Proposed Residential Development - St Paul's, Raheny, Dublin 5

Client: Crekav Trading GP Limited

Traffic & Transport Assessment and Mobility Management Plan

PROPOSED RESIDENTIAL DEVELOPMENT, ST PAUL'S, RAHENY

Description:

Traffic & Transport Assessment and Mobility Management Plan

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PROPOSED RESIDENTIAL DEVELOPMENT, ST PAUL'S, RAHENY

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1 INTRODUCTION

1.1 Background

1.1.1 ILTP Consulting were commissioned by Crekav Trading GP Limited to undertake a new Traffic and Transport Assessment (TTA) for a Proposed Development on lands at St Paul's, Raheny, Dublin 5.

1.1.2 The Proposed Development consists of a residential development comprising 657 no. apartment units, in addition to an ancillary commercial creche and public open space.

1.2 Purpose of Report

1.2.1 The primary purpose of this TTA is to assess the potential impact the latest Proposed Development may have on the surrounding road network and to identify measures to mitigate these impacts and promote sustainable transport patterns.

1.2.2 This Traffic & Transport Assessment sets out to assess:

- Existing traffic conditions
- Integration with adjoining developments and surrounding area
- Public transport provisions
- Proposed access arrangements for the development
- Proposed parking arrangements
- Effect on road network of increased traffic volumes from Proposed Development

1.2.3 The report also contains the Mobility Management Plan / Travel Plan for the development and sets out the Construction Traffic Impact Assessment.

1.3 Methodology

1.3.1 In order to assess the traffic impact of the Proposed Development it was first necessary to assess the current traffic situation in the area. Several site visits were undertaken by ILTP, most recently in March 2019, and traffic count data was collated in the environs of the Proposed Development to determine traffic flows.

1.3.2 A desktop study relating to the Proposed Development was undertaken by ILTP in 2019, concluding in September 2019.

1.3.3 ILTP calculated the estimated trip rates from the Proposed Development and added these figures to the base flows. A Picady analysis was also undertaken to assess the capacity of the proposed access onto Sybil Hill Road. LinSig Traffic Signal Junction modelling software was also utilised to assess the capacity of the adjacent Howth Road / Sybil Hill Road junction with the Proposed Development in place.

1.3.4 ILTP then assessed what impact the development had on the road network based on the recent traffic data.

1.3.5 A study of public transport provisions in the area was also carried out to determine the likely usage of PT services by residents in the new development.

1.3.6 As part of this TTA ILTP have prepared a Mobility Management Plan / Travel Plan for the proposed St Paul's Residential Development, with the specific objectives of reducing in overall terms both the amount of trips generated by the development, and ensuring that greater numbers use the extensive public transport services in the immediate area.

1.3.7 ILTP also assessed the Construction Stage Impacts of the proposed St Paul's residential development on the wider road network.

1.3.8 This Traffic and Transport Assessment also takes into consideration the views of Dublin City Council as outlined as part of the pre-planning process.

1.4 Report Structure

1.4.1 The proposed St Paul's residential development and study area are described in Chapter 2.

1.4.2 Chapter 3 sets out the planning context for the Proposed Development.

1.4.3 Chapter 4 presents a description of proposed access arrangements for the development.

1.4.4 An assessment of car and cycle parking provision and arrangements is made in Chapter 5.

1.4.5 Chapter 6 describes the data taken from traffic surveys and site appraisals undertaken by ILTP.

1.4.6 Trip Generation and Trip Distribution figures for the development are set out in Chapter 7.

1.4.7 Picady and LinSig Traffic Modelling results are presented in Chapter 8.

1.4.8 Chapter 9 includes the Construction Traffic Impact Assessment for the development.

1.4.9 The Mobility Management Plan / Travel Plan is included in Chapter 10.

1.4.10 The summary and conclusions are outlined in Chapter 11.

2 OVERVIEW OF PROPOSED DEVELOPMENT AND STUDY AREA

2.1 Proposed Development

2.1.1 The site of the Proposed Development is in Raheny, Dublin 5. The planning application site is approximately 6.7 Ha in area and located approximately 5km from Dublin City Centre. The area is largely residential with established schools, community and social facilities in the vicinity.

2.1.2 The development will consist of the construction of a residential development set out in 9 no. blocks, ranging in height from 5 to 9 storeys accommodating 657 no. apartments, residential tenant amenity spaces and a crèche. At basement level the site will accommodate car parking spaces, bicycle parking, storage, services and plant areas. Landscaping will include extensive communal amenity areas, and a proposed significant area of public open space. The Proposed Development also includes for the widening and realignment of an existing vehicular access onto Sybil Hill Road and the demolition of an existing pre-fab building to facilitate the construction of an access road from Sybil Hill Road between Sybil Hill House (a Protected Structure) and St Paul's College incorporating upgraded accesses to Sybil Hill House and St Paul's College and a proposed pedestrian crossing on Sybil Hill Road. The Proposed Development also includes for the laying of a foul water sewer in Sybil Hill Road and the routing of surface water discharge from the site via St. Anne's Park to the Naniken River and the demolition and reconstruction of existing pedestrian stream crossing in St. Anne's Park with integral surface water discharge to Naniken River.The Proposed Development layout is shown in Figure 2.1.

Figure 2.1: Site Layout (Source: OMP Architects)

2.1.3 The proposed access for the development is off the R808 Sybil Hill Road to the north of St Paul's College, and is the current access for the Vincentian's Residence (Sybil Hill House). It is proposed to upgrade the existing access to the Vincentian's Residence and extend same eastwards to provide access to the new residential development located to the rear of the school. Access to the school will remain unaltered by the Proposed Development and a gated access to the school will also be provided off the Proposed Development access to provide linkage between the Vincentian's Residence and the school.

2.1.4 The proposed residential development is located approximately 200m from Sybil Hill Road. This is beneficial in ensuring that there can be no overspill of car parking on to Sybil Hill Road and that the residential area will also remain free from external car parking.

2.2 Description of the Receiving Environment

2.2.1 The site is currently accessed from the R808 Sybil Hill Road and accommodates St Paul's College secondary school. There is also a residential facility for the Vincentian Order adjoining the site to the northeast.

2.2.2 St. Anne's Park borders the site to the north, south and east. There is also a residential development to the northwest of the site. To the west and directly across from the Proposed Development is the *'Little Sisters of the Poor'* nursing home.

2.2.3 The location of the study area is shown in Figure 2.2.

Figure 2.2: Location of Subject Site

2.3 Existing Road Network

2.3.1 The Proposed Development is located off the R808 Sybil Hill Road. This regional roadway runs north south connecting the R807 Clontarf Road with the R105 Howth Road. The R808 is a two-way roadway with pedestrian footpaths on each side and a grass verge with trees on each side in the vicinity of the subject site.

