consulting engineers

NRB

"Transportation Assessment Report"

incl.

Preliminary Mobility Management Plan

(Appendix G)

DMURS Statement of Consistency

(Appendix H)

Parking Management Strategy Report

(Appendix I)

Servicing/Operational Waste Management Report

(Appendix J)

Stage 1 Road Safety Audit (incl. Quality Audit)

(Appendix K) &

Bus/LUAS Capacity/Demand Report

(Appendix L)

For

Proposed Residential Development

At

Broomhill Road, Tallaght, Dublin 24.

SUBMISSION ISSUE

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EXECUTIVE SUMMARY

NRB Consulting Engineers Ltd were appointed to address the Traffic/Transportation issues associated with a planning application for a residential apartment development on zoned development lands on Broomhill Road, Tallaght, Dublin 24.

The site was previously used for industrial and employment purposes. In this regard, the site has long established traffic and trip generation characteristics, which are most likely to have been significantly greater than the now-proposed use.

Being located in the heart of Tallaght and within a 10-minute walk of The Square and other local large employment centres such as Tallaght Hospital and TU Dublin Campus, the site is ideally placed to take advantage of, and contribute to, non-car modes of travel.

This Transportation Assessment (TA) has been prepared to address any Traffic/Transportation issues associated with the proposal, and specifically the capacity of the existing road network. The report takes account of the Tallaght LAP transport policy & mobility policy context provisions which seek to change the nature of the networks in the area.

The Report has been prepared in accordance with the TII's Traffic & Transportation Assessment Guidelines and addresses the worst-case traffic impact of the proposal. This TA addresses the adequacy of the existing and improved local road network to safely and appropriately accommodate the worst-case vehicular demands with the development fully occupied, taking account of the existing transportation demands locally.

We commissioned and undertook new traffic surveys of the adjacent road network during May 2021 and then applied a 'Summertime/Covid factor' utilising adjacent TII Traffic Counter Data, to adjust the data to reflect non-pandemic times. This represents industry-standard procedure, being a pragmatic approach in the context of the statutory timeframes applied to planning applications during a pandemic. This traffic survey data formed the basis of the study.

The Transportation Assessment confirms that the established existing road network and the access junctions are more than adequate to accommodate the worst-case traffic associated with the development. The assessment also confirms that the construction and full occupation of the scheme will have a negligible impact upon the operation of the adjacent road network.

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

Direct and high-quality pedestrian linkages are provided between the site and the existing pedestrian & cycling facilities on the surrounding road network. The lower provision of car parking will also act as a demand management measure, ensuring that the development is accessed in the most sustainable manner, being almost predominantly reliant on non-car modes of travel.

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

The assessment includes a Preliminary Mobility Management Plan (MMP or Travel Plan) for the site which is included as ***Appendix G***. We have also prepared a Statement of Consistency with DMURS and confirm that the internal layout is compliant with the requirements, and this is included as ***Appendix H***. A Parking Management/Strategy Report is included as ***Appendix I***. A Service/Operational Waste Management Report is included as ***Appendix J***.

An independent Stage 1 Road Safety Audit (incl. Quality Audit), together with the Designer Feedback form, has been undertaken and included as ***Appendix K***. A Bus & LUAS Capacity/Demand Report has been prepared and is included as ***Appendix L***.

We conclude that there are no adverse traffic/transportation capacity or operational safety issues associated with the construction and occupation of the proposed residential apartment development which would prevent planning permission being granted by An Bord Pleanála.

1.0 INTRODUCTION

1.1 This Transportation Assessment (TA) has been prepared by NRB Consulting Engineers Ltd and addresses the Traffic / Transportation issues arising from the proposal to construct and occupy a total of 242 apartments and an ancillary Crèche on the site at Broomhill Road, Tallaght, Dublin 24.

1.2 The proposed development, a high-density apartment/residential scheme arranged in a series of 5 blocks with an ancillary crèche, should be considered in the context of its location within the heart of a changing Tallaght Town Centre environment. A site location plan is included below as ***Figure 1.1***.

Figure 1.1 - Site Location in Heart of Tallaght

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

- Relatively Small Scale of the development **in Traffic terms** (conscious of the long-established use and nature of the established site),
- Location of the development within Tallaght in close proximity to high quality Public Transport Links,
- Traffic & Transportation impact,

- Capacity of the proposed vehicular accesses to accommodate the worst-case development traffic flows,
- Capacity of & Impact Upon the Existing Road Network,
- Adequacy and safety of the existing roads and junctions locally, within the area of influence.

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

- The TII Traffic & Transport Assessment Guidelines,
- Design Manual for Urban Roads and Streets,
- Recent Weekday AM and PM Peak Classified Turning Movements Traffic Survey Data commissioned,
- TII Design Guidance,
- Transportation Planning Policy provisions of the SDCC Development Plan & the Tallaght Local Are Plan (LAP),
- Our experience in assessing the impact of Developments of this Nature, and
- Site Visits and Observations.

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

1.6 The assessment includes a Preliminary Mobility Management Plan (MMP or Travel Plan) for the site which is included as ***Appendix G***. We have also prepared a Statement of Consistency with DMURS and confirm that the internal layout is compliant with the requirements, and this is included as ***Appendix H***. A Parking Management/Strategy Report is included as ***Appendix I***. A Service/Operational Waste Management Report is included as ***Appendix J.***

1.7 An independent Stage 1 Road Safety Audit (incl. Quality Audit), together with the Designer Feedback form, has been undertaken and included as ***Appendix K***. A Bus & LUAS Capacity/Demand Report has been prepared and is included as ***Appendix L***.

2.0 EXISTING CONDITIONS, DEVELOPMENT PROPOSALS & PARKING

2.1 The subject development site is located within the old, long-established, Broomhill Industrial Estate and was until recently in use as Industrial and Employment uses. An illustration of the proposed development extracted from the Architects Ground Floor Plan is included below are ***Figure 2.1.***

Figure 2.1 – Ground Floor Layout Plan

2.2 The site is within the long-established Broomhill Industrial Estate, which clearly is Commercial/Industrial in nature, and a gradual change to residential uses is expected.

2.3 The subject site is bound to the south & east by long established industrial/warehousing and employment uses. It is bound to the west by Broomhill Road and to the north by Broomhill Terrace.

2.4 Broomhill Road is a single carriageway 2-way road, currently subject to a 50km/h speed restriction and is relatively lightly trafficked. It runs in a N-S orientation immediately west of the site, and it is intended that the site access will be directly from Broomhill Road in the form of a traditional simple priority 'T-Junction'.

2.5 The Traffic survey and assessment within ***Appendix D***, confirms that Broomhill Rd carries a weekday AM Peak Hour 2-Way traffic flow of approximately 376 Passenger Car Units (PCUs) and a 2-way flow of 356 PCUs in the PM Peak Hour, measured adjacent the Airton Road Junction. In these terms, the road is considered moderately trafficked in terms of its link carrying capacity.

2.6 Broomhill Terrace is also a single carriageway 2-way road, currently subject to a 50km/h speed restriction, and it is currently very lightly trafficked indeed. It runs in an E-W orientation immediately north of the site, and it currently serves as a secondary road within Broomhill Industrial Estate. The Traffic survey and assessment within ***Appendix D***, confirms that Broomhill Terrace carries a weekday AM Peak Hour 2-Way traffic flow of approximately 6 PCUs and a 2-way flow of 6 PCUs in the PM Peak Hour. In these terms, the road is clearly considered very lightly trafficked in terms of its link carrying capacity.

2.7 Broomhill Road meets Airton Road some 120m to the south, in the form of a simple priority T-Junction. Airton Road is an important local road for Tallaght, providing for access to Belgard Road to the west and to Old Tallaght Village to the east. Airton Rd is also a single carriageway 2-way road, currently subject to a 50km/h speed restriction and is moderately trafficked. It runs in an E-W orientation, meeting Belgard Road and Greenhills Road at either terminal end point in the form of a traffic signal-controlled junction. The Traffic survey and assessment within ***Appendix D***, confirms that Airton Rd carries a weekday AM Peak Hour 2-Way traffic flow of approximately 919 Passenger Car Units (PCUs) and a 2-way flow of 895 PCUs in the PM Peak Hour, measured just west of the Broomhill Road Junction.

2.8 To set the above existing flows in context, roads of this nature have a traffic carrying or link capacity of between 1,200 and 1,500 PCUs per-direction per-hour. In these terms, this link capacity provides a context for the traffic nature classification of the existing flows as set out above. Of course, it should be remembered that the capacity or through-put of any road in an urban environment of this nature is generally determined by the capacity of the junctions. In this case, based on our own experience and observation, the critical junctions are the Belgard Rd/Airton Rd and Airton Rd/Greenhills Rd traffic signal-controlled junctions which are both somewhat remote from the subject site, but which are both included within the area of influence herein.

2.9 A review of the Road Safety Authority (RSA) on-line database of reported road traffic accidents confirms that there have been no significant accidents on the adjacent affected roads during the reported period 2005 to date, ones that are considered relevant or which will be affected by the proposed development. An extract from the RSA Database is included below as ***Figure 2.2.***

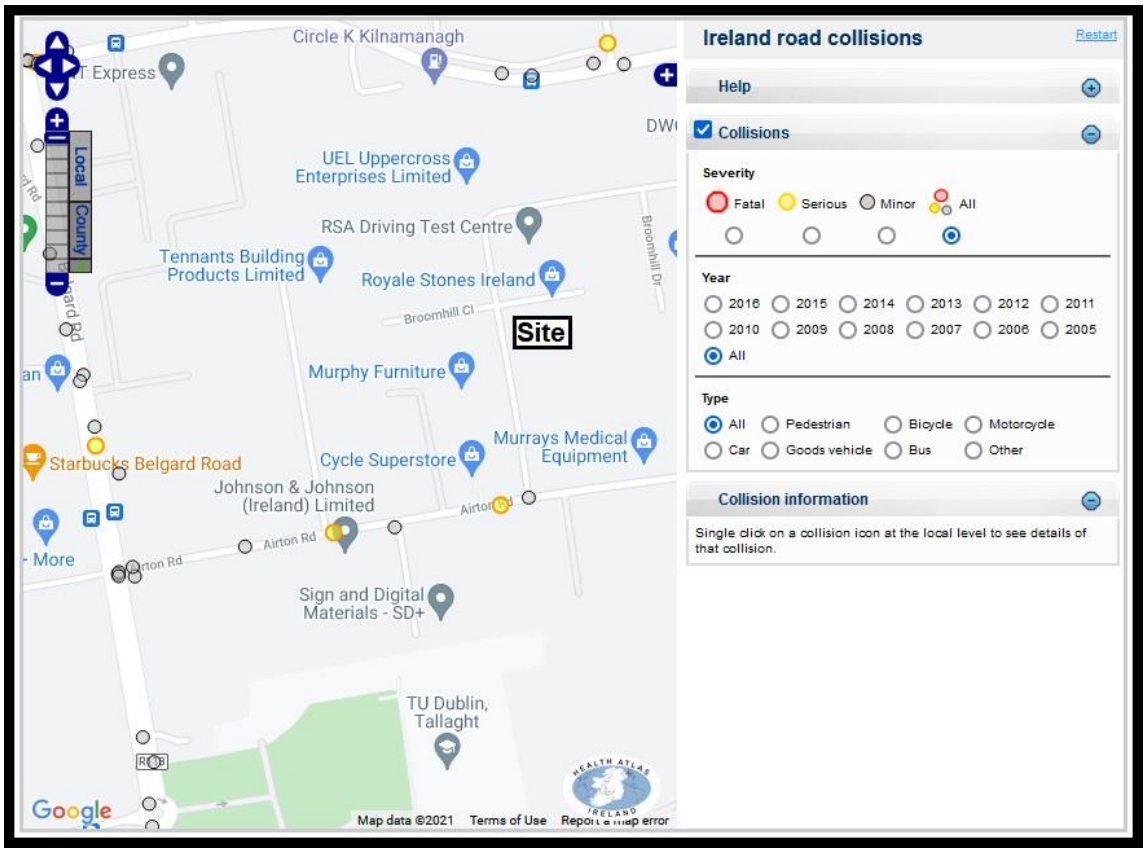

Figure 2.2 – RSA Accident Statistics Database Extract

2.10 The content of the individual Blocks is as set out on the detailed Plans and associated Architectural Schedule of Accommodation, but in terms of Traffic/Transportation Assessment the development content is as summarised below in ***Table 2.1*** for ease of reference. These elements are clearly supported by bin storage, management, outdoor amenity space, landscaping, and car/bicycle parking.

Table 2.1: Summary - Development Content by Block for Transportation Assessment Purposes

Block (Ref Fig 2.1)	***No.***
Block A	• 40 Apartment Units, • 4 x 1 Bed, 31 x 2 Bed, 5 x 3 Bed,
Block B & Block C Combined	• 102 Apartments Units, • 45 x 1 Bed & 57 x 2 Bed. • Ancillary Amenity Space @GF (Generates No Traffic),
Block D	• 36 Apartments Units, • 16 x 1 Bed & 20 x 2 Bed. • An Ancillary Crèche @GF (Generates No Traffic),
Block E	• 64 Apartments Units, • 31 x 1 Bed & 33 x 2 Bed.

2.11 Based on the above, the entire site has a total of 242 Apartments set out in individual blocks with amenity space, servicing and supporting infrastructure arranged in traditional blocks, as illustrated in the Layout drawings included as ***Appendix A.***

2.12 The development includes copious secure bicycle parking, refuse management /residential storage areas & limited car parking within the dedicated areas. Car Parking Quantum is addressed further within the Parking Section of the Report below.

2.13 The site is within the long-established Broomhill Industrial Estate, which clearly is Commercial/Industrial in nature, however the nature of the roads provides traditional low level normal kerbing, landscaped strips, and good quality footpaths.

Car Parking and Bicycle Parking Quantum

2.14 We have reviewed the **car parking** provision in terms of the maximum requirements of the SDCC Development Plan 2016-2022, for the entire development. The site is interpreted as being within SDCC Zone 2, with the resulting breakdowns provided below as ***Table 2.2***:

Table 2.2: Car Parking Requirements as per SDCC Development Plan

Element	*No.*	*SDCC Max Rate*	*Requires Max No.*
3 Bed+ Apartments	5	1.25/Unit	6
2 Bed Apartments	141	1/unit	141
1 Bed/Studio Apartments	96	0.75/unit	72
Ancillary/Support Units	NA	NA	NA
Total Maximum Parking Required Under SDCC Plan			***219***

2.15 The boundary ground floor at grade car park has a provision of 139 parking spaces, including mobility-impaired parking spaces and therefore meets the MAXIMUM requirements of the SDCC Development Plan as set out above in ***Table 2.2*** above, being circa 63% of the maximum parking number allowable in the Plan.

2.16 The requirement for bicycle parking has also been assessed in accordance with the ***SDCC Development Plan*** and this is included below as ***Table 2.3*** below:

Table 2.3: Min Bicycle Parking as per SDCC Development Plan

Element	*SDCC Max Parking Rate*		*Requires*	
	Long Term	Short Stay	Long Stay	Short Stay
242 Apartments	1/5 units	1/10 units	48	24
Total Min Cycle Parking Required Under SDCC Plan			***72***	

2.17 Notwithstanding the Bicycle Parking & Storage requirements of the SDCC Development Plan, as illustrated above, cycle storage facilities are generally being provided to meet the more onerous requirements of The Department of Housing Planning & Local Government "***Sustainable Urban Housing Design Standards for New Apartments***" to meet the satisfaction of An Bord Pleanála.

2.18 The referenced Apartment Guidelines suggest a requirement for one residential Bicycle Storage Space per Bedroom PLUS one visitor Bicycle Storage Space per 2 residential units. For the subject site, with 393 Bedrooms and 242 units, this represents a requirement for 393 Residential Bicycle Storage Spaces and 121 Visitor Spaces. The proposals include a provision of 308 No. residential bicycle spaces and 118 No. visitor spaces – total proposed provision being 426. We believe that this represents an acceptable and sensible bicycle parking quantum being way above the SDCC requirement (72 total) and slightly below the National Apartment Guideline recommendation (514), conscious of the location.

Discussion/Justification - Car Parking

2.19 Approximately c.63% of the Development Plan Parking Maximum Standards are being provided at the site. In terms of the 'per-unit car parking ratio' 139 No parking spaces represents a ratio of 0.57 per unit. The 'Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities', updates previous guidance in the context of greater evidence and knowledge of current and likely future housing demand in Ireland taking account of the Housing Agency National Statement on Housing Demand and Supply and projected need for additional housing supply out to 2020, the Government's action programme on housing and homelessness Rebuilding Ireland & National Planning Framework Ireland 2040.

2.20 These new guidelines address car parking and include an objective to 'Remove requirements for car-parking in certain circumstances where there are better mobility solutions and to reduce costs.' Under Car Parking - Section 4.18 the guidelines acknowledge that the quantum of car parking or the requirement for any such provision for apartment developments will vary, having regard to the types of location in cities and towns that may be suitable for apartment development, broadly based on proximity and accessibility criteria.

2.21 Under Section 4.19 the guidelines note that in larger scale and higher density developments, comprising wholly of apartments in more central locations that are well

served by public transport, the default policy is for car parking provision to be wholly eliminated or substantially reduced. Specifically, Paragraph 4.19 states:

> ***"The Quantum of Car parking or the requirement for any such provision for apartment developments will vary having regard to the types of location in cities and towns that may be suitable for apartment development, broadly based on proximity and accessibility criteria"***

2.22 It then goes on to identify the locational characteristics and features that warrant a reduction or elimination in provision of private car parking spaces (Paragraph 4.19):

> ***"Central and/or Accessible Urban Locations***
>
> ***In larger scale and higher density developments, comprising wholly of apartments in more central locations that are well served by public transport, the default policy is for car parking provision to be minimised, substantially reduced or wholly eliminated in certain circumstances. The policies above would be particularly applicable in highly accessible areas such as in or adjoining city cores or at a confluence of public transport systems such as rail and bus stations located in close proximity"***

2.23 In terms of the stated Policy, the subject site meets all the requirements for significantly reducing or eliminating the provision of Private Car Parking, under the headings:

High Density Development	✓
Comprising Wholly of Apartments	✓
Central Location	✓
Well Served by Public Transport	✓
Rail/Bus in Close Proximity	✓

2.24 The National Apartment Guidance states (Paragraph 4.23):

> ***For all types of location, where it is sought to eliminate or reduce car parking provision, it is necessary to ensure, where possible, the provision of an appropriate number of drop off, service, visitor parking spaces and parking for the mobility impaired. Provision is also to be made for alternative mobility solutions including facilities for car sharing club vehicles and cycle parking and secure storage. It is also a requirement to demonstrate specific measures that enable car parking provision to be reduced or avoided.***

2.25 Conscious that the scheme is intended to be actively marketed as Reduced Car Dependency, the layout has been designed with the above issues in mind.

2.26 For the proposed development, given the mix of units, it is anticipated that there will be an associated lower car ownership & dependency for this nature of scheme. Given the slightly restricted number of spaces being provided, the entire scheme will be actively marketed and promoted as a "***Reduced Car Dependency***" scheme, and this will be communicated from the outset as part of sales and marketing. The development will also be managed on an on-going basis to ensure that the Reduced Car Dependency nature of the development is continually promoted and enhanced.

2.27 The development will be managed and operated by a Management Company. Car parking will not be an automatic entitlement with the apartments, but spaces will be available to rent and purchase. Renting/sales of parking will be allocated to residents mainly on a first come first served basis by the Management Company and will be continually managed by the Management.

2.28 Some parking spaces will be reserved for visitors with other car parking spaces allocated for rent/sale to larger units. The allocation of car parking spaces will reviewed/renewed on an annual/ongoing basis to suit demand. The Car Park Management measures are all set out in the enclosed Parking Management/Strategy Report included as ***Appendix I***.

2.29 In terms of ***specific measures*** to enable car parking provision to be reduced to the level proposed, with a parking ratio of 0.57, the specific measures are:

- The Active Management and Marketing of the Development from the outset as Reduced Car Dependency',
- Restricted Dedicated Car Parking is intended to be provided to Residents and will be specifically associated with specific private sales or rental properties (and same will be Specified in associated Rental Agreements),
- The Location within walking/cycling distance of all South Dublin amenities (e.g., The Square and SDCC HQ, Tallaght Hospital etc) and schools,
- Associated Employment Opportunities locally (*Based on the CSO Census Data, in 2016 there were 2,958 commuters who lived in the Electoral Division of Tallaght -*

Springfield but worked elsewhere. There were 8,874 commuters who travelled in to this electoral division to work. This resulted in a net in-flow of 5,916 commuters. This indicates that the locality has significant employment opportunities, and these are continually improving),

- Proximity to the LUAS being served by the LUAS Red Line 'on the doorstep' of the site,

- Very easy walk distance from the Dublin Bus Terminus at *The Square* (from where 7 high frequency services currently operate)

- 4 No. Dedicated "Go Car" spaces/cars provided within the development,

- Copious Cycle Parking and Cycle Storage (Refer Above),

- On site Security and Management by permanent staff and CCTV that will ensure the car parking areas are monitored and policed, with a clamping system in operation, so that the car parking restrictions are closely controlled and enforced,

  and

- The Implementation of a working Mobility Management Plan.

3.0 TRIP GENERATION, ASSIGNMENT & 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 recommended for use within the TII Traffic/transport Assessment Guidelines.

3.2 We have included as ***Appendix C*** the TRICS output for traditional Residential Apartments and Crèches, and this provides a robust estimation of traffic as illustrated in ***Table 3.1*** below – given that the development comprises a mix of units which will have lower car ownership and usage, supported by restricted car parking provision, it is anticipated that the traffic generation will be less than apartments selected from within the database.

3.3 The following Table summarises the Output from the TRICS database, the output from which is included herein as ***Appendix C*** for comparison purposes.

Table 3.1: TRICS Data Summary - Proposed Development

242 No Apartments	**Arrivals (PCUs)**		**Departures (PCUs)**		**Total 2-Way Vehicular Traffic Generated**
Network Hour	**Per Unit**	**242 No**	**Per Unit**	**242 No**	
Weekday AM Peak Hr 8-9	0.062	15	0.203	49	64
Weekday PM Peak Hr 5-6	0.178	43	0.088	21	64
465 m² Creche*	**Arrivals (PCUs)**		**Departures (PCUs)**		**Total 2-Way Vehicular Traffic Generated**
Network Hour	**/100m²**	**Site**	**/100m²**	**Site**	
Weekday AM Peak Hr 8-9	3.455	17	2.813	13	30
Weekday PM Peak Hr 5-6	2.540	13	3.183	16	29
COMBINATION OF ABOVE ELEMENTS – ENTIRE DEVELOPMENT					
Network Hour		**Arrivals**		**Departures**	**Total 2-Way**
Weekday AM Peak Hr 8-9		25		38	63
Weekday PM Peak Hr 5-6		34		26	60

***Creche Trip Types Adjusted to Reflect Shared/Internal Use Trips, as per Industry Practice*

3.4 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 expected worst-case traffic generated by the proposed development. This is particularly the case for the subject site where there is restricted residential car parking provision, which further limits trip generation.

3.5 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 low traffic impact associated with the development.

Assessment Methodology

3.6 We have used hand assignment techniques based on the observed movements, with the worst-case traffic assigned to the roads based on the observed established traffic patterns, being the industry standard methodology. The standard methodology applied was to firstly ascertain the base background traffic conditions for both the weekday AM and weekday PM Commuter Peak periods. To this end we commissioned and undertook a 2021 Traffic Survey of the existing affected roads and junctions in order to establish base background traffic conditions.

3.7 We then applied a calculated **Covid Factor** based on accurate data extracted from the TII Permanent Traffic Counter data on the N81 nearest the site. This represents a pragmatic industry standard approach in these times when Planning Applications have statutory timeframes during a Pandemic. Details of the traffic surveys are included as ***Appendix B*** and are reproduced as commuter peak hour Stick Diagrams as ***Appendix D.***

3.8 We then used the TII PE-PAG-02017 Project Appraisal Guidelines for National Roads Unit 5.3 (Travel Demand Projections 2019, Table 6.1: Central Growth Rates: Annual Growth Factors, Metropolitan Dublin), to establish projected occupation/opening year 2023 and design year 2038 traffic conditions 15 years following opening on the local road network. The worst-case traffic based on the content of ***Table 3.1*** above was then applied in order to establish Opening Year and Design Year Traffic Conditions with the proposed development in place and fully occupied. This is all included in the calculations included herein as ***Appendix D***.

3.9 It should be noted that we have selected an opening year of 2023 as being reasonable and appropriate. However, in our experience, varying the opening year and design year by 1-3 years, if required for whatever reason, would have no significant impact upon the conclusions of the study. In addition, given the favourable results reported in this study, if required to apply higher background traffic conditions for any reason we would not anticipate any changes to the conclusions.

3.10 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 which provides the recommended method of predicting future year traffic growth on Roads.

3.11 Calculations of the relevant growth factors are included in ***Table 3.2*** below (based on tabulated 'Central Growth' for Metropolitan Dublin). It should be noted that any requirement to use different or higher growth factors will also have no implications for the conclusions of the study.

Table 3.2: Traffic Growth Rates, TII Travel Demand Projections Unit 5.3

Year	to Year	Table 6.1:
Surveyed	2023	1.032
2023	2038	1.165

4.0 TRAFFIC IMPACT - TRAFFIC CAPACITY RESULTS

4.1 The TII Traffic and Transport Assessment Guidelines set out a strict mechanism for assessment of developments of this nature and determining whether further assessment is indeed required. This Guideline requires a **Threshold Assessment** of the impact on the local roads to be provided in order to determine whether further, more detailed modelling and assessment of particular critical junctions is necessary.

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. In this case, given the location, for robustness, the 5% threshold has been applied. The Threshold is 10% for uncongested networks and it could be argued that the use of the higher threshold is warranted.

4.3 In this regard, it is demonstrated herein that the occupation of the development, with relatively low volumes of vehicular traffic added to a busy network, will not result in any significant or noticeable level of new trips on the local roads, with all anticipated traffic increases beyond the Proposed Access junction and Broomhill Road itself expected to be **well below** the Industry-Standard level of 5% above which further assessment is required. This underlines the low levels of traffic generated in comparison with the established road network traffic volumes.

4.4 Our assessment confirms that the absolute worst-case traffic increases on the adjacent road network junctions, with the entire development open and occupied, undertaken in accordance with Guidelines, is as summarised below as ***Table 4.1***.

Table 4.1: All of the Proposed Development Open & Occupied - Threshold Assessment, Worst-Case Impact - AM & PM Peak Hours 2023

Assessed Road or Junction	Traffic Increase %		COMMENT
	AM Pk Hr	PM Pk Hr	
Belgard Rd/Airton Rd Junction	1.4%	1.1%	<5% No Further Assessment Required
Airton Rd/Greenhills Rd Junction	0.9%	1.0%	<5% No Further Assessment Required
Broomhill Rd/Airton Rd Junction	4.0%	4.0%	<5% No Further Assessment Required
Broomhill Rd/Greenhills Rd Junction	1.9%	2.0%	<5% No Further Assessment Required
Broomhill Rd/Close/Terrace Junction	5.9%	7.6%	>5% Due to low current flow, therefore Junction Assessed Herein

4.5 Apart from the Site Access and the Broomhill Rd/Close/Terrace junction, these worst-case traffic increases are below the Guideline and industry standard 5% level above which further assessment is required, in accordance with the 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%, so, in this context alone, increases of less than 5% will go entirely unnoticed and this underscores the negligible impact of the proposed development traffic.

4.7 We have undertaken traffic modelling of the proposed access T-Junction and the Broomhill Rd/Terrace/Close Crossroads for weekday AM and PM Periods (2023 Opening Year and 2038 Design Year +15) purely to confirm & demonstrate adequate capacity exists to accommodate the increased traffic associated with the development.

Access T-Junction & Broomhill Rd/Terrace/Close - Capacity Modelling

4.8 We have used the TII-approved software package 'Junctions 9' PiCADY' (**P**riority **I**ntersection **C**apacity **A**nd **D**ela**y**) software package (as part of the TRL Package 'Junction 9') to assess the capacity of the junctions. PiCADY produces results based on a ratio of flow to capacity (RFC) and queue length. An RFC greater that 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 the proposed site access and the long-established adjacent junction in ***Appendix E*** and ***Appendix F***.

4.9 We have undertaken the detailed assessment of the capacity of junctions with the entire subject development in place and fully occupied. The detailed output of the models is summarised below as ***Table 4.2*** and ***Table 4.3:***

Table 4.2: Site Access PiCADY Results, Weekday AM & PM Commuter Pk Hours - 2023 & 2038

Modelled Scenario	*Period Mean Max Q (PCUs)*	*Period Max RFC*
Opening Year 2023 AM Peak Hr	<1	0.07
Opening Year 2023 PM Peak Hr	<1	0.05
Design Year 2038 AM Peak Hr	<1	0.07
Design Year 2038 PM Peak Hr	<1	0.05

Table 4.3: Broomhill Rd/Close Crossroads Results, Weekday AM & PM Commuter Pk Hours - 2023 & 2038

Modelled Scenario	*Period Mean Max Q (PCUs)*	*Period Max RFC*
Opening Year 2023 AM Peak Hr	<1	0.04
Opening Year 2023 PM Peak Hr	<1	0.05
Design Year 2038 AM Peak Hr	<1	0.05
Design Year 2038 PM Peak Hr	<1	0.06

4.10 The results of the modelling clearly show that both junctions will have way more than adequate capacity to accommodate the worst-case traffic associated with the fully complete and occupied scheme, in opening and design years (conscious of the very small increases in traffic associated with the subject development).

4.11 The analysis undertaken confirms that there is adequate capacity in the existing and proposed junctions to accommodate the worst-case traffic projections without any concerns arising in terms of increased Traffic Congestion or indeed adverse Traffic Safety. It should also be remembered that we have ignored the significant traffic generation characteristics on the established and historic site uses, which would have undoubtedly generated significantly higher volumes of vehicular traffic. This underscores the robust nature of the assessment.

5.0 RESPONSE TO MATTERS RAISED BY SDCC TRAFFIC/TRANSPORT & ABP

5.1 This section sets out the response to specific Traffic/Transportation & Roads matters raised by SDCC Roads/Transportation Department and by ABP. We have included below the relevant extracts as individual numbered items, for ease of reference, together with the Design Team Response following immediately thereafter in sequentially numbered paragraphs.

> 1. A masterplan is required to ensure a coordinated approach to the proposed development. It is important to understand how the design will fit in relation to future neighbouring developments. It is important to maximise the pedestrian, cyclist, and vehicular permeability throughout the site and to the wider masterplan area. A design of the road, footpath and cycle lane for the development in line with the LAP for Tallaght is required.

5.2 The site has been designed with permeability in mind, with an attractive landscaped area within the site, provided with links to the adjacent public roads surrounding the site. This is illustrated in an annotated image extract included as Figure 5.1 below. The site has therefore been designed within the confines of the Red Line of the application to allow for linkages to both adjacent sites and to improved/altered pedestrian/cyclist infrastructure that may be delivered as part of the LAP for Tallaght.

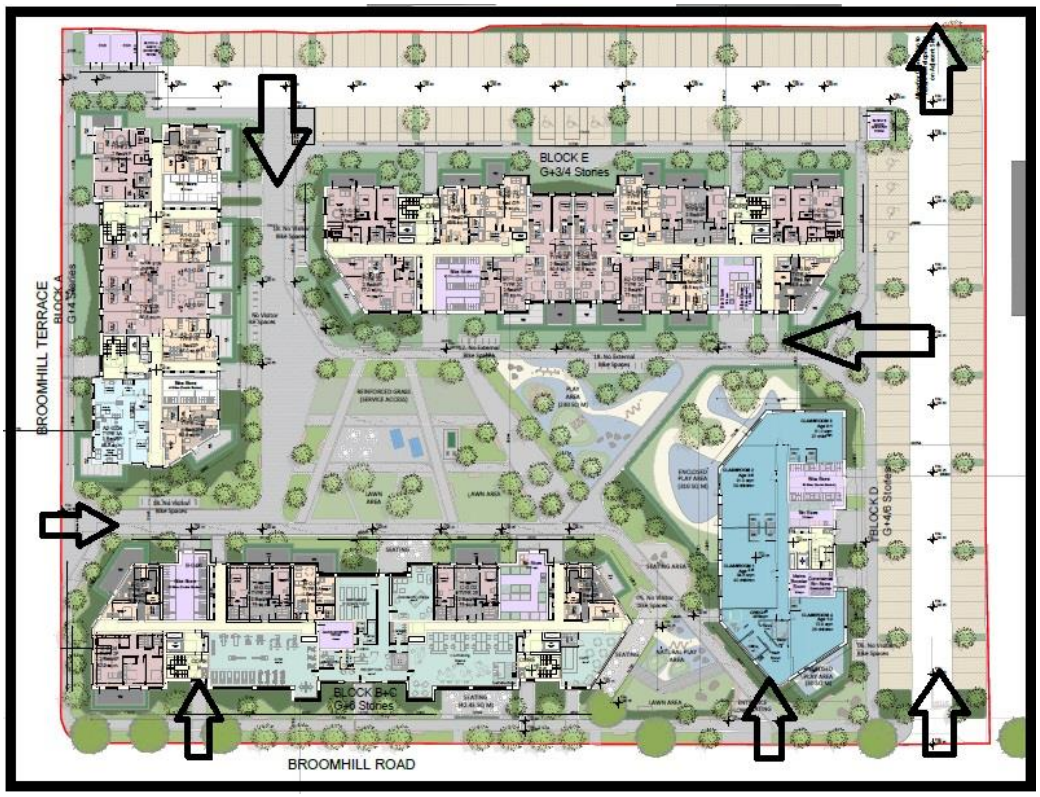

Figure 5.1 – Annotated Site Image Showing Permeability/Linkages

2. SDCC recommends a ratio of 0.65 for the residential element of this development. Please note that the commercial car parking element is seen as complementary to the residential spaces that are provided above.

5.3 The Car Parking quantum provided is addressed within ***Paragraph 2.19*** to ***Paragraph 2.29*** above.

3. The main vehicular access and egress road onto Broomhill Road shall be 6.0m wide with a 1.8m wide pedestrian footpath.

5.4 This access arrangement is as set out in the enclosed drawings at ***Appendix A***.

4. The applicant will be required to submit a swept path / Auto track analysis of large cars particularly at parking through the entire site.

5.5 AutoTRACK Drawings for the car park are provided within ***Appendix A***.

5. The car parking size should be 5.0m x 2.5m with 6m reversing distance to help access and egress from the parking spaces. Prior to construction a revised layout showing parking spaces of 2.5m x 5.0m must be agreed in writing with the roads department and a copy filed with the planning department.

5.6 It is normal to provide wider parking spaces for short stay parking such as in retail environments where there is a frequent turnover of cars. The recommended dimensions of Car Parking Spaces are contained within DMURS Section 4.4.9, and this states;

"The standard width of a space should be 2.4m", and

"The standard depth of a perpendicular spaces should be 4.8m"

5.7 The development is compliant with DMURS in this regard, with accessible spaces provided as demonstrated through the TRACK drawing included as ***Appendix A***.

6. The applicant shall provide a 10% of the overall vehicular parking spaces to be equipped with electrical charging points.

5.8 A total of 14 EV charging spaces are shown distributed around the site, being c10% of the total number of spaces. Notwithstanding, all of the car parking spaces can easily be upgraded to allow conversion for Electric Vehicles. Development Plans define the % of EV Spaces to be provided, and the design includes for these dedicated spaces as per the Development Plan. In the case of a large residential development of the nature proposed, with specific spaces likely dedicated to specific apartments, it is considered appropriate to also facilitate the retrofitting of parking spaces, based on demand following occupation, rather than dedicated electric charge spaces being dedicated to apartments and provided from the outset.

5.9 The entire car park of the subject scheme can therefore be ducted to accept future cabling to serve a charging point for every car space as demanded. Within the ground floor area, conduits or ducting can be run underground, with a facility allowing charging points to be mounted at the front of parking spaces. Where residents request a charging point to be installed, the relevant charging point will be pre-wired back to their home electricity meter in the designated meter location. The socket point will have a lockable cover on it so that only that resident may use the power point. This provision around the entire parking area will also charging points to be installed at any of the car parking spaces with minimum works as and when required

7. SDCC required a mobility impaired provision of 5% of total car parking spaces.

5.10 Mobility impaired spaces (7No.) are being provided in accordance with the SDCC requirements.

8. The proposed development shall make provision for the charging of electric vehicles. 100% of surface car parking spaces must be provided with electrical ducting and termination points to allow for the provision of future charging points, and 10% of surface car parking spaces must be provided with electric vehicle charging points initially. Details of how it is proposed to comply with these requirements including details of the design of, and signage for, the electric charging points (where they are not in areas to be taken in charge) shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. REASON: In the interest of sustainable transport.

5.11 This is addressed in ***Paragraph 5.7*** and ***5.8*** above.

> 9. Bicycle parking provision is to be to 2018 Apartment Guidelines which is satisfactory. However, all spaces including visitor spaces are recommended to be covered spaces to encourage this mode of travel.

5.12 Bicycle parking provision is as illustrated on the enclosed drawings, and we believe that the provision is compliant with the Apartment Guidelines. Visitor parking spaces within the landscaped areas are not all currently shown as covered, but we do not believe there is a Guideline or operational requirement for such short duration visitor cycle parking spaces to be covered.

> 10. The applicant shall submit stage 1 Road safety audit for the proposed development.

5.13 An independent Stage 1 Road Safety Audit and the associated Designer Feedback form is included as ***Appendix I***.

> 11. The applicant is requested to submit details of the pedestrian routes within the development.

5.14 An annotated drawing with pedestrian routes is included as ***Appendix A***.

> 12. A Mobility Management Plan is to be completed within six months of opening of the proposed development. The Mobility Management Plan shall be agreed in writing with the roads department and the agreed plan, along with the written agreement of the roads department shall be lodged to the planning file. The written commitment of the developer to implement the agreed plan shall also be lodged to the file.
> REASON: In the interest of sustainable transport.

5.15 A Preliminary MMP is enclosed as ***Appendix G***. A working MMP will be prepared upon full occupation as requested by SDCC.

> 13. The management of bin storage needs to be set out clearly.

5.16 The refuse management and storage areas are shown on the enclosed drawings. A Service/Operational Waste Management Report is included as ***Appendix J.***

14. Proposed pedestrian and cycle access between Broomhill Terrace and Airton Road at the southern end of the proposed development shall be improved.

5.17 The annotated plan enclosed at ***Appendix A*** sets out the pedestrian and cyclist linkages provided. Of course, as a lightly trafficked 30kph homezone environment, cyclists will share roadspace internally with vehicles.

15. Prior to commencement, SDCC will require a public lighting scheme to be agreed with South Dublin County Council Lighting Department.

5.18 Please refer to proposed lighting design & layout by Environmental design Partnership attached to the application.

16. All items and areas for taking in charge shall be undertaken to a taking in charge standard. Prior to development the applicant shall submit construction details of all items to be taken in charge. No development shall take place until these items have been agreed.

5.19 No areas of the site are proposed for taking in charge by SDCC.

17. Prior to commencement a developed Construction Demolition and Waste Management Plan shall be agreed by SDCC and lodged on the planning file.

5.20 Refer to Resource Management Plan submitted by AWN as part of the application – this can also be agreed in more detail post planning.

18. The footpath at the existing entrance is to be continued and made good when the access point is closed. The footpath and grass verge shall match the existing and in line with SDCC taking in charge standards.

5.21 Noted.

19. The proposal shall include the upgrade of local cycle facilities along the frontage of the site.

5.22 We would note that there is ample road width allowing for a future cycle lane, if necessary. There would appear to be no logical reason to provide such a cycle lane at the moment, but this can be provided in future as part of a broader scheme if necessary. We suggest therefore that any such local upgrade of cycle facilities along the site frontage on a public road can be agreed with SDCC at detailed design stage if required.

Traffic/Transportation Issues Raised by ABP Within The Opinion

11. A response to the matters raised in the South Dublin County Council Roads Department report dated 21/10/2021, including inter alia:

a) A Parking Management Strategy, including detail on the allocation of parking spaces by type and by land use.

b) A Quality Audit in accordance with Advice Note 4 of DMURS. Such audit should consider the quality of pedestrian and cycle connections to services and amenities in the surrounding area.

c) Details of the quantum and design of bicycle parking / storage, having regard to the provisions of the guidelines on Sustainable Urban Housing: Design Standards for New Apartments. The design of such parking / storage should consider relevant access and operational requirements.

d) A Servicing and Operations Management Plan.

5.23 **ABP Item 11(a)** is dealt with within the main body of this report. In addition, a Parking Management/Strategy Report is included as ***Appendix I***

5.24 **ABP Item 11(b)** has been addressed through the commissioning of an independent Stage 1 Road Safety Audit including Quality Audit, with an associated Designer Feedback from, included as ***Appendix K***.

5.25 **ABP Item 11(c)** has been addressed above within ***Paragraph 2.16 to Paragraph 2.18*** and is detailed in the enclosed layout plans.

5.26 **ABP Item 11(d)** has been addressed, with the Service/Operational Waste Management Report included as ***Appendix J*** . Refer also to the Resource Management Plan submitted by AWN as part of the application.

6.0 CONCLUSIONS

6.1 This Transportation Assessment Report assesses the traffic & transportation impact of the proposal to construct and occupy a planning application for a residential apartment development on zoned development lands on Broomhill Road, Tallaght, Dublin 24.

6.2 This Report has been prepared in accordance with the TII Traffic & Transport Assessment Guidelines and is based on industry-standard Trip Generation Rates established using the most up to date version of the TRICS Database. The impact of the development traffic on the local roads has been modelled and assessed, based on a traffic survey/vehicle turning movement survey during normal school period, with industry standard covid factors applied based on TII Traffic Counter Data. Appropriate traffic growth factors have been applied to establish selected opening year and design year traffic conditions.

6.3 The assessment includes a Preliminary Mobility Management Plan (MMP or Travel Plan) for the site which is included as ***Appendix G***. We have also prepared a Statement of Consistency with DMURS and confirm that the internal layout is compliant with the requirements, and this is included as ***Appendix H***. A Parking Management/Strategy Report is included as ***Appendix I***. A Service/Operational Waste Management Report is included as ***Appendix J***. An independent Stage 1 Road Safety Audit (incl. Quality Audit), together with the Designer Feedback form, has been undertaken and included as ***Appendix K***. A Bus & LUAS Capacity/Demand Report has been prepared and is included as ***Appendix L***

6.4 An assessment of Car Parking and Bicycle Parking quantum and design provided has been undertaken, and the provision is generally consistent with the requirements of the National Apartment Guidelines and best sustainability practices.

6.5 This report demonstrates that the proposed Development will have an absolutely negligible impact upon the established local traffic conditions and can easily be accommodated on the road network without any capacity concerns arising.

6.6 The assessment confirms that the proposed access junction is of more than adequate capacity to accommodate the worst-case traffic associated with the proposed development during the selected year of opening and the design year 15 years following opening.

6.7 It is considered that there are no significant Operational Traffic Safety or Road Capacity issues, affecting the established road network, that prevent a positive determination of the application by An Bord Pleanála.

APPENDICES - CONTENT

A	Proposed Development – Site Layout Plans & Drawings
B	Weekday Classified Turning Movement Traffic Survey Output Data
C	TRICS Output Data – Residential Apartments & Créche
D	Traffic Calculations, Trip Distribution, Network Traffic Flow Diagrams & Projections, Based on Traffic Surveys
E	Junction 9 PiCADY Output – Broomhill Road/Site Access Junction
F	Junction 9 PiCADY Output – Broomhill Road/Close/Terrace Junction
G	Preliminary Mobility Management Plan/Travel Plan
H	DMURS Statement of Consistency
I	Parking Management/Strategy Report
J	Servicing/Operational Waste Management Report
K	Stage 1 Independent Road Safety Audit (& *Designer Feedback*)
L	Bus/LUAS Capacity & Demand Report

APPENDIX A

Proposed Development
Site Layout/Plans & Drawings

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 drawing BHR-JFA-SP-00-DR-A-P1001, received 20/04/22. NRB Consulting Engineers Ltd shall not be liable for any inaccuracies or deficiencies.

REV	DATE	AMENDMENTS	DRAWN	CHK	APP

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Registered in Ireland No. 491679

Client

Project: Broomhill Road, Tallaght

Title: Proposed Site Layout

Project No.	Drawing No.
21-059	NRB-TA-001

Drawn	Checked	Approved
PB	ER 29/04/22	ER 29/04/22

Date	Scale @ A3	Rev
29-Apr-22	1:500	C

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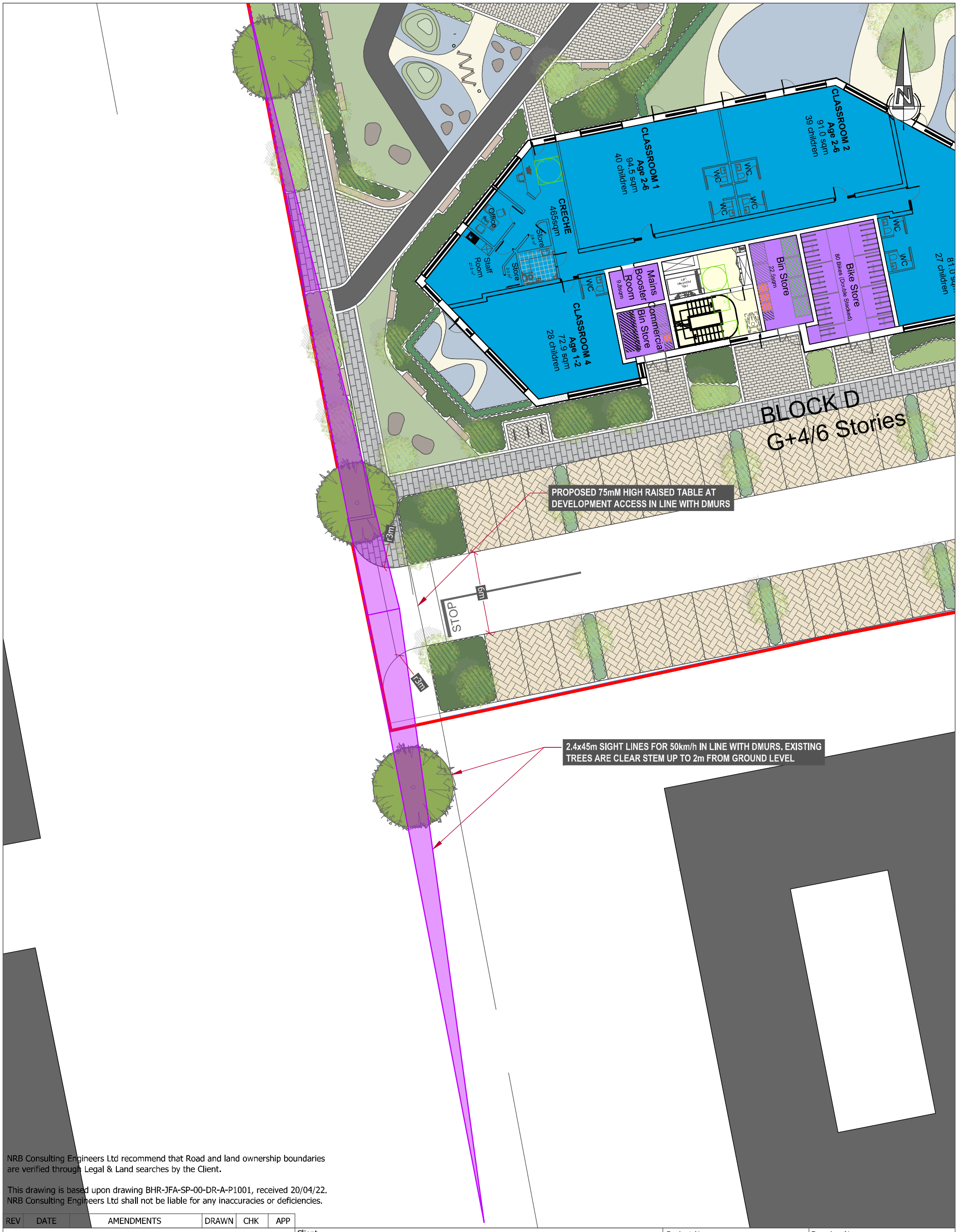
Purpose of Issue: ☐ Draft ☐ As Built ☐ Information ☐ Tender ☐ Approval ☐ Construction



