consulting engineers

NRB

Transportation Assessment Report

including....

Preliminary Travel Plan

(Appendix F)

DMURS Statement of Consistency

(Appendix G)

Stage 1 Road Safety Audit

(Appendix H)

Bus Capacity/Demand Report

(*Appendix I)*

For

Proposed Residential Development

At

Glebe Site, St Agnes Road Crumlin, Dublin 12.

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 lands at Glebe House, Crumlin, Dublin 12.

Although now closed, the site was notably previously used for industrial & 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 Crumlin Village with local services, schools, and employment destinations all available nearby, and being served by high frequency bus services, the site is ideally placed to take advantage of, and contribute to, non-car modes of travel. In these terms we believe it represents sustainable development.

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

We commissioned and undertook new traffic surveys of the adjacent road network during September 2021 when schools were fully opened 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 junction, are more than adequate to accommodate the worst-case traffic associated with the development. The assessment also confirms that the construction and full occupation of the scheme will have a negligible 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 & future 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. All as set out in the enclosed Preliminary MMP. The Bus Capacity/Demand Study confirms that the proposed development can be accommodated on current services and is not dependant upon future improved services.

Direct and high-quality pedestrian linkages are provided between the site and the existing pedestrian/cycling facilities on the surrounding road network. The limited 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 F***. 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 G***.

An independent Stage 1 Road Safety Audit, together with the Designer Feedback form, has been undertaken and included as ***Appendix H***. A Bus Capacity/Demand Report has been prepared and is included as ***Appendix I***.

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 150 apartments and an ancillary small crèche and ancillary café on the site at St Agnes Road, Crumlin, Dublin 12.

1.2 The proposed development, a high-density residential apartment scheme arranged in 2 blocks with an ancillary crèche & café, together with the refurbishment of the protected structure, should be considered in the context of its sustainable location within the heart of Crumlin Village. A site location plan is included below as ***Figure 1.1***.

Figure 1.1 - Site Location in Heart of Crumlin

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 previous uses & nature of the established site),
- Location of the development within Crumlin 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 & Junctions,
- 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 Assessment Guidance,
- 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 F***. 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 G.***

1.7 An independent Stage 1 Road Safety Audit, together with the Designer Feedback form, has been undertaken and included as ***Appendix H***. A Bus Capacity/Demand Report has been prepared and is included as ***Appendix I***.

2.0 EXISTING CONDITIONS, DEVELOPMENT PROPOSALS & PARKING

2.1 The subject development site is located within the grounds of Glebe House, Crumlin. The site is within and northwest of Crumlin Village. It is located close to the junction of St Agnes Road & Windmill Road and lies 4km southwest of Dublin City Centre. Crumlin Village itself contains a range of local services & shops. There are a number of schools locally including Rosary College, St Agnes National School, Loretto College and Drimnagh Castle Primary School.

2.2 The site is within a short walking distance of Pearse Park, located to the northeast along Windmill Road. Pearse Park contains sports pitches, mature parkland, and a children's playground. There is also a local park nearby, located off Somerville Avenue to the west.

2.3 The subject site is approximately 0.88Ha in area. It contains a protected structure, Glebe House, a derelict three-storey detached period house, and the lands of the Coruba House site (which is located north of the site off St Agnes Road). Located to the rear of Glebe House are several old industrial workshop units, with an enclosed paddock to the rear used for the storage of materials and the grazing of horses.

2.4 The eastern part of the site is currently separated from the Glebe House lands by a blockwork wall and the walls of the former industrial units. The existing boundary with Somerville Drive to the east comprises remnant factory walls of previous industrial units.

2.5 To the south, the site is bounded by a community-use building, Morean Hall, and to the west is a small green space set in the context of Somerville Green residential units and their associated gardens. The site is relatively flat in nature with an established access and direct frontage onto St Agnes Road. The boundary with the road is defined by an existing limestone wall and 4 mature Horse-chestnut trees.

2.6 St Agnes Road is a typical urban single carriageway roadway provided with generous footpaths along both sides. The roadway is generally orientated in a N-S direction as it bisects the middle of Crumlin Village. An image showing the site in the context of the existing St Agnes Road is included below as ***Figure 2.1.***

Figure 2.1 – View of St Agnes Road & Site (View Northwards)

2.7 The Traffic survey and assessment (within ***Appendix D***) confirms that St Agnes Rd carries a weekday AM Peak Hour 2-Way traffic flow of approximately 655 Passenger Car Units (PCUs) and a 2-way flow of 591 PCUs in the PM Peak Hour, measured immediately south of the Glebe Site. In these terms, the road is considered moderately trafficked in terms of its link carrying capacity.

2.8 To set the above existing flow in context, roads of this nature have a traffic carrying or link capacity of between 1,000 and 1,200 PCUs per-direction per-hour. This link capacity of a typical street provides a context for the existing conditions on St Agnes Road 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 terminal junctions.

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

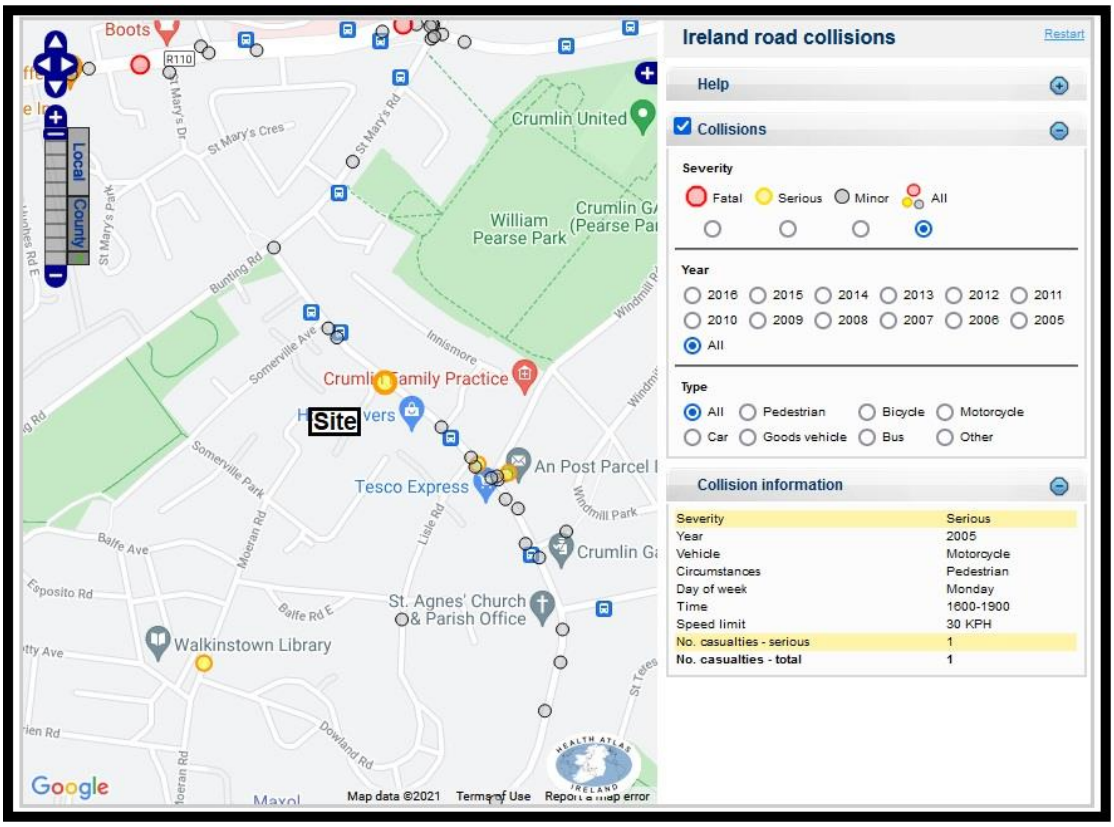


Figure 2.2 – RSA On-Line Accident Database

2.10 There was a single accident on the street in front of the site that we examined in more detail – it was classified as 'serious' (highlighted above) and is reported as having occurred in 2005 between 4pm and 7pm in the evening, involving a pedestrian & a motorcyclist. There was one serious injury (requiring hospitalisation) as a result of the reported accident.

Proposed Development

2.11 The scheme consists of a residential scheme with a total of 150 No apartments provided, comprising a residential development of 150 no. apartments consisting of 74 one beds, 72 two beds and 4 three bed residential units, a creche and café.

2.12 Two apartment buildings are proposed ranging in height from 4 – 6 storeys and linked by a carpark at ground floor and a podium at first floor level comprising Block A and Block B. Block A is 5-6 storeys and consists of 79 apartments including 35 no. one beds and 44 no. two beds units, ESB substation/switch room/metering room of 85m^2, 42 no. secure bicycle storage and bin storage of 44m^2. Block B is 4-5 storeys and consists of 66 apartments and includes 38 no. one beds, 25no. two beds and 3 no. three beds, a Creche of 147 m^2 at ground floor level with associated outdoor area, ground floor plant rooms of 74m^2, ESB substations/switch room/metering room/telecoms of 89m^2, 188 no.

secure bicycle storage spaces in two locations, 6 no. motorbike spaces and bin storage of 75m^2. It includes 2 no. three storey pavilion buildings either side of Glebe House to accommodate 1 No two-storey duplex 2-bed apartment above 1 No. 1-bed apartment at ground floor in the north-west pavilion & One number two storey duplex 2 bed apartment above a 55m^2 ground floor café, in the south-east pavilion.

2.13 The proposed development includes the repair of fire damaged elements (following a fire 21st April 2022) and the refurbishment of Glebe House, a protected structure, into two apartments, one number 2 bed unit at lower ground floor and one number 3 bed unit at upper ground and first floor.

2.14 The repair of fire damaged elements includes the replacement of all roof coverings and structure, replacement of all 1st floor timber stud walls, replacement of first floor rear return joists, replacement/repair of floor joists at first floor level, replacement of internal render to kitchen/dining area in rear return building and replacement/repair of stair from upper ground to first floor level. The refurbishment of Glebe House includes the removal of extensions to the rear and sides of the building, restoration of the façade, replacement of pvc windows with sliding sash windows and associated works to the interior and to the curtilage of Glebe House including lowering the front boundary wall and return boundary wall to the front of Glebe House.

2.15 The proposed development also includes the demolition of all workshops, offices and sheds to the rear and sides of Glebe House Demolition of boundary walls around the Coruba land on Somerville Drive, the front entrance and between Coruba and the Glebe lands. Demolition of non-original brick column's at St Agnes Road entrance to Glebe House (1,636 m^2).

2.16 The proposed development includes 75 car parking spaces with 66 no. car parking spaces (includes 2 Go Car spaces) in a ground floor car park below podium (& partly in Block A), 4 No. visitor car parking spaces in front of Glebe House all with vehicular access from St Agnes's Road and 5 No. assigned car parking spaces on the eastern side of Block B with vehicular access from Somerville Drive.

2.17 The development provides 905m^2 of Public Open Space to the front and side of Glebe House, and within the southeast public plaza. with a pedestrian route to the side of the Café at Pavilion B and 1,632m^2 of Communal Open Space located at podium level and to the rear of Block A.

2.18 76 no. visitor bicycle parking spaces are provided in the public accessible areas of the site.

2.19 The application also includes the provision of a new footpath along the south-eastern boundary at Somerville Drive, a new controlled gate between Somerville Drive and St Agnes Road allowing public access through the site within daylight hours and a new pedestrian access from the public open space onto St. Agnes Road, boundary treatment, landscaping, Solar Panels on the roof of Blocks A and B, provision of 4 no. Microwave link dishes to be mounted on 2 No. steel support posts affixed to the lift shaft overrun on Block A, lighting, services and connections, waste management and other ancillary site development works to facilitate the proposed development.

Car Parking & Bicycle Parking Quantum

2.20 We have reviewed the **car parking** provision in terms of the maximum requirements of the DCC Development, for the entire development (on the assumption that the small ancillary creche & café generate a negligible requirement). The site is within Zone 3 of Map J of the Development Plan (Refer extract below as ***Figure 2.3***).

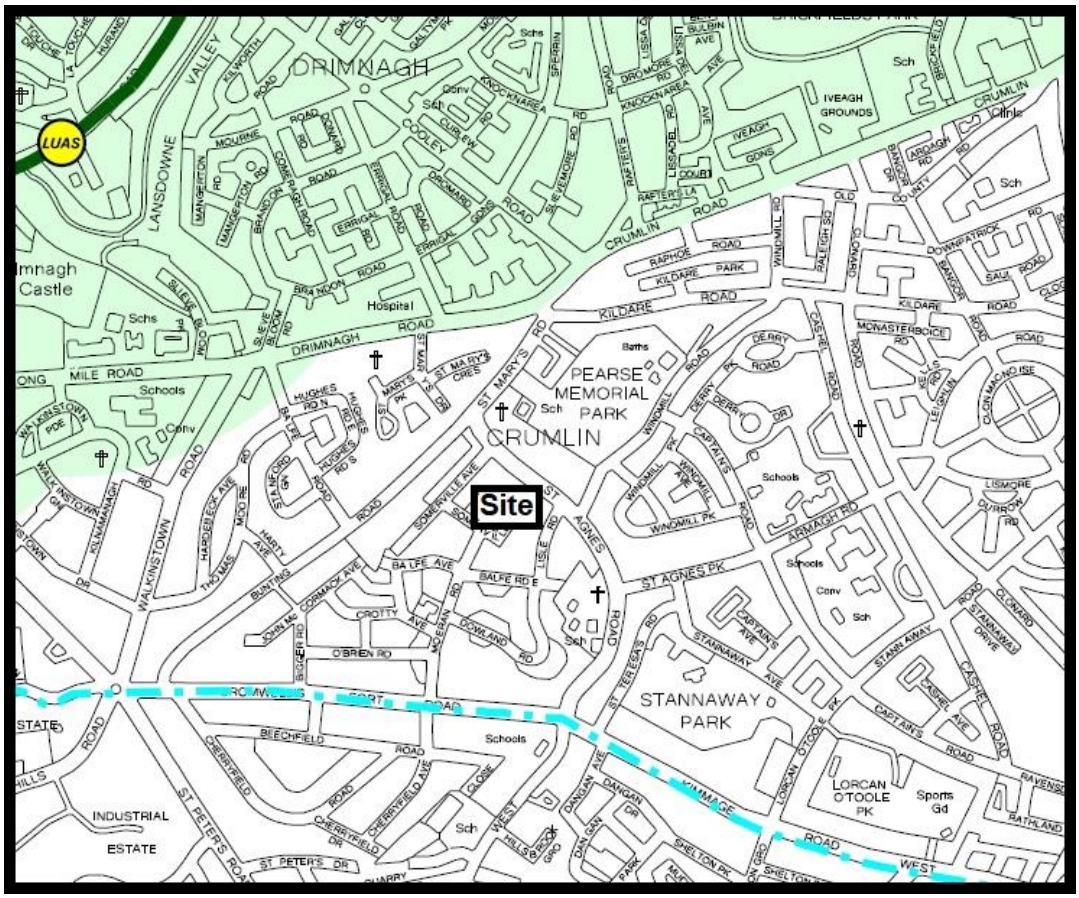
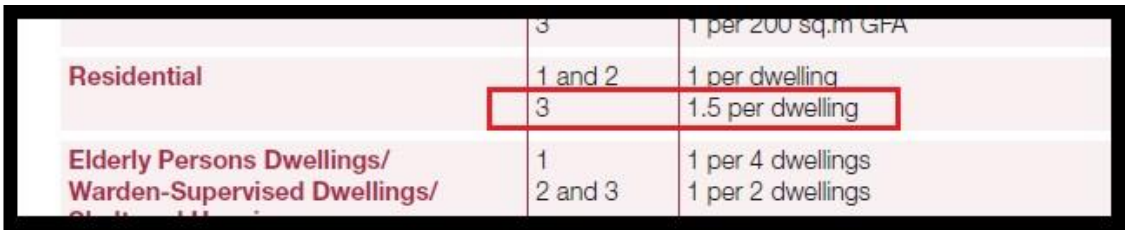


Figure 2.3 – DCC Map J Extract

2.21 The car parking requirements are set out within Table 16.1 of the DCC Development Plan (extract below as ***Figure 2.4***). This allows a maximum car parking provision of 1.5 spaces per unit, which would result in a requirement for 225 car parking spaces for the apartments. Clearly, this would represent an unsustainable approach. In this case 30% of the maximum requirements of the DCC Development Plan are proposed.



	3	1 per 200 sq.m GFA
Residential	1 and 2	1 per dwelling
	3	1.5 per dwelling
Elderly Persons Dwellings/	1	1 per 4 dwellings
Warden-Supervised Dwellings/	2 and 3	1 per 2 dwellings

Figure 2.4 – DCC Extract Table 16.1, Maximum Car Parking

2.22 There are a total of 75 Parking Spaces provided. In terms of the 'per-unit car parking ratio', the 75 No parking spaces provided represents a ratio of 0.5 per unit. The recently 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.

2.23 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.

2.24 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"***

2.25 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"***

2.26 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	✓

2.27 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.***

2.28 The development is intended to be run by Circle VHA, a Housing Body (as per the application), and has significantly lower car dependency and usage than traditional apartments. Under the management, car parking will not be an automatic entitlement with the apartments, but the spaces provided will be available to residents on a 'need basis'. The remainder of the parking will be allocated to residents mainly on a first-come-first-served basis but will be dedicated and allocated to specific residents. Some parking

spaces will then be reserved for visitors and set down/deliveries. The allocation of car parking spaces will reviewed/renewed on an annual/ongoing basis to suit demand.

2.29 In terms of ***specific measures*** to enable car parking provision to be reduced to the level proposed, with a parking ratio of 0.5, the specific measures are:

- The development is intended to be run by Circle VHA, a Housing Body (as per the application), and, as a housing body scheme, it has significantly lower car dependency and usage than traditional apartments (refer to letters from Circle VHA submitted with the application),
- Car Parking spaces provided will be available to residents on a 'need-basis'. The remainder of the parking will then be allocated to residents mainly on a first-come-first-served basis, but will be dedicated and allocated to specific residents,
- The Location within walking/cycling distance of all local amenities within Crumlin Village and being within 4.5km distance of Dublin City Centre.
- Proximity to frequent existing Dublin Bus Services, with Go-Ahead Service #18 & Dublin Bus Service #150 passing the site (the nearest northbound bus stop is located 105m from the existing site access and the nearest southbound bus stop is located 65m from the existing site access). Refer also to details of Bus Stops on Figure 2.2 of the enclosed Bus Capacity & Demand Report. There are additional services to Crumlin Village such as #27 nearby,with a combined peak period bus frequency of less than 10-minute intervals.
- It is intended that 2 No. Dedicated "Go Car" spaces/cars will be provided within the development, for the use of residents.
- Copious Cycle Parking and Cycle Storage (Refer Above),
- On site Security and Management by permanent staff and/or CCTV that will ensure the car parking areas are monitored and policed, with an enforcement system in operation, so that the car parking restrictions are enforced, and
- The Implementation of a working Mobility Management Plan.

2.30 10% of car parking spaces are currently designed as fully EV. All car parking spaces can easily be upgraded to allow conversion for Electric Vehicles. In the case of a residential development of the nature proposed, with specific spaces likely dedicated to specific apartments, it is considered appropriate to facilitate the retrofitting of spaces, based on

demand following occupation, rather than a percentage of spaces being defined as such and provided from the outset. 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. Where appropriate, conduits can be run on the walls where charging points can also be mounted.

2.31 The requirement for **Bicycle Parking** has also been assessed in accordance with the ***DCC Development Plan***. The cycle parking requirement is set out in Table 16.2 of the Plan, with an extract below as ***Figure 2.5*** for ease of reference.

Table 16.2 – Cycle Parking Standards for Various Land-Uses (All areas quoted are gross floor area)

Land-Use	Zone	Cycle Spaces
Enterprise and employment	1 and 2 3	1 per 100 sq.m 1 per 150 sq.m
Shops and Main Street Financial Offices	1 and 2 3	1 per 150 sq.m 1 per 200 sq.m
Residential (houses and apartments)	All zones	1 per unit (*Additional requirements for larger units and visitor parking will be decided on a case by case basis*)
Hotels	1 2 3	Under 50 bedrooms – 1 per 6 bedrooms Over 50 bedrooms – 1 per 10 bedrooms (Minimum of 10 cycle spaces) 1 per 12 bedrooms

Figure 2.5 – DCC Extract Table 16.2, Bicycle Parking Requirements

2.32 This would indicate a requirement for 150 bicycle parking spaces only. Notwithstanding the Bicycle Parking & Storage requirements of the DCC 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.

2.33 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 230 Bedrooms in total and 150 units, this represents a requirement for 230 Residential Bicycle Storage Spaces and 75 Visitor Spaces. These precise numbers are being provided on the site, fully complying with the Apartment Guidelines.

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. It is specifically referenced and recommended for use within the TII Guidelines for Traffic/Transport Assessment.

3.2 We have included as ***Appendix C*** the TRICS output for traditional Residential Apartments, Crèches and Cafés, and this provides a robust estimation of traffic as illustrated in ***Table 3.1*** to ***Table 3.4*** 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 lower, as it is based on traditional apartments. However, it does represent a robust approach to the assessment.

3.3 It should also be noted that we have assigned additional traffic associated with the small ancillary Creche & Café located within the facility for robustness, but it is expected that the quantum of external vehicular trips that these elements would generate would be absolutely negligible or zero in the context of the local roads. This is in the context of these facilities being ancillary to the scheme and likely for the use of residents primarily. The following Tables summarise the Output from the TRICS database, which is included herein as ***Appendix C*** for comparison purposes.

Table 3.1: TRICS Data Summary, 150 Apartments

150 No Apartments	Arrivals (PCUs)		Departures (PCUs)		Total 2-Way Vehicular Traffic Generated
Network Hour	Per Unit	150 No	Per Unit	150 No	
Weekday AM Peak Hr 8-9	0.062	9	0.198	30	39
Weekday PM Peak Hr 5-6	0.172	26	0.084	13	39

Table 3.2: TRICS Data Summary, 150m² Crèche

150 m² Creche	Arrivals (PCUs)		Departures (PCUs)		Total 2-Way Vehicular Traffic Generated
Network Hour	Per Unit	Dev	Per Unit	Dev	
Weekday AM Peak Hr 8-9	3.710	6	3.120	5	11
Weekday PM Peak Hr 5-6	2.854	4	3.448	5	9

Table 3.3: TRICS Data Summary, 55m² Café

55 m² Café	Arrivals (PCUs)		Departures (PCUs)		Total 2-Way Vehicular Traffic Generated
Network Hour	Per Unit	Dev	Per Unit	Dev	
Weekday AM Peak Hr 8-9	0.000	0	0.000	0	0
Weekday PM Peak Hr 5-6	2.254	1	1.382	1	2

Table 3.4: Total Traffic Generated (Worst Case, Robust Approach)

Network Hour	Arrivals (PCUs)	Departures (PCUs)	2-Way Flow (PCUs)
Weekday AM Peak Hr 8-9	15	35	50
Weekday PM Peak Hr 5-6	31	19	50

3.4 In the case of residential apartments, the application of TRICS in this case specifically excludes the effect of Shared Visits to other elements and quantifies the volumes of traffic on an individual basis with the traffic assigned as 100% primary trips - in these terms the assessment can be considered further robust.

3.5 Therefore, the use of TRICS and the methodology adopted is Robust and Onerous and the Trip Rates applied & used provide for a robust reflection of the worst-case traffic generated by the proposed development. This is particularly the case for the subject site where there is restricted residential car parking provision, which further limits trip generation.

3.6 Notwithstanding, in light of observation of existing capacity conditions, the use of higher Trip Rates, if required, would have no impact upon the conclusions of the study. This is particularly the case given the low traffic impact associated with the development.

Assessment Methodology

3.7 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.

3.8 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. The Traffic Survey commissioned included the junctions as set out in ***Figure 3.1*** below

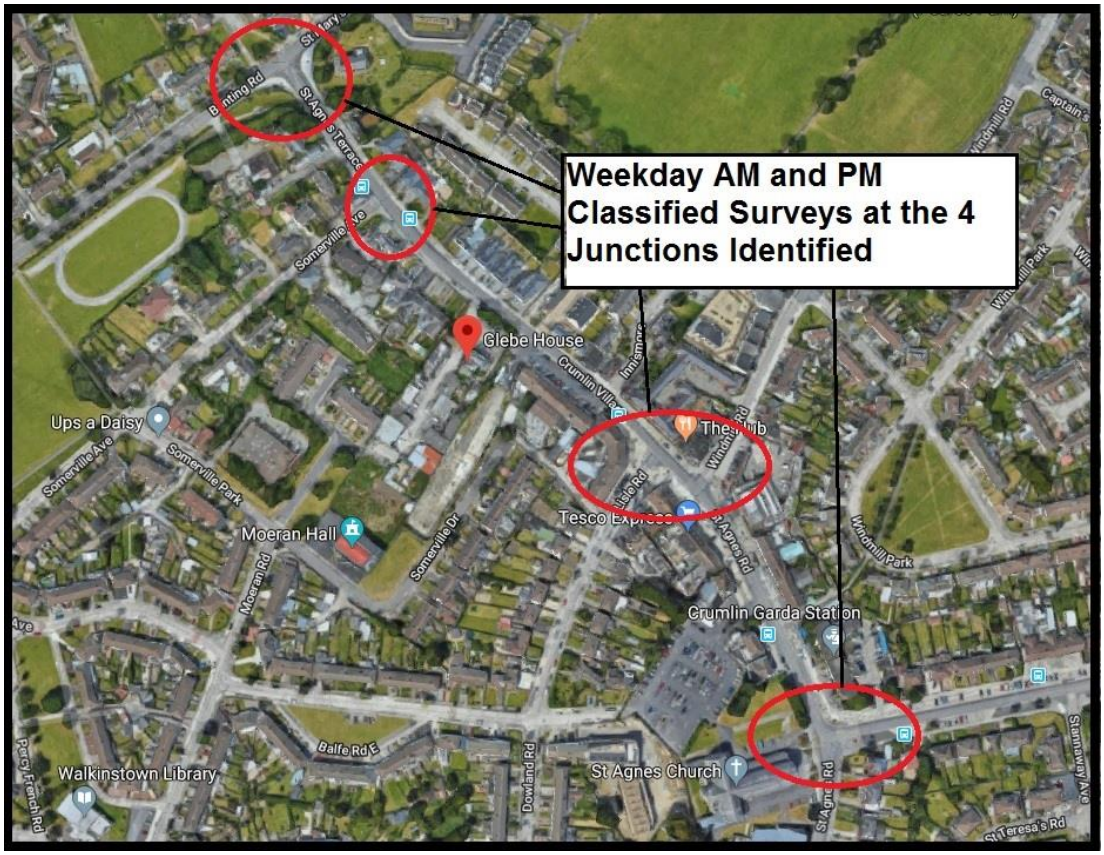


Figure 3.1 – Traffic Surveys Commissioned

3.9 Using this data, we then applied a calculated **Covid Factor** based on accurate data extracted from the TII Permanent Traffic Counter data on the M50 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.***

3.10 We then used the TII PE-PAG-02017 Project Appraisal Guidelines for National Roads Unit 5.3 (Travel Demand Projections 2021, Table 6.1: Central Growth Rates: Annual Growth Factors, Metropolitan Dublin), to establish projected occupation/opening year 2024 and design year 2039 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***.

3.11 It should be noted that we have selected an opening year of 2024 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. 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.

3.12 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	2024	1.049
2024	2039	1.153

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 additional 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.

4.3 In this regard, it is demonstrated herein that the proposed occupation of the entire site and Apartments, 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 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 2024

Assessed Road or Junction	Traffic Increase %		COMMENT
	AM Pk Hr	PM Pk Hr	
St Mary's Rd/Bunting Rd junction	3.2%	3.1%	<5% No Further Assessment Required
Somerville Ave/St Agnes Rd Junction	4.1%	3.9%	<5% No Further Assessment Required
Lisle Rd/St Agnes Rd Junction	2.3%	2.9%	<5% No Further Assessment Required
Windmill Rd/St Agnes Rd Junction	2.0%	2.4%	<5% No Further Assessment Required
St Agnes Pk/St Agnes Rd Junction	1.3%	1.7%	<5% No Further Assessment Required

4.5 Apart from the Site Access, these worst-case traffic increases are all below the Guideline & industry-standard 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 for the weekday AM and PM Periods (2024 Opening Year and 2039 Design Year +15) purely to confirm & demonstrate adequate capacity exists to accommodate the increased traffic associated with the development.

Access T-Junction - 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 junction. 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 as ***Appendix E***.

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

Table 4.2: Glebe Site Access PiCADY Results, Weekday AM & PM Commuter Pk Hours - 2024 & 2039

Modelled Scenario	*Period Mean Max Q (PCUs)*	*Period Max RFC*
Opening Year 2024 AM Peak Hr	<1	0.08
Opening Year 2024 PM Peak Hr	<1	0.04
Design Year 2039 AM Peak Hr	<1	0.09
Design Year 2039 PM Peak Hr	<1	0.04

4.10 The results of the modelling clearly show that the site access junction 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 proposed access 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 similar or higher volumes of car borne commuters. This further under-scores the robust nature of the assessment.

5.0 RESPONSE TO MATTERS RAISED BY DCC TRAFFIC/TRANSPORTATION

5.1 This section sets out the response to specific Traffic/Transportation & Roads matters raised by DCC Roads/Transportation Department dated 8th Dec 2021. We have included below the relevant extracts from the DCC Report, including these as individual numbered items as per the DCC Report, for ease of reference together with the Design Team Response following immediately thereafter in sequentially numbered paragraphs.

> 1. The applicant is requested to review the quantum of car parking proposed in the context of the development's location and limited alternative transport options as well as risk of car parking overspill onto adjacent local roads. The applicant should take account of local census information, car ownership etc. to help inform proposed car parking provision as well as the Traffic Impact Assessment. Modal split targets should be provided for the proposed development.

5.2 The Car Parking quantum is addressed within ***Paragraph 2.14*** to ***Paragraph 2.34*** above. There are a total of 75 Parking Spaces provided (66 under-croft, 5 at Somerville Drive and 4 visitor spaces). In terms of the 'per-unit car parking ratio', the 75 No parking spaces provided represents a ratio of 0.5 per unit. The quantum of car parking in the under-croft has been increased from 49 proposed at Pre-App Stage to 66 currently.

5.3 In addition, we have examined the Local Area Census Data, with an extract from the CSO Small Area Mapping (with the site highlighted) below as ***Figure 5.1***

Figure 5.1 – Extract CSO Small Area Mapping Showing Site

5.4 We have examined the data for each of the Local Small Areas surrounding the site, extracting relevant data, using the CSO on line map-based tool and summarised the information below as ***Table 5.1***.

Table 5.1: Local Census Data Information – Car Ownership

CSO Small Area Ref. Above Fig 5.1	Total Pop	No. Households	Total Commuters	Car Drivers	No Households Without a Car
1	165	69	86	30	22
2	218	84	129	52	21
3	164	86	72	26	43
4	317	115	195	57	36
5	208	84	108	28	34
6	356	130	208	59	50
7	316	137	202	74	49
8	210	72	139	53	16
9	273	105	180	75	19
10	245	103	150	57	20
11	206	83	130	46	18
12	221	91	117	37	18
13	146	68	86	41	14
14	268	100	169	47	32
15	236	100	160	58	19
Totals	3549	1427	2133	732	411
Relevant Extracts vis-à-vis Car Usage					
Percentage of Total Population in Area Commuting =					60.1%
Percentage of Total Population in Area Commuting as Car Drivers =					20.6%
Percentage of Households Locally that have No Car =					28.8%

5.5 The data confirms that only 20% of the population in the area are commuting as car drivers. It also confirms that nearly 30% of the existing households in the catchment currently have no car. This data further supports the case for the slightly reduced parking provision at the site.

5.6 We disagree with DCC statement that there are 'limited alternative transport options', and the Bus Capacity Assessment Report appended hereto clearly demonstrates that this location is highly accessible by bus. The site is served by frequent existing Dublin Bus Services, with Go-Ahead Service #18 & Dublin Bus Service #150 passing the site (the nearest northbound bus stop is located 105m from the existing site access and the nearest southbound bus stop is located 65m from the existing site access). Refer also to details of Bus Stops on Figure 2.2 of the enclosed Bus Capacity & Demand Report. There are additional services to Crumlin Village such as #27 nearby, with a combined

peak period bus frequency of less than 10-minute intervals, representing a high frequency service.

5.7 In terms of 'Modal Split Targets', any such targets are normally and ordinarily set within a working Mobility Management Plan when the development becomes operational and occupied.

> 2. The main entrance for the crèche is off Somerville Road. No visitor cycle or car parking are proposed adjacent to the entrance. The proposed drop off and collection strategy for the crèche should be provided having regard to access to cycle parking and car parking for staff and visitors.

5.8 There are 4 short stay visitor parking spaces provided in front of Glebe House, which can be used for Creche Drop Off. There will be no drop off on Somerville Drive, and parents will be advised of the arrangements upon enrolment. The facility will support the local area and community, being a childcare facility located within easy walking distance for residents. In addition, cycle parking spaces are proposed immediately beside the Creche facility, supporting & promoting sustainable travel.

> 3. The applicant should be requested to review the quantum of car parking proposed in the context of the development's location and limited alternative transport options as well as risk of car parking overspill onto adjacent local roads. The applicant should take account of local census information, car ownership etc. to help inform proposed car parking provision as well as the Traffic Impact Assessment. Modal split targets should be provided for the proposed development.

5.9 This Item is a repeat of Item 1 above and has been addressed.

> 4. The applicant is requested to provide a Car Parking Management Strategy at application stage and also include a letter of intent from a car share provider to clarify car share services can be provided at the proposed development. The applicant is also requested to clarify the number of visitor car parking spaces detailed on Drawing *100, Ground Floor Plan* which outlines 4 no. visitor spaces is correct as it contradicts figures outlined in the Design Report which states 2 no visitor spaces.

5.10 The drawings have been updated following receipt of the DCC comments.

5.11 The development is intended to be run by Circle VHA, a Housing Body (as per the application), and has significantly lower car dependency and usage than traditional apartments. Under the management, car parking will not be an automatic entitlement with the apartments, but the spaces provided will be available to residents on a 'need basis'. The remainder of the parking will be allocated to residents mainly on a first-come-first-served basis but will be dedicated and allocated to specific residents. Some parking spaces will then be reserved for visitors and normal parking spaces will similarly accommodate residential delivery vans. The allocation of car parking spaces will be reviewed/renewed on an annual/ongoing basis to suit demand.

5.12 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 below.

5.13 Dedicated Clauses can and will be contained within Residents Agreements for all units, which specifically address Car Parking. In the event where a parking space is an entitlement as part of an 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.

5.14 The day-to-day management of parking will be the responsibility of the Site Manager, and parking will be controlled by way of resident passes to be displayed in windscreens. Accordingly, unless they are dedicated to individual Residential units, on-site parking will otherwise remain in the control of the Management Company which will be operated by Circle. A car parking management regime will be implemented which will control & manage access to the car parking bays, thereby actively ensuring the availability of on-site car parking for each of the following user profiles:

- Residents,
- Crèche drop-off & pick-up,
- Visitors to the site

5.15 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. Other than the dedicated spaces for Apartments, visitors who request a short-term permit will be allocated on a 'first-come first-served' basis.

5.16 It is intended that access to the limited number of visitor spaces will be closely controlled.

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

5. Having regard to the use of the access road by cyclists and pedestrians as well as to DMURS recommendations on controlling vehicular speeds, the applicant is requested to justify the wide vehicular entrance and corresponding wide access road. The applicant is also requested to provide by way of an updated plan drawing, a pedestrian priority detail across the proposed vehicular entrance. Updated swept path analysis drawing should be submitted to take into account any changes to the vehicular entrance width having regards to review of the proposed 6.0m wide entrance.

5.18 The access road provides access to a total of 70 parking spaces, and as such it is very lightly trafficked indeed. It should also be noted that the 6m wide section referenced is only 17m in length (ie 3 car lengths), narrowing significantly internally beyond this point to provide natural horizontal traffic calming. The first 6m wide section has been so designed to ensure that the 4 no. surface parking spaces are accessible, avoiding unnecessary shunting when accessing the spaces. The comments under Item 5 above have been otherwise addressed by way of Design Amendments, TRACK drawings and Access Layout plans included as ***Appendix A***.

6. The applicant should be requested to review this potential conflict between the swept path of a refuse truck and proposed first floor façade treatment located on the northwest side of Block B and provide details how potential building strikes are proposed to be avoided.

5.19 This has been checked, and the TRACK of a refuse lorry can clearly avoid the façade at 1st floor level, as illustrated in the revised annotated TRACK drawings included as ***Appendix A***.

7. The applicant should be requested to clarify how car parking spaces located off Somerville Road are to be managed. Details of any bollards and signage etc. located within the private landing of the development to indicate the private car parking spaces off Somerville Drive should be clarified.

5.20 These spaces on Somerville Avenue are demarcated as 'Assigned Spaces for Residents' as illustrated on the drawings included as ***Appendix A***. Low Level signage will be provided for users. These will be managed as part of the development consistent with the internal parking management arrangements as set out in ***Paragraph 5.8*** to ***Paragraph 5.16*** above.

8. The applicant should be requested to clearly show the location of the temporary waste storage area as described within the *Operational Waste Management Plan* on plan drawings at application stage.

5.21 The 'temporary waste storage area' is intended to be immediately beside the entrance to the bin store, where the bin lorry stops. This is noted on drawings included as ***Appendix A***.

9. The applicant should be requested to provide 6 no. non-standard cycle parking spaces (a minimum of 4no. resident spaces should be sheltered and secure) and also detail location of cycle parking for staff associated with the development including the crèche use. Visitor spaces for the crèche use should also be identified.

5.22 A total of 46 visitor/staff cycle spaces are now provided within the vicinity of the proposed crèche, within easy walking distance (refer to Architect Layout Plans). Provision is also made for larger bikes (eg Cargo Bikes) within the under-croft and within the visitor parking areas, with a total of 6 Provided (incl 2 Cargo Bike Spaces adjacent the Creche (See GF Drawing extracts below as ***Figure 5.2*** and ***Figure 5.3***).

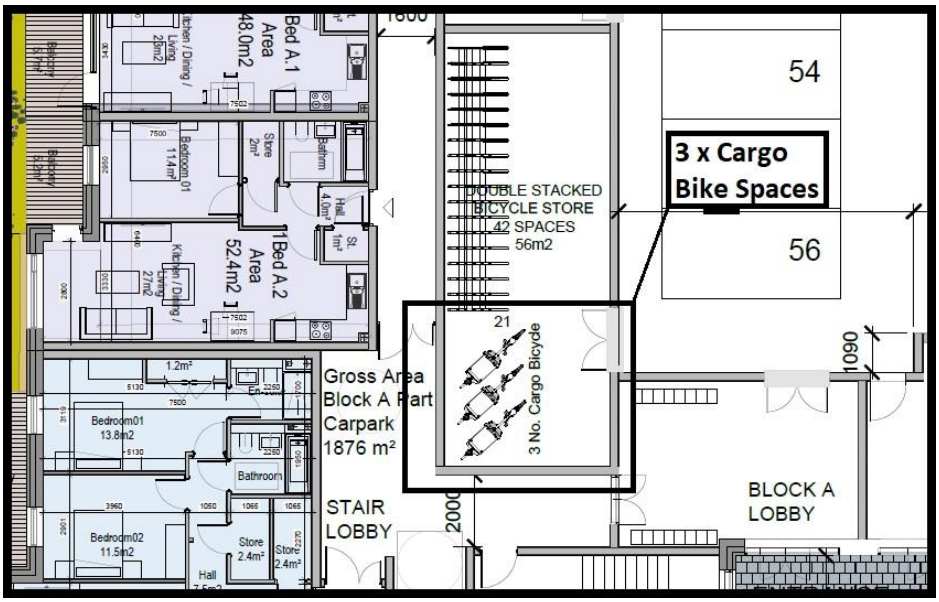


Figure 5.2 – Ground Floor Plan Extract Showing Cargo Bike Spaces

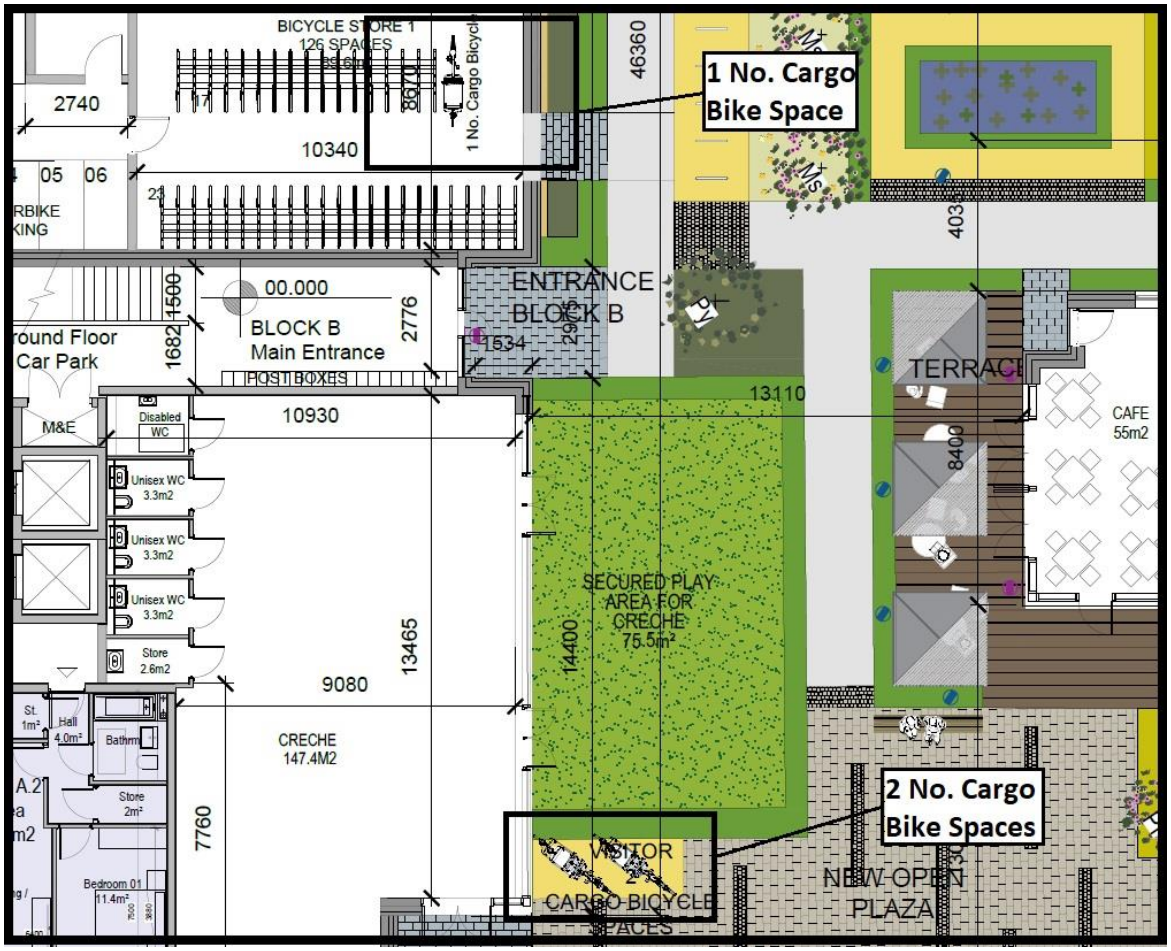


Figure 5.3 – Ground Floor Plan Extract Showing Cargo Bike Spaces (incl 2 No at Créche)

> 10. The applicant should also provide annotated drawings at application stage indicating available space within the various cycle stores to operate and manoeuver and park a bicycle within the proposed parking system.

