

consulting
engineers

NRB

Transportation Assessment Report

for

Construction of Pipeline & Wastewater Treatment Plant

for

DAWN Meats – Slane
Greenhills, Beauparc, Navan,
Co. Meath,

FINAL ISSUE

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EXECUTIVE SUMMARY

NRB Consulting Engineers Ltd were appointed to address the Traffic & Transportation issues associated with the construction of a Wastewater Treatment Plan and associated Sewer Pipe-laying for DAWN Meats - Slane, Greenhills, Beauparc, Navan, Co. Meath.

The site is long established and the proposed works when operational will, in reality, result in reduced traffic demand. The completed works will remove existing traffic volumes associated with current de-sludging and decanting operations when the pipeline and wastewater treatment plant is installed. This Report addresses the traffic impact associated with the construction of the wastewater treatment plant in tandem with the sewer laying works along the route as illustrated herein as **Appendix A**.

This Transportation Assessment Report (TA) has been prepared to address the Traffic and Transportation issues associated with the construction works, the capacity of the existing road network and the impact of the temporary very small increases in traffic locally. The Report has been prepared in accordance with TII's Traffic & Transportation Assessment Guidelines and addresses the worst case traffic impact of the proposal with both construction operations proceeding.

Comprehensive classified turning movement surveys of the existing affected roads and junctions were carried out during the weekday AM and PM Peak Hours in 2020. These surveys, undertaken in the normal school term, formed the basis of the study. We have utilised adjacent permanent TII Traffic Counters on the N2 to apply 'Covid Factors' to the survey data, and this represents industry standard practice during pandemic times.

The analysis includes the effects of the existing traffic on the local roads and assesses the impact during the traditional peak commuter peaks periods in accordance with Traffic & Transportation Assessment Guidelines.

The Transportation Assessment confirms that the road network and the affected junction capacities are more than adequate to accommodate the worst case traffic associated with the operations. It should be acknowledged that the completion of the works, and the operation of an on-site treatment plant will result in less traffic on the local roads, as in future there will be no requirement to remove bulk sludge for off-site treatment.

Based on our studies, we believe that there are no adverse traffic/transportation capacity or operational issues associated with the construction operations that would prevent planning permission being granted by Meath County Council.

1.0 INTRODUCTION

- 1.1 This Transportation Assessment (TA) has been prepared by NRB Consulting Engineers Ltd and addresses the Traffic/ Transportation issues arising from the proposed construction of the Dawn Meats - Slane wastewater treatment plant and the associated public road pipe-laying works.
- 1.2 The DAWN Meats – Slane plant is long established in the area and in these terms has very well established traffic generation characteristics in its own right. The proposed works when complete will actually result in reduced traffic as it will mean that waste will no longer have to be regularly removed off-site by heavy goods vehicles for onward treatment. A site location plan for the DAWN site, together with details of the local road Junctions within the Network Area of Influence, is included below as **Figure 1.1**;

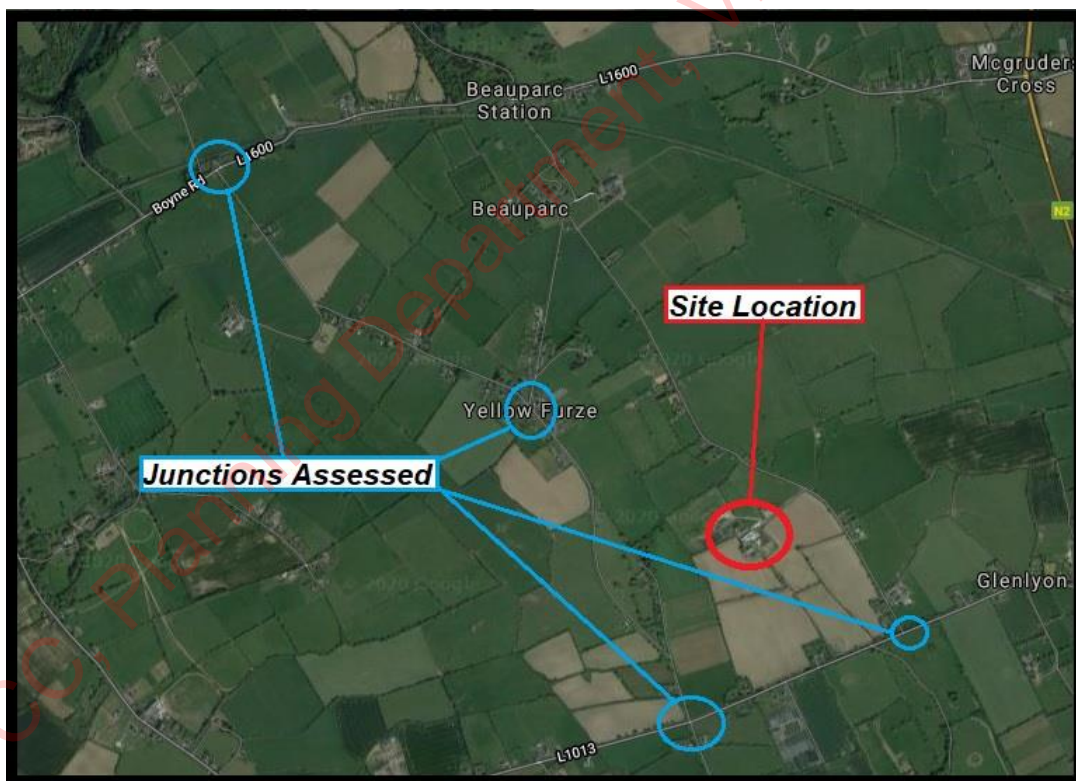


Figure 1.1 - Site Location

- 1.3 In describing the Receiving Environment and the Roads Environment during the construction works, this report addresses the following aspects of the proposed development:

- Relatively Small Scale of the construction traffic volume in the context of the local road network (Reflected in the very Low Traffic Volume Projections associated with the Construction Works),
- Location of the development within a long established lightly trafficked local road network adjacent the N2 National Road,
- Traffic & Transportation impact,
- Capacity of the Existing Road Network,
- Adequacy of Capacity and safety of the existing roads and junctions locally, within the area of influence.
- Impact upon the adjacent affected junctions locally as per **Figure 1.1**.

1.4 A review of the Road Safety Authority (RSA) online collision database indicates that there are no significant accidents on the affected stretches of road network surrounding the site. There have been a few 'minor' accidents locally as per the illustration below but the statistics are expected to be unaffected by the proposed works.

1.5 An extract from the RSA on-line collisions record is included below as **Figure 1.2**.

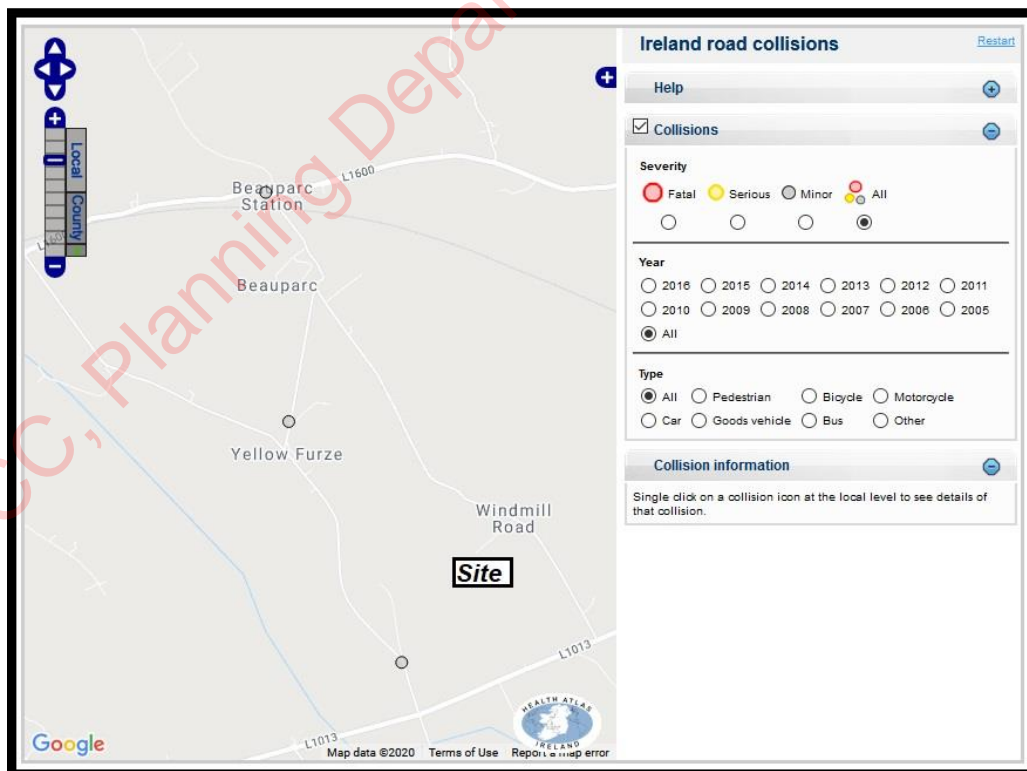


Figure 1.2 - Extract from RSA On-Line Record of Traffic Collisions

1.6 The Recommendations contained within this Transportation Assessment are based on the following sources of information and industry-standard practices; -

- TII Traffic & Transport Assessment Guidelines,
- Recent Traffic Survey Data, supplemented by TII Traffic Census Data,
- Relevant Design Guidance,
- Predicted Construction Traffic AADT Volumes provided by the Consulting Engineer for the Project,
- Our experience in assessing the impact of Developments of this Nature, and
- Site Visits and Observations.

1.7 The Report has been prepared in accordance with the requirements of the TII's Traffic & Transport Assessment Guidelines. These are the professional Guidelines used to assess the impact of developments on public roads.

2.0 DEVELOPMENT PROPOSALS & EXISTING ROAD CONDITIONS

- 2.1 The development consists of the construction of a Wastewater Treatment Plant on the site of DAWN Meats - Slane and also the construction of the associated outfall pipe to the River Boyne as detailed on the Engineers Drawings enclosed as **Appendix A**, with an annotated extract included below as **Figure 2.1** for ease of reference. The site compound for the works will be within the DAWN Site.

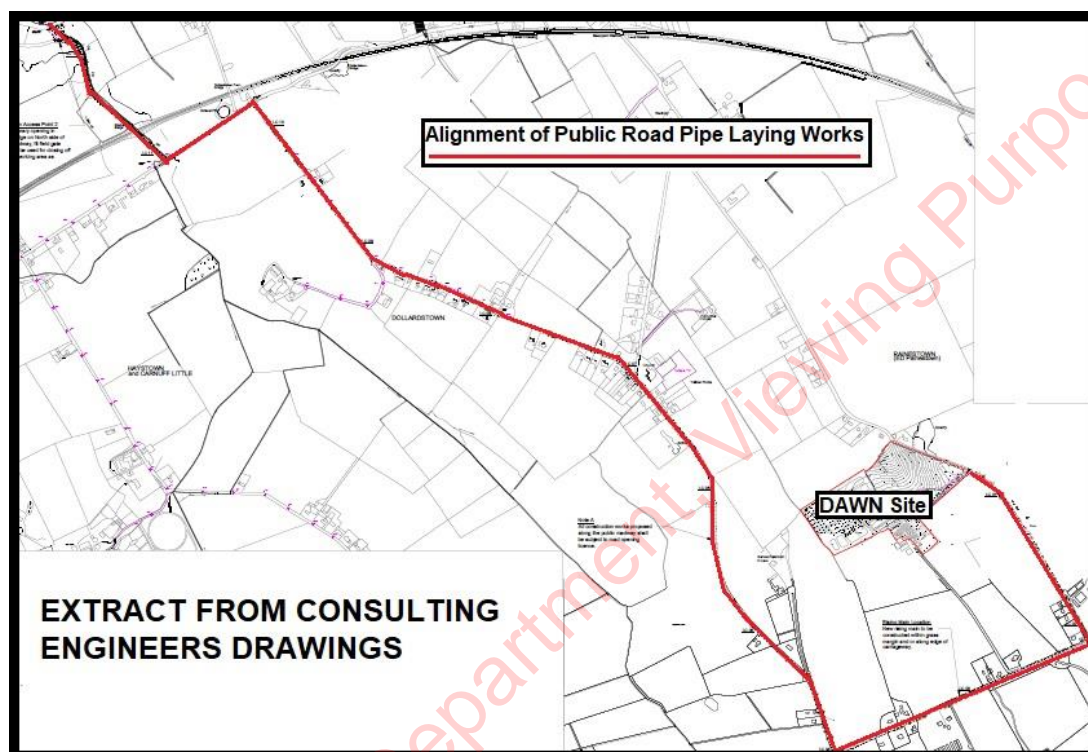


Figure 2.1 – Annotated Extract from Engineers Drawings (Appendix A)

- 2.2 It is proposed to locate the Site Compound on the DAWN Site, accessible via the L1303 via the adjacent N2. The works compound and DAWN is located approximately 1.3km west of the N2, and in these terms is considered ideal in terms of the import of the expected small volumes of materials, machinery and construction staff. The location is illustrated below as **Figure 2.2**



Figure 2.2 – Location of DAWN Site & Proximity to N2

- 2.3 The junction of the N2 and the L1303 takes the form of a large capacity priority junction with the provision of a dedicated right turn lane. The form of junction will ensure that the small volumes of construction related traffic will have easy & safe access to the construction compound from the N2. An image of the junction is included below as **Figure 2.3**



Figure 2.3 – N2/L1303 Boyne Rd (looking south)

- 2.4 The local roads surrounding the site are traditional and rural in nature, all consisting of single carriageway roads bounded by established hedgerows. Each of the affected roads are classified as Local Roads (with the “L” designation), and are all subject to an 80kph speed restriction. Whilst there is an 80kph designation, the speeds are self-regulating in terms of the undulating and rural nature of the carriageways. In terms of the capacity of the local roads, ultimately these have a theoretical traffic or link capacity of approximately 800-1,000 PCUs per direction per hour. The existing flows on the local roads need to be considered in this context.
- 2.5 The L1600 Boyne Road is orientated in an E-W direction and, in addition to the L1303, it can serve as a secondary or backup route from the N2 to the area. The L1600 currently carries a weekday AM Peak Hour 2-way flow of approximately 165 PCUs & a weekday PM Peak Hour 2-Way flow of approximately 171 PCUs. In these terms, it is clearly lightly trafficked in terms of its theoretical link capacity as illustrated above.
- 2.6 The local road past Yellow Furze, linking the L1600 to the L1013 to the south, carries a weekday AM Peak Hour 2-way flow of approximately 40 PCUs & a weekday PM Peak Hour 2-Way flow of approximately 45 PCUs. In these terms, it is clearly very lightly trafficked indeed.
- 2.7 The L1013 to the south, which will serve as the primary access from the N2, is also orientated in an E-W direction. It has a primary high quality access to/from the N2 by way of a large capacity Priority Junction (with Right Turn Ghost Island). It currently carries a weekday AM Peak Hour 2-way flow of approximately 90 PCUs & a weekday PM Peak Hour 2-Way flow of approximately 155 PCUs. In these terms, it is also considered lightly trafficked in terms of its theoretical link capacity as illustrated above.
- 2.8 Of course, the capacity of any road or link is ordinarily determined by the capacity of terminal junctions, and the capacity of junctions is therefore addressed in more detail within the main body of this report.

3.0 VEHICULAR TRIP GENERATION, ASSIGNMENT & DISTRIBUTION

- 3.1 The Trip Rate Information Computer System (TRICS) database is ordinarily used to ascertain vehicular trip generation associated with the use of any particular site. This represents industry standard practice for Transportation Assessments in Ireland, in the assessment of traditional commercial developments. In this case, an assessment of construction traffic impact is required, and an alternative traffic generation calculation methodology is used to quantify the traffic generated by the construction operations.
- 3.2 An assessment of the worst case daily traffic volumes associated with both the pipe laying works (on the public roads) and the waste water treatment plant (within DAWN Meats) has been undertaken and this is illustrated below as **Figure 3.1**

Construction Activity	Movements Generated	
	LGV	HGV
Extension to WWTP (Phase 1)	40	30
Rising Main Pipeline	60	40

Table 3-1: Annual Average Daily Traffic (Construction Traffic)

Figure 3.1 Daily Traffic Volumes Generated by Construction Operations

- 3.3 Through the use of standard vehicle conversion factors to convert vehicle types to Passenger Car Units ('Car Equivalents'), we have utilised this information to quantify the traffic generated by both construction projects. In this case, a Light Goods Vehicle (LGV) is equivalent to 1 PCU and a Heavy Goods Vehicle to 2 PCUs for assessment purposes. This is illustrated below as **Table 3.2** and **Table 3.3**.