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Client

Project: Broomhill Road, Tallaght

Title: Proposed Development Access Sightlines

Project No.: 21-059

Drawing No.: NRB-TA-002

Drawn: PB

Checked: ER 29/04/22

Approved: ER 29/04/22

Date: 29-Apr-22

Scale @ A3: 1:250

Rev: C

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Client

Project: Broomhill Road, Tallaght

Title: Autotrack of a Large Refuse Vehicle Entering the Development

Project No.: 21-059

Drawing No.: NRB-TA-003

Drawn: PB

Checked: ER 29/04/22

Approved: ER 29/04/22

Date: 29-Apr-22

Scale @ A3: 1:500

Rev: C

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Client

Project: Broomhill Road, Tallaght

Title: Autotrack of a Large Refuse Vehicle Exiting the Development

Project No.: 21-059

Drawing No.: NRB-TA-004

Drawn: PB

Checked: ER 29/04/22

Approved: ER 29/04/22

Date: 29-Apr-22

Scale @ A3: 1:500

Rev: C

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Client

Project
Broomhill Road
Tallaght

Title
Autotrack of a LWB Fire Tender
Entering the Development

Project No.	Drawing No.
21-059	NRB-TA-005

Drawn	Checked	Approved
PB	ER 29/04/22	ER 29/04/22

Date	Scale @ A3	Rev
29-Apr-22	1:500	C

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

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Client

Project: Broomhill Road, Tallaght

Title: Autotrack of a LWB Fire Tender Exiting the Development

Project No.: 21-059

Drawing No.: NRB-TA-006

Drawn: PB

Checked: ER 29/04/22

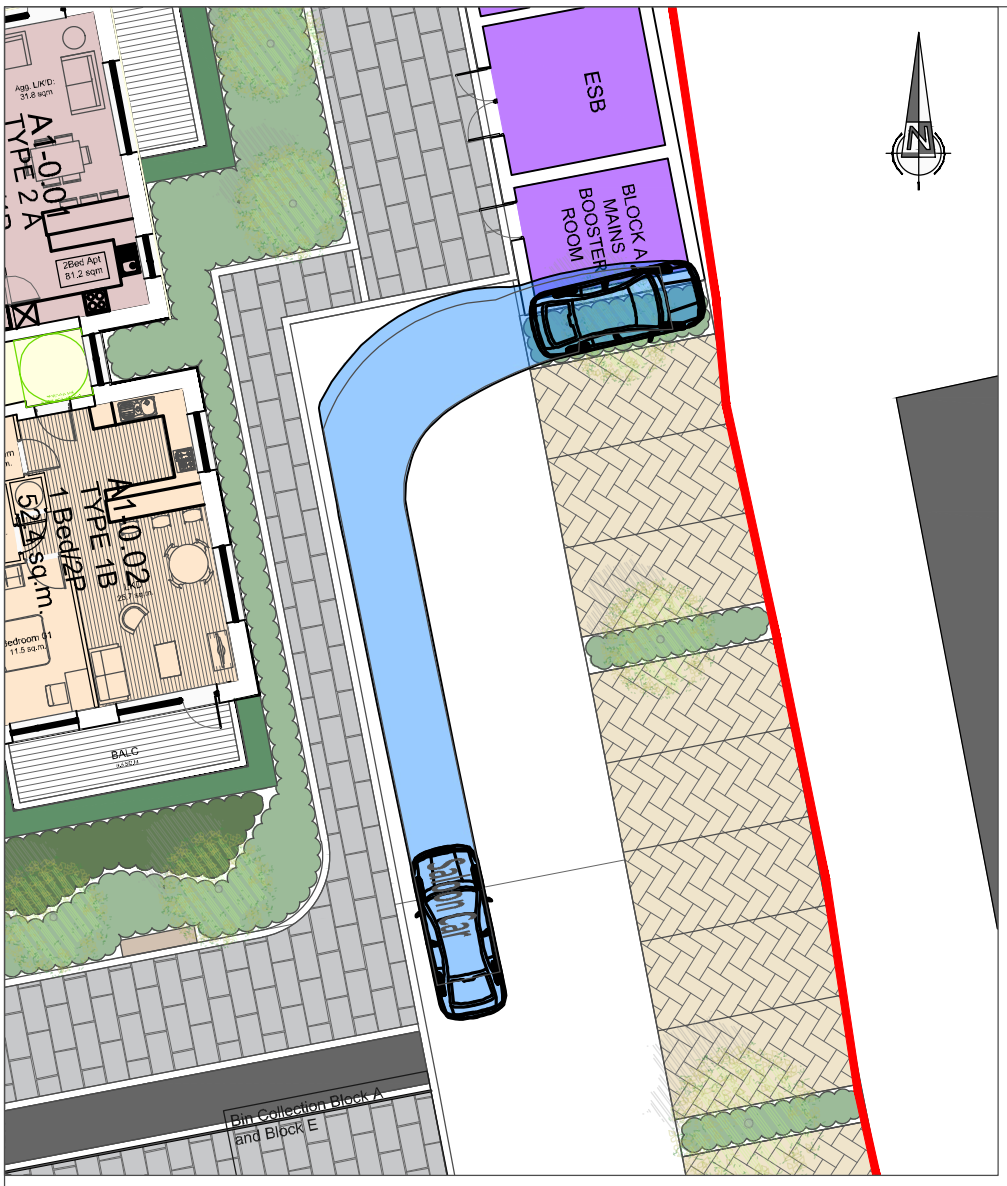
Approved: ER 29/04/22

Date: 29-Apr-22

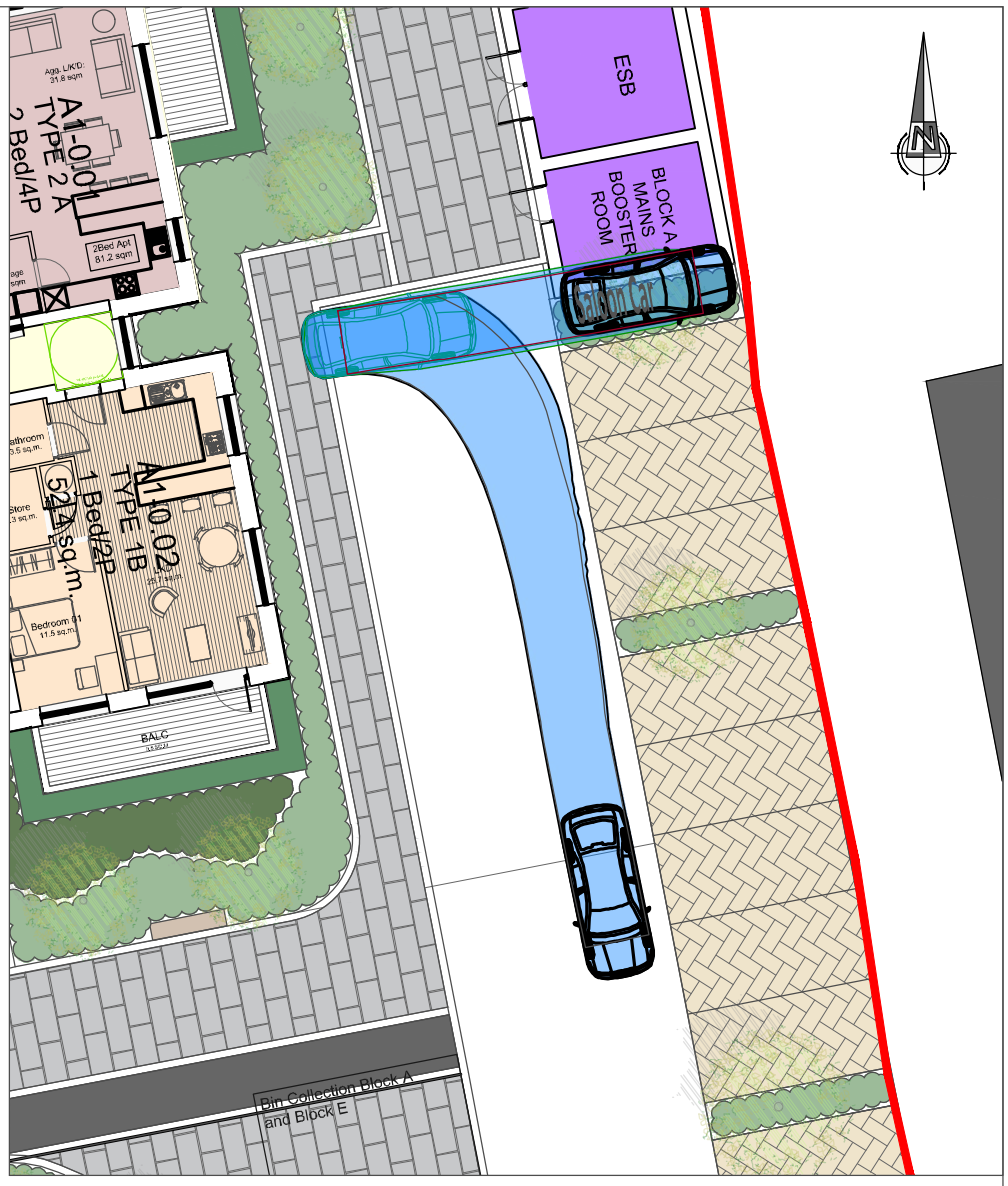
Scale @ A3: 1:500

Rev: C

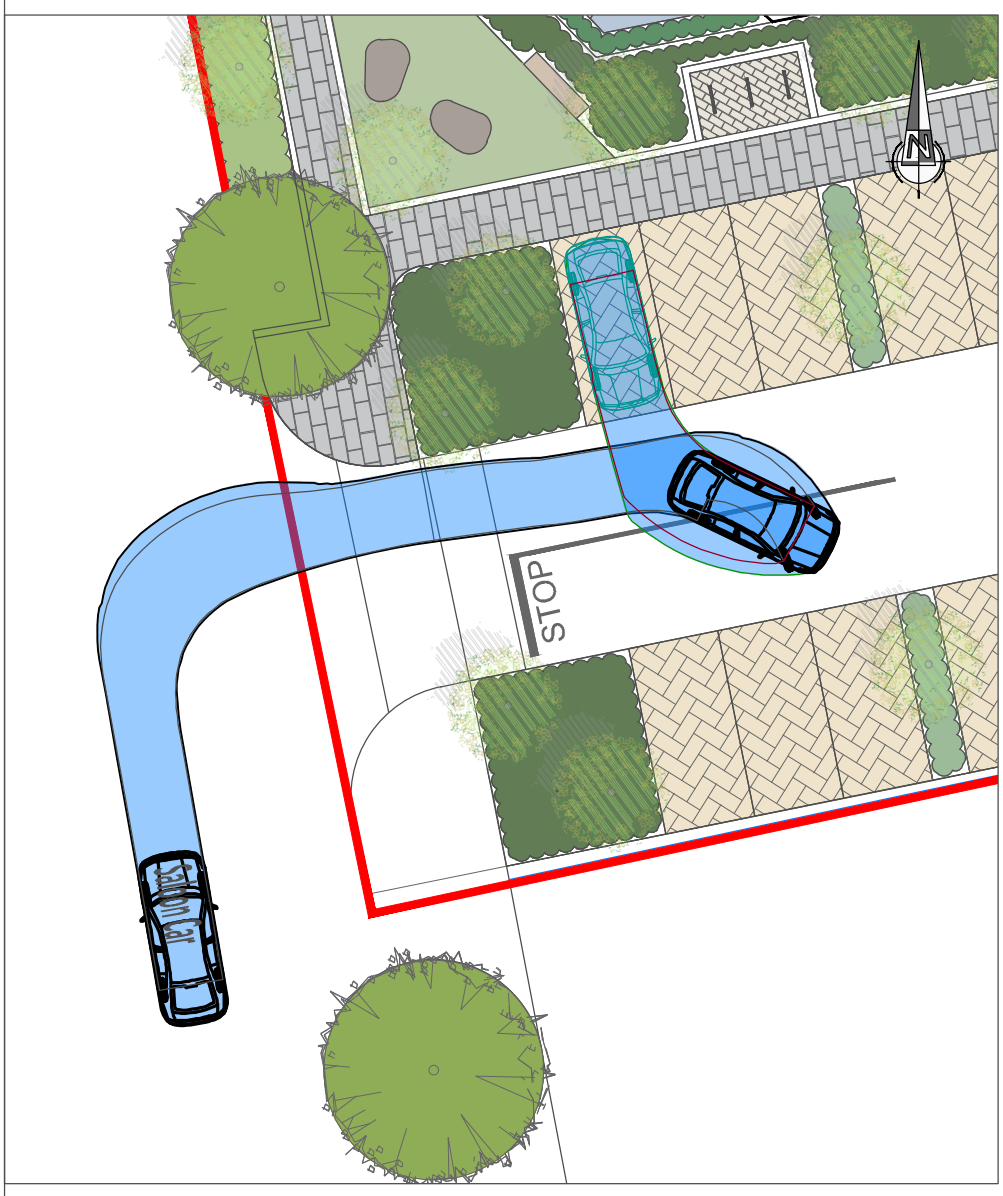
Purpose of Issue: ☐ Draft ☐ Information ☐ Approval ☐ As Built ☐ Tender ☐ Construction



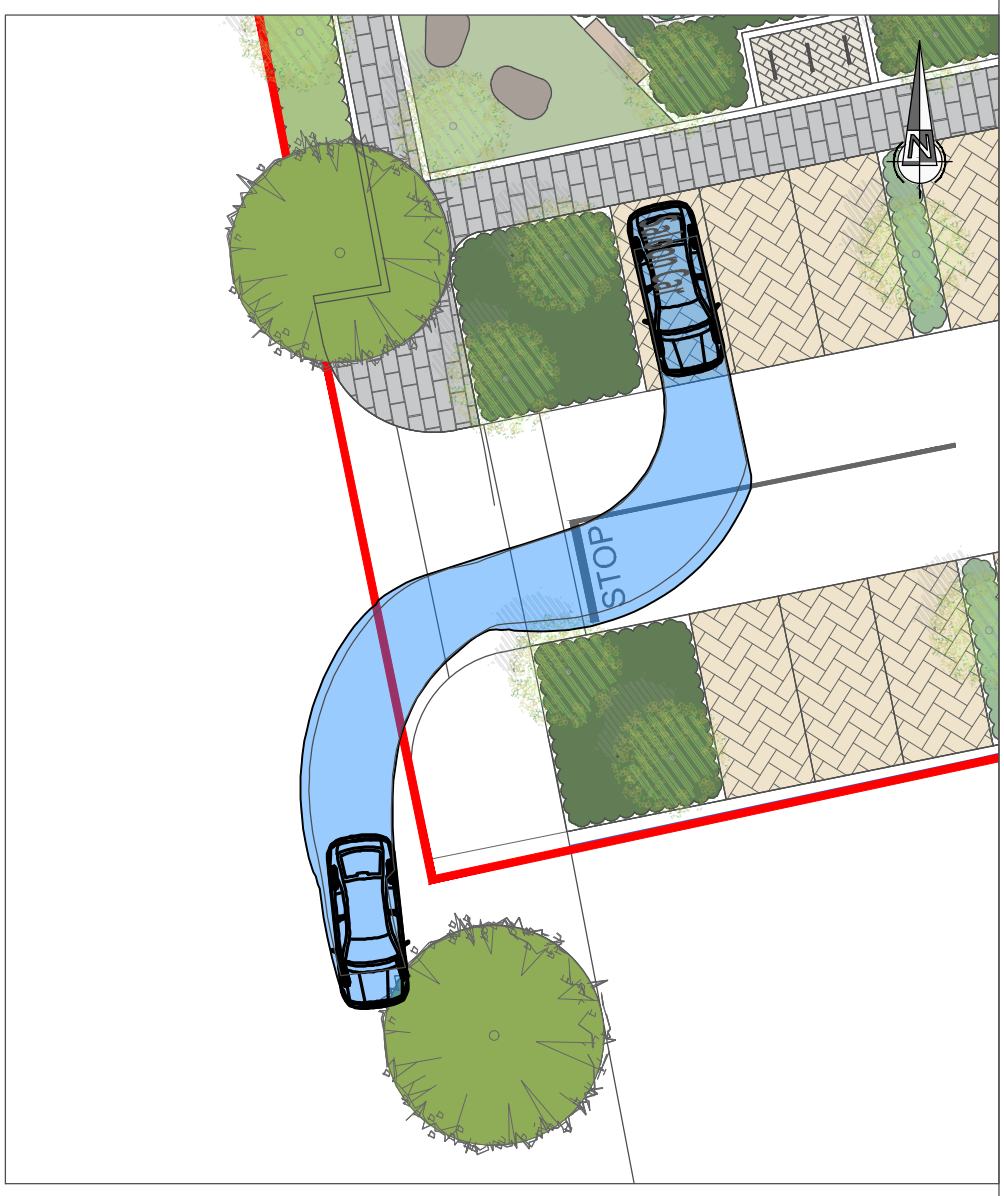
AUTOTRACK OF A LARGE CAR ENTERING A PARKING SPACE



AUTOTRACK OF A LARGE CAR EXITING A PARKING SPACE



AUTOTRACK OF A LARGE CAR ENTERING A PARKING SPACE



AUTOTRACK OF A LARGE CAR EXITING A PARKING SPACE

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Client

Project: Broomhill Road, Tallaght

Title: Autotracks of a Large Car Entering and Exiting Typical Parking Spaces

Project No.	Drawing No.
21-059	NRB-TA-007

Drawn	Checked	Approved
PB	ER 29/04/22	ER 29/04/22

Date	Scale @ A3	Rev
29-Apr-22	1:200	C

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Client

Project: Broomhill Road
Tallaght

Title: Pedestrian Routes
Within the Development

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Project No.	Drawing No.
21-059	NRB-TA-008

Drawn	Checked	Approved
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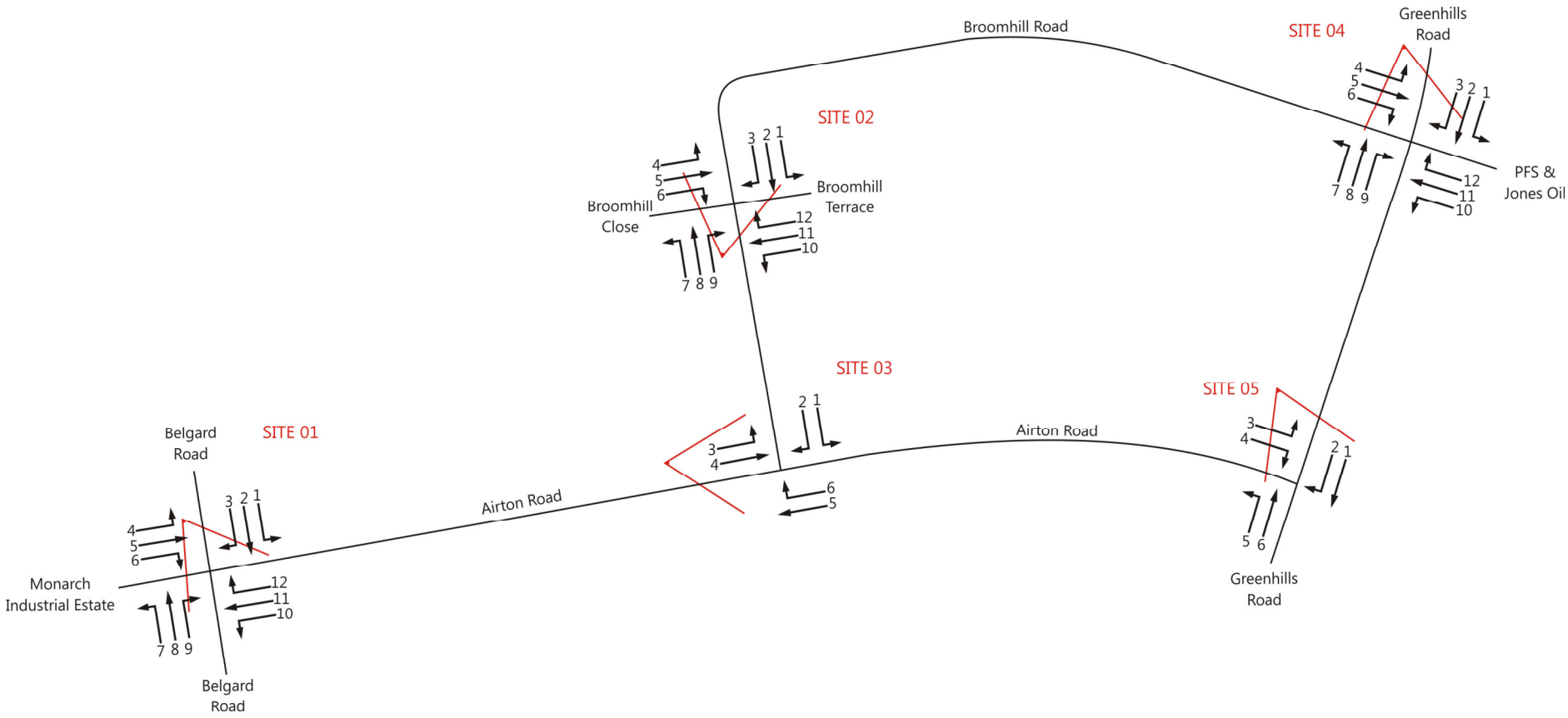
Date	Scale @ A3	Rev
29-Apr-22	1:500	C

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

APPENDIX B

Weekday - Classified
Turning Movement Traffic Survey Output Data

Site Locations/Movement Numbering



Job number: TRA/21/077	Job date: 19th May 2021	Drawing No: TRA/21/077-02	traffinomics.ie
Client: NRB Consulting Engineers	Job day Wednesday	Survey Details/Cover Sheet	

TRAFFINOMICS LIMITED

BROOMHILL ROAD TRAFFIC COUNTS **MAY 2021**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/21/077**

SITE: 01 DATE: 19th May 2021

LOCATION: Belgard Road/Monarch Industrial Estate/Airton Road DAY: Wednesday

	MOVEMENT 1								MOVEMENT 2								MOVEMENT 3							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	1	0	45	7	4	2	59	64	2	0	57	15	12	2	88	100	0	0	4	1	1	0	6	7
07:45	6	0	67	18	4	0	95	94	1	0	66	10	5	3	85	92	0	0	5	0	0	0	5	5
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H/TOT	4	2	234	56	26	0	322	344	7	2	449	68	15	5	546	559	0	0	56	8	2	0	66	68
P/TOT	11	3	466	103	45	2	630	666	13	2	717	113	34	16	895	933	0	0	86	15	4	0	105	109

	MOVEMENT 1								MOVEMENT 2								MOVEMENT 3							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
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17:45	0	0	25	2	2	0	29	31	2	0	99	15	2	1	119	120	0	0	27	3	0	0	30	30
H/TOT	0	0	87	14	4	0	105	109	10	5	411	43	8	2	479	478	0	0	94	7	1	0	102	103
18:00	1	0	19	1	1	0	22	22	4	0	100	7	0	2	113	112	0	0	24	1	0	0	25	25
18:15	0	0	18	1	2	0	21	23	2	3	98	13	1	2	119	119	0	1	16	2	0	1	20	20
H/TOT	1	0	37	2	3	0	43	45.2	6	3	198	20	1	4	232	230	0	1	40	3	0	1	45	45.4
P/TOT	2	3	227	37	19	0	288	304	24	10	958	127	16	15	1150	1156	0	2	244	20	5	1	272	277

TRAFFINOMICS LIMITED

BROOMHILL ROAD TRAFFIC COUNTS **MAY 2021**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/21/077**

SITE: 01 DATE: 19th May 2021

LOCATION: Belgard Road/Monarch Industrial Estate/Airton Road DAY: Wednesday

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	0	0	2	0	1	0	3	4	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
07:45	0	0	3	0	0	0	3	3	0	0	2	1	0	0	3	3	0	0	1	0	0	0	1	1
08:00	0	0	3	2	0	0	5	5	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	4
08:15	0	0	6	1	0	0	7	7	0	0	2	3	0	0	5	5	0	0	5	2	0	0	7	7
H/TOT	0	0	14	3	1	0	18	19	0	0	4	4	0	0	8	8	0	0	13	2	0	0	15	15
08:30	0	0	5	0	0	0	5	5	0	0	2	2	0	0	4	4	0	0	6	1	0	0	7	7
08:45	0	0	7	5	2	0	14	16	0	0	5	0	0	0	5	5	0	0	8	1	0	0	9	9
09:00	0	0	12	4	0	0	16	16	0	0	5	0	0	0	5	5	0	0	8	2	1	0	11	12
09:15	0	0	11	3	0	0	14	14	0	0	6	0	0	0	6	6	0	0	13	1	1	0	15	16
H/TOT	0	0	35	12	2	0	49	51	0	0	18	2	0	0	20	20	0	0	35	5	2	0	42	44
P/TOT	0	0	49	15	3	0	67	70	0	0	22	6	0	0	28	28	0	0	48	7	2	0	57	59

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
16:00	1	0	26	3	0	0	30	29	0	0	12	3	0	0	15	15	0	1	22	0	0	0	23	22
16:15	0	0	38	4	0	0	42	42	0	0	11	1	0	0	12	12	0	0	17	1	1	0	19	20
16:30	0	0	27	4	1	0	32	33	1	0	13	1	1	0	16	16	0	0	27	2	0	0	29	29
16:45	0	0	30	4	1	0	35	36	0	0	8	0	0	0	8	8	0	0	26	3	0	0	29	29
H/TOT	1	0	121	15	2	0	139	140	1	0	44	5	1	0	51	51	0	1	92	6	1	0	100	100
17:00	0	0	35	2	0	0	37	37	0	0	9	0	0	0	9	9	0	1	26	1	0	0	28	27
17:15	1	0	23	3	0	0	27	26	0	0	10	1	0	0	11	11	0	0	26	1	0	0	27	27
17:30	0	0	31	3	0	0	34	34	0	0	13	1	0	0	14	14	0	0	27	2	1	0	30	31
17:45	0	0	25	3	0	0	28	28	0	0	12	2	0	0	14	14	0	0	23	3	0	0	26	26
H/TOT	1	0	114	11	0	0	126	125	0	0	44	4	0	0	48	48	0	1	102	7	1	0	111	111
18:00	1	0	26	3	0	0	30	29	0	1	7	1	0	0	9	8	0	0	22	2	0	0	24	24
18:15	0	0	34	2	0	0	36	36	1	0	12	1	0	0	14	13	0	0	14	1	0	0	15	15
H/TOT	1	0	60	5	0	0	66	65.2	1	1	19	2	0	0	23	21.6	0	0	36	3	0	0	39	39
P/TOT	3	0	295	31	2	0	331	331	2	1	107	11	1	0	122	121	0	2	230	16	2	0	250	251

TRAFFINOMICS LIMITED

BROOMHILL ROAD TRAFFIC COUNTS **MAY 2021**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/21/077**

SITE: 01 DATE: 19th May 2021

LOCATION: Belgard Road/Monarch Industrial Estate/Airton Road DAY: Wednesday

	MOVEMENT 7								MOVEMENT 8								MOVEMENT 9							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	0	0	4	0	0	0	4	4	4	1	53	11	4	2	75	77	2	1	36	3	1	0	43	42
07:45	1	0	4	0	0	0	5	4	3	2	54	14	3	2	78	79	1	0	56	7	2	0	66	67
08:00	0	0	2	3	0	0	5	5	4	0	77	13	6	1	101	105	0	0	31	8	1	0	40	41
08:15	0	0	9	1	0	0	10	10	2	0	86	18	5	2	113	118	0	1	50	11	1	1	64	65
H/TOT	1	0	19	4	0	0	24	23	13	3	270	56	18	7	367	380	3	2	173	29	5	1	213	215
08:30	0	0	9	4	0	0	13	13	1	0	92	17	3	1	114	117	1	0	53	11	0	0	65	64
08:45	0	0	11	2	0	0	13	13	0	1	91	14	0	2	108	109	0	0	47	5	2	0	54	56
09:00	0	0	22	4	0	1	27	28	1	0	74	13	4	5	97	105	1	0	36	4	3	0	44	46
09:15	0	0	25	1	2	0	28	30	0	0	77	12	1	4	94	99	0	0	25	3	0	1	29	30
H/TOT	0	0	67	11	2	1	81	84	2	1	334	56	8	12	413	431	2	0	161	23	5	1	192	196
P/TOT	1	0	86	15	2	1	105	107	15	4	604	112	26	19	780	811	5	2	334	52	10	2	405	412

	MOVEMENT 7								MOVEMENT 8								MOVEMENT 9							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
16:00	0	0	26	1	0	0	27	27	1	1	103	17	4	3	129	135	1	0	31	6	0	0	38	37
16:15	0	0	31	1	0	0	32	32	1	2	123	9	3	2	140	143	0	0	25	2	1	0	28	29
16:30	0	0	28	5	0	0	33	33	2	0	106	17	0	2	127	127	0	0	22	4	0	0	26	26
16:45	0	0	21	1	0	0	22	22	0	0	108	13	3	1	125	129	0	0	34	8	2	0	44	46
H/TOT	0	0	106	8	0	0	114	114	4	3	440	56	10	8	521	534	1	0	112	20	3	0	136	138
17:00	0	0	19	0	0	0	19	19	1	1	142	10	1	2	157	159	0	0	39	2	0	0	41	41
17:15	0	0	18	7	0	0	25	25	3	1	130	16	3	0	153	153	2	1	20	3	0	0	26	24
17:30	0	0	19	3	0	0	22	22	5	0	121	11	5	1	143	145	0	0	28	1	1	0	30	31
17:45	1	0	21	1	0	0	23	22	2	0	149	5	2	2	160	162	1	0	23	1	0	0	25	24
H/TOT	1	0	77	11	0	0	89	88	11	2	542	42	11	5	613	619	3	1	110	7	1	0	122	120
18:00	0	0	30	2	0	0	32	32	3	1	92	7	4	2	109	112	0	0	24	0	1	0	25	26
18:15	0	0	17	2	0	0	19	19	3	0	107	8	1	2	121	122	1	0	27	0	0	0	28	27
H/TOT	0	0	47	4	0	0	51	51	6	1	199	15	5	4	230	234	1	0	51	0	1	0	53	53.2
P/TOT	1	0	230	23	0	0	254	253	21	6	1181	113	26	17	1364	1387	5	1	273	27	5	0	311	311

TRAFFINOMICS LIMITED

BROOMHILL ROAD TRAFFIC COUNTS **MAY 2021**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/21/077**

SITE: 01 DATE: 19th May 2021

LOCATION: Belgard Road/Monarch Industrial Estate/Airton Road DAY: Wednesday

	MOVEMENT 10								MOVEMENT 11								MOVEMENT 12							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	1	0	14	2	0	0	17	16	0	0	3	0	0	0	3	3	0	0	7	3	2	0	12	14
07:45	1	0	32	3	1	0	37	37	0	0	0	1	0	0	1	1	0	0	15	7	1	0	23	24
08:00	0	0	30	4	1	1	36	38	0	0	2	2	0	0	4	4	1	0	9	5	3	0	18	20
08:15	0	0	35	2	3	0	40	43	0	0	3	1	0	0	4	4	0	0	16	4	3	0	23	26
H/TOT	2	0	111	11	5	1	130	134	0	0	8	4	0	0	12	12	1	0	47	19	9	0	76	84
08:30	0	0	29	4	0	1	34	35	0	0	1	1	0	0	2	2	0	0	17	4	6	0	27	33
08:45	0	0	40	8	1	0	49	50	0	0	5	1	0	0	6	6	0	0	19	9	4	1	33	38
09:00	0	0	39	7	2	0	48	50	1	0	6	2	0	0	9	8	0	0	19	11	5	0	35	40
09:15	0	0	39	0	1	0	40	41	0	0	4	1	0	0	5	5	0	0	22	14	9	0	45	54
H/TOT	0	0	147	19	4	1	171	176	1	0	16	5	0	0	22	21	0	0	77	38	24	1	140	165
P/TOT	2	0	258	30	9	2	301	310	1	0	24	9	0	0	34	33	1	0	124	57	33	1	216	249

	MOVEMENT 10								MOVEMENT 11								MOVEMENT 12							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
16:00	0	0	47	6	0	0	53	53	0	0	12	0	0	0	12	12	0	0	77	13	4	0	94	98
16:15	0	0	42	5	1	0	48	49	0	0	6	0	0	0	6	6	0	0	44	3	3	0	50	53
16:30	3	0	49	9	3	0	64	65	0	0	8	1	0	0	9	9	1	0	72	11	3	0	87	89
16:45	1	2	62	6	1	0	72	71	0	0	8	1	0	0	9	9	1	0	65	13	5	0	84	88
H/TOT	4	2	200	26	5	0	237	238	0	0	34	2	0	0	36	36	2	0	258	40	15	0	315	328
17:00	3	0	72	10	0	0	85	83	0	0	14	0	0	0	14	14	0	1	74	12	3	0	90	92
17:15	2	0	56	5	1	0	64	63	0	0	7	3	0	0	10	10	0	0	72	6	4	0	82	86
17:30	0	0	50	5	2	0	57	59	1	0	8	1	0	0	10	9	2	0	52	5	3	0	62	63
17:45	3	0	45	4	0	0	52	50	0	1	13	0	0	0	14	13	1	0	34	5	2	0	42	43
H/TOT	8	0	223	24	3	0	258	255	1	1	42	4	0	0	48	47	3	1	232	28	12	0	276	285
18:00	1	1	48	6	0	0	56	55	0	0	10	0	0	0	10	10	1	0	36	4	3	0	44	46
18:15	1	0	38	4	0	0	43	42	0	0	3	1	0	0	4	4	1	0	31	3	1	0	36	36
H/TOT	2	1	86	10	0	0	99	96.8	0	0	13	1	0	0	14	14	2	0	67	7	4	0	80	82.4
P/TOT	14	3	509	60	8	0	594	589	1	1	89	7	0	0	98	97	7	1	557	75	31	0	671	696

TRAFFINOMICS LIMITED

BROOMHILL ROAD TRAFFIC COUNTS **MAY 2021**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/21/077**

SITE: 02 DATE: 19th May 2021

LOCATION: Broomhill Road/Broomhill Close/Broomhill Terrace DAY: Wednesday

	MOVEMENT 1								MOVEMENT 2								MOVEMENT 3							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	0	0	0	0	0	0	0	0	0	0	3	3	0	0	6	6	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	8	0	1	0	9	10	0	0	1	0	0	0	1	1
08:00	0	0	0	0	0	0	0	0	0	0	9	1	1	1	12	14	0	0	3	0	0	0	3	3
08:15	0	0	0	1	0	0	1	1	0	0	11	2	2	0	15	17	0	0	0	0	0	0	0	0
H/TOT	0	0	0	1	0	0	1	1	0	0	31	6	4	1	42	47	0	0	4	0	0	0	4	4
08:30	0	0	0	0	0	0	0	0	1	0	8	1	0	0	10	9	0	0	1	0	0	0	1	1
08:45	0	0	0	0	0	0	0	0	1	0	16	4	3	1	25	28	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0	14	10	1	0	25	26	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	14	5	1	0	20	21	0	0	0	1	1	0	2	3
H/TOT	0	0	0	0	0	0	0	0	2	0	52	20	5	1	80	84	0	0	1	1	1	0	3	4
P/TOT	0	0	0	1	0	0	1	1	2	0	83	26	9	2	122	131	0	0	5	1	1	0	7	8

	MOVEMENT 1								MOVEMENT 2								MOVEMENT 3							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
16:00	0	0	0	0	0	0	0	0	0	0	27	4	3	0	34	37	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	15	7	5	0	27	32	0	0	0	0	0	0	0	0
16:30	0	0	1	0	0	0	1	1	2	1	30	9	3	0	45	46	0	0	0	0	0	0	0	0
16:45	0	0	2	0	0	0	2	2	5	0	37	5	3	0	50	49	0	0	0	0	0	0	0	0
H/TOT	0	0	3	0	0	0	3	3	7	1	109	25	14	0	156	164	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	6	1	55	6	2	0	70	67	0	0	1	0	0	0	1	1
17:15	0	0	0	0	0	0	0	0	1	0	28	0	3	0	32	34	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	2	0	34	5	0	0	41	39	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	8	2	1	0	11	12	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	9	1	125	13	6	0	154	152	0	0	1	0	0	0	1	1
18:00	0	0	0	0	0	0	0	0	0	0	17	2	2	0	21	23	0	0	0	0	0	0	0	0
18:15	0	0	1	0	0	0	1	1	3	0	12	3	1	0	19	18	0	0	0	0	0	0	0	0
H/TOT	0	0	1	0	0	0	1	1	3	0	29	5	3	0	40	40.6	0	0	0	0	0	0	0	0
P/TOT	0	0	4	0	0	0	4	4	19	2	263	43	23	0	350	357	0	0	1	0	0	0	1	1

TRAFFINOMICS LIMITED

BROOMHILL ROAD TRAFFIC COUNTS **MAY 2021**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/21/077**

SITE: 02 DATE: 19th May 2021

LOCATION: Broomhill Road/Broomhill Close/Broomhill Terrace DAY: Wednesday

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
07:45	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	3
08:15	0	0	0	3	1	0	4	5	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
H/TOT	0	0	0	5	1	0	6	7	0	0	0	0	0	0	0	0	0	0	2	4	1	0	7	8
08:30	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
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	1	2	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	3
H/TOT	0	0	3	2	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	6	1	0	7	8
P/TOT	0	0	3	7	1	0	11	12	0	0	0	0	0	0	0	0	0	0	2	10	2	0	14	16

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
16:00	0	0	2	1	0	0	3	3	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
16:30	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
16:45	0	0	3	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
H/TOT	0	0	7	1	0	0	8	8	0	0	0	0	0	0	0	0	0	0	10	0	0	0	10	10
17:00	0	0	2	1	1	0	4	5	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	3
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	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	4
17:45	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	1	0	5	1	0	0	7	6
H/TOT	0	0	2	3	1	0	6	7	0	0	0	0	0	0	0	0	1	0	10	3	0	0	14	13
18:00	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0	0	0	2	4	1	0	7	8
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	1	0	1	2	0	0	0	0	0	0	0	0	0	0	2	4	1	0	7	8
P/TOT	0	0	9	4	2	0	15	17	0	0	0	0	0	0	0	0	1	0	22	7	1	0	31	31

TRAFFINOMICS LIMITED

BROOMHILL ROAD TRAFFIC COUNTS **MAY 2021**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/21/077**

SITE: 02 DATE: 19th May 2021

LOCATION: Broomhill Road/Broomhill Close/Broomhill Terrace DAY: Wednesday

	MOVEMENT 7								MOVEMENT 8								MOVEMENT 9							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	0	0	4	2	0	0	6	6	0	0	20	1	3	1	25	29	0	0	0	0	0	0	0	0
07:45	0	0	2	4	1	0	7	8	5	0	31	7	2	0	45	43	0	0	0	0	0	0	0	0
08:00	0	0	1	3	0	0	4	4	0	0	32	5	0	0	37	37	0	0	0	1	0	0	1	1
08:15	0	0	6	2	0	0	8	8	1	0	56	9	3	0	69	71	0	0	0	0	0	0	0	0
H/TOT	0	0	13	11	1	0	25	26	6	0	139	22	8	1	176	180	0	0	0	1	0	0	1	1
08:30	0	0	4	2	0	0	6	6	0	0	30	6	2	0	38	40	0	0	1	0	0	0	1	1
08:45	0	0	5	1	2	0	8	10	1	1	39	10	1	0	52	52	0	0	0	0	0	0	0	0
09:00	0	0	3	2	0	0	5	5	1	0	32	7	1	0	41	41	0	0	1	0	1	0	2	3
09:15	0	0	1	2	1	0	4	5	0	0	19	7	1	0	27	28	0	0	0	0	0	0	0	0
H/TOT	0	0	13	7	3	0	23	26	2	1	120	30	5	0	158	161	0	0	2	0	1	0	3	4
P/TOT	0	0	26	18	4	0	48	52	8	1	259	52	13	1	334	341	0	0	2	1	1	0	4	5

	MOVEMENT 7								MOVEMENT 8								MOVEMENT 9							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
16:00	0	0	2	1	0	0	3	3	0	0	17	6	4	0	27	31	0	0	0	0	0	0	0	0
16:15	0	0	0	2	1	0	3	4	0	2	15	2	3	0	22	24	0	0	0	0	0	0	0	0
16:30	0	0	2	0	0	0	2	2	0	0	14	3	0	0	17	17	0	0	0	0	0	0	0	0
16:45	0	0	2	1	1	0	4	5	0	0	13	4	2	0	19	21	0	0	0	0	0	0	0	0
H/TOT	0	0	6	4	2	0	12	14	0	2	59	15	9	0	85	93	0	0	0	0	0	0	0	0
17:00	0	0	1	0	0	0	1	1	2	1	14	1	0	0	18	16	0	0	1	0	0	0	1	1
17:15	0	0	0	0	0	0	0	0	0	1	12	0	0	0	13	12	0	0	0	1	0	0	1	1
17:30	0	0	1	1	0	0	2	2	1	0	11	0	0	0	12	11	0	0	0	0	0	0	0	0
17:45	0	0	0	2	1	0	3	4	1	0	9	1	3	0	14	16	0	0	0	0	0	0	0	0
H/TOT	0	0	2	3	1	0	6	7	4	2	46	2	3	0	57	56	0	0	1	1	0	0	2	2
18:00	0	0	0	0	1	0	1	2	0	0	16	2	1	0	19	20	0	0	0	0	0	0	0	0
18:15	0	0	1	0	0	0	1	1	2	0	7	0	1	0	10	9	0	0	1	0	0	0	1	1
H/TOT	0	0	1	0	1	0	2	3	2	0	23	2	2	0	29	29.4	0	0	1	0	0	0	1	1
P/TOT	0	0	9	7	4	0	20	24	6	4	128	19	14	0	171	178	0	0	2	1	0	0	3	3

TRAFFINOMICS LIMITED

BROOMHILL ROAD TRAFFIC COUNTS **MAY 2021**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/21/077**

SITE: 02 DATE: 19th May 2021

LOCATION: Broomhill Road/Broomhill Close/Broomhill Terrace DAY: Wednesday

	MOVEMENT 10								MOVEMENT 11								MOVEMENT 12							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	0	0	1	2	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
H/TOT	0	0	1	4	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	1	1	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P/TOT	0	0	1	5	1	0	7	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	MOVEMENT 10								MOVEMENT 11								MOVEMENT 12							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
16:00	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	2	1	0	0	3	3	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
H/TOT	0	0	3	2	0	0	5	5	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
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	1	0	0	0	1	1
17:45	0	0	1	0	0	0	1	1	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	1	0	0	0	1	1
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	1	0	0	0	1	1	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	1	0	0	0	1	1
P/TOT	0	0	6	2	0	0	8	8	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3

TRAFFINOMICS LIMITED

BROOMHILL ROAD TRAFFIC COUNTS **MAY 2021**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/21/077**

SITE: 03 DATE: 19th May 2021

LOCATION: Broomhill Road/Airton Road DAY: Wednesday

	MOVEMENT 1								MOVEMENT 2								MOVEMENT 3							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	0	0	0	0	0	0	0	0	0	0	3	2	1	0	6	7	0	0	22	4	3	1	30	34
07:45	0	0	1	1	0	0	2	2	0	0	8	4	1	0	13	14	0	0	33	10	2	0	45	47
08:00	0	0	0	0	1	1	2	4	0	0	8	3	1	0	12	13	1	0	29	9	1	0	40	40
08:15	0	0	1	1	1	0	3	4	0	0	8	0	2	0	10	12	0	0	54	7	3	0	64	67
H/TOT	0	0	2	2	2	1	7	10	0	0	27	9	5	0	41	46	1	0	138	30	9	1	179	188
08:30	0	0	4	1	0	0	5	5	0	0	7	3	1	0	11	12	0	0	44	7	2	1	54	57
08:45	0	0	1	3	0	1	5	6	0	0	12	7	2	0	21	23	2	0	33	13	2	0	50	50
09:00	0	0	2	1	1	0	4	5	0	0	18	9	2	0	29	31	1	0	33	9	4	0	47	50
09:15	0	0	5	2	1	0	8	9	0	0	14	5	3	0	22	25	0	0	21	9	0	0	30	30
H/TOT	0	0	12	7	2	1	22	25	0	0	51	24	8	0	83	91	3	0	131	38	8	1	181	188
P/TOT	0	0	14	9	4	2	29	35	0	0	78	33	13	0	124	137	4	0	269	68	17	2	360	376

	MOVEMENT 1								MOVEMENT 2								MOVEMENT 3							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
16:00	0	0	6	2	1	0	9	10	0	0	21	7	2	0	30	32	0	0	16	4	4	0	24	28
16:15	0	0	4	0	0	0	4	4	0	0	24	5	1	0	30	31	1	1	16	3	4	0	25	28
16:30	1	0	8	0	2	0	11	12	1	0	28	12	5	0	46	50	0	0	21	6	0	0	27	27
16:45	0	0	9	0	0	0	9	9	1	1	43	6	2	0	53	54	0	0	14	3	2	0	19	21
H/TOT	1	0	27	2	3	0	33	35	2	1	116	30	10	0	159	167	1	1	67	16	10	0	95	104
17:00	0	0	7	0	0	0	7	7	1	1	66	10	2	0	80	81	0	0	14	2	1	0	17	18
17:15	0	0	7	0	0	0	7	7	0	0	37	2	4	0	43	47	1	0	12	0	0	0	13	12
17:30	0	0	8	2	1	0	11	12	0	0	35	2	4	0	41	45	0	0	13	0	0	0	13	13
17:45	0	0	7	0	1	0	8	9	0	0	20	4	1	0	25	26	1	0	15	3	1	0	20	20
H/TOT	0	0	29	2	2	0	33	35	1	1	158	18	11	0	189	199	2	0	54	5	2	0	63	63
18:00	0	0	13	3	2	0	18	20	0	0	28	6	1	0	35	36	0	0	20	1	3	0	24	27
18:15	1	0	10	0	0	0	11	10	2	0	30	6	1	0	39	38	0	0	14	0	0	0	14	14
H/TOT	1	0	23	3	2	0	29	30.2	2	0	58	12	2	0	74	74.4	0	0	34	1	3	0	38	41
P/TOT	2	0	79	7	7	0	95	100	5	2	332	60	23	0	422	440	3	1	155	22	15	0	196	208

TRAFFINOMICS LIMITED

BROOMHILL ROAD TRAFFIC COUNTS **MAY 2021**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/21/077**

SITE: 03 DATE: 19th May 2021

LOCATION: Broomhill Road/Airton Road DAY: Wednesday

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	1	1	28	5	2	0	37	38	2	0	21	5	1	0	29	28	0	0	2	1	1	0	4	5
07:45	2	0	45	8	0	1	56	55	2	0	55	9	2	0	68	68	0	0	4	1	0	0	5	5
08:00	1	0	42	10	5	0	58	62	1	0	38	8	2	1	50	52	0	0	7	1	0	0	8	8
08:15	0	1	51	14	3	1	70	73	0	0	51	9	4	0	64	68	0	0	10	1	0	0	11	11
H/TOT	4	2	166	37	10	2	221	229	5	0	165	31	9	1	211	217	0	0	23	4	1	0	28	29
08:30	3	0	62	10	1	0	76	75	2	0	46	5	3	1	57	59	0	0	8	0	0	0	8	8
08:45	1	0	67	4	3	0	75	77	2	0	60	9	3	1	75	77	0	0	11	1	1	0	13	14
09:00	0	0	60	9	4	0	73	77	3	0	58	10	1	0	72	71	0	0	8	0	0	0	8	8
09:15	1	0	45	7	2	0	55	56	2	0	57	7	5	0	71	74	0	0	3	1	1	0	5	6
H/TOT	5	0	234	30	10	0	279	285	9	0	221	31	12	2	275	282	0	0	30	2	2	0	34	36
P/TOT	9	2	400	67	20	2	500	514	14	0	386	62	21	3	486	499	0	0	53	6	3	0	62	65

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
16:00	3	0	46	9	3	0	61	62	1	0	68	12	2	0	83	84	0	0	2	1	0	0	3	3
16:15	0	1	37	7	1	0	46	46	1	0	54	4	1	0	60	60	0	0	1	1	0	0	2	2
16:30	1	0	53	7	1	0	62	62	2	1	70	13	6	0	92	96	0	0	3	0	1	0	4	5
16:45	1	0	48	4	2	0	55	56	1	0	74	8	1	0	84	84	0	0	0	1	1	0	2	3
H/TOT	5	1	184	27	7	0	224	226	5	1	266	37	10	0	319	324	0	0	6	3	2	0	11	13
17:00	0	0	55	2	1	0	58	59	3	0	91	15	1	0	110	109	0	0	4	0	2	0	6	8
17:15	3	0	44	5	1	0	53	52	1	0	64	9	1	0	75	75	0	0	1	1	0	0	2	2
17:30	0	0	47	1	1	0	49	50	1	0	58	4	4	0	67	70	0	0	4	0	0	0	4	4
17:45	0	0	43	0	0	0	43	43	4	1	72	4	0	0	81	77	0	0	4	0	1	0	5	6
H/TOT	3	0	189	8	3	0	203	204	9	1	285	32	6	0	333	331	0	0	13	1	3	0	17	20
18:00	1	1	27	2	0	0	31	30	2	0	59	4	1	0	66	65	0	0	3	1	1	0	5	6
18:15	2	0	41	1	0	0	44	42	3	1	37	3	0	0	44	41	0	0	4	0	0	0	4	4
H/TOT	3	1	68	3	0	0	75	72	5	1	96	7	1	0	110	106	0	0	7	1	1	0	9	10
P/TOT	11	2	441	38	10	0	502	502	19	3	647	76	17	0	762	762	0	0	26	5	6	0	37	43

TRAFFINOMICS LIMITED

BROOMHILL ROAD TRAFFIC COUNTS **MAY 2021**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/21/077**

SITE: 04 DATE: 19th May 2021

LOCATION: Greenhills Road/Broomhill Road DAY: Wednesday

	MOVEMENT 1								MOVEMENT 2								MOVEMENT 3							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	1	0	4	2	0	0	7	6	6	0	52	7	3	1	69	68	1	0	13	4	0	0	18	17
07:45	0	0	8	2	1	0	11	12	4	0	62	18	2	2	88	89	0	0	12	1	0	0	13	13
08:00	0	0	2	2	0	0	4	4	2	0	74	15	1	2	94	95	3	0	22	2	0	0	27	25
08:15	0	0	5	0	0	0	5	5	1	0	73	11	9	4	98	110	0	0	19	2	1	0	22	23
H/TOT	1	0	19	6	1	0	27	27	13	0	261	51	15	9	349	363	4	0	66	9	1	0	80	78
08:30	0	0	5	1	0	0	6	6	1	0	96	7	4	3	111	117	1	0	14	3	1	0	19	19
08:45	0	0	11	3	1	0	15	16	4	0	87	9	3	3	106	109	1	0	17	1	1	0	20	20
09:00	0	0	6	1	0	0	7	7	4	0	102	17	2	1	126	126	0	0	24	4	2	0	30	32
09:15	0	0	4	4	1	0	9	10	3	0	76	9	9	1	98	106	0	0	23	5	3	0	31	34
H/TOT	0	0	26	9	2	0	37	39	12	0	361	42	18	8	441	457	2	0	78	13	7	0	100	105
P/TOT	1	0	45	15	3	0	64	66	25	0	622	93	33	17	790	820	6	0	144	22	8	0	180	183

	MOVEMENT 1								MOVEMENT 2								MOVEMENT 3							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
16:00	0	0	5	1	0	0	6	6	2	3	85	13	2	0	105	104	0	0	7	6	4	0	17	21
16:15	0	0	5	0	0	0	5	5	7	0	80	6	6	2	101	103	0	0	9	5	2	0	16	18
16:30	0	0	5	0	0	0	5	5	6	2	88	6	1	2	105	102	0	0	11	4	1	0	16	17
16:45	0	0	4	0	0	0	4	4	5	0	82	7	1	2	97	96	1	0	11	2	0	0	14	13
H/TOT	0	0	19	1	0	0	20	20	20	5	335	32	10	6	408	405	1	0	38	17	7	0	63	69
17:00	0	0	4	1	0	0	5	5	4	1	92	11	4	2	114	116	0	0	10	1	0	0	11	11
17:15	0	0	3	2	1	0	6	7	9	0	88	5	5	2	109	109	0	0	9	1	2	0	12	14
17:30	0	0	4	0	1	0	5	6	9	1	94	8	1	0	113	106	2	0	7	0	0	0	9	7
17:45	0	0	3	0	0	0	3	3	4	0	82	10	1	2	99	99	0	0	4	1	0	0	5	5
H/TOT	0	0	14	3	2	0	19	21	26	2	356	34	11	6	435	430	2	0	30	3	2	0	37	37
18:00	0	0	5	1	0	0	6	6	6	0	92	7	1	1	107	104	0	0	6	0	0	0	6	6
18:15	0	0	3	1	0	0	4	4	3	1	77	6	3	1	91	92	2	0	6	2	0	0	10	8
H/TOT	0	0	8	2	0	0	10	10	9	1	169	13	4	2	198	196	2	0	12	2	0	0	16	14.4
P/TOT	0	0	41	6	2	0	49	51	55	8	860	79	25	14	1041	1031	5	0	80	22	9	0	116	121

TRAFFINOMICS LIMITED

BROOMHILL ROAD TRAFFIC COUNTS **MAY 2021**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/21/077**

SITE: 04 DATE: 19th May 2021

LOCATION: Greenhills Road/Broomhill Road DAY: Wednesday

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	0	0	7	1	0	0	8	8	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	3
07:45	0	0	5	1	1	0	7	8	0	0	1	3	0	0	4	4	0	0	1	1	2	0	4	6
08:00	0	0	4	2	1	0	7	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	8	7	4	0	19	23	0	0	0	1	1	0	2	3	0	0	1	0	0	0	1	1
H/TOT	0	0	24	11	6	0	41	47	0	0	1	4	1	0	6	7	0	0	4	2	2	0	8	10
08:30	0	0	12	4	0	0	16	16	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	3
08:45	0	1	16	5	1	0	23	23	0	0	1	0	0	0	1	1	0	0	2	1	0	0	3	3
09:00	0	0	10	3	1	0	14	15	0	0	1	1	0	0	2	2	0	0	0	0	0	0	0	0
09:15	0	0	11	5	5	0	21	26	0	0	0	1	1	0	2	3	0	0	1	1	1	0	3	4
H/TOT	0	1	49	17	7	0	74	80	0	0	2	2	1	0	5	6	0	0	3	3	1	1	8	10
P/TOT	0	1	73	28	13	0	115	127	0	0	3	6	2	0	11	13	0	0	7	5	3	1	16	20

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
16:00	1	0	28	5	1	0	35	35	0	0	2	1	0	0	3	3	0	0	1	2	0	0	3	3
16:15	1	0	16	6	2	0	25	26	0	0	2	0	0	0	2	2	0	0	2	3	1	0	6	7
16:30	2	0	24	5	1	0	32	31	0	0	1	0	0	0	1	1	0	0	4	0	0	0	4	4
16:45	3	0	25	10	0	0	38	36	0	0	1	0	0	0	1	1	0	0	0	0	1	0	1	2
H/TOT	7	0	93	26	4	0	130	128	0	0	6	1	0	0	7	7	0	0	7	5	2	0	14	16
17:00	2	0	34	3	3	0	42	43	0	0	3	2	0	0	5	5	0	0	5	1	0	0	6	6
17:15	0	1	21	2	0	0	24	23	0	0	0	0	0	0	0	0	0	1	3	0	0	0	4	3
17:30	1	0	19	2	0	0	22	21	0	0	1	0	0	0	1	1	0	0	4	1	0	0	5	5
17:45	0	0	12	3	1	0	16	17	0	0	4	0	0	0	4	4	0	0	2	0	0	0	2	2
H/TOT	3	1	86	10	4	0	104	105	0	0	8	2	0	0	10	10	0	1	14	2	0	0	17	16
18:00	1	0	16	1	0	0	18	17	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
18:15	0	0	7	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
H/TOT	1	0	23	1	0	0	25	24.2	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	5
P/TOT	11	1	202	37	8	0	259	258	0	0	14	3	0	0	17	17	0	1	26	7	2	0	36	37

TRAFFINOMICS LIMITED

BROOMHILL ROAD TRAFFIC COUNTS **MAY 2021**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/21/077**

SITE: 04 DATE: 19th May 2021

LOCATION: Greenhills Road/Broomhill Road DAY: Wednesday

	MOVEMENT 7								MOVEMENT 8								MOVEMENT 9							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	0	0	4	0	0	0	4	4	2	1	61	13	3	1	81	83	0	0	1	1	0	0	2	2
07:45	0	0	9	3	0	0	12	12	3	0	74	19	3	1	100	102	0	0	2	3	0	0	5	5
08:00	0	0	12	3	0	1	16	17	6	0	85	17	7	2	117	121	0	0	4	2	0	0	6	6
08:15	1	0	9	3	0	0	13	12	4	1	69	29	4	3	110	113	0	0	2	1	0	0	3	3
H/TOT	1	0	34	9	0	1	45	45	15	2	289	78	17	7	408	419	0	0	9	7	0	0	16	16
08:30	1	0	5	0	0	0	6	5	3	0	76	9	3	4	95	100	0	0	0	1	0	0	1	1
08:45	0	0	9	5	0	1	15	16	2	1	74	20	5	1	103	107	0	0	6	1	1	0	8	9
09:00	0	0	6	6	0	0	12	12	1	0	83	14	5	2	105	111	0	0	5	2	0	0	7	7
09:15	0	0	4	2	2	0	8	10	4	1	73	10	4	1	93	94	0	0	5	2	1	0	8	9
H/TOT	1	0	24	13	2	1	41	43	10	2	306	53	17	8	396	412	0	0	16	6	2	0	24	26
P/TOT	2	0	58	22	2	2	86	88	25	4	595	131	34	15	804	831	0	0	25	13	2	0	40	42

