0.24	-	-	-	0.95	0.79	0.0	0.0	1.530	A
				B	272	68	-	-	-	273	278	0.0	0.0	0.537	A
				C	213	53	-	-	-	213	206	0.0	0.0	0.535	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	100	25	934	870	0.115	100	99	0.0	0.2	4.817	A
			2	A	246	61	934	870	0.282	246	251	0.0	0.5	5.901	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	245	61	-	-	-	246	253	0.0	0.0	0.274	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	100	25	-	-	-	100	100	0.0	0.0	0.158	A
C - N52 (W)	Entry	1	1	A	274	68	1093	1010	0.271	276	264	0.0	0.5	5.632	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	114	28	1093	1011	0.113	114	113	0.0	0.1	3.968	A
				C	1	0.33	206	188	0.007	1	0.83	0.0	0.0	3.944	A
		2	1	A	274	68	-	-	-	274	266	0.0	0.0	0.327	A
				B	114	28	-	-	-	114	114	0.0	0.0	0.105	A
				C	1	0.33	-	-	-	1	0.83	0.0	0.0	0.467	A

16:30 - 16:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	333	83	948	905	0.368	333	326	0.5	0.6	6.383	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0.71	0.18	169	162	0.004	0.71	0.79	0.0	0.0	4.641	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	242	60	948	905	0.267	241	244	0.3	0.5	6.548	A
		2	1	A	0.71	0.18	-	-	-	0.71	0.79	0.0	0.0	0.264	A
				B	334	83	-	-	-	333	327	0.0	0.2	0.768	A
				C	243	61	-	-	-	242	245	0.0	0.1	0.825	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	120	30	934	861	0.140	120	120	0.2	0.2	4.871	A
			2	A	299	75	934	862	0.347	299	305	0.5	0.6	6.464	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	300	75	-	-	-	299	305	0.0	0.1	0.509	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	120	30	-	-	-	120	120	0.0	0.0	0.382	A
C - N52 (W)	Entry	1	1	A	317	79	1093	993	0.319	314	311	0.5	0.7	5.894	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	139	35	1093	992	0.141	138	134	0.1	0.2	4.375	A
				C	0.36	0.09	184	166	0.002	0.36	0.71	0.0	0.0	5.511	A
		2	1	A	317	79	-	-	-	317	311	0.0	0.0	0.553	A
				B	139	35	-	-	-	139	134	0.0	0.0	0.311	A
				C	0.36	0.09	-	-	-	0.36	0.71	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	420	105	948	895	0.469	419	404	0.6	0.9	7.087	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	1	0.27	206	196	0.005	1	0.91	0.0	0.0	4.156	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	291	73	948	895	0.325	292	298	0.5	0.6	6.901	A
		2	1	A	1	0.27	-	-	-	1	0.91	0.0	0.0	1.694	A
				B	419	105	-	-	-	420	405	0.2	0.2	1.723	A
				C	290	72	-	-	-	291	298	0.1	0.1	1.772	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	153	38	934	845	0.181	154	152	0.2	0.2	5.364	A
			2	A	366	91	934	845	0.432	367	367	0.6	0.8	7.114	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	365	91	-	-	-	366	368	0.1	0.1	0.926	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	153	38	-	-	-	153	152	0.0	0.0	0.550	A
C - N52 (W)	Entry	1	1	A	380	95	1093	968	0.392	376	377	0.7	0.8	6.621	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	170	43	1093	969	0.176	170	164	0.2	0.3	4.639	A
				C	2	0.39	249	221	0.007	2	1	0.0	0.0	5.423	A
		2	1	A	380	95	-	-	-	380	378	0.0	0.2	0.977	A
				B	170	43	-	-	-	170	164	0.0	0.0	0.518	A
				C	2	0.39	-	-	-	2	1	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	390	97	948	897	0.435	392	395	0.9	0.7	6.852	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0.71	0.18	272	257	0.003	0.83	1	0.0	0.0	5.412	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	293	73	948	897	0.327	294	292	0.6	0.7	6.855	A
		2	1	A	0.71	0.18	-	-	-	0.71	1	0.0	0.0	0.502	A
				B	393	98	-	-	-	390	394	0.2	0.4	1.739	A
				C	296	74	-	-	-	293	292	0.1	0.3	1.597	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	146	36	934	846	0.173	146	146	0.2	0.3	5.397	A
			2	A	375	94	934	846	0.443	373	372	0.8	0.8	6.931	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	375	94	-	-	-	375	372	0.1	0.1	0.829	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	146	37	-	-	-	146	147	0.0	0.0	0.601	A
C - N52 (W)	Entry	1	1	A	382	95	1093	968	0.394	383	381	0.8	0.7	6.633	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	162	41	1093	968	0.168	162	164	0.3	0.2	4.354	A
				C	2	0.39	357	317	0.005	1	2	0.0	0.0	4.172	A
		2	1	A	382	95	-	-	-	382	381	0.2	0.2	1.292	A
				B	163	41	-	-	-	162	164	0.0	0.1	0.758	A
				C	2	0.39	-	-	-	2	2	0.0	0.0	1.245	A

17:15 - 17:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	334	83	948	905	0.369	335	337	0.7	0.5	6.416	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0.71	0.18	131	126	0.006	0.59	0.55	0.0	0.0	6.552	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	255	64	948	905	0.282	255	243	0.7	0.5	6.662	A
		2	1	A	0.71	0.18	-	-	-	0.71	0.59	0.0	0.0	0.000	A
				B	334	83	-	-	-	334	336	0.4	0.1	1.012	A
				C	255	64	-	-	-	255	242	0.3	0.0	1.063	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	125	31	934	857	0.145	124	125	0.3	0.2	5.170	A
			2	A	308	77	934	858	0.359	308	306	0.8	0.6	6.382	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	308	77	-	-	-	308	305	0.1	0.0	0.492	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	124	31	-	-	-	125	124	0.0	0.0	0.316	A
C - N52 (W)	Entry	1	1	A	319	80	1093	989	0.322	318	317	0.7	0.6	6.124	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	136	34	1093	990	0.138	136	135	0.2	0.2	4.366	A
				C	1	0.27	238	216	0.005	1	1	0.0	0.0	4.250	A
		2	1	A	320	80	-	-	-	319	317	0.2	0.1	0.634	A
				B	136	34	-	-	-	136	135	0.1	0.0	0.431	A
				C	1	0.27	-	-	-	1	0.99	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - N52 (NNE)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	276	69	948	912	0.303	277	275	0.5	0.5	5.912	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0.71	0.18	160	153	0.005	0.71	0.83	0.0	0.0	5.449	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	199	50	948	912	0.218	199	203	0.5	0.4	6.379	A
		2	1	A	0.71	0.18	-	-	-	0.71	0.79	0.0	0.0	0.000	A
				B	276	69	-	-	-	276	275	0.1	0.0	0.608	A
				C	199	50	-	-	-	199	203	0.0	0.0	0.646	A
B - R497	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	109	27	934	874	0.125	110	103	0.2	0.1	4.647	A
			2	A	254	64	934	874	0.291	254	252	0.6	0.4	6.016	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
		2	1	A	254	64	-	-	-	254	251	0.0	0.0	0.375	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	109	27	-	-	-	109	102	0.0	0.0	0.199	A
C - N52 (W)	Entry	1	1	A	263	66	1093	1007	0.261	264	262	0.6	0.5	5.543	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
			2	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	114	29	1093	1008	0.113	114	116	0.2	0.2	4.288	A
				C	0.95	0.24	238	218	0.004	0.95	0.91	0.0	0.0	4.130	A
		2	1	A	263	66	-	-	-	263	261	0.1	0.0	0.666	A
				B	113	28	-	-	-	114	116	0.0	0.0	0.446	A
				C	0.95	0.24	-	-	-	0.95	0.91	0.0	0.0	1.316	A

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.1.1.1905
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Filename: Junction 10_N52-CC2 Compound Tjct_LS.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 13:05:24

»LS - 2024, AM
»LS - 2024, PM
»LS - 2028 No Construction , AM
»LS - 2028 No Construction , PM
»LS - 2028 With Construction Peak, AM
»LS - 2028 With Construction Peak, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	LS [Lane Simulation] - 2024									
A - N52(N)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - CC2 Compound	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - N52(S)	0.0	0.00		A		0.0	0.00		A	
	LS [Lane Simulation] - 2028 No Construction									
A - N52(N)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - CC2 Compound	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - N52(S)	0.0	0.00		A		0.0	0.00		A	
	LS [Lane Simulation] - 2028 With Construction Peak									
A - N52(N)	0.0	0.00		A	2.34	0.0	0.00		A	1.86
B - CC2 Compound	0.2	15.39	0.05	C		0.5	12.03	0.30	B	
C - N52(S)	0.5	4.06		A		0.0	0.00		A	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	Water Supply Project
Location	
Site number	Junction 10
Date	19/03/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Calculate RFCs	Relaxation factor for capacity/RFC runs	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)	Last run total time taken (s)
Delay	1.00	100000	100000	Calculate for all arms	3.00	-1	3	1	60	✓			1729905483	21	0.11	2.08

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	08:00	09:30	15	✓
D2	2024	PM	ONE HOUR	16:30	18:00	15	✓
D3	2028 No Construction	AM	ONE HOUR	08:00	09:30	15	✓
D4	2028 No Construction	PM	ONE HOUR	16:30	18:00	15	✓
D5	2028 With Construction Peak	AM	ONE HOUR	08:00	09:30	15	✓
D6	2028 With Construction Peak	PM	ONE HOUR	16:30	18:00	15	✓

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	LS	✓	✓	100.000	100.000

LS - 2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
10		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	N52(N)		Major
B	CC2 Compound		Minor
C	N52(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)	Vehicles causing blocking (%)
C - N52(S)	8.80			250.0	✓	0.00	100

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 - CC2 Compound	One lane	2.50	22	28

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	474	0.076	0.191	0.120	0.273
B-C	609	0.082	0.207	-	-
C-B	719	0.245	0.245	-	-

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.

Lane Simulation: Arm options

Arm	Traffic considering secondary lanes (%)
A - N52(N)	10.00
B - CC2 Compound	10.00
C - N52(S)	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - N52(N)	Entry	1	1	B, C		Infinity			0	99999	
	Exit	1	1			Infinity					
B - CC2 Compound	Entry	1	1	A, C		Infinity			0	99999	
	Exit	1	1			Infinity					
C - N52(S)	Entry	1	1	A, B		Infinity			0	99999	
	Exit	1	1			Infinity					

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			N52 (N)	CC2 Compound	N52 (S)
A - N52(N)	1	1		✓	✓
B - CC2 Compound	1	1	✓		✓
C - N52(S)	1	1	✓	✓	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52(N)		ONE HOUR	✓	380	100.000
B - CC2 Compound		ONE HOUR	✓	0	100.000
C - N52(S)		ONE HOUR	✓	267	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N52(N)	B - CC2 Compound	C - N52(S)
From	A - N52(N)	0	0	380
	B - CC2 Compound	0	0	0
	C - N52(S)	267	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
10	0.20	0.80

Heavy Vehicle %

		To		
		A - N52(N)	B - CC2 Compound	C - N52(S)
From	A - N52(N)	0	0	17
	B - CC2 Compound	0	0	0
	C - N52(S)	20	0	0

Cyclist %

		To		
		A - N52(N)	B - CC2 Compound	C - N52(S)
From	A - N52(N)	0	0	0
	B - CC2 Compound	0	0	0
	C - N52(S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52(N)		0.00	0.0	A	357	535
B - CC2 Compound	0.00	0.00	0.0	A	0	0
C - N52(S)		0.00	0.0	A	246	368

LS - 2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
10		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D2	2024	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52(N)		ONE HOUR	✓	232	100.000
B - CC2 Compound		ONE HOUR	✓	0	100.000
C - N52(S)		ONE HOUR	✓	386	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N52(N)	B - CC2 Compound	C - N52(S)
From	A - N52(N)	0	0	232
	B - CC2 Compound	0	0	0
	C - N52(S)	386	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
10	0.20	0.80

Heavy Vehicle %

		To		
		A - N52(N)	B - CC2 Compound	C - N52(S)
From	A - N52(N)	0	0	14
	B - CC2 Compound	0	0	0
	C - N52(S)	14	0	0

Cyclist %

		To		
		A - N52(N)	B - CC2 Compound	C - N52(S)
From	A - N52(N)	0	0	0
	B - CC2 Compound	0	0	0
	C - N52(S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52(N)		0.00	0.0	A	205	308
B - CC2 Compound	0.00	0.00	0.0	A	0	0
C - N52(S)		0.00	0.0	A	357	535

LS - 2028 No Construction , AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
10		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D3	2028 No Construction	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52(N)		ONE HOUR	✓	408	100.000
B - CC2 Compound		ONE HOUR	✓	0	100.000
C - N52(S)		ONE HOUR	✓	288	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N52(N)	B - CC2 Compound	C - N52(S)
From	A - N52(N)	0	0	408
	B - CC2 Compound	0	0	0
	C - N52(S)	288	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
10	0.20	0.80

Heavy Vehicle %

		To		
		A - N52(N)	B - CC2 Compound	C - N52(S)
From	A - N52(N)	0	0	18
	B - CC2 Compound	0	0	0
	C - N52(S)	21	0	0

Cyclist %

		To		
		A - N52(N)	B - CC2 Compound	C - N52(S)
From	A - N52(N)	0	0	0
	B - CC2 Compound	0	0	0
	C - N52(S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52(N)		0.00	0.0	A	381	571
B - CC2 Compound	0.00	0.00	0.0	A	0	0
C - N52(S)		0.00	0.0	A	279	418

LS - 2028 No Construction , PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
10		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D4	2028 No Construction	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52(N)		ONE HOUR	✓	248	100.000
B - CC2 Compound		ONE HOUR	✓	0	100.000
C - N52(S)		ONE HOUR	✓	414	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N52(N)	B - CC2 Compound	C - N52(S)
From	A - N52(N)	0	0	248
	B - CC2 Compound	0	0	0
	C - N52(S)	414	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
10	0.20	0.80

Heavy Vehicle %

		To		
		A - N52(N)	B - CC2 Compound	C - N52(S)
From	A - N52(N)	0	0	14
	B - CC2 Compound	0	0	0
	C - N52(S)	15	0	0

Cyclist %

		To		
		A - N52(N)	B - CC2 Compound	C - N52(S)
From	A - N52(N)	0	0	0
	B - CC2 Compound	0	0	0
	C - N52(S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52(N)		0.00	0.0	A	227	340
B - CC2 Compound	0.00	0.00	0.0	A	0	0
C - N52(S)		0.00	0.0	A	377	566

LS - 2028 With Construction Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
10		T-Junction	Two-way	Two-way	Two-way		2.34	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.34	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)	Run automatically
D5	2028 With Construction Peak	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52(N)		ONE HOUR	✓	441	100.000
B - CC2 Compound		ONE HOUR	✓	21	100.000
C - N52(S)		ONE HOUR	✓	429	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N52(N)	B - CC2 Compound	C - N52(S)
From	A - N52(N)	0	12	429
	B - CC2 Compound	1	0	20
	C - N52(S)	329	100	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
10	0.20	0.80

Heavy Vehicle %

		To		
		A - N52(N)	B - CC2 Compound	C - N52(S)
From	A - N52(N)	0	4	22
	B - CC2 Compound	100	0	100
	C - N52(S)	31	0	0

Cyclist %

		To		
		A - N52(N)	B - CC2 Compound	C - N52(S)
From	A - N52(N)	0	0	0
	B - CC2 Compound	0	0	0
	C - N52(S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52(N)		0.00	0.0	A	402	602
B - CC2 Compound	0.05	15.39	0.2	C	19	29
C - N52(S)		4.06	0.5	A	399	598

LS - 2028 With Construction Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
10		T-Junction	Two-way	Two-way	Two-way		1.86	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.86	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)	Run automatically
D6	2028 With Construction Peak	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52(N)		ONE HOUR	✓	271	100.000
B - CC2 Compound		ONE HOUR	✓	132	100.000
C - N52(S)		ONE HOUR	✓	455	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N52(N)	B - CC2 Compound	C - N52(S)
From	A - N52(N)	0	1	270
	B - CC2 Compound	12	0	120
	C - N52(S)	455	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
10	0.20	0.80

Heavy Vehicle %

		To		
		A - N52(N)	B - CC2 Compound	C - N52(S)
From	A - N52(N)	0	100	21
	B - CC2 Compound	4	0	17
	C - N52(S)	22	0	0

Cyclist %

		To		
		A - N52(N)	B - CC2 Compound	C - N52(S)
From	A - N52(N)	0	0	0
	B - CC2 Compound	0	0	0
	C - N52(S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52(N)		0.00	0.0	A	250	374
B - CC2 Compound	0.30	12.03	0.5	B	121	182
C - N52(S)		0.00	0.0	A	412	619

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.1.1.1905
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Filename: Junction 13_L1064-BPT Tjct_LS.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 13:07:04

»LS - 2024, AM
»LS - 2024, PM
»LS - 2030 No Construction , AM
»LS - 2030 No Construction , PM
»LS - 2032 Year of Opening No Dev, AM
»LS - 2032 Year of Opening No Dev, PM
»LS - 2037 (5 Years after Opening) No Dev, AM
»LS - 2037 (5 Years after Opening) No Dev, PM
»LS - 2047 (15 Years after Opening) No Dev, AM
»LS - 2047 (15 Years after Opening) No Dev, PM
»LS - 2030 With Construction Peak, AM
»LS - 2030 With Construction Peak, PM
»LS - 2032 Year of Opening With Dev, AM
»LS - 2032 Year of Opening With Dev, PM
»LS - 2037 (5 Years after Opening) With Dev, AM
»LS - 2037 (5 Years after Opening) With Dev, PM
»LS - 2047 (15 Years after Opening) With Dev, AM
»LS - 2047 (15 Years after Opening) With Dev, PM

Summary of junction performance

	AM						PM					

	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
LS [Lane Simulation] - 2024										
A - L1064 (N)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - Break Pressure Tank	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - L1064 (S)	0.0	0.00		A		0.0	0.00		A	
LS [Lane Simulation] - 2030 No Construction										
A - L1064 (N)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - Break Pressure Tank	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - L1064 (S)	0.0	0.00		A		0.0	0.00		A	
LS [Lane Simulation] - 2032 Year of Opening No Dev										
A - L1064 (N)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - Break Pressure Tank	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - L1064 (S)	0.0	0.00		A		0.0	0.00		A	
LS [Lane Simulation] - 2037 (5 Years after Opening) No Dev										
A - L1064 (N)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - Break Pressure Tank	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - L1064 (S)	0.0	0.00		A		0.0	0.00		A	
LS [Lane Simulation] - 2047 (15 Years after Opening) No Dev										
A - L1064 (N)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - Break Pressure Tank	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - L1064 (S)	0.0	0.00		A		0.0	0.00		A	
LS [Lane Simulation] - 2030 With Construction Peak										
A - L1064 (N)	0.0	0.00		A	3.32	0.0	0.00		A	3.47
B - Break Pressure Tank	0.0	0.00	0.00	A		0.1	6.34	0.06	A	
C - L1064 (S)	0.1	4.54		A		0.0	0.95		A	
LS [Lane Simulation] - 2032 Year of Opening With Dev										
A - L1064 (N)	0.0	0.00		A	2.06	0.0	0.00		A	2.46
B - Break Pressure Tank	0.0	0.00	0.00	A		0.0	7.32	0.02	A	
C - L1064 (S)	0.1	3.61		A		0.0	1.03		A	
LS [Lane Simulation] - 2037 (5 Years after Opening) With Dev										
A - L1064 (N)	0.0	0.00		A	1.92	0.0	0.00		A	2.56
B - Break Pressure Tank	0.0	0.00	0.00	A		0.0	7.45	0.02	A	
C - L1064 (S)	0.0	3.27		A		0.0	0.99		A	
LS [Lane Simulation] - 2047 (15 Years after Opening) With Dev										
A - L1064 (N)	0.0	0.00		A	1.91	0.0	0.00		A	2.43
B - Break Pressure Tank	0.0	0.00	0.00	A		0.0	7.66	0.02	A	
C - L1064 (S)	0.0	3.40		A		0.0	0.70		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. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	Water Supply Project
Location	
Site number	Junction 13
Date	19/03/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Calculate RFCs	Relaxation factor for capacity/RFC runs	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)	Last run total time taken (s)
Delay	1.00	100000	100000	Calculate for all arms	3.00	-1	3	1	60	✓			144107345	21	0.02	1.51

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	08:30	10:00	15	✓
D2	2024	PM	ONE HOUR	16:45	18:15	15	✓
D3	2030 No Construction	AM	ONE HOUR	08:30	10:00	15	✓
D4	2030 No Construction	PM	ONE HOUR	16:45	18:15	15	✓
D5	2032 Year of Opening No Dev	AM	ONE HOUR	08:30	10:00	15	✓
D6	2032 Year of Opening No Dev	PM	ONE HOUR	16:45	18:15	15	✓
D7	2037 (5 Years after Opening) No Dev	AM	ONE HOUR	08:30	10:00	15	✓
D8	2037 (5 Years after Opening) No Dev	PM	ONE HOUR	16:45	18:15	15	✓
D9	2047 (15 Years after Opening) No Dev	AM	ONE HOUR	08:30	10:00	15	✓
D10	2047 (15 Years after Opening) No Dev	PM	ONE HOUR	16:45	18:15	15	✓
D11	2030 With Construction Peak	AM	ONE HOUR	08:30	10:00	15	✓
D12	2030 With Construction Peak	PM	ONE HOUR	16:45	18:15	15	✓
D13	2032 Year of Opening With Dev	AM	ONE HOUR	08:30	10:00	15	✓
D14	2032 Year of Opening With Dev	PM	ONE HOUR	16:45	18:15	15	✓
D15	2037 (5 Years after Opening) With Dev	AM	ONE HOUR	08:30	10:00	15	✓
D16	2037 (5 Years after Opening) With Dev	PM	ONE HOUR	16:45	18:15	15	✓
D17	2047 (15 Years after Opening) With Dev	AM	ONE HOUR	08:30	10:00	15	✓
D18	2047 (15 Years after Opening) With Dev	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	LS	✓	✓	100.000	100.000

LS - 2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L1064 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
13		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	L1064 (N)		Major
B	Break Pressure Tank		Minor
C	L1064 (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)	Vehicles causing blocking (%)
C - L1064 (S)	4.80			110.0	✓	0.00	100

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 - Break Pressure Tank	One lane	2.50	120	103

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	541	0.104	0.262	0.165	0.374
B-C	654	0.106	0.267	-	-
C-B	638	0.260	0.260	-	-

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.

Lane Simulation: Arm options

Arm	Traffic considering secondary lanes (%)
A - L1064 (N)	10.00
B - Break Pressure Tank	10.00
C - L1064 (S)	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - L1064 (N)	**Entry**	**1**	**1**	B, C		Infinity			0	99999	
	Exit	**1**	**1**			Infinity					
B - Break Pressure Tank	**Entry**	**1**	**1**	A, C		Infinity			0	99999	
	Exit	**1**	**1**			Infinity					
C - L1064 (S)	**Entry**	**1**	**1**	A, B		Infinity			0	99999	
	Exit	**1**	**1**			Infinity					

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			L1064 (N)	Break Pressure Tank	L1064 (S)
A - L1064 (N)	**1**	**1**		✓	✓
B - Break Pressure Tank	**1**	**1**	✓		✓
C - L1064 (S)	**1**	**1**	✓	✓	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	08:30	10:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L1064 (N)		ONE HOUR	✓	15	100.000
B - Break Pressure Tank		ONE HOUR	✓	0	100.000
C - L1064 (S)		ONE HOUR	✓	11	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	15
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	11	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
13	0.20	0.80

Heavy Vehicle %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	31
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Cyclist %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	0
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L1064 (N)		0.00	0.0	A	13	20
B - Break Pressure Tank	0.00	0.00	0.0	A	0	0
C - L1064 (S)		0.00	0.0	A	10	15

LS - 2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L1064 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
13		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D2	2024	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L1064 (N)		ONE HOUR	✓	10	100.000
B - Break Pressure Tank		ONE HOUR	✓	0	100.000
C - L1064 (S)		ONE HOUR	✓	16	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	10
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	16	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
13	0.20	0.80

Heavy Vehicle %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	0
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Cyclist %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	0
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L1064 (N)		0.00	0.0	A	10	15
B - Break Pressure Tank	0.00	0.00	0.0	A	0	0
C - L1064 (S)		0.00	0.0	A	15	22

LS - 2030 No Construction , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L1064 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
13		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D3	2030 No Construction	AM	ONE HOUR	08:30	10:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L1064 (N)		ONE HOUR	✓	16	100.000
B - Break Pressure Tank		ONE HOUR	✓	0	100.000
C - L1064 (S)		ONE HOUR	✓	12	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	16
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	12	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
13	0.20	0.80

Heavy Vehicle %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	33
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Cyclist %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	0
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L1064 (N)		0.00	0.0	A	16	23
B - Break Pressure Tank	0.00	0.00	0.0	A	0	0
C - L1064 (S)		0.00	0.0	A	11	16

LS - 2030 No Construction , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L1064 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
13		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D4	2030 No Construction	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L1064 (N)		ONE HOUR	✓	11	100.000
B - Break Pressure Tank		ONE HOUR	✓	0	100.000
C - L1064 (S)		ONE HOUR	✓	18	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	11
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	18	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
13	0.20	0.80

Heavy Vehicle %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	0
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Cyclist %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	0
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L1064 (N)		0.00	0.0	A	11	16
B - Break Pressure Tank	0.00	0.00	0.0	A	0	0
C - L1064 (S)		0.00	0.0	A	17	26

LS - 2032 Year of Opening No Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L1064 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
13		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D5	2032 Year of Opening No Dev	AM	ONE HOUR	08:30	10:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L1064 (N)		ONE HOUR	✓	17	100.000
B - Break Pressure Tank		ONE HOUR	✓	0	100.000
C - L1064 (S)		ONE HOUR	✓	12	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	17
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	12	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
13	0.20	0.80

Heavy Vehicle %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	34
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Cyclist %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	0
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L1064 (N)		0.00	0.0	A	15	22
B - Break Pressure Tank	0.00	0.00	0.0	A	0	0
C - L1064 (S)		0.00	0.0	A	11	16

LS - 2032 Year of Opening No Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L1064 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
13		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D6	2032 Year of Opening No Dev	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L1064 (N)		ONE HOUR	✓	11	100.000
B - Break Pressure Tank		ONE HOUR	✓	0	100.000
C - L1064 (S)		ONE HOUR	✓	18	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	11
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	18	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
13	0.20	0.80

Heavy Vehicle %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	0
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Cyclist %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	0
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L1064 (N)		0.00	0.0	A	9	14
B - Break Pressure Tank	0.00	0.00	0.0	A	0	0
C - L1064 (S)		0.00	0.0	A	15	22

LS - 2037 (5 Years after Opening) No Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L1064 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
13		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D7	2037 (5 Years after Opening) No Dev	AM	ONE HOUR	08:30	10:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L1064 (N)		ONE HOUR	✓	18	100.000
B - Break Pressure Tank		ONE HOUR	✓	0	100.000
C - L1064 (S)		ONE HOUR	✓	13	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	18
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	13	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
13	0.20	0.80

Heavy Vehicle %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	35
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Cyclist %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	0
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L1064 (N)		0.00	0.0	A	15	22
B - Break Pressure Tank	0.00	0.00	0.0	A	0	0
C - L1064 (S)		0.00	0.0	A	11	17

LS - 2037 (5 Years after Opening) No Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L1064 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
13		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D8	2037 (5 Years after Opening) No Dev	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L1064 (N)		ONE HOUR	✓	12	100.000
B - Break Pressure Tank		ONE HOUR	✓	0	100.000
C - L1064 (S)		ONE HOUR	✓	18	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	12
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	18	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
13	0.20	0.80

Heavy Vehicle %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	0
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Cyclist %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	0
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L1064 (N)		0.00	0.0	A	12	18
B - Break Pressure Tank	0.00	0.00	0.0	A	0	0
C - L1064 (S)		0.00	0.0	A	17	25

LS - 2047 (15 Years after Opening) No Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L1064 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
13		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D9	2047 (15 Years after Opening) No Dev	AM	ONE HOUR	08:30	10:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L1064 (N)		ONE HOUR	✓	20	100.000
B - Break Pressure Tank		ONE HOUR	✓	0	100.000
C - L1064 (S)		ONE HOUR	✓	14	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	20
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	14	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
13	0.20	0.80

Heavy Vehicle %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	38
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Cyclist %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	0
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L1064 (N)		0.00	0.0	A	18	27
B - Break Pressure Tank	0.00	0.00	0.0	A	0	0
C - L1064 (S)		0.00	0.0	A	12	18

LS - 2047 (15 Years after Opening) No Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L1064 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
13		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D10	2047 (15 Years after Opening) No Dev	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L1064 (N)		ONE HOUR	✓	12	100.000
B - Break Pressure Tank		ONE HOUR	✓	0	100.000
C - L1064 (S)		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	12
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	20	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
13	0.20	0.80

Heavy Vehicle %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	0
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Cyclist %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	0
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L1064 (N)		0.00	0.0	A	11	16
B - Break Pressure Tank	0.00	0.00	0.0	A	0	0
C - L1064 (S)		0.00	0.0	A	18	27

LS - 2030 With Construction Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L1064 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
13		T-Junction	Two-way	Two-way	Two-way		3.32	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.32	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)	Run automatically
D11	2030 With Construction Peak	AM	ONE HOUR	08:30	10:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L1064 (N)		ONE HOUR	✓	16	100.000
B - Break Pressure Tank		ONE HOUR	✓	2	100.000
C - L1064 (S)		ONE HOUR	✓	42	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	16
	B - Break Pressure Tank	0	0	2
	C - L1064 (S)	12	30	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
13	0.20	0.80

Heavy Vehicle %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	33
	B - Break Pressure Tank	0	0	100
	C - L1064 (S)	0	7	0

Cyclist %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	0
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L1064 (N)		0.00	0.0	A	14	21
B - Break Pressure Tank	0.00	0.00	0.0	A	0	0
C - L1064 (S)		4.54	0.1	A	37	56

LS - 2030 With Construction Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L1064 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
13		T-Junction	Two-way	Two-way	Two-way		3.47	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.47	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)	Run automatically
D12	2030 With Construction Peak	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L1064 (N)		ONE HOUR	✓	11	100.000
B - Break Pressure Tank		ONE HOUR	✓	30	100.000
C - L1064 (S)		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	11
	B - Break Pressure Tank	0	0	30
	C - L1064 (S)	18	2	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
13	0.20	0.80

Heavy Vehicle %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	0
	B - Break Pressure Tank	0	0	7
	C - L1064 (S)	0	100	0

Cyclist %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	0
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L1064 (N)		0.00	0.0	A	10	14
B - Break Pressure Tank	0.06	6.34	0.1	A	28	42
C - L1064 (S)		0.95	0.0	A	19	28

LS - 2032 Year of Opening With Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L1064 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
13		T-Junction	Two-way	Two-way	Two-way		2.06	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.06	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)	Run automatically
D13	2032 Year of Opening With Dev	AM	ONE HOUR	08:30	10:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L1064 (N)		ONE HOUR	✓	17	100.000
B - Break Pressure Tank		ONE HOUR	✓	2	100.000
C - L1064 (S)		ONE HOUR	✓	24	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	17
	B - Break Pressure Tank	0	0	2
	C - L1064 (S)	12	12	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
13	0.20	0.80

Heavy Vehicle %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	34
	B - Break Pressure Tank	0	0	100
	C - L1064 (S)	0	17	0

Cyclist %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	0
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L1064 (N)		0.00	0.0	A	17	25
B - Break Pressure Tank	0.00	0.00	0.0	A	0	0
C - L1064 (S)		3.61	0.1	A	22	33

LS - 2032 Year of Opening With Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L1064 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
13		T-Junction	Two-way	Two-way	Two-way		2.46	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.46	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)	Run automatically
D14	2032 Year of Opening With Dev	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L1064 (N)		ONE HOUR	✓	11	100.000
B - Break Pressure Tank		ONE HOUR	✓	12	100.000
C - L1064 (S)		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	11
	B - Break Pressure Tank	0	0	12
	C - L1064 (S)	18	2	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
13	0.20	0.80

Heavy Vehicle %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	0
	B - Break Pressure Tank	0	0	17
	C - L1064 (S)	0	100	0

Cyclist %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	0
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L1064 (N)		0.00	0.0	A	10	15
B - Break Pressure Tank	0.02	7.32	0.0	A	10	16
C - L1064 (S)		1.03	0.0	A	19	28

LS - 2037 (5 Years after Opening) With Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L1064 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
13		T-Junction	Two-way	Two-way	Two-way		1.92	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.92	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)	Run automatically
D15	2037 (5 Years after Opening) With Dev	AM	ONE HOUR	08:30	10:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L1064 (N)		ONE HOUR	✓	18	100.000
B - Break Pressure Tank		ONE HOUR	✓	2	100.000
C - L1064 (S)		ONE HOUR	✓	25	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	18
	B - Break Pressure Tank	0	0	2
	C - L1064 (S)	13	12	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
13	0.20	0.80

Heavy Vehicle %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	35
	B - Break Pressure Tank	0	0	100
	C - L1064 (S)	0	17	0

Cyclist %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	0
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L1064 (N)		0.00	0.0	A	17	25
B - Break Pressure Tank	0.00	0.00	0.0	A	0	0
C - L1064 (S)		3.27	0.0	A	24	35

LS - 2037 (5 Years after Opening) With Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L1064 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
13		T-Junction	Two-way	Two-way	Two-way		2.56	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.56	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)	Run automatically
D16	2037 (5 Years after Opening) With Dev	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L1064 (N)		ONE HOUR	✓	12	100.000
B - Break Pressure Tank		ONE HOUR	✓	12	100.000
C - L1064 (S)		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	12
	B - Break Pressure Tank	0	0	12
	C - L1064 (S)	18	2	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
13	0.20	0.80

Heavy Vehicle %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	0
	B - Break Pressure Tank	0	0	17
	C - L1064 (S)	0	100	0

Cyclist %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	0
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L1064 (N)		0.00	0.0	A	11	17
B - Break Pressure Tank	0.02	7.45	0.0	A	12	18
C - L1064 (S)		0.99	0.0	A	19	28

LS - 2047 (15 Years after Opening) With Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L1064 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
13		T-Junction	Two-way	Two-way	Two-way		1.91	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.91	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)	Run automatically
D17	2047 (15 Years after Opening) With Dev	AM	ONE HOUR	08:30	10:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L1064 (N)		ONE HOUR	✓	20	100.000
B - Break Pressure Tank		ONE HOUR	✓	2	100.000
C - L1064 (S)		ONE HOUR	✓	26	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	20
	B - Break Pressure Tank	0	0	2
	C - L1064 (S)	14	12	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
13	0.20	0.80

Heavy Vehicle %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	38
	B - Break Pressure Tank	0	0	100
	C - L1064 (S)	0	17	0

Cyclist %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	0
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L1064 (N)		0.00	0.0	A	19	28
B - Break Pressure Tank	0.00	0.00	0.0	A	0	0
C - L1064 (S)		3.40	0.0	A	24	36

LS - 2047 (15 Years after Opening) With Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L1064 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
13		T-Junction	Two-way	Two-way	Two-way		2.43	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.43	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)	Run automatically
D18	2047 (15 Years after Opening) With Dev	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L1064 (N)		ONE HOUR	✓	12	100.000
B - Break Pressure Tank		ONE HOUR	✓	12	100.000
C - L1064 (S)		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	12
	B - Break Pressure Tank	0	0	12
	C - L1064 (S)	20	2	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
13	0.20	0.80

Heavy Vehicle %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	0
	B - Break Pressure Tank	0	0	17
	C - L1064 (S)	0	100	0

Cyclist %

		To		
		A - L1064 (N)	B - Break Pressure Tank	C - L1064 (S)
From	A - L1064 (N)	0	0	0
	B - Break Pressure Tank	0	0	0
	C - L1064 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L1064 (N)		0.00	0.0	A	10	15
B - Break Pressure Tank	0.02	7.66	0.0	A	11	17
C - L1064 (S)		0.70	0.0	A	20	30

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.1.1.1905
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Filename: Junction 14_R490-R491 Tjct_LS.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 13:08:29

»LS - 2024, AM
»LS - 2024, PM
»LS - 2028 No Construction , AM
»LS - 2028 No Construction , PM
»LS - 2028 With Construction Peak, AM
»LS - 2028 With Construction Peak, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	LS [Lane Simulation] - 2024									
A - R490 Main Street	0.0	0.00		A	2.87	0.0	0.00		A	2.84
B - R491	0.3	8.69	0.15	A		0.2	8.83	0.13	A	
C - R490 Templemore Road	0.1	1.88		A		0.2	2.48		A	
	LS [Lane Simulation] - 2028 No Construction									
A - R490 Main Street	0.0	0.00		A	2.94	0.0	0.00		A	3.02
B - R491	0.3	8.92	0.17	A		0.3	9.06	0.14	A	
C - R490 Templemore Road	0.1	2.09		A		0.1	2.76		A	
	LS [Lane Simulation] - 2028 With Construction Peak									
A - R490 Main Street	0.0	0.00		A	2.80	0.0	0.00		A	2.86
B - R491	0.3	9.12	0.18	A		0.3	9.68	0.15	A	
C - R490 Templemore Road	0.1	2.02		A		0.2	2.27		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. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	Water Supply Project
Location	
Site number	Junction 14
Date	19/03/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Calculate RFCs	Relaxation factor for capacity/RFC runs	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)	Last run total time taken (s)
Delay	1.00	100000	100000	Calculate for all arms	3.00	-1	3	1	60	✓			633335626	101	0.63	8.79

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	08:15	09:45	15	✓
D2	2024	PM	ONE HOUR	14:15	15:45	15	✓
D3	2028 No Construction	AM	ONE HOUR	08:15	09:45	15	✓
D4	2028 No Construction	PM	ONE HOUR	14:15	15:45	15	✓
D5	2028 With Construction Peak	AM	ONE HOUR	08:15	09:45	15	✓
D6	2028 With Construction Peak	PM	ONE HOUR	14:15	15:45	15	✓

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	LS	✓	✓	100.000	100.000

LS - 2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - R491 - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
14		T-Junction	Two-way	Two-way	Two-way		2.87	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.87	A

Arms

Arms

Arm	Name	Description	Arm type
A	R490 Main Street		Major
B	R491		Minor
C	R490 Templemore Road		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)	Vehicles causing blocking (%)
C - R490 Templemore Road	7.40			170.0	✓	0.00	100

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - R491	One lane plus flare	5.50	3.50	3.30	3.30	3.30	✓	1.00	13	24

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	510	0.087	0.220	0.139	0.315
B-C	586	0.084	0.213	-	-
C-B	672	0.245	0.245	-	-

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.

Lane Simulation: Arm options

Arm	Traffic considering secondary lanes (%)
A - R490 Main Street	10.00
B - R491	10.00
C - R490 Templemore Road	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - R490 Main Street	**Entry**	**1**	**1**	B, C		Infinity			0	99999	
	Exit	**1**	**1**			Infinity					
B - R491	**Entry**	**1**	**1**	C	✓	1.00			0	99999	
			2	A	✓	1.00			0	99999	
		2	**1**	(A, C)		Infinity					
	Exit	**1**	**1**			Infinity					
C - R490 Templemore Road	**Entry**	**1**	**1**	A, B		Infinity			0	99999	
	Exit	**1**	**1**			Infinity					

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			R490 Main Street	R491	R490 Templemore Road
A - R490 Main Street	1	1		✓	✓
B - R491	1	1			✓
		2	✓		
	2	1	✓		✓
C - R490 Templemore Road	1	1	✓	✓	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	08:15	09:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R490 Main Street		ONE HOUR	✓	126	100.000
B - R491		ONE HOUR	✓	81	100.000
C - R490 Templemore Road		ONE HOUR	✓	116	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R490 Main Street	B - R491	C - R490 Templemore Road
From	A - R490 Main Street	0	29	97
	B - R491	47	0	34
	C - R490 Templemore Road	90	26	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
14	0.20	0.80

Heavy Vehicle %

		To		
		A - R490 Main Street	B - R491	C - R490 Templemore Road
From	A - R490 Main Street	0	0	17
	B - R491	0	0	10
	C - R490 Templemore Road	9	12	0

Cyclist %

		To		
		A - R490 Main Street	B - R491	C - R490 Templemore Road
From	A - R490 Main Street	0	0	0
	B - R491	0	0	0
	C - R490 Templemore Road	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R490 Main Street		0.00	0.0	A	117	176
B - R491	0.15	8.69	0.3	A	76	114
C - R490 Templemore Road		1.88	0.1	A	105	158

LS - 2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - R491 - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
14		T-Junction	Two-way	Two-way	Two-way		2.84	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.84	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)	Run automatically
D2	2024	PM	ONE HOUR	14:15	15:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R490 Main Street		ONE HOUR	✓	126	100.000
B - R491		ONE HOUR	✓	69	100.000
C - R490 Templemore Road		ONE HOUR	✓	112	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R490 Main Street	B - R491	C - R490 Templemore Road
From	A - R490 Main Street	0	50	76
	B - R491	41	0	28
	C - R490 Templemore Road	81	31	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
14	0.20	0.80

Heavy Vehicle %

		To		
		A - R490 Main Street	B - R491	C - R490 Templemore Road
From	A - R490 Main Street	0	15	8
	B - R491	6	0	19
	C - R490 Templemore Road	18	13	0

Cyclist %

		To		
		A - R490 Main Street	B - R491	C - R490 Templemore Road
From	A - R490 Main Street	0	0	0
	B - R491	0	0	0
	C - R490 Templemore Road	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R490 Main Street		0.00	0.0	A	117	175
B - R491	0.13	8.83	0.2	A	61	92
C - R490 Templemore Road		2.48	0.2	A	106	159

LS - 2028 No Construction , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - R491 - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
14		T-Junction	Two-way	Two-way	Two-way		2.94	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.94	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)	Run automatically
D3	2028 No Construction	AM	ONE HOUR	08:15	09:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R490 Main Street		ONE HOUR	✓	136	100.000
B - R491		ONE HOUR	✓	86	100.000
C - R490 Templemore Road		ONE HOUR	✓	125	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R490 Main Street	B - R491	C - R490 Templemore Road
From	A - R490 Main Street	0	31	105
	B - R491	50	0	36
	C - R490 Templemore Road	97	28	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
14	0.20	0.80

Heavy Vehicle %

		To		
		A - R490 Main Street	B - R491	C - R490 Templemore Road
From	A - R490 Main Street	0	0	18
	B - R491	0	0	11
	C - R490 Templemore Road	10	12	0

Cyclist %

		To		
		A - R490 Main Street	B - R491	C - R490 Templemore Road
From	A - R490 Main Street	0	0	0
	B - R491	0	0	0
	C - R490 Templemore Road	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R490 Main Street		0.00	0.0	A	126	189
B - R491	0.17	8.92	0.3	A	78	117
C - R490 Templemore Road		2.09	0.1	A	113	170

LS - 2028 No Construction , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - R491 - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
14		T-Junction	Two-way	Two-way	Two-way		3.02	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.02	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)	Run automatically
D4	2028 No Construction	PM	ONE HOUR	14:15	15:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R490 Main Street		ONE HOUR	✓	134	100.000
B - R491		ONE HOUR	✓	74	100.000
C - R490 Templemore Road		ONE HOUR	✓	121	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R490 Main Street	B - R491	C - R490 Templemore Road
From	A - R490 Main Street	0	53	81
	B - R491	44	0	30
	C - R490 Templemore Road	88	33	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
14	0.20	0.80

Heavy Vehicle %

		To		
		A - R490 Main Street	B - R491	C - R490 Templemore Road
From	A - R490 Main Street	0	16	8
	B - R491	6	0	20
	C - R490 Templemore Road	19	14	0

Cyclist %

		To		
		A - R490 Main Street	B - R491	C - R490 Templemore Road
From	A - R490 Main Street	0	0	0
	B - R491	0	0	0
	C - R490 Templemore Road	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R490 Main Street		0.00	0.0	A	125	188
B - R491	0.14	9.06	0.3	A	67	101
C - R490 Templemore Road		2.76	0.1	A	112	168

LS - 2028 With Construction Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - R491 - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
14		T-Junction	Two-way	Two-way	Two-way		2.80	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.80	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)	Run automatically
D5	2028 With Construction Peak	AM	ONE HOUR	08:15	09:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R490 Main Street		ONE HOUR	✓	156	100.000
B - R491		ONE HOUR	✓	86	100.000
C - R490 Templemore Road		ONE HOUR	✓	145	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R490 Main Street	B - R491	C - R490 Templemore Road
From	A - R490 Main Street	0	31	125
	B - R491	50	0	36
	C - R490 Templemore Road	117	28	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
14	0.20	0.80

Heavy Vehicle %

		To		
		A - R490 Main Street	B - R491	C - R490 Templemore Road
From	A - R490 Main Street	0	0	26
	B - R491	0	0	11
	C - R490 Templemore Road	20	12	0

Cyclist %

		To		
		A - R490 Main Street	B - R491	C - R490 Templemore Road
From	A - R490 Main Street	0	0	0
	B - R491	0	0	0
	C - R490 Templemore Road	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R490 Main Street		0.00	0.0	A	146	219
B - R491	0.18	9.12	0.3	A	81	122
C - R490 Templemore Road		2.02	0.1	A	135	202

LS - 2028 With Construction Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - R491 - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
14		T-Junction	Two-way	Two-way	Two-way		2.86	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.86	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)	Run automatically
D6	2028 With Construction Peak	PM	ONE HOUR	14:15	15:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R490 Main Street		ONE HOUR	✓	155	100.000
B - R491		ONE HOUR	✓	74	100.000
C - R490 Templemore Road		ONE HOUR	✓	141	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R490 Main Street	B - R491	C - R490 Templemore Road
From	A - R490 Main Street	0	53	102
	B - R491	44	0	30
	C - R490 Templemore Road	108	33	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
14	0.20	0.80

Heavy Vehicle %

		To		
		A - R490 Main Street	B - R491	C - R490 Templemore Road
From	A - R490 Main Street	0	16	20
	B - R491	6	0	20
	C - R490 Templemore Road	28	14	0

Cyclist %

		To		
		A - R490 Main Street	B - R491	C - R490 Templemore Road
From	A - R490 Main Street	0	0	0
	B - R491	0	0	0
	C - R490 Templemore Road	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R490 Main Street		0.00	0.0	A	139	208
B - R491	0.15	9.68	0.3	A	69	104
C - R490 Templemore Road		2.27	0.2	A	128	193

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.1.1.1905
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Filename: Junction 15_L4022-PSD2 Tjct_LS.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 13:10:27

»LS - 2024, AM
»LS - 2024, PM
»LS - 2028 No Construction , AM
»LS - 2028 No Construction , PM
»LS - 2028 With Construction Peak, AM
»LS - 2028 With Construction Peak, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	LS [Lane Simulation] - 2024									
A - L4022 (W)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - PSD2	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - L4022 (E)	0.0	0.00		A		0.0	0.00		A	
	LS [Lane Simulation] - 2028 No Construction									
A - L4022 (W)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - PSD2	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - L4022 (E)	0.0	0.00		A		0.0	0.00		A	
	LS [Lane Simulation] - 2028 With Construction Peak									
A - L4022 (W)	0.0	0.00		A	2.01	0.0	0.00		A	2.20
B - PSD2	0.1	10.74	0.02	B		0.1	9.63	0.04	A	
C - L4022 (E)	0.0	2.36		A		0.0	1.39		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. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	Water Supply Project
Location	
Site number	Junction 15
Date	19/03/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Calculate RFCs	Relaxation factor for capacity/RFC runs	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)	Last run total time taken (s)
Delay	1.00	100000	100000	Calculate for all arms	3.00	-1	3	1	60	✓			196498580	21	0.03	1.71

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	08:00	09:30	15	✓
D2	2024	PM	ONE HOUR	16:00	17:30	15	✓
D3	2028 No Construction	AM	ONE HOUR	08:00	09:30	15	✓
D4	2028 No Construction	PM	ONE HOUR	16:00	17:30	15	✓
D5	2028 With Construction Peak	AM	ONE HOUR	08:00	09:30	15	✓
D6	2028 With Construction Peak	PM	ONE HOUR	16:00	17:30	15	✓

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	LS	✓	✓	100.000	100.000

LS - 2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L4022 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
15		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	L4022 (W)		Major
B	PSD2		Minor
C	L4022 (E)		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)	Vehicles causing blocking (%)
C - L4022 (E)	4.40			250.0	✓	0.00	100

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 - PSD2	One lane	2.50	250	250

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	662	0.129	0.326	0.205	0.466
B-C	742	0.122	0.308	-	-
C-B	719	0.298	0.298	-	-

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.

Lane Simulation: Arm options

Arm	Traffic considering secondary lanes (%)
A - L4022 (W)	10.00
B - PSD2	10.00
C - L4022 (E)	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - L4022 (W)	**Entry**	**1**	**1**	B, C		Infinity			0	99999	
	Exit	**1**	**1**			Infinity					
B - PSD2	**Entry**	**1**	**1**	A, C		Infinity			0	99999	
	Exit	**1**	**1**			Infinity					
C - L4022 (E)	**Entry**	**1**	**1**	A, B		Infinity			0	99999	
	Exit	**1**	**1**			Infinity					

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			L4022 (W)	PSD2	L4022 (E)
A - L4022 (W)	**1**	**1**		✓	✓
B - PSD2	**1**	**1**	✓		✓
C - L4022 (E)	**1**	**1**	✓	✓	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L4022 (W)		ONE HOUR	✓	53	100.000
B - PSD2		ONE HOUR	✓	0	100.000
C - L4022 (E)		ONE HOUR	✓	24	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L4022 (W)	B - PSD2	C - L4022 (E)
From	A - L4022 (W)	0	0	53
	B - PSD2	0	0	0
	C - L4022 (E)	24	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
15	0.20	0.80

Heavy Vehicle %

		To		
		A - L4022 (W)	B - PSD2	C - L4022 (E)
From	A - L4022 (W)	0	0	15
	B - PSD2	0	0	0
	C - L4022 (E)	13	0	0

Cyclist %

		To		
		A - L4022 (W)	B - PSD2	C - L4022 (E)
From	A - L4022 (W)	0	0	0
	B - PSD2	0	0	0
	C - L4022 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L4022 (W)		0.00	0.0	A	48	71
B - PSD2	0.00	0.00	0.0	A	0	0
C - L4022 (E)		0.00	0.0	A	22	33

LS - 2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L4022 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
15		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D2	2024	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L4022 (W)		ONE HOUR	✓	32	100.000
B - PSD2		ONE HOUR	✓	0	100.000
C - L4022 (E)		ONE HOUR	✓	32	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L4022 (W)	B - PSD2	C - L4022 (E)
From	A - L4022 (W)	0	0	32
	B - PSD2	0	0	0
	C - L4022 (E)	32	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
15	0.20	0.80

Heavy Vehicle %

		To		
		A - L4022 (W)	B - PSD2	C - L4022 (E)
From	A - L4022 (W)	0	0	33
	B - PSD2	0	0	0
	C - L4022 (E)	14	0	0

Cyclist %

		To		
		A - L4022 (W)	B - PSD2	C - L4022 (E)
From	A - L4022 (W)	0	0	0
	B - PSD2	0	0	0
	C - L4022 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L4022 (W)		0.00	0.0	A	30	44
B - PSD2	0.00	0.00	0.0	A	0	0
C - L4022 (E)		0.00	0.0	A	29	43

LS - 2028 No Construction , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L4022 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
15		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D3	2028 No Construction	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L4022 (W)		ONE HOUR	✓	57	100.000
B - PSD2		ONE HOUR	✓	0	100.000
C - L4022 (E)		ONE HOUR	✓	25	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L4022 (W)	B - PSD2	C - L4022 (E)
From	A - L4022 (W)	0	0	57
	B - PSD2	0	0	0
	C - L4022 (E)	25	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
15	0.20	0.80

Heavy Vehicle %

		To		
		A - L4022 (W)	B - PSD2	C - L4022 (E)
From	A - L4022 (W)	0	0	16
	B - PSD2	0	0	0
	C - L4022 (E)	14	0	0

Cyclist %

		To		
		A - L4022 (W)	B - PSD2	C - L4022 (E)
From	A - L4022 (W)	0	0	0
	B - PSD2	0	0	0
	C - L4022 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L4022 (W)		0.00	0.0	A	55	82
B - PSD2	0.00	0.00	0.0	A	0	0
C - L4022 (E)		0.00	0.0	A	26	39

LS - 2028 No Construction , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L4022 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
15		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D4	2028 No Construction	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L4022 (W)		ONE HOUR	✓	35	100.000
B - PSD2		ONE HOUR	✓	0	100.000
C - L4022 (E)		ONE HOUR	✓	35	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L4022 (W)	B - PSD2	C - L4022 (E)
From	A - L4022 (W)	0	0	35
	B - PSD2	0	0	0
	C - L4022 (E)	35	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
15	0.20	0.80

Heavy Vehicle %

		To		
		A - L4022 (W)	B - PSD2	C - L4022 (E)
From	A - L4022 (W)	0	0	35
	B - PSD2	0	0	0
	C - L4022 (E)	15	0	0

Cyclist %

		To		
		A - L4022 (W)	B - PSD2	C - L4022 (E)
From	A - L4022 (W)	0	0	0
	B - PSD2	0	0	0
	C - L4022 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L4022 (W)		0.00	0.0	A	31	47
B - PSD2	0.00	0.00	0.0	A	0	0
C - L4022 (E)		0.00	0.0	A	31	47

LS - 2028 With Construction Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L4022 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
15		T-Junction	Two-way	Two-way	Two-way		2.01	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.01	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)	Run automatically
D5	2028 With Construction Peak	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L4022 (W)		ONE HOUR	✓	70	100.000
B - PSD2		ONE HOUR	✓	13	100.000
C - L4022 (E)		ONE HOUR	✓	46	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L4022 (W)	B - PSD2	C - L4022 (E)
From	A - L4022 (W)	0	6	64
	B - PSD2	6	0	7
	C - L4022 (E)	33	13	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
15	0.20	0.80

Heavy Vehicle %

		To		
		A - L4022 (W)	B - PSD2	C - L4022 (E)
From	A - L4022 (W)	0	100	19
	B - PSD2	100	0	82
	C - L4022 (E)	21	48	0

Cyclist %

		To		
		A - L4022 (W)	B - PSD2	C - L4022 (E)
From	A - L4022 (W)	0	0	0
	B - PSD2	0	0	0
	C - L4022 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L4022 (W)		0.00	0.0	A	62	93
B - PSD2	0.02	10.74	0.1	B	13	19
C - L4022 (E)		2.36	0.0	A	42	63

LS - 2028 With Construction Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L4022 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
15		T-Junction	Two-way	Two-way	Two-way		2.20	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.20	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)	Run automatically
D6	2028 With Construction Peak	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L4022 (W)		ONE HOUR	✓	48	100.000
B - PSD2		ONE HOUR	✓	19	100.000
C - L4022 (E)		ONE HOUR	✓	49	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L4022 (W)	B - PSD2	C - L4022 (E)
From	A - L4022 (W)	0	6	42
	B - PSD2	6	0	13
	C - L4022 (E)	42	7	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
15	0.20	0.80

Heavy Vehicle %

		To		
		A - L4022 (W)	B - PSD2	C - L4022 (E)
From	A - L4022 (W)	0	100	37
	B - PSD2	100	0	48
	C - L4022 (E)	21	82	0

Cyclist %

		To		
		A - L4022 (W)	B - PSD2	C - L4022 (E)
From	A - L4022 (W)	0	0	0
	B - PSD2	0	0	0
	C - L4022 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L4022 (W)		0.00	0.0	A	44	66
B - PSD2	0.04	9.63	0.1	A	18	27
C - L4022 (E)		1.39	0.0	A	46	68

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.1.1.1905
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Filename: Junction 16_N62-R492 Cross.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 13:12:04

»2024, AM
»2024, PM
»2028 No Construction , AM
»2028 No Construction , PM
»2028 With Construction Peak, AM
»2028 With Construction Peak, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	2024									
Stream B-CD	0.0	6.86	0.03	A	1.26	0.0	7.79	0.02	A	1.25
Stream B-AD	0.0	9.22	0.02	A		0.0	8.69	0.02	A	
Stream A-D	0.1	7.13	0.07	A		0.1	6.94	0.11	A	
Stream D-AB	0.1	6.07	0.09	A		0.1	6.32	0.07	A	
Stream D-BC	0.0	10.15	0.01	B		0.0	11.45	0.01	B	
Stream C-ABD	0.0	4.65	0.01	A		0.0	5.02	0.02	A	
	2028 No Construction									
Stream B-CD	0.0	6.99	0.04	A	1.28	0.0	8.07	0.02	A	1.29
Stream B-AD	0.0	9.52	0.03	A		0.0	8.96	0.02	A	
Stream A-D	0.1	7.33	0.07	A		0.1	7.15	0.12	A	
Stream D-AB	0.1	6.21	0.10	A		0.1	6.54	0.07	A	
Stream D-BC	0.0	10.48	0.01	B		0.0	11.95	0.01	B	
Stream C-ABD	0.0	4.62	0.01	A		0.0	4.99	0.02	A	
	2028 With Construction Peak									
Stream B-CD	0.0	7.10	0.04	A	2.18	0.0	8.31	0.02	A	2.18
Stream B-AD	0.0	10.18	0.03	B		0.0	9.51	0.02	A	
Stream A-D	0.2	9.46	0.15	A		0.3	9.19	0.20	A	
Stream D-AB	0.2	8.01	0.17	A		0.2	8.41	0.15	A	
Stream D-BC	0.0	11.26	0.02	B		0.0	12.83	0.02	B	
Stream C-ABD	0.0	4.66	0.01	A		0.0	5.04	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	Water Supply Project
Location	
Site number	Junction 16
Date	19/03/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

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	2024	AM	ONE HOUR	07:30	09:00	15
D2	2024	PM	ONE HOUR	16:30	18:00	15
D3	2028 No Construction	AM	ONE HOUR	07:30	09:00	15
D4	2028 No Construction	PM	ONE HOUR	16:30	18:00	15
D5	2028 With Construction Peak	AM	ONE HOUR	07:30	09:00	15
D6	2028 With Construction Peak	PM	ONE HOUR	16:30	18:00	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - R492 (NNE) - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Minor arm visibility to right	B - R492 (NNE) - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.
Warning	Minor arm visibility to right	D - R492 (SW) - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

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
16		Crossroads	Two-way	Two-way	Two-way	Two-way		1.26	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.26	A

Arms

Arms

Arm	Name	Description	Arm type
A	N62 (NNW)		Major
B	R492 (NNE)		Minor
C	N62 (SSE)		Major
D	R492 (SW)		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A - N62 (NNW)	10.20		✓	3.10	102.0		-
C - N62 (SSE)	10.20				250.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - R492 (NNE)	One lane plus flare	7.80	4.00	3.10	2.90	2.90	✓	1.00	19	38
D - R492 (SW)	One lane plus flare	8.10	5.40	4.80	4.80	4.80	✓	3.00	250	42

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
A-D	695	-	-	-	-	-	-	0.220	0.314	0.220	-	-	-
B-A	517	0.077	0.195	0.195	-	-	-	0.122	0.278	-	0.195	0.195	0.097
B-C	679	0.085	0.215	-	-	-	-	-	-	-	-	-	-
B-D, nearside lane	527	0.078	0.198	0.198	-	-	-	0.125	0.283	0.125	-	-	-
B-D, offside lane	517	0.077	0.195	0.195	-	-	-	0.122	0.278	0.122	-	-	-
C-B	719	0.228	0.228	0.325	-	-	-	-	-	-	-	-	-
D-A	757	-	-	-	-	-	-	0.240	-	0.095	-	-	-
D-B, nearside lane	675	0.160	0.160	0.363	-	-	-	0.254	0.254	0.101	-	-	-
D-B, offside lane	461	0.109	0.109	0.248	-	-	-	0.173	0.173	0.069	-	-	-
D-C	461	-	0.109	0.248	0.087	0.173	0.173	0.173	0.173	0.069	-	-	-

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	2024	AM	ONE HOUR	07:30	09:00	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N62 (NNW)		✓	319	100.000
B - R492 (NNE)		✓	26	100.000
C - N62 (SSE)		✓	288	100.000
D - R492 (SW)		✓	61	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - N62 (NNW)	B - R492 (NNE)	C - N62 (SSE)	D - R492 (SW)
From	A - N62 (NNW)	0	2	280	37
	B - R492 (NNE)	7	0	15	4
	C - N62 (SSE)	280	4	0	4
	D - R492 (SW)	56	2	3	0

Vehicle Mix

Heavy Vehicle %

		To			
		A - N62 (NNW)	B - R492 (NNE)	C - N62 (SSE)	D - R492 (SW)
From	A - N62 (NNW)	0	100	12	16
	B - R492 (NNE)	0	0	7	0
	C - N62 (SSE)	9	0	0	0
	D - R492 (SW)	4	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.03	6.86	0.0	A
B-AD	0.02	9.22	0.0	A
A-B				
A-C				
A-D	0.07	7.13	0.1	A
D-AB	0.09	6.07	0.1	A
D-BC	0.01	10.15	0.0	B
C-ABD	0.01	4.65	0.0	A
C-D				
C-A				

2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - R492 (NNE) - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Minor arm visibility to right	B - R492 (NNE) - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.
Warning	Minor arm visibility to right	D - R492 (SW) - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

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
16		Crossroads	Two-way	Two-way	Two-way	Two-way		1.25	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.25	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	2024	PM	ONE HOUR	16:30	18:00	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N62 (NNW)		✓	326	100.000
B - R492 (NNE)		✓	14	100.000
C - N62 (SSE)		✓	333	100.000
D - R492 (SW)		✓	42	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - N62 (NNW)	B - R492 (NNE)	C - N62 (SSE)	D - R492 (SW)
From	A - N62 (NNW)	0	5	259	62
	B - R492 (NNE)	3	0	5	6
	C - N62 (SSE)	318	8	0	7
	D - R492 (SW)	35	6	1	0

Vehicle Mix

Heavy Vehicle %

		To			
		A - N62 (NNW)	B - R492 (NNE)	C - N62 (SSE)	D - R492 (SW)
From	A - N62 (NNW)	0	25	9	5
	B - R492 (NNE)	0	0	25	0
	C - N62 (SSE)	8	14	0	0
	D - R492 (SW)	3	20	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.02	7.79	0.0	A
B-AD	0.02	8.69	0.0	A
A-B				
A-C				
A-D	0.11	6.94	0.1	A
D-AB	0.07	6.32	0.1	A
D-BC	0.01	11.45	0.0	B
C-ABD	0.02	5.02	0.0	A
C-D				
C-A				

2028 No Construction , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - R492 (NNE) - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Minor arm visibility to right	B - R492 (NNE) - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.
Warning	Minor arm visibility to right	D - R492 (SW) - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

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
16		Crossroads	Two-way	Two-way	Two-way	Two-way		1.28	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.28	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 No Construction	AM	ONE HOUR	07:30	09:00	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N62 (NNW)		✓	352	100.000
B - R492 (NNE)		✓	28	100.000
C - N62 (SSE)		✓	316	100.000
D - R492 (SW)		✓	66	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - N62 (NNW)	B - R492 (NNE)	C - N62 (SSE)	D - R492 (SW)
From	A - N62 (NNW)	0	2	309	41
	B - R492 (NNE)	8	0	16	4
	C - N62 (SSE)	308	4	0	4
	D - R492 (SW)	61	2	3	0

Vehicle Mix

Heavy Vehicle %

		To			
		A - N62 (NNW)	B - R492 (NNE)	C - N62 (SSE)	D - R492 (SW)
From	A - N62 (NNW)	0	100	13	17
	B - R492 (NNE)	0	0	8	0
	C - N62 (SSE)	9	0	0	0
	D - R492 (SW)	4	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.04	6.99	0.0	A
B-AD	0.03	9.52	0.0	A
A-B				
A-C				
A-D	0.07	7.33	0.1	A
D-AB	0.10	6.21	0.1	A
D-BC	0.01	10.48	0.0	B
C-ABD	0.01	4.62	0.0	A
C-D				
C-A				

2028 No Construction , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - R492 (NNE) - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Minor arm visibility to right	B - R492 (NNE) - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.
Warning	Minor arm visibility to right	D - R492 (SW) - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

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
16		Crossroads	Two-way	Two-way	Two-way	Two-way		1.29	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.29	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 No Construction	PM	ONE HOUR	16:30	18:00	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N62 (NNW)		✓	357	100.000
B - R492 (NNE)		✓	15	100.000
C - N62 (SSE)		✓	366	100.000
D - R492 (SW)		✓	46	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - N62 (NNW)	B - R492 (NNE)	C - N62 (SSE)	D - R492 (SW)
From	A - N62 (NNW)	0	5	285	68
	B - R492 (NNE)	3	0	5	7
	C - N62 (SSE)	349	9	0	8
	D - R492 (SW)	38	7	1	0

