

consulting
engineers

NRB

**Traffic & Transport
Assessment Report**
Incl

**Preliminary Mobility
Management Plan**
(Appendix H)

&

**Independent Stage 1 Road
Safety/Quality Audit.**
(Appendix I)

For

**Proposed Residential
Development**

At

**R215/Hill Street, Dundalk,
Co Louth.**

**On Behalf of
Zirbac DLK Ltd.**

FINAL ISSUE

Contents

Page	Section	Description
2	--	Executive Summary
4	1.0	Introduction
6	2.0	Receiving Environment, Active Travel & Development Proposals
12	3.0	Trip Generation, Assignment & Distribution
15	4.0	Traffic Impact - Adjacent Road Junction Capacity
17	5.0	Response to Roads / Transport Matters in LCC Opinion
22	6.0	Conclusions

Appendices.....

A	Proposed Development – Site Layout Plan / Access Arrangement
B	Original Raw Traffic Survey Output Data
C	TRICS Output Data – Housing/Duplex & Apartments
D	Traffic Calculations, Trip Distribution, Network Traffic Flow Diagrams & Projections
E	PiCADY Capacity Modelling – Northern Site Access Priority Junction
F	PiCADY Capacity Modelling – Ex Mourneview Priority Junction
G	Dundalk – Proposed Urban Cycle Network Plan (Aecom/NTA)
H	Preliminary Mobility Management Plan (Travel Plan)
I	Stage 1 Independent Road Safety / Quality Audit

EXECUTIVE SUMMARY

NRB Consulting Engineers Ltd were appointed to address the Traffic & Transport impact associated with the construction of a proposed residential development comprising 194 apartment / duplex units on residential zoned lands at Townparks / Hill street, Dublin Rd, Dundalk, Co Louth.

We have assessed the impact of the traffic associated with these proposed elements, together with the established traffic on the adjacent affected road network for the AM Peak and PM Peak Commuter Hours, based on an extensive traffic survey (undertaken by an independent specialist in traffic data collection). The analysis also confirms that there is more than adequate capacity available in the junctions to accommodate any potential future development of further phases.

Vehicular access to the lands is provided by way of a new DMURS compliant simple priority controlled T-junction onto Dublin Rd serving 4 blocks of Apartments (75 No), with additional connectivity to the network by way of the existing Mournview Hall T junction serving the remaining 4 blocks (119 No).

The Traffic & Transport Assessment Report (TA) has been prepared in accordance with the TII's Traffic & Transport Assessment Guidelines and addresses the traffic impact of the proposals. The assessment is based on comprehensive Weekday AM & Weekday PM Peak classified interval turning movement surveys of the local roads carried out during normal school term. (Refer to Traffic Data included as **Appendix B**).

The Report & analysis includes an assessment of impact of the proposed development traffic during the selected Opening Year 2026 together with an assessment of the Design Year 2041 (15 years following opening), in accordance with normal practice.

Whilst we have selected an opening year of 2026, it should be noted that, if required, minor changes of 2-3 years in the choice of opening or design year would have no effect on the conclusions of this study.

The TA confirms that the proposed new site access junction and the established Mournview Hall junction are more than adequate to accommodate the worst-case traffic associated with the entire development being occupied and operational. The assessment

also confirms that the full occupation of the scheme will have a small and unnoticeable impact upon the operation of the adjacent local road network.

The site is ideally located in terms of the promotion of active travel and in particular cycling, being surrounded by Urban Primary Cycle network as per the NTA Cycle Plans for the town (***Refer Appendix G***).

We have prepared and included a Preliminary Mobility Management Plan as ***Appendix H*** and this includes details of the sustainable modes of travel available at the site. An independent Stage 1 Road Safety / Quality Audit of the scheme was also undertaken and this report, together with the associated Designer Feedback Form is included as ***Appendix I***.

Based on our studies, we conclude that there are no adverse traffic/transportation capacity or operational issues associated with the construction and occupation of the proposed development that would prevent a positive determination of the planning application by Louth County Council (LCC).

1.0 INTRODUCTION

- 1.1 This Traffic & Transport Assessment (TA) has been prepared by NRB Consulting Engineers Ltd and addresses the transportation capacity considerations associated with the construction of a proposed Large Scale Residential Development (LRD) on residential zoned lands at Townparks, Dublin Rd, Dundalk, Co Louth. The development consists of a total of 194 residential units (Duplex and Apartments) in 8 blocks.
- 1.2 A site location map for the development is included below as **Figure 1.1**.



Figure 1.1: Site Location Map in Context of Local Roads

- 1.3 This Report addresses the impact of the proposed development and the implications for the adjacent road network for the weekday AM and PM Peak Hours, taking account of existing traffic conditions.
- 1.4 The site is considered to represent a highly sustainable location for residential development of the nature proposed, in the context of the location within the urban area of Dundalk, with the range of services within sustainable & active travel distance.
- 1.5 The layout and design of the scheme will meet the requirements of LCC and meets the specific requirements of DMURS in terms of layout & geometric design (Refer to layout plan included herein as **Appendix A**).

- 1.6 In describing the Receiving Environment and the Proposed Future Environment, this report addresses the following aspects of the proposed development:
- Appropriate Scale of Development Proposals (conscious that the development constitutes zoned residential development in an established urban area),
 - Location of the development within Dundalk urban area,
 - Traffic & Transportation impact,
 - Capacity of the proposed access junctions to accommodate the worst-case development traffic flows,
 - Pedestrian and cyclist permeability and promotion,
 - Impact of the development on the free flow and capacity of the adjacent roads and junctions in the area of influence, and
 - The locational characteristics of the site being in a highly sustainable location in terms of travel characteristics.
- 1.7 Recommendations contained within this Traffic & Transport Assessment are based on the following sources of information and industry-standard practices:
- Transport Infrastructure Ireland (TII) Traffic & Transport Assessment Guidelines,
 - TII PE-PAG-02017 Project Appraisal Guidelines for National Roads Unit 5.3,
 - New comprehensive traffic turning movement surveys of the adjacent affected road network undertaken during normal school term,
 - Our experience in assessing the impact of developments of this nature, and
 - Site visits and observations.
- 1.8 The Report has been prepared in accordance with the requirements of TII's Traffic & Transport Assessment Guidelines. These are the professional Guidelines used to assess the impact of developments on public roads.
- 1.9 We have prepared and included a Preliminary Mobility Management Plan as **Appendix H**, which includes details of the sustainable modes of travel available at the site. An independent Stage 1 Road Safety / Quality Audit of the scheme was also undertaken and this report, together with the associated Designer Feedback Form is included as **Appendix I**.

2.0 RECEIVING ENVIRONMENT, ACTIVE TRAVEL & DEVELOPMENT PROPOSALS

- 2.1 The proposal consists of a residential development sustainably located within the Dundalk urban area, with multi modal accessibility provided for.
- 2.2 The site is bound along the northern boundary by both the established residential estates of Goslings Terrace and by residential housing fronting onto Avenue Road. There are undeveloped lands to the east, and to the south lies Mourneview Hall apartments with direct access established to the Dublin Rd.
- 2.3 The site is bound along the western boundary by Dublin Road and properties fronting same. To set the context of the link and carrying capacity of the R215, this was formerly the main Primary Route linking Dublin and Belfast. It consists of a wide single carriageway road with central hatched median, and with on-road advisory cycle lanes and footpaths on both sides. It is subject to a 50kph urban speed limit adjacent the site. A google street-view image showing the R215 at the location of the proposed new access is included below as **Figure 2.1**.



Figure 2.1 – Google Streetview Image, Looking South at Access Location

- 2.4 The R215 is moderately trafficked, with a weekday AM Peak Hour 2-way Traffic Flow of 1,207 PCUs and a weekday PM Peak Hour Traffic Flow of 1,123 PCUs, measured immediately north of the Mourneview Hall Junction. Mourneview Hall itself is very lightly

trafficked, with a weekday AM Peak Hour 2-way Traffic Flow of 3 PCUs and a weekday PM Peak Hour Traffic Flow of 17 PCUs, measured at the site.

- 2.5 Whilst the traffic flows are likely considered significant locally, a street such as this has an associated traffic or link capacity of 1,500 to 1,800 PCUs per-lane direction per-hour. This is reflective of its previous use as the main Belfast-Dublin Road. In these terms the road has a 2-way traffic carrying or ‘link capacity’ of approximately 3,000-3,600 PCUs. For this reason we consider it to be moderately trafficked in terms of the Link Capacity. It is generally accepted that the traffic carrying capacity of any road in urban areas is normally governed by the capacity of terminal junctions, and this is true in the case of the subject street network in Dundalk where normal peak commuter period congestion occurs at road junctions primarily.
- 2.6 The junction of Mourneview Hall takes the form of a simple priority T junction and a google street-view image showing the junction is included below as **Figure 2.2**.



Figure 2.2 – Google Streetview Image, Mourneview Hall Junction

- 2.7 We commissioned a new Traffic Survey of the existing road and affected junctions in order to establish background conditions. The network extent of Traffic Survey is as illustrated on **Figure 2.3** below. Details of the surveys are included as **Appendix B**.

2.8 These traffic surveys of the adjacent road network were undertaken by specialist supplier and reflect normal school term traffic conditions. This traffic survey data formed the basis of the study. Details of the surveys undertaken are included with the Peak Hour Network Flow Diagrams (expressed as PCUs) identified, all as outlined herein as **Appendix D**.



Figure 2.3 – Details of Traffic Surveys of Existing Conditions Locally

2.9 Details of all of the alternative and active travel modes available at the site are all outlined in the enclosed Preliminary Mobility Management Plan (**Appendix H**). This should be read in conjunction with the below Active Travel / Cycling information.

Active Travel - Cycling

2.10 Louth County Council in conjunction with the NTA are progressing the Dundalk Active Travel Scheme that passes through the site. The scheme will see the creation of high quality segregated cycle lanes, pedestrian/cyclist crossing points and works to existing junctions along a circa 1.8km stretch of the R125 Dublin Road, starting at the junction of the Dublin Road and the Dundalk Inner Relief Road (known as the Xerox Junction) and finishing at Riverside Walk at the Dublin Road.

2.11 The scheme has gone through a Public Consultation and is been progressed to detailed design stage. The proposed Dundalk Active Travel Scheme works include:

- The installation of high-quality segregated pedestrian and cycling infrastructure to improve safety and promote active travel along the Dublin Road from the Xerox Junction (R132, R215 intersection) heading northwards to Riverside Walk for a length of c.2km.
- The upgrade of junctions along the entire route to provide safer pedestrian and cycle crossings.
- The upgrade of existing bus stops along the route, providing facilities that integrate both pedestrians and cyclists.
- The upgrade of all entrances along the route to better facilitate pedestrians and cyclists.
- The provision of pedestrian and cycling crossings at identified desire lines along the route.
- Connection to existing cycling facilities that interface with the route, the improvement of landscaping and biodiversity along the full length of the scheme, including sustainable urban drainage systems (SUDS).
- The provision of all other ancillary works associated with these cycle lanes along the length of the scheme

2.12 The National Transport Authority, through the Cycle Networks Initiative, have also published an overall Cycle Network Plan for Dundalk, a copy of which is included herein as **Appendix G**. These plans include a network of cycle links of various types, showing how these link to services, schools and facilities and the proposed upgrades that are to be put in place to facilitate the plans. An extract from the Key Plan is below as **Figure 2.4**.

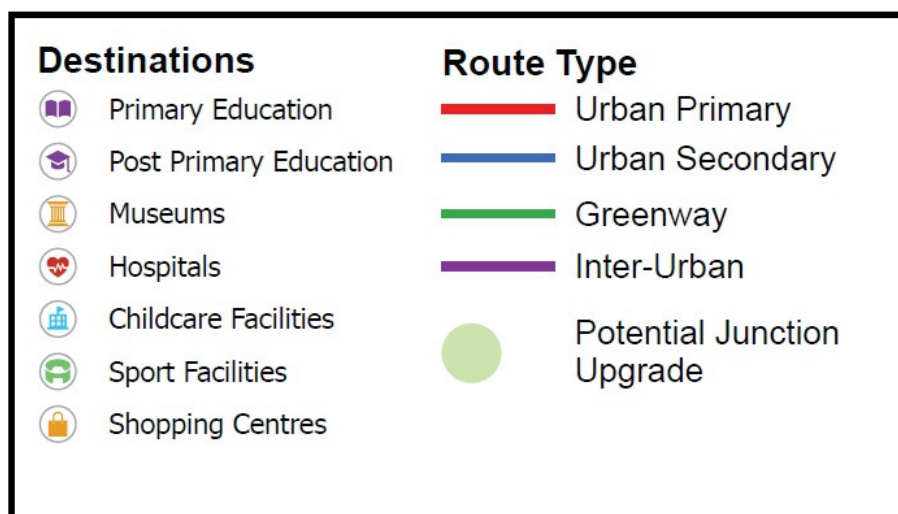


Figure 2.4 – Key Plan Extract from NTA Cycle Networks Proposal for Dundalk

2.13 We include below as **Figure 2.5** an annotated extract from the NTA Drawing, with the site in context.

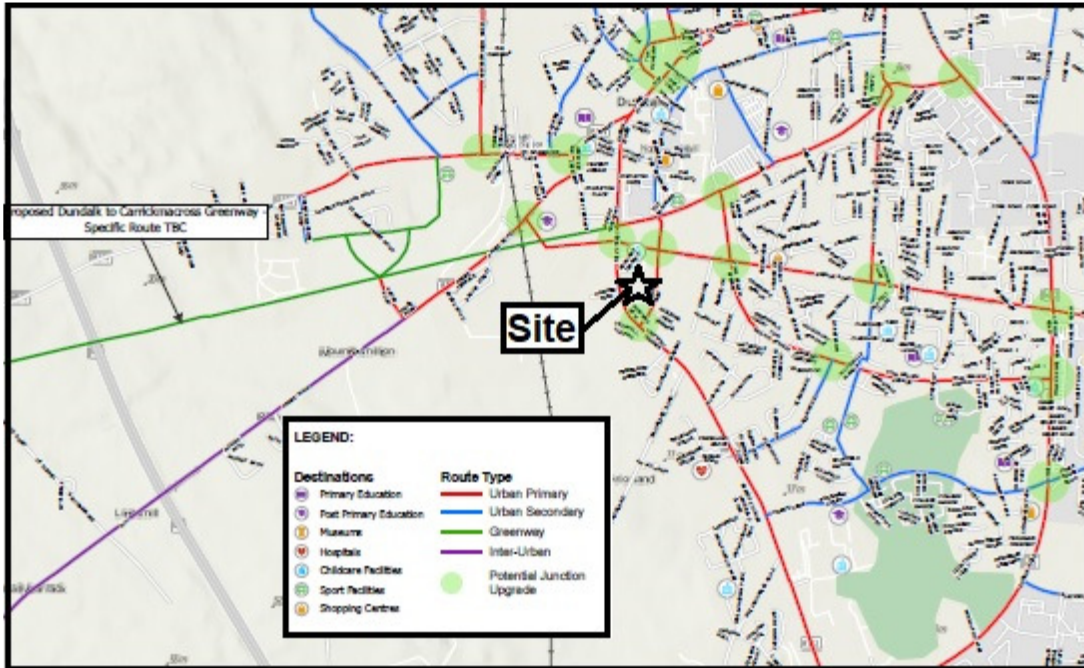


Figure 2.5 – Annotated Extract NTA Cycle Networks Proposal for Dundalk, showing Site

2.14 We further illustrate the site accessibility by bicycle by way of a larger scale extract included below as **Figure 2.6**.

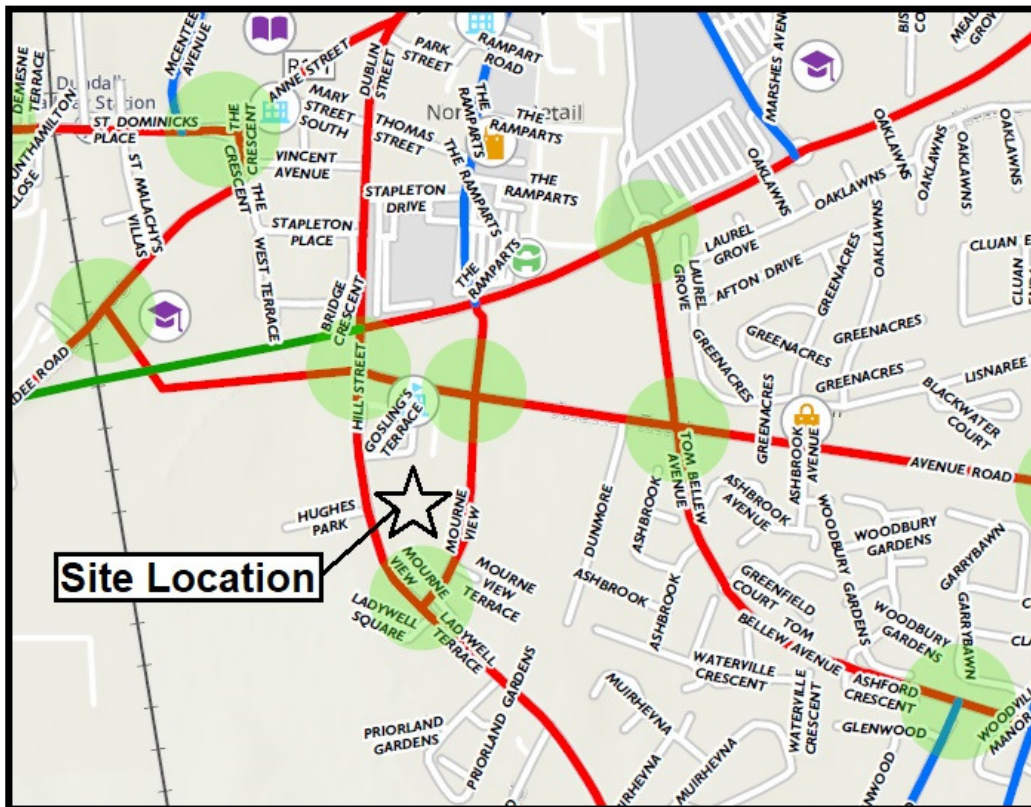


Figure 2.6 – Larger Scale Annotated Extract NTA Cycle Networks, Showing Site

- 2.15 It is clear from the above that the site is in fact bound on all sides by an Urban Primary Cycle Network (Red), even running within the site through Mourneview Hall, which provides the highest quality connectivity to the entire Dundalk Area.

Proposed Development

- 2.16 The proposed development will consist of 194no. apartments in 8no. distinctive blocks (A to H) ranging in height from part one storey to five storeys in height across the site together with all associated public, communal and private open space, car parking, cycle parking and site services. The proposed development provides for a childcare facility within Block A, at ground floor level with a potential capacity of c.45 full time childcare spaces. The childcare facility will have its own outdoor play space and set down area as well as staff car parking and bicycle parking. In order to preserve the integrity of the existing pedestrian/cycle track and the open section of the River Blackwater that run north-south broadly through the centre of the site, two separate vehicular accesses are proposed to serve the development from the R132 Dublin Road/Hill Street. The first vehicular access will be a new access onto Dublin Road / Hill Street and will serve 75 dwellings. The second vehicular access is the existing access road onto Dublin Road at Mourne View Hall which will provide access to 119no. apartments. A more detailed development is included within the Planning Reports and also on the application Site Notice.
- 2.17 As with all such residential developments, it is anticipated that the development will be mainly serviced using regular weekly refuse lorries within the site as required, with small transit vans or small-wheelbase trucks for day-to-day servicing of the duplex units and apartments, which do not have onerous swept-paths and can easily be facilitated on the site.
- 2.18 In traffic terms, whilst there are a significant number of units, residential schemes of this nature within urban areas with very good alternative transport links & active travel measures do not generate a significant volume of car movements, and TRICS provides clear evidence in this regard. The small scale of the entire facility in traffic terms is confirmed through the robust assessment of Car Traffic Generated, which is addressed further within Section 3 of this Report.

3.0 TRIP GENERATION, ASSIGNMENT AND DISTRIBUTION

- 3.1 In terms of assessing car traffic and the impact of same on the local road network, the Trip Rate Information Computer System 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 specifically referenced and recommended for use in the TII Guidelines for Traffic and Transport Assessment.
- 3.2 We have included in **Appendix C** the TRICS output for all of the individual elements of the proposed Development, being residential housing (Duplex) and residential apartments. Whilst technically Duplex generate lower volumes of vehicular traffic than traditional houses, the use of TRICS as done herein provides a robust estimation of traffic as illustrated in **Table 3.1** below. We have also included the traffic associated with the proposed Creche fully as Primary Trips, and this underscores the robust nature of the assessment.
- 3.3 The following Table summarises the output from the TRICS database which is included herein as **Appendix C** for comparison purposes.

Table 3.1: TRICS Data Summary - Proposed Scheme – Traffic Generated (PCUs)

119 No. Duplex		Arrivals		Departures		2-Way Traffic
Period	Per	Site	Per	Site		
Weekday 8-9am	0.146	17	0.366	44	61	
Weekday 5-6pm	0.377	45	0.165	20	65	
24 Hr Day	2.269	270	2.275	271	541	
212m ² GFA Creche		Arrivals		Departures		2-Way Traffic
Period	Per	Site	Per	Site		
Weekday 8-9am	3.023	6	2.628	6	12	
Weekday 5-6pm	2.423	5	3.069	7	12	
24 Hr Day	14.480	31	16.243	34	65	
TOTAL TRAFFIC VIA EXISTING MOURNEVIEW HALL (SUM OF ABOVE)						
Period	Arrivals		Departures		2-Way Flow	
Weekday 8-9am	23		50		73	
Weekday 5-6pm	50		27		77	
24 Hr Day	301		305		606	
TOTAL TRAFFIC VIA NEW R215 NORTHERN MOST ACCESS JUNCTION						
75 No. Duplex/Aparts		Arrivals		Departures		2-Way Traffic
Period	Per	Site	Per	Site		
Weekday 8-9am	0.062	5	0.187	14	19	
Weekday 5-6pm	0.158	12	0.081	6	18	
24 Hr Day	1.077	81	1.146	86	167	

- 3.4 In this case, the application of TRICS in this case specifically excludes the effect of shared visits or linked trips and quantifies the volumes of traffic on an individual basis. In addition, the proximity to the town centre and the cycle network will likely further dilute and reduce primary trips - in these terms the assessment can be considered further robust.
- 3.5 Therefore, we consider that the use of TRICS in the methodology adopted is robust and onerous and the Trip Rates applied and used provide for a robust reflection of the worst-case traffic generated by the proposed development. This is particularly the case for the subject site within the urban area, the employment and services nearby, and the low levels of car parking provision which will further limit car trip generation.
- 3.6 Notwithstanding, in light of observation of existing capacity conditions, the use of higher Trip Rates, if required, would have no impact upon the conclusions of the study. This is particularly the case given the clear modelled low impact of the proposed development on the locally affected junctions and the capacity available.

Assessment Methodology

- 3.7 We commissioned a Traffic Survey of the existing road and affected junctions in order to establish background conditions. The network extent of Traffic Survey is as illustrated on **Figure 2.3** above. Details of the survey data is included as **Appendix B**.
- 3.8 In Traffic Engineering all vehicles are expressed in terms of “Passenger Car Units” (PCUs), sometimes referred to as “Car Equivalents”. This is the methodology that has been employed here, with specific industry standard conversion factors to convert HGVs, Skip Lorries, Cars/Trailers and Bin Lorries to PCUs. The conversion factors used are in accordance with industry-standard recommendations.
- 3.9 We have assigned the subject development traffic to the road network based on the reasonable and industry standard assumption that the trip patterns will mirror the existing established weekday AM and PM peak hour traffic count data in terms of traffic turning proportions and distribution at junctions and in particular here, they reflect the observed patterns during the commuter peak hours on the local roads. This represents Industry Standard practice.
- 3.10 The Guidance recommends that we are required to provide a robust and onerous assessment of the likely impact of the proposed development, in order to provide

reassurance that the road infrastructure is adequate to accommodate the development. We have therefore assigned the development traffic to the local roads based on the onerous assumption that ALL of the traffic is new traffic, constituting Primary Trips.

- 3.11 The resulting traffic flow diagrams for the subject site are included as **Appendix D** with the calculated subject development traffic applied.
- 3.12 We have selected a year of opening of 2026 for the purposes of this assessment, however it should be noted that minor changes of 2-3 years in the selected or actual year of opening will have no impact on the conclusions of the study. We have also undertaken assessment of the Design Year 2041, 15 years following opening.
- 3.13 Traffic growth factors for future year assessments were calculated from data obtained in the 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 Louth), which provides the recommended method of predicting future year traffic growth on roads. Calculations of the relevant growth factors are included in **Table 3.2** below.

Table 3.2 - Traffic Growth Rates, TII Project Appraisal Guidelines (TII Growth Factors)

Year	to Year	Table 6.2:
2023	2026	1.045 (ie 4.5% growth)
2026	2041	1.145 (ie 14.5% growth)

4.0 TRAFFIC IMPACT - ROAD JUNCTION CAPACITY

- 4.1 The TII Traffic and Transport Assessment Guidelines, being the National Standard Guidance applied to Assessments, sets out a strict mechanism for assessment of developments of this nature and determining whether further assessment is indeed required. These Guidelines require a ‘*Threshold Assessment*’ of the impact on the local roads to be provided in order to determine whether more detailed modelling and assessment of particular critical junctions is necessary.
- 4.2 We have assessed the impact of the proposed development with a wide area of influence included. The professional guidance referenced above sets out specific increases in traffic volume associated with new development, which, when breached, requires further detailed analysis to be undertaken. The recommendation is that, if the expected increase is **5%** for networks that are considered heavily trafficked or congested, then further analysis is warranted. The Threshold is set lower, at 10% for uncongested networks.
- 4.3 It is demonstrated herein that the proposed occupation of the residential development, with relatively low volumes of vehicular traffic added to the town centre network, will not result in any significant or noticeable level of new trips on the local roads at/beyond the Development Access Points. All anticipated traffic increases beyond these points are **below** the Industry-Standard of 5%, above which further assessment is required.
- 4.4 Our assessment confirms that the absolute worst-case traffic increases on the adjacent road network junctions, for the entire development open and occupied, undertaken in accordance with Guidelines, is as summarised below as **Table 4.1**.

Table 4.1: All of Proposed Development Open & Occupied - Threshold Assessment, Worst-Case Impact - AM & PM Peak Hours 2026

Assessed Road or Junction	Traffic Increase %		COMMENT
	AM Hr	PM Hr	
Site Accesses	NA	NA	Capacity Assessment Undertaken
Hill St / Avenue Rd to North	2.9%	2.8%	<<5% so further assessment not required
Junction at Priorland to South	3.5%	4.3%	<<5% so further assessment not required

- 4.5 These worst-case traffic increases at and beyond the Site Accesses and beyond the local area of influence and are below the Guideline and industry standard recommended levels above which further assessment is required, in accordance with the TTA Guidelines.

4.6 To set these increased levels of traffic in context, the day-to-day variation in traffic volume (due to day-of-week or weather conditions for example) is accepted as 10%. The low increases locally underscores the small impact of the proposed development traffic on traffic conditions within Dundalk.

Access Junction Capacity

4.7 For capacity assessment of the Priority junctions, we have used the TII-approved software package PiCADY (**P**riority **I**ntersection **C**apacity **A**nd **D**elay) software package (as part of the TRL Package 'Junctions 9'). This TII approved software has been used to assess the capacity of the new T Junction and also the established junction of Mournview Hall.

4.8 PiCADY produces results based on a ratio of flow to capacity (RFC) and queue length. An RFC greater than 1.00 indicates that a junction is operating at or above capacity, with 0.85 considered to be the optimum RFC value. We have appended the detailed computer simulation model results for both junctions herein as **Appendix E** and **Appendix F**, with a summary of the results for each junction tabulated below for ease of reference.

Table 4.2 – PiCADY Summary Results, Proposed New Site Access T junction (Appendix E)

Modelled Scenario	Period Mean Max Q (PCUs)	Period Max RFC
2026 Opening Year AM Peak Hr	0.1	0.04
2026 Opening Year PM Peak Hr	0.1	0.02
2041 Design Year AM Peak Hr	0.1	0.05
2041 Design Year PM Peak Hr	0.1	0.02

Table 4.3 - PiCADY Summary Results, Existing Mournview Hall T junction (Appendix F)

Modelled Scenario	Period Mean Max Q (PCUs)	Period Max RFC
2026 Opening Year AM Peak Hr	0.2	0.16
2026 Opening Year PM Peak Hr	0.1	0.12
2041 Design Year AM Peak Hr	0.2	0.19
2041 Design Year PM Peak Hr	0.2	0.14

4.9 The modelling results for the site access junctions above confirms that they can accommodate the worst case predicted traffic flows during the year of opening and the design year, without any capacity issues whatsoever arising, with all RFCs well below 0.85. Indeed there is so much excess capacity available that the RFCs barely register in the capacity output.

4.10 The results of the assessment and associated modelling clearly shows that the development will have a small and unnoticeable impact upon traffic conditions locally.

5.0 RESPONSE TO TRAFFIC/TRANSPORT MATTERS IN LCC LRD OPINION

5.1 We include below extracts from the LCC LRD Opinion dated 8th October 2024, and following on the NRB Response to same, or reference to where each item is addressed within this submission.

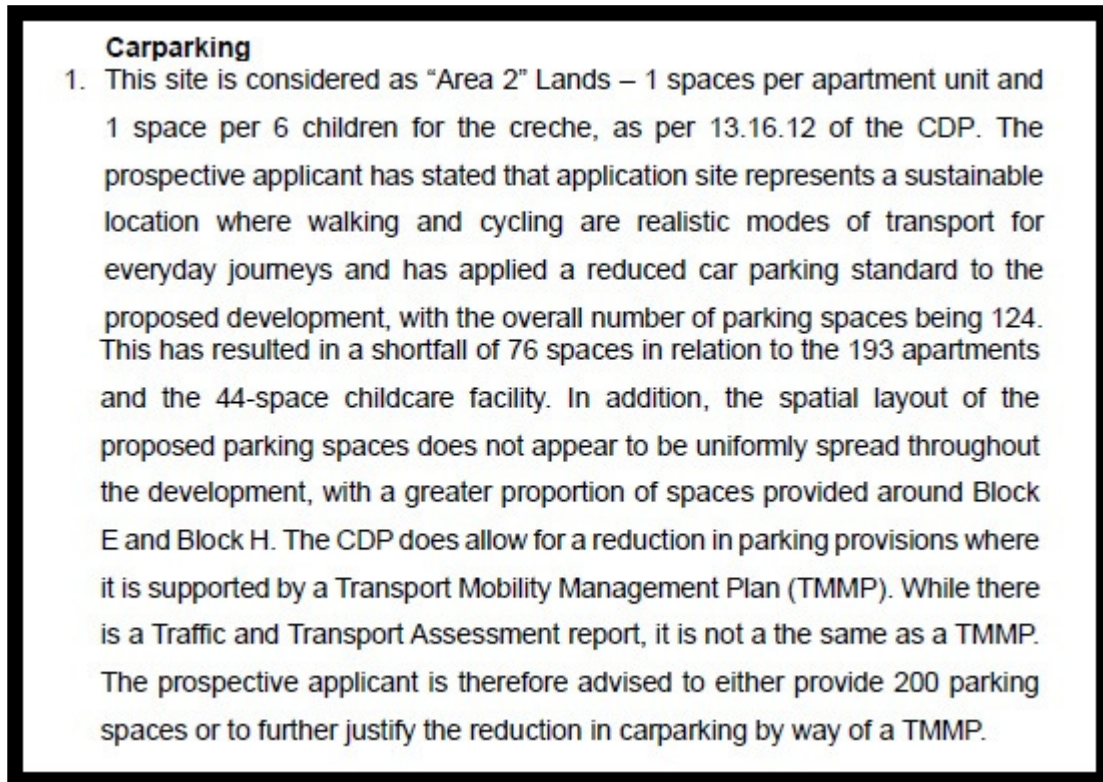


Figure 5.1 – Opinion Extract 1 – Car Parking

5.2 Notwithstanding the content of the CDP, in terms of the Sustainable Residential Development and Compact Settlements Guidelines (2024) (CSG), this site is considered an ‘**Accessible Location**’ (Table 3.8 of the CSG) :

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

5.3 SPPR3 of the CSG (P58) states that in accessible locations car parking provision should be substantially reduced. It states that the **maximum** rate of car parking provision for residential development at these locations, where such provision is justified to the satisfaction of the planning authority, should be 1.5 no. space per dwelling.

5.4 In this case the total number of car parking spaces is 143 No., including 7 No. assigned at the Creche area (with 10 No. accessible spaces and 26 No. EV Spaces). With 194 No. Duplex Units, this represents a car parking ratio of 0.7, and this is considered appropriate in this sustainable location.

5.5 A Preliminary Residential Mobility Management Plan has now been prepared and is included herein as **Appendix H**.

Traffic and Transport Issues, including Layout of Internal Streets

1. The prospective applicant shall accommodate a Bus Stop where the development fronts onto the Regional Road R132 (Dublin Road) along Blocks G & H, as per NTA requirements. There is a requirement also to provide a Bus Shelter at the location of the Bus Stop.

Figure 5.2 – Opinion Extract, Traffic / Transport Item #1

5.6 A **Bus Stop including Shelter** has now been provided on the Regional Road with the proposed design and layout of same being consistent with Detail TL204 (Page 215) of the NTA’s Cycle Design Manual.

Traffic and Transport Issues, including Layout of Internal Streets

2. LCC’s Active Travel Unit currently has a Part 8 Proposal for proposed works on the R132 from the location of the proposed development all the way south to the Xerox Junction. The prospective applicant should make reference to same in any future application.

Figure 5.3 – Opinion Extract, Traffic / Transport Item #2

5.7 The layout and design of the proposed development allows and facilitates the delivery of the Part 8 Active Travel plans for the R132.

Traffic and Transport Issues, including Layout of Internal Streets

3. The prospective applicant shall demonstrate right-turn pockets at both of the proposed junctions serving the development.

Figure 5.4 – Opinion Extract, Traffic / Transport Item #3

5.8 We highlight that DMURS now promotes reduced road widths and shorter crossing distances for Vulnerable Road Users (VRUs) in town centre environments. The unnecessary addition of dedicated right turn pockets has the additional effect of encouraging inappropriate traffic speeds.

5.9 The now superseded pre-DMURS Guidance setting out the requirements for a Right Turn Ghost Island right turn lane were included within Table 4.1 of DNGEO-03060, which is reproduced below for ease of reference as **Figure 5.5**.

Major road AADT	Minor road AADT	
< 5,000	> 600	< 5,000
5,000 - 10,000	> 450	< 3,000
> 10,000	> 300	< 1,500

Note: AADT values provided should only be used as an initial assessment of the most appropriate junction type, the final junction arrangement shall be informed by a detailed analysis of peak hour flows (see Appendix D).

Figure 5.5 – Extract DNGEO-03060, Requirements for Ghost Islands

5.10 In this case the 24Hr AADT on the Regional Road was measured at 11,650 PCUs, and the predicted AADT generated on the minor arms of each junction are 606 at Mourneview Hall and 167 PCUs at the Northern Access. So, even under the old Guidance, there is not a requirement for a ghost Island, using the data in Table 4.1 alone for guidance. However, DNGEO-03060 also recommends design to be based on “**Traffic Analysis by the Designer to assess the capacity based on the projected turning movements at the junction**” (Reference Page 26 of DNGEO-03060).

5.11 In this case, the capacity analysis within Section 4.0, Traffic Analysis consistent with TII Guidelines, clearly shows that a ghost island (or right turn pocket) is not required.

