

Phase 3 Residential Development, Ballymastone, Donabate, Co. Dublin

Traffic and Transportation Assessment

20003-DBF-XXXX-XX-RP-C01-000104

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Contents

1	Introduction.....	8
1.1	Background	8
1.2	Scope of Assessment	8
1.3	Appraisal Methodology	9
1.4	Report Structure	10
1.5	LRD Section 32D Pre-Application Consultation	11
2	Receiving Environment	26
2.1	Land Use	26
2.2	Location.....	26
2.3	Local Amenities	28
2.4	Existing Site Accessibility	29
2.5	Existing Transportation Infrastructure	31
2.6	Emerging Transport Developments	38
3	Policy Framework	42
3.1	Introduction.....	42
3.2	National Sustainable Mobility Policy	42
3.3	Greater Dublin Area Transport Strategy 2022-2042	43
3.4	Sustainable Residential Development and Compact Settlements - Guidelines for Planning Authorities - (January 2024)	44
3.5	Fingal Development Plan 2023-2029	46
3.6	Donabate Local Area Plan March 2016 (As Extended)	48
3.7	Development Control.....	50
4	Characteristics of Proposals.....	55
4.1	Overview	55
4.2	Site Access Arrangements	56

4.3	Bicycle Parking Strategy	58
4.3.1	Bicycle Parking Provision	58
4.3.2	Bicycle Parking – Apartment / Duplex Units.....	59
4.3.3	Bicycle Parking – Mid-Terrace Units	61
4.4	Car Parking Strategy	62
4.4.1	Car Parking Provision	62
4.5	Mobility Points	66
5	Trip Generation and Distribution	67
5.1	Introduction	67
5.2	Traffic Surveys	67
5.3	Trip Generation	68
5.4	Committed Development	70
5.5	Vehicle Trip Distribution	72
5.6	Traffic Growth	72
5.7	Trip Distribution and Assignment	73
6	Network Impact	74
6.1	Assessment Scope	74
6.2	Network Impact	74
6.3	Mitigation Strategy	77
7	Network Analysis	79
7.1	Introduction	79
7.2	Junction 1: Proposed Site Access DDR (North)	80
7.3	Junction 2: Proposed Site Access / DDR (South)	81
7.4	Junction 3: DDR / New Road	83
7.5	Junction 4: Chapel View / Main Street	86
7.6	Junction 5: Hearse Road / Main Street (L2170) (PICADY Analysis).....	88

7.7	Junction 6: Main Street (L2170)/ Portrane Road	90
7.8	Junction 7: Portrane Road / The Links (PICADY Analysis)	93
7.9	Junction 7: Portrane Road / The Links (TRANSYT Analysis)	94
7.10	Junction 8: DDR / Portrane Road	95
8	Summary and Conclusion	98
8.1	Overview	98
8.2	Summary.....	99
8.3	Conclusion	99
Appendix A :	Traffic Flow Model.....	A
Appendix B :	PICADY Output Files.....	B
Appendix C :	TRANSYT Output Files.....	C
Appendix D :	Public Transport Capacity Analysis.....	D

Figures

Figure 1-1:	Proposed Car Parking Provision for Creche and Community Hall Facilities.....	15
Figure 1-2:	Example of Proposed External Cycle Store & Locker Provision	17
Figure 1-3:	Proposed Pedestrian / Cyclist Connections	21
Figure 2-1:	Fingal Development Plan 2023-2029 - Zoning Objectives (Sheet No. 7)	26
Figure 2-2:	Location of Subject Scheme in Context of Wider Area (Source:OpenStreetMaps).....	27
Figure 2-3:	Site Location (Source: OpenStreetMaps).....	27
Figure 2-4:	Local Amenities Surrounding the Subject Site	29
Figure 2-5:	Pedestrian Accessibility (Walking Time) (Source: TravelTime platform).....	29
Figure 2-6:	Cycle Accessibility (Cycle Time from Site)	30
Figure 2-7:	Public Transport Accessibility – Travel Time Catchments (Public Transit and Walking Time from Ballymastone Site) (Source: TravelTime platform)	31
Figure 2-8:	Existing Road Network (Source: www.google.ie/maps)	32

Figure 2-9: Existing Pedestrian/Cycle Facilities on the DDR.....	33
Figure 2-10: Upgraded Signalised Junction on DDR to the South of Proposed Development	33
Figure 2-11: Upgraded Portrane Road / The Links Signalised Junction	34
Figure 2-12: Existing Pedestrian Facilities on New Road.....	34
Figure 2-13: Pedestrian Crossing at the DDR/New Road Junction.....	35
Figure 2-14: Existing Bus Routes and Bus Stop walking distance from Subject Site	36
Figure 2-15: Irish Rail Network and Onwards Potential Connections from Donabate Station.....	37
Figure 2-16: Greater Dublin Area Cycle Network Plan (2022)	38
Figure 2-17: Proposed BusConnects Routes in Donabate (Source: www.busconnects.ie)	39
Figure 2-18: DART+ Programme (Source: www.dartplus.ie).....	41
Figure 3-1: 1km Walking Distance from Train Station.....	46
Figure 4-1: Proposed Phase 3 Development Layout (Source: 23010-MDO-ZZZZ-XX-DR-A01-050000)	56
Figure 4-2: Proposed Development Site Access Location and Internal Streets	57
Figure 4-3: Proposed Pedestrian / Cyclist Connections	58
Figure 4-4: Locations of External and Internal Cycle Stores	60
Figure 4-5: Example of Proposed External Cycle Store & Locker Provision	61
Figure 4-6: In-curtilage Bin / Bike Stores for Mid-Terrace Units.....	62
Figure 5-1: Junctions Surveyed in March 2025	68
Figure 5-2: Committed Development Locations	71
Figure 6-1: Increase in Vehicle Trips Through Key Of-Site Junctions (2043 AM Peak).....	76
Figure 6-2: Increase in Vehicle Trips Through Key Of-Site Junctions (2043 PM Peak).....	77
Figure 7-1: Junctions Included within the Network Analysis	79

Tables

Table 2-1: Bus Routes and Service Frequency in Donabate (In minutes)	36
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Table 2-2: Rail Services to and from Donabate (No. of Services).....	37
Table 3-1: Development Management Car Parking Standards.....	51
Table 3-2: Development Management Car Parking Requirements (Maximum).....	51
Table 3-3: Development Management Bicycle Parking Standards.....	53
Table 3-4: Development Management Bicycle Parking Requirements (Minimums).....	53
Table 4-1: Proposed Residential Phase 3	55
Table 4-2: Proposed Development Cycle Parking (Required and Proposed).....	59
Table 4-3: Proposed Development Car Parking Provision.....	63
Table 4-4: Breakdown of Car Parking Provision by Type	64
Table 5-1: Proposed Development Trip Rates.....	69
Table 5-2: Proposed Development Vehicle Trips (Fully Constructed)	69
Table 5-3: Committed Development Trip Rates	71
Table 5-4: Adopted Committed Development Potential Trips	72
Table 5-5: National Traffic Growth Forecasts: Annual Growth Factors	72
Table 5-6: Adopted Growth Rates	73
Table 6-1: Proposed Development's Network Impact.....	75
Table 7-1: Do Something Analysis – Junction 1	80
Table 7-2: 2028 Do-Something Analysis – Junction 2.....	81
Table 7-3: 2033 Do-Something Analysis – Junction 2.....	82
Table 7-4: 2043 Do- Something Analysis – Junction 2.....	82
Table 7-5: 2028 Do Nothing Analysis - Junction 3	83
Table 7-6: 2033 Do-Nothing TRANSYT Analysis – Junction 3	84
Table 7-7: 2043 Do-Nothing Analysis - Junction 3	84
Table 7-8: 2028 Do-Something TRANSYT Analysis – Junction 3.....	85
Table 7-9: 2033 Do-Something TRANSYT Analysis – Junction 3.....	85
Table 7-10: 2043 Do-Something TRANSYT Analysis - Junction 3	86

Table 7-11: Do-Nothing Analysis – Junction 4.....	87
Table 7-12: Do-Something Analysis – Junction 4.....	88
Table 7-13: Do Nothing Analysis - Junction 5.....	89
Table 7-14: Do Something Analysis - Junction 5.....	90
Table 7-15: Do Nothing Analysis – Junction 6.....	91
Table 7-16: Do Something Analysis – Junction 6.....	92
Table 7-17: Do Nothing Analysis – Junction 7	93
Table 7-18: 2028 Do-Something Analysis - Junction 7.....	94
Table 7-19: 2033 Do-Something Analysis – Junction 7	95
Table 7-20: 2043 Do- Something Analysis – Junction 7	95
Table 7-21: Do Nothing Analysis – Junction 8.....	96
Table 7-22: Do Something Analysis – Junction 8.....	97

1 Introduction

1.1 Background

DBFL Consulting Engineers (DBFL) has been commissioned by Glenveagh Living Ltd. to undertake a Traffic and Transport Assessment (TTA) for a proposed residential development on a greenfield site located at Ballymastone, Donabate, Co. Dublin.

The proposed development will consist of the construction of a residential development, which represents Phase 3 of a wider development of the Ballymastone Lands (as identified in the Donabate Local Area Plan 2016 (as extended)) and is a continuation of Phase 1 and Phase 2 of the Masterplan lands (permitted under LRD0008/S3 and LRD0039/S3). The proposed development ranges in height from 2 to 6 storeys to accommodate 398 residential dwellings (including a mix of apartments, duplexes and houses), a childcare/creche and community building and public open space. The site will accommodate car parking spaces, bicycle parking spaces, storage, services, new pedestrian/cycle links, road improvements and plant areas. Landscaping will include communal amenity areas and a significant public open space provision.

The development comprises a total of 316 no. car parking spaces, comprising 288 no. residential spaces, 10 no. creche /community hall spaces, 3 no. accessible spaces, 6 no. public EV spaces (including 1 accessible EV space) and 12 no. future ducted public EV spaces (comprising 10 no. standard and 2 no. accessible spaces). A total of 1,619 no. cycle parking spaces are also proposed as part of the development (comprising 1,513 no. resident cycle spaces and 106 no. visitor cycle spaces).

1.2 Scope of Assessment

This report has been produced to address any potential concerns that the local planning authority may have pertaining to the level of influence of the proposed 398 no. residential unit development may have upon the local transportation system. The objective of this TTA is to assess and quantify:

- The principal accessibility characteristics of the existing local receiving environment,
- The proposed method of access for pedestrians, cyclists and vehicles travelling to / from the proposed development, and
- The identification of the potential scale of impact upon the local road network.

The scope of the assessment covers transport and sustainability issues including access, pedestrian, cyclist and public transport connections. Recommendations contained within this

report are based on existing and proposed road layout plans, site visits, on site traffic observations and junction survey data.

The availability and subsequent review of this information will enable the planning authority to gain a more detailed understanding of the proposed development at an early stage. This information will enable the authority to respond in an appropriate manner in the context of the scale and nature of the potential impact generated by the subject proposals.

1.3 Appraisal Methodology

Our approach to the study accords with policy and guidance both at a national and local level. Accordingly, the adopted methodology responds to best practices, current and emerging guidance, exemplified by a series of publications, all of which advocate this method of analysis. Key publications consulted include;

- *'Traffic and Transport Assessment Guidelines'* (May 2014) National Road Authority;
- *'Traffic Management Guidelines'* Dublin Transportation Office & Department of the Environment and Local Government (May 2003);
- *'Guidelines for Traffic Impact Assessments'* The Institution of Highways and Transportation;
- *'Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities'* Department of Housing, Local Government and Heritage (January 2024)
- *'Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities'* Department of Housing, Planning and Local Government (2025);
- Donabate Local Area Plan (as extended) (March 2016) and
- Fingal Development Plan 2023-2029.

Our methodology incorporated a number of key inter-related stages, including;

- **Background Review:** This important exercise incorporated three parallel tasks which included (a) an examination of the local regulatory and development management documentation; (b) an analysis of previous 'transport' related, strategic and site specific studies of development and transport infrastructure proposals across the Donabate area which have emerged and (c) a review of planning applications to establish the legal status of various third party development schemes that were either considered within the strategic 'transport' studies or which have emerged and received full planning permission since.
- **Site Audit:** A site audit was undertaken to quantify existing road network issues and identify local infrastructure characteristics, in addition to establishing the level of

accessibility to the site in terms of walking, cycling and public transport. An inventory of the local road network was also developed during this stage of the assessment.

- **Traffic Counts:** Traffic count surveys were carried out on 05 March 2025 for the surrounding area, the results of which were analysed with the objective of establishing local traffic characteristics in the immediate area of the proposed Ballymastone development.
- **Trip Generation:** A trip generation exercise has been carried out to establish the potential level of vehicle trips generated by the proposed residential development.
- **Trip Distribution:** Based upon both the existing traffic survey characteristics and the network layout in addition to the spatial / land use configuration, a distribution exercise has been undertaken to assign the subject development's generated vehicle trips across the local road network.
- **Network Analysis:** Further to quantifying the predicted impact of vehicle movements across the local road network for the adopted site access strategy, additional detailed computer simulations have been undertaken to assess the operational performance of key junctions in the post development 2028, 2033 and 2043 development scenarios.

1.4 Report Structure

As introduced above, this TTA seeks to clarify the potential level of influence generated by the proposed development upon the local road network and subsequently ascertain the existing and future operational performance of the local transport system. The structure of the report responds to the various stages of this exercise including the key tasks summarised below.

Chapter 2 of this report describes the existing conditions at the proposed development location and surrounding area, whilst **Chapter 3** provides a summary of the relevant transport policies that influence the design and appraisal of the subject commercial proposals.

A description of the proposed development scheme is described in **Chapter 4** whilst **Chapter 5** outlines the trip generation exercise carried out and the adopted methodology for applying growth factors to establish design year network traffic flows and the predicted scale of impact upon the local road network.

The operational performance of key junctions is assessed for the Phase 3 2028 Opening Year and the 2033 (Opening Year +5 years) and the 2043 (Opening Year +15 years) Horizon Years are summarised within **Chapter 6**.

The operational performance of the site access, the key local junctions for a range of different development / traffic scenarios both prior to and following the commissioning of the proposed residential development as well as the junction enhancement analysis are investigated and reported within **Chapter 7**.

The main conclusions and recommendations derived from the analysis are summarised in **Chapter 8**.

1.5 LRD Section 32D Pre-Application Consultation

As part of the Large-scale Residential Development (LRD) process a pre-application Section 32D consultation was undertaken following which, Fingal County Council (FCC) provided feedback in their LRD opinion.

The FCC feedback included a number of points from the FCC Transportation Planning Division, which identified a number of transport items to be addressed. The following summarises the key traffic and transportation items raised within the FCC feedback (in blue text) and corresponding response or clarification of how these have been addressed:

Item 1: The proposed development would be accessed via a new vehicular entrance onto the 'the Links Road' to the west of the site; and via a new entrance onto the R126 (Donabate Distributor Road) to the east. The location of these entrances is acceptable in principle; however, the details of the vehicular entrances should be further developed and a drawing demonstrating the sightlines should be included. A dedicated drawing for the new entrance onto the Donabate Distributor Road should be considered, and confirmation that the layout complies with the 'Cycle Design Manual'.

Details of the proposed vehicular accesses for the scheme are provided in DBFL Drawing 20003-DBF-XXXX-XX-DR-C01-123000 Overall Road Layout and also the detail for the DDR site access is provided in DBFL Drawing 20003-DBF-XXXX-XX-DR-C01-123005. It is confirmed that the layout of the DDR site access junction complies with the 'Cycle Design Manual'.

Item 2: The Fingal Development Plan 2023-2029 creates two distinct parking zones to ensure adequate residential parking provision and the control of destination car parking. This approach also allows greater flexibility in the application of car parking standards on sites in areas with varying levels of road and public transport provision. The car parking requirements for 'Zone 1' is maximums. The proposed development is within a 1.6km radius of the Malahide Dart Station, which would place a car parking requirement on the development of maximum 1 car parking space per 3+ bedroom unit, and 0.5 spaces per 1-2-bedroom unit; in regard to current Development Plan standards.

The above is noted in relation to Donabate Train Station – Detail on the proposed car parking provision which is in accordance with the FCC Development Plan requirements is contained in Section 4.

Item 3: The applicant is proposing to provide the car parking provision as per the maximum permitted for 'Zone 1' in the current Development Plan; that is, 0.5 spaces per 1-2-bedroom unit, and 1 car parking space per 3+ bedroom unit. The proposed carparking provision appears to comply with the maximum quantity allowed in the standards of the current Development Plan.

Detail on the proposed car parking provision which is in accordance with the FCC Development Plan requirements is contained in Section 4.

Item 4: Section 14.17.10 of the Fingal Development Plan 2023-2029 states that all multi-unit residential developments shall incorporate EV charging points at 20% of the future fit out of a charging point at all parking spaces.

The EV charging strategy is discussed in Section 4.4.1 of this report.

All of the houses will be equipped with the necessary infrastructure to enable the occupier to fit their own charge point if / when needed.

With regards to the off-curtilage parking associated with the apartment / duplex units a review has been undertaken in relation to the optimal public charging infrastructure to be implemented for the development. The implementation of 22kW chargers rather than 7.4kW chargers as part of the proposed development has been examined and is considered to offer significant benefits in terms of energy savings, faster charging times, lower carbon emissions and a simplified infrastructure strategy. Given the higher capacity of the 22kW chargers and the aim to rationalise the public charging infrastructure to be implemented across the development, it is proposed that 6 no. 22kW chargers are provided. This equates to ≈ 66 EV users being accommodated. There are 60 no. off-curtilage spaces proposed for the apartment / duplex units plus 10 no. spaces associated with the creche / community hall and 3 no. accessible spaces equating to a total of 73 no. spaces. Based on the development plan requirements, 20% of these spaces are required to be equipped with EV chargers equating to 15 no. spaces. With the 6 no. 22kW chargers implemented serving ≈ 66 EV users, this well exceeds the 20% coverage required under the development plan.

An additional 12 no. spaces (10 no. standard and 2 no. accessible) will be ducted to allow for the future provision of additional public EV chargers as demand increases across the development.

***Item 5:** Regarding the in-curtilage car parking spaces, the applicant states that all in-curtilage parking for the proposed houses will be equipped with the necessary infrastructure for the occupier to fit an EV charger, should they require one.*

The above is noted, and no further response is required. The EV charging strategy is discussed in Section 4.4.1 of this report.

***Item 6:** Regarding the 72 no. off-curtilage spaces in communal areas, the 'Traffic and Transportation Assessment' submitted describes that the current Development Plan requirements for 20% of parking spaces to be equipped with EV charging infrastructure, which would require 15 spaces to be fitted with EV charging infrastructure; and the Development Plan requirements have been rationalised by the applicant considering the charging capabilities of different types of chargers (AC charging versus DC fast charging). It is proposed by the applicant to provide 6 no. 22kW fast charging spaces, which exceeds the charging capacity of 15 no. spaces equipped with standard AC charging equipment. Additionally, 3 no. further spaces will be ducted for future expansion of similar EV charging provisions."*

This proposal should be further developed by the applicant, with further details of the location of these spaces provided. It is noted that the EV charging spaces would not be considered to be part of the residential parking provision, and there is a preference for the car parking provision to be slightly increased to address this. If necessary, the applicant is advised to engage with the Council's Taking in Charge Section for any technical discussion required on the Council's taking in charge requirements, who can be reached at ticestates@fingal.ie.

The proposed approach with regards to the EV charging strategy has been outlined in response to Item 4 and also discussed further in Section 4.4.1 of this report. Locations of the proposed EV spaces are shown on DBFL Drawing 20003-DBF-XXXX-XX-DR-C01-123010 Parking Allocation Plan.

***Item 7:** Motorcycle parking should be provided on the basis of one motorcycle parking bay per 10 no. car parking spaces provided for apartment developments. Spaces should be provided in locations convenient to building access points, similar to cycle parking requirements. Where parking is provided within streets and spaces drop-kerbs should be provided to facilitate access to motorcycle parking bays. Fixed and robust features such as rails, hoops or posts should be provided to secure a motorcycle using a chain or similar device.*

The applicant is proposing 6 no. motorcycle spaces, which is 10% of the non-residential car parking spaces, and the Transportation Planning Section has no objection to this.

Full details regarding the locations of the motorcycle bays are provided in DBFL Drawing 20003-DBF-XXXX-XX-DR-C01-123000. The motorcycle parking strategy is also discussed in Section 4.3 of this report.

***Item 8:** Accessible parking is being proposed at a rate of 5% of the off-curtilage parking (for apartments and duplexes); and this is acceptable to the Transportation Planning Section.*

60 no. off curtilage spaces are proposed for the apartment / duplex units plus 5 no. staff spaces associated with the creche / community hall. A total of 3 no. accessible spaces are proposed, representing 5% of the off-curtilage parking. The accessible parking strategy is discussed further in Section 4.4.1 of this report.

***Item 9:** The layout of the proposed creche appears to have 4 rooms. The applicant states in the 'architectural design statement' that car parking would be provided at a rate of 0.5 spaces per classroom with additional drop off / set down in accordance with current Development Plan standards.*

The proposed parking strategy in relation to the creche and community hall facility is discussed in Section 4.4.1 of this report.

***Item 10:** The details of the location and quantity of car parking does not appear to have been clearly set out in the submission; and this should be addressed. The applicant should consider the following items:*

- *Drop off and parking should be appropriately located and designed to ensure three-point turns are not required near the entrance to the creche, and a circuitous route could be considered if appropriate.*
- *Parallel spaces on the same side of the street as the creche are generally preferable.*
- *Appropriate size of spaces should be considered to allow for safe exit from the car and use of child seats etc.*

There should be control measures in place by way of signage and lining to reserve the creche set down and staff parking for the exclusive use of the creche during creche operating hours. Spaces could revert to visitor spaces outside of operational hours.

The 5 no. drop off spaces for the proposed creche are parallel and located on same side of the road as the creche, as shown in **Figure 1-1** below. Thereby enabling parents / caregivers to pull up beside the creche, safely access their car to get children out onto the footpath and they can then use the internal road network of the development to conveniently turn around without having to

undertake three point turns on the road. These spaces will be clearly marked and signed as drop off spaces for the creche facility.

There are also 5 no. staff spaces provided to the eastern side of the creche facility. It is proposed that both the drop off and staff spaces (i.e. 10 spaces) will be dual function and also serve the proposed Community Hall facility. Events and activities in the Community Hall are expected to generally occur outside of the opening times of the creche. Therefore, in order to avoid an oversupply of car parking, it is proposed that these 10 no. spaces will serve both uses given they are located in close proximity to each other.

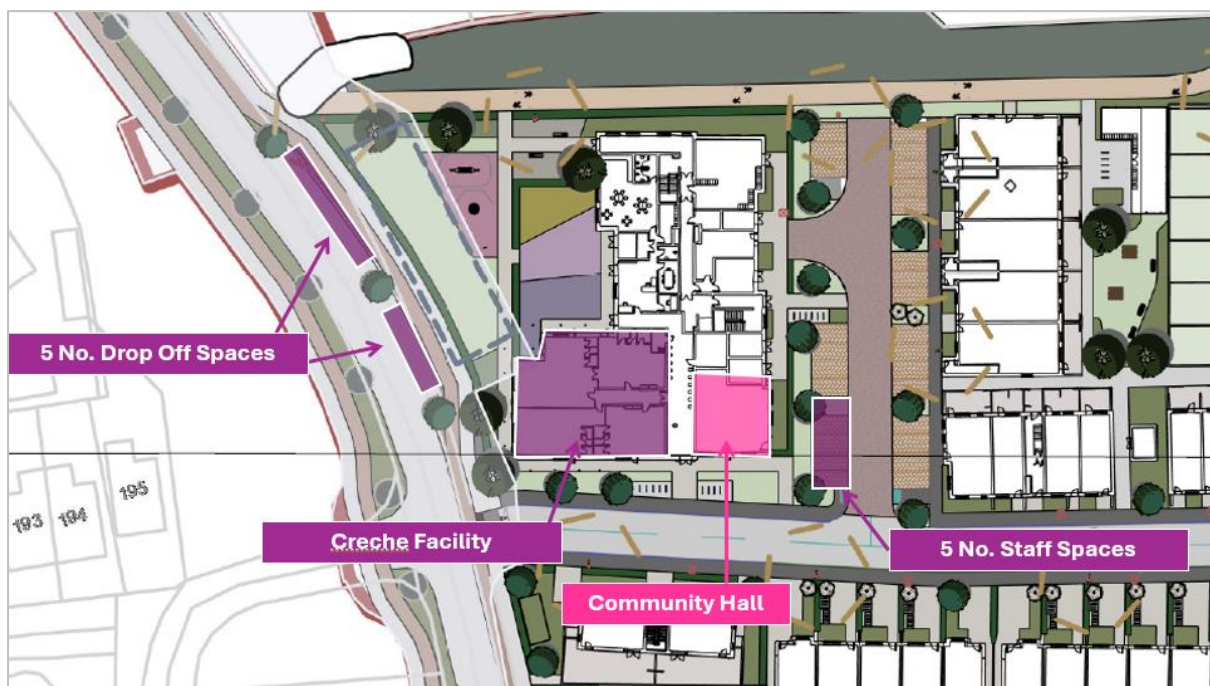


Figure 1-1: Proposed Car Parking Provision for Creche and Community Hall Facilities

Item 11: Mid Terrace Units: *Mid-terrace houses are proposed to include a combined bin / bicycle storage structure incorporated into the front curtilage of the unit, which is acceptable.*

Combined bin / bike stores will be provided in the front curtilage of the mid-terraced units. Further detail regarding the sizing, layout and location of these can be found in CSR Frontage Typology Drawings 19164-2-3141 / 3142.

Item 12: Apartment Blocks: *Regarding the apartment units, the applicant is proposing to provide 'long stay' bicycle parking at the minimum rate described in the standards of the current Development Plan, which is 1 space per unit plus one space per bedroom; and also 0.5 visitor spaces per unit; and this quantity is acceptable in principle to the Transportation Planning Section. The location and layout of the bike parking stores, as presented on page 20 of the submitted 'Architectural Design Statement' is*

generally acceptable, however the full layout and detail should be further developed and presented for each apartment block and consideration should be given to the details described in the standards of the current Development Plan, the 'Sustainable Residential Development and Compact Settlement Guidelines for Local Authorities' (2024) and the 'Cycle Design Manual'; as described in further detail in the next section below titled Cycle Storage.

Full design details of the location and layout of each of the long-term bicycle stores are provided in MDO Drawing 23010-MDO-BX16-XX-DR-A01-070001-Block BX16 / Block BX24.

Item 13: *Duplex Blocks: The applicant is proposing that the residential (long stay) cycle parking spaces for the duplex units will be provided in external stores. The applicant has provided the locations, which are generally acceptable in principle; however, the layout and details have not been provided and should be further developed.*

Full design details of the location and layout of each of the long-term bicycle stores are provided in MDO Drawing 23010-MDO-BX16-XX-DR-A01-070001-Block BX16 / Block BX24.

Item 14: *The proposed bicycle parking provision is generally acceptable in terms of quantity and general location; however additional design solutions should be considered and incorporated where possible, as described below:*

- *Additional design details should be considered to address the needs of heavier bikes, lockers, E-bike charging and cargo bikes.*
- *Communal storage rooms should be designed so that they are universally accessible for cycle parking – see NTA cycle manual dimensions and details. As follows:*
 - o *The design should address that heavier bikes are not always suitable for two tier.*
 - o *Repair stations for bike equipment should be considered.*
 - o *A quantity of Individual bike-lockers should be considered.*

The operators of the apartment management should provide a cycle parking management plan and include a maintenance regime for the parking facilities to be maintained.

Further detail for each of the cycle stores, including layout and quantum of cycle space in each store together with a full schedule, is provided in the MDO Architectural Design Statement. The cycle stores will provide double tier bike racks, with accessible / cargo bike parking provided at a rate of 5% of the overall quantum of cycle parking.

The external cycle stores will comprise lightweight, visually appealing structures, designed so as to provide a covered, secure parking facility whilst not dominating the streetscape or open space areas. With regards to the requirement for providing storage facilities for cyclists' equipment, the cycle stores will incorporate small lockers, at the rate of 1 no. locker per bike parking space, similar to that shown in **Figure 1-2** below. Further detail on the design of the cycle stores and locker facilities can be found in MDO Architectural Design Statement.

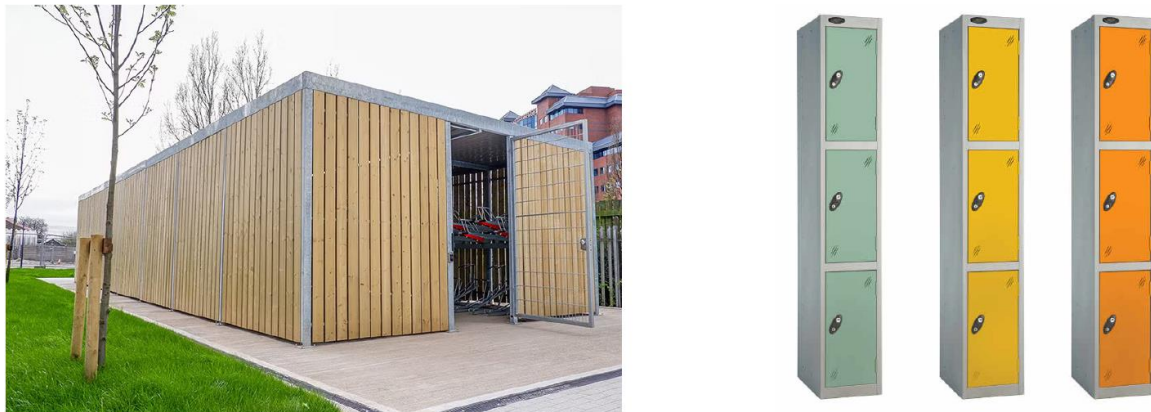


Figure 1-2: Example of Proposed External Cycle Store & Locker Provision

Item 15: *Section 14.17.2.1 of the current Development Plan deals with bicycle parking standards for residential development and describes the following:*

- The quality and quantity of bicycle parking provision in residential developments should encourage residents to adopt cycling as the preferred mode of travel for short trips.*
- Cycle parking should be provided within the curtilage or adjacent to the building and should not require the bike to be brought through an internal area.*
- Innovative, secure, covered and front of house bicycle parking solutions are required in the design of all new duplex developments and terrace dwellings. Wall bars or rings are not acceptable at the front of a house for long stay bicycle parking. Applications for front of house bicycle parking solutions in existing housing and residential areas and matching these criteria will be supported and encouraged.*
- In exceptional circumstances, where cycle parking cannot be provided within the curtilage, bicycle parking that is innovative in design, secure and sheltered must be provided adjacent to the building. Communal on-street bicycle parking provision provides an opportunity in the context of retro-fitting existing terrace dwellings fronting onto streets in existing built-up area and this will form part of the Active Travel Strategy.*

- *Apartment development must be comprehensively equipped with high quality cycle parking and storage facilities for residents and visitors.*
- *The provision of high-quality bicycle parking is a key concern for apartment residents and apartment proposals must respond accordingly in their design and provision of such facilities.*
- *Each apartment unit shall be provided with an individual storage compartment for long stay bicycle provision that is capable of accommodating bicycles, buggies and additional ancillary equipment such as scooters, helmets and bicycle maintenance equipment.*
- *Guidance in relation to bicycle parking provision and storage for apartment developments is outlined in the 'Planning Design Standards for Apartments - Guidelines for Planning Authorities' (2025). The Council will have regard to these relevant guidelines when considering applications for apartment development where bicycle parking is a requirement.*

Section 14.17.2 of the Fingal Development Plan 2023-2029 describes 'long-stay' bicycle parking in the following terms: These are to be designed for private use by residents and employees. Such cycle parking spaces should be located in a secure area that is easy to access, well-lit and covered. Effective security and functionality for all types of users is also maximised by the provision of individual facilities to allow for different types of equipment such as buggies, cargo bikes, helmets and scooters to be stored where appropriate. They should be situated within the curtilage of the destination.

Apartment / Duplex Units Cycle Parking

Long stay cycle parking for the apartment and duplex blocks are provided in the form of internal and external bike stores. The locations of these bike stores are driven by the need to provide secure, safe and accessible bike storage to the residential blocks that they serve. With regards to the requirement for providing storage facilities for cyclists' equipment, the cycle stores will incorporate small lockers, at the rate of 1 no. locker per bike parking space as per the approach previously taken and approved for Phase 2 of the subject development. Further detail on the design of the cycle stores and locker facilities can be found in MDO Architectural Design Statement. Full design details of each of the long term bicycle stores are provided in MDO's architectural drawing pack. This includes detailed floor plans for each of the proposed bicycle stores.

Mid-Terrace Units Cycle Parking

For the residents of the mid-terraced house units, a combined bin / bike storage unit has been incorporated into the front curtilage space of the mid-terrace units. This is in recognition of the difficulty often encountered by occupants or visitors of mid-terraced units with regards to

accessing the rear garden areas to store bicycles, which requires bringing the bicycle through the house. The bike stores provided within the front curtilage of the 3 bed units will be capable of accommodating 5 no. bicycles and the 2 bed units will be capable of accommodating 3 no. bicycles in line with the development plan requirements. They will facilitate secure, covered, convenient storage of bicycles for the residents of the mid-terrace units. Further detail on the proposed layout of the in-curtilage bin / bike stores can be found MDO / CSR drawings.

The cycle parking proposed is of a high quality, provides sufficient storage and is designed so as to make it easy, safe and convenient for people to store bicycles thereby encouraging an uptake in cycling.

***Item 16:** Detailed boundary treatment proposals between the development and the adjacent public roads and residential streets should be provided. The applicant should take cognisance of the following objectives in regard to permeability:*

- *The Fingal Development Plan 2023-2029 Objective CIO501 – Permeability - Ensure permeability and connections between public open spaces including connections between new and existing spaces, in consultation with residents.*
- *Fingal Development Plan 2023-2029 Objective DMSO49 – Permeable and Accessible Open Spaces- Integrate and provide links through adjoining open spaces to create permeable and accessible areas, subject to Screening for Appropriate Assessment and consultation, including the public, as necessary.*
- *The Transport Strategy for the Greater Dublin Area 2016-2035 sets out Principles of Land Use and Transport Integration. At the local level, the principles state: New development areas should be fully permeable for walking and cycling and the retrospective implementation of walking and cycling facilities should be undertaken where practicable in existing neighbourhoods, in order to a give competitive advantage to these modes; and, where possible, developments should provide for filtered permeability. This would provide for walking, cycling, public transport and private vehicle access but at the same time would restrict or discourage private car through trips.*

The 'NTA's Permeability Best Practice Guide', also outlines the importance of permeability.

The proposed development has been designed to maximise permeability for pedestrians and cyclists, ensuring convenient connections to adjacent public roads such as The Links and the DDR. Boundary treatments with adjacent existing residential areas such as The Priory and Priory Wood

have been designed so as not to prohibit the delivery of future additional pedestrian links, to be delivered by FCC as and when required. Details of the proposed boundary treatments for the subject development can be found in CSR Drawing No. 19164-2-3123-Boundary Treatment Plan.

Item 17: The site location offers good opportunity for permeability into all surrounding streets and residential developments, and this should be further developed by the applicant and preferably a dedicated drawing provided to demonstrate permeability through the development should be submitted.

There are several pedestrian/cyclist access points located along the DDR offering excellent levels of connectivity to/from the pedestrian and cycle facilities along the DDR as well as connections eastwards to the Recreational Hub development via the upgraded DDR junction being delivered as part of the Phase 1 development.

As shown in **Figure 1-3**, there will be connectivity westwards to Donabate village via The Links and the permitted Phase 1 development which will provide linkages to key services in the village as well as Donabate Train Station.

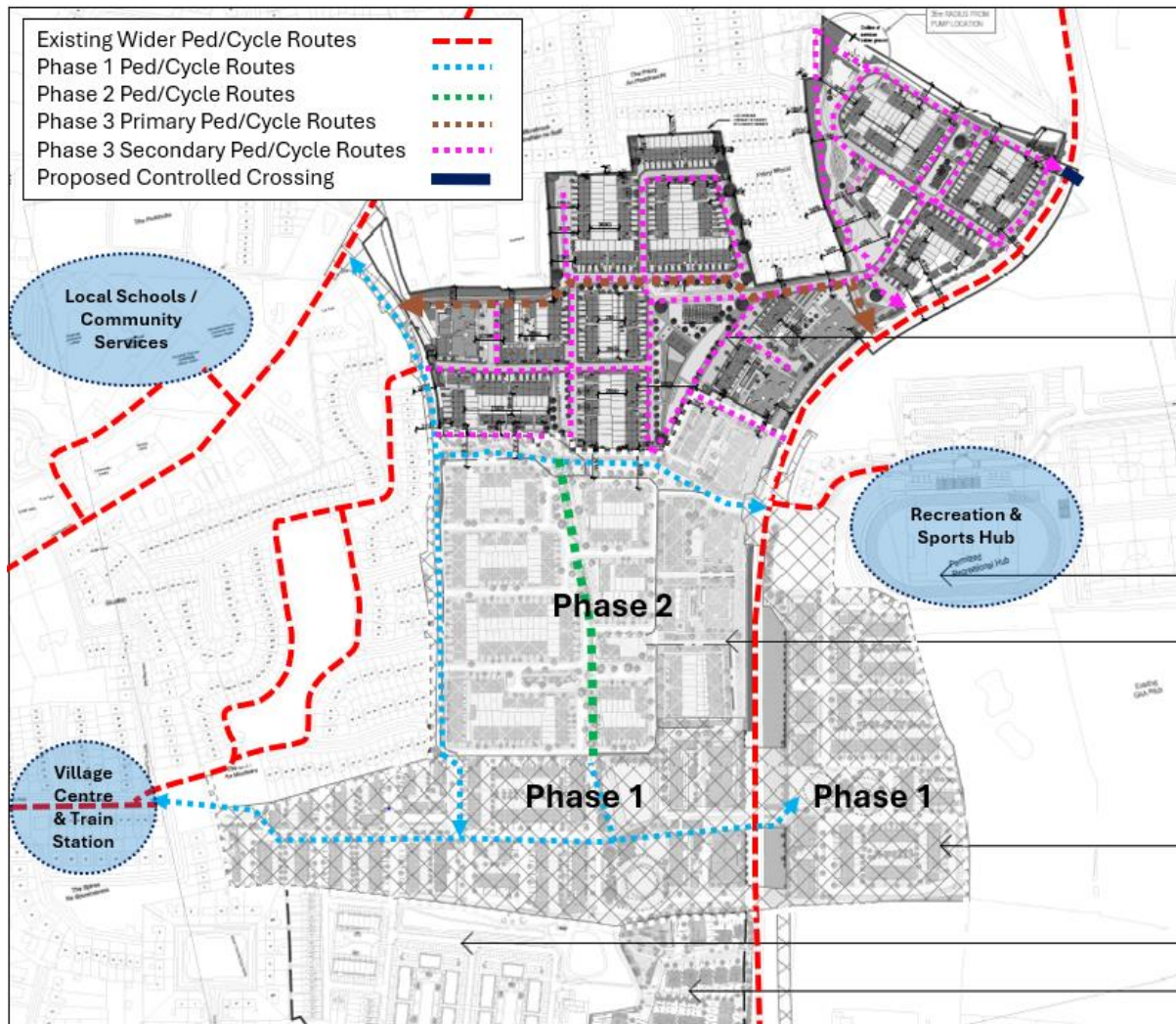


Figure 1-3: Proposed Pedestrian / Cyclist Connections

Item 18: Roads hierarchy: The applicant has provided a 'roads hierarchy drawing'. We recommend that the various widths of roads are detailed on the drawings, and a rationale provided.

Road hierarchy details are provided in DBFL Drawing 20003-DBF-XXXX-XX-DR-C01-123004 and the widths / cross sections of each of the different street types are contained in DBFL Drawings 20003-DBF-XXXX-XX-DR-C01-523001 to 523005. The rationale for the various road widths and proposed road hierarchy is contained within the DMURS Statement submitted as part of the planning application.

Item 19: Roads Line Marking and Signage: A road line marking and signage drawing should be provided, and a statement that it complies with the Traffic Signs Manual submitted.

The required details are provided in DBFL Drawing 20003-DBF-XXXX-XX-DR-C01-123004 and have been developed in accordance with the requirements of the Traffic Signs Manual.

Item 20: Kerb Levels: *A drawing detailing the kerb levels of the footpath should be provided; detailing the levels of footpaths and kerbs relative to the road carriageway.*

Proposed kerb heights are shown on DBFL Drawings 20003-DBF-XXXX-XX-DR-C01-123010 to 123032.

Item 21: Tactile Paving and Crossings: *The proposed locations for pedestrian crossings points with tactile paving should be detailed, and a rationale for where they are located with reference to the guidance provided in the 'Traffic Management Guidelines' submitted.*

The use of tactile paving has been applied throughout in accordance with the guidance contained within the Traffic Management Guidelines (2003) and the UK Guidance on the use of Tactile Paving Surfaces to ensure a logical and navigable pedestrian environment is delivered for those with visual impairments.

Well-designed pedestrian crossing facilities are provided at frequent intervals along key travel desire lines throughout the scheme in addition to those located at street nodes. All courtesy crossings are provided with either dropped kerbs or a raised flat top / continuous footpath treatment thereby allowing pedestrians to informally assert a degree of priority. All informal pedestrian crossing facilities are at least 2.0m wide. The locations and types of tactile paving are shown on DBFL Drawing 20003-DBF-XXXX-XX-DR-C01-123000. Additional detail with regards to the rationale for the location of pedestrian crossing facilities are contained within the DMURS Statement submitted as part of the planning application.

Item 22: Road Safety Audit: *A Stage 1 (or possibly a stage 2 if appropriate) Road Safety Audit should be submitted by the applicant as part of the final submission.*

A Stage 1 Road Safety Audit has been undertaken by an independent road safety audit team who has not been involved in any of the design aspects of the project. The Stage 1 RSA is submitted as part of the planning documentation.

Item 23: Swept Path Analysis: *Access for fire tender and bin collection should be considered, as described further below.*

Vehicle tracking for refuse collection vehicles and fire tender are provided in DBFL Drawings 240058-DBF-XXXX-XX-SK-C01-123001 -123002.

Item 24: Home zones: *The exact proposed surface details of the shared surface should be provided, with a rationale for how it complies with DMURS. DMURS describes (Section 4.3.4) that the key condition for the design of any shared surface is that drivers, upon entering the street, recognise that they are in a*

shared space and react by driving very slowly (i.e. 20km/h or less). To ensure this, designers should use a variety of materials and finishes that indicate that the carriageway is an extension of the pedestrian domain. DMURS also allows for the use of Verges that act as refuge zones allowing pedestrians to step on and off the carriageway to let cars pass. DMURS also describes that the total carriageway width on Local Streets where a shared surface is provided should not exceed 4.8m.

Specific design features that have been incorporated within the proposed residential scheme with the objective of delivering a design that is consistent with both the principles and guidance outlined within the Design Manual for Urban Roads and Streets (DMURS) (Version 1.1, 2019).

DMURS states designers should use “contrasting materials and textures to inform pedestrians of changes to the function of space (i.e. to demarcate verges, footway, strips, cycle paths and driveways) and in particular to guide the visually impaired”

It is proposed to use a coloured asphalt surface treatment on the Homezone areas. The shared surface areas will be differentiated from local streets through contrasting colour surfacing.

DMURS notes that designers should use discretion with regard to the self-regulating characteristics of streets and the impact of signs / line marking on the value of place.

In recognition of the low speed nature and low movement function of the Homezones, the proposed design has sought to specify minimal signage and line markings along the internal streets with such treatments used sensitively throughout.

There is a DMURS Design Statement with regards to the proposed Phase 3 Residential Development provided in DBFL Report 20003-DBF-XXXX-XX-RP-C01-000105 DMURS Design Statement.

***Item 25:** The applicant should confirm that access for firefighting operations has been considered in regard to Building Regulations Technical Guidance Document B. The applicant should consider that for some larger sizes of multi-storey buildings (defined in Part B of the Building Regulations) the Turntable Ladder (TTL) is required. This is 11.6m in length..*

Access for fire tender has been considered and facilitated and vehicle tracking for fire tender are provided in DBFL Drawings 240058-DBF-XXXX-XX-SK-C01-123001 -123002.

***Item 26:** The applicant should confirm that the proposed street layout can accommodate the access requirements for a refuse collection vehicle, with consideration given for the 11.2m long refuse collection vehicle.*

Vehicle tracking for refuse collection vehicles are provided in DBFL Drawings 240058-DBF-XXXX-XX-SK-C01-123001 -123002.

***Item 27:** A Traffic and Transportation Assessment has been provided by the applicant, and the Transportation has generally no objection to the methodology and approach taken to the assessment.*

The above is noted, and no further response is required.

***Item 28:** A taking-in-charge drawing should be provided detailing all areas proposed to be taken in charge by the Council. The applicant is advised to further consider the following points:*

- *The Council's Taking in Charge Policy/Specification, Appendix 6 Section 8, states the following: 'All roads to be taken in charge will be taken in charge at a minimum from the back of footpath/cyclepath on one side of the road to the back of footpath/cyclepath on the other side of the road in line with the definition of a road in the 1993 Roads Act Part 1 Section 2(1).' The consequence of this is that the Council's taking in charge policy, by default, requires all 'non in-curtilage carparking / on-street car parking spaces' located on or directly adjacent to streets / roads proposed to be taken in charge by the Council to not be designated to any particular unit and to become public car parking spaces, unless otherwise agreed with the Council's Taking-In-Charge Section.*
- *All areas that are proposed to be 'taken in charge' by the Council, should be constructed and maintained to the Councils standards for taking in charge, including roads, footpaths, verges, public lighting, open space, sewers, watermains or drains, forming part of the development.*
- *Public infrastructure such as stormwater drainage and streetlighting, should be located in areas to be taken-in-charge by the Council.*

If necessary, the applicant is advised to engage with the Council's Taking in Charge Section for any technical discussion required on the Council's taking in charge requirements, who can be reached at ticestates@fingal.ie.

The Taken In Charge plan can be found in MDO's Architectural Drawing Pack (Dwg. No. 23010-MDO-PZ4X-XX-DR-A01-054304 and 23010-MDO-ZZZZ-XX-DR-A01-054305).

***Item 29:** Any application that may be forthcoming should be accompanied by a Road Safety Audit. It is important that the Road Safety Audit process is built into the early stages of the Planning Procedure to allow the Local Authority to give due consideration to the potential road safety risks associated with a development prior to the award of planning consent, and prior to the commencement of construction*

work. A Stage 1 (or possibly a Stage 2 if appropriate) Road Safety Audit should be submitted by the Applicant as part of the final submission.

A Stage 1 Road Safety Audit has been undertaken by an audit team independent of the design team and is submitted as part of the planning documentation.

Item 30: *A final Construction Traffic Management Plan will need to be agreed with the Planning Authority prior to construction of the proposed development. The Plan should include the construction phasing of development and haul routes.*

A Construction Traffic Management Plan will be completed and be agreed with Fingal County Council prior to the commencement of construction activities on site.

2 Receiving Environment

2.1 Land Use

The subject site is located on a greenfield site in Ballymastone which forms part of the Donabate LAP lands. The subject lands are zoned Objective RA (Residential Area) which aims to ***“Provide for new residential communities subject to the provision of the necessary social and physical infrastructure”*** within the 2023-2029 Fingal County Development Plan as shown in **Figure 2-1**.

The subject site is bound to the west and north by existing established residential developments and a local cemetery. The lands to the south are zoned for residential development, permitted Phase 2 as per Reg. Ref: LRD0039/S3 (Objectives ‘RS’ and ‘RA’), whilst the lands north-east are zoned Objective ‘HA’ (High Amenity). The lands to the east are zoned for Objective CI (Community Infrastructure).

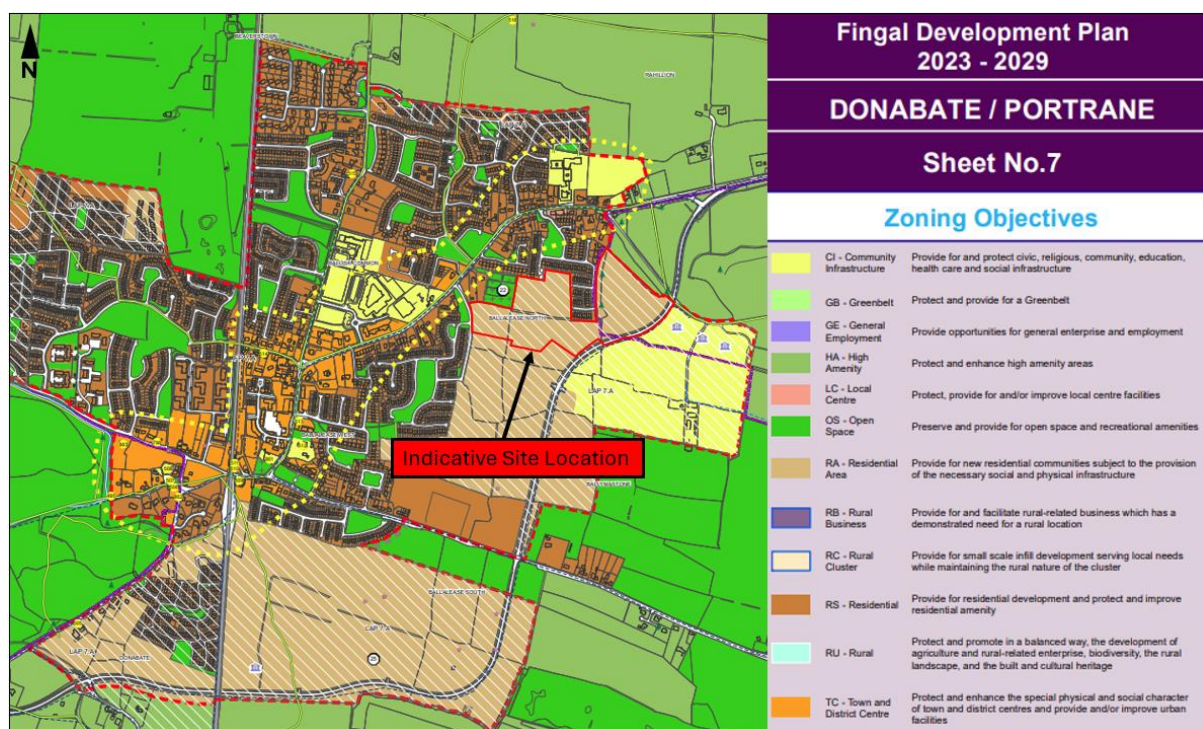


Figure 2-1: Fingal Development Plan 2023-2029 - Zoning Objectives (Sheet No. 7)

2.2 Location

The general location of the subject site in relation to the wider road network is illustrated in **Figure 2-2** while the extents of the subject site boundary and neighbouring lands are indicatively shown in **Figure 2-3**. The subject site is located approximately 21 kilometres northeast of Dublin City Centre.

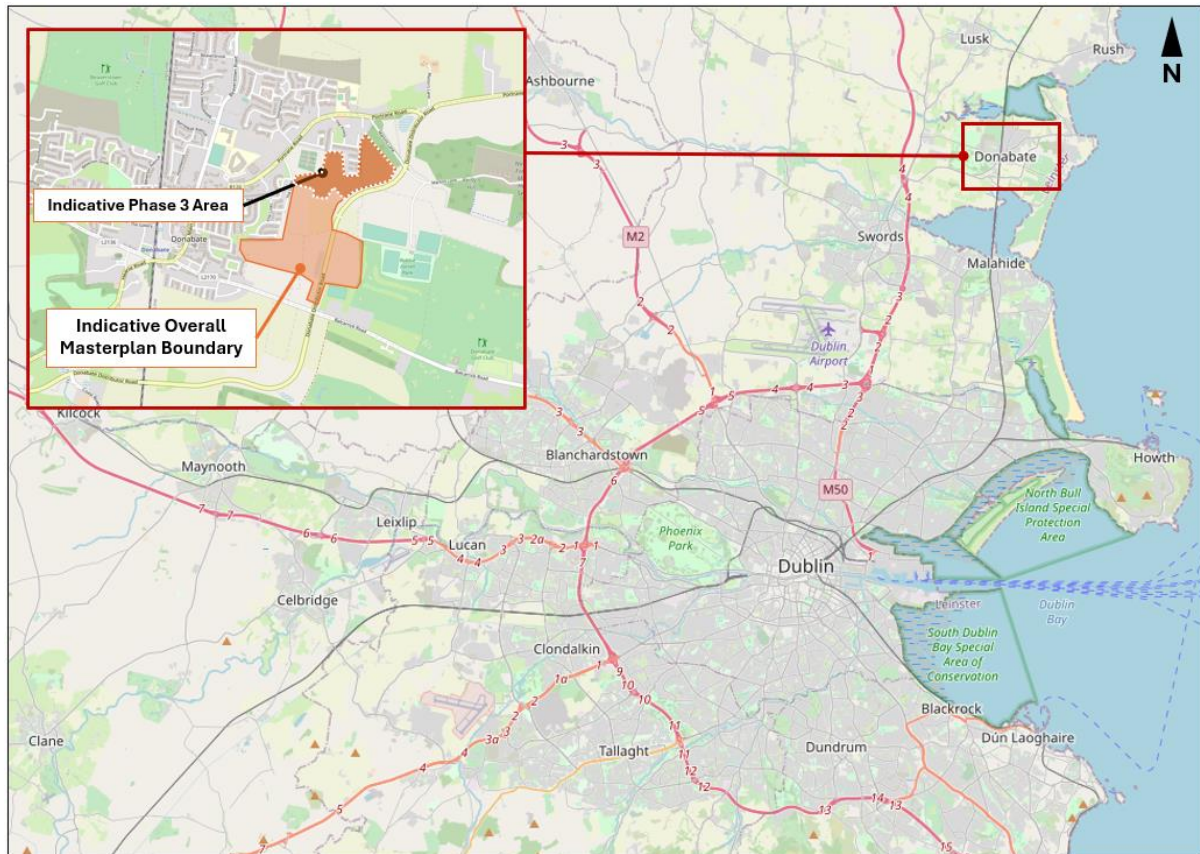


Figure 2-2: Location of Subject Scheme in Context of Wider Area (Source:OpenStreetMaps)

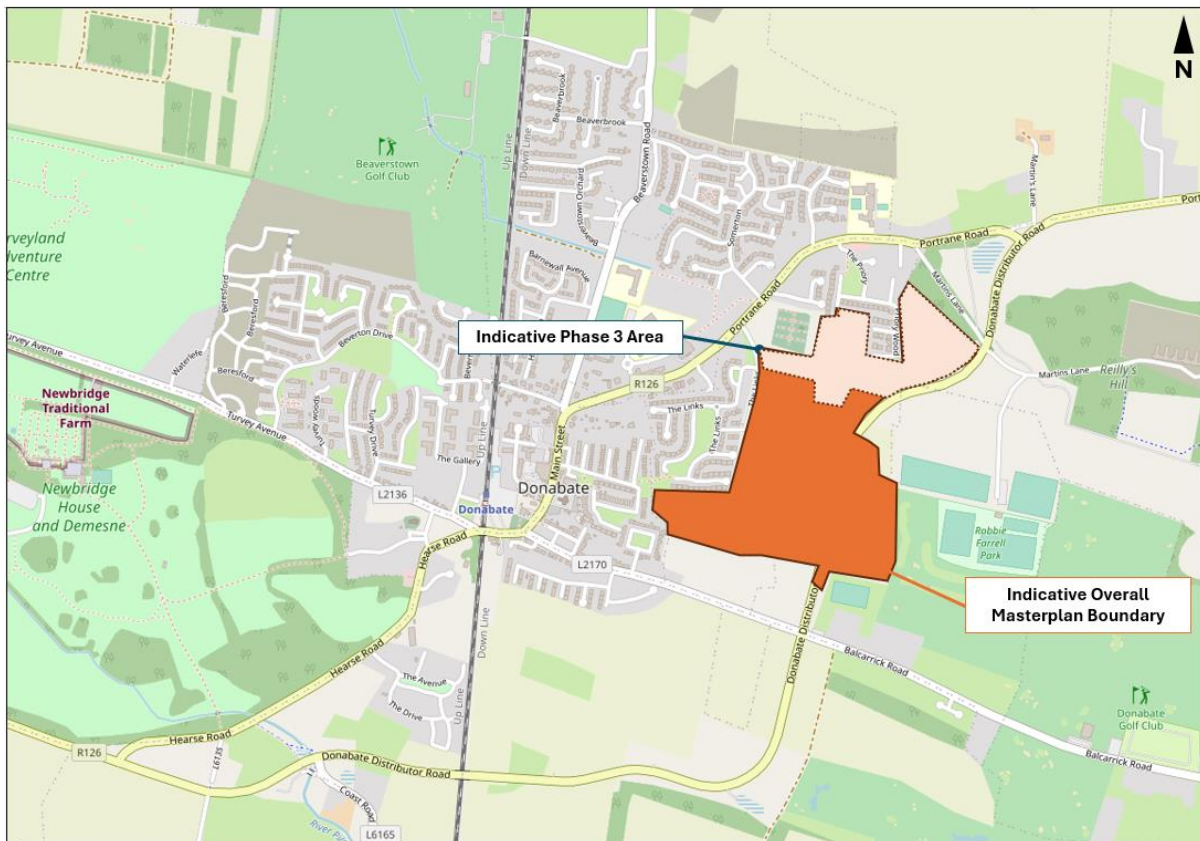


Figure 2-3: Site Location (Source: OpenStreetMaps)

The Donabate Distributor Road runs in a north-south direction to the east of the subject site from the R126 Hearse Road to the R126 Portrane Road. The R126 Hearse Road subsequently provides access to the R132 and Swords to the west and the M1 via Junction 4. The destinations of Drogheda and Dundalk can be reached by following the M1 northbound, whilst Dublin Airport and Dublin can be reached by following the M1 southbound.

To the south of the subject site, New Road runs in an east-west direction and provides access to Donabate Village and subsequently the R132. Travelling north on the R132 access is provided to Lusk and Skerries via the R127.

2.3 Local Amenities

The proposed development site is very well placed in terms of proximity to local amenities as shown in **Figure 2-4**.

There are a number of schools close to the subject site such as St. Patrick's Boys National School, St. Patrick's Girls National School, Donabate Portrane Educate Together National School and Donabate Community College. These schools are all within 1km of the subject site.

In terms of leisure facilities, the subject site is approximately 500m to the west of St. Patrick's Donabate GAA Club and St. Ita's AFC. Donabate Portrane Community Centre is approximately 200m west of the subject site and Donabate Golf Club is approximately 1.2km southeast of the subject site. Portrane Athletic Football Club is approximately 1.0km northeast of the subject site and Beaverstown Golf Club is approximately 1.3km northwest of the subject site.

Medical clinics such as Donabate Clinic, Dr Tom Hughes Dental Surgeon and Donabate Portrane Medical Centre are approximately 700m, 800m and 250m away from the subject site respectively. In addition, hospitals such as St. James's Hospital (approx. 23km), Clontarf Hospital (approx. 20km) and the National Maternity Hospital (approx. 22km) are also highly accessible via the M1 and the M50.

Convenience stores that are accessible from the subject site include Supervalu Donabate (approx. 750m), Back Again (approx. 200m) and Maxol (approx. 1.1km).

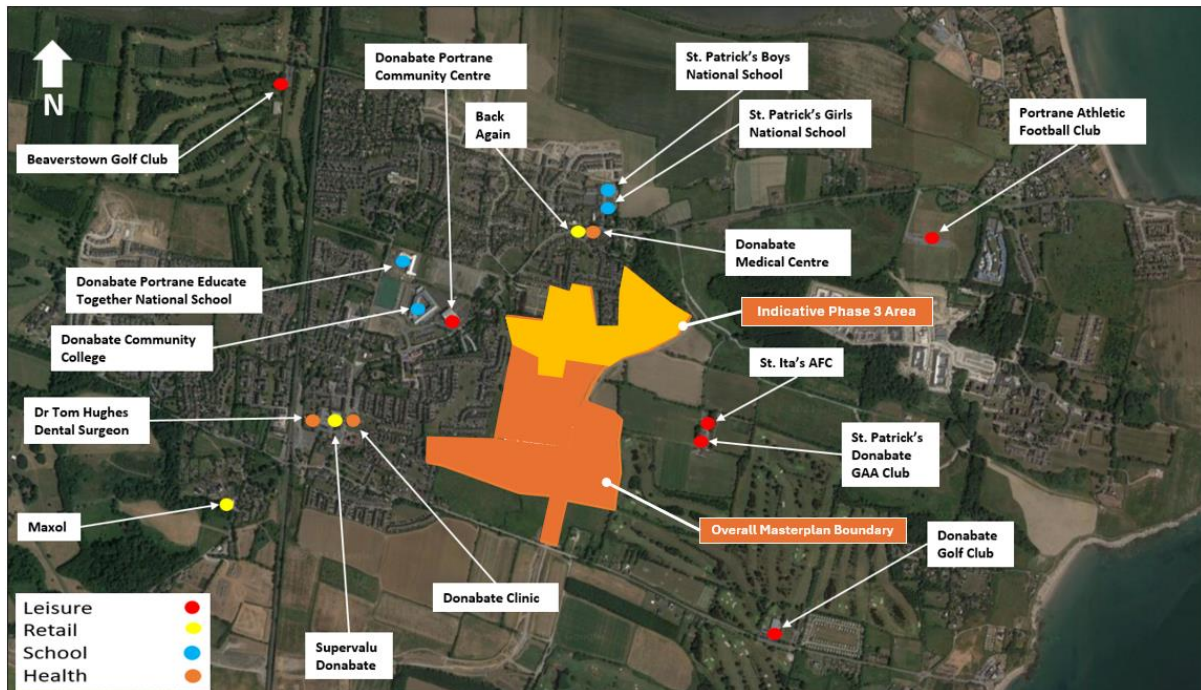


Figure 2-4: Local Amenities Surrounding the Subject Site

2.4 Existing Site Accessibility

Walking Catchment Area

Figure 2-5 below presents the significant pedestrian catchment extents accessible from the subject Ballymastone site for different walking times ranging from 10 minutes to 20 minutes. To note, this is based on the existing pedestrian network.

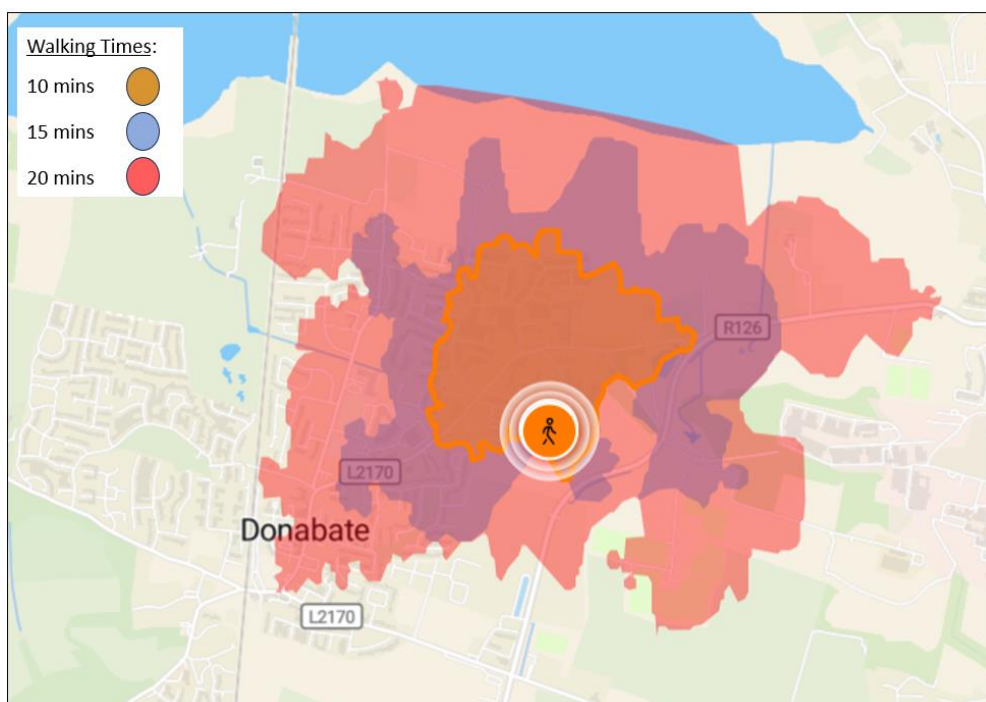


Figure 2-5: Pedestrian Accessibility (Walking Time) (Source: TravelTime platform)

Within a 20 minute walking timeframe, Donabate Train Station, Donabate Town Centre, SuperValu, Donabate Clinic, Stack's Pharmacy, Coastal Dental Care medical clinic and Donabate Golf Club can all be accessed. Within a longer 30-minute timeframe, Portrane is accessible and in 45-minutes, Balcarrick Golf Club and Corballis Links Golf Club are accessible.

Cycling Catchment Area

Figure 2-6 below illustrates cycle travel time catchment areas from the Ballymastone subject site. In 15 minutes of cycling, a significant number of nearby employment and educational facilities in the wider locality of Donabate town are accessible. In 30 minutes of cycling, Swords and Lusk are accessible. Whilst in 45 minutes of cycling, areas such as Rush and Malahide are all accessible from the subject site.

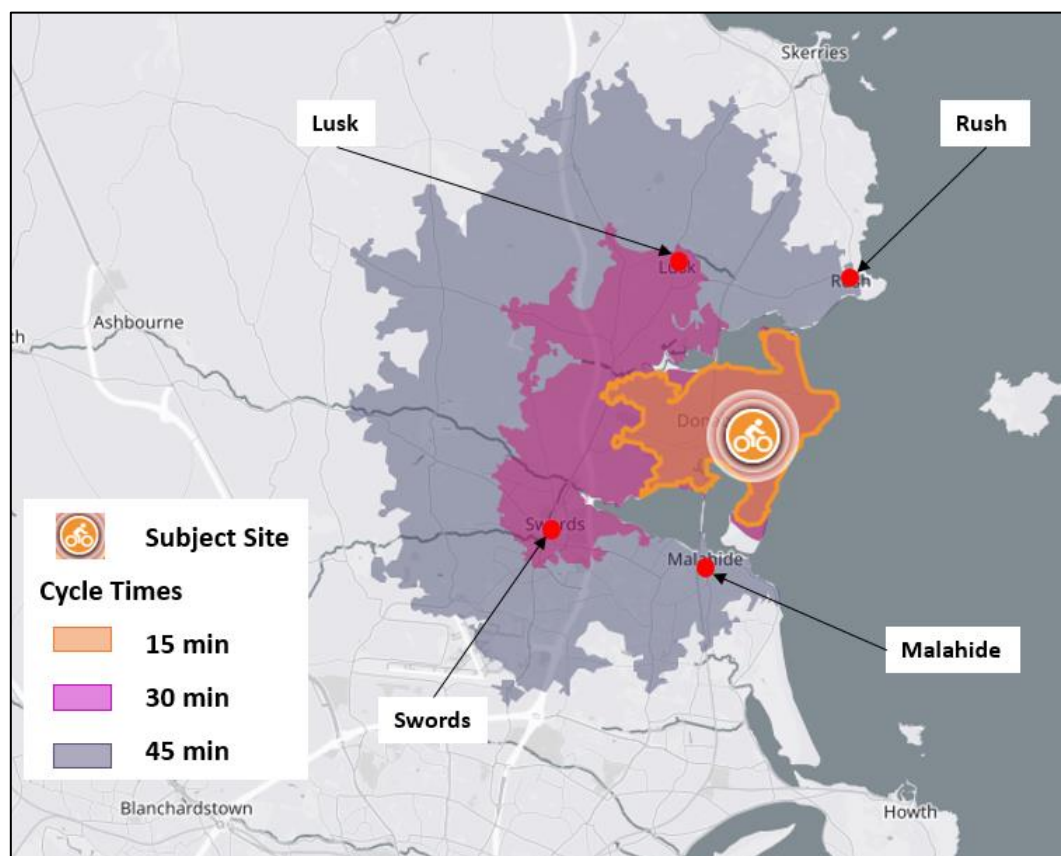


*Figure 2-6: Cycle Accessibility (Cycle Time from Site)
(Source: TravelTime platform)*

Public Transport and Walking Catchment Area

Regarding public transport accessibility, the subject site currently benefits from a number of bus and rail services in close proximity to the site as outlined in the previous section. In order to obtain realistic journey times, the following maps give travel times during AM peak time hours, in this case 08:00 on a Tuesday. **Figure 2-7** below illustrates an analysis of public transport catchment

areas accessible from the site within a **30-minute** transit and walking timeframe. Areas such as Swords, Malahide, Skerries and Portmarnock are accessible from the subject site within 30 minutes.

The catchment for the combined transit and walking times within a **45-minute** timeframe from the site is illustrated in **Figure 2-7** below. Areas such as Lusk, Clongriffin, Donaghmede, Balbriggan and Connolly Station are easily accessible.

The catchment for the combined transit and walking times within a **60-minute** timeframe from the site are also illustrated in **Figure 2-7** and indicate that within 60 minutes, the public transport catchment is extended to include Drogheda, Dublin City and Howth.

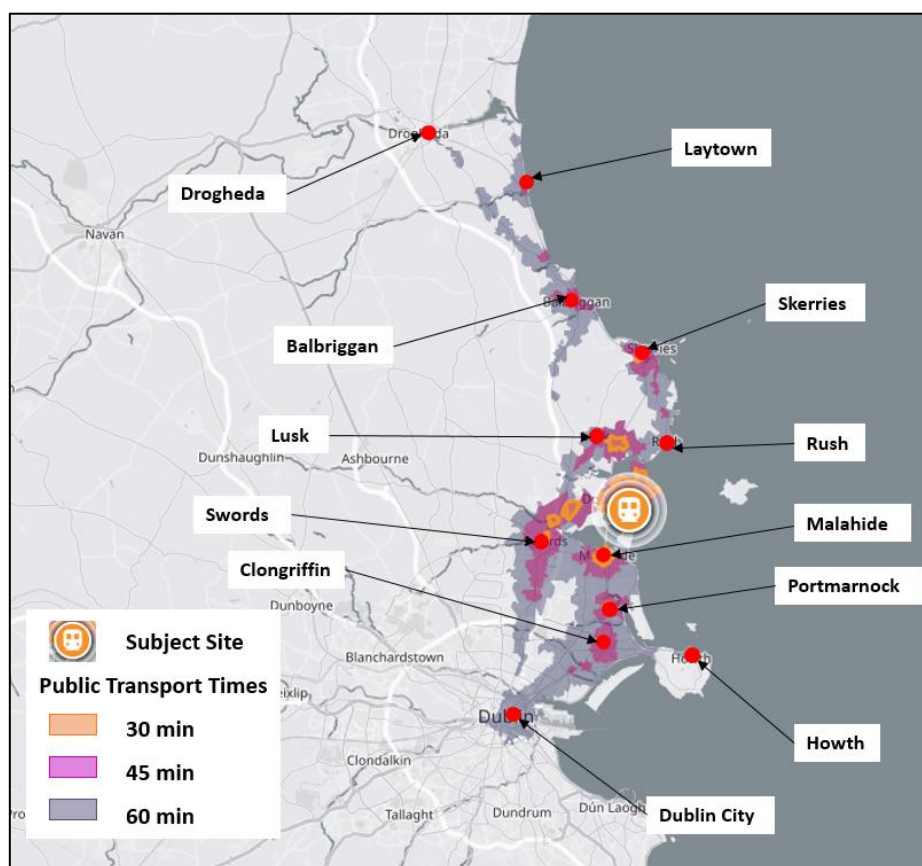


Figure 2-7: Public Transport Accessibility – Travel Time Catchments (Public Transit and Walking Time from Ballymastone Site) (Source: TravelTime platform)

2.5 Existing Transportation Infrastructure

Road Network

The Donabate Distributor Road (DDR) runs in a north-south direction to the east of the site, comprising a two-way single lane carriageway with 3.75m wide traffic lanes in both directions in the vicinity of the site. The DDR is subject to a speed limit of 60kph with street lighting provided

on one side of the carriageway. The DDR continues northbound towards the DDR / Portrane Road priority junction, and southbound towards the Hearse Road / DDR signalised junction.

Travelling west onto the R126 from the DDR, motorists can access the M1 Motorway which provides convenient access to Dublin City Centre to the south and the M50 which provides strategic network access across the Greater Dublin Area. Destinations such as Drogheda and Dundalk can be accessed via the M1 to the north.

Portrane Road runs in an east-west direction to the north of the site between Portrane and Donabate Village, comprising a two-way single lane carriageway. Portrane Road is subject to a speed limit of 50kph with street lighting provided on one side of the carriageway. Portrane Road connects with Main Street and Beaverstown Road via a priority junction. The western extents of the site will access Portrane Road via The Links at a priority junction.

New Road runs in an east-west direction to the south of the site, comprising a two-way single lane carriageway. New Road is subject to a speed limit of 50kph with street lighting provided on one side of the carriageway. New Road connects with Main Street via a priority junction. Figure 2.8 below illustrates the location of the subject site within the context of the existing road network.

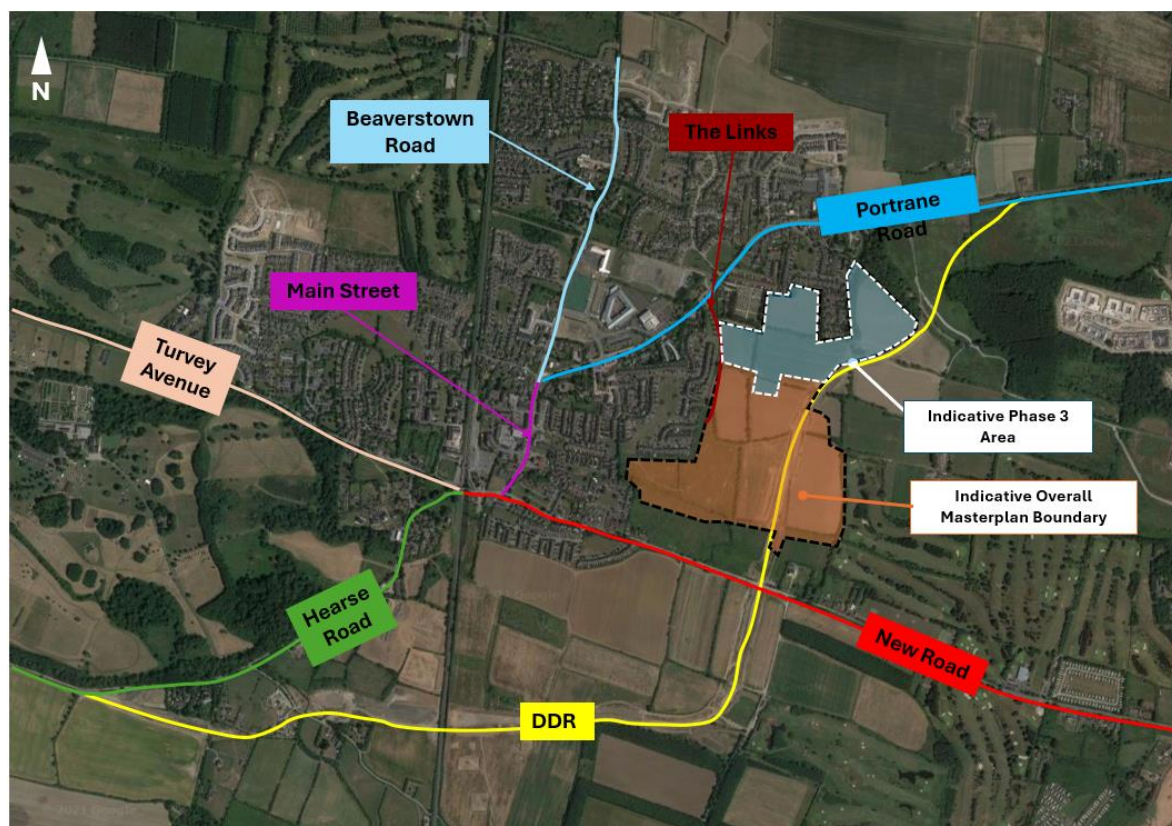


Figure 2-8: Existing Road Network (Source: www.google.ie/maps)

Existing Pedestrian and Cycling Facilities

A segregated cycle track and footpath is provided on both sides of the DDR in the vicinity of the subject site, with street lighting provided on one side of the carriageway as shown in **Figure 2-9**. Pedestrian crossings are provided at a number of locations along the DDR including at the upgraded signalised junction south of the proposed development as shown in **Figure 2-10** which also serves as the access into Phases 1 and 2 of the development.



Figure 2-9: Existing Pedestrian/Cycle Facilities on the DDR



Figure 2-10: Upgraded Signalised Junction on DDR to the South of Proposed Development

There is a continuous footpath on the northern side of the carriageway on Portrane Road as well as intermittent sections of footpath along the southern side of the carriageway. The junction at

the Portrane Road / The Links has recently been upgraded as part of the Phase 1 development as shown in **Figure 2-11**.



Figure 2-11: Upgraded Portrane Road / The Links Signalised Junction

There is a continuous footpath on the northern side of the carriageway on New Road as well as sections of the southern side of the carriageway as shown in **Figure 2-12**. There is a pedestrian crossing at the New Road / DDR junction located to the south of the subject site as shown in **Figure 2-13**.



Figure 2-12: Existing Pedestrian Facilities on New Road



Figure 2-13: Pedestrian Crossing at the DDR/New Road Junction

Donabate currently has limited dedicated cycling facilities but has potential to become a cycling town. The Greater Dublin Area Cycle Network Plan currently proposes a number of cycle route networks within Donabate. These include an inter-urban route, an urban/town network and a greenway. These cycle routes are discussed in further detail in Chapter 2.6 of this TTA.

Public Transport - Bus

Dublin Bus operate route numbers 33d and 33e and GoAhead operate route number 33b that serve the subject site locale. The nearest bus interchange opportunities to the subject site are located on Portrane Road (situated approx. 350m north of the site) and on Main Street (situated approx. 575m west of the site) as indicated in **Figure 2-14**.



Figure 2-14: Existing Bus Routes and Bus Stop walking distance from Subject Site
(Source: Google Maps)

All four bus routes serve the bus stops indicated in **Figure 2-14** above and are between ≈3-10 minutes walking distance from the site.

Go-Ahead 33b operates daily and offers frequent services (i.e. every 20-30 minutes at peak times) between Portrane and Swords. Go- Ahead 33t operates Monday to Friday only, providing two routes, Donabate Ns to Station Road (PM) and Turvey Avenue to Donabate (AM). A summary of current bus services is provided in **Table 2.1**.

Operator	Route Number	Route	Monday – Friday	Saturday	Sunday
Go Ahead Ireland	33B	Portrane - Swords	20-30	30-60	30-60
Go Ahead Ireland	33t	Donabate NS - Station Road	2 Service	-	-
Dublin Bus	33d	Portrane – St. Stephen’s Green	1 Service	-	-
Dublin Bus	33e	Abbey St. Lower to Mourne View (Skerries)	1 Service	-	-

Table 2-1: Bus Routes and Service Frequency in Donabate (In minutes)

Dublin Bus 33d provides a single one-way service and commences at 07:20 from Marsh Lane (Portrane) to Stephen’s Green. Dublin Bus 33e provides a single one-way service and commences at 07:00 from Abbey St. Lower to Skerries.

Public Transport – Heavy Rail

The subject Phase 3 development site is between 950m-2,000m from Donabate Railway Station (measured from the nearest and furthest points of the development site respectively). The well-established rail infrastructure in Donabate provides linkages to Dublin City Centre to the south, and Drogheda to the north from where further onwards connections can be made to other regional, strategic and intermediate destinations as part of Irish Rails regional and Dublin commuter services as shown in **Figure 2-15**.

Donabate Railway Station is currently well served by up to 28 no. commuter rail services providing connections to/from Dublin City Centre on a typical weekday, operating at a frequency of 15-20 minutes during peak times. **Table 2-2** below presents a summary of rail services available at Donabate Railway Station.