Table 3.2 – Total Traffic Generated by Waste Water Treatment Plant Works (PCUs)

Network Period	Arrivals	Departures
	(PCUs)	(PCUs)
24 Hr AADT	100	100
Weekday AM Peak Hr*	13	13
Weekday PM Peak Hr*	13	13

Table 3.3 – Total Traffic Generated by Pipe Laying Works (PCUs)

Network Period	Arrivals	Departures
	(PCUs)	(PCUs)
24 Hr AADT	140	140
Weekday AM Peak Hr*	18	18
Weekday PM Peak Hr*	18	18

* Industry Standard Method of Calculating Weekday Peak Hr is to Divide 24Hr AADT by 10 - We have Divided by 8 for Robustness, giving higher Peak Hr Flow Volumes for Assessment Purposes.

- 3.4 These volumes of traffic have then been applied to the established road network and the resultant impact considered. The assessment is undertaken in accordance with the Guidelines in the context of the demonstrably low levels of traffic generated by the proposed construction operations.

Assignment/Distribution - Future Year Traffic

- 3.5 We have used hand assignment techniques based on the observed patterns, with the worst case traffic assigned to the roads based on the observed established traffic patterns.
- 3.6 The standard methodology applied was to firstly ascertain the base background traffic conditions for both the weekday AM and weekday PM Commuter Peak periods. We then used the TII Project Appraisal Guidelines Unit 5.3 (Travel Demand Projections Table 5.3.2) to establish worst case projected construction year 2022 on the local road network. (We selected 2022, however an earlier or indeed a later start to the construction will not have any material impact upon the conclusions).
- 3.7 The worst case traffic based on a combination of the content of **Table 3.2** and **Table 3.3** above was then applied in order to establish Construction Year Traffic Conditions for both the pipeline works and WWTP occurring in tandem. This is all included in the calculations included herein as **Appendix C**.
- 3.8 It should be noted that we have selected the construction year of 2022 as being reasonable and appropriate, however, in our experience varying this by 1-2 years will have no significant impact upon the conclusions of the study. In addition, given the favourable results reported in this study, if required to apply higher background traffic conditions for any reason we would not anticipate any changes whatsoever to the conclusions.

3.9 In light of the covid pandemic, we have used historic and publicly available TII Traffic Census Data from the nearby N2 Ashbourne/Slane to establish 'normal' non-covid pandemic traffic conditions on the local network. In essence, we applied a 'Covid Factor' to the surveyed AM & PM flows through this exercise, and this accords with normal accepted practice during these emergency times. This is as set out in **Appendix C** (Page 1).

3.10 Normal traffic growth factors for future year assessments were calculated from data obtained in the TII Travel Demand Projections Unit 5.3, which provides the recommended method of predicting future year traffic growth on Roads. Calculations of the relevant growth factors are included in **Table 3.4** below (based on tabulated 'medium growth' in the Meath Area).

Table 3.4 - Traffic Growth Rates, TII Travel Demand Projections Unit 5.3

Year	to Year	Table 5.5.1:
2020	2022	1.022

3.11 The resulting Traffic Flow Projections and Figures within **Appendix C** allowed the assessment of impact of the construction operations to be undertaken.

4.0 TRAFFIC IMPACT - THRESHOLD ASSESSMENT/TRAFFIC CAPACITY ANALYSIS

- 4.1 The Institution of Highways and Transportation (IHT) Guidelines for Traffic Impact Assessment and the TII Traffic and Transport Assessment Guidelines sets out a methodology for assessment of developments of this nature and determining whether further assessment is indeed required.
- 4.2 This TII Traffic and Transport Assessment Guidelines normally requires a **Threshold Assessment** of the impact on the local roads to be provided in order to determine whether further more detailed modelling and assessment of particular critical junctions is necessary. However, in this case, given the very lightly trafficked nature of the local roads even a small increase in traffic related to construction activities can have a significant Net Effect.
- 4.3 For robustness we have therefore undertaken an assessment of the worst case traffic capacity impact, with junction capacity modelling undertaken for each of the 4 local junctions within the network area of influence of the construction works;
- The Windmill Rd/L1013 T-Junction near DAWN Meats,
 - The L1013/Yellow Furze Rd Crossroads to the west,
 - The T-Junction at Yellow Furze, and
 - The L1600 Boyne Road T-Junction nearest the site compound,
- 4.4 Clearly the WWTP Works at Dawn Meats is a fixed site as a construction traffic destination, however the pipelaying contract works will move throughout the programme as the piping progresses. In this regard, we have undertaken an assessment of the progression of the pipe contract works in 5 separate locations (referred to herein as 'Scenarios') in order to determine the worst case traffic demands at each junction. Traffic to and from the works sites will originate to/from the dedicated site compound at the Dawn Meats Plant.
- 4.5 The scenarios considered are;
- **Scenario A** – WWTP works at DAWN & Pipelaying on Windmill Rd.,
 - **Scenario B** – WWTP works at DAWN & Pipelaying on L1013,
 - **Scenario C** – WWTP works at DAWN & Pipelaying South of Yellow Furze
 - **Scenario D** – WWTP works at DAWN & Pipelaying North of Yellow Furze
 - **Scenario E** – WWTP works at DAWN & Pipelaying on the L1600.

- 4.6 The entire assessment is included herein as Appendix C. A summary showing the worst case traffic conditions at each of the local junctions is below as Table 4.1

Table 4.1 – Total Traffic Generated by Pipe Laying Works (PCUs)

Network Junction	Total Worst Case Predicted Traffic Flow Through Junction									
	Scenario A		Scenario B		Scenario C		Scenario D		Scenario E	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Windmill Rd/L1013	271	253	270	252	270	252	270	252	270	252
L1013 Crossroads	182	194	183	194	218	229	218	229	218	229
T Junction Yellow Furze	42	47	42	47	42	47	77	82	77	82
L1600/Yellow Furze T Junc	216	242	216	242	216	242	216	242	251	277

- 4.7 The assessment demonstrates that **Scenario E** unsurprisingly represents the worst case in traffic terms at each of the network junctions. Therefore a junction capacity assessment for Scenario E at each junction has been undertaken.
- 4.8 We have used the TII-approved software package 'Junctions 9' PICADY' (Priority Intersection Capacity and Delay) software package (as part of the TRL Package 'Junction 9') to assess the capacity of each of the junctions. PiCADY produces results based on a ratio of flow to capacity (RFC) and period mean-maximum queue length. An RFC greater than 1.00 indicates that a junction is operating at or above capacity, with 0.85 considered to be the optimum RFC value. We have appended the detailed computer simulation model results (PiCADY Outputs) of the junction modelling for the proposed site access in **Appendix D, E, F and G**. Summaries of the results of the modelling is included below.

Windmill Rd/L1013 T-Junction

- 4.9 The detailed simulation output is included as **Appendix D**, and a summary of the results is reproduced below as **Table 4.2**

Table 4.3 - Junctions9 PiCADY Summary Results, Windmill Rd/L1013 T-Junction

Modelled Scenario	Period Mean Max Q (PCUs)	Period Max RFC
2022 Construction Year AM Peak	<1	0.11
2022 Construction Year PM Peak	<1	0.10

L1013 Crossroads Junction

- 4.10 The detailed simulation output is included as **Appendix E**, and a summary of the results is reproduced below as **Table 4.4**

Table 4.4 - Junctions9 PiCADY Summary Results, L1013 Crossroads Junction

Modelled Scenario	Period Mean Max Q (PCUs)	Period Max RFC
2022 Construction Year AM Peak	<1	0.07
2022 Construction Year PM Peak	<1	0.08

T-Junction at Yellow Furze

- 4.11 The detailed simulation output is included as **Appendix F**, and a summary of the results is reproduced below as **Table 4.5**

Table 4.5 - Junctions9 PiCADY Summary Results, Yellow Furze T Junction

Modelled Scenario	Period Mean Max Q (PCUs)	Period Max RFC
2022 Construction Year AM Peak	<1	0.02
2022 Construction Year PM Peak	<1	0.01

L1600 Boyne Rd T-Junction (North of Yellow Furze)

- 4.12 The detailed simulation output is included as **Appendix G**, and a summary of the results is reproduced below as **Table 4.6**

Table 4.6 - Junctions9 PiCADY Summary Results, Boyne Rd T-Junction North of Yellow Furze

Modelled Scenario	Period Mean Max Q (PCUs)	Period Max RFC
2022 Construction Year AM Peak	<1	0.07
2022 Construction Year PM Peak	<1	0.7

Conclusion – Modelling Above

- 4.13 The results of the modelling above clearly shows that all of the affected junctions will have significantly more than adequate capacity to accommodate the worst case traffic associated with both construction projects progressing in tandem. All of the RFCs are **way below** the theoretical optimum capacity of 0.85 and no queuing whatsoever is anticipated.

5.0 CONCLUSIONS

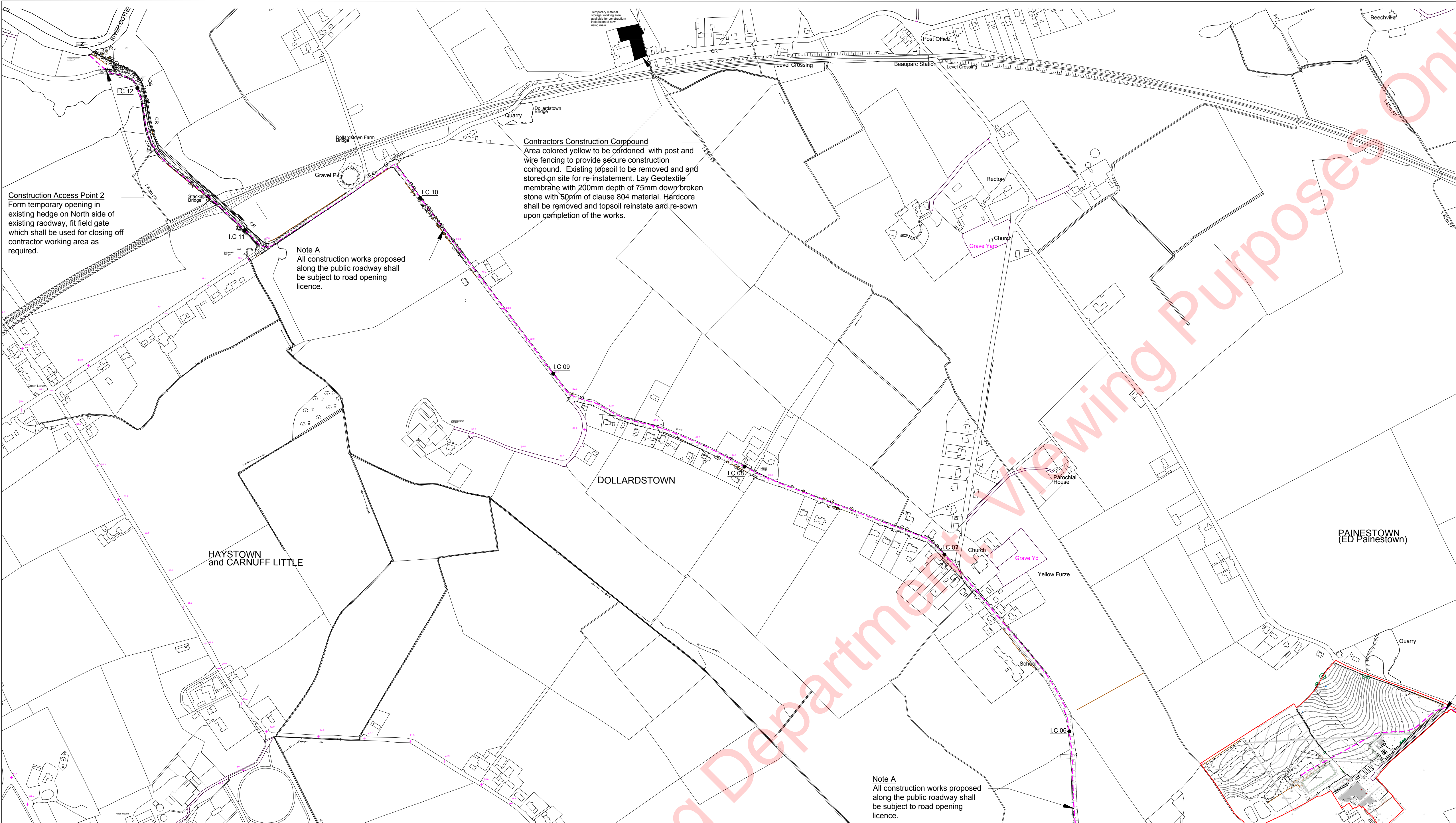
- 5.1 This Transportation Assessment Report assesses the traffic and transportation impact associated with the construction of a pipelaying contract and a wastewater treatment plant (WWTP) running in tandem, associated with the DAWN Meats – Slane Plant in Co Meath.
- 5.2 This Report has been prepared in accordance with the TII Traffic & Transport Assessment Guidelines, and it provides for an onerous and robust assessment of the impact of the construction traffic associated with the contracts.
- 5.3 The impact of the traffic on the local roads has been modelled and assessed, based on a comprehensive new classified vehicle turning movement survey undertaken for the purposes of this study, during normal school period, factored using industry standard methods to reflect non-Covid 19 Pandemic times.
- 5.4 This report assessed the WWTP and the Pipelaying in tandem, assessing the worst case traffic at each junction associated with the entire length of the Pipe Laying works.
- 5.5 The assessment demonstrates that the construction traffic will have an absolutely negligible impact upon the established local traffic conditions and can easily be accommodated on the road network without any capacity concerns arising.
- 5.6 It should be remembered that, whilst there will be a very small increase in traffic conditions locally during the construction works, the construction of the WWTP will result in a medium and long term improvement in traffic conditions locally, as large tanker vehicles will no longer be required to export effluent from the site for off-site treatment.
- 5.7 It is considered that there are no significant Operational Traffic Safety or Road Capacity issues that prevent a positive determination of the application by Meath County Council.

APPENDICES - CONTENT

A	Proposed Route of Pipe Laying Works (For Reference)
B	Raw Traffic Survey Data
C	Traffic Surveys, Trip Distribution & Network Traffic Flow Diagrams
D	PiCADY Junction Capacity Model Output – Existing Windmill Rd/L1013
E	PiCADY Junction Capacity Model Output – Existing L1013 Crossroads
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APPENDIX A

**Proposed Route of Pipe Laying Works
(For Reference)**



Construction Access Point 2
Form temporary opening in
existing hedge on North side of
existing roadway, fit field gate
which shall be used for closing off
contractor working area as
required.

Note A
All construction works proposed
along the public roadway shall
be subject to road opening
licence.

Contractors Construction Compound
Area colored yellow to be cordoned with post and
wire fencing to provide secure construction
compound. Existing topsoil to be removed and
stored on site for re-instatement. Lay Geotextile
membrane with 200mm depth of 75mm down broken
stone with 50mm of clause 804 material. Hardcore
shall be removed and topsoil reinstate and re-sown
upon completion of the works.

Note A
All construction works proposed
along the public roadway shall
be subject to road opening
licence.

Construction Access Point 1
Existing entrance to Dawn Meats
site to be used for construction
access for pipeline.