5.23 The proposed double stack parking system is the standard proprietary system that has been approved and used throughout the city. The space provided meets the specification for the system. This system proposed is depicted below as ***Figure 5.4***

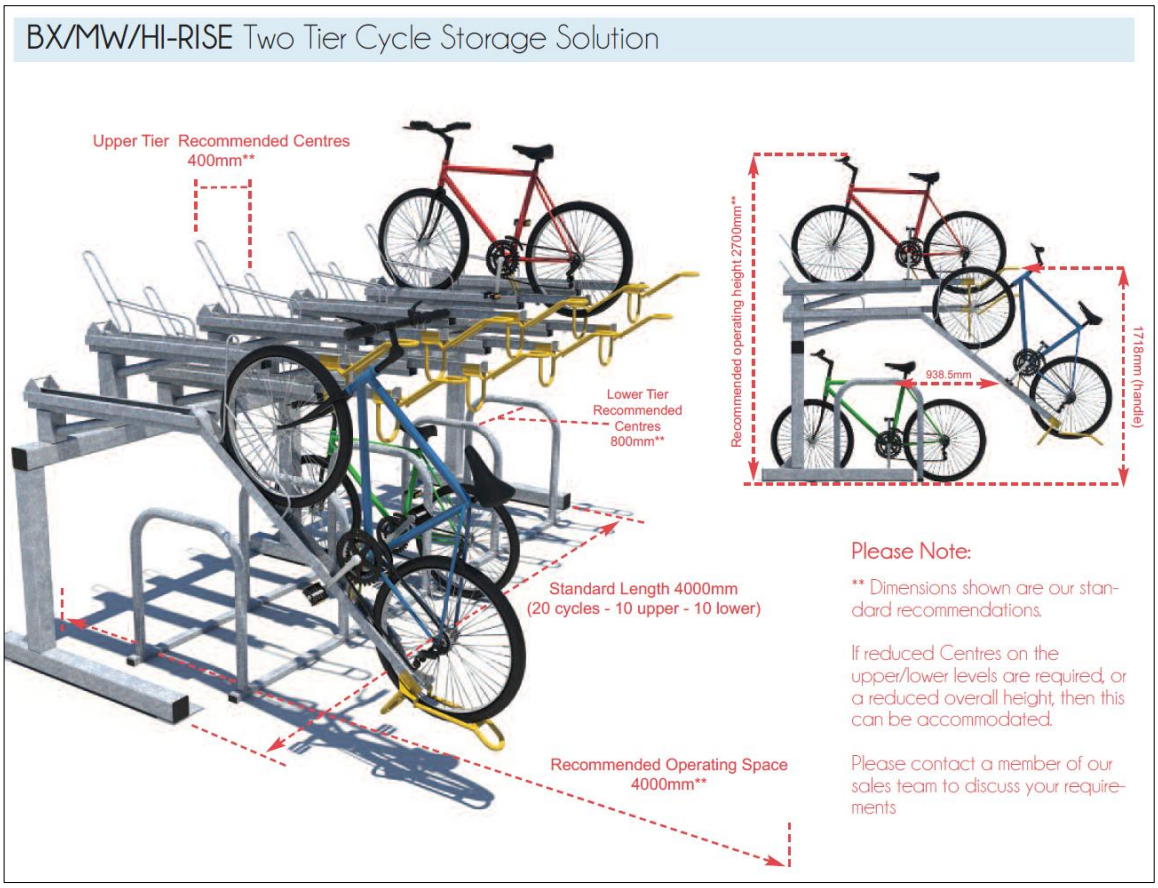


Figure 5.4 – Double Stack Cycle Storage (with Sheffield Stands at Lower Level)

> 11. The applicant should be requested to omit the proposed gate to ensure resident desire lines are provided by reinstating the permeable access to and from Somerville Drive and St Agnes Road.

5.24 The details now proposed, including providing for pedestrian & cyclist permeability to St Agnes Road and Somerville Drive, are as illustrated on the Architects Layout Plans. The pedestrian gates provided will allow permeable access during daylight hours to allow local residents access through the site which is in private ownership. The gates will be locked outside these hours, which is a similar approach to how many public parks are managed throughout the City. Resident desire lines are provided throughout daylight hours similar to public parks where desire lines are available during daylight hours but not at night time. Residents will have 24hr fobbed access, similar to other apartment schemes.

12. The applicant is also requested to review the provision of additional pedestrian demarcation within the existing public car park area located adjacent to the new public pedestrian connection located to the east of the site. This is to ensure cyclists and pedestrians as well as drivers have good visibility between the two areas and improved pedestrian facilities are provided within the existing car park area due to the increased pedestrian movement generated by the proposed development. The applicant should also be requested to clarify by way of an annotated plan drawings that an unobstructed width of 3.0m to facilitate a pedestrian/cyclist route through the 'New Public Plaza' is provided

5.25 The existing parking area here is currently located beside a vehicular access gateway as illustrated below in the *Google* Extract as **Figure 5.5.**

Figure 5.5 Existing Parking Area to NE of Site

5.26 It is clear from the above that there is currently limited visibility or inter-visibility at the existing vehicular/pedestrian access leading to the car parking area, and there is limited (or no) advisory road markings or signage.

5.27 The now-proposed revised arrangement is as illustrated in the extract from the layout plans included below as ***Figure 5.6***

Figure 5.6 – Extract from Plans Showing Proposed Layout at Parking Area

5.28 The revised arrangement has been reviewed, and it provides adequate inter-visibility between the car park and the pedestrian/cyclist access. It has been subject to the specialist Independent Road Safety Audit, and there were no issues or concerns arising. We do not believe that additional signage or markings are required, however, if necessary, any additional requirements can be agreed with DCC at detailed design stage. See below as ***Figure 5.7*** an annotated plan extract showing that an unobstructed 3m route for pedestrians/cyclists is through the new public plaza area.

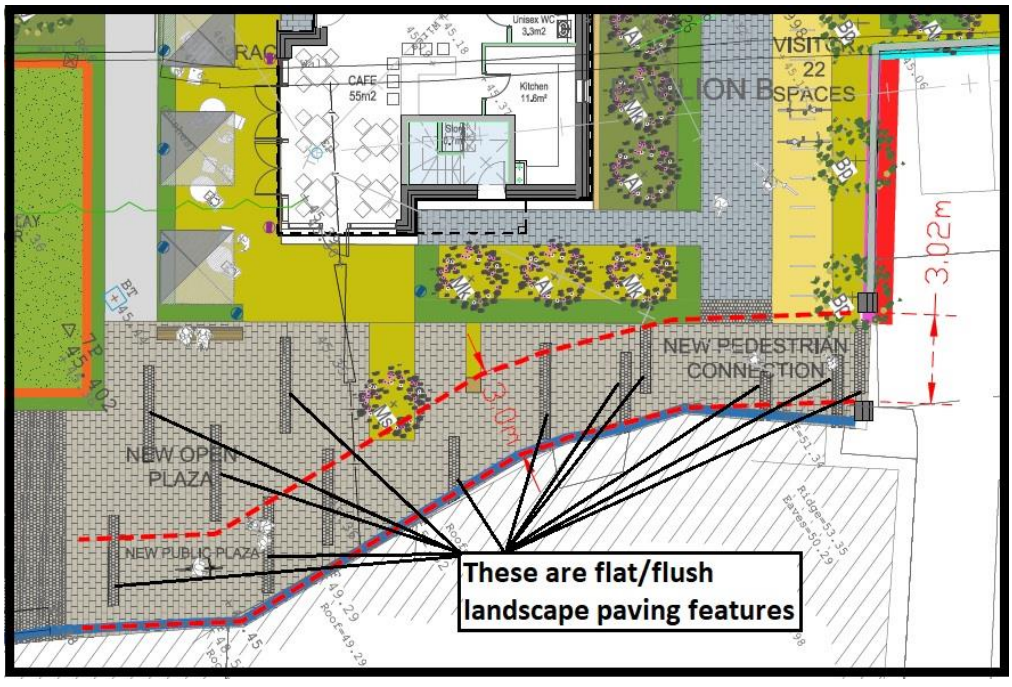


Figure 5.7 – 3m Route Through Plaza Area

13. The applicant is requested to submit the accompanying drawing referenced within to the South Dublin County Council (SDCC) Letter of Consent at application stage.

5.29 The drawing referenced is being included separately within the application documents.

14. A drawing highlighting proposed areas to be taken in charge shall be submitted with the application and all works should be in accordance with Construction Standards for Roads and Street Works in Dublin City Council.

5.30 We understand that other than works on the access across the public footpath, and the public footpath at Somerville Drive, there are no areas within the development that are to be offered for taking-in-charge by DCC.

6.0 CONCLUSIONS

6.1 This Transportation Assessment Report assesses the traffic & transportation impact of the proposal to construct and occupy a residential apartment development on zoned development lands at Glebe House, St Agnes Road, Crumlin, Dublin 12.

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 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 F***. This MMP highlights the current & future alternative transport accessibility of the site, underlining the sustainable nature of the development. 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 G***.. An independent Stage 1 Road Safety Audit, together with the Designer Feedback form, has been undertaken and included as ***Appendix H***. A Bus Capacity/Demand Report has been prepared and is included as ***Appendix I.*** The Bus Capacity Report highlights the very high accessibility of the site via public transport.

6.4 An assessment of Car Parking and Bicycle Parking quantum and design provided has been undertaken, and the provision is 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 We have included a dedicated section within this Report addressing the matters raised by DCC Traffic/Transportation Department.

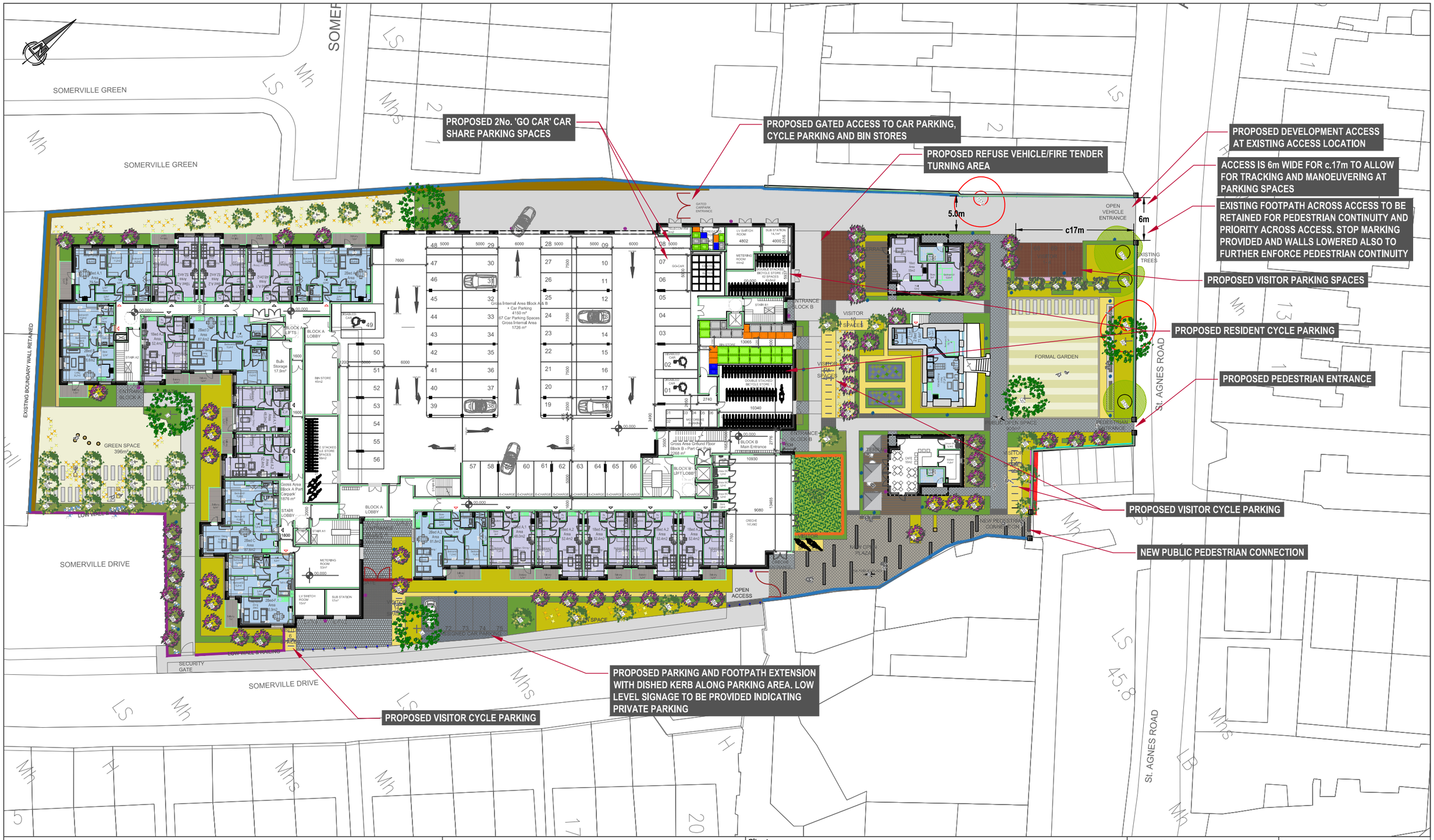
6.8 It is considered that there are no significant Operational Traffic Safety or Road Capacity issues, affecting the established road network, that prevent a positive determination of the application by An Bord Pleanála.

APPENDICES - CONTENT

A	Proposed Development – Site Layout Plans, TRACKs & Drawings
B	Weekday Classified Turning Movement Traffic Survey Output Data
C	TRICS Output Data – Residential Apartments, Crèche & Café
D	Traffic Calculations, Trip Distribution, Network Traffic Flow Diagrams & Projections Based on Traffic Surveys
E	Junction 9 PiCADY Output – Site Access T-Junction
F	Preliminary Mobility Management Plan/Travel Plan
G	DMURS Statement of Consistency
H	Stage 1 Independent Road Safety Audit
I	Bus Capacity/Demand Report

APPENDIX A

Proposed Development
Site Layout/Plans, TRACKs & 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 Reddy Architects drawing P19171D-3.0-100 Ground Floor Plan, received 08/06/22. NRB Consulting Engineers Ltd shall not be liable for any inaccuracies or deficiencies.

REV	DATE	AMENDMENTS	DRAWN	CHK	APP

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Client		Project No. 21-094	Drawing No. NRB-TA-001
Project	Glebe Crumlin	Drawn PB / Checked ER 08/06/22	Approved ER 08/06/22
Title	Proposed Site Layout	Date 8-Jun-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 ☐ As Built ☐ Information ☐ Tender ☐ Approval ☐ Construction

REV	DATE	AMENDMENTS	DRAWN	CHK	APP

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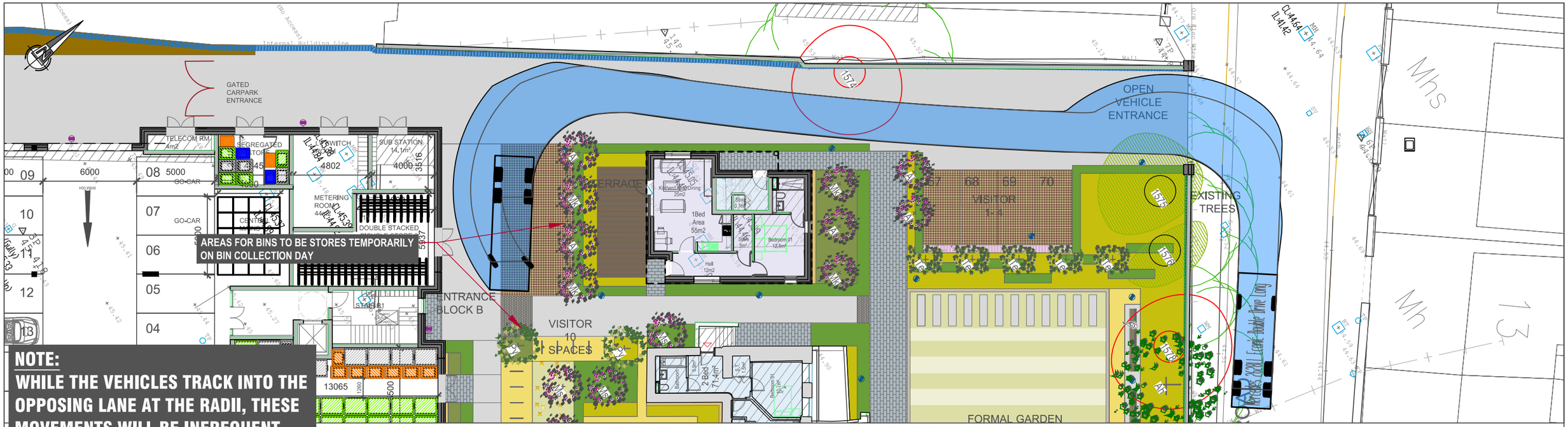
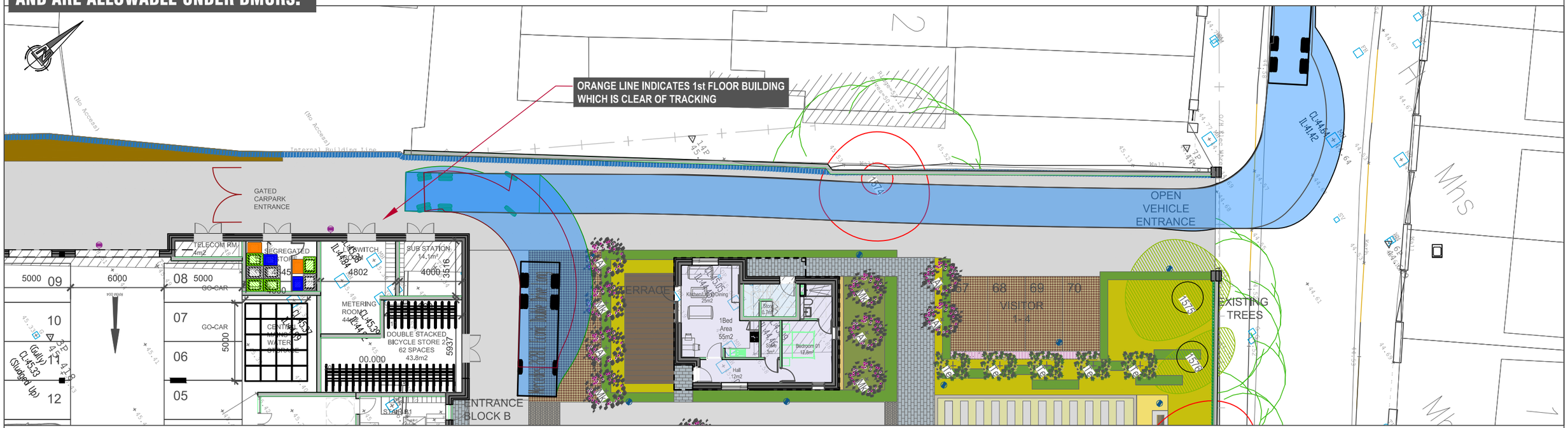
Client		Project No. 21-094	Drawing No. NRB-TA-002
Project: Glebe, Crumlin	Drawn: PB	Checked: ER 08/06/22	Approved: ER 08/06/22
Title: Proposed Access Sightlines	Date: 8-Jun-22	Scale @ A3: 1:500	Rev: B

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



AUTOTRACK OF A LARGE REFUSE VEHICLE ENTERING THE PROPOSED DEVELOPMENT



AUTOTRACK OF A LARGE REFUSE VEHICLE EXITING THE PROPOSED DEVELOPMENT

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 Reddy Architects drawing P19171D-3.0-100 Ground Floor Plan, received 08/06/22. NRB Consulting Engineers Ltd shall not be liable for any inaccuracies or deficiencies.

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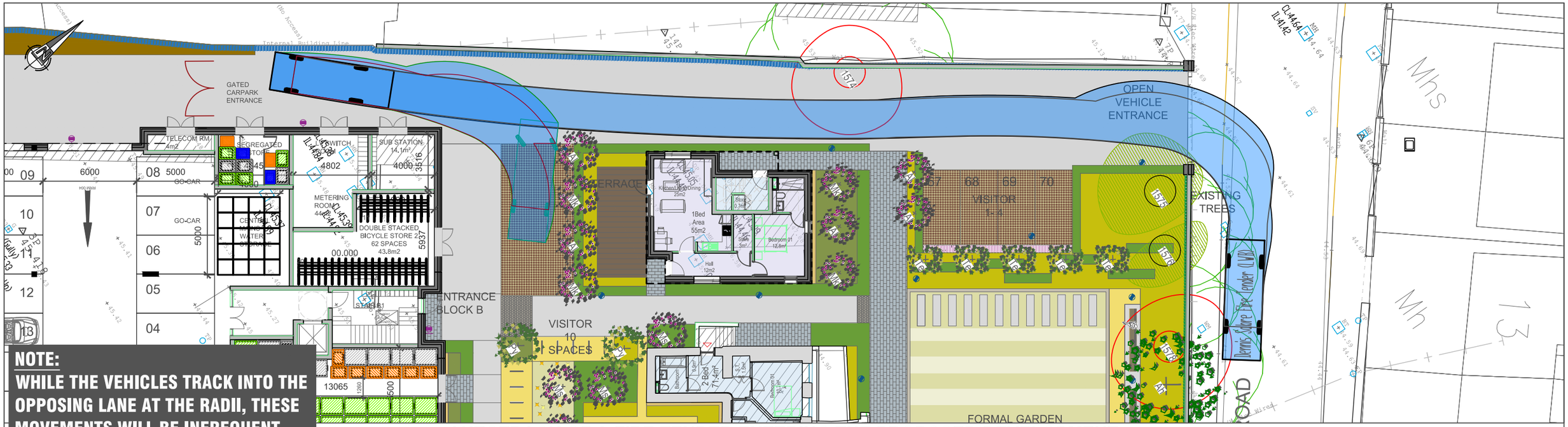
Client		Project No. 21-094	Drawing No. NRB-TA-003
Project	Glebe Crumlin	Drawn PB / Checked ER 08/06/22	Approved ER 08/06/22
Title	AutoTRACKs of a Refuse Vehicle Entering and Exiting the Development	Date 8-Jun-22	Scale @ A3 1:250 / Rev B

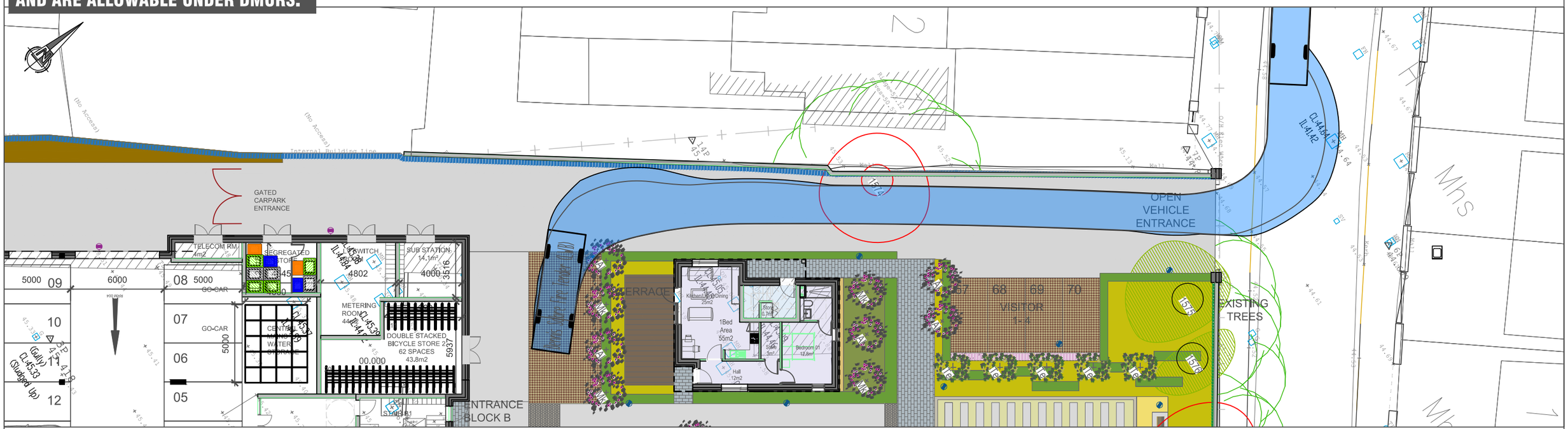
NRB Consulting Engineers Ltd accept no responsibility for any unauthorised amendments to this drawing. Only figured dimensions to be worked to.

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



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

AUTOTRACK OF A FIRE TENDER ENTERING THE PROPOSED DEVELOPMENT



AUTOTRACK OF A FIRE TENDER EXITING THE PROPOSED DEVELOPMENT

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 Reddy Architects drawing P19171D-3.0-100 Ground Floor Plan, received 08/06/22. NRB Consulting Engineers Ltd shall not be liable for any inaccuracies or deficiencies.

REV	DATE	AMENDMENTS	DRAWN	CHK	APP

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Client		Project No. 21-094	Drawing No. NRB-TA-004
Project	Glebe Crumlin	Drawn PB / Checked ER 08/06/22	Approved ER 08/06/22
Title	AutoTRACKs of a Fire Tender Entering and Exiting the Development	Date 8-Jun-22	Scale @ A3 1:250 / Rev B

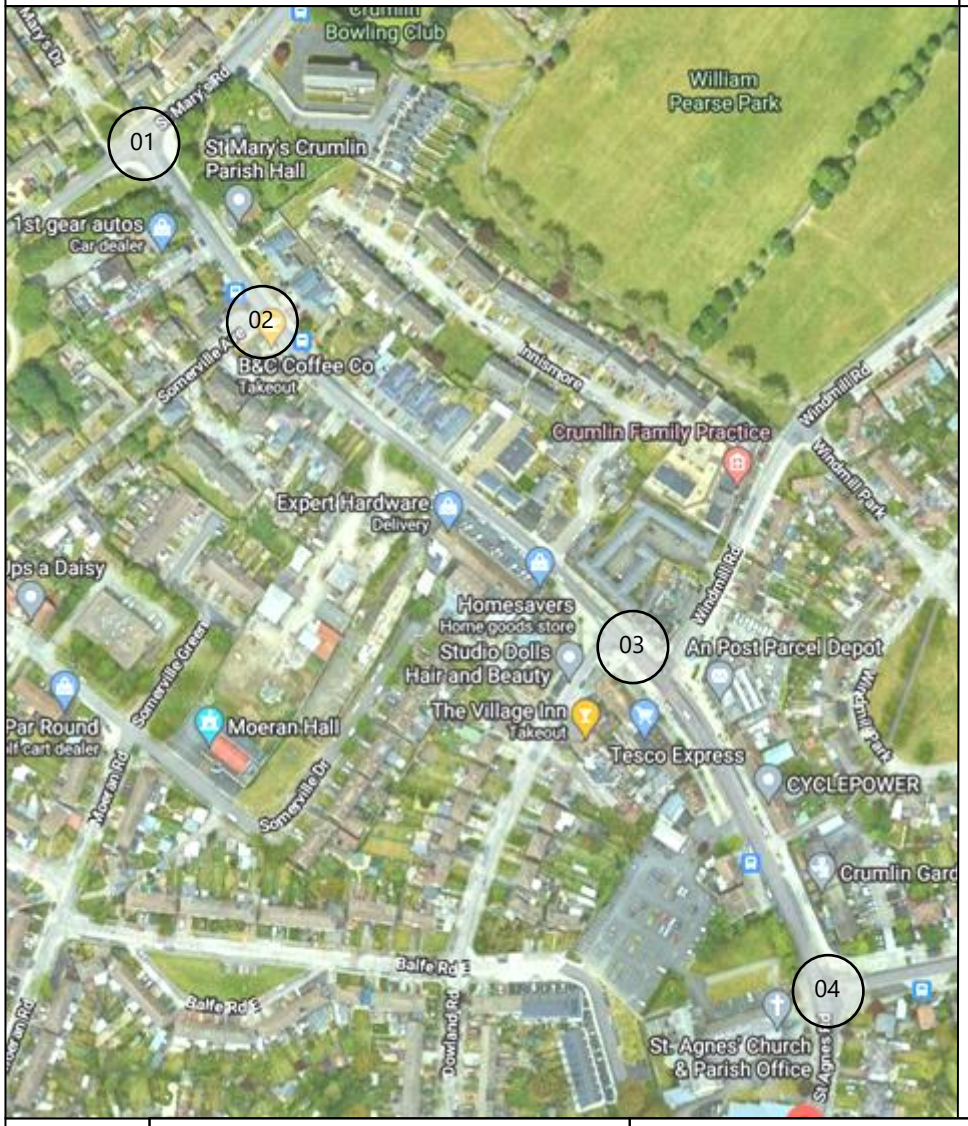
NRB Consulting Engineers Ltd accept no responsibility for any unauthorised amendments to this drawing. Only figured dimensions to be worked to.

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

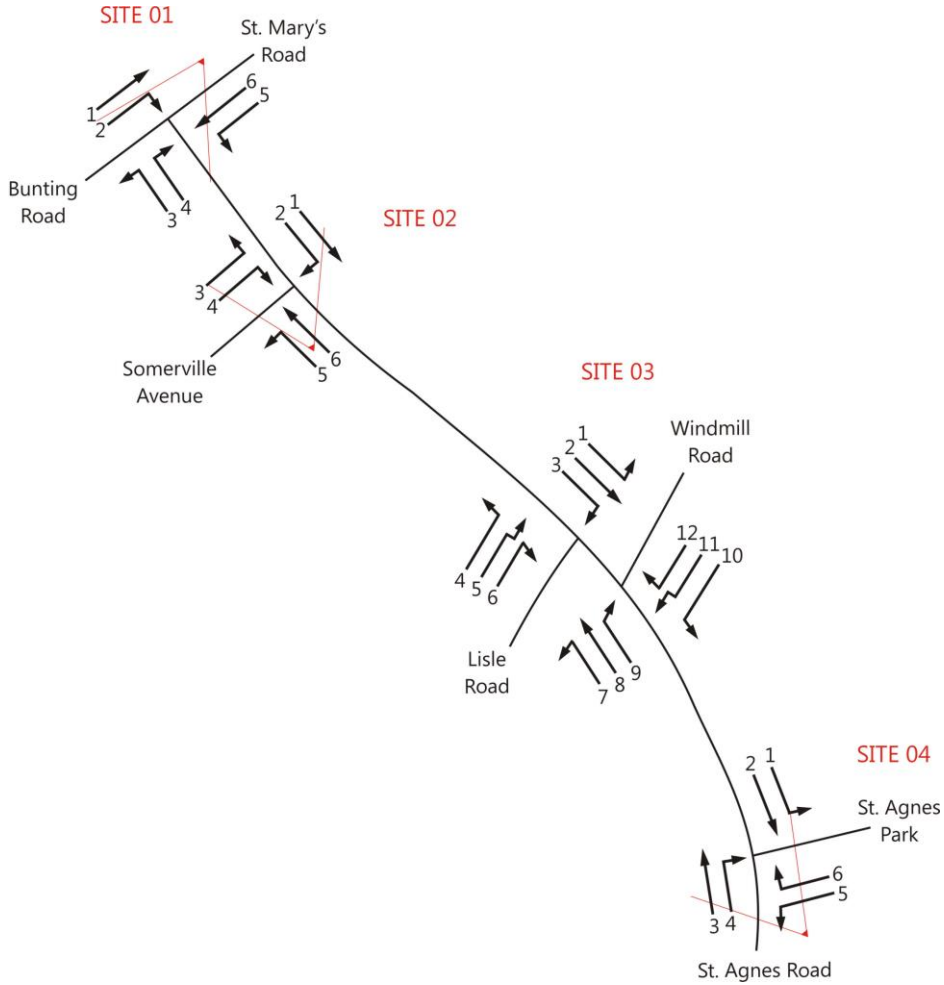
APPENDIX B

Weekday - Classified
Turning Movement Traffic Survey Output Data

Site Locations



Movement Numbers



Job number: TRA/21/142	Job date: 7th September 2021	Drawing No: TRA/21/142-01	traffinomics.ie
Client: NRB Consulting Engineers	Job day Tuesday	Map Showing Survey Details Cover – Details following	

TRAFFINOMICS LIMITED

CRUMLIN TRAFFIC COUNTS **SEPTEMBER 2021**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/21/142**

SITE: 01 DATE: 7th September 2021

LOCATION: Bunting Road/St. Agnes Terrace/St. Mary's Road DAY: Tuesday

	MOVEMENT 1								MOVEMENT 2								MOVEMENT 3							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:00	5	0	6	2	0	0	13	9	0	0	6	2	0	0	8	8	1	0	6	0	1	0	8	8
07:15	1	1	12	3	0	0	17	16	0	0	8	1	0	0	9	9	0	0	2	1	1	0	4	5
07:30	3	0	10	0	1	0	14	13	2	0	8	0	0	0	10	8	3	0	12	2	4	0	21	23
07:45	3	0	11	6	0	0	20	18	0	0	8	2	0	0	10	10	1	0	18	6	0	0	25	24
H/TOT	12	1	39	11	1	0	64	55	2	0	30	5	0	0	37	35	5	0	38	9	6	0	58	60
08:00	2	0	11	5	0	0	18	16	6	0	21	3	1	1	32	29	4	0	21	6	0	0	31	28
08:15	7	0	12	6	4	0	29	27	4	0	28	1	0	0	33	30	1	0	25	4	0	0	30	29
08:30	2	0	20	8	1	0	31	30	0	0	33	3	0	0	36	36	3	0	55	4	0	0	62	60
08:45	7	1	27	2	1	0	38	33	5	0	34	3	0	0	42	38	0	0	33	7	0	0	40	40
H/TOT	18	1	70	21	6	0	116	107	15	0	116	10	1	1	143	133	8	0	134	21	0	0	163	157
09:00	1	0	29	5	1	0	36	36	0	0	39	0	1	0	40	41	4	1	29	1	0	0	35	31
09:15	3	0	17	2	2	0	24	24	0	0	15	2	1	0	18	19	0	0	19	1	0	1	21	22
09:30	2	0	9	9	0	0	20	18	0	1	18	4	0	0	23	22	0	0	14	2	1	1	18	20
09:45	0	1	13	4	2	0	20	21	2	0	21	1	0	0	24	22	3	0	22	2	1	0	28	27
H/TOT	6	1	68	20	5	0	100	100	2	1	93	7	2	0	105	105	7	1	84	6	2	2	102	100
P/TOT	36	3	177	52	12	0	280	261	19	1	239	22	3	1	285	273	20	1	256	36	8	2	323	316

	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	0	13	5	0	0	21	19	2	0	22	2	0	1	27	26	6	2	25	1	1	0	35	30
16:15	4	0	10	3	0	0	17	14	2	0	16	0	1	0	19	18	0	0	20	3	1	0	24	25
16:30	6	0	10	1	0	0	17	12	0	0	19	3	0	0	22	22	4	0	27	1	0	0	32	29
16:45	6	1	12	2	2	0	23	20	3	0	27	2	0	0	32	30	2	0	19	2	0	0	23	21
H/TOT	19	1	45	11	2	0	78	64	7	0	84	7	1	1	100	96	12	2	91	7	2	0	114	105
17:00	4	0	20	1	0	0	25	22	5	1	33	1	0	1	41	37	3	0	13	2	0	1	19	18
17:15	4	0	14	2	0	0	20	17	2	0	25	0	0	0	27	25	1	0	20	3	0	0	24	23
17:30	5	0	14	1	0	0	20	16	3	0	29	2	1	0	35	34	1	0	15	1	1	0	18	18
17:45	3	0	16	2	0	0	21	19	1	0	23	4	0	0	28	27	3	1	10	3	1	0	18	16
H/TOT	16	0	64	6	0	0	86	73	11	1	110	7	1	1	131	124	8	1	58	9	2	1	79	75
18:00	3	0	16	3	0	0	22	20	1	1	18	2	0	0	22	21	1	0	20	1	0	0	22	21
18:15	6	0	13	1	0	0	20	15	2	0	15	2	1	0	20	19	4	0	12	1	1	0	18	16
18:30	2	0	10	2	0	0	14	12	1	0	18	2	0	0	21	20	0	0	21	2	0	0	23	23
18:45	5	0	15	0	0	0	20	16	2	0	16	2	1	0	21	20	4	0	13	4	0	0	21	18
H/TOT	16	0	54	6	0	0	76	63	6	1	67	8	2	0	84	81	9	0	66	8	1	0	84	78
P/TOT	51	1	163	23	2	0	240	201	24	2	261	22	4	2	315	301	29	3	215	24	5	1	277	258

CRUMLIN TRAFFIC COUNTS **SEPTEMBER 2021**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/21/142**

SITE: 01 DATE: 7th September 2021

LOCATION: Bunting Road/St. Agnes Terrace/St. Mary's Road DAY: Tuesday

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:00	1	0	26	3	0	3	33	35	0	0	7	3	1	2	13	16	2	0	6	0	0	0	8	6
07:15	0	0	24	4	2	2	32	36	1	0	9	5	0	0	15	14	3	0	1	1	0	0	5	3
07:30	4	0	16	3	0	2	25	24	1	0	7	2	1	2	13	15	3	0	8	5	0	0	16	14
07:45	4	0	32	4	1	3	44	45	0	0	18	1	0	2	21	23	5	1	8	3	0	0	17	12
H/TOT	9	0	98	14	3	10	134	140	2	0	41	11	2	6	62	68	13	1	23	9	0	0	46	35
08:00	4	1	25	9	2	1	42	41	2	1	16	4	1	3	27	29	2	0	14	3	0	0	19	17
08:15	3	0	39	0	0	0	42	40	2	0	32	5	1	2	42	43	3	0	10	2	0	0	15	13
08:30	2	0	28	2	1	1	34	34	2	0	33	2	1	3	41	43	2	0	21	1	0	0	24	22
08:45	5	0	29	4	2	2	42	42	3	0	26	2	1	2	34	35	3	0	14	3	0	0	20	18
H/TOT	14	1	121	15	5	4	160	157	9	1	107	13	4	10	144	150	10	0	59	9	0	0	78	70
09:00	0	2	47	6	1	2	58	60	0	0	35	4	2	1	42	45	1	0	9	2	1	0	13	13
09:15	1	0	26	2	0	1	30	30	1	0	20	2	1	2	26	28	0	1	20	1	0	0	22	21
09:30	2	0	22	1	1	6	32	37	2	0	23	3	2	1	31	32	0	1	8	1	1	0	11	11
09:45	2	0	25	4	0	3	34	35	3	0	23	3	0	3	32	33	2	0	11	1	2	0	16	16
H/TOT	5	2	120	13	2	12	154	163	6	0	101	12	5	7	131	138	3	2	48	5	4	0	62	62
P/TOT	28	3	339	42	10	26	448	460	17	1	249	36	11	23	337	357	26	3	130	23	4	0	186	167

	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	34	4	0	1	42	41	3	0	37	4	0	1	45	44	0	0	21	6	0	0	27	27
16:15	2	0	24	1	2	3	32	35	4	0	31	1	0	2	38	37	4	1	24	6	0	0	35	31
16:30	0	1	30	2	0	2	35	36	3	2	38	1	0	1	45	42	6	0	27	9	0	0	42	37
16:45	3	1	38	6	0	2	50	49	1	0	29	1	1	3	35	38	4	0	19	8	0	1	32	30
H/TOT	8	2	126	13	2	8	159	161	11	2	135	7	1	7	163	161	14	1	91	29	0	1	136	125
17:00	0	1	21	2	1	2	27	29	6	0	43	2	1	1	53	50	3	0	23	6	1	0	33	32
17:15	2	0	31	3	0	0	36	34	5	1	35	6	0	1	48	44	3	0	20	3	1	0	27	26
17:30	0	0	33	3	0	1	37	38	3	1	31	2	0	3	40	40	4	1	23	1	1	0	30	27
17:45	1	0	35	4	0	2	42	43	1	0	40	2	1	3	47	50	2	0	20	2	1	0	25	24
H/TOT	3	1	120	12	1	5	142	145	15	2	149	12	2	8	188	185	12	1	86	12	4	0	115	109
18:00	1	0	29	1	0	2	33	34	3	1	32	2	0	2	40	39	3	0	20	1	1	0	25	24
18:15	1	0	20	4	0	1	26	26	1	0	37	1	0	1	40	40	4	0	19	5	0	0	28	25
18:30	0	0	32	3	0	2	37	39	2	0	34	1	0	1	38	37	6	1	17	2	0	0	26	21
18:45	1	0	23	2	0	1	27	27	2	0	39	2	1	2	46	47	1	0	17	1	0	0	19	18
H/TOT	3	0	104	10	0	6	123	127	8	1	142	6	1	6	164	164	14	1	73	9	1	0	98	87
P/TOT	14	3	350	35	3	19	424	433	34	5	426	25	4	21	515	510	40	3	250	50	5	1	349	321

CRUMLIN TRAFFIC COUNTS **SEPTEMBER 2021**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/21/142**

SITE: 02 DATE: 7th September 2021

LOCATION: St. Agnes Terrace/Somerville Avenue DAY: Tuesday

	MOVEMENT 1								MOVEMENT 2								MOVEMENT 3							
TIME	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU
07:00	0	0	13	4	1	2	20	23	0	0	0	1	0	0	1	1	0	0	1	1	0	0	2	2
07:15	1	0	17	6	0	0	24	23	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
07:30	3	0	13	2	1	2	21	22	0	0	2	0	0	0	2	2	0	0	3	0	0	0	3	3
07:45	0	0	26	3	0	2	31	33	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	5
H/TOT	4	0	69	15	2	6	96	101	0	0	2	1	0	0	3	3	0	0	12	1	0	0	13	13
08:00	8	1	36	7	2	4	58	57	0	0	1	0	0	0	1	1	2	0	4	1	0	0	7	5
08:15	6	0	58	6	1	2	73	71	0	0	2	0	0	0	2	2	1	0	2	0	0	0	3	2
08:30	2	0	60	5	1	3	71	73	0	0	6	0	0	0	6	6	1	0	1	1	0	0	3	2
08:45	7	0	59	5	1	2	74	71	1	0	1	0	0	0	2	1	0	0	5	1	0	0	6	6
H/TOT	23	1	213	23	5	11	276	273	1	0	10	0	0	0	11	10	4	0	12	3	0	0	19	16
09:00	0	0	69	3	3	1	76	80	0	0	5	1	0	0	6	6	0	0	8	2	1	0	11	12
09:15	1	0	33	4	2	2	42	45	0	0	2	0	0	0	2	2	1	0	0	0	0	0	1	0
09:30	2	1	41	7	2	1	54	55	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
09:45	5	0	40	4	0	2	51	49	0	0	4	0	0	1	5	6	0	0	2	0	0	0	2	2
H/TOT	8	1	183	18	7	6	223	229	0	0	11	1	0	1	13	14	2	0	10	2	1	0	15	14
P/TOT	35	2	465	56	14	23	595	603	1	0	23	2	0	1	27	27	6	0	34	6	1	0	47	43

	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	5	0	51	6	0	2	64	62	0	0	8	0	0	0	8	8	0	0	6	0	0	0	6	6
16:15	5	0	40	1	1	2	49	48	1	0	7	0	0	0	8	7	0	0	4	0	0	0	4	4
16:30	1	2	52	3	0	1	59	58	2	0	5	1	0	0	8	6	1	0	7	2	0	0	10	9
16:45	4	0	54	3	1	3	65	66	0	0	2	0	0	0	2	2	0	0	9	2	0	0	11	11
H/TOT	15	2	197	13	2	8	237	234	3	0	22	1	0	0	26	24	1	0	26	4	0	0	31	30
17:00	10	1	72	2	1	2	88	82	1	0	4	1	0	0	6	5	0	0	6	0	0	0	6	6
17:15	5	1	58	6	0	1	71	67	2	0	2	0	0	0	4	2	0	0	1	0	0	0	1	1
17:30	6	1	54	4	1	3	69	68	0	0	6	0	0	0	6	6	1	0	4	0	0	0	5	4
17:45	1	0	59	6	1	3	70	73	1	0	4	0	0	0	5	4	0	0	2	0	0	0	2	2
H/TOT	22	3	243	18	3	9	298	291	4	0	16	1	0	0	21	18	1	0	13	0	0	0	14	13
18:00	3	2	48	4	0	2	59	57	1	0	2	0	0	0	3	2	0	0	5	0	0	0	5	5
18:15	3	0	48	3	1	1	56	56	0	0	4	0	0	0	4	4	2	0	1	0	0	0	3	1
18:30	2	0	48	3	0	1	54	53	1	0	4	0	0	0	5	4	0	0	4	3	0	0	7	7
18:45	2	0	49	2	2	2	57	59	2	0	6	2	0	0	10	8	0	0	9	0	0	0	9	9
H/TOT	10	2	193	12	3	6	226	226	4	0	16	2	0	0	22	19	2	0	19	3	0	0	24	22
P/TOT	47	7	633	43	8	23	761	750	11	0	54	4	0	0	69	60	4	0	58	7	0	0	69	66