Route	Monday – Friday	Saturday	Sunday
Donabate to Dublin	28	19	15
Dublin to Donabate	25	21	15
Donabate to Drogheda	24	21	15
Drogheda to Donabate	28	19	15
Donabate to Dundalk	8	5	2
Dundalk to Donabate	5	5	1

Table 2-2: Rail Services to and from Donabate (No. of Services)

The availability, convenient access, frequency of services and range of destinations reachable via Donabate Railway station is likely to attract a number of rail users with an ultimate multi-modal trip origin/destination within the potential future development.

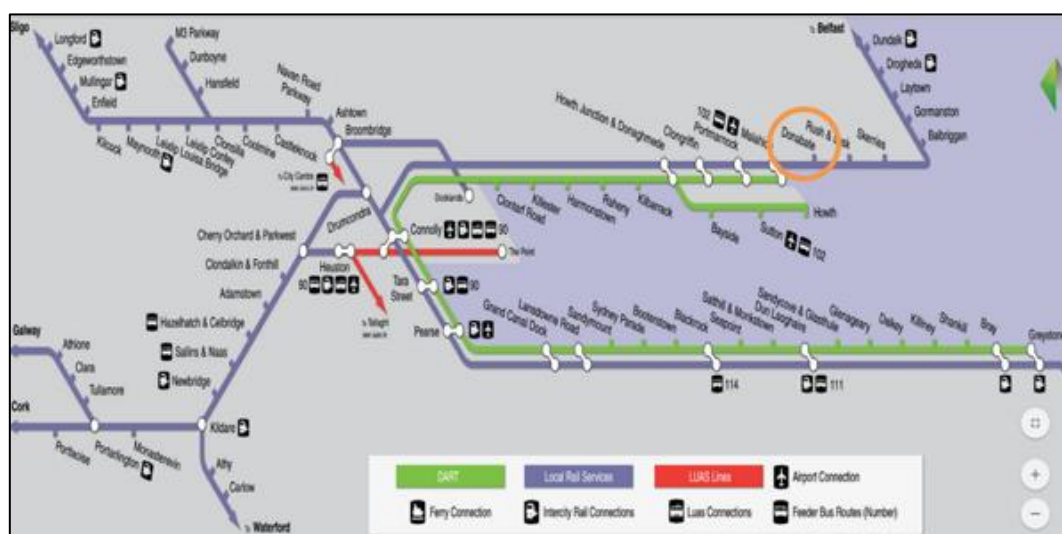


Figure 2-15: Irish Rail Network and Onwards Potential Connections from Donabate Station

2.6 Emerging Transport Developments

GDA Cycle Network Plan 2022

The subject site is located within the 'Lusk, Rush & Donabate' Sector as outlined within the Greater Dublin Area Cycle Network Plan (2022). The GDA's Cycle Network Plan proposes two categories of cycle route networks within Donabate Town. These include the introduction of secondary routes and a greenway. The Cycle Network Plan proposes the following route additions as indicated on **Figure 2.16** below:

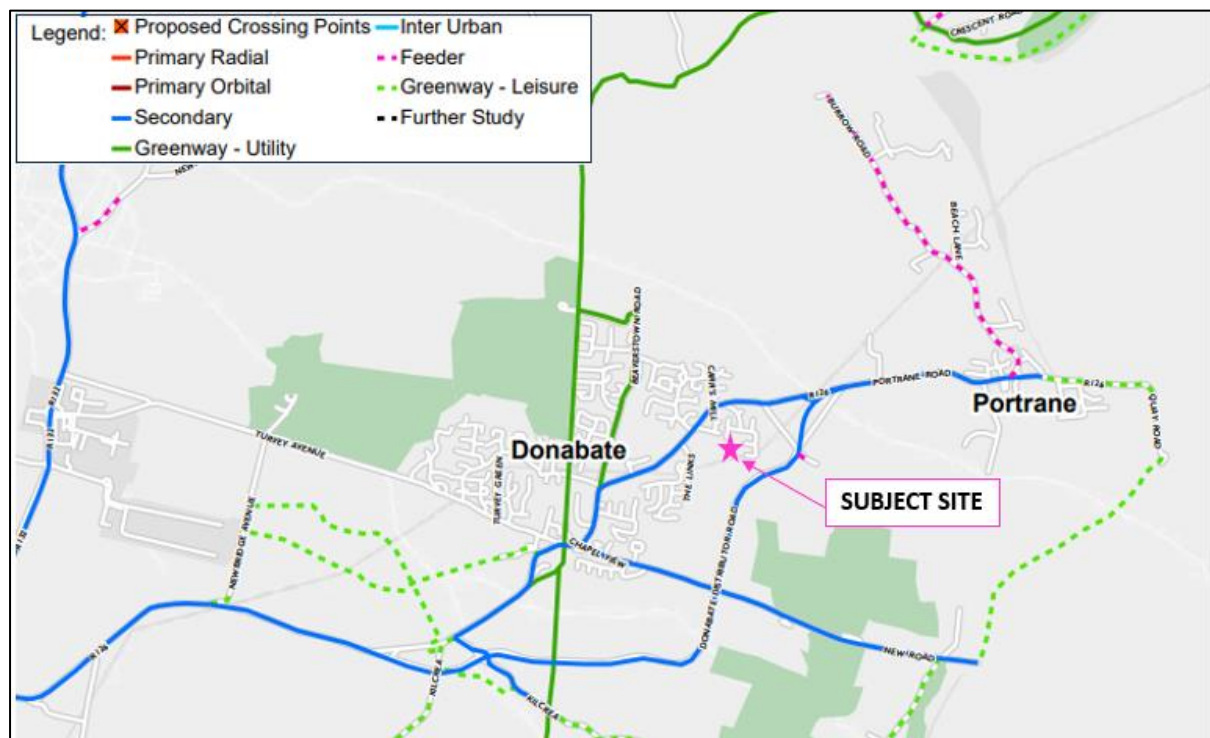


Figure 2-16: Greater Dublin Area Cycle Network Plan (2022)

BusConnects

The National Transport Authority (NTA) has developed a strategic transport plan, known as BusConnects, which will transform and overhaul the current bus network to provide a more efficient network. The proposed network will deliver the 'next generation' of bus corridors on the busiest routes and redesign routes with the aim of offering fast, predictable and reliable bus journeys.

Under the BusConnects proposals, the following routes will serve Donabate and the subject site and are shown below in **Figure 2-17**:

- Route **L83**: Portrane – Donabate – Swords – Airport
- Route **X83**: Portrane – Donabate – City Centre – UCD

Route **L83**, proposed under BusConnects, will run every 30 minutes on weekdays and weekends from Portrane to Dublin Airport via Donabate and Swords. It is proposed to operate along Portrane Rd approximately 200m north of the subject site.

Route **X83** is exclusively a peak time route which will run from Portrane to University College Dublin (UCD) via Donabate and Dublin City Centre. This route is proposed with 1 southbound AM trip from Portrane between 8:00 and 9:00, and 1 northbound PM trip from UCD starting between 17:00 and 18:00. The routes are proposed to operate along Portrane Rd approximately 200m north of the subject site.

Further analysis regarding current available capacity on bus and rail services serving the proposed development and capability of accommodating additional demand for these services arising from the proposed development are found in **Appendix D**.

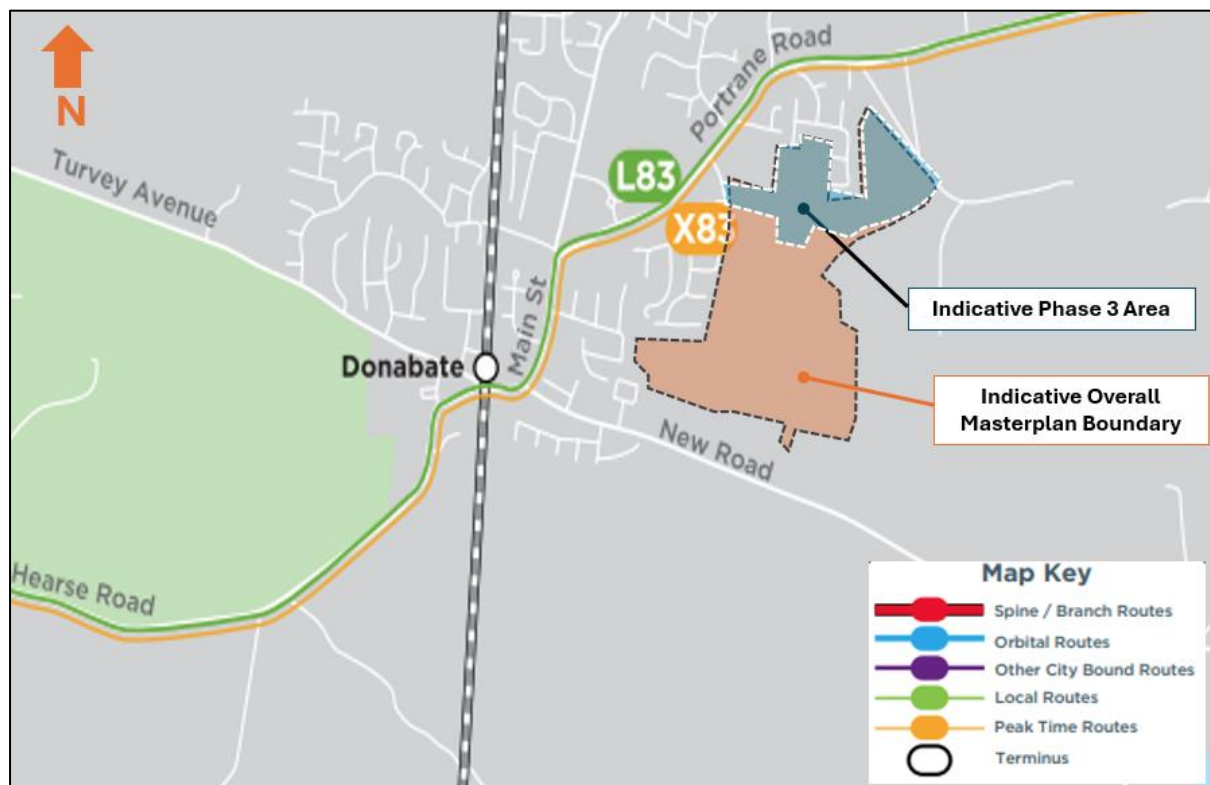


Figure 2-17: Proposed BusConnects Routes in Donabate (Source: www.busconnects.ie)

Dublin Area Rapid Transit (DART) Expansion Programme

The Dublin Area Rapid Transit (DART)+ Programme aims to modernise and improve the existing rail network, which radiates from Dublin City Centre. It will provide a sustainable, electrified, faster, reliable and user-friendly rail system, which increases train frequencies and customer carrying capacity. It intends to increase the length of the DART network from the currently 50km to 150km

railway corridor through the electrification and upgrade of existing lines transforming commuter train travel in the Greater Dublin Area (GDA). The DART+ Programme also includes the purchase of new train fleet.

The DART+ Programme will deliver frequent, modern, electrified services to/from Dublin City Centre (Connolly and Spencer Dock) to:

- Maynooth and M3 Parkway
- Hazelhatch and Celbridge
- Drogheda; and
- Greystones

This proposed infrastructure will further increase the accessibility of Donabate and its environs.

An Coimisiún Pleanála have approved the Railway Order application for DART+ Coastal North, which will extend the electrified DART network from Malahide to Drogheda. The application was lodged in July 2024. The procurement process will now commence for a design and build contractors. Once the contractors has been appointed, a period of detailed design will commence followed by construction. Subject to funding being allocated it is anticipated that construction will be in the region of three years.

The Greater Dublin Area Transport Strategy 2022-2042 states that the strategic transport infrastructure is proposed to be delivered within the Short-Term 2022-2030 time period. **Figure 2-18** below shows the DART+ Programme route map.

Further analysis regarding current available capacity on bus and rail services serving the proposed development and capability of accommodating additional demand for these services arising from the proposed development are found in **Appendix D**.



Figure 2-18: DART+ Programme (Source: www.dartplus.ie)

3 Policy Framework

3.1 Introduction

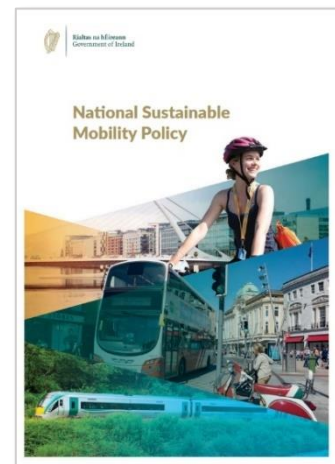
In the context of transportation, the subject site is influenced by the following key documents. A common theme through each of these key documents is the emphasis placed upon the importance of travel demand management, with many identifying the need to implement mobility management plans with the objective of promoting sustainable travel patterns.

- *National Sustainable Mobility Policy (2022)*
- *Greater Dublin Area Transport Strategy (2022-2042)*
- *Sustainable Urban Housing: Design Standards for New Apartments (2025)*
- *Sustainable Residential Development and Compact Settlement Guidelines for Planning Authorities (2024)*
- *Fingal Development Plan 2023-2029*
- *Donabate Local Area Plan 2016*

3.2 National Sustainable Mobility Policy

The National Sustainable Mobility Policy was published in April 2022 by the Department of Transport and replaces Smarter Travel 2009. The overall aim of the Policy is to “set out a strategic framework for 2030 for active travel and public transport to support Ireland’s overall requirement to achieve a 51% reduction in carbon emissions by the end of this decade”.

The Policy is a direct response to the fact that continued growth in demand for road transport is not sustainable due to the resulting adverse impacts of increasing congestion levels, localised air pollution, contribution to global warming and the additional negative impacts to health through promoting increasingly sedentary lifestyles. The following 3 key Policy areas and 10 goals form the basis of the National Sustainable Mobility Policy:



Safe and Green Mobility

1. Improve mobility safety
2. Decarbonise public transport
3. Expand availability of sustainable mobility in metropolitan areas
4. Expand availability of sustainable mobility in regional and rural areas

5. Encourage people to choose sustainable mobility over the private car

People Focused Mobility

6. Take a whole journey approach to mobility, promoting inclusive access for all
7. Design infrastructure according to Universal Design Principles and the Hierarchy of Road Users model
8. Promote sustainable mobility through research and citizen

Better Integrated Mobility

9. Better integrate land use and transport planning at all levels
10. Promote smart and integrated mobility through innovative technologies and development of appropriate regulation

The policy is accompanied by an Action Plan with a total 91 actions organised by goal to be completed by 2025. Each action has been assigned to a specific government department or body with the hope of creating accountability for their implementation. The success of the policy will be measured using an annual National Household Travel Survey administered by the National Transport Authority.

3.3 Greater Dublin Area Transport Strategy 2022-2042

The Greater Dublin Area Transport Strategy 2022-2042 has arisen from a review of the original 2016 strategy. The updated document *"sets out the framework for investment in transport infrastructure and services over the next two years"*.

The overall aim of the Transport Strategy is *"to provide a sustainable, accessible and effective transport system for the Greater Dublin Area which meets the region's climate change requirements, serves the needs of urban and rural communities, and supports economic growth"*.

Four primary objectives have been identified as part of the Greater Dublin Area Transport Strategy 2022-2042. These are:

- **An Enhanced Natural and Built Environment:** To create a better environment and meet our environmental obligations by transitioning to a clean, low emission transport system, reducing car dependency, and increasing walking, cycling and public transport use.

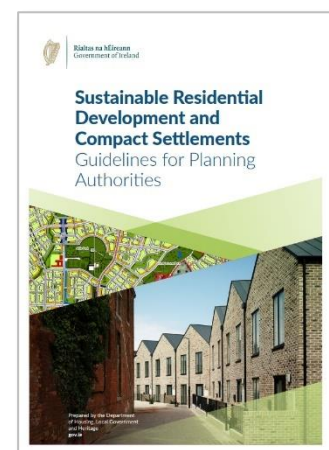


- **Connected Communities and a Better Quality of Life:** To enhance the health and quality of life of our society by improving connectivity between people and places, delivering safe and integrated transport options, and increasing opportunities for walking and cycling.
- **A Strong Sustainable Economy:** To support economic activity and growth by improving the opportunity for people to travel for work or business where and when They need to and facilitating the efficient movement of goods.
- **An Inclusive Transport System:** To deliver a high quality, equitable and accessible transport system, which caters for the needs of all members of society.

3.4 Sustainable Residential Development and Compact Settlements - Guidelines for Planning Authorities - (January 2024)

The guidelines set out policy and guidance in relation to the planning and development of urban and rural settlements, with a focus on sustainable residential development and the creation of compact settlements.

These Guidelines replace the Sustainable Residential Development in Urban Areas Guidelines for Planning Authorities issued as Ministerial guidelines under Section 28 of the Act in 2009, which in turn replaced the Residential Density Guidelines issued in 1999. They build on and update previous guidance to take account of current Government policy and economic, social and environmental considerations. There is a renewed focus in the Guidelines on the renewal of existing settlements and on the interaction between residential density, housing standards and quality urban design and placemaking to support sustainable and compact growth.



The Guidelines include a Specific Planning Policy Requirement (SPPR) in relation to car parking. The quantum of car parking or the requirement for any such provision for new developments will be based on the accessibility characteristics of the site. There are four accessibility levels set out in the Guidelines that will determine the level of parking provided, these are as follows:

High-Capacity Public Transport Node or Interchange: Lands within 1km walking distance of an existing or planned high capacity urban public transport node or interchange, including DART or high frequency Commuter Rail; or locations within 500 metres walking distance of an existing or planned BusConnects 'Core Bus Corridor' stop.

Accessible Locations: Lands within 500 metres (i.e. up to 5–6-minute walk) of existing or planned high frequency (i.e. 10-minute peak hour frequency) urban bus services.

Intermediate Locations: Lands within 500-1,000 metres (i.e. 10–12-minute walk) of existing or planned high frequency (i.e. 10-minute peak hour frequency) urban bus services and lands within 500 metres (i.e. 6-minute walk) of a reasonably frequent (minimum 15-minute peak hour frequency) urban bus service.

Peripheral Locations: comprise of lands that do not meet the proximity or accessibility criteria detailed above. This includes all lands in Small and Medium Sized Towns and in Rural Towns and Villages.

The subject Ballymastone Phase 3 development fall under two classifications, based on the areas of the site located within and outside the 1km walking distance of the Train Station as shown in **Figure 3-1**.

The western edge of Phase 3 lies within the 1km walking distance of the Donabate Train Station, which provide commuter rail opportunities and form part of the future Dart+ Programme. This portion of the site can be classed as a *'Metropolitan Town – Centre and Urban Neighbourhood'*. Accordingly, under SPPR 3 – Car Parking (i) the Guidelines state that for urban neighbourhoods *"car parking should be minimised, substantially reduced or wholly eliminated. The maximum rate of car parking provision for residential development at these locations, where such provision is justified to the satisfaction of the planning authority, shall be 1 no. space per dwelling"*.

Outside of this 1km walking distance, the remainder of the site is classed as a *'Peripheral'*, given there are no high, or reasonably frequent bus services within 500-1,000m of the site. Accordingly, under SPPR 3 – Car Parking (iii) in intermediate and peripheral locations *"the maximum rate of car parking provision for residential development, where such provision is justified to the satisfaction of the planning authority, shall be 2 no. spaces per dwelling"*.

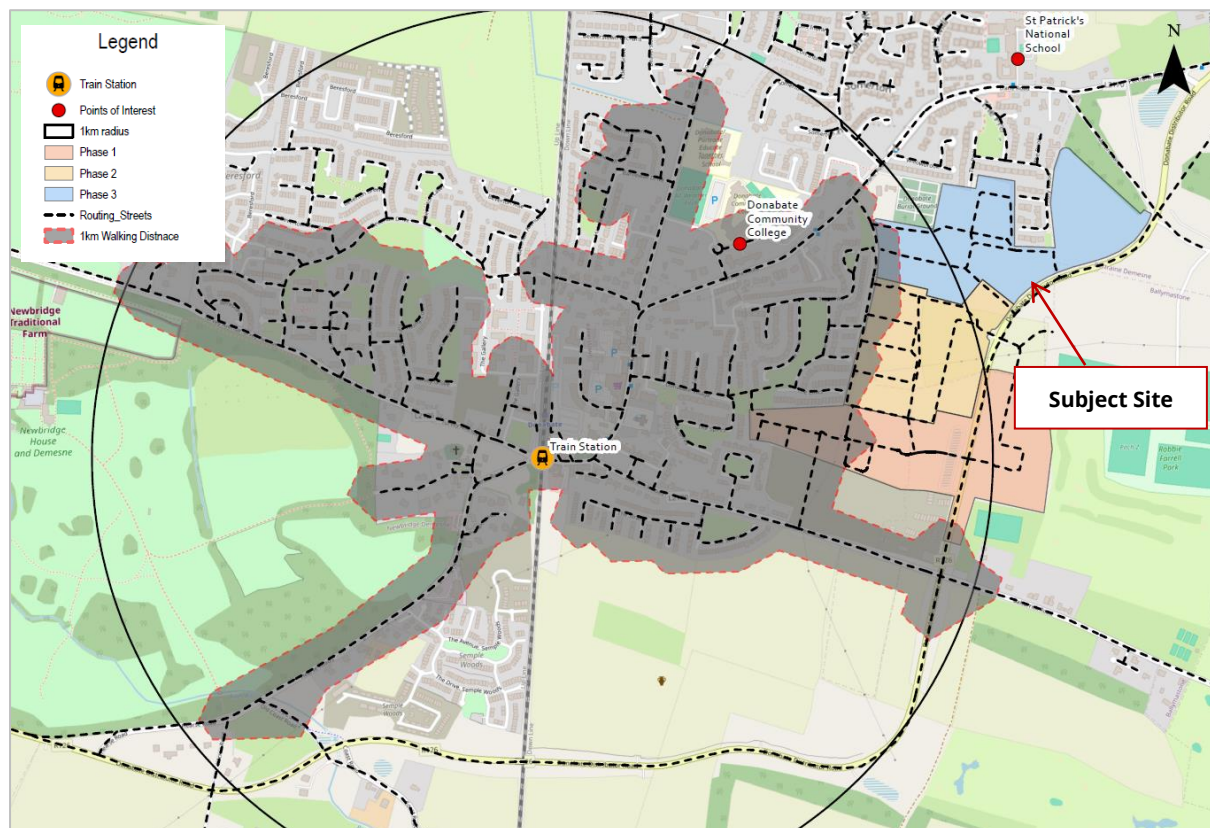


Figure 3-1: 1km Walking Distance from Train Station

The Guidelines note that the maximum car parking standards:

- Do not include bays assigned for use by a car club, designated short stay on-street Electric Vehicle (EV) charging stations or accessible parking spaces.
- The maximum car parking standards do include provision for visitor parking.

The Guidelines also set out requirements under SPPR 4 for Cycle Parking and Storage. In terms of quantity it state that *"residential units that do not have ground level open space or have smaller terraces, a general minimum standard of 1 cycle storage space per bedroom should be applied. Visitor cycle parking should also be provided"* and that *"it will be important to make provision for a mix of bicycle parking types including larger / heavier cargo and electric bikes and for individual lockers"*.

3.5 Fingal Development Plan 2023-2029

The Fingal Development Plan 2023-2029 sets out a new approach to meet the needs and aspirations of citizens of Fingal, Dublin County as a whole and the country, not only for the 6-year life of the plan, but for the long term. This approach is based on the principles of sustainability and resilience on the social, economic and environmental fronts. The Development Plan's Strategic Policy in response to the challenges facing the economy of the city and its role as the national and regional economic engine are as follows:

- Promote a vibrant, attractive environment for living and working, facilitating efficient movement by sustainable modes of transport throughout the County;
- Improve the use of key resources such as land, water, energy, waste and transportation infrastructure;
- Create a competitive business environment supporting economic development, job creation, tourism and prosperity for all;
- Improving the general attractiveness of a city for people and investors as a key part of maintaining competitiveness and creating a vibrant place that attracts and retains creative people within the city; and
- Encourage inclusive and active sustainable communities based around a strong network of community facilities.

In the context of the subject proposals, the following are the relevant transport and development policies and objectives set out in the plan:-

“Objective CM01: Work with the NTA, TII and other transport agencies in facilitating the integrated set of transport objectives for the County as set out in this Plan, in line with National and Regional policy including the NTA’s GDA Transport Strategy and any subsequent plan to encourage modal shift towards more sustainable modes of transport and patterns of commuting to reduce reliance on the private car.”

“Objective CM02: Work with the NTA to develop mode share targets for the County to achieve and monitor a transition to more sustainable modes including walking, cycling and public transport, during the lifetime of this Plan. This includes providing targeted infrastructure in the most appropriate locations and prioritising development at the most accessible locations in order to achieve the appropriate levels of integration and sustainable transport provision.”

Integration of Land-Use and Transport

“Objective CM03: Support and facilitate high-density, mixed-use development and trip intensive uses along public transport corridors and to ensure the integration of high-quality permeability links and public realm in conjunction with the delivery of public transport services through plan frameworks to generate and reinforce sustainable patterns of compact growth and development in the County.”

A Sustainable and Integrated Transport Network

“Objective CM06: Maintain and improve the pedestrian and cyclist environment and promote the development of a network of pedestrian/cycle routes which link residential areas with schools,

employment, recreational destinations and public transport stops to create a pedestrian/cyclist environment that is safe, accessible to all in accordance with best accessibility practice."

"Objective CM08: *Prepare an Active Travel Strategy to encourage active travel and modal shift to sustainable transport modes."*

"Objective CM011: *Support the provision of walking and cycling infrastructure, including bike parking, bike repair and support services, to increase footfall and economic activity in town and village centres while reducing emissions and improving quality of life."*

"Objective CM016: *Encourage and facilitate the delivery of high-quality public realm in tandem with new developments throughout the County through the Development Management process and the retrospective provision in existing developments, including the provision of a pedestrianised core in town centres where appropriate. "*

"Objective CM019: *Support and facilitate improvements to the pedestrian and cycle network and public realm that prioritise the removal of barriers to active movement, to improve connectivity and permeability and optimise accessibility for all users."*

Public Transport

"Objective CM023: *Support the delivery of key sustainable transport projects including MetroLink, BusConnects, DART+ and LUAS expansion programme so as to provide an integrated public transport network with efficient interchange between transport modes to serve needs of the County and the mid-east region in collaboration with the NTA, TII and Irish Rail and other relevant stakeholders."*

"Objective CM024: *Support NTA and other stakeholders in implementing the NTA Strategy including MetroLink, BusConnects, DART +, LUAS and the GDA Cycle Network."*

Roads Network

"Objective CM035: *Work with the TII and other relevant national transport agencies, to protect and enhance the capacity of national routes, to minimise the impacts on the management of the broader network and to support the economic competitiveness of the County."*

3.6 Donabate Local Area Plan March 2016 (As Extended)

The *Donabate Local Area Plan (LAP) 2016* sets out to provide for the structured development of the identified new residential areas of Donabate such that they integrate into the established village and support the continued growth of a vibrant and attractive town for existing and future residents.

The LAP's strategic aims in support of the sustainable vision for the area are as follows:

- Provide a framework for a growing population with phased development of new housing delivered in tandem with supporting community and physical infrastructure;
- Support Donabate Village as the primary location for commercial, retail, community and cultural development serving the Town and Peninsula generally;
- Provide infrastructural investment to address traffic, pedestrian safety and movement challenges including the early delivery by FCC of a new road & bridge providing an alternative access to Donabate and Portrane; and
- Improving Protect and enhance the existing natural amenities of Donabate and improve access to established local amenity areas through the creation of a network of designated green routes.

In relation to Ballymastone the LAP states, *"The Ballymastone lands will evolve to connect coherently to existing and proposed road infrastructure in the vicinity. Connections will be required between residential areas and the proposed Educational and Recreational Campus including a new Campus Link Road from the west. Street networks that are orthogonal in nature are the most effective in terms of permeability and legibility. Important strategic pedestrian and cycleway connections will be necessary from Ballymastone eastwards to St. Ita's Demesne and westwards to the Spires estate to maximise permeability to the Village."*

In the context of the subject proposals, the following are the relevant transport and development policies and objectives set out in the plan:-

"Objective 3.1: Provide a network of pedestrian and cycle access routes to Donabate Train Station from the new development lands."

"Objective 3.4: Implement local and strategic traffic relief measures to improve traffic freeflow and safety – Donabate Village and on road networks serving schools through phased construction of a Distributor Road and a series of internal link roads through the LAP lands."

"Objective 3.5: Seek the implementation of DMURS to facilitate good quality permeability and places/public realm."

"Objective 3.7: Provide for good quality bicycle parking facilities at key locations within the LAP lands such as the Corballis Local Centre and the Ballymastone Campus, in accordance with Fingal Development Plan standards."

“Objective 3.8: Prioritise the movement of pedestrians and cyclists in proximity to public transport nodes and improve the walking and cycling environment in tandem with the emerging public transport and vehicular network.”

“Objective 3.9: Continue to ensure walking and cycling facilities and networks are designed so that they are safe and also meet the needs of people with disabilities.”

3.7 Development Control

Car Parking Standards

The appropriate level of car parking provision for the proposed development will be provided with reference to Chapter 14 (Table 14.19) of the Fingal Development Plan (2023-2029) as published by Fingal County Council which outlines the maximum car parking standards for the county. Reference was also made to Chapter 5 of the ‘Sustainable Residential Development and Compact Settlements - Guidelines for Planning Authorities’ (January 2024).

The Fingal Development Plan car parking standards are split into Zone 1 which allows fewer car parking spaces and Zone 2 which allows a higher number of car parking spaces. Zone 1 relates to developments within 800m of a QBC or high quality bus service, or 1.6km of an existing or planned Luas/DART/Metro/Rail station or within an area covered by a Section 49 Scheme. Zone 2 applies to all other areas.

With regards to the Fingal Development Plan car parking standards, the subject development is between 850m-1,500m from Donabate Railway Station. Accordingly, Zone 1 requirements will be applied to the car parking requirements as it falls within the 1.6km radius of the train station.

Within the ‘Sustainable Residential Development and Compact Settlements’, it is considered that the majority of the subject development site is located within a ‘Peripheral’ area, with the western most area falling within a “Metropolitan Town – Centre and Urban Neighbourhood” area as per the definitions of the Compact Settlement Guidelines.

The ‘Sustainable Residential Development and Compact Settlements’ also state that in regard to the quantum of long stay spaces in Peripheral areas:

“the maximum rate of car parking provision for residential development, where such provision is justified to the satisfaction of the planning authority, shall be 2 no. spaces per dwelling.”

While in locations within 1km walking distance of DART services, the maximum rate of car parking provision ***“shall be 1 no. space per dwelling”***. There are 8 no. units which fall within the 1km walking

distance to the Donabate Train Station. The remainder of the units are outside of this and classed as 'Peripheral'. The 'Sustainable Residential Development and Compact Settlements' also notes the following:

"The maximum car parking standards do not include bays assigned for use by a car club, designated short stay on-street Electric Vehicle (EV) charging stations or accessible parking spaces. The maximum car parking standards do include provision for visitor parking."

Reference has been made to Table 14.19 of the Fingal Development Plan (2023-2029) which outlines the maximum car parking provision sought for new developments within the area governed by FCC and the 'Compact Settlement Guidelines' (as set out in section 3.5) as follows:

Land Use		FCC Development Plan Max. Requirements	Compact Settlement Requirements	
		Long Stay	Peripheral Locations	Urban Neighbourhoods
Apartments / Duplexes	1-2 Beds	0.5/Unit	Maximum rate 2 no. space per dwelling (including visitor parking)	Maximum rate 1 no. space per dwelling
	3 Beds	1/Unit		
Houses	1-2 Beds	0.5/Unit		
	3-3+ Beds	1/Unit		
Creche		0.5 / Classroom	-	
Community Hall		1 / 100m ²	-	

Table 3-1: Development Management Car Parking Standards

Land Use		Quantity of Units	FCC Development Plan	Compact Settlement Maximum Requirements	
Houses	2 Beds	81	41	780	8
	3 Beds	134	134		
	4 Beds	12	12		
Apartments	1 Bed	47	24		
	2 Beds	68	34		
	3 Beds	9	9		
Duplexes	1 Bed	2	1		
	2 Beds	24	12		
	3 Beds	21	21		
Creche	Classrooms	4	2	-	-
Community Hall	sqm	100.4	1	-	-
Total			291	788	

Table 3-2: Development Management Car Parking Requirements (Maximum)

As shown in **Table 3-2** above, the maximum number of car parking spaces permitted under the FCC Development Plan Standards is 291 no. spaces, comprising 288 no. residential spaces and 3 no. creche / community hall spaces. By comparison, the Compact Settlement Guidelines permit a maximum of 788 no. residential spaces.

The proposed Phase 3 Ballymastone development provides a total of 288 no. car parking spaces for the residential units. This level of provision is in accordance with the FCC Development Plan requirements for Zone 1 developments and the car parking management standards as detailed within Table 14.18 of the FCC Development Plan. The car parking provision is discussed further in Section 4 of this report.

Disabled Car Parking

In regard to the provision of dedicated accessible (disabled) car parking spaces, Section 14.17.8 of the Fingal Development Plan (2023–2029) states that *"A minimum of 5% of car parking spaces should be set aside for disabled car parking in non-residential developments"*.

Whilst the Development Plan does not specify a requirement for residential developments, in accordance with national standards and best practice it is proposed that 5% of the proposed off curtilage car park spaces will be dedicated accessible spaces.

Electrical Vehicle Parking

The Fingal Development Plan states that *"All multi-unit residential developments shall incorporate EV charging points at 20% of the proposed parking spaces and appropriate infrastructure (e.g. ducting) to allow for future fit out of a charging point at all parking spaces."*

All of the houses will be equipped with the necessary infrastructure to enable the occupier to fit their own charge point if / when needed. With regards to the off-curtilage parking associated with the apartment / duplex units a review has been undertaken in relation to the optimal public charging infrastructure to be implemented for the development. The electric vehicle car parking strategy is detailed in Chapter 4.4 of this report.

Cycle Parking Standards

Reference has been made to Table 14.17 of the Fingal Development Plan (2023–2029) which outlines the minimum cycle parking provision sought for new developments within the area governed by FCC. Reference has also been made to the 'Compact Settlement Guidelines'. The

bicycle parking standards applicable to the subject development are detailed in **Table 3-3** and corresponding cycle parking requirements in **Table 3-4**.

Land Use		FCC Development Plan		Compact Settlement Guidelines	
		Long Stay	Short Stay	Long Stay	Short Stay
Apts / Duplexes	1-2 Beds	1 space plus 1 space / bedroom	0.5 space per unit	Min. 1 cycle storage space per bedroom	Visitor Cycle parking should be provided
	3-3+ Beds	2 spaces plus 1 space / bedroom	0.5 space per unit		
Houses	1-2 Beds	1 space plus 1 space / bedroom	-		
	3+ Beds	2 spaces plus 1 space / bedroom	-		
Creche		1 per classroom	5 per classroom	-	-
Community Hall		1 per 5 staff	1 per 50m2		

Table 3-3: Development Management Bicycle Parking Standards

Land Use		Quantity of Units	FCC Development Plan		Compact Settlement Guidelines	
			Long Stay	Short Stay	Long Stay	Short Stay
Houses (End of Terrace)	2 Beds	0	-	-	0	"visitor parking should be provided"
	3 Beds	86	430		258	
	4 Beds	12	72		48	
Houses (mid terrace)	2 Beds	81	243	-	162	
	3 Beds	48	240		144	
	4 Beds	0	-		-	
Apartments	1 Bed	47	94	24	47	
	2 Beds	68	204	34	136	
	3 Beds	9	45	5	27	
Duplexes	1 Bed	2	4	1	2	
	2 Beds	24	72	12	48	
	3 Beds	21	105	11	63	
Creche	Classrooms	4	4	20	-	-
Community Hall	sqm	100.4	-	2	-	-
Sub Total			1,513	108	935	-
Total			1,621		935 + visitors	

Table 3-4: Development Management Bicycle Parking Requirements (Minimums)

As shown in Table 3-4 above, the minimum number of cycle parking spaces required under the FCC Development Plan Standards is 1,621 no. spaces. By comparison, the Compact Settlement Guidelines require a minimum of 935 no. spaces plus visitor spaces.

The proposed Phase 3 Ballymastone development provides a total of 1,619 no. cycle park spaces, comprising 1,513 no. 'long term' (residents) bicycle parking spaces and 106 no. 'short term' (visitor) cycle spaces. The level of provision is in accordance with the FCC Development Plan requirements and above the Compact Settlement Guidelines and therefore is deemed acceptable.

Motorcycle Parking Standards

In reference to the Fingal Development Plan (2023-2029), motorcycle parking *"should be provided on the basis of one motorcycle parking bay per 10 car park spaces provided for non-residential developments and apartment developments"*.

Accordingly, as 60 no. off curtilage car parking spaces are proposed for the apartment and duplex units, 6 no. motorcycle spaces (10%) are provided. These will be distributed across the site in close proximity to their associated apartment / duplex blocks.

4 Characteristics of Proposals

4.1 Overview

The proposal is for a residential development of 398 no. units located on lands to the west of the Donabate Distributor Road (DDR) between New Road and Portrane Road in Donabate, Co. Dublin. The development comprises 81 no. 2-bed houses, 134 no. 3-bed houses, 12 no. 4-bed houses, 2 no. 1-bed duplexes, 24 no. 2-bed duplexes, 21 no. 3-bed duplexes, 47 no. 1-bed apartment units, 68 no. 2-bed apartment units and 9 no. 3-bed apartment units.

The development gains vehicular access to the R126 Donabate Road to the east and the L2170 Portrane Road to the west via The Links Road. There are pedestrian and cyclist links to all access points ensuring high levels of connectivity and permeability.

The development comprises a total of 316 no. car parking spaces, comprising 288 no. residential spaces, 10 no. creche / community hall spaces, 3 no. accessible spaces, 6 no. EV spaces (including 1 accessible EV space) and 12 no. spaces (including 10 no. standard and 2 no. accessible spaces) ducted for future EV provision. A total of 1,619 no. cycle parking spaces are also proposed as part of the development (comprising 1,513 no. resident cycle spaces and 106 no. visitor cycle spaces).

Unit Type		No.
Houses	2-bed	81
	3-bed	134
	4-bed	12
Sub Total		227
Duplexes	1-bed	2
	2-bed	24
	3-bed	21
Sub Total		47
Apartments	1-bed	47
	2-bed	68
	3-bed	9
Sub Total		124
Total		398

Table 4-1: Proposed Residential Phase 3

Further details of the development proposals including the site layout, internal connections and linkages with neighbouring lands are illustrated in the architects' scheme drawings as submitted with this planning application.



Figure 4-1: Proposed Phase 3 Development Layout (Source: 23010-MDO-ZZZZ-XX-DR-A01-050000)

4.2 Site Access Arrangements

Vehicular Access Arrangements

The proposal represents Phase 3 of the overall Ballymastone development, and includes the provision of 2 no. vehicle access points, as shown in **Figure 4-2**, providing an integrated street network between the subject development, the overall Masterplan proposal and existing surrounding streets/developments, these accesses include:

- **The Links:** The Development will tie into The Links Street which forms part of the western boundary of the site. In turn this will provide a connection to the Portrane Road/The Links junction located to the east of the site. The Portrane Road/The Links junction is a signalised junction; and
- **Donabate Distributor Road:** One vehicular access, DDR Site Access 2, is proposed from the DDR in the form of a priority-controlled junction.
- **Ballisk Residential Development:** A vehicular access will be provided via Phase 1 and Phase 2 (Ref: LRD0008/S3 and LRD0039/S3) of the masterplan lands to the Ballisk residential development (Ref F17A/0373) located south of the subject development, which in turn provides a connection through to New Road.

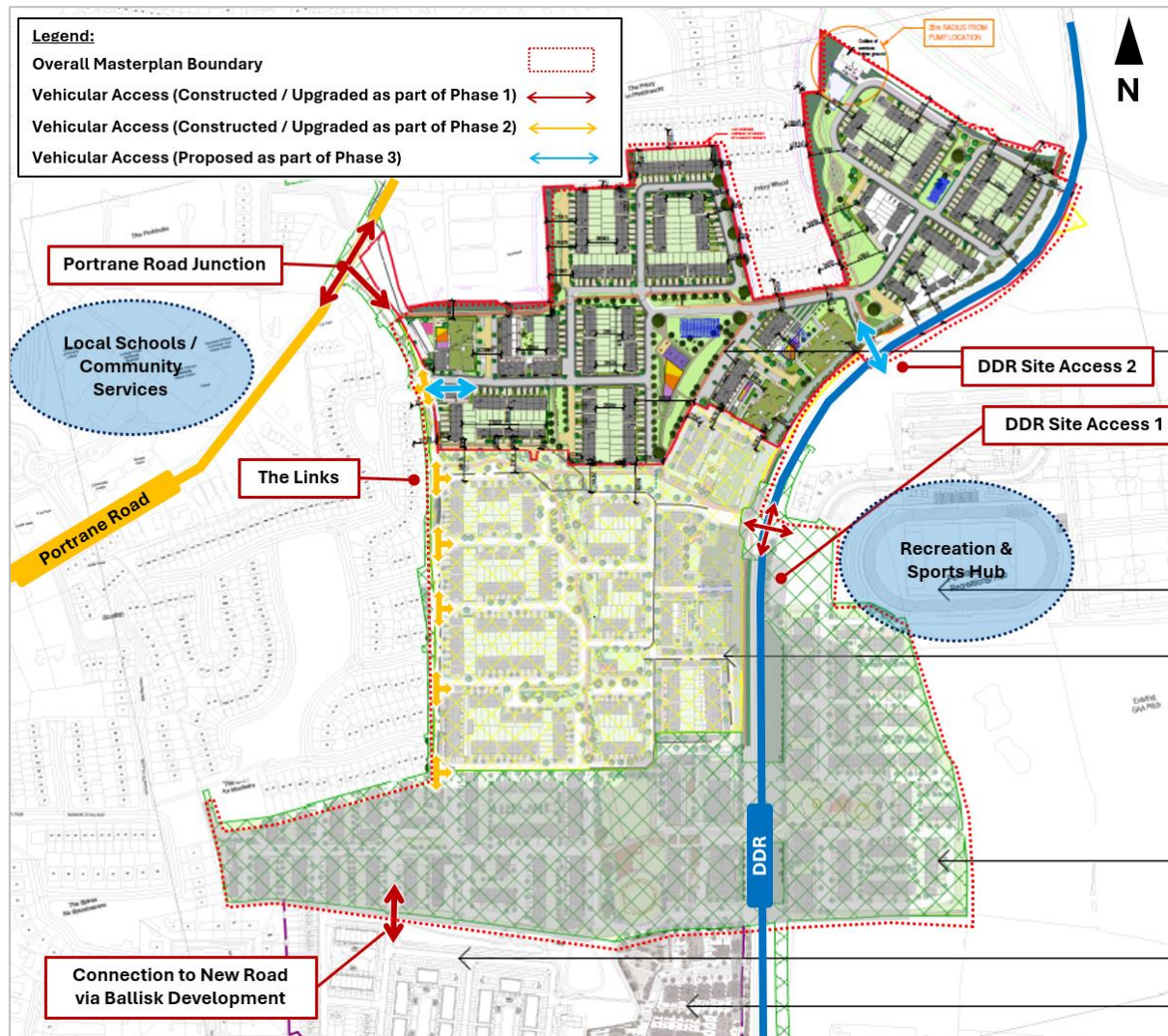


Figure 4-2: Proposed Development Site Access Location and Internal Streets

The vehicle connection to The Links will be a priority junction. It is proposed that this junction will include a raised continuous footpath to aid both traffic calming and enable pedestrian/cyclist to assert a level of priority when crossing junctions.

Pedestrian / Cyclist Access Arrangements

The vehicular accesses described in the previous section will also be accessible to both pedestrians and cyclists. There are several additional pedestrian/cyclist access points located along the DDR offering excellent levels of connectivity to/from the pedestrian and cycle facilities along the DDR. In addition there is also a new Toucan crossing proposed on the DDR located towards the northeast corner of the subject site.

As shown in **Figure 4-3**, connectivity to Donabate Village will be provided via Phase 1. This will provide links to key services in the village as well as Donabate Train Station. Within the site itself

is a connected network of paths for pedestrians and cyclists. Internal junctions and crossing points have been designed in accordance with DMURS and the Cycle Design Manual (CDM) to ensure safe and direct facilities for pedestrians and cyclists in order encourage uptake in active modes.

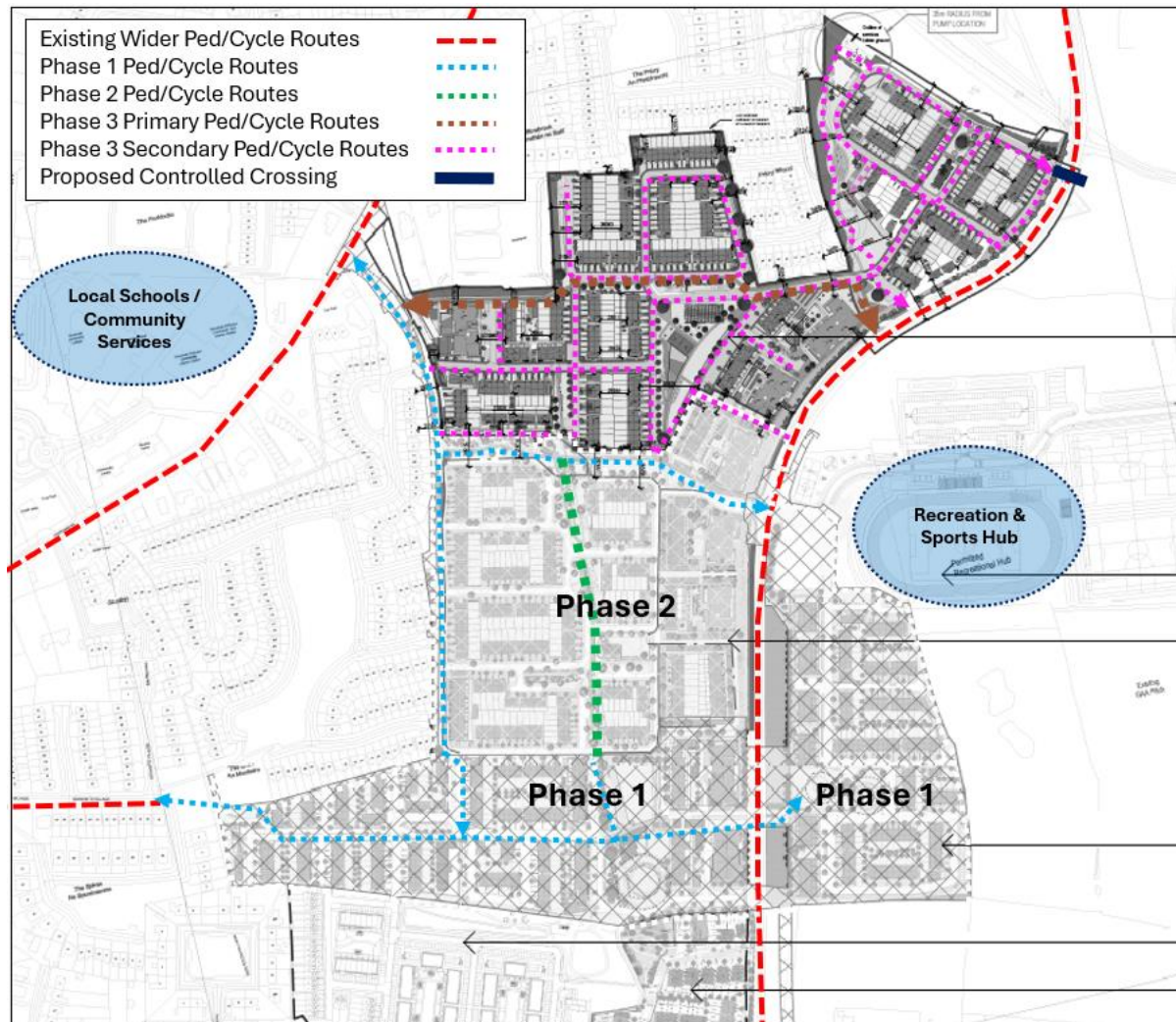


Figure 4-3: Proposed Pedestrian / Cyclist Connections

4.3 Bicycle Parking Strategy

4.3.1 Bicycle Parking Provision

Reference has been made to Table 14.17 of the Fingal Development Plan which outlines the minimum cycle parking standards. Chapter 14 'Development Management Standards' states that the provision of *"high quality, safe, secure and convenient bicycle parking is essential to support sustainable transport including cycling, walking and public transport"*. Reference has also been made to SPPR 4 of the 'Compact Settlement Guidelines'.

The relevant bicycle parking development management standards have previously been discussed in Section 3.7. A comparison of the proposed cycle parking provision against the FCC Development

Plan, the Compact Settlement Guideline requirements and the proposed provision are shown in

Table 4-2.

Land Use		No. Units	FCC Development Plan Standards		Compact Settlement Guidelines		Proposed Cycle Parking Provision	
			Long Stay	Short Stay	Long Stay	Short Stay	Long Stay	Short Stay
Houses (End of terrace)	2 Beds	-	-	-	-	"visitor parking should be provided"	0	-
	3 Beds	86	430		258		430	
	4 Beds	12	72		48		72	
Houses (mid terrace)	2 Beds	81	243	-	162		243	-
	3 Beds	48	240		144		240	
	4 Beds	-	-		-		0	
Apartments	1 Bed	47	94	24	47		94	24
	2 Beds	68	204	34	136		204	34
	3 Beds	9	45	5	27		45	5
Duplexes	1 Bed	2	4	1	2		4	1
	2 Beds	24	72	12	48		72	12
	3 Beds	21	105	11	63		105	11
Creche (Classrooms)		4	4	20	-	-	4	20
Community Hall (Sq.m)		100.4	0	2	-	-		
Sub Total			1,513	108	935	-	1,513	106
Total			1,621		935 + visitors		1,619	

Table 4-2: Proposed Development Cycle Parking (Required and Proposed)

A total of 1,619 no. cycle parking spaces are proposed as part of the Phase 3 subject Ballymastone Development proposals, comprising 1,513 no. 'long term' (residents/staff) bicycle parking spaces and 106 no. 'short term' (visitor) cycle spaces. The level of provision is in accordance with the FCC Development Plan requirements and above the Compact Settlement Guidelines and therefore is deemed acceptable.

4.3.2 Bicycle Parking – Apartment / Duplex Units

With regards to the cycle parking for the apartment and duplex units, it is noted that the Fingal Development Plan (2023-2029) states that:

"Each apartment unit shall be provided with an individual storage compartment for long-stay bicycle provision that is capable of accommodating bicycles, buggies and additional ancillary equipment such as scooters, helmets and bicycle maintenance equipment."

Consequently, it is proposed that the resident (long stay) cycle parking spaces for the apartment and duplex units will be provided for in a mix of external and internal stores, the locations of which are shown in **Figure 4-4**.



*Figure 4-4: Locations of External and Internal Cycle Stores
[Source: MDO Architectural Design Statement]*

Further detail for each of the cycle stores, including layout and quantum of cycle space in each store together with a full schedule, is provided in the MDO Architectural Design Statement and drawing pack. The cycle stores will provide double tier bike racks, with accessible / cargo bike parking provided at a rate of 5% of the overall quantum of cycle parking.

The external cycle stores will comprise lightweight, visually appealing structures, designed so as to provide a covered, secure parking facility whilst not dominating the streetscape or open space areas. With regards to the requirement for providing storage facilities for cyclists' equipment, the cycle stores will incorporate small lockers, at the rate of 1 no. locker per bike parking space, similar to that shown in **Figure 4-5** below. Further detail on the design of the cycle stores and locker facilities can be found in MDO Architectural Design Statement.



Figure 4-5: Example of Proposed External Cycle Store & Locker Provision

4.3.3 Bicycle Parking – Mid-Terrace Units

For the residents of the mid-terraced units, a combined bin / bike storage unit has been incorporated into the front curtilage space of the mid-terrace units, examples of which are illustrated in **Figure 4-6** below. This is in recognition of the difficulty often encountered by occupants or visitors of mid-terraced units with regards to accessing the rear garden areas to store bicycles, which requires bringing the bicycle through the house. There are 81 no. 2-bed mid-terraced houses and 48 no. 3-bed mid-terraced houses which have been provided with a combined bin / bike storage unit in their front curtilage space. The remaining end of terrace houses have access to their rear garden areas to store bicycles and do not require a combined bin / bike storage unit in their front curtilage space.

The bike stores provided within the front curtilage of units will be capable of accommodating 3 no. bicycles for the 2-bed units and 5 no. bicycles for the 3-bed units in accordance with the development plan standards. This will facilitate secure, covered, convenient storage of bicycles for the residents of the mid-terrace units. Further detail on the proposed layout of the in-curtilage bin / bike stores can be found on the MDO / CSR drawings.



Figure 4-6: In-curtilage Bin / Bike Stores for Mid-Terrace Units

Motorcycle Parking Standards

In reference to the Fingal Development Plan (2023-2029), motorcycle parking *"should be provided on the basis of one motorcycle parking bay per 10 car park spaces provided for non-residential developments and apartment developments"*.

Accordingly, as 60 no. off curtilage car parking spaces are proposed for the apartment and duplex units, 6 no. motorcycle spaces (10%) are provided. These will be distributed across the site in close proximity to their associated apartment / duplex blocks.

4.4 Car Parking Strategy

4.4.1 Car Parking Provision

In terms of the car parking provision proposed for the Ballymastone Phase 3 development, it is proposed that the 1-bed apartment/duplex units will not be provided with car parking spaces. The 2 bed apartment units will be provided with parking at a ratio of 0.3 spaces per unit. The 2 bed duplex units will be provided parking at a ratio of 0.5 spaces per unit. The 3 bed apartment/duplex units will be provided with parking at a ratio of 1 space per unit.

It is proposed that all 2-bed houses will be provided with 1 no. car park space per unit. It is noted that the FCC Development Plan standards are a maximum of 0.5 spaces for 2-bed units. However,

the redistribution of the parking provision associated with the 1-bed apt/duplex units and 2 bed apartment units to the 2-bed houses means that the overall quantum of car parking is still provided in accordance with the FCC Development Plan requirements. The proposed car parking provision is shown in **Table 4-3** below:

Land Use		No. Units	Proposed Car Parking Ratios	Proposed Car Parking Provision	
				Long Stay	Drop Off
Houses	2 Beds	81	1 space / unit	81	-
	3 Beds	134	1 space / unit	134	-
	4 Beds	12	1 space / unit	12	-
Apartments	1 Bed	47	0 space / unit	0	-
	2 Beds	68	0.3 space / unit	19	-
	3 Beds	9	1.0 space / unit	9	-
Duplexes	1 Bed	2	0 space / unit	0	-
	2 Beds	24	0.5 space / unit	12	-
	3 Beds	21	1 space / unit	21	-
Creche	Classroom	4	1 / classroom	5 (Staff)	5 (Drop-off)
Community Hall	sqm	100.4	1 / 100m ²		
Total				293	5

Table 4-3: Proposed Development Car Parking Provision

As shown in Table 4-3 above, it is proposed to provide 5 no. staff car park spaces and 5 no. drop off-spaces for the creche facility. It is proposed that these spaces will be dual use, so that they will also serve the proposed Community Hall. Events and activities taking place within the Community Hall are expected to generally occur outside of the creche opening hours. Providing separate car park spaces serving these two uses could result in an overprovision of car parking, therefore it is proposed that these 10 no spaces are dual purpose serving both the creche and community hall which are both located adjacent each other.

In addition to the above, there is also public EV spaces and accessible car park spaces provided. As noted in the Compact Settlement Guidelines, maximum car parking standards do not include bays assigned for EV charging stations or accessible spaces. Therefore, the total car parking provision on the site is summarised as follows:

Car Park Type	Provision
Houses	227
Apartments	28
Duplexes	33
Residential Sub-Total	288
Creche / Community Hall	10
Accessible Spaces (22 kW EV Charger)	1
Accessible Spaces (Ducted for Future EV Provision)	2
Public EV 22kw Spaces (Live Day 1)	5
Public EV 22kw Spaces (Ducted for Future Provision)	10
Sub-total	28
Total	316

Table 4-4: Breakdown of Car Parking Provision by Type

Therefore, the proposed Phase 3 Ballymastone development provides a total of 316 no. car parking spaces, comprising 288 no. residential spaces, 10 no. creche/community hall spaces, 3 no. accessible spaces, 6 no. EV spaces (including one accessible space) and 12 no. spaces (10 no. standard and 2 no. accessible spaces) ducted for future EV provision.

This level of provision is in accordance with the FCC Development Plan requirements for Zone 1 developments and the car parking management standards as detailed within Table 14.19 of the FCC Development Plan and also previously set out in **Table 3.2**. The proposed provision of 288 no. residential spaces is also in accordance with the Compact Settlement Requirements, which permits a maximum of 788 no. spaces.

Accessible Car Parking Spaces

In regard to the provision of dedicated accessible (disabled) car parking spaces, Section 14.17.8 of the Fingal Development Plan (2023–2029) states that “A minimum of 5% of car parking spaces should be set aside for disabled car parking in non-residential developments”. Whilst the Development Plan does not specify a requirement for residential developments, in accordance with national standards and best practice the subject proposals include for 3 no. mobility impaired car parking spaces, which equates to 5% of the off-curtilage / communal parking provided for the apartment & duplex units.

It is also noted that the Development Plan requires “*EV parking spaces for accessible spaces should also be included in the development where these exist*”. One of the accessible spaces will be equipped with an EV charger, while the other two accessible spaces will be ducted to enable future provision of EV chargers as / when required.

EV Car Parking Provision

The development plan standards require that 20% of the proposed parking spaces incorporate EV charging points and provision of appropriate infrastructure (ducting) to allow fit out a charging point at all parking spaces.

All of the houses will be equipped with the necessary infrastructure to enable the occupier to fit their own charge point if / when needed. As noted previously, a total of 60 no. off curtilage spaces will be provided for the apartment / duplex units plus 3 no. accessible spaces and 10 no. spaces provided for the creche/community hall equating to a total of 73 no. spaces. These will be located off-curtilage and in communal areas. Based on the development plan requirements, 20% of these spaces are required to be equipped with EV chargers equating to 15 no. spaces.

With regards to the off-curtilage parking associated with the apartment / duplex units a review has been undertaken in relation to the optimal public charging infrastructure to be implemented for the development. The following are the typical charging times for 7.4kW and 22kW chargers:

- **7.4kW Charger:** Usually takes 6 - 8 hours to fully charge one EV
- **22kW Charger:** Typically takes 2 - 4 hours to fully charge one EV

This will obviously be dependent on the specific charging speeds and car battery sizes. However, the implementation of 22kW chargers rather than 7.4kW chargers as part of the proposed development has been examined and is considered to offer significant benefits in terms of energy savings, faster charging times, lower carbon emissions and a simplified infrastructure strategy.

When considering the introduction of the 22kW chargers, the following formed the basis of the calculations:

Average EV User:

- Average travel/ day = 44.8km (equivalent to 9.4 kWh of battery at 0.21kW/km).
- Average charging session = 30-40kW (equivalent to between 3 and 4 days average travel).
- Assume charge required by average EV owner every 3 or 4 days (i.e. twice a week).

22kW Charger (Operating at average 11kW rate):

- Average charging session = 2-4 hours.
- Charger could conservatively be used 3 times per weekday and 4 times per day at weekends (23 times per week).
- Each 22kW charger suitable for 11.5 EV owners (round down to 11).

Consequently, given the higher capacity of the 22kW chargers and the aim to rationalise the public charging infrastructure to be implemented across the development, it is proposed that 6 no. 22kW chargers are provided. This equates to ≈ 66 EV users being accommodated.

A total of 73 no. off-curtilage spaces are proposed. Based on the development plan requirements, 20% of these spaces are required to be equipped with EV chargers equating to 15 no. spaces. With the 6 no. 22kW chargers implemented serving ≈ 66 EV users, this well exceeds the 20% coverage required under the development plan.

An additional 12 no. spaces (10 no. standard and 2 no. accessible) will be ducted to allow for the future provision of additional EV chargers as demand increases across the development.

4.5 Mobility Points

Three mobility points are proposed as part of Phase 2 of the Masterplan lands (permitted under LRD0039/S3) located directly south of the subject site, which will be readily accessible and available for use by the future occupants of Phase 3.

Rather than one large mobility hub, it is proposed to provide 3 smaller mobility points within Phase 2 of the development. These mobility points include public e-bike cycle parking spaces, car club spaces and further public EV Charge Points.

5 Trip Generation and Distribution

5.1 Introduction

The following paragraphs present the process by which the potential level of vehicle trips, associated with the proposed development have been generated and subsequently assigned across the local road network. In order to assess the operation of the proposed road network and its future capacity, an Excel based traffic model of the existing network and proposed links were created.

5.2 Traffic Surveys

In order to establish the existing local road networks traffic characteristics and subsequently enable the identification of the potential impact of the proposed residential development, traffic surveys were conducted on Wednesday 05 March 2025. These surveys were conducted within the accepted time range for undertaking traffic surveys in accordance with best practice and are therefore valid for use as part of the traffic and transport assessment.

The aforementioned traffic surveys (weekday classified junction turning counts) were conducted by Tracsis Ltd. between 07:00 AM and 19:00 PM. Junction Turning Counts (JTC's) were carried out at nine junctions within close proximity to the proposed development site. The following nine locations were included within the survey (**Figure 5-1**).

- JTC 1 – Donabate Distributor Road / New Road (4 Arm Junction)
- JTC 2 – Main Street / Chapel View (3 Arm Junction)
- JTC 3 – Main Street / Ascaill Thuirbhe / Hearse Road (3 Arm Junction)
- JTC 4 – The Square / Hearse Road (3 Arm Junction)
- JTC 5 – Ascaill Thuirbhe / The Square (3 Arm Junction)
- JTC 6 – Main Street / Portrane Road / Beaverstown Road (3 Arm Junction)
- JTC 7 – Portrane Road / The Links (3 Arm Junction)
- JTC 8 – Portrane Road / Donabate Distributor Road (3 Arm Junction)
- JTC 9 – Hearse Road / Donabate Distributor Road (3 Arm Junction)



Figure 5-1: Junctions Surveyed in March 2025

An analysis of the survey results established that the local weekday AM and PM peak hours occurred between 08:00- 09:00 and 17:00-18:00 respectively. In order to analyse and assess the predicted traffic generation from the proposed development upon the local road network, an area wide Excel based generation and distribution traffic model incorporating the aforementioned local junctions has been created. The recorded peak hour traffic flows at the aforementioned study junctions are presented in **Appendix A**.

5.3 Trip Generation

A trip generation exercise has been undertaken to establish the potential level of vehicle trips that the development could generate. To estimate the potential level of vehicle trips that could be generated by the proposed residential development, reference has been made to the TRICS database. TRICS provides trip rate information for a variety of different land uses and development types, which can be applied to the subject development.

TRICS data is primarily UK based, although a number of Irish sites have recently been included and the number of Irish sites continues to expand. Nevertheless, we consider that TRICS will provide a reasonable indication of traffic generation from the proposed development.

Notwithstanding the above, internal research undertaken by TRICS has shown that there is no direct evidence of trip rate variation by country or region. The use of English, Scottish or Welsh

data can be equally applicable to Ireland if users take into account important site selection filtering factors such as levels of population, location type, local public transport provision, and development size and car ownership level, amongst others.

Data supplied for inclusion in TRICS undergoes a procedure of validation testing, and there is no evidence from this procedure suggesting that data from Ireland bears any significant fundamental differences to that from the other countries included. Consequently, we consider that TRICS will provide a reasonable indication of traffic generation from the proposed development.

Table 5-1 presents the predicted trip generation and the estimated traffic flows arriving and departing the proposed development during the morning and evening peak hour periods. The TRICS output data is provided within **Appendix B**. It is noted that the Community Hall activity is generally likely to occur outside of peak hour periods and therefore not generate additional trips during the AM and PM peak periods. Furthermore, at the Community Hall is proposed to serve the proposed development the number of vehicular trips generated is anticipated to be negligible given it will be within short walking / cycling distance of residents.

Period	AM Peak Hour			PM Peak Hour		
Land Use	In	Out	2-way	In	Out	2-way
Houses	0.160	0.320	0.480	0.283	0.113	0.396
Apartments/ Duplexes	0.070	0.180	0.250	0.172	0.114	0.286
Creche	3.106	2.280	5.386	2.223	3.163	5.386

Table 5-1: Proposed Development Trip Rates

Based on the above trip rates, the potential peak hour vehicle traffic flows have been calculated for the proposed development. **Table 5-2** summarise the predicted AM and PM peak hour traffic flows generated by the proposed development for the horizon years, that have been calculated based on the proposed development schedule.

Land Use	Units/sqm	AM (08:00 - 09:00)			PM (17:00 – 18:00)		
		Arrival	Departure	Total	Arrival	Departure	Total
Houses	227	36	73	109	64	26	90
Apartments/ Duplexes	171	12	31	43	29	19	49
Creche	911	28	21	49	20	29	49
Total		77	124	201	114	74	188

Table 5-2: Proposed Development Vehicle Trips (Fully Constructed)

It is estimated that the proposed development could potentially generate a total of 201 and 188 two-way vehicle movements during the road network's AM and PM peak respectively on a typical weekday as detailed in **Table 5-2**.

5.4 Committed Development

With the objective of providing a robust appraisal, DBFL have established the extent of existing 7 no. third party developments, as located within the area of influence of the subject Development site. DBFL have subsequently included the following third-party scheme proposals as committed developments within this assessment.

- **Committed Development 1:** The residential development (Ref: LRD0017/S3), referred to as the Corballis East Development, located to the south of the proposed Ballymastone development was granted permission for 1,020 no. new residential dwellings.
- **Committed Development 2:** The residential development (Ref: LADP/0001/24 (S179A)), referred to as the Ballisk Development, located immediately south of the proposed Ballymastone development was granted permission for 175 no. dwellings and a creche.
- **Committed Development 3:** The residential development (Ref: F20A/0510), located immediately south of the proposed Ballymastone development was granted permission for 28 no. apartments/duplexes and 36 no. houses.
- **Committed Development 4:** The Ballymastone Recreational Hub located to the east of the proposed Ballymastone development will provide a multifunctional campus for an extensive range of sporting and recreational activities as a shared public facility.
- **Committed Development 5:** (Reg. Ref: LRD0008/S3 ABP-315288-22) Phase 1 of the wider development of the Ballymastone Lands, located south of the proposed Phase 3 site, involves construction of 432 no. new residential dwellings consists of 93 no. Apartment units, 126 no. Duplexes and 213 no. Houses.
- **Committed Development 6:** The residential development (Ref: F22A/0527), located to the south of the proposed Ballymastone development was granted permission for 28 no. duplexes and 68 no. houses.
- **Committed Development 7:** (Reg. Ref: LRD0039/S3 ABP-320885-24) Phase 2 of the wider development of the Ballymastone Lands, located immediately south of the proposed Phase 3 site, involves construction of 364 residential dwellings (including a mix of apartments, duplexes and houses).
- **Committed Development 8:** (Reg. Ref: F24A/0169) the residential development comprising 98 no. units. Located to the south of the proposed Ballymastone development.

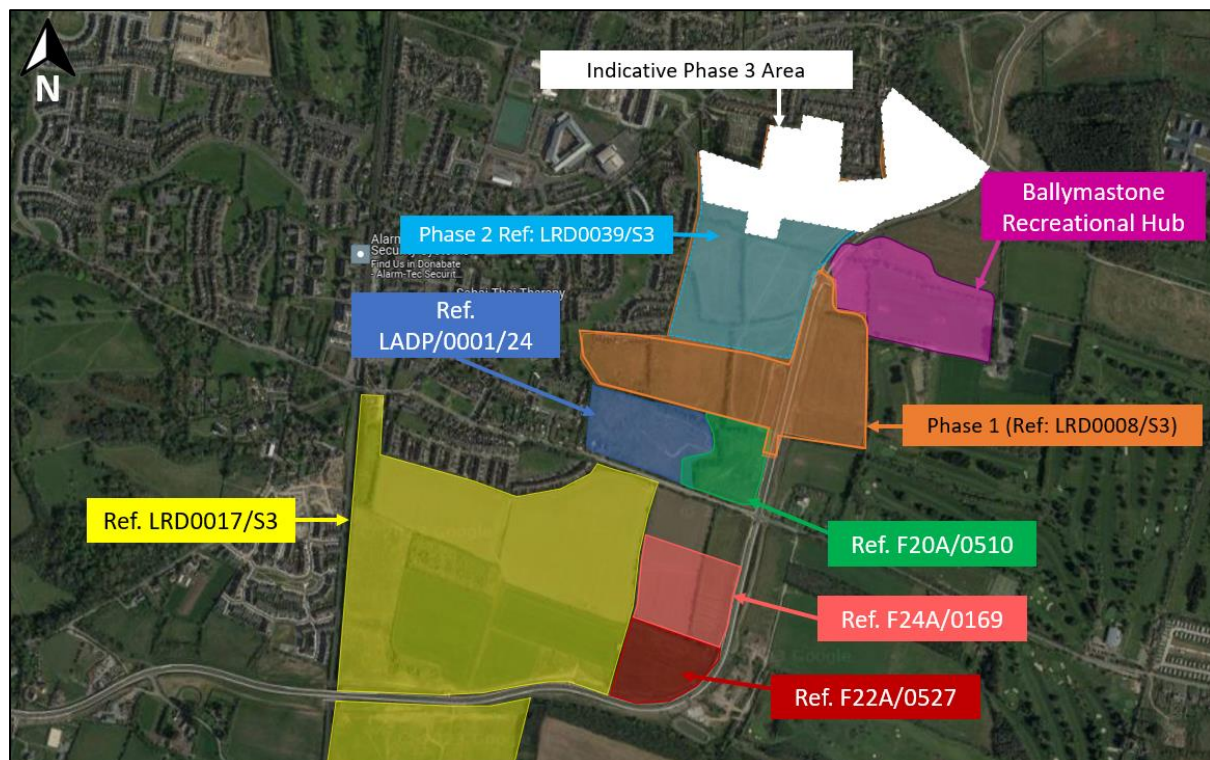


Figure 5-2: Committed Development Locations

Committed Development Trip Generation

Table 5-3 below presents the trips rates applied for Committed Development 2 and Committed Development 3, for both arrivals and departures during the AM and PM peak hour periods.

Proposed Development	Unit/GFA	AM Peak Hour		PM Peak Hour	
		Arr	Dep	Arr	Dep
Committed Development 2	151	See Table 5.1 Proposed Development Trip Rates Applied			
Committed Development 3	64	See Table 5.1 Proposed Development Trip Rates Applied			
Committed Development 3	364	See Table 5.1 Proposed Development Trip Rates Applied			

Table 5-3: Committed Development Trip Rates

Based on the above trip rates, the corresponding forecast peak hour trip generation for the committed development is presented in **Table 5-4** for the AM and PM peak hour arrivals and departures. It has been assumed that the creche element will generate 6 no. two-way trips in both the AM and PM peak hours. The Trips in the TTA submitted as part of Committed Development 1 were used.

Proposed Development	AM Peak Hour			PM Peak Hour		
	Arr	Dep	Two-way	Arr	Dep	Two-way
Committed Development 1	102	325	427	331	172	503
Committed Development 2	19	42	60	39	24	63
Committed Development 3	7	19	26	17	9	26
Committed Development 6	14	40	54	39	24	63

Table 5-4: Adopted Committed Development Potential Trips

For the Ballymastone Recreational Hub it has been assumed that 75% of the vehicles that can be accommodated by the car park will arrive during the evening peak hour and 25% will depart. There are 191 no. car parking spaces proposed which equates to 143 no. vehicles arriving the evening peak hour and 48 no. departing.

5.5 Vehicle Trip Distribution

The proposed distribution of the subject developments forecast generated vehicle movements as proposed by DBFL are presented in **Appendix A** of this report.

5.6 Traffic Growth

The TTA adopts an Opening Design year of 2028 and accordingly an Interim Year of 2033 (Opening Year +5 years) and a Future Year of 2043 (Opening Year + 15 years) as per Transport Infrastructure Ireland (TII) guidelines.

To ensure a robust analysis of the impact of traffic upon the local road network we have adopted growth rates using the TII traffic projections. Table 6.2 (Unit 5.3 – Travel Demand Projections) within the TII Project Appraisal Guidelines provides Annual Growth Factors for the different regions within Ireland. The subject site lies within ‘County – Dublin’ with the growth factors as outlined within **Table 5-5** below.

County	Low Sensitivity Growth				Central Growth				High Sensitivity Growth			
	2016-2030		2030-2040		2016-2030		2030-2040		2016-2030		2030-2040	
	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV	LV	HV
Dublin	1.0163	1.0303	1.0046	1.0123	1.0180	1.0317	1.0062	1.0139	1.0211	1.0348	1.0100	1.0170

*Table 5-5: National Traffic Growth Forecasts: Annual Growth Factors
(Extract from Table 6.1 of Unit 5.3 PAG)*

The annual factors as outlined in **Table 5-5** above were applied to the 2025 normalised base flows. The annual factors were adopted for the Opening Year of 2028, the Interim Year of 2033 (Opening Year +5 years) and the Future Year 2043 (Opening Year +15 years). Accordingly, the following growth rates shown in **Table 5-6** below, have been adopted to establish corresponding 2028, 2033 and 2043 baseline network flows.

Period	2025 to 2028	2025 to 2033	2025 to 2043
Central Growth	1.0549	1.1137	1.1805
	3.63%	10.69%	17.47%

Table 5-6: Adopted Growth Rates

It is noted that the TII Project Appraisal Guidelines states that *“the central growth rates are intended for use in project appraisal with the low and high growth rates to be used as sensitivity tests for economic and environmental impacts.”*

5.7 Trip Distribution and Assignment

For the adopted Opening Year of 2028 and Future Years of 2033 (+5 years) and 2043 (+15 years), the distribution of proposed development traffic as proposed by DBFL is included in **Appendix A** of this report.

6 Network Impact

6.1 Assessment Scope

Assessment Scenarios

Two different traffic scenarios have been assessed, namely (a) the 'Base' (Do-Nothing) traffic characteristic, and (b) the 'Post Development' (Do-Something) traffic characteristics.

The 'Do-Nothing' traffic scenario takes into account the potential level of traffic that could be generated by the 'committed development' in addition to the existing flows travelling across the network subjected to growth rates.

The proposed development traffic flows are then added to the network's 'Do-Nothing (Base with growth rates applied + Committed Development) traffic flows to establish the new post development 'Do-Something' traffic flows.

For the purposes of this assessment, it has been assumed that the entire proposed development could be in place by the end of the adopted 2028 Opening Year. In summary the following scenarios are considered:

- **Do Nothing A1** – 2028 Base Flows + Committed Development
- **Do Nothing A2** – 2033 Base Flows + Committed Development
- **Do Nothing A3** – 2043 Base Flows + Committed Development
- **Do-Something B1** - 2028 Do Nothing (A1) + Proposed Development Flows
- **Do-Something B2** - 2033 Do Nothing (A2) + Proposed Development Flows
- **Do-Something B3** - 2043 Do Nothing (A3) + Proposed Development Flows

Assessment Period

The AM and PM peak hour flows have been identified within the traffic survey data as occurring between 08:00-09:00 and 17:00 -18:00 respectively. These peak hour periods form the basis of the 2028, 2033 and 2043 network assessments.

The figures as included in **Appendix A** present the vehicle flows across the local road network for each of the adopted development scenarios mentioned above.

6.2 Network Impact

The TII document 'Traffic and Transport Assessment Guidelines (2014)' states that the impact of a proposed development upon the local road network is considered material when the level of

traffic it generates surpasses 10% and 5% on normal and congested networks respectively. When such levels of impact are generated a more detailed assessment should be undertaken to ascertain the specific impact upon the network's operational performance. In accordance with the TII guidelines we have undertaken an assessment to establish the potential level of impact upon the key junctions of the local road network. To enable this calculation to be undertaken we have based the analysis upon the 2028 Opening Year and 2033 and 2043 Future Design Years scenarios. **Table 6-1** below details the specific scale of network impact predicted at each of the key local off-site junctions during the 2028 Opening Year and 2033 and 2043 Design Years.

Junction	Year	AM Peak			PM Peak		
		DN	DS	% Impact	DN	DS	% Impact
1. Proposed Site Access (N) / DDR	2028	642	762	18.77%	602	715	18.71%
	2033	762	825	8.21%	711	771	8.40%
	2043	796	858	7.86%	741	801	8.07%
2. Proposed Site Access (S) / DDR	2028	801	909	13.54%	867	968	11.70%
	2033	919	974	5.90%	973	1024	5.21%
	2043	953	1007	5.69%	1002	1053	5.06%
3. DDR / New Road	2028	1054	1181	12.00%	1283	1401	9.21%
	2033	1198	1324	10.56%	1424	1543	8.29%
	2043	1244	1370	10.17%	1476	1594	8.00%
4. Chapel View / Main Street	2028	809	827	2.23%	829	846	2.04%
	2033	868	886	2.08%	885	902	1.91%
	2043	910	928	1.99%	927	944	1.82%
5. Hearse Road / Main Street (L2170)	2028	954	984	3.16%	852	880	3.31%
	2033	1004	1034	3.00%	907	936	3.10%
	2043	1058	1088	2.85%	953	981	2.96%
6. Main Street (L2170) / Portrane Road	2028	1350	1374	1.79%	1101	1123	2.05%
	2033	1429	1453	1.69%	1172	1195	1.92%
	2043	1510	1534	1.60%	1235	1257	1.83%
7. Portrane Road / The Links	2028	1636	1715	4.85%	1597	1680	5.15%
	2033	1793	1872	4.42%	1748	1830	4.71%
	2043	1890	1969	4.20%	1841	1923	4.47%
8. DDR / Portrane Road	2028	1515	1576	4.07%	1417	1483	4.64%
	2033	1605	1667	3.84%	1527	1592	4.31%
	2043	1696	1758	3.63%	1610	1676	4.09%

Table 6-1: Proposed Development's Network Impact

Based on the scale of impact generated in the adopted worst-case scenario, more detailed assessments regarding the junction's operational performance have been undertaken. **Table 6-1** indicates that the impact on the surrounding road network will exceed the 10% threshold at junctions 1, 2, and 3.

Figure 6-1 and **Figure 6-2** below details the total number of two-way vehicle trips that will pass through the key off-site junctions in the 2043 Future Design Year and the resulting percentage increase in traffic flows as a result of the traffic generated by the proposed development.



Figure 6-1: Increase in Vehicle Trips Through Key Of-Site Junctions (2043 AM Peak)



Figure 6-2: Increase in Vehicle Trips Through Key Of-Site Junctions (2043 PM Peak)

As noted previously, the percentage increase at Junction 4 (Chapel View / Main Street), Junction 5 (Hearse Road / Main Street), Junction 6 (Main Street / Portrane Road), Junction 7 (Portrane Road / The Links) and Junction 8 (DDR / Portrane Road) are below the TII threshold for assessment for normal networks and as such the proposed development is not anticipated to have a material impact on these junctions.

However, the level of traffic impact at Junctions 1, 2 and 3 surpasses the 10% threshold and such, an assessment of the proposed development impact has been undertaken to ensure a robust assessment. Furthermore, in accordance with FCC's maximum impact threshold, any junctions exceeding 2.5% threshold impact within the administrative area of Fingal is required to be further analysed. Therefore, when compared to FCC's 2.5% network impact threshold, junctions 4 – 8 exceed this threshold and as a result DBFL conducted further analysis on these junctions also.

6.3 Mitigation Strategy

A package of integrated mitigation measures has been identified to off-set the additional local demand that the proposed residential development on the subject zoned lands could potentially generate as a result of the forecast increase in vehicle movements by residents of the scheme.

The strategy includes specific measures for both the construction and operational stages of the proposed development.

Operational Stage

With the objective of mitigating the potential impact of the proposed development as predicted in Section 6.2 above during its operational stage, the following initiatives and associated timescale for their implementation have been identified and subsequently form an integral part of the subject development proposals.

- Management – A Mobility Management Plan (MMP) has been compiled with the aim of guiding the delivery and management of coordinated initiatives by the scheme promotor. The MMP ultimately seeks to encourage sustainable travel practices for all journeys, by residents and visitors travelling to and from the proposed development.
- Infrastructure (Permeability) – The design of the scheme proposals has sought to maximise the ability to provide attractive connections to third-party lands surrounding the subject development site and onwards connections to Donabate town centre, including Donabate Train Station. The implementation of pedestrian / cycle infrastructure connections extending right up to the boundary of the site enables the planning authority, in consultation with third parties as appropriate; to deliver a network of permeable linkages between the subject development lands and both existing and future developments adjoining the subject site.