NOTES:

- RISING MAIN SHALL BE 150mm Ø PE 100 SDR 17 (10-BAR) RISING MAIN.
RISING MAIN TO HAVE MINIMUM COVER OF 900mm.
PIPELINE TO HAVE 150mm SURROUND CONSISTING OF 10mm PEA GRAVEL.
AIR VALVES TO BE LOCATED AT HIGH POINTS AND INSPECTION CHAMBERS TO BE LOCATED AS SHOWN ON
DRAWING. LOCATION OF ALL VALVES TO BE AGREED WITH DAWN MEATS.
MARKER POSTS TO BE INSTALLED AT ALL AIR VALVES & INSPECTION CHAMBERS.
ALL TEES, SPECIAL BENDS TO BE FLANGED ONLY.
JOINTS SHALL BE FORMED BY AN APPROVED METHOD, RECOMMENDED BY THE MANUFACTURER.
ELASTOMERIC SEALING RINGS, WHERE USED, SHOULD COMPLY WITH THE REQUIREMENTS OF BS 2494.
CONCRETE ANCHOR BLOCKS SHOULD BE PROVIDED ON RISING MAIN AT BENDS OF CURVATURE GREATER
THAN 22.5° AND AT BOTH SIDES OF AIR VALVE CHAMBER. ANCHOR BLOCKS SHOULD ENCASE THE PIPE IN
CONCRETE (CLASS C, CLAUSE 1002, SPECIFICATION FOR ROADWORKS), TO A MINIMUM THICKNESS OF 150mm.
ALL ROUND AND SHOULD BE A MINIMUM LENGTH OF 750mm.
ALL WATERMANS TO BE OVERLAID WITH MARKER TAPE COMPLETE WITH 2 STRANDS OF CONTINUOUS
TRACER WIRE. TRACER WIRE TO BE CONNECTED TO FITTINGS. CONTINUITY OF TRACER WIRE TO BE
ENSURED AT ENDS OF ROLLS, FITTINGS AND CHANGES IN DIRECTION.
INSPECTION AND AIR VALVE CHAMBERS SHOULD BE PROVIDED WITH CAST IRON SURFACE BOXES IN
COMPLIANCE WITH THE REQUIREMENTS OF IS 261. SURFACE BOXES FOR ROADWAYS AND AREAS
ACCESSIBLE TO WHEELED TRAFFIC SHOULD BE SUBJECT TO APPROVAL.
THE LOCATION OF INSPECTION CHAMBERS AND AIR VALVES SHALL BE SHOWN BY INDICATOR PLATES
POSITIONED TO THE APPROVAL OF DAWN MEATS.
RISING MAIN SHALL BE HYDRAULICALLY TESTED IN SECTIONS AFTER LAYING AT 1.5 TIMES ITS OPERATING
PRESSURE AND BE WITNESSED AND CERTIFIED BY A REPRESENTATIVE OF DAWN MEATS. METHOD OF
TESTING AS APPROVED BY ENGINEER. THE PIPELINE SHOULD BE ADEQUATELY ANCHORED OR RESTRAINED,
DURING TESTING.
EXISTING WALLS, FENCES AND OPEN DITCHES THAT ARE BROKEN THROUGH OR DAMAGED DURING THE
WORKS SHALL BE MADE GOOD UPON COMPLETION OF THE WORKS.
EXISTING HEDGES SHALL REMAIN INTACT WHERE POSSIBLE. WHERE A SECTION OF A HEDGE NEEDS TO BE
REMOVED AND WHERE DAMAGE IS UNAVOIDABLE, SUCH DAMAGE SHALL BE KEPT TO THE ABSOLUTE MINIMUM
AND SHALL NOT IN ANY CASE EXTEND BEYOND THE WIDTH OF THE TRENCH.
WHERE PRACTICAL, THE PORTION OF THE ORIGINAL HEDGE WHERE IT CROSSES THE TRENCH SHALL
BEFORE EXCAVATION COMMENCES, BE CAREFULLY REMOVED COMPLETE WITH SOIL AROUND THE ROOTS
AND RE-PLANTED NEARBY. FOLLOWING THE LAYING OF THE PIPELINE IT SHALL THEN BE RE-INSTATED BACK
BACK TO ITS ORIGINAL POSITION AND SUITABLY FERTILIZED AND CARED FOR.
SHOULD THIS PROCEDURE NOT BE PRACTICAL OR SHOULD IT BE TRIED AND RESULT IN FAILURE OF THE
HEDGE, THEN THE CONTRACTOR IS TO REPLACE THE DAMAGED PORTION OF THE HEDGE WITH PLANTS OF
THE SAME TYPE AT THE ORIGINAL SPACINGS. THE REPLACEMENT PLANTS ARE TO BE AS MATURE AS
POSSIBLE BUT IN ANY EVENT NOT LESS THAN TWO YEARS OLD. THEY ARE TO BE CAREFULLY NURTURED
UNTIL A STRONG AND STURDY GROWTH EXISTS.
SHRUBS AND BUSHES OF VALUE WHICH ARE LOCATED ALONG THE LINE OF THE PIPELINE SHALL BE DEALT
WITH IN A SIMILAR MANNER TO HEDGES.
ALL HEDGE PLANTS TO BE PLANTED IN AN EXCAVATED PIT OR TRENCH TO GIVE 100MM MINIMUM GROWTH
SPACE TO ACCOMMODATE ROOT SPREAD. HEDGEROWS TO BE ESTABLISHED AS DOUBLE STAGGERED ROW.
PLANTS TO BE RANDOMLY DISPERSED WITHIN MIXED SPECIES HEDGEROWS.

LEGEND:

- Site Boundary of Proposed
Development
- I.C. 01
- Pipeline Inspection Chamber
- Construction compound (temporary)

B	Pipeline route altered to public roadways	17th April 2020	T.Finn
A	Pipeline route through M.McGrane land altered	11th Feb 2019	T.Finn
REV. NO.	DESCRIPTION	DATE	INITIALS

finn
DESIGN
PARTNERSHIP
Blaketown, Ardee, Co. Louth, Ireland
t 041 6857200 f 041 6857201 e info@finn.ie w www.finn.ie

DRAWING NO:
312

REV. NO:
B

ONE

TITLE:
Site Location Plan
Traffic Management Plan

PROJECT:
Extension to WWTP &
Rising Main Pipeline to River Boyne

CLIENT:
Dawn Meats Slane
Painestown, Beauparc,
Co Meath

SCALE: 1:2500

DRAWN: T.Finn

DATE: January 2019

CHECKED: -

STATUS:
Planning Application

JOB NO:
1604

NOTES

- Copyright Reserved 2003 ©
- Work to figure dimensions only. Do not scale drawing.
- The contractor is responsible for checking all levels and dimensions on site and shall refer all discrepancies to the Architect.
- Where appropriate, for details of r.c. structure, or mechanical and electrical details, see Engineers drawings.
- Proprietary items shall be fixed in strict accordance with manufacturers instructions.
- Size of proprietary items shall be checked with manufacturer.
- The contractor shall be responsible for the construction of structure, finishes and services.

● CIVIL - STRUCTURAL ENGINEERING ● PROJECT MANAGEMENT

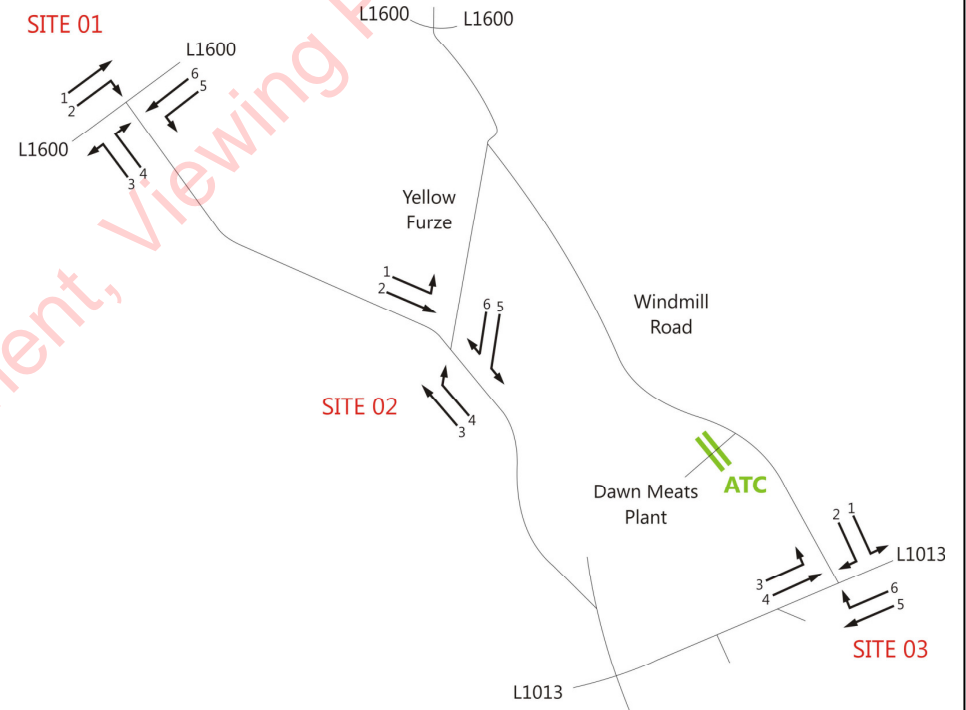
APPENDIX B

Raw Traffic Survey Data Output

Site Locations



Movement Numbering



Job number:

TRA/20/123

Client:

NRB Consulting Engineers

Job date:

November 2020

Job day

Midweek – School day

Drawing No:

TRA/20/123-01

Map – Survey Location

traffinomics



TRAFFINOMICS LIMITED

**DAWN MEATS, SLANE TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION TURNING COUNTS**

**NOVEMBER 2020
TRA/20/123**

SITE: 01

DATE: 11th November 2020

LOCATION: L1600/Yellow Furze Road

DAY: Wednesday

	MOVEMENT 1								MOVEMENT 2								MOVEMENT 3							
TIME	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU
07:30	0	0	25	10	0	1	36	37	0	0	5	0	0	0	5	5	0	0	6	2	0	2	10	12
07:45	0	0	26	5	0	0	31	31	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1
08:00	0	0	22	7	1	0	30	31	0	0	1	1	1	0	3	4	0	0	3	0	0	0	3	3
08:15	0	0	23	1	1	0	25	26	0	0	4	0	0	0	4	4	0	0	2	0	0	1	3	4
H/TOT	0	0	96	23	2	1	122	125	0	0	11	1	1	0	13	14	0	0	12	2	0	3	17	20
08:30	0	0	23	2	1	0	26	27	0	0	4	2	0	0	6	6	0	0	0	0	0	0	0	0
08:45	0	0	18	4	1	0	23	24	0	0	6	1	0	0	7	7	0	0	1	4	0	0	5	5
09:00	0	0	16	4	0	1	21	22	0	0	18	1	0	1	20	21	0	0	20	2	0	1	23	24
09:15	0	0	8	1	0	0	9	9	0	0	11	0	0	0	11	11	0	0	22	2	0	0	24	24
H/TOT	0	0	65	11	2	1	79	82	0	0	39	4	0	1	44	45	0	0	43	8	0	1	52	53
P/TOT	0	0	161	34	4	2	201	207	0	0	50	5	1	1	57	59	0	0	55	10	0	4	69	73
108								21								12								

TIME	MOVEMENT 1						TOT	PCU	MOVEMENT 2						TOT	PCU	MOVEMENT 3						TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS			PCL	MCL	CAR	LGV	HGV	BUS			PCL	MCL	CAR	LGV	HGV	BUS		
16:00	0	0	6	4	0	0	10	10	0	0	5	0	0	0	5	5	0	0	5	2	0	0	7	7
16:15	0	0	6	4	1	0	11	12	0	0	4	2	0	0	6	6	0	0	2	2	0	0	4	4
16:30	0	0	7	3	0	1	11	12	0	0	5	1	0	0	6	6	0	0	5	1	0	0	6	6
16:45	0	0	11	3	1	0	15	16	0	0	5	1	0	0	6	6	0	0	3	3	0	0	6	6
H/TOT	0	0	30	14	2	1	47	50	0	0	19	4	0	0	23	23	0	0	15	8	0	0	23	23
17:00	0	0	10	3	0	0	13	13	0	0	2	0	0	0	2	2	0	0	5	1	0	0	6	6
17:15	0	0	12	0	0	0	12	12	0	0	4	0	0	0	4	4	0	0	3	1	0	0	4	4
17:30	0	0	11	1	0	0	12	12	0	0	3	1	0	0	4	4	0	0	4	0	0	0	4	4
17:45	0	0	7	0	0	0	7	7	0	0	5	0	0	0	5	5	0	0	4	1	0	0	5	5
H/TOT	0	0	40	4	0	0	44	44	0	0	14	1	0	0	15	15	0	0	16	3	0	0	19	19
18:00	0	0	10	2	0	0	12	12	0	0	5	0	0	0	5	5	0	0	7	0	0	0	7	7
18:15	0	0	3	1	0	0	4	4	0	0	4	0	0	0	4	4	0	0	3	0	0	0	3	3
H/TOT	0	0	13	3	0	0	16	16	0	0	9	0	0	0	9	9	0	0	10	0	0	0	10	10
P/TOT	0	0	83	21	2	1	107	110	0	0	42	5	0	0	47	47	0	0	41	11	0	0	52	52

TRAFFINOMICS LIMITED

**DAWN MEATS, SLANE TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION TURNING COUNTS**

**NOVEMBER 2020
TRA/20/123**

SITE: 01

DATE: 11th November 2020

LOCATION: L1600/Yellow Furze Road

DAY: Wednesday

TIME	MOVEMENT 4						TOT	PCU	MOVEMENT 5						TOT	PCU	MOVEMENT 6						TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS			PCL	MCL	CAR	LGV	HGV	BUS			PCL	MCL	CAR	LGV	HGV	BUS		
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	2	0	0	8	8
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	3	1	2	25	28
08:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	13	2	1	0	16	17
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	0	0	6	6
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	8	2	2	55	59
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	3	1	0	15	16
08:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	8	4	2	0	14	16
09:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	10	3	1	0	14	15
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	5	1	1	17	19
H/TOT	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	0	0	39	15	5	1	60	66
P/TOT	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	0	0	82	23	7	3	115	125
							0								1								55	

TIME	MOVEMENT 4						TOT	PCU	MOVEMENT 5						TOT	PCU	MOVEMENT 6						TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS			PCL	MCL	CAR	LGV	HGV	BUS			PCL	MCL	CAR	LGV	HGV	BUS		
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	7	4	0	30	34
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	6	0	0	18	18
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	4	1	1	29	31
16:45	0	0	1	0	0	0	1	1	0	0	2	0	0	0	2	2	0	0	18	11	1	0	30	31
H/TOT	0	0	1	0	0	0	1	1	0	0	2	0	0	0	2	2	0	0	72	28	6	1	107	114
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	4	2	0	24	26
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	7	2	0	39	41
17:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	18	4	0	0	22	22
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32	6	0	0	38	38
H/TOT	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	98	21	4	0	123	127
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	3	0	0	29	29
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	4	0	0	21	21
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	7	0	0	50	50
P/TOT	0	0	1	0	0	0	1	1	0	0	3	0	0	0	3	3	0	0	213	56	10	1	280	291

TRAFFINOMICS LIMITED

**DAWN MEATS, SLANE TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION TURNING COUNTS**

**NOVEMBER 2020
TRA/20/123**

SITE: 02

DATE: 11th November 2020

LOCATION: Yellow Furze Village Junction

DAY: Wednesday

	MOVEMENT 1								MOVEMENT 2								MOVEMENT 3							
TIME	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU
07:30	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	6	0	0	5	1	0	1	7	8
07:45	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3	0	0	0	0	0	0	0	0
08:00	0	0	0	1	0	0	1	1	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	5	0	0	0	0	0	1	1	2
H/TOT	0	0	0	1	0	0	1	1	0	0	14	0	1	0	15	16	0	0	5	1	0	2	8	10
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	1	0	0	1	1	0	0	6	1	0	0	7	7	0	0	1	3	0	0	4	4
09:00	0	0	2	0	0	0	2	2	0	0	24	3	0	1	28	29	0	0	17	2	0	1	20	21
09:15	0	0	0	0	0	0	0	0	0	0	15	0	0	0	15	15	0	0	24	2	0	0	26	26
H/TOT	0	0	2	1	0	0	3	3	0	0	45	4	0	1	50	51	0	0	42	7	0	1	50	51
P/TOT	0	0	2	2	0	0	4	4	0	0	59	4	1	1	65	67	0	0	47	8	0	3	58	61
2								14								6								

TIME	MOVEMENT 1						TOT	PCU	MOVEMENT 2						TOT	PCU	MOVEMENT 3						TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS			PCL	MCL	CAR	LGV	HGV	BUS			PCL	MCL	CAR	LGV	HGV	BUS		
16:00	0	0	1	0	0	0	1	1	0	0	4	0	0	0	4	4	0	0	3	2	0	0	5	5
16:15	0	0	0	0	0	0	0	0	0	0	4	1	0	0	5	5	0	0	3	2	0	0	5	5
16:30	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	3	0	0	6	1	0	0	7	7
16:45	0	0	1	0	0	0	1	1	0	0	3	1	0	0	4	4	0	0	7	3	0	0	10	10
H/TOT	0	0	2	0	0	0	2	2	0	0	12	4	0	0	16	16	0	0	19	8	0	0	27	27
17:00	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	3	3	0	0	6	6
17:15	0	0	1	0	0	0	1	1	0	0	2	1	0	0	3	3	0	0	2	0	0	0	2	2
17:30	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	2	1	0	0	3	3
17:45	0	0	2	0	0	0	2	2	0	0	2	0	0	0	2	2	0	0	3	1	0	0	4	4
H/TOT	0	0	5	0	0	0	5	5	0	0	6	1	0	0	7	7	0	0	10	5	0	0	15	15
18:00	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	0	0	4	0	0	0	4	4
18:15	0	0	2	0	0	0	2	2	0	0	3	0	0	0	3	3	0	0	2	0	0	0	2	2
H/TOT	0	0	2	0	0	0	2	2	0	0	5	0	0	0	5	5	0	0	6	0	0	0	6	6
P/TOT	0	0	9	0	0	0	9	9	0	0	23	5	0	0	28	28	0	0	35	13	0	0	48	48