2.3.2 The Road network in the environs of the subject site is shown in Figure 2.3.

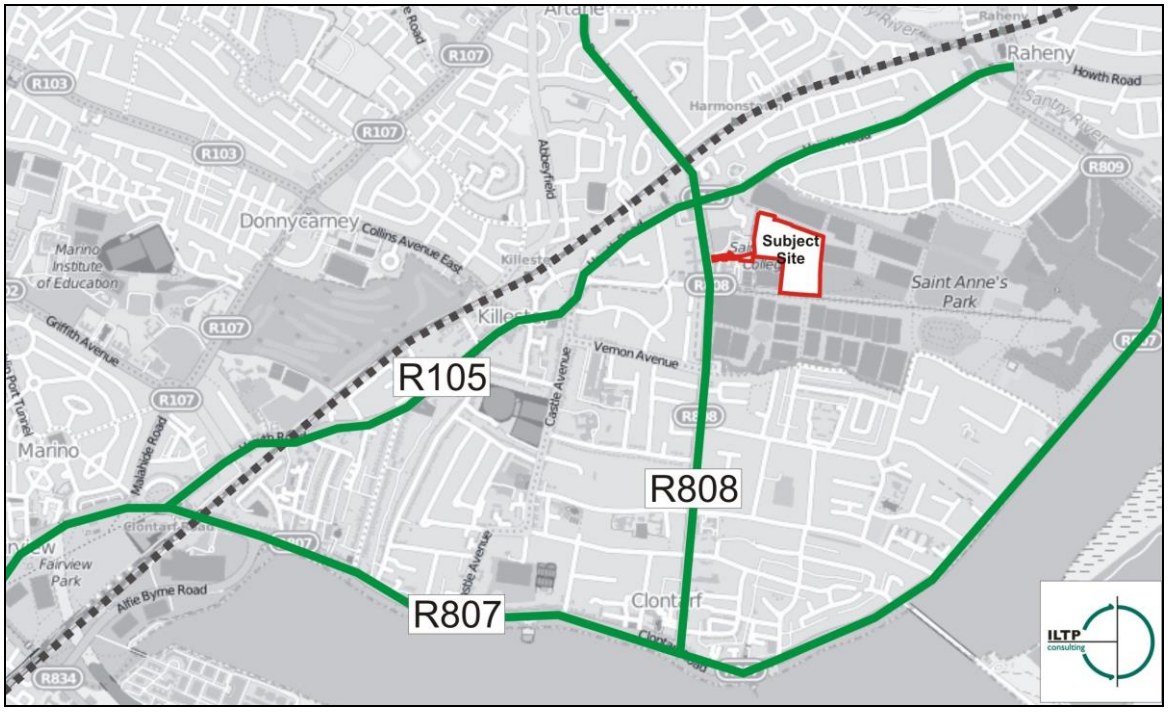

Figure 2.3: Existing Local Road Network

2.3.3 The R105 Howth Road / R808 Sybil Hill Road junction is located 200m to the north of the proposed vehicular access to the residential development. This junction has cycle paths and pedestrian crossing facilities, including a traffic signal pedestrian phase.

2.4 Existing Pedestrian and Cycle Network

2.4.1 Pedestrian facilities including footpaths are provided on the R808 adjacent to the Proposed Development. There is an existing pedestrian crossing on the R808 adjacent to the Proposed Development. This is shown in Figure 2.4.

2.4.2 In addition to the pedestrian facilities adjacent to the existing road network there are pedestrian routes in the adjacent St. Anne's Park which can be linked into from the Proposed Development.

Figure 2.4: Existing Pedestrian Crossing adjacent to St. Pauls

2.4.3 There are no dedicated cycle provisions on the R808 Sybil Hill Road. The R105 Howth Road is located 200m to the north of the access to the Proposed Development, and has dedicated cycle lanes. The cycle facilities at the Howth Road / Sybil Hill Road junction are shown in Figure 2.5.

Figure 2.5: Cycle Facilities at Howth Road / Sybil Hill Road junction

2.5 Existing Rail and Bus Services

2.5.1 The subject site is to the southeast of the DART line running from Greystones to Howth / Malahide via the City Centre, with Killester and Harmonstown rail stations in closest proximity.

2.5.2 The DART Services serving the Killester and Harmonstown stations are high capacity high frequency services connecting the subject site with the city centre and the wider Commuter and Intercity rail services. There are approximately 95 services per day in each direction and up to 6 services per direction per hour at peak times.

2.5.3 The R105 Howth Road to the north of the subject site is currently one of sixteen Quality Bus Corridors (QBCs) in Dublin. There are also regular bus services on the R105 Howth Road, and also on Vernon Avenue to the southwest. Howth Road is a primary arterial route connecting the suburbs of north Dublin with the city centre.

2.5.4 The closest bus stop is located on Howth Road approximately 360m walking distance from the subject site, as shown in Figure 2.6. This stop is served by a number of bus services, including 29A, 31, 31A, 31B and 32.

2.5.5 The bus stops to the west of the site on Sybil Hill Road and Vernon Avenue are served by the 130 bus route (also see Figure 2.6).