7 Network Analysis

7.1 Introduction

The operational assessment of the local road network has been undertaken using the Transport Research Laboratory (TRL) computer package TRANSYT for signal-controlled junctions and PICADY for priority-controlled junctions. When considering signal-controlled junctions, a Ratio of Flow to Capacity (RFC) of greater than 85% (0.85) would indicate a junction to be approaching capacity, as operation above this RFC value is poor and deteriorates quickly. For the TRANSYT and PICADY analyses, a 90-minute AM and PM period has been simulated, from 07:45 to 09:15 and 16:45 to 18:15, respectively. For these junction analysis sets traffic flows were entered using an Origin-Destination table for the peak hours.

In order to analyse and assess the impact of the potential development on the surrounding road network, a traffic model replicating the local road network including the key off-site junctions was developed to quantify conditions in each of the following three future design years:

- 2028 Opening Year
- 2033 Interim Year Opening Year (Opening Year + 5 years)
- 2043 Future Horizon Year (Opening Year + 15 years)

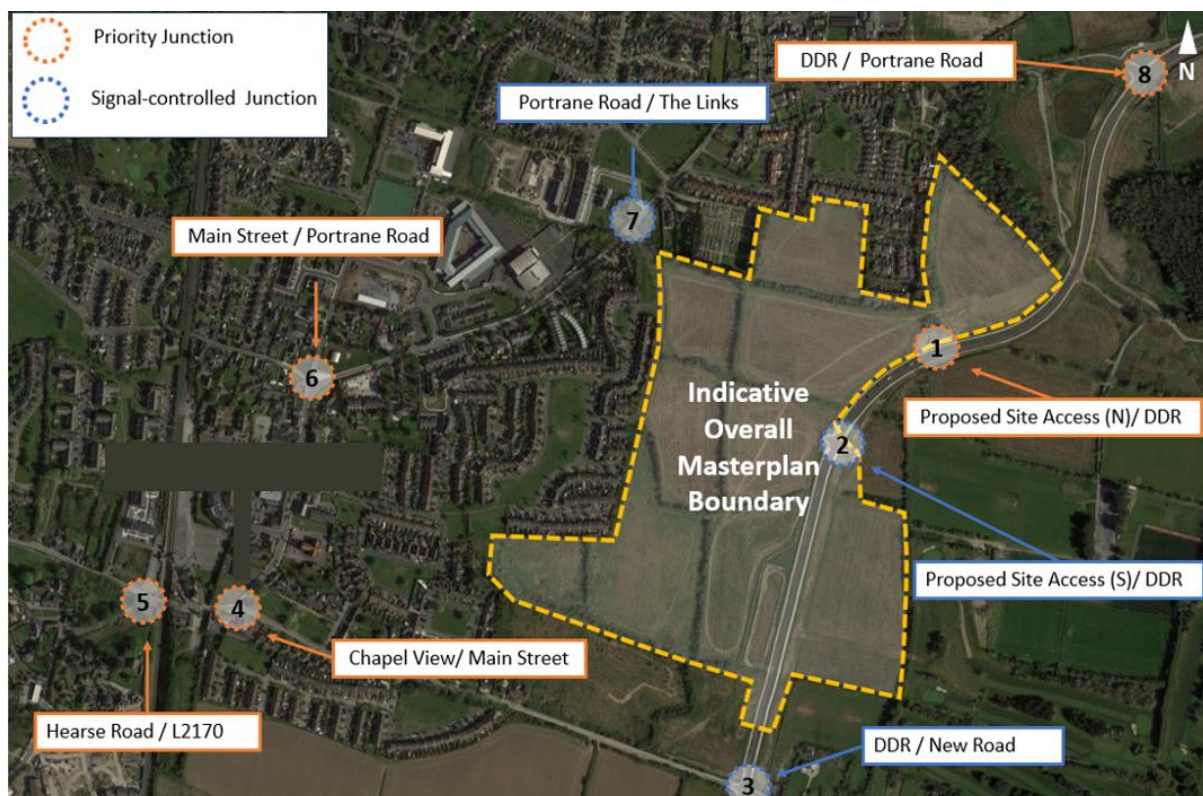


Figure 7-1: Junctions Included within the Network Analysis

7.2 Junction 1: Proposed Site Access DDR (North)

The proposed site access / DDR priority junction (North) has been analysed for all of the modelling scenarios using the Junctions 9 PICADY software package. The three arms were labelled as follows within the PICADY model:

- **Arm A:** DDR (S)
- **Arm B:** Site Access (N)
- **Arm C:** DDR (N)

Do Something Scenario

The PICADY results (**Table 7-1**) indicate that the Proposed Site Access / DDR three-arm priority junction will operate within capacity for the 2028 “Do Something” AM peak hour with a maximum RFC value of 0.19 (19%) and a corresponding queue of 0.2 pcus being recorded on stream B-AC. For the corresponding PM peak hour, a maximum RFC value of 0.11 (11%) occurs on stream B-AC with a queue of 0.1.

For the 2033 Future Horizon Year “Do Something” scenario, the PICADY results indicate that the priority junction will also operate within capacity during the AM peak hour with a maximum RFC value of 0.25 (25%) and a corresponding queue of 0.3 pcus being recorded again on-stream B-AC. For the corresponding PM peak hour, a maximum RFC value of 0.12 (12%) occurs again on-stream B-AC with a queue of 0.1.

Scenario	Period	Arm	RFC	Mean Max Queue (pcu)	Delay (s)
2028 DS	AM Peak	B-AC	0.19	0.2	11.08
		C-AB	0.01	0.0	5.42
	PM Peak	B-AC	0.11	0.1	9.77
		C-AB	0.02	0.0	5.18
2033 DS	AM Peak	B-AC	0.25	0.3	12.18
		C-AB	0.02	0.0	5.40
	PM Peak	B-AC	0.12	0.1	10.11
		C-AB	0.03	0.0	5.19
2043 DS	AM Peak	B-AC	0.25	0.4	12.47
		C-AB	0.02	0.0	5.36
	PM Peak	B-AC	0.13	0.2	10.28
		C-AB	0.03	0.0	5.15

Table 7-1: Do Something Analysis – Junction 1

In the 2043 Future Horizon Year “Do Something” scenario, the PICADY results once again indicate that the priority junction will operate within capacity during the AM peak hour with a maximum RFC value of 0.25 (25%) and a corresponding queue of 0.4 pcus being recorded on stream B-AC. For the corresponding PM peak hour, a maximum RFC value of 0.13 (13%) occurs on stream B-AC with 0.2 queue taking place.

7.3 Junction 2: Proposed Site Access / DDR (South)

The principal results of the operational assessment of this signal-controlled junction during the weekday morning and evening peaks are summarised in **Table 7-2** to **Table 7-4** below. The four arms were labelled as follows within the TRANSYT model:

- **Arm 1:** Site Access (East)
- **Arm 2:** Site Access (West)
- **Arm 3:** DDR (South)
- **Arm 4:** DDR (North)

2028 Do Something Scenario

The 2028 DS AM peak hour TRANSYT results (**Table 7-2**) indicate that this junction will operate within capacity with a maximum DoS value of 57% and a maximum MMQ of 6.28 pcu’s being recorded.

Similarly, the 2028 DS PM peak hour TRANSYT results indicate that this junction will again operate within capacity with a maximum DoS value of 51% and a maximum MMQ of 8.97 pcu’s being recorded.

Scenario	Arm	DoS (%)	Delay (s)	MMQ (pcu)
AM Peak	1	5	39.61	0.27
	2	57	52.38	3.58
	3	31	10.10	4.59
	4	40	11.09	6.28
PM Peak	1	4	43.32	0.15
	2	42	52.61	1.73
	3	31	8.36	4.39
	4	51	10.83	8.97

Table 7-2: 2028 Do-Something Analysis – Junction 2

2033 Do Something Scenario

The 2033 DS AM peak hour TRANSYT results (**Table 7-3**) indicate that this junction will operate within capacity with a maximum DoS value of 55% and a maximum MMQ of 6.91 pcu's being recorded.

Scenario	Arm	DoS (%)	Delay (s)	MMQ (pcu)
AM Peak	1	5	38.66	0.27
	2	55	50.07	3.67
	3	35	11.00	5.30
	4	43	11.97	6.91
PM Peak	1	4	43.32	0.15
	2	43	53.18	1.80
	3	33	8.52	4.74
	4	49	10.47	8.37

Table 7-3: 2033 Do-Something Analysis – Junction 2

Similarly, the 2033 DS PM peak hour TRANSYT results indicate that this junction will again operate within capacity with a maximum DoS value of 49% and a maximum MMQ of 8.37 pcu's being recorded.

2043 Do Something Scenario

The 2043 DS AM peak hour TRANSYT results (**Table 7-4**) indicate that this junction will operate within capacity with a maximum DoS value of 60% and a maximum MMQ of 7.19 pcu's being recorded.

Scenario	Arm	DoS (%)	Delay (s)	MMQ (pcu)
AM Peak	1	5	39.61	0.27
	2	60	53.79	3.80
	3	36	10.62	5.42
	4	43	11.60	7.19
PM Peak	1	4	43.32	0.15
	2	43	53.18	1.80
	3	34	8.64	4.93
	4	50	10.66	8.60

Table 7-4: 2043 Do- Something Analysis – Junction 2

Similarly, the 2043 DS PM peak hour TRANSYT results indicate that this junction will again operate within capacity with a maximum DoS value of 50% and a maximum MMQ of 8.60 pcu's being recorded.

7.4 Junction 3: DDR / New Road

The principal results of the operational assessment of this signal-controlled junction during the weekday morning and evening peaks are summarised in **Table 7-5** to **Table 7-10** below. The four arms were labelled as follows within the TRANSYT model:

- **Arm 1:** DDR (North)
- **Arm 2:** New Road (East)
- **Arm 3:** DDR (South)
- **Arm 4:** New Road (West)

2028 Do-Nothing Scenario

The 2028 DN AM peak hour TRANSYT results (**Table 7-5**) indicate that this junction will operate within capacity with a maximum DoS value of 56% and a maximum MMQ of 6.98 pcu's being recorded.

Similarly, the 2028 DN PM peak hour TRANSYT results indicate that this junction will again operate within capacity with a maximum DoS value of 62% and a maximum MMQ of 8.83 pcu's being recorded.

Scenario	Arm	DoS (%)	Delay (s)	MMQ (pcu)
AM Peak	1	27	32.37	2.64
	2	56	38.70	6.23
	3	43	18.09	6.98
	4	35	16.87	5.40
PM Peak	1	37	31.70	4.11
	2	62	37.88	7.74
	3	45	20.10	7.07
	4	52	21.57	8.83

Table 7-5: 2028 Do Nothing Analysis - Junction 3

2033 Do-Nothing Scenario

The 2033 DN AM peak hour TRANSYT results (**Table 7-6**) indicate that this junction will operate within capacity with a maximum DoS value of 61% and a maximum MMQ of 8.91 pcu's being recorded.

Similarly, the 2033 DN PM peak hour TRANSYT results indicate that this junction will again operate within capacity with a maximum DoS value of 66% and a maximum MMQ of 10.45 pcu's being recorded.

Scenario	Arm	DoS (%)	Delay (s)	MMQ (pcu)
AM Peak	1	30	32.89	2.97
	2	61	40.40	7.03
	3	52	19.62	8.91
	4	39	17.43	6.20
PM Peak	1	40	31.58	4.68
	2	66	38.58	8.74
	3	51	21.86	8.34
	4	59	23.87	10.45

Table 7-6: 2033 Do-Nothing TRANSYT Analysis – Junction 3

2043 Do-Nothing Scenario

The 2043 DN AM peak hour TRANSYT results (**Table 7-7**) indicate that this junction will operate within capacity with a maximum DoS value of 63% and a maximum MMQ of 9.37 pcu's being recorded.

Scenario	Arm	DoS (%)	Delay (s)	MMQ (pcu)
AM Peak	1	31	33.16	3.17
	2	63	41.19	7.32
	3	54	19.99	9.37
	4	41	17.66	6.44
PM Peak	1	42	31.97	4.92
	2	68	39.68	9.26
	3	53	22.27	8.81
	4	61	24.33	10.79

Table 7-7: 2043 Do-Nothing Analysis - Junction 3

Similarly, the 2043 DN PM peak hour TRANSYT results indicate that this junction will again operate within capacity with a maximum DoS value of 68% and a maximum MMQ of 10.79 pcu's being recorded.

2028 Do-Something Scenario

The 2028 DS AM peak hour TRANSYT results (**Table 7-8**) indicate that this junction will operate within capacity with a maximum DoS value of 61% and a maximum MMQ of 8.64 pcu's being recorded, this is an increase of 1.66.

Scenario	Arm	DoS (%)	Delay (s)	MMQ (pcu)
AM Peak	1	29	32.78	2.89
	2	61	40.14	6.87
	3	51	19.46	8.64
	4	39	17.33	5.99
PM Peak	1	38	31.29	4.43
	2	65	38.42	8.68
	3	51	21.86	8.34
	4	58	23.44	9.99

Table 7-8: 2028 Do-Something TRANSYT Analysis – Junction 3

Similarly, the 2028 DS PM peak hour TRANSYT results indicate that this junction will again operate within capacity with a maximum DoS value of 65% and a maximum MMQ of 9.99 pcu's being recorded, this is an increase of 1.16.

2033 Do-Something Scenario

The 2033 DS AM peak hour TRANSYT results (**Table 7-9**) indicate that this junction will operate within capacity with a maximum DoS value of 66% and a maximum MMQ of 10.77 pcu's being recorded, this is an increase of 1.86.

Similarly, the 2033 DS PM peak hour TRANSYT results indicate that this junction will again operate within capacity with a maximum DoS value of 72% and a maximum MMQ of 11.40 pcu's being recorded, this is an increase of 0.95.

Scenario	Arm	DoS (%)	Delay (s)	MMQ (pcu)
AM Peak	1	33	33.40	3.31
	2	66	42.16	7.72
	3	59	21.32	10.77
	4	43	17.94	6.82
PM Peak	1	43	32.17	5.04
	2	72	41.24	9.91
	3	56	22.93	9.47
	4	63	25.00	11.40

Table 7-9: 2033 Do-Something TRANSYT Analysis – Junction 3

2043 Do- Something Scenario

The 2043 DS AM peak hour TRANSYT results (**Table 7-10**) indicate that this junction will operate within capacity with a maximum DoS value of 68% and a maximum MMQ of 11.26 pcu's being recorded, this is an increase of 1.89.

Similarly, the 2043 DS PM peak hour TRANSYT results indicate that this junction will again operate within capacity with a maximum DoS value of 72% and a maximum MMQ of 12.25 pcu's being recorded, this is an increase of 1.46.

Scenario	Arm	DoS (%)	Delay (s)	MMQ (pcu)
AM Peak	1	34	33.64	3.46
	2	68	43.22	8.06
	3	61	21.75	11.26
	4	44	18.18	7.07
PM Peak	1	43	31.49	5.27
	2	72	40.35	10.13
	3	59	24.36	10.10
	4	67	26.69	12.25

Table 7-10: 2043 Do-Something TRANSYT Analysis - Junction 3

7.5 Junction 4: Chapel View / Main Street

The Chapel View / Main Street priority junction has been analysed for all of the modelling scenarios using the Junctions 9 PICADY software package. The three arms were labelled as follows within the PICADY model:

- **Arm A** : Main Street
- **Arm B**: New Road (E)
- **Arm C**: New Road (W)

Do Nothing Scenario

The PICADY results (**Table 7-11**) indicate that the Chapel View / Main Street three-arm priority junction will operate within capacity for the 2028 "Do Nothing" AM peak hour with a maximum RFC value of 0.81 (81%) and a corresponding queue of 3.8 pcus being recorded on stream B-AC. For the corresponding PM peak hour, a maximum RFC value of 0.86 (86%) occurs on stream C-AB with a queue of 9.6.

For the 2033 Future Horizon Year “Do Nothing” scenario, the PICADY results indicate that the priority junction will operate above capacity during the AM peak hour with a maximum RFC value of 1.03 (103%) and a corresponding queue of 16.4 pcus being recorded on-stream B-AC. For the corresponding PM peak hour, a maximum RFC value of 1.04 (104%) occurs on-stream C-AB with a queue of 39.6.

Scenario	Period	Arm	RFC	Mean Max Queue (pcu)	Delay (s)
2028 DN	AM Peak	B-AC	0.81	3.8	50.26
		C-AB	0.43	1.7	6.90
	PM Peak	B-AC	0.77	3.1	43.53
		C-AB	0.86	9.6	29.91
2033 DN	AM Peak	B-AC	1.03	16.4	169.25
		C-AB	0.55	2.7	8.58
	PM Peak	B-AC	0.99	10.5	126.67
		C-AB	1.04	39.6	128.52
2043 DN	AM Peak	B-AC	1.15	29.6	282.50
		C-AB	0.62	3.6	9.89
	PM Peak	B-AC	1.19	25.0	264.88
		C-AB	1.10	63.7	196.14

Table 7-11: Do-Nothing Analysis – Junction 4

In the 2043 Future Horizon Year “Do Nothing” scenario, the PICADY results indicate that the priority junction will operate above capacity during the AM peak hour with a maximum RFC value of 1.15 (115%) and a corresponding queue of 29.6 pcus being recorded on stream B-AC. For the corresponding PM peak hour, the results indicate that the priority junction will operate above capacity with a maximum RFC value of 1.19 (119%) occurs on-stream C-AB with a queue of 63.7.

Do Something Scenario

The PICADY results (**Table 7-12**) indicate that the Chapel View / Main Street three-arm priority junction will operate above capacity for the 2028 “Do Something” AM peak hour with a maximum RFC value of 0.97 (97%) and a corresponding queue of 10.9 pcus being recorded on stream B-AC. For the corresponding PM peak hour, a maximum RFC value of 1.01 (101%) occurs on stream C-AB with a queue of 30.4.

For the 2033 Future Horizon Year “Do Something” scenario, the PICADY results indicate that the priority junction will operate above capacity during the AM peak hour with a maximum RFC value of 1.23 (123%) and a corresponding queue of 42.7 pcus being recorded on-stream B-AC. For the

corresponding PM peak hour, a maximum RFC value of 1.31 (131%) occurs on-stream B-AC with a queue of 35.3.

Scenario	Period	Arm	RFC	Mean Max Queue (pcu)	Delay (s)
2028 DN	AM Peak	B-AC	0.97	10.9	118.13
		C-AB	0.55	2.5	8.71
	PM Peak	B-AC	0.94	7.6	94.97
		C-AB	1.01	30.4	103.28
2033 DN	AM Peak	B-AC	1.23	42.7	371.79
		C-AB	0.68	4.3	12.09
	PM Peak	B-AC	1.31	35.3	375.92
		C-AB	1.15	82.2	273.30
2043 DN	AM Peak	B-AC	1.37	60.9	537.05
		C-AB	0.75	6.2	15.79
	PM Peak	B-AC	1.69	68.3	820.73
		C-AB	1.21	112.7	404.94

Table 7-12: Do-Something Analysis – Junction 4

In the 2043 Future Horizon Year “Do Something” scenario, the PICADY results indicate that the priority junction will operate above capacity during the AM peak hour with a maximum RFC value of 1.37 (137%) and a corresponding queue of 60.9 pcus being recorded on stream B-AC. For the corresponding PM peak hour, the results indicate that the priority junction will operate above capacity with a maximum RFC value of 1.69 (169%) occurs on-stream B-AC with a queue of 68.3. However, it is noted that even without the development traffic, the junction is shown to be operating above capacity in the Do-Nothing scenario.

7.6 Junction 5: Hearse Road / Main Street (L2170) (PICADY Analysis)

The Hearse Road / Main Street (L2170) priority junction has been analysed for all of the modelling scenarios using the Junctions 9 PICADY software package. The three arms were labelled as follows within the PICADY model:

- **Arm A** : Hearse Road
- **Arm B**: Turvey Avenue
- **Arm C**: New Road

Do Nothing Scenario

The PICADY results (**Table 7-13**) indicate that the three-arm priority junction will operate above capacity for the 2028 “Do Nothing” AM peak hour with a maximum RFC value of 0.99 (99%) and a corresponding queue of 23.7 pcus being recorded on stream C-AB. For the corresponding PM peak hour, a maximum RFC value of 0.81 (81%) occurs on stream C-AB with a queue of 5.4.

For the 2033 Future Horizon Year “Do Nothing” scenario, the PICADY results indicate that the priority junction will operate above capacity during the AM peak hour with a maximum RFC value of 1.04 (104%) and a corresponding queue of 36.3 pcus being recorded on-stream C-AB. For the corresponding PM peak hour, a maximum RFC value of 0.88 (88%) occurs on-stream C-AB with a queue of 8.6.

For the 2043 Future Horizon Year “Do Nothing” scenario, the PICADY results indicate that the priority junction will operate above capacity during the AM peak hour with a maximum RFC value of 1.10 (110%) and a corresponding queue of 59.8 pcus being recorded on-stream C-AB. For the corresponding PM peak hour, a maximum RFC value of 0.96 (96%) occurs on-stream C-AB with a queue of 15.8.

Scenario	Period	Arm	RFC	Mean Max Queue (pcu)	Delay (s)
2028 DN	AM Peak	B-AC	0.75	2.9	24.77
		C-B	0.99	23.7	90.40
	PM Peak	B-AC	0.73	2.7	25.37
		C-B	0.81	5.4	27.84
2033 DN	AM Peak	B-AC	0.82	4.4	34.35
		C-B	1.04	36.3	131.66
	PM Peak	B-AC	0.82	4.4	37.96
		C-B	0.88	8.6	43.16
2043 DN	AM Peak	B-AC	0.88	6.2	47.03
		C-B	1.10	59.8	204.12
	PM Peak	B-AC	0.88	6.2	51.85
		C-B	0.96	15.8	75.91

Table 7-13: Do Nothing Analysis - Junction 5

Do Something Scenario

The PICADY results (**Table 7-14**) indicate that the Hearse Road / L2170 three-arm priority junction will operate above capacity for the 2028 “Do Something” AM peak hour with a maximum RFC value of 1.04 (104%) and a corresponding queue of 35.8 pcus being recorded on stream B-AC. For the

corresponding PM peak hour, a maximum RFC value of 0.86 (86%) occurs again on stream B-AC with a queue of 3.6.

For the 2033 Future Horizon Year “Do Something” scenario, the PICADY results indicate that the priority junction will also operate above capacity during the AM peak hour with a maximum RFC value of 1.09 (109%) and a corresponding queue of 52.2 pcus being recorded on-stream C-B. For the corresponding PM peak hour, the results indicate that the priority junction will operate above capacity with a maximum RFC value of 0.93 (93%) occurs on-stream C-B with a queue of 12.5.

Scenario	Period	Arm	RFC	Mean Max Queue (pcu)	Delay (s)
2028 DS	AM Peak	B-AC	0.78	3.5	28.56
		C-B	1.04	35.8	129.63
	PM Peak	B-AC	0.78	3.6	31.65
		C-B	0.86	7.1	35.79
2033 DS	AM Peak	B-AC	0.86	5.5	41.89
		C-B	1.09	52.2	180.89
	PM Peak	B-AC	0.88	6.1	51.23
		C-B	0.93	12.5	61.11
2043 DS	AM Peak	B-AC	0.91	8.1	59.19
		C-B	1.15	79.4	290.49
	PM Peak	B-AC	0.93	9.3	74.06
		C-B	1.00	22.2	104.04

Table 7-14: Do Something Analysis - Junction 5

In the 2043 Future Horizon Year “Do Something” scenario, the PICADY results once again indicate that the priority junction will operate above capacity during the AM peak hour with a maximum RFC value of 1.15 (115%) and a corresponding queue of 79.4 pcus being recorded on stream C-B. For the corresponding PM peak hour, the results indicate that the priority junction will operate above capacity with a maximum RFC value of 1.00 (100%) occurs on-stream C-B with a queue of 22.2. However, it is noted that even without the development traffic, the junction is shown to be operating above capacity in the Do-Nothing scenario.

7.7 Junction 6: Main Street (L2170)/ Portrane Road

The Main Street / Portrane Road priority junction has been analysed for all of the modelling scenarios using the Junctions 9 PICADY software package. The three arms were labelled as follows within the PICADY model:

- **Arm A:** Main Street
- **Arm B:** Beaverstown Road

- **Arm C:** Portrane Road

Do Nothing Scenario

The PICADY results (**Table 7-15**) indicate that the Main Street / Portrane Road three-arm priority junction will operate within capacity for the 2028 “Do Nothing” AM peak hour with a maximum RFC value of 0.61 (61%) and a corresponding queue of 1.6 pcus being recorded on stream B-AC. For the corresponding PM peak hour, a maximum RFC value of 0.39 (39%) occurs on stream B-AC with a queue of 0.7.

For the 2033 Future Horizon Year “Do Nothing” scenario, the PICADY results indicate that the priority junction will also operate within capacity during the AM peak hour with a maximum RFC value of 0.68 (68%) and a corresponding queue of 2.1 pcus being recorded on-stream B-AC. For the corresponding PM peak hour, the results indicate that the priority junction will operate again above capacity with a maximum RFC value of 0.43 (43%) occurs on-stream B-AC with a queue of 0.8.

For the 2043 Future Horizon Year “Do Nothing” scenario, the PICADY results indicate that the priority junction will also operate within capacity during the AM peak hour with a maximum RFC value of 0.75 (75%) and a corresponding queue of 2.9 pcus being recorded on-stream B-AC. For the corresponding PM peak hour, the results indicate that the priority junction will operate again above capacity with a maximum RFC value of 0.47 (47%) occurs on-stream B-AC with a queue of 0.9.

Scenario	Period	Arm	RFC	Mean Max Queue (pcu)	Delay (s)
2028 DN	AM Peak	B-AC	0.61	1.6	24.14
		C-AB	0.06	0.1	5.20
	PM Peak	B-AC	0.39	0.7	14.22
		C-AB	0.03	0.0	5.85
2033 DN	AM Peak	B-AC	0.68	2.1	30.53
		C-AB	0.06	0.1	5.18
	PM Peak	B-AC	0.43	0.8	15.84
		C-AB	0.03	0.0	5.86
2043 DN	AM Peak	B-AC	0.75	2.9	40.20
		C-AB	0.07	0.1	5.13
	PM Peak	B-AC	0.47	0.9	17.53
		C-AB	0.04	0.1	5.84

Table 7-15: Do Nothing Analysis – Junction 6

Do Something Scenario

The PICADY results (**Table 7-16**) indicate that the Main Street / Portrane Road three-arm priority junction will operate within capacity for the 2028 “Do Something” AM peak hour with a maximum RFC value of 0.62 (62%) and a corresponding queue of 1.6 pcus being recorded on stream B-AC. For the corresponding PM peak hour, a maximum RFC value of 0.40 (40%) occurs on stream B-AC with a queue of 0.7.

For the 2033 Future Horizon Year “Do Something” scenario, the PICADY results indicate that the priority junction will also operate within capacity during the AM peak hour with a maximum RFC value of 0.69 (69%) and a corresponding queue of 2.2 pcus being recorded on-stream B-AC. For the corresponding PM peak hour, the results indicate that the priority junction will operate again above capacity with a maximum RFC value of 0.44 (44%) occurs on-stream B-AC with a queue of 0.8.

Scenario	Period	Arm	RFC	Mean Max Queue (pcu)	Delay (s)
2028 DS	AM Peak	B-AC	0.62	1.6	25.19
		C-AB	0.06	0.1	5.16
	PM Peak	B-AC	0.40	0.7	14.60
		C-AB	0.03	0.0	5.82
2033 DS	AM Peak	B-AC	0.69	2.2	32.18
		C-AB	0.06	0.1	5.15
	PM Peak	B-AC	0.44	0.8	16.32
		C-AB	0.04	0.1	5.84
2043 DS	AM Peak	B-AC	0.76	3.1	43.33
		C-AB	0.07	0.1	5.09
	PM Peak	B-AC	0.48	0.9	18.04
		C-AB	0.04	0.1	5.82

Table 7-16: Do Something Analysis – Junction 6

For the 2043 Future Horizon Year “Do Something” scenario, the PICADY results indicate that the priority junction will also operate within capacity during the AM peak hour with a maximum RFC value of 0.76 (76%) and a corresponding queue of 3.1 pcus being recorded on-stream B-AC. For the corresponding PM peak hour, the results indicate that the priority junction will operate again above capacity with a maximum RFC value of 0.48 (48%) occurs on-stream B-AC with a queue of 0.9.

7.8 Junction 7: Portrane Road / The Links (PICADY Analysis)

The Portrane Road / The Links priority junction has been analysed for all of the modelling scenarios using the Junctions 9 PICADY software package. The three arms were labelled as follows within the PICADY model:

- **Arm A** : Portrane Road (E)
- **Arm B**: The Links
- **Arm C**: Portrane Road (W)

Do-Nothing Scenario

The PICADY results (**Table 7-17**) indicate that the Hearse Road / L2170 three-arm priority junction will operate within capacity for the 2028 “Do Nothing” AM peak hour with a maximum RFC value of 0.28 (28%) and a corresponding queue of 0.4 pcus being recorded on stream C-AB. For the corresponding PM peak hour, a maximum RFC value of 0.17 (17%) occurs again on stream C-AB with a queue of 0.2.

For the 2033 Future Horizon Year “Do Nothing” scenario, the PICADY results indicate that the priority junction will operate above capacity during the AM peak hour with a maximum RFC value of 0.27 (27%) and a corresponding queue of 0.4 pcus being recorded on-stream C-AB. For the corresponding PM peak hour, a maximum RFC value of 0.17 (17%) occurs on-stream C-AB with a queue of 0.2.

Scenario	Period	Arm	RFC	Mean Max Queue (pcu)	Delay (s)
2028 DN	AM Peak	B-AC	0.28	0.4	10.57
		C-AB	0.09	0.2	5.23
	PM Peak	B-AC	0.17	0.2	9.01
		C-AB	0.26	0.6	5.96
2033 DN	AM Peak	B-AC	0.27	0.4	10.70
		C-AB	0.11	0.3	5.25
	PM Peak	B-AC	0.17	0.2	9.19
		C-AB	0.30	0.7	6.38
2043 DN	AM Peak	B-AC	0.28	0.4	11.17
		C-AB	0.12	0.3	5.23
	PM Peak	B-AC	0.18	0.2	9.47
		C-AB	0.32	0.8	6.47

Table 7-17: Do Nothing Analysis – Junction 7

In the 2043 Future Horizon Year “Do Nothing” scenario, the PICADY results once again indicate that the priority junction will operate above capacity during the AM peak hour with a maximum RFC

value of 0.28 (28%) and a corresponding queue of 0.4 pcus being recorded on stream C-AB. For the corresponding PM peak hour, the results indicate that the priority junction will operate above capacity with a maximum RFC value of 0.18 (18%) occurs on-stream C-AB with a queue of 0.2.

7.9 Junction 7: Portrane Road / The Links (TRANSYT Analysis)

The principal results of the operational assessment of this signal-controlled junction during the weekday morning and evening peaks are summarised in **Table 7-18** to **Table 7-20** below. The arms were labelled as follows within the TRANSYT model:

- **Arm 1:** Portrane Road (E)
- **Arm 2:** The Links
- **Arm 3:** Portrane Road (W)

2028 Do-Something Scenario

The 2028 DS AM peak hour TRANSYT results (**Table 7-18**) indicate that this junction will operate within capacity with a maximum DoS value of 60% and a maximum MMQ of 6.05 pcu's being recorded.

Scenario	Arm	DoS (%)	Delay (s)	MMQ (pcu)
AM Peak	1	44	13.34	5.45
	2	48	13.87	6.05
	3	60	41.44	3.21
PM Peak	1	50	12.95	6.46
	2	33	10.80	3.73
	3	47	39.88	1.98

Table 7-18: 2028 Do-Something Analysis - Junction 7

Similarly, the 2028 DS PM peak hour TRANSYT results indicate that this junction will again operate within capacity with a maximum DoS value of 50% and a maximum MMQ of 6.46 pcu's being recorded.

2033 Do-Something Scenario

The 2033 DS AM peak hour TRANSYT results (**Table 7-19**) indicate that this junction will operate within capacity with a maximum DoS value of 63% and a maximum MMQ of 6.44 pcu's being recorded.

Scenario	Arm	DoS (%)	Delay (s)	MMQ (pcu)
AM Peak	1	46	13.05	5.87
	2	50	13.55	6.44
	3	63	45.20	3.20
PM Peak	1	54	13.58	7.16
	2	35	11.02	3.98
	3	46	39.51	1.93

Table 7-19: 2033 Do-Something Analysis – Junction 7

Similarly, the 2033 DS PM peak hour TRANSYT results indicate that this junction will again operate within capacity with a maximum DoS value of 54% and a maximum MMQ of 7.16 pcu's being recorded.

2043 Do- Something Scenario

The 2043 DS AM peak hour TRANSYT results (**Table 7-20**) indicate that this junction will operate within capacity with a maximum DoS value of 65% and a maximum MMQ of 6.97 pcu's being recorded.

Scenario	Arm	DoS (%)	Delay (s)	MMQ (pcu)
AM Peak	1	49	13.41	6.33
	2	52	14.00	6.97
	3	65	46.69	3.37
PM Peak	1	56	14.03	7.68
	2	36	11.22	4.28
	3	48	40.27	2.03

Table 7-20: 2043 Do- Something Analysis – Junction 7

Similarly, the 2043 DS PM peak hour TRANSYT results indicate that this junction will again operate within capacity with a maximum DoS value of 56% and a maximum MMQ of 7.68 pcu's being recorded.

7.10 Junction 8: DDR / Portrane Road

The Portrane Road / DDR priority junction has been analysed for all of the modelling scenarios using the Junctions 9 PICADY software package. The three arms were labelled as follows within the PICADY model:

- **Arm A** : DDR (S)
- **Arm B**: Portrane Road

- **Arm C: DDR (N)**

Do-Nothing Scenario

The PICADY results (**Table 7-21**) indicate that the Portrane Road / DDR three-arm priority junction will operate within capacity for the 2028 “Do Nothing” AM peak hour with a maximum RFC value of 0.43 (43%) and a corresponding queue of 0.8 pcus being recorded on stream B-AC. For the corresponding PM peak hour, a maximum RFC value of 0.51 (51%) occurs again on stream C-AB with a queue of 1.1.

For the 2033 Future Horizon Year “Do Nothing” scenario, the PICADY results indicate that the priority junction will operate within capacity during the AM peak hour with a maximum RFC value of 0.47 (47%) and a corresponding queue of 0.9 pcus being recorded on-stream B-AC. For the corresponding PM peak hour, a maximum RFC value of 0.54 (54%) occurs on-stream C-AB with a queue of 1.2.

In the 2043 Future Horizon Year “Do Nothing” scenario, the PICADY results indicate that the priority junction will operate approaching capacity during the AM peak hour with a maximum RFC value of 0.50 (50%) and a corresponding queue of 1.0 pcus being recorded on stream B-AC. For the corresponding PM peak hour, the results indicate that the priority junction will operate within capacity with a maximum RFC value of 0.57 (57%) occurs on-stream C-AB with a queue of 1.4.

Scenario	Period	Arm	RFC	Mean Max Queue (pcu)	Delay (s)
2028 DN	AM Peak	B-AC	0.43	0.8	11.17
		C-AB	0.19	0.2	7.43
	PM Peak	B-AC	0.51	1.1	12.65
		C-AB	0.17	0.2	7.04
2033 DN	AM Peak	B-AC	0.47	0.9	12.13
		C-AB	0.21	0.3	7.67
	PM Peak	B-AC	0.54	1.2	13.83
		C-AB	0.18	0.2	7.22
2043 DN	AM Peak	B-AC	0.50	1.0	13.04
		C-AB	0.22	0.3	7.84
	PM Peak	B-AC	0.57	1.4	14.99
		C-AB	0.19	0.2	7.36

Table 7-21: Do Nothing Analysis – Junction 8

Do-Something Scenario

The PICADY results (**Table 7-22**) indicate that the Portrane Road / DDR three-arm priority junction will operate within capacity for the 2028 “Do Something” AM peak hour with a maximum RFC value

of 0.44 (44%) and a corresponding queue of 0.8 pcus being recorded on stream B-AC. For the corresponding PM peak hour, a maximum RFC value of 0.51 (51%) occurs again on stream C-AB with a queue of 1.1.

For the 2033 Future Horizon Year “Do Something” scenario, the PICADY results indicate that the priority junction will operate within capacity during the AM peak hour with a maximum RFC value of 0.48 (48%) and a corresponding queue of 0.9 pcus being recorded on-stream B-AC. For the corresponding PM peak hour, a maximum RFC value of 0.55 (55%) occurs on-stream C-AB with a queue of 1.3.

In the 2043 Future Horizon Year “Do Something” scenario, the PICADY results indicate that the priority junction will operate approaching capacity during the AM peak hour with a maximum RFC value of 0.51 (51%) and a corresponding queue of 1.1 pcus being recorded on stream B-AC. For the corresponding PM peak hour, the results indicate that the priority junction will operate within capacity with a maximum RFC value of 0.58 (58%) occurs on-stream C-AB with a queue of 1.4.

Scenario	Period	Arm	RFC	Mean Max Queue (pcu)	Delay (s)
2028 DS	AM Peak	B-AC	0.44	0.8	11.36
		C-AB	0.20	0.3	7.49
	PM Peak	B-AC	0.51	1.1	12.86
		C-AB	0.17	0.2	7.10
2033 DS	AM Peak	B-AC	0.48	0.9	12.38
		C-AB	0.21	0.3	7.74
	PM Peak	B-AC	0.55	1.3	14.08
		C-AB	0.19	0.2	7.30
2043 DS	AM Peak	B-AC	0.51	1.1	13.34
		C-AB	0.23	0.3	7.93
	PM Peak	B-AC	0.58	1.4	15.30
		C-AB	0.20	0.3	7.44

Table 7-22: Do Something Analysis – Junction 8

8 Summary and Conclusion

8.1 Overview

DBFL Consulting Engineers (DBFL) has been commissioned by Glenveagh Living Ltd. to undertake a Traffic and Transport Assessment (TTA) for a proposed residential development on a greenfield site located at Ballymastone, Donabate, Co. Dublin.

In summary, the proposed development will consist of the construction of a residential development, which represents Phase 3 of the wider development of the Ballymastone Lands, ranging in height from 2- to 6-storeys, to accommodate 398 no. residential dwellings (including a mix of apartments, duplexes and houses), private amenity space, a crèche (c. 646sq.m), and a community space (c. 100sq.m).

The site will accommodate 316 no. car parking spaces in total (comprised of 288 no. residential spaces, 10 no. spaces for the proposed crèche/community space, 6 no. EV charging spaces including accessible spaces, and 12 no. spaces ducted for future provision), 1,619 total no. bicycle parking spaces, new pedestrian/cycle links, road improvements, storage, services (including water, wastewater, electricity and telecommunications) and plant areas. Landscaping will include communal amenity areas, SuDS features, and significant public open space (c. 15.3% of the net site) including outdoor exercise and play equipment.

The purpose of this TTA is to quantify the existing transport environment and to detail the results of assessment work undertaken to identify the potential level of transport impact generated as a result of the proposed development. Our methodology incorporated a number of key inter-related stages, including;

- Site Audit;
- Planning File Review;
- Policy Review;
- Commissioning and Analysis of Traffic Surveys;
- Trip Generation, Distribution and Assignment, and Network Impact;
- Network Analysis;

As per best practice guidance this TTA has carried out a range of network assessments investigating different traffic conditions for an Opening Year of 2028, the Interim Year of 2033 and the Future Horizon Year of 2043.

8.2 Summary

The findings of the analysis summarised within this Traffic and Transport Assessment are as follows:

- The subject site and the proposals being promoted will deliver a number of benefits for pedestrians and cyclists with a network of dedicated, shared and quiet street linkages integrating with the off-site network to provide attractive, safe and convenient connections to the surrounding area.
- The subject site is well served in terms of public transport provision. Both bus and rail based public transport services with interchanges to both modes being within a convenient walking distance of the subject development site.
- The subject development proposes to provide 316 no. car parking spaces, comprising 288 no. residential spaces, 10 no. creche / community hall spaces, 3 no. accessible spaces, 6 no. EV spaces including accessible spaces and 12 no. spaces ducted for future EV provision in accordance with the FCC Development Plan requirements.
- In terms of cycle parking, the proposals provide 1,619 no. cycle parking spaces (1,513 no. long stay resident spaces and 106 short stay visitor spaces) which is in accordance with the FCC Development Plan standards.
- The proposed development (upon full completion) is predicted to generate no more than 201 no. and 188 no. two-way vehicle trips during the AM and PM peak hours respectively in the adopted worst case scenario.
- With the objective of providing a robust assessment, a total of 8 no. different committed developments (including Phase 1 and Phase 2 of the subject Masterplan lands) has been incorporated into the appraisal of the local road network's operational performance.
- The development will gain vehicular access from The Links which will in turn provide a connection to/from Portrane Road located to the north of the site. A new site access will also be created from the DDR via a priority junction.
- Two different scenarios have been assessed namely (a) the 'Base' (Do-Nothing) traffic characteristics and (b) the 'Post Development' (Do-Something) traffic characteristic.

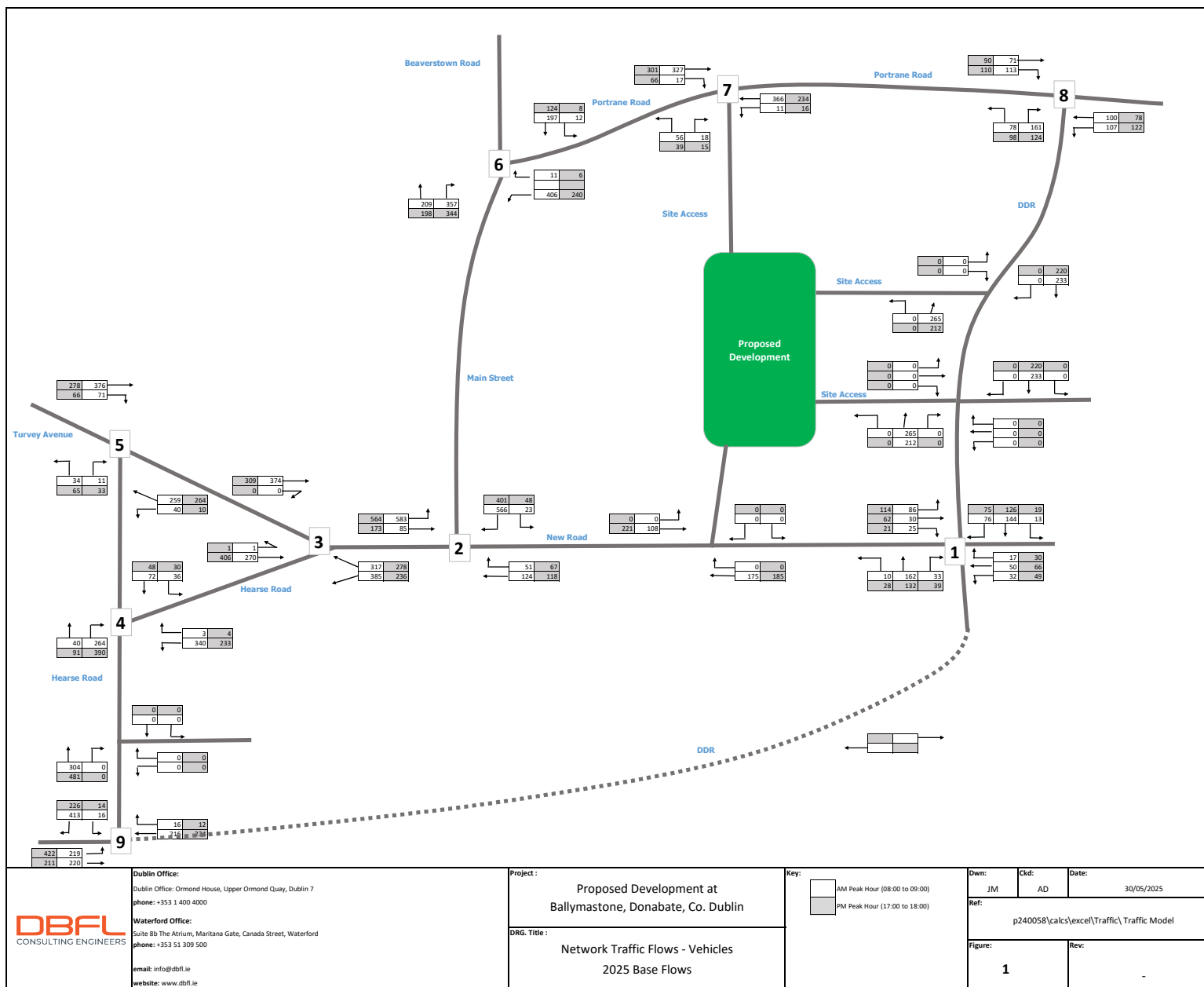
8.3 Conclusion

In conclusion, it is considered that the impact on the surrounding road network, as a result of the proposed development on the surrounding road network will be minimal. This is based on the

anticipated levels of traffic generated by the proposed development, the existing and future road infrastructure and the information and analysis summarised in the above report.

It is concluded that the proposals represent a sustainable and viable approach to development on the subject lands and there are no significant traffic or transportation related reasons that should prevent the granting of planning permission for the proposed residential development.

Appendix A : Traffic Flow Model



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email: info@dbfl.ie
website: www.dbfl.ie

Project:
Proposed Development at
Ballymastone, Donabate, Co. Dublin

DRG. Title:
Network Traffic Flows - Vehicles
2025 Base Flows

Key:

AM Peak Hour (08:00 to 09:00)

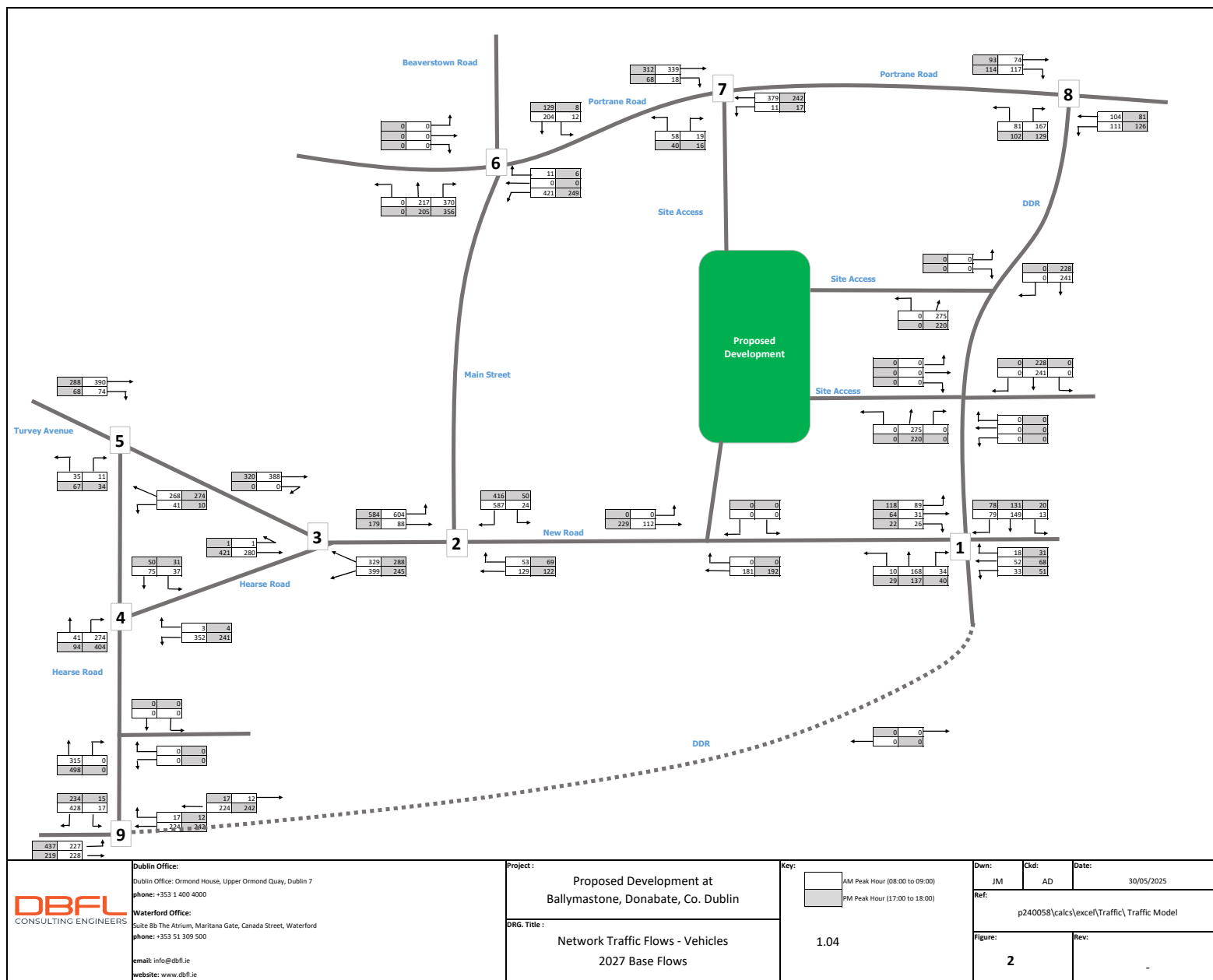
PM Peak Hour (17:00 to 18:00)

Dwn: JM
Ckd: AD
Date: 30/05/2025

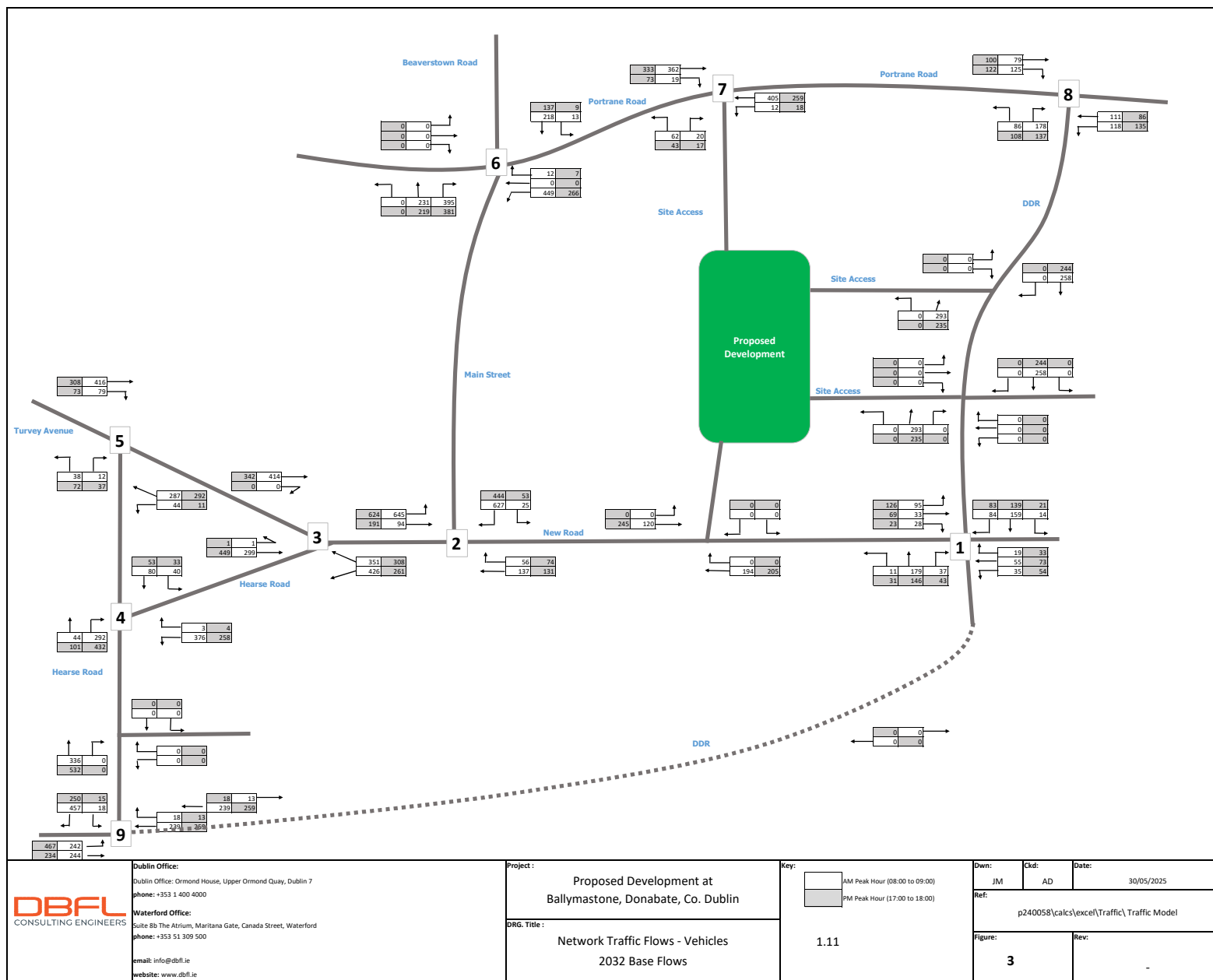
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p240058\calcs\excel\Traffic\ Traffic Model

Figure:
1

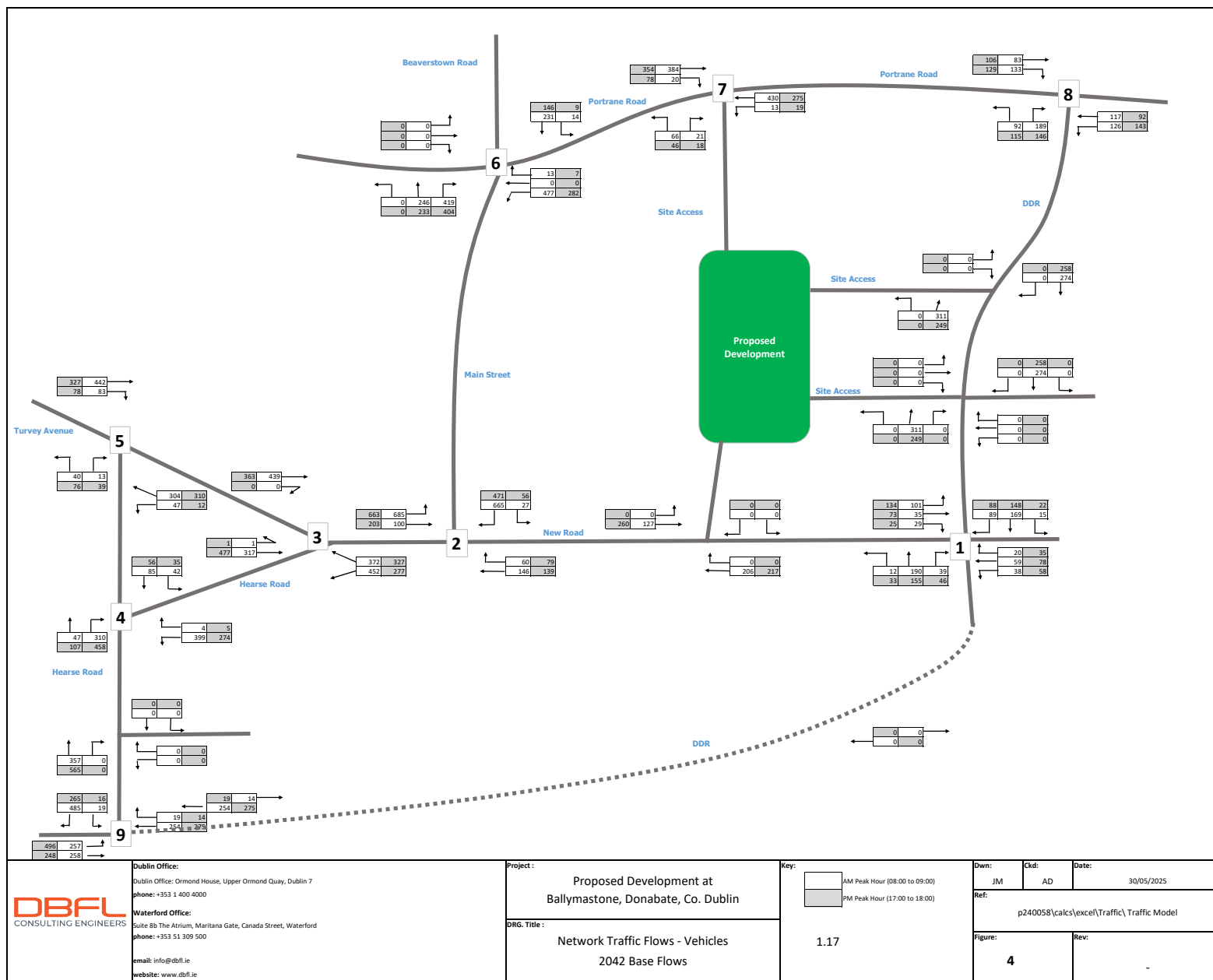
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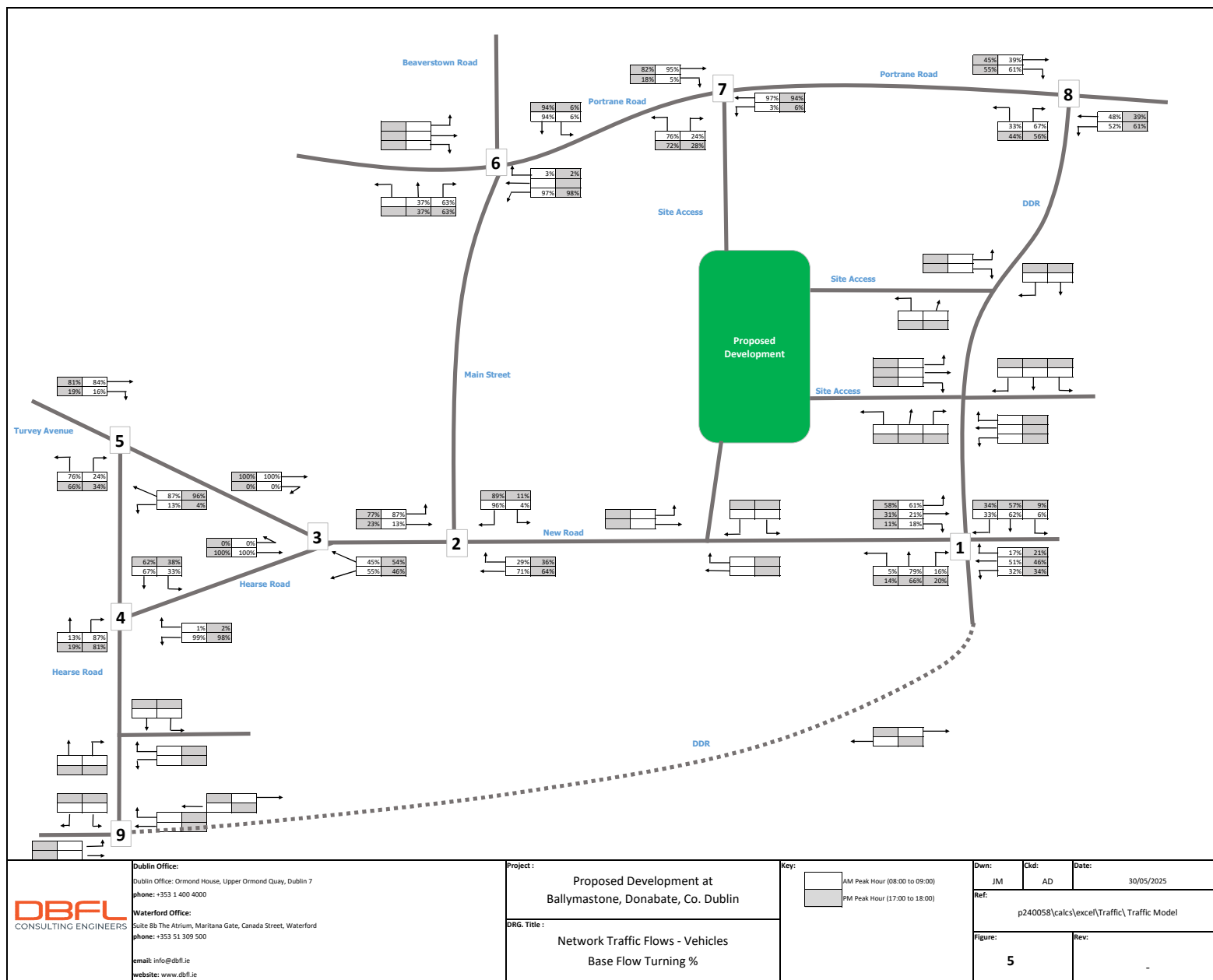


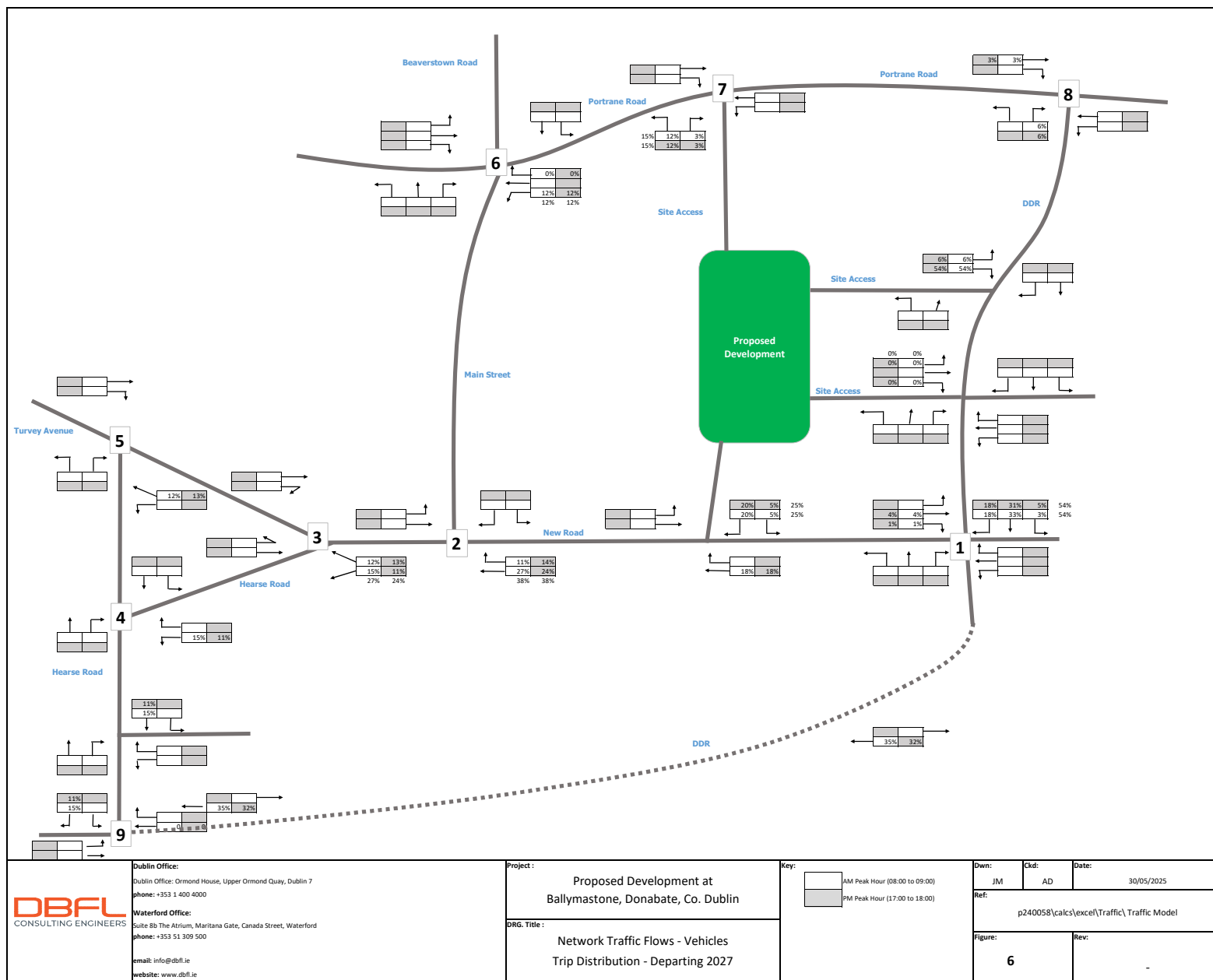
DBFL CONSULTING ENGINEERS	Dublin Office: Dublin Office: Ormond House, Upper Ormond Quay, Dublin 7 phone: +353 1 400 4000	Project : Proposed Development at Ballymastone, Donabate, Co. Dublin	Key: AM Peak Hour (08:00 to 09:00) PM Peak Hour (17:00 to 18:00)	Dwn: JM Ckd: AD Date: 30/05/2025
	Waterford Office: Suite 8b The Atrium, Maritana Gate, Canada Street, Waterford phone: +353 51 309 500 email: info@dbfl.ie website: www.dbfl.ie	DRG. Title : Network Traffic Flows - Vehicles 2027 Base Flows	1.04	Ref: p240058\calcs\excel\Traffic\ Traffic Model
				Figure: 2 Rev: -

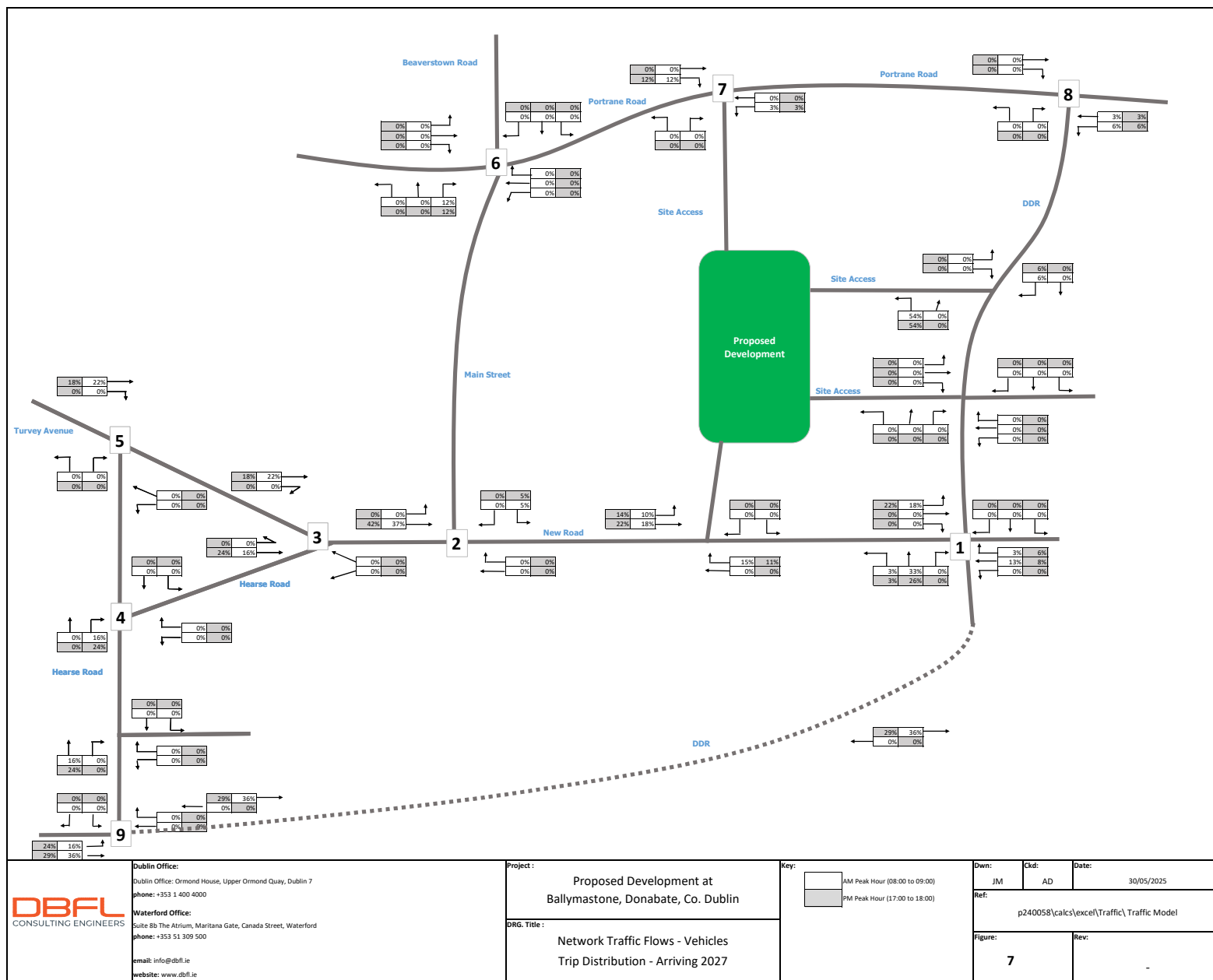


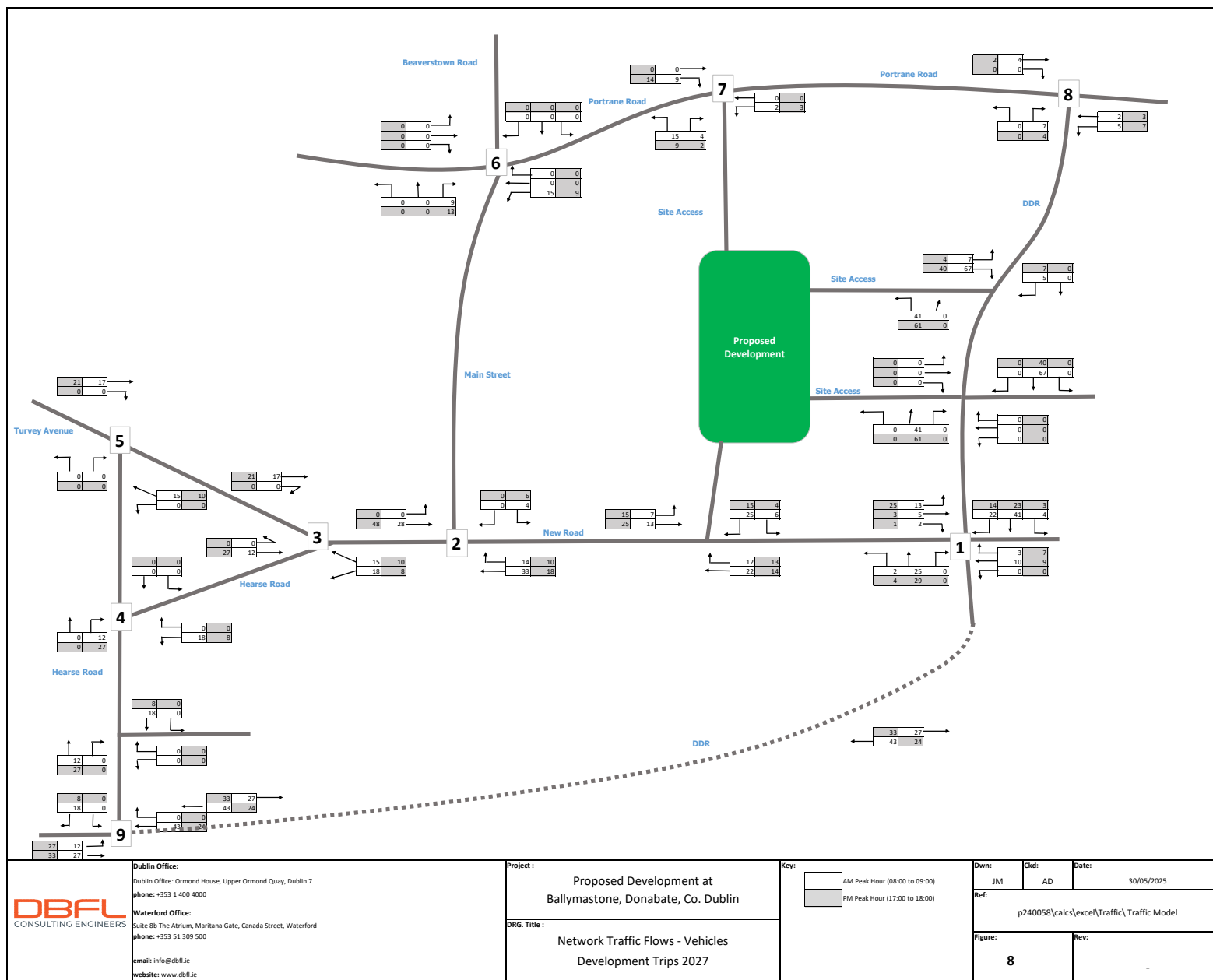
DBFL CONSULTING ENGINEERS	Dublin Office: Dublin Office: Ormond House, Upper Ormond Quay, Dublin 7 phone: +353 1 400 4000	Project : Proposed Development at Ballymastone, Donabate, Co. Dublin	Key: AM Peak Hour (08:00 to 09:00) PM Peak Hour (17:00 to 18:00)	Dwn: JM	Ckd: AD	Date: 30/05/2025
	Waterford Office: Suite 8b The Atrium, Maritana Gate, Canada Street, Waterford phone: +353 51 309 500	DRG. Title : Network Traffic Flows - Vehicles 2032 Base Flows	1.11	Ref: p240058\calcs\excel\Traffic\ Traffic Model		
	email: info@dbfl.ie website: www.dbfl.ie			Figure: 3	Rev: -	

