consulting engineers

NRB

Traffic & Transport Assessment Report

including

Preliminary Mobility Management Plan (Travel Plan)
(Appendix G)
Stage 1-2 Road Safety / Quality Audit (& Designer Feedback Form)
(Appendix H)
&
DMURS Compliance Statement
(Appendix I)

For

Proposed Large Scale Residential Development

At

Cartron, Oranmore, Co. Galway

On behalf of

Marshall Yards Development Company Ltd

SUBMISSION ISSUE

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EXECUTIVE SUMMARY

NRB Consulting Engineers Ltd were appointed to address the Traffic/Transportation issues associated with a planning application for a Large Scale Residential Development on lands at Cartron, Oranmore, Co Galway.

The development comprises a mix of 171 No Residential Houses and a small ancillary Creche.

This Transportation Assessment (TA) has been prepared to address any Traffic/Transportation issues associated with the proposal, and specifically the impact upon the capacity of the existing adjacent road network.

The Report has been prepared in accordance with TII's Traffic & Transportation Assessment Guidelines and addresses the worst-case traffic impact of the proposal.

This TA addresses the adequacy of the existing local road network to safely accommodate the worst-case vehicular demands with the development fully occupied, taking account of the existing transportation demands locally.

We commissioned and undertook new traffic surveys of the adjacent road network which were used for the purposes of the study, with future year traffic conditions established using TII-approved annual growth factors. This represents industry-standard procedure with the traffic survey data from November 2023 forming the basis of the study.

The Transportation Assessment confirms that the established existing road network, and the proposed development access junction, are more than adequate to accommodate the worst-case traffic associated with the development.

The assessment also confirms that the construction and full occupation of the scheme will have a negligible and unnoticeable impact upon the operation of the adjacent road network.

The work included the preparation of a Preliminary Development Mobility Management Plan included as ***Appendix G*** and an independent Stage 1 Road Safety/Quality Audit (including Designer Feedbaqck Form) as ***Appendix H***. A Statement of Compliance with DMURS is included as ***Appendix I***.

Based on our studies, we conclude that there are no adverse or significant traffic/transportation capacity or operational issues associated with the proposed high quality Residential Development which would prevent planning permission being granted by Galway 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 proposal to develop a Large Scale Residential Development on lands at Cartron, Oranmore, Co Galway.

1.2 Drawings of the proposals are included as ***Appendix A***, with a site location plan for reference included below as ***Figure 1.1***;

Figure 1.1 - Site Location

1.3 In describing the Receiving Environment and the Proposed Future Environment, this report addresses the following aspects of the proposed development:

- The moderately trafficked nature of the R338 Coast Road which serves as the main vehicular access to the site,
- Location of the development on suitably zoned and easily accessible lands,
- Best Practice Sustainability Principles,
- Accessibility to Oranmore Train Station,
- Traffic & Transportation impact,

- Capacity of the long-established adjacent road junctions to accommodate the worst-case development traffic flows,
- Network permeability and accessibility,
- Capacity of the Existing Road Network,
- Adequacy and safety of the existing roads and junctions locally, within the area of influence.

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

- TII Traffic & Transport Assessment Guidelines,
- The most recent version of the TRICS Database,
- Recent Local Traffic Survey Data commissioned by independent specialist,
- Relevant Design Guidance including Design Manual for Urban Roads and Streets (DMURS),
- Junction Capacity Modelling using TII-approved Proprietary Software,
- Details of Traffic Generated by Development using the TRICS database, and
- Our experience in assessing the impact of Developments of this Nature.

1.5 The Report has been prepared in accordance with the requirements of the TII's Traffic & Transport Assessment Guidelines 2014. These are the professional Guidelines used to assess the impact of developments on public roads.

2.0 PROPOSED DEVELOPMENT, PARKING & EXISTING CONDITIONS

2.1 The proposed development is a Large Scale Residential Development (LRD) at Cartron (townland), Oranmore, Co. Galway - comprising the following elements:

- The demolition of the existing shed and associated structures on site and the construction of 171 no. residential units, 1 no. creche and all associated development works with vehicular / pedestrian access via a new entrance on the L-71051 to the east,
- This includes the provision of pedestrian/cyclist facilities along the R338 public road connecting to Oranmore rail station,
- The site also included 1 no. ESB substation, 1 no. pumping station, the undergrounding of the existing ESB sites traversing the site, footpaths, lighting, parking, drainage, bicycle and bin stores and landscaping/amenity areas.

2.2 The proposed development is laid out in a traditional streetscape, which has been carefully designed with both hard & soft landscaping to be compliant with DMURS requirements. The development plans with proposed road features are included as ***Appendix A***.

Car / Bicycle Parking

2.3 The ***Car Parking*** requirements for the site are addressed in Galway County Development Plan Development Management Standard #31 Car Parking, with an extract from the Table included below as ***Figure 2.1*** for ease of Reference.

Development	Car Parking Standard
Dwellings/Apartments (1-3 bedrooms)	1.5 Spaces Per Dwelling
Dwellings/Apartments (4+ bedrooms)	2 Spaces Per Unit
*Childcare Facilities	1 car parking space per staff member + 1 car parking space per 4 children

Figure 2.1 – Extract GCDP Car Parking

2.4 The resulting breakdown and requirements of the proposed development elements are set out below as ***Table 2.1***

Table 3.1; - Assessment of Car Parking Requirements for Development

Element	No of/Size	GCC Requirement	Requires
1 Bed Maisonette	16	1.5	24
2 Bed Apartments	4	1.5	6
2 Bed Mid Terrace	71	1.5	106
3 Bed End Terrace	33	1.5	49
3 Bed End Terrace (Side)	23	1.5	34
3 Bed Semi detached	14	1.5	21
4 Bed Semi detached	6	2	12
4 Bed Semi Detached (Side)	4	2	8
Creche	232.9m^2 (48 Spaces)	1 / Staff + 1 / 4 Kids	TBC
		Total Car Parking Requirement	260 + Creche

2.5 There are a total of 269 Residential Parking spaces provided and allocated to the residential elements, together with 7 visitor spaces dispersed within the site. In addition there are 7 spaces plus a dedicated set down area provided at the Creche. We therefore believe that the plans are compliant with the requirements of the County Development Management Guidelines in terms of Car Parking.

2.6 The ***Bicycle Parking*** requirements are contained within DM Standard 31 (Item F) of the County Development Management Guidelines, with the relevant extract included below as ***Figure 2.2*** for ease of reference.

- Housing Developments: 1 private secure bicycle space per bed space (note - design should not require bicycle access via living area), minimum 2 spaces 1 visitor bicycle space per two housing units
- Offices: 10% of employee numbers, (subject to minimum of 10 bicycle storage places or one bike space for every car space, whichever is the greater)
- Schools: 10% of pupil registration numbers, minimum 10 places.
- Other Developments: 1 bike storage space for every car space
- Shops 1 storage space per 100 sq. m.
- Public Transport pick-up points (Rail, tram, taxi ranks and QBCs) 2.5% of number of daily boarders at that point/ station, subject to minimum of 10 bicycle storage places.

Figure 2.2 – Extract GCDP Bicycle Parking

2.7 The Proposed Development contains a total Bicycle Parking provision as follows:

- A total of 616 No. Private Spaces (provided within the demise of the houses / properties where rear access is available),
- A total of 166 spaces are provided in the form of front garden secure locked bike stores, where rear access is not available,

- A provision of 86 visitor bicycle parking spaces, and
- A total of 12 bicycle parking spaces provided at the Creche.

2.8 We therefore believe that the provision meets or exceeds the standards set out within the Development Management Guidelines.

Existing Conditions

2.9 The site, which comprises lands in current use for agricultural purposes, is bound immediately to the north by the Galway-Dublin Irish Rail railway line and to the south by the R338 Oranmore Coast Road. It is bound to the east and west by large single residential dwellings and/or farm holdings, with a local unclassified road also abutting the site boundary to the east.

2.10 It is intended that vehicular access to the site will be by way of a simple priority T Junction from the local road to the east, as specifically requested by Galway County Council (GCC) Roads/Traffic Department in pre-planning discussions (being the GCC preferred access arrangement). The local road and the adjacent junction with the R338 is proposed to be upgraded and improved, together with improved pedestrian / cycle infrastructure, with roads included within the red line of the application for this purpose. A google street-view image of the existing junction is included below as ***Figure 2.3***.

2.11 The local road is very lightly trafficked, serving as access to local residences and holdings, with an observed weekday AM and weekday PM Peak Hour traffic flow of 10 PCUs (2-way). An Automated Tube volume/speed survey of the local road was also undertaken at the location for the site access, and this established that the 85%ile ambient traffic speed at the location for the proposed access is less than 28km/hr. Full output from all of the traffic survey data is included herein as ***Appendix B***.

***Figure 2.3 – Local Road / R338 Junction** (Google Streetview, view North)*

2.12 The R338 Coast Road is a moderately / heavily trafficked Regional Road linking Galway City and Oranmore, serving as the secondary route to/from the City. It is subject to an 80km/hr speed restriction along the site boundary. A Google Streetview image showing the existing road is included below as ***Figure 2.4***.

***Figure 2.4 –R338 at The Site** (Google Streetview, view West)*

2.13 The R338 consists of a wide single carriageway road provided with hard shoulders, bounded on both sides by traditional stone walls and/or hedgerows. Based on the recent Traffic Survey, the R338 Coast road carries a weekday AM commuter Peak Hour (8-9am) 2-Way flow of approximately 1,328 Passenger Car Units (PCUs or car-equivalents), and a PM Peak Hr (5-6pm) flow also of 961 PCUs. In these terms, it is very moderately-heavily trafficked.

***Figure 2.5 –R338 at The Site** (Google Streetview, view East)*

2.14 To put the traffic measured flow in context, a road of the nature and running width of the R338 has a free flow link capacity of c 1,500-1,800 PCUs per direction per hour (or a 2 way link capacity of between 3,000 & 3,600 PCUs). So, based on this evidence it is considered moderately-heavily trafficked.

2.15 However, all such semi-urban road capacities are generally restricted by the capacity of their terminal junctions, and the Coast Road in Oranmore is no different, being a feeder route on the outskirts of the City.

2.16 We commissioned and undertook detailed interval turning movement surveys of the junctions within the area of influence for the weekday AM and PM Peak Periods, in addition to a speed/volume ATC Count at the location for the vehicular access.

2.17 It should be noted that this report confirms that the proposed development generates relatively low traffic volumes of traffic during the weekday AM & PM Peak Commuter periods. It is normal and represents best practice, adhering to the Guidelines, to assess the network critical commuter peak hours, being the key times on the road network for any congestion. This accords both with best practice and with the TII Guidelines for Transportation Assessment. In this case we have undertaken detailed assessment of both the weekday AM and PM peak periods, with the entire development occupied and operational.

2.18 The extant of survey and limit of the assessment is as outlined in ***Figure 2.6*** below.

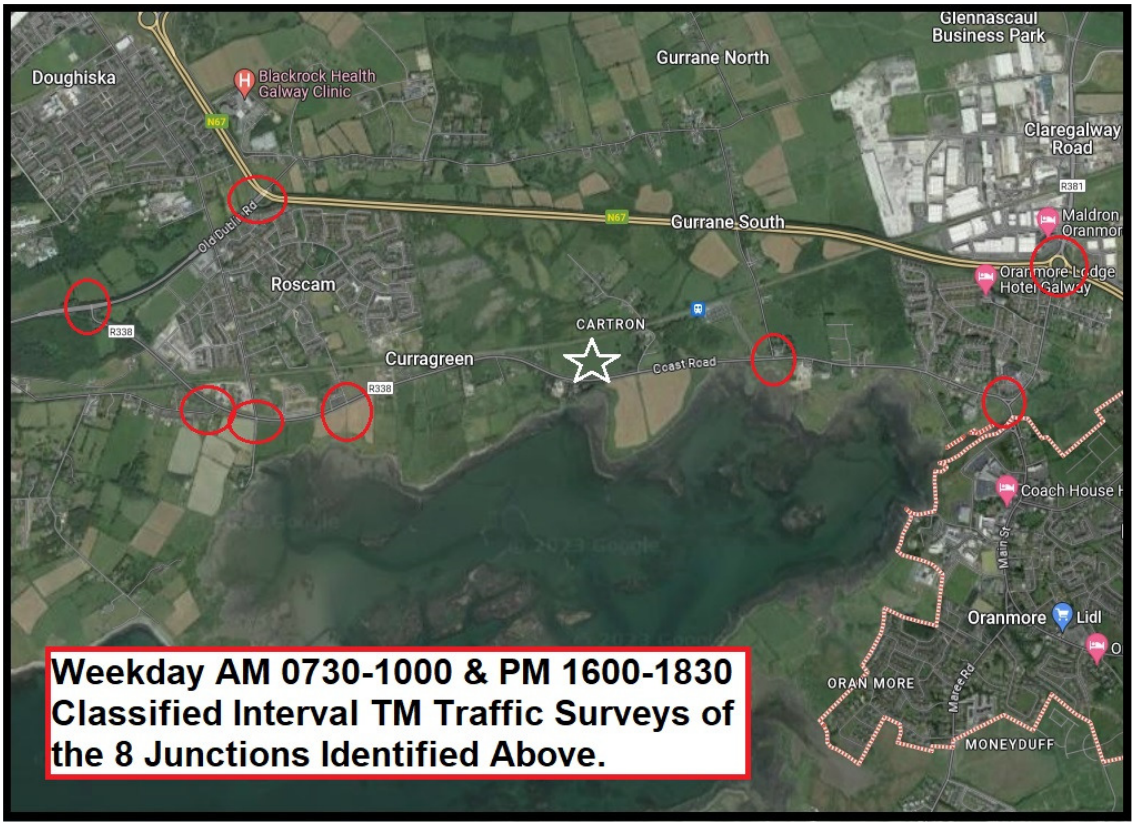

Figure 2.6 – Annotated Google Image, Surveys/Area of Influence

3.0 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, and is indeed the recommended assessment methodology within the TII Guidelines for Traffic & Transport Assessment. In this case the worst-case assessment has been undertaken based on the current licensed version of TRICS.

3.2 A robust and onerous assessment has been undertaken of the impact on the entire network as described above in order to ensure that we thoroughly assess the effect of the development, in terms of stress testing the access junctions and the road capacity impact of the scheme on the local links. The assessment is undertaken in accordance with the Guidelines in the context of the relatively low levels of traffic generated by the proposed development (being within a reasonable acceptable walking distance of Oranmore Train Station).

3.3 The TRICS assessment output for the subject site is included herein as ***Appendix C*** (based on the most recent version of TRICS). The resulting Associated Trip Rates applied for the entire proposed scheme is as set out below as ***Table 3.1,***

Table 3.1; - Traffic Generation by Proposed Development based on TRICS Database

171 Houses	**Arrivals (PCUs)**		**Departures (PCUs)**		**2-Way Traffic**
Network Hour	**Per Unit**	**Site (171)**	**Per Unit**	**Site (171)**	
Weekday AM Peak Hr 8-9	0.146	25	0.366	63	88
Weekday PM Peak Hr 5-6	0.339	58	0.163	28	86
24 Hours	2.269	388	2.274	389	777
250m2 Creche	**Arrivals (PCUs)**		**Departures (PCUs)**		**2-Way Traffic**
Network Hour	**Per 100m2**	**Creche**	**Per 100m2**	**Creche**	
Weekday AM Peak Hr 8-9	3.113	8	2.726	7	15
Weekday PM Peak Hr 5-6	2.537	6	3.158	8	14
24 Hours	15.014	38	16.763	42	80
TOTAL THEORETICAL TRAFFIC GENERATED BY TRADITIONAL HOUSES AND CRECHE (TRICS)					
Network Hour	**Arrivals (PCUs)**		**Departures (PCUs)**		**2-Way Traffic Flow**
Weekday AM Peak Hr 8-9	33		69		102
Weekday PM Peak Hr 5-6	64		36		100
24 Hours	426		431		857

3.4 During the **construction stages**, based on our experience of developments of this nature, it is expected that the maximum number of construction operatives/staff on site during the most intensive processes, would typically be 10-20 (notably with a typical start time of 8am or before, i.e. out-with the commuter peak hour).

3.5 This equates to less than 15 PCUs (cars) arriving in the morning. In addition, it is anticipated that the worst case deliveries would typically be 1-2 lorries arriving in the morning or evening peak (2-4 PCUs 2-way, translating to Passenger Car Equivalents). This peak hour 2-way flow during construction being a maximum of 20 PCUs 2-way is clearly less than the maximum predicted flow occurring upon full opening & occupation of the development. In these terms the operational assessment presented herein likely has a demonstrably more onerous impact upon the road network.

Assignment/Distribution - Future Year Traffic

3.6 We have used hand assignment techniques based on the observed proportions and patterns, with the worst-case traffic assigned to the roads based on the established traffic patterns at junctions. This represents industry-standard best practice and reflects an established gravity-model based distribution method.

3.7 The standard methodology applied was to firstly ascertain the base background traffic conditions for the critical weekday AM & PM Commuter Peak periods. We commissioned a Traffic Survey of the local junctions and links, and this data is included as ***Appendix B***.

3.8 We then used and applied the *TII Project Appraisal Guidelines* to establish traffic conditions during the selected opening year for the entire scheme of 2028 and the associated assessed design year 15 years following opening (2043).

3.9 It should be noted that we have selected these Opening/Completion years as being reasonable and appropriate, however, varying the opening year or the design years by 1-3 years, if required for any reason (eg Phasing), would have no significant impact upon the conclusions of the study.

3.10 Traffic growth factors for future year assessments were calculated from data obtained from Project Appraisal Guidelines for National Roads Unit 5.3, which provides the recommended standard method of predicting future year traffic growth on Roads.

3.11 Calculations of the relevant growth factors are included in ***Table 3.2*** below (based on tabulated 'medium growth' for Galway).

Table 3.5 - Traffic Growth Rates, TII Project Appraisal Guidelines

Year	to Year	Table 6.2:
Survey	2028	1.136
2028	2043	1.210

3.12 The resulting Traffic Flow Projections and Figures allowed the assessment of impact of the development to be undertaken, all as set out in network flow diagrams included within ***Appendix D***

4.0 TRAFFIC IMPACT - TRAFFIC CAPACITY RESULTS

4.1 The TII Traffic and Transport Assessment Guidelines sets out a mechanism for assessment of developments of this nature, in determining whether further assessment is indeed required and whether an impact is considered significant and needs further assessment. The TII Traffic & Transport Assessment Guidelines 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. In the case of a residential development sustainably located beside a train station, such as in this case, it can be considered inappropriate and unnecessary to 'chase' development traffic through junctions remote from the site location. However we have undertaken a wide network impact.

4.2 Notwithstanding the above, the professional Guidance sets out specific increases in traffic volume associated with new development, which, if breached, requires further detailed analysis to be undertaken. The recommendation is that, if the expected increase is greater than 5% for networks that are considered heavily trafficked or congested, then further analysis is warranted. The Threshold level is set at 10% for uncongested situation.

4.3 To set the increases in traffic flow in context, the day-to-day variation in traffic volumes due to variables such as day-of-week, or weather conditions, is accepted as being 10%, so in this context small increases in traffic can pass unnoticed.

4.4 Conscious that we have robustly assigned the traffic as 100% New Trips, in this case we have indicated the worst-case traffic increases on a 'Network Flow Diagram' on Page 6 of ***Appendix D***, with the specific impact on the adjacent local links junctions summarised below as ***Table 4.1***.

Table 4.1; - Threshold Assessment - Weekday AM/PM Peak Hours Entire Development.

Threshold Assessment Location	% During Period		
	AM 8-9	PM 5-6	Comment
Proposed Site Access T Junction	N/A	N/A	Capacity Assessment Undertaken
Local Road / R338 T-Junction	6.7	9.1	>5%: Capacity Assessment Undertaken
Old Dublin Rd / Doughiska Junction	0.4	0.1	<5%: No Further Capacity Assessment Required
Old Dublin Rd / R338 Coast Rd Junction	2.3	2.1	<5%: No Further Capacity Assessment Required
Doughiska Rd / Coast Rd R338 Junction	3.6	4.6	<5%: No Further Capacity Assessment Required
Caiseal Cam / R338 Junction	3.7	4.9	<5%: No Further Capacity Assessment Required
Garraun Sth / R338 Junction	3.2	4.3	<5%: No Further Capacity Assessment Required
Station Rd / R338 Coast Rd Junction	2.3	2.6	<5%: No Further Capacity Assessment Required
N67 / Station Rd Roundabout	0.4	0.4	<5%: No Further Capacity Assessment Required

4.5 The worst case traffic increases are locally at the access and at the junction of the local road and the R338. We have undertaken detailed simulation capacity modelling of the site access and the R338 T-junction using the TII Approved modelling techniques.

4.6 Each of the modelled junctions have been assessed using the TII-approved TRL Modelling Software Package *Junctions 9*-PICADY (**P**riority **I**ntersection **C**apacity **A**nd **D**ela**Y**). PICADY enables the user to predict the capacity, queues and delays at priority controlled road junctions. The outputs from the software present RFC (Ratio of Flow to Capacity) and Queue lengths as indicators of operational efficiency of the junctions.

4.7 We have appended the detailed computer simulation model results (PICADY Outputs) of the junction modelling for the 2 Junctions as ***Appendix E*** and ***Appendix F***. A summary of the results is reproduced below as ***Table 4.2*** and ***Table 4.3.***

Table 4.2: Proposed Site Access T Junction –PICADY Summary, Entire Development Complete

Modelled Year & Scenario	Period "Mean-Max" Q (PCUs)	Period Max RFC
2028 Opening Year AM Peak 8-9am	0.2	0.14
2028 Opening Year PM Peak 5-6pm	0.1	0.08
2043 Design Year AM Peak 8-9am	0.2	0.14
2043 Design Year PM Peak 5-6pm	0.1	0.08

Table 4.3: Local Road / R338 T junction –PICADY Summary, Entire Development Complete

Modelled Year & Scenario	Period "Mean-Max" Q (PCUs)	Period Max RFC
2028 Opening Year AM Peak 8-9am	0.3	0.25
2028 Opening Year PM Peak 5-6pm	0.1	0.13
2043 Design Year AM Peak 8-9am	0.5	0.34
2043 Design Year PM Peak 5-6pm	0.2	0.15

4.8 The results of the modelling clearly show that the proposed access junction and the adjacent improved R338 T-junction will have more than adequate capacity to accommodate the worst case traffic associated with the entire proposed development on the site. Any Junction's Upper limiting capacity is of course 100%, but it is widely accepted as 85% or 0.85 in RFC Terms. The modelling clearly demonstrates that each of the junctions has sufficient geometric design capacity to accommodate the worst case traffic flows, with the RFCs all being way below 0.85. It is also noteworthy that a dedicated right turn lane on the R338 at the local road is not required on the grounds of traffic capacity and such lanes have the effect of inducing higher ambient traffic speeds.

4.9 In terms of construction traffic capacity, we have demonstrated that construction traffic volumes will be less than operational/occupied traffic conditions. In this regard, if the junctions have sufficient capacity for operational conditions it will clearly also have sufficient capacity to accommodate the lower levels of traffic associated with construction traffic.

Summary of Results/Analysis

4.10 The above analyses considered together confirms that the completion and occupation of the proposed development will have an acceptable & negligible impact upon the capacity and safety of the road network in the area, and the associated traffic effects can easily be accommodated with the subject development in place.

5.0 RESPONSE To TRAFFIC/ROADS MATTERS IN GCC OPINION

5.1 We include below relevant extracts from the GCC Opinion, followed by the NRB/Design Team response to same.

> ***Item # 4 - The Roads & Transportation Section have identified their traffic safety concerns in the consultations regarding the location of the site entrance within an 80KPH speed limit zone on a regional route and where visibility for a new development access appears to be restricted due to the road curvature. The prospective applicant shall note that that the road standards applicable are Transport Infrastructure Ireland standards, whilst DMURS is predominantly used within an urban defined setting of 60kph. The Planning Authority have serious concerns regarding the provision of an access to a development of 162 units within this speed limit where sightlines are required to be demonstrated adhering to an 80KPH and in accordance with DM Standard 28. The applicant must also demonstrate that they have the necessary consent and control of lands to provide and maintain the sightlines into perpetuity. Please note a departure from TII standards is required for this development in terms of providing connectivity facilities (footpath/cycle-path) in an 80kph speed limit and the applicant shall liaise and seek the necessary approval from the TII in this regard.***

Response to Item #4

5.2 The location for the access has been redesigned and relocated to provide for access by way of the Local Road, with a significantly improved Local Road / R338 junction. Sightline and annotated layout design drawings are included as ***Appendix A***, referencing the requisite Guidance documents. We note that the revised scheme provides for enhanced pedestrian and cycle linkage to the established footpaths to the east along the R338, that connect to Oranmore and the Train Station that are within the 60Km/hr or 50Km/hr speed limit. Road improvement works providing enhanced facilities are included within the red line of the application, with the associated Letter Of Consent from GCC to make the application.

> ***Item #5 - The applicant shall consider an alternative development access from the adjoining local road, in lieu of proposing a new vehicular entrance, where the existing public road junction may require local widening and improvement works, whilst incorporating segregated walking and cycling connectivity links accordingly. Please note this local road junction is also within an 80kph speed limit and requires a departure from TII standards.***

Subject to approval of departure from the TII standards, a quality audit for any proposed segregated footpath and cycle path facilities with public lighting and associated drainage measures shall be incorporated in such a proposed design, linking towards Oranmore & the train station

Response to Item #5

5.3 The location for the access has been redesigned and relocated to provide for access by way of the Local Road, with a significantly improved Local Road / R338 junction. Sightline and annotated layout design drawings are included as ***Appendix A***, referencing the requisite Guidance documents. Whilst we note the requirement to seek a derogation in Guidance or Standard from TII within the Opinion, the R338 is we understand a Regional Road within the control of GCC and is out-with the control of TII. The lands are zoned within the GCC Development Plan and there is no other way to connect to the lands save for the established roads infrastructure, which has speed limits in place (which are set by GCC).

5.4 However, we have commissioned an independent Stage 1 Road Safety /Quality Audit of the proposed junctions and the internal layout, by Tii approved Audit Team members (Refer ***Appendix H***). We have also specifically highlighted the issues raised and the wording contained within the GCC Opinion to the Safety Auditors in advance of preparing the Audit. The Designer Feedback form in response to the Audit is included.

Item #6(a) - The internal layout of the development shall adhere to the provisions of DMURS standards.
(i)The road carriageway width should be a maximum of 5.5m in accordance with the guidelines set out in DTTaS publication – "Design Manual for Urban Roads and Streets".
(ii)The proposed development junction corner radii shall be redesigned in accordance with guidance in DTTaS publication – "Design Manual for Urban Roads and Streets" where a maximum of 6m corner radii should be applied.
(iii)Proposed pedestrian crossings shall reflect a raised ramp profile with proposed signage and line marking per TSM (as amended) at each proposed pedestrian crossing points in accordance with guidance in DTTAS publication – "Design Manual for Urban Roads and Streets".
(iv)A cross section of raised ramp and tactile paving including drainage infrastructure shall be provided at these locations per (iii) above.
(v)The proposed road gradients and Geometrical parameters such as gradients, crests, sags and the existing and proposed levels at 10m chainages should also be presented with these drawings.

(vi)Longitudinal section and cross section profiles with finished road levels proposed of proposed surface water at tie in with public road shall be provided and similar cross section drainage details for proposed internal road layout.

(vii)Drawings showing the swept path analysis of larger vehicles (i.e. fire tenders and refuse trucks) entering, exiting and circulating safely through the proposed site shall be provided.

Response to Item #6a

5.5 The internal layout and design has been checked and amended so as to be consistent with the requirements of DMURS best practice and meets the GCC standards and requirements as outlined in Section 6a(i) to 6a(vii) inclusive above. A DMURS Statement of Compliance and Review is included as ***Appendix I***.

Item #6(b) - Any future application should clearly demonstrate through dedicated drawing the full extent of both pedestrian and cycle connectivity through and within the site. Cycle paths shall be designed in accordance with the Traffic Management Guidelines and the National Cycle Manual and Street lighting shall be provided along footpaths and cycle paths in accordance with the recommendations made in 'Site Development Works for Housing Areas' (DoEHLG) and any subsequent publication or successor to this document where compliant with mitigation measures designed to ensure minimal impact of new lighting on local Bat populations.

Response to Item #6b

5.6 Cycle Paths and intersections/transitions have been designed in accordance with the requirements of the new NTA Cycle Design Manual (September 2023). Street lighting will be in accordance with the standards set down in the DoEHLG Site Development Works for Housing Areas and GCC requirements.

Item 7(i) - A stage 1 / 2 Road Safety Audit has not been included with the LRD Opinion documents for the subject site for proposed works within the red line boundary. Any future application should include detailed design drawings which incorporate the measures recommended by the auditor and accepted by the designer in each of the stage 1 / 2 RSA for the subject site. All associated recommendations shall be itemised and shown to correlate with the RSA numbering on a revised drawing for ease of reference

Response to Item #7(i)

5.7 Please see attached Independent Stage 1-2 RSA together with the associated Designer Feedback form (included as ***Appendix H***). We also include an annotated reference drawing within ***Appendix A*** highlighting how each of the issues raised in the Audit have been addressed.

Item #7(ii) - A Traffic and Transport Assessment which shall also include details relating to construction stage traffic shall be submitted. This shall include estimated traffic volumes associated with the various stages of construction activity, anticipated construction programme, haulage/deliveries to site, spoil removal, parking of construction staff and any mitigation measures

Response to Item #7(ii)

5.8 The main body of this Study constitutes a Traffic & Transport Assessment Report, with Construction Traffic volume estimates within Section 3 (Traffic Generation). A separate Construction Management Plan prepared by Tobin Consulting Engineers is included with the application. Whilst it is normal for construction programme and plans to be agreed with the appointed Contractor for the works following a planning decision (by way of Planning Condition), the Plan includes preliminary proposed details for access arrangements for labour, plant, materials and construction parking/plant and machine compounds. However it should be recognised that such details are normally best dealt with when details of construction methods, programme and phasing have been confirmed by the appointed contractor in the event of a grant of planning permission prior to commencement.

Item #7(iii) - A Mobility Management Plan which shall adhere to the measures and targets set out by Galway County Transport & Planning Strategy 2022-2028

Response to Item #7(iii)

5.9 A Preliminary Mobility management Plan for the site has been prepared, with reference to the Calway County Transport & Planning Strategy 2022-2028 and is included as ***Appendix G***.

Item #8 - Proposals shall accord with DM Standard 31 relating to car parking standards, EV measures, disability access, cycle parking & shelters

Response to Item #8

5.10 The internal layout and parking for cars and cyclists have been checked to ensure they are in accordance with the requirements of GCC DM Standard 31.

Item #9 - A set down area shall be provided at the creche facility with clear safe pedestrian connections from the nearby carparking space to the creche

Response to Item #8

5.11 A set down area is provided at the Creche with safe routes facilitated, the layout and design of which has been included within the remit of the Independent Road Safety Audit Team.

6.0 CONCLUSIONS

6.1 NRB Consulting Engineers Ltd were appointed to address the Traffic/Transportation issues associated with a planning application for a Large Scale Residential Development on lands at Cartron (townland), Oranmore, Co. Galway.

6.2 The development comprises a mix of 171 No Residential Houses and a small ancillary Creche.

6.3 This Report has been prepared in accordance with the TII Traffic & Transport Assessment Guidelines, and is based on industry standard Trip Generation calculations and methodology, in order to provide an onerous and robust assessment of the impact of the proposed development.

6.4 We commissioned and undertook new traffic surveys of the adjacent road network which were used for the purposes of the study, with future year traffic conditions established using TII-approved annual growth factors. This represents industry-standard procedure with the traffic survey data from late 2023 forming the basis of the study.

6.5 The Transportation Assessment confirms that the established existing road network, and the proposed development access junction, which is located and designed in accordance with GCC requirements, are more than adequate to accommodate the worst-case traffic associated with the development. The assessment also confirms that the construction and full occupation of the scheme will have a negligible and unnoticeable impact upon the operation of the adjacent road network.

6.6 This report demonstrates that the proposed development will have an acceptable and negligible impact upon the established local traffic conditions and can be accommodated on the road network without any significant capacity concerns arising during the selected opening years and design years 15 years after opening.

6.7 The work included the preparation of a Preliminary Development Mobility Management Plan included as ***Appendix G*** and an independent Stage 1 Road Safety/Quality Audit (including Designer Feedback Form) as ***Appendix H***. A Statement of Compliance with DMURS is included as ***Appendix I***

6.8 It is considered that there are no significant Operational Traffic Safety or Road Capacity, issues which prevent a positive determination of the application by Galway County Council

APPENDICES - CONTENT

APPENDIX A

Proposed Development
Layout / Access / Tracking

NRB Consulting Engineers Ltd recommend that Road and land ownership boundaries are verified through Legal & Land searches by the Client.

This drawing is based upon Architects drawing CAR-ZZ-LZZ-M2-JFA-AR-P1000, received 14/05/24. NRB Consulting Engineers Ltd shall not be liable for any inaccuracies or deficiencies.

REV	DATE	AMENDMENTS	DRAWN	CHK	APP

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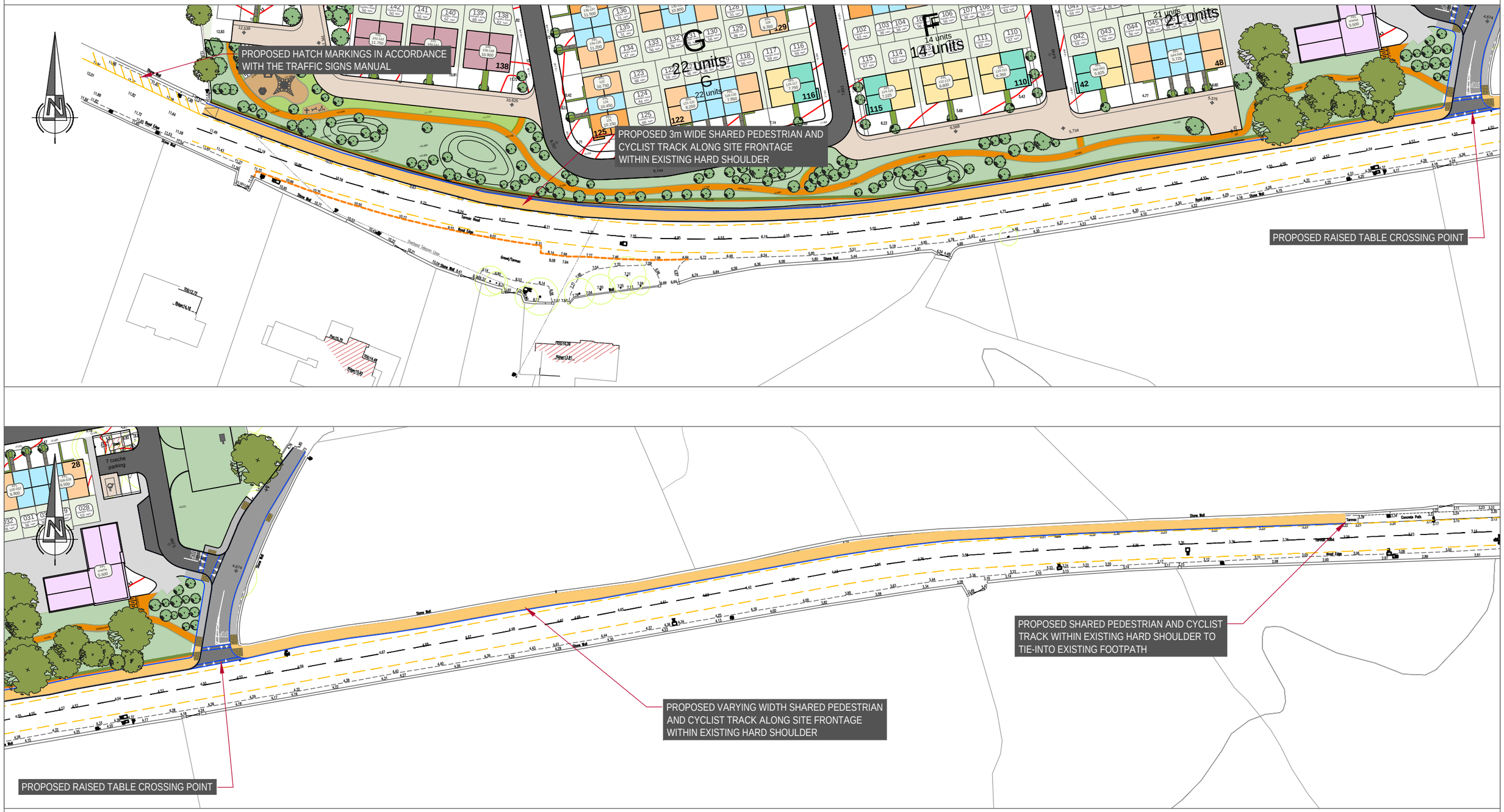
Email: info@nrb.ie
Web: www.nrb.ie
Registered in Ireland No. 491679

NRB consulting engineers

Client		Project No. 23-120	Drawing No. NRB-TA-000
Project	Oranmore Galway	Drawn PB / Checked ER 15/05/24 / Approved ER 15/05/24	
Title	Proposed Site Layout	Date May 2024 / Scale @ A3 1:1000	Rev B

NRB Consulting Engineers Ltd accept no responsibility for any unauthorised amendments to this drawing. Only figured dimensions to be worked to.

Purpose of Issue: ☐ Draft ☐ Information ☐ Approval ☐ As Built ☐ Tender ☐ Construction



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Client		Project No. 23-120	Drawing No. NRB-TA-001
Project	Oranmore Galway	Drawn PB / Checked ER 15/05/24	Approved ER 15/05/24
Title	Proposed Shared Pedestrian And Cycle Route	Date May 2024	Scale @ A3 1:1000 / Rev B

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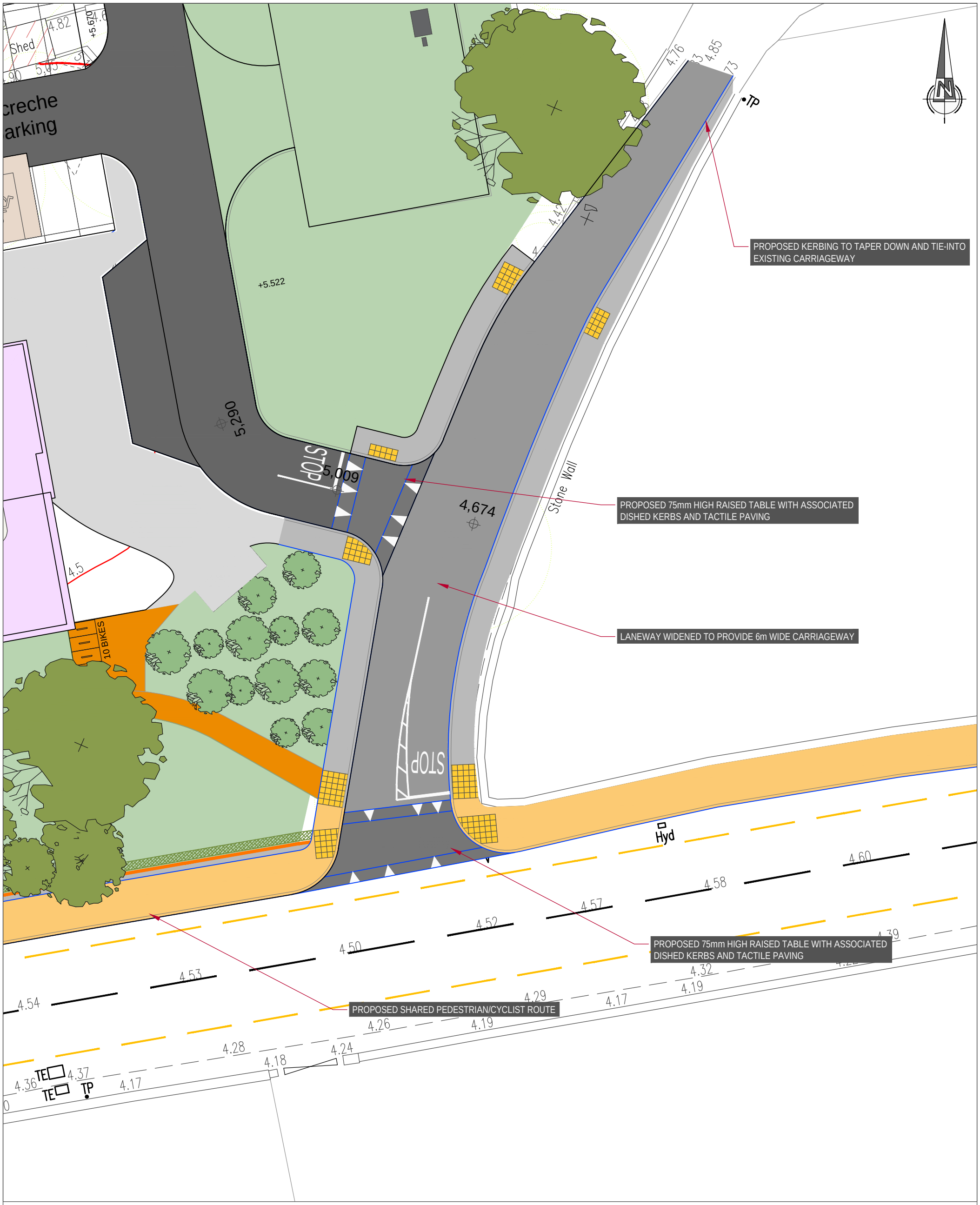
Purpose of Issue: ☐ Draft ☐ Information ☐ Approval ☐ As Built ☐ Tender ☐ Construction



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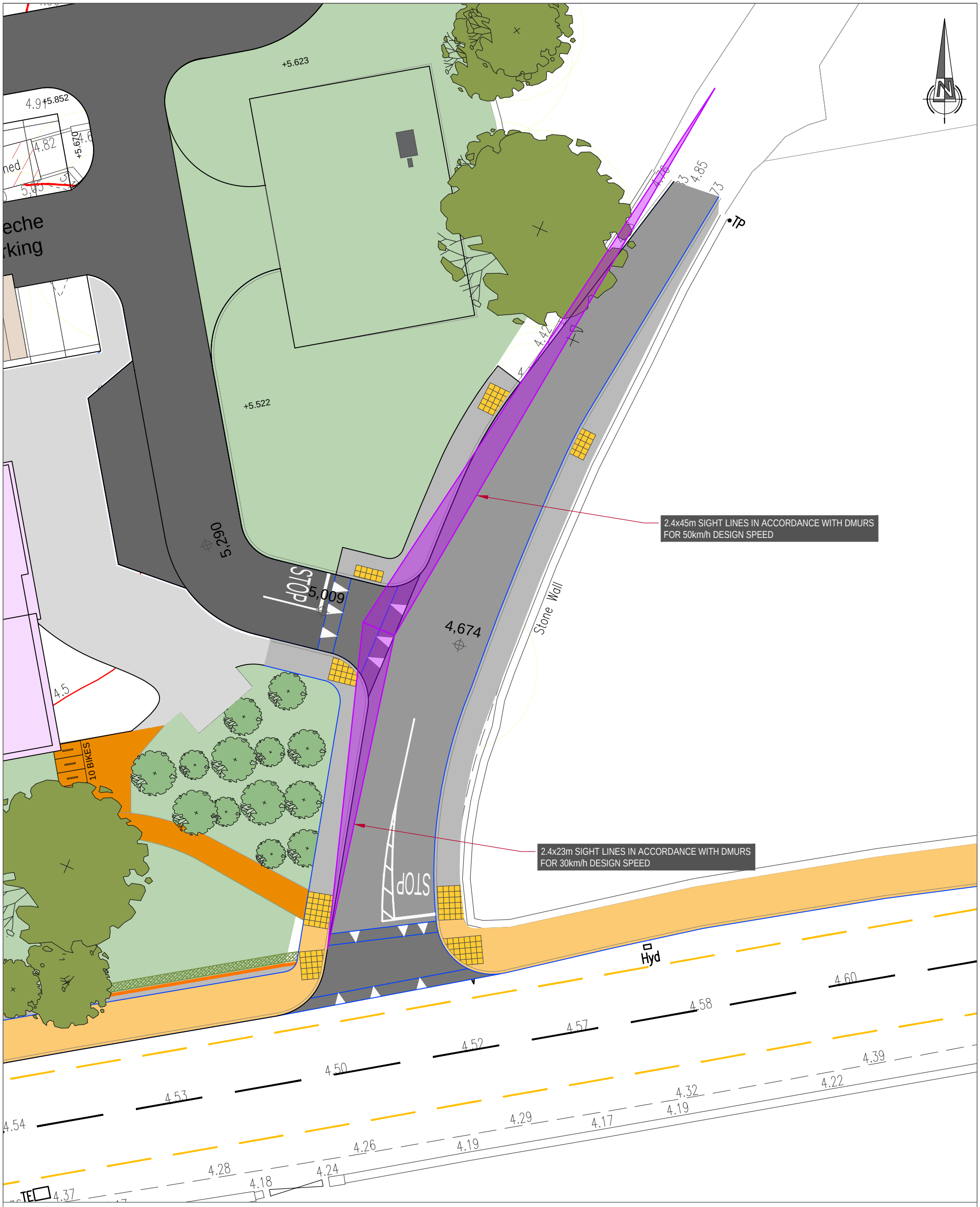
Client		Project No. 23-120	Drawing No. NRB-TA-002
Project	Oranmore Galway	Drawn PB / Checked ER 15/05/24	Approved ER 15/05/24
Title	Proposed Development Access	Date 15-May-24	Scale @ A3 1:250 / Rev B

Purpose of Issue: ☐ Draft ☐ Information ☐ Approval ☐ As Built ☐ Tender ☐ Construction



NRB Consulting Engineers Ltd recommend that Road and land ownership boundaries are verified through Legal & Land searches by the Client.

This drawing is based upon Architects drawing CAR-ZZ-LZZ-M2-JFA-AR-P1000, received 14/05/24. NRB Consulting Engineers Ltd shall not be liable for any inaccuracies or deficiencies.