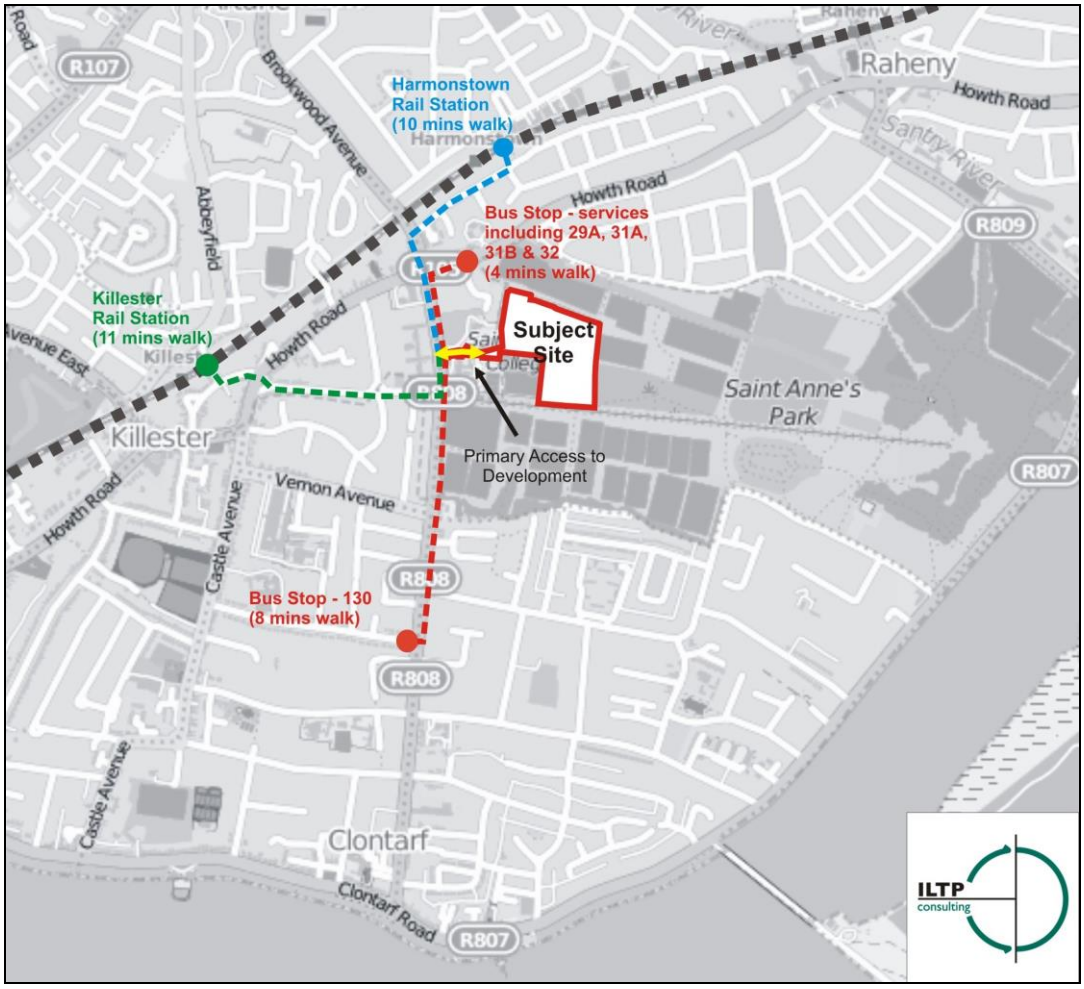

Figure 2.6: Walking Distance from Proposed Development to nearest Rail and Bus Stops

2.5.6 Bus routes in the vicinity of the site are mapped out in Figure 2.7.

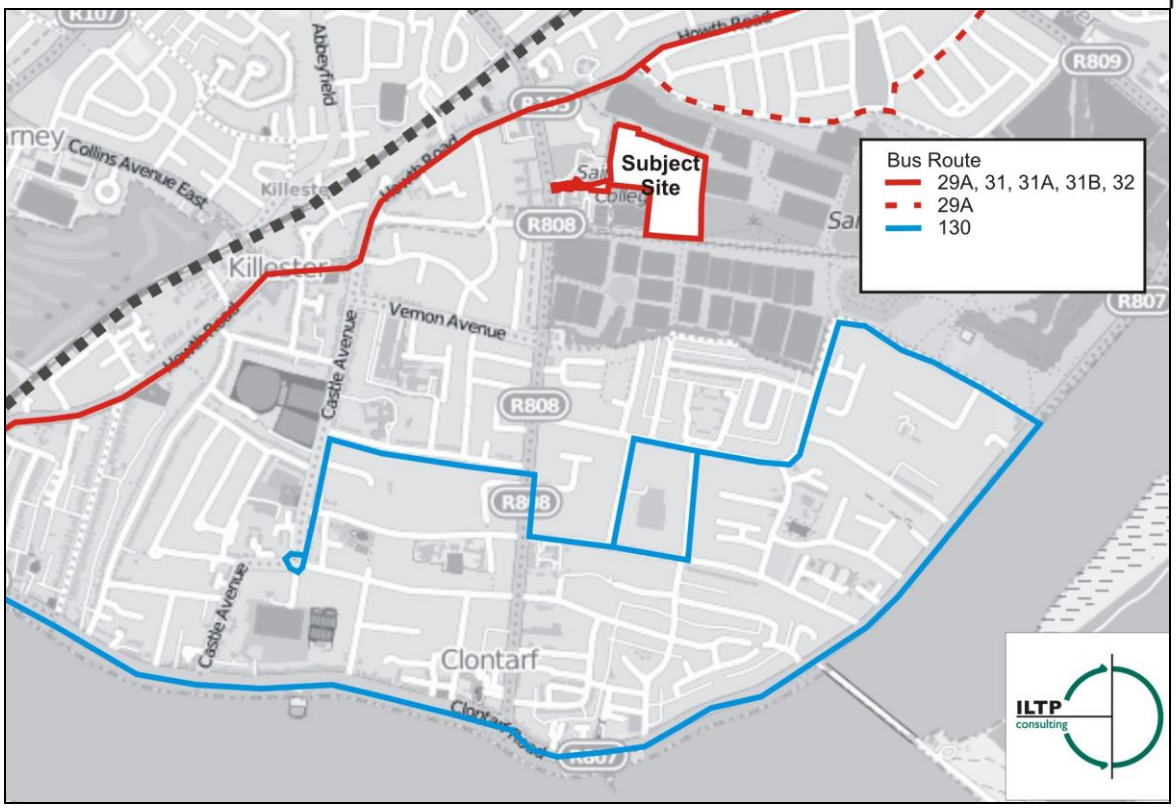

Figure 2.7: Bus Routes in vicinity of Proposed Development

2.5.7 The direction and frequency of travel of the main bus routes are as follows:

- The 130 is a high frequency service running every 8 – 10 minutes in each direction on weekdays between 7.30am and 7.15pm.
- The 29A runs from the city centre to Baldoyle and has approximately 50 services per day per direction, with 3 - 4 services per direction per hour at peak times.
- The 31/31A runs from the city centre to Howth and has approximately 44 services per day per direction, with 3 services per direction per hour at peak times.
- The 32 runs from the city centre to Malahide and has approximately 25 services per day per direction, with 2 services per direction per hour at peak times.

2.6 Future Bicycle Network

2.6.1 There are significant improvements planned for the bicycle network in the vicinity of the subject lands. The planned improvements are set out in the NTA Greater *Dublin Area Cycle Network Plan.* The planned network in the vicinity of the subject site is shown in Figure 2.8.

Figure 2.8: Planned Cycle Network (Source: NTA – GDA Cycle Network Plan)

2.6.2 It can be seen that a secondary cycle network is planned on the R808 adjacent to the subject site and a primary cycle network is planned on the R105 nearby.

2.6.3 An 8.5km section of the Dublin Bay Cycle Path was recently opened in 2017. This off-road cycle path runs from Clontarf to Sutton along Dublin Bay.

2.6.4 The roll out of the cycle network by DCC has already resulted in large increases in cycling.

2.7 Future Rail and Bus Services

2.7.1 The *National Development Plan 2018 - 2027* includes DART expansion on the nearby rail corridor, which includes for new electric / diesel hybrid trains, and further new infrastructure

2.7.2 The currently proposed Bus-Connects Route 1 Clongriffin to City Centre also routes within 1.5km of the proposed access to the St Paul's Residential Development, which would further increase the bus connectivity for the wider community (see Figure 2.9).