Traffic and Transport Issues, including Layout of Internal Streets

4. There are concerns in relation to the proposed location of the creche at the most northern point of the site. A location closer to the main road R132 is considered desirable.

Figure 5.6 – Opinion Extract, Traffic / Transport Item #4

5.12 The scheme has been redesigned to provide for the Creche adjacent the Regional Road as suggested.

Traffic and Transport, including Layout of Internal Streets
 5. Junctions must comply with DMURS standards, inclusive of the existing Avenue Road Junction. Sightlines shall be achieved, inclusive of the public Bus Stop, that do not adversely affect visibility splays.

Figure 5.7 – Opinion Extract, Traffic / Transport Item #5

5.13 The internal roads and junctions, together with the proposed new access junction onto the Regional Road, are in accordance with the requirements of DMURS.

Traffic and Transport Issues, including Layout of Internal Streets
 6. A comprehensive Road Safety Audit should be submitted as part of any LRD application.

Figure 5.8 – Opinion Extract, Traffic / Transport Item #6

5.14 An independent Road Safety Audit has been undertaken, and this together with the Designer Feedback form is included herein as **Appendix I**.

Traffic and Transport issues, including Layout of Internal Streets
 7. The entrance at the proposed duplexes is lined with perpendicular parking, which is not satisfactory, resulting conflict in traffic movements. The prospective applicant is advised to amend the parking layout in this area.

Figure 5.9 – Opinion Extract, Traffic / Transport Item #7

5.15 The entrance road has been amended as suggested, with the removal and relocation of previously proposed parking to facilitate uninhibited potential queuing of 2-3 cars on exit at the junction, conscious that the modelling shows that such traffic queuing is not expected to occur given the low traffic generated by the scheme.

Traffic and Transport issues, including Layout of Internal Streets
 8. The applicant is advised to make provision for the Bike Share Scheme which is due to become operative in February 2025.

Figure 5.10 – Opinion Extract, Traffic / Transport Item #8

5.16 The proposed Bike Share scheme can be included through agreement with the Operators, once details are available. The layout and design of the development allows for and facilitates such a bike share scheme.

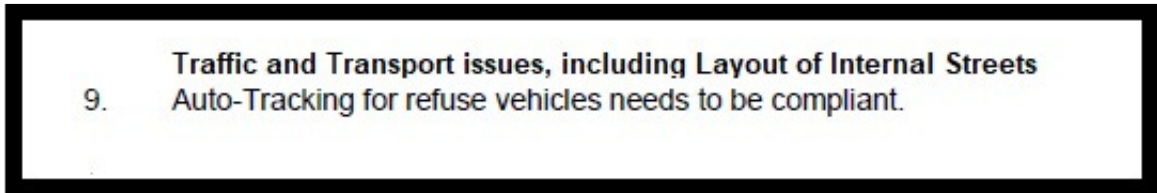


Figure 5.11 – Opinion Extract, Traffic / Transport Item #9

5.17 Swept Path Assessment for Refuse Lorries has been undertaken, with comprehensive drawings demonstrating same provided to the Safety Audit Team and is included within **Appendix A** for ease of reference.

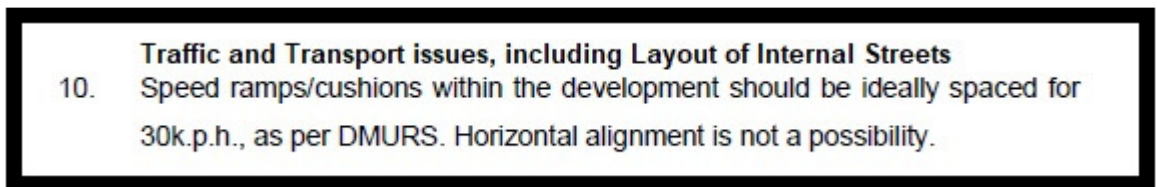


Figure 5.12 – Opinion Extract, Traffic / Transport Item #10

5.18 Appropriate raised table junctions are provided internally, with junction geometry and radii tightened consistent with the requirements of DMURS.

6.0 CONCLUSIONS

- 6.1 NRB Consulting Engineers Ltd were appointed to address the Traffic & Transport impact associated with the construction of a proposed residential development comprising 194 apartment / duplex units on residential zoned lands at Townparks / Hill street, Dublin Rd, Dundalk, Co Louth.
- 6.2 We have assessed the impact of the traffic associated with these proposed elements, together with the established traffic on the adjacent affected road network for the AM Peak and PM Peak Commuter Hours, based on an extensive traffic survey (undertaken by an independent specialist in traffic data collection). The analysis also confirms that there is more than adequate capacity available in the junctions to accommodate any potential future development of further phases.
- 6.3 Vehicular access to the lands is provided by way of a new DMURS compliant simple priority controlled T-junction onto Dublin Rd serving 4 blocks of Apartments (75 No), with additional connectivity to the network by way of the existing Mournview Hall T junction serving the remaining 4 blocks (119 No).
- 6.4 The Traffic & Transport Assessment Report (TA) has been prepared in accordance with the TII's Traffic & Transport Assessment Guidelines and addresses the traffic impact of the proposals. The assessment is based on comprehensive Weekday AM & Weekday PM Peak classified interval turning movement surveys of the local roads carried out during normal school term. (Refer to Traffic Data included as **Appendix B**).
- 6.5 The Report & analysis includes an assessment of impact of the proposed development traffic during the selected Opening Year 2026 together with an assessment of the Design Year 2041 (15 years following opening), in accordance with normal practice.
- 6.6 Whilst we have selected an opening year of 2026, it should be noted that, if required, minor changes of 2-3 years in the choice of opening or design year would have no effect on the conclusions of this study.
- 6.7 The TA confirms that the proposed new site access junction and the established Mournview Hall junction are more than adequate to accommodate the worst-case traffic associated with the entire development being occupied and operational. The assessment also confirms that the full occupation of the scheme will have a small and unnoticeable impact upon the operation of the adjacent local road network.

- 6.8 The site is ideally located in terms of the promotion of active travel and in particular cycling, being surrounded by Urban Primary Cycle network as per the NTA Cycle Plans for the town (***Refer Appendix G***).
- 6.9 We have prepared and included a Preliminary Mobility Management Plan as ***Appendix H*** and this includes details of the sustainable modes of travel available at the site. An independent Stage 1 Road Safety / Quality Audit of the scheme was also undertaken and this report, together with the associated Designer Feedback Form is included as ***Appendix I***.
- 6.10 Based on our studies, we conclude that there are no adverse traffic/transportation capacity or operational issues associated with the construction and occupation of the proposed development that would prevent a positive determination of the planning application by Louth County Council (LCC).

APPENDICES - CONTENT

A	Proposed Development – Site Layout Plan / Access Arrangement
B	Original Raw Traffic Survey Output Data
C	TRICS Output Data – Housing/Duplex & Apartments
D	Traffic Calculations, Trip Distribution, Network Traffic Flow Diagrams & Projections
E	PiCADY Capacity Modelling – Northern Site Access Priority Junction
F	PiCADY Capacity Modelling – Existing Mourneview Priority Junction
G	Dundalk – Proposed Urban Cycle Network Plan (Aecom/NTA)
H	Preliminary Mobility Management Plan (Travel Plan)
I	Stage 1 Independent Road Safety / Quality Audit

APPENDIX A

**Proposed Development
Site Layout Plan / Access / TRACKS**



SIGHTLINE
A-B = 50M
A-C = 50M

PROPOSED BUS SHELTER LAYOUT TO BE IN ACCORDANCE WITH TL202 OF THE CYCLE DESIGN MANUAL

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 5501-DWC- P003 - Proposed Site Plan-08Jan-2025, received 08/01/25. NRB Consulting Engineers Ltd shall not be liable for any inaccuracies or deficiencies.

REV	DATE	AMENDMENTS	DRAWN	CHK	APP

NRB Consulting Engineers Ltd
5th Floor
40 Mespil Road
Dublin 4
D04 C2N4

Phone: +353 1 292 1941
Email: info@nrb.ie
Web: www.nrb.ie
Registered in Ireland No. 491679



Client			
Project	Hill Street Dundalk		
Title	Proposed Development Layout		
NRB Consulting Engineers Ltd accept no responsibility for any unauthorised amendments to this drawing. Only figured dimensions to be worked to.			

Project No.	23-047		Drawing No.	NRB-TA-001	
Drawn	Checked	Approved			
CD	PB 15/01/25	PB 15/01/25		PB 15/01/25	
Date	15-Jan-25		Scale @ A3	1:1000	
					Rev C
Purpose of Issue			<input type="checkbox"/> Draft	<input type="checkbox"/> Information	<input type="checkbox"/> Approval
			<input type="checkbox"/> As Built	<input type="checkbox"/> Tender	<input type="checkbox"/> Construction

COPYRIGHT © RESERVED

PROPOSED TRAFFIC SIGNS:



S1

- proposed STOP sign RUS 027 per the Traffic Signs Manual



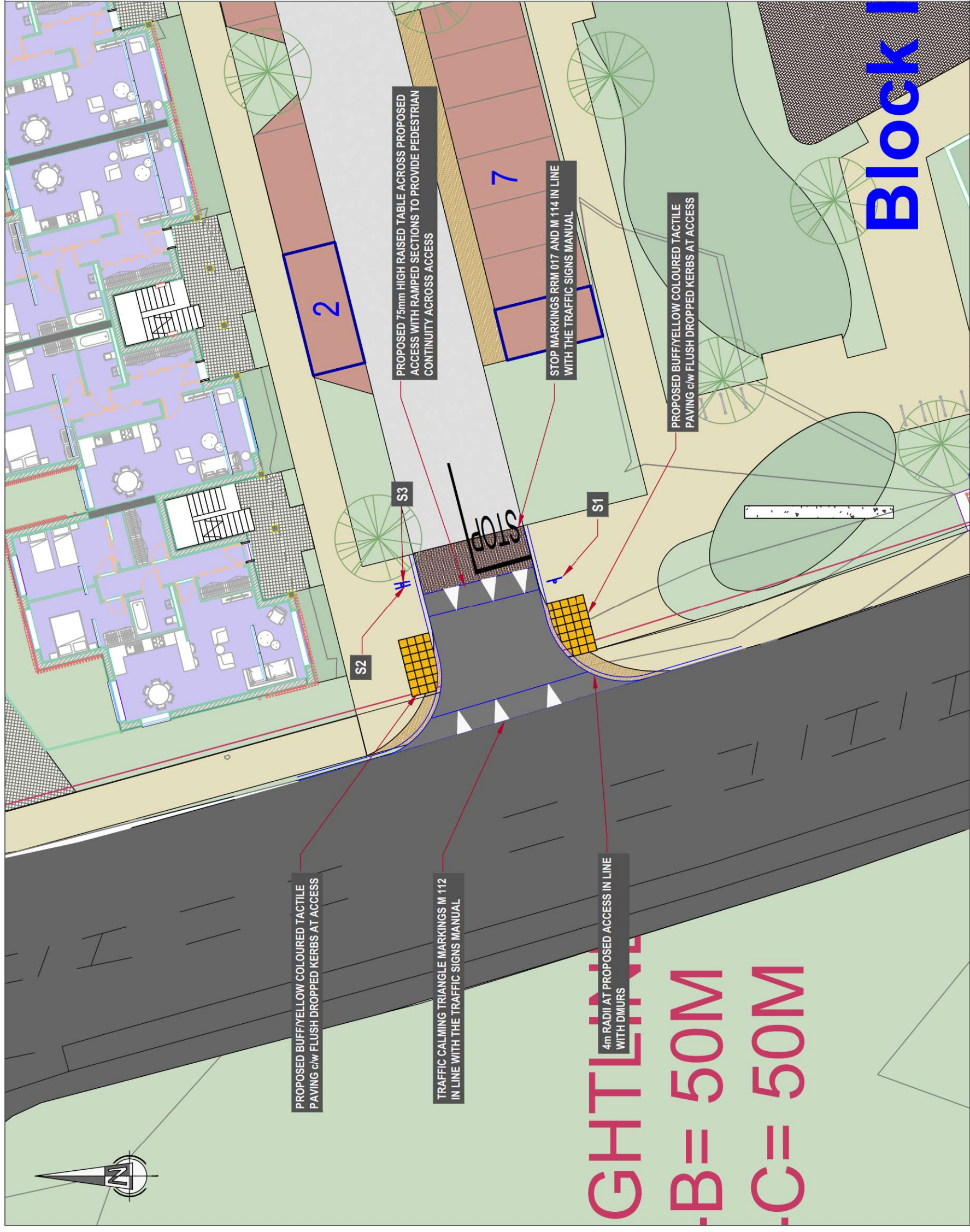
S2

- proposed SLOW ZONE sign F 403 per the Traffic Signs Manual



S3

- proposed 50km/h speed limit sign RUS 043 per the Traffic Signs Manual



REV	DATE	AMENDMENTS	DRAWN	CHK	APP

NRB Consulting Engineers Ltd
 5th Floor
 40 Mespill Road
 Dublin 4
 D04 C2N4
 Phone: +353 1 292 1941
 Email: info@nrbe.ie
 Web: www.nrbe.ie
 Registered in Ireland No. 491679

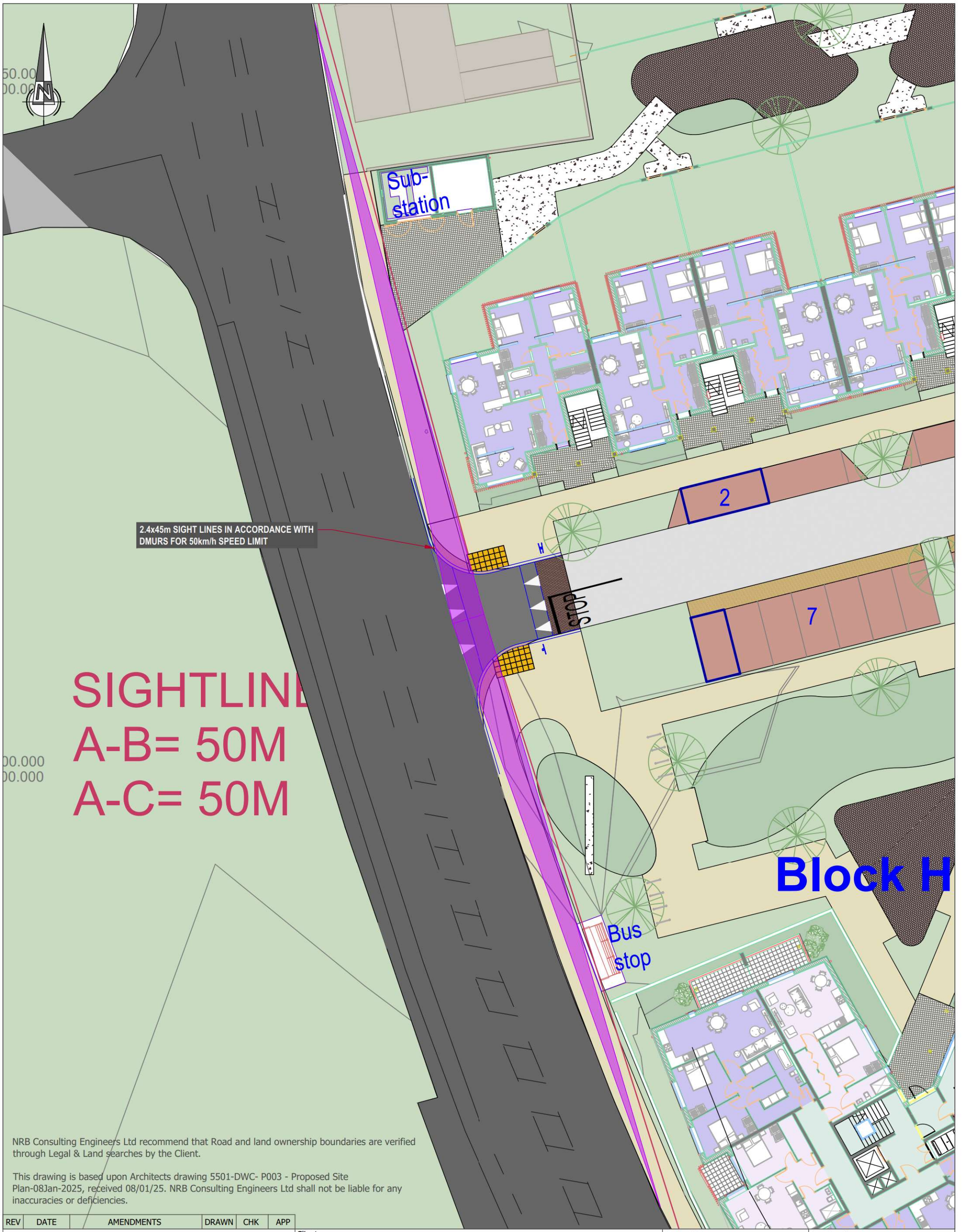
NRB consulting engineers

copyright © reserved

Client: Hill Street Dundalk
 Project: Proposed Development Access 01 Details
 Title: Proposed Development Access 01 Details

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

Project No.	23-047	Drawing No.	NRB-TA-002
Drawn	CD	Checked	PB
Date	15-Jan-25	Approved	PB
Scale @ A3	1:200	Rev	C
Purpose of Issue	<input type="checkbox"/> Draft <input type="checkbox"/> As Built	Information	<input type="checkbox"/> Approval <input type="checkbox"/> Construction
		Date	15/01/25



2.4x45m SIGHT LINES IN ACCORDANCE WITH DMURS FOR 50km/h SPEED LIMIT

SIGHTLINE
A-B= 50M
A-C= 50M

Block H

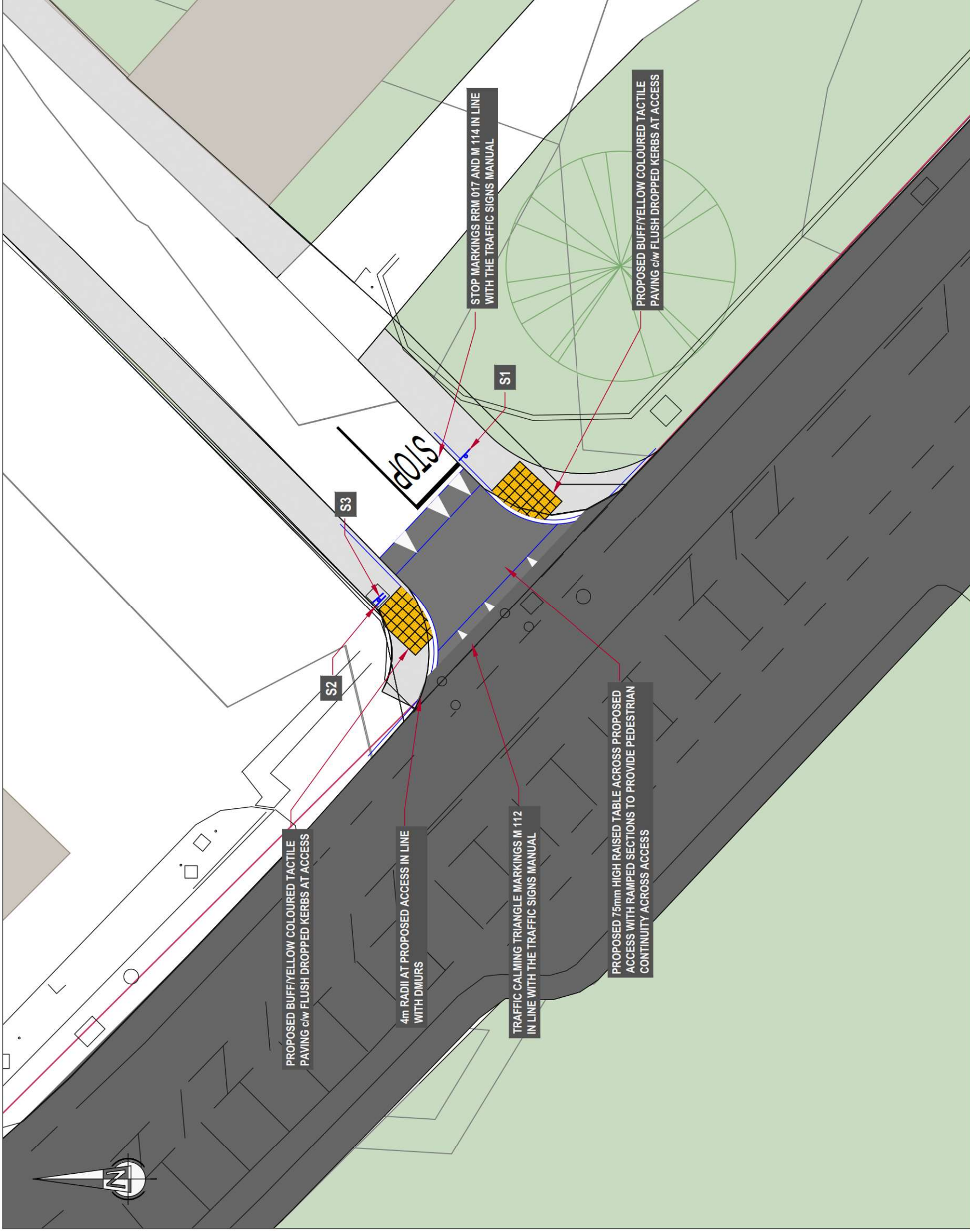
NRB Consulting Engineers Ltd recommend that Road and land ownership boundaries are verified through Legal & Land searches by the Client.

This drawing is based upon Architects drawing 5501-DWC- P003 - Proposed Site Plan-08Jan-2025, received 08/01/25. NRB Consulting Engineers Ltd shall not be liable for any inaccuracies or deficiencies.

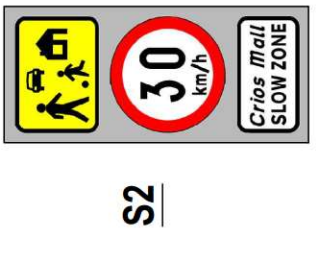
REV	DATE	AMENDMENTS	DRAWN	CHK	APP
<p>NRB Consulting Engineers Ltd 5th Floor 40 Mespil Road Dublin 4 D04 C2N4</p> <p>Phone: +353 1 292 1941 Email: info@nrb.ie Web: www.nrb.ie Registered in Ireland No. 491679</p>					



Client	Project No. 23-047	Drawing No. NRB-TA-003
Project Hill Street Dundalk	Drawn CD	Checked PB 15/01/25
Title Proposed Development Access 01 Sight Lines	Date 15-Jan-25	Approved PB 15/01/25
NRB Consulting Engineers Ltd accept no responsibility for any unauthorised amendments to this drawing. Only figured dimensions to be worked to.	Purpose of Issue	Scale @ A3 1:250
	<input type="checkbox"/> Draft <input type="checkbox"/> As Built	<input type="checkbox"/> Information <input type="checkbox"/> Tender
		<input type="checkbox"/> Approval <input type="checkbox"/> Construction



PROPOSED TRAFFIC SIGNS:



REV	DATE	AMENDMENTS	DRAWN	CHK	APP

NRB Consulting Engineers Ltd
 5th Floor
 40 Mesplil Road
 Dublin 4
 D04 C2N4
 Phone: +353 1 292 1941
 Email: info@nrb.ie
 Web: www.nrb.ie
 Registered in Ireland No. 491679

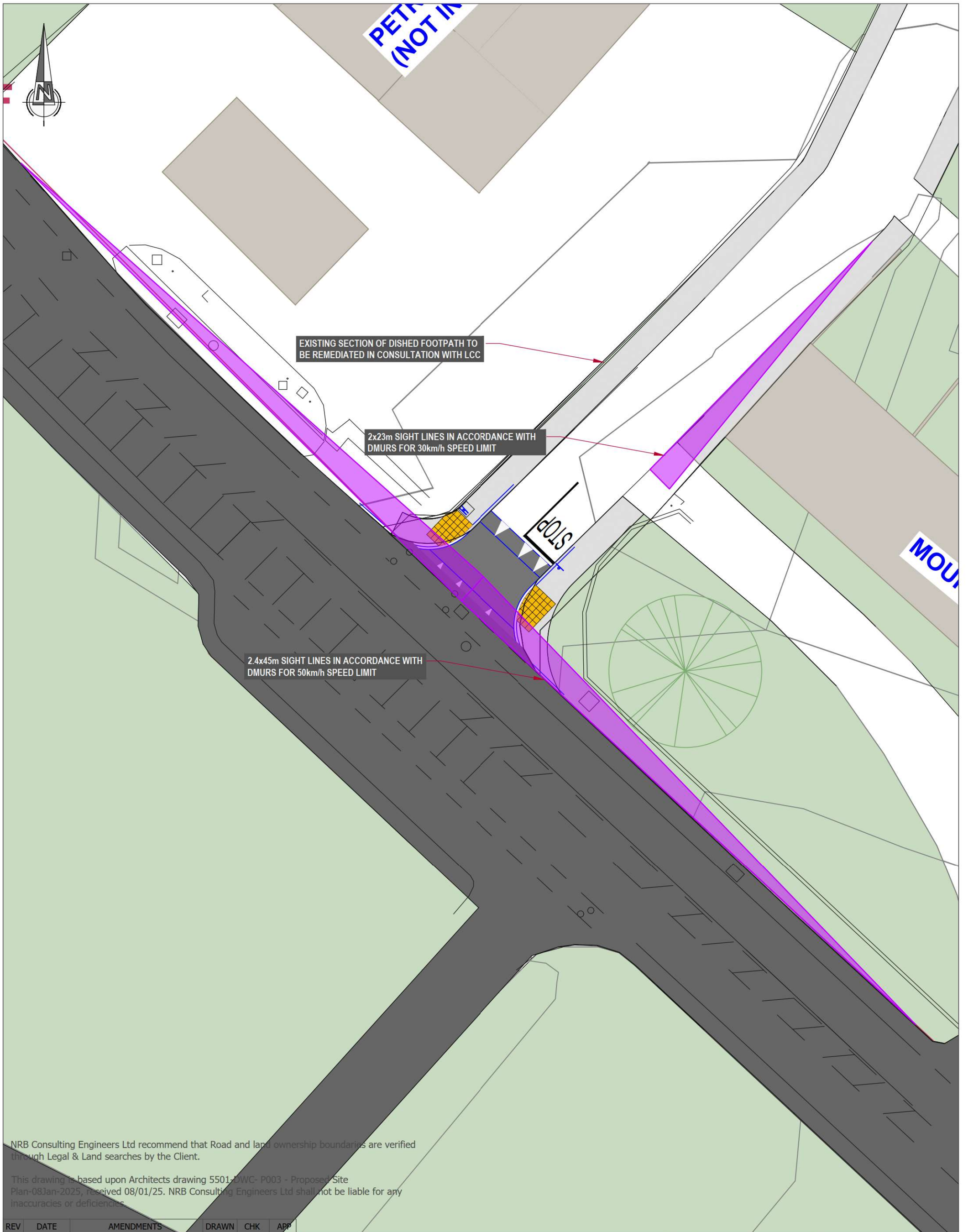
NRB consulting engineers

copyright © reserved

Client: Hill Street Dundalk
 Project: Proposed Development Access 02 Details
 Title: Proposed Development Access 02 Details

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

Project No.	23-047	Drawing No.	NRB-TA-004
Drawn	CD	Checked	PB
Date	15-Jan-25	Approved	PB
Scale @ A3	1:200	Scale @ A3	15/01/25
Purpose of Issue	<input type="checkbox"/> Draft <input type="checkbox"/> As Built <input type="checkbox"/> Information <input type="checkbox"/> Tender <input type="checkbox"/> Approval <input type="checkbox"/> Construction	Rev	C



EXISTING SECTION OF DISHED FOOTPATH TO BE REMEDIATED IN CONSULTATION WITH LCC

2x23m SIGHT LINES IN ACCORDANCE WITH DMURS FOR 30km/h SPEED LIMIT

2.4x45m SIGHT LINES IN ACCORDANCE WITH DMURS FOR 50km/h SPEED LIMIT

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 5501-DWC- P003 - Proposed Site Plan-08Jan-2025, received 08/01/25. NRB Consulting Engineers Ltd shall not be liable for any inaccuracies or deficiencies.

REV	DATE	AMENDMENTS	DRAWN	CHK	APP
-----	------	------------	-------	-----	-----

Client	
Project	Hill Street Dundalk
Title	Proposed Development Access 02 Sight Lines

Project No.	23-047	Drawing No.	NRB-TA-005
Drawn	CD	Checked	PB 15/01/25
Date	15-Jan-25	Approved	PB 15/01/25
		Scale @ A3	1:250
		Rev	C

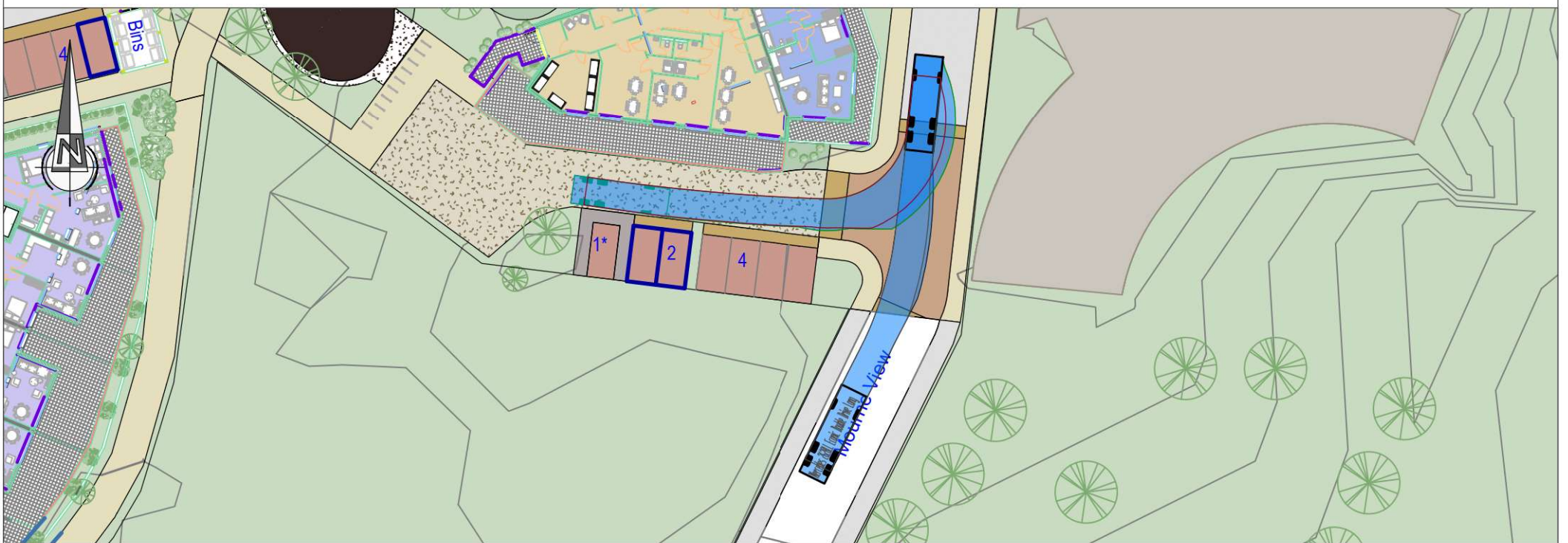
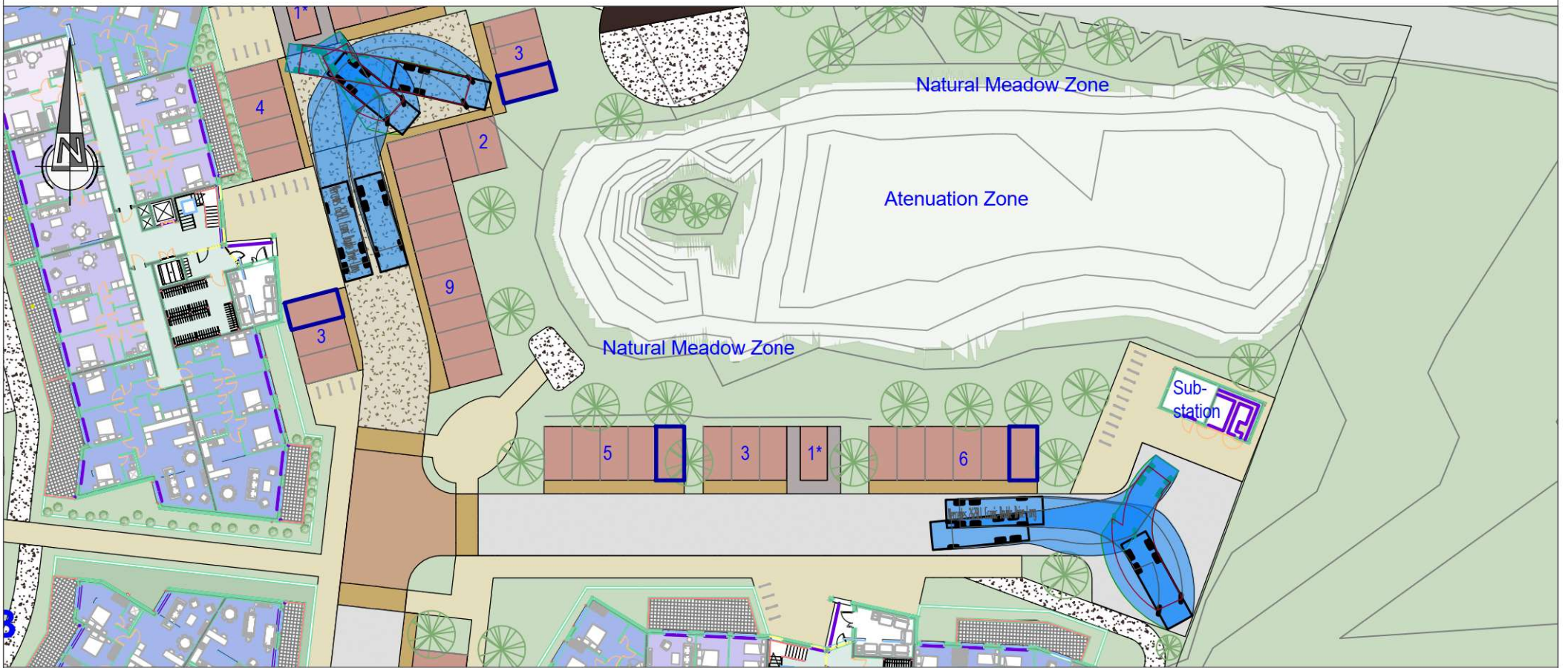
NRB Consulting Engineers Ltd accept no responsibility for any unauthorised amendments to this drawing. Only figured dimensions to be worked to.

Purpose of Issue	<input type="checkbox"/> Draft	<input type="checkbox"/> Information	<input type="checkbox"/> Approval
	<input type="checkbox"/> As Built	<input type="checkbox"/> Tender	<input type="checkbox"/> Construction

NRB Consulting Engineers Ltd
 5th Floor
 40 Mespil Road
 Dublin 4
 D04 C2N4
 Phone: +353 1 292 1941
 Email: info@nrb.ie
 Web: www.nrb.ie
 Registered in Ireland No. 491679



COPYRIGHT © RESERVED



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 5501-DWC- P003 - Proposed Site Plan-08Jan-2025, received 08/01/25. NRB Consulting Engineers Ltd shall not be liable for any inaccuracies or deficiencies.