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Client

Project No. 23-120

Drawing No. NRB-TA-003

Project: Oranmore, Galway

Drawn: PB

Checked: ER 15/05/24

Approved: ER 15/05/24

Title: Proposed Development Access - Sight Lines

Date: 15-May-24

Scale @ A3: 1:250

Rev: B

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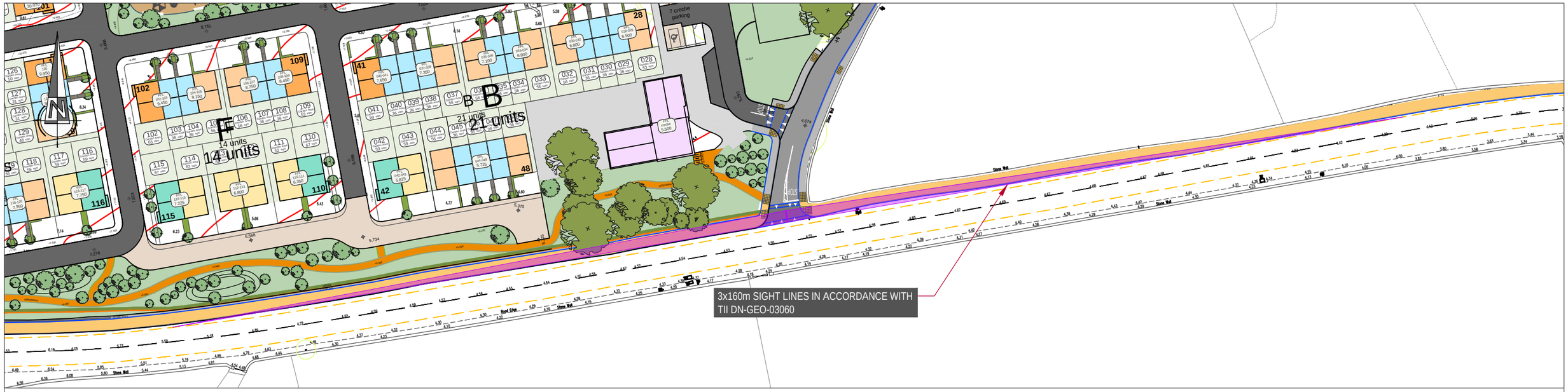
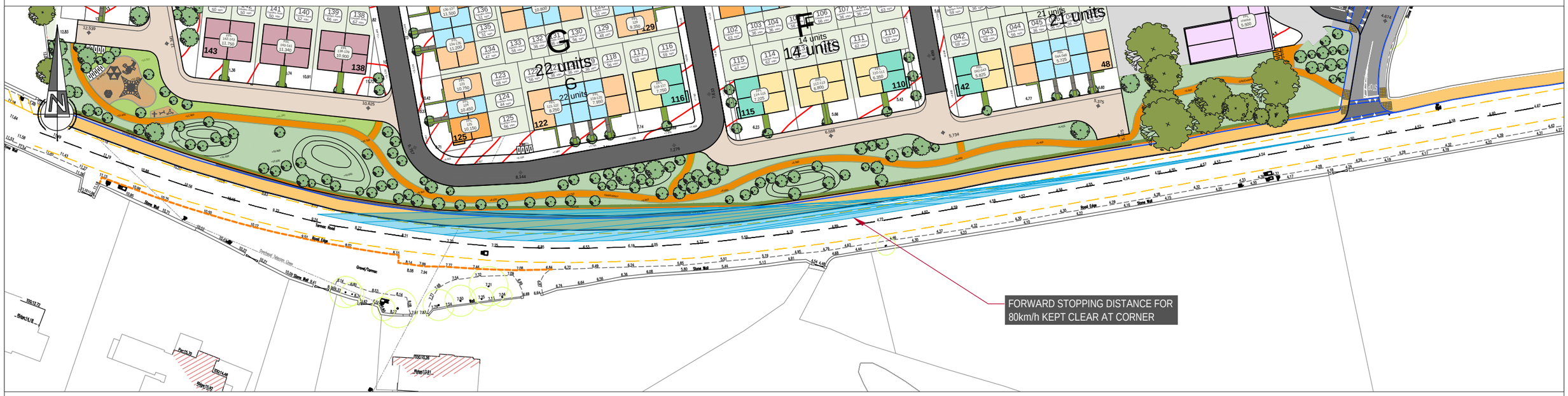
Purpose of Issue: ☐ Draft ☐ As Built ☐ Information ☐ Tender ☐ Approval ☐ Construction



SIGHT LINES AT ACCESS WITH THE R338



FORWARD STOPPIN DISTANCE AT EXISTING CURVE ON THE R338

NRB Consulting Engineers Ltd recommend that Road and land ownership boundaries are verified through Legal & Land searches by the Client.

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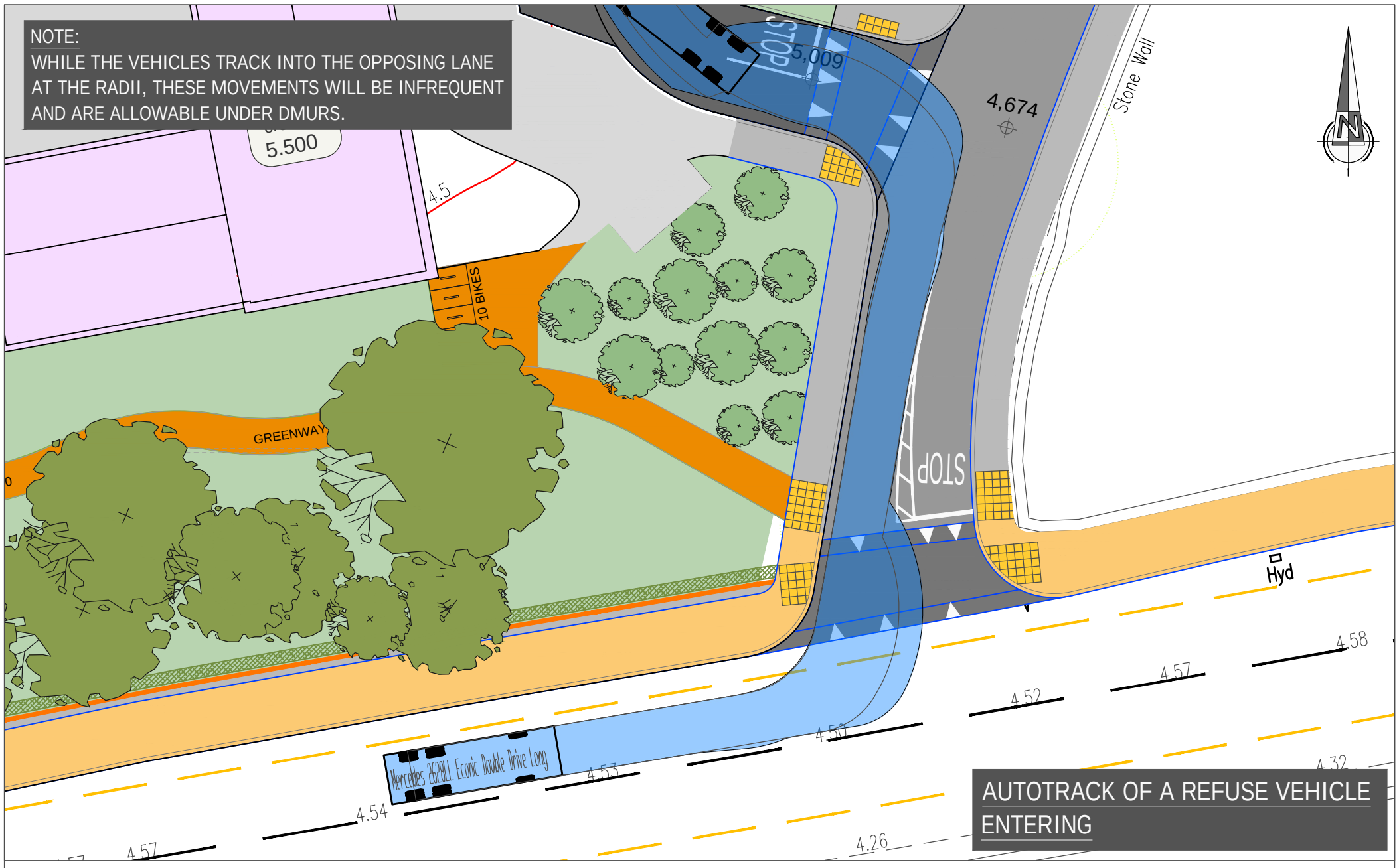
NRB consulting engineers

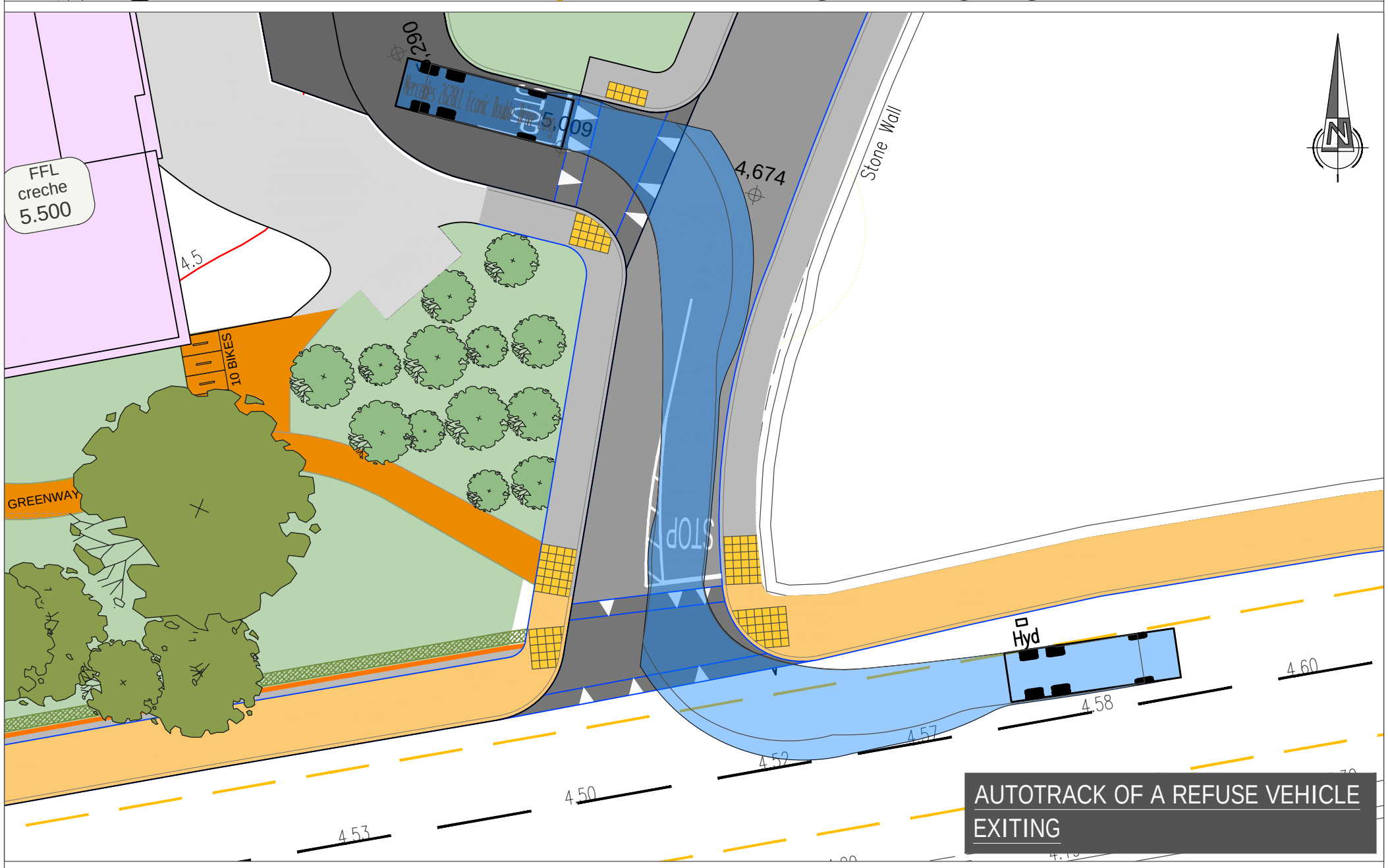
Client		Project No. 23-120	Drawing No. NRB-TA-004
Project	Oranmore Galway	Drawn PB / Checked ER 15/05/24	Approved ER 15/05/24
Title	R338 Sight Lines and Forward Stopping Distance	Date May 2024	Scale @ A3 1:1000 / Rev B

Purpose of Issue: ☐ Draft ☐ Information ☐ Approval ☐ As Built ☐ Tender ☐ Construction

NOTE:
WHILE THE VEHICLES TRACK INTO THE OPPOSING LANE AT THE RADII, THESE MOVEMENTS WILL BE INFREQUENT AND ARE ALLOWABLE UNDER DMURS.



AUTOTRACK OF A REFUSE VEHICLE ENTERING



AUTOTRACK OF A REFUSE VEHICLE EXITING

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Client

Project No. 23-120

Drawing No. NRB-TA-005

Project: Oranmore, Galway

Drawn: PB

Checked: ER 15/05/24

Approved: ER 15/05/24

Title: AutoTRACKs of a Refuse Vehicle

Date: 15-May-24

Scale @ A3: 1:250

Rev: B

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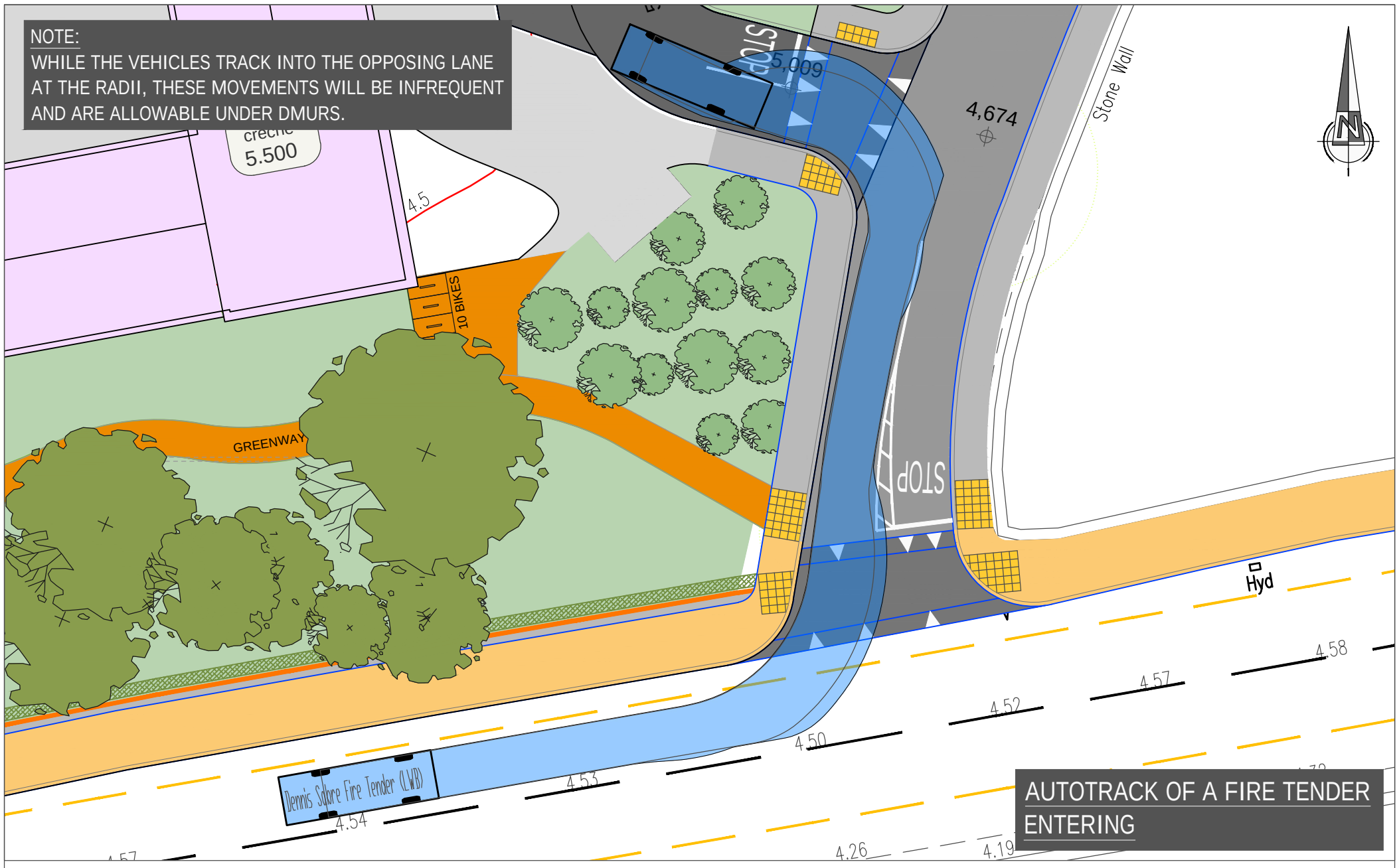
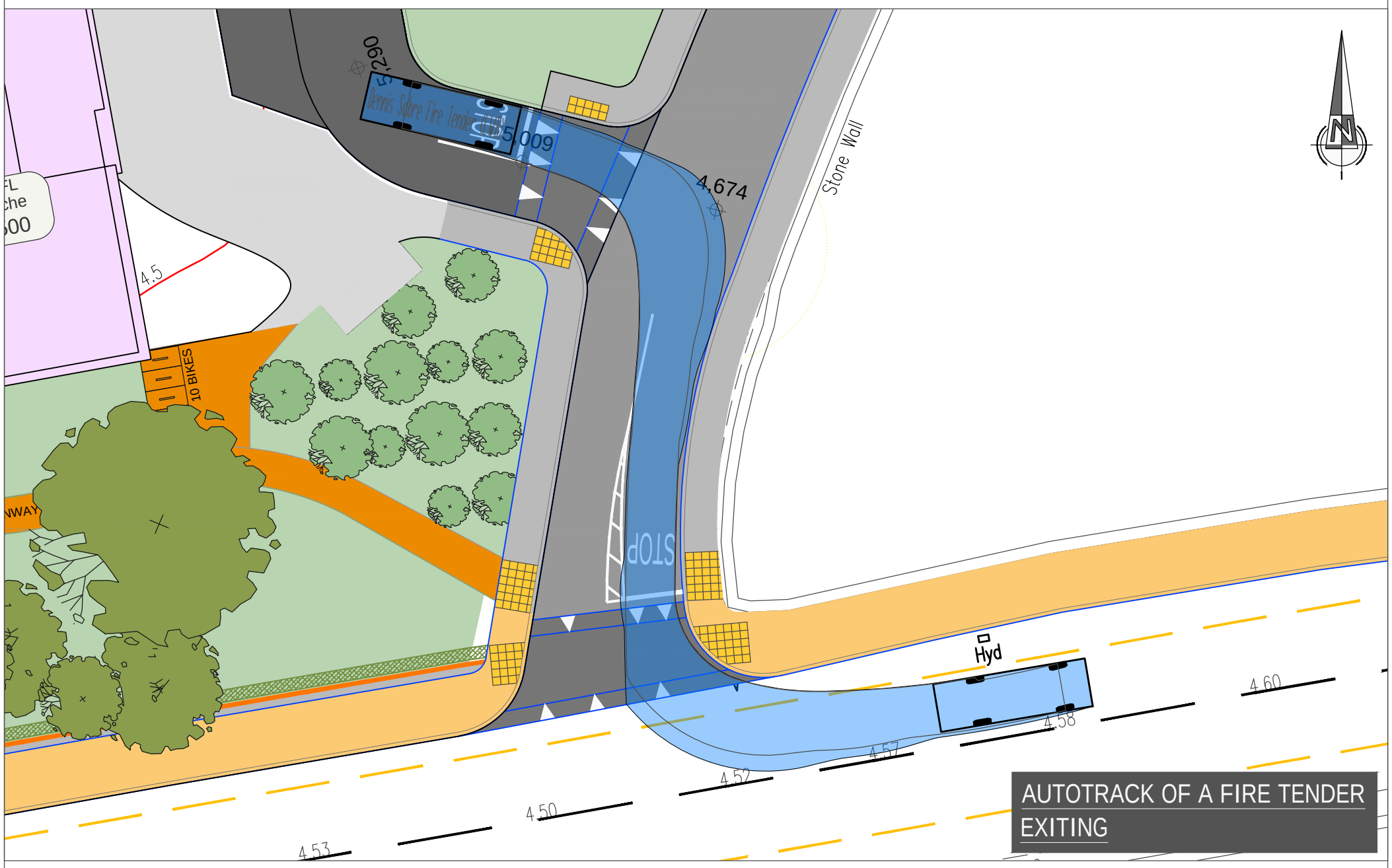
Purpose of Issue: ☐ Draft ☐ As Built ☐ Information ☐ Tender ☐ Approval ☐ Construction

NOTE:
WHILE THE VEHICLES TRACK INTO THE OPPOSING LANE AT THE RADII, THESE MOVEMENTS WILL BE INFREQUENT AND ARE ALLOWABLE UNDER DMURS.



AUTOTRACK OF A FIRE TENDER ENTERING



AUTOTRACK OF A FIRE TENDER EXITING

NRB Consulting Engineers Ltd recommend that Road and land ownership boundaries are verified through Legal & Land searches by the Client. This drawing is based upon Architects drawing CAR-ZZ-LZZ-M2-JFA-AR-P1000, received 14/05/24. NRB Consulting Engineers Ltd shall not be liable for any inaccuracies or deficiencies.

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Client		Project No. 23-120		Drawing No. NRB-TA-006
Project	Oranmore Galway	Drawn PB	Checked ER 15/05/24	Approved ER 15/05/24
Title	AutoTRACKs of a Fire Tender	Date 15-May-24	Scale @ A3 1:250	Rev B

NRB Consulting Engineers Ltd accept no responsibility for any unauthorised amendments to this drawing. Only figured dimensions to be worked to.

Purpose of Issue: ☐ Draft ☐ As Built ☐ Information ☐ Tender ☐ Approval ☐ Construction

APPENDIX B

2023 Independent Traffic Survey Data Output Results

Site Location

Site Location

	Job number: TRA/24/013	Job Date: Week Commencing Friday 9th February 2024	Drawing No: TRA/24/013-01	traffinomics.ie
	Client: NRB		Author: SPW	

TRAFFINOMICS LIMITED

ORANMORE TRAFFIC COUNT/SPEED SURVEY **SUMMARY** **WEEK COMMENCING:** **Friday 9 February 2024**
AUTOMATIC TRAFFIC COUNT **TRA/24/013**

SITE 01

LOCATION: Unclassified Road, Cartron Townland, Oranmore @ Proposed Access - (Goolgle Maps Ref: 53.273534, -8.951058)

SPEED SURVEY SUMMARY:

NORTHBOUND	85% Speed = 29.77 km/h, 95% Speed = 32.00 km/h, Median = 24.48 km/h	Maximum = 38.9 km/h, Minimum = 8.0 km/h, Mean = 24.1 km/h
SOUTHBOUND	85% Speed = 33.46 km/h, 95% Speed = 37.66 km/h, Median = 27.45 km/h	Maximum = 41.9 km/h, Minimum = 9.4 km/h, Mean = 27.2 km/h

VOLUMETRIC VEHICLE COUNTS:

Direction	Time	Friday 9 February 2024	Saturday 10 February 2024	Sunday 11 February 2024	Monday 12 February 2024	Tuesday 13 February 2024	0	0	No. Vehicles	7 day Mean
NORTHBOUND	**07-19**	65	48	32	66	71	0	0	282	40
SOUTHBOUND	**07-19**	67	54	32	67	78	0	0	298	43
NORTHBOUND	**00-00**	85	61	43	78	83	0	0	350	50
SOUTHBOUND	**00-00**	82	65	39	76	86	0	0	348	50

PEAK FLOW SUMMARY:

Peak	AM	IP	PM
Most Frequent Peak Hour	0700	1200	1600
Average Vehicles per Peak Hour	4	5	5

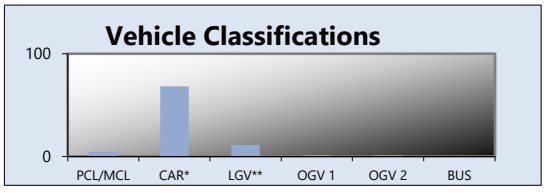
TRAFFINOMICS LIMITED

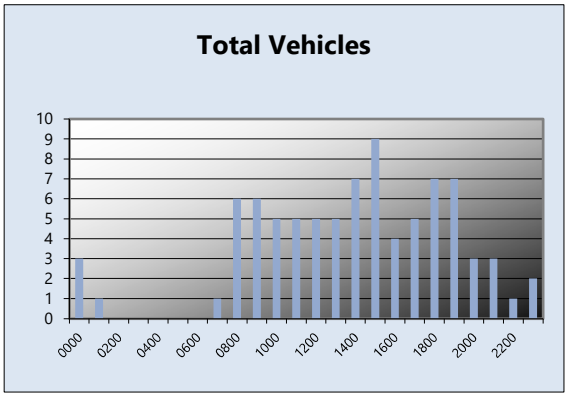
ORANMORE TRAFFIC COUNT/SPEED SURVEY **Friday 9 February 2024**
AUTOMATIC TRAFFIC COUNT **TRA/24/013**

SITE 01
NORTHBOUND

TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	1	2	0	0	0	0	3	2
0100	0	1	0	0	0	0	1	1
0200	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0
0400	0	0	0	0	0	0	0	0
0500	0	0	0	0	0	0	0	0
0600	0	0	0	0	0	0	0	0
0700	0	1	0	0	0	0	1	1
0800	1	4	1	0	0	0	6	5
0900	0	4	1	0	1	0	6	7
1000	1	2	2	0	0	0	5	4
1100	0	4	1	0	0	0	5	5
1200	0	2	3	0	0	0	5	5
1300	0	3	1	1	0	0	5	6
1400	0	6	1	0	0	0	7	7
1500	0	9	0	0	0	0	9	9
1600	0	4	0	0	0	0	4	4
1700	0	5	0	0	0	0	5	5
1800	0	6	1	0	0	0	7	7
1900	1	6	0	0	0	0	7	6
2000	0	3	0	0	0	0	3	3
2100	0	3	0	0	0	0	3	3
2200	0	1	0	0	0	0	1	1
2300	0	2	0	0	0	0	2	2
07-19	2	50	11	1	1	0	65	65
06-22	3	62	11	1	1	0	78	77
06-00	3	65	11	1	1	0	81	80
00-00	4	68	11	1	1	0	85	84

Peaks	Time	Vehicles	PCU's
AM	0800	6	7.3
IP	1400	7	7
PM	1800	7	7





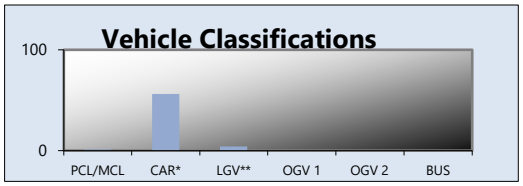
TRAFFINOMICS LIMITED

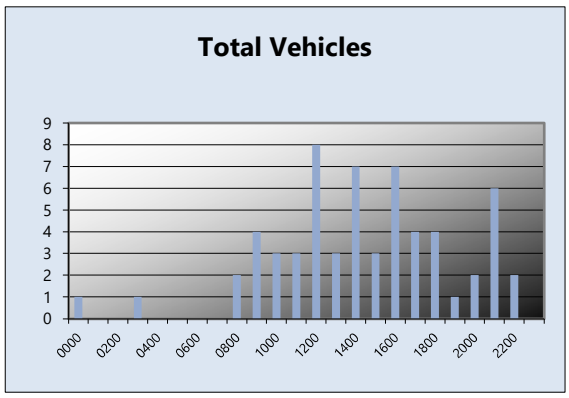
ORANMORE TRAFFIC COUNT/SPEED SURVEY **Saturday 10 February 2024**
AUTOMATIC TRAFFIC COUNT **TRA/24/013**

SITE 01
NORTHBOUND

TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	0	1	0	0	0	0	1	1
0100	0	0	0	0	0	0	0	0
0200	0	0	0	0	0	0	0	0
0300	0	1	0	0	0	0	1	1
0400	0	0	0	0	0	0	0	0
0500	0	0	0	0	0	0	0	0
0600	0	0	0	0	0	0	0	0
0700	0	0	0	0	0	0	0	0
0800	0	2	0	0	0	0	2	2
0900	0	3	1	0	0	0	4	4
1000	0	3	0	0	0	0	3	3
1100	1	2	0	0	0	0	3	2
1200	0	8	0	0	0	0	8	8
1300	0	2	1	0	0	0	3	3
1400	0	6	1	0	0	0	7	7
1500	0	3	0	0	0	0	3	3
1600	0	7	0	0	0	0	7	7
1700	0	4	0	0	0	0	4	4
1800	0	3	1	0	0	0	4	4
1900	0	1	0	0	0	0	1	1
2000	0	2	0	0	0	0	2	2
2100	0	6	0	0	0	0	6	6
2200	0	2	0	0	0	0	2	2
2300	0	0	0	0	0	0	0	0
07-19	1	43	4	0	0	0	48	47
06-22	1	52	4	0	0	0	57	56
06-00	1	54	4	0	0	0	59	58
00-00	1	56	4	0	0	0	61	60

Peaks	Time	Vehicles	PCU's
AM	0900	4	4
IP	1200	8	8
PM	1600	7	7





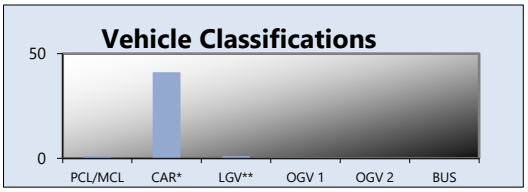
TRAFFINOMICS LIMITED

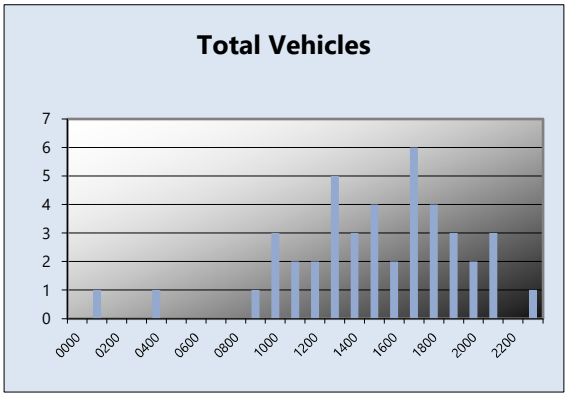
ORANMORE TRAFFIC COUNT/SPEED SURVEY **Sunday 11 February 2024**
AUTOMATIC TRAFFIC COUNT **TRA/24/013**

SITE 01
NORTHBOUND

TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	0	0	0	0	0	0	0	0
0100	0	1	0	0	0	0	1	1
0200	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0
0400	0	1	0	0	0	0	1	1
0500	0	0	0	0	0	0	0	0
0600	0	0	0	0	0	0	0	0
0700	0	0	0	0	0	0	0	0
0800	0	0	0	0	0	0	0	0
0900	0	1	0	0	0	0	1	1
1000	0	3	0	0	0	0	3	3
1100	0	1	1	0	0	0	2	2
1200	1	1	0	0	0	0	2	1
1300	0	5	0	0	0	0	5	5
1400	0	3	0	0	0	0	3	3
1500	0	4	0	0	0	0	4	4
1600	0	2	0	0	0	0	2	2
1700	0	6	0	0	0	0	6	6
1800	0	4	0	0	0	0	4	4
1900	0	3	0	0	0	0	3	3
2000	0	2	0	0	0	0	2	2
2100	0	3	0	0	0	0	3	3
2200	0	0	0	0	0	0	0	0
2300	0	1	0	0	0	0	1	1
07-19	1	30	1	0	0	0	32	31
06-22	1	38	1	0	0	0	40	39
06-00	1	39	1	0	0	0	41	40
00-00	1	41	1	0	0	0	43	42

Peaks	Time	Vehicles	PCU's
AM	0900	1	1
IP	1300	5	5
PM	1700	6	6





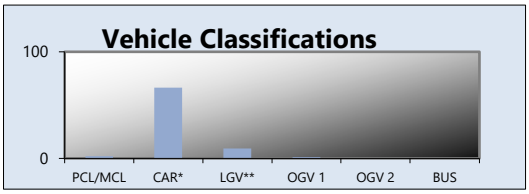
TRAFFINOMICS LIMITED

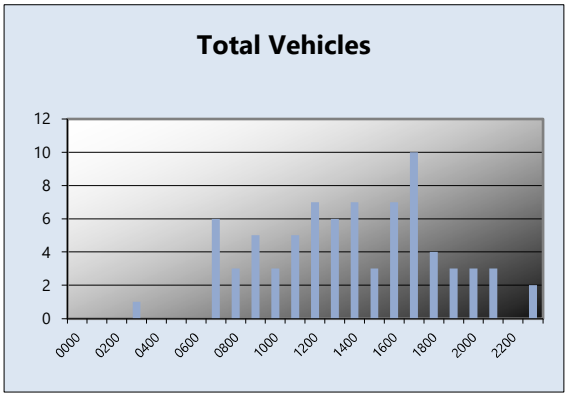
ORANMORE TRAFFIC COUNT/SPEED SURVEY **Monday 12 February 2024**
AUTOMATIC TRAFFIC COUNT **TRA/24/013**

SITE 01
NORTHBOUND

TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	0	0	0	0	0	0	0	0
0100	0	0	0	0	0	0	0	0
0200	0	0	0	0	0	0	0	0
0300	0	1	0	0	0	0	1	1
0400	0	0	0	0	0	0	0	0
0500	0	0	0	0	0	0	0	0
0600	0	0	0	0	0	0	0	0
0700	1	4	1	0	0	0	6	5
0800	0	3	0	0	0	0	3	3
0900	1	2	2	0	0	0	5	4
1000	0	3	0	0	0	0	3	3
1100	0	3	2	0	0	0	5	5
1200	0	5	1	1	0	0	7	8
1300	0	4	2	0	0	0	6	6
1400	0	6	1	0	0	0	7	7
1500	0	3	0	0	0	0	3	3
1600	0	7	0	0	0	0	7	7
1700	0	10	0	0	0	0	10	10
1800	0	4	0	0	0	0	4	4
1900	0	3	0	0	0	0	3	3
2000	0	3	0	0	0	0	3	3
2100	0	3	0	0	0	0	3	3
2200	0	0	0	0	0	0	0	0
2300	0	2	0	0	0	0	2	2
07-19	2	54	9	1	0	0	66	65
06-22	2	63	9	1	0	0	75	74
06-00	2	65	9	1	0	0	77	76
00-00	2	66	9	1	0	0	78	77

Peaks	Time	Vehicles	PCU's
AM	0700	6	5.2
IP	1200	7	7.5
PM	1700	10	10





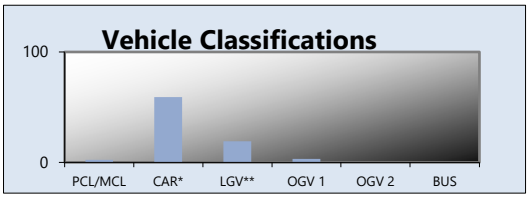
TRAFFINOMICS LIMITED

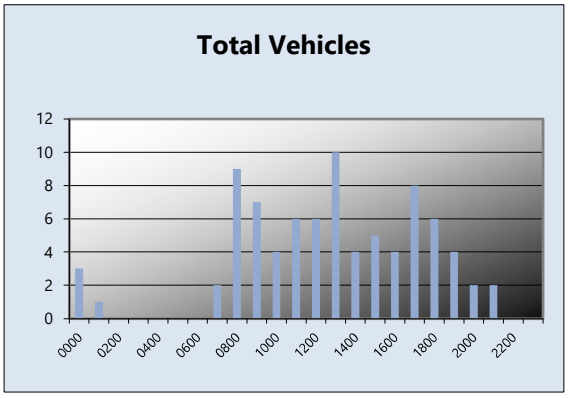
ORANMORE TRAFFIC COUNT/SPEED SURVEY **Tuesday 13 February 2024**
AUTOMATIC TRAFFIC COUNT **TRA/24/013**

SITE 01
NORTHBOUND

TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	1	2	0	0	0	0	3	2
0100	0	1	0	0	0	0	1	1
0200	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0
0400	0	0	0	0	0	0	0	0
0500	0	0	0	0	0	0	0	0
0600	0	0	0	0	0	0	0	0
0700	0	1	1	0	0	0	2	2
0800	0	3	4	2	0	0	9	10
0900	0	3	4	0	0	0	7	7
1000	0	2	2	0	0	0	4	4
1100	0	2	3	1	0	0	6	7
1200	0	3	3	0	0	0	6	6
1300	0	9	1	0	0	0	10	10
1400	0	3	1	0	0	0	4	4
1500	0	5	0	0	0	0	5	5
1600	0	4	0	0	0	0	4	4
1700	0	8	0	0	0	0	8	8
1800	1	5	0	0	0	0	6	5
1900	0	4	0	0	0	0	4	4
2000	0	2	0	0	0	0	2	2
2100	0	2	0	0	0	0	2	2
2200	0	0	0	0	0	0	0	0
2300	0	0	0	0	0	0	0	0
07-19	1	48	19	3	0	0	71	72
06-22	1	56	19	3	0	0	79	80
06-00	1	56	19	3	0	0	79	80
00-00	2	59	19	3	0	0	83	83

Peaks	Time	Vehicles	PCU's
AM	0800	9	10
IP	1300	10	10
PM	1700	8	8





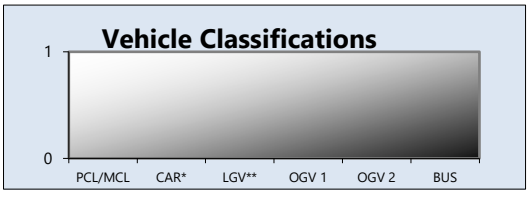
TRAFFINOMICS LIMITED

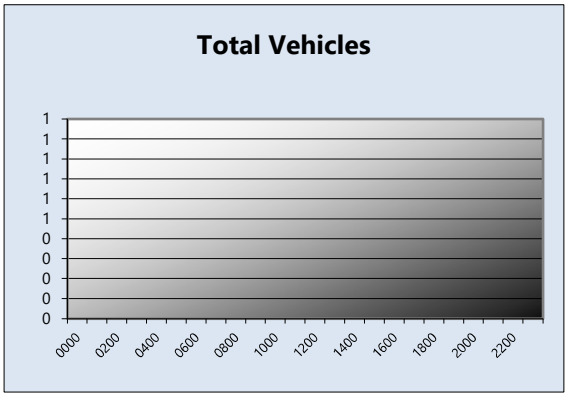
ORANMORE TRAFFIC COUNT/SPEED SURVEY **########**
AUTOMATIC TRAFFIC COUNT **TRA/24/013**

SITE 01
NORTHBOUND

TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	0	0	0	0	0	0	0	0
0100	0	0	0	0	0	0	0	0
0200	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0
0400	0	0	0	0	0	0	0	0
0500	0	0	0	0	0	0	0	0
0600	0	0	0	0	0	0	0	0
0700	0	0	0	0	0	0	0	0
0800	0	0	0	0	0	0	0	0
0900	0	0	0	0	0	0	0	0
1000	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0
1200	0	0	0	0	0	0	0	0
1300	0	0	0	0	0	0	0	0
1400	0	0	0	0	0	0	0	0
1500	0	0	0	0	0	0	0	0
1600	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0
1900	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0
2100	0	0	0	0	0	0	0	0
2200	0	0	0	0	0	0	0	0
2300	0	0	0	0	0	0	0	0
07-19	0	0	0	0	0	0	0	0
06-22	0	0	0	0	0	0	0	0
06-00	0	0	0	0	0	0	0	0
00-00	0	0	0	0	0	0	0	0

Peaks	Time	Vehicles	PCU's
AM	0700	0	0
IP	1200	0	0
PM	1600	0	0





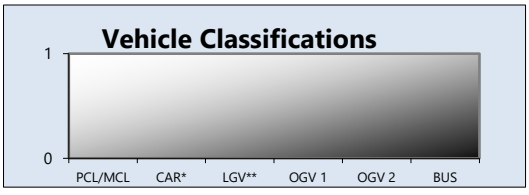
TRAFFINOMICS LIMITED

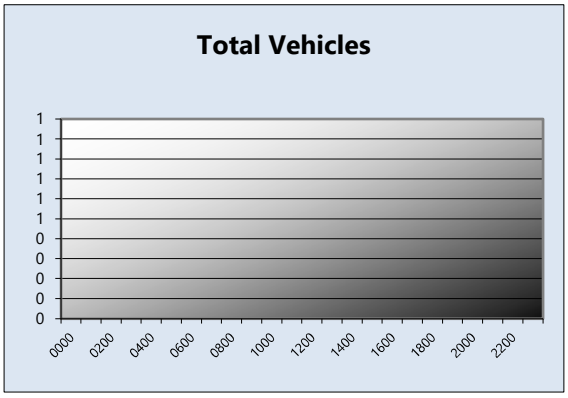
ORANMORE TRAFFIC COUNT/SPEED SURVEY **########**
AUTOMATIC TRAFFIC COUNT **TRA/24/013**

SITE 01
NORTHBOUND

TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	0	0	0	0	0	0	0	0
0100	0	0	0	0	0	0	0	0
0200	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0
0400	0	0	0	0	0	0	0	0
0500	0	0	0	0	0	0	0	0
0600	0	0	0	0	0	0	0	0
0700	0	0	0	0	0	0	0	0
0800	0	0	0	0	0	0	0	0
0900	0	0	0	0	0	0	0	0
1000	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0
1200	0	0	0	0	0	0	0	0
1300	0	0	0	0	0	0	0	0
1400	0	0	0	0	0	0	0	0
1500	0	0	0	0	0	0	0	0
1600	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0
1900	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0
2100	0	0	0	0	0	0	0	0
2200	0	0	0	0	0	0	0	0
2300	0	0	0	0	0	0	0	0
07-19	0	0	0	0	0	0	0	0
06-22	0	0	0	0	0	0	0	0
06-00	0	0	0	0	0	0	0	0
00-00	0	0	0	0	0	0	0	0

Peaks	Time	Vehicles	PCU's
AM	0700	0	0
IP	1200	0	0
PM	1600	0	0





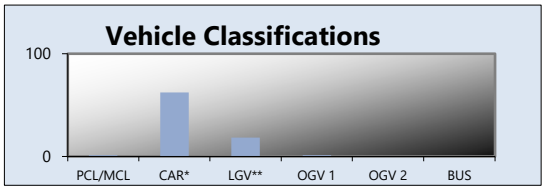
TRAFFINOMICS LIMITED

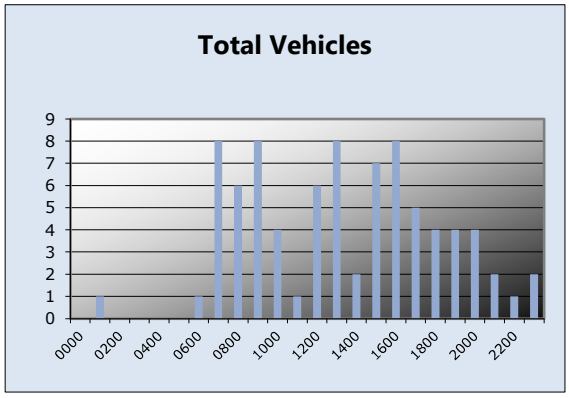
ORANMORE TRAFFIC COUNT/SPEED SURVEY **Friday 9 February 2024**
AUTOMATIC TRAFFIC COUNT **TRA/24/013**

SITE 01
SOUTHBOUND

TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	0	0	0	0	0	0	0	0
0100	0	1	0	0	0	0	1	1
0200	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0
0400	0	0	0	0	0	0	0	0
0500	0	0	0	0	0	0	0	0
0600	0	1	0	0	0	0	1	1
0700	0	8	0	0	0	0	8	8
0800	0	5	1	0	0	0	6	6
0900	0	6	2	0	0	0	8	8
1000	0	2	2	0	0	0	4	4
1100	0	0	1	0	0	0	1	1
1200	0	4	2	0	0	0	6	6
1300	0	6	2	0	0	0	8	8
1400	0	2	0	0	0	0	2	2
1500	0	3	4	0	0	0	7	7
1600	0	6	2	0	0	0	8	8
1700	0	4	1	0	0	0	5	5
1800	0	3	0	1	0	0	4	5
1900	0	4	0	0	0	0	4	4
2000	1	3	0	0	0	0	4	3
2100	0	1	1	0	0	0	2	2
2200	0	1	0	0	0	0	1	1
2300	0	2	0	0	0	0	2	2
07-19	0	49	17	1	0	0	67	68
06-22	1	58	18	1	0	0	78	78
06-00	1	61	18	1	0	0	81	81
00-00	1	62	18	1	0	0	82	82

Peaks	Time	Vehicles	PCU's
AM	0700	8	8
IP	1300	8	8
PM	1600	8	8





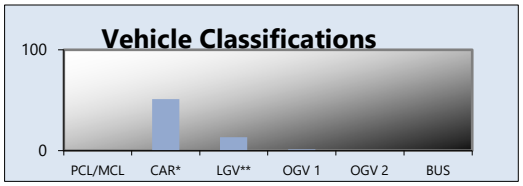
TRAFFINOMICS LIMITED

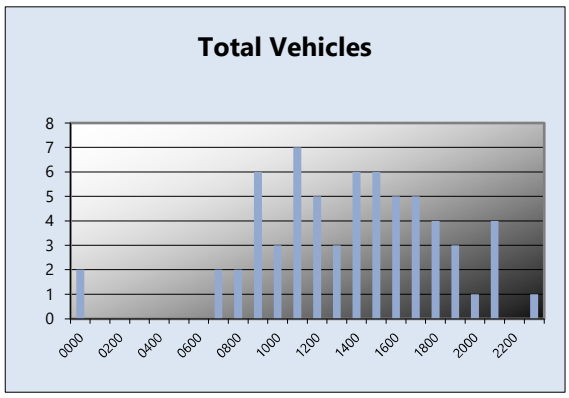
ORANMORE TRAFFIC COUNT/SPEED SURVEY **Saturday 10 February 2024**
AUTOMATIC TRAFFIC COUNT **TRA/24/013**

SITE 01
SOUTHBOUND

TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	0	2	0	0	0	0	2	2
0100	0	0	0	0	0	0	0	0
0200	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0
0400	0	0	0	0	0	0	0	0
0500	0	0	0	0	0	0	0	0
0600	0	0	0	0	0	0	0	0
0700	0	2	0	0	0	0	2	2
0800	0	1	1	0	0	0	2	2
0900	0	3	2	1	0	0	6	7
1000	0	2	1	0	0	0	3	3
1100	0	6	1	0	0	0	7	7
1200	0	3	2	0	0	0	5	5
1300	0	2	1	0	0	0	3	3
1400	0	4	2	0	0	0	6	6
1500	0	5	1	0	0	0	6	6
1600	0	5	0	0	0	0	5	5
1700	0	4	1	0	0	0	5	5
1800	0	4	0	0	0	0	4	4
1900	0	3	0	0	0	0	3	3
2000	0	1	0	0	0	0	1	1
2100	0	3	1	0	0	0	4	4
2200	0	0	0	0	0	0	0	0
2300	0	1	0	0	0	0	1	1
07-19	0	41	12	1	0	0	54	55
06-22	0	48	13	1	0	0	62	63
06-00	0	49	13	1	0	0	63	64
00-00	0	51	13	1	0	0	65	66

Peaks	Time	Vehicles	PCU's
AM	0900	6	6.5
IP	1400	6	6
PM	1600	5	5





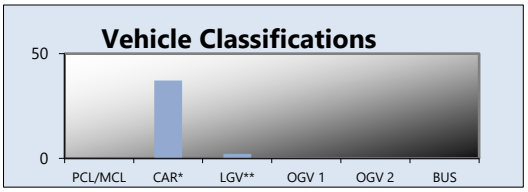
TRAFFINOMICS LIMITED

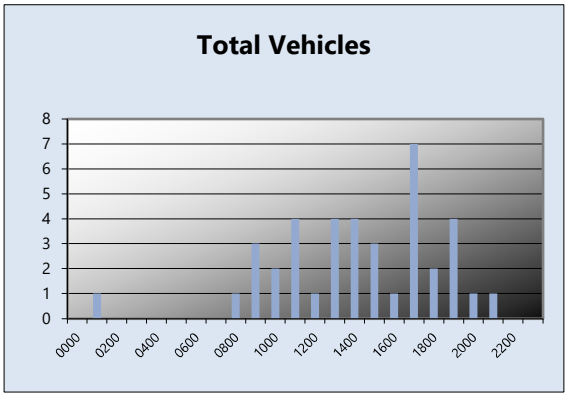
ORANMORE TRAFFIC COUNT/SPEED SURVEY **Sunday 11 February 2024**
AUTOMATIC TRAFFIC COUNT **TRA/24/013**