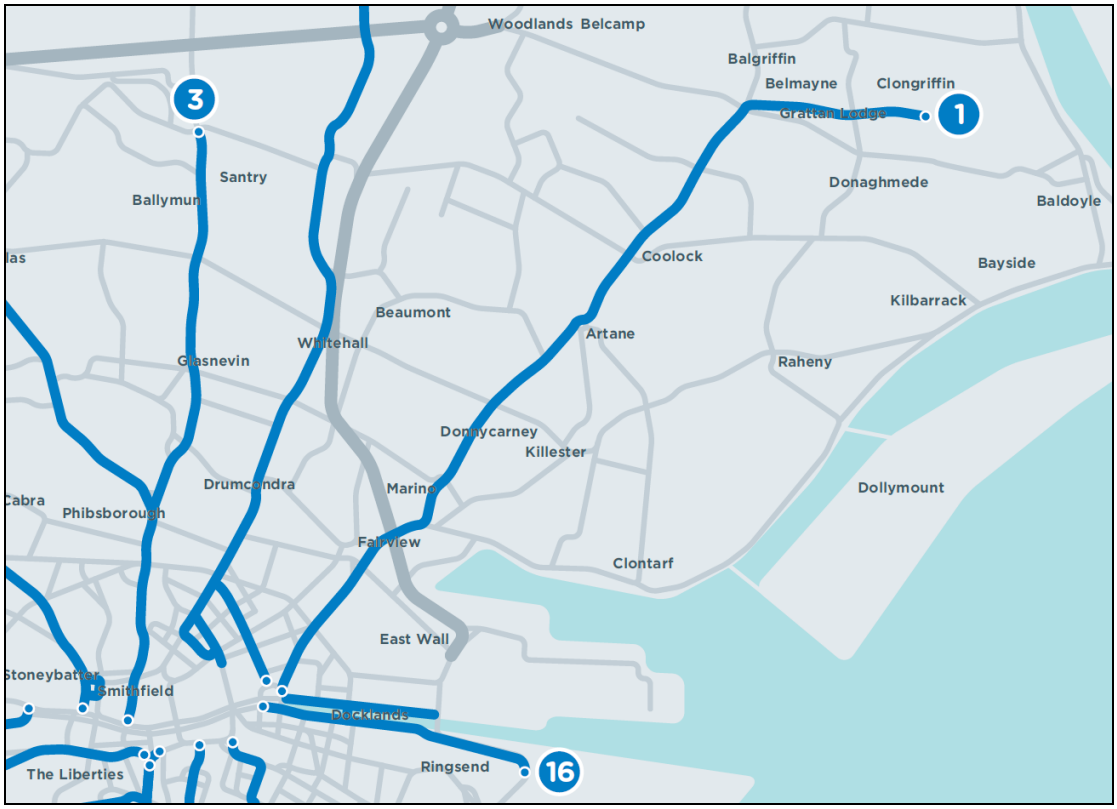

Figure 2.9: Proposed Clongriffin to City Centre BusConnects Route (Source: NTA – *Clongriffin > City Centre Core Bus Corridor Emerging Preferred Route Public Consultation November 2018*)

2.7.3 These Government public transport proposals would further enhance public transport in the area and reduce traffic flows generally in the city by increasing the attractiveness of public transport and a resultant mode shift from private car to public transport. The TTA has however as a worse case scenario not assumed any mode shift as a result of these planned infrastructure improvements.

3 TRANSPORT PLANNING CONTEXT

3.1 Overview

3.1.1 This study is being prepared having regard to key policy documents at national, regional and local levels, particularly:

- Project Ireland 2040 - National Planning Framework and RSES
- Smarter Travel A Sustainable Transport Future
- Dublin City Development Plan 2016 – 2022

3.1.2 This section also includes a brief review of the recent planning history for the subject lands and adjoining lands.

3.2 Project Ireland 2040 – National Planning Framework and RSES

3.2.1 The NPF national policy sets out an overall strategy that will guide the orderly sustainable growth and development of the state over the coming decades. This proposed to concentrate development in existing city and town centres and were existing public transport service are available.

3.2.2 The *Regional Spatial & Economic Strategy 2019 - 2031* for the Eastern Midlands area, which has just undergone a public consultation process, aligns with the NPF in that it targets more compacted and consolidated growth in existing urban centres. The RSES sets out the following as some of the main growth enablers for the Dublin metropolitan area:

- *"To achieve growth of 1.4 million people in Dublin City and Suburbs and 1.65 million people in the Dublin Metropolitan Area by 2031*
- *To realise ambitious compact development targets at least 50% of all new homes within or contiguous to the existing built up area in Dublin and at least 30% in other metropolitan settlements*
- *To deliver identified strategic development areas along high-quality public transport corridors in tandem with the delivery of infrastructure and enabling services to ensure a steady supply of sites."*

3.2.3 The proposed St Paul's SHD is within an existing well established Dublin suburban area and is strategically located in the proximity of high-quality rail and bus public transport services, so is fully consistent with the NPF and RSES policies

3.3 Smarter Travel A Sustainable Transport Future 2009-2020

3.3.1 *Smarter Travel A Sustainable Transport Future 2009-2020*, recognises the vital importance of continued investment in transport to ensure an efficient economy and continued social development, but it also sets out the necessary steps to ensure that people choose more sustainable transport modes such as walking, cycling and public transport. The policy is a response to the fact that continued growth in demand for road transport is not sustainable from a number of angles as it will lead to further congestion, further local air pollution, contribute to global warming, and result in negative impacts to health through promoting increasingly sedentary lifestyles. The aim of the policy document is to;

- Improve quality of life and accessibility to transport for all and, in particular, for people with reduced mobility and those who may experience isolation due to lack of transport.

- Improve economic competitiveness through maximising the efficiency of the transport system and alleviating congestion and infrastructural bottlenecks.
- Minimise the negative impacts of transport on the local and global environment through reducing localised air pollutants and greenhouse gas emissions.
- Reduce overall travel demand and commuting distances travelled by the private car
- Improve security of energy supply by reducing dependency on imported fossil fuels.

3.3.2 These are to be achieved by four main actions;

- Actions to reduce distance travelled by private car and encourage smarter travel, including focusing population growth in areas of employment and to encourage people to live in close proximity to places of employment and the use of pricing mechanisms or fiscal measures to encourage behavioral change,
- Actions aimed at ensuring that alternatives to the car are more widely available, mainly through a radically improved public transport service and through investment in cycling and walking,
- Actions aimed at improving the fuel efficiency of motorised transport through improved fleet structure, energy efficient driving and alternative technologies, and
- Actions aimed at strengthening institutional arrangements.

3.3.3 In order to ensure that the broad goals and detailed targets of the Smarter Travel document are met a series of polices and measures are recommended. These policies focus on co-coordinating land use and transport, the provision of high quality public transport and high quality routes for cycling and walking, aligning employment policy with transport planning, the implementation of mobility management plans and the use of fiscal measures to influence travel behaviour. These include:

- That 10% of all trips be made by bicycle by 2020; and
- Work related commuting by car will be reduced from a current modal share of 65% to 45%.

3.3.4 Intensification of development within established urban areas served by high capacity, high quality public transport services accords with good planning and promotes sustainable transport modes.