Vehicle Mix

Heavy Vehicle %

		To			
		A - N62 (NNW)	B - R492 (NNE)	C - N62 (SSE)	D - R492 (SW)
From	A - N62 (NNW)	0	27	9	5
	B - R492 (NNE)	0	0	27	0
	C - N62 (SSE)	8	15	0	0
	D - R492 (SW)	3	21	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.02	8.07	0.0	A
B-AD	0.02	8.96	0.0	A
A-B				
A-C				
A-D	0.12	7.15	0.1	A
D-AB	0.07	6.54	0.1	A
D-BC	0.01	11.95	0.0	B
C-ABD	0.02	4.99	0.0	A
C-D				
C-A				

2028 With Construction Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - R492 (NNE) - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Minor arm visibility to right	B - R492 (NNE) - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.
Warning	Minor arm visibility to right	D - R492 (SW) - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

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
16		Crossroads	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)
D5	2028 With Construction Peak	AM	ONE HOUR	07:30	09:00	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N62 (NNW)		✓	416	100.000
B - R492 (NNE)		✓	28	100.000
C - N62 (SSE)		✓	344	100.000
D - R492 (SW)		✓	108	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - N62 (NNW)	B - R492 (NNE)	C - N62 (SSE)	D - R492 (SW)
From	A - N62 (NNW)	0	2	328	86
	B - R492 (NNE)	8	0	16	4
	C - N62 (SSE)	335	4	0	5
	D - R492 (SW)	101	2	5	0

Vehicle Mix

Heavy Vehicle %

		To			
		A - N62 (NNW)	B - R492 (NNE)	C - N62 (SSE)	D - R492 (SW)
From	A - N62 (NNW)	0	100	16	36
	B - R492 (NNE)	0	0	8	0
	C - N62 (SSE)	12	0	0	0
	D - R492 (SW)	23	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.04	7.10	0.0	A
B-AD	0.03	10.18	0.0	B
A-B				
A-C				
A-D	0.15	9.46	0.2	A
D-AB	0.17	8.01	0.2	A
D-BC	0.02	11.26	0.0	B
C-ABD	0.01	4.66	0.0	A
C-D				
C-A				

2028 With Construction Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - R492 (NNE) - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Minor arm visibility to right	B - R492 (NNE) - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.
Warning	Minor arm visibility to right	D - R492 (SW) - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

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
16		Crossroads	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)
D6	2028 With Construction Peak	PM	ONE HOUR	16:30	18:00	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N62 (NNW)		✓	424	100.000
B - R492 (NNE)		✓	15	100.000
C - N62 (SSE)		✓	387	100.000
D - R492 (SW)		✓	92	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - N62 (NNW)	B - R492 (NNE)	C - N62 (SSE)	D - R492 (SW)
From	A - N62 (NNW)	0	5	312	107
	B - R492 (NNE)	3	0	5	7
	C - N62 (SSE)	369	9	0	9
	D - R492 (SW)	83	7	2	0

Vehicle Mix

Heavy Vehicle %

		To			
		A - N62 (NNW)	B - R492 (NNE)	C - N62 (SSE)	D - R492 (SW)
From	A - N62 (NNW)	0	27	12	23
	B - R492 (NNE)	0	0	27	0
	C - N62 (SSE)	11	15	0	0
	D - R492 (SW)	28	21	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.02	8.31	0.0	A
B-AD	0.02	9.51	0.0	A
A-B				
A-C				
A-D	0.20	9.19	0.3	A
D-AB	0.15	8.41	0.2	A
D-BC	0.02	12.83	0.0	B
C-ABD	0.02	5.04	0.0	A
C-D				
C-A				

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.1.1.1905
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Filename: Junction 18_N52-R440 Rbt_LS_02.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 13:16:47

»LS_AM - 2024, AM
»LS_AM - 2029 No Construction , AM
»LS_AM - 2029 With Construction Peak, AM
»LS_PM - 2024, PM
»LS_PM - 2029 No Construction , PM
»LS_PM - 2029 With Construction Peak, PM

Summary of junction performance

	AM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	LS_AM [Lane Simulation] - 2024				
A - N52(N) - John's Place	5.6	31.33	0.80	D	27.43
B - R440 John's Place	4.2	33.68	0.73	D	
C - N52(S) - Wilmer Road	5.3	21.76	0.79	C	
D - Connaught Street	0.0	0.00		A	
	LS_AM [Lane Simulation] - 2029 No Construction				
A - N52(N) - John's Place	11.2	66.70	0.87	F	53.65
B - R440 John's Place	7.9	57.20	0.89	F	
C - N52(S) - Wilmer Road	11.0	43.47	0.93	E	
D - Connaught Street	0.0	0.00		A	

	LS_AM [Lane Simulation] - 2029 With Construction Peak				
A - N52(N) - John's Place	18.8	101.08	0.99	F	78.17
B - R440 John's Place	11.8	76.23	0.89	F	
C - N52(S) - Wilmer Road	19.5	64.14	0.95	F	
D - Connaught Street	0.0	0.00		A	

	PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	LS_PM [Lane Simulation] - 2024				
A - N52(N) - John's Place	3.8	21.61	0.76	C	20.09
B - R440 John's Place	2.0	24.29	0.67	C	
C - N52(S) - Wilmer Road	3.8	17.28	0.77	C	
D - Connaught Street	0.0	0.00		A	
	LS_PM [Lane Simulation] - 2029 No Construction				
A - N52(N) - John's Place	6.9	36.08	0.87	E	34.24
B - R440 John's Place	4.1	36.71	0.75	E	
C - N52(S) - Wilmer Road	8.4	31.96	0.88	D	
D - Connaught Street	0.0	0.00		A	
	LS_PM [Lane Simulation] - 2029 With Construction Peak				
A - N52(N) - John's Place	9.8	48.45	0.89	E	50.63
B - R440 John's Place	6.1	49.43	0.81	E	
C - N52(S) - Wilmer Road	15.2	52.65	0.96	F	
D - Connaught Street	0.0	0.00		A	

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	Water Supply Project
Location	
Site number	Junction 18
Date	19/03/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
JUNCTIONS 9	5.75						0.85	36.00	20.00		

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Calculate RFCs	Relaxation factor for capacity/RFC runs	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)	Last run total time taken (s)
Delay	1.00	100000	100000	Calculate for all arms	3.00	-1	3	1	60	✓			671057241	174	4.48	9.70

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	08:15	09:45	15	✓
D2	2024	PM	ONE HOUR	16:45	18:15	15	✓
D3	2029 No Construction	AM	ONE HOUR	08:15	09:45	15	✓
D4	2029 No Construction	PM	ONE HOUR	16:45	18:15	15	✓
D5	2029 With Construction Peak	AM	ONE HOUR	08:15	09:45	15	✓
D6	2029 With Construction Peak	PM	ONE HOUR	16:45	18:15	15	✓

LS_AM - 2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 76% of the total flow for the roundabout for one or more time segments][Arms B and C have 70% of the total flow for the roundabout for one or more time segments]
Info	Simulation	A2 - LS_AM [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	LS_AM	✓	✓	✓	D1,D3,D5	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
18		Mini-roundabout		A, B, C, D	27.43	D

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		27.43	D

Arms

Arms

Arm	Name	Description
A	N52(N) - John's Place	
B	R440 John's Place	
C	N52(S) - Wilmer Road	
D	Connaught Street	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A - N52(N) - John's Place	5.00	3.00	3.00	0.0	5.00	2.00	0.0	
B - R440 John's Place	3.00	3.00	3.00	0.0	5.00	2.00	0.0	
C - N52(S) - Wilmer Road	5.00	3.00	3.00	0.0	5.00	2.00	0.0	
D - Connaught Street	3.00	3.00	3.00	0.0	5.00	2.00	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - N52(N) - John's Place	0.590	863
B - R440 John's Place	0.590	985
C - N52(S) - Wilmer Road	0.590	863
D - Connaught Street	0.590	985

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - N52(N) - John's Place	Direct		-100
B - R440 John's Place	Direct		50
C - N52(S) - Wilmer Road	Direct		350

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - N52(N) - John's Place	Evenly split	10.00
B - R440 John's Place	Evenly split	10.00
C - N52(S) - Wilmer Road	Evenly split	10.00
D - Connaught Street	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - N52(N) - John's Place	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
B - R440 John's Place	Entry	1	1	C	✓	4.00			0	99999	
			2	A, B, D	✓	4.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					
C - N52(S) - Wilmer Road	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
D - Connaught Street	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - N52(N) - John's Place	Entry	1	1	0.590	863
B - R440 John's Place	Entry	1	1	0.295	492
			2	0.295	492
C - N52(S) - Wilmer Road	Entry	1	1	0.590	863

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm			
			N52(N) - John's Place	R440 John's Place	N52(S) - Wilmer Road	Connaught Street
A - N52 (N) - John's Place	1	1	✓	✓	✓	✓
B - R440 John's Place	1	1			✓	
		2	✓	✓		✓
	2	1	✓	✓	✓	✓
C - N52 (S) - Wilmer Road	1	1	✓	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	08:15	09:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52(N) - John's Place		ONE HOUR	✓	477	100.000
B - R440 John's Place		ONE HOUR	✓	380	100.000
C - N52(S) - Wilmer Road		ONE HOUR	✓	745	100.000
D - Connaught Street		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - N52(N) - John's Place	B - R440 John's Place	C - N52(S) - Wilmer Road	D - Connaught Street
From	A - N52(N) - John's Place	0	70	399	8
	B - R440 John's Place	215	0	111	54
	C - N52(S) - Wilmer Road	551	130	6	58
	D - Connaught Street	0	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
18	0.20	0.80

Heavy Vehicle %

		To			
		A - N52(N) - John's Place	B - R440 John's Place	C - N52(S) - Wilmer Road	D - Connaught Street
From	A - N52(N) - John's Place	0	21	21	0
	B - R440 John's Place	9	0	6	3
	C - N52(S) - Wilmer Road	15	7	27	3
	D - Connaught Street	0	0	0	0

Cyclist %

		To			
		A - N52(N) - John's Place	B - R440 John's Place	C - N52(S) - Wilmer Road	D - Connaught Street
From	A - N52(N) - John's Place	0	0	0	0
	B - R440 John's Place	0	0	0	0
	C - N52(S) - Wilmer Road	0	0	0	0
	D - Connaught Street	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52(N) - John's Place	0.80	31.33	5.6	D	437	655
B - R440 John's Place	0.73	33.68	4.2	D	348	522
C - N52(S) - Wilmer Road	0.79	21.76	5.3	C	683	1025
D - Connaught Street		0.00	0.0	A	0	0

LS_AM - 2029 No Construction , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 76% of the total flow for the roundabout for one or more time segments][Arms B and C have 70% of the total flow for the roundabout for one or more time segments]
Info	Simulation	A2 - LS_AM [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	LS_AM	✓	✓	✓	D1,D3,D5	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
18		Mini-roundabout		A, B, C, D	53.65	F

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		53.65	F

Arms

Arms

Arm	Name	Description
A	N52(N) - John's Place	
B	R440 John's Place	
C	N52(S) - Wilmer Road	
D	Connaught Street	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A - N52(N) - John's Place	5.00	3.00	3.00	0.0	5.00	2.00	0.0	
B - R440 John's Place	3.00	3.00	3.00	0.0	5.00	2.00	0.0	
C - N52(S) - Wilmer Road	5.00	3.00	3.00	0.0	5.00	2.00	0.0	
D - Connaught Street	3.00	3.00	3.00	0.0	5.00	2.00	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - N52(N) - John's Place	0.590	863
B - R440 John's Place	0.590	985
C - N52(S) - Wilmer Road	0.590	863
D - Connaught Street	0.590	985

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - N52(N) - John's Place	Direct		-100
B - R440 John's Place	Direct		50
C - N52(S) - Wilmer Road	Direct		350

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - N52(N) - John's Place	Evenly split	10.00
B - R440 John's Place	Evenly split	10.00
C - N52(S) - Wilmer Road	Evenly split	10.00
D - Connaught Street	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - N52(N) - John's Place	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
B - R440 John's Place	Entry	1	1	C	✓	4.00			0	99999	
			2	A, B, D	✓	4.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					
C - N52(S) - Wilmer Road	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
D - Connaught Street	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - N52(N) - John's Place	Entry	1	1	0.590	863
B - R440 John's Place	Entry	1	1	0.295	492
			2	0.295	492
C - N52(S) - Wilmer Road	Entry	1	1	0.590	863

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm			
			N52(N) - John's Place	R440 John's Place	N52(S) - Wilmer Road	Connaught Street
A - N52 (N) - John's Place	1	1	✓	✓	✓	✓
B - R440 John's Place	1	1			✓	
		2	✓	✓		✓
	2	1	✓	✓	✓	✓
C - N52 (S) - Wilmer Road	1	1	✓	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2029 No Construction	AM	ONE HOUR	08:15	09:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52(N) - John's Place		ONE HOUR	✓	542	100.000
B - R440 John's Place		ONE HOUR	✓	421	100.000
C - N52(S) - Wilmer Road		ONE HOUR	✓	845	100.000
D - Connaught Street		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - N52(N) - John's Place	B - R440 John's Place	C - N52(S) - Wilmer Road	D - Connaught Street
From	A - N52(N) - John's Place	0	78	455	9
	B - R440 John's Place	238	0	124	59
	C - N52(S) - Wilmer Road	627	147	6	65
	D - Connaught Street	0	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
18	0.20	0.80

Heavy Vehicle %

		To			
		A - N52(N) - John's Place	B - R440 John's Place	C - N52(S) - Wilmer Road	D - Connaught Street
From	A - N52(N) - John's Place	0	22	23	0
	B - R440 John's Place	10	0	6	3
	C - N52(S) - Wilmer Road	16	8	28	3
	D - Connaught Street	0	0	0	0

Cyclist %

		To			
		A - N52(N) - John's Place	B - R440 John's Place	C - N52(S) - Wilmer Road	D - Connaught Street
From	A - N52(N) - John's Place	0	0	0	0
	B - R440 John's Place	0	0	0	0
	C - N52(S) - Wilmer Road	0	0	0	0
	D - Connaught Street	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52(N) - John's Place	0.87	66.70	11.2	F	496	744
B - R440 John's Place	0.89	57.20	7.9	F	387	581
C - N52(S) - Wilmer Road	0.93	43.47	11.0	E	771	1156
D - Connaught Street		0.00	0.0	A	0	0

LS_AM - 2029 With Construction Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 76% of the total flow for the roundabout for one or more time segments][Arms B and C have 69% of the total flow for the roundabout for one or more time segments]
Info	Simulation	A2 - LS_AM [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	LS_AM	✓	✓	✓	D1,D3,D5	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
18		Mini-roundabout		A, B, C, D	78.17	F

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		78.17	F

Arms

Arms

Arm	Name	Description
A	N52(N) - John's Place	
B	R440 John's Place	
C	N52(S) - Wilmer Road	
D	Connaught Street	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A - N52(N) - John's Place	5.00	3.00	3.00	0.0	5.00	2.00	0.0	
B - R440 John's Place	3.00	3.00	3.00	0.0	5.00	2.00	0.0	
C - N52(S) - Wilmer Road	5.00	3.00	3.00	0.0	5.00	2.00	0.0	
D - Connaught Street	3.00	3.00	3.00	0.0	5.00	2.00	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - N52(N) - John's Place	0.590	863
B - R440 John's Place	0.590	985
C - N52(S) - Wilmer Road	0.590	863
D - Connaught Street	0.590	985

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - N52(N) - John's Place	Direct		-100
B - R440 John's Place	Direct		50
C - N52(S) - Wilmer Road	Direct		350

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - N52(N) - John's Place	Evenly split	10.00
B - R440 John's Place	Evenly split	10.00
C - N52(S) - Wilmer Road	Evenly split	10.00
D - Connaught Street	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - N52(N) - John's Place	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
B - R440 John's Place	Entry	1	1	C	✓	4.00			0	99999	
			2	A, B, D	✓	4.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					
C - N52(S) - Wilmer Road	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
D - Connaught Street	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - N52(N) - John's Place	Entry	1	1	0.590	863
B - R440 John's Place	Entry	1	1	0.295	492
			2	0.295	492
C - N52(S) - Wilmer Road	Entry	1	1	0.590	863

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm			
			N52(N) - John's Place	R440 John's Place	N52(S) - Wilmer Road	Connaught Street
A - N52 (N) - John's Place	1	1	✓	✓	✓	✓
B - R440 John's Place	1	1			✓	
		2	✓	✓		✓
	2	1	✓	✓	✓	✓
C - N52 (S) - Wilmer Road	1	1	✓	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2029 With Construction Peak	AM	ONE HOUR	08:15	09:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52(N) - John's Place		ONE HOUR	✓	579	100.000
B - R440 John's Place		ONE HOUR	✓	454	100.000
C - N52(S) - Wilmer Road		ONE HOUR	✓	881	100.000
D - Connaught Street		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - N52(N) - John's Place	B - R440 John's Place	C - N52(S) - Wilmer Road	D - Connaught Street
From	A - N52(N) - John's Place	0	94	476	9
	B - R440 John's Place	249	0	146	59
	C - N52(S) - Wilmer Road	642	168	6	65
	D - Connaught Street	0	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
18	0.20	0.80

Heavy Vehicle %

		To			
		A - N52(N) - John's Place	B - R440 John's Place	C - N52(S) - Wilmer Road	D - Connaught Street
From	A - N52(N) - John's Place	0	24	24	0
	B - R440 John's Place	11	0	19	3
	C - N52(S) - Wilmer Road	17	19	28	3
	D - Connaught Street	0	0	0	0

Cyclist %

		To			
		A - N52(N) - John's Place	B - R440 John's Place	C - N52(S) - Wilmer Road	D - Connaught Street
From	A - N52(N) - John's Place	0	0	0	0
	B - R440 John's Place	0	0	0	0
	C - N52(S) - Wilmer Road	0	0	0	0
	D - Connaught Street	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52(N) - John's Place	0.99	101.08	18.8	F	529	794
B - R440 John's Place	0.89	76.23	11.8	F	417	625
C - N52(S) - Wilmer Road	0.95	64.14	19.5	F	807	1211
D - Connaught Street		0.00	0.0	A	0	0

LS_PM - 2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 80% of the total flow for the roundabout for one or more time segments]
Info	Simulation	A3 - LS_PM [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A3	LS_PM	✓	✓	✓	D2,D4,D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
18		Mini-roundabout		A, B, C, D	20.09	C

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		20.09	C

Arms

Arms

Arm	Name	Description
A	N52(N) - John's Place	
B	R440 John's Place	
C	N52(S) - Wilmer Road	
D	Connaught Street	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A - N52(N) - John's Place	5.00	3.00	3.00	0.0	5.00	2.00	0.0	
B - R440 John's Place	3.00	3.00	3.00	0.0	5.00	2.00	0.0	
C - N52(S) - Wilmer Road	5.00	3.00	3.00	0.0	5.00	2.00	0.0	
D - Connaught Street	3.00	3.00	3.00	0.0	5.00	2.00	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - N52(N) - John's Place	0.590	863
B - R440 John's Place	0.590	985
C - N52(S) - Wilmer Road	0.590	863
D - Connaught Street	0.590	985

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - N52(N) - John's Place	Direct		0
B - R440 John's Place	Direct		50
C - N52(S) - Wilmer Road	Direct		350

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - N52(N) - John's Place	Evenly split	10.00
B - R440 John's Place	Evenly split	10.00
C - N52(S) - Wilmer Road	Evenly split	10.00
D - Connaught Street	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - N52(N) - John's Place	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
B - R440 John's Place	Entry	1	1	C	✓	4.00			0	99999	
			2	A, B, D	✓	4.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					
C - N52(S) - Wilmer Road	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
D - Connaught Street	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - N52(N) - John's Place	Entry	1	1	0.590	863
B - R440 John's Place	Entry	1	1	0.295	492
			2	0.295	492
C - N52(S) - Wilmer Road	Entry	1	1	0.590	863

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm			
			N52(N) - John's Place	R440 John's Place	N52(S) - Wilmer Road	Connaught Street
A - N52 (N) - John's Place	1	1	✓	✓	✓	✓
B - R440 John's Place	1	1			✓	
		2	✓	✓		✓
	2	1	✓	✓	✓	✓
C - N52 (S) - Wilmer Road	1	1	✓	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2024	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52(N) - John's Place		ONE HOUR	✓	525	100.000
B - R440 John's Place		ONE HOUR	✓	305	100.000
C - N52(S) - Wilmer Road		ONE HOUR	✓	735	100.000
D - Connaught Street		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - N52(N) - John's Place	B - R440 John's Place	C - N52(S) - Wilmer Road	D - Connaught Street
From	A - N52(N) - John's Place	0	37	472	16
	B - R440 John's Place	167	0	92	46
	C - N52(S) - Wilmer Road	533	128	3	71
	D - Connaught Street	0	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
18	0.20	0.80

Heavy Vehicle %

		To			
		A - N52(N) - John's Place	B - R440 John's Place	C - N52(S) - Wilmer Road	D - Connaught Street
From	A - N52(N) - John's Place	0	16	9	0
	B - R440 John's Place	9	0	2	0
	C - N52(S) - Wilmer Road	9	0	0	0
	D - Connaught Street	0	0	0	0

Cyclist %

		To			
		A - N52(N) - John's Place	B - R440 John's Place	C - N52(S) - Wilmer Road	D - Connaught Street
From	A - N52(N) - John's Place	0	0	0	0
	B - R440 John's Place	0	0	0	0
	C - N52(S) - Wilmer Road	0	0	0	0
	D - Connaught Street	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52(N) - John's Place	0.76	21.61	3.8	C	480	719
B - R440 John's Place	0.67	24.29	2.0	C	279	418
C - N52(S) - Wilmer Road	0.77	17.28	3.8	C	678	1017
D - Connaught Street		0.00	0.0	A	0	0

LS_PM - 2029 No Construction , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 80% of the total flow for the roundabout for one or more time segments]
Info	Simulation	A3 - LS_PM [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A3	LS_PM	✓	✓	✓	D2,D4,D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
18		Mini-roundabout		A, B, C, D	34.24	D

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		34.24	D

Arms

Arms

Arm	Name	Description
A	N52(N) - John's Place	
B	R440 John's Place	
C	N52(S) - Wilmer Road	
D	Connaught Street	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A - N52(N) - John's Place	5.00	3.00	3.00	0.0	5.00	2.00	0.0	
B - R440 John's Place	3.00	3.00	3.00	0.0	5.00	2.00	0.0	
C - N52(S) - Wilmer Road	5.00	3.00	3.00	0.0	5.00	2.00	0.0	
D - Connaught Street	3.00	3.00	3.00	0.0	5.00	2.00	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - N52(N) - John's Place	0.590	863
B - R440 John's Place	0.590	985
C - N52(S) - Wilmer Road	0.590	863
D - Connaught Street	0.590	985

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - N52(N) - John's Place	Direct		0
B - R440 John's Place	Direct		50
C - N52(S) - Wilmer Road	Direct		350

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - N52(N) - John's Place	Evenly split	10.00
B - R440 John's Place	Evenly split	10.00
C - N52(S) - Wilmer Road	Evenly split	10.00
D - Connaught Street	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - N52(N) - John's Place	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
B - R440 John's Place	Entry	1	1	C	✓	4.00			0	99999	
			2	A, B, D	✓	4.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					
C - N52(S) - Wilmer Road	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
D - Connaught Street	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - N52(N) - John's Place	Entry	1	1	0.590	863
B - R440 John's Place	Entry	1	1	0.295	492
			2	0.295	492
C - N52(S) - Wilmer Road	Entry	1	1	0.590	863

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm			
			N52(N) - John's Place	R440 John's Place	N52(S) - Wilmer Road	Connaught Street
A - N52 (N) - John's Place	1	1	✓	✓	✓	✓
B - R440 John's Place	1	1			✓	
		2	✓	✓		✓
	2	1	✓	✓	✓	✓
C - N52 (S) - Wilmer Road	1	1	✓	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2029 No Construction	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52(N) - John's Place		ONE HOUR	✓	588	100.000
B - R440 John's Place		ONE HOUR	✓	338	100.000
C - N52(S) - Wilmer Road		ONE HOUR	✓	842	100.000
D - Connaught Street		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - N52(N) - John's Place	B - R440 John's Place	C - N52(S) - Wilmer Road	D - Connaught Street
From	A - N52(N) - John's Place	0	41	529	18
	B - R440 John's Place	185	0	102	51
	C - N52(S) - Wilmer Road	612	146	3	81
	D - Connaught Street	0	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
18	0.20	0.80

Heavy Vehicle %

		To			
		A - N52(N) - John's Place	B - R440 John's Place	C - N52(S) - Wilmer Road	D - Connaught Street
From	A - N52(N) - John's Place	0	17	9	0
	B - R440 John's Place	10	0	2	0
	C - N52(S) - Wilmer Road	10	0	0	0
	D - Connaught Street	0	0	0	0

Cyclist %

		To			
		A - N52(N) - John's Place	B - R440 John's Place	C - N52(S) - Wilmer Road	D - Connaught Street
From	A - N52(N) - John's Place	0	0	0	0
	B - R440 John's Place	0	0	0	0
	C - N52(S) - Wilmer Road	0	0	0	0
	D - Connaught Street	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52(N) - John's Place	0.87	36.08	6.9	E	539	809
B - R440 John's Place	0.75	36.71	4.1	E	310	464
C - N52(S) - Wilmer Road	0.88	31.96	8.4	D	770	1155
D - Connaught Street		0.00	0.0	A	0	0

LS_PM - 2029 With Construction Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 79% of the total flow for the roundabout for one or more time segments]
Info	Simulation	A3 - LS_PM [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A3	LS_PM	✓	✓	✓	D2,D4,D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
18		Mini-roundabout		A, B, C, D	50.63	F

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		50.63	F

Arms

Arms

Arm	Name	Description
A	N52(N) - John's Place	
B	R440 John's Place	
C	N52(S) - Wilmer Road	
D	Connaught Street	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A - N52(N) - John's Place	5.00	3.00	3.00	0.0	5.00	2.00	0.0	
B - R440 John's Place	3.00	3.00	3.00	0.0	5.00	2.00	0.0	
C - N52(S) - Wilmer Road	5.00	3.00	3.00	0.0	5.00	2.00	0.0	
D - Connaught Street	3.00	3.00	3.00	0.0	5.00	2.00	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - N52(N) - John's Place	0.590	863
B - R440 John's Place	0.590	985
C - N52(S) - Wilmer Road	0.590	863
D - Connaught Street	0.590	985

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - N52(N) - John's Place	Direct		0
B - R440 John's Place	Direct		50
C - N52(S) - Wilmer Road	Direct		350

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - N52(N) - John's Place	Evenly split	10.00
B - R440 John's Place	Evenly split	10.00
C - N52(S) - Wilmer Road	Evenly split	10.00
D - Connaught Street	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - N52(N) - John's Place	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
B - R440 John's Place	Entry	1	1	C	✓	4.00			0	99999	
			2	A, B, D	✓	4.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					
C - N52(S) - Wilmer Road	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
D - Connaught Street	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - N52(N) - John's Place	Entry	1	1	0.590	863
B - R440 John's Place	Entry	1	1	0.295	492
			2	0.295	492
C - N52(S) - Wilmer Road	Entry	1	1	0.590	863

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm			
			N52(N) - John's Place	R440 John's Place	N52(S) - Wilmer Road	Connaught Street
A - N52 (N) - John's Place	1	1	✓	✓	✓	✓
B - R440 John's Place	1	1			✓	
		2	✓	✓		✓
	2	1	✓	✓	✓	✓
C - N52 (S) - Wilmer Road	1	1	✓	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2029 With Construction Peak	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52(N) - John's Place		ONE HOUR	✓	614	100.000
B - R440 John's Place		ONE HOUR	✓	376	100.000
C - N52(S) - Wilmer Road		ONE HOUR	✓	884	100.000
D - Connaught Street		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - N52(N) - John's Place	B - R440 John's Place	C - N52(S) - Wilmer Road	D - Connaught Street
From	A - N52(N) - John's Place	0	52	544	18
	B - R440 John's Place	201	0	124	51
	C - N52(S) - Wilmer Road	632	168	3	81
	D - Connaught Street	0	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
18	0.20	0.80

Heavy Vehicle %

		To			
		A - N52(N) - John's Place	B - R440 John's Place	C - N52(S) - Wilmer Road	D - Connaught Street
From	A - N52(N) - John's Place	0	22	11	0
	B - R440 John's Place	11	0	18	0
	C - N52(S) - Wilmer Road	11	12	0	0
	D - Connaught Street	0	0	0	0

Cyclist %

		To			
		A - N52(N) - John's Place	B - R440 John's Place	C - N52(S) - Wilmer Road	D - Connaught Street
From	A - N52(N) - John's Place	0	0	0	0
	B - R440 John's Place	0	0	0	0
	C - N52(S) - Wilmer Road	0	0	0	0
	D - Connaught Street	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52(N) - John's Place	0.89	48.45	9.8	E	563	844
B - R440 John's Place	0.81	49.43	6.1	E	346	519
C - N52(S) - Wilmer Road	0.96	52.65	15.2	F	815	1223
D - Connaught Street		0.00	0.0	A	0	0

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.1.1.1905
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Filename: Junction 20_N62-Dublin Rd Tjct_LS - 2.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 13:25:53

»LS - 2024, AM
»LS - 2024, PM
»LS - 2030 No Construction , AM
»LS - 2030 No Construction , PM
»LS - 2030 With Construction Peak, AM
»LS - 2030 With Construction Peak, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	LS [Lane Simulation] - 2024									
A - N62 Church Street	0.0	0.00		A	9.79	0.0	0.00		A	20.41
B - N62 Lourdes Road	2.0	18.34	0.57	C		4.4	35.34	0.77	E	
C - Dublin Road	1.0	7.81		A		3.8	20.12		C	
	LS [Lane Simulation] - 2030 No Construction									
A - N62 Church Street	0.0	0.00		A	12.09	0.0	0.00		A	46.49
B - N62 Lourdes Road	3.5	22.85	0.68	C		13.4	93.69	1.00	F	
C - Dublin Road	1.2	9.28		A		8.5	36.98		E	
	LS [Lane Simulation] - 2030 With Construction Peak									
A - N62 Church Street	0.0	0.00		A	13.88	0.0	0.00		A	55.61
B - N62 Lourdes Road	3.1	25.84	0.71	D		18.3	112.23	1.00	F	
C - Dublin Road	2.0	10.83		B		9.4	41.90		E	

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. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	Water Supply Project
Location	
Site number	Junction 20
Date	19/03/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Calculate RFCs	Relaxation factor for capacity/RFC runs	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)	Last run total time taken (s)
Delay	1.00	100000	100000	Calculate for all arms	3.00	-1	3	1	60	✓			700681583	83	1.41	8.78

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	08:15	09:45	15	✓
D2	2024	PM	ONE HOUR	15:00	16:30	15	✓
D3	2030 No Construction	AM	ONE HOUR	08:15	09:45	15	✓
D4	2030 No Construction	PM	ONE HOUR	15:00	16:30	15	✓
D5	2030 With Construction Peak	AM	ONE HOUR	08:15	09:45	15	✓
D6	2030 With Construction Peak	PM	ONE HOUR	15:00	16:30	15	✓

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	LS	✓	✓	100.000	100.000

LS - 2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	B - N62 Lourdes Road - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
20		T-Junction	Two-way	Two-way	Two-way		9.79	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	9.79	A

Arms

Arms

Arm	Name	Description	Arm type
A	N62 Church Street		Major
B	N62 Lourdes Road		Minor
C	Dublin Road		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)	Vehicles causing blocking (%)
C - Dublin Road	10.50		✓	3.00	120.0	✓	4.00	100

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - N62 Lourdes Road	One lane plus flare	10.00	7.20	6.20	5.50	4.60		2.00	49	20

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	493	0.072	0.183	0.115	0.261
B-C	694	0.086	0.216	-	-
C-B	699	0.218	0.218	-	-

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.

Lane Simulation: Arm options

Arm	Traffic considering secondary lanes (%)
A - N62 Church Street	10.00
B - N62 Lourdes Road	10.00
C - Dublin Road	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - N62 Church Street	Entry	1	1	B, C		Infinity			0	99999	
	Exit	1	1			Infinity					
B - N62 Lourdes Road	Entry	1	1	C	✓	2.00			0	99999	
			2	A	✓	2.00			0	99999	
		2	1	(A, C)		Infinity					
	Exit	1	1			Infinity					
C - Dublin Road	Entry	1	1	A	✓	4.00			0	99999	
			2	B	✓	4.00			0	99999	
		2	1	(A, B)		Infinity					
	Exit	1	1			Infinity					

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			N62 Church Street	N62 Lourdes Road	Dublin Road
A - N62 Church Street	1	1		✓	✓
B - N62 Lourdes Road	1	1			✓
		2	✓		
	2	1	✓		✓
C - Dublin Road	1	1	✓		
		2		✓	
	2	1	✓	✓	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	08:15	09:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N62 Church Street		ONE HOUR	✓	232	100.000
B - N62 Lourdes Road		ONE HOUR	✓	346	100.000
C - Dublin Road		ONE HOUR	✓	356	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N62 Church Street	B - N62 Lourdes Road	C - Dublin Road
From	A - N62 Church Street	0	141	91
	B - N62 Lourdes Road	120	0	226
	C - Dublin Road	124	232	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
20	0.20	0.80

Heavy Vehicle %

		To		
		A - N62 Church Street	B - N62 Lourdes Road	C - Dublin Road
From	A - N62 Church Street	0	11	13
	B - N62 Lourdes Road	7	0	26
	C - Dublin Road	10	20	0

Cyclist %

		To		
		A - N62 Church Street	B - N62 Lourdes Road	C - Dublin Road
From	A - N62 Church Street	0	0	0
	B - N62 Lourdes Road	0	0	0
	C - Dublin Road	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N62 Church Street		0.00	0.0	A	212	318
B - N62 Lourdes Road	0.57	18.34	2.0	C	318	477
C - Dublin Road		7.81	1.0	A	327	490

LS - 2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	B - N62 Lourdes Road - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
20		T-Junction	Two-way	Two-way	Two-way		20.41	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	20.41	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2024	PM	ONE HOUR	15:00	16:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N62 Church Street		ONE HOUR	✓	298	100.000
B - N62 Lourdes Road		ONE HOUR	✓	420	100.000
C - Dublin Road		ONE HOUR	✓	621	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N62 Church Street	B - N62 Lourdes Road	C - Dublin Road
From	A - N62 Church Street	0	201	97
	B - N62 Lourdes Road	168	0	252
	C - Dublin Road	221	400	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
20	0.20	0.80

Heavy Vehicle %

		To		
		A - N62 Church Street	B - N62 Lourdes Road	C - Dublin Road
From	A - N62 Church Street	0	6	5
	B - N62 Lourdes Road	3	0	22
	C - Dublin Road	3	26	0

Cyclist %

		To		
		A - N62 Church Street	B - N62 Lourdes Road	C - Dublin Road
From	A - N62 Church Street	0	0	0
	B - N62 Lourdes Road	0	0	0
	C - Dublin Road	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N62 Church Street		0.00	0.0	A	270	406
B - N62 Lourdes Road	0.77	35.34	4.4	E	381	571
C - Dublin Road		20.12	3.8	C	572	858

LS - 2030 No Construction , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	B - N62 Lourdes Road - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
20		T-Junction	Two-way	Two-way	Two-way		12.09	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	12.09	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2030 No Construction	AM	ONE HOUR	08:15	09:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N62 Church Street		ONE HOUR	✓	263	100.000
B - N62 Lourdes Road		ONE HOUR	✓	395	100.000
C - Dublin Road		ONE HOUR	✓	406	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N62 Church Street	B - N62 Lourdes Road	C - Dublin Road
From	A - N62 Church Street	0	160	103
	B - N62 Lourdes Road	135	0	260
	C - Dublin Road	140	266	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
20	0.20	0.80

Heavy Vehicle %

		To		
		A - N62 Church Street	B - N62 Lourdes Road	C - Dublin Road
From	A - N62 Church Street	0	12	14
	B - N62 Lourdes Road	8	0	28
	C - Dublin Road	11	22	0

Cyclist %

		To		
		A - N62 Church Street	B - N62 Lourdes Road	C - Dublin Road
From	A - N62 Church Street	0	0	0
	B - N62 Lourdes Road	0	0	0
	C - Dublin Road	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N62 Church Street		0.00	0.0	A	240	360
B - N62 Lourdes Road	0.68	22.85	3.5	C	367	551
C - Dublin Road		9.28	1.2	A	373	559

LS - 2030 No Construction , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	B - N62 Lourdes Road - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
20		T-Junction	Two-way	Two-way	Two-way		46.49	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	46.49	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2030 No Construction	PM	ONE HOUR	15:00	16:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N62 Church Street		ONE HOUR	✓	337	100.000
B - N62 Lourdes Road		ONE HOUR	✓	478	100.000
C - Dublin Road		ONE HOUR	✓	709	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N62 Church Street	B - N62 Lourdes Road	C - Dublin Road
From	A - N62 Church Street	0	227	110
	B - N62 Lourdes Road	189	0	289
	C - Dublin Road	248	461	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
20	0.20	0.80

Heavy Vehicle %

		To		
		A - N62 Church Street	B - N62 Lourdes Road	C - Dublin Road
From	A - N62 Church Street	0	7	6
	B - N62 Lourdes Road	3	0	24
	C - Dublin Road	4	28	0

Cyclist %

		To		
		A - N62 Church Street	B - N62 Lourdes Road	C - Dublin Road
From	A - N62 Church Street	0	0	0
	B - N62 Lourdes Road	0	0	0
	C - Dublin Road	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N62 Church Street		0.00	0.0	A	312	468
B - N62 Lourdes Road	1.00	93.69	13.4	F	437	656
C - Dublin Road		36.98	8.5	E	646	969

LS - 2030 With Construction Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	B - N62 Lourdes Road - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
20		T-Junction	Two-way	Two-way	Two-way		13.88	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	13.88	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2030 With Construction Peak	AM	ONE HOUR	08:15	09:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N62 Church Street		ONE HOUR	✓	263	100.000
B - N62 Lourdes Road		ONE HOUR	✓	409	100.000
C - Dublin Road		ONE HOUR	✓	433	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N62 Church Street	B - N62 Lourdes Road	C - Dublin Road
From	A - N62 Church Street	0	160	103
	B - N62 Lourdes Road	135	0	274
	C - Dublin Road	140	293	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
20	0.20	0.80

Heavy Vehicle %

		To		
		A - N62 Church Street	B - N62 Lourdes Road	C - Dublin Road
From	A - N62 Church Street	0	12	14
	B - N62 Lourdes Road	8	0	31
	C - Dublin Road	11	25	0

Cyclist %

		To		
		A - N62 Church Street	B - N62 Lourdes Road	C - Dublin Road
From	A - N62 Church Street	0	0	0
	B - N62 Lourdes Road	0	0	0
	C - Dublin Road	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N62 Church Street		0.00	0.0	A	241	362
B - N62 Lourdes Road	0.71	25.84	3.1	D	380	570
C - Dublin Road		10.83	2.0	B	393	590

LS - 2030 With Construction Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	B - N62 Lourdes Road - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
20		T-Junction	Two-way	Two-way	Two-way		55.61	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	55.61	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2030 With Construction Peak	PM	ONE HOUR	15:00	16:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N62 Church Street		ONE HOUR	✓	337	100.000
B - N62 Lourdes Road		ONE HOUR	✓	505	100.000
C - Dublin Road		ONE HOUR	✓	723	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N62 Church Street	B - N62 Lourdes Road	C - Dublin Road
From	A - N62 Church Street	0	227	110
	B - N62 Lourdes Road	189	0	316
	C - Dublin Road	248	475	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
20	0.20	0.80

Heavy Vehicle %

		To		
		A - N62 Church Street	B - N62 Lourdes Road	C - Dublin Road
From	A - N62 Church Street	0	7	6
	B - N62 Lourdes Road	3	0	26
	C - Dublin Road	4	30	0

Cyclist %

		To		
		A - N62 Church Street	B - N62 Lourdes Road	C - Dublin Road
From	A - N62 Church Street	0	0	0
	B - N62 Lourdes Road	0	0	0
	C - Dublin Road	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N62 Church Street		0.00	0.0	A	309	463
B - N62 Lourdes Road	1.00	112.23	18.3	F	463	695
C - Dublin Road		41.90	9.4	E	661	991

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.1.1.1905
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Filename: Junction 22_L4004-PSD4 Tjct_LS.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 13:26:58

»LS - 2024, AM
»LS - 2024, PM
»LS - 2029 No Construction , AM
»LS - 2029 No Construction , PM
»LS - 2029 With Construction Peak, AM
»LS - 2029 With Construction Peak, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	LS [Lane Simulation] - 2024									
A - L4004 (W)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - PSD4	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - L4004 (E)	0.0	0.00		A		0.0	0.00		A	
	LS [Lane Simulation] - 2029 No Construction									
A - L4004 (W)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - PSD4	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - L4004 (E)	0.0	0.00		A		0.0	0.00		A	
	LS [Lane Simulation] - 2029 With Construction Peak									
A - L4004 (W)	0.0	0.00		A	1.12	0.0	0.00		A	1.04
B - PSD4	0.1	11.66	0.02	B		0.0	8.32	0.02	A	
C - L4004 (E)	0.1	0.88		A		0.0	0.79		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. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	Water Supply Project
Location	
Site number	Junction 22
Date	19/03/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Calculate RFCs	Relaxation factor for capacity/RFC runs	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)	Last run total time taken (s)
Delay	1.00	100000	100000	Calculate for all arms	3.00	-1	3	1	60	✓			1240239234	21	0.03	1.72

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	07:45	09:15	15	✓
D2	2024	PM	ONE HOUR	16:45	18:15	15	✓
D3	2029 No Construction	AM	ONE HOUR	07:45	09:15	15	✓
D4	2029 No Construction	PM	ONE HOUR	16:45	18:15	15	✓
D5	2029 With Construction Peak	AM	ONE HOUR	07:45	09:15	15	✓
D6	2029 With Construction Peak	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	LS	✓	✓	100.000	100.000

LS - 2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L4004 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
22		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	L4004 (W)		Major
B	PSD4		Minor
C	L4004 (E)		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)	Vehicles causing blocking (%)
C - L4004 (E)	5.10			250.0	✓	0.00	100

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 - PSD4	One lane	2.50	250	250

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	662	0.125	0.317	0.199	0.453
B-C	742	0.118	0.299	-	-
C-B	719	0.289	0.289	-	-

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.

Lane Simulation: Arm options

Arm	Traffic considering secondary lanes (%)
A - L4004 (W)	10.00
B - PSD4	10.00
C - L4004 (E)	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - L4004 (W)	**Entry**	**1**	**1**	B, C		Infinity			0	99999	
	Exit	**1**	**1**			Infinity					
B - PSD4	**Entry**	**1**	**1**	A, C		Infinity			0	99999	
	Exit	**1**	**1**			Infinity					
C - L4004 (E)	**Entry**	**1**	**1**	A, B		Infinity			0	99999	
	Exit	**1**	**1**			Infinity					

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			L4004 (W)	PSD4	L4004 (E)
A - L4004 (W)	**1**	**1**		✓	✓
B - PSD4	**1**	**1**	✓		✓
C - L4004 (E)	**1**	**1**	✓	✓	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L4004 (W)		ONE HOUR	✓	35	100.000
B - PSD4		ONE HOUR	✓	0	100.000
C - L4004 (E)		ONE HOUR	✓	64	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L4004 (W)	B - PSD4	C - L4004 (E)
From	A - L4004 (W)	0	0	35
	B - PSD4	0	0	0
	C - L4004 (E)	64	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
22	0.20	0.80

Heavy Vehicle %

		To		
		A - L4004 (W)	B - PSD4	C - L4004 (E)
From	A - L4004 (W)	0	0	22
	B - PSD4	0	0	0
	C - L4004 (E)	12	0	0

Cyclist %

		To		
		A - L4004 (W)	B - PSD4	C - L4004 (E)
From	A - L4004 (W)	0	0	0
	B - PSD4	0	0	0
	C - L4004 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L4004 (W)		0.00	0.0	A	33	50
B - PSD4	0.00	0.00	0.0	A	0	0
C - L4004 (E)		0.00	0.0	A	56	84

LS - 2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L4004 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
22		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D2	2024	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L4004 (W)		ONE HOUR	✓	52	100.000
B - PSD4		ONE HOUR	✓	0	100.000
C - L4004 (E)		ONE HOUR	✓	35	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L4004 (W)	B - PSD4	C - L4004 (E)
From	A - L4004 (W)	0	0	52
	B - PSD4	0	0	0
	C - L4004 (E)	35	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
22	0.20	0.80

Heavy Vehicle %

		To		
		A - L4004 (W)	B - PSD4	C - L4004 (E)
From	A - L4004 (W)	0	0	17
	B - PSD4	0	0	0
	C - L4004 (E)	22	0	0

Cyclist %

		To		
		A - L4004 (W)	B - PSD4	C - L4004 (E)
From	A - L4004 (W)	0	0	0
	B - PSD4	0	0	0
	C - L4004 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L4004 (W)		0.00	0.0	A	50	75
B - PSD4	0.00	0.00	0.0	A	0	0
C - L4004 (E)		0.00	0.0	A	31	46

LS - 2029 No Construction , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L4004 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
22		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D3	2029 No Construction	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L4004 (W)		ONE HOUR	✓	38	100.000
B - PSD4		ONE HOUR	✓	0	100.000
C - L4004 (E)		ONE HOUR	✓	69	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L4004 (W)	B - PSD4	C - L4004 (E)
From	A - L4004 (W)	0	0	38
	B - PSD4	0	0	0
	C - L4004 (E)	69	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
22	0.20	0.80

Heavy Vehicle %

		To		
		A - L4004 (W)	B - PSD4	C - L4004 (E)
From	A - L4004 (W)	0	0	23
	B - PSD4	0	0	0
	C - L4004 (E)	13	0	0

Cyclist %

		To		
		A - L4004 (W)	B - PSD4	C - L4004 (E)
From	A - L4004 (W)	0	0	0
	B - PSD4	0	0	0
	C - L4004 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L4004 (W)		0.00	0.0	A	39	59
B - PSD4	0.00	0.00	0.0	A	0	0
C - L4004 (E)		0.00	0.0	A	68	102

LS - 2029 No Construction , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L4004 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
22		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D4	2029 No Construction	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L4004 (W)		ONE HOUR	✓	57	100.000
B - PSD4		ONE HOUR	✓	0	100.000
C - L4004 (E)		ONE HOUR	✓	38	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L4004 (W)	B - PSD4	C - L4004 (E)
From	A - L4004 (W)	0	0	57
	B - PSD4	0	0	0
	C - L4004 (E)	38	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
22	0.20	0.80

Heavy Vehicle %

		To		
		A - L4004 (W)	B - PSD4	C - L4004 (E)
From	A - L4004 (W)	0	0	19
	B - PSD4	0	0	0
	C - L4004 (E)	23	0	0

Cyclist %

		To		
		A - L4004 (W)	B - PSD4	C - L4004 (E)
From	A - L4004 (W)	0	0	0
	B - PSD4	0	0	0
	C - L4004 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L4004 (W)		0.00	0.0	A	55	82
B - PSD4	0.00	0.00	0.0	A	0	0
C - L4004 (E)		0.00	0.0	A	35	53

LS - 2029 With Construction Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L4004 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
22		T-Junction	Two-way	Two-way	Two-way		1.12	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.12	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)	Run automatically
D5	2029 With Construction Peak	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L4004 (W)		ONE HOUR	✓	63	100.000
B - PSD4		ONE HOUR	✓	9	100.000
C - L4004 (E)		ONE HOUR	✓	105	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L4004 (W)	B - PSD4	C - L4004 (E)
From	A - L4004 (W)	0	4	59
	B - PSD4	4	0	5
	C - L4004 (E)	95	10	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
22	0.20	0.80

Heavy Vehicle %

		To		
		A - L4004 (W)	B - PSD4	C - L4004 (E)
From	A - L4004 (W)	0	100	50
	B - PSD4	100	0	75
	C - L4004 (E)	31	37	0

Cyclist %

		To		
		A - L4004 (W)	B - PSD4	C - L4004 (E)
From	A - L4004 (W)	0	0	0
	B - PSD4	0	0	0
	C - L4004 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L4004 (W)		0.00	0.0	A	59	88
B - PSD4	0.02	11.66	0.1	B	9	13
C - L4004 (E)		0.88	0.1	A	97	146

LS - 2029 With Construction Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L4004 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
22		T-Junction	Two-way	Two-way	Two-way		1.04	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.04	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)	Run automatically
D6	2029 With Construction Peak	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L4004 (W)		ONE HOUR	✓	87	100.000
B - PSD4		ONE HOUR	✓	15	100.000
C - L4004 (E)		ONE HOUR	✓	64	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L4004 (W)	B - PSD4	C - L4004 (E)
From	A - L4004 (W)	0	4	83
	B - PSD4	4	0	11
	C - L4004 (E)	59	5	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
22	0.20	0.80

Heavy Vehicle %

		To		
		A - L4004 (W)	B - PSD4	C - L4004 (E)
From	A - L4004 (W)	0	100	38
	B - PSD4	100	0	38
	C - L4004 (E)	50	82	0

Cyclist %

		To		
		A - L4004 (W)	B - PSD4	C - L4004 (E)
From	A - L4004 (W)	0	0	0
	B - PSD4	0	0	0
	C - L4004 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L4004 (W)		0.00	0.0	A	79	118
B - PSD4	0.02	8.32	0.0	A	13	20
C - L4004 (E)		0.79	0.0	A	59	89

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.1.1.1905
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Filename: Junction 23_L3003-BPS Tjct_LS.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 13:28:01

»LS - 2024, AM
»LS - 2024, PM
»LS - 2030 No Construction , AM
»LS - 2030 No Construction , PM
»LS - 2030 With Construction Peak, AM
»LS - 2030 With Construction Peak, PM
»LS - 2032 Year of Opening No Dev, AM
»LS - 2032 Year of Opening No Dev, PM
»LS - 2037 (5 Years after Opening) No Dev, AM
»LS - 2037 (5 Years after Opening) No Dev, PM
»LS - 2047 (15 Years after Opening) No Dev, AM
»LS - 2047 (15 Years after Opening) No Dev, PM
»LS - 2032 Year of Opening With Dev, AM
»LS - 2032 Year of Opening With Dev, PM
»LS - 2037 (5 Years after Opening) With Dev, AM
»LS - 2037 (5 Years after Opening) With Dev, PM
»LS - 2047 (15 Years after Opening) With Dev, AM
»LS - 2047 (15 Years after Opening) With Dev, PM

Summary of junction performance

	AM						PM					

	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
LS [Lane Simulation] - 2024										
A - L3003 (W)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - BPS	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - L3003 (E)	0.0	0.00		A		0.0	0.00		A	
LS [Lane Simulation] - 2030 No Construction										
A - L3003 (W)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - BPS	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - L3003 (E)	0.0	0.00		A		0.0	0.00		A	
LS [Lane Simulation] - 2030 With Construction Peak										
A - L3003 (W)	0.0	0.00		A	4.37	0.0	0.00		A	4.09
B - BPS	0.1	9.40	0.01	A		0.1	6.60	0.07	A	
C - L3003 (E)	0.1	4.68		A		0.0	2.78		A	
LS [Lane Simulation] - 2032 Year of Opening No Dev										
A - L3003 (W)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - BPS	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - L3003 (E)	0.0	0.00		A		0.0	0.00		A	
LS [Lane Simulation] - 2037 (5 Years after Opening) No Dev										
A - L3003 (W)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - BPS	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - L3003 (E)	0.0	0.00		A		0.0	0.00		A	
LS [Lane Simulation] - 2047 (15 Years after Opening) No Dev										
A - L3003 (W)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - BPS	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - L3003 (E)	0.0	0.00		A		0.0	0.00		A	
LS [Lane Simulation] - 2032 Year of Opening With Dev										
A - L3003 (W)	0.0	0.00		A	0.21	0.0	0.00		A	0.00
B - BPS	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - L3003 (E)	0.0	0.36		A		0.0	0.00		A	
LS [Lane Simulation] - 2037 (5 Years after Opening) With Dev										
A - L3003 (W)	0.0	0.00		A	0.17	0.0	0.00		A	0.00
B - BPS	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - L3003 (E)	0.0	0.32		A		0.0	0.00		A	
LS [Lane Simulation] - 2047 (15 Years after Opening) With Dev										
A - L3003 (W)	0.0	0.00		A	0.17	0.0	0.00		A	0.00
B - BPS	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - L3003 (E)	0.0	0.28		A		0.0	0.00		A	

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	Water Supply Project
Location	
Site number	Junction 23
Date	19/03/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Calculate RFCs	Relaxation factor for capacity/RFC runs	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)	Last run total time taken (s)
Delay	1.00	100000	100000	Calculate for all arms	3.00	-1	3	1	60	✓			1205491074	21	0.02	1.53

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	08:15	09:45	15	✓
D2	2024	PM	ONE HOUR	17:15	18:45	15	✓
D3	2030 No Construction	AM	ONE HOUR	08:15	09:45	15	✓
D4	2030 No Construction	PM	ONE HOUR	17:15	18:45	15	✓
D5	2030 With Construction Peak	AM	ONE HOUR	08:15	09:45	15	✓
D6	2030 With Construction Peak	PM	ONE HOUR	17:15	18:45	15	✓
D7	2032 Year of Opening No Dev	AM	ONE HOUR	08:15	09:45	15	✓
D8	2032 Year of Opening No Dev	PM	ONE HOUR	17:15	18:45	15	✓
D9	2037 (5 Years after Opening) No Dev	AM	ONE HOUR	08:15	09:45	15	✓
D10	2037 (5 Years after Opening) No Dev	PM	ONE HOUR	17:15	18:45	15	✓
D11	2047 (15 Years after Opening) No Dev	AM	ONE HOUR	08:15	09:45	15	✓
D12	2047 (15 Years after Opening) No Dev	PM	ONE HOUR	17:15	18:45	15	✓
D13	2032 Year of Opening With Dev	AM	ONE HOUR	08:15	09:45	15	✓
D14	2032 Year of Opening With Dev	PM	ONE HOUR	17:15	18:45	15	✓
D15	2037 (5 Years after Opening) With Dev	AM	ONE HOUR	08:15	09:45	15	✓
D16	2037 (5 Years after Opening) With Dev	PM	ONE HOUR	17:15	18:45	15	✓
D17	2047 (15 Years after Opening) With Dev	AM	ONE HOUR	08:15	09:45	15	✓
D18	2047 (15 Years after Opening) With Dev	PM	ONE HOUR	17:15	18:45	15	✓

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	LS	✓	✓	100.000	100.000

LS - 2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L3003 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
23		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	L3003 (W)		Major
B	BPS		Minor
C	L3003 (E)		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)	Vehicles causing blocking (%)
C - L3003 (E)	5.10			250.0	✓	0.00	100

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 - BPS	One lane	2.50	250	250

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	662	0.125	0.317	0.199	0.453
B-C	742	0.118	0.299	-	-
C-B	719	0.289	0.289	-	-

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.

Lane Simulation: Arm options

Arm	Traffic considering secondary lanes (%)
A - L3003 (W)	10.00
B - BPS	10.00
C - L3003 (E)	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - L3003 (W)	Entry	1	1	B, C		Infinity			0	99999	
	Exit	1	1			Infinity					
B - BPS	Entry	1	1	A, C		Infinity			0	99999	
	Exit	1	1			Infinity					
C - L3003 (E)	Entry	1	1	A, B		Infinity			0	99999	
	Exit	1	1			Infinity					

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			L3003 (W)	BPS	L3003 (E)
A - L3003 (W)	1	1		✓	✓
B - BPS	1	1	✓		✓
C - L3003 (E)	1	1	✓	✓	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	08:15	09:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L3003 (W)		ONE HOUR	✓	14	100.000
B - BPS		ONE HOUR	✓	0	100.000
C - L3003 (E)		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	14
	B - BPS	0	0	0
	C - L3003 (E)	20	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
23	0.20	0.80

Heavy Vehicle %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	33
	B - BPS	0	0	0
	C - L3003 (E)	15	0	0

Cyclist %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	0
	B - BPS	0	0	0
	C - L3003 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L3003 (W)		0.00	0.0	A	14	21
B - BPS	0.00	0.00	0.0	A	0	0
C - L3003 (E)		0.00	0.0	A	20	29

LS - 2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L3003 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
23		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D2	2024	PM	ONE HOUR	17:15	18:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L3003 (W)		ONE HOUR	✓	16	100.000
B - BPS		ONE HOUR	✓	0	100.000
C - L3003 (E)		ONE HOUR	✓	16	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	16
	B - BPS	0	0	0
	C - L3003 (E)	16	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
23	0.20	0.80

Heavy Vehicle %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	19
	B - BPS	0	0	0
	C - L3003 (E)	10	0	0

Cyclist %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	0
	B - BPS	0	0	0
	C - L3003 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L3003 (W)		0.00	0.0	A	14	21
B - BPS	0.00	0.00	0.0	A	0	0
C - L3003 (E)		0.00	0.0	A	13	20

LS - 2030 No Construction , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L3003 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
23		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D3	2030 No Construction	AM	ONE HOUR	08:15	09:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L3003 (W)		ONE HOUR	✓	15	100.000
B - BPS		ONE HOUR	✓	0	100.000
C - L3003 (E)		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	15
	B - BPS	0	0	0
	C - L3003 (E)	22	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
23	0.20	0.80

Heavy Vehicle %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	36
	B - BPS	0	0	0
	C - L3003 (E)	17	0	0

Cyclist %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	0
	B - BPS	0	0	0
	C - L3003 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L3003 (W)		0.00	0.0	A	12	18
B - BPS	0.00	0.00	0.0	A	0	0
C - L3003 (E)		0.00	0.0	A	19	28

LS - 2030 No Construction , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L3003 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
23		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D4	2030 No Construction	PM	ONE HOUR	17:15	18:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L3003 (W)		ONE HOUR	✓	18	100.000
B - BPS		ONE HOUR	✓	0	100.000
C - L3003 (E)		ONE HOUR	✓	17	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	18
	B - BPS	0	0	0
	C - L3003 (E)	17	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
23	0.20	0.80

Heavy Vehicle %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	21
	B - BPS	0	0	0
	C - L3003 (E)	11	0	0

Cyclist %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	0
	B - BPS	0	0	0
	C - L3003 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L3003 (W)		0.00	0.0	A	19	28
B - BPS	0.00	0.00	0.0	A	0	0
C - L3003 (E)		0.00	0.0	A	15	23

LS - 2030 With Construction Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L3003 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
23		T-Junction	Two-way	Two-way	Two-way		4.37	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.37	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)	Run automatically
D5	2030 With Construction Peak	AM	ONE HOUR	08:15	09:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L3003 (W)		ONE HOUR	✓	15	100.000
B - BPS		ONE HOUR	✓	9	100.000
C - L3003 (E)		ONE HOUR	✓	65	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	15
	B - BPS	0	0	9
	C - L3003 (E)	22	43	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
23	0.20	0.80

Heavy Vehicle %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	36
	B - BPS	0	0	85
	C - L3003 (E)	17	18	0

Cyclist %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	0
	B - BPS	0	0	0
	C - L3003 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L3003 (W)		0.00	0.0	A	14	21
B - BPS	0.01	9.40	0.1	A	8	12
C - L3003 (E)		4.68	0.1	A	62	92

LS - 2030 With Construction Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L3003 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
23		T-Junction	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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2030 With Construction Peak	PM	ONE HOUR	17:15	18:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L3003 (W)		ONE HOUR	✓	18	100.000
B - BPS		ONE HOUR	✓	43	100.000
C - L3003 (E)		ONE HOUR	✓	26	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	18
	B - BPS	0	0	43
	C - L3003 (E)	17	9	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
23	0.20	0.80

Heavy Vehicle %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	21
	B - BPS	0	0	18
	C - L3003 (E)	11	85	0

Cyclist %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	0
	B - BPS	0	0	0
	C - L3003 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L3003 (W)		0.00	0.0	A	17	25
B - BPS	0.07	6.60	0.1	A	40	61
C - L3003 (E)		2.78	0.0	A	25	37

LS - 2032 Year of Opening No Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L3003 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
23		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D7	2032 Year of Opening No Dev	AM	ONE HOUR	08:15	09:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L3003 (W)		ONE HOUR	✓	16	100.000
B - BPS		ONE HOUR	✓	0	100.000
C - L3003 (E)		ONE HOUR	✓	23	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	16
	B - BPS	0	0	0
	C - L3003 (E)	23	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
23	0.20	0.80

Heavy Vehicle %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	36
	B - BPS	0	0	0
	C - L3003 (E)	17	0	0

Cyclist %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	0
	B - BPS	0	0	0
	C - L3003 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L3003 (W)		0.00	0.0	A	15	23
B - BPS	0.00	0.00	0.0	A	0	0
C - L3003 (E)		0.00	0.0	A	22	33

LS - 2032 Year of Opening No Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L3003 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
23		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D8	2032 Year of Opening No Dev	PM	ONE HOUR	17:15	18:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L3003 (W)		ONE HOUR	✓	18	100.000
B - BPS		ONE HOUR	✓	0	100.000
C - L3003 (E)		ONE HOUR	✓	17	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	18
	B - BPS	0	0	0
	C - L3003 (E)	17	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
23	0.20	0.80

Heavy Vehicle %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	21
	B - BPS	0	0	0
	C - L3003 (E)	11	0	0

Cyclist %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	0
	B - BPS	0	0	0
	C - L3003 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L3003 (W)		0.00	0.0	A	14	22
B - BPS	0.00	0.00	0.0	A	0	0
C - L3003 (E)		0.00	0.0	A	14	21

LS - 2037 (5 Years after Opening) No Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L3003 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
23		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D9	2037 (5 Years after Opening) No Dev	AM	ONE HOUR	08:15	09:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L3003 (W)		ONE HOUR	✓	17	100.000
B - BPS		ONE HOUR	✓	0	100.000
C - L3003 (E)		ONE HOUR	✓	24	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	17
	B - BPS	0	0	0
	C - L3003 (E)	24	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
23	0.20	0.80

Heavy Vehicle %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	38
	B - BPS	0	0	0
	C - L3003 (E)	18	0	0

Cyclist %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	0
	B - BPS	0	0	0
	C - L3003 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L3003 (W)		0.00	0.0	A	17	25
B - BPS	0.00	0.00	0.0	A	0	0
C - L3003 (E)		0.00	0.0	A	20	31

LS - 2037 (5 Years after Opening) No Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L3003 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
23		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D10	2037 (5 Years after Opening) No Dev	PM	ONE HOUR	17:15	18:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L3003 (W)		ONE HOUR	✓	19	100.000
B - BPS		ONE HOUR	✓	0	100.000
C - L3003 (E)		ONE HOUR	✓	18	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	19
	B - BPS	0	0	0
	C - L3003 (E)	18	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
23	0.20	0.80

Heavy Vehicle %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	22
	B - BPS	0	0	0
	C - L3003 (E)	11	0	0

Cyclist %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	0
	B - BPS	0	0	0
	C - L3003 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L3003 (W)		0.00	0.0	A	19	29
B - BPS	0.00	0.00	0.0	A	0	0
C - L3003 (E)		0.00	0.0	A	20	29

LS - 2047 (15 Years after Opening) No Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L3003 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
23		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D11	2047 (15 Years after Opening) No Dev	AM	ONE HOUR	08:15	09:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L3003 (W)		ONE HOUR	✓	19	100.000
B - BPS		ONE HOUR	✓	0	100.000
C - L3003 (E)		ONE HOUR	✓	27	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	19
	B - BPS	0	0	0
	C - L3003 (E)	27	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
23	0.20	0.80

Heavy Vehicle %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	41
	B - BPS	0	0	0
	C - L3003 (E)	20	0	0

Cyclist %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	0
	B - BPS	0	0	0
	C - L3003 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L3003 (W)		0.00	0.0	A	16	24
B - BPS	0.00	0.00	0.0	A	0	0
C - L3003 (E)		0.00	0.0	A	27	41

LS - 2047 (15 Years after Opening) No Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L3003 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
23		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D12	2047 (15 Years after Opening) No Dev	PM	ONE HOUR	17:15	18:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L3003 (W)		ONE HOUR	✓	22	100.000
B - BPS		ONE HOUR	✓	0	100.000
C - L3003 (E)		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	22
	B - BPS	0	0	0
	C - L3003 (E)	20	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
23	0.20	0.80

Heavy Vehicle %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	24
	B - BPS	0	0	0
	C - L3003 (E)	13	0	0

Cyclist %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	0
	B - BPS	0	0	0
	C - L3003 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L3003 (W)		0.00	0.0	A	18	27
B - BPS	0.00	0.00	0.0	A	0	0
C - L3003 (E)		0.00	0.0	A	20	30

LS - 2032 Year of Opening With Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L3003 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
23		T-Junction	Two-way	Two-way	Two-way		0.21	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.21	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)	Run automatically
D13	2032 Year of Opening With Dev	AM	ONE HOUR	08:15	09:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L3003 (W)		ONE HOUR	✓	19	100.000
B - BPS		ONE HOUR	✓	2	100.000
C - L3003 (E)		ONE HOUR	✓	24	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	3	16
	B - BPS	2	0	0
	C - L3003 (E)	23	1	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
23	0.20	0.80