	MOVEMENT 7								MOVEMENT 8								MOVEMENT 9							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
16:00	0	0	4	2	0	0	6	6	4	0	96	15	5	3	123	128	0	0	2	0	0	0	2	2
16:15	1	0	0	0	0	0	1	0	3	0	86	8	6	1	104	109	0	0	4	0	0	0	4	4
16:30	1	0	4	2	1	0	8	8	2	1	73	4	7	3	90	98	0	0	4	0	0	0	4	4
16:45	0	0	5	0	0	0	5	5	2	0	85	10	1	2	100	101	0	0	4	1	0	0	5	5
H/TOT	2	0	13	4	1	0	20	19	11	1	340	37	19	9	417	436	0	0	14	1	0	0	15	15
17:00	0	0	1	0	0	0	1	1	2	1	75	4	1	1	84	84	0	0	1	0	1	0	2	3
17:15	0	0	1	0	0	0	1	1	3	1	81	8	1	2	96	96	0	0	3	0	0	0	3	3
17:30	0	0	2	0	0	0	2	2	1	0	87	3	1	1	93	94	0	0	1	0	0	0	1	1
17:45	0	0	0	0	0	0	0	0	0	1	83	6	2	2	94	97	0	0	2	0	0	0	2	2
H/TOT	0	0	4	0	0	0	4	4	6	3	326	21	5	6	367	371	0	0	7	0	1	0	8	9
18:00	0	0	4	0	2	0	6	8	4	1	78	6	1	3	93	93	0	0	0	1	0	0	1	1
18:15	0	0	3	0	0	0	3	3	2	0	76	4	1	1	84	84	0	0	3	0	0	0	3	3
H/TOT	0	0	7	0	2	0	9	11	6	1	154	10	2	4	177	178	0	0	3	1	0	0	4	4
P/TOT	2	0	24	4	3	0	33	34	23	5	820	68	26	19	961	985	0	0	24	2	1	0	27	28

TRAFFINOMICS LIMITED

BROOMHILL ROAD TRAFFIC COUNTS **MAY 2021**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/21/077**

SITE: 04 DATE: 19th May 2021

LOCATION: Greenhills Road/Broomhill Road DAY: Wednesday

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

	MOVEMENT 10								MOVEMENT 11								MOVEMENT 12							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
16:00	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	3
16:30	0	0	3	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	4
16:45	0	0	2	1	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	8	1	0	0	9	9	0	0	0	0	0	0	0	0	0	0	5	2	0	0	7	7
17:00	0	0	3	1	0	0	4	4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
17:15	0	0	1	2	0	0	3	3	0	0	1	0	1	0	2	3	0	0	1	0	0	0	1	1
17:30	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
17:45	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	7	3	0	0	10	10	0	0	1	0	1	0	2	3	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	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	3
H/TOT	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	3
P/TOT	0	0	16	4	0	0	20	20	0	0	1	0	1	0	2	3	0	0	10	3	0	0	13	13

TRAFFINOMICS LIMITED

BROOMHILL ROAD TRAFFIC COUNTS **MAY 2021**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/21/077**

SITE: 05 DATE: 19th May 2021

LOCATION: Greenhills Road/Airton Road DAY: Wednesday

	MOVEMENT 1								MOVEMENT 2								MOVEMENT 3							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	1	0	25	7	1	1	35	36	1	0	17	1	2	0	21	22	0	1	20	5	2	0	28	29
07:45	2	1	30	19	4	3	59	64	1	0	40	4	0	0	45	44	1	1	29	7	1	0	39	39
08:00	2	0	51	3	2	1	59	60	0	0	28	6	1	1	36	38	1	0	24	5	2	0	32	33
08:15	0	0	38	12	5	4	59	68	0	0	40	6	6	0	52	58	0	1	39	8	1	1	50	51
H/TOT	5	1	144	41	12	9	212	228	2	0	125	17	9	1	154	162	2	3	112	25	6	1	149	153
08:30	1	0	49	4	1	1	56	57	0	0	49	4	3	2	58	63	1	0	19	9	1	0	30	30
08:45	1	0	54	6	1	4	66	70	1	0	35	7	1	0	44	44	0	0	25	9	3	0	37	40
09:00	2	0	63	14	3	1	83	85	1	0	44	4	1	0	50	50	0	0	25	7	3	0	35	38
09:15	2	0	43	12	3	1	61	63	1	0	31	4	5	0	41	45	0	0	23	7	1	0	31	32
H/TOT	6	0	209	36	8	7	266	276	3	0	159	19	10	2	193	203	1	0	92	32	8	0	133	140
P/TOT	11	1	353	77	20	16	478	505	5	0	284	36	19	3	347	365	3	3	204	57	14	1	282	293

	MOVEMENT 1								MOVEMENT 2								MOVEMENT 3							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
16:00	3	3	72	15	1	0	94	91	0	0	34	5	1	0	40	41	2	0	38	6	3	0	49	50
16:15	6	0	60	7	3	2	78	78	1	0	39	2	2	0	44	45	0	0	33	6	0	0	39	39
16:30	7	1	71	8	2	2	91	89	0	1	37	5	4	0	47	50	1	1	33	1	1	0	37	37
16:45	4	1	60	3	4	2	74	76	2	0	42	6	1	0	51	50	1	0	40	5	2	0	48	49
H/TOT	20	5	263	33	10	6	337	334	3	1	152	18	8	0	182	187	4	1	144	18	6	0	173	175
17:00	1	2	79	11	5	1	99	103	1	0	54	11	0	0	66	65	0	1	39	2	1	0	43	43
17:15	8	1	77	6	4	3	99	99	0	0	41	2	1	0	44	45	1	0	25	4	1	0	31	31
17:30	6	0	72	8	1	0	87	83	3	1	41	2	1	0	48	46	0	0	36	0	0	0	36	36
17:45	4	0	56	5	1	1	67	66	2	0	43	4	0	0	49	47	0	0	23	1	1	0	25	26
H/TOT	19	3	284	30	11	5	352	351	6	1	179	19	2	0	207	204	1	1	123	7	3	0	135	137
18:00	6	0	75	6	1	2	90	88	0	0	37	1	0	0	38	38	0	1	22	3	1	0	27	27
18:15	1	0	71	5	2	1	80	82	2	1	22	2	0	0	27	25	1	0	27	1	0	0	29	28
H/TOT	7	0	146	11	3	3	170	170	2	1	59	3	0	0	65	62.8	1	1	49	4	1	0	56	55.6
P/TOT	46	8	693	74	24	14	859	855	11	3	390	40	10	0	454	453	6	3	316	29	10	0	364	367

TRAFFINOMICS LIMITED

BROOMHILL ROAD TRAFFIC COUNTS **MAY 2021**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/21/077**

SITE: 05 DATE: 19th May 2021

LOCATION: Greenhills Road/Airton Road DAY: Wednesday

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:30	0	0	2	1	0	1	4	5	0	0	11	6	1	0	18	19	4	1	67	14	0	1	87	84
07:45	0	0	5	2	1	0	8	9	1	0	30	6	0	0	37	36	4	0	80	22	0	1	107	105
08:00	0	0	5	0	5	1	11	17	1	0	21	4	1	0	27	27	5	0	80	15	4	3	107	110
08:15	0	0	6	4	2	1	13	16	0	0	29	2	1	0	32	33	4	1	70	20	4	3	102	105
H/TOT	0	0	18	7	8	3	36	47	2	0	91	18	3	0	114	115	17	2	297	71	8	8	403	404
08:30	1	0	25	1	0	0	27	26	3	0	38	2	1	1	45	45	2	0	81	6	1	4	94	97
08:45	0	0	22	1	0	2	25	27	1	0	38	4	0	0	43	42	3	1	75	16	3	2	100	102
09:00	0	0	15	2	1	0	18	19	3	0	39	5	0	0	47	45	3	0	72	16	4	2	97	101
09:15	0	0	15	2	3	0	20	23	0	0	33	4	1	0	38	39	3	1	76	14	1	1	96	95
H/TOT	1	0	77	6	4	2	90	95	7	0	148	15	2	1	173	170	11	2	304	52	9	9	387	395
P/TOT	1	0	95	13	12	5	126	142	9	0	239	33	5	1	287	286	28	4	601	123	17	17	790	799

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
16:00	2	0	23	2	1	0	28	27	0	0	13	2	0	0	15	15	3	0	45	9	2	3	62	65
16:15	2	1	23	3	0	0	29	27	0	1	15	1	0	0	17	16	2	0	57	7	8	1	75	82
16:30	2	0	26	3	0	0	31	29	1	0	21	2	0	0	24	23	2	0	55	6	9	2	74	83
16:45	1	0	23	0	0	0	24	23	0	0	13	4	1	0	18	19	1	0	53	7	0	2	63	64
H/TOT	7	1	95	8	1	0	112	107	1	1	62	9	1	0	74	74	8	0	210	29	19	8	274	295
17:00	0	0	40	2	0	0	42	42	0	0	19	3	3	0	25	28	1	0	40	6	1	2	50	52
17:15	0	0	21	1	0	0	22	22	0	0	17	1	0	0	18	18	2	1	46	2	1	1	53	53
17:30	0	0	22	4	0	0	26	26	0	0	16	1	1	0	18	19	1	0	50	3	1	1	56	57
17:45	0	0	22	1	0	0	23	23	1	0	25	0	1	0	27	27	0	1	59	5	1	2	68	70
H/TOT	0	0	105	8	0	0	113	113	1	0	77	5	5	0	88	92	4	2	195	16	4	6	227	233
18:00	0	0	27	2	0	0	29	29	1	0	15	1	1	0	18	18	3	0	55	3	2	3	66	69
18:15	1	0	24	2	0	0	27	26	1	0	6	0	0	0	7	6	1	0	54	1	0	1	57	57
H/TOT	1	0	51	4	0	0	56	55.2	2	0	21	1	1	0	25	24.4	4	0	109	4	2	4	123	126
P/TOT	8	1	251	20	1	0	281	275	4	1	160	15	7	0	187	190	16	2	514	49	25	18	624	653

APPENDIX C

TRICS Output Data
Residential Apartments & Créche

Calculation Reference: AUDIT-160301-210416-0430

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

03	SOUTH WEST		
	DC	DORSET	1 days
	DV	DEVON	1 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
	NF	NORFOLK	2 days
	SF	SUFFOLK	3 days
05	EAST MIDLANDS		
	DS	DERBYSHIRE	1 days
	LE	LEICESTERSHIRE	1 days
	NT	NOTTINGHAMSHIRE	2 days
06	WEST MIDLANDS		
	WM	WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	RI	EAST RIDING OF YORKSHIRE	1 days
	SY	SOUTH YORKSHIRE	1 days
08	NORTH WEST		
	MS	MERSEYSIDE	2 days
09	NORTH		
	CB	CUMBRIA	3 days
10	WALES		
	CO	CONWY	1 days
11	SCOTLAND		
	EB	CITY OF EDINBURGH	1 days
	SA	SOUTH AYRSHIRE	1 days
	SR	STIRLING	3 days
12	CONNAUGHT		
	GA	GALWAY	1 days
13	MUNSTER		
	WA	WATERFORD	1 days
14	LEINSTER		
	LU	LOUTH	3 days
15	GREATER DUBLIN		
	DL	DUBLIN	7 days
16	ULSTER (REPUBLIC OF IRELAND)		
	MG	MONAGHAN	1 days
17	ULSTER (NORTHERN IRELAND)		
	AN	ANTRIM	1 days

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	40	61	0.045	40	61	0.155	40	61	0.200
08:00 - 09:00	40	61	0.062	40	61	0.203	40	61	0.265
09:00 - 10:00	40	61	0.076	40	61	0.088	40	61	0.164
10:00 - 11:00	40	61	0.054	40	61	0.073	40	61	0.127
11:00 - 12:00	40	61	0.064	40	61	0.077	40	61	0.141
12:00 - 13:00	40	61	0.083	40	61	0.079	40	61	0.162
13:00 - 14:00	40	61	0.075	40	61	0.088	40	61	0.163
14:00 - 15:00	40	61	0.092	40	61	0.087	40	61	0.179
15:00 - 16:00	40	61	0.105	40	61	0.069	40	61	0.174
16:00 - 17:00	40	61	0.120	40	61	0.080	40	61	0.200
17:00 - 18:00	40	61	0.178	40	61	0.088	40	61	0.266
18:00 - 19:00	40	61	0.155	40	61	0.100	40	61	0.255
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.109			1.187			2.296

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

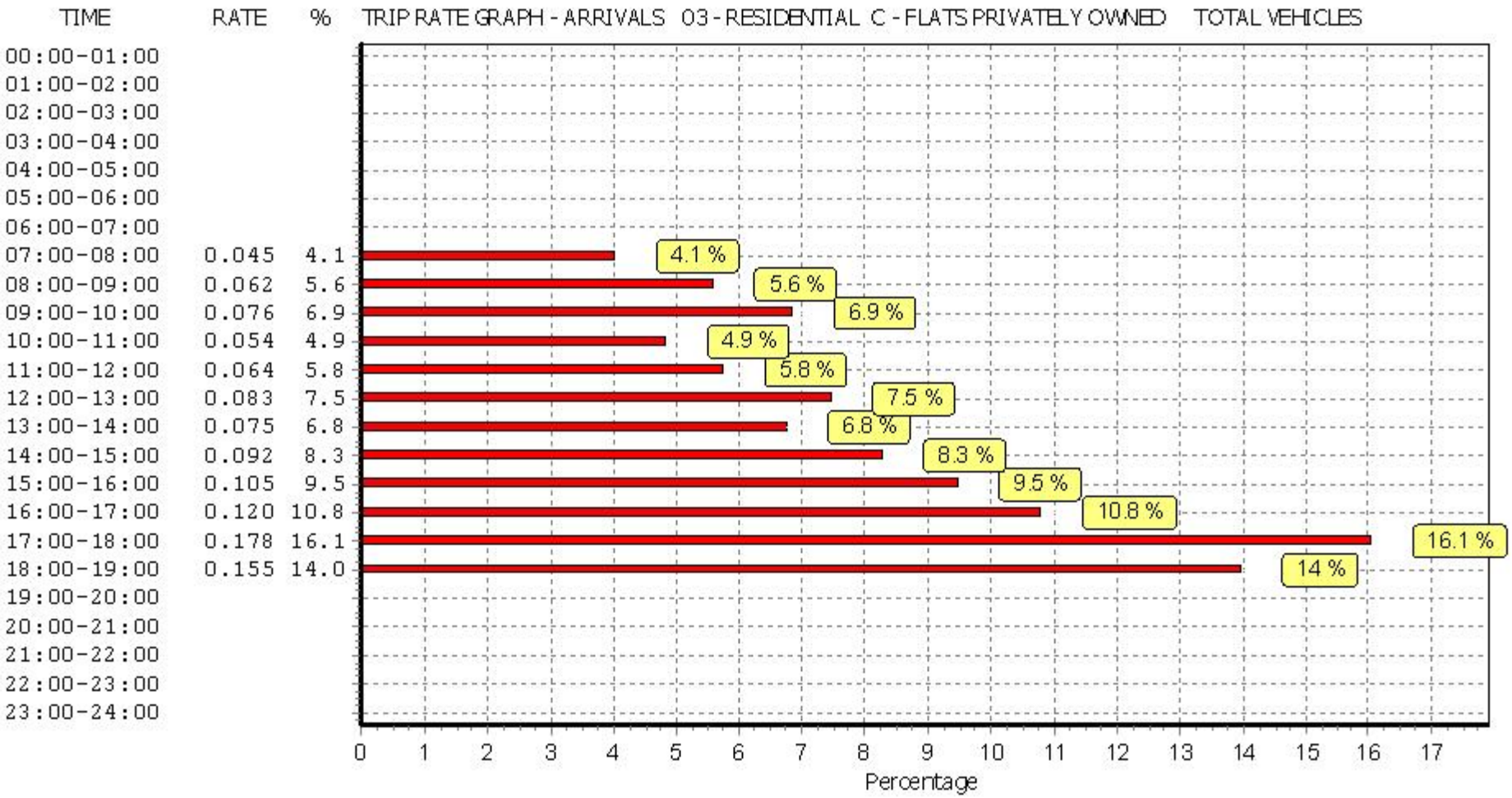
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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

Parameter summary

Trip rate parameter range selected:	9 - 332 (units:)
Survey date date range:	01/01/13 - 23/10/20
Number of weekdays (Monday-Friday):	40
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

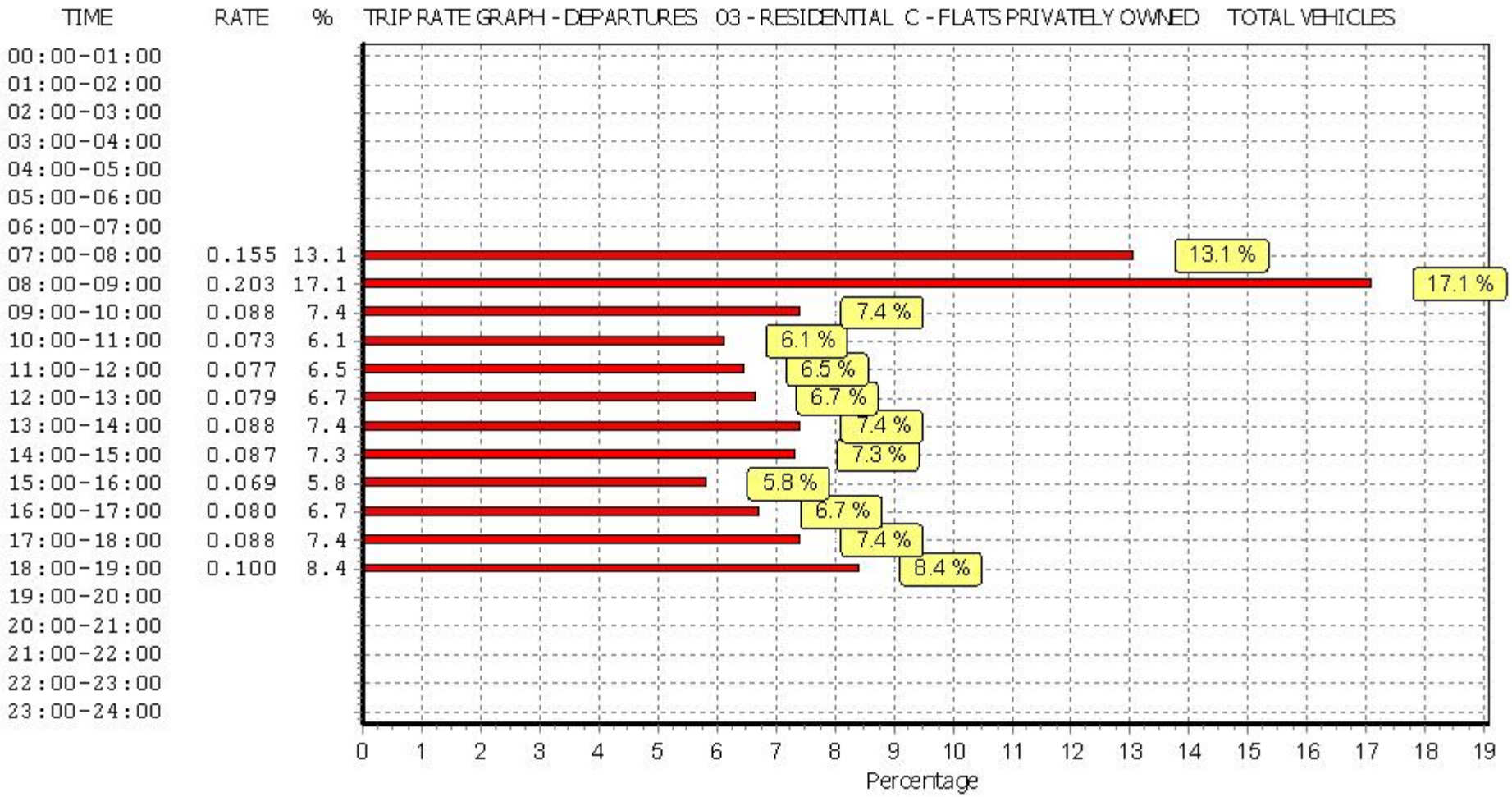
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected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

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



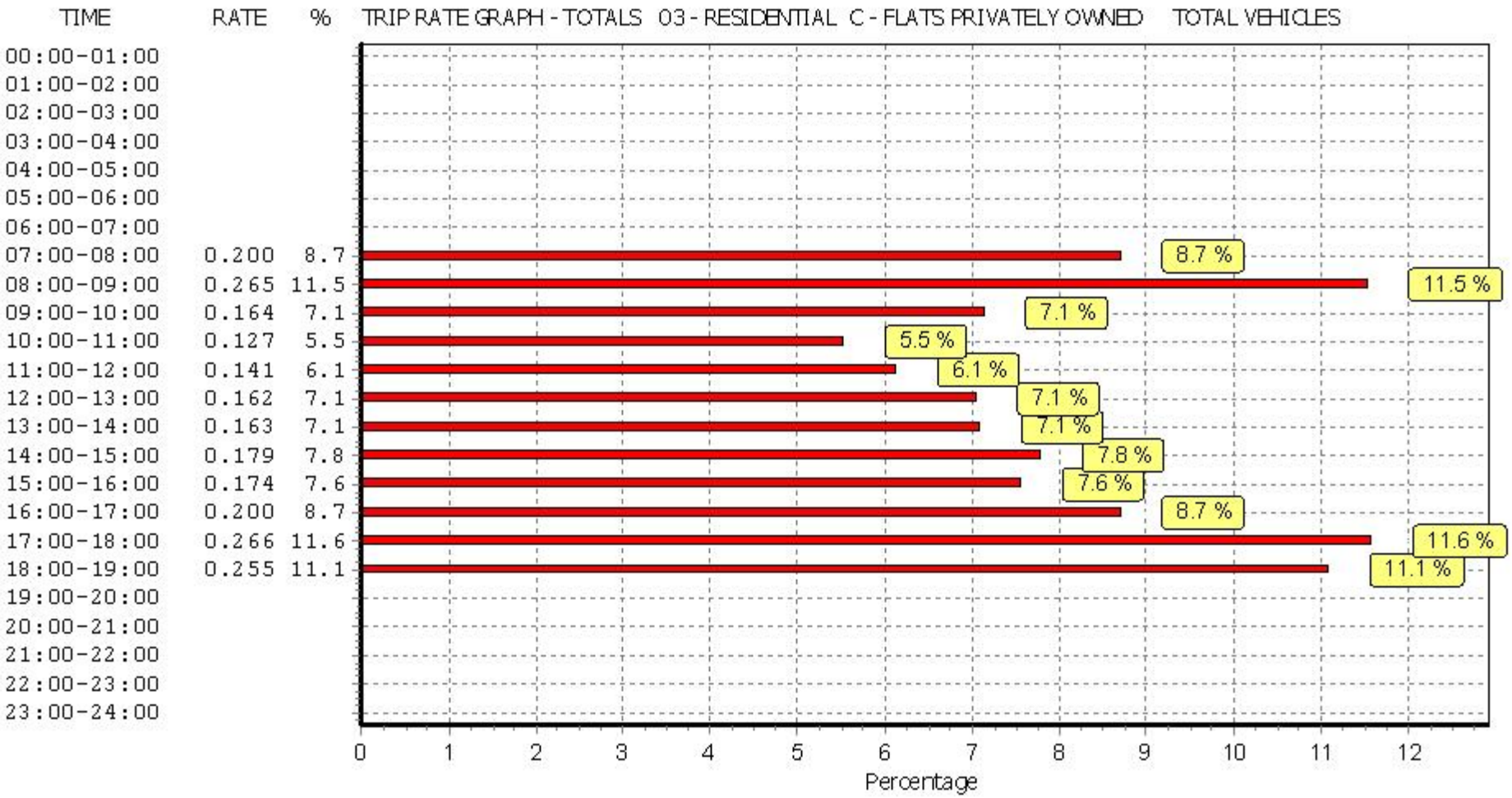
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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

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



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

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



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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	2	455	0.000	2	455	0.000	2	455	0.000
07:00 - 08:00	21	489	1.888	21	489	0.934	21	489	2.822
08:00 - 09:00	21	489	3.455	21	489	2.813	21	489	6.268
09:00 - 10:00	21	489	1.557	21	489	1.528	21	489	3.085
10:00 - 11:00	21	489	0.457	21	489	0.341	21	489	0.798
11:00 - 12:00	21	489	0.652	21	489	0.438	21	489	1.090
12:00 - 13:00	21	489	1.285	21	489	1.421	21	489	2.706
13:00 - 14:00	21	489	0.895	21	489	1.285	21	489	2.180
14:00 - 15:00	21	489	0.701	21	489	0.623	21	489	1.324
15:00 - 16:00	21	489	0.749	21	489	0.827	21	489	1.576
16:00 - 17:00	21	489	1.499	21	489	1.664	21	489	3.163
17:00 - 18:00	21	489	2.540	21	489	3.183	21	489	5.723
18:00 - 19:00	20	506	0.138	20	506	0.691	20	506	0.829
19:00 - 20:00	1	400	0.000	1	400	0.000	1	400	0.000
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			15.816			15.748			31.564

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

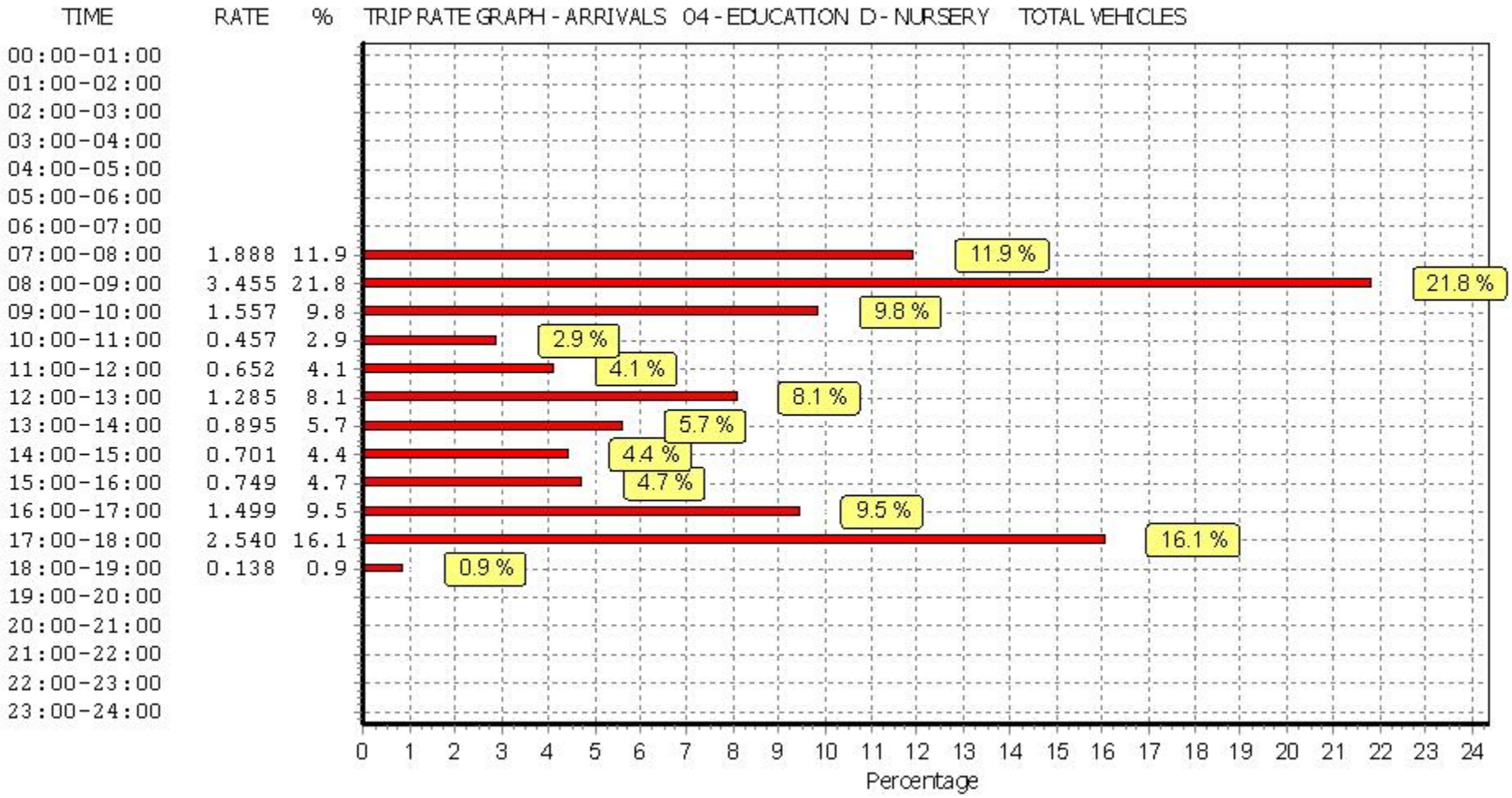
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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

Parameter summary

Trip rate parameter range selected:	150 - 880 (units: sqm)
Survey date date range:	01/01/14 - 19/11/21
Number of weekdays (Monday-Friday):	21
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
Surveys manually removed from selection:	0

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

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



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

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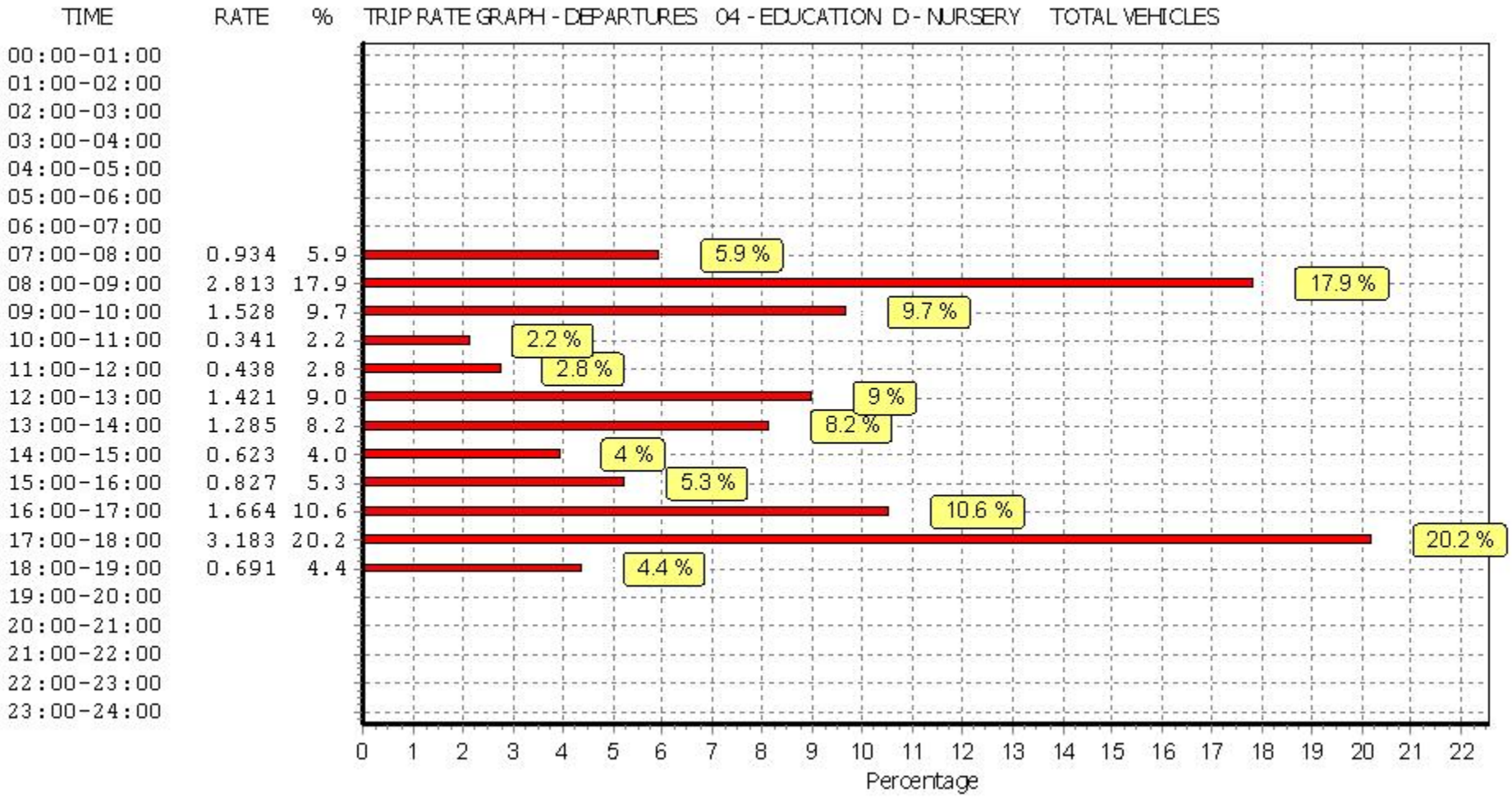

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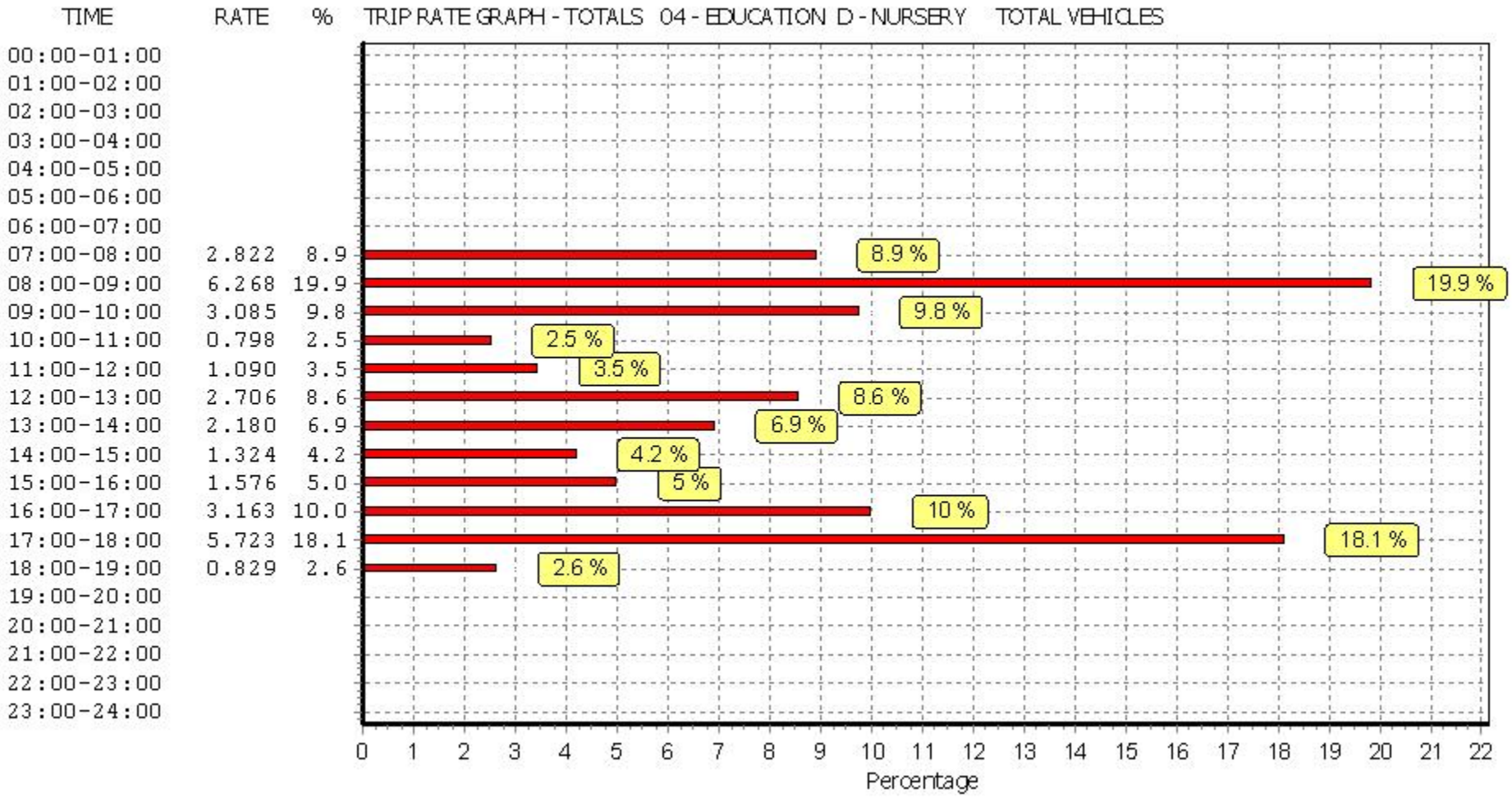
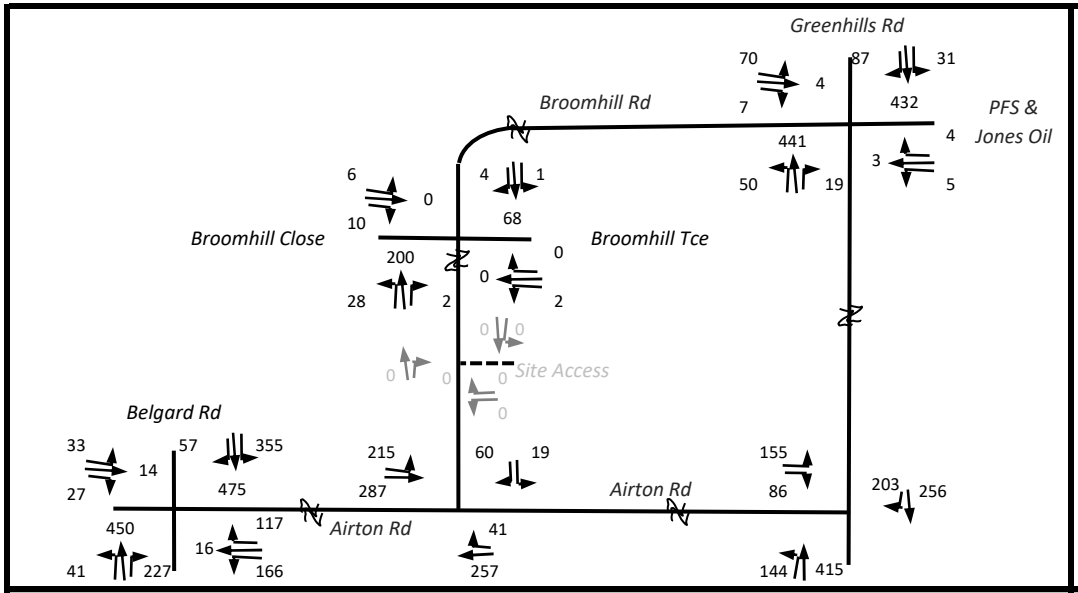


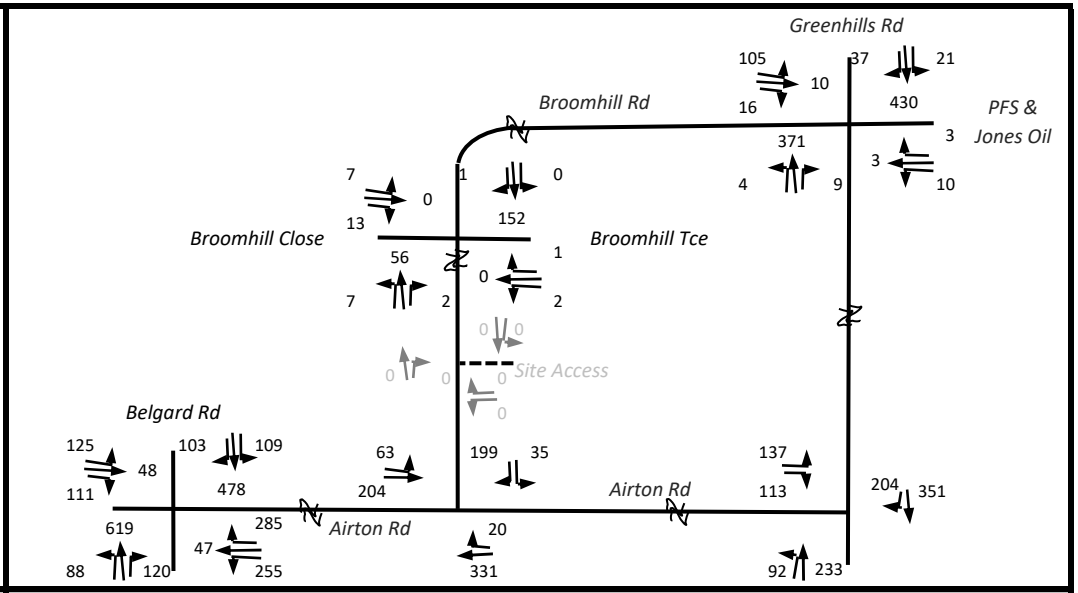
This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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

APPENDIX D

Traffic Calculations, Trip Distribution, Network Traffic Flow Diagrams & Projections Based on Traffic Surveys/TRICS



AM PEAK HR 8-9am



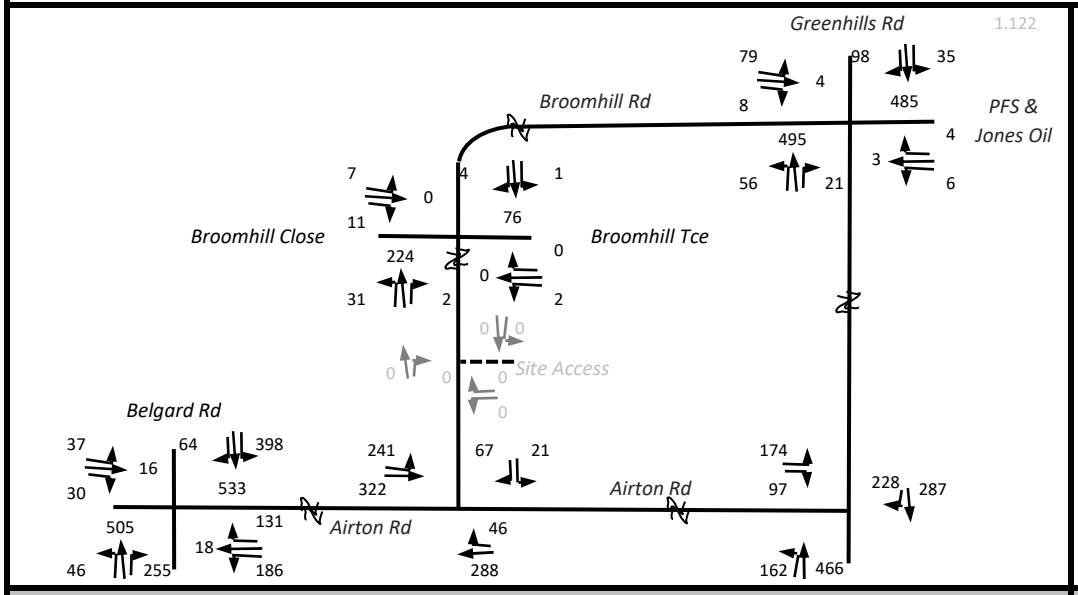
PM PEAK HR 5-6pm

Existing As Surveyed 2021 Traffic (PCUs) - WITHOUT NEW DEVELOPMENT (Refer Appendix B).

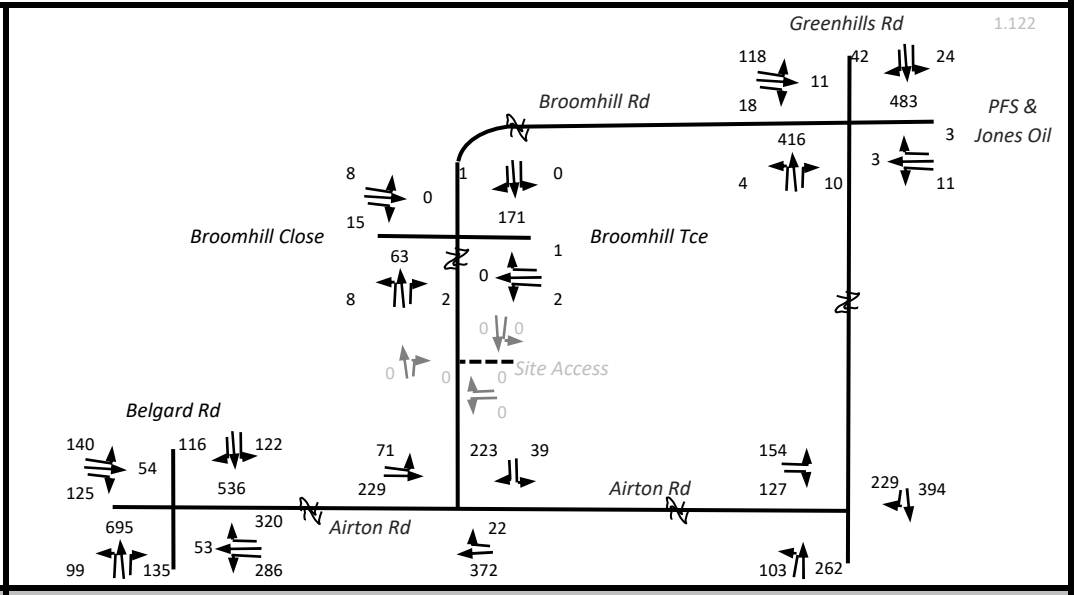
N81 TII Counter Tallaght - 19/5/2021, AM 2423, PM 2415, gives equiv AADT = 24190

N81 TII Counter Tallaght - 06/03/2019, AM 2665, PM 2765, gives equiv AADT = 27150

Resulting Summertime/Covid Factor to Apply to Surveyed Flows = 1.122



AM PEAK HR 8-9am

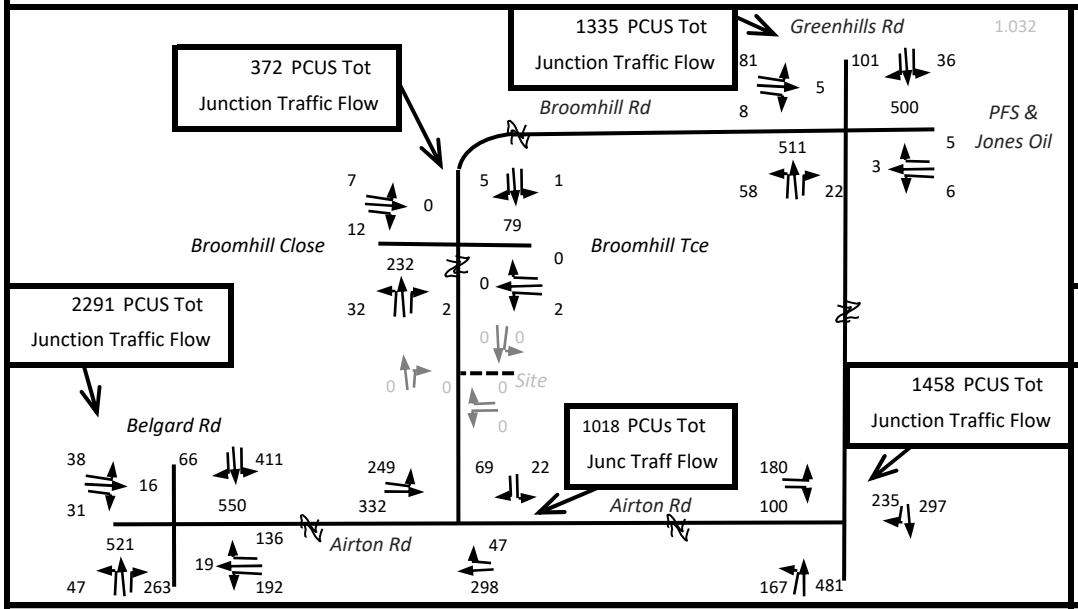


PM PEAK HR 5-6pm

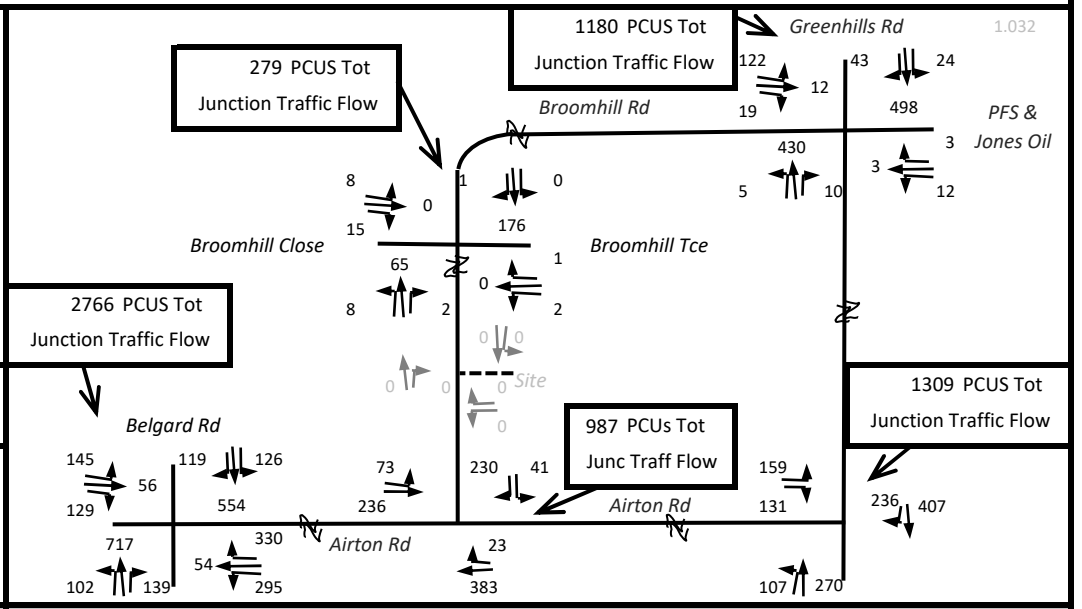
Corrected 2021 Weekday Peak Hour Traffic Volumes - Industry Standard Summer/Covid Factors Applied (PCUs) - WITHOUT NEW DEVELOPMENT

TII PE-PAG-02017 Project Appraisal Guidelines for National Roads Unit 5.3
(Travel Demand Projections 2019, Table 6.1: Central Growth Rates: Annual Growth Factors Metropolitan Dublin)

2021 to 2023 = 1.032
2023 to 2038 = 1.165

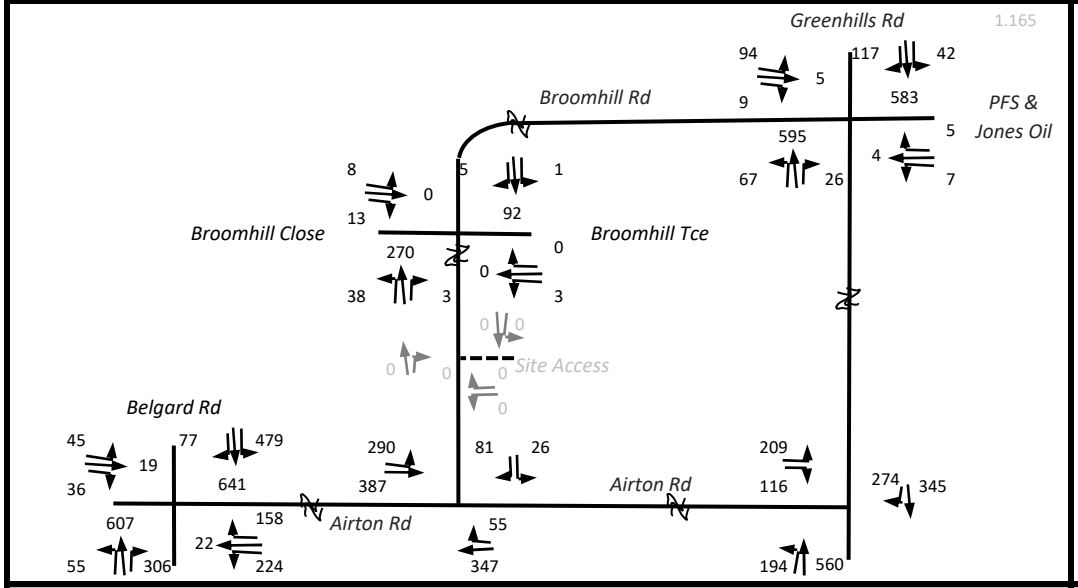


AM PEAK HR 8-9am

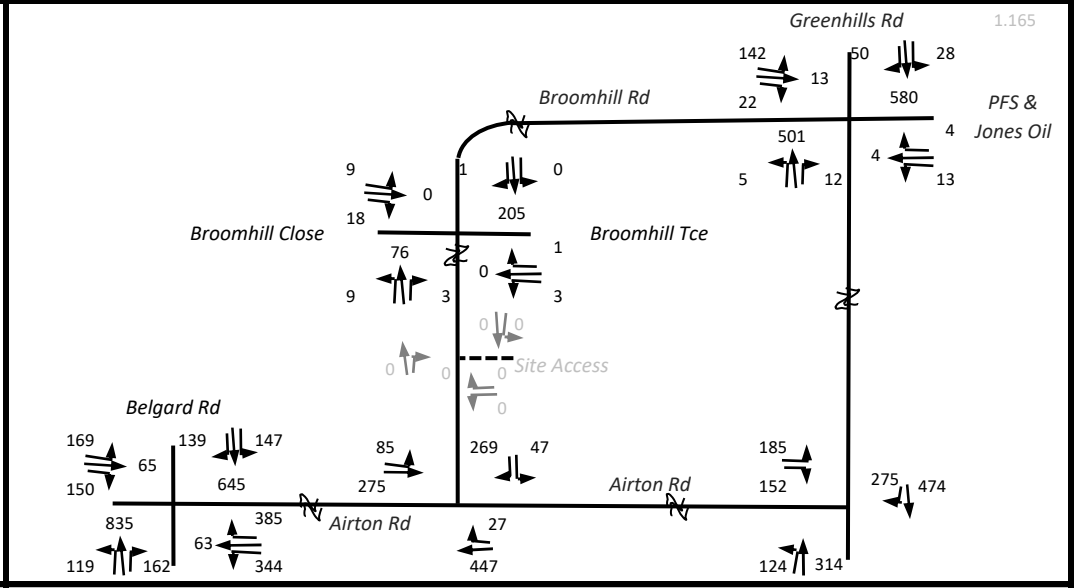


PM PEAK HR 5-6pm

Projected Selected Opening Year 2023 Weekday Peak Hour Traffic Volumes - TII Annual Growth Factors Applied (PCUs) - WITHOUT NEW DEVELOPMENT