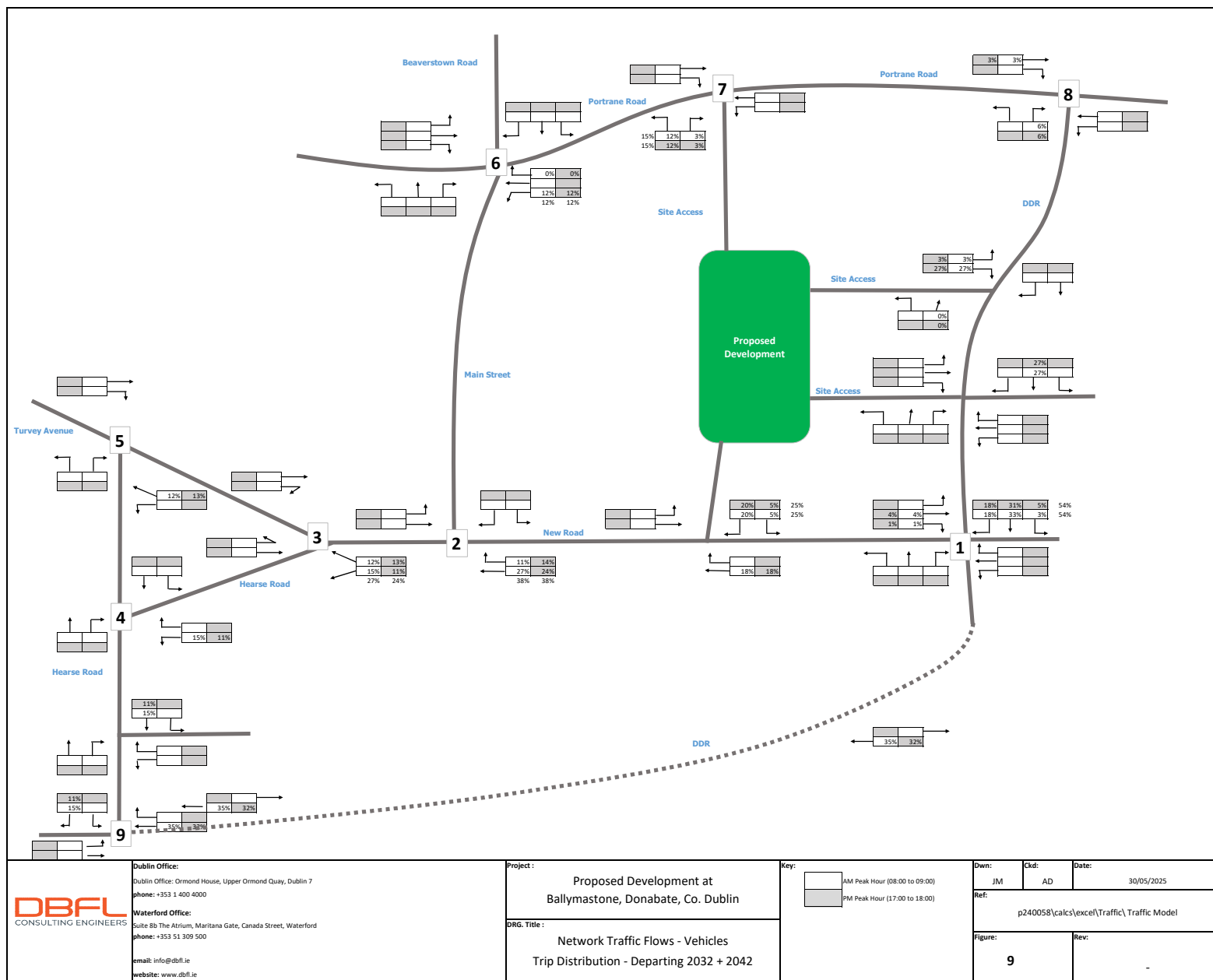


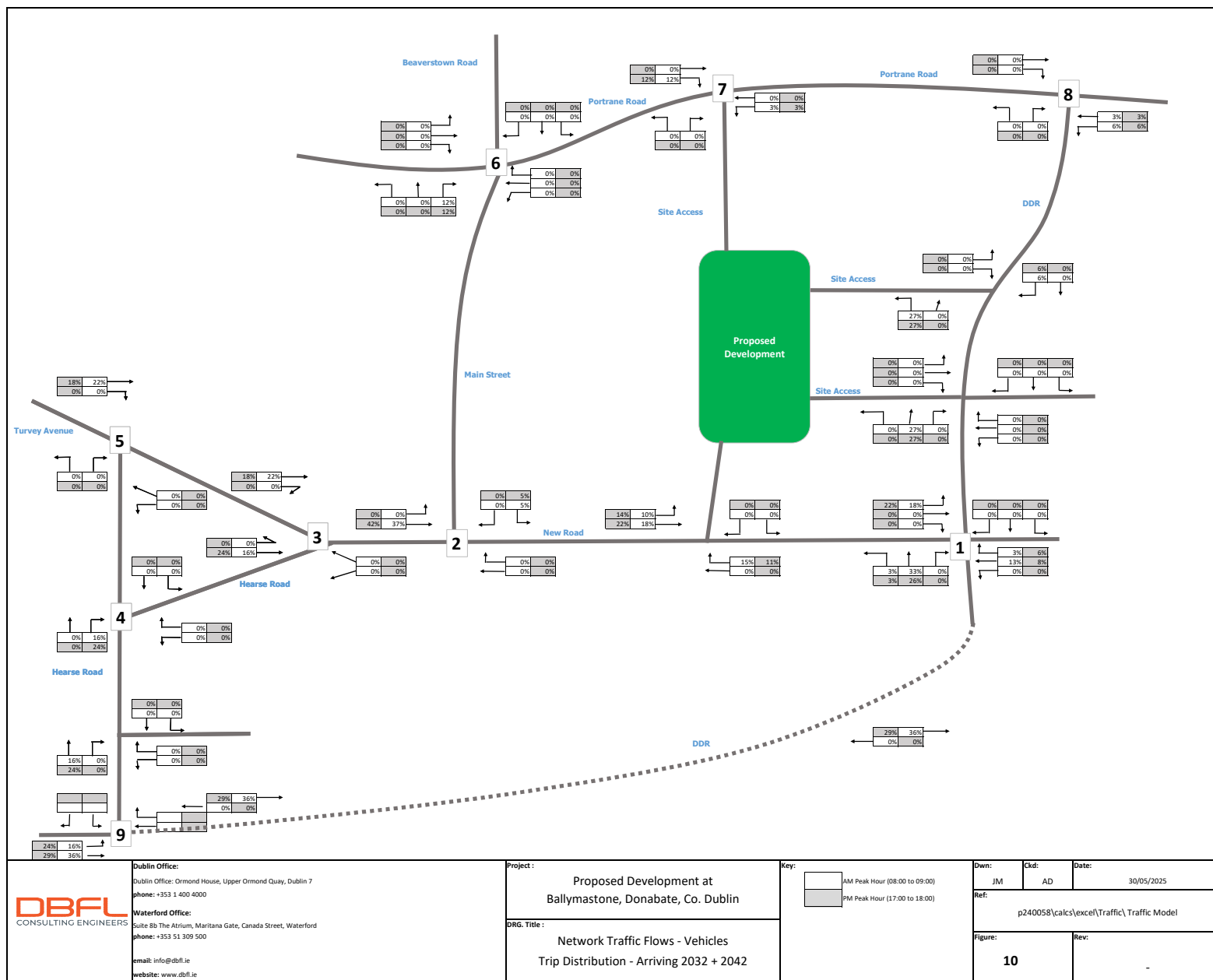


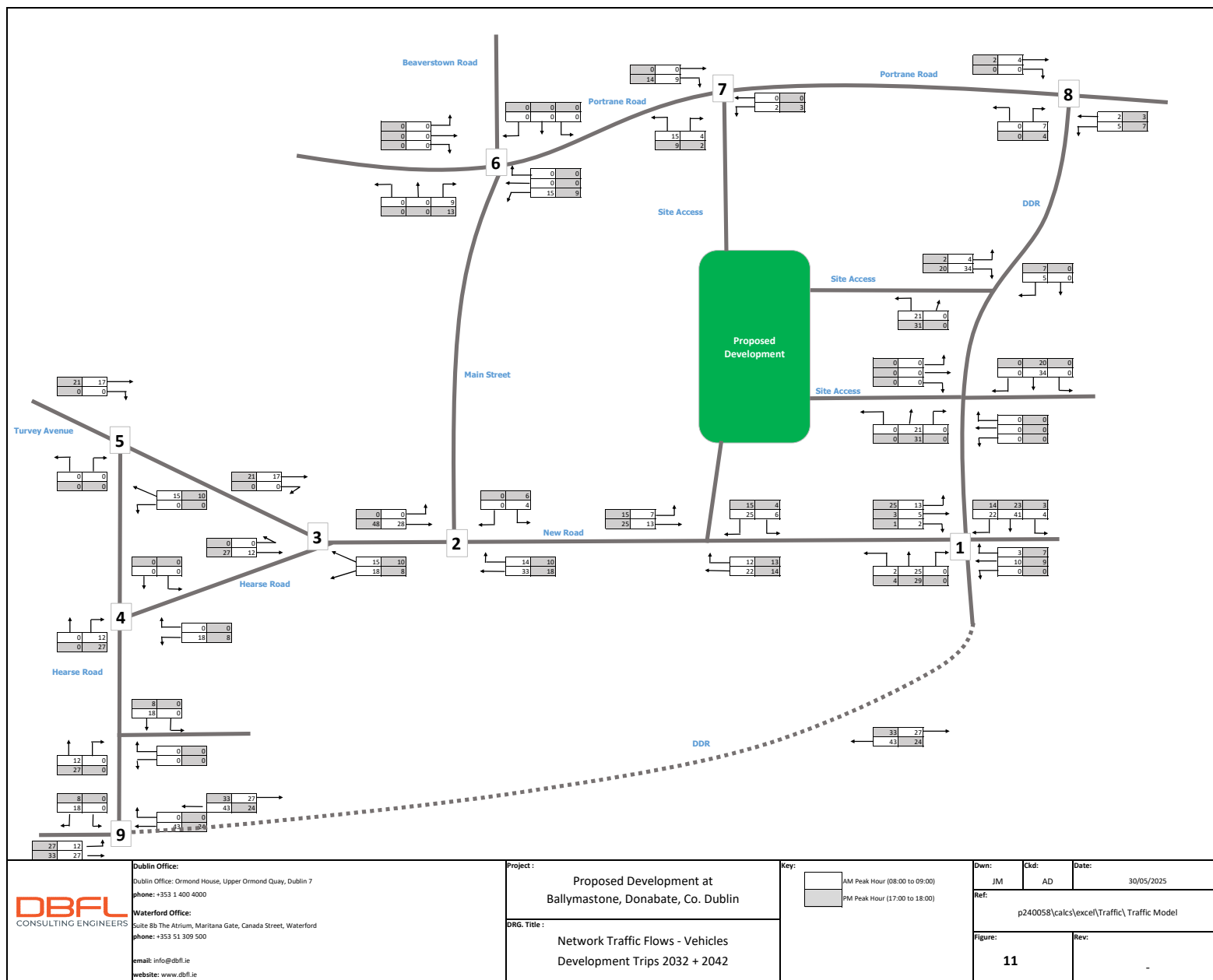


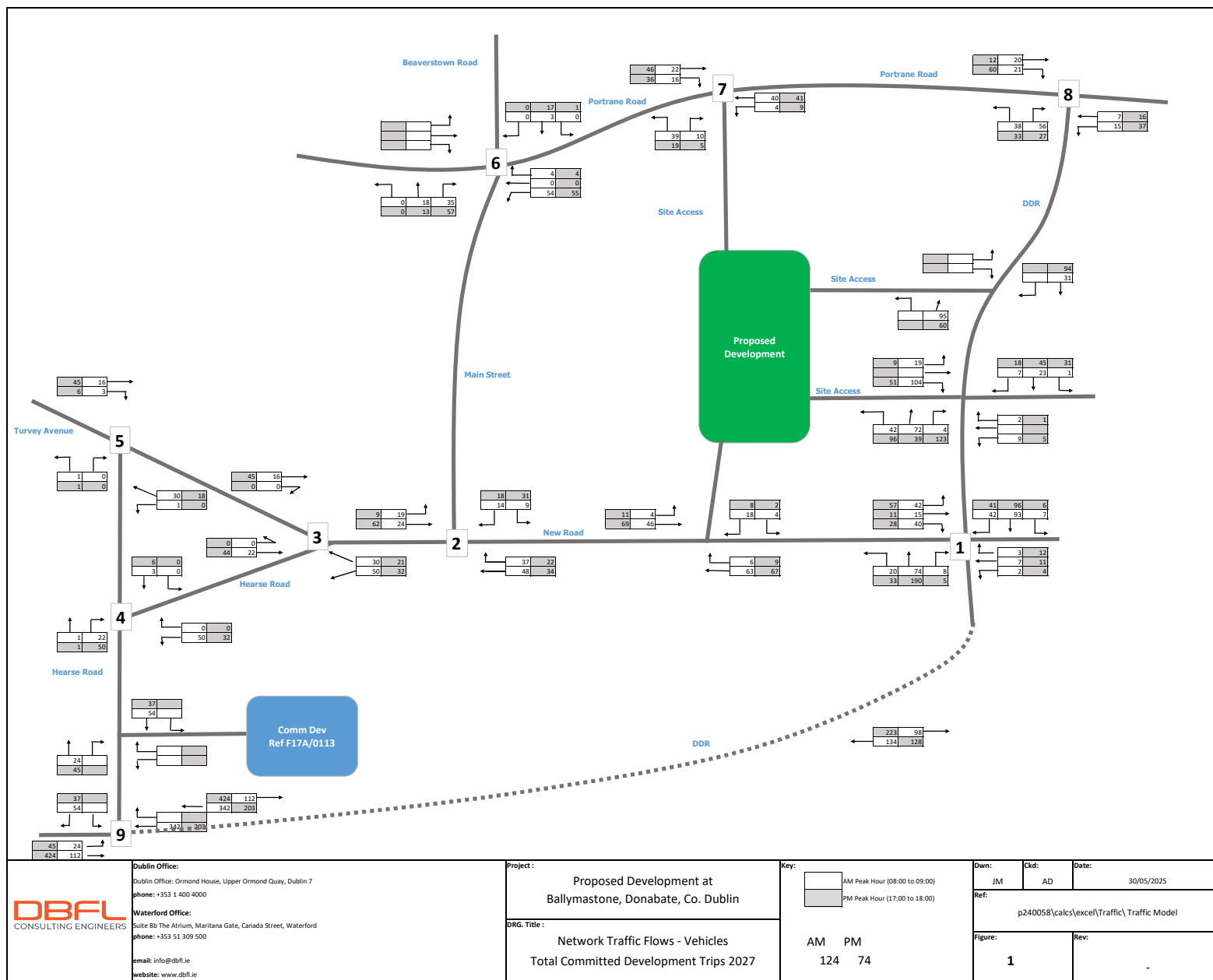




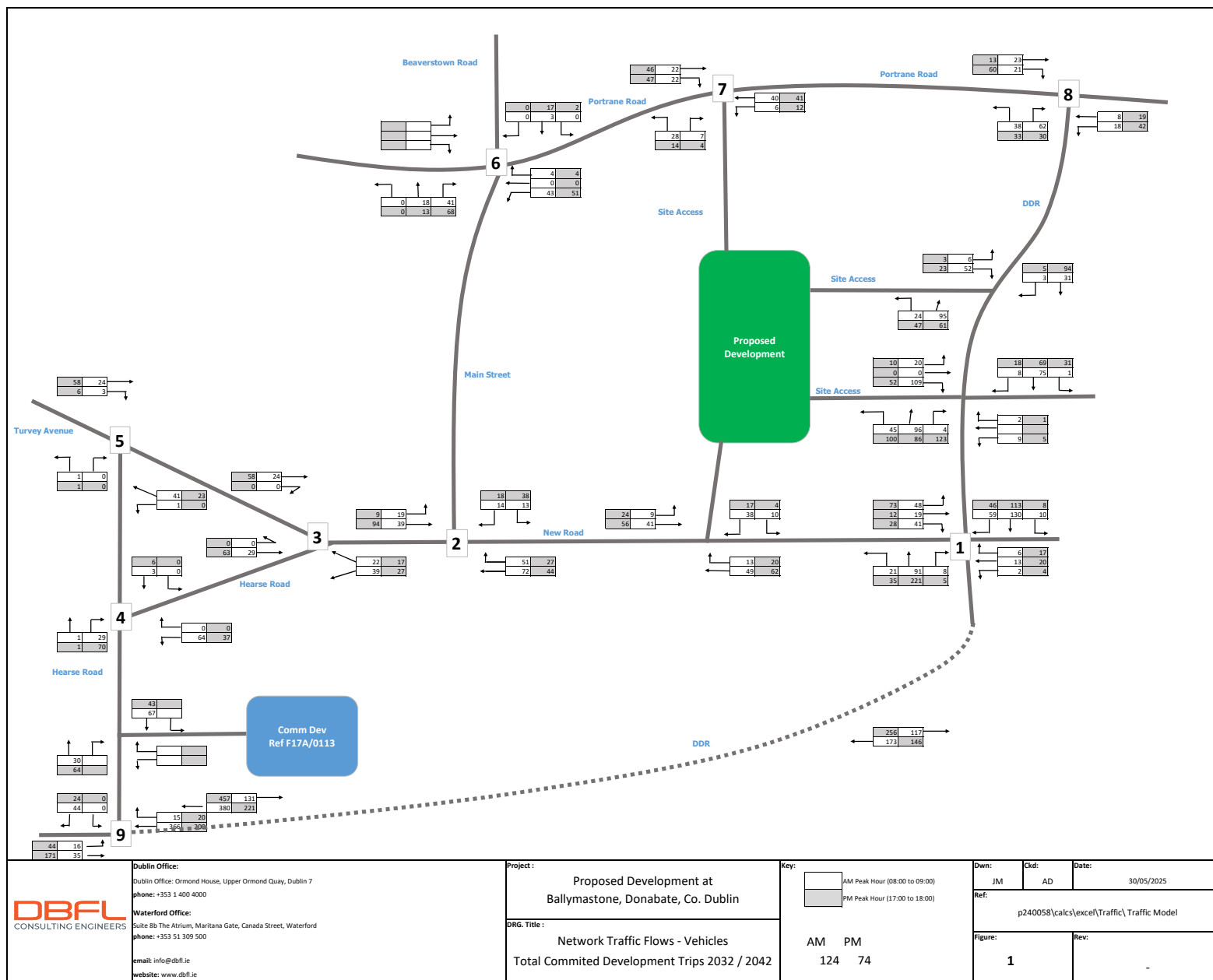








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		ORG. Title: Network Traffic Flows - Vehicles Total Committed Development Trips 2027		Ref: p240058\calcs\excel\Traffic\ Traffic Model Figure: 1 Rev: -



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Ballymastone, Donabate, Co. Dublin

ORG. Title:
Network Traffic Flows - Vehicles
Total Committed Development Trips 2032 / 2042

Key:

AM Peak Hour (08:00 to 09:00)

PM Peak Hour (17:00 to 18:00)

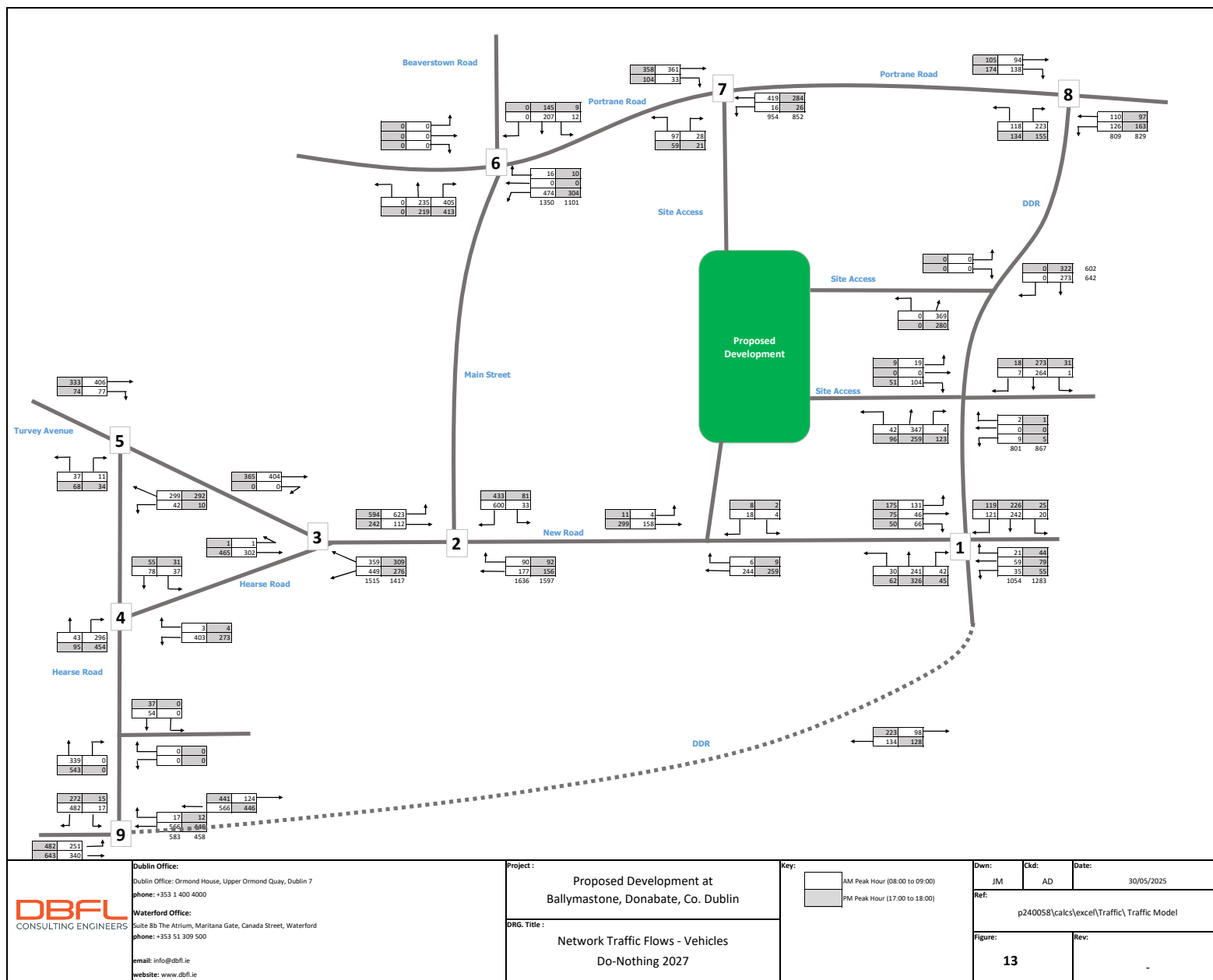
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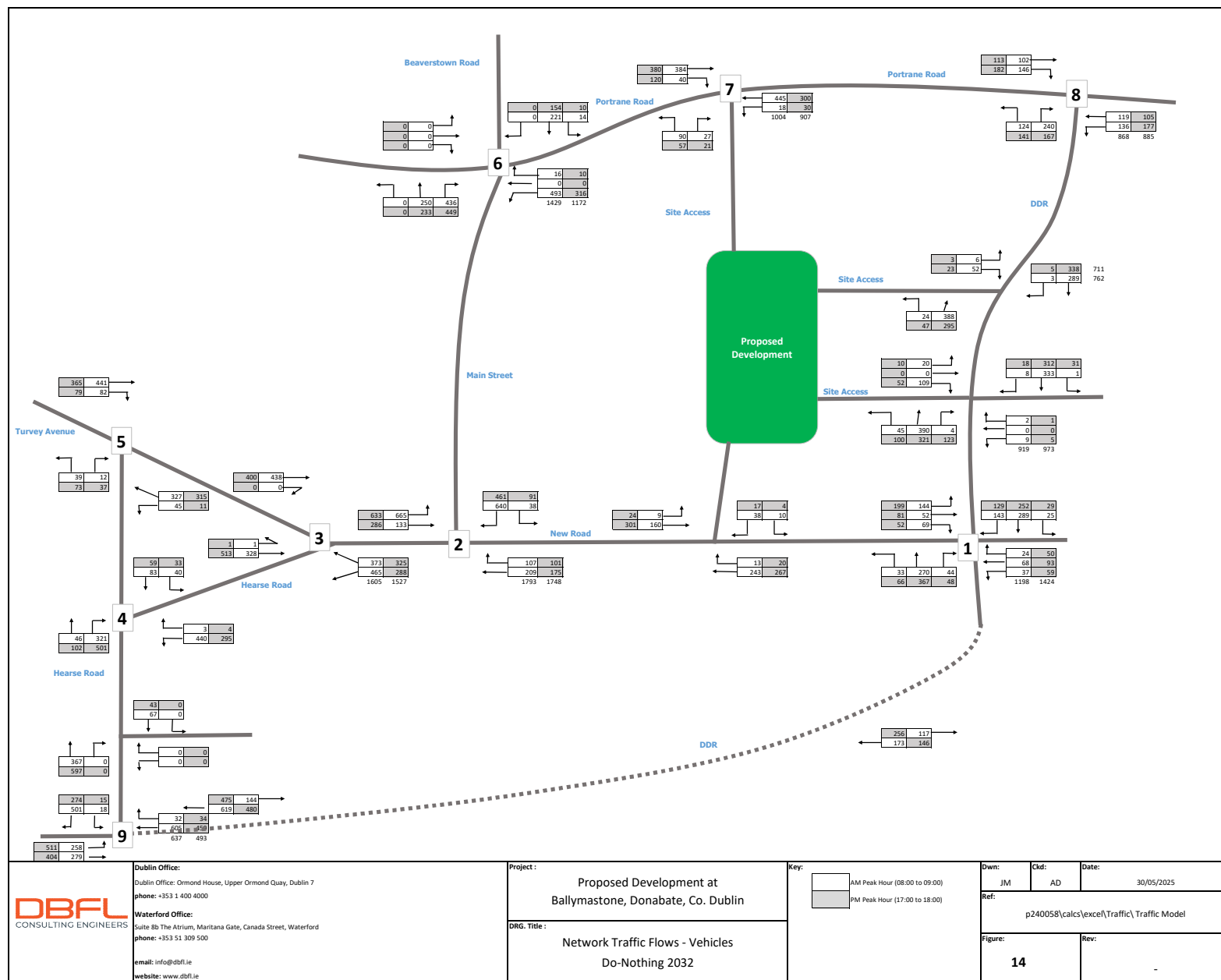
124 74

Dwn: JM **Ckd:** AD **Date:** 30/05/2025

Ref:
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Figure: 1 **Rev:** -





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Project :
Proposed Development at
Ballymastone, Donabate, Co. Dublin

DRG. Title :
Network Traffic Flows - Vehicles
Do-Nothing 2032

Key:

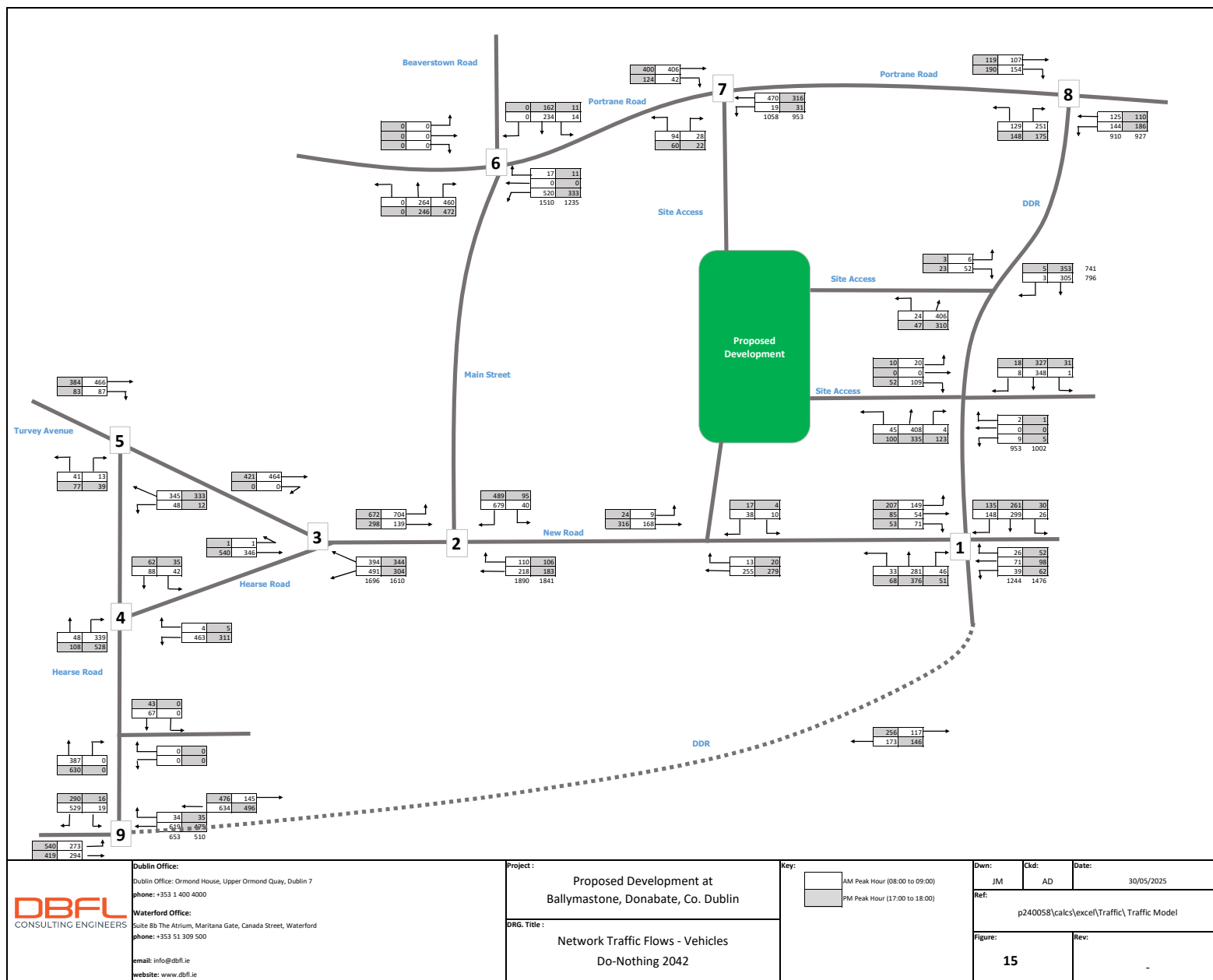
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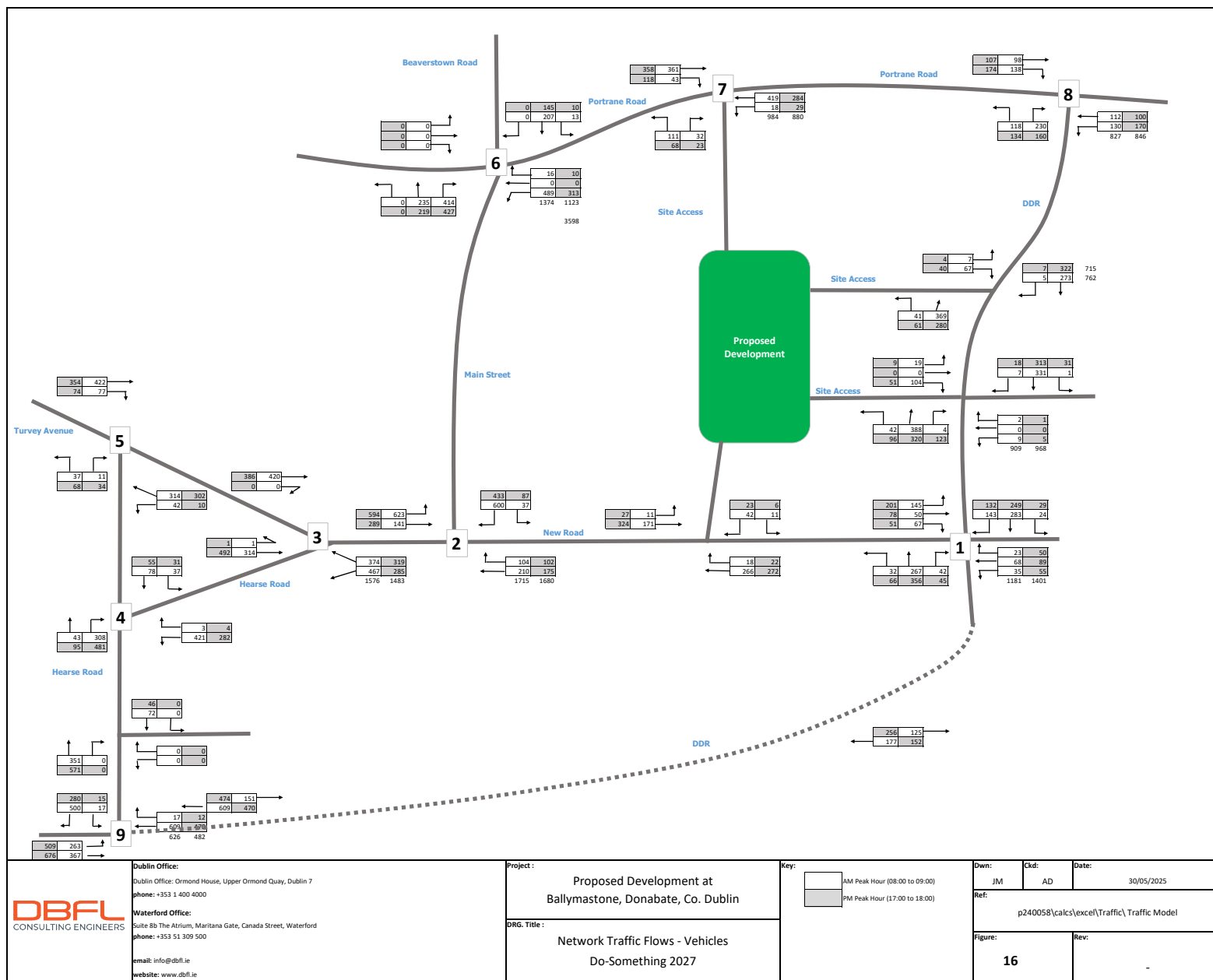
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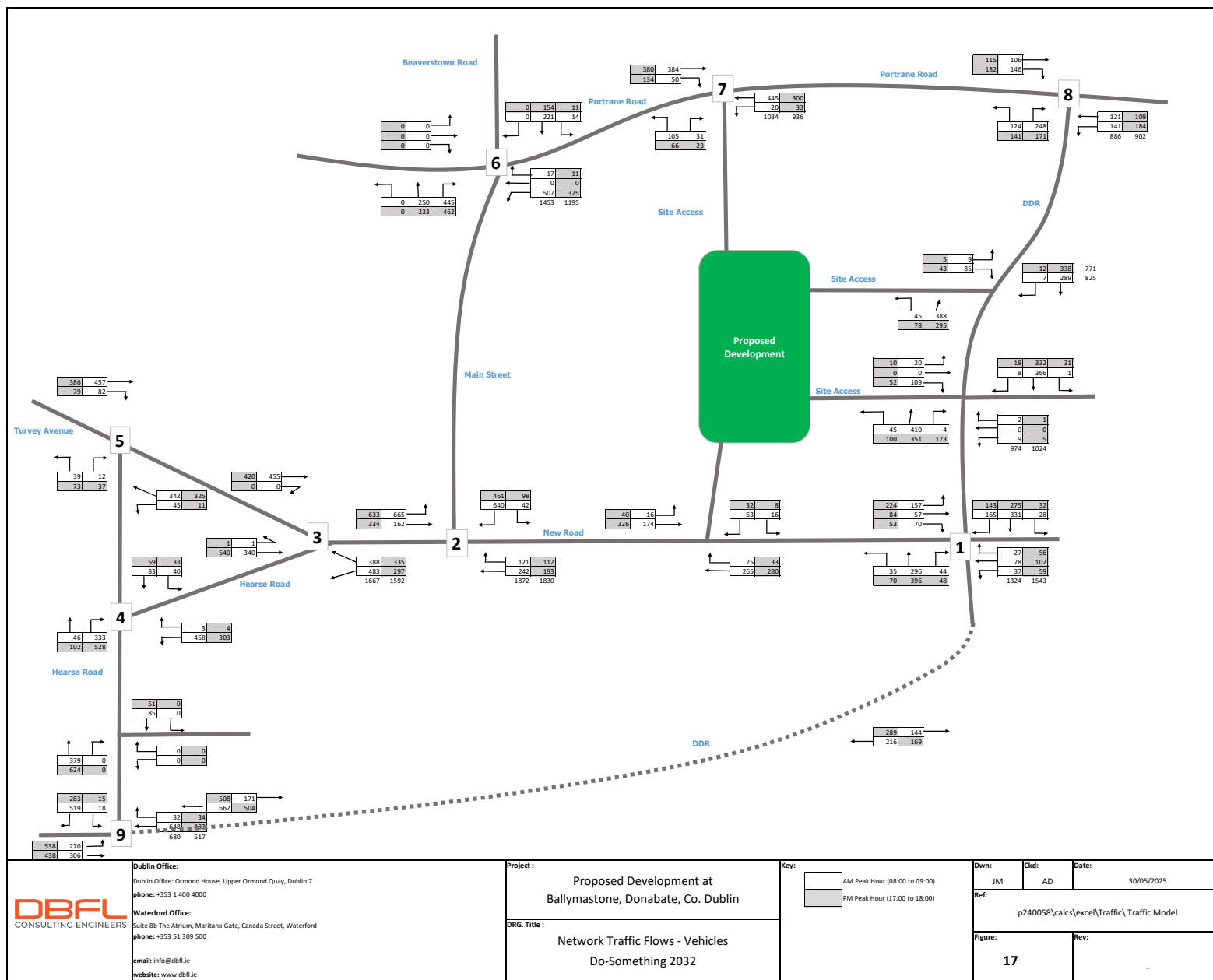
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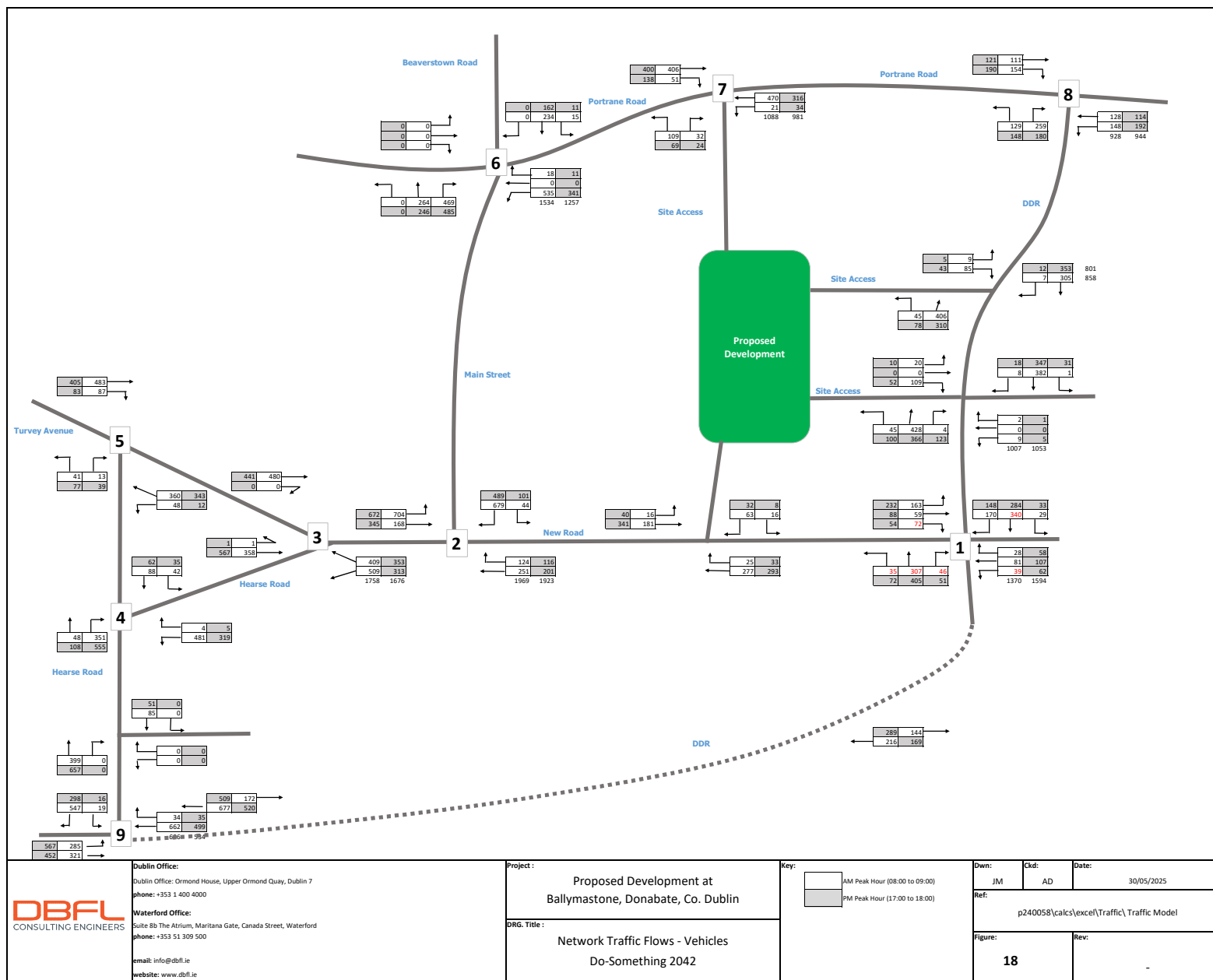
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Figure: 14
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DDR / Site Access (N)
 DDR / Site Access (S)
 DDR / New Road
 DDR / Portrane Road
 Portrane Road / Site Access
 Main Street / Portrane Road
 Main Street / New Road
 New Road / Hearse Road

2027	AM		
Scenario	DN	DS	% Impact
Junction 1	642	762	18.77%
Junction 2	801	909	13.54%
Junction 3	1054	1181	12.00%
Junction 4	809	827	2.23%
Junction 5	954	984	3.16%
Junction 6	1350	1374	1.79%
Junction 7	1636	1715	4.85%
Junction 8	1515	1576	4.07%

2027	PM		
Scenario	DN	DS	% Impact
Junction 1	602	715	18.71%
Junction 2	867	968	11.70%
Junction 3	1283	1401	9.21%
Junction 4	829	846	2.04%
Junction 5	852	880	3.31%
Junction 6	1101	1123	2.05%
Junction 7	1597	1680	5.15%
Junction 8	1417	1483	4.64%

DDR / Site Access (N)
 DDR / Site Access (S)
 DDR / New Road
 DDR / Portrane Road
 Portrane Road / Site Access
 Main Street / Portrane Road
 Main Street / New Road
 New Road / Hearse Road

2032	AM		
Scenario	DN	DS	% Impact
Junction 1	762	825	8.21%
Junction 2	919	974	5.90%
Junction 3	1198	1324	10.56%
Junction 4	868	886	2.08%
Junction 5	1004	1034	3.00%
Junction 6	1429	1453	1.69%
Junction 7	1793	1872	4.42%
Junction 8	1605	1667	3.84%

2032	PM		
Scenario	DN	DS	% Impact
Junction 1	711	771	8.40%
Junction 2	973	1024	5.21%
Junction 3	1424	1543	8.29%
Junction 4	885	902	1.91%
Junction 5	907	936	3.10%
Junction 6	1172	1195	1.92%
Junction 7	1748	1830	4.71%
Junction 8	1527	1592	4.31%

DDR / Site Access (N)
 DDR / Site Access (S)
 DDR / New Road
 DDR / Portrane Road
 Portrane Road / Site Access
 Main Street / Portrane Road
 Main Street / New Road
 New Road / Hearse Road

2042	AM		
Scenario	DN	DS	% Impact
Junction 1	796	858	7.86%
Junction 2	953	1007	5.69%
Junction 3	1244	1370	10.17%
Junction 4	910	928	1.99%
Junction 5	1058	1088	2.85%
Junction 6	1510	1534	1.60%
Junction 7	1890	1969	4.20%
Junction 8	1696	1758	3.63%

2042	PM		
Scenario	DN	DS	% Impact
Junction 1	741	801	8.07%
Junction 2	1002	1053	5.06%
Junction 3	1476	1594	8.00%
Junction 4	927	944	1.82%
Junction 5	953	981	2.96%
Junction 6	1235	1257	1.83%
Junction 7	1841	1923	4.47%
Junction 8	1610	1676	4.09%

Appendix B : PICADY Output Files

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.2.1013
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For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 375777 software@trl.co.uk www.trlsoftware.co.uk

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Hearse Road - L2170 DS.j9
Path: G:\2024\p240058\calcs\picady\Junction 8 - Hearse Road L2170
Report generation date: 22/09/2025 14:23:01

- »DS - DS 2027, AM
- »DS - DS 2027, PM
- »DS - DS 2032, AM
- »DS - DS 2032, PM
- »DS - DS 2042, AM
- »DS - DS 2042, PM

Summary of junction performance

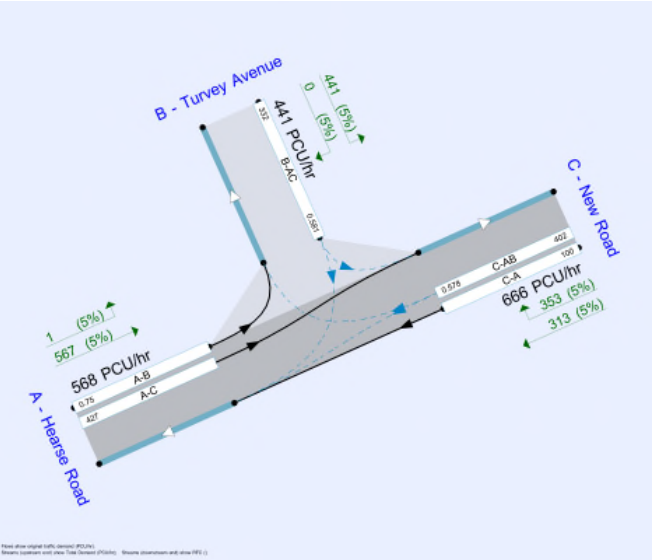
AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	
DS - DS 2027											
Stream B-AC	D1	3.5	28.56	0.78	D	D2	3.6	31.65	0.78	D	
Stream C-AB		35.8	129.63	1.04	F		7.1	35.79	0.86	E	
DS - DS 2032											
Stream B-AC	D3	5.5	41.89	0.86	E	D4	6.1	51.23	0.88	F	
Stream C-AB		52.2	180.89	1.09	F		12.5	61.11	0.93	F	
DS - DS 2042											
Stream B-AC	D5	8.1	55.19	0.91	F	D6	9.3	74.06	0.93	F	
Stream C-AB		79.4	290.49	1.15	F		22.2	104.04	1.00	F	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description	
Title	
Location	
Site number	
Date	28/11/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	HEADOFFICE\GarveyD
Description	

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	km/h	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	DS 2027	AM	ONE HOUR	07:45	09:15	15
D2	DS 2027	PM	ONE HOUR	16:45	18:15	15
D3	DS 2032	AM	ONE HOUR	07:45	09:15	15
D4	DS 2032	PM	ONE HOUR	16:45	18:15	15
D5	DS 2042	AM	ONE HOUR	07:45	09:15	15
D6	DS 2042	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	DS	100.000

DS - DS 2027, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		71.48	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Hearse Road	Major	
B	Turvey Avenue	Minor	
C	New Road	Major	

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - New Road	6.50			100.0	✓	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 - Turvey Avenue	One lane	3.50	110	40

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	560	0.100	0.252	0.159	0.360
B-C	682	0.102	0.258	-	-
C-B	632	0.240	0.240	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	DS 2027	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Hearse Road		✓	315	100.000
B - Turvey Avenue		✓	420	100.000
C - New Road		✓	841	100.000

Origin-Destination Data

		To		
From		A - Hearse Road	B - Turvey Avenue	C - New Road
	A - Hearse Road	0	1	314
	B - Turvey Avenue	0	0	420
	C - New Road	467	374	0

Vehicle Mix

		To		
From		A - Hearse Road	B - Turvey Avenue	C - New Road
	A - Hearse Road	0	5	5
	B - Turvey Avenue	5	0	5
	C - New Road	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.78	28.56	3.5	D
C-AB	1.04	129.63	35.8	F
C-A				
AB				
AC				

Main Results for each time segment

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	316	620	0.510	312	1.1	12.095	B
C-AB	495	814	0.608	487	2.2	11.417	B
C-A	138			138			
AB	0.75			0.75			
AC	236			236			

DS - DS 2027, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		20.79	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	DS 2027	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Hearse Road		✓	493	100.000
B - Turvey Avenue		✓	386	100.000
C - New Road		✓	604	100.000

Origin-Destination Data

		To		
From		A - Hearse Road	B - Turvey Avenue	C - New Road
	A - Hearse Road	0	1	492
	B - Turvey Avenue	0	0	386
	C - New Road	285	319	0

Vehicle Mix

		To		
From		A - Hearse Road	B - Turvey Avenue	C - New Road
	A - Hearse Road	0	5	5
	B - Turvey Avenue	5	0	5
	C - New Road	5	5	0

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	347	567	0.612	354	1.7	18.308	C
C-AB	460	716	0.643	478	2.6	17.342	C
C-A	83			83			
AB	0.90			0.90			
AC	442			442			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	291	586	0.496	293	1.1	13.035	B
C-AB	351	696	0.505	356	1.4	11.356	B
C-A	104			104			
AB	0.75			0.75			
AC	370			370			

DS - DS 2032, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		100.47	F

Junction Network Options

Driving side	Lighting
Left	Normalunknown

Traffic Demand

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	DS 2032	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Hearse Road		✓	341	100.000
B - Turvey Avenue		✓	455	100.000
C - New Road		✓	871	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
From		A - Hearse Road	B - Turvey Avenue	C - New Road
	A - Hearse Road	0	1	340
	B - Turvey Avenue	0	0	455
	C - New Road	483	388	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		A - Hearse Road	B - Turvey Avenue	C - New Road
	A - Hearse Road	0	5	5
	B - Turvey Avenue	5	0	5
	C - New Road	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.86	41.89	5.5	E
C-AB	1.09	180.89	52.2	F
C-A				
AB				
AC				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	343	615	0.557	337	1.3	13.370	B
C-AB	525	819	0.642	516	2.5	12.302	B
C-A	130			130			
AB	0.75			0.75			
AC	256			256			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	409	603	0.679	406	2.1	18.881	C
C-AB	713	861	0.828	699	6.0	23.066	C
C-A	70			70			
AB	0.90			0.90			
AC	306			306			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	501	585	0.857	490	5.0	35.888	E
C-AB	959	884	1.085	856	31.7	88.792	F
C-A	0			0			
AB	1			1			
AC	374			374			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	501	585	0.857	499	5.5	41.894	E
C-AB	959	885	1.084	877	52.2	180.891	F
C-A	0			0			
AB	1			1			
AC	374			374			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	409	603	0.679	421	2.4	22.098	C
C-AB	783	904	0.866	879	28.2	163.486	F
C-A	0			0			
AB	0.90			0.90			
AC	306			306			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	343	615	0.557	347	1.4	14.258	B
C-AB	578	862	0.671	678	3.2	33.434	D
C-A	78			78			
AB	0.75			0.75			
AC	256			256			

DS - DS 2032, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		35.17	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	DS 2032	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Hearse Road		✓	541	100.000
B - Turvey Avenue		✓	420	100.000
C - New Road		✓	632	100.000

Origin-Destination Data

Demand (PCU/hr)		To		
From		A - Hearse Road	B - Turvey Avenue	C - New Road
		0	1	540
A - Hearse Road		0	0	420
B - Turvey Avenue		297	335	0
C - New Road				

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		A - Hearse Road	B - Turvey Avenue	C - New Road
		0	5	5
A - Hearse Road		5	0	5
B - Turvey Avenue		5	5	0
C - New Road				

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.88	51.23	6.1	F
C-AB	0.93	61.11	12.5	F
C-A				
AB				
AC				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	316	577	0.548	311	1.2	14.006	B
C-AB	373	692	0.539	367	1.5	11.519	B
C-A	103			103			
AB	0.75			0.75			
AC	407			407			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	378	556	0.679	374	2.1	20.382	C
C-AB	487	707	0.689	482	2.8	16.717	C
C-A	81			81			
AB	0.90			0.90			
AC	485			485			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	462	528	0.876	449	5.4	42.097	E
C-AB	677	730	0.926	648	9.9	41.735	E
C-A	19			19			
AB	1			1			
AC	595			595			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	462	528	0.876	460	6.1	51.226	F
C-AB	692	740	0.934	681	12.5	61.111	F
C-A	4			4			
AB	1			1			
AC	595			595			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	378	556	0.679	393	2.4	24.886	C
C-AB	504	723	0.697	540	3.4	25.082	D
C-A	64			64			
AB	0.90			0.90			
AC	485			485			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	316	577	0.548	320	1.3	14.992	B
C-AB	377	695	0.542	384	1.6	12.519	B
C-A	99			99			
AB	0.75			0.75			
AC	407			407			

DS - DS 2042, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		163.12	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	DS 2042	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Hearse Road		✓	359	100.000
B - Turvey Avenue		✓	480	100.000
C - New Road		✓	918	100.000

Origin-Destination Data

Demand (PCU/hr)		To		
From		A - Hearse Road	B - Turvey Avenue	C - New Road
		0	1	358
A - Hearse Road		0	0	480
B - Turvey Avenue		509	409	0
C - New Road				

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		A - Hearse Road	B - Turvey Avenue	C - New Road
		0	5	5
A - Hearse Road		5	0	5
B - Turvey Avenue		5	5	0
C - New Road				

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.91	59.19	8.1	F
C-AB	1.15	290.49	79.4	F
C-A				
AB				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	361	612	0.591	356	1.5	14.441	B
C-AB	572	830	0.690	560	3.1	13.776	B
C-A	119			119			
AB	0.75			0.75			
A-C	270			270			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	432	598	0.721	427	2.5	21.544	C
C-AB	793	875	0.895	760	9.0	31.491	D
C-A	42			42			
AB	0.90			0.90			
A-C	322			322			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	528	580	0.912	511	6.9	46.084	E
C-AB	1011	878	1.151	864	45.8	124.477	F
C-A	0			0			
AB	1			1			
A-C	394			394			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	528	580	0.912	524	8.1	59.187	F
C-AB	1011	879	1.150	876	79.4	264.989	F
C-A	0			0			
AB	1			1			
A-C	394			394			

DS - DS 2042, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		57.49	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	DS 2042	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Hearse Road		✓	568	100.000
B - Turvey Avenue		✓	441	100.000
C - New Road		✓	666	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Hearse Road	B - Turvey Avenue	C - New Road
From	A - Hearse Road	0	1	567
	B - Turvey Avenue	0	0	441
	C - New Road	313	353	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Hearse Road	B - Turvey Avenue	C - New Road
From	A - Hearse Road	0	5	5
	B - Turvey Avenue	5	0	5
	C - New Road	5	5	0

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	432	598	0.721	452	3.0	28.651	D
C-AB	825	900	0.917	883	64.9	290.495	F
C-A	0			0			
AB	0.90			0.90			
A-C	322			322			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	361	612	0.591	367	1.6	15.754	C
C-AB	691	914	0.756	893	14.4	161.476	F
C-A	0			0			
AB	0.75			0.75			
A-C	270			270			

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	332	571	0.581	326	1.4	15.119	C
C-AB	402	696	0.578	395	1.8	12.404	B
C-A	100			100			
AB	0.75			0.75			
A-C	427			427			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	396	550	0.721	392	2.5	23.297	C
C-AB	528	713	0.741	521	3.6	19.569	C
C-A	70			70			
AB	0.90			0.90			
A-C	510			510			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	486	520	0.933	465	7.6	54.526	F
C-AB	733	734	0.999	684	15.9	60.581	F
C-A	0			0			
AB	1			1			
A-C	624			624			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	486	520	0.933	479	9.3	74.062	F
C-AB	733	735	0.998	708	22.2	104.041	F
C-A	0			0			
AB	1			1			
A-C	624			624			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	396	550	0.721	422	3.0	33.854	D
C-AB	563	741	0.759	631	5.0	50.102	F
C-A	36			36			
A-B	0.90			0.90			
A-C	510			510			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	332	571	0.581	338	1.5	16.574	C
C-AB	408	702	0.582	421	2.0	14.160	B
C-A	93			93			
A-B	0.75			0.75			
A-C	427			427			

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.2.1013
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Filename: Main Street - Chapel View DN.j9
Path: G:\2024\p240058\calcs\picady\Junction 7 - Main Street Chapel View
Report generation date: 22/09/2025 14:07:30

- »DN - DN 2027, AM
- »DN - DN 2027, PM
- »DN - DN 2032, AM
- »DN - DN 2032, PM
- »DN - DN 2042, AM
- »DN - DN 2042, PM

Summary of junction performance

		AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	
DN - DN 2027											
Stream B-AC	D1	3.8	50.26	0.81	F	D2	3.1	43.53	0.77	E	
Stream C-AB		1.7	6.90	0.43	A		9.6	29.91	0.86	D	
DN - DN 2032											
Stream B-AC	D3	16.4	169.25	1.03	F	D4	10.5	126.67	0.99	F	
Stream C-AB		2.7	8.58	0.55	A		39.6	129.52	1.04	F	
DN - DN 2042											
Stream B-AC	D5	29.6	282.50	1.15	F	D6	25.0	264.88	1.15	F	
Stream C-AB		3.6	9.89	0.62	A		63.7	196.14	1.10	F	

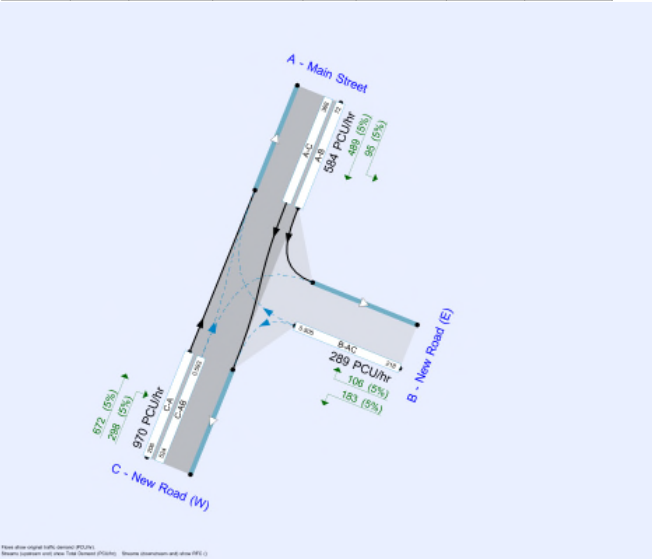
Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description	
Title	
Location	
Site number	
Date	28/11/2023
Version	
Status	(new file)
Identifier	
Client	
Job number	
Enumerator	HEADOFFICE\GarveyD
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	DN 2027	AM	ONE HOUR	07:45	09:15	15
D2	DN 2027	PM	ONE HOUR	16:45	18:15	15
D3	DN 2032	AM	ONE HOUR	07:45	09:15	15
D4	DN 2032	PM	ONE HOUR	16:45	18:15	15
D5	DN 2042	AM	ONE HOUR	07:45	09:15	15
D6	DN 2042	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
At	DN	100.000

DN - DN 2027, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		9.56	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Main Street		Major
B	New Road (E)		Minor
C	New Road (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - New Road (W)	6.50			100.0	✓	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 - New Road (E)	One lane	3.50	80	50

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	555	0.099	0.250	0.157	0.357
B-C	688	0.103	0.261	-	-
C-B	632	0.240	0.240	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	DN 2027	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Main Street		✓	633	100.000
B - New Road (E)		✓	267	100.000
C - New Road (W)		✓	735	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Main Street	B - New Road (E)	C - New Road (W)
From	A - Main Street	0	33	600
	B - New Road (E)	90	0	177
	C - New Road (W)	623	112	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Main Street	B - New Road (E)	C - New Road (W)
From	A - Main Street	0	5	5
	B - New Road (E)	5	0	5
	C - New Road (W)	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.81	50.26	3.8	F
C-AB	0.43	6.90	1.7	A
C-A				
AB				
AC				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	201	461	0.437	198	0.8	14.230	B
C-AB	188	852	0.220	185	0.6	5.672	A
C-A	366			366			
AB	25			25			
AC	452			452			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	240	422	0.569	238	1.3	20.289	C
C-AB	268	902	0.297	266	0.9	5.965	A
C-A	393			393			
AB	30			30			
AC	539			539			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	294	365	0.805	285	3.5	43.234	E
C-AB	421	975	0.432	418	1.7	6.824	A
C-A	388			388			
AB	36			36			
AC	661			661			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	294	365	0.806	293	3.8	50.262	F
C-AB	423	977	0.433	423	1.7	6.904	A
C-A	386			386			
AB	36			36			
AC	661			661			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	240	421	0.570	250	1.5	23.069	C
C-AB	270	905	0.298	273	0.9	6.045	A
C-A	391			391			
AB	30			30			
AC	539			539			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	201	460	0.437	204	0.8	14.876	B
C-AB	189	853	0.222	191	0.6	5.735	A
C-A	364			364			
AB	25			25			
AC	452			452			

DN - DN 2027, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		18.83	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	DN 2027	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Main Street		✓	514	100.000
B - New Road (E)		✓	248	100.000
C - New Road (W)		✓	836	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Main Street	B - New Road (E)	C - New Road (W)
From	A - Main Street	0	81	433
	B - New Road (E)	92	0	156
	C - New Road (W)	594	242	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Main Street	B - New Road (E)	C - New Road (W)
From	A - Main Street	0	5	5
	B - New Road (E)	5	0	5
	C - New Road (W)	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.77	43.53	3.1	E
C-AB	0.86	29.91	9.6	D
C-A				
AB				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	187	461	0.405	184	0.7	13.532	B
C-AB	383	852	0.450	378	1.3	7.944	A
C-A	246			246			
AB	61			61			
A-C	326			326			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	223	421	0.530	221	1.1	18.770	C
C-AB	539	903	0.597	534	2.5	10.345	B
C-A	213			213			
AB	73			73			
A-C	389			389			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	273	361	0.757	266	2.8	37.607	E
C-AB	829	974	0.851	806	8.2	22.738	C
C-A	91			91			
AB	89			89			
A-C	477			477			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	273	356	0.767	272	3.1	43.532	E
C-AB	851	986	0.863	845	9.6	29.910	D
C-A	69			69			
AB	89			89			
A-C	477			477			

DN - DN 2032, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		31.82	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	DN 2032	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Main Street		✓	678	100.000
B - New Road (E)		✓	316	100.000
C - New Road (W)		✓	798	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
From		A - Main Street	B - New Road (E)	C - New Road (W)
	A - Main Street	0	38	640
	B - New Road (E)	107	0	209
	C - New Road (W)	665	133	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - Main Street	B - New Road (E)	C - New Road (W)
	A - Main Street	0	5	5
	B - New Road (E)	5	0	5
	C - New Road (W)	5	5	0

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	223	415	0.537	230	1.3	21.187	C
C-AB	559	919	0.608	586	2.9	12.583	B
C-A	192			192			
AB	73			73			
A-C	389			389			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	187	459	0.407	189	0.7	14.115	B
C-AB	389	857	0.454	395	1.4	8.350	A
C-A	240			240			
AB	61			61			
A-C	326			326			

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	1.03	169.25	16.4	F
C-AB	0.55	8.58	2.7	A
C-A				
AB				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	238	445	0.535	233	1.2	17.535	C
C-AB	236	869	0.272	233	0.7	5.951	A
C-A	364			364			
AB	29			29			
A-C	482			482			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	294	402	0.707	280	2.3	29.862	D
C-AB	342	924	0.371	340	1.2	6.513	A
C-A	375			375			
AB	34			34			
A-C	575			575			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	348	337	1.032	314	10.9	100.214	F
C-AB	551	1003	0.549	545	2.6	8.348	A
C-A	328			328			
AB	42			42			
A-C	705			705			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	348	336	1.035	326	16.4	169.254	F
C-AB	556	1007	0.552	556	2.7	8.575	A
C-A	323			323			
AB	42			42			
A-C	705			705			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	284	401	0.709	338	3.0	79.378	F
C-AB	347	928	0.373	352	1.3	6.687	A
C-A	371			371			
A-B	34			34			
A-C	575			575			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	238	444	0.536	245	1.3	19.611	C
C-AB	239	871	0.275	241	0.8	6.049	A
C-A	362			362			
A-B	29			29			
A-C	482			482			

DN - DN 2032, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		79.90	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	DN 2032	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Main Street		✓	552	100.000
B - New Road (E)		✓	276	100.000
C - New Road (W)		✓	919	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
From		A - Main Street	B - New Road (E)	C - New Road (W)
	A - Main Street	0	91	461
	B - New Road (E)	101	0	175
	C - New Road (W)	633	286	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		A - Main Street	B - New Road (E)	C - New Road (W)
	A - Main Street	0	5	5
	B - New Road (E)	5	0	5
	C - New Road (W)	5	5	0

12

13

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.99	126.67	10.5	F
C-AB	1.04	128.52	39.6	F
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	208	443	0.469	204	0.9	15.587	C
C-AB	477	868	0.550	470	2.0	9.443	A
C-A	214			214			
A-B	69			69			
A-C	347			347			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	248	397	0.624	245	1.6	24.355	C
C-AB	681	923	0.738	671	4.5	15.207	C
C-A	145			145			
A-B	82			82			
A-C	414			414			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	304	326	0.932	285	6.4	71.859	F
C-AB	1012	976	1.036	926	26.0	63.968	F
C-A	0			0			
A-B	100			100			
A-C	508			508			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	304	305	0.995	287	10.5	126.670	F
C-AB	1012	978	1.035	958	39.6	128.522	F
C-A	0			0			
A-B	100			100			
A-C	508			508			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	248	368	0.675	280	2.4	53.497	F
C-AB	802	998	0.804	924	9.1	79.811	F
C-A	24			24			
A-B	82			82			
A-C	414			414			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	208	437	0.475	214	1.0	17.316	C
C-AB	497	885	0.561	525	2.2	11.465	B
C-A	195			195			
A-B	69			69			
A-C	347			347			

14

15

DN - DN 2042, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		51.47	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	DN 2042	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Main Street		✓	719	100.000
B - New Road (E)		✓	328	100.000
C - New Road (W)		✓	843	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Main Street	B - New Road (E)	C - New Road (W)
From	A - Main Street	0	40	679
	B - New Road (E)	110	0	218
	C - New Road (W)	704	139	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Main Street	B - New Road (E)	C - New Road (W)
From	A - Main Street	0	5	5
	B - New Road (E)	5	0	5
	C - New Road (W)	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	1.15	282.50	29.6	F
C-AB	0.62	9.89	3.6	A
C-A				
AB				
AC				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	247	433	0.570	242	1.3	19.268	C
C-AB	261	884	0.295	258	0.8	6.031	A
C-A	373			373			
AB	30			30			
AC	511			511			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	295	387	0.763	289	2.9	36.337	E
C-AB	384	944	0.407	381	1.4	6.761	A
C-A	374			374			
AB	36			36			
AC	610			610			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	361	316	1.143	304	17.2	146.116	F
C-AB	632	1030	0.613	624	3.4	9.449	A
C-A	297			297			
AB	44			44			
AC	748			748			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	361	315	1.148	312	29.6	282.495	F
C-AB	639	1035	0.618	639	3.6	9.886	A
C-A	289			289			
AB	44			44			
AC	748			748			

DN - DN 2042, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		136.36	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	DN 2042	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Main Street		✓	584	100.000
B - New Road (E)		✓	289	100.000
C - New Road (W)		✓	970	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Main Street	B - New Road (E)	C - New Road (W)
From	A - Main Street	0	95	489
	B - New Road (E)	106	0	183
	C - New Road (W)	672	298	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Main Street	B - New Road (E)	C - New Road (W)
From	A - Main Street	0	5	5
	B - New Road (E)	5	0	5
	C - New Road (W)	5	5	0

DS - DS 2027, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		23.68	C

Junction Network Options

Driving side	Lighting
Left	Normalatunknowm

Arms

Arm	Name	Description	Arm type
A	Main Street		Major
B	New Road (E)		Minor
C	New Road (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - New Road (W)	6.50			100.0	✓	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 - New Road (E)	One lane	3.50	80	50

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	555	0.099	0.250	0.157	0.357
B-C	688	0.103	0.261	-	-
C-B	632	0.240	0.240	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	DS 2027	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Main Street		✓	637	100.000
B - New Road (E)		✓	314	100.000
C - New Road (W)		✓	764	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Main Street	B - New Road (E)	C - New Road (W)
From	A - Main Street	0	37	600
	B - New Road (E)	104	0	210
	C - New Road (W)	623	141	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Main Street	B - New Road (E)	C - New Road (W)
From	A - Main Street	0	5	5
	B - New Road (E)	5	0	5
	C - New Road (W)	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.97	119.13	10.9	F
C-AB	0.55	8.71	2.5	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	236	457	0.518	232	1.1	16.527	C
C-AB	236	851	0.278	234	0.7	6.115	A
C-A	339			339			
A-B	28			28			
A-C	452			452			

DS - DS 2027, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		63.07	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
DZ	DS 2027	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Main Street		✓	520	100.000
B - New Road (E)		✓	277	100.000
C - New Road (W)		✓	883	100.000

Origin-Destination Data

Demand (PCU/hr)		To		
From		A - Main Street	B - New Road (E)	C - New Road (W)
		0	87	433
A - Main Street				
B - New Road (E)		102	0	175
C - New Road (W)		594	289	0

Vehicle Mix

Heavy Vehicle Percentages		To		
From		A - Main Street	B - New Road (E)	C - New Road (W)
		0	5	5
A - Main Street				
B - New Road (E)		5	0	5
C - New Road (W)		5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.94	94.97	7.6	F
C-AB	1.01	103.28	30.4	F
C-A				
AB				
AC				

Main Results for each time segment

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	209	452	0.462	205	0.9	15.122	C
C-AB	458	852	0.538	451	1.8	9.385	A
C-A	207			207			
AB	65			65			
AC	326			326			

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	249	468	0.610	246	1.5	22.946	C
C-AB	645	902	0.715	637	3.9	14.388	B
C-A	148			148			
AB	78			78			
AC	389			389			

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	305	342	0.893	290	5.3	60.848	F
C-AB	972	964	1.008	903	21.3	54.574	F
C-A	0			0			
AB	96			96			
AC	477			477			

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	305	326	0.936	296	7.6	94.971	F
C-AB	972	966	1.006	936	30.4	103.275	F
C-A	0			0			
AB	96			96			
AC	477			477			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	249	386	0.645	271	2.1	37.683	E
C-AB	728	958	0.760	825	6.2	47.548	E
C-A	66			66			
AB	78			78			
AC	389			389			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	209	448	0.466	213	0.9	16.412	C
C-AB	471	863	0.546	487	2.0	10.663	B
C-A	194			194			
AB	65			65			
AC	326			326			

DS - DS 2032, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		75.35	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	DS 2032	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Main Street		✓	682	100.000
B - New Road (E)		✓	363	100.000
C - New Road (W)		✓	827	100.000

Origin-Destination Data

Demand (PCU/hr)		To		
From		A - Main Street	B - New Road (E)	C - New Road (W)
		0	42	640
A - Main Street				
B - New Road (E)		121	0	242
C - New Road (W)		665	162	0

Vehicle Mix

Heavy Vehicle Percentages		To		
From		A - Main Street	B - New Road (E)	C - New Road (W)
		0	5	5
A - Main Street				
B - New Road (E)		5	0	5
C - New Road (W)		5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	1.23	371.79	42.7	F
C-AB	0.68	12.09	4.3	B
C-A				
AB				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	273	440	0.620	267	1.6	21.072	C
C-AB	288	868	0.332	284	0.9	6.475	A
C-A	334			334			
AB	32			32			
A-C	482			482			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	326	396	0.825	317	3.9	43.720	E
C-AB	418	923	0.452	415	1.6	7.483	A
C-A	326			326			
AB	38			38			
A-C	575			575			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	400	328	1.220	320	23.8	182.216	F
C-AB	673	1003	0.671	664	4.1	11.318	B
C-A	237			237			
AB	46			46			
A-C	705			705			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	400	326	1.227	324	42.7	371.790	F
C-AB	683	1009	0.676	682	4.3	12.089	B
C-A	228			228			
AB	46			46			
A-C	705			705			

DS - DS 2032, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		200.39	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	DS 2032	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Main Street		✓	559	100.000
B - New Road (E)		✓	305	100.000
C - New Road (W)		✓	967	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
From		A - Main Street	B - New Road (E)	C - New Road (W)
	A - Main Street	0	98	461
	B - New Road (E)	112	0	193
	C - New Road (W)	633	334	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		A - Main Street	B - New Road (E)	C - New Road (W)
	A - Main Street	0	5	5
	B - New Road (E)	5	0	5
	C - New Road (W)	5	5	0

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	274	308	0.891	299	29.1	375.924	F
C-AB	869	963	0.903	943	63.7	273.303	F
C-A	0			0			
A-B	88			88			
A-C	414			414			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	230	383	0.600	339	1.9	136.259	F
C-AB	725	985	0.737	954	6.6	131.407	F
C-A	3			3			
A-B	74			74			
A-C	347			347			

DS - DS 2042, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		106.79	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
DS	DS 2042	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Main Street		✓	723	100.000
B - New Road (E)		✓	375	100.000
C - New Road (W)		✓	872	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
From		A - Main Street	B - New Road (E)	C - New Road (W)
	A - Main Street	0	44	679
	B - New Road (E)	124	0	251
	C - New Road (W)	704	168	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		A - Main Street	B - New Road (E)	C - New Road (W)
	A - Main Street	0	5	5
	B - New Road (E)	5	0	5
	C - New Road (W)	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	1.37	537.05	60.9	F
C-AB	0.75	15.79	6.2	C
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	282	429	0.659	275	1.9	23.576	C
C-AB	316	884	0.357	312	1.1	6.803	A
C-A	341			341			
A-B	33			33			
A-C	511			511			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	337	380	0.887	323	5.3	58.254	F
C-AB	465	944	0.493	461	1.9	7.901	A
C-A	319			319			
A-B	40			40			
A-C	610			610			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	413	305	1.352	301	33.2	256.016	F
C-AB	766	1030	0.744	751	5.7	13.902	B
C-A	194			194			
A-B	48			48			
A-C	748			748			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	413	302	1.366	302	60.9	537.050	F
C-AB	783	1039	0.753	781	6.2	15.794	C
C-A	177			177			
A-B	48			48			
A-C	748			748			

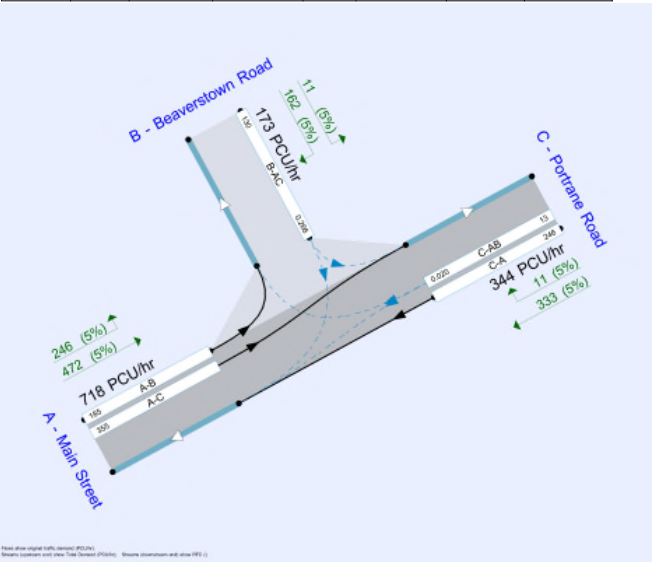
08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	337	377	0.894	371		52.6	F
C-AB	478	956	0.500	494	2.1	8.631	A
C-A	306			306			
A-B	40			40			
A-C	610			610			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	282	427	0.661	419	18.4	311.973	F
C-AB	321	888	0.361	325	1.1	6.811	A
C-A	336			336			
A-B	33			33			
A-C	511			511			

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		RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
Calculate Queue Percentiles	Calculate residual capacity			
		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	2027 DN	AM	ONE HOUR	07:45	09:15	15
D2	2027 DN	PM	ONE HOUR	16:45	18:15	15
D3	2032 DN	AM	ONE HOUR	07:45	09:15	15
D4	2032 DN	PM	ONE HOUR	16:45	18:15	15
D5	2042 DN	AM	ONE HOUR	07:45	09:15	15
D6	2042 DN	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details		
ID	Name	Network flow scaling factor (%)
A1	DN	100.000

DN - 2027 DN, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		4.06	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arm	Name	Description	Arm type
A	Main Street		Major
B	Beaverstown Road		Minor
C	Portrane Road		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Portrane Road	6.00			50.0	✓	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 - Beaverstown Road	One lane	4.00	150	150

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	665	0.121	0.306	0.193	0.437
B-C	790	0.121	0.306	-	-
C-B	603	0.234	0.234	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2027 DN	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Main Street		✓	640	100.000
B - Beaverstown Road		✓	219	100.000
C - Portrane Road		✓	490	100.000

Origin-Destination Data

Demand (PCU/hr)		To		
From		A - Main Street	B - Beaverstown Road	C - Portrane Road
	A - Main Street	0	235	405
	B - Beaverstown Road	207	0	12
	C - Portrane Road	474	16	0

Vehicle Mix

Heavy Vehicle Percentages		To		
From		A - Main Street	B - Beaverstown Road	C - Portrane Road
	A - Main Street	0	5	5
	B - Beaverstown Road	5	0	5
	C - Portrane Road	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.61	24.14	1.6	C
C-AB	0.06	5.20	0.1	A
C-A				
AB				
AC				

Main Results for each time segment

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	165	484	0.341	163	0.5	11.685	B
C-AB	23	750	0.031	23	0.0	5.198	A
C-A	346			346			
AB	177			177			
AC	305			305			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	197	448	0.440	196	0.8	14.944	B
C-AB	32	784	0.040	32	0.1	5.025	A
C-A	409			409			
A-B	211			211			
A-C	364			364			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	241	397	0.607	238	1.5	23.367	C
C-AB	47	833	0.057	47	0.1	4.809	A
C-A	492			492			
A-B	259			259			
A-C	446			446			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	241	397	0.607	241	1.6	24.137	C
C-AB	47	833	0.057	47	0.1	4.810	A
C-A	492			492			
A-B	259			259			
A-C	446			446			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	197	448	0.440	200	0.8	15.425	C
C-AB	32	784	0.040	32	0.1	5.029	A
C-A	409			409			
A-B	211			211			
A-C	364			364			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	165	484	0.341	166	0.6	11.932	B
C-AB	23	750	0.031	23	0.0	5.202	A
C-A	346			346			
A-B	177			177			
A-C	305			305			

DN - 2027 DN, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.08	A

Junction Network Options

Driving side	Lighting
Left	Normalunknown

Traffic Demand

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	2027 DN	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Main Street		✓	632	100.000
B - Beaverstown Road		✓	154	100.000
C - Portrane Road		✓	314	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
From		A - Main Street	B - Beaverstown Road	C - Portrane Road
	A - Main Street	0	219	413
	B - Beaverstown Road	145	0	9
	C - Portrane Road	304	10	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		A - Main Street	B - Beaverstown Road	C - Portrane Road
	A - Main Street	0	5	5
	B - Beaverstown Road	5	0	5
	C - Portrane Road	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.39	14.22	0.7	B
C-AB	0.03	5.85	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	116	510	0.227	115	0.3	9.529	A
C-AB	12	658	0.018	11	0.0	5.845	A
C-A	225			225			
A-B	165			165			
A-C	311			311			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	138	479	0.289	138	0.4	11.076	B
C-AB	15	672	0.023	15	0.0	5.753	A
C-A	267			267			
A-B	197			197			
A-C	371			371			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	170	435	0.390	169	0.7	14.123	B
C-AB	21	693	0.031	21	0.0	5.625	A
C-A	324			324			
A-B	241			241			
A-C	455			455			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	170	435	0.390	170	0.7	14.218	B
C-AB	21	693	0.031	21	0.0	5.625	A
C-A	324			324			
A-B	241			241			
A-C	455			455			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	138	479	0.289	139	0.4	11.166	B
C-AB	15	672	0.023	15	0.0	5.754	A
C-A	267			267			
A-B	197			197			
A-C	371			371			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	116	510	0.227	116	0.3	9.614	A
C-AB	12	658	0.018	12	0.0	5.846	A
C-A	225			225			
A-B	165			165			
A-C	311			311			

DN - 2032 DN, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		5.16	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2032 DN	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Main Street		✓	686	100.000
B - Beaverstown Road		✓	235	100.000
C - Portrane Road		✓	509	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
	A - Main Street	B - Beaverstown Road	C - Portrane Road	
A - Main Street	0	250	436	
B - Beaverstown Road	221	0	14	
C - Portrane Road	493	16	0	

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	A - Main Street	B - Beaverstown Road	C - Portrane Road	
A - Main Street	0	5	5	
B - Beaverstown Road	5	0	5	
C - Portrane Road	5	5	0	

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.68	30.53	2.1	D
C-AB	0.06	5.18	0.1	A
C-A				
AB				
AC				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	177	474	0.374	174	0.6	12.539	B
C-AB	24	754	0.031	24	0.0	5.175	A
C-A	359			359			
AB	188			188			
AC	328			328			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	211	435	0.486	210	1.0	16.586	C
C-AB	33	789	0.042	33	0.1	4.998	A
C-A	425			425			
AB	225			225			
AC	392			392			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	259	381	0.679	254	2.0	28.869	D
C-AB	50	841	0.059	50	0.1	4.779	A
C-A	510			510			
AB	275			275			
AC	480			480			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	259	381	0.679	258	2.1	30.533	D
C-AB	50	841	0.059	50	0.1	4.782	A
C-A	510			510			
AB	275			275			
AC	480			480			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	211	435	0.486	216	1.0	17.560	C
C-AB	33	789	0.042	33	0.1	5.000	A
C-A	425			425			
AB	225			225			
AC	392			392			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	177	474	0.374	178	0.6	12.877	B
C-AB	24	754	0.032	24	0.0	5.177	A
C-A	359			359			
AB	188			188			
AC	328			328			

DN - 2032 DN, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.31	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2032 DN	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Main Street		✓	682	100.000
B - Beaverstown Road		✓	164	100.000
C - Portrane Road		✓	325	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
	A - Main Street	B - Beaverstown Road	C - Portrane Road	
A - Main Street	0	233	449	
B - Beaverstown Road	154	0	10	
C - Portrane Road	316	10	0	

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	A - Main Street	B - Beaverstown Road	C - Portrane Road	
A - Main Street	0	5	5	
B - Beaverstown Road	5	0	5	
C - Portrane Road	5	5	0	

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.43	15.84	0.8	C
C-AB	0.03	5.86	0.0	A
C-A				
AB				
AC				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	123	499	0.247	122	0.3	9.988	A
C-AB	12	657	0.018	12	0.0	5.857	A
C-A	234			234			
AB	175			175			
AC	338			338			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	147	466	0.317	147	0.5	11.838	B
C-AB	16	671	0.023	16	0.0	5.764	A
C-A	277			277			
AB	209			209			
AC	404			404			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	181	419	0.431	179	0.8	15.692	C
C-AB	22	693	0.032	22	0.0	5.635	A
C-A	337			337			
AB	257			257			
AC	494			494			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	181	419	0.431	181	0.8	15.838	C
C-AB	22	693	0.032	22	0.0	5.638	A
C-A	337			337			
AB	257			257			
AC	494			494			

DN - 2042 DN, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		6.75	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
DS	2042 DN	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Main Street		✓	724	100.000
B - Beaverstown Road		✓	248	100.000
C - Portrane Road		✓	537	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Main Street	B - Beaverstown Road	C - Portrane Road
From	A - Main Street	0	264	460
	B - Beaverstown Road	234	0	14
	C - Portrane Road	520	17	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Main Street	B - Beaverstown Road	C - Portrane Road
From	A - Main Street	0	5	5
	B - Beaverstown Road	5	0	5
	C - Portrane Road	5	5	0

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	147	466	0.317	140	0.5	11.969	B
C-AB	16	671	0.023	16	0.0	5.768	A
C-A	277			277			
AB	209			209			
AC	404			404			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	123	499	0.247	124	0.4	10.092	B
C-AB	12	657	0.018	12	0.0	5.860	A
C-A	234			234			
AB	175			175			
AC	338			338			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	223	421	0.529	230	1.2	20.346	C
C-AB	37	801	0.046	37	0.1	4.946	A
C-A	446			446			
A-B	237			237			
A-C	414			414			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	187	462	0.404	189	0.7	13.927	B
C-AB	26	764	0.035	26	0.0	5.127	A
C-A	378			378			
A-B	199			199			
A-C	346			346			

DN - 2042 DN, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.55	A

Junction Network Options

Driving side	Lighting
Left	Normalunknown

Traffic Demand

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	2042 DN	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Main Street		✓	718	100.000
B - Beaverstown Road		✓	173	100.000
C - Portrane Road		✓	344	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
From		A - Main Street	B - Beaverstown Road	C - Portrane Road
	A - Main Street	0	246	472
	B - Beaverstown Road	162	0	11
	C - Portrane Road	333	11	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		A - Main Street	B - Beaverstown Road	C - Portrane Road
	A - Main Street	0	5	5
	B - Beaverstown Road	5	0	5
	C - Portrane Road	5	5	0

18

19

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.47	17.53	0.9	C
C-AB	0.04	5.84	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	130	490	0.266	129	0.4	10.412	B
C-AB	13	661	0.020	13	0.0	5.836	A
C-A	246			246			
A-B	185			185			
A-C	355			355			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	156	455	0.342	155	0.5	12.570	B
C-AB	18	676	0.026	18	0.0	5.739	A
C-A	291			291			
A-B	221			221			
A-C	424			424			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	190	406	0.469	189	0.9	17.313	C
C-AB	26	700	0.036	25	0.1	5.605	A
C-A	353			353			
A-B	271			271			
A-C	520			520			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	190	406	0.469	190	0.9	17.530	C
C-AB	26	700	0.037	26	0.1	5.608	A
C-A	353			353			
A-B	271			271			
A-C	520			520			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	156	455	0.342	157	0.6	12.748	B
C-AB	18	676	0.026	18	0.0	5.743	A
C-A	291			291			
A-B	221			221			
A-C	424			424			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	130	490	0.266	131	0.4	10.538	B
C-AB	13	661	0.020	13	0.0	5.839	A
C-A	246			246			
A-B	185			185			
A-C	355			355			

20

21

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.2.1013
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Filename: Main Street-Portrane Road DS.j9
Path: G:\2024\p240058\calcs\picady\Junction 6 - Main Street Portrane Road
Report generation date: 22/09/2025 12:58:36