SITE 01
SOUTHBOUND

TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	0	0	0	0	0	0	0	0
0100	0	1	0	0	0	0	1	1
0200	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0
0400	0	0	0	0	0	0	0	0
0500	0	0	0	0	0	0	0	0
0600	0	0	0	0	0	0	0	0
0700	0	0	0	0	0	0	0	0
0800	0	1	0	0	0	0	1	1
0900	0	3	0	0	0	0	3	3
1000	0	2	0	0	0	0	2	2
1100	0	4	0	0	0	0	4	4
1200	0	1	0	0	0	0	1	1
1300	0	4	0	0	0	0	4	4
1400	0	3	1	0	0	0	4	4
1500	0	3	0	0	0	0	3	3
1600	0	1	0	0	0	0	1	1
1700	0	6	1	0	0	0	7	7
1800	0	2	0	0	0	0	2	2
1900	0	4	0	0	0	0	4	4
2000	0	1	0	0	0	0	1	1
2100	0	1	0	0	0	0	1	1
2200	0	0	0	0	0	0	0	0
2300	0	0	0	0	0	0	0	0
07-19	0	30	2	0	0	0	32	32
06-22	0	36	2	0	0	0	38	38
06-00	0	36	2	0	0	0	38	38
00-00	0	37	2	0	0	0	39	39

Peaks	Time	Vehicles	PCU's
AM	0900	3	3
IP	1300	4	4
PM	1700	7	7





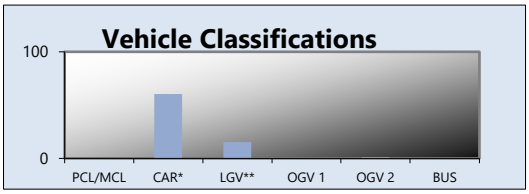
TRAFFINOMICS LIMITED

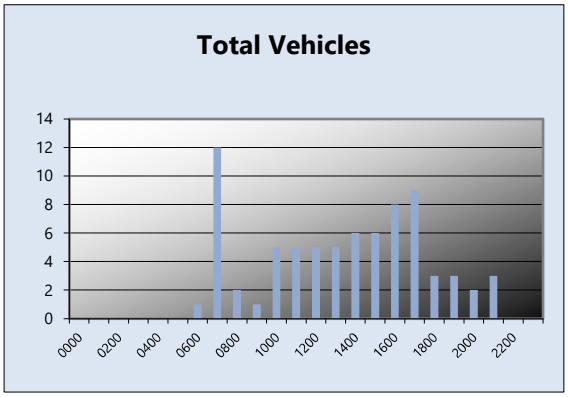
ORANMORE TRAFFIC COUNT/SPEED SURVEY **Monday 12 February 2024**
AUTOMATIC TRAFFIC COUNT **TRA/24/013**

SITE 01
SOUTHBOUND

TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	0	0	0	0	0	0	0	0
0100	0	0	0	0	0	0	0	0
0200	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0
0400	0	0	0	0	0	0	0	0
0500	0	0	0	0	0	0	0	0
0600	0	1	0	0	0	0	1	1
0700	0	9	3	0	0	0	12	12
0800	0	2	0	0	0	0	2	2
0900	0	0	1	0	0	0	1	1
1000	0	5	0	0	0	0	5	5
1100	0	3	2	0	0	0	5	5
1200	0	2	3	0	0	0	5	5
1300	0	3	2	0	0	0	5	5
1400	0	4	1	0	1	0	6	7
1500	0	6	0	0	0	0	6	6
1600	0	7	1	0	0	0	8	8
1700	0	7	2	0	0	0	9	9
1800	0	3	0	0	0	0	3	3
1900	0	3	0	0	0	0	3	3
2000	0	2	0	0	0	0	2	2
2100	0	3	0	0	0	0	3	3
2200	0	0	0	0	0	0	0	0
2300	0	0	0	0	0	0	0	0
07-19	0	51	15	0	1	0	67	68
06-22	0	60	15	0	1	0	76	77
06-00	0	60	15	0	1	0	76	77
00-00	0	60	15	0	1	0	76	77

Peaks	Time	Vehicles	PCU's
AM	0700	12	12
IP	1400	6	7.3
PM	1700	9	9





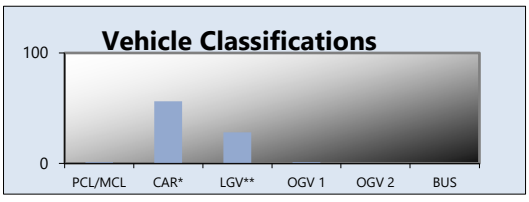
TRAFFINOMICS LIMITED

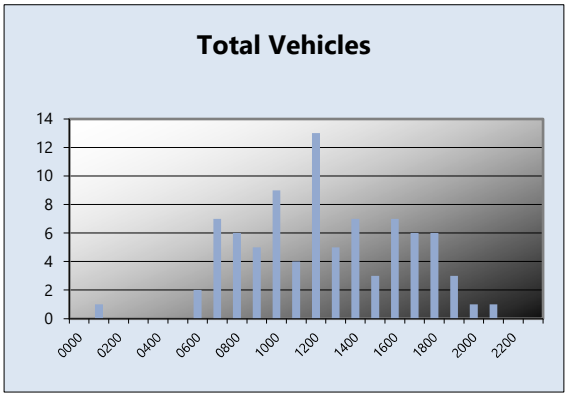
ORANMORE TRAFFIC COUNT/SPEED SURVEY **Tuesday 13 February 2024**
AUTOMATIC TRAFFIC COUNT **TRA/24/013**

SITE 01
SOUTHBOUND

TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	0	0	0	0	0	0	0	0
0100	0	1	0	0	0	0	1	1
0200	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0
0400	0	0	0	0	0	0	0	0
0500	0	0	0	0	0	0	0	0
0600	0	2	0	0	0	0	2	2
0700	0	6	1	0	0	0	7	7
0800	0	3	3	0	0	0	6	6
0900	0	3	1	1	0	0	5	6
1000	0	5	4	0	0	0	9	9
1100	0	3	1	0	0	0	4	4
1200	0	6	7	0	0	0	13	13
1300	0	3	2	0	0	0	5	5
1400	1	3	3	0	0	0	7	6
1500	0	3	0	0	0	0	3	3
1600	0	6	1	0	0	0	7	7
1700	0	3	3	0	0	0	6	6
1800	0	4	2	0	0	0	6	6
1900	0	3	0	0	0	0	3	3
2000	0	1	0	0	0	0	1	1
2100	0	1	0	0	0	0	1	1
2200	0	0	0	0	0	0	0	0
2300	0	0	0	0	0	0	0	0
07-19	1	48	28	1	0	0	78	78
06-22	1	55	28	1	0	0	85	85
06-00	1	55	28	1	0	0	85	85
00-00	1	56	28	1	0	0	86	86

Peaks	Time	Vehicles	PCU's
AM	0700	7	7
IP	1200	13	13
PM	1600	7	7





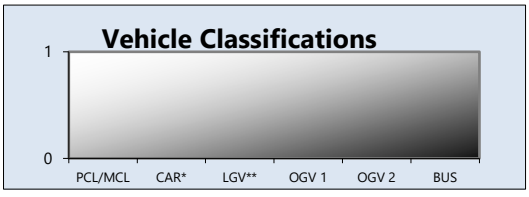
TRAFFINOMICS LIMITED

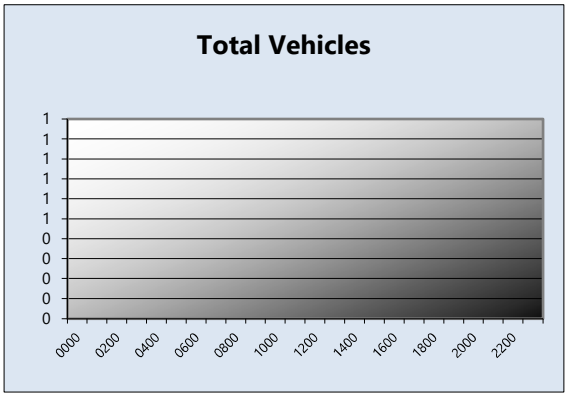
ORANMORE TRAFFIC COUNT/SPEED SURVEY **########**
AUTOMATIC TRAFFIC COUNT **TRA/24/013**

SITE 01
SOUTHBOUND

TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	0	0	0	0	0	0	0	0
0100	0	0	0	0	0	0	0	0
0200	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0
0400	0	0	0	0	0	0	0	0
0500	0	0	0	0	0	0	0	0
0600	0	0	0	0	0	0	0	0
0700	0	0	0	0	0	0	0	0
0800	0	0	0	0	0	0	0	0
0900	0	0	0	0	0	0	0	0
1000	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0
1200	0	0	0	0	0	0	0	0
1300	0	0	0	0	0	0	0	0
1400	0	0	0	0	0	0	0	0
1500	0	0	0	0	0	0	0	0
1600	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0
1900	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0
2100	0	0	0	0	0	0	0	0
2200	0	0	0	0	0	0	0	0
2300	0	0	0	0	0	0	0	0
07-19	0	0	0	0	0	0	0	0
06-22	0	0	0	0	0	0	0	0
06-00	0	0	0	0	0	0	0	0
00-00	0	0	0	0	0	0	0	0

Peaks	Time	Vehicles	PCU's
AM	0700	0	0
IP	1200	0	0
PM	1600	0	0





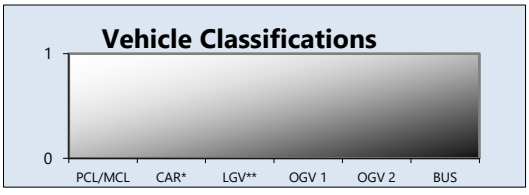
TRAFFINOMICS LIMITED

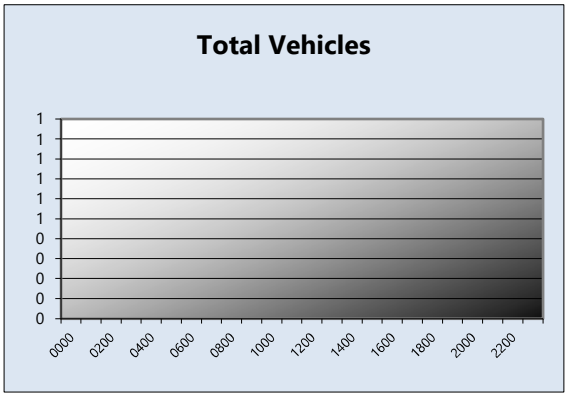
ORANMORE TRAFFIC COUNT/SPEED SURVEY **########**
AUTOMATIC TRAFFIC COUNT **TRA/24/013**

SITE 01
SOUTHBOUND

TIME	PCL/MCL	CAR*	LGV**	OGV 1	OGV 2	BUS	TOTAL	PCU
0000	0	0	0	0	0	0	0	0
0100	0	0	0	0	0	0	0	0
0200	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0
0400	0	0	0	0	0	0	0	0
0500	0	0	0	0	0	0	0	0
0600	0	0	0	0	0	0	0	0
0700	0	0	0	0	0	0	0	0
0800	0	0	0	0	0	0	0	0
0900	0	0	0	0	0	0	0	0
1000	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0
1200	0	0	0	0	0	0	0	0
1300	0	0	0	0	0	0	0	0
1400	0	0	0	0	0	0	0	0
1500	0	0	0	0	0	0	0	0
1600	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0
1900	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0
2100	0	0	0	0	0	0	0	0
2200	0	0	0	0	0	0	0	0
2300	0	0	0	0	0	0	0	0
07-19	0	0	0	0	0	0	0	0
06-22	0	0	0	0	0	0	0	0
06-00	0	0	0	0	0	0	0	0
00-00	0	0	0	0	0	0	0	0

Peaks	Time	Vehicles	PCU's
AM	0700	0	0
IP	1200	0	0
PM	1600	0	0

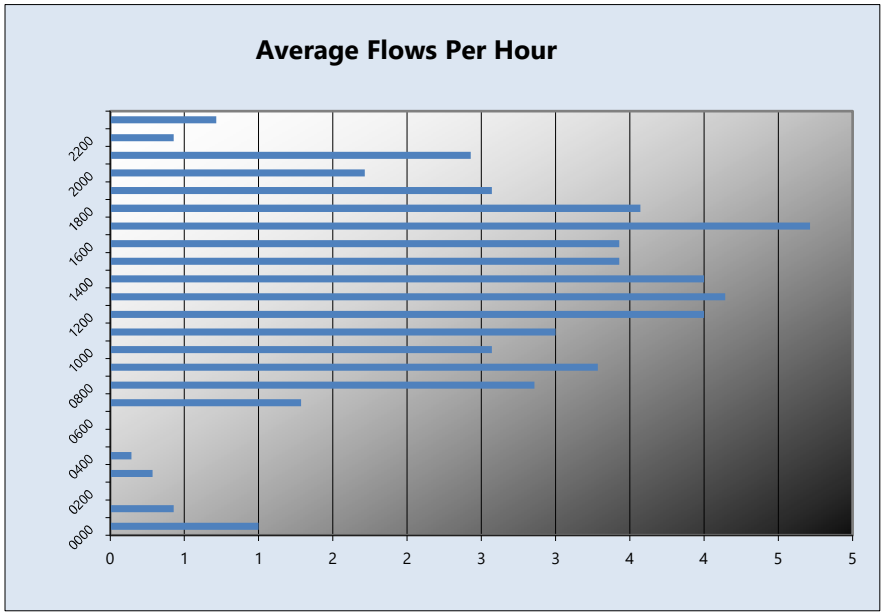


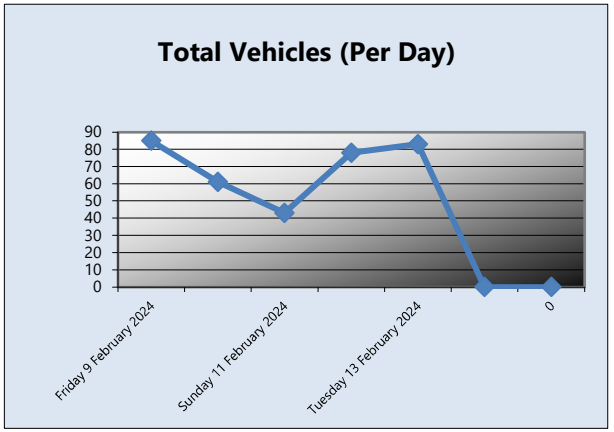


ORANMORE TRAFFIC COUNT/SPEED SURVEY **SITE 01** **WEEK COMMENCING:** **Friday 9 February 2024**
AUTOMATIC TRAFFIC COUNT **NORTHBOUND** **TRA/24/013**

TIME PERIOD	Friday 9 February 2024	Saturday 10 February 2024	Sunday 11 February 2024	Monday 12 February 2024	Tuesday 13 February 2024	0	0	Average
0000	3	1	0	0	3	0	0	1
0100	1	0	1	0	1	0	0	0
0200	0	0	0	0	0	0	0	0
0300	0	1	0	1	0	0	0	0
0400	0	0	1	0	0	0	0	0
0500	0	0	0	0	0	0	0	0
0600	0	0	0	0	0	0	0	0
0700	1	0	0	6	2	0	0	1
0800	6	2	0	3	9	0	0	3
0900	6	4	1	5	7	0	0	3
1000	5	3	3	3	4	0	0	3
1100	5	3	2	5	6	0	0	3
1200	5	8	2	7	6	0	0	4
1300	5	3	5	6	10	0	0	4
1400	7	7	3	7	4	0	0	4
1500	9	3	4	3	5	0	0	3
1600	4	7	2	7	4	0	0	3
1700	5	4	6	10	8	0	0	5
1800	7	4	4	4	6	0	0	4
1900	7	1	3	3	4	0	0	3
2000	3	2	2	3	2	0	0	2
2100	3	6	3	3	2	0	0	2
2200	1	2	0	0	0	0	0	0
2300	2	0	1	2	0	0	0	1
07-19	65	48	32	66	71	0	0	40
06-22	78	57	40	75	79	0	0	47
06-00	81	59	41	77	79	0	0	48
00-00	85	61	43	78	83	0	0	50

ORANMORE TRAFFIC COUNT/SPEED SURVEY **SITE 01** **WEEK COMMENCING:** **Friday 9 February 2024**
AUTOMATIC TRAFFIC COUNT **NORTHBOUND** **TRA/24/013**





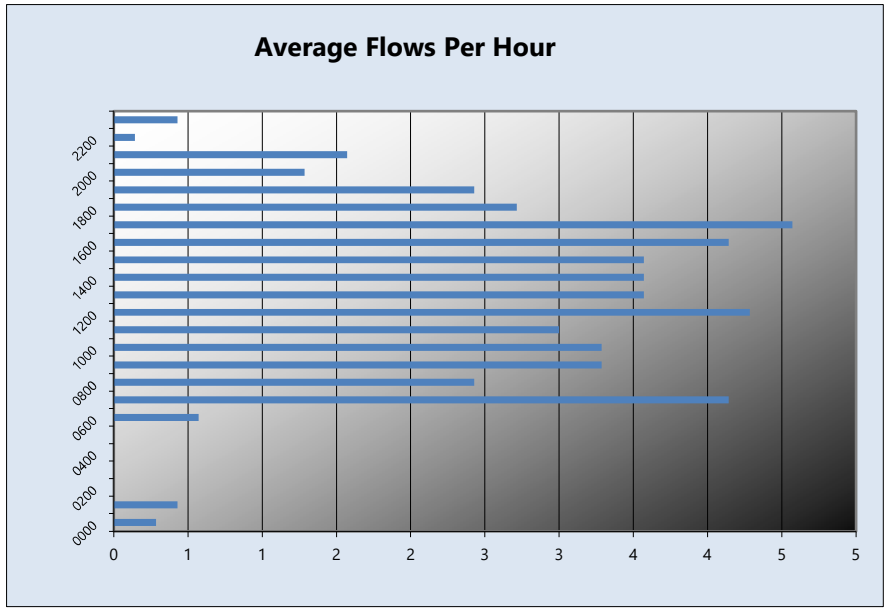
Peak Time & Volumetric Count Data

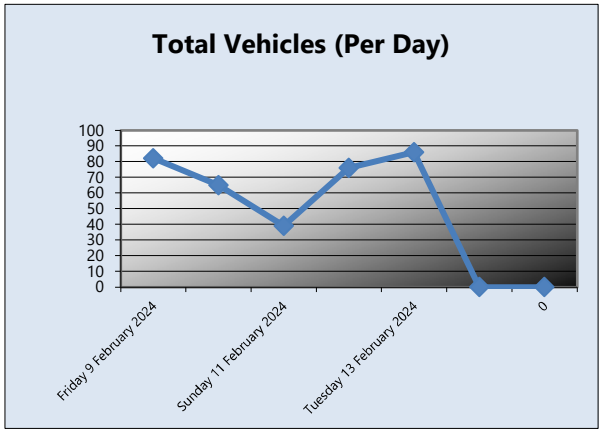
	Friday 9 February 2024	Saturday 10 February 2024	Sunday 11 February 2024	Monday 12 February 2024	Tuesday 13 February 2024	0	0	Mode/ Average
AM								
Time	0800	0900	0900	0700	0800	0700	0700	0700
Vehicles	6	4	1	6	9	0	0	4
IP								
Time	1400	1200	1300	1200	1300	1200	1200	1200
Vehicles	7	8	5	7	10	0	0	5
PM								
Time	1800	1600	1700	1700	1700	1600	1600	1600
Vehicles	7	7	6	10	8	0	0	5

ORANMORE TRAFFIC COUNT/SPEED SURVEY **SITE 01** **WEEK COMMENCING:** **Friday 9 February 2024**
AUTOMATIC TRAFFIC COUNT **SOUTHBOUND** **TRA/24/013**

TIME PERIOD	Friday 9 February 2024	Saturday 10 February 2024	Sunday 11 February 2024	Monday 12 February 2024	Tuesday 13 February 2024	0	0	Average
0000	0	2	0	0	0	0	0	0
0100	1	0	1	0	1	0	0	0
0200	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0
0400	0	0	0	0	0	0	0	0
0500	0	0	0	0	0	0	0	0
0600	1	0	0	1	2	0	0	1
0700	8	2	0	12	7	0	0	4
0800	6	2	1	2	6	0	0	2
0900	8	6	3	1	5	0	0	3
1000	4	3	2	5	9	0	0	3
1100	1	7	4	5	4	0	0	3
1200	6	5	1	5	13	0	0	4
1300	8	3	4	5	5	0	0	4
1400	2	6	4	6	7	0	0	4
1500	7	6	3	6	3	0	0	4
1600	8	5	1	8	7	0	0	4
1700	5	5	7	9	6	0	0	5
1800	4	4	2	3	6	0	0	3
1900	4	3	4	3	3	0	0	2
2000	4	1	1	2	1	0	0	1
2100	2	4	1	3	1	0	0	2
2200	1	0	0	0	0	0	0	0
2300	2	1	0	0	0	0	0	0
07-19	67	54	32	67	78	0	0	43
06-22	78	62	38	76	85	0	0	48
06-00	81	63	38	76	85	0	0	49
00-00	82	65	39	76	86	0	0	50

ORANMORE TRAFFIC COUNT/SPEED SURVEY **SITE 01** **WEEK COMMENCING:** **Friday 9 February 2024**
AUTOMATIC TRAFFIC COUNT **SOUTHBOUND** **TRA/24/013**





Peak Time & Volumetric Count Data

	Friday 9 February 2024	Saturday 10 February 2024	Sunday 11 February 2024	Monday 12 February 2024	Tuesday 13 February 2024	0	0	Mode/ Average
AM								
Time	0700	0900	0900	0700	0700	0700	0700	0700
Vehicles	8	6	8	12	7	0	0	6
IP								
Time	1300	1400	1300	1400	1200	1200	1200	1200
Vehicles	8	6	4	6	13	0	0	5
PM								
Time	1600	1600	1700	1700	1600	1600	1600	1600
Vehicles	8	5	7	9	7	0	0	5

ORANMORE TRAFFIC COUNT/SPEED SURVEY **WEEK COMMENCING:** **Friday 9 February 2024**

AUTOMATIC TRAFFIC COUNT **TRA/24/013**

SITE 01
NORTHBOUND

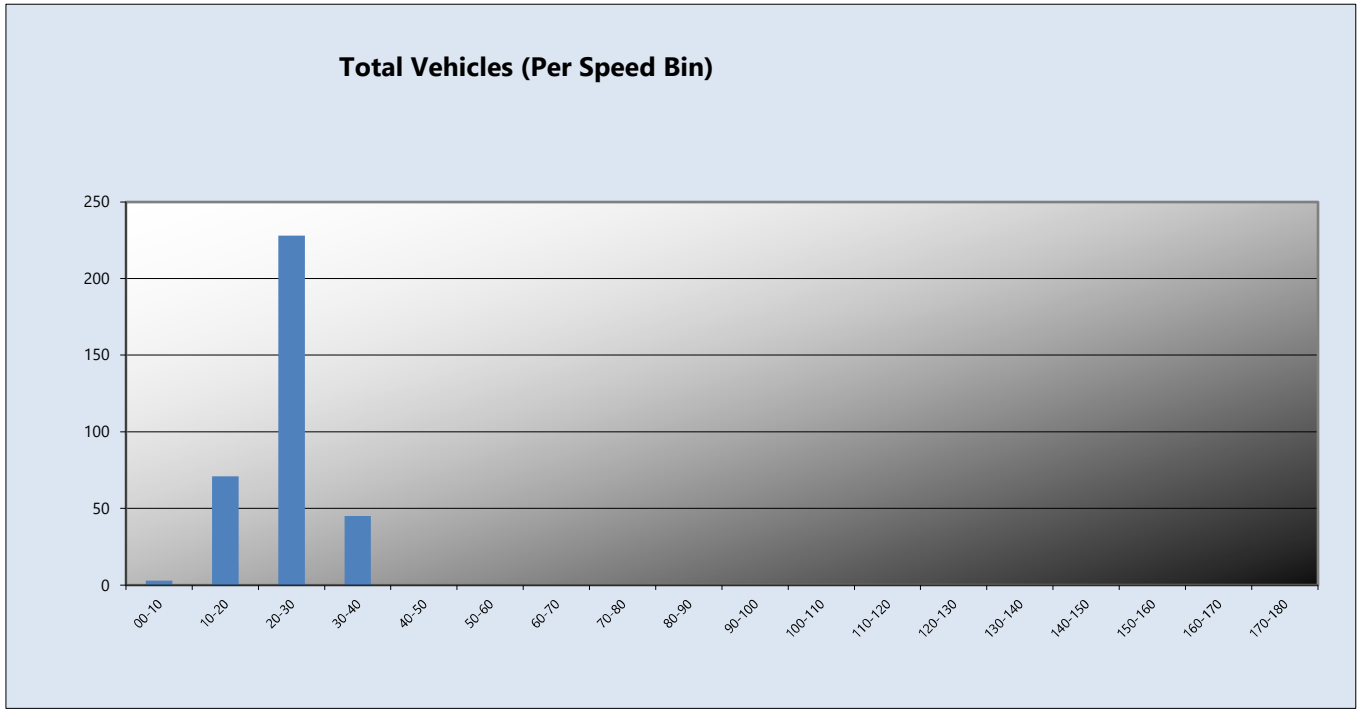
Profile:

Filter time: 00:00 9th February 2024 => 23:59 13th February 2024
Speed range: 0 - 200 km/h.
Separation: Greater than 4.00 seconds. - (Headway)
Units: Metric (meter, kilometer, m/s, km/h, kg, tonne)

Vehicles = 347
Maximum = 38.9 km/h, Minimum = 8.0 km/h, Mean = 24.1 km/h
85% Speed = 29.77 km/h, 95% Speed = 32.00 km/h, Median = 24.48 km/h
20 km/h Pace = 14 - 34, Number in Pace = 328 (94.52%)
Variance = 28.69, Standard Deviation = 5.36 km/h

Speed Bins:

Speed	Bin	
KPH	No.	%
00-10	3	0.9
10-20	71	20.5
20-30	228	65.7
30-40	45	13.0
40-50	0	0.0
50-60	0	0.0
60-70	0	0.0
70-80	0	0.0
80-90	0	0.0
90-100	0	0.0
100-110	0	0.0
110-120	0	0.0
120-130	0	0.0
130-140	0	0.0
140-150	0	0.0
150-160	0	0.0
160-170	0	0.0
170-180	0	0.0



ORANMORE TRAFFIC COUNT/SPEED SURVEY **WEEK COMMENCING: Friday 9 February 2024**
AUTOMATIC TRAFFIC COUNT **TRA/24/013**

SITE 01
SOUTHBOUND

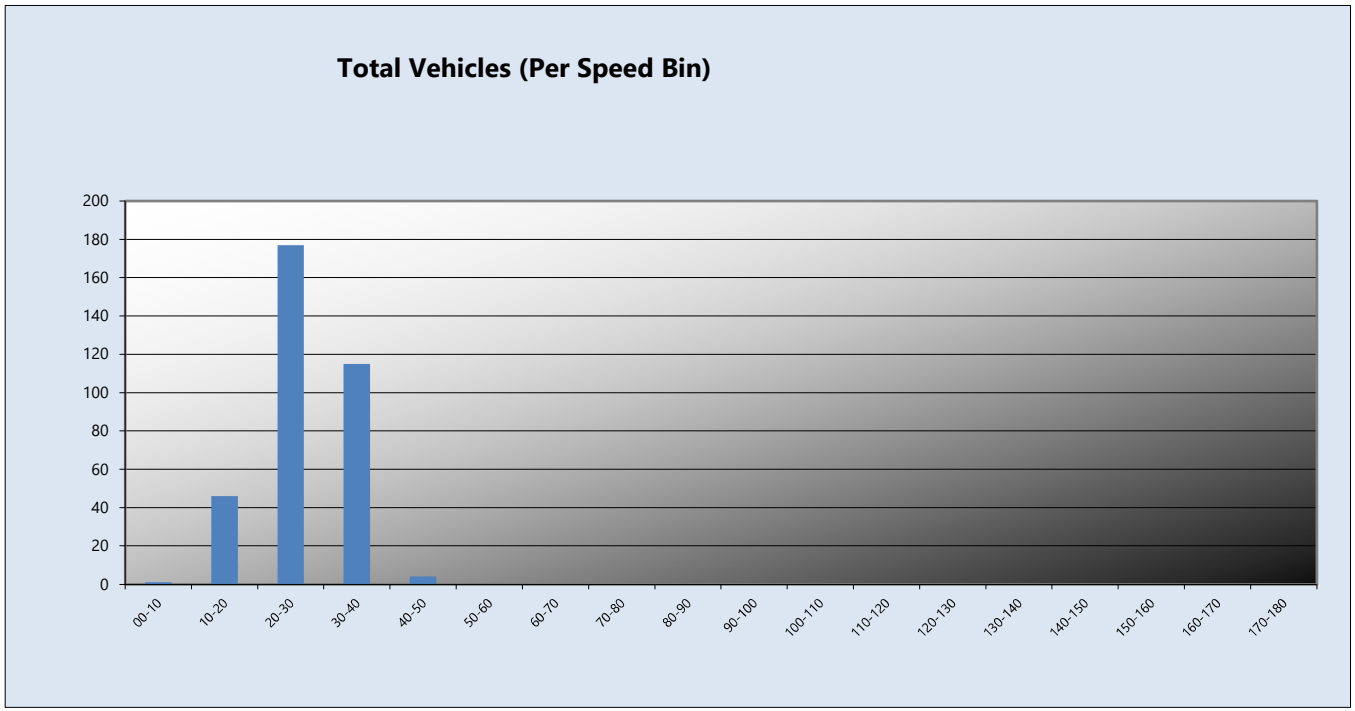
Profile:

Filter time: 00:00 9th February 2024 => 23:59 13th February 2024
Speed range: 0 - 200 km/h.
Separation: Greater than 4.00 seconds. - (Headway)
Units: Metric (meter, kilometer, m/s, km/h, kg, tonne)

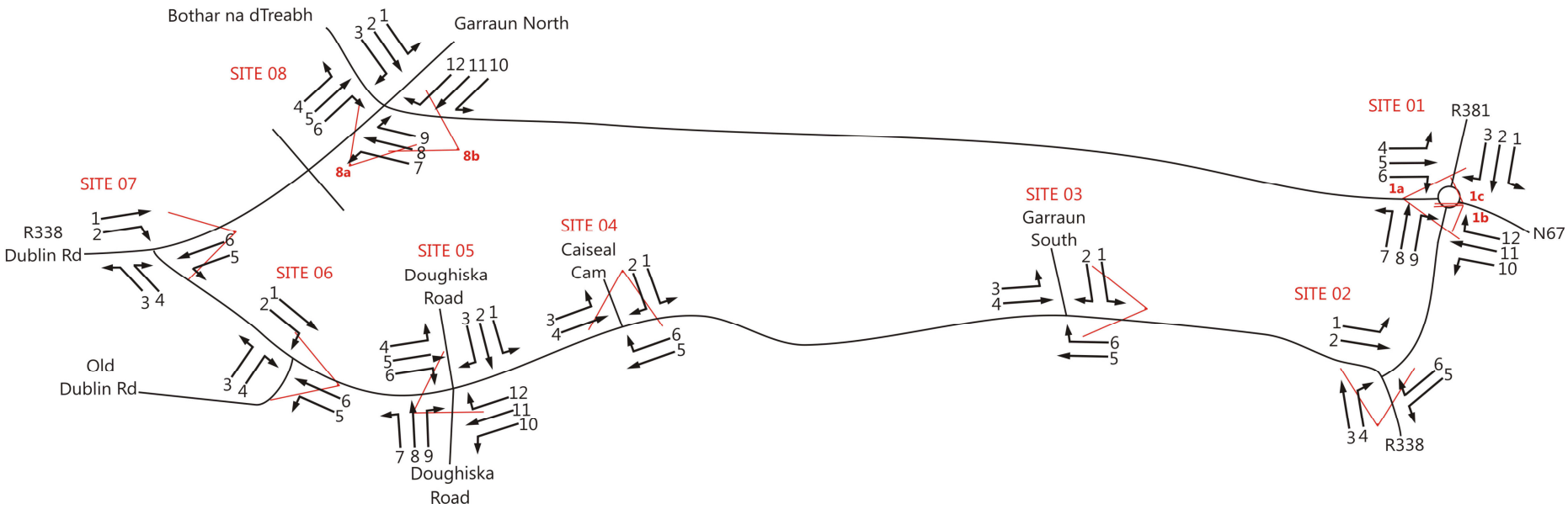
Vehicles = 343
Maximum = 41.9 km/h, Minimum = 9.4 km/h, Mean = 27.2 km/h
85% Speed = 33.46 km/h, 95% Speed = 37.66 km/h, Median = 27.45 km/h
20 km/h Pace = 15 - 35, Number in Pace = 304 (88.63%)
Variance = 38.55, Standard Deviation = 6.21 km/h

Speed Bins:

Speed	Bin	
KPH	No.	%
00-10	1	0.3
10-20	46	13.4
20-30	177	51.6
30-40	115	33.5
40-50	4	1.2
50-60	0	0.0
60-70	0	0.0
70-80	0	0.0
80-90	0	0.0
90-100	0	0.0
100-110	0	0.0
110-120	0	0.0
120-130	0	0.0
130-140	0	0.0
140-150	0	0.0
150-160	0	0.0
160-170	0	0.0
170-180	0	0.0



Site/Movement Numbering



Job number: TRA/23/251	Job Date: 14th November 2023	Drawing No: TRA/23/251-01	traffinomics.ie
Client: NRB Consulting Engineers	Job Day: Tuesday	Author: JW	

TRAFFINOMICS LIMITED

GALWAY TRAFFIC COUNTS **NOVEMBER 2023**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/23/251**

SITE: 01 DATE: 14th November 2023

LOCATION: R381/N67/Station Road/Oranmore Roundabout DAY: Tuesday

	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	29	19	1	0	49	50	0	0	32	6	1	0	39	40	0	0	22	4	4	0	30	34
07:45	0	0	25	21	6	0	52	58	0	0	35	10	0	1	46	47	0	0	28	3	3	0	34	37
H/TOT	0	0	54	40	7	0	101	108	0	0	67	16	1	1	85	87	0	0	50	7	7	0	64	71
08:00	0	0	43	13	5	0	61	66	0	0	76	6	1	1	84	86	0	0	32	10	3	1	46	50
08:15	0	0	45	11	5	3	64	72	0	0	51	8	1	1	61	63	0	0	29	10	2	4	45	51
08:30	0	0	38	10	5	1	54	60	0	0	49	14	1	1	65	67	0	0	37	3	1	1	42	44
08:45	0	0	40	17	5	0	62	67	0	0	48	10	0	0	58	58	0	0	44	7	4	3	58	65
H/TOT	0	0	166	51	20	4	241	265	0	0	224	38	3	3	268	274	0	0	142	30	10	9	191	210
09:00	0	0	49	23	4	0	76	80	0	0	66	13	1	0	80	81	0	0	24	6	2	1	33	36
09:15	1	0	32	8	4	3	48	54	0	0	53	7	0	0	60	60	0	0	23	6	2	1	32	35
09:30	0	0	42	11	0	0	53	53	0	0	49	9	0	1	59	60	0	0	20	6	5	1	32	38
09:45	0	0	38	16	1	0	55	56	0	0	42	3	0	0	45	45	0	0	21	8	4	1	34	39
H/TOT	1	0	161	58	9	3	232	243	0	0	210	32	1	1	244	246	0	0	88	26	13	4	131	148
P/TOT	1	0	381	149	36	7	574	616	0	0	501	86	5	5	597	607	0	0	280	63	30	13	386	429

	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**
16:00	0	0	90	16	0	0	106	106	0	0	44	5	0	1	50	51	0	0	24	0	1	0	25	26
16:15	0	0	66	14	4	1	85	90	0	1	46	6	0	0	53	52	0	0	14	3	1	0	18	19
16:30	0	0	68	8	0	0	76	76	0	0	42	6	0	0	48	48	0	0	22	4	0	0	26	26
16:45	0	0	81	16	2	1	100	103	0	0	42	4	0	0	46	46	0	0	23	5	2	0	30	32
H/TOT	0	0	305	54	6	2	367	375	0	1	174	21	0	1	197	197	0	0	83	12	4	0	99	103
17:00	0	0	75	13	0	0	88	88	0	0	70	7	0	0	77	77	0	0	39	4	1	0	44	45
17:15	0	1	79	11	4	0	95	98	0	0	43	4	0	0	47	47	0	0	20	1	1	0	22	23
17:30	1	0	91	10	1	0	103	103	1	0	39	4	1	0	45	45	0	0	33	4	0	1	38	39
17:45	1	0	76	12	3	0	92	94	0	0	55	4	0	0	59	59	0	0	18	1	1	0	20	21
H/TOT	2	1	321	46	8	0	378	384	1	0	207	19	1	0	228	228	0	0	110	10	3	1	124	128
18:00	0	0	84	6	0	0	90	90	0	0	46	6	0	0	52	52	0	0	21	2	0	0	23	23
18:15	0	0	54	5	0	0	59	59	0	0	37	2	0	0	39	39	0	0	12	2	0	0	14	14
H/TOT	0	0	138	11	0	0	149	149	0	0	83	8	0	0	91	91	0	0	33	4	0	0	37	37
P/TOT	2	1	764	111	14	2	894	908	1	1	464	48	1	1	516	517	0	0	226	26	7	1	260	268

SITE: 01 DATE: 14th November 2023

LOCATION: R381/N67/Station Road/Oranmore Roundabout DAY: Tuesday

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
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	41	4	3	0	48	51	0	0	46	12	0	3	61	64	0	0	5	0	3	0	8	11
07:45	0	0	39	7	3	0	49	52	0	0	44	6	2	1	53	56	0	0	8	1	3	1	13	17
H/TOT	0	0	80	11	6	0	97	103	0	0	90	18	2	4	114	120	0	0	13	1	6	1	21	28
08:00	0	0	51	9	2	0	62	64	0	0	58	10	4	1	73	78	0	0	7	1	1	0	9	10
08:15	0	0	40	9	2	0	51	53	0	0	59	9	4	0	72	76	0	0	10	4	1	0	15	16
08:30	2	1	51	9	2	0	65	65	0	0	76	7	0	0	83	83	0	0	24	4	0	1	29	30
08:45	0	0	26	8	3	1	38	42	0	0	62	9	2	1	74	77	0	0	15	0	4	0	19	23
H/TOT	2	1	168	35	9	1	216	224	0	0	255	35	10	2	302	314	0	0	56	9	6	1	72	79
09:00	0	0	36	11	2	1	50	53	0	0	34	9	4	1	48	53	0	0	13	4	0	0	17	17
09:15	0	0	36	11	3	1	51	55	0	0	48	11	2	3	64	69	0	0	14	1	1	1	17	19
09:30	0	0	19	8	3	0	30	33	0	0	41	13	6	2	62	70	0	0	12	0	5	2	19	26
09:45	0	0	22	5	3	1	31	35	0	0	41	14	7	3	65	75	0	0	11	2	3	0	16	19
H/TOT	0	0	113	35	11	3	162	176	0	0	164	47	19	9	239	267	0	0	50	7	9	3	69	81
P/TOT	2	1	361	81	26	4	475	503	0	0	509	100	31	15	655	701	0	0	119	17	21	5	162	188

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
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**
16:00	0	0	16	6	1	0	23	24	0	0	145	23	1	0	169	170	0	0	25	2	1	2	30	33
16:15	0	0	24	7	1	0	32	33	0	1	171	21	2	0	195	196	0	0	48	5	1	0	54	55
16:30	0	0	16	4	2	0	22	24	1	1	163	23	1	0	189	189	0	0	20	1	0	0	21	21
16:45	0	0	24	3	3	0	30	33	0	0	139	20	3	1	163	167	0	0	30	4	0	1	35	36
H/TOT	0	0	80	20	7	0	107	114	1	2	618	87	7	1	716	722	0	0	123	12	2	3	140	145
17:00	0	0	20	3	0	0	23	23	0	0	166	25	1	0	192	193	0	0	32	2	1	1	36	38
17:15	0	0	25	1	1	0	27	28	0	1	165	24	4	1	195	199	0	0	42	2	1	0	45	46
17:30	0	0	19	4	1	0	24	25	0	0	172	19	1	1	193	195	0	0	29	1	1	1	32	34
17:45	0	0	23	3	0	0	26	26	0	0	163	20	0	0	183	183	0	0	28	1	0	0	29	29
H/TOT	0	0	87	11	2	0	100	102	0	1	666	88	6	2	763	770	0	0	131	6	3	2	142	147
18:00	0	0	16	2	2	1	21	24	0	1	208	13	2	0	224	225	0	0	24	1	0	0	25	25
18:15	0	0	22	0	0	0	22	22	0	0	161	11	2	0	174	176	0	0	27	1	0	2	30	32
H/TOT	0	0	38	2	2	1	43	46	0	1	369	24	4	0	398	401	0	0	51	2	0	2	55	57
P/TOT	0	0	205	33	11	1	250	262	1	4	1653	199	17	3	1877	1894	0	0	305	20	5	7	337	349

GALWAY TRAFFIC COUNTS **NOVEMBER 2023**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/23/251**

SITE: 01 DATE: 14th November 2023

LOCATION: R381/N67/Station Road/Oranmore Roundabout DAY: Tuesday

	MOVEMENT 7								MOVEMENT 8								MOVEMENT 9							
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	27	3	0	0	30	30	0	0	28	6	2	0	36	38	0	0	9	1	0	0	10	10
07:45	0	0	15	0	1	0	16	17	2	0	30	4	0	1	37	36	0	0	7	1	0	1	9	10
H/TOT	0	0	42	3	1	0	46	47	2	0	58	10	2	1	73	74	0	0	16	2	0	1	19	20
08:00	0	0	20	2	0	0	22	22	0	0	57	8	0	0	65	65	0	0	25	3	0	0	28	28
08:15	0	0	15	1	0	0	16	16	0	0	42	5	1	0	48	49	0	0	17	1	0	4	22	26
08:30	0	0	17	1	1	0	19	20	0	0	68	5	1	1	75	77	0	0	27	3	0	0	30	30
08:45	0	0	16	1	0	0	17	17	1	0	36	6	2	1	46	48	0	0	16	4	0	1	21	22
H/TOT	0	0	68	5	1	0	74	75	1	0	203	24	4	2	234	239	0	0	85	11	0	5	101	106
09:00	0	0	13	2	0	0	15	15	2	0	50	0	2	1	55	56	0	0	16	1	0	0	17	17
09:15	0	0	23	2	0	0	25	25	0	0	31	8	0	2	41	43	0	0	6	1	0	1	8	9
09:30	0	0	11	0	1	0	12	13	0	0	26	7	1	0	34	35	0	0	12	1	1	0	14	15
09:45	0	0	18	3	1	0	22	23	0	0	31	7	2	0	40	42	0	0	10	0	0	0	10	10
H/TOT	0	0	65	7	2	0	74	76	2	0	138	22	5	3	170	176	0	0	44	3	1	1	49	51
P/TOT	0	0	175	15	4	0	194	198	5	0	399	56	11	6	477	490	0	0	145	16	1	7	169	177

	MOVEMENT 7								MOVEMENT 8								MOVEMENT 9							
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**
16:00	0	0	17	1	0	0	18	18	0	0	44	7	0	0	51	51	0	0	30	8	0	1	39	40
16:15	0	0	8	0	0	0	8	8	0	0	48	6	1	0	55	56	0	0	56	6	0	1	63	64
16:30	0	0	15	0	0	0	15	15	0	0	47	5	3	0	55	58	0	0	45	3	2	1	51	54
16:45	0	0	8	0	0	0	8	8	0	0	54	12	0	0	66	66	0	0	44	2	2	1	49	52
H/TOT	0	0	48	1	0	0	49	49	0	0	193	30	4	0	227	231	0	0	175	19	4	4	202	210
17:00	0	0	20	0	0	0	20	20	0	0	56	10	2	0	68	70	0	0	44	4	0	0	48	48
17:15	0	0	22	2	0	0	24	24	0	0	57	8	0	1	66	67	0	0	50	2	0	0	52	52
17:30	1	0	23	2	0	0	26	25	0	1	58	4	0	0	63	62	0	0	59	2	0	2	63	65
17:45	0	0	14	2	0	0	16	16	0	0	56	6	0	0	62	62	0	0	35	0	1	1	37	39
H/TOT	1	0	79	6	0	0	86	85	0	1	227	28	2	1	259	261	0	0	188	8	1	3	200	204
18:00	0	0	17	3	0	0	20	20	0	2	54	2	0	0	58	57	0	0	51	2	0	1	54	55
18:15	1	0	10	0	0	0	11	10	0	0	35	2	0	0	37	37	0	0	32	2	0	1	35	36
H/TOT	1	0	27	3	0	0	31	30.2	0	2	89	4	0	0	95	94	0	0	83	4	0	2	89	91
P/TOT	2	0	154	10	0	0	166	164	0	3	509	62	6	1	581	586	0	0	446	31	5	9	491	505

TRAFFINOMICS LIMITED

GALWAY TRAFFIC COUNTS **NOVEMBER 2023**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/23/251**

SITE: 01 DATE: 14th November 2023

LOCATION: R381/N67/Station Road/Oranmore Roundabout DAY: Tuesday

	MOVEMENT 10								MOVEMENT 11								MOVEMENT 12							
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	3	1	0	29	30	0	1	214	27	4	0	246	249	0	0	60	14	2	0	76	78
07:45	0	0	32	2	0	1	35	36	0	0	221	38	4	2	265	271	0	0	82	11	3	0	96	99
H/TOT	0	0	57	5	1	1	64	66	0	1	435	65	8	2	511	520	0	0	142	25	5	0	172	177
08:00	0	0	37	2	1	1	41	43	0	0	202	29	3	0	234	237	0	0	82	14	3	0	99	102
08:15	0	0	37	1	0	3	41	44	0	1	182	15	5	2	205	211	0	0	75	22	6	0	103	109
08:30	0	0	36	3	2	3	44	49	0	1	139	11	3	0	154	156	0	0	110	13	1	1	125	127
08:45	0	0	42	6	0	2	50	52	0	1	132	8	2	2	145	148	0	0	95	17	4	0	116	120
H/TOT	0	0	152	12	3	9	176	188	0	3	655	63	13	4	738	753	0	0	362	66	14	1	443	458
09:00	0	0	46	2	0	0	48	48	0	0	143	11	1	3	158	162	0	0	101	8	2	1	112	115
09:15	0	0	31	3	0	1	35	36	0	0	135	17	0	1	153	154	0	0	48	9	5	1	63	69
09:30	0	0	20	2	0	1	23	24	0	0	133	10	1	3	147	151	0	0	64	15	4	0	83	87
09:45	0	0	23	3	0	0	26	26	0	0	115	15	6	1	137	144	0	0	32	9	4	0	45	49
H/TOT	0	0	120	10	0	2	132	134	0	0	526	53	8	8	595	611	0	0	245	41	15	2	303	320
P/TOT	0	0	329	27	4	12	372	388	0	4	1616	181	29	14	1844	1885	0	0	749	132	34	3	918	955