NOTE:

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

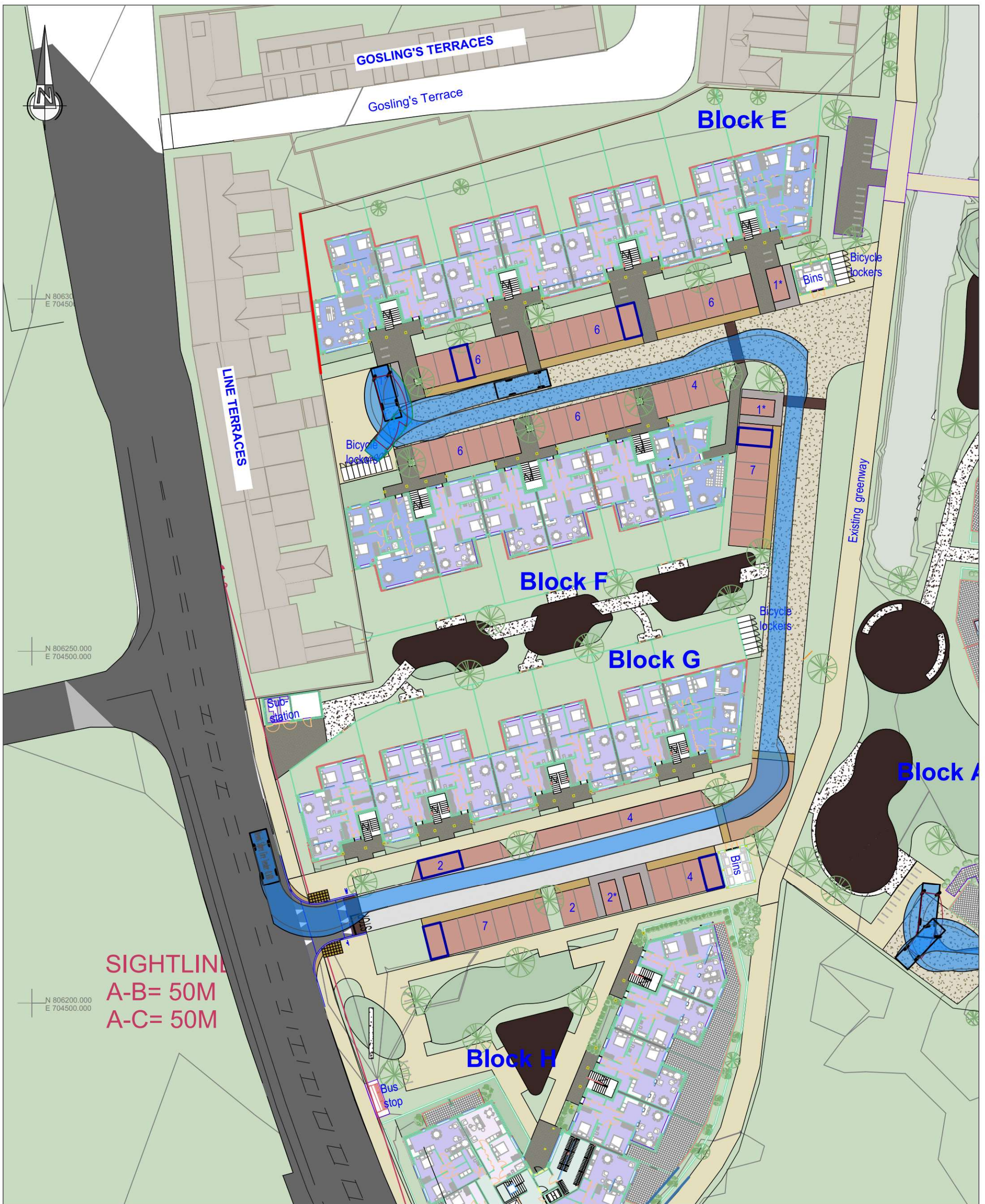
REV	DATE	AMENDMENTS	DRAWN	CHK	APP

NRB Consulting Engineers Ltd
5th Floor
40 Mespil Road
Dublin 4
D04 C2N4

Phone: +353 1 292 1941
Email: info@nrb.ie
Web: www.nrb.ie
Registered in Ireland No. 491679

© COPYRIGHT RESERVED

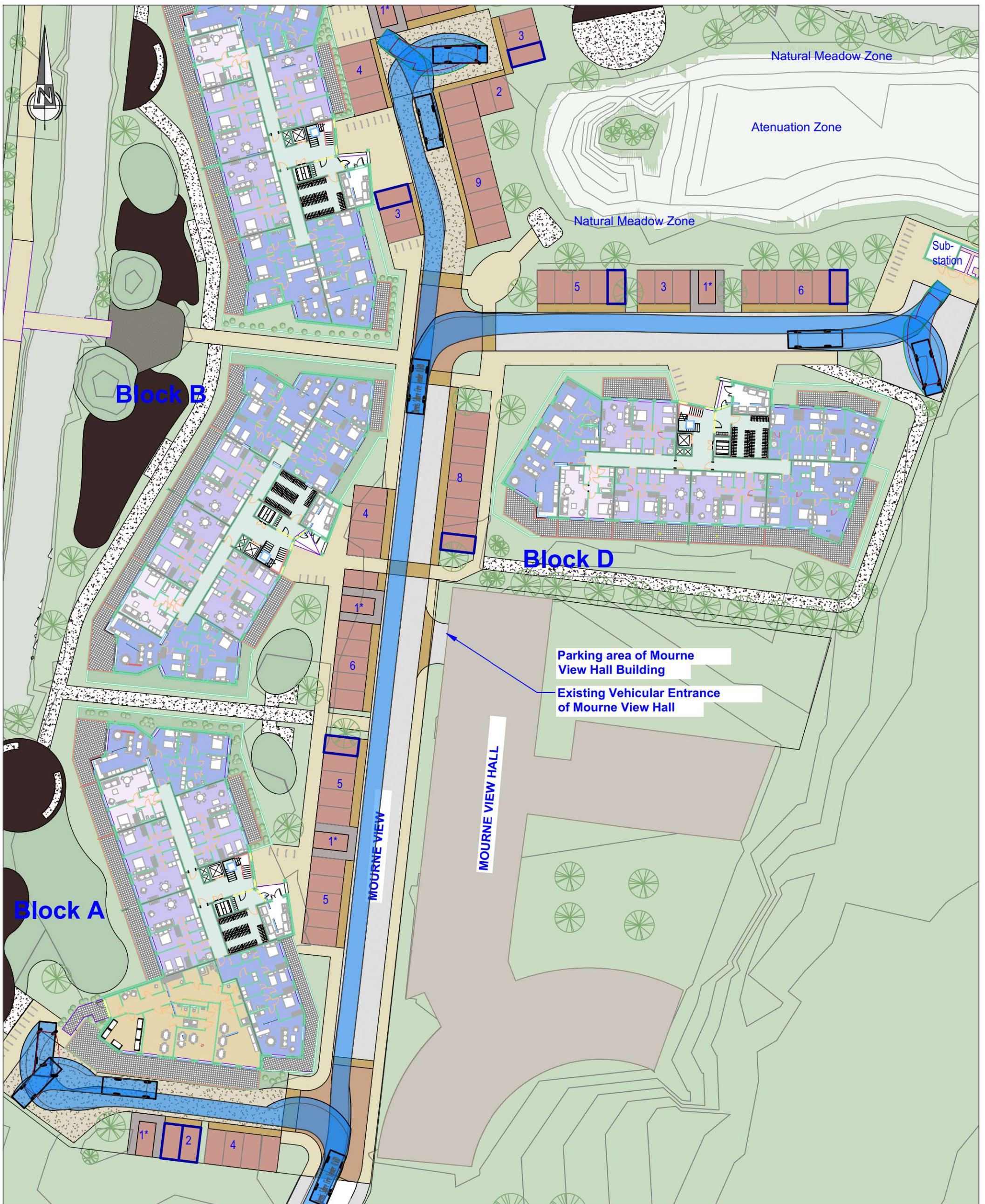
Client	Project No. 23-047	Drawing No. NRB-TA-006
Project Hill Street Dundalk	Drawn CD	Checked PB 15/01/25
Title Refuse Vehicle AutoTRACKS	Date 15-Jan-25	Approved PB 15/01/25
<small>NRB Consulting Engineers Ltd accept no responsibility for any unauthorised amendments to this drawing. Only figured dimensions to be worked to.</small>		Scale @ A3 1:500 Rev C
Purpose of Issue <input type="checkbox"/> Draft <input type="checkbox"/> Information <input type="checkbox"/> Approval <input type="checkbox"/> As Built <input type="checkbox"/> Tender <input type="checkbox"/> 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 5501-DWC- P003 - Proposed Site Plan-08Jan-2025, received 08/01/25. NRB Consulting Engineers Ltd shall not be liable for any inaccuracies or deficiencies.

REV	DATE	AMENDMENTS	DRAWN	CHK	APP										
NRB Consulting Engineers Ltd 5th Floor 40 Mespil Road Dublin 4 D04 C2N4 Phone: +353 1 292 1941 Email: info@nrb.ie Web: www.nrb.ie Registered in Ireland No. 491679						Client		Project No. 23-047		Drawing No. NRB-TA-007					
						Project Hill Street Dundalk		Drawn CD		Checked PB 15/01/25		Approved PB 15/01/25			
						Title Fire Tender AutoTRACKs 1 of 2		Date 15-Jan-25		Scale @ A3 1:500		Rev C			
						NRB Consulting Engineers Ltd accept no responsibility for any unauthorised amendments to this drawing. Only figured dimensions to be worked to.						Purpose of Issue		<input type="checkbox"/> Draft <input type="checkbox"/> Information <input type="checkbox"/> Approval <input type="checkbox"/> As Built <input type="checkbox"/> Tender <input type="checkbox"/> Construction	



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

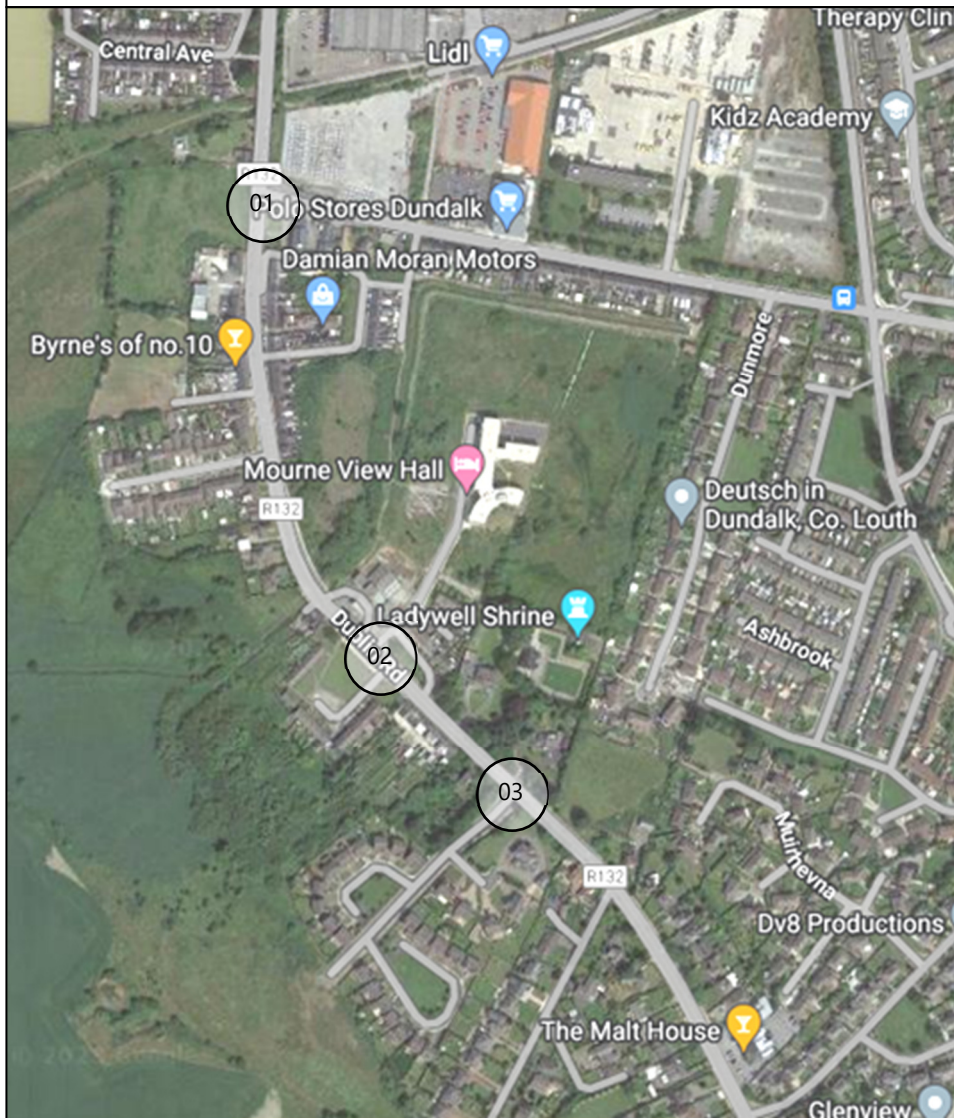
This drawing is based upon Architects drawing 5501-DWC- P003 - Proposed Site Plan-08Jan-2025, received 08/01/25. NRB Consulting Engineers Ltd shall not be liable for any inaccuracies or deficiencies.

REV	DATE	AMENDMENTS	DRAWN	CHK	APP												
NRB Consulting Engineers Ltd 5th Floor 40 Mespil Road Dublin 4 D04 C2N4 Phone: +353 1 292 1941 Email: info@nrb.ie Web: www.nrb.ie Registered in Ireland No. 491679						NRB consulting engineers		Client		Project No. 23-047		Drawing No. NRB-TA-008					
						Project Hill Street Dundalk		Drawn CD		Checked PB 15/01/25		Approved PB 15/01/25					
						Title Fire Tender AutoTRACKs 2 of 2		Date 15-Jan-25		Scale @ A3 1:500		Rev C					
						NRB Consulting Engineers Ltd accept no responsibility for any unauthorised amendments to this drawing. Only figured dimensions to be worked to.						Purpose of Issue <input type="checkbox"/> Draft <input type="checkbox"/> As Built		<input type="checkbox"/> Information <input type="checkbox"/> Tender		<input type="checkbox"/> Approval <input type="checkbox"/> Construction	

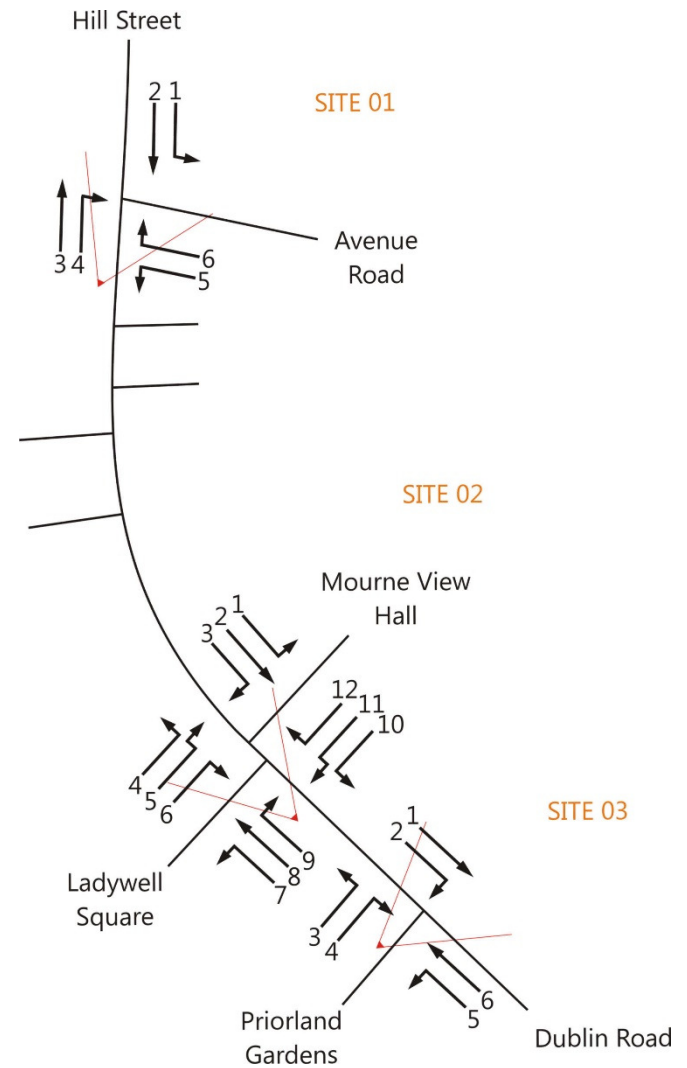
APPENDIX B

**Raw Classified Interval Turning Movement
Traffic Survey Output Data**

Site Locations



Movement Numbers



Job number:
TRA/23/126

Client:
NRB Consulting Engineers

Job Date:
25th May 2023

Job Day:
Thursday

Drawing No:
TRA/23/126-01

Map of Survey
Details



TRAFFINOMICS LIMITED

**DUNDALK TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION TURNING COUNTS**

**MAY 2023
TRA/23/126**

SITE: 01

DATE: 25th May 2023

LOCATION: Hill Street/Dublin Road/Avenue Road

DAY: Thursday

TIME	MOVEMENT 1							TOT	PCU	MOVEMENT 2							TOT	PCU	MOVEMENT 3							TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS	PCL			MCL	CAR	LGV	HGV	BUS	PCL	MCL			CAR	LGV	HGV	BUS					
07:30	0	0	12	5	0	1	18	19	3	0	60	5	2	1	71	72	3	1	29	6	3	2	44	46			
07:45	1	0	22	8	0	1	32	32	4	0	64	14	3	2	87	89	3	0	79	4	2	7	95	102			
H/TOT	1	0	34	13	0	2	50	51	7	0	124	19	5	3	158	160	6	1	108	10	5	9	139	148			
08:00	2	1	32	9	1	0	45	44	3	0	64	8	2	3	80	83	5	0	98	8	3	6	120	125			
08:15	1	0	20	7	0	0	28	27	6	0	86	11	1	3	107	106	4	0	123	2	1	2	132	132			
08:30	1	0	25	2	1	2	31	33	5	0	88	15	3	4	115	118	10	0	129	6	1	10	156	159			
08:45	0	0	22	8	0	2	32	34	5	0	106	13	1	3	128	128	4	0	114	11	0	4	133	134			
H/TOT	4	1	99	26	2	4	136	138	19	0	344	47	7	13	430	435	23	0	464	27	5	22	541	550			
09:00	0	0	29	2	1	3	35	39	4	1	104	7	0	4	120	120	0	0	130	11	5	5	151	161			
09:15	0	0	28	4	1	2	35	38	4	0	101	8	1	2	116	116	0	0	101	15	3	3	122	128			
09:30	1	0	31	11	1	2	46	48	2	0	82	4	4	2	94	98	1	0	110	21	0	3	135	137			
09:45	0	0	31	8	1	1	41	43	1	0	70	11	0	1	83	83	1	0	96	9	1	5	112	117			
H/TOT	1	0	119	25	4	8	157	168	11	1	357	30	5	9	413	418	2	0	437	56	9	16	520	543			
P/TOT	6	1	252	64	6	14	343	358	37	1	825	96	17	25	1001	1013	31	1	1009	93	19	47	1200	1241			

TIME	MOVEMENT 1							TOT	PCU	MOVEMENT 2							TOT	PCU	MOVEMENT 3							TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS	PCL			MCL	CAR	LGV	HGV	BUS	PCL	MCL			CAR	LGV	HGV	BUS					
16:00	0	0	41	3	1	3	48	52	3	0	79	6	1	2	91	92	4	0	102	11	1	4	122	124			
16:15	0	0	38	7	1	0	46	47	3	0	82	4	0	10	99	107	5	0	96	13	0	4	118	118			
16:30	0	0	46	4	0	1	51	52	4	2	74	9	0	4	93	93	7	0	114	6	1	2	130	127			
16:45	0	0	37	7	1	1	46	48	5	0	69	9	1	1	85	83	7	1	111	17	1	1	138	134			
H/TOT	0	0	162	21	3	5	191	199	15	2	304	28	2	17	368	374	23	1	423	47	3	11	508	503			
17:00	0	0	39	8	1	1	49	51	1	0	107	4	0	2	114	115	6	1	128	12	0	3	150	148			
17:15	0	0	43	3	1	1	48	50	3	0	103	4	0	1	111	110	5	0	122	12	1	3	143	143			
17:30	0	0	33	1	0	1	35	36	5	0	73	2	0	2	82	80	7	1	100	10	1	2	121	118			
17:45	1	1	24	2	2	0	30	31	6	0	66	3	1	0	76	72	8	0	79	8	0	2	97	93			
H/TOT	1	1	139	14	4	3	162	168	15	0	349	13	1	5	383	377	26	2	429	42	2	10	511	501			
18:00	0	0	40	2	0	1	43	44	5	0	100	4	2	1	112	111	4	0	116	6	0	3	129	129			
18:15	0	0	28	2	1	1	32	34	3	0	88	6	1	2	100	101	6	0	102	5	1	2	116	114			
H/TOT	0	0	68	4	1	2	75	78	8	0	188	10	3	3	212	212	10	0	218	11	1	5	245	243			
P/TOT	1	1	369	39	8	10	428	445	38	2	841	51	6	25	963	962	59	3	1070	100	6	26	1264	1247			

TRAFFINOMICS LIMITED

**DUNDALK TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION TURNING COUNTS**

**MAY 2023
TRA/23/126**

SITE: 01

DATE: 25th May 2023

LOCATION: Hill Street/Dublin Road/Avenue Road

DAY: Thursday

TIME	MOVEMENT 4							TOT	PCU	MOVEMENT 5							TOT	PCU	MOVEMENT 6							TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS	PCL			MCL	CAR	LGV	HGV	BUS	PCL	MCL			CAR	LGV	HGV	BUS					
07:30	0	0	9	0	1	0	10	11	1	1	9	2	2	2	17	20	1	0	27	5	0	2	35	36			
07:45	0	0	10	5	1	1	17	19	0	0	13	0	0	0	13	13	0	0	34	3	1	1	39	41			
H/TOT	0	0	19	5	2	1	27	30	1	1	22	2	2	2	30	33	1	0	61	8	1	3	74	77			
08:00	0	0	6	4	1	0	11	12	0	0	9	1	2	3	15	20	0	0	30	6	1	3	40	44			
08:15	1	1	24	2	1	1	30	31	0	0	16	4	1	1	22	24	1	0	51	7	1	0	60	60			
08:30	0	0	28	1	1	0	30	31	0	0	21	2	1	1	25	27	0	0	67	10	1	2	80	83			
08:45	0	0	16	4	0	2	22	24	0	0	31	3	2	0	36	38	0	0	57	6	1	3	67	71			
H/TOT	1	1	74	11	3	3	93	98	0	0	77	10	6	5	98	109	1	0	205	29	4	8	247	258			
09:00	0	0	24	2	0	1	27	28	0	0	27	1	0	2	30	32	0	0	52	11	2	2	67	71			
09:15	0	0	19	0	1	1	21	23	0	0	13	4	0	1	18	19	1	0	43	7	2	1	54	56			
09:30	0	0	18	0	1	0	19	20	0	0	14	4	2	0	20	22	2	0	31	11	1	1	46	46			
09:45	0	0	15	1	3	1	20	24	0	0	10	2	0	0	12	12	0	1	34	11	0	0	46	45			
H/TOT	0	0	76	3	5	3	87	95	0	0	64	11	2	3	80	85	3	1	160	40	5	4	213	219			
P/TOT	1	1	169	19	10	7	207	223	1	1	163	23	10	10	208	227	5	1	426	77	10	15	534	554			

TIME	MOVEMENT 4							TOT	PCU	MOVEMENT 5							TOT	PCU	MOVEMENT 6							TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS	PCL			MCL	CAR	LGV	HGV	BUS	PCL	MCL			CAR	LGV	HGV	BUS					
16:00	0	0	23	4	2	1	30	33	1	0	49	1	0	3	54	56	0	0	41	4	1	0	46	47			
16:15	0	0	22	3	0	0	25	25	0	0	36	4	1	0	41	42	0	2	54	10	1	0	67	67			
16:30	0	0	19	5	0	1	25	26	0	0	23	3	3	1	30	34	0	0	49	12	3	1	65	69			
16:45	0	0	16	0	0	2	18	20	0	0	22	4	1	0	27	28	0	0	45	6	0	0	51	51			
H/TOT	0	0	80	12	2	4	98	104	1	0	130	12	5	4	152	160	0	2	189	32	5	1	229	234			
17:00	0	0	23	2	0	2	27	29	1	0	39	4	0	1	45	45	1	0	57	7	1	0	66	66			
17:15	0	0	21	3	0	0	24	24	0	0	43	1	1	0	45	46	0	0	58	9	0	0	67	67			
17:30	0	0	15	1	0	1	17	18	1	1	35	1	0	0	38	37	0	0	45	5	1	0	51	52			
17:45	0	0	10	0	0	1	11	12	0	0	25	2	0	0	27	27	0	0	40	7	0	0	47	47			
H/TOT	0	0	69	6	0	4	79	83	2	1	142	8	1	1	155	155	1	0	200	28	2	0	231	232			
18:00	0	0	16	2	0	1	19	20	0	0	23	1	0	1	25	26	0	0	56	5	1	2	64	67			
18:15	0	0	19	2	2	1	24	27	1	0	40	4	0	0	45	44	0	0	61	5	1	0	67	68			
H/TOT	0	0	35	4	2	2	43	47	1	0	63	5	0	1	70	70	0	0	117	10	2	2	131	135			
P/TOT	0	0	184	22	4	10	220	234	4	1	335	25	6	6	377	385	1	2	506	70	9	3	591	601			

TRAFFINOMICS LIMITED

**DUNDALK TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION TURNING COUNTS**

**MAY 2023
TRA/23/126**

SITE: 02

DATE: 25th May 2023

LOCATION: Dublin Road/Ladywell Square/Mourne View Hall

DAY: Thursday

TIME	MOVEMENT 1							TOT	PCU	MOVEMENT 2							TOT	PCU	MOVEMENT 3							TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS	PCL			MCL	CAR	LGV	HGV	BUS	PCL	MCL			CAR	LGV	HGV	BUS					
07:30	0	0	1	0	0	0	1	1	5	0	75	5	5	3	93	97	0	0	0	0	0	0	0	0			
07:45	0	0	0	0	0	0	0	0	6	0	76	16	3	2	103	103	0	0	0	0	0	0	0	0			
H/TOT	0	0	1	0	0	0	1	1	11	0	151	21	8	5	196	200	0	0	0	0	0	0	0	0			
08:00	0	0	0	0	0	0	0	0	2	0	72	8	4	7	93	102	0	0	0	0	0	0	0	0			
08:15	0	0	0	0	0	0	0	0	6	0	103	17	2	3	131	131	0	0	1	0	0	0	1	1			
08:30	0	0	0	0	0	0	0	0	5	0	113	19	3	6	146	151	1	0	0	0	0	0	1	0			
08:45	0	0	2	0	0	0	2	2	5	0	120	16	2	3	146	147	0	0	0	0	0	0	0	0			
H/TOT	0	0	2	0	0	0	2	2	18	0	408	60	11	19	516	532	1	0	1	0	0	0	2	1			
09:00	0	0	0	0	0	0	0	0	4	1	125	6	0	5	141	142	0	0	0	0	0	0	0	0			
09:15	0	0	0	0	0	0	0	0	4	0	109	10	1	3	127	128	0	0	0	0	0	0	0	0			
09:30	0	0	0	0	0	0	0	0	2	0	88	8	6	2	106	112	0	0	1	0	0	0	1	1			
09:45	0	0	1	0	0	0	1	1	1	0	84	13	1	1	100	101	0	0	0	1	0	0	1	1			
H/TOT	0	0	1	0	0	0	1	1	11	1	406	37	8	11	474	484	0	0	1	1	0	0	2	2			
P/TOT	0	0	4	0	0	0	4	4	40	1	965	118	27	35	1186	1215	1	0	2	1	0	0	4	3			

TIME	MOVEMENT 1							TOT	PCU	MOVEMENT 2							TOT	PCU	MOVEMENT 3							TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS	PCL			MCL	CAR	LGV	HGV	BUS	PCL	MCL			CAR	LGV	HGV	BUS					
16:00	0	0	1	0	0	0	1	1	5	0	123	8	1	5	142	144	0	0	0	0	0	0	0	0			
16:15	0	0	0	0	0	0	0	0	3	0	104	6	2	10	125	135	0	0	0	0	0	0	0	0			
16:30	0	0	0	0	0	0	0	0	4	2	93	12	3	5	119	123	0	0	1	0	0	0	1	1			
16:45	0	0	2	0	0	0	2	2	4	0	89	11	3	1	108	109	0	0	0	1	0	0	1	1			
H/TOT	0	0	3	0	0	0	3	3	16	2	409	37	9	21	494	510	0	0	1	1	0	0	2	2			
17:00	0	0	1	0	0	0	1	1	3	0	125	5	0	3	136	137	0	0	0	0	0	0	0	0			
17:15	1	0	0	0	0	0	1	0	3	0	118	5	0	1	127	126	0	0	0	0	0	0	0	0			
17:30	0	0	1	0	0	0	1	1	7	0	139	4	1	2	153	150	0	0	0	0	0	0	0	0			
17:45	0	0	0	0	0	0	0	0	8	0	100	6	0	0	114	108	0	0	1	0	0	0	1	1			
H/TOT	1	0	2	0	0	0	3	2	21	0	482	20	1	6	530	520	0	0	1	0	0	0	1	1			
18:00	0	0	0	0	0	0	0	0	6	0	119	5	2	2	134	133	0	0	0	0	0	0	0	0			
18:15	0	0	0	0	0	0	0	0	2	0	129	12	0	1	144	143	0	0	0	0	0	0	0	0			
H/TOT	0	0	0	0	0	0	0	0	8	0	248	17	2	3	278	277	0	0	0	0	0	0	0	0			
P/TOT	1	0	5	0	0	0	6	5	45	2	1139	74	12	30	1302	1307	0	0	2	1	0	0	3	3			

TRAFFINOMICS LIMITED

**DUNDALK TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION TURNING COUNTS**

**MAY 2023
TRA/23/126**

SITE: 02

DATE: 25th May 2023

LOCATION: Dublin Road/Ladywell Square/Mourne View Hall

DAY: Thursday

TIME	MOVEMENT 4							TOT	PCU	MOVEMENT 5							TOT	PCU	MOVEMENT 6							TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS	PCL			MCL	CAR	LGV	HGV	BUS	PCL	MCL			CAR	LGV	HGV	BUS					
07:30	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	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	1	0	0	0	1	1		
H/TOT	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	1	1		
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2			
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1			
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3			
09:00	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
09:15	0	0	0	1	0	0	1	1	1	0	0	0	0	0	1	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	1	1	0	0	2	2			
H/TOT	0	0	1	1	0	0	2	2	1	0	0	0	0	0	1	0	0	0	1	1	0	0	2	2			
P/TOT	0	0	1	1	0	0	2	2	2	0	0	0	0	0	2	0	0	0	5	1	0	0	6	6			

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

TRAFFINOMICS LIMITED

**DUNDALK TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION TURNING COUNTS**

**MAY 2023
TRA/23/126**

SITE: 02

DATE: 25th May 2023

LOCATION: Dublin Road/Ladywell Square/Mourne View Hall

DAY: Thursday

TIME	MOVEMENT 7							TOT	PCU	MOVEMENT 8							TOT	PCU	MOVEMENT 9							TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS	PCL			MCL	CAR	LGV	HGV	BUS	PCL	MCL			CAR	LGV	HGV	BUS					
07:30	1	0	0	0	0	0	1	0	2	1	39	6	4	3	55	60	0	0	0	0	0	0	0	0			
07:45	0	0	0	0	0	0	0	0	4	0	99	12	5	7	127	136	0	0	1	0	0	0	1	1			
H/TOT	1	0	0	0	0	0	1	0	6	1	138	18	9	10	182	196	0	0	1	0	0	0	1	1			
08:00	0	0	0	0	0	0	0	0	3	0	98	7	2	7	117	124	0	0	0	0	0	0	0	0			
08:15	0	0	0	0	0	0	0	0	7	0	169	5	3	1	185	183	0	0	0	0	0	0	0	0			
08:30	1	0	0	0	0	0	1	0	11	0	151	10	1	10	183	185	0	0	0	0	0	0	0	0			
08:45	1	0	0	0	0	0	1	0	4	0	140	16	4	7	171	179	0	0	0	0	0	0	0	0			
H/TOT	2	0	0	0	0	0	2	0	25	0	558	38	10	25	656	671	0	0	0	0	0	0	0	0			
09:00	1	0	0	0	0	0	1	0	0	0	121	16	3	4	144	151	0	0	0	0	0	0	0	0			
09:15	3	0	1	0	0	0	4	2	1	0	120	13	2	4	140	145	0	0	0	0	0	0	0	0			
09:30	0	0	0	0	0	0	0	0	0	0	120	15	1	4	140	145	0	0	0	0	0	0	0	0			
09:45	0	0	0	0	0	1	1	2	1	0	143	13	4	7	168	178	0	0	0	0	0	0	0	0			
H/TOT	4	0	1	0	0	1	6	4	2	0	504	57	10	19	592	619	0	0	0	0	0	0	0	0			
P/TOT	7	0	1	0	0	1	9	4	33	1	1200	113	29	54	1430	1486	0	0	1	0	0	0	1	1			

TIME	MOVEMENT 7							TOT	PCU	MOVEMENT 8							TOT	PCU	MOVEMENT 9							TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS	PCL			MCL	CAR	LGV	HGV	BUS	PCL	MCL			CAR	LGV	HGV	BUS					
16:00	0	0	1	1	0	0	2	2	6	0	126	17	3	4	156	158	0	0	0	0	0	0	0	0			
16:15	0	0	2	0	0	0	2	2	9	0	107	13	0	5	134	132	0	0	2	0	0	0	2	2			
16:30	0	0	0	1	0	0	1	1	5	1	137	13	0	3	159	157	0	0	0	0	0	0	0	0			
16:45	0	0	1	0	0	0	1	1	7	0	144	15	2	3	171	170	0	0	1	1	0	0	2	2			
H/TOT	0	0	4	2	0	0	6	6	27	1	514	58	5	15	620	618	0	0	3	1	0	0	4	4			
17:00	0	0	1	0	0	0	1	1	8	1	161	13	0	5	188	186	0	0	1	1	0	0	2	2			
17:15	0	0	1	0	0	0	1	1	5	0	112	11	0	1	129	126	0	0	1	0	0	0	1	1			
17:30	0	0	1	0	0	0	1	1	5	1	133	7	1	4	151	151	0	0	0	0	0	0	0	0			
17:45	0	0	1	0	0	0	1	1	9	0	108	11	0	3	131	127	0	0	0	0	0	1	1	2			
H/TOT	0	0	4	0	0	0	4	4	27	2	514	42	1	13	599	590	0	0	2	1	0	1	4	5			
18:00	0	0	0	0	0	0	0	0	5	0	126	7	1	3	142	142	0	0	0	0	0	0	0	0			
18:15	0	0	0	0	0	0	0	0	6	0	111	7	3	4	131	133	1	0	0	0	0	0	1	0			
H/TOT	0	0	0	0	0	0	0	0	11	0	237	14	4	7	273	275	1	0	0	0	0	0	1	0			
P/TOT	0	0	8	2	0	0	10	10	65	3	1265	114	10	35	1492	1483	1	0	5	2	0	1	9	9			