- »DS - 2027 DS, AM
- »DS - 2027 DS, PM
- »DS - 2032 DS, AM
- »DS - 2032 DS, PM
- »DS - 2042 DS, AM
- »DS - 2042 DS, PM

Summary of junction performance

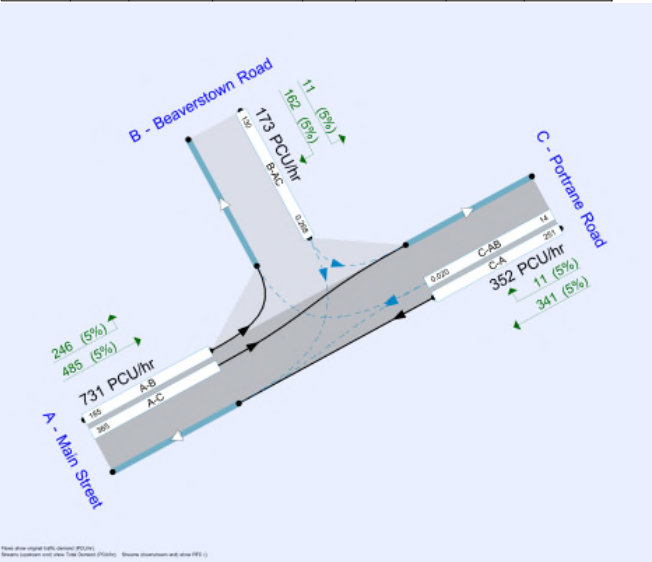
AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	
DS - 2027 DS											
Stream B-AC	D1	1.6	25.19	0.62	D	D2	0.7	14.60	0.40	B	
Stream C-AB		0.1	5.16	0.06	A		0.0	5.82	0.03	A	
DS - 2032 DS											
Stream B-AC	D3	2.2	32.18	0.69	D	D4	0.8	16.32	0.44	C	
Stream C-AB		0.1	5.15	0.06	A		0.1	5.84	0.04	A	
DS - 2042 DS											
Stream B-AC	D5	3.1	43.33	0.76	E	D6	0.9	18.04	0.48	C	
Stream C-AB		0.1	5.09	0.07	A		0.1	5.82	0.04	A	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description	
Title	Main Street / Portrane Road
Location	
Site number	
Date	28/11/2023
Version	
Status	Main Street / Portrane Road
Identifier	
Client	
Job number	
Enumerator	HEADOFFICE\GarveyD
Description	

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	km/h	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	2027 DS	AM	ONE HOUR	07:45	09:15	15
D2	2027 DS	PM	ONE HOUR	16:45	18:15	15
D3	2032 DS	AM	ONE HOUR	07:45	09:15	15
D4	2032 DS	PM	ONE HOUR	16:45	18:15	15
D5	2042 DS	AM	ONE HOUR	07:45	09:15	15
D6	2042 DS	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	DS	100.000

DS - 2027 DS, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		4.18	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Main Street		Major
B	Beaverstown Road		Minor
C	Portrane Road		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Portrane Road	6.00			50.0	✓	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 - Beaverstown Road	One lane	4.00	150	150

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	665	0.121	0.306	0.193	0.437
B-C	790	0.121	0.306	-	-
C-B	603	0.234	0.234	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2027 DS	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Main Street		✓	649	100.000
B - Beaverstown Road		✓	220	100.000
C - Portrane Road		✓	505	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
	A - Main Street	B - Beaverstown Road	C - Portrane Road	
A - Main Street	0	235	414	
B - Beaverstown Road	207	0	13	
C - Portrane Road	489	16	0	

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	A - Main Street	B - Beaverstown Road	C - Portrane Road	
A - Main Street	0	5	5	
B - Beaverstown Road	5	0	5	
C - Portrane Road	5	5	0	

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.62	25.19	1.6	D
C-AB	0.06	5.16	0.1	A
C-A				
AB				
AC				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	166	481	0.345	163	0.5	11.842	B
C-AB	23	757	0.031	23	0.0	5.152	A
C-A	357			357			
AB	177			177			
AC	312			312			

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	198	443	0.446	197	0.8	15.258	C
C-AB	32	792	0.041	32	0.1	4.973	A
C-A	422			422			
AB	211			211			
AC	372			372			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	242	392	0.619	239	1.6	24.309	C
C-AB	49	844	0.058	49	0.1	4.752	A
C-A	507			507			
AB	259			259			
AC	456			456			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	242	392	0.619	242	1.6	25.193	D
C-AB	49	844	0.058	49	0.1	4.756	A
C-A	507			507			
AB	259			259			
AC	456			456			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	198	443	0.446	201	0.9	15.789	C
C-AB	32	792	0.041	33	0.1	4.978	A
C-A	421			421			
AB	211			211			
AC	372			372			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	166	480	0.345	167	0.6	12.101	B
C-AB	24	757	0.031	24	0.0	5.156	A
C-A	357			357			
AB	177			177			
AC	312			312			

DS - 2027 DS, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.10	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2027 DS	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Main Street		✓	646	100.000
B - Beaverstown Road		✓	155	100.000
C - Portrane Road		✓	323	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
	A - Main Street	B - Beaverstown Road	C - Portrane Road	
A - Main Street	0	219	427	
B - Beaverstown Road	145	0	10	
C - Portrane Road	313	10	0	

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	A - Main Street	B - Beaverstown Road	C - Portrane Road	
A - Main Street	0	5	5	
B - Beaverstown Road	5	0	5	
C - Portrane Road	5	5	0	

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.40	14.60	0.7	B
C-AB	0.03	5.82	0.0	A
C-A				
AB				
AC				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	117	506	0.230	115	0.3	9.667	A
C-AB	12	661	0.018	12	0.0	5.821	A
C-A	231			231			
AB	165			165			
AC	321			321			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	139	474	0.294	139	0.4	11.256	B
C-AB	15	676	0.023	15	0.0	5.725	A
C-A	275			275			
AB	197			197			
AC	384			384			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	171	430	0.397	170	0.7	14.489	B
C-AB	22	698	0.031	22	0.0	5.591	A
C-A	334			334			
AB	241			241			
AC	470			470			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	171	430	0.397	171	0.7	14.596	B
C-AB	22	698	0.031	22	0.0	5.591	A
C-A	334			334			
AB	241			241			
AC	470			470			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	139	474	0.294	140	0.4	11.352	B
C-AB	15	676	0.023	16	0.0	5.728	A
C-A	275			275			
A-B	197			197			
A-C	384			384			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	117	506	0.230	117	0.3	9.723	A
C-AB	12	661	0.018	12	0.0	5.825	A
C-A	231			231			
A-B	165			165			
A-C	321			321			

DS - 2032 DS, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		5.35	A

Junction Network Options

Driving side	Lighting
Left	Normalunknown

Traffic Demand

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	2032 DS	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Main Street		✓	695	100.000
B - Beaverstown Road		✓	235	100.000
C - Portrane Road		✓	524	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
From		A - Main Street	B - Beaverstown Road	C - Portrane Road
	A - Main Street	0	250	445
	B - Beaverstown Road	221	0	14
	C - Portrane Road	507	17	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		A - Main Street	B - Beaverstown Road	C - Portrane Road
	A - Main Street	0	5	5
	B - Beaverstown Road	5	0	5
	C - Portrane Road	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.69	32.18	2.2	D
C-AB	0.06	5.15	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	177	469	0.377	174	0.6	12.722	B
C-AB	26	760	0.034	26	0.0	5.142	A
C-A	369			369			
A-B	188			188			
A-C	335			335			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	211	430	0.492	210	1.0	17.081	C
C-AB	36	797	0.045	36	0.1	4.964	A
C-A	435			435			
A-B	225			225			
A-C	400			400			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	259	375	0.690	254	2.1	30.237	D
C-AB	55	851	0.064	54	0.1	4.746	A
C-A	522			522			
A-B	275			275			
A-C	490			490			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	259	375	0.690	258	2.2	32.179	D
C-AB	55	851	0.064	55	0.1	4.748	A
C-A	522			522			
A-B	275			275			
A-C	490			490			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	211	430	0.492	216	1.1	18.052	C
C-AB	36	797	0.045	36	0.1	4.967	A
C-A	435			435			
A-B	225			225			
A-C	400			400			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	177	469	0.377	179	0.6	13.081	B
C-AB	26	761	0.034	26	0.0	5.145	A
C-A	369			369			
A-B	188			188			
A-C	335			335			

DS - 2032 DS, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.35	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2032 DS	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Main Street		✓	695	100.000
B - Beaverstown Road		✓	165	100.000
C - Portrane Road		✓	336	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To		
	A - Main Street	B - Beaverstown Road	C - Portrane Road
A - Main Street	0	233	462
B - Beaverstown Road	154	0	11
C - Portrane Road	325	11	0

Vehicle Mix

Heavy Vehicle Percentages

From	To		
	A - Main Street	B - Beaverstown Road	C - Portrane Road
A - Main Street	0	5	5
B - Beaverstown Road	5	0	5
C - Portrane Road	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.44	16.32	0.8	C
C-AB	0.04	5.84	0.1	A
C-A				
AB				
AC				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	124	495	0.251	123	0.3	10.110	B
C-AB	13	660	0.020	13	0.0	5.842	A
C-A	240			240			
AB	175			175			
AC	348			348			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	148	461	0.322	148	0.5	12.048	B
C-AB	17	675	0.026	17	0.0	5.748	A
C-A	285			285			
AB	209			209			
AC	415			415			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	182	413	0.440	180	0.8	16.156	C
C-AB	25	698	0.036	25	0.1	5.617	A
C-A	345			345			
AB	257			257			
AC	509			509			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	182	413	0.440	182	0.8	16.320	C
C-AB	25	698	0.036	25	0.1	5.620	A
C-A	345			345			
AB	257			257			
AC	509			509			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	148	461	0.322	150	0.5	12.188	B
C-AB	18	675	0.026	18	0.0	5.752	A
C-A	285			285			
AB	209			209			
AC	415			415			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	124	495	0.251	125	0.4	10.220	B
C-AB	13	660	0.020	13	0.0	5.843	A
C-A	240			240			
AB	175			175			
AC	348			348			

DS - 2042 DS, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		7.19	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2042 DS	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Main Street		✓	733	100.000
B - Beaverstown Road		✓	249	100.000
C - Portrane Road		✓	553	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To		
	A - Main Street	B - Beaverstown Road	C - Portrane Road
A - Main Street	0	264	469
B - Beaverstown Road	234	0	15
C - Portrane Road	535	18	0

Vehicle Mix

Heavy Vehicle Percentages

From	To		
	A - Main Street	B - Beaverstown Road	C - Portrane Road
A - Main Street	0	5	5
B - Beaverstown Road	5	0	5
C - Portrane Road	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.76	43.33	3.1	E
C-AB	0.07	5.09	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	187	458	0.409	185	0.7	13.684	B
C-AB	28	771	0.037	28	0.1	5.089	A
C-A	388			388			
A-B	199			199			
A-C	353			353			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	224	416	0.538	222	1.2	19.257	C
C-AB	40	810	0.049	40	0.1	4.908	A
C-A	457			457			
A-B	237			237			
A-C	422			422			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	274	359	0.765	267	2.9	38.773	E
C-AB	62	868	0.071	62	0.1	4.689	A
C-A	547			547			
A-B	291			291			
A-C	516			516			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	274	358	0.765	273	3.1	43.330	E
C-AB	62	868	0.071	62	0.1	4.691	A
C-A	547			547			
A-B	291			291			
A-C	516			516			

DS - 2042 DS, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.58	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2042 DS	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Main Street		✓	731	100.000
B - Beaverstown Road		✓	173	100.000
C - Portrane Road		✓	352	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Main Street	B - Beaverstown Road	C - Portrane Road
From	A - Main Street	0	246	485
	B - Beaverstown Road	162	0	11
	C - Portrane Road	341	11	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Main Street	B - Beaverstown Road	C - Portrane Road
From	A - Main Street	0	5	5
	B - Beaverstown Road	5	0	5
	C - Portrane Road	5	5	5

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	224	416	0.538	231	1.3	21.149	C
C-AB	40	810	0.049	40	0.1	4.911	A
C-A	457			457			
A-B	237			237			
A-C	422			422			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	187	458	0.409	190	0.7	14.186	B
C-AB	29	771	0.037	29	0.1	5.093	A
C-A	388			388			
A-B	199			199			
A-C	353			353			

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	130	486	0.268	129	0.4	10.531	B
C-AB	14	663	0.020	13	0.0	5.815	A
C-A	251			251			
A-B	185			185			
A-C	365			365			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	156	450	0.346	155	0.5	12.779	B
C-AB	18	679	0.027	18	0.0	5.714	A
C-A	298			298			
A-B	221			221			
A-C	436			436			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	190	400	0.476	189	0.9	17.797	C
C-AB	26	704	0.037	26	0.1	5.576	A
C-A	362			362			
A-B	271			271			
A-C	534			534			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	190	400	0.476	190	0.9	18.037	C
C-AB	26	704	0.037	26	0.1	5.579	A
C-A	361			361			
A-B	271			271			
A-C	534			534			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	156	450	0.346	157	0.6	12.969	B
C-AB	18	680	0.027	18	0.0	5.718	A
C-A	298			298			
A-B	221			221			
A-C	436			436			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	130	496	0.268	131	0.4	10.664	B
C-AB	14	663	0.020	14	0.0	5.816	A
C-A	251			251			
A-B	185			185			
A-C	365			365			

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.2.1013
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Filename: The Links-Portrane Rd DN.j9
Path: G:\2024\p240058\calcs\picady\Junction 5 - Portrane Road Site Access
Report generation date: 22/09/2025 12:46:34

- »DN - DN 2027, AM
- »DN - DN 2027, PM
- »DN - DN 2032, AM
- »DN - DN 2032, PM
- »DN - DN 2042, AM
- »DN - DN 2042, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
DN - DN 2027										
Stream B-AC	D1	0.4	10.57	0.28	B	D2	0.2	9.01	0.17	A
Stream C-AB		0.2	5.23	0.09	A		0.6	5.96	0.26	A
DN - DN 2032										
Stream B-AC	D3	0.4	10.70	0.27	B	D4	0.2	9.19	0.17	A
Stream C-AB		0.3	5.25	0.11	A		0.7	6.38	0.30	A
DN - DN 2042										
Stream B-AC	D5	0.4	11.17	0.28	B	D6	0.2	9.47	0.18	A
Stream C-AB		0.3	5.23	0.12	A		0.8	6.47	0.32	A

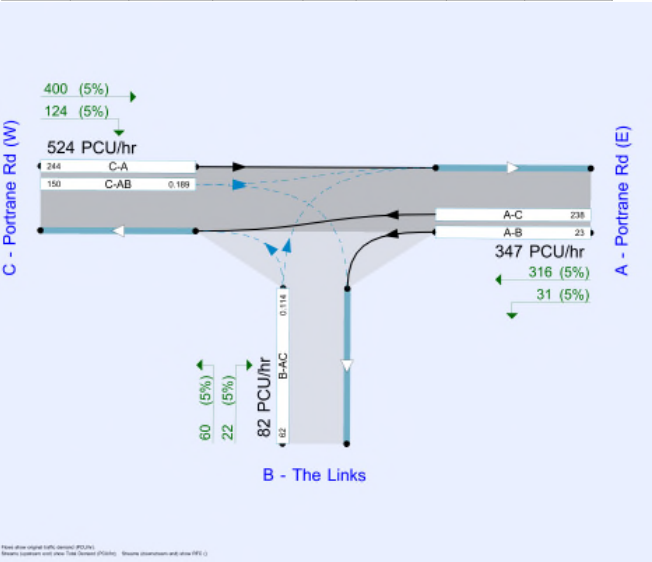
Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description	
Title	The Links / Portrane Rd DN
Location	
Site number	
Date	28/11/2023
Version	
Status	The Links / Portrane Rd DN
Identifier	
Client	
Jobnumber	
Enumerator	HEADOFFICE\GarveyD
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	DN 2027	AM	ONE HOUR	07:45	09:15	15
D2	DN 2027	PM	ONE HOUR	16:45	18:15	15
D3	DN 2032	AM	ONE HOUR	07:45	09:15	15
D4	DN 2032	PM	ONE HOUR	16:45	18:15	15
D5	DN 2042	AM	ONE HOUR	07:45	09:15	15
D6	DN 2042	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	DN	100.000

DN - DN 2027, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.70	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arm	Name	Description	Arm type
A	Portrane Rd (E)		Major
B	The Links		Minor
C	Portrane Rd (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Portrane Rd (W)	6.00			150.0	✓	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 - The Links	One lane	3.50	40	50

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	0.099	0.249	0.157	0.358
B-C	688	0.105	0.287	-	-
C-B	661	0.256	0.256	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	DN 2027	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Portrane Rd (E)		✓	435	100.000
B - The Links		✓	125	100.000
C - Portrane Rd (W)		✓	394	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Portrane Rd (E)	B - The Links	C - Portrane Rd (W)
From	A - Portrane Rd (E)	0	16	419
	B - The Links	28	0	97
	C - Portrane Rd (W)	361	33	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Portrane Rd (E)	B - The Links	C - Portrane Rd (W)
From	A - Portrane Rd (E)	0	5	5
	B - The Links	5	0	5
	C - Portrane Rd (W)	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.28	10.57	0.4	B
C-AB	0.09	5.23	0.2	A
C-A				
AB				
AC				

Main Results for each time segment

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	94	545	0.173	93	0.2	8.346	A
C-AB	39	762	0.051	38	0.1	5.225	A
C-A	258			258			
AB	12			12			
AC	315			315			

DN - DN 2027, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.08	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	DN 2027	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Portrane Rd (E)		✓	310	100.000
B - The Links		✓	80	100.000
C - Portrane Rd (W)		✓	489	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Portrane Rd (E)	B - The Links	C - Portrane Rd (W)
From	A - Portrane Rd (E)	0	26	284
	B - The Links	21	0	59
	C - Portrane Rd (W)	385	104	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Portrane Rd (E)	B - The Links	C - Portrane Rd (W)
From	A - Portrane Rd (E)	0	5	5
	B - The Links	5	0	5
	C - Portrane Rd (W)	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.17	9.01	0.2	A
C-AB	0.26	5.96	0.6	A
C-A				
AB				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	60	553	0.109	60	0.1	7.655	A
C-AB	123	794	0.155	122	0.3	5.623	A
C-A	245			245			
AB	20			20			
A-C	214			214			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	72	534	0.135	72	0.2	8.170	A
C-AB	162	823	0.197	162	0.4	5.726	A
C-A	278			278			
AB	23			23			
A-C	255			255			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	88	508	0.174	88	0.2	8.999	A
C-AB	226	863	0.262	225	0.6	5.941	A
C-A	312			312			
AB	29			29			
A-C	313			313			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	88	508	0.174	88	0.2	9.010	A
C-AB	227	863	0.262	226	0.6	5.956	A
C-A	312			312			
AB	29			29			
A-C	313			313			

DN - DN 2032, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.63	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	DN 2032	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Am	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Portrane Rd (E)		✓	463	100.000
B - The Links		✓	117	100.000
C - Portrane Rd (W)		✓	424	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To		
	A - Portrane Rd (E)	B - The Links	C - Portrane Rd (W)
	A - Portrane Rd (E)	0	18
	B - The Links	27	0
	C - Portrane Rd (W)	384	40

Vehicle Mix

Heavy Vehicle Percentages

From	To		
	A - Portrane Rd (E)	B - The Links	C - Portrane Rd (W)
	A - Portrane Rd (E)	0	5
	B - The Links	5	0
	C - Portrane Rd (W)	5	0

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	72	534	0.135	72	0.2	8.186	A
C-AB	162	823	0.197	163	0.4	5.745	A
C-A	277			277			
AB	23			23			
A-C	255			255			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	60	553	0.109	60	0.1	7.681	A
C-AB	124	795	0.156	124	0.3	5.651	A
C-A	244			244			
AB	20			20			
A-C	214			214			

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.27	10.70	0.4	B
C-AB	0.11	5.25	0.3	A
C-A				
AB				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	88	536	0.164	87	0.2	8.400	A
C-AB	48	769	0.063	48	0.1	5.243	A
C-A	271			271			
AB	14			14			
A-C	335			335			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	105	514	0.205	105	0.3	9.236	A
C-AB	64	793	0.081	64	0.2	5.184	A
C-A	317			317			
AB	16			16			
A-C	400			400			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	129	482	0.267	128	0.4	10.670	B
C-AB	90	829	0.109	90	0.2	5.122	A
C-A	377			377			
AB	20			20			
A-C	490			490			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	129	482	0.267	129	0.4	10.697	B
C-AB	90	829	0.109	90	0.3	5.125	A
C-A	376			376			
AB	20			20			
A-C	490			490			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	105	514	0.205	106	0.3	9.269	A
C-AB	64	794	0.081	64	0.2	5.192	A
C-A	317			317			
A-B	16			16			
A-C	400			400			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	88	536	0.164	88	0.2	8.443	A
C-AB	48	769	0.063	49	0.1	5.250	A
C-A	271			271			
A-B	14			14			
A-C	335			335			

DN - DN 2032, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.29	A

Junction Network Options

Driving side	Lighting
Left	Normalunknown

Traffic Demand

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	DN 2032	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Portrane Rd (E)		✓	330	100.000
B - The Links		✓	78	100.000
C - Portrane Rd (W)		✓	500	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
From		A - Portrane Rd (E)	B - The Links	C - Portrane Rd (W)
	A - Portrane Rd (E)	0	30	300
	B - The Links	21	0	57
	C - Portrane Rd (W)	380	120	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		A - Portrane Rd (E)	B - The Links	C - Portrane Rd (W)
	A - Portrane Rd (E)	0	5	5
	B - The Links	5	0	5
	C - Portrane Rd (W)	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.17	9.19	0.2	A
C-AB	0.30	6.38	0.7	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	59	546	0.108	58	0.1	7.744	A
C-AB	142	788	0.180	140	0.3	5.829	A
C-A	235			235			
A-B	23			23			
A-C	226			226			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	70	526	0.133	70	0.2	8.289	A
C-AB	186	816	0.228	186	0.5	6.008	A
C-A	263			263			
A-B	27			27			
A-C	270			270			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	86	497	0.173	86	0.2	9.179	A
C-AB	260	855	0.304	259	0.7	6.359	A
C-A	290			290			
A-B	33			33			
A-C	330			330			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	86	497	0.173	86	0.2	9.191	A
C-AB	261	855	0.305	260	0.7	6.380	A
C-A	290			290			
A-B	33			33			
A-C	330			330			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	70	526	0.133	70	0.2	8.306	A
C-AB	187	816	0.229	188	0.5	6.034	A
C-A	263			263			
A-B	27			27			
A-C	270			270			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	59	546	0.108	59	0.1	7.769	A
C-AB	142	789	0.181	143	0.3	5.864	A
C-A	234			234			
A-B	23			23			
A-C	226			226			

DN - DN 2042, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.68	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	DN 2042	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Portrane Rd (E)		✓	489	100.000
B - The Links		✓	122	100.000
C - Portrane Rd (W)		✓	448	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
From		A - Portrane Rd (E)	B - The Links	C - Portrane Rd (W)
	A - Portrane Rd (E)	0	19	470
	B - The Links	28	0	94
	C - Portrane Rd (W)	406	42	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		A - Portrane Rd (E)	B - The Links	C - Portrane Rd (W)
	A - Portrane Rd (E)	0	5	5
	B - The Links	5	0	5
	C - Portrane Rd (W)	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.28	11.17	0.4	B
C-AB	0.12	5.23	0.3	A
C-A				
AB				
AC				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	92	530	0.173	91	0.2	8.584	A
C-AB	52	776	0.067	52	0.1	5.217	A
C-A	285			285			
AB	14			14			
AC	354			354			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	110	506	0.217	109	0.3	9.513	A
C-AB	70	802	0.087	69	0.2	5.161	A
C-A	333			333			
AB	17			17			
AC	423			423			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	134	473	0.284	134	0.4	11.138	B
C-AB	99	840	0.118	99	0.3	5.102	A
C-A	394			394			
AB	21			21			
AC	517			517			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	134	473	0.284	134	0.4	11.173	B
C-AB	99	841	0.118	99	0.3	5.109	A
C-A	394			394			
AB	21			21			
AC	517			517			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	110	506	0.217	110	0.3	9.551	A
C-AB	70	803	0.087	70	0.2	5.170	A
C-A	333			333			
AB	17			17			
AC	423			423			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	92	530	0.173	92	0.2	8.633	A
C-AB	52	776	0.068	53	0.1	5.227	A
C-A	285			285			
AB	14			14			
AC	354			354			

DN - DN 2042, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		2.36	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	DN 2042	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Portrane Rd (E)		✓	347	100.000
B - The Links		✓	82	100.000
C - Portrane Rd (W)		✓	524	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
From		A - Portrane Rd (E)	B - The Links	C - Portrane Rd (W)
	A - Portrane Rd (E)	0	31	316
	B - The Links	22	0	60
	C - Portrane Rd (W)	400	124	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		A - Portrane Rd (E)	B - The Links	C - Portrane Rd (W)
	A - Portrane Rd (E)	0	5	5
	B - The Links	5	0	5
	C - Portrane Rd (W)	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.18	9.47	0.2	A
C-AB	0.32	6.47	0.8	A
C-A				
AB				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	62	541	0.114	61	0.1	7.868	A
C-AB	150	796	0.189	149	0.4	5.839	A
C-A	244			244			
AB	23			23			
A-C	238			238			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	74	520	0.142	74	0.2	8.466	A
C-AB	198	825	0.241	198	0.5	6.038	A
C-A	273			273			
AB	28			28			
A-C	284			284			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	90	490	0.184	90	0.2	9.454	A
C-AB	279	866	0.322	278	0.8	6.439	A
C-A	298			298			
AB	34			34			
A-C	348			348			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	90	489	0.184	90	0.2	9.468	A
C-AB	280	867	0.323	280	0.8	6.466	A
C-A	297			297			
AB	34			34			
A-C	348			348			

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.2.1013
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Filename: DDR-Portrane Rd DN.j9
Path: G:\2024\p240058\calcs\picady\Junction 4 - DDR Portrane Road
Report generation date: 22/09/2025 12:24:16

- »DN - DN 2027, AM
- »DN - DN 2027, PM
- »DN - DN 2032, AM
- »DN - DN 2032, PM
- »DN - DN 2042, AM
- »DN - DN 2042, PM

Summary of junction performance

		AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	
DN - DN 2027											
Stream B-AC	D1	0.8	11.17	0.43	B	D2	1.1	12.65	0.51	B	
Stream C-B		0.2	7.43	0.19	A		0.2	7.04	0.17	A	
DN - DN 2032											
Stream B-AC	D3	0.9	12.13	0.47	B	D4	1.2	13.83	0.54	B	
Stream C-B		0.3	7.67	0.21	A		0.2	7.22	0.18	A	
DN - DN 2042											
Stream B-AC	D5	1.0	13.04	0.50	B	D6	1.4	14.99	0.57	B	
Stream C-B		0.3	7.84	0.22	A		0.2	7.36	0.19	A	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description	
Title	DDR / Portrane Rd DN
Location	
Site number	
Date	28/11/2023
Version	
Status	(new file)
Identifier	DDR / Portrane Rd DN
Client	
Jobnumber	
Enumerator	HEADOFFICE\GarveyD
Description	

17:45 - 18:00

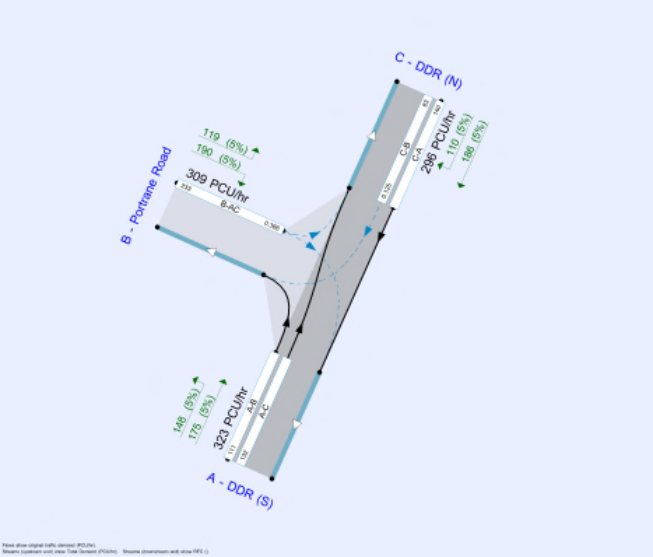
Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	74	520	0.142	74	0.2	8.485	A
C-AB	199	826	0.241	200	0.5	6.070	A
C-A	272			272			
AB	28			28			
A-C	284			284			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	62	541	0.114	62	0.1	7.896	A
C-AB	151	796	0.190	152	0.4	5.876	A
C-A	244			244			
AB	23			23			
A-C	238			238			

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	km/h	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	DN 2027	AM	ONE HOUR	07:45	09:15	15
D2	DN 2027	PM	ONE HOUR	16:45	18:15	15
D3	DN 2032	AM	ONE HOUR	07:45	09:15	15
D4	DN 2032	PM	ONE HOUR	16:45	18:15	15
D5	DN 2042	AM	ONE HOUR	07:45	09:15	15
D6	DN 2042	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
AT	DN	100.000

DN - DN 2027, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

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

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	DDR (S)		Major
B	Portrane Road		Minor
C	DDR (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - DDR (N)	9.00		✓	3.50	100.0		-

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Portrane Road	One lane	5.00	100	100

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	673	0.107	0.269	0.169	0.385
B-C	824	0.110	0.278	-	-
C-B	721	0.243	0.243	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	DN 2027	AM	ONE HOUR	07:45	09:15	15

3

4

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - DDR (S)		✓	341	100.000
B - Portrane Road		✓	232	100.000
C - DDR (N)		✓	236	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
From		A - DDR (S)	B - Portrane Road	C - DDR (N)
	A - DDR (S)	0	118	223
	B - Portrane Road	138	0	94
	C - DDR (N)	126	110	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		A - DDR (S)	B - Portrane Road	C - DDR (N)
	A - DDR (S)	0	5	5
	B - Portrane Road	5	0	5
	C - DDR (N)	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A-C	0.43	11.17	0.8	B
C-A				
C-B	0.19	7.43	0.2	A
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-A-C	175	637	0.274	173	0.4	8.125	A
C-A	95			95			
C-B	83	659	0.126	82	0.1	6.547	A
A-B	89			89			
A-C	168			168			

5

6

DN - DN 2027, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		5.09	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
DZ	DN 2027	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - DDR (S)		✓	289	100.000
B - Portrane Road		✓	279	100.000
C - DDR (N)		✓	260	100.000

Origin-Destination Data

Demand (PCU/hr)

From		To		
		A - DDR (S)	B - Portrane Road	C - DDR (N)
From	A - DDR (S)	0	134	155
	B - Portrane Road	174	0	105
	C - DDR (N)	163	97	0

Vehicle Mix

Heavy Vehicle Percentages

From		To		
		A - DDR (S)	B - Portrane Road	C - DDR (N)
From	A - DDR (S)	0	5	5
	B - Portrane Road	5	0	5
	C - DDR (N)	5	5	0

DN - DN 2032, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		4.52	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	DN 2032	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - DDR (S)		✓	364	100.000
B - Portrane Road		✓	248	100.000
C - DDR (N)		✓	255	100.000

Origin-Destination Data

Demand (PCU/hr)

From		To		
		A - DDR (S)	B - Portrane Road	C - DDR (N)
From	A - DDR (S)	0	124	240
	B - Portrane Road	146	0	102
	C - DDR (N)	136	119	0

Vehicle Mix

Heavy Vehicle Percentages

From		To		
		A - DDR (S)	B - Portrane Road	C - DDR (N)
From	A - DDR (S)	0	5	5
	B - Portrane Road	5	0	5
	C - DDR (N)	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.47	12.13	0.9	B
C-A				
C-B	0.21	7.67	0.3	A
AB				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	187	631	0.296	185	0.4	8.442	A
C-A	102			102			
C-B	90	655	0.137	89	0.2	6.675	A
AB	93			93			
A-C	181			181			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	223	612	0.365	222	0.6	9.696	A
C-A	122			122			
C-B	107	642	0.167	107	0.2	7.064	A
AB	111			111			
A-C	216			216			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	273	585	0.467	272	0.9	12.036	B
C-A	150			150			
C-B	131	624	0.210	131	0.3	7.662	A
AB	137			137			
A-C	264			264			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	273	585	0.467	273	0.9	12.129	B
C-A	150			150			
C-B	131	624	0.210	131	0.3	7.668	A
AB	137			137			
A-C	264			264			

DN - DN 2032, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		5.47	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	DN 2032	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - DDR (S)		✓	308	100.000
B - Portrane Road		✓	295	100.000
C - DDR (N)		✓	282	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
From		A - DDR (S)	B - Portrane Road	C - DDR (N)
	A - DDR (S)	0	141	167
	B - Portrane Road	182	0	113
	C - DDR (N)	177	105	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		A - DDR (S)	B - Portrane Road	C - DDR (N)
	A - DDR (S)	0	5	5
	B - Portrane Road	5	0	5
	C - DDR (N)	5	5	0

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	223	611	0.365	224	0.6	9.791	A
C-A	122			122			
C-B	107	642	0.167	107	0.2	7.077	A
AB	111			111			
A-C	216			216			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	187	631	0.296	187	0.4	8.537	A
C-A	102			102			
C-B	90	655	0.137	90	0.2	6.692	A
AB	93			93			
A-C	181			181			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	265	621	0.427	267	0.8	10.711	B
C-A	159			159			
C-B	94	654	0.144	95	0.2	6.759	A
AB	127			127			
AC	150			150			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	222	638	0.348	223	0.6	9.117	A
C-A	133			133			
C-B	79	665	0.119	79	0.1	6.454	A
AB	106			106			
AC	126			126			

DN - DN 2042, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		4.82	A

Junction Network Options

Driving side	Lighting
Left	Normalunknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
DS	DN 2042	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - DDR (S)		✓	380	100.000
B - Portrane Road		✓	261	100.000
C - DDR (N)		✓	269	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
From		A - DDR (S)	B - Portrane Road	C - DDR (N)
	A - DDR (S)	0	129	251
	B - Portrane Road	154	0	107
	C - DDR (N)	144	125	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		A - DDR (S)	B - Portrane Road	C - DDR (N)
	A - DDR (S)	0	5	5
	B - Portrane Road	5	0	5
	C - DDR (N)	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.50	13.04	1.0	B
C-A				
C-B	0.22	7.84	0.3	A
AB				
AC				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	196	626	0.314	195	0.5	8.725	A
C-A	108			108			
C-B	94	652	0.144	93	0.2	6.761	A
AB	97			97			
AC	189			189			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	235	666	0.387	234	0.7	10.150	B
C-A	129			129			
C-B	112	638	0.176	112	0.2	7.184	A
AB	116			116			
AC	226			226			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	287	577	0.498	286	1.0	12.910	B
C-A	159			159			
C-B	138	620	0.222	137	0.3	7.833	A
AB	142			142			
AC	276			276			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	287	577	0.498	287	1.0	13.036	B
C-A	159			159			
C-B	138	620	0.222	138	0.3	7.842	A
AB	142			142			
AC	276			276			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	235	605	0.388	236	0.7	10.271	B
C-A	129			129			
C-B	112	638	0.176	113	0.2	7.197	A
AB	116			116			
AC	226			226			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	196	626	0.314	197	0.5	8.837	A
C-A	108			108			
C-B	94	652	0.144	94	0.2	6.782	A
AB	97			97			
AC	189			189			

DN - DN 2042, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		5.86	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	DN 2042	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - DDR (S)		✓	323	100.000
B - Portrane Road		✓	309	100.000
C - DDR (N)		✓	296	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
From		A - DDR (S)	B - Portrane Road	C - DDR (N)
	A - DDR (S)	0	148	175
	B - Portrane Road	190	0	119
	C - DDR (N)	186	110	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		A - DDR (S)	B - Portrane Road	C - DDR (N)
	A - DDR (S)	0	5	5
	B - Portrane Road	5	0	5
	C - DDR (N)	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.57	14.99	1.4	B
C-A				
C-B	0.19	7.36	0.2	A
AB				
AC				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	233	635	0.366	230	0.6	9.289	A
C-A	140			140			
C-B	83	662	0.125	82	0.1	6.510	A
AB	111			111			
AC	132			132			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	278	617	0.450	277	0.8	11.080	B
C-A	167			167			
C-B	99	651	0.152	99	0.2	6.846	A
AB	133			133			
AC	157			157			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	340	592	0.575	338	1.4	14.759	B
C-A	205			205			
C-B	121	635	0.191	121	0.2	7.350	A
AB	163			163			
AC	193			193			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	340	592	0.575	340	1.4	14.992	B
C-A	205			205			
C-B	121	635	0.191	121	0.2	7.356	A
AB	163			163			
AC	193			193			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	278	617	0.450	280	0.9	11.287	B
C-A	167			167			
C-B	99	651	0.152	99	0.2	6.854	A
AB	133			133			
AC	157			157			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	233	635	0.367	234	0.6	9.453	A
C-A	140			140			
C-B	83	662	0.125	83	0.2	6.529	A
AB	111			111			
AC	132			132			

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.2.1013
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Filename: DDR-Portrane Rd DS.j9
Path: G:\2024\p240058\calcs\picady\Junction 4 - DDR Portrane Road
Report generation date: 22/09/2025 12:31:51

- »DS - DS 2027, AM
- »DS - DS 2027, PM
- »DS - DS 2032, AM
- »DS - DS 2032, PM
- »DS - DS 2042, AM
- »DS - DS 2042, PM

Summary of junction performance

AM					PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
DS - DS 2027										
Stream B-AC	D1	0.8	11.36	0.44	B	D2	1.1	12.86	0.51	B
Stream C-B		0.3	7.49	0.20	A		0.2	7.10	0.17	A
DS - DS 2032										
Stream B-AC	D3	0.9	12.38	0.48	B	D4	1.3	14.08	0.55	B
Stream C-B		0.3	7.74	0.21	A		0.2	7.30	0.19	A
DS - DS 2042										
Stream B-AC	D5	1.1	13.34	0.51	B	D6	1.4	15.30	0.58	C
Stream C-B		0.3	7.93	0.23	A		0.3	7.44	0.20	A

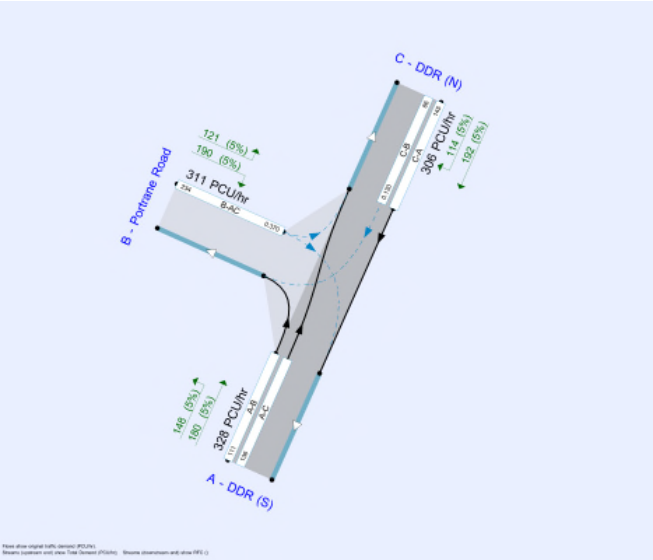
Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description	
Title	DDR / Portrane Rd DS
Location	
Site number	
Date	28/11/2023
Version	
Status	DDR / Portrane Rd DS
Identifier	
Client	
Jobnumber	
Enumerator	HEADOFFICE\GarveyD
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	DS 2027	AM	ONE HOUR	07:45	09:15	15
D2	DS 2027	PM	ONE HOUR	16:45	18:15	15
D3	DS 2032	AM	ONE HOUR	07:45	09:15	15
D4	DS 2032	PM	ONE HOUR	16:45	18:15	15
D5	DS 2042	AM	ONE HOUR	07:45	09:15	15
D6	DS 2042	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	DS	100.000

DS - DS 2027, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		4.26	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	DDR (S)		Major
B	Portrane Road		Minor
C	DDR (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - DDR (N)	9.00		✓	3.50	100.0		-

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Portrane Road	One lane	5.00	100	100

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	673	0.107	0.269	0.169	0.385
B-C	824	0.110	0.278	-	-
C-B	721	0.243	0.243	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	DS 2027	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - DDR (S)		✓	348	100.000
B - Portrane Road		✓	236	100.000
C - DDR (N)		✓	242	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
From		A - DDR (S)	B - Portrane Road	C - DDR (N)
	A - DDR (S)	0	118	230
	B - Portrane Road	138	0	98
	C - DDR (N)	130	112	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		A - DDR (S)	B - Portrane Road	C - DDR (N)
	A - DDR (S)	0	5	5
	B - Portrane Road	5	0	5
	C - DDR (N)	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-A	0.44	11.36	0.8	B
C-A				
C-B	0.20	7.49	0.3	A
A-B				
A-C				

Main Results for each time segment

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-A	178	636	0.279	176	0.4	8.184	A
C-A	98			98			
C-B	84	658	0.128	84	0.2	6.579	A
A-B	89			89			
A-C	173			173			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	212	618	0.343	212	0.5	9.289	A
C-A	117			117			
C-B	101	645	0.156	101	0.2	6.937	A
AB	106			106			
AC	207			207			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	260	592	0.439	259	0.8	11.295	B
C-A	143			143			
C-B	123	628	0.196	123	0.3	7.480	A
AB	130			130			
AC	253			253			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	260	592	0.439	260	0.8	11.364	B
C-A	143			143			
C-B	123	628	0.196	123	0.3	7.486	A
AB	130			130			
AC	253			253			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	212	618	0.343	213	0.6	9.364	A
C-A	117			117			
C-B	101	645	0.156	101	0.2	6.946	A
AB	106			106			
AC	207			207			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	178	636	0.279	178	0.4	8.265	A
C-A	98			98			
C-B	84	658	0.128	84	0.2	6.599	A
AB	89			89			
AC	173			173			

DS - DS 2027, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		5.12	A

Junction Network Options

Driving side	Lighting
Left	Normalunknown

Traffic Demand

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	DS 2027	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - DDR (S)		✓	294	100.000
B - Portrane Road		✓	281	100.000
C - DDR (N)		✓	270	100.000

Origin-Destination Data

		To		
		A - DDR (S)	B - Portrane Road	C - DDR (N)
From	A - DDR (S)	0	134	160
	B - Portrane Road	174	0	107
	C - DDR (N)	170	100	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - DDR (S)	B - Portrane Road	C - DDR (N)
From	A - DDR (S)	0	5	5
	B - Portrane Road	5	0	5
	C - DDR (N)	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.51	12.86	1.1	B
C-A				
C-B	0.17	7.10	0.2	A
AB				
AC				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	212	642	0.329	210	0.5	8.698	A
C-A	128			128			
C-B	75	667	0.113	75	0.1	6.372	A
AB	101			101			
AC	120			120			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	253	626	0.404	252	0.7	10.087	B
C-A	153			153			
C-B	90	657	0.137	90	0.2	6.661	A
AB	120			120			
AC	144			144			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	309	603	0.513	308	1.1	12.731	B
C-A	187			187			
C-B	110	643	0.171	110	0.2	7.096	A
AB	148			148			
AC	176			176			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	309	603	0.513	309	1.1	12.863	B
C-A	187			187			
C-B	110	643	0.171	110	0.2	7.097	A
AB	148			148			
AC	176			176			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	253	626	0.404	254	0.7	10.211	B
C-A	153			153			
C-B	90	657	0.137	90	0.2	6.668	A
AB	120			120			
AC	144			144			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	212	642	0.330	212	0.5	8.816	A
C-A	128			128			
C-B	75	667	0.113	75	0.1	6.385	A
AB	101			101			
AC	120			120			

DS - DS 2032, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		4.58	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	DS 2032	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - DDR (S)		✓	372	100.000
B - Portrane Road		✓	252	100.000
C - DDR (N)		✓	262	100.000

Origin-Destination Data

		To		
		A - DDR (S)	B - Portrane Road	C - DDR (N)
From	A - DDR (S)	0	124	248
	B - Portrane Road	146	0	106
	C - DDR (N)	141	121	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - DDR (S)	B - Portrane Road	C - DDR (N)
From	A - DDR (S)	0	5	5
	B - Portrane Road	5	0	5
	C - DDR (N)	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.48	12.38	0.9	B
C-A				
C-B	0.21	7.74	0.3	A
AB				
AC				

Main Results for each time segment

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	190	630	0.301	188	0.4	8.514	A
C-A	106			106			
C-B	91	653	0.139	90	0.2	6.707	A
AB	93			93			
AC	187			187			

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	227	610	0.371	226	0.6	9.817	A
C-A	127			127			
C-B	109	640	0.170	109	0.2	7.111	A
AB	111			111			
AC	223			223			

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	277	583	0.476	276	0.9	12.278	B
C-A	155			155			
C-B	133	622	0.214	133	0.3	7.727	A
AB	137			137			
AC	273			273			

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	277	583	0.476	277	0.9	12.378	B
C-A	155			155			
C-B	133	622	0.214	133	0.3	7.737	A
AB	137			137			
AC	273			273			

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	227	610	0.371	228	0.6	9.917	A
C-A	127			127			
C-B	109	640	0.170	109	0.2	7.121	A
AB	111			111			
AC	223			223			

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	190	630	0.301	190	0.5	8.613	A
C-A	106			106			
C-B	91	653	0.139	91	0.2	6.730	A
AB	93			93			
AC	187			187			

DS - DS 2032, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		5.52	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	DS 2032	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - DDR (S)		✓	312	100.000
B - Portrane Road		✓	297	100.000
C - DDR (N)		✓	293	100.000

Origin-Destination Data

		To		
		A - DDR (S)	B - Portrane Road	C - DDR (N)
From	A - DDR (S)	0	141	171
	B - Portrane Road	182	0	115
	C - DDR (N)	184	109	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - DDR (S)	B - Portrane Road	C - DDR (N)
From	A - DDR (S)	0	5	5
	B - Portrane Road	5	0	5
	C - DDR (N)	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.55	14.08	1.3	B
C-A				
C-B	0.19	7.30	0.2	A
AB				
AC				

Main Results for each time segment

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	224	637	0.351	221	0.6	9.047	A
C-A	139			139			
C-B	82	664	0.124	81	0.1	6.479	A
AB	106			106			
AC	129			129			

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	267	620	0.431	266	0.8	10.667	B
C-A	165			165			
C-B	98	653	0.150	98	0.2	6.805	A
AB	127			127			
AC	154			154			

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	327	595	0.549	325	1.2	13.900	B
C-A	203			203			
C-B	120	638	0.188	120	0.2	7.293	A
AB	155			155			
AC	188			188			

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	327	595	0.549	327	1.3	14.083	B
C-A	203			203			
C-B	120	638	0.188	120	0.2	7.299	A
AB	155			155			
AC	188			188			

DS - DS 2042, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		4.90	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
DS	DS 2042	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - DDR (S)		✓	388	100.000
B - Portrane Road		✓	265	100.000
C - DDR (N)		✓	276	100.000

Origin-Destination Data

		To		
		A - DDR (S)	B - Portrane Road	C - DDR (N)
From	A - DDR (S)	0	129	259
	B - Portrane Road	154	0	111
	C - DDR (N)	148	128	0

Vehicle Mix

		To		
		A - DDR (S)	B - Portrane Road	C - DDR (N)
From	A - DDR (S)	0	5	5
	B - Portrane Road	5	0	5
	C - DDR (N)	5	5	0

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	267	619	0.431	269	0.8	10.835	B
C-A	165			165			
C-B	98	653	0.150	98	0.2	6.813	A
AB	127			127			
AC	154			154			

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	224	637	0.351	225	0.6	9.188	A
C-A	139			139			
C-B	82	664	0.124	82	0.1	6.498	A
AB	106			106			
AC	129			129			

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	224	637	0.351	225	0.6	9.188	A
C-A	139			139			
C-B	82	664	0.124	82	0.1	6.498	A
AB	106			106			
AC	129			129			

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	267	620	0.431	266	0.8	10.667	B
C-A	165			165			
C-B	98	653	0.150	98	0.2	6.805	A
AB	127			127			
AC	154			154			

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	327	595	0.549	325	1.2	13.900	B
C-A	203			203			
C-B	120	638	0.188	120	0.2	7.293	A
AB	155			155			
AC	188			188			

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	327	595	0.549	327	1.3	14.083	B
C-A	203			203			
C-B	120	638	0.188	120	0.2	7.299	A
AB	155			155			
AC	188			188			

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.51	13.34	1.1	B
C-A				
C-B	0.23	7.93	0.3	A
AB				
AC				

Main Results for each time segment

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	200	625	0.319	198	0.5	8.805	A
C-A	111			111			
C-B	96	650	0.148	96	0.2	6.807	A
AB	97			97			
AC	195			195			

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	238	604	0.394	237	0.7	10.289	B
C-A	133			133			
C-B	115	637	0.181	115	0.2	7.245	A
AB	116			116			
AC	233			233			

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	292	575	0.507	290	1.1	13.200	B
C-A	163			163			
C-B	141	617	0.228	141	0.3	7.922	A
AB	142			142			
AC	285			285			

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	292	575	0.507	292	1.1	13.337	B
C-A	163			163			
C-B	141	617	0.228	141	0.3	7.931	A
AB	142			142			
AC	285			285			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	238	604	0.394	240	0.7	10.422	B
C-A	133			133			
C-B	115	637	0.181	115	0.2	7.259	A
A-B	116			116			
A-C	233			233			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	200	625	0.319	200	0.5	8.922	A
C-A	111			111			
C-B	96	660	0.148	97	0.2	6.828	A
A-B	97			97			
A-C	195			195			

DS - DS 2042, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		5.93	A

Junction Network Options

Driving side	Lighting
Left	Normalunknown

Traffic Demand

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	DS 2042	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - DDR (S)		✓	328	100.000
B - Portrane Road		✓	311	100.000
C - DDR (N)		✓	306	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
From		A - DDR (S)	B - Portrane Road	C - DDR (N)
	A - DDR (S)	0	148	180
	B - Portrane Road	190	0	121
	C - DDR (N)	192	114	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		A - DDR (S)	B - Portrane Road	C - DDR (N)
	A - DDR (S)	0	5	5
	B - Portrane Road	5	0	5
	C - DDR (N)	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.58	15.30	1.4	C
C-A				
C-B	0.20	7.44	0.3	A
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	234	633	0.370	232	0.6	9.363	A
C-A	145			145			
C-B	86	661	0.130	85	0.2	6.555	A
A-B	111			111			
A-C	136			136			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	280	615	0.455	279	0.9	11.212	B
C-A	173			173			
C-B	102	660	0.158	102	0.2	6.905	A
A-B	133			133			
A-C	162			162			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	342	589	0.581	340	1.4	15.053	C
C-A	211			211			
C-B	126	634	0.198	125	0.3	7.434	A
A-B	163			163			
A-C	198			198			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	342	589	0.581	342	1.4	15.303	C
C-A	211			211			
C-B	126	634	0.198	126	0.3	7.439	A
A-B	163			163			
A-C	198			198			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	280	615	0.455	282	0.9	11.431	B
C-A	173			173			
C-B	102	660	0.158	103	0.2	6.913	A
A-B	133			133			
A-C	162			162			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	234	633	0.370	235	0.6	9.531	A
C-A	145			145			
C-B	86	661	0.130	86	0.2	6.574	A
A-B	111			111			
A-C	136			136			

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - DDR (S)		✓	410	100.000
B - Site Access (N)		✓	74	100.000
C - DDR (N)		✓	278	100.000

Origin-Destination Data

		To		
From		A - DDR (S)	B - Site Access (N)	C - DDR (N)
A - DDR (S)		0	41	369
B - Site Access (N)		67	0	7
C - DDR (N)		273	5	0

Vehicle Mix

		To		
From		A - DDR (S)	B - Site Access (N)	C - DDR (N)
A - DDR (S)		0	5	5
B - Site Access (N)		5	0	5
C - DDR (N)		5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.19	11.08	0.2	B
C-AB	0.01	5.42	0.0	A
C-A				
AB				
AC				

Main Results for each time segment

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56	470	0.119	55	0.1	9.109	A
C-AB	5	703	0.008	5	0.0	5.419	A
C-A	204			204			
AB	31			31			
AC	278			278			

DS - DS 2027, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.69	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	DS 2027	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - DDR (S)		✓	341	100.000
B - Site Access (N)		✓	44	100.000
C - DDR (N)		✓	329	100.000

Origin-Destination Data

		To		
From		A - DDR (S)	B - Site Access (N)	C - DDR (N)
A - DDR (S)		0	61	280
B - Site Access (N)		40	0	4
C - DDR (N)		322	7	0

Vehicle Mix

		To		
From		A - DDR (S)	B - Site Access (N)	C - DDR (N)
A - DDR (S)		0	5	5
B - Site Access (N)		5	0	5
C - DDR (N)		5	5	0

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	67	450	0.148	66	0.2	9.852	A
C-AB	7	718	0.010	7	0.0	5.312	A
C-A	243			243			
AB	37			37			
AC	332			332			

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	81	423	0.193	81	0.2	11.063	B
C-AB	9	741	0.013	9	0.0	5.166	A
C-A	297			297			
AB	45			45			
AC	406			406			

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	81	423	0.193	81	0.2	11.080	B
C-AB	9	741	0.013	9	0.0	5.168	A
C-A	297			297			
AB	45			45			
AC	406			406			

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	67	450	0.148	67	0.2	9.875	A
C-AB	7	718	0.010	7	0.0	5.312	A
C-A	243			243			
AB	37			37			
AC	332			332			

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56	470	0.119	56	0.1	9.140	A
C-AB	5	703	0.008	5	0.0	5.420	A
C-A	204			204			
AB	31			31			
AC	278			278			

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.11	9.77	0.1	A
C-AB	0.02	5.18	0.0	A
C-A				
AB				
AC				

Main Results for each time segment

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	33	478	0.069	33	0.1	8.482	A
C-AB	8	738	0.011	8	0.0	5.173	A
C-A	240			240			
AB	46			46			
AC	211			211			

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	460	0.086	39	0.1	8.982	A
C-AB	10	761	0.013	10	0.0	5.034	A
C-A	286			286			
AB	55			55			
AC	252			252			

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	48	435	0.111	48	0.1	9.765	A
C-AB	14	793	0.018	14	0.0	4.851	A
C-A	348			348			
AB	67			67			
AC	308			308			

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	48	435	0.111	48	0.1	9.771	A
C-AB	14	793	0.018	14	0.0	4.852	A
C-A	348			348			
AB	67			67			
AC	308			308			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40	460	0.086	40	0.1	8.994	A
C-AB	10	761	0.013	10	0.0	5.037	A
C-A	286			286			
A-B	55			55			
A-C	252			252			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	33	478	0.069	33	0.1	8.497	A
C-AB	8	738	0.011	8	0.0	5.176	A
C-A	240			240			
A-B	46			46			
A-C	211			211			

DS - DS 2032, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.46	A

Junction Network Options

Driving side	Lighting
Left	Normalunknown

Traffic Demand

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	DS 2032	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - DDR (S)		✓	433	100.000
B - Site Access (N)		✓	94	100.000
C - DDR (N)		✓	296	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
From		A - DDR (S)	B - Site Access (N)	C - DDR (N)
	A - DDR (S)	0	45	388
	B - Site Access (N)	85	0	9
	C - DDR (N)	289	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		A - DDR (S)	B - Site Access (N)	C - DDR (N)
	A - DDR (S)	0	5	5
	B - Site Access (N)	5	0	5
	C - DDR (N)	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.25	12.18	0.3	B
C-AB	0.02	5.40	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	71	464	0.153	70	0.2	9.583	A
C-AB	8	707	0.011	8	0.0	5.400	A
C-A	215			215			
A-B	34			34			
A-C	292			292			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	85	443	0.191	84	0.2	10.536	B
C-AB	10	724	0.014	10	0.0	5.290	A
C-A	256			256			
A-B	40			40			
A-C	349			349			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	103	414	0.250	103	0.3	12.145	B
C-AB	13	749	0.018	13	0.0	5.141	A
C-A	312			312			
A-B	50			50			
A-C	427			427			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	103	414	0.250	103	0.3	12.176	B
C-AB	13	749	0.018	13	0.0	5.141	A
C-A	312			312			
A-B	50			50			
A-C	427			427			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	85	443	0.191	85	0.3	10.571	B
C-AB	10	724	0.014	10	0.0	5.290	A
C-A	256			256			
A-B	40			40			
A-C	349			349			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	71	464	0.153	71	0.2	9.633	A
C-AB	8	708	0.011	8	0.0	5.402	A
C-A	215			215			
A-B	34			34			
A-C	292			292			

DS - DS 2032, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.77	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	DS 2032	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - DDR (S)		✓	373	100.000
B - Site Access (N)		✓	48	100.000
C - DDR (N)		✓	350	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
	A - DDR (S)	B - Site Access (N)	C - DDR (N)	
A - DDR (S)	0	78	295	
B - Site Access (N)	43	0	5	
C - DDR (N)	338	12	0	

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	A - DDR (S)	B - Site Access (N)	C - DDR (N)	
A - DDR (S)	0	5	5	
B - Site Access (N)	5	0	5	
C - DDR (N)	5	5	0	

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.12	10.11	0.1	B
C-AB	0.03	5.19	0.0	A
C-A				
AB				
AC				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	36	473	0.076	36	0.1	8.648	A
C-AB	14	742	0.019	14	0.0	5.191	A
C-A	250			250			
AB	59			59			
AC	222			222			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43	454	0.095	43	0.1	9.206	A
C-AB	18	765	0.023	18	0.0	5.057	A
C-A	297			297			
AB	70			70			
AC	265			265			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	53	427	0.124	53	0.1	10.099	B
C-AB	25	799	0.031	25	0.0	4.882	A
C-A	361			361			
AB	86			86			
AC	325			325			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	53	427	0.124	53	0.1	10.107	B
C-AB	25	799	0.031	25	0.0	4.883	A
C-A	361			361			
AB	86			86			
AC	325			325			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43	454	0.095	43	0.1	9.218	A
C-AB	18	765	0.023	18	0.0	5.058	A
C-A	297			297			
AB	70			70			
AC	265			265			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	36	473	0.076	36	0.1	8.659	A
C-AB	14	742	0.019	14	0.0	5.193	A
C-A	250			250			
AB	59			59			
AC	222			222			

DS - DS 2042, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.44	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	DS 2042	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - DDR (S)		✓	451	100.000
B - Site Access (N)		✓	94	100.000
C - DDR (N)		✓	312	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
	A - DDR (S)	B - Site Access (N)	C - DDR (N)	
A - DDR (S)	0	45	406	
B - Site Access (N)	85	0	9	
C - DDR (N)	305	7	0	

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	A - DDR (S)	B - Site Access (N)	C - DDR (N)	
A - DDR (S)	0	5	5	
B - Site Access (N)	5	0	5	
C - DDR (N)	5	5	0	

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.25	12.47	0.4	B
C-AB	0.02	5.36	0.0	A
C-A				
AB				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	71	459	0.154	70	0.2	9.707	A
C-AB	8	713	0.011	8	0.0	5.358	A
C-A	227			227			
AB	34			34			
A-C	306			306			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	85	437	0.193	84	0.2	10.714	B
C-AB	10	731	0.014	10	0.0	5.241	A
C-A	270			270			
AB	40			40			
A-C	365			365			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	103	407	0.255	103	0.4	12.439	B
C-AB	14	757	0.018	14	0.0	5.083	A
C-A	330			330			
AB	50			50			
A-C	447			447			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	103	407	0.255	103	0.4	12.473	B
C-AB	14	757	0.018	14	0.0	5.083	A
C-A	330			330			
AB	50			50			
A-C	447			447			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	85	437	0.193	85	0.3	10.753	B
C-AB	10	731	0.014	10	0.0	5.244	A
C-A	270			270			
AB	40			40			
A-C	365			365			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	71	459	0.154	71	0.2	9.756	A
C-AB	8	713	0.011	8	0.0	5.361	A
C-A	227			227			
AB	34			34			
A-C	306			306			

DS - DS 2042, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.75	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	DS 2042	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - DDR (S)		✓	388	100.000
B - Site Access (N)		✓	48	100.000
C - DDR (N)		✓	365	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - DDR (S)	B - Site Access (N)	C - DDR (N)
From	A - DDR (S)	0	78	310
	B - Site Access (N)	43	0	5
	C - DDR (N)	353	12	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - DDR (S)	B - Site Access (N)	C - DDR (N)
From	A - DDR (S)	0	5	5
	B - Site Access (N)	5	0	5
	C - DDR (N)	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.13	10.28	0.2	B
C-AB	0.03	5.15	0.0	A
C-A				
AB				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	36	469	0.077	36	0.1	8.728	A
C-AB	14	747	0.019	14	0.0	5.153	A
C-A	261			261			
AB	59			59			
A-C	233			233			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43	448	0.096	43	0.1	9.325	A
C-AB	18	772	0.024	18	0.0	5.014	A
C-A	310			310			
AB	70			70			
A-C	279			279			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	53	420	0.126	53	0.1	10.275	B
C-AB	26	807	0.032	25	0.0	4.833	A
C-A	376			376			
AB	86			86			
A-C	341			341			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	53	420	0.126	53	0.2	10.284	B
C-AB	26	808	0.032	26	0.0	4.834	A
C-A	376			376			
AB	86			86			
A-C	341			341			

DN - DN 2027, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		50.10	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Hearse Road		Major
B	Turvey Avenue		Minor
C	New Road		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - New Road	6.50			100.0	✓	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 - Turvey Avenue	One lane	3.50	110	40

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B (PCU/hr)	Slope for A-C (PCU/hr)	Slope for C-A (PCU/hr)	Slope for C-B (PCU/hr)
B-A	560	0.100	0.252	0.159	0.360
B-C	682	0.102	0.258	-	-
C-B	632	0.240	0.240	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	DN 2027	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Hearse Road		✓	303	100.000
B - Turvey Avenue		✓	404	100.000
C - New Road		✓	808	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Hearse Road	B - Turvey Avenue	C - New Road
From	A - Hearse Road	0	1	302
	B - Turvey Avenue	0	0	404
	C - New Road	449	359	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Hearse Road	B - Turvey Avenue	C - New Road
From	A - Hearse Road	0	5	5
	B - Turvey Avenue	5	0	5
	C - New Road	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.75	24.77	2.9	C
C-AB	0.99	90.40	23.7	F
C-A				
AB				
AC				

Main Results for each time segment

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	304	623	0.488	300	1.0	11.586	B
C-AB	465	807	0.576	458	1.9	10.721	B
C-A	143			143			
AB	0.75			0.75			
AC	227			227			

DN - DN 2027, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		16.24	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	DN 2027	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Hearse Road		✓	466	100.000
B - Turvey Avenue		✓	365	100.000
C - New Road		✓	585	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Hearse Road	B - Turvey Avenue	C - New Road
From	A - Hearse Road	0	1	465
	B - Turvey Avenue	0	0	365
	C - New Road	276	309	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Hearse Road	B - Turvey Avenue	C - New Road
From	A - Hearse Road	0	5	5
	B - Turvey Avenue	5	0	5
	C - New Road	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.73	25.37	2.7	D
C-AB	0.81	27.84	5.4	D
C-A				
AB				
AC				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	275	591	0.465	271	0.9	11.693	B
C-AB	332	692	0.480	328	1.2	10.287	B
C-A	108			108			
AB	0.75			0.75			
AC	350			350			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	328	574	0.572	326	1.4	15.168	C
C-AB	430	707	0.608	427	2.0	13.471	B
C-A	96			96			
AB	0.90			0.90			
AC	418			418			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	402	549	0.732	397	2.6	24.010	C
C-AB	589	729	0.808	577	5.0	24.306	C
C-A	55			55			
AB	1			1			
AC	512			512			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	402	549	0.732	401	2.7	25.372	D
C-AB	594	733	0.811	593	5.4	27.842	D
C-A	50			50			
AB	1			1			
AC	512			512			

DN - DN 2032, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		72.90	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	DN 2032	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Hearse Road		✓	329	100.000
B - Turvey Avenue		✓	438	100.000
C - New Road		✓	838	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
From		A - Hearse Road	B - Turvey Avenue	C - New Road
	A - Hearse Road	0	1	328
	B - Turvey Avenue	0	0	438
	C - New Road	465	373	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		A - Hearse Road	B - Turvey Avenue	C - New Road
	A - Hearse Road	0	5	5
	B - Turvey Avenue	5	0	5
	C - New Road	5	5	0

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	328	574	0.572	333	1.5	16.042	C
C-AB	436	713	0.611	440	2.2	15.164	C
C-A	90			90			
AB	0.90			0.90			
AC	418			418			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	275	591	0.465	277	0.9	12.108	B
C-AB	335	695	0.482	339	1.3	10.800	B
C-A	105			105			
AB	0.75			0.75			
AC	350			350			

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.82	34.35	4.4	D
C-AB	1.04	131.66	36.3	F
C-A				
AB				
AC				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	330	618	0.534	325	1.2	12.724	B
C-AB	494	811	0.609	485	2.2	11.469	B
C-A	137			137			
AB	0.75			0.75			
AC	247			247			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	394	605	0.650	391	1.9	17.398	C
C-AB	666	851	0.783	656	4.7	19.304	C
C-A	87			87			
AB	0.90			0.90			
AC	295			295			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	482	588	0.820	473	4.1	30.757	D
C-AB	923	888	1.039	847	23.7	68.932	F
C-A	0			0			
AB	1			1			
AC	361			361			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	482	588	0.820	481	4.4	34.348	D
C-AB	923	889	1.038	873	36.3	131.658	F
C-A	0			0			
AB	1			1			
AC	361			361			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	394	605	0.650	403	2.1	19.433	C
C-AB	747	904	0.827	854	9.6	91.173	F
C-A	6			6			
AB	0.90			0.90			
AC	295			295			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	330	618	0.534	333	1.2	13.424	B
C-AB	510	826	0.618	539	2.5	14.716	B
C-A	120			120			
AB	0.75			0.75			
AC	247			247			

DN - DN 2032, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		25.07	D

Junction Network Options

Driving side	Lighting
Left	Normalatunknown

Traffic Demand

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	DN 2032	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Hearse Road		✓	514	100.000
B - Turvey Avenue		✓	400	100.000
C - New Road		✓	613	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
From		A - Hearse Road	B - Turvey Avenue	C - New Road
	A - Hearse Road	0	1	513
	B - Turvey Avenue	0	0	400
	C - New Road	288	325	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		A - Hearse Road	B - Turvey Avenue	C - New Road
	A - Hearse Road	0	5	5
	B - Turvey Avenue	5	0	5
	C - New Road	5	5	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.82	37.96	4.4	E
C-AB	0.88	43.16	8.6	E
C-A				
AB				
AC				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	301	582	0.518	297	1.1	13.074	B
C-AB	357	691	0.516	351	1.4	11.018	B
C-A	105			105			
AB	0.75			0.75			
AC	386			386			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	360	562	0.639	357	1.8	18.146	C
C-AB	464	706	0.657	460	2.5	15.305	C
C-A	87			87			
AB	0.90			0.90			
AC	461			461			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	440	536	0.822	431	4.0	33.577	D
C-AB	641	729	0.879	621	7.4	33.265	D
C-A	34			34			
AB	1			1			
AC	565			565			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	440	536	0.822	439	4.4	37.962	E
C-AB	651	735	0.885	646	8.6	43.162	E
C-A	24			24			
AB	1			1			
AC	565			565			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	360	562	0.639	369	2.0	20.442	C
C-AB	475	716	0.663	498	2.9	19.392	C
C-A	77			77			
AB	0.90			0.90			
AC	461			461			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	301	582	0.518	304	1.2	13.778	B
C-AB	360	694	0.519	366	1.5	11.778	B
C-A	101			101			
AB	0.75			0.75			
AC	386			386			

DN - DN 2042, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		114.09	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	DN 2042	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Hearse Road		✓	347	100.000
B - Turvey Avenue		✓	464	100.000
C - New Road		✓	885	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
	A - Hearse Road	B - Turvey Avenue	C - New Road	
A - Hearse Road	0	1	346	
B - Turvey Avenue	0	0	464	
C - New Road	491	394	0	

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	A - Hearse Road	B - Turvey Avenue	C - New Road	
A - Hearse Road	0	5	5	
B - Turvey Avenue	5	0	5	
C - New Road	5	5	0	

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.88	47.03	6.2	E
C-AB	1.10	204.12	59.8	F
C-A				
AB				
AC				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	349	614	0.569	344	1.3	13.732	B
C-AB	539	822	0.656	528	2.6	12.691	B
C-A	127			127			
AB	0.75			0.75			
AC	260			260			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	417	601	0.694	414	2.2	19.756	C
C-AB	733	865	0.848	717	6.7	25.992	D
C-A	62			62			
AB	0.90			0.90			
AC	311			311			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	511	583	0.876	498	5.5	39.112	E
C-AB	974	882	1.104	859	35.5	98.353	F
C-A	0			0			
AB	1			1			
AC	381			381			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	511	583	0.876	508	6.2	47.034	E
C-AB	974	883	1.103	877	59.8	204.121	F
C-A	0			0			
AB	1			1			
AC	381			381			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	417	601	0.694	432	2.5	23.946	C
C-AB	796	903	0.881	881	38.5	198.726	F
C-A	0			0			
AB	0.90			0.90			
AC	311			311			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	349	614	0.569	354	1.4	14.751	B
C-AB	614	880	0.697	753	3.7	58.432	F
C-A	52			52			
AB	0.75			0.75			
AC	260			260			

DN - DN 2042, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		41.21	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	DN 2042	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Hearse Road		✓	541	100.000
B - Turvey Avenue		✓	421	100.000
C - New Road		✓	648	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
	A - Hearse Road	B - Turvey Avenue	C - New Road	
A - Hearse Road	0	1	540	
B - Turvey Avenue	0	0	421	
C - New Road	304	344	0	

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	A - Hearse Road	B - Turvey Avenue	C - New Road	
A - Hearse Road	0	5	5	
B - Turvey Avenue	5	0	5	
C - New Road	5	5	0	

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.88	51.85	6.2	F
C-AB	0.96	75.91	15.8	F
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	317	577	0.550	312	1.2	14.044	B
C-AB	386	695	0.555	380	1.6	11.847	B
C-A	102			102			
A-B	0.75			0.75			
A-C	407			407			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	378	556	0.681	375	2.1	20.474	C
C-AB	506	712	0.710	500	3.1	17.730	C
C-A	77			77			
A-B	0.90			0.90			
A-C	485			485			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	464	528	0.878	450	5.5	42.467	E
C-AB	705	736	0.957	669	12.0	48.449	E
C-A	9			9			
A-B	1			1			
A-C	595			595			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	464	528	0.878	461	6.2	51.852	F
C-AB	713	743	0.961	698	15.8	75.909	F
C-A	0			0			
A-B	1			1			
A-C	595			595			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	378	556	0.681	394	2.4	25.105	D
C-AB	528	732	0.721	575	3.9	31.441	D
C-A	55			55			
A-B	0.90			0.90			
A-C	485			485			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	317	577	0.550	321	1.3	15.042	C
C-AB	391	700	0.559	400	1.8	13.073	B
C-A	97			97			
A-B	0.75			0.75			
A-C	407			407			

Appendix C : TRANSYT Output Files

TRANSYT 15

Version: 15.5.3.7
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+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: DDR-New Road DS.t15
Path: G:\2024\p240058\calcs\transyt\Junction 3 - DDR New Road
Report generation date: 23/09/2025 10:05:42

File summary

File description	
File title	DDR - New Road DS
Location	
Site number	
UTCR	Region
Driving side	Left
Date	28/11/2023
Version	
Status	(new file)
Identifier	
Client	
Job number	
Enumerator	HEADOFFICE\GarveyD
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	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

Units

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units	Traffic units	Flow units	Average delay units	Total delay units	Rate of delay units
£	km/h	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	Link grouping type	Source grouping	Colour Analysts/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

A1 - 2027 DS AM
D1 - 2027 DS AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (E 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 over PR
1	23/09/2025 10:05:24	23/09/2025 10:05:25	08:00	100	126.44	8.14	60.65	2/1	0	0	2/1	3/1	2/1

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2027 DS AM		D1	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2027 DS AM				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (E)	Phase maximum broken penalty (E)	Intergreen broken penalty (E)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

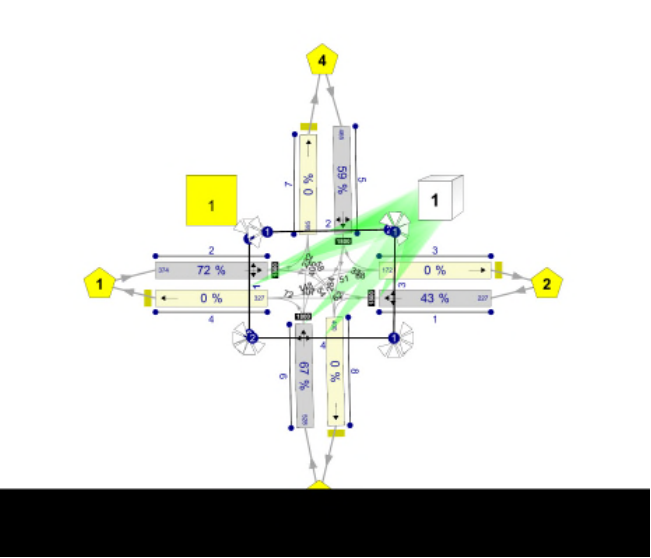
Traffic options

Traffic model	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 results calculation	Random delay mode	Type of Vehicle-In-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate POM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Network Diagrams



Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

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
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0, 5, 0, 5, 0, 5		✓	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

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic mode
(ALL)			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
2	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
3	1			✓	183.31						Normal	
4	1			✓	183.16						Normal	
5	1	DDR (N)		✓	95.71	✓	Sum of lanes	1800	✓		Normal	
6	1			✓	92.52	✓	Sum of lanes	1800	✓		Normal	
7	1			✓	167.84						Normal	
8	1			✓	167.08						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
1	1	1	(untitled)			1800
2	1	1	(untitled)			1800
3	1	1	(untitled)			
4	1	1	(untitled)			
5	1	1	(untitled)			1800
6	1	1	(untitled)			1800
7	1	1	(untitled)			
8	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
(ALL)	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
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

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)
1	1	126	126
2	1	262	262
3	1	116	116
4	1	243	243
5	1	450	450
6	1	341	341
7	1	435	435
8	1	385	385

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	C	
2	1	1	D	
5	1	1	A	
6	1	1	B	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
1	1	12.00	30.00
2	1	12.00	30.00
5	1	11.48	30.00
6	1	11.10	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)
3	1	1	2/1	3/1	22.00	30.00	✓	Straight	Straight Movement
4	1	1	6/1	4/1	21.98	30.00	✓	Nearside	23.87
7	1	1	2/1	7/1	20.14	30.00	✓	Nearside	32.23
8	1	1	2/1	8/1	20.05	30.00	✓	Offside	43.34
3	1	2	6/1	3/1	22.00	30.00	✓	Offside	47.14
4	1	2	5/1	4/1	21.98	30.00	✓	Offside	56.47
7	1	2	6/1	7/1	20.14	30.00	✓	Straight	Straight Movement
8	1	2	5/1	8/1	20.05	30.00	✓	Straight	Straight Movement
3	1	3	5/1	3/1	22.00	30.00	✓	Nearside	32.20
4	1	3	1/1	4/1	21.98	30.00	✓	Straight	Straight Movement
7	1	3	1/1	7/1	20.14	30.00	✓	Offside	56.33
8	1	3	1/1	8/1	20.05	30.00	✓	Nearside	16.69

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	6.50	4.33	5.40
2	(untitled)				Farside	11.50	7.67	5.40
3	(untitled)				Farside	6.50	4.33	5.40
4	(untitled)				Farside	11.50	7.67	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(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
(ALL)	(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	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To			
		1	2	3	4
From	1	0	50	67	145
	2	68	0	35	23
	3	32	42	0	267
	4	143	24	283	0

Bus Input Flows not shown as they are blank.