CRUMLIN TRAFFIC COUNTS **SEPTEMBER 2021**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/21/142**

SITE: 02 DATE: 7th September 2021

LOCATION: St. Agnes Terrace/Somerville Avenue DAY: Tuesday

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
TIME	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU
07:00	0	0	1	0	0	0	1	1	1	0	2	0	0	0	3	2	2	0	31	2	1	3	39	41
07:15	0	0	2	0	0	0	2	2	0	0	1	1	0	0	2	2	0	0	23	5	3	2	33	38
07:30	0	0	1	1	0	0	2	2	0	0	0	0	0	0	0	0	7	0	25	5	4	2	43	43
07:45	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0	5	0	45	10	1	3	64	64
H/TOT	0	0	6	1	0	0	7	7	1	0	3	1	0	0	5	4	14	0	124	22	9	10	179	187
08:00	1	0	1	1	0	0	3	2	0	0	0	2	0	0	2	2	6	1	42	14	2	1	66	64
08:15	0	0	2	2	0	0	4	4	0	0	0	1	0	0	1	1	3	0	62	4	0	0	69	67
08:30	1	0	2	1	0	0	4	3	0	0	1	0	0	0	1	1	4	0	82	5	1	1	93	92
08:45	0	0	2	1	0	0	3	3	1	0	4	0	0	0	5	4	5	0	57	10	2	2	76	76
H/TOT	2	0	7	5	0	0	14	12	1	0	5	3	0	0	9	8	18	1	243	33	5	4	304	298
09:00	0	0	3	0	0	0	3	3	0	0	4	1	0	0	5	5	4	3	68	5	0	2	82	79
09:15	0	0	1	1	0	0	2	2	0	0	1	0	0	0	1	1	0	0	45	3	0	2	50	52
09:30	0	0	2	0	0	1	3	4	0	0	4	0	0	0	4	4	1	0	36	3	2	7	49	57
09:45	0	0	2	1	0	0	3	3	0	0	2	0	0	0	2	2	5	0	45	6	1	3	60	60
H/TOT	0	0	8	2	0	1	11	12	0	0	11	1	0	0	12	12	10	3	194	17	3	14	241	248
P/TOT	2	0	21	8	0	1	32	31	2	0	19	5	0	0	26	24	42	4	561	72	17	28	724	733

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
TIME	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU
16:00	0	0	1	0	0	0	1	1	1	0	0	0	0	0	1	0	9	2	53	5	1	1	71	65
16:15	0	0	1	0	0	0	1	1	0	0	2	0	0	0	2	2	2	0	40	4	3	3	52	56
16:30	1	0	2	0	0	0	3	2	0	0	2	2	0	0	4	4	3	1	50	1	0	2	57	56
16:45	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	4	5	1	48	6	0	2	62	59
H/TOT	1	0	4	0	0	0	5	4	1	0	7	3	0	0	11	10	19	4	191	16	4	8	242	236
17:00	0	0	2	2	0	0	4	4	1	0	6	0	0	0	7	6	3	1	28	4	1	3	40	41
17:15	0	0	1	0	0	0	1	1	0	0	4	1	0	0	5	5	3	0	50	6	0	0	59	57
17:30	1	0	2	0	0	0	3	2	1	0	3	1	0	0	5	4	0	0	44	4	1	1	50	52
17:45	0	0	2	1	0	0	3	3	1	0	4	0	0	0	5	4	4	1	43	7	1	2	58	57
H/TOT	1	0	7	3	0	0	11	10	3	0	17	2	0	0	22	20	10	2	165	21	3	6	207	207
18:00	0	0	2	0	0	0	2	2	1	0	5	0	0	0	6	5	2	0	44	2	0	2	50	50
18:15	0	0	4	0	0	0	4	4	0	0	2	0	0	0	2	2	3	0	31	5	1	1	41	41
18:30	0	0	1	0	0	0	1	1	0	0	2	0	0	0	2	2	0	0	49	2	0	2	53	55
18:45	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1	5	0	27	6	0	1	39	36
H/TOT	0	0	8	0	0	0	8	8	1	0	10	0	0	0	11	10	10	0	151	15	1	6	183	182
P/TOT	2	0	19	3	0	0	24	22	5	0	34	5	0	0	44	40	39	6	507	52	8	20	632	625

CRUMLIN TRAFFIC COUNTS **SEPTEMBER 2021**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/21/142**

SITE: 03 DATE: 7th September 2021

LOCATION: St. Agnes Terrace/Lisle Road/Windmill Road DAY: Tuesday

	MOVEMENT 1								MOVEMENT 2								MOVEMENT 3							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:00	0	0	4	1	0	0	5	5	0	0	8	3	0	1	12	13	0	0	1	1	0	0	2	2
07:15	0	1	5	1	0	0	7	6	0	0	15	5	0	1	21	22	0	0	0	0	0	0	0	0
07:30	0	0	4	0	1	0	5	6	3	0	11	3	0	2	19	19	0	0	0	0	0	0	0	0
07:45	0	0	9	0	0	0	9	9	1	0	22	3	0	1	27	27	0	0	0	0	0	0	0	0
H/TOT	0	1	22	2	1	0	26	26	4	0	56	14	0	5	79	81	0	0	1	1	0	0	2	2
08:00	3	0	12	4	1	0	20	19	6	0	32	3	1	4	46	46	0	0	2	1	0	0	3	3
08:15	1	1	16	2	0	0	20	19	6	0	43	4	1	2	56	54	0	0	1	0	0	0	1	1
08:30	0	0	17	2	1	0	20	21	5	0	55	5	1	1	67	65	0	0	3	1	0	2	6	8
08:45	0	0	18	2	0	0	20	20	4	0	46	5	1	2	58	58	0	0	1	0	0	0	1	1
H/TOT	4	1	63	10	2	0	80	78	21	0	176	17	4	9	227	223	0	0	7	2	0	2	11	13
09:00	0	0	27	1	1	0	29	30	0	1	40	1	2	1	45	47	0	0	3	0	0	0	3	3
09:15	1	0	18	1	1	0	21	21	0	0	27	2	2	2	33	37	0	0	1	0	0	0	1	1
09:30	1	1	8	4	0	0	14	13	1	0	26	2	1	2	32	34	0	0	4	1	1	0	6	7
09:45	1	0	8	2	0	0	11	10	6	0	39	4	0	3	52	50	0	0	0	0	0	0	0	0
H/TOT	3	1	61	8	2	0	75	74	7	1	132	9	5	8	162	169	0	0	8	1	1	0	10	11
P/TOT	7	3	146	20	5	0	181	179	32	1	364	40	9	22	468	473	0	0	16	4	1	2	23	26

	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	16	4	0	0	20	20	7	0	37	2	0	0	46	40	0	0	5	1	0	0	6	6
16:15	1	0	10	0	1	0	12	12	4	0	33	3	0	3	43	43	0	0	4	1	0	1	6	7
16:30	0	0	14	2	0	0	16	16	2	0	32	3	0	0	37	35	0	0	5	0	0	0	5	5
16:45	2	0	16	2	1	0	21	20	2	1	39	1	0	3	46	47	0	0	3	0	0	0	3	3
H/TOT	3	0	56	8	2	0	69	69	15	1	141	9	0	6	172	165	0	0	17	2	0	1	20	21
17:00	2	0	19	4	0	0	25	23	5	1	54	3	1	1	65	62	0	0	1	0	0	0	1	1
17:15	0	0	17	1	0	0	18	18	8	0	43	4	0	2	57	53	0	0	2	1	0	0	3	3
17:30	0	0	20	3	0	0	23	23	6	2	36	2	1	2	49	46	1	0	4	0	0	0	5	4
17:45	2	0	19	3	0	0	24	22	2	0	45	4	1	4	56	59	0	0	1	0	0	0	1	1
H/TOT	4	0	75	11	0	0	90	87	21	3	178	13	3	9	227	220	1	0	8	1	0	0	10	9
18:00	0	1	5	2	0	0	8	7	2	0	39	1	0	1	43	42	0	0	2	1	0	0	3	3
18:15	2	0	17	2	0	0	21	19	4	0	43	2	1	2	52	52	0	0	3	0	0	0	3	3
18:30	3	0	7	1	0	0	11	9	4	0	34	2	1	1	42	41	0	0	7	0	0	0	7	7
18:45	1	0	16	0	0	0	17	16	1	0	40	3	1	2	47	49	0	0	4	0	0	0	4	4
H/TOT	6	1	45	5	0	0	57	52	11	0	156	8	3	6	184	184	0	0	16	1	0	0	17	17
P/TOT	13	1	176	24	2	0	216	207	47	4	475	30	6	21	583	570	1	0	41	4	0	1	47	47

CRUMLIN TRAFFIC COUNTS **SEPTEMBER 2021**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/21/142**

SITE: 03 DATE: 7th September 2021

LOCATION: St. Agnes Terrace/Lisle Road/Windmill Road DAY: Tuesday

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
TIME	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU
07:00	1	0	0	0	0	0	1	0	3	0	6	0	0	0	9	7	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	1	4	1	0	0	6	5	0	0	4	1	0	1	6	7
07:30	1	0	0	0	0	0	1	0	2	0	7	0	0	0	9	7	1	0	2	2	0	0	5	4
07:45	0	0	0	0	1	0	1	2	1	0	11	0	0	0	12	11	0	0	7	1	0	0	8	8
H/TOT	2	0	0	0	1	0	3	2	6	1	28	1	0	0	36	31	1	0	13	4	0	1	19	19
08:00	1	0	4	1	0	0	6	5	3	0	10	2	1	0	16	15	0	0	6	3	0	0	9	9
08:15	0	0	5	0	0	0	5	5	1	0	19	4	1	0	25	25	0	0	2	0	0	0	2	2
08:30	0	0	3	0	1	0	4	5	1	0	10	1	1	1	14	15	0	0	11	1	0	2	14	16
08:45	0	0	5	1	0	0	6	6	1	0	16	1	0	1	19	19	0	0	9	1	0	0	10	10
H/TOT	1	0	17	2	1	0	21	21	6	0	55	8	3	2	74	74	0	0	28	5	0	2	35	37
09:00	1	0	2	0	0	0	3	2	0	0	9	0	0	0	9	9	0	0	6	1	0	0	7	7
09:15	0	0	2	0	0	0	2	2	0	0	4	1	0	0	5	5	1	0	2	0	1	0	4	4
09:30	1	0	2	0	1	1	5	6	0	0	9	1	0	0	10	10	0	0	6	0	0	0	6	6
09:45	0	0	1	0	1	1	3	5	1	0	4	2	0	0	7	6	1	0	3	0	0	0	4	3
H/TOT	2	0	7	0	2	2	13	15	1	0	26	4	0	0	31	30	2	0	17	1	1	0	21	20
P/TOT	5	0	24	2	4	2	37	39	13	1	109	13	3	2	141	135	3	0	58	10	1	3	75	77

	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	5	1	0	0	6	6	0	0	8	3	0	0	11	11	0	0	4	2	0	0	6	6
16:15	0	0	1	1	0	0	2	2	0	0	7	0	0	1	8	9	0	0	5	1	0	0	6	6
16:30	0	0	2	0	0	0	2	2	0	0	5	0	0	0	5	5	0	0	6	2	0	0	8	8
16:45	0	0	1	4	0	0	5	5	1	0	6	0	0	0	7	6	0	0	8	1	1	0	10	11
H/TOT	0	0	9	6	0	0	15	15	1	0	26	3	0	1	31	31	0	0	23	6	1	0	30	31
17:00	0	0	3	0	0	0	3	3	0	0	14	1	0	0	15	15	1	0	7	2	0	0	10	9
17:15	0	0	3	0	0	0	3	3	0	0	12	2	0	0	14	14	0	0	5	1	0	0	6	6
17:30	0	0	5	2	0	0	7	7	0	0	10	1	0	0	11	11	0	0	6	0	0	0	6	6
17:45	0	0	9	1	0	0	10	10	0	0	11	0	0	0	11	11	0	0	9	0	0	1	10	11
H/TOT	0	0	20	3	0	0	23	23	0	0	47	4	0	0	51	51	1	0	27	3	0	1	32	32
18:00	0	0	3	1	0	0	4	4	0	0	6	3	0	0	9	9	0	0	3	0	0	0	3	3
18:15	0	0	1	0	0	0	1	1	0	1	10	0	0	0	11	10	0	0	4	0	0	0	4	4
18:30	0	0	2	1	0	0	3	3	2	0	7	0	0	0	9	7	0	0	3	2	0	0	5	5
18:45	0	0	5	0	0	0	5	5	0	0	10	0	0	0	10	10	0	0	7	0	0	0	7	7
H/TOT	0	0	11	2	0	0	13	13	2	1	33	3	0	0	39	37	0	0	17	2	0	0	19	19
P/TOT	0	0	40	11	0	0	51	51	3	1	106	10	0	1	121	119	1	0	67	11	1	1	81	82

CRUMLIN TRAFFIC COUNTS **SEPTEMBER 2021**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/21/142**

SITE: 03 DATE: 7th September 2021

LOCATION: St. Agnes Terrace/Lisle Road/Windmill Road DAY: Tuesday

	MOVEMENT 7								MOVEMENT 8								MOVEMENT 9							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:00	0	0	1	3	0	0	4	4	3	0	25	1	0	3	32	33	1	0	3	2	0	0	6	5
07:15	0	0	0	0	0	0	0	0	0	0	21	3	3	2	29	34	1	0	7	1	0	0	9	8
07:30	0	0	7	2	0	0	9	9	6	0	21	5	2	2	36	35	1	0	14	3	1	0	19	19
07:45	0	0	3	0	0	1	4	5	5	0	33	3	1	3	45	45	2	0	16	2	0	0	20	18
H/TOT	0	0	11	5	0	1	17	18	14	0	100	12	6	10	142	147	5	0	40	8	1	0	54	51
08:00	0	0	3	0	0	0	3	3	6	1	33	8	2	1	51	49	1	0	19	0	0	0	20	19
08:15	0	0	6	0	1	0	7	8	1	0	49	1	1	0	52	52	1	0	13	3	0	0	17	16
08:30	0	0	9	1	0	1	11	12	4	0	62	4	1	1	72	71	1	0	12	1	0	1	15	15
08:45	0	0	10	3	1	1	15	17	4	1	45	8	1	2	61	60	0	0	18	2	0	0	20	20
H/TOT	0	0	28	4	2	2	36	40	15	2	189	21	5	4	236	232	3	0	62	6	0	1	72	71
09:00	0	0	14	0	0	0	14	14	2	0	56	5	2	2	67	69	2	0	15	2	0	0	19	17
09:15	0	0	11	1	0	0	12	12	0	0	45	4	0	3	52	55	1	0	15	2	1	0	19	19
09:30	1	0	11	1	1	0	14	14	1	0	46	3	0	5	55	59	1	0	17	4	1	0	23	23
09:45	0	0	2	1	0	0	3	3	6	0	38	7	0	2	53	50	0	0	16	5	0	0	21	21
H/TOT	1	0	38	3	1	0	43	43	9	0	185	19	2	12	227	234	4	0	63	13	2	0	82	81
P/TOT	1	0	77	12	3	3	96	101	38	2	474	52	13	26	605	612	12	0	165	27	3	1	208	202

	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	1	19	1	0	0	21	20	5	2	46	3	0	1	57	53	0	1	21	2	0	0	24	23
16:15	1	0	5	2	0	0	8	7	1	0	34	3	2	3	43	47	3	1	12	1	0	0	17	14
16:30	0	0	8	0	0	0	8	8	1	1	39	2	0	2	45	46	1	0	15	1	0	0	17	16
16:45	1	0	18	0	0	0	19	18	5	2	43	4	0	2	56	53	1	1	19	3	0	0	24	23
H/TOT	2	1	50	3	0	0	56	54	12	5	162	12	2	8	201	198	5	3	67	7	0	0	82	76
17:00	0	0	10	2	0	0	12	12	6	1	30	1	0	2	40	37	2	0	18	0	0	1	21	20
17:15	1	0	11	3	0	0	15	14	2	0	45	8	0	0	55	53	2	0	13	0	1	0	16	15
17:30	0	0	7	1	0	0	8	8	1	0	30	4	0	1	36	36	0	0	27	0	0	0	27	27
17:45	0	0	8	2	0	0	10	10	5	0	41	3	1	2	52	51	1	0	11	1	0	0	13	12
H/TOT	1	0	36	8	0	0	45	44	14	1	146	16	1	5	183	177	5	0	69	1	1	1	77	75
18:00	0	0	9	3	1	0	13	14	3	0	35	2	0	2	42	42	2	0	12	2	0	0	16	14
18:15	0	0	9	1	0	0	10	10	2	0	38	3	1	1	45	45	0	0	16	4	0	0	20	20
18:30	0	0	9	1	0	0	10	10	2	0	28	1	1	2	34	35	1	0	14	3	1	0	19	19
18:45	0	0	6	0	0	0	6	6	8	0	18	3	0	1	30	25	2	0	16	1	0	0	19	17
H/TOT	0	0	33	5	1	0	39	40	15	0	119	9	2	6	151	147	5	0	58	10	1	0	74	71
P/TOT	3	1	119	16	1	0	140	138	41	6	427	37	5	19	535	523	15	3	194	18	2	1	233	222

CRUMLIN TRAFFIC COUNTS **SEPTEMBER 2021**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/21/142**

SITE: 03 DATE: 7th September 2021

LOCATION: St. Agnes Terrace/Lisle Road/Windmill Road DAY: Tuesday

	MOVEMENT 10								MOVEMENT 11								MOVEMENT 12							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:00	1	0	1	2	1	0	5	5	0	0	2	0	0	0	2	2	0	0	5	2	1	0	8	9
07:15	0	1	9	3	0	0	13	12	0	0	3	0	0	0	3	3	0	0	1	2	0	0	3	3
07:30	0	0	7	6	0	0	13	13	0	0	4	1	0	0	5	5	3	0	6	1	1	0	11	10
07:45	1	0	8	4	0	0	13	12	0	0	3	2	1	0	6	7	1	0	9	4	0	0	14	13
H/TOT	2	1	25	15	1	0	44	43	0	0	12	3	1	0	16	17	4	0	21	9	2	0	36	35
08:00	2	0	13	1	0	0	16	14	0	0	7	2	0	0	9	9	2	0	4	5	0	0	11	9
08:15	0	0	16	3	0	0	19	19	2	0	5	0	0	0	7	5	0	0	15	3	0	0	18	18
08:30	0	0	18	3	0	0	21	21	2	0	7	1	0	0	10	8	1	0	27	2	0	0	30	29
08:45	2	0	11	1	0	0	14	12	0	0	9	2	0	0	11	11	1	0	14	2	1	0	18	18
H/TOT	4	0	58	8	0	0	70	67	4	0	28	5	0	0	37	34	4	0	60	12	1	0	77	75
09:00	1	0	13	1	0	0	15	14	1	0	12	2	0	0	15	14	0	1	12	0	0	0	13	12
09:15	0	0	16	1	0	0	17	17	0	0	7	1	0	0	8	8	0	0	4	1	0	0	5	5
09:30	0	0	11	0	0	0	11	11	0	0	5	0	0	0	5	5	2	0	6	1	0	0	9	7
09:45	1	0	9	2	1	0	13	13	0	0	5	3	0	0	8	8	0	0	11	3	0	0	14	14
H/TOT	2	0	49	4	1	0	56	55	1	0	29	6	0	0	36	35	2	1	33	5	0	0	41	39
P/TOT	8	1	132	27	2	0	170	165	5	0	69	14	1	0	89	86	10	1	114	26	3	0	154	148

	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	2	0	19	3	0	0	24	22	0	0	14	2	0	0	16	16	1	0	12	2	1	0	16	16
16:15	1	0	8	1	1	0	11	11	0	0	15	2	1	0	18	19	2	0	13	3	1	0	19	18
16:30	1	0	17	0	1	0	19	19	1	0	10	1	0	0	12	11	2	0	15	1	0	0	18	16
16:45	0	0	22	1	0	0	23	23	1	0	15	1	0	0	17	16	2	1	14	2	0	0	19	17
H/TOT	4	0	66	5	2	0	77	76	2	0	54	6	1	0	63	62	7	1	54	8	2	0	72	68
17:00	3	0	13	3	0	0	19	17	1	0	12	2	0	0	15	14	0	0	10	1	1	0	12	13
17:15	4	0	17	0	0	1	22	20	1	0	19	4	0	0	24	23	1	0	16	0	0	0	17	16
17:30	2	0	15	0	1	0	18	17	1	0	15	1	0	0	17	16	2	0	8	1	1	0	12	11
17:45	0	0	14	2	0	0	16	16	0	0	10	3	0	0	13	13	1	1	10	1	0	0	13	12
H/TOT	9	0	59	5	1	1	75	70	3	0	56	10	0	0	69	67	4	1	44	3	2	0	54	52
18:00	2	1	21	1	0	0	25	23	0	0	10	1	0	0	11	11	0	0	7	0	0	0	7	7
18:15	4	0	15	1	0	0	20	17	0	0	7	0	0	0	7	7	1	0	6	1	1	0	9	9
18:30	1	0	21	3	0	0	25	24	0	0	13	2	0	0	15	15	0	0	20	0	0	0	20	20
18:45	1	0	13	1	1	0	16	16	0	0	6	2	0	0	8	8	0	0	4	3	0	0	7	7
H/TOT	8	1	70	6	1	0	86	80	0	0	36	5	0	0	41	41	1	0	37	4	1	0	43	43
P/TOT	21	1	195	16	4	1	238	226	5	0	146	21	1	0	173	170	12	2	135	15	5	0	169	163

CRUMLIN TRAFFIC COUNTS **SEPTEMBER 2021**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/21/142**

SITE: 04 DATE: 7th September 2021

LOCATION: St. Agnes Terrace/St. Agnes Park DAY: Tuesday

	MOVEMENT 1								MOVEMENT 2								MOVEMENT 3							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:00	0	0	4	2	2	0	8	10	0	0	6	3	0	0	9	9	2	0	24	4	0	1	31	30
07:15	0	0	10	4	0	2	16	18	1	0	14	5	0	1	21	21	1	0	23	3	1	1	29	30
07:30	1	0	8	4	0	1	14	14	4	0	9	6	0	1	20	18	4	0	29	8	1	1	43	42
07:45	0	0	16	2	0	1	19	20	2	0	19	7	0	0	28	26	7	0	42	4	0	4	57	55
H/TOT	1	0	38	12	2	4	57	62	7	0	48	21	0	2	78	74	14	0	118	19	2	7	160	158
08:00	2	0	23	4	0	3	32	33	7	0	27	4	0	1	39	34	6	1	38	5	0	1	51	47
08:15	2	0	24	1	0	1	28	27	5	0	36	7	1	1	50	48	3	0	53	3	0	0	59	57
08:30	1	0	33	4	1	2	41	43	5	0	39	5	0	1	50	47	4	0	48	1	1	2	56	56
08:45	4	0	34	2	0	1	41	39	3	0	30	3	0	1	37	36	4	0	51	6	3	1	65	66
H/TOT	9	0	114	11	1	7	142	143	20	0	132	19	1	4	176	165	17	1	190	15	4	4	231	225
09:00	0	1	25	3	3	0	32	34	3	0	33	4	0	1	41	40	3	0	63	8	1	2	77	78
09:15	1	0	18	1	1	1	22	23	1	0	31	3	2	1	38	40	0	0	38	4	0	1	43	44
09:30	0	0	17	1	0	2	20	22	0	1	30	0	1	0	32	32	1	0	42	4	1	3	51	54
09:45	1	0	16	1	0	1	19	19	4	0	30	4	1	2	41	41	6	0	45	9	0	1	61	57
H/TOT	2	1	76	6	4	4	93	99	8	1	124	11	4	4	152	153	10	0	188	25	2	7	232	233
P/TOT	12	1	228	29	7	15	292	304	35	1	304	51	5	10	406	392	41	1	496	59	8	18	623	616

	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	0	22	4	0	0	29	27	6	0	36	4	0	0	46	41	3	3	46	5	0	1	58	55
16:15	3	0	27	3	0	1	34	33	4	0	27	1	1	2	35	35	2	2	21	4	1	2	32	32
16:30	1	0	17	3	0	0	21	20	3	0	36	2	1	0	42	41	1	1	35	2	0	1	40	40
16:45	1	0	22	1	1	1	26	27	2	1	42	4	0	2	51	51	3	2	50	6	0	1	62	59
H/TOT	8	0	88	11	1	2	110	107	15	1	141	11	2	4	174	167	9	8	152	17	1	5	192	186
17:00	0	0	36	2	0	1	39	40	8	1	51	4	0	0	64	57	6	1	36	3	0	2	48	45
17:15	2	0	30	1	0	1	34	33	9	0	50	5	0	2	66	61	3	0	44	6	1	0	54	53
17:30	2	1	30	1	2	1	37	38	7	1	38	1	0	1	48	43	1	0	49	2	0	1	53	53
17:45	0	0	28	3	0	1	32	33	3	0	49	1	1	3	57	59	7	0	42	3	1	1	54	50
H/TOT	4	1	124	7	2	4	142	144	27	2	188	11	1	6	235	219	17	1	171	14	2	4	209	201
18:00	1	0	26	2	0	0	29	28	5	1	42	1	0	1	50	46	5	0	34	5	0	2	46	44
18:15	2	0	25	0	1	1	29	29	7	0	33	2	0	2	44	40	3	0	35	6	0	0	44	42
18:30	1	0	22	6	1	1	31	32	3	0	39	2	0	0	44	42	1	0	30	3	1	1	36	37
18:45	0	0	21	2	1	1	25	27	5	0	43	2	2	1	53	52	7	1	33	2	0	0	43	37
H/TOT	4	0	94	10	3	3	114	117	20	1	157	7	2	4	191	180	16	1	132	16	1	3	169	160
P/TOT	16	1	306	28	6	9	366	368	62	4	486	29	5	14	600	567	42	10	455	47	4	12	570	546

TRAFFINOMICS LIMITED

CRUMLIN TRAFFIC COUNTS **SEPTEMBER 2021**

MANUAL CLASSIFIED JUNCTION TURNING COUNTS **TRA/21/142**

SITE: 04 DATE: 7th September 2021

LOCATION: St. Agnes Terrace/St. Agnes Park DAY: Tuesday

	MOVEMENT 4								MOVEMENT 5								MOVEMENT 6							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**BUS**	**TOT**	**PCU**
07:00	0	0	15	7	0	1	23	24	1	0	9	1	1	2	14	16	1	0	8	2	0	2	13	14
07:15	0	0	16	4	1	1	22	24	1	0	11	3	0	2	17	18	0	0	6	1	1	1	9	11
07:30	1	0	26	11	1	1	40	41	1	0	10	7	1	3	22	25	2	0	9	3	2	1	17	18
07:45	0	0	32	5	2	0	39	41	1	0	29	5	1	1	37	38	1	0	13	1	1	0	16	16
H/TOT	1	0	89	27	4	3	124	130	4	0	59	16	3	8	90	98	4	0	36	7	4	4	55	60
08:00	1	0	22	4	0	0	27	26	1	1	25	2	0	1	30	30	1	0	13	5	1	0	20	20
08:15	1	1	29	7	0	1	39	39	2	0	21	2	0	1	26	25	0	0	22	2	2	0	26	28
08:30	0	0	43	5	1	1	50	52	0	0	18	2	0	0	20	20	3	0	36	6	0	1	46	45
08:45	0	0	43	2	1	2	48	51	1	0	41	2	1	3	48	51	0	1	48	4	0	2	55	56
H/TOT	2	1	137	18	2	4	164	168	4	1	105	8	1	5	124	126	4	1	119	17	3	3	147	149
09:00	0	0	30	1	1	0	32	33	2	0	19	3	0	0	24	22	2	0	31	2	0	1	36	35
09:15	0	0	29	4	3	1	37	41	0	0	16	2	1	1	20	22	0	0	23	0	1	2	26	29
09:30	1	0	27	3	1	1	33	34	1	0	27	2	2	0	32	33	1	0	23	3	1	2	30	32
09:45	3	1	35	3	0	2	44	43	2	0	15	2	3	1	23	25	1	0	15	2	0	1	19	19
H/TOT	4	1	121	11	5	4	146	151	5	0	77	9	6	2	99	103	4	0	92	7	2	6	111	116
P/TOT	7	2	347	56	11	11	434	449	13	1	241	33	10	15	313	327	12	1	247	31	9	13	313	325

	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	29	4	1	1	35	37	0	1	31	4	0	1	37	37	2	0	35	1	0	1	39	38
16:15	1	0	31	2	1	2	37	39	1	0	24	1	0	0	26	25	3	0	28	3	1	1	36	36
16:30	2	1	25	2	0	1	31	30	0	0	26	7	0	0	33	33	1	0	24	2	0	0	27	26
16:45	1	0	23	6	0	1	31	31	1	0	29	2	0	1	33	33	4	0	28	1	0	1	34	32
H/TOT	4	1	108	14	2	5	134	137	2	1	110	14	0	2	129	129	10	0	115	7	1	3	136	132
17:00	1	2	33	8	1	0	45	44	1	1	24	4	0	0	30	29	1	0	16	1	0	1	19	19
17:15	0	0	33	7	0	1	41	42	3	0	25	2	0	1	31	30	1	0	21	5	0	0	27	26
17:30	0	0	34	2	2	1	39	42	2	0	25	1	0	1	29	28	2	0	11	2	0	0	15	13
17:45	0	0	32	3	0	0	35	35	1	1	27	4	0	1	34	34	1	0	17	2	0	1	21	21
H/TOT	1	2	132	20	3	2	160	163	7	2	101	11	0	3	124	120	5	0	65	10	0	2	82	80
18:00	2	0	40	3	0	2	47	47	1	0	20	3	0	0	24	23	0	0	21	2	1	1	25	27
18:15	0	0	28	0	0	0	28	28	3	0	29	4	0	1	37	36	2	0	23	2	1	0	28	27
18:30	1	0	30	3	0	1	35	35	1	0	31	3	0	1	36	36	2	0	21	2	1	1	27	27
18:45	0	0	38	1	0	1	40	41	0	1	18	4	0	1	24	24	3	0	12	1	0	1	17	16
H/TOT	3	0	136	7	0	4	150	152	5	1	98	14	0	3	121	119	7	0	77	7	3	3	97	97
P/TOT	8	3	376	41	5	11	444	452	14	4	309	39	0	8	374	368	22	0	257	24	4	8	315	309

APPENDIX C

TRICS Output Data
Residential Apartments, Crèche & Cafe

Calculation Reference: AUDIT-160301-211011-1026

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST		
	BD	BEDFORDSHIRE	3 days
	ES	EAST SUSSEX	1 days
	EX	ESSEX	2 days
	HC	HAMPSHIRE	1 days
	HF	HERTFORDSHIRE	4 days
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	51	65	0.043	51	65	0.155	51	65	0.198
08:00 - 09:00	51	65	0.062	51	65	0.198	51	65	0.260
09:00 - 10:00	51	65	0.075	51	65	0.090	51	65	0.165
10:00 - 11:00	51	65	0.060	51	65	0.079	51	65	0.139
11:00 - 12:00	51	65	0.064	51	65	0.078	51	65	0.142
12:00 - 13:00	51	65	0.091	51	65	0.088	51	65	0.179
13:00 - 14:00	51	65	0.079	51	65	0.088	51	65	0.167
14:00 - 15:00	51	65	0.086	51	65	0.083	51	65	0.169
15:00 - 16:00	51	65	0.101	51	65	0.068	51	65	0.169
16:00 - 17:00	51	65	0.122	51	65	0.077	51	65	0.199
17:00 - 18:00	51	65	0.172	51	65	0.084	51	65	0.256
18:00 - 19:00	51	65	0.159	51	65	0.095	51	65	0.254
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.114			1.183			2.297

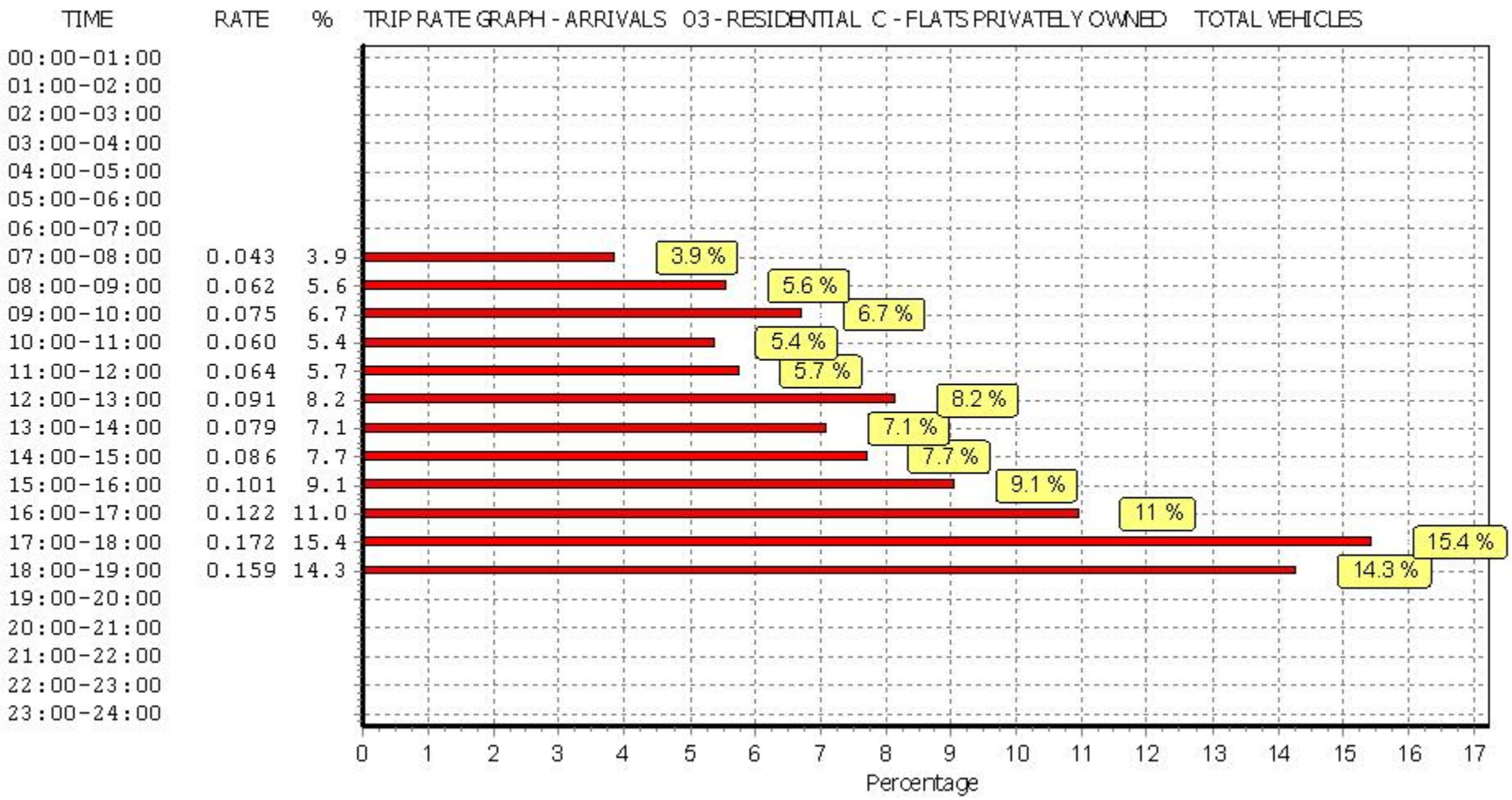
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are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

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

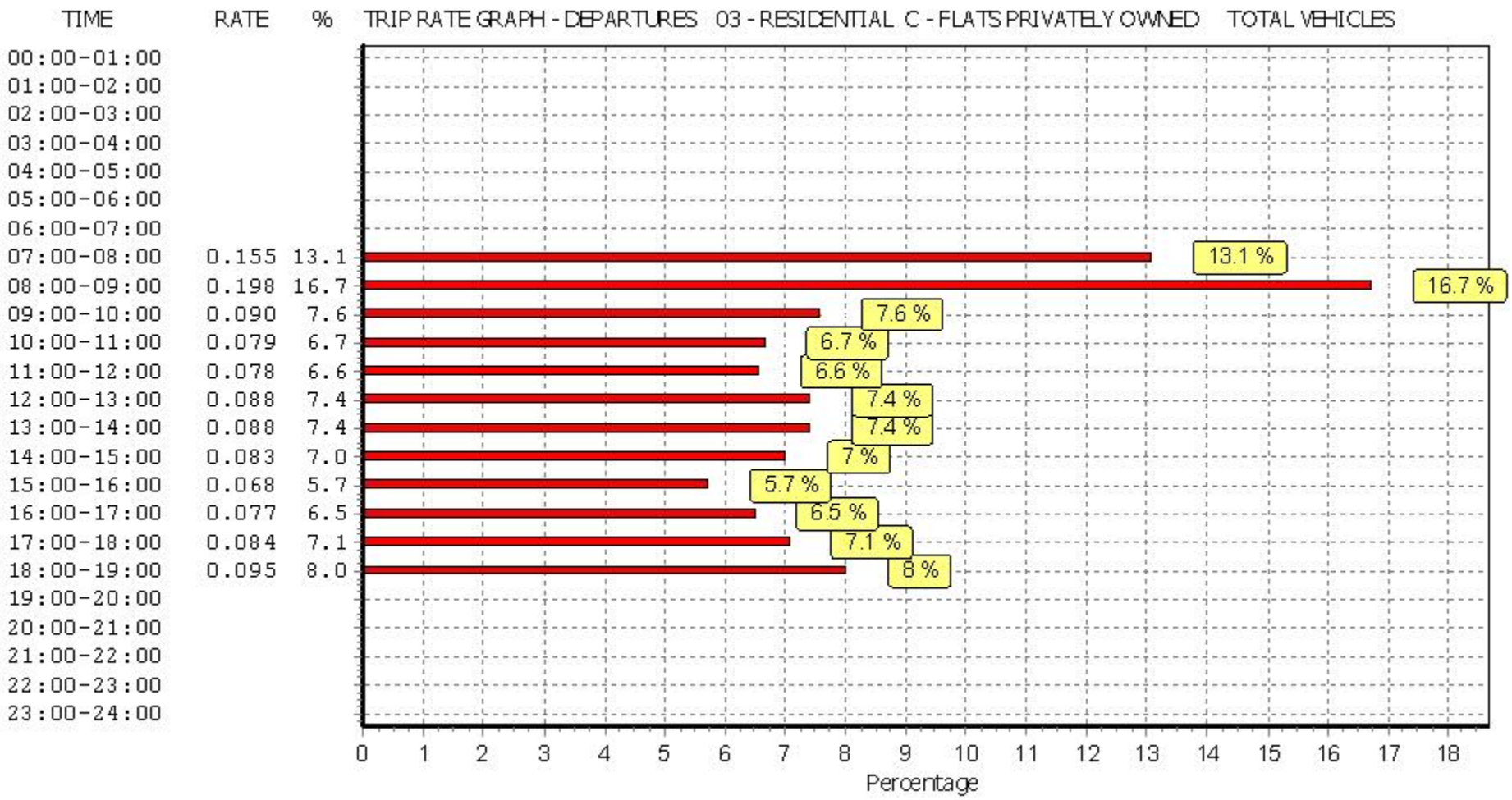
Parameter summary

Trip rate parameter range selected:	6 - 332 (units:)
Survey date date range:	01/01/13 - 10/06/21
Number of weekdays (Monday-Friday):	51
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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



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



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

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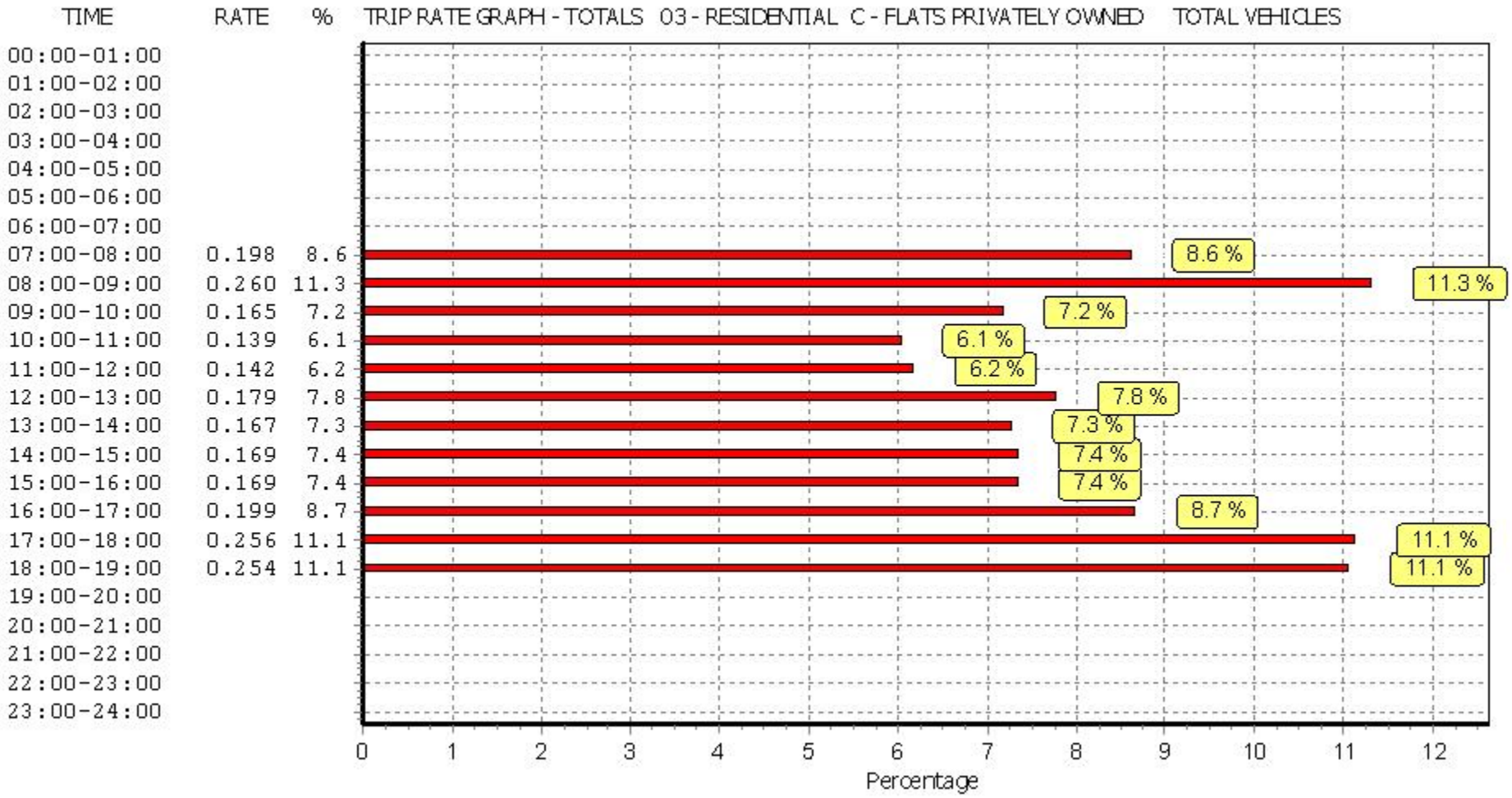

This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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

Calculation Reference: AUDIT-160301-211011-1056

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST		
	ES	EAST SUSSEX	1 days
03	SOUTH WEST		
	WL	WILTSHIRE	1 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
	SF	SUFFOLK	1 days
05	EAST MIDLANDS		
	DS	DERBYSHIRE	1 days
	LE	LEICESTERSHIRE	1 days
	LN	LINCOLNSHIRE	1 days
06	WEST MIDLANDS		
	SH	SHROPSHIRE	1 days
	WK	WARWICKSHIRE	1 days
08	NORTH WEST		
	CH	CHESHIRE	1 days
09	NORTH		
	TV	TEES VALLEY	1 days
	TW	TYNE & WEAR	1 days
10	WALES		
	BG	BRIDGEND	1 days
	MM	MONMOUTHSHIRE	1 days
	RC	RHONDDA CYNON TAFF	1 days
11	SCOTLAND		
	DU	DUNDEE CITY	1 days
	SR	STIRLING	1 days
12	CONNAUGHT		
	RO	ROSCOMMON	2 days

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	400	0.000	1	400	0.000	1	400	0.000
07:00 - 08:00	19	452	2.144	19	452	1.048	19	452	3.192
08:00 - 09:00	19	452	3.716	19	452	3.122	19	452	6.838
09:00 - 10:00	19	452	1.759	19	452	1.666	19	452	3.425
10:00 - 11:00	19	452	0.536	19	452	0.408	19	452	0.944
11:00 - 12:00	19	452	0.722	19	452	0.513	19	452	1.235
12:00 - 13:00	19	452	1.398	19	452	1.503	19	452	2.901
13:00 - 14:00	19	452	0.897	19	452	1.386	19	452	2.283
14:00 - 15:00	19	452	0.664	19	452	0.641	19	452	1.305
15:00 - 16:00	19	452	0.676	19	452	0.909	19	452	1.585
16:00 - 17:00	19	452	1.712	19	452	1.806	19	452	3.518
17:00 - 18:00	19	452	2.854	19	452	3.448	19	452	6.302
18:00 - 19:00	18	469	0.166	18	469	0.771	18	469	0.937
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:			17.244			17.221			34.465

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 - 860 (units: sqm)
Survey date date range:	01/01/13 - 06/05/21
Number of weekdays (Monday-Friday):	19
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.