TRAFFINOMICS LIMITED

**DAWN MEATS, SLANE TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION TURNING COUNTS**

**NOVEMBER 2020
TRA/20/123**

SITE: 02

DATE: 11th November 2020

LOCATION: Yellow Furze Village Junction

DAY: Wednesday

TIME	MOVEMENT 4							PCU	MOVEMENT 5							PCU	MOVEMENT 6							PCU
	PCL	MCL	CAR	LGV	HGV	BUS	TOT		PCL	MCL	CAR	LGV	HGV	BUS	TOT		PCL	MCL	CAR	LGV	HGV	BUS	TOT	
07:30	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	0	1	0	1	2	3
07:45	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1
08:00	0	0	0	0	0	0	1	0	0	0	2	0	0	0	2	2	0	0	4	0	0	0	4	4
08:15	0	0	1	0	0	0	1	1	0	0	0	0	1	0	1	2	0	0	1	0	0	0	1	1
H/TOT	0	0	3	0	0	0	3	3	0	0	4	0	1	0	5	6	0	0	6	1	0	1	8	9
08:30	0	0	3	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
09:00	0	0	5	0	0	0	5	5	0	0	10	0	0	0	10	10	0	0	1	0	0	0	1	1
09:15	0	0	13	1	0	0	14	14	0	0	6	1	0	0	7	7	0	0	0	0	0	0	0	0
H/TOT	0	0	23	1	0	0	24	24	0	0	16	1	0	0	17	17	0	0	1	1	0	0	2	2
P/TOT	0	0	26	1	0	0	27	27	0	0	20	1	1	0	22	23	0	0	7	2	0	1	10	11
6									4								6							

TIME	MOVEMENT 4							PCU	MOVEMENT 5							PCU	MOVEMENT 6							PCU
	PCL	MCL	CAR	LGV	HGV	BUS	TOT		PCL	MCL	CAR	LGV	HGV	BUS	TOT		PCL	MCL	CAR	LGV	HGV	BUS	TOT	
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
16:15	0	0	1	1	0	0	2	2	0	0	1	0	0	0	1	1	0	0	0	1	0	0	1	1
16:30	0	0	3	0	0	0	3	3	0	0	3	1	0	0	4	4	0	0	0	0	0	0	0	0
16:45	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
H/TOT	0	0	6	1	0	0	7	7	0	0	4	1	0	0	5	5	0	0	2	1	0	0	3	3
17:00	0	0	3	0	0	0	3	3	0	0	2	0	0	0	2	2	0	0	1	0	0	0	1	1
17:15	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
17:45	0	0	0	2	0	0	2	2	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0
H/TOT	0	0	4	2	0	0	6	6	0	0	5	0	0	0	5	5	0	0	2	0	0	0	2	2
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
18:15	0	0	2	0	0	0	2	2	0	0	1	1	0	0	2	2	0	0	1	0	0	0	1	1
H/TOT	0	0	2	0	0	0	2	2	0	0	1	1	0	0	2	2	0	0	2	0	0	0	2	2
P/TOT	0	0	12	3	0	0	15	15	0	0	10	2	0	0	12	12	0	0	6	1	0	0	7	7

TRAFFINOMICS LIMITED

**DAWN MEATS, SLANE TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION TURNING COUNTS**

**NOVEMBER 2020
TRA/20/123**

SITE: 03

DATE: 11th November 2020

LOCATION: L1013/Windmill Road

DAY: Wednesday

	MOVEMENT 1								MOVEMENT 2								MOVEMENT 3							
TIME	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU
07:30	0	0	1	0	1	0	2	3	0	0	0	1	0	0	1	1	0	0	1	0	0	0	1	1
07:45	0	0	1	1	0	0	2	2	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1
08:00	0	0	6	0	3	0	9	12	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
08:15	0	0	1	2	1	0	4	5	0	0	2	0	1	0	3	4	0	0	0	0	0	0	0	0
H/TOT	0	0	9	3	5	0	17	22	0	0	3	1	1	0	5	6	0	0	3	0	0	0	3	3
08:30	0	0	2	0	1	0	3	4	0	0	1	0	0	0	1	1	0	0	2	1	0	0	3	3
08:45	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
09:00	0	0	3	0	0	0	3	3	0	0	2	0	0	0	2	2	0	0	1	0	0	0	1	1
09:15	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	0	0	1	0	0	0	1	1
H/TOT	0	0	7	0	1	0	8	9	0	0	5	0	0	0	5	5	0	0	5	1	0	0	6	6
P/TOT	0	0	16	3	6	0	25	31	0	0	8	1	1	0	10	11	0	0	8	1	0	0	9	9
23								5								5								

TIME	MOVEMENT 1						TOT	PCU	MOVEMENT 2						TOT	PCU	MOVEMENT 3						TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS			PCL	MCL	CAR	LGV	HGV	BUS			PCL	MCL	CAR	LGV	HGV	BUS		
16:00	0	0	2	1	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
16:15	0	0	1	0	1	0	2	3	0	0	1	0	0	0	1	1	0	0	2	0	0	0	2	2
16:30	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
16:45	0	0	1	3	0	0	4	4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
H/TOT	0	0	6	4	1	0	11	12	0	0	1	0	0	0	1	1	1	0	3	0	1	0	5	5
17:00	0	0	6	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
17:15	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1
17:30	0	0	0	0	2	0	2	4	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1
17:45	0	0	1	0	0	0	1	1	0	0	3	0	0	0	3	3	0	0	3	0	0	0	3	3
H/TOT	0	0	8	0	2	0	10	12	0	0	5	0	0	0	5	5	0	0	7	0	0	0	7	7
18:00	0	0	2	0	1	0	3	4	0	0	2	0	0	0	2	2	0	0	3	0	1	0	4	5
18:15	0	0	3	0	2	0	5	7	0	0	6	1	1	0	8	9	0	0	2	0	0	0	2	2
H/TOT	0	0	5	0	3	0	8	11	0	0	8	1	1	0	10	11	0	0	5	0	1	0	6	7
P/TOT	0	0	19	4	6	0	29	35	0	0	14	1	1	0	16	17	1	0	15	0	2	0	18	19

TRAFFINOMICS LIMITED

**DAWN MEATS, SLANE TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION TURNING COUNTS**

**NOVEMBER 2020
TRA/20/123**

SITE: 03

DATE: 11th November 2020

LOCATION: L1013/Windmill Road

DAY: Wednesday

TIME	MOVEMENT 4						TOT	PCU	MOVEMENT 5						TOT	PCU	MOVEMENT 6						TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS			PCL	MCL	CAR	LGV	HGV	BUS			PCL	MCL	CAR	LGV	HGV	BUS		
07:30	0	0	16	2	1	1	20	22	0	0	4	1	0	1	6	7	0	0	1	0	0	0	1	1
07:45	0	0	15	4	0	0	19	19	0	0	13	4	1	0	18	19	0	0	1	0	1	0	2	3
08:00	0	0	19	5	3	0	1	30	0	0	14	2	3	0	19	22	0	0	3	3	3	0	9	12
08:15	0	0	7	0	1	0	8	9	0	0	14	3	1	0	18	19	0	0	2	0	1	0	3	4
H/TOT	0	0	57	11	5	1	74	80	0	0	45	10	5	1	61	67	0	0	7	3	5	0	15	20
08:30	0	0	10	2	2	0	14	16	0	0	7	3	0	0	10	10	0	0	1	3	0	0	4	4
08:45	0	0	11	2	0	1	14	15	0	0	9	2	2	1	14	17	0	0	0	0	0	0	0	0
09:00	0	0	14	1	3	2	20	25	0	0	20	1	1	0	22	23	0	0	1	1	0	0	2	2
09:15	0	0	13	2	1	0	16	17	0	0	7	6	1	0	14	15	0	0	4	2	2	0	8	10
H/TOT	0	0	48	7	6	3	64	73	0	0	43	12	4	1	60	65	0	0	6	6	2	0	14	16
P/TOT	0	0	105	18	11	4	138	153	0	0	88	22	9	2	121	132	0	0	13	9	7	0	29	36
								70									68							20

TIME	MOVEMENT 4						TOT	PCU	MOVEMENT 5						TOT	PCU	MOVEMENT 6						TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS			PCL	MCL	CAR	LGV	HGV	BUS			PCL	MCL	CAR	LGV	HGV	BUS		
16:00	0	0	10	4	1	0	15	16	0	0	9	2	3	0	14	17	0	0	1	0	0	0	1	1
16:15	0	0	8	2	2	0	12	14	0	0	21	6	2	1	30	33	0	0	1	0	0	0	1	1
16:30	0	0	15	3	0	0	18	18	1	0	14	6	2	1	24	26	0	0	0	0	0	0	0	0
16:45	0	0	12	2	3	0	17	20	0	0	5	6	0	1	12	13	0	0	4	0	0	0	4	4
H/TOT	0	0	45	11	6	0	62	68	1	0	49	20	7	3	80	89	0	0	6	0	0	0	6	6
17:00	0	0	12	1	1	0	14	15	0	0	15	4	0	0	19	19	0	0	3	0	0	0	3	3
17:15	0	0	13	3	1	0	17	18	0	0	16	3	0	0	19	19	0	0	1	0	0	0	1	1
17:30	0	0	15	1	1	0	17	18	0	0	16	4	0	0	20	20	0	0	0	0	0	0	0	0
17:45	0	0	10	1	0	0	11	11	0	0	12	1	0	0	13	13	0	0	0	0	1	0	1	2
H/TOT	0	0	50	6	3	0	59	62	0	0	59	12	0	0	71	71	0	0	4	0	1	0	5	6
18:00	0	0	4	0	0	0	4	4	0	0	12	2	2	0	16	18	0	0	0	0	3	0	3	6
18:15	0	0	10	0	2	0	12	14	0	0	17	4	0	0	21	21	0	0	2	0	1	0	3	4
H/TOT	0	0	14	0	2	0	16	18	0	0	29	6	2	0	37	39	0	0	2	0	4	0	6	10
P/TOT	0	0	109	17	11	0	137	148	1	0	137	38	9	3	188	199	0	0	12	0	5	0	17	22

TRAFFINOMICS LIMITED

DAWN MEATS, SLANE TRAFFIC COUNTS
MANUAL CLASSIFIED ENTRY/EXIT COUNTS

NOVEMBER 2020
TRA/20/123

SITE: ATC Location

DATE:

LOCATION: Dawn Meats Access

DAY:

Wednesday

TIME	ENTRY						TOT	PCU	EXIT						TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS			PCL	MCL	CAR	LGV	HGV	BUS		
00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
02:45	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0
H/TOT	0	0	3	0	0	0	3	3	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
H/TOT	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
04:00	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
04:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0
H/TOT	0	0	3	0	0	0	3	3	0	0	0	0	0	0	0	0
05:00	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
05:15	0	0	4	0	0	0	4	4	0	0	0	0	0	0	0	0
05:30	0	0	3	0	0	0	3	3	0	0	0	0	0	0	0	0
05:45	0	0	7	0	0	0	7	7	0	0	1	0	0	0	1	1
H/TOT	0	0	15	0	0	0	15	15	0	0	1	0	0	0	1	1
06:00	0	0	4	0	1	0	5	6	0	0	0	0	0	0	0	0
06:15	0	0	3	0	0	0	3	3	0	0	0	0	1	0	1	2
06:30	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0
06:45	0	0	4	0	0	0	4	4	0	0	0	0	0	0	0	0
H/TOT	0	0	13	0	1	0	14	15	0	0	0	0	1	0	1	2
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	1	2	1	0	4	5	0	0	0	0	0	0	0	0
07:30	0	0	1	1	0	0	2	2	0	0	0	2	1	0	3	4
07:45	0	0	1	1	0	0	2	2	0	0	0	1	0	0	1	1
H/TOT	0	0	3	4	1	0	8	9	0	0	0	3	1	0	4	5

TRAFFINOMICS LIMITED

DAWN MEATS, SLANE TRAFFIC COUNTS
MANUAL CLASSIFIED ENTRY/EXIT COUNTS

NOVEMBER 2020
TRA/20/123

SITE: ATC Location

DATE:

LOCATION: Dawn Meats Access

DAY:

Wednesday

TIME	ENTRY						TOT	PCU	EXIT						TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS			PCL	MCL	CAR	LGV	HGV	BUS		
08:00	0	0	2	1	1	0	4	5	0	0	0	1	0	0	1	1
08:15	0	0	2	0	1	0	3	4	0	0	1	0	1	0	2	3
08:30	0	0	5	0	1	0	6	7	0	0	0	0	0	0	0	0
08:45	0	0	0	1	0	0	1	1	0	0	3	0	2	0	5	7
H/TOT	0	0	9	2	3	0	14	17	0	0	4	1	3	0	8	11
09:00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
09:15	0	0	1	1	0	0	2	2	0	0	1	0	0	0	1	1
09:30	0	0	2	1	2	0	5	7	0	0	1	2	0	0	3	3
09:45	0	0	2	1	3	0	6	9	0	0	1	1	2	0	4	6
H/TOT	0	0	5	3	5	0	13	18	0	0	3	5	2	0	10	12
10:00	0	0	3	0	1	0	4	5	0	0	4	0	2	0	6	8
10:15	0	0	2	0	0	0	2	2	0	0	2	0	1	0	3	4
10:30	0	0	2	1	2	0	5	7	0	0	0	0	1	0	1	2
10:45	0	0	0	1	0	0	1	1	0	0	0	2	0	0	2	2
H/TOT	0	0	7	2	3	0	12	15	0	0	6	2	4	0	12	16
11:00	0	0	1	0	2	0	3	5	0	0	0	0	1	0	1	2
11:15	0	0	1	0	0	0	1	1	0	0	0	0	2	0	2	4
11:30	0	0	1	0	2	0	3	5	0	0	0	0	2	0	2	4
11:45	0	0	0	1	2	0	3	5	0	0	0	0	0	0	0	0
H/TOT	0	0	3	1	6	0	10	16	0	0	0	0	5	0	5	10
12:00	0	0	2	0	1	0	3	4	0	0	2	1	2	0	5	7
12:15	0	0	1	1	1	0	3	4	0	0	0	0	1	0	1	2
12:30	0	0	0	0	0	0	0	0	0	0	2	0	1	0	3	4
12:45	0	0	3	0	1	0	4	5	0	0	2	0	1	0	3	4
H/TOT	0	0	6	1	3	0	10	13	0	0	6	1	5	0	12	17
13:00	0	0	1	0	2	0	3	5	0	0	1	0	0	0	1	1
13:15	0	0	2	1	0	0	3	3	0	0	7	3	1	0	11	12
13:30	0	0	1	0	0	0	1	1	0	0	1	0	1	0	2	3
13:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
H/TOT	0	0	4	1	2	0	7	9	0	0	10	3	2	0	15	17
14:00	0	0	1	1	2	0	4	6	0	0	1	0	1	0	2	3
14:15	0	0	0	0	1	0	1	2	0	0	2	1	0	0	3	3
14:30	0	0	1	0	1	0	2	3	0	0	4	0	1	0	5	6
14:45	0	0	0	1	0	0	1	1	0	0	5	0	0	0	5	5
H/TOT	0	0	2	2	4	0	8	12	0	0	12	1	2	0	15	17
15:00	0	0	1	0	2	0	3	5	0	0	7	0	3	0	10	13
15:15	0	0	2	0	0	0	2	2	0	0	4	0	0	0	4	4
15:30	0	0	0	0	2	0	2	4	0	0	5	0	1	0	6	7
15:45	0	0	0	1	1	0	2	3	0	0	3	0	0	0	3	3
H/TOT	0	0	3	1	5	0	9	14	0	0	19	0	4	0	23	27

TRAFFINOMICS LIMITED

DAWN MEATS, SLANE TRAFFIC COUNTS
MANUAL CLASSIFIED ENTRY/EXIT COUNTS

NOVEMBER 2020
TRA/20/123

SITE: ATC

DATE:

LOCATION: Dawn Meats Access

DAY:

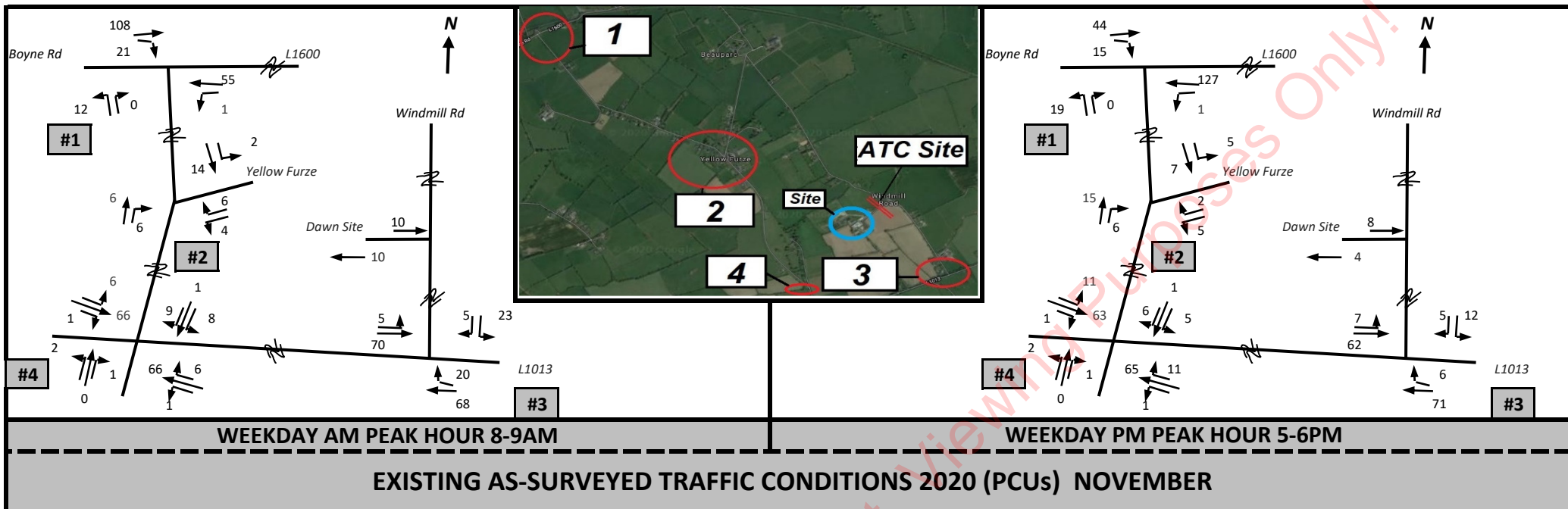
Wednesday

TIME	ENTRY						TOT	PCU	EXIT						TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS			PCL	MCL	CAR	LGV	HGV	BUS		
16:00	0	0	1	0	0	0	1	1	0	0	1	0	1	0	2	3
16:15	0	0	0	0	0	0	0	0	0	0	1	1	3	0	5	8
16:30	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	5
16:45	0	0	2	0	1	0	3	4	0	0	2	0	0	0	2	2
H/TOT	0	0	3	0	1	0	4	5	0	0	9	1	4	0	14	18
17:00	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
17:15	0	0	2	0	1	0	3	4	0	0	0	0	1	0	1	2
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
H/TOT	0	0	2	0	1	0	3	4	0	0	6	0	1	0	7	8
18:00	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0
18:15	0	0	0	2	1	0	3	4	0	0	0	0	2	0	2	4
18:30	0	0	1	0	2	0	3	5	0	0	1	0	2	0	3	5
18:45	0	0	0	0	2	0	2	4	0	0	0	0	1	0	1	2
H/TOT	0	0	1	2	6	0	9	15	0	0	1	0	5	0	6	11
19:00	0	0	0	0	1	0	1	2	0	0	1	0	2	0	3	5
19:15	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
19:30	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0
19:45	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	3	0	3	6	0	0	1	0	4	0	5	9
20:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20:15	0	0	0	1	0	0	1	1	0	0	0	0	1	0	1	2
20:30	0	0	0	0	1	0	1	2	0	0	0	1	1	0	2	3
20:45	0	0	0	0	1	0	1	2	0	0	0	1	0	0	1	1
H/TOT	0	0	0	1	2	0	3	5	0	0	0	2	2	0	4	6
21:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
21:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
22:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:15	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
23:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:45	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	1	0	1	2	0	0	2	0	0	0	2	2

APPENDIX C

Traffic Surveys, Trip Distribution & Network Traffic Flow Diagrams

Meath CC, Planning Department, Viewing Purposes Only!



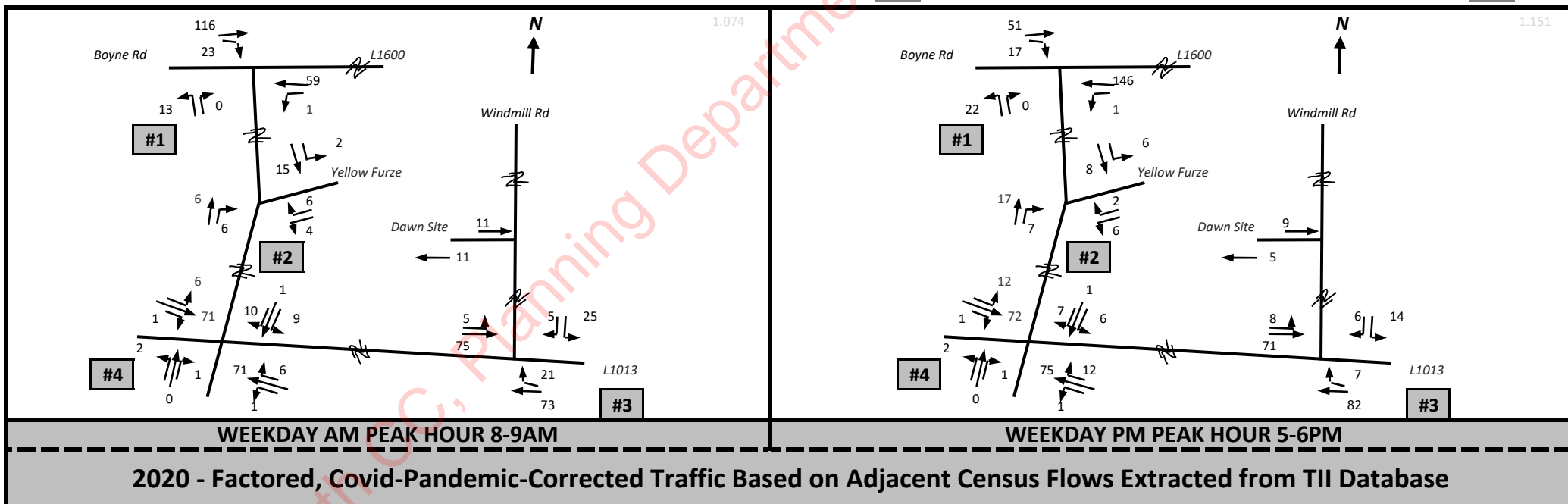
M7 NRA/TII Counter Data Information
(N2 Ashbourne/Slane)

Wed 11-Nov-20 AM Pk AADT= 653
Wed 13-Nov-19 AM Pk AADT= 701

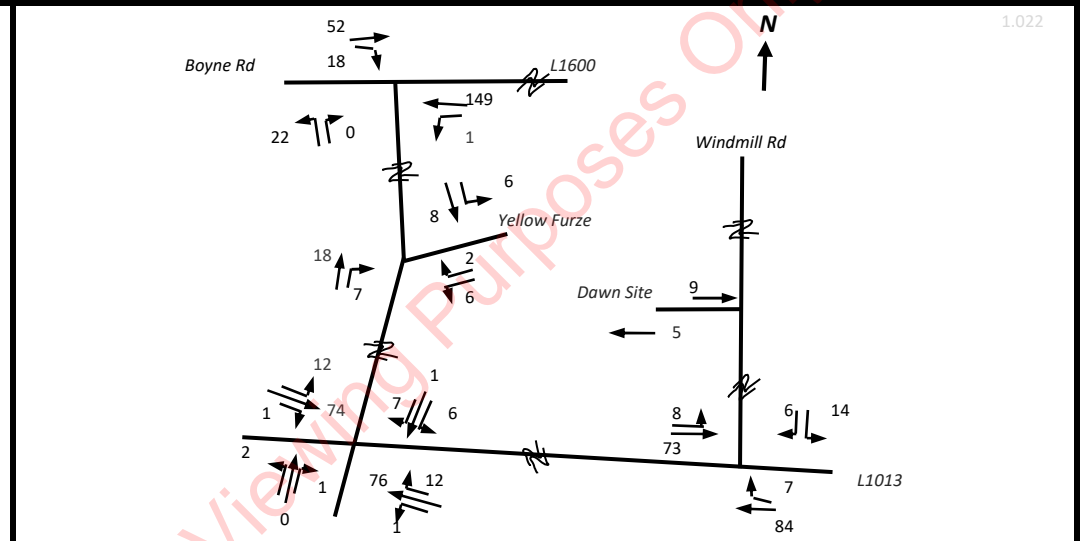
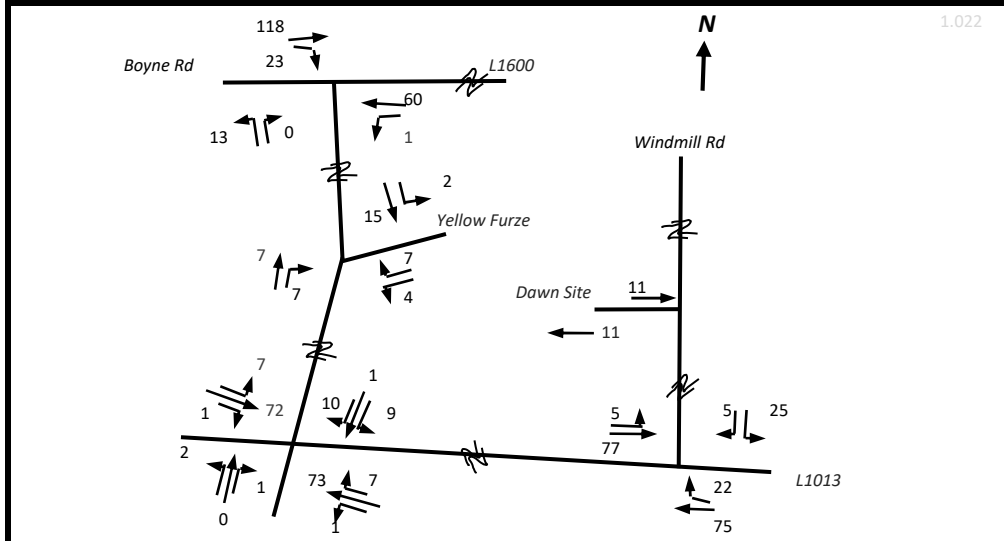
AM Covid Factor
1.074

Wed 11-Nov-20 PM Pk AADT= 654
Wed 13-Nov-19 PM Pk AADT= 753

PM Covid Factor
1.151



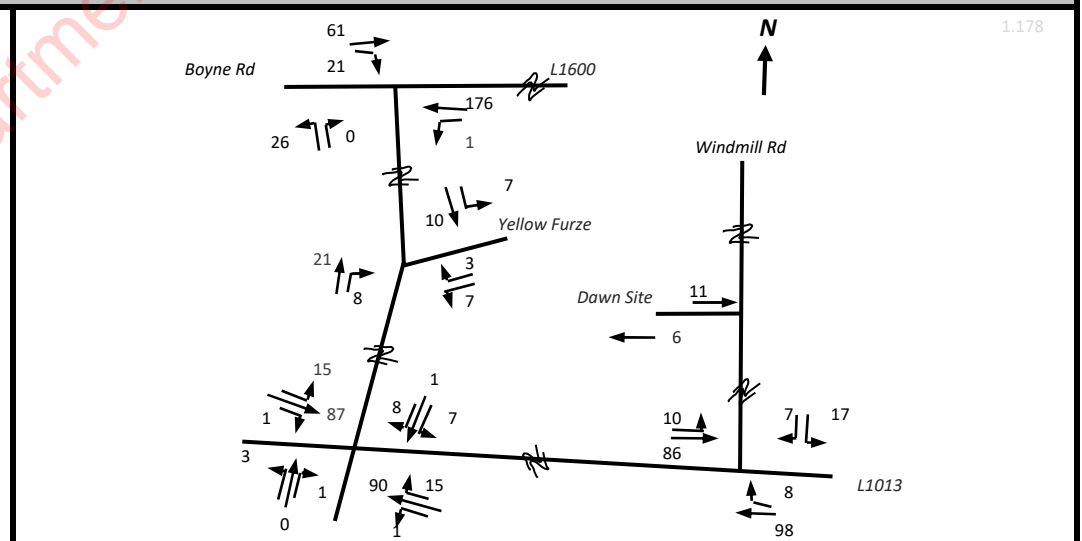
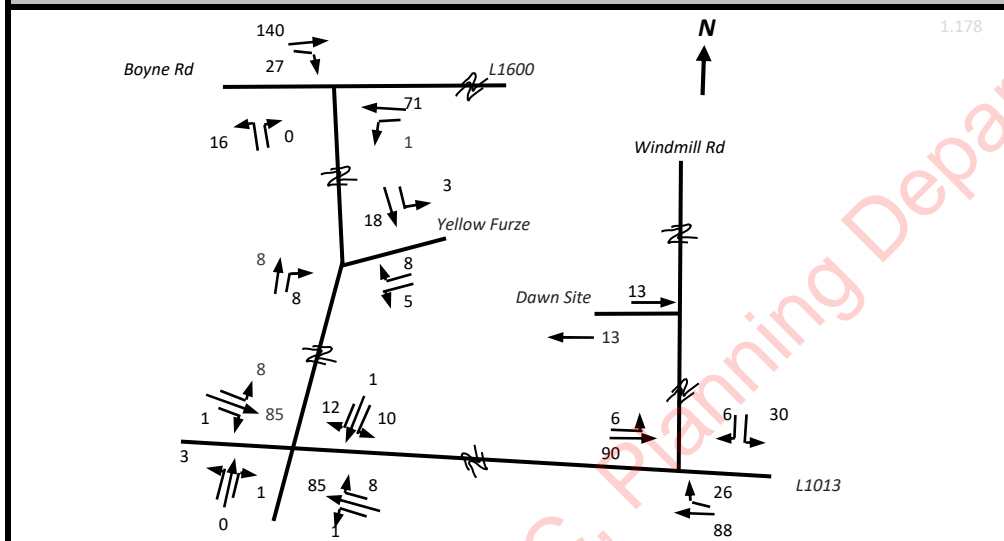
5.3.2: Link-Based Growth Rates: Annual Growth Factors) Meath



WEEKDAY AM PEAK HOUR 8-9AM

WEEKDAY PM PEAK HOUR 5-6PM

PROJECTED CONSTRUCTION YEAR TRAFFIC CONDITIONS 2022 (PCUs) - WITHOUT CONSTRUCTION TRAFFIC



WEEKDAY AM PEAK HOUR 8-9AM

WEEKDAY PM PEAK HOUR 5-6PM

PROJECTED DESIGN YEAR TRAFFIC CONDITIONS 2037 (PCUs) - WITHOUT CONSTRUCTION TRAFFIC

24 Hr AADT Traffic Volumes Generated by Construction Operations		
Construction Activity	Movements Generated	
	LGV	HGV
Extension to WWTP (Phase 1)	40	30
Rising Main Pipeline	60	40