AM PEAK HR 8-9am



PM PEAK HR 5-6pm

Associated Design Year 2038 Weekday Peak Hour Traffic Volumes - TII Annual Growth Factors Applied (PCUs) - WITHOUT NEW DEVELOPMENT

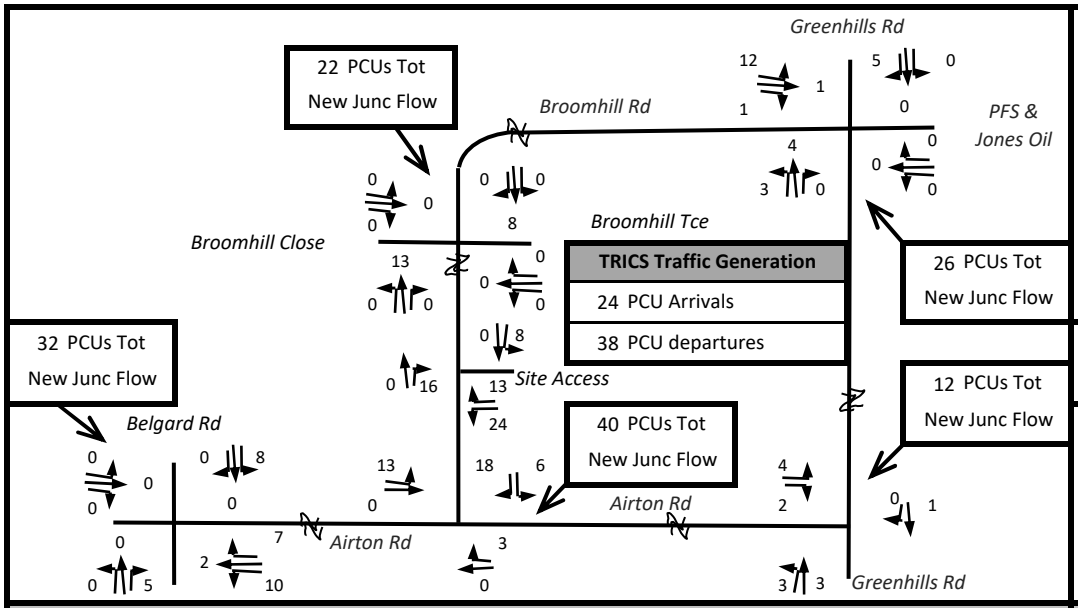
TRICS ASSESSMENT OF WORST-CASE TRAFFIC GENERATED BY PROPOSED DEVELOPMENT

REFER TO TRICS OUTPUT WITHIN APPENDIX C

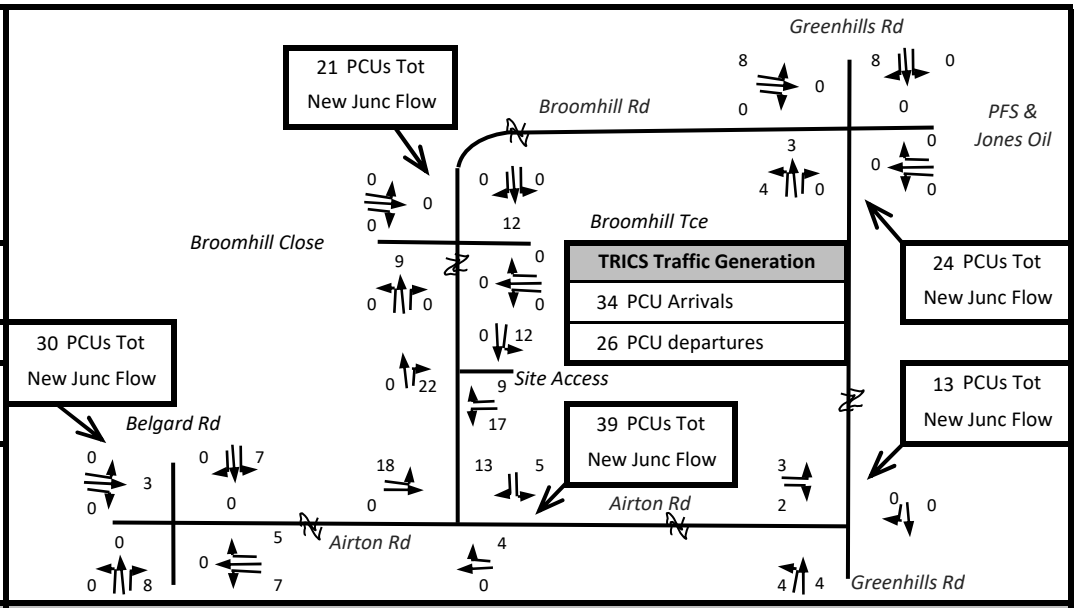
242 No Apartments	Arrivals (PCUs)		Departures (PCUs)		Total 2-Way Vehicular Traffic Generated	
Network Hour	Per Unit	242 No	Per Unit	242 No		
Weekday AM Peak Hr 8-9	0.062	15	0.203	49	64	**242 Apartments**
Weekday PM Peak Hr 5-6	0.178	43	0.088	21	64	
465 m2 Creche*	**Arrivals (PCUs)**		**Departures (PCUs)**		**Total 2-Way Vehicular Traffic Generated**	
Network Hour	**/100m2**	**Site**	**/100m2**	**Site**		**Small Creche**
Weekday AM Peak Hr 8-9	3.455	17	2.813	13	30	
Weekday PM Peak Hr 5-6	2.540	12	3.183	15	28	

COMBINATION OF ABOVE ELEMENTS				
Network Hour	Arrivals	Departures	Total 2-Way	
Weekday AM Peak Hr 8-9	24	38	62	**Full Site**
Weekday PM Peak Hr 5-6	34	26	60	

* *Creche Traffic Reduced by 50% to Reflect Shared/Local Resident Trips*

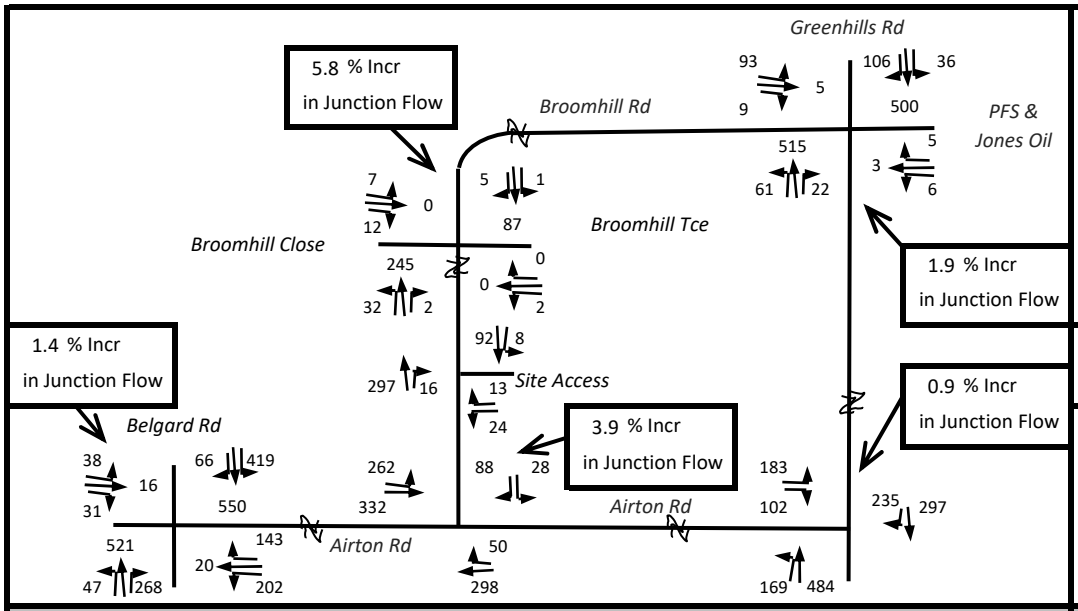


AM PEAK HR 8-9am

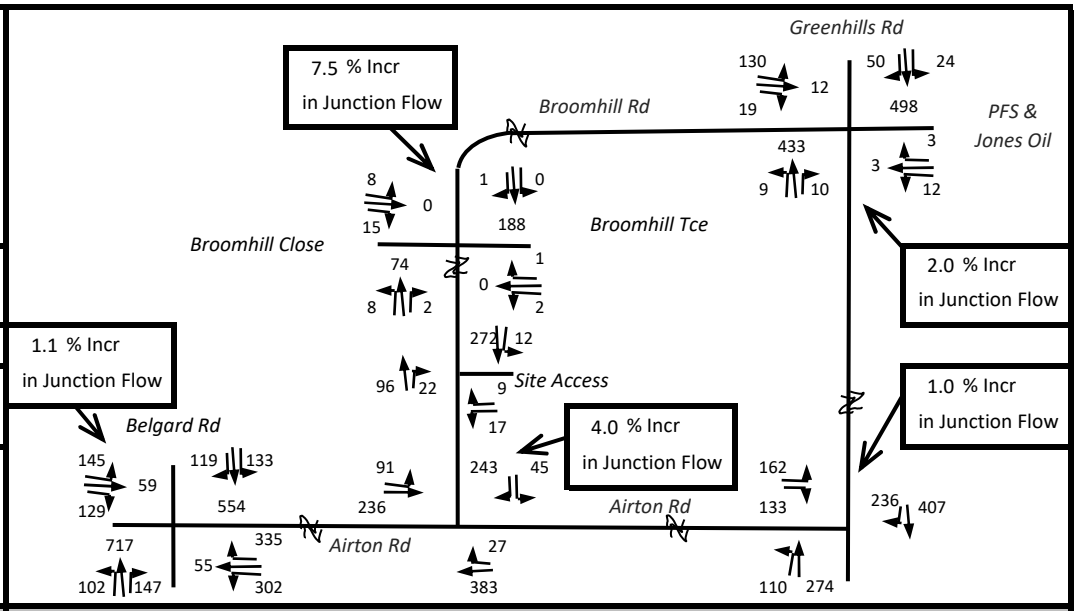


PM PEAK HR 5-6pm

ASSIGNMENT OF SUBJECT DEVELOPMENT TRAFFIC ONLY TO NETWORK ***(BASED ON ESTABLISHED OBSERVED PROPORTIONS, BEING INDUSTRY STANDARD PRACTICE)***

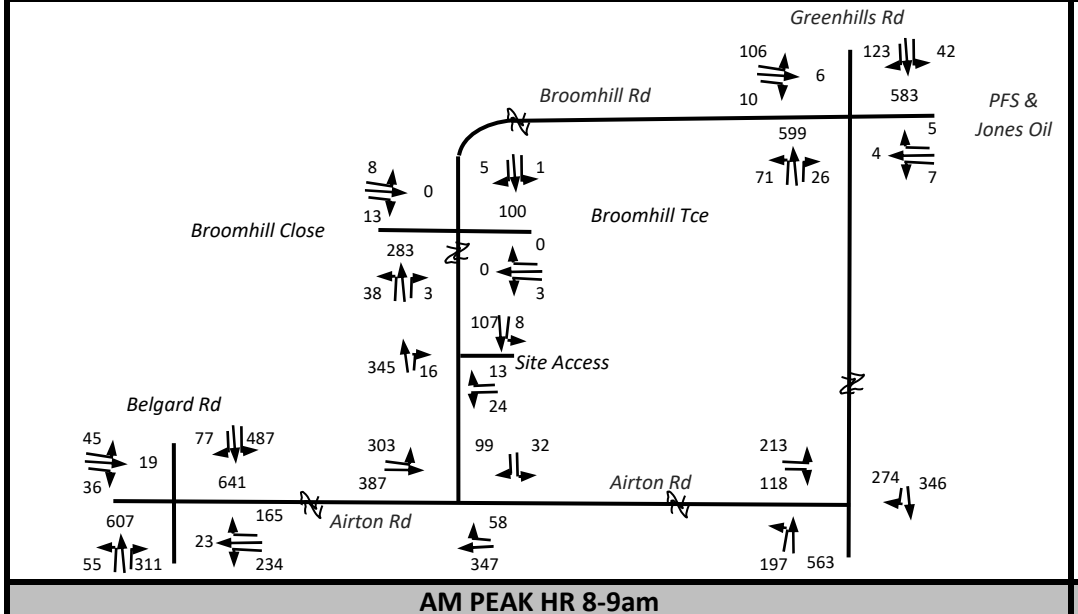


AM PEAK HR 8-9am

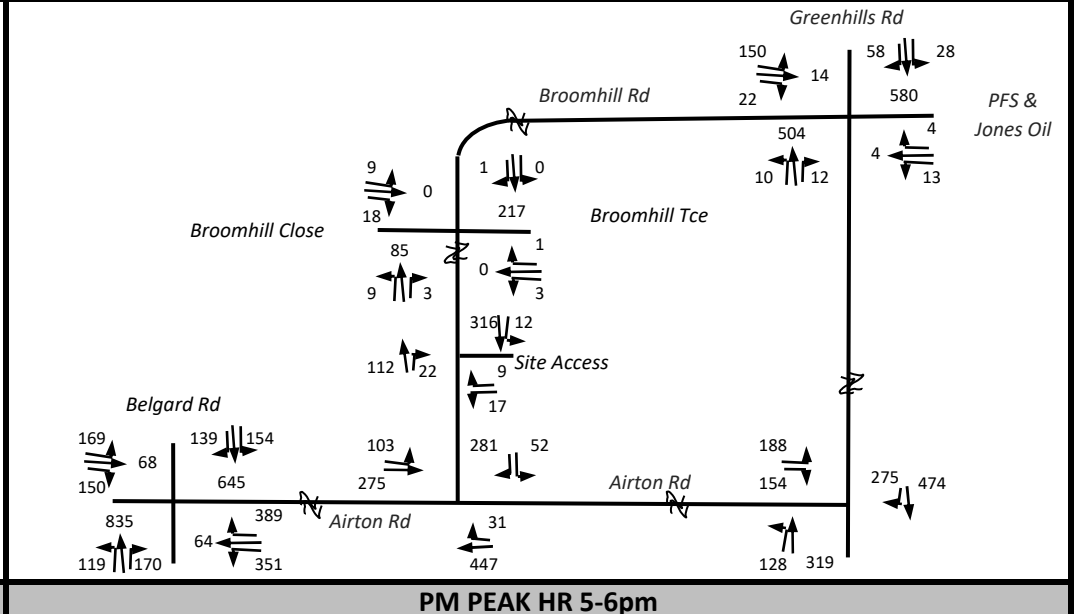


PM PEAK HR 5-6pm

Projected Selected Opening Year 2023 Weekday Peak Hour Traffic Volumes - WITH SUBJECT DEVELOPMENT OPEN & OCCUPIED



AM PEAK HR 8-9am



PM PEAK HR 5-6pm

Associated Design Year 2038 (Ope +15) Weekday Peak Hour Traffic Volumes - WITH SUBJECT DEVELOPMENT OPEN & OCCUPIED

APPENDIX E

Junction9 PiCADY Output
(Site Access/Broomhill Rd Junction)

Capacity Assessment With Subject Development Open and Occupied
Priority Controlled Broomhill Rd Site Access Junction

Modelled Scenario	Period Mean Max Q (PCUs)	Period Max RFC
2023 Opening Year AM Peak Hr	<1	0.07
2023 Opening Year PM Peak Hr	<1	0.05
2038 Design Year AM Peak Hr	<1	0.07
2038 Design Year PM Peak Hr	<1	0.05

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 2023 or Design Year 2038, or indeed significantly higher traffic volumes experienced, as clearly deductable from the positive results presented, will clearly have no significant implications in terms of the conclusions of the Study. The Excess Capacity in the Junction is such that the modelled RFCs are practically immeasurable.

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: 2023 AM PM.j9
Path: C:\Users\Eoin\NRB Consulting Engineers Ltd\NRB Server - Documents\2021\21-059 Broomhill Rd SHD\Calculations\Site Access Picadys
Report generation date: 07/04/2022 12:52:58

Summary of junction performance

	AM				PM			
	Q (PCU)	Delay (s)	RFC	LOS	Q (PCU)	Delay (s)	RFC	LOS
	2023							
Stream B-AC	0.1	6.86	0.07	A	0.1	7.16	0.05	A
Stream C-AB	0.0	6.20	0.03	A	0.0	6.87	0.04	A

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	25/08/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	NRB-004\Eoin
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023	AM	ONE HOUR	07:45	09:15	15
D2	2023	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2023, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Site Access Broomhill Rd	T-Junction	Two-way	0.80	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Broomhill Rd North		Major
B	Site Access		Minor
C	Broomhill Rd 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			90.0	✓	1.00

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

Minor Arm Geometry

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

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	552	0.096	0.243	0.153	0.347
1	B-C	681	0.100	0.252	-	-
1	C-B	626	0.232	0.232	-	-

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	2023	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A		✓	101	100.000
B		✓	38	100.000
C		✓	313	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	9	92
	B	13	0	25
	C	297	16	0

Vehicle Mix

HV %s

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS
B-AC	0.07	6.86	0.1	A
C-AB	0.03	6.20	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	29	594	0.048	28	0.1	6.487	A
C-AB	12	613	0.020	12	0.0	6.108	A
C-A	224			224			
A-B	7			7			
A-C	69			69			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	34	587	0.058	34	0.1	6.639	A
C-AB	15	612	0.024	15	0.0	6.146	A
C-A	267			267			
A-B	8			8			
A-C	83			83			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	42	577	0.073	42	0.1	6.860	A
C-AB	18	611	0.029	18	0.0	6.195	A
C-A	327			327			
A-B	10			10			
A-C	101			101			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	42	577	0.073	42	0.1	6.860	A
C-AB	18	611	0.029	18	0.0	6.197	A
C-A	327			327			
A-B	10			10			
A-C	101			101			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	34	587	0.058	34	0.1	6.643	A
C-AB	15	612	0.024	15	0.0	6.149	A
C-A	267			267			
A-B	8			8			
A-C	83			83			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	29	594	0.048	29	0.1	6.493	A
C-AB	12	613	0.020	12	0.0	6.108	A
C-A	224			224			
A-B	7			7			
A-C	69			69			

2023, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Site Access Broomhill Rd	T-Junction	Two-way	0.79	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	2023	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A		✓	284	100.000
B		✓	26	100.000
C		✓	118	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	12	272
	B	9	0	17
	C	96	22	0

Vehicle Mix

HV %s

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS
B-AC	0.05	7.16	0.1	A
C-AB	0.04	6.87	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	20	570	0.034	19	0.0	6.671	A
C-AB	17	579	0.029	17	0.0	6.529	A
C-A	72			72			
A-B	9			9			
A-C	205			205			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	23	558	0.042	23	0.0	6.868	A
C-AB	20	570	0.035	20	0.0	6.673	A
C-A	86			86			
A-B	11			11			
A-C	245			245			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	29	542	0.053	29	0.1	7.157	A
C-AB	24	558	0.044	24	0.0	6.875	A
C-A	105			105			
A-B	13			13			
A-C	299			299			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	29	542	0.053	29	0.1	7.157	A
C-AB	24	558	0.044	24	0.0	6.875	A
C-A	105			105			
A-B	13			13			
A-C	299			299			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	23	558	0.042	23	0.0	6.872	A
C-AB	20	570	0.035	20	0.0	6.677	A
C-A	86			86			
A-B	11			11			
A-C	245			245			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	20	570	0.034	20	0.0	6.674	A
C-AB	17	579	0.029	17	0.0	6.535	A
C-A	72			72			
A-B	9			9			
A-C	205			205			

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: 2038 AM PM.j9
Path: C:\Users\Eoin\NRB Consulting Engineers Ltd\NRB Server - Documents\2021\21-059 Broomhill Rd SHD\Calculations\Site Access Picadys
Report generation date: 07/04/2022 12:55:01

Summary of junction performance

	AM				PM			
	Q (PCU)	Delay (s)	RFC	LOS	Q (PCU)	Delay (s)	RFC	LOS
	2038							
Stream B-AC	0.1	6.97	0.07	A	0.1	7.35	0.05	A
Stream C-AB	0.0	6.22	0.03	A	0.0	7.01	0.04	A

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	25/08/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	NRB-004\Eoin
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2038	AM	ONE HOUR	07:45	09:15	15
D2	2038	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2038, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Site Access Broomhill Rd	T-Junction	Two-way	0.71	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Broomhill Rd North		Major
B	Site Access		Minor
C	Broomhill Rd 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			90.0	✓	1.00

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

Minor Arm Geometry

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

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	552	0.096	0.243	0.153	0.347
1	B-C	681	0.100	0.252	-	-
1	C-B	626	0.232	0.232	-	-

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	2038	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A		✓	116	100.000
B		✓	38	100.000
C		✓	361	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	9	107
	B	13	0	25
	C	345	16	0

Vehicle Mix

HV %s

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS
B-AC	0.07	6.97	0.1	A
C-AB	0.03	6.22	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	29	589	0.049	28	0.1	6.551	A
C-AB	12	611	0.020	12	0.0	6.127	A
C-A	260			260			
A-B	7			7			
A-C	81			81			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	34	580	0.059	34	0.1	6.721	A
C-AB	15	610	0.024	15	0.0	6.167	A
C-A	310			310			
A-B	8			8			
A-C	96			96			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	42	569	0.074	42	0.1	6.970	A
C-AB	18	608	0.030	18	0.0	6.217	A
C-A	379			379			
A-B	10			10			
A-C	118			118			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	42	569	0.074	42	0.1	6.970	A
C-AB	18	608	0.030	18	0.0	6.220	A
C-A	379			379			
A-B	10			10			
A-C	118			118			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	34	580	0.059	34	0.1	6.726	A
C-AB	15	610	0.024	15	0.0	6.170	A
C-A	310			310			
A-B	8			8			
A-C	96			96			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	29	589	0.049	29	0.1	6.555	A
C-AB	12	611	0.020	12	0.0	6.129	A
C-A	260			260			
A-B	7			7			
A-C	81			81			

2038, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Site Access Broomhill Rd	T-Junction	Two-way	0.71	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	2038	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A		✓	328	100.000
B		✓	26	100.000
C		✓	134	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	12	316
	B	9	0	17
	C	112	22	0

Vehicle Mix

HV %s

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS
B-AC	0.05	7.35	0.1	A
C-AB	0.04	7.01	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	20	560	0.035	19	0.0	6.785	A
C-AB	17	571	0.029	17	0.0	6.615	A
C-A	84			84			
A-B	9			9			
A-C	238			238			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	23	547	0.043	23	0.0	7.013	A
C-AB	20	561	0.035	20	0.0	6.779	A
C-A	101			101			
A-B	11			11			
A-C	284			284			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	29	528	0.054	29	0.1	7.352	A
C-AB	24	548	0.045	24	0.0	7.011	A
C-A	123			123			
A-B	13			13			
A-C	348			348			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	29	528	0.054	29	0.1	7.352	A
C-AB	24	548	0.045	24	0.0	7.011	A
C-A	123			123			
A-B	13			13			
A-C	348			348			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	23	547	0.043	23	0.0	7.014	A
C-AB	20	561	0.035	20	0.0	6.783	A
C-A	101			101			
A-B	11			11			
A-C	284			284			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	20	560	0.035	20	0.0	6.788	A
C-AB	17	571	0.029	17	0.0	6.621	A
C-A	84			84			
A-B	9			9			
A-C	238			238			

APPENDIX F

Junction9 PiCADY Output
(Broomhill Rd/Terrace/Close Junction)

Capacity Assessment With Subject Development Open and Occupied
'Crossroads', 4-Arm Priority Controlled Broomhill Rd/Terrace/Close Junction

Modelled Scenario	Period Mean Max Q (PCUs)	Period Max RFC
2023 Opening Year AM Peak Hr	<1	0.04
2023 Opening Year PM Peak Hr	<1	0.05
2038 Design Year AM Peak Hr	<1	0.05
2038 Design Year PM Peak Hr	<1	0.06

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 2023 or Design Year 2038, or indeed significantly higher traffic volumes experienced, as clearly deductable from the positive results presented, will clearly have no significant implications in terms of the conclusions of the Study. The Excess Capacity in the Junction is such that the modelled RFCs are practically immeasurable.

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: 2023 AM PM.j9
Path: C:\Users\Eoin\NRB Consulting Engineers Ltd\NRB Server - Documents\2021\21-059 Broomhill Rd SHD\Calculations\Broomhill Rd B'Hill Close Picadys
Report generation date: 07/04/2022 12:59:00

Summary of junction performance

	AM				PM			
	Q (PCU)	Delay (s)	RFC	LOS	Q (PCU)	Delay (s)	RFC	LOS
	2023							
Stream B-ACD	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream A-BCD	0.0	6.71	0.01	A	0.0	6.09	0.00	A
Stream D-ABC	0.0	7.56	0.04	A	0.0	7.09	0.05	A
Stream C-ABD	0.0	6.67	0.00	A	0.0	6.98	0.00	A

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	25/08/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	NRB-004\Eoin
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023	AM	ONE HOUR	07:45	09:15	15
D2	2023	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2023, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Broomhill Rd-Close-Tce Junct	Crossroads	Two-way	0.49	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Broomhill Rd North		Major
B	Broomhill Tce		Minor
C	Broomhill Rd South		Major
D	Broomhill Close		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A	6.00			90.0	✓	1.00
C	6.00			1.0	✓	1.00

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

Minor Arm Geometry

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

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	626	-	-	-	-	-	-	0.243	0.347	0.243	-	-	-
1	B-A	552	0.101	0.254	0.254	-	-	-	0.160	0.363	-	0.254	0.254	0.127
1	B-C	681	0.104	0.264	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	552	0.101	0.254	0.254	-	-	-	0.160	0.363	0.160	-	-	-
1	B-D, offside lane	552	0.101	0.254	0.254	-	-	-	0.160	0.363	0.160	-	-	-
1	C-B	575	0.223	0.223	0.318	-	-	-	-	-	-	-	-	-
1	D-A	681	-	-	-	-	-	-	0.264	-	0.104	-	-	-
1	D-B, nearside lane	552	0.160	0.160	0.363	-	-	-	0.254	0.254	0.101	-	-	-
1	D-B, offside lane	552	0.160	0.160	0.363	-	-	-	0.254	0.254	0.101	-	-	-
1	D-C	552	-	0.160	0.363	0.127	0.254	0.254	0.254	0.254	0.101	-	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A		✓	93	100.000
B		✓	2	100.000
C		✓	279	100.000
D		✓	19	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	1	87	5
	B	0	0	2	0
	C	245	2	0	32
	D	7	0	12	0

Vehicle Mix

HV %s

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS
B-ACD	0.00	0.00	0.0	A
A-BCD	0.01	6.71	0.0	A
A-B				
A-C				
D-ABC	0.04	7.56	0.0	A
C-ABD	0.00	6.67	0.0	A
C-D				
C-A				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	534	0.000	0	0.0	0.000	A
A-BCD	4	575	0.007	4	0.0	6.422	A
A-B	0.75			0.75			
A-C	65			65			
D-ABC	14	534	0.027	14	0.0	7.061	A
C-ABD	2	559	0.003	1	0.0	6.583	A
C-D	24			24			
C-A	184			184			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	525	0.000	0	0.0	0.000	A
A-BCD	5	566	0.008	4	0.0	6.541	A
A-B	0.90			0.90			
A-C	78			78			
D-ABC	17	522	0.033	17	0.0	7.265	A
C-ABD	2	556	0.003	2	0.0	6.620	A
C-D	29			29			
C-A	220			220			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	512	0.000	0	0.0	0.000	A
A-BCD	6	552	0.010	6	0.0	6.713	A
A-B	1			1			
A-C	96			96			
D-ABC	21	506	0.041	21	0.0	7.562	A
C-ABD	2	553	0.004	2	0.0	6.671	A
C-D	35			35			
C-A	270			270			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	512	0.000	0	0.0	0.000	A
A-BCD	6	552	0.010	6	0.0	6.713	A
A-B	1			1			
A-C	96			96			
D-ABC	21	506	0.041	21	0.0	7.562	A
C-ABD	2	553	0.004	2	0.0	6.671	A
C-D	35			35			
C-A	270			270			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	525	0.000	0	0.0	0.000	A
A-BCD	5	566	0.008	5	0.0	6.544	A
A-B	0.90			0.90			
A-C	78			78			
D-ABC	17	522	0.033	17	0.0	7.269	A
C-ABD	2	556	0.003	2	0.0	6.620	A
C-D	29			29			
C-A	220			220			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	534	0.000	0	0.0	0.000	A
A-BCD	4	575	0.007	4	0.0	6.425	A
A-B	0.75			0.75			
A-C	65			65			
D-ABC	14	534	0.027	14	0.0	7.068	A
C-ABD	2	559	0.003	2	0.0	6.583	A
C-D	24			24			
C-A	184			184			

2023, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Broomhill Rd-Close-Tce Junct	Crossroads	Two-way	0.62	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	2023	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A		✓	189	100.000
B		✓	3	100.000
C		✓	84	100.000
D		✓	23	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	0	188	1
	B	1	0	2	0
	C	74	2	0	8
	D	8	0	15	0

Vehicle Mix

HV %s

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS
B-ACD	0.00	0.00	0.0	A
A-BCD	0.00	6.09	0.0	A
A-B				
A-C				
D-ABC	0.05	7.09	0.0	A
C-ABD	0.00	6.98	0.0	A
C-D				
C-A				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	534	0.000	0	0.0	0.000	A
A-BCD	0.75	611	0.001	0.75	0.0	6.018	A
A-B	0			0			
A-C	142			142			
D-ABC	17	558	0.031	17	0.0	6.784	A
C-ABD	2	543	0.003	1	0.0	6.780	A
C-D	6			6			
C-A	56			56			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	525	0.000	0	0.0	0.000	A
A-BCD	0.90	608	0.001	0.90	0.0	6.049	A
A-B	0			0			
A-C	169			169			
D-ABC	21	552	0.037	21	0.0	6.912	A
C-ABD	2	537	0.003	2	0.0	6.861	A
C-D	7			7			
C-A	67			67			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	512	0.000	0	0.0	0.000	A
A-BCD	1	604	0.002	1	0.0	6.091	A
A-B	0			0			
A-C	207			207			
D-ABC	25	543	0.047	25	0.0	7.093	A
C-ABD	2	529	0.004	2	0.0	6.975	A
C-D	9			9			
C-A	81			81			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	512	0.000	0	0.0	0.000	A
A-BCD	1	604	0.002	1	0.0	6.091	A
A-B	0			0			
A-C	207			207			
D-ABC	25	543	0.047	25	0.0	7.093	A
C-ABD	2	529	0.004	2	0.0	6.975	A
C-D	9			9			
C-A	81			81			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	525	0.000	0	0.0	0.000	A
A-BCD	0.90	608	0.001	0.90	0.0	6.051	A
A-B	0			0			
A-C	169			169			
D-ABC	21	552	0.037	21	0.0	6.913	A
C-ABD	2	537	0.003	2	0.0	6.861	A
C-D	7			7			
C-A	67			67			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	534	0.000	0	0.0	0.000	A
A-BCD	0.75	611	0.001	0.75	0.0	6.021	A
A-B	0			0			
A-C	142			142			
D-ABC	17	558	0.031	17	0.0	6.791	A
C-ABD	2	543	0.003	2	0.0	6.780	A
C-D	6			6			
C-A	56			56			

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: 2038 AM PM.j9
Path: C:\Users\Eoin\NRB Consulting Engineers Ltd\NRB Server - Documents\2021\21-059 Broomhill Rd SHD\Calculations\Broomhill Rd B'Hill Close Picadys
Report generation date: 07/04/2022 13:01:25

Summary of junction performance

	AM				PM			
	Q (PCU)	Delay (s)	RFC	LOS	Q (PCU)	Delay (s)	RFC	LOS
	2038							
Stream B-ACD	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream A-BCD	0.0	6.86	0.01	A	0.0	6.13	0.00	A
Stream D-ABC	0.0	7.79	0.05	A	0.1	7.29	0.06	A
Stream C-ABD	0.0	6.71	0.01	A	0.0	7.08	0.01	A

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	25/08/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	NRB-004\Eoin
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2038	AM	ONE HOUR	07:45	09:15	15
D2	2038	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2038, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Broomhill Rd-Close-Tce Junct	Crossroads	Two-way	0.48	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Broomhill Rd North		Major
B	Broomhill Tce		Minor
C	Broomhill Rd South		Major
D	Broomhill Close		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A	6.00			90.0	✓	1.00
C	6.00			1.0	✓	1.00

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

Minor Arm Geometry

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

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	626	-	-	-	-	-	-	0.243	0.347	0.243	-	-	-
1	B-A	552	0.101	0.254	0.254	-	-	-	0.160	0.363	-	0.254	0.254	0.127
1	B-C	681	0.104	0.264	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	552	0.101	0.254	0.254	-	-	-	0.160	0.363	0.160	-	-	-
1	B-D, offside lane	552	0.101	0.254	0.254	-	-	-	0.160	0.363	0.160	-	-	-
1	C-B	575	0.223	0.223	0.318	-	-	-	-	-	-	-	-	-
1	D-A	681	-	-	-	-	-	-	0.264	-	0.104	-	-	-
1	D-B, nearside lane	552	0.160	0.160	0.363	-	-	-	0.254	0.254	0.101	-	-	-
1	D-B, offside lane	552	0.160	0.160	0.363	-	-	-	0.254	0.254	0.101	-	-	-
1	D-C	552	-	0.160	0.363	0.127	0.254	0.254	0.254	0.254	0.101	-	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2038	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A		✓	106	100.000
B		✓	3	100.000
C		✓	324	100.000
D		✓	21	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	1	100	5
	B	0	0	3	0
	C	283	3	0	38
	D	8	0	13	0

Vehicle Mix

HV %s

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS
B-ACD	0.00	0.00	0.0	A
A-BCD	0.01	6.86	0.0	A
A-B				
A-C				
D-ABC	0.05	7.79	0.0	A
C-ABD	0.01	6.71	0.0	A
C-D				
C-A				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	527	0.000	0	0.0	0.000	A
A-BCD	4	567	0.007	4	0.0	6.516	A
A-B	0.75			0.75			
A-C	75			75			
D-ABC	16	526	0.030	16	0.0	7.187	A
C-ABD	2	558	0.004	2	0.0	6.612	A
C-D	29			29			
C-A	213			213			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	516	0.000	0	0.0	0.000	A
A-BCD	5	556	0.008	4	0.0	6.658	A
A-B	0.90			0.90			
A-C	90			90			
D-ABC	19	513	0.037	19	0.0	7.429	A
C-ABD	3	554	0.005	3	0.0	6.654	A
C-D	34			34			
C-A	254			254			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	502	0.000	0	0.0	0.000	A
A-BCD	6	540	0.010	6	0.0	6.863	A
A-B	1			1			
A-C	110			110			
D-ABC	23	495	0.047	23	0.0	7.789	A
C-ABD	3	550	0.006	3	0.0	6.711	A
C-D	42			42			
C-A	312			312			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	502	0.000	0	0.0	0.000	A
A-BCD	6	540	0.010	6	0.0	6.863	A
A-B	1			1			
A-C	110			110			
D-ABC	23	495	0.047	23	0.0	7.789	A
C-ABD	3	550	0.006	3	0.0	6.711	A
C-D	42			42			
C-A	312			312			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	516	0.000	0	0.0	0.000	A
A-BCD	5	556	0.008	5	0.0	6.660	A
A-B	0.90			0.90			
A-C	90			90			
D-ABC	19	513	0.037	19	0.0	7.431	A
C-ABD	3	554	0.005	3	0.0	6.657	A
C-D	34			34			
C-A	254			254			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	526	0.000	0	0.0	0.000	A
A-BCD	4	567	0.007	4	0.0	6.516	A
A-B	0.75			0.75			
A-C	75			75			
D-ABC	16	526	0.030	16	0.0	7.191	A
C-ABD	2	558	0.004	2	0.0	6.615	A
C-D	29			29			
C-A	213			213			

2038, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Broomhill Rd-Close-Tce Junct	Crossroads	Two-way	0.66	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	2038	PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A		✓	218	100.000
B		✓	4	100.000
C		✓	97	100.000
D		✓	27	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	0	217	1
	B	1	0	3	0
	C	85	3	0	9
	D	9	0	18	0

Vehicle Mix

HV %s

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS
B-ACD	0.00	0.00	0.0	A
A-BCD	0.00	6.13	0.0	A
A-B				
A-C				
D-ABC	0.06	7.29	0.1	A
C-ABD	0.01	7.08	0.0	A
C-D				
C-A				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	526	0.000	0	0.0	0.000	A
A-BCD	0.75	608	0.001	0.75	0.0	6.042	A
A-B	0			0			
A-C	163			163			
D-ABC	20	551	0.037	20	0.0	6.914	A
C-ABD	2	538	0.004	2	0.0	6.849	A
C-D	7			7			
C-A	64			64			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	516	0.000	0	0.0	0.000	A
A-BCD	0.90	605	0.001	0.90	0.0	6.078	A
A-B	0			0			
A-C	195			195			
D-ABC	24	544	0.045	24	0.0	7.069	A
C-ABD	3	531	0.005	3	0.0	6.945	A
C-D	8			8			
C-A	76			76			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	502	0.000	0	0.0	0.000	A
A-BCD	1	600	0.002	1	0.0	6.127	A
A-B	0			0			
A-C	239			239			
D-ABC	30	533	0.056	30	0.1	7.291	A
C-ABD	3	522	0.006	3	0.0	7.082	A
C-D	10			10			
C-A	94			94			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	502	0.000	0	0.0	0.000	A
A-BCD	1	600	0.002	1	0.0	6.127	A
A-B	0			0			
A-C	239			239			
D-ABC	30	533	0.056	30	0.1	7.291	A
C-ABD	3	522	0.006	3	0.0	7.082	A
C-D	10			10			
C-A	94			94			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	516	0.000	0	0.0	0.000	A
A-BCD	0.90	605	0.001	0.90	0.0	6.080	A
A-B	0			0			
A-C	195			195			
D-ABC	24	544	0.045	24	0.0	7.073	A
C-ABD	3	531	0.005	3	0.0	6.945	A
C-D	8			8			
C-A	76			76			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-ACD	0	526	0.000	0	0.0	0.000	A
A-BCD	0.75	608	0.001	0.75	0.0	6.042	A
A-B	0			0			
A-C	163			163			
D-ABC	20	551	0.037	20	0.0	6.920	A
C-ABD	2	538	0.004	2	0.0	6.852	A
C-D	7			7			
C-A	64			64			

APPENDIX G

Preliminary Planning Stage
Mobility Management Plan/Travel Plan

consulting engineers

NRB

Residential Travel Plan
(Mobility Management Plan)

Appendix G

For

Proposed Residential Apartment Development

At

Broomhill Road, Tallaght, Dublin 24.

SUBMISSION ISSUE

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

Registered in Ireland No. 491679

Contents

1.0 INTRODUCTION

1.1 NRB Consulting Engineers have been commissioned to prepare a Residential Travel Plan in support of a proposed apartment development on the site at Broomhill Rd, Tallaght, Dublin 24. 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, the provision of Go Car Spaces 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.

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

2.1 The development consists of a total of 242 residential apartment units, arranged in blocks together with ancillary/supporting facilities. The site is within close proximity to high quality alternative modes of transport, 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 immediately beside Tallaght Town Centre, this contributes to sustainable living, with employment opportunities, retail and leisure all located within reasonable proximity. The measures and initiatives below are relevant and assist in addressing the transportation demands of the proposed scheme.

Cycling and Walking Facilities

2.3 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 Broomhill Industrial Estate is that the GDA cycle network will be rolled out as the nature of the environment changes. There is clearly scope to provide the facilities to create the plan as set out in the NTA's GDA Cycle Network Plan for this area of Dublin. An extract from the plan is This is as illustrated in ***Figure 2.1*** below.

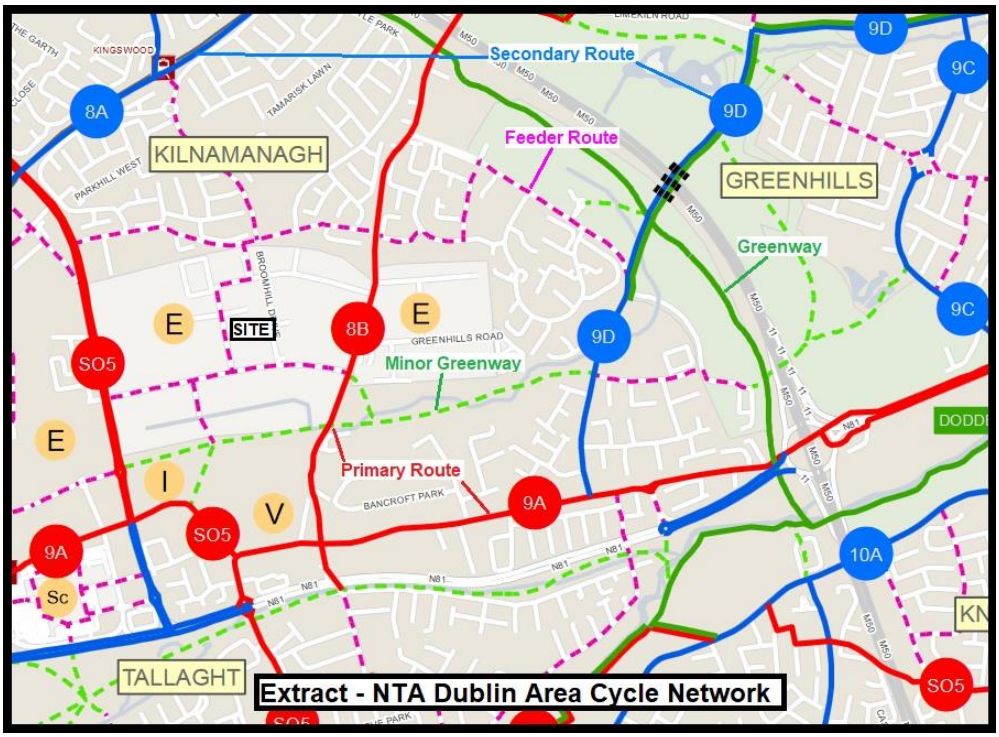


Figure 2.1 – NTA's GDA Cycle Network, Showing Site

2.4 In terms of the 'Legend' for this extract, this is included below as Figure 2.2

Figure 2.2 – Legend for NTA's GDA Cycle Network

2.5 The site is therefore ideally placed to take advantage of the Feeder Route serving Broomhill Road past the site, leading to 2 x Primary Routes on Belgard Road and Greenhills Road.

2.6 These Primary Routes and Greenways in turn feed into the overall GDA Network Plan, an extract of which is included below as ***Figure 2.3*** showing the site in context, and demonstrating the cyclist permeability of the location to the overall Dublin City Area.

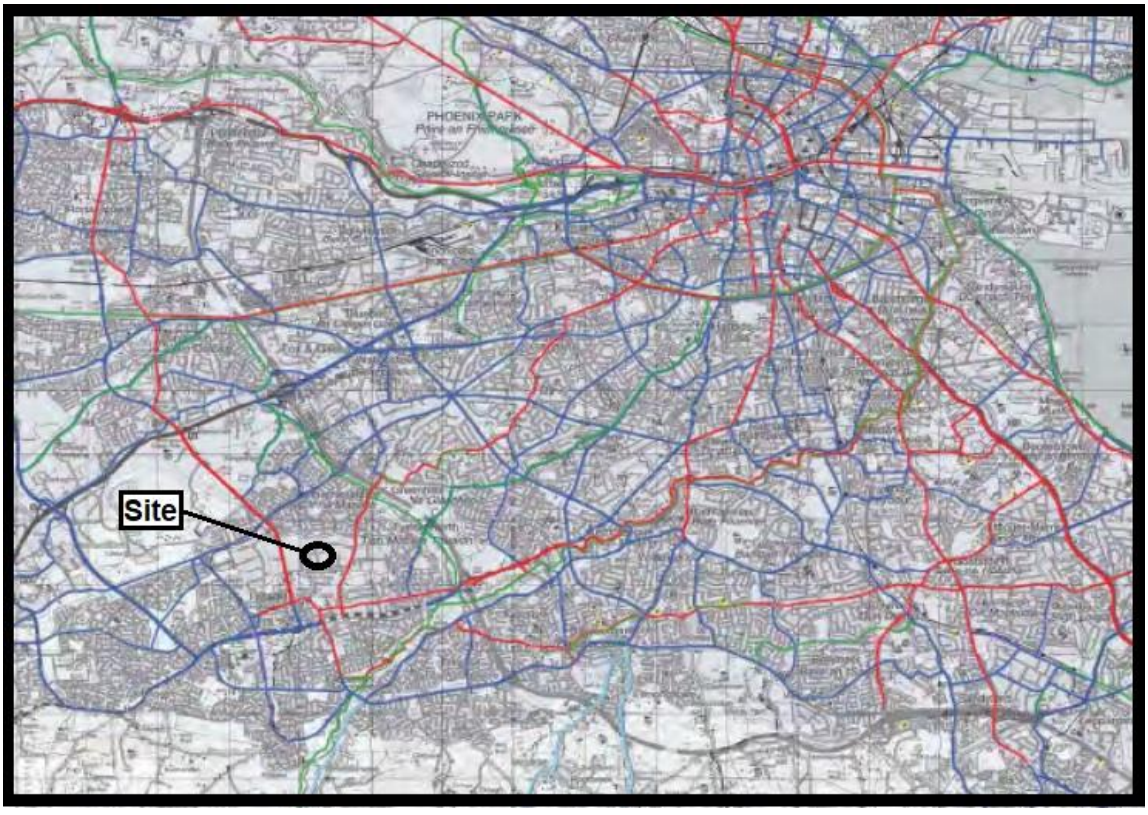


Figure 2.3 – Overall GDA Cycle Network Plan, Showing Site Location

2.7 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 for the site is addressed in more detail within ***Section 2.0*** of the ***TA Report***.

2.8 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.

2.9 To illustrate the extent of the GDA accessible by both Bicycle (8km) and on foot (2km) 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, and schools within sustainable travel distance of the site, as ***Figure 2.4*** and ***Figure 2.5***. In these terms, residents would not have a requirement to own a car, supporting sustainable living.

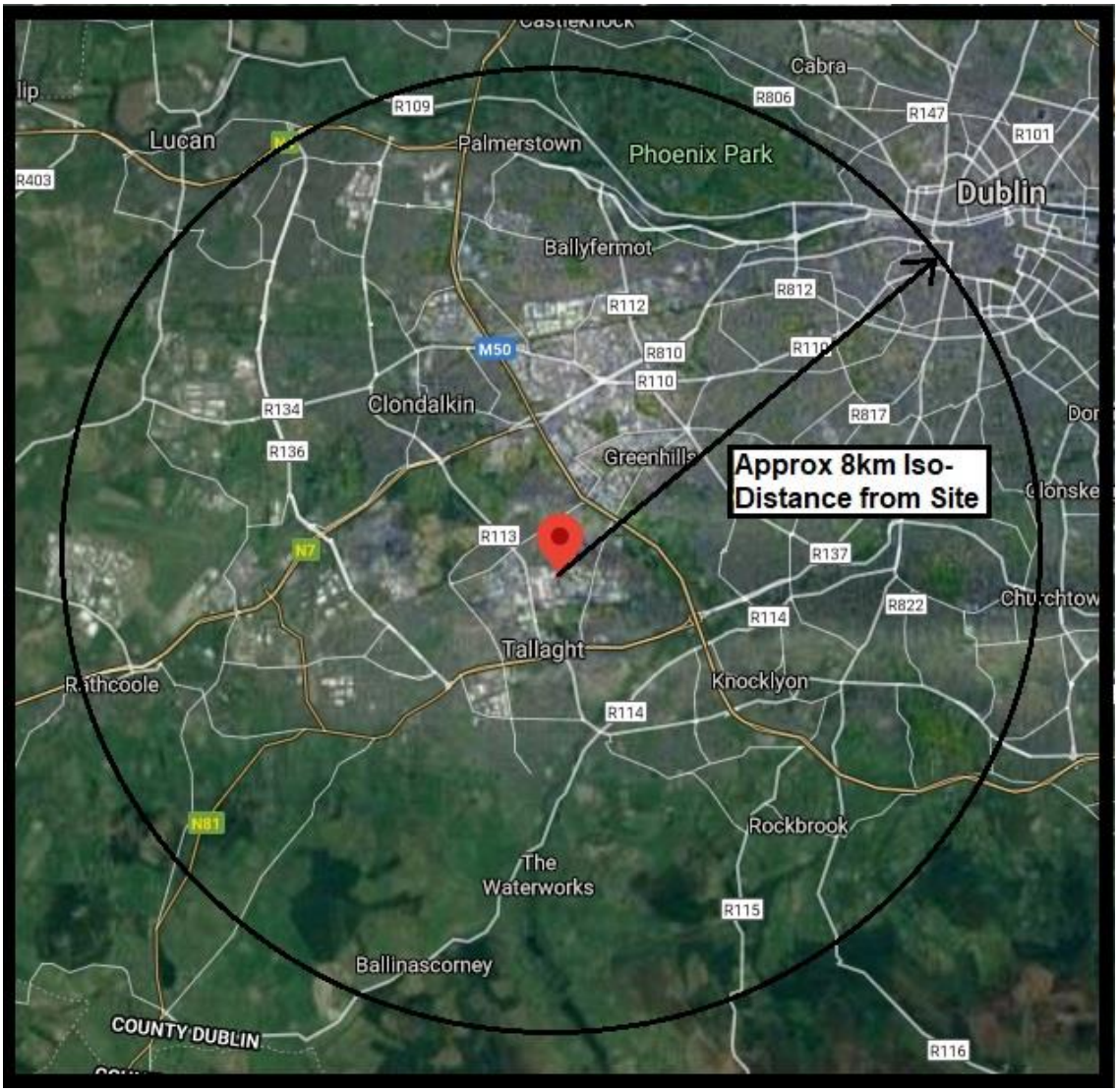


Figure 2.4 – 8km Radius Iso-Distance of the Subject Site (Cycle)

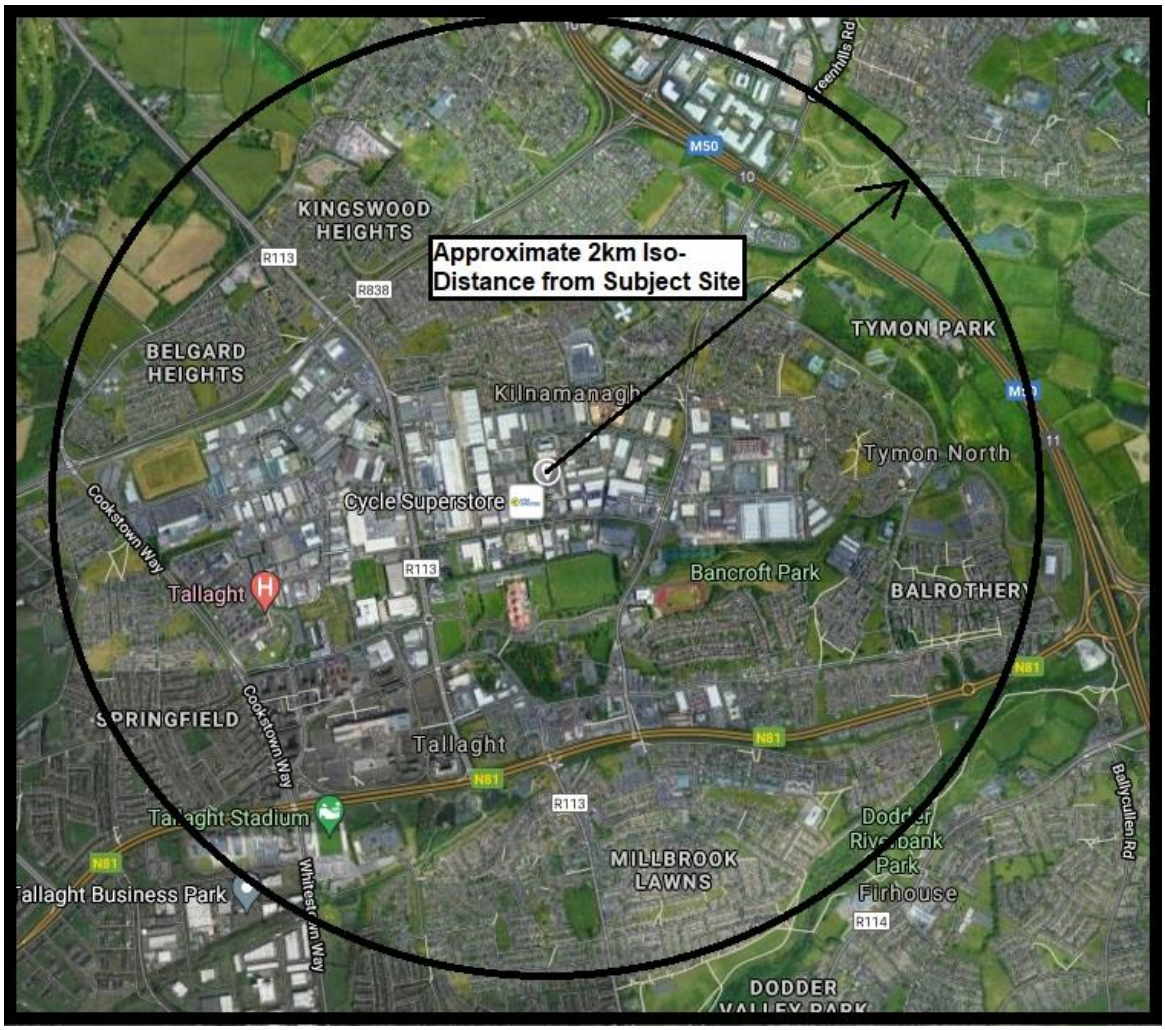


Figure 2.5 – 2km Radius Iso-Distance of the Subject Site (Walk)

2.10 The proposed site clearly can support sustainable living in terms of cycle and walking accessibility to schools, employment, and services as set out above.