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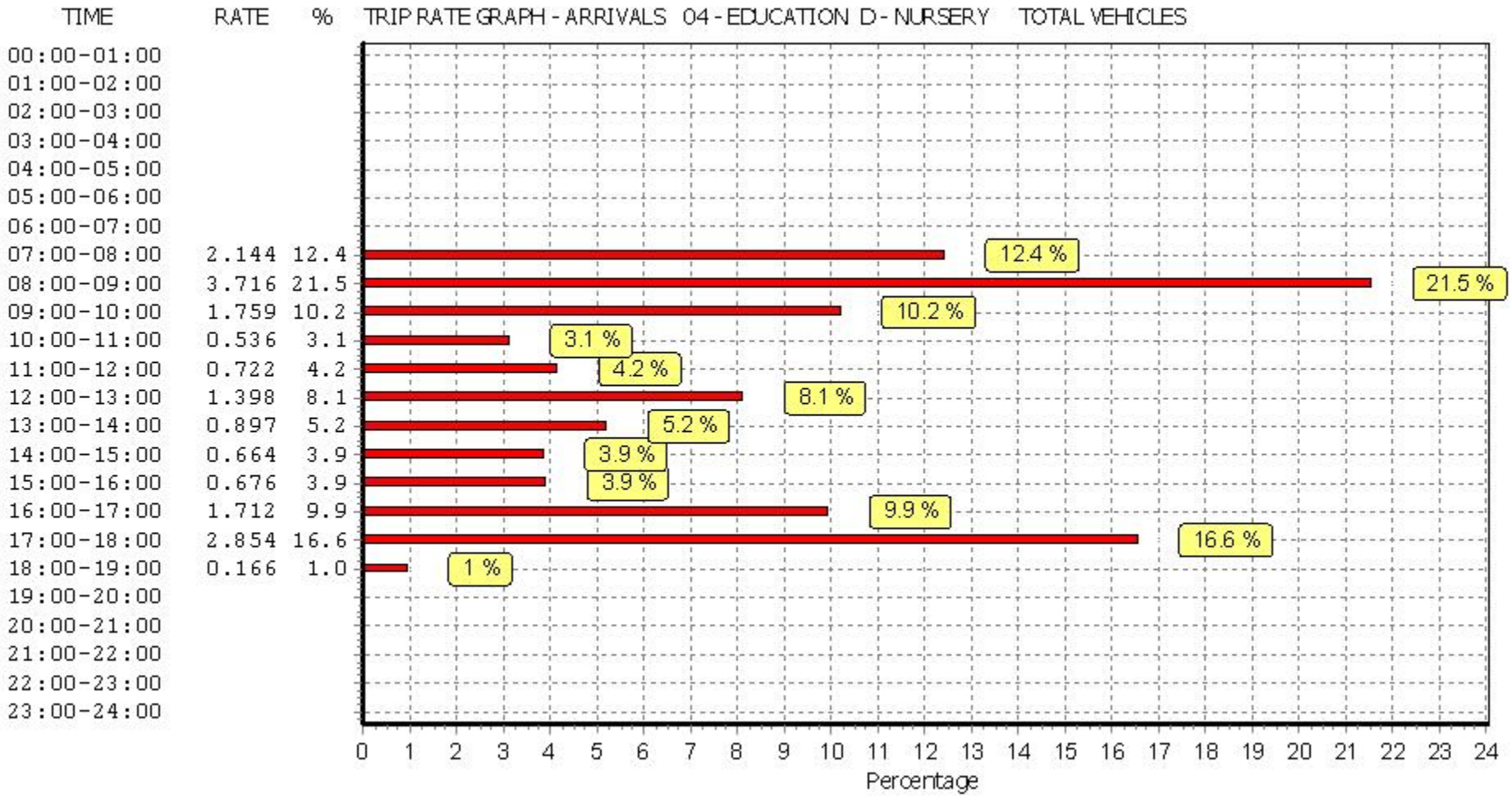

This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through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

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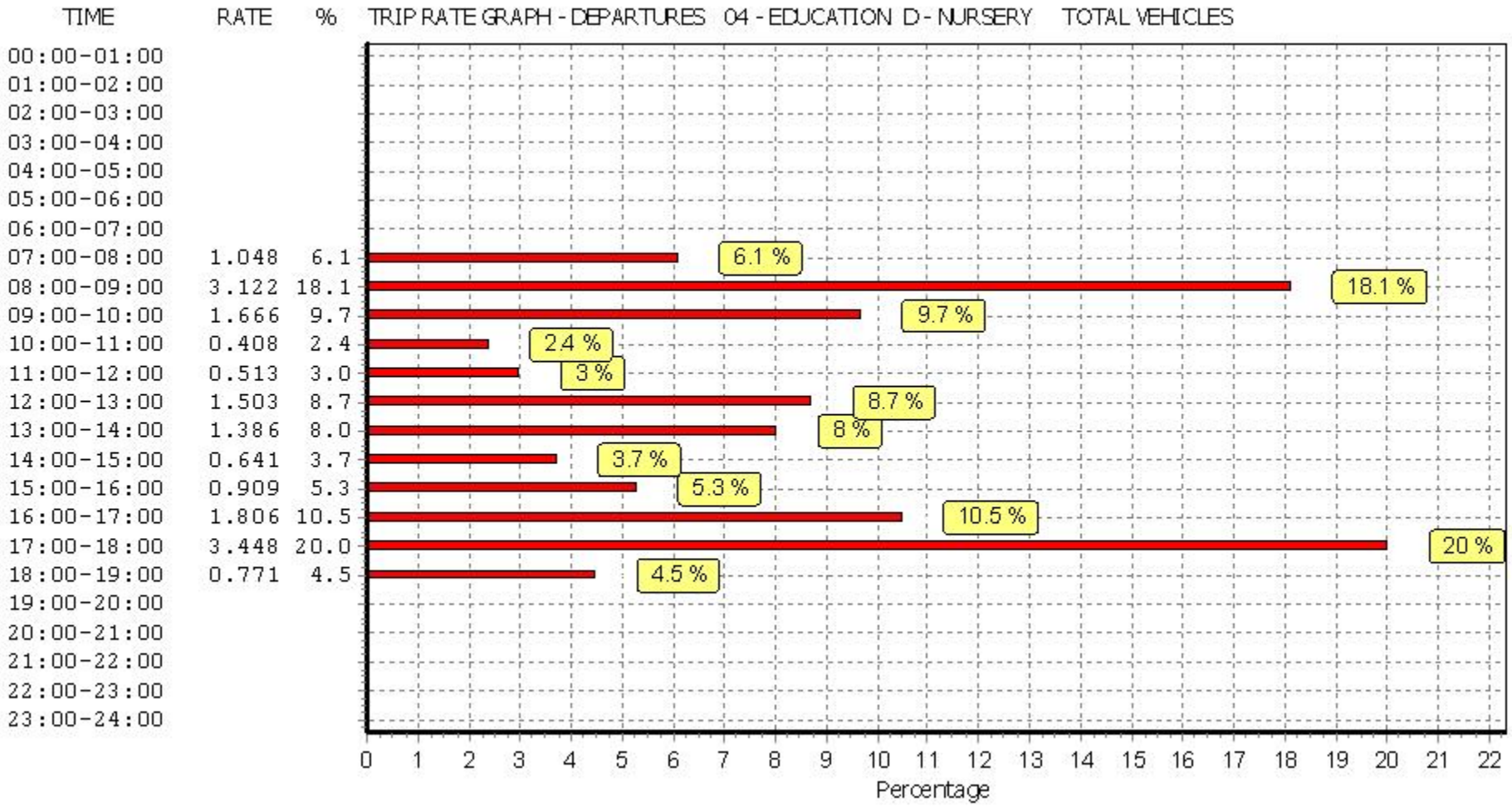

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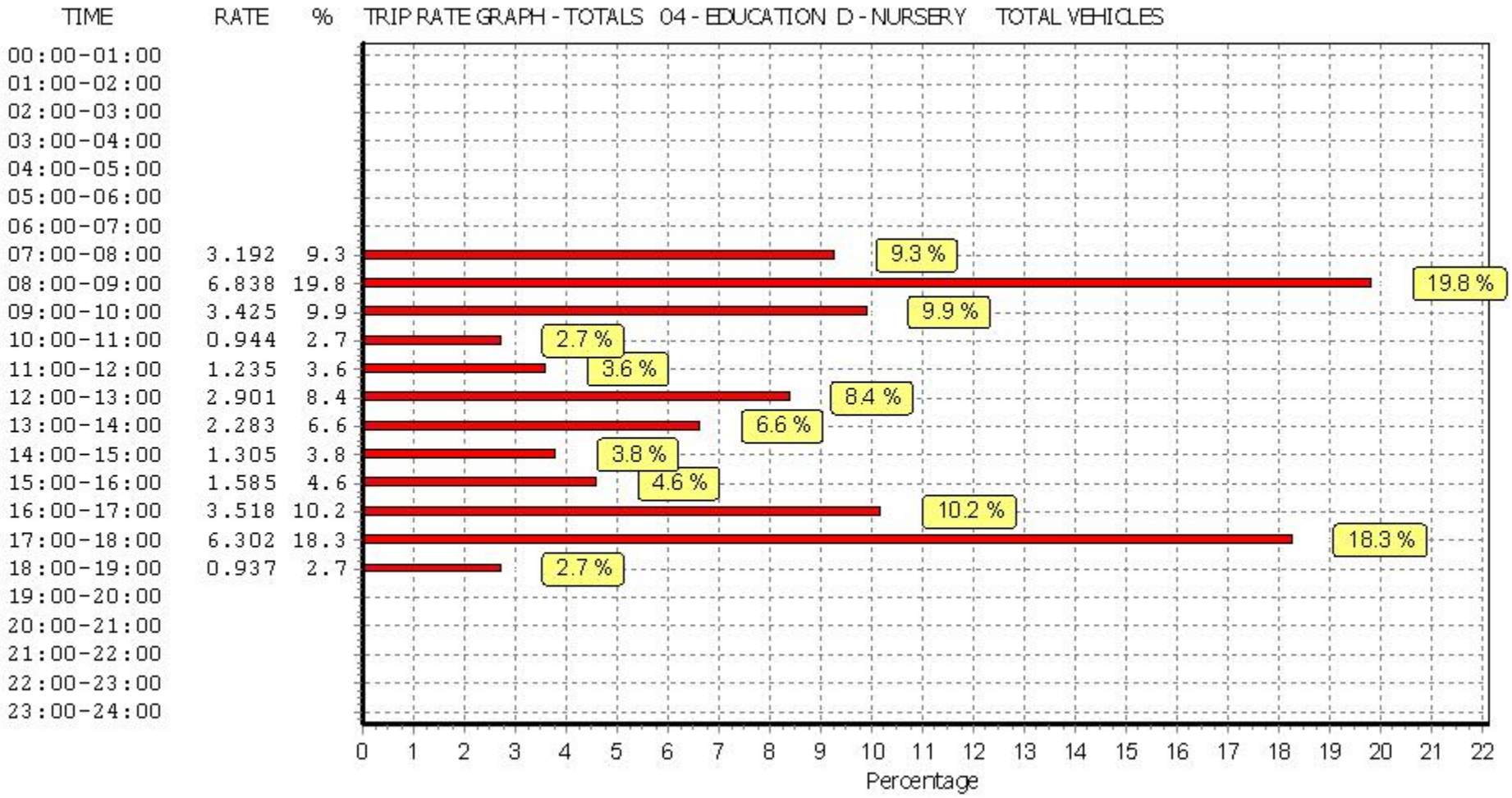

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Calculation Reference: AUDIT-160301-211012-1042

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 06 - HOTEL, FOOD & DRINK
Category : C - PUB/RESTAURANT
TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	ES	EAST SUSSEX	1 days
	EX	ESSEX	1 days
	HC	HAMPSHIRE	1 days
03	SOUTH WEST		
	BR	BRISTOL CITY	1 days
04	EAST ANGLIA		
	SF	SUFFOLK	1 days
05	EAST MIDLANDS		
	LN	LINCOLNSHIRE	1 days
	NR	NORTHAMPTONSHIRE	1 days
	NT	NOTTINGHAMSHIRE	1 days
06	WEST MIDLANDS		
	ST	STAFFORDSHIRE	1 days
	WK	WARWICKSHIRE	1 days
	WM	WEST MIDLANDS	1 days
	WO	WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	WY	WEST YORKSHIRE	1 days
08	NORTH WEST		
	CH	CHESHIRE	1 days
	GM	GREATER MANCHESTER	1 days
	LC	LANCASHIRE	2 days
09	NORTH		
	DH	DURHAM	1 days
	TW	TYNE & WEAR	1 days
10	WALES		
	SW	SWANSEA	1 days
11	SCOTLAND		
	RF	RENFREWSHIRE	1 days
13	MUNSTER		
	TI	TIPPERARY	1 days
14	LEINSTER		
	WC	WICKLOW	1 days
15	GREATER DUBLIN		
	DL	DUBLIN	1 days
16	ULSTER (REPUBLIC OF IRELAND)		
	DN	DONEGAL	1 days

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

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/C - PUB/RESTAURANT
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	1	1550	0.065	1	1550	0.129	1	1550	0.194
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	1	600	0.000	1	600	0.000	1	600	0.000
08:00 - 09:00	1	600	0.000	1	600	0.000	1	600	0.000
09:00 - 10:00	1	600	0.000	1	600	0.000	1	600	0.000
10:00 - 11:00	24	603	0.518	24	603	0.332	24	603	0.850
11:00 - 12:00	24	603	0.954	24	603	0.408	24	603	1.362
12:00 - 13:00	25	611	2.561	25	611	1.042	25	611	3.603
13:00 - 14:00	25	611	1.946	25	611	1.854	25	611	3.800
14:00 - 15:00	25	611	1.127	25	611	1.684	25	611	2.811
15:00 - 16:00	25	611	1.035	25	611	1.074	25	611	2.109
16:00 - 17:00	25	611	1.520	25	611	1.009	25	611	2.529
17:00 - 18:00	25	611	2.254	25	611	1.382	25	611	3.636
18:00 - 19:00	25	611	2.666	25	611	2.273	25	611	4.939
19:00 - 20:00	25	611	2.371	25	611	2.745	25	611	5.116
20:00 - 21:00	25	611	1.579	25	611	2.352	25	611	3.931
21:00 - 22:00	25	611	0.963	25	611	1.572	25	611	2.535
22:00 - 23:00	25	611	0.596	25	611	1.782	25	611	2.378
23:00 - 24:00	21	576	0.339	21	576	0.984	21	576	1.323
Total Rates:			20.494			20.622			41.116

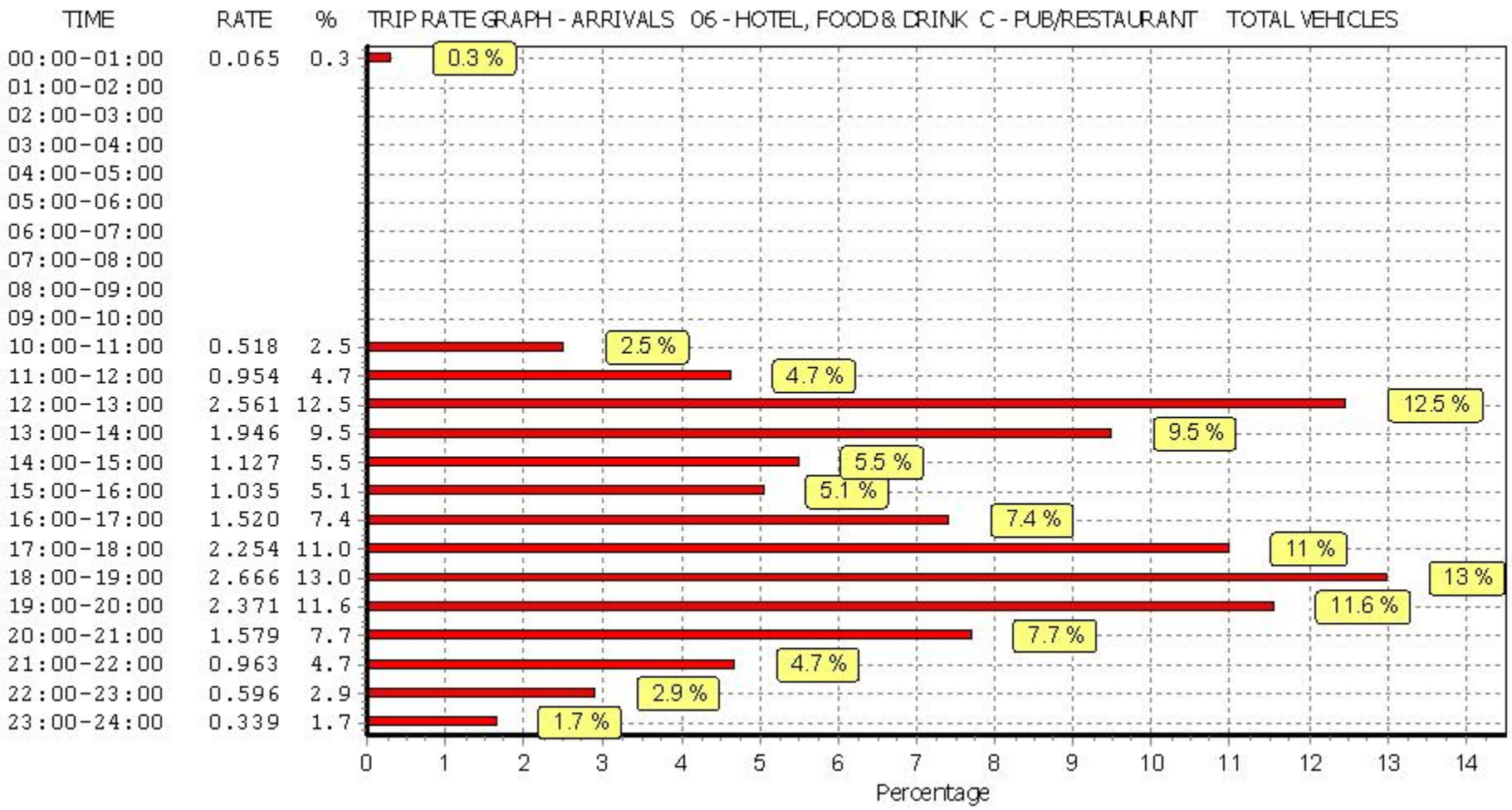
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are 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:	200 - 1550 (units: sqm)
Survey date date range:	01/01/13 - 23/11/19
Number of weekdays (Monday-Friday):	25
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.



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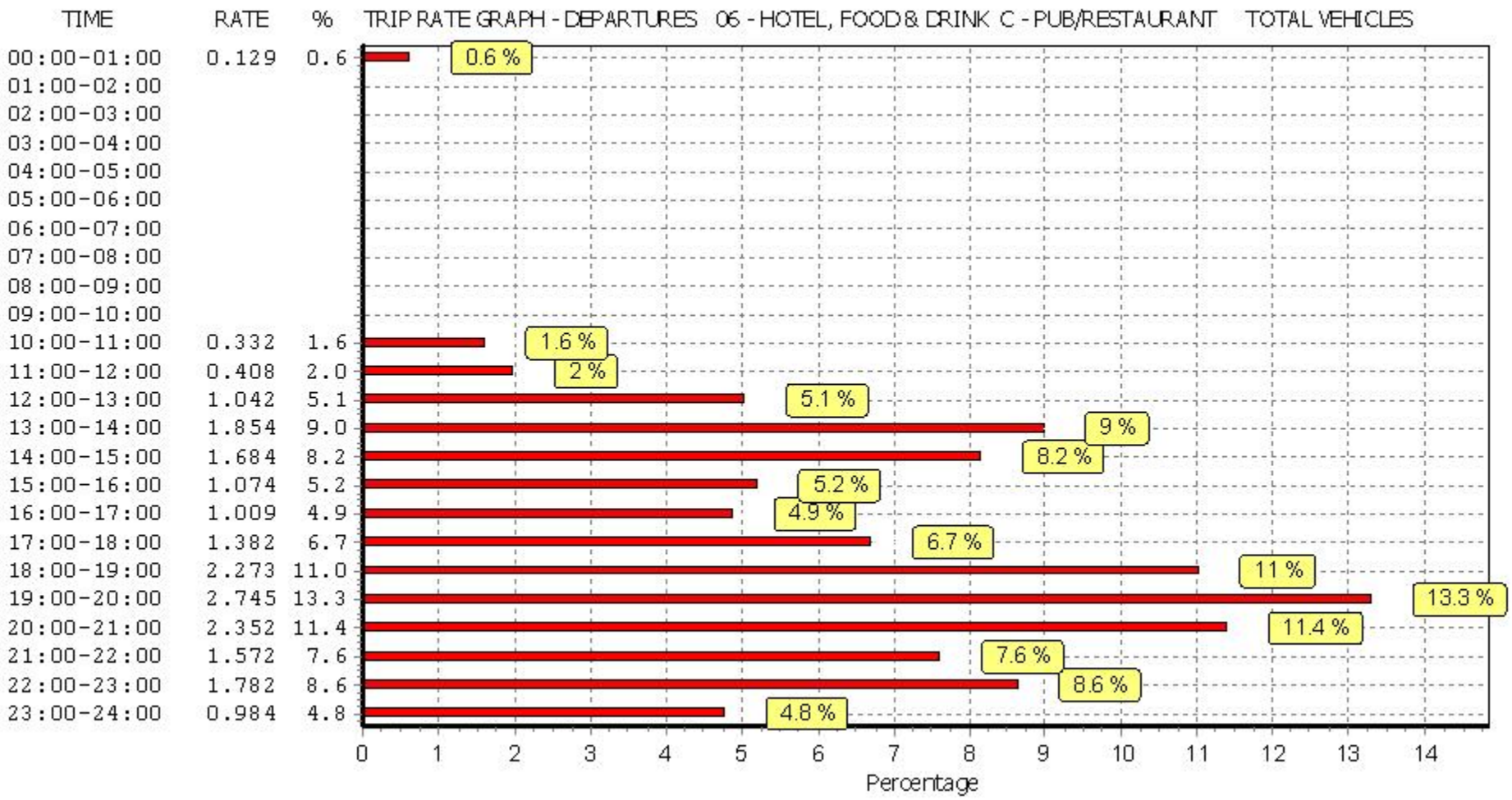

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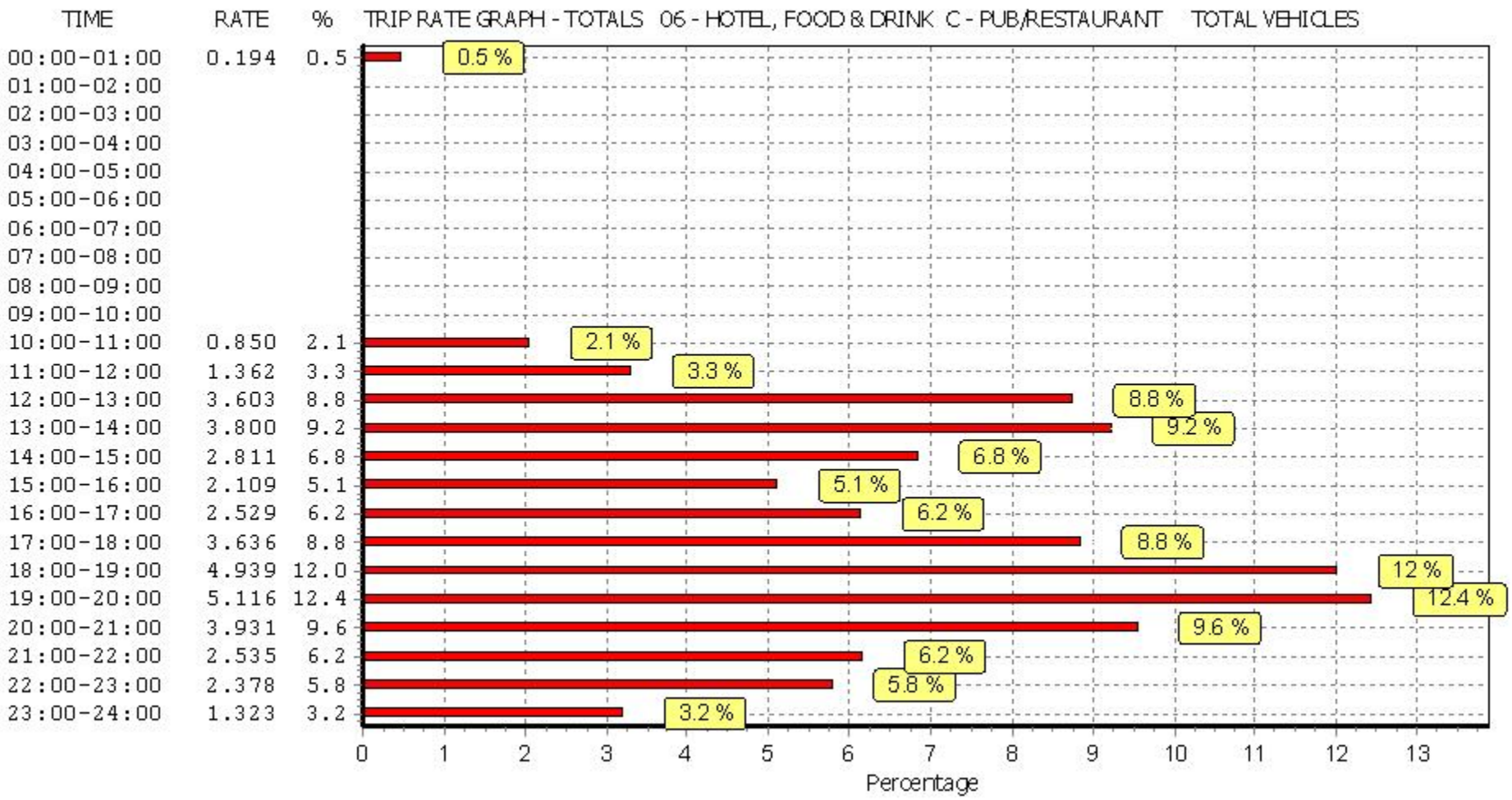

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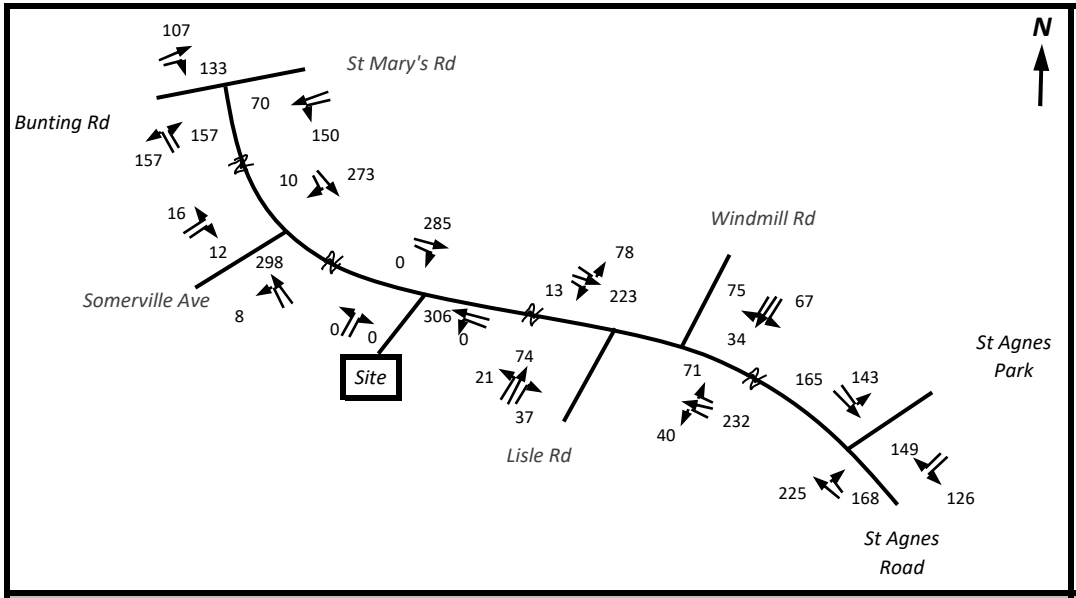
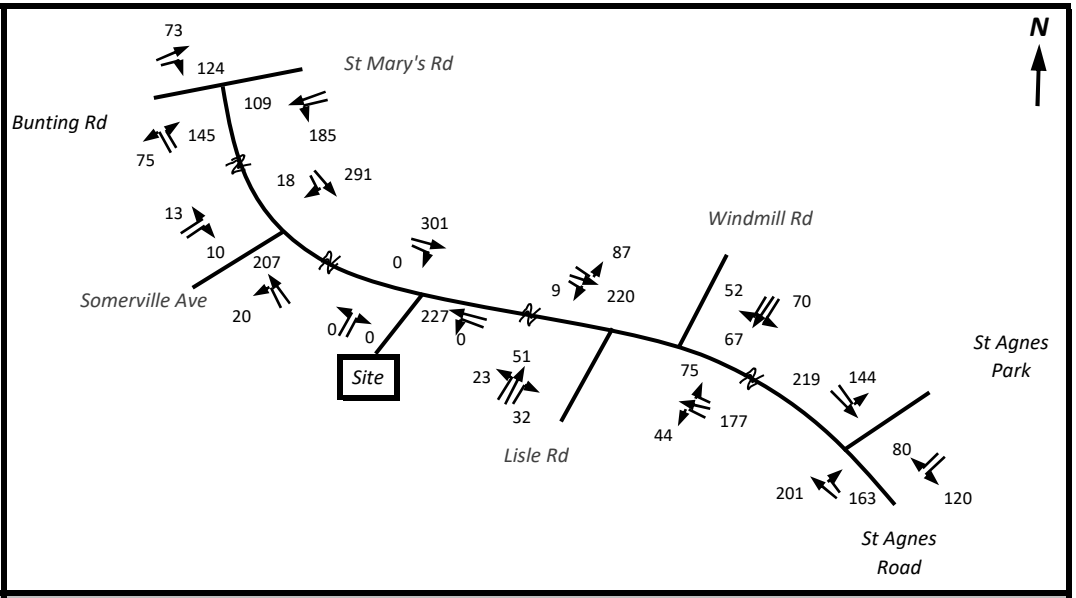
APPENDIX D

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



AM PEAK HR 8-9am



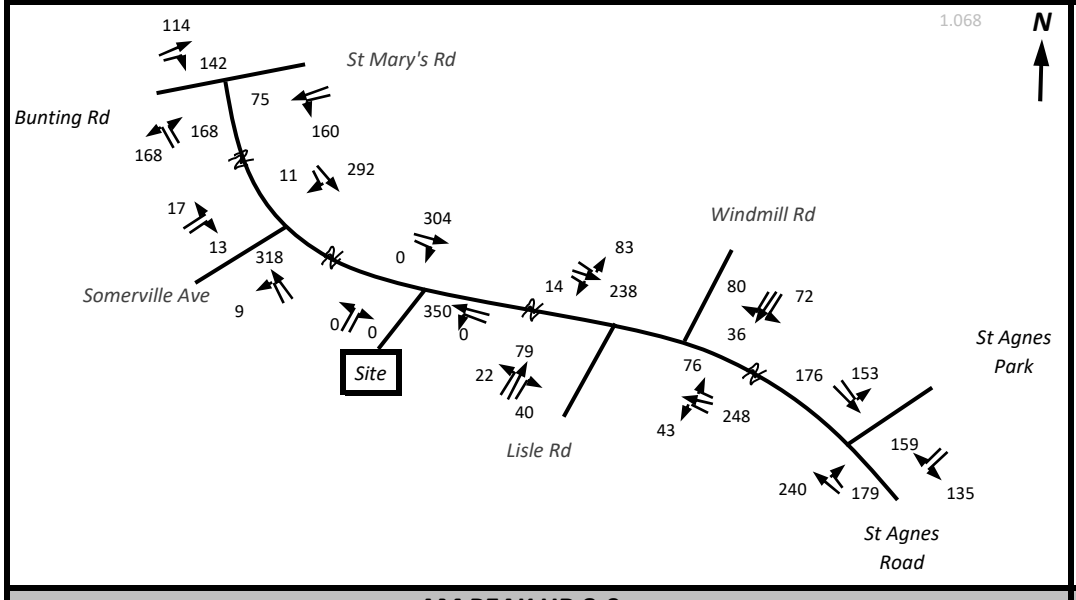
PM PEAK HR 5-6pm

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

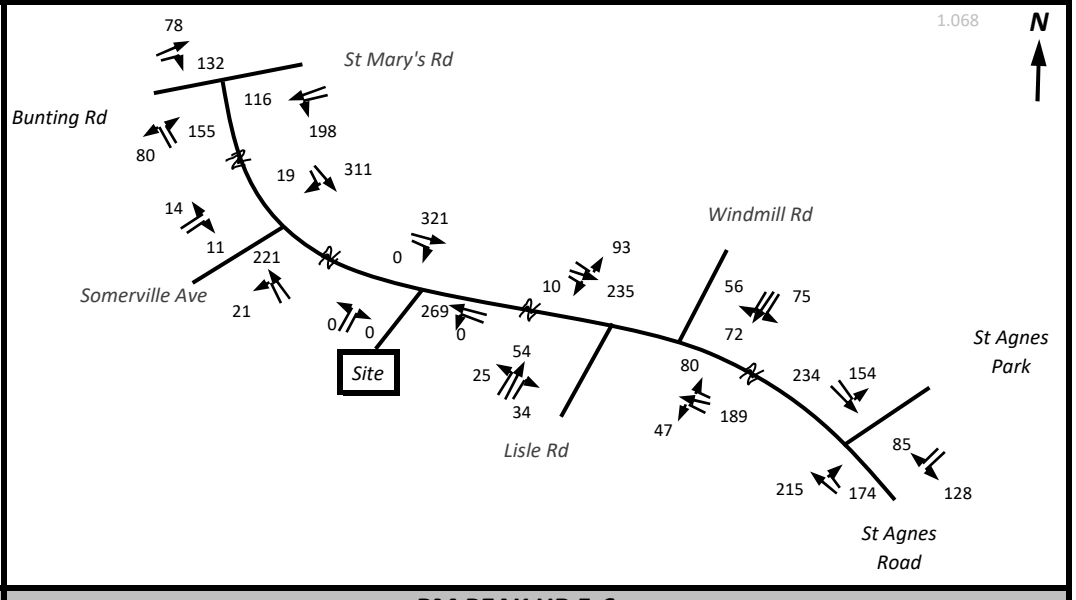
M50 TII Counter Junc #9/#10 - 7/9/2021, AM 10335, PM 11011, gives equiv AADT = 106730

M50 TII Counter Junc #9/#10 - 10/9/2021, AM 11179, PM 11016, gives equiv AADT = 113975

Resulting Summertime/Covid Factor to Apply to Surveyed Flows = 1.068



AM PEAK HR 8-9am

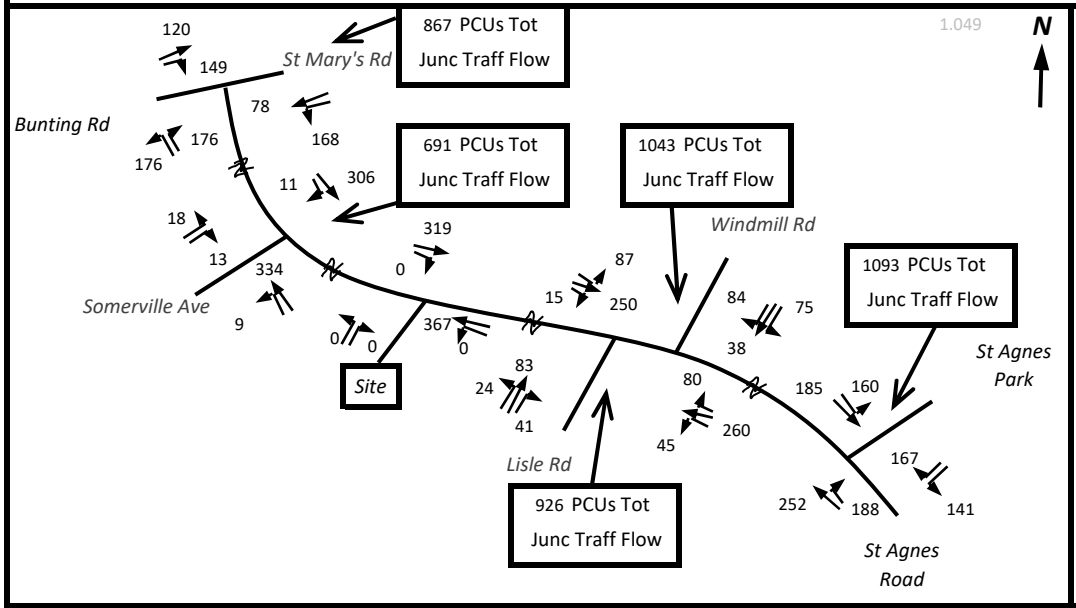


PM PEAK HR 5-6pm

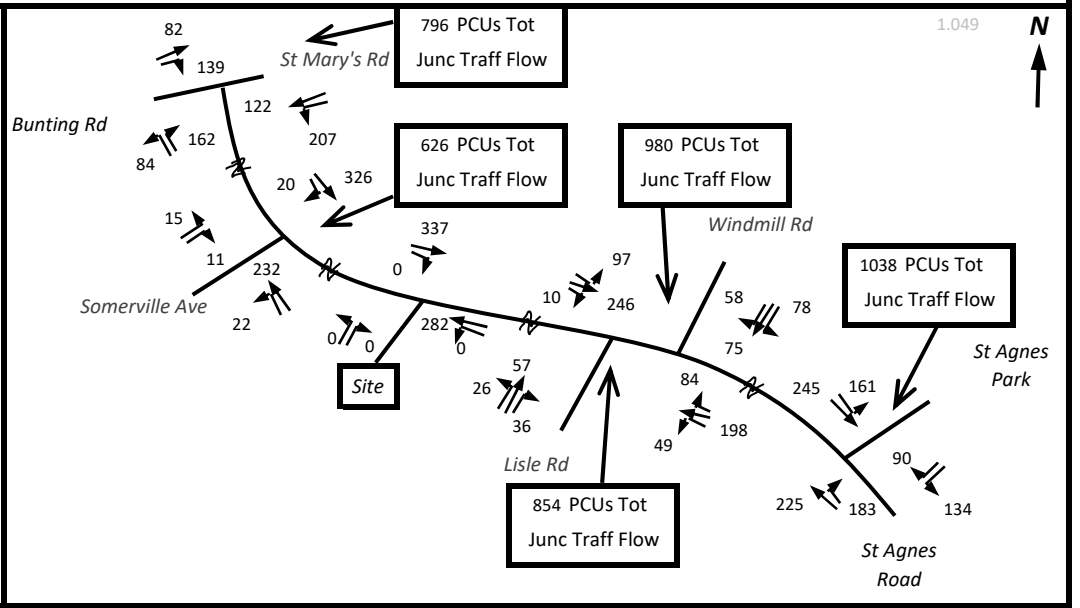
Corrected 2021 Weekday Peak Hour Traffic Volumes - Industry Standard Summer/Covid Factors Applied (PCUs) - WITHOUT NEW DEVELOPMENT

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 2024 = 1.049
2023 to 2039 = 1.153

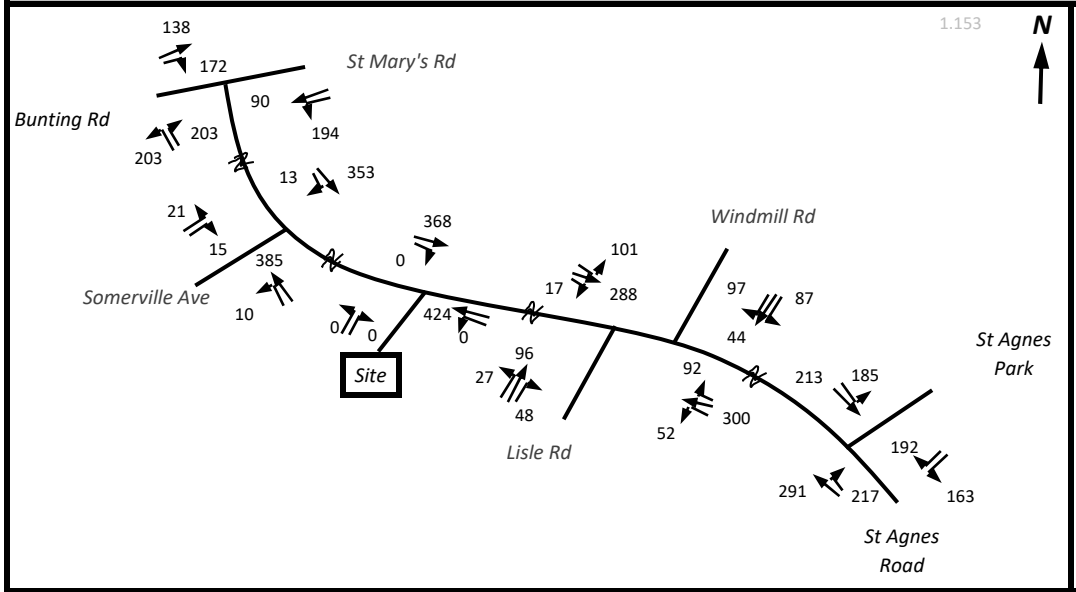


AM PEAK HR 8-9am

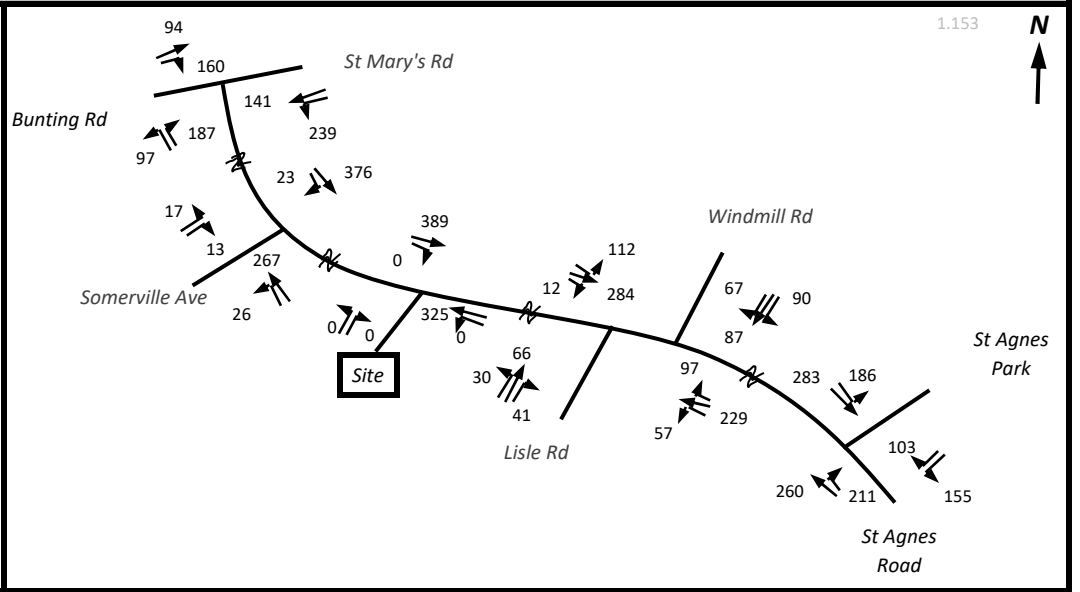


PM PEAK HR 5-6pm

Projected Selected Opening Year 2024 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 2039 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 Appendix C)