	MOVEMENT 10								MOVEMENT 11								MOVEMENT 12							
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**
16:00	0	0	20	0	1	0	21	22	0	0	71	9	0	2	82	84	0	0	49	14	7	0	70	77
16:15	0	2	14	2	2	2	22	25	0	0	73	10	2	4	89	95	0	0	45	14	4	0	63	67
16:30	1	1	17	4	1	0	24	24	0	0	67	12	2	3	84	89	0	0	41	16	1	0	58	59
16:45	0	0	24	2	0	0	26	26	0	0	76	13	3	2	94	99	0	0	41	11	1	0	53	54
H/TOT	1	3	75	8	4	2	93	96	0	0	287	44	7	11	349	367	0	0	176	55	13	0	244	257
17:00	0	0	17	2	0	0	19	19	0	0	72	8	3	0	83	86	0	0	66	17	3	1	87	91
17:15	1	0	21	3	0	0	25	24	0	0	95	12	3	1	111	115	0	0	47	10	2	0	59	61
17:30	0	0	14	1	0	3	18	21	0	0	74	10	1	2	87	90	0	0	55	6	2	0	63	65
17:45	0	0	26	0	0	0	26	26	0	0	79	8	0	1	88	89	0	0	44	4	1	0	49	50
H/TOT	1	0	78	6	0	3	88	90	0	0	320	38	7	4	369	380	0	0	212	37	8	1	258	267
18:00	0	0	15	1	0	0	16	16	0	0	82	13	1	1	97	99	0	0	50	3	2	0	55	57
18:15	0	0	17	3	0	0	20	20	0	0	74	10	1	1	86	88	0	0	46	3	2	1	52	55
H/TOT	0	0	32	4	0	0	36	36	0	0	156	23	2	2	183	187	0	0	96	6	4	1	107	112
P/TOT	2	3	185	18	4	5	217	223	0	0	763	105	16	17	901	934	0	0	484	98	25	2	609	636

GALWAY TRAFFIC COUNTS **NOVEMBER 2023**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/23/251**

SITE: 02 DATE: 14th November 2023

LOCATION: Station Road/R338 Coast Road DAY: Tuesday

	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	11	4	1	1	17	19	1	0	37	1	0	0	39	38	3	0	164	17	2	1	187	188
07:45	0	0	23	1	1	1	26	28	0	0	47	8	0	0	55	55	2	0	181	13	2	0	198	198
H/TOT	0	0	34	5	2	2	43	47	1	0	84	9	0	0	94	93	5	0	345	30	4	1	385	386
08:00	0	0	44	5	0	0	49	49	1	0	57	6	0	0	64	63	1	0	162	4	0	1	168	168
08:15	0	0	36	3	1	2	42	45	0	0	114	7	0	0	121	121	3	0	186	9	1	6	205	210
08:30	0	0	40	5	0	0	45	45	1	0	139	5	0	0	145	144	2	0	126	9	0	1	138	137
08:45	1	0	24	3	1	1	30	31	2	0	98	3	1	0	104	103	2	0	136	12	0	0	150	148
H/TOT	1	0	144	16	2	3	166	170	4	0	408	21	1	0	434	432	8	0	610	34	1	8	661	664
09:00	1	0	26	2	1	0	30	30	1	0	54	4	0	1	60	60	0	0	156	8	2	2	168	172
09:15	0	0	17	5	0	1	23	24	0	0	42	2	0	1	45	46	1	0	81	6	1	0	89	89
09:30	0	0	13	3	1	0	17	18	0	0	37	3	1	0	41	42	2	0	81	4	3	1	91	93
09:45	0	0	14	1	0	0	15	15	1	0	29	5	0	0	35	34	3	0	73	5	3	0	84	85
H/TOT	1	0	70	11	2	1	85	87	2	0	162	14	1	2	181	182	6	0	391	23	9	3	432	439
P/TOT	2	0	248	32	6	6	294	304	7	0	654	44	2	2	709	707	19	0	1346	87	14	12	1478	1489

	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**
16:00	0	0	33	5	0	1	39	40	1	2	104	14	0	0	121	119	0	0	88	7	1	0	96	97
16:15	0	0	46	3	1	1	51	53	1	0	106	19	0	0	126	125	0	0	90	6	1	0	97	98
16:30	0	0	60	4	3	1	68	72	0	0	99	5	0	0	104	104	1	0	65	6	1	0	73	73
16:45	0	0	47	3	1	1	52	54	0	0	103	6	0	1	110	111	1	0	62	5	0	0	68	67
H/TOT	0	0	186	15	5	4	210	219	2	2	412	44	0	1	461	459	2	0	305	24	3	0	334	335
17:00	0	0	47	7	1	0	55	56	0	0	114	8	0	0	122	122	0	0	80	8	0	0	88	88
17:15	0	0	39	4	0	0	43	43	3	0	93	3	0	1	100	99	1	1	70	5	0	0	77	76
17:30	2	0	57	4	0	2	65	65	0	0	130	4	0	0	134	134	1	0	69	6	0	1	77	77
17:45	0	0	39	1	0	1	41	42	2	0	99	2	0	0	103	101	1	0	66	3	0	0	70	69
H/TOT	2	0	182	16	1	3	204	206	5	0	436	17	0	1	459	456	3	1	285	22	0	1	312	310
18:00	0	0	38	2	0	1	41	42	2	0	95	6	0	0	103	101	1	0	63	1	1	0	66	66
18:15	0	0	29	1	0	3	33	36	5	0	109	6	0	0	120	116	1	0	54	4	0	0	59	58
H/TOT	0	0	67	3	0	4	74	78	7	0	204	12	0	0	223	217	2	0	117	5	1	0	125	124
P/TOT	2	0	435	34	6	11	488	503	14	2	1052	73	0	2	1143	1133	7	1	707	51	4	1	771	770

SITE: 02 DATE: 5th September 2023

LOCATION: Station Road/R338 Coast Road DAY: Tuesday

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
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	34	5	0	0	39	39	0	0	32	11	0	1	44	45	0	0	30	3	2	1	36	39
07:45	2	0	47	3	1	0	53	52	0	0	44	10	2	1	57	60	0	0	31	5	1	1	38	40
H/TOT	2	0	81	8	1	0	92	91.4	0	0	76	21	2	2	101	105	0	0	61	8	3	2	74	79
08:00	0	0	37	4	0	0	41	41	0	0	56	5	1	2	64	67	0	0	42	4	2	1	49	52
08:15	1	0	29	2	1	2	35	37	0	0	70	6	2	3	81	86	0	0	36	5	0	0	41	41
08:30	0	0	46	4	2	0	52	54	0	0	65	7	0	0	72	72	0	0	23	11	1	3	38	42
08:45	1	0	52	4	0	1	58	58	1	0	80	4	2	1	88	90	0	0	34	12	2	2	50	54
H/TOT	2	0	164	14	3	3	186	190	1	0	271	22	5	6	305	315	0	0	135	32	5	6	178	189
09:00	0	0	59	3	0	0	62	62	0	0	64	8	0	0	72	72	0	0	51	11	1	0	63	64
09:15	0	0	42	5	0	2	49	51	0	0	45	4	1	0	50	51	0	0	39	11	0	1	51	52
09:30	0	0	28	1	3	0	32	35	0	0	48	9	3	3	63	69	0	0	52	6	1	1	60	62
09:45	0	0	45	6	2	0	53	55	0	0	38	4	1	0	43	44	0	0	19	3	1	0	23	24
H/TOT	0	0	174	15	5	2	196	203	0	0	195	25	5	3	228	236	0	0	161	31	3	2	197	202
P/TOT	4	0	419	37	9	5	474	485	1	0	542	68	12	11	634	656	0	0	357	71	11	10	449	470

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
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**
16:00	0	0	63	5	0	0	68	68	0	0	67	4	1	1	73	75	0	0	14	1	1	0	16	17
16:15	0	0	69	7	0	0	76	76	2	0	65	9	1	1	78	78	0	0	13	2	0	2	17	19
16:30	0	0	55	8	2	0	65	67	1	0	66	8	0	1	76	76	0	0	23	2	2	0	27	29
16:45	0	0	55	11	1	0	67	68	0	0	67	12	0	0	79	79	0	1	21	2	0	0	24	23
H/TOT	0	0	242	31	3	0	276	279	3	0	265	33	2	3	306	309	0	1	71	7	3	2	84	88
17:00	0	0	67	11	1	0	79	80	0	0	68	6	0	1	75	76	0	0	19	1	1	0	21	22
17:15	0	0	62	5	0	0	67	67	0	1	82	9	1	0	93	93	0	0	22	4	1	0	27	28
17:30	0	0	69	4	0	0	73	73	1	0	60	6	1	0	68	68	0	0	12	0	1	3	16	20
17:45	1	0	68	7	1	0	77	77	0	0	76	2	0	1	79	80	1	0	18	3	0	0	22	21
H/TOT	1	0	266	27	2	0	296	297	1	1	286	23	2	2	315	318	1	0	71	8	3	3	86	91
18:00	1	0	53	3	0	0	57	56	0	0	73	6	0	0	79	79	0	0	17	2	0	0	19	19
18:15	0	0	43	3	0	0	46	46	0	0	54	4	0	1	59	60	0	0	11	1	0	1	13	14
H/TOT	1	0	96	6	0	0	103	102	0	0	127	10	0	1	138	139	0	0	28	3	0	1	32	33
P/TOT	2	0	604	64	5	0	675	678	4	1	678	66	4	6	759	765	1	1	170	18	6	6	202	213

TRAFFINOMICS LIMITED

GALWAY TRAFFIC COUNTS **NOVEMBER 2023**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/23/251**

SITE: 03 DATE: 14th November 2023

LOCATION: Garraun South/R338 Coast Road DAY: Tuesday

	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	2	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
07:45	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	2	0	0	0	2	2
H/TOT	0	0	3	0	0	0	3	3	0	0	1	0	0	0	1	1	0	0	4	0	0	0	4	4
08:00	0	0	5	0	0	0	5	5	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2	1
08:15	0	0	7	1	1	0	9	10	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
08:30	0	0	11	1	0	0	12	12	0	0	2	0	0	0	2	2	0	0	3	0	0	0	3	3
08:45	0	0	8	1	0	0	9	9	0	0	2	0	0	0	2	2	0	0	1	0	0	0	1	1
H/TOT	0	0	31	3	1	0	35	36	0	0	5	0	0	0	5	5	1	0	5	0	0	0	6	5
09:00	0	0	3	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
09:15	0	0	2	1	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
09:30	0	0	3	0	1	0	4	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45	0	0	3	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
H/TOT	0	0	11	1	1	0	13	14	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	3
P/TOT	0	0	45	4	2	0	51	53	0	0	6	0	0	0	6	6	1	0	11	1	0	0	13	12

	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**
16:00	0	0	9	2	0	0	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	1	0	10	0	0	0	11	10	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
16:30	0	0	9	0	0	0	9	9	0	0	1	0	0	0	1	1	0	0	3	0	0	0	3	3
16:45	0	0	7	1	0	0	8	8	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
H/TOT	1	0	35	3	0	0	39	38	0	0	1	0	0	0	1	1	0	0	5	0	0	0	5	5
17:00	0	0	16	1	0	0	17	17	0	0	3	0	0	0	3	3	0	0	1	0	0	0	1	1
17:15	0	0	5	1	0	0	6	6	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
17:30	1	0	10	0	0	0	11	10	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
17:45	0	0	9	0	0	0	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	40	2	0	0	43	42	0	0	3	0	0	0	3	3	0	0	3	0	0	0	3	3
18:00	0	0	3	1	0	0	4	4	0	0	3	0	0	0	3	3	0	0	0	0	0	0	0	0
18:15	0	0	4	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
H/TOT	0	0	7	1	0	0	8	8	0	0	3	0	0	0	3	3	0	0	1	0	0	0	1	1
P/TOT	2	0	82	6	0	0	90	88	0	0	7	0	0	0	7	7	0	0	9	0	0	0	9	9

GALWAY TRAFFIC COUNTS **NOVEMBER 2023**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/23/251**

SITE: 03 DATE: 5th September 2023

LOCATION: Garraun South/R338 Coast Road DAY: Tuesday

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
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	41	2	1	1	45	47	2	0	197	16	2	2	219	221	0	0	4	1	0	0	5	5
07:45	0	0	75	9	1	1	86	88	2	0	225	19	5	1	252	256	0	0	1	0	0	0	1	1
H/TOT	0	0	116	11	2	2	131	135	4	0	422	35	7	3	471	478	0	0	5	1	0	0	6	6
08:00	1	0	97	12	0	0	110	109	1	0	199	9	0	1	210	210	0	0	1	0	0	0	1	1
08:15	0	0	134	8	0	2	144	146	5	0	216	11	2	6	240	244	0	0	3	0	0	0	3	3
08:30	1	0	142	8	0	0	151	150	2	0	137	17	1	4	161	164	0	0	7	1	0	0	8	8
08:45	3	0	109	6	2	1	121	122	1	0	141	21	0	3	166	168	0	0	6	2	0	0	8	8
H/TOT	5	0	482	34	2	3	526	527	9	0	693	58	3	14	777	787	0	0	17	3	0	0	20	20
09:00	2	0	71	7	0	1	81	80	0	0	199	18	2	2	221	225	0	0	7	0	1	0	8	9
09:15	0	0	60	9	1	2	72	75	0	0	120	15	1	1	137	139	0	0	2	0	1	0	3	4
09:30	0	0	45	3	1	0	49	50	0	0	111	9	2	2	124	128	0	0	3	0	0	0	3	3
09:45	0	0	43	5	0	0	48	48	6	0	87	7	4	0	104	103	0	0	2	0	0	0	2	2
H/TOT	2	0	219	24	2	3	250	253	6	0	517	49	9	5	586	595	0	0	14	0	2	0	16	18
P/TOT	7	0	817	69	6	8	907	915	19	0	1632	142	19	22	1834	1860	0	0	36	4	2	0	42	44

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
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**
16:00	2	2	125	17	0	1	147	145	0	0	95	5	1	0	101	102	0	0	8	1	1	0	10	11
16:15	0	0	131	10	1	1	143	145	1	0	91	8	1	2	103	105	0	0	7	1	0	0	8	8
16:30	0	0	174	10	0	3	187	190	1	0	81	7	0	1	90	90	0	0	3	0	0	0	3	3
16:45	0	0	130	9	1	0	140	141	1	1	74	11	0	0	87	86	0	0	5	0	0	0	5	5
H/TOT	2	2	560	46	2	5	617	621	3	1	341	31	2	3	381	383	0	0	23	2	1	0	26	27
17:00	2	0	128	15	0	0	145	143	0	0	80	11	0	0	91	91	0	0	5	0	0	0	5	5
17:15	1	0	126	10	0	1	138	138	2	1	75	7	2	0	87	87	0	0	5	0	0	0	5	5
17:30	1	0	178	9	0	2	190	191	0	0	74	7	0	3	84	87	0	0	5	0	0	0	5	5
17:45	2	0	123	3	0	1	129	128	2	1	75	5	1	1	85	85	0	0	2	0	0	0	2	2
H/TOT	6	0	555	37	0	4	602	601	4	2	304	30	3	4	347	350	0	0	17	0	0	0	17	17
18:00	3	0	126	7	0	1	137	136	1	0	72	3	0	0	76	75	0	0	1	1	0	0	2	2
18:15	2	1	126	8	0	3	140	141	0	0	65	3	1	1	70	72	0	0	0	0	0	0	0	0
H/TOT	5	1	252	15	0	4	277	276	1	0	137	6	1	1	146	147	0	0	1	1	0	0	2	2
P/TOT	13	3	1367	98	2	13	1496	1499	8	3	782	67	6	8	874	880	0	0	41	3	1	0	45	46

TRAFFINOMICS LIMITED

GALWAY TRAFFIC COUNTS **NOVEMBER 2023**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/23/251**

SITE: 04 DATE: 14th November 2023

LOCATION: Caiseal Cam/R338 Coast Road DAY: Tuesday

	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
09:30	0	0	0	1	0	0	1	1	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0
09:45	0	0	0	1	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1
H/TOT	0	0	0	2	0	0	2	2	0	0	3	0	0	0	3	3	0	0	2	0	0	0	2	2
P/TOT	0	0	1	2	0	0	3	3	0	0	3	0	0	0	3	3	0	0	2	0	0	0	2	2

	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**
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0
P/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

SITE: 04 DATE: 5th September 2023

LOCATION: Caiseal Cam/R338 Coast Road DAY: Tuesday

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
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	55	3	0	2	60	62	0	0	191	19	3	2	215	220	0	0	0	0	0	0	0	0
07:45	1	0	64	9	1	0	75	75	3	0	204	15	3	1	226	228	0	0	0	0	0	0	0	0
H/TOT	1	0	119	12	1	2	135	137	3	0	395	34	6	3	441	448	0	0	0	0	0	0	0	0
08:00	0	0	104	9	0	0	113	113	2	0	184	8	1	2	197	198	0	0	0	0	0	0	0	0
08:15	1	0	111	5	0	2	119	120	4	0	185	13	2	4	208	211	0	0	0	0	0	0	0	0
08:30	1	0	140	6	0	0	147	146	1	0	136	15	1	4	157	161	0	0	0	1	0	0	1	1
08:45	3	0	89	5	3	1	101	103	1	0	141	18	0	3	163	165	0	0	0	1	0	0	1	1
H/TOT	5	0	444	25	3	3	480	482	8	0	646	54	4	13	725	736	0	0	0	2	0	0	2	2
09:00	0	0	59	8	1	1	69	71	0	0	182	20	2	2	206	210	0	0	0	0	0	0	0	0
09:15	0	0	60	6	0	2	68	70	0	0	113	18	0	1	132	133	0	0	3	0	0	0	3	3
09:30	0	0	49	3	1	0	53	54	0	0	109	9	2	2	122	126	0	0	1	0	0	0	1	1
09:45	1	0	44	7	0	0	52	51	1	0	77	9	3	0	90	92	0	0	0	0	0	0	0	0
H/TOT	1	0	212	24	2	3	242	246	1	0	481	56	7	5	550	561	0	0	4	0	0	0	4	4
P/TOT	7	0	775	61	6	8	857	865	12	0	1522	144	17	21	1716	1744	0	0	4	2	0	0	6	6

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
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**
16:00	1	2	118	13	0	1	135	134	0	0	90	5	0	0	95	95	0	0	0	0	0	0	0	0
16:15	0	0	133	9	0	1	143	144	0	0	85	6	0	2	93	95	0	0	0	0	0	0	0	0
16:30	0	0	164	10	1	3	178	182	1	0	85	8	0	1	95	95	0	0	0	0	0	0	0	0
16:45	0	0	134	12	1	0	147	148	0	0	70	10	0	0	80	80	0	0	0	0	0	0	0	0
H/TOT	1	2	549	44	2	5	603	608	1	0	330	29	0	3	363	365	0	0	0	0	0	0	0	0
17:00	3	0	121	13	0	0	137	135	0	0	78	10	0	0	88	88	0	0	1	0	0	0	1	1
17:15	2	0	126	9	0	1	138	137	1	0	69	5	3	0	78	80	0	0	0	0	0	0	0	0
17:30	2	0	167	8	0	3	180	181	0	0	65	8	1	3	77	81	0	0	0	0	0	0	0	0
17:45	1	0	122	7	0	0	130	129	2	0	67	5	0	0	74	72	0	0	1	0	0	0	1	1
H/TOT	8	0	536	37	0	4	585	583	3	0	279	28	4	3	317	322	0	0	2	0	0	0	2	2
18:00	2	0	109	8	0	1	120	119	1	0	72	3	0	0	76	75	0	0	0	0	0	0	0	0
18:15	2	0	115	8	0	4	129	131	0	0	63	3	0	1	67	68	0	0	1	0	0	0	1	1
H/TOT	4	0	224	16	0	5	249	251	1	0	135	6	0	1	143	143	0	0	1	0	0	0	1	1
P/TOT	13	2	1309	97	2	14	1437	1441	5	0	744	63	4	7	823	830	0	0	3	0	0	0	3	3

GALWAY TRAFFIC COUNTS **NOVEMBER 2023**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/23/251**

SITE: 05 DATE: 14th November 2023

LOCATION: Doughiska Road/R338 Coast Road DAY: Tuesday

	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	12	0	0	0	12	12	0	0	0	0	0	0	0	0	0	0	18	1	0	0	19	19
07:45	0	0	24	1	0	0	25	25	0	0	0	0	0	0	0	0	1	0	20	2	0	0	23	22
H/TOT	0	0	36	1	0	0	37	37	0	0	0	0	0	0	0	0	1	0	38	3	0	0	42	41
08:00	0	0	33	1	0	0	34	34	0	0	0	0	0	0	0	0	0	0	18	2	1	0	21	22
08:15	0	0	45	1	0	0	46	46	0	0	0	0	0	0	0	0	0	0	11	0	1	1	13	15
08:30	0	0	77	3	0	0	80	80	0	0	0	0	0	0	0	0	0	0	5	1	0	0	6	6
08:45	1	0	31	3	1	1	37	38	0	0	0	0	0	0	0	0	0	0	7	1	0	0	8	8
H/TOT	1	0	186	8	1	1	197	198	0	0	0	0	0	0	0	0	0	0	41	4	2	1	48	51
09:00	0	0	21	0	0	1	22	23	0	0	0	0	0	0	0	0	0	0	7	2	0	1	10	11
09:15	0	0	11	3	0	0	14	14	0	0	0	0	0	0	0	0	0	0	7	1	0	0	8	8
09:30	0	0	6	1	0	0	7	7	0	0	0	0	0	0	0	0	0	0	7	0	1	0	8	9
09:45	0	0	11	2	0	0	13	13	0	0	0	0	0	0	0	0	0	0	3	1	1	0	5	6
H/TOT	0	0	49	6	0	1	56	57	0	0	0	0	0	0	0	0	0	0	24	4	2	1	31	34
P/TOT	1	0	271	15	1	2	290	292	0	0	0	0	0	0	0	0	1	0	103	11	4	2	121	126

	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**
16:00	1	0	26	3	0	1	31	31	0	0	0	0	0	0	0	0	0	0	4	1	0	0	5	5
16:15	0	0	30	2	0	0	32	32	0	0	0	0	0	0	0	0	0	0	4	1	0	0	5	5
16:30	0	0	29	1	0	0	30	30	0	0	0	0	0	0	0	0	0	0	10	0	0	0	10	10
16:45	0	0	22	1	0	0	23	23	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	4
H/TOT	1	0	107	7	0	1	116	116	0	0	0	0	0	0	0	0	0	0	22	2	0	0	24	24
17:00	0	0	26	4	0	0	30	30	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	7
17:15	0	0	30	1	0	1	32	33	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	3
17:30	0	0	29	1	0	0	30	30	0	0	0	0	0	0	0	0	0	0	9	0	0	0	9	9
17:45	0	0	16	0	0	0	16	16	0	0	0	0	0	0	0	0	0	0	9	1	0	0	10	10
H/TOT	0	0	101	6	0	1	108	109	0	0	0	0	0	0	0	0	0	0	27	2	0	0	29	29
18:00	0	0	23	0	0	0	23	23	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
18:15	0	0	19	1	0	0	20	20	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	7
H/TOT	0	0	42	1	0	0	43	43	0	0	0	0	0	0	0	0	0	0	10	0	0	0	10	10
P/TOT	1	0	250	14	0	2	267	268	0	0	0	0	0	0	0	0	0	0	59	4	0	0	63	63

GALWAY TRAFFIC COUNTS **NOVEMBER 2023**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/23/251**

SITE: 05 DATE: 14th November 2023

LOCATION: Doughiska Road/R338 Coast Road DAY: Tuesday

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
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	3	0	0	0	3	3	0	0	36	3	0	1	40	41	0	0	0	0	0	0	0	0
07:45	0	0	4	0	0	0	4	4	0	0	43	8	1	1	53	55	0	0	0	0	0	0	0	0
H/TOT	0	0	7	0	0	0	7	7	0	0	79	11	1	2	93	96	0	0	0	0	0	0	0	0
08:00	0	0	7	0	0	0	7	7	1	0	66	5	0	0	72	71	0	0	0	0	0	0	0	0
08:15	0	0	3	0	1	1	5	7	0	0	59	7	0	2	68	70	0	0	1	0	0	0	1	1
08:30	0	0	1	0	1	1	3	5	1	0	63	2	0	0	66	65	0	0	0	0	0	0	0	0
08:45	0	0	1	0	0	0	1	1	2	0	54	3	3	0	62	63	0	0	0	0	0	0	0	0
H/TOT	0	0	12	0	2	2	16	20	4	0	242	17	3	2	268	270	0	0	1	0	0	0	1	1
09:00	1	0	2	1	0	0	4	3	1	0	47	7	1	0	56	56	0	0	0	0	0	0	0	0
09:15	0	0	3	0	1	0	4	5	0	0	45	5	0	2	52	54	0	0	0	0	0	0	0	0
09:30	0	0	3	0	0	0	3	3	0	0	44	3	1	0	48	49	0	0	0	0	0	0	0	0
09:45	0	0	5	0	0	0	5	5	1	0	35	3	0	0	39	38	0	0	0	1	0	0	1	1
H/TOT	1	0	13	1	1	0	16	16	2	0	171	18	2	2	195	197	0	0	0	1	0	0	1	1
P/TOT	1	0	32	1	3	2	39	43	6	0	492	46	6	6	556	563	0	0	1	1	0	0	2	2

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
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**
16:00	0	0	13	0	0	1	14	15	0	2	95	10	0	0	107	106	0	0	0	0	0	0	0	0
16:15	0	0	4	0	0	0	4	4	0	0	98	10	0	1	109	110	0	0	0	0	0	0	0	0
16:30	0	0	4	0	0	0	4	4	0	0	135	8	1	3	147	151	0	0	1	0	0	0	1	1
16:45	1	0	5	0	0	0	6	5	0	0	111	10	1	0	122	123	0	0	0	0	0	0	0	0
H/TOT	1	0	26	0	0	1	28	28	0	2	439	38	2	4	485	490	0	0	1	0	0	0	1	1
17:00	0	0	7	1	0	0	8	8	3	0	98	10	0	0	111	109	0	0	0	0	0	0	0	0
17:15	0	0	8	0	0	0	8	8	2	0	101	6	0	0	109	107	0	0	0	0	0	0	0	0
17:30	0	0	7	1	0	0	8	8	3	0	125	7	0	3	138	139	0	0	0	0	0	0	0	0
17:45	0	0	5	0	0	0	5	5	2	0	112	5	0	0	119	117	0	0	0	0	0	0	0	0
H/TOT	0	0	27	2	0	0	29	29	10	0	436	28	0	3	477	472	0	0	0	0	0	0	0	0
18:00	0	0	7	0	0	0	7	7	1	0	87	9	0	1	98	98	0	0	0	0	0	0	0	0
18:15	0	0	3	0	0	0	3	3	1	0	89	7	0	4	101	104	0	0	0	0	0	0	0	0
H/TOT	0	0	10	0	0	0	10	10	2	0	176	16	0	5	199	202	0	0	0	0	0	0	0	0
P/TOT	1	0	63	2	0	1	67	67	12	2	1051	82	2	12	1161	1164	0	0	1	0	0	0	1	1

GALWAY TRAFFIC COUNTS **NOVEMBER 2023**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/23/251**

SITE: 05 DATE: 14th November 2023

LOCATION: Doughiska Road/R338 Coast Road DAY: Tuesday

	MOVEMENT 7								MOVEMENT 8								MOVEMENT 9							
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0
P/TOT	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	MOVEMENT 7								MOVEMENT 8								MOVEMENT 9							
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**
16:00	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	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	0	0	1	0	0	0	1	1
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0
P/TOT	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1

GALWAY TRAFFIC COUNTS **NOVEMBER 2023**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/23/251**

SITE: 05 DATE: 14th November 2023

LOCATION: Doughiska Road/R338 Coast Road DAY: Tuesday

	MOVEMENT 10								MOVEMENT 11								MOVEMENT 12							
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	1	0	178	15	2	2	198	201	0	0	16	2	0	1	19	20
07:45	0	0	0	0	0	0	0	0	3	0	175	14	4	1	197	200	0	0	21	1	1	0	23	24
H/TOT	0	0	0	0	0	0	0	0	4	0	353	29	6	3	395	401	0	0	37	3	1	1	42	44
08:00	0	0	0	0	0	0	0	0	3	0	155	12	1	1	172	172	0	0	20	2	0	0	22	22
08:15	0	0	0	0	0	0	0	0	3	0	152	10	1	2	168	169	1	0	32	2	1	3	39	42
08:30	0	0	0	0	0	0	0	0	0	0	103	13	0	5	121	126	0	0	32	2	0	0	34	34
08:45	0	0	0	0	0	0	0	0	2	0	105	12	1	2	122	123	0	0	40	2	0	1	43	44
H/TOT	0	0	0	0	0	0	0	0	8	0	515	47	3	10	583	590	1	0	124	8	1	4	138	142
09:00	0	0	0	0	0	0	0	0	1	0	126	18	2	1	148	150	0	0	52	3	0	1	56	57
09:15	0	0	0	0	0	0	0	0	0	0	111	19	1	0	131	132	0	0	20	0	0	0	20	20
09:30	0	0	0	0	0	0	0	0	0	0	93	9	2	2	106	110	0	0	15	1	0	0	16	16
09:45	0	0	0	0	0	0	0	0	2	0	68	4	1	1	76	76	0	0	10	1	0	0	11	11
H/TOT	0	0	0	0	0	0	0	0	3	0	398	50	6	4	461	469	0	0	97	5	0	1	103	104
P/TOT	0	0	0	0	0	0	0	0	15	0	1266	126	15	17	1439	1459	1	0	258	16	2	6	283	290

	MOVEMENT 10								MOVEMENT 11								MOVEMENT 12							
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**
16:00	0	0	0	0	0	0	0	0	0	0	59	7	0	1	67	68	0	0	28	0	0	0	28	28
16:15	0	0	0	0	0	0	0	0	0	0	52	3	0	1	56	57	0	0	32	0	0	0	32	32
16:30	0	0	0	0	0	0	0	0	1	0	56	5	0	1	63	63	0	0	25	1	0	0	26	26
16:45	0	0	0	0	0	0	0	0	0	1	49	10	1	0	61	61	0	0	23	1	0	0	24	24
H/TOT	0	0	0	0	0	0	0	0	1	1	216	25	1	3	247	250	0	0	108	2	0	0	110	110
17:00	0	0	0	0	0	0	0	0	0	0	51	7	0	0	58	58	0	0	17	2	0	0	19	19
17:15	0	0	0	0	0	0	0	0	0	0	50	5	2	0	57	59	0	0	25	1	0	0	26	26
17:30	0	0	0	0	0	0	0	0	1	0	49	6	0	1	57	57	1	0	23	0	0	0	24	23
17:45	0	0	0	0	0	0	0	0	2	0	57	5	1	1	66	66	0	0	16	0	0	1	17	18
H/TOT	0	0	0	0	0	0	0	0	3	0	207	23	3	2	238	241	1	0	81	3	0	1	86	86
18:00	0	0	0	0	0	0	0	0	2	0	43	3	0	0	48	46	0	0	21	1	0	0	22	22
18:15	0	0	0	0	0	0	0	0	0	0	48	1	0	1	50	51	0	0	19	1	1	0	21	22
H/TOT	0	0	0	0	0	0	0	0	2	0	91	4	0	1	98	97	0	0	40	2	1	0	43	44
P/TOT	0	0	0	0	0	0	0	0	6	1	514	52	4	6	583	588	1	0	229	7	1	1	239	240

GALWAY TRAFFIC COUNTS **NOVEMBER 2023**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/23/251**

SITE: 06 DATE: 14th November 2023

LOCATION: R338 Coast Road/Old Dublin Road DAY: Tuesday

	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	38	3	0	1	42	43	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
07:45	0	0	42	8	1	1	52	54	0	0	4	2	0	0	6	6	0	0	0	0	1	0	1	2
H/TOT	0	0	80	11	1	2	94	97	0	0	5	2	0	0	7	7	0	0	0	0	1	0	1	2
08:00	0	0	62	4	0	0	66	66	0	0	5	0	0	0	5	5	0	0	3	0	0	0	3	3
08:15	0	0	42	7	1	3	53	57	0	0	8	2	0	0	10	10	0	0	3	0	0	0	3	3
08:30	1	0	49	0	1	0	51	51	0	0	2	0	1	1	4	6	0	0	1	1	0	1	3	4
08:45	2	0	49	2	2	0	55	55	0	0	1	0	0	0	1	1	0	0	2	0	0	1	3	4
H/TOT	3	0	202	13	4	3	225	230	0	0	16	2	1	1	20	22	0	0	9	1	0	2	12	14
09:00	1	0	41	7	1	0	50	50	0	0	3	0	0	0	3	3	0	0	0	0	0	0	0	0
09:15	0	0	41	4	1	2	48	51	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
09:30	0	0	44	3	0	0	47	47	0	0	4	1	0	0	5	5	0	0	0	0	0	0	0	0
09:45	1	0	36	2	0	0	39	38	0	0	3	1	0	0	4	4	0	0	0	0	0	0	0	0
H/TOT	2	0	162	16	2	2	184	186	0	0	10	2	0	0	12	12	0	0	1	0	0	0	1	1
P/TOT	5	0	444	40	7	7	503	513	0	0	31	6	1	1	39	41	0	0	10	1	1	2	14	17

	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**
16:00	0	2	83	8	0	0	93	92	0	0	0	1	0	0	1	1	0	0	0	1	0	0	1	1
16:15	0	0	78	7	0	1	86	87	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
16:30	0	0	104	3	0	3	110	113	0	0	1	0	0	0	1	1	0	0	2	0	0	0	2	2
16:45	0	0	88	6	1	0	95	96	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0
H/TOT	0	2	353	24	1	4	384	388	0	0	3	1	0	0	4	4	0	0	2	2	0	0	4	4
17:00	2	0	70	7	0	0	79	77	0	0	1	1	0	0	2	2	0	0	0	0	0	0	0	0
17:15	2	0	78	3	0	0	83	81	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1
17:30	1	0	110	5	0	3	119	121	0	0	2	0	0	0	2	2	0	0	3	0	0	0	3	3
17:45	2	0	97	3	0	0	102	100	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
H/TOT	7	0	355	18	0	3	383	380	0	0	5	1	0	0	6	6	0	0	4	0	0	0	4	4
18:00	1	0	65	7	0	1	74	74	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2
18:15	0	0	66	7	0	4	77	81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	131	14	0	5	151	155	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2
P/TOT	8	2	839	56	1	12	918	923	0	0	8	2	0	0	10	10	0	0	7	3	0	0	10	10

GALWAY TRAFFIC COUNTS **NOVEMBER 2023**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/23/251**

SITE: 06 DATE: 5th September 2023

LOCATION: R338 Coast Road/Old Dublin Road DAY: Tuesday

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
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	0	0	1	1	0	0	124	8	1	0	133	134	1	0	72	8	1	2	84	86
07:45	0	0	5	0	0	0	5	5	1	0	115	11	1	0	128	128	3	0	80	5	3	1	92	94
H/TOT	0	0	6	0	0	0	6	6	1	0	239	19	2	0	261	262	4	0	152	13	4	3	176	180
08:00	1	0	11	1	0	0	13	12	1	0	77	5	0	0	83	82	2	0	96	9	2	1	110	111
08:15	0	0	21	0	0	0	21	21	0	0	71	1	1	1	74	76	3	0	94	9	1	2	109	110
08:30	0	0	15	2	0	1	18	19	0	0	60	6	0	1	67	68	0	0	48	8	0	4	60	64
08:45	0	0	6	1	1	0	8	9	2	0	50	8	0	1	61	60	0	0	62	5	1	1	69	71
H/TOT	1	0	53	4	1	1	60	61	3	0	258	20	1	3	285	287	5	0	300	31	4	8	348	356
09:00	1	0	8	1	0	0	10	9	1	0	65	11	2	0	79	80	0	0	68	9	0	2	79	81
09:15	0	0	7	1	0	0	8	8	0	0	73	10	0	0	83	83	0	0	45	10	1	0	56	57
09:30	0	0	3	0	1	0	4	5	0	0	53	3	1	0	57	58	0	0	47	6	2	2	57	61
09:45	0	0	4	2	0	0	6	6	2	0	36	2	0	0	40	38	0	0	35	3	2	1	41	44
H/TOT	1	0	22	4	1	0	28	28	3	0	227	26	3	0	259	260	0	0	195	28	5	5	233	243
P/TOT	2	0	81	8	2	1	94	95	7	0	724	65	6	3	805	808	9	0	647	72	13	16	757	779

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
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**
16:00	0	0	25	2	0	1	28	29	0	0	9	2	0	0	11	11	0	0	54	7	0	1	62	63
16:15	0	0	24	3	0	0	27	27	0	0	10	0	0	0	10	10	0	0	46	4	0	1	51	52
16:30	0	0	36	5	1	0	42	43	0	0	17	0	0	0	17	17	1	0	49	5	0	1	56	56
16:45	1	0	28	4	0	0	33	32	0	0	12	3	0	0	15	15	0	1	41	7	1	0	50	50
H/TOT	1	0	113	14	1	1	130	131	0	0	48	5	0	0	53	53	1	1	190	23	1	3	219	222
17:00	1	0	35	4	0	0	40	39	0	0	17	0	0	0	17	17	0	0	41	7	0	0	48	48
17:15	0	0	31	3	0	0	34	34	0	0	12	2	2	0	16	18	0	0	40	4	0	0	44	44
17:30	2	0	22	3	0	0	27	25	1	0	12	1	0	0	14	13	0	0	46	5	0	1	52	53
17:45	0	0	20	2	0	0	22	22	1	0	17	1	1	0	20	20	1	0	49	5	0	1	56	56
H/TOT	3	0	108	12	0	0	123	121	2	0	58	4	3	0	67	68	1	0	176	21	0	2	200	201
18:00	0	0	29	2	0	0	31	31	0	0	9	1	0	0	10	10	2	0	37	2	0	0	41	39
18:15	1	0	26	0	0	0	27	26	0	0	13	0	0	0	13	13	0	0	42	1	0	1	44	45
H/TOT	1	0	55	2	0	0	58	57.2	0	0	22	1	0	0	23	23	2	0	79	3	0	1	85	84
P/TOT	5	0	276	28	1	1	311	309	2	0	128	10	3	0	143	144	4	1	445	47	1	6	504	507

GALWAY TRAFFIC COUNTS **NOVEMBER 2023**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/23/251**

SITE: 07 DATE: 14th November 2023

LOCATION: R338 Dublin Road/R338 Coast Road DAY: Tuesday

	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	50	6	1	5	62	68	0	0	35	1	0	1	37	38	1	0	52	8	1	2	64	66
07:45	1	0	76	8	3	4	92	98	1	0	36	9	1	1	48	49	3	0	53	4	3	1	64	66
H/TOT	1	0	126	14	4	9	154	166	1	0	71	10	1	2	85	87	4	0	105	12	4	3	128	132
08:00	0	0	87	14	2	3	106	111	0	0	51	3	0	0	54	54	2	0	58	5	2	1	68	69
08:15	0	0	84	6	2	4	96	102	1	0	40	7	1	2	51	53	3	0	58	7	1	1	70	70
08:30	3	0	58	8	1	3	73	75	0	0	48	0	1	0	49	50	0	0	40	10	0	4	54	58
08:45	0	0	68	10	1	3	82	86	1	0	46	2	2	0	51	52	0	0	45	5	1	2	53	56
H/TOT	3	0	297	38	6	13	357	374	2	0	185	12	4	2	205	209	5	0	201	27	4	8	245	253
09:00	0	0	75	15	3	4	97	104	1	0	32	8	1	0	42	42	0	0	44	7	0	2	53	55
09:15	1	0	52	6	2	10	71	82	0	0	31	2	1	3	37	41	0	0	35	9	0	0	44	44
09:30	0	0	34	9	4	4	51	59	0	0	34	2	0	0	36	36	0	0	41	5	1	1	48	50
09:45	0	0	69	8	5	5	87	97	0	0	31	4	0	0	35	35	0	0	36	5	2	2	45	49
H/TOT	1	0	230	38	14	23	306	342	1	0	128	16	2	3	150	154	0	0	156	26	3	5	190	198
P/TOT	5	0	653	90	24	45	817	882	4	0	384	38	7	7	440	451	9	0	462	65	11	16	563	583

	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**
16:00	1	0	131	18	0	2	152	153	0	0	75	8	0	0	83	83	0	0	49	7	0	1	57	58
16:15	0	0	134	21	2	1	158	161	0	0	77	6	0	1	84	85	0	0	45	5	0	1	51	52
16:30	1	2	109	18	1	4	135	138	0	0	96	2	0	3	101	104	1	0	48	5	0	1	55	55
16:45	0	1	114	7	1	2	125	127	0	0	79	6	1	0	86	87	0	1	42	7	1	0	51	51
H/TOT	2	3	488	64	4	9	570	580	0	0	327	22	1	4	354	359	1	1	184	24	1	3	214	217
17:00	0	1	115	19	1	3	139	142	2	0	64	6	0	0	72	70	0	0	39	6	0	0	45	45
17:15	2	0	123	12	2	5	144	149	2	0	74	6	0	0	82	80	0	0	39	6	0	0	45	45
17:30	1	0	117	6	2	5	131	137	1	0	97	4	0	3	105	107	0	0	45	6	0	1	52	53
17:45	0	0	106	10	1	4	121	126	2	0	92	3	0	0	97	95	1	0	48	3	0	1	53	53
H/TOT	3	1	461	47	6	17	535	555	7	0	327	19	0	3	356	353	1	0	171	21	0	2	195	196
18:00	1	0	114	7	2	7	131	139	1	0	59	8	0	1	69	69	1	0	37	3	0	0	41	40
18:15	1	0	124	9	0	6	140	145	0	0	59	6	0	4	69	73	1	0	39	1	0	0	41	40
H/TOT	2	0	238	16	2	13	271	284	1	0	118	14	0	5	138	142	2	0	76	4	0	0	82	80
P/TOT	7	4	1187	127	12	39	1376	1419	8	0	772	55	1	12	848	855	4	1	431	49	1	5	491	493

GALWAY TRAFFIC COUNTS **NOVEMBER 2023**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/23/251**

SITE: 07 DATE: 5th September 2023

LOCATION: R338 Dublin Road/R338 Coast Road DAY: Tuesday

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
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	9	1	1	0	11	12	0	0	7	1	0	0	8	8	0	0	114	23	1	4	142	147
07:45	0	0	30	0	0	0	30	30	0	0	7	1	0	0	8	8	1	0	74	10	2	8	95	104
H/TOT	0	0	39	1	1	0	41	42	0	0	14	2	0	0	16	16	1	0	188	33	3	12	237	251
08:00	0	0	31	1	0	0	32	32	0	0	7	0	0	0	7	7	5	1	84	9	1	5	105	106
08:15	0	0	32	1	0	1	34	35	0	0	9	0	0	1	10	11	1	1	86	12	2	8	110	119
08:30	0	0	24	2	0	1	27	28	1	0	4	0	1	0	6	6	0	1	90	8	2	15	116	132
08:45	0	0	12	0	0	0	12	12	0	0	7	0	0	0	7	7	0	1	94	3	1	5	104	109
H/TOT	0	0	99	4	0	2	105	107	1	0	27	0	1	1	30	31	6	4	354	32	6	33	435	467
09:00	0	0	12	0	0	0	12	12	0	0	7	0	0	0	7	7	0	0	95	14	1	10	120	131
09:15	0	0	9	0	1	0	10	11	0	0	7	0	0	0	7	7	0	0	108	11	3	5	127	135
09:30	0	0	10	2	1	0	13	14	0	0	10	0	0	0	10	10	0	0	118	12	3	5	138	146
09:45	0	0	2	0	0	0	2	2	0	0	8	1	0	0	9	9	0	0	143	21	5	5	174	184
H/TOT	0	0	33	2	2	0	37	39	0	0	32	1	0	0	33	33	0	0	464	58	12	25	559	596
P/TOT	0	0	171	7	3	2	183	188	1	0	73	3	1	1	79	80	7	4	1006	123	21	70	1231	1314

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
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**
16:00	0	0	1	0	0	0	1	1	0	2	5	1	0	0	8	7	0	0	91	12	1	7	111	119
16:15	0	0	1	0	0	0	1	1	0	0	4	0	0	0	4	4	2	0	84	8	0	7	101	106
16:30	0	0	1	0	0	0	1	1	0	0	5	0	0	0	5	5	0	0	93	8	0	7	108	115
16:45	0	0	1	0	0	0	1	1	0	0	8	0	0	0	8	8	0	0	91	12	1	3	107	111
H/TOT	0	0	4	0	0	0	4	4	0	2	22	1	0	0	25	24	2	0	359	40	2	24	427	451
17:00	0	0	3	0	0	0	3	3	0	0	6	0	0	0	6	6	0	0	110	9	0	6	125	131
17:15	0	0	3	0	0	0	3	3	0	0	8	0	0	0	8	8	1	0	111	14	1	5	132	137
17:30	0	0	2	0	0	0	2	2	0	0	8	0	0	0	8	8	3	0	112	7	1	3	126	128
17:45	0	0	0	0	0	0	0	0	0	0	9	0	0	0	9	9	1	0	97	7	2	3	110	114
H/TOT	0	0	8	0	0	0	8	8	0	0	31	0	0	0	31	31	5	0	430	37	4	17	493	510
18:00	0	0	1	0	0	0	1	1	0	0	8	0	0	0	8	8	0	0	112	8	1	4	125	130
18:15	0	0	2	0	0	0	2	2	0	0	7	0	0	0	7	7	0	0	106	12	1	1	120	122
H/TOT	0	0	3	0	0	0	3	3	0	0	15	0	0	0	15	15	0	0	218	20	2	5	245	252
P/TOT	0	0	15	0	0	0	15	15	0	2	68	1	0	0	71	70	7	0	1007	97	8	46	1165	1213

GALWAY TRAFFIC COUNTS **NOVEMBER 2023**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/23/251**

SITE: 08 DATE: 14th November 2023

LOCATION: R446 Bothar na dTreabh/R338 Dublin Road/Garraun North DAY: Tuesday

	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	1	28	3	0	0	32	31	0	0	34	5	2	0	41	43	0	0	60	12	2	1	75	78
07:45	0	0	24	3	1	0	28	29	0	0	34	10	6	0	50	56	0	0	33	6	2	1	42	45
H/TOT	0	1	52	6	1	0	60	60.4	0	0	68	15	8	0	91	99	0	0	93	18	4	2	117	123
08:00	0	0	21	1	0	0	22	22	0	0	34	10	5	0	49	54	0	1	19	8	3	0	31	33
08:15	0	0	23	1	0	0	24	24	0	1	35	10	4	0	50	53	0	0	28	4	0	2	34	36
08:30	0	0	28	0	0	0	28	28	0	0	43	13	1	0	57	58	0	0	31	4	2	1	38	41
08:45	0	0	18	0	0	0	18	18	0	0	37	6	5	0	48	53	0	0	34	5	0	1	40	41
H/TOT	0	0	90	2	0	0	92	92	0	1	149	39	15	0	204	218	0	1	112	21	5	4	143	151
09:00	0	0	24	2	0	0	26	26	0	0	47	8	4	1	60	65	0	0	38	5	2	1	46	49
09:15	0	0	36	2	0	0	38	38	0	0	38	10	3	0	51	54	0	0	61	6	2	1	70	73
09:30	0	0	27	3	0	0	30	30	0	0	30	13	5	1	49	55	0	0	65	16	4	1	86	91
09:45	0	0	27	1	2	0	30	32	0	0	51	9	7	0	67	74	0	0	76	14	1	2	93	96
H/TOT	0	0	114	8	2	0	124	126	0	0	166	40	19	2	227	248	0	0	240	41	9	5	295	309
P/TOT	0	1	256	16	3	0	276	278	0	1	383	94	42	2	522	565	0	1	445	80	18	11	555	583