2.11 Bicycle sharing facilities are becoming ever more popular with the Dublin Bikes and BleeperBike initiatives spreading ever further throughout the City and into Suburbs. These facilities offer a bicycle sharing alternative mode of transport and are easily accessible from the site.

Cycle Parking

2.12 Given the clear accessibility of the location as demonstrated above, it is anticipated that a significant number of residents can be encouraged to cycle to work and school etc. with the safe links and secure parking which are in place (and that is reflected in the provision of a total of 406dedicated cycle parking spaces. This number is considered appropriate in terms of published policy documents.

2.13 The SDCC Development Plan and Policy Documents vision is to cultivate a cycling culture,

through the implementation of appropriate infrastructure and promotional measures, which positively encourages all members of the community to cycle at all life stages and abilities as a mode of sustainable transport that delivers environmental, health and economic benefits to both the individual and the community.

BUS ACCESSIBILITY

2.14 The development is well placed to take advantage of the existing and future Dublin Bus and services, with existing stops within easy walking distance of the site. The location and proximity to the established bus stops and services (NB accurate at the time of writing) are illustrated on ***Figure 2.6*** below.

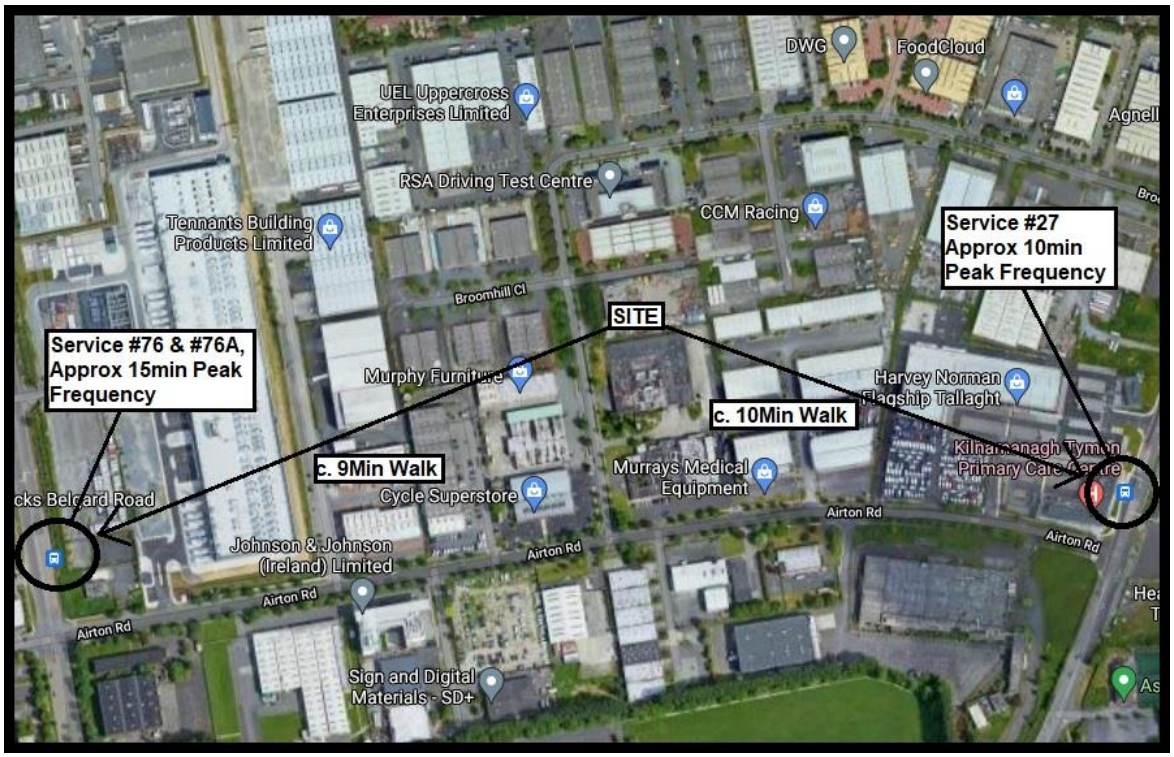


Figure 2.6 – Existing Dublin Bus Services

2.15 In addition to the stops adjacent the site on Belgard Road and Greenhills Road, there are a number of other Dublin Bus Stops operating locally, with the closest Terminus Points with multiple services being located on Belgard square North and Belgard Road. The services available at the time of writing are as outlined in ***Figure 2.7*** below.

2.16 All of the Dublin Bus routes passing the development are operated using new low-floor wheelchair accessible city buses. Details of route, timetables and fares are provided on www.dublinbus.ie and on the Transport for Ireland National Journey Planner App.

Route	Description
27	Clare Hall – Jobstown
49	Pearse Street – Tallaght (The Square)
54a	Pearse St. – Ellensborough / Kiltipper Way
56a	Ringsend Rd. – Tallaght (The Square)
65	Poolbeg St. – Blessington / Ballymore
75	The Square Tallaght – Dun Laoghaire
76	Chapelizod – Tallaght (The Square)
76a	Blanchardstown Centre – Tallaght (The Square)
77a	Ringsend Rd. – Citywest

Figure 2.7 – Existing Dublin Bus Services Available

2.17 Bus Éireann also has a stop on Belgard Square which is served by Route No 132, linking Dublin Connolly with Bunclody in Co Wexford. Busarus is also accessible via the LUAS Red Line which is on the doorstep. 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. The ***Airport Hopper*** Tallaght Mini Bus Service operates between The Square Tallaght Town Centre and Dublin Airport, on an approximate hourly basis over the course of the working day.

2.18 In terms of **Future Planned Services**, the NTA have recently published details of the overall bus network for the GDA, the 'New Dublin Area Network' - showing Spine Routes, Feeder and Orbital Routes. An extract from the NTA Plans showing the site location is included below as ***Figure 2.8.***

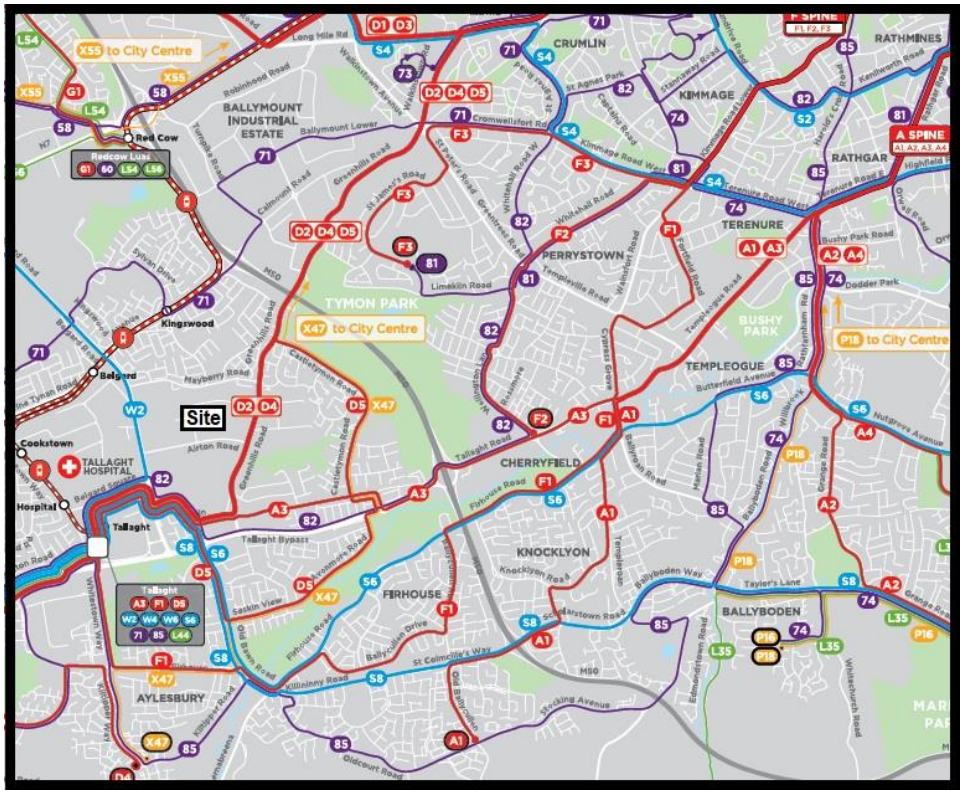


Figure 2.8 – NTA GDA New Dublin Area Network - Bus Services

2.19 This future network shows that the site's accessibility to bus services will be further enhanced, with a high frequency and permeable service to be provided via 2 'Main Spine Routes' provided on Greenhills Road.

LUAS

2.20 The LUAS Red Line stops (Cookstown & Belgard) are immediately beside the site and high-quality improved pedestrian links are provided. LUAS has become a highly successful travel mode linking Tallaght with local areas and onwards to the city centre. It is a semi-segregated light rail tram service operating at street level but generally gets priority over motorised vehicles at junctions.

2.21 The LUAS Red Line serving the site provides a regular service between the 3 Arena/Connolly Station and Tallaght/Saggart with intermediate stops at key locations including Busarus, Heuston Station, Red Cow and City West. The normal day to day operating times are 05:30-24:00. The recently extended Green Line now provides a good degree of connectivity with the Red Line and their respective stops intersecting at O'Connell Street and Abbey Street.

2.22 The Green Line provides a service between Sandyford and Broombridge with intermediate stops at St Stephens Green, Westmoreland, Cabra, Phibsborough and Broadstone DIT. LUAS runs on a frequency of service which changes depending upon the time of day to adequately cater for demand. The proximity to LUAS is illustrated below as ***Figure 2.9.***

Figure 2.9 – Walk Distance/Proximity to LUAS Services at Belgard

MAINLINE BUS AND RAIL

2.23 Of course, with the high frequency existing and proposed bus & LUAS services to/from the city, the site is therefore also within easy reach of the mainline Nationwide Bus & Train Services - trains via Connolly & Heuston Stations and Buses via Busarus Terminus.

2.24 With ease of accessibility by Bus and Rail, and in particular with the high frequency existing bus services, and with the clear accessibility for walking and cycling, it is therefore considered that the proposed development is highly sustainable in terms of public 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.

TAXI ACCESSIBILITY

2.25 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

2.26 The permeability locally for walking by residents is addressed above – and of course, being within close proximity to the major employment district of Tallaght and Ballymount (amongst others), this means that a very significant number of Schools, Services, Employment Destinations and Offices are within an easy and acceptable walk-commute of the site.

2.27 The site is also within the heart of the Tallaght Community and is therefore within the catchment for local Primary and Secondary Schools.

2.28 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 Apartments.

RESIDENTS COMMUNICATION

2.29 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.

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

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

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

2.33 Working Residents are generally now offered the opportunity to purchase public transport commuter tickets under the current 'Employer Pass' and 'TaxSaver' programmes, by individual Employers. Under these schemes the employer applies to Iarnród Éireann / Bus Éireann for tax free public transport tickets for their employees as an incentive for them to use public transport to travel to work.

2.34 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 adults will consider walking a maximum of 3.5 km (Approx. 30/40 minutes). Residents working within a 3.5 km 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	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 a developing well serviced residential neighbourhood within 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.

APPENDIX H

DMURS Statement of Consistency

consulting engineers

NRB

DMURS Design Statement
Technical Note
(Appendix H)

For

Proposed Residential Development

At

Broomhill Road, Tallaght, Dublin 24.

SUBMISSION ISSUE

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

Registered in Ireland No. 491679

1.0 INTRODUCTION

1.1 It is NRB's opinion that the proposed residential development is consistent with both the principles and guidance outlined within the *Design Manual for Urban Roads and Streets* (DMURS). The scheme proposals are the outcome of an integrated design approach. This approach seeks to implement a sustainable community connected by well-designed links, layout and accesses - which combined deliver attractive, convenient and safe access in addition to promoting modal shift and viable alternatives to car-based journeys.

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

2.0 DESIGN ATTRIBUTES

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

2.2 High Quality Connections between the proposed development and the local roads and public transport services are provided. The internal road layout itself been designed to deliver a hierarchy which provide safe access within / across the proposed new residential community, linking the site and community with the established and proposed local network.

2.3 Dedicated routes are provided for pedestrians and for cyclists to access Broomhill Raod. As part of the development the movement function is designed to respect the different levels of motorised traffic whilst optimising access to/from alternative transport and catering for higher number of pedestrians & cyclists. In parallel the adopted design philosophy has sought to consider the context / place status of the scheme in terms of level of connectivity provided, quality of the proposed design, level of pedestrian / cyclists activity and vulnerable users requirements whilst identifying appropriate 'transition' solutions particularly at street junctions.

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

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

a) The main vehicular access to the development is clearly defined and distinct from the pedestrian and cyclist accesses to the development and out-with the open space.

b) The proposed scheme includes the closure of the established accesses onto Broomhill Road, which in itself has beneficial effects. The plan then offers a well-connected, sustainable, and improved but permeable network through connectivity to and through the Development, with the vehicular traffic using a separate dedicated route.

c) The proposed design deliberately seeks to specify minimal signage and line markings along the internal layout, with such treatments used sensitively throughout and predominately at key nodes and ‘transition’ areas.

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

e) Appropriate clear unobstructed visibility splays, as per DMURS requirements, will at the site access junctions to the external road network.

f) Well designed and frequent pedestrian crossing facilities will be provided along key travel desire lines throughout the scheme in addition to those located at street nodes. All courtesy crossings will be provided with either dropped kerbs thereby allowing pedestrians to informally assert a degree of priority. The separation of vehicular access to the development from the pedestrian accesses to the development and the open space aid in this aspect of the layout.

g) At the more heavily trafficked Broomhill Road serving the site, a simple priority-controlled junction is to be provided – and by nature this clearly provides priority to Main Road Traffic. This connects with the ever-improving Pedestrian, Cyclists and Bus Stop facilities within Tallaght Centre.

h) All informal pedestrian crossing facilities will be at least 2.0m wide, whilst all controlled pedestrian crossings will be a minimum of 2.4m wide.

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

j) Internally within the development, where carriageway kerbs are required, heights will be typically 75-80mm in accordance with the objectives of DMURS.

k) There are plans by the NTA to upgrade all of the cycle facilities in this area as outlined in the MMP. Within the development, as required cyclists will share the carriageway with other street users as per the NCM guidance for such situations and best practice.

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

APPENDIX I

Parking Management/Strategy Report

consulting engineers

NRB

PARKING MANAGEMENT /STRATEGY REPORT

(Appendix I)

for

Proposed Residential Apartment Development

At

Broomhill Road, Tallaght, Dublin 24.

SUBMISSION ISSUE

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

Registered in Ireland No. 491679

Contents

1.0 INTRODUCTION

1.1 This Parking Strategy Report (PSR) has been prepared by NRB Consulting Engineers Ltd and addresses the adequacy of the parking provision and sets out the proposed management strategy for same, for the proposed residential apartment development on zoned development lands on Broomhill Road, Tallaght, Dublin 24.

1.2 The local area and the subject site is already a long-established destination, containing a mixture of commercial, retail, industrial & residential development and in these terms has very well established urban transportation characteristics in its own right. The proposed development, being on a prominent & highly accessible site should be considered in this context. A site location plan for the site is included below as ***Figure 1.1***.

Figure 1.1 - Site Location

1.3 The content of the individual Blocks is as set out on the detailed Plans and associated Architectural Schedule of Accommodation, but in terms of Traffic/Transportation Assessment the development content is as summarised

below in ***Table 2.1*** for ease of reference. These elements are clearly supported by bin storage, management, outdoor amenity space, landscaping and car/bicycle parking:

Table 2.1: Summary - Development Content

Block (Ref Fig 2.1)	*No.*
Block A	• 40 Apartment Units, • 4 x 1 Bed, 31 x 2 Bed, 5 x 3 Bed,
Block B & Block C Combined	• 102 Apartments Units, • 45 x 1 Bed & 57 x 2 Bed. • Ancillary Amenity Space @GF (Generates No Traffic),
Block D	• 36 Apartments Units, • 16 x 1 Bed & 20 x 2 Bed. • An Ancillary Crèche @GF (Generates No Traffic),
Block E	• 64 Apartments Units, • 31 x 1 Bed & 33 x 2 Bed.

1.4 Based on the above, the entire site has a total of 242 Apartments set out in individual blocks with amenity space, servicing and supporting infrastructure arranged in traditional blocks, as illustrated in the Layout drawings included as ***Appendix A***.

1.5 This document presents the rationale behind the provision of vehicle parking (including mobility impaired parking, car share spaces, motorcycle parking, service vehicle parking) and cycle parking being proposed as part of the subject site development proposals. The Report also sets out the management measures which will be implemented to allocate the use and control of parking provided at the proposed development site.

1.6 The document sets out the principles of the parking management strategy proposed at the residential development and should be read in conjunction with the following complementary reports;

- Traffic & Transportation Assessment (TTA),
- Mobility Management Plan (MMP), and
- Bus/LUAS Capacity & Demand Report.

1.7 The TTA and the associated Reports set out the details of the multi-modal accessibility of the site, together with providing details of the existing conditions pertaining.

2.0 POLICY CONTEXT AND STANDARDS

CAR PARKING POLICY

2.1 The adopted 'Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities', updates previous guidance in the context of greater evidence and knowledge of current and likely future housing demand in Ireland taking account of the Housing Agency National Statement on Housing Demand and Supply and projected need for additional housing supply out to 2020, the Government's action programme on housing and homelessness Rebuilding Ireland & National Planning Framework Ireland 2040, (subsequent to 2015 guidelines).

2.2 These new guidelines address car parking and include an objective to 'Remove requirements for car-parking in certain circumstances where there are better mobility solutions, and to reduce costs.' Under Car Parking - Section 4.18 the guidelines acknowledge that the quantum of car parking or the requirement for any such provision for apartment developments will vary, having regard to the types of location in cities and towns that may be suitable for apartment development, broadly based on proximity and accessibility criteria.

2.3 Under Section 4.21 the guidelines note that in larger scale and higher density developments that are well served by public transport, the default policy is for car parking provision to be **wholly eliminated or substantially reduced**. Specifically Paragraph 4.21 states

> ***Intermediate Urban Locations***
> ***In suburban/urban locations served by public transport or close to town centres or employment areas and particularly for housing schemes with more than 45 dwellings per hectare net (18 per acre), planning authorities must consider a reduced overall car parking standard and apply an appropriate maximum car parking standard.***

2.4 In terms of the stated Policy, we believe that the subject site meets all the requirements for reducing the provision of Private Car Parking, under the headings;

High Density Development	✓
Comprising Wholly of Apartments	✓
Central Location	✓
Well Served by Public Transport	✓

2.5 The National Apartment Guidance states (Paragraph 4.23);

For all types of location, where it is sought to eliminate or reduce car parking provision, it is necessary to ensure, where possible, the provision of an appropriate number of drop off, service, visitor parking spaces and parking for the mobility impaired. Provision is also to be made for alternative mobility solutions including facilities for car sharing club vehicles and cycle parking and secure storage. It is also a requirement to demonstrate specific measures that enable car parking provision to be reduced or avoided

2.6 Conscious that the scheme is intended to be actively marketed as Reduced Car Dependency, the layout has been designed with the above issues in mind.

2.7 For the proposed development, given the mix of units, it is anticipated that there will be an associated lower car ownership & dependency for this nature of scheme. Given the slightly restricted number of spaces being provided, the entire scheme will be actively marketed and promoted as a "***Reduced Car Dependency***" scheme, and this will be communicated from the outset as part of sales and marketing. The development will also be managed on an on-going basis to ensure that the Reduced Car Dependency nature of the development is continually promoted and enhanced.

2.8 In terms of ***specific measures*** to enable car parking provision to be reduced to the level proposed, with a parking ratio of 0.58, the specific measures are.

- The Active Management and Marketing of the Development from the outset as Reduced Car Dependency',
- Restricted Dedicated Car Parking is intended to be provided to Residents and will be specifically associated with specific private sales or rental properties (and same will be Specified in associated Rental Agreements),
- The Location within walking/cycling distance of all South Dublin amenities (e.g., The Square and SDCC HQ, Tallaght Hospital etc) and schools,
- Associated Employment Opportunities locally (*Based on the CSO Census Data, in 2016 there were 2,958 commuters who lived in the Electoral Division of Tallaght -Springfield but worked elsewhere. There were 8,874 commuters who travelled in to this electoral division to work. This resulted in a net in-flow of 5,916*

commuters. This indicates that the locality has significant employment opportunities, and these are continually improving),

- Proximity to the LUAS being served by the LUAS Red Line 'on the doorstep' of the site,

- Very easy walk distance from the Dublin Bus Terminus at *The Square* (from where 7 high frequency services currently operate)

- 4 No. Dedicated "Go Car" spaces/cars provided within the development,

- Copious Cycle Parking and Cycle Storage (Refer Above),

- On site Security and Management by permanent staff and CCTV that will ensure the car parking areas are monitored and policed, with a clamping system in operation, so that the car parking restrictions are closely controlled and enforced,

  and

- The Implementation of a working Mobility Management Plan

Bicycle Parking

2.9 Notwithstanding the lower Bicycle Parking & Storage requirements of the SDCC Development Plan, cycle storage facilities are generally being provided to meet the more onerous requirements of The Department of Housing Planning & Local Government "***Sustainable Urban Housing Design Standards for New Apartments***" to meet the satisfaction of An Bord Pleanála.

> *Quantity* – a general minimum standard of 1 cycle storage space per bedroom shall be applied. For studio units, at least 1 cycle storage space shall be provided. Visitor cycle parking shall also be provided at a standard of 1 space per 2 residential units. Any deviation from these standards shall be at the discretion of the planning authority and shall be justified with respect to factors such as location, quality of facilities proposed, flexibility for future enhancement/enlargement, etc.

Figure 2.1 - Extract from National Apartment Guidelines

2.10 The referenced Apartment Guidelines suggest a requirement for one residential Bicycle Storage Space per Bedroom PLUS one visitor Bicycle Storage Space per 2 residential units. For the subject site, with 393 Bedrooms and 242 units, this

represents a requirement for 393 Residential Bicycle Storage Spaces and 121 Visitor Spaces (514 total). The proposals include a total cycle parking provision of 426 spaces, between internal residential spaces and external visitor spaces. We believe that this represents an acceptable and sensible bicycle parking quantum being way above the SDCC requirement (72 total) and slightly below the National Apartment Guideline recommendation (514), conscious of the location.

3.0 CAR PARKING PROVISION

Overview

3.1 The ground floor area where the parking is provided within the development contains a mix of service areas, access, circulation, bin storage, landscaping and of course car & bicycle parking. An extract from the ground floor plan is included below as ***Figure 3.1.***

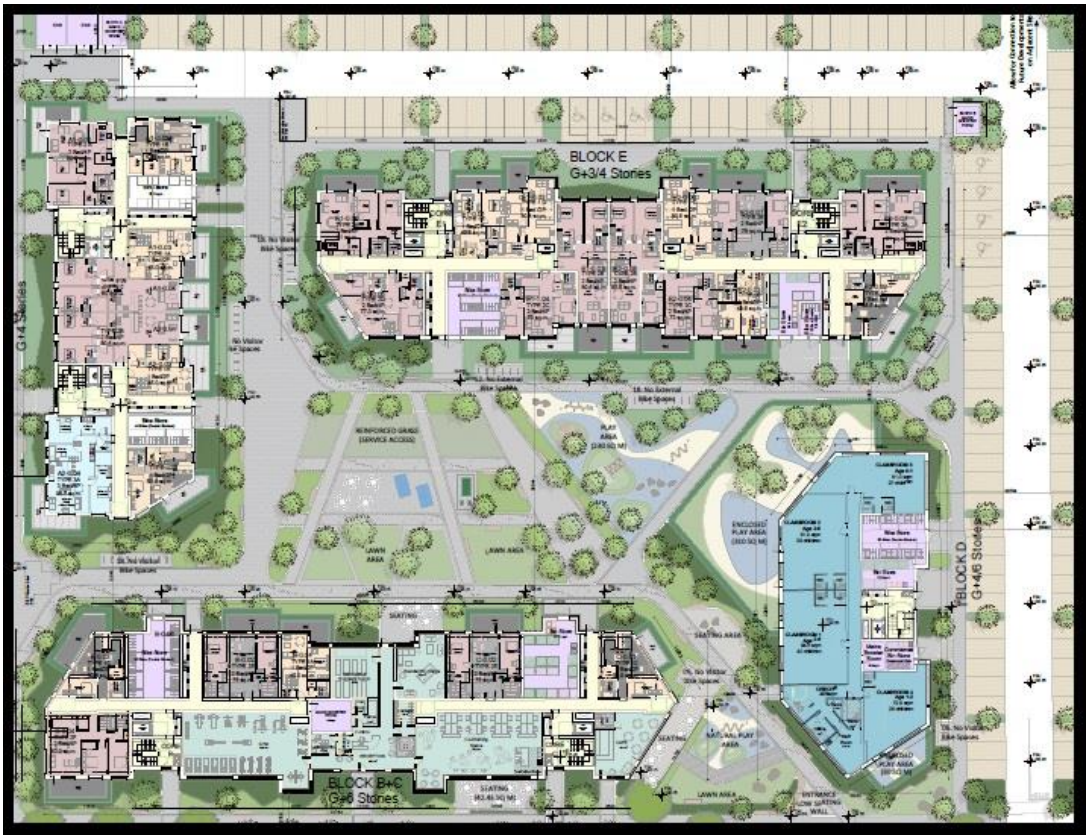


Figure 3.1 – Extract from Ground Floor Drawing Showing Proposed Car Parking

3.2 The ground floor at-grade car park has a provision of 136 parking spaces, including mobility-impaired parking spaces and potential Car-Share spaces.

3.3 The car parking space provision is broken down as follows;

- 7 no spaces for Mobility Impaired Residential Users,
- Go-Car Spaces can be allocated as required,
- Traditional Residential Parking Spaces, with
- Electric Vehicle charging provided for in a flexible manner as set out below

3.4 Car parking spaces provided can easily be upgraded to allow conversion for **Electric Vehicles**. In the case of residential apartment development of the nature proposed, with specific spaces ultimately dedicated to specific apartments, it is considered appropriate to facilitate the retro-fitting of spaces, based on demand

following occupation, rather than a % of spaces being defined as such and provided from the outset.

3.5 The entire car park of the subject scheme is therefore to be ducted below ground to accept future cabling to serve a charging point for every car space as demanded. Within the parking area, conduits can be run where charging points can also be mounted. Where residents request a charging point to be installed, the relevant charging point will be pre-wired back to their home electricity meter in the designated meter location. The socket point will have a lockable cover on it so that only that resident may use the power point. This provision around the entire parking area allows future charging points to be installed at any of the car parking spaces with minimum works as and when required.

Car Share

3.6 We have requested a Letter of Support from Go-Car as a potential operator for the dedicated Car-Share spaces, however we have not received a response at the time of writing. The Building Management Company will further engage with potential car share or car club operators (such as Go-Car), with a view to establishing a permanent base at the site.

4.0 BICYCLE PARKING

4.1 It is anticipated that a very significant number of residents can be encouraged to cycle to work and school etc., with the safe links and secure parking which is in place. That is reflected in the provision of a total of 288 dedicated secure cycle parking spaces within secure fobbed/keypad accessed areas, supported by 118 spaces for visitors at ground level spread throughout the site. This number provided is consistent with the requirements as set out in the National Apartment Guidelines.

4.2 It is acknowledged that for visitors, cyclists need to be confident that their cycles will not be tampered with, and in these terms the cycle storage for residents is in secured locked areas, and which will be monitored by CCTV. An extract showing a typical bicycle storage area is included below as ***Figure 4.1***

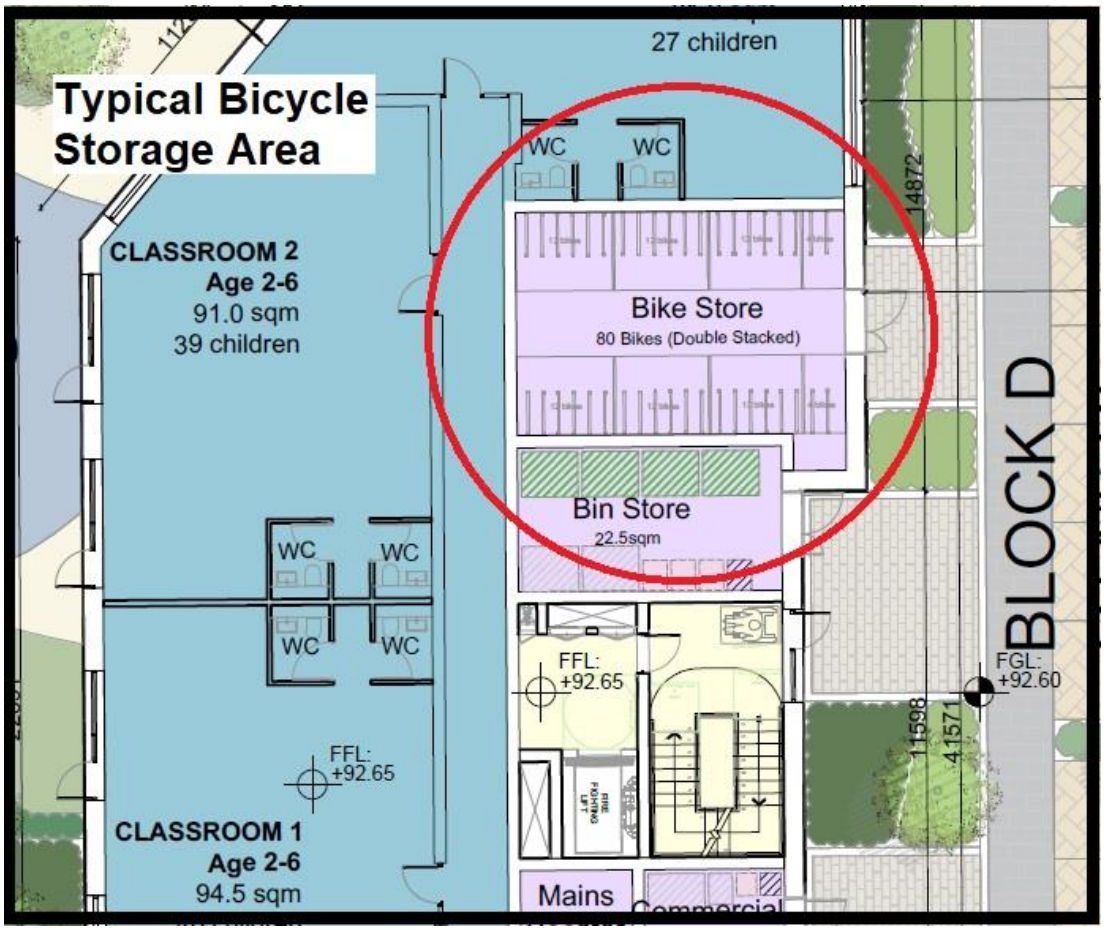


Figure 4.1 – Extract from Drawings Showing Typical Residential Bicycle Storage

4.3 There are a total of 118 Bicycle Parking Spaces, primarily for visitors, dotted throughout the landscape areas and the courtyards at surface level.

4.4 There is a dedicated bicycle storage area provided within the Creche Building, in addition to visitor cycle parking provided immediately beside the Creche, in the form of double sided Sheffield Stand type stands.

4.5 The cycle parking spaces at ground level are beneficially in areas subject to passive surveillance and they will of course also be monitored by CCTV and by way of on-site security and management.

4.6 It is important to cultivate a cycling culture, through the implementation of appropriate infrastructure and promotional measures, which positively encourages all members of the community to cycle at all life stages and abilities as a mode of sustainable transport that delivers environmental, health and economic benefits to both the individual and the community.

5.0 INITIATIVES FOR SUSTAINABLE TRAVEL

5.1 It is acknowledged that residents may require a vehicle of some sort for purposes other than commuting on an everyday basis, and simply reducing car parking would not be realistic without implementing alternative measures to accommodate residents and visitors alike. Therefore the following alternative arrangements are proposed in support of the slightly reduced car parking and car ownership levels within the development;

- A working Mobility Management Plan,
- Increased & Well Designed Cycle Parking Provision,
- Parking Management and Control,
- Dedicated legal controls within Sales or Letting Agreements associated with all Residential Apartments, and
- Undertaking to engage with Car Share Operators to provide a base within the site, with 4 spaces provided and a letter of agreement in principle received from G-Car.

Mobility Management Plan

5.2 An outline MMP has been prepared and should be read in conjunction with this Parking Strategy Report. The MMP will be further developed at occupation /operational stage by the Development Management Company.

Increased Bicycle Parking

5.3 Increased bicycle parking provides a realistic alternative transport mode when there is reduced car parking provision. As previously set out on page 6, the bicycle parking provision exceeds the requirements of the Development Plan and is in line with National Apartment Guidelines. With a total of 406 bicycle parking spaces provided within the site, and with 242 apartments, this represents a provision of 1.7 bicycle spaces per apartment.

Parking Management Strategy

5.4 A key component in ensuring the efficient controlled operation of any car parking is an active and enforced parking management strategy. In this case, this strategy will be managed by the Development Management Company with the specific details as set out in Section 6.0 of this Report.

Legal Controls – Sales/Letting Agreements

5.5 Dedicated Clauses can and will be contained within Sales or Letting Agreements for all Residential Apartments, which specifically address Car Parking. In the event where a parking space is an entitlement as part of a Sale or Letting Agreement, this will be clearly enunciated by way of a dedicated clause, with the specific space or spaces referenced with mapping provided to illustrate the relevant space.

Car Share

5.6 A car club (e.g. Go Car) can provide residents with quick and easy access to a vehicle for short term hire. Well established operators such as Go-Car are active in the Greater Dublin Area and provide a really good alternative for circumstances such as this. A recent survey undertaken by Go-Car indicated that the main uses of the service is for day-trips, family trips and weekly shopping trips. The survey also highlighted that the average use of a car was for 1 hour per day. A screen grab from the Go-Car website included below as ***Figure 5.1*** shows the availability of cars adjacent the site at the time of writing of the report. We have requested a Letter of Support from Go-Car as a potential operator for the dedicated Car-Share spaces, however we have not received a response at the time of writing. The Building Management Company will further engage with potential car share or car club operators (such as Go-Car), with a view to establishing a permanent base at the site.

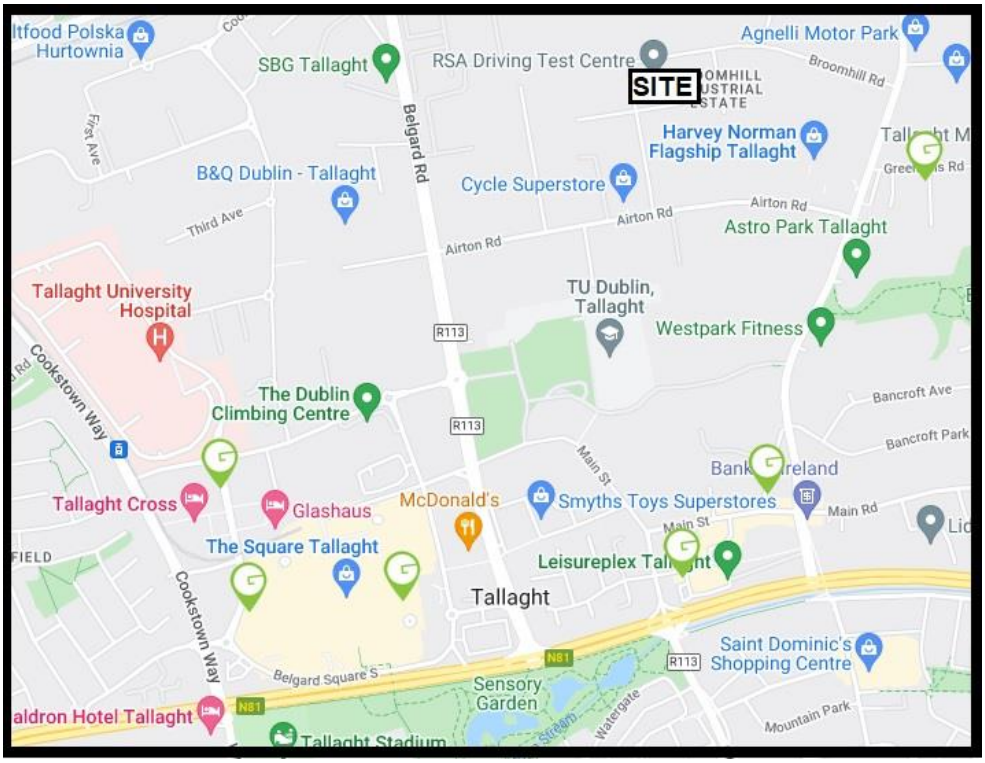


Figure 5.1 – Extract from Go-Car Map Car Locator

6.0 MANAGEMENT OF PARKING FACILITIES

Introduction

6.1 A key component in the effective operation of on-site car parking is an active and enforced parking management strategy. This strategy will be implemented by both the Developer and the Management Company. The Management Company will be charged with responsibility for the control of parking and access within the internal area at surface level.

6.2 It is intended that the proposed development will be actively marketed as 'Reduced Car Dependency'. Consequently, all marketing material for the development will make it clear that the apartments have reduced car parking availability and will also highlight the alternatives available.

6.3 Dedicated Clauses can and will be contained within Sales or Letting Agreements for all Residential Apartments, which specifically address Car Parking. In the event where a parking space is an entitlement as part of a Sale or Letting Agreement, this will be clearly enunciated by way of a dedicated clause, with the specific space or spaces referenced in Agreements, with mapping provided & referenced therein to identify the relevant space. All parking spaces will be clearly numbered.

6.4 Accordingly, unless they are dedicated to individual Residential Apartments, on-site parking will otherwise remain in the control of the Management Company. A management regime will be implemented by the Management Company to control and manage access to the car parking bays, thereby actively managing the availability of on-site car parking for each of the following user profiles;

- Residents of the Apartments,
- Staff based at the proposed development (Crèche, Management Company and Maintenance),
- Visitors/Customers to the site,

Car Parking Allocation

6.5 As stated above, all residents will be advised that unless it is otherwise stated in the Lease or Sales Agreement, there will be very limited car parking available on the site.

6.6 In the event that a parking space is part of a Legal Agreement, the apartment resident will have a parking permit for the particular dedicated space to display in the vehicle window.

6.7 The Management Company will have a limited supply of Visitor Car Parking Permits for the site.

6.8 The Management Company will be responsible for the day-to-day management of car parking operations. Other than the dedicated spaces for Apartments, visitors who request a short term permit will be allocated on a 'first-come first-served' basis.

6.9 It is intended that a charge will be applied to obtain a visitor permit with the objective of covering the associated management costs, discouraging long-term usage of the parking space and encouraging more sustainable modes of travel.

Car Parking Access/Control

6.10 Access to the parking area can be controlled by security barriers if necessary to ensure that only permitted vehicles can gain access. If needed, a barrier or barriers can be safely located so as not to result in any hazard or obstruction.

6.11 Access to approved users can be facilitated by coded keypad entry/fob control or Automated Number Plate Recognition (ANPR) technology which only permits registered permitted vehicles to enter.

6.12 A clamping enforcement regime will also be in place within the entire site to ensure that parking restrictions are adhered to.

7.0 CONCLUSION

Based on the information contained within this Parking Strategy Report, it is considered that the parking provision at the subject development is appropriate and sufficient. This is supported by a high number of bicycle parking spaces at the development, combined with controls that are to be put in place to manage use of the spaces, including a Working Mobility Management Plan, Legal Allocation of Spaces to Residents and the day-to-day management/clamping of parking being a role for the management company.

APPENDIX J

Servicing/Operational Waste Management Report

consulting engineers

NRB

SERVICING
&
OPERATIONAL WASTE MANAGEMENT PLAN
(Appendix J)

For

Proposed Residential Apartment Development

At

Broomhill Road, Tallaght, Dublin 24.

SUBMISSION ISSUE

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

Registered in Ireland No. 491679

Contents

1.0 INTRODUCTION

1.1 This Servicing & Operational Waste Management Plan (SOWMP) has been prepared by NRB Consulting Engineers Ltd and addresses the Traffic/Transportation issues associated with servicing & waste management for the proposed apartment development at Broomhill Road, Tallaght, Dublin 24. The apartments are a direct replacement for the established industrial & employment uses on the site. A Site Location Plan is included below as ***Figure 1.1***.

Figure 1.1; - Extract DCC Map J, Site Location Plan and Context

1.2 This report is prepared to outline how deliveries/collections & waste/refuse will managed by the operators within the curtilage of the development site when the Apartments are occupied and operational.

1.3 Considering the delivery and servicing needs of a site from the outset can help to facilitate efficient deliveries by encouraging site occupiers and their suppliers to consider the actual need for delivery & servicing activity, in terms of timing when & how deliveries are made, and also improving overall access to goods and services. The established existing significant historic commercial development at the site in the context of the local roads is

illustrated below as ***Figure 1.2.*** The use as Industrial/Commercial and Employment, with 'warehouse-type' buildings on the site currently, would have had significantly greater and more intense commercial vehicular traffic than the current proposed use for apartments.

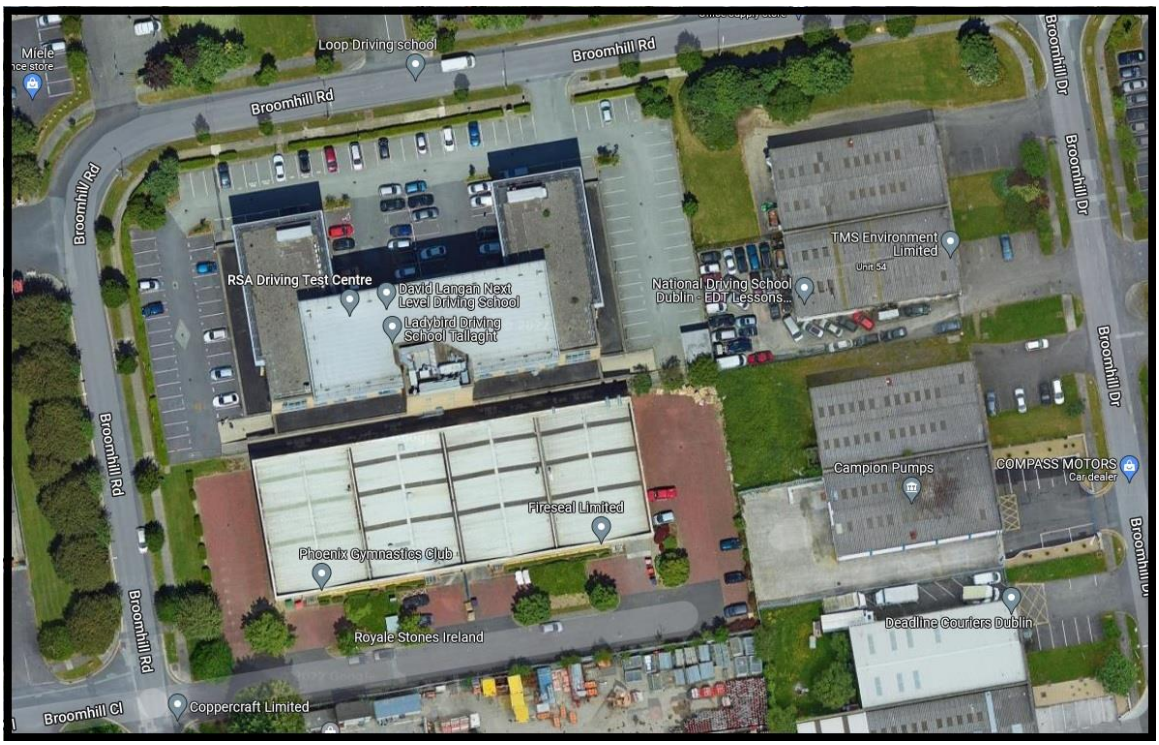


Figure 1.2 – Aerial View of Existing Site Showing Established Uses

1.4 This document provides an outline Delivery/Collection & Waste Management Plan for the planning stage and describes the operational regime that will be adopted at this development. It sets out the framework necessary to progress the SOWMP into a fully operational document ready for implementation and it demonstrates how the development can be serviced in a manner which ensures minimal impacts locally, conscious of the local area and the established nature of the local roads.

1.5 The SOWMP has been prepared following discussions within the project team and site visits.

1.6 There are clearly established commercial uses at the site, located in an environment with busy and active frontage as illustrated in the image above, and with accessible public streets available along the boundaries. Servicing and refuse management at the existing historically busy commercial site have operated without issues arising, and it is expected that this will be improved when the new apartments are completed with dedicated planned staging areas to accommodate servicing.

1.7 Currently the site is bound by lightly/moderately trafficked roads. Refuse and the infrequent service vehicles clearly currently service the existing site along these boundaries by collecting or servicing from within the site, for the short duration required to undertake operations.

1.8 It is expected that the commercial units surrounding the site will continue to be accessed and serviced as necessary off-road within their own demises.

1.9 In terms of the residential elements of the subject scheme, for the vast majority of day-to-day servicing, the type of vehicle servicing a residential apartment scheme will be very much smaller service vehicles such as taxis, small vans, Transit Vans or Courier Bikes. These can be clearly accommodated within the within the car park or on the local public roads where parking is unrestricted currently.

1.10 It is intended that refuse lorries will be accommodated internally within the ground floor layout of the site. The proposed Bin Stores for the Residential & small commercial elements are illustrated in the extract from the drawings included below as ***Figure 1.5***.

Figure 1.5 – Proposed Bin Storage Areas

Objectives

1.11 The primary objective of the SOWMP will be to manage deliveries/collections including waste/refuse to/from and within the development, in order to ensure that all activity is undertaken successfully, whilst minimising the potential for conflicts with pedestrians and other vehicles.

1.12 Typically, a SOWMP will help to:

- Achieve financial savings through improved efficiencies.
- Identify where safe and legal loading can take place, both generally and in exceptional circumstances.
- Improve vehicular access to a delivery / collection origin or destination.
- Avoid vehicles moving through a site and parking unnecessarily.
- Reduce noise, CO2 and air quality emissions, congestion, collisions and overall freight costs by reducing the number of delivery trips (particularly during peak hours).

2.0 SERVICING ARRANGEMENTS

2.1 The site historically operated as a busy commercial premises and generates significant associated commercial vehicle traffic. In these terms, it clearly had established associated servicing and day-to-day operational activities in its own right which are significantly greater than those associated with the now-proposed use for residential apartments.

2.2 Notwithstanding the above, there will clearly be a requirement for residential deliveries and e-shopping deliveries which can be accommodated on the site as proposed.

2.3 Other than refused lorries, the vast majority of deliveries to the development will be by small to medium sized vehicles, such as transit vans, with the rare and infrequent need for a larger vehicle such as a 7.5t box van or smaller rigid bodied truck, all of which can be accommodated at surface level.

2.4 Deliveries will be pre-booked where possible, and a delivery slot allocated so as to minimise the potential for multiple vehicles arriving simultaneously and requiring use of the same facilities.

2.5 Whilst deliveries will be managed where possible to ensure that the potential for multiple vehicles arriving/departing at the same time is minimised, the current surface level areas will clearly be able to cater for more than one vehicle simultaneously if required

2.6 The key issue will be management of refuse collection, and this is addressed herein.

2.7 Waste Management facilities for the residential elements are provided in the dedicated bin storage areas which are all accessible at Ground Floor Level. The facilities provide for full separation and recycling.

2.8 In terms of adequacy of the facility, we understand that the quantity of bins has been provided at a rate of 1 No. 1,110L Bin per 15 No. Occupants, consistent with the Guidelines. This accords with the design considerations outlined in Section 4.8 & 4.9 of the Department of Housing, Planning & Local Government, Sustainable Urban Housing, design Standards for New Apartments, Guidelines for Planning Authorities (2020).

2.9 No on-street servicing is envisaged for the development.

2.10 SDCC strategies targets & supports a fundamental shift towards sustainable travel, reducing the dependency on the private car and taking action to make the area more accessible and connected, enhancing quality of life for all. The general objectives include:

- Promoting sustainable transport
- Managing traffic in a way which maximises mobility and safe movement
- Maintaining and Developing/Upgrading Infrastructure

2.11 It is recognised that commercial building management and delivery systems are essential for the economic activity of the area.

2.12 This SOWMP accords with these strategic aims as demonstrated in the measures proposed at Section 3 below.

3.0 INITIATIVES OF THE PLAN

3.1 The Management Company for the facility will manage the day to day operations of the overall development. Within this team, the job description will include goods management to oversee servicing activity and to ensure the smooth running of the Plan (referred to below as 'Goods-in-Manager').

3.2 The Management Company Staff will therefore be aware of any forthcoming commercial servicing and refuse collection activity, particularly, if/when exceptional activity is planned/expected.

Servicing

3.3 In order to meet the objectives of the SOWMP, the following initiatives pertaining to the new residential elements are proposed:

- The Goods-In Manager will issue instructions to all residents who book deliveries and collections setting out the delivery procedures to be adopted by them.
- Residents will be required to pre-book Half-hour or 1 hour slots including details of the type of vehicle that will be used to undertake the delivery / collection and the scale/nature of goods to be supplied. The timed slots would allow for the vagaries of traffic etc and any restrictions applicable at that time.
- Deliveries and collections will be programmed so as to avoid clashing with waste/recycling collections and will be off peak to avoid the peak arrival and departure times for commuters.
- Delivery drivers will be encouraged to advise the Goods-In Manager of their impending arrival by telephone in reasonable time before arrival where possible.
- Drivers will be informed that vehicle engines must be switched off whilst goods are being loaded/unloaded (i.e. when their vehicle is stationary).
- Vehicles not associated with delivery of goods will not be permitted to park/wait within the development.
- The Goods-In Manager will ensure that goods are transported directly from the delivery vehicle to the relevant point of receipt or residents. He/she will ensure that goods and/or storage cages are not stored within/in public areas or on any footways so as to keep the areas clear at all times.
- The Goods-In Manager will be responsible for the smooth and efficient operation of the 'Plan'.

Refuse

3.4 The development contains dedicated self-contained & managed bin storage areas within the ground floor plans. This are within enclosed secure areas that can be accessible by lock/fob or possibly by way of a key pad. The bin storage areas will contain dedicated colour coded bins for recyclables, normal waste and organic waste in accordance with best practice.

3.5 The Management Company will be responsible for the weekly movement of the bins to a collection point within the at-grade car park on the days of refuse collection. Hand propulsion of the wheeled containers will be used to manoeuvre the full bins, and to return the empty bins to the refuse area following collection. This is a long-established normal procedure at all such urban apartment developments

3.6 Notwithstanding the above collection-day procedures, the Goods-In Manager will also be designated to oversee the storage and collection of waste. The key objectives will be to:

- Minimise the risk of a potential conflict with users of the development when waste is being deposited, transferred or collected.
- Encourage the effective and environmentally friendly storage and disposal of refuse and recyclable material.
- Reduce the amount of waste produced, and
- Increase the proportion of waste that is recycled.

3.7 The collection of commercial waste, arising from the creche/commercial elements, will be agreed with the relevant operator and undertaken in accordance with the Council's requirements. Such refuse collections traditionally take place early in the morning or later in the evening, avoiding clashing with peak network times, as is normal practice.

Access Management

3.8 Vehicular access will be restricted to all but essential activity and residents with rights of access (with the assistance of signage, active management and CCTV control as necessary).

3.9 Management staff will provide an active presence on-site, in order to actively discourage any unauthorised parking/waiting activity. In addition, security staff will maintain contact with colleagues who will be able to monitor CCTV footage, in order to assist in the management and control of parking activity.

3.10 Where possible, for residents, larger vehicles will be discouraged from servicing the site, particularly between the hours of 8am and 6pm.

3.11 The timing of deliveries will avoid peak periods where possible (in particular 08:00-09:00 and 17:00-18:00) and peak commuter arrival & departure times. The Goods-In Manager will timetable deliveries for quieter times, when this is within their control. Timetabling will also reduce the risk that multiple delivery vehicles will arrive at the same time and therefore minimise the chances of congestion occurring as a result of the servicing strategy. Given the intended use and the space available on site, this is not expected to represent an issue of concern.

4.0 MANAGEMENT & MONITORING OF THE PLAN

Overview

4.1 Management, review and monitoring of the SOWMP will be important in ensuring that actions are carried out and remedial measures are taken where necessary. This will be undertaken by the Management Company.

Monitoring and Review

4.2 The SOWMP will have similar timescales to the Mobility Management Plan and be reviewed as required following occupation. Surveys can also be undertaken to coincide with the baseline monitoring survey for the Mobility Management Plan (typically undertaken within six months of occupancy) and annually thereafter.

4.3 Monitoring of the SOWMP will include:

- Survey of the number of vehicle movements throughout the survey days and timing of these;
- Recording of Warning Notices issued to those servicing the development as well as any complaints associated with servicing;
- Identification of any parking, access or loading issues on the site and on the surrounding roads.

4.4 Where the monitoring process highlights that there is under-performance against the aims of the SOWMP, remedial action would be taken in consultation with the Local Authority if required. Following implementation of additional measures, the areas of weakness would be subject to regular review.

5.0 CONCLUSIONS

5.1 This Servicing & Operational Waste Management Plan (SOWMP) describes the proposed strategy to manage the delivery and servicing requirements of the proposed new residential apartment development at Broomhill Road. It should be remembered that the site has long established commercial uses and the additional uses as residential apartments will have a significantly lower servicing requirement.