150 No Apartments	Arrivals (PCUs)		Departures (PCUs)		Total 2-Way Vehicular Traffic Generated
Network Hour	Per Unit	150 No	Per Unit	150 No	
Weekday AM Peak Hr 8-9	0.062	9	0.198	30	39
Weekday PM Peak Hr 5-6	0.172	26	0.084	13	39

150 Apartments

150 m2 Creche	Arrivals (PCUs)		Departures (PCUs)		Total 2-Way Vehicular Traffic Generated
Network Hour	Per Unit	Dev	Per Unit	Dev	
Weekday AM Peak Hr 8-9	3.710	6	3.120	5	11
Weekday PM Peak Hr 5-6	2.854	4	3.448	5	9

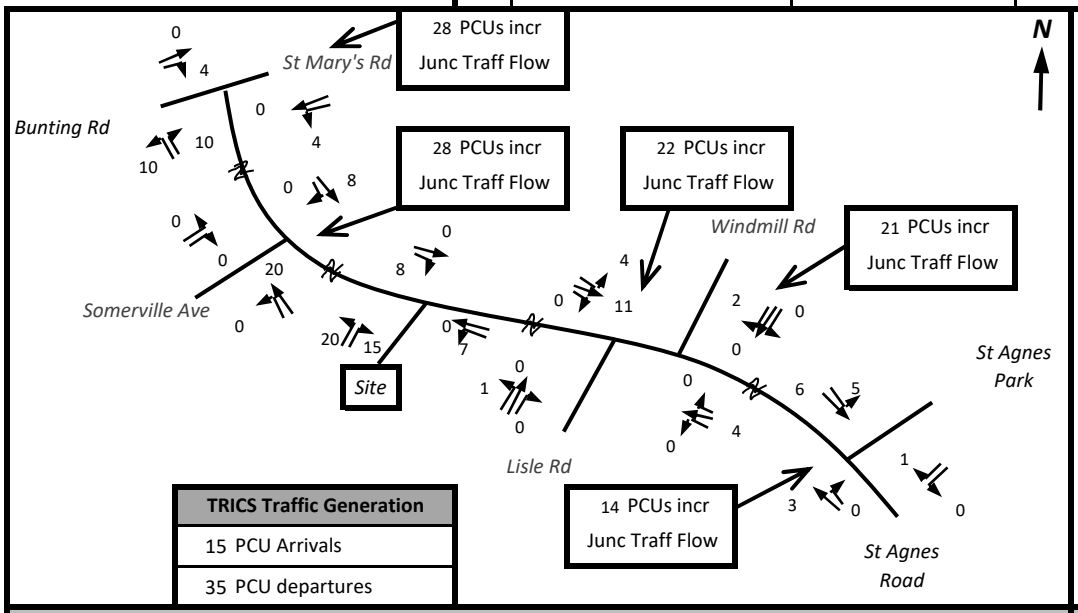
Small Ancillary Creche

55 m2 Café	Arrivals (PCUs)		Departures (PCUs)		Total 2-Way Vehicular Traffic Generated
Network Hour	Per Unit	Dev	Per Unit	Dev	
Weekday AM Peak Hr 8-9	0.000	0	0.000	0	0
Weekday PM Peak Hr 5-6	2.254	1	1.382	1	2

Small Ancillary Café

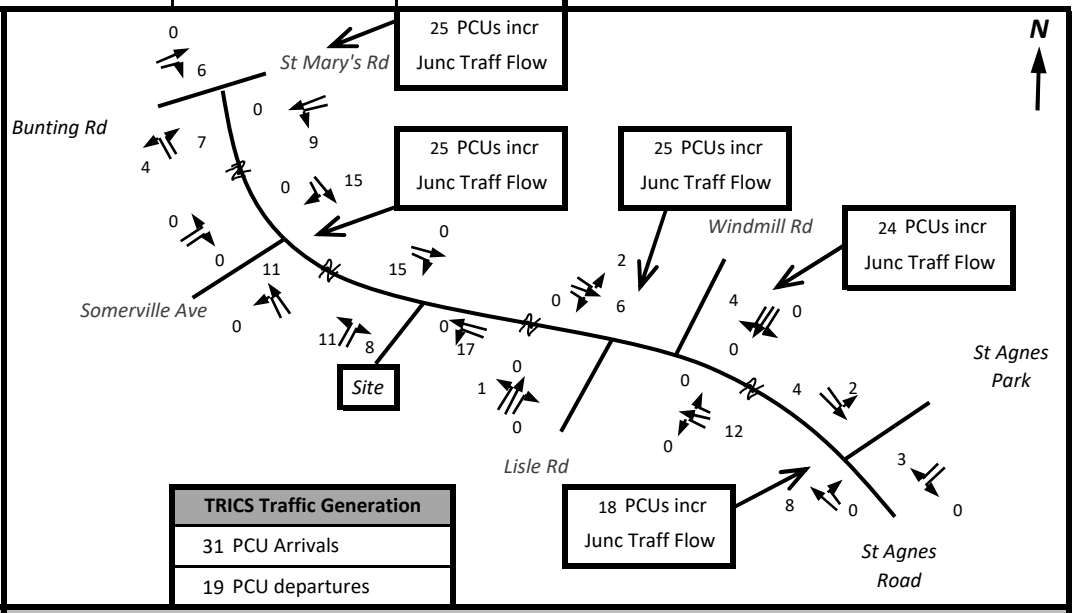
Network Hour	Arrivals (PCUs)	Departures (PCUs)	2-Way Flow
Weekday AM Peak Hr 8-9	15	35	50
Weekday PM Peak Hr 5-6	31	19	50

Total Development Traffic



TRICS Traffic Generation
15 PCU Arrivals
35 PCU departures

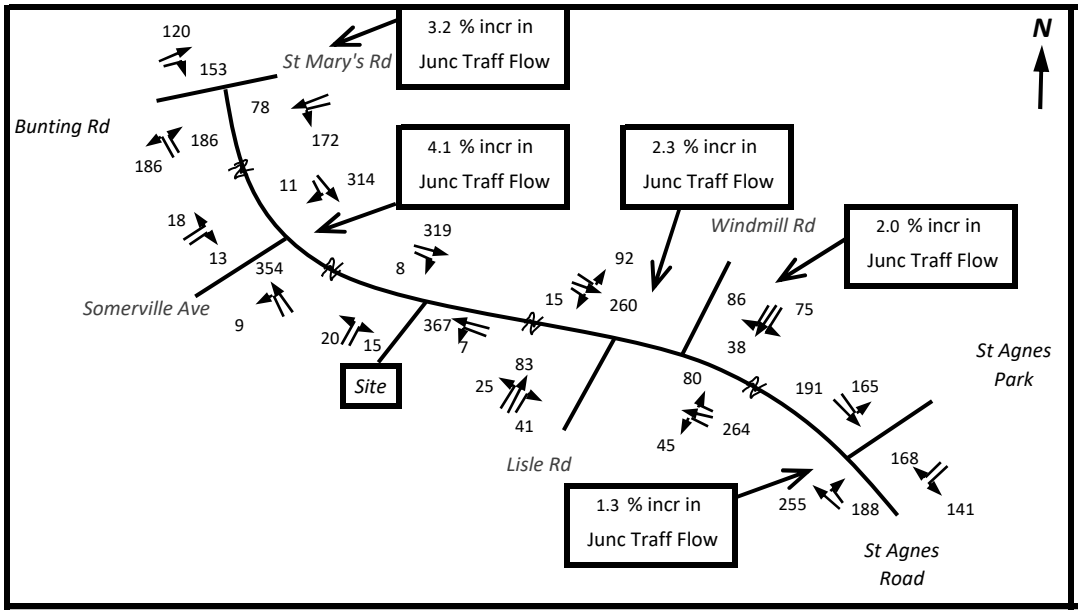
AM PEAK HR 8-9am



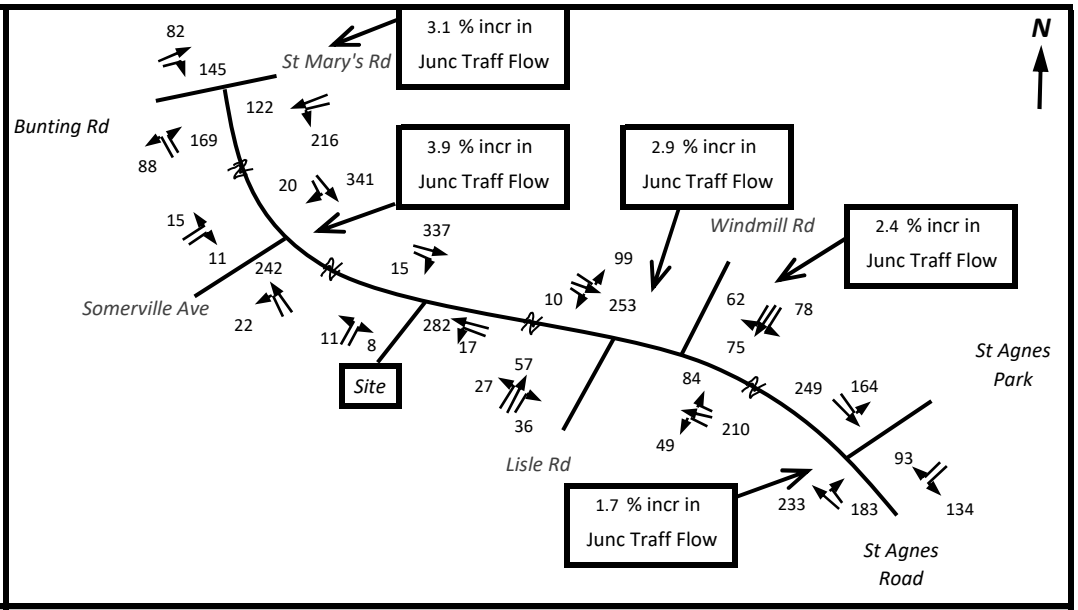
TRICS Traffic Generation
31 PCU Arrivals
19 PCU departures

PM PEAK HR 5-6pm

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

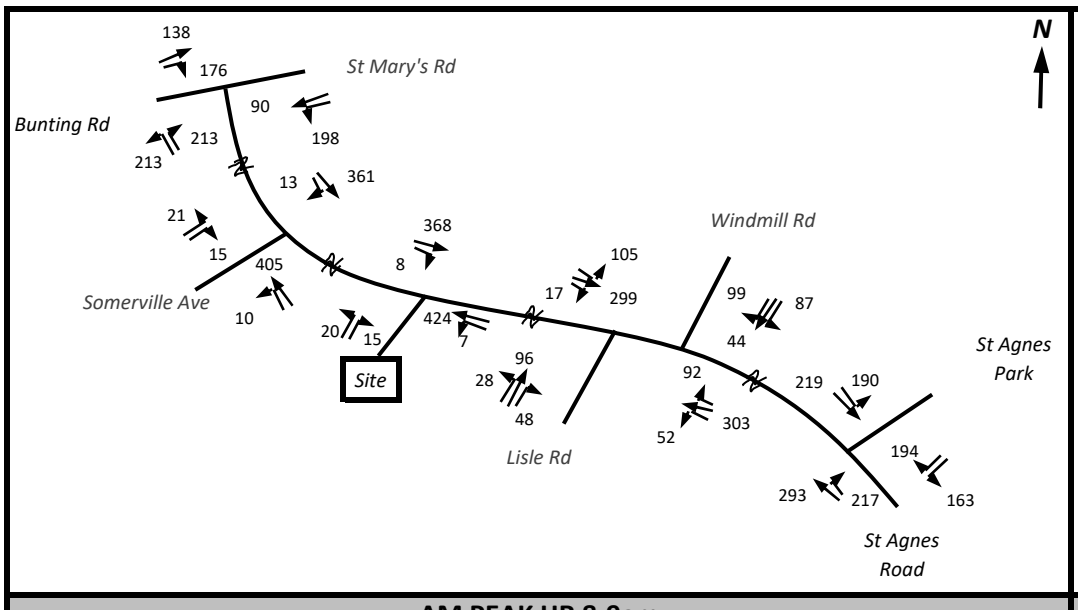


AM PEAK HR 8-9am

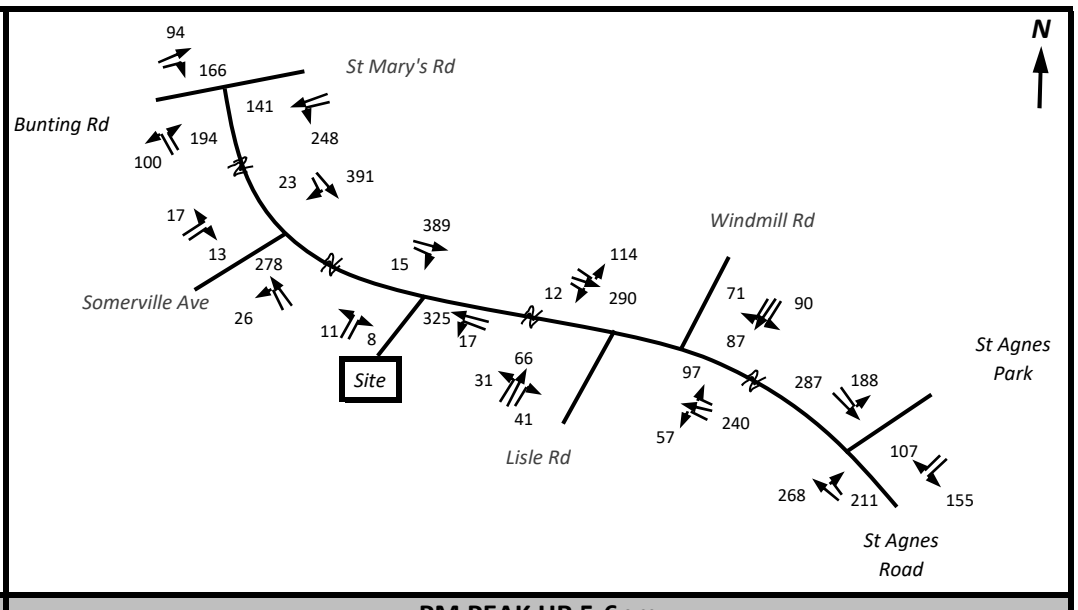


PM PEAK HR 5-6pm

Projected Selected Opening Year 2024 Weekday Peak Hour Traffic Volumes - WITH SUBJECT DEVELOPMENT OPEN & OCCUPIED



AM PEAK HR 8-9am



PM PEAK HR 5-6pm

Associated Design Year 2039 (Ope +15) Weekday Peak Hour Traffic Volumes - WITH SUBJECT DEVELOPMENT OPEN & OCCUPIED

APPENDIX E

Junction9 PiCADY Output
(Site Access T-Junction)

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

Modelled Scenario	Period Mean Max Q (PCUs)	Period Max RFC
2024 Opening Year AM Peak Hr	<1	0.08
2024 Opening Year PM Peak Hr	<1	0.04
2039 Design Year AM Peak Hr	<1	0.09
2039 Design Year PM Peak Hr	<1	0.04

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. The Model output demonstrates very low RFCs, signifying high reserve capacity available.

NB - Any Small Changes to Selected Opening Year 2024 or Design Year 2039, 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: 2023AMPM.j9
Path: C:\Users\Eoin\NRB Consulting Engineers Ltd\NRB Server - Documents\2021\21-094 Glebe Crumlin\Calculations\PiCADY Access
Report generation date: 11/10/2021 13:33:57

Summary of junction performance

	AM				PM			
	Q (PCU)	Delay (s)	RFC	LOS	Q (PCU)	Delay (s)	RFC	LOS
	2023							
Stream B-AC	0.1	8.64	0.08	A	0.0	7.98	0.04	A
Stream C-AB	0.0	7.12	0.02	A	0.0	6.90	0.03	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	11/10/2021
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	Main Site Access T Junc	T-Junction	Two-way	0.50	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	St Agnes Rd S		Major
B	Site Access		Minor
C	St Agnes Rd N		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.00			50.0	✓	1.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	50	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	519	0.094	0.239	0.150	0.341
1	B-C	655	0.100	0.254	-	-
1	C-B	603	0.234	0.234	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	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		✓	368	100.000
B		✓	35	100.000
C		✓	322	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	7	361
	B	15	0	20
	C	314	8	0

Vehicle Mix

HV %s

		To		
		A	B	C
From	A	0	0	3
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS
B-AC	0.08	8.64	0.1	A
C-AB	0.02	7.12	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	26	498	0.053	26	0.1	7.620	A
C-AB	6	541	0.011	6	0.0	6.731	A
C-A	236			236			
A-B	5			5			
A-C	272			272			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	31	480	0.066	31	0.1	8.017	A
C-AB	7	529	0.014	7	0.0	6.893	A
C-A	282			282			
A-B	6			6			
A-C	325			325			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	39	455	0.085	38	0.1	8.635	A
C-AB	9	514	0.017	9	0.0	7.125	A
C-A	346			346			
A-B	8			8			
A-C	397			397			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	39	455	0.085	39	0.1	8.639	A
C-AB	9	514	0.017	9	0.0	7.125	A
C-A	346			346			
A-B	8			8			
A-C	397			397			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	31	480	0.066	32	0.1	8.022	A
C-AB	7	530	0.014	7	0.0	6.896	A
C-A	282			282			
A-B	6			6			
A-C	325			325			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	26	498	0.053	26	0.1	7.631	A
C-AB	6	541	0.011	6	0.0	6.734	A
C-A	236			236			
A-B	5			5			
A-C	272			272			

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	Main Site Access T Junc	T-Junction	Two-way	0.37	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		✓	294	100.000
B		✓	18	100.000
C		✓	346	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	16	278
	B	8	0	10
	C	332	14	0

Vehicle Mix

HV %s

		To		
		A	B	C
From	A	0	0	3
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS
B-AC	0.04	7.98	0.0	A
C-AB	0.03	6.90	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	14	508	0.027	13	0.0	7.271	A
C-AB	11	556	0.019	11	0.0	6.601	A
C-A	250			250			
A-B	12			12			
A-C	209			209			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	16	493	0.033	16	0.0	7.552	A
C-AB	13	548	0.023	13	0.0	6.725	A
C-A	298			298			
A-B	14			14			
A-C	250			250			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	20	471	0.042	20	0.0	7.979	A
C-AB	16	538	0.029	16	0.0	6.896	A
C-A	365			365			
A-B	18			18			
A-C	306			306			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	20	471	0.042	20	0.0	7.979	A
C-AB	16	538	0.029	16	0.0	6.898	A
C-A	365			365			
A-B	18			18			
A-C	306			306			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	16	493	0.033	16	0.0	7.556	A
C-AB	13	548	0.023	13	0.0	6.726	A
C-A	298			298			
A-B	14			14			
A-C	250			250			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	14	508	0.027	14	0.0	7.274	A
C-AB	11	556	0.019	11	0.0	6.602	A
C-A	250			250			
A-B	12			12			
A-C	209			209			

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: 2038AMPM.j9
Path: C:\Users\Eoin\NRB Consulting Engineers Ltd\NRB Server - Documents\2021\21-094 Glebe Crumlin\Calculations\PiCADY Access
Report generation date: 11/10/2021 13:36:21

Summary of junction performance

	AM				PM			
	Q (PCU)	Delay (s)	RFC	LOS	Q (PCU)	Delay (s)	RFC	LOS
	2038							
Stream B-AC	0.1	9.13	0.09	A	0.0	8.33	0.04	A
Stream C-AB	0.0	7.33	0.02	A	0.0	7.03	0.03	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	11/10/2021
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	Main Site Access T Junc	T-Junction	Two-way	0.45	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	St Agnes Rd S		Major
B	Site Access		Minor
C	St Agnes Rd N		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.00			50.0	✓	1.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	50	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	519	0.094	0.239	0.150	0.341
1	B-C	655	0.100	0.254	-	-
1	C-B	603	0.234	0.234	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	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		✓	428	100.000
B		✓	35	100.000
C		✓	374	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	7	421
	B	15	0	20
	C	366	8	0

Vehicle Mix

HV %s

		To		
		A	B	C
From	A	0	0	3
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS
B-AC	0.09	9.13	0.1	A
C-AB	0.02	7.33	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	26	483	0.055	26	0.1	7.870	A
C-AB	6	531	0.011	6	0.0	6.860	A
C-A	276			276			
A-B	5			5			
A-C	317			317			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	31	462	0.068	31	0.1	8.355	A
C-AB	7	518	0.014	7	0.0	7.054	A
C-A	329			329			
A-B	6			6			
A-C	378			378			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	39	433	0.089	38	0.1	9.131	A
C-AB	9	500	0.018	9	0.0	7.332	A
C-A	403			403			
A-B	8			8			
A-C	464			464			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	39	433	0.089	39	0.1	9.135	A
C-AB	9	500	0.018	9	0.0	7.335	A
C-A	403			403			
A-B	8			8			
A-C	464			464			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	31	462	0.068	32	0.1	8.361	A
C-AB	7	518	0.014	7	0.0	7.054	A
C-A	329			329			
A-B	6			6			
A-C	378			378			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	26	483	0.055	26	0.1	7.880	A
C-AB	6	531	0.011	6	0.0	6.861	A
C-A	276			276			
A-B	5			5			
A-C	317			317			

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	Main Site Access T Junc	T-Junction	Two-way	0.33	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		✓	340	100.000
B		✓	18	100.000
C		✓	400	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	16	324
	B	8	0	10
	C	386	14	0

Vehicle Mix

HV %s

		To		
		A	B	C
From	A	0	0	3
	B	0	0	0
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS
B-AC	0.04	8.33	0.0	A
C-AB	0.03	7.03	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	14	496	0.027	13	0.0	7.461	A
C-AB	11	549	0.019	11	0.0	6.691	A
C-A	290			290			
A-B	12			12			
A-C	244			244			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	16	478	0.034	16	0.0	7.802	A
C-AB	13	540	0.024	13	0.0	6.833	A
C-A	347			347			
A-B	14			14			
A-C	291			291			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	20	452	0.044	20	0.0	8.328	A
C-AB	16	528	0.030	16	0.0	7.030	A
C-A	425			425			
A-B	18			18			
A-C	357			357			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	20	452	0.044	20	0.0	8.329	A
C-AB	16	528	0.030	16	0.0	7.030	A
C-A	425			425			
A-B	18			18			
A-C	357			357			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	16	478	0.034	16	0.0	7.805	A
C-AB	13	540	0.024	13	0.0	6.837	A
C-A	347			347			
A-B	14			14			
A-C	291			291			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	14	496	0.027	14	0.0	7.465	A
C-AB	11	549	0.019	11	0.0	6.694	A
C-A	290			290			
A-B	12			12			
A-C	244			244			

APPENDIX F

Preliminary Planning Stage
Mobility Management Plan/Travel Plan

consulting engineers

NRB

Residential Travel Plan
(Mobility Management Plan)

Appendix F

For

Proposed Residential Development

At

Glebe Site, St Agnes Road
Crumlin, Dublin 12.

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 (aka Mobility Management Plan) in support of a proposed apartment development with ancillary crèche and café on the site at Glebe House, St Agnes Road, Crumlin, Dublin 12. 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 & managed provision of car parking for the development, the provision of Go Car Spaces and generous cycle parking provision.

1.2 **The development is intended to be run by Circle VHA, a Housing Body** (as per the application), and as a housing body scheme it has significantly lower car dependency and usage than traditional apartments (refer to letters from Circle VHA submitted with the application).

1.3 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 future proposed alternative transport services** and set out strategies that will be deployed to encourage the eventual residents to use alternative modes of travel.

What is a Travel Plan?

1.4 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.

1.5 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

1.6 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.

1.7 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.

1.8 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 & 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

1.9 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).

1.10 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.

1.11 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 150 residential apartment units, arranged in blocks together with ancillary/supporting facilities (including an ancillary Crèche & Café). 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 within Crumlin Village Centre, this contributes to sustainable living, with schools, 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 facilities are continually improving, and of course the nature of the area and current practices by the Dublin Local Authorities is that the GDA cycle network will be rolled out within a short timeframe. The site is clearly ideally placed in terms of the NTA's GDA Cycle Network Plan for this area of Dublin. An extract from the plan is included and illustrated in ***Figure 2.1*** below.

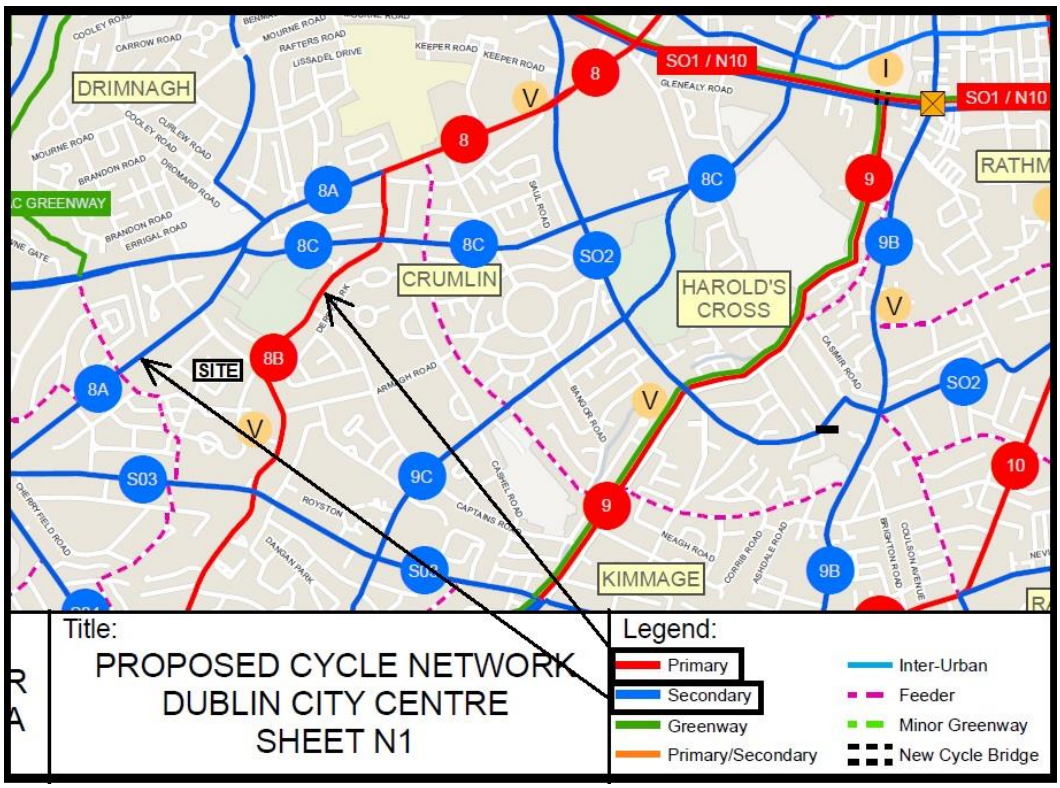


Figure 2.1 – NTA's GDA Cycle Network, Showing Site

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 Primary and Secondary Cycling Routes that are both within 100m distance of the main access on St Agnes Road, with the Primary Route indicated ensuring that the site is highly accessible by bicycle to Dublin City Centre (as illustrated in the image included below as Figure 2.3.

2.6 These Cycle Routes 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.

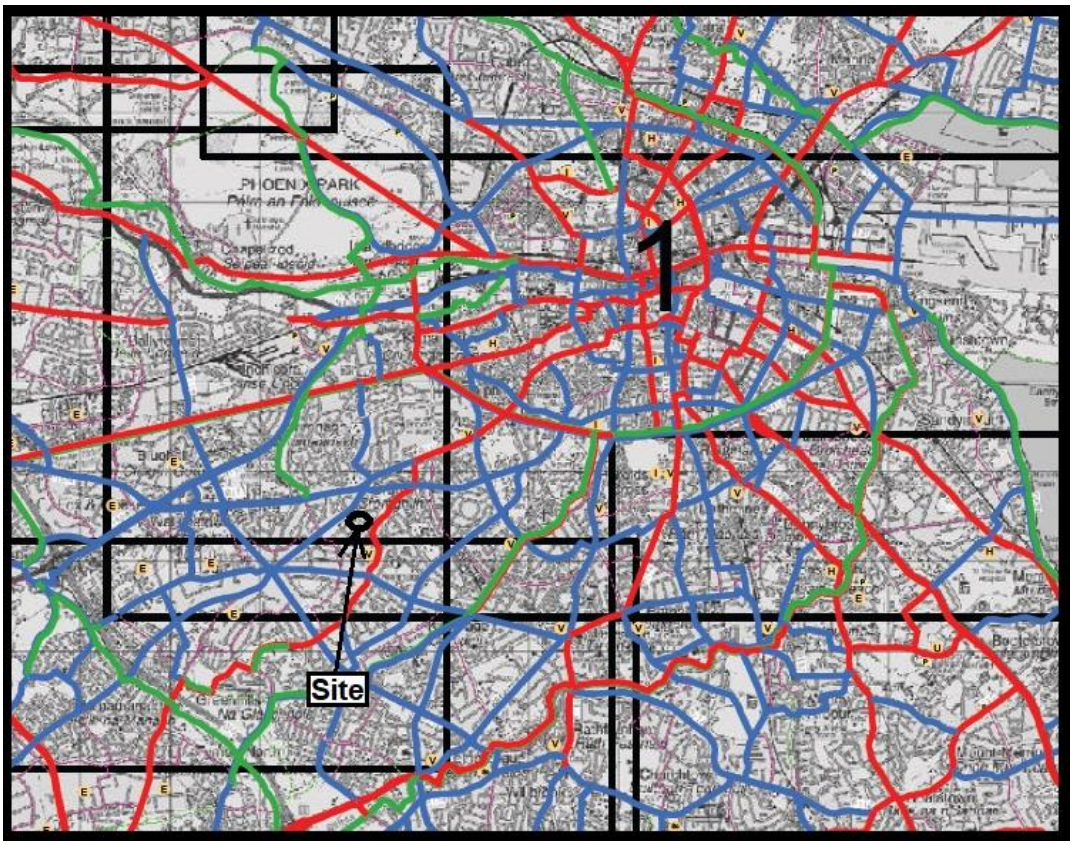


Figure 2.3 – Overall GDA Cycle Network Plan, Showing Site Location

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, which represents a c25 min walk) 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 clearly not have a need to own a car, supporting sustainable living.

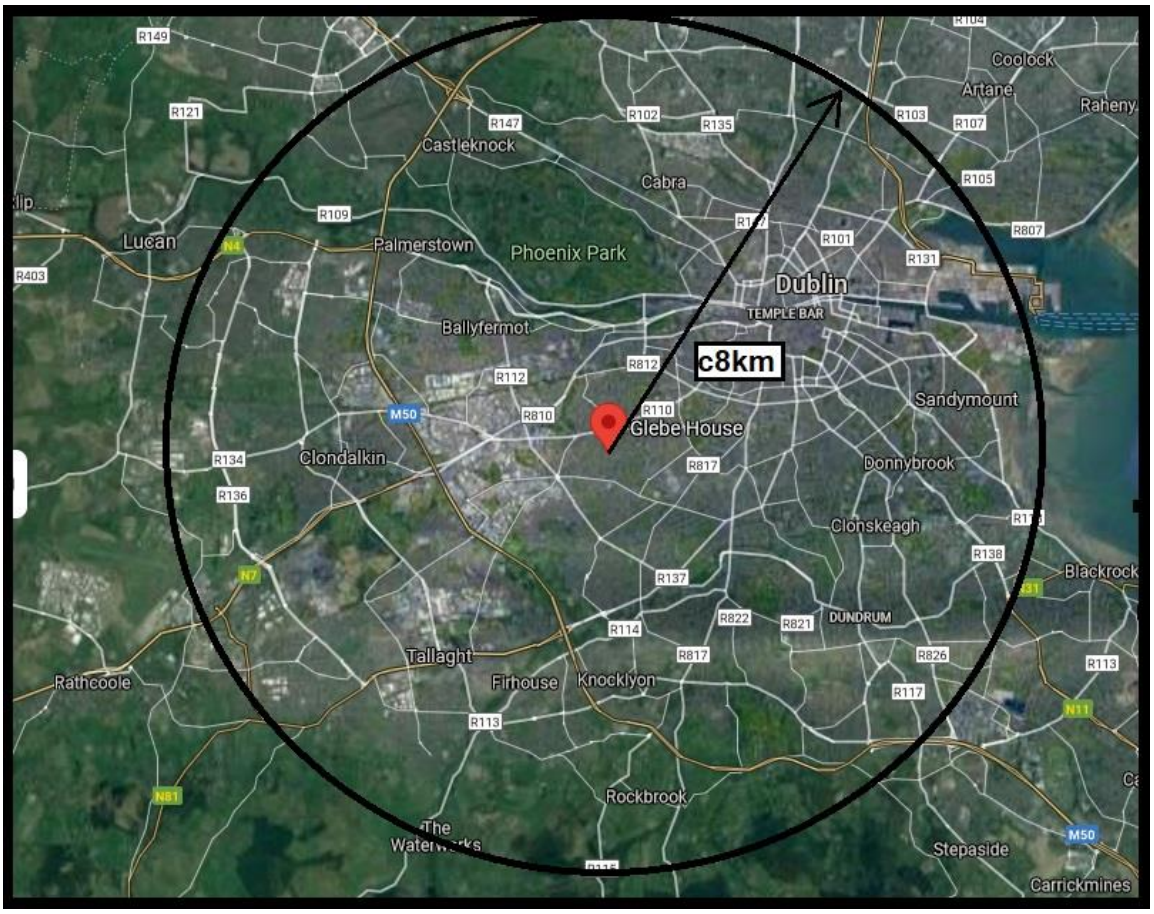


Figure 2.4 – 8km Radius Iso-Distance of the Subject Site (Cycle)

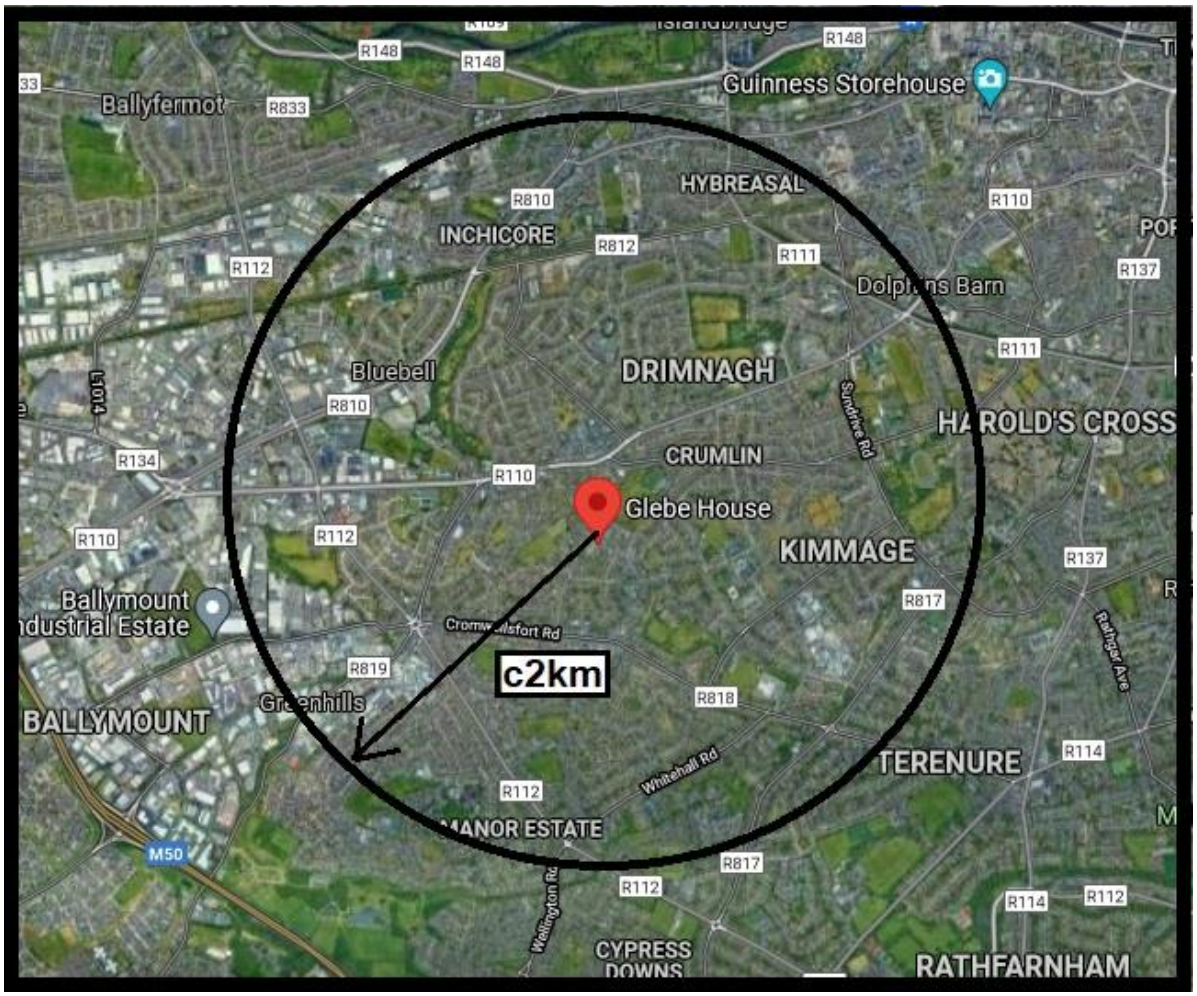


Figure 2.5 – 2km Radius Iso-Distance of the Subject Site (25 Min Walk)

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. The 8km cycle distance takes in a wide swathe of Dublin City.

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 309 dedicated cycle parking spaces. This number is considered appropriate in terms of published policy documents, i.e. The National Apartment Guidelines.

2.13 The DCC Development Plan and Policy Documents vision is to nurture and encourage 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. This is supported by the NTAs plans for the GDA. Cycling represents 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. There are existing bus stops with high frequency services, when considering the combination of buses, all located within 100m walk distance of the site access on St Agnes Road. 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 St Agnes Road, there are a number of other Dublin Bus Stops operating locally, particularly on Kimmage Road West adjacent Ashleaf Shopping Centre to the south, where service Nos 9, 17 and 17D operate. The proximity to Kimmage Road West Bus Stops is outlined in ***Figure 2.7*** below.

Figure 2.7 – Proximity to Bus Services on Kimmage Road West (10 min Walk)

2.16 All of the Buses passing the area 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.

2.17 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.***

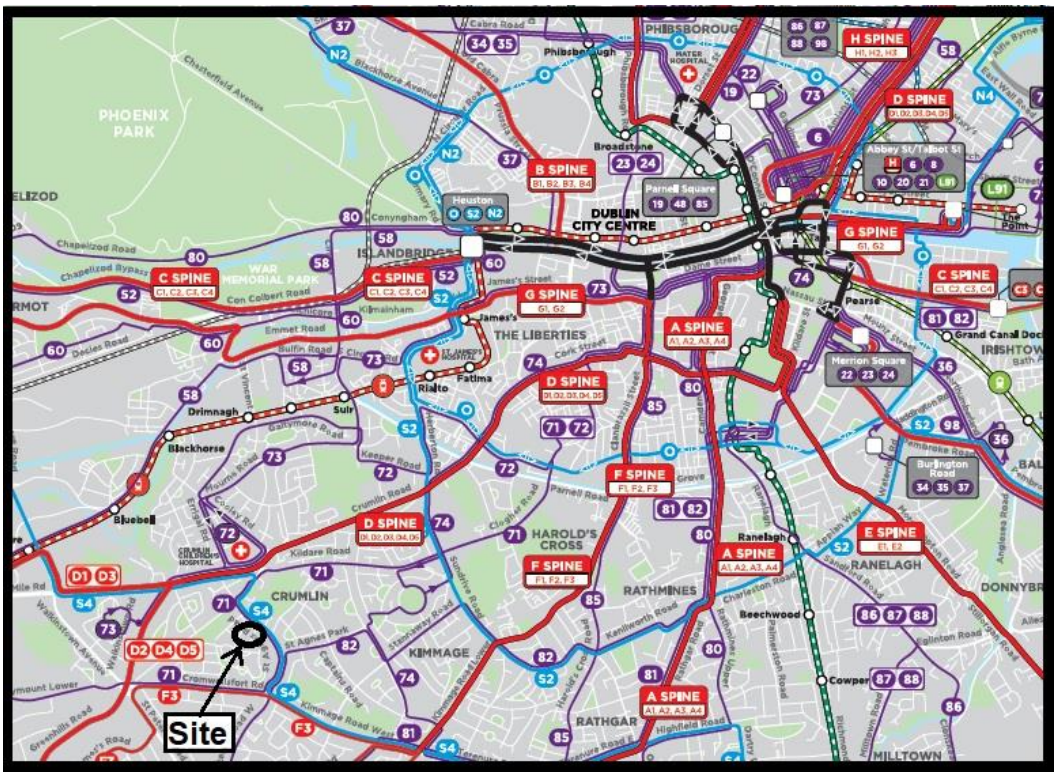
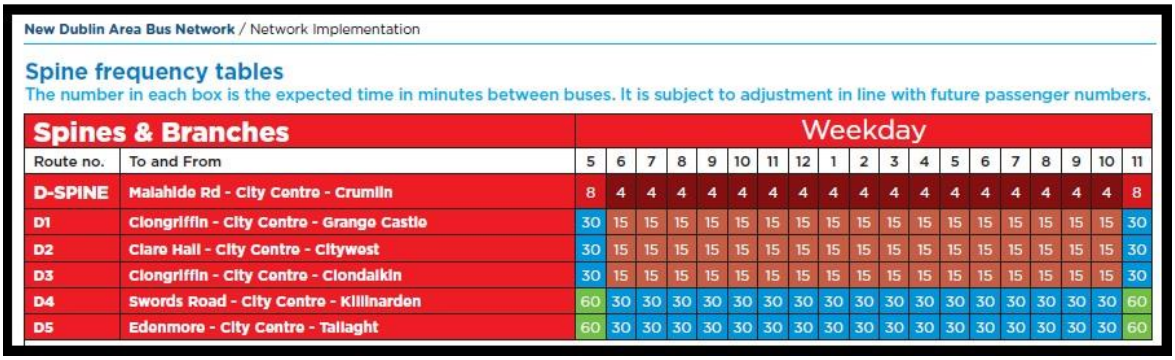


Figure 2.8 – NTA GDA New Dublin Area Network - Bus Services

2.18 This future network shows that the site's accessibility to bus services will be further enhanced, with a high frequency and permeable service to be provided. The site is located approximately 500m walk distance from the Main D Spine (Red Colour in Figure 2.8 above) which is to run along Crumlin Road, north of the site. The planned frequency of service for the D Spine is a bus every 4 minutes. An extract from the NTA Bus Spine Frequency Tables is included below as ***Figure 2.9 ("The number in each box is the expected time in minutes between buses")***.