	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**
16:00	0	0	7	1	0	0	8	8	1	0	114	18	2	0	135	136	0	2	44	7	0	1	54	54
16:15	0	0	13	0	0	0	13	13	0	1	119	18	2	0	140	141	0	0	59	5	0	3	67	70
16:30	0	0	4	2	0	0	6	6	0	0	111	15	2	0	128	130	0	0	51	5	0	1	57	58
16:45	0	0	12	0	0	0	12	12	0	0	123	9	3	0	135	138	0	0	48	8	0	0	56	56
H/TOT	0	0	36	3	0	0	39	39	1	1	467	60	9	0	538	546	0	2	202	25	0	5	234	238
17:00	0	0	5	0	0	0	5	5	0	0	126	16	2	0	144	146	0	1	43	2	0	3	49	51
17:15	0	0	8	1	0	0	9	9	0	0	104	16	2	1	123	126	0	0	64	8	0	2	74	76
17:30	0	0	10	0	0	0	10	10	0	0	135	15	1	1	152	154	0	0	64	5	1	2	72	75
17:45	0	0	7	1	1	0	9	10	0	0	116	15	0	0	131	131	0	0	52	4	0	0	56	56
H/TOT	0	0	30	2	1	0	33	34	0	0	481	62	5	2	550	557	0	1	223	19	1	7	251	258
18:00	0	0	7	1	0	0	8	8	0	1	140	12	1	0	154	154	0	0	48	7	0	0	55	55
18:15	0	0	11	0	0	0	11	11	0	0	143	11	1	0	155	156	0	1	54	6	0	2	63	64
H/TOT	0	0	18	1	0	0	19	19	0	1	283	23	2	0	309	310	0	1	102	13	0	2	118	119
P/TOT	0	0	84	6	1	0	91	92	1	2	1231	145	16	2	1397	1413	0	4	527	57	1	14	603	616

TRAFFINOMICS LIMITED

GALWAY TRAFFIC COUNTS **NOVEMBER 2023**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/23/251**

SITE: 08 DATE: 14th November 2023

LOCATION: R446 Bothar na dTreabh/R338 Dublin Road/Garraun North DAY: Tuesday

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
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	22	2	0	0	24	24	0	0	8	0	0	0	8	8	0	0	39	6	2	3	50	55
07:45	0	0	18	2	1	0	21	22	1	0	21	1	0	1	24	24	0	0	70	10	3	2	85	90
H/TOT	0	0	40	4	1	0	45	46	1	0	29	1	0	1	32	32	0	0	109	16	5	5	135	145
08:00	0	0	21	4	0	0	25	25	0	0	21	1	0	0	22	22	0	0	78	10	4	0	92	96
08:15	0	0	28	1	1	1	31	33	0	0	26	1	0	0	27	27	0	0	85	12	3	0	100	103
08:30	0	0	26	2	2	1	31	34	0	0	11	1	0	1	13	14	2	0	90	9	0	0	101	99
08:45	0	1	36	6	0	0	43	42	1	0	11	0	0	0	12	11	0	0	66	10	2	2	80	84
H/TOT	0	1	111	13	3	2	130	134	1	0	69	3	0	1	74	74	2	0	319	41	9	2	373	382
09:00	0	0	28	2	3	1	34	38	0	0	10	4	0	0	14	14	0	0	50	20	3	2	75	80
09:15	0	0	22	1	0	2	25	27	1	0	8	0	0	1	10	10	0	0	45	12	2	5	64	71
09:30	0	0	17	5	0	0	22	22	0	0	9	1	0	1	11	12	0	0	23	5	6	2	36	44
09:45	0	0	24	3	1	0	28	29	0	0	10	0	1	0	11	12	0	0	39	6	5	3	53	61
H/TOT	0	0	91	11	4	3	109	116	1	0	37	5	1	2	46	48	0	0	157	43	16	12	228	256
P/TOT	0	1	242	28	8	5	284	296	3	0	135	9	1	4	152	155	2	0	585	100	30	19	736	783

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
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**
16:00	0	0	90	14	2	1	107	110	0	0	10	0	0	1	11	12	0	0	69	8	0	1	78	79
16:15	0	0	83	8	2	1	94	97	1	0	7	1	0	0	9	8	0	0	121	16	1	0	138	139
16:30	0	0	92	21	0	1	114	115	0	0	8	1	0	2	11	13	0	1	68	13	1	0	83	83
16:45	0	1	80	9	0	1	91	91	0	0	8	2	0	0	10	10	0	0	90	12	4	0	106	110
H/TOT	0	1	345	52	4	4	406	413	1	0	33	4	0	3	41	43	0	1	348	49	6	1	405	411
17:00	0	0	82	10	2	2	96	100	0	0	2	3	0	0	5	5	0	1	78	16	0	0	95	94
17:15	0	0	102	8	0	0	110	110	1	0	4	1	0	1	7	7	0	0	82	8	3	0	93	96
17:30	0	0	67	5	1	1	74	76	0	0	8	0	0	1	9	10	0	0	75	8	1	0	84	85
17:45	0	0	49	2	0	2	53	55	0	0	5	0	0	0	5	5	0	0	83	9	1	1	94	96
H/TOT	0	0	300	25	3	5	333	341	1	0	19	4	0	2	26	27	0	1	318	41	5	1	366	371
18:00	0	0	53	1	1	1	56	58	0	0	9	0	0	2	11	13	0	0	75	7	0	1	83	84
18:15	0	0	52	3	0	0	55	55	0	0	9	1	1	0	11	12	0	0	65	4	3	1	73	77
H/TOT	0	0	105	4	1	1	111	113	0	0	18	1	1	2	22	25	0	0	140	11	3	2	156	161
P/TOT	0	1	750	81	8	10	850	867	2	0	70	9	1	7	89	95	0	2	806	101	14	4	927	944

TRAFFINOMICS LIMITED

GALWAY TRAFFIC COUNTS **NOVEMBER 2023**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/23/251**

SITE: 08 DATE: 14th November 2023

LOCATION: R446 Bothar na dTreabh/R338 Dublin Road/Garraun North DAY: Tuesday

	MOVEMENT 7								MOVEMENT 8								MOVEMENT 9							
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	114	20	3	2	139	144	0	0	142	22	4	0	168	172	0	0	12	1	1	0	14	15
07:45	0	0	118	13	2	0	133	135	0	1	111	12	5	0	129	133	0	0	24	1	0	1	26	27
H/TOT	0	0	232	33	5	2	272	279	0	1	253	34	9	0	297	305	0	0	36	2	1	1	40	42
08:00	0	0	81	8	4	2	95	101	0	0	137	16	3	0	156	159	0	0	25	3	2	0	30	32
08:15	0	1	95	14	1	1	112	113	0	0	123	22	3	0	148	151	0	0	24	2	0	1	27	28
08:30	0	1	108	8	3	5	125	132	0	0	83	10	3	0	96	99	0	0	18	3	0	0	21	21
08:45	0	0	66	7	2	3	78	83	0	1	72	10	2	0	85	86	0	0	21	0	0	0	21	21
H/TOT	0	2	350	37	10	11	410	430	0	1	415	58	11	0	485	495	0	0	88	8	2	1	99	102
09:00	0	0	103	9	1	4	117	122	0	0	73	13	1	0	87	88	0	0	15	0	4	1	20	25
09:15	0	0	81	14	2	2	99	103	0	0	78	10	2	0	90	92	0	0	12	1	0	0	13	13
09:30	0	0	86	9	2	1	98	101	0	0	81	6	1	1	89	91	0	0	12	0	3	1	16	20
09:45	0	0	78	10	4	1	93	98	0	0	54	12	4	0	70	74	0	0	17	0	1	1	19	21
H/TOT	0	0	348	42	9	8	407	424	0	0	286	41	8	1	336	345	0	0	56	1	8	3	68	79
P/TOT	0	2	930	112	24	21	1089	1133	0	2	954	133	28	1	1118	1146	0	0	180	11	11	5	207	223

	MOVEMENT 7								MOVEMENT 8								MOVEMENT 9							
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**
16:00	0	0	49	5	2	2	58	62	0	0	50	10	2	0	62	64	0	0	1	0	1	0	2	3
16:15	0	0	53	5	0	1	59	60	0	0	45	4	1	1	51	53	0	0	7	0	0	1	8	9
16:30	0	0	48	4	0	4	56	60	0	0	54	10	1	0	65	66	0	0	1	0	0	0	1	1
16:45	0	0	63	10	1	1	75	77	0	0	42	10	3	0	55	58	0	0	3	0	0	1	4	5
H/TOT	0	0	213	24	3	8	248	259	0	0	191	34	7	1	233	241	0	0	12	0	1	2	15	18
17:00	0	0	74	4	0	1	79	80	0	0	46	6	3	0	55	58	0	0	5	1	0	0	6	6
17:15	0	0	77	7	3	0	87	90	0	0	46	4	1	0	51	52	0	0	5	1	0	1	7	8
17:30	0	0	85	6	0	1	92	93	0	0	50	10	0	2	62	64	0	0	4	0	0	0	4	4
17:45	0	0	54	7	1	0	62	63	1	0	49	3	2	0	55	56	0	0	1	1	0	0	2	2
H/TOT	0	0	290	24	4	2	320	326	1	0	191	23	6	2	223	230	0	0	15	3	0	1	19	20
18:00	0	0	80	8	1	0	89	90	0	0	48	7	0	0	55	55	0	0	1	1	0	1	3	4
18:15	0	0	51	9	0	0	60	60	0	0	42	5	1	0	48	49	0	0	0	0	0	1	1	2
H/TOT	0	0	131	17	1	0	149	150	0	0	90	12	1	0	103	104	0	0	1	1	0	2	4	6
P/TOT	0	0	634	65	8	10	717	735	1	0	472	69	14	3	559	575	0	0	28	4	1	5	38	44

TRAFFINOMICS LIMITED

GALWAY TRAFFIC COUNTS **NOVEMBER 2023**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/23/251**

SITE: 08 DATE: 14th November 2023

LOCATION: R446 Bothar na dTreabh/R338 Dublin Road/Garraun North DAY: Tuesday

	MOVEMENT 10								MOVEMENT 11								MOVEMENT 12							
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	6	0	1	0	7	8	0	0	5	0	0	0	5	5	0	0	6	1	0	0	7	7
07:45	0	0	3	4	0	1	8	9	0	0	9	1	0	1	11	12	0	0	5	1	0	0	6	6
H/TOT	0	0	9	4	1	1	15	17	0	0	14	1	0	1	16	17	0	0	11	2	0	0	13	13
08:00	0	0	3	1	0	0	4	4	2	0	23	7	0	0	32	30	0	0	3	0	0	0	3	3
08:15	0	0	3	0	1	0	4	5	0	0	16	2	0	2	20	22	0	0	6	1	1	1	9	11
08:30	0	0	2	0	0	1	3	4	1	0	28	1	0	3	33	35	0	0	2	0	0	0	2	2
08:45	0	0	2	0	0	0	2	2	0	0	11	3	0	0	14	14	0	0	2	1	2	0	5	7
H/TOT	0	0	10	1	1	1	13	15	3	0	78	13	0	5	99	102	0	0	13	2	3	1	19	23
09:00	0	0	4	1	2	0	7	9	0	0	14	0	0	1	15	16	0	0	4	2	0	0	6	6
09:15	0	0	6	1	0	1	8	9	0	0	7	1	1	0	9	10	0	0	2	2	0	0	4	4
09:30	0	0	3	1	1	1	6	8	0	0	18	1	1	0	20	21	0	0	9	1	0	0	10	10
09:45	0	0	7	1	2	0	10	12	0	0	22	3	1	3	29	33	0	0	9	2	0	0	11	11
H/TOT	0	0	20	4	5	2	31	38	0	0	61	5	3	4	73	80	0	0	24	7	0	0	31	31
P/TOT	0	0	39	9	7	4	59	70	3	0	153	19	3	10	188	199	0	0	48	11	3	1	63	67

	MOVEMENT 10								MOVEMENT 11								MOVEMENT 12							
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**
16:00	0	0	19	1	1	1	22	24	0	0	12	1	0	1	14	15	0	0	25	4	0	0	29	29
16:15	0	0	10	0	0	0	10	10	1	0	11	2	0	1	15	15	0	0	22	1	0	0	23	23
16:30	0	0	17	0	0	1	18	19	0	0	22	0	0	0	22	22	0	0	32	1	0	1	34	35
16:45	0	0	11	1	0	0	12	12	0	0	3	0	0	0	3	3	0	0	14	1	0	0	15	15
H/TOT	0	0	57	2	1	2	62	65	1	0	48	3	0	2	54	55	0	0	93	7	0	1	101	102
17:00	0	0	24	3	0	0	27	27	0	0	19	1	0	1	21	22	0	1	45	5	0	0	51	50
17:15	0	0	17	0	0	0	17	17	0	0	20	0	0	1	21	22	0	0	21	0	0	0	21	21
17:30	0	0	12	1	0	1	14	15	0	0	9	1	0	0	10	10	0	0	32	1	0	0	33	33
17:45	0	0	10	0	0	0	10	10	0	0	9	0	0	0	9	9	0	0	18	3	0	0	21	21
H/TOT	0	0	63	4	0	1	68	69	0	0	57	2	0	2	61	63	0	1	116	9	0	0	126	125
18:00	0	0	8	0	1	1	10	12	1	0	9	0	0	1	11	11	0	0	16	0	0	0	16	16
18:15	0	0	10	1	0	1	12	13	0	0	8	0	0	0	8	8	0	0	16	0	0	0	16	16
H/TOT	0	0	18	1	1	2	22	25	1	0	17	0	0	1	19	19	0	0	32	0	0	0	32	32
P/TOT	0	0	138	7	2	5	152	159	2	0	122	5	0	5	134	137	0	1	241	16	0	1	259	259

APPENDIX C

TRICS Traffic Generation Output
(Residential Houses & Creche)

NRB Consulting Engineers Ltd 8 Leopardstown Business Centre, Ballyogan Avenue Dublin 18 Licence No: 160301

Calculation Reference: AUDIT-160301-240418-0434

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED
TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	BO	BEDFORD	1 days
	CT	CENTRAL BEDFORDSHIRE	1 days
	ES	EAST SUSSEX	7 days
	EX	ESSEX	2 days
	HC	HAMPSHIRE	12 days
	HF	HERTFORDSHIRE	2 days
	IW	ISLE OF WIGHT	1 days
	KC	KENT	8 days
	MW	MEDWAY	2 days
	SC	SURREY	4 days
	SP	SOUTHAMPTON	1 days
	WB	WEST BERKSHIRE	1 days
	WS	WEST SUSSEX	11 days
03	SOUTH WEST		
	DC	DORSET	2 days
	GS	GLOUCESTERSHIRE	1 days
	SD	SWINDON	1 days
	SM	SOMERSET	2 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	3 days
	NF	NORFOLK	20 days
	PB	PETERBOROUGH	1 days
	SF	SUFFOLK	4 days
05	EAST MIDLANDS		
	DY	DERBY	1 days
	LE	LEICESTERSHIRE	1 days
	NM	WEST NORTHAMPTONSHIRE	1 days
	NN	NORTH NORTHAMPTONSHIRE	1 days
	NT	NOTTINGHAMSHIRE	1 days
06	WEST MIDLANDS		
	ST	STAFFORDSHIRE	2 days
	WK	WARWICKSHIRE	2 days
	WM	WEST MIDLANDS	2 days
	WO	WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	BY	BARNSLEY	1 days
	LS	LEEDS	1 days
	NY	NORTH YORKSHIRE	3 days
	SE	SHEFFIELD	1 days
08	NORTH WEST		
	AC	CHESHIRE WEST & CHESTER	3 days
	GM	GREATER MANCHESTER	1 days
	LC	LANCASHIRE	1 days
09	NORTH		
	DH	DURHAM	3 days
	FU	WESTMORLAND & FURNESS	1 days
10	WALES		
	VG	VALE OF GLAMORGAN	1 days
11	SCOTLAND		
	AS	ABERDEENSHIRE	1 days
	HI	HIGHLAND	1 days
12	CONNAUGHT		
	CS	SLIGO	2 days
	LT	LEITRIM	1 days
	MA	MAYO	1 days
13	MUNSTER		
	TI	TIPPERARY	1 days
14	LEINSTER		
	CC	CARLOW	1 days
	LU	LOUTH	1 days
	WC	WICKLOW	2 days
15	GREATER DUBLIN		
	DL	DUBLIN	2 days
16	ULSTER (REPUBLIC OF IRELAND)		

	CV	CAVAN	2 days
	DN	DONEGAL	3 days
	MG	MONAGHAN	2 days
17	ULSTER (NORTHERN IRELAND)		
	AN	ANTRIM	1 days
	DE	DERRY	2 days
	TY	TYRONE	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
TOTAL VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	139	137	0.075	139	137	0.282	139	137	0.357
08:00 - 09:00	139	137	0.146	139	137	0.366	139	137	0.512
09:00 - 10:00	139	137	0.132	139	137	0.164	139	137	0.296
10:00 - 11:00	139	137	0.119	139	137	0.139	139	137	0.258
11:00 - 12:00	139	137	0.128	139	137	0.137	139	137	0.265
12:00 - 13:00	139	137	0.147	139	137	0.146	139	137	0.293
13:00 - 14:00	139	137	0.152	139	137	0.146	139	137	0.298
14:00 - 15:00	139	137	0.161	139	137	0.179	139	137	0.340
15:00 - 16:00	139	137	0.244	139	137	0.168	139	137	0.412
16:00 - 17:00	139	137	0.266	139	137	0.158	139	137	0.424
17:00 - 18:00	139	137	0.339	139	137	0.163	139	137	0.502
18:00 - 19:00	139	137	0.267	139	137	0.153	139	137	0.420
19:00 - 20:00	1	97	0.062	1	97	0.052	1	97	0.114
20:00 - 21:00	1	97	0.031	1	97	0.021	1	97	0.052
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.269			2.274			4.543

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

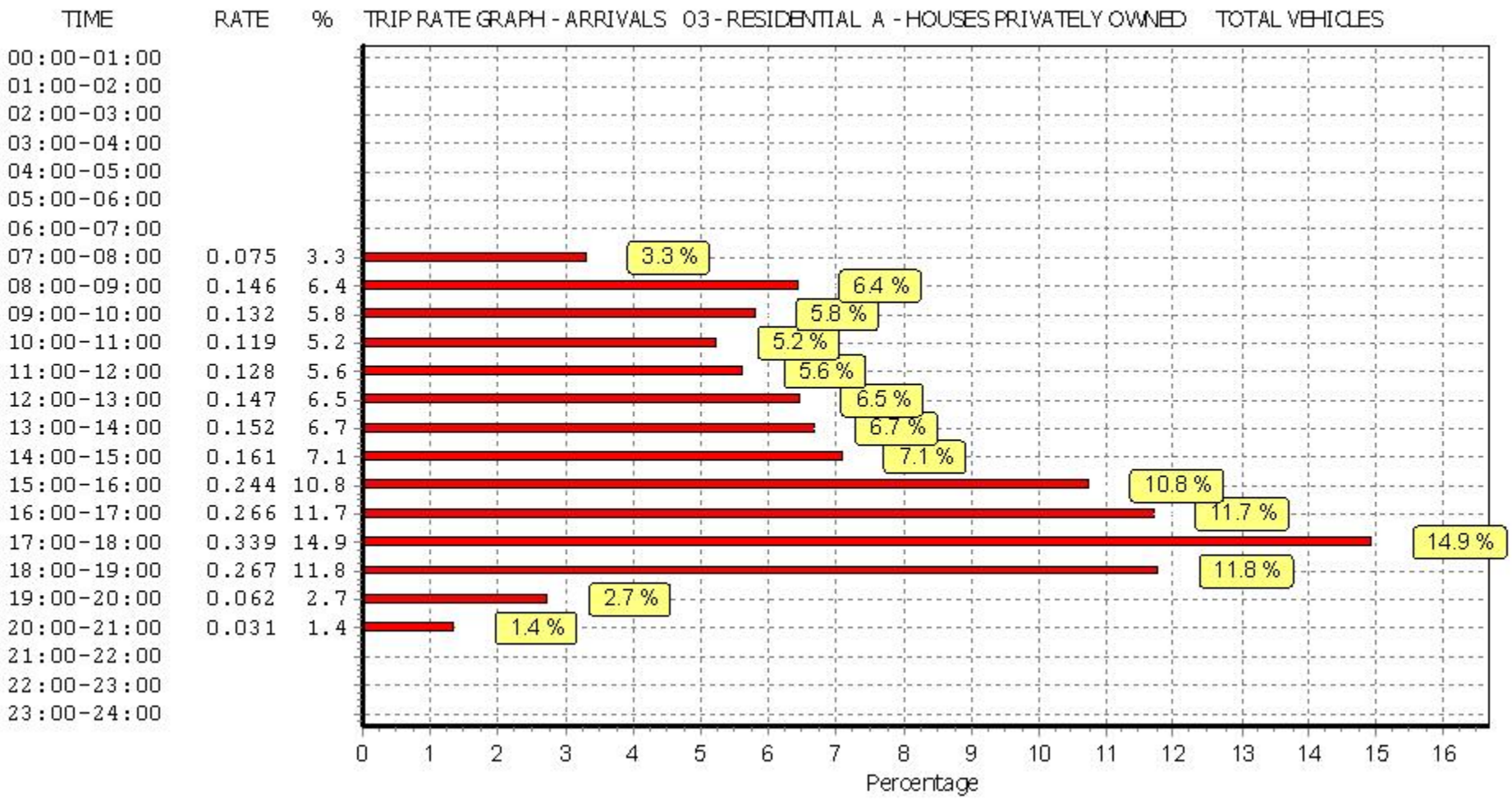
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter summary

Trip rate parameter range selected:	6 - 1882 (units:)
Survey date date range:	01/01/16 - 14/11/23
Number of weekdays (Monday-Friday):	139
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	57
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

NRB Consulting Engineers Ltd 8 Leopardstown Business Centre, Ballyogan Avenue Dublin 18 Licence No: 160301



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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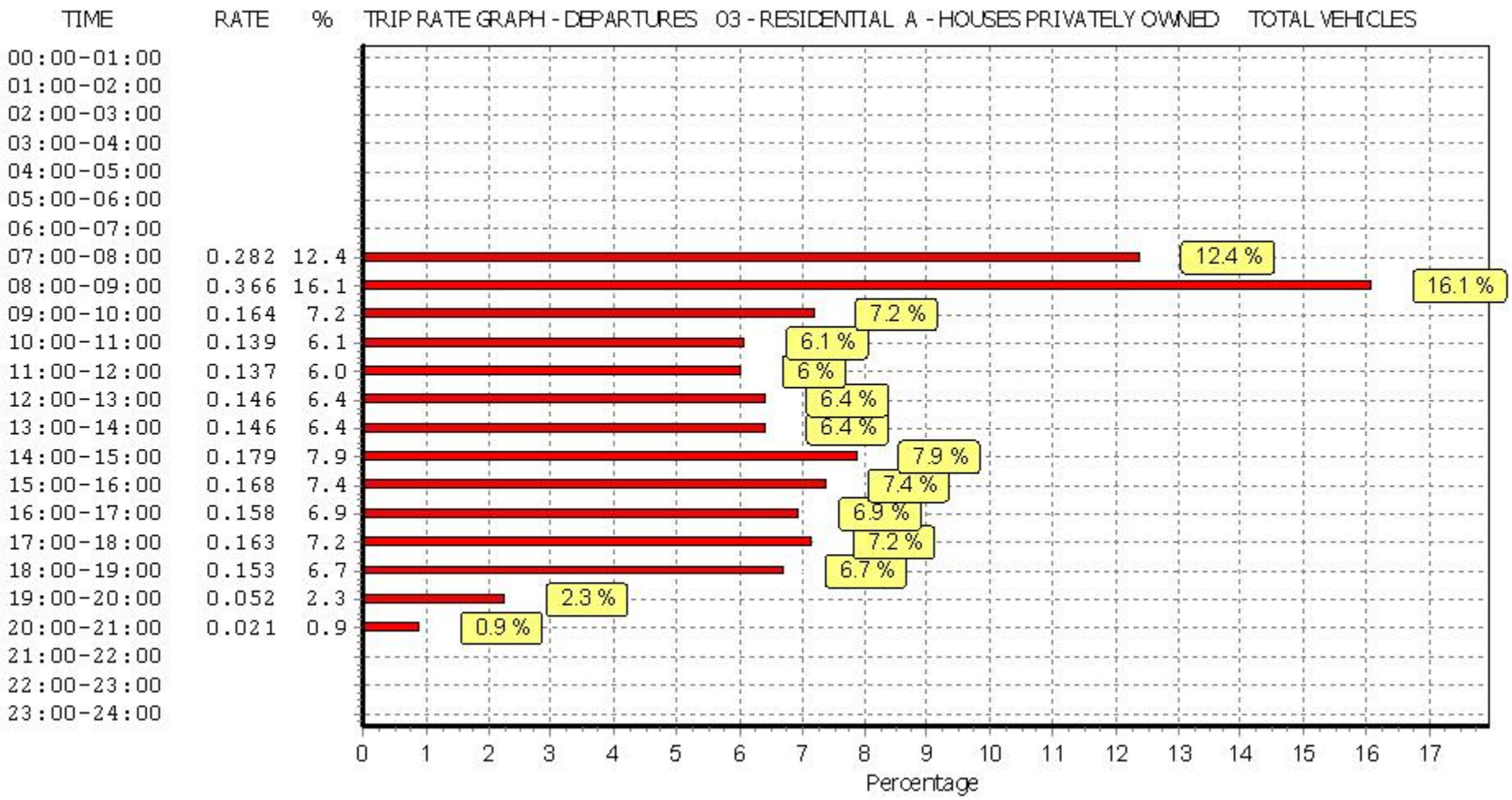

This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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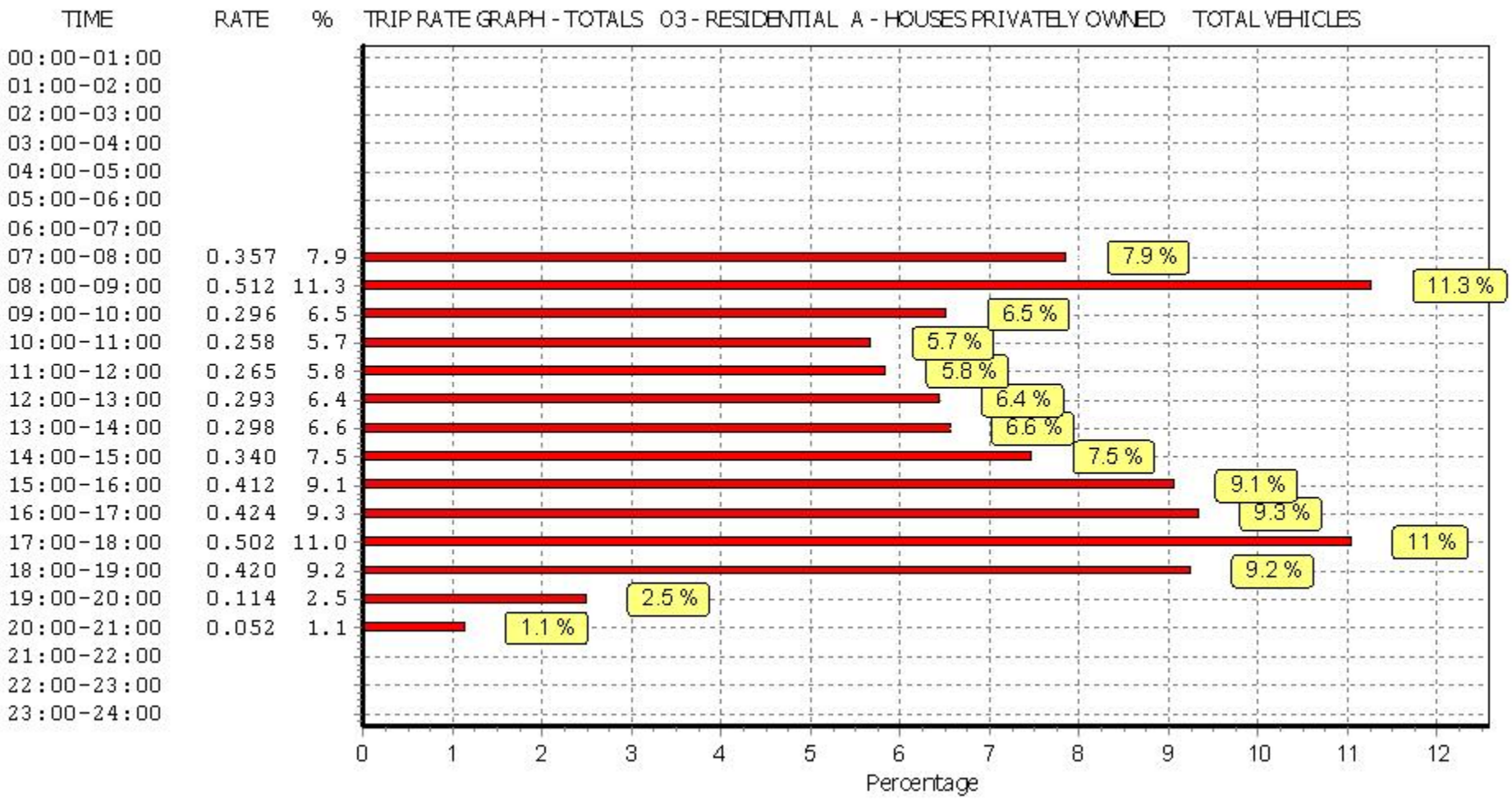


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

NRB Consulting Engineers Ltd 8 Leopardstown Business Centre, Ballyogan Avenue Dublin 18 Licence No: 160301

Calculation Reference: AUDIT-160301-240418-0432

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION
Category : D - NURSERY
TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	BH	BRIGHTON & HOVE	1 days
	WS	WEST SUSSEX	1 days
03	SOUTH WEST		
	BA	BATH & NORTH EAST SOMERSET	1 days
	BR	BRISTOL CITY	1 days
	SD	SWINDON	1 days
05	EAST MIDLANDS		
	DY	DERBY	1 days
	LN	LINCOLNSHIRE	1 days
	NN	NORTH NORTHAMPTONSHIRE	1 days
06	WEST MIDLANDS		
	WK	WARWICKSHIRE	1 days
	WM	WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	DR	DONCASTER	1 days
	NY	NORTH YORKSHIRE	1 days
09	NORTH		
	TV	TEES VALLEY	1 days
	TW	TYNE & WEAR	1 days
10	WALES		
	MM	MONMOUTHSHIRE	1 days
	NW	NEWPORT	1 days
	RC	RHONDDA CYNON TAFF	1 days
11	SCOTLAND		
	DU	DUNDEE CITY	1 days
12	CONNAUGHT		
	RO	ROSCOMMON	1 days
16	ULSTER (REPUBLIC OF IRELAND)		
	MG	MONAGHAN	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY
TOTAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	3	420	0.159	3	420	0.000	3	420	0.159
07:00 - 08:00	20	556	2.267	20	556	1.161	20	556	3.428
08:00 - 09:00	20	556	3.113	20	556	2.726	20	556	5.839
09:00 - 10:00	20	556	1.206	20	556	1.116	20	556	2.322
10:00 - 11:00	20	556	0.396	20	556	0.270	20	556	0.666
11:00 - 12:00	20	556	0.468	20	556	0.351	20	556	0.819
12:00 - 13:00	20	556	1.080	20	556	1.188	20	556	2.268
13:00 - 14:00	20	556	0.828	20	556	1.215	20	556	2.043
14:00 - 15:00	20	556	0.414	20	556	0.423	20	556	0.837
15:00 - 16:00	20	556	0.801	20	556	0.711	20	556	1.512
16:00 - 17:00	20	556	1.377	20	556	1.529	20	556	2.906
17:00 - 18:00	20	556	2.537	20	556	3.158	20	556	5.695
18:00 - 19:00	19	577	0.146	19	577	0.693	19	577	0.839
19:00 - 20:00	1	450	0.222	1	450	2.222	1	450	2.444
20:00 - 21:00	1	450	0.000	1	450	0.000	1	450	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			15.014			16.763			31.777

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

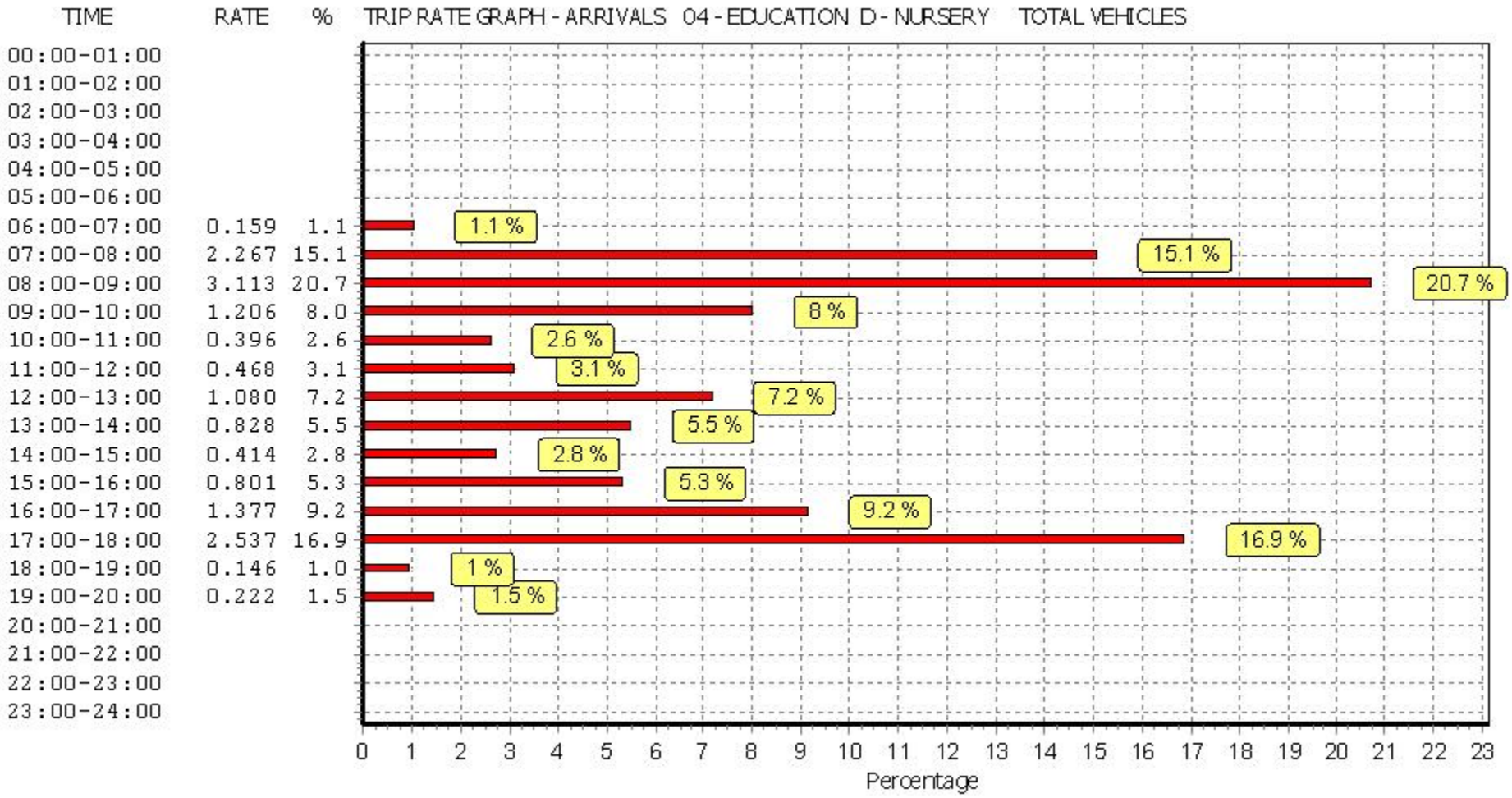
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter summary

Trip rate parameter range selected:	150 - 1250 (units: sqm)
Survey date date range:	01/01/16 - 02/05/23
Number of weekdays (Monday-Friday):	20
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
Surveys manually removed from selection:	0

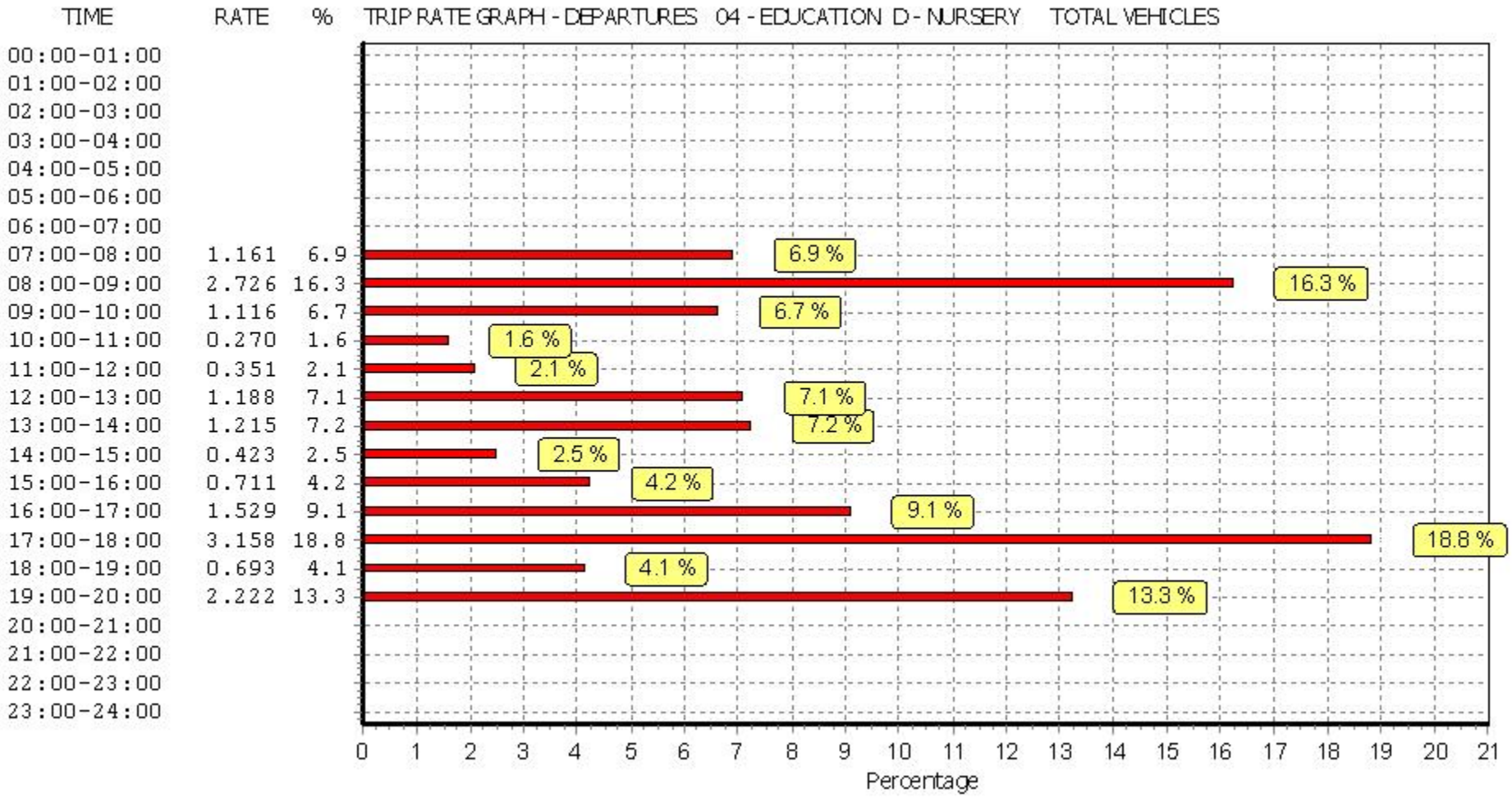
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

NRB Consulting Engineers Ltd 8 Leopardstown Business Centre, Ballyogan Avenue Dublin 18 Licence No: 160301



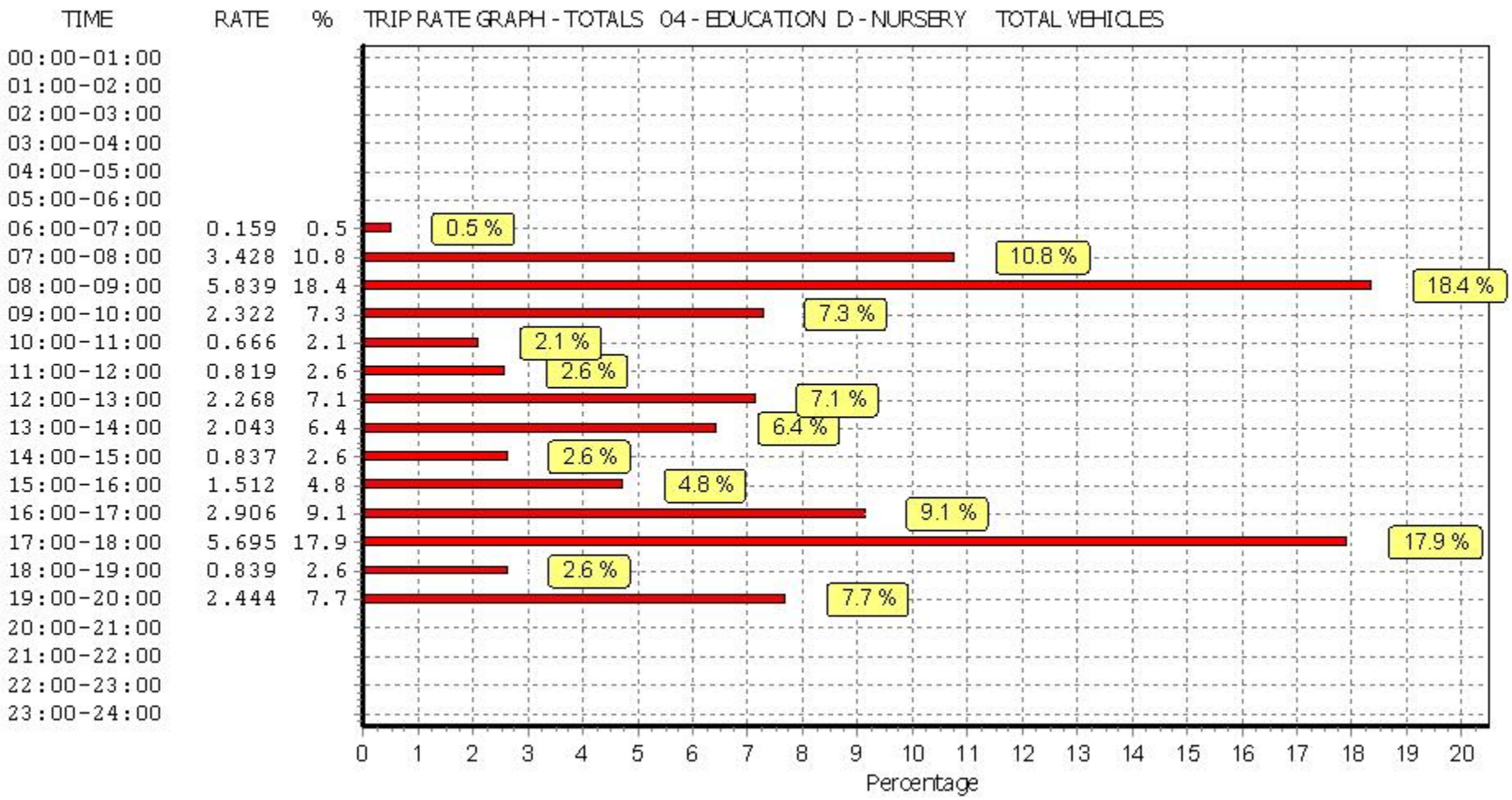
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

NRB Consulting Engineers Ltd 8 Leopardstown Business Centre, Ballyogan Avenue Dublin 18 Licence No: 160301



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

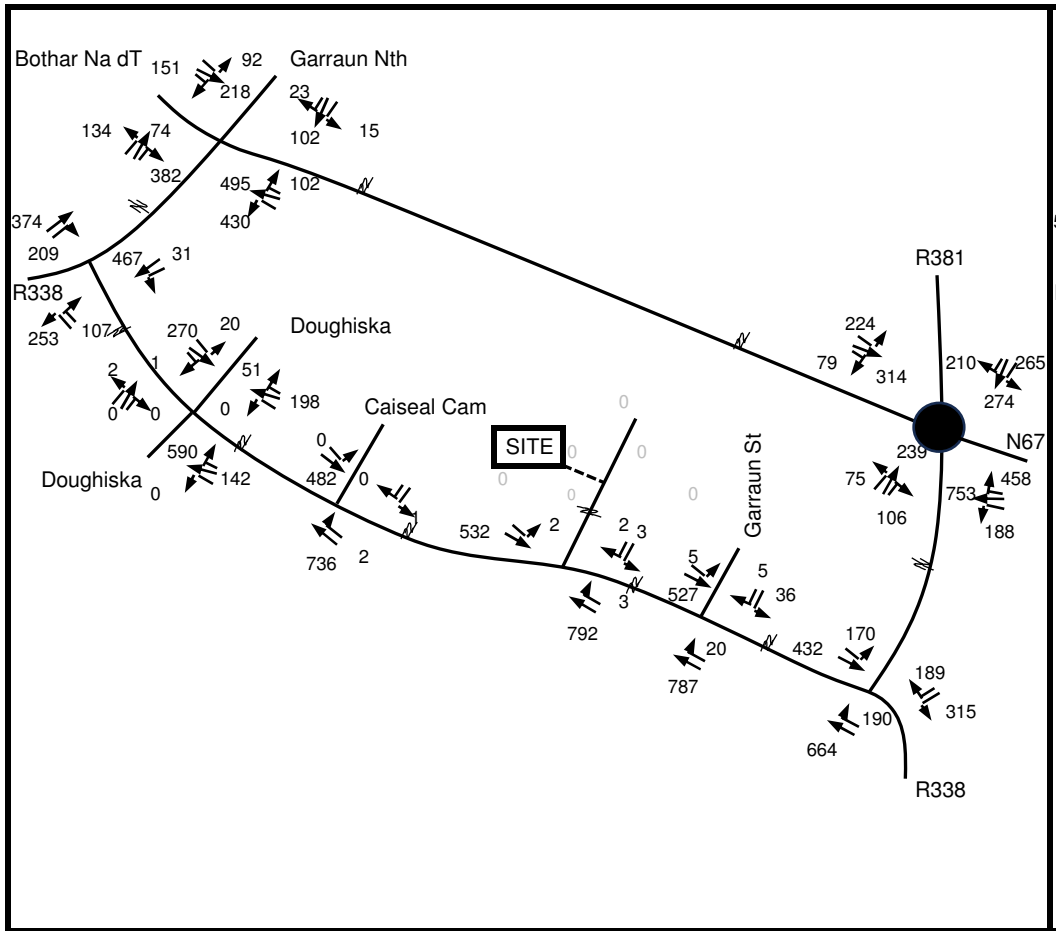
NRB Consulting Engineers Ltd 8 Leopardstown Business Centre, Ballyogan Avenue Dublin 18 Licence No: 160301