5.2 Overall, the SOWMP for the development will ensure the successful operation of delivery and collection activity within the site curtilage on a day-to-day basis.

5.3 The SOWMP will ensure that the likelihood of conflicts with pedestrians and other vehicles will be minimised and that servicing activity will not affect the free flow or environmental condition of the local road network.

5.4 Measures have been proposed to ensure that the delivery and servicing that does take place has a limited impact upon other road users and neighbouring residents & commercial premises. It is evident that a reduction in servicing trips is likely as a result of the development proposals.

5.5 The Applicant is committed to the implementation of this SOWMP and this document will be fully updated upon occupation.

5.6 With the proposed SOWMP in place, it is considered that there are no significant Operational Traffic Safety or Road Capacity issues associated with Servicing or Waste Management which prevent a positive determination of the application by An Bord Pleanála.

APPENDIX K

Independent Stage 1 Road Safety Audit, incl Quality Audit & Designer Feedback Form

Title: **STAGE 1 ROAD SAFETY AUDIT INCLUDING QUALITY AUDIT**

For;

Proposed Residential Development at Broomhill Road, Tallaght, Dublin 24.

Client: **NRB Consulting Engineers Ltd.**

Date: **April 2022**

Report reference: **1466R01**

VERSION: **FINAL**

Prepared By:

Bruton Consulting Engineers Ltd

Glaspistol
Clogherhead
Drogheda
Co. Louth.

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CONTENTS SHEET

Contents

1.0 Introduction

This report was prepared in response to a request from Mr. Eoin Reynolds of NRB Consulting Engineers Ltd for a Stage 1 Road Safety Audit including Quality Audit of the proposed residential development at Broomhill Road, Tallaght, Dublin 24.

The 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 Quality Audit has been carried out in accordance with the guidance in the Design Manual for Urban Roads and Streets (DMURS), produced by Department of Transport Tourism and Sport in March 2013 and updated in June 2019.

This portion of the Quality Audit includes an access audit, a walking audit and a cycling audit, i.e. those elements carried out by persons independent of the Design Team.

The Road Safety and Quality Audit Team comprised of;

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

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

The Road Safety Audit and Quality Audit involved the examination of drawings and other material provided by NRB and a site visit by both team members on the 12th of April 2022.

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

The problems raised in this Quality Audit may belong to more than one of the categories of Audit named above. A table has been provided at the start of Section 3 of this report detailing which category of audit each problem is associated with.

Recommendations have been provided to help improve the quality of the design with regard to the areas described above. A feedback form has also been provided for the designer to complete indicating whether or not he/she will accept those recommendations or provide alternative recommendations for implementation.

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

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

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

2.0 Background

It is proposed to construct a residential apartment development at Broomhill Road, Tallaght, Dublin 24. The development would consist of 242 apartments in five blocks and an ancillary creche. The site is located in the existing Broomhill Industrial Estate and was previously an industrial site.

Vehicular access to the site would be from Broomhill Road via a priority junction.

Broomhill Road is a single carriageway road with footpaths on both sides. There are no existing cycle facilities on Broomhill Road.

The speed limit on Broomhill Road is 50km/hr.

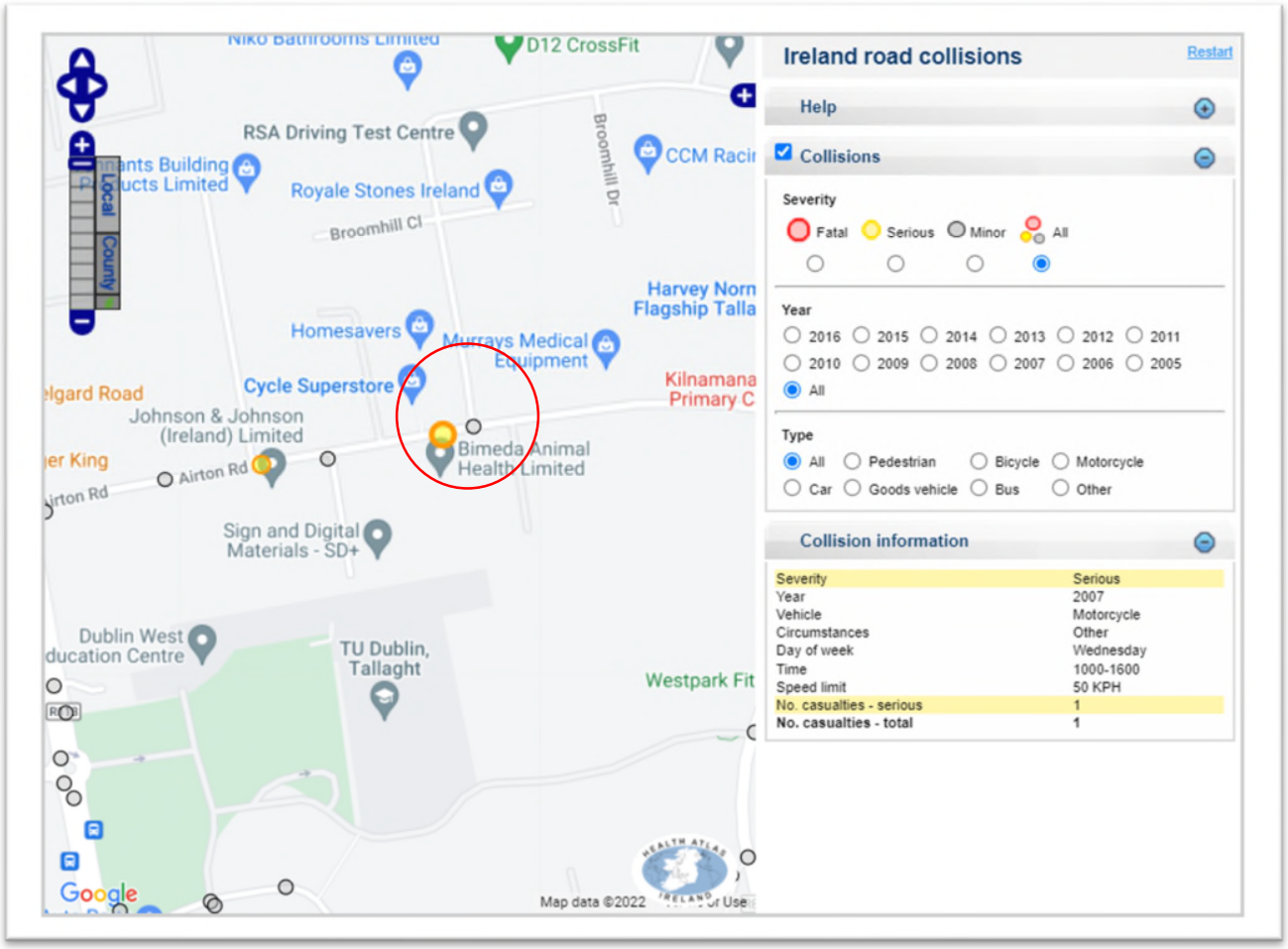
This section of Broomhill Road is approximately equidistant from Greenhills Road (R819) and Belgard Road (R113) both of which are bus routes. Airton Road connects both these regional arterial routes to the proposed development.

Both Belgard and Tallaght Hospital Luas stops on the Red Line are approximately 20 minutes' walk from the proposed development.

The Square and TU Dublin Tallaght Campus are also in close proximity to the site.

The location of the site is shown below.

A review of the Road Safety Authority's website shows that between the years 2005 and 2016 there was one serious injury collision and one minor injury collision adjacent to the Airton Road/Broomhill Road junction. Both involved motorcycles.



3.0 Issues Identified in This RSA Stage 1 incl. Quality Audit.

Summary Table of Problem Categories

Problem Reference	Access Audit	Walking Audit	Cycling Audit	Road Safety Audit	Quality Audit
3.1				✓	✓
3.2	✓				✓
3.3		✓		✓	✓
3.4		✓		✓	✓

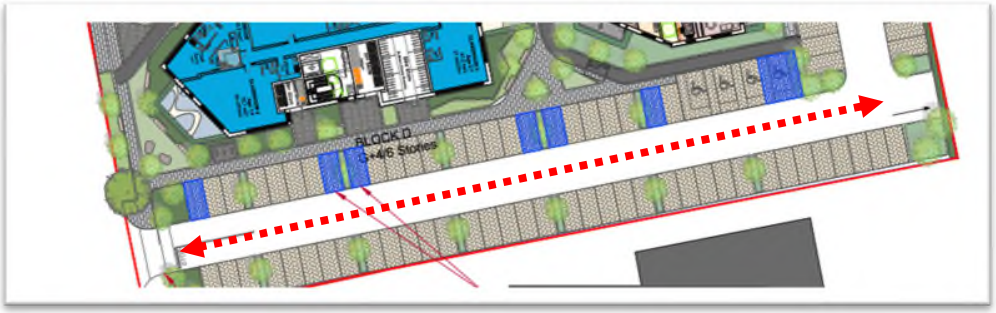
3.1 Problem

LOCATION

Drawing NRB-TA-001 Rev B

PROBLEM

The vehicular access consists of two relatively long straight sections of carriageway. This could lead to high speeds which could result in high severity injuries if a vulnerable road user is struck.



RECOMMENDATION

It is recommended that some traffic calming features be provided along the straight sections.

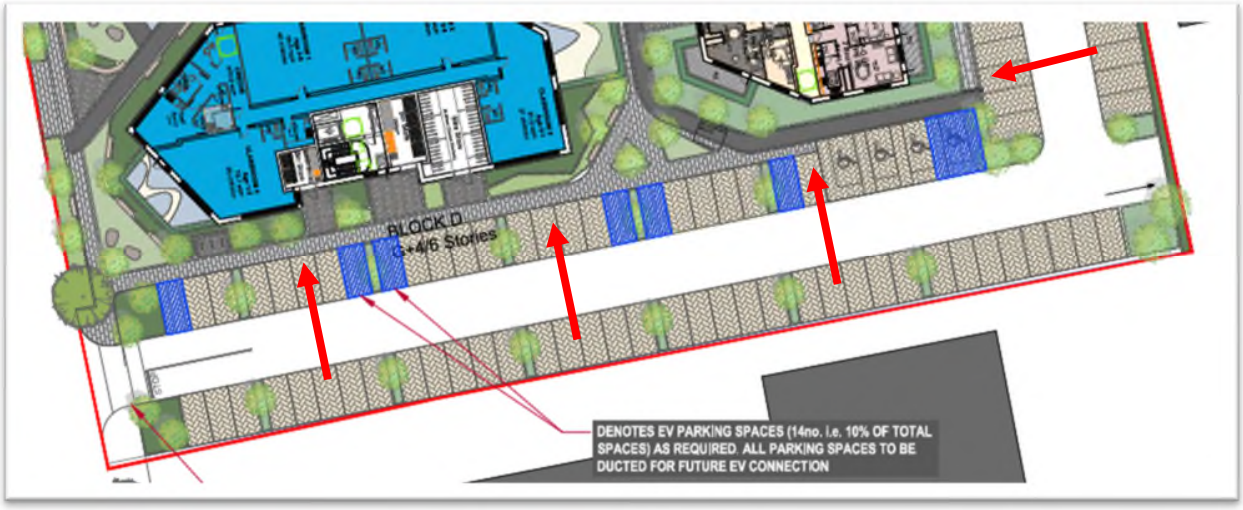
3.2 Problem

LOCATION

Drawing NRB TA-001 Rev B

PROBLEM

There is no provision for pedestrians from vehicles parked on the opposite side of the access road to the development to access the footpaths around the buildings due to the continuous perpendicular parking spaces. This could lead to inaccessibility for some mobility impaired pedestrians/vehicle occupants.



RECOMMENDATION

It is recommended that gaps be provided in the parking provision for pedestrian access.

3.3 Problem

LOCATION

Drawing NRB TA-001 Rev B

PROBLEM

It is unclear what the proposed width of the footpath along Broomhill Terrace is to be. Broomhill Terrace will remain an industrial area and it is important that pedestrians associated with this new residential development will have refuge from industrial traffic.

RECOMMENDATION

It is recommended that a footpath of at least 1.8m in width is provided so that pedestrians do not have to use the carriageway of Broomhill Terrace or Broomhill Road.

3.4 Problem

LOCATION

Drawing NRB TA-001 Rev B

PROBLEM

There are footpath links to the carriageway edge at regular intervals along Broomhill Road . It is unclear what these links are for. There is a risk that they could encourage pedestrians to cross the carriageway at areas without controlled or uncontrolled crossings. This could lead to slips, trips and falls.

RECOMMENDATION

It is recommended that if uncontrolled crossings are to be provided that dropped kerbs and tactile paving be provided on both sides of Broomhill Road.

4.0 Road Safety Audit Stage 1 and Quality Audit Statement

This Road Safety Audit and Quality Audit has been carried out in accordance with the guidance given in DMURS and TII Publication GE-STY-01024.

It 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:** Norman Bruton

(Road Safety & Audit Quality Audit Team Leader) **Dated: 28/4/2022**

Owen O'Reilly **Signed:** Owen O'Reilly

(Road Safety & Quality Audit Team Member) **Dated: 28/4/2022**

Appendix A

List of Material Supplied for this RSA1 & Quality Audit;

- 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 B
- Drawing NRB -TA- 006 Rev B
- Drawing NRB -TA- 007 Rev B
- Drawing NRB -TA- 008 Rev B

Information Provided as Background Information.

- NRB Transport Assessment Report, 30 March 2022.

Appendix B

Feedback Form

SAFETY AUDIT & QUALITY AUDIT FORM – FEEDBACK ON AUDIT REPORT

Scheme: Residential Development, Broomhill Road, Tallaght.
Stage: 1 Road Safety Audit incl QA
Date Audit (Site Visit) Completed: 12-4-2022

Paragraph No. in Audit Report	**Problem accepted (yes/no)**	**Recommended measure accepted (yes/no)**	**Alternative measures (describe)**	**Alternative measures accepted by Auditors (Yes/No)**
3.1 Traffic Calming	Yes	Yes	Intermittent Compliant Raised Cushions/Platforms will be incorporated and will be subject to detailed design/audit	Yes
3.2 Pedestrian Routes	Yes	Yes	Gaps in Parking and defined routes will be clearly provided for pedestrians and will be subject to detailed design/audit	Yes
3.3 Broomhill Tce Path	Yes	Yes	This will be discussed with SDCC as the road is in the charge of the Local Authority.	Yes
3.4 Pedestrian Routes	Yes	Yes	These insets into the grass margin are intended as landscaping features only and they will be removed.	Yes

Signed **Date** 28/04/22.
Design Team Leader

Signed……. **Date**……28/4/2022…….
Audit Team Leader

Signed **Date** 28/04/22
***PP* Developer/ Employer**

Appendix C

Problem Location Plan.

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

REV	DATE	AMENDMENTS	DRAWN	CHK	APP

1This drawing is based upon drawing BHR-JFA-SP-00-DR-A-P1001, received 04/05/22. NRB Consulting Engineers Ltd shall not be liable for any inaccuracies or deficiencies.

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Dublin 14

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Registered in Ireland No. 491679

Client		Project No. 21-059		Drawing No. NRB-TA-001	
Project	Broomhill Road Tallaght	Drawn PB	Checked ER 11/04/22	Approved ER 11/04/22	
Title	Proposed Site Layout	Date 11-Apr-22	Scale @ A3 1:500	Rev B	

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

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

APPENDIX L

Bus/LUAS Capacity & Demand Report

consulting engineers

NRB

Bus/LUAS
Capacity Assessment
Report

(Appendix L)

For

Proposed Residential
Apartment Development

At

Broomhill Road, Tallaght,
Dublin 24

SUBMISSION ISSUE

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Contents

Appendices.....

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Registered in Ireland No. 491679

1.0 INTRODUCTION

1.1 NRB Consulting Engineers Ltd were appointed to address the Bus & LUAS Demand and capacity associated with a planning application for a proposed residential apartment development at Broomhill Road, Tallaght, Dublin 24.

1.2 The development consists of a 242 unit apartment scheme, including a supporting ancillary Creche, with secure off-street parking areas for bicycles and a reduced number of private cars, along with landscaping, bins storage and all associated site works. The site was previously used for industrial purposes, and as such it would have had demand for public transport use by the workforce. This former demand has been discounted in this assessment.

1.3 The NRB commission on the project includes this assessment of current & future Bus & LUAS capacity, a 'Bus & LUAS Capacity Assessment Report', which seeks to establish demand and capacity using available data & information.

1.4 Whilst this Report contains an assessment of Bus & LUAS Capacity and demand, it should be remembered that Service Providers are commercial in nature, running their businesses based on current demand rather than medium to longer term future demand. In simple terms, services are provided based on actual existing footfall rather than potential future demand. If there is an increased demand for services, with full or over-capacity services, Operators then generally react to improve facilities if it makes commercial sense to do so. More customers means more revenue generated by the services.

1.5 Notwithstanding the above, the purpose of this Study is to review the potential impact of the development upon the existing and future local Bus & LUAS services in the vicinity of the site.

1.6 The analysis of the existing and future services is based on an assessment methodology which includes trip generation assessment, modal split assumptions, and assignment/distribution. These assumptions have been based on real data extracted from the Central Statistics Office (CSO) 2016 Small Area Map Data, available through the SAP online mapping tool. This data was used to quantify the anticipated demand for services as a result of the proposed development locally, based fully on adjacent CSO Statistical Small Areas.

1.7 The first step was to review the current and future planned services. The bus stops within walking distance of the subject site were identified, with the current bus services, bus service frequency and the capacity studied/assessed. Similarly, the demand for LUAS services at Belgard was assessed, based on current provision.

1.8 *Bus Connects* is expected to be implemented within a relatively short timeframe. This initiative will reconfigure the bus services for the Greater Dublin Area completely. This Study therefore considers both the existing bus network and the planned *Bus Connects* Network.

1.9 The ***LUAS Red Line*** is the tramway running between the city and Tallaght / Saggart. The Belgard station, located nearest the site, serves as an interchange for the Red Line and Citywest extension. It has two track alignments. The relatively new second track allows for the arrival and departure of trams. It also serves as a stabling track for the trams that run on Citywest extension. Trams operate at headway of 6.5 minutes and 8 minutes from The Point station to Tallaght during peak and non-peak hours respectively. Trams on line A1 operate at headway of 10 minutes and are expected to allow for an extra two million passenger journeys a year. The net travel time from Saggart to Connolly is approximately 50 minutes and that between Tallaght and The Point station is 53 minutes

1.10 This Study focuses on the peak commuter periods for the development, and in particular the busiest weekday AM commuter peak demand for services – this represents the period of highest demand on the network consistent with the TII Traffic & Transport Assessment Guidelines (May 2014). The AM Peak is busier because 'peak spreading' generally occurs in the evening period.

1.11 The methodology assumes that the trips will be assigned to the nearest available bus stops and of course to Belgard LUAS which is closest LUAS Station.

2.0 BUS/LUAS LOCATIONS & SERVICES (CURRENT & FUTURE)

CURRENT SERVICES

2.1 For commuting, a walk distance to/ from Bus Stops of up to 1-1.5km is generally considered to be acceptable. For the purposes of any assessment, it is normal to assume a 10-15min commuting walk time as appropriate, reflecting a distance of 1,000-1,500m depending on speed of walking. However, all of the services on Belgard Road and Greenhills Road immediately at the site are easily accessible to residents in this case.

2.2 The site is well served by frequent Bus Services, and this is illustrated below within ***Figure 2.1*** which illustrates the existing bus services & Stops running adjacent the site.

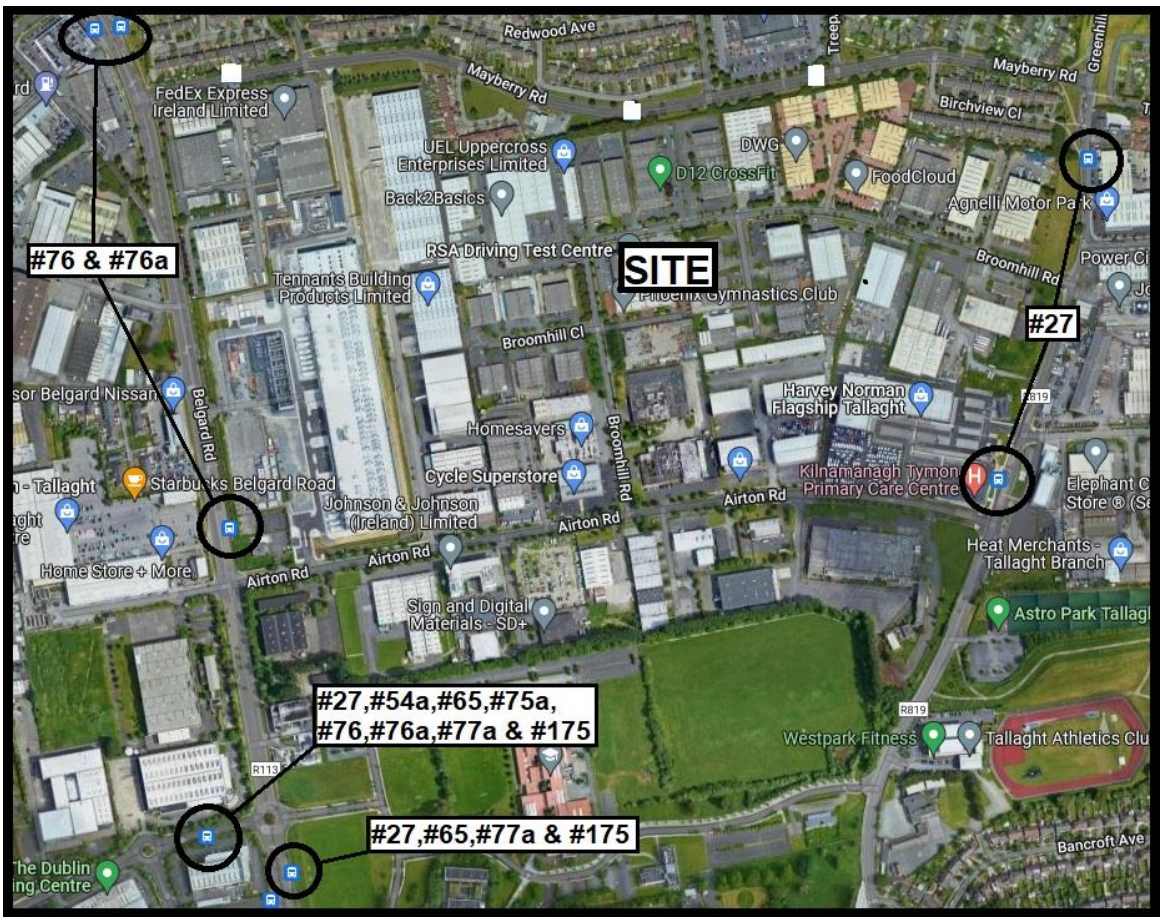


Figure 2.1 – Existing Bus Stops at the Site

2.3 The Services together provide links to other transport hubs such as DART, City Centre hubs and other LUAS stations.

2.4 As an illustration of proximity to Belgard Square Bus Terminus, we include below the *Google* walk time as ***Figure 2.2***, and the Cycle Time as ***Figure 2.3***

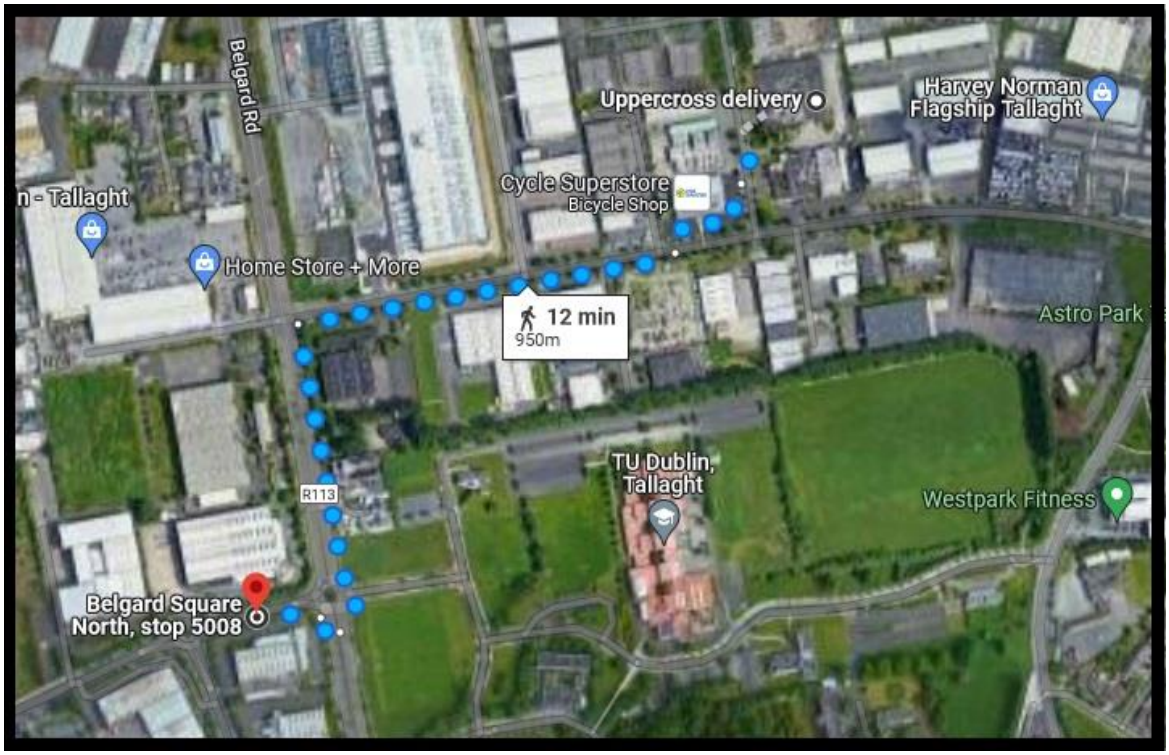


Figure 2.2 – Walk Time to Belgard Square North

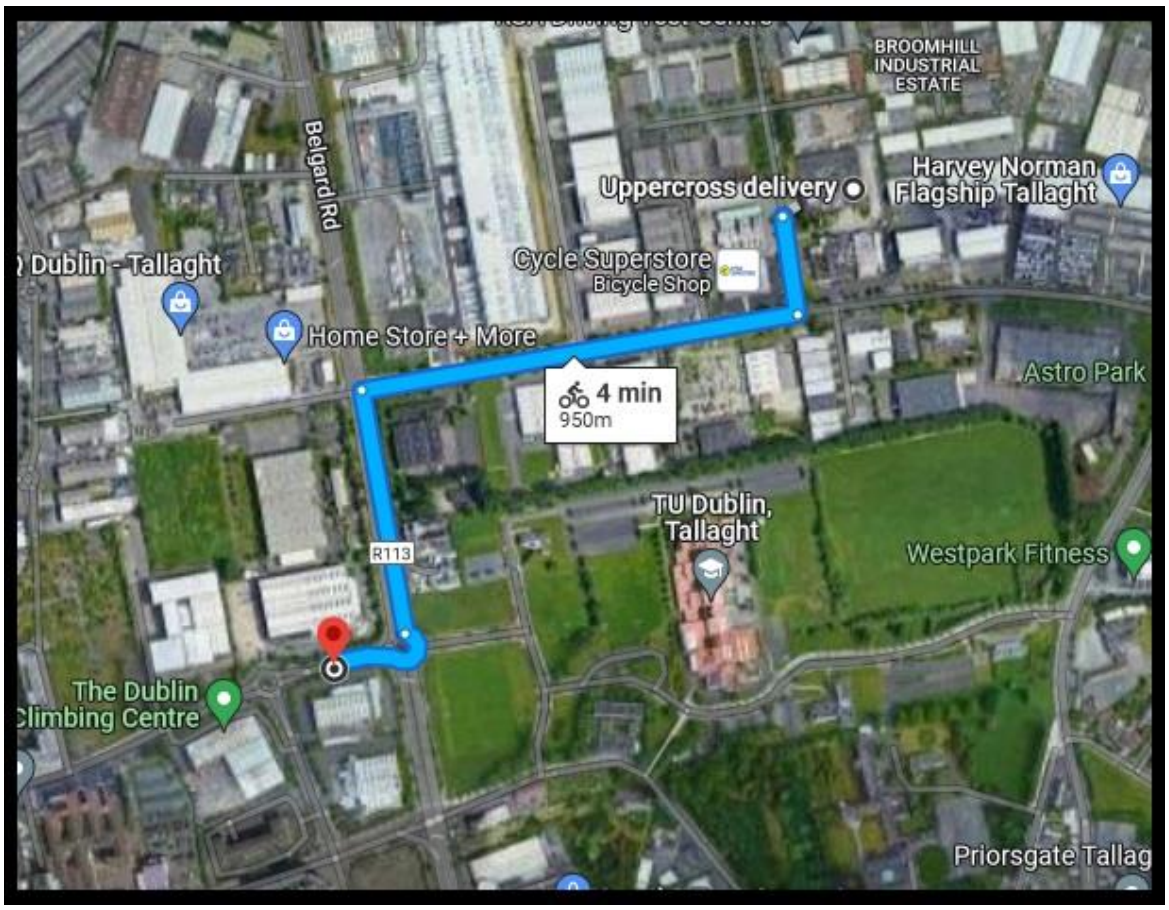


Figure 2.3 – Cycle Time to Belgard Square North

2.5 We include below illustrations showing the proximity to Red Line LUAS services at Belgard. The Walk Time to Belgard Station is included as ***Figure 2.4*** and the *Google* Cycle time as ***Figure 2.5***. A significant proportion of commuters are also cyclists, and the cycling/walking distance to/from LUAS will ensure it is a viable alternative for use by residents.

Figure 2.4 – Walk Time of 19 Mins to Belgard LUAS

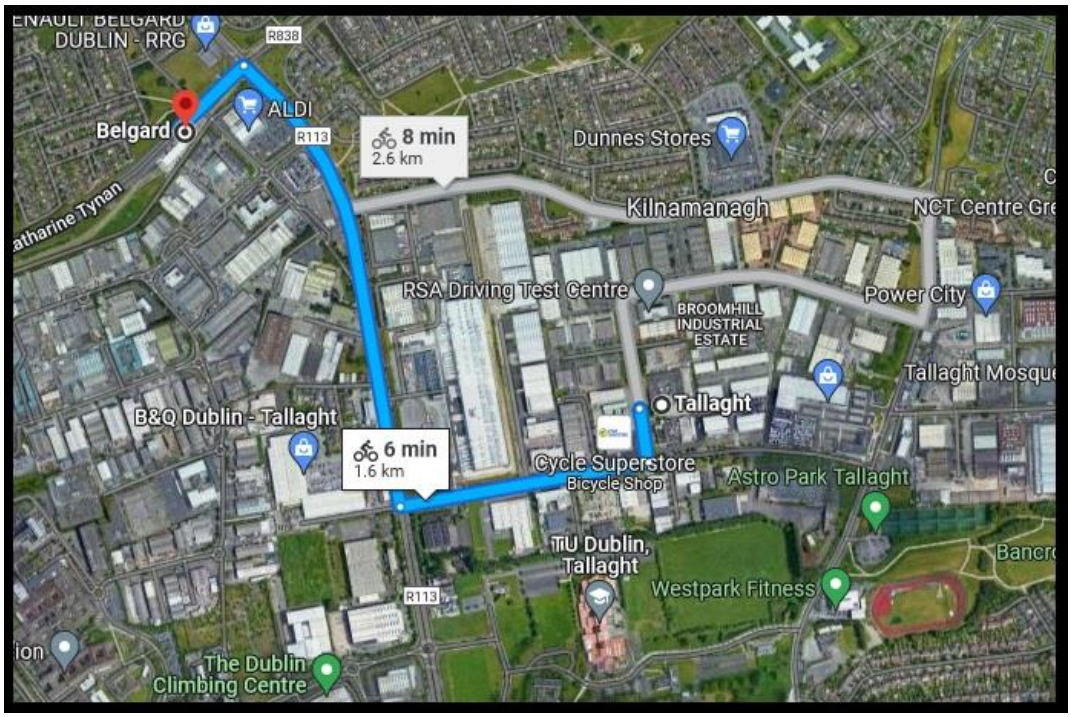


Figure 2.5 – Cycle Time of 6 Mins to Belgard LUAS

2.6 In terms of the **Existing Bus Service Provision** & Service Frequency, the Timetables for each existing Services nearby are included herein as ***Appendix A***. These details have been collated and are summarised below as ***Table 2.1,*** extracting information relating to the busy 7-9am weekday AM Commuter Period.

Table 2.1; - Buses Available Adjacent the Site, 7-9am Approx Capacity.

Service #	Route	Operator	No. Buses 7-9am (Mon - Fri)	Total Person Capacity (7-9am)	Via City (Y/N)
27	Jobstown - Clarehall - & Return	Dublin Bus	15	1365	Y
54a	Kiltipper Way - Pearse St - & Return	Dublin Bus	6	546	Y
65	Blessington - Poolbeg St - & Return	Dublin Bus	4	364	Y
75a	The Square - Dun Laoghaire - & Return	Go Ahead Ire	4	364	N
76/76a	Chapelizod - Tallaght - & Return	Go Ahead Ire	6	546	N
77a	Citywest - Ringsend - & Return	Dublin Bus	11	1001	Y
175	Citywest - UCD- & Return	Go Ahead Ire	2	182	N
	Total (7-9am) All Routes		**48**	**4368**	
	Total (7-9am) Routes Via City Centre		**36**	**3276**	

2.7 The above demonstrates that the site is clearly accessible to a significant and high capacity existing bus provision, with a capacity of c4,368 bus seats citybound during the 7-9am commuter peak period, all within easy access to the site.

2.8 And of course, the majority of these bus services provide for connectivity to Public Transports Hubs and Interchanges (Rail, Intercity Bus Services, LUAS etc) located within the City Core. The Services also provide a link to the DART at Dun Laoghaire and also to LUAS at Dundrum as required. Importantly, there is also a service to UCD Belfield campus.

2.9 The **LUAS Red Line** Service runs to/from Saggart/Citywest via Belgard and onwards to the city centre to The Point via both Heuston and Connolly Stations. Luas Red Line is c20km in length and has 32 Stops along the route. The service operates on a continual basis throughout the day, with Trams running on an approximate 5-6 minute interval basis during the morning and evening peaks (in both directions).

2.10 The approximate LUAS capacity 7-9am is then illustrated below as ***Table 2.2***

Table 2.2; - LUAS Approximate Existing Capacity Each Way (7-9am)

Details	No. 7-9am	People Capacity
LUAS Trams Belgard (Red Line)*	20	408
Total LUAS People Capacity 7-9am (each direction)	8,160	

**Based on LUAS Frequency of 1 Tram Every 6.5 minutes*

2.11 The Transport for Ireland, LUAS & Dublin Bus websites (and Mobile Phone Apps) now provide a service that allows customers access up to date real time information for Arrivals and departures, on a stop-by-stop basis. This information on Arrivals and Departures allows customers to plan their arrivals and departures & associated walk/cycle times accurately, facilitating efficient journey planning (and minimising congestion on platforms or stops).

2.12 The LUAS Trams are of course modern and of high quality. Almost all of Dublin Bus & Go-Ahead Bus Services consist of fleets of high quality comfortable 'Double Decker' Buses, being accessible buses with 'low-floor' technology incorporated into their design.

2.13 Transport for Ireland also provides an interactive online tool that enables the user to plan journeys, with real time information on Bus & Rail services on a nationwide basis.

2.14 The LUAS Red Line Services have been recently upgraded with longer trams. We have also set out below details of the proposed bus service improvements locally as part of Bus Connects.

FUTURE BUS SERVICES

2.15 In terms of **Future Planned Services**, the NTA have recently published details of the overall bus network for the GDA, the 'New Dublin Area Network' - showing Spine Routes, Feeder & Orbital Routes. An extract from the NTA Plans showing the site location is included below as ***Figure 2.6***.

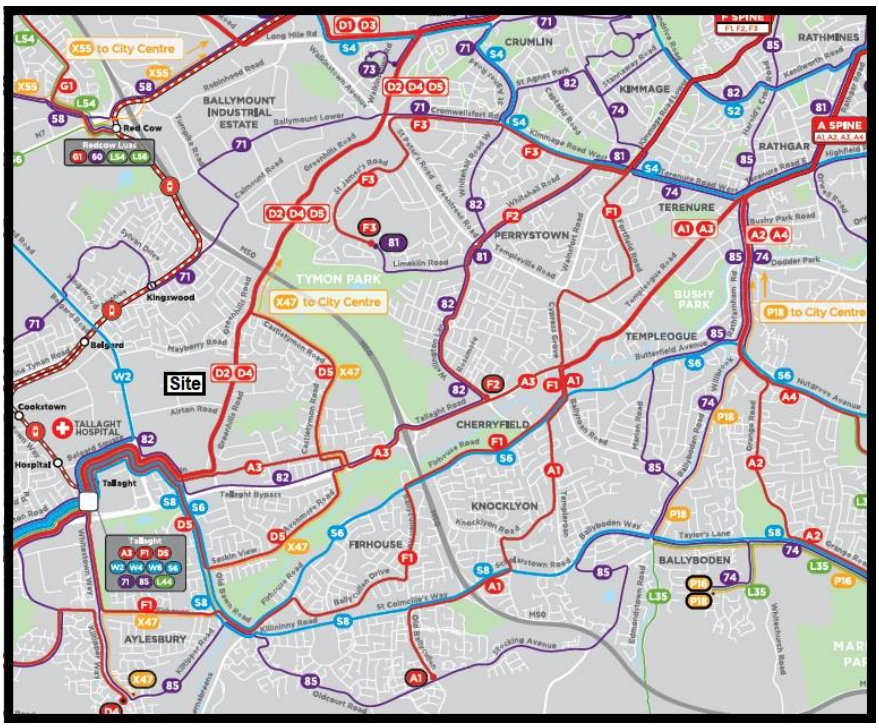
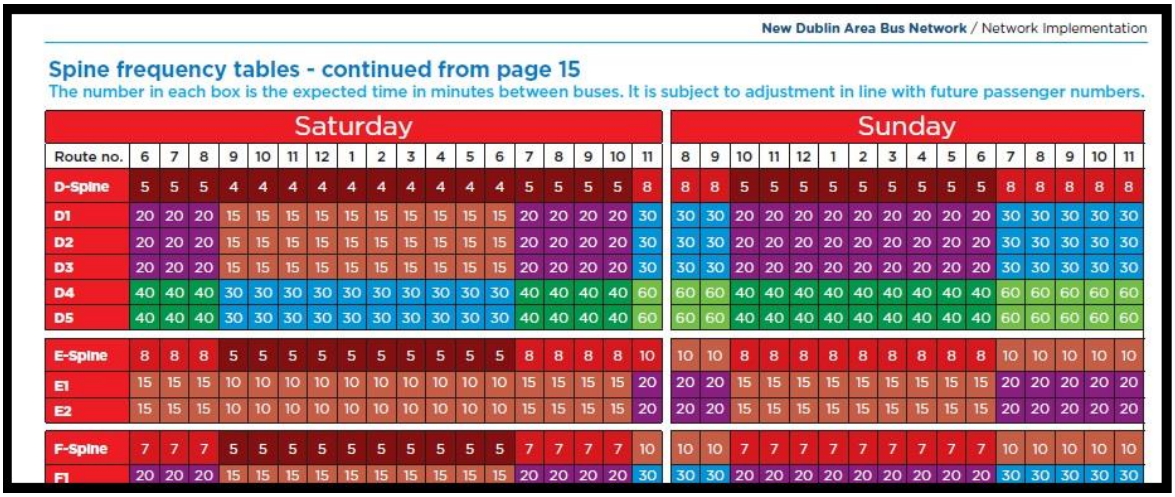


Figure 2.6 – Extract Current NTA Network Plans & Site

2.16 This future network shows that the site's accessibility to bus services will clearly be further enhanced, with a high frequency and permeable service to be provided. The site is located served by **Spine Routes D2 & D4** (Red) both running along Greenhills Rd. The expected frequency of these services as illustrated in the extract included as ***Figure 2.7*** below.



New Dublin Area Bus Network / Network Implementation

Spine frequency tables - continued from page 15

The number in each box is the expected time in minutes between buses. It is subject to adjustment in line with future passenger numbers.

	Saturday																	Sunday												
Route no.	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11
D-Spine	5	5	5	4	4	4	4	4	4	4	4	4	4	5	5	5	5	8	8	8	5	5	5	5	5	5	5	5	5	8	8	8	8	8
D1	20	20	20	15	15	15	15	15	15	15	15	15	15	20	20	20	20	30	30	30	20	20	20	20	20	20	20	20	20	30	30	30	30	30
D2	20	20	20	15	15	15	15	15	15	15	15	15	15	20	20	20	20	30	30	30	20	20	20	20	20	20	20	20	20	30	30	30	30	30
D3	20	20	20	15	15	15	15	15	15	15	15	15	15	20	20	20	20	30	30	30	20	20	20	20	20	20	20	20	20	30	30	30	30	30
D4	40	40	40	30	30	30	30	30	30	30	30	30	30	40	40	40	40	60	60	60	40	40	40	40	40	40	40	40	40	60	60	60	60	60
D5	40	40	40	30	30	30	30	30	30	30	30	30	30	40	40	40	40	60	60	60	40	40	40	40	40	40	40	40	40	60	60	60	60	60
E-Spine	8	8	8	5	5	5	5	5	5	5	5	5	5	8	8	8	8	10	10	10	8	8	8	8	8	8	8	8	8	10	10	10	10	10
E1	15	15	15	10	10	10	10	10	10	10	10	10	10	15	15	15	15	20	20	20	15	15	15	15	15	15	15	15	15	20	20	20	20	20
E2	15	15	15	10	10	10	10	10	10	10	10	10	10	15	15	15	15	20	20	20	15	15	15	15	15	15	15	15	15	20	20	20	20	20
F-Spine	7	7	7	5	5	5	5	5	5	5	5	5	5	7	7	7	7	10	10	10	7	7	7	7	7	7	7	7	7	10	10	10	10	10
F1	20	20	20	15	15	15	15	15	15	15	15	15	15	20	20	20	20	30	30	30	20	20	20	20	20	20	20	20	20	30	30	30	30	30

Figure 2.7 – Extract NTA Core Bus Network GDA, Spine Route Frequencies

2.17 The site is therefore also ideally placed in terms of future high-frequency bus availability, based on the NTAs published Plans with significant improved services.

2.18 In terms of **Bus Passenger Capacity**, a typical current Dublin Bus double decker bus have a capacity to accommodate ~91 passengers. However, it should be noted Dublin Bus are introducing new hybrid buses, some of which have extra capacity e.g. the new Wrightbus StreetDeck HEV 96 double-decker buses. Our assessment has been based on the 91 passenger bus capacity for robustness.

3.0 BUS & LUAS USE PREDICTIONS, CAPACITY & DEMAND

3.1 We have used the CSO Local Small Area Mapping to establish the proportion of Bus & LUAS Users within the local area surrounding the site in order to estimate the additional demand for services, utilising real data rather than estimations of modal split.

3.2 An annotated extract from the CSO Database Small Area Mapping used for this purpose is included below as ***Figure 3.1.***

Figure 3.1 – Collated CSO Local Area Data

3.3 We have extracted information from the Census Data for these local small statistical areas to calculate the demand for bus & LUAS during the busy weekday AM Commuter period, and this is illustrated below as ***Table 3.1***.

Table 3.1 – Bus & LUAS Demand Based on CSO Data & Expected Residential Population

CSO Small Area Ref. Above	Total Population	Total Commuters Age 5+ to Work, School or College	No. of Bus Users	No. of LUAS Users	No. of Commuters Leaving Home 7-9am to Work/Schl or College
1	355	239	18	22	178
2	270	155	14	2	112
3	277	191	25	11	108
4	750	271	11	23	123
5	232	154	11	15	96
6	283	182	18	17	126
7	235	144	9	9	91
8	225	148	7	11	125
9	327	193	25	6	145
10	317	194	37	7	141
11	315	149	27	1	101
12	251	140	21	0	101
13	217	121	12	2	79
14	277	148	7	2	103
15	379	208	21	2	148
16	314	149	24	1	98
17	212	162	33	2	109
18	309	199	34	21	99
19	196	107	17	2	67
20	606	337	49	63	178
21	356	206	7	29	147
22	245	145	4	29	95
23	377	211	9	29	138
24	236	152	13	26	113
25	276	173	10	19	111
26	213	137	9	14	91
27	245	177	17	18	116
28	382	253	26	9	164
29	253	170	20	7	114
30	197	97	14	2	58
Totals	9127	5312	549	401	3475

CALCULATION OF BUS & LUAS DEMAND DUE TO DEVELOPMENT BASED ON LOCAL CSO DATA	
Percentage of Total Population in Local Area Commuting =	58.2%
Percentage of Total Population in Local Area Commuting By Bus =	6.0%
Percentage of Total Population in Local Area Commuting By LUAS =	4.4%
Percentage of Commuters in Local Area Leaving Home 7-9am =	65.4%

781	Residents within Occupied Proposed Development, based on Bed Spaces/Census
47	Bus Commuters (Consistent with the Local Area Census Data)
31	**Total Additional Bus Commuters Between 7am and 9am**
34	LUAS Commuters (Consistent with the Local Area Census Data)
22	**Total Additional LUAS Commuters Between 7am and 9am**

BUS/LUAS CAPACITY & DEMAND

3.4 Based on existing travel patterns in the locality, the above confirms that the Development will create an additional worst case demand for approximately 31 seats on bus services between 7am and 9am.

3.5 There will be an additional worst case demand for 22 LUAS seats on Red Line Services between 7am and 9am. Of course, it is not possible to predict the commuting destination of future residents for either Bus or LUAS.

3.6 The predicted increased service demand should be considered in terms of the capacity locally, for both Buses and LUAS.

3.7 In terms of **Buses**, the demand is illustrated in ***Table 3.2*** below - with c4,368 bus seats available during the weekday AM commuter peak period, passing adjacent the site. There are a similar number of services and seats during the weekday PM Peak period 4pm-6pm, however demand is greater during the weekday AM Peak (due to 'peak spreading' that occurs in the evenings, with a staggered departure time from work or College locations).

Table 3.2; Total Peak Demand for Bus Seats Due to Development

Details	Buses	Seats
Total Number of Buses (7-9am) All Routes	48	4368
Total Number of Buses (7-9am) Routes Via City Centre	36	3276
Total Demand for Seats Created by Proposed Development (7-9am)		31
Percentage Impact Upon Existing Services within Catchment (All Routes)		0.7
Percentage Impact Upon Existing Services within Catchment (Routes Via City)		0.9

3.8 The resulting increased demand for bus seats is less than 1% of the total available seat capacity locally. This is considered to be a low impact, and we believe it can be accommodated within the current service provision.

3.9 In terms of **LUAS** services at Belgard, the demand associated with the development is illustrated in ***Table 3.3*** below, and this has then been used to calculate the demand and impact upon services.

Table 3.3; Total Peak Demand for LUAS Seats at Belgard Due to Development

LUAS Capacity/Demand Details	No. 7-9am	People Capacity
LUAS Commuter Services Leaving 7-9am*	20	408
Total Approx People Capacity 7-9am	8160	
Total Demand Created by Proposed Development	22	
% Additional Demand Created	0.28%	

*****_Based on LUAS Frequency of 1 Tram Every 6.5 minutes_

3.10 The proposed development will therefore also create an additional demand for LUAS seats, equating to 0.28% of the current carrying capacity. This is also considered to be a low impact and we believe it can easily be accommodated within the current service provision. In terms of assessing current service capacity, details of seat or space availability on any particular individual bus or LUAS service, at any particular bus/LUAS stop, is just not available. Service operators themselves accept cash fares, and as a result the availability of space for additional passengers cannot be accurately measured using Leap-Card software output (commercial information which is unavailable in any event).

3.11 We therefore undertook a sample survey of the space availability on buses and LUAS trams on Wednesday 6th & Thursday 7th April. We observed occupancy at Bus Stops #5008 (Belgard Sq N), #2633 (Airton Rd Northbound) and #4446 (Airton Rd Southbound), together with LUAS Occupancy of Trams serving Belgard Stop. The demand for services appeared greater on Thursday 7th April, and we have therefore used observations on the Thursday days for the purposes of this assessment.

3.12 For the **Bus Services**, we have used an annotated image of the Dublin Bus Real Time Information from the Mobile Phone App to illustrate the spaces availability on services serving each stop. The record of the observation survey for Thursday 7th April is below as ***Figures 3.2, 3.3*** and ***3.4***. The survey confirmed that the buses are running with significant seat/space availability on both days, with the maximum observed being c45 people on a double decker bus (which has a capacity for 91 persons).

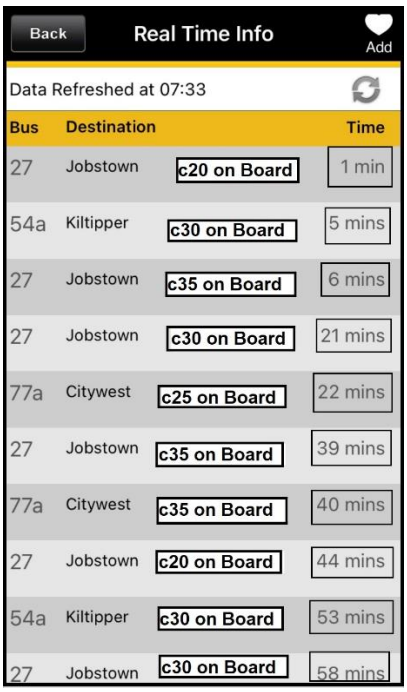


Figure 3.2 – Observed Bus Occupancy Stop #5008, Belgard Sq North; Thursday 7th April

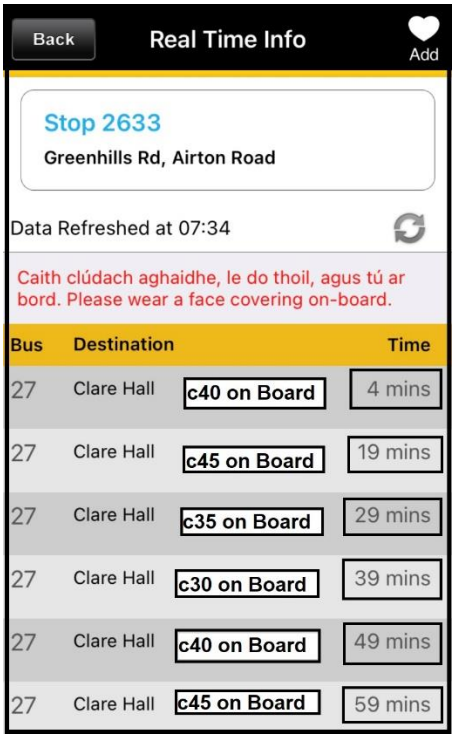


Figure 3.3 – Observed Bus Occupancy Stop #2633, Airton Rd N'bnd; Thursday 7th April

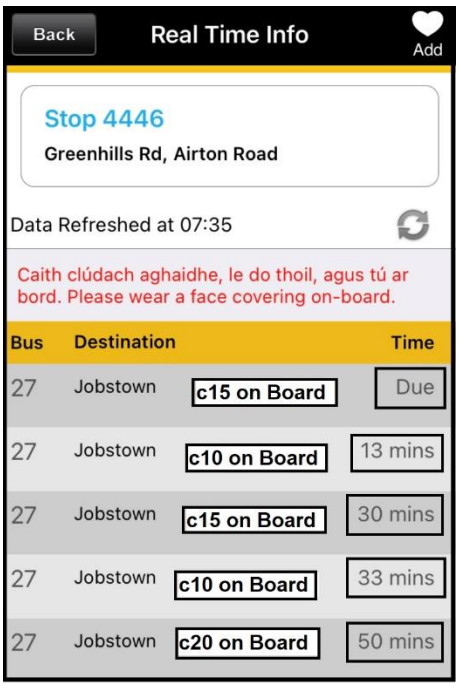


Figure 3.4 – Observed Bus Occupancy Stop #4446, Airton Rd S'bnd; Thursday 7th April

3.13 We conclude that the small additional demand for Bus services can be accommodated within the existing services, as there appears to be adequate capacity available.

3.14 In terms of **LUAS Services**, we observed Tram arrivals and departures at the Belgard LUAS Stop over the 2 days for a 1 hour period on each day (730am to 830am). During this time all waiting passengers were able to board the next available tram, and there was no observed congestion, either on the platform or on the trams themselves. In fact on the majority of the trams there were empty seats available to passengers. This would appear to confirm that there is adequate capacity in the existing service to accommodate the small additional demand created by the proposed residential development.

3.15 In future, there are additional bus services to be created as part of Bus Connects as set out within Section 2.0 above. There will also be more than adequate capacity on the further improved services locally, with 2 Spine Routes passing the site.

3.16 The analysis is based on 2016 CSO travel patterns, and whilst the development seeks to encourage modal shift, given the relatively small increase in predicted Bus and LUAS demand, any possible future changes in demand due to improved modal shift (walking, cycling, increased working from home and public transport etc) it will still have a small impact on bus capacity here.

4.0 CONCLUSIONS

4.1 NRB Consulting Engineers Ltd were appointed to address the Bus & LUAS Demand and capacity associated with a planning application for a Strategic Housing Development at Broomhill Road, Tallaght, Dublin 24.

4.2 The development consists of a 242 unit apartment scheme, including a supporting ancillary Creche, with secure off-street parking areas for bicycles and a reduced number of private cars (along with landscaping, bins storage and all associated site works). The site was previously used for industrial uses with an associated demand for transport associated with staff and visitors.