TRAFFINOMICS LIMITED

**DUNDALK TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION TURNING COUNTS**

**MAY 2023
TRA/23/126**

SITE: 02

DATE: 25th May 2023

LOCATION: Dublin Road/Ladywell Square/Mourne View Hall

DAY: Thursday

TIME	MOVEMENT 10							TOT	PCU	MOVEMENT 11							TOT	PCU	MOVEMENT 12							TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS	PCL			MCL	CAR	LGV	HGV	BUS	PCL	MCL			CAR	LGV	HGV	BUS					
07:30	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1			
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	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1			
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1			
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	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
H/TOT	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1			
09:00	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
09:15	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	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	1	0	0	0	1	1			
H/TOT	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2			
P/TOT	1	0	2	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	4			

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

TRAFFINOMICS LIMITED

**DUNDALK TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION TURNING COUNTS**

**MAY 2023
TRA/23/126**

SITE: 03

DATE: 25th May 2023

LOCATION: Dublin Road/Priorland Gardens

DAY: Thursday

TIME	MOVEMENT 1							TOT	PCU	MOVEMENT 2							TOT	PCU	MOVEMENT 3							TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS	PCL			MCL	CAR	LGV	HGV	BUS	PCL	MCL			CAR	LGV	HGV	BUS					
07:30	4	0	75	5	5	3	92	97	1	0	1	0	0	0	2	1	0	1	0	0	0	0	1	0			
07:45	6	0	77	16	3	2	104	104	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
H/TOT	10	0	152	21	8	5	196	201	1	0	1	0	0	0	2	1	0	1	0	0	0	0	1	0			
08:00	2	0	74	8	4	7	95	104	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3			
08:15	6	0	103	17	2	3	131	131	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2			
08:30	5	0	113	18	3	6	145	150	0	0	1	1	0	0	2	2	0	0	4	0	0	0	4	4			
08:45	6	0	119	16	2	3	146	146	0	0	1	0	0	0	1	1	0	0	2	0	0	0	2	2			
H/TOT	19	0	409	59	11	19	517	532	0	0	2	1	0	0	3	3	0	0	11	0	0	0	11	11			
09:00	4	1	126	6	0	5	142	143	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2			
09:15	3	0	106	10	1	3	123	125	1	0	3	0	0	0	4	3	0	0	0	0	0	0	0	0			
09:30	2	0	85	8	6	2	103	109	0	0	3	0	0	0	3	3	0	0	4	0	0	0	4	4			
09:45	1	0	83	14	1	1	100	101	0	0	2	0	0	0	2	2	0	0	4	1	0	0	5	5			
H/TOT	10	1	400	38	8	11	468	478	1	0	8	0	0	0	9	8	0	0	10	1	0	0	11	11			
P/TOT	39	1	961	118	27	35	1181	1211	2	0	11	1	0	0	14	12	0	1	21	1	0	0	23	22			

TIME	MOVEMENT 1							TOT	PCU	MOVEMENT 2							TOT	PCU	MOVEMENT 3							TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS	PCL			MCL	CAR	LGV	HGV	BUS	PCL	MCL			CAR	LGV	HGV	BUS					
16:00	5	0	121	9	1	5	141	143	0	0	3	0	0	0	3	3	0	0	1	0	0	0	1	1			
16:15	3	0	101	6	2	10	122	132	0	0	4	0	0	0	4	4	0	0	1	0	0	0	1	1			
16:30	5	2	96	12	3	5	123	126	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
16:45	6	0	88	11	3	1	109	108	0	0	2	0	0	0	2	2	0	0	3	1	0	0	4	4			
H/TOT	19	2	406	38	9	21	495	509	0	0	9	0	0	0	9	9	0	0	5	1	0	0	6	6			
17:00	3	0	124	5	0	3	135	136	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1			
17:15	3	0	117	5	0	1	126	125	0	0	2	0	0	0	2	2	0	0	3	0	0	0	3	3			
17:30	8	0	139	4	1	2	154	151	0	0	3	0	0	0	3	3	0	0	1	0	0	0	1	1			
17:45	8	0	99	6	0	0	113	107	0	0	2	0	0	0	2	2	0	0	3	0	0	0	3	3			
H/TOT	22	0	479	20	1	6	528	517	0	0	8	0	0	0	8	8	0	0	8	0	0	0	8	8			
18:00	6	0	117	5	2	2	132	131	0	0	2	0	0	0	2	2	0	0	1	0	0	0	1	1			
18:15	2	0	129	11	0	1	143	142	0	0	0	1	0	0	1	1	1	0	6	0	0	0	7	6			
H/TOT	8	0	246	16	2	3	275	274	0	0	2	1	0	0	3	3	1	0	7	0	0	0	8	7			
P/TOT	49	2	1131	74	12	30	1298	1300	0	0	19	1	0	0	20	20	1	0	20	1	0	0	22	21			

TRAFFINOMICS LIMITED

**DUNDALK TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION TURNING COUNTS**

**MAY 2023
TRA/23/126**

SITE: 03

DATE: 25th May 2023

LOCATION: Dublin Road/Priorland Gardens

DAY: Thursday

TIME	MOVEMENT 4							TOT	PCU	MOVEMENT 5							TOT	PCU	MOVEMENT 6							TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS	PCL			MCL	CAR	LGV	HGV	BUS	PCL	MCL			CAR	LGV	HGV	BUS					
07:30	0	0	1	0	0	0	1	1	0	0	0	0	1	0	1	2	3	0	39	6	4	3	55	60			
07:45	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0	4	0	100	12	5	7	128	137			
H/TOT	0	0	1	0	1	0	2	3	0	0	0	0	1	0	1	2	7	0	139	18	9	10	183	196			
08:00	0	0	3	0	0	0	3	3	0	0	0	0	0	0	0	0	3	0	95	7	2	7	114	121			
08:15	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	7	0	167	5	3	1	183	181			
08:30	0	0	2	1	0	0	3	3	0	0	0	0	0	0	0	0	12	0	147	10	1	10	180	181			
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	138	16	4	7	170	177			
H/TOT	1	0	5	1	0	0	7	6	0	0	0	0	0	0	0	0	27	0	547	38	10	25	647	660			
09:00	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	119	16	3	4	143	149			
09:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	4	0	121	13	2	4	144	147			
09:30	0	0	2	0	0	0	2	2	0	0	1	0	0	0	1	1	0	0	116	15	1	4	136	141			
09:45	0	0	3	0	0	0	3	3	0	0	0	2	0	0	2	2	1	0	139	12	4	8	164	175			
H/TOT	0	0	6	0	0	0	6	6	0	0	2	2	0	0	4	4	6	0	495	56	10	20	587	612			
P/TOT	1	0	12	1	1	0	15	15	0	0	2	2	1	0	5	6	40	0	1181	112	29	55	1417	1469			

TIME	MOVEMENT 4							TOT	PCU	MOVEMENT 5							TOT	PCU	MOVEMENT 6							TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS	PCL			MCL	CAR	LGV	HGV	BUS	PCL	MCL			CAR	LGV	HGV	BUS					
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	126	18	3	4	157	159			
16:15	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1	9	0	110	13	0	5	137	135			
16:30	0	0	0	1	0	0	1	1	0	0	1	0	0	0	1	1	5	1	137	14	0	3	160	158			
16:45	0	0	1	0	0	0	1	1	0	0	2	0	0	0	2	2	7	0	143	15	2	3	170	169			
H/TOT	0	0	2	1	0	0	3	3	0	0	4	0	0	0	4	4	27	1	516	60	5	15	624	622			
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	1	162	14	0	5	190	188			
17:15	1	0	2	0	0	0	3	2	0	0	0	1	0	0	1	1	5	0	111	11	0	1	128	125			
17:30	0	0	1	0	0	0	1	1	0	0	2	0	0	0	2	2	5	1	133	7	1	4	151	151			
17:45	0	0	3	0	0	0	3	3	0	0	3	0	0	0	3	3	9	0	106	11	0	4	130	127			
H/TOT	1	0	6	0	0	0	7	6	0	0	5	1	0	0	6	6	27	2	512	43	1	14	599	591			
18:00	0	0	1	0	0	0	1	1	0	0	2	1	0	0	3	3	5	0	125	7	1	3	141	141			
18:15	0	0	1	0	0	0	1	1	0	0	0	0	1	0	1	2	6	0	105	7	3	4	125	127			
H/TOT	0	0	2	0	0	0	2	2	0	0	2	1	1	0	4	5	11	0	230	14	4	7	266	268			
P/TOT	1	0	10	1	0	0	12	11	0	0	11	2	1	0	14	15	65	3	1258	117	10	36	1489	1481			

**TRICS Output Data
Duplex / Housing & Apartments**

Calculation Reference: AUDIT-160301-231031-1031

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : C - FLATS PRIVATELY OWNED
 TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	BH BRIGHTON & HOVE	1 days
	CT CENTRAL BEDFORDSHIRE	3 days
	HF HERTFORDSHIRE	4 days
	PO PORTSMOUTH	1 days
	WS WEST SUSSEX	1 days
03	SOUTH WEST	
	DV DEVON	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	1 days
	SF SUFFOLK	2 days
05	EAST MIDLANDS	
	DY DERBY	1 days
	LE LEICESTERSHIRE	1 days
	NG NOTTINGHAM	2 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	BY BARNSELY	1 days
08	NORTH WEST	
	MS MERSEYSIDE	3 days
09	NORTH	
	TW TYNE & WEAR	1 days
10	WALES	
	CO CONWY	1 days
11	SCOTLAND	
	EB CITY OF EDINBURGH	1 days
	SR STIRLING	1 days
12	CONNAUGHT	
	MA MAYO	1 days
13	MUNSTER	
	WA WATERFORD	1 days
14	LEINSTER	
	LU LOUTH	1 days
15	GREATER DUBLIN	
	DL DUBLIN	3 days

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	34	74	0.038	34	74	0.148	34	74	0.186
08:00 - 09:00	34	74	0.062	34	74	0.187	34	74	0.249
09:00 - 10:00	34	74	0.078	34	74	0.079	34	74	0.157
10:00 - 11:00	34	74	0.063	34	74	0.082	34	74	0.145
11:00 - 12:00	34	74	0.063	34	74	0.077	34	74	0.140
12:00 - 13:00	34	74	0.082	34	74	0.087	34	74	0.169
13:00 - 14:00	34	74	0.074	34	74	0.082	34	74	0.156
14:00 - 15:00	34	74	0.078	34	74	0.081	34	74	0.159
15:00 - 16:00	34	74	0.104	34	74	0.071	34	74	0.175
16:00 - 17:00	34	74	0.129	34	74	0.078	34	74	0.207
17:00 - 18:00	34	74	0.158	34	74	0.081	34	74	0.239
18:00 - 19:00	34	74	0.148	34	74	0.093	34	74	0.241
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.077			1.146			2.223

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.*

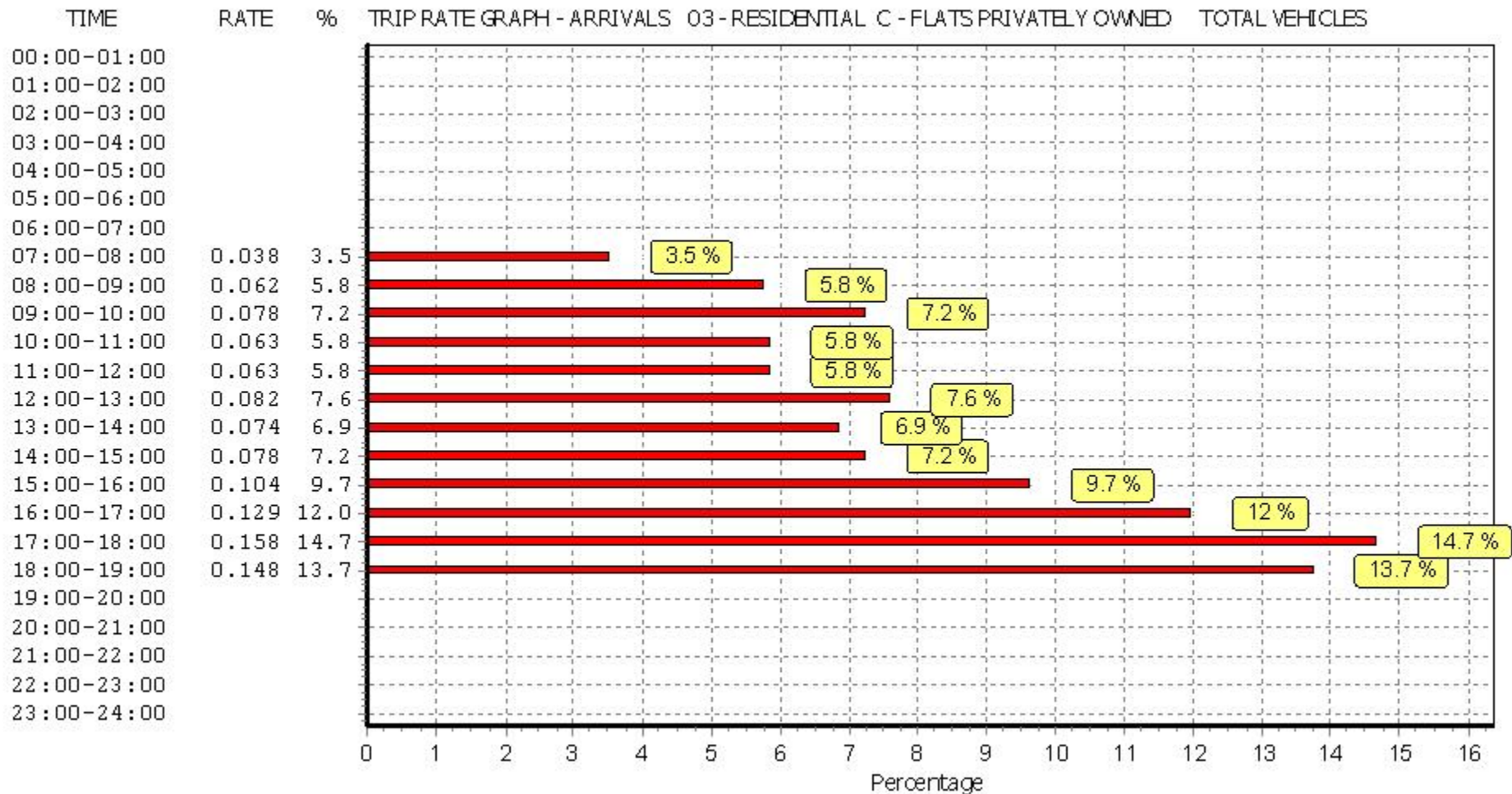
The survey data, graphs and all associated supporting information, contained within the TRICS Database are published by TRICS Consortium Limited ("the Company") and the Company claims copyright and database rights in this published work. The Company authorises those who possess a current TRICS licence to access the TRICS Database and copy the data contained within the TRICS Database for the licence holders' use only. Any resulting copy must retain all copyrights and other proprietary notices, and any disclaimer contained thereon.

The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

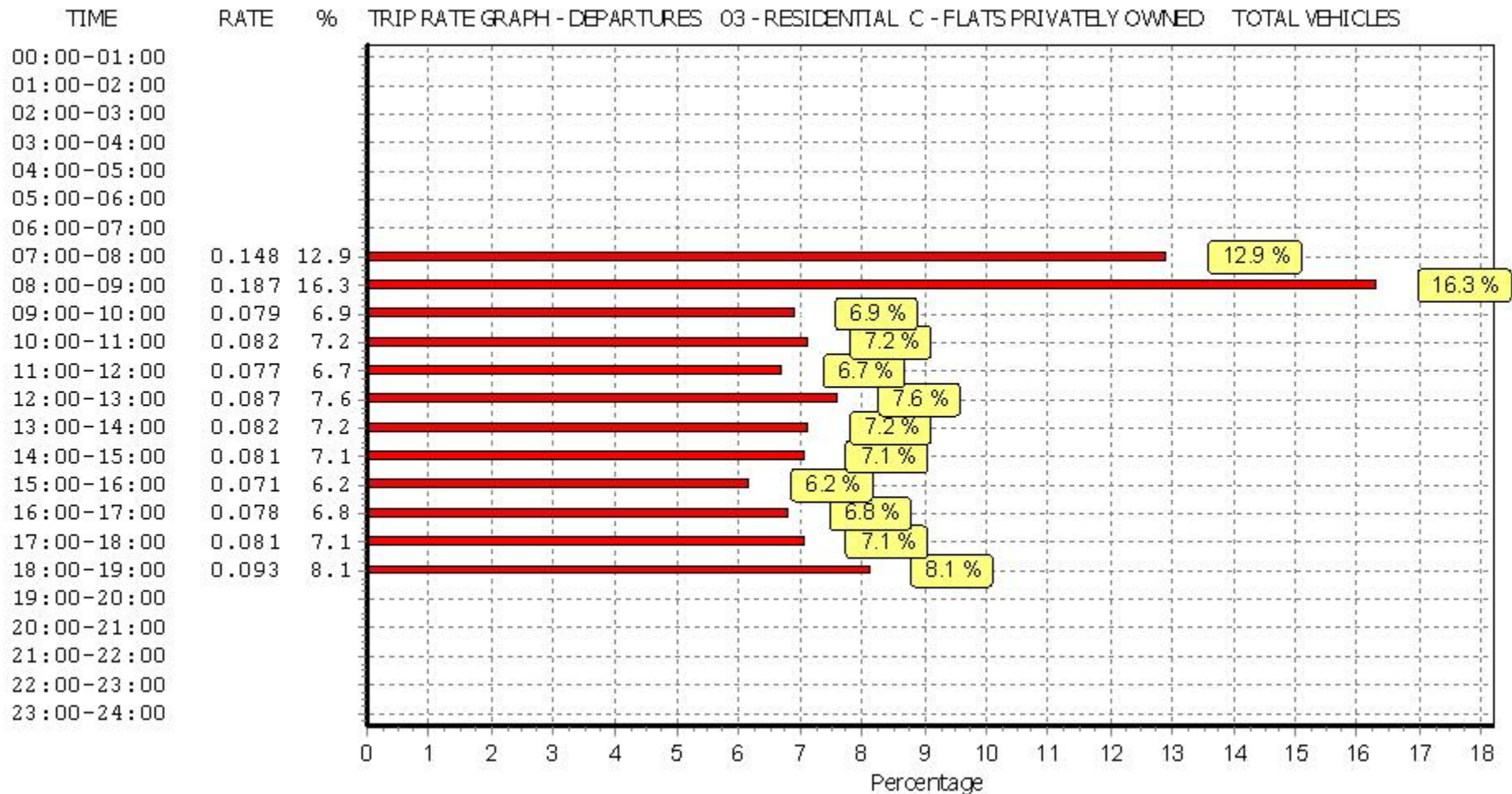
Parameter summary

Trip rate parameter range selected: 9 - 332 (units:)
 Survey date date range: 01/01/15 - 11/05/22
 Number of weekdays (Monday-Friday): 34
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 0

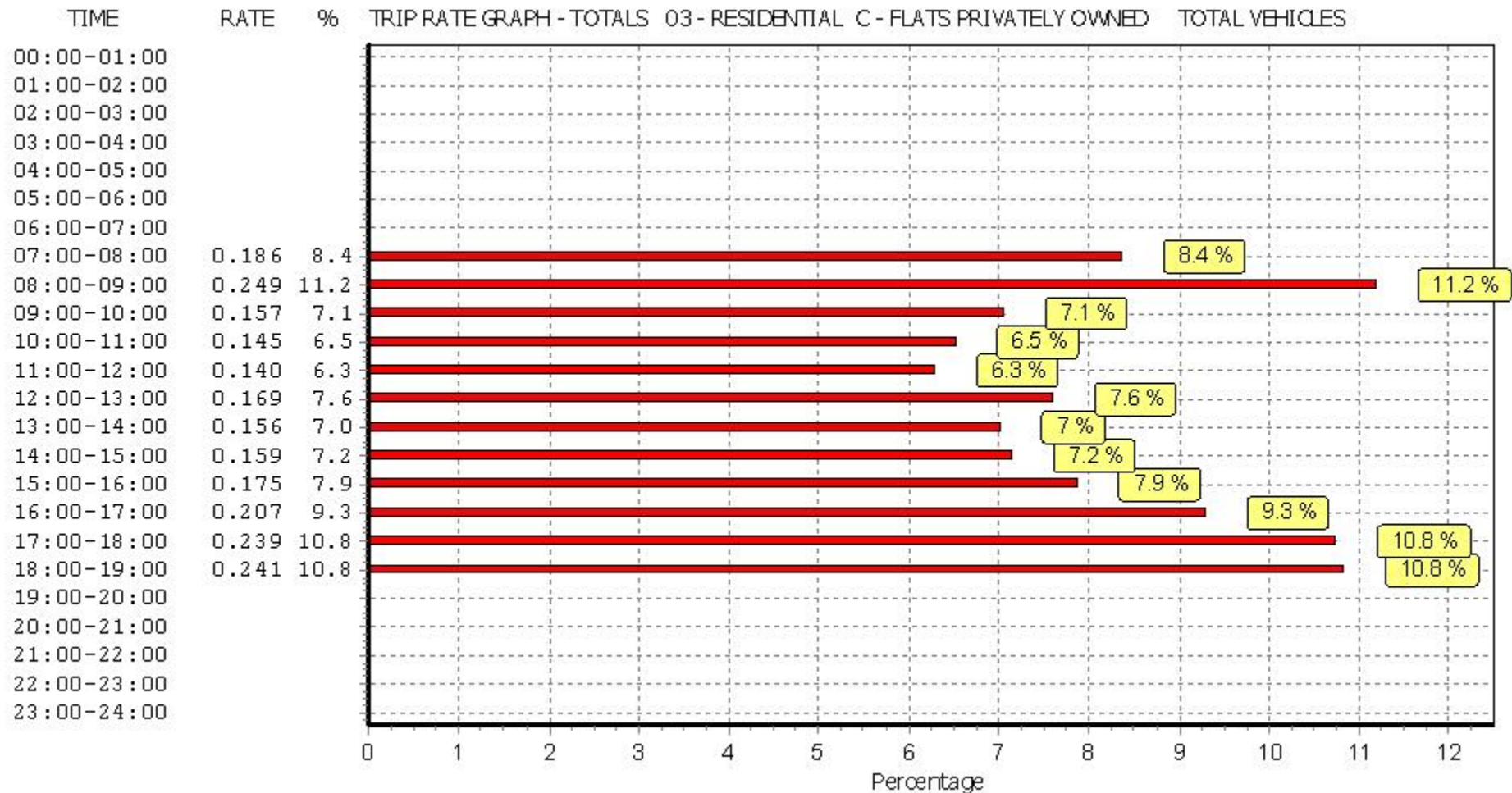
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected 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.



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.



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.



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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	148	129	0.075	148	129	0.278	148	129	0.353
08:00 - 09:00	148	129	0.146	148	129	0.366	148	129	0.512
09:00 - 10:00	148	129	0.133	148	129	0.162	148	129	0.295
10:00 - 11:00	148	129	0.120	148	129	0.141	148	129	0.261
11:00 - 12:00	148	129	0.130	148	129	0.138	148	129	0.268
12:00 - 13:00	148	129	0.149	148	129	0.147	148	129	0.296
13:00 - 14:00	148	129	0.152	148	129	0.146	148	129	0.298
14:00 - 15:00	148	129	0.160	148	129	0.177	148	129	0.337
15:00 - 16:00	148	129	0.242	148	129	0.168	148	129	0.410
16:00 - 17:00	148	129	0.265	148	129	0.159	148	129	0.424
17:00 - 18:00	148	129	0.337	148	129	0.165	148	129	0.502
18:00 - 19:00	148	129	0.267	148	129	0.155	148	129	0.422
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			2.275			4.544

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.

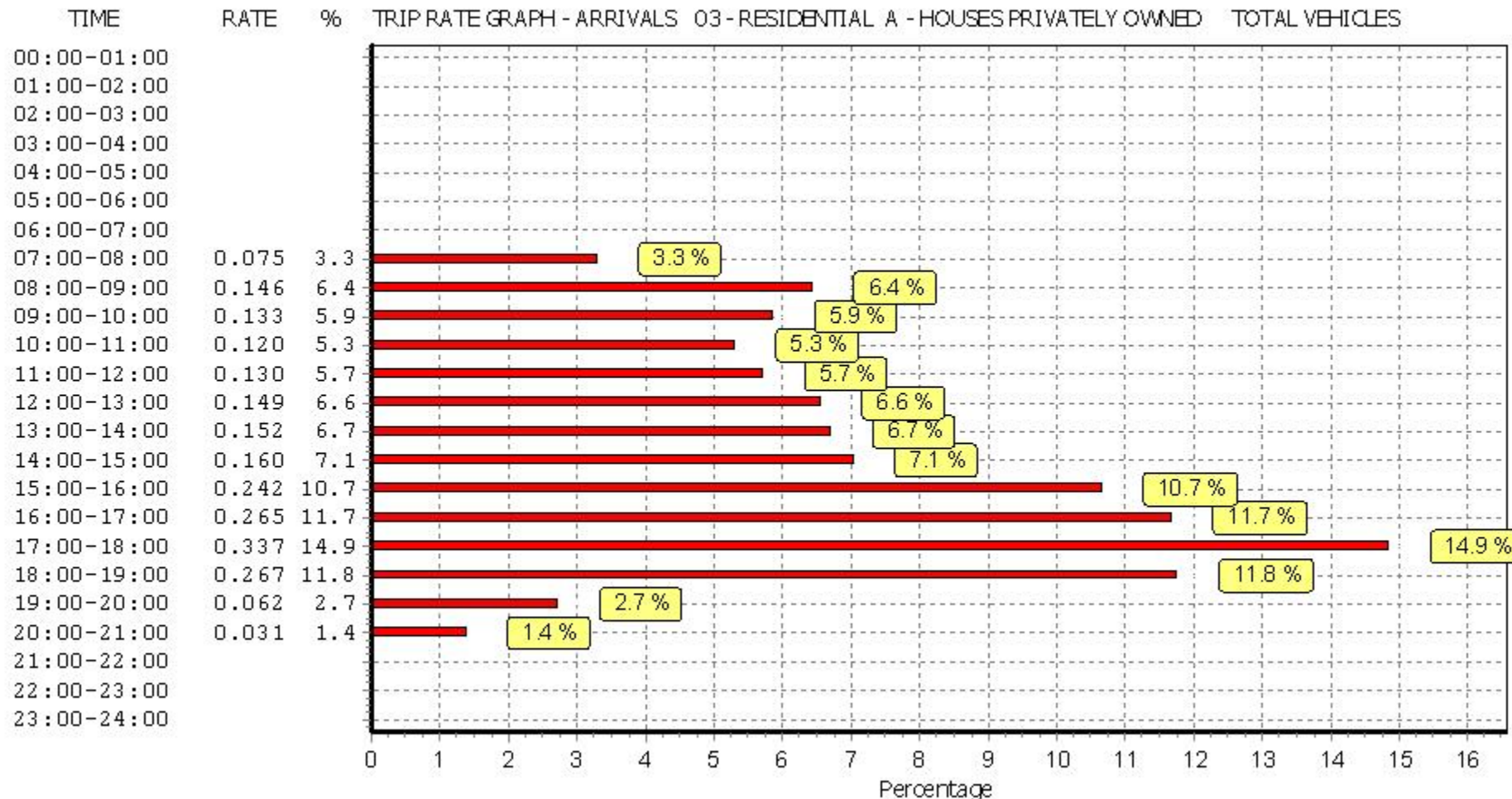
The survey data, graphs and all associated supporting information, contained within the TRICS Database are published by TRICS Consortium Limited ("the Company") and the Company claims copyright and database rights in this published work. The Company authorises those who possess a current TRICS licence to access the TRICS Database and copy the data contained within the TRICS Database for the licence holders' use only. Any resulting copy must retain all copyrights and other proprietary notices, and any disclaimer contained thereon.

The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

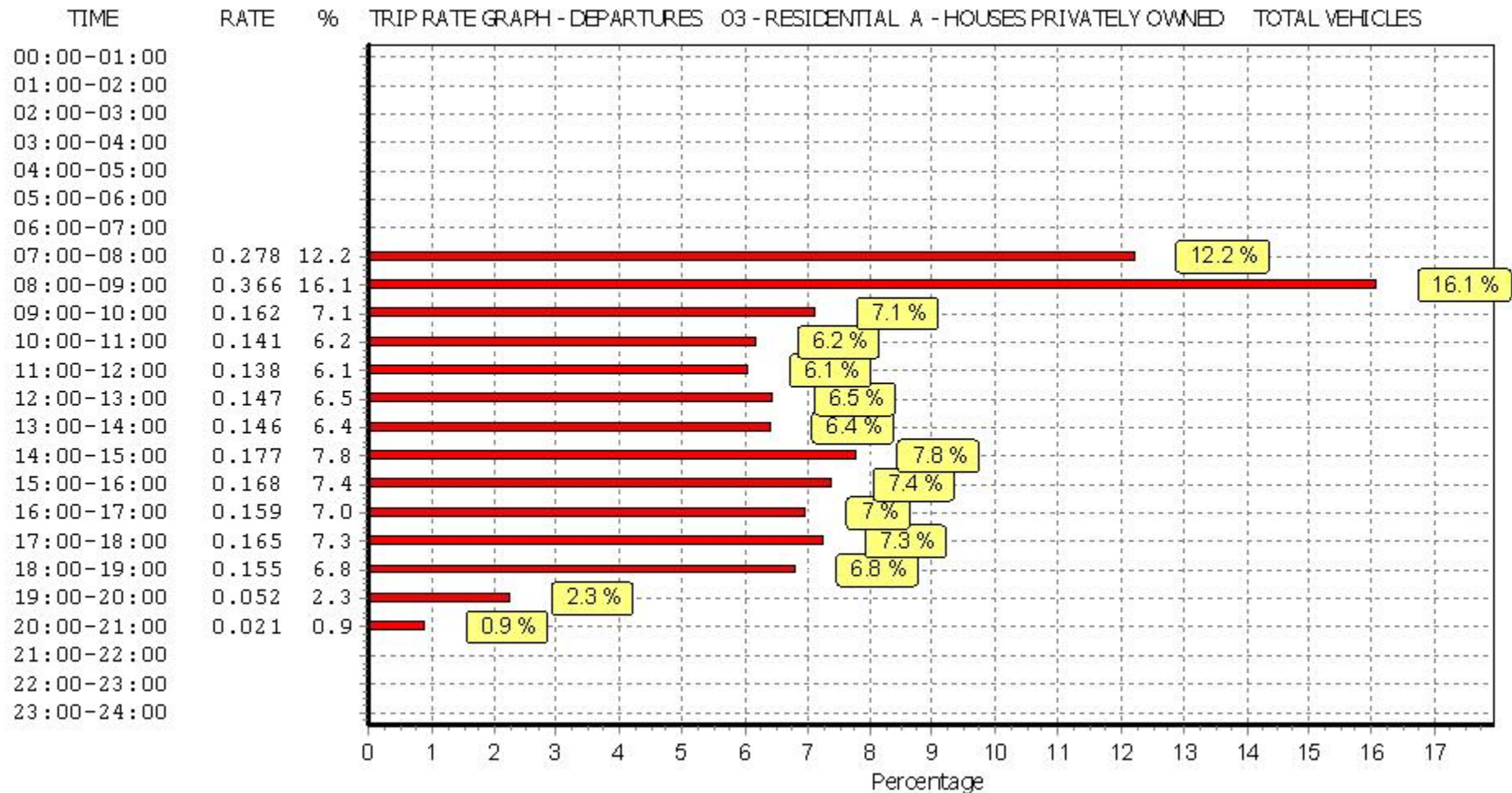
Parameter summary

Trip rate parameter range selected: 6 - 1882 (units:)
Survey date range: 01/01/15 - 29/06/23
Number of weekdays (Monday-Friday): 148
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 55
Surveys manually removed from selection: 0

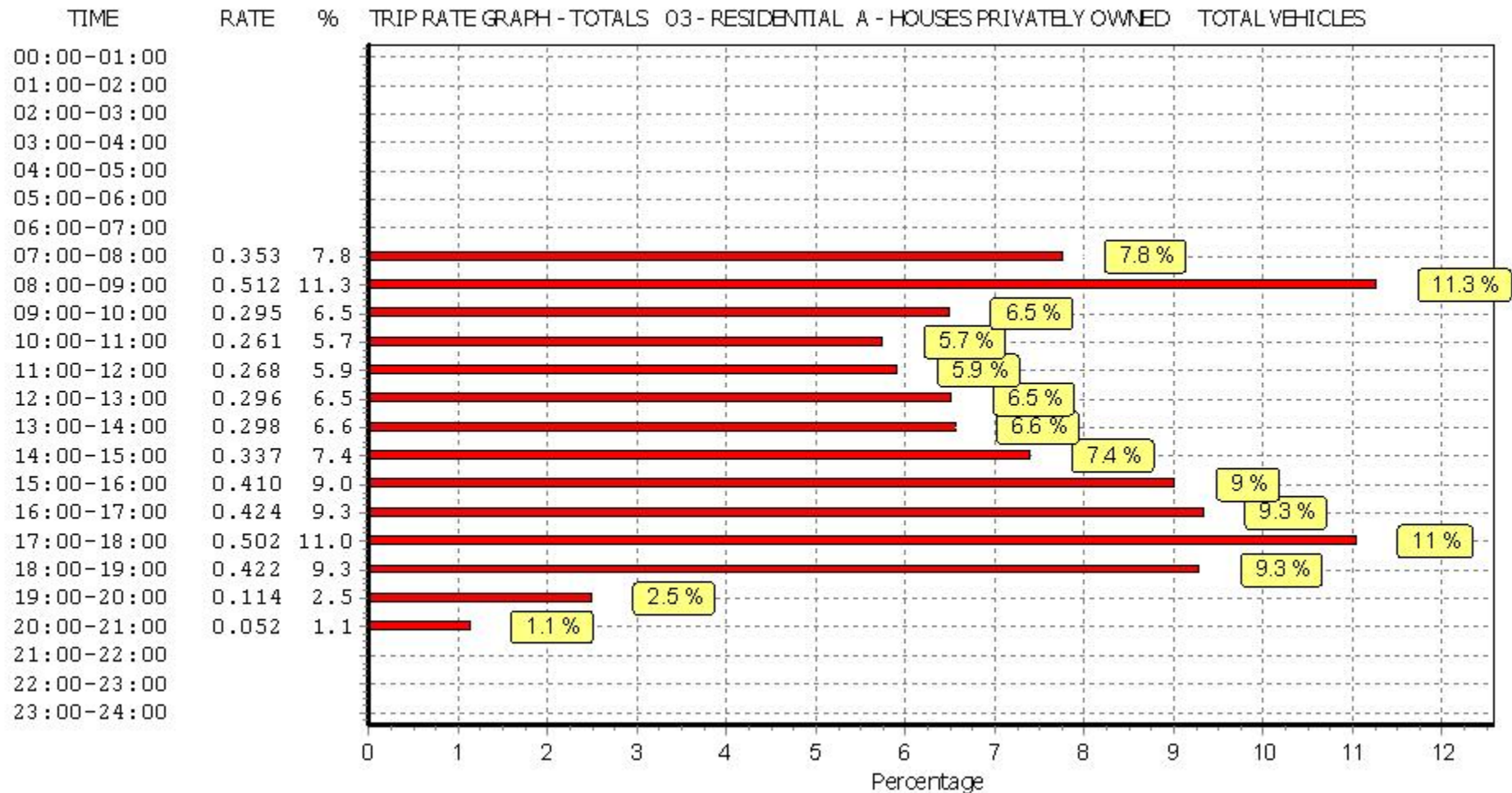
This section displays a quick summary of some of the data filtering selections made by the TRICS@ user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected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



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.



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.



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.