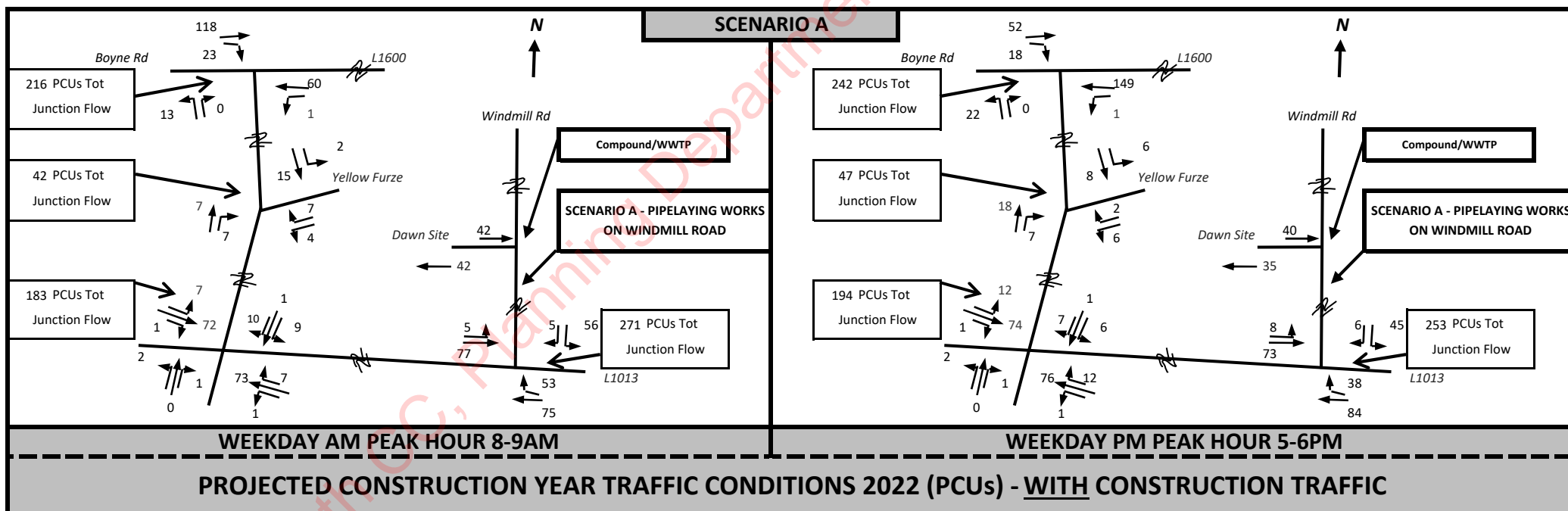
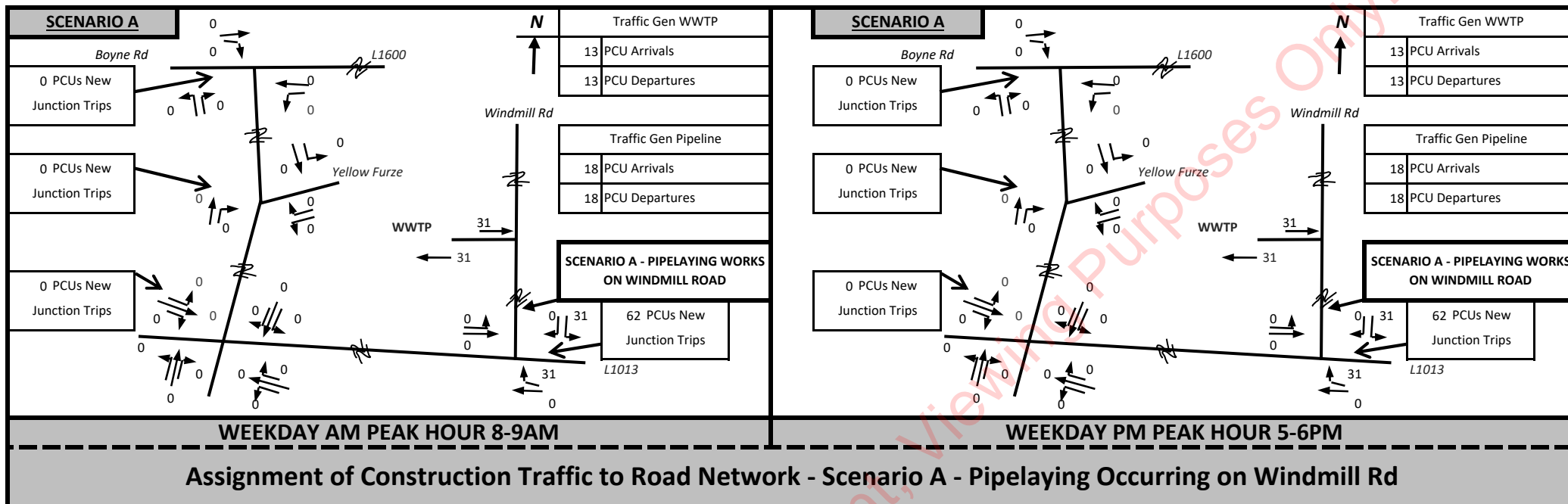
Table 3-1: Annual Average Daily Traffic (Construction Traffic)

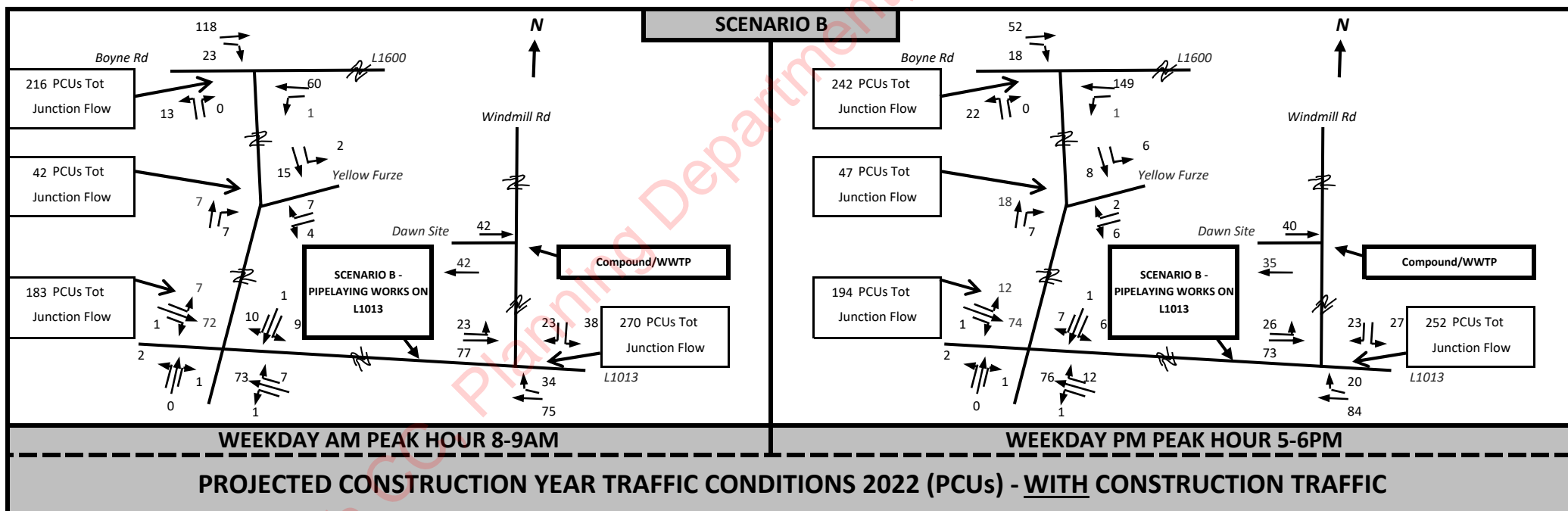
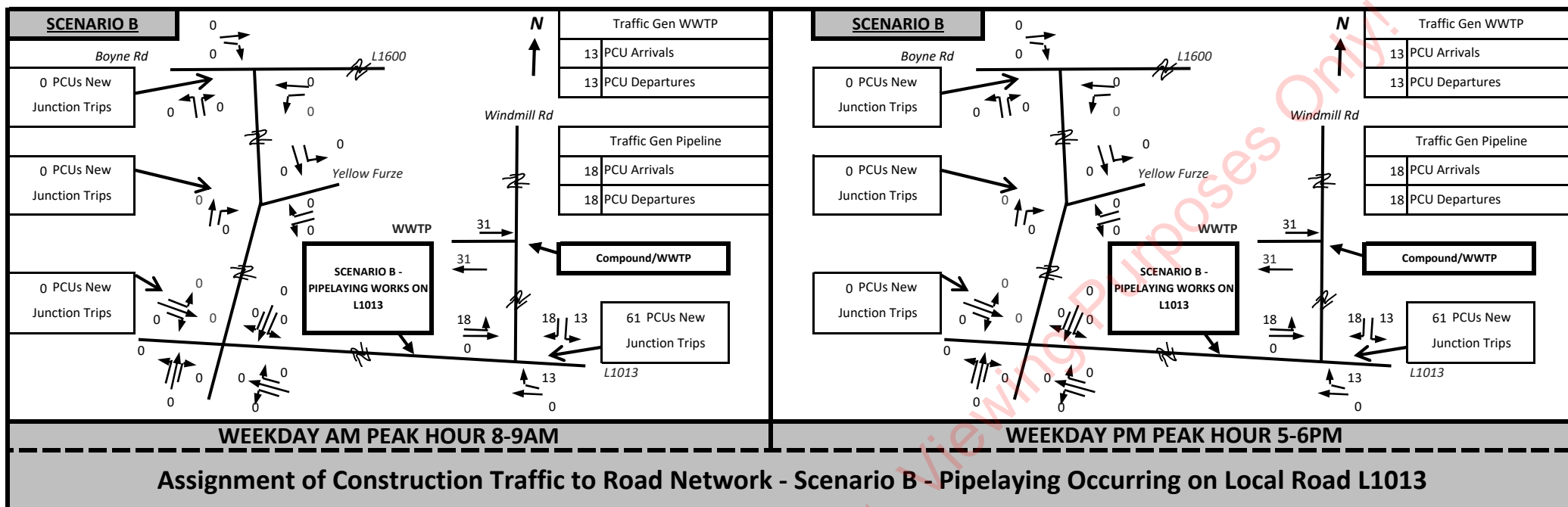
Converting to PCUS & Commuter Peak Flows.....

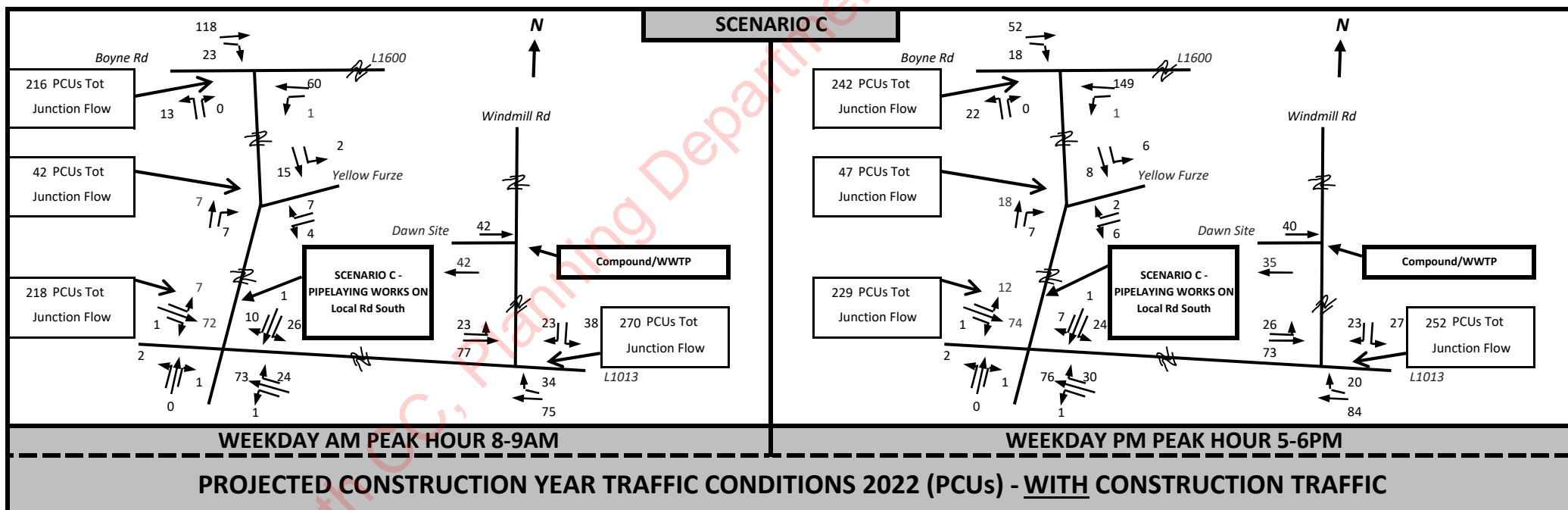
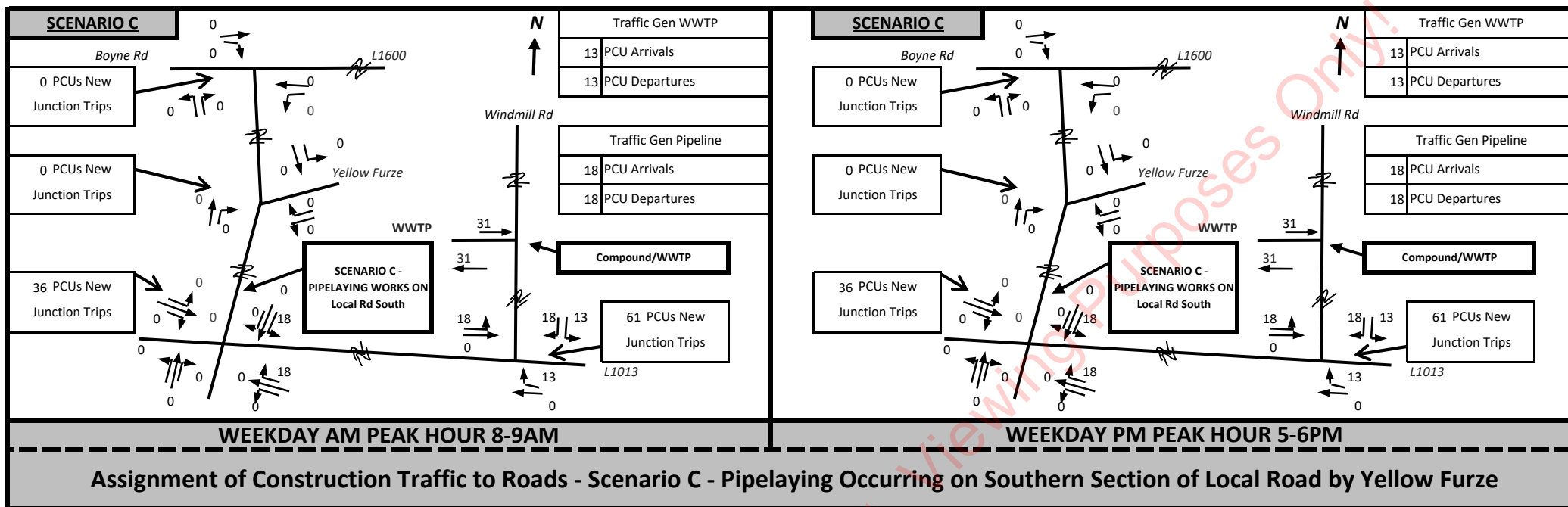
WWTP EXTENSION		
Network Period	Arrivals	Departures
	(PCUs)	(PCUs)
24 Hr AADT	100	100
Weekday AM Peak Hr*	13	13
Weekday PM Peak Hr*	13	13

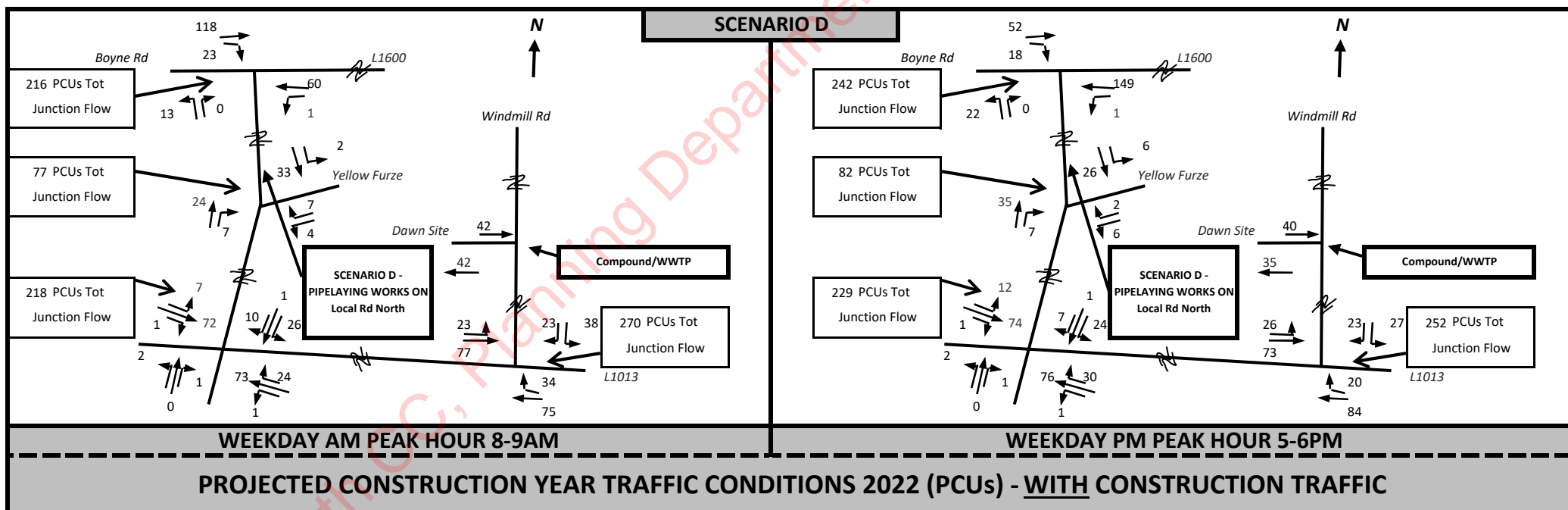
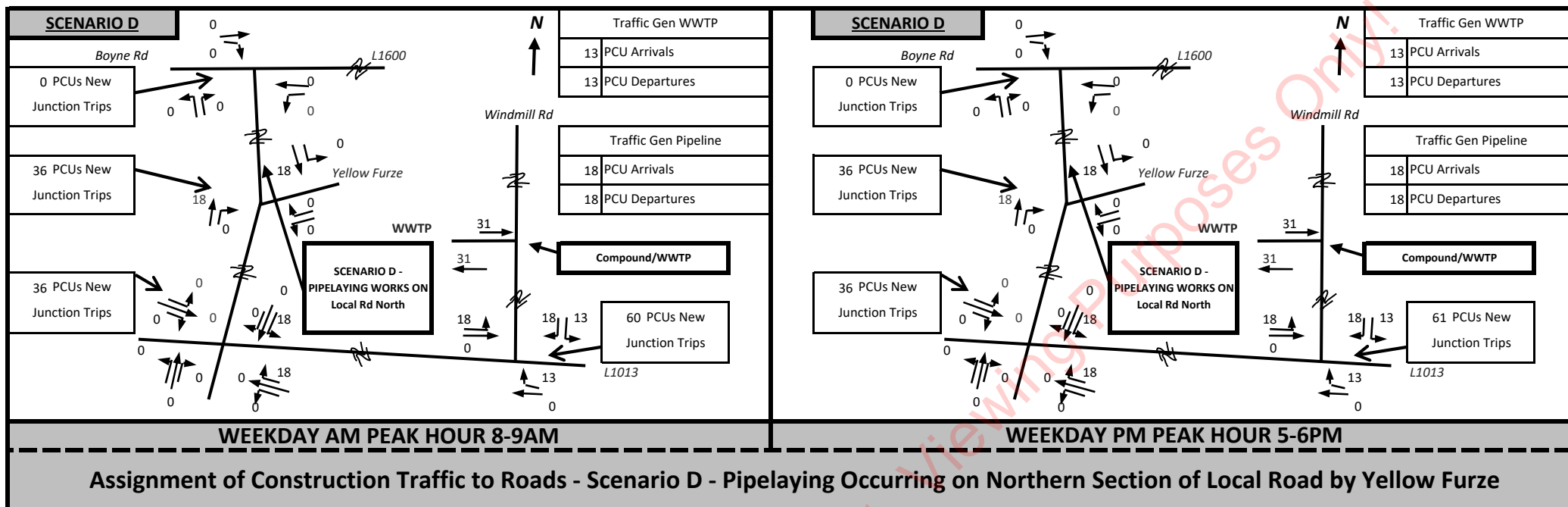
RISING MAIN PIPELINE		
Network Period	Arrivals	Departures
	(PCUs)	(PCUs)
24 Hr AADT	140	140
Weekday AM Peak Hr*	18	18
Weekday PM Peak Hr*	18	18