Tram 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	1	(untitled)	2/1	4/1	#0000FF
	2	(untitled)	1/1	3/1	#FF0000
	3	(untitled)	6/1	8/1	#00FF00
	4	(untitled)	5/1	7/1	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	2/1, 3/1	Normal	50
	2		2	1	1/1, 4/1	Normal	68
	3		1	4	2/1, 7/1	Normal	145
	4		2	4	1/1, 7/1	Normal	23
	5		4	2	5/1, 3/1	Normal	24
	6		4	1	5/1, 4/1	Normal	143
	7		1	3	2/1, 8/1	Normal	67
	8		2	3	1/1, 8/1	Normal	35
	9		4	3	5/1, 6/1	Normal	283
	10		3	2	6/1, 3/1	Normal	42
	11		3	1	6/1, 4/1	Normal	32
	12		3	4	6/1, 7/1	Normal	267

Signal Timings

Network Default: 100s cycle time; 100 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	100

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A, B	1
	2	C, D	1
	3	E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3	37, 66, 81

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A			6	6	8
	B			6	6	8
	C	6	6			8
	D	6	6			8
	E	8	8	8	8	

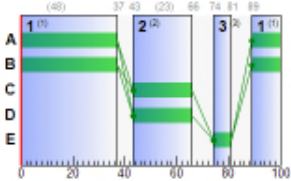
Banned Stage transitions for Controller Stream 1

		To		
		1	2	3
From	1			
	2			
	3			

Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
1	1		1	C	43	66	23
2	1		1	D	43	66	23
5	1		1	A	89	37	48
6	1		1	B	89	37	48

Phase Timings Diagram for Controller Stream 1



A2 - 2027 DS PM

D2 - 2027 DS PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	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 over PR
2	23/09/2025 10:05:25	23/09/2025 10:05:25	17:00	100	166.34	10.74	65.48	2/1	0	0	2/1	3/1	2/1

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2027 DS PM		D2	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2027 DS PM				17:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		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)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	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 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		✓

13

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Bus	PCU Factor	Dispersion type	Acceleration (ms ⁻² [-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Tram	PCU Factor	Dispersion type	Acceleration (ms ⁻² [-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

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
Hill Climb (Fast)	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

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
(ALL)			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
2	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
3	1			✓	183.31						Normal	
4	1			✓	183.16						Normal	
5	1	DDR (N)		✓	95.71	✓	Sum of lanes	1800	✓		Normal	
6	1			✓	92.52	✓	Sum of lanes	1800	✓		Normal	
7	1			✓	167.84						Normal	
8	1			✓	167.08						Normal	

14

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
1	1	1	(untitled)			1800
2	1	1	(untitled)			1800
3	1	1	(untitled)			
4	1	1	(untitled)			
5	1	1	(untitled)			1800
6	1	1	(untitled)			1800
7	1	1	(untitled)			
8	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
(ALL)	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
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

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)
1	1	194	194
2	1	330	330
3	1	152	152
4	1	287	287
5	1	410	410
6	1	467	467
7	1	607	607
8	1	355	355

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	C	
2	1	1	D	
5	1	1	A	
6	1	1	B	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
1	1	12.00	30.00
2	1	12.00	30.00
5	1	11.48	30.00
6	1	11.10	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)
3	1	1	2/1	3/1	22.00	30.00	✓	Straight	Straight Movement
4	1	1	6/1	4/1	21.98	30.00	✓	Nearside	23.87
7	1	1	2/1	7/1	20.14	30.00	✓	Nearside	32.23
8	1	1	2/1	8/1	20.05	30.00	✓	Offside	43.34
3	1	2	6/1	3/1	22.00	30.00	✓	Offside	47.14
4	1	2	5/1	4/1	21.98	30.00	✓	Offside	56.47
7	1	2	6/1	7/1	20.14	30.00	✓	Straight	Straight Movement
8	1	2	5/1	8/1	20.05	30.00	✓	Straight	Straight Movement
3	1	3	5/1	3/1	22.00	30.00	✓	Nearside	32.20
4	1	3	1/1	4/1	21.98	30.00	✓	Straight	Straight Movement
7	1	3	1/1	7/1	20.14	30.00	✓	Offside	56.33
8	1	3	1/1	8/1	20.05	30.00	✓	Nearside	16.69

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	6.50	4.33	5.40
2	(untitled)				Farside	11.50	7.67	5.40
3	(untitled)				Farside	6.50	4.33	5.40
4	(untitled)				Farside	11.50	7.67	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(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
(ALL)	(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	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

15

16

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	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 over PRC
2	23/09/2025 10:05:25	23/09/2025 10:05:25	17:00	100	166.34	10.74	65.48	2/1	0	0	2/1	3/1	2/1

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	65	0	2802	542	13.80	152.47	13.87	166.34

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	56	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s per cycle)
17:00-18:00	2802	2802	0		65		37	598

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	16.12	13.80	10.74	152.47	39.48	1106.14	13.87

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From		To			
		1	2	3	4
1	1	0.0	72.4	70.5	70.6
	2	65.3	0.0	63.3	63.4
	3	56.5	56.5	0.0	54.7
	4	55.3	55.3	53.4	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
1	1	2	78	72.42	78	72.42
2	2	1	89	65.27	89	65.27
3	1	4	201	70.56	201	70.56
4	2	4	50	63.43	50	63.43
5	4	2	55.34	29	29	55.34
6	4	1	132	55.32	132	55.32
7	1	3	51	70.46	51	70.46
8	2	3	55	63.33	55	63.33
9	4	3	249	53.39	249	53.39
10	3	2	45	56.53	45	56.53
11	3	1	66	56.52	66	56.52
12	3	4	356	54.68	356	54.68

21

Final Prediction Table

Traffic Stream Results

			SIGNALS			FLOWS			PERFORMANCE			PER PCU			QUEUES	
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)	Dwell time (s)
1	1			1	C	194	1800	27	0.00	38	134	43.29	31.29	80.99	4.43	
2	1			1	D	330	1800	27	0.00	65	37	50.42	38.42	92.72	8.68	
3	1					152	Unrestricted	100	22.00	0	Unrestricted	22.00	0.00	0.00	0.00	
4	1					287	Unrestricted	100	18.00	0	Unrestricted	21.98	0.00	0.00	0.00	
5	1	DDR (%)		1	A	410	1800	44	0.00	51	78	33.34	21.86	71.36	8.34	
6	1			1	B	467	1800	44	0.00	58	56	34.54	23.44	75.05	9.99	
7	1					607	Unrestricted	100	11.00	0	Unrestricted	20.14	0.00	0.00	0.00	
8	1					355	Unrestricted	100	17.00	0	Unrestricted	20.05	0.00	0.00	0.00	

Pedestrian Crossing Results

			SIGNALS			FLOWS			PERFORMANCE			PER PED			QUEUES		WEIGHTS
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 (%)			
(ALL)	(ALL)	(untitled)		1	E	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100			

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total 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	376.46	23.29	16.17	10.74	152.47	13.87	0.00	166.34
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	376.46	23.29	16.17	10.74	152.47	13.87	0.00	166.34

- < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- +/- = Traffic Stream - Normal: Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%
- +/- = Traffic Stream - Normal: Bus or Tram 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

22

A3 - 2032 DS AM D3 - 2032 DS AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	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 over PRC
3	23/09/2025 10:05:25	23/09/2025 10:05:25	08:00	100	149.18	9.61	65.74	2/1	0	0	2/1	3/1	2/1

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2032 DS AM		D3	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH-mm)	Locked
2032 DS AM				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		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)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	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 results calculation	Random delay mode	Type of Vehicle-In-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate POM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

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
Hill Climb	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 5, 0, 0, 5, 0, 0, 5		✓	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

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
(ALL)			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
2	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
3	1			✓	183.31						Normal	
4	1			✓	183.16						Normal	
5	1	DDR (%)		✓	95.71	✓	Sum of lanes	1800	✓		Normal	
6	1			✓	92.52	✓	Sum of lanes	1800	✓		Normal	
7	1			✓	167.84						Normal	
8	1			✓	167.08						Normal	

23

24

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
1	1	1	(untitled)			1800
2	1	1	(untitled)			1800
3	1	1	(untitled)			
4	1	1	(untitled)			
5	1	1	(untitled)			1800
6	1	1	(untitled)			1800
7	1	1	(untitled)			
8	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
(ALL)	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
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

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)
1	1	142	142
2	1	284	284
3	1	129	129
4	1	278	278
5	1	524	524
6	1	375	375
7	1	480	480
8	1	438	438

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	C	
2	1	1	D	
5	1	1	A	
6	1	1	B	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
1	1	12.00	30.00
2	1	12.00	30.00
5	1	11.48	30.00
6	1	11.10	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)
3	1	1	2/1	3/1	22.00	30.00	✓	Straight	Straight Movement
4	1	1	6/1	4/1	21.98	30.00	✓	Nearside	23.87
7	1	1	2/1	7/1	20.14	30.00	✓	Nearside	32.23
8	1	1	2/1	8/1	20.05	30.00	✓	Offside	43.34
3	1	2	6/1	3/1	22.00	30.00	✓	Offside	47.14
4	1	2	5/1	4/1	21.98	30.00	✓	Offside	56.47
7	1	2	6/1	7/1	20.14	30.00	✓	Straight	Straight Movement
8	1	2	5/1	8/1	20.05	30.00	✓	Straight	Straight Movement
3	1	3	5/1	3/1	22.00	30.00	✓	Nearside	32.20
4	1	3	1/1	4/1	21.98	30.00	✓	Straight	Straight Movement
7	1	3	1/1	7/1	20.14	30.00	✓	Offside	56.33
8	1	3	1/1	8/1	20.05	30.00	✓	Nearside	16.69

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	6.50	4.33	5.40
2	(untitled)				Farside	11.50	7.67	5.40
3	(untitled)				Farside	6.50	4.33	5.40
4	(untitled)				Farside	11.50	7.67	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(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
(ALL)	(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	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To			
		1	2	3	4
From	1	0	57	70	157
	2	78	0	37	27
	3	35	44	0	296
	4	165	28	331	0

Bus Input Flows not shown as they are blank.

Tram 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	1	(untitled)	271	402	#0000FF
	2	(untitled)	171	371	#FF0000
	3	(untitled)	671	871	#00FF00
	4	(untitled)	571	771	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	2/1, 3/1	Normal	57
	2		2	1	1/1, 4/1	Normal	78
	3		1	4	2/1, 7/1	Normal	157
	4		2	4	1/1, 7/1	Normal	27
	5		4	2	5/1, 3/1	Normal	28
	6		4	1	5/1, 4/1	Normal	165
	7		1	3	2/1, 8/1	Normal	70
	8		2	3	1/1, 8/1	Normal	37
	9		4	3	5/1, 6/1	Normal	331
	10		3	2	6/1, 3/1	Normal	44
	11		3	1	6/1, 4/1	Normal	35
	12		3	4	6/1, 7/1	Normal	296

Signal Timings

Network Default: 100s cycle time; 100 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	100

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A, B	1
	2	C, D	1
	3	E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3	37, 66, 81

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A			6	6	8
	B			6	6	8
	C	6	6			8
	D	6	6			8
	E	8	8	8	8	

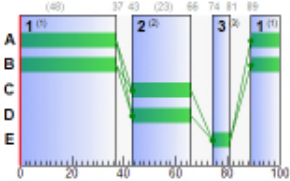
Banned Stage transitions for Controller Stream 1

		To		
		1	2	3
From	1			
	2			
	3			

Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
1	1		1	C	43	66	23
2	1		1	D	43	66	23
5	1		1	A	89	37	48
6	1		1	B	89	37	48

Phase Timings Diagram for Controller Stream 1



A4 - 2032 DS PM

D4 - 2032 DS PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	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 over PR
4	23/09/2025 10:05:26	23/09/2025 10:05:27	17:00	100	193.48	12.51	71.63	2/1	0	0	2/1	3/1	2/1

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2032 DS PM		D4	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2032 DS PM				17:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		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)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	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 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		✓

33

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Bus	PCU Factor	Dispersion type	Acceleration (ms ⁻² [-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Tram	PCU Factor	Dispersion type	Acceleration (ms ⁻² [-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

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
Hill Climb (Fast)	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

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
(ALL)			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
2	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
3	1			✓	183.31						Normal	
4	1			✓	183.16						Normal	
5	1	DDR (N)		✓	95.71	✓	Sum of lanes	1800	✓		Normal	
6	1			✓	92.52	✓	Sum of lanes	1800	✓		Normal	
7	1			✓	167.84						Normal	
8	1			✓	167.08						Normal	

34

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
1	1	1	(untitled)			1800
2	1	1	(untitled)			1800
3	1	1	(untitled)			
4	1	1	(untitled)			
5	1	1	(untitled)			1800
6	1	1	(untitled)			1800
7	1	1	(untitled)			
8	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
(ALL)	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
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

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)
1	1	217	217
2	1	361	361
3	1	164	164
4	1	315	315
5	1	450	450
6	1	514	514
7	1	676	676
8	1	387	387

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	C	
2	1	1	D	
5	1	1	A	
6	1	1	B	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
1	1	12.00	30.00
2	1	12.00	30.00
5	1	11.48	30.00
6	1	11.10	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)
3	1	1	2/1	3/1	22.00	30.00	✓	Straight	Straight Movement
4	1	1	6/1	4/1	21.98	30.00	✓	Nearside	23.87
7	1	1	2/1	7/1	20.14	30.00	✓	Nearside	32.23
8	1	1	2/1	8/1	20.05	30.00	✓	Offside	43.34
3	1	2	6/1	3/1	22.00	30.00	✓	Offside	47.14
4	1	2	5/1	4/1	21.98	30.00	✓	Offside	56.47
7	1	2	6/1	7/1	20.14	30.00	✓	Straight	Straight Movement
8	1	2	5/1	8/1	20.05	30.00	✓	Straight	Straight Movement
3	1	3	5/1	3/1	22.00	30.00	✓	Nearside	32.20
4	1	3	1/1	4/1	21.98	30.00	✓	Straight	Straight Movement
7	1	3	1/1	7/1	20.14	30.00	✓	Offside	56.33
8	1	3	1/1	8/1	20.05	30.00	✓	Nearside	16.69

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)							
2	(untitled)				Farside	11.50	7.67	5.40
3	(untitled)				Farside	6.50	4.33	5.40
4	(untitled)				Farside	11.50	7.67	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(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
(ALL)	(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	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

35

36

Normal Input Flows (PCU/hr)

		To			
		1	2	3	4
From	1	0	84	53	224
	2	102	0	59	56
	3	70	48	0	396
	4	143	32	275	0

Bus Input Flows not shown as they are blank.

Tram 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	1	(untitled)	2/1	4/1	#0000FF
	2	(untitled)	1/1	3/1	#FF0000
	3	(untitled)	6/1	8/1	#00FF00
	4	(untitled)	5/1	7/1	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	2/1, 3/1	Normal	84
	2		2	1	1/1, 4/1	Normal	102
	3		1	4	2/1, 7/1	Normal	224
	4		2	4	1/1, 7/1	Normal	56
	5		4	2	5/1, 3/1	Normal	32
	6		4	1	5/1, 4/1	Normal	143
	7		1	3	2/1, 8/1	Normal	53
	8		2	3	1/1, 8/1	Normal	59
	9		4	3	5/1, 8/1	Normal	275
	10		3	2	6/1, 3/1	Normal	48
	11		3	1	6/1, 4/1	Normal	70
	12		3	4	6/1, 7/1	Normal	396

Signal Timings

Network Default: 100s cycle time; 100 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	100

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A, B	1
	2	C, D	1
	3	E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3	33, 66, 81

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A		6	6	8	
	B			6	6	8
	C	6	6			8
	D	6	6			8
	E	8	8	8	8	

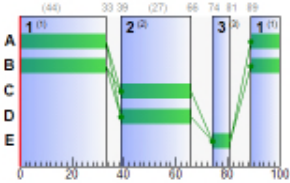
Banned Stage transitions for Controller Stream 1

		To		
		1	2	3
From	1			
	2			
	3			

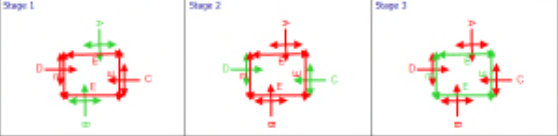
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
1	1		1	C	39	66	27
2	1		1	D	39	66	27
5	1		1	A	89	33	44
6	1		1	B	89	33	44

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
17:00-18:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	1	1	43	109	217	1800	27	32.17	5.04	29.01	27.53	2.24	29.78
	2	1	72	26	361	1800	27	41.24	9.91	56.98	58.73	4.37	63.09
	3	1	0	Unrestricted	164	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	4	1	0	Unrestricted	315	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	5	1	56	62	450	1800	44	22.93	9.47	56.90	40.71	4.17	44.88
	6	1	63	42	514	1800	44	25.00	11.40	70.84	50.68	5.05	55.73
	7	1	0	Unrestricted	676	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	8	1	0	Unrestricted	387	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
17:00-18:00	1	1	217	217	0		1800	504	43		109	0.00	27
	2	1	361	361	0		1800	504	72		26	0.00	27
	3	1	164	164	0		Unrestricted	Unrestricted	0		Unrestricted	0.57	100
	4	1	315	315	0		Unrestricted	Unrestricted	0		Unrestricted	0.61	100
	5	1	450	450	0		1800	810	56		62	0.00	44
	6	1	514	514	0		1800	810	63		42	0.00	44
	7	1	676	676	0		Unrestricted	Unrestricted	0		Unrestricted	0.57	100
	8	1	387	387	0		Unrestricted	Unrestricted	0		Unrestricted	0.60	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (h)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	1	1	12.00	32.17	1.94	27.53	82.46	178.93	2.24
	2	1	12.00	41.24	4.14	58.73	96.47	348.25	4.37
	3	1	22.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	1	21.98	0.00	0.00	0.00	0.00	0.00	0.00
	5	1	11.48	22.93	2.87	40.71	73.97	332.88	4.17
	6	1	11.10	25.00	3.57	50.68	78.28	402.37	5.05
	7	1	20.14	0.00	0.00	0.00	0.00	0.00	0.00
	8	1	20.05	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	1	1	0.00	5.04	17.39	29.01	0.00	0.00	
	2	1	0.00	9.91	17.39	56.98	0.00	0.00	
	3	1	0.00	0.00	31.88	0.00	0.00	20.00	
	4	1	0.00	0.00	31.85	0.00	0.00	17.00	
	5	1	0.00	9.47	16.64	56.90	0.00	0.00	
	6	1	0.00	11.40	16.09	70.84	0.00	0.00	
	7	1	0.00	0.00	29.19	0.00	0.00	10.00	
	8	1	0.00	0.00	29.05	0.00	0.00	16.00	

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	1	1	0.00	0.00	✓	5.04	0.16	4.50	1.00	0.00	29.78
	2	1	0.00	0.00	✓	9.92	0.89	8.11	1.00	0.00	63.09
	3	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	4	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	5	1	0.00	0.00	✓	9.47	0.35	7.22	1.00	0.00	44.88
	6	1	0.00	0.00	✓	11.40	0.55	8.40	1.00	0.00	55.73
	7	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	8	1	0.00	0.00	✓	0.00			1.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))
17:00-18:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Total delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	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
4	23/09/2025 10:05:26	23/09/2025 10:05:27	17:00	100	193.48	12.51	71.63	2/1	0	0	2/1	3/1	2/1

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	72	0	3084	542	14.60	177.65	15.83	193.48

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	56	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated Flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s per cycle)
17:00-18:00	3084	3084	0		72		26	598

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	16.12	14.60	12.51	177.65	40.93	1262.42	15.83

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To			
	1	2	3	4
	1	0.0	75.2	73.3
	2	66.1	0.0	64.2
	3	58.1	58.1	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
1	1	2	84	75.24	84	75.24
2	2	1	102	66.15	102	66.15
3	1	4	224	73.38	224	73.38
4	2	4	56	64.31	56	64.31
5	4	2	32	56.42	32	56.42
6	4	1	143	56.40	143	56.40
7	1	3	53	73.29	53	73.29
8	2	3	59	64.21	59	64.21
9	4	3	275	54.47	275	54.47
10	3	2	48	58.10	48	58.10
11	3	1	70	58.08	70	58.08
12	3	4	396	56.24	396	56.24

41

42

Final Prediction Table

Traffic Stream Results

			SIGNALS			FLOWS			PERFORMANCE			PER PCU			QUEUES	
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)	Dwell time (s)
1	1			1	C	217	1800	27	0.00	43	109	44.17	32.17	82.46	5.04	
2	1			1	D	361	1800	27	0.00	72	26	53.24	41.24	96.47	9.91	
3	1					164	Unrestricted	100	20.00	0	Unrestricted	22.00	0.00	0.00	0.00	
4	1					315	Unrestricted	100	17.00	0	Unrestricted	21.98	0.00	0.00	0.00	
5	1	DDR (%)		1	A	450	1800	44	0.00	56	62	34.42	22.93	73.97	9.47	
6	1			1	B	514	1800	44	0.00	63	42	36.10	25.00	78.28	11.40	
7	1					676	Unrestricted	100	10.00	0	Unrestricted	20.14	0.00	0.00	0.00	
8	1					387	Unrestricted	100	16.00	0	Unrestricted	20.05	0.00	0.00	0.00	

Pedestrian Crossing Results

			SIGNALS			FLOWS			PERFORMANCE			PER PED			QUEUES		WEIGHTS
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 (%)			
(ALL)	(ALL)	(untitled)		1	E	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100			

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total 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	414.29	26.32	15.74	12.51	177.65	15.83	0.00	193.48
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	414.29	26.32	15.74	12.51	177.65	15.83	0.00	193.48

- <= adjusted flow warning (upstream links/traffic streams are over-saturated)
- +/- = Traffic Stream - Normal: Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%
- +/- = Traffic Stream - Normal: Bus or Tram 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

A5 - 2042 DS AM D5 - 2042 DS AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	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
5	23/09/2025 10:05:27	23/09/2025 10:05:27	08:00	100	157.05	10.13	68.06	2/1	0	0	2/1	3/1	2/1

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2042 DS AM		D5	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2042 DS AM				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		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)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	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 results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate POM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

43

44

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
1	1	1	(untitled)			1800
2	1	1	(untitled)			1800
3	1	1	(untitled)			
4	1	1	(untitled)			
5	1	1	(untitled)			1800
6	1	1	(untitled)			1800
7	1	1	(untitled)			
8	1	1	(untitled)			

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
(ALL)	1	NetworkDefault	100	100	100		0.00		

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
[ALL]	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	1	NetworkDefault

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
1	1	148	148
2	1	294	294
3	1	134	134
4	1	286	286
5	1	539	539
6	1	388	388
7	1	498	498
8	1	451	451

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	C	
2	1	1	D	
5	1	1	A	
6	1	1	B	

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
1	1	12.00	30.00
2	1	12.00	30.00
5	1	11.48	30.00
6	1	11.10	30.00

Am	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)
3	1	1	2/1	3/1	22.00	30.00	✓	Straight	Straight Movement
4	1	1	6/1	4/1	21.98	30.00	✓	Nearside	23.87
7	1	1	2/1	7/1	20.14	30.00	✓	Nearside	32.23
8	1	1	2/1	8/1	20.05	30.00	✓	Offside	43.34
3	1	2	6/1	3/1	22.00	30.00	✓	Offside	47.14
4	1	2	5/1	4/1	21.98	30.00	✓	Offside	56.47
7	1	2	6/1	7/1	20.14	30.00	✓	Straight	Straight Movement
8	1	2	5/1	8/1	20.05	30.00	✓	Straight	Straight Movement
3	1	3	5/1	3/1	22.00	30.00	✓	Nearside	22.20
4	1	3	1/1	4/1	21.98	30.00	✓	Straight	Straight Movement
7	1	3	1/1	7/1	20.14	30.00	✓	Offside	56.33
8	1	3	1/1	8/1	20.05	30.00	✓	Nearside	16.69

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(unrtd)				Farside	6.50	4.33	5.40
2	(unrtd)				Farside	11.50	7.67	5.40
3	(unrtd)				Farside	6.50	4.33	5.40
4	(unrtd)				Farside	11.50	7.67	5.40

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(ALL)	11000

Crossing	Side	Delay weighting (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (Ped)	Has queue limit	Has degree of saturation limit
(ALL)	(ALL)	100	100		0.00		

OD Matrix	Name	Use for point to point travel	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equilisation			✓			✓	1.25		

		To			
		1	2	3	4
From	1	0	59	72	163
	2	81	0	39	28
	3	35	46	0	307
	4	170	29	340	0

Pedestrian Input Flows not shown as they are blank.

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	2/1	4/1	#0000FF
	2	(untitled)	1/1	3/1	#FF0000
	3	(untitled)	6/1	8/1	#00FF00
	4	(untitled)	5/1	7/1	#FFFF00

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	2/1, 3/1	Normal	59
	2		2	1	1/1, 4/1	Normal	81
	3		1	4	2/1, 7/1	Normal	163
	4		2	4	1/1, 7/1	Normal	28
	5		4	2	5/1, 3/1	Normal	29
	6		4	1	5/1, 4/1	Normal	170
	7		1	3	2/1, 6/1	Normal	72
	8		2	3	1/1, 8/1	Normal	99
	9		4	3	5/1, 8/1	Normal	340
	10		3	2	6/1, 3/1	Normal	46
	11		3	1	6/1, 4/1	Normal	35
	12		3	4	6/1, 7/1	Normal	307

Network Default: 100s cycle time; 100 steps

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	100

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Pedestrian	0

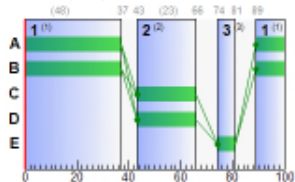
Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A, B	1
	2	C, D	1
	3	E	1

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3	37, 66, 81

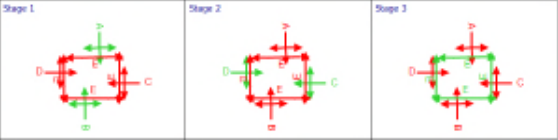
		To				
From		A	B	C	D	E
	A			6	6	8
	B			6	6	8
	C	6	6			8
	D	6	6			8
	E	8	8	8	8	

		To		
		1	2	3
From	1			
	2			
	3			

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
1	1		1	C	43	66	23
2	1		1	D	43	66	23
5	1		1	A	89	37	48
6	1		1	B	89	37	48



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
08:00-09:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	1	1	34	163	148	1800	23	33.64	3.46	19.90	19.64	1.54	21.18
	2	1	68	32	294	1800	23	43.22	8.06	46.35	50.12	3.58	53.71
	3	1	0	Unrestricted	134	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	4	1	0	Unrestricted	286	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	5	1	61	47	539	1800	48	21.75	11.26	67.63	46.25	4.97	51.22
	6	1	44	105	388	1800	48	18.18	7.07	43.94	27.82	3.13	30.95
	7	1	0	Unrestricted	498	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	8	1	0	Unrestricted	451	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s per cycle)
08:00-09:00	1	1	148	148	0		1800	432	34		163	0.00	23
	2	1	294	294	0		1800	432	68		32	0.00	23
	3	1	134	134	0		Unrestricted	Unrestricted	0		Unrestricted	0.58	100
	4	1	286	286	0		Unrestricted	Unrestricted	0		Unrestricted	0.60	100
	5	1	539	539	0		1800	882	61		47	0.00	48
	6	1	388	388	0		1800	882	44		105	0.00	48
	7	1	498	498	0		Unrestricted	Unrestricted	0		Unrestricted	0.60	100
	8	1	451	451	0		Unrestricted	Unrestricted	0		Unrestricted	0.58	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (s)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	1	1	12.00	33.64	1.38	19.64	82.97	122.80	1.54
	2	1	12.00	43.22	3.53	50.12	97.23	285.85	3.58
	3	1	22.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	1	21.98	0.00	0.00	0.00	0.00	0.00	0.00
	5	1	11.48	21.75	3.26	46.25	73.53	396.33	4.97
	6	1	11.10	18.18	1.96	27.82	64.28	249.42	3.13
	7	1	20.14	0.00	0.00	0.00	0.00	0.00	0.00
	8	1	20.05	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s per cycle)	Estimated blocking
08:00-09:00	1	1	0.00	3.46	17.39	19.90	0.00	0.00	
	2	1	0.00	8.06	17.39	46.35	0.00	0.00	
	3	1	0.00	0.00	31.88	0.00	0.00	23.00	
	4	1	0.00	0.00	31.85	0.00	0.00	18.00	
	5	1	0.00	11.26	16.64	67.63	0.00	0.00	
	6	1	0.00	7.07	16.09	43.94	0.00	0.00	
	7	1	0.00	0.00	29.19	0.00	0.00	11.00	
	8	1	0.00	0.00	29.05	0.00	0.00	15.00	

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Warm up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	1	1	0.00	0.00	✓	3.46	0.09	3.21	1.00	0.00	21.18
	2	1	0.00	0.00	✓	8.07	0.72	6.92	1.00	0.00	53.71
	3	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	4	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	5	1	0.00	0.00	✓	11.26	0.48	8.11	1.00	0.00	51.22
	6	1	0.00	0.00	✓	7.07	0.17	5.67	1.00	0.00	30.95
	7	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	8	1	0.00	0.00	✓	0.00			1.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s per cycle)
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Total delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (H:M-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 over PR
5	23/09/2025 10:05:27	23/09/2025 10:05:27	08:00	100	157.05	10.13	68.06	2/1	0	0	2/1	3/1	2/1

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	68	0	2738	542	13.32	143.83	13.22	157.05

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	56	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s per cycle)
08:00-09:00	2738	2738	0		68		32	598

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (s)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	16.11	13.32	10.13	143.83	38.51	1054.40	13.22

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To			
	1	2	3	4
1	0.0	77.2	75.3	75.4
2	67.6	0.0	65.7	65.8
3	51.3	51.3	0.0	49.4
4	55.2	55.2	53.3	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
1	1	2	59	77.22	59	77.22
2	2	1	81	67.62	81	67.62
3	1	4	163	75.36	163	75.36
4	2	4	28	65.78	28	65.78
5	4	2	29	55.23	29	55.23
6	4	1	170	55.22	170	55.22
7	1	3	72	75.27	72	75.27
8	2	3	39	65.69	39	65.69
9	4	3	340	53.28	340	53.28
10	3	2	46	51.28	46	51.28
11	3	1	35	51.26	35	51.26
12	3	4	307	49.42	307	49.42

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
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 (sat per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (s)	Mean max queue (PCU)	
1	1			1	C	148	1800	23	0.00	34	163	45.64	33.64	82.97	3.46	
2	1			1	D	294	1800	23	0.00	68	32	55.22	43.22	97.23	8.06	
3	1					134	Unrestricted	100	23.00	0	Unrestricted	22.00	0.00	0.00	0.00	
4	1					286	Unrestricted	100	18.00	0	Unrestricted	21.98	0.00	0.00	0.00	
5	1	DDR (N)		1	A	539	1800	48	0.00	61	47	33.24	21.75	73.53	11.26	
6	1			1	B	388	1800	48	0.00	44	105	29.28	18.18	64.28	7.07	
7	1					498	Unrestricted	100	11.00	0	Unrestricted	20.14	0.00	0.00	0.00	
8	1					451	Unrestricted	100	15.00	0	Unrestricted	20.05	0.00	0.00	0.00	

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES		WEIGHTS
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)	Mean stops per Ped (s)	Delay weighting (%)
(ALL)	(ALL)	(united)		1	E	0	11000	7	0	Unrestricted	0.00	0.00	0.00	0.00	100

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total 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	367.56	22.38	16.42	10.13	143.83	13.22	0.00	157.05
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	367.56	22.38	16.42	10.13	143.83	13.22	0.00	157.05

A6 - 2042 DS PM

D6 - 2042 DS PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	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 over PR
6	23/09/2025 10:05:37	23/09/2025 10:05:37	17:00	100	204.66	13.24	71.65	2/1	0	0	2/1	3/1	2/1

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2042 DS PM		D6	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2042 DS PM				17:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (s)	Phase maximum broken penalty (s)	Intergreen broken penalty (s)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	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 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		✓

53

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Bus	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Tram	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

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
Hill Climb (Fast)	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

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
(ALL)			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
2	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
3	1			✓	183.31						Normal	
4	1			✓	183.16						Normal	
5	1	DDR (N)		✓	95.71	✓	Sum of lanes	1800	✓		Normal	
6	1			✓	92.52	✓	Sum of lanes	1800	✓		Normal	
7	1			✓	167.84						Normal	
8	1			✓	167.08						Normal	

54

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
1	1	1	(untitled)			1800
2	1	1	(untitled)			1800
3	1	1	(untitled)			
4	1	1	(untitled)			
5	1	1	(untitled)			1800
6	1	1	(untitled)			1800
7	1	1	(untitled)			
8	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
(ALL)	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
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

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)
1	1	227	227
2	1	374	374
3	1	172	172
4	1	327	327
5	1	465	465
6	1	528	528
7	1	695	695
8	1	400	400

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	C	
2	1	1	D	
5	1	1	A	
6	1	1	B	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
1	1	12.00	30.00
2	1	12.00	30.00
5	1	11.48	30.00
6	1	11.10	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)
3	1	1	2/1	3/1	22.00	30.00	✓	Straight	Straight Movement
4	1	1	6/1	4/1	21.98	30.00	✓	Nearside	23.87
7	1	1	2/1	7/1	20.14	30.00	✓	Nearside	32.23
8	1	1	2/1	8/1	20.05	30.00	✓	Offside	43.34
3	1	2	6/1	3/1	22.00	30.00	✓	Offside	47.14
4	1	2	5/1	4/1	21.98	30.00	✓	Offside	56.47
7	1	2	6/1	7/1	20.14	30.00	✓	Straight	Straight Movement
8	1	2	5/1	8/1	20.05	30.00	✓	Straight	Straight Movement
3	1	3	5/1	3/1	22.00	30.00	✓	Nearside	32.20
4	1	3	1/1	4/1	21.98	30.00	✓	Straight	Straight Movement
7	1	3	1/1	7/1	20.14	30.00	✓	Offside	56.33
8	1	3	1/1	8/1	20.05	30.00	✓	Nearside	16.69

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	6.50	4.33	5.40
2	(untitled)				Farside	11.50	7.67	5.40
3	(untitled)				Farside	6.50	4.33	5.40
4	(untitled)				Farside	11.50	7.67	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(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
(ALL)	(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	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

55

56

Normal Input Flows (PCU/hr)

		To			
		1	2	3	4
From	1	0	88	54	232
	2	107	0	62	58
	3	72	51	0	405
	4	148	33	284	0

Bus Input Flows not shown as they are blank.

Tram 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	1	(untitled)	2/1	4/1	#0000FF
	2	(untitled)	1/1	3/1	#FF0000
	3	(untitled)	6/1	8/1	#00FF00
	4	(untitled)	5/1	7/1	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	2/1, 3/1	Normal	88
	2		2	1	1/1, 4/1	Normal	107
	3		1	4	2/1, 7/1	Normal	232
	4		2	4	1/1, 7/1	Normal	58
	5		4	2	5/1, 3/1	Normal	33
	6		4	1	5/1, 4/1	Normal	148
	7		1	3	2/1, 8/1	Normal	54
	8		2	3	1/1, 8/1	Normal	62
	9		4	3	5/1, 8/1	Normal	284
	10		3	2	6/1, 3/1	Normal	51
	11		3	1	6/1, 4/1	Normal	72
	12		3	4	6/1, 7/1	Normal	405

Signal Timings

Network Default: 100s cycle time; 100 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	100

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A, B	1
	2	C, D	1
	3	E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3	32, 66, 81

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A		6	6	8	
	B			6	6	8
	C	6	6			8
	D	6	6			8
	E	8	8	8	8	

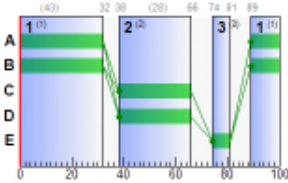
Banned Stage transitions for Controller Stream 1

		To		
		1	2	3
From	1			
	2			
	3			

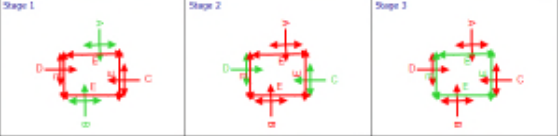
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
1	1		1	C	38	66	28
2	1		1	D	38	66	28
5	1		1	A	89	32	43
6	1		1	B	89	32	43

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
17:00-18:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated sat flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	1	1	43	107	227	1800	28	31.49	5.27	30.33	28.20	2.34	30.53
	2	1	72	26	374	1800	28	40.35	10.13	58.26	59.52	4.50	64.02
	3	1	0	Unrestricted	172	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	4	1	0	Unrestricted	327	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	5	1	59	53	465	1800	43	24.36	10.10	60.69	44.68	4.46	49.14
	6	1	67	35	528	1800	43	26.69	12.25	76.11	55.59	5.38	60.97
	7	1	0	Unrestricted	695	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	8	1	0	Unrestricted	400	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s per cycle)
17:00-18:00	1	1	227	227	0		1800	522	43		107	0.00	28
	2	1	374	374	0		1800	522	72		26	0.00	28
	3	1	172	172	0		Unrestricted	Unrestricted	0		Unrestricted	0.56	100
	4	1	327	327	0		Unrestricted	Unrestricted	0		Unrestricted	0.61	100
	5	1	465	465	0		1800	792	59		53	0.00	43
	6	1	528	528	0		1800	792	67		35	0.00	43
	7	1	695	695	0		Unrestricted	Unrestricted	0		Unrestricted	0.56	100
	8	1	400	400	0		Unrestricted	Unrestricted	0		Unrestricted	0.61	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	1	1	12.00	31.49	1.99	28.20	82.10	186.37	2.34
	2	1	12.00	40.35	4.19	59.52	95.88	358.59	4.50
	3	1	22.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	1	21.98	0.00	0.00	0.00	0.00	0.00	0.00
	5	1	11.48	24.36	3.15	44.68	76.51	355.75	4.46
	6	1	11.10	26.69	3.91	55.59	81.34	429.46	5.38
	7	1	20.14	0.00	0.00	0.00	0.00	0.00	0.00
	8	1	20.05	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s per cycle)	Estimated blocking
17:00-18:00	1	1	0.00	5.27	17.39	30.33	0.00	0.00	
	2	1	0.00	10.13	17.39	58.26	0.00	0.00	
	3	1	0.00	0.00	31.88	0.00	0.00	20.00	
	4	1	0.00	0.00	31.85	0.00	0.00	17.00	
	5	1	0.00	10.10	16.64	60.69	0.00	0.00	
	6	1	0.00	12.25	16.09	76.11	0.00	0.00	
	7	1	0.00	0.00	29.19	0.00	0.00	10.00	
	8	1	0.00	0.00	29.05	0.00	0.00	16.00	

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	1	1	0.00	0.00	✓	5.27	0.17	4.64	1.00	0.00	30.53
	2	1	0.00	0.00	✓	10.14	0.90	8.27	1.00	0.00	64.02
	3	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	4	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	5	1	0.00	0.00	✓	10.10	0.42	7.65	1.00	0.00	49.14
	6	1	0.00	0.00	✓	12.25	0.66	8.88	1.00	0.00	60.97
	7	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	8	1	0.00	0.00	✓	0.00			1.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s per cycle)
17:00-18:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Total delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (Hr-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 over PRC
6	23/09/2025 10:05:37	23/09/2025 10:05:37	17:00	100	204.66	13.24	71.65	2/1	0	0	2/1	3/1	2/1

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	72	0	3188	542	14.95	187.99	16.68	204.66

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	56	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s per cycle)
17:00-18:00	3188	3188	0		72		26	598

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	16.12	14.95	13.24	187.99	41.72	1330.18	16.68

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From		To			
		1	2	3	4
1	1	0.0	74.3	72.4	72.5
	2	65.5	0.0	63.5	63.6
	3	59.8	59.8	0.0	57.9
	4	57.8	57.8	55.9	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
1	1	2	88	74.35	88	74.35
2	2	1	107	65.47	107	65.47
3	1	4	232	72.49	232	72.49
4	2	4	58	63.63	58	63.63
5	4	2	33	57.84	33	57.84
6	4	1	148	57.82	148	57.82
7	1	3	54	72.40	54	72.40
8	2	3	62	63.54	62	63.54
9	4	3	284	55.89	284	55.89
10	3	2	51	59.79	51	59.79
11	3	1	72	59.77	72	59.77
12	3	4	405	57.93	405	57.93

61

Final Prediction Table

Traffic Stream Results

			SIGNALS			FLOWS			PERFORMANCE			PER PCU			QUEUES	
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)	D well mu
1	1			1	C	227	1800	28	0.00	43	107	43.49	31.49	82.10	5.27	
2	1			1	D	374	1800	28	0.00	72	26	52.35	40.35	95.88	10.13	
3	1					172	Unrestricted	100	20.00	0	Unrestricted	22.00	0.00	0.00	0.00	
4	1					327	Unrestricted	100	17.00	0	Unrestricted	21.98	0.00	0.00	0.00	
5	1	DDR (%)		1	A	465	1800	43	0.00	59	53	35.84	24.36	76.51	10.10	
6	1			1	B	528	1800	43	0.00	67	35	37.79	26.69	81.34	12.25	
7	1					695	Unrestricted	100	10.00	0	Unrestricted	20.14	0.00	0.00	0.00	
8	1					400	Unrestricted	100	16.00	0	Unrestricted	20.05	0.00	0.00	0.00	

Pedestrian Crossing Results

			SIGNALS			FLOWS			PERFORMANCE			PER PED			QUEUES		WEIGHTS	P
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 (%)				
(ALL)	(ALL)	(untitled)		1	E	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100				

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total 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	428.35	27.52	15.57	13.24	187.99	16.68	0.00	204.66
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	428.35	27.52	15.57	13.24	187.99	16.68	0.00	204.66

- <= adjusted flow warning (upstream links/traffic streams are over-saturated)
- += Traffic Stream - Normal: Bus or Train Stop or Delay weighting has been set to a value other than 100%
- ^= Traffic Stream - Normal: Bus or Train 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



62

TRANSYT 15

Version: 15.5.3.7
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The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: DDR-Site Access (S).tl5

Path: G:\2024\p240058\calcs\transyt\Junction 2 - DDR Site Access (S)

Report generation date: 23/09/2025 09:44:27

- »A1 - 2027 DS AM : D1 - 2027 DS AM* :
- »A2 - 2027 DS PM : D2 - 2027 DS PM* :
- »A3 - 2032 DS AM : D3 - 2032 DS AM* :
- »A4 - 2032 DS PM : D4 - 2032 DS PM* :
- »A5 - 2042 DS AM : D5 - 2042 DS AM* :
- »A6 - 2042 DS PM : D6 - 2042 DS PM* :

File summary

File description

File title	DDR - Site Access (S)
Location	
Site number	
UTCRegion	
Driving side	Left
Date	28/11/2023
Version	(new file)
Status	
Identifier	
Client	
Jobnumber	
Enumerator	HEADOFFICE\GarveyO
Description	

Model and Results

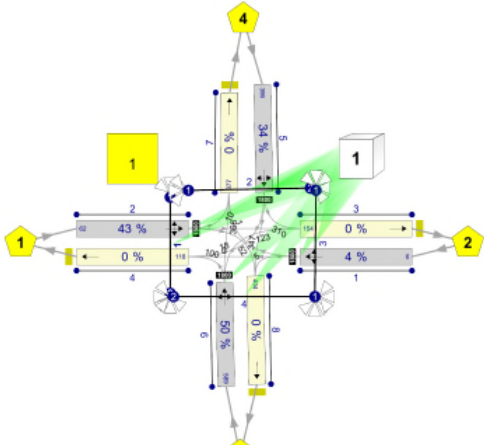
Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber
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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	Link grouping	Source grouping	Colour Analysts/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓



A1 - 2027 DS AM

D1 - 2027 DS AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	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 over PR
1	23/09/2025 09:44:13	23/09/2025 09:44:13	08:00	100	66.07	4.20	56.94	2/1	0	0	2/1	3/1	2/1

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2027 DS AM		D1	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2027 DS AM				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		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)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	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 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		✓

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
1	1	1	(untitled)			1800
2	1	1	(untitled)			1800
3	1	1	(untitled)			
4	1	1	(untitled)			
5	1	1	(untitled)			1800
6	1	1	(untitled)			1800
7	1	1	(untitled)			
8	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
(ALL)	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
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

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)
1	1	11	11
2	1	123	123
3	1	5	5
4	1	49	49
5	1	339	339
6	1	434	434
7	1	409	409
8	1	444	444

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	C	
2	1	1	D	
5	1	1	A	
6	1	1	B	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
1	1	12.00	30.00
2	1	10.80	30.00
5	1	11.48	30.00
6	1	11.10	30.00

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

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
Hill Climb (Fast)	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

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
(ALL)			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
2	1			✓	90.00	✓	Sum of lanes	1800	✓		Normal	
3	1			✓	183.31						Normal	
4	1			✓	183.16						Normal	
5	1	DDR (N)		✓	95.71	✓	Sum of lanes	1800	✓		Normal	
6	1			✓	92.52	✓	Sum of lanes	1800	✓		Normal	
7	1			✓	167.84						Normal	
8	1			✓	167.08						Normal	

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)
3	1	1	2/1	3/1	22.00	30.00	✓	Straight	Straight Movement
4	1	1	6/1	4/1	21.98	30.00	✓	Nearside	23.87
7	1	1	2/1	7/1	20.14	30.00	✓	Nearside	32.23
8	1	1	2/1	8/1	20.05	30.00	✓	Offside	43.34
3	1	2	6/1	3/1	22.00	30.00	✓	Offside	47.14
4	1	2	5/1	4/1	21.98	30.00	✓	Offside	56.47
7	1	2	6/1	7/1	20.14	30.00	✓	Straight	Straight Movement
8	1	2	5/1	8/1	20.05	30.00	✓	Straight	Straight Movement
3	1	3	5/1	3/1	22.00	30.00	✓	Nearside	32.20
4	1	3	1/1	4/1	21.98	30.00	✓	Straight	Straight Movement
7	1	3	1/1	7/1	20.14	30.00	✓	Offside	56.33
8	1	3	1/1	8/1	20.05	30.00	✓	Nearside	16.69

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	6.50	4.33	5.40
2	(untitled)				Farside	11.50	7.67	5.40
3	(untitled)				Farside	6.50	4.33	5.40
4	(untitled)				Farside	11.50	7.67	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(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
(ALL)	(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	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

From		To			
		1	2	3	4
1	0	0	104	19	
2	0	0	9	2	
3	42	4	0	388	
4	7	1	331	0	

Bus Input Flows not shown as they are blank.

Tram 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	1	(untitled)	2/1	4/1	#0000FF
	2	(untitled)	1/1	3/1	#FF0000
	3	(untitled)	6/1	8/1	#00FF00
	4	(untitled)	5/1	7/1	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	2/1, 3/1	Normal	0
	2		2	1	1/1, 4/1	Normal	0
	3		1	4	2/1, 7/1	Normal	19
	4		2	4	1/1, 7/1	Normal	2
	5		4	2	5/1, 3/1	Normal	1
	6		4	1	5/1, 4/1	Normal	7
	7		1	3	2/1, 8/1	Normal	104
	8		2	3	1/1, 8/1	Normal	9
	9		4	3	5/1, 8/1	Normal	331
	10		3	2	6/1, 3/1	Normal	4
	11		3	1	6/1, 4/1	Normal	42
	12		3	4	6/1, 7/1	Normal	388

Signal Timings

Network Default: 100s cycle time; 100 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	100

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

7

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A, B	1
	2	C, D	1
	3	E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3	49, 66, 81

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A			6	6	8
	B			6	6	8
	C	6	6			8
	D	6	6			8
	E	8	8	8	8	

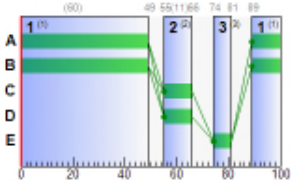
Banned Stage transitions for Controller Stream 1

		To		
		1	2	3
From	1			
	2			
	3			

Traffic Stream Green Times

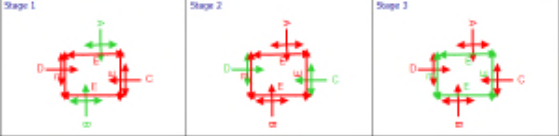
Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
1	1		1	C	55	66	11
2	1		1	D	55	66	11
5	1		1	A	89	49	60
6	1		1	B	89	49	60

Phase Timings Diagram for Controller Stream 1



8

Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
08:00-09:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	1	1	5	1667	11	1800	11	39.61	0.27	1.55	1.72	0.12	1.84
	2	1	57	58	123	1800	11	52.38	3.58	22.88	25.41	1.59	27.01
	3	1	0	Unrestricted	5	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	4	1	0	Unrestricted	49	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	5	1	31	192	339	1800	60	10.10	4.59	27.57	13.51	1.98	15.49
	6	1	40	128	434	1800	60	11.09	6.28	39.01	18.99	2.74	21.73
	7	1	0	Unrestricted	409	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	8	1	0	Unrestricted	444	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s per cycle)
08:00-09:00	1	1	11	11	0		1800	216	5		1667	0.00	11
	2	1	123	123	0		1800	216	57		58	0.00	11
	3	1	5	5	0		Unrestricted	Unrestricted	0		Unrestricted	0.66	100
	4	1	49	49	0		Unrestricted	Unrestricted	0		Unrestricted	0.66	100
	5	1	339	339	0		1800	1098	31		192	0.00	60
	6	1	434	434	0		1800	1098	40		128	0.00	60
	7	1	409	409	0		Unrestricted	Unrestricted	0		Unrestricted	0.60	100
	8	1	444	444	0		Unrestricted	Unrestricted	0		Unrestricted	0.54	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (s)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	1	1	12.00	39.61	0.12	1.72	87.26	9.60	0.12
	2	1	10.80	52.38	1.79	25.41	103.30	127.06	1.59
	3	1	22.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	1	21.98	0.00	0.00	0.00	0.00	0.00	0.00
	5	1	11.48	10.10	0.95	13.51	46.57	157.87	1.98
	6	1	11.10	11.09	1.34	18.99	50.36	235.55	2.74
	7	1	20.14	0.00	0.00	0.00	0.00	0.00	0.00
	8	1	20.05	0.00	0.00	0.00	0.00	0.00	0.00

9

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s per cycle)	Estimated blocking
08:00-09:00	1	1	0.00	0.27	17.39	1.55	0.00	11.00	
	2	1	0.00	3.58	15.65	22.88	0.00	0.00	
	3	1	0.00	0.00	31.88	0.00	0.00	100.00	
	4	1	0.00	0.00	31.85	0.00	0.00	74.00	
	5	1	0.00	4.59	16.64	27.57	0.00	0.00	
	6	1	0.00	6.28	16.09	39.01	0.00	0.00	
	7	1	0.00	0.00	29.19	0.00	0.00	19.00	
	8	1	0.00	0.00	29.05	0.00	0.00	9.00	

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	1	1	0.00	0.00	✓	0.27	0.00	0.27	1.00	0.00	1.84
	2	1	0.00	0.00	✓	3.58	0.37	3.38	1.00	0.00	27.01
	3	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	4	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	5	1	0.00	0.00	✓	4.59	0.07	3.74	1.00	0.00	15.49
	6	1	0.00	0.00	✓	6.28	0.13	4.83	1.00	0.00	21.73
	7	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	8	1	0.00	0.00	✓	0.00			1.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s per cycle)
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Total delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00

10

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	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 over PR
1	23/09/2025 09:44:13	23/09/2025 09:44:13	08:00	100	66.07	4.20	56.94	2/1	0	0	2/1	3/1	2/1

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	57	0	1814	542	8.33	59.63	6.43	66.07

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	56	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s per cycle)
08:00-09:00	1814	1814	0		57		58	598

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	15.71	8.33	4.20	59.63	28.28	513.07	6.43

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To			
	1	2	3	4
	1	0.0	0.0	83.2
	2	0.0	0.0	71.7
	3	44.2	44.2	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
1	1	2	0	0.00	0	0.00
2	2	1	0	0.00	0	0.00
3	1	4	19	83.32	19	83.32
4	2	4	2	71.75	2	71.75
5	4	2	1	43.58	1	43.58
6	4	1	7	43.57	7	43.57
7	1	3	104	83.23	104	83.23
8	2	3	9	71.65	9	71.65
9	4	3	331	41.63	331	41.63
10	3	2	4	44.19	4	44.19
11	3	1	42	44.18	42	44.18
12	3	4	388	42.34	388	42.34

Final Prediction Table

Traffic Stream Results

			SIGNALS			FLOWS			PERFORMANCE			PER PCU			QUEUES	
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)	Weighted max queue (PCU)
1	1			1	C	11	1800	11	11.00	5	1667	51.61	39.61	87.26	0.27	
2	1			1	D	123	1800	11	0.00	57	58	63.18	52.38	103.30	3.58	
3	1					5	Unrestricted	100	100.00	0	Unrestricted	22.00	0.00	0.00	0.00	
4	1					49	Unrestricted	100	74.00	0	Unrestricted	21.98	0.00	0.00	0.00	
5	1	DDR (%)		1	A	339	1800	60	0.00	31	192	21.59	10.10	46.57	4.59	
6	1			1	B	434	1800	60	0.00	40	128	22.20	11.09	50.36	6.28	
7	1					409	Unrestricted	100	19.00	0	Unrestricted	20.14	0.00	0.00	0.00	
8	1					444	Unrestricted	100	9.00	0	Unrestricted	20.05	0.00	0.00	0.00	

Pedestrian Crossing Results

			SIGNALS			FLOWS			PERFORMANCE			PER PED			QUEUES		WEIGHTS
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 (%)			P
(ALL)	(ALL)	(untitled)		1	E	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100			

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total 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	237.48	12.12	19.60	4.20	59.63	6.43	0.00	66.07
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	237.48	12.12	19.60	4.20	59.63	6.43	0.00	66.07

- <= adjusted flow warning (upstream links/traffic streams are over-saturated)
- += Traffic Stream - Normal: Bus or Tram Stop or Delay weighting has been set to a value other than 100%
- += Traffic Stream - Normal: Bus or Tram 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

A2 - 2027 DS PM D2 - 2027 DS PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	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 over PR
2	23/09/2025 09:44:14	23/09/2025 09:44:14	17:00	100	57.80	3.60	51.45	6/1	0	0	6/1	3/1	6/1

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2027 DS PM		D2	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2027 DS PM				17:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		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)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	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 results calculation	Random delay mode	Type of Vehicle-In-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate POM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

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
Hill Climb	15, 40, -1, 15, (Fast)	50, 50, 5, 5, 0, 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

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
(ALL)			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
2	1			✓	90.00	✓	Sum of lanes	1800	✓		Normal	
3	1			✓	183.31						Normal	
4	1			✓	183.16						Normal	
5	1	DDR (%)		✓	95.71	✓	Sum of lanes	1800	✓		Normal	
6	1			✓	92.52	✓	Sum of lanes	1800	✓		Normal	
7	1			✓	167.84						Normal	
8	1			✓	167.08						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
1	1	1	(untitled)			1800
2	1	1	(untitled)			1800
3	1	1	(untitled)			
4	1	1	(untitled)			
5	1	1	(untitled)			1800
6	1	1	(untitled)			1800
7	1	1	(untitled)			
8	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
(ALL)	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
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

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)
1	1	6	6
2	1	60	60
3	1	154	154
4	1	114	114
5	1	362	362
6	1	602	602
7	1	393	393
8	1	369	369

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	C	
2	1	1	D	
5	1	1	A	
6	1	1	B	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
1	1	12.00	30.00
2	1	10.80	30.00
5	1	11.48	30.00
6	1	11.10	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)
3	1	1	2/1	3/1	22.00	30.00	✓	Straight	Straight Movement
4	1	1	6/1	4/1	21.98	30.00	✓	Nearside	23.87
7	1	1	2/1	7/1	20.14	30.00	✓	Nearside	32.23
8	1	1	2/1	8/1	20.05	30.00	✓	Offside	43.34
3	1	2	6/1	3/1	22.00	30.00	✓	Offside	47.14
4	1	2	5/1	4/1	21.98	30.00	✓	Offside	56.47
7	1	2	6/1	7/1	20.14	30.00	✓	Straight	Straight Movement
8	1	2	5/1	8/1	20.05	30.00	✓	Straight	Straight Movement
3	1	3	5/1	3/1	22.00	30.00	✓	Nearside	32.20
4	1	3	1/1	4/1	21.98	30.00	✓	Straight	Straight Movement
7	1	3	1/1	7/1	20.14	30.00	✓	Offside	56.33
8	1	3	1/1	8/1	20.05	30.00	✓	Nearside	16.69

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	6.50	4.33	5.40
2	(untitled)				Farside	11.50	7.67	5.40
3	(untitled)				Farside	6.50	4.33	5.40
4	(untitled)				Farside	11.50	7.67	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(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
(ALL)	(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	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	51	9
	2	0	0	5	1
	3	96	123	0	383
	4	18	31	313	0

Bus Input Flows not shown as they are blank.

Tram 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	1	(untitled)	2/1	4/1	#0000FF
	2	(untitled)	1/1	3/1	#FF0000
	3	(untitled)	6/1	8/1	#00FF00
	4	(untitled)	5/1	7/1	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	2/1, 3/1	Normal	0
	2		2	1	1/1, 4/1	Normal	0
	3		1	4	2/1, 7/1	Normal	9
	4		2	4	1/1, 7/1	Normal	1
	5		4	2	5/1, 3/1	Normal	31
	6		4	1	5/1, 4/1	Normal	18
	7		1	3	2/1, 8/1	Normal	5
	8		2	3	1/1, 8/1	Normal	5
	9		4	3	5/1, 6/1	Normal	213
	10		3	2	6/1, 3/1	Normal	123
	11		3	1	6/1, 4/1	Normal	96
	12		3	4	6/1, 7/1	Normal	383

Signal Timings

Network Default: 100s cycle time; 100 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	100

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A, B	1
	2	C, D	1
	3	E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3	53, 66, 81

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A			6	6	8
	B			6	6	8
	C	6	6			8
	D	6	6			8
	E	8	8	8	8	

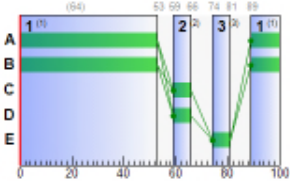
Banned Stage transitions for Controller Stream 1

		To		
		1	2	3
From	1			
	2			
	3			

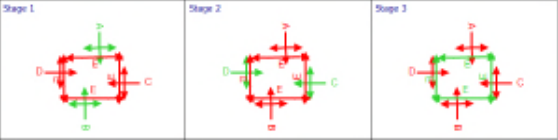
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
1	1		1	C	59	66	7
2	1		1	D	59	66	7
5	1		1	A	89	53	64
6	1		1	B	89	53	64

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
17:00-18:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	1	1	4	2060	6	1800	7	43.32	0.15	0.89	1.03	0.07	1.09
	2	1	42	116	60	1800	7	52.61	1.73	11.05	12.45	0.77	13.22
	3	1	0	Unrestricted	154	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	4	1	0	Unrestricted	114	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	5	1	31	191	362	1800	64	8.36	4.39	26.39	11.94	1.92	13.86
	6	1	51	75	602	1800	64	10.83	8.97	55.73	25.72	3.91	29.63
	7	1	0	Unrestricted	393	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	8	1	0	Unrestricted	369	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s per cycle)
17:00-18:00	1	1	6	6	0		1800	144	4		2060	0.00	7
	2	1	60	60	0		1800	144	42		116	0.00	7
	3	1	154	154	0		Unrestricted	Unrestricted	0		Unrestricted	0.59	100
	4	1	114	114	0		Unrestricted	Unrestricted	0		Unrestricted	0.59	100
	5	1	362	362	0		1800	1170	31		191	0.00	64
	6	1	602	602	0		1800	1170	51		75	0.00	64
	7	1	393	393	0		Unrestricted	Unrestricted	0		Unrestricted	0.56	100
	8	1	369	369	0		Unrestricted	Unrestricted	0		Unrestricted	0.49	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	1	1	12.00	43.32	0.07	1.03	91.36	5.48	0.07
	2	1	10.80	52.61	0.88	12.45	102.36	61.42	0.77
	3	1	22.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	1	21.98	0.00	0.00	0.00	0.00	0.00	0.00
	5	1	11.48	8.36	0.84	11.94	42.32	153.19	1.92
	6	1	11.10	10.83	1.81	25.72	51.75	311.55	3.91
	7	1	20.14	0.00	0.00	0.00	0.00	0.00	0.00
	8	1	20.05	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s per cycle)	Estimated blocking
17:00-18:00	1	1	0.00	0.15	17.39	0.89	0.00	7.00	
	2	1	0.00	1.73	15.55	11.05	0.00	0.00	
	3	1	0.00	0.00	31.88	0.00	0.00	29.00	
	4	1	0.00	0.00	31.85	0.00	0.00	32.00	
	5	1	0.00	4.39	16.64	26.39	0.00	0.00	
	6	1	0.00	8.97	16.09	55.73	0.00	0.00	
	7	1	0.00	0.00	29.19	0.00	0.00	19.00	
	8	1	0.00	0.00	29.05	0.00	0.00	11.00	

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Warm up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	1	1	0.00	0.00	✓	0.15	0.00	0.15	1.00	0.00	1.09
	2	1	0.00	0.00	✓	1.73	0.15	1.68	1.00	0.00	13.22
	3	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	4	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	5	1	0.00	0.00	✓	4.39	0.07	3.59	1.00	0.00	13.86
	6	1	0.00	0.00	✓	8.97	0.27	6.13	1.00	0.00	29.63
	7	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	8	1	0.00	0.00	✓	0.00			1.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s per cycle)
17:00-18:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Total delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (H:M-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 over PR
2	23/09/2025 09:44:14	23/09/2025 09:44:14	17:00	100	57.80	3.60	51.45	6/1	0	0	6/1	3/1	6/1

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	51	0	2060	542	6.29	51.13	6.67	57.80

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	56	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s per cycle)
17:00-18:00	2060	2060	0		51		75	598

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	15.91	6.29	3.60	51.13	25.81	531.63	6.67

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To			
	1	2	3	4
1	0.0	0.0	83.5	83.6
2	0.0	0.0	75.4	75.5
3	43.9	43.9	0.0	42.1
4	41.8	41.8	99.9	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
1	1	2	0	0.00	0	0.00
2	2	1	0	0.00	0	0.00
3	1	4	9	83.55	9	83.55
4	2	4	1	75.46	1	75.46
5	4	2	31	41.84	31	41.84
6	4	1	18	41.82	18	41.82
7	1	3	51	83.46	51	83.46
8	2	3	5	75.37	5	75.37
9	4	3	313	39.89	313	39.89
10	3	2	123	43.93	123	43.93
11	3	1	96	43.91	96	43.91
12	3	4	363	42.07	363	42.07

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
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 (s per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	Journey Time (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	
1	1			1	C	6	1800	7	7.00	4	2060	55.32	43.32	91.36	0.15	
2	1			1	D	60	1800	7	0.00	42	116	63.41	52.61	102.36	1.73	
3	1					154	Unrestricted	100	29.00	0	Unrestricted	22.00	0.00	0.00	0.00	
4	1					114	Unrestricted	100	32.00	0	Unrestricted	21.98	0.00	0.00	0.00	
5	1	DDR (N)		1	A	362	1800	64	0.00	31	191	19.84	8.36	42.32	4.39	
6	1			1	B	602	1800	64	0.00	51	75	21.93	10.83	51.75	8.97	
7	1					393	Unrestricted	100	19.00	0	Unrestricted	20.14	0.00	0.00	0.00	
8	1					369	Unrestricted	100	11.00	0	Unrestricted	20.05	0.00	0.00	0.00	

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES		WEIGHTS
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 (s per cycle)	
(ALL)	(ALL)	(united)		1	E	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (mph)	Total 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	273.06	12.70	21.50	3.60	51.13	6.67	0.00	57.80
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	273.06	12.70	21.50	3.60	51.13	6.67	0.00	57.80

- <= adjusted flow warning (upstream links/traffic streams are

A3 - 2032 DS AM

D3 - 2032 DS AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	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 over PR
3	23/09/2025 09:44:14	23/09/2025 09:44:15	08:00	100	72.20	4.58	55.13	2/1	0	0	2/1	3/1	2/1

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2032 DS AM		D3	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2032 DS AM				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		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)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	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 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	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Bus	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Tram	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

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
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 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

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
(ALL)			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
2	1			✓	90.00	✓	Sum of lanes	1800	✓		Normal	
3	1			✓	183.31						Normal	
4	1			✓	183.16						Normal	
5	1	DDR (N)		✓	95.71	✓	Sum of lanes	1800	✓		Normal	
6	1			✓	92.52	✓	Sum of lanes	1800	✓		Normal	
7	1			✓	167.84						Normal	
8	1			✓	167.08						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
1	1	1	(untitled)			1800
2	1	1	(untitled)			1800
3	1	1	(untitled)			
4	1	1	(untitled)			
5	1	1	(untitled)			1800
6	1	1	(untitled)			1800
7	1	1	(untitled)			
8	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
(ALL)	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
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

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)
1	1	11	11
2	1	129	129
3	1	5	5
4	1	53	53
5	1	375	375
6	1	459	459
7	1	432	432
8	1	484	484

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	C	
2	1	1	D	
5	1	1	A	
6	1	1	B	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
1	1	12.00	30.00
2	1	10.80	30.00
5	1	11.48	30.00
6	1	11.10	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)
3	1	1	2/1	3/1	22.00	30.00	✓	Straight	Straight Movement
4	1	1	6/1	4/1	21.98	30.00	✓	Nearside	23.87
7	1	1	2/1	7/1	20.14	30.00	✓	Nearside	32.23
8	1	1	2/1	8/1	20.05	30.00	✓	Offside	43.34
3	1	2	6/1	3/1	22.00	30.00	✓	Offside	47.14
4	1	2	5/1	4/1	21.98	30.00	✓	Offside	56.47
7	1	2	6/1	7/1	20.14	30.00	✓	Straight	Straight Movement
8	1	2	5/1	8/1	20.05	30.00	✓	Straight	Straight Movement
3	1	3	5/1	3/1	22.00	30.00	✓	Nearside	32.20
4	1	3	1/1	4/1	21.98	30.00	✓	Straight	Straight Movement
7	1	3	1/1	7/1	20.14	30.00	✓	Offside	56.33
8	1	3	1/1	8/1	20.05	30.00	✓	Nearside	16.69

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	6.50	4.33	5.40
2	(untitled)				Farside	11.50	7.67	5.40
3	(untitled)				Farside	6.50	4.33	5.40
4	(untitled)				Farside	11.50	7.67	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(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
(ALL)	(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	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

From		To			
		1	2	3	4
1	1	0	0	109	20
	2	0	0	9	2
	3	45	4	0	410
	4	8	1	366	0

Bus Input Flows not shown as they are blank.

Tram 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	1	(untitled)	2/1	4/1	#0000FF
	2	(untitled)	1/1	3/1	#FF0000
	3	(untitled)	6/1	8/1	#00FF00
	4	(untitled)	5/1	7/1	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	2/1, 3/1	Normal	0
	2		2	1	1/1, 4/1	Normal	0
	3		1	4	2/1, 7/1	Normal	20
	4		2	4	1/1, 7/1	Normal	2
	5		4	2	5/1, 3/1	Normal	1
	6		4	1	5/1, 4/1	Normal	8
	7		1	3	2/1, 8/1	Normal	109
	8		2	3	1/1, 8/1	Normal	9
	9		4	3	5/1, 8/1	Normal	366
	10		3	2	6/1, 3/1	Normal	4
	11		3	1	6/1, 4/1	Normal	45
	12		3	4	6/1, 7/1	Normal	410

Signal Timings

Network Default: 100s cycle time; 100 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	100

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A, B	1
	2	C, D	1
	3	E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3	48, 66, 81

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A			6	6	8
	B			6	6	8
	C	6	6			8
	D	6	6			8
	E	8	8	8	8	

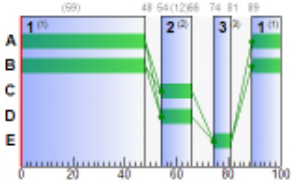
Banned Stage transitions for Controller Stream 1

		To		
		1	2	3
From	1			
	2			
	3			

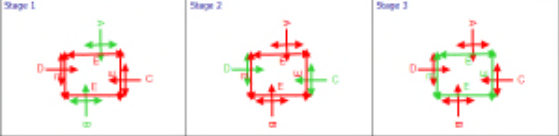
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
1	1		1	C	54	66	12
2	1		1	D	54	66	12
5	1		1	A	89	48	59
6	1		1	B	89	48	59

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
08:00-09:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	1	1	5	1815	11	1800	12	36.66	0.27	1.54	1.68	0.12	1.80
	2	1	55	63	129	1800	12	50.07	3.67	23.42	25.48	1.63	27.11
	3	1	0	Unrestricted	5	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	4	1	0	Unrestricted	53	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	5	1	35	159	375	1800	59	11.00	5.30	31.85	16.26	2.32	18.59
	6	1	43	112	459	1800	59	11.97	6.91	42.97	21.67	3.03	24.70
	7	1	0	Unrestricted	432	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	8	1	0	Unrestricted	484	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s per cycle)
08:00-09:00	1	1	11	11	0		1800	234	5		1815	0.00	12
	2	1	129	129	0		1800	234	55		63	0.00	12
	3	1	5	5	0		Unrestricted	Unrestricted	0		Unrestricted	0.69	100
	4	1	53	53	0		Unrestricted	Unrestricted	0		Unrestricted	0.69	100
	5	1	375	375	0		1800	1080	35		159	0.00	59
	6	1	459	459	0		1800	1080	43		112	0.00	59
	7	1	432	432	0		Unrestricted	Unrestricted	0		Unrestricted	0.62	100
	8	1	484	484	0		Unrestricted	Unrestricted	0		Unrestricted	0.54	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	1	1	12.00	36.66	0.12	1.68	86.20	9.48	0.12
	2	1	10.80	50.07	1.79	25.48	100.90	130.16	1.63
	3	1	22.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	1	21.98	0.00	0.00	0.00	0.00	0.00	0.00
	5	1	11.48	11.00	1.15	16.26	49.37	185.12	2.32
	6	1	11.10	11.97	1.53	21.67	52.67	241.78	3.03
	7	1	20.14	0.00	0.00	0.00	0.00	0.00	0.00
	8	1	20.05	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s per cycle)	Estimated blocking
08:00-09:00	1	1	0.00	0.27	17.39	1.54	0.00	12.00	
	2	1	0.00	3.67	15.65	23.42	0.00	0.00	
	3	1	0.00	0.00	31.88	0.00	0.00	100.00	
	4	1	0.00	0.00	31.85	0.00	0.00	70.00	
	5	1	0.00	5.30	16.64	31.85	0.00	0.00	
	6	1	0.00	6.91	16.09	42.97	0.00	0.00	
	7	1	0.00	0.00	29.19	0.00	0.00	19.00	
	8	1	0.00	0.00	29.05	0.00	0.00	10.00	

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	1	1	0.00	0.00	✓	0.27	0.00	0.27	1.00	0.00	1.80
	2	1	0.00	0.00	✓	3.67	0.34	3.45	1.00	0.00	27.11
	3	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	4	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	5	1	0.00	0.00	✓	5.30	0.09	4.26	1.00	0.00	18.59
	6	1	0.00	0.00	✓	6.91	0.16	5.26	1.00	0.00	24.70
	7	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	8	1	0.00	0.00	✓	0.00			1.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s per cycle)
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Total delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	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 over PR
3	23/09/2025 09:44:14	23/09/2025 09:44:15	08:00	100	72.20	4.58	55.13	2/1	0	0	2/1	3/1	2/1

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	55	0	1948	1948	542	8.47	65.09	7.10

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	56	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated Flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s per cycle)
08:00-09:00	1948	1948	0		55		63	598

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	15.71	8.47	4.58	65.09	29.08	566.54	7.10

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To			
	1	2	3	4
	1	0.0	0.0	80.9
	2	0.0	0.0	70.7
	3	45.1	45.1	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
1	1	2	0	0.00	0	0.00
2	2	1	0	0.00	0	0.00
3	1	4	20	81.01	20	81.01
4	2	4	2	70.80	2	70.80
5	4	2	1	44.48	1	44.48
6	4	1	8	44.46	8	44.46
7	1	3	109	80.92	109	80.92
8	2	3	9	70.71	9	70.71
9	4	3	366	42.53	366	42.53
10	3	2	4	45.07	4	45.07
11	3	1	45	45.05	45	45.05
12	3	4	410	43.21	410	43.21

31

Final Prediction Table

Traffic Stream Results

			SIGNALS			FLOWS			PERFORMANCE			PER PCU			QUEUES	
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)	we m
1	1			1	C	11	1800	12	12.00	5	1815	50.66	38.66	86.20	0.27	
2	1			1	D	129	1800	12	0.00	55	63	60.87	50.07	100.90	3.67	
3	1						Unrestricted	100	100.00	0	Unrestricted	22.00	0.00	0.00	0.00	
4	1					53	Unrestricted	100	70.00	0	Unrestricted	21.98	0.00	0.00	0.00	
5	1	DDR (%)		1	A	375	1800	59	0.00	35	159	22.48	11.00	49.37	5.30	
6	1			1	B	459	1800	59	0.00	43	112	23.07	11.97	52.67	6.91	
7	1					432	Unrestricted	100	19.00	0	Unrestricted	20.14	0.00	0.00	0.00	
8	1					484	Unrestricted	100	10.00	0	Unrestricted	20.05	0.00	0.00	0.00	

Pedestrian Crossing Results

			SIGNALS			FLOWS			PERFORMANCE			PER PED			QUEUES		WEIGHTS	P
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 (%)				
(ALL)	(ALL)	(untitled)		1	E	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100				

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total 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	255.05	13.09	19.49	4.58	65.09	7.10	0.00	72.20
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	255.05	13.09	19.49	4.58	65.09	7.10	0.00	72.20

- <= adjusted flow warning (upstream links/traffic streams are over-saturated)
- +/- Traffic Stream - Normal: Bus or Tram Stop or Delay weighting has been set to a value other than 100%
- +/- Traffic Stream - Normal: Bus or Tram 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

32

A4 - 2032 DS PM
D4 - 2032 DS PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	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 over PR
4	23/09/2025 09:44:15	23/09/2025 09:44:15	17:00	100	57.10	3.56	49.06	6/1	0	0	6/1	3/1	6/1

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2032 DS PM		D4	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2032 DS PM				17.00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		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)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	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 results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate POM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

33

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

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
Hill Climb	15, 40, -1, 15, (Fast)	50, 50, 5, 5, 0, 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

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
(ALL)			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
2	1			✓	90.00	✓	Sum of lanes	1800	✓		Normal	
3	1			✓	183.31						Normal	
4	1			✓	183.16						Normal	
5	1	DDR (%)		✓	95.71	✓	Sum of lanes	1800	✓		Normal	
6	1			✓	92.52	✓	Sum of lanes	1800	✓		Normal	
7	1			✓	167.84						Normal	
8	1			✓	167.08						Normal	

34

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
1	1	1	(untitled)			1800
2	1	1	(untitled)			1800
3	1	1	(untitled)			
4	1	1	(untitled)			
5	1	1	(untitled)			1800
6	1	1	(untitled)			1800
7	1	1	(untitled)			
8	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
(ALL)	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
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

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)
1	1	6	6
2	1	62	62
3	1	154	154
4	1	118	118
5	1	381	381
6	1	574	574
7	1	362	362
8	1	389	389

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	C	
2	1	1	D	
5	1	1	A	
6	1	1	B	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
1	1	12.00	30.00
2	1	10.80	30.00
5	1	11.48	30.00
6	1	11.10	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)
3	1	1	2/1	3/1	22.00	30.00	✓	Straight	Straight Movement
4	1	1	6/1	4/1	21.98	30.00	✓	Nearside	23.87
7	1	1	2/1	7/1	20.14	30.00	✓	Nearside	32.23
8	1	1	2/1	8/1	20.05	30.00	✓	Offside	43.34
3	1	2	6/1	3/1	22.00	30.00	✓	Offside	47.14
4	1	2	5/1	4/1	21.98	30.00	✓	Offside	56.47
7	1	2	6/1	7/1	20.14	30.00	✓	Straight	Straight Movement
8	1	2	5/1	8/1	20.05	30.00	✓	Straight	Straight Movement
3	1	3	5/1	3/1	22.00	30.00	✓	Nearside	32.20
4	1	3	1/1	4/1	21.98	30.00	✓	Straight	Straight Movement
7	1	3	1/1	7/1	20.14	30.00	✓	Offside	56.33
8	1	3	1/1	8/1	20.05	30.00	✓	Nearside	16.69

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing time	Length (m)	Cruise time (seconds)	Cruise speed (kph)
2	(untitled)				Farside	11.50	7.67	5.40
3	(untitled)				Farside	6.50	4.33	5.40
4	(untitled)				Farside	11.50	7.67	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(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
(ALL)	(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	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	52	10
	2	0	0	5	1
	3	100	129	0	351
	4	18	31	332	0

Bus Input Flows not shown as they are blank.

Tram 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	1	(untitled)	2/1	4/1	#0000FF
	2	(untitled)	1/1	3/1	#FF0000
	3	(untitled)	6/1	8/1	#00FF00
	4	(untitled)	5/1	7/1	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	2/1, 3/1	Normal	0
	2		2	1	1/1, 4/1	Normal	0
	3		1	4	2/1, 7/1	Normal	10
	4		2	4	1/1, 7/1	Normal	1
	5		4	2	5/1, 3/1	Normal	31
	6		4	1	5/1, 4/1	Normal	18
	7		1	3	2/1, 8/1	Normal	5
	8		2	3	1/1, 8/1	Normal	5
	9		4	3	5/1, 6/1	Normal	232
	10		3	2	6/1, 3/1	Normal	129
	11		3	1	6/1, 4/1	Normal	100
	12		3	4	6/1, 7/1	Normal	351

Signal Timings

Network Default: 100s cycle time; 100 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	100

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A, B	1
	2	C, D	1
	3	E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3	53, 66, 81

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A			6	6	8
	B			6	6	8
	C	6	6			8
	D	6	6			8
	E	8	8	8	8	

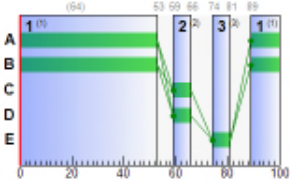
Banned Stage transitions for Controller Stream 1

		To		
		1	2	3
From	1			
	2			
	3			

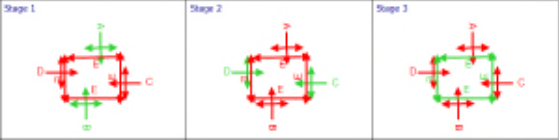
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
1	1		1	C	59	66	7
2	1		1	D	59	66	7
5	1		1	A	89	53	64
6	1		1	B	89	53	64

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
17:00-18:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	1	1	4	2060	6	1800	7	43.32	0.15	0.89	1.03	0.07	1.09
	2	1	43	109	62	1800	7	53.18	1.80	11.48	13.00	0.80	13.80
	3	1	0	Unrestricted	154	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	4	1	0	Unrestricted	118	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	5	1	33	176	381	1800	64	8.52	4.74	28.45	12.80	2.06	14.86
	6	1	49	83	574	1800	64	10.47	8.37	52.00	23.71	3.63	27.34
	7	1	0	Unrestricted	362	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	8	1	0	Unrestricted	389	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s per cycle)
17:00-18:00	1	1	6	6	0		1800	144	4		2060	0.00	7
	2	1	62	62	0		1800	144	43		109	0.00	7
	3	1	154	154	0		Unrestricted	Unrestricted	0		Unrestricted	0.59	100
	4	1	118	118	0		Unrestricted	Unrestricted	0		Unrestricted	0.59	100
	5	1	381	381	0		1800	1170	33		176	0.00	64
	6	1	574	574	0		1800	1170	49		83	0.00	64
	7	1	362	362	0		Unrestricted	Unrestricted	0		Unrestricted	0.56	100
	8	1	389	389	0		Unrestricted	Unrestricted	0		Unrestricted	0.48	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (s)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	1	1	12.00	43.32	0.07	1.03	91.36	5.48	0.07
	2	1	10.80	53.18	0.92	13.00	102.91	63.81	0.80
	3	1	22.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	1	21.98	0.00	0.00	0.00	0.00	0.00	0.00
	5	1	11.48	8.52	0.90	12.80	43.12	164.28	2.06
	6	1	11.10	10.47	1.67	23.71	50.47	289.68	3.63
	7	1	20.14	0.00	0.00	0.00	0.00	0.00	0.00
	8	1	20.05	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s per cycle)	Estimated blocking
17:00-18:00	1	1	0.00	0.15	17.39	0.89	0.00	7.00	
	2	1	0.00	1.80	15.55	11.48	0.00	0.00	
	3	1	0.00	0.00	31.88	0.00	0.00	29.00	
	4	1	0.00	0.00	31.85	0.00	0.00	32.00	
	5	1	0.00	4.74	16.64	28.45	0.00	0.00	
	6	1	0.00	8.37	16.09	52.00	0.00	0.00	
	7	1	0.00	0.00	29.19	0.00	0.00	19.00	
	8	1	0.00	0.00	29.05	0.00	0.00	11.00	

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Warm up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	1	1	0.00	0.00	✓	0.15	0.00	0.15	1.00	0.00	1.09
	2	1	0.00	0.00	✓	1.80	0.16	1.75	1.00	0.00	13.80
	3	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	4	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	5	1	0.00	0.00	✓	4.74	0.08	3.78	1.00	0.00	14.86
	6	1	0.00	0.00	✓	8.37	0.24	5.82	1.00	0.00	27.34
	7	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	8	1	0.00	0.00	✓	0.00			1.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s per cycle)
17:00-18:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Total delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (H:M-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 over PR
4	23/09/2025 09:44:15	23/09/2025 09:44:15	17:00	100	57.10	3.56	49.06	6/1	0	0	6/1	3/1	6/1

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	49	0	2046	542	6.26	50.54	6.56	57.10

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	56	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s per cycle)
17:00-18:00	2046	2046	0		49		83	598

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (s)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	15.91	6.26	3.56	50.54	25.57	523.25	6.56

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

		To			
		1	2	3	4
From	1	0.0	0.0	84.0	84.1
	2	0.0	0.0	75.4	75.5
	3	43.6	43.6	0.0	41.7
	4	42.0	42.0	40.0	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
1	1	2	0	0.00	0	0.00
2	2	1	0	0.00	0	0.00
3	1	4	10	84.12	10	84.12
4	2	4	1	75.46	1	75.46
5	4	2	31	42.00	31	42.00
6	4	1	18	41.98	18	41.98
7	1	3	52	84.02	52	84.02
8	2	3	5	75.37	5	75.37
9	4	3	332	40.05	332	40.05
10	3	2	123	43.57	123	43.57
11	3	1	100	43.56	100	43.56
12	3	4	351	41.72	351	41.72

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES
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)
1	1			1	C	6	1800	7	7.00	4	2060	55.32	43.32	91.36	0.15
2	1			1	D	62	1800	7	0.00	43	109	63.98	53.18	102.91	1.80
3	1					154	Unrestricted	100	29.00	0	Unrestricted	22.00	0.00	0.00	0.00
4	1					118	Unrestricted	100	32.00	0	Unrestricted	21.98	0.00	0.00	0.00
5	1	DDR (N)		1	A	381	1800	64	0.00	33	176	20.00	8.52	43.12	4.74
6	1			1	B	574	1800	64	0.00	49	83	21.58	10.47	50.47	8.37
7	1					362	Unrestricted	100	19.00	0	Unrestricted	20.14	0.00	0.00	0.00
8	1					389	Unrestricted	100	11.00	0	Unrestricted	20.05	0.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian	Side	Name	Traffic node	Controller stream	Phase	SIGNALS		FLOWS		PERFORMANCE				PER PED		QUEUES		WEIGHTS	P
						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 (m)					
(ALL)	(ALL)	(united)		1	E	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100					

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (mph)	Total 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	271.34	12.60	21.53	3.56	50.54	6.56	0.00	57.10
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	271.34	12.60	21.53	3.56	50.54	6.56	0.00	57.10

A5 - 2042 DS AM

D5 - 2042 DS AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	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 over PR
5	23/09/2025 09:44:15	23/09/2025 09:44:16	08:00	100	74.60	4.74	59.72	2/1	0	0	2/1	3/1	2/1

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2042 DS AM		D5	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2042 DS AM				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (s)	Phase maximum broken penalty (s)	Intergreen broken penalty (s)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	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 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		✓

43

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Bus	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Tram	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

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
Hill Climb (Fast)	15, 40, -1, 15, 40, 1, -1, 1	50, 50, 5, 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

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
(ALL)			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
2	1			✓	90.00	✓	Sum of lanes	1800	✓		Normal	
3	1			✓	183.31						Normal	
4	1			✓	183.16						Normal	
5	1	DDR (N)		✓	95.71	✓	Sum of lanes	1800	✓		Normal	
6	1			✓	92.52	✓	Sum of lanes	1800	✓		Normal	
7	1			✓	167.84						Normal	
8	1			✓	167.06						Normal	

44

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
1	1	1	(untitled)			1800
2	1	1	(untitled)			1800
3	1	1	(untitled)			
4	1	1	(untitled)			
5	1	1	(untitled)			1800
6	1	1	(untitled)			1800
7	1	1	(untitled)			
8	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
(ALL)	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
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

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)
1	1	11	11
2	1	129	129
3	1	5	5
4	1	53	53
5	1	391	391
6	1	477	477
7	1	450	450
8	1	500	500

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	C	
2	1	1	D	
5	1	1	A	
6	1	1	B	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
1	1	12.00	30.00
2	1	10.80	30.00
5	1	11.48	30.00
6	1	11.10	30.00

45

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)
3	1	1	2/1	3/1	22.00	30.00	✓	Straight	Straight Movement
4	1	1	6/1	4/1	21.98	30.00	✓	Nearside	23.87
7	1	1	2/1	7/1	20.14	30.00	✓	Nearside	32.23
8	1	1	2/1	8/1	20.05	30.00	✓	Offside	43.34
3	1	2	6/1	3/1	22.00	30.00	✓	Offside	47.14
4	1	2	5/1	4/1	21.98	30.00	✓	Offside	56.47
7	1	2	6/1	7/1	20.14	30.00	✓	Straight	Straight Movement
8	1	2	5/1	8/1	20.05	30.00	✓	Straight	Straight Movement
3	1	3	5/1	3/1	22.00	30.00	✓	Nearside	32.20
4	1	3	1/1	4/1	21.98	30.00	✓	Straight	Straight Movement
7	1	3	1/1	7/1	20.14	30.00	✓	Offside	56.33
8	1	3	1/1	8/1	20.05	30.00	✓	Nearside	16.69

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	6.50	4.33	5.40
2	(untitled)				Farside	11.50	7.67	5.40
3	(untitled)				Farside	6.50	4.33	5.40
4	(untitled)				Farside	11.50	7.67	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(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
(ALL)	(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	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

46

Normal Input Flows (PCU/hr)

From		To			
		1	2	3	4
1	0	0	109	20	
2	0	0	9	2	
3	45	4	0	428	
4	8	1	382	0	

Bus Input Flows not shown as they are blank.