Calculation Reference: AUDIT-160301-241216-1227

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
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	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	2 days
09	NORTH	
	TV TEES VALLEY	1 days
	TW TYNE & WEAR	3 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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	24	549	2.180	24	549	1.170	24	549	3.350
08:00 - 09:00	24	549	3.023	24	549	2.628	24	549	5.651
09:00 - 10:00	24	549	1.170	24	549	1.086	24	549	2.256
10:00 - 11:00	24	549	0.387	24	549	0.266	24	549	0.653
11:00 - 12:00	24	549	0.433	24	549	0.342	24	549	0.775
12:00 - 13:00	24	549	1.048	24	549	1.132	24	549	2.180
13:00 - 14:00	24	549	0.760	24	549	1.086	24	549	1.846
14:00 - 15:00	24	549	0.410	24	549	0.410	24	549	0.820
15:00 - 16:00	24	549	0.760	24	549	0.706	24	549	1.466
16:00 - 17:00	24	549	1.367	24	549	1.504	24	549	2.871
17:00 - 18:00	24	549	2.423	24	549	3.069	24	549	5.492
18:00 - 19:00	23	566	0.138	23	566	0.622	23	566	0.760
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:			14.480			16.243			30.723

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.

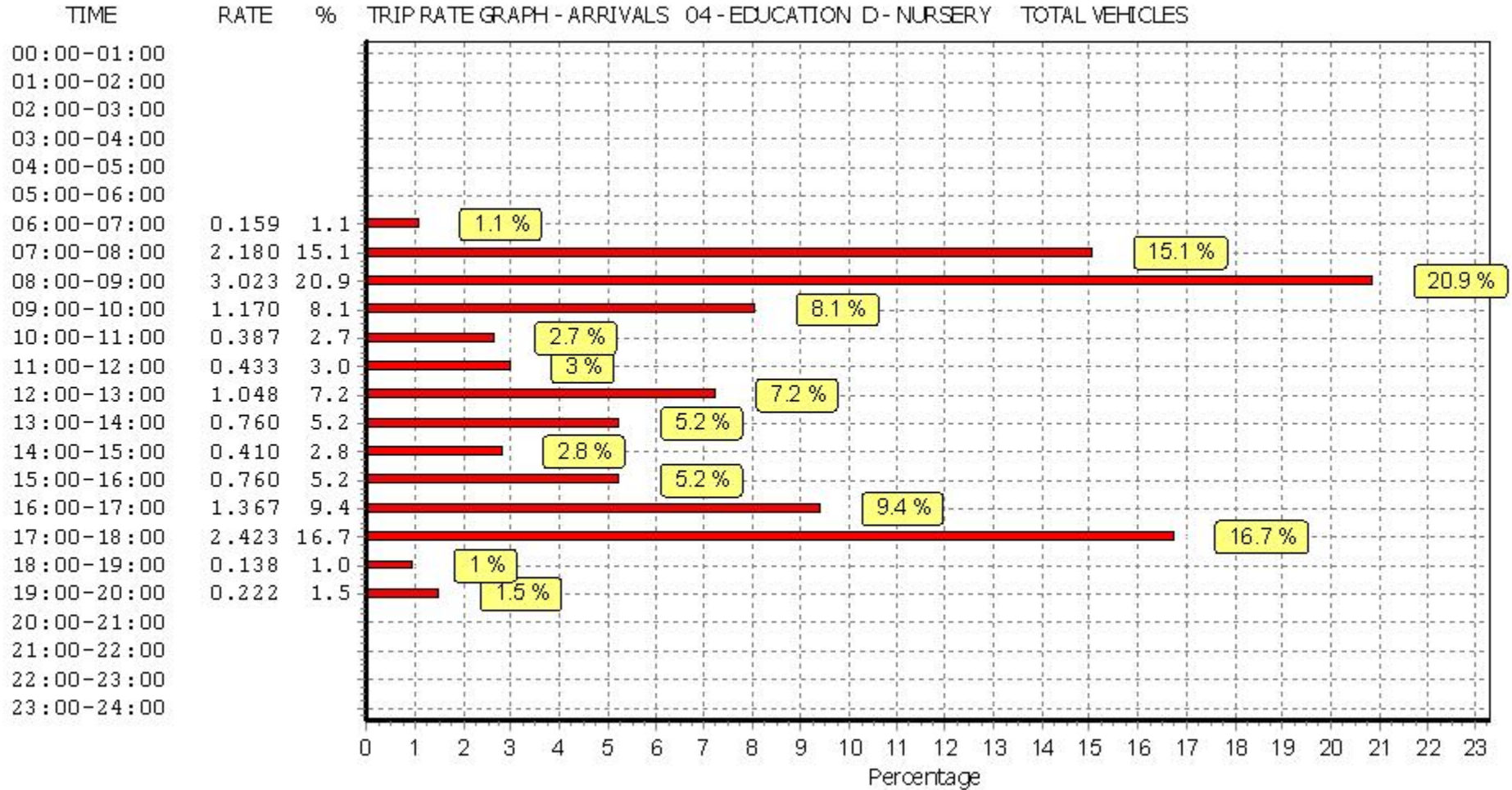
The survey data, graphs and all associated supporting information, contained within the TRICS Database are published by TRICS Consortium Limited ("the Company") and the Company claims copyright and database rights in this published work. The Company authorises those who possess a current TRICS licence to access the TRICS Database and copy the data contained within the TRICS Database for the licence holders' use only. Any resulting copy must retain all copyrights and other proprietary notices, and any disclaimer contained thereon.

The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

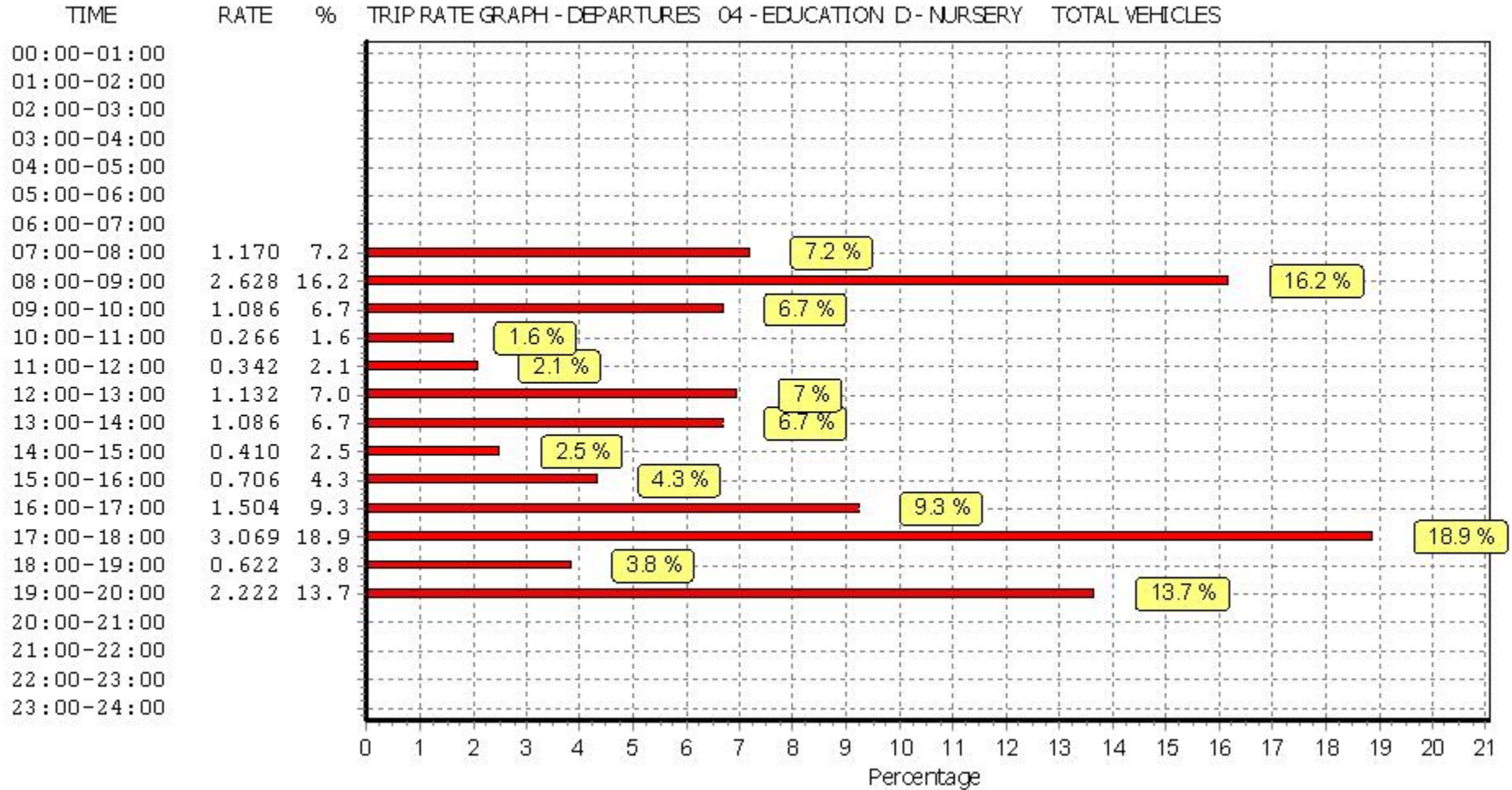
Parameter summary

Trip rate parameter range selected:	150 - 1250 (units: sqm)
Survey date range:	01/01/16 - 06/09/23
Number of weekdays (Monday-Friday):	24
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
Surveys manually removed from selection:	0

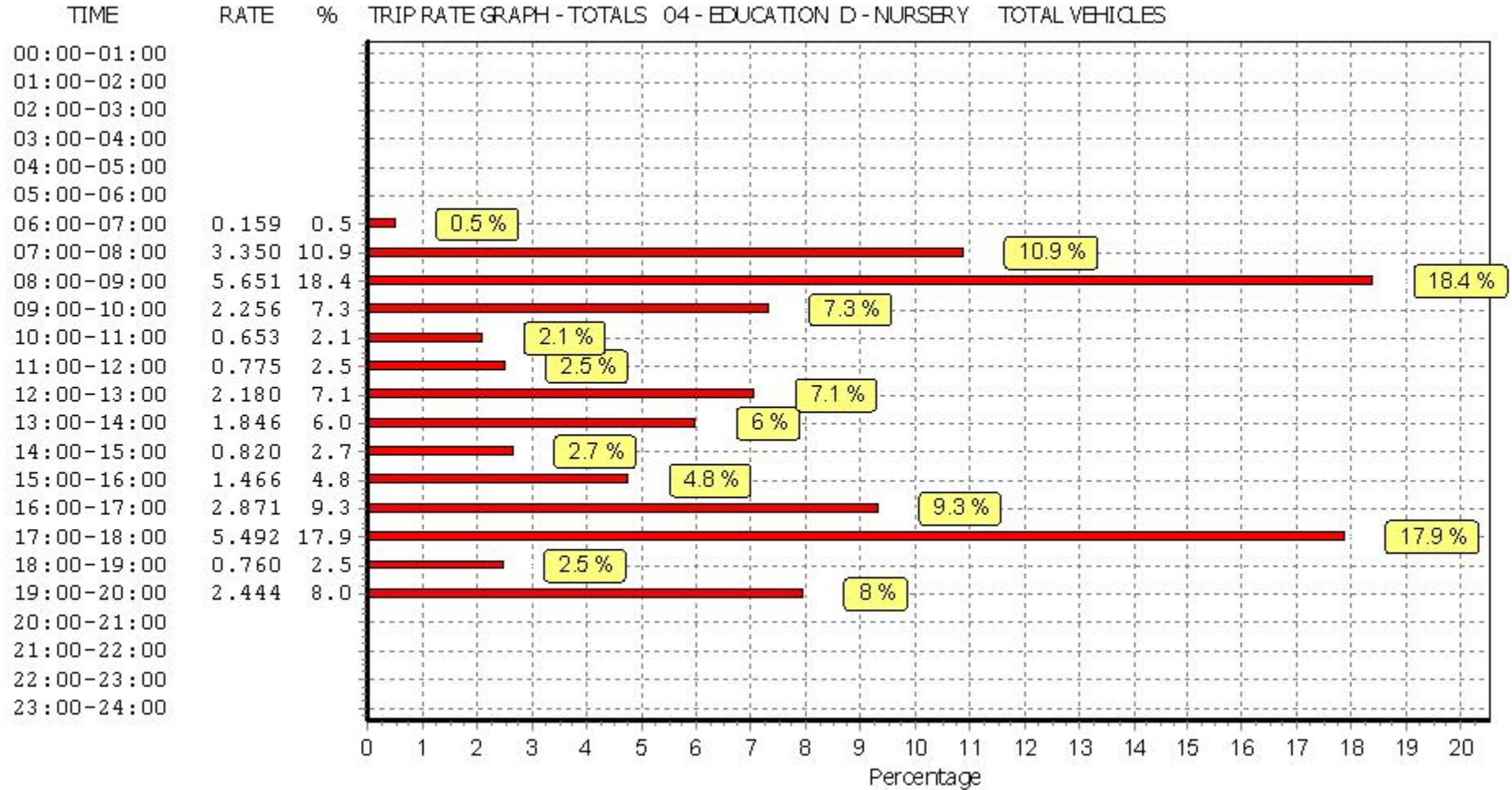
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected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



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.



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.



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.

TRIP RATE for Land Use 04 - EDUCATION/D - NURSERY

CARS

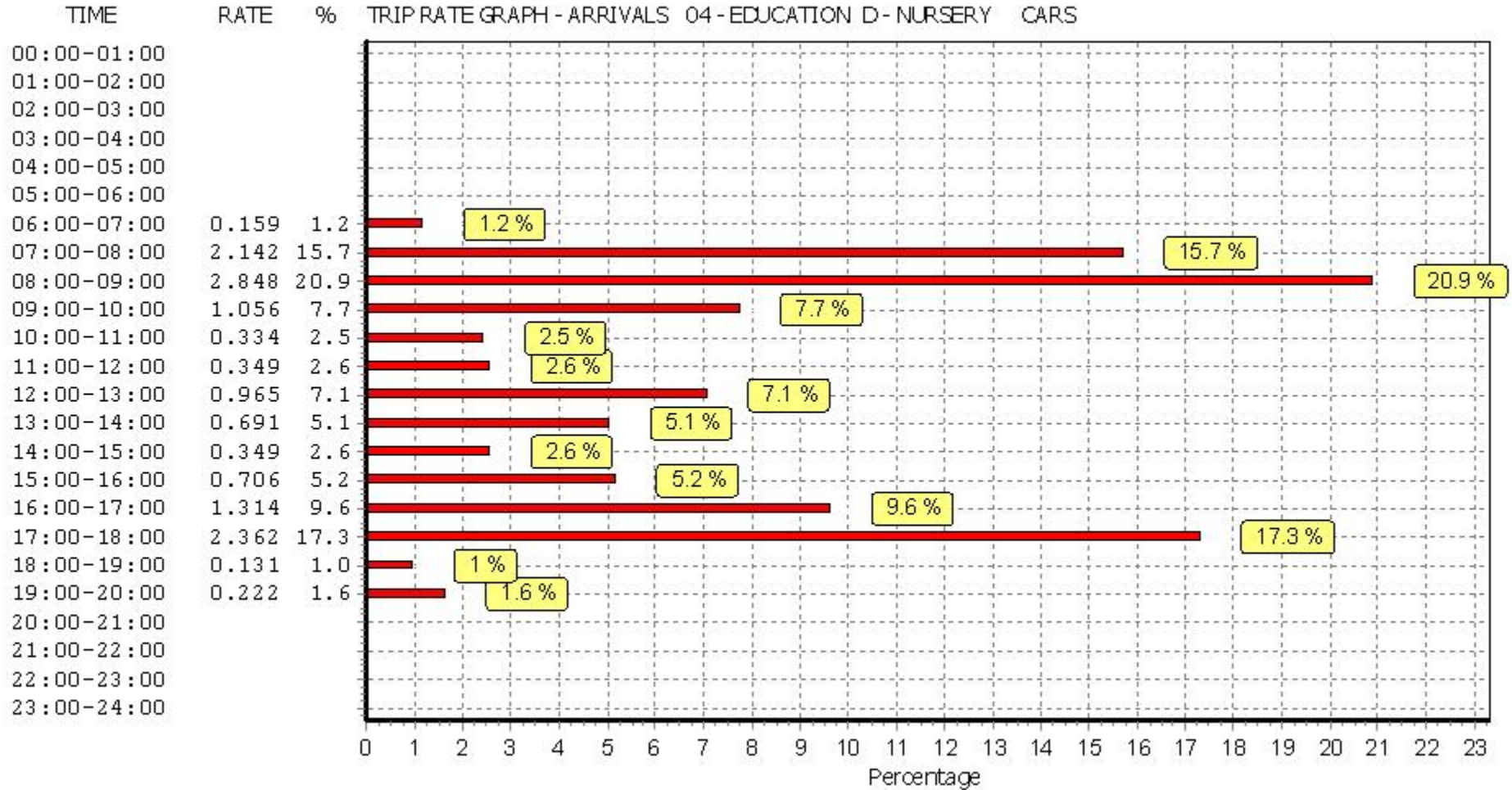
Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

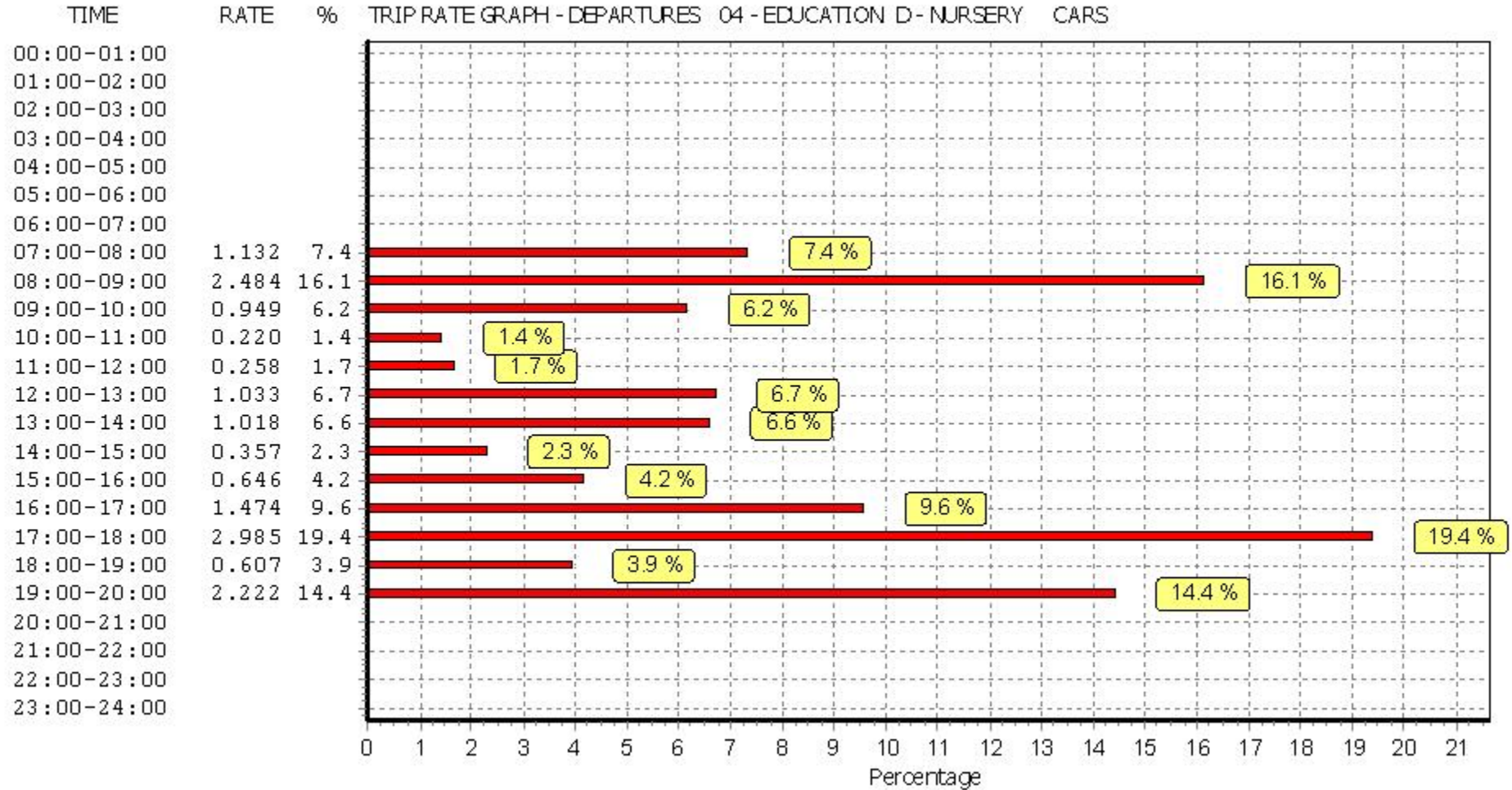
Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	3	420	0.159	3	420	0.000	3	420	0.159
07:00 - 08:00	24	549	2.142	24	549	1.132	24	549	3.274
08:00 - 09:00	24	549	2.848	24	549	2.484	24	549	5.332
09:00 - 10:00	24	549	1.056	24	549	0.949	24	549	2.005
10:00 - 11:00	24	549	0.334	24	549	0.220	24	549	0.554
11:00 - 12:00	24	549	0.349	24	549	0.258	24	549	0.607
12:00 - 13:00	24	549	0.965	24	549	1.033	24	549	1.998
13:00 - 14:00	24	549	0.691	24	549	1.018	24	549	1.709
14:00 - 15:00	24	549	0.349	24	549	0.357	24	549	0.706
15:00 - 16:00	24	549	0.706	24	549	0.646	24	549	1.352
16:00 - 17:00	24	549	1.314	24	549	1.474	24	549	2.788
17:00 - 18:00	24	549	2.362	24	549	2.985	24	549	5.347
18:00 - 19:00	23	566	0.131	23	566	0.607	23	566	0.738
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:			13.628			15.385			29.013

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.

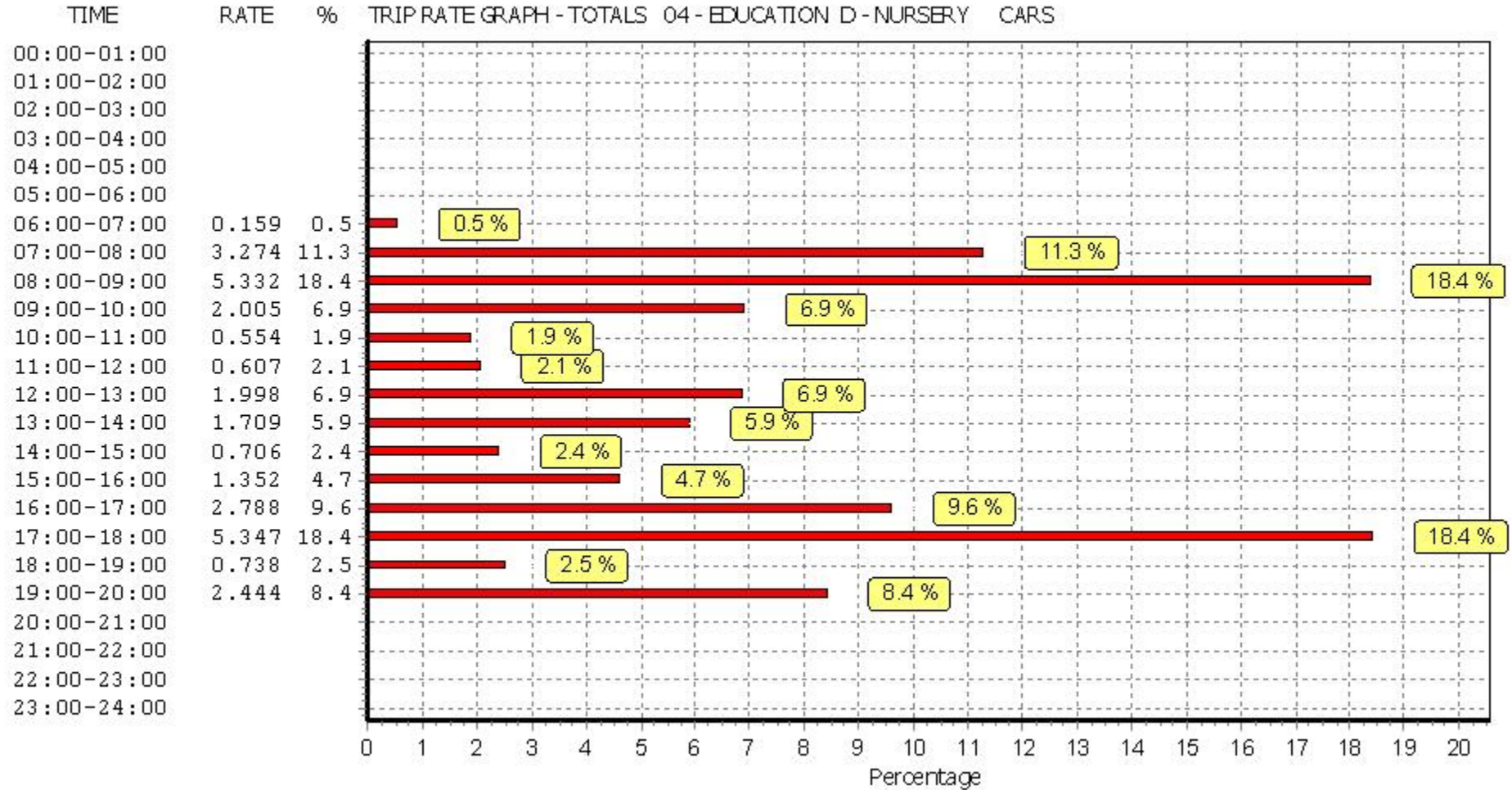
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected 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.



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.



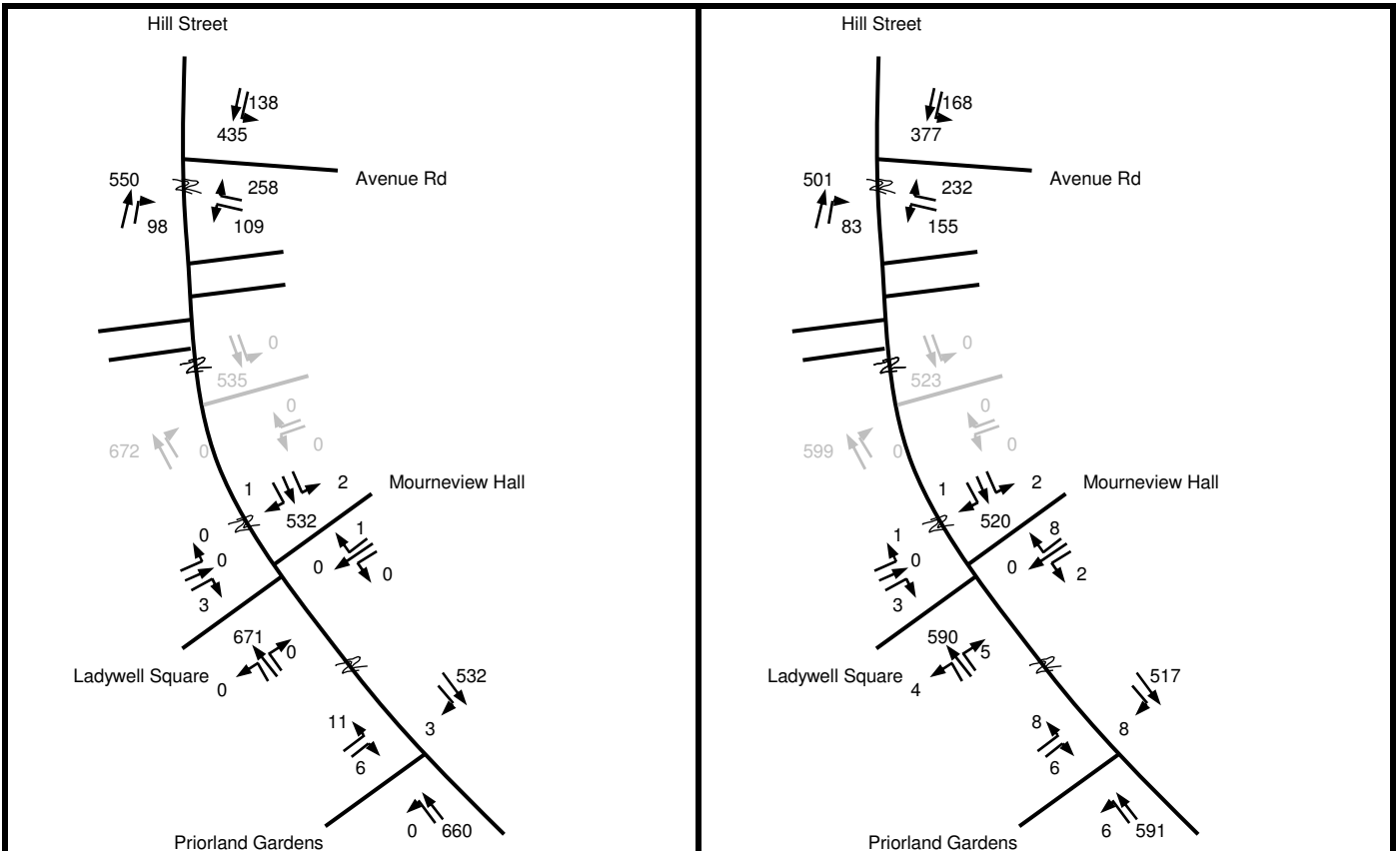
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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



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 Calculations, Trip Distribution,
Network Traffic Flow Diagrams & Projections**



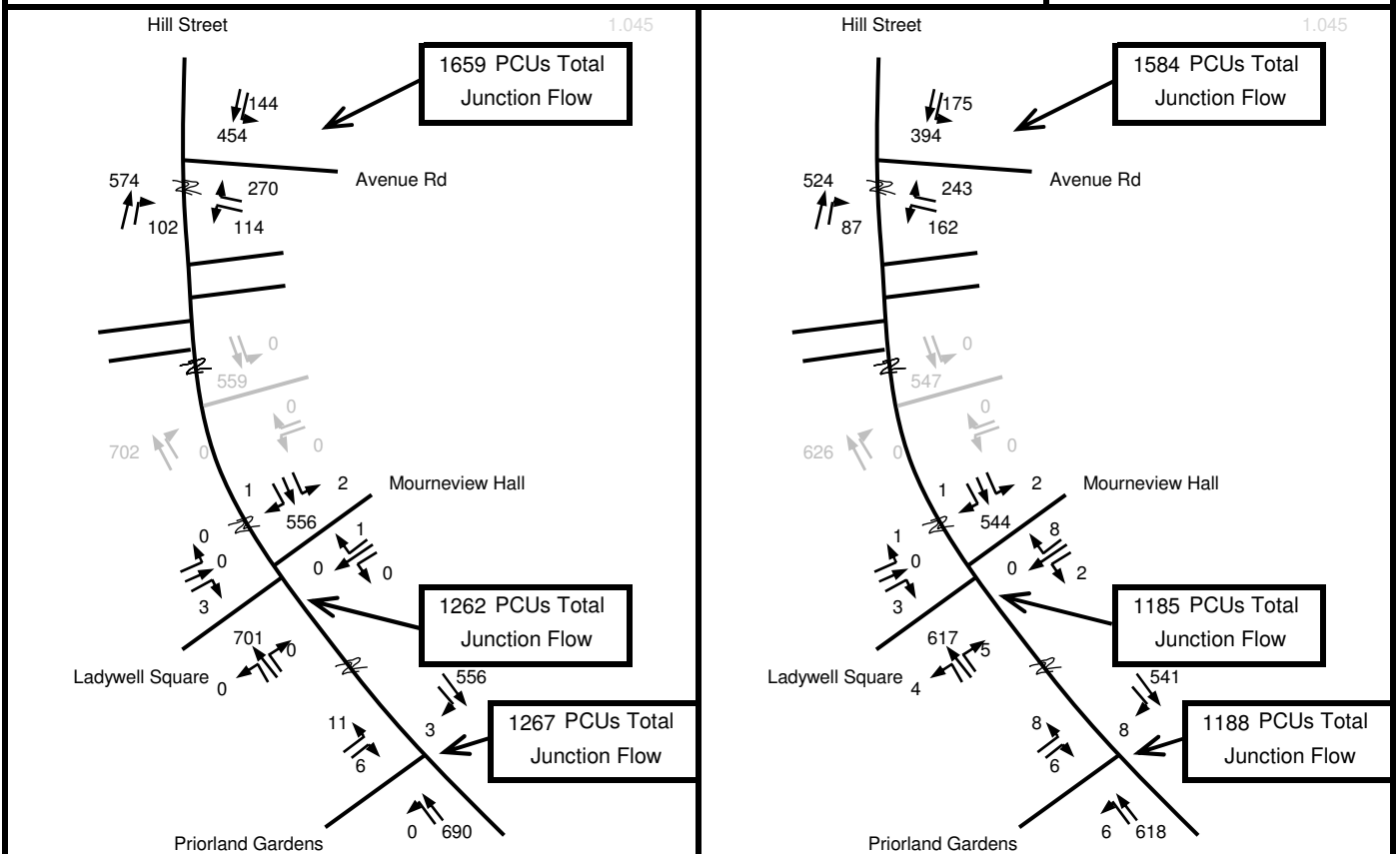
WEEKDAY AM PEAK (8-9AM)

WEEKDAY PM PEAK (5-6PM)

EXISTING AS SURVEYED TRAFFIC FLOWS (REFER APPENDIX B)

TII PE-PAG-02017 Project Appraisal Guidelines for National Roads Unit 5.3 (Travel Demand Projections 2019, Table 6.2: Central Growth Rates: Annual Growth Factors County Louth)