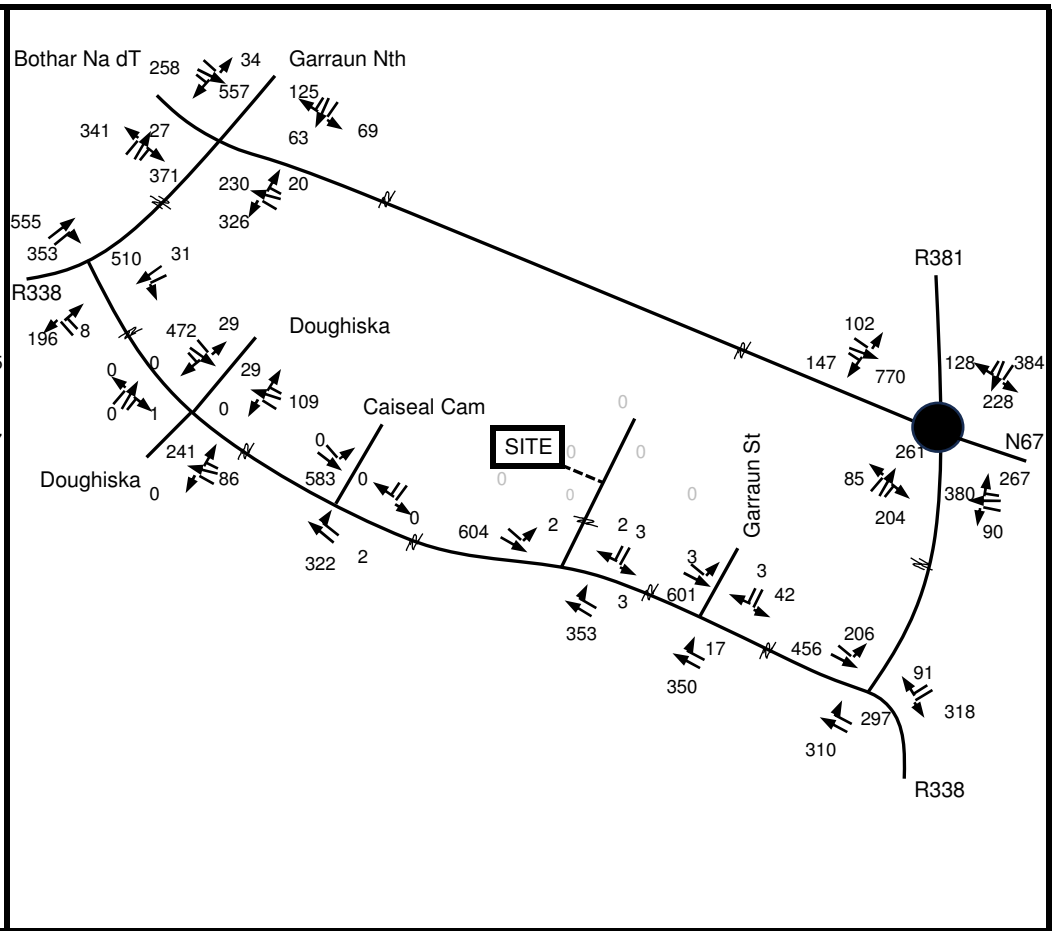
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

APPENDIX D

Traffic Surveys, Trip Distribution & Network Traffic Flow Projections & Diagrams



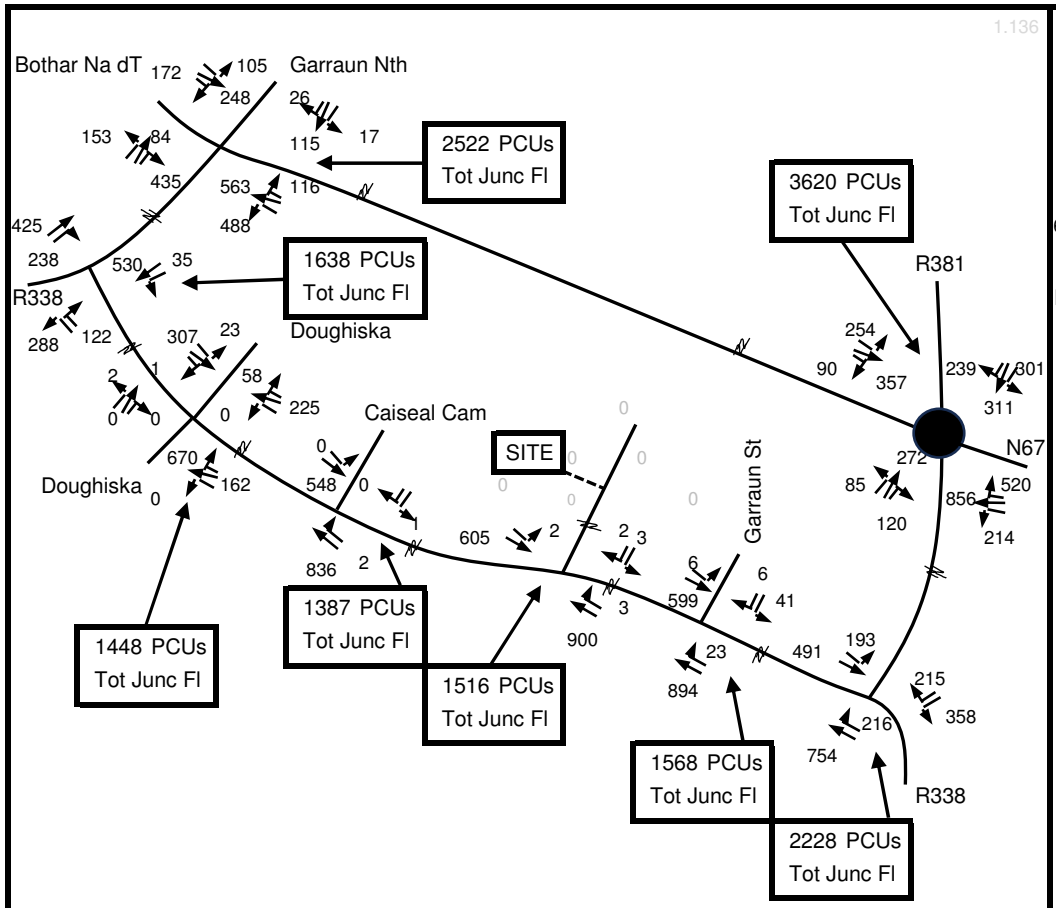
WEEKDAY AM PEAK HOUR 8-9AM



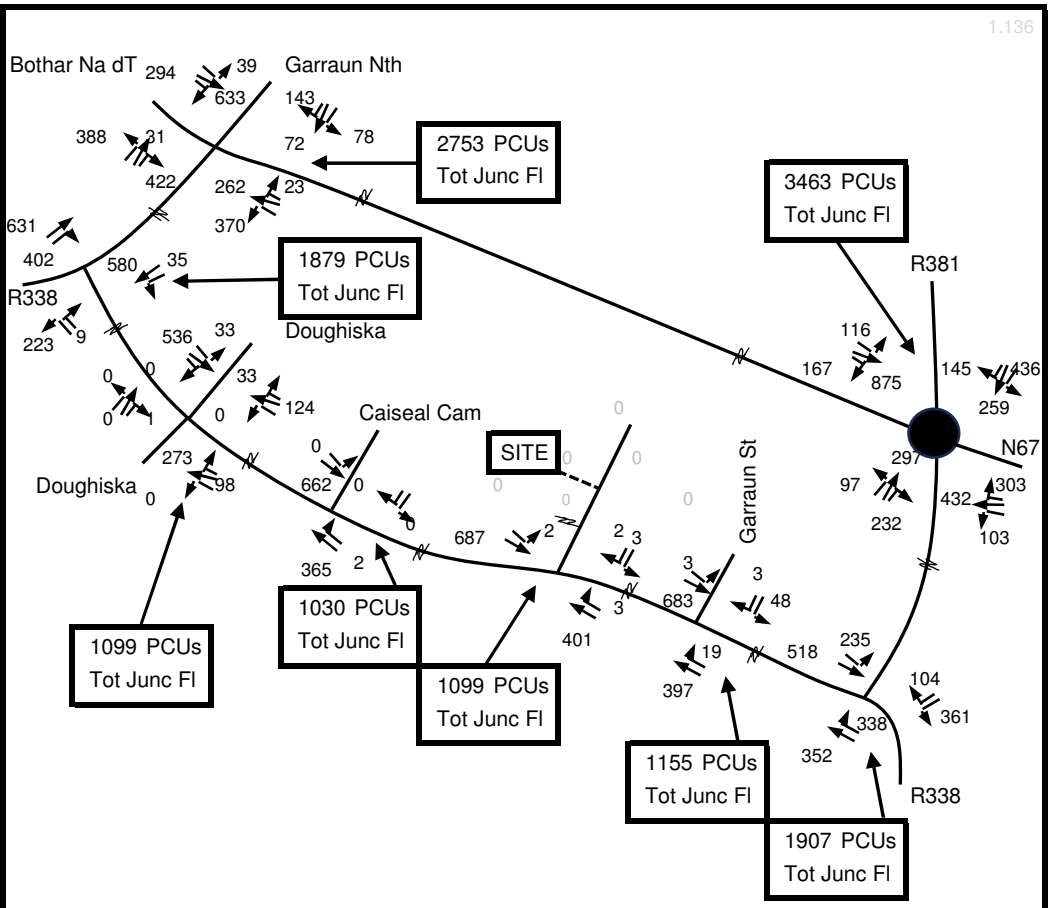
WEEKDAY PM PEAK HOUR 5-6PM

EXISTING AS SURVEYED NETWORK TRAFFIC CONDITIONS 2023 (PCUs) - REFER APPENDIX B

RECOMMENDED GROWTH RATES: TII PE-PAG-02017 Project Appraisal Guidelines for National Roads Unit 5.3 (Travel Demand Projections, Table 6.2: Central Growth Rates: Annual Growth Factors, County Galway)	2023 to 2028 = 1.136 2028 to 2043 = 1.210

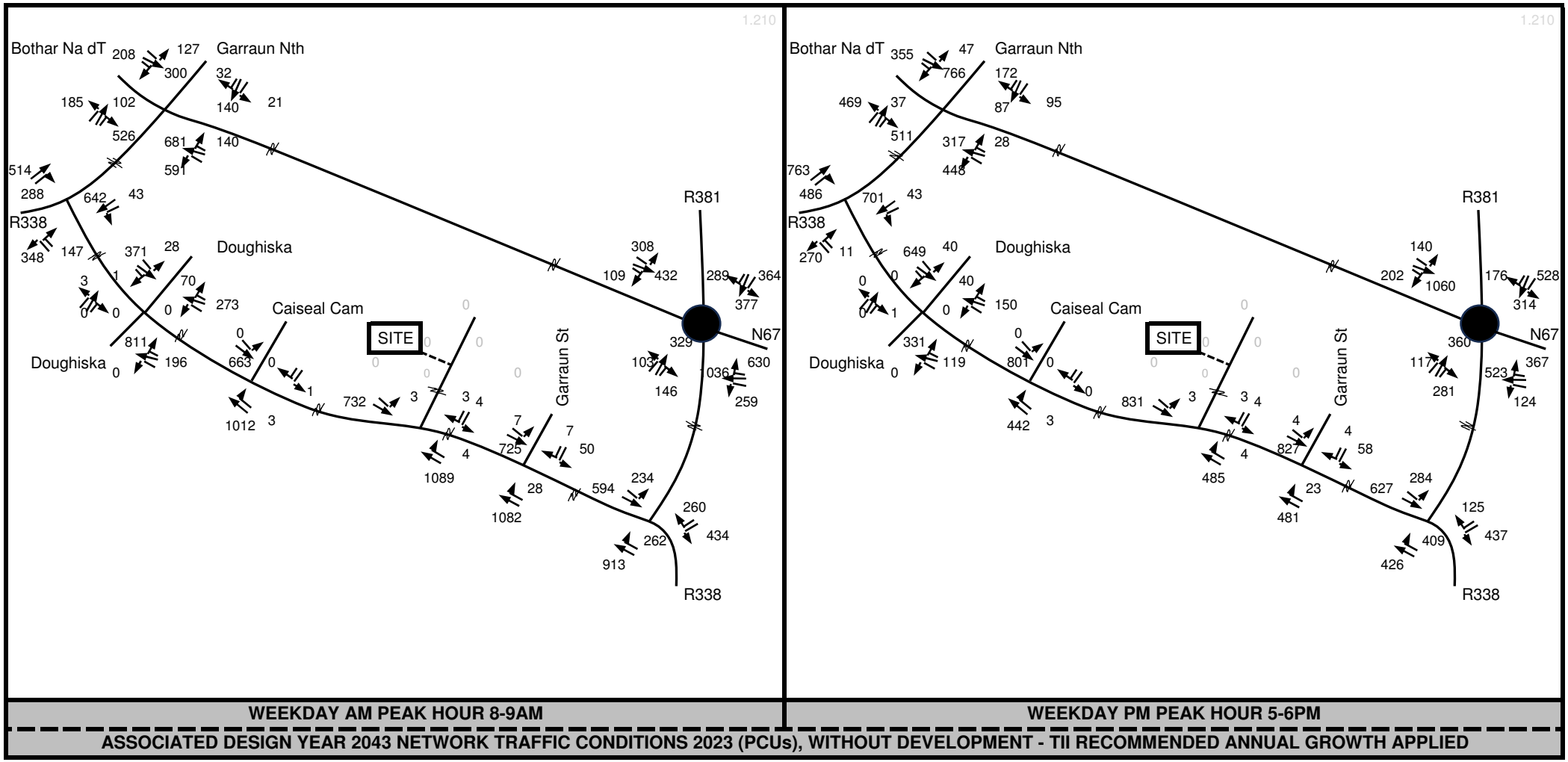


WEEKDAY AM PEAK HOUR 8-9AM



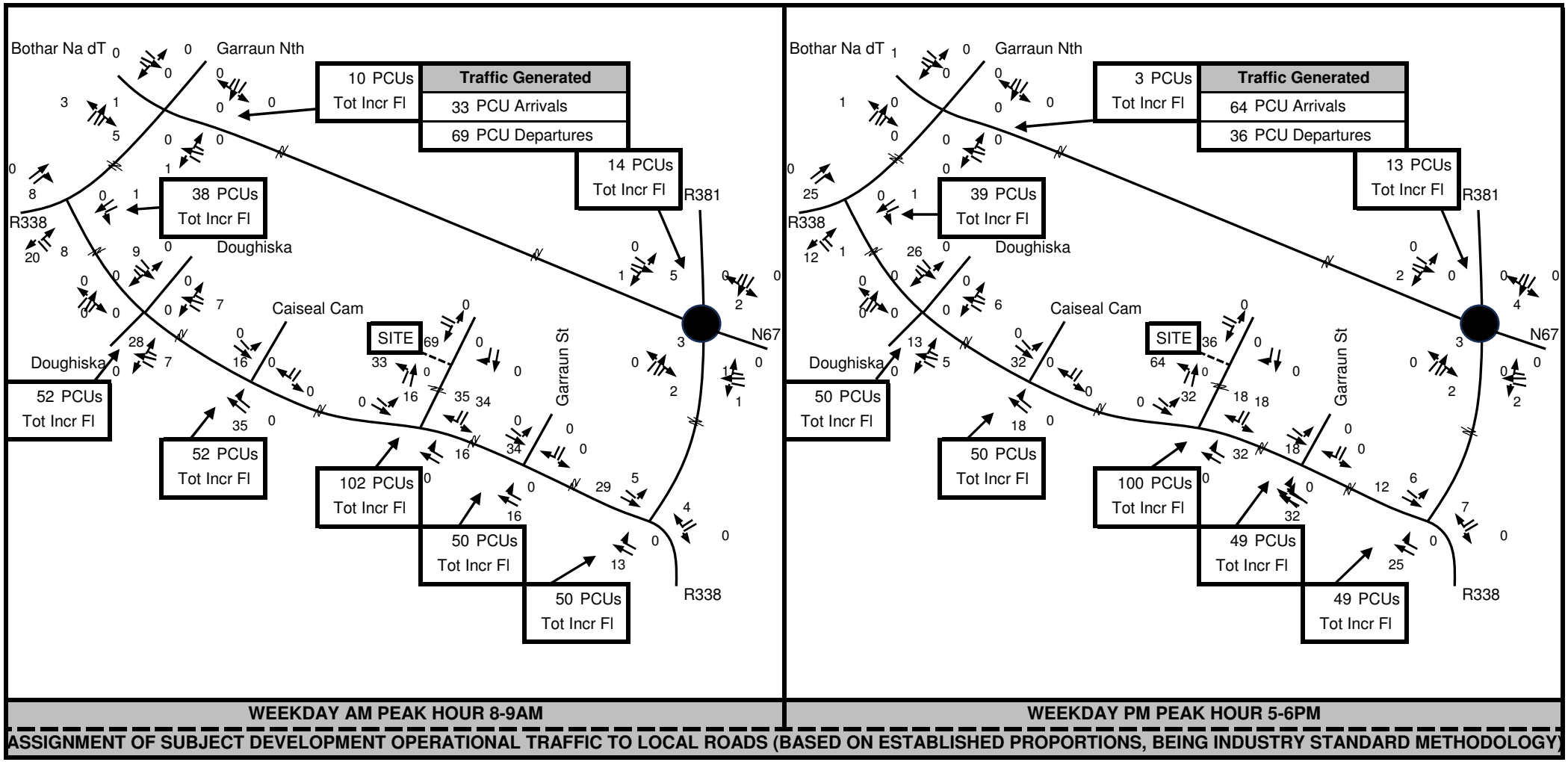
WEEKDAY PM PEAK HOUR 5-6PM

PROJECTED OPENING YEAR NETWORK TRAFFIC CONDITIONS 2028 (PCUs), WITHOUT DEVELOPMENT - TII RECOMMENDED ANNUAL GROWTH APPLIED

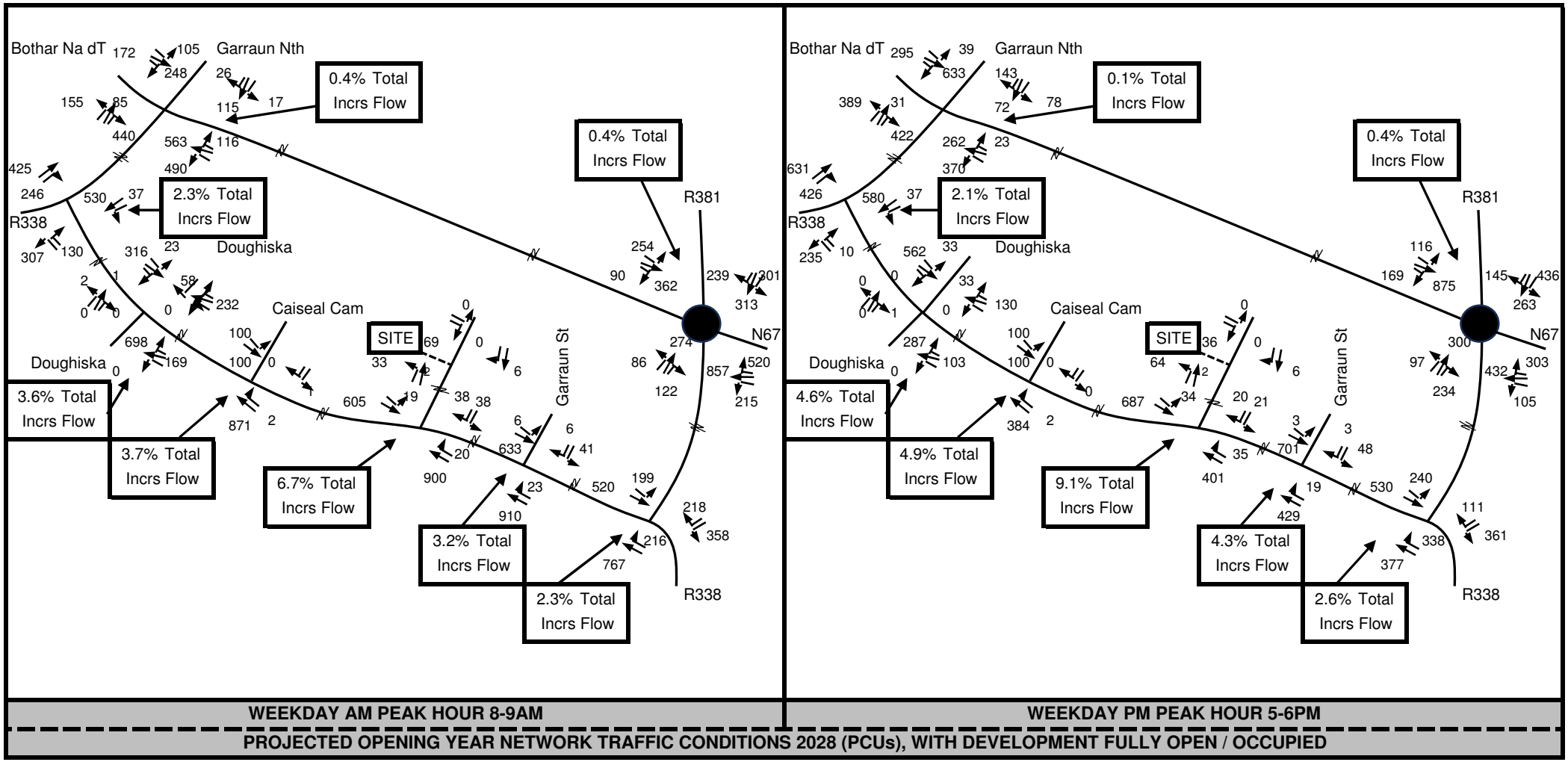

Bothar Na dT
Garraun Nth
Doughiska
Caiseal Cam
SITE
Garraun St
R381
R338
N67
WEEKDAY AM PEAK HOUR 8-9AM
WEEKDAY PM PEAK HOUR 5-6PM
ASSOCIATED DESIGN YEAR 2043 NETWORK TRAFFIC CONDITIONS 2023 (PCUs), WITHOUT DEVELOPMENT - TII RECOMMENDED ANNUAL GROWTH APPLIED

TRICS Assessment (Traffic Generation Calculations, Houses & Creche) Refer to Appendix C

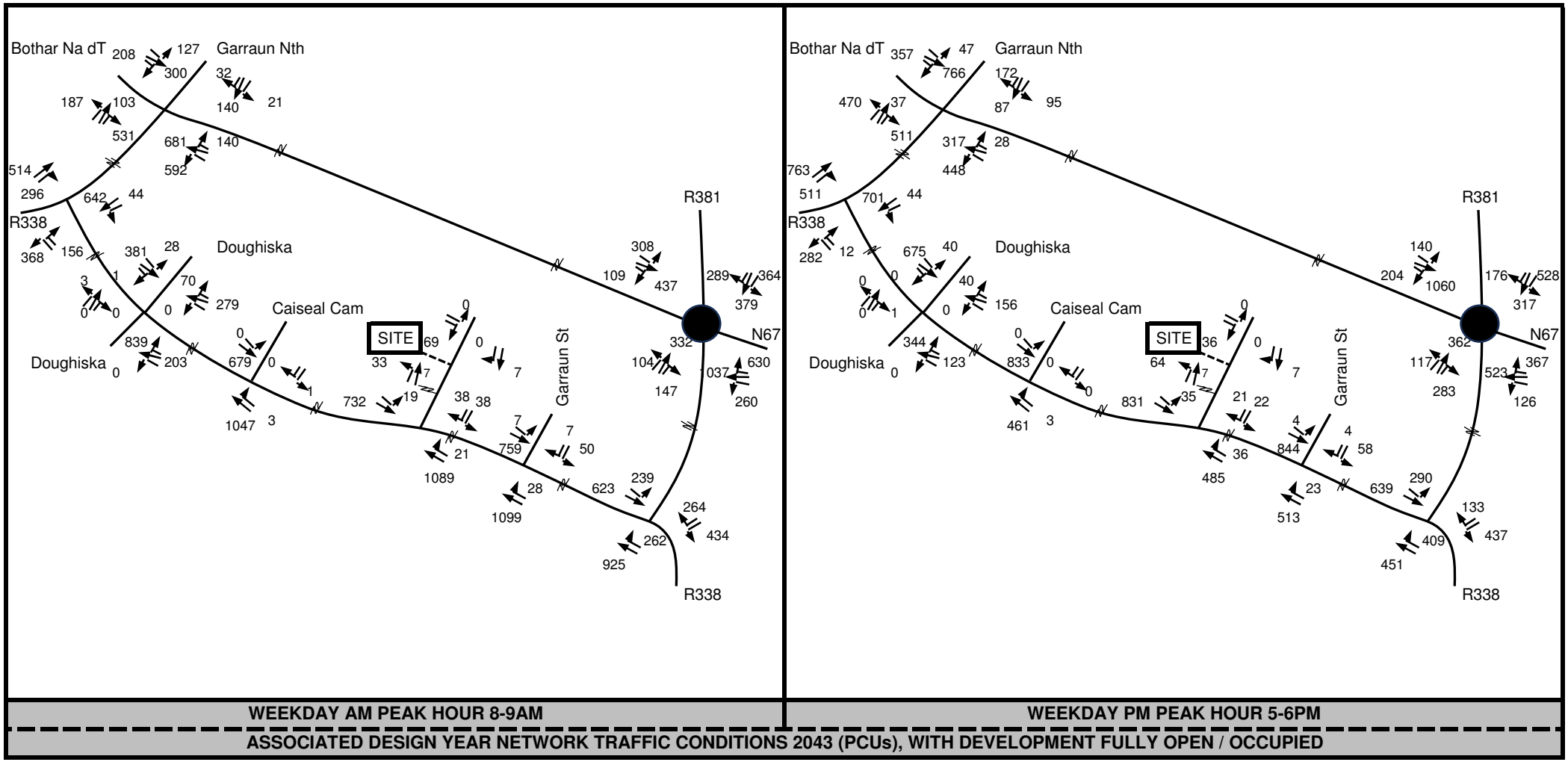
171 Houses	**Arrivals (PCUs)**		**Departures (PCUs)**		**Total 2-Way Traffic**
Network Hour	**Per Unit**	**Site (165)**	**Per Unit**	**Site (165)**	
Weekday AM Peak Hr 8-9	0.146	25	0.366	63	88
Weekday PM Peak Hr 5-6	0.339	58	0.163	28	86
24 Hours	2.269	388	2.274	389	777
250 m2 Creche	**Arrivals (PCUs)**		**Departures (PCUs)**		**Total 2-Way Traffic**
Network Hour	**Per 100m2**	**Creche**	**Per 100m2**	**Creche**	
Weekday AM Peak Hr 8-9	3.113	8	2.726	7	15
Weekday PM Peak Hr 5-6	2.537	6	3.158	8	14
24 Hours	15.014	38	16.763	42	80
TOTAL THEORETICAL TRAFFIC GENERATED BY TRADITIONAL HOUSES AND CRECHE (TRICS)					
Network Hour	**Arrivals (PCUs)**		**Departures (PCUs)**		**2-Way Traffic Flow**
Weekday AM Peak Hr 8-9	33		69		102
Weekday PM Peak Hr 5-6	64		36		100
24 Hours	426		431		857



ASSIGNMENT OF SUBJECT DEVELOPMENT OPERATIONAL TRAFFIC TO LOCAL ROADS (BASED ON ESTABLISHED PROPORTIONS, BEING INDUSTRY STANDARD METHODOLOGY)



PROJECTED OPENING YEAR NETWORK TRAFFIC CONDITIONS 2028 (PCUs), WITH DEVELOPMENT FULLY OPEN / OCCUPIED



ASSOCIATED DESIGN YEAR NETWORK TRAFFIC CONDITIONS 2043 (PCUs), WITH DEVELOPMENT FULLY OPEN / OCCUPIED

APPENDIX E

PiCADY Junction Simulation Model Output
(Local Road / Site Access)

Proposed Priority Controlled Site Access Junction
Summary PICADY Results in Order as included herein
(Robust & Worst Case – with Development fully Occupied, incl Creche)

Modelled Scenario	Period Mean Max Q (PCUs)	Period Max RFC
2028 Opening Year AM Peak 8-9am	0.2	0.14
2028 Opening Year PM Peak 5-6pm	0.1	0.08
2043 Design Year AM Peak 8-9am	0.2	0.14
2043 Design Year PM Peak 5-6pm	0.1	0.08

All Results Above are WAY below the recommended Max RFC of 0.85 (85% Capacity) and therefore no problems whatsoever are anticipated at the Proposed Junction in terms of Capacity or Vehicle Queues

NB *Any Small Changes to Selected Opening Year 2028 or Design Year 2043 will have no significant implications in terms of the Conclusions of the Study.*

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: 2028 AM PM.j9
Path: C:\Users\Eoin\NRB Consulting Engineers Ltd\NRB Server - Documents\2023\23-120 Glenveagh Oranmore\Calculations\Site Access Capacity
Report generation date: 18/04/2024 14:15:26

Summary of junction performance

	AM				PM			
	Q (PCU)	Delay (s)	RFC	LOS	Q (PCU)	Delay (s)	RFC	LOS
	2028							
Stream B-AC	0.2	8.18	0.14	A	0.1	7.63	0.08	A
Stream C-AB	0.0	0.00	0.00	A	0.0	0.00	0.00	A

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	17/04/2024
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	2028	AM	ONE HOUR	07:45	09:15	15
D2	2028	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2028, 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	Site Access Junct	T-Junction	Two-way	5.12	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Local Rd S		Major
B	Site Access		Minor
C	Local Rd N		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	6.00			90.0	✓	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	50	50

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	519	0.094	0.239	0.150	0.341
1	B-C	655	0.100	0.254	-	-
1	C-B	626	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	2028	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		✓	34	100.000
B		✓	67	100.000
C		✓	6	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	32	2
	B	67	0	0
	C	6	0	0

Vehicle Mix

HV %s

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS
B-AC	0.14	8.18	0.2	A
C-AB	0.00	0.00	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	50	515	0.098	50	0.1	7.732	A
C-AB	0	1252	0.000	0	0.0	0.000	A
C-A	5			5			
A-B	24			24			
A-C	2			2			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	60	515	0.117	60	0.1	7.920	A
C-AB	0	1250	0.000	0	0.0	0.000	A
C-A	5			5			
A-B	29			29			
A-C	2			2			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	74	514	0.144	74	0.2	8.178	A
C-AB	0	1246	0.000	0	0.0	0.000	A
C-A	7			7			
A-B	35			35			
A-C	2			2			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	74	514	0.144	74	0.2	8.183	A
C-AB	0	1246	0.000	0	0.0	0.000	A
C-A	7			7			
A-B	35			35			
A-C	2			2			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	60	515	0.117	60	0.1	7.929	A
C-AB	0	1250	0.000	0	0.0	0.000	A
C-A	5			5			
A-B	29			29			
A-C	2			2			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	50	515	0.098	51	0.1	7.749	A
C-AB	0	1252	0.000	0	0.0	0.000	A
C-A	5			5			
A-B	24			24			
A-C	2			2			

2028, 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	Site Access Junct	T-Junction	Two-way	2.54	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	2028	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		✓	64	100.000
B		✓	35	100.000
C		✓	6	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	62	2
	B	35	0	0
	C	6	0	0

Vehicle Mix

HV %s

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS
B-AC	0.08	7.63	0.1	A
C-AB	0.00	0.00	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	26	513	0.051	26	0.1	7.389	A
C-AB	0	1241	0.000	0	0.0	0.000	A
C-A	5			5			
A-B	47			47			
A-C	2			2			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	31	512	0.061	31	0.1	7.490	A
C-AB	0	1236	0.000	0	0.0	0.000	A
C-A	5			5			
A-B	56			56			
A-C	2			2			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	39	511	0.075	38	0.1	7.626	A
C-AB	0	1230	0.000	0	0.0	0.000	A
C-A	7			7			
A-B	68			68			
A-C	2			2			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	39	511	0.075	39	0.1	7.626	A
C-AB	0	1230	0.000	0	0.0	0.000	A
C-A	7			7			
A-B	68			68			
A-C	2			2			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	31	512	0.061	32	0.1	7.495	A
C-AB	0	1236	0.000	0	0.0	0.000	A
C-A	5			5			
A-B	56			56			
A-C	2			2			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	26	513	0.051	26	0.1	7.399	A
C-AB	0	1241	0.000	0	0.0	0.000	A
C-A	5			5			
A-B	47			47			
A-C	2			2			

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: 2043 AM PM.j9
Path: C:\Users\Eoin\NRB Consulting Engineers Ltd\NRB Server - Documents\2023\23-120 Glenveagh Oranmore\Calculations\Site Access Capacity
Report generation date: 18/04/2024 14:30:12

Summary of junction performance

	AM				PM			
	Q (PCU)	Delay (s)	RFC	LOS	Q (PCU)	Delay (s)	RFC	LOS
	2043							
Stream B-AC	0.2	8.19	0.14	A	0.1	7.63	0.08	A
Stream C-AB	0.0	0.00	0.00	A	0.0	0.00	0.00	A

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	17/04/2024
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	2043	AM	ONE HOUR	07:45	09:15	15
D2	2043	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2043, 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	Site Access Junct	T-Junction	Two-way	5.08	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Local Rd S		Major
B	Site Access		Minor
C	Local Rd N		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	6.00			90.0	✓	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	50	50

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	519	0.094	0.239	0.150	0.341
1	B-C	655	0.100	0.254	-	-
1	C-B	626	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	2043	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		✓	34	100.000
B		✓	67	100.000
C		✓	7	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	32	2
	B	67	0	0
	C	7	0	0

Vehicle Mix

HV %s

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS
B-AC	0.14	8.19	0.2	A
C-AB	0.00	0.00	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	50	515	0.098	50	0.1	7.734	A
C-AB	0	1252	0.000	0	0.0	0.000	A
C-A	5			5			
A-B	24			24			
A-C	2			2			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	60	514	0.117	60	0.1	7.922	A
C-AB	0	1250	0.000	0	0.0	0.000	A
C-A	6			6			
A-B	29			29			
A-C	2			2			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	74	513	0.144	74	0.2	8.181	A
C-AB	0	1246	0.000	0	0.0	0.000	A
C-A	8			8			
A-B	35			35			
A-C	2			2			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	74	513	0.144	74	0.2	8.186	A
C-AB	0	1246	0.000	0	0.0	0.000	A
C-A	8			8			
A-B	35			35			
A-C	2			2			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	60	514	0.117	60	0.1	7.930	A
C-AB	0	1250	0.000	0	0.0	0.000	A
C-A	6			6			
A-B	29			29			
A-C	2			2			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	50	515	0.098	51	0.1	7.751	A
C-AB	0	1252	0.000	0	0.0	0.000	A
C-A	5			5			
A-B	24			24			
A-C	2			2			

2043, 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	Site Access Junct	T-Junction	Two-way	2.52	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)
D2	2043	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		✓	64	100.000
B		✓	35	100.000
C		✓	7	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	62	2
	B	35	0	0
	C	7	0	0

Vehicle Mix

HV %s

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS
B-AC	0.08	7.63	0.1	A
C-AB	0.00	0.00	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	26	513	0.051	26	0.1	7.391	A
C-AB	0	1241	0.000	0	0.0	0.000	A
C-A	5			5			
A-B	47			47			
A-C	2			2			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	31	512	0.061	31	0.1	7.492	A
C-AB	0	1236	0.000	0	0.0	0.000	A
C-A	6			6			
A-B	56			56			
A-C	2			2			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	39	510	0.076	38	0.1	7.628	A
C-AB	0	1230	0.000	0	0.0	0.000	A
C-A	8			8			
A-B	68			68			
A-C	2			2			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	39	510	0.076	39	0.1	7.628	A
C-AB	0	1230	0.000	0	0.0	0.000	A
C-A	8			8			
A-B	68			68			
A-C	2			2			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	31	512	0.061	32	0.1	7.497	A
C-AB	0	1236	0.000	0	0.0	0.000	A
C-A	6			6			
A-B	56			56			
A-C	2			2			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	26	513	0.051	26	0.1	7.401	A
C-AB	0	1241	0.000	0	0.0	0.000	A
C-A	5			5			
A-B	47			47			
A-C	2			2			

APPENDIX F

PiCADY Junction Simulation Model Output
(Local Road / Coast Rd R338)

Existing / Improved Priority Controlled Junction
Summary PICADY Results in Order as included herein
(Robust & Worst Case – with Development fully Occupied, incl Creche)

Modelled Scenario	Period Mean Max Q (PCUs)	Period Max RFC
2028 Opening Year AM Peak 8-9am	0.3	0.25
2028 Opening Year PM Peak 5-6pm	0.1	0.13
2043 Design Year AM Peak 8-9am	0.5	0.34
2043 Design Year PM Peak 5-6pm	0.2	0.15

All Results Above are WAY below the recommended Max RFC of 0.85 (85% Capacity) and therefore no problems whatsoever are anticipated at the Proposed Junction in terms of Capacity or Vehicle Queues. In addition, the simulation model confirms that a dedicated Right Turn Central Lane is clearly NOT required based on the modelled Capacity.

NB *Any Small Changes to Selected Opening Year 2028 or Design Year 2043 will have no significant implications in terms of the Conclusions of the Study.*

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: 2028 AM PM.j9
Path: C:\Users\Eoin\NRB Consulting Engineers Ltd\NRB Server - Documents\2023\23-120 Glenveagh Oranmore\Calculations\R338 - local Rd Capacity
Report generation date: 18/04/2024 14:28:04

Summary of junction performance

	AM				PM			
	Q (PCU)	Delay (s)	RFC	LOS	Q (PCU)	Delay (s)	RFC	LOS
	2028							
Stream B-AC	0.3	15.75	0.25	C	0.1	11.80	0.13	B
Stream C-AB	0.1	7.42	0.04	A	0.1	8.26	0.08	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	17/04/2024
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	2028	AM	ONE HOUR	07:45	09:15	15
D2	2028	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2028, 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	Site Access Junct	T-Junction	Two-way	0.80	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	R338 West		Major
B	Local Rd to Site		Minor
C	R338 East		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	80	80

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	544	0.095	0.239	0.151	0.342
1	B-C	674	0.099	0.250	-	-
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	2028	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		✓	623	100.000
B		✓	72	100.000
C		✓	919	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	18	605
	B	36	0	36
	C	900	19	0

Vehicle Mix

HV %s

		To		
		A	B	C
From	A	2	0	2
	B	2	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	0.25	15.75	0.3	C
C-AB	0.04	7.42	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	54	412	0.132	54	0.2	10.223	B
C-AB	15	542	0.027	15	0.0	6.962	A
C-A	677			677			
A-B	14			14			
A-C	455			455			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	65	372	0.174	64	0.2	11.945	B
C-AB	18	530	0.034	18	0.0	7.169	A
C-A	808			808			
A-B	16			16			
A-C	544			544			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	79	312	0.254	79	0.3	15.688	C
C-AB	23	518	0.044	23	0.1	7.417	A
C-A	989			989			
A-B	20			20			
A-C	666			666			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	79	312	0.254	79	0.3	15.755	C
C-AB	23	518	0.044	23	0.1	7.417	A
C-A	989			989			
A-B	20			20			
A-C	666			666			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	65	372	0.174	65	0.2	12.006	B
C-AB	18	530	0.034	18	0.0	7.173	A
C-A	808			808			
A-B	16			16			
A-C	544			544			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	54	412	0.132	54	0.2	10.272	B
C-AB	15	542	0.027	15	0.0	6.969	A
C-A	677			677			
A-B	14			14			
A-C	455			455			

2028, 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	Site Access Junct	T-Junction	Two-way	0.65	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2028	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		✓	720	100.000
B		✓	41	100.000
C		✓	435	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	33	687
	B	20	0	21
	C	401	34	0

Vehicle Mix

HV %s

		To		
		A	B	C
From	A	0	2	2
	B	2	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	0.13	11.80	0.1	B
C-AB	0.08	8.26	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	31	437	0.071	31	0.1	9.022	A
C-AB	26	521	0.051	26	0.1	7.415	A
C-A	301			301			
A-B	25			25			
A-C	517			517			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	37	404	0.091	37	0.1	10.005	B
C-AB	32	505	0.064	32	0.1	7.771	A
C-A	359			359			
A-B	30			30			
A-C	618			618			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	45	356	0.127	45	0.1	11.792	B
C-AB	41	485	0.084	41	0.1	8.261	A
C-A	438			438			
A-B	36			36			
A-C	756			756			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	45	356	0.127	45	0.1	11.803	B
C-AB	41	485	0.084	41	0.1	8.263	A
C-A	438			438			
A-B	36			36			
A-C	756			756			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	37	404	0.091	37	0.1	10.021	B
C-AB	32	505	0.064	32	0.1	7.776	A
C-A	359			359			
A-B	30			30			
A-C	618			618			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	31	437	0.071	31	0.1	9.040	A
C-AB	26	521	0.051	26	0.1	7.426	A
C-A	301			301			
A-B	25			25			
A-C	517			517			

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: 2043 AM PM.j9
Path: C:\Users\Eoin\NRB Consulting Engineers Ltd\NRB Server - Documents\2023\23-120 Glenveagh Oranmore\Calculations\R338 - local Rd Capacity
Report generation date: 18/04/2024 14:27:01

Summary of junction performance

	AM				PM			
	Q (PCU)	Delay (s)	RFC	LOS	Q (PCU)	Delay (s)	RFC	LOS
	2043							
Stream B-AC	0.5	23.22	0.34	C	0.2	14.26	0.15	B
Stream C-AB	0.1	7.70	0.05	A	0.1	8.78	0.09	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	17/04/2024
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	2043	AM	ONE HOUR	07:45	09:15	15
D2	2043	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2043, 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	Site Access Junct	T-Junction	Two-way	0.98	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	R338 West		Major
B	Local Rd to Site		Minor
C	R338 East		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	80	80

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	544	0.095	0.239	0.151	0.342
1	B-C	674	0.099	0.250	-	-
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	2043	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		✓	751	100.000
B		✓	74	100.000
C		✓	1109	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	19	732
	B	37	0	37
	C	1089	20	0

Vehicle Mix

HV %s

		To		
		A	B	C
From	A	2	0	2
	B	2	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	0.34	23.22	0.5	C
C-AB	0.05	7.70	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	56	369	0.151	55	0.2	11.664	B
C-AB	16	526	0.030	16	0.0	7.194	A
C-A	819			819			
A-B	14			14			
A-C	551			551			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	67	317	0.210	66	0.3	14.590	B
C-AB	19	513	0.038	19	0.0	7.433	A
C-A	977			977			
A-B	17			17			
A-C	658			658			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	81	239	0.340	81	0.5	22.955	C
C-AB	25	502	0.050	25	0.1	7.699	A
C-A	1196			1196			
A-B	21			21			
A-C	806			806			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	81	239	0.340	81	0.5	23.223	C
C-AB	25	502	0.050	25	0.1	7.700	A
C-A	1196			1196			
A-B	21			21			
A-C	806			806			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	67	317	0.210	67	0.3	14.742	B
C-AB	19	513	0.038	20	0.0	7.439	A
C-A	977			977			
A-B	17			17			
A-C	658			658			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	56	369	0.151	56	0.2	11.745	B
C-AB	16	526	0.030	16	0.0	7.201	A
C-A	819			819			
A-B	14			14			
A-C	551			551			

2043, 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	Site Access Junct	T-Junction	Two-way	0.64	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	2043	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		✓	865	100.000
B		✓	41	100.000
C		✓	520	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	34	831
	B	20	0	21
	C	485	35	0

Vehicle Mix

HV %s

		To		
		A	B	C
From	A	0	2	2
	B	2	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	0.15	14.26	0.2	B
C-AB	0.09	8.78	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	31	403	0.077	31	0.1	9.858	A
C-AB	28	501	0.055	27	0.1	7.753	A
C-A	364			364			
A-B	26			26			
A-C	626			626			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	37	362	0.102	37	0.1	11.306	B
C-AB	34	482	0.070	34	0.1	8.190	A
C-A	434			434			
A-B	31			31			
A-C	747			747			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	45	303	0.149	45	0.2	14.234	B
C-AB	44	462	0.094	43	0.1	8.779	A
C-A	529			529			
A-B	37			37			
A-C	915			915			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	45	303	0.149	45	0.2	14.261	B
C-AB	44	462	0.094	44	0.1	8.784	A
C-A	529			529			
A-B	37			37			
A-C	915			915			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	37	361	0.102	37	0.1	11.327	B
C-AB	34	482	0.070	34	0.1	8.200	A
C-A	434			434			
A-B	31			31			
A-C	747			747			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	31	403	0.077	31	0.1	9.886	A
C-AB	28	501	0.055	28	0.1	7.765	A
C-A	364			364			
A-B	26			26			
A-C	626			626			

APPENDIX G

Preliminary Mobility Management Plan
(Travel Plan)

consulting engineers

NRB

Preliminary Mobility Management Plan
(Residential Travel Plan)
Appendix G

For

Proposed Large-Scale Residential Development (LRD)

At

Cartron, Oranmore, Co. Galway.

On behalf of

Marshall Yards Development Company Ltd

SUBMISSION ISSUE

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Registered in Ireland No. 491679

Contents

1.0 INTRODUCTION

1.1 NRB Consulting Engineers have been commissioned to prepare a preliminary Mobility Management Plan (or Residential Travel Plan) to identify measures which could be implemented to promote sustainable travel amongst future residents at the proposed Large-Scale Residential Development on lands Cartron, Oranmore, Co Galway.

1.2 The proposed residential development comprises 171 No private residential houses and an ancillary creche.

1.3 The report has been prepared in order to explain the applicant's commitment to the promotion of more sustainable and cost-effective travel habits among the residents and visitors of the scheme, to discourage car ownership and provide for incentives to encourage the use of public transport, cycling, walking and car-pooling by residents, occupants and staff employed in the development. The MMP references the content of the *Galway County Transport and Planning Strategy 2022-2028*.

1.4 The plan includes measures and services that will support residents within the development, encourage the use of public transport, cycling, walking and carpooling by residents / visitors of the development and to reduce and regulate the extent of car parking.

1.5 **It should be recognised that a Mobility Management Plan / Travel Plan prepared at Compliance Stage, when a permitted development is unoccupied, can only highlight the current and proposed alternative transport initiatives in place at the site, and set out the applicant's commitment to the promotion of sustainable transport measures. Realistic modal split targets can only be set when the OD and travel habits or requirements of residents are established and can be studied**.

What is a Travel Plan?

1.6 A Travel Plan is of course best prepared at full-development occupation, which allow targets to be actually set & focussed, based on the actual residents O-D and actual travel profile. However, this Report does provide a structure for the Management Company and the appointed Mobility Manager to follow post occupation. Once the residents profile is known, the travel habits and travel choices can then be best monitored and influenced. Modal shift targets will be set and included when a working plan is then in place. A Mobility Management Manager / Travel Plan Coordinator shall be appointed to oversee and co-ordinate the preparation of individual plans.

1.7 Originally and elsewhere called Mobility Management Plans (MMPs), they originated in the United States and the Netherlands in the late 1980s. In the US, employers over a certain size (generally over 100 employees) were required to implement 'Trip Reduction Plans' in order to reduce single-occupancy car commuting trips, and to increase car occupancy.

1.8 A Mobility Management Plan (MMP) or Travel Plan (TP) consists of a package of measures put in place by an organisation to encourage and support more sustainable travel patterns among residents and other visitors. Such a plan usually concentrates on work and school commuting patterns. In essence, a MMP/TP is useful not only to reduce the attractiveness of private car use, but also for the ability to promote and support the use of more sustainable transport modes such as walking, cycling, shared transport and mass transit such as buses and trains.

Aims and Objectives of this MMP

1.9 The package generally includes measures to promote and improve the attractiveness of using public transport, cycling, walking, car sharing, flexible working or a combination of these as alternatives to single-occupancy car journeys to work. A MMP can consider all travel associated with the residential or work site, including business travel, fleet management, customer access and deliveries. It should be considered as a dynamic process where a package of measures and campaigns are identified, piloted and monitored on an on-going basis.

1.10 The changes which are being sought as part of any plan may be as simple as car sharing one-day per week, or walking on Wednesdays, or taking the bus on days which do not conflict with other commitments, leisure or work activities.

1.11 It is envisaged that once in place, a working Mobility Management Plan will enable the following benefits to be realised for the proposed development:

- Reduced car parking demand and reduced congestion on the local road network due to lower demand for private transport and/or more efficient use of private motor vehicles,
- Improved safety for cyclists and pedestrians,
- Direct financial savings for those taking part in the developed initiatives, through higher than average vehicle occupancy rates,
- A reduction in car parking & car set-down demand, resulting in improved operational efficiency and safety for all,
- Improved social networking between all those participating in the shared initiatives,
- Improved environmental consideration and performance,
- Improved public image for the development, which sets an example to the broader community and may lead to residents making better travel decisions in the future,
- Improved health and well-being for those using active non-car transport modes,
- Regular liaison with the Local Authority and public transport providers to maintain, improve, and support transportation services to and from the site,
- Improved attractiveness of the development to prospective residents,
- Optimal levels of safety for all, both residents and visitors.