New Dublin Area Bus Network / Network Implementation

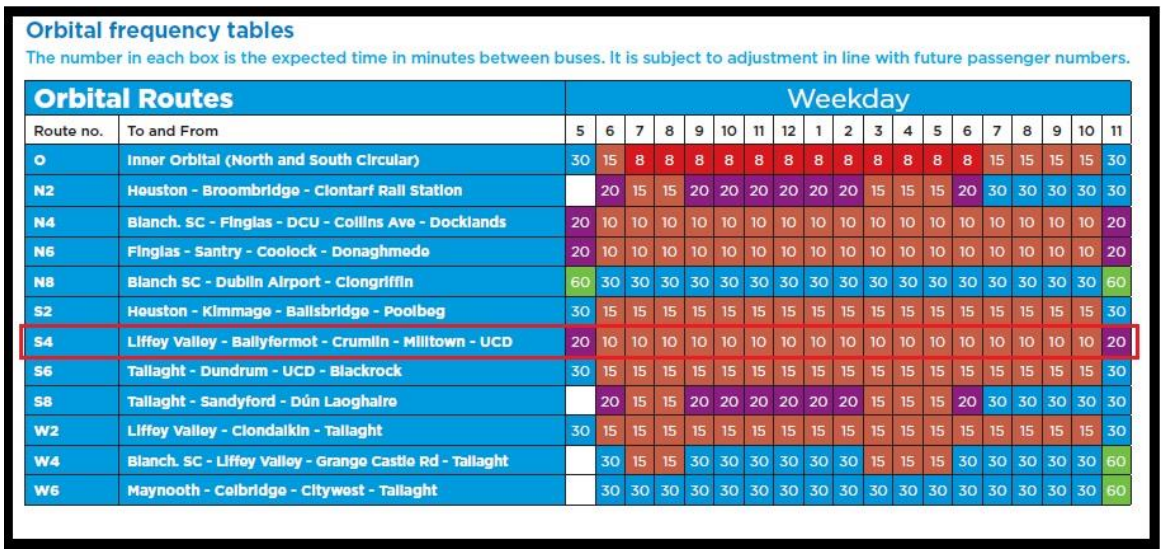
Spine frequency tables

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

Spines & Branches		Weekday																	
Route no.	To and From	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11
D-SPINE	Malahide Rd - City Centre - Crumlin	8	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	8
D1	Clongriffin - City Centre - Grange Castle	30	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	30
D2	Clare Hall - City Centre - Citywest	30	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	30
D3	Clongriffin - City Centre - Clondalkin	30	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	30
D4	Swords Road - City Centre - Kilinarden	60	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	60
D5	Edenmore - City Centre - Tallaght	60	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	60

Figure 2.9 – Extract NTA Core Bus Network GDA

2.19 Immediately adjacent the site, **Orbital Route S4** (Blue) and **Radial Route 74** (Purple) are intended to serve St Agnes Road, with the expected frequency of these services as illustrated in extracts included ***Figure 2.10*** and ***2.11*** below. This confirms that the intention is for orbital buses every 10 minutes and radial buses every 30 mins which will in turn connect to Spine Routes.

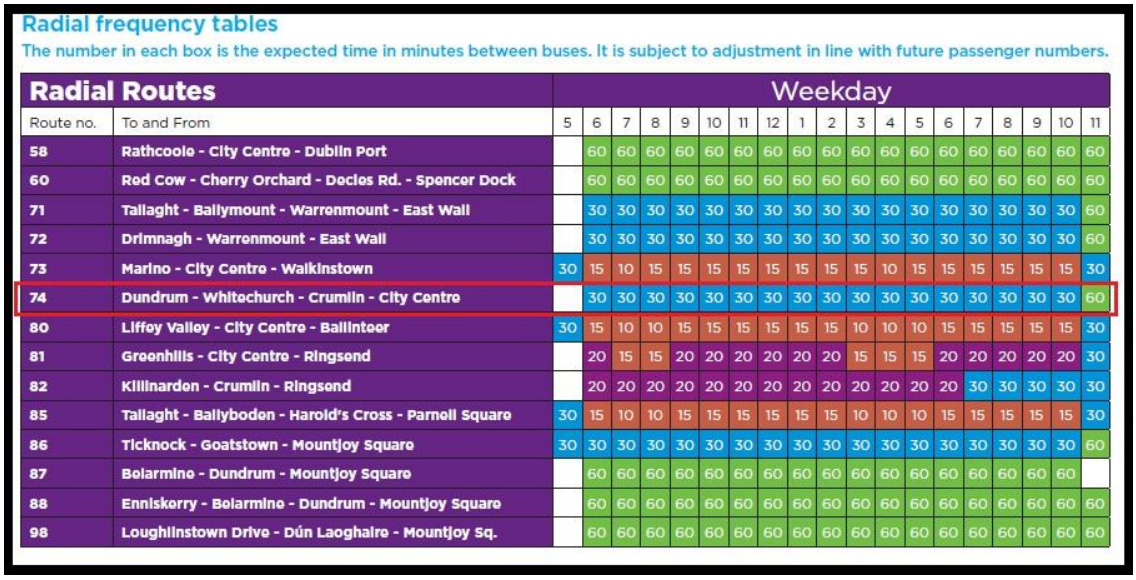


Orbital frequency tables

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

Orbital Routes		Weekday																	
Route no.	To and From	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11
O	Inner Orbital (North and South Circular)	30	15	8	8	8	8	8	8	8	8	8	8	8	8	15	15	15	15	30
N2	Houston - Broombridge - Clontarf Rail Station		20	15	15	20	20	20	20	20	20	15	15	15	20	30	30	30	30	30
N4	Blanch. SC - Finglas - DCU - Collins Ave - Docklands	20	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	20
N6	Finglas - Santry - Coolock - Donaghmede	20	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	20
N8	Blanch SC - Dublin Airport - Clongriffin	60	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	60
S2	Houston - Kimmage - Ballsbridge - Poolbeg	30	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	30
S4	Liffey Valley - Ballyfermot - Crumlin - Milltown - UCD	20	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	20
S6	Tallaght - Dundrum - UCD - Blackrock	30	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	30
S8	Tallaght - Sandyford - Dún Laoghaire		20	15	15	20	20	20	20	20	20	15	15	15	20	30	30	30	30	30
W2	Liffey Valley - Clondalkin - Tallaght	30	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	30
W4	Blanch. SC - Liffey Valley - Grange Castle Rd - Tallaght		30	15	15	30	30	30	30	30	30	15	15	15	30	30	30	30	30	60
W6	Maynooth - Celbridge - Citywest - Tallaght		30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	60

Figure 2.10 – Extract NTA Orbital Bus Frequency Tables



Radial frequency tables

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

Radial Routes		Weekday																	
Route no.	To and From	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11
58	Rathcoole - City Centre - Dublin Port		60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
60	Red Cow - Cherry Orchard - Decies Rd. - Spencer Dock		60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
71	Tallaght - Ballymount - Warrenmount - East Wall		30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	60
72	Drimnagh - Warrenmount - East Wall		30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	60
73	Marino - City Centre - Walkinstown	30	15	10	15	15	15	15	15	15	15	15	10	15	15	15	15	15	15	30
74	Dundrum - Whitechurch - Crumlin - City Centre		30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	60
80	Liffey Valley - City Centre - Ballinteer	30	15	10	10	15	15	15	15	15	15	10	10	10	15	15	15	15	15	30
81	Greenhills - City Centre - Ringsend		20	15	15	20	20	20	20	20	20	15	15	15	20	20	20	20	20	30
82	Killinardon - Crumlin - Ringsend		20	20	20	20	20	20	20	20	20	20	20	20	20	30	30	30	30	30
85	Tallaght - Ballybodon - Harold's Cross - Parnell Square	30	15	10	10	15	15	15	15	15	15	10	10	10	15	15	15	15	15	30
86	Ticknock - Goatstown - Mountjoy Square	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	60
87	Belarmine - Dundrum - Mountjoy Square		60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	
88	Enniskerry - Belarmine - Dundrum - Mountjoy Square		60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
98	Loughlinstown Drive - Dún Laoghaire - Mountjoy Sq.		60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60

Figure 2.11 – Extract NTA, Radial Route Bus Frequency

2.20 The site is therefore ideally placed in terms of current and future high frequency bus availability.

MAINLINE BUS AND RAIL

2.21 Of course, with the high frequency existing and proposed bus 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.

2.22 With ease of accessibility by Bus and Rail, and in particular with the high frequency 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 & alternative transport accessibility. The proximity of the development to 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

2.23 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

2.24 The permeability locally for walking by residents is addressed above – and of course, being within the established Crumlin Village, and within only 4.5km of the City Centre (5km walk distance from St Stephens Green), 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.

2.25 The site is also within the heart of the Crumlin and is therefore within the catchment for local Primary and Secondary Schools.

2.26 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

2.27 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.

2.28 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 current and future viable alternatives to the private car for accessing the site and will not be reliant upon the car as a primary mode of travel.

2.29 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.

2.30 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.

2.31 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.

2.32 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 central location & good transport links at this development, combined with the restricted 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 established 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, Circle Housing VHA (a Housing Body) 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 G

DMURS Statement of Consistency

consulting engineers

NRB

DMURS Design Statement
Technical Note
(Appendix G)

For

Proposed Residential Development

At

Glebe Site, St Agnes Road
Crumlin, Dublin 12.

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 has been designed to deliver a hierarchy which provides safe access within / across the proposed new residential community, linking the site and community with the established and proposed local network.

2.3 Dedicated clearly defined and signed routes are to be provided for pedestrians & for cyclists to access the site to/from St Agnes Road. 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 / cyclist 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. There are multiple accesses for pedestrians and cyclists onto St Agnes Road and Somerville Drive.

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*** including:

a) The main vehicular access to the development is via the existing St Agnes Road, by way of a raised platform priority controlled junction, with a sightline consistent with DMURS (all of which are subject to an independent Road Safety Audit).

b) There are of course other separate pedestrian & cyclist accesses to the development, which will reduce the need for cyclists and/or pedestrians to share road-space with development related vehicular traffic.

c) The proposed scheme includes the closure of established vehicular accesses at The Glebe and the creation of an improved access as a direct replacement. The plan then offers a well-connected, sustainable and improved but permeable network through connectivity to and through the existing residential streets within Crumlin.

d) These improved footpath and cycle linkages are included to integrate the proposed development with Crumlin Village, benefitting both the proposed and existing developments in the area.

e) 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.

f) 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.

g) Appropriate clear unobstructed visibility splays, as per DMURS requirements, are provided at the site access junction to the external road network.

h) 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. A raised table affording priority and protection to pedestrians will be provided at the main access onto St Agnes Road.

i) All courtesy crossings will be provided with either raised tables and /or 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.

j) 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.

k) 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.

l) Internally within the development, where carriageway kerbs are required, heights will be typically 60mm in accordance with the objectives of DMURS.

m) Much of the local road network currently includes shared cycle & bus lanes or cycle lanes which will provide access to the development. 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.

n) 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 Dublin City Council.

APPENDIX H

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

Title: **STAGE 1 ROAD SAFETY AUDIT**

For;

Glebe Site, St. Agnes Road, Crumlin, Dublin 12.

Client: **NRB Consulting Engineers**

Date: **April 2022**

Report reference: **1459R01**

VERSION: **FINAL**

Prepared By:

Bruton Consulting Engineers Ltd

Glaspistol
Clogherhead
Drogheda
Co. Louth.

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CONTENTS SHEET

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1.0 Introduction

This report was prepared in response to a request from Mr. Eoin Reynolds, NRB Consulting Engineers, for a Stage 1 Road Safety Audit of the proposed residential development at Glebe Site, St. Agnes Road, Crumlin, Dublin 12.

The Road Safety Audit Team comprised of;

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

TII Auditor Approval no. NB 168446

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

TII Auditor Approval no. OO1291756

The Road Safety Audit comprised an examination of the drawings provided and a site visit by the Audit Team on the 12th of April 2022.

The weather at the time of the daytime site visit was dry and the road surface was also damp.

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

The scheme has been examined and this report compiled in respect of the consideration of those matters that have an adverse effect on road safety. It has not been examined or verified for compliance with any other standards or criteria.

The problems identified in this report are considered to require action in order to improve the safety of the scheme for road users.

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

A location map is provided in **Appendix A.**

A list of the documents provided to the Audit Team is provided in **Appendix B.**

The feedback form is provided in **Appendix C.**

2.0 Background

It is proposed to construct a high density residential development (150 units) on zoned lands at Glebe House, Crumlin, Dublin 12.
The development will consist of two blocks of apartments along with a creche and café and refurbishment of the protected structure.

The proposal includes a ground floor car park with 66 no. spaces and 9 no. set down spaces. There would be 230 bicycle parking spaces for residents , 76 visitor spaces and 6no motorcycle spaces.

Vehicular access would be via an upgrade of the existing vehicular access on St. Agnes Road.

In addition, the boundary wall to Somerville Drive would be removed, a footpath would be provided along the south eastern boundary, a new controlled access gate between Somerville Drive and St Agnes Road and a new pedestrian access from the communal open space onto St. Agnes Road would be provided.

The site location is shown below.

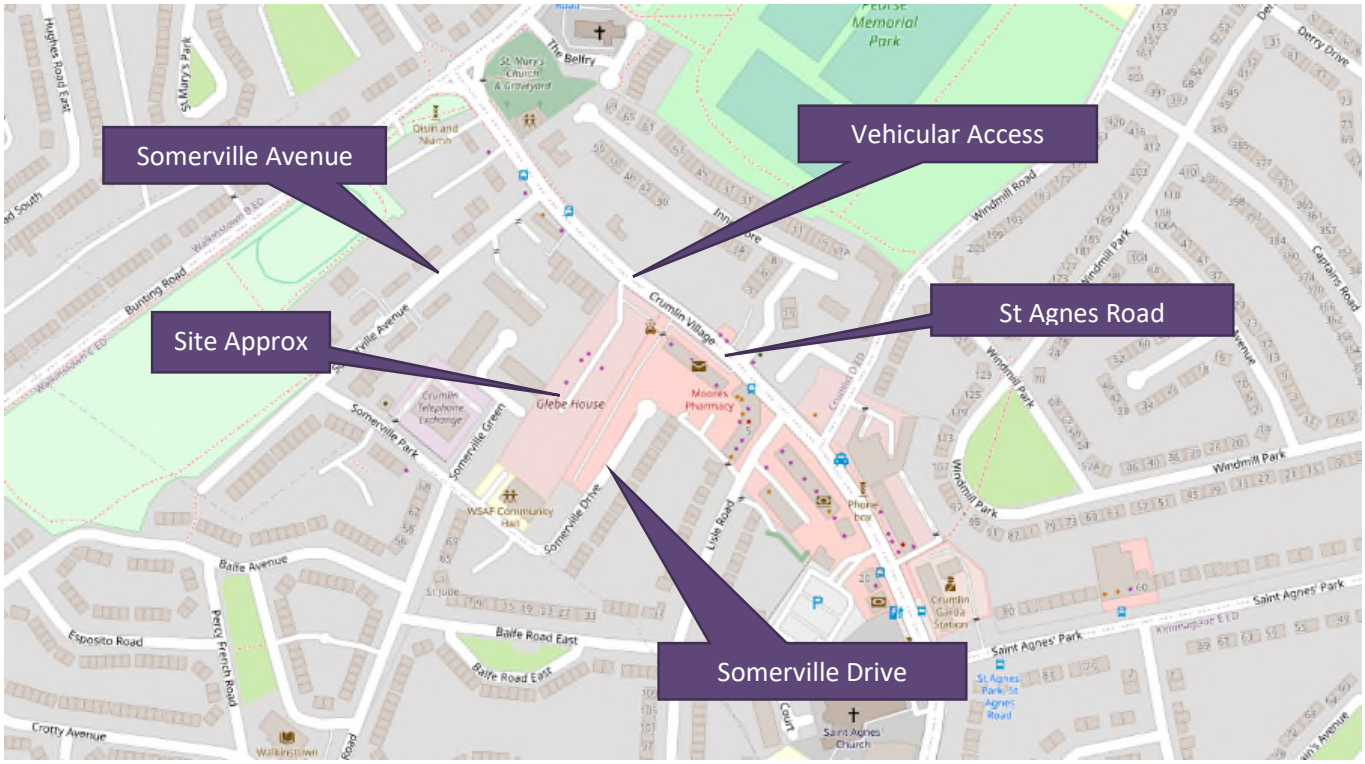
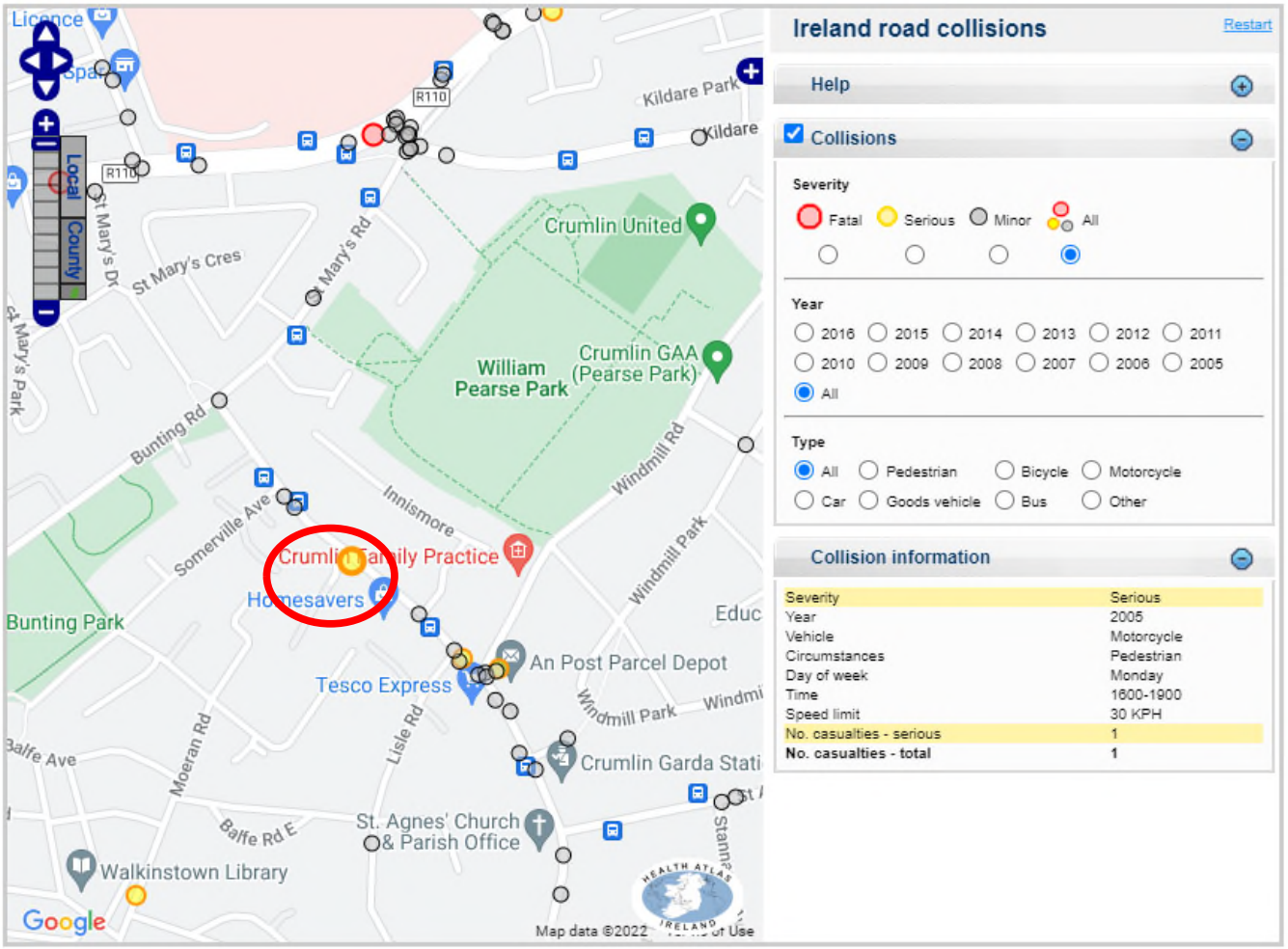


Image courtesy of openstreetmap.org

The Road Safety Authority's website www.rsa.ie shows that there was one serious injury collision recorded at or close to the proposed vehicular entrance in the 12-year period 2005 to 2016.



3.0 Issues Raised in This Road Safety Audit.

No Safety issues Identified

4.0 Observations

4.1 Observation

A keep right arrow sign will be required at the carriageway narrowing on Somerville Drive at detailed design stage.

4.2 Observation

Car parking was observed on the footpath on St Agnes Road to the East of the vehicular access. This is an enforcement issue.

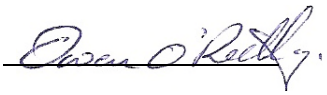
5.0 Audit Statement

We certify that we have examined the site on the 12th of April 2022. The examination has been carried out with the sole purpose of identifying any aspects of the design which could be added, removed or modified in order to improve the safety of the scheme.

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

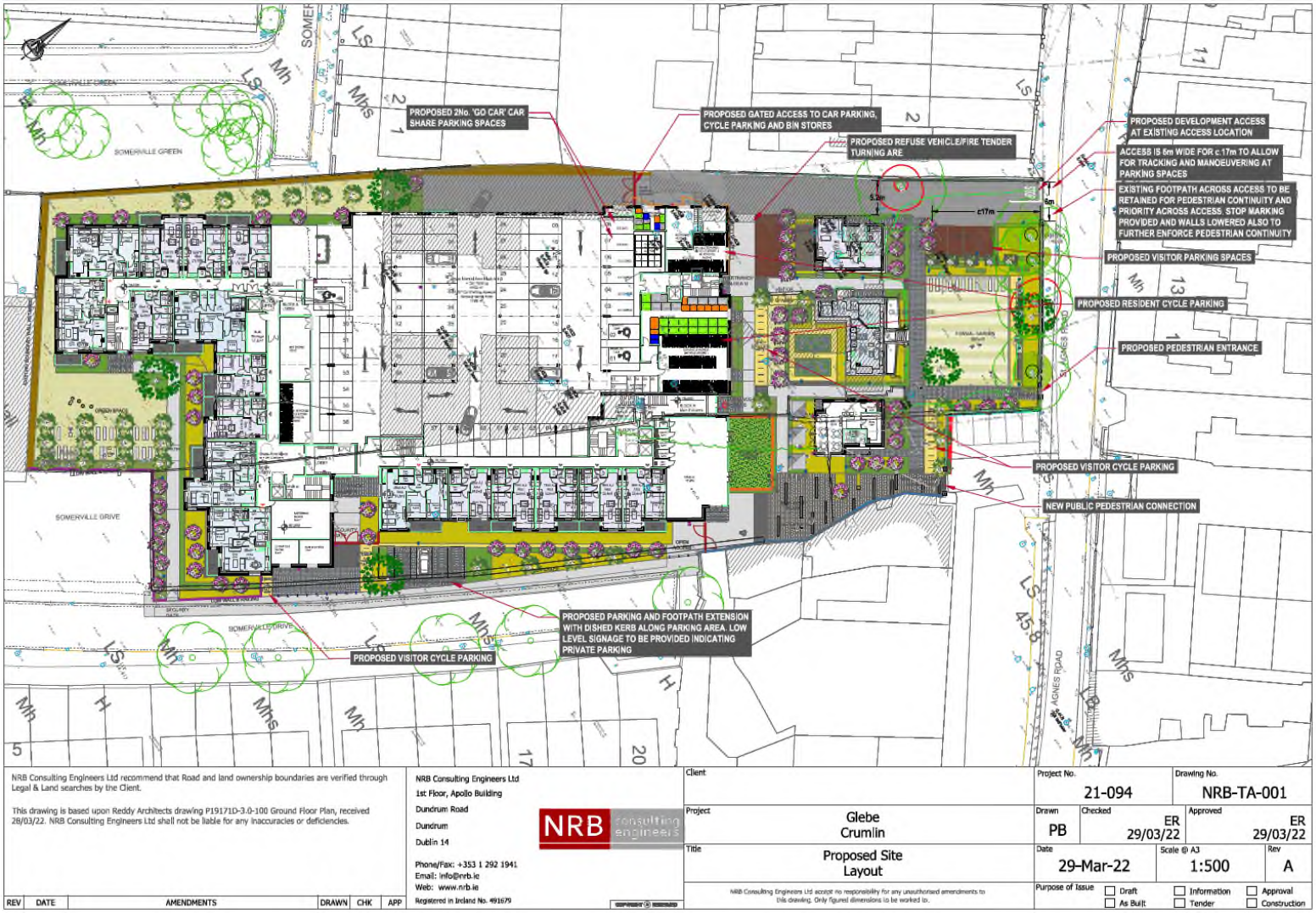
Norman Bruton **Signed:** 

(Audit Team Leader) **Dated: 14/4/2022**

Owen O'Reilly **Signed:** 

(Audit Team Member) **Dated: _14/4/2022**

Appendix A – Problem Location Map



Appendix B

Information Supplied to the Audit Team

- Drawing NRB-TA-001
- Drawing NRB-TA-002
- Drawing NRB-TA-003
- Drawing NRB-TA-004

Information Supplied for Background Information

- Transport Assessment Report, NRB (DRAFT) March 2022.

Appendix C

Feedback Form

SAFETY AUDIT FORM – FEEDBACK ON AUDIT REPORT

Scheme: Glebe House, Crumlin
Stage: 1 Road Safety Audit
Date Audit (Site Visit) Completed: 12-4-2022

Paragraph No. in Safety Audit Report	Problem accepted (yes/no)	Recommended measure accepted (yes/no)	Alternative measures (describe)	Alternative measures accepted by Auditors (Yes/No)
N/A	N/A			

Signed……N/A……**…** **Date**…….
Design Team Leader

Signed……N/A…….. **Date**……
Audit Team Leader

Signed……N/A…….. **Date**……
Employer

NRB consulting engineers

APPENDIX I

Bus Capacity/Demand Report

consulting engineers

NRB

Bus Services
&
Capacity Assessment
Report

(Appendix I)

For

Proposed Residential Development

At

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SUBMISSION ISSUE

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Appendices.....

1.0 INTRODUCTION

1.1 NRB Consulting Engineers Ltd were appointed to address the Traffic & Transportation issues associated with a planning application for a residential apartment development on zoned lands at Glebe House, Crumlin, Dublin 12.

1.2 Although now closed, the site was notably previously used for industrial & employment purposes. In this regard, the site has long established transportation demand, which are most likely to have been significantly greater than the now-proposed uses. However, this report has been prepared as if the Bus Demand created is additional new demand for these services.

1.3 The NRB commission includes this assessment of current & future Bus Capacity, a 'Bus Services & Capacity Assessment Report'.

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

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

1.6 The analysis of the existing and future bus 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 online mapping tool. This data was used to quantify the anticipated demand for Buses as a result of the proposed development locally based on adjacent CSO Statistical Small Areas.

1.7 The first step undertaken therefore was to review the current and future planned bus services. While the requirement under the Building Height Guidelines is to show that the site is currently well served by existing public transport we have also considered the future planned bus services as part of Bus Connects.

1.8 In the first instance, the bus stops within an easy walking distance of the subject site were identified, with the current bus services, bus service frequency and capacity studied and assessed.

1.9 In terms of future services, *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 primarily the existing bus network and existing capacity.

1.10 The Study focuses on the peak commuter periods, and in particular the busiest weekday AM commuter peak demand for buses – this represents the period of highest demand on the network consistent with the TII Traffic & Transport Assessment Guidelines (May 2014). The methodology assumes that the demand for bus trips will be assigned to the nearest available bus stops.

2.0 BUS STOP LOCATIONS & BUS SERVICES (CURRENT & FUTURE)

CURRENT BUS SERVICES

2.1 For commuting, a walk distance to/ from Bus Stops of up to 1km is generally considered to be acceptable. For the purposes of this assessment we have assumed a 10min walk time as being appropriate, reflecting a distance of 800-1,000m depending on speed of walking.

2.2 The site is very well served by Bus Services, and this is illustrated below within ***Figure 2.1*** and ***Figure 2.2*** which illustrate the existing bus services within acceptable walking distance of the site. The existing Bus Stops and Services to the north of the site are illustrated below as ***Figure 2.1*** (correct at time of writing).

Figure 2.1 – Existing Bus Stops North of the Site

2.3 The existing Bus Stops and Services to the south of the site are illustrated below as ***Figure 2.2***.

Figure 2.2 – Existing Bus Stops South of the Site

2.4 As an illustration of walk times (which have been corroborated by way of on-site measurements) we include below the *Google* walk time to the southern-most bus stop on Kimmage Road as ***Figure 2.3***.

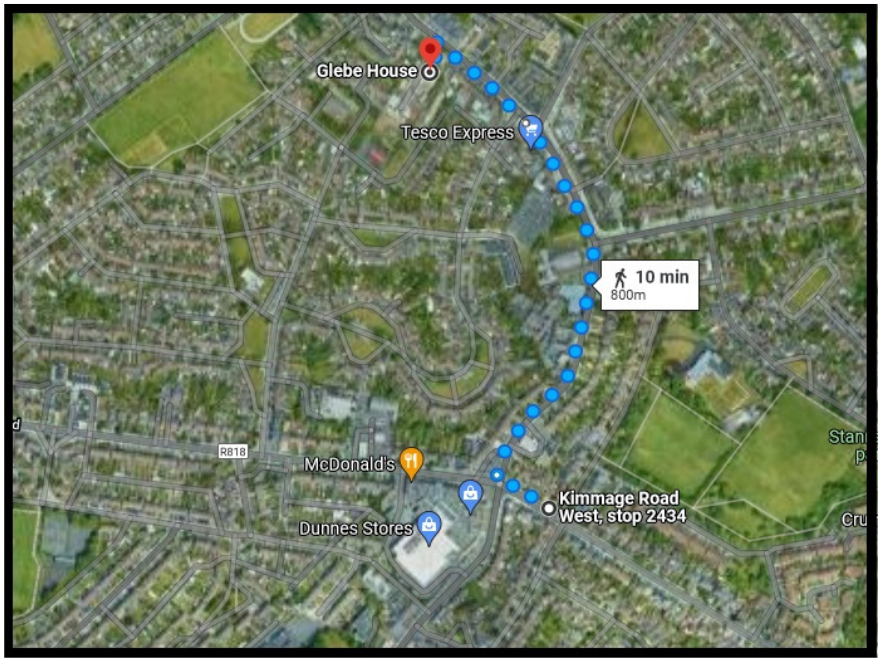


Figure 2.3 – Walk Time of 10 Mins to Kimmage Rd West Stop #2434

2.5 In terms of the Existing Bus Service Provision and Service Frequency, the Timetables for each existing Service 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 within 10min Walk Distance, 7-9am Approx Capacity.

Bus #	Route	Operator	No. Buses 7-9am (Mon - Fri)	Total Person Capacity (7-9am)	Thru City Core (Y/N)
9	Charlestown - Limekiln - & Back	Dublin Bus	10	910	Y
17	Rialto - Blackrock - & Back	Go Ahead Ireland	5	455	N
17D	Rialto - Dundrum LUAS - & Back	Go Ahead Ireland	2	182	N
18	Palmerstown - Sandymount - & Back	Go Ahead Ireland	5	455	Y
27	Clarehall - Jobstown - & Back	Dublin Bus	15	1365	Y
56A	Ringsend - The Square - & Back	Dublin Bus	2	182	Y
77A	Ringsend Rd - Citywest - & Back	Dublin Bus	10	910	Y
122	Ashington - Drimnagh Rd - & Back	Dublin Bus	10	910	Y
123	Walkinstown - Marino - & Back	Dublin Bus	11	1001	Y
150	Hawkins St - Rossmore - & Back	Dublin Bus	8	728	Y
151	Docklands - Foxborough Rd - & Back	Dublin Bus	8	728	Y
		Total (7-9am) All Routes	**86**	**7826**	
		Total (7-9am) Routes Via City Centre	**79**	**7189**	

2.6 The above demonstrates that the site is clearly accessible to a significant and high capacity existing bus provision, with a capacity of c7,800 bus seats during the 7-9am commuter peak period, all within a 10 minute walk-distance of the site.

2.7 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.

2.8 Dublin Bus website and Mobile Phone Apps now provide a service that allows customers access up to date real information for Bus Arrivals and departures on a stop-by-stop basis. This information on Bus Arrivals and Departures allows customers to plan their arrivals and departures and associated walk times accurately, facilitating journey planning.

2.9 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.

2.10 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.

2.11 This Report addresses the increased capacity bus demand created by the Residential Development based on current Modal Split and Existing Bus Services.

2.12 We have also set out below details of the proposed bus service improvements locally, but even without these future improvements the site is well served by public transport with high capacity frequent services and with good links to other modes of transport.

FUTURE BUS SERVICES

2.13 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 2.4***.

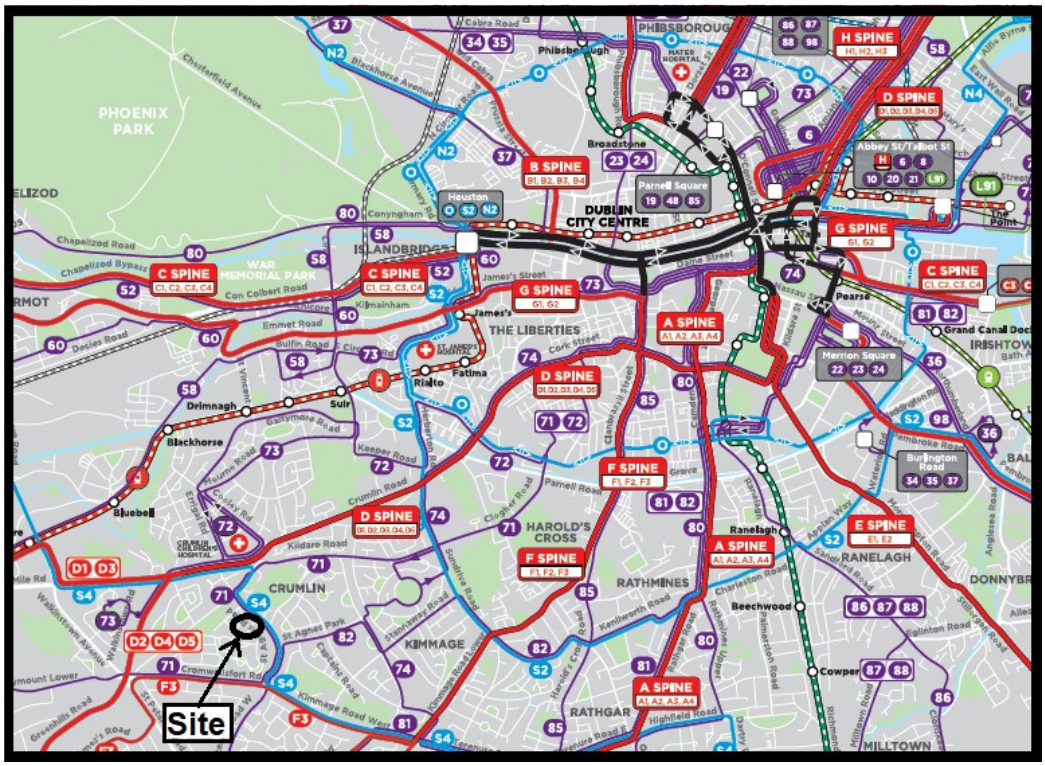
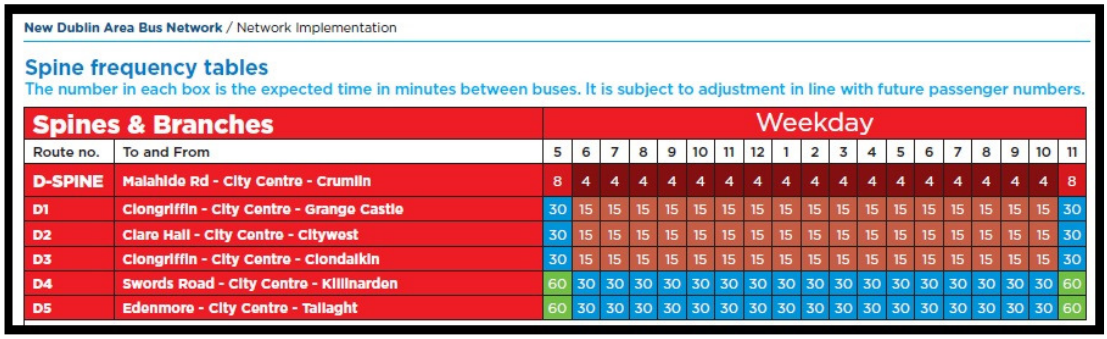


Figure 2.4 – Extract Current NTA Network Plans & Site

2.14 This future network shows that the site's accessibility to bus services will be further enhanced, with a high frequency and permeable service to be provided. The site is located approximately 500m walk distance from the Main D Spine (Red Colour in Figure 2.4 above)

which is to run along Crumlin Road, north of the site. The planned frequency of service for the D Spine is a bus every 4 minutes. An extract from the NTA Bus Spine Frequency Tables is included below as ***Figure 2.5 ("The number in each box is the expected time in minutes between buses"***.



New Dublin Area Bus Network / Network Implementation

Spine frequency tables

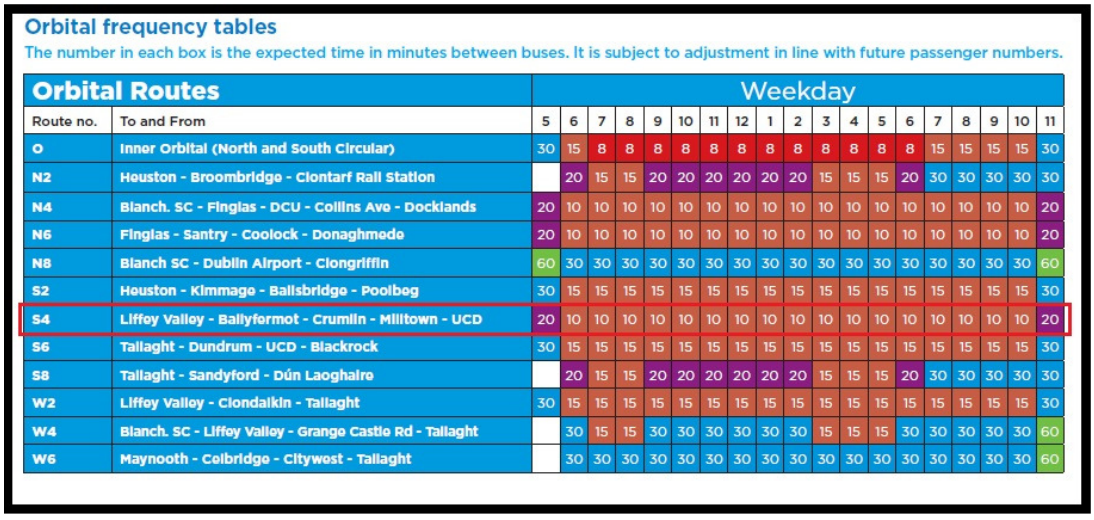
The number in each box is the expected time in minutes between buses. It is subject to adjustment in line with future passenger numbers.

Spines & Branches		Weekday																		
Route no.	To and From	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11
D-SPINE	Malahide Rd - City Centre - Crumlin	8	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	8
D1	Clongriffin - City Centre - Grange Castle	30	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	30
D2	Clare Hall - City Centre - Citywest	30	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	30
D3	Clongriffin - City Centre - Clondalkin	30	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	30
D4	Swords Road - City Centre - Kilinardon	60	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	60
D5	Edenmore - City Centre - Tallaght	60	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	60

Figure 2.5 – Extract NTA Core Bus Network GDA

2.15 Immediately adjacent the site, **Orbital Route S4** (Blue) and **Radial Route 74** (Purple) are intended to serve St Agnes Road, with the expected frequency of these services as illustrated in extracts included ***Figure 2.6*** and ***2.7*** below.

2.16 This confirms that the intention is for orbital buses every 10 minutes and radial buses every 30 mins which will in turn connect to Spine Routes.

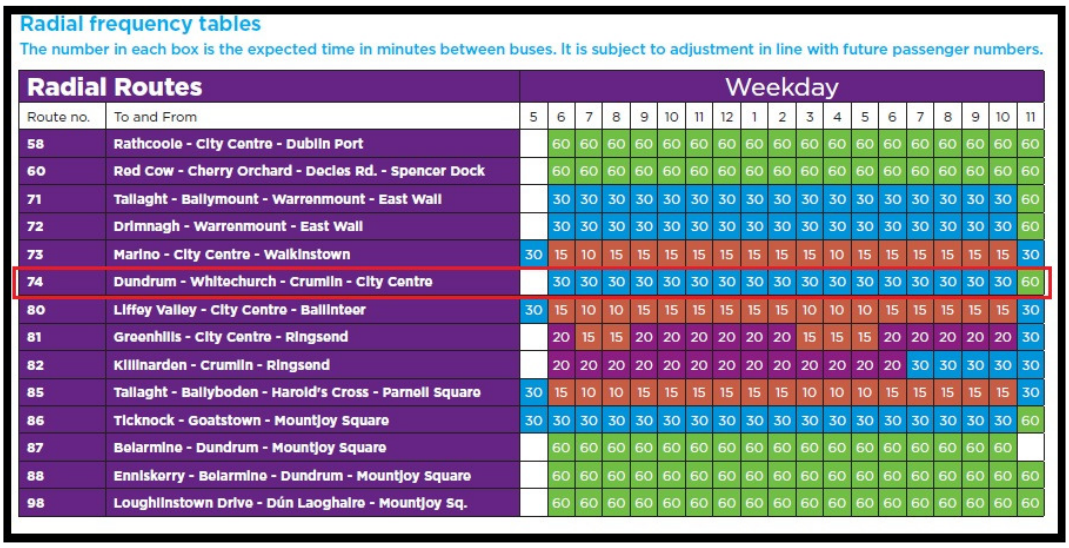


Orbital frequency tables

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

Orbital Routes		Weekday																		
Route no.	To and From	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11
O	Inner Orbital (North and South Circular)	30	15	8	8	8	8	8	8	8	8	8	8	8	8	15	15	15	15	30
N2	Heuston - Broombridge - Ciontarf Rail Station		20	15	15	20	20	20	20	20	20	15	15	15	20	30	30	30	30	30
N4	Blanch. SC - Finglas - DCU - Collins Ave - Docklands	20	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	20
N6	Finglas - Santry - Coolock - Donaghmede	20	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	20
N8	Blanch SC - Dublin Airport - Clongriffin	60	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	60
S2	Heuston - Kimmage - Ballsbridge - Poolbeg	30	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	30
S4	Liffey Valley - Ballyfermot - Crumlin - Milltown - UCD	20	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	20
S6	Tallaght - Dundrum - UCD - Blackrock	30	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	30
S8	Tallaght - Sandyford - Dún Laoghaire		20	15	15	20	20	20	20	20	20	15	15	15	20	30	30	30	30	30
W2	Liffey Valley - Clondalkin - Tallaght	30	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	30
W4	Blanch. SC - Liffey Valley - Grange Castle Rd - Tallaght		30	15	15	30	30	30	30	30	30	15	15	15	30	30	30	30	30	60
W6	Maynooth - Celbridge - Citywest - Tallaght		30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	60

Figure 2.6 – Extract NTA Orbital Bus Frequency Tables



Radial frequency tables

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

Radial Routes		Weekday																	
Route no.	To and From	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11
58	Rathcoole - City Centre - Dublin Port		60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
60	Red Cow - Cherry Orchard - Docks Rd. - Spencer Dock		60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
71	Tallaght - Ballymount - Warrenmount - East Wall		30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	60
72	Drimnagh - Warrenmount - East Wall		30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	60
73	Marino - City Centre - Walkinstown	30	15	10	15	15	15	15	15	15	15	15	10	15	15	15	15	15	15	30
74	Dundrum - Whitechurch - Crumlin - City Centre		30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	60
80	Liffey Valley - City Centre - Ballintoer	30	15	10	10	15	15	15	15	15	15	10	10	10	15	15	15	15	15	30
81	Greenhills - City Centre - Ringsend		20	15	15	20	20	20	20	20	20	15	15	15	20	20	20	20	20	30
82	Killinarden - Crumlin - Ringsend		20	20	20	20	20	20	20	20	20	20	20	20	20	30	30	30	30	30
85	Tallaght - Ballyboden - Harold's Cross - Parnell Square	30	15	10	10	15	15	15	15	15	15	10	10	10	15	15	15	15	15	30
86	Ticknock - Goatstown - Mountjoy Square	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	60
87	Belarmine - Dundrum - Mountjoy Square		60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	
88	Enniskerry - Belarmine - Dundrum - Mountjoy Square		60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
98	Loughlinstown Drive - Dún Laoghaire - Mountjoy Sq.		60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60

Figure 2.7 – Extract NTA, Radial Route Bus Frequency

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

2.18 In terms of **Bus Passenger Capacity**, a typical old-type Dublin Bus double decker bus has 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.