4.3 The analysis of the existing and future Bus/LUAS services has been undertaken based on an assessment methodology which includes trip generation assessment, modal split assumptions, and assignment/distribution. These assumptions have been based on real data extracted from the Central Statistics Office (CSO) 2016 Small Area Map Data, available through the CSO online mapping tool. This data was used to quantify the anticipated demand for Bus/LUAS as a result of the proposed development in this particular location, utilising current local modal shift patterns & statistics.

4.4 This Report contains details of current and future Bus & LUAS Services and Bus & LUAS Capacity serving the site and the local area. It also includes details of seat/space availability of existing services locally, based on an observation survey

4.5 The assessment confirms that the completion and full occupation of the development will result in an increased demand for Bus/LUAS seats, with an additional 31 Bus customers and 22 LUAS customers during the weekday AM Commuter Peak 7-9am (and less during the PM Commuter peak period). This represents a total of approximately 0.7% of the Bus and less than 0.28% of LUAS seating capacity available locally during this AM Period.

4.6 We conclude that the additional demand for Bus/LUAS trips as a result of the proposed development can be accommodated on the existing and future improved services in the area without any significant or noticeable effect.

4.7 This Report contains an assessment of demand & current capacity, however service providers are commercial in nature, running their businesses based on existing demand, rather than future demand. Transport services are provided based on real demand rather than potential demand. If there is an increased demand for services, or indeed if there is a deficit in a service provision, Operators generally react to improve facilities if it makes commercial sense to do so. More customers means more revenue generated.

APPENDIX A

A	Bus Timetable Information *(Correct at Time of Collating Data & Writing Report)*

A A A

27

Buses from/to
From Clare Hall To Jobstown
Operative Date: 31/08/2020
Version: TT 20.1

From Clare Hall Towards Jobstown

Halla Chláir , Timpeallán Ard Aidhin , Fionnradharc , Cé Éidin , An Carnán , Crois Bhaile Bhailcín , Tamhlacht (An Chearnóg) , Baile na Miontáin

Buses leave terminus at:

Route Variations
c To city centre
r From Ringsend to Jobstown

Monday - Friday				Saturday				Sunday			
05:15	05:30r	05:45	05:55r	05:30	06:00	06:30	07:00	08:00	08:30	09:00	09:20
06:00	06:10	06:15r	06:20	07:30	08:00	08:20	08:40	09:40	10:00	10:20	10:40
06:30	06:30r	06:40	06:50	09:00	09:10	09:20	09:30	11:00	11:15	11:30	11:45
then every 10 minutes until 1930				then every 10 minutes until 1900				then every 15 minutes until 1900			
19:50	20:10	20:30	20:50	19:20	19:40	20:00	20:20	19:20	19:40	20:00	20:20
21:10	21:30	21:50	22:10	20:40	21:00	21:20	21:40	20:40	21:00	21:20	21:40
22:30	22:50	23:10c	23:30c	22:00	22:20	22:40	23:00	22:00	22:20	22:40	23:00
				23:30c				23:30c			

Clare Hall » 16mins » Artane Roundabout » 14mins » Fairview » 10mins » Eden Quay » 14mins » Dolphin's Barn Cross » 17mins » Walkinstown Cross (The Kestrel) » 13mins » Tallaght (The Square) » 12mins » Jobstown

All times are off peak estimates

From Jobstown Towards Clare Hall

Baile na Miontáin , Tamhlacht (An Chearnóg) , Crois Bhaile Bhailcín , An Carnán , Cé Éidin , Fionnradharc , Timpeallán Ard Aidhin , Halla Chláir

Buses leave terminus at:

Route Variations
v Via Crumlin Village to city centre
e From Eden Quay to Clare Hall
c To city centre
t From Jobstown via Cookstown Rd., Kingswood Heights, Belgard Rd., Castletymon Rd. and Tallaght Community College during term time only

Monday - Friday				Saturday				Sunday			
05:15c	05:35	05:55v	06:00	05:30	06:00	06:30	07:00	08:00	08:30	09:00	09:20
06:05e	06:10	06:20	06:30	07:30	08:00	08:20	08:40	09:40	10:00	10:20	10:40
06:40	06:50	07:00	07:10	09:00	09:10	09:20	09:30	11:00	11:15	11:30	11:45
07:20	07:30	07:40	07:45t	then every 10 minutes until 1900				then every 15 minutes until 1900			
07:50t	07:50	08:00	08:10	19:20	19:40	20:00	20:20	19:20	19:40	20:00	20:20
then every 10 minutes until 1930				20:40	21:00	21:20	21:40	20:40	21:00	21:20	21:40
19:50	20:10	20:30	20:50	22:00	22:20	22:40	23:00c	22:00	22:20	22:40	23:00c
21:10	21:30	21:50	22:10	23:30c				23:30c			
22:30	22:50c	23:10c	23:30c								

Jobstown » 12mins » Tallaght (The Square) » 13mins » Walkinstown Cross (The Kestrel) » 17mins » Dolphin's Barn Cross » 14mins » Eden Quay » 10mins » Fairview » 14mins » Artane Roundabout » 16mins » Clare Hall

All times are off peak estimates

Fare Stages

89	11	Clare Hall	
88	12	Malahide Rd. (N32)	
87	13	Priorswood Rd.	
86	14	Glin Rd. / Greencastle Rd.	
85	15	Greencastle Rd. / Greencastle Ave.	
84	16	Brookville Rd. (Ascal Measc)	
83	17	St. Brigid's Rd. (Roundabout)	
82	18	Malahide Rd. (Killester Park)	
81	19	Malahide Rd. (Donnycarney Church)	
80	20	Malahide Rd. (Griffith Ave.)	
79	21	Fairview (St. Joseph's School)	
78	22	Annesley Bridge Rd.	
77	23	Newcomen Bridge	
71	29	Cork St. (Donore Ave.)	
70	30	Cork St. (Coombe Hospital)	
69	31	Dolphin's Barn Cross	
68	32	Crumlin Rd. (Loreto Convent)	
67	33	Crumlin Rd. (Bangor Drive)	
66	34	Crumlin Rd. (Cooley Rd.)	
65	35	Drimnagh Rd. (Halfway House)	
64	36	Walkinstown Cross (The Kestrel)	
63	37	Greenhills Rd. (O'Malley's)	
62	38	Greenhills Rd. (Green Park)	
61	39	Greenhills Rd. (Ballymount Rd. Upr.)	
60	40	Greenhills Rd. (Cuckoo's Nest)	
59	41	Greenhills Rd. (Mayberry Rd.)	

76	24	Connolly Rail Station	58	42	Greenhills Rd. (Airton Rd.)
75	25	Eden Quay	57	43	Tallaght (The Square)
74	26	Werburgh St. / Lord Edward St.	56	44	Blessington Rd. (Raheen Rd.)
73	27	Kevin St. (Patrick St.) / Patrick St.	55	45	Jobstown
72	28	Cork St. (Ardee St.)			

Customer Comment Desk: (01) 8734222
Phone lines open: Monday to Saturday 08:30hrs – 18:00hrs (except public holidays)

A A A

54a

Buses from/to
From Pearse St.To Ellensborough / Kiltipper Way
Operative Date: 20/01/2019
Version: TT 9.1

From Pearse Street Towards Ellensborough / Kiltipper Way

Sráid an Phiarsaigh , Faiche Chrois Araild , Tobair na Spá , Seanbhóthar Bhaile Coimín , Buirg Eibhlin /An Bealach Choill Tobair

Buses leave terminus at:

Monday-Friday				Saturday				Sunday			
06:30	07:00	07:30	08:00	07:15	08:15	09:15	09:45	10:00	11:00	12:00	13:00
08:30	09:00	09:30	10:00	10:15	10:45	11:15	11:45	14:00	15:00	16:00	17:00
10:30	11:00	11:30	12:00	12:15	12:45	13:15	13:45	18:00	19:00	20:00	21:00
12:30	13:00	13:30	14:00	14:15	14:45	15:15	15:45	22:00	23:00		
14:30	15:00	15:30	16:00	16:15	16:45	17:15	17:45				
16:30	17:00	17:30	17:45	18:15	19:00	19:45	21:00				
18:00	18:30	19:00	19:30	22:15	23:30						
20:00	20:30	21:10	22:20								
23:30											

Pearse Street >> 20mins >> Harold's Cross Green >> 20mins >> Spawell >> 20mins >> Old Blesssington Rd. (The Square) >> 10mins >> Ellensborough / Kiltipper Way

All times are off peak estimates

From Ellensborough / Kiltipper Way Towards Pearse Street

Buirg Eibhlin /An Bealach Choill Tobair , Seanbhóthar Bhaile Coimín , Tobair na Spá , Faiche Chrois Araild , Sráid an Phiarsaigh

Buses leave terminus at:

Monday-Friday				Saturday				Sunday			
06:30	07:00	07:20	07:40	07:30	08:30	09:30	10:30	09:00	10:00	11:00	12:00
08:00	08:30	09:00	09:30	11:00	11:30	12:00	12:30	13:00	14:00	15:00	16:00
10:00	10:30	11:00	11:30	13:00	13:30	14:00	14:30	17:00	18:00	19:00	20:00
12:00	12:30	13:00	13:30	15:00	15:30	16:00	16:30	21:00	22:00	23:00	
14:00	14:30	15:00	15:30	17:00	17:30	18:00	18:30				
16:00	16:30	17:00	17:30	19:15	20:00	21:00	22:15				
18:00	18:30	19:00	19:30	23:30							
20:00	20:30	21:00	21:30								
22:30	23:30										

Ellensborough / Kiltipper Way >> 10mins >> Old Blesssington Rd. (The Square) >> 20mins >> Spawell >> 20mins >> Harold's Cross Green >> 20mins >> Pearse Street

All times are off peak estimates

Fare Stages

25 75 Pearse Street
26 74 Lord Edward St. / Nicholas St.
27 73 Patrick St. (Dean St.)
28 72 Clanbrassil St. (Lombard St. West)
29 71 Leonard's Corner
30 70 Harold's Cross Green West
31 69 Lwr. Kimmage Rd. (Sundrive Rd.)
32 68 Lwr. Kimmage Rd. (Ravensdale Park)
33 67 Kimmage Cross Rd.
34 66 Wainsfort Rd.
35 65 Fortfield Park
36 64 Willington Rd. Roundabout
37 63 Wellington Lane (St. Judes GAA Club)
38 62 Tallaght Rd. (Spawell Bridge)
39 61 Tallaght Rd. (Spawell Golf Range)
40 60 Tallaght Rd. (Firhouse Bridge)
41 59 Tallaght Rd. (Balrothery / Castle Park)
42 58 Tallaght Rd. (Newtown Park)
43 57 Tallaght Village
44 56 Old Blesssington Rd. (The Square)
45 55 Blessington Rd. (Raheen)
46 54 Killinarden (Community Centre)
47 53 Kiltipper Way (Ellensborough/Marfield)

Customer Comment Desk: (01) 8734222
Phone lines open: Monday to Saturday 08:30hrs – 18:00hrs (except public holidays)

A A A

65

Buses from/to
From Poolbeg St. To Blessington / Ballymore
Operative Date: 31/08/2020
Version: TT 20.1

From Poolbeg St. Towards Blessington / Ballymore

Sráid an Phoill Bhig , Sráid Camden , Ráth Maonais , Tír an Iúir , Teach Mealóg , Tamhlacht (An Chearnóg) , Crois an tSéipéil , Baile Coimín / Baile Mór

Buses leave terminus at:

Monday to Friday				Saturday				Sunday			
05:30k	05:40b	06:40	07:45b	05:40b	07:00	08:00b	09:30	08:00	09:30b	11:30b	13:30
09:30	11:30	13:30	15:30	11:30b	13:30b	15:30	17:30b	15:30b	17:30b	18:30	20:30b
15:40t	16:30	17:30k	18:30b	18:30b	20:30	21:30b	23:15	21:30b	23:15		
20:00	21:30	23:00b									

Route Variations
k To Ballyknockan
b To Ballymore
t From Poolbeg St., during term time only.
Please note on Wednesday bus departs at 12:50 instead of 15:40.

Poolbeg St. >> 10mins >> Camden St. >> 10mins >> Rathmines >> 15mins >> Terenure >> 15mins >> Templeogue >> 15mins >> Tallaght (The Square) >> 20mins >> Cross Chapel >> 15mins >> Blessington / Ballymore

All times are off peak estimates

From Blessington / Ballymore Towards Poolbeg St.

Baile Coimín / Baile Mór , Crois an tSéipéil , Tamhlacht (An Chearnóg) , Teach Mealóg , Tír an Iúir , Ráth Maonais , Sráid Camden , Sráid an Phoill Bhig

Buses leave terminus at:

Monday to Friday				Saturday				Sunday			
06:30	07:00k	07:10b	07:30t	07:10b	08:30	09:30b	11:30	09:30	11:30b	13:30b	15:30
08:00	09:30b	11:30	13:30	13:30b	15:30b	17:00	19:00b	17:00b	19:00b	20:00	22:00b
15:30	17:30	18:30	19:45k	20:00b	22:00	23:00b	00:20	23:00b	00:20		
20:30b	21:30	23:15	00:15b								

Route Variations
k From Ballyknockan
b From Ballymore
t During term time only

Blessington / Ballymore >> 15mins >> Cross Chapel >> 20mins >> Tallaght (The Square) >> 15mins >> Templeogue >> 15mins >> Terenure >> 15mins >> Rathmines >> 10mins >> Camden St. >> 10mins >> Poolbeg St.

All times are off peak estimates

Fare Stages

25 75 Poolbeg St.	37 63 Tallaght (Cheeverstown House)
26 74 Sth. Great George's St.	38 62 Tallaght Rd. (Spawell Bridge)
27 73 Aungier St. (Bishop St.)	39 61 Tallaght Rd. (Spawell Golf Range)
28 72 Richmond St. South	40 60 Tallaght Rd. (Firhouse Bridge)
29 71 Rathmines Rd. Lwr. (Richmond Hill)	41 59 Tallaght Rd. (Balrothery)
30 70 Rathmines Rd. (Rathgar Rd.)	42 58 Tallaght Rd. (Newtown Park)
31 69 Rathgar Rd. (Frankfort Ave.)	43 57 Tallaght Village
32 68 Terenure	44 56 Old Blesssington Rd. (The Square)
33 67 Templeogue Rd. (Rathdown Park)	45 55 Blessington Rd. (Raheen)
34 66 Templeogue Rd. (Fortfield Rd.)	46 54 Jobstown
35 65 Templeogue Post Office	47 53 De Selby Quarries
36 64 Templeogue Bridge	48 52 Saggart Rd.

Fare Information

Download fare chart for further information on stages and fares.

Customer Comment Desk: (01) 8734222
Phone lines open: Monday to Saturday 08:30hrs – 18:00hrs (except public holidays)

A A A

77a

Buses from/to
From Ringsend Road To Citywest
Operative Date: 31/08/2020
Version: TT 20.1

From Ringsend Road Towards Citywest

Bóthar na Rinne , An Carnán , Crois Bhaile Bhailcín , Baile an Ridire , Tamhlacht (An Chearnóg) , Iarthar na Cathrach

Buses leave terminus at:

Monday to Friday				Saturday				Sunday			
05:40	06:00	06:20	06:40	05:55	06:30	07:00	07:30	07:00	07:30	08:00	08:30
07:00	07:20	07:40	08:00	08:00	08:20	08:40	09:00	09:00	09:30	10:00	10:30
08:20	08:40	09:00	09:20	09:20	09:40	10:00	10:20	11:00	11:30	12:00	12:30
09:40	10:00	10:20	10:40	10:40	11:00	11:20	11:40	13:00	13:30	14:00	14:30
11:00	11:20	11:40	12:00	12:00	12:20	12:40	13:00	15:00	15:30	16:00	16:30
12:20	12:40	13:00	13:20	13:20	13:40	14:00	14:20	17:00	17:30	18:00	18:30
13:40	14:00	14:20	14:40	14:40	15:00	15:20	15:40	19:00	19:30	20:00	20:30
15:00	15:20	15:40	16:00	16:00	16:20	16:40	17:00	21:00	21:30	22:00	22:30
16:20	16:40	16:55	17:10	17:20	17:40	18:00	18:30	23:00	23:30		
17:25	17:40	17:55	18:10	19:00	19:30	20:00	20:30				
18:30	18:50	19:10	19:30	21:00	21:30	22:00	22:30				
20:00	20:30	21:00	21:30	23:00	23:25						
22:00	22:30	23:00	23:25								

Ringsend Road >> 22mins >> Dolphin's Barn >> 22mins >> Walkinstown Cross >> 15mins >> Balrothery >> 15mins >> Tallaght (The Square) >> 12mins >> Citywest

All times are off peak estimates

From Citywest Towards Ringsend Road

Iarthar na Cathrach , Tamhlacht (An Chearnóg) , Baile an Ridire , Crois Bhaile Bhailcín , An Carnán , Bóthar na Rinne

Buses leave terminus at:

Monday to Friday				Saturday				Sunday			
06:00	06:20	06:40	07:00	06:20	06:50	07:20	07:50	08:00	08:30	09:00	09:30
07:20	07:30	07:30t	07:40	08:10	08:30	08:50	09:10	10:00	10:30	11:00	11:30
07:50	08:00	08:10	08:20	09:30	09:50	10:10	10:30	12:00	12:30	13:00	13:30
08:30	08:40	09:00	09:20	10:50	11:10	11:30	11:50	14:00	14:30	15:00	15:30
09:40	10:00	10:20	10:40	12:10	12:30	12:50	13:10	16:00	16:30	17:00	17:30
11:00	11:20	11:40	12:00	13:30	13:50	14:10	14:30	18:00	18:30	19:00	19:30
12:20	12:40	13:00	13:20	14:50	15:10	15:30	15:50	20:00	20:30	21:00	21:30
13:40	14:00	14:20	14:40	16:10	16:30	16:50	17:10	22:00	22:30	23:00	23:30
15:00	15:20	15:40	15:55	17:30	17:50	18:10	18:30				
16:10	16:20	16:30	16:45	18:50	19:20	19:50	20:20				
17:00	17:15	17:30	17:45	20:50	21:20	21:50	22:20				
18:00	18:20	18:40	19:00	22:50	23:20						
19:30	20:00	20:30	21:00								
21:30	22:00	22:30	23:00								
23:30											

Route Variations
t From Kilinarden Community School via Mayberry Rd., St. Peter's Rd., and St. Paul's school Limekiln Ave during term time only

Citywest >> 12mins >> Tallaght (The Square) >> 15mins >> Balrothery >> 15mins >> Walkinstown Cross >> 22mins >> Dolphin's Barn >> 22mins >> Ringsend Road

All times are off peak estimates

Fare Stages

22 78 Ringsend Rd. (Barrow St.)
23 77 Pearse St. (Macken St.)
24 76 Pearse St. (Lombard St.)
37 63 Greenhills Rd. (O'Malley's)
38 62 Greenhills Rd. (Green Park)
39 61 Greenhills Rd. (Ballymount Rd. Upr.)

25	75	College St. / Townsend St.	40	60	Greenhills Rd. (Cuckoo's Nest)
26	74	Werburgh St. / Lord Edward St.	41	59	Tymon Park
27	73	Kevin St. (Patrick St.) / Patrick St.	42	58	Castle Lawns
28	72	Cork St. (Ardee St.)	43	57	Balrothery (Castle Park)
29	71	Cork St. (Donore Ave.)	44	56	Seskin View Rd.
30	70	Cork St. (Coombe Hospital)	45	55	Old Bawn Rd.
31	69	Dolphin's Barn Cross	46	54	Tallaght (The Square)
32	68	Crumlin Rd. (Loreto Convent)	47	53	Blessington Rd. (Raheen)
33	67	Crumlin Rd. (Bangor Drive)	48	52	Jobstown
34	66	Crumlin Rd. (Cooley Rd.)	49	51	De Selby Quarries
35	65	Drimnagh Rd. (Halfway House)	50	50	Citywest
36	64	Walkinstown Cross (The Kestrel)			

Customer Comment Desk: (01) 8734222
Phone lines open: Monday to Saturday 08:30hrs – 18:00hrs (except public holidays)

Tallaght - Dun Laoghaire (via Dundrum)	75	
Tallaght - Dun Laoghaire (via Sandyford Ind Est)	75A	Monday to Friday

Valid from 13th of Marc 2022

Service Number	75	75	75A	75	75A	75	75A	75A	75	75	75	75	75	75	75	75	75	75
The Square Tallaght (4342)	05:35	06:00	**06:05**	06:30	**06:50**	07:00	**07:15**	**07:50**	08:30	09:10	09:45	10:15	10:45	11:15	11:45	12:15	12:45	13:15
Old Bawn Centre (2540)	05:45	06:12	**06:17**	06:42	**07:02**	07:14	**07:27**	**08:02**	08:45	09:23	09:58	10:28	10:58	11:28	11:58	12:28	13:00	13:30
Green Acre Court (2548)	05:50	06:17	**06:23**	06:48	**07:08**	07:22	**07:33**	**08:08**	08:53	09:30	10:05	10:35	11:05	11:35	12:05	12:35	13:07	13:37
Rathfarnham Wood (1306)	05:56	06:23	**06:30**	06:56	**07:17**	07:33	**07:42**	**08:17**	09:03	09:40	10:15	10:45	11:15	11:45	12:15	12:45	13:17	13:47
Ballinteer Comm Sch (2853)	06:01	06:29	**06:36**	07:03	**07:24**	07:41	**07:49**	**08:24**	09:10	09:47	10:22	10:52	11:22	11:52	12:22	12:53	13:25	13:55
Ballinteer Avenue (2858)	06:04	06:32	**06:40**	07:07	**07:28**	07:45	**07:53**	**08:28**	09:14	09:51	10:26	10:56	11:26	11:56	12:26	12:57	13:29	13:59
Dundrum Luas (2866)	06:11	06:39	**06:47**	07:14	**07:35**	07:56	**08:00**	**08:35**	09:23	10:00	10:35	11:05	11:35	12:05	12:35	13:06	13:38	14:08
Kilmacud Avenue (2878)	06:18	06:46	**06:55**	07:25	**07:46**	08:10	**08:11**	**08:46**	09:32	10:09	10:44	11:14	11:44	12:14	12:44	13:16	13:48	14:18
Heather Road (450)	....	....	**07:03**	....	**07:54**	....	**08:19**	**08:54**	....	....	....	....	....	....	....	....	....	....
Stillorgan SC (3321)	06:22	06:50	**07:11**	07:29	**08:04**	08:16	**08:29**	**09:04**	09:37	10:14	10:49	11:19	11:49	12:19	12:49	13:21	13:53	14:23
Foxrock Church (2017)	06:28	06:57	**07:18**	07:38	**08:17**	08:28	**08:42**	**09:17**	09:46	10:23	10:58	11:28	11:58	12:28	12:58	13:31	14:03	14:33
Glenageary Road (4567)	06:33	07:03	**07:25**	07:46	**08:25**	08:40	**08:50**	**09:25**	09:53	10:30	11:05	11:35	12:05	12:35	13:05	13:38	14:12	14:42
Dun Laoghaire Stn (2039)	06:39	07:09	**07:32**	07:53	**08:34**	08:49	**08:59**	**09:34**	10:02	10:39	11:14	11:44	12:14	12:44	13:14	13:47	14:21	14:51

Service Number	75	75	75	75	75	75	75A	75	75	75	75	75	75	75	75	75	75	75
The Square Tallaght (4342)	13:45	14:15	14:45	15:15	15:35	16:05	**16:20**	17:00	17:40	18:10	18:40	19:10	19:40	20:20	21:00	21:30	22:05	22:35
Old Bawn Centre (2540)	14:00	14:32	15:02	15:32	15:52	16:22	**16:37**	17:17	17:58	18:26	18:54	19:24	19:54	20:32	21:11	21:41	22:16	22:44
Green Acre Court (2548)	14:07	14:39	15:09	15:39	15:59	16:29	**16:44**	17:24	18:04	18:32	19:00	19:30	20:00	20:38	21:16	21:46	22:21	22:48
Rathfarnham Wood (1306)	14:17	14:49	15:19	15:49	16:09	16:39	**16:54**	17:34	18:17	18:42	19:10	19:38	20:08	20:46	21:23	21:52	22:27	22:54
Ballinteer Comm Sch (2853)	14:25	14:57	15:27	15:57	16:17	16:47	**17:02**	17:42	18:24	18:49	19:16	19:44	20:14	20:52	21:29	21:58	22:32	22:59
Ballinteer Avenue (2858)	14:29	15:02	15:32	16:02	16:22	16:52	**17:07**	17:47	18:28	18:53	19:20	19:48	20:17	20:55	21:32	22:01	22:35	23:02
Dundrum Luas (2866)	14:38	15:11	15:41	16:11	16:31	17:01	**17:16**	17:56	18:36	19:01	19:27	19:55	20:24	21:02	21:39	22:08	22:41	23:08
Kilmacud Avenue (2878)	14:48	15:21	15:51	16:21	16:41	17:11	**17:26**	18:06	18:46	19:11	19:36	20:04	20:32	21:10	21:47	22:16	22:49	23:16
Heather Road (450)	....	....	....	....	....	....	**17:35**	....	....	....	....	....	....	....	....	....	....	....
Stillorgan SC (3321)	14:53	15:26	15:56	16:26	16:46	17:16	**17:45**	18:11	18:51	19:16	19:40	20:08	20:36	21:14	21:51	22:20	22:53	23:20
Foxrock Church (2017)	15:03	15:36	16:06	16:36	16:56	17:26	**17:55**	18:21	19:02	19:25	19:49	20:17	20:45	21:21	21:58	22:27	22:58	23:25
Glenageary Road (4567)	15:12	15:45	16:15	16:45	17:05	17:35	**18:04**	18:30	19:09	19:31	19:54	20:22	20:50	21:26	22:03	22:31	23:02	23:29
Dun Laoghaire Stn (2039)	15:21	15:54	16:24	16:54	17:14	17:44	**18:13**	18:39	19:16	19:38	20:01	20:28	20:56	21:32	22:09	22:36	23:07	23:34

Service Number	75
The Square Tallaght (4342)	23:05
Old Bawn Centre (2540)	23:13
Green Acre Court (2548)	23:18
Rathfarnham Wood (1306)	23:24
Ballinteer Comm Sch (2853)	23:29
Ballinteer Avenue (2858)	23:32
Dundrum Luas (2866)	23:38
Kilmacud Avenue (2878)	23:44
Heather Road (450)	....
Stillorgan SC (3321)	23:48
Foxrock Church (2017)	23:53
Glenageary Road (4567)	23:57
Dun Laoghaire Stn (2039)	24:02

TFI TRANSPORT FOR IRELAND

Go-Ahead Ireland

Dun Laoghaire - Tallaght (via Dundrum)	75	
Dun Laoghaire - Tallaght (via Sandyford Ind Est)	75A	Monday to Friday

Valid from 13th of Marc 2022

Service Number	75	75	75	75	75A	75	75A	75	75	75	75	75	75	75	75	75	75	75
Dun Laoghaire Stn (2039)	05:35	05:55	06:25	06:45	**06:50**	07:20	**07:35**	08:15	08:55	09:25	09:55	10:25	10:55	11:25	11:55	12:25	12:55	13:25
Kill Avenue (4568)	05:41	06:01	06:31	06:52	**06:57**	07:27	**07:46**	08:26	09:06	09:36	10:06	10:36	11:05	11:35	12:05	12:36	13:06	13:36
Foxrock Church (2060)	05:46	06:06	06:37	06:59	**07:04**	07:34	**07:55**	08:37	09:14	09:44	10:14	10:44	11:14	11:45	12:15	12:46	13:16	13:46
Stillorgan SC (3322)	05:50	06:10	06:43	07:06	**07:12**	07:42	**08:03**	08:47	09:24	09:54	10:24	10:54	11:22	11:53	12:23	12:55	13:25	13:55
Heather Road (450)	....	....	....	....	**07:22**	....	**08:16**	....	....	....	....	....	....	....	....	....	....	....
Marsham Court (7393)	05:52	06:12	06:45	07:09	**07:27**	07:46	**08:22**	08:54	09:28	09:58	10:28	10:58	11:26	11:57	12:27	12:59	13:29	13:59
The Rise (4397)	06:03	06:23	06:58	07:25	**07:42**	08:01	**08:39**	09:09	09:42	10:12	10:42	11:12	11:41	12:13	12:43	13:15	13:45	14:15
Ballinteer Comm Sch (2852)	06:06	06:26	07:01	07:29	**07:46**	08:05	**08:44**	09:13	09:46	10:16	10:46	11:16	11:45	12:17	12:47	13:19	13:49	14:19
St Mary's School (1329)	06:12	06:32	07:09	07:38	**07:56**	08:15	**08:55**	09:22	09:54	10:24	10:54	11:24	11:53	12:26	12:56	13:27	13:57	14:27
Green Acre Court (2517)	06:18	06:38	07:16	07:47	**08:06**	08:25	**09:04**	09:30	10:02	10:32	11:02	11:32	12:02	12:35	13:05	13:36	14:06	14:36
Old Bawn Centre (2532)	06:24	06:44	07:23	07:58	**08:18**	08:37	**09:13**	09:39	10:10	10:40	11:10	11:40	12:11	12:44	13:14	13:45	14:15	14:45
Village Green (2617)	06:28	06:48	07:27	08:04	**08:26**	08:45	**09:18**	09:44	10:15	10:45	11:15	11:45	12:17	12:49	13:19	13:50	14:20	14:50
Belgard Square South (7181)	06:35	06:55	07:35	08:13	**08:35**	08:54	**09:27**	09:54	10:25	10:55	11:25	11:55	12:27	12:59	13:29	14:00	14:30	15:00

Service Number	75	75	75	75	75	75	75A	75	75	75A	75A	75	75	75	75	75	75	75
Dun Laoghaire Stn (2039)	13:55	14:25	14:55	15:25	15:55	16:25	....	16:55	17:25	....	**18:00**	18:25	18:55	19:30	20:05	20:35	21:10	21:45
Kill Avenue (4568)	14:06	14:36	15:06	15:36	16:06	16:37	....	17:07	17:37	....	**18:12**	18:35	19:05	19:40	20:14	20:43	21:18	21:52
Foxrock Church (2060)	14:16	14:46	15:16	15:46	16:16	16:47	....	17:17	17:47	....	**18:21**	18:44	19:13	19:47	20:21	20:50	21:24	21:57
Stillorgan SC (3322)	14:25	14:55	15:25	15:55	16:25	16:56	**16:58**	17:26	17:56	**18:00**	**18:30**	18:53	19:21	19:54	20:28	20:56	21:30	22:03
Heather Road (450)	....	....	....	....	....	....	**17:08**	....	....	**18:14**	**18:40**	....	....	....	....	....	....	....
Marsham Court (7393)	14:29	14:59	15:29	15:59	16:29	17:00	**17:15**	17:30	18:00	**18:20**	**18:46**	18:57	19:24	19:57	20:31	20:59	21:33	22:06
The Rise (4397)	14:45	15:15	15:45	16:15	16:45	17:17	**17:32**	17:47	18:17	**18:37**	**19:02**	19:13	19:39	20:12	20:45	21:13	21:46	22:18
Ballinteer Comm Sch (2852)	14:49	15:19	15:49	16:19	16:49	17:21	**17:36**	17:51	18:21	**18:41**	**19:06**	19:17	19:43	20:16	20:48	21:16	21:49	22:21
St Mary's School (1329)	14:58	15:29	15:59	16:29	16:59	17:31	**17:46**	18:00	18:30	**18:51**	**19:15**	19:25	19:51	20:24	20:55	21:23	21:56	22:27
Green Acre Court (2517)	15:07	15:39	16:12	16:42	17:12	17:45	**18:00**	18:11	18:41	**19:02**	**19:23**	19:33	19:59	20:32	21:02	21:30	22:03	22:33
Old Bawn Centre (2532)	15:17	15:49	16:23	16:53	17:23	17:55	**18:10**	18:21	18:51	**19:12**	**19:33**	19:43	20:09	20:39	21:09	21:37	22:10	22:39
Village Green (2617)	15:22	15:54	16:28	16:58	17:28	18:00	**18:15**	18:25	18:55	**19:17**	**19:37**	19:47	20:13	20:43	21:13	21:41	22:14	22:43
Belgard Square South (7181)	15:32	16:04	16:38	17:08	17:38	18:10	**18:25**	18:35	19:05	**19:27**	**19:46**	19:56	20:22	20:51	21:21	21:49	22:22	22:51

Service Number	75	75	75
Dun Laoghaire Stn (2039)	22:20	22:50	23:20
Kill Avenue (4568)	22:27	22:55	23:25
Foxrock Church (2060)	22:32	23:00	23:30
Stillorgan SC (3322)	22:38	23:05	23:35
Heather Road (450)	....	....	....
Marsham Court (7393)	22:41	23:08	23:37
The Rise (4397)	22:52	23:19	23:47
Ballinteer Comm Sch (2852)	22:55	23:22	23:50
St Mary's School (1329)	23:01	23:28	23:56
Green Acre Court (2517)	23:07	23:34	24:02
Old Bawn Centre (2532)	23:13	23:40	24:08
Village Green (2617)	23:17	23:43	24:11
Belgard Square South (7181)	23:24	23:50	24:17

TFI TRANSPORT FOR IRELAND

Go-Ahead Ireland

Tallaght - Dun Laoghaire (via Dundrum)	75	
Tallaght - Dun Laoghaire (via Sandyford Ind Est)	75A	

Saturday

Valid from 13th of Marc 2022

Service Number	75A	75A	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
The Square Tallaght (4342)	06:30	07:00	07:40	08:10	08:40	09:05	09:35	09:55	10:15	10:45	11:15	11:45	12:15	12:45	13:15	13:45	14:15	14:45
Old Bawn Centre (2540)	06:40	07:10	07:50	08:22	08:53	09:18	09:48	10:08	10:29	10:59	11:29	11:59	12:31	13:01	13:31	14:01	14:31	15:01
Green Acre Court (2548)	06:46	07:16	07:56	08:28	08:59	09:24	09:54	10:14	10:35	11:05	11:35	12:05	12:37	13:07	13:37	14:07	14:37	15:07
Rathfarnham Wood (1306)	06:52	07:22	08:02	08:35	09:06	09:31	10:02	10:22	10:44	11:16	11:46	12:16	12:48	13:18	13:48	14:18	14:48	15:18
Ballinteer Comm Sch (2853)	06:58	07:28	08:08	08:41	09:12	09:37	10:09	10:29	10:52	11:24	11:54	12:24	12:57	13:27	13:57	14:27	14:57	15:27
Ballinteer Avenue (2858)	07:01	07:31	08:11	08:44	09:15	09:41	10:13	10:33	10:57	11:29	11:59	12:29	13:02	13:32	14:02	14:32	15:02	15:32
Dundrum Luas (2866)	07:06	07:36	08:18	08:51	09:22	09:49	10:21	10:41	11:05	11:37	12:07	12:37	13:13	13:43	14:13	14:43	15:13	15:43
Kilmacud Avenue (2878)	07:13	07:43	08:26	08:59	09:30	09:59	10:31	10:51	11:15	11:47	12:17	12:47	13:23	13:53	14:23	14:53	15:23	15:53
Heather Road (450)	07:18	07:48	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Stillorgan SC (3321)	07:25	07:53	08:30	09:03	09:34	10:03	10:35	10:55	11:19	11:52	12:22	12:52	13:28	13:58	14:28	14:58	15:28	15:58
Foxrock Church (2017)	07:32	08:00	08:37	09:10	09:41	10:10	10:44	11:04	11:28	12:01	12:31	13:01	13:37	14:07	14:37	15:07	15:37	16:07
Glenageary Road (4567)	07:37	08:05	08:42	09:15	09:47	10:16	10:50	11:10	11:34	12:09	12:39	13:09	13:45	14:15	14:45	15:15	15:45	16:15
Dun Laoghaire Stn (2039)	07:42	08:10	08:47	09:20	09:53	10:23	10:57	11:19	11:43	12:18	12:48	13:18	13:54	14:24	14:54	15:24	15:54	16:24

Service Number	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
The Square Tallaght (4342)	15:15	15:45	16:15	16:45	17:15	17:45	18:15	18:45	19:15	19:45	20:30	21:00	21:35	22:05	22:35	23:05
Old Bawn Centre (2540)	15:31	16:01	16:31	17:01	17:31	18:01	18:29	18:59	19:28	19:56	20:41	21:11	21:46	22:16	22:45	23:15
Green Acre Court (2548)	15:37	16:07	16:37	17:07	17:37	18:07	18:35	19:05	19:34	20:02	20:47	21:17	21:52	22:22	22:50	23:20
Rathfarnham Wood (1306)	15:48	16:18	16:47	17:17	17:47	18:17	18:43	19:13	19:42	20:10	20:55	21:24	21:58	22:28	22:56	23:26
Ballinteer Comm Sch (2853)	15:57	16:27	16:55	17:25	17:55	18:25	18:50	19:20	19:49	20:16	21:01	21:30	22:04	22:33	23:01	23:31
Ballinteer Avenue (2858)	16:02	16:32	16:59	17:29	17:59	18:29	18:54	19:24	19:53	20:20	21:05	21:34	22:08	22:36	23:04	23:34
Dundrum Luas (2866)	16:13	16:43	17:08	17:38	18:08	18:38	19:03	19:32	20:00	20:27	21:12	21:40	22:14	22:42	23:09	23:39
Kilmacud Avenue (2878)	16:23	16:53	17:18	17:48	18:18	18:48	19:11	19:40	20:08	20:35	21:20	21:47	22:21	22:49	23:16	23:46
Heather Road (450)	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Stillorgan SC (3321)	16:28	16:58	17:23	17:53	18:23	18:53	19:15	19:44	20:12	20:39	21:24	21:51	22:24	22:52	23:19	23:49
Foxrock Church (2017)	16:37	17:07	17:32	18:02	18:32	19:02	19:22	19:51	20:19	20:46	21:31	21:56	22:29	22:57	23:24	23:54
Glenageary Road (4567)	16:45	17:15	17:40	18:10	18:40	19:10	19:29	19:57	20:25	20:52	21:37	22:02	22:35	23:03	23:29	23:59
Dun Laoghaire Stn (2039)	16:54	17:24	17:49	18:19	18:49	19:19	19:36	20:03	20:31	20:58	21:43	22:08	22:41	23:09	23:35	24:05

TFI TRANSPORT FOR IRELAND

Go-Ahead Ireland

Dun Laoghaire - Tallaght (via Dundrum)	75
Dun Laoghaire - Tallaght (via Sandyford Ind Est)	75A

Saturday

Valid from 13th of Marc 2022

Service Number	75A	75	75A	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
Dun Laoghaire Stn (2039)	06:42	07:20	07:42	08:20	08:45	09:15	09:45	10:10	10:35	11:05	11:25	11:55	12:25	12:55	13:25	13:55	14:25	14:55
Kill Avenue (4568)	06:48	07:26	07:48	08:27	08:53	09:23	09:53	10:19	10:45	11:15	11:35	12:06	12:36	13:06	13:36	14:06	14:36	15:06
Foxrock Church (2060)	06:53	07:31	07:53	08:33	09:00	09:30	10:00	10:26	10:53	11:23	11:43	12:14	12:44	13:14	13:44	14:14	14:44	15:14
Stillorgan SC (3322)	06:58	07:36	07:58	08:39	09:07	09:38	10:08	10:34	11:02	11:32	11:52	12:23	12:53	13:23	13:53	14:23	14:53	15:23
Heather Road (450)	07:04	....	08:04	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Marsham Court (7393)	07:08	07:39	08:08	08:42	09:10	09:41	10:11	10:37	11:07	11:37	11:57	12:27	12:57	13:27	13:57	14:27	14:57	15:27
The Rise (4397)	07:19	07:50	08:19	08:54	09:23	09:54	10:24	10:50	11:21	11:51	12:11	12:42	13:12	13:42	14:12	14:42	15:12	15:42
Ballinteer Comm Sch (2852)	07:22	07:53	08:22	08:57	09:26	09:57	10:27	10:54	11:25	11:55	12:15	12:46	13:16	13:46	14:16	14:46	15:16	15:46
St Mary's School (1329)	07:28	07:59	08:28	09:03	09:32	10:05	10:35	11:02	11:33	12:03	12:23	12:55	13:25	13:55	14:25	14:55	15:25	15:55
Green Acre Court (2517)	07:34	08:05	08:34	09:09	09:38	10:12	10:42	11:09	11:42	12:12	12:32	13:04	13:34	14:04	14:34	15:04	15:34	16:04
Old Bawn Centre (2532)	07:40	08:11	08:40	09:16	09:46	10:20	10:50	11:17	11:50	12:20	12:40	13:13	13:43	14:13	14:43	15:13	15:43	16:13
Village Green (2617)	07:43	08:14	08:43	09:20	09:50	10:24	10:54	11:23	11:55	12:25	12:45	13:19	13:49	14:19	14:49	15:19	15:49	16:19
Belgard Square South (7181)	07:49	08:19	08:49	09:25	09:55	10:31	11:01	11:30	12:03	12:33	12:53	13:27	13:57	14:27	14:57	15:27	15:57	16:27

Service Number	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
Dun Laoghaire Stn (2039)	15:25	15:55	16:25	16:55	17:25	17:55	18:25	18:55	19:30	20:05	20:40	21:15	21:45	22:20	22:50	23:20	
Kill Avenue (4568)	15:36	16:06	16:36	17:06	17:36	18:06	18:36	19:06	19:40	20:15	20:49	21:23	21:53	22:28	22:57	23:27	
Foxrock Church (2060)	15:44	16:14	16:44	17:14	17:44	18:13	18:43	19:13	19:46	20:21	20:55	21:28	21:58	22:33	23:02	23:32	
Stillorgan SC (3322)	15:53	16:23	16:53	17:23	17:53	18:21	18:51	19:21	19:53	20:28	21:02	21:34	22:04	22:39	23:07	23:37	
Heather Road (450)	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	
Marsham Court (7393)	15:57	16:27	16:57	17:27	17:57	18:24	18:54	19:24	19:55	20:30	21:04	21:36	22:06	22:41	23:09	23:39	
The Rise (4397)	16:12	16:42	17:12	17:42	18:12	18:39	19:09	19:39	20:09	20:44	21:17	21:48	22:17	22:52	23:19	23:49	
Ballinteer Comm Sch (2852)	16:16	16:46	17:16	17:46	18:16	18:43	19:13	19:43	20:13	20:48	21:20	21:51	22:20	22:55	23:22	23:52	
St Mary's School (1329)	16:25	16:55	17:25	17:55	18:25	18:51	19:21	19:51	20:21	20:56	21:28	21:58	22:27	23:02	23:28	23:57	
Green Acre Court (2517)	16:34	17:04	17:34	18:04	18:34	18:59	19:29	19:59	20:28	21:03	21:35	22:04	22:33	23:08	23:34	24:02	
Old Bawn Centre (2532)	16:43	17:13	17:43	18:13	18:43	19:07	19:37	20:07	20:35	21:10	21:42	22:11	22:40	23:15	23:39	24:07	
Village Green (2617)	16:49	17:19	17:49	18:19	18:49	19:12	19:42	20:11	20:39	21:14	21:46	22:15	22:44	23:19	23:43	24:11	
Belgard Square South (7181)	16:57	17:27	17:57	18:27	18:57	19:19	19:49	20:18	20:46	21:21	21:53	22:21	22:50	23:25	23:48	24:16	

TFI TRANSPORT FOR IRELAND

Go-Ahead Ireland

Tallaght - Dun Laoghaire (via Dundrum) **75** **Sunday** **Valid from 13th of Marc 2022**

Service Number	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
The Square Tallaght (4342)	07:50	08:50	09:30	10:00	10:30	11:00	11:25	11:55	12:25	12:55	13:25	13:55	14:25	14:55	15:25	15:55	16:25	16:50
Old Bawn Centre (2540)	08:01	09:01	09:42	10:12	10:42	11:14	11:39	12:09	12:39	13:09	13:39	14:09	14:39	15:09	15:39	16:09	16:39	17:04
Green Acre Court (2548)	08:07	09:07	09:49	10:19	10:49	11:21	11:46	12:16	12:46	13:16	13:46	14:16	14:46	15:16	15:46	16:16	16:46	17:11
Rathfarnham Wood (1306)	08:13	09:13	09:56	10:26	10:58	11:30	11:55	12:25	12:55	13:25	13:55	14:25	14:55	15:25	15:55	16:25	16:55	17:20
Ballinteer Comm Sch (2853)	08:18	09:18	10:02	10:32	11:05	11:37	12:02	12:32	13:02	13:32	14:02	14:32	15:02	15:32	16:02	16:32	17:02	17:27
Ballinteer Avenue (2858)	08:21	09:21	10:06	10:36	11:09	11:41	12:06	12:36	13:06	13:36	14:06	14:36	15:06	15:36	16:06	16:36	17:06	17:31
Dundrum Luas (2866)	08:27	09:27	10:14	10:44	11:17	11:50	12:15	12:45	13:15	13:45	14:15	14:45	15:15	15:45	16:15	16:45	17:15	17:40
Kilmacud Avenue (2878)	08:34	09:34	10:21	10:51	11:26	12:00	12:25	12:55	13:25	13:55	14:25	14:55	15:25	15:55	16:25	16:55	17:25	17:50
Heather Road (450)	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Stillorgan SC (3321)	08:37	09:37	10:25	10:55	11:31	12:05	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00	16:30	17:00	17:30	17:55
Foxrock Church (2017)	08:44	09:44	10:32	11:02	11:39	12:13	12:38	13:08	13:38	14:08	14:38	15:08	15:38	16:08	16:38	17:08	17:38	18:03
Glenageary Road (4567)	08:49	09:49	10:38	11:08	11:45	12:20	12:45	13:15	13:45	14:15	14:45	15:15	15:45	16:15	16:45	17:15	17:45	18:10
Dun Laoghaire Stn (2039)	08:54	09:54	10:44	11:14	11:51	12:26	12:51	13:21	13:51	14:21	14:51	15:21	15:51	16:21	16:51	17:21	17:51	18:16

Service Number	75	75	75	75	75	75	75	75	75	75	75	75
The Square Tallaght (4342)	17:10	17:40	18:10	18:45	19:30	20:00	20:35	21:05	21:35	22:05	22:35	23:05
Old Bawn Centre (2540)	17:24	17:54	18:24	18:57	19:42	20:11	20:46	21:16	21:44	22:14	22:44	23:14
Green Acre Court (2548)	17:31	18:01	18:31	19:03	19:48	20:16	20:51	21:21	21:49	22:19	22:49	23:19
Rathfarnham Wood (1306)	17:39	18:09	18:39	19:11	19:56	20:23	20:58	21:28	21:55	22:25	22:55	23:25
Ballinteer Comm Sch (2853)	17:45	18:15	18:45	19:17	20:02	20:28	21:03	21:33	22:00	22:30	23:00	23:30
Ballinteer Avenue (2858)	17:49	18:19	18:49	19:21	20:06	20:31	21:06	21:36	22:03	22:33	23:03	23:33
Dundrum Luas (2866)	17:56	18:26	18:56	19:28	20:13	20:37	21:12	21:42	22:09	22:39	23:08	23:38
Kilmacud Avenue (2878)	18:04	18:34	19:04	19:36	20:21	20:45	21:20	21:50	22:16	22:46	23:14	23:44
Heather Road (450)	....	....	....	....	....	....	....	....	....	....	....	....
Stillorgan SC (3321)	18:08	18:38	19:08	19:39	20:24	20:48	21:23	21:53	22:19	22:49	23:17	23:47
Foxrock Church (2017)	18:15	18:45	19:15	19:46	20:31	20:54	21:29	21:59	22:25	22:55	23:22	23:52
Glenageary Road (4567)	18:22	18:52	19:22	19:53	20:38	21:00	21:35	22:05	22:29	22:59	23:26	23:56
Dun Laoghaire Stn (2039)	18:28	18:58	19:28	19:59	20:44	21:06	21:41	22:11	22:35	23:05	23:32	24:02

***75A - No Sunday Service**

TFI TRANSPORT FOR IRELAND

Go-Ahead Ireland

Dun Laoghaire - Tallaght (via Dundrum) **75** **Sunday** **Valid from 13th of Marc 2022**

Service Number	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
Dun Laoghaire Stn (2039)	08:45	09:30	10:00	10:30	11:00	11:25	11:55	12:25	12:55	13:25	13:55	14:25	14:55	15:25	15:55	16:25	16:55	17:25
Kill Avenue (4568)	08:51	09:37	10:07	10:38	11:08	11:33	12:04	12:36	13:06	13:36	14:06	14:36	15:05	15:35	16:05	16:35	17:05	17:35
Foxrock Church (2060)	08:57	09:43	10:13	10:44	11:14	11:39	12:10	12:43	13:13	13:43	14:13	14:43	15:12	15:42	16:12	16:42	17:12	17:42
Stillorgan SC (3322)	09:02	09:50	10:20	10:51	11:21	11:46	12:18	12:51	13:21	13:51	14:21	14:51	15:20	15:50	16:20	16:50	17:20	17:50
Heather Road (450)	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Marsham Court (7393)	09:04	09:52	10:23	10:54	11:24	11:49	12:21	12:54	13:24	13:54	14:24	14:54	15:23	15:54	16:24	16:54	17:24	17:54
The Rise (4397)	09:14	10:04	10:36	11:07	11:37	12:02	12:34	13:08	13:38	14:10	14:40	15:10	15:37	16:09	16:39	17:09	17:39	18:09
Ballinteer Comm Sch (2852)	09:17	10:07	10:40	11:11	11:41	12:06	12:38	13:12	13:42	14:14	14:44	15:14	15:41	16:13	16:43	17:13	17:43	18:13
St Mary's School (1329)	09:23	10:14	10:48	11:19	11:49	12:14	12:46	13:20	13:50	14:22	14:52	15:22	15:48	16:21	16:51	17:21	17:51	18:21
Green Acre Court (2517)	09:29	10:20	10:54	11:26	11:56	12:22	12:54	13:28	13:58	14:31	15:01	15:31	15:57	16:30	17:00	17:30	18:00	18:30
Old Bawn Centre (2532)	09:35	10:26	11:00	11:32	12:02	12:29	13:01	13:37	14:07	14:40	15:10	15:40	16:04	16:38	17:08	17:38	18:08	18:38
Village Green (2617)	09:39	10:30	11:04	11:36	12:08	12:35	13:07	13:43	14:13	14:46	15:16	15:46	16:08	16:42	17:12	17:42	18:12	18:42
Belgard Square South (7181)	09:44	10:36	11:10	11:42	12:14	12:42	13:14	13:50	14:20	14:53	15:23	15:53	16:15	16:50	17:20	17:50	18:20	18:50

Service Number	75	75	75	75	75	75	75	75	75	75	75
Dun Laoghaire Stn (2039)	17:55	18:30	19:10	19:40	20:10	20:45	21:15	21:50	22:20	22:50	23:20
Kill Avenue (4568)	18:05	18:39	19:18	19:48	20:18	20:52	21:22	21:56	22:26	22:56	23:26
Foxrock Church (2060)	18:12	18:46	19:25	19:55	20:25	20:59	21:29	22:02	22:32	23:01	23:31
Stillorgan SC (3322)	18:20	18:52	19:31	20:01	20:31	21:05	21:35	22:07	22:37	23:05	23:35
Heather Road (450)	....	....	....	....	....	....	....	....	....	....	....
Marsham Court (7393)	18:23	18:55	19:34	20:04	20:34	21:07	21:37	22:09	22:39	23:07	23:37
The Rise (4397)	18:37	19:09	19:48	20:18	20:47	21:20	21:49	22:20	22:50	23:18	23:48
Ballinteer Comm Sch (2852)	18:41	19:13	19:52	20:22	20:50	21:23	21:52	22:23	22:53	23:21	23:51
St Mary's School (1329)	18:48	19:20	19:59	20:29	20:56	21:29	21:58	22:29	22:59	23:27	23:57
Green Acre Court (2517)	18:57	19:27	20:06	20:36	21:03	21:35	22:04	22:34	23:04	23:32	24:02
Old Bawn Centre (2532)	19:04	19:34	20:13	20:43	21:10	21:41	22:10	22:40	23:10	23:38	24:08
Village Green (2617)	19:08	19:38	20:17	20:47	21:14	21:45	22:14	22:44	23:14	23:42	24:12
Belgard Square South (7181)	19:15	19:45	20:24	20:54	21:21	21:51	22:20	22:50	23:20	23:48	24:18

***75A - No Sunday Service**

Tallaght - Chapelizod (via Liffey Valley SC)	76	
Tallaght - Blanchardstown (via Chapelizod)	76A	Monday to Friday

Valid from 13th of Marc 2022

TFI TRANSPORT FOR IRELAND

Go-Ahead Ireland

Service Number	76A	76	76A	76	76A	76	76	76	76	76	76	76	76	76	76	76	76	76
The Square (4341)	05:50	06:30	06:50	07:15	07:35	07:55	08:15	08:35	08:55	09:15	09:35	09:55	10:15	10:35	10:55	11:15	11:35	12:00
Belgard Road (5011)	05:57	06:38	06:58	07:25	07:46	08:06	08:26	08:46	09:05	09:25	09:45	10:05	10:25	10:45	11:05	11:25	11:45	12:11
Oakfield (2115)	06:03	06:46	07:07	07:34	07:55	08:15	08:35	08:55	09:15	09:35	09:55	10:15	10:35	10:55	11:15	11:35	11:55	12:22
Collinstown College (2120)	06:07	06:51	07:12	07:41	08:02	08:23	08:43	09:03	09:21	09:41	10:00	10:20	10:40	11:02	11:22	11:42	12:02	12:29
Coldcut Road (2685)	06:09	06:53	07:15	07:43	08:05	08:26	08:46	09:06	09:24	09:44	10:03	10:23	10:43	11:05	11:25	11:45	12:05	12:32
Liffey Valley SC (4795) arr	06:10	06:54	07:16	07:45	08:07	08:28	08:48	09:08	09:26	09:46	10:05	10:25	10:45	11:07	11:27	11:47	12:07	12:34
Liffey Valley SC (4795) dep	06:12	06:56	07:18	07:48	08:09	08:32	08:52	09:12	09:30	09:50	10:09	10:29	10:49	11:11	11:31	11:51	12:11	12:38
Cherry Orchard Hosp (2205)	06:15	06:59	07:22	07:52	08:14	08:37	08:57	09:17	09:33	09:53	10:12	10:32	10:52	11:15	11:35	11:55	12:15	12:42
Ballyfermot (2696)	06:18	07:02	07:26	07:56	08:18	08:41	09:01	09:21	09:37	09:57	10:16	10:36	10:56	11:19	11:39	11:59	12:19	12:46
Glenaulin (2199)	....	07:06	....	08:02	....	08:49	09:09	09:29	09:45	10:05	10:24	10:44	11:04	11:27	11:47	12:07	12:27	12:54
Kennelsfort Road (4401)	06:24	....	07:33	....	08:26	....	....	....	....	....	....	....	....	....	....	....	....	....
Blanchardstown Village (1813)	06:32	....	07:40	....	08:35	....	....	....	....	....	....	....	....	....	....	....	....	....
Blanchardstown SC (7026)	06:38	....	07:47	....	08:42	....	....	....	....	....	....	....	....	....	....	....	....	....