Methodology

1.12 As part of this Travel Plan, reference has been made to the following documents:

- Galway County Transport and Planning Strategy 2022-2028;
- Your Step By Step Guide To Travel Plans (NTA);
- Achieving Effective Workplace Travel Plans (NTA);
- Traffic and Transport Assessment Guidelines (TII);
- Traffic Management Guidelines (DoELG);
- Mobility Management Plans – DTO Advice Note (DTO);
- The Route to Sustainable Commuting (DTO 2001); and,
- Smarter Travel: A Sustainable Transport Future (DOT).

1.13 Consultation with key stakeholders is an essential part of any MMP. As discussed below, as part of the operational phase of this development, a Mobility Management Manager / Travel Plan Coordinator will be appointed from within the Management Company. Following on, once occupied residents will be asked to complete detailed questionnaires on essential data in relation to their existing travel patterns in order to determine appropriate modal shift targets. This information will be used to inform the ongoing implementation, monitoring and review of the plan for this development.

1.14 This information has been used herein as the basis for the assessment, conclusions and recommendations.

2.0 ACCESS TO THE SITE - BY MODE

2.1 The development consists of the construction of 171 residential houses and an ancillary creche, with dedicated car & bicycle parking spaces, along with all associated site works on the site at Cartron, Oranmore, Co Galway.

2.2 This is an accessible location adjacent to Oranmore Train Station and will benefit from the detailed plans for multi modal transport improvements at set out in the Galway County Transport and Planning Strategy 2022-2028 (GCTPS), an extract from which is below showing the overview of the plans for the Galway to Athenry Corridor including Oranmore is included below.

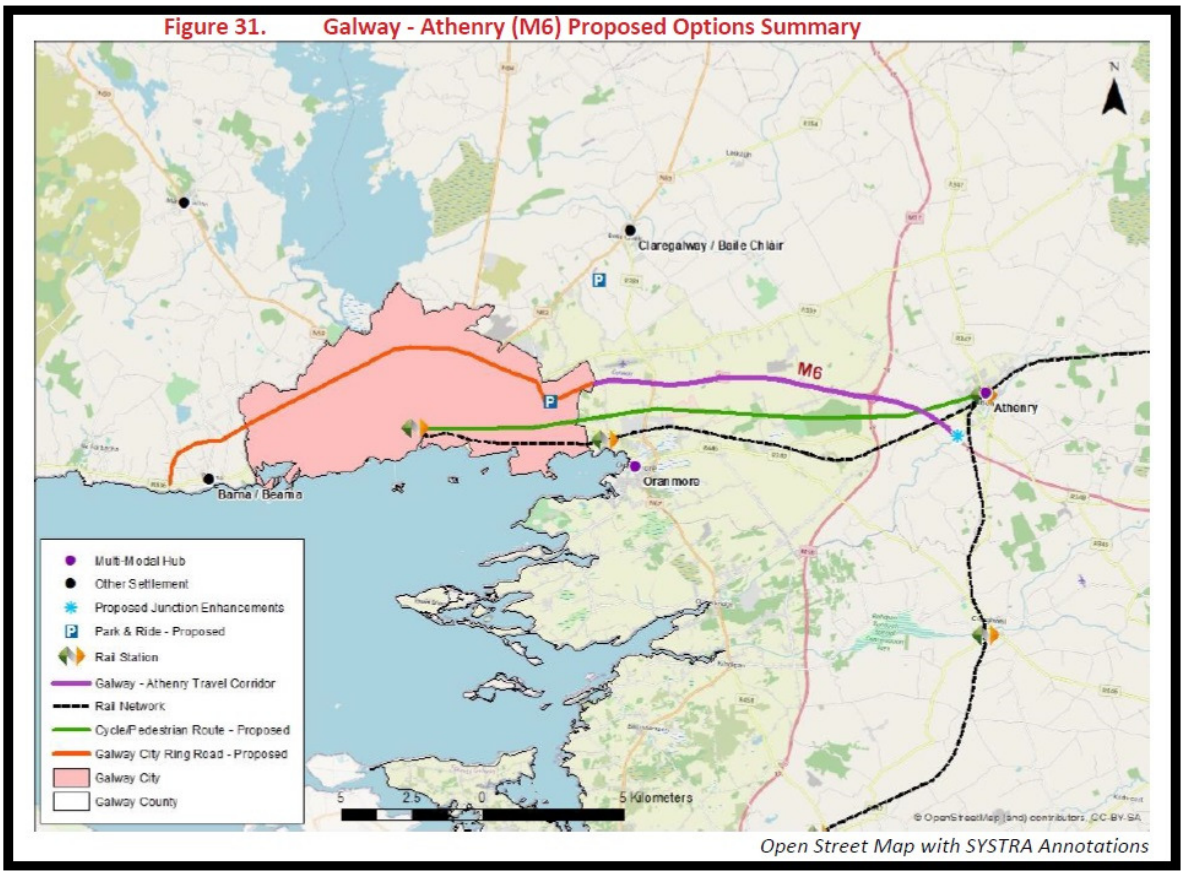


Figure 2.1 – Extract GCTPS Showing Galway – Athenry Proposals

Location

2.3 A site location plan showing the site and the context in relation to Galway City and the adjacent Oranmore Train Station is illustrated below as ***Figure 2.2.*** The site is within a ~10-11 minute walk or a 3 min cycle of Oranmore Train Station. This site is accessible to schools and employment opportunities within Oranmore and Galway including services, retail, restaurants etc which can serve residents of the development for their regular shopping/service needs.

Figure 2.2 – Development Site Location

2.4 A extract from the GCTPS showing the local measures that are planned for the Galway-Athenry Corridor that will benefit the site is included below as Figure 2.3

Table 11. Galway-Athenry (M6) Proposed Measures & Forecast Benefits

PROPOSED MEASURES	FORECAST BENEFIT
Multi-modal hub at Athenry and Oranmore	Required to increase attractiveness of public transport use and allow for integrated interchange between modes.
Cycle Greenway between Galway and Athenry (extends to Athlone)	Improved connectivity for cyclists and wider rural settlements alongside safety improvements through provision of off-road cycle greenway.
Park and Ride at Ardaun	Reduced congestion upon approach and within Galway City by reduction of private vehicle trips improving journey times.
Galway City Ring Road	Reduce congestion on approach and through Galway City by traffic diversion around the City improving journey times.
Review of congestion hotspots	Alleviate congestion to and from Athenry to access the M6.

Figure 2.3 – Extract GCTPS Showing Proposals Benefiting Site

2.5 A plan showing the site and the cycle times to the surrounding neighbourhoods, and transport hubs is illustrated below as ***Figure 2.4.***

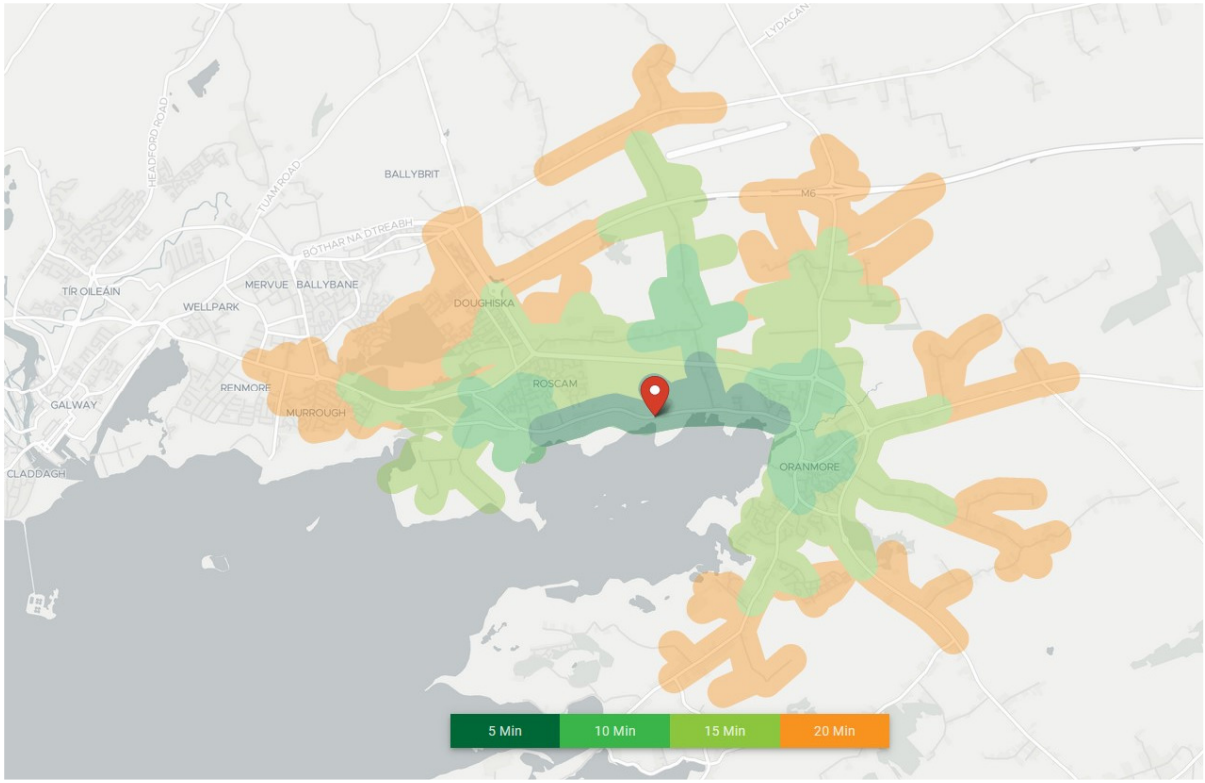


Figure 2.4 – Proposed Development ~ Estimated 5 to 10 min Cycle Distance
(Source: targomo.com)

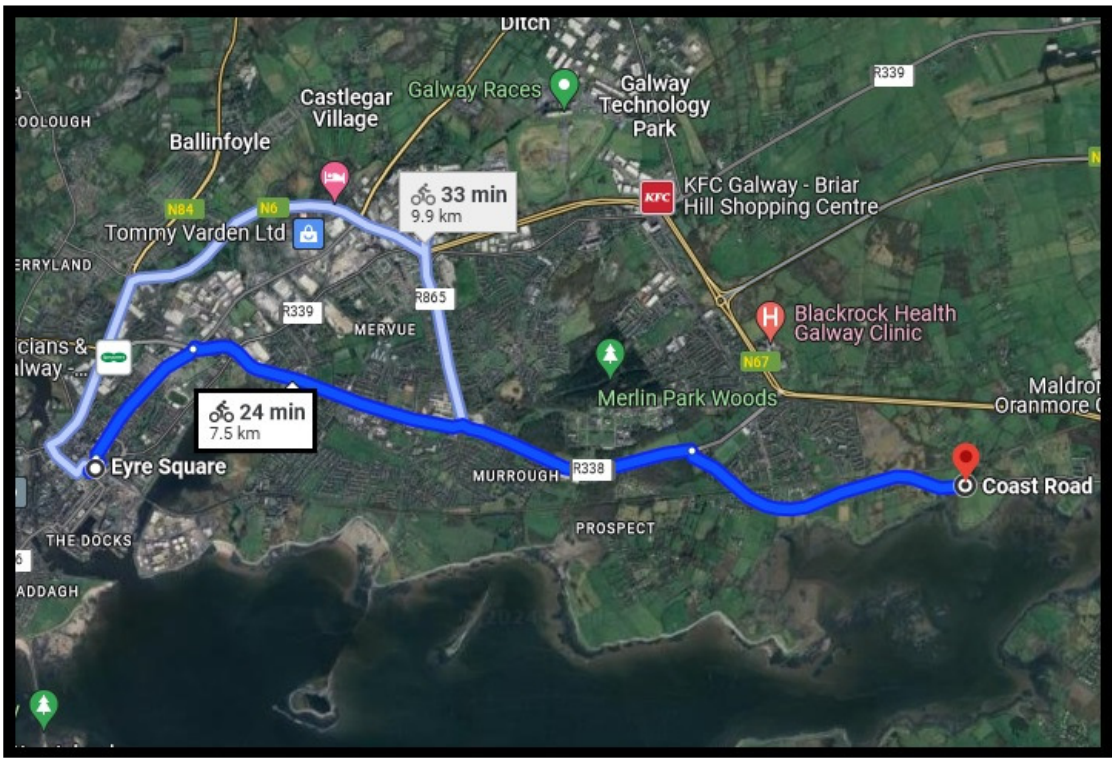


Figure 2.5 – Eyre Square Cycle Distance (7.5km)
(Source: Google Maps)

2.6 The above included Figures highlight that the site is currently within a ~25 minute cycle of most areas of Galway City and its southern / northern / eastern suburbs, demonstrating that this site is within a short cycle of schools, employment opportunities, services, retail, restaurants etc. These can serve residents of the development for their shopping/service needs.

2.7 For a residential redevelopments, it is essential for successful Travel Planning to concentrate on journeys associated with the commuting patterns. These are the groups which can most practically be encouraged to use modes of transport other than the car.

Active Travel - Walking Facilities

2.8 At present, the existing site is not well served by a footpath network on the R338 Coast Road, however the plans include provision for continuity and connectivity with the footpaths to the east and onwards to Oranmore Village and en-route to Oranmore Railway Station.

2.9 The site is within a short walk of schools, shops, pharmacy, restaurants and public houses, amongst other local services, which can serve residents of the development for their regular shopping/service's needs.

2.10 The existing pedestrian facilities will of course be improved further as part of the GCTPS plans to create a multi-modal hub at Oranmore, which will necessarily involve improving the the pedestrian network within the area. An illustration showing the Walk Times in the catchment is included below as Figure 2.6, and this demonstrates that Oranmore Village is within easy walk distance.

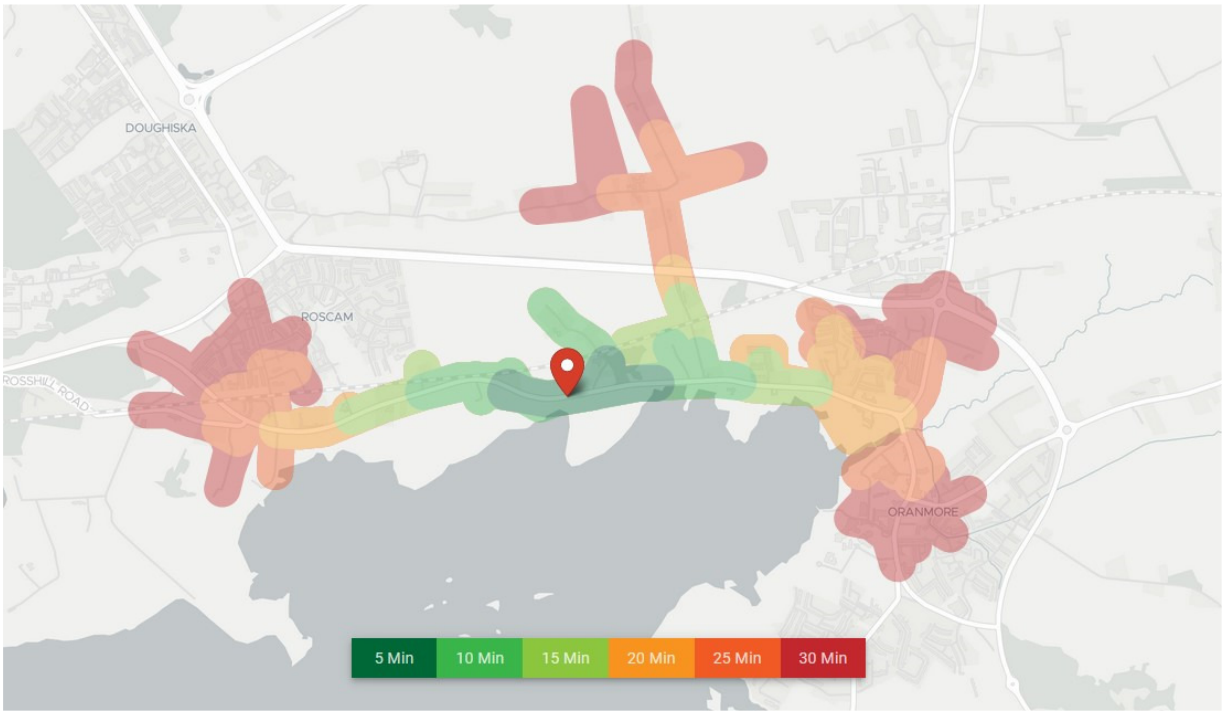


Figure 2.6 – Proposed Development ~ Estimated 5 to 30 min Walk Distance
(Source: targomo.com)

Figure 2.7 – Oranmore Train Station Walk Distance (800m)
(Source: Google Maps)

Active Travel - Cycle Facilities

2.11 Cycle facilities close to the site will of course be improved further as part of NTA and Galway County Council plans to further enhance the links and cycle network within the County, and in particular the creation of the cycle network between Galway and Athenry as part of the GCTPS plans. An extract from the GCTS County Multi Modal Network Plans showing the site is included below as ***Fige 2.8.***

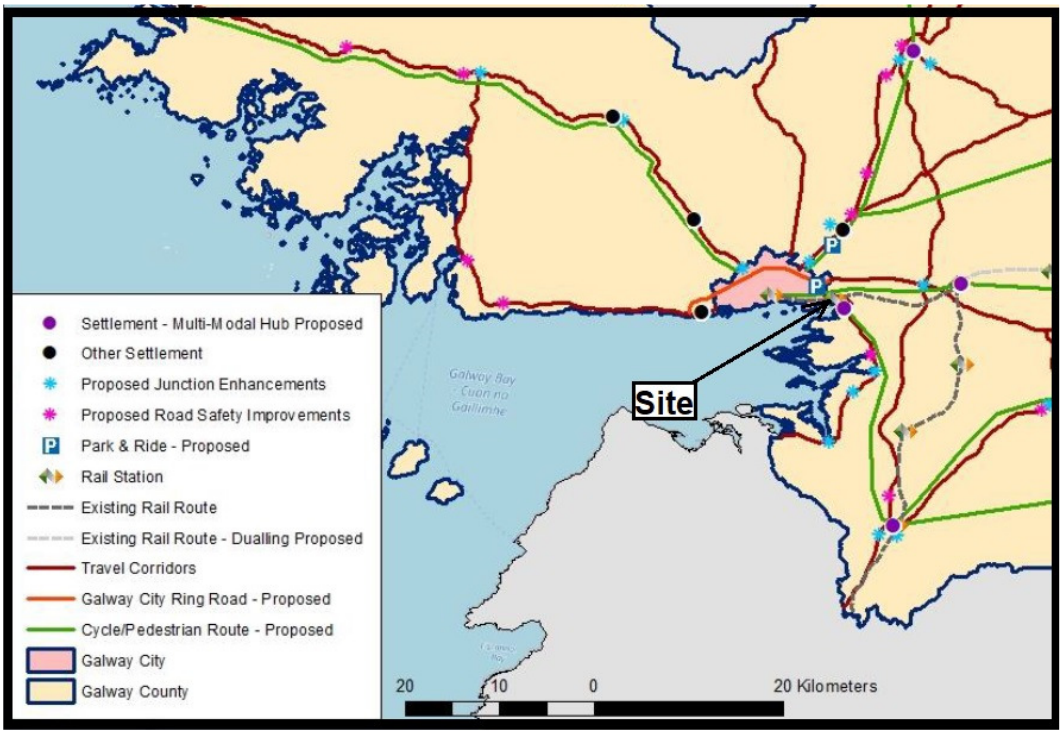


Figure 2.8 – Extract GCTPS Showing County Wide Multi Modal Proposals

2.12 The extract from the GCTPS above shows that the site will be located close to a range of alternative and active travel infrastructure, and will link to the planned Oranmore to Train Station Active Travel Scheme that is currently in Design / Consultation Stages by Galway County Council. Therefore, the proposed site is in an ideal location to benefit from the proposed upgrades of the county's network.

Figure 2.9 – Extract GCC Active Travel Scheme Brochure (April 2024)

2.13 The key to cycle accessibility is convenient safe links, with secure and carefully sited cycle parking. Cycling is ideal for shorter journeys, and with the levels of cycle parking provided on site and with the current and improving infrastructure, cycling will be an important travel mode for residents.

2.14 For journeys greater than 8km, it is recognised that a modal shift to cycling could be achievable for some, but not all, and options such as public transport and car sharing should be considered. Journeys up to 8km could be undertaken by bicycle and journeys up to 3-4km could be undertaken by walking or cycling.

Cycle & Car Parking

2.15 It is anticipated that a significant number of residents and visitors can be encouraged to cycle to work and school etc. with the safe links and secure parking which are in place. This is reflected in the provision of residential and visitor car and bicycle parking spaces proposed within the development, in accordance with the requirements of the County Development Plan. Cycle and Car parking are addressed within the main body of the Traffic & Transport Assessment Report.

2.16 As per the best practice and guidelines, no designated bicycle parking spaces are required for residential developments with bicycle parking possible within each unit's curtilage/garden.

2.17 In these terms we believe that walking and cycling will represent a very popular mode of home-work-home travel for residents and visitors of the development.

2.18 It is acknowledged that cyclists need to be confident that their cycles will not be tampered with. This development includes secure enclosed accessible cycle parking spaces which are beneficially in an area subject to passive surveillance. All new cycle parking stands will allow both frame and wheels to be secured as required.

2.19 The Galway County Development Plan and National Strategy is to cultivate a cycling culture, through the implementation of appropriate infrastructure and promotional measures, which positively encourages all members of the community to cycle at all life stages and abilities as a mode of sustainable transport that delivers environmental, health and economic benefits to both the individual and the community.

Bus Provision

2.20 The GCTPS states that Galway County is currently served by an extensive network of bus services with both public and private operators connecting rural areas, linking settlements within the County and connecting with major destinations including Galway City, nearby Regional Airports and other centres of scale nationally.

2.21 The GCTPS goes on to state that GCC recognises the importance of bus services to communities and is continuing to facilitate their improvement, primarily through provision and upgrading of infrastructure and continued provision of bespoke services to more rural communities, including demand responsive transport.

2.22 Consolidation of growth in potential bus markets, associated with planned new development and the spatial policy objective in the CDP is expected to support and broaden the customer base for both public and private bus services in the future. GCC are committed to supporting the NTA and public/private operators in improving and extending bus services and infrastructure throughout the County.

2.23 In terms of **current Bus Services**, Bus Eireann currently run a regular Service #404 linking Oranmore and Galway City Centre, with a service at 30 min intervals at peak demand periods in each direction. An extract from the AM Timetable for the service is included below as ***Figure 2.10*** All of the Bus routes are generally being upgraded to new low-floor wheelchair accessible buses. Details of routes, timetables and fares are also provided on the Transport for Ireland National Journey Planner App.

404 **Oranmore to Westside SC via Eyre Square**

Operating day		Monday - Friday												
Oranmore (Opp Oran Town Centre)	dep			06:40	07:10	07:40	08:10	08:40	09:10	09:40	10:10	10:40	11:10	11:40
Oranmore Village (Opp Calacanctius Coll)				06:42	07:12	07:42	08:13	08:43	09:12	09:42	10:12	10:42	11:12	11:42
Dublin Rd (Galway Clinic)				06:52	07:22	07:52	08:25	08:55	09:23	09:53	10:22	10:52	11:22	11:52
Dublin Rd (Castlegar Complex)				06:55	07:26	07:56	08:29	08:59	09:26	09:56	10:25	10:55	11:25	11:55
Dublin Rd (Kingsvalley Hotel)				06:59	07:29	07:59	08:33	09:03	09:30	10:00	10:27	10:57	11:27	11:57
Dublin Rd (Opp Woodhaven)				07:00	07:30	08:00	08:35	09:05	09:31	10:01	10:28	10:58	11:28	11:58
ATU Galway City				07:01	07:31	08:01	08:36	09:06	09:32	10:02	10:29	10:59	11:29	11:59
Dublin Rd (Dawn Dairies)				07:01	07:32	08:02	08:37	09:07	09:34	10:04	10:30	11:00	11:30	12:00
Dublin Rd (Opp Glenina Hgts)				07:02	07:33	08:03	08:38	09:08	09:35	10:05	10:31	11:01	11:31	12:01
Dublin Rd (Woodlands)				07:04	07:35	08:05	08:40	09:10	09:37	10:07	10:33	11:03	11:33	12:03
Dublin Rd (Opp G Hotel)				07:05	07:36	08:06	08:41	09:11	09:38	10:08	10:34	11:04	11:34	12:04
College Rd Galway (Opp Loyola Pk)				07:06	07:37	08:07	08:43	09:13	09:40	10:10	10:35	11:05	11:35	12:05
College Rd Galway (Opp Sportsground)				07:07	07:37	08:07	08:43	09:13	09:40	10:10	10:36	11:06	11:36	12:06
College Rd Galway (Opp City Hall)				07:07	07:38	08:08	08:44	09:14	09:41	10:11	10:36	11:06	11:36	12:06
Eyre Square East (Stop No 5)		06:15	06:45	07:15	07:47	08:17	08:48	09:18	09:47	10:17	10:46	11:16	11:46	12:16
Francis Street (Abbey Church)		06:16	06:46	07:17	07:50	08:20	08:50	09:20	09:50	10:20	10:48	11:18	11:48	12:18
University Rd (Cathedral)		06:18	06:48	07:19	07:52	08:22	08:52	09:22	09:52	10:22	10:50	11:20	11:50	12:20
University Of Galway		06:19	06:49	07:19	07:52	08:22	08:53	09:23	09:52	10:22	10:50	11:20	11:50	12:20
University of Galway		06:21	06:51	07:21	07:54	08:24	08:55	09:25	09:54	10:24	10:52	11:22	11:53	12:22
Lower Newcastle (G & L Stores)		06:22	06:52	07:22	07:55	08:25	08:56	09:26	09:56	10:26	10:54	11:24	11:54	12:24
Lower Newcastle (Moyola Park Entr)		06:22	06:52	07:23	07:56	08:26	08:57	09:27	09:57	10:27	10:55	11:25	11:55	12:25
Lwr Newcastle (Opp St Francis Home)		06:23	06:53	07:24	07:57	08:27	08:58	09:28	09:58	10:28	10:55	11:25	11:55	12:25
Lower Newcastle (Greenfields Entr)		06:23	06:53	07:24	07:57	08:27	08:58	09:28	09:58	10:28	10:55	11:25	11:56	12:25
Thomas Hynes Rd (Clifton Pk)		06:24	06:54	07:25	07:58	08:28	09:00	09:30	09:59	10:29	10:57	11:27	11:57	12:27
Thomas Hynes Rd (Fairlands Park)		06:25	06:55	07:26	07:59	08:29	09:01	09:31	10:00	10:30	10:57	11:27	11:58	12:27
Thomas Hynes Rd (St Josephs School)		06:25	06:55	07:26	07:59	08:29	09:01	09:31	10:00	10:30	10:58	11:28	11:58	12:28
Thomas Hynes Rd (Ardilaun Road)		06:26	06:56	07:27	08:00	08:30	09:02	09:32	10:01	10:31	10:58	11:28	11:58	12:28
Thomas Hynes Rd (Opp Ardilaun Road)		06:27	06:57	07:28	08:01	08:31	09:04	09:34	10:02	10:32	10:59	11:29	12:00	12:29
Siobhain McKenna Rd (Corrib Pk)		06:28	06:58	07:28	08:02	08:32	09:05	09:35	10:03	10:33	11:00	11:30	12:00	12:30
John Coogan Park		06:28	06:58	07:29	08:03	08:33	09:05	09:35	10:03	10:33	11:01	11:31	12:01	12:31
Siobhain McKenna Rd (Westside Pitches)		06:29	06:59	07:29	08:03	08:33	09:06	09:36	10:04	10:34	11:01	11:31	12:02	12:31
Circular Rd (Opp Curragh Bui)		06:29	06:59	07:30	08:04	08:34	09:07	09:37	10:04	10:34	11:02	11:32	12:02	12:32
Seamus Quirke Rd (Circular Rd Junc)		06:31	07:01	07:31	08:06	08:36	09:08	09:38	10:06	10:36	11:04	11:34	12:04	12:34
Westside (Shopping Centre)	arr	06:32	07:02	07:33	08:07	08:37	09:10	09:40	10:08	10:38	11:05	11:35	12:05	12:35

Figure 2.10 – Extract Oranmore – Galway Bus #404 Timetable

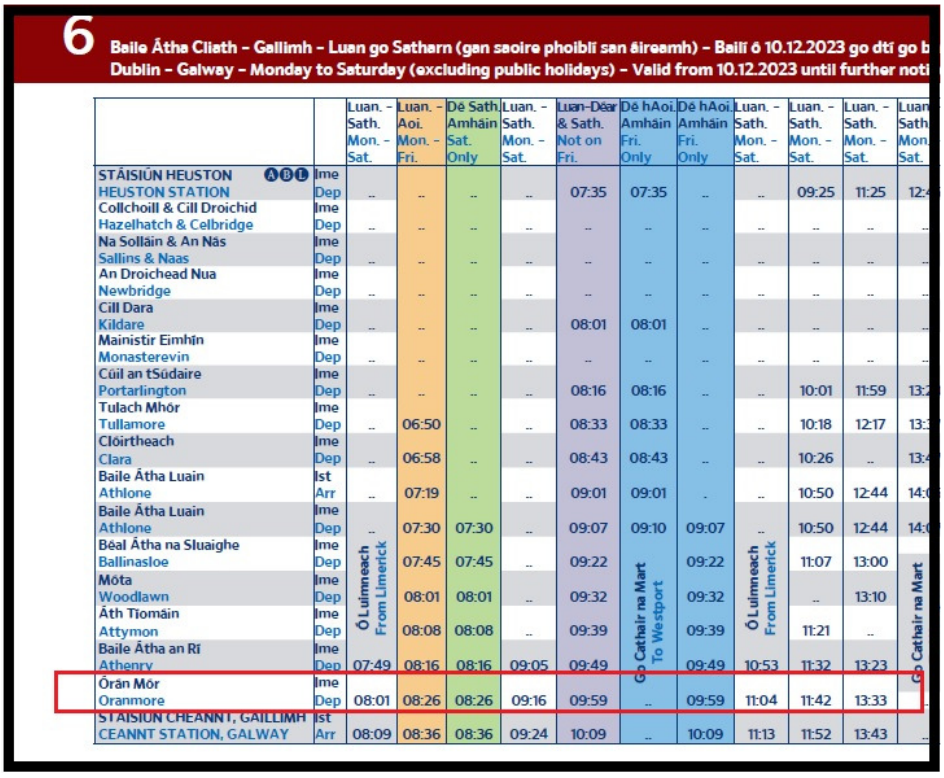
2.24 The proposed development is therefore well placed to take advantage of the existing and future Bus services.

Rail

2.25 The Oranmore Station is a 10-11 minute walk or a 3 min cycle of the site, with services being less than 10 mins journey time from Galway Station. This represents a highly accessible commute time for commuting City workers who chose to use the train, contributing to making this an accessible development.

Figure 2.11 – 3 Min Cycle to Oranmore Train Station (Google Maps)

2.26 Oranmore benefits from being on the main Galway–Dublin and Galway–Limerick (Western Rail Corridor) Railway lines, with regular commuter services stopping at the Station. An extract from the Dublin Service timetable is included below as Figure 2.12



6 Baile Átha Cliath – Gallimh – Luan go Satharn (gan saoire phoiblí san áireamh) – Baili ó 10.12.2023 go dtí go b
Dublin – Galway – Monday to Saturday (excluding public holidays) – Valid from 10.12.2023 until further noti

		Luan. – Sath. Mon. – Sat.	Luan. – Aoi. Mon. – Fri.	Dé Sath. Amháin Sat. Only	Luan. – Sath. Mon. – Sat.	Luan–Déar & Sath. Not on Fri.	Dé hAoi. Amháin Fri. Only	Dé hAoi. Amháin Fri. Only	Luan. – Sath. Mon. – Sat.	Luan. – Sath. Mon. – Sat.	Luan. – Sath. Mon. – Sat.	Luan Sath Mon. Sat.
STÁISIÚN HEUSTON A B L	Ime											
HEUSTON STATION	Dep	..	..	..	..	07:35	07:35	..	..	09:25	11:25	12:
Collchoill & Cill Droichid	Ime											
Hazelhatch & Celbridge	Dep	..	..	..	..	..	..	..	..	..	..	..
Na Sollain & An Nás	Ime											
Sallins & Naas	Dep	..	..	..	..	..	..	..	..	..	..	..
An Droichead Nua	Ime											
Newbridge	Dep	..	..	..	..	..	..	..	..	..	..	..
Cill Dara	Ime											
Kildare	Dep	..	..	..	..	08:01	08:01	..	..	..	..	..
Mainistir Eimhin	Ime											
Monasterevin	Dep	..	..	..	..	..	..	..	..	..	..	..
Cúil an tSúdaire	Ime											
Portarlington	Dep	..	..	..	..	08:16	08:16	..	..	10:01	11:59	13:
Tulach Mhór	Ime											
Tullamore	Dep	..	06:50	..	..	08:33	08:33	..	..	10:18	12:17	13:
Clóirtheach	Ime											
Clara	Dep	..	06:58	..	..	08:43	08:43	..	..	10:26	..	13:
Baile Átha Luain	Ist											
Athlone	Arr	..	07:19	..	..	09:01	09:01	.	..	10:50	12:44	14:
Baile Átha Luain	Ime											
Athlone	Dep	..	07:30	07:30	..	09:07	09:10	09:07	..	10:50	12:44	14:
Béal Átha na Sluaighe	Ime											
Ballinasloe	Dep	Ó Luimneach From Limerick	07:45	07:45	..	09:22	Go Cathair na Mart To Westport	09:22	Ó Luimneach From Limerick	11:07	13:00	Go Cathair na Mart
Móta	Ime											
Woodlawn	Dep		08:01	08:01	..	09:32		09:32		..	13:10	
Áth Tiomáin	Ime											
Attymon	Dep		08:08	08:08	..	09:39		09:39		11:21	..	
Baile Átha an Rí	Ime											
Athenry	Dep	07:49	08:16	08:16	09:05	09:49		09:49	10:53	11:32	13:23	
Órán Mór	Ime											
Oranmore	Dep	08:01	08:26	08:26	09:16	09:59	..	09:59	11:04	11:42	13:33	..
STÁISIÚN CHEANNT, GAILLIMH	Ist											
CEANNT STATION, GALWAY	Arr	08:09	08:36	08:36	09:24	10:09	..	10:09	11:13	11:52	13:43	..

Figure 2.12 – Extract Galway/Dublin Train Timetable

2.27 The Galway-Limerick Line intersects with the Galway-Dublin line in Athenry, thereby providing onward multi route connectivity. There are some infrastructural constraints on the Galway-Athlone section of line, and the GCTPS and GCC policy supports the upgrade of this line in time, including provision of a dual line between Galway and Athlone which would significantly improve the quality and frequency of the service on this line. GCC are supportive of the development of enhanced rail infrastructure in terms of facilitating balanced regional growth and the full development of the Galway Metropolitan Area Strategic Plan. GCC are on record of stating that they will continue to engage with Iarnród Eireann in seeking to improve rail services and infrastructure at appropriate locations in the County.

Accessibility By Taxi

2.28 In terms of taxis, modern communication devices (e.g. 'FreeNow' and 'Lynk') now allow taxis to be ordered on a demand-basis, without any requirement for formal taxi ranks or dedicated taxi holding areas.

Communication

2.29 As part of Residents Initiation, the Mobility Manager will issue welcome packs to all new residents. These packs include details of the development and how it is run, advice on cycling, public transport information, and useful local information. The preparation of this information ensures residents will be familiar with the operation of the development.

2.30 In terms of number of transport alternatives easily available to residents and visitors, it is considered that the proposed development is highly sustainable in terms of public and alternative transport accessibility. The proximity of the development to existing and proposed public transport services means that all residents and visitors will have viable alternatives to the private car for accessing the site and will not be reliant upon the car as a primary mode of travel.

2.31 Direct and high quality pedestrian and cycle linkages are being provided between the site and the existing pedestrian facilities on the surrounding road network. The entrances to the site will be well lit, so that people can feel secure in using the facilities.

2.32 Public transport maps and timetables can be provided in prominent locations on site and the information will be kept up to date by the appointed Mobility Management Manager / Travel Plan Coordinator, a role for the Management Company.

2.33 Working residents are generally now offered the opportunity to purchase public transport commuter tickets under the current ‘Employer Pass’ and ‘TaxSaver’ programmes, by individual Employers. Under these schemes the employer applies to Iarnród Éireann / Bus Éireann / Dublin Bus for tax free public transport tickets for their employees as an incentive for them to use public transport to travel to work. Working residents are generally also now offered access to the Bike to Work scheme as well as an incentive for them to cycle to work.

2.34 With this in mind, the main focus of this Mobility Management Plan / Travel Plan will be to promote and support the use of active travel and alternative modes to the private car.

3.0 COLLECTION OF BASELINE INFORMATION

Possible Travel Pattern Questionnaires

3.1 Once occupied, and when the Mobility Management Manager / Travel Plan Coordinator is appointed, the occupiers of the proposed development will be encouraged to regularly monitor the Mobility Management Plan initiatives in order to maximise on their success.

3.2 Shortly after opening of the new development, a detailed travel-questionnaire will be compiled and distributed to residents for completion. The aim of the travel questionnaire will be to establish travel patterns between work and home and school among other travel demands. The information gathered from this survey will be used to inform the further development of the Mobility Management Plan and to set Modal Share Targets and Initiatives based on real data.

3.3 The Baseline Survey information will also allow the Mobility Management Manager for the development to set realistic modal-split targets for the development. It is anticipated that, given the location and good transport links at this development, there will be a high percentage of use via public and alternative transport.

3.4 The Mobility Management Plan will need to maintain this positive modal split and improve it, where possible. It is informative to note that the "Smarter Travel: A Sustainable Transport Future" (DOT) Objective for 2020 was to achieve a reduced work related commuting by car modal share of 65% to 45%.

3.5 In terms of the current County-Wide Travel Modal split, the GCTPS indicates the following as per the extract included as ***Figure 3.1***. The working MMP will hope to improve on these targets by setting realistic goals once the first travel survey is completed.

Table 5. Galway County Commuting & Education Origin Trips Mode Share

MODE	WORK	EDUCATION
Foot	5%	11%
Cycle	1%	1%
Bus / Minibus / Coach	2%	22%
Rail	0%	1%
Motorcycle/Scooter	0%	0%
Car Driver	76%	5%
Car Passenger	4%	60%
Van	10%	0%
Other (incl. lorry)	1%	0%
Total	100%	100%

Central Statistics Office – 2016 Census Data

Figure 3.1 – Extract GCTPS Showing County Wide Current Modal Split

4.0 THE MOBILITY MANAGEMENT PLAN

4.1 The successful implementation of a Mobility Management Plan / Travel Plan will ensure that, in-so-far-as-possible, the impacts of any traffic are reduced and minimised where practical, while providing a number of environmental and economic advantages detailed below.

4.2 The following sub-sections detail the available initiatives which will serve to better manage travel demand, and therefore the traffic impact of work and school related journeys, focused on the movement of residents during peak times.

Walking

Walking - Key Information	
Approx. Zone of Influence	3.5km
Percentage of Residents in area of influence	TBC in each survey when occupied
Percentage of Residents interested in Walking	TBC in each survey when occupied

Table 4.1 – Key Information: Walking

4.3 There are many local, global, and personal benefits to walking to work, a few of which are listed following:

- **W** - Wake Up! - Studies have shown that people who walk to work are more awake and find it easier to concentrate.
- **A** - Always one step ahead - Walking makes people more aware of road safety issues and helps them develop stronger personal safety skills.
- **L** - Less congestion - If you leave the car at home and walk, there are fewer cars on the road which makes it safer for those who walk and cycle.
- **K** - Kinder to the environment - By leaving the car at home you are reducing the amount of CO 2 produced and helping to reduce the effects of climate change and air pollution.
- **I** - Interpersonal skills - Walking to work or school can be a great way to meet other walkers, share the experience, and develop personal skills.
- **N** - New adventures - Walking to work or school is a great way to learn about your local environment and community. It's also a fun way to learn about the weather, landscape, and local ecosystems.
- **G** - Get fit and stay active - Walking to and from work or school helps people incorporate physical activity into their daily routines. Research shows that regular physical activity can benefit your body and mind.

4.4 Most adults will consider walking a maximum of 3.5 km (Approx. 30/40 minutes) to work. Residents working within a 3.5 km radius of the site will be encouraged to walk to work as often as their schedule permits.

4.5 The following initiatives and incentives can be used to encourage walking to work or school:

- Take part in a 'Pedometer Challenge' which is organised through the Irish Heart Foundation or Smarter Travel Workplaces;
- Organise special events such as a 'Walk to work/school on Wednesdays' where participants are rewarded for their participation;
- Keep umbrellas in public areas on a deposit system for use when raining;
- Display Smarter Travel Workplaces Accessibility Walking maps on notice boards areas so residents can plan journeys;
- Organise lunch time or afternoon walks as part of a health and well-being programme;
- Highlight the direct savings gained due to reduced use of private vehicles.

Cycling

Cycling – Key Information	
Approx. zone of influence	10km
Percentage of Residents in area of influence	TBC in each survey when occupied
Percentage of Residents interested in cycling	TBC in each survey when occupied

Table 4.2 - Key Information - Cycling

4.6 Research suggests that cycling is a viable mode of transport for people who live up to 10 km from work or school.

4.7 Cycling is a great way to travel. It helps foster independence, raises awareness of road safety, and helps the environment.

4.8 Some positive aspects of cycling to work or school are listed following:

- **C** - Cycling is fun! - Cycling is a great form of transport but it's also a great recreational activity. Cycling is a skill that stays with you for life and it's a fantastic way to explore your local community.
- **Y** - You save time & money - cycling to work reduces the need to travel by car thus reducing fuel costs and freeing up road space for more cyclists;
- **C** - Confidence building - travelling to work as an independent cyclist can give people increased confidence proving beneficial in all aspects of life;
- **L** - Less congestion - If you leave the car at home and cycle to work there are fewer

cars on the road which makes it safer for those who cycle and walk to work or school;

- **I** - Interpersonal skills - Cycling to work or to school can be a great way to meet other cyclists and share the experience;
- **N** - New adventures - Cycling to work or school is a great way to learn about your local environment and community. It helps people to understand where they live and how their actions affect their local environment;
- **G** - Get fit and stay active - cycling to and from work or school helps people incorporate physical activity into their daily routines. Research shows that regular physical activity can benefit your body and mind.

4.9 The provision of enhanced and attractive cycle parking facilities at the site will clearly play a critical role in promoting journeys by bicycle.

4.10 The following initiatives and incentives can be used to encourage cycling to work:

- New cycle parking installed within the development, secure and well lit;
- Publicise cycle parking availability by way of signage and on notice boards;
- Display maps on notice boards areas so people can plan journeys;
- The development can provide free cycle accessories (panniers, lights, visi-vests, helmets) in periodic draws for cyclists,
- The Travel Plan Coordinator can organise cycle training sessions on site on the rules of the road and the specific risks associated with the locality;
- The Travel Plan Coordinator can invite bike suppliers on site for a 'Green Day' or 'Green Week' so that people can try bikes before buying;
- The Travel Plan Coordinator can set up a Bicycle User Group (BUG) to promote cycling;
- The Travel Plan Coordinator can highlight the direct savings gained due to reduced use of private vehicles;
- The Travel Plan Coordinator can encourage residents to take part in National Bike Week, see www.bikeweek.ie.

Public Transport

Public Transport – Key Information	
Approx. zone of influence	All Residents
Percentage of Residents in area of influence	100%
Percentage of end Residents using Public Transport	TBC in each survey when occupied

Table 4.3 - Key Information: Public Transport

4.11 There are many benefits to taking public transport, some of which include:

- Personal Opportunities – Public transportation provides personal mobility and freedom;
- Saving fuel – Every full standard bus can take more than 50 cars off the road, resulting in fuel savings from reduced congestion;
- Reducing congestion – The more people who travel to work or to school on public transport, especially during peak periods, the less people travelling by private car;
- Saving money – Taking public transport to and from work or school is a lot cheaper than travelling by car and saves the cost of buying, maintaining and running a vehicle;
- Reducing fuel consumption – A full standard bus uses significantly less fuel per passenger than the average car;
- Reducing carbon footprint – Public transport is at least twice as energy efficient as private cars. Buses produce less than half the CO2 emissions per passenger kilometre compared to cars;
- Get fit and stay active - Walking to and from work or school to public transport helps people incorporate physical activity into their daily routines. Research shows that regular physical activity can benefit your body and mind.
- Less stress – Using public transport can be less stressful than driving yourself, allowing you to relax, read, or listen to music.

4.12 The following initiatives and incentives can be used to encourage people to take public transport:

- Publicise Employee Tax Saver Commuter tickets, which offer savings to employers in PSRI per ticket sold and significant savings to employees in marginal tax rate and levies on the price of their ticket;
- Encourage public transport use for travel by promoting smart cards, advertising the availability of these tickets to end occupiers/residents;
- Publicise the availability of Real Time Information. Real Time Information shows when your bus is due to arrive at your bus stop so you can plan your journey more accurately;
- Provide maps of local bus routes and the nearest bus stops and the length of time it takes to walk to them;

Go-Car/Car Sharing

Car Sharing – Key Information	
Approx. zone of influence	All Residents
Percentage of Residents in area of influence	100%
Percentage of Residents using Car Sharing	TBC in each survey when occupied

Table 4.4 - Key Information - Go-Car/Car Sharing

4.13 Every day thousands of commuters drive to work or to school on the same routes to the same destinations, at the same time as their colleagues. By car sharing just once a week, a commuter's fuel costs can be reduced by 20%, and in a similar fashion, the demand for work related parking can be reduced by 20%. If every single-occupancy driver carried another driver, there would be 50% less cars on the road at peak times.

4.14 Although use of the car to get to work is essential for some people, car sharing schemes such as GoCar and YUKO (which are becoming more active nationally) have the potential to deliver a significant reduction in private vehicle trips by promoting higher than average occupancy rates for each vehicle.

4.15 Car sharing often happens informally, however some participants often prefer a formal scheme such as a GoCar facility which will normally generate a higher take-up for car sharing, and more efficiency in terms of increased occupancy rates.

4.16 Encouraging more Residents to share car journeys to work rather than driving alone as well as encouraging more to set up and take part in car sharing/pooling would prove a very effective means of reducing daily car trips to and from the site.

4.17 The following initiatives and incentives can be used to encourage car sharing:

- Highlight to drivers that they do not have to share with a person that doesn't suit them – allow choice based on gender, route, smoking or non-smoking;
- Clarify the financial implications of the scheme – those accepting a lift could contribute towards fuel costs.
- Use existing online databases for car sharing. For example, the development could set up its own private car sharing site using www.carsharing.ie.

Action Plan Summary Table

4.18 The Summary Action Plan is described in the Table below. Modal Split Targets will be determined following on from the first survey shortly after residents occupy, typically within the first six months. This will be part of the role of the Mobility Management Manager. This will show existing travel patterns with realistic targets set to improve the modal split of residents.