Heavy Vehicle %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	67	36
	B - BPS	100	0	0
	C - L3003 (E)	17	0	0

Cyclist %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	0
	B - BPS	0	0	0
	C - L3003 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L3003 (W)		0.00	0.0	A	16	24
B - BPS	0.00	0.00	0.0	A	0	0
C - L3003 (E)		0.36	0.0	A	21	31

LS - 2032 Year of Opening With Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L3003 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
23		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D14	2032 Year of Opening With Dev	PM	ONE HOUR	17:15	18:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L3003 (W)		ONE HOUR	✓	20	100.000
B - BPS		ONE HOUR	✓	4	100.000
C - L3003 (E)		ONE HOUR	✓	17	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	2	18
	B - BPS	3	0	1
	C - L3003 (E)	17	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
23	0.20	0.80

Heavy Vehicle %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	100	21
	B - BPS	67	0	0
	C - L3003 (E)	11	0	0

Cyclist %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	0
	B - BPS	0	0	0
	C - L3003 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L3003 (W)		0.00	0.0	A	20	30
B - BPS	0.00	0.00	0.0	A	0	0
C - L3003 (E)		0.00	0.0	A	16	24

LS - 2037 (5 Years after Opening) With Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L3003 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
23		T-Junction	Two-way	Two-way	Two-way		0.17	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.17	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)	Run automatically
D15	2037 (5 Years after Opening) With Dev	AM	ONE HOUR	08:15	09:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L3003 (W)		ONE HOUR	✓	20	100.000
B - BPS		ONE HOUR	✓	2	100.000
C - L3003 (E)		ONE HOUR	✓	25	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	3	17
	B - BPS	2	0	0
	C - L3003 (E)	24	1	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
23	0.20	0.80

Heavy Vehicle %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	67	38
	B - BPS	100	0	0
	C - L3003 (E)	18	0	0

Cyclist %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	0
	B - BPS	0	0	0
	C - L3003 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L3003 (W)		0.00	0.0	A	19	29
B - BPS	0.00	0.00	0.0	A	0	0
C - L3003 (E)		0.32	0.0	A	22	33

LS - 2037 (5 Years after Opening) With Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L3003 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
23		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D16	2037 (5 Years after Opening) With Dev	PM	ONE HOUR	17:15	18:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L3003 (W)		ONE HOUR	✓	21	100.000
B - BPS		ONE HOUR	✓	4	100.000
C - L3003 (E)		ONE HOUR	✓	18	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	2	19
	B - BPS	3	0	1
	C - L3003 (E)	18	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
23	0.20	0.80

Heavy Vehicle %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	100	22
	B - BPS	67	0	0
	C - L3003 (E)	11	0	0

Cyclist %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	0
	B - BPS	0	0	0
	C - L3003 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L3003 (W)		0.00	0.0	A	21	31
B - BPS	0.00	0.00	0.0	A	0	0
C - L3003 (E)		0.00	0.0	A	19	29

LS - 2047 (15 Years after Opening) With Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L3003 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
23		T-Junction	Two-way	Two-way	Two-way		0.17	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.17	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)	Run automatically
D17	2047 (15 Years after Opening) With Dev	AM	ONE HOUR	08:15	09:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L3003 (W)		ONE HOUR	✓	22	100.000
B - BPS		ONE HOUR	✓	2	100.000
C - L3003 (E)		ONE HOUR	✓	28	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	3	19
	B - BPS	2	0	0
	C - L3003 (E)	27	1	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
23	0.20	0.80

Heavy Vehicle %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	67	41
	B - BPS	100	0	0
	C - L3003 (E)	20	0	0

Cyclist %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	0
	B - BPS	0	0	0
	C - L3003 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L3003 (W)		0.00	0.0	A	18	28
B - BPS	0.00	0.00	0.0	A	0	0
C - L3003 (E)		0.28	0.0	A	27	41

LS - 2047 (15 Years after Opening) With Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L3003 (E) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
23		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D18	2047 (15 Years after Opening) With Dev	PM	ONE HOUR	17:15	18:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L3003 (W)		ONE HOUR	✓	24	100.000
B - BPS		ONE HOUR	✓	4	100.000
C - L3003 (E)		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	2	22
	B - BPS	3	0	1
	C - L3003 (E)	20	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
23	0.20	0.80

Heavy Vehicle %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	100	24
	B - BPS	67	0	0
	C - L3003 (E)	13	0	0

Cyclist %

		To		
		A - L3003 (W)	B - BPS	C - L3003 (E)
From	A - L3003 (W)	0	0	0
	B - BPS	0	0	0
	C - L3003 (E)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L3003 (W)		0.00	0.0	A	21	31
B - BPS	0.00	0.00	0.0	A	0	0
C - L3003 (E)		0.00	0.0	A	19	29

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.1.1.1905
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Filename: Junction 24_R421-L4004 Cross.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 13:29:06

»2024, AM
»2024, PM
»2029 No Construction , AM
»2029 No Construction , PM
»2029 With Construction Peak, AM
»2029 With Construction Peak, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	2024									
Stream B-CD	0.0	7.23	0.04	A	4.52	0.0	7.44	0.02	A	4.45
Stream B-AD	0.1	7.94	0.05	A		0.0	8.24	0.02	A	
Stream A-BCD	0.0	7.31	0.02	A		0.0	5.88	0.04	A	
Stream D-AB	0.1	7.19	0.05	A		0.1	7.13	0.05	A	
Stream D-BC	0.1	8.25	0.05	A		0.1	8.70	0.05	A	
Stream C-ABD	0.0	4.97	0.01	A		0.0	5.02	0.00	A	
	2029 No Construction									
Stream B-CD	0.0	7.30	0.04	A	4.62	0.0	7.57	0.02	A	4.55
Stream B-AD	0.1	8.04	0.05	A		0.0	8.36	0.02	A	
Stream A-BCD	0.0	7.43	0.03	A		0.1	5.90	0.04	A	
Stream D-AB	0.1	7.29	0.06	A		0.1	7.27	0.06	A	
Stream D-BC	0.1	8.38	0.05	A		0.1	8.86	0.05	A	
Stream C-ABD	0.0	4.97	0.01	A		0.0	5.03	0.00	A	
	2029 With Construction Peak									
Stream B-CD	0.0	7.44	0.04	A	4.13	0.0	7.73	0.02	A	4.00
Stream B-AD	0.1	8.24	0.05	A		0.0	8.57	0.02	A	
Stream A-BCD	0.1	8.31	0.03	A		0.1	6.71	0.06	A	
Stream D-AB	0.1	7.79	0.07	A		0.1	7.99	0.06	A	
Stream D-BC	0.1	8.58	0.05	A		0.1	9.11	0.05	A	
Stream C-ABD	0.0	5.04	0.01	A		0.0	5.08	0.00	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	Water Supply Project
Location	
Site number	Junction 24
Date	19/03/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

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	2024	AM	ONE HOUR	07:45	09:15	15
D2	2024	PM	ONE HOUR	16:45	18:15	15
D3	2029 No Construction	AM	ONE HOUR	07:45	09:15	15
D4	2029 No Construction	PM	ONE HOUR	16:45	18:15	15
D5	2029 With Construction Peak	AM	ONE HOUR	07:45	09:15	15
D6	2029 With Construction Peak	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2024, 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
24		Crossroads	Two-way	Two-way	Two-way	Two-way		4.52	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.52	A

Arms

Arms

Arm	Name	Description	Arm type
A	R421 (NNE)		Major
B	L8008		Minor
C	R421 (SSW)		Major
D	L4004		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 - R421 (NNE)	7.80			100.0	✓	0.00
C - R421 (SSW)	7.80			250.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - L8008	One lane plus flare	9.30	5.10	4.10	3.30	2.60	✓	1.00	16	17
D - L4004	One lane plus flare	10.00	6.00	4.40	3.90	3.60	✓	1.00	13	35

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
A-D	632	-	-	-	-	-	-	0.226	0.322	0.226	-	-	-
B-A	521	0.087	0.221	0.221	-	-	-	0.139	0.316	-	0.221	0.221	0.110
B-C	673	0.095	0.240	-	-	-	-	-	-	-	-	-	-
B-D, nearside lane	521	0.087	0.221	0.221	-	-	-	0.139	0.316	0.139	-	-	-
B-D, offside lane	521	0.087	0.221	0.221	-	-	-	0.139	0.316	0.139	-	-	-
C-B	719	0.257	0.257	0.367	-	-	-	-	-	-	-	-	-
D-A	672	-	-	-	-	-	-	0.240	-	0.095	-	-	-
D-B, nearside lane	519	0.139	0.139	0.315	-	-	-	0.220	0.220	0.087	-	-	-
D-B, offside lane	519	0.139	0.139	0.315	-	-	-	0.220	0.220	0.087	-	-	-
D-C	519	-	0.139	0.315	0.110	0.220	0.220	0.220	0.220	0.087	-	-	-

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	2024	AM	ONE HOUR	07:45	09:15	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R421 (NNE)		✓	40	100.000
B - L8008		✓	41	100.000
C - R421 (SSW)		✓	53	100.000
D - L4004		✓	48	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R421 (NNE)	B - L8008	C - R421 (SSW)	D - L4004
From	A - R421 (NNE)	0	14	13	13
	B - L8008	11	0	7	23
	C - R421 (SSW)	28	8	0	17
	D - L4004	14	23	11	0

Vehicle Mix

Heavy Vehicle %

		To			
		A - R421 (NNE)	B - L8008	C - R421 (SSW)	D - L4004
From	A - R421 (NNE)	0	0	0	28
	B - L8008	0	0	0	10
	C - R421 (SSW)	0	0	0	0
	D - L4004	16	0	18	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.04	7.23	0.0	A
B-AD	0.05	7.94	0.1	A
A-BCD	0.02	7.31	0.0	A
A-B				
A-C				
D-AB	0.05	7.19	0.1	A
D-BC	0.05	8.25	0.1	A
C-ABD	0.01	4.97	0.0	A
C-D				
C-A				

2024, 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
24		Crossroads	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)
D2	2024	PM	ONE HOUR	16:45	18:15	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R421 (NNE)		✓	49	100.000
B - L8008		✓	17	100.000
C - R421 (SSW)		✓	34	100.000
D - L4004		✓	48	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R421 (NNE)	B - L8008	C - R421 (SSW)	D - L4004
From	A - R421 (NNE)	0	2	24	23
	B - L8008	1	0	3	13
	C - R421 (SSW)	17	2	0	15
	D - L4004	19	16	13	0

Vehicle Mix

Heavy Vehicle %

		To			
		A - R421 (NNE)	B - L8008	C - R421 (SSW)	D - L4004
From	A - R421 (NNE)	0	0	16	0
	B - L8008	0	0	0	15
	C - R421 (SSW)	28	0	0	0
	D - L4004	12	14	15	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.02	7.44	0.0	A
B-AD	0.02	8.24	0.0	A
A-BCD	0.04	5.88	0.0	A
A-B				
A-C				
D-AB	0.05	7.13	0.1	A
D-BC	0.05	8.70	0.1	A
C-ABD	0.00	5.02	0.0	A
C-D				
C-A				

2029 No Construction , 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
24		Crossroads	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	2029 No Construction	AM	ONE HOUR	07:45	09:15	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R421 (NNE)		✓	43	100.000
B - L8008		✓	45	100.000
C - R421 (SSW)		✓	57	100.000
D - L4004		✓	53	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R421 (NNE)	B - L8008	C - R421 (SSW)	D - L4004
From	A - R421 (NNE)	0	15	14	14
	B - L8008	12	0	8	25
	C - R421 (SSW)	30	9	0	18
	D - L4004	16	25	12	0

Vehicle Mix

Heavy Vehicle %

		To			
		A - R421 (NNE)	B - L8008	C - R421 (SSW)	D - L4004
From	A - R421 (NNE)	0	0	0	30
	B - L8008	0	0	0	11
	C - R421 (SSW)	0	0	0	0
	D - L4004	17	0	20	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.04	7.30	0.0	A
B-AD	0.05	8.04	0.1	A
A-BCD	0.03	7.43	0.0	A
A-B				
A-C				
D-AB	0.06	7.29	0.1	A
D-BC	0.05	8.38	0.1	A
C-ABD	0.01	4.97	0.0	A
C-D				
C-A				

2029 No Construction , 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
24		Crossroads	Two-way	Two-way	Two-way	Two-way		4.55	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.55	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	2029 No Construction	PM	ONE HOUR	16:45	18:15	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R421 (NNE)		✓	53	100.000
B - L8008		✓	18	100.000
C - R421 (SSW)		✓	36	100.000
D - L4004		✓	53	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R421 (NNE)	B - L8008	C - R421 (SSW)	D - L4004
From	A - R421 (NNE)	0	2	26	25
	B - L8008	1	0	3	14
	C - R421 (SSW)	18	2	0	16
	D - L4004	21	18	14	0

Vehicle Mix

Heavy Vehicle %

		To			
		A - R421 (NNE)	B - L8008	C - R421 (SSW)	D - L4004
From	A - R421 (NNE)	0	0	17	0
	B - L8008	0	0	0	17
	C - R421 (SSW)	30	0	0	0
	D - L4004	13	15	17	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.02	7.57	0.0	A
B-AD	0.02	8.36	0.0	A
A-BCD	0.04	5.90	0.1	A
A-B				
A-C				
D-AB	0.06	7.27	0.1	A
D-BC	0.05	8.86	0.1	A
C-ABD	0.00	5.03	0.0	A
C-D				
C-A				

2029 With Construction Peak, 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
24		Crossroads	Two-way	Two-way	Two-way	Two-way		4.13	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.13	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	2029 With Construction Peak	AM	ONE HOUR	07:45	09:15	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R421 (NNE)		✓	71	100.000
B - L8008		✓	45	100.000
C - R421 (SSW)		✓	81	100.000
D - L4004		✓	62	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R421 (NNE)	B - L8008	C - R421 (SSW)	D - L4004
From	A - R421 (NNE)	0	15	38	18
	B - L8008	12	0	8	25
	C - R421 (SSW)	54	9	0	18
	D - L4004	25	25	12	0

Vehicle Mix

Heavy Vehicle %

		To			
		A - R421 (NNE)	B - L8008	C - R421 (SSW)	D - L4004
From	A - R421 (NNE)	0	0	63	46
	B - L8008	0	0	0	11
	C - R421 (SSW)	44	0	0	0
	D - L4004	27	0	20	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.04	7.44	0.0	A
B-AD	0.05	8.24	0.1	A
A-BCD	0.03	8.31	0.1	A
A-B				
A-C				
D-AB	0.07	7.79	0.1	A
D-BC	0.05	8.58	0.1	A
C-ABD	0.01	5.04	0.0	A
C-D				
C-A				

2029 With Construction Peak, 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
24		Crossroads	Two-way	Two-way	Two-way	Two-way		4.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.00	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	2029 With Construction Peak	PM	ONE HOUR	16:45	18:15	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R421 (NNE)		✓	86	100.000
B - L8008		✓	18	100.000
C - R421 (SSW)		✓	60	100.000
D - L4004		✓	57	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R421 (NNE)	B - L8008	C - R421 (SSW)	D - L4004
From	A - R421 (NNE)	0	2	50	34
	B - L8008	1	0	3	14
	C - R421 (SSW)	42	2	0	16
	D - L4004	25	18	14	0

Vehicle Mix

Heavy Vehicle %

		To			
		A - R421 (NNE)	B - L8008	C - R421 (SSW)	D - L4004
From	A - R421 (NNE)	0	0	57	12
	B - L8008	0	0	0	17
	C - R421 (SSW)	70	0	0	0
	D - L4004	27	15	17	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.02	7.73	0.0	A
B-AD	0.02	8.57	0.0	A
A-BCD	0.06	6.71	0.1	A
A-B				
A-C				
D-AB	0.06	7.99	0.1	A
D-BC	0.05	9.11	0.1	A
C-ABD	0.00	5.08	0.0	A
C-D				
C-A				

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.1.1.1905
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Filename: Junction 25_R440-R421 Tjct_LS.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 13:30:17

»LS - 2024, AM
»LS - 2024, PM
»LS - 2029 No Construction , AM
»LS - 2029 No Construction , PM
»LS - 2029 With Construction Peak, AM
»LS - 2029 With Construction Peak, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	LS [Lane Simulation] - 2024									
A - R421 (E)	0.0	0.00		A	2.14	0.0	0.00		A	0.98
B - R421 (SSW)	0.1	8.14	0.09	A		0.1	9.28	0.03	A	
C - R440	0.0	0.00		A		0.0	0.00		A	
	LS [Lane Simulation] - 2029 No Construction									
A - R421 (E)	0.0	0.00		A	2.14	0.0	0.00		A	1.07
B - R421 (SSW)	0.1	8.18	0.10	A		0.1	9.63	0.05	A	
C - R440	0.0	0.00		A		0.0	0.00		A	
	LS [Lane Simulation] - 2029 With Construction Peak									
A - R421 (E)	0.0	0.00		A	3.95	0.0	0.00		A	3.08
B - R421 (SSW)	0.3	12.09	0.15	B		0.2	12.21	0.11	B	
C - R440	0.0	0.41		A		0.0	0.47		A	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	Water Supply Project
Location	
Site number	Junction 25
Date	19/03/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Calculate RFCs	Relaxation factor for capacity/RFC runs	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)	Last run total time taken (s)
Delay	1.00	100000	100000	Calculate for all arms	3.00	-1	3	1	60	✓			681500143	100	0.41	9.84

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	08:00	09:30	15	✓
D2	2024	PM	ONE HOUR	16:15	17:45	15	✓
D3	2029 No Construction	AM	ONE HOUR	08:00	09:30	15	✓
D4	2029 No Construction	PM	ONE HOUR	16:15	17:45	15	✓
D5	2029 With Construction Peak	AM	ONE HOUR	08:00	09:30	15	✓
D6	2029 With Construction Peak	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	LS	✓	✓	100.000	100.000

LS - 2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
25		T-Junction	Two-way	Two-way	Two-way		2.14	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.14	A

Arms

Arms

Arm	Name	Description	Arm type
A	R421 (E)		Major
B	R421 (SSW)		Minor
C	R440		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)	Vehicles causing blocking (%)
C - R440	6.80			120.0	✓	0.00	100

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - R421 (SSW)	One lane plus flare	9.20	5.70	4.20	3.30	3.20	✓	1.00	19	22

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	551	0.097	0.245	0.154	0.350
B-C	603	0.089	0.225	-	-
C-B	643	0.241	0.241	-	-

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.

Lane Simulation: Arm options

Arm	Traffic considering secondary lanes (%)
A - R421 (E)	10.00
B - R421 (SSW)	10.00
C - R440	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - R421 (E)	Entry	1	1	B, C		Infinity			0	99999	
	Exit	1	1			Infinity					
B - R421 (SSW)	Entry	1	1	C	✓	1.00			0	99999	
			2	A	✓	1.00			0	99999	
		2	1	(A, C)		Infinity					
	Exit	1	1			Infinity					
C - R440	Entry	1	1	A, B		Infinity			0	99999	
	Exit	1	1			Infinity					

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			R421 (E)	R421 (SSW)	R440
A - R421 (E)	1	1		✓	✓
B - R421 (SSW)	1	1			✓
		2	✓		
	2	1	✓		✓
C - R440	1	1	✓	✓	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R421 (E)		ONE HOUR	✓	81	100.000
B - R421 (SSW)		ONE HOUR	✓	41	100.000
C - R440		ONE HOUR	✓	33	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R421 (E)	B - R421 (SSW)	C - R440
From	A - R421 (E)	0	15	66
	B - R421 (SSW)	40	0	1
	C - R440	33	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
25	0.20	0.80

Heavy Vehicle %

		To		
		A - R421 (E)	B - R421 (SSW)	C - R440
From	A - R421 (E)	0	20	5
	B - R421 (SSW)	5	0	0
	C - R440	5	0	0

Cyclist %

		To		
		A - R421 (E)	B - R421 (SSW)	C - R440
From	A - R421 (E)	0	0	0
	B - R421 (SSW)	0	0	0
	C - R440	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R421 (E)		0.00	0.0	A	73	109
B - R421 (SSW)	0.09	8.14	0.1	A	36	55
C - R440		0.00	0.0	A	29	44

LS - 2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
25		T-Junction	Two-way	Two-way	Two-way		0.98	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.98	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)	Run automatically
D2	2024	PM	ONE HOUR	16:15	17:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R421 (E)		ONE HOUR	✓	76	100.000
B - R421 (SSW)		ONE HOUR	✓	16	100.000
C - R440		ONE HOUR	✓	49	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R421 (E)	B - R421 (SSW)	C - R440
From	A - R421 (E)	0	31	45
	B - R421 (SSW)	16	0	0
	C - R440	49	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
25	0.20	0.80

Heavy Vehicle %

		To		
		A - R421 (E)	B - R421 (SSW)	C - R440
From	A - R421 (E)	0	0	5
	B - R421 (SSW)	19	0	0
	C - R440	17	0	0

Cyclist %

		To		
		A - R421 (E)	B - R421 (SSW)	C - R440
From	A - R421 (E)	0	0	0
	B - R421 (SSW)	0	0	0
	C - R440	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R421 (E)		0.00	0.0	A	70	104
B - R421 (SSW)	0.03	9.28	0.1	A	14	21
C - R440		0.00	0.0	A	46	69

LS - 2029 No Construction , AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
25		T-Junction	Two-way	Two-way	Two-way		2.14	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.14	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)	Run automatically
D3	2029 No Construction	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R421 (E)		ONE HOUR	✓	88	100.000
B - R421 (SSW)		ONE HOUR	✓	44	100.000
C - R440		ONE HOUR	✓	35	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R421 (E)	B - R421 (SSW)	C - R440
From	A - R421 (E)	0	17	71
	B - R421 (SSW)	43	0	1
	C - R440	35	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
25	0.20	0.80

Heavy Vehicle %

		To		
		A - R421 (E)	B - R421 (SSW)	C - R440
From	A - R421 (E)	0	22	6
	B - R421 (SSW)	6	0	0
	C - R440	5	0	0

Cyclist %

		To		
		A - R421 (E)	B - R421 (SSW)	C - R440
From	A - R421 (E)	0	0	0
	B - R421 (SSW)	0	0	0
	C - R440	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R421 (E)		0.00	0.0	A	82	123
B - R421 (SSW)	0.10	8.18	0.1	A	40	60
C - R440		0.00	0.0	A	32	48

LS - 2029 No Construction , PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
25		T-Junction	Two-way	Two-way	Two-way		1.07	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.07	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)	Run automatically
D4	2029 No Construction	PM	ONE HOUR	16:15	17:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R421 (E)		ONE HOUR	✓	82	100.000
B - R421 (SSW)		ONE HOUR	✓	18	100.000
C - R440		ONE HOUR	✓	54	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R421 (E)	B - R421 (SSW)	C - R440
From	A - R421 (E)	0	33	49
	B - R421 (SSW)	18	0	0
	C - R440	54	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
25	0.20	0.80

Heavy Vehicle %

		To		
		A - R421 (E)	B - R421 (SSW)	C - R440
From	A - R421 (E)	0	0	6
	B - R421 (SSW)	20	0	0
	C - R440	18	0	0

Cyclist %

		To		
		A - R421 (E)	B - R421 (SSW)	C - R440
From	A - R421 (E)	0	0	0
	B - R421 (SSW)	0	0	0
	C - R440	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R421 (E)		0.00	0.0	A	76	113
B - R421 (SSW)	0.05	9.63	0.1	A	16	24
C - R440		0.00	0.0	A	52	78

LS - 2029 With Construction Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
25		T-Junction	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)	Run automatically
D5	2029 With Construction Peak	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R421 (E)		ONE HOUR	✓	123	100.000
B - R421 (SSW)		ONE HOUR	✓	76	100.000
C - R440		ONE HOUR	✓	38	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R421 (E)	B - R421 (SSW)	C - R440
From	A - R421 (E)	0	51	72
	B - R421 (SSW)	73	0	3
	C - R440	36	2	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
25	0.20	0.80

Heavy Vehicle %

		To		
		A - R421 (E)	B - R421 (SSW)	C - R440
From	A - R421 (E)	0	61	7
	B - R421 (SSW)	42	0	0
	C - R440	6	0	0

Cyclist %

		To		
		A - R421 (E)	B - R421 (SSW)	C - R440
From	A - R421 (E)	0	0	0
	B - R421 (SSW)	0	0	0
	C - R440	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R421 (E)		0.00	0.0	A	113	169
B - R421 (SSW)	0.15	12.09	0.3	B	70	105
C - R440		0.41	0.0	A	36	53

LS - 2029 With Construction Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
25		T-Junction	Two-way	Two-way	Two-way		3.08	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.08	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)	Run automatically
D6	2029 With Construction Peak	PM	ONE HOUR	16:15	17:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R421 (E)		ONE HOUR	✓	113	100.000
B - R421 (SSW)		ONE HOUR	✓	55	100.000
C - R440		ONE HOUR	✓	57	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R421 (E)	B - R421 (SSW)	C - R440
From	A - R421 (E)	0	63	50
	B - R421 (SSW)	53	0	2
	C - R440	55	2	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
25	0.20	0.80

Heavy Vehicle %

		To		
		A - R421 (E)	B - R421 (SSW)	C - R440
From	A - R421 (E)	0	44	7
	B - R421 (SSW)	60	0	0
	C - R440	19	0	0

Cyclist %

		To		
		A - R421 (E)	B - R421 (SSW)	C - R440
From	A - R421 (E)	0	0	0
	B - R421 (SSW)	0	0	0
	C - R440	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R421 (E)		0.00	0.0	A	105	158
B - R421 (SSW)	0.11	12.21	0.2	B	50	75
C - R440		0.47	0.0	A	52	77

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.1.1.1905
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Filename: Junction 26_L2027-PSD5 Tjct_LS.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 13:31:20

»LS - 2024, AM
»LS - 2024, PM
»LS - 2028 No Construction , AM
»LS - 2028 No Construction , PM
»LS - 2028 With Construction Peak, AM
»LS - 2028 With Construction Peak, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	LS [Lane Simulation] - 2024									
A - L2027 (S)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - PSD 5	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - L2027 (N)	0.0	0.00		A		0.0	0.00		A	
	LS [Lane Simulation] - 2028 No Construction									
A - L2027 (S)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - PSD 5	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - L2027 (N)	0.0	0.00		A		0.0	0.00		A	
	LS [Lane Simulation] - 2028 With Construction Peak									
A - L2027 (S)	0.0	0.00		A	3.81	0.0	0.00		A	2.63
B - PSD 5	0.1	17.22	0.02	C		0.1	10.40	0.03	B	
C - L2027 (N)	0.1	2.80		A		0.0	1.77		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. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	Water Supply Project
Location	
Site number	Junction 26
Date	19/03/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Calculate RFCs	Relaxation factor for capacity/RFC runs	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)	Last run total time taken (s)
Delay	1.00	100000	100000	Calculate for all arms	3.00	-1	3	1	60	✓			958604757	21	0.02	1.53

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	08:00	09:30	15	✓
D2	2024	PM	ONE HOUR	16:00	17:30	15	✓
D3	2028 No Construction	AM	ONE HOUR	08:00	09:30	15	✓
D4	2028 No Construction	PM	ONE HOUR	16:00	17:30	15	✓
D5	2028 With Construction Peak	AM	ONE HOUR	08:00	09:30	15	✓
D6	2028 With Construction Peak	PM	ONE HOUR	16:00	17:30	15	✓

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	LS	✓	✓	100.000	100.000

LS - 2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L2027 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
26		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	L2027 (S)		Major
B	PSD 5		Minor
C	L2027 (N)		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)	Vehicles causing blocking (%)
C - L2027 (N)	4.60			250.0	✓	0.00	100

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 - PSD 5	One lane	2.20	60	18

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	465	0.090	0.227	0.143	0.325
B-C	584	0.095	0.240	-	-
C-B	719	0.295	0.295	-	-

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.

Lane Simulation: Arm options

Arm	Traffic considering secondary lanes (%)
A - L2027 (S)	10.00
B - PSD 5	10.00
C - L2027 (N)	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - L2027 (S)	Entry	1	1	B, C		Infinity			0	99999	
	Exit	1	1			Infinity					
B - PSD 5	Entry	1	1	A, C		Infinity			0	99999	
	Exit	1	1			Infinity					
C - L2027 (N)	Entry	1	1	A, B		Infinity			0	99999	
	Exit	1	1			Infinity					

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			L2027 (S)	PSD 5	L2027 (N)
A - L2027 (S)	1	1		✓	✓
B - PSD 5	1	1	✓		✓
C - L2027 (N)	1	1	✓	✓	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L2027 (S)		ONE HOUR	✓	17	100.000
B - PSD 5		ONE HOUR	✓	0	100.000
C - L2027 (N)		ONE HOUR	✓	19	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L2027 (S)	B - PSD 5	C - L2027 (N)
From	A - L2027 (S)	0	0	17
	B - PSD 5	0	0	0
	C - L2027 (N)	19	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
26	0.20	0.80

Heavy Vehicle %

		To		
		A - L2027 (S)	B - PSD 5	C - L2027 (N)
From	A - L2027 (S)	0	0	18
	B - PSD 5	0	0	0
	C - L2027 (N)	16	0	0

Cyclist %

		To		
		A - L2027 (S)	B - PSD 5	C - L2027 (N)
From	A - L2027 (S)	0	0	0
	B - PSD 5	0	0	0
	C - L2027 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L2027 (S)		0.00	0.0	A	13	19
B - PSD 5	0.00	0.00	0.0	A	0	0
C - L2027 (N)		0.00	0.0	A	17	25

LS - 2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L2027 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
26		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D2	2024	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L2027 (S)		ONE HOUR	✓	23	100.000
B - PSD 5		ONE HOUR	✓	0	100.000
C - L2027 (N)		ONE HOUR	✓	16	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L2027 (S)	B - PSD 5	C - L2027 (N)
From	A - L2027 (S)	0	0	23
	B - PSD 5	0	0	0
	C - L2027 (N)	16	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
26	0.20	0.80

Heavy Vehicle %

		To		
		A - L2027 (S)	B - PSD 5	C - L2027 (N)
From	A - L2027 (S)	0	0	26
	B - PSD 5	0	0	0
	C - L2027 (N)	19	0	0

Cyclist %

		To		
		A - L2027 (S)	B - PSD 5	C - L2027 (N)
From	A - L2027 (S)	0	0	0
	B - PSD 5	0	0	0
	C - L2027 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L2027 (S)		0.00	0.0	A	20	30
B - PSD 5	0.00	0.00	0.0	A	0	0
C - L2027 (N)		0.00	0.0	A	13	19

LS - 2028 No Construction , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L2027 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
26		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D3	2028 No Construction	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L2027 (S)		ONE HOUR	✓	18	100.000
B - PSD 5		ONE HOUR	✓	0	100.000
C - L2027 (N)		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L2027 (S)	B - PSD 5	C - L2027 (N)
From	A - L2027 (S)	0	0	18
	B - PSD 5	0	0	0
	C - L2027 (N)	20	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
26	0.20	0.80

Heavy Vehicle %

		To		
		A - L2027 (S)	B - PSD 5	C - L2027 (N)
From	A - L2027 (S)	0	0	19
	B - PSD 5	0	0	0
	C - L2027 (N)	17	0	0

Cyclist %

		To		
		A - L2027 (S)	B - PSD 5	C - L2027 (N)
From	A - L2027 (S)	0	0	0
	B - PSD 5	0	0	0
	C - L2027 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L2027 (S)		0.00	0.0	A	19	29
B - PSD 5	0.00	0.00	0.0	A	0	0
C - L2027 (N)		0.00	0.0	A	22	32

LS - 2028 No Construction , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L2027 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
26		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D4	2028 No Construction	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L2027 (S)		ONE HOUR	✓	25	100.000
B - PSD 5		ONE HOUR	✓	0	100.000
C - L2027 (N)		ONE HOUR	✓	17	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L2027 (S)	B - PSD 5	C - L2027 (N)
From	A - L2027 (S)	0	0	25
	B - PSD 5	0	0	0
	C - L2027 (N)	17	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
26	0.20	0.80

Heavy Vehicle %

		To		
		A - L2027 (S)	B - PSD 5	C - L2027 (N)
From	A - L2027 (S)	0	0	28
	B - PSD 5	0	0	0
	C - L2027 (N)	20	0	0

Cyclist %

		To		
		A - L2027 (S)	B - PSD 5	C - L2027 (N)
From	A - L2027 (S)	0	0	0
	B - PSD 5	0	0	0
	C - L2027 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L2027 (S)		0.00	0.0	A	24	37
B - PSD 5	0.00	0.00	0.0	A	0	0
C - L2027 (N)		0.00	0.0	A	15	22

LS - 2028 With Construction Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L2027 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
26		T-Junction	Two-way	Two-way	Two-way		3.81	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.81	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)	Run automatically
D5	2028 With Construction Peak	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L2027 (S)		ONE HOUR	✓	22	100.000
B - PSD 5		ONE HOUR	✓	8	100.000
C - L2027 (N)		ONE HOUR	✓	30	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L2027 (S)	B - PSD 5	C - L2027 (N)
From	A - L2027 (S)	0	4	18
	B - PSD 5	4	0	4
	C - L2027 (N)	20	10	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
26	0.20	0.80

Heavy Vehicle %

		To		
		A - L2027 (S)	B - PSD 5	C - L2027 (N)
From	A - L2027 (S)	0	100	19
	B - PSD 5	100	0	70
	C - L2027 (N)	17	32	0

Cyclist %

		To		
		A - L2027 (S)	B - PSD 5	C - L2027 (N)
From	A - L2027 (S)	0	0	0
	B - PSD 5	0	0	0
	C - L2027 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L2027 (S)		0.00	0.0	A	21	31
B - PSD 5	0.02	17.22	0.1	C	8	12
C - L2027 (N)		2.80	0.1	A	28	42

LS - 2028 With Construction Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L2027 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
26		T-Junction	Two-way	Two-way	Two-way		2.63	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.63	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)	Run automatically
D6	2028 With Construction Peak	PM	ONE HOUR	16:00	17:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L2027 (S)		ONE HOUR	✓	29	100.000
B - PSD 5		ONE HOUR	✓	14	100.000
C - L2027 (N)		ONE HOUR	✓	21	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L2027 (S)	B - PSD 5	C - L2027 (N)
From	A - L2027 (S)	0	4	25
	B - PSD 5	4	0	10
	C - L2027 (N)	17	4	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
26	0.20	0.80

Heavy Vehicle %

		To		
		A - L2027 (S)	B - PSD 5	C - L2027 (N)
From	A - L2027 (S)	0	100	28
	B - PSD 5	100	0	32
	C - L2027 (N)	20	70	0

Cyclist %

		To		
		A - L2027 (S)	B - PSD 5	C - L2027 (N)
From	A - L2027 (S)	0	0	0
	B - PSD 5	0	0	0
	C - L2027 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L2027 (S)		0.00	0.0	A	27	41
B - PSD 5	0.03	10.40	0.1	B	11	17
C - L2027 (N)		1.77	0.0	A	19	28

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.1.1.1905
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Filename: Junction 27_N52-Kinnity Rd Tjct_LS.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 13:32:18

»LS - 2024, AM
»LS - 2024, PM
»LS - 2030 No Construction , AM
»LS - 2030 No Construction , PM
»LS - 2030 With Construction Peak, AM
»LS - 2030 With Construction Peak, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	LS [Lane Simulation] - 2024									
A - N52 Bridge St	0.0	0.00		A	4.78	0.0	0.00		A	3.66
B - Kinnity Rd L6041	1.3	16.53	0.47	C		0.9	14.93	0.40	B	
C - N52 Main St	0.4	1.91		A		0.2	1.61		A	
	LS [Lane Simulation] - 2030 No Construction									
A - N52 Bridge St	0.0	0.00		A	5.56	0.0	0.00		A	4.26
B - Kinnity Rd L6041	1.3	19.48	0.55	C		1.3	17.15	0.47	C	
C - N52 Main St	0.5	2.08		A		0.2	2.05		A	
	LS [Lane Simulation] - 2030 With Construction Peak									
A - N52 Bridge St	0.0	0.00		A	6.15	0.0	0.00		A	4.75
B - Kinnity Rd L6041	1.6	23.89	0.59	C		1.7	20.31	0.52	C	
C - N52 Main St	0.3	2.31		A		0.2	1.92		A	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	Water Supply Project
Location	
Site number	Junction 25
Date	18/04/2024
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Calculate RFCs	Relaxation factor for capacity/RFC runs	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)	Last run total time taken (s)
Delay	1.00	100000	100000	Calculate for all arms	3.00	-1	3	1	60	✓			4648787	101	1.94	14.34

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	07:45	09:15	15	✓
D2	2024	PM	ONE HOUR	14:45	16:15	15	✓
D3	2030 No Construction	AM	ONE HOUR	07:45	09:15	15	✓
D4	2030 No Construction	PM	ONE HOUR	14:45	16:15	15	✓
D5	2030 With Construction Peak	AM	ONE HOUR	07:45	09:15	15	✓
D6	2030 With Construction Peak	PM	ONE HOUR	14:45	16:15	15	✓

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	LS	✓	✓	100.000	100.000

LS - 2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A1 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
27		T-Junction	Two-way	Two-way	Two-way		4.78	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.78	A

Arms

Arms

Arm	Name	Description	Arm type
A	N52 Bridge St		Major
B	Kinnity Rd L6041		Minor
C	N52 Main St		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)	Vehicles causing blocking (%)
C - N52 Main St	6.80			120.0	✓	0.00	100

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 - Kinnity Rd L6041	One lane	3.50	40	30

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	531	0.093	0.236	0.148	0.337
B-C	675	0.100	0.252	-	-
C-B	643	0.241	0.241	-	-

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.

Lane Simulation: Arm options

Arm	Traffic considering secondary lanes (%)
A - N52 Bridge St	10.00
B - Kinnity Rd L6041	10.00
C - N52 Main St	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - N52 Bridge St	Entry	1	1	B, C		Infinity			0	99999	
	Exit	1	1			Infinity					
B - Kinnity Rd L6041	Entry	1	1	A, C		Infinity			0	99999	
	Exit	1	1			Infinity					
C - N52 Main St	Entry	1	1	A, B		Infinity			0	99999	
	Exit	1	1			Infinity					

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			N52 Bridge St	Kinnity Rd L6041	N52 Main St
A - N52 Bridge St	1	1		✓	✓
B - Kinnity Rd L6041	1	1	✓		✓
C - N52 Main St	1	1	✓	✓	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52 Bridge St		ONE HOUR	✓	289	100.000
B - Kinnity Rd L6041		ONE HOUR	✓	206	100.000
C - N52 Main St		ONE HOUR	✓	348	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N52 Bridge St	B - Kinnity Rd L6041	C - N52 Main St
From	A - N52 Bridge St	0	81	208
	B - Kinnity Rd L6041	121	0	85
	C - N52 Main St	309	39	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
27	0.20	0.80

Heavy Vehicle %

		To		
		A - N52 Bridge St	B - Kinnity Rd L6041	C - N52 Main St
From	A - N52 Bridge St	0	9	20
	B - Kinnity Rd L6041	3	0	7
	C - N52 Main St	15	11	0

Cyclist %

		To		
		A - N52 Bridge St	B - Kinnity Rd L6041	C - N52 Main St
From	A - N52 Bridge St	0	0	0
	B - Kinnity Rd L6041	0	0	0
	C - N52 Main St	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52 Bridge St		0.00	0.0	A	265	397
B - Kinnity Rd L6041	0.47	16.53	1.3	C	187	280
C - N52 Main St		1.91	0.4	A	323	485

LS - 2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A1 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
27		T-Junction	Two-way	Two-way	Two-way		3.66	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.66	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)	Run automatically
D2	2024	PM	ONE HOUR	14:45	16:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52 Bridge St		ONE HOUR	✓	365	100.000
B - Kinnity Rd L6041		ONE HOUR	✓	167	100.000
C - N52 Main St		ONE HOUR	✓	256	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N52 Bridge St	B - Kinnity Rd L6041	C - N52 Main St
From	A - N52 Bridge St	0	88	277
	B - Kinnity Rd L6041	96	0	71
	C - N52 Main St	225	31	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
27	0.20	0.80

Heavy Vehicle %

		To		
		A - N52 Bridge St	B - Kinnity Rd L6041	C - N52 Main St
From	A - N52 Bridge St	0	6	18
	B - Kinnity Rd L6041	13	0	3
	C - N52 Main St	23	10	0

Cyclist %

		To		
		A - N52 Bridge St	B - Kinnity Rd L6041	C - N52 Main St
From	A - N52 Bridge St	0	0	0
	B - Kinnity Rd L6041	0	0	0
	C - N52 Main St	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52 Bridge St		0.00	0.0	A	341	511
B - Kinnity Rd L6041	0.40	14.93	0.9	B	154	230
C - N52 Main St		1.61	0.2	A	234	351

LS - 2030 No Construction , AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A1 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
27		T-Junction	Two-way	Two-way	Two-way		5.56	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.56	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)	Run automatically
D3	2030 No Construction	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52 Bridge St		ONE HOUR	✓	324	100.000
B - Kinnity Rd L6041		ONE HOUR	✓	227	100.000
C - N52 Main St		ONE HOUR	✓	388	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N52 Bridge St	B - Kinnity Rd L6041	C - N52 Main St
From	A - N52 Bridge St	0	90	234
	B - Kinnity Rd L6041	133	0	94
	C - N52 Main St	344	44	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
27	0.20	0.80

Heavy Vehicle %

		To		
		A - N52 Bridge St	B - Kinnity Rd L6041	C - N52 Main St
From	A - N52 Bridge St	0	10	22
	B - Kinnity Rd L6041	4	0	8
	C - N52 Main St	16	12	0

Cyclist %

		To		
		A - N52 Bridge St	B - Kinnity Rd L6041	C - N52 Main St
From	A - N52 Bridge St	0	0	0
	B - Kinnity Rd L6041	0	0	0
	C - N52 Main St	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52 Bridge St		0.00	0.0	A	296	444
B - Kinnity Rd L6041	0.55	19.48	1.3	C	207	311
C - N52 Main St		2.08	0.5	A	356	533

LS - 2030 No Construction , PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A1 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
27		T-Junction	Two-way	Two-way	Two-way		4.26	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.26	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)	Run automatically
D4	2030 No Construction	PM	ONE HOUR	14:45	16:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52 Bridge St		ONE HOUR	✓	408	100.000
B - Kinnity Rd L6041		ONE HOUR	✓	185	100.000
C - N52 Main St		ONE HOUR	✓	287	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N52 Bridge St	B - Kinnity Rd L6041	C - N52 Main St
From	A - N52 Bridge St	0	97	311
	B - Kinnity Rd L6041	107	0	78
	C - N52 Main St	253	34	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
27	0.20	0.80

Heavy Vehicle %

		To		
		A - N52 Bridge St	B - Kinnity Rd L6041	C - N52 Main St
From	A - N52 Bridge St	0	7	20
	B - Kinnity Rd L6041	15	0	4
	C - N52 Main St	26	11	0

Cyclist %

		To		
		A - N52 Bridge St	B - Kinnity Rd L6041	C - N52 Main St
From	A - N52 Bridge St	0	0	0
	B - Kinnity Rd L6041	0	0	0
	C - N52 Main St	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52 Bridge St		0.00	0.0	A	376	565
B - Kinnity Rd L6041	0.47	17.15	1.3	C	170	255
C - N52 Main St		2.05	0.2	A	268	402

LS - 2030 With Construction Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A1 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
27		T-Junction	Two-way	Two-way	Two-way		6.15	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.15	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)	Run automatically
D5	2030 With Construction Peak	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52 Bridge St		ONE HOUR	✓	398	100.000
B - Kinnity Rd L6041		ONE HOUR	✓	230	100.000
C - N52 Main St		ONE HOUR	✓	410	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N52 Bridge St	B - Kinnity Rd L6041	C - N52 Main St
From	A - N52 Bridge St	0	100	298
	B - Kinnity Rd L6041	136	0	94
	C - N52 Main St	362	48	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
27	0.20	0.80

Heavy Vehicle %

		To		
		A - N52 Bridge St	B - Kinnity Rd L6041	C - N52 Main St
From	A - N52 Bridge St	0	12	19
	B - Kinnity Rd L6041	6	0	8
	C - N52 Main St	17	11	0

Cyclist %

		To		
		A - N52 Bridge St	B - Kinnity Rd L6041	C - N52 Main St
From	A - N52 Bridge St	0	0	0
	B - Kinnity Rd L6041	0	0	0
	C - N52 Main St	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52 Bridge St		0.00	0.0	A	371	556
B - Kinnity Rd L6041	0.59	23.89	1.6	C	209	314
C - N52 Main St		2.31	0.3	A	373	559

LS - 2030 With Construction Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A1 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
27		T-Junction	Two-way	Two-way	Two-way		4.75	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.75	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)	Run automatically
D6	2030 With Construction Peak	PM	ONE HOUR	14:45	16:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52 Bridge St		ONE HOUR	✓	429	100.000
B - Kinnity Rd L6041		ONE HOUR	✓	200	100.000
C - N52 Main St		ONE HOUR	✓	352	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N52 Bridge St	B - Kinnity Rd L6041	C - N52 Main St
From	A - N52 Bridge St	0	100	329
	B - Kinnity Rd L6041	117	0	83
	C - N52 Main St	318	34	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
27	0.20	0.80

Heavy Vehicle %

		To		
		A - N52 Bridge St	B - Kinnity Rd L6041	C - N52 Main St
From	A - N52 Bridge St	0	10	21
	B - Kinnity Rd L6041	17	0	3
	C - N52 Main St	22	11	0

Cyclist %

		To		
		A - N52 Bridge St	B - Kinnity Rd L6041	C - N52 Main St
From	A - N52 Bridge St	0	0	0
	B - Kinnity Rd L6041	0	0	0
	C - N52 Main St	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52 Bridge St		0.00	0.0	A	400	600
B - Kinnity Rd L6041	0.52	20.31	1.7	C	182	272
C - N52 Main St		1.92	0.2	A	326	489

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.1.1.1905
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Filename: Junction 28_R421-CC5 St.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 13:33:38

»2024, AM
»2024, PM
»2030 No Construction , AM
»2030 No Construction , PM
»2030 With Construction Peak, AM
»2030 With Construction Peak, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	2024									
Stream B-ACD	0.0	0.00	0.00	A	0.00	0.0	0.00	0.00	A	0.00
Stream A-BCD	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
Stream D-ABC	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
Stream C-ABD	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
	2030 No Construction									
Stream B-ACD	0.0	0.00	0.00	A	0.00	0.0	0.00	0.00	A	0.00
Stream A-BCD	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
Stream D-ABC	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
Stream C-ABD	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
	2030 With Construction Peak									
Stream B-ACD	0.0	0.00	0.00	A	3.26	0.0	0.00	0.00	A	3.27
Stream A-BCD	0.2	6.45	0.12	A		0.0	8.48	0.02	A	
Stream D-ABC	0.1	15.94	0.05	C		0.2	9.24	0.17	A	
Stream C-ABD	0.0	0.00	0.00	A		0.0	0.00	0.00	A	

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

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

File summary

File Description

Title	Water Supply Project
Location	
Site number	Junction 28
Date	19/03/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

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	2024	AM	ONE HOUR	08:00	09:30	15
D2	2024	PM	ONE HOUR	16:45	18:15	15
D3	2030 No Construction	AM	ONE HOUR	08:00	09:30	15
D4	2030 No Construction	PM	ONE HOUR	16:45	18:15	15
D5	2030 With Construction Peak	AM	ONE HOUR	08:00	09:30	15
D6	2030 With Construction Peak	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	A - R421 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Major arm width	C - R421 (S) - 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
28		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	R421 (N)		Major
B	CC5 (east of R421)		Minor
C	R421 (S)		Major
D	CC5 (west of R421)		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 - R421 (N)	5.30			250.0	✓	0.00
C - R421 (S)	5.30			250.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - CC5 (east of R421)	One lane	2.50	250	105
D - CC5 (west of R421)	One lane	2.50	10	10

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for 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	-	-	-	0.287	0.287	0.287	-	0.287	-	-
B-AD	585	0.110	0.277	-	-	-	0.175	0.396	0.175	0.110	0.277
B-C	655	0.104	0.262	-	-	-	-	-	-	0.104	0.262
C-B	719	0.287	0.287	-	-	-	-	-	-	0.287	0.287
D-A	599	-	-	-	0.239	0.095	0.239	-	0.095	-	-
D-BC	462	0.138	0.138	0.313	0.219	0.087	0.219	-	0.087	-	-

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	2024	AM	ONE HOUR	08:00	09:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R421 (N)		✓	35	100.000
B - CC5 (east of R421)		✓	0	100.000
C - R421 (S)		✓	85	100.000
D - CC5 (west of R421)		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R421 (N)	B - CC5 (east of R421)	C - R421 (S)	D - CC5 (west of R421)
From	A - R421 (N)	0	0	35	0
	B - CC5 (east of R421)	0	0	0	0
	C - R421 (S)	85	0	0	0
	D - CC5 (west of R421)	0	0	0	0

Vehicle Mix

Heavy Vehicle %

		To			
		A - R421 (N)	B - CC5 (east of R421)	C - R421 (S)	D - CC5 (west of R421)
From	A - R421 (N)	0	0	22	0
	B - CC5 (east of R421)	0	0	0	0
	C - R421 (S)	12	0	0	0
	D - CC5 (west of R421)	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.00	0.00	0.0	A
A-BCD	0.00	0.00	0.0	A
A-B				
A-C				
D-ABC	0.00	0.00	0.0	A
C-ABD	0.00	0.00	0.0	A
C-D				
C-A				

2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	A - R421 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Major arm width	C - R421 (S) - 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
28		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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	2024	PM	ONE HOUR	16:45	18:15	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R421 (N)		✓	87	100.000
B - CC5 (east of R421)		✓	0	100.000
C - R421 (S)		✓	41	100.000
D - CC5 (west of R421)		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R421 (N)	B - CC5 (east of R421)	C - R421 (S)	D - CC5 (west of R421)
From	A - R421 (N)	0	0	87	0
	B - CC5 (east of R421)	0	0	0	0
	C - R421 (S)	41	0	0	0
	D - CC5 (west of R421)	0	0	0	0

Vehicle Mix

Heavy Vehicle %

		To			
		A - R421 (N)	B - CC5 (east of R421)	C - R421 (S)	D - CC5 (west of R421)
From	A - R421 (N)	0	0	12	0
	B - CC5 (east of R421)	0	0	0	0
	C - R421 (S)	19	0	0	0
	D - CC5 (west of R421)	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.00	0.00	0.0	A
A-BCD	0.00	0.00	0.0	A
A-B				
A-C				
D-ABC	0.00	0.00	0.0	A
C-ABD	0.00	0.00	0.0	A
C-D				
C-A				

2030 No Construction , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	A - R421 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Major arm width	C - R421 (S) - 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
28		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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	2030 No Construction	AM	ONE HOUR	08:00	09:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R421 (N)		✓	39	100.000
B - CC5 (east of R421)		✓	0	100.000
C - R421 (S)		✓	94	100.000
D - CC5 (west of R421)		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R421 (N)	B - CC5 (east of R421)	C - R421 (S)	D - CC5 (west of R421)
From	A - R421 (N)	0	0	39	0
	B - CC5 (east of R421)	0	0	0	0
	C - R421 (S)	94	0	0	0
	D - CC5 (west of R421)	0	0	0	0

Vehicle Mix

Heavy Vehicle %

		To			
		A - R421 (N)	B - CC5 (east of R421)	C - R421 (S)	D - CC5 (west of R421)
From	A - R421 (N)	0	0	24	0
	B - CC5 (east of R421)	0	0	0	0
	C - R421 (S)	14	0	0	0
	D - CC5 (west of R421)	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.00	0.00	0.0	A
A-BCD	0.00	0.00	0.0	A
A-B				
A-C				
D-ABC	0.00	0.00	0.0	A
C-ABD	0.00	0.00	0.0	A
C-D				
C-A				

2030 No Construction , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	A - R421 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Major arm width	C - R421 (S) - 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
28		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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	2030 No Construction	PM	ONE HOUR	16:45	18:15	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R421 (N)		✓	96	100.000
B - CC5 (east of R421)		✓	0	100.000
C - R421 (S)		✓	45	100.000
D - CC5 (west of R421)		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R421 (N)	B - CC5 (east of R421)	C - R421 (S)	D - CC5 (west of R421)
From	A - R421 (N)	0	0	96	0
	B - CC5 (east of R421)	0	0	0	0
	C - R421 (S)	45	0	0	0
	D - CC5 (west of R421)	0	0	0	0

Vehicle Mix

Heavy Vehicle %

		To			
		A - R421 (N)	B - CC5 (east of R421)	C - R421 (S)	D - CC5 (west of R421)
From	A - R421 (N)	0	0	13	0
	B - CC5 (east of R421)	0	0	0	0
	C - R421 (S)	20	0	0	0
	D - CC5 (west of R421)	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.00	0.00	0.0	A
A-BCD	0.00	0.00	0.0	A
A-B				
A-C				
D-ABC	0.00	0.00	0.0	A
C-ABD	0.00	0.00	0.0	A
C-D				
C-A				

2030 With Construction Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	A - R421 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Major arm width	C - R421 (S) - 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
28		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		3.26	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.26	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	2030 With Construction Peak	AM	ONE HOUR	08:00	09:30	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R421 (N)		✓	125	100.000
B - CC5 (east of R421)		✓	4	100.000
C - R421 (S)		✓	114	100.000
D - CC5 (west of R421)		✓	21	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R421 (N)	B - CC5 (east of R421)	C - R421 (S)	D - CC5 (west of R421)
From	A - R421 (N)	0	4	47	74
	B - CC5 (east of R421)	4	0	0	0
	C - R421 (S)	102	0	0	12
	D - CC5 (west of R421)	9	0	12	0

Vehicle Mix

Heavy Vehicle %

		To			
		A - R421 (N)	B - CC5 (east of R421)	C - R421 (S)	D - CC5 (west of R421)
From	A - R421 (N)	0	100	37	11
	B - CC5 (east of R421)	100	0	0	0
	C - R421 (S)	21	0	0	100
	D - CC5 (west of R421)	86	0	100	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.00	0.00	0.0	A
A-BCD	0.12	6.45	0.2	A
A-B				
A-C				
D-ABC	0.05	15.94	0.1	C
C-ABD	0.00	0.00	0.0	A
C-D				
C-A				

2030 With Construction Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	A - R421 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Major arm width	C - R421 (S) - 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
28		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		3.27	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.27	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	2030 With Construction Peak	PM	ONE HOUR	16:45	18:15	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R421 (N)		✓	118	100.000
B - CC5 (east of R421)		✓	4	100.000
C - R421 (S)		✓	66	100.000
D - CC5 (west of R421)		✓	86	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R421 (N)	B - CC5 (east of R421)	C - R421 (S)	D - CC5 (west of R421)
From	A - R421 (N)	0	4	105	9
	B - CC5 (east of R421)	4	0	0	0
	C - R421 (S)	54	0	0	12
	D - CC5 (west of R421)	74	0	12	0

Vehicle Mix

Heavy Vehicle %

		To			
		A - R421 (N)	B - CC5 (east of R421)	C - R421 (S)	D - CC5 (west of R421)
From	A - R421 (N)	0	100	20	86
	B - CC5 (east of R421)	100	0	0	0
	C - R421 (S)	33	0	0	100
	D - CC5 (west of R421)	11	0	100	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.00	0.00	0.0	A
A-BCD	0.02	8.48	0.0	A
A-B				
A-C				
D-ABC	0.17	9.24	0.2	A
C-ABD	0.00	0.00	0.0	A
C-D				
C-A				

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.1.1.1905
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Filename: Junction 29_N52-R421 Rbt_LS.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 13:34:39

»LS - 2024, AM
»LS - 2024, PM
»LS - 2030 No Construction , AM
»LS - 2030 No Construction , PM
»LS - 2030 With Construction Peak, AM
»LS - 2030 With Construction Peak, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	LS [Lane Simulation] - 2024									
A - N52 (ESE)	0.4	5.38	0.25	A	6.22	0.8	5.64	0.34	A	5.45
B - R421	0.4	6.00	0.20	A		0.2	5.22	0.09	A	
C - N52 (WNW)	0.8	6.95	0.37	A		0.4	5.29	0.27	A	
	LS [Lane Simulation] - 2030 No Construction									
A - N52 (ESE)	0.6	5.84	0.28	A	6.64	0.8	6.14	0.38	A	5.83
B - R421	0.4	6.23	0.22	A		0.2	5.46	0.10	A	
C - N52 (WNW)	1.1	7.43	0.41	A		0.6	5.57	0.30	A	
	LS [Lane Simulation] - 2030 With Construction Peak									
A - N52 (ESE)	0.9	6.33	0.38	A	6.94	0.9	6.43	0.42	A	6.39
B - R421	0.6	7.00	0.24	A		0.3	6.26	0.17	A	
C - N52 (WNW)	1.3	7.48	0.44	A		0.9	6.39	0.38	A	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	Water Supply Project
Location	
Site number	Junction 29
Date	19/03/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Calculate RFCs	Relaxation factor for capacity/RFC runs	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)	Last run total time taken (s)
Delay	1.00	100000	100000	Calculate for all arms	3.00	-1	3	1	60	✓			1002611361	61	0.78	4.82

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	07:45	09:15	15	✓
D2	2024	PM	ONE HOUR	16:30	18:00	15	✓
D3	2030 No Construction	AM	ONE HOUR	07:45	09:15	15	✓
D4	2030 No Construction	PM	ONE HOUR	16:30	18:00	15	✓
D5	2030 With Construction Peak	AM	ONE HOUR	07:45	09:15	15	✓
D6	2030 With Construction Peak	PM	ONE HOUR	16:30	18:00	15	✓

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	LS	✓	✓	100.000	100.000

LS - 2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
29		Standard Roundabout		A, B, C	6.22	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.22	A

Arms

Arms

Arm	Name	Description	No give-way line
A	N52 (ESE)		
B	R421		
C	N52 (WNW)		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - N52 (ESE)	6.00	9.23	11.2	7.3	44.8	20.1		
B - R421	4.30	9.56	8.3	7.3	44.8	20.4		
C - N52 (WNW)	6.20	7.10	2.7	7.3	37.0	0.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - N52 (ESE)	0.713	2208
B - R421	0.620	1732
C - N52 (WNW)	0.724	2049

The slope and intercept shown above include any corrections and adjustments.