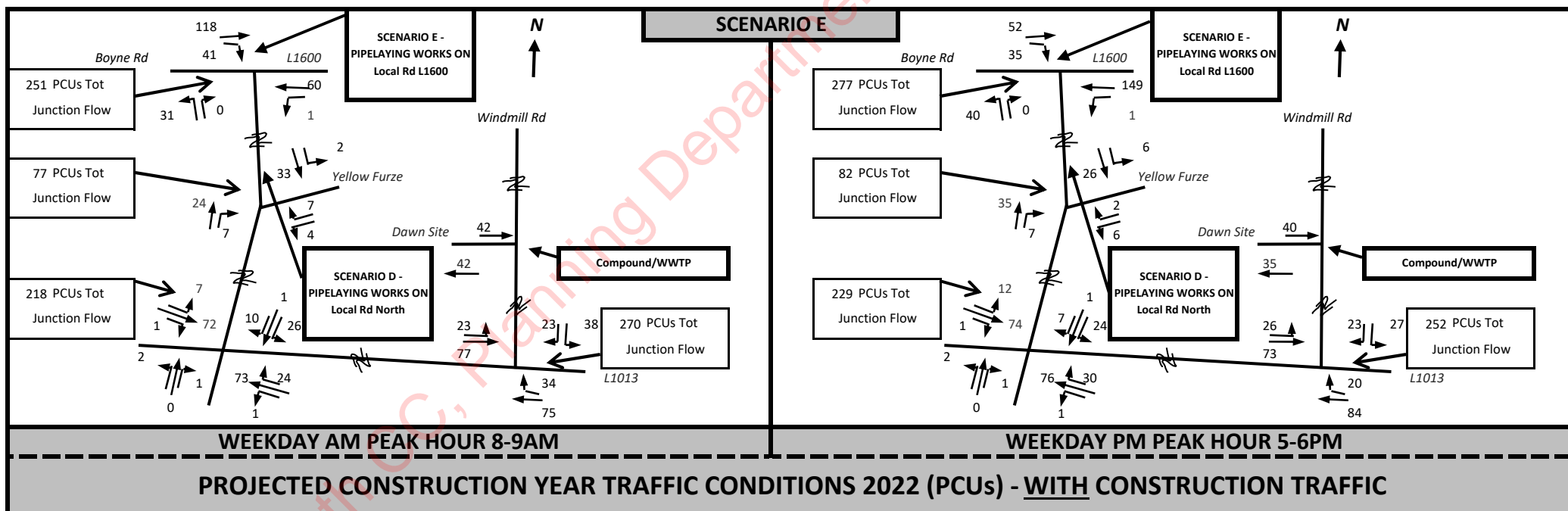
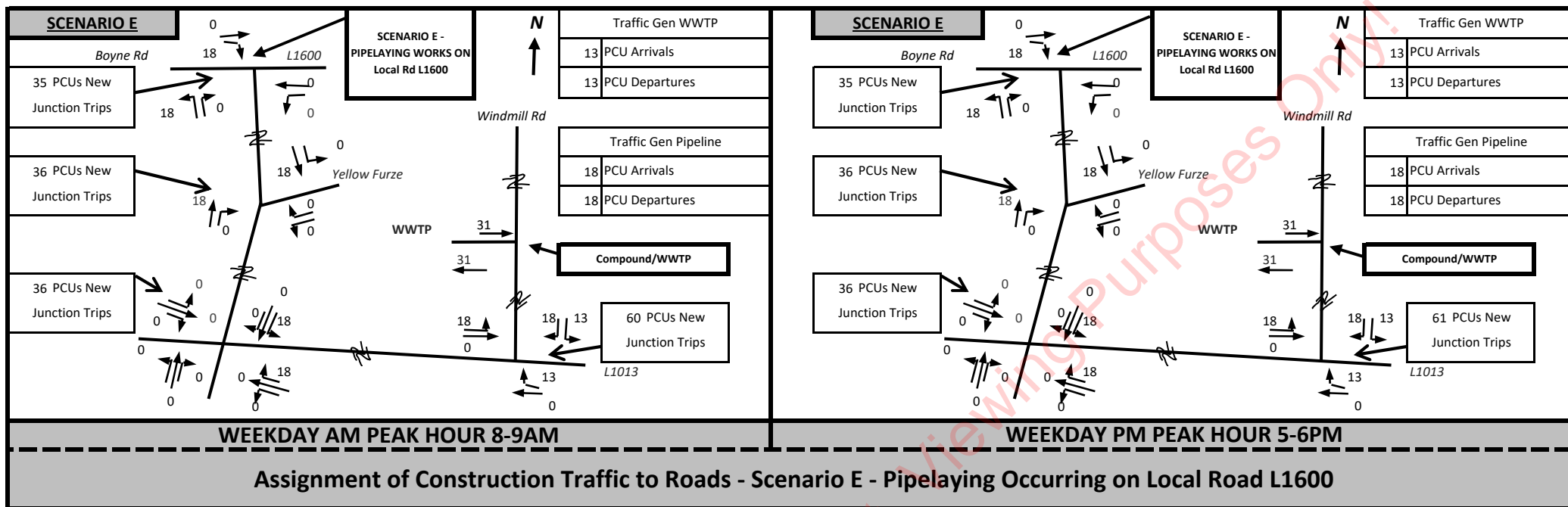
* Industry Standard Method of Calculating Weekday Peak Hr is to Divide 24Hr AADT by 10 - We have Divided by 8 for Robustness, giving higher Peak Hr Flow Volumes











APPENDIX D

PiCADY Junction Capacity Model Output Existing Windmill Rd/L1013

Established T Junction Leading to Dawn Plant
Summary PICADY Results in Order as included herein
(Robust & Worst Case – Being “Scenario E”)
SELECTED CONSTRUCTION YEAR 2022

Modelled Scenario	Period Mean Max Q (PCUs)	Period Max RFC
2022 Construction Year AM Peak	<1	0.11
2022 Construction Year PM Peak	<1	0.10

All Results Above are way below the recommended RFC of 0.85 (85% Capacity) and therefore no problems whatsoever are anticipated at the Junction in terms of Capacity or excessive vehicle Queues

NB Any Small Changes to Selected Construction Year 2022 or indeed significantly higher traffic volumes experienced, will clearly have no significant implications in terms of the conclusions of the Study in Light of the Favourable Results.

Junctions 9
PICADY 9 - Priority Intersection Module
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Filename: 2022 AM PM Worst Case.j9

Path: C:\Users\Eoin\NRB Consulting Engineers Ltd\NRB Server - Documents\2020\20-070 Dawn Slane\Calculations\Windmill L1013 Picadys

Report generation date: 13/12/2020 12:32:10

»2022, AM

»2022, PM

Summary of junction performance

	AM				PM			
	Q (PCU)	Delay (s)	RFC	LOS	Q (PCU)	Delay (s)	RFC	LOS
	2022							
Stream B-AC	0.1	7.45	0.11	A	0.1	7.42	0.10	A
Stream C-AB	0.1	6.76	0.06	A	0.0	6.60	0.04	A

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	09/12/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	NRB-004\Eoin
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Av. delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Calculate Q Percentiles	Calculate residual capacity	RFC Threshold	Av. Delay threshold (s)	Q threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022	AM	ONE HOUR	07:45	09:15	15
D2	2022	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Meath CC, Planning Department, Viewing Purposes Only!

2022, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Windmill Rd/L1013 T Junct	T-Junction	Two-way	2.54	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	L1013 West		Major
B	Windmill Rd to Dawn		Minor
C	L1013 to N2		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.00			100.0	✓	1.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	90	90

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	552	0.096	0.243	0.153	0.347
1	B-C	681	0.100	0.252	-	-
1	C-B	632	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	2022	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	Av. Demand (PCU/hr)	Scaling Factor (%)
A		✓	100	100.000
B		✓	61	100.000
C		✓	109	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	23	77
	B	23	0	38
	C	75	34	0

Vehicle Mix

HV %s

	To			
	A	B	C	
From	A	0	8	1
	B	8	0	8
	C	1	8	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS
B-AC	0.11	7.45	0.1	A
C-AB	0.06	6.76	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)	LOS
B-AC	46	601	0.076	46	0.1	6.998	A
C-AB	26	617	0.042	26	0.0	6.567	A
C-A	56			56			
A-B	17			17			
A-C	58			58			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	55	596	0.092	55	0.1	7.185	A
C-AB	31	615	0.050	31	0.1	6.650	A
C-A	67			67			
A-B	21			21			
A-C	69			69			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	67	589	0.114	67	0.1	7.445	A
C-AB	38	612	0.062	38	0.1	6.761	A
C-A	82			82			
A-B	25			25			
A-C	85			85			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	67	589	0.114	67	0.1	7.448	A
C-AB	38	612	0.062	38	0.1	6.761	A
C-A	82			82			
A-B	25			25			
A-C	85			85			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	55	596	0.092	55	0.1	7.191	A
C-AB	31	615	0.050	31	0.1	6.651	A
C-A	67			67			
A-B	21			21			
A-C	69			69			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	46	601	0.076	46	0.1	7.008	A
C-AB	26	617	0.042	26	0.0	6.571	A
C-A	56			56			
A-B	17			17			
A-C	58			58			

2022, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Windmill Rd/L1013 T Junct	T-Junction	Two-way	1.99	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	2022	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	Av. Demand (PCU/hr)	Scaling Factor (%)
A		✓	99	100.000
B		✓	50	100.000
C		✓	104	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A	B	C
	A	0	26	73
	B	23	0	27
	C	84	20	0

Vehicle Mix

HV %s

		To		
From		A	B	C
	A	0	8	1
	B	8	0	8
	C	1	8	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS
B-AC	0.10	7.42	0.1	A
C-AB	0.04	6.60	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)	LOS
B-AC	38	590	0.064	37	0.1	7.026	A
C-AB	15	616	0.025	15	0.0	6.463	A
C-A	63			63			
A-B	20			20			
A-C	55			55			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	45	586	0.077	45	0.1	7.188	A
C-AB	18	614	0.029	18	0.0	6.522	A
C-A	75			75			
A-B	23			23			
A-C	66			66			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	55	579	0.095	55	0.1	7.418	A
C-AB	22	611	0.036	22	0.0	6.602	A
C-A	92			92			
A-B	29			29			
A-C	80			80			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	55	579	0.095	55	0.1	7.418	A
C-AB	22	611	0.036	22	0.0	6.602	A
C-A	92			92			
A-B	29			29			
A-C	80			80			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	45	586	0.077	45	0.1	7.194	A
C-AB	18	614	0.029	18	0.0	6.522	A
C-A	75			75			
A-B	23			23			
A-C	66			66			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	38	590	0.064	38	0.1	7.036	A
C-AB	15	616	0.025	15	0.0	6.463	A
C-A	63			63			
A-B	20			20			
A-C	55			55			

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APPENDIX E

PiCADY Junction Capacity Model Output Existing L1013 Crossroads (Leading to Yellow Furze)

Established L1013 Crossroads Junction Leading to Yellow Furze
Summary PICADY Results in Order as included herein
(Robust & Worst Case – Being “Scenario E”)
SELECTED CONSTRUCTION YEAR 2022

Modelled Scenario	Period Mean Max Q (PCUs)	Period Max RFC
2022 Construction Year AM Peak	<1	0.07
2022 Construction Year PM Peak	<1	0.08

All Results Above are way below the recommended RFC of 0.85 (85% Capacity) and therefore no problems whatsoever are anticipated at the Junction in terms of Capacity or excessive vehicle Queues

NB Any Small Changes to Selected Construction Year 2022 or indeed significantly higher traffic volumes experienced, will clearly have no significant implications in terms of the conclusions of the Study in Light of the Favourable Results

Junctions 9				
PICADY 9 - Priority Intersection Module				
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Filename: 2022 AM PM Worst Case.j9

Path: C:\Users\Eoin\NRB Consulting Engineers Ltd\NRB Server - Documents\2020\20-070 Dawn Slane\Calculations\L1013

Junc Leading YF Picadys

Report generation date: 13/12/2020 12:35:02

»2022, AM

»2022, PM

Summary of junction performance

	AM				PM			
	Q (PCU)	Delay (s)	RFC	LOS	Q (PCU)	Delay (s)	RFC	LOS
2022								
Stream B-ACD	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream A-BCD	0.0	6.61	0.04	A	0.1	6.84	0.08	A
Stream D-ABC	0.1	6.74	0.07	A	0.1	6.66	0.06	A
Stream C-ABD	0.0	6.04	0.00	A	0.0	6.13	0.00	A

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	09/12/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	NRB-004\Eoin
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Av. delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Calculate Q Percentiles	Calculate residual capacity	RFC Threshold	Av. Delay threshold (s)	Q threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022	AM	ONE HOUR	07:45	09:15	15
D2	2022	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Meath CC, Planning Department, Viewing Purposes Only!