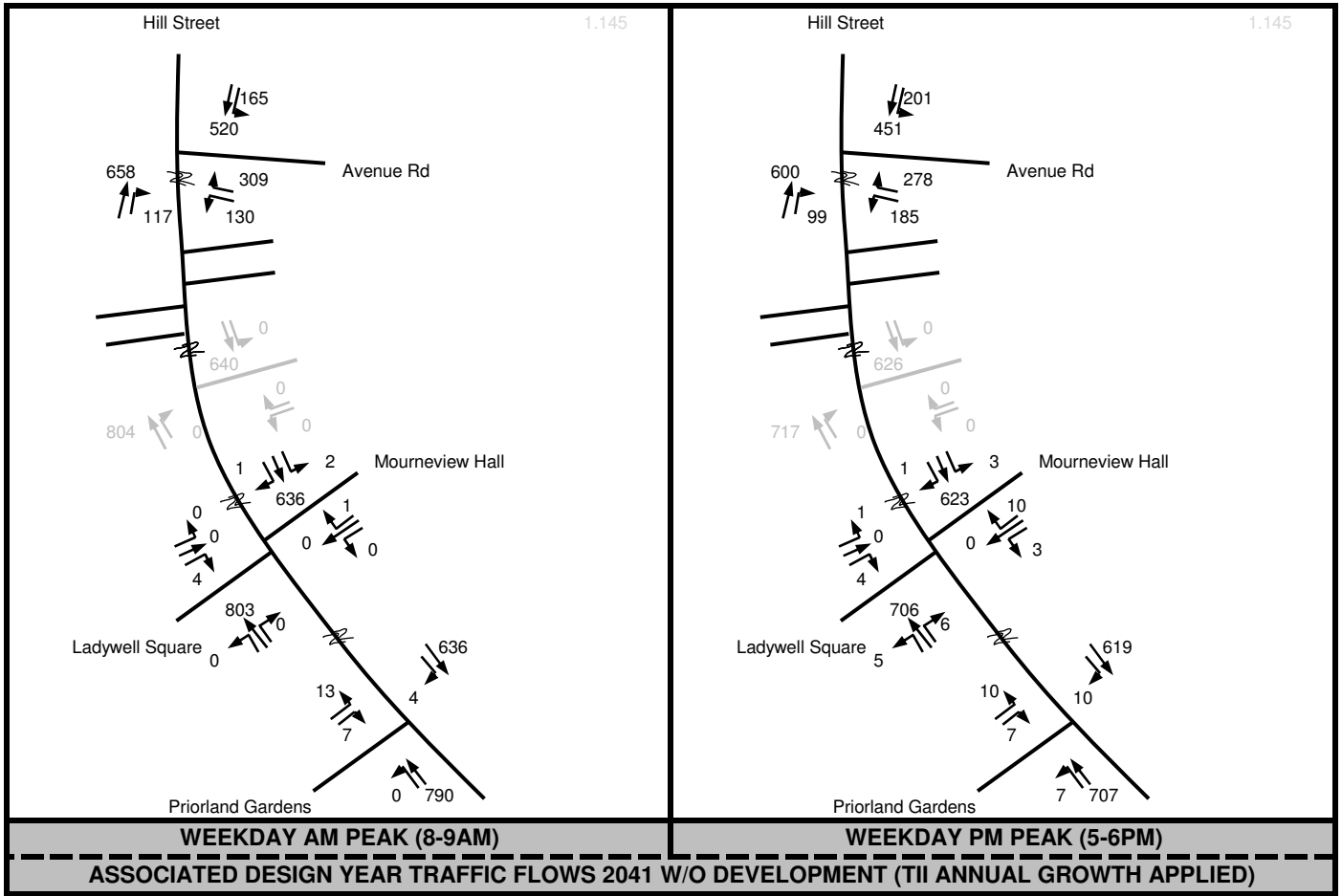
Survey to 2026 = 1.045
2026 to 2041 = 1.145



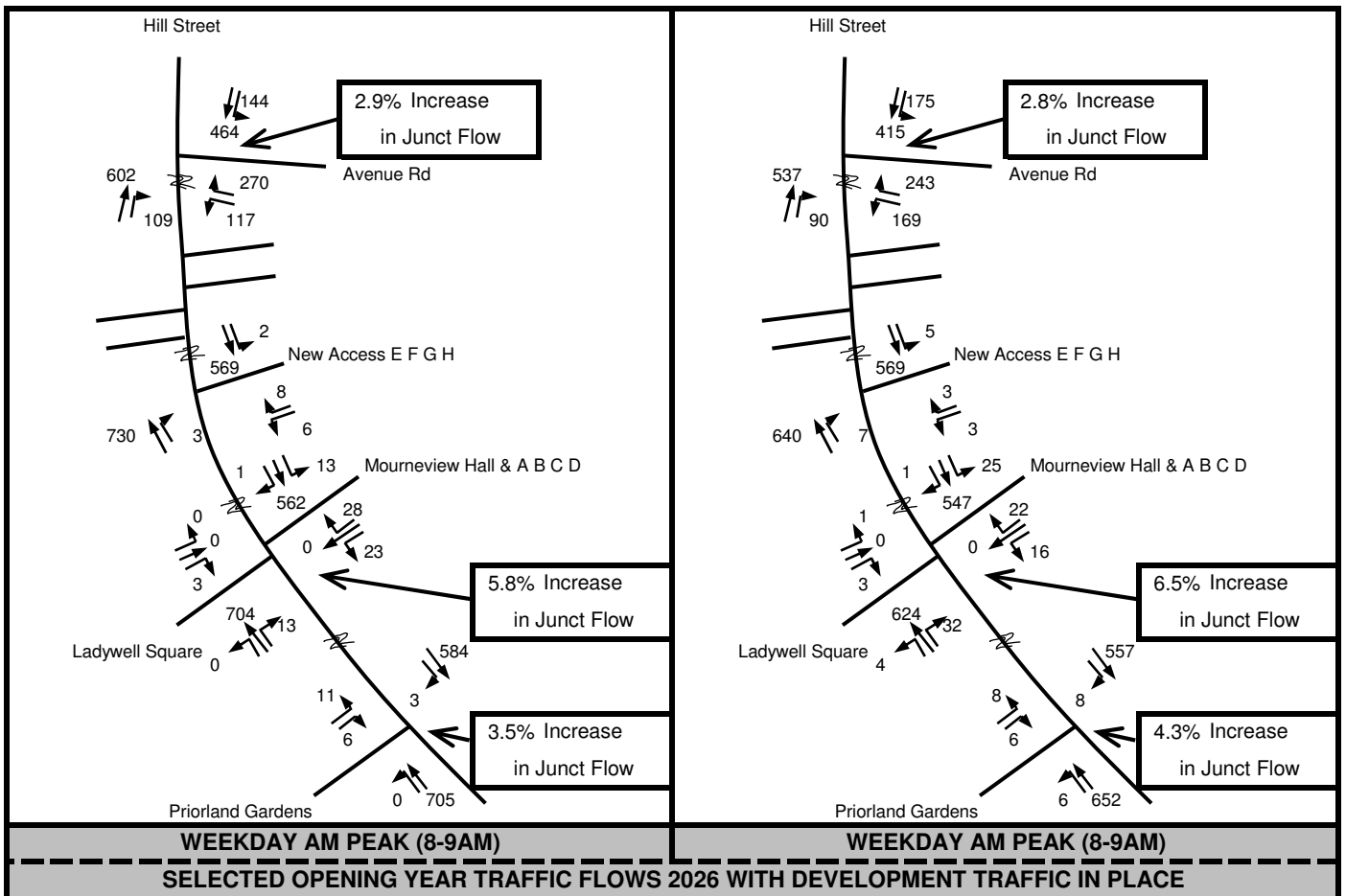
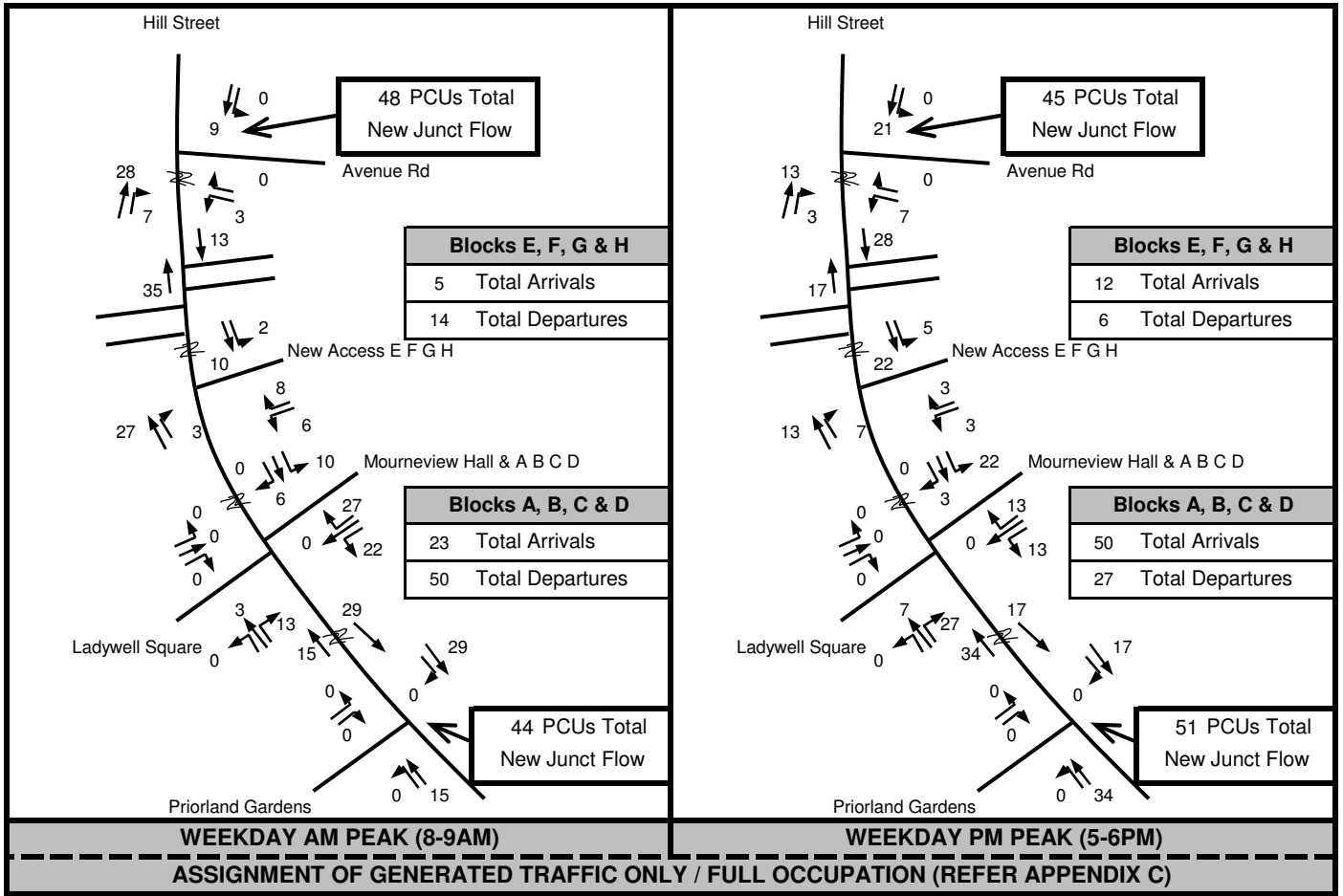
WEEKDAY AM PEAK (8-9AM)

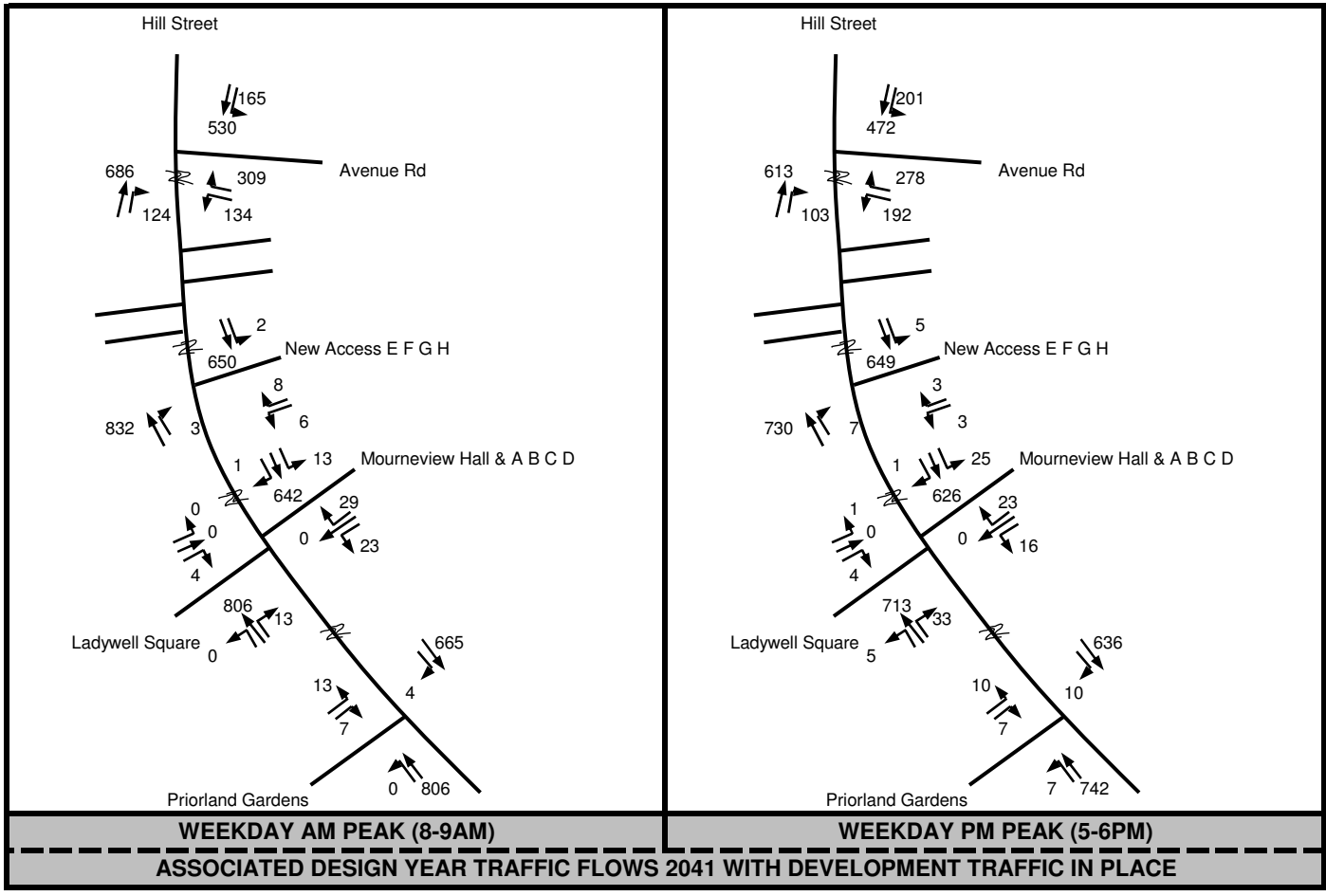
WEEKDAY PM PEAK (5-6PM)

OPENING YEAR TRAFFIC FLOWS 2026 W/O DEVELOPMENT (TII ANNUAL GROWTH APPLIED)



	119 Duplex	Arrivals		Departures		2-Way Traffic
		Per	Site	Per	Site	
BLOCKS A, B, C & D Total	Weekday 8-9am	0.146	17	0.366	44	61
	Weekday 5-6pm	0.377	45	0.165	20	65
	24 Hr Day	2.269	270	2.275	271	541
	212 m2 Creche	Arrivals		Departures		2-Way Traffic
		Per	Site	Per	Site	
212m2 GFA Creche	Weekday 8-9am	3.023	6	2.628	6	12
	Weekday 5-6pm	2.423	5	3.069	7	12
	24 Hr Day	14.480	31	16.243	34	65
TOTAL TRAFFIC VIA EXISTING MOURNEVIEW HALL (SUM OF ABOVE)						
TOTAL FLOW	Period	Arrivals		Departures		2-Way Flow
	Weekday 8-9am	23		50		73
	Weekday 5-6pm	50		27		77
	24 Hr Day	301		305		606
	75 Aparts	Arrivals		Departures		2-Way Traffic
		Per	Site	Per	Site	
BLOCKS E, F, G & H Total	Weekday 8-9am	0.062	5	0.187	14	19
	Weekday 5-6pm	0.158	12	0.081	6	18
	24 Hr Day	1.077	81	1.146	86	167





APPENDIX E

PiCADY Model Output
(R215 - New Site Access Priority Junction)

Capacity Assessment With Subject Development Open and Fully Occupied
Proposed New Northern Priority Controlled Access T-Junction

Modelled Scenario	Period Mean Max Q (PCUs)	Period Max RFC
2026 Opening Year AM Peak Hr	0.1	0.04
2026 Opening Year PM Peak Hr	0.1	0.02
2041 Design Year AM Peak Hr	0.1	0.05
2041 Design Year PM Peak Hr	0.1	0.02

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

NB - Any Small Changes to Selected Opening Year 2026 or Design Year 2041, or indeed significantly higher traffic volumes experienced, as deductable from the positive results presented, will clearly have no significant implications in terms of the conclusions of the Study.

Junctions 9
PICADY 9 - Priority Intersection Module
Version: 9.5.2.1013 © Copyright TRL Limited, 2019
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: 2026 AM PM.j9
Path: C:\Users\Eoin\NRB Consulting Engineers Ltd\NRB Server - Documents\2023\23-047 Hill St Dundalk DWA\Calculations\New Hill St site Access
Report generation date: 16/12/2024 12:45:28

»2026, AM
 »2026, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2026										
Stream B-AC	D1	0.0	11.10	0.04	B	D2	0.0	10.01	0.02	B
Stream C-AB		0.0	7.47	0.01	A		0.0	7.46	0.02	A

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	31/10/2023
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	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2026	AM	ONE HOUR	07:45	09:15	15
D2	2026	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2026, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	New T Junction Site Access	T-Junction	Two-way		0.13	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Hill St North		Major
B	New Site Access Arm		Minor
C	Hill St South		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	3.50	50	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	544	0.095	0.240	0.151	0.343
B-C	688	0.101	0.255	-	-
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	2026	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	571	100.000
B		✓	14	100.000
C		✓	733	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	
From	A	0	2	569	
	B	8	0	6	
	C	730	3	0	

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	
From	A	0	1	2	
	B	1	0	1	
	C	2	1	0	

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.04	11.10	0.0	B
C-AB	0.01	7.47	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	428	0.025	10	0.0	8.707	A
C-AB	2	534	0.004	2	0.0	6.841	A
C-A	550			550			
A-B	2			2			
A-C	428			428			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	393	0.032	13	0.0	9.558	A
C-AB	3	515	0.005	3	0.0	7.092	A
C-A	656			656			
A-B	2			2			
A-C	512			512			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	15	343	0.045	15	0.0	11.093	B
C-AB	3	490	0.007	3	0.0	7.464	A
C-A	804			804			
A-B	2			2			
A-C	626			626			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	15	343	0.045	15	0.0	11.095	B
C-AB	3	490	0.007	3	0.0	7.467	A
C-A	804			804			
A-B	2			2			
A-C	626			626			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	393	0.032	13	0.0	9.560	A
C-AB	3	515	0.005	3	0.0	7.093	A
C-A	656			656			
A-B	2			2			
A-C	512			512			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	428	0.025	11	0.0	8.712	A
C-AB	2	534	0.004	2	0.0	6.841	A
C-A	550			550			
A-B	2			2			
A-C	428			428			

2026, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	New T Junction Site Access	T-Junction	Two-way		0.09	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2026	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	574	100.000
B		✓	6	100.000
C		✓	647	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	5	569
	B	3	0	3
	C	640	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	1	2
	B	1	0	1
	C	2	1	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.02	10.01	0.0	B
C-AB	0.02	7.46	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	5	449	0.010	4	0.0	8.178	A
C-AB	5	536	0.010	5	0.0	6.855	A
C-A	482			482			
A-B	4			4			
A-C	428			428			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	5	416	0.013	5	0.0	8.844	A
C-AB	6	518	0.012	6	0.0	7.100	A
C-A	575			575			
A-B	4			4			
A-C	512			512			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	7	370	0.018	7	0.0	10.005	B
C-AB	8	496	0.016	8	0.0	7.456	A
C-A	704			704			
A-B	6			6			
A-C	626			626			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	7	370	0.018	7	0.0	10.005	B
C-AB	8	496	0.016	8	0.0	7.456	A
C-A	704			704			
A-B	6			6			
A-C	626			626			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	5	416	0.013	5	0.0	8.847	A
C-AB	6	518	0.012	6	0.0	7.101	A
C-A	575			575			
A-B	4			4			
A-C	512			512			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	5	449	0.010	5	0.0	8.181	A
C-AB	5	536	0.010	5	0.0	6.858	A
C-A	482			482			
A-B	4			4			
A-C	428			428			

Junctions 9
PICADY 9 - Priority Intersection Module
Version: 9.5.2.1013 © Copyright TRL Limited, 2019
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: 2041 AM PM.j9
Path: C:\Users\Eoin\NRB Consulting Engineers Ltd\NRB Server - Documents\2023\23-047 Hill St Dundalk DWA\Calculations\New Hill St site Access
Report generation date: 16/12/2024 12:47:18

»2041, AM
 »2041, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2041										
Stream B-AC	D1	0.1	12.63	0.05	B	D2	0.0	11.13	0.02	B
Stream C-AB		0.0	7.78	0.01	A		0.0	7.75	0.02	A

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	31/10/2023
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	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2041	AM	ONE HOUR	07:45	09:15	15
D2	2041	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2041, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	New T Junction Site Access	T-Junction	Two-way		0.13	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Hill St North		Major
B	New Site Access Arm		Minor
C	Hill St South		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	3.50	50	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	544	0.095	0.240	0.151	0.343
B-C	688	0.101	0.255	-	-
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	2041	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	652	100.000
B		✓	14	100.000
C		✓	835	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	
From	A	0	2	650	
	B	8	0	6	
	C	832	3	0	

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	
From	A	0	1	2	
	B	1	0	1	
	C	2	1	0	

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.05	12.63	0.1	B
C-AB	0.01	7.78	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	403	0.026	10	0.0	9.268	A
C-AB	2	520	0.004	2	0.0	7.024	A
C-A	626			626			
A-B	2			2			
A-C	489			489			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	362	0.035	13	0.0	10.403	B
C-AB	3	499	0.005	3	0.0	7.327	A
C-A	748			748			
A-B	2			2			
A-C	584			584			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	15	303	0.051	15	0.1	12.622	B
C-AB	3	471	0.007	3	0.0	7.782	A
C-A	916			916			
A-B	2			2			
A-C	716			716			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	15	303	0.051	15	0.1	12.627	B
C-AB	3	471	0.007	3	0.0	7.783	A
C-A	916			916			
A-B	2			2			
A-C	716			716			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	362	0.035	13	0.0	10.411	B
C-AB	3	499	0.005	3	0.0	7.330	A
C-A	748			748			
A-B	2			2			
A-C	584			584			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	403	0.026	11	0.0	9.275	A
C-AB	2	520	0.004	2	0.0	7.025	A
C-A	626			626			
A-B	2			2			
A-C	489			489			

2041, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	New T Junction Site Access	T-Junction	Two-way		0.09	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2041	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	654	100.000
B		✓	6	100.000
C		✓	737	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	5	649
	B	3	0	3
	C	730	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	1	2
	B	1	0	1
	C	2	1	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.02	11.13	0.0	B
C-AB	0.02	7.75	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	5	426	0.011	4	0.0	8.629	A
C-AB	5	522	0.010	5	0.0	7.031	A
C-A	550			550			
A-B	4			4			
A-C	489			489			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	5	388	0.014	5	0.0	9.504	A
C-AB	6	503	0.013	6	0.0	7.323	A
C-A	656			656			
A-B	4			4			
A-C	583			583			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	7	333	0.020	7	0.0	11.125	B
C-AB	8	477	0.017	8	0.0	7.750	A
C-A	804			804			
A-B	6			6			
A-C	715			715			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	7	333	0.020	7	0.0	11.126	B
C-AB	8	477	0.017	8	0.0	7.752	A
C-A	804			804			
A-B	6			6			
A-C	715			715			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	5	388	0.014	5	0.0	9.508	A
C-AB	6	503	0.013	6	0.0	7.326	A
C-A	656			656			
A-B	4			4			
A-C	583			583			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	5	426	0.011	5	0.0	8.631	A
C-AB	5	522	0.010	5	0.0	7.031	A
C-A	550			550			
A-B	4			4			
A-C	489			489			

APPENDIX F

**PiCADY Model Output
(Existing Mourneview Hill St Priority Junction)**

**Capacity Assessment With Subject Development Open and Fully Occupied
Existing Mourneview / Hill St Priority Controlled T-Junction**

Modelled Scenario	Period Mean Max Q (PCUs)	Period Max RFC
2026 Opening Year AM Peak Hr	0.2	0.16
2026 Opening Year PM Peak Hr	0.1	0.12
2041 Design Year AM Peak Hr	0.2	0.19
2041 Design Year PM Peak Hr	0.2	0.14

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

NB - Any Small Changes to Selected Opening Year 2026 or Design Year 2041, or indeed significantly higher traffic volumes experienced, as deductable from the positive results presented, will clearly have no significant implications in terms of the conclusions of the Study

Junctions 9
PICADY 9 - Priority Intersection Module
Version: 9.5.2.1013 © Copyright TRL Limited, 2019
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: 2026 AM PM.j9

Path: C:\Users\Eoin\NRB Consulting Engineers Ltd\NRB Server - Documents\2023\23-047 Hill St Dundalk DWA\Calculations\Ex Mourneview Access

Report generation date: 16/12/2024 12:58:10

»2026, AM

»2026, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2026										
Stream B-AC	D1	0.2	12.42	0.16	B	D2	0.1	11.79	0.12	B
Stream C-AB		0.0	7.39	0.03	A		0.1	7.33	0.07	A

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	31/10/2023
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	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2026	AM	ONE HOUR	07:45	09:15	15
D2	2026	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2026, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Ex Mrne View T Junction	T-Junction	Two-way		0.55	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Hill St North		Major
B	Mourne View to Site		Minor
C	Hill St South		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	3.50	50	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	544	0.095	0.240	0.151	0.343
B-C	688	0.101	0.255	-	-
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	2026	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	576	100.000
B		✓	51	100.000
C		✓	717	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	13	563
	B	28	0	23
	C	704	13	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	1	2
	B	1	0	1
	C	2	1	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.16	12.42	0.2	B
C-AB	0.03	7.39	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	38	433	0.089	38	0.1	9.199	A
C-AB	10	541	0.018	10	0.0	6.853	A
C-A	530			530			
A-B	10			10			
A-C	424			424			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	46	398	0.115	46	0.1	10.309	B
C-AB	12	526	0.023	12	0.0	7.080	A
C-A	633			633			
A-B	12			12			
A-C	506			506			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56	349	0.161	56	0.2	12.403	B
C-AB	15	507	0.030	15	0.0	7.390	A
C-A	774			774			
A-B	14			14			
A-C	620			620			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56	349	0.161	56	0.2	12.422	B
C-AB	15	507	0.030	15	0.0	7.393	A
C-A	774			774			
A-B	14			14			
A-C	620			620			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	46	398	0.115	46	0.1	10.331	B
C-AB	12	526	0.023	12	0.0	7.081	A
C-A	633			633			
A-B	12			12			
A-C	506			506			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	38	433	0.089	39	0.1	9.223	A
C-AB	10	541	0.018	10	0.0	6.854	A
C-A	530			530			
A-B	10			10			
A-C	424			424			

2026, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Ex Mrne View T Junction	T-Junction	Two-way		0.55	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	2026	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	573	100.000
B		✓	38	100.000
C		✓	660	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	25	548
	B	22	0	16
	C	628	32	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	1	2
	B	1	0	1
	C	2	1	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.12	11.79	0.1	B
C-AB	0.07	7.33	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	29	432	0.066	28	0.1	8.998	A
C-AB	25	553	0.045	25	0.0	6.887	A
C-A	472			472			
A-B	19			19			
A-C	413			413			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	398	0.086	34	0.1	9.979	A
C-AB	31	544	0.056	31	0.1	7.086	A
C-A	563			563			
A-B	22			22			
A-C	493			493			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	42	350	0.119	42	0.1	11.773	B
C-AB	39	536	0.073	39	0.1	7.324	A
C-A	688			688			
A-B	28			28			
A-C	603			603			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	42	350	0.119	42	0.1	11.785	B
C-AB	39	536	0.073	39	0.1	7.328	A
C-A	688			688			
A-B	28			28			
A-C	603			603			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34	398	0.086	34	0.1	9.995	A
C-AB	31	544	0.056	31	0.1	7.092	A
C-A	563			563			
A-B	22			22			
A-C	493			493			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	29	432	0.066	29	0.1	9.018	A
C-AB	25	553	0.045	25	0.1	6.894	A
C-A	472			472			
A-B	19			19			
A-C	413			413			

Junctions 9
PICADY 9 - Priority Intersection Module
Version: 9.5.2.1013 © Copyright TRL Limited, 2019
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: 2041 AM PM.j9
Path: C:\Users\Eoin\NRB Consulting Engineers Ltd\NRB Server - Documents\2023\23-047 Hill St Dundalk DWA\Calculations\Ex Mourneview Access
Report generation date: 16/12/2024 13:00:47

»2041, AM
 »2041, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2041										
Stream B-AC	D1	0.2	14.53	0.19	B	D2	0.2	13.57	0.14	B
Stream C-AB		0.0	7.64	0.03	A		0.1	7.49	0.08	A

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	31/10/2023
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	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2041	AM	ONE HOUR	07:45	09:15	15
D2	2041	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2041, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Ex Mrne View T Junction	T-Junction	Two-way		0.56	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Hill St North		Major
B	Mourne View to Site		Minor
C	Hill St South		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	3.50	50	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	544	0.095	0.240	0.151	0.343
B-C	688	0.101	0.255	-	-
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	2041	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	656	100.000
B		✓	52	100.000
C		✓	820	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	
From	A	0	13	643	
	B	29	0	23	
	C	807	13	0	

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	
From	A	0	1	2	
	B	1	0	1	
	C	2	1	0	

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.19	14.53	0.2	B
C-AB	0.03	7.64	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	39	406	0.096	39	0.1	9.884	A
C-AB	10	528	0.019	10	0.0	7.017	A
C-A	607			607			
A-B	10			10			
A-C	484			484			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	47	366	0.128	47	0.1	11.386	B
C-AB	12	512	0.024	12	0.0	7.281	A
C-A	725			725			
A-B	12			12			
A-C	578			578			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	57	307	0.186	57	0.2	14.496	B
C-AB	15	491	0.031	15	0.0	7.642	A
C-A	888			888			
A-B	14			14			
A-C	708			708			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	57	307	0.186	57	0.2	14.533	B
C-AB	15	491	0.031	15	0.0	7.642	A
C-A	888			888			
A-B	14			14			
A-C	708			708			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	47	366	0.128	47	0.2	11.422	B
C-AB	12	512	0.024	12	0.0	7.282	A
C-A	725			725			
A-B	12			12			
A-C	578			578			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	39	406	0.096	39	0.1	9.917	A
C-AB	10	528	0.019	10	0.0	7.020	A
C-A	607			607			
A-B	10			10			
A-C	484			484			

2041, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Ex Mrne View T Junction	T-Junction	Two-way		0.55	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	2041	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	652	100.000
B		✓	39	100.000
C		✓	751	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	25	627
	B	23	0	16
	C	718	33	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	1	2
	B	1	0	1
	C	2	1	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.14	13.57	0.2	B
C-AB	0.08	7.49	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	29	406	0.072	29	0.1	9.634	A
C-AB	26	544	0.048	26	0.1	7.026	A
C-A	539			539			
A-B	19			19			
A-C	472			472			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	35	367	0.096	35	0.1	10.947	B
C-AB	32	534	0.060	32	0.1	7.242	A
C-A	643			643			
A-B	22			22			
A-C	564			564			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43	311	0.138	43	0.2	13.548	B
C-AB	41	527	0.078	41	0.1	7.489	A
C-A	786			786			
A-B	28			28			
A-C	690			690			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43	311	0.138	43	0.2	13.571	B
C-AB	41	527	0.078	41	0.1	7.493	A
C-A	786			786			
A-B	28			28			
A-C	690			690			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	35	367	0.096	35	0.1	10.971	B
C-AB	32	535	0.060	32	0.1	7.248	A
C-A	643			643			
A-B	22			22			
A-C	564			564			

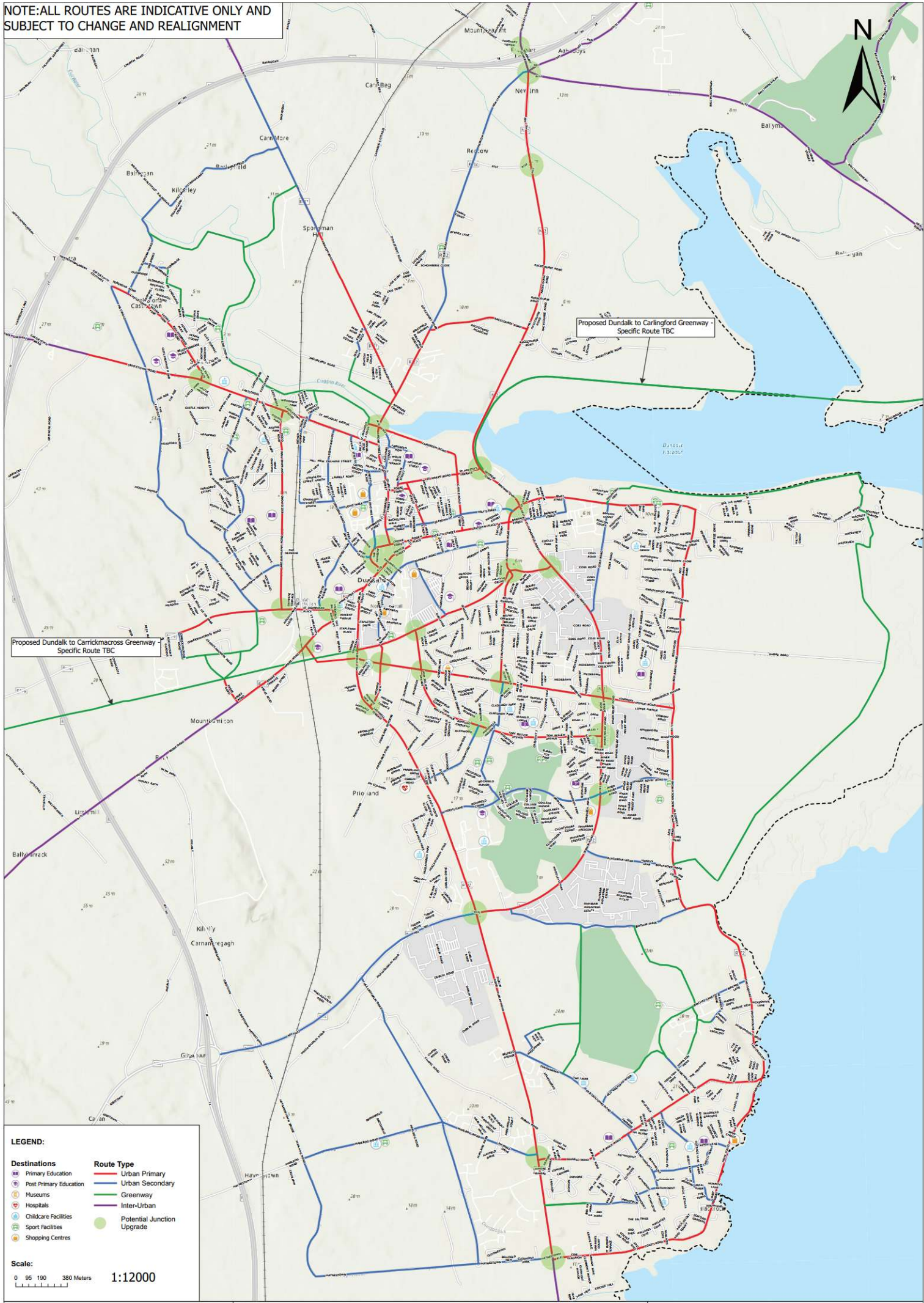
18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	29	406	0.072	29	0.1	9.657	A
C-AB	26	544	0.048	26	0.1	7.029	A
C-A	539			539			
A-B	19			19			
A-C	472			472			

APPENDIX G

Dundalk – Proposed Urban Cycle Network Plan
(Aecom/NTA)

NOTE: ALL ROUTES ARE INDICATIVE ONLY AND SUBJECT TO CHANGE AND REALIGNMENT



Proposed Dundalk to Carrickmacross Greenway - Specific Route TBC

Proposed Dundalk to Carrigrohane Greenway - Specific Route TBC

LEGEND:

Primary Education	Urban Primary
Post-Primary Education	Urban Secondary
Museums	Greenway
Hospitals	Inter-Urban
Childcare Facilities	Potential Junction Upgrade
Sport Facilities	
Shopping Centres	

Scale: 0 95 190 380 Meters **1:12000**

APPENDIX H

**Preliminary Mobility Management Plan
(AKA Travel Plan)**

consulting
engineers

NRB

***Residential Travel Plan
(Mobility Management Plan)***

Appendix H

For

**Proposed Residential
Development**

At

**R215/Hill Street, Dundalk,
Co Louth.**

**On Behalf of
Zirbac DLK Ltd.**

FINAL ISSUE

Contents

Page	Section	Description
2	1.0	Introduction
4	2.0	Access to the Site - By Mode / Accessibility
10	3.0	Collection of Baseline Information
11	4.0	The Travel Plan
17	5.0	Implementing the Plan
19	6.0	Monitoring and Review

Appendices.....