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - N52 (ESE)	Evenly split	10.00
B - R421	Evenly split	10.00
C - N52 (WNW)	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - N52 (ESE)	**Entry**	**1**	**1**	B	✓	2.00			0	99999	
			2	A, C	✓	2.00			0	99999	
		2	**1**	(A, B, C)		Infinity					
	Exit	**1**	**1**			Infinity					
B - R421	**Entry**	**1**	**1**	C	✓	3.00			0	99999	
			2	A, B	✓	3.00			0	99999	
		2	**1**	(A, B, C)		Infinity					
	Exit	**1**	**1**			Infinity					
C - N52 (WNW)	**Entry**	**1**	**1**	A	✓	3.00			0	99999	
			2	B, C	✓	3.00			0	99999	
		2	**1**	(A, B, C)		Infinity					
	Exit	**1**	**1**			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - N52 (ESE)	**Entry**	**1**	**1**	0.356	1104
			2	0.356	1104
B - R421	**Entry**	**1**	**1**	0.310	866
			2	0.310	866
C - N52 (WNW)	**Entry**	**1**	**1**	0.362	1024
			2	0.362	1024

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			N52 (ESE)	R421	N52 (WNW)
A - N52 (ESE)	1	1		✓	
		2	✓		✓
	2	1	✓	✓	✓
B - R421	1	1			✓
		2	✓	✓	
	2	1	✓	✓	✓
C - N52 (WNW)	1	1	✓		
		2		✓	✓
	2	1	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52 (ESE)		ONE HOUR	✓	268	100.000
B - R421		ONE HOUR	✓	199	100.000
C - N52 (WNW)		ONE HOUR	✓	370	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N52 (ESE)	B - R421	C - N52 (WNW)
From	A - N52 (ESE)	1	34	233
	B - R421	69	0	130
	C - N52 (WNW)	326	43	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
29	0.20	0.80

Heavy Vehicle %

		To		
		A - N52 (ESE)	B - R421	C - N52 (WNW)
From	A - N52 (ESE)	0	26	24
	B - R421	11	0	6
	C - N52 (WNW)	21	5	0

Cyclist %

		To		
		A - N52 (ESE)	B - R421	C - N52 (WNW)
From	A - N52 (ESE)	0	0	0
	B - R421	0	0	0
	C - N52 (WNW)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52 (ESE)	0.25	5.38	0.4	A	245	368
B - R421	0.20	6.00	0.4	A	179	269
C - N52 (WNW)	0.37	6.95	0.8	A	333	499

LS - 2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
29		Standard Roundabout		A, B, C	5.45	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.45	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)	Run automatically
D2	2024	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52 (ESE)		ONE HOUR	✓	382	100.000
B - R421		ONE HOUR	✓	86	100.000
C - N52 (WNW)		ONE HOUR	✓	320	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N52 (ESE)	B - R421	C - N52 (WNW)
From	A - N52 (ESE)	2	65	315
	B - R421	40	0	46
	C - N52 (WNW)	223	96	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
29	0.20	0.80

Heavy Vehicle %

		To		
		A - N52 (ESE)	B - R421	C - N52 (WNW)
From	A - N52 (ESE)	0	9	12
	B - R421	4	0	0
	C - N52 (WNW)	18	2	0

Cyclist %

		To		
		A - N52 (ESE)	B - R421	C - N52 (WNW)
From	A - N52 (ESE)	0	0	0
	B - R421	0	0	0
	C - N52 (WNW)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52 (ESE)	0.34	5.64	0.8	A	349	524
B - R421	0.09	5.22	0.2	A	79	119
C - N52 (WNW)	0.27	5.29	0.4	A	295	443

LS - 2030 No Construction , AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
29		Standard Roundabout		A, B, C	6.64	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.64	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)	Run automatically
D3	2030 No Construction	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52 (ESE)		ONE HOUR	✓	302	100.000
B - R421		ONE HOUR	✓	219	100.000
C - N52 (WNW)		ONE HOUR	✓	415	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N52 (ESE)	B - R421	C - N52 (WNW)
From	A - N52 (ESE)	1	38	263
	B - R421	76	0	143
	C - N52 (WNW)	367	47	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
29	0.20	0.80

Heavy Vehicle %

		To		
		A - N52 (ESE)	B - R421	C - N52 (WNW)
From	A - N52 (ESE)	0	28	26
	B - R421	12	0	7
	C - N52 (WNW)	23	5	0

Cyclist %

		To		
		A - N52 (ESE)	B - R421	C - N52 (WNW)
From	A - N52 (ESE)	0	0	0
	B - R421	0	0	0
	C - N52 (WNW)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52 (ESE)	0.28	5.84	0.6	A	274	411
B - R421	0.22	6.23	0.4	A	201	301
C - N52 (WNW)	0.41	7.43	1.1	A	389	583

LS - 2030 No Construction , PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
29		Standard Roundabout		A, B, C	5.83	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.83	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)	Run automatically
D4	2030 No Construction	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52 (ESE)		ONE HOUR	✓	425	100.000
B - R421		ONE HOUR	✓	93	100.000
C - N52 (WNW)		ONE HOUR	✓	357	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N52 (ESE)	B - R421	C - N52 (WNW)
From	A - N52 (ESE)	2	72	351
	B - R421	43	0	50
	C - N52 (WNW)	250	106	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
29	0.20	0.80

Heavy Vehicle %

		To		
		A - N52 (ESE)	B - R421	C - N52 (WNW)
From	A - N52 (ESE)	0	10	14
	B - R421	4	0	0
	C - N52 (WNW)	20	3	0

Cyclist %

		To		
		A - N52 (ESE)	B - R421	C - N52 (WNW)
From	A - N52 (ESE)	0	0	0
	B - R421	0	0	0
	C - N52 (WNW)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52 (ESE)	0.38	6.14	0.8	A	391	587
B - R421	0.10	5.46	0.2	A	85	128
C - N52 (WNW)	0.30	5.57	0.6	A	330	495

LS - 2030 With Construction Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
29		Standard Roundabout		A, B, C	6.94	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.94	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)	Run automatically
D5	2030 With Construction Peak	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52 (ESE)		ONE HOUR	✓	425	100.000
B - R421		ONE HOUR	✓	233	100.000
C - N52 (WNW)		ONE HOUR	✓	458	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N52 (ESE)	B - R421	C - N52 (WNW)
From	A - N52 (ESE)	1	87	337
	B - R421	89	0	144
	C - N52 (WNW)	382	75	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
29	0.20	0.80

Heavy Vehicle %

		To		
		A - N52 (ESE)	B - R421	C - N52 (WNW)
From	A - N52 (ESE)	0	26	23
	B - R421	24	0	7
	C - N52 (WNW)	23	3	0

Cyclist %

		To		
		A - N52 (ESE)	B - R421	C - N52 (WNW)
From	A - N52 (ESE)	0	0	0
	B - R421	0	0	0
	C - N52 (WNW)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52 (ESE)	0.38	6.33	0.9	A	390	584
B - R421	0.24	7.00	0.6	A	217	325
C - N52 (WNW)	0.44	7.48	1.3	A	423	635

LS - 2030 With Construction Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
29		Standard Roundabout		A, B, C	6.39	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.39	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)	Run automatically
D6	2030 With Construction Peak	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52 (ESE)		ONE HOUR	✓	453	100.000
B - R421		ONE HOUR	✓	170	100.000
C - N52 (WNW)		ONE HOUR	✓	432	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N52 (ESE)	B - R421	C - N52 (WNW)
From	A - N52 (ESE)	2	85	366
	B - R421	92	0	78
	C - N52 (WNW)	324	107	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
29	0.20	0.80

Heavy Vehicle %

		To		
		A - N52 (ESE)	B - R421	C - N52 (WNW)
From	A - N52 (ESE)	0	23	15
	B - R421	15	0	0
	C - N52 (WNW)	17	3	0

Cyclist %

		To		
		A - N52 (ESE)	B - R421	C - N52 (WNW)
From	A - N52 (ESE)	0	0	0
	B - R421	0	0	0
	C - N52 (WNW)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52 (ESE)	0.42	6.43	0.9	A	417	626
B - R421	0.17	6.26	0.3	A	156	234
C - N52 (WNW)	0.38	6.39	0.9	A	396	594

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.1.1.1905
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Filename: Junction 30_N52-R420 Rbt_LS.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 13:35:41

»LS_AM - 2024, AM
»LS_AM - 2029 No Construction , AM
»LS_AM - 2029 With Construction Peak, AM
»LS_PM - 2024, PM
»LS_PM - 2029 No Construction , PM
»LS_PM - 2029 With Construction Peak, PM

Summary of junction performance

	AM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	LS_AM [Lane Simulation] - 2024				
A - N52 (N)	4.5	20.48	0.75	C	37.21
B - R420 (E)	9.2	57.70	0.88	F	
C - N52 (S)	7.5	42.73	0.86	E	
D - R420 (W)	3.6	32.21	0.66	D	
	LS_AM [Lane Simulation] - 2029 No Construction				
A - N52 (N)	9.1	40.11	0.86	E	78.09
B - R420 (E)	27.3	141.17	1.03	F	
C - N52 (S)	19.4	87.47	0.98	F	
D - R420 (W)	6.2	49.38	0.77	E	

	LS_AM [Lane Simulation] - 2029 With Construction Peak				
A - N52 (N)	15.0	53.02	0.96	F	103.33
B - R420 (E)	40.5	211.78	1.09	F	
C - N52 (S)	22.3	106.18	0.98	F	
D - R420 (W)	6.5	51.85	0.81	F	

	PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	LS_PM [Lane Simulation] - 2024				
A - N52 (N)	18.0	68.93	0.96	F	64.17
B - R420 (E)	9.4	82.13	0.88	F	
C - N52 (S)	11.5	50.21	0.94	F	
D - R420 (W)	15.2	64.01	0.95	F	
	LS_PM [Lane Simulation] - 2029 No Construction				
A - N52 (N)	50.4	165.45	1.07	F	145.76
B - R420 (E)	18.5	142.63	0.99	F	
C - N52 (S)	33.4	121.36	1.02	F	
D - R420 (W)	36.9	149.87	1.06	F	
	LS_PM [Lane Simulation] - 2029 With Construction Peak				
A - N52 (N)	49.8	167.12	1.12	F	166.91
B - R420 (E)	21.6	160.29	1.02	F	
C - N52 (S)	35.7	129.09	1.04	F	
D - R420 (W)	52.9	208.18	1.14	F	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	Water Supply Project
Location	
Site number	Junction 7
Date	17/04/2024
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Calculate RFCs	Relaxation factor for capacity/RFC runs	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)	Last run total time taken (s)
Delay	1.00	100000	100000	Calculate for all arms	3.00	-1	3	1	60	✓			839746802	469	27.69	59.70

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	08:00	09:30	15	✓
D2	2024	PM	ONE HOUR	16:15	17:45	15	✓
D3	2029 No Construction	AM	ONE HOUR	08:00	09:30	15	✓
D4	2029 No Construction	PM	ONE HOUR	16:15	17:45	15	✓
D5	2029 With Construction Peak	AM	ONE HOUR	08:00	09:30	15	✓
D6	2029 With Construction Peak	PM	ONE HOUR	16:15	17:45	15	✓

LS_AM - 2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A1 - LS_AM [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	LS_AM	✓	✓	✓	D1,D3,D5	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
30		Standard Roundabout		A, B, C, D	37.21	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	37.21	E

Arms

Arms

Arm	Name	Description	No give-way line
A	N52 (N)		
B	R420 (E)		
C	N52 (S)		
D	R420 (W)		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - N52 (N)	3.70	6.50	11.0	27.2	50.0	26.6		
B - R420 (E)	3.50	8.03	10.0	28.5	50.0	24.2		
C - N52 (S)	3.70	7.80	10.0	16.0	50.0	27.5		
D - R420 (W)	3.70	8.30	12.0	32.0	50.0	26.4		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - N52 (N)	0.602	1628
B - R420 (E)	0.614	1677
C - N52 (S)	0.599	1653
D - R420 (W)	0.636	1801

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - N52 (N)	Direct		100
B - R420 (E)	Direct		-125
C - N52 (S)	Direct		50
D - R420 (W)	Direct		-300

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - N52 (N)	Evenly split	10.00
B - R420 (E)	Evenly split	10.00
C - N52 (S)	Evenly split	10.00
D - R420 (W)	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - N52 (N)	Entry	1	1	B, C	✓	2.00			0	99999	
			2	A, D	✓	2.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					
B - R420 (E)	Entry	1	1	C, D	✓	2.00			0	99999	
			2	A, B	✓	2.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					
C - N52 (S)	Entry	1	1	A, D	✓	2.00			0	99999	
			2	B, C	✓	2.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					
D - R420 (W)	Entry	1	1	A	✓	3.00			0	99999	
			2	B, C, D	✓	3.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - N52 (N)	Entry	1	1	0.301	814
			2	0.301	814
B - R420 (E)	Entry	1	1	0.307	839
			2	0.307	839
C - N52 (S)	Entry	1	1	0.299	826
			2	0.299	826
D - R420 (W)	Entry	1	1	0.318	900
			2	0.318	900

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm			
			N52 (N)	R420 (E)	N52 (S)	R420 (W)
A - N52 (N)	1	1		✓	✓	
		2	✓			✓
	2	1	✓	✓	✓	✓
B - R420 (E)	1	1			✓	✓
		2	✓	✓		
	2	1	✓	✓	✓	✓
C - N52 (S)	1	1	✓			✓
		2		✓	✓	
	2	1	✓	✓	✓	✓
D - R420 (W)	1	1	✓			
		2		✓	✓	✓
	2	1	✓	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52 (N)		ONE HOUR	✓	705	100.000
B - R420 (E)		ONE HOUR	✓	511	100.000
C - N52 (S)		ONE HOUR	✓	569	100.000
D - R420 (W)		ONE HOUR	✓	357	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - N52 (N)	B - R420 (E)	C - N52 (S)	D - R420 (W)
From	A - N52 (N)	0	113	409	183
	B - R420 (E)	180	0	84	247
	C - N52 (S)	373	57	0	139
	D - R420 (W)	138	109	110	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
30	0.20	0.80

Heavy Vehicle %

		To			
		A - N52 (N)	B - R420 (E)	C - N52 (S)	D - R420 (W)
From	A - N52 (N)	0	23	22	11
	B - R420 (E)	14	0	8	11
	C - N52 (S)	23	17	0	11
	D - R420 (W)	8	9	20	0

Cyclist %

		To			
		A - N52 (N)	B - R420 (E)	C - N52 (S)	D - R420 (W)
From	A - N52 (N)	0	0	0	0
	B - R420 (E)	0	0	0	0
	C - N52 (S)	0	0	0	0
	D - R420 (W)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52 (N)	0.75	20.48	4.5	C	647	971
B - R420 (E)	0.88	57.70	9.2	F	467	701
C - N52 (S)	0.86	42.73	7.5	E	525	787
D - R420 (W)	0.66	32.21	3.6	D	327	490

LS_AM - 2029 No Construction , AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A1 - LS_AM [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	LS_AM	✓	✓	✓	D1,D3,D5	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
30		Standard Roundabout		A, B, C, D	78.09	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	78.09	F

Arms

Arms

Arm	Name	Description	No give-way line
A	N52 (N)		
B	R420 (E)		
C	N52 (S)		
D	R420 (W)		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - N52 (N)	3.70	6.50	11.0	27.2	50.0	26.6		
B - R420 (E)	3.50	8.03	10.0	28.5	50.0	24.2		
C - N52 (S)	3.70	7.80	10.0	16.0	50.0	27.5		
D - R420 (W)	3.70	8.30	12.0	32.0	50.0	26.4		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - N52 (N)	0.602	1628
B - R420 (E)	0.614	1677
C - N52 (S)	0.599	1653
D - R420 (W)	0.636	1801

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - N52 (N)	Direct		100
B - R420 (E)	Direct		-125
C - N52 (S)	Direct		50
D - R420 (W)	Direct		-300

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - N52 (N)	Evenly split	10.00
B - R420 (E)	Evenly split	10.00
C - N52 (S)	Evenly split	10.00
D - R420 (W)	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - N52 (N)	Entry	1	1	B, C	✓	2.00			0	99999	
			2	A, D	✓	2.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					
B - R420 (E)	Entry	1	1	C, D	✓	2.00			0	99999	
			2	A, B	✓	2.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					
C - N52 (S)	Entry	1	1	A, D	✓	2.00			0	99999	
			2	B, C	✓	2.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					
D - R420 (W)	Entry	1	1	A	✓	3.00			0	99999	
			2	B, C, D	✓	3.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - N52 (N)	Entry	1	1	0.301	814
			2	0.301	814
B - R420 (E)	Entry	1	1	0.307	839
			2	0.307	839
C - N52 (S)	Entry	1	1	0.299	826
			2	0.299	826
D - R420 (W)	Entry	1	1	0.318	900
			2	0.318	900

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm			
			N52 (N)	R420 (E)	N52 (S)	R420 (W)
A - N52 (N)	1	1		✓	✓	
		2	✓			✓
	2	1	✓	✓	✓	✓
B - R420 (E)	1	1			✓	✓
		2	✓	✓		
	2	1	✓	✓	✓	✓
C - N52 (S)	1	1	✓			✓
		2		✓	✓	
	2	1	✓	✓	✓	✓
D - R420 (W)	1	1	✓			
		2		✓	✓	✓
	2	1	✓	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2029 No Construction	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52 (N)		ONE HOUR	✓	792	100.000
B - R420 (E)		ONE HOUR	✓	557	100.000
C - N52 (S)		ONE HOUR	✓	638	100.000
D - R420 (W)		ONE HOUR	✓	389	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - N52 (N)	B - R420 (E)	C - N52 (S)	D - R420 (W)
From	A - N52 (N)	0	124	469	199
	B - R420 (E)	197	0	91	269
	C - N52 (S)	424	62	0	152
	D - R420 (W)	150	118	121	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
30	0.20	0.80

Heavy Vehicle %

		To			
		A - N52 (N)	B - R420 (E)	C - N52 (S)	D - R420 (W)
From	A - N52 (N)	0	25	23	12
	B - R420 (E)	16	0	9	12
	C - N52 (S)	24	18	0	12
	D - R420 (W)	9	10	22	0

Cyclist %

		To			
		A - N52 (N)	B - R420 (E)	C - N52 (S)	D - R420 (W)
From	A - N52 (N)	0	0	0	0
	B - R420 (E)	0	0	0	0
	C - N52 (S)	0	0	0	0
	D - R420 (W)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52 (N)	0.86	40.11	9.1	E	724	1085
B - R420 (E)	1.03	141.17	27.3	F	512	768
C - N52 (S)	0.98	87.47	19.4	F	582	874
D - R420 (W)	0.77	49.38	6.2	E	357	536

LS_AM - 2029 With Construction Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A1 - LS_AM [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	LS_AM	✓	✓	✓	D1,D3,D5	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
30		Standard Roundabout		A, B, C, D	103.33	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	103.33	F

Arms

Arms

Arm	Name	Description	No give-way line
A	N52 (N)		
B	R420 (E)		
C	N52 (S)		
D	R420 (W)		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - N52 (N)	3.70	6.50	11.0	27.2	50.0	26.6		
B - R420 (E)	3.50	8.03	10.0	28.5	50.0	24.2		
C - N52 (S)	3.70	7.80	10.0	16.0	50.0	27.5		
D - R420 (W)	3.70	8.30	12.0	32.0	50.0	26.4		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - N52 (N)	0.602	1628
B - R420 (E)	0.614	1677
C - N52 (S)	0.599	1653
D - R420 (W)	0.636	1801

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - N52 (N)	Direct		100
B - R420 (E)	Direct		-125
C - N52 (S)	Direct		50
D - R420 (W)	Direct		-300

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - N52 (N)	Evenly split	10.00
B - R420 (E)	Evenly split	10.00
C - N52 (S)	Evenly split	10.00
D - R420 (W)	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - N52 (N)	Entry	1	1	B, C	✓	2.00			0	99999	
			2	A, D	✓	2.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					
B - R420 (E)	Entry	1	1	C, D	✓	2.00			0	99999	
			2	A, B	✓	2.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					
C - N52 (S)	Entry	1	1	A, D	✓	2.00			0	99999	
			2	B, C	✓	2.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					
D - R420 (W)	Entry	1	1	A	✓	3.00			0	99999	
			2	B, C, D	✓	3.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - N52 (N)	Entry	1	1	0.301	814
			2	0.301	814
B - R420 (E)	Entry	1	1	0.307	839
			2	0.307	839
C - N52 (S)	Entry	1	1	0.299	826
			2	0.299	826
D - R420 (W)	Entry	1	1	0.318	900
			2	0.318	900

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm			
			N52 (N)	R420 (E)	N52 (S)	R420 (W)
A - N52 (N)	1	1		✓	✓	
		2	✓			✓
	2	1	✓	✓	✓	✓
B - R420 (E)	1	1			✓	✓
		2	✓	✓		
	2	1	✓	✓	✓	✓
C - N52 (S)	1	1	✓			✓
		2		✓	✓	
	2	1	✓	✓	✓	✓
D - R420 (W)	1	1	✓			
		2		✓	✓	✓
	2	1	✓	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2029 With Construction Peak	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52 (N)		ONE HOUR	✓	862	100.000
B - R420 (E)		ONE HOUR	✓	569	100.000
C - N52 (S)		ONE HOUR	✓	646	100.000
D - R420 (W)		ONE HOUR	✓	397	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - N52 (N)	B - R420 (E)	C - N52 (S)	D - R420 (W)
From	A - N52 (N)	0	131	470	261
	B - R420 (E)	203	0	97	269
	C - N52 (S)	425	67	0	154
	D - R420 (W)	151	118	128	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
30	0.20	0.80

Heavy Vehicle %

		To			
		A - N52 (N)	B - R420 (E)	C - N52 (S)	D - R420 (W)
From	A - N52 (N)	0	28	23	9
	B - R420 (E)	18	0	13	12
	C - N52 (S)	24	23	0	12
	D - R420 (W)	9	10	20	0

Cyclist %

		To			
		A - N52 (N)	B - R420 (E)	C - N52 (S)	D - R420 (W)
From	A - N52 (N)	0	0	0	0
	B - R420 (E)	0	0	0	0
	C - N52 (S)	0	0	0	0
	D - R420 (W)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52 (N)	0.96	53.02	15.0	F	788	1182
B - R420 (E)	1.09	211.78	40.5	F	522	783
C - N52 (S)	0.98	106.18	22.3	F	591	886
D - R420 (W)	0.81	51.85	6.5	F	363	544

LS_PM - 2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS_PM [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	LS_PM	✓	✓	✓	D2,D4,D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
30		Standard Roundabout		A, B, C, D	64.17	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	64.17	F

Arms

Arms

Arm	Name	Description	No give-way line
A	N52 (N)		
B	R420 (E)		
C	N52 (S)		
D	R420 (W)		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - N52 (N)	3.70	6.50	11.0	27.2	50.0	26.6		
B - R420 (E)	3.50	8.03	10.0	28.5	50.0	24.2		
C - N52 (S)	3.70	7.80	10.0	16.0	50.0	27.5		
D - R420 (W)	3.70	8.30	12.0	32.0	50.0	26.4		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - N52 (N)	0.602	1628
B - R420 (E)	0.614	1677
C - N52 (S)	0.599	1653
D - R420 (W)	0.636	1801

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - N52 (N)	Direct		100
B - R420 (E)	Direct		-230
C - N52 (S)	Direct		105
D - R420 (W)	Direct		-125

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - N52 (N)	Evenly split	10.00
B - R420 (E)	Evenly split	10.00
C - N52 (S)	Evenly split	10.00
D - R420 (W)	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - N52 (N)	Entry	1	1	B, C	✓	2.00			0	99999	
			2	A, D	✓	2.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					
B - R420 (E)	Entry	1	1	C, D	✓	2.00			0	99999	
			2	A, B	✓	2.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					
C - N52 (S)	Entry	1	1	A, D	✓	2.00			0	99999	
			2	B, C	✓	2.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					
D - R420 (W)	Entry	1	1	A	✓	3.00			0	99999	
			2	B, C, D	✓	3.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - N52 (N)	Entry	1	1	0.301	814
			2	0.301	814
B - R420 (E)	Entry	1	1	0.307	839
			2	0.307	839
C - N52 (S)	Entry	1	1	0.299	826
			2	0.299	826
D - R420 (W)	Entry	1	1	0.318	900
			2	0.318	900

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm			
			N52 (N)	R420 (E)	N52 (S)	R420 (W)
A - N52 (N)	1	1		✓	✓	
		2	✓			✓
	2	1	✓	✓	✓	✓
B - R420 (E)	1	1			✓	✓
		2	✓	✓		
	2	1	✓	✓	✓	✓
C - N52 (S)	1	1	✓			✓
		2		✓	✓	
	2	1	✓	✓	✓	✓
D - R420 (W)	1	1	✓			
		2		✓	✓	✓
	2	1	✓	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2024	PM	ONE HOUR	16:15	17:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52 (N)		ONE HOUR	✓	813	100.000
B - R420 (E)		ONE HOUR	✓	353	100.000
C - N52 (S)		ONE HOUR	✓	723	100.000
D - R420 (W)		ONE HOUR	✓	688	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - N52 (N)	B - R420 (E)	C - N52 (S)	D - R420 (W)
From	A - N52 (N)	0	193	412	208
	B - R420 (E)	111	0	70	172
	C - N52 (S)	452	102	0	169
	D - R420 (W)	258	239	189	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
30	0.20	0.80

Heavy Vehicle %

		To			
		A - N52 (N)	B - R420 (E)	C - N52 (S)	D - R420 (W)
From	A - N52 (N)	0	11	17	2
	B - R420 (E)	22	0	17	6
	C - N52 (S)	16	12	0	1
	D - R420 (W)	3	1	4	0

Cyclist %

		To			
		A - N52 (N)	B - R420 (E)	C - N52 (S)	D - R420 (W)
From	A - N52 (N)	0	0	0	0
	B - R420 (E)	0	0	0	0
	C - N52 (S)	0	0	0	0
	D - R420 (W)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52 (N)	0.96	68.93	18.0	F	747	1121
B - R420 (E)	0.88	82.13	9.4	F	324	486
C - N52 (S)	0.94	50.21	11.5	F	664	996
D - R420 (W)	0.95	64.01	15.2	F	630	945

LS_PM - 2029 No Construction , PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS_PM [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	LS_PM	✓	✓	✓	D2,D4,D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
30		Standard Roundabout		A, B, C, D	145.76	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	145.76	F

Arms

Arms

Arm	Name	Description	No give-way line
A	N52 (N)		
B	R420 (E)		
C	N52 (S)		
D	R420 (W)		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - N52 (N)	3.70	6.50	11.0	27.2	50.0	26.6		
B - R420 (E)	3.50	8.03	10.0	28.5	50.0	24.2		
C - N52 (S)	3.70	7.80	10.0	16.0	50.0	27.5		
D - R420 (W)	3.70	8.30	12.0	32.0	50.0	26.4		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - N52 (N)	0.602	1628
B - R420 (E)	0.614	1677
C - N52 (S)	0.599	1653
D - R420 (W)	0.636	1801

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - N52 (N)	Direct		100
B - R420 (E)	Direct		-230
C - N52 (S)	Direct		105
D - R420 (W)	Direct		-125

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - N52 (N)	Evenly split	10.00
B - R420 (E)	Evenly split	10.00
C - N52 (S)	Evenly split	10.00
D - R420 (W)	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - N52 (N)	Entry	1	1	B, C	✓	2.00			0	99999	
			2	A, D	✓	2.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					
B - R420 (E)	Entry	1	1	C, D	✓	2.00			0	99999	
			2	A, B	✓	2.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					
C - N52 (S)	Entry	1	1	A, D	✓	2.00			0	99999	
			2	B, C	✓	2.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					
D - R420 (W)	Entry	1	1	A	✓	3.00			0	99999	
			2	B, C, D	✓	3.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - N52 (N)	Entry	1	1	0.301	814
			2	0.301	814
B - R420 (E)	Entry	1	1	0.307	839
			2	0.307	839
C - N52 (S)	Entry	1	1	0.299	826
			2	0.299	826
D - R420 (W)	Entry	1	1	0.318	900
			2	0.318	900

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm			
			N52 (N)	R420 (E)	N52 (S)	R420 (W)
A - N52 (N)	1	1		✓	✓	
		2	✓			✓
	2	1	✓	✓	✓	✓
B - R420 (E)	1	1			✓	✓
		2	✓	✓		
	2	1	✓	✓	✓	✓
C - N52 (S)	1	1	✓			✓
		2		✓	✓	
	2	1	✓	✓	✓	✓
D - R420 (W)	1	1	✓			
		2		✓	✓	✓
	2	1	✓	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2029 No Construction	PM	ONE HOUR	16:15	17:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52 (N)		ONE HOUR	✓	902	100.000
B - R420 (E)		ONE HOUR	✓	386	100.000
C - N52 (S)		ONE HOUR	✓	807	100.000
D - R420 (W)		ONE HOUR	✓	744	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - N52 (N)	B - R420 (E)	C - N52 (S)	D - R420 (W)
From	A - N52 (N)	0	211	467	224
	B - R420 (E)	122	0	77	187
	C - N52 (S)	513	112	0	182
	D - R420 (W)	279	258	205	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
30	0.20	0.80

Heavy Vehicle %

		To			
		A - N52 (N)	B - R420 (E)	C - N52 (S)	D - R420 (W)
From	A - N52 (N)	0	12	18	2
	B - R420 (E)	24	0	18	7
	C - N52 (S)	17	13	0	2
	D - R420 (W)	4	1	5	0

Cyclist %

		To			
		A - N52 (N)	B - R420 (E)	C - N52 (S)	D - R420 (W)
From	A - N52 (N)	0	0	0	0
	B - R420 (E)	0	0	0	0
	C - N52 (S)	0	0	0	0
	D - R420 (W)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52 (N)	1.07	165.45	50.4	F	831	1246
B - R420 (E)	0.99	142.63	18.5	F	355	533
C - N52 (S)	1.02	121.36	33.4	F	740	1111
D - R420 (W)	1.06	149.87	36.9	F	681	1022

LS_PM - 2029 With Construction Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS_PM [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	LS_PM	✓	✓	✓	D2,D4,D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
30		Standard Roundabout		A, B, C, D	166.91	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	166.91	F

Arms

Arms

Arm	Name	Description	No give-way line
A	N52 (N)		
B	R420 (E)		
C	N52 (S)		
D	R420 (W)		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - N52 (N)	3.70	6.50	11.0	27.2	50.0	26.6		
B - R420 (E)	3.50	8.03	10.0	28.5	50.0	24.2		
C - N52 (S)	3.70	7.80	10.0	16.0	50.0	27.5		
D - R420 (W)	3.70	8.30	12.0	32.0	50.0	26.4		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - N52 (N)	0.602	1628
B - R420 (E)	0.614	1677
C - N52 (S)	0.599	1653
D - R420 (W)	0.636	1801

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - N52 (N)	Direct		100
B - R420 (E)	Direct		-230
C - N52 (S)	Direct		105
D - R420 (W)	Direct		-125

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - N52 (N)	Evenly split	10.00
B - R420 (E)	Evenly split	10.00
C - N52 (S)	Evenly split	10.00
D - R420 (W)	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - N52 (N)	Entry	1	1	B, C	✓	2.00			0	99999	
			2	A, D	✓	2.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					
B - R420 (E)	Entry	1	1	C, D	✓	2.00			0	99999	
			2	A, B	✓	2.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					
C - N52 (S)	Entry	1	1	A, D	✓	2.00			0	99999	
			2	B, C	✓	2.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					
D - R420 (W)	Entry	1	1	A	✓	3.00			0	99999	
			2	B, C, D	✓	3.00			0	99999	
		2	1	(A, B, C, D)		Infinity					
	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - N52 (N)	Entry	1	1	0.301	814
			2	0.301	814
B - R420 (E)	Entry	1	1	0.307	839
			2	0.307	839
C - N52 (S)	Entry	1	1	0.299	826
			2	0.299	826
D - R420 (W)	Entry	1	1	0.318	900
			2	0.318	900

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm			
			N52 (N)	R420 (E)	N52 (S)	R420 (W)
A - N52 (N)	1	1		✓	✓	
		2	✓			✓
	2	1	✓	✓	✓	✓
B - R420 (E)	1	1			✓	✓
		2	✓	✓		
	2	1	✓	✓	✓	✓
C - N52 (S)	1	1	✓			✓
		2		✓	✓	
	2	1	✓	✓	✓	✓
D - R420 (W)	1	1	✓			
		2		✓	✓	✓
	2	1	✓	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2029 With Construction Peak	PM	ONE HOUR	16:15	17:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N52 (N)		ONE HOUR	✓	911	100.000
B - R420 (E)		ONE HOUR	✓	397	100.000
C - N52 (S)		ONE HOUR	✓	819	100.000
D - R420 (W)		ONE HOUR	✓	809	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - N52 (N)	B - R420 (E)	C - N52 (S)	D - R420 (W)
From	A - N52 (N)	0	217	468	226
	B - R420 (E)	128	0	82	187
	C - N52 (S)	513	117	0	189
	D - R420 (W)	341	258	208	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
30	0.20	0.80

Heavy Vehicle %

		To			
		A - N52 (N)	B - R420 (E)	C - N52 (S)	D - R420 (W)
From	A - N52 (N)	0	15	18	2
	B - R420 (E)	28	0	22	7
	C - N52 (S)	17	16	0	1
	D - R420 (W)	3	1	5	0

Cyclist %

		To			
		A - N52 (N)	B - R420 (E)	C - N52 (S)	D - R420 (W)
From	A - N52 (N)	0	0	0	0
	B - R420 (E)	0	0	0	0
	C - N52 (S)	0	0	0	0
	D - R420 (W)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N52 (N)	1.12	167.12	49.8	F	836	1254
B - R420 (E)	1.02	160.29	21.6	F	366	549
C - N52 (S)	1.04	129.09	35.7	F	754	1131
D - R420 (W)	1.14	208.18	52.9	F	746	1118

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.1.1.1905
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Filename: Junction 32_N80-R422 Rbt_LS.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 13:37:16

»Lane Simulation - 2024, AM
»Lane Simulation - 2024, PM
»Lane Simulation - 2031 No Construction , AM
»Lane Simulation - 2031 No Construction , PM
»Lane Simulation - 2031 With Construction Peak, AM
»Lane Simulation - 2031 With Construction Peak, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	Lane Simulation [Lane Simulation] - 2024									
A - N80 (S)	1.3	6.14	0.42	A	13.76	2.6	9.38	0.62	A	16.91
B - R422	1.1	19.17	0.53	C		1.6	29.71	0.65	D	
C - N80 (N)	2.8	20.59	0.66	C		3.0	23.59	0.70	C	
	Lane Simulation [Lane Simulation] - 2031 No Construction									
A - N80 (S)	1.1	7.15	0.48	A	18.38	2.7	11.96	0.73	B	29.23
B - R422	2.1	29.00	0.60	D		4.8	71.30	0.77	F	
C - N80 (N)	3.6	27.30	0.72	D		6.0	39.25	0.87	E	
	Lane Simulation [Lane Simulation] - 2031 With Construction Peak									
A - N80 (S)	1.4	7.74	0.51	A	22.13	3.5	13.49	0.72	B	43.34
B - R422	2.8	40.15	0.66	E		6.9	91.70	0.85	F	
C - N80 (N)	4.5	32.24	0.75	D		11.0	69.21	0.88	F	

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. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	Water Supply Project
Location	
Site number	Junction 32
Date	19/03/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
JUNCTIONS 9	5.75						0.85	36.00	20.00		

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Calculate RFCs	Relaxation factor for capacity/RFC runs	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)	Last run total time taken (s)
Delay	1.00	100000	100000	Calculate for all arms	3.00	-1	3	1	60	✓			2074442065	133	1.48	4.74

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	08:15	09:45	15	✓
D2	2024	PM	ONE HOUR	16:45	18:15	15	✓
D3	2031 No Construction	AM	ONE HOUR	08:15	09:45	15	✓
D4	2031 No Construction	PM	ONE HOUR	16:45	18:15	15	✓
D5	2031 With Construction Peak	AM	ONE HOUR	08:15	09:45	15	✓
D6	2031 With Construction Peak	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Lane Simulation	✓	✓	100.000	100.000

Lane Simulation - 2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A1 - Lane Simulation [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
32		Mini-roundabout		A, B, C	13.76	B

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		13.76	B

Arms

Arms

Arm	Name	Description
A	N80 (S)	
B	R422	
C	N80 (N)	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A - N80 (S)	3.00	3.00	3.00	0.0	5.00	2.00	0.0	
B - R422	3.00	3.00	3.00	0.0	5.00	2.00	0.0	
C - N80 (N)	3.00	3.00	3.00	0.0	5.00	2.00	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - N80 (S)	0.590	985
B - R422	0.590	985
C - N80 (N)	0.590	985

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - N80 (S)	Direct		200
B - R422	Direct		-350
C - N80 (N)	Direct		-250

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - N80 (S)	Evenly split	10.00
B - R422	Evenly split	10.00
C - N80 (N)	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - N80 (S)	Entry	1	1	A, C, B		Infinity			0	99999	
	Exit	1	1			Infinity					
B - R422	Entry	1	1	A, C, B		Infinity			0	99999	
	Exit	1	1			Infinity					
C - N80 (N)	Entry	1	1	A, C, B		Infinity			0	99999	
	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - N80 (S)	Entry	1	1	0.590	985
B - R422	Entry	1	1	0.590	985
C - N80 (N)	Entry	1	1	0.590	985

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			N80 (S)	R422	N80 (N)
A - N80 (S)	1	1	✓	✓	✓
B - R422	1	1	✓	✓	✓
C - N80 (N)	1	1	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	08:15	09:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N80 (S)		ONE HOUR	✓	444	100.000
B - R422		ONE HOUR	✓	189	100.000
C - N80 (N)		ONE HOUR	✓	341	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N80 (S)	B - R422	C - N80 (N)
From	A - N80 (S)	0	105	339
	B - R422	172	1	16
	C - N80 (N)	338	3	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
32	0.20	0.80

Heavy Vehicle %

		To		
		A - N80 (S)	B - R422	C - N80 (N)
From	A - N80 (S)	0	7	16
	B - R422	6	0	0
	C - N80 (N)	21	60	0

Cyclist %

		To		
		A - N80 (S)	B - R422	C - N80 (N)
From	A - N80 (S)	0	0	0
	B - R422	0	0	0
	C - N80 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N80 (S)	0.42	6.14	1.3	A	405	608
B - R422	0.53	19.17	1.1	C	175	263
C - N80 (N)	0.66	20.59	2.8	C	312	469

Lane Simulation - 2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 85% of the total flow for the roundabout for one or more time segments]
Info	Simulation	A1 - Lane Simulation [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
32		Mini-roundabout		A, B, C	16.91	C

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		16.91	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2024	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N80 (S)		ONE HOUR	✓	663	100.000
B - R422		ONE HOUR	✓	180	100.000
C - N80 (N)		ONE HOUR	✓	406	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N80 (S)	B - R422	C - N80 (N)
From	A - N80 (S)	12	194	457
	B - R422	146	1	33
	C - N80 (N)	393	13	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
32	0.20	0.80

Heavy Vehicle %

		To		
		A - N80 (S)	B - R422	C - N80 (N)
From	A - N80 (S)	0	4	13
	B - R422	7	0	0
	C - N80 (N)	14	0	0

Cyclist %

		To		
		A - N80 (S)	B - R422	C - N80 (N)
From	A - N80 (S)	0	0	0
	B - R422	0	0	0
	C - N80 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N80 (S)	0.62	9.38	2.6	A	606	908
B - R422	0.65	29.71	1.6	D	162	244
C - N80 (N)	0.70	23.59	3.0	C	371	557

Lane Simulation - 2031 No Construction , AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A1 - Lane Simulation [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
32		Mini-roundabout		A, B, C	18.38	C

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		18.38	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2031 No Construction	AM	ONE HOUR	08:15	09:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N80 (S)		ONE HOUR	✓	509	100.000
B - R422		ONE HOUR	✓	214	100.000
C - N80 (N)		ONE HOUR	✓	393	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N80 (S)	B - R422	C - N80 (N)
From	A - N80 (S)	0	120	389
	B - R422	195	1	18
	C - N80 (N)	390	3	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
32	0.20	0.80

Heavy Vehicle %

		To		
		A - N80 (S)	B - R422	C - N80 (N)
From	A - N80 (S)	0	7	17
	B - R422	6	0	0
	C - N80 (N)	23	62	0

Cyclist %

		To		
		A - N80 (S)	B - R422	C - N80 (N)
From	A - N80 (S)	0	0	0
	B - R422	0	0	0
	C - N80 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N80 (S)	0.48	7.15	1.1	A	467	700
B - R422	0.60	29.00	2.1	D	192	289
C - N80 (N)	0.72	27.30	3.6	D	358	537

Lane Simulation - 2031 No Construction , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 85% of the total flow for the roundabout for one or more time segments]
Info	Simulation	A1 - Lane Simulation [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
32		Mini-roundabout		A, B, C	29.23	D

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		29.23	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2031 No Construction	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N80 (S)		ONE HOUR	✓	758	100.000
B - R422		ONE HOUR	✓	204	100.000
C - N80 (N)		ONE HOUR	✓	466	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N80 (S)	B - R422	C - N80 (N)
From	A - N80 (S)	14	221	523
	B - R422	166	1	37
	C - N80 (N)	451	15	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
32	0.20	0.80

Heavy Vehicle %

		To		
		A - N80 (S)	B - R422	C - N80 (N)
From	A - N80 (S)	0	5	14
	B - R422	7	0	0
	C - N80 (N)	15	0	0

Cyclist %

		To		
		A - N80 (S)	B - R422	C - N80 (N)
From	A - N80 (S)	0	0	0
	B - R422	0	0	0
	C - N80 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N80 (S)	0.73	11.96	2.7	B	699	1048
B - R422	0.77	71.30	4.8	F	185	277
C - N80 (N)	0.87	39.25	6.0	E	428	642

Lane Simulation - 2031 With Construction Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 81% of the total flow for the roundabout for one or more time segments]
Info	Simulation	A1 - Lane Simulation [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
32		Mini-roundabout		A, B, C	22.13	C

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		22.13	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2031 With Construction Peak	AM	ONE HOUR	08:15	09:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N80 (S)		ONE HOUR	✓	556	100.000
B - R422		ONE HOUR	✓	214	100.000
C - N80 (N)		ONE HOUR	✓	412	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N80 (S)	B - R422	C - N80 (N)
From	A - N80 (S)	0	120	436
	B - R422	195	1	18
	C - N80 (N)	409	3	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
32	0.20	0.80

Heavy Vehicle %

		To		
		A - N80 (S)	B - R422	C - N80 (N)
From	A - N80 (S)	0	7	17
	B - R422	6	0	0
	C - N80 (N)	23	62	0

Cyclist %

		To		
		A - N80 (S)	B - R422	C - N80 (N)
From	A - N80 (S)	0	0	0
	B - R422	0	0	0
	C - N80 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N80 (S)	0.51	7.74	1.4	A	510	765
B - R422	0.66	40.15	2.8	E	198	297
C - N80 (N)	0.75	32.24	4.5	D	374	560

Lane Simulation - 2031 With Construction Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 86% of the total flow for the roundabout for one or more time segments]
Info	Simulation	A1 - Lane Simulation [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
32		Mini-roundabout		A, B, C	43.34	E

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		43.34	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2031 With Construction Peak	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - N80 (S)		ONE HOUR	✓	777	100.000
B - R422		ONE HOUR	✓	204	100.000
C - N80 (N)		ONE HOUR	✓	513	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - N80 (S)	B - R422	C - N80 (N)
From	A - N80 (S)	14	221	542
	B - R422	166	1	37
	C - N80 (N)	498	15	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
32	0.20	0.80

Heavy Vehicle %

		To		
		A - N80 (S)	B - R422	C - N80 (N)
From	A - N80 (S)	0	5	15
	B - R422	7	0	0
	C - N80 (N)	15	0	0

Cyclist %

		To		
		A - N80 (S)	B - R422	C - N80 (N)
From	A - N80 (S)	0	0	0
	B - R422	0	0	0
	C - N80 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - N80 (S)	0.72	13.49	3.5	B	711	1066
B - R422	0.85	91.70	6.9	F	188	282
C - N80 (N)	0.88	69.21	11.0	F	469	704

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.1.1.1905
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Filename: Junction 33_R422-Sarsfield St Rbt_LS.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 13:38:33

»AM CAL - 2024, AM
»AM CAL - 2031 No Construction , AM
»AM CAL - 2031 With Construction Peak, AM
»PM_CAL - 2024, PM
»PM_CAL - 2031 No Construction , PM
»PM_CAL - 2031 With Construction Peak, PM

Summary of junction performance

	AM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
AM CAL [Lane Simulation] - 2024					
A - R422 Lord Edward Street	2.9	21.46	0.71	C	24.37
B - Connolly Street	3.4	24.76	0.74	C	
C - R422 Sarsfield Street	3.2	27.40	0.74	D	
AM CAL [Lane Simulation] - 2031 No Construction					
A - R422 Lord Edward Street	6.5	38.75	0.85	E	47.37
B - Connolly Street	7.0	57.91	0.88	F	
C - R422 Sarsfield Street	6.1	46.50	0.86	E	
AM CAL [Lane Simulation] - 2031 With Construction Peak					
A - R422 Lord Edward Street	9.9	56.45	0.93	F	61.41
B - Connolly Street	9.9	72.38	0.92	F	
C - R422 Sarsfield Street	7.6	56.67	0.88	F	

	PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
PM_CAL [Lane Simulation] - 2024					
A - R422 Lord Edward Street	5.2	32.73	0.82	D	27.67
B - Connolly Street	3.4	26.23	0.77	D	
C - R422 Sarsfield Street	2.9	22.69	0.71	C	
PM_CAL [Lane Simulation] - 2031 No Construction					
A - R422 Lord Edward Street	11.9	60.59	0.93	F	51.02
B - Connolly Street	7.0	47.92	0.87	E	
C - R422 Sarsfield Street	6.4	41.89	0.82	E	
PM_CAL [Lane Simulation] - 2031 With Construction Peak					
A - R422 Lord Edward Street	15.1	80.66	0.97	F	70.59
B - Connolly Street	8.7	60.23	0.89	F	
C - R422 Sarsfield Street	10.8	68.42	0.92	F	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	Water Supply Project
Location	
Site number	Junction 33
Date	19/03/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
JUNCTIONS 9	5.75						0.85	36.00	20.00		

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Calculate RFCs	Relaxation factor for capacity/RFC runs	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)	Last run total time taken (s)
Delay	1.00	100000	100000	Calculate for all arms	3.00	-1	3	1	60	✓			105995736	176	2.62	6.25

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	08:15	09:45	15	✓
D2	2024	PM	ONE HOUR	16:45	18:15	15	✓
D3	2031 No Construction	AM	ONE HOUR	08:15	09:45	15	✓
D4	2031 No Construction	PM	ONE HOUR	16:45	18:15	15	✓
D5	2031 With Construction Peak	AM	ONE HOUR	08:15	09:45	15	✓
D6	2031 With Construction Peak	PM	ONE HOUR	16:45	18:15	15	✓

AM CAL - 2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A1 - AM CAL [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	AM CAL	✓	✓	✓	D1,D3,D5	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
33		Mini-roundabout		A, B, C	24.37	C

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		24.37	C

Arms

Arms

Arm	Name	Description
A	R422 Lord Edward Street	
B	Connolly Street	
C	R422 Sarsfield Street	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A - R422 Lord Edward Street	3.00	3.00	3.00	0.0	5.00	2.00	0.0	
B - Connolly Street	3.00	3.00	3.00	0.0	5.00	2.00	0.0	
C - R422 Sarsfield Street	3.00	3.00	3.00	0.0	5.00	2.00	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - R422 Lord Edward Street	0.590	985
B - Connolly Street	0.590	985
C - R422 Sarsfield Street	0.590	985

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - R422 Lord Edward Street	Direct		-200
B - Connolly Street	Direct		-300
C - R422 Sarsfield Street	Direct		-250

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - R422 Lord Edward Street	Evenly split	10.00
B - Connolly Street	Evenly split	10.00
C - R422 Sarsfield Street	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - R422 Lord Edward Street	Entry	1	1	A, C, B		Infinity			0	99999	
	Exit	1	1			Infinity					
B - Connolly Street	Entry	1	1	A, C, B		Infinity			0	99999	
	Exit	1	1			Infinity					
C - R422 Sarsfield Street	Entry	1	1	A, C, B		Infinity			0	99999	
	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - R422 Lord Edward Street	Entry	1	1	0.590	985
B - Connolly Street	Entry	1	1	0.590	985
C - R422 Sarsfield Street	Entry	1	1	0.590	985

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			R422 Lord Edward Street	Connolly Street	R422 Sarsfield Street
A - R422 Lord Edward Street	1	1	✓	✓	✓
B - Connolly Street	1	1	✓	✓	✓
C - R422 Sarsfield Street	1	1	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	08:15	09:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R422 Lord Edward Street		ONE HOUR	✓	435	100.000
B - Connolly Street		ONE HOUR	✓	382	100.000
C - R422 Sarsfield Street		ONE HOUR	✓	364	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R422 Lord Edward Street	B - Connolly Street	C - R422 Sarsfield Street
From	A - R422 Lord Edward Street	2	261	172
	B - Connolly Street	242	1	139
	C - R422 Sarsfield Street	199	164	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
33	0.20	0.80

Heavy Vehicle %

		To		
		A - R422 Lord Edward Street	B - Connolly Street	C - R422 Sarsfield Street
From	A - R422 Lord Edward Street	0	7	11
	B - Connolly Street	7	0	5
	C - R422 Sarsfield Street	21	9	0

Cyclist %

		To		
		A - R422 Lord Edward Street	B - Connolly Street	C - R422 Sarsfield Street
From	A - R422 Lord Edward Street	0	0	0
	B - Connolly Street	0	0	0
	C - R422 Sarsfield Street	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R422 Lord Edward Street	0.71	21.46	2.9	C	395	593
B - Connolly Street	0.74	24.76	3.4	C	350	525
C - R422 Sarsfield Street	0.74	27.40	3.2	D	336	503

AM CAL - 2031 No Construction , AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A1 - AM CAL [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	AM CAL	✓	✓	✓	D1,D3,D5	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
33		Mini-roundabout		A, B, C	47.37	E

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		47.37	E

Arms

Arms

Arm	Name	Description
A	R422 Lord Edward Street	
B	Connolly Street	
C	R422 Sarsfield Street	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A - R422 Lord Edward Street	3.00	3.00	3.00	0.0	5.00	2.00	0.0	
B - Connolly Street	3.00	3.00	3.00	0.0	5.00	2.00	0.0	
C - R422 Sarsfield Street	3.00	3.00	3.00	0.0	5.00	2.00	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - R422 Lord Edward Street	0.590	985
B - Connolly Street	0.590	985
C - R422 Sarsfield Street	0.590	985

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - R422 Lord Edward Street	Direct		-200
B - Connolly Street	Direct		-300
C - R422 Sarsfield Street	Direct		-250

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - R422 Lord Edward Street	Evenly split	10.00
B - Connolly Street	Evenly split	10.00
C - R422 Sarsfield Street	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - R422 Lord Edward Street	Entry	1	1	A, C, B		Infinity			0	99999	
	Exit	1	1			Infinity					
B - Connolly Street	Entry	1	1	A, C, B		Infinity			0	99999	
	Exit	1	1			Infinity					
C - R422 Sarsfield Street	Entry	1	1	A, C, B		Infinity			0	99999	
	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - R422 Lord Edward Street	Entry	1	1	0.590	985
B - Connolly Street	Entry	1	1	0.590	985
C - R422 Sarsfield Street	Entry	1	1	0.590	985

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			R422 Lord Edward Street	Connolly Street	R422 Sarsfield Street
A - R422 Lord Edward Street	1	1	✓	✓	✓
B - Connolly Street	1	1	✓	✓	✓
C - R422 Sarsfield Street	1	1	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2031 No Construction	AM	ONE HOUR	08:15	09:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R422 Lord Edward Street		ONE HOUR	✓	495	100.000
B - Connolly Street		ONE HOUR	✓	435	100.000
C - R422 Sarsfield Street		ONE HOUR	✓	417	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R422 Lord Edward Street	B - Connolly Street	C - R422 Sarsfield Street
From	A - R422 Lord Edward Street	2	297	196
	B - Connolly Street	276	1	158
	C - R422 Sarsfield Street	229	187	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
33	0.20	0.80

Heavy Vehicle %

		To		
		A - R422 Lord Edward Street	B - Connolly Street	C - R422 Sarsfield Street
From	A - R422 Lord Edward Street	0	8	12
	B - Connolly Street	7	0	5
	C - R422 Sarsfield Street	22	9	0

Cyclist %

		To		
		A - R422 Lord Edward Street	B - Connolly Street	C - R422 Sarsfield Street
From	A - R422 Lord Edward Street	0	0	0
	B - Connolly Street	0	0	0
	C - R422 Sarsfield Street	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R422 Lord Edward Street	0.85	38.75	6.5	E	454	680
B - Connolly Street	0.88	57.91	7.0	F	402	604
C - R422 Sarsfield Street	0.86	46.50	6.1	E	384	576

AM CAL - 2031 With Construction Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A1 - AM CAL [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	AM CAL	✓	✓	✓	D1,D3,D5	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
33		Mini-roundabout		A, B, C	61.41	F

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		61.41	F

Arms

Arms

Arm	Name	Description
A	R422 Lord Edward Street	
B	Connolly Street	
C	R422 Sarsfield Street	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A - R422 Lord Edward Street	3.00	3.00	3.00	0.0	5.00	2.00	0.0	
B - Connolly Street	3.00	3.00	3.00	0.0	5.00	2.00	0.0	
C - R422 Sarsfield Street	3.00	3.00	3.00	0.0	5.00	2.00	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - R422 Lord Edward Street	0.590	985
B - Connolly Street	0.590	985
C - R422 Sarsfield Street	0.590	985

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - R422 Lord Edward Street	Direct		-200
B - Connolly Street	Direct		-300
C - R422 Sarsfield Street	Direct		-250

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - R422 Lord Edward Street	Evenly split	10.00
B - Connolly Street	Evenly split	10.00
C - R422 Sarsfield Street	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - R422 Lord Edward Street	Entry	1	1	A, C, B		Infinity			0	99999	
	Exit	1	1			Infinity					
B - Connolly Street	Entry	1	1	A, C, B		Infinity			0	99999	
	Exit	1	1			Infinity					
C - R422 Sarsfield Street	Entry	1	1	A, C, B		Infinity			0	99999	
	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - R422 Lord Edward Street	Entry	1	1	0.590	985
B - Connolly Street	Entry	1	1	0.590	985
C - R422 Sarsfield Street	Entry	1	1	0.590	985

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			R422 Lord Edward Street	Connolly Street	R422 Sarsfield Street
A - R422 Lord Edward Street	1	1	✓	✓	✓
B - Connolly Street	1	1	✓	✓	✓
C - R422 Sarsfield Street	1	1	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2031 With Construction Peak	AM	ONE HOUR	08:15	09:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R422 Lord Edward Street		ONE HOUR	✓	542	100.000
B - Connolly Street		ONE HOUR	✓	435	100.000
C - R422 Sarsfield Street		ONE HOUR	✓	436	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R422 Lord Edward Street	B - Connolly Street	C - R422 Sarsfield Street
From	A - R422 Lord Edward Street	2	297	243
	B - Connolly Street	276	1	158
	C - R422 Sarsfield Street	248	187	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
33	0.20	0.80

Heavy Vehicle %

		To		
		A - R422 Lord Edward Street	B - Connolly Street	C - R422 Sarsfield Street
From	A - R422 Lord Edward Street	0	8	12
	B - Connolly Street	7	0	5
	C - R422 Sarsfield Street	23	9	0

Cyclist %

		To		
		A - R422 Lord Edward Street	B - Connolly Street	C - R422 Sarsfield Street
From	A - R422 Lord Edward Street	0	0	0
	B - Connolly Street	0	0	0
	C - R422 Sarsfield Street	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R422 Lord Edward Street	0.93	56.45	9.9	F	497	746
B - Connolly Street	0.92	72.38	9.9	F	397	596
C - R422 Sarsfield Street	0.88	56.67	7.6	F	399	598

PM_CAL - 2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - PM_CAL [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	PM_CAL	✓	✓	✓	D2,D4,D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
33		Mini-roundabout		A, B, C	27.67	D

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		27.67	D

Arms

Arms

Arm	Name	Description
A	R422 Lord Edward Street	
B	Connolly Street	
C	R422 Sarsfield Street	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A - R422 Lord Edward Street	3.00	3.00	3.00	0.0	5.00	2.00	0.0	
B - Connolly Street	3.00	3.00	3.00	0.0	5.00	2.00	0.0	
C - R422 Sarsfield Street	3.00	3.00	3.00	0.0	5.00	2.00	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - R422 Lord Edward Street	0.590	985
B - Connolly Street	0.590	985
C - R422 Sarsfield Street	0.590	985

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - R422 Lord Edward Street	Direct		-200
B - Connolly Street	Direct		-200
C - R422 Sarsfield Street	Direct		-250

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - R422 Lord Edward Street	Evenly split	10.00
B - Connolly Street	Evenly split	10.00
C - R422 Sarsfield Street	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - R422 Lord Edward Street	Entry	1	1	A, C, B		Infinity			0	99999	
	Exit	1	1			Infinity					
B - Connolly Street	Entry	1	1	A, C, B		Infinity			0	99999	
	Exit	1	1			Infinity					
C - R422 Sarsfield Street	Entry	1	1	A, C, B		Infinity			0	99999	
	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - R422 Lord Edward Street	Entry	1	1	0.590	985
B - Connolly Street	Entry	1	1	0.590	985
C - R422 Sarsfield Street	Entry	1	1	0.590	985

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			R422 Lord Edward Street	Connolly Street	R422 Sarsfield Street
A - R422 Lord Edward Street	1	1	✓	✓	✓
B - Connolly Street	1	1	✓	✓	✓
C - R422 Sarsfield Street	1	1	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2024	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R422 Lord Edward Street		ONE HOUR	✓	489	100.000
B - Connolly Street		ONE HOUR	✓	411	100.000
C - R422 Sarsfield Street		ONE HOUR	✓	371	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R422 Lord Edward Street	B - Connolly Street	C - R422 Sarsfield Street
From	A - R422 Lord Edward Street	4	215	270
	B - Connolly Street	228	2	181
	C - R422 Sarsfield Street	201	167	3

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
33	0.20	0.80

Heavy Vehicle %

		To		
		A - R422 Lord Edward Street	B - Connolly Street	C - R422 Sarsfield Street
From	A - R422 Lord Edward Street	0	4	7
	B - Connolly Street	2	0	3
	C - R422 Sarsfield Street	13	1	0

Cyclist %

		To		
		A - R422 Lord Edward Street	B - Connolly Street	C - R422 Sarsfield Street
From	A - R422 Lord Edward Street	0	0	0
	B - Connolly Street	0	0	0
	C - R422 Sarsfield Street	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R422 Lord Edward Street	0.82	32.73	5.2	D	448	673
B - Connolly Street	0.77	26.23	3.4	D	380	570
C - R422 Sarsfield Street	0.71	22.69	2.9	C	345	518

PM_CAL - 2031 No Construction , PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - PM_CAL [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	PM_CAL	✓	✓	✓	D2,D4,D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
33		Mini-roundabout		A, B, C	51.02	F

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		51.02	F

Arms

Arms

Arm	Name	Description
A	R422 Lord Edward Street	
B	Connolly Street	
C	R422 Sarsfield Street	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A - R422 Lord Edward Street	3.00	3.00	3.00	0.0	5.00	2.00	0.0	
B - Connolly Street	3.00	3.00	3.00	0.0	5.00	2.00	0.0	
C - R422 Sarsfield Street	3.00	3.00	3.00	0.0	5.00	2.00	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - R422 Lord Edward Street	0.590	985
B - Connolly Street	0.590	985
C - R422 Sarsfield Street	0.590	985

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - R422 Lord Edward Street	Direct		-200
B - Connolly Street	Direct		-200
C - R422 Sarsfield Street	Direct		-250

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - R422 Lord Edward Street	Evenly split	10.00
B - Connolly Street	Evenly split	10.00
C - R422 Sarsfield Street	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - R422 Lord Edward Street	Entry	1	1	A, C, B		Infinity			0	99999	
	Exit	1	1			Infinity					
B - Connolly Street	Entry	1	1	A, C, B		Infinity			0	99999	
	Exit	1	1			Infinity					
C - R422 Sarsfield Street	Entry	1	1	A, C, B		Infinity			0	99999	
	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - R422 Lord Edward Street	Entry	1	1	0.590	985
B - Connolly Street	Entry	1	1	0.590	985
C - R422 Sarsfield Street	Entry	1	1	0.590	985

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			R422 Lord Edward Street	Connolly Street	R422 Sarsfield Street
A - R422 Lord Edward Street	1	1	✓	✓	✓
B - Connolly Street	1	1	✓	✓	✓
C - R422 Sarsfield Street	1	1	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2031 No Construction	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R422 Lord Edward Street		ONE HOUR	✓	557	100.000
B - Connolly Street		ONE HOUR	✓	465	100.000
C - R422 Sarsfield Street		ONE HOUR	✓	423	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R422 Lord Edward Street	B - Connolly Street	C - R422 Sarsfield Street
From	A - R422 Lord Edward Street	5	244	308
	B - Connolly Street	258	2	205
	C - R422 Sarsfield Street	230	190	3

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
33	0.20	0.80

Heavy Vehicle %

		To		
		A - R422 Lord Edward Street	B - Connolly Street	C - R422 Sarsfield Street
From	A - R422 Lord Edward Street	0	4	7
	B - Connolly Street	2	0	3
	C - R422 Sarsfield Street	14	2	0

Cyclist %

		To		
		A - R422 Lord Edward Street	B - Connolly Street	C - R422 Sarsfield Street
From	A - R422 Lord Edward Street	0	0	0
	B - Connolly Street	0	0	0
	C - R422 Sarsfield Street	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R422 Lord Edward Street	0.93	60.59	11.9	F	508	763
B - Connolly Street	0.87	47.92	7.0	E	424	636
C - R422 Sarsfield Street	0.82	41.89	6.4	E	389	584

PM_CAL - 2031 With Construction Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - PM_CAL [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	PM_CAL	✓	✓	✓	D2,D4,D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
33		Mini-roundabout		A, B, C	70.59	F

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (s)	Network LOS
Left	Normal/unknown	Normal/unknown		70.59	F

Arms

Arms

Arm	Name	Description
A	R422 Lord Edward Street	
B	Connolly Street	
C	R422 Sarsfield Street	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A - R422 Lord Edward Street	3.00	3.00	3.00	0.0	5.00	2.00	0.0	
B - Connolly Street	3.00	3.00	3.00	0.0	5.00	2.00	0.0	
C - R422 Sarsfield Street	3.00	3.00	3.00	0.0	5.00	2.00	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - R422 Lord Edward Street	0.590	985
B - Connolly Street	0.590	985
C - R422 Sarsfield Street	0.590	985

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - R422 Lord Edward Street	Direct		-200
B - Connolly Street	Direct		-200
C - R422 Sarsfield Street	Direct		-250

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - R422 Lord Edward Street	Evenly split	10.00
B - Connolly Street	Evenly split	10.00
C - R422 Sarsfield Street	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - R422 Lord Edward Street	Entry	1	1	A, C, B		Infinity			0	99999	
	Exit	1	1			Infinity					
B - Connolly Street	Entry	1	1	A, C, B		Infinity			0	99999	
	Exit	1	1			Infinity					
C - R422 Sarsfield Street	Entry	1	1	A, C, B		Infinity			0	99999	
	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - R422 Lord Edward Street	Entry	1	1	0.590	985
B - Connolly Street	Entry	1	1	0.590	985
C - R422 Sarsfield Street	Entry	1	1	0.590	985

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			R422 Lord Edward Street	Connolly Street	R422 Sarsfield Street
A - R422 Lord Edward Street	1	1	✓	✓	✓
B - Connolly Street	1	1	✓	✓	✓
C - R422 Sarsfield Street	1	1	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2031 With Construction Peak	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R422 Lord Edward Street		ONE HOUR	✓	576	100.000
B - Connolly Street		ONE HOUR	✓	465	100.000
C - R422 Sarsfield Street		ONE HOUR	✓	471	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R422 Lord Edward Street	B - Connolly Street	C - R422 Sarsfield Street
From	A - R422 Lord Edward Street	5	244	327
	B - Connolly Street	258	2	205
	C - R422 Sarsfield Street	278	190	3

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
33	0.20	0.80

Heavy Vehicle %

		To		
		A - R422 Lord Edward Street	B - Connolly Street	C - R422 Sarsfield Street
From	A - R422 Lord Edward Street	0	4	9
	B - Connolly Street	2	0	3
	C - R422 Sarsfield Street	14	2	0

Cyclist %

		To		
		A - R422 Lord Edward Street	B - Connolly Street	C - R422 Sarsfield Street
From	A - R422 Lord Edward Street	0	0	0
	B - Connolly Street	0	0	0
	C - R422 Sarsfield Street	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R422 Lord Edward Street	0.97	80.66	15.1	F	533	800
B - Connolly Street	0.89	60.23	8.7	F	428	642
C - R422 Sarsfield Street	0.92	68.42	10.8	F	432	649

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.1.1.1905
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Filename: Junction 36_R402-R400 St.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 13:40:07

»2024, AM
»2024, PM
»2029 No Construction , AM
»2029 No Construction , PM
»2029 With Construction Peak, AM
»2029 With Construction Peak, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	2024									
Stream B-C	0.1	7.51	0.06	A	2.93	0.0	6.31	0.04	A	2.01
Stream B-AD	0.3	12.25	0.22	B		0.1	9.83	0.11	A	
Stream A-BCD	0.1	5.19	0.06	A		0.0	4.77	0.02	A	
Stream D-A	0.0	6.02	0.03	A		0.0	6.48	0.03	A	
Stream D-BC	0.1	9.28	0.05	A		0.1	9.39	0.09	A	
Stream C-ABD	0.1	5.33	0.05	A		0.1	4.92	0.05	A	
	2029 No Construction									
Stream B-C	0.1	7.86	0.06	A	3.12	0.0	6.44	0.04	A	2.10
Stream B-AD	0.4	13.34	0.26	B		0.2	10.30	0.12	B	
Stream A-BCD	0.1	5.21	0.06	A		0.0	4.75	0.02	A	
Stream D-A	0.0	6.13	0.03	A		0.0	6.61	0.03	A	
Stream D-BC	0.1	9.78	0.06	A		0.1	9.92	0.11	A	
Stream C-ABD	0.1	5.37	0.06	A		0.1	4.91	0.05	A	
	2029 With Construction Peak									
Stream B-C	0.1	8.93	0.07	A	3.83	0.1	7.60	0.05	A	2.65
Stream B-AD	0.5	14.54	0.28	B		0.2	11.33	0.14	B	
Stream A-BCD	0.2	5.84	0.09	A		0.1	6.16	0.04	A	
Stream D-A	0.1	8.42	0.05	A		0.1	8.86	0.05	A	
Stream D-BC	0.2	11.66	0.11	B		0.2	10.99	0.13	B	
Stream C-ABD	0.1	5.87	0.07	A		0.1	5.41	0.07	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	Water Supply Project
Location	
Site number	Junction 36
Date	19/03/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

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	2024	AM	ONE HOUR	07:30	09:00	15
D2	2024	PM	ONE HOUR	16:30	18:00	15
D3	2029 No Construction	AM	ONE HOUR	07:30	09:00	15
D4	2029 No Construction	PM	ONE HOUR	16:30	18:00	15
D5	2029 With Construction Peak	AM	ONE HOUR	07:30	09:00	15
D6	2029 With Construction Peak	PM	ONE HOUR	16:30	18:00	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2024, 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
36		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		2.93	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.93	A

Arms

Arms

Arm	Name	Description	Arm type
A	R402 (WNW)		Major
B	R400 (NNE)		Minor
C	R402 (ESE)		Major
D	R400 (SW)		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 - R402 (WNW)	8.70			250.0	✓	0.00
C - R402 (ESE)	8.70			250.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - R400 (NNE)	One lane plus flare	10.00	6.10	3.90	3.40	3.00	✓	1.00	19	17
D - R400 (SW)	One lane plus flare	10.00	7.10	5.30	3.90	3.00	✓	2.00	20	55

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
A-D	719	-	-	-	0.246	0.246	0.246	-	0.246	-	-
B-AD	541	0.087	0.220	-	-	-	0.138	0.314	0.138	0.087	0.220
B-C	649	0.088	0.222	-	-	-	-	-	-	0.088	0.222
C-B	719	0.246	0.246	-	-	-	-	-	-	0.246	0.246
D-A	692	-	-	-	0.237	0.094	0.237	-	0.094	-	-
D-BC	560	0.143	0.143	0.325	0.228	0.090	0.228	-	0.090	-	-

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	2024	AM	ONE HOUR	07:30	09:00	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R402 (WNW)		✓	304	100.000
B - R400 (NNE)		✓	117	100.000
C - R402 (ESE)		✓	215	100.000
D - R400 (SW)		✓	36	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R402 (WNW)	B - R400 (NNE)	C - R402 (ESE)	D - R400 (SW)
From	A - R402 (WNW)	0	39	238	27
	B - R400 (NNE)	68	0	28	21
	C - R402 (ESE)	182	26	0	7
	D - R400 (SW)	16	14	6	0

Vehicle Mix

Heavy Vehicle %

		To			
		A - R402 (WNW)	B - R400 (NNE)	C - R402 (ESE)	D - R400 (SW)
From	A - R402 (WNW)	0	14	19	8
	B - R400 (NNE)	22	0	7	0
	C - R402 (ESE)	16	6	0	29
	D - R400 (SW)	0	0	33	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.06	7.51	0.1	A
B-AD	0.22	12.25	0.3	B
A-BCD	0.06	5.19	0.1	A
A-B				
A-C				
D-A	0.03	6.02	0.0	A
D-BC	0.05	9.28	0.1	A
C-ABD	0.05	5.33	0.1	A
C-D				
C-A				

2024, 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
36		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		2.01	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.01	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	2024	PM	ONE HOUR	16:30	18:00	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R402 (WNW)		✓	245	100.000
B - R400 (NNE)		✓	62	100.000
C - R402 (ESE)		✓	248	100.000
D - R400 (SW)		✓	54	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R402 (WNW)	B - R400 (NNE)	C - R402 (ESE)	D - R400 (SW)
From	A - R402 (WNW)	0	65	171	9
	B - R400 (NNE)	28	0	19	15
	C - R402 (ESE)	215	23	0	10
	D - R400 (SW)	14	35	5	0

Vehicle Mix

Heavy Vehicle %

		To			
		A - R402 (WNW)	B - R400 (NNE)	C - R402 (ESE)	D - R400 (SW)
From	A - R402 (WNW)	0	11	9	0
	B - R400 (NNE)	13	0	0	0
	C - R402 (ESE)	11	0	0	39
	D - R400 (SW)	0	7	40	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.04	6.31	0.0	A
B-AD	0.11	9.83	0.1	A
A-BCD	0.02	4.77	0.0	A
A-B				
A-C				
D-A	0.03	6.48	0.0	A
D-BC	0.09	9.39	0.1	A
C-ABD	0.05	4.92	0.1	A
C-D				
C-A				

2029 No Construction , 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
36		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		3.12	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.12	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)
D3	2029 No Construction	AM	ONE HOUR	07:30	09:00	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R402 (WNW)		✓	341	100.000
B - R400 (NNE)		✓	131	100.000
C - R402 (ESE)		✓	240	100.000
D - R400 (SW)		✓	40	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R402 (WNW)	B - R400 (NNE)	C - R402 (ESE)	D - R400 (SW)
From	A - R402 (WNW)	0	43	268	30
	B - R400 (NNE)	77	0	31	23
	C - R402 (ESE)	204	28	0	8
	D - R400 (SW)	18	15	7	0