3.4 Dublin City Development Plan

3.4.1 The *Dublin City Development Plan 2016 – 2022* sets out the development context for the Proposed Development. The CDP zoning objectives for the area are shown in Figure 3.1

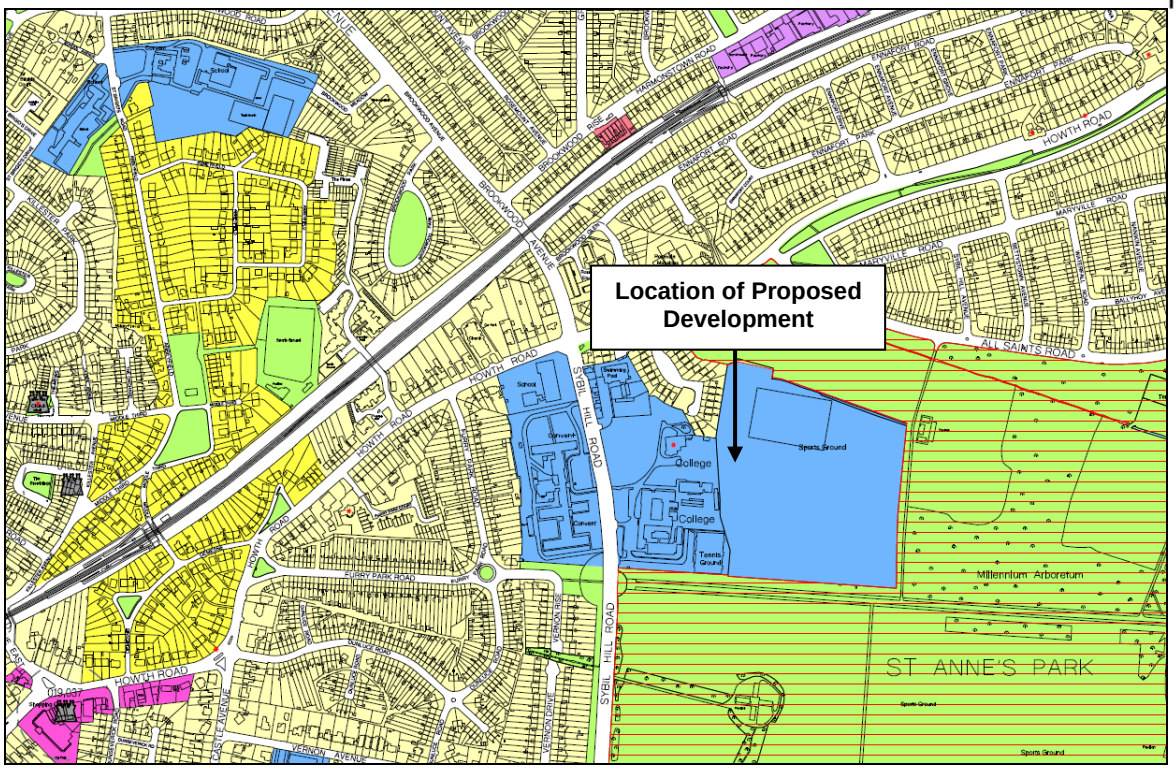

Figure 3.1 Proposed Development in context of DCC Development Plan (Source: *Dublin City Development Plan 2016 – 2022* Map B)

3.4.2 The subject site is zoned Z15 "*To protect and provide for institutional and community uses".* Residential development is "Open for consideration" on Z15 lands.

3.4.3 In terms of mode share targets by Dublin City Council (DCC), the CDP states:

> *"Increasing capacity on public transport including bus corridors, DART, suburban railway lines and Luas will continue to reduce the reliance on private car usage and provide opportunities for people to alter their travel behaviour and increase modal shift to more sustainable modes. Promoting modal change also encourages active travel (i.e. walking and cycling) in general and as a means to access public transport routes. Car clubs, whereby cars are rented for short periods, facilitate people who have limited need for a car and these clubs can help reduce car ownership levels and free up road space for more sustainable travel modes."*

3.4.4 The priority of DCC to reduce private car mode share in Dublin City is further reinforced in Policy MT2 of the CDP which states:

> *"**MT2:** Whilst having regard to the necessity for private car usage and the economic benefit to the city centre retail core as well as the city and national economy to continue to promote modal shift from private car use towards increased use of more sustainable forms of transport such as cycling, walking and public transport, and to co-operate with the NTA, Transport Infrastructure Ireland (TII) and other transport agencies in progressing an integrated set of transport objectives. Initiatives contained in the Government's 'Smarter Travel' document and in the NTA's Draft Transport Strategy are key elements of this approach."*

3.4.5 These Government and Council policies and objectives reinforce the need for quality housing and related development in the close confines of existing public transport infrastructure, as is the case with the proposed St Paul's residential development. In addition, the targeted reductions in private car mode share will serve to reduce traffic flows on the wider road network over time, particularly where high quality public transport and non-motorised alternatives are in place, as is the case in the immediate vicinity of the subject site.

3.5 Review of Planning History for Subject Lands

3.5.1 A previous SHD planning application for a development comprising 432 no. apartments and 104 no. housing units on the subject lands was previously lodged with An Bord Pleanala on 22nd December 2017 (ABP ref. 300559-18).

3.5.2 The application was granted by the Board on 3rd March 2018. This decision was subsequently quashed by the Board on 11th September 2018, by order of the High Court following a judicial review (refer Board Order ABP-302225-18).

3.6 Review of Recent Planning History for Adjacent Lands

3.6.1 A planning application was lodged with Dublin City Council by Orsigny Company Limited with Guarantee on 4th September 2017, ref. 3777/17, for a new Sports Hall and Playing Pitches on the adjoining St Paul's College lands. This application was subsequently refused by DCC on 27th March 2018, but later appealed to the An Bord Pleanala (ABP ref. 301482-18). The Board has not yet adjudicated on this case.

3.6.2 A planning application was submitted by the MKN Property Group on 16th December 2015 (DCC ref. 4242/15) for a development to be located to the immediate north of the St Paul's site, and was granted by DCC. This development includes 68 no. apartments, 8 no. houses, a creche and café/community centre. The Proposed Development was acceptable to the DCC Roads and Traffic Planning Division subject to minor conditions, and was granted on 18th February 2016. A new planning application was subsequently lodged by MKN Property Group on 23rd May 2017 (DCC ref. 2977/17), including for 3 no. apartment units in addition to minor elevational changes. This application was granted planning permission by DCC on 17th July 2017. The development has since been partially occupied by residents, however construction works are still ongoing on the Site.

3.6.3 ILTP took consideration of data and findings from these planning applications as part of this Traffic & Transport Assessment.

4 ACCESS LAYOUT

4.1 Review of Main Access Proposals

4.1.1 The proposed access for the development is off the R808 Sybil Hill Road to the north of St Paul's College, and is the current access for the Vincentian's Residence (Sybil Hill House). The proposal includes an upgraded entrance that can serve both the Proposed Development and the Vincentian's Residence to the north, in addition to providing an additional access point to St Paul's College to the south. The proposed access junction off Sybil Hill Roadis displayed in Figure 4.1.