A	Bus Timetables / Route Information Services 174 / 174A and 174B
----------	---

1.0 INTRODUCTION

1.1 NRB Consulting Engineers have been commissioned to prepare a Residential Travel Plan for a proposed residential development on the site at Hill Street, Dundalk, Co Louth. This report explains the applicant's commitment to the promotion of more sustainable and cost-effective travel habits among the end occupiers/residents of the scheme. In this case, sustainable travel is supported by reduced provision of car parking for the development, and generous cycle parking provision.

1.2 **Of course, it should be recognised that, until residents are actually in place, an MMP prepared at Planning Stage can only outline the current and proposed alternative transport services and set out strategies that will be deployed to encourage future residents to use alternative modes of travel. A working MMP requires residents mode of travel to be measured to allow target modal splits to then be set. In these terms this MMP is considered 'Preliminary'.**

What is a Travel Plan?

1.3 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.

1.4 A 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 staff and other visitors. Such a plan usually concentrates on staff commuting patterns. In essence, a 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 Travel Plan

1.5 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 TP 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.

1.6 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.

1.7 It is envisaged that once in place, the Travel Plan will enable the following benefits to be realised for the Development:

- Reduced residential 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 and 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 residents, staff & visitors.

Methodology

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

- Your Step-By-Step Guide To Travel Plans (NTA 2012),
- Achieving Effective Workplace Travel Plans (NTA 2011),
- Traffic and Transport Assessment Guidelines (TII),
- Traffic Management Guidelines (DoELG, 2003),
- Mobility Management Plans – DTO Advice Note (DTO, 2002),
- The Route to Sustainable Commuting (DTO 2001),
- Smarter Travel: A Sustainable Transport Future (DOT).

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

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

2.0 ACCESS TO THE SITE - BY MODE / ACCESSIBILITY

- 2.1 The development consists of a total of 194 residential duplex/apartment units, arranged in blocks together with ancillary/supporting facilities. The site is within close proximity to high quality alternative modes of transport, being within the centre of Dundalk, with secure off-street parking areas for bicycles and a reduced number of private cars proposed along with bins storage, electrical room, plant enclosures and all associated site works.
- 2.2 For a Residential Development, it is essential for the successful Travel Planning to concentrate on journeys associated with work and school commuting patterns. These are the groups which can most practically be encouraged to use modes of transport other than the car. It should be noted that, being located within the centre of the town, this contributes to sustainable living, with schools, colleges, employment opportunities, retail and leisure all located within easy proximity. The measures and initiatives below are relevant and assist in addressing the transportation demands of the proposed scheme, together with identifying the range of alternative modes available.

Cycling and Walking Facilities

- 2.3 Louth County Council in conjunction with the NTA are progressing the Dundalk Active Travel Scheme that passes through the site. The scheme will see the creation of high quality segregated cycle lanes, pedestrian/cyclist crossing points and works to existing junctions along a circa 1.8km stretch of the R125 Dublin Road, starting at the junction of the Dublin Road and the Dundalk Inner Relief Road (known as the Xerox Junction) and finishing at Riverside Walk at the Dublin Road.
- 2.4 The scheme has gone through a Public Consultation and is been progressed to detailed design stage. The proposed Dundalk Active Travel Scheme works include:
- The installation of high-quality segregated pedestrian and cycling infrastructure to improve safety and promote active travel along the Dublin Road from the Xerox Junction (R132, R215 intersection) heading northwards to Riverside Walk for a length of c.2km.
 - The upgrade of junctions along the entire route to provide safer pedestrian and cycle crossings.
 - The upgrade of existing bus stops along the route, providing facilities that integrate both pedestrians and cyclists.
 - The upgrade of all entrances along the route to better facilitate pedestrians and cyclists.
 - The provision of pedestrian and cycling crossings at identified desire lines along the route.
 - Connection to existing cycling facilities that interface with the route, the improvement of landscaping and biodiversity along the full length of the scheme, including sustainable urban drainage systems (SUDS).
 - The provision of all other ancillary works associated with these cycle lanes along the length of the scheme

2.5 At present, pedestrian/cycle traffic at/to the existing site is served by an extensive network of footpaths and some cycle lanes/facilities. These are ever improving, and of course the nature of current National Policy is improved cycle networks will be rolled out as a matter of priority. In addition to the in-progress Dundalk Active Travel Scheme, the National Transport Authority, through the Cycle Networks Initiative, have published an overall Cycle Network Plan for Dundalk, a copy of which is included within Appendix G of the TA.

2.6 These plans include a network of cycle links of various types, showing how these link to services, schools and facilities and the proposed upgrades that are to be put in place to facilitate the plans. An extract from the Key Plan is below as **Figure 2.1**. An extract from the plan is as illustrated in **Figure 2.2** below.

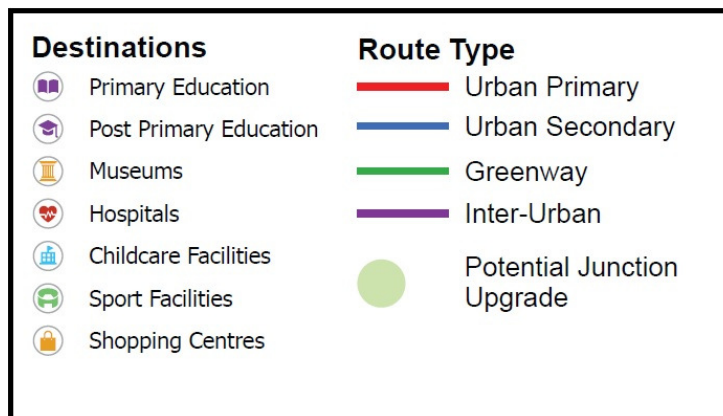


Figure 2.1 – Key Plan Extract from NTA Cycle Networks Proposal for Dundalk

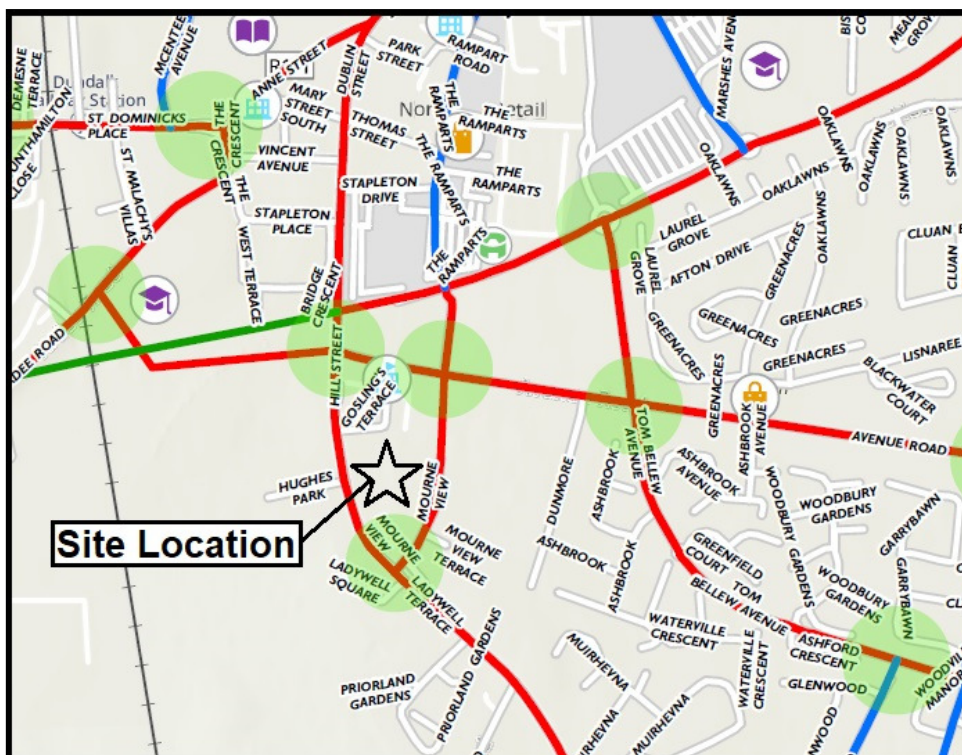


Figure 2.2 – Annotated Extract NTA Cycle Networks, Showing Site

- 2.7 It is clear from the above that the site is in fact bound on all sides by an Urban Primary Cycle Network (Red), even running within the site through Mourneview Hall, which provides the highest quality connectivity to the entire Dundalk Area.
- 2.8 The key to cycle accessibility is convenient safe links, with secure and carefully sited cycle parking. Cycling is ideal for shorter journeys. The provision of cycle parking is in line with the Apartment Guidelines 2022, which requires 1 Residential Bicycle Parking Space per Bedroom and 1 Visitor Bicycle Parking Space per 2 Units. With 385 Bedrooms in the 194 Units, this is a requirement for 385 No Residential Bicycle Parking spaces and 98 Visitor Bicycle Parking Spaces. An overall total of **648 No. Bicycle Parking Spaces are proposed**.
- 2.9 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.
- 2.10 To illustrate the extent of the area accessible by both Bicycle (8km) and on foot (2km), using Google we have included below approximate 'Iso-Distance Mapping' for an 8km and 2km Radius from the site. These illustrate the extent of the employment, retail, schools and colleges within sustainable travel distance of the site, as **Figure 2.3** and **Figure 2.4**. In these terms, residents would not have a requirement to own a car, with the closeness to services supporting sustainable living.

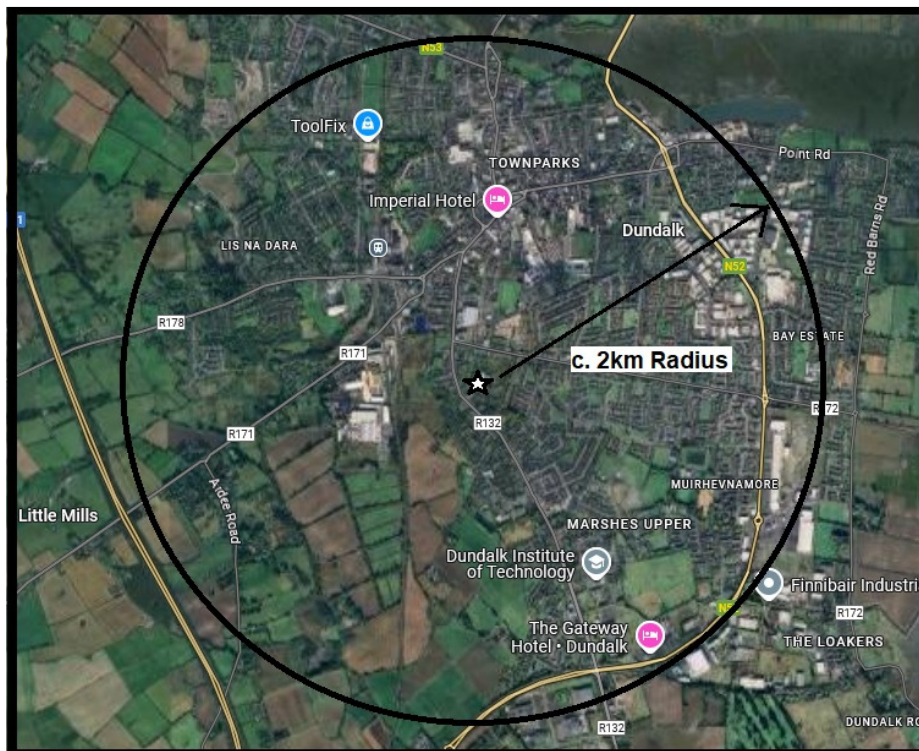


Figure 2.3 – 2km Radius Iso-Distance of the Subject Site (Walking): Google



Figure 2.4 – 8km Radius Iso-Distance of the Subject Site (Cycling): Google

- 2.11 The proposed site clearly can support sustainable living in terms of cycle and walking accessibility to schools, colleges, employment, retails and services within a very large catchment area as set out above.
- 2.12 Bicycle sharing facilities are becoming ever more popular with Public Bicycle Sharing initiatives spreading ever further throughout the Country and we understand that there are plans for such a scheme in Dundalk. These facilities offer a bicycle sharing alternative mode of transport and are easily accessible from the site. Stations can easily be accommodated within the site through minor amendments to the landscaping plans.

BUS & RAIL ACCESSIBILITY

- 2.13 Bus Eireann currently operate 3 No Dundalk Town local bus services, the #174 , #174A and #174B.

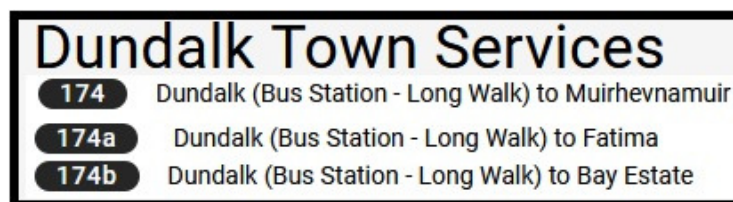


Figure 2.5 – Dundalk Town Bus Services

- 2.14 Each of these services provides for easy accessibility of the site to Longwalk Bus Station and the wider area of Dundalk, with the #174 passing the site on the R132. Timetables for the local Bus Eireann services showing stops and the frequency of the services (correct at the time of writing) are appended to this MMP.

- 2.15 Transport for Ireland provides Local Link Bus Services (including the #171 service) for the town and the wider area (refer map appended herewith). The closest bus stop is at Tesco with many of the Local Link services passing the site directly.
- 2.16 In addition, the Matthews Private Bus Service is very popular in Dundalk and it has its terminal at the Marshes Shopping Centre, a short walking distance from the site. *Readypenny* are also a private operator who run town bus services as part of Local Link.
- 2.17 The site is a 7min to 10 min bus journey to Longwalk Bus Station and a 6 min journey from Dundalk Railway Station. The site is a 1.5km walk to Dundalk Bus Station (approx. 20min walk time or 6min cycle time). It is similarly equidistant from the Train Station also being a 1.5km walk to the Station (approx. 20min walk time or 6min cycle time).
- 2.18 With the associated onward connection by bus and rail from the mainline Bus and Rail Stations, the site is therefore highly accessible to a wide range of national mainline rail services serving all destinations around Ireland, and of course linking to Dublin Airport by public and private service providers.
- 2.19 With ease of accessibility by Bus and Rail, and in particular with the high frequency existing train and bus services linking to Dublin, and with the clear accessibility for walking and cycling, it is therefore considered that the proposed development is highly sustainable in terms of public and alternative transport accessibility. The proximity of the development to existing public transport services means that end occupiers/residents will have viable alternatives to the private car for accessing the site and will not be reliant whatsoever upon the car as a primary mode of travel. This accessibility supports the case for reduced car parking provision at the site.

GOCAR

- 2.20 Car Sharing facilities are also provided within Dundalk, with GoCar services at Dundalk Retail Park located just north of the site. It is likely that these and other operators will extend and improve services within the area.

TAXI ACCESSIBILITY

- 2.21 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.

WALKING

- 2.22 The permeability locally for walking by residents is addressed above – and of course, being within the centre of Dundalk, this means that a very significant number of Schools, Colleges, Services, Retail destinations, Employment Destinations and Offices are within an easy and acceptable walk-commute of the site.
- 2.23 The site is also within the heart of the Dundalk Community and is therefore within the catchment

for local Primary and Secondary Schools.

- 2.24 In these terms we believe that walking will represent the most popular mode of home-work-home and home-school-home travel for residents of the scheme.

RESIDENTS COMMUNICATION

- 2.25 Prior to moving in, the Management Company will issue welcome packs to all residents. These packs include details of the development and how it is run, advice on moving in, public transport information, useful local information, the restricted availability of on-site parking and can require confirmation of a timeslot to move in. The preparation of this information ensures residents are familiar with the operation of the development before moving in.
- 2.26 Direct and high-quality pedestrian linkages are provided between the site and the existing pedestrian and cyclist 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 and can also be monitored by CCTV.
- 2.27 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 Travel Plan Coordinator, a role for the Management Company.
- 2.28 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 for tax free public transport tickets for their employees as an incentive for them to use public transport to travel to work.
- 2.29 With this in mind, the main focus of this Preliminary Travel Plan will be to promote and support the use of alternative modes to the private car.

3.0 COLLECTION OF BASELINE INFORMATION

Possible Travel Pattern Questionnaires

- 3.1 Once occupied, and when the Travel Plan Coordinator is appointed, the occupiers of the proposed development will be encouraged to regularly monitor the Travel Plan initiatives in order to maximise on their success.
- 3.2 Shortly after occupation 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 Travel Plan.
- 3.3 The Baseline Survey information will also allow the Travel Plan Coordinator for the development to set realistic modal-split targets for the development.
- 3.4 It is anticipated that, given the very-much town centre location and good transport links at this development, combined with the lack of car parking on site, there will be a high percentage of use via public and alternative transport. The Travel 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 is to achieve a reduced work-related commuting by car modal share of 65% to 45%.

4.0 THE TRAVEL PLAN

4.1 The successful implementation of a Travel Plan will ensure that, in-so-far-as-possible, the impacts of this 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-related journeys, focused on the movement of residents during peak times.

Walking - Key Information	
Approx. Zone of Influence	3.5km
Percentage of Residents travelling 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, a few of which are listed following:

- **W** - Wake Up! - Studies have shown that people who walk 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 can be a great way to meet other walkers, share the experience, and develop personal skills.
- **N** - New adventures - Walking 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 helps people incorporate physical activity into their daily routines. Research shows that regular physical activity can benefit your body and mind.

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

- 4.5 The following initiatives and incentives can be used to encourage walking:
- 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 – Key Information	
Approx. zone of influence	8-10km
Percentage of Residents travelling 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 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 reduces the need to travel by car thus reducing fuel costs and freeing up road space for more cyclists,
 - **C** - Confidence building - travelling 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 there are fewer cars on the road which makes it safer for those who cycle and walk,
 - **I** - Interpersonal skills - Cycling can be a great way to meet other cyclists and share the experience,
 - **N** - New adventures - Cycling 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 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:

- 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 – Key Information	
Approx. zone of influence	All Residents
Percentage of Residents travelling in area of influence	100%
Percentage of 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 on public transport, especially

during peak periods, the less people travelling by private car,

- Saving money – Taking public transport 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 and a full bus produces 377 times less carbon monoxide than a full car,
- Get fit and stay active - Walking 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 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.

Car Sharing – Key Information	
Approx. zone of influence	All Residents
Percentage of Residents travelling in area of influence	100%
Percentage of Residents 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 place 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 or to school is essential for some people, car sharing schemes such as GoCar (which are active in Dublin) 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:
- Draw up a car-sharing policy for how the scheme will operate,
 - 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.
- 4.18 Other travel planning measures such as the use of technology, flexible working arrangements and video conferencing facilities will and are used as part of this development to minimise travel requirements and allow people to use alternative means of transport.

Action Plan Summary Table

- 4.19 The Summary Action Plan is described in the Table below. Modal Split Targets will be determined following on from the first survey shortly after full occupation, typically within the first six months. This will be part of the role of the Travel Plan Coordinator. 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
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 TP	Marketing the Plan	High	Low	Driven By TP Coordinator	
	Measuring Success	High	Medium	Annual Surveys	

Action Plan Summary Table

5.0 IMPLEMENTING THE PLAN

Background

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

- 5.3 The key objective of this Travel Plan is to ensure that the traffic impacts and car usage associated with the operation of 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 Travel Plan Coordinator to be appointed for the Development upon occupation.
- 5.5 The nominated person and their contact details will be provided to the Planning Authority upon occupation of the development.
- 5.6 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.
- 5.7 To support the Travel Plan Coordinator's efforts, the Operator 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 Travel Plan

- 5.8 Active promotion and marketing is needed if the Travel Plan is to have a positive impact on stakeholder travel patterns to and from the site.
- 5.9 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, school, and business travel & to promote active travel, public transport & alternatives to travelling by car.

- **Brand the Plan** – as part of communicating the 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, school travel, 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.

- 5.10 As part of the marketing process, the Travel Plan coordinator can personalise a plan for the Development, drawing attention to the benefits of participation and support for its implementation.
- 5.11 The Coordinator can identify communication tools and networks used by the different audiences in the development and use these to communicate about travel.
- 5.12 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.
- 5.13 The 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 so on, 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 Residents commitment to the Plan.

6.0 CONCLUSIONS

- 6.1 The development forming the subject of this application accords with the principles of sustainable development, being located within the heart of Dundalk Town centre with clear and easy access to alternative modes of travel. With reduced car parking provided this also acts as a travel demand management measure. The Operator, 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 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 working Travel Plan itself.
- 6.3 The key to the Plans success will be the appointment of a **Travel Plan Coordinator** for the development, once occupied. 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 Plan Coordinator should be assisted and supported by the Operator and Residents. This will serve to spread the work load, and also give the Residents a valuable input into the operation of the Plan.
- 6.5 Successful Travel Plans 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 Plan 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 plan. They are, after all, the plan's primary focus.
- 6.7 It is recommended that the working Travel Plan be set in motion full residential occupation. The plan should evolve and develop with the development, taking into account changing Residents and their travel preferences and needs.
- 6.8 Annual reviews of the Plan 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 plan should be viewed as a calibration exercise for target setting .



Timetable

171 Shercock to Dundalk

SHERCOCK - CARRICKMACROSS - INNISKEEN - DUNDALK TRAIN STATION - DUNDALK BUS STATION

Stops	Monday - Saturday				
Shercock, Main St.	07:10	09:45	11:45	14:25	17:15
Corduff Jct.	07:18	09:53	11:53	14:33	17:23
Carrickmacross, Workhouse	07:24	09:59	11:59	14:39	17:29
Carrickmacross, Main St.	07:27	10:02	12:02	14:42	17:32
Carrickmacross, Civic Offices	07:30	10:05	12:05	14:45	17:35
Essexford	07:37	10:12	12:12	14:52	17:42
Inniskeen Church	07:43	10:18	12:18	14:58	17:48
Inniskeen	07:45	10:20	12:20	15:00	17:50
Channonrock	07:51	10:26	12:26	15:06	17:56
Mullabohy	07:56	10:31	12:31	15:11	18:01
Rices Bridge	07:58	10:33	12:33	15:13	18:03
Dundalk, Train Station	08:03	10:38	12:38	15:18	18:08
Dundalk, Park St.	08:05	10:40	12:40	15:20	18:10
Dundalk, Bus Station (The Long Walk)	08:07	10:42	12:42	15:22	18:12

DUNDALK BUS STATION - DUNDALK TRAIN STATION - INNISKEEN - CARRICKMACROSS - SHERCOCK

Stops	Monday - Saturday				
Dundalk, Bus Station (The Long Walk)	08:10	10:45	13:15	16:10	18:20
Dundalk, Train Station	08:14	10:49	13:19	16:14	18:24
Rices Bridge	08:19	10:54	13:24	16:19	18:29
Mullabohy	08:21	10:56	13:26	16:21	18:31
Channonrock	08:26	11:01	13:31	16:26	18:36
Inniskeen	08:32	11:07	13:37	16:32	18:42
Inniskeen Church	08:34	11:09	13:39	16:34	18:44
Essexford	08:39	11:14	13:44	16:39	18:49
Carrickmacross, Civic Offices	08:46	11:21	13:51	16:46	18:56
Carrickmacross, Main St.	08:49	11:24	13:54	16:49	18:59
Carrickmacross, Workhouse	08:51	11:26	13:56	16:51	19:01
Corduff Jct.	08:58	11:33	14:03	16:58	19:08
Shercock, Main St.	09:08	11:43	14:13	17:08	19:18

For information on all available journeys & connections visit the National Journey Planner at www.transportforireland.ie

For more information on the TFI Leap Card, where to buy it and how to use it, visit leapcard.ie

The TFI Go app allows you to buy tickets directly from your phone and is available to download on Apple iOS and Google Android. For more information on the TFI Go app, visit transportforireland.ie

For more information



Tel: 047 51840



Email: cm@locallink.ie

Web: www.locallinkcm.ie

Instagram: [@locallinkcavanmonaghan](https://www.instagram.com/locallinkcavanmonaghan)

Facebook: [@locallinkcavanandmonaghan](https://www.facebook.com/locallinkcavanandmonaghan)



Operated by: TFI Local Link Cavan Monaghan, The Pringle Building, Clones, Co. Monaghan, H23 FK29



Ask your driver or other staff member for assistance



TFI Local Link fares include single, return, young adult and child fares. Cash is accepted, Free Travel Pass holders and children under 5 years travel for free.

For more information on fares, please visit: transportforireland.ie/fares/bus-fares or call TFI Local Link Cavan Monaghan.



You can now use the TFI Go app or the TFI Leap Card to pay for your ticket.



TFI Go app



Leap Top-Up app



Our vehicles are wheelchair accessible. Please pre-book the day before travel

Service operates to a reduced timetable on Sundays and Bank holidays.

Information correct at time of print: September 2023



171 Shercock to Dundalk

SHERCOCK - CARRICKMACROSS - INNISKEEN - DUNDALK TRAIN STATION - DUNDALK BUS STATION

Stops	Sunday & Bank Holiday			
Shercock, Main St.	08:15	11:15	14:15	17:15
Corduff Jct.	08:23	11:23	14:23	17:23
Carrickmacross, Workhouse	08:29	11:29	14:29	17:29
Carrickmacross, Main St.	08:32	11:32	14:32	17:32
Carrickmacross, Civic Offices	08:35	11:35	14:35	17:35
Essexford	08:42	11:42	14:42	17:42
Inniskeen Church	08:48	11:48	14:48	17:48
Inniskeen	08:50	11:50	14:50	17:50
Channonrock	08:56	11:56	14:56	17:56
Mullabohy	09:01	12:01	15:01	18:01
Rices Bridge	09:03	12:03	15:03	18:03
Dundalk, Train Station	09:08	12:08	15:08	18:08
Dundalk, Park St.	09:10	12:10	15:10	18:10
Dundalk, Bus Station (The Long Walk)	09:12	12:12	15:12	18:12

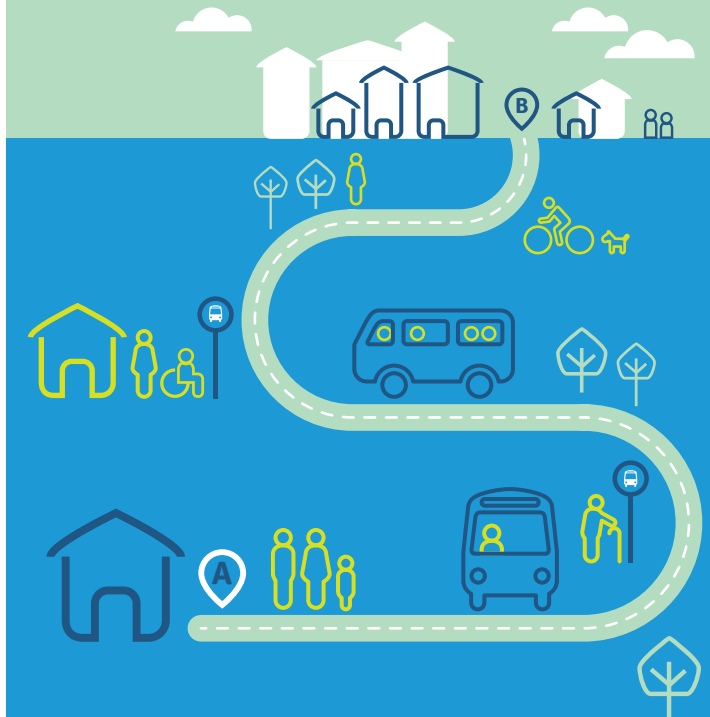
DUNDALK BUS STATION - DUNDALK TRAIN STATION - INNISKEEN - CARRICKMACROSS - SHERCOCK

Stops	Sunday & Bank Holiday			
Dundalk, Bus Station (The Long Walk)	09:45	13:00	15:45	18:30
Dundalk, Train Station	09:49	13:04	15:49	18:34
Rices Bridge	09:54	13:09	15:54	18:39
Mullabohy	09:56	13:11	15:56	18:41
Channonrock	10:01	13:16	16:01	18:46
Inniskeen	10:07	13:22	16:07	18:52
Inniskeen Church	10:09	13:24	16:09	18:54
Essexford	10:14	13:29	16:14	18:59
Carrickmacross, Civic Offices	10:21	13:36	16:21	19:06
Carrickmacross, Main St.	10:24	13:39	16:24	19:09
Carrickmacross, Workhouse	10:26	13:41	16:26	19:11
Corduff Jct.	10:33	13:48	16:33	19:18
Shercock, Main St.	10:43	13:58	16:43	19:28

Route

171

Shercock to Dundalk



Cavan Monaghan



Operating day		Monday - Friday												
Dundalk (Bus Station- Long Walk)	dep	08:45	09:15	09:45	10:15	10:45	11:15	11:45	12:15	12:45	13:15	13:45	14:15	14:45
Dundalk (Dublin Rd McDonalds)		08:50	09:20	09:50	10:20	10:50	11:20	11:50	12:21	12:51	13:21	13:51	14:21	14:51
Tom Bellew Ave (Garrybawn Est)		08:55	09:25	09:55	10:25	10:55	11:25	11:55	12:27	12:57	13:27	13:57	14:27	14:57
Little Muirheavna Rd (Road 1)		08:56	09:26	09:56	10:26	10:56	11:26	11:56	12:28	12:58	13:28	13:58	14:28	14:58
Grange Drive Muirheavna (No 39)	arr	08:58	09:28	09:59	10:29	10:59	11:29	11:59	12:31	13:01	13:31	14:01	14:31	15:01

Operating day		Monday - Friday						
Dundalk (Bus Station- Long Walk)	dep	15:15	15:45	16:15	16:45	17:15	17:45	18:15
Dundalk (Dublin Rd McDonalds)		15:21	15:51	16:21	16:51	17:21	17:51	18:21
Tom Bellew Ave (Garrybawn Est)		15:27	15:57	16:27	16:57	17:27	17:57	18:27
Little Muirheavna Rd (Road 1)		15:28	15:58	16:28	16:58	17:28	17:58	18:28
Grange Drive Muirheavna (No 39)	arr	15:31	16:01	16:30	17:00	17:30	18:00	18:30

Operating day		Saturday												
Dundalk (Bus Station- Long Walk)	dep	08:45	09:15	09:45	10:15	10:45	11:15	11:45	12:15	12:45	13:15	13:45	14:15	14:45
Dundalk (Dublin Rd McDonalds)		08:48	09:18	09:48	10:19	10:49	11:19	11:49	12:19	12:49	13:20	13:50	14:21	14:51
Tom Bellew Ave (Garrybawn Est)		08:52	09:22	09:52	10:24	10:54	11:24	11:54	12:24	12:54	13:25	13:55	14:26	14:56
Little Muirheavna Rd (Road 1)		08:53	09:23	09:53	10:25	10:55	11:25	11:55	12:25	12:55	13:26	13:56	14:27	14:57
Grange Drive Muirheavna (No 39)	arr	08:55	09:25	09:55	10:27	10:57	11:27	11:57	12:27	12:57	13:28	13:58	14:29	14:59

Operating day		Saturday						
Dundalk (Bus Station- Long Walk)	dep	15:15	15:45	16:15	16:45	17:15	17:45	18:15
Dundalk (Dublin Rd McDonalds)		15:21	15:51	16:20	16:50	17:21	17:51	18:19
Tom Bellew Ave (Garrybawn Est)		15:26	15:56	16:25	16:55	17:26	17:56	18:24
Little Muirheavna Rd (Road 1)		15:27	15:57	16:26	16:56	17:27	17:57	18:25
Grange Drive Muirheavna (No 39)	arr	15:29	15:59	16:28	16:58	17:29	17:59	18:27

Operating day		Monday - Friday												
Grange Drive Muirheavna (No 39)	dep	08:58	09:28	09:59	10:29	10:59	11:29	11:59	12:31	13:01	13:31	14:01	14:31	15:01
Hoey's Lane (Doolargy Est)		09:00	09:30	10:01	10:31	11:01	11:31	12:01	12:33	13:03	13:33	14:03	14:33	15:03
Hoey's Lane (DKIT)		09:02	09:32	10:03	10:33	11:03	11:33	12:03	12:35	13:05	13:35	14:05	14:35	15:05
Dundalk (County Louth Hospital)		09:03	09:34	10:05	10:35	11:05	11:35	12:05	12:37	13:07	13:37	14:07	14:37	15:07
Dundalk (Park St Russells Bus Saloon)		09:07	09:38	10:09	10:39	11:10	11:40	12:10	12:42	13:12	13:42	14:13	14:43	15:12
Dundalk (Bus Station- Long Walk)	arr	09:08	09:40	10:11	10:41	11:12	11:42	12:12	12:44	13:14	13:44	14:15	14:45	15:14

Operating day		Monday - Friday						
Grange Drive Muirheavna (No 39)	dep	15:31	16:01	16:30	17:00	17:30	18:00	18:30
Hoey's Lane (Doolargy Est)		15:33	16:03	16:32	17:02	17:32	18:02	18:32
Hoey's Lane (DKIT)		15:35	16:05	16:34	17:04	17:34	18:04	18:34
Dundalk (County Louth Hospital)		15:37	16:07	16:36	17:06	17:36	18:06	18:36
Dundalk (Park St Russells Bus Saloon)		15:42	16:12	16:41	17:11	17:41	18:11	18:40
Dundalk (Bus Station- Long Walk)	arr	15:44	16:14	16:43	17:13	17:43	18:13	18:42

Operating day		Saturday												
Grange Drive Muirheavna (No 39)	dep	09:00	09:30	10:00	10:30	11:00	11:31	12:01	12:32	13:02	13:32	14:02	14:31	15:01
Hoey's Lane (Doolargy Est)		09:02	09:32	10:02	10:32	11:02	11:33	12:03	12:34	13:04	13:34	14:04	14:33	15:03
Hoey's Lane (DKIT)		09:04	09:33	10:03	10:33	11:03	11:34	12:04	12:36	13:06	13:36	14:06	14:35	15:05
Dundalk (County Louth Hospital)		09:05	09:34	10:05	10:35	11:05	11:36	12:06	12:37	13:08	13:38	14:08	14:37	15:07
Dundalk (Park St Russells Bus Saloon)		09:09	09:39	10:09	10:39	11:09	11:40	12:10	12:42	13:12	13:42	14:13	14:41	15:11
Dundalk (Bus Station- Long Walk)	arr	09:11	09:41	10:11	10:41	11:11	11:42	12:12	12:44	13:14	13:44	14:15	14:43	15:13

* The TFI Live App allows you to access live real time departure and journey planning information across the Transport for Ireland (TFI) network



Operating day		Saturday						
Grange Drive Muirheavna (No 39)	dep	15:31	16:01	16:31	17:01	17:31	18:01	18:32
Hoey's Lane (Doolargy Est)		15:33	16:03	16:33	17:02	17:32	18:02	18:34
Hoey's Lane (DKIT)		15:35	16:04	16:34	17:04	17:34	18:04	18:35
Dundalk (County Louth Hospital)		15:37	16:06	16:36	17:05	17:35	18:05	18:37
Dundalk (Park St Russells Bus Saloon)		15:41	16:11	16:41	17:10	17:40	18:09	18:41
Dundalk (Bus Station- Long Walk)	arr	15:43	16:13	16:43	17:12	17:42	18:11	18:43