Service Number	76	76	76	76	76	76	76A	76	76	76A	76	76	76A	76	76	76A	76	76
The Square (4341)	12:20	12:40	13:00	13:20	13:40	14:00	14:20	14:40	15:00	15:20	15:40	16:00	16:20	16:40	17:00	17:20	17:40	18:00
Belgard Road (5011)	12:31	12:53	13:13	13:33	13:53	14:13	14:33	14:53	15:13	15:33	15:53	16:13	16:33	16:55	17:15	17:33	17:53	18:13
Oakfield (2115)	12:42	13:04	13:24	13:44	14:04	14:24	14:44	15:04	15:24	15:44	16:04	16:24	16:44	17:07	17:27	17:45	18:03	18:23
Collinstown College (2120)	12:49	13:11	13:31	13:51	14:11	14:31	14:51	15:11	15:31	15:51	16:12	16:32	16:52	17:15	17:35	17:52	18:09	18:29
Coldcut Road (2685)	12:52	13:14	13:34	13:54	14:14	14:34	14:54	15:14	15:34	15:54	16:16	16:36	16:56	17:19	17:39	17:56	18:12	18:32
Liffey Valley SC (4795) arr	12:54	13:16	13:36	13:56	14:16	14:36	14:56	15:16	15:36	15:56	16:18	16:38	16:58	17:21	17:41	17:58	18:14	18:34
Liffey Valley SC (4795) dep	12:58	13:20	13:40	14:00	14:20	14:40	15:00	15:20	15:40	16:00	16:22	16:42	17:02	17:25	17:45	18:02	18:18	18:38
Cherry Orchard Hosp (2205)	13:02	13:24	13:44	14:04	14:24	14:44	15:04	15:24	15:44	16:04	16:26	16:46	17:06	17:29	17:49	18:06	18:22	18:42
Ballyfermot (2696)	13:06	13:28	13:48	14:08	14:28	14:48	15:08	15:28	15:48	16:08	16:30	16:50	17:10	17:33	17:53	18:10	18:26	18:46
Glenaulin (2199)	13:14	13:36	13:56	14:16	14:36	14:56	....	15:36	15:56	....	16:38	16:58	....	17:41	18:01	....	18:34	18:54
Kennelsfort Road (4401)	....	....	....	....	....	....	15:16	....	....	16:16	....	....	17:20	....	....	18:18	....	....
Blanchardstown Village (1813)	....	....	....	....	....	....	15:24	....	....	16:25	....	....	17:29	....	....	18:26	....	....
Blanchardstown SC (7026)	....	....	....	....	....	....	15:31	....	....	16:32	....	....	17:38	....	....	18:35	....	....

Service Number	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
The Square (4341)	18:20	18:40	19:00	19:20	19:40	20:00	20:20	20:40	21:00	21:20	21:40	22:00	22:20	22:40	23:00	23:20	23:50
Belgard Road (5011)	18:31	18:50	19:10	19:30	19:50	20:10	20:29	20:49	21:09	21:29	21:49	22:09	22:28	22:48	23:08	23:26	23:56
Oakfield (2115)	18:40	18:58	19:18	19:38	19:58	20:18	20:36	20:56	21:16	21:36	21:56	22:16	22:35	22:55	23:15	23:33	24:03
Collinstown College (2120)	18:46	19:04	19:24	19:44	20:03	20:23	20:40	21:00	21:20	21:40	22:00	22:20	22:41	22:59	23:19	23:37	24:07
Coldcut Road (2685)	18:49	19:07	19:27	19:47	20:05	20:25	20:42	21:02	21:22	21:42	22:02	22:22	22:43	23:01	23:21	23:39	24:09
Liffey Valley SC (4795) arr	18:51	19:09	19:29	19:49	20:07	20:27	20:44	21:04	21:24	21:44	22:04	22:24	22:45	23:03	23:23	23:41	24:11
Liffey Valley SC (4795) dep	18:55	19:12	19:32	19:52	20:10	20:30	20:47	21:07	21:27	21:47	22:07	22:27	22:46	23:04	23:24	23:42	24:12
Cherry Orchard Hosp (2205)	18:59	19:15	19:35	19:55	20:13	20:33	20:50	21:10	21:30	21:50	22:10	22:30	22:49	23:07	23:27	23:45	24:15
Ballyfermot (2696)	19:03	19:19	19:39	19:59	20:17	20:37	20:54	21:14	21:34	21:54	22:14	22:34	22:52	23:11	23:31	23:49	24:19
Glenaulin (2199)	19:11	19:27	19:47	20:07	20:25	20:45	21:02	21:22	21:42	22:02	22:22	22:42	22:58	23:17	23:37	23:55	24:25
Kennelsfort Road (4401)	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Blanchardstown Village (1813)	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Blanchardstown SC (7026)	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

Chapelizod - Tallaght (via Liffey Valley SC)	76
Blanchardstown - Tallaght (via Chapelizod)	76A

Monday to Friday

Valid from 13th of Marc 2022

TFI TRANSPORT FOR IRELAND

Go-Ahead Ireland

Service Number	76	76	76A	76	76	76	76	76A	76	76	76A	76	76	76A	76	76	76	76
Blanchardstown SC (4747)	....	....	**06:37**	....	....	....	....	**07:54**	....	....	**09:11**	....	....	**10:11**	....	....	....	....
Old Navan Road (1842)	....	....	**06:43**	....	....	....	....	**08:02**	....	....	**09:18**	....	....	**10:18**	....	....	....	....
Kennelsfort Road (2241)	....	....	**06:52**	....	....	....	....	**08:17**	....	....	**09:27**	....	....	**10:27**	....	....	....	....
Glenaulin (2243)	06:25	06:40	**06:55**	07:10	07:30	07:45	08:05	**08:20**	08:50	09:10	**09:30**	09:50	10:10	**10:30**	10:50	11:10	11:30	11:50
Ballyfermot Comm Cen (2668)	06:31	06:46	**07:01**	07:16	07:37	07:52	08:12	**08:27**	08:57	09:17	**09:37**	09:57	10:17	**10:37**	10:57	11:17	11:37	11:57
Coldcut Road (4798)	06:34	06:49	**07:04**	07:19	07:40	07:56	08:16	**08:31**	09:01	09:20	**09:40**	10:00	10:20	**10:40**	11:00	11:20	11:40	12:00
Liffey Valley SC (4795) arr	06:36	06:51	**07:06**	07:21	07:42	07:58	08:18	**08:33**	09:03	09:22	**09:42**	10:02	10:22	**10:42**	11:02	11:22	11:42	12:02
Liffey Valley SC (4795) dep	06:38	06:53	**07:08**	07:23	07:44	08:02	08:22	**08:37**	09:07	09:26	**09:46**	10:06	10:26	**10:46**	11:06	11:26	11:46	12:06
Collinstown College (2127)	06:43	06:58	**07:14**	07:29	07:51	08:09	08:29	**08:44**	09:14	09:32	**09:52**	10:12	10:32	**10:52**	11:12	11:32	11:52	12:12
Oakfield (2158)	06:49	07:04	**07:20**	07:35	07:58	08:19	08:39	**08:54**	09:24	09:39	**09:59**	10:19	10:39	**10:59**	11:19	11:39	11:59	12:19
Knockmeenagh Road (2174)	06:52	07:07	**07:23**	07:38	08:03	08:24	08:44	**08:59**	09:29	09:44	**10:04**	10:24	10:44	**11:04**	11:24	11:44	12:04	12:24
Belgard (2620)	06:58	07:13	**07:33**	07:48	08:13	08:34	08:54	**09:07**	09:37	09:52	**10:12**	10:32	10:52	**11:12**	11:32	11:52	12:12	12:32
Belgard Square South (7181)	07:05	07:20	**07:40**	07:54	08:20	08:44	09:04	**09:17**	09:47	10:02	**10:22**	10:42	11:02	**11:22**	11:42	12:02	12:22	12:42

Service Number	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76A	76
Blanchardstown SC (4747)	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	**17:00**	....
Old Navan Road (1842)	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	**17:11**	....
Kennelsfort Road (2241)	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	**17:21**	....
Glenaulin (2243)	12:10	12:30	12:45	13:00	13:20	13:40	14:00	14:20	14:40	15:00	15:20	15:40	16:00	16:20	16:40	17:00	**17:24**	17:40
Ballyfermot Comm Cen (2668)	12:17	12:38	12:53	13:08	13:28	13:48	14:08	14:28	14:48	15:08	15:28	15:48	16:08	16:28	16:48	17:08	**17:36**	17:48
Coldcut Road (4798)	12:20	12:42	12:57	13:12	13:32	13:52	14:12	14:32	14:52	15:12	15:32	15:52	16:12	16:32	16:52	17:14	**17:42**	17:52
Liffey Valley SC (4795) arr	12:22	12:45	13:00	13:15	13:35	13:55	14:15	14:35	14:55	15:15	15:35	15:55	16:15	16:35	16:55	17:17	**17:46**	17:56
Liffey Valley SC (4795) dep	12:26	12:49	13:04	13:19	13:39	13:59	14:19	14:39	14:59	15:19	15:39	15:59	16:19	16:39	16:59	17:21	**17:51**	18:01
Collinstown College (2127)	12:32	12:55	13:10	13:25	13:45	14:05	14:25	14:45	15:05	15:25	15:45	16:05	16:25	16:45	17:05	17:27	**17:57**	18:07
Oakfield (2158)	12:39	13:02	13:17	13:32	13:52	14:12	14:32	14:52	15:12	15:32	15:52	16:12	16:32	16:52	17:12	17:34	**18:04**	18:14
Knockmeenagh Road (2174)	12:44	13:08	13:23	13:38	13:58	14:18	14:38	14:58	15:18	15:38	15:58	16:18	16:38	16:58	17:18	17:40	**18:09**	18:18
Belgard (2620)	12:52	13:19	13:34	13:49	14:09	14:29	14:49	15:09	15:29	15:49	16:09	16:29	16:49	17:09	17:29	17:51	**18:19**	18:26
Belgard Square South (7181)	13:02	13:29	13:44	13:59	14:19	14:39	14:59	15:19	15:39	15:59	16:19	16:39	16:59	17:19	17:39	18:01	**18:27**	18:34

Service Number	76	76A	76	76A	76	76	76	76	76	76	76	76	76	76	76	76
Blanchardstown SC (4747)	....	**18:00**	....	**18:55**	....	....	....	....	....	....	....	....	....	....	....	....
Old Navan Road (1842)	....	**18:10**	....	**19:03**	....	....	....	....	....	....	....	....	....	....	....	....
Kennelsfort Road (2241)	....	**18:24**	....	**19:12**	....	....	....	....	....	....	....	....	....	....	....	....
Glenaulin (2243)	18:00	**18:27**	18:50	**19:15**	19:35	19:55	20:15	20:35	20:55	21:15	21:35	21:55	22:15	22:35	22:55	23:25
Ballyfermot Comm Cen (2668)	18:08	**18:35**	18:56	**19:21**	19:41	20:01	20:21	20:41	21:01	21:21	21:41	22:01	22:21	22:41	23:01	23:31
Coldcut Road (4798)	18:12	**18:39**	19:00	**19:24**	19:44	20:04	20:24	20:43	21:03	21:23	21:43	22:03	22:23	22:43	23:03	23:33
Liffey Valley SC (4795) arr	18:16	**18:43**	19:03	**19:27**	19:46	20:06	20:26	20:45	21:05	21:25	21:45	22:05	22:25	22:45	23:05	23:35
Liffey Valley SC (4795) dep	18:21	**18:48**	19:07	**19:31**	19:50	20:10	20:30	20:49	21:09	21:28	21:48	22:08	22:28	22:48	23:08	23:38
Collinstown College (2127)	18:27	**18:54**	19:13	**19:37**	19:56	20:16	20:36	20:54	21:14	21:32	21:52	22:12	22:32	22:52	23:12	23:42
Oakfield (2158)	18:35	**19:00**	19:19	**19:43**	20:02	20:22	20:42	20:59	21:19	21:37	21:57	22:17	22:36	22:56	23:16	23:46
Knockmeenagh Road (2174)	18:39	**19:04**	19:23	**19:47**	20:06	20:26	20:46	21:02	21:22	21:40	22:00	22:20	22:38	22:58	23:18	23:48
Belgard (2620)	18:46	**19:11**	19:30	**19:54**	20:13	20:33	20:53	21:08	21:28	21:46	22:06	22:26	22:42	23:02	23:22	23:52
Belgard Square South (7181)	18:54	**19:19**	19:38	**20:02**	20:21	20:41	21:01	21:15	21:35	21:53	22:13	22:33	22:49	23:09	23:29	23:59

Tallaght - Chapelizod (via Liffey Valley SC) **76** **Saturday** **Valid from 13th of Marc 2022**

Service Number	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
The Square (4341)	06:45	07:15	07:45	08:15	08:45	09:00	09:20	09:40	10:00	10:20	10:40	11:00	11:20	11:40	12:00	12:20	12:40	13:00
Belgard Road (5011)	06:52	07:22	07:52	08:23	08:53	09:08	09:28	09:49	10:09	10:29	10:49	11:09	11:29	11:49	12:09	12:29	12:49	13:09
Oakfield (2115)	07:00	07:30	08:00	08:31	09:01	09:16	09:36	09:58	10:18	10:39	10:59	11:19	11:39	11:59	12:21	12:41	13:01	13:21
Collinstown College (2120)	07:03	07:33	08:03	08:35	09:05	09:20	09:40	10:03	10:23	10:45	11:05	11:25	11:45	12:05	12:27	12:47	13:07	13:27
Coldcut Road (2685)	07:05	07:35	08:05	08:37	09:07	09:22	09:42	10:05	10:25	10:47	11:07	11:27	11:47	12:07	12:29	12:49	13:11	13:31
Liffey Valley SC (4795) arr	07:05	07:38	08:08	08:42	09:09	09:24	09:44	10:07	10:27	10:49	11:09	11:29	11:49	12:09	12:31	12:51	13:14	13:34
Liffey Valley SC (4795) dep	07:08	07:38	08:08	08:42	09:12	09:27	09:47	10:11	10:31	10:53	11:13	11:33	11:53	12:13	12:35	12:55	13:18	13:38
Cherry Orchard Hosp (2205)	07:12	07:42	08:12	08:46	09:16	09:31	09:51	10:15	10:35	10:57	11:17	11:37	11:57	12:17	12:39	12:59	13:22	13:42
Ballyfermot (2696)	07:15	07:45	08:15	08:49	09:19	09:34	09:54	10:18	10:38	11:00	11:20	11:40	12:00	12:20	12:42	13:02	13:26	13:46
Glenaulin (2199)	07:19	07:49	08:19	08:53	09:23	09:38	09:58	10:22	10:42	11:04	11:24	11:44	12:04	12:24	12:46	13:06	13:32	13:52

Service Number	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
The Square (4341)	13:20	13:40	14:00	14:20	14:40	15:00	15:20	15:40	16:00	16:20	16:40	17:00	17:20	17:40	18:00	18:20	18:40	19:00
Belgard Road (5011)	13:29	13:49	14:09	14:29	14:49	15:09	15:29	15:49	16:09	16:29	16:49	17:09	17:29	17:49	18:09	18:29	18:49	19:09
Oakfield (2115)	13:41	14:01	14:21	14:41	15:01	15:21	15:41	16:01	16:21	16:41	17:01	17:21	17:40	18:00	18:20	18:40	18:59	19:19
Collinstown College (2120)	13:47	14:07	14:27	14:47	15:07	15:27	15:47	16:07	16:27	16:47	17:07	17:27	17:46	18:06	18:26	18:45	19:03	19:23
Coldcut Road (2685)	13:51	14:11	14:31	14:51	15:11	15:31	15:51	16:11	16:31	16:50	17:10	17:30	17:49	18:09	18:29	18:47	19:05	19:25
Liffey Valley SC (4795) arr	13:54	14:14	14:34	14:54	15:14	15:34	15:54	16:14	16:34	16:52	17:12	17:32	17:51	18:11	18:31	18:49	19:07	19:27
Liffey Valley SC (4795) dep	13:58	14:18	14:38	14:58	15:18	15:38	15:58	16:18	16:38	16:54	17:14	17:34	17:53	18:13	18:33	18:51	19:09	19:29
Cherry Orchard Hosp (2205)	14:02	14:22	14:42	15:02	15:22	15:42	16:02	16:22	16:42	16:58	17:18	17:38	17:57	18:17	18:37	18:55	19:13	19:33
Ballyfermot (2696)	14:06	14:26	14:46	15:06	15:26	15:46	16:06	16:26	16:46	17:02	17:22	17:42	18:01	18:21	18:41	18:59	19:17	19:37
Glenaulin (2199)	14:12	14:32	14:52	15:12	15:32	15:52	16:12	16:32	16:52	17:08	17:28	17:48	18:07	18:27	18:47	19:05	19:23	19:43

Service Number	76	76	76	76	76	76	76	76	76	76	76	76	76	76
The Square (4341)	19:20	19:40	20:00	20:20	20:40	21:00	21:20	21:40	22:00	22:20	22:40	23:00	23:20	23:50
Belgard Road (5011)	19:29	19:49	20:09	20:27	20:47	21:07	21:27	21:47	22:07	22:27	22:47	23:07	23:27	23:57
Oakfield (2115)	19:39	19:59	20:19	20:35	20:55	21:15	21:35	21:55	22:15	22:35	22:55	23:14	23:34	24:04
Collinstown College (2120)	19:43	20:03	20:23	20:39	20:59	21:19	21:39	21:59	22:19	22:39	22:59	23:18	23:38	24:08
Coldcut Road (2685)	19:45	20:05	20:25	20:41	21:01	21:21	21:41	22:01	22:21	22:41	23:01	23:20	23:40	24:10
Liffey Valley SC (4795) arr	19:47	20:07	20:27	20:42	21:02	21:22	21:42	22:02	22:22	22:42	23:02	23:21	23:41	24:11
Liffey Valley SC (4795) dep	19:49	20:09	20:29	20:44	21:04	21:24	21:44	22:04	22:24	22:44	23:04	23:23	23:43	24:13
Cherry Orchard Hosp (2205)	19:53	20:13	20:33	20:48	21:08	21:28	21:48	22:08	22:28	22:48	23:08	23:27	23:47	24:17
Ballyfermot (2696)	19:57	20:17	20:37	20:51	21:11	21:31	21:51	22:11	22:31	22:51	23:11	23:30	23:50	24:20
Glenaulin (2199)	20:03	20:23	20:43	20:55	21:15	21:35	21:55	22:15	22:35	22:55	23:15	23:34	23:54	24:24

***76A - No Saturday Service**

TFI TRANSPORT FOR IRELAND

Go-Ahead Ireland

Chapelizod - Tallaght (via Liffey Valley SC) **76** **Saturday** **Valid from 13th of Marc 2022**

Service Number	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
Glenaulin (2243)	06:30	07:00	07:30	08:00	08:30	08:55	09:20	09:40	10:00	10:20	10:40	11:00	11:20	11:40	12:00	12:20	12:40	13:00
Ballyfermot Comm Cen (2668)	06:35	07:05	07:35	08:05	08:35	09:00	09:26	09:46	10:06	10:27	10:47	11:07	11:27	11:47	12:07	12:27	12:47	13:07
Coldcut Road (4798)	06:37	07:07	07:37	08:07	08:37	09:02	09:28	09:48	10:09	10:30	10:50	11:10	11:30	11:50	12:10	12:30	12:50	13:10
Liffey Valley SC (4795) arr	06:39	07:09	07:39	08:09	08:39	09:04	09:30	09:50	10:11	10:33	10:53	11:13	11:33	11:55	12:15	12:35	12:55	13:15
Liffey Valley SC (4795) dep	06:43	07:13	07:43	08:13	08:43	09:08	09:34	09:54	10:15	10:37	10:57	11:17	11:37	11:59	12:19	12:39	12:59	13:19
Collinstown College (2127)	06:47	07:17	07:47	08:17	08:47	09:12	09:38	09:58	10:20	10:42	11:02	11:22	11:42	12:04	12:24	12:44	13:04	13:24
Oakfield (2158)	06:52	07:22	07:52	08:22	08:52	09:17	09:43	10:03	10:25	10:48	11:08	11:28	11:48	12:10	12:30	12:50	13:10	13:30
Knockmeenagh Road (2174)	06:54	07:24	07:54	08:24	08:54	09:19	09:45	10:05	10:28	10:51	11:11	11:31	11:51	12:13	12:33	12:53	13:13	13:33
Belgard (2620)	07:00	07:30	08:00	08:30	09:00	09:25	09:53	10:13	10:36	10:59	11:19	11:39	11:59	12:24	12:44	13:04	13:24	13:44
Belgard Square South (7181)	07:07	07:37	08:07	08:37	09:07	09:32	10:00	10:20	10:43	11:08	11:28	11:48	12:08	12:33	12:53	13:13	13:33	13:53

Service Number	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
Glenaulin (2243)	13:20	13:40	14:00	14:20	14:40	15:00	15:20	15:40	16:00	16:20	16:40	17:00	17:20	17:40	18:00	18:20	18:40	19:00
Ballyfermot Comm Cen (2668)	13:27	13:47	14:07	14:27	14:47	15:07	15:27	15:47	16:07	16:27	16:47	17:07	17:27	17:47	18:07	18:27	18:47	19:05
Coldcut Road (4798)	13:30	13:50	14:10	14:30	14:50	15:10	15:30	15:50	16:10	16:30	16:50	17:10	17:30	17:50	18:10	18:30	18:50	19:08
Liffey Valley SC (4795) arr	13:35	13:55	14:15	14:35	14:55	15:15	15:35	15:55	16:15	16:35	16:55	17:15	17:35	17:55	18:15	18:35	18:55	19:13
Liffey Valley SC (4795) dep	13:39	13:59	14:19	14:39	14:59	15:19	15:39	15:59	16:19	16:39	16:59	17:19	17:39	17:59	18:19	18:39	18:59	19:17
Collinstown College (2127)	13:44	14:04	14:24	14:44	15:04	15:24	15:44	16:04	16:24	16:44	17:04	17:24	17:44	18:04	18:24	18:44	19:04	19:22
Oakfield (2158)	13:50	14:10	14:30	14:50	15:10	15:30	15:50	16:10	16:30	16:50	17:10	17:30	17:50	18:10	18:30	18:50	19:10	19:28
Knockmeenagh Road (2174)	13:53	14:13	14:33	14:53	15:13	15:33	15:53	16:13	16:33	16:53	17:13	17:33	17:53	18:13	18:33	18:53	19:13	19:31
Belgard (2620)	14:04	14:24	14:44	15:02	15:22	15:42	16:02	16:22	16:42	17:02	17:22	17:41	18:01	18:21	18:41	19:01	19:21	19:39
Belgard Square South (7181)	14:13	14:33	14:53	15:11	15:31	15:51	16:11	16:31	16:51	17:11	17:31	17:49	18:09	18:29	18:49	19:09	19:29	19:47

Service Number	76	76	76	76	76	76	76	76	76	76	76	76	76
Glenaulin (2243)	19:15	19:35	19:55	20:15	20:35	20:55	21:15	21:35	21:55	22:15	22:35	22:55	23:25
Ballyfermot Comm Cen (2668)	19:20	19:40	20:00	20:20	20:40	21:00	21:20	21:40	22:00	22:20	22:40	23:00	23:30
Coldcut Road (4798)	19:23	19:43	20:03	20:23	20:42	21:02	21:22	21:42	22:02	22:22	22:42	23:02	23:32
Liffey Valley SC (4795) arr	19:28	19:48	20:08	20:27	20:45	21:05	21:25	21:45	22:05	22:25	22:45	23:05	23:35
Liffey Valley SC (4795) dep	19:32	19:52	20:12	20:31	20:48	21:08	21:28	21:48	22:08	22:28	22:48	23:08	23:38
Collinstown College (2127)	19:37	19:57	20:17	20:35	20:52	21:12	21:32	21:52	22:12	22:32	22:52	23:12	23:42
Oakfield (2158)	19:43	20:03	20:23	20:41	20:58	21:18	21:38	21:58	22:18	22:36	22:56	23:16	23:46
Knockmeenagh Road (2174)	19:46	20:06	20:26	20:44	21:01	21:21	21:41	22:01	22:21	22:39	22:59	23:19	23:49
Belgard (2620)	19:54	20:14	20:34	20:52	21:06	21:26	21:46	22:06	22:26	22:44	23:04	23:24	23:54
Belgard Square South (7181)	20:02	20:22	20:42	21:00	21:12	21:32	21:52	22:12	22:32	22:50	23:10	23:30	24:00

***76A - No Saturday Service**

TFI TRANSPORT FOR IRELAND

Go-Ahead Ireland

Tallaght - Chapelizod (via Liffey Valley SC) **76** **Sunday** **Valid from 13th of Marc 2022**

Service Number	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
The Square (4341)	08:15	08:45	09:15	09:45	10:05	10:25	10:45	11:05	11:25	11:40	12:00	12:20	12:40	13:00	13:20	13:40	14:00	14:20
Belgard Road (5011)	08:22	08:52	09:22	09:54	10:14	10:34	10:54	11:14	11:34	11:50	12:10	12:30	12:50	13:10	13:30	13:50	14:10	14:30
Oakfield (2115)	08:29	08:59	09:29	10:02	10:22	10:42	11:02	11:22	11:42	11:59	12:19	12:39	12:59	13:19	13:39	13:59	14:19	14:39
Collinstown College (2120)	08:33	09:03	09:33	10:06	10:26	10:46	11:06	11:26	11:46	12:03	12:23	12:43	13:03	13:23	13:43	14:03	14:23	14:43
Coldcut Road (2685)	08:35	09:05	09:35	10:08	10:28	10:48	11:08	11:28	11:48	12:05	12:25	12:45	13:05	13:25	13:45	14:05	14:25	14:45
Liffey Valley SC (4795) arr	08:37	09:07	09:37	10:10	10:30	10:50	11:10	11:30	11:52	12:09	12:29	12:49	13:09	13:29	13:49	14:09	14:29	14:49
Liffey Valley SC (4795) dep	08:39	09:09	09:39	10:14	10:34	10:54	11:14	11:34	11:56	12:13	12:33	12:53	13:13	13:33	13:53	14:13	14:33	14:53
Cherry Orchard Hosp (2205)	08:42	09:12	09:42	10:18	10:38	10:58	11:18	11:38	12:00	12:17	12:37	12:57	13:17	13:37	13:57	14:17	14:37	14:57
Ballyfermot (2696)	08:45	09:15	09:45	10:21	10:41	11:01	11:21	11:41	12:03	12:20	12:40	13:00	13:20	13:40	14:00	14:20	14:40	15:00
Glenaulin (2199)	08:49	09:19	09:49	10:25	10:45	11:05	11:25	11:45	12:07	12:24	12:44	13:04	13:24	13:44	14:04	14:24	14:44	15:04

Service Number	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
The Square (4341)	14:40	15:00	15:20	15:40	16:00	16:20	16:40	17:00	17:20	17:40	18:00	18:20	18:40	19:00	19:20	19:40	20:00	20:15
Belgard Road (5011)	14:50	15:10	15:30	15:50	16:10	16:30	16:50	17:10	17:30	17:50	18:10	18:30	18:50	19:10	19:30	19:48	20:08	20:23
Oakfield (2115)	14:59	15:19	15:39	15:59	16:19	16:39	16:59	17:19	17:39	17:59	18:19	18:39	18:59	19:19	19:39	19:57	20:17	20:32
Collinstown College (2120)	15:03	15:23	15:43	16:03	16:23	16:43	17:03	17:23	17:43	18:03	18:23	18:43	19:03	19:23	19:43	20:01	20:21	20:36
Coldcut Road (2685)	15:05	15:25	15:45	16:05	16:25	16:45	17:05	17:25	17:45	18:05	18:25	18:45	19:05	19:25	19:45	20:03	20:23	20:38
Liffey Valley SC (4795) arr	15:09	15:29	15:49	16:09	16:29	16:49	17:07	17:27	17:47	18:07	18:27	18:47	19:07	19:27	19:47	20:05	20:25	20:40
Liffey Valley SC (4795) dep	15:13	15:33	15:53	16:13	16:33	16:53	17:10	17:30	17:50	18:10	18:30	18:50	19:10	19:30	19:50	20:08	20:28	20:43
Cherry Orchard Hosp (2205)	15:17	15:37	15:57	16:17	16:37	16:57	17:14	17:34	17:54	18:14	18:34	18:54	19:14	19:34	19:54	20:12	20:32	20:47
Ballyfermot (2696)	15:20	15:40	16:00	16:20	16:40	17:00	17:17	17:37	17:57	18:17	18:37	18:57	19:17	19:37	19:57	20:15	20:35	20:50
Glenaulin (2199)	15:24	15:44	16:04	16:24	16:44	17:04	17:21	17:41	18:01	18:21	18:41	19:01	19:21	19:41	20:01	20:19	20:39	20:54

Service Number	76	76	76	76	76	76
The Square (4341)	20:45	21:15	21:45	22:15	22:45	23:15
Belgard Road (5011)	20:52	21:22	21:52	22:22	22:51	23:21
Oakfield (2115)	21:00	21:30	22:00	22:30	22:59	23:29
Collinstown College (2120)	21:04	21:34	22:04	22:34	23:03	23:33
Coldcut Road (2685)	21:06	21:36	22:06	22:36	23:04	23:34
Liffey Valley SC (4795) arr	21:08	21:38	22:08	22:38	23:05	23:35
Liffey Valley SC (4795) dep	21:10	21:40	22:10	22:40	23:07	23:37
Cherry Orchard Hosp (2205)	21:14	21:44	22:14	22:44	23:11	23:41
Ballyfermot (2696)	21:17	21:47	22:17	22:47	23:14	23:44
Glenaulin (2199)	21:21	21:51	22:21	22:51	23:18	23:48

***76A - No Sunday Service**

Chapelizod - Tallaght (via Liffey Valley SC) **76** **Sunday** **Valid from 13th of Marc 2022**

Service Number	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
Glenaulin (2243)	08:30	09:00	09:30	10:00	10:20	10:40	11:00	11:20	11:40	12:00	12:20	12:40	13:00	13:20	13:40	14:00	14:20	14:40
Ballyfermot Comm Cen (2668)	08:34	09:04	09:35	10:05	10:25	10:45	11:06	11:26	11:46	12:06	12:26	12:48	13:08	13:28	13:48	14:08	14:28	14:48
Coldcut Road (4798)	08:37	09:07	09:38	10:08	10:28	10:48	11:09	11:29	11:49	12:09	12:29	12:52	13:12	13:32	13:52	14:12	14:32	14:52
Liffey Valley SC (4795) arr	08:39	09:09	09:40	10:10	10:30	10:50	11:11	11:31	11:51	12:11	12:31	12:54	13:14	13:34	13:54	14:14	14:34	14:54
Liffey Valley SC (4795) dep	08:42	09:12	09:43	10:13	10:33	10:53	11:15	11:35	11:55	12:15	12:35	12:58	13:18	13:38	13:58	14:18	14:38	14:58
Collinstown College (2127)	08:46	09:16	09:47	10:17	10:37	10:57	11:20	11:40	12:00	12:20	12:40	13:03	13:23	13:43	14:03	14:23	14:43	15:03
Oakfield (2158)	08:51	09:21	09:52	10:22	10:42	11:02	11:26	11:46	12:06	12:26	12:46	13:09	13:29	13:49	14:09	14:29	14:49	15:09
Knockmeenagh Road (2174)	08:54	09:24	09:55	10:25	10:45	11:05	11:31	11:51	12:11	12:31	12:51	13:14	13:34	13:54	14:14	14:34	14:54	15:14
Belgard (2620)	08:58	09:28	10:00	10:30	10:50	11:10	11:37	11:57	12:17	12:37	12:57	13:20	13:40	14:00	14:20	14:40	15:00	15:20
Belgard Square South (7181)	09:05	09:35	10:07	10:37	10:57	11:17	11:44	12:04	12:24	12:44	13:04	13:27	13:47	14:07	14:27	14:47	15:07	15:27

Service Number	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
Glenaulin (2243)	15:00	15:20	15:40	16:00	16:20	16:40	17:00	17:20	17:40	18:00	18:20	18:40	19:00	19:15	19:35	19:55	20:15	20:35
Ballyfermot Comm Cen (2668)	15:08	15:28	15:48	16:08	16:28	16:48	17:08	17:27	17:47	18:07	18:27	18:47	19:07	19:22	19:41	20:01	20:21	20:41
Coldcut Road (4798)	15:12	15:32	15:52	16:12	16:32	16:52	17:12	17:30	17:50	18:10	18:30	18:50	19:10	19:25	19:43	20:03	20:23	20:43
Liffey Valley SC (4795) arr	15:14	15:34	15:54	16:14	16:34	16:54	17:14	17:32	17:52	18:12	18:32	18:52	19:12	19:27	19:45	20:05	20:25	20:45
Liffey Valley SC (4795) dep	15:18	15:38	15:58	16:18	16:38	16:58	17:18	17:36	17:56	18:16	18:36	18:56	19:16	19:31	19:49	20:09	20:28	20:48
Collinstown College (2127)	15:23	15:43	16:03	16:23	16:43	17:03	17:23	17:41	18:01	18:21	18:41	19:01	19:21	19:36	19:54	20:14	20:32	20:52
Oakfield (2158)	15:29	15:49	16:09	16:29	16:49	17:09	17:29	17:47	18:07	18:27	18:47	19:07	19:27	19:42	20:00	20:20	20:37	20:57
Knockmeenagh Road (2174)	15:34	15:54	16:14	16:34	16:54	17:14	17:34	17:52	18:12	18:32	18:52	19:12	19:32	19:47	20:05	20:25	20:41	21:01
Belgard (2620)	15:40	16:00	16:20	16:40	17:00	17:20	17:40	17:58	18:18	18:38	18:58	19:18	19:38	19:53	20:11	20:31	20:47	21:07
Belgard Square South (7181)	15:47	16:07	16:27	16:47	17:07	17:27	17:47	18:05	18:25	18:45	19:05	19:25	19:45	20:00	20:18	20:38	20:52	21:12

Service Number	76	76	76	76	76	76
Glenaulin (2243)	20:55	21:25	21:55	22:25	22:55	23:25
Ballyfermot Comm Cen (2668)	21:01	21:31	22:01	22:31	23:01	23:31
Coldcut Road (4798)	21:03	21:33	22:03	22:33	23:03	23:33
Liffey Valley SC (4795) arr	21:05	21:35	22:05	22:35	23:05	23:35
Liffey Valley SC (4795) dep	21:08	21:38	22:08	22:37	23:07	23:37
Collinstown College (2127)	21:12	21:42	22:12	22:41	23:11	23:41
Oakfield (2158)	21:17	21:47	22:17	22:45	23:15	23:45
Knockmeenagh Road (2174)	21:21	21:51	22:21	22:48	23:18	23:48
Belgard (2620)	21:27	21:57	22:27	22:53	23:23	23:53
Belgard Square South (7181)	21:32	22:02	22:32	22:58	23:28	23:58

***76A - No Sunday Service**

TFI TRANSPORT FOR IRELAND

Go-Ahead Ireland

UCD - Citywest via Dundrum | **175** | **Monday to Friday** | **Valid from 13th of Marc 2022**

Service Number	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175
UCD (765)	05:52	06:33	07:14	07:50	08:30	09:05	09:40	10:10	10:40	11:10	11:40	12:10	12:30	13:00	13:15	13:45	14:15	14:45
Deerpark Road (10096)	05:57	06:39	07:22	08:00	08:39	09:13	09:47	10:17	10:47	11:17	11:47	12:18	12:38	13:08	13:24	13:53	14:24	14:53
Dundrum Luas (2825)	06:02	06:45	07:28	08:07	08:46	09:19	09:53	10:23	10:54	11:23	11:53	12:24	12:45	13:15	13:30	14:02	14:31	15:02
The Rise (4397)	06:08	06:53	07:36	08:18	08:56	09:26	10:03	10:33	11:04	11:32	12:03	12:34	12:54	13:25	13:39	14:11	14:41	15:12
Scholarstown Park (10105)	06:15	07:03	07:49	08:31	09:07	09:38	10:13	10:43	11:15	11:42	12:14	12:44	13:07	13:39	13:51	14:23	14:54	15:27
Old Bawn Centre (2532)	06:22	07:12	08:03	08:47	09:17	09:46	10:21	10:51	11:22	11:50	12:23	12:53	13:15	13:49	14:00	14:33	15:06	15:36
Village Green (2617)	06:26	07:17	08:10	08:53	09:23	09:52	10:27	10:57	11:28	11:57	12:29	12:59	13:21	13:56	14:05	14:41	15:13	15:42
The Square Tallaght (4347)	06:33	07:25	08:20	09:01	09:30	09:59	10:35	11:05	11:36	12:05	12:37	13:08	13:28	14:03	14:12	14:49	15:21	15:50
Ard Mor Drive (10110)	06:40	07:35	08:30	09:11	09:40	10:07	10:44	11:14	11:45	12:14	12:46	13:17	13:38	14:12	14:21	15:00	15:30	16:02
Kingswood Avenue (6002)	06:45	07:40	08:38	09:17	09:45	10:13	10:50	11:20	11:52	12:21	12:52	13:24	13:44	14:19	14:28	15:06	15:36	16:10

Service Number	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175
UCD (765)	15:15	15:45	16:15	16:45	17:15	17:45	18:15	18:45	19:15	19:40	20:00	20:30	21:00	21:25	21:50	22:20	22:50	23:20
Deerpark Road (10096)	15:25	15:55	16:26	16:55	17:26	17:54	18:25	18:54	19:24	19:47	20:07	20:37	21:07	21:31	21:56	22:26	22:56	23:26
Dundrum Luas (2825)	15:38	16:09	16:37	17:07	17:34	18:02	18:32	19:02	19:31	19:53	20:13	20:42	21:12	21:35	22:00	22:30	23:00	23:30
The Rise (4397)	15:48	16:26	16:49	17:19	17:43	18:13	18:41	19:13	19:40	20:01	20:21	20:50	21:20	21:42	22:07	22:37	23:07	23:37
Scholarstown Park (10105)	16:07	16:43	17:04	17:34	17:58	18:27	18:55	19:25	19:51	20:12	20:31	21:00	21:30	21:51	22:16	22:45	23:15	23:45
Old Bawn Centre (2532)	16:20	16:57	17:17	17:47	18:11	18:38	19:04	19:33	19:59	20:21	20:39	21:08	21:37	21:57	22:22	22:52	23:22	23:52
Village Green (2617)	16:26	17:03	17:24	17:54	18:16	18:44	19:10	19:39	20:04	20:26	20:44	21:12	21:41	22:01	22:26	22:56	23:26	23:56
The Square Tallaght (4347)	16:35	17:11	17:31	18:03	18:24	18:51	19:16	19:46	20:10	20:31	20:51	21:18	21:45	22:07	22:32	23:01	23:31	24:00
Ard Mor Drive (10110)	16:45	17:21	17:41	18:13	18:34	19:01	19:26	19:55	20:20	20:40	21:00	21:26	21:54	22:15	22:40	23:09	23:39	24:07
Kingswood Avenue (6002)	16:51	17:28	17:49	18:19	18:40	19:08	19:32	20:01	20:25	20:46	21:05	21:31	21:59	22:20	22:45	23:14	23:44	24:12

TFI TRANSPORT FOR IRELAND

Go-Ahead Ireland

Citywest - UCD via Dundrum | **175** | **Monday to Friday** | **Valid from 13th of Marc 2022**

Service Number	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175
Kingswood Avenue (6001)	06:20	06:40	06:55	07:10	07:30	08:00	08:30	09:00	09:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:20	13:40
Ard Mor Drive (10150)	06:25	06:46	07:00	07:15	07:35	08:07	08:37	09:09	09:36	10:06	10:36	11:06	11:36	12:06	12:36	13:06	13:27	13:46
Tallaght Luas (4348)	06:34	06:55	07:10	07:25	07:45	08:18	08:48	09:19	09:46	10:15	10:45	11:15	11:45	12:16	12:46	13:16	13:36	13:56
Old Bawn Centre (2540)	06:46	07:08	07:22	07:37	07:57	08:33	09:04	09:31	09:59	10:27	10:57	11:27	11:59	12:29	13:00	13:29	13:49	14:10
Scholarstown Park (10154)	06:55	07:18	07:33	07:52	08:15	08:47	09:14	09:39	10:08	10:36	11:06	11:36	12:08	12:39	13:10	13:39	13:59	14:20
Marley Park (2969)	07:03	07:25	07:42	08:03	08:27	08:56	09:21	09:47	10:16	10:43	11:13	11:43	12:15	12:45	13:17	13:47	14:06	14:27
Ballinteer Avenue (2858)	07:07	07:30	07:48	08:09	08:32	09:01	09:26	09:51	10:20	10:48	11:18	11:48	12:21	12:51	13:23	13:52	14:11	14:33
Dundrum Centre (2841)	07:13	07:37	07:56	08:16	08:39	09:06	09:31	09:58	10:25	10:53	11:23	11:53	12:28	12:58	13:29	13:57	14:17	14:40
Dundrum Luas (2866)	07:16	07:40	07:59	08:19	08:41	09:10	09:35	10:02	10:29	10:57	11:27	11:57	12:32	13:01	13:33	14:01	14:21	14:43
Fosters Avenue (2052)	07:27	07:50	08:17	08:36	08:53	09:21	09:46	10:10	10:37	11:08	11:35	12:05	12:42	13:13	13:45	14:13	14:32	14:54
UCD (765)	07:35	08:00	08:28	08:47	09:06	09:27	09:53	10:17	10:45	11:18	11:45	12:15	12:52	13:23	13:51	14:22	14:40	15:04

Service Number	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175
Kingswood Avenue (6001)	14:10	14:40	15:10	15:40	16:10	16:40	17:10	17:40	18:05	18:35	19:05	19:35	20:15	20:45	21:15	21:45	22:15
Ard Mor Drive (10150)	14:17	14:47	15:18	15:47	16:18	16:48	17:19	17:50	18:13	18:43	19:12	19:40	20:20	20:49	21:19	21:49	22:19
Tallaght Luas (4348)	14:26	14:57	15:28	15:57	16:28	16:58	17:30	18:00	18:22	18:53	19:21	19:49	20:28	20:57	21:27	21:57	22:27
Old Bawn Centre (2540)	14:41	15:12	15:43	16:11	16:42	17:14	17:47	18:16	18:36	19:06	19:32	20:00	20:38	21:06	21:36	22:06	22:36
Scholarstown Park (10154)	14:52	15:23	15:53	16:22	16:53	17:26	17:59	18:26	18:46	19:16	19:41	20:08	20:46	21:13	21:43	22:13	22:43
Marley Park (2969)	14:59	15:29	16:00	16:29	17:00	17:33	18:07	18:34	18:53	19:23	19:48	20:14	20:52	21:19	21:49	22:19	22:48
Ballinteer Avenue (2858)	15:04	15:34	16:05	16:34	17:05	17:37	18:11	18:39	18:58	19:28	19:52	20:18	20:55	21:23	21:53	22:23	22:51
Dundrum Centre (2841)	15:10	15:41	16:12	16:39	17:11	17:43	18:16	18:44	19:04	19:33	19:57	20:22	20:59	21:27	21:57	22:27	22:55
Dundrum Luas (2866)	15:14	15:44	16:16	16:43	17:15	17:48	18:20	18:48	19:07	19:37	20:01	20:26	21:03	21:29	21:59	22:29	22:58
Fosters Avenue (2052)	15:28	15:56	16:27	16:54	17:28	17:59	18:31	18:59	19:18	19:46	20:09	20:34	21:10	21:35	22:05	22:35	23:03
UCD (765)	15:35	16:04	16:36	17:07	17:35	18:08	18:40	19:08	19:28	19:54	20:17	20:39	21:15	21:40	22:10	22:40	23:07

TFI TRANSPORT FOR IRELAND

Go-Ahead Ireland

UCD - Citywest via Dundrum | **175** | **Saturday** | **Valid from 13th of Marc 2022**

Service Number	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175
UCD (765)	08:15	09:15	10:05	11:05	12:05	13:05	14:05	15:05	16:05	17:05	18:05	19:05	20:05	21:15	22:20	23:20
Deerpark Road (10096)	08:21	09:22	10:13	11:13	12:13	13:13	14:13	15:13	16:13	17:13	18:13	19:13	20:12	21:21	22:26	23:26
Dundrum Luas (2825)	08:26	09:27	10:19	11:19	12:19	13:19	14:19	15:19	16:19	17:19	18:19	19:19	20:17	21:25	22:30	23:30
The Rise (4397)	08:32	09:34	10:27	11:28	12:28	13:28	14:28	15:28	16:28	17:28	18:28	19:28	20:25	21:32	22:37	23:37
Scholarstown Park (10105)	08:40	09:43	10:37	11:40	12:40	13:40	14:40	15:40	16:40	17:40	18:40	19:40	20:34	21:40	22:45	23:45
Old Bawn Centre (2532)	08:47	09:51	10:46	11:49	12:49	13:49	14:49	15:49	16:49	17:49	18:49	19:49	20:42	21:47	22:52	23:52
Village Green (2617)	08:51	09:57	10:52	11:55	12:55	13:55	14:55	15:55	16:55	17:55	18:55	19:55	20:46	21:51	22:56	23:56
The Square Tallaght (4347)	08:57	10:03	11:00	12:04	13:04	14:04	15:04	16:04	17:04	18:04	19:04	20:04	20:52	21:56	23:01	24:01
Ard Mor Drive (10110)	09:04	10:11	11:08	12:14	13:14	14:14	15:14	16:14	17:14	18:14	19:14	20:14	21:00	22:04	23:09	24:09
Kingswood Avenue (6002)	09:09	10:16	11:13	12:19	13:19	14:19	15:19	16:19	17:19	18:19	19:19	20:19	21:05	22:09	23:14	24:14

Citywest - UCD via Dundrum | **175** | **Saturday** | **Valid from 13th of Marc 2022**

Service Number	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175
Kingswood Avenue (6001)	07:10	08:10	08:50	09:30	10:30	11:30	12:30	13:30	14:30	15:30	16:30	17:30	18:30	19:30	20:30	21:15	22:15
Ard Mor Drive (10150)	07:14	08:14	08:55	09:36	10:36	11:36	12:36	13:36	14:36	15:36	16:36	17:36	18:36	19:34	20:34	21:19	22:19
Tallaght Luas (4348)	07:22	08:22	09:04	09:46	10:46	11:46	12:46	13:46	14:46	15:46	16:46	17:46	18:46	19:42	20:42	21:27	22:27
Old Bawn Centre (2540)	07:31	08:31	09:14	09:57	10:57	11:59	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:51	20:51	21:36	22:36
Scholarstown Park (10154)	07:38	08:38	09:22	10:06	11:06	12:11	13:11	14:11	15:11	16:09	17:08	18:08	19:08	19:58	20:58	21:43	22:43
Marley Park (2969)	07:43	08:44	09:29	10:13	11:13	12:19	13:19	14:19	15:19	16:16	17:15	18:15	19:15	20:04	21:04	21:49	22:49
Ballinteer Avenue (2858)	07:47	08:48	09:33	10:17	11:17	12:25	13:25	14:25	15:25	16:22	17:19	18:19	19:19	20:08	21:08	21:53	22:53
Dundrum Centre (2841)	07:52	08:53	09:38	10:22	11:23	12:32	13:32	14:32	15:32	16:29	17:26	18:26	19:26	20:12	21:12	21:57	22:57
Dundrum Luas (2866)	07:54	08:55	09:41	10:25	11:26	12:35	13:35	14:35	15:35	16:32	17:29	18:29	19:29	20:15	21:14	21:59	22:59
Fosters Avenue (2052)	07:59	09:01	09:48	10:32	11:34	12:43	13:43	14:43	15:43	16:40	17:37	18:37	19:37	20:22	21:20	22:05	23:05
UCD (765)	08:04	09:06	09:55	10:39	11:42	12:51	13:51	14:51	15:51	16:48	17:45	18:45	19:45	20:27	21:25	22:10	23:10

TFI TRANSPORT FOR IRELAND

Go-Ahead Ireland

UCD - Citywest via Dundrum **Sunday** **Valid from 13th of Marc 2022**

Service Number	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175
UCD (765)	09:15	10:05	11:05	12:05	13:05	14:05	15:05	16:05	17:05	18:05	19:05	20:05	21:15	22:20	23:20
Deerpark Road (10096)	09:22	10:12	11:12	12:12	13:12	14:12	15:12	16:12	17:12	18:12	19:12	20:12	21:21	22:26	23:26
Dundrum Luas (2825)	09:27	10:17	11:17	12:18	13:18	14:18	15:18	16:18	17:18	18:18	19:18	20:16	21:25	22:30	23:30
The Rise (4397)	09:34	10:24	11:24	12:26	13:26	14:26	15:26	16:26	17:26	18:26	19:26	20:26	21:33	22:38	23:38
Scholarstown Park (10105)	09:42	10:32	11:34	12:38	13:38	14:38	15:38	16:38	17:38	18:38	19:38	20:36	21:41	22:46	23:46
Old Bawn Centre (2532)	09:49	10:40	11:42	12:47	13:47	14:47	15:47	16:47	17:47	18:47	19:47	20:43	21:48	22:53	23:53
Village Green (2617)	09:53	10:44	11:46	12:52	13:52	14:52	15:52	16:52	17:52	18:52	19:52	20:48	21:52	22:57	23:57
The Square Tallaght (4347)	09:58	10:50	11:53	12:59	13:59	14:59	15:59	16:59	17:59	18:59	19:59	20:53	21:57	23:02	24:02
Ard Mor Drive (10110)	10:05	10:57	12:02	13:08	14:08	15:08	16:08	17:08	18:08	19:08	20:08	21:01	22:05	23:10	24:10
Kingswood Avenue (6002)	10:10	11:02	12:07	13:15	14:15	15:15	16:15	17:15	18:15	19:15	20:15	21:06	22:10	23:15	24:15

Citywest - UCD via Dundrum **Sunday** **Valid from 13th of Marc 2022**

Service Number	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175
Kingswood Avenue (6001)	08:10	08:50	09:30	10:30	11:30	12:30	13:30	14:30	15:30	16:30	17:30	18:30	19:30	20:30	21:15	22:15
Ard Mor Drive (10150)	08:14	08:54	09:35	10:35	11:35	12:35	13:35	14:35	15:35	16:35	17:35	18:35	19:34	20:34	21:19	22:19
Tallaght Luas (4348)	08:22	09:02	09:44	10:44	11:44	12:44	13:44	14:44	15:44	16:44	17:44	18:44	19:42	20:42	21:27	22:27
Old Bawn Centre (2540)	08:32	09:12	09:54	10:56	11:56	12:56	13:56	14:56	15:56	16:56	17:56	18:56	19:51	20:51	21:36	22:36
Scholarstown Park (10154)	08:39	09:19	10:01	11:05	12:05	13:05	14:05	15:05	16:05	17:05	18:05	19:05	19:58	20:58	21:43	22:43
Marley Park (2969)	08:45	09:25	10:07	11:11	12:13	13:13	14:13	15:13	16:13	17:13	18:11	19:11	20:04	21:04	21:49	22:49
Ballinteer Avenue (2858)	08:50	09:30	10:12	11:16	12:18	13:18	14:18	15:18	16:18	17:18	18:16	19:16	20:08	21:08	21:53	22:53
Dundrum Centre (2841)	08:54	09:34	10:17	11:22	12:24	13:24	14:24	15:24	16:24	17:24	18:22	19:22	20:12	21:12	21:57	22:57
Dundrum Luas (2866)	08:57	09:37	10:21	11:26	12:28	13:28	14:28	15:28	16:28	17:28	18:26	19:26	20:15	21:14	21:59	22:59
Fosters Avenue (2052)	09:03	09:43	10:28	11:33	12:37	13:37	14:37	15:37	16:37	17:37	18:33	19:33	20:22	21:20	22:05	23:05
UCD (765)	09:10	09:50	10:35	11:41	12:45	13:45	14:45	15:45	16:45	17:45	18:41	19:41	20:27	21:25	22:10	23:10

TFI TRANSPORT FOR IRELAND

Go-Ahead Ireland