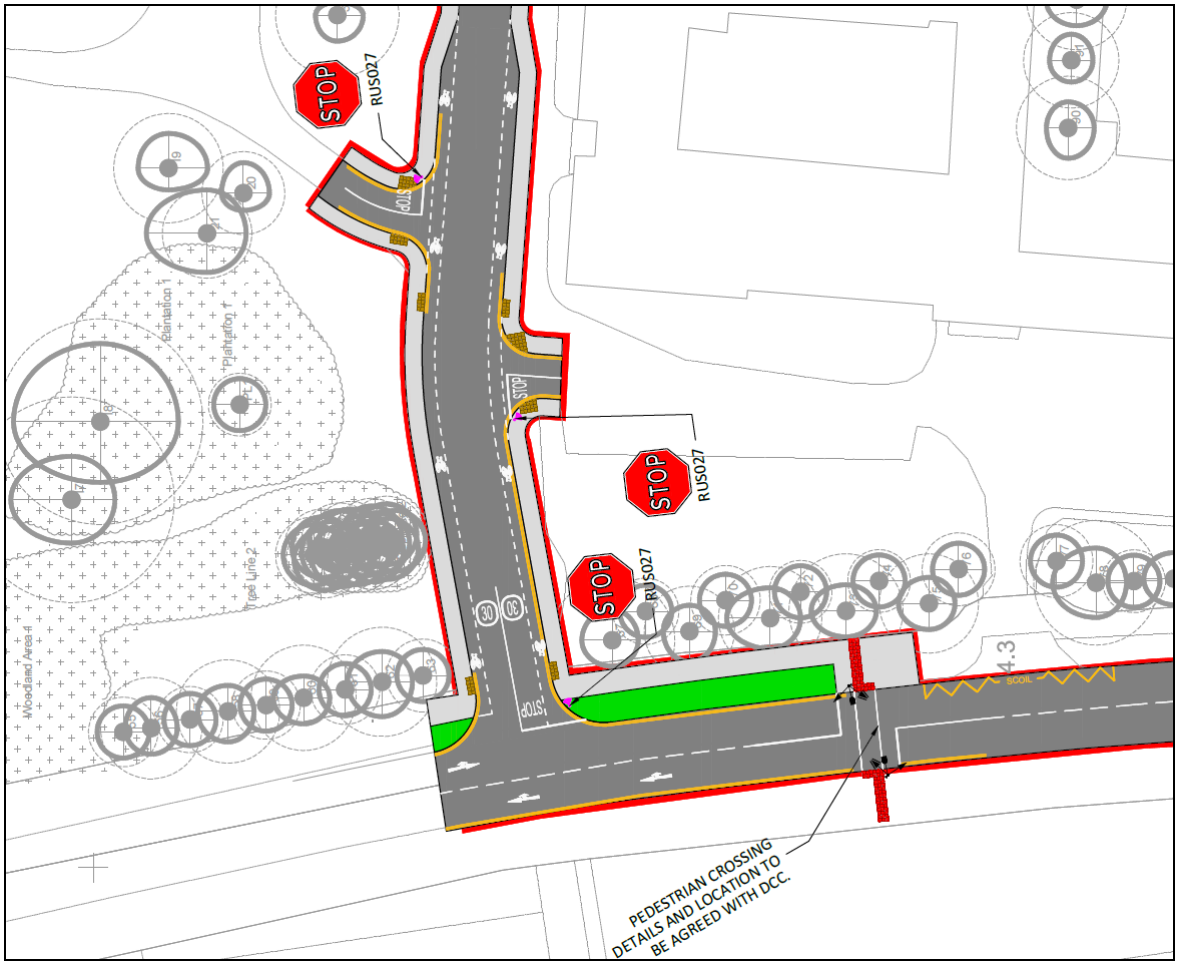

Figure 4.1: Proposed Access Junction off Sybil Hill Road (Source: O'Connor Sutton Cronin)

4.1.2 The proposed residential development is located approximately 200m from Sybil Hill Road. This is beneficial in preventing overspill of car parking on to Sybil Hill Road and ensuring that the proposed residential area will also remain free from external car parking.

4.1.3 The cross-section of the proposed access road at the Sybil Hill Road end includes:

- 2 no. 3.0m traffic lanes
- 2.0m Footpath either side of road
- 1.5m wide Cycle lanes between Sybil Hill Road and east of Vincentian's Residence

4.1.4 The proposed access road includes for on-road cycle lanes from the junction with Sybil Hill Road to beyond the access to the Vincentian's Residence, to give a safe cycle route from Sybil Hill Road to beyond the school and Vincentian's Residence access points. This cycle route will link with the DCC Cycle Network planned for the area.

4.1.5 The northern gate to the secondary school from the main access road will be gated. Pedestrians and cyclists will normally use this entrance during school hours, which is in keeping with the existing arrangements. The vehicular entrance will normally be closed and will be only used occasionally.

4.1.6 Beyond the Vincentian's Residence and school side access gate the nature of the new access road will become solely residential in nature, with landscaping and traffic management measures to ensure that cyclists and cars can share the carriageway.

4.1.7 The existing school access arrangements will not be altered by the Proposed Development.

4.2 Review of Pedestrian & Cyclist Accesses

4.2.1 The proposed residential development adjoins St. Anne's Park along three sides. Four pedestrian links are proposed between the Proposed Development and St. Anne's Park as shown in Figure 2.1. These pedestrian links could also allow direct access to the park for residents, which would further increase the use of the park and would also reduce walk and cycle distance to Bus and Dart services. The Roads Planning section of DCC previously advised that a link to the park would probably need to be gated, with opening times consistent with the park opening times. Public access would be required through the development also during park opening hours.

4.2.2 The pedestrian crossing to the south of the proposed access will provide gaps in the traffic on Sybil Hill Road, which will further aid access and egress to the Proposed Development. The final location of this pedestrian crossing will be agreed with the local authority.

4.2.3 The proposed access arrangements have been designed having regard for the National Transport Authority document *Best Practice Guide on Permeability* (2015).

4.2.4 The layout of the internal streets and pedestrian and cycle linkages to the adjacent school, park and public transport links ensure that the overall design seeks to promote greater use of sustainable travel modes and to provide good permeability for walking and cycle modes consistent with NTA guidance. The locations of the pedestrian and cycle links ensure good connectivity to the adjacent St. Anne's Park and public transport links. This should help foster greater use of public transport and help promote healthy living for the new community.

5 CAR AND CYCLE PARKING ASSESSMENT

5.1 Overview of Car Parking Standards and Car Parking Requirement

5.1.1 The required car parking provision was assessed having regard for:

- The Car Parking Standards section (Section 16.38) of the *Dublin City Development Plan 2016 – 2022*,
- The Department of Housing, Planning and Local Government document *Sustainable Urban Housing: Design Standards for New Apartments - Guidelines for Planning Authorities*, 2018,
- The nature and location of the Proposed Development, and
- The views of DCC as outlined as part of the pre-planning process.

5.1.2 For Residential land-use, Table 16.1 of the City Development Plan (CDP) Parking Standards includes a maximum provision of 1 no. car parking space per dwelling for Parking Areas / Zones 1 and 2, and a maximum provision of 1.5 per dwelling for Zone 3. The relevant extract of Table 16.1 relating to Residential land-use is shown in Figure 5.1 below, and included in full in **Appendix A**.

Residential	1 and 2 3	1 per dwelling 1.5 per dwelling

Figure 5.1 Maximum Car Parking Standard for Residential Land-Use for Parking Zones 1, 2 and 3 (Source: *Dublin City Development Plan 2016 – 2022*)

5.1.3 The proposed St Paul's residential development site is located within Parking Zone 2 of the CDP Parking Standards due to its proximity to the QBC and Harmonstown Rail Station, which is shown graphically on *Map J - Strategic Transport and Parking Areas* of the CDP and reproduced in Figure 5.2 below. The southern section of the Site is adjacent to Parking Zone 3.