2022, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	L1013 Crossroads - Leading to Yellow Furze	Crossroads	Two-way	1.93	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	L1013 to Dawn and N2		Major
B	Local Road S		Minor
C	L1013 West Arm		Major
D	Local Road to Yellow Furze		Minor

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)
A	6.00			100.0	✓	1.00
C	6.00			100.0	✓	1.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	90	90
D	One lane	3.00	90	90

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	632	-	-	-	-	-	-	0.245	0.350	0.245	-	-	-
1	B-A	552	0.101	0.254	0.254	-	-	-	0.160	0.363	-	0.254	0.254	0.127
1	B-C	681	0.104	0.264	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	552	0.101	0.254	0.254	-	-	-	0.160	0.363	0.160	-	-	-
1	B-D, offside lane	552	0.101	0.254	0.254	-	-	-	0.160	0.363	0.160	-	-	-
1	C-B	632	0.245	0.245	0.350	-	-	-	-	-	-	-	-	-
1	D-A	681	-	-	-	-	-	-	0.264	-	0.104	-	-	-
1	D-B, nearside lane	552	0.160	0.160	0.363	-	-	-	0.254	0.254	0.101	-	-	-
1	D-B, offside lane	552	0.160	0.160	0.363	-	-	-	0.254	0.254	0.101	-	-	-
1	D-C	552	-	0.160	0.363	0.127	0.254	0.254	0.254	0.254	0.101	-	-	-

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	2022	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	Av. Demand (PCU/hr)	Scaling Factor (%)
A		✓	98	100.000
B		✓	3	100.000
C		✓	80	100.000
D		✓	37	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	A	B	C	D	
From	A	0	1	73	24
	B	1	0	2	0
	C	72	1	0	7
	D	26	1	10	0

Vehicle Mix

HV %s

	To				
	A	B	C	D	
From	A	0	8	8	8
	B	8	0	1	1
	C	8	1	0	1
	D	8	1	1	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS
B-ACD	0.00	0.00	0.0	A
A-BCD	0.04	6.61	0.0	A
A-B				
A-C				
D-ABC	0.07	6.74	0.1	A
C-ABD	0.00	6.04	0.0	A
C-D				
C-A				

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)	LOS
B-ACD	0	552	0.000	0	0.0	0.000	A
A-BCD	18	619	0.029	18	0.0	6.465	A
A-B	0.75			0.75			
A-C	55			55			
D-ABC	28	615	0.045	28	0.0	6.479	A
C-ABD	0.75	612	0.001	0.75	0.0	5.947	A
C-D	5			5			
C-A	54			54			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	546	0.000	0	0.0	0.000	A
A-BCD	22	617	0.035	22	0.0	6.528	A
A-B	0.90			0.90			
A-C	66			66			
D-ABC	33	611	0.054	33	0.1	6.589	A
C-ABD	0.90	608	0.001	0.90	0.0	5.987	A
C-D	6			6			
C-A	65			65			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	539	0.000	0	0.0	0.000	A
A-BCD	27	615	0.043	27	0.0	6.611	A
A-B	1			1			
A-C	80			80			
D-ABC	41	606	0.067	41	0.1	6.743	A
C-ABD	1	603	0.002	1	0.0	6.042	A
C-D	8			8			
C-A	79			79			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	539	0.000	0	0.0	0.000	A
A-BCD	27	615	0.043	27	0.0	6.611	A
A-B	1			1			
A-C	80			80			
D-ABC	41	606	0.067	41	0.1	6.743	A
C-ABD	1	603	0.002	1	0.0	6.042	A
C-D	8			8			
C-A	79			79			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	546	0.000	0	0.0	0.000	A
A-BCD	22	617	0.035	22	0.0	6.529	A
A-B	0.90			0.90			
A-C	66			66			
D-ABC	33	611	0.054	33	0.1	6.590	A
C-ABD	0.90	608	0.001	0.90	0.0	5.987	A
C-D	6			6			
C-A	65			65			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	552	0.000	0	0.0	0.000	A
A-BCD	18	619	0.029	18	0.0	6.468	A
A-B	0.75			0.75			
A-C	55			55			
D-ABC	28	615	0.045	28	0.1	6.483	A
C-ABD	0.75	612	0.001	0.75	0.0	5.950	A
C-D	5			5			
C-A	54			54			

2022, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	L1013 Crossroads - Leading to Yellow Furze	Crossroads	Two-way	2.16	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)
D2	2022	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	Av. Demand (PCU/hr)	Scaling Factor (%)
A		✓	120	100.000
B		✓	3	100.000
C		✓	87	100.000
D		✓	32	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	1	76	43
	B	1	0	2	0
	C	74	1	0	12
	D	24	1	7	0

Vehicle Mix

HV %s

		To			
		A	B	C	D
From	A	0	8	8	8
	B	8	0	1	1
	C	8	1	0	1
	D	8	1	1	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS
B-ACD	0.00	0.00	0.0	A
A-BCD	0.08	6.84	0.1	A
A-B				
A-C				
D-ABC	0.06	6.66	0.1	A
C-ABD	0.00	6.13	0.0	A
C-D				
C-A				

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)	LOS
B-ACD	0	548	0.000	0	0.0	0.000	A
A-BCD	33	620	0.053	32	0.1	6.617	A
A-B	0.75			0.75			
A-C	57			57			
D-ABC	24	620	0.039	24	0.0	6.407	A
C-ABD	0.75	606	0.001	0.75	0.0	6.002	A
C-D	9			9			
C-A	56			56			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	542	0.000	0	0.0	0.000	A
A-BCD	39	618	0.063	39	0.1	6.714	A
A-B	0.89			0.89			
A-C	68			68			
D-ABC	29	616	0.047	29	0.1	6.511	A
C-ABD	0.90	601	0.002	0.90	0.0	6.053	A
C-D	11			11			
C-A	67			67			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	533	0.000	0	0.0	0.000	A
A-BCD	48	616	0.078	48	0.1	6.840	A
A-B	1			1			
A-C	83			83			
D-ABC	35	609	0.058	35	0.1	6.656	A
C-ABD	1	595	0.002	1	0.0	6.125	A
C-D	13			13			
C-A	81			81			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	533	0.000	0	0.0	0.000	A
A-BCD	48	616	0.078	48	0.1	6.843	A
A-B	1			1			
A-C	83			83			
D-ABC	35	609	0.058	35	0.1	6.656	A
C-ABD	1	595	0.002	1	0.0	6.125	A
C-D	13			13			
C-A	81			81			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	542	0.000	0	0.0	0.000	A
A-BCD	39	618	0.063	39	0.1	6.716	A
A-B	0.89			0.89			
A-C	68			68			
D-ABC	29	616	0.047	29	0.1	6.515	A
C-ABD	0.90	601	0.002	0.90	0.0	6.056	A
C-D	11			11			
C-A	67			67			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	548	0.000	0	0.0	0.000	A
A-BCD	33	620	0.053	33	0.1	6.626	A
A-B	0.75			0.75			
A-C	57			57			
D-ABC	24	620	0.039	24	0.0	6.414	A
C-ABD	0.75	606	0.001	0.75	0.0	6.003	A
C-D	9			9			
C-A	56			56			

APPENDIX F

PiCADY Junction Capacity Model Output Existing T Junction at 'Yellow Furze'

Established T Junction at 'Yellow Furze'
Summary PiCADY Results in Order as included herein
(Robust & Worst Case – Being "Scenario E")
SELECTED CONSTRUCTION YEAR 2022

Modelled Scenario	Period Mean Max Q (PCUs)	Period Max RFC
2022 Construction Year AM Peak	<1	0.02
2022 Construction Year PM Peak	<1	0.01

All Results Above are way below the recommended RFC of 0.85 (85% Capacity) and therefore no problems whatsoever are anticipated at the Junction in terms of Capacity or excessive vehicle Queues

NB Any Small Changes to Selected Construction Year 2022 or indeed significantly higher traffic volumes experienced, will clearly have no significant implications in terms of the conclusions of the Study in Light of the Favourable Results.

Junctions 9				
PICADY 9 - Priority Intersection Module				
Version: 9.0.1.4646 [] © Copyright TRL Limited, 2020				
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Filename: 2022 AM PM Worst Case.j9

Path: C:\Users\Eoin\NRB Consulting Engineers Ltd\NRB Server - Documents\2020\20-070 Dawn Slane\Calculations\Yellow Furze Picadys

Report generation date: 13/12/2020 12:37:29

»2022, AM

»2022, PM

Summary of junction performance

	AM				PM			
	Q (PCU)	Delay (s)	RFC	LOS	Q (PCU)	Delay (s)	RFC	LOS
2022								
Stream B-AC	0.0	6.42	0.02	A	0.0	5.83	0.01	A
Stream C-AB	0.0	5.91	0.01	A	0.0	5.90	0.01	A

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	09/12/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	NRB-004\Eoin
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Av. delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Calculate Q Percentiles	Calculate residual capacity	RFC Threshold	Av. Delay threshold (s)	Q threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022	AM	ONE HOUR	07:45	09:15	15
D2	2022	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Meath CC, Planning Department, Viewing Purposes Only!

2022, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Yellow Furze T Junction at Local Road	T-Junction	Two-way	1.45	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Local Road N		Major
B	Minor Road Approach at YF		Minor
C	Local Road S		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.00			100.0	✓	1.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	90	90

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	552	0.096	0.243	0.153	0.347
1	B-C	681	0.100	0.252	-	-
1	C-B	632	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	2022	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	Av. Demand (PCU/hr)	Scaling Factor (%)
A		✓	35	100.000
B		✓	11	100.000
C		✓	31	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	2	33
	B	7	0	4
	C	24	7	0

Vehicle Mix

HV %s

	To			
	A	B	C	
From	A	0	1	8
	B	1	0	1
	C	8	1	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS
B-AC	0.02	6.42	0.0	A
C-AB	0.01	5.91	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)	LOS
B-AC	8	583	0.014	8	0.0	6.324	A
C-AB	5	626	0.008	5	0.0	5.858	A
C-A	18			18			
A-B	2			2			
A-C	25			25			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	10	581	0.017	10	0.0	6.362	A
C-AB	6	625	0.010	6	0.0	5.878	A
C-A	22			22			
A-B	2			2			
A-C	30			30			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	12	579	0.021	12	0.0	6.417	A
C-AB	8	623	0.012	8	0.0	5.907	A
C-A	26			26			
A-B	2			2			
A-C	36			36			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	12	579	0.021	12	0.0	6.417	A
C-AB	8	623	0.012	8	0.0	5.907	A
C-A	26			26			
A-B	2			2			
A-C	36			36			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	10	581	0.017	10	0.0	6.365	A
C-AB	6	625	0.010	6	0.0	5.881	A
C-A	22			22			
A-B	2			2			
A-C	30			30			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	8	583	0.014	8	0.0	6.324	A
C-AB	5	626	0.008	5	0.0	5.860	A
C-A	18			18			
A-B	2			2			
A-C	25			25			

2022, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Yellow Furze T Junction at Local Road	T-Junction	Two-way	1.07	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	2022	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	Av. Demand (PCU/hr)	Scaling Factor (%)
A		✓	32	100.000
B		✓	8	100.000
C		✓	42	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	6	26
	B	2	0	6
	C	35	7	0

Vehicle Mix

HV %s

	To			
	A	B	C	
From	A	0	1	8
	B	1	0	1
	C	8	1	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS
B-AC	0.01	5.83	0.0	A
C-AB	0.01	5.90	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)	LOS
B-AC	6	636	0.009	6	0.0	5.772	A
C-AB	5	626	0.008	5	0.0	5.852	A
C-A	26			26			
A-B	5			5			
A-C	20			20			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	7	634	0.011	7	0.0	5.796	A
C-AB	6	625	0.010	6	0.0	5.871	A
C-A	31			31			
A-B	5			5			
A-C	23			23			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	9	632	0.014	9	0.0	5.830	A
C-AB	8	624	0.012	8	0.0	5.898	A
C-A	39			39			
A-B	7			7			
A-C	29			29			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	9	632	0.014	9	0.0	5.830	A
C-AB	8	624	0.012	8	0.0	5.898	A
C-A	39			39			
A-B	7			7			
A-C	29			29			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	7	634	0.011	7	0.0	5.799	A
C-AB	6	625	0.010	6	0.0	5.874	A
C-A	31			31			
A-B	5			5			
A-C	23			23			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	6	636	0.009	6	0.0	5.772	A
C-AB	5	626	0.008	5	0.0	5.852	A
C-A	26			26			
A-B	5			5			
A-C	20			20			

Meath CC, Planning Department, Viewing Purposes Only!

APPENDIX G

PiCADY Junction Capacity Model Output Existing T-Junction at L1600/Road to 'Yellow Furze'

Established T Junction at L1600/ Road to 'Yellow Furze'
Summary PICADY Results in Order as included herein
(Robust & Worst Case – Being "Scenario E")
SELECTED CONSTRUCTION YEAR 2022

Modelled Scenario	Period Mean Max Q (PCUs)	Period Max RFC
2022 Construction Year AM Peak	<1	0.07
2022 Construction Year PM Peak	<1	0.07

All Results Above are way below the recommended RFC of 0.85 (85% Capacity) and therefore no problems whatsoever are anticipated at the Junction in terms of Capacity or excessive vehicle Queues

NB Any Small Changes to Selected Construction Year 2022 or indeed significantly higher traffic volumes experienced, will clearly have no significant implications in terms of the conclusions of the Study in Light of the Favourable Results.

Junctions 9
PICADY 9 - Priority Intersection Module
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Filename: 2022 AM PM Worst Case.j9

Path: C:\Users\Eoin\NRB Consulting Engineers Ltd\NRB Server - Documents\2020\20-070 Dawn Slane\Calculations\Northern Yellow F L1600 Picadys

Report generation date: 13/12/2020 12:40:02

»2022, AM

»2022, PM

Summary of junction performance

	AM				PM			
	Q (PCU)	Delay (s)	RFC	LOS	Q (PCU)	Delay (s)	RFC	LOS
2022								
Stream B-AC	0.1	5.83	0.05	A	0.1	6.17	0.07	A
Stream C-AB	0.1	6.33	0.07	A	0.1	6.58	0.06	A

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	09/12/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	NRB-004\Eoin
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Av. delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Calculate Q Percentiles	Calculate residual capacity	RFC Threshold	Av. Delay threshold (s)	Q threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022	AM	ONE HOUR	07:45	09:15	15
D2	2022	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Meath CC, Planning Department, Viewing Purposes Only!

2022, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Yellow Furze T Junct	T-Junction	Two-way	1.77	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	L1600 East		Major
B	Minor Road Leading to Yellow Furze		Minor
C	L1600 West		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.00			100.0	✓	1.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	90	90

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	552	0.096	0.243	0.153	0.347
1	B-C	681	0.100	0.252	-	-
1	C-B	632	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	2022	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	Av. Demand (PCU/hr)	Scaling Factor (%)
A		✓	61	100.000
B		✓	31	100.000
C		✓	159	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	1	60
	B	0	0	31
	C	118	41	0

Vehicle Mix

HV %s

	To			
	A	B	C	
From	A	0	8	2
	B	8	0	2
	C	2	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS
B-AC	0.05	5.83	0.1	A
C-AB	0.07	6.33	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)	LOS
B-AC	23	669	0.035	23	0.0	5.683	A
C-AB	31	626	0.050	31	0.1	6.171	A
C-A	89			89			
A-B	0.75			0.75			
A-C	45			45			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	28	667	0.042	28	0.0	5.745	A
C-AB	37	626	0.060	37	0.1	6.239	A
C-A	106			106			
A-B	0.90			0.90			
A-C	54			54			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	34	664	0.051	34	0.1	5.830	A
C-AB	46	626	0.073	46	0.1	6.327	A
C-A	129			129			
A-B	1			1			
A-C	66			66			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	34	664	0.051	34	0.1	5.830	A
C-AB	46	626	0.073	46	0.1	6.329	A
C-A	129			129			
A-B	1			1			
A-C	66			66			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	28	667	0.042	28	0.0	5.748	A
C-AB	37	626	0.060	37	0.1	6.243	A
C-A	106			106			
A-B	0.90			0.90			
A-C	54			54			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	23	669	0.035	23	0.0	5.686	A
C-AB	31	626	0.050	31	0.1	6.177	A
C-A	89			89			
A-B	0.75			0.75			
A-C	45			45			

2022, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Yellow Furze T Junct	T-Junction	Two-way	1.73	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	2022	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	Av. Demand (PCU/hr)	Scaling Factor (%)
A		✓	150	100.000
B		✓	40	100.000
C		✓	87	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	1	149
	B	0	0	40
	C	52	35	0

Vehicle Mix

HV %s

	To			
	A	B	C	
From	A	0	8	2
	B	8	0	2
	C	2	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS
B-AC	0.07	6.17	0.1	A
C-AB	0.06	6.58	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)	LOS
B-AC	30	652	0.046	30	0.0	5.899	A
C-AB	26	607	0.044	26	0.0	6.318	A
C-A	39			39			
A-B	0.75			0.75			
A-C	112			112			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	36	647	0.056	36	0.1	6.011	A
C-AB	32	603	0.052	32	0.1	6.426	A
C-A	47			47			
A-B	0.90			0.90			
A-C	134			134			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	44	639	0.069	44	0.1	6.170	A
C-AB	39	597	0.065	39	0.1	6.575	A
C-A	57			57			
A-B	1			1			
A-C	164			164			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	44	639	0.069	44	0.1	6.170	A
C-AB	39	597	0.065	39	0.1	6.575	A
C-A	57			57			
A-B	1			1			
A-C	164			164			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	36	647	0.056	36	0.1	6.012	A
C-AB	32	603	0.052	32	0.1	6.428	A
C-A	47			47			
A-B	0.90			0.90			
A-C	134			134			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	30	652	0.046	30	0.0	5.902	A
C-AB	26	607	0.044	26	0.0	6.324	A
C-A	39			39			
A-B	0.75			0.75			
A-C	112			112			

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