3.0 BUS USE PREDICTIONS, CAPACITY & DEMAND

3.1 We have used the CSO Local Small Area Mapping to establish the proportion of Bus Users within the area surrounding the site in order to estimate the additional demand for Buses. An annotated extract from the CSO Database Small Area Mapping used for this purpose is included below as ***Figure 3.1.***

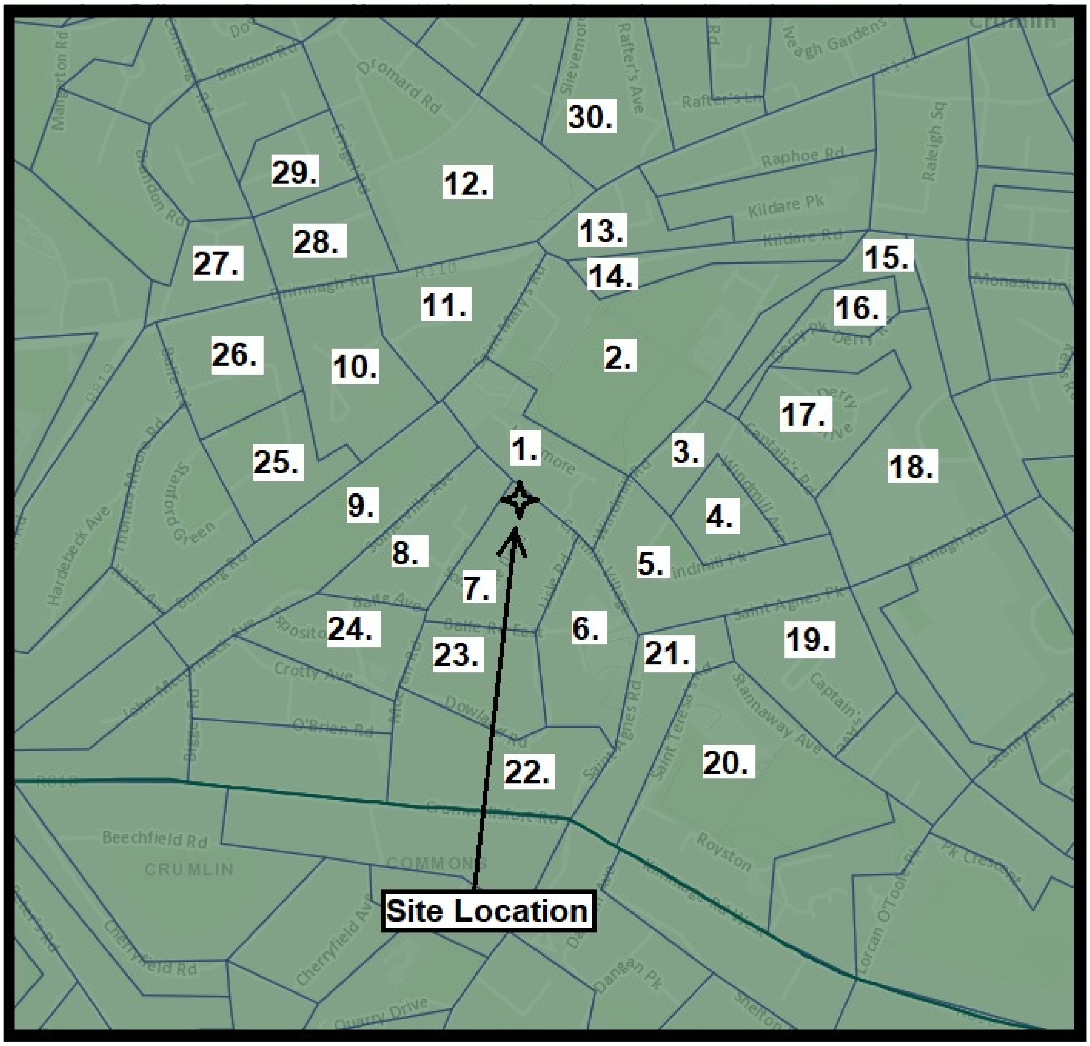


Figure 3.1 – Collated CSO Local Area Data

3.2 We have extracted information from the Census Data to calculate the demand for buses during the busy weekday AM Commuter period, and this is illustrated below as ***Table 3.1***.

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

CSO Small Area Ref. Figure 3.1 Above	Total Population of Small Area	Total Commuters Age 5+ to Work, School or College per Small Area	No. of Bus Users per Small Area	No. of Commuters Leaving Home 7-9am to Work/Schl or College
1	316	202	35	151
2	210	139	30	92
3	356	208	55	144
4	208	108	23	74
5	317	195	43	125
6	164	72	11	48
7	165	86	15	56
8	268	169	38	112
9	146	86	20	54
10	245	152	34	110
11	273	180	39	135
12	574	316	47	218
13	221	116	52	86
14	208	112	26	83
15	204	117	30	71
16	246	134	22	76
17	323	197	38	123
18	290	179	38	116
19	359	218	39	145
20	256	178	33	134
21	191	125	28	84
22	235	134	31	87
23	218	129	26	86
24	236	160	27	124
25	221	117	21	74
26	206	130	25	80
27	253	167	35	128
28	245	155	35	102
29	222	144	28	87
30	361	198	28	116
Totals	**7737**	**4623**	**952**	**3121**
CALCULATION OF BUS DEMAND DUE TO DEVELOPMENT				
			Percentage of Total Population in Area Commuting =	59.8%
			Percentage of Total Population in Area Commuting By Bus =	12.3%
			Percentage of Commuters Leaving Home 7-9am =	67.5%
400	Residents within Occupied Proposed Development, based on Bed Spaces			
49	Bus Commuters (Consistent with the Local Area Census Data)			
33	Total Additional Bus Commuters Between 7am and 9am			

BUS CAPACITY & DEMAND

3.3 The above confirms that the Development will create an additional demand for approximately 33 seats on bus services between 7am and 9am. Of course, it is not possible to predict the commuting destination of future residents. This should be considered in terms of the capacity locally, with c7,200 bus seats available on city bound buses during the weekday AM commuter peak period, all within a 10 minute walk of the subject 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 much more significant staggered departure times from work locations).

3.4 The resulting demand for bus seats has then been used to calculate the demand and impact upon services as illustrated in **Table 3.2** below. Of course, there will possibly be a very low contra-flow demand for bus seats created by the small number of Creche & ancillary Staff, a number which is considered by us to be negligible in the context of this calculation.

Table 3.2; Total Current Peak Commuter Hr Demand for Bus Seats Due to SHD Development

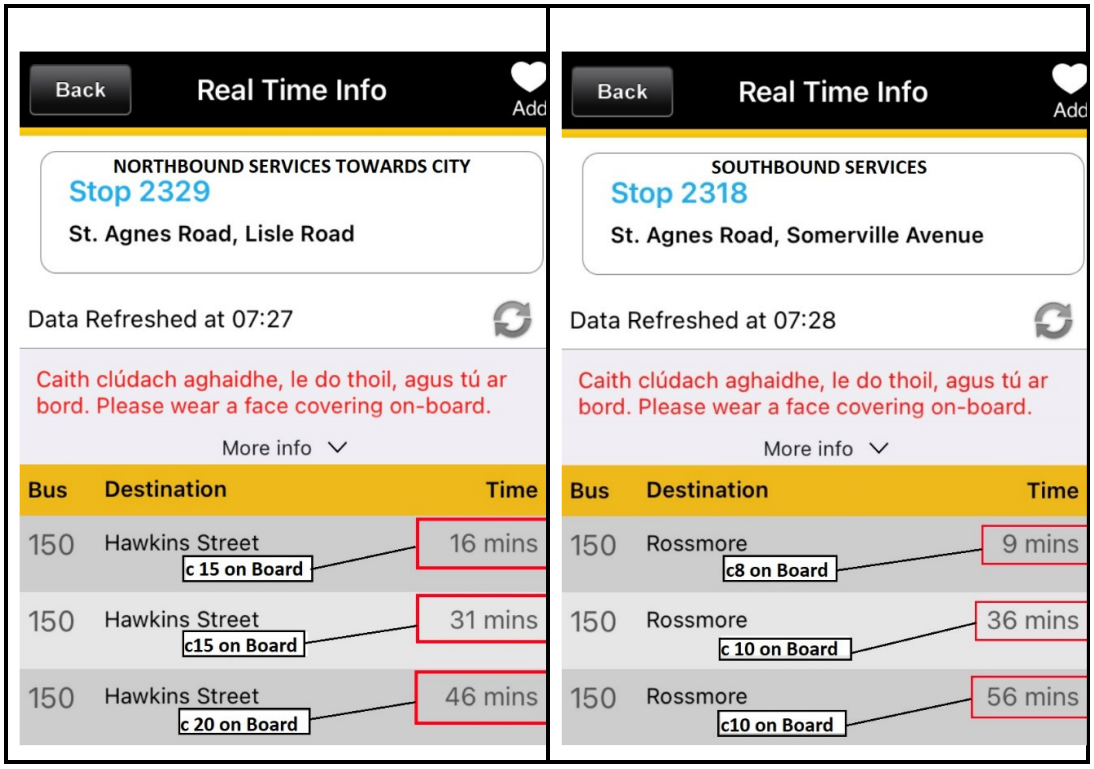
Details (10 minute Walk Time)	Buses	Seats
Total Number of Buses (7-9am) All Routes	86	7826
Total Number of Buses (7-9am) Routes Via City Centre	79	7189
Total Demand for Seats Created by Proposed Development (7-9am)		33
Percentage Impact Upon Existing Services within 10min Walk (All Routes) %		0.4
Percentage Impact Upon Existing Services within 10min Walk (Routes Via City) %		0.5

3.5 The proposed development will therefore create an additional demand for bus seats, equating to 0.4% or 0.5% of the current capacity. This is considered negligible and we believe it can easily be accommodated within the current services. In terms of assessing current service capacity, details of seat or space availability on any particular individual bus service, at any particular bus 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). We therefore undertook a sample survey of the space availability on buses passing immediately by the site on St Agnes Road.

3.6 We observed bus occupancy at Bus Stops #2318 and #2329 on St Agnes Road, with Dublin Bus Services #150, #27 and Go-Ahead Ireland Service #18 serving these stops. We were able to estimate the number of passengers on each service by simply standing at the Bus Stops. This was undertaken over 2 days, Thursday 7th April and Friday 8th April. The demand for services appeared greater on Friday 8th April, and we have therefore used this for the purposes of this assessment.

3.7 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 passing the site. The record of the observation survey for Friday 8th April is below as Table 3.3. In addition to the Dublin Bus Service #150 passing and recorded below, there were 2 No. Go Ahead Ireland #18s in each direction during this time. Each of these #18s had between 10 and 20 passengers on board.

Table 3.3 – Recorded Approximate Bus Occupancy at Stops on St Agnes Rd at Site



3.8 The observation survey demonstrates that the buses passing the site are at worst 20% full currently, providing reassurance that there is adequate capacity available locally to accommodate additional passengers.

3.9 We conclude that the expected demand can easily be accommodated within the existing services based on anticipate usage, supported by our observation of current bus occupancy. In future, there are also additional 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.

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

4.0 CONCLUSIONS

4.1 NRB Consulting Engineers Ltd were appointed to address the Traffic & Transportation issues associated with a planning application for a residential apartment development on zoned lands at Glebe House, Crumlin, Dublin 12.

4.2 The NRB Commission includes this assessment of current and future Bus Capacity, entitled 'Bus Services & Capacity Assessment Report'. The purpose of this Study is to review the potential impact of the development upon the existing and future bus services in the vicinity of the site.

4.3 The analysis of the existing and future bus 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 Buses as a result of the proposed development.

4.4 This Report contains details of current and future Bus Services and Bus Capacity serving the site and the local area. It also includes details of seat/space availability of existing services on St Agnes Road 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 seats, with an additional 33 customers during the weekday AM Commuter Peak 7-9am (and less during the PM Commuter peak period). This represents a total of 0.4% to 0.5% of the number of bus seats or capacity available locally during the AM Period.

4.6 We conclude that the additional demand for Buses as a result of the proposed development can be accommodated on the existing and future improved bus services in the area.

4.7 Whilst this Report contains an assessment of Bus Capacity, it should be remembered that Bus Operators are commercial in nature, running their businesses based on demand rather than medium to longer term future demand. Bus services are provided based on demand rather than potential. 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.

APPENDICES A

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

A A A

9

Buses from/to
From Charlestown Towards Limekiln Ave.
Operative Date: 13/12/2020
Version: TT 20.1

From Charlestown Towards Limekiln Ave.

Baile Séarlais , Bóthar Bhinn Aoibhinn , Bóthar Gharraithe na Lus , Sráid Uí Chonaill , An Cuarbhóthar Theas , Ascaill na Tiníleach

Buses leave terminus at:

Route Variations
c To city centre

Monday - Friday				Saturday				Sunday			
06:25	06:40	06:55	07:10	06:40	07:00	07:20	07:40	09:00	09:25	09:50	10:15
07:25	07:35	07:45	07:55	08:00	08:20	08:40	09:00	10:40	11:00	11:20	11:40
08:05	08:15	08:30	08:45	09:20	09:40	10:00	10:15	12:00	12:15	12:30	12:45
09:00	09:12	09:24	09:36	10:30	10:45	11:00	11:15	13:00	13:15	13:30	13:45
09:48	10:00	10:12	10:24	11:30	11:45	12:00	12:15	14:00	14:15	14:30	14:45
10:36	10:48	11:00	11:12	12:30	12:45	13:00	13:15	15:00	15:15	15:30	15:45
11:24	11:36	11:48	12:00	13:30	13:45	14:00	14:15	16:00	16:15	16:30	16:45
12:12	12:24	12:36	12:48	14:30	14:45	15:00	15:15	17:00	17:15	17:30	17:45
13:00	13:12	13:24	13:36	15:30	15:45	16:00	16:15	18:00	18:15	18:30	18:50
13:48	14:00	14:12	14:24	16:30	16:45	17:00	17:15	19:10	19:30	19:50	20:10
14:36	14:48	15:00	15:12	17:30	17:45	18:00	18:20	20:30	20:50	21:10	21:30
15:24	15:36	15:48	16:00	18:40	19:00	19:20	19:40	21:50	22:10	22:30	22:50
16:12	16:24	16:36	16:48	20:00	20:20	20:40	21:00	23:10	23:30		
17:00	17:15	17:30	17:45	21:30	22:00	22:30	23:00				
18:00	18:15	18:30	18:45	23:30c							
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										

Charlestown » 10mins » Beneavin Rd. » 8mins » Botanic Rd. » 12mins » O'Connell St. » 14mins » South Circular Rd. » 15mins » Limekiln Ave.

All times are off peak estimates

From Limekiln Ave. Towards Charlestown

Ascaill na Tiníleach , An Cuarbhóthar Theas , Sráid Uí Chonaill , Bóthar Gharraithe na Lus , Bóthar Bhinn Aoibhinn , Baile Séarlais

Buses leave terminus at:

Route Variations
c To city centre

Monday - Friday				Saturday				Sunday			
06:20	06:35	06:50	07:05	06:50	07:05	07:20	07:35	09:30	09:55	10:20	10:45
07:15	07:25	07:35	07:45	07:50	08:10	08:30	08:50	11:10	11:35	12:00	12:15
07:55	08:05	08:15	08:30	09:10	09:30	09:50	10:10	12:30	12:45	13:00	13:15
08:45	09:00	09:12	09:24	10:30	10:50	11:10	11:30	13:30	13:45	14:00	14:15
09:36	09:48	10:00	10:12	11:45	12:00	12:15	12:30	14:30	14:45	15:00	15:15
10:24	10:36	10:48	11:00	12:45	13:00	13:15	13:30	15:30	15:45	16:00	16:15
11:12	11:24	11:36	11:48	13:45	14:00	14:15	14:30	16:30	16:45	17:00	17:15
12:00	12:12	12:24	12:36	14:45	15:00	15:15	15:30	17:30	17:45	18:00	18:15
12:48	13:00	13:12	13:24	15:45	16:00	16:15	16:30	18:30	18:50	19:10	19:30
13:36	13:48	14:00	14:12	16:45	17:00	17:15	17:30	19:50	20:10	20:30	20:50
14:24	14:36	14:48	15:00	17:45	18:00	18:15	18:30	21:10	21:30	21:50	22:10
15:12	15:24	15:36	15:48	18:45	19:00	19:20	19:40	22:30	22:50	23:10	23:30
16:00	16:10	16:20	16:30	20:00	20:15	20:45	21:15				
16:40	16:50	17:00	17:10	21:45	22:15	22:45	23:15c				
17:25	17:40	17:55	18:10								
18:25	18:40	18:55	19:10								

Rialto - Blackrock	**17**		
via UCD Belfield		**Monday to Friday**	**Valid from 23rd of January 2022**
Rialto - Dundrum Luas	**17D**		

Service Number	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Rialto Church (1380)	06:40	07:00	07:15	07:45	08:15	08:45	09:05	09:20	09:40	10:00	10:20	10:40	11:00	11:20	11:40	12:00	12:20
Scoil Una Naofa (2450)	06:49	07:09	07:25	07:58	08:28	08:59	09:17	09:31	09:51	10:10	10:29	10:51	11:10	11:30	11:50	12:11	12:29
Rathfarnham Road (1299)	07:00	07:24	07:39	08:15	08:51	09:15	09:30	09:43	10:03	10:23	10:41	11:04	11:24	11:44	12:05	12:25	12:42
Rathfarnham Wood (1306)	07:08	07:33	07:47	08:23	09:02	09:24	09:38	09:51	10:11	10:31	10:48	11:12	11:31	11:51	12:12	12:32	12:49
The Oaks (2868)	07:16	07:42	07:57	08:32	09:12	09:37	09:48	09:59	10:20	10:39	10:58	11:20	11:39	11:59	12:20	12:42	12:59
North Avenue (2082)	07:28	07:57	08:14	08:47	09:25	09:48	09:59	10:10	10:32	10:51	11:09	11:30	11:49	12:11	12:32	12:53	13:11
UCD (765) arr	07:34	08:02	08:18	08:50	09:28	09:54	10:01	10:11	10:34	10:52	11:11	11:32	11:51	12:12	12:34	12:54	13:13
UCD (765) dep	07:38	08:07	08:23	08:55	09:33	09:59	10:06	10:16	10:39	10:57	11:16	11:37	11:56	12:17	12:39	12:59	13:18
Blackrock Station (3085)	07:54	08:31	08:47	09:14	09:48	10:14	10:20	10:30	10:53	11:12	11:31	11:52	12:13	12:33	12:52	13:14	13:36

Service Number	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Rialto Church (1380)	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	17:10	17:40	18:10	18:40
Scoil Una Naofa (2450)	12:49	13:10	13:30	13:50	14:10	14:30	14:52	15:11	15:32	15:51	16:12	16:31	16:51	17:21	17:51	18:19	18:50
Rathfarnham Road (1299)	13:04	13:26	13:47	14:05	14:26	14:46	15:08	15:25	15:45	16:07	16:26	16:45	17:05	17:36	18:04	18:31	19:02
Rathfarnham Wood (1306)	13:13	13:33	13:55	14:13	14:33	14:53	15:16	15:33	15:53	16:17	16:34	16:53	17:13	17:44	18:12	18:39	19:09
The Oaks (2868)	13:20	13:40	14:04	14:21	14:42	15:02	15:27	15:44	16:03	16:27	16:45	17:02	17:23	17:53	18:20	18:47	19:16
North Avenue (2082)	13:30	13:52	14:16	14:31	14:52	15:12	15:38	15:55	16:15	16:38	16:58	17:14	17:35	18:06	18:33	18:59	19:27
UCD (765) arr	13:33	13:54	14:17	14:33	14:54	15:14	15:41	15:58	16:17	16:40	17:00	17:15	17:40	18:09	18:37	19:00	19:30
UCD (765) dep	13:38	13:59	14:21	14:37	14:59	15:19	15:44	16:03	16:22	16:45	17:05	17:20	17:45	18:14	18:42	19:05	19:34
Blackrock Station (3085)	13:53	14:15	14:37	14:55	15:18	15:38	16:03	16:19	16:39	16:59	17:18	17:38	18:02	18:30	18:56	19:17	19:47

Service Number	17	17	17	17	17	17	17	17	17D
Rialto Church (1380)	19:10	19:40	20:15	20:45	21:15	21:45	22:15	22:45	**23:15**
Scoil Una Naofa (2450)	19:20	19:48	20:23	20:52	21:21	21:51	22:21	22:51	**23:21**
Rathfarnham Road (1299)	19:32	20:00	20:33	21:00	21:30	22:00	22:30	22:59	**23:29**
Rathfarnham Wood (1306)	19:39	20:06	20:38	21:05	21:34	22:04	22:34	23:02	**23:32**
The Oaks (2868)	19:46	20:14	20:44	21:10	21:40	22:10	22:40	23:08	**23:38**
Dundrum Luas (2825)	....	....	....	....	....	....	....	....	**23:40**
North Avenue (2082)	19:57	20:23	20:52	21:19	21:48	22:18	22:48	23:16	....
UCD (765) arr	20:00	20:25	20:54	21:20	21:51	22:20	22:50	23:18	....
UCD (765) dep	20:04	20:29	20:58	21:23	21:54	22:23	22:53	23:21	....
Blackrock Station (3085)	20:17	20:43	21:08	21:34	22:05	22:34	23:04	23:31	....

TFI TRANSPORT FOR IRELAND

Go-Ahead Ireland

Blackrock - Rialto	**17**		
via UCD Belfield		**Monday to Friday**	**Valid from 23rd of January 2022**
Dundrum - Rialto	**17D**		

Service Number	17D	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Blackrock Station (3085)	....	07:05	07:45	08:05	08:35	09:05	09:30	10:00	10:20	10:40	11:00	11:20	11:40	12:00	12:20	12:40	13:00
UCD (765) arr	....	07:13	08:00	08:20	08:52	09:18	09:42	10:11	10:31	10:51	11:10	11:31	11:51	12:11	12:32	12:51	13:12
UCD (765) dep	....	07:17	08:05	08:25	08:57	09:23	09:47	10:16	10:36	10:56	11:15	11:36	11:56	12:15	12:37	12:56	13:17
North Avenue (2072)	....	07:23	08:12	08:32	09:04	09:30	09:55	10:22	10:42	11:02	11:22	11:43	12:03	12:24	12:43	13:03	13:22
Dundrum Luas (2825)	06:40	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Notre Dame School (2867)	06:42	07:33	08:31	08:50	09:16	09:42	10:06	10:34	10:53	11:14	11:33	11:53	12:17	12:37	12:58	13:16	13:36
St Mary's School (1329)	06:49	07:41	08:40	08:59	09:24	09:48	10:12	10:41	11:01	11:22	11:40	12:01	12:25	12:45	13:05	13:24	13:44
Terenure (1336)	06:54	07:46	08:50	09:07	09:32	09:55	10:17	10:46	11:08	11:28	11:48	12:08	12:33	12:51	13:11	13:31	13:51
Scoil Colm (2466)	07:06	07:59	09:05	09:20	09:43	10:06	10:26	10:58	11:18	11:39	12:00	12:20	12:44	13:04	13:24	13:44	14:05
Rialto Church (1367)	07:18	08:12	09:16	09:30	09:55	10:18	10:36	11:09	11:28	11:49	12:10	12:30	12:54	13:14	13:34	13:54	14:15

Service Number	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Blackrock Station (3085)	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	18:10	18:40	19:10
UCD (765) arr	13:34	13:53	14:11	14:34	14:52	15:12	15:34	15:54	16:11	16:33	16:52	17:13	17:34	17:51	18:21	18:51	19:20
UCD (765) dep	13:39	13:58	14:15	14:39	14:57	15:14	15:39	15:57	16:15	16:38	16:57	17:18	17:39	17:55	18:26	18:56	19:24
North Avenue (2072)	13:44	14:05	14:23	14:46	15:06	15:25	15:47	16:08	16:27	16:46	17:07	17:28	17:47	18:05	18:34	19:03	19:31
Notre Dame School (2867)	13:59	14:18	14:36	14:59	15:23	15:43	16:03	16:26	16:45	17:03	17:25	17:44	18:04	18:23	18:50	19:17	19:42
St Mary's School (1329)	14:07	14:28	14:45	15:08	15:33	15:53	16:14	16:35	16:54	17:13	17:35	17:53	18:14	18:32	18:59	19:26	19:49
Terenure (1336)	14:14	14:34	14:52	15:15	15:40	15:59	16:20	16:43	17:03	17:22	17:43	18:01	18:22	18:40	19:06	19:33	19:56
Scoil Colm (2466)	14:27	14:49	15:05	15:28	15:58	16:13	16:34	16:57	17:14	17:35	17:56	18:14	18:34	18:55	19:20	19:44	20:07
Rialto Church (1367)	14:37	14:59	15:17	15:38	16:09	16:25	16:45	17:07	17:24	17:44	18:07	18:23	18:45	19:04	19:30	19:55	20:18

Service Number	17	17	17	17	17	17	17	17
Blackrock Station (3085)	19:40	20:10	20:40	21:10	21:40	22:15	22:45	23:15
UCD (765) arr	19:49	20:19	20:49	21:18	21:46	22:22	22:51	23:22
UCD (765) dep	19:53	20:24	20:53	21:22	21:50	22:25	22:54	23:25
North Avenue (2072)	19:59	20:29	20:58	21:27	21:55	22:29	22:59	23:30
Notre Dame School (2867)	20:11	20:40	21:08	21:37	22:05	22:37	23:07	23:39
St Mary's School (1329)	20:18	20:47	21:15	21:43	22:11	22:43	23:12	23:44
Terenure (1336)	20:23	20:53	21:20	21:48	22:16	22:46	23:15	23:47
Scoil Colm (2466)	20:33	21:03	21:29	21:57	22:24	22:55	23:23	23:54
Rialto Church (1367)	20:43	21:12	21:37	22:04	22:32	23:02	23:30	24:01

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Go-Ahead Ireland

Rialto - Blackrock	**17**		
via UCD Belfield		**Saturday**	**Valid from 23rd of January 2022**
Rialto - Dundrum Luas	**17D**		

Service Number	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**17**
Rialto Church (1380)	06:40	07:15	07:45	08:15	08:45	09:05	09:20	09:40	10:00	10:20	10:40	11:00	11:20	11:40	12:00	12:20	12:40
Scoil Una Naofa (2450)	06:46	07:21	07:52	08:22	08:52	09:13	09:28	09:48	10:08	10:28	10:48	11:08	11:29	11:49	12:09	12:29	12:49
Rathfarnham Road (1299)	06:55	07:30	08:01	08:31	09:03	09:24	09:39	09:59	10:19	10:42	11:02	11:23	11:43	12:03	12:23	12:43	13:03
Rathfarnham Wood (1306)	06:58	07:33	08:05	08:35	09:08	09:29	09:47	10:07	10:27	10:50	11:10	11:31	11:54	12:14	12:34	12:54	13:14
The Oaks (2868)	07:04	07:39	08:11	08:41	09:14	09:35	09:55	10:15	10:35	10:59	11:19	11:40	12:03	12:23	12:43	13:03	13:25
North Avenue (2082)	07:12	07:47	08:19	08:50	09:23	09:45	10:05	10:25	10:45	11:09	11:29	11:52	12:15	12:35	12:55	13:15	13:37
UCD (765) arr	07:15	07:50	08:22	08:53	09:26	09:48	10:08	10:28	10:48	11:12	11:34	11:55	12:18	12:38	12:58	13:18	13:40
UCD (765) dep	07:17	07:52	08:24	08:55	09:28	09:51	10:12	10:32	10:52	11:16	11:38	11:59	12:22	12:42	13:02	13:22	13:44
Blackrock Station (3085)	07:28	08:03	08:35	09:06	09:39	10:03	10:24	10:44	11:04	11:31	11:51	12:12	12:34	12:54	13:14	13:34	13:56

Service Number	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**17**
Rialto Church (1380)	13:00	13:20	13:40	14:00	14:20	14:40	15:00	15:20	15:40	16:00	16:20	16:40	17:10	17:40	18:10	18:40	19:10
Scoil Una Naofa (2450)	13:09	13:29	13:49	14:09	14:29	14:49	15:09	15:29	15:49	16:09	16:29	16:49	17:19	17:49	18:19	18:48	19:18
Rathfarnham Road (1299)	13:23	13:43	14:02	14:22	14:42	15:02	15:22	15:42	16:01	16:21	16:41	17:00	17:30	18:00	18:30	18:59	19:28
Rathfarnham Wood (1306)	13:34	13:52	14:11	14:31	14:51	15:09	15:29	15:49	16:08	16:28	16:48	17:07	17:37	18:07	18:35	19:04	19:33
The Oaks (2868)	13:45	14:03	14:22	14:42	15:02	15:16	15:36	15:56	16:15	16:35	16:55	17:16	17:46	18:15	18:41	19:10	19:40
North Avenue (2082)	13:57	14:15	14:34	14:54	15:14	15:28	15:48	16:08	16:27	16:47	17:07	17:26	17:56	18:25	18:51	19:20	19:48
UCD (765) arr	14:00	14:18	14:37	14:57	15:17	15:31	15:51	16:11	16:30	16:50	17:10	17:29	17:59	18:28	18:54	19:23	19:51
UCD (765) dep	14:04	14:22	14:41	15:01	15:21	15:35	15:55	16:15	16:34	16:54	17:14	17:33	18:03	18:32	18:58	19:27	19:55
Blackrock Station (3085)	14:16	14:34	14:53	15:13	15:33	15:48	16:08	16:28	16:46	17:06	17:26	17:45	18:15	18:44	19:10	19:38	20:06

Service Number	**17**	**17**	**17**	**17**	**17**	**17**	**17**	**17D**
Rialto Church (1380)	19:40	20:15	20:45	21:15	21:45	22:15	22:45	**23:15**
Scoil Una Naofa (2450)	19:47	20:22	20:52	21:22	21:52	22:22	22:52	**23:22**
Rathfarnham Road (1299)	19:57	20:32	21:01	21:31	22:01	22:30	22:59	**23:29**
Rathfarnham Wood (1306)	20:02	20:37	21:05	21:35	22:05	22:34	23:03	**23:33**
The Oaks (2868)	20:08	20:43	21:11	21:41	22:11	22:40	23:09	**23:39**
Dundrum Luas (2825)	....	....	....	....	....	....	....	**23:41**
North Avenue (2082)	20:17	20:51	21:19	21:49	22:19	22:48	23:17	....
UCD (765) arr	20:20	20:54	21:22	21:52	22:22	22:51	23:20	....
UCD (765) dep	20:23	20:57	21:25	21:55	22:25	22:54	23:23	....
Blackrock Station (3085)	20:34	21:08	21:36	22:06	22:36	23:05	23:34	....

Palmerstown - Sandymount **18** **Monday to Friday** **Valid from 23rd of January 2022**

Service Number	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Hollyville Lawn (4359)	06:35	07:05	07:35	08:05	08:35	08:37	09:05	09:20	09:40	10:00	10:20	10:40	11:00	11:20	11:40	12:00	12:20	12:40
Palmerstown Crescent (4888)	06:40	07:10	07:40	08:11	08:41	08:43	09:10	09:26	09:45	10:06	10:26	10:46	11:06	11:26	11:47	12:05	12:26	12:45
Ballyfermot (2696)	06:45	07:16	07:45	08:18	08:50	08:52	09:17	09:32	09:50	10:11	10:31	10:52	11:12	11:31	11:53	12:11	12:32	12:51
Kylemore Luas (2786)	06:52	07:23	07:53	08:28	09:02	09:04	09:26	09:41	09:59	10:21	10:39	11:02	11:21	11:40	12:02	12:23	12:42	13:01
Crumlin Hospital (1421)	06:58	07:29	07:58	08:35	09:09	09:11	09:32	09:48	10:07	10:27	10:46	11:08	11:28	11:47	12:07	12:30	12:49	13:07
Scoil Colm (2466)	07:03	07:35	08:04	08:43	09:14	09:16	09:39	09:54	10:12	10:33	10:53	11:14	11:35	11:54	12:14	12:36	12:55	13:15
Sundrive Park (2497)	07:08	07:40	08:12	08:49	09:19	09:21	09:44	10:00	10:17	10:38	10:58	11:19	11:41	12:00	12:20	12:42	13:00	13:20
Westfield Road (2474)	07:11	07:43	08:18	08:53	09:22	09:24	09:47	10:02	10:19	10:41	11:01	11:22	11:43	12:03	12:22	12:45	13:03	13:23
Rathmines (4527)	07:16	07:49	08:26	08:59	09:27	09:29	09:52	10:07	10:23	10:46	11:06	11:27	11:49	12:08	12:26	12:50	13:09	13:28
Oakley Road (2790)	07:20	07:53	08:32	09:03	09:30	09:32	09:56	10:11	10:27	10:50	11:10	11:31	11:52	12:12	12:30	12:54	13:12	13:32
Baggot Street (781)	07:28	08:03	08:45	09:13	09:40	09:42	10:05	10:16	10:35	10:56	11:16	11:37	11:58	12:18	12:35	13:00	13:19	13:38
RDS Ballsbridge (416)	07:35	08:09	08:53	09:19	09:47	09:49	10:11	10:21	10:40	11:01	11:23	11:42	12:03	12:24	12:41	13:05	13:25	13:45
Dromard Terrace (375)	07:43	08:16	09:02	09:27	09:55	09:57	10:19	10:29	10:48	11:09	11:30	11:50	12:10	12:32	12:50	13:12	13:34	13:54

Service Number	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Hollyville Lawn (4359)	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	18:20	18:55
Palmerstown Crescent (4888)	13:07	13:26	13:46	14:06	14:26	14:46	15:06	15:26	15:46	16:06	16:27	16:46	17:07	17:26	17:46	18:07	18:25	19:00
Ballyfermot (2696)	13:13	13:31	13:51	14:12	14:32	14:52	15:12	15:32	15:53	16:12	16:33	16:53	17:12	17:31	17:51	18:12	18:30	19:05
Kylemore Luas (2786)	13:23	13:43	14:02	14:23	14:43	15:04	15:23	15:43	16:04	16:22	16:43	17:03	17:23	17:41	18:01	18:21	18:39	19:14
Crumlin Hospital (1421)	13:31	13:49	14:08	14:30	14:50	15:11	15:31	15:51	16:11	16:28	16:50	17:11	17:30	17:48	18:09	18:27	18:44	19:19
Scoil Colm (2466)	13:38	13:56	14:15	14:37	14:57	15:17	15:38	15:58	16:18	16:34	16:56	17:18	17:37	17:56	18:16	18:32	18:49	19:24
Sundrive Park (2497)	13:43	14:01	14:20	14:41	15:02	15:22	15:43	16:03	16:23	16:39	17:02	17:24	17:42	18:02	18:21	18:37	18:54	19:28
Westfield Road (2474)	13:46	14:04	14:24	14:44	15:05	15:25	15:46	16:06	16:26	16:42	17:05	17:27	17:46	18:05	18:24	18:39	18:56	19:30
Rathmines (4527)	13:51	14:09	14:30	14:49	15:10	15:30	15:53	16:12	16:31	16:49	17:10	17:33	17:51	18:11	18:30	18:44	19:01	19:35
Oakley Road (2790)	13:55	14:13	14:34	14:53	15:14	15:33	15:57	16:16	16:35	16:52	17:13	17:37	17:55	18:15	18:34	18:47	19:05	19:38
Baggot Street (781)	14:02	14:19	14:41	15:02	15:22	15:40	16:07	16:23	16:42	16:57	17:19	17:45	18:03	18:24	18:42	18:53	19:12	19:44
RDS Ballsbridge (416)	14:08	14:25	14:47	15:07	15:28	15:47	16:13	16:29	16:48	17:02	17:25	17:52	18:10	18:30	18:48	18:58	19:18	19:49
Dromard Terrace (375)	14:18	14:33	14:55	15:16	15:35	15:56	16:20	16:37	16:55	17:08	17:30	17:58	18:18	18:37	18:56	19:05	19:25	19:57

Service Number	18	18	18	18	18	18	18	18
Hollyville Lawn (4359)	19:25	19:55	20:30	21:05	21:35	22:05	22:35	23:05
Palmerstown Crescent (4888)	19:30	20:00	20:33	21:09	21:39	22:08	22:39	23:09
Ballyfermot (2696)	19:35	20:05	20:38	21:14	21:43	22:12	22:42	23:13
Kylemore Luas (2786)	19:43	20:12	20:44	21:20	21:49	22:16	22:46	23:17
Crumlin Hospital (1421)	19:48	20:18	20:48	21:23	21:53	22:21	22:50	23:21
Scoil Colm (2466)	19:53	20:24	20:53	21:27	21:57	22:24	22:52	23:24
Sundrive Park (2497)	19:58	20:29	20:58	21:31	22:02	22:28	22:57	23:27
Westfield Road (2474)	20:01	20:31	21:00	21:34	22:03	22:30	22:59	23:29
Rathmines (4527)	20:05	20:36	21:03	21:38	22:08	22:34	23:03	23:32
Oakley Road (2790)	20:09	20:38	21:05	21:40	22:10	22:36	23:05	23:35
Baggot Street (781)	20:13	20:42	21:10	21:44	22:15	22:40	23:09	....
RDS Ballsbridge (416)	20:18	20:47	21:14	21:49	22:19	22:44	23:13	....
Dromard Terrace (375)	20:26	20:54	21:21	21:56	22:26	22:50	23:20	....

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Sandymount - Palmerstown **18** **Monday to Friday** **Valid from 23rd of January 2022**

Service Number	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Newgrove Avenue (385)	06:40	07:10	07:40	08:10	08:40	09:10	09:40	10:00	10:20	10:40	11:00	11:20	11:40	12:00	12:20	12:40	13:00	13:20
RDS Ballsbridge (486)	06:45	07:16	07:47	08:16	08:47	09:16	09:46	10:06	10:26	10:46	11:06	11:26	11:46	12:06	12:27	12:46	13:06	13:26
Burlington Road (754)	06:48	07:19	07:52	08:22	08:52	09:22	09:51	10:11	10:31	10:51	11:11	11:31	11:51	12:11	12:32	12:52	13:10	13:31
Ranelagh Luas (2791)	06:54	07:24	07:58	08:28	08:58	09:28	09:56	10:17	10:36	10:56	11:16	11:37	11:56	12:17	12:37	12:57	13:16	13:36
Rathmines Garda Stn (1077)	06:58	07:28	08:02	08:33	09:03	09:32	10:01	10:21	10:40	11:00	11:20	11:41	12:02	12:22	12:42	13:03	13:24	13:42
Sundrive Road (2485)	07:05	07:36	08:10	08:45	09:11	09:37	10:08	10:28	10:47	11:08	11:27	11:49	12:10	12:30	12:50	13:09	13:31	13:50
Scoil Una Naofa (2450)	07:10	07:42	08:18	08:53	09:17	09:43	10:13	10:33	10:53	11:13	11:34	11:55	12:16	12:36	12:56	13:15	13:36	13:56
Crumlin Hospital (2101)	07:14	07:49	08:25	09:02	09:24	09:49	10:18	10:38	10:59	11:20	11:41	12:02	12:22	12:43	13:03	13:23	13:43	14:04
Kylemore Road (2781)	07:20	07:58	08:35	09:11	09:33	09:57	10:26	10:47	11:07	11:29	11:51	12:11	12:31	12:52	13:13	13:33	13:52	14:12
Ballyfermot Comm Cen (2668)	07:27	08:07	08:46	09:23	09:44	10:07	10:35	10:57	11:16	11:40	12:01	12:22	12:41	13:03	13:26	13:44	14:02	14:23
Kennelsfort Green (2208)	07:32	08:12	08:53	09:28	09:50	10:11	10:39	11:02	11:21	11:45	12:07	12:27	12:46	13:08	13:31	13:50	14:07	14:28
Hollyville Lawn (4357)	07:38	08:19	09:00	09:36	09:59	10:18	10:46	11:09	11:28	11:53	12:14	12:36	12:54	13:16	13:37	13:58	14:17	14:37

Service Number	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Newgrove Avenue (385)	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	19:30
RDS Ballsbridge (486)	13:46	14:07	14:27	14:47	15:06	15:26	15:47	16:06	16:27	16:46	17:05	17:27	17:48	18:09	18:28	18:46	19:07	19:37
Burlington Road (754)	13:51	14:13	14:31	14:52	15:12	15:31	15:52	16:12	16:32	16:51	17:11	17:33	17:54	18:14	18:34	18:52	19:11	19:41
Ranelagh Luas (2791)	13:57	14:21	14:38	14:58	15:18	15:37	15:59	16:19	16:38	16:58	17:18	17:39	18:01	18:21	18:40	18:57	19:17	19:47
Rathmines Garda Stn (1077)	14:03	14:27	14:43	15:03	15:24	15:44	16:07	16:25	16:45	17:04	17:24	17:47	18:09	18:28	18:48	19:03	19:22	19:52
Sundrive Road (2485)	14:11	14:36	14:52	15:11	15:33	15:52	16:17	16:34	16:55	17:12	17:34	17:55	18:19	18:39	18:56	19:11	19:31	20:01
Scoil Una Naofa (2450)	14:18	14:42	14:58	15:19	15:40	15:59	16:24	16:40	17:01	17:18	17:40	18:01	18:26	18:46	19:03	19:17	19:37	20:07
Crumlin Hospital (2101)	14:26	14:50	15:06	15:25	15:47	16:07	16:31	16:47	17:09	17:25	17:47	18:08	18:34	18:53	19:08	19:23	19:43	20:13
Kylemore Road (2781)	14:35	15:00	15:16	15:34	15:57	16:16	16:39	16:56	17:18	17:34	17:55	18:15	18:42	19:02	19:14	19:30	19:50	20:20
Ballyfermot Comm Cen (2668)	14:46	15:11	15:26	15:46	16:13	16:29	16:51	17:08	17:31	17:46	18:06	18:25	18:52	19:12	19:23	19:39	19:57	20:27
Kennelsfort Green (2208)	14:52	15:16	15:31	15:51	16:18	16:35	16:56	17:15	17:37	17:51	18:12	18:33	18:56	19:16	19:27	19:43	20:02	20:32
Hollyville Lawn (4357)	15:00	15:24	15:42	16:01	16:26	16:46	17:06	17:24	17:46	18:04	18:22	18:42	19:02	19:22	19:33	19:50	20:08	20:38

Service Number	18	18	18	18	18	18	18	18
Newgrove Avenue (385)	20:00	20:30	21:05	21:35	22:05	22:35	23:05	23:35
RDS Ballsbridge (486)	20:06	20:37	21:11	21:40	22:10	22:40	23:10	23:39
Burlington Road (754)	20:10	20:41	21:15	21:44	22:14	22:44	23:14	23:42
Ranelagh Luas (2791)	20:15	20:46	21:20	21:47	22:17	22:47	23:17	23:45
Rathmines Garda Stn (1077)	20:19	20:50	21:24	21:51	22:21	22:51	23:20	23:47
Sundrive Road (2485)	20:26	20:56	21:30	21:57	22:27	22:57	23:26	23:52
Scoil Una Naofa (2450)	20:31	21:01	21:34	22:01	22:31	23:01	23:30	23:56
Crumlin Hospital (2101)	20:37	21:07	21:39	22:06	22:36	23:06	23:35	24:01
Kylemore Road (2781)	20:45	21:13	21:44	22:11	22:41	23:11	23:39	....
Ballyfermot Comm Cen (2668)	20:52	21:20	21:51	22:17	22:47	23:17	23:45	....
Kennelsfort Green (2208)	20:57	21:24	21:55	22:21	22:51	23:21	23:49	....
Hollyville Lawn (4357)	21:02	21:30	21:59	22:25	22:55	23:25	23:53	....