* The TFI Live App allows you to access live real time departure and journey planning information across the Transport for Ireland (TFI) network





Operating day			Monday - Friday											
Dundalk (Bus Station- Long Walk)	dep	07:30	08:00	08:30	09:00	09:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30
Seatown Place (The Windmill)		07:33	08:03	08:33	09:04	09:34	10:04	10:34	11:05	11:35	12:05	12:34	13:04	13:34
Point Rd (Opp Army HQ)		07:35	08:05	08:35	09:06	09:36	10:06	10:36	11:08	11:38	12:08	12:37	13:07	13:37
Dundalk Rd (Riverside Est)		07:37	08:07	08:37	09:08	09:38	10:08	10:38	11:10	11:40	12:10	12:39	13:09	13:39
Hazelwood Ave (Bay Estate)	arr	07:39	08:09	08:39	09:10	09:40	10:10	10:40	11:12	11:42	12:12	12:41	13:11	13:41
Operating day			Monday - Friday											
Dundalk (Bus Station- Long Walk)	dep	14:00	14:30	15:00	15:30	16:00	16:30	17:00	17:30	18:00				
Seatown Place (The Windmill)		14:04	14:34	15:04	15:34	16:04	16:34	17:04	17:34	18:04				
Point Rd (Opp Army HQ)		14:07	14:37	15:07	15:37	16:07	16:37	17:06	17:36	18:06				
Dundalk Rd (Riverside Est)		14:09	14:39	15:09	15:39	16:09	16:39	17:08	17:38	18:08				
Hazelwood Ave (Bay Estate)	arr	14:11	14:41	15:11	15:41	16:11	16:41	17:10	17:40	18:10				
Operating day			Saturday											
Dundalk (Bus Station- Long Walk)	dep	07:30	08:00	08:30	09:00	09:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30
Seatown Place (The Windmill)		07:32	08:03	08:33	09:03	09:33	10:04	10:34	11:04	11:34	12:04	12:34	13:04	13:34
Point Rd (Opp Army HQ)		07:35	08:06	08:36	09:06	09:36	10:06	10:36	11:06	11:36	12:06	12:36	13:06	13:36
Dundalk Rd (Riverside Est)		07:36	08:07	08:37	09:07	09:37	10:08	10:38	11:08	11:38	12:08	12:38	13:08	13:38
Hazelwood Ave (Bay Estate)	arr	07:38	08:09	08:39	09:09	09:39	10:10	10:40	11:11	11:41	12:11	12:41	13:11	13:41
Operating day			Saturday											
Dundalk (Bus Station- Long Walk)	dep	14:00	14:30	15:00	15:30	16:00	16:30	17:00	17:30	18:00				
Seatown Place (The Windmill)		14:04	14:34	15:04	15:34	16:04	16:34	17:04	17:34	18:04				
Point Rd (Opp Army HQ)		14:06	14:36	15:06	15:36	16:06	16:36	17:06	17:36	18:06				
Dundalk Rd (Riverside Est)		14:08	14:38	15:08	15:38	16:08	16:38	17:08	17:38	18:08				
Hazelwood Ave (Bay Estate)	arr	14:11	14:41	15:11	15:41	16:11	16:41	17:10	17:40	18:10				
Operating day			Sunday											
Dundalk (Bus Station- Long Walk)	dep	13:30	14:30	15:30	16:30	17:30								
Seatown Place (The Windmill)		13:33	14:33	15:33	16:33	17:33								
Point Rd (Opp Army HQ)		13:36	14:36	15:36	16:36	17:36								
Dundalk Rd (Riverside Est)		13:38	14:38	15:38	16:38	17:38								
Hazelwood Ave (Bay Estate)	arr	13:40	14:40	15:40	16:40	17:40								

* The TFI Live App allows you to access live real time departure and journey planning information across the Transport for Ireland (TFI) network



Operating day		Monday - Friday												
Hazelwood Ave (Bay Estate)	dep	07:39	08:09	08:39	09:10	09:40	10:10	10:40	11:12	11:42	12:12	12:41	13:11	13:41
Blackrock Road (Opp Kingswood)		07:42	08:12	08:42	09:13	09:43	10:13	10:43	11:15	11:45	12:15	12:44	13:14	13:44
Hoey's Lane (Doolargy Est)		07:45	08:15	08:45	09:16	09:46	10:16	10:46	11:18	11:48	12:18	12:47	13:17	13:47
Hoey's Lane (DKIT)		07:46	08:16	08:46	09:18	09:48	10:18	10:48	11:20	11:50	12:20	12:49	13:19	13:49
Dundalk (County Louth Hospital)		07:48	08:18	08:48	09:20	09:50	10:20	10:50	11:22	11:52	12:22	12:51	13:21	13:51
Dundalk (Park St Russells Bus Saloon)		07:52	08:22	08:52	09:24	09:54	10:24	10:54	11:27	11:57	12:27	12:56	13:26	13:56
Dundalk (Bus Station- Long Walk)	arr	07:53	08:23	08:53	09:26	09:56	10:26	10:56	11:29	11:59	12:29	12:58	13:28	13:58

Operating day		Monday - Friday												
Hazelwood Ave (Bay Estate)	dep	14:11	14:41	15:11	15:41	16:11	16:41	17:10	17:41	18:10				
Blackrock Road (Opp Kingswood)		14:14	14:44	15:14	15:44	16:14	16:44	17:13	17:44	18:13				
Hoey's Lane (Doolargy Est)		14:17	14:47	15:17	15:47	16:17	16:47	17:16	17:47	18:16				
Hoey's Lane (DKIT)		14:19	14:49	15:19	15:49	16:19	16:49	17:18	17:49	18:18				
Dundalk (County Louth Hospital)		14:21	14:51	15:21	15:51	16:21	16:51	17:20	17:51	18:20				
Dundalk (Park St Russells Bus Saloon)		14:26	14:56	15:26	15:56	16:26	16:56	17:25	17:56	18:24				
Dundalk (Bus Station- Long Walk)	arr	14:28	14:58	15:28	15:58	16:28	16:58	17:27	17:58	18:25				

Operating day		Saturday												
Hazelwood Ave (Bay Estate)	dep	07:38	08:10	08:40	09:09	09:39	10:10	10:40	11:11	11:41	12:13	12:43	13:14	13:44
Blackrock Road (Opp Kingswood)		07:41	08:13	08:43	09:12	09:42	10:13	10:43	11:14	11:44	12:16	12:46	13:17	13:47
Hoey's Lane (Doolargy Est)		07:43	08:16	08:46	09:15	09:45	10:16	10:46	11:17	11:47	12:19	12:49	13:20	13:50
Hoey's Lane (DKIT)		07:44	08:17	08:47	09:16	09:46	10:18	10:48	11:18	11:48	12:20	12:50	13:22	13:52
Dundalk (County Louth Hospital)		07:45	08:18	08:48	09:17	09:47	10:19	10:49	11:20	11:50	12:22	12:52	13:23	13:53
Dundalk (Park St Russells Bus Saloon)		07:48	08:21	08:51	09:22	09:52	10:24	10:54	11:24	11:54	12:26	12:56	13:28	13:58
Dundalk (Bus Station- Long Walk)	arr	07:50	08:23	08:53	09:24	09:54	10:26	10:56	11:26	11:56	12:28	12:58	13:30	14:00

Operating day		Saturday												
Hazelwood Ave (Bay Estate)	dep	14:11	14:41	15:11	15:41	16:12	16:42	17:10	17:40	18:10				
Blackrock Road (Opp Kingswood)		14:14	14:44	15:14	15:44	16:15	16:45	17:13	17:43	18:13				
Hoey's Lane (Doolargy Est)		14:17	14:47	15:17	15:47	16:18	16:48	17:16	17:46	18:16				
Hoey's Lane (DKIT)		14:19	14:49	15:19	15:49	16:19	16:49	17:18	17:48	18:17				
Dundalk (County Louth Hospital)		14:21	14:51	15:21	15:51	16:21	16:51	17:19	17:49	18:19				
Dundalk (Park St Russells Bus Saloon)		14:25	14:55	15:26	15:56	16:26	16:56	17:24	17:54	18:23				
Dundalk (Bus Station- Long Walk)	arr	14:27	14:57	15:28	15:58	16:28	16:58	17:26	17:56	18:25				

Operating day		Sunday												
Hazelwood Ave (Bay Estate)	dep	13:41	14:41	15:40	16:40	17:40								
Blackrock Road (Opp Kingswood)		13:44	14:44	15:43	16:43	17:43								
Hoey's Lane (Doolargy Est)		13:46	14:47	15:46	16:46	17:46								
Hoey's Lane (DKIT)		13:48	14:49	15:48	16:48	17:48								
Dundalk (County Louth Hospital)		13:50	14:50	15:49	16:49	17:49								
Dundalk (Park St Russells Bus Saloon)		13:54	14:54	15:53	16:53	17:53								
Dundalk (Bus Station- Long Walk)	arr	13:56	14:56	15:55	16:55	17:55								

* The TFI Live App allows you to access live real time departure and journey planning information across the Transport for Ireland (TFI) network



Operating day			Monday - Friday											
Dundalk (Bus Station- Long Walk)	dep	07:10	08:00	08:30	09:00	09:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30
Castletown Rd (Graveyard)		07:16	08:06	08:36	09:06	09:36	10:06	10:36	11:06	11:36	12:06	12:37	13:08	13:38
Bellewsbridge Rd (Fatima Pk)	arr	07:20	08:10	08:41	09:11	09:41	10:11	10:41	11:11	11:41	12:11	12:42	13:13	13:43
Operating day			Monday - Friday											
Dundalk (Bus Station- Long Walk)	dep	14:00	14:30	15:00	15:30	16:00	16:30	17:00	17:30	18:00				
Castletown Rd (Graveyard)		14:08	14:38	15:08	15:36	16:06	16:38	17:08	17:38	18:08				
Bellewsbridge Rd (Fatima Pk)	arr	14:13	14:43	15:13	15:41	16:11	16:43	17:13	17:43	18:13				
Operating day			Saturday											
Dundalk (Bus Station- Long Walk)	dep	08:00	08:30	09:00	09:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00
Castletown Rd (Graveyard)		08:05	08:35	09:06	09:36	10:06	10:36	11:06	11:36	12:06	12:36	13:06	13:36	14:06
Bellewsbridge Rd (Fatima Pk)	arr	08:09	08:39	09:11	09:41	10:11	10:41	11:11	11:41	12:11	12:41	13:11	13:41	14:11
Operating day			Saturday											
Dundalk (Bus Station- Long Walk)	dep	14:30	15:00	15:30	16:00	16:30	17:00	17:30	18:00					
Castletown Rd (Graveyard)		14:36	15:06	15:36	16:06	16:36	17:06	17:36	18:06					
Bellewsbridge Rd (Fatima Pk)	arr	14:41	15:11	15:41	16:11	16:41	17:11	17:41	18:10					
Operating day			Sunday											
Dundalk (Bus Station- Long Walk)	dep	13:00	14:00	15:00	16:00	17:00								
Castletown Rd (Graveyard)		13:05	14:05	15:05	16:05	17:05								
Bellewsbridge Rd (Fatima Pk)	arr	13:10	14:10	15:10	16:10	17:10								

* The TFI Live App allows you to access live real time departure and journey planning information across the Transport for Ireland (TFI) network



Operating day		Monday - Friday												
Bellewsbridge Rd (Fatima Pk)	dep	07:20	08:10	08:41	09:11	09:41	10:11	10:41	11:11	11:41	12:11	12:42	13:13	13:43
Beechmount Drive (Skateboard Park)		07:24	08:14	08:45	09:15	09:45	10:15	10:45	11:16	11:46	12:16	12:47	13:18	13:48
Castletown Rd (Woodview)		07:29	08:19	08:50	09:20	09:50	10:20	10:50	11:23	11:52	12:22	12:53	13:24	13:54
Dundalk (Bus Station- Long Walk)	arr	07:32	08:28	08:59	09:29	09:59	10:29	10:59	11:30	11:58	12:28	12:59	13:30	14:00

Operating day		Monday - Friday												
Bellewsbridge Rd (Fatima Pk)	dep	14:13	14:43	15:13	15:41	16:11	16:43	17:13	17:43	18:13				
Beechmount Drive (Skateboard Park)		14:17	14:47	15:17	15:45	16:15	16:47	17:17	17:47	18:17				
Castletown Rd (Woodview)		14:22	14:52	15:22	15:50	16:20	16:52	17:22	17:51	18:21				
Dundalk (Bus Station- Long Walk)	arr	14:29	14:59	15:29	15:57	16:27	16:59	17:29	17:57	18:27				

Operating day		Saturday												
Bellewsbridge Rd (Fatima Pk)	dep	08:09	08:39	09:11	09:41	10:11	10:41	11:11	11:41	12:13	12:43	13:12	13:42	14:11
Beechmount Drive (Skateboard Park)		08:12	08:42	09:15	09:45	10:15	10:45	11:15	11:45	12:17	12:47	13:16	13:46	14:15
Castletown Rd (Woodview)		08:15	08:45	09:18	09:48	10:18	10:48	11:18	11:48	12:20	12:50	13:19	13:49	14:18
Dundalk (Bus Station- Long Walk)	arr	08:20	08:52	09:25	09:55	10:25	10:55	11:25	11:55	12:27	12:57	13:26	13:56	14:25

Operating day		Saturday												
Bellewsbridge Rd (Fatima Pk)	dep	14:41	15:11	15:41	16:11	16:41	17:11	17:41	18:10					
Beechmount Drive (Skateboard Park)		14:45	15:15	15:45	16:15	16:45	17:15	17:45	18:13					
Castletown Rd (Woodview)		14:48	15:18	15:48	16:18	16:48	17:18	17:48	18:16					
Dundalk (Bus Station- Long Walk)	arr	14:55	15:25	15:55	16:25	16:55	17:25	17:55	18:23					

Operating day		Sunday												
Bellewsbridge Rd (Fatima Pk)	dep	13:10	14:10	15:10	16:10	17:10								
Beechmount Drive (Skateboard Park)		13:14	14:14	15:14	16:14	17:14								
Castletown Rd (Woodview)		13:17	14:17	15:17	16:17	17:17								
Dundalk (Bus Station- Long Walk)	arr	13:23	14:23	15:23	16:23	17:23								

* The TFI Live App allows you to access live real time departure and journey planning information across the Transport for Ireland (TFI) network



Louth Service Area



APPENDIX I

**Stage 1 Independent Road Safety / Quality Audit
(& Designer Feedback Form)**

Title: Stage 1 ROAD SAFETY AUDIT
For;
Proposed Residential Development at Hill Street, Dundalk,
Co. Louth.

Client: NRB Consulting Engineers

Date: December 2024

Report reference: 2529R01

VERSION: FINAL (15-1-2025)

Prepared By:

Bruton Consulting Engineers Ltd

Glaspistol

Clogherhead

Drogheda

Co. Louth.

Tel: 041 9881456

Mob: 086 8067075

E: admin@brutonceng.ie

W: www.brutonceng.ie

CONTENTS SHEET

Contents

1.0	Introduction	2
2.0	Background	3
3.0	Items Raised in This Road Safety Audit.....	4
3.1	Problem	4
3.2	Problem	5
3.3	Problem	6
3.4	Problem	7
4.0	Observations.....	8
4.1	Observation	8
5.0	Audit Statement.....	9
	Appendix A.....	10
	Appendix B.....	11
	Appendix C.....	13

1.0 Introduction

This report was prepared in response to a request from Mr. Eoin Reynolds, of NRB Consulting Engineers, for a Stage 1 Road Safety Audit for a proposed residential development and associated works off Hill Street (R132) in Dundalk.

The Road Safety Audit Team comprised of;

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

TII Auditor Approval no. NB 168446

Team Member: **Daniel Pentony**, CEng MIEI PGDipPM

TII Auditor Approval no. DP3383505

The Road Safety Audit involved the examination of drawings and other material provided by NRB Consulting Engineers and a site visit by the Audit Team, together, on the 20th of December 2024.

The weather at the time of the site visit was wet and the road surface was also wet.

This Stage 1 Road Safety Audit has been carried out in accordance with the requirements of TII Publication Number GE-STY-01024, dated December 2017.

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 this safety audit report 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**.

ST 1 RSA – Hill St, Dundalk

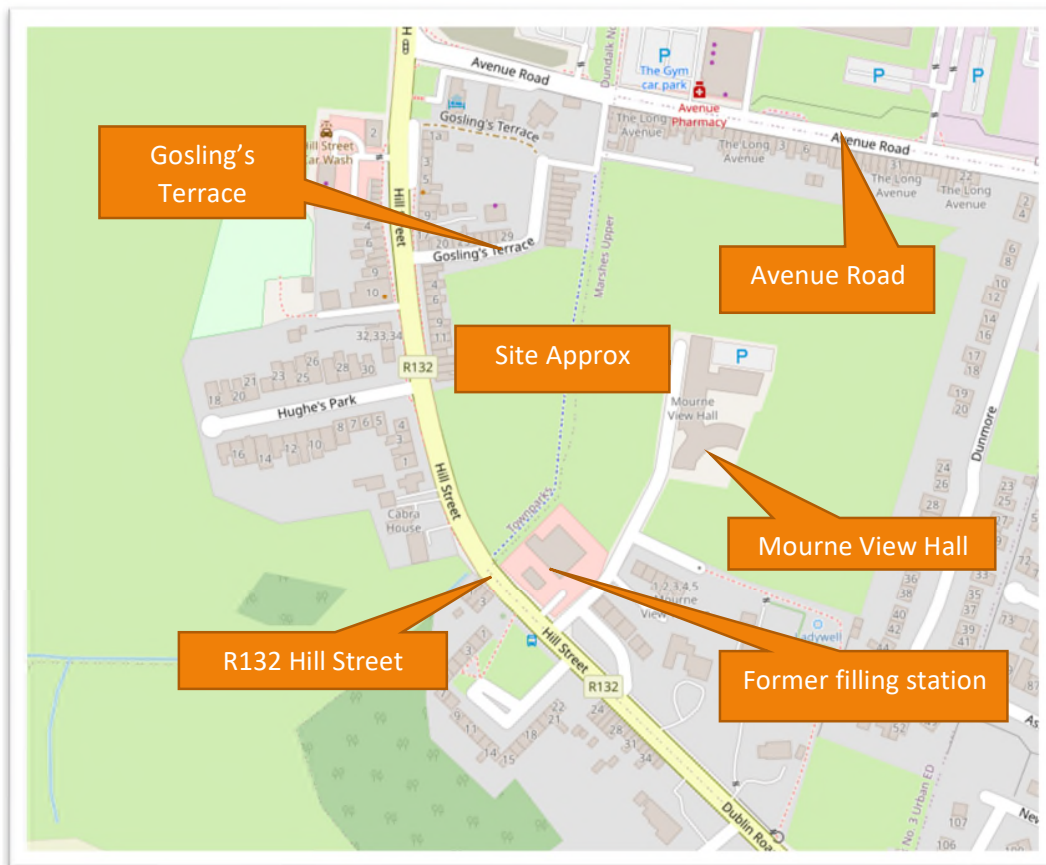
NRB

2.0 Background

It is proposed to construct a residential development off the R132, Hill Street in Dundalk. Two vehicular access points are to be provided either side of the former filling station. The southern access will be an extension of the existing road serving the Mourne View Hall residential development and the second will be a new access north of the existing greenway/shared use pedestrian cycle scheme from the R132 to Avenue Road. There is an open drain/stream through some of the site and a pedestrian crossing is proposed internally within the development.

The speed limit on the R132 is 50km/hr.

The site location map is shown below.



Site location map courtesy of [openstreetmap.org](https://www.openstreetmap.org)

ST 1 RSA – Hill St, Dundalk

NRB

3.0 Items Raised in This Road Safety Audit.

3.1 Problem

LOCATION

R132.

PROBLEM

There are no crossing facilities of the R132 for pedestrians. The bus stop and the proposed development will increase the desire line for pedestrian to cross the R132. The lack of facilities could lead to collisions with through traffic or trips and falls on the high kerbs.



RECOMMENDATION

It is recommended that crossing facilities for pedestrians be provided on the R132.

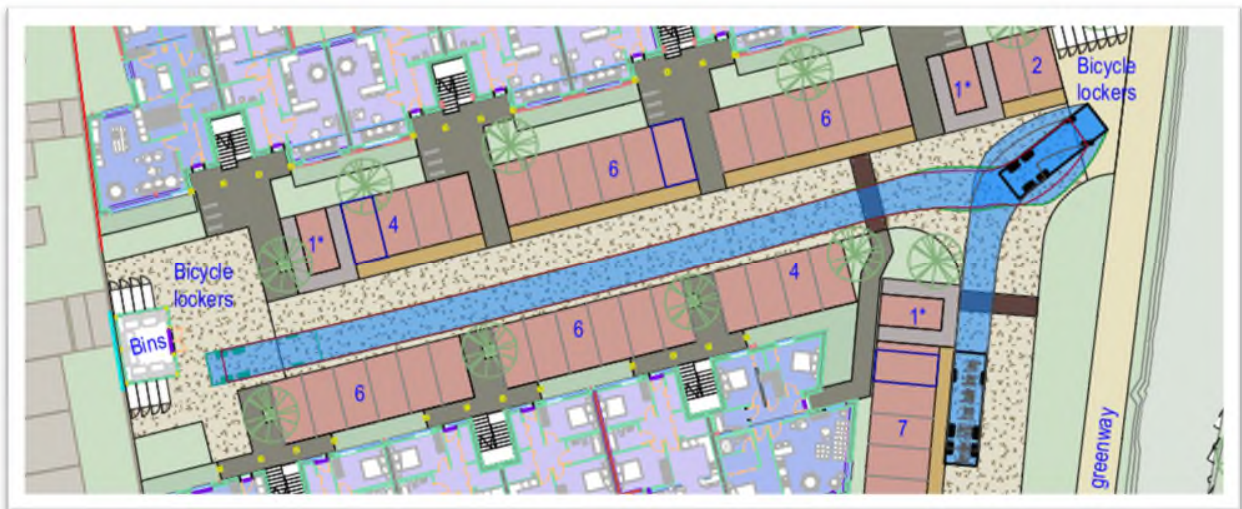
ST 1 RSA – Hill St, Dundalk**NRB****3.2 Problem***LOCATION*

Drawing NRB-TA-006

Internal Home-zone Road to the rear of Line Terraces.

PROBLEM

The swept path analysis shows a refuse vehicle reversing along the homezone road over a relatively long distance. Given the nature of home zone roads where space is shared between all road users there is a risk that children playing may not be seen by a reversing driver in the blind spots or by the other refuse collection crew who may be distracted collecting and returning bins.

**RECOMMENDATION**

It is recommended that the turning head be extended to cater for refuse vehicles.

ST 1 RSA – Hill St, Dundalk

NRB

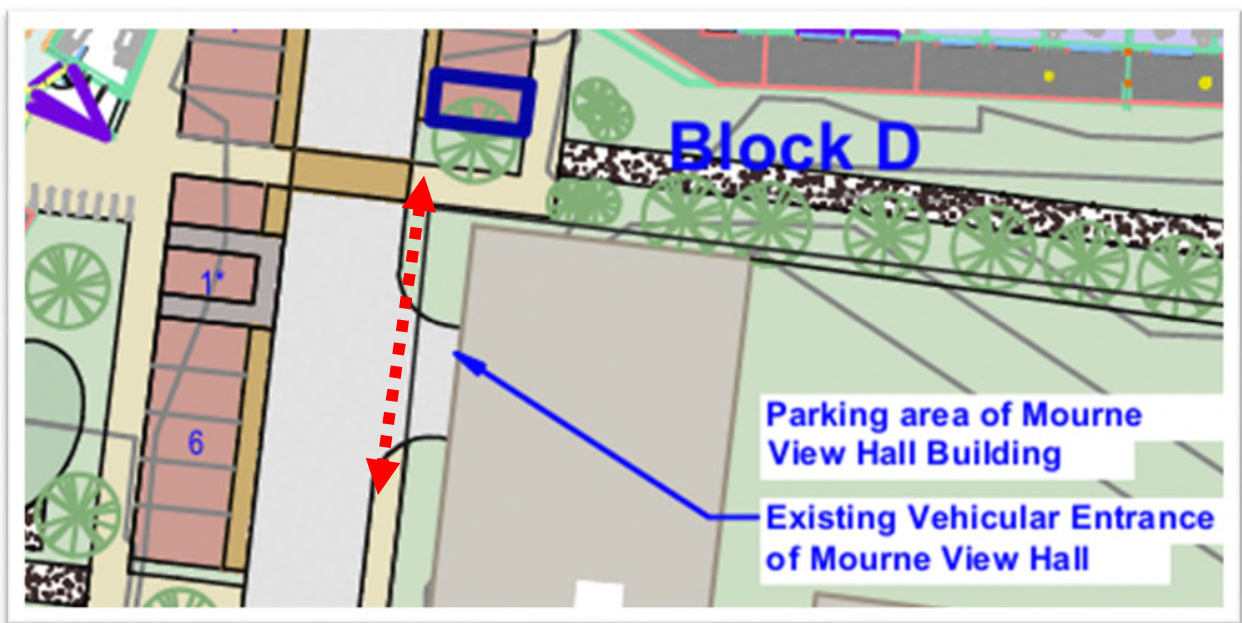
3.3 Problem

LOCATION

Mourne View hall.

PROBLEM

The footpath is not shown to continue north of the vehicular access of the existing building. Pedestrians would have to enter the carriageway if they intend on continuing north to the proposed development. This could lead to collisions with passing vehicles and inaccessibility for mobility impaired users.



RECOMMENDATION

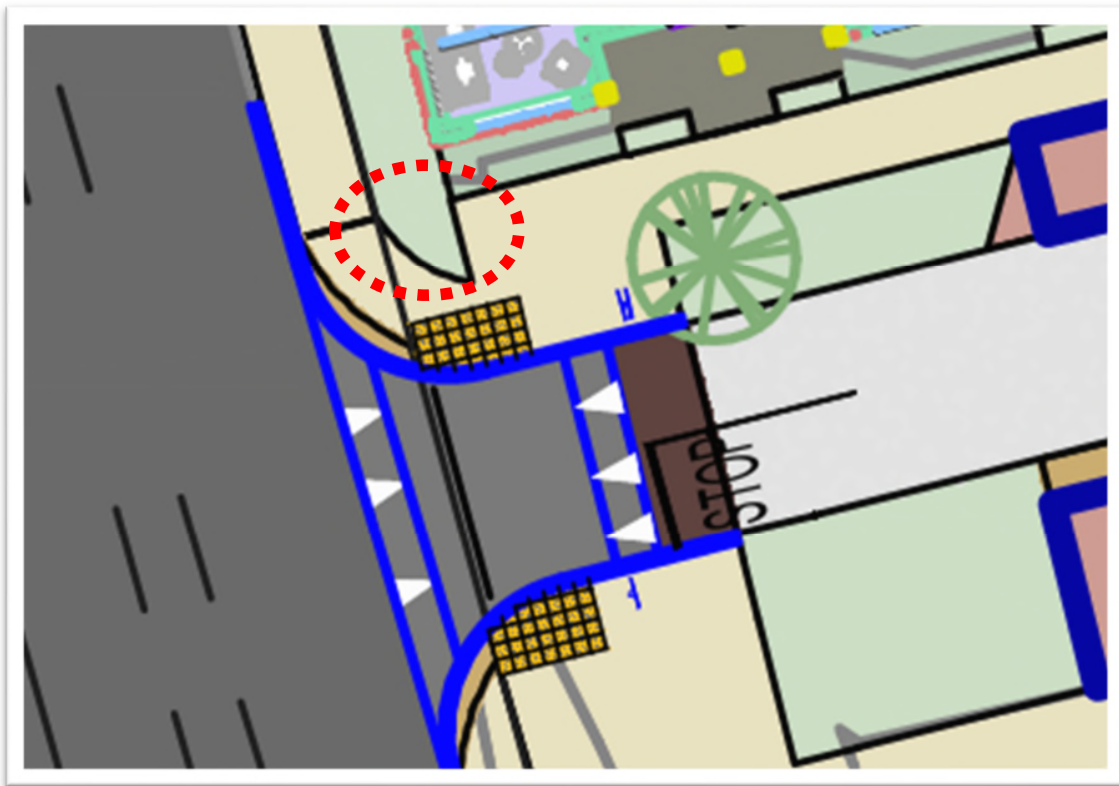
It is recommended that the footpath be made continuous including dropped kerbs and tactile paving.

ST 1 RSA – Hill St, Dundalk**NRB****3.4 Problem***LOCATION*

Northern access off the R132.

PROBLEM

The landscaping is shown protruding into the footpath area close to the uncontrolled pedestrian crossing point. This will be on the desire line and will be traversed by pedestrians resulting in possible slips and falls.

**RECOMMENDATION**

It is recommended that the landscaped area be reduced at this location.

ST 1 RSA – Hill St, Dundalk

NRB

4.0 Observations

4.1 Observation

A drawing of the proposed Active Travel scheme on the R132 was provided to the Audit Team which shows a signalised pedestrian crossing. Drawing ref L330-OCSC-XX-XX-Dr-C-0111 S3 P02, OCSC Proposed Layout Sheet 10 of 10, dated 2/8/2023.

ST 1 RSA – Hill St, Dundalk

NRB

5.0 Audit Statement

We certify that we have examined the information provided and the site on the 20th of December 2024. 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.

Norman Bruton Signed: 
(Audit Team Leader) Dated: 15 -1-2025

Daniel Pentony Signed: 
(Audit Team Member) Dated: 15-1-2025

ST 1 RSA – Hill St, Dundalk

NRB

Appendix A

List of Material Supplied for this Road Safety Audit;

Drawing references

- Drawing NRB-TA-001 Rev B
- Drawing NRB-TA-002 Rev B
- Drawing NRB-TA-003 Rev B
- Drawing NRB-TA-004 Rev B
- Drawing NRB-TA-005 Rev C
- Drawing NRB-TA-006 Rev B
- Drawing NRB-TA-007 Rev B
- Drawing NRB-TA-008 Rev B

ST 1 RSA – Hill St, Dundalk

NRB



Appendix B

Feedback Form

AUDIT FORM – FEEDBACK ON ROAD SAFETY AUDIT REPORT

Scheme: Hill St. Dundalk

Stage Audit: Stage 1

Date Audit (site visit) Completed: 20-12-2024

Paragraph No. in Road Safety Audit Report	Problem accepted (yes/no)	Recommended measure accepted (yes/no)	Alternative measures (describe)	Alternative measures accepted by Auditors (Yes/No)
3.1	Yes	Yes – a pedestrian crossing can be provided through agreement with LCC as needed. Note a crossing is proposed by LCC under the Active Travel scheme.		
3.2	Yes	Yes – the turning head can easily be achieved through minor modifications to cycle storage and landscaping (Tracks Provided)		
3.3	Yes	Yes – the detail can be agreed with LCC		
3.4	Yes	Yes – small area of landscaping will be adjusted		

Observation 4.1 : The Drawings are now annotated to show an in-line Bus Stop in accordance with the CDM Detail TL204, to tie into the existing situation. This can be adjusted as required in the event of the Active Travel scheme being implemented.



Signed.....

Date 15-1-2025.

Design Team Leader



Signed.....

Date...15-1-2025.....

Audit Team Leader



Signed.....

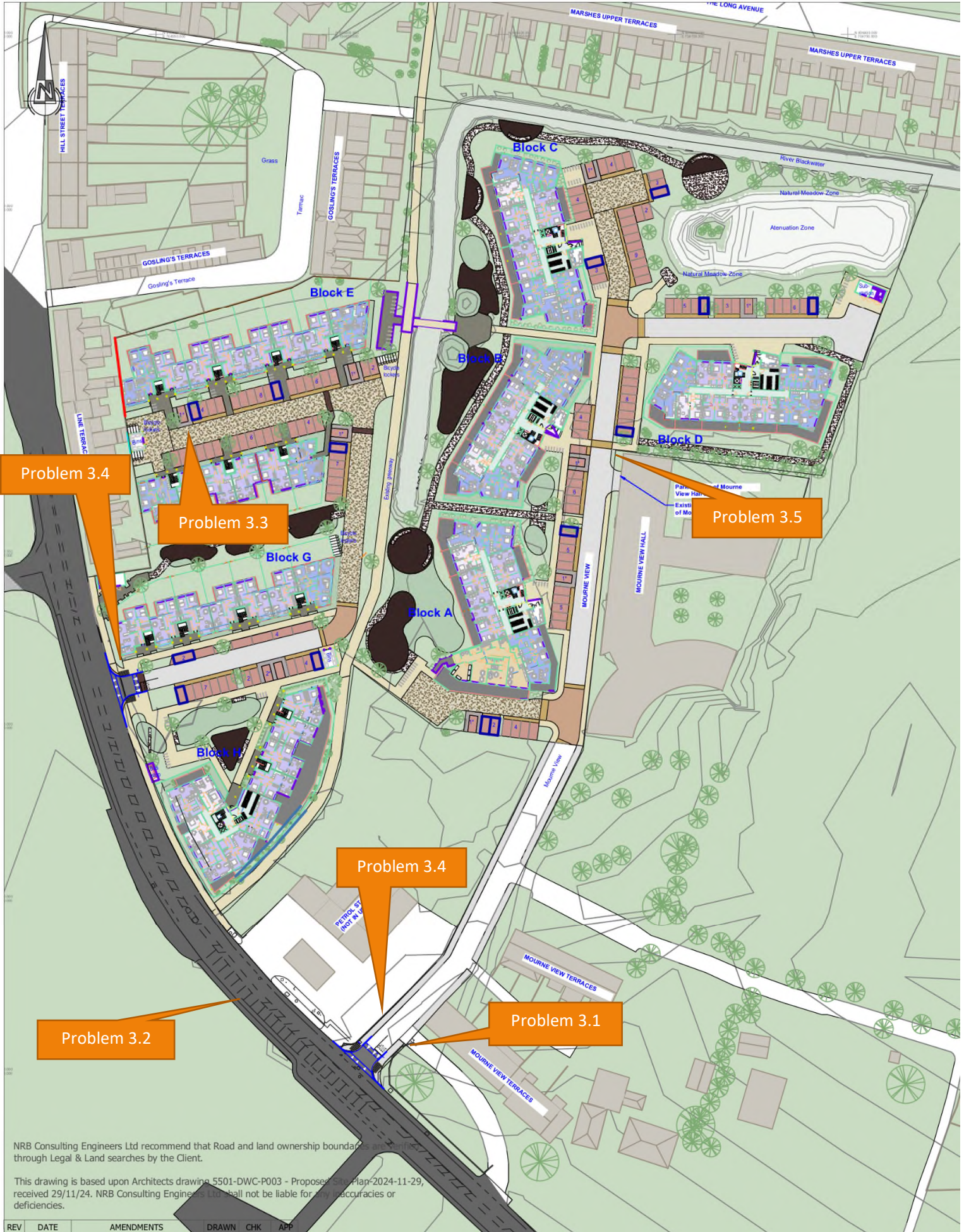
Date 15-1-2025.

'PP' Employer

Signed 'PP' with the Permission/Consent of Employer

Appendix C

Problem Location Plan.



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

This drawing is based upon Architects drawing 5501-DWC-P003 - Proposed Site Plan-2024-11-29, received 29/11/24. NRB Consulting Engineers Ltd shall not be liable for any inaccuracies or deficiencies.

REV	DATE	AMENDMENTS	DRAWN	CHK	APP