Vehicle Mix

Heavy Vehicle %

		To			
		A - R402 (WNW)	B - R400 (NNE)	C - R402 (ESE)	D - R400 (SW)
From	A - R402 (WNW)	0	16	20	9
	B - R400 (NNE)	23	0	8	0
	C - R402 (ESE)	17	6	0	31
	D - R400 (SW)	0	0	36	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.06	7.86	0.1	A
B-AD	0.26	13.34	0.4	B
A-BCD	0.06	5.21	0.1	A
A-B				
A-C				
D-A	0.03	6.13	0.0	A
D-BC	0.06	9.78	0.1	A
C-ABD	0.06	5.37	0.1	A
C-D				
C-A				

2029 No Construction , 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
36		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	2029 No Construction	PM	ONE HOUR	16:30	18:00	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R402 (WNW)		✓	273	100.000
B - R400 (NNE)		✓	69	100.000
C - R402 (ESE)		✓	276	100.000
D - R400 (SW)		✓	60	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R402 (WNW)	B - R400 (NNE)	C - R402 (ESE)	D - R400 (SW)
From	A - R402 (WNW)	0	73	190	10
	B - R400 (NNE)	31	0	21	17
	C - R402 (ESE)	240	25	0	11
	D - R400 (SW)	15	39	6	0

Vehicle Mix

Heavy Vehicle %

		To			
		A - R402 (WNW)	B - R400 (NNE)	C - R402 (ESE)	D - R400 (SW)
From	A - R402 (WNW)	0	12	10	0
	B - R400 (NNE)	14	0	0	0
	C - R402 (ESE)	12	0	0	41
	D - R400 (SW)	0	7	42	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.04	6.44	0.0	A
B-AD	0.12	10.30	0.2	B
A-BCD	0.02	4.75	0.0	A
A-B				
A-C				
D-A	0.03	6.61	0.0	A
D-BC	0.11	9.92	0.1	A
C-ABD	0.05	4.91	0.1	A
C-D				
C-A				

2029 With Construction Peak, 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
36		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		3.83	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.83	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	2029 With Construction Peak	AM	ONE HOUR	07:30	09:00	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R402 (WNW)		✓	364	100.000
B - R400 (NNE)		✓	140	100.000
C - R402 (ESE)		✓	265	100.000
D - R400 (SW)		✓	71	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R402 (WNW)	B - R400 (NNE)	C - R402 (ESE)	D - R400 (SW)
From	A - R402 (WNW)	0	43	282	39
	B - R400 (NNE)	77	0	35	28
	C - R402 (ESE)	217	34	0	14
	D - R400 (SW)	27	20	24	0

Vehicle Mix

Heavy Vehicle %

		To			
		A - R402 (WNW)	B - R400 (NNE)	C - R402 (ESE)	D - R400 (SW)
From	A - R402 (WNW)	0	16	23	26
	B - R400 (NNE)	23	0	18	11
	C - R402 (ESE)	21	17	0	50
	D - R400 (SW)	28	15	30	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.07	8.93	0.1	A
B-AD	0.28	14.54	0.5	B
A-BCD	0.09	5.84	0.2	A
A-B				
A-C				
D-A	0.05	8.42	0.1	A
D-BC	0.11	11.66	0.2	B
C-ABD	0.07	5.87	0.1	A
C-D				
C-A				

2029 With Construction Peak, 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
36		Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		2.65	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.65	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	2029 With Construction Peak	PM	ONE HOUR	16:30	18:00	15

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R402 (WNW)		✓	296	100.000
B - R400 (NNE)		✓	77	100.000
C - R402 (ESE)		✓	313	100.000
D - R400 (SW)		✓	80	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R402 (WNW)	B - R400 (NNE)	C - R402 (ESE)	D - R400 (SW)
From	A - R402 (WNW)	0	73	204	19
	B - R400 (NNE)	31	0	25	21
	C - R402 (ESE)	254	31	0	28
	D - R400 (SW)	24	44	12	0

Vehicle Mix

Heavy Vehicle %

		To			
		A - R402 (WNW)	B - R400 (NNE)	C - R402 (ESE)	D - R400 (SW)
From	A - R402 (WNW)	0	12	14	40
	B - R400 (NNE)	14	0	16	14
	C - R402 (ESE)	15	13	0	33
	D - R400 (SW)	31	13	60	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.05	7.60	0.1	A
B-AD	0.14	11.33	0.2	B
A-BCD	0.04	6.16	0.1	A
A-B				
A-C				
D-A	0.05	8.86	0.1	A
D-BC	0.13	10.99	0.2	B
C-ABD	0.07	5.41	0.1	A
C-D				
C-A				

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.1.1.1905
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Filename: Junction 38_R420-R419 Spa St.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 13:41:43

»2024, AM
»2024, PM
»2029 No Construction , AM
»2029 No Construction , PM
»2029 With Construction Peak, AM
»2029 With Construction Peak, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	2024									
Stream B-ACD	4.0	37.83	0.80	E	8.01	1.4	19.70	0.57	C	3.37
Stream AB-CD	0.0	4.26	0.02	A		0.1	4.63	0.07	A	
Stream D-ABC	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
Stream CD-AB	0.4	9.11	0.22	A		1.4	9.97	0.47	A	
	2029 No Construction									
Stream B-ACD	7.6	67.25	0.90	F	13.81	2.0	25.50	0.65	D	4.23
Stream AB-CD	0.0	4.15	0.02	A		0.2	4.55	0.08	A	
Stream D-ABC	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
Stream CD-AB	0.5	9.51	0.25	A		1.9	11.32	0.54	B	
	2029 With Construction Peak									
Stream B-ACD	10.4	87.91	0.94	F	17.83	3.0	36.50	0.75	E	5.85
Stream AB-CD	0.0	4.18	0.02	A		0.2	4.57	0.08	A	
Stream D-ABC	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
Stream CD-AB	0.6	10.34	0.27	B		2.2	12.55	0.57	B	

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	Water Supply Project
Location	
Site number	Junction 38
Date	19/03/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	08:00	09:30	15	✓
D2	2024	PM	ONE HOUR	16:45	18:15	15	✓
D3	2029 No Construction	AM	ONE HOUR	08:00	09:30	15	✓
D4	2029 No Construction	PM	ONE HOUR	16:45	18:15	15	✓
D5	2029 With Construction Peak	AM	ONE HOUR	08:00	09:30	15	✓
D6	2029 With Construction Peak	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2024, 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
38		Left-Right Stagger	Two-way	Two-way	Two-way	Two-way		8.01	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	8.01	A

Arms

Arms

Arm	Name	Description	Arm type
A	R420		Major
B	R419 Spa Street		Minor
C	R420 Link Road		Major
D	Access 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 - R420	8.70			70.0	✓	0.00
C - R420 Link Road	8.70			40.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - R419 Spa Street	One lane	3.70	11	38
D - Access Road	One lane	5.00	16	10

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-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
AB-D	615	-	-	-	-	-	0.210	0.210	0.210	-	-
B-A	535	0.086	0.217	0.217	-	-	0.137	0.310	-	0.137	0.310
B-CD	693	0.094	0.237	0.237	-	-	-	-	-	-	-
CD-B	597	0.204	0.204	0.204	-	-	-	-	-	-	-
D-AB	756	-	-	-	-	-	0.259	0.259	0.102	-	-
D-C	585	-	0.150	0.340	0.150	0.340	0.238	0.238	0.094	-	-

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)	Run automatically
D1	2024	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R420		ONE HOUR	✓	451	100.000
B - R419 Spa Street		ONE HOUR	✓	364	100.000
C - R420 Link Road		ONE HOUR	✓	218	100.000
D - Access Road		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R420	B - R419 Spa Street	C - R420 Link Road	D - Access Road
From	A - R420	0	85	362	4
	B - R419 Spa Street	125	0	237	2
	C - R420 Link Road	127	90	0	1
	D - Access Road	0	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
		A - R420	B - R419 Spa Street	C - R420 Link Road	D - Access Road
From	A - R420	0	28	10	0
	B - R419 Spa Street	20	0	4	0
	C - R420 Link Road	17	19	0	0
	D - Access Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.80	37.83	4.0	E	334	501
A-B					78	117
A-C					332	498
A-D					4	6
AB-CD	0.02	4.26	0.0	A	14	20
AB-C					541	812
D-ABC	0.00	0.00	0.0	A	0	0
C-D					0.92	1
C-A					117	175
C-B					83	124
CD-AB	0.22	9.11	0.4	A	104	155
CD-A					96	143

2024, 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
38		Left-Right Stagger	Two-way	Two-way	Two-way	Two-way		3.37	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.37	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)	Run automatically
D2	2024	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R420		ONE HOUR	✓	547	100.000
B - R419 Spa Street		ONE HOUR	✓	236	100.000
C - R420 Link Road		ONE HOUR	✓	471	100.000
D - Access Road		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R420	B - R419 Spa Street	C - R420 Link Road	D - Access Road
From	A - R420	0	147	386	14
	B - R419 Spa Street	79	0	150	7
	C - R420 Link Road	302	165	0	4
	D - Access Road	0	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
		A - R420	B - R419 Spa Street	C - R420 Link Road	D - Access Road
From	A - R420	0	8	3	0
	B - R419 Spa Street	14	0	4	0
	C - R420 Link Road	6	3	0	0
	D - Access Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.57	19.70	1.4	C	217	325
A-B					135	202
A-C					354	531
A-D					13	19
AB-CD	0.07	4.63	0.1	A	46	69
AB-C					465	698
D-ABC	0.00	0.00	0.0	A	0	0
C-D					4	6
C-A					277	416
C-B					151	227
CD-AB	0.47	9.97	1.4	A	258	387
CD-A					171	256

2029 No Construction , 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
38		Left-Right Stagger	Two-way	Two-way	Two-way	Two-way		13.81	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	13.81	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2029 No Construction	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R420		ONE HOUR	✓	497	100.000
B - R419 Spa Street		ONE HOUR	✓	400	100.000
C - R420 Link Road		ONE HOUR	✓	241	100.000
D - Access Road		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R420	B - R419 Spa Street	C - R420 Link Road	D - Access Road
From	A - R420	0	95	398	4
	B - R419 Spa Street	138	0	260	2
	C - R420 Link Road	141	99	0	1
	D - Access Road	0	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
		A - R420	B - R419 Spa Street	C - R420 Link Road	D - Access Road
From	A - R420	0	30	10	0
	B - R419 Spa Street	21	0	4	0
	C - R420 Link Road	18	20	0	0
	D - Access Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.90	67.25	7.6	F	367	551
A-B					87	131
A-C					365	548
A-D					4	6
AB-CD	0.02	4.15	0.0	A	15	22
AB-C					594	891
D-ABC	0.00	0.00	0.0	A	0	0
C-D					0.92	1
C-A					129	194
C-B					91	136
CD-AB	0.25	9.51	0.5	A	117	176
CD-A					103	154

2029 No Construction , 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
38		Left-Right Stagger	Two-way	Two-way	Two-way	Two-way		4.23	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.23	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)	Run automatically
D4	2029 No Construction	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R420		ONE HOUR	✓	600	100.000
B - R419 Spa Street		ONE HOUR	✓	259	100.000
C - R420 Link Road		ONE HOUR	✓	516	100.000
D - Access Road		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R420	B - R419 Spa Street	C - R420 Link Road	D - Access Road
From	A - R420	0	162	423	15
	B - R419 Spa Street	87	0	164	8
	C - R420 Link Road	332	180	0	4
	D - Access Road	0	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
		A - R420	B - R419 Spa Street	C - R420 Link Road	D - Access Road
From	A - R420	0	9	3	0
	B - R419 Spa Street	14	0	4	0
	C - R420 Link Road	7	3	0	0
	D - Access Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.65	25.50	2.0	D	238	356
A-B					149	223
A-C					388	582
A-D					14	21
AB-CD	0.08	4.55	0.2	A	55	82
AB-C					505	757
D-ABC	0.00	0.00	0.0	A	0	0
C-D					4	6
C-A					305	457
C-B					165	248
CD-AB	0.54	11.32	1.9	B	298	448
CD-A					171	257

2029 With Construction Peak, 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
38		Left-Right Stagger	Two-way	Two-way	Two-way	Two-way		17.83	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	17.83	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2029 With Construction Peak	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R420		ONE HOUR	✓	520	100.000
B - R419 Spa Street		ONE HOUR	✓	413	100.000
C - R420 Link Road		ONE HOUR	✓	256	100.000
D - Access Road		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R420	B - R419 Spa Street	C - R420 Link Road	D - Access Road
From	A - R420	0	112	404	4
	B - R419 Spa Street	142	0	269	2
	C - R420 Link Road	147	108	0	1
	D - Access Road	0	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
		A - R420	B - R419 Spa Street	C - R420 Link Road	D - Access Road
From	A - R420	0	25	12	0
	B - R419 Spa Street	20	0	7	0
	C - R420 Link Road	21	26	0	0
	D - Access Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.94	87.91	10.4	F	379	568
A-B					103	154
A-C					371	556
A-D					4	6
AB-CD	0.02	4.18	0.0	A	15	23
AB-C					607	911
D-ABC	0.00	0.00	0.0	A	0	0
C-D					0.92	1
C-A					135	202
C-B					99	149
CD-AB	0.27	10.34	0.6	B	130	194
CD-A					104	157

2029 With Construction Peak, 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
38		Left-Right Stagger	Two-way	Two-way	Two-way	Two-way		5.85	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.85	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)	Run automatically
D6	2029 With Construction Peak	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R420		ONE HOUR	✓	610	100.000
B - R419 Spa Street		ONE HOUR	✓	287	100.000
C - R420 Link Road		ONE HOUR	✓	531	100.000
D - Access Road		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R420	B - R419 Spa Street	C - R420 Link Road	D - Access Road
From	A - R420	0	166	429	15
	B - R419 Spa Street	105	0	174	8
	C - R420 Link Road	338	189	0	4
	D - Access Road	0	0	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To			
		A - R420	B - R419 Spa Street	C - R420 Link Road	D - Access Road
From	A - R420	0	9	5	0
	B - R419 Spa Street	12	0	9	0
	C - R420 Link Road	8	8	0	0
	D - Access Road	0	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.75	36.50	3.0	E	263	395
A-B					152	228
A-C					394	590
A-D					14	21
AB-CD	0.08	4.57	0.2	A	56	84
AB-C					518	777
D-ABC	0.00	0.00	0.0	A	0	0
C-D					4	6
C-A					310	465
C-B					173	260
CD-AB	0.57	12.55	2.2	B	317	476
CD-A					166	250

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.1.1.1905
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Filename: Junction 39_R402-PSD6 Tjct_LS.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 13:43:07

»LS - 2024, AM
»LS - 2024, PM
»LS - 2029 No Construction , AM
»LS - 2029 No Construction , PM
»LS - 2029 With Construction Peak, AM
»LS - 2029 With Construction Peak, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	LS [Lane Simulation] - 2024									
A - R402 (S)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - PSD8	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - R402 (N)	0.0	0.00		A		0.0	0.00		A	
	LS [Lane Simulation] - 2029 No Construction									
A - R402 (S)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - PSD8	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - R402 (N)	0.0	0.00		A		0.0	0.00		A	
	LS [Lane Simulation] - 2029 With Construction Peak									
A - R402 (S)	0.0	0.00		A	0.75	0.0	0.00		A	0.76
B - PSD8	0.1	12.02	0.02	B		0.1	10.31	0.03	B	
C - R402 (N)	0.1	1.13		A		0.1	0.68		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. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	Water Supply Project
Location	
Site number	Junction 39
Date	19/03/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Calculate RFCs	Relaxation factor for capacity/RFC runs	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)	Last run total time taken (s)
Delay	1.00	100000	100000	Calculate for all arms	3.00	-1	3	1	60	✓			1096535661	21	0.08	1.90

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	07:30	09:00	15	✓
D2	2024	PM	ONE HOUR	16:30	18:00	15	✓
D3	2029 No Construction	AM	ONE HOUR	07:30	09:00	15	✓
D4	2029 No Construction	PM	ONE HOUR	16:30	18:00	15	✓
D5	2029 With Construction Peak	AM	ONE HOUR	07:30	09:00	15	✓
D6	2029 With Construction Peak	PM	ONE HOUR	16:30	18:00	15	✓

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	LS	✓	✓	100.000	100.000

LS - 2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R402 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
39		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	R402 (S)		Major
B	PSD8		Minor
C	R402 (N)		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)	Vehicles causing blocking (%)
C - R402 (N)	5.40			250.0	✓	0.00	100

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 - PSD8	One lane	2.50	250	250

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	662	0.124	0.313	0.197	0.447
B-C	742	0.117	0.295	-	-
C-B	719	0.286	0.286	-	-

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.

Lane Simulation: Arm options

Arm	Traffic considering secondary lanes (%)
A - R402 (S)	10.00
B - PSD8	10.00
C - R402 (N)	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - R402 (S)	Entry	1	1	B, C		Infinity			0	99999	
	Exit	1	1			Infinity					
B - PSD8	Entry	1	1	A, C		Infinity			0	99999	
	Exit	1	1			Infinity					
C - R402 (N)	Entry	1	1	A, B		Infinity			0	99999	
	Exit	1	1			Infinity					

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			R402 (S)	PSD8	R402 (N)
A - R402 (S)	1	1		✓	✓
B - PSD8	1	1	✓		✓
C - R402 (N)	1	1	✓	✓	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	07:30	09:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R402 (S)		ONE HOUR	✓	242	100.000
B - PSD8		ONE HOUR	✓	0	100.000
C - R402 (N)		ONE HOUR	✓	156	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R402 (S)	B - PSD8	C - R402 (N)
From	A - R402 (S)	0	0	242
	B - PSD8	0	0	0
	C - R402 (N)	156	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
39	0.20	0.80

Heavy Vehicle %

		To		
		A - R402 (S)	B - PSD8	C - R402 (N)
From	A - R402 (S)	0	0	25
	B - PSD8	0	0	0
	C - R402 (N)	32	0	0

Cyclist %

		To		
		A - R402 (S)	B - PSD8	C - R402 (N)
From	A - R402 (S)	0	0	0
	B - PSD8	0	0	0
	C - R402 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R402 (S)		0.00	0.0	A	221	332
B - PSD8	0.00	0.00	0.0	A	0	0
C - R402 (N)		0.00	0.0	A	138	206

LS - 2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R402 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
39		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D2	2024	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R402 (S)		ONE HOUR	✓	135	100.000
B - PSD8		ONE HOUR	✓	0	100.000
C - R402 (N)		ONE HOUR	✓	212	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R402 (S)	B - PSD8	C - R402 (N)
From	A - R402 (S)	0	0	135
	B - PSD8	0	0	0
	C - R402 (N)	212	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
39	0.20	0.80

Heavy Vehicle %

		To		
		A - R402 (S)	B - PSD8	C - R402 (N)
From	A - R402 (S)	0	0	21
	B - PSD8	0	0	0
	C - R402 (N)	27	0	0

Cyclist %

		To		
		A - R402 (S)	B - PSD8	C - R402 (N)
From	A - R402 (S)	0	0	0
	B - PSD8	0	0	0
	C - R402 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R402 (S)		0.00	0.0	A	129	193
B - PSD8	0.00	0.00	0.0	A	0	0
C - R402 (N)		0.00	0.0	A	199	298

LS - 2029 No Construction , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R402 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
39		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D3	2029 No Construction	AM	ONE HOUR	07:30	09:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R402 (S)		ONE HOUR	✓	274	100.000
B - PSD8		ONE HOUR	✓	0	100.000
C - R402 (N)		ONE HOUR	✓	178	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R402 (S)	B - PSD8	C - R402 (N)
From	A - R402 (S)	0	0	274
	B - PSD8	0	0	0
	C - R402 (N)	178	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
39	0.20	0.80

Heavy Vehicle %

		To		
		A - R402 (S)	B - PSD8	C - R402 (N)
From	A - R402 (S)	0	0	27
	B - PSD8	0	0	0
	C - R402 (N)	34	0	0

Cyclist %

		To		
		A - R402 (S)	B - PSD8	C - R402 (N)
From	A - R402 (S)	0	0	0
	B - PSD8	0	0	0
	C - R402 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R402 (S)		0.00	0.0	A	245	367
B - PSD8	0.00	0.00	0.0	A	0	0
C - R402 (N)		0.00	0.0	A	165	247

LS - 2029 No Construction , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R402 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
39		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D4	2029 No Construction	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R402 (S)		ONE HOUR	✓	152	100.000
B - PSD8		ONE HOUR	✓	0	100.000
C - R402 (N)		ONE HOUR	✓	241	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R402 (S)	B - PSD8	C - R402 (N)
From	A - R402 (S)	0	0	152
	B - PSD8	0	0	0
	C - R402 (N)	241	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
39	0.20	0.80

Heavy Vehicle %

		To		
		A - R402 (S)	B - PSD8	C - R402 (N)
From	A - R402 (S)	0	0	23
	B - PSD8	0	0	0
	C - R402 (N)	29	0	0

Cyclist %

		To		
		A - R402 (S)	B - PSD8	C - R402 (N)
From	A - R402 (S)	0	0	0
	B - PSD8	0	0	0
	C - R402 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R402 (S)		0.00	0.0	A	129	194
B - PSD8	0.00	0.00	0.0	A	0	0
C - R402 (N)		0.00	0.0	A	218	327

LS - 2029 With Construction Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R402 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
39		T-Junction	Two-way	Two-way	Two-way		0.75	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.75	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)	Run automatically
D5	2029 With Construction Peak	AM	ONE HOUR	07:30	09:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R402 (S)		ONE HOUR	✓	300	100.000
B - PSD8		ONE HOUR	✓	12	100.000
C - R402 (N)		ONE HOUR	✓	220	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R402 (S)	B - PSD8	C - R402 (N)
From	A - R402 (S)	0	0	300
	B - PSD8	0	0	12
	C - R402 (N)	203	17	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
39	0.20	0.80

Heavy Vehicle %

		To		
		A - R402 (S)	B - PSD8	C - R402 (N)
From	A - R402 (S)	0	0	32
	B - PSD8	0	0	90
	C - R402 (N)	40	64	0

Cyclist %

		To		
		A - R402 (S)	B - PSD8	C - R402 (N)
From	A - R402 (S)	0	0	0
	B - PSD8	0	0	0
	C - R402 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R402 (S)		0.00	0.0	A	278	418
B - PSD8	0.02	12.02	0.1	B	12	17
C - R402 (N)		1.13	0.1	A	204	305

LS - 2029 With Construction Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R402 (N) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
39		T-Junction	Two-way	Two-way	Two-way		0.76	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.76	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)	Run automatically
D6	2029 With Construction Peak	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R402 (S)		ONE HOUR	✓	177	100.000
B - PSD8		ONE HOUR	✓	17	100.000
C - R402 (N)		ONE HOUR	✓	278	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R402 (S)	B - PSD8	C - R402 (N)
From	A - R402 (S)	0	0	177
	B - PSD8	0	0	17
	C - R402 (N)	266	12	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
39	0.20	0.80

Heavy Vehicle %

		To		
		A - R402 (S)	B - PSD8	C - R402 (N)
From	A - R402 (S)	0	0	31
	B - PSD8	0	0	64
	C - R402 (N)	34	90	0

Cyclist %

		To		
		A - R402 (S)	B - PSD8	C - R402 (N)
From	A - R402 (S)	0	0	0
	B - PSD8	0	0	0
	C - R402 (N)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R402 (S)		0.00	0.0	A	162	244
B - PSD8	0.03	10.31	0.1	B	15	22
C - R402 (N)		0.68	0.1	A	255	383

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.1.1.1905
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Filename: Junction 40_R402-R401 Tjct_LS.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 13:44:14

»LS - 2024, AM
»LS - 2024, PM
»LS - 2029 No Construction , AM
»LS - 2029 No Construction , PM
»LS - 2029 With Construction Peak, AM
»LS - 2029 With Construction Peak, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	LS [Lane Simulation] - 2024									
A - R402 (NE)	0.0	0.00		A	2.22	0.0	0.00		A	2.35
B - R401	0.3	12.41	0.18	B		0.6	13.38	0.26	B	
C - R402 (SW)	0.4	1.21		A		0.0	0.39		A	
	LS [Lane Simulation] - 2029 No Construction									
A - R402 (NE)	0.0	0.00		A	2.48	0.0	0.00		A	2.72
B - R401	0.5	13.63	0.21	B		0.8	15.14	0.32	C	
C - R402 (SW)	0.2	1.40		A		0.1	0.39		A	
	LS [Lane Simulation] - 2029 With Construction Peak									
A - R402 (NE)	0.0	0.00		A	2.23	0.0	0.00		A	2.61
B - R401	0.4	13.42	0.21	B		0.8	15.96	0.32	C	
C - R402 (SW)	0.3	1.33		A		0.1	0.49		A	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	Water Supply Project
Location	
Site number	Junction 40
Date	19/03/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Calculate RFCs	Relaxation factor for capacity/RFC runs	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)	Last run total time taken (s)
Delay	1.00	100000	100000	Calculate for all arms	3.00	-1	3	1	60	✓			833435205	101	1.40	20.59

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	07:45	09:15	15	✓
D2	2024	PM	ONE HOUR	16:15	17:45	15	✓
D3	2029 No Construction	AM	ONE HOUR	07:45	09:15	15	✓
D4	2029 No Construction	PM	ONE HOUR	16:15	17:45	15	✓
D5	2029 With Construction Peak	AM	ONE HOUR	07:45	09:15	15	✓
D6	2029 With Construction Peak	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	LS	✓	✓	100.000	100.000

LS - 2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
40		T-Junction	Two-way	Two-way	Two-way		2.22	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.22	A

Arms

Arms

Arm	Name	Description	Arm type
A	R402 (NE)		Major
B	R401		Minor
C	R402 (SW)		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)	Vehicles causing blocking (%)
C - R402 (SW)	8.50			250.0	✓	0.00	100

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - R401	One lane plus flare	10.00	8.90	7.00	5.00	3.70		1.00	21	16

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	569	0.092	0.234	0.147	0.334
B-C	630	0.086	0.217	-	-
C-B	719	0.248	0.248	-	-

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.

Lane Simulation: Arm options

Arm	Traffic considering secondary lanes (%)
A - R402 (NE)	10.00
B - R401	10.00
C - R402 (SW)	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - R402 (NE)	Entry	1	1	B, C		Infinity			0	99999	
	Exit	1	1			Infinity					
B - R401	Entry	1	1	C	✓	1.00			0	99999	
			2	A	✓	1.00			0	99999	
		2	1	(A, C)		Infinity					
	Exit	1	1			Infinity					
C - R402 (SW)	Entry	1	1	A, B		Infinity			0	99999	
	Exit	1	1			Infinity					

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			R402 (NE)	R401	R402 (SW)
A - R402 (NE)	1	1		✓	✓
B - R401	1	1			✓
		2	✓		
	2	1	✓		✓
C - R402 (SW)	1	1	✓	✓	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R402 (NE)		ONE HOUR	✓	249	100.000
B - R401		ONE HOUR	✓	86	100.000
C - R402 (SW)		ONE HOUR	✓	339	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R402 (NE)	B - R401	C - R402 (SW)
From	A - R402 (NE)	0	69	180
	B - R401	67	0	19
	C - R402 (SW)	318	21	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
40	0.20	0.80

Heavy Vehicle %

		To		
		A - R402 (NE)	B - R401	C - R402 (SW)
From	A - R402 (NE)	0	23	20
	B - R401	24	0	73
	C - R402 (SW)	11	76	0

Cyclist %

		To		
		A - R402 (NE)	B - R401	C - R402 (SW)
From	A - R402 (NE)	0	0	0
	B - R401	0	0	0
	C - R402 (SW)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R402 (NE)		0.00	0.0	A	228	342
B - R401	0.18	12.41	0.3	B	80	120
C - R402 (SW)		1.21	0.4	A	311	467

LS - 2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
40		T-Junction	Two-way	Two-way	Two-way		2.35	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.35	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)	Run automatically
D2	2024	PM	ONE HOUR	16:15	17:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R402 (NE)		ONE HOUR	✓	380	100.000
B - R401		ONE HOUR	✓	116	100.000
C - R402 (SW)		ONE HOUR	✓	192	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R402 (NE)	B - R401	C - R402 (SW)
From	A - R402 (NE)	0	85	295
	B - R401	107	0	9
	C - R402 (SW)	187	5	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
40	0.20	0.80

Heavy Vehicle %

		To		
		A - R402 (NE)	B - R401	C - R402 (SW)
From	A - R402 (NE)	0	13	22
	B - R401	18	0	89
	C - R402 (SW)	13	43	0

Cyclist %

		To		
		A - R402 (NE)	B - R401	C - R402 (SW)
From	A - R402 (NE)	0	0	0
	B - R401	0	0	0
	C - R402 (SW)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R402 (NE)		0.00	0.0	A	349	524
B - R401	0.26	13.38	0.6	B	106	158
C - R402 (SW)		0.39	0.0	A	174	261

LS - 2029 No Construction , AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
40		T-Junction	Two-way	Two-way	Two-way		2.48	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.48	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)	Run automatically
D3	2029 No Construction	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R402 (NE)		ONE HOUR	✓	281	100.000
B - R401		ONE HOUR	✓	98	100.000
C - R402 (SW)		ONE HOUR	✓	380	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R402 (NE)	B - R401	C - R402 (SW)
From	A - R402 (NE)	0	78	203
	B - R401	76	0	22
	C - R402 (SW)	355	25	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
40	0.20	0.80

Heavy Vehicle %

		To		
		A - R402 (NE)	B - R401	C - R402 (SW)
From	A - R402 (NE)	0	25	21
	B - R401	25	0	75
	C - R402 (SW)	12	78	0

Cyclist %

		To		
		A - R402 (NE)	B - R401	C - R402 (SW)
From	A - R402 (NE)	0	0	0
	B - R401	0	0	0
	C - R402 (SW)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R402 (NE)		0.00	0.0	A	259	388
B - R401	0.21	13.63	0.5	B	91	137
C - R402 (SW)		1.40	0.2	A	349	524

LS - 2029 No Construction , PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
40		T-Junction	Two-way	Two-way	Two-way		2.72	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.72	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)	Run automatically
D4	2029 No Construction	PM	ONE HOUR	16:15	17:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R402 (NE)		ONE HOUR	✓	428	100.000
B - R401		ONE HOUR	✓	132	100.000
C - R402 (SW)		ONE HOUR	✓	216	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R402 (NE)	B - R401	C - R402 (SW)
From	A - R402 (NE)	0	95	333
	B - R401	121	0	11
	C - R402 (SW)	210	6	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
40	0.20	0.80

Heavy Vehicle %

		To		
		A - R402 (NE)	B - R401	C - R402 (SW)
From	A - R402 (NE)	0	14	24
	B - R401	20	0	90
	C - R402 (SW)	15	46	0

Cyclist %

		To		
		A - R402 (NE)	B - R401	C - R402 (SW)
From	A - R402 (NE)	0	0	0
	B - R401	0	0	0
	C - R402 (SW)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R402 (NE)		0.00	0.0	A	389	584
B - R401	0.32	15.14	0.8	C	123	184
C - R402 (SW)		0.39	0.1	A	200	301

LS - 2029 With Construction Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
40		T-Junction	Two-way	Two-way	Two-way		2.23	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.23	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)	Run automatically
D5	2029 With Construction Peak	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R402 (NE)		ONE HOUR	✓	318	100.000
B - R401		ONE HOUR	✓	98	100.000
C - R402 (SW)		ONE HOUR	✓	422	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R402 (NE)	B - R401	C - R402 (SW)
From	A - R402 (NE)	0	80	238
	B - R401	76	0	22
	C - R402 (SW)	395	27	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
40	0.20	0.80

Heavy Vehicle %

		To		
		A - R402 (NE)	B - R401	C - R402 (SW)
From	A - R402 (NE)	0	25	31
	B - R401	26	0	75
	C - R402 (SW)	18	74	0

Cyclist %

		To		
		A - R402 (NE)	B - R401	C - R402 (SW)
From	A - R402 (NE)	0	0	0
	B - R401	0	0	0
	C - R402 (SW)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R402 (NE)		0.00	0.0	A	292	438
B - R401	0.21	13.42	0.4	B	90	135
C - R402 (SW)		1.33	0.3	A	393	589

LS - 2029 With Construction Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
40		T-Junction	Two-way	Two-way	Two-way		2.61	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.61	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)	Run automatically
D6	2029 With Construction Peak	PM	ONE HOUR	16:15	17:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R402 (NE)		ONE HOUR	✓	470	100.000
B - R401		ONE HOUR	✓	132	100.000
C - R402 (SW)		ONE HOUR	✓	253	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R402 (NE)	B - R401	C - R402 (SW)
From	A - R402 (NE)	0	97	373
	B - R401	121	0	11
	C - R402 (SW)	245	8	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
40	0.20	0.80

Heavy Vehicle %

		To		
		A - R402 (NE)	B - R401	C - R402 (SW)
From	A - R402 (NE)	0	14	29
	B - R401	20	0	90
	C - R402 (SW)	24	37	0

Cyclist %

		To		
		A - R402 (NE)	B - R401	C - R402 (SW)
From	A - R402 (NE)	0	0	0
	B - R401	0	0	0
	C - R402 (SW)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R402 (NE)		0.00	0.0	A	435	652
B - R401	0.32	15.96	0.8	C	122	182
C - R402 (SW)		0.49	0.1	A	231	346

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.1.1.1905
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Filename: Junction 43_R403-CC6 Tjct_LS.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 13:45:14

»LS - 2024, AM
»LS - 2024, PM
»LS - 2030 No Construction , AM
»LS - 2030 No Construction , PM
»LS - 2030 With Construction Peak, AM
»LS - 2030 With Construction Peak, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	LS [Lane Simulation] - 2024									
A - R403 (N)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - CC6	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - R403 (S)	0.0	0.00		A		0.0	0.00		A	
	LS [Lane Simulation] - 2030 No Construction									
A - R403 (N)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - CC6	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - R403 (S)	0.0	0.00		A		0.0	0.00		A	
	LS [Lane Simulation] - 2030 With Construction Peak									
A - R403 (N)	0.0	0.00		A	7.79	0.0	0.00		A	4.67
B - CC6	1.9	25.38	0.63	D		0.2	13.28	0.09	B	
C - R403 (S)	0.2	1.66		A		1.4	6.93		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. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	Water Supply Project
Location	
Site number	Junction 43
Date	19/03/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Calculate RFCs	Relaxation factor for capacity/RFC runs	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)	Last run total time taken (s)
Delay	1.00	100000	100000	Calculate for all arms	3.00	-1	3	1	60	✓			403918338	21	0.09	1.93

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	07:15	08:45	15	✓
D2	2024	PM	ONE HOUR	16:45	18:15	15	✓
D3	2030 No Construction	AM	ONE HOUR	07:15	08:45	15	✓
D4	2030 No Construction	PM	ONE HOUR	16:45	18:15	15	✓
D5	2030 With Construction Peak	AM	ONE HOUR	07:15	08:45	15	✓
D6	2030 With Construction Peak	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	LS	✓	✓	100.000	100.000

LS - 2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R403 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
43		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	R403 (N)		Major
B	CC6		Minor
C	R403 (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)	Vehicles causing blocking (%)
C - R403 (S)	5.30			180.0	✓	0.00	100

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 - CC6	One lane	3.50	55	15

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	528	0.099	0.250	0.158	0.358
B-C	665	0.105	0.266	-	-
C-B	678	0.271	0.271	-	-

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.

Lane Simulation: Arm options

Arm	Traffic considering secondary lanes (%)
A - R403 (N)	10.00
B - CC6	10.00
C - R403 (S)	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - R403 (N)	Entry	1	1	B, C		Infinity			0	99999	
	Exit	1	1			Infinity					
B - CC6	Entry	1	1	A, C		Infinity			0	99999	
	Exit	1	1			Infinity					
C - R403 (S)	Entry	1	1	A, B		Infinity			0	99999	
	Exit	1	1			Infinity					

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			R403 (N)	CC6	R403 (S)
A - R403 (N)	1	1		✓	✓
B - CC6	1	1	✓		✓
C - R403 (S)	1	1	✓	✓	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	07:15	08:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R403 (N)		ONE HOUR	✓	332	100.000
B - CC6		ONE HOUR	✓	0	100.000
C - R403 (S)		ONE HOUR	✓	162	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R403 (N)	B - CC6	C - R403 (S)
From	A - R403 (N)	0	0	332
	B - CC6	0	0	0
	C - R403 (S)	162	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
43	0.20	0.80

Heavy Vehicle %

		To		
		A - R403 (N)	B - CC6	C - R403 (S)
From	A - R403 (N)	0	0	26
	B - CC6	0	0	0
	C - R403 (S)	31	0	0

Cyclist %

		To		
		A - R403 (N)	B - CC6	C - R403 (S)
From	A - R403 (N)	0	0	0
	B - CC6	0	0	0
	C - R403 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R403 (N)		0.00	0.0	A	308	463
B - CC6	0.00	0.00	0.0	A	0	0
C - R403 (S)		0.00	0.0	A	152	228

LS - 2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R403 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
43		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D2	2024	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R403 (N)		ONE HOUR	✓	182	100.000
B - CC6		ONE HOUR	✓	0	100.000
C - R403 (S)		ONE HOUR	✓	370	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R403 (N)	B - CC6	C - R403 (S)
From	A - R403 (N)	0	0	182
	B - CC6	0	0	0
	C - R403 (S)	370	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
43	0.20	0.80

Heavy Vehicle %

		To		
		A - R403 (N)	B - CC6	C - R403 (S)
From	A - R403 (N)	0	0	21
	B - CC6	0	0	0
	C - R403 (S)	17	0	0

Cyclist %

		To		
		A - R403 (N)	B - CC6	C - R403 (S)
From	A - R403 (N)	0	0	0
	B - CC6	0	0	0
	C - R403 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R403 (N)		0.00	0.0	A	168	252
B - CC6	0.00	0.00	0.0	A	0	0
C - R403 (S)		0.00	0.0	A	344	517

LS - 2030 No Construction , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R403 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
43		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D3	2030 No Construction	AM	ONE HOUR	07:15	08:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R403 (N)		ONE HOUR	✓	391	100.000
B - CC6		ONE HOUR	✓	0	100.000
C - R403 (S)		ONE HOUR	✓	192	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R403 (N)	B - CC6	C - R403 (S)
From	A - R403 (N)	0	0	391
	B - CC6	0	0	0
	C - R403 (S)	192	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
43	0.20	0.80

Heavy Vehicle %

		To		
		A - R403 (N)	B - CC6	C - R403 (S)
From	A - R403 (N)	0	0	28
	B - CC6	0	0	0
	C - R403 (S)	34	0	0

Cyclist %

		To		
		A - R403 (N)	B - CC6	C - R403 (S)
From	A - R403 (N)	0	0	0
	B - CC6	0	0	0
	C - R403 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R403 (N)		0.00	0.0	A	355	532
B - CC6	0.00	0.00	0.0	A	0	0
C - R403 (S)		0.00	0.0	A	174	260

LS - 2030 No Construction , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R403 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
43		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D4	2030 No Construction	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R403 (N)		ONE HOUR	✓	214	100.000
B - CC6		ONE HOUR	✓	0	100.000
C - R403 (S)		ONE HOUR	✓	432	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R403 (N)	B - CC6	C - R403 (S)
From	A - R403 (N)	0	0	214
	B - CC6	0	0	0
	C - R403 (S)	432	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
43	0.20	0.80

Heavy Vehicle %

		To		
		A - R403 (N)	B - CC6	C - R403 (S)
From	A - R403 (N)	0	0	23
	B - CC6	0	0	0
	C - R403 (S)	19	0	0

Cyclist %

		To		
		A - R403 (N)	B - CC6	C - R403 (S)
From	A - R403 (N)	0	0	0
	B - CC6	0	0	0
	C - R403 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R403 (N)		0.00	0.0	A	199	298
B - CC6	0.00	0.00	0.0	A	0	0
C - R403 (S)		0.00	0.0	A	397	596

LS - 2030 With Construction Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R403 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
43		T-Junction	Two-way	Two-way	Two-way		7.79	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.79	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)	Run automatically
D5	2030 With Construction Peak	AM	ONE HOUR	07:15	08:45	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R403 (N)		ONE HOUR	✓	406	100.000
B - CC6		ONE HOUR	✓	256	100.000
C - R403 (S)		ONE HOUR	✓	221	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R403 (N)	B - CC6	C - R403 (S)
From	A - R403 (N)	0	10	396
	B - CC6	121	0	135
	C - R403 (S)	197	24	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
43	0.20	0.80

Heavy Vehicle %

		To		
		A - R403 (N)	B - CC6	C - R403 (S)
From	A - R403 (N)	0	79	29
	B - CC6	7	0	8
	C - R403 (S)	36	45	0

Cyclist %

		To		
		A - R403 (N)	B - CC6	C - R403 (S)
From	A - R403 (N)	0	0	0
	B - CC6	0	0	0
	C - R403 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R403 (N)		0.00	0.0	A	370	555
B - CC6	0.63	25.38	1.9	D	234	351
C - R403 (S)		1.66	0.2	A	200	300

LS - 2030 With Construction Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - R403 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
43		T-Junction	Two-way	Two-way	Two-way		4.67	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.67	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)	Run automatically
D6	2030 With Construction Peak	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R403 (N)		ONE HOUR	✓	340	100.000
B - CC6		ONE HOUR	✓	34	100.000
C - R403 (S)		ONE HOUR	✓	572	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - R403 (N)	B - CC6	C - R403 (S)
From	A - R403 (N)	0	121	219
	B - CC6	10	0	24
	C - R403 (S)	437	135	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
43	0.20	0.80

Heavy Vehicle %

		To		
		A - R403 (N)	B - CC6	C - R403 (S)
From	A - R403 (N)	0	7	25
	B - CC6	79	0	45
	C - R403 (S)	20	8	0

Cyclist %

		To		
		A - R403 (N)	B - CC6	C - R403 (S)
From	A - R403 (N)	0	0	0
	B - CC6	0	0	0
	C - R403 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R403 (N)		0.00	0.0	A	315	472
B - CC6	0.09	13.28	0.2	B	33	49
C - R403 (S)		6.93	1.4	A	524	786

TRANSYT 17

Version: 17.0.0.2525
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Filename: Junction 45_R403-R415-L1020 Station Rd_v4.t17
Path: C:\Users\AYIMM\Downloads
Report generation date: 10/11/2025 13:48:45

»A1 - (untitled) : D1 - 2024 | Base | AM :
»A1 - (untitled) : D2 - 2024 | Base | PM :
»A1 - (untitled) : D3 - 2030 | Base | AM :
»A1 - (untitled) : D4 - 2030 | Base | PM :
»A1 - (untitled) : D5 - 2030 | Base + Const. | AM :
»A1 - (untitled) : D6 - 2030 | Base + Const. | PM :

Summary of network performance

	AM				PM			
	Set ID	Total delay (PCU-hr/hr)	Highest DOS	Number oversaturated	Set ID	Total delay (PCU-hr/hr)	Highest DOS	Number oversaturated
	(untitled) - 2024 - Base							
Network	D1	2.10	35% (TS C/1)	0 (0%)	D2	2.94	49% (TS B/1)	0 (0%)
	(untitled) - 2030 - Base							
Network	D3	2.83	41% (TS B/1)	0 (0%)	D4	4.27	62% (TS B/1)	0 (0%)
	(untitled) - 2030 - Base + Const.							
Network	D5	3.98	51% (TS B/1)	0 (0%)	D6	5.42	67% (TS B/1)	0 (0%)

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

File summary

File description

File title	(untitled)
Location	
Site number	
Driving side	Left
Date	06/12/2011
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	JEGINTL\AYIMM
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display OD matrix distances	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber	Display controller phase minimums
			✓			✓	✓	✓	✓	✓	✓	✓			

Units

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	kph	m	mpg	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

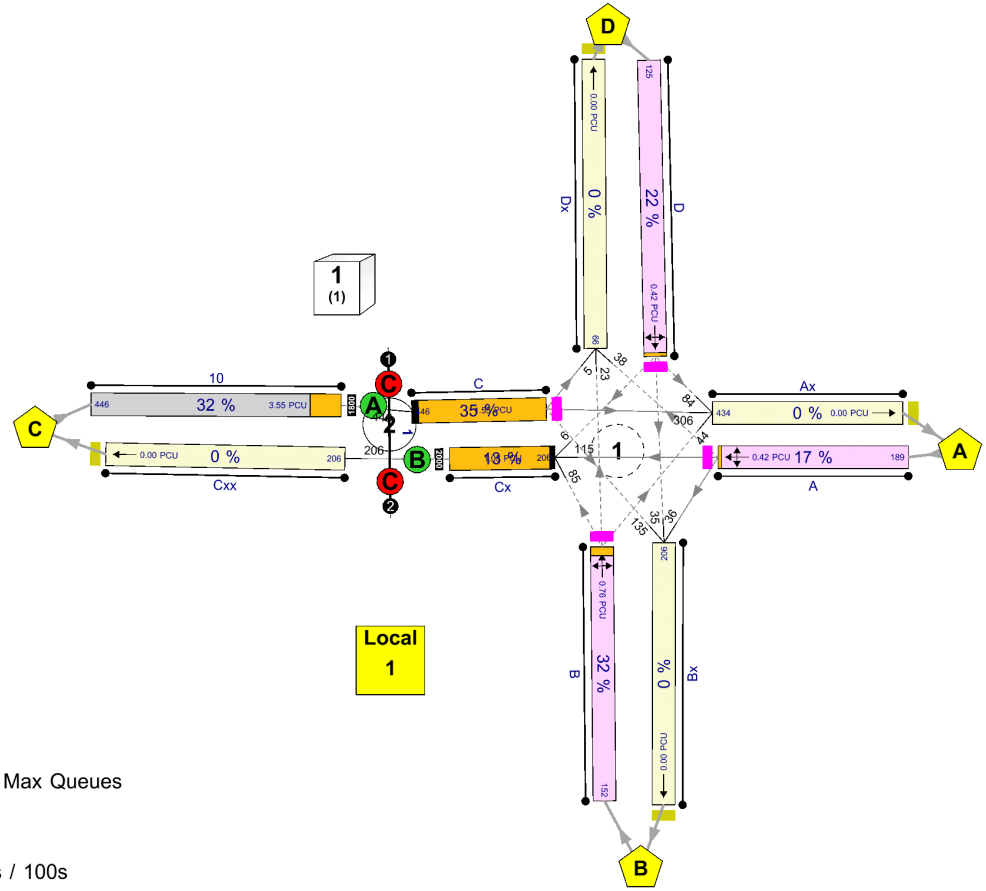
Sorting

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Demand set display name template	Demand set include ID	Summary results columns	Summary results rows	Link grouping	Source grouping	Colour Analysis/Demand Sets
✓	Ascending	Numerical		ID	Y | S | T	✓	T	Y - S	Normal	Normal	✓

Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Average animation capture interval (s)	Use quick response	Do flow sampling	Uniform vehicle generation	Last run random seed	Last run number of trials	Last run time taken (s)
Delay	1.00	10000	10000	-1	3	60	✓			0	0	0.00

Network Diagrams



Mean Max Queues

(untitled)
Cycletime 0s / 100s
Timesteps 99 / 100
1
Diagram produced using TRANSYT 17.0.0.2525

A1 - (untitled)
D1 - 2024 | Base | AM

Summary

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Traffic Stream Data	ZArm (untitled) - ZTraffic Stream (untitled)	ZTraffic Stream (untitled): CTM uses a whole number of cells. CTM is using the length adjusted by 39%.
Warning	Traffic Stream Data	ZArm (untitled) - ZTraffic Stream R403 WB @Peds	ZTraffic Stream R403 WB @Peds: CTM uses a whole number of cells. CTM is using the length adjusted by 39%.

Run Summary

Analysis set used	Run start time	Run finish time	Run duration (s)	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
1	10/11/2025 13:48:16	10/11/2025 13:48:19	3.68	07:45	100	32.53	2.10	34.79	C/1	0	0	10/1	C/1	C/1	✓

Analysis Set Details

Name	Use Simulation	Description	Use specific Demand Set(s)	Optimise specific Demand Set(s)	Include in report	Locked
(untitled)					✓	

Demand Set Details

Year	Scenario	Time period	Description	Use Relationship	Relationship	Start time (HH:mm)	Locked	Run automatically
2024	Base	AM	(untitled)			07:45		✓

Network Options

Network timings

Network cycle time (s)	Minimum possible cycle time (s)	Absolute minimum possible cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100	27	27		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)	Missing stage transition options
10000.00	10000.00	10000.00	2	Assume banned

Traffic options

Traffic model	Exclude blocking-back in DoS	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)		100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from traffic model	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓			Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Cruise time coefficient	TRANSYT 16 compatibility mode
Default	35	80	✓

Normal Vehicle Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	Vehicle type	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	Bus	1.00	Default	0.94	30	85

Cycle parameters

Name	Vehicle type	PCU Factor	Dispersion type	Cruise time coefficient
Cycle	Cycle	0.20	Default	80

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
✓	✓	Offsets And Green Splits	

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy (%)	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Standard accuracy Hill Climb	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1			Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.60	14.20

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	R403 East		1
Ax	(untitled)		
B	R415		1
Bx	(untitled)		
C	(untitled)		1
Cx	(untitled)		2
Cxx	R403 West Exit		
D	L1020 Station Rd		1
Dx	(untitled)		
10	R403 West		2

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Zebra crossing ID	Allow nearside turn on red
A	1	R403 East			125.00							✓	Normal		
Ax	1	(untitled)			225.59								Normal		
B	1	R415			125.00							✓	Normal		
Bx	1	(untitled)			225.59								Normal		
C	1	(untitled)			6.00				✓	1800		✓	Normal		
Cx	1	R403 WB @Peds			6.00	✓	Directly entered	2000	✓	1800	✓		Normal		
Cxx	1			✓	225.82								Normal		
D	1	L1020 Station Rd			200.00							✓	Normal		
Dx	1	(untitled)			213.09								Normal		
10	1	R403 West		✓	164.32	✓	Directly entered	1800			✓		Normal		

Lanes

Arm	Traffic Stream	Lane	Name	Description
(ALL)	1	1	(untitled)	

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A	1	NetworkDefault	100	100	100		0.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B	1	NetworkDefault	100	100	100		0.00		
Bx	1	NetworkDefault	100	100	100		0.00		
C	1	CTM	100	100	100		1.00		
Cx	1	CTM	100	100	100		1.00		
Cxx	1	NetworkDefault	100	100	100		0.00		
D	1	NetworkDefault	100	100	100		0.00		
Dx	1	NetworkDefault	100	100	100		0.00		
10	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
A	1	0.00	Automatic	Included	Automatic	1.00	✓	90
Ax	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
B	1	0.00	Automatic	Included	Automatic	1.00	✓	90
Bx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
C	1	0.00	Automatic	Included	Automatic	1.00	✓	90
Cx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
Cxx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
D	1	0.00	Automatic	Included	Automatic	1.00	✓	90
Dx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
10	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90

Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	1	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
A	1	189	189
Ax	1	434	434
B	1	152	152
Bx	1	206	206
C	1	446	446
Cx	1	206	206
Cxx	1	206	206
D	1	125	125
Dx	1	66	66
10	1	446	446

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Green start adjustment (s)	Green end adjustment (s)
Cx	1	1	B		0	0
10	1	1	A		0	0

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A	1	15.00	30.00
B	1	15.00	30.00
D	1	24.00	30.00
10	1	19.72	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	C/1	Ax/1	27.07	30.00	✓	Straight	Straight Movement
Bx	1	1	C/1	Bx/1	27.07	30.00	✓	Offside	75.51
C	1	1	10/1	C/1	1.00	30.00	✓	Straight	Straight Movement
Cx	1	1	A/1	Cx/1	1.00	30.00	✓	Straight	Straight Movement
Cxx	1	1	Cx/1	Cxx/1	27.10	30.00	✓	Straight	Straight Movement
Dx	1	1	C/1	Dx/1	25.57	30.00	✓	Nearside	33.19
Ax	1	2	B/1	Ax/1	27.07	30.00	✓	Offside	72.59
Bx	1	2	A/1	Bx/1	27.07	30.00	✓	Nearside	35.39
Cx	1	2	B/1	Cx/1	1.00	30.00	✓	Nearside	30.06
Dx	1	2	A/1	Dx/1	25.57	30.00	✓	Offside	71.99
Ax	1	3	D/1	Ax/1	27.07	30.00	✓	Nearside	37.51
Bx	1	3	D/1	Bx/1	27.07	30.00	✓	Straight	Straight Movement
Cx	1	3	D/1	Cx/1	1.00	30.00	✓	Offside	65.00
Dx	1	3	B/1	Dx/1	25.57	30.00	✓	Straight	Straight Movement

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	1	Movement		

Give Way Data - Movements

Arm	Traffic Stream	Movement	Destination traffic stream	Max Flow (Opposed) (PCU/hr)	Max Flow (Unopposed) (PCU/hr)	Max congested capacity (PCU/hr)	Percentage opposed (%)
A	1	1	Dx/1	603	603		100
		2	Cx/1	1800	1800		100
		3	Bx/1	1800	1800		100
B	1	1	Dx/1	600	600		100
		2	Cx/1	700	700		100
		3	Ax/1	500	500		100
C	1	1	Dx/1	2000	2000	0	100
		2	Bx/1	750	750	0	100
		3	Ax/1	2000	2000	0	100
D	1	1	Ax/1	715	715		100
		2	Bx/1	650	650		100
		3	Cx/1	600	600		100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible
A	1	1	Dx/1	Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.23	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.23	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.33	
B	1	1	Dx/1	Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.31	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.14	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.14	
		2	Cx/1	Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.23	
		3	Ax/1	Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.14	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.31	
				Crossroads opposing flow	TrafficStreamMovement	D/1	Ax/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	D/1	Bx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	D/1	Cx/1	100	0.11	
C	1	2	Bx/1	Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.23	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.23	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.33	
D	1	1	Ax/1	Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.23	
		2	Bx/1	Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.31	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.14	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.14	
		3	Cx/1	Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.14	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.31	
				Crossroads opposing flow	TrafficStreamMovement	B/1	Cx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	B/1	Dx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	B/1	Ax/1	100	0.11	

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Crossing type	Allow walk on red	Green man location	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)			Signalised		Farside	8.00	5.33	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
1	1	C	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
1	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
1	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Limit paths by length	Path length limit multiplier	Limit paths by number	Limit paths by flow
1	(untitled)	✓	✓	Path Equalisation			✓		✓	1.25		

Normal Input Flows (PCU/hr)

		To			
		A	B	C	D
From	A	0	36	115	38
	B	44	0	85	23
	C	306	135	0	5
	D	84	35	6	0

Bus Input Flows not shown as they are blank.

Cycle Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	A	(untitled)	A/1	Ax/1	#0000FF
	B	(untitled)	B/1	Bx/1	#FF0000
	C	(untitled)	10/1	Cxx/1	#00FF00
	D	(untitled)	D/1	Dx/1	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		A	D	A/1, Dx/1	Normal	38
	3		A	B	A/1, Bx/1	Normal	36
	4		B	D	B/1, Dx/1	Normal	23
	6		B	A	B/1, Ax/1	Normal	44
	7		A	C	A/1, Cx/1, Cxx/1	Normal	115
	8		B	C	B/1, Cx/1, Cxx/1	Normal	85
	9		D	C	D/1, Cx/1, Cxx/1	Normal	6
	10		C	D	10/1, C/1, Dx/1	Normal	5
	11		D	B	D/1, Bx/1	Normal	35
	12		D	A	D/1, Ax/1	Normal	84
	13		C	B	10/1, C/1, Bx/1	Normal	135
	14		C	A	10/1, C/1, Ax/1	Normal	306

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Mean end of red queue (PCU)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A	1	R403 East	1			189	1154	90	3.90	17	423	19.03	4.03	6.97	0.42		100	100	0.00	3.17
Ax	1	(untitled)				434	Unrestricted	90	0.00	0	Unrestricted	27.07	0.00	0.00	0.00		100	100	0.00	0.00
B	1	R415	1			152	501	90	3.76	32	182	26.16	11.16	16.37	0.76		100	100	0.00	7.00
Bx	1	(untitled)				206	Unrestricted	90	0.00	0	Unrestricted	27.07	0.00	0.00	0.00		100	100	0.00	0.00
C	1	(untitled)	1			446 <	1282	90	19.00	35	159	5.53	4.53	7.73	1.55 +		100	100	0.00	8.19
Cx	1	R403 WB @Peds	2	1	B	206 <	2000	70	0.00	13	589	3.36	2.36	19.97	1.03 +	1.03	100	100	0.00	2.18
Cxx	1					206	Unrestricted	90	10.00	0	Unrestricted	27.10	0.00	0.00	0.00		100	100	0.00	0.00
D	1	L1020 Station Rd	1			125	590	90	2.94	22	309	32.15	8.15	11.10	0.42		100	100	0.00	4.19
Dx	1	(untitled)				66	Unrestricted	90	5.00	0	Unrestricted	25.57	0.00	0.00	0.00		100	100	0.00	0.00
10	1	R403 West	2	1	A	446	1800	70	2.10	32	178	23.23	3.51	28.96	3.55	2.43	100	100	0.00	7.79

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
1	(ALL)	(untitled)		1	C	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	349.79	13.81	25.34	0.52	1.57	29.76	2.76	0.00	32.53
Bus									
Cycle									
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	349.79	13.81	25.34	0.52	1.57	29.76	2.76	0.00	32.53

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = stop or delay weighting has been set to a value other than 100%*
- *^ = stop or delay path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

A1 - (untitled)
D2 - 2024 | Base | PM

Summary

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Traffic Stream Data	ZArm (untitled) - ZTraffic Stream (untitled)	ZTraffic Stream (untitled): CTM uses a whole number of cells. CTM is using the length adjusted by 39%.
Warning	Traffic Stream Data	ZArm (untitled) - ZTraffic Stream R403 WB @Peds	ZTraffic Stream R403 WB @Peds: CTM uses a whole number of cells. CTM is using the length adjusted by 39%.

Run Summary

Analysis set used	Run start time	Run finish time	Run duration (s)	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
1	10/11/2025 13:48:19	10/11/2025 13:48:23	4.69	16:00	100	45.88	2.94	48.82	B/1	0	0	Cx/1	B/1	B/1	✓

Analysis Set Details

Name	Use Simulation	Description	Use specific Demand Set(s)	Optimise specific Demand Set(s)	Include in report	Locked
(untitled)					✓	

Demand Set Details

Year	Scenario	Time period	Description	Use Relationship	Relationship	Start time (HH:mm)	Locked	Run automatically
2024	Base	PM				16:00		✓

Network Options

Network timings

Network cycle time (s)	Minimum possible cycle time (s)	Absolute minimum possible cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100	27	27		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)	Missing stage transition options
10000.00	10000.00	10000.00	2	Assume banned

Traffic options

Traffic model	Exclude blocking-back in DoS	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)		100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from traffic model	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓			Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Cruise time coefficient	TRANSYT 16 compatibility mode
Default	35	80	✓

Normal Vehicle Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	Vehicle type	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	Bus	1.00	Default	0.94	30	85

Cycle parameters

Name	Vehicle type	PCU Factor	Dispersion type	Cruise time coefficient
Cycle	Cycle	0.20	Default	80

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
✓	✓	Offsets And Green Splits	

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy (%)	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Standard accuracy Hill Climb	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1			Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.60	14.20

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	R403 East		1
Ax	(untitled)		
B	R415		1
Bx	(untitled)		
C	(untitled)		1
Cx	(untitled)		2
Cxx	R403 West Exit		
D	L1020 Station Rd		1
Dx	(untitled)		
10	R403 West		2

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Zebra crossing ID	Allow nearside turn on red
A	1	R403 East			125.00							✓	Normal		
Ax	1	(untitled)			225.59								Normal		
B	1	R415			125.00							✓	Normal		
Bx	1	(untitled)			225.59								Normal		
C	1	(untitled)			6.00				✓	1800		✓	Normal		
Cx	1	R403 WB @Peds			6.00	✓	Directly entered	2000	✓	1800	✓		Normal		
Cxx	1			✓	225.82								Normal		
D	1	L1020 Station Rd			200.00							✓	Normal		
Dx	1	(untitled)			213.09								Normal		
10	1	R403 West		✓	164.32	✓	Directly entered	1800			✓		Normal		

Lanes

Arm	Traffic Stream	Lane	Name	Description
(ALL)	1	1	(untitled)	

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A	1	NetworkDefault	100	100	100		0.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B	1	NetworkDefault	100	100	100		0.00		
Bx	1	NetworkDefault	100	100	100		0.00		
C	1	CTM	100	100	100		1.00		
Cx	1	CTM	100	100	100		1.00		
Cxx	1	NetworkDefault	100	100	100		0.00		
D	1	NetworkDefault	100	100	100		0.00		
Dx	1	NetworkDefault	100	100	100		0.00		
10	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
A	1	0.00	Automatic	Included	Automatic	1.00	✓	90
Ax	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
B	1	0.00	Automatic	Included	Automatic	1.00	✓	90
Bx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
C	1	0.00	Automatic	Included	Automatic	1.00	✓	90
Cx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
Cxx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
D	1	0.00	Automatic	Included	Automatic	1.00	✓	90
Dx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
10	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90

Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	1	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
A	1	433	433
Ax	1	256	256
B	1	200	200
Bx	1	184	184
C	1	275	275
Cx	1	431	431
Cxx	1	431	431
D	1	79	79
Dx	1	116	116
10	1	275	275

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Green start adjustment (s)	Green end adjustment (s)
Cx	1	1	B		0	0
10	1	1	A		0	0

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A	1	15.00	30.00
B	1	15.00	30.00
D	1	24.00	30.00
10	1	19.72	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	C/1	Ax/1	27.07	30.00	✓	Straight	Straight Movement
Bx	1	1	C/1	Bx/1	27.07	30.00	✓	Offside	75.51
C	1	1	10/1	C/1	1.00	30.00	✓	Straight	Straight Movement
Cx	1	1	A/1	Cx/1	1.00	30.00	✓	Straight	Straight Movement
Cxx	1	1	Cx/1	Cxx/1	27.10	30.00	✓	Straight	Straight Movement
Dx	1	1	C/1	Dx/1	25.57	30.00	✓	Nearside	33.19
Ax	1	2	B/1	Ax/1	27.07	30.00	✓	Offside	72.59
Bx	1	2	A/1	Bx/1	27.07	30.00	✓	Nearside	35.39
Cx	1	2	B/1	Cx/1	1.00	30.00	✓	Nearside	30.06
Dx	1	2	A/1	Dx/1	25.57	30.00	✓	Offside	71.99
Ax	1	3	D/1	Ax/1	27.07	30.00	✓	Nearside	37.51
Bx	1	3	D/1	Bx/1	27.07	30.00	✓	Straight	Straight Movement
Cx	1	3	D/1	Cx/1	1.00	30.00	✓	Offside	65.00
Dx	1	3	B/1	Dx/1	25.57	30.00	✓	Straight	Straight Movement

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	1	Movement		

Give Way Data - Movements

Arm	Traffic Stream	Movement	Destination traffic stream	Max Flow (Opposed) (PCU/hr)	Max Flow (Unopposed) (PCU/hr)	Max congested capacity (PCU/hr)	Percentage opposed (%)
A	1	1	Dx/1	603	603		100
		2	Cx/1	1800	1800		100
		3	Bx/1	1800	1800		100
B	1	1	Dx/1	600	600		100
		2	Cx/1	700	700		100
		3	Ax/1	500	500		100
C	1	1	Dx/1	2000	2000	0	100
		2	Bx/1	750	750	0	100
		3	Ax/1	2000	2000	0	100
D	1	1	Ax/1	715	715		100
		2	Bx/1	650	650		100
		3	Cx/1	600	600		100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible
A	1	1	Dx/1	Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.23	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.23	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.33	
B	1	1	Dx/1	Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.31	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.14	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.14	
		2	Cx/1	Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.23	
		3	Ax/1	Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.14	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.31	
				Crossroads opposing flow	TrafficStreamMovement	D/1	Ax/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	D/1	Bx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	D/1	Cx/1	100	0.11	
C	1	2	Bx/1	Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.23	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.23	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.33	
D	1	1	Ax/1	Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.23	
		2	Bx/1	Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.31	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.14	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.14	
		3	Cx/1	Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.14	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.31	
				Crossroads opposing flow	TrafficStreamMovement	B/1	Cx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	B/1	Dx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	B/1	Ax/1	100	0.11	

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Crossing type	Allow walk on red	Green man location	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)			Signalised		Farside	8.00	5.33	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
1	1	C	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
1	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
1	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Limit paths by length	Path length limit multiplier	Limit paths by number	Limit paths by flow
1	(untitled)	✓	✓	Path Equalisation			✓		✓	1.25		

Normal Input Flows (PCU/hr)

		To			
		A	B	C	D
From	A	0	66	290	77
	B	49	0	134	17
	C	156	97	0	22
	D	51	21	7	0

Bus Input Flows not shown as they are blank.