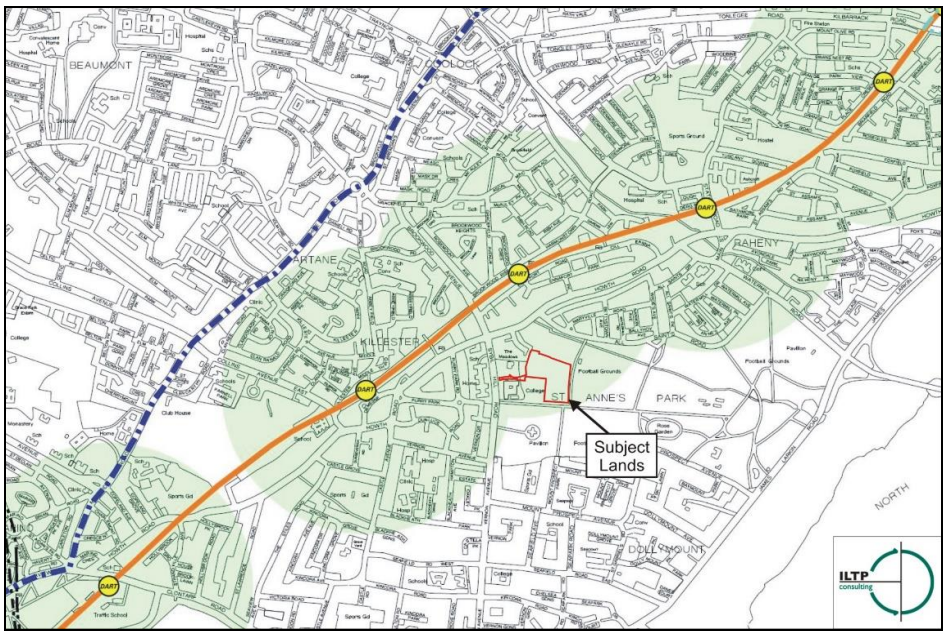

Figure 5.2 Proposed Development Site Location Relative to the CDP Parking Zones (Source: *Dublin City Development Plan 2016 - 2022 - Map J*)

5.1.4 It is noted that the CDP residential parking standards do not differentiate between apartments and houses, nor do they differentiate between 1-bed, 2-bed, 3-bed or 4-bedroom units.

5.2 Proposed Car Parking Allocation - Apartments

5.2.1 The car parking provision set out in this section is proposed for the apartment units in consideration of the CDP and 2018 Apartment Guidelines.

5.2.2 ILTP propose to apply the CDP standard of 1:1 parking space to apartment ratio for 2-bed and 3-bed apartments. ILTP further propose that zero car parking spaces be allocated to the 1-bed apartments. It is proposed that 5% of the residential parking provision be allocated for disabled access parking on an 'as-needs' basis.

5.2.3 For the apartments this equates to an overall average provision of 0.7 car parking spaces per apartment unit (see Table 5.1 below).

5.2.4 The Proposed Development also includes provision at basement level for electric car charge points at car parking spaces to enable those residents who own electric cars to charge them overnight.

5.3 Proposed Car Parking Allocation – Crèche Staff

5.3.1 It is projected that up to 17 staff members will work in the creche at any one time. The 9 no. staff car parking spaces for the crèche are proposed to be located within the underground car park. These car parking spaces are conveniently located to the lifts to allow staff to directly access the crèche via the lifts.

5.3.2 Given the location of the development and its proximity to PT services this is more than adequate to meet the needs of the creche.

5.4 Proposed Shared Car Parking Allocation – Visitors and Crèche Drop-off

5.4.1 The occasional peak parking demands for visitors to the apartments and creche drop-off would typically occur at different times of the day, and on different days of the week. The short-term peak parking demand for creche drop-off is expected to be during weekday morning and evening drop-off / pick-up periods. Similarly, peak parking demand for visitor parking for the residential units is projected to be at night and during the weekend.

5.4.2 Therefore, the level of car parking available for creche drop-off can be higher during weekdays for example when demand is greatest, while the level of apartment visitor spaces can equally be increased at weekends when visitor demand is greatest. The dual / multi-functional use of car spaces in urban locations is an efficient way of providing for these occasional peak parking demands and is also environmentally more sustainable as it reduces building quantity while maintaining an efficient and appropriate level of provision.

5.4.3 As per Table 5.1 below, it is proposed that 28 no. car parking spaces be allocated for shared use, and these will be managed by the Management Company. These spaces will be for shared use to facilitate car parking demand for creche drop-off and visitors to apartments.

5.4.4 Given that the crèche is proposed to mainly facilitate residents of the Proposed Development most will be dropped off at the crèche on foot. Therefore the proposed shared parking provision should be more than adequate to accommodate the peak drop off demand.

5.5 Proposed Car Parking Allocation - Other

5.5.1 In addition, it is proposed to provide an additional 2 no. dedicated electric car parking at surface level to enable those residents who own electric cars to charge them overnight.

5.5.2 A 'Go Car' car club facility is also proposed for the St Paul's Residential Development in order to reduce the need for car ownership whilst making cars available for residents to meet periodic car needs. The Go-Car facility will be exclusively for residential uses and would be operated and managed by the Management Company. It is proposed that 2 no. 'Go-Car' car parking spaces be provided at surface level

5.5.3 It is proposed that 5% of the total parking provision be allocated for disabled access parking on an 'as-needs' basis.

5.6 Summary of Proposed Car Parking

5.6.1 A breakdown of the proposed car parking provision for each specific land use is shown in Table 5.1.

Table 5.1 St Paul's Development – Proposed Car Parking Provision for Development

Land Use / Location	Proposed Car Parking Allocation	No. of Units	No. of Spaces	Total No. of Spaces
Basement Level	1 bed apartment	224	0	465
	2 bed apartment	378	378	
	3 bed apartment	55	55	
	Disabled Access spaces		23	
	Crèche Staff		9	
Surface Level (Other)	Visitor & Crèche Drop-off		28	34
	Disabled		2	
	Electric Car		2	
	Go Car		2	
	Total Car Parking Provision			**499**

5.6.2 It is good practice from a sustainable development perspective to apply measures to restrain private car usage. Measures such as parking control are important in encouraging alternative forms of travel to the private car. However, it is desirable that the quantum of parking should be set at a reasonable level in order to ensure illegal parking outside of the subject site is not generated. The proposed parking adheres to these principles, and to Development Plan standards and recent Government guidelines, and is appropriate for a site of this kind and location.

5.7 Proposed Cycle Parking Allocation

5.7.1 The required cycle parking provision for the proposed residential development was also determined with regard to current Development Plan Standards and the Apartment Guidelines. It is proposed to provide 1,314 no. cycle parking spaces in the basement, which equates on average to 2 no. cycle parking spaces per residential unit. It is further proposed to provide an additional 329 no. cycle parking spaces at surface level which is approximately 1 no. cycle parking space per 2 no. residential units. A portion of the proposed cycle parking provision can also be allocated to meet the cycle parking requirements of the creche.