	Initiative	Impact on Delivery	Difficulty Delivering	Current Modal Split	Target MS
Residents Initiatives	Walking	Medium	Low	TBC	TBC
	Cycling	Medium	Medium	TBC	TBC
	Public Transport	High	Low	TBC	TBC
	Other	Medium	Medium	TBC	TBC
	Car - Sharing	Medium	Medium	TBC	TBC
	Cars - 1 Passenger Only	High - Negative	High	TBC	TBC
Promoting the MMP	Marketing the Plan	High	Low	Driven By MMP Coordinator	
	Measuring Success	High	Medium	Annual Surveys	

Action Plan Summary Table

5.0 IMPLEMENTING THE STRATEGY

Background

5.1 Setting realistic targets and a sustained approach to the promotion of the Strategy is important if the measures are to be successful. The objectives and benefits of the Strategy will be made clear and broadcast during the full lifecycle of the Strategy.

5.2 The implementation of a successful Mobility Management Plan / Travel Plan will require the upfront investment of resources. As well as reviewing objectives and initiatives regularly, it is equally important to measure results. This provides an indication of any Plan's success and ensures that the targets remain realistic.

The Mobility Management Manager / Travel Plan Coordinator

5.3 The key objective of this MMP is to ensure that the traffic impacts and car usage associated with the operation of the development are minimised. Achieving this objective will result in a wide array of benefits for the development and its stakeholders.

5.4 To ensure the plan is effective it is essential for a Mobility Management Manager / Travel Plan Coordinator to be appointed for the Development upon occupation.

5.5 It is envisaged that the Coordinator will work closely with residents to enthusiastically promote and market the Travel Plan. As residents will be the focus of the plan; their involvement must be sought from the outset.

5.6 To support the Mobility Management Manager 's efforts, the Management Company must ensure that they have sufficient time to carry out their duties. In addition, it is essential that the powers of decision making are bestowed upon him/her, along with a suitable budget and programme for implementation.

Promoting the MMP / Travel Plan

5.7 Active promotion and marketing is needed if the MMP / Travel Plan is to have a positive impact on stakeholder travel patterns to and from the site.

5.8 All marketing initiatives should be focused on areas where there is willingness to change. Such information has been extracted from the questionnaires and has been described in Section 3 of this Plan.

- **Identify the Aim** – e.g., to reduce low occupancy car commuting and business travel & to promote active travel, public transport & alternatives to travelling by car.

- **Brand the Plan** – as part of communicating the MMP / Travel Plan, visually brand all work relating to it with a consistent look, slogan, identity or logo.

- **Identify the Target Audience** – 'segment the audience' (e.g. shift workers, sedentary workers, people travelling long/ short distances, mode used, members of a walking club or green team) so you can target the message and events towards these different groups.

5.9 As part of the marketing process, the Mobility Management Manager / Travel Plan Coordinator can personalise a plan for the Development, drawing attention to the benefits of participation and support for its implementation.

5.10 The Manager / Coordinator can identify communication tools and networks used by the different audiences in the development and use these to communicate about travel.

5.11 Promotional material regardless of its quality is only as good as its distribution network; material incentives assist greatly in introducing people to alternative modes of commuting.

5.12 The plan should be about promoting equity among modes and offering choice and accessibility.

5.13 The Manager / Coordinator can promote positive messages associated with a plan, for example, reduced tax/PRSI payments, getting fit and active, reducing congestion, reducing CO2 emissions and encourage people to start small – changing one day per week for example, to explore their options.

5.14 Marketing drives which feature individual residents who have reduced their car use can carry a strong message. This will serve to raise not only the profile of the Plan, but also send a clear message in relation to the resident's commitment to the Plan.

6.0 MONITORING AND REVIEW

6.1 The development forming the subject of this application accords with the principles of sustainable development, being located within a growing suburban residential area with clear and easy access to alternative modes of travel. The Management Company, once the development is occupied, will utilise pragmatic measures that encourage safe and viable alternatives to the private car for accessing the development.

6.2 Good Travel Planning is not a one-off event, it is instead an on-going iterative process requiring continued effort. This preliminary report assists these efforts by forming an outline framework and providing guidance for its success. Monitoring and reviewing the initiatives set out within the plan will form a far greater part of the Final Mobility Management Plan itself.

6.3 The key to the Plans success will be the appointment of a ***Mobility Management Manager / Travel Plan Coordinator*** for the development, once residents are in place. They will be vested with total responsibility for implementing the plan. They should be granted the authority and time to execute the Plan and be provided with sufficient resources to realise the Plans success.

6.4 As residents are the focus of the plan; their involvement should be sought from the outset following occupation. To this end, the Mobility Management Manager should be assisted and supported by the Management Company and Residents. This will serve to spread the workload, and also give the Residents a valuable input into the operation of the Plan.

6.5 Successful Mobility Management Plan require marketing **and** regular review. The measures set out in the Action Plan Summary Table (Chapter 4) should form the basis of a sound, realistic Strategies and should be clearly set out and be fully transparent to all users.

6.6 Residents also have an essential responsibility in terms of co-operating with and taking an active part in the Strategy. They are, after all, the plan's primary focus.

6.7 It is recommended that the Final Mobility Management Plan be set in motion, sensibly at Opening. The plan should evolve and develop with the development, taking into account changing Residents members and their travel preferences and needs.

6.8 Annual reviews of the Strategy should include a full stakeholder survey, providing valuable information for target setting and marketing target groups. It is emphasised that failing to meet initial targets should not be seen as failure, as the preliminary 12 to 18 months of the Strategy should be viewed as a calibration exercise for target setting.

APPENDIX H

Stage 1/2 Independent Road Safety / Quality Audit (incl Designer Feedback Form)

Title: **Stage 1 DMURS Quality Audit,**

Incl. Stage 1&2 Road Safety Audit

For;

Proposed Large Scale Residential Development at Cartron, Oranmore, Co. Galway.

Client: **NRB Consulting Engineers.**

Date: **May 2024**

Report reference: **2265R01**

VERSION: **FINAL**

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CONTENTS SHEET

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1.0 Introduction

This report was prepared in response to a request from Mr. Eoin Reynolds, NRB Consulting Engineers for a Stage 1 Quality Audit including Stage 1&2 Road Safety Audit for a proposed large scale residential (LRD) development at Cartron, Oranmore, Co. Galway.

The Audit Team comprised of

Team Leader: **Norman Bruton**, BE CEng FIEI, Cert Comp RSA.

TII Auditor Approval no. NB 168446

Team Member: **Owen O'Reilly**, B.SC. Eng Dip Struct. Eng NCEA Civil Dip Civil. Eng CEng FIEI

TII Auditor Approval no. OO 1291756

The Audits involved the examination of drawings and other material provided and a site visit by both team members, together, in May 2024. The weather at the time of the site visit was dry and the road surface was also dry.

The Stage 1-2 Road Safety Audit has been carried out in accordance with the requirements of TII Publication Number GE-S A TY-01024, dated December 2017.

The Stage 1 (Preliminary Design) Quality Audit has been carried out in accordance with the guidance in the Design Manual for Urban Roads and Streets (DMURS), produced by Department of Transport Tourism and Sport in March 2013 and as updated in June 2019 including Advice Notes. The Quality Audit is composed of a number of distinct audits which include an Accessibility Audit, a Walking Audit and a Cycling Audit (i.e. aspects of a Quality Audit carried out independent of the Design Team and generally included as appendices to the overall Audit).

Many issues raised in the Road Safety Audit would also be raised in the various aspects of the Quality Audit, however to avoid repetition items that are common to more than the Road Safety Audit have been included in a table at the start of Section 3.0 of this report.

The scheme has been examined and this report compiled in respect of the consideration of those matters that have an adverse effect on road safety. It has not been examined or verified for compliance with any other standards or criteria. The problems identified in this report are considered to require action in order to improve the safety of the scheme for road users.

If any of the recommendations within these audits are not accepted, a written response is required, stating reasons for non-acceptance. Comments made within the report under the heading of Observation are intended to be for information only. Written responses to Observations are not required.

The information supplied to the Audit Team is listed in **Appendix A.**

The feedback form is contained in **Appendix B.**

A plan drawing showing the problem locations is contained in **Appendix C**.

2.0 Background

It is proposed to construct a LRD with 165 residential houses and a creche at Cartron. Oranmore Co. Galway.

The main access to the site will be via the local road to the east which connects with the R338 Coast Road via a priority junction. Both the local road and the R338 will be improved, especially for vulnerable road users. A shared use pedestrian/cycle facility will be provided on the northern side of the R338.

The speed limits are 80km/hr on the public roads. The proposed speed limit within the development will be 30km/hr.

The scheme has been designed to the principles of DMURS internally however the 80km/hr speed limit on the R338 requires the application of Transport Infrastructure Ireland (TII) standards.

A total of 225 car parking spaces are to be provided along with 7 visitor spaces. Seven spaces plus a set-down are to be provided at the creche.

Bicycle parking will be provided within the demise of the houses either in back or front gardens . A total of 86 visitor parking spaces will be provided and 12 spaces associated with the creche.

The proposed upgrade of the R338 leads to greater connectivity to the train station and to Oranmore from this rural (80km/hr) area to the urban areas (50/60km/hr).

The site location is shown in the map below.

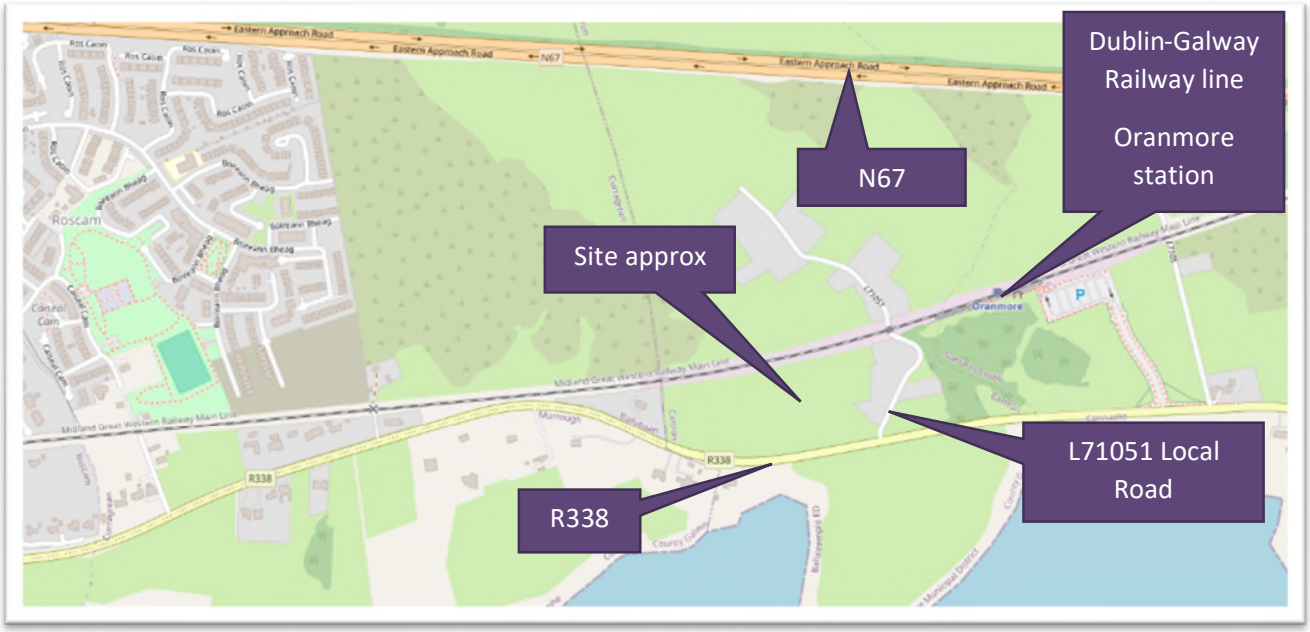


Image courtesy of Openstreetmap.org

3.0 Issues Common to More Audits than RSA

Below is a summary table of problems raised in the Road Safety Audit that would also be raised in the Quality Audit however are not repeated for clarity and brevity.

Problem Reference	Road Safety Audit	Access Audit	Walking Audit	Cycling Audit
4.1	✓			
4.2	✓			
4.3	✓			
4.4	✓		✓	✓
4.5	✓			
4.6	✓	✓	✓	

4.0 Items Raised in This Stage 1&2 Road Safety Audit

4.1 Problem

LOCATION

Drawing NRB -TA-002, Sightlines at Local Road.

PROBLEM

The sightlines at the local road are shown to be for a 30km/hr design speed based on DMURS. The 85th percentile southbound speed was slightly greater than 30km/hr and with the proposed improvements to this road vehicle speeds could increase. A lack of visibility could lead to side-impact or rear-end collisions.

RECOMMENDATION

It is recommended that sightlines for a higher sped be provided or that traffic calming measures to ensure speeds that match the sightlines provided are achieved.

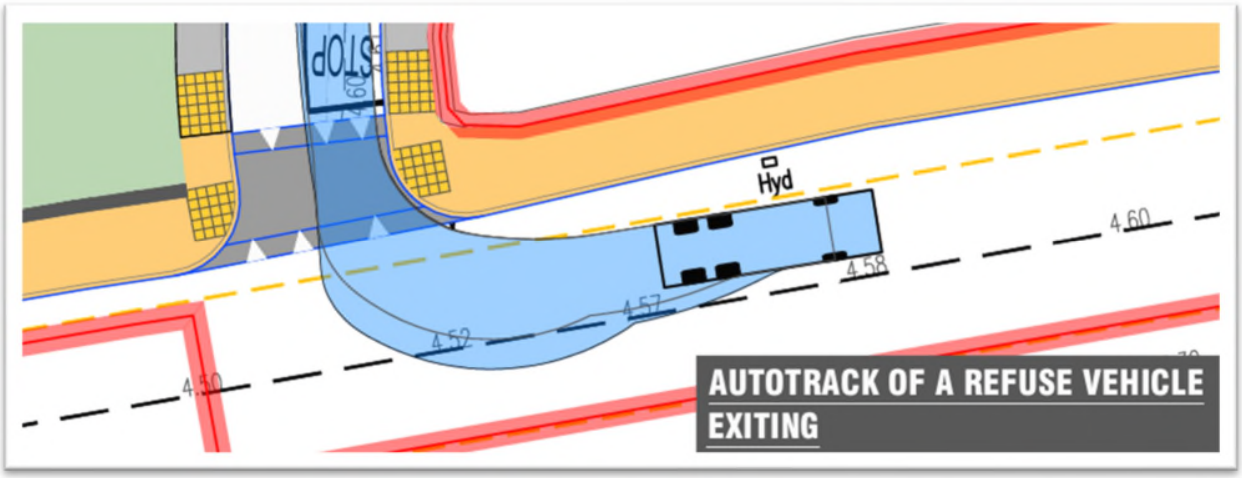
4.2 Problem

LOCATION

Drawing NRB -TA-004 & 005, Swept path of refuse vehicles.

PROBLEM

The swept path of refuse vehicles crosses the centre line of the R338 as vehicles exit and crosses the stop line as vehicles enter the local road. The R338 is a high speed road and although the refuse vehicle numbers will be low there may be similar delivery vehicles, agricultural vehicles etc. making the same movements. If vehicles cannot get off the R338 mainline relatively quickly (e.g. if another vehicle is stopped at the stop line of the local road) then they risk causing rear-end collisions.



RECOMMENDATION

It is recommended that the junction mouth be widened somewhat to facilitate turning of HGVs without crossing the centre line or stop line. The raised table will provide sufficient traffic calming to reduce speeds. Corner radii should reflect the arterial nature of the R338.

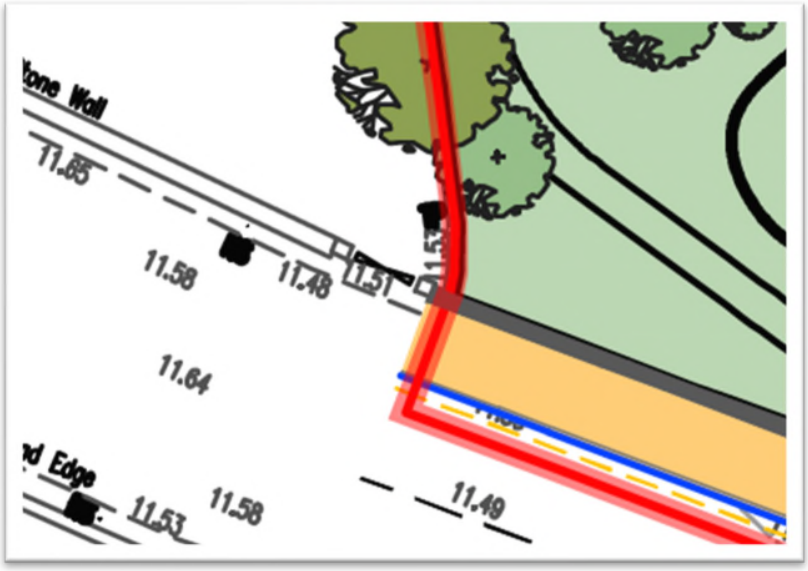
4.3 Problem

LOCATION

Drawing NRB -TA-001- Start of shared use facility on R338.

PROBLEM

The shared use facility commences at the western site boundary. This could lead to sudden lateral movements into the carriageway by slow moving vehicles in the hard shoulder resulting in side-impact or rear-end collisions.



RECOMMENDATION

It is recommended that the hard shoulder be terminated by a suitable taper, hatched road markings and warning signage well in advance of the start of the shared use facility.

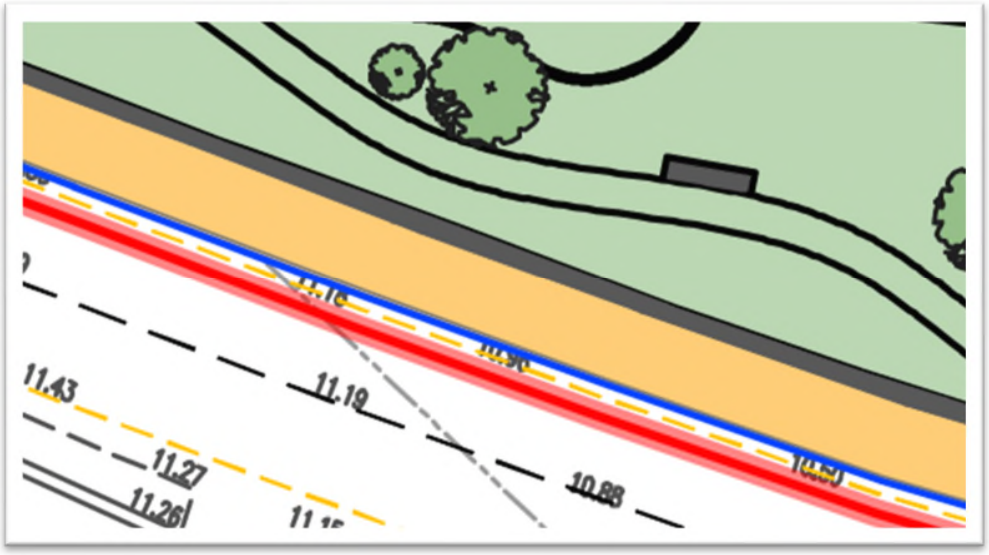
4.4 Problem

LOCATION

Drawing NRB -TA-001- Shared use facility on the R338.

PROBLEM

It is not clear what the kerb details will be at the shared use facility and the hard shoulder width appears to vary along its length. Given the relatively high speed along the R338 there is a risk that vulnerable road users on the shared use facility will be too close to passing vehicles which could lead to them being knocked off their bikes by wind forces or stumbling into traffic.



RECOMMENDATION

It is recommended that a suitable buffer zone be provided between the carriageway and the shared use facility.

4.5 Problem

LOCATION

Drawing NRB -TA-001- Shared use facility on the R338.

PROBLEM

It is unclear what type of kerb is to be provided at the shared use path. There is a risk of surface water ponding at the edge of the kerb and into the carriageway if suitable drainage is not provided.

RECOMMENDATION

It is recommended that suitable drainage be provided to avoid surface water ponding on the R338.

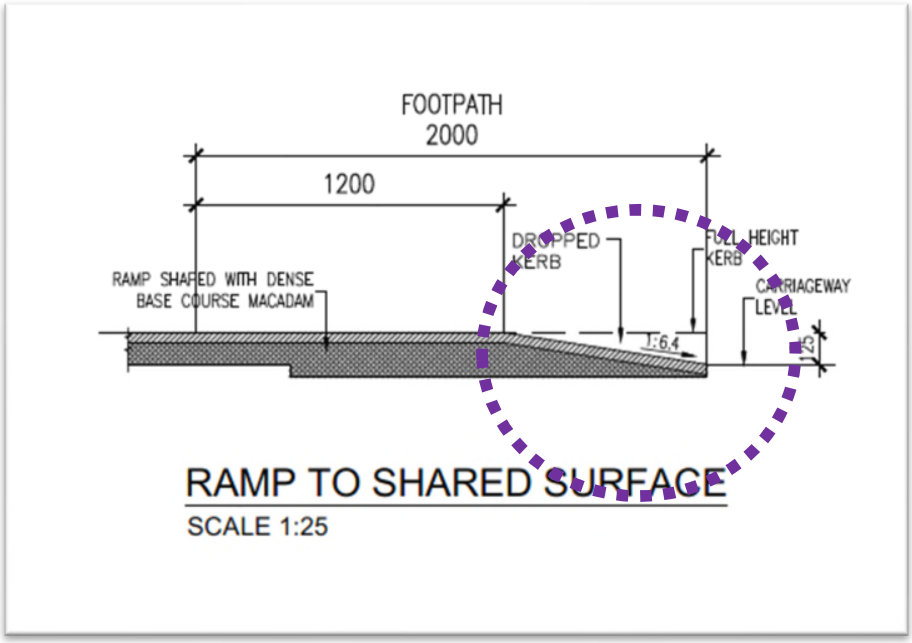
4.6 Problem

LOCATION

Drawing *23011-AMK-XXXX-DR-C01 -520001 S2*

PROBLEM

The detail for the ramp shows a 1:6.4 gradient. Steep gradients could lead loss of balance and inaccessibility for some.



RECOMMENDATION

It is recommended that suitable gradients be provided.

5.0 Items Raised in This Stage 1 Quality Audit – Accessibility Audit.

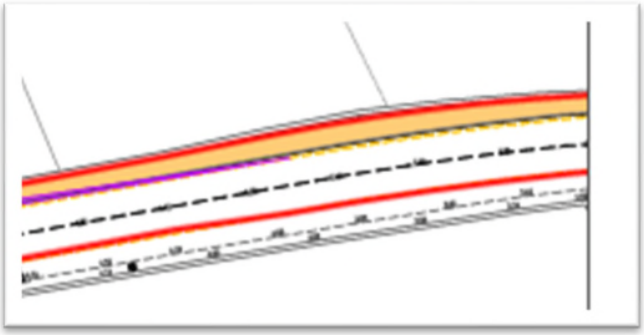
5.1 Problem

LOCATION

Drawing NRB TA-004, To Oranmore Train Station.

PROBLEM

It is unclear how far the proposed shared use facility will extend eastbound and how it ties in with existing pedestrian facilities.



RECOMMENDATION

It is recommended that a consistent width shared use pedestrian and cycle facility be continued to the train station junction where they can be segregated into separate pedestrian and cyclist facilities.

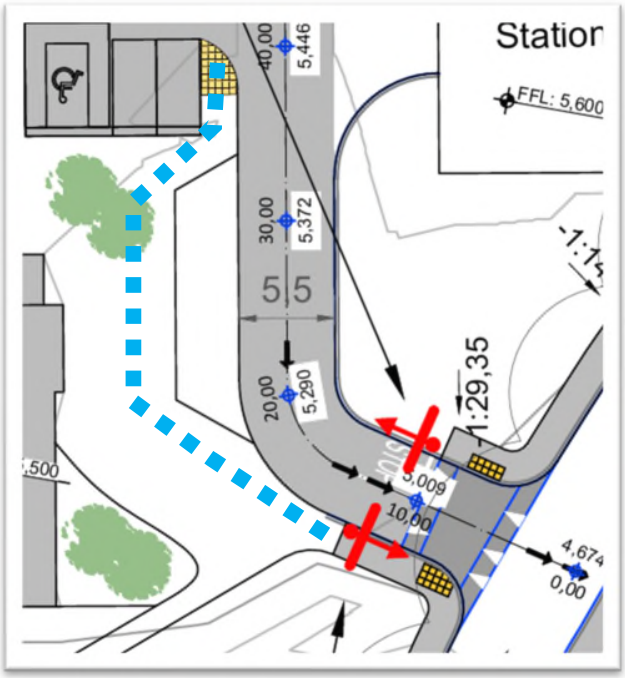
5.2 Problem

LOCATION

Drawing 23011-AMK-xxxx-DR-C01 -500001 S2, footpath at creche.

PROBLEM

It is unclear if the footpath will be available to all to the rear of the set down area at the creche. A lack of continuity of presence of pinch points could lead to inaccessibility for some mobility impaired pedestrians.



RECOMMENDATION

It is recommended that a clear route be provided for non creche pedestrians without pinch-points.

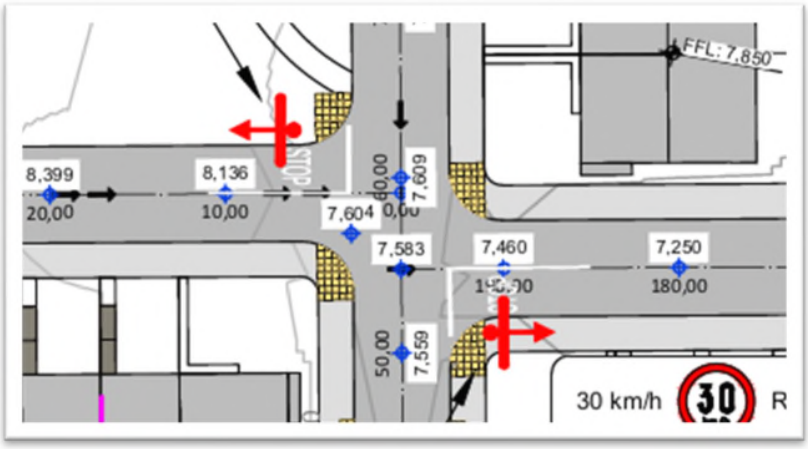
5.3 Problem

LOCATION

Drawing 23011-AMK-xxxx-DR-C01 -500001 S2, Internal crossroads.

PROBLEM

The dropped kerbs and tactile paving at the internal partially staggered crossroads cater for north-south desire lines. The orientation of the blisters and the dropped kerbs may make this a difficult area to cross for east-west pedestrians who are visually impaired.



RECOMMENDATION

It is recommended that east west movements be catered for however the dropped kerbs and tactile paving should not be to the rear of on-curtilage parking spaces whereby reversing drivers may not see small children.

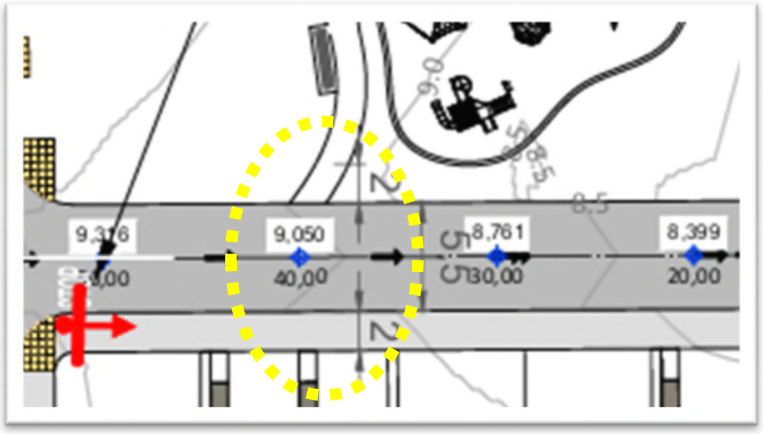
5.4 Problem

LOCATION

Drawing 23011-AMK-xxxx-DR-C01 -500001 S2, Open space.

PROBLEM

A link from the open space to the surrounding road to the south does not coincide with a crossing point. This may lead to crossing behind parked vehicles or inability for some users with mobility impairment to mount the kerbs.



RECOMMENDATION

It is recommended that the link be relocated or that a crossing facility be included in the design.

6.0 Items Raised in This Stage 1 Quality Audit – Walking Audit.

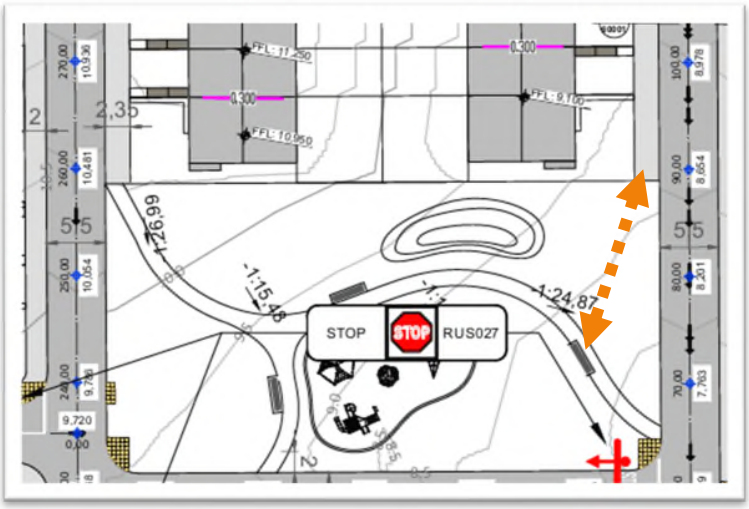
6.1 Problem

LOCATION

Drawing 23011-AMK-xxxx-DR-C01 -500001 S2, Pedestrian Desire Line.

PROBLEM

There will be a pedestrian desire line from the end of the footpath at the central internal road to the green area. Without a suitable path there could be slips and falls in the grassed area.



RECOMMENDATION

It is recommended that a link be provided for pedestrians.

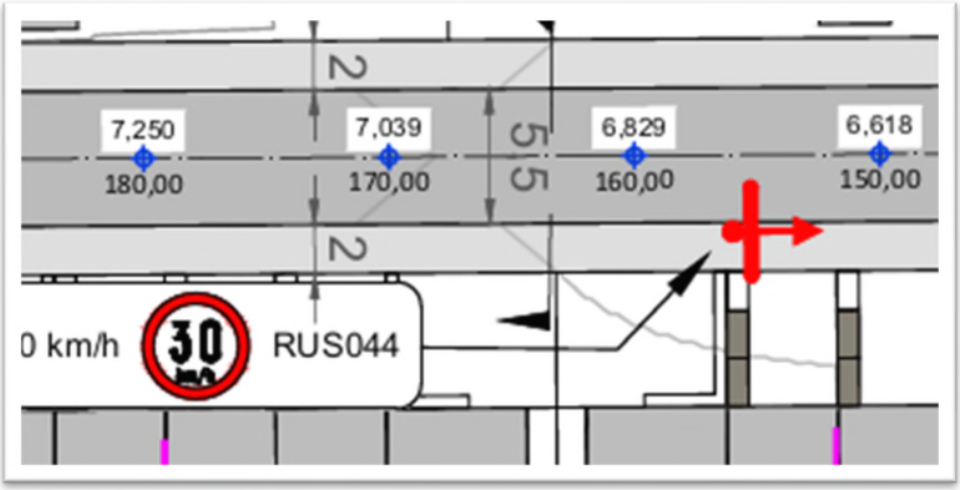
6.2 Problem

LOCATION

Drawing 23011-AMK-xxxx-DR-C01 -500001 S2, footpath at creche.

PROBLEM

It is proposed to provide a 30km/hr sign at Ch 155 on the internal east west road. This sign is unnecessary as the entire development has a speed limit of 30km/hr and the pole will be a hazard for pedestrians.



RECOMMENDATION

It is recommended that the sign and pole be removed.

7.0 Items Raised in This Stage 1 Quality Audit – Cycling Audit

7.1 Problem

LOCATION

Drawing NRB TA-001

PROBLEM

It is unclear if the shared use pedestrian/cycle facility on the R338 is to be one-way or two-way for cyclists. If it is to be two-way there are no facilities for cyclists to cross the carriageway when the facility ends/starts.

RECOMMENDATION

It is recommended that a clear route for both inbound and outbound cyclists be provided. Given the width and relatively high speed of the R338, any crossing facilities provided should be controlled.

8.0 Observations

8.1 Observation

It is assumed that poles for signs will be provided to the rear of footpaths whereby the poles will not be hazards for pedestrians and reduce the effective width of the footpaths.

8.2 Observation

It is assumed that stop signage and new junction definition posts will be provided at the R338 junction.

8.2 Observation

The following have not been provided to the Audit Team.

- Drainage Design
- Lighting Design
- Some kerb details.
- Long sections
- Landscaping details

9.0 Audit Statements.

Road Safety Audit Statement

We certify that we have examined the information provided and the site. The examination has been carried out with the sole purpose of identifying any features of the design which could be removed or modified in order to improve the safety of the scheme.

The problems identified have been noted in this report together with associated safety improvement suggestions which we would recommend should be studied for implementation. The audit has been carried out by the persons named below who have not been involved in any design work on this scheme as a member of the Design Team.

Quality Audit Statement

We certify that we have carried out this audit in accordance with DMURS for those areas independent of the Design team.

Norman Bruton **Signed:** _____

(Audit Team Leader) **Dated:** ___10-5-2024_____

Owen O'Reilly **Signed:** _____

(Audit Team Member) **Dated:** ___10-5-2024_____

Appendix A

List of Material Supplied for this Road Safety Audit and Quality Audit;

- Drawing 23011-akm-xxxx-xx-dr-c01-500001-pdf_2024-05-09_2142\NRB-TA-001
- Drawing 23011-akm-xxxx-xx-dr-c01-500001-pdf_2024-05-09_2142\NRB-TA-002
- Drawing 23011-akm-xxxx-xx-dr-c01-500001-pdf_2024-05-09_2142\NRB-TA-003
- Drawing 23011-akm-xxxx-xx-dr-c01-500001-pdf_2024-05-09_2142\NRB-TA-004
- Drawing 23011-akm-xxxx-xx-dr-c01-500001-pdf_2024-05-09_2142\NRB-TA-005
- Drawing 23011-akm-xxxx-xx-dr-c01-500001-pdf_2024-05-09_2142\NRB-TA-006
- Drawing 23011-akm-xxxx-xx-dr-c01-500001-pdf_2024-05-09_2142\23011-AKM-XXXX-XX-DR-C01-500001
- Drawing 23011-akm-xxxx-xx-dr-c01-500001-pdf_2024-05-09_2142\23011-AKM-XXXX-XX-DR-C01-500002
- Drawing 23011-akm-xxxx-xx-dr-c01-500001-pdf_2024-05-09_2142\23011-AKM-XXXX-XX-DR-C01-500003
- Drawing 23011-akm-xxxx-xx-dr-c01-500001-pdf_2024-05-09_2142\23011-AKM-XXXX-XX-DR-C01-510001
- Drawing 23011-akm-xxxx-xx-dr-c01-500001-pdf_2024-05-09_2142\23011-AKM-XXXX-XX-DR-C01-520001
- Drawing 23011-akm-xxxx-xx-dr-c01-500001-pdf_2024-05-09_2142\23011-AKM-XXXX-XX-DR-C01-520002
- Drawing 23011-akm-xxxx-xx-dr-c01-500001-pdf_2024-05-09_2142\23011-AKM-XXXX-XX-DR-C01-520003

For Information

Draft Transport Assessment Report, NRB , May 2024.

Appendix B

Feedback Forms (Road Safety Audit & Quality Audit)

SAFETY AUDIT FORM – FEEDBACK ON AUDIT REPORT

Scheme: LRD, Oranmore, Co. Galway
Stage: 1&2 Road Safety Audit
Date Audit (Site Visit) Completed: May 2024

Paragraph No. in Safety Audit Report	Problem accepted (yes/no)	Recommended measure accepted (yes/no)	Alternative measures (describe)	Alternative measures accepted by Auditors (Yes/No)
4.1	Yes	Yes	A sightlines for a 50km/h speed is achievable, greater than the 95%ile speed of 37.66km/h.	
4.2	Yes	Yes	The corner radii will be increased in the DD Stage.	
4.3	Yes	Yes	The hard shoulder will be terminated by a suitable taper, hatched road markings and warning signage well in advance of the start of the shared use facility. To be shown in the DD Stage.	
4.4	Yes	Yes	A suitable buffer zone will be provided between the carriageway and the shared usefacility. To be shown in the DD Stage.	
4.5	Yes	Yes	Suitable drainage will be provided to avoid surface water ponding on the R338.	
4.6	Yes	Yes	A gentler gradient will be provided. To be shown in the DD Stage.	

Signed..... **Date 10/05/2024**
Design Team Leader

Signed..... **Date**...10-5-2024.....
Audit Team Leader

Signed..... **Date 10/05/2024**
***PP* Employer**
Signed 'PP' with the Agreement of the Client

QUALITY AUDIT FORM – FEEDBACK ON QUALITY AUDIT REPORT

Scheme: LRD, Oranmore
Quality Audit- Stage 1
Date Audit (site visit) May 2024

Paragraph No. in Quality Audit Report	Problem accepted (yes/no)	Recommended measure accepted (yes/no)	Alternative measures (describe)	Alternative measures accepted by Auditors (Yes/No)
5.1	Yes	Yes	This will be agreed with Galway County Council Road Officials in the event of grant of planning permission.	
5.2	Yes	Yes	A footpath is proposed at this location.	
5.3	Yes	Yes	East-West pedestrian movements will be catered for with dropped kerbs and tactile paving placed in suitable locations. To be shown in the DD Stage.	
5.4	Yes	Yes	The link will be relocated to a suitable crossing location. To be shown in the DD Stage.	
6.1	Yes	Yes	A link will be provided for pedestrians. To be shown in the DD Stage.	
6.2	Yes	Yes	The sign and pole will be removed. To be shown in the DD Stage.	
7.1	Yes	Yes	This will be agreed with Galway County Council Road Officials in the event of grant of planning permission.	

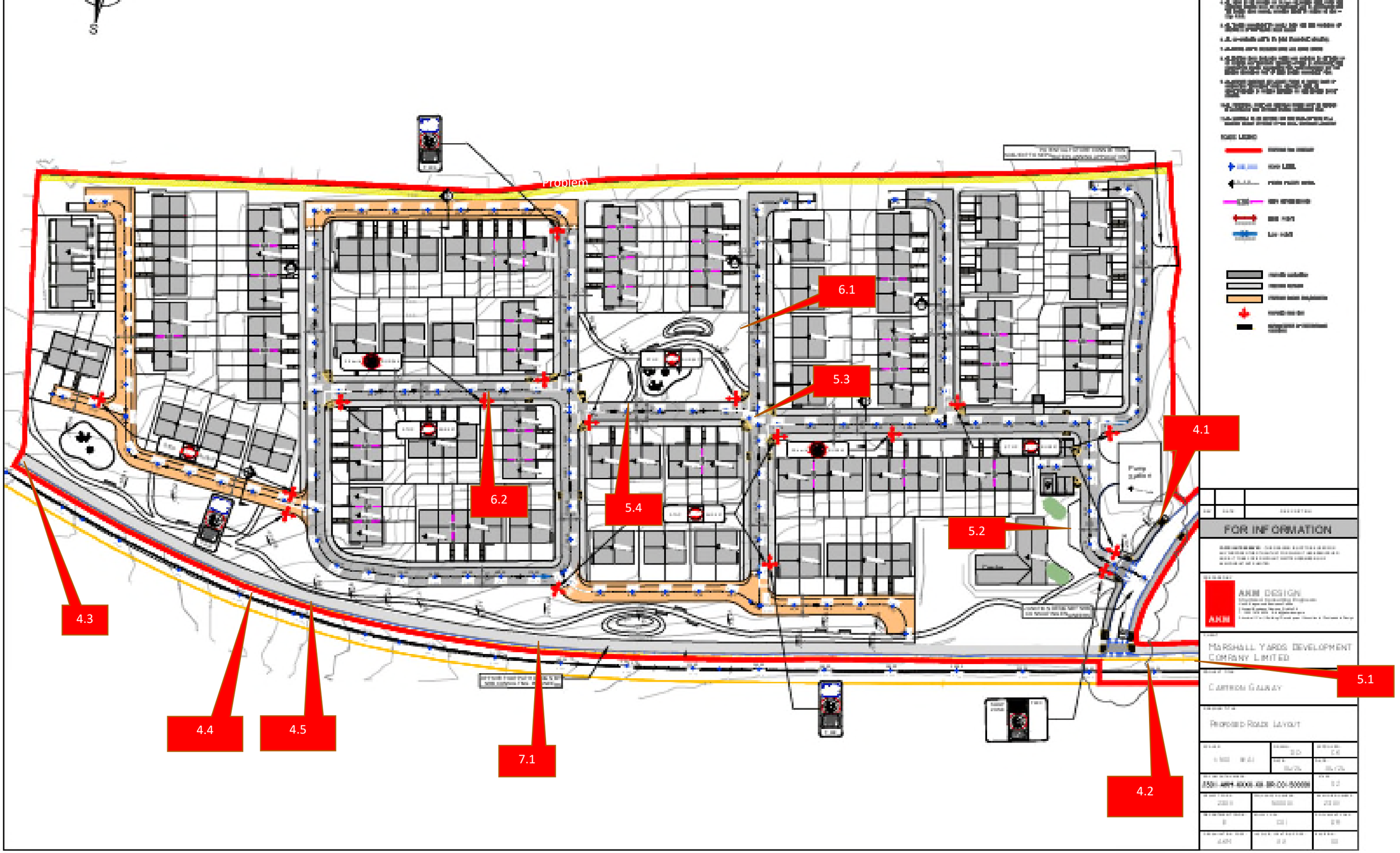
Signed.....Brian McMahon **Date 10/05/2024**
Design Team Leader

Signed.....Norman Bruton **Date**: 10-5-2024.....
Audit Team Leader

Signed.....Brian McMahon **Date10/05/2024**
***PP* Employer**
Signed 'PP' with the Agreement of the Client

Appendix C

Problem Location Plan.


Problem
6.1
5.3
4.1
6.2
5.4
5.2
4.3
4.4
4.5
7.1
4.2
5.1
FOR INFORMATION
ARM DESIGN
MARSHALL YARDS DEVELOPMENT COMPANY LIMITED
CAMERON GALWAY
PROPOSED ROADS LAYOUT

APPENDIX I

DMURS COMPLIANCE STATEMENT

consulting engineers

NRB

DMURS Design Compliance Statement Technical Note

(Appendix I)

For

Proposed Large Scale Residential Development

At

Cartron, Oranmore, Co. Galway.

On behalf of

Marshall Yards Development Company Ltd

FINAL ISSUE

1st Floor, Apollo Building, Dundrum Road, Dundrum, Dublin 14
Tel/fax: +353 1 292 1941, E-mail: info@nrb.ie, Web: www.nrb.ie

Registered in Ireland No. 491679

1.0 INTRODUCTION

1.1 It is NRB's opinion that the proposed Large Scale Residential Development on lands located at Cartron, Oranmore, Co Galway, is consistent with both the principles and guidance outlined within the *Design Manual for Urban Roads and Streets* (DMURS) 2013 as amended in 2019. The scheme proposals are the outcome of an integrated design approach by the entire Design Team, to address the integration of residential developments into this expanding area. This approach sought to implement a sustainable community connected by well-designed links, layout and accesses - which combined deliver attractive, convenient and safe access consistent with the stated requirements of GCC, in addition to promoting modal shift and viable alternatives to car-based journeys.

1.2 The following section discusses design features which are to be incorporated within the proposed residential scheme with the objective of delivering a design that is consistent with the principles of DMURS.

2.0 DESIGN ATTRIBUTES

2.1 The proposed layout strategy seeks to maximise connectivity between key local destinations through the provision of a high level of **permeability and legibility** for all journeys, particularly for sustainable forms of travel (cycling and walking). The proposed residential development delivers great mode & route choices along direct, attractive and safe linkages to local amenities and schools/service destinations.

2.2 Improved connections link the development and the local roads and railway station in Oranmore, through enhancements to the R338 Coast Road. The external perimeter setting itself been designed to deliver a hierarchy which provides safe access within / across the proposed new residential community. Safe well-designed routes are provided for pedestrians and for cyclists, with easy access to the Railway Station and onwards to Oranmore to the easte.

2.3 The proposed development is consistent with DMURS, in that the movement function is designed to respect the different levels of motorised traffic whilst optimising access to/from alternative transport and catering for higher number of pedestrians & cyclists. In parallel, the adopted design philosophy has sought to consider the context / place status of the scheme in terms of level of connectivity provided, the quality of the proposed design, the level of pedestrian / cyclists activity and vulnerable users requirements, whilst also

identifying appropriate ‘transition’ solutions particularly at the internal road junctions, which have raised tables as appropriate and reduced radii and crossing widths placed throughout the internal road network to promote lower vehicle speeds.

2.4 The layout of the proposed development seeks to maximise permeability and enhances legibility, and the design of appropriately sized blocks actively contributes to a highly permeable and accessible community for both pedestrians and cyclists.

2.5 The proposed layout seeks to successfully create an appropriate balance between the functional requirements of different network users whilst enhancing the 'sense of place'. Design attributes of the proposed layout which contribute to achieving this ***DMURS objective*** include:

a) The proposed pedestrian and cycle networks give excellent connectivity to the external roads and junctions and to both the Railway Station and Oranmore to ensure trips can be made by sustainable modes.

b) Improvements are proposed to the external road network, consisting of enhanced pedestrian and cycle links along and to the R338 Coast Road, which link the proposed residential site and with Oranmore.

c) The proposed pedestrian and cycle routes will link directly to existing residential developments to the east of the subject lands. These routes also provide superb links to the existing public transport facilities in Oranmore, promoting active travel.

d) The proposal includes for Shared Streets with colour contrast finishes as appropriate, with shared surface streets provided where pedestrians and cyclists are given priority.

e) The main vehicular access from the local road, has reduced radii and advisory signage and can incorporate a raised table to promote lower vehicle speeds if considered necessary.

f) At the Creche, contrasting surface finishes and textures can be provided, to promote pedestrian priority and to reduce vehicular speed.

g) Raised tables placed throughout the internal road network with tight corner radii to promote lower vehicle speeds.

h) With the objective of encouraging low vehicle speeds and maximising pedestrian safety and convenience, corner radii will be less than 6m where swept path analysis permits and will be of further reduced radii where feasible in line with DMURS guidance.

i) 30km/hr speed limits are proposed for the site, with signage at the main access according with best practice.

j) The design deliberately seeks to specify minimal signage and line markings on the internal layout, with such treatments used sensitively throughout and predominately at key nodes and 'transition' areas.

k) Footpaths no less than 1.8m (generally 2.0m or wider) will be provided throughout the scheme with connections and tie-ins to permitted and existing external pedestrian networks.

l) Appropriate clear unobstructed visibility splays, as per DMURS requirements, are provided at the junctions internally within the site. Sightlines provided at internal junctions will be consistent with DMURS to provide min 2.4m x 23m for a 30km/h zone.

m) Well designed and frequent pedestrian crossing facilities will be provided along key travel desire lines throughout the scheme, with raised junctions to provide for pedestrian priority, consistent with DMURS, with flush kerbing provided throughout.

n) In the event of any upstand kerbs are required, heights will be typically max 60mm in accordance with the objectives of DMURS.

o) Within the development, as required, cyclists will share the carriageway with other street users as per the National Cycle Manual guidance for such situations and best practice for residential streets of this nature.

p) Any required street signage and road markings will be in accordance with the Department of Transport Traffic Signs Manual, and the location and form will be agreed in advance with Wicklow County Council.

CONCLUSION

2.6 The use of DMURS in urban areas is mandatory and the design attributes outlined above demonstrate that the design team have ensured that the relevant design standards contained within DMURS have been duly considered.