Cycle Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	A	(untitled)	A/1	Ax/1	#0000FF
	B	(untitled)	B/1	Bx/1	#FF0000
	C	(untitled)	10/1	Cxx/1	#00FF00
	D	(untitled)	D/1	Dx/1	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		A	D	A/1, Dx/1	Normal	77
	3		A	B	A/1, Bx/1	Normal	66
	4		B	D	B/1, Dx/1	Normal	17
	6		B	A	B/1, Ax/1	Normal	49
	7		A	C	A/1, Cx/1, Cxx/1	Normal	290
	8		B	C	B/1, Cx/1, Cxx/1	Normal	134
	9		D	C	D/1, Cx/1, Cxx/1	Normal	7
	10		C	D	10/1, C/1, Dx/1	Normal	22
	11		D	B	D/1, Bx/1	Normal	21
	12		D	A	D/1, Ax/1	Normal	51
	13		C	B	10/1, C/1, Bx/1	Normal	97
	14		C	A	10/1, C/1, Ax/1	Normal	156

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Mean end of red queue (PCU)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A	1	R403 East	1			433	1256	90	12.88	41	122	22.19	7.19	27.00	3.21		100	100	0.00	13.75
Ax	1	(untitled)				256	Unrestricted	90	4.00	0	Unrestricted	27.07	0.00	0.00	0.00		100	100	0.00	0.00
B	1	R415	1			200	498	90	12.74	49	84	34.47	19.47	46.78	2.55		100	100	0.00	16.53
Bx	1	(untitled)				184	Unrestricted	90	7.00	0	Unrestricted	27.07	0.00	0.00	0.00		100	100	0.00	0.00
C	1	(untitled)	1			275 <	1142	90	19.00	24	274	5.51	4.51	11.46	1.33 +		100	100	0.00	5.10
Cx	1	R403 WB @Peds	2	1	B	431 <	2000	70	0.00	27	229	2.91	1.91	9.93	1.07 +	1.07	100	100	0.00	3.53
Cxx	1					431	Unrestricted	90	4.00	0	Unrestricted	27.10	0.00	0.00	0.00		100	100	0.00	0.00
D	1	L1020 Station Rd	1			79	596	90	11.96	16	475	33.34	9.34	22.76	0.49		100	100	0.00	3.14
Dx	1	(untitled)				116	Unrestricted	90	10.00	0	Unrestricted	25.57	0.00	0.00	0.00		100	100	0.00	0.00
10	1	R403 West	2	1	A	275	1800	70	1.38	20	356	22.48	2.76	24.48	1.86	1.48	100	100	0.00	3.84

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
1	(ALL)	(untitled)		1	C	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	365.66	15.18	24.09	0.74	2.19	41.69	4.19	0.00	45.88
Bus									
Cycle									
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	365.66	15.18	24.09	0.74	2.19	41.69	4.19	0.00	45.88

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = stop or delay weighting has been set to a value other than 100%*
- *^ = stop or delay path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

A1 - (untitled)
D3 - 2030 | Base | AM

Summary

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Traffic Stream Data	ZArm (untitled) - ZTraffic Stream (untitled)	ZTraffic Stream (untitled): CTM uses a whole number of cells. CTM is using the length adjusted by 39%.
Warning	Traffic Stream Data	ZArm (untitled) - ZTraffic Stream R403 WB @Peds	ZTraffic Stream R403 WB @Peds: CTM uses a whole number of cells. CTM is using the length adjusted by 39%.

Run Summary

Analysis set used	Run start time	Run finish time	Run duration (s)	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
1	10/11/2025 13:48:23	10/11/2025 13:48:27	4.48	07:45	100	44.00	2.83	41.13	B/1	0	0	10/1	B/1	B/1	✓

Analysis Set Details

Name	Use Simulation	Description	Use specific Demand Set(s)	Optimise specific Demand Set(s)	Include in report	Locked
(untitled)					✓	

Demand Set Details

Year	Scenario	Time period	Description	Use Relationship	Relationship	Start time (HH:mm)	Locked	Run automatically
2030	Base	AM	(untitled)			07:45		✓

Network Options

Network timings

Network cycle time (s)	Minimum possible cycle time (s)	Absolute minimum possible cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100	27	27		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)	Missing stage transition options
10000.00	10000.00	10000.00	2	Assume banned

Traffic options

Traffic model	Exclude blocking-back in DoS	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)		100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from traffic model	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓			Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Cruise time coefficient	TRANSYT 16 compatibility mode
Default	35	80	✓

Normal Vehicle Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	Vehicle type	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	Bus	1.00	Default	0.94	30	85

Cycle parameters

Name	Vehicle type	PCU Factor	Dispersion type	Cruise time coefficient
Cycle	Cycle	0.20	Default	80

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
✓	✓	Offsets And Green Splits	

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy (%)	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Standard accuracy Hill Climb	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1			Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.60	14.20

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	R403 East		1
Ax	(untitled)		
B	R415		1
Bx	(untitled)		
C	(untitled)		1
Cx	(untitled)		2
Cxx	R403 West Exit		
D	L1020 Station Rd		1
Dx	(untitled)		
10	R403 West		2

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Zebra crossing ID	Allow nearside turn on red
A	1	R403 East			125.00							✓	Normal		
Ax	1	(untitled)			225.59								Normal		
B	1	R415			125.00							✓	Normal		
Bx	1	(untitled)			225.59								Normal		
C	1	(untitled)			6.00				✓	1800		✓	Normal		
Cx	1	R403 WB @Peds			6.00	✓	Directly entered	2000	✓	1800	✓		Normal		
Cxx	1			✓	225.82								Normal		
D	1	L1020 Station Rd			200.00							✓	Normal		
Dx	1	(untitled)			213.09								Normal		
10	1	R403 West		✓	164.32	✓	Directly entered	1800			✓		Normal		

Lanes

Arm	Traffic Stream	Lane	Name	Description
(ALL)	1	1	(untitled)	

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A	1	NetworkDefault	100	100	100		0.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B	1	NetworkDefault	100	100	100		0.00		
Bx	1	NetworkDefault	100	100	100		0.00		
C	1	CTM	100	100	100		1.00		
Cx	1	CTM	100	100	100		1.00		
Cxx	1	NetworkDefault	100	100	100		0.00		
D	1	NetworkDefault	100	100	100		0.00		
Dx	1	NetworkDefault	100	100	100		0.00		
10	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
A	1	0.00	Automatic	Included	Automatic	1.00	✓	90
Ax	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
B	1	0.00	Automatic	Included	Automatic	1.00	✓	90
Bx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
C	1	0.00	Automatic	Included	Automatic	1.00	✓	90
Cx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
Cxx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
D	1	0.00	Automatic	Included	Automatic	1.00	✓	90
Dx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
10	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90

Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	1	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
A	1	221	221
Ax	1	501	501
B	1	180	180
Bx	1	239	239
C	1	518	518
Cx	1	243	243
Cxx	1	243	243
D	1	140	140
Dx	1	76	76
10	1	518	518

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Green start adjustment (s)	Green end adjustment (s)
Cx	1	1	B		0	0
10	1	1	A		0	0

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A	1	15.00	30.00
B	1	15.00	30.00
D	1	24.00	30.00
10	1	19.72	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	C/1	Ax/1	27.07	30.00	✓	Straight	Straight Movement
Bx	1	1	C/1	Bx/1	27.07	30.00	✓	Offside	75.51
C	1	1	10/1	C/1	1.00	30.00	✓	Straight	Straight Movement
Cx	1	1	A/1	Cx/1	1.00	30.00	✓	Straight	Straight Movement
Cxx	1	1	Cx/1	Cxx/1	27.10	30.00	✓	Straight	Straight Movement
Dx	1	1	C/1	Dx/1	25.57	30.00	✓	Nearside	33.19
Ax	1	2	B/1	Ax/1	27.07	30.00	✓	Offside	72.59
Bx	1	2	A/1	Bx/1	27.07	30.00	✓	Nearside	35.39
Cx	1	2	B/1	Cx/1	1.00	30.00	✓	Nearside	30.06
Dx	1	2	A/1	Dx/1	25.57	30.00	✓	Offside	71.99
Ax	1	3	D/1	Ax/1	27.07	30.00	✓	Nearside	37.51
Bx	1	3	D/1	Bx/1	27.07	30.00	✓	Straight	Straight Movement
Cx	1	3	D/1	Cx/1	1.00	30.00	✓	Offside	65.00
Dx	1	3	B/1	Dx/1	25.57	30.00	✓	Straight	Straight Movement

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	1	Movement		

Give Way Data - Movements

Arm	Traffic Stream	Movement	Destination traffic stream	Max Flow (Opposed) (PCU/hr)	Max Flow (Unopposed) (PCU/hr)	Max congested capacity (PCU/hr)	Percentage opposed (%)
A	1	1	Dx/1	603	603		100
		2	Cx/1	1800	1800		100
		3	Bx/1	1800	1800		100
B	1	1	Dx/1	600	600		100
		2	Cx/1	700	700		100
		3	Ax/1	500	500		100
C	1	1	Dx/1	2000	2000	0	100
		2	Bx/1	750	750	0	100
		3	Ax/1	2000	2000	0	100
D	1	1	Ax/1	715	715		100
		2	Bx/1	650	650		100
		3	Cx/1	600	600		100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible
A	1	1	Dx/1	Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.23	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.23	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.33	
B	1	1	Dx/1	Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.31	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.14	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.14	
		2	Cx/1	Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.23	
		3	Ax/1	Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.14	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.31	
				Crossroads opposing flow	TrafficStreamMovement	D/1	Ax/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	D/1	Bx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	D/1	Cx/1	100	0.11	
C	1	2	Bx/1	Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.23	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.23	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.33	
D	1	1	Ax/1	Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.23	
		2	Bx/1	Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.31	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.14	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.14	
		3	Cx/1	Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.14	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.31	
				Crossroads opposing flow	TrafficStreamMovement	B/1	Cx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	B/1	Dx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	B/1	Ax/1	100	0.11	

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Crossing type	Allow walk on red	Green man location	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)			Signalised		Farside	8.00	5.33	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
1	1	C	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
1	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
1	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Limit paths by length	Path length limit multiplier	Limit paths by number	Limit paths by flow
1	(untitled)	✓	✓	Path Equalisation			✓		✓	1.25		

Normal Input Flows (PCU/hr)

		To			
		A	B	C	D
From	A	0	42	135	44
	B	53	0	101	26
	C	355	157	0	6
	D	93	40	7	0

Bus Input Flows not shown as they are blank.

Cycle Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	A	(untitled)	A/1	Ax/1	#0000FF
	B	(untitled)	B/1	Bx/1	#FF0000
	C	(untitled)	10/1	Cxx/1	#00FF00
	D	(untitled)	D/1	Dx/1	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		A	D	A/1, Dx/1	Normal	44
	3		A	B	A/1, Bx/1	Normal	42
	4		B	D	B/1, Dx/1	Normal	26
	6		B	A	B/1, Ax/1	Normal	53
	7		A	C	A/1, Cx/1, Cxx/1	Normal	135
	8		B	C	B/1, Cx/1, Cxx/1	Normal	101
	9		D	C	D/1, Cx/1, Cxx/1	Normal	7
	10		C	D	10/1, C/1, Dx/1	Normal	6
	11		D	B	D/1, Bx/1	Normal	40
	12		D	A	D/1, Ax/1	Normal	93
	13		C	B	10/1, C/1, Bx/1	Normal	157
	14		C	A	10/1, C/1, Ax/1	Normal	355

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Mean end of red queue (PCU)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A	1	R403 East	1			221	1133	90	5.99	21	326	19.60	4.60	10.96	0.70		100	100	0.00	4.32
Ax	1	(untitled)				501	Unrestricted	90	0.00	0	Unrestricted	27.07	0.00	0.00	0.00		100	100	0.00	0.00
B	1	R415	1			180	478	90	5.98	41	119	29.42	14.42	28.07	1.44		100	100	0.00	10.87
Bx	1	(untitled)				239	Unrestricted	90	1.00	0	Unrestricted	27.07	0.00	0.00	0.00		100	100	0.00	0.00
C	1	(untitled)	1			518 <	1273	90	19.00	41	121	6.04	5.04	8.28	1.70 +		100	100	0.00	10.57
Cx	1	R403 WB @Peds	2	1	B	243 <	2000	70	0.00	15	484	3.29	2.29	17.00	1.03 +	1.03	100	100	0.00	2.46
Cxx	1					243	Unrestricted	90	8.00	0	Unrestricted	27.10	0.00	0.00	0.00		100	100	0.00	0.00
D	1	L1020 Station Rd	1			140	572	90	5.79	27	239	33.44	9.44	15.87	0.63		100	100	0.00	5.49
Dx	1	(untitled)				76	Unrestricted	90	6.00	0	Unrestricted	25.57	0.00	0.00	0.00		100	100	0.00	0.00
10	1	R403 West	2	1	A	518	1800	70	3.13	38	136	23.73	4.01	32.27	4.58	2.85	100	100	0.00	10.29

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
1	(ALL)	(untitled)		1	C	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	405.82	16.41	24.72	0.70	2.13	40.14	3.86	0.00	44.00
Bus									
Cycle									
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	405.82	16.41	24.72	0.70	2.13	40.14	3.86	0.00	44.00

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = stop or delay weighting has been set to a value other than 100%*
- *^ = stop or delay path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

A1 - (untitled)
D4 - 2030 | Base | PM

Summary

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Traffic Stream Data	ZArm (untitled) - ZTraffic Stream (untitled)	ZTraffic Stream (untitled): CTM uses a whole number of cells. CTM is using the length adjusted by 39%.
Warning	Traffic Stream Data	ZArm (untitled) - ZTraffic Stream R403 WB @Peds	ZTraffic Stream R403 WB @Peds: CTM uses a whole number of cells. CTM is using the length adjusted by 39%.

Run Summary

Analysis set used	Run start time	Run finish time	Run duration (s)	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
1	10/11/2025 13:48:27	10/11/2025 13:48:31	4.88	16:00	100	66.40	4.27	61.56	B/1	0	0	Cx/1	B/1	B/1	✓

Analysis Set Details

Name	Use Simulation	Description	Use specific Demand Set(s)	Optimise specific Demand Set(s)	Include in report	Locked
(untitled)					✓	

Demand Set Details

Year	Scenario	Time period	Description	Use Relationship	Relationship	Start time (HH:mm)	Locked	Run automatically
2030	Base	PM				16:00		✓

Network Options

Network timings

Network cycle time (s)	Minimum possible cycle time (s)	Absolute minimum possible cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100	27	27		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)	Missing stage transition options
10000.00	10000.00	10000.00	2	Assume banned

Traffic options

Traffic model	Exclude blocking-back in DoS	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)		100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from traffic model	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓			Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Cruise time coefficient	TRANSYT 16 compatibility mode
Default	35	80	✓

Normal Vehicle Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	Vehicle type	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	Bus	1.00	Default	0.94	30	85

Cycle parameters

Name	Vehicle type	PCU Factor	Dispersion type	Cruise time coefficient
Cycle	Cycle	0.20	Default	80

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
✓	✓	Offsets And Green Splits	

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy (%)	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Standard accuracy Hill Climb	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1			Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.60	14.20

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	R403 East		1
Ax	(untitled)		
B	R415		1
Bx	(untitled)		
C	(untitled)		1
Cx	(untitled)		2
Cxx	R403 West Exit		
D	L1020 Station Rd		1
Dx	(untitled)		
10	R403 West		2

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Zebra crossing ID	Allow nearside turn on red
A	1	R403 East			125.00							✓	Normal		
Ax	1	(untitled)			225.59								Normal		
B	1	R415			125.00							✓	Normal		
Bx	1	(untitled)			225.59								Normal		
C	1	(untitled)			6.00				✓	1800		✓	Normal		
Cx	1	R403 WB @Peds			6.00	✓	Directly entered	2000	✓	1800	✓		Normal		
Cxx	1			✓	225.82								Normal		
D	1	L1020 Station Rd			200.00							✓	Normal		
Dx	1	(untitled)			213.09								Normal		
10	1	R403 West		✓	164.32	✓	Directly entered	1800			✓		Normal		

Lanes

Arm	Traffic Stream	Lane	Name	Description
(ALL)	1	1	(untitled)	

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A	1	NetworkDefault	100	100	100		0.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B	1	NetworkDefault	100	100	100		0.00		
Bx	1	NetworkDefault	100	100	100		0.00		
C	1	CTM	100	100	100		1.00		
Cx	1	CTM	100	100	100		1.00		
Cxx	1	NetworkDefault	100	100	100		0.00		
D	1	NetworkDefault	100	100	100		0.00		
Dx	1	NetworkDefault	100	100	100		0.00		
10	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
A	1	0.00	Automatic	Included	Automatic	1.00	✓	90
Ax	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
B	1	0.00	Automatic	Included	Automatic	1.00	✓	90
Bx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
C	1	0.00	Automatic	Included	Automatic	1.00	✓	90
Cx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
Cxx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
D	1	0.00	Automatic	Included	Automatic	1.00	✓	90
Dx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
10	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90

Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	1	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
A	1	502	502
Ax	1	300	300
B	1	232	232
Bx	1	215	215
C	1	324	324
Cx	1	500	500
Cxx	1	500	500
D	1	91	91
Dx	1	134	134
10	1	324	324

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Green start adjustment (s)	Green end adjustment (s)
Cx	1	1	B		0	0
10	1	1	A		0	0

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A	1	15.00	30.00
B	1	15.00	30.00
D	1	24.00	30.00
10	1	19.72	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	C/1	Ax/1	27.07	30.00	✓	Straight	Straight Movement
Bx	1	1	C/1	Bx/1	27.07	30.00	✓	Offside	75.51
C	1	1	10/1	C/1	1.00	30.00	✓	Straight	Straight Movement
Cx	1	1	A/1	Cx/1	1.00	30.00	✓	Straight	Straight Movement
Cxx	1	1	Cx/1	Cxx/1	27.10	30.00	✓	Straight	Straight Movement
Dx	1	1	C/1	Dx/1	25.57	30.00	✓	Nearside	33.19
Ax	1	2	B/1	Ax/1	27.07	30.00	✓	Offside	72.59
Bx	1	2	A/1	Bx/1	27.07	30.00	✓	Nearside	35.39
Cx	1	2	B/1	Cx/1	1.00	30.00	✓	Nearside	30.06
Dx	1	2	A/1	Dx/1	25.57	30.00	✓	Offside	71.99
Ax	1	3	D/1	Ax/1	27.07	30.00	✓	Nearside	37.51
Bx	1	3	D/1	Bx/1	27.07	30.00	✓	Straight	Straight Movement
Cx	1	3	D/1	Cx/1	1.00	30.00	✓	Offside	65.00
Dx	1	3	B/1	Dx/1	25.57	30.00	✓	Straight	Straight Movement

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	1	Movement		

Give Way Data - Movements

Arm	Traffic Stream	Movement	Destination traffic stream	Max Flow (Opposed) (PCU/hr)	Max Flow (Unopposed) (PCU/hr)	Max congested capacity (PCU/hr)	Percentage opposed (%)
A	1	1	Dx/1	603	603		100
		2	Cx/1	1800	1800		100
		3	Bx/1	1800	1800		100
B	1	1	Dx/1	600	600		100
		2	Cx/1	700	700		100
		3	Ax/1	500	500		100
C	1	1	Dx/1	2000	2000	0	100
		2	Bx/1	750	750	0	100
		3	Ax/1	2000	2000	0	100
D	1	1	Ax/1	715	715		100
		2	Bx/1	650	650		100
		3	Cx/1	600	600		100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible
A	1	1	Dx/1	Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.23	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.23	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.33	
B	1	1	Dx/1	Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.31	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.14	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.14	
		2	Cx/1	Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.23	
		3	Ax/1	Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.14	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.31	
				Crossroads opposing flow	TrafficStreamMovement	D/1	Ax/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	D/1	Bx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	D/1	Cx/1	100	0.11	
C	1	2	Bx/1	Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.23	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.23	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.33	
D	1	1	Ax/1	Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.23	
		2	Bx/1	Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.31	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.14	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.14	
		3	Cx/1	Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.14	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.31	
				Crossroads opposing flow	TrafficStreamMovement	B/1	Cx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	B/1	Dx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	B/1	Ax/1	100	0.11	

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Crossing type	Allow walk on red	Green man location	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)			Signalised		Farside	8.00	5.33	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
1	1	C	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
1	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
1	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Limit paths by length	Path length limit multiplier	Limit paths by number	Limit paths by flow
1	(untitled)	✓	✓	Path Equalisation			✓		✓	1.25		

Normal Input Flows (PCU/hr)

		To			
		A	B	C	D
From	A	0	76	337	89
	B	57	0	155	20
	C	184	115	0	25
	D	59	24	8	0

Bus Input Flows not shown as they are blank.

Cycle Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	A	(untitled)	A/1	Ax/1	#0000FF
	B	(untitled)	B/1	Bx/1	#FF0000
	C	(untitled)	10/1	Cxx/1	#00FF00
	D	(untitled)	D/1	Dx/1	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		A	D	A/1, Dx/1	Normal	89
	3		A	B	A/1, Bx/1	Normal	76
	4		B	D	B/1, Dx/1	Normal	20
	6		B	A	B/1, Ax/1	Normal	57
	7		A	C	A/1, Cx/1, Cxx/1	Normal	337
	8		B	C	B/1, Cx/1, Cxx/1	Normal	155
	9		D	C	D/1, Cx/1, Cxx/1	Normal	8
	10		C	D	10/1, C/1, Dx/1	Normal	25
	11		D	B	D/1, Bx/1	Normal	24
	12		D	A	D/1, Ax/1	Normal	59
	13		C	B	10/1, C/1, Bx/1	Normal	115
	14		C	A	10/1, C/1, Ax/1	Normal	184

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Mean end of red queue (PCU)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A	1	R403 East	1			502	1243	90	13.91	48	86	23.72	8.72	32.75	4.56		100	100	0.00	19.32
Ax	1	(untitled)				300	Unrestricted	90	4.00	0	Unrestricted	27.07	0.00	0.00	0.00		100	100	0.00	0.00
B	1	R415	1			232	473	90	13.80	62	46	43.16	28.16	64.76	4.06		100	100	0.00	27.66
Bx	1	(untitled)				215	Unrestricted	90	6.00	0	Unrestricted	27.07	0.00	0.00	0.00		100	100	0.00	0.00
C	1	(untitled)	1			324 <	1118	90	19.00	29	211	5.95	4.95	10.85	1.43 +		100	100	0.00	6.56
Cx	1	R403 WB @Peds	2	1	B	500 <	2000	70	0.00	32	184	2.85	1.85	8.73	1.09 +	1.09	100	100	0.00	3.94
Cxx	1					500	Unrestricted	90	2.00	0	Unrestricted	27.10	0.00	0.00	0.00		100	100	0.00	0.00
D	1	L1020 Station Rd	1			91	580	90	12.97	19	376	34.34	10.34	25.79	0.64		100	100	0.00	4.01
Dx	1	(untitled)				134	Unrestricted	90	10.00	0	Unrestricted	25.57	0.00	0.00	0.00		100	100	0.00	0.00
10	1	R403 West	2	1	A	324	1800	70	2.33	24	282	22.72	3.00	26.42	2.38	1.75	100	100	0.00	4.91

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
1	(ALL)	(untitled)		1	C	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	425.78	18.52	22.99	1.04	3.23	60.57	5.82	0.00	66.40
Bus									
Cycle									
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	425.78	18.52	22.99	1.04	3.23	60.57	5.82	0.00	66.40

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = stop or delay weighting has been set to a value other than 100%*
- *^ = stop or delay path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

A1 - (untitled)
D5 - 2030 | Base + Const. | AM

Summary

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Traffic Stream Data	ZArm (untitled) - ZTraffic Stream (untitled)	ZTraffic Stream (untitled): CTM uses a whole number of cells. CTM is using the length adjusted by 39%.
Warning	Traffic Stream Data	ZArm (untitled) - ZTraffic Stream R403 WB @Peds	ZTraffic Stream R403 WB @Peds: CTM uses a whole number of cells. CTM is using the length adjusted by 39%.

Run Summary

Analysis set used	Run start time	Run finish time	Run duration (s)	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
1	10/11/2025 13:48:31	10/11/2025 13:48:35	4.52	07:45	100	62.26	3.98	51.35	B/1	0	0	10/1	B/1	B/1	✓

Analysis Set Details

Name	Use Simulation	Description	Use specific Demand Set(s)	Optimise specific Demand Set(s)	Include in report	Locked
(untitled)					✓	

Demand Set Details

Year	Scenario	Time period	Description	Use Relationship	Relationship	Start time (HH:mm)	Locked	Run automatically
2030	Base + Const.	AM	(untitled)			07:45		✓

Network Options

Network timings

Network cycle time (s)	Minimum possible cycle time (s)	Absolute minimum possible cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100	27	27		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)	Missing stage transition options
10000.00	10000.00	10000.00	2	Assume banned

Traffic options

Traffic model	Exclude blocking-back in DoS	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)		100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from traffic model	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓			Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Cruise time coefficient	TRANSYT 16 compatibility mode
Default	35	80	✓

Normal Vehicle Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	Vehicle type	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	Bus	1.00	Default	0.94	30	85

Cycle parameters

Name	Vehicle type	PCU Factor	Dispersion type	Cruise time coefficient
Cycle	Cycle	0.20	Default	80

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
✓	✓	Offsets And Green Splits	

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy (%)	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Standard accuracy Hill Climb	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1			Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.60	14.20

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	R403 East		1
Ax	(untitled)		
B	R415		1
Bx	(untitled)		
C	(untitled)		1
Cx	(untitled)		2
Cxx	R403 West Exit		
D	L1020 Station Rd		1
Dx	(untitled)		
10	R403 West		2

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Zebra crossing ID	Allow nearside turn on red
A	1	R403 East			125.00							✓	Normal		
Ax	1	(untitled)			225.59								Normal		
B	1	R415			125.00							✓	Normal		
Bx	1	(untitled)			225.59								Normal		
C	1	(untitled)			6.00				✓	1800		✓	Normal		
Cx	1	R403 WB @Peds			6.00	✓	Directly entered	2000	✓	1800	✓		Normal		
Cxx	1			✓	225.82								Normal		
D	1	L1020 Station Rd			200.00							✓	Normal		
Dx	1	(untitled)			213.09								Normal		
10	1	R403 West		✓	164.32	✓	Directly entered	1800			✓		Normal		

Lanes

Arm	Traffic Stream	Lane	Name	Description
(ALL)	1	1	(untitled)	

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A	1	NetworkDefault	100	100	100		0.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B	1	NetworkDefault	100	100	100		0.00		
Bx	1	NetworkDefault	100	100	100		0.00		
C	1	CTM	100	100	100		1.00		
Cx	1	CTM	100	100	100		1.00		
Cxx	1	NetworkDefault	100	100	100		0.00		
D	1	NetworkDefault	100	100	100		0.00		
Dx	1	NetworkDefault	100	100	100		0.00		
10	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
A	1	0.00	Automatic	Included	Automatic	1.00	✓	90
Ax	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
B	1	0.00	Automatic	Included	Automatic	1.00	✓	90
Bx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
C	1	0.00	Automatic	Included	Automatic	1.00	✓	90
Cx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
Cxx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
D	1	0.00	Automatic	Included	Automatic	1.00	✓	90
Dx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
10	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90

Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	1	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
A	1	366	366
Ax	1	535	535
B	1	180	180
Bx	1	239	239
C	1	552	552
Cx	1	388	388
Cxx	1	388	388
D	1	140	140
Dx	1	76	76
10	1	552	552

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Green start adjustment (s)	Green end adjustment (s)
Cx	1	1	B		0	0
10	1	1	A		0	0

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A	1	15.00	30.00
B	1	15.00	30.00
D	1	24.00	30.00
10	1	19.72	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	C/1	Ax/1	27.07	30.00	✓	Straight	Straight Movement
Bx	1	1	C/1	Bx/1	27.07	30.00	✓	Offside	75.51
C	1	1	10/1	C/1	1.00	30.00	✓	Straight	Straight Movement
Cx	1	1	A/1	Cx/1	1.00	30.00	✓	Straight	Straight Movement
Cxx	1	1	Cx/1	Cxx/1	27.10	30.00	✓	Straight	Straight Movement
Dx	1	1	C/1	Dx/1	25.57	30.00	✓	Nearside	33.19
Ax	1	2	B/1	Ax/1	27.07	30.00	✓	Offside	72.59
Bx	1	2	A/1	Bx/1	27.07	30.00	✓	Nearside	35.39
Cx	1	2	B/1	Cx/1	1.00	30.00	✓	Nearside	30.06
Dx	1	2	A/1	Dx/1	25.57	30.00	✓	Offside	71.99
Ax	1	3	D/1	Ax/1	27.07	30.00	✓	Nearside	37.51
Bx	1	3	D/1	Bx/1	27.07	30.00	✓	Straight	Straight Movement
Cx	1	3	D/1	Cx/1	1.00	30.00	✓	Offside	65.00
Dx	1	3	B/1	Dx/1	25.57	30.00	✓	Straight	Straight Movement

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	1	Movement		

Give Way Data - Movements

Arm	Traffic Stream	Movement	Destination traffic stream	Max Flow (Opposed) (PCU/hr)	Max Flow (Unopposed) (PCU/hr)	Max congested capacity (PCU/hr)	Percentage opposed (%)
A	1	1	Dx/1	603	603		100
		2	Cx/1	1800	1800		100
		3	Bx/1	1800	1800		100
B	1	1	Dx/1	600	600		100
		2	Cx/1	700	700		100
		3	Ax/1	500	500		100
C	1	1	Dx/1	2000	2000	0	100
		2	Bx/1	750	750	0	100
		3	Ax/1	2000	2000	0	100
D	1	1	Ax/1	715	715		100
		2	Bx/1	650	650		100
		3	Cx/1	600	600		100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible
A	1	1	Dx/1	Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.23	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.23	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.33	
B	1	1	Dx/1	Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.31	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.14	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.14	
		2	Cx/1	Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.23	
		3	Ax/1	Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.14	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.31	
				Crossroads opposing flow	TrafficStreamMovement	D/1	Ax/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	D/1	Bx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	D/1	Cx/1	100	0.11	
C	1	2	Bx/1	Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.23	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.23	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.33	
D	1	1	Ax/1	Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.23	
		2	Bx/1	Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.31	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.14	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.14	
		3	Cx/1	Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.14	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.31	
				Crossroads opposing flow	TrafficStreamMovement	B/1	Cx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	B/1	Dx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	B/1	Ax/1	100	0.11	

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Crossing type	Allow walk on red	Green man location	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)			Signalised		Farside	8.00	5.33	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
1	1	C	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
1	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
1	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Limit paths by length	Path length limit multiplier	Limit paths by number	Limit paths by flow
1	(untitled)	✓	✓	Path Equalisation			✓		✓	1.25		

Normal Input Flows (PCU/hr)

		To			
		A	B	C	D
From	A	0	42	280	44
	B	53	0	101	26
	C	389	157	0	6
	D	93	40	7	0

Bus Input Flows not shown as they are blank.

Cycle Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	A	(untitled)	A/1	Ax/1	#0000FF
	B	(untitled)	B/1	Bx/1	#FF0000
	C	(untitled)	10/1	Cxx/1	#00FF00
	D	(untitled)	D/1	Dx/1	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		A	D	A/1, Dx/1	Normal	44
	3		A	B	A/1, Bx/1	Normal	42
	4		B	D	B/1, Dx/1	Normal	26
	6		B	A	B/1, Ax/1	Normal	53
	7		A	C	A/1, Cx/1, Cxx/1	Normal	280
	8		B	C	B/1, Cx/1, Cxx/1	Normal	101
	9		D	C	D/1, Cx/1, Cxx/1	Normal	7
	10		C	D	10/1, C/1, Dx/1	Normal	6
	11		D	B	D/1, Bx/1	Normal	40
	12		D	A	D/1, Ax/1	Normal	93
	13		C	B	10/1, C/1, Bx/1	Normal	157
	14		C	A	10/1, C/1, Ax/1	Normal	389

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Mean end of red queue (PCU)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A	1	R403 East	1			366	1316	90	11.93	33	176	20.84	5.84	21.37	2.21		100	100	0.00	9.41
Ax	1	(untitled)				535	Unrestricted	90	0.00	0	Unrestricted	27.07	0.00	0.00	0.00		100	100	0.00	0.00
B	1	R415	1			180	430	90	11.74	51	75	39.01	24.01	55.88	2.73		100	100	0.00	18.31
Bx	1	(untitled)				239	Unrestricted	90	5.00	0	Unrestricted	27.07	0.00	0.00	0.00		100	100	0.00	0.00
C	1	(untitled)	1			552 <	1265	90	19.00	44	106	6.39	5.39	8.68	1.79 +		100	100	0.00	12.06
Cx	1	R403 WB @Peds	2	1	B	388 <	2000	70	0.00	25	266	2.97	1.97	10.91	1.06 +	1.06	100	100	0.00	3.29
Cxx	1					388	Unrestricted	90	4.00	0	Unrestricted	27.10	0.00	0.00	0.00		100	100	0.00	0.00
D	1	L1020 Station Rd	1			140	553	90	10.94	30	201	35.87	11.87	27.58	1.08		100	100	0.00	7.04
Dx	1	(untitled)				76	Unrestricted	90	13.00	0	Unrestricted	25.57	0.00	0.00	0.00		100	100	0.00	0.00
10	1	R403 West	2	1	A	552	1800	70	4.24	41	118	24.18	4.46	35.40	5.21	3.06	100	100	0.00	12.16

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
1	(ALL)	(untitled)		1	C	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	471.02	19.75	23.85	1.09	2.89	56.50	5.76	0.00	62.26
Bus									
Cycle									
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	471.02	19.75	23.85	1.09	2.89	56.50	5.76	0.00	62.26

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = stop or delay weighting has been set to a value other than 100%*
- *^ = stop or delay path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

A1 - (untitled)
D6 - 2030 | Base + Const. | PM

Summary

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Traffic Stream Data	ZArm (untitled) - ZTraffic Stream (untitled)	ZTraffic Stream (untitled): CTM uses a whole number of cells. CTM is using the length adjusted by 39%.
Warning	Traffic Stream Data	ZArm (untitled) - ZTraffic Stream R403 WB @Peds	ZTraffic Stream R403 WB @Peds: CTM uses a whole number of cells. CTM is using the length adjusted by 39%.

Run Summary

Analysis set used	Run start time	Run finish time	Run duration (s)	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Item with worst overall PRC	Network within capacity
1	10/11/2025 13:48:35	10/11/2025 13:48:39	4.48	16:00	100	84.51	5.42	66.68	B/1	0	0	10/1	B/1	B/1	✓

Analysis Set Details

Name	Use Simulation	Description	Use specific Demand Set(s)	Optimise specific Demand Set(s)	Include in report	Locked
(untitled)					✓	

Demand Set Details

Year	Scenario	Time period	Description	Use Relationship	Relationship	Start time (HH:mm)	Locked	Run automatically
2030	Base + Const.	PM				16:00		✓

Network Options

Network timings

Network cycle time (s)	Minimum possible cycle time (s)	Absolute minimum possible cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100	27	27		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)	Missing stage transition options
10000.00	10000.00	10000.00	2	Assume banned

Traffic options

Traffic model	Exclude blocking-back in DoS	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)		100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from traffic model	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓			Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Cruise time coefficient	TRANSYT 16 compatibility mode
Default	35	80	✓

Normal Vehicle Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	Vehicle type	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	Bus	1.00	Default	0.94	30	85

Cycle parameters

Name	Vehicle type	PCU Factor	Dispersion type	Cruise time coefficient
Cycle	Cycle	0.20	Default	80

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
✓	✓	Offsets And Green Splits	

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy (%)	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Standard accuracy Hill Climb	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0.5, 0.5, 0.05, 0.05		✓	1			Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.60	14.20

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
A	R403 East		1
Ax	(untitled)		
B	R415		1
Bx	(untitled)		
C	(untitled)		1
Cx	(untitled)		2
Cxx	R403 West Exit		
D	L1020 Station Rd		1
Dx	(untitled)		
10	R403 West		2

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Zebra crossing ID	Allow nearside turn on red
A	1	R403 East			125.00							✓	Normal		
Ax	1	(untitled)			225.59								Normal		
B	1	R415			125.00							✓	Normal		
Bx	1	(untitled)			225.59								Normal		
C	1	(untitled)			6.00				✓	1800		✓	Normal		
Cx	1	R403 WB @Peds			6.00	✓	Directly entered	2000	✓	1800	✓		Normal		
Cxx	1			✓	225.82								Normal		
D	1	L1020 Station Rd			200.00							✓	Normal		
Dx	1	(untitled)			213.09								Normal		
10	1	R403 West		✓	164.32	✓	Directly entered	1800			✓		Normal		

Lanes

Arm	Traffic Stream	Lane	Name	Description
(ALL)	1	1	(untitled)	

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
A	1	NetworkDefault	100	100	100		0.00		
Ax	1	NetworkDefault	100	100	100		0.00		
B	1	NetworkDefault	100	100	100		0.00		
Bx	1	NetworkDefault	100	100	100		0.00		
C	1	CTM	100	100	100		1.00		
Cx	1	CTM	100	100	100		1.00		
Cxx	1	NetworkDefault	100	100	100		0.00		
D	1	NetworkDefault	100	100	100		0.00		
Dx	1	NetworkDefault	100	100	100		0.00		
10	1	NetworkDefault	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
A	1	0.00	Automatic	Included	Automatic	1.00	✓	90
Ax	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
B	1	0.00	Automatic	Included	Automatic	1.00	✓	90
Bx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
C	1	0.00	Automatic	Included	Automatic	1.00	✓	90
Cx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
Cxx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
D	1	0.00	Automatic	Included	Automatic	1.00	✓	90
Dx	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90
10	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	90

Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	1	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
A	1	536	536
Ax	1	445	445
B	1	232	232
Bx	1	215	215
C	1	469	469
Cx	1	534	534
Cxx	1	534	534
D	1	91	91
Dx	1	134	134
10	1	469	469

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled	Green start adjustment (s)	Green end adjustment (s)
Cx	1	1	B		0	0
10	1	1	A		0	0

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
A	1	15.00	30.00
B	1	15.00	30.00
D	1	24.00	30.00
10	1	19.72	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)	Auto turning radius	Traffic turn style	Turning radius (m)
Ax	1	1	C/1	Ax/1	27.07	30.00	✓	Straight	Straight Movement
Bx	1	1	C/1	Bx/1	27.07	30.00	✓	Offside	75.51
C	1	1	10/1	C/1	1.00	30.00	✓	Straight	Straight Movement
Cx	1	1	A/1	Cx/1	1.00	30.00	✓	Straight	Straight Movement
Cxx	1	1	Cx/1	Cxx/1	27.10	30.00	✓	Straight	Straight Movement
Dx	1	1	C/1	Dx/1	25.57	30.00	✓	Nearside	33.19
Ax	1	2	B/1	Ax/1	27.07	30.00	✓	Offside	72.59
Bx	1	2	A/1	Bx/1	27.07	30.00	✓	Nearside	35.39
Cx	1	2	B/1	Cx/1	1.00	30.00	✓	Nearside	30.06
Dx	1	2	A/1	Dx/1	25.57	30.00	✓	Offside	71.99
Ax	1	3	D/1	Ax/1	27.07	30.00	✓	Nearside	37.51
Bx	1	3	D/1	Bx/1	27.07	30.00	✓	Straight	Straight Movement
Cx	1	3	D/1	Cx/1	1.00	30.00	✓	Offside	65.00
Dx	1	3	B/1	Dx/1	25.57	30.00	✓	Straight	Straight Movement

Give Way Data

Arm	Traffic Stream	Opposed traffic	Use Step-wise Opposed Turn Model	Visibility restricted
(ALL)	1	Movement		

Give Way Data - Movements

Arm	Traffic Stream	Movement	Destination traffic stream	Max Flow (Opposed) (PCU/hr)	Max Flow (Unopposed) (PCU/hr)	Max congested capacity (PCU/hr)	Percentage opposed (%)
A	1	1	Dx/1	603	603		100
		2	Cx/1	1800	1800		100
		3	Bx/1	1800	1800		100
B	1	1	Dx/1	600	600		100
		2	Cx/1	700	700		100
		3	Ax/1	500	500		100
C	1	1	Dx/1	2000	2000	0	100
		2	Bx/1	750	750	0	100
		3	Ax/1	2000	2000	0	100
D	1	1	Ax/1	715	715		100
		2	Bx/1	650	650		100
		3	Cx/1	600	600		100

Give Way Data - Movements - Conflicts

Arm	Traffic Stream	Movement	Destination traffic stream	Description	Controlling type	Controlling from traffic stream	Controlling to traffic stream	Percentage opposing (%)	Slope coefficient	Upstream signals visible
A	1	1	Dx/1	Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.23	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.23	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.33	
B	1	1	Dx/1	Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.31	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.14	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.14	
		2	Cx/1	Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.23	
		3	Ax/1	Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.14	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.31	
				Crossroads opposing flow	TrafficStreamMovement	D/1	Ax/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	D/1	Bx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	D/1	Cx/1	100	0.11	
C	1	2	Bx/1	Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.23	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.23	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.33	
D	1	1	Ax/1	Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.23	
		2	Bx/1	Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.31	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.14	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Bx/1	100	0.14	
		3	Cx/1	Crossroads opposing flow	TrafficStreamMovement	C/1	Ax/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Dx/1	100	0.09	
				Crossroads opposing flow	TrafficStreamMovement	C/1	Bx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Cx/1	100	0.14	
				Crossroads opposing flow	TrafficStreamMovement	A/1	Dx/1	100	0.31	
				Crossroads opposing flow	TrafficStreamMovement	B/1	Cx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	B/1	Dx/1	100	0.22	
				Crossroads opposing flow	TrafficStreamMovement	B/1	Ax/1	100	0.11	

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Crossing type	Allow walk on red	Green man location	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)			Signalised		Farside	8.00	5.33	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
1	1	C	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
1	(ALL)	11000

Pedestrian Crossings - Modelling

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
1	(ALL)	100	100		0.00		

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Limit paths by length	Path length limit multiplier	Limit paths by number	Limit paths by flow
1	(untitled)	✓	✓	Path Equalisation			✓		✓	1.25		

Normal Input Flows (PCU/hr)

		To			
		A	B	C	D
From	A	0	76	371	89
	B	57	0	155	20
	C	329	115	0	25
	D	59	24	8	0

Bus Input Flows not shown as they are blank.

Cycle Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	A	(untitled)	A/1	Ax/1	#0000FF
	B	(untitled)	B/1	Bx/1	#FF0000
	C	(untitled)	10/1	Cxx/1	#00FF00
	D	(untitled)	D/1	Dx/1	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		A	D	A/1, Dx/1	Normal	89
	3		A	B	A/1, Bx/1	Normal	76
	4		B	D	B/1, Dx/1	Normal	20
	6		B	A	B/1, Ax/1	Normal	57
	7		A	C	A/1, Cx/1, Cxx/1	Normal	371
	8		B	C	B/1, Cx/1, Cxx/1	Normal	155
	9		D	C	D/1, Cx/1, Cxx/1	Normal	8
	10		C	D	10/1, C/1, Dx/1	Normal	25
	11		D	B	D/1, Bx/1	Normal	24
	12		D	A	D/1, Ax/1	Normal	59
	13		C	B	10/1, C/1, Bx/1	Normal	115
	14		C	A	10/1, C/1, Ax/1	Normal	329

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES		WEIGHTS		PENALTIES	P.I.
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	Mean end of red queue (PCU)	Delay weighting multiplier (%)	Stop weighting multiplier (%)	Cost of traffic penalties (£ per hr)	P.I.
A	1	R403 East	1			536	1227	90	14.69	53	69	25.02	10.02	37.78	5.60		100	100	0.00	23.72
Ax	1	(untitled)				445	Unrestricted	90	2.00	0	Unrestricted	27.07	0.00	0.00	0.00		100	100	0.00	0.00
B	1	R415	1			232	446	90	13.99	67	35	50.07	35.07	77.90	4.87		100	100	0.00	34.36
Bx	1	(untitled)				215	Unrestricted	90	6.00	0	Unrestricted	27.07	0.00	0.00	0.00		100	100	0.00	0.00
C	1	(untitled)	1			469 <	1285	90	19.00	37	147	5.74	4.74	7.94	1.59 +		100	100	0.00	9.01
Cx	1	R403 WB @Peds	2	1	B	534 <	2000	70	0.00	34	166	2.84	1.84	8.28	1.11 +	1.11	100	100	0.00	4.17
Cxx	1					534	Unrestricted	90	2.00	0	Unrestricted	27.10	0.00	0.00	0.00		100	100	0.00	0.00
D	1	L1020 Station Rd	1			91	542	90	13.91	21	331	35.68	11.68	28.62	0.72		100	100	0.00	4.52
Dx	1	(untitled)				134	Unrestricted	90	10.00	0	Unrestricted	25.57	0.00	0.00	0.00		100	100	0.00	0.00
10	1	R403 West	2	1	A	469	1800	70	3.21	35	160	23.46	3.74	30.99	4.00	2.57	100	100	0.00	8.73

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS	PENALTIES	P.I.
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Degree of saturation (%)	Practical reserve capacity	JourneyTime (s)	Mean Delay per Ped (s)	Mean max queue (Ped)	Delay weighting (%)	Cost of traffic penalties (£ per hr)	P.I.
1	(ALL)	(untitled)		1	C	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	0.00	0.00

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Uniform delay (PCU-hr/hr)	Random plus oversat delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	495.32	22.01	22.50	1.38	4.05	77.03	7.48	0.00	84.51
Bus									
Cycle									
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	495.32	22.01	22.50	1.38	4.05	77.03	7.48	0.00	84.51

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = stop or delay weighting has been set to a value other than 100%*
- *^ = stop or delay path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.1.1.1905
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Filename: Junction 50_R407-Clane Ring Rd Rbt_LS_02.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 10/11/2025 13:47:02

»LS - AM - 2024, AM
»LS - AM - 2030 No Construction , AM
»LS - AM - 2030 With Construction Peak, AM
»LS - PM - 2024, PM
»LS - PM - 2030 No Construction , PM
»LS - PM - 2030 With Construction Peak, PM

Summary of junction performance

	AM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	LS - AM [Lane Simulation] - 2024				
A - R407 Main Street (NNW)	5.2	24.98	0.80	C	23.73
B - Clane Ring Road	7.3	37.96	0.89	E	
C - R407 Main Street (SSE)	4.7	15.38	0.80	C	
D - An Crochán	0.3	11.46	0.21	B	
	LS - AM [Lane Simulation] - 2030 No Construction				
A - R407 Main Street (NNW)	16.8	71.63	0.94	F	75.42
B - Clane Ring Road	30.4	146.41	1.05	F	
C - R407 Main Street (SSE)	12.6	40.35	0.93	E	
D - An Crochán	0.5	16.34	0.33	C	

	LS - AM [Lane Simulation] - 2030 With Construction Peak				
A - R407 Main Street (NNW)	27.9	114.45	1.02	F	136.00
B - Clane Ring Road	59.4	302.25	1.14	F	
C - R407 Main Street (SSE)	16.1	48.93	0.99	E	
D - An Crochán	0.8	20.47	0.36	C	

	PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	LS - PM [Lane Simulation] - 2024				
A - R407 Main Street (NNW)	6.7	47.92	0.85	E	38.87
B - Clane Ring Road	3.8	20.47	0.78	C	
C - R407 Main Street (SSE)	12.5	52.83	0.93	F	
D - An Crochán	0.3	9.05	0.20	A	
	LS - PM [Lane Simulation] - 2030 No Construction				
A - R407 Main Street (NNW)	24.8	158.90	1.03	F	124.08
B - Clane Ring Road	8.7	37.89	0.91	E	
C - R407 Main Street (SSE)	53.4	188.88	1.08	F	
D - An Crochán	0.3	10.01	0.25	B	
	LS - PM [Lane Simulation] - 2030 With Construction Peak				
A - R407 Main Street (NNW)	46.6	313.74	1.20	F	216.86
B - Clane Ring Road	15.8	64.01	0.96	F	
C - R407 Main Street (SSE)	77.1	316.51	1.16	F	
D - An Crochán	0.4	10.81	0.27	B	

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. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	Water Supply Project
Location	
Site number	Junction 50
Date	01/07/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Calculate RFCs	Relaxation factor for capacity/RFC runs	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)	Last run total time taken (s)
Delay	1.00	100000	100000	Calculate for all arms	3.00	-1	3	1	60	✓			1527408645	189	15.85	34.20

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	07:00	08:30	15	✓
D2	2024	PM	ONE HOUR	17:00	18:30	15	✓
D3	2030 No Construction	AM	ONE HOUR	07:00	08:30	15	✓
D4	2030 No Construction	PM	ONE HOUR	17:00	18:30	15	✓
D5	2030 With Construction Peak	AM	ONE HOUR	07:00	08:30	15	✓
D6	2030 With Construction Peak	PM	ONE HOUR	17:00	18:30	15	✓

LS - AM - 2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A1 - LS - AM [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	LS - AM	✓	✓	✓	D1, D3, D5	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
50		Standard Roundabout		A, B, C, D	23.73	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	23.73	C

Arms

Arms

Arm	Name	Description	No give-way line
A	R407 Main Street (NNW)		
B	Clane Ring Road		
C	R407 Main Street (SSE)		
D	An Crochán		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - R407 Main Street (NNW)	2.75	4.50	5.0	28.0	28.0	22.0		
B - Clane Ring Road	4.60	6.50	5.0	34.3	28.0	20.9		
C - R407 Main Street (SSE)	3.20	4.30	1.0	25.0	28.0	19.3		
D - An Crochán	2.70	5.50	1.0	25.0	28.0	14.8		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - R407 Main Street (NNW)	0.555	1129
B - Clane Ring Road	0.684	1740
C - R407 Main Street (SSE)	0.550	1092
D - An Crochán	0.527	960

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - R407 Main Street (NNW)	Direct		50
B - Clane Ring Road	Direct		-650
C - R407 Main Street (SSE)	Direct		180
D - An Crochán	Direct		0

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - R407 Main Street (NNW)	Evenly split	10.00
B - Clane Ring Road	Evenly split	10.00
C - R407 Main Street (SSE)	Evenly split	10.00
D - An Crochán	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - R407 Main Street (NNW)	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
B - Clane Ring Road	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
C - R407 Main Street (SSE)	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
D - An Crochán	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - R407 Main Street (NNW)	Entry	1	1	0.555	1129
B - Clane Ring Road	Entry	1	1	0.684	1740
C - R407 Main Street (SSE)	Entry	1	1	0.550	1092
D - An Crochán	Entry	1	1	0.527	960

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm			
			R407 Main Street (NNW)	Clane Ring Road	R407 Main Street (SSE)	An Crochán
A - R407 Main Street (NNW)	1	1	✓	✓	✓	✓
B - Clane Ring Road	1	1	✓	✓	✓	✓
C - R407 Main Street (SSE)	1	1	✓	✓	✓	✓
D - An Crochán	1	1	✓	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024	AM	ONE HOUR	07:00	08:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R407 Main Street (NNW)		ONE HOUR	✓	581	100.000
B - Clane Ring Road		ONE HOUR	✓	531	100.000
C - R407 Main Street (SSE)		ONE HOUR	✓	864	100.000
D - An Crochán		ONE HOUR	✓	82	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R407 Main Street (NNW)	B - Clane Ring Road	C - R407 Main Street (SSE)	D - An Crochán
From	A - R407 Main Street (NNW)	0	81	499	1
	B - Clane Ring Road	72	1	427	31
	C - R407 Main Street (SSE)	388	469	3	4
	D - An Crochán	5	66	11	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
50	0.20	0.80

Heavy Vehicle %

		To			
		A - R407 Main Street (NNW)	B - Clane Ring Road	C - R407 Main Street (SSE)	D - An Crochán
From	A - R407 Main Street (NNW)	0	27	13	0
	B - Clane Ring Road	28	0	7	0
	C - R407 Main Street (SSE)	14	8	0	0
	D - An Crochán	0	0	0	0

Cyclist %

		To			
		A - R407 Main Street (NNW)	B - Clane Ring Road	C - R407 Main Street (SSE)	D - An Crochán
From	A - R407 Main Street (NNW)	0	0	0	0
	B - Clane Ring Road	0	0	0	0
	C - R407 Main Street (SSE)	0	0	0	0
	D - An Crochán	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R407 Main Street (NNW)	0.80	24.98	5.2	C	535	802
B - Clane Ring Road	0.89	37.96	7.3	E	488	731
C - R407 Main Street (SSE)	0.80	15.38	4.7	C	799	1198
D - An Crochán	0.21	11.46	0.3	B	76	115

LS - AM - 2030 No Construction , AM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A1 - LS - AM [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	LS - AM	✓	✓	✓	D1, D3, D5	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
50		Standard Roundabout		A, B, C, D	75.42	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	75.42	F

Arms

Arms

Arm	Name	Description	No give-way line
A	R407 Main Street (NNW)		
B	Clane Ring Road		
C	R407 Main Street (SSE)		
D	An Crochán		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - R407 Main Street (NNW)	2.75	4.50	5.0	28.0	28.0	22.0		
B - Clane Ring Road	4.60	6.50	5.0	34.3	28.0	20.9		
C - R407 Main Street (SSE)	3.20	4.30	1.0	25.0	28.0	19.3		
D - An Crochán	2.70	5.50	1.0	25.0	28.0	14.8		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - R407 Main Street (NNW)	0.555	1129
B - Clane Ring Road	0.684	1740
C - R407 Main Street (SSE)	0.550	1092
D - An Crochán	0.527	960

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - R407 Main Street (NNW)	Direct		50
B - Clane Ring Road	Direct		-650
C - R407 Main Street (SSE)	Direct		180
D - An Crochán	Direct		0

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - R407 Main Street (NNW)	Evenly split	10.00
B - Clane Ring Road	Evenly split	10.00
C - R407 Main Street (SSE)	Evenly split	10.00
D - An Crochán	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - R407 Main Street (NNW)	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
B - Clane Ring Road	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
C - R407 Main Street (SSE)	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
D - An Crochán	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - R407 Main Street (NNW)	Entry	1	1	0.555	1129
B - Clane Ring Road	Entry	1	1	0.684	1740
C - R407 Main Street (SSE)	Entry	1	1	0.550	1092
D - An Crochán	Entry	1	1	0.527	960

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm			
			R407 Main Street (NNW)	Clane Ring Road	R407 Main Street (SSE)	An Crochán
A - R407 Main Street (NNW)	1	1	✓	✓	✓	✓
B - Clane Ring Road	1	1	✓	✓	✓	✓
C - R407 Main Street (SSE)	1	1	✓	✓	✓	✓
D - An Crochán	1	1	✓	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2030 No Construction	AM	ONE HOUR	07:00	08:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R407 Main Street (NNW)		ONE HOUR	✓	676	100.000
B - Clane Ring Road		ONE HOUR	✓	615	100.000
C - R407 Main Street (SSE)		ONE HOUR	✓	1001	100.000
D - An Crochán		ONE HOUR	✓	95	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R407 Main Street (NNW)	B - Clane Ring Road	C - R407 Main Street (SSE)	D - An Crochán
From	A - R407 Main Street (NNW)	0	96	579	1
	B - Clane Ring Road	85	1	493	36
	C - R407 Main Street (SSE)	451	542	3	5
	D - An Crochán	6	76	13	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
50	0.20	0.80

Heavy Vehicle %

		To			
		A - R407 Main Street (NNW)	B - Clane Ring Road	C - R407 Main Street (SSE)	D - An Crochán
From	A - R407 Main Street (NNW)	0	29	14	0
	B - Clane Ring Road	30	0	8	0
	C - R407 Main Street (SSE)	15	9	0	0
	D - An Crochán	0	0	0	0

Cyclist %

		To			
		A - R407 Main Street (NNW)	B - Clane Ring Road	C - R407 Main Street (SSE)	D - An Crochán
From	A - R407 Main Street (NNW)	0	0	0	0
	B - Clane Ring Road	0	0	0	0
	C - R407 Main Street (SSE)	0	0	0	0
	D - An Crochán	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R407 Main Street (NNW)	0.94	71.63	16.8	F	624	936
B - Clane Ring Road	1.05	146.41	30.4	F	562	843
C - R407 Main Street (SSE)	0.93	40.35	12.6	E	921	1381
D - An Crochán	0.33	16.34	0.5	C	88	132

LS - AM - 2030 With Construction Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Last Run	Simulation	B - Clane Ring Road	Arm B: Queue at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated.
Info	Simulation	A1 - LS - AM [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	LS - AM	✓	✓	✓	D1, D3, D5	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
50		Standard Roundabout		A, B, C, D	136.00	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	136.00	F

Arms

Arms

Arm	Name	Description	No give-way line
A	R407 Main Street (NNW)		
B	Clane Ring Road		
C	R407 Main Street (SSE)		
D	An Crochán		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - R407 Main Street (NNW)	2.75	4.50	5.0	28.0	28.0	22.0		
B - Clane Ring Road	4.60	6.50	5.0	34.3	28.0	20.9		
C - R407 Main Street (SSE)	3.20	4.30	1.0	25.0	28.0	19.3		
D - An Crochán	2.70	5.50	1.0	25.0	28.0	14.8		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - R407 Main Street (NNW)	0.555	1129
B - Clane Ring Road	0.684	1740
C - R407 Main Street (SSE)	0.550	1092
D - An Crochán	0.527	960

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - R407 Main Street (NNW)	Direct		50
B - Clane Ring Road	Direct		-650
C - R407 Main Street (SSE)	Direct		180
D - An Crochán	Direct		0

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - R407 Main Street (NNW)	Evenly split	10.00
B - Clane Ring Road	Evenly split	10.00
C - R407 Main Street (SSE)	Evenly split	10.00
D - An Crochán	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - R407 Main Street (NNW)	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
B - Clane Ring Road	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
C - R407 Main Street (SSE)	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
D - An Crochán	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - R407 Main Street (NNW)	Entry	1	1	0.555	1129
B - Clane Ring Road	Entry	1	1	0.684	1740
C - R407 Main Street (SSE)	Entry	1	1	0.550	1092
D - An Crochán	Entry	1	1	0.527	960

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm			
			R407 Main Street (NNW)	Clane Ring Road	R407 Main Street (SSE)	An Crochán
A - R407 Main Street (NNW)	1	1	✓	✓	✓	✓
B - Clane Ring Road	1	1	✓	✓	✓	✓
C - R407 Main Street (SSE)	1	1	✓	✓	✓	✓
D - An Crochán	1	1	✓	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2030 With Construction Peak	AM	ONE HOUR	07:00	08:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R407 Main Street (NNW)		ONE HOUR	✓	729	100.000
B - Clane Ring Road		ONE HOUR	✓	685	100.000
C - R407 Main Street (SSE)		ONE HOUR	✓	1010	100.000
D - An Crochán		ONE HOUR	✓	95	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R407 Main Street (NNW)	B - Clane Ring Road	C - R407 Main Street (SSE)	D - An Crochán
From	A - R407 Main Street (NNW)	0	149	579	1
	B - Clane Ring Road	142	1	506	36
	C - R407 Main Street (SSE)	451	551	3	5
	D - An Crochán	6	76	13	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
50	0.20	0.80

Heavy Vehicle %

		To			
		A - R407 Main Street (NNW)	B - Clane Ring Road	C - R407 Main Street (SSE)	D - An Crochán
From	A - R407 Main Street (NNW)	0	49	14	0
	B - Clane Ring Road	50	0	7	0
	C - R407 Main Street (SSE)	15	8	0	0
	D - An Crochán	0	0	0	0

Cyclist %

		To			
		A - R407 Main Street (NNW)	B - Clane Ring Road	C - R407 Main Street (SSE)	D - An Crochán
From	A - R407 Main Street (NNW)	0	0	0	0
	B - Clane Ring Road	0	0	0	0
	C - R407 Main Street (SSE)	0	0	0	0
	D - An Crochán	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R407 Main Street (NNW)	1.02	114.45	27.9	F	664	995
B - Clane Ring Road	1.14	302.25	59.4	F	633	949
C - R407 Main Street (SSE)	0.99	48.93	16.1	E	928	1392
D - An Crochán	0.36	20.47	0.8	C	87	130

LS - PM - 2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS - PM [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	LS - PM	✓	✓	✓	D2, D4, D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
50		Standard Roundabout		A, B, C, D	38.87	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	38.87	E

Arms

Arms

Arm	Name	Description	No give-way line
A	R407 Main Street (NNW)		
B	Clane Ring Road		
C	R407 Main Street (SSE)		
D	An Crochán		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - R407 Main Street (NNW)	2.75	4.50	5.0	28.0	28.0	22.0		
B - Clane Ring Road	4.60	6.50	5.0	34.3	28.0	20.9		
C - R407 Main Street (SSE)	3.20	4.30	1.0	25.0	28.0	19.3		
D - An Crochán	2.70	5.50	1.0	25.0	28.0	14.8		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - R407 Main Street (NNW)	0.555	1129
B - Clane Ring Road	0.684	1740
C - R407 Main Street (SSE)	0.550	1092
D - An Crochán	0.527	960

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - R407 Main Street (NNW)	Direct		-300
B - Clane Ring Road	Direct		-650
C - R407 Main Street (SSE)	Direct		-130
D - An Crochán	Direct		0

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - R407 Main Street (NNW)	Evenly split	10.00
B - Clane Ring Road	Evenly split	10.00
C - R407 Main Street (SSE)	Evenly split	10.00
D - An Crochán	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - R407 Main Street (NNW)	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
B - Clane Ring Road	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
C - R407 Main Street (SSE)	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
D - An Crochán	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - R407 Main Street (NNW)	Entry	1	1	0.555	1129
B - Clane Ring Road	Entry	1	1	0.684	1740
C - R407 Main Street (SSE)	Entry	1	1	0.550	1092
D - An Crochán	Entry	1	1	0.527	960

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm			
			R407 Main Street (NNW)	Clane Ring Road	R407 Main Street (SSE)	An Crochán
A - R407 Main Street (NNW)	1	1	✓	✓	✓	✓
B - Clane Ring Road	1	1	✓	✓	✓	✓
C - R407 Main Street (SSE)	1	1	✓	✓	✓	✓
D - An Crochán	1	1	✓	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2024	PM	ONE HOUR	17:00	18:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R407 Main Street (NNW)		ONE HOUR	✓	395	100.000
B - Clane Ring Road		ONE HOUR	✓	589	100.000
C - R407 Main Street (SSE)		ONE HOUR	✓	732	100.000
D - An Crochán		ONE HOUR	✓	95	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R407 Main Street (NNW)	B - Clane Ring Road	C - R407 Main Street (SSE)	D - An Crochán
From	A - R407 Main Street (NNW)	3	108	276	8
	B - Clane Ring Road	56	2	430	101
	C - R407 Main Street (SSE)	299	427	0	6
	D - An Crochán	8	76	11	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
50	0.20	0.80

Heavy Vehicle %

		To			
		A - R407 Main Street (NNW)	B - Clane Ring Road	C - R407 Main Street (SSE)	D - An Crochán
From	A - R407 Main Street (NNW)	67	0	15	0
	B - Clane Ring Road	0	0	7	0
	C - R407 Main Street (SSE)	12	4	0	0
	D - An Crochán	0	0	0	0

Cyclist %

		To			
		A - R407 Main Street (NNW)	B - Clane Ring Road	C - R407 Main Street (SSE)	D - An Crochán
From	A - R407 Main Street (NNW)	0	0	0	0
	B - Clane Ring Road	0	0	0	0
	C - R407 Main Street (SSE)	0	0	0	0
	D - An Crochán	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R407 Main Street (NNW)	0.85	47.92	6.7	E	364	546
B - Clane Ring Road	0.78	20.47	3.8	C	547	820
C - R407 Main Street (SSE)	0.93	52.83	12.5	F	670	1004
D - An Crochán	0.20	9.05	0.3	A	87	130

LS - PM - 2030 No Construction , PM

Data Errors and Warnings

Severity	Area	Item	Description
Info	Simulation	A2 - LS - PM [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	LS - PM	✓	✓	✓	D2, D4, D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
50		Standard Roundabout		A, B, C, D	124.08	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	124.08	F

Arms

Arms

Arm	Name	Description	No give-way line
A	R407 Main Street (NNW)		
B	Clane Ring Road		
C	R407 Main Street (SSE)		
D	An Crochán		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - R407 Main Street (NNW)	2.75	4.50	5.0	28.0	28.0	22.0		
B - Clane Ring Road	4.60	6.50	5.0	34.3	28.0	20.9		
C - R407 Main Street (SSE)	3.20	4.30	1.0	25.0	28.0	19.3		
D - An Crochán	2.70	5.50	1.0	25.0	28.0	14.8		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - R407 Main Street (NNW)	0.555	1129
B - Clane Ring Road	0.684	1740
C - R407 Main Street (SSE)	0.550	1092
D - An Crochán	0.527	960

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - R407 Main Street (NNW)	Direct		-300
B - Clane Ring Road	Direct		-650
C - R407 Main Street (SSE)	Direct		-130
D - An Crochán	Direct		0

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - R407 Main Street (NNW)	Evenly split	10.00
B - Clane Ring Road	Evenly split	10.00
C - R407 Main Street (SSE)	Evenly split	10.00
D - An Crochán	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - R407 Main Street (NNW)	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
B - Clane Ring Road	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
C - R407 Main Street (SSE)	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
D - An Crochán	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - R407 Main Street (NNW)	Entry	1	1	0.555	1129
B - Clane Ring Road	Entry	1	1	0.684	1740
C - R407 Main Street (SSE)	Entry	1	1	0.550	1092
D - An Crochán	Entry	1	1	0.527	960

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm			
			R407 Main Street (NNW)	Clane Ring Road	R407 Main Street (SSE)	An Crochán
A - R407 Main Street (NNW)	1	1	✓	✓	✓	✓
B - Clane Ring Road	1	1	✓	✓	✓	✓
C - R407 Main Street (SSE)	1	1	✓	✓	✓	✓
D - An Crochán	1	1	✓	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2030 No Construction	PM	ONE HOUR	17:00	18:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R407 Main Street (NNW)		ONE HOUR	✓	458	100.000
B - Clane Ring Road		ONE HOUR	✓	679	100.000
C - R407 Main Street (SSE)		ONE HOUR	✓	845	100.000
D - An Crochán		ONE HOUR	✓	109	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R407 Main Street (NNW)	B - Clane Ring Road	C - R407 Main Street (SSE)	D - An Crochán
From	A - R407 Main Street (NNW)	4	124	321	9
	B - Clane Ring Road	64	2	497	116
	C - R407 Main Street (SSE)	347	491	0	7
	D - An Crochán	9	87	13	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
50	0.20	0.80

Heavy Vehicle %

		To			
		A - R407 Main Street (NNW)	B - Clane Ring Road	C - R407 Main Street (SSE)	D - An Crochán
From	A - R407 Main Street (NNW)	69	0	16	0
	B - Clane Ring Road	0	0	8	0
	C - R407 Main Street (SSE)	13	5	0	0
	D - An Crochán	0	0	0	0

Cyclist %

		To			
		A - R407 Main Street (NNW)	B - Clane Ring Road	C - R407 Main Street (SSE)	D - An Crochán
From	A - R407 Main Street (NNW)	0	0	0	0
	B - Clane Ring Road	0	0	0	0
	C - R407 Main Street (SSE)	0	0	0	0
	D - An Crochán	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R407 Main Street (NNW)	1.03	158.90	24.8	F	421	631
B - Clane Ring Road	0.91	37.89	8.7	E	623	934
C - R407 Main Street (SSE)	1.08	188.88	53.4	F	778	1167
D - An Crochán	0.25	10.01	0.3	B	100	150

LS - PM - 2030 With Construction Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description
Last Run	Simulation	A - R407 Main Street (NNW)	Arm A: Queue at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated.
Last Run	Simulation	C - R407 Main Street (SSE)	Arm C: Queue at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated.
Info	Simulation	A2 - LS - PM [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	LS - PM	✓	✓	✓	D2, D4, D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
50		Standard Roundabout		A, B, C, D	216.86	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	216.86	F

Arms

Arms

Arm	Name	Description	No give-way line
A	R407 Main Street (NNW)		
B	Clane Ring Road		
C	R407 Main Street (SSE)		
D	An Crochán		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - R407 Main Street (NNW)	2.75	4.50	5.0	28.0	28.0	22.0		
B - Clane Ring Road	4.60	6.50	5.0	34.3	28.0	20.9		
C - R407 Main Street (SSE)	3.20	4.30	1.0	25.0	28.0	19.3		
D - An Crochán	2.70	5.50	1.0	25.0	28.0	14.8		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - R407 Main Street (NNW)	0.555	1129
B - Clane Ring Road	0.684	1740
C - R407 Main Street (SSE)	0.550	1092
D - An Crochán	0.527	960

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - R407 Main Street (NNW)	Direct		-300
B - Clane Ring Road	Direct		-650
C - R407 Main Street (SSE)	Direct		-130
D - An Crochán	Direct		0

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic considering secondary lanes (%)
A - R407 Main Street (NNW)	Evenly split	10.00
B - Clane Ring Road	Evenly split	10.00
C - R407 Main Street (SSE)	Evenly split	10.00
D - An Crochán	Evenly split	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - R407 Main Street (NNW)	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
B - Clane Ring Road	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
C - R407 Main Street (SSE)	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					
D - An Crochán	Entry	1	1	A, B, C, D		Infinity			0	99999	
	Exit	1	1			Infinity					

Entry Lane slope and intercept

Arm	Side	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A - R407 Main Street (NNW)	Entry	1	1	0.555	1129
B - Clane Ring Road	Entry	1	1	0.684	1740
C - R407 Main Street (SSE)	Entry	1	1	0.550	1092
D - An Crochán	Entry	1	1	0.527	960

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm			
			R407 Main Street (NNW)	Clane Ring Road	R407 Main Street (SSE)	An Crochán
A - R407 Main Street (NNW)	1	1	✓	✓	✓	✓
B - Clane Ring Road	1	1	✓	✓	✓	✓
C - R407 Main Street (SSE)	1	1	✓	✓	✓	✓
D - An Crochán	1	1	✓	✓	✓	✓

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2030 With Construction Peak	PM	ONE HOUR	17:00	18:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - R407 Main Street (NNW)		ONE HOUR	✓	514	100.000
B - Clane Ring Road		ONE HOUR	✓	740	100.000
C - R407 Main Street (SSE)		ONE HOUR	✓	858	100.000
D - An Crochán		ONE HOUR	✓	109	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - R407 Main Street (NNW)	B - Clane Ring Road	C - R407 Main Street (SSE)	D - An Crochán
From	A - R407 Main Street (NNW)	4	180	321	9
	B - Clane Ring Road	117	2	505	116
	C - R407 Main Street (SSE)	347	504	0	7
	D - An Crochán	9	87	13	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
50	0.20	0.80

Heavy Vehicle %

		To			
		A - R407 Main Street (NNW)	B - Clane Ring Road	C - R407 Main Street (SSE)	D - An Crochán
From	A - R407 Main Street (NNW)	69	25	16	0
	B - Clane Ring Road	38	0	8	0
	C - R407 Main Street (SSE)	13	5	0	0
	D - An Crochán	0	0	0	0

Cyclist %

		To			
		A - R407 Main Street (NNW)	B - Clane Ring Road	C - R407 Main Street (SSE)	D - An Crochán
From	A - R407 Main Street (NNW)	0	0	0	0
	B - Clane Ring Road	0	0	0	0
	C - R407 Main Street (SSE)	0	0	0	0
	D - An Crochán	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - R407 Main Street (NNW)	1.20	313.74	46.6	F	470	706
B - Clane Ring Road	0.96	64.01	15.8	F	681	1021
C - R407 Main Street (SSE)	1.16	316.51	77.1	F	792	1188
D - An Crochán	0.27	10.81	0.4	B	99	149

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.1.1.1905
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Filename: Junction 57_L2008-FCV Tjct_LS.j10
Path: C:\Users\mitsuyj\Jacobs\WSP EIAR Delivery - Traffic modelling\A05\Junction10\V6
Report generation date: 29/07/2025 09:20:24

»LS - 2025, AM
»LS - 2025, PM
»LS - 2031 No Construction , AM
»LS - 2031 No Construction , PM
»LS - 2031 With Construction Peak, AM
»LS - 2031 With Construction Peak, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	LS [Lane Simulation] - 2025									
A - L2008 (N)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - FCV	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - L2008 (S)	0.0	0.00		A		0.0	0.00		A	
	LS [Lane Simulation] - 2031 No Construction									
A - L2008 (N)	0.0	0.00		A	0.00	0.0	0.00		A	0.00
B - FCV	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
C - L2008 (S)	0.0	0.00		A		0.0	0.00		A	
	LS [Lane Simulation] - 2031 With Construction Peak									
A - L2008 (N)	0.0	0.00		A	0.51	0.0	0.00		A	0.73
B - FCV	0.2	13.98	0.06	B		0.1	14.58	0.06	B	
C - L2008 (S)	0.0	0.00		A		0.0	0.00		A	

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	Water Supply Project
Location	
Site number	Junction 57
Date	19/03/2025
Version	
Status	
Identifier	
Client	
Jobnumber	6909
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
5.75						0.85	36.00	20.00		

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Calculate RFCs	Relaxation factor for capacity/RFC runs	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials
Delay	1.00	100000	100000	Calculate for all arms	3.00	-1	3	1	60	✓			297376590	21

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	AM	ONE HOUR	07:45	09:15	15	✓
D2	2025	PM	ONE HOUR	16:45	18:15	15	✓
D3	2031 No Construction	AM	ONE HOUR	07:45	09:15	15	✓
D4	2031 No Construction	PM	ONE HOUR	16:45	18:15	15	✓
D5	2031 With Construction Peak	AM	ONE HOUR	07:45	09:15	15	✓
D6	2031 With Construction Peak	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	LS	✓	✓	100.000	100.000

LS - 2025, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L2008 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
57		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	L2008 (N)		Major
B	FCV		Minor
C	L2008 (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)	Vehicles causing blocking (%)
C - L2008 (S)	5.10			250.0	✓	0.00	100

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 - FCV	One lane	2.50	250	250

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	662	0.125	0.317	0.199	0.453
B-C	742	0.118	0.299	-	-
C-B	719	0.289	0.289	-	-

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.