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Palmerstown - Sandymount **18** **Saturday** **Valid from 23rd of January 2022**

Service Number	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Hollyville Lawn (4359)	06:35	07:05	07:35	08:05	08:35	....	09:05	09:20	09:40	10:00	10:20	10:40	11:00	11:20	11:40	12:00	12:20	12:40
Palmerstown Crescent (4888)	06:39	07:09	07:39	08:09	08:39	....	09:09	09:24	09:45	10:05	10:25	10:45	11:05	11:25	11:45	12:05	12:25	12:45
Ballyfermot (2696)	06:43	07:13	07:44	08:14	08:44	....	09:14	09:29	09:50	10:10	10:30	10:50	11:10	11:30	11:50	12:10	12:30	12:50
Kylemore Luas (2786)	06:48	07:18	07:49	08:21	08:51	....	09:21	09:36	09:57	10:17	10:38	10:58	11:18	11:38	11:58	12:18	12:39	12:59
Crumlin Hospital (1421)	06:51	07:22	07:53	08:26	08:56	09:11	09:26	09:41	10:02	10:22	10:43	11:03	11:23	11:43	12:03	12:23	12:44	13:04
Scoil Colm (2466)	06:55	07:27	07:58	08:31	09:01	09:16	09:31	09:46	10:07	10:27	10:48	11:08	11:28	11:48	12:09	12:29	12:50	13:10
Sundrive Park (2497)	06:58	07:30	08:01	08:34	09:04	09:19	09:34	09:49	10:12	10:32	10:53	11:13	11:33	11:53	12:14	12:34	12:56	13:16
Westfield Road (2474)	07:00	07:33	08:04	08:37	09:07	09:22	09:37	09:52	10:15	10:35	10:56	11:16	11:36	11:56	12:17	12:37	12:59	13:19
Rathmines (4527)	07:04	07:37	08:08	08:41	09:11	09:26	09:41	09:56	10:19	10:39	11:00	11:20	11:40	12:00	12:21	12:41	13:03	13:23
Oakley Road (2790)	07:07	07:40	08:11	08:44	09:14	09:29	09:44	09:59	10:23	10:43	11:04	11:24	11:44	12:04	12:25	12:45	13:07	13:27
Baggot Street (781)	07:11	07:45	08:16	08:49	09:19	09:34	09:49	10:04	10:30	10:50	11:11	11:31	11:51	12:11	12:32	12:52	13:14	13:34
RDS Ballsbridge (416)	07:15	07:49	08:21	08:54	09:24	09:39	09:54	10:09	10:35	10:55	11:16	11:36	11:56	12:16	12:37	12:57	13:19	13:39
Dromard Terrace (375)	07:21	07:55	08:27	09:00	09:30	09:45	10:00	10:15	10:41	11:01	11:22	11:42	12:02	12:22	12:43	13:03	13:25	13:45

Service Number	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Hollyville Lawn (4359)	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	18:20	18:55
Palmerstown Crescent (4888)	13:05	13:25	13:45	14:05	14:25	14:45	15:05	15:25	15:45	16:05	16:25	16:45	17:05	17:25	17:45	18:05	18:25	19:00
Ballyfermot (2696)	13:10	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	19:05
Kylemore Luas (2786)	13:19	13:39	13:59	14:19	14:38	14:58	15:18	15:38	15:58	16:18	16:38	16:58	17:18	17:38	17:58	18:18	18:38	19:13
Crumlin Hospital (1421)	13:24	13:44	14:04	14:24	14:43	15:03	15:23	15:43	16:03	16:23	16:43	17:03	17:23	17:43	18:03	18:23	18:43	19:18
Scoil Colm (2466)	13:30	13:50	14:10	14:30	14:49	15:09	15:29	15:49	16:09	16:29	16:49	17:09	17:29	17:48	18:08	18:28	18:48	19:23
Sundrive Park (2497)	13:36	13:56	14:16	14:36	14:54	15:14	15:34	15:54	16:14	16:34	16:54	17:14	17:34	17:53	18:13	18:33	18:52	19:27
Westfield Road (2474)	13:39	13:59	14:19	14:39	14:57	15:17	15:37	15:57	16:17	16:37	16:57	17:17	17:37	17:55	18:15	18:35	18:54	19:29
Rathmines (4527)	13:43	14:03	14:23	14:43	15:01	15:21	15:41	16:01	16:21	16:41	17:01	17:21	17:41	17:59	18:19	18:39	18:58	19:33
Oakley Road (2790)	13:47	14:07	14:27	14:47	15:05	15:25	15:45	16:05	16:25	16:45	17:05	17:25	17:45	18:03	18:23	18:43	19:02	19:37
Baggot Street (781)	13:54	14:14	14:34	14:54	15:12	15:32	15:52	16:12	16:32	16:52	17:12	17:32	17:52	18:09	18:29	18:49	19:07	19:42
RDS Ballsbridge (416)	13:59	14:19	14:39	14:59	15:17	15:37	15:57	16:17	16:37	16:57	17:17	17:37	17:57	18:14	18:34	18:54	19:11	19:46
Dromard Terrace (375)	14:05	14:25	14:45	15:05	15:23	15:43	16:03	16:23	16:43	17:03	17:23	17:43	18:03	18:20	18:40	19:00	19:17	19:52

Service Number	18	18	18	18	18	18	18	18
Hollyville Lawn (4359)	19:25	19:55	20:30	21:05	21:35	22:05	22:35	23:05
Palmerstown Crescent (4888)	19:30	20:00	20:34	21:09	21:39	22:09	22:39	23:09
Ballyfermot (2696)	19:35	20:05	20:38	21:13	21:43	22:13	22:43	23:13
Kylemore Luas (2786)	19:43	20:13	20:44	21:19	21:49	22:17	22:47	23:17
Crumlin Hospital (1421)	19:48	20:18	20:48	21:23	21:53	22:21	22:51	23:21
Scoil Colm (2466)	19:53	20:23	20:52	21:27	21:57	22:25	22:55	23:25
Sundrive Park (2497)	19:57	20:27	20:56	21:32	22:02	22:29	22:59	23:29
Westfield Road (2474)	19:59	20:29	20:59	21:34	22:04	22:30	23:00	23:30
Rathmines (4527)	20:03	20:33	21:03	21:38	22:08	22:34	23:04	23:34
Oakley Road (2790)	20:07	20:37	21:07	21:42	22:12	22:37	23:07	23:37
Baggot Street (781)	20:12	20:42	21:12	21:47	22:17	22:42	23:12	....
RDS Ballsbridge (416)	20:16	20:46	21:16	21:51	22:21	22:46	23:16	....
Dromard Terrace (375)	20:22	20:52	21:23	21:58	22:28	22:52	23:22	....

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Sandymount - Palmerstown **18** **Saturday** **Valid from 23rd of January 2022**

Service Number	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Newgrove Avenue (385)	06:40	07:10	07:40	08:10	08:40	09:10	09:40	10:00	10:20	10:40	11:00	11:20	11:40	12:00	12:20	12:40	13:00	13:20
RDS Ballsbridge (486)	06:46	07:16	07:46	08:16	08:46	09:16	09:46	10:06	10:26	10:46	11:06	11:26	11:46	12:06	12:26	12:46	13:06	13:26
Burlington Road (754)	06:49	07:19	07:49	08:19	08:49	09:19	09:49	10:09	10:29	10:49	11:09	11:29	11:49	12:09	12:29	12:49	13:09	13:29
Ranelagh Luas (2791)	06:53	07:23	07:53	08:23	08:53	09:23	09:53	10:13	10:33	10:55	11:15	11:35	11:55	12:15	12:35	12:55	13:15	13:35
Rathmines Garda Stn (1077)	06:56	07:26	07:56	08:26	08:56	09:27	09:58	10:18	10:38	11:00	11:20	11:40	12:00	12:20	12:40	13:00	13:20	13:40
Sundrive Road (2485)	07:01	07:31	08:01	08:31	09:01	09:33	10:05	10:25	10:45	11:08	11:28	11:48	12:08	12:28	12:48	13:08	13:28	13:48
Scoil Una Naofa (2450)	07:05	07:35	08:05	08:35	09:05	09:39	10:11	10:31	10:51	11:14	11:34	11:54	12:14	12:34	12:54	13:14	13:34	13:54
Crumlin Hospital (2101)	07:09	07:39	08:09	08:39	09:09	09:44	10:16	10:36	10:56	11:20	11:40	12:00	12:20	12:40	13:00	13:20	13:40	14:00
Kylemore Road (2781)	07:15	07:45	08:15	08:45	09:15	09:50	10:24	10:44	11:04	11:29	11:49	12:09	12:29	12:49	13:09	13:29	13:49	14:09
Ballyfermot Comm Cen (2668)	07:21	07:51	08:21	08:51	09:21	09:58	10:32	10:52	11:12	11:38	11:58	12:18	12:38	12:58	13:18	13:38	13:58	14:18
Kennelsfort Green (2208)	07:25	07:55	08:25	08:55	09:25	10:03	10:37	10:57	11:17	11:43	12:03	12:23	12:43	13:03	13:23	13:43	14:03	14:23
Hollyville Lawn (4357)	07:29	07:59	08:29	08:59	09:29	10:07	10:41	11:01	11:21	11:47	12:07	12:27	12:47	13:07	13:27	13:47	14:07	14:27

Service Number	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Newgrove Avenue (385)	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	19:30
RDS Ballsbridge (486)	13:46	14:06	14:26	14:46	15:06	15:26	15:46	16:06	16:26	16:46	17:06	17:26	17:46	18:06	18:26	18:46	19:06	19:36
Burlington Road (754)	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	18:50	19:10	19:40
Ranelagh Luas (2791)	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	19:15	19:45
Rathmines Garda Stn (1077)	14:00	14:20	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	19:19	19:49
Sundrive Road (2485)	14:08	14:28	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	19:25	19:55
Scoil Una Naofa (2450)	14:14	14:34	14:52	15:12	15:32	15:52	16:12	16:32	16:52	17:12	17:32	17:52	18:12	18:32	18:52	19:09	19:29	19:59
Crumlin Hospital (2101)	14:20	14:40	14:57	15:17	15:37	15:57	16:17	16:37	16:57	17:17	17:37	17:57	18:17	18:37	18:57	19:14	19:34	20:04
Kylemore Road (2781)	14:29	14:49	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	19:19	19:39	20:09
Ballyfermot Comm Cen (2668)	14:38	14:58	15:14	15:34	15:54	16:14	16:34	16:54	17:14	17:34	17:54	18:14	18:34	18:54	19:14	19:26	19:46	20:16
Kennelsfort Green (2208)	14:43	15:03	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	19:31	19:51	20:21
Hollyville Lawn (4357)	14:47	15:07	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	19:35	19:55	20:25

Service Number	18	18	18	18	18	18	18	18
Newgrove Avenue (385)	20:00	20:30	21:05	21:35	22:05	22:35	23:05	23:35
RDS Ballsbridge (486)	20:06	20:36	21:11	21:40	22:10	22:40	23:10	23:39
Burlington Road (754)	20:10	20:40	21:15	21:44	22:14	22:44	23:14	23:43
Ranelagh Luas (2791)	20:15	20:45	21:20	21:47	22:17	22:47	23:17	23:46
Rathmines Garda Stn (1077)	20:19	20:49	21:24	21:51	22:21	22:51	23:20	23:48
Sundrive Road (2485)	20:25	20:55	21:30	21:57	22:27	22:57	23:26	23:54
Scoil Una Naofa (2450)	20:29	20:59	21:34	22:01	22:31	23:01	23:30	23:58
Crumlin Hospital (2101)	20:34	21:04	21:39	22:06	22:36	23:06	23:35	24:03
Kylemore Road (2781)	20:39	21:09	21:44	22:11	22:41	23:11	23:39	....
Ballyfermot Comm Cen (2668)	20:46	21:16	21:51	22:17	22:47	23:17	23:45	....
Kennelsfort Green (2208)	20:51	21:21	21:56	22:21	22:51	23:21	23:49	....
Hollyville Lawn (4357)	20:55	21:25	22:00	22:25	22:55	23:25	23:53	....

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Palmerstown - Sandymount **18** **Sunday** **Valid from 23rd of January 2022**

Service Number	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Hollyville Lawn (4359)	08:35	09:05	09:35	10:05	....	10:30	10:45	11:00	11:20	11:40	12:00	12:20	12:40	13:00	13:20	13:40	14:00	14:20
Palmerstown Crescent (4888)	08:39	09:09	09:39	10:09	....	10:34	10:49	11:04	11:24	11:46	12:06	12:26	12:46	13:06	13:26	13:46	14:06	14:26
Ballyfermot (2696)	08:43	09:13	09:43	10:13	....	10:38	10:53	11:08	11:28	11:50	12:10	12:30	12:50	13:10	13:30	13:50	14:10	14:30
Kylemore Luas (2786)	08:47	09:18	09:48	10:18	....	10:43	10:58	11:13	11:33	11:57	12:17	12:37	12:57	13:17	13:37	13:57	14:17	14:37
Crumlin Hospital (1421)	08:51	09:23	09:53	10:23	10:36	10:49	11:04	11:19	11:39	12:03	12:23	12:43	13:03	13:23	13:43	14:03	14:23	14:43
Scoil Colm (2466)	08:55	09:27	09:57	10:27	10:40	10:54	11:09	11:24	11:44	12:08	12:28	12:48	13:08	13:28	13:50	14:10	14:30	14:47
Sundrive Park (2497)	08:59	09:31	10:01	10:31	10:44	10:59	11:14	11:29	11:49	12:13	12:33	12:53	13:13	13:33	13:55	14:15	14:35	14:51
Westfield Road (2474)	09:02	09:34	10:04	10:34	10:47	11:02	11:17	11:32	11:52	12:16	12:36	12:56	13:16	13:36	13:58	14:18	14:38	14:54
Rathmines (4527)	09:06	09:38	10:08	10:38	10:51	11:07	11:22	11:37	11:57	12:21	12:41	13:01	13:21	13:41	14:03	14:23	14:43	14:58
Oakley Road (2790)	09:09	09:41	10:11	10:41	10:54	11:11	11:26	11:41	12:01	12:25	12:45	13:05	13:25	13:45	14:07	14:27	14:47	15:02
Baggot Street (781)	09:14	09:46	10:16	10:46	10:59	11:16	11:31	11:46	12:06	12:30	12:50	13:10	13:30	13:50	14:15	14:35	14:55	15:10
RDS Ballsbridge (416)	09:18	09:50	10:20	10:50	11:03	11:20	11:35	11:50	12:10	12:34	12:54	13:14	13:34	13:54	14:19	14:39	14:59	15:14
Dromard Terrace (375)	09:22	09:54	10:24	10:54	11:07	11:25	11:40	11:55	12:15	12:39	12:59	13:19	13:39	13:59	14:24	14:44	15:04	15:19

Service Number	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Hollyville Lawn (4359)	14:40	15:00	15:20	15:40	16:00	16:20	16:40	17:00	17:20	17:40	18:00	18:20	18:55	19:25	19:55	20:30	21:05	21:35
Palmerstown Crescent (4888)	14:46	15:06	15:26	15:46	16:06	16:26	16:46	17:06	17:26	17:46	18:06	18:26	19:01	19:31	20:01	20:34	21:09	21:39
Ballyfermot (2696)	14:50	15:10	15:30	15:50	16:10	16:30	16:50	17:10	17:30	17:50	18:10	18:30	19:05	19:35	20:05	20:38	21:13	21:43
Kylemore Luas (2786)	14:57	15:17	15:37	15:57	16:17	16:37	16:57	17:17	17:37	17:57	18:17	18:37	19:12	19:41	20:11	20:44	21:19	21:49
Crumlin Hospital (1421)	15:03	15:23	15:43	16:03	16:23	16:43	17:03	17:23	17:43	18:03	18:23	18:43	19:18	19:46	20:16	20:48	21:23	21:53
Scoil Colm (2466)	15:07	15:27	15:47	16:07	16:27	16:47	17:07	17:27	17:47	18:07	18:27	18:47	19:22	19:50	20:20	20:52	21:27	21:57
Sundrive Park (2497)	15:11	15:31	15:51	16:11	16:31	16:51	17:11	17:31	17:51	18:11	18:31	18:51	19:26	19:54	20:24	20:56	21:32	22:02
Westfield Road (2474)	15:14	15:34	15:54	16:14	16:34	16:54	17:14	17:34	17:54	18:14	18:34	18:54	19:29	19:57	20:27	20:59	21:34	22:04
Rathmines (4527)	15:18	15:38	15:58	16:18	16:38	16:58	17:18	17:38	17:58	18:18	18:38	18:58	19:33	20:01	20:31	21:03	21:38	22:08
Oakley Road (2790)	15:22	15:42	16:01	16:21	16:41	17:01	17:21	17:41	18:01	18:21	18:41	19:01	19:36	20:04	20:34	21:07	21:42	22:12
Baggot Street (781)	15:30	15:50	16:08	16:28	16:48	17:08	17:28	17:48	18:08	18:28	18:48	19:08	19:43	20:09	20:39	21:12	21:47	22:17
RDS Ballsbridge (416)	15:34	15:54	16:12	16:32	16:52	17:12	17:32	17:52	18:12	18:32	18:52	19:12	19:47	20:13	20:43	21:16	21:51	22:21
Dromard Terrace (375)	15:39	15:59	16:17	16:37	16:57	17:17	17:37	17:57	18:17	18:37	18:57	19:17	19:52	20:18	20:48	21:23	21:58	22:28

Service Number	18	18	18
Hollyville Lawn (4359)	22:05	22:35	23:05
Palmerstown Crescent (4888)	22:09	22:39	23:09
Ballyfermot (2696)	22:13	22:43	23:13
Kylemore Luas (2786)	22:17	22:47	23:17
Crumlin Hospital (1421)	22:21	22:51	23:21
Scoil Colm (2466)	22:25	22:55	23:25
Sundrive Park (2497)	22:29	22:59	23:29
Westfield Road (2474)	22:30	23:00	23:30
Rathmines (4527)	22:34	23:04	23:34
Oakley Road (2790)	22:37	23:07	23:37
Baggot Street (781)	22:42	23:12	....
RDS Ballsbridge (416)	22:46	23:16	....
Dromard Terrace (375)	22:52	23:22	....

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Sandymount - Palmerstown **18** **Sunday** **Valid from 23rd of January 2022**

Service Number	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Newgrove Avenue (385)	08:35	09:05	09:35	10:05	10:35	11:05	11:20	11:40	12:00	12:20	12:40	13:00	13:20	13:40	14:00	14:20	14:40	15:00
RDS Ballsbridge (486)	08:40	09:10	09:40	10:10	10:40	11:10	11:25	11:45	12:05	12:25	12:45	13:05	13:25	13:45	14:05	14:25	14:45	15:05
Burlington Road (754)	08:43	09:13	09:43	10:13	10:43	11:13	11:29	11:49	12:09	12:29	12:49	13:09	13:29	13:49	14:09	14:29	14:49	15:09
Ranelagh Luas (2791)	08:47	09:17	09:47	10:17	10:47	11:17	11:34	11:54	12:14	12:34	12:54	13:14	13:34	13:54	14:14	14:34	14:54	15:14
Rathmines Garda Stn (1077)	08:51	09:21	09:51	10:21	10:51	11:21	11:38	11:58	12:18	12:38	12:58	13:18	13:38	13:58	14:18	14:38	14:58	15:18
Sundrive Road (2485)	08:56	09:26	09:57	10:27	10:57	11:27	11:45	12:05	12:25	12:45	13:05	13:25	13:45	14:05	14:25	14:45	15:05	15:25
Scoil Una Naofa (2450)	09:00	09:31	10:02	10:32	11:02	11:32	11:50	12:10	12:30	12:50	13:10	13:30	13:50	14:10	14:30	14:50	15:10	15:30
Crumlin Hospital (2101)	09:04	09:35	10:07	10:37	11:07	11:37	11:55	12:15	12:35	12:55	13:15	13:36	13:56	14:15	14:35	14:55	15:15	15:35
Kylemore Road (2781)	09:09	09:40	10:13	10:43	11:13	11:43	12:02	12:22	12:43	13:03	13:23	13:45	14:05	14:23	14:43	15:03	15:23	15:43
Ballyfermot Comm Cen (2668)	09:15	09:46	10:21	10:51	11:21	11:51	12:10	12:30	12:52	13:12	13:32	13:54	14:14	14:32	14:52	15:12	15:32	15:52
Kennelsfort Green (2208)	09:19	09:50	10:25	10:55	11:25	11:55	12:14	12:34	12:56	13:16	13:36	13:59	14:19	14:36	14:56	15:16	15:36	15:56
Hollyville Lawn (4357)	09:23	09:54	10:29	10:59	11:29	11:59	12:20	12:40	13:02	13:22	13:42	14:06	14:26	14:42	15:02	15:22	15:42	16:02

Service Number	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Newgrove Avenue (385)	15:20	15:40	16:00	16:20	16:40	17:00	17:20	17:40	18:00	18:20	18:40	19:00	19:30	20:00	20:30	21:05	21:35	22:05
RDS Ballsbridge (486)	15:25	15:45	16:05	16:25	16:45	17:05	17:25	17:45	18:05	18:25	18:45	19:05	19:35	20:05	20:35	21:10	21:40	22:10
Burlington Road (754)	15:29	15:49	16:09	16:29	16:49	17:09	17:29	17:49	18:09	18:29	18:49	19:09	19:39	20:09	20:39	21:14	21:44	22:14
Ranelagh Luas (2791)	15:34	15:54	16:14	16:34	16:54	17:14	17:34	17:54	18:14	18:34	18:54	19:14	19:44	20:14	20:44	21:19	21:49	22:19
Rathmines Garda Stn (1077)	15:38	15:58	16:18	16:38	16:58	17:18	17:38	17:58	18:18	18:38	18:58	19:18	19:48	20:18	20:48	21:22	21:52	22:22
Sundrive Road (2485)	15:45	16:05	16:25	16:45	17:05	17:25	17:45	18:05	18:25	18:45	19:05	19:25	19:55	20:25	20:55	21:28	21:58	22:28
Scoil Una Naofa (2450)	15:50	16:10	16:30	16:50	17:10	17:30	17:50	18:10	18:30	18:50	19:10	19:30	20:00	20:30	21:00	21:32	22:02	22:32
Crumlin Hospital (2101)	15:55	16:15	16:35	16:55	17:15	17:35	17:55	18:15	18:35	18:55	19:15	19:35	20:04	20:34	21:04	21:36	22:06	22:36
Kylemore Road (2781)	16:03	16:23	16:43	17:03	17:23	17:43	18:03	18:23	18:41	19:01	19:21	19:41	20:09	20:39	21:09	21:41	22:11	22:41
Ballyfermot Comm Cen (2668)	16:12	16:32	16:52	17:12	17:32	17:52	18:12	18:32	18:48	19:08	19:28	19:48	20:16	20:46	21:16	21:46	22:16	22:46
Kennelsfort Green (2208)	16:16	16:36	16:56	17:16	17:36	17:56	18:16	18:36	18:52	19:12	19:32	19:52	20:20	20:50	21:20	21:49	22:19	22:49
Hollyville Lawn (4357)	16:22	16:42	17:02	17:22	17:42	18:02	18:22	18:42	18:58	19:18	19:38	19:58	20:26	20:56	21:26	21:53	22:23	22:53

Service Number	18	18	18
Newgrove Avenue (385)	22:35	23:05	23:35
RDS Ballsbridge (486)	22:40	23:10	23:40
Burlington Road (754)	22:44	23:14	23:42
Ranelagh Luas (2791)	22:49	23:19	23:48
Rathmines Garda Stn (1077)	22:51	23:21	23:50
Sundrive Road (2485)	22:56	23:26	23:54
Scoil Una Naofa (2450)	23:00	23:30	23:58
Crumlin Hospital (2101)	23:04	23:34	24:03
Kylemore Road (2781)	23:09	23:39	....
Ballyfermot Comm Cen (2668)	23:14	23:44	....
Kennelsfort Green (2208)	23:17	23:47	....
Hollyville Lawn (4357)	23:21	23:51	....

TFI TRANSPORT FOR IRELAND

Go-Ahead Ireland

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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.)	

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56a

Buses from/to
From Ringsend Rd. Towards Tallaght (The Square)
Operative Date: 11/09/2011
Version: TT 1.1

Click here to view Route 56a from From Drimnagh Rd. (Our Lady's Hospital Towards Tallaght (The Square)

Click here to view Route 56a From Drimnagh Rd. (Our Lady's Hospital) Towards Ringsend Rd

From Ringsend Road Towards Tallaght (The Square)

Bóthar na Rinne , An Carnán , Crois Bhaile Bhailcín , Bothar Bhaile an Chócaigh , Tamhlacht (An Chearnóg)

Buses leave terminus at:

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

Ringsend Road >> 22mins >> Dolphin's Barn >> 22mins >> Walkinstown Cross >> 15mins >> Cookstown Rd. >> 15mins >> Tallaght (The Square)

All times are off peak estimates

From Tallaght (The Square) Towards Ringsend Road

Tamhlacht (An Chearnóg) , Bothar Bhaile an Chócaigh , Crois Bhaile Bhailcín , An Carnán , Bóthar na Rinne

Buses leave terminus at:

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

Tallaght (The Square) >> 15mins >> Cookstown Rd. >> 15mins >> Walkinstown Cross >> 22mins >> Dolphin's Barn >> 22mins >> Ringsend Road

All times are off peak estimates

Fare Stages

22 78 Ringsend Rd. (Barrow St.)	35 65 Drimnagh Rd. (Halfway House)
23 77 Pearse St. (Macken St.)	36 64 Walkinstown Ave.
24 76 Pearse St. / Townsend St.	37 63 Ballymount Rd. Lwr. (Musgrave's)
25 75 College St. / Townsend St.	38 62 Sylvan Drive
26 74 Werburgh St. / Lord Edward St.	39 61 Ballymount Rd. (Kingswood Heights)
27 73 Kevin St. (Patrick St.) / Patrick St.	40 60 Cookstown Rd. (Belgard Inn)
28 72 Cork St. (Ardee St.)	41 59 Cookstown Rd. (Scoil Ard Mhuire)
29 71 Cork St. (Donore Ave.)	42 58 Cookstown Rd. (Ambervale)
30 70 Cork St. (Coombe Hospital)	43 57 Cookstown Rd. (St. Mark's School)
31 69 Dolphin's Barn Cross	44 56 Maplewood Rd. (Shopping Centre)
32 68 Crumlin Rd. (Loreto Convent)	45 55 Maplewood Rd. (Fettercairn Rd.)
33 67 Crumlin Rd. (Bangor Drive)	46 54 Fettercairn
34 66 Crumlin Rd. (Cooley Rd.)	47 53 Tallaght (The Square)

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

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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.)

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122

Buses from/to
From Ashington Towards Drimnagh Rd.
Operative Date: 16/04/2018
Version: TT 8.1

From Ashington Towards Drimnagh Rd.

Ashington , Teampaill Naomh Pheadair (Bothar na Cabraí) , Sráid Uí Chonaill , Coirnéal Uí Cheallaigh , Bóthar Dhroimeanaigh (Ospidéal Mhuire)

Buses leave terminus at:

Route Variations
c To City Centre

Monday to Friday				Saturday				Sunday			
06:15	06:30	06:45	07:00	06:55	07:15	07:35	07:55	08:00	08:30	09:00	09:30
07:15	07:25	07:35	07:45	08:15	08:35	08:55	09:15	10:00	10:30	10:50	11:10
07:55	08:05	08:15	08:25	09:35	09:55	10:15	10:35	11:30	11:50	12:10	12:30
08:40	08:55	09:10	09:25	10:55	11:15	11:35	11:55	12:50	13:10	13:30	13:50
09:40	10:00	10:20	10:40	12:15	12:35	12:55	13:15	14:10	14:30	14:50	15:10
11:00	11:20	11:40	12:00	13:35	13:55	14:15	14:35	15:30	15:50	16:10	16:30
12:20	12:40	13:00	13:20	14:55	15:15	15:35	15:55	16:50	17:10	17:30	17:50
13:40	14:00	14:20	14:40	16:15	16:35	16:55	17:15	18:10	18:30	18:50	19:10
14:58	15:10	15:22	15:34	17:35	17:55	18:15	18:35	19:30	20:00	20:30	21:00
15:46	15:58	16:10	16:22	18:55	19:15	19:45	20:15	21:30	22:00	22:30	23:00
16:34	16:46	16:58	17:10	20:45	21:15	21:45	22:15	23:30c			
17:22	17:35	17:50	18:10	22:45	23:10	23:30c					
18:30	18:50	19:15	19:45								
20:15	20:45	21:15	21:45								
22:15	22:45	23:10	23:30c								

Ashington >> 15mins >> St. Peter's Church (Cabra Rd.) >> 15mins >> O'Connell St. >> 15mins >> Kelly's Corner >> 10mins >> Drimnagh Rd. (Our Lady's Hospital)

All times are off peak estimates

From Drimnagh Rd. Towards Ashington

Bóthar Dhroimeanaigh (Ospidéal Mhuire) , Coirnéal Uí Cheallaigh , Sráid Uí Chonaill , Teampaill Naomh Pheadair (Bothar na Cabraí) , Ashington

Buses leave terminus at:

Route Variations
c To City Centre

Monday to Friday				Saturday				Sunday			
06:30	06:45	07:00	07:15	07:05	07:25	07:45	08:05	08:00	08:30	09:00	09:30
07:30	07:40	07:50	08:00	08:25	08:45	09:05	09:25	10:00	10:30	11:00	11:20
08:10	08:20	08:35	08:50	09:45	10:05	10:25	10:45	11:40	12:00	12:20	12:40
09:05	09:20	09:35	09:50	11:05	11:25	11:45	12:05	13:00	13:20	13:40	14:00
10:10	10:30	10:50	11:10	12:25	12:45	13:05	13:25	14:20	14:40	15:00	15:20
11:30	11:50	12:10	12:30	13:45	14:05	14:25	14:45	15:40	16:00	16:20	16:40
12:50	13:10	13:30	13:50	15:05	15:25	15:35	15:55	17:00	17:20	17:40	18:00
14:10	14:30	14:50	15:10	16:15	16:35	16:55	17:15	18:20	18:40	19:00	19:20
15:28	15:40	15:52	16:04	17:35	17:55	18:15	18:35	19:40	20:00	20:30	21:00
16:16	16:28	16:40	16:52	18:55	19:15	19:35	20:00	21:30	22:00	22:30	23:00
17:04	17:16	17:28	17:40	20:30	21:00	21:30	22:00	23:30c			
18:00	18:20	18:40	19:00	22:30	23:00	23:30c					
19:20	19:40	20:05	20:30								
21:00	21:30	22:00	22:30								
23:00	23:30c										

Drimnagh Rd. (Our Lady's Hospital) >> 10mins >> Kelly's Corner >> 15mins >> O'Connell St. >> 15mins >> St. Peter's Church (Cabra Rd.) >> 15mins >> Ashington

All times are off peak estimates

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123

Buses from/to
From Walkinstown (Kilnamanagh Rd.) To Marino
Operative Date: 14/05/2018
Version: TT 8.2

From Walkinstown (Kilnamanagh Rd.) Towards Marino

Baile Bhailcín (Bóthar Chill na Manach) , Ospidéal San Séamus , Sráid Uí Chonaill , Baile Bhocht (Bóthar Chluain Life) , Marino (Ascaill Uí Ghriofa)

Buses leave terminus at:

Route Variations
c To City Centre

Monday-Friday				Saturday				Sunday			
06:10	06:30	06:50	07:02	07:00	07:15	07:30	07:45	09:10	09:40	10:10	10:40
07:14	07:24	07:34	07:44	then every 15 minutes until 1900				11:00	11:20	11:40	12:00
07:54	08:04	08:16	08:28	19:20	19:40	20:00	20:20	12:20	12:40	13:00	13:20
then every 12 minutes until 1604				20:40	21:00	21:20	21:40	13:40	14:00	14:20	14:40
16:14	16:24	16:34	16:44	22:00	22:20	22:40	23:00	15:00	15:20	15:40	16:00
16:54	17:04	17:14	17:24	23:30c				16:20	16:40	17:00	17:20
17:36	17:48	18:00	18:12					17:40	18:00	18:20	18:40
18:24	18:36	18:48	19:00					19:00	19:20	19:40	20:00
19:15	19:30	19:45	20:00					20:30	21:00	21:30	22:00
20:20	20:40	21:00	21:20					22:30	23:00	23:30c	
21:40	22:00	22:20	22:40								
23:00	23:30c										

Walkinstown (Kilnamanagh Rd.) » 20mins » St. James's Hospital » 20mins » O'Connell St. » 15mins » Ballybough Rd. (Clonliffe Rd.) » 7mins » Marino (Griffith Ave.)

All times are off peak estimates

From Marino Towards Walkinstown (Kilnamanagh Rd.)

Marino (Ascaill Uí Ghriofa) , Baile Bhocht (Bóthar Chluain Life) , Sráid Uí Chonaill , Ospidéal San Séamus , Baile Bhailcín (Bóthar Chill na Manach)

Buses leave terminus at:

Route Variations
c To City Centre

Monday-Friday				Saturday				Sunday			
06:10	06:30	06:44	06:56	07:00	07:15	07:30	07:45	08:20	08:50	09:20	09:50
07:08	07:20	07:30	07:40	08:00	08:15	08:30	08:45	10:20	10:40	11:00	11:20
07:50	08:00	08:10	08:20	09:00	09:15	09:30	09:45	11:40	12:00	12:20	12:40
08:30	08:40	08:52	09:04	09:55	10:05	10:20	10:35	13:00	13:20	13:40	14:00
then every 12 minutes until 1604				then every 15 minutes until 1850				14:20	14:40	15:00	15:20
16:14	16:24	16:36	16:48	19:10	19:30	19:50	20:10	15:40	16:00	16:20	16:40
17:00	17:12	17:24	17:36	20:30	20:50	21:10	21:30	17:00	17:20	17:40	18:00
17:48	18:00	18:12	18:24	21:50	22:10	22:30	22:50	18:20	18:40	19:00	19:20
18:36	18:48	19:00	19:15	23:10	23:30c			19:40	20:00	20:30	21:00
19:30	19:45	20:00	20:20					21:30	22:00	22:30	23:10
20:40	21:00	21:20	21:40					23:30c			
22:00	22:20	22:45	23:10								
23:30c											

Marino (Griffith Ave.) » 7mins » Ballybough Rd. (Clonliffe Rd.) » 15mins » O'Connell St. » 20mins » St. James's Hospital » 20mins » Walkinstown (Kilnamanagh Rd.)

All times are off peak estimates

Fare Stages

36 64	Walkinstown (Kilnamanagh Rd.)	27 73	Thomas St. (Watling St.)
35 65	Drimnagh Rd. (Halfway House)	26 74	Lord Edward St.
34 66	Drimnagh Rd. (Our Lady's Hospital)	25 75	O'Connell St.
33 67	Galtymore Rd. (Cooley Rd.)	24 76	Parnell St. / Cumberland St.
32 68	Galtymore Rd. (Sperrin Rd.)	23 77	Summerhill Parade (Canal Bridge)

A A A

150

Buses from/to
From Hawkins St. Towards Rossmore
Operative Date: 18/06/2017
Version: TT 7.1

Click here to view Route 150 from Clogher Rd. towards Rossmore.

Click here to view Route 150 from Clogher Rd. towards Hawkins St.

From Hawkins St. Towards Rossmore

Sráid Hawkins , Sráid Chaoimhin (Sráid Phádraig) / Sráid Phádraig (Sráid an Déin) , Ascaill Dhún Uabhair (An Cuarbhóthar Theas) , Bóthar San Aignéas , Ros Mór

Buses leave terminus at:

Monday - Friday				Saturday				Sunday			
06:35	06:55	07:15	07:35	06:45	07:15	07:45	08:15	08:30	09:00	09:30	10:00
07:55	08:10	08:25	08:40	08:45	09:15	09:45	10:15	10:30	11:00	11:30	12:00
08:55	09:10	09:30	09:50	10:45	11:15	11:35	11:55	12:30	13:00	13:30	14:00
10:10	10:30	10:50	11:10	12:15	12:35	12:55	13:15	14:30	15:00	15:30	16:00
11:30	11:50	12:10	12:30	13:35	13:55	14:15	14:35	16:30	17:00	17:30	18:00
12:50	13:10	13:30	13:50	14:55	15:15	15:35	15:55	18:30	19:00	19:30	20:00
14:10	14:30	14:50	15:10	16:15	16:35	16:55	17:15	20:30	21:00	21:30	22:00
15:30	15:50	16:10	16:25	17:35	17:55	18:15	18:35	22:30	23:00	23:30	
16:40	16:55	17:10	17:25	19:00	19:30	20:00	20:30				
17:40	17:55	18:10	18:30	21:00	21:30	22:00	22:30				
18:50	19:10	19:35	20:00	23:00	23:30						
20:30	21:00	21:30	22:00								
22:30	23:00	23:30									

Hawkins St. >> 5mins >> Kevin St. (Patrick St.) / Patrick St. (Dean St.) >> 14mins >> Donore Ave. (South Circular Rd.) >> 8mins >> St. Agnes Rd. >> 13mins >> Rossmore

All times are off peak estimates

From Rossmore Towards Hawkins St.

Ros Mór , Bóthar San Aignéas , Ascaill Dhún Uabhair (An Cuarbhóthar Theas) , Sráid Chaoimhin (Sráid Phádraig) / Sráid Phádraig (Sráid an Déin) , Sráid Hawkins

Buses leave terminus at:

Monday - Friday				Saturday				Sunday			
06:20	06:40	07:00	07:15	07:00	07:30	08:00	08:30	08:15	08:45	09:15	09:45
07:30v	07:45v	08:00v	08:15v	09:00	09:30	10:00	10:30	10:15	10:45	11:15	11:45
08:30v	08:45v	09:00v	09:15	11:00	11:30	12:00	12:20	12:15	12:45	13:15	13:45
09:30	09:45	10:00	10:20	12:40	13:00	13:20	13:40	14:15	14:45	15:15	15:45
10:40	11:00	11:20	11:40	14:00	14:20	14:40	15:00	16:15	16:45	17:15	17:45
12:00	12:20	12:40	13:00	15:20	15:40	16:00	16:20	18:15	18:45	19:15	19:45
13:20	13:40	14:00	14:20	16:40	17:00	17:20	17:40	20:15	20:45	21:15	21:45
14:40	15:00	15:20	15:40	18:00	18:20	18:40	19:00	22:15	22:45	23:20	
16:00	16:20	16:40	17:00	19:20	19:45	20:15	20:45				
17:20	17:40	18:00	18:25	21:15	21:45	22:15	22:45				
18:50	19:15	19:40	20:05	23:20							
20:30	20:55	21:20	21:50								
22:20	22:50	23:20									

Route Variations
v Via Ardee Row and St. Luke's Avenue

Rossmore >> 13mins >> St. Agnes Rd. >> 8mins >> Donore Ave. (South Circular Rd.) >> 14mins >> Kevin St. (Patrick St.) / Patrick St. (Dean St.) >> 5mins >> Hawkins St.

All times are off peak estimates

Fare Stages

25 75 Hawkins St.

32 68 Kildare Rd. (Bangor Rd.)

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151

Buses from/to
From Docklands (East Rd.) To Foxborough (Balgaddy Rd.)
Operative Date: 06/09/2015
Version: TT 5.1

Click here to view Route 151 from Hawkins St. towards Foxborough (Balgaddy Rd.)

Click here to view Route 151 from Eden Quay Towards Docklands (East Rd.)

From Docklands (East Rd.) Towards Foxborough (Balgaddy Rd.)

Ceantar na nDugaí (An Bóthar Thoir) , Sráid an Dáma / Cé Urumhan Íochtarach , An Carnán , Bóthar Dhroimeanaigh , An Pháirc Thiar , Baile an tSionnaigh

Buses leave terminus at:

Route Variations
f From Docklands and departs Eden Quay South at 23:30

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

Docklands (East Rd.) >> 10mins >> Dame St. / Ormond Quay >> 15mins >> Dolphin's Barn >> 15mins >> Drimnagh Rd. >> 15mins >> Parkwest >> 15mins >> Foxborough

All times are off peak estimates

From Foxborough (Balgaddy Rd.) Towards Docklands (East Rd.)

Baile an tSionnaigh , An Pháirc Thiar , Bóthar Dhroimeanaigh , An Carnán , Sráid an Dáma / Cé Urumhan Íochtarach , Ceantar na nDugaí (An Bóthar Thoir)

Buses leave terminus at:

Route Variations
t To Eden Quay only

Monday to Friday				Saturday				Sunday			
06:00	06:15	06:30	06:45	06:30	06:50	07:10	07:30	07:30	08:00	08:30	09:00
07:00	07:15	07:30	07:45	07:50	08:10	08:30	08:50	09:30	10:00	10:30	11:00
08:00	08:20	08:40	09:00	09:10	09:30	09:50	10:10	11:30	12:00	12:30	13:00
09:20	09:40	10:00	10:20	10:30	10:50	11:10	11:30	13:25	13:50	14:20	14:50
10:40	11:00	11:20	11:40	11:50	12:10	12:30	12:50	15:20	15:50	16:20	16:50
12:00	12:20	12:40	13:00	13:10	13:30	13:50	14:10	17:20	17:50	18:20	18:50
13:20	13:40	14:00	14:20	14:30	14:50	15:10	15:30	19:10	19:30	20:00	20:30
14:40	15:00	15:20	15:40	15:50	16:10	16:30	16:50	21:00	21:30	22:00	22:30
16:00	16:20	16:40	17:00	17:10	17:30	17:50	18:10	23:00	23:30t		
17:20	17:40	18:00	18:20	18:30	18:50	19:10	19:30				
18:40	19:00	19:30	20:00	20:00	20:30	21:00	21:30				
20:30	21:00	21:30	22:00	22:00	22:30	23:00	23:30t				
22:30	23:00	23:30t									

Foxborough >> 15mins >> Parkwest >> 15mins >> Drimnagh Rd. >> 15mins >> Dolphin's Barn >> 15mins >> Dame St. / Ormond Quay >> 10mins >> Docklands (East Rd.)

All times are off peak estimates

Fare Stages

22 78 Docklands (East Rd.)

35 65 Drimnagh Rd. (Halfway House)