Tram 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	1	(untitled)	2/1	4/1	#0000FF
	2	(untitled)	1/1	3/1	#FF0000
	3	(untitled)	6/1	8/1	#00FF00
	4	(untitled)	5/1	7/1	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	2/1, 3/1	Normal	0
	2		2	1	1/1, 4/1	Normal	0
	3		1	4	2/1, 7/1	Normal	20
	4		2	4	1/1, 7/1	Normal	2
	5		4	2	5/1, 3/1	Normal	1
	6		4	1	5/1, 4/1	Normal	8
	7		1	3	2/1, 8/1	Normal	109
	8		2	3	1/1, 8/1	Normal	9
	9		4	3	5/1, 8/1	Normal	382
	10		3	2	6/1, 3/1	Normal	4
	11		3	1	6/1, 4/1	Normal	45
	12		3	4	6/1, 7/1	Normal	428

Signal Timings

Network Default: 100s cycle time; 100 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	100

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A, B	1
	2	C, D	1
	3	E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3	49, 66, 81

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A			6	6	8
	B			6	6	8
	C	6	6			8
	D	6	6			8
	E	8	8	8	8	

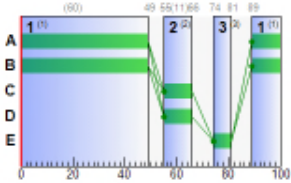
Banned Stage transitions for Controller Stream 1

		To		
		1	2	3
From	1			
	2			
	3			

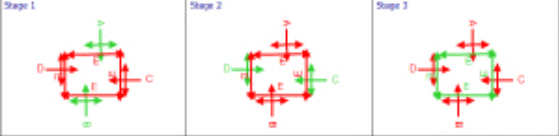
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
1	1		1	C	55	66	11
2	1		1	D	55	66	11
5	1		1	A	89	49	60
6	1		1	B	89	49	60

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
08:00-09:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	1	1	5	1667	11	1800	11	39.61	0.27	1.55	1.72	0.12	1.84
	2	1	60	51	129	1800	11	53.79	3.80	24.28	27.37	1.69	29.06
	3	1	0	Unrestricted	5	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	4	1	0	Unrestricted	53	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	5	1	36	153	391	1800	60	10.62	5.42	32.56	16.38	2.38	18.76
	6	1	43	107	477	1800	60	11.60	7.19	44.68	21.83	3.11	24.94
	7	1	0	Unrestricted	450	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	8	1	0	Unrestricted	500	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s per cycle)
08:00-09:00	1	1	11	11	0		1800	216	5		1667	0.00	11
	2	1	129	129	0		1800	216	60		51	0.00	11
	3	1	5	5	0		Unrestricted	Unrestricted	0		Unrestricted	0.67	100
	4	1	53	53	0		Unrestricted	Unrestricted	0		Unrestricted	0.67	100
	5	1	391	391	0		1800	1098	36		153	0.00	60
	6	1	477	477	0		1800	1098	43		107	0.00	60
	7	1	450	450	0		Unrestricted	Unrestricted	0		Unrestricted	0.60	100
	8	1	500	500	0		Unrestricted	Unrestricted	0		Unrestricted	0.53	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (s)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	1	1	12.00	39.61	0.12	1.72	87.26	9.60	0.12
	2	1	10.80	53.79	1.93	27.37	104.53	134.85	1.69
	3	1	22.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	1	21.98	0.00	0.00	0.00	0.00	0.00	0.00
	5	1	11.48	10.62	1.15	16.38	48.50	189.64	2.38
	6	1	11.10	11.60	1.54	21.83	51.92	247.65	3.11
	7	1	20.14	0.00	0.00	0.00	0.00	0.00	0.00
	8	1	20.05	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s per cycle)	Estimated blocking
08:00-09:00	1	1	0.00	0.27	17.39	1.55	0.00	11.00	
	2	1	0.00	3.80	15.65	24.28	0.00	0.00	
	3	1	0.00	0.00	31.88	0.00	0.00	100.00	
	4	1	0.00	0.00	31.85	0.00	0.00	70.00	
	5	1	0.00	5.42	16.64	32.56	0.00	0.00	
	6	1	0.00	7.19	16.09	44.68	0.00	0.00	
	7	1	0.00	0.00	29.19	0.00	0.00	18.00	
	8	1	0.00	0.00	29.05	0.00	0.00	9.00	

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	1	1	0.00	0.00	✓	0.27	0.00	0.27	1.00	0.00	1.84
	2	1	0.00	0.00	✓	3.81	0.44	3.59	1.00	0.00	29.06
	3	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	4	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	5	1	0.00	0.00	✓	5.42	0.10	4.33	1.00	0.00	18.76
	6	1	0.00	0.00	✓	7.19	0.17	5.33	1.00	0.00	24.94
	7	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	8	1	0.00	0.00	✓	0.00			1.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s per cycle)
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Total delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	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 over PRC
5	23/09/2025 09:44:15	23/09/2025 09:44:16	08:00	100	74.60	4.74	59.72	2/1	0	0	2/1	3/1	2/1

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	60	0	2016	542	8.46	67.31	7.29	74.60

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	56	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s per cycle)
08:00-09:00	2016	2016	0		60		51	598

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	15.71	8.46	4.74	67.31	28.86	581.74	7.29

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

		To			
From		1	2	3	4
	1	0.0	0.0	84.6	84.7
	2	0.0	0.0	71.7	71.7
	3	44.7	44.7	0.0	42.8
	4	44.1	44.1	42.2	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
1	1	2	0	0.00	0	0.00
2	2	1	0	0.00	0	0.00
3	1	4	20	84.73	20	84.73
4	2	4	2	71.75	2	71.75
5	4	2	1	44.11	1	44.11
6	4	1	8	44.09	8	44.09
7	1	3	109	84.64	109	84.64
8	2	3	9	71.65	9	71.65
9	4	3	382	42.16	382	42.16
10	3	2	4	44.70	4	44.70
11	3	1	45	44.69	45	44.69
12	3	4	428	42.85	428	42.85

51

Final Prediction Table

Traffic Stream Results

			SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES	
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)	Weighting (%)
1	1			1	C	11	1800	11	11.00	5	1667	51.61	39.61	87.26	0.27	
2	1			1	D	129	1800	11	0.00	60	51	64.59	53.79	104.53	3.80	
3	1					5	Unrestricted	100	100.00	0	Unrestricted	22.00	0.00	0.00	0.00	
4	1					53	Unrestricted	100	70.00	0	Unrestricted	21.98	0.00	0.00	0.00	
5	1	DDR (%)		1	A	391	1800	60	0.00	36	153	22.11	10.62	48.50	5.42	
6	1			1	B	477	1800	60	0.00	43	107	22.71	11.60	51.92	7.19	
7	1					450	Unrestricted	100	18.00	0	Unrestricted	20.14	0.00	0.00	0.00	
8	1					500	Unrestricted	100	9.00	0	Unrestricted	20.05	0.00	0.00	0.00	

Pedestrian Crossing Results

			SIGNALS			FLOWS		PERFORMANCE				PER PED			QUEUES		WEIGHTS	P
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 (%)				
(ALL)	(ALL)	(untitled)		1	E	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100				

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total 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	263.94	13.54	19.50	4.74	67.31	7.29	0.00	74.60
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	263.94	13.54	19.50	4.74	67.31	7.29	0.00	74.60

- <= adjusted flow warning (upstream links/traffic streams are over-saturated)
- += Traffic Stream - Normal: Bus or Train Stop or Delay weighting has been set to a value other than 100%
- += Traffic Stream - Normal: Bus or Train 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

52

A6 - 2042 DS PM D6 - 2042 DS PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	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 over PRC
6	23/09/2025 09:44:16	23/09/2025 09:44:17	17:00	100	59.08	3.68	50.34	6/1	0	0	6/1	3/1	6/1

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2042 DS PM		D6	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2042 DS PM				17.00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		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)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	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 results calculation	Random delay mode	Type of Vehicle-In-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate POM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

53

Arms

Arm	Name	Description	Traffic node
(ALL)			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
2	1			✓	90.00	✓	Sum of lanes	1800	✓		Normal	
3	1			✓	183.31						Normal	
4	1			✓	183.16						Normal	
5	1	DDR (%)		✓	95.71	✓	Sum of lanes	1800	✓		Normal	
6	1			✓	92.52	✓	Sum of lanes	1800	✓		Normal	
7	1			✓	167.84						Normal	
8	1			✓	167.08						Normal	

54

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
1	1	1	(untitled)			1800
2	1	1	(untitled)			1800
3	1	1	(untitled)			
4	1	1	(untitled)			
5	1	1	(untitled)			1800
6	1	1	(untitled)			1800
7	1	1	(untitled)			
8	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
(ALL)	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
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

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)
1	1	6	6
2	1	62	62
3	1	154	154
4	1	118	118
5	1	396	396
6	1	589	589
7	1	377	377
8	1	404	404

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	C	
2	1	1	D	
5	1	1	A	
6	1	1	B	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
1	1	12.00	30.00
2	1	10.80	30.00
5	1	11.48	30.00
6	1	11.10	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)
3	1	1	2/1	3/1	22.00	30.00	✓	Straight	Straight Movement
4	1	1	6/1	4/1	21.98	30.00	✓	Nearside	23.87
7	1	1	2/1	7/1	20.14	30.00	✓	Nearside	32.23
8	1	1	2/1	8/1	20.05	30.00	✓	Offside	43.34
3	1	2	6/1	3/1	22.00	30.00	✓	Offside	47.14
4	1	2	5/1	4/1	21.98	30.00	✓	Offside	56.47
7	1	2	6/1	7/1	20.14	30.00	✓	Straight	Straight Movement
8	1	2	5/1	8/1	20.05	30.00	✓	Straight	Straight Movement
3	1	3	5/1	3/1	22.00	30.00	✓	Nearside	32.20
4	1	3	1/1	4/1	21.98	30.00	✓	Straight	Straight Movement
7	1	3	1/1	7/1	20.14	30.00	✓	Offside	56.33
8	1	3	1/1	8/1	20.05	30.00	✓	Nearside	16.69

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	6.50	4.33	5.40
2	(untitled)				Farside	11.50	7.67	5.40
3	(untitled)				Farside	6.50	4.33	5.40
4	(untitled)				Farside	11.50	7.67	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(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
(ALL)	(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	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	52	10
	2	0	0	5	1
	3	100	123	0	366
	4	18	31	347	0

Bus Input Flows not shown as they are blank.

Tram 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	1	(untitled)	2/1	4/1	#0000FF
	2	(untitled)	1/1	3/1	#FF0000
	3	(untitled)	6/1	8/1	#00FF00
	4	(untitled)	5/1	7/1	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	2/1, 3/1	Normal	0
	2		2	1	1/1, 4/1	Normal	0
	3		1	4	2/1, 7/1	Normal	10
	4		2	4	1/1, 7/1	Normal	1
	5		4	2	5/1, 3/1	Normal	31
	6		4	1	5/1, 4/1	Normal	18
	7		1	3	2/1, 8/1	Normal	5
	8		2	3	1/1, 8/1	Normal	5
	9		4	3	5/1, 6/1	Normal	347
	10		3	2	6/1, 3/1	Normal	123
	11		3	1	6/1, 4/1	Normal	100
	12		3	4	6/1, 7/1	Normal	366

Signal Timings

Network Default: 100s cycle time; 100 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	100

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A, B	1
	2	C, D	1
	3	E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3	53, 66, 81

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A			6	6	8
	B			6	6	8
	C	6	6			8
	D	6	6			8
	E	8	8	8	8	

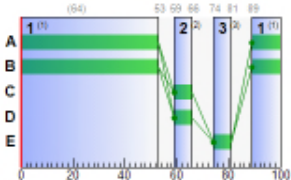
Banned Stage transitions for Controller Stream 1

		To		
		1	2	3
From	1			
	2			
	3			

Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
1	1		1	C	59	66	7
2	1		1	D	59	66	7
5	1		1	A	89	53	64
6	1		1	B	89	53	64

Phase Timings Diagram for Controller Stream 1



Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1			✓	125.00	✓	Sum of lanes	1800	✓		Normal	
1x	1			✓	189.68						Normal	
2	1			✓	125.00	✓	Sum of lanes	1800	✓		Normal	
2x	1			✓	217.29						Normal	
6	1			✓	188.51						Normal	
7	1			✓	105.80	✓	Sum of lanes	1800	✓		Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
1	1	1	(untitled)			1800
1x	1	1	(untitled)			
2	1	1	(untitled)			1800
2x	1	1	(untitled)			
6	1	1	(untitled)			
7	1	1	(untitled)			1800

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
(ALL)	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
(ALL)	1	0.00	NetworkDefault	Not Included	NetworkDefault	0.50	✓	75

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)
1	1	404	404
1x	1	530	530
2	1	437	437
2x	1	393	393
6	1	61	61
7	1	143	143

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	A	
2	1	1	B	
7	1	1	C	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
1	1	15.00	30.00
2	1	15.00	30.00
7	1	12.70	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)
1x	1	1	2/1	1x/1	22.76	30.00	✓	Straight	Straight Movement
2x	1	1	1/1	2x/1	26.07	30.00	✓	Straight	Straight Movement
6	1	1	1/1	6/1	22.62	30.00	✓	Offside	44.70
1x	1	2	7/1	1x/1	22.76	30.00	✓	Nearside	22.71
2x	1	2	7/1	2x/1	26.07	30.00	✓	Offside	52.30
6	1	2	2/1	6/1	22.62	30.00	✓	Nearside	30.30

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	8.00	5.33	5.40
2	(untitled)				Farside	12.00	8.00	5.40
3	(untitled)				Farside	8.00	5.33	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(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
(ALL)	(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	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To			
		1	2	3	
From	1	0	361	43	
	2	419	0	18	
	3	111	32	0	

Bus Input Flows not shown as they are blank.

Tram 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	1	(untitled)	1/1	1x/1	#0000FF
	2	(untitled)	2/1	2x/1	#FF0000
	3	(untitled)	7/1	6/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	1/1, 2x/1	Normal	361
	2		2	1	2/1, 1x/1	Normal	419
	4		1	3	1/1, 6/1	Normal	43
	5		3	1	7/1, 1x/1	Normal	111
	6		2	3	2/1, 6/1	Normal	18
	7		3	2	7/1, 2x/1	Normal	32

Signal Timings

Network Default: 75s cycle time; 75 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	75

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓		✓	Offsets And Green Splits	✓

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A, B	1
	2	C	1
	3	D	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3	33, 48, 63
	2	(untitled)	Single	1, 3, 2	18, 44, 69

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	
From	A			6	8	
	B			6	8	
	C	6	6		8	
	D	8	8	8		

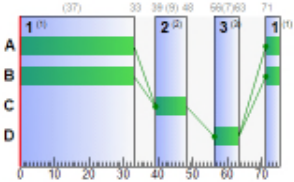
Banned Stage transitions for Controller Stream 1

		To			
		1	2	3	
From	1				
	2				
	3				

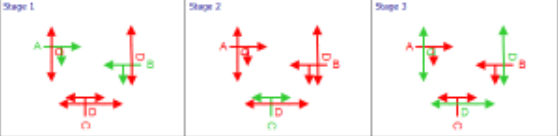
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
1	1	1	1	A	71	33	37
2	1	1	1	B	71	33	37
7	1	1	1	C	39	48	9

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
08:00-09:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	1	1	44	103	404	1800	37	13.34	5.45	25.07	21.26	3.18	24.44
	1x	1	0	Unrestricted	530	Unrestricted	75	0.00	0.00	0.00	0.00	0.00	0.00
	2	1	48	88	437	1800	37	13.87	6.05	27.81	23.90	3.53	27.43
	2x	1	0	Unrestricted	393	Unrestricted	75	0.00	0.00	0.00	0.00	0.00	0.00
	6	1	0	Unrestricted	61	Unrestricted	75	0.00	0.00	0.00	0.00	0.00	0.00
	6	1	0	Unrestricted	61	Unrestricted	75	0.00	0.00	0.00	0.00	0.00	0.00
	7	1	60	51	143	1800	9	41.44	3.21	17.45	23.38	1.89	25.27

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
08:00-09:00	1	1	404	404	0		1800	912	44		103	0.00	37
	1x	1	530	530	0		Unrestricted	Unrestricted	0		Unrestricted	0.55	75
	2	1	437	437	0		1800	912	48		88	0.00	37
	2x	1	393	393	0		Unrestricted	Unrestricted	0		Unrestricted	0.65	75
	6	1	61	61	0		Unrestricted	Unrestricted	0		Unrestricted	0.82	75
	6	1	61	61	0		Unrestricted	Unrestricted	0		Unrestricted	0.82	75
	7	1	143	143	0		1800	240	60		51	0.00	9

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	1	1	15.00	13.34	1.50	21.26	62.79	253.65	3.18
	1x	1	22.76	0.00	0.00	0.00	0.00	0.00	0.00
	2	1	15.00	13.87	1.68	23.90	64.47	281.73	3.53
	2x	1	26.07	0.00	0.00	0.00	0.00	0.00	0.00
	6	1	22.62	0.00	0.00	0.00	0.00	0.00	0.00
	6	1	22.62	0.00	0.00	0.00	0.00	0.00	0.00
	7	1	12.70	41.44	1.05	23.38	105.66	151.10	1.89

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	1	1	0.00	5.45	21.74	25.07	0.00	0.00	
	1x	1	0.00	0.00	32.99	0.00	0.00	8.00	
	2	1	0.00	6.05	21.74	27.81	0.00	0.00	
	2x	1	0.00	0.00	37.79	0.00	0.00	14.00	
	6	1	0.00	0.00	32.78	0.00	0.00	38.00	
	6	1	0.00	0.00	32.78	0.00	0.00	38.00	
	7	1	0.00	3.21	18.40	17.45	0.00	0.00	

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Warned up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	1	1	0.00	0.00	✓	5.45	0.18	4.33	1.00	0.00	24.44
	1x	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	2	1	0.00	0.00	✓	6.05	0.22	4.71	1.00	0.00	27.43
	2x	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	6	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	6	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	7	1	0.00	0.00	✓	3.22	0.43	3.02	1.00	0.00	25.27

9

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	1027	0		Unrestricted	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Total delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (Hr-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 over PR
1	23/09/2025 10:10:33	23/09/2025 10:10:33	08:00	75	77.14	4.83	59.58	7/1	0	0	7/1	2x/1	7/1

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	60	0	1968	308	8.83	68.53	8.61	77.14

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))
08:00-09:00	1968	1968	0		60		51	350

9

10

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	19.37	8.83	4.83	68.53	34.88	686.48	8.61

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To		
	1	2	3
	0.0	54.4	51.0
	2	51.6	0.0
3	76.9	80.2	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
1	1	2	361	54.41	361	54.41
2	2	1	419	51.63	419	51.63
4	1	3	43	50.96	43	50.96
5	3	1	111	76.90	111	76.90
6	2	3	18	51.49	18	51.49
7	3	2	32	80.21	32	80.21

Final Prediction Table

Traffic Stream Results

			SIGNALS			FLOWS			PERFORMANCE			PER PCU			QUEUES		
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)	we	m
1	1		1	1	A	404	1800	37	0.00	44	103	28.34	13.34	62.79	5.45		
1x	1					530	Unrestricted	75	8.00	0	Unrestricted	22.76	0.00	0.00	0.00		
2	1		1	1	B	437	1800	37	0.00	48	88	28.87	13.87	64.47	6.05		
2x	1					393	Unrestricted	75	14.00	0	Unrestricted	26.07	0.00	0.00	0.00		
6	1					61	Unrestricted	75	38.00	0	Unrestricted	22.62	0.00	0.00	0.00		
7	1		1	1	C	143	1800	9	0.00	60	51	54.14	41.44	105.66	3.21		

Pedestrian Crossing Results

			SIGNALS			FLOWS			PERFORMANCE			PER PED			QUEUES			WEIGHTS	P
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 (%)					
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100					

11

12

A2 - 2027 DS PM

D2 - 2027 DS PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	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 over PR
2	23/09/2025 10:30:34	23/09/2025 10:10:34	17:00	75	59.04	3.66	49.58	1/1	0	0	1/1	2x/1	1/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2027 DS PM		D2	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2027 DS PM				17:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
75		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (G)	Phase maximum broken penalty (G)	Intergreen broken penalty (G)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	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 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		✓

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1			✓	125.00	✓	Sum of lanes	1800	✓		Normal	
1x	1			✓	189.68						Normal	
2	1			✓	125.00	✓	Sum of lanes	1800	✓		Normal	
2x	1			✓	217.29						Normal	
6	1			✓	188.51						Normal	
7	1			✓	105.80	✓	Sum of lanes	1800	✓		Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
1	1	1	(untitled)			1800
1x	1	1	(untitled)			
2	1	1	(untitled)			1800
2x	1	1	(untitled)			
6	1	1	(untitled)			
7	1	1	(untitled)			1800

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
(ALL)	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
(ALL)	1	0.00	NetworkDefault	Not Included	NetworkDefault	0.50	✓	75

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)
1	1	476	476
1x	1	352	352
2	1	313	313
2x	1	381	381
6	1	147	147
7	1	91	91

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	A	
2	1	1	B	
7	1	1	C	

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻² [2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻² [2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

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
Hill Climb (Fast)	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
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
1x			
2			1
2x			
6			
7			1

Entry 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)
1	1				15.00	30.00			
2	1				15.00	30.00			
7	1				12.70	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)
1x	1	1	2/1	1x/1	22.76	30.00	✓	Straight	Straight Movement
2x	1	1	1/1	2x/1	26.07	30.00	✓	Straight	Straight Movement
6	1	1	1/1	6/1	22.62	30.00	✓	Offside	44.70
1x	1	2	7/1	1x/1	22.76	30.00	✓	Nearside	22.71
2x	1	2	7/1	2x/1	26.07	30.00	✓	Offside	52.30
6	1	2	2/1	6/1	22.62	30.00	✓	Nearside	30.30

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	8.00	5.33	5.40
2	(untitled)				Farside	12.00	8.00	5.40
3	(untitled)				Farside	8.00	5.33	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(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
(ALL)	(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 notes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

	To
	1 2 3
From 1	0 358 118
2	284 0 29
3	68 23 0

Bus Input Flows not shown as they are blank.

Tram 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	1	(untitled)	1/1	1x/1	#0000FF
	2	(untitled)	2/1	2x/1	#FF0000
	3	(untitled)	7/1	6/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	1/1, 2x/1	Normal	358
	2		2	1	2/1, 1x/1	Normal	284
	4		1	3	1/1, 6/1	Normal	118
	5		3	1	7/1, 1x/1	Normal	68
	6		2	3	2/1, 6/1	Normal	29
	7		3	2	7/1, 2x/1	Normal	23

Signal Timings

Network Default: 75s cycle time; 75 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	75

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1		Unspecified					Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A, B	1
	2	C	1
	3	D	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3	35, 48, 63
	2	(untitled)	Single	1, 3, 2	18, 44, 69

Intergreen Matrix for Controller Stream 1

	To				
From		A	B	C	D
	A			6	8
	B			6	8
	C	6	6		8
	D	8	8	8	

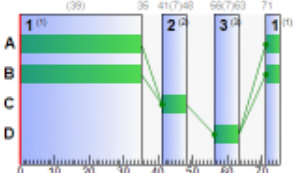
Banned Stage transitions for Controller Stream 1

	To			
From		1	2	3
	1			
	2			
	3			

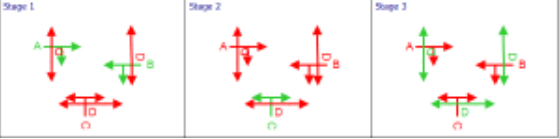
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
1	1	1	1	A	71	35	39
2	1	1	1	B	71	35	39
7	1	1	1	C	41	48	7

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
17:00-18:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	1	1	50	82	476	1800	39	12.95	6.46	29.70	24.31	3.75	28.06
	1x	1	0	Unrestricted	352	Unrestricted	75	0.00	0.00	0.00	0.00	0.00	0.00
	2	1	33	176	313	1800	39	10.80	3.73	17.16	13.33	2.16	15.50
	2x	1	0	Unrestricted	381	Unrestricted	75	0.00	0.00	0.00	0.00	0.00	0.00
	6	1	0	Unrestricted	147	Unrestricted	75	0.00	0.00	0.00	0.00	0.00	0.00
	7	1	47	90	91	1800	7	39.88	1.98	10.76	14.32	1.17	15.49

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s per cycle)
17:00-18:00	1	1	476	476	0		1800	960	50		82	0.00	39
	1x	1	352	352	0		Unrestricted	Unrestricted	0		Unrestricted	0.54	75
	2	1	313	313	0		1800	960	33		176	0.00	39
	2x	1	381	381	0		Unrestricted	Unrestricted	0		Unrestricted	0.64	75
	6	1	147	147	0		Unrestricted	Unrestricted	0		Unrestricted	0.77	75
	7	1	91	91	0		1800	192	47		90	0.00	7

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (s)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	1	1	15.00	12.95	1.73	24.31	62.90	299.42	3.75
	1x	1	22.76	0.00	0.00	0.00	0.00	0.00	0.00
	2	1	15.00	10.80	0.94	13.33	55.15	172.61	2.16
	2x	1	26.07	0.00	0.00	0.00	0.00	0.00	0.00
	6	1	22.62	0.00	0.00	0.00	0.00	0.00	0.00
	7	1	12.70	39.88	1.01	14.32	102.57	93.33	1.17

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s per cycle)	Estimated blocking
17:00-18:00	1	1	0.00	6.46	21.74	29.70	0.00	0.00	
	1x	1	0.00	0.00	32.99	0.00	0.00	10.00	
	2	1	0.00	3.73	21.74	17.16	0.00	0.00	
	2x	1	0.00	0.00	37.79	0.00	0.00	14.00	
	6	1	0.00	0.00	32.78	0.00	0.00	29.00	
	7	1	0.00	1.98	18.40	10.76	0.00	0.00	

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Warmup	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	1	1	0.00	0.00	✓	6.46	0.24	4.87	1.00	0.00	28.06
	1x	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	2	1	0.00	0.00	✓	3.73	0.08	3.12	1.00	0.00	15.50
	2x	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	6	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	7	1	0.00	0.00	✓	1.98	0.21	1.91	1.00	0.00	15.49

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s per cycle)
17:00-18:00	(ALL)	(ALL)	0	0	0		11000	1027	0		Unrestricted	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Total delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (H:M)	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 over PR
2	23/09/2025 10:10:34	23/09/2025 10:10:34	17:00	75	59.04	3.66	49.58	1/1	0	0	1/1	2x/1	1/1

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	50	0	1760	310	7.48	51.96	7.09	59.04

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s per cycle)
17:00-18:00	1760	1760	0		50		82	352

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	19.47	7.48	3.66	51.96	32.12	565.37	7.09

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To			
	1	2	3	
	1	0.0	54.0	50.6
	2	48.6	0.0	48.4
3	75.3	78.7	0.0	

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
1	1	2	358	54.02	358	54.02
2	2	1	284	48.56	284	48.56
4	1	3	118	50.57	118	50.57
5	3	1	68	75.34	68	75.34
6	2	3	29	48.42	29	48.42
7	3	2	23	78.66	23	78.66

Final Prediction Table

Traffic Stream Results

			SIGNALS			FLOWS		PERFORMANCE				PER PCU		QUEUES	
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)
1	1		1	1	A	476	1800	39	0.00	50	82	27.95	12.95	62.90	6.46
1x	1					352	Unrestricted	75	10.00	0	Unrestricted	22.76	0.00	0.00	0.00
2	1		1	1	B	313	1800	39	0.00	33	176	25.80	10.80	55.15	3.73
2x	1					381	Unrestricted	75	14.00	0	Unrestricted	26.07	0.00	0.00	0.00
6	1					147	Unrestricted	75	29.00	0	Unrestricted	22.62	0.00	0.00	0.00
7	1		1	1	C	91	1800	7	0.00	47	90	52.58	39.88	102.57	1.98

Pedestrian Crossing Results

			SIGNALS			FLOWS		PERFORMANCE				PER PED		QUEUES		WEIGHTS	P
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 (%)			
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00		100		

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total 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	285.52	13.18	21.67	3.66	51.96	7.09	0.00	59.04
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	285.52	13.18	21.67	3.66	51.96	7.09	0.00	59.04

- < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- * = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%
- ^ = Traffic Stream - Normal, Bus or Tram 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

A3 - 2032 DS AM
D3 - 2032 DS AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	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 over PR
3	23/09/2025 10:10:24	23/09/2025 10:10:24	08:00	75	80.48	5.03	62.96	7/1	0	0	7/1	24/1	7/1

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2032 DS AM		D3	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2032 DS AM				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
75		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)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	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 results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate POM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

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
Hill Climb (Fast)	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
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
1x			
2			1
2x			
6			
7			1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1			✓	125.00	✓	Sum of lanes	1800	✓		Normal	
1x	1			✓	189.68						Normal	
2	1			✓	125.00	✓	Sum of lanes	1800	✓		Normal	
2x	1			✓	217.29						Normal	
6	1			✓	188.51						Normal	
7	1			✓	105.80	✓	Sum of lanes	1800	✓		Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
1	1	1	(untitled)			1800
1x	1	1	(untitled)			
2	1	1	(untitled)			1800
2x	1	1	(untitled)			
6	1	1	(untitled)			
7	1	1	(untitled)			1800

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
(ALL)	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
(ALL)	1	0.00	NetworkDefault	Not Included	NetworkDefault	0.50	✓	75

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)
1	1	434	434
1x	1	550	550
2	1	465	465
2x	1	415	415
6	1	70	70
7	1	136	136

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	A	
2	1	1	B	
7	1	1	C	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
1	1	15.00	30.00
2	1	15.00	30.00
7	1	12.70	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)
1x	1	1	2/1	1x/1	22.76	30.00	✓	Straight	Straight Movement
2x	1	1	1/1	2x/1	26.07	30.00	✓	Straight	Straight Movement
6	1	1	1/1	6/1	22.62	30.00	✓	Offside	44.70
1x	1	2	7/1	1x/1	22.76	30.00	✓	Nearside	22.71
2x	1	2	7/1	2x/1	26.07	30.00	✓	Offside	52.30
6	1	2	2/1	6/1	22.62	30.00	✓	Nearside	30.30

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	8.00	5.33	5.40
2	(untitled)				Farside	12.00	8.00	5.40
3	(untitled)				Farside	8.00	5.33	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(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
(ALL)	(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	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To			
		1	2	3	
From	1	0	384	50	
	2	445	0	20	
	3	105	31	0	

Bus Input Flows not shown as they are blank.

Tram 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	1	(untitled)	1/1	1x/1	#0000FF
	2	(untitled)	2/1	2x/1	#FF0000
	3	(untitled)	7/1	6/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	1/1, 2x/1	Normal	384
	2		2	1	2/1, 1x/1	Normal	445
	4		1	3	1/1, 6/1	Normal	50
	5		3	1	7/1, 1x/1	Normal	105
	6		2	3	2/1, 6/1	Normal	20
	7		3	2	7/1, 2x/1	Normal	31

Signal Timings

Network Default: 75s cycle time; 75 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	75

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓		✓	Offsets And Green Splits	✓

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A, B	1
	2	C	1
	3	D	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3	34, 48, 63
	2	(untitled)	Single	1, 3, 2	18, 44, 69

Intergreen Matrix for Controller Stream 1

		To			
		A	B	C	D
From	A			6	8
	B			6	8
	C	6	6		8
	D	8	8	8	

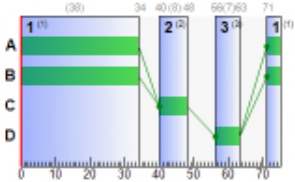
Banned Stage transitions for Controller Stream 1

		To		
		1	2	3
From	1			
	2			
	3			

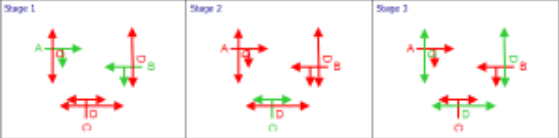
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
1	1	1	1	A	71	34	38
2	1	1	1	B	71	34	38
7	1	1	1	C	40	48	8

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
08:00-09:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	1	1	46	94	434	1800	38	13.05	5.87	26.98	22.34	3.41	25.75
	1x	1	0	Unrestricted	550	Unrestricted	75	0.00	0.00	0.00	0.00	0.00	0.00
	2	1	50	81	465	1800	38	13.55	6.44	29.64	24.85	3.75	28.60
	2x	1	0	Unrestricted	415	Unrestricted	75	0.00	0.00	0.00	0.00	0.00	0.00
	6	1	0	Unrestricted	70	Unrestricted	75	0.00	0.00	0.00	0.00	0.00	0.00
	6	1	0	Unrestricted	70	Unrestricted	75	0.00	0.00	0.00	0.00	0.00	0.00
	7	1	63	43	136	1800	8	45.20	3.20	17.41	24.25	1.88	26.13

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
08:00-09:00	1	1	434	434	0		1800	936	46		94	0.00	38
	1x	1	550	550	0		Unrestricted	Unrestricted	0		Unrestricted	0.54	75
	2	1	465	465	0		1800	936	50		81	0.00	38
	2x	1	415	415	0		Unrestricted	Unrestricted	0		Unrestricted	0.64	75
	6	1	70	70	0		Unrestricted	Unrestricted	0		Unrestricted	0.80	75
	6	1	70	70	0		Unrestricted	Unrestricted	0		Unrestricted	0.80	75
	7	1	136	136	0		1800	216	63		43	0.00	8

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	1	1	15.00	13.05	1.57	22.34	62.63	271.81	3.41
	1x	1	22.76	0.00	0.00	0.00	0.00	0.00	0.00
	2	1	15.00	13.55	1.75	24.85	64.30	298.98	3.75
	2x	1	26.07	0.00	0.00	0.00	0.00	0.00	0.00
	6	1	22.62	0.00	0.00	0.00	0.00	0.00	0.00
	6	1	22.62	0.00	0.00	0.00	0.00	0.00	0.00
	7	1	12.70	45.20	1.71	24.25	110.53	150.32	1.88

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	1	1	0.00	5.87	21.74	26.98	0.00	0.00	
	1x	1	0.00	0.00	32.99	0.00	0.00	7.00	
	2	1	0.00	6.44	21.74	29.64	0.00	0.00	
	2x	1	0.00	0.00	37.79	0.00	0.00	13.00	
	6	1	0.00	0.00	32.78	0.00	0.00	36.00	
	6	1	0.00	0.00	32.78	0.00	0.00	36.00	
	7	1	0.00	3.20	18.40	17.41	0.00	0.00	

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Warned up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	1	1	0.00	0.00	✓	5.87	0.20	4.54	1.00	0.00	25.75
	1x	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	2	1	0.00	0.00	✓	6.44	0.24	4.89	1.00	0.00	28.60
	2x	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	6	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	6	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	7	1	0.00	0.00	✓	3.21	0.53	3.02	1.00	0.00	26.13

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	1027	0		Unrestricted	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Total delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00		0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (H:M: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 over PR
3	23/09/2025 10:10:34	23/09/2025 10:10:34	08:00	75	80.48	5.03	62.96	7/1	0	0	7/1	2x/1	7/1

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	63	0	2070	309	8.75	71.43	9.04	80.48

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))
08:00-09:00	2070	2070	0		63		43	351

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	19.39	8.75	5.03	71.43	34.84	721.10	9.04

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To			
	1	2	3	
	0.0	54.1	50.7	
	2	51.3	0.0	51.2
3	80.7	84.0	0.0	

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
1	1	2	384	54.12	384	54.12
2	2	1	445	51.31	445	51.31
4	1	3	50	50.67	50	50.67
5	3	1	105	80.66	105	80.66
6	2	3	20	51.17	20	51.17
7	3	2	31	83.97	31	83.97

Final Prediction Table

Traffic Stream Results

			SIGNALS			FLOWS			PERFORMANCE			PER PCU			QUEUES	
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)	we m
1	1		1	1	A	434	1800	38	0.00	46	94	28.05	13.05	62.63	5.87	
1x	1					550	Unrestricted	75	7.00	0	Unrestricted	22.76	0.00	0.00	0.00	
2	1		1	1	B	465	1800	38	0.00	50	81	28.55	13.55	64.30	6.44	
2x	1					415	Unrestricted	75	13.00	0	Unrestricted	26.07	0.00	0.00	0.00	
6	1					70	Unrestricted	75	36.00	0	Unrestricted	22.62	0.00	0.00	0.00	
7	1		1	1	C	136	1800	8	0.00	63	43	57.90	45.20	110.53	3.20	

Pedestrian Crossing Results

			SIGNALS			FLOWS			PERFORMANCE			PER PED			QUEUES		WEIGHTS	P
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 (%)				(
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00				100	(

A4 - 2032 DS PM

D4 - 2032 DS PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (E 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 over PR
4	23/09/2025 10:30:34	23/09/2025 10:10:34	17:00	75	63.52	3.94	53.54	1/1	0	0	1/1	2x/1	1/1

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2032 DS PM		D4	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2032 DS PM				17:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
75		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (G)	Phase maximum broken penalty (G)	Intergreen broken penalty (G)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	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 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		✓

33

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻² [2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻² [2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

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
Hill Climb (Fast)	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
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
1x			
2			1
2x			
6			
7			1

34

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1			✓	125.00	✓	Sum of lanes	1800	✓		Normal	
1x	1			✓	189.68						Normal	
2	1			✓	125.00	✓	Sum of lanes	1800	✓		Normal	
2x	1			✓	217.29						Normal	
6	1			✓	188.51						Normal	
7	1			✓	105.80	✓	Sum of lanes	1800	✓		Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
1	1	1	(untitled)			1800
1x	1	1	(untitled)			
2	1	1	(untitled)			1800
2x	1	1	(untitled)			
6	1	1	(untitled)			
7	1	1	(untitled)			1800

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
(ALL)	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
(ALL)	1	0.00	NetworkDefault	Not Included	NetworkDefault	0.50	✓	75

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)
1	1	514	514
1x	1	366	366
2	1	333	333
2x	1	403	403
6	1	167	167
7	1	89	89

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	A	
2	1	1	B	
7	1	1	C	

Entry 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)
1	1				15.00	30.00			
2	1				15.00	30.00			
7	1				12.70	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)
1x	1	1	2/1	1x/1	22.76	30.00	✓	Straight	Straight Movement
2x	1	1	1/1	2x/1	26.07	30.00	✓	Straight	Straight Movement
6	1	1	1/1	6/1	22.62	30.00	✓	Offside	44.70
1x	1	2	7/1	1x/1	22.76	30.00	✓	Nearside	22.71
2x	1	2	7/1	2x/1	26.07	30.00	✓	Offside	52.30
6	1	2	2/1	6/1	22.62	30.00	✓	Nearside	30.30

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	8.00	5.33	5.40
2	(untitled)				Farside	12.00	8.00	5.40
3	(untitled)				Farside	8.00	5.33	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(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
(ALL)	(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 notes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

	To			
	1	2	3	
From	1	0	380	134
	2	300	0	33
	3	66	23	0

35

36

Bus Input Flows not shown as they are blank.

Tram 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	1	(untitled)	1/1	1x/1	#0000FF
	2	(untitled)	2/1	2x/1	#FF0000
	3	(untitled)	7/1	6/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	1/1, 2x/1	Normal	380
	2		2	1	2/1, 1x/1	Normal	300
	4		1	3	1/1, 6/1	Normal	134
	5		3	1	7/1, 1x/1	Normal	66
	6		2	3	2/1, 6/1	Normal	33
	7		3	2	7/1, 2x/1	Normal	23

Signal Timings

Network Default: 75s cycle time; 75 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	75

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1		Unspecified					Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A, B	1
	2	C	1
	3	D	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3	35, 48, 63
	2	(untitled)	Single	1, 3, 2	18, 44, 69

Intergreen Matrix for Controller Stream 1

		To			
		A	B	C	D
	From A			6	8
	From B			6	8
	C	6	6		8
	D	8	8	8	

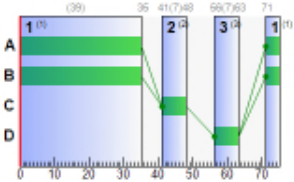
Banned Stage transitions for Controller Stream 1

		To		
		1	2	3
	From 1			
	2			

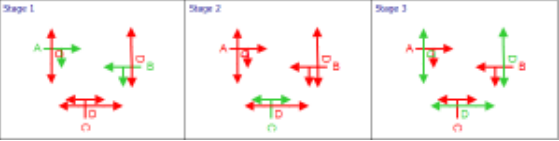
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
1	1	1	1	A	71	35	39
2	1	1	1	B	71	35	39
7	1	1	1	C	41	48	7

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
17:00-18:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted reserve capacity (s per hr)	Performance Index (£ per hr)
17:00-18:00	1	1	54	68	514	1800	39	13.58	7.16	32.94	27.54	4.18	31.72
	1x	1	0	Unrestricted	366	Unrestricted	75	0.00	0.00	0.00	0.00	0.00	0.00
	2	1	35	159	333	1800	39	11.02	3.98	18.29	14.47	2.32	16.79
	2x	1	0	Unrestricted	403	Unrestricted	75	0.00	0.00	0.00	0.00	0.00	0.00
	6	1	0	Unrestricted	167	Unrestricted	75	0.00	0.00	0.00	0.00	0.00	0.00
	7	1	46	94	89	1800	7	39.51	1.93	10.48	13.87	1.14	15.01

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s per cycle)
17:00-18:00	1	1	514	514	0		1800	960	54		68	0.00	39
	1x	1	366	366	0		Unrestricted	Unrestricted	0		Unrestricted	0.55	75
	2	1	333	333	0		1800	960	35		159	0.00	39
	2x	1	403	403	0		Unrestricted	Unrestricted	0		Unrestricted	0.65	75
	6	1	167	167	0		Unrestricted	Unrestricted	0		Unrestricted	0.77	75
	7	1	89	89	0		1800	192	46		94	0.00	7

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (s)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	1	1	15.00	13.58	1.94	27.54	64.84	333.27	4.18
	1x	1	22.76	0.00	0.00	0.00	0.00	0.00	0.00
	2	1	15.00	11.02	1.02	14.47	55.59	185.12	2.32
	2x	1	26.07	0.00	0.00	0.00	0.00	0.00	0.00
	6	1	22.62	0.00	0.00	0.00	0.00	0.00	0.00
	7	1	12.70	39.51	0.98	13.87	102.14	90.91	1.14

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s per cycle)	Estimated blocking
17:00-18:00	1	1	0.00	7.16	21.74	32.94	0.00	0.00	
	1x	1	0.00	0.00	32.99	0.00	0.00	10.00	
	2	1	0.00	3.98	21.74	18.29	0.00	0.00	
	2x	1	0.00	0.00	37.79	0.00	0.00	14.00	
	6	1	0.00	0.00	32.78	0.00	0.00	28.00	
	7	1	0.00	1.93	18.40	10.48	0.00	0.00	

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Warm up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	1	1	0.00	0.00	✓	7.16	0.31	5.31	1.00	0.00	31.72
	1x	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	2	1	0.00	0.00	✓	3.98	0.09	3.33	1.00	0.00	16.79
	2x	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	6	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	7	1	0.00	0.00	✓	1.93	0.20	1.86	1.00	0.00	15.01

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s per cycle)
17:00-18:00	(ALL)	(ALL)	0	0	0		11000	1027	0		Unrestricted	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Total delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (H:M)	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 over PR
4	23/09/2025 10:10:34	23/09/2025 10:10:34	17:00	75	63.52	3.94	53.54	1/1	0	0	1/1	2x/1	1/1

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	54	0	1872	310	7.57	55.88	7.64	63.52

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s per cycle)
17:00-18:00	1872	1872	0		54		68	352

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	19.47	7.57	3.94	55.88	32.55	609.30	7.64

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To			
	1	2	3	
	1	0.0	54.7	51.2
	2	48.8	0.0	48.6
3	75.0	78.3	0.0	

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
1	1	2	380	54.66	380	54.66
2	2	1	300	48.78	300	48.78
4	1	3	134	51.20	134	51.20
5	3	1	66	74.97	66	74.97
6	2	3	33	48.64	33	48.64
7	3	2	23	78.28	23	78.28

Final Prediction Table

Traffic Stream Results

			SIGNALS			FLOWS		PERFORMANCE				PER PCU		QUEUES	
Am	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)
1	1		1	1	A	514	1800	39	0.00	54	66	28.58	13.58	64.84	7.16
1x	1					386	Unrestricted	75	10.00	0	Unrestricted	22.76	0.00	0.00	0.00
2	1		1	1	B	333	1800	39	0.00	35	159	26.02	11.02	55.59	3.98
2x	1					403	Unrestricted	75	14.00	0	Unrestricted	26.07	0.00	0.00	0.00
6	1					167	Unrestricted	75	28.00	0	Unrestricted	22.62	0.00	0.00	0.00
7	1		1	1	C	89	1800	7	0.00	46	94	52.21	39.51	102.14	1.93

Pedestrian Crossing Results

			SIGNALS			FLOWS		PERFORMANCE				PER PED		QUEUES		WEIGHTS	P
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 (%)			
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00		100		(

A5 - 2042 DS AM
D5 - 2042 DS AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	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 over PR
5	23/09/2025 10:10:35	23/09/2025 10:10:35	08:00	75	86.95	5.44	65.28	7/1	0	0	7/1	24/1	7/1

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2042 DS AM		D5	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2042 DS AM				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
75		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)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	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 results calculation	Random delay mode	Type of Vehicle-In-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate POM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total 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	303.76	14.06	21.60	3.94	55.88	7.64	0.00	63.52
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	303.76	14.06	21.60	3.94	55.88	7.64	0.00	63.52

- < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- * = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%
- ^ = Traffic Stream - Normal, Bus or Tram 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

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

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
Hill Climb (Fast)	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
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
1x			
2			1
2x			
6			
7			1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1			✓	125.00	✓	Sum of lanes	1800	✓		Normal	
1x	1			✓	189.68						Normal	
2	1			✓	125.00	✓	Sum of lanes	1800	✓		Normal	
2x	1			✓	217.29						Normal	
6	1			✓	188.51						Normal	
7	1			✓	105.80	✓	Sum of lanes	1800	✓		Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
1	1	1	(untitled)			1800
1x	1	1	(untitled)			
2	1	1	(untitled)			1800
2x	1	1	(untitled)			
6	1	1	(untitled)			
7	1	1	(untitled)			1800

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
(ALL)	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
(ALL)	1	0.00	NetworkDefault	Not Included	NetworkDefault	0.50	✓	75

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)
1	1	457	457
1x	1	579	579
2	1	491	491
2x	1	438	438
6	1	72	72
7	1	141	141

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	A	
2	1	1	B	
7	1	1	C	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
1	1	15.00	30.00
2	1	15.00	30.00
7	1	12.70	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)
1x	1	1	2/1	1x/1	22.76	30.00	✓	Straight	Straight Movement
2x	1	1	1/1	2x/1	26.07	30.00	✓	Straight	Straight Movement
6	1	1	1/1	6/1	22.62	30.00	✓	Offside	44.70
1x	1	2	7/1	1x/1	22.76	30.00	✓	Nearside	22.71
2x	1	2	7/1	2x/1	26.07	30.00	✓	Offside	52.30
6	1	2	2/1	6/1	22.62	30.00	✓	Nearside	30.30

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	8.00	5.33	5.40
2	(untitled)				Farside	12.00	8.00	5.40
3	(untitled)				Farside	8.00	5.33	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(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
(ALL)	(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	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To			
		1	2	3	
From	1	0	406	51	
	2	470	0	21	
	3	109	32	0	

Bus Input Flows not shown as they are blank.

Tram 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	1	(untitled)	1/1	1x/1	#0000FF
	2	(untitled)	2/1	2x/1	#FF0000
	3	(untitled)	7/1	6/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	1/1, 2x/1	Normal	406
	2		2	1	2/1, 1x/1	Normal	470
	4		1	3	1/1, 6/1	Normal	51
	5		3	1	7/1, 1x/1	Normal	109
	6		2	3	2/1, 6/1	Normal	21
	7		3	2	7/1, 2x/1	Normal	32

Signal Timings

Network Default: 75s cycle time; 75 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	75

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓		✓	Offsets And Green Splits	✓

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A, B	1
	2	C	1
	3	D	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3	34, 48, 63
	2	(untitled)	Single	1, 3, 2	18, 44, 69

Intergreen Matrix for Controller Stream 1

		To			
		A	B	C	D
From	A		6	8	
	B			6	8
	C	6	6		8
	D	8	8	8	

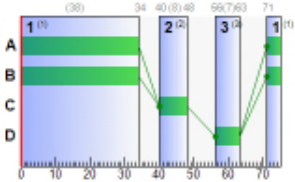
Banned Stage transitions for Controller Stream 1

		To		
		1	2	3
From	1			
	2			
	3			

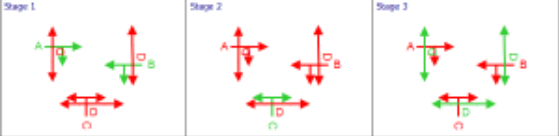
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
1	1	1	1	A	71	34	38
2	1	1	1	B	71	34	38
7	1	1	1	C	40	48	8

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
08:00-09:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	1	1	49	84	457	1800	38	13.41	6.33	29.10	24.18	3.66	27.84
	1x	1	0	Unrestricted	579	Unrestricted	75	0.00	0.00	0.00	0.00	0.00	0.00
	2	1	52	72	491	1800	38	14.00	6.97	32.07	27.11	4.05	31.17
	2x	1	0	Unrestricted	438	Unrestricted	75	0.00	0.00	0.00	0.00	0.00	0.00
	6	1	0	Unrestricted	72	Unrestricted	75	0.00	0.00	0.00	0.00	0.00	0.00
	7	1	65	38	141	1800	8	46.69	3.37	18.34	25.97	1.99	27.95

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
08:00-09:00	1	1	457	457	0		1800	936	49		84	0.00	38
	1x	1	579	579	0		Unrestricted	Unrestricted	0		Unrestricted	0.54	75
	2	1	491	491	0		1800	936	52		72	0.00	38
	2x	1	438	438	0		Unrestricted	Unrestricted	0		Unrestricted	0.65	75
	6	1	72	72	0		Unrestricted	Unrestricted	0		Unrestricted	0.80	75
	7	1	141	141	0		1800	216	65		38	0.00	8

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	1	1	15.00	13.41	1.70	24.18	63.83	291.69	3.66
	1x	1	22.76	0.00	0.00	0.00	0.00	0.00	0.00
	2	1	15.00	14.00	1.91	27.11	65.84	323.25	4.05
	2x	1	26.07	0.00	0.00	0.00	0.00	0.00	0.00
	6	1	22.62	0.00	0.00	0.00	0.00	0.00	0.00
	7	1	12.70	46.69	1.83	25.97	112.30	158.34	1.99

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	1	1	0.00	6.33	21.74	23.10	0.00	0.00	
	1x	1	0.00	0.00	32.99	0.00	0.00	7.00	
	2	1	0.00	6.97	21.74	32.07	0.00	0.00	
	2x	1	0.00	0.00	37.79	0.00	0.00	12.00	
	6	1	0.00	0.00	32.78	0.00	0.00	36.00	
	7	1	0.00	3.37	18.40	18.34	0.00	0.00	

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Warned up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	1	1	0.00	0.00	✓	6.33	0.23	4.80	1.00	0.00	27.84
	1x	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	2	1	0.00	0.00	✓	6.97	0.29	5.20	1.00	0.00	31.17
	2x	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	6	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	7	1	0.00	0.00	✓	3.38	0.60	3.19	1.00	0.00	27.95

49

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	1027	0		Unrestricted	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Total delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (Hr-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 over PR
5	23/09/2025 10:10:35	23/09/2025 10:10:35	08:00	75	86.95	5.44	65.28	7/1	0	0	7/1	2x/1	7/1

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	65	0	2178	309	8.99	77.26	9.70	86.95

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))
08:00-09:00	2178	2178	0		65		38	351

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	19.39	8.99	5.44	77.26	35.50	773.28	9.70

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To		
	1	2	3
	0.0	54.5	51.0
	2	51.8	0.0
3	82.1	85.5	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
1	1	2	406	54.49	406	54.49
2	2	1	470	51.76	470	51.76
4	1	3	51	51.03	51	51.03
5	3	1	109	82.15	109	82.15
6	2	3	21	51.62	21	51.62
7	3	2	32	85.46	32	85.46

Final Prediction Table

Traffic Stream Results

			SIGNALS			FLOWS			PERFORMANCE			PER PCU			QUEUES	
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)	we m
1	1		1	1	A	457	1800	38	0.00	49	84	28.41	13.41	63.83	6.33	
1x	1					579	Unrestricted	75	7.00	0	Unrestricted	22.76	0.00	0.00	0.00	
2	1		1	1	B	491	1800	38	0.00	52	72	29.00	14.00	65.84	6.97	
2x	1					438	Unrestricted	75	12.00	0	Unrestricted	26.07	0.00	0.00	0.00	
6	1					72	Unrestricted	75	36.00	0	Unrestricted	22.62	0.00	0.00	0.00	
7	1		1	1	C	141	1800	8	0.00	65	38	59.39	46.69	112.30	3.37	

Pedestrian Crossing Results

			SIGNALS			FLOWS			PERFORMANCE			PER PED			QUEUES		WEIGHTS	P
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 (%)				(
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00				100	(

51

52

A6 - 2042 DS PM

D6 - 2042 DS PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	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 over PR
6	23/09/2025 10:30:35	23/09/2025 10:10:35	17:00	75	68.20	4.23	56.04	1/1	0	0	1/1	2x/1	1/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2042 DS PM		D6	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2042 DS PM				17:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
75		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (G)	Phase maximum broken penalty (G)	Intergreen broken penalty (G)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	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 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	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻² [2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻² [2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

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
Hill Climb (Fast)	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
1	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
1x			
2			1
2x			
6			
7			1

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1			✓	125.00	✓	Sum of lanes	1800	✓		Normal	
1x	1			✓	189.68						Normal	
2	1			✓	125.00	✓	Sum of lanes	1800	✓		Normal	
2x	1			✓	217.29						Normal	
6	1			✓	188.51						Normal	
7	1			✓	105.80	✓	Sum of lanes	1800	✓		Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
1	1	1	(untitled)			1800
1x	1	1	(untitled)			
2	1	1	(untitled)			1800
2x	1	1	(untitled)			
6	1	1	(untitled)			
7	1	1	(untitled)			1800

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
(ALL)	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
(ALL)	1	0.00	NetworkDefault	Not Included	NetworkDefault	0.50	✓	75

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)
1	1	538	538
1x	1	385	385
2	1	350	350
2x	1	424	424
6	1	172	172
7	1	93	93

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	A	
2	1	1	B	
7	1	1	C	

Entry 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)
1	1				15.00	30.00			
2	1				15.00	30.00			
7	1				12.70	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)
1x	1	1	2/1	1x/1	22.76	30.00	✓	Straight	Straight Movement
2x	1	1	1/1	2x/1	26.07	30.00	✓	Straight	Straight Movement
6	1	1	1/1	6/1	22.62	30.00	✓	Offside	44.70
1x	1	2	7/1	1x/1	22.76	30.00	✓	Nearside	22.71
2x	1	2	7/1	2x/1	26.07	30.00	✓	Offside	52.30
6	1	2	2/1	6/1	22.62	30.00	✓	Nearside	30.30

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	8.00	5.33	5.40
2	(untitled)				Farside	12.00	8.00	5.40
3	(untitled)				Farside	8.00	5.33	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	D	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(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
(ALL)	(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 notes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

	To			
	1	2	3	
From	1	0	400	138
	2	316	0	34
	3	69	24	0

Bus Input Flows not shown as they are blank.

Tram 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	1	(untitled)	1/1	1x/1	#0000FF
	2	(untitled)	2/1	2x/1	#FF0000
	3	(untitled)	7/1	6/1	#00FF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	1/1, 2x/1	Normal	400
	2		2	1	2/1, 1x/1	Normal	316
	4		1	3	1/1, 6/1	Normal	138
	5		3	1	7/1, 1x/1	Normal	69
	6		2	3	2/1, 6/1	Normal	34
	7		3	2	7/1, 2x/1	Normal	24

Signal Timings

Network Default: 75s cycle time; 75 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	75

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1		Unspecified					Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A, B	1
	2	C	1
	3	D	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3	35, 48, 63
	2	(untitled)	Single	1, 3, 2	18, 44, 69

Intergreen Matrix for Controller Stream 1

		To			
From		A	B	C	D
	A			6	8
	B			6	8
	C	6	6		8
	D	8	8	8	

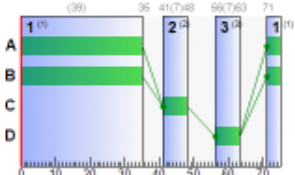
Banned Stage transitions for Controller Stream 1

	To			
From		1	2	3
	1			
	2			
	3			

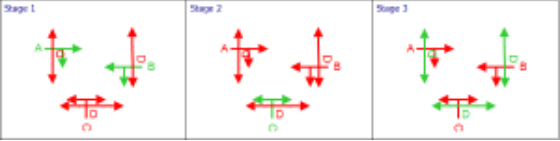
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
1	1	1	1	A	71	35	39
2	1	1	1	B	71	35	39
7	1	1	1	C	41	48	7

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
17:00-18:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	1	1	56	61	538	1800	39	14.03	7.68	35.32	29.77	4.48	34.25
	1x	1	0	Unrestricted	385	Unrestricted	75	0.00	0.00	0.00	0.00	0.00	0.00
	2	1	36	147	350	1800	39	11.22	4.28	19.71	15.49	2.49	17.98
	2x	1	0	Unrestricted	424	Unrestricted	75	0.00	0.00	0.00	0.00	0.00	0.00
	6	1	0	Unrestricted	172	Unrestricted	75	0.00	0.00	0.00	0.00	0.00	0.00
	7	1	48	86	93	1800	7	40.27	2.03	11.05	14.77	1.20	15.97

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s per cycle)
17:00-18:00	1	1	538	538	0		1800	960	56		61	0.00	39
	1x	1	385	385	0		Unrestricted	Unrestricted	0		Unrestricted	0.55	75
	2	1	350	350	0		1800	960	36		147	0.00	39
	2x	1	424	424	0		Unrestricted	Unrestricted	0		Unrestricted	0.65	75
	6	1	172	172	0		Unrestricted	Unrestricted	0		Unrestricted	0.77	75
	7	1	93	93	0		1800	192	48		86	0.00	7

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (s)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	1	1	15.00	14.03	2.10	29.77	66.39	357.16	4.48
	1x	1	22.76	0.00	0.00	0.00	0.00	0.00	0.00
	2	1	15.00	11.22	1.09	15.49	56.72	198.50	2.49
	2x	1	26.07	0.00	0.00	0.00	0.00	0.00	0.00
	6	1	22.62	0.00	0.00	0.00	0.00	0.00	0.00
	7	1	12.70	40.27	1.04	14.77	103.00	95.79	1.20

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s per cycle)	Estimated blocking
17:00-18:00	1	1	0.00	7.68	21.74	35.32	0.00	0.00	
	1x	1	0.00	0.00	32.99	0.00	0.00	10.00	
	2	1	0.00	4.28	21.74	19.71	0.00	0.00	
	2x	1	0.00	0.00	37.79	0.00	0.00	13.00	
	6	1	0.00	0.00	32.78	0.00	0.00	28.00	
	7	1	0.00	2.03	18.40	11.05	0.00	0.00	

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Warm up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	1	1	0.00	0.00	✓	7.68	0.36	5.59	1.00	0.00	34.25
	1x	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	2	1	0.00	0.00	✓	4.29	0.10	3.51	1.00	0.00	17.98
	2x	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	6	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	7	1	0.00	0.00	✓	2.03	0.23	1.96	1.00	0.00	15.97

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s per cycle)
17:00-18:00	(ALL)	(ALL)	0	0	0		11000	1027	0		Unrestricted	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Total delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (H:M)	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 over PR
6	23/09/2025 10:10:35	23/09/2025 10:10:35	17:00	75	68.20	4.23	56.04	1/1	0	0	1/1	2x/1	1/1

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	56	0	1962	310	7.76	60.03	8.17	68.20

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	42	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s per cycle)
17:00-18:00	1962	1962	0		56		61	352

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	19.48	7.76	4.23	60.03	33.20	651.46	8.17

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To			
	1	2	3	
	1	0.0	55.1	51.7
	2	49.0	0.0	48.8
3	75.7	79.0	0.0	

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
1	1	2	400	55.10	400	55.10
2	2	1	316	48.98	316	48.98
4	1	3	138	51.65	138	51.65
5	3	1	69	75.73	69	75.73
6	2	3	34	48.84	34	48.84
7	3	2	24	79.04	24	79.04

Final Prediction Table

Traffic Stream Results

			SIGNALS			FLOWS		PERFORMANCE				PER PCU		QUEUES	
Am	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)
1	1		1	1	A	538	1800	39	0.00	56	61	29.03	14.03	66.39	7.68
1x	1					385	Unrestricted	75	10.00	0	Unrestricted	22.76	0.00	0.00	0.00
2	1		1	1	B	350	1800	39	0.00	36	147	26.22	11.22	56.72	4.28
2x	1					424	Unrestricted	75	13.00	0	Unrestricted	26.07	0.00	0.00	0.00
6	1					172	Unrestricted	75	28.00	0	Unrestricted	22.62	0.00	0.00	0.00
7	1		1	1	C	93	1800	7	0.00	48	86	52.96	40.27	103.00	2.03

Pedestrian Crossing Results

			SIGNALS			FLOWS		PERFORMANCE				PER PED		QUEUES		WEIGHTS	
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 (%)			
(ALL)	(ALL)	(untitled)		1	D	0	11000	7	0	Unrestricted	0.00	0.00	0.00			100	

TRANSYT 15

Version: 15.5.3.7
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Filename: DDR-New Road DN.t15
Path: G:\2024\p240058\calcs\transyt\Junction 3 - DDR New Road
Report generation date: 23/09/2025 09:59:13

- »A1 - 2027 DN AM : D1 - 2027 DN AM* :
- »A2 - 2027 DN PM : D2 - 2027 DN PM* :
- »A3 - 2032 DN AM : D3 - 2032 DN AM* :
- »A4 - 2032 DN PM : D4 - 2032 DN PM* :
- »A5 - 2042 DN AM : D5 - 2042 DN AM* :
- »A6 - 2042 DN PM : D6 - 2042 DN PM* :

File summary

File description	
File title	DDR - New Road DN
Location	
Site number	
UTCRegion	
Driving side	Left
Date	28/11/2023
Version	
Status	DDR - New Road DN
Identifier	
Client	
Jobnumber	
Enumerator	HEADOFFICE\GarveyD
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	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-Ambler	Display End-Of-Green Ambler

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

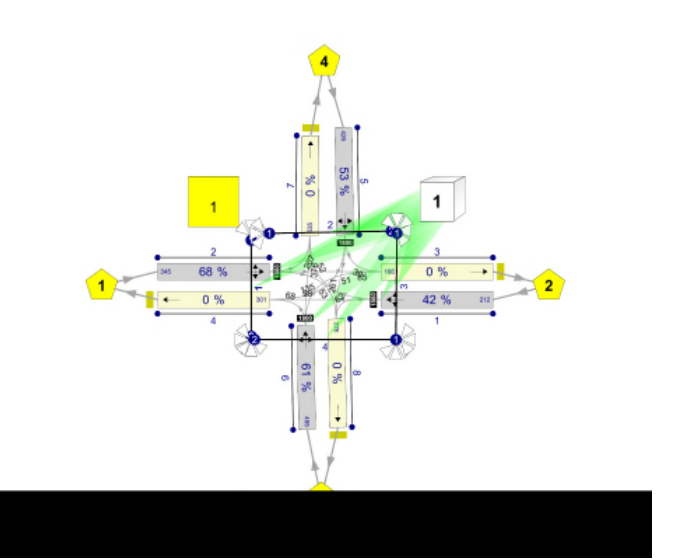
Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysts/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total 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	318.42	14.84	21.45	4.23	60.03	8.17	0.00	68.20
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	318.42	14.84	21.45	4.23	60.03	8.17	0.00	68.20

- < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- * = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%
- ^ = Traffic Stream - Normal, Bus or Tram 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

Network Diagrams



A1 - 2027 DN AM

D1 - 2027 DN AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	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 over PR
1	23/09/2025 09:59:02	23/09/2025 09:59:03	08:00	100	109.33	7.04	56.25	2/1	0	0	2/1	3/1	2/1

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2027 DN AM		D1	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2027 DN AM				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		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)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	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 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		✓

3

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
1	1	1	(untitled)			1800
2	1	1	(untitled)			1800
3	1	1	(untitled)			
4	1	1	(untitled)			
5	1	1	(untitled)			1800
6	1	1	(untitled)			1800
7	1	1	(untitled)			
8	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
(ALL)	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
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

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)
1	1	115	115
2	1	243	243
3	1	108	108
4	1	210	210
5	1	383	383
6	1	313	313
7	1	393	393
8	1	343	343

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	C	
2	1	1	D	
5	1	1	A	
6	1	1	B	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
1	1	12.00	30.00
2	1	12.00	30.00
5	1	11.48	30.00
6	1	11.10	30.00

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

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
Hill Climb (Fast)	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

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
(ALL)			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
2	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
3	1			✓	183.31						Normal	
4	1			✓	183.16						Normal	
5	1	DDR (N)		✓	95.71	✓	Sum of lanes	1800	✓		Normal	
6	1			✓	92.52	✓	Sum of lanes	1800	✓		Normal	
7	1			✓	167.84						Normal	
8	1			✓	167.08						Normal	

4

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)
3	1	1	2/1	3/1	22.00	30.00	✓	Straight	Straight Movement
4	1	1	6/1	4/1	21.98	30.00	✓	Nearside	23.87
7	1	1	2/1	7/1	20.14	30.00	✓	Nearside	32.23
8	1	1	2/1	8/1	20.05	30.00	✓	Offside	43.34
3	1	2	6/1	3/1	22.00	30.00	✓	Offside	47.14
4	1	2	5/1	4/1	21.98	30.00	✓	Offside	56.47
7	1	2	6/1	7/1	20.14	30.00	✓	Straight	Straight Movement
8	1	2	5/1	8/1	20.05	30.00	✓	Straight	Straight Movement
3	1	3	5/1	3/1	22.00	30.00	✓	Nearside	32.20
4	1	3	1/1	4/1	21.98	30.00	✓	Straight	Straight Movement
7	1	3	1/1	7/1	20.14	30.00	✓	Offside	56.33
8	1	3	1/1	8/1	20.05	30.00	✓	Nearside	16.69

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	6.50	4.33	5.40
2	(untitled)				Farside	11.50	7.67	5.40
3	(untitled)				Farside	6.50	4.33	5.40
4	(untitled)				Farside	11.50	7.67	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(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
(ALL)	(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	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

5

6

Normal Input Flows (PCU/hr)

		To			
		1	2	3	4
From	1	0	46	66	131
	2	59	0	35	21
	3	30	42	0	241
	4	121	20	242	0

Bus Input Flows not shown as they are blank.

Tram 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	1	(untitled)	2/1	4/1	#0000FF
	2	(untitled)	1/1	3/1	#FF0000
	3	(untitled)	6/1	8/1	#00FF00
	4	(untitled)	5/1	7/1	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	2/1, 3/1	Normal	46
	2		2	1	1/1, 4/1	Normal	59
	3		1	4	2/1, 7/1	Normal	131
	4		2	4	1/1, 7/1	Normal	21
	5		4	2	5/1, 3/1	Normal	20
	6		4	1	5/1, 4/1	Normal	121
	7		1	3	2/1, 8/1	Normal	66
	8		2	3	1/1, 8/1	Normal	35
	9		4	3	5/1, 8/1	Normal	242
	10		3	2	6/1, 3/1	Normal	42
	11		3	1	6/1, 4/1	Normal	30
	12		3	4	6/1, 7/1	Normal	241

Signal Timings

Network Default: 100s cycle time; 100 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	100

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

7

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A, B	1
	2	C, D	1
	3	E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3	37, 66, 81

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A		6	6	8	
	B			6	6	8
	C	6	6			8
	D	6	6			8
	E	8	8	8	8	

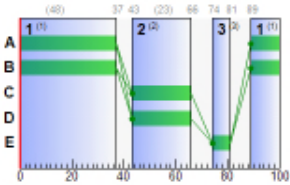
Banned Stage transitions for Controller Stream 1

		To		
		1	2	3
From	1			
	2			
	3			

Traffic Stream Green Times

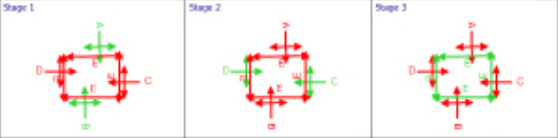
Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
1	1		1	C	43	66	23
2	1		1	D	43	66	23
5	1		1	A	89	37	48
6	1		1	B	89	37	48

Phase Timings Diagram for Controller Stream 1



8

Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
08:00-09:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	1	1	27	238	115	1800	23	32.37	2.64	15.16	14.68	1.17	15.85
	2	1	56	60	243	1800	23	38.70	6.23	35.83	37.09	2.77	39.86
	3	1	0	Unrestricted	108	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	4	1	0	Unrestricted	210	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	5	1	43	107	383	1800	48	18.09	6.98	41.91	27.32	3.08	30.40
	6	1	35	154	313	1800	48	16.87	5.40	33.57	20.83	2.39	23.21
	7	1	0	Unrestricted	393	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	8	1	0	Unrestricted	343	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
08:00-09:00	1	1	115	115	0		1800	432	27		238	0.00	23
	2	1	243	243	0		1800	432	56		60	0.00	23
	3	1	108	108	0		Unrestricted	Unrestricted	0		Unrestricted	0.62	100
	4	1	210	210	0		Unrestricted	Unrestricted	0		Unrestricted	0.63	100
	5	1	383	383	0		1800	882	43		107	0.00	48
	6	1	313	313	0		1800	882	35		154	0.00	48
	7	1	393	393	0		Unrestricted	Unrestricted	0		Unrestricted	0.63	100
	8	1	343	343	0		Unrestricted	Unrestricted	0		Unrestricted	0.62	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (s)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	1	1	12.00	32.37	1.03	14.68	81.11	93.27	1.17
	2	1	12.00	38.70	2.61	37.09	91.00	221.13	2.77
	3	1	22.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	1	21.98	0.00	0.00	0.00	0.00	0.00	0.00
	5	1	11.48	18.09	1.92	27.32	64.15	245.70	3.08
	6	1	11.10	16.87	1.47	20.83	60.78	190.23	2.39
	7	1	20.14	0.00	0.00	0.00	0.00	0.00	0.00
	8	1	20.05	0.00	0.00	0.00	0.00	0.00	0.00

9

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s (per cycle))	Estimated blocking
08:00-09:00	1	1	0.00	2.64	17.39	15.16	0.00	0.00	
	2	1	0.00	6.23	17.39	35.83	0.00	0.00	
	3	1	0.00	0.00	31.88	0.00	0.00	26.00	
	4	1	0.00	0.00	31.85	0.00	0.00	20.00	
	5	1	0.00	6.98	16.64	41.91	0.00	0.00	
	6	1	0.00	5.40	16.09	33.57	0.00	0.00	
	7	1	0.00	0.00	29.19	0.00	0.00	14.00	
	8	1	0.00	0.00	29.05	0.00	0.00	16.00	

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	1	1	0.00	0.00	✓	2.64	0.05	2.48	1.00	0.00	15.85
	2	1	0.00	0.00	✓	6.23	0.36	5.43	1.00	0.00	39.86
	3	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	4	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	5	1	0.00	0.00	✓	6.98	0.17	5.59	1.00	0.00	30.40
	6	1	0.00	0.00	✓	5.40	0.10	4.53	1.00	0.00	23.21
	7	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	8	1	0.00	0.00	✓	0.00			1.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Total delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00

10

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	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 over PR
1	23/09/2025 09:59:02	23/09/2025 09:59:03	08:00	100	109.33	7.04	56.25	2/1	0	0	2/1	3/1	2/1

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	56	0	2108	542	12.02	99.92	9.41	109.33

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	56	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s per cycle)
08:00-09:00	2108	2108	0	56		60	598

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	16.11	12.02	7.04	99.92	35.59	750.32	9.41

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From		To			
		1	2	3	4
1	1	0.0	72.7	70.7	70.8
	2	66.4	0.0	64.4	64.5
	3	49.9	50.0	0.0	49.1
	4	51.6	51.6	49.8	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
1	1	2	46	72.69	46	72.69
2	2	1	59	66.35	59	66.35
3	1	4	131	70.84	131	70.84
4	2	4	21	64.51	21	64.51
5	4	2	20	51.57	20	51.57
6	4	1	121	51.55	121	51.55
7	1	3	66	70.74	66	70.74
8	2	3	35	64.42	35	64.42
9	4	3	242	49.62	242	49.62
10	3	2	42	49.97	42	49.97
11	3	1	30	49.95	30	49.95
12	3	4	241	48.11	241	48.11

11

Final Prediction Table

Traffic Stream Results

			SIGNALS			FLOWS			PERFORMANCE			PER PCU			QUEUES	
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)	Dwell time (s)
1	1			1	C	115	1800	23	0.00	27	238	44.37	32.37	81.11	2.64	
2	1			1	D	243	1800	23	0.00	56	60	50.70	38.70	91.00	6.23	
3	1					108	Unrestricted	100	26.00	0	Unrestricted	22.00	0.00	0.00	0.00	
4	1					210	Unrestricted	100	20.00	0	Unrestricted	21.98	0.00	0.00	0.00	
5	1	DDR (%)		1	A	383	1800	48	0.00	43	107	29.57	18.09	64.15	6.98	
6	1			1	B	313	1800	48	0.00	35	154	27.97	16.87	60.78	5.40	
7	1					393	Unrestricted	100	14.00	0	Unrestricted	20.14	0.00	0.00	0.00	
8	1					343	Unrestricted	100	16.00	0	Unrestricted	20.05	0.00	0.00	0.00	

Pedestrian Crossing Results

			SIGNALS			FLOWS			PERFORMANCE			PER PED			QUEUES		WEIGHTS	P
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 (%)				
(ALL)	(ALL)	(untitled)		1	E	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100				

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total 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	282.94	16.47	17.18	7.04	99.92	9.41	0.00	109.33
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	282.94	16.47	17.18	7.04	99.92	9.41	0.00	109.33

- <= adjusted flow warning (upstream links/traffic streams are over-saturated)
- != Traffic Stream - Normal: Bus or Tram Stop or Delay weighting has been set to a value other than 100%
- != Traffic Stream - Normal: Bus or Tram 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

12

A2 - 2027 DN PM D2 - 2027 DN PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	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 over PR
2	23/09/2025 08:59:03	23/09/2025 09:59:04	17:00	100	145.51	9.39	61.73	2/1	0	0	2/1	3/1	2/1

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2027 DN PM		D2	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2027 DN PM				17:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		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)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	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 results calculation	Random delay mode	Type of Vehicle-In-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate POM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

13

Arms

Arm	Name	Description	Traffic node
(ALL)			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
2	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
3	1			✓	183.31						Normal	
4	1			✓	183.16						Normal	
5	1	DDR (%)		✓	95.71	✓	Sum of lanes	1800	✓		Normal	
6	1			✓	92.52	✓	Sum of lanes	1800	✓		Normal	
7	1			✓	167.84						Normal	
8	1			✓	167.08						Normal	

14

Lanes						
Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
1	1	1	(untitled)			1800
2	1	1	(untitled)			1800
3	1	1	(untitled)			
4	1	1	(untitled)			
5	1	1	(untitled)			1800
6	1	1	(untitled)			1800
7	1	1	(untitled)			
8	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
(ALL)	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
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal traffic - Modelling			
Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1	100	100

Normal traffic - Advanced	
Arm	Traffic Stream
(ALL)	1

Flows			
Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
1	1	178	178
2	1	300	300
3	1	145	145
4	1	260	260
5	1	370	370
6	1	433	433
7	1	545	545
8	1	331	331

Signals				
Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	C	
2	1	1	D	
5	1	1	A	
6	1	1	B	

Entry Sources			
Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
1	1	12.00	30.00
2	1	12.00	30.00
5	1	11.48	30.00
6	1	11.10	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)
3	1	1	2/1	3/1	22.00	30.00	✓	Straight	Straight Movement
4	1	1	6/1	4/1	21.98	30.00	✓	Nearside	23.87
7	1	1	2/1	7/1	20.14	30.00	✓	Nearside	32.23
8	1	1	2/1	8/1	20.05	30.00	✓	Offside	43.34
3	1	2	6/1	3/1	22.00	30.00	✓	Offside	47.14
4	1	2	5/1	4/1	21.98	30.00	✓	Offside	56.47
7	1	2	6/1	7/1	20.14	30.00	✓	Straight	Straight Movement
8	1	2	5/1	8/1	20.05	30.00	✓	Straight	Straight Movement
3	1	3	5/1	3/1	22.00	30.00	✓	Nearside	32.20
4	1	3	1/1	4/1	21.98	30.00	✓	Straight	Straight Movement
7	1	3	1/1	7/1	20.14	30.00	✓	Offside	56.33
8	1	3	1/1	8/1	20.05	30.00	✓	Nearside	16.69

Pedestrian Crossings

Pedestrian Crossings								
Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	6.50	4.33	5.40
2	(untitled)				Farside	11.50	7.67	5.40
3	(untitled)				Farside	6.50	4.33	5.40
4	(untitled)				Farside	11.50	7.67	5.40

Pedestrian Crossings - Signals			
Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides		
Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(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
(ALL)	(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	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

	From	To			
		1	2	3	4
		1	0	75	50
		2	79	0	55
		3	62	45	0

Bus Input Flows not shown as they are blank.