Lane Simulation: Arm options

Arm	Traffic considering secondary lanes (%)
A - L2008 (N)	10.00
B - FCV	10.00
C - L2008 (S)	10.00

Lanes

Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Has obstruction	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
A - L2008 (N)	Entry	1	1	B, C		Infinity			0	99999	
	Exit	1	1			Infinity					
B - FCV	Entry	1	1	A, C		Infinity			0	99999	
	Exit	1	1			Infinity					
C - L2008 (S)	Entry	1	1	A, B		Infinity			0	99999	
	Exit	1	1			Infinity					

Summary of Entry Lane allowed movements

Arm	Lane Level	Lane	Destination arm		
			L2008 (N)	FCV	L2008 (S)
A - L2008 (N)	1	1		✓	✓
B - FCV	1	1	✓		✓
C - L2008 (S)	1	1	✓	✓	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L2008 (N)		ONE HOUR	✓	168	100.000
B - FCV		ONE HOUR	✓	0	100.000
C - L2008 (S)		ONE HOUR	✓	354	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L2008 (N)	B - FCV	C - L2008 (S)
From	A - L2008 (N)	0	0	168
	B - FCV	0	0	0
	C - L2008 (S)	354	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
57	0.20	0.80

Heavy Vehicle %

		To		
		A - L2008 (N)	B - FCV	C - L2008 (S)
From	A - L2008 (N)	0	0	12
	B - FCV	0	0	0
	C - L2008 (S)	11	0	0

Cyclist %

		To		
		A - L2008 (N)	B - FCV	C - L2008 (S)
From	A - L2008 (N)	0	0	0
	B - FCV	0	0	0
	C - L2008 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L2008 (N)		0.00	0.0	A	161	241
B - FCV	0.00	0.00	0.0	A	0	0
C - L2008 (S)		0.00	0.0	A	330	495

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	131	33			131	130	263	0.0	0.0	0.000	A
B - FCV	0	0	642	0.000	0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	263	66			263	263	131	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	161	40			161	155	317	0.0	0.0	0.000	A
B - FCV	0	0	601	0.000	0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	317	79			317	320	161	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	184	46			184	189	391	0.0	0.0	0.000	A
B - FCV	0	0	599	0.000	0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	391	98			391	390	184	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	201	50			201	190	380	0.0	0.0	0.000	A
B - FCV	0	0	590	0.000	0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	380	95			380	385	201	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	153	38			153	158	339	0.0	0.0	0.000	A
B - FCV	0	0	617	0.000	0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	339	85			339	311	153	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	134	34			134	133	288	0.0	0.0	0.000	A
B - FCV	0	0	603	0.000	0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	288	72			288	277	134	0.0	0.0	0.000	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	131	131	130	0.0	0.0	0.000	A
	Exit	1	1		263	263	263	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	0	0	0	0.0	0.0	0.000	A
	Exit	1	1		0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	263	263	263	0.0	0.0	0.000	A
	Exit	1	1		131	131	130	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	161	161	155	0.0	0.0	0.000	A
	Exit	1	1		317	317	320	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	0	0	0	0.0	0.0	0.000	A
	Exit	1	1		0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	317	317	320	0.0	0.0	0.000	A
	Exit	1	1		161	161	155	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	184	184	189	0.0	0.0	0.000	A
	Exit	1	1		391	391	390	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	0	0	0	0.0	0.0	0.000	A
	Exit	1	1		0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	391	391	390	0.0	0.0	0.000	A
	Exit	1	1		184	184	189	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	201	201	190	0.0	0.0	0.000	A
	Exit	1	1		380	380	385	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	0	0	0	0.0	0.0	0.000	A
	Exit	1	1		0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	380	380	385	0.0	0.0	0.000	A
	Exit	1	1		201	201	190	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	153	153	158	0.0	0.0	0.000	A
	Exit	1	1		339	339	311	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	0	0	0	0.0	0.0	0.000	A
	Exit	1	1		0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	339	339	311	0.0	0.0	0.000	A
	Exit	1	1		153	153	158	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	134	134	133	0.0	0.0	0.000	A
	Exit	1	1		288	288	277	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	0	0	0	0.0	0.0	0.000	A
	Exit	1	1		0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	288	288	277	0.0	0.0	0.000	A
	Exit	1	1		134	134	133	0.0	0.0	0.000	A

Lane movements: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	131	33	-	-	-	131	130	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	263	66	-	-	-	263	263	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

08:00 - 08:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	161	40	-	-	-	161	155	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	317	79	-	-	-	317	320	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

08:15 - 08:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	184	46	-	-	-	184	189	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	391	98	-	-	-	391	390	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

08:30 - 08:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	201	50	-	-	-	201	190	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	380	95	-	-	-	380	385	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

08:45 - 09:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	153	38	-	-	-	153	158	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	339	85	-	-	-	339	311	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

09:00 - 09:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	134	34	-	-	-	134	133	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	288	72	-	-	-	288	277	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

LS - 2025, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L2008 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
57		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D2	2025	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L2008 (N)		ONE HOUR	✓	257	100.000
B - FCV		ONE HOUR	✓	0	100.000
C - L2008 (S)		ONE HOUR	✓	128	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L2008 (N)	B - FCV	C - L2008 (S)
From	A - L2008 (N)	0	0	257
	B - FCV	0	0	0
	C - L2008 (S)	128	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
57	0.20	0.80

Heavy Vehicle %

		To		
		A - L2008 (N)	B - FCV	C - L2008 (S)
From	A - L2008 (N)	0	0	11
	B - FCV	0	0	0
	C - L2008 (S)	13	0	0

Cyclist %

		To		
		A - L2008 (N)	B - FCV	C - L2008 (S)
From	A - L2008 (N)	0	0	0
	B - FCV	0	0	0
	C - L2008 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L2008 (N)		0.00	0.0	A	221	332
B - FCV	0.00	0.00	0.0	A	0	0
C - L2008 (S)		0.00	0.0	A	118	177

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	193	48			193	186	116	0.0	0.0	0.000	A
B - FCV	0	0	613	0.000	0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	116	29			116	108	193	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	211	53			211	226	107	0.0	0.0	0.000	A
B - FCV	0	0	653	0.000	0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	107	27			107	112	211	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	251	63			251	282	129	0.0	0.0	0.000	A
B - FCV	0	0	611	0.000	0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	129	32			129	144	251	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	271	68			271	281	155	0.0	0.0	0.000	A
B - FCV	0	0	586	0.000	0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	155	39			155	146	271	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	230	57			230	230	113	0.0	0.0	0.000	A
B - FCV	0	0	601	0.000	0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	113	28			113	121	230	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	173	43			173	185	86	0.0	0.0	0.000	A
B - FCV	0	0	617	0.000	0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	86	22			86	105	173	0.0	0.0	0.000	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	193	193	186	0.0	0.0	0.000	A
	Exit	1	1		116	116	108	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	0	0	0	0.0	0.0	0.000	A
	Exit	1	1		0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	116	116	108	0.0	0.0	0.000	A
	Exit	1	1		193	193	186	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	211	211	226	0.0	0.0	0.000	A
	Exit	1	1		107	107	112	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	0	0	0	0.0	0.0	0.000	A
	Exit	1	1		0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	107	107	112	0.0	0.0	0.000	A
	Exit	1	1		211	211	226	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	251	251	282	0.0	0.0	0.000	A
	Exit	1	1		129	129	144	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	0	0	0	0.0	0.0	0.000	A
	Exit	1	1		0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	129	129	144	0.0	0.0	0.000	A
	Exit	1	1		251	251	282	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	271	271	281	0.0	0.0	0.000	A
	Exit	1	1		155	155	146	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	0	0	0	0.0	0.0	0.000	A
	Exit	1	1		0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	155	155	146	0.0	0.0	0.000	A
	Exit	1	1		271	271	281	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	230	230	230	0.0	0.0	0.000	A
	Exit	1	1		113	113	121	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	0	0	0	0.0	0.0	0.000	A
	Exit	1	1		0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	113	113	121	0.0	0.0	0.000	A
	Exit	1	1		230	230	230	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	173	173	185	0.0	0.0	0.000	A
	Exit	1	1		86	86	105	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	0	0	0	0.0	0.0	0.000	A
	Exit	1	1		0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	86	86	105	0.0	0.0	0.000	A
	Exit	1	1		173	173	185	0.0	0.0	0.000	A

Lane movements: Main Results for each time segment

16:45 - 17:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	193	48	-	-	-	193	186	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	116	29	-	-	-	116	108	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

17:00 - 17:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	211	53	-	-	-	211	226	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	107	27	-	-	-	107	112	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

17:15 - 17:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	251	63	-	-	-	251	282	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	129	32	-	-	-	129	144	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

17:30 - 17:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	271	68	-	-	-	271	281	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	155	39	-	-	-	155	146	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

17:45 - 18:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	230	57	-	-	-	230	230	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	113	28	-	-	-	113	121	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

18:00 - 18:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	173	43	-	-	-	173	185	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	86	22	-	-	-	86	105	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

LS - 2031 No Construction , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L2008 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
57		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D3	2031 No Construction	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L2008 (N)		ONE HOUR	✓	187	100.000
B - FCV		ONE HOUR	✓	0	100.000
C - L2008 (S)		ONE HOUR	✓	395	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L2008 (N)	B - FCV	C - L2008 (S)
From	A - L2008 (N)	0	0	187
	B - FCV	0	0	0
	C - L2008 (S)	395	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
57	0.20	0.80

Heavy Vehicle %

		To		
		A - L2008 (N)	B - FCV	C - L2008 (S)
From	A - L2008 (N)	0	0	12
	B - FCV	0	0	0
	C - L2008 (S)	12	0	0

Cyclist %

		To		
		A - L2008 (N)	B - FCV	C - L2008 (S)
From	A - L2008 (N)	0	0	0
	B - FCV	0	0	0
	C - L2008 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L2008 (N)		0.00	0.0	A	168	252
B - FCV	0.00	0.00	0.0	A	0	0
C - L2008 (S)		0.00	0.0	A	355	532

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	146	36			146	145	277	0.0	0.0	0.000	A
B - FCV	0	0	604	0.000	0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	277	69			277	296	146	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	154	39			154	159	369	0.0	0.0	0.000	A
B - FCV	0	0	598	0.000	0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	369	92			369	354	154	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	207	52			207	209	435	0.0	0.0	0.000	A
B - FCV	0	0	607	0.000	0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	435	109			435	427	207	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	193	48			193	198	408	0.0	0.0	0.000	A
B - FCV	0	0	587	0.000	0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	408	102			408	414	193	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	151	38			151	174	347	0.0	0.0	0.000	A
B - FCV	0	0	610	0.000	0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	347	87			347	360	151	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	156	39			156	154	291	0.0	0.0	0.000	A
B - FCV	0	0	624	0.000	0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	291	73			291	298	156	0.0	0.0	0.000	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	146	146	145	0.0	0.0	0.000	A
	Exit	1	1		277	277	296	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	0	0	0	0.0	0.0	0.000	A
	Exit	1	1		0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	277	277	296	0.0	0.0	0.000	A
	Exit	1	1		146	146	145	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	154	154	159	0.0	0.0	0.000	A
	Exit	1	1		369	369	354	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	0	0	0	0.0	0.0	0.000	A
	Exit	1	1		0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	369	369	354	0.0	0.0	0.000	A
	Exit	1	1		154	154	159	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	207	207	209	0.0	0.0	0.000	A
	Exit	1	1		435	435	427	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	0	0	0	0.0	0.0	0.000	A
	Exit	1	1		0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	435	435	427	0.0	0.0	0.000	A
	Exit	1	1		207	207	209	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	193	193	198	0.0	0.0	0.000	A
	Exit	1	1		408	408	414	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	0	0	0	0.0	0.0	0.000	A
	Exit	1	1		0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	408	408	414	0.0	0.0	0.000	A
	Exit	1	1		193	193	198	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	151	151	174	0.0	0.0	0.000	A
	Exit	1	1		347	347	360	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	0	0	0	0.0	0.0	0.000	A
	Exit	1	1		0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	347	347	360	0.0	0.0	0.000	A
	Exit	1	1		151	151	174	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	156	156	154	0.0	0.0	0.000	A
	Exit	1	1		291	291	298	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	0	0	0	0.0	0.0	0.000	A
	Exit	1	1		0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	291	291	298	0.0	0.0	0.000	A
	Exit	1	1		156	156	154	0.0	0.0	0.000	A

Lane movements: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	146	36	-	-	-	146	145	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	277	69	-	-	-	277	296	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

08:00 - 08:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	154	39	-	-	-	154	159	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	369	92	-	-	-	369	354	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

08:15 - 08:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	207	52	-	-	-	207	209	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	435	109	-	-	-	435	427	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

08:30 - 08:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	193	48	-	-	-	193	198	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	408	102	-	-	-	408	414	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

08:45 - 09:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	151	38	-	-	-	151	174	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	347	87	-	-	-	347	360	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

09:00 - 09:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	156	39	-	-	-	156	154	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	291	73	-	-	-	291	298	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

LS - 2031 No Construction , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L2008 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
57		T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	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)	Run automatically
D4	2031 No Construction	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L2008 (N)		ONE HOUR	✓	287	100.000
B - FCV		ONE HOUR	✓	0	100.000
C - L2008 (S)		ONE HOUR	✓	143	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L2008 (N)	B - FCV	C - L2008 (S)
From	A - L2008 (N)	0	0	287
	B - FCV	0	0	0
	C - L2008 (S)	143	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
57	0.20	0.80

Heavy Vehicle %

		To		
		A - L2008 (N)	B - FCV	C - L2008 (S)
From	A - L2008 (N)	0	0	11
	B - FCV	0	0	0
	C - L2008 (S)	14	0	0

Cyclist %

		To		
		A - L2008 (N)	B - FCV	C - L2008 (S)
From	A - L2008 (N)	0	0	0
	B - FCV	0	0	0
	C - L2008 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L2008 (N)		0.00	0.0	A	259	388
B - FCV	0.00	0.00	0.0	A	0	0
C - L2008 (S)		0.00	0.0	A	132	198

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	205	51			205	219	106	0.0	0.0	0.000	A
B - FCV	0	0	628	0.000	0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	106	27			106	110	205	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	263	66			263	262	135	0.0	0.0	0.000	A
B - FCV	0	0	615	0.000	0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	135	34			135	132	263	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	319	80			319	321	157	0.0	0.0	0.000	A
B - FCV	0	0	587	0.000	0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	157	39			157	163	319	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	307	77			307	314	155	0.0	0.0	0.000	A
B - FCV	0	0	581	0.000	0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	155	39			155	160	307	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	266	66			266	250	128	0.0	0.0	0.000	A
B - FCV	0	0	633	0.000	0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	128	32			128	129	266	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	193	48			193	202	111	0.0	0.0	0.000	A
B - FCV	0	0	642	0.000	0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	111	28			111	110	193	0.0	0.0	0.000	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	205	205	219	0.0	0.0	0.000	A
	Exit	1	1		106	106	110	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	0	0	0	0.0	0.0	0.000	A
	Exit	1	1		0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	106	106	110	0.0	0.0	0.000	A
	Exit	1	1		205	205	219	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	263	263	262	0.0	0.0	0.000	A
	Exit	1	1		135	135	132	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	0	0	0	0.0	0.0	0.000	A
	Exit	1	1		0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	135	135	132	0.0	0.0	0.000	A
	Exit	1	1		263	263	262	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	319	319	321	0.0	0.0	0.000	A
	Exit	1	1		157	157	163	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	0	0	0	0.0	0.0	0.000	A
	Exit	1	1		0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	157	157	163	0.0	0.0	0.000	A
	Exit	1	1		319	319	321	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	307	307	314	0.0	0.0	0.000	A
	Exit	1	1		155	155	160	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	0	0	0	0.0	0.0	0.000	A
	Exit	1	1		0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	155	155	160	0.0	0.0	0.000	A
	Exit	1	1		307	307	314	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	266	266	250	0.0	0.0	0.000	A
	Exit	1	1		128	128	129	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	0	0	0	0.0	0.0	0.000	A
	Exit	1	1		0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	128	128	129	0.0	0.0	0.000	A
	Exit	1	1		266	266	250	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	193	193	202	0.0	0.0	0.000	A
	Exit	1	1		111	111	110	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	0	0	0	0.0	0.0	0.000	A
	Exit	1	1		0	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	111	111	110	0.0	0.0	0.000	A
	Exit	1	1		193	193	202	0.0	0.0	0.000	A

Lane movements: Main Results for each time segment

16:45 - 17:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	205	51	-	-	-	205	219	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	106	27	-	-	-	106	110	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

17:00 - 17:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	263	66	-	-	-	263	262	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	135	34	-	-	-	135	132	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

17:15 - 17:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	319	80	-	-	-	319	321	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	157	39	-	-	-	157	163	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

17:30 - 17:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	307	77	-	-	-	307	314	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	155	39	-	-	-	155	160	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

17:45 - 18:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	266	66	-	-	-	266	250	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	128	32	-	-	-	128	129	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

18:00 - 18:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	193	48	-	-	-	193	202	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	111	28	-	-	-	111	110	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

LS - 2031 With Construction Peak, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L2008 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
57		T-Junction	Two-way	Two-way	Two-way		0.51	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.51	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)	Run automatically
D5	2031 With Construction Peak	AM	ONE HOUR	07:45	09:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L2008 (N)		ONE HOUR	✓	209	100.000
B - FCV		ONE HOUR	✓	22	100.000
C - L2008 (S)		ONE HOUR	✓	395	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L2008 (N)	B - FCV	C - L2008 (S)
From	A - L2008 (N)	0	22	187
	B - FCV	22	0	0
	C - L2008 (S)	395	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
57	0.20	0.80

Heavy Vehicle %

		To		
		A - L2008 (N)	B - FCV	C - L2008 (S)
From	A - L2008 (N)	0	84	12
	B - FCV	84	0	0
	C - L2008 (S)	12	0	0

Cyclist %

		To		
		A - L2008 (N)	B - FCV	C - L2008 (S)
From	A - L2008 (N)	0	0	0
	B - FCV	0	0	0
	C - L2008 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L2008 (N)		0.00	0.0	A	190	284
B - FCV	0.06	13.98	0.2	B	21	31
C - L2008 (S)		0.00	0.0	A	362	543

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	158	40			158	160	318	0.0	0.0	0.000	A
B - FCV	17	4	524	0.032	17	20	17	0.0	0.0	11.425	B
C - L2008 (S)	301	75			301	303	141	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	191	48			191	189	368	0.0	0.0	0.000	A
B - FCV	19	5	547	0.036	20	19	22	0.0	0.1	13.175	B
C - L2008 (S)	348	87			348	351	169	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	224	56			224	227	458	0.0	0.0	0.000	A
B - FCV	24	6	533	0.045	24	24	24	0.1	0.0	13.876	B
C - L2008 (S)	435	109			435	440	199	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	223	56			223	228	463	0.0	0.0	0.000	A
B - FCV	28	7	488	0.057	27	25	22	0.0	0.2	13.983	B
C - L2008 (S)	437	109			437	431	201	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	191	48			191	189	378	0.0	0.0	0.000	A
B - FCV	23	6	542	0.042	22	23	22	0.2	0.1	12.505	B
C - L2008 (S)	356	89			356	355	170	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	151	38			151	155	312	0.0	0.0	0.000	A
B - FCV	15	4	568	0.026	15	17	15	0.1	0.0	11.747	B
C - L2008 (S)	297	74			297	295	135	0.0	0.0	0.000	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	158	158	160	0.0	0.0	0.000	A
	Exit	1	1		318	318	322	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	17	17	20	0.0	0.0	11.425	B
	Exit	1	1		17	17	16	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	301	301	303	0.0	0.0	0.000	A
	Exit	1	1		141	141	144	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	191	191	189	0.0	0.0	0.000	A
	Exit	1	1		368	368	370	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	19	20	19	0.0	0.1	13.175	B
	Exit	1	1		22	22	20	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	348	348	351	0.0	0.0	0.000	A
	Exit	1	1		169	169	168	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	224	224	227	0.0	0.0	0.000	A
	Exit	1	1		458	458	464	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	24	24	24	0.1	0.0	13.876	B
	Exit	1	1		24	24	23	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	435	435	440	0.0	0.0	0.000	A
	Exit	1	1		199	199	204	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	223	223	228	0.0	0.0	0.000	A
	Exit	1	1		463	463	455	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	28	27	25	0.0	0.2	13.983	B
	Exit	1	1		22	22	22	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	437	437	431	0.0	0.0	0.000	A
	Exit	1	1		201	201	206	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	191	191	189	0.0	0.0	0.000	A
	Exit	1	1		378	378	379	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	23	22	23	0.2	0.1	12.505	B
	Exit	1	1		22	22	20	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	356	356	355	0.0	0.0	0.000	A
	Exit	1	1		170	170	169	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	151	151	155	0.0	0.0	0.000	A
	Exit	1	1		312	312	312	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	15	15	17	0.1	0.0	11.747	B
	Exit	1	1		15	15	15	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	297	297	295	0.0	0.0	0.000	A
	Exit	1	1		135	135	140	0.0	0.0	0.000	A

Lane movements: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	17	4	-	-	-	17	16	0.0	0.0	0.000	A
				C	141	35	-	-	-	141	144	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	17	4	629	526	0.032	17	20	0.0	0.0	11.425	B
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	301	75	-	-	-	301	303	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

08:00 - 08:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	22	6	-	-	-	22	20	0.0	0.0	0.000	A
				C	169	42	-	-	-	169	168	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	19	5	610	491	0.040	20	19	0.0	0.1	13.175	B
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	348	87	-	-	-	348	351	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

08:15 - 08:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	24	6	-	-	-	24	23	0.0	0.0	0.000	A
				C	199	50	-	-	-	199	204	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	24	6	636	490	0.048	24	24	0.1	0.0	13.876	B
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	435	109	-	-	-	435	440	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

08:30 - 08:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	22	6	-	-	-	22	22	0.0	0.0	0.000	A
				C	201	50	-	-	-	201	206	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	28	7	649	498	0.056	27	25	0.0	0.2	13.983	B
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	437	109	-	-	-	437	431	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

08:45 - 09:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	22	5	-	-	-	22	20	0.0	0.0	0.000	A
				C	170	42	-	-	-	170	169	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	23	6	642	517	0.045	22	23	0.2	0.1	12.505	B
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	356	89	-	-	-	356	355	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

09:00 - 09:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	15	4	-	-	-	15	15	0.0	0.0	0.000	A
				C	135	34	-	-	-	135	140	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	15	4	629	529	0.028	15	17	0.1	0.0	11.747	B
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	297	74	-	-	-	297	295	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

LS - 2031 With Construction Peak, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L2008 (S) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Info	Simulation	A2 - LS [Lane Simulation]	This run uses Simulation mode. For detailed information on this mode, please see the User Guide.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
57		T-Junction	Two-way	Two-way	Two-way		0.73	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.73	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)	Run automatically
D6	2031 With Construction Peak	PM	ONE HOUR	16:45	18:15	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - L2008 (N)		ONE HOUR	✓	309	100.000
B - FCV		ONE HOUR	✓	22	100.000
C - L2008 (S)		ONE HOUR	✓	143	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - L2008 (N)	B - FCV	C - L2008 (S)
From	A - L2008 (N)	0	22	287
	B - FCV	22	0	0
	C - L2008 (S)	143	0	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Junction	PCU factor for a cyclist	PCU factor for a cyclist in controlling flow
57	0.20	0.80

Heavy Vehicle %

		To		
		A - L2008 (N)	B - FCV	C - L2008 (S)
From	A - L2008 (N)	0	84	11
	B - FCV	84	0	0
	C - L2008 (S)	14	0	0

Cyclist %

		To		
		A - L2008 (N)	B - FCV	C - L2008 (S)
From	A - L2008 (N)	0	0	0
	B - FCV	0	0	0
	C - L2008 (S)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - L2008 (N)		0.00	0.0	A	284	426
B - FCV	0.06	14.58	0.1	B	22	33
C - L2008 (S)		0.00	0.0	A	130	196

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	235	59			235	234	122	0.0	0.0	0.000	A
B - FCV	15	4	568	0.027	15	18	15	0.0	0.0	12.175	B
C - L2008 (S)	107	27			107	108	220	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	278	69			278	279	146	0.0	0.0	0.000	A
B - FCV	23	6	544	0.042	23	20	19	0.0	0.0	14.577	B
C - L2008 (S)	123	31			123	128	259	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	335	84			335	335	190	0.0	0.0	0.000	A
B - FCV	30	7	528	0.057	29	25	27	0.0	0.1	12.519	B
C - L2008 (S)	161	40			161	156	308	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	337	84			337	343	185	0.0	0.0	0.000	A
B - FCV	26	7	553	0.048	27	25	24	0.1	0.1	13.855	B
C - L2008 (S)	158	40			158	166	313	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	283	71			283	281	148	0.0	0.0	0.000	A
B - FCV	21	5	559	0.038	20	22	18	0.1	0.1	11.290	B
C - L2008 (S)	128	32			128	130	266	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	236	59			236	235	121	0.0	0.0	0.000	A
B - FCV	16	4	564	0.028	16	18	18	0.1	0.0	12.197	B
C - L2008 (S)	105	26			105	112	218	0.0	0.0	0.000	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	235	235	234	0.0	0.0	0.000	A
	Exit	1	1		122	122	126	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	15	15	18	0.0	0.0	12.175	B
	Exit	1	1		15	15	17	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	107	107	108	0.0	0.0	0.000	A
	Exit	1	1		220	220	217	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	278	278	279	0.0	0.0	0.000	A
	Exit	1	1		146	146	148	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	23	23	20	0.0	0.0	14.577	B
	Exit	1	1		19	19	18	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	123	123	128	0.0	0.0	0.000	A
	Exit	1	1		259	259	261	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	335	335	335	0.0	0.0	0.000	A
	Exit	1	1		190	190	181	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	30	29	25	0.0	0.1	12.519	B
	Exit	1	1		27	27	23	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	161	161	156	0.0	0.0	0.000	A
	Exit	1	1		308	308	312	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	337	337	343	0.0	0.0	0.000	A
	Exit	1	1		185	185	191	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	26	27	25	0.1	0.1	13.855	B
	Exit	1	1		24	24	24	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	158	158	166	0.0	0.0	0.000	A
	Exit	1	1		313	313	318	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	283	283	281	0.0	0.0	0.000	A
	Exit	1	1		148	148	152	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	21	20	22	0.1	0.1	11.290	B
	Exit	1	1		18	18	19	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	128	128	130	0.0	0.0	0.000	A
	Exit	1	1		266	266	261	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	B, C	236	236	235	0.0	0.0	0.000	A
	Exit	1	1		121	121	130	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A, C	16	16	18	0.1	0.0	12.197	B
	Exit	1	1		18	18	16	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A, B	105	105	112	0.0	0.0	0.000	A
	Exit	1	1		218	218	219	0.0	0.0	0.000	A

Lane movements: Main Results for each time segment

16:45 - 17:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	15	4	-	-	-	15	17	0.0	0.0	0.000	A
				C	220	55	-	-	-	220	217	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	15	4	636	544	0.028	15	18	0.0	0.0	12.175	B
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	107	27	-	-	-	107	108	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

17:00 - 17:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	19	5	-	-	-	19	18	0.0	0.0	0.000	A
				C	259	65	-	-	-	259	261	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	23	6	616	515	0.045	23	20	0.0	0.0	14.577	B
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	123	31	-	-	-	123	128	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

17:15 - 17:30

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	27	7	-	-	-	27	23	0.0	0.0	0.000	A
				C	308	77	-	-	-	308	312	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	30	7	629	504	0.059	29	25	0.0	0.1	12.519	B
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	161	40	-	-	-	161	156	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

17:30 - 17:45

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	24	6	-	-	-	24	24	0.0	0.0	0.000	A
				C	313	78	-	-	-	313	318	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	26	7	629	499	0.053	27	25	0.1	0.1	13.855	B
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	158	40	-	-	-	158	166	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

17:45 - 18:00

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	18	4	-	-	-	18	19	0.0	0.0	0.000	A
				C	266	66	-	-	-	266	261	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	21	5	656	546	0.039	20	22	0.1	0.1	11.290	B
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	128	32	-	-	-	128	130	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

18:00 - 18:15

Arm	Side	Lane level	Lane	To Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Simulation max flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - L2008 (N)	Entry	1	1	A	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				B	18	4	-	-	-	18	16	0.0	0.0	0.000	A
				C	218	54	-	-	-	218	219	0.0	0.0	0.000	A
B - FCV	Entry	1	1	A	16	4	629	539	0.029	16	18	0.1	0.0	12.197	B
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
C - L2008 (S)	Entry	1	1	A	105	26	-	-	-	105	112	0.0	0.0	0.000	A
				B	0	0	0	0	0.000	0	0	0.0	0.0	0.000	A
				C	0	0	0	0	0.000	0	0	0.0	0.0	0.000	

Annex B. Figures

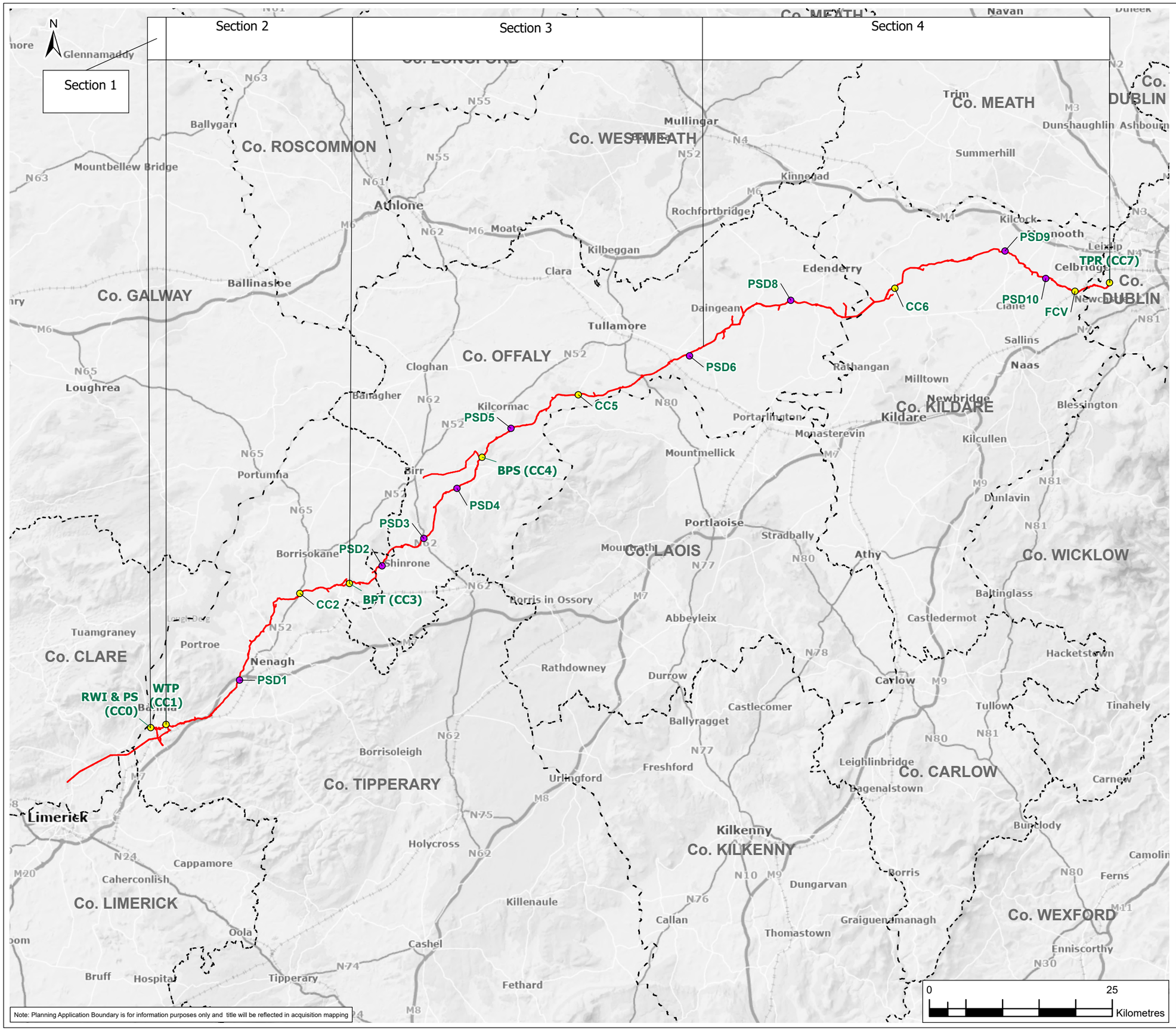
Environmental Impact Assessment Report (EIAR)

Volume 6 of 6: Appendices

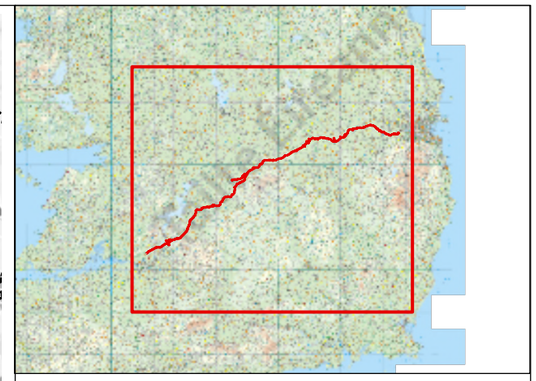
(Appendix A7.1) Annex B Figures

Document no: 32105801/EIARA7.1
Version: Final
December 2025

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Note: Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping



Legend

- Planning Application Boundary
- Construction Compound
- Pipe Storage Depot
- County Boundary

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F03	18/11/25	Final - Planning Application	SP	JC	MR	PW

Jacobs TOBIN

Client

Uisce Éireann Irish Water

Tionscadal Soláthair Uisce Water Supply Project

Project

Water Supply Project
Eastern and Midlands Region

Drawing Title

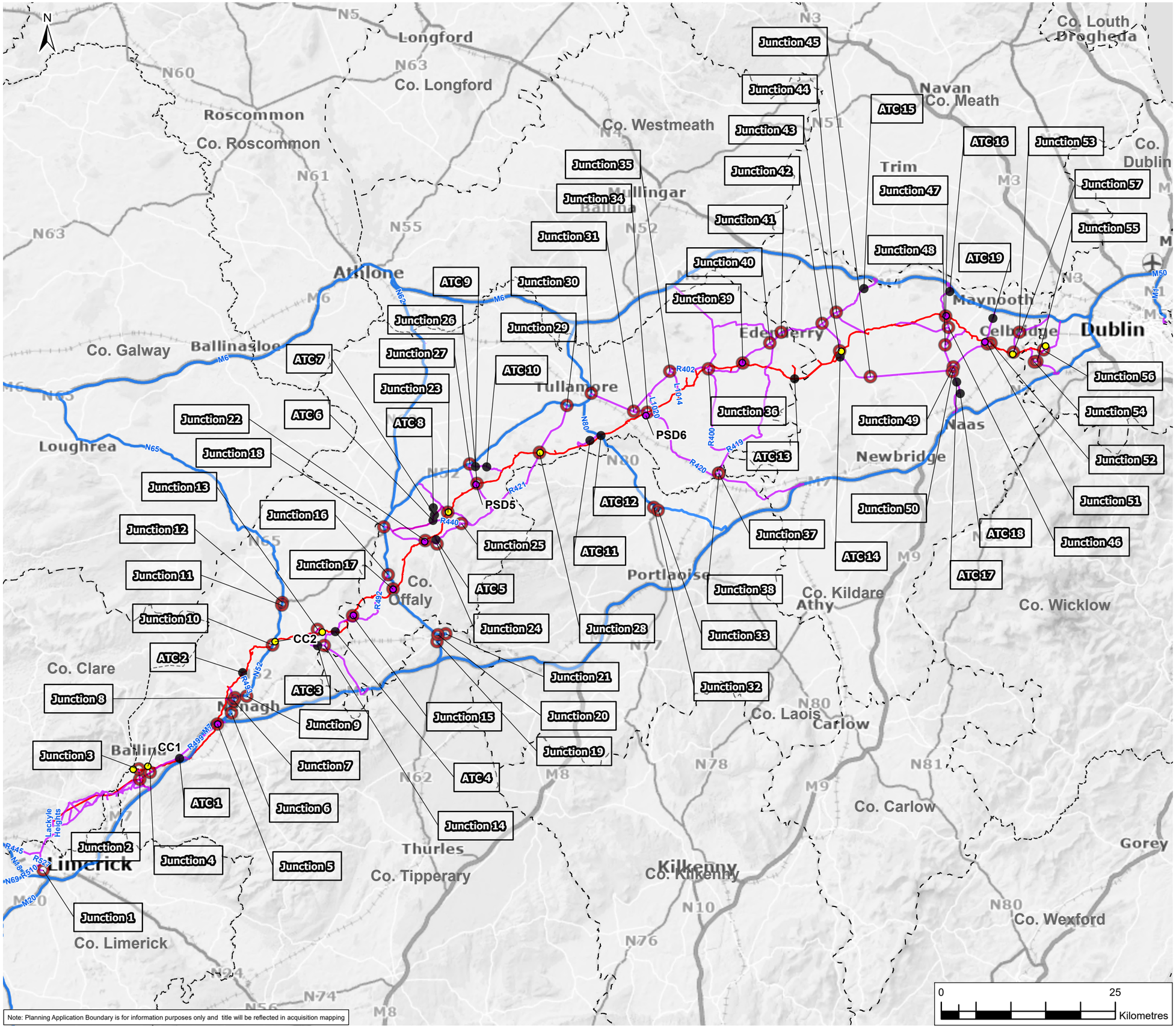
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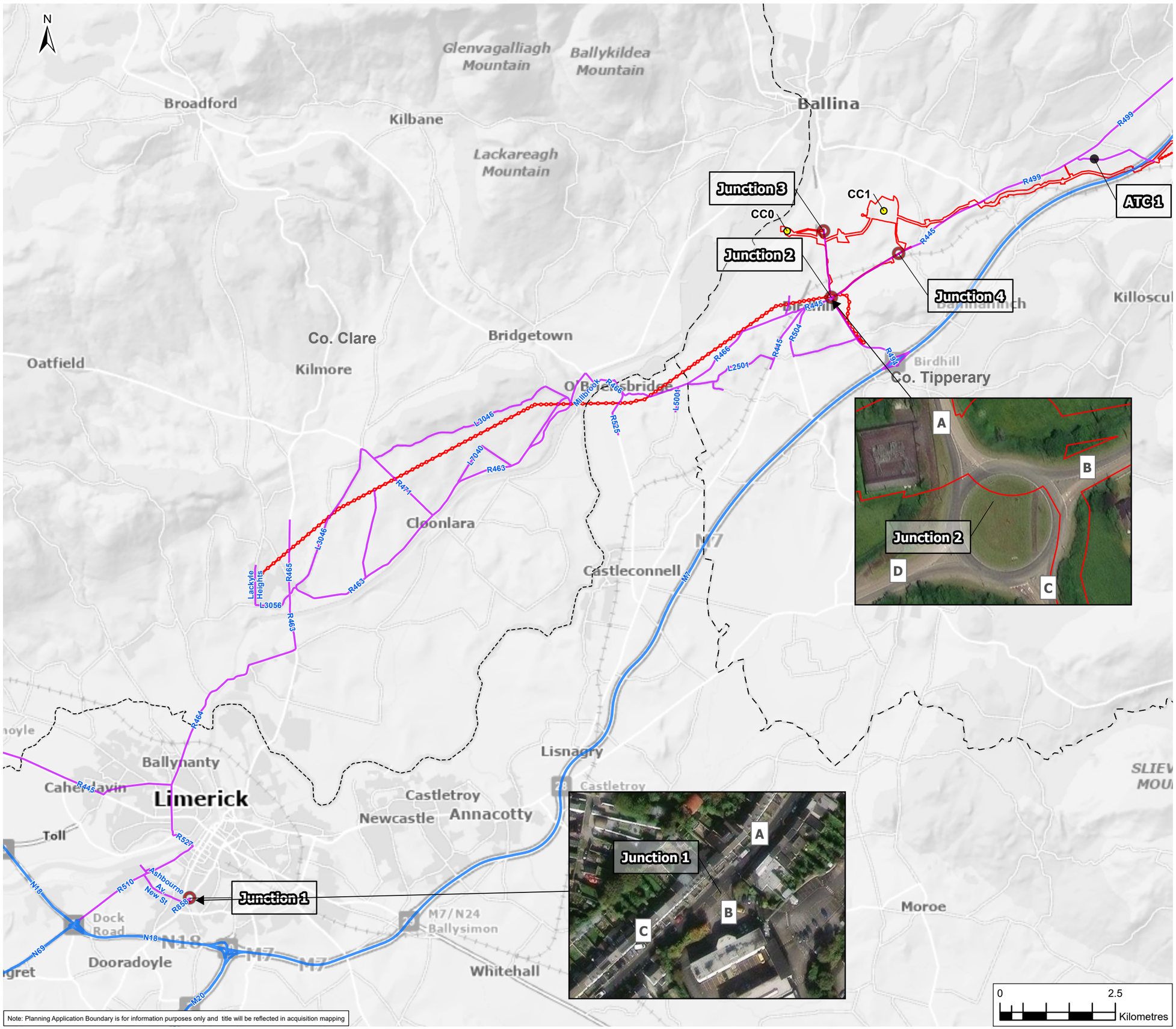
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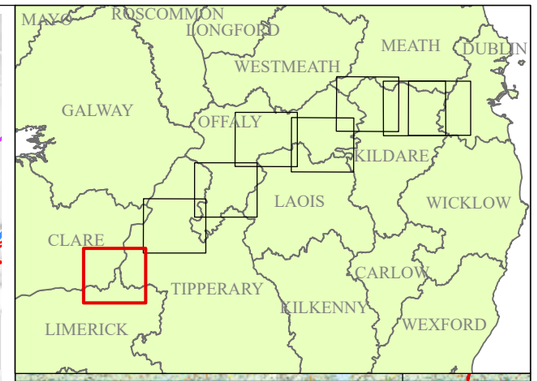
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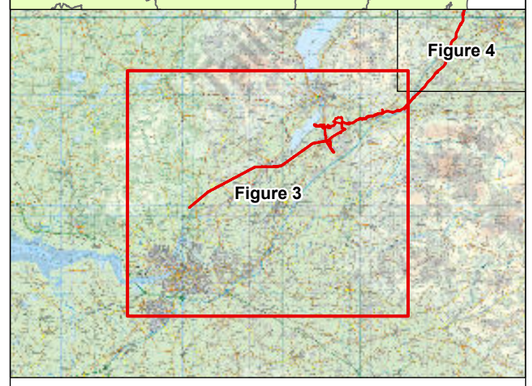
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Ballinasloe
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Edenderry
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Legend

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Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F03	14/11/25	Final - Planning Application	SP	JC	MR	PW

Jacobs TOBIN

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Project: Water Supply Project
Eastern and Midlands Region

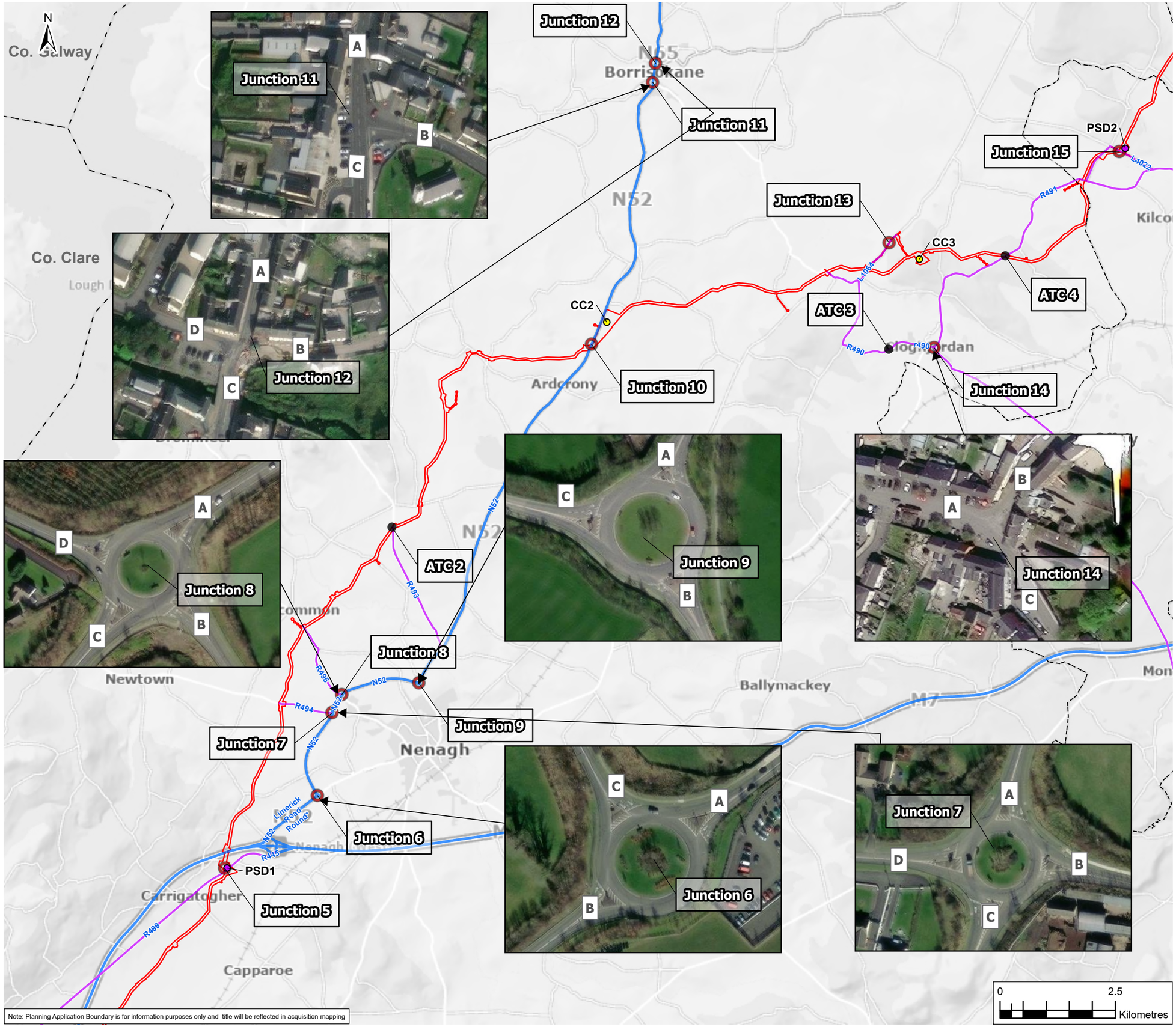
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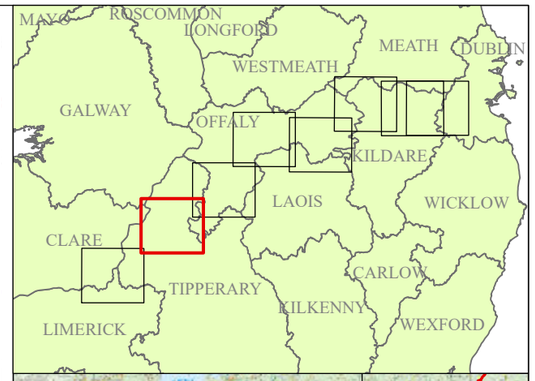
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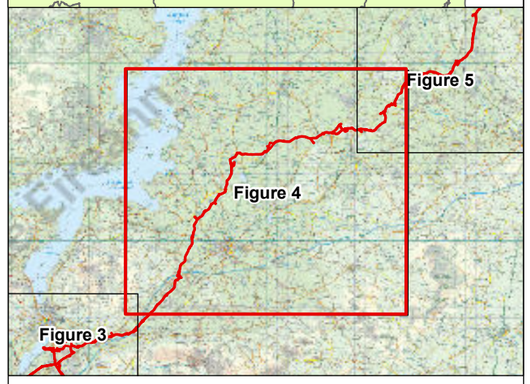
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F03	14/11/25	Final - Planning Application	SP	JC	MR	PW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

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Sheet 2 of 8

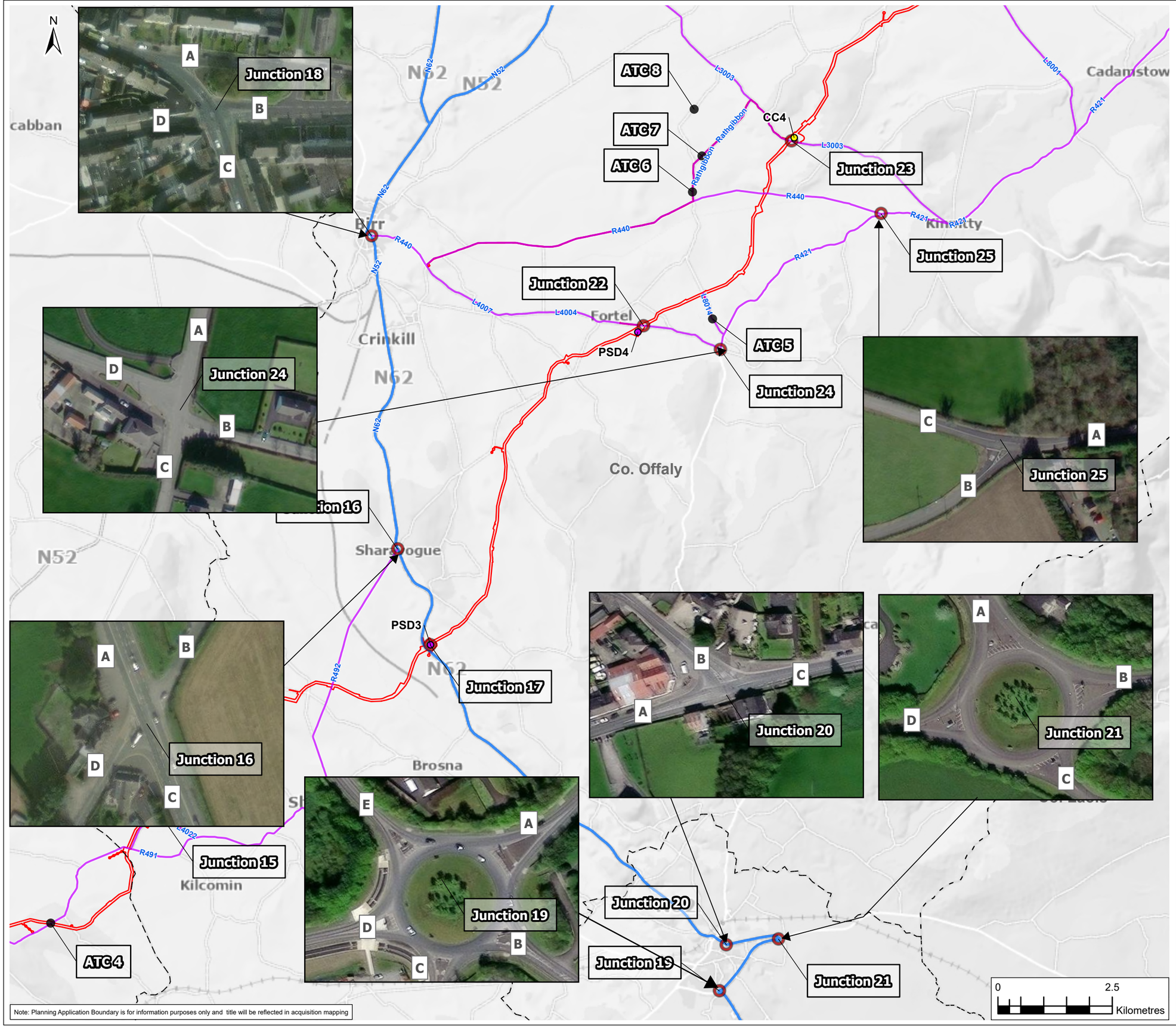
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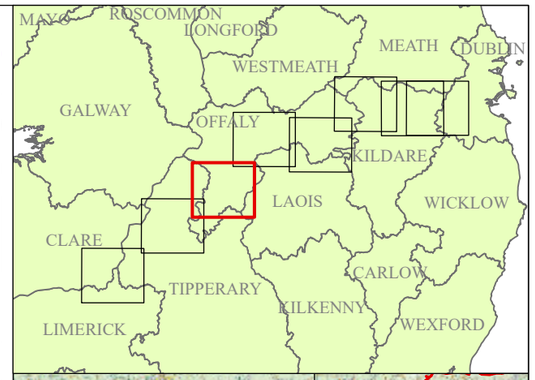
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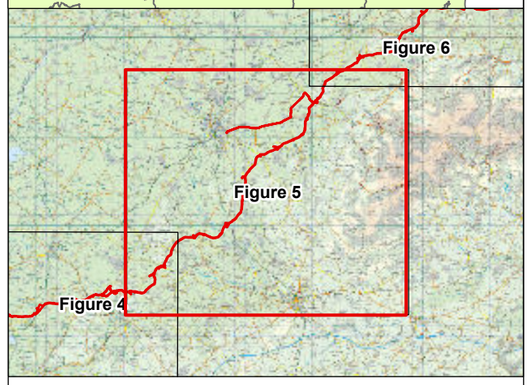
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Note: Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping







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- County Boundary

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F03	14/11/25	Final - Planning Application	SP	JC	MR	PW

Jacobs TOBIN

Client

Uisce Éireann Irish Water

Tionscadal Soláthair Uisce Water Supply Project

Project

Water Supply Project
Eastern and Midlands Region

Drawing Title

A7.1 Figure 5
ATC and Junction Count Locations
Sheet 3 of 8

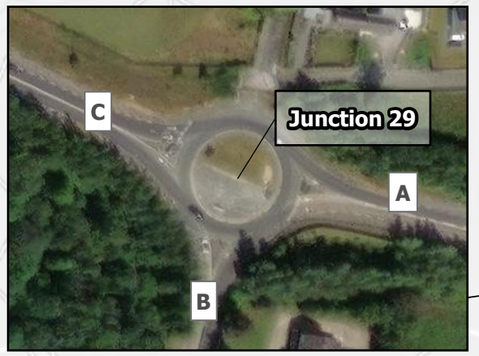
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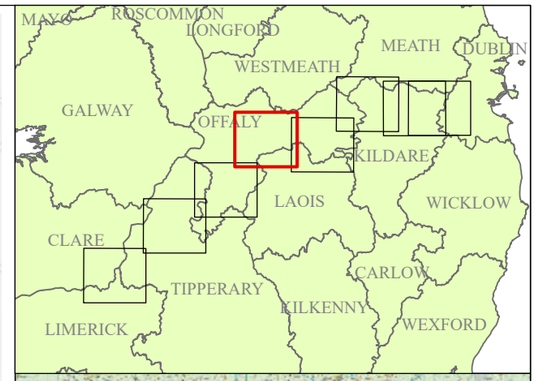
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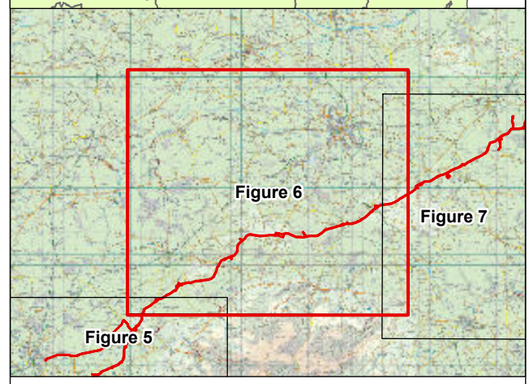
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F03	14/11/25	Final - Planning Application	SP	JC	MR	PW

Jacobs TOBIN

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Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A7.1 Figure 6
ATC and Junction Count Locations
Sheet 4 of 8

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Ballinagar

Clonygowan

Pollardstown

Co. Kildare

Co. Laois

Killenard

Monaster

Ballybrittas

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Junction 32

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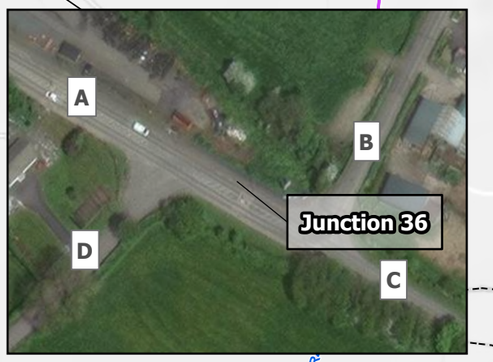
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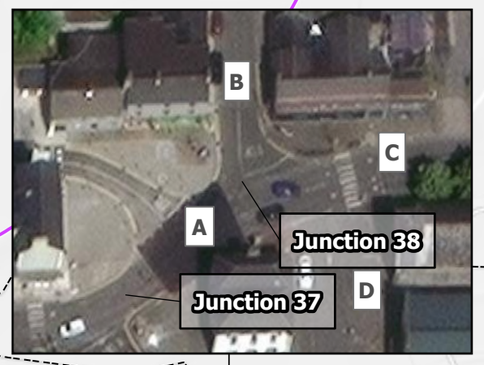
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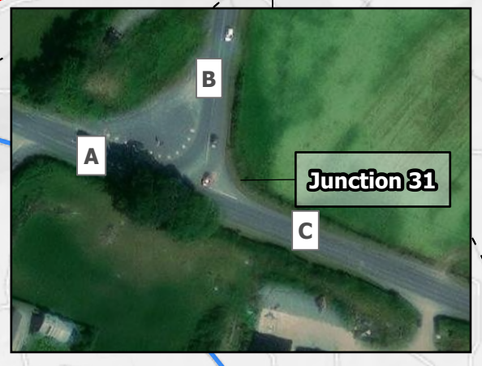
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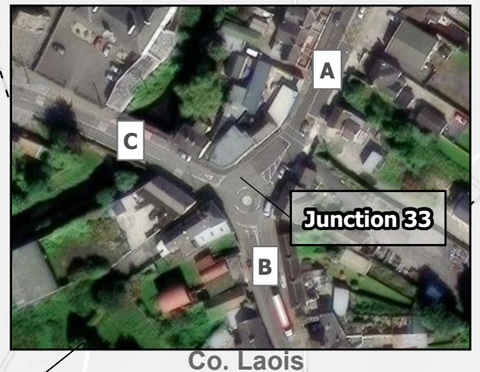


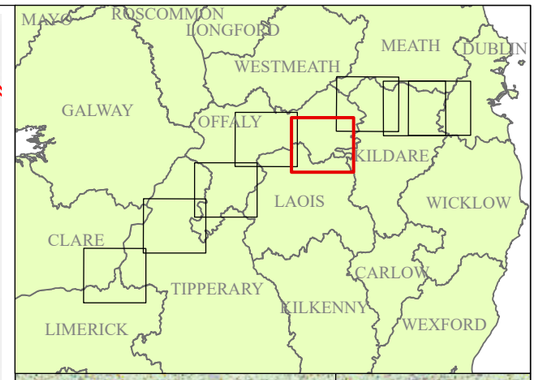


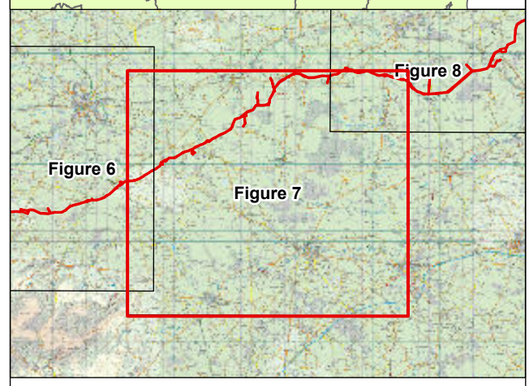












Legend

- Planning Application Boundary
- Pipe Storage Depot
- Junctions
- Principal Haul Roads
- Minor Haul Roads
- County Boundary

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A7.1 Figure 7
ATC and Junction Count Locations
Sheet 5 of 8

Drawing Status: Final - Planning Application

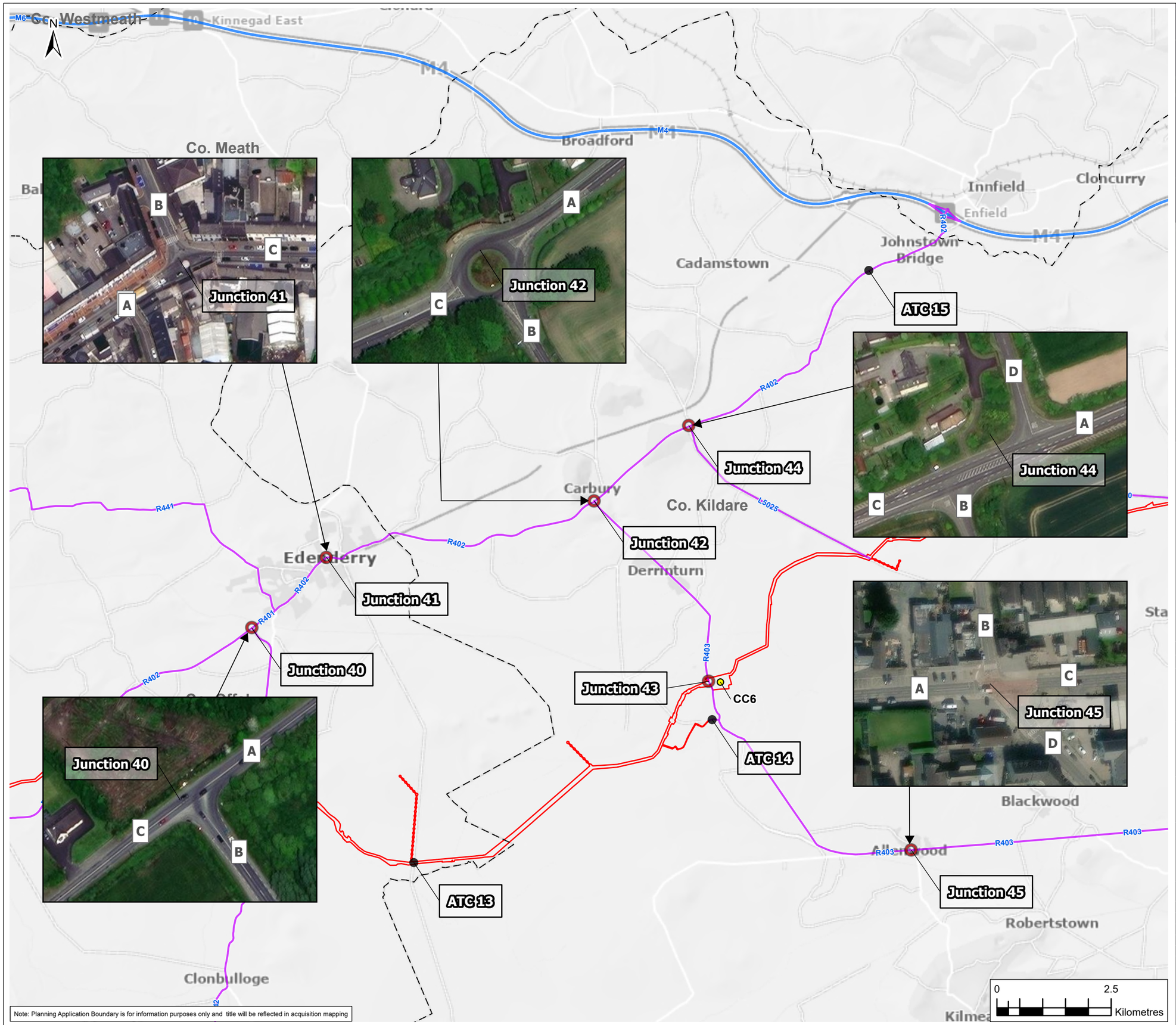
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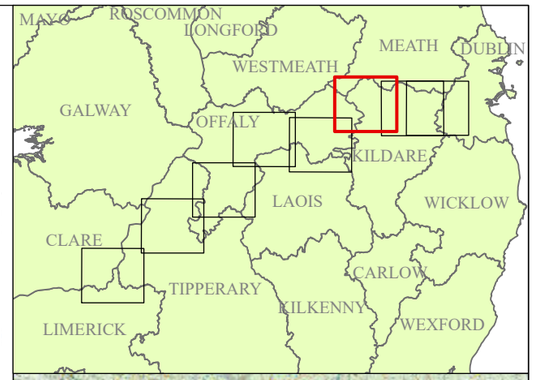
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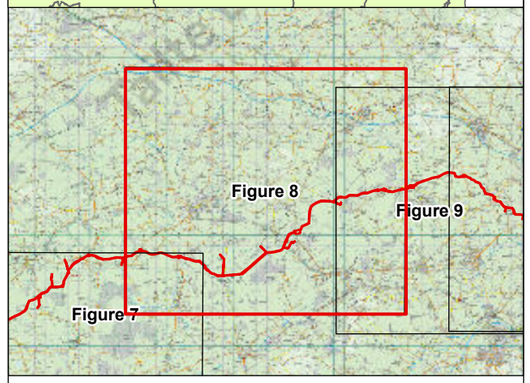
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Legend

- Planning Application Boundary
- Construction Compound
- Pipe Storage Depot
- Junctions
- ATC
- Principal Haul Roads
- Minor Haul Roads
- County Boundary

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F03	14/11/25	Final - Planning Application	SP	JC	MR	PW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A7.1 Figure 8
ATC and Junction Count Locations
Sheet 6 of 8

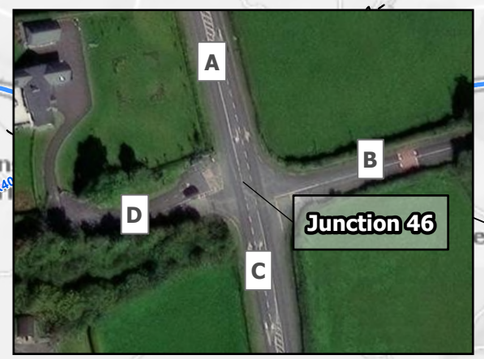
Drawing Status: Final - Planning Application

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Client No.	9318	
Drawing No.	32105801/700/20237	
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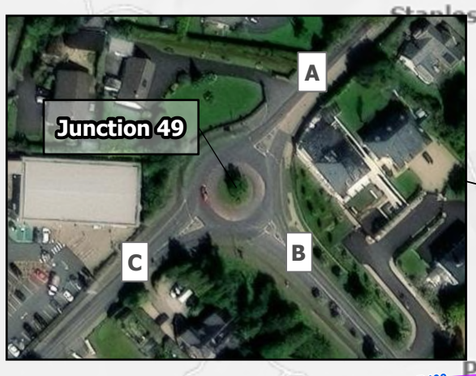
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Note: Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping

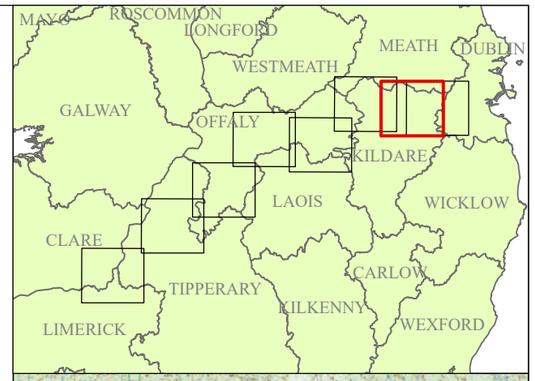


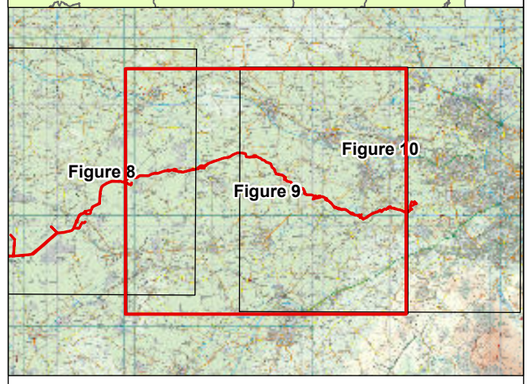






Note: Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping





Legend

- Planning Application Boundary
- Construction Compound
- Pipe Storage Depot
- Junctions
- ATC
- Principal Haul Roads
- Minor Haul Roads
- County Boundary

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F03	14/11/25	Final - Planning Application	SP	JC	MR	PW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A7.1 Figure 9
ATC and Junction Count Locations
Sheet 7 of 8

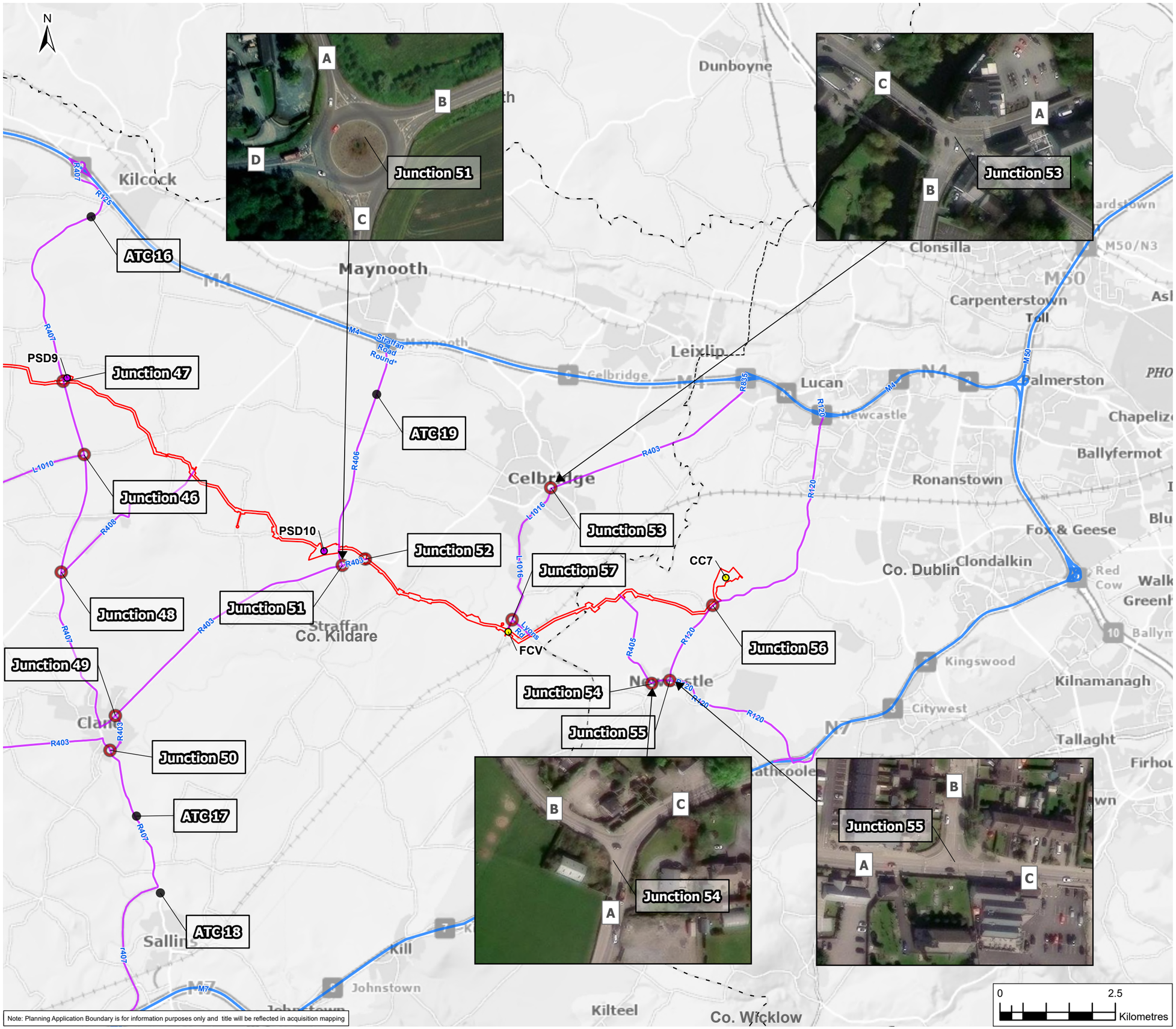
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0 2.5 Kilometres



Note: Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping

Legend

- Planning Application Boundary
- Construction Compound
- Pipe Storage Depot
- Junctions
- ATC
- Principal Haul Roads
- Minor Haul Roads
- County Boundary

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F03	14/11/25	Final - Planning Application	SP	JC	MR	PW

Jacobs TOBIN

Client

Uisce Éireann Irish Water

Tionscadal Soláthair Uisce Water Supply Project

Project

Water Supply Project
Eastern and Midlands Region

Drawing Title

A7.1 Figure 10
ATC and Junction Count Locations
Sheet 8 of 8

Drawing Status

Final - Planning Application

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N

Kinvarra
Ballyvaghan
Bealaclugga
Craggagh
Killinny
Peterswell
Co.Galway
Gort
Carran
Lisdoonvarna
Doolin
Kilfenora
Kilshanny
Killinaboy
Drumandoora
Flagmount
Caher
Ballinruan
Corrofin
Ennistimon
Lehinch
Crusheen
Ruan
Feakle
Scarriff
Co.Clare
Tuamgraney
Mauricesmills
Barefield
Bodyke
Inagh
Kilnamona
Tulla
Ennis
O'Callaghansmills
Connolly
Kilmaley
Mahonburgh
Clarecastle
Quin
Kilkishen
Broadford
Kilbane
Derragh
Kilmurry
Liscasey
Oatfield
Sixmilebridge
Kilmihil
Ballynacally
Shannon
Bunratty
Cratloe
Millbrook
Kilmore
Cloonlara
Castleconnell
Lackyle Heights
Ardnacrusha
Parteen
Cratloe Road
Cranny
Killadysert
Lisnagry
Drumdigus
Coolmeen

M18
N67
N68
N85
N19
N18
L3046
L3056
L5001
L7040
R445
R471
R525
R463
R465
R464

Figure 11
Figure 13
Figure 12

SLIGO
LEITRIM
CAVAN
MONAGHAN
LOUTH
MAYO
ROSCOMMON
LONGFORD
MEATH
WESTMEATH
DUBLIN
GALWAY
OFFALY
KILDARE
LAOIS
WICKLOW
CLARE
CARLOW
TIPPERARY
KILKENNY
LIMERICK
WEXFORD
WATERFORD
KERRY
CORK

Legend

- Planning Application Boundary
- Principal Haul Roads
- Minor Haul Roads
- County Boundary

0 10 Kilometres

Note: Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F03	04/12/25	Final - Planning Application	SP	JC	MR	PW

Jacobs TOBIN

Client

Uisce Éireann Irish Water
Tionscadal Soláthair Uisce Water Supply Project

Project

Water Supply Project
Eastern and Midlands Region

Drawing Title

A7.1 Figure 11
Clare Haul Roads
Sheet 1 of 7

Drawing Status

Final - Planning Application

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RWI & PS (CC0)
WTP (CC1)
AE053
AE001
AE002
AE054
Millbrook
L3046
R471
R445
R466
R504
R525
L5001
L7040
R463
R465
R464
Lackyle Heights
Cratloe Road
Court Brack Avenue
Ashbourne Avenue
R510
R858
New Street
L6188
Kilmurry
Oatfield
Sixmilebridge
Co.Clare
Ballynacally
Shannon
Bunratty
Cratloe
Killadysert
Ballysteen
Pallaskenry
Foynes
Askeaton
Kildimo New
Kildimo Old
Clarina
Dooradoyle
Limerick
Parteen
Ardnacrusha
Cloonlara
Kilmore
Castleconnell
Co.Tipperary
Toor
Lackamore
Rear Cross
Lisnagry
Co.Limerick
Garryowen
Galvone
Whitehall
Barringtonsbridge
Moroe
Brittas
Cappamore
Doon
Ballyneety
Caherconlish
Patrickswell
Crecora
Adare
Shanagolden
Pallas Grean New
Pallas Grean
Fedamore
Grange
Caherelly
Meanus
Holycross
Herbertstown
Kilteely
Newmarket on Fergus
Gortacloona
Cullen
Oola
Ballinard
Hospital
Emly
Lattin
Rathkea
Knocklong
Ballywire
Elton
Bulgaden
Garryspillane
Lisvarrinane
Galbally
Kilmallock
Martinstown
Ballylanders
Kilfinnane
Ardpatrick
Anglesborough
Glenroe
Ballyorgan
Knoc
Kilcolman
Rathkeale
Croagh
Kilfinny
Ardagh
Knockaderry
Newcastle West
Ballingarry
Granagh
Banoge
Athlacca
Bruff
Co.Limerick
Mahoonagh
Castletown
Kilmeedy
Bruree
Garryfine
Ballyagran
Feenagh
Feohanagh
Strand
Ballagh
Ashford
Broadford
Dromcollihar
Milford
Newtownshandrum
Charleville
Co.Cork
Tullylease
Dromina
Croom
Monaster
N20
N21
N18
N19
N69
N24
M7
M20
M18
Note: Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping
0
10
Kilometres
SLIGO
LEITRIM
CAVAN
MONAGHAN
MAYO
ROSCOMMON
LONGFORD
MEATH
WESTMEATH
DUBLIN
GALWAY
OFFALY
KILDARE
LAOIS
WICKLOW
CLARE
CARLOW
TIPPERARY
KILKENNY
LIMERICK
WEXFORD
WATERFORD
KERRY
CORK
Figure 11
Figure 13
Figure 12
Legend
Planning Application Boundary
Construction Compound
Principal Haul Roads
Minor Haul Roads
County Boundary

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F03	04/12/25	Final - Planning Application	SP	JC	MR	PW

Jacobs TOBIN

Client
Uisce Éireann Irish Water
Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

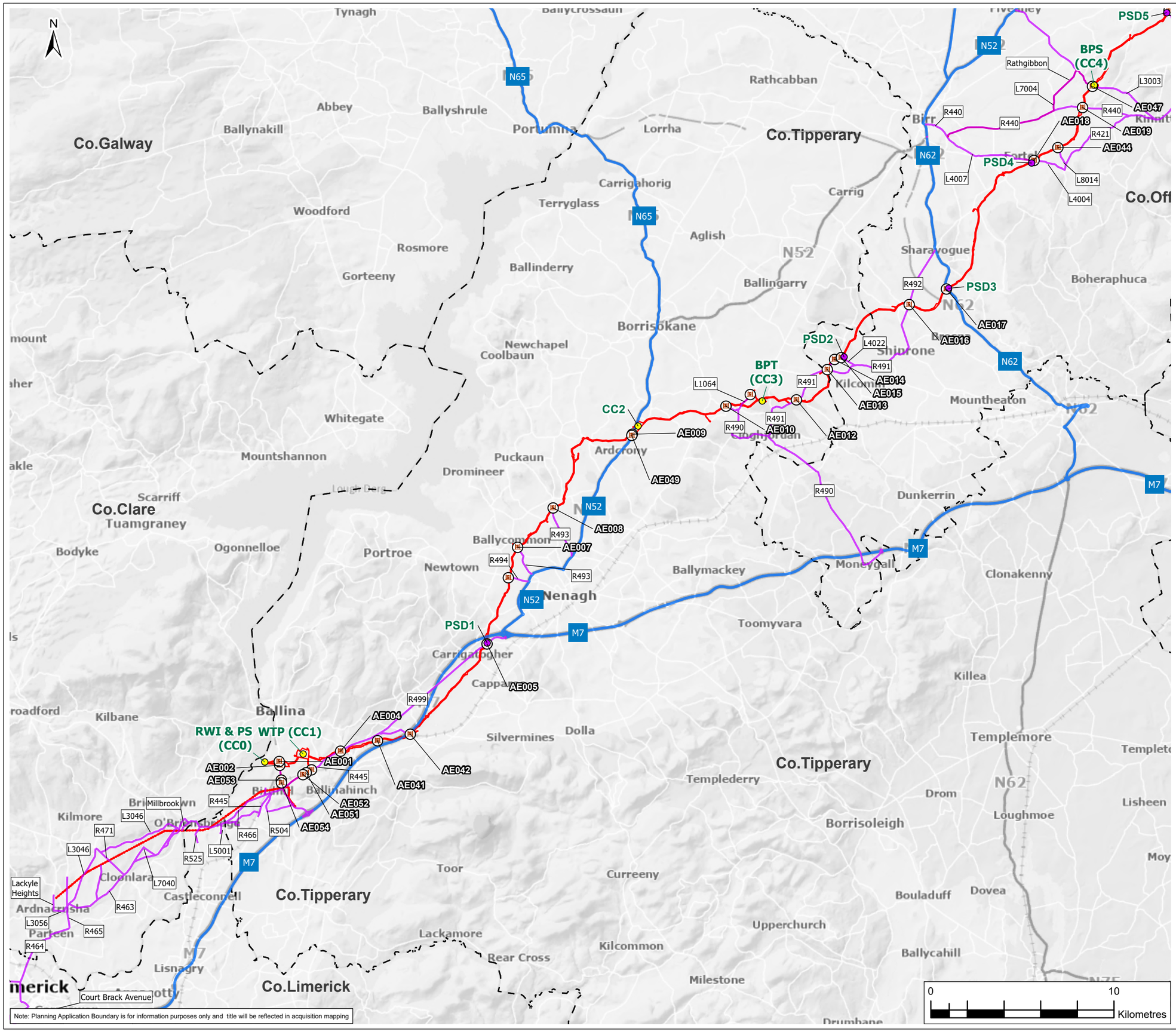
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Limerick Haul Roads
Sheet 2 of 7

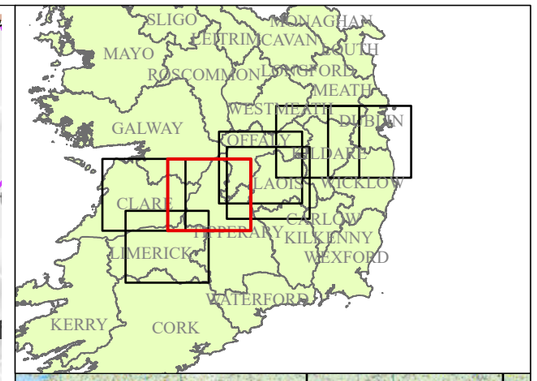
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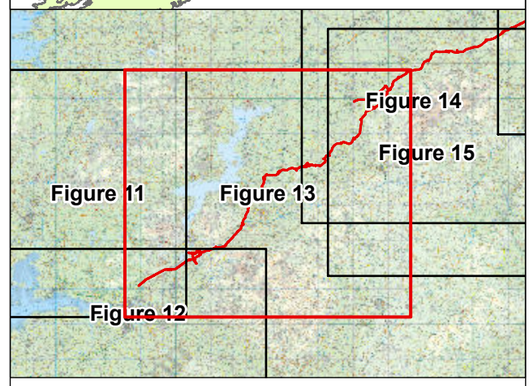
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Legend

- Planning Application Boundary
- Construction Compound
- Pipe Storage Depot
- Principal Haul Roads
- Minor Haul Roads
- County Boundary

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F03	04/12/25	Final - Planning Application	SP	JC	MR	PW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

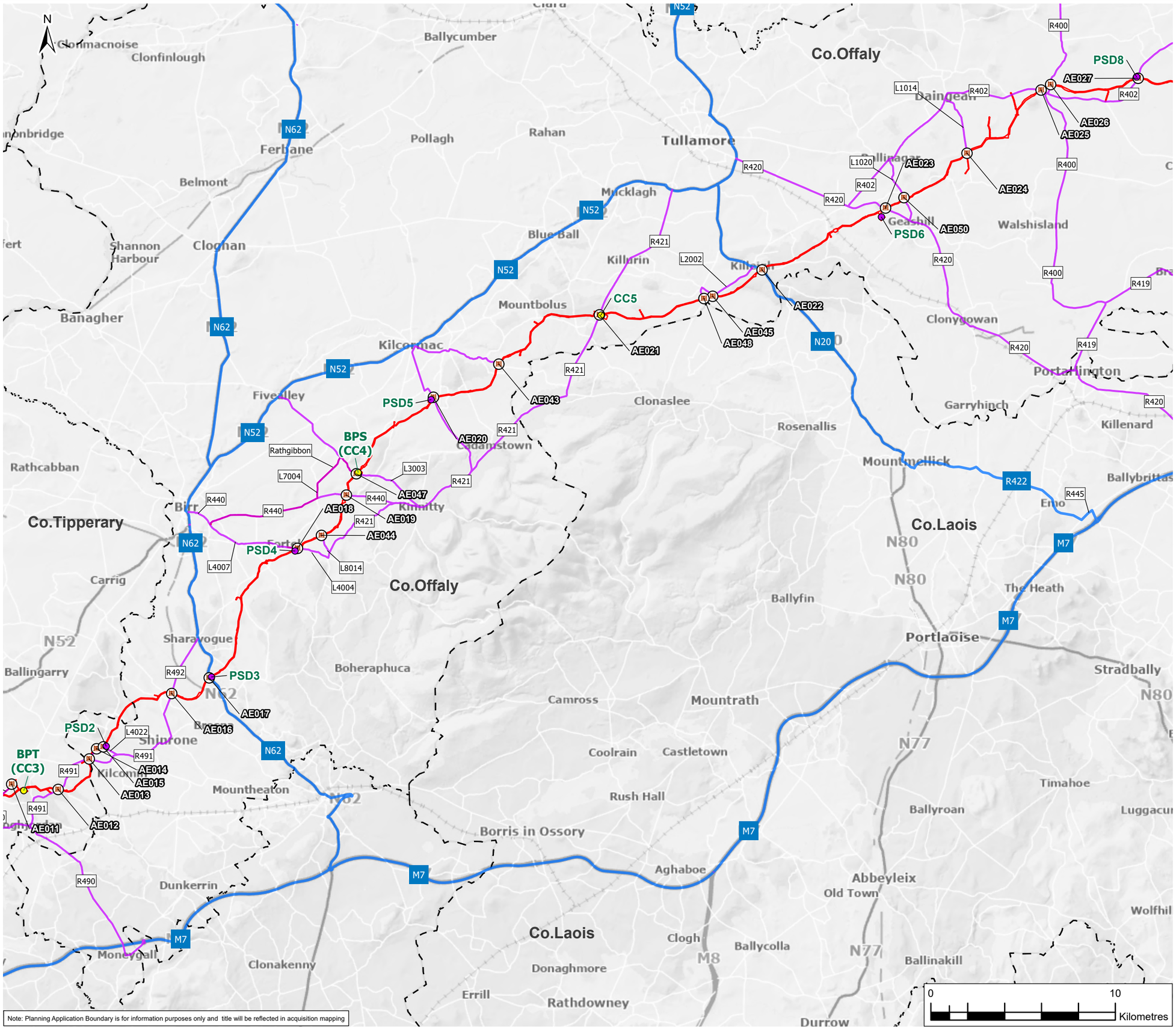
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Sheet 3 of 7

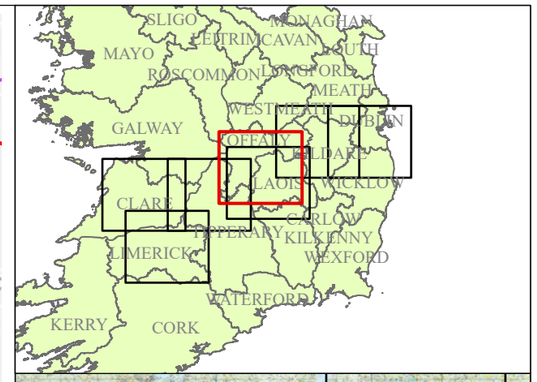
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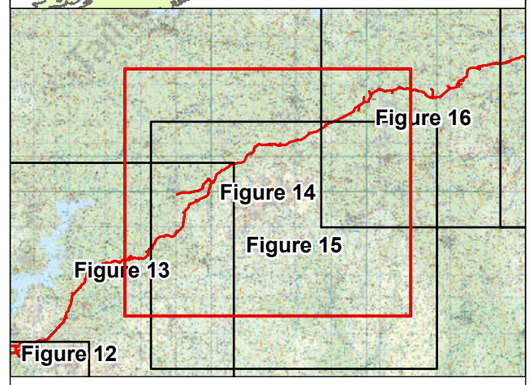
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Legend

- Planning Application Boundary
- Construction Compound
- Pipe Storage Depot
- Principal Haul Roads
- Minor Haul Roads
- County Boundary

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F03	04/12/25	Final - Planning Application	SP	JC	MR	PW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

Drawing Title: A7.1 Figure 14
Offaly Haul Roads
Sheet 4 of 7

Drawing Status: Final - Planning Application

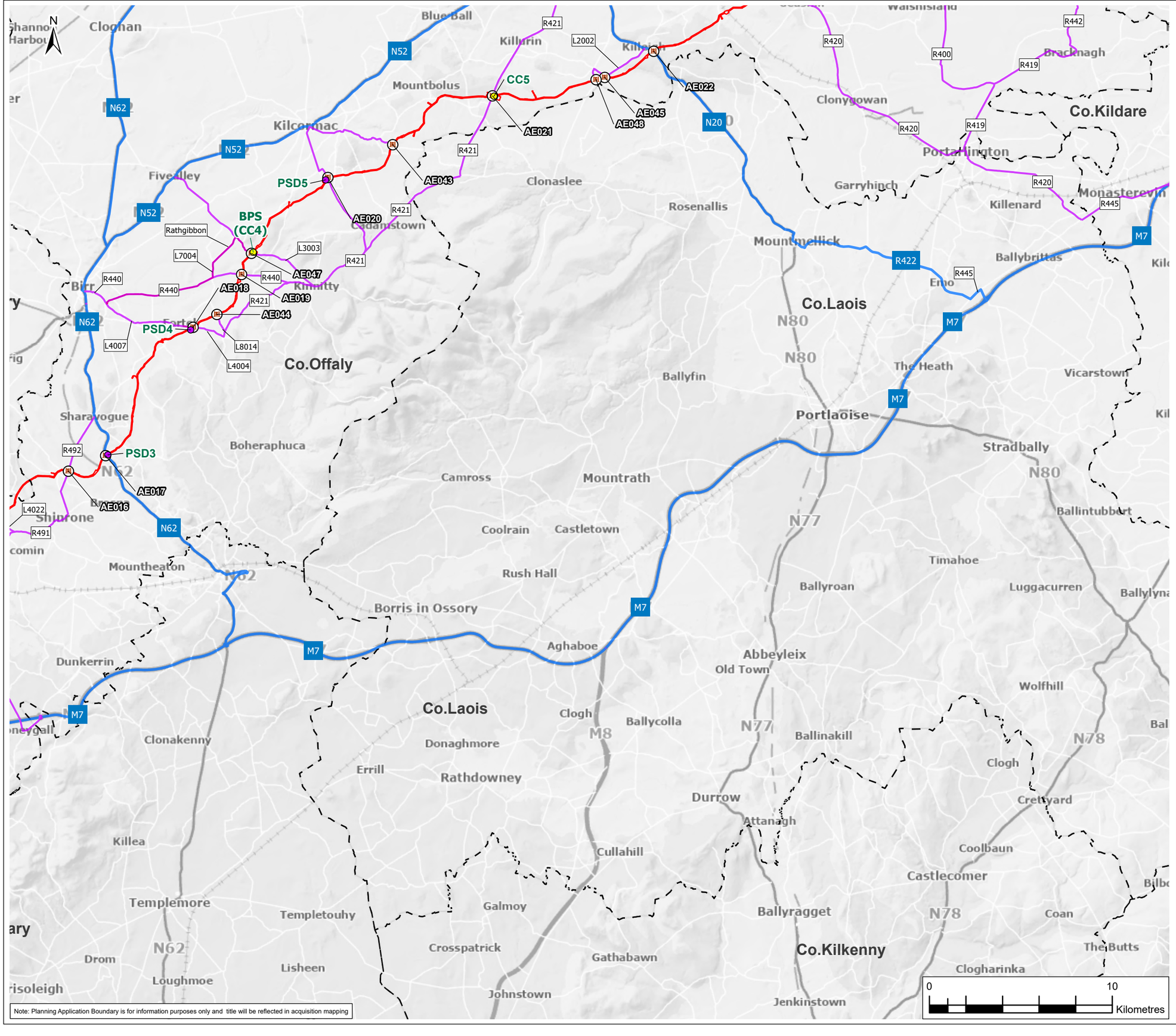
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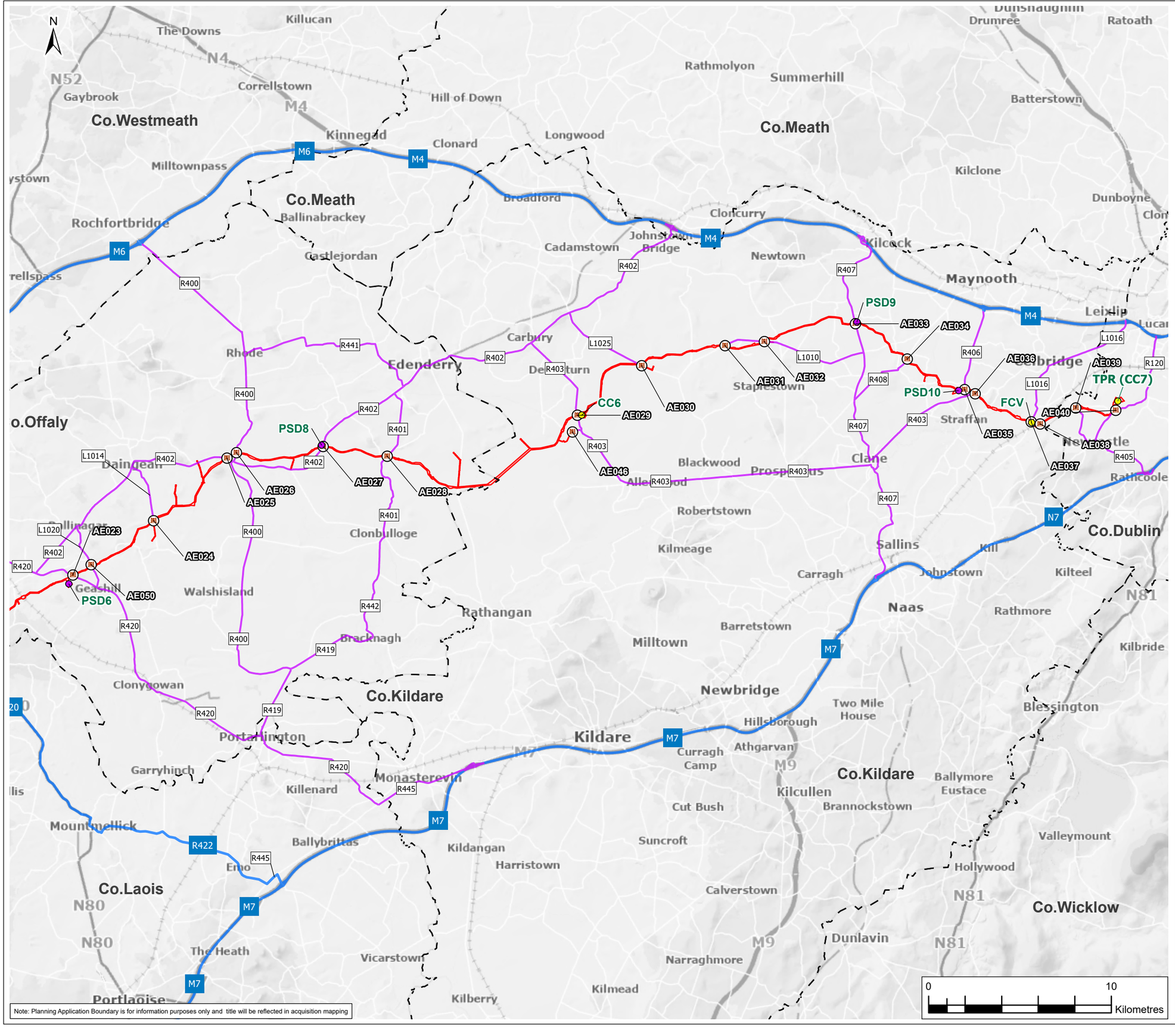
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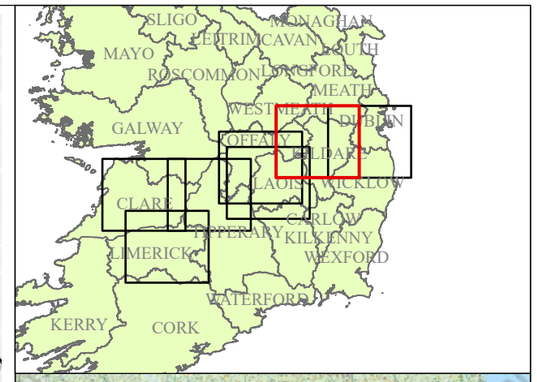
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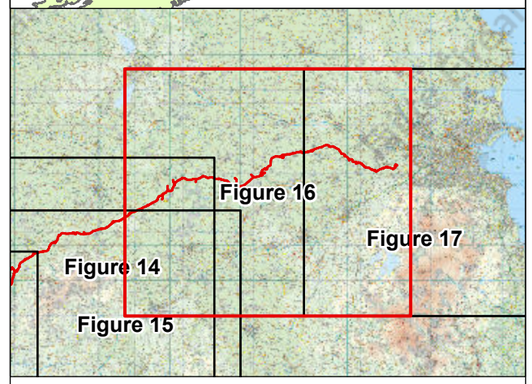
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Note: Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping


N
Cloghan
Blueball
Killurin
Kilkieh
Mountbolus
Kilcormac
Fivealley
Clonaslee
Rosenallis
Clonygowan
Co.Kildare
Portarlington
Garryhinch
Killenard
Monasterevin
Mountmellick
Ballybrittas
Co.Laois
Co.Offaly
Rathgibbon
Birr
Kinnitty
Farbo
Ballyfin
The Heath
Vicarstown
Portlaoise
Sharavogue
Boheraphuca
Stradbally
Camross
Mountrath
Shinrone
Coolrain
Castletown
Mountheaton
Rush Hall
Borris in Ossory
Timahoe
Ballyroan
Luggacurren
Aghaboe
Abbeyleix
Old Town
Wolfhill
Dunkerrin
Clonakenny
Donaghmore
Errill
Rathdowney
Clogh
Ballycolla
Ballinakill
Durrow
Attanagh
Killea
Cullahill
Coolbaun
Castlecomer
Templemore
Templetouhy
Galmoy
Ballyragget
Co.Kilkenny
Crosspatrick
Gathabawn
Loughmoe
Lisheen
Johnstown
Jenkinstown
Clogharinka
Ballintubbert
The Butts
Coan
Mountheaton
Shinrone
Drom
Timahoe
Ballylyna
Wolfhill
Bal
Kil
Ballintubbert
Bilb
Ballylyna
Kilkieh
Walshisland
Bracknagh
Monasterevin
Ballybrittas
Kil
Vicarstown
Stradbally
Ballintubbert







Legend

- Planning Application Boundary
- Construction Compound
- Pipe Storage Depot
- Principal Haul Roads
- Minor Haul Roads
- County Boundary

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
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Jacobs TOBIN

Client

Uisce Éireann Irish Water

Tionscadal Soláthair Uisce Water Supply Project

Project

Water Supply Project
Eastern and Midlands Region

Drawing Title

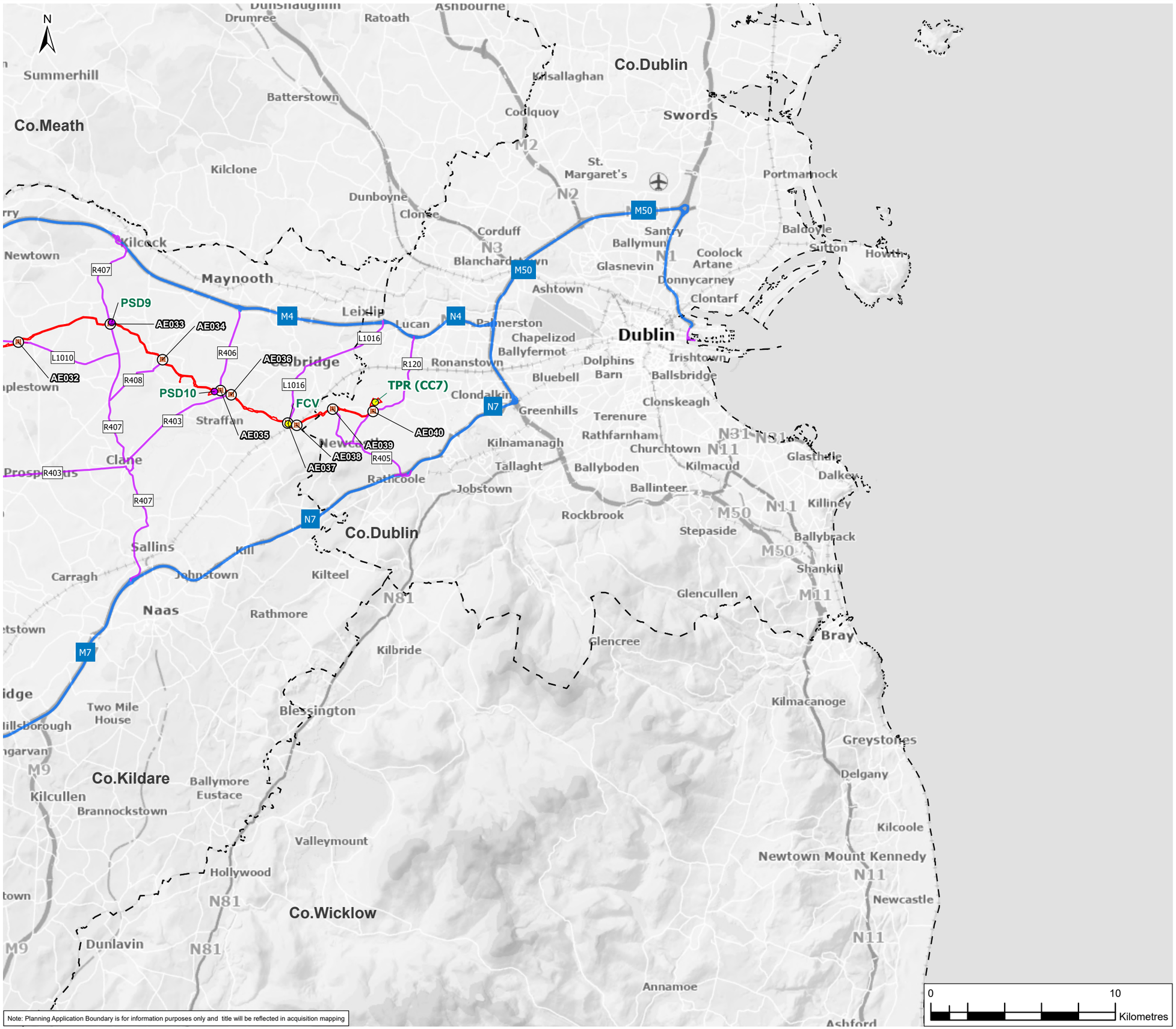
A7.1 Figure 16
Kildare Haul Roads
Sheet 6 of 7

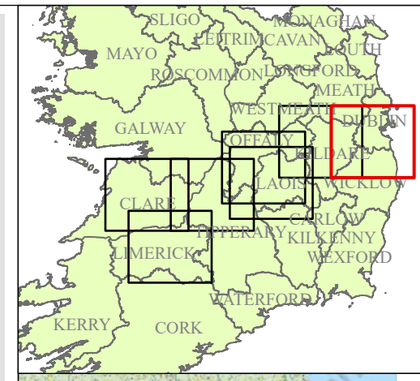
Drawing Status: Final - Planning Application

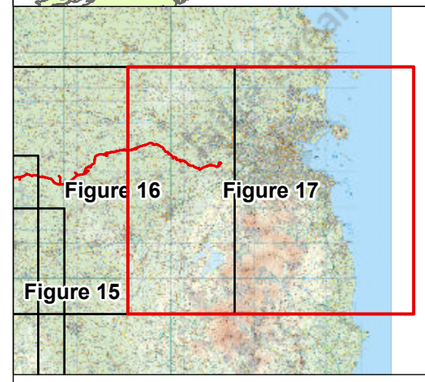
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Legend

- Planning Application Boundary
- Construction Compound
- Pipe Storage Depot
- Principal Haul Roads
- Minor Haul Roads
- County Boundary

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F03	04/12/25	Final - Planning Application	SP	JC	MR	PW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

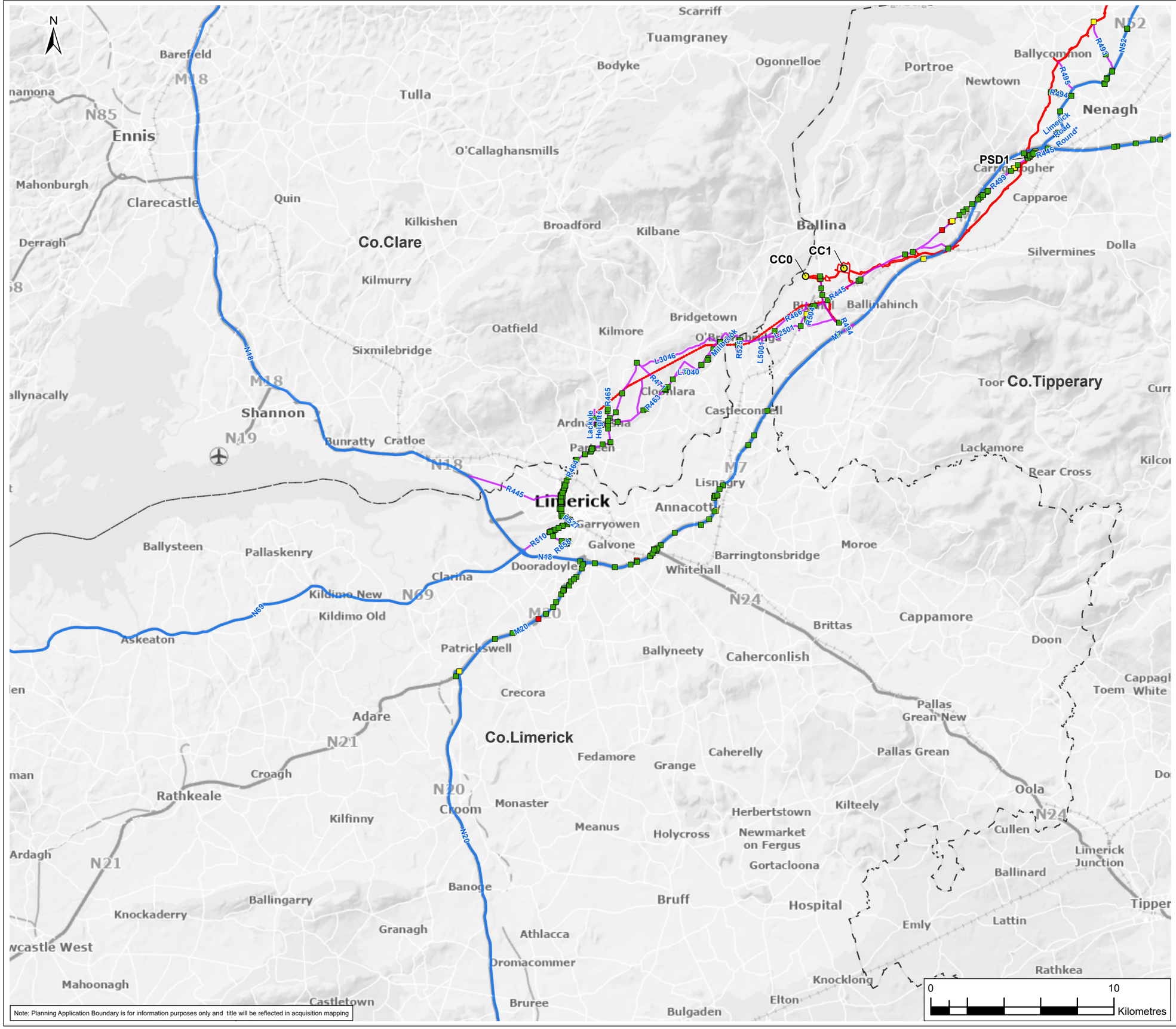
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South Dublin Haul Roads
Sheet 7 of 7

Drawing Status: Final - Planning Application

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Note: Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping

Legend

- Planning Application Boundary
- Construction Compound
- Pipe Storage Depot
- Principal Haul Roads
- Minor Haul Roads

RSA Collision data - 2005 to 2016

- Fatal
- Serious
- Minor
- County Boundary

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F03	14/11/25	Final - Planning Application	SP	JC	MR	PW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

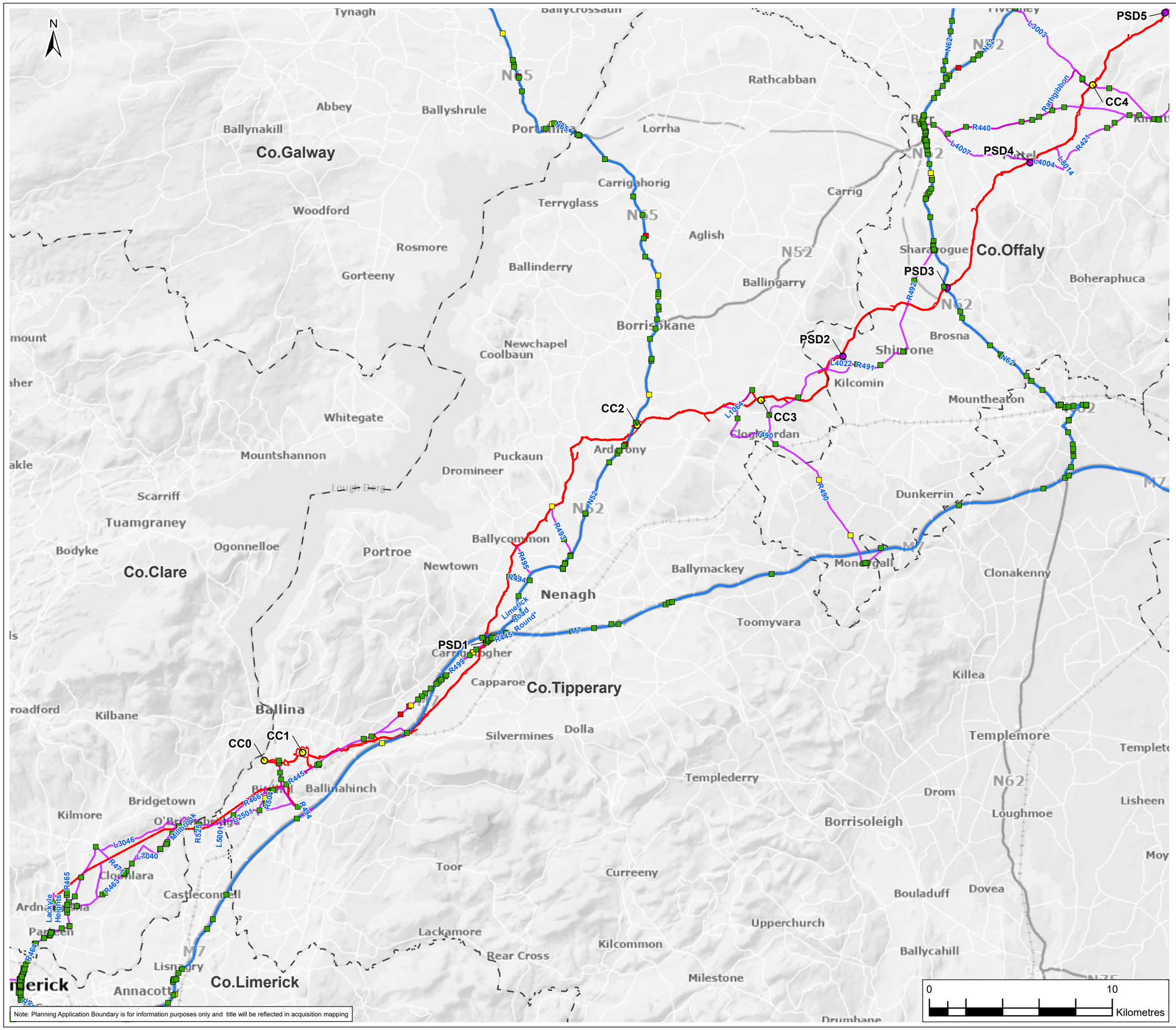
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Collision Data
Sheet 1 of 4

Drawing Status: Final - Planning Application

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Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F03	14/11/25	Final - Planning Application	SP	JC	MR	PW

Jacobs TOBIN

Client

Uisce Éireann Irish Water

Tionscadal Soláthair Uisce Water Supply Project

Project

Water Supply Project
Eastern and Midlands Region

Drawing Title

A7.1 Figure 19
Collision Data
Sheet 2 of 4

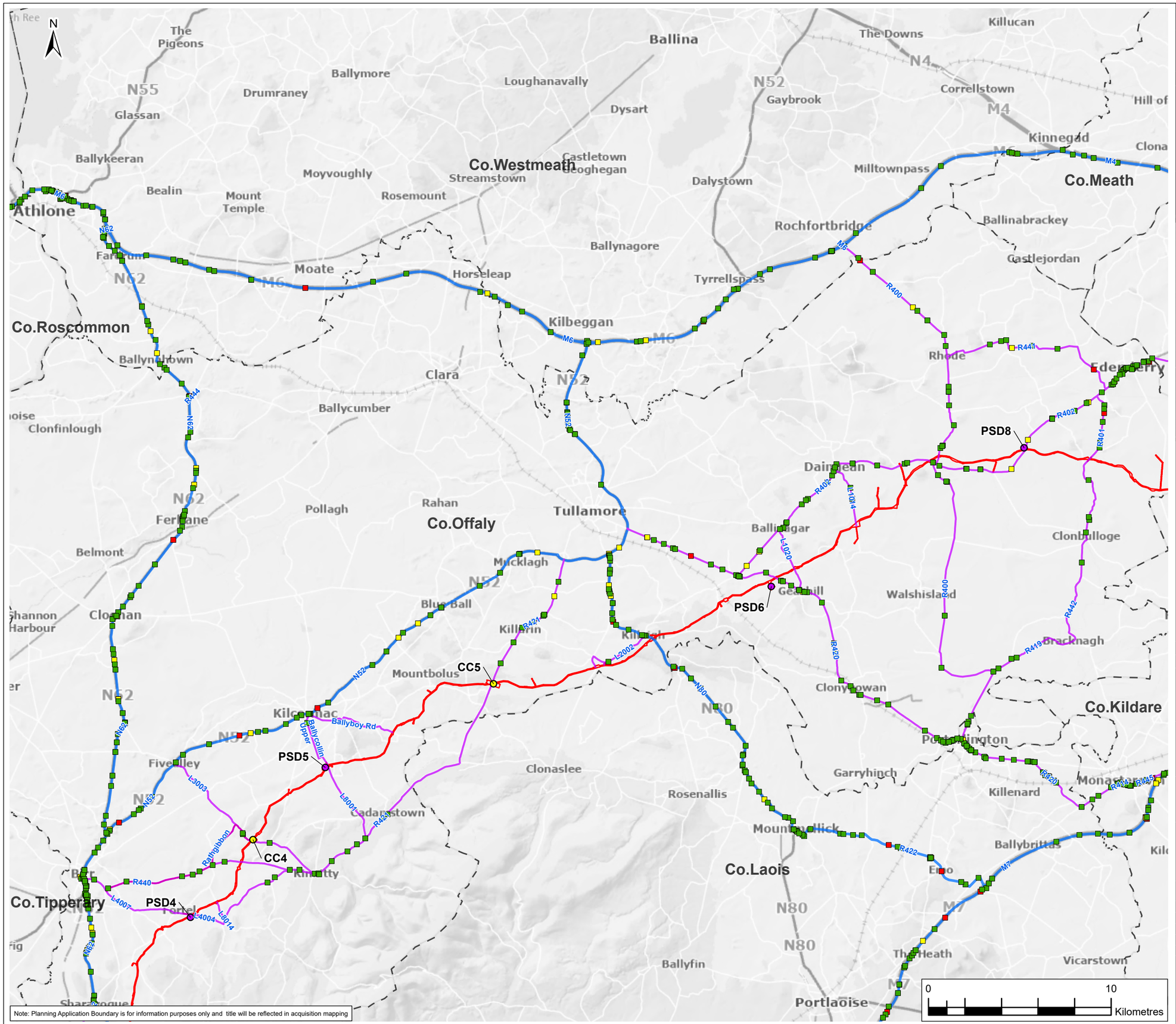
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Final - Planning Application

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Client No.	9318	
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Note: Planning Application Boundary is for information purposes only and title will be reflected in acquisition mapping

Legend

- Planning Application Boundary
- Construction Compound
- Pipe Storage Depot
- Principal Haul Roads
- Minor Haul Roads

RSA Collision data - 2005 to 2016

- Fatal
- Serious
- Minor
- County Boundary

Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F03	14/11/25	Final - Planning Application	SP	JC	MR	PW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project: Water Supply Project
Eastern and Midlands Region

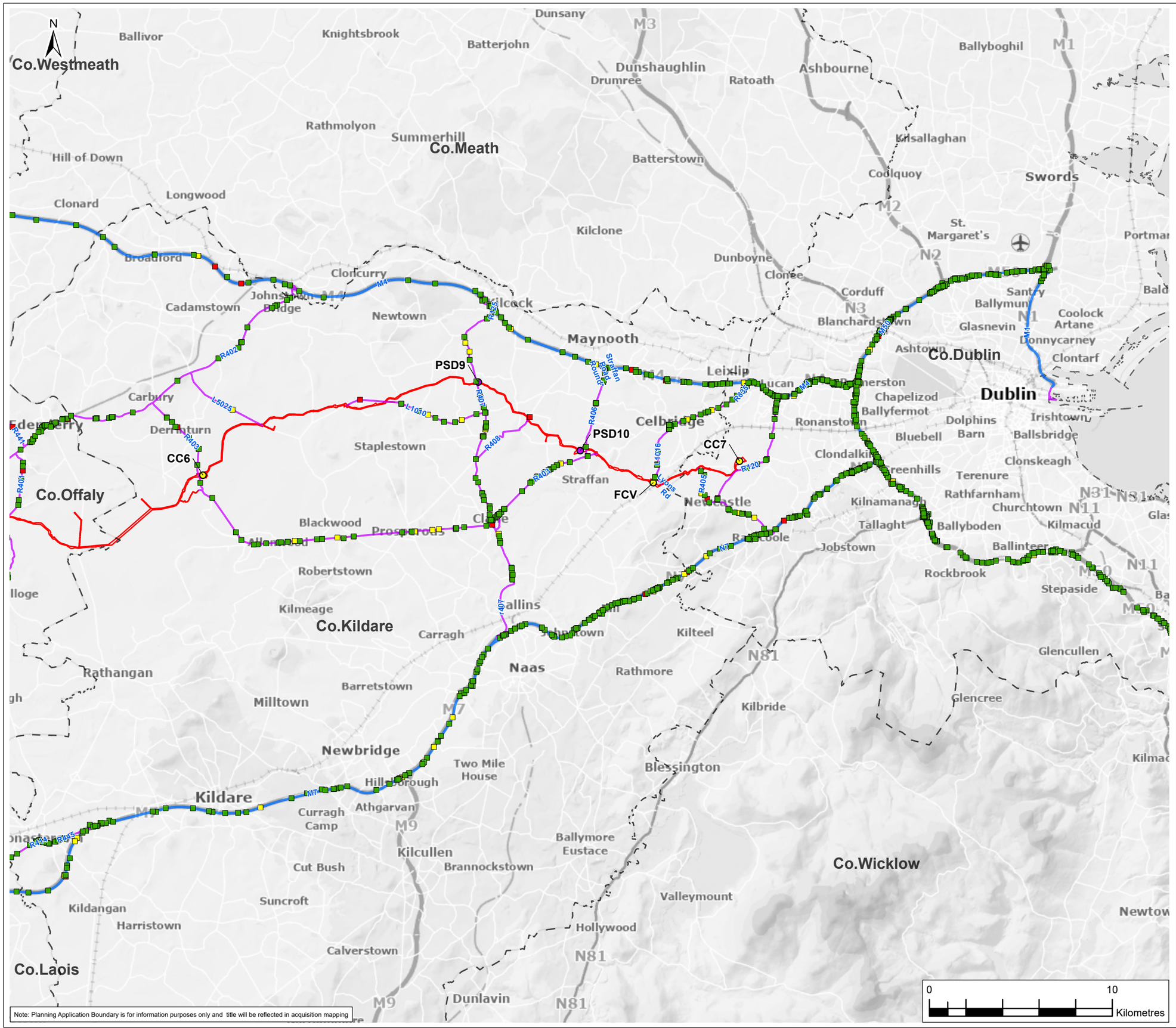
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Collision Data
Sheet 3 of 4

Drawing Status: Final - Planning Application

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Rev.	Date	Purpose of revision	Drawn	Check'd	Rev'd	Appr'd
F03	14/11/25	Final - Planning Application	SP	JC	MR	PW

Jacobs TOBIN

Client: Uisce Éireann Irish Water; Tionscadal Soláthair Uisce Water Supply Project

Project
Water Supply Project
Eastern and Midlands Region

Drawing Title
A7.1 Figure 21
Collision Data
Sheet 4 of 4

Drawing Status: Final - Planning Application

Scale @ A3	1:200,000	DO NOT SCALE
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