Tram 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	1	(untitled)	2/1	4/1	#0000FF
	2	(untitled)	1/1	3/1	#FF0000
	3	(untitled)	6/1	8/1	#00FF00
	4	(untitled)	5/1	7/1	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	2/1, 3/1	Normal	75
	2		1	2	1/1, 4/1	Normal	79
	3		1	4	2/1, 7/1	Normal	175
	4		2	4	1/1, 7/1	Normal	44
	5		4	2	5/1, 3/1	Normal	25
	6		4	1	5/1, 4/1	Normal	119
	7		1	3	2/1, 8/1	Normal	50
	8		2	3	1/1, 8/1	Normal	55
	9		4	3	5/1, 6/1	Normal	226
	10		3	2	6/1, 3/1	Normal	45
	11		3	1	6/1, 4/1	Normal	62
	12		3	4	6/1, 7/1	Normal	326

Signal Timings

Network Default: 100s cycle time; 100 steps

Controller Stream 1					
Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	100

Controller Stream 1 - Properties							
Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation					
Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A, B	1
	2	C, D	1
	3	E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3	34, 66, 81

Intergreen Matrix for Controller Stream 1

	From	To				
		A	B	C	D	E
				6	6	8
		B		6	6	8
		C	6	6		8

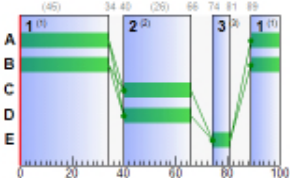
Banned Stage transitions for Controller Stream 1

	From	To		
		1	2	3
		1		
		2		

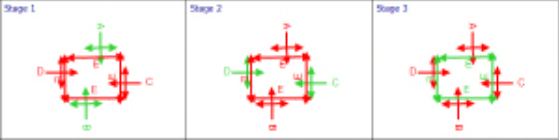
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
1	1		1	C	40	66	26
2	1		1	D	40	66	26
5	1		1	A	89	34	45
6	1		1	B	89	34	45

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
17:00-18:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	1	1	37	146	178	1800	26	31.70	4.11	23.64	22.26	1.81	24.07
	2	1	62	46	300	1800	26	37.88	7.74	44.52	44.83	3.44	48.27
	3	1	0	Unrestricted	145	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	4	1	0	Unrestricted	260	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	5	1	45	101	370	1800	45	20.10	7.07	42.45	29.34	3.13	32.47
	6	1	52	72	433	1800	45	21.57	8.83	54.85	36.85	3.86	40.71
	7	1	0	Unrestricted	545	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	8	1	0	Unrestricted	331	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s per cycle)
17:00-18:00	1	1	178	178	0		1800	486	37		146	0.00	26
	2	1	300	300	0		1800	486	62		46	0.00	26
	3	1	145	145	0		Unrestricted	Unrestricted	0		Unrestricted	0.62	100
	4	1	260	260	0		Unrestricted	Unrestricted	0		Unrestricted	0.63	100
	5	1	370	370	0		1800	828	45		101	0.00	45
	6	1	433	433	0		1800	828	52		72	0.00	45
	7	1	545	545	0		Unrestricted	Unrestricted	0		Unrestricted	0.61	100
	8	1	331	331	0		Unrestricted	Unrestricted	0		Unrestricted	0.63	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (s)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	1	1	12.00	31.70	1.57	22.26	81.00	144.17	1.81
	2	1	12.00	37.88	3.16	44.83	91.44	274.32	3.44
	3	1	22.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	1	21.98	0.00	0.00	0.00	0.00	0.00	0.00
	5	1	11.48	20.10	2.07	29.34	67.42	249.44	3.13
	6	1	11.10	21.57	2.59	36.85	71.18	308.20	3.86
	7	1	20.14	0.00	0.00	0.00	0.00	0.00	0.00
	8	1	20.05	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s per cycle)	Estimated blocking
17:00-18:00	1	1	0.00	4.11	17.39	23.64	0.00	0.00	0.00
	2	1	0.00	7.74	17.39	44.52	0.00	0.00	0.00
	3	1	0.00	0.00	31.88	0.00	0.00	23.00	0.00
	4	1	0.00	0.00	31.85	0.00	0.00	19.00	0.00
	5	1	0.00	7.07	16.64	42.45	0.00	0.00	0.00
	6	1	0.00	8.83	16.09	54.85	0.00	0.00	0.00
	7	1	0.00	0.00	29.19	0.00	0.00	12.00	0.00
	8	1	0.00	0.00	29.05	0.00	0.00	17.00	0.00

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Warm up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	1	1	0.00	0.00	✓	4.11	0.11	3.72	1.00	0.00	24.07
	2	1	0.00	0.00	✓	7.74	0.49	6.58	1.00	0.00	48.27
	3	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	4	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	5	1	0.00	0.00	✓	7.07	0.18	5.73	1.00	0.00	32.47
	6	1	0.00	0.00	✓	8.83	0.29	6.78	1.00	0.00	40.71
	7	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	8	1	0.00	0.00	✓	0.00			1.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s per cycle)
17:00-18:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Total delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00

A3 - 2032 DN AM

D3 - 2032 DN AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	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 over PR
3	23/09/2025 09:59:04	23/09/2025 09:59:04	08:00	100	129.26	8.32	61.34	2/1	0	0	2/1	3/1	2/1

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2032 DN AM		D3	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2032 DN AM				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		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)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	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 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		✓

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
1	1	1	(untitled)			1800
2	1	1	(untitled)			1800
3	1	1	(untitled)			
4	1	1	(untitled)			
5	1	1	(untitled)			1800
6	1	1	(untitled)			1800
7	1	1	(untitled)			
8	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
(ALL)	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
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

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)
1	1	129	129
2	1	265	265
3	1	121	121
4	1	244	244
5	1	457	457
6	1	347	347
7	1	438	438
8	1	395	395

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	C	
2	1	1	D	
5	1	1	A	
6	1	1	B	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
1	1	12.00	30.00
2	1	12.00	30.00
5	1	11.48	30.00
6	1	11.10	30.00

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

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
Hill Climb (Fast)	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

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
(ALL)			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
2	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
3	1			✓	183.31						Normal	
4	1			✓	183.16						Normal	
5	1	DDR (N)		✓	95.71	✓	Sum of lanes	1800	✓		Normal	
6	1			✓	92.52	✓	Sum of lanes	1800	✓		Normal	
7	1			✓	167.84						Normal	
8	1			✓	167.08						Normal	

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)
3	1	1	2/1	3/1	22.00	30.00	✓	Straight	Straight Movement
4	1	1	6/1	4/1	21.98	30.00	✓	Nearside	23.87
7	1	1	2/1	7/1	20.14	30.00	✓	Nearside	32.23
8	1	1	2/1	8/1	20.05	30.00	✓	Offside	43.34
3	1	2	6/1	3/1	22.00	30.00	✓	Offside	47.14
4	1	2	5/1	4/1	21.98	30.00	✓	Offside	56.47
7	1	2	6/1	7/1	20.14	30.00	✓	Straight	Straight Movement
8	1	2	5/1	8/1	20.05	30.00	✓	Straight	Straight Movement
3	1	3	5/1	3/1	22.00	30.00	✓	Nearside	32.20
4	1	3	1/1	4/1	21.98	30.00	✓	Straight	Straight Movement
7	1	3	1/1	7/1	20.14	30.00	✓	Offside	56.33
8	1	3	1/1	8/1	20.05	30.00	✓	Nearside	16.69

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	6.50	4.33	5.40
2	(untitled)				Farside	11.50	7.67	5.40
3	(untitled)				Farside	6.50	4.33	5.40
4	(untitled)				Farside	11.50	7.67	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(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
(ALL)	(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	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To			
		1	2	3	4
From	1	0	52	69	144
	2	68	0	37	24
	3	33	44	0	270
	4	143	25	289	0

Bus Input Flows not shown as they are blank.

Tram 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	1	(untitled)	2/1	4/1	#0000FF
	2	(untitled)	1/1	3/1	#FF0000
	3	(untitled)	6/1	8/1	#00FF00
	4	(untitled)	5/1	7/1	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	2/1, 3/1	Normal	52
	2		2	1	1/1, 4/1	Normal	68
	3		1	4	2/1, 7/1	Normal	144
	4		2	4	1/1, 7/1	Normal	24
	5		4	2	5/1, 3/1	Normal	25
	6		4	1	5/1, 4/1	Normal	143
	7		1	3	2/1, 8/1	Normal	69
	8		2	3	1/1, 8/1	Normal	37
	9		4	3	5/1, 8/1	Normal	289
	10		3	2	6/1, 3/1	Normal	44
	11		3	1	6/1, 4/1	Normal	33
	12		3	4	6/1, 7/1	Normal	270

Signal Timings

Network Default: 100s cycle time; 100 stops

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	100

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A, B	1
	2	C, D	1
	3	E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3	37, 66, 81

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A		6	6	8	
	B			6	6	8
	C	6	6			8
	D	6	6			8
	E	8	8	8	8	

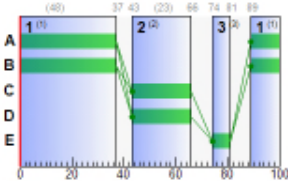
Banned Stage transitions for Controller Stream 1

		To		
		1	2	3
From	1			
	2			
	3			

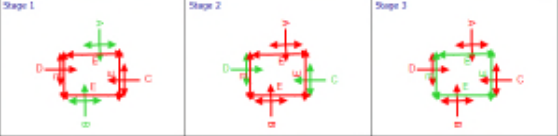
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
1	1		1	C	43	66	23
2	1		1	D	43	66	23
5	1		1	A	89	37	48
6	1		1	B	89	37	48

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
08:00-09:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	1	1	30	201	129	1800	23	32.89	2.97	17.05	16.73	1.32	18.05
	2	1	61	47	265	1800	23	40.40	7.03	40.43	42.22	3.11	45.33
	3	1	0	Unrestricted	121	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	4	1	0	Unrestricted	244	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	5	1	52	74	457	1800	48	19.62	8.91	53.53	35.37	3.92	39.29
	6	1	39	129	347	1800	48	17.43	6.20	38.53	23.86	2.72	26.58
	7	1	0	Unrestricted	438	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	8	1	0	Unrestricted	395	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s per cycle)
08:00-09:00	1	1	129	129	0		1800	432	30		201	0.00	23
	2	1	265	265	0		1800	432	61		47	0.00	23
	3	1	121	121	0		Unrestricted	Unrestricted	0		Unrestricted	0.60	100
	4	1	244	244	0		Unrestricted	Unrestricted	0		Unrestricted	0.62	100
	5	1	457	457	0		1800	882	52		74	0.00	48
	6	1	347	347	0		1800	882	39		129	0.00	48
	7	1	438	438	0		Unrestricted	Unrestricted	0		Unrestricted	0.62	100
	8	1	395	395	0		Unrestricted	Unrestricted	0		Unrestricted	0.60	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	1	1	12.00	32.89	1.18	16.73	81.58	105.24	1.32
	2	1	12.00	40.40	2.97	42.22	93.59	248.02	3.11
	3	1	22.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	1	21.98	0.00	0.00	0.00	0.00	0.00	0.00
	5	1	11.48	19.62	2.49	35.37	68.41	312.61	3.92
	6	1	11.10	17.43	1.66	23.86	62.47	216.77	2.72
	7	1	20.14	0.00	0.00	0.00	0.00	0.00	0.00
	8	1	20.05	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s per cycle)	Estimated blocking
08:00-09:00	1	1	0.00	2.97	17.39	17.05	0.00	0.00	
	2	1	0.00	7.03	17.39	40.43	0.00	0.00	
	3	1	0.00	0.00	31.88	0.00	0.00	24.00	
	4	1	0.00	0.00	31.85	0.00	0.00	19.00	
	5	1	0.00	8.91	16.64	53.53	0.00	0.00	
	6	1	0.00	6.20	16.09	38.53	0.00	0.00	
	7	1	0.00	0.00	29.19	0.00	0.00	13.00	
	8	1	0.00	0.00	29.05	0.00	0.00	16.00	

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	1	1	0.00	0.00	✓	2.97	0.06	2.79	1.00	0.00	18.05
	2	1	0.00	0.00	✓	7.03	0.48	6.08	1.00	0.00	45.33
	3	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	4	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	5	1	0.00	0.00	✓	8.91	0.28	6.75	1.00	0.00	39.29
	6	1	0.00	0.00	✓	6.20	0.13	5.04	1.00	0.00	26.58
	7	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	8	1	0.00	0.00	✓	0.00			1.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s per cycle)
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Total delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	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 over PR
3	23/09/2025 09:59:04	23/09/2025 09:59:04	08:00	100	129.26	8.32	61.34	2/1	0	0	2/1	3/1	2/1

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	61	0	2396	542	12.51	118.19	11.07	129.26

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	56	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s per cycle)
08:00-09:00	2396	2396	0	61		47	598

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	16.11	12.51	8.32	118.19	36.84	882.64	11.07

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To			
	1	2	3	4
	1	0.0	74.4	72.4
	2	66.9	0.0	64.9
	3	50.5	50.5	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
1	1	2	52	74.39	52	74.39
2	2	1	68	66.87	68	66.87
3	1	4	144	72.54	144	72.54
4	2	4	24	65.03	24	65.03
5	4	2	25	53.10	25	53.10
6	4	1	143	53.08	143	53.08
7	1	3	69	72.44	69	72.44
8	2	3	37	64.93	37	64.93
9	4	3	289	51.15	289	51.15
10	3	2	44	50.53	44	50.53
11	3	1	33	50.52	33	50.52
12	3	4	270	48.68	270	48.68

31

Final Prediction Table

Traffic Stream Results

SIGNALS						FLOWS		PERFORMANCE				PER PCU			QUEUES	
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 (%)	Journey Time (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	D well mu
1	1			1	C	129	1800	23	0.00	30	201	44.89	32.89	81.58	2.97	
2	1			1	D	265	1800	23	0.00	61	47	52.40	40.40	93.59	7.03	
3	1					121	Unrestricted	100	24.00	0	Unrestricted	22.00	0.00	0.00	0.00	
4	1					244	Unrestricted	100	19.00	0	Unrestricted	21.98	0.00	0.00	0.00	
5	1	DDR (N)		1	A	457	1800	48	0.00	52	74	31.11	19.62	68.41	8.91	
6	1			1	B	347	1800	48	0.00	39	129	28.54	17.43	62.47	6.20	
7	1					438	Unrestricted	100	13.00	0	Unrestricted	20.14	0.00	0.00	0.00	
8	1					395	Unrestricted	100	16.00	0	Unrestricted	20.05	0.00	0.00	0.00	

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES		WEIGHTS		P
Pedestrian	Side	Name	Traffic node	Controller stream	Phase	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 (%)				
(ALL)	(ALL)	(untitled)		1	E	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100			

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total 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	321.62	19.04	16.89	8.32	118.19	11.07	0.00	129.26
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	321.62	19.04	16.89	8.32	118.19	11.07	0.00	129.26

- <= adjusted flow warning (upstream links/traffic streams are over-saturated)
- + = Traffic Stream - Normal: Bus or Train Stop or Delay weighting has been set to a value other than 100%
- + = Traffic Stream - Normal: Bus or Train 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

32

A4 - 2032 DN PM
D4 - 2032 DN PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	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 over PR
4	23/09/2025 09:59:04	23/09/2025 09:59:05	17:00	100	170.51	11.01	65.87	2/1	0	0	2/1	3/1	2/1

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2032 DN PM		D4	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2032 DN PM				17:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		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)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	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 results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate POM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

33

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

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
Hill Climb	15, 40, -1, 15, (Fast)	50, 50, 5, 5, 0, 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

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
(ALL)			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
2	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
3	1			✓	183.31						Normal	
4	1			✓	183.16						Normal	
5	1	DDR (N)		✓	95.71	✓	Sum of lanes	1800	✓		Normal	
6	1			✓	92.52	✓	Sum of lanes	1800	✓		Normal	
7	1			✓	167.84						Normal	
8	1			✓	167.08						Normal	

34

Lanes	Am	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
	1	1	1	(untitled)			1800
	2	1	1	(untitled)			1800
	3	1	1	(untitled)			
	4	1	1	(untitled)			
	5	1	1	(untitled)			1800
	6	1	1	(untitled)			1800
	7	1	1	(untitled)			
	8	1	1	(untitled)			

Modelling	Am	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
(ALL)	1		NetworkDefault	100	100	100		0.00		

Modelling - Advanced	Am	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	1		0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

Normal traffic - Modelling	Am	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	1		100	100

Normal traffic - Advanced	Am	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	1		NetworkDefault

Flows	Am	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
	1	1	202	202
	2	1	332	332
	3	1	158	158
	4	1	288	288
	5	1	410	410
	6	1	481	481
	7	1	616	616
	8	1	363	363

Signals	Am	Traffic Stream	Controller stream	Phase	Second phase enabled
	1	1	1	C	
	2	1	1	D	
	5	1	1	A	
	6	1	1	B	

Entry Sources	Am	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
	1	1	12.00	30.00
	2	1	12.00	30.00
	5	1	11.48	30.00
	6	1	11.10	30.00

Sources	Am	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)
	3	1	1	2/1	3/1	22.00	30.00	✓	Straight	Straight Movement
	4	1	1	6/1	4/1	21.98	30.00	✓	Nearside	23.87
	7	1	1	2/1	7/1	20.14	30.00	✓	Nearside	32.23
	8	1	1	2/1	8/1	20.05	30.00	✓	Offside	43.34
	3	1	2	6/1	3/1	22.00	30.00	✓	Offside	47.14
	4	1	2	5/1	4/1	21.98	30.00	✓	Offside	56.47
	7	1	2	6/1	7/1	20.14	30.00	✓	Straight	Straight Movement
	8	1	2	5/1	8/1	20.05	30.00	✓	Straight	Straight Movement
	3	1	3	5/1	3/1	22.00	30.00	✓	Nearside	32.20
	4	1	3	1/1	4/1	21.98	30.00	✓	Straight	Straight Movement
	7	1	3	1/1	7/1	20.14	30.00	✓	Offside	56.33
	8	1	3	1/1	8/1	20.05	30.00	✓	Nearside	16.69

Pedestrian Crossings

Pedestrian Crossings	Crossing	Name	Description	Traffic node	Allow walk on red	Crossing time	Length (m)	Cruise time (seconds)	Cruise speed (kph)
	2	(untitled)				Farside	11.50	7.67	5.40
	3	(untitled)				Farside	6.50	4.33	5.40
	4	(untitled)				Farside	11.50	7.67	5.40

Pedestrian Crossings - Signals	Crossing	Controller stream	Phase	Second phase enabled
(ALL)	(ALL)	1	E	

Pedestrian Crossings - Sides	Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(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
(ALL)	(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	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
	1	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To
		1 2 3 4
From	1	0 81 52 199
	2	93 0 59 50
	3	66 48 0 367
	4	129 29 252 0

Bus Input Flows not shown as they are blank.

Tram 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	(untitled)	212	412	#0000FF
	2	(untitled)	112	312	#FF0000
	3	(untitled)	612	812	#00FF00
	4	(untitled)	512	712	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
	1		1	2	2/1, 3/1	Normal	81
	2		2	1	1/1, 4/1	Normal	93
	3		1	4	2/1, 7/1	Normal	199
	4		2	4	1/1, 7/1	Normal	50
	5		4	2	5/1, 3/1	Normal	29
	6		4	1	5/1, 4/1	Normal	129
	7		1	3	2/1, 8/1	Normal	52
	8		2	3	1/1, 8/1	Normal	59
	9		4	3	5/1, 6/1	Normal	252
	10		3	2	6/1, 3/1	Normal	48
	11		3	1	6/1, 4/1	Normal	66
	12		3	4	6/1, 7/1	Normal	367

Signal Timings

Network Default: 100s cycle time; 100 steps

Controller Stream 1	Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
	1	(untitled)		1	NetworkDefault	100

Controller Stream 1 - Properties	Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
	1		Unspecified					Absolute

Controller Stream 1 - Optimisation	Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
	1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
	1	A (untitled)	7	300	0	0	Traffic	
		B (untitled)	7	300	0	0	Traffic	
		C (untitled)	7	300	0	0	Traffic	
		D (untitled)	7	300	0	0	Traffic	
		E (untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
	1	A, B	1
		C, D	1
		E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
	1	(untitled)	Single	1, 2, 3	33, 66, 81

Intergreen Matrix for Controller Stream 1

	To					
From		A	B	C	D	E
	A			6	6	8
	B			6	6	8
	C	6	6			8
	D	6	6			8
	E	8	8	8	8	

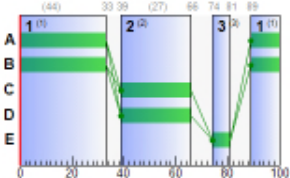
Banned Stage transitions for Controller Stream 1

	To			
From		1	2	3
	1			
	2			
	3			

Traffic Stream Green Times

Am	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1
	1	1	1	C	39 66 27
	2	1	1	D	39 66 27
	5	1	1	A	89 33 44
	6	1	1	B	89 33 44

Phase Timings Diagram for Controller Stream 1



A5 - 2042 DN AM

D5 - 2042 DN AM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	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 over PR
5	23/09/2025 09:59:05	23/09/2025 09:59:05	08:00	100	136.30	8.78	63.43	2/1	0	0	2/1	3/1	2/1

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2042 DN AM		D5	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2042 DN AM				08:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		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)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	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 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	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Bus	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Tram	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

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
Hill Climb (Fast)	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

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
(ALL)			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
2	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
3	1			✓	183.31						Normal	
4	1			✓	183.16						Normal	
5	1	DDR (N)		✓	95.71	✓	Sum of lanes	1800	✓		Normal	
6	1			✓	92.52	✓	Sum of lanes	1800	✓		Normal	
7	1			✓	167.84						Normal	
8	1			✓	167.08						Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
1	1	1	(untitled)			1800
2	1	1	(untitled)			1800
3	1	1	(untitled)			
4	1	1	(untitled)			
5	1	1	(untitled)			1800
6	1	1	(untitled)			1800
7	1	1	(untitled)			
8	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
(ALL)	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
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

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)
1	1	136	136
2	1	274	274
3	1	126	126
4	1	252	252
5	1	473	473
6	1	360	360
7	1	456	456
8	1	409	409

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	C	
2	1	1	D	
5	1	1	A	
6	1	1	B	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
1	1	12.00	30.00
2	1	12.00	30.00
5	1	11.48	30.00
6	1	11.10	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)
3	1	1	2/1	3/1	22.00	30.00	✓	Straight	Straight Movement
4	1	1	6/1	4/1	21.98	30.00	✓	Nearside	23.87
7	1	1	2/1	7/1	20.14	30.00	✓	Nearside	32.23
8	1	1	2/1	8/1	20.05	30.00	✓	Offside	43.34
3	1	2	6/1	3/1	22.00	30.00	✓	Offside	47.14
4	1	2	5/1	4/1	21.98	30.00	✓	Offside	56.47
7	1	2	6/1	7/1	20.14	30.00	✓	Straight	Straight Movement
8	1	2	5/1	8/1	20.05	30.00	✓	Straight	Straight Movement
3	1	3	5/1	3/1	22.00	30.00	✓	Nearside	32.20
4	1	3	1/1	4/1	21.98	30.00	✓	Straight	Straight Movement
7	1	3	1/1	7/1	20.14	30.00	✓	Offside	56.33
8	1	3	1/1	8/1	20.05	30.00	✓	Nearside	16.69

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	6.50	4.33	5.40
2	(untitled)				Farside	11.50	7.67	5.40
3	(untitled)				Farside	6.50	4.33	5.40
4	(untitled)				Farside	11.50	7.67	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(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
(ALL)	(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	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To			
		1	2	3	4
From	1	0	54	71	149
	2	71	0	39	26
	3	33	46	0	281
	4	148	26	299	0

Bus Input Flows not shown as they are blank.

Tram 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	1	(untitled)	2/1	4/1	#0000FF
	2	(untitled)	1/1	3/1	#FF0000
	3	(untitled)	6/1	8/1	#00FF00
	4	(untitled)	5/1	7/1	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	2/1, 3/1	Normal	54
	2		2	1	1/1, 4/1	Normal	71
	3		1	4	2/1, 7/1	Normal	149
	4		2	4	1/1, 7/1	Normal	26
	5		4	2	5/1, 3/1	Normal	26
	6		4	1	5/1, 4/1	Normal	148
	7		1	3	2/1, 8/1	Normal	71
	8		2	3	1/1, 8/1	Normal	39
	9		4	3	5/1, 8/1	Normal	299
	10		3	2	6/1, 3/1	Normal	46
	11		3	1	6/1, 4/1	Normal	33
	12		3	4	6/1, 7/1	Normal	281

Signal Timings

Network Default: 100s cycle time; 100 stops

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	100

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A, B	1
	2	C, D	1
	3	E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3	37, 66, 81

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A		6	6	8	
	B			6	6	8
	C	6	6			8
	D	6	6			8
	E	8	8	8	8	

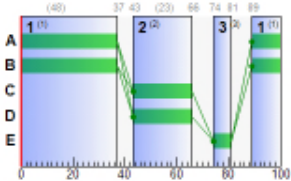
Banned Stage transitions for Controller Stream 1

		To		
		1	2	3
From	1			
	2			
	3			

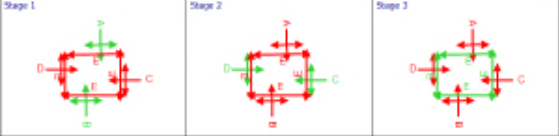
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
1	1		1	C	43	66	23
2	1		1	D	43	66	23
5	1		1	A	89	37	48
6	1		1	B	89	37	48

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
08:00-09:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	1	1	31	186	136	1800	23	33.16	3.17	18.23	17.79	1.41	19.20
	2	1	63	42	274	1800	23	41.19	7.32	42.07	44.52	3.25	47.77
	3	1	0	Unrestricted	126	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	4	1	0	Unrestricted	252	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	5	1	54	68	473	1800	48	19.99	9.37	56.32	37.30	4.11	41.41
	6	1	41	121	360	1800	48	17.66	6.44	40.03	25.08	2.84	27.93
	7	1	0	Unrestricted	456	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	8	1	0	Unrestricted	409	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s per cycle)
08:00-09:00	1	1	136	136	0		1800	432	31		186	0.00	23
	2	1	274	274	0		1800	432	63		42	0.00	23
	3	1	126	126	0		Unrestricted	Unrestricted	0		Unrestricted	0.59	100
	4	1	252	252	0		Unrestricted	Unrestricted	0		Unrestricted	0.62	100
	5	1	473	473	0		1800	882	54		68	0.00	48
	6	1	360	360	0		1800	882	41		121	0.00	48
	7	1	456	456	0		Unrestricted	Unrestricted	0		Unrestricted	0.61	100
	8	1	409	409	0		Unrestricted	Unrestricted	0		Unrestricted	0.60	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	1	1	12.00	33.16	1.25	17.79	82.49	112.18	1.41
	2	1	12.00	41.19	3.14	44.52	94.66	259.38	3.25
	3	1	22.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	1	21.98	0.00	0.00	0.00	0.00	0.00	0.00
	5	1	11.48	19.99	2.63	37.30	69.22	327.43	4.11
	6	1	11.10	17.66	1.77	25.08	63.01	226.94	2.84
	7	1	20.14	0.00	0.00	0.00	0.00	0.00	0.00
	8	1	20.05	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s per cycle)	Estimated blocking
08:00-09:00	1	1	0.00	3.17	17.39	18.23	0.00	0.00	
	2	1	0.00	7.32	17.39	42.07	0.00	0.00	
	3	1	0.00	0.00	31.88	0.00	0.00	24.00	
	4	1	0.00	0.00	31.85	0.00	0.00	19.00	
	5	1	0.00	9.37	16.64	56.32	0.00	0.00	
	6	1	0.00	6.44	16.09	40.03	0.00	0.00	
	7	1	0.00	0.00	29.19	0.00	0.00	12.00	
	8	1	0.00	0.00	29.05	0.00	0.00	15.00	

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Warmed up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	1	1	0.00	0.00	✓	3.17	0.07	2.94	1.00	0.00	19.20
	2	1	0.00	0.00	✓	7.32	0.55	6.33	1.00	0.00	47.77
	3	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	4	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	5	1	0.00	0.00	✓	9.38	0.31	7.01	1.00	0.00	41.41
	6	1	0.00	0.00	✓	6.44	0.14	5.24	1.00	0.00	27.93
	7	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	8	1	0.00	0.00	✓	0.00			1.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s per cycle)
08:00-09:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Total delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
08:00-09:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Excess queue penalty (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
08:00-09:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	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 over PR
5	23/09/2025 09:59:05	23/09/2025 09:59:05	08:00	100	136.30	8.78	63.43	2/1	0	0	2/1	3/1	2/1

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s per cycle)	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
08:00-09:00	63	0	2486	542	12.72	124.69	11.61	136.30

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s per cycle)	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
08:00-09:00	0	0	56	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s per cycle)
08:00-09:00	2486	2486	0		63		42	598

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
08:00-09:00	16.11	12.72	8.78	124.69	37.24	925.94	11.61

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To			
	1	2	3	4
	1	0.0	75.2	73.2
	2	67.1	0.0	65.2
	3	50.7	50.8	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
1	1	2	54	75.19	54	75.19
2	2	1	71	67.14	71	67.14
3	1	4	149	73.33	149	73.33
4	2	4	26	65.30	26	65.30
5	4	2	26	53.47	26	53.47
6	4	1	148	53.46	148	53.46
7	1	3	71	73.24	71	73.24
8	2	3	39	65.21	39	65.21
9	4	3	299	51.52	299	51.52
10	3	2	46	50.76	46	50.76
11	3	1	33	50.75	33	50.75
12	3	4	281	48.91	281	48.91

51

A6 - 2042 DN PM D6 - 2042 DN PM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	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 over PR
6	23/09/2025 09:59:06	23/09/2025 09:59:06	17:00	100	180.56	11.67	68.45	2/1	0	0	2/1	3/1	2/1

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
2042 DN PM		D6	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
2042 DN PM				17:00	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
100		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)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	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 results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate POM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Final Prediction Table

Traffic Stream Results

			SIGNALS			FLOWS		PERFORMANCE				PER PCU			QUEUES	
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)	Dwell time (s)
1	1			1	C	136	1800	23	0.00	31	186	45.16	33.16	82.49	3.17	
2	1			1	D	274	1800	23	0.00	63	42	53.19	41.19	94.66	7.32	
3	1					126	Unrestricted	100	24.00	0	Unrestricted	22.00	0.00	0.00	0.00	
4	1					252	Unrestricted	100	19.00	0	Unrestricted	21.98	0.00	0.00	0.00	
5	1	DDR (N)		1	A	473	1800	48	0.00	54	68	31.48	19.99	69.22	9.37	
6	1			1	B	360	1800	48	0.00	41	121	28.77	17.66	63.01	6.44	
7	1					456	Unrestricted	100	12.00	0	Unrestricted	20.14	0.00	0.00	0.00	
8	1					409	Unrestricted	100	15.00	0	Unrestricted	20.05	0.00	0.00	0.00	

Pedestrian Crossing Results

			SIGNALS			FLOWS		PERFORMANCE				PER PED			QUEUES		WEIGHTS
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 (%)			
(ALL)	(ALL)	(untitled)		1	E	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100			

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total 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	333.69	19.90	16.76	8.78	124.69	11.61	0.00	136.30
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	333.69	19.90	16.76	8.78	124.69	11.61	0.00	136.30

- < = adjusted flow warning (upstream links/traffic streams are over-saturated)
- + = Traffic Stream - Normal: Bus or Tram Stop or Delay weighting has been set to a value other than 100%
- * = Traffic Stream - Normal: Bus or Tram 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

52

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms ⁻²)	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

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
Hill Climb	15, 40, -1, 15, (Fast)	50, 50, 5, 5, 0, 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

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
(ALL)			

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
2	1			✓	100.00	✓	Sum of lanes	1800	✓		Normal	
3	1			✓	183.31						Normal	
4	1			✓	183.16						Normal	
5	1	DDR (N)		✓	95.71	✓	Sum of lanes	1800	✓		Normal	
6	1			✓	92.52	✓	Sum of lanes	1800	✓		Normal	
7	1			✓	167.84						Normal	
8	1			✓	167.08						Normal	

53

54

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Saturation flow (PCU/hr)
1	1	1	(untitled)			1800
2	1	1	(untitled)			1800
3	1	1	(untitled)			
4	1	1	(untitled)			
5	1	1	(untitled)			1800
6	1	1	(untitled)			1800
7	1	1	(untitled)			
8	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
(ALL)	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
(ALL)	1	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	100

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)
1	1	212	212
2	1	345	345
3	1	166	166
4	1	301	301
5	1	426	426
6	1	495	495
7	1	635	635
8	1	376	376

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
1	1	1	C	
2	1	1	D	
5	1	1	A	
6	1	1	B	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (kph)
1	1	12.00	30.00
2	1	12.00	30.00
5	1	11.48	30.00
6	1	11.10	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)
3	1	1	2/1	3/1	22.00	30.00	✓	Straight	Straight Movement
4	1	1	6/1	4/1	21.98	30.00	✓	Nearside	23.87
7	1	1	2/1	7/1	20.14	30.00	✓	Nearside	32.23
8	1	1	2/1	8/1	20.05	30.00	✓	Offside	43.34
3	1	2	6/1	3/1	22.00	30.00	✓	Offside	47.14
4	1	2	5/1	4/1	21.98	30.00	✓	Offside	56.47
7	1	2	6/1	7/1	20.14	30.00	✓	Straight	Straight Movement
8	1	2	5/1	8/1	20.05	30.00	✓	Straight	Straight Movement
3	1	3	5/1	3/1	22.00	30.00	✓	Nearside	32.20
4	1	3	1/1	4/1	21.98	30.00	✓	Straight	Straight Movement
7	1	3	1/1	7/1	20.14	30.00	✓	Offside	56.33
8	1	3	1/1	8/1	20.05	30.00	✓	Nearside	16.69

Pedestrian Crossings

Pedestrian Crossings

Crossing	Name	Description	Traffic node	Allow walk on red	Crossing type	Length (m)	Cruise time (seconds)	Cruise speed (kph)
1	(untitled)				Farside	6.50	4.33	5.40
2	(untitled)				Farside	11.50	7.67	5.40
3	(untitled)				Farside	6.50	4.33	5.40
4	(untitled)				Farside	11.50	7.67	5.40

Pedestrian Crossings - Signals

Crossing	Controller stream	Phase	Second phase enabled
(ALL)	1	E	

Pedestrian Crossings - Sides

Crossing	Side	Saturation flow (Ped/hr)
(ALL)	(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
(ALL)	(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	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Path Equalisation			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To			
		1	2	3	4
From	1	0	85	53	207
	2	98	0	62	52
	3	68	51	0	376
	4	135	30	261	0

Bus Input Flows not shown as they are blank.

Tram 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	1	(untitled)	212	412	#0000FF
	2	(untitled)	171	371	#FF0000
	3	(untitled)	612	812	#00FF00
	4	(untitled)	512	712	#FFFF00

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	2/1, 3/1	Normal	85
	2		2	1	1/1, 4/1	Normal	98
	3		1	4	2/1, 7/1	Normal	207
	4		2	4	1/1, 7/1	Normal	52
	5		4	2	5/1, 3/1	Normal	30
	6		4	1	5/1, 4/1	Normal	135
	7		1	3	2/1, 8/1	Normal	53
	8		2	3	1/1, 8/1	Normal	62
	9		4	3	5/1, 6/1	Normal	261
	10		3	2	6/1, 3/1	Normal	51
	11		3	1	6/1, 4/1	Normal	68
	12		3	4	6/1, 7/1	Normal	376

Signal Timings

Network Default: 100s cycle time; 100 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		1	NetworkDefault	100

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets And Green Splits	✓	

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	A, B	1
	2	C, D	1
	3	E	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 2, 3	33, 66, 81

Intergreen Matrix for Controller Stream 1

		To				
		A	B	C	D	E
From	A			6	6	8
	B			6	6	8
	C	6	6			8
	D	6	6			8
	E	8	8	8	8	

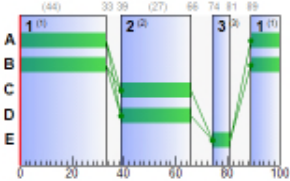
Banned Stage transitions for Controller Stream 1

		To		
		1	2	3
From	1			
	2			
	3			

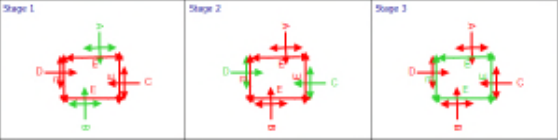
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1		
					Start	End	Duration
1	1		1	C	39	66	27
2	1		1	D	39	66	27
5	1		1	A	89	33	44
6	1		1	B	89	33	44

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
17:00-18:00	1	0.00	0.00	0.00	0.00

Traffic Stream Results

Traffic Stream Results: Vehicle summary

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Mean max queue (PCU)	Utilised storage (%)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	1	1	42	114	212	1800	27	31.97	4.92	28.30	26.74	2.19	28.92
	2	1	68	31	345	1800	27	39.68	9.26	53.24	54.00	4.08	58.08
	3	1	0	Unrestricted	166	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	4	1	0	Unrestricted	301	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	5	1	53	71	426	1800	44	22.27	8.81	52.93	37.42	3.85	41.28
	6	1	61	47	495	1800	44	24.33	10.79	67.06	47.51	4.77	52.28
	7	1	0	Unrestricted	635	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00
	8	1	0	Unrestricted	376	Unrestricted	100	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Flows and signals

Time Segment	Arm	Traffic Stream	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Calculated sat flow (PCU/hr)	Calculated capacity (PCU/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Mean modulus of error	Actual green (s (per cycle))
17:00-18:00	1	1	212	212	0		1800	504	42		114	0.00	27
	2	1	345	345	0		1800	504	68		31	0.00	27
	3	1	166	166	0		Unrestricted	Unrestricted	0		Unrestricted	0.58	100
	4	1	301	301	0		Unrestricted	Unrestricted	0		Unrestricted	0.62	100
	5	1	426	426	0		1800	810	53		71	0.00	44
	6	1	495	495	0		1800	810	61		47	0.00	44
	7	1	635	635	0		Unrestricted	Unrestricted	0		Unrestricted	0.58	100
	8	1	376	376	0		Unrestricted	Unrestricted	0		Unrestricted	0.61	100

Traffic Stream Results: Stops and delays

Time Segment	Arm	Traffic Stream	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	1	1	12.00	31.97	1.88	26.74	82.29	174.46	2.19
	2	1	12.00	39.68	3.90	54.00	94.36	325.54	4.08
	3	1	22.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	1	21.98	0.00	0.00	0.00	0.00	0.00	0.00
	5	1	11.48	22.27	2.64	37.42	72.16	307.41	3.85
	6	1	11.10	24.33	3.35	47.51	76.91	380.69	4.77
	7	1	20.14	0.00	0.00	0.00	0.00	0.00	0.00
	8	1	20.05	0.00	0.00	0.00	0.00	0.00	0.00

Traffic Stream Results: Queues and blocking

Time Segment	Arm	Traffic Stream	Initial queue (PCU)	Mean max queue (PCU)	Max queue storage (PCU)	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s (per cycle))	Estimated blocking
17:00-18:00	1	1	0.00	4.92	17.39	28.30	0.00	0.00	
	2	1	0.00	9.26	17.39	53.24	0.00	0.00	
	3	1	0.00	0.00	31.88	0.00	0.00	20.00	
	4	1	0.00	0.00	31.85	0.00	0.00	17.00	
	5	1	0.00	8.81	16.64	52.93	0.00	0.00	
	6	1	0.00	10.79	16.09	67.06	0.00	0.00	
	7	1	0.00	0.00	29.19	0.00	0.00	11.00	
	8	1	0.00	0.00	29.05	0.00	0.00	16.00	

Traffic Stream Results: Advanced

Time Segment	Arm	Traffic Stream	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Warm up	Mean Max Queue EoTS (PCU)	Max End of Green Queue EoTS (PCU)	Max End of Red Queue EoTS (PCU)	PCU Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	1	1	0.00	0.00	✓	4.92	0.15	4.39	1.00	0.00	28.92
	2	1	0.00	0.00	✓	9.27	0.74	7.64	1.00	0.00	58.08
	3	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	4	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	5	1	0.00	0.00	✓	8.81	0.29	6.80	1.00	0.00	41.28
	6	1	0.00	0.00	✓	10.79	0.48	8.04	1.00	0.00	52.28
	7	1	0.00	0.00	✓	0.00			1.00	0.00	0.00
	8	1	0.00	0.00	✓	0.00			1.00	0.00	0.00

Pedestrian Crossing Results

Pedestrian Crossings: Pedestrian summary

Time Segment	Crossing	Side	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Calculated sat flow (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Mean max queue (Ped)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0	0	11000	7	0.00	0.00	0.00	0.00

Pedestrian Crossings: Flows and signals

Time Segment	Crossing	Side	Calculated flow entering (Ped/hr)	Calculated flow out (Ped/hr)	Flow discrepancy (Ped/hr)	Adjusted flow warning	Calculated sat flow (Ped/hr)	Calculated capacity (Ped/hr)	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity	Mean modulus of error	Actual green (s (per cycle))
17:00-18:00	(ALL)	(ALL)	0	0	0		11000	770	0		Unrestricted	0.00	7

Pedestrian Crossings: Stops and delays

Time Segment	Crossing	Side	Mean Cruise Time per Ped (s)	Mean Delay per Ped (s)	Total delay (Ped-hr/hr)	Weighted cost of delay (£ per hr)
17:00-18:00	(ALL)	(ALL)	1.00	0.00	0.00	0.00

Pedestrian Crossings: Queues and blocking

Time Segment	Crossing	Side	Mean max queue (Ped)	Max queue storage (Ped)	Utilised storage (%)	Excess queue penalty (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	10.00	0.00	0.00

Pedestrian Crossings: Advanced

Time Segment	Crossing	Side	Degree of saturation (%)	Ped gap accepting penalty (£ per hr)	Mean Max Queue EoTS (Ped)	Ped Factor	Cost of traffic penalties (£ per hr)	Performance Index (£ per hr)
17:00-18:00	(ALL)	(ALL)	0.00	0.00	0.00	1.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (Hr-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 over PR
6	23/09/2025 09:59:06	23/09/2025 09:59:06	17:00	100	180.56	11.67	68.45	2/1	0	0	2/1	3/1	2/1

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
17:00-18:00	68	0	2956	542	14.21	165.66	14.90	180.56

Network Results: Pedestrian summary

Time Segment	Degree of saturation (%)	Calculated Flow Entering (Ped/hr)	Actual green (s (per cycle))	Mean Delay Per Ped (s)	Weighted cost of delay (£ per hr)	Performance Index (£ per hr)
17:00-18:00	0	0	56	0.00	0.00	0.00

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))
17:00-18:00	2956	2956	0		68		31	598

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
17:00-18:00	16.13	14.21	11.67	165.66	40.19	1188.10	14.90

Point to Point Journey Time

Average Journey Time (s) for Local Matrix: 1

From	To			
	1	2	3	4
1	0.0	73.7	71.7	73.8
2	66.0	0.0	64.0	64.1
3	57.4	57.4	0.0	55.6
4	55.7	55.8	53.8	0.0

Path Journey Time

Path	From Location	To Location	Normal Calculated Flow (PCU/hr)	Normal journey time (s)	Calculated Total Flow (PCU/hr)	Avg journey time (s)
1	1	2	85	73.68	85	73.68
2	2	1	98	65.95	98	65.95
3	1	4	207	71.82	207	71.82
4	2	4	52	64.11	52	64.11
5	4	2	30	55.75	30	55.75
6	4	1	135	55.73	135	55.73
7	1	3	53	71.73	53	71.73
8	2	3	62	64.02	62	64.02
9	4	3	261	53.80	261	53.80
10	3	2	51	57.43	51	57.43
11	3	1	68	57.41	68	57.41
12	3	4	376	55.57	376	55.57

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
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 (s per cycle)	Degree of saturation (%)	Practical reserve capacity (%)	Journey Time (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	
1	1			1	C	212	1800	27	0.00	42	114	43.97	31.97	82.29	4.92	
2	1			1	D	345	1800	27	0.00	68	31	51.68	39.68	94.36	9.26	
3	1					166	Unrestricted	100	20.00	0	Unrestricted	22.00	0.00	0.00	0.00	
4	1					301	Unrestricted	100	17.00	0	Unrestricted	21.98	0.00	0.00	0.00	
5	1	DDR (N)		1	A	426	1800	44	0.00	53	71	33.76	22.27	72.16	8.81	
6	1			1	B	495	1800	44	0.00	61	47	35.43	24.33	76.91	10.79	
7	1					635	Unrestricted	100	11.00	0	Unrestricted	20.14	0.00	0.00	0.00	
8	1					376	Unrestricted	100	16.00	0	Unrestricted	20.05	0.00	0.00	0.00	

Pedestrian Crossing Results

				SIGNALS		FLOWS		PERFORMANCE			PER PED		QUEUES	WEIGHTS
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 (%)
(ALL)	(ALL)	(unrestricted)		1	E	0	11000	7	0	Unrestricted	0.00	0.00	0.00	100

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (kph)	Total 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	397.22	24.91	15.95	11.67	165.66	14.90	0.00	180.56
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	397.22	24.91	15.95	11.67	165.66	14.90	0.00	180.56

Appendix D : Public Transport Capacity Analysis

Ballymastone, Donabate Phase 3

Public Transport Capacity Analysis

20003-DBFL-XXXX-XX-RP-C01-000106

October 2025

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Contents

1	INTRODUCTION	4
2	BUS LOCATIONS & SERVICES (CURRENT & FUTURE)	5
2.1	Dublin Bus	5
2.2	GoAhead Bus.....	5
2.3	Future Bus Services	7
3	BUS & RAIL USE PREDICTIONS, CAPACITY & DEMAND	9
4	BUS CAPACITY & DEMAND	11
5	RAIL LOCATIONS & SERVICES (CURRENT & FUTURE)	16
5.1	Future Rail Services	16
6	RAIL CAPACITY & DEMAND.....	18
7	CONCLUSION	22

|

1 INTRODUCTION

This Technical Note (TN) comprises the assessment of current & future Bus & Rail capacity within the vicinity of the subject Ballymastone Phase 3 residential development. It should be remembered that bus service providers are commercial in nature, running their businesses based on current demand rather than medium to longer term future demand. In simple terms, bus and rail services are provided based on actual existing footfall rather than potential future demand. If there is an increased demand for services with full or over-capacity services, operators then generally react to improve facilities if it makes commercial sense to do so. More customers mean more revenue generated by the services.

Notwithstanding the above, the purpose of this chapter is to review the potential impact of the development upon the existing and future bus and rail services in the vicinity of the site. The analysis of the existing and future services is based on an assessment methodology which includes trip generation assessment, modal split assumptions, and assignment/distribution. These assumptions have been based on real data extracted from the Central Statistics Office (CSO) 2022 Small Area Map Data, available through the SAP online mapping tool. This data was used to quantify the anticipated demand for services as a result of the proposed development locally, based fully on adjacent CSO Statistical Small Areas.

The first step was to review the current and future planned services. The bus and rail stops within an easy walking distance of the subject site were identified, with the current bus & rail services, bus & rail service frequency and capacity studied and assessed. Bus Connects is expected to be implemented within a relatively short timeframe. This initiative will reconfigure the bus services for the Greater Dublin Area completely. This assessment therefore considers both the existing bus network and the planned Bus Connects Network. DART+ is also set to be implemented and this assessment therefore considers both the existing rail network and the planned DART+ Network.

This chapter focuses on the peak AM and PM commuter periods for the development – this represents the period of highest demand on the network consistent with the TII Traffic & Transport Assessment Guidelines (May 2014).

2 BUS LOCATIONS & SERVICES (CURRENT & FUTURE)

For commuting, a walk distance to/ from Bus Stops of up to 1km is generally considered to be acceptable. For the purposes of this assessment, we have assumed an 8-10min walk time as being appropriate, reflecting a distance of 700-1,000m depending on speed of walking.

The Subject Site is ideally located to avail of a number of existing bus services. Bus routes including the 33b, 33d and 33e serve bus stops in close proximity to the subject site at Ballymastone.



Figure 2.1: Existing Dublin Bus and Go-Ahead Stops

2.1 Dublin Bus

The **33d** bus route and **33e** bus route travels along Portrane Road with bus stop facilities available approximately 250m (3-minute walk) to the north of the subject site. Dublin Bus 33d provides a single one-way service and commences at 07:20 from Marsh Lane (Portrane) to Stephen's Green. Dublin Bus 33e provides a single one-way service and commences at 07:00 from Abbey St. Lower to Skerries.

2.2 GoAhead Bus

The **33b** and **33t** bus route travels along Portrane Road with bus stop facilities available approximately 250m (3-minute walk) to the north of the subject site. Go-Ahead 33b operates daily

and offers frequent services (i.e. every 20-30 minutes at peak times) between Portrane and Swords. Go- Ahead 33t operates Monday to Friday only, providing two routes, Donabate National School to Station Road (PM) and Turvey Avenue to Donabate (AM).

In terms of existing bus service provision and service frequency has been collated and are summarised below in **Tables 2.1 and 2.2.**

Operator	Route No.	Direction	AM	PM
Dublin Bus	33D	Portrane to Stephen's Green	1	-
		Stephen's Green to Portrane	-	1
	33E	Abbey St. Lower to Mourne View (Skerries)	1	-
GoAhead GoAhead	33B	Portrane to Swords	5	4
		Swords to Portrane	4	4
	33t	Turvey Avenue to Donabate	1	-

Table 2.1: No. of Buses Services

In terms of Bus Passenger Capacity, the Go-Ahead Ireland services and typical old type Dublin Bus double decker buses have a capacity to accommodate c.91 passengers. However, it should be noted Dublin Bus are introducing new hybrid buses, some of which have extra capacity e.g. the new Wrightbus StreetDeck HEV 96 double-decker buses. Route 33B predominantly uses Wright StreetLite DF buses which are a single decker bus with capacity to accommodate c.41 passengers in the AM peak. In the PM peak, based on a review of the recent timetables, it is found that half of the Route 33B buses are Wright StreetLite DF buses with capacity to accommodate c.41 passengers and half are double decker buses which have a capacity to accommodate c.91 passengers

Operator	Route No.	Direction	AM	PM
Dublin Bus	33D	Portrane to Stephen's Green	91	0
		Stephen's Green to Portrane	0	91
	33E	Abbey St. Lower to Mourne View (Skerries)	91	0
GoAhead	33B	Portrane to Swords	205	264
		Swords to Portrane	164	264
	33t	Turvey Avenue to Donabate	91	-
Total			642	619

Table 2.2: No. of Seats Approx Capacity

These tables demonstrate that the site is clearly accessible to a significant and high capacity existing bus provision, with a capacity of c. 642 bus seats during the 7am-9am commuter AM peak period, and a capacity of c. 619 bus seats during the 4pm-6pm commuter PM peak period, all within an 8-10 minute walk-distance of the site.

2.3 Future Bus Services

The National Transport Authority (NTA) has developed a strategic transport plan, known as **BusConnects**, which will transform and overhaul the current bus network to provide a more efficient network. The proposed network will deliver the 'next generation' of bus corridors on the busiest routes and redesign routes with the aim of offering fast, predictable and reliable bus journeys.

Under the BusConnects proposals, the following routes will serve the subject site and are shown below in **Figure 2.2**:

- Route **L83**: Portrane – Donabate – Swords – Airport (frequency 30 minutes)
- Route **X83**: Portrane - Donabate – City Centre – UCD (operate twice daily)

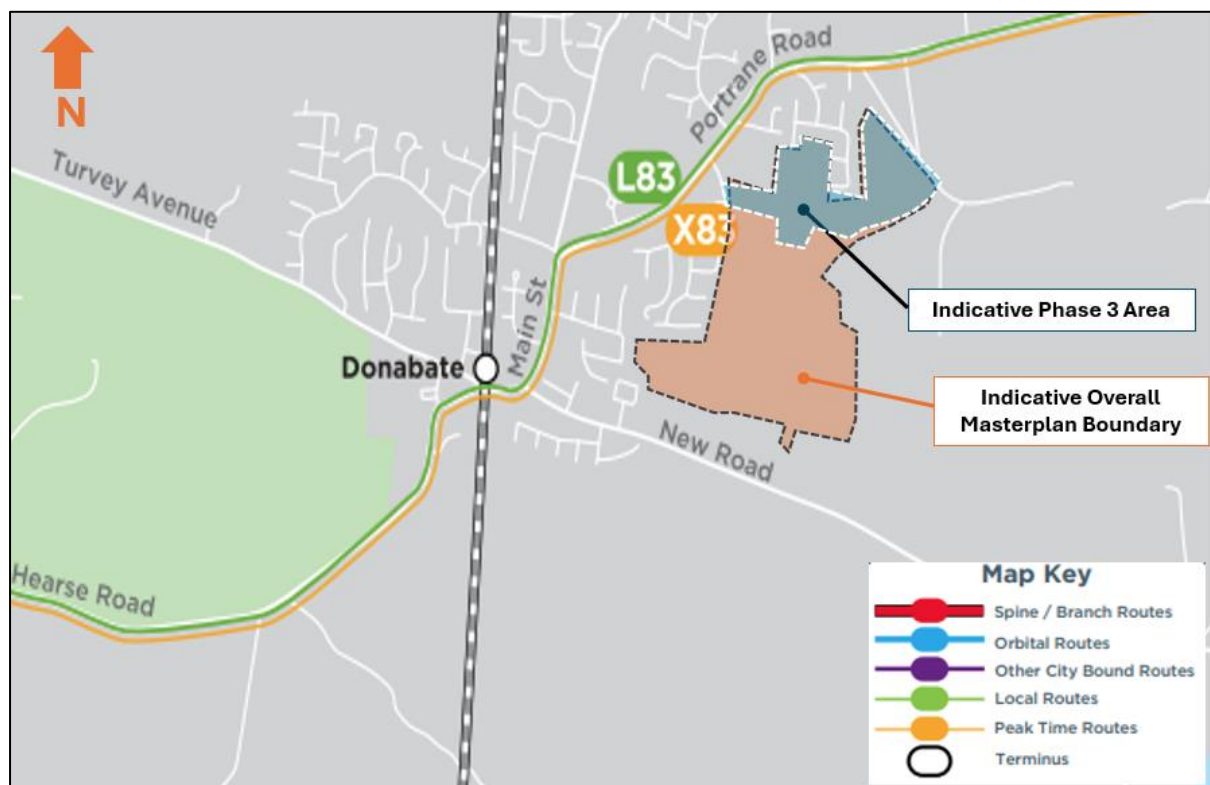


Figure 2.2: Proposed Public Transport Routes (Source: www.busconnects.ie)

This future network shows that the site's accessibility to bus services will be further enhanced, with a high frequency and permeable service to be provided. The site is therefore also ideally placed in terms of future high frequency bus availability, based on the NTAs published Plans.

3 BUS & RAIL USE PREDICTIONS, CAPACITY & DEMAND

The 2022 CSO travel data has been used to establish the proportion of Bus and Rail Users within the local area surrounding the site in order to estimate the additional demand for services, utilising real data rather than estimations of modal split. An annotated extract from the CSO Database Small Area Mapping used for this purpose is included below as **Figure 3.1**.

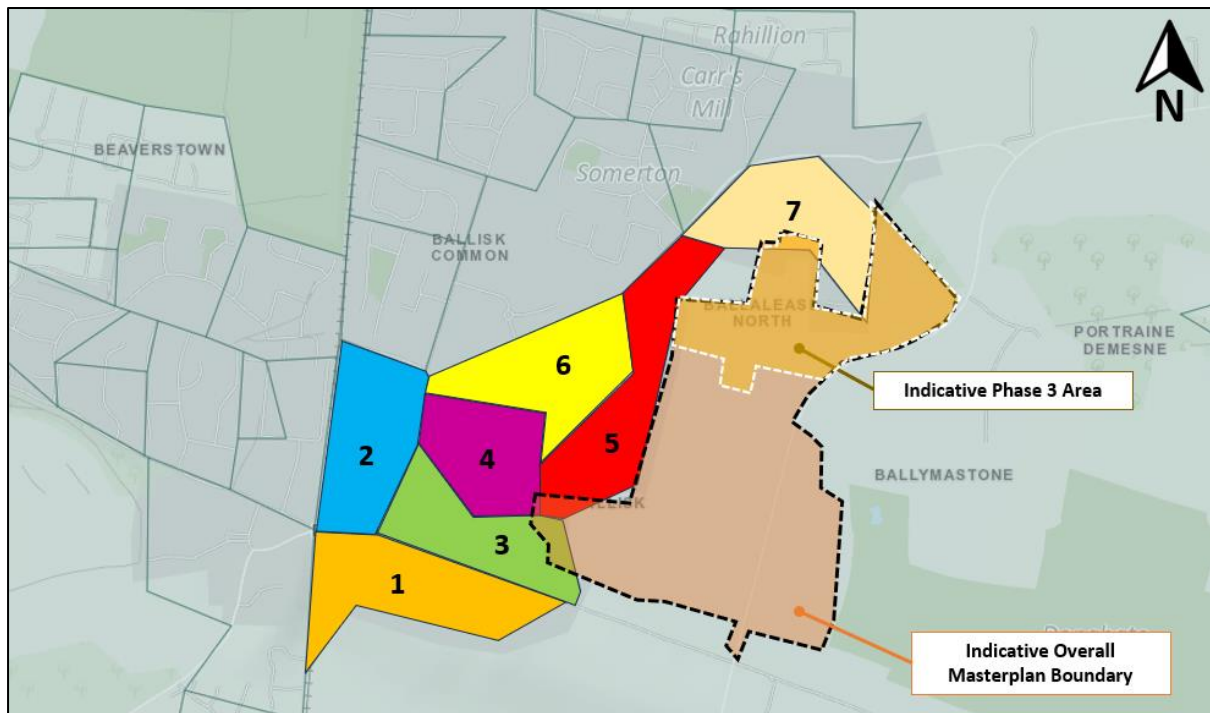


Figure 3.1: 2022 CSO SAPMAP Surrounding Small Areas

Information from the Census Data for these local small statistical areas has been extracted to calculate the demand for bus during the weekday AM Commuter period, and this is illustrated below as **Table 3.1**.

The local residential areas analysed include the following:

- Small Area 1: The Strand - Small Areas: A267065009
- Small Area 2: Beaverstown - Small Areas: A267065003
- Small Area 3: Ballaleas West - Small Areas: A267065005
- Small Area 4: Donabate Village - Small Areas: A267065004
- Small Area 5: 'The Links' East - Small Areas: A267065007
- Small Area 6: Ballisk - Small Areas: A267065015
- Small Area 7: The Priory - Small Areas: A267065006/02

CSO Small Area Ref.	Total Population	Total Commuters Age 5+ to Work, School or College	No. of Bus Users	No. of Rail Users	No. of Commuters Leaving Home 7-9am to Work, School or College
1	386	292	15	51	166
2	237	188	15	38	116
3	194	131	11	28	79
4	283	207	9	36	128
5	421	361	19	63	226
6	551	451	41	74	257
7	401	333	32	59	211
Totals	2473	1963	142	349	1183
Percentage of Total Population in Area Commuting =					79.4%
Percentage of Total Population in Area Commuting by Bus =					5.7%
Percentage of Total Population in Area Commuting by Rail =					14.1%
Percentage of Commuters Leaving Home 7:30-9:30am =					60.3%
935	Residents within Occupied Proposed Development, based on Bed Spaces				
54	Bus Commuters (Consistent with the Local Area Census Data)				
32	Total Additional Bus Commuters Between 7:30-9:30am				
132	Rail Commuters (Consistent with the Local Area Census Data)				
80	Total Additional Rail Commuters Between 7:30-9:30am				

Table 3.1: Bus & Rail Demand Based on CSO Data & Expected Residential Population

4 BUS CAPACITY & DEMAND

Based on existing travel patterns in the locality, the above confirms that the proposed development will create an additional demand for approximately 32 seats on bus services between 7am and 9am. As can be seen in **Tables 2.1** and **2.2**, there are a similar number of services and seats during the weekday PM Peak period 4pm-6pm, however demand is greater during the weekday AM Peak (due to 'peak spreading' that occurs in the evenings, with much more significant staggered departure times from work or College locations). From the 2022 CSO Travel data, it is not possible to establish the time that the residents of the aforementioned 7 small areas would leave their work, school or college to travel home in the evening. Although the PM demand is anticipated to be lower than the AM demand due to the aforementioned 'peak spreading', the same demand has been used for the PM period, creating a conservative scenario i.e. the proposed development will require approximately 32 seats on bus services between 4pm and 6pm.

Although the vast majority of bus commuters generated by the proposed development will **depart** from the development in the AM and arrive back in the PM, some will travel in the opposite directions during these peak times. It has been predicted that this number would not be higher than 10% of the demand departing the development in the AM and arriving back in the PM. Subsequently, a demand for approximately 35 seats on bus services for both the AM period of 7am-9am and the PM period of 4pm-6pm has been calculated.

The total demand for buses is illustrated in **Tables 4.1** and **4.2** below - with c. 642 and 619 bus seats in the AM and PM peak periods respectively, within an 8-10 minute walk of the subject site.

Details	Buses	Seats
Total number of Buses (7-9am) All Routes	12	642
Total demand for seats created by proposed development		35
Percentage impact upon existing services within 10min walk (all routes)		5.5%

Table 4.1: Total Peak AM Demand for Bus Seats due to Development

Details	Buses	Seats
Total Number of Buses (4-6pm) All Routes	9	619
Total Demand for seats created by proposed development		35
Percentage Impact upon existing services within 10min walk (all routes)		5.7%

Table 4.2: Total Peak PM Demand for Bus Seats due to Development

The resulting increased demand for bus seats is approximately 5.5% and 5.7% of the AM and PM peak total available seat capacity locally. This is considered to be a relatively small increase in demand which can easily be accommodated within the current service provision.

To further determine the bus capacity on individual bus routes within the vicinity of the subject development, a gravity model has been created. This model takes into account the key education and employment attractors for the proposed development and the bus routes that would be used to get to these key attractors.

This gravity model distributes the total trips travelling to/from the proposed development by bus route so that trips can be individually assigned to different bus routes. This has been done in order to assess the impact that the proposed development will have on the capacity of bus routes and services serving the surrounding area. This gravity model is illustrated in **Figure 4.1** below.

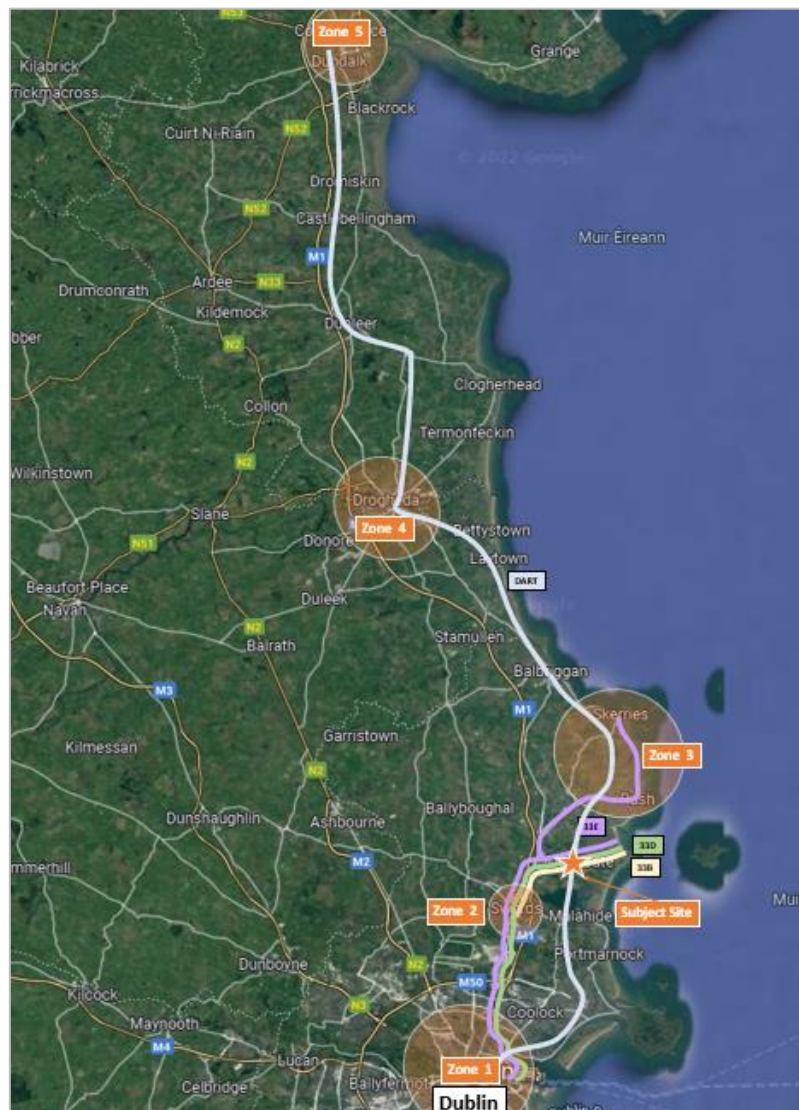


Figure 4.1: Gravity Model for Bus Trips from Subject Site

The key attractors were identified as:

- Zone 1: Dublin City
- Zone 2: Swords
- Zone 3: Skerries/Rush
- Zone 4: Drogheda
- Zone 5: Dundalk

When the education and employment bus trip percentages described previously are combined, they give a total bus trip percentage for the subject site. These bus trip percentages are illustrated in **Table 4.3** below.

Zone	Trip Assignment
1	15%
2	75%
3	10%
4	0%
5	0%

Table 4.3: Trip Assignment

Based off these trip assignment percentages the number of bus seats that will be demanded as a result of the development are illustrated in **Table 4.4** below.

Zone	Arriving to Site from		Departing from Site to	
	AM	PM	AM	PM
1	0	5	5	0
2	3	24	24	3
3	0	3	3	0
4	0	0	0	0
5	0	0	0	0
Total	3	32	32	3

Table 4.4: Bus Seat Trip Assignment

33D	Portrane to Stephen's Green		Stephen's Green to Portrane	
Peak Period	AM	PM	AM	PM
No of Bus Services	1	-	-	1
Passenger Capacity	91	-	-	91
Peak Times passenger demand	8	-	-	8
% Additional Demand Created by Proposed Development	8.8%	-	-	8.8%
33E	Abbey St. Lower to Mourne View (Skerries)			
Peak Period	AM	PM	AM	PM
No of Bus Services	1			
Passenger Capacity	91			
Peak Times passenger demand	1			
% Additional Demand Created by Proposed Development	0.8%			
33B	Portrane to Swords		Swords to Portrane	
Peak Period	AM	PM	AM	PM
No of Bus Services	5	4	4	4
Passenger Capacity	205	264	164	264
Peak Times passenger demand	24	3	3	24
% Additional Demand Created by Proposed Development	11.7%	1.1%	1.8%	9.1%

Table 4.5: Total Peak Times Development Generated Demand for Selected Bus Routes

As can be seen in **Table 4.5** above, the additional demand on the bus routes created by the proposed development for all routes is less than 12%.

The highest percentage additional demand is on the **33B bus route** (Portrane to Swords), with a demand of 11.7% and 9.1% in the AM and PM peak respectively.

The lowest percentage additional demand is on the **33E bus route** (Abbey St. Lower to Mourne View (Skerries)), with a peak demand of 0.8% in the AM peak.

This scale of demand generated by the proposed development is considered to be relatively small and can be accommodated within the current service provision over the entire peak period.

The analysis is based on 2022 CSO travel patterns, and whilst the development seeks to encourage modal shift, given the small increase in predicted bus demand, any possible future changes in

demand due to improve modal shift (walking, cycling, increased working from home and public transport etc) will still have a relatively minor impact on bus capacity here.

We conclude that this relatively small additional demand for bus services can easily be accommodated within the existing services. In future, there are additional services to be created as part of BusConnects as set out within the TTA which will continue to provide suitable capacity on local services.

5 RAIL LOCATIONS & SERVICES (CURRENT & FUTURE)

The subject development site is between 850m-1,500m from Donabate Railway Station (measured from the nearest and furthest points of the development site respectively). The well-established rail infrastructure in Donabate provides linkages to Dublin City Centre to the south, and Drogheda to the north from where further onwards connections can be made. Donabate Railway Station is currently well served by up to 28 no. commuter rail services providing connections to/from Dublin City Centre on a typical weekday, operating at a frequency of 15-20 minutes during peak times.

In terms of existing DART service provision and service frequency has been collated and are summarised below in **Tables 5.1 and 5.2**.

Operator	Route No.	Direction	AM	PM
DART	DART	Dublin to Dundalk	3	6
		Dundalk to Dublin	7	3

Table 5.1: No. of DART Services

In terms of DART Passenger Capacity, a capacity of 512 passengers has been assumed.

Operator	Route No.	Direction	AM	PM
DART	DART	Dublin to Dundalk	1536	3072
		Dundalk to Dublin	3584	1536
Total			5120	4608

Table 5.2: No. of Seats Approx Capacity

These tables demonstrates that the site is clearly accessible to a significant and high capacity existing DART provision, with a capacity of c. 5,120 DART seats during the 7am-9am commuter AM peak period, and a capacity of c. 4,608 DART seats during the 4pm-6pm commuter PM peak period, all within an 11-20 minute walk-distance of the site.

5.1 Future Rail Services

The Dublin Area Rapid Transit (DART)+ Programme aims to modernise and improve the existing rail network, which radiates from Dublin City Centre. It will provide a sustainable, electrified, faster, reliable and user-friendly rail system, which increases train frequencies and customer carrying capacity. It intends to increase the length of the DART network from the currently 50km to 150km railway corridor through the electrification and upgrade of existing lines transforming commuter train travel in the Greater Dublin Area (GDA). The DART+ Programme also includes the purchase of new train fleet.

This proposed infrastructure will further increase the accessibility of Donabate and its environs. An Coimisiún Pleanála have approved the Railway Order application for DART+ Coastal North, which will extend the electrified DART network from Malahide to Drogheda. The application was lodged in July 2024. The procurement process will now commence for a design and build contractors. Once the contractors has been appointed, a period of detailed design will commence followed by construction. Subject to funding being allocated it is anticipated that construction will be in the region of three years.

The Greater Dublin Area Transport Strategy 2022-2042 states that the strategic transport infrastructure is proposed to be delivered within the Short-Term 2022-2030 time period. **Figure 5.1** below shows the Greater Dublin Area Heavy Rail Network (Commuter Rail and DART Services) in 2035.



Figure 5.1: Proposed Public Transport Routes (Source: www.busconnects.ie)

6 RAIL CAPACITY & DEMAND

Based on existing travel patterns in the locality, the above confirms that the proposed development will create an additional demand for approximately 80 seats on rail services between 7am-9am. As can be seen in **Tables 6.1** and **6.2**, there are a similar number of services and seats during the weekday PM Peak period 4pm-6pm, however demand is greater during the weekday AM Peak (due to 'peak spreading' that occurs in the evenings, with much more significant staggered departure times from work or College locations). From the 2022 CSO Travel data, it is not possible to establish the time that the residents of the aforementioned 7 small areas would leave their work, school or college to travel home in the evening. Although the PM demand is anticipated to be lower than the AM demand due to 'peak spreading', the same demand has been used for the PM period, creating a conservative scenario i.e. the proposed development will require approximately 80 seats on rail services between 4pm and 6pm.

Although the vast majority of rail commuters generated by the proposed development will **depart** from the development in the AM and arrive back in the PM, some will travel in the opposite directions during these peak times. It has been predicted that this number would not be higher than 10% of the demand departing the development in the AM and arriving back in the PM. Subsequently, a demand for approximately 88 seats on DART services for both the AM period of 7am-9am and the PM period of 4pm-6pm has been calculated.

The total demand for DART services is illustrated in **Tables 7.1** and **7.2** below with c. 1,600 and 1,440 seats in the AM and PM peak periods.

Details	DART's	Seats
Total Number of DART's (7-9am) All Routes	10	1600
Total Demand for seats created by proposed development		88
Percentage Impact upon existing services within 15min walk (all routes)		5.5%

Table 6.1: Total Peak AM Demand for DART Seats From Development

Details	DART's	Seats
Total Number of DART's (4-6pm) All Routes	9	1440
Total Demand for seats created by proposed development		88
Percentage Impact upon existing services within 15min walk (all routes)		6.1%

Table 6.2: Total Peak PM Demand for DART Seats From Development

The resulting increased demand for DART seats is approximately 5.5% and 6.1% of the AM and PM peak total available seat capacity locally. This is considered a relatively small number and we believe it can easily be accommodated within the current service provision.

To further determine the DART capacity a gravity model has been created. This model takes into account the key education and employment attractors for the proposed development and the bus routes that would be used to get to these key attractors. This gravity model distributes the total trips travelling to/from the proposed development by DART route so that trips can be individually assigned. This has been done in order to assess the impact that the proposed development will have on the capacity of DART routes and services serving the surrounding area. This gravity model is illustrated in **Figure 6.1** below.

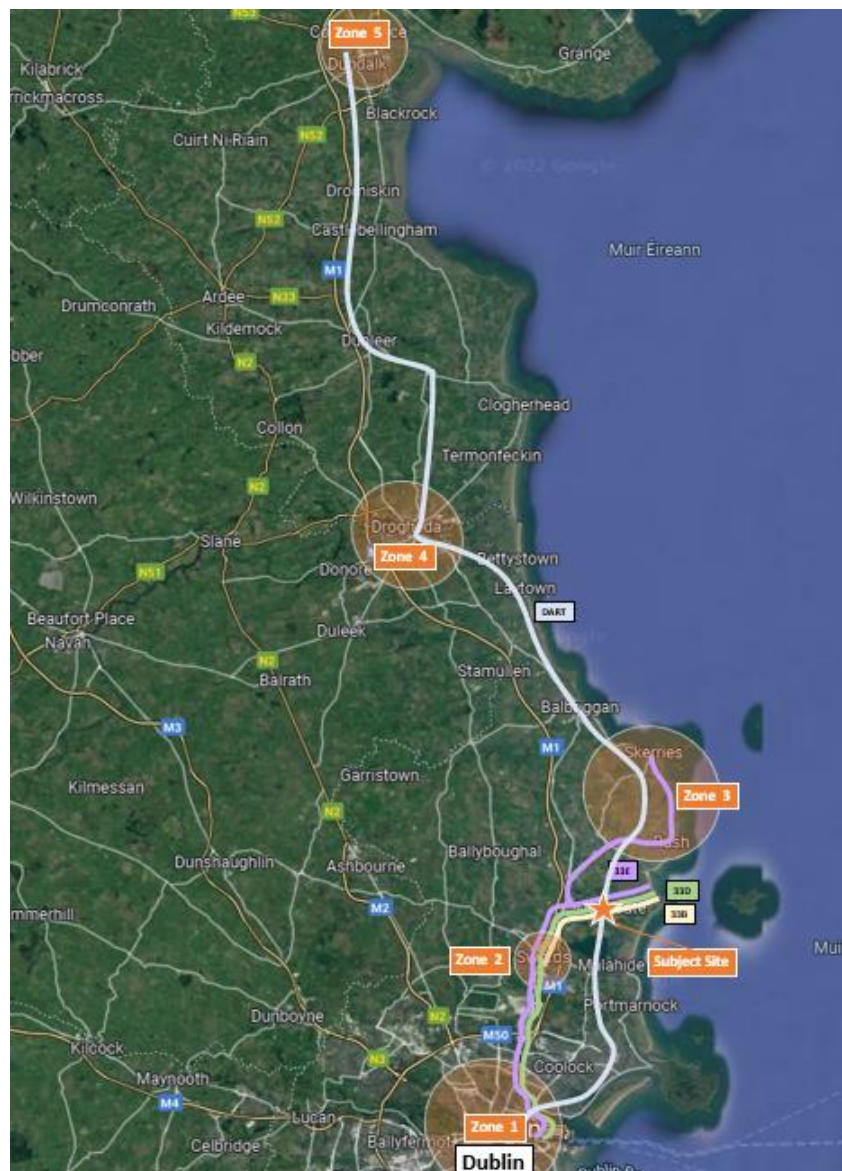


Figure 6.1: Gravity Model for DART Trips from Subject Site

The key attractors were identified as:

- Zone 1: Dublin City
- Zone 2: Swords
- Zone 3: Skerries/Rush
- Zone 4: Drogheda
- Zone 5: Dundalk

When the education and employment DART trip percentages described previously are combined, they give a total DART trip percentage for the subject site. These DART trip percentages are illustrated in **Table 6.3** below.

Zone	Trip Assignment
1	80%
2	0%
3	5%
4	10%
5	5%

Table 6.3: Trip Assignment

Based off these trip assignment percentages the number of DART seats that will be demanded as a result of the development are illustrated in **Table 6.4** below.

Zone	Arriving to Site from		Departing from Site to	
	AM	PM	AM	PM
1	6	64	64	6
2	0	0	0	0
3	0	4	4	0
4	1	8	8	1
5	0	4	4	0
Total	7	80	80	7

Table 6.4: Rail Seat Trip Assignment

DART	Northbound		Southbound	
Peak Period	AM	PM	AM	PM
No of DART Services	3	6	7	3
Passenger Capacity	480	960	1120	480
Peak Times passenger demand	22	65	65	22
% Additional Demand Created by Proposed Development	4.6%	6.8%	5.8%	4.6%

Table 6.5: Total Peak Times Development Generated Demand for DART Route

As can be seen in **Table 6.5** above, the additional demand on the DART services created by the proposed development for all routes is 7% or less.

It is concluded that this small additional demand for rail services can easily be accommodated within the existing services. In future, there are additional services and increased capacity to be created as part of Dublin Area Rapid Transit (DART)+ Programme as set out within the TTA.

7 CONCLUSION

The analysis of the existing and future bus and rail services has been undertaken based on an assessment methodology which includes trip generation assessment, modal split assumptions, and assignment / distribution. These assumptions have been based on real data extracted from CSO 2022 Small Area Map Data. This data was used to quantify the anticipated demand for both bus and rail services as a result of the proposed development in this particular location, utilising current local modal shift patterns & statistics.

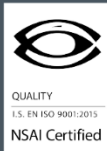
This Technical Note sets out the details of current and future bus/rail services and bus/rail capacity serving the site and the local area. The assessment confirms that the completion and full occupation of the development will result in an increased demand for bus seats, with an additional 35 bus users during the weekday AM Commuter Peak 7-9am and PM Commuter Peak 4-6pm (although it is noted that trips in the PM Commuter peak period will more than likely be less due to 'peak spreading'). The additional demand on the bus routes created by the proposed development for all routes is less than 6%.

Similarly, the assessment predicts an increased demand for seats on rail services, with an additional 88 rail users during the weekday AM Commuter Peak 7-9am and PM Commuter Peak 4-6pm (although it is noted that trips in the PM Commuter peak period will more than likely be less due to 'peak spreading'). The additional demand on the rail services created by the proposed development for all routes is less than 7%.

In conclusion the additional demand for bus and rail services as a result of the proposed development can be accommodated on the existing and future improved services in the area without any noticeable effect. The analysis is based on 2022 CSO travel patterns, and whilst the development seeks to encourage modal shift, given the relatively small increase in predicted bus / rail demand, any possible future changes in demand due to increased modal shift (walking, cycling, increased working from home and public transport etc) will still have only negligible impact on bus capacity, and slight impact on rail capacity.

Whilst this Technical Note contains an assessment of current capacity, it should be remembered that service providers are commercial in nature, running their businesses based on existing demand, rather than medium to longer term future demand. Bus services are provided based on real demand rather than potential demand. If there is an increased demand for services, or indeed

if there is a deficit in a service provision, Operators generally react to improve facilities if it makes commercial sense to do so. More customers means more revenue generated.



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