6 TRAFFIC SURVEY & SITE APPRAISAL

6.1 Introduction

6.1.1 In order to assess the traffic impact of the Proposed Development it was first necessary to assess the current traffic situation in the area. Fully classified traffic count data in the environs of the Proposed Development was previously collated by ILTP in 2015 and 2017, with new surveys conducted in February 2019.

6.1.2 In addition, ILTP took consideration of data and findings from the *Traffic Appraisal Report*, dated November 2015, for the separate MKN development site to the immediate north of the subject site, also located on Sybil Hill Road. This report was part of a planning application (DCC ref. 4242/15) for 68 no. apartments, 8 no. houses, a community / cafe facility and a crèche, which was granted by DCC on 18th February 2016. A new planning application was subsequently lodged by MKN Property Group on 23rd May 2017 (DCC ref. 2977/17), including for 3 no. apartment units in addition to minor elevational changes. This application was granted planning permission by DCC on 17th July 2017.

6.1.3 The MKN development has since been partially occupied by residents, however construction works are still ongoing on the Site. Therefore, in order to ensure a robust and worse-case scenario Traffic Impact Assessment is carried out ILTP have assumed in their analysis that no residents have occupied the MKN development, and have applied the full projected trip generation figures from the permitted MKN development to the base flows for the St. Pauls application.

6.1.4 A Picady analysis was also undertaken to assess the capacity of the proposed St Paul's residential development access and adjacent road network.

6.1.5 ILTP also carried out a LinSig analysis of the signalised R105 Howth Road and R808 Sybil Hill Road to ascertain the impact of additional traffic flows from the proposed St Paul's residential development on the junction.

6.1.6 From these results a conclusion could be drawn as to the impact that the development will have on the overall traffic flows. Once details were available ILTP then assessed what impact the development had on the road network.

6.2 ILTP Traffic Count Surveys

6.2.1 Fully classified traffic counts in the environs of the Proposed Development were previously undertaken by ILTP in 2015 and 2017, with new surveys conducted in February 2019. These surveys included the following junctions to allow an appraisal to be made of the effect of the Proposed Development on the wider traffic network:

- The Proposed Access onto Sybil Hill Road
- Existing St Paul's College Vehicular Entrances
- R105 Howth Road / R808 Sybil Hill Road
- R808 Sybil Hill Road / Vernon Avenue

6.2.2 The purpose of the surveys was to measure current traffic flows at the Site and neighbouring junctions during the peak periods. This was of critical interest in gauging the effect the Proposed Development would have on existing traffic patterns and volumes in the area during peak flow periods.

6.2.3 The site survey also allowed sight lines and speed limits to be observed, in addition to signal phasing at nearby junctions.

6.2.4 ILTP also observed pedestrian and cyclist patterns and behaviours in the vicinity of St Paul's College and the Proposed Development.

6.2.5 The AM morning traffic count included the school opening period, and surveyed volumes of through-traffic, in addition to vehicles entering the school grounds and dropping off at the road side.

6.2.6 The existing traffic conditions on the adjoining road network are as expected for Regional and local roads in an urban / suburban location. The most significant volumes of traffic were observed from through traffic along the R105 Howth Road.

6.2.7 The locations of the recorded traffic data are shown in Figure 6.1.

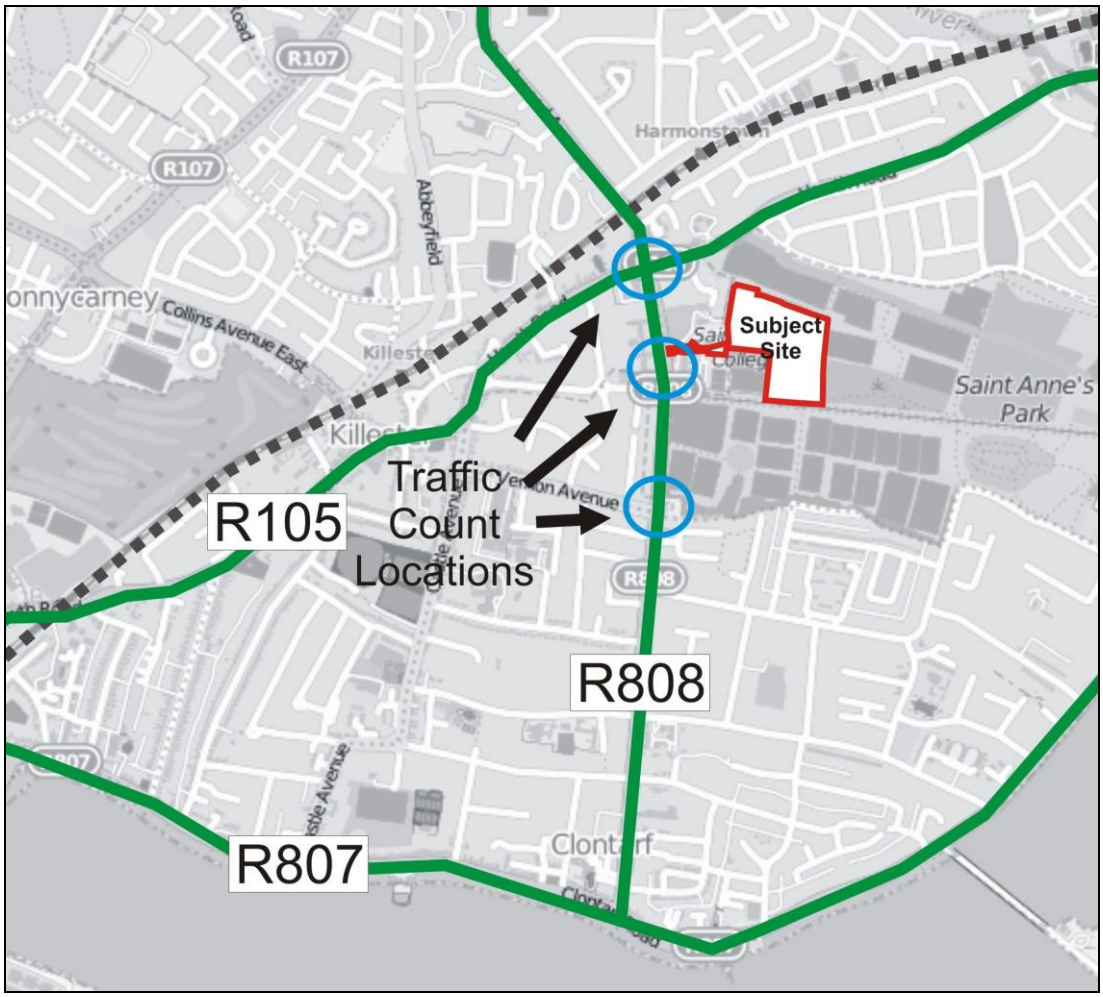

Figure 6.1: Location of Traffic Counts

6.3 R105 Howth Road / R808 Sybil Hill Road junction

6.3.1 The R105 Howth Road / R808 Sybil Hill Road junction is located 200m to the north of the proposed vehicular access to the residential development. This junction has cycle paths and pedestrian crossing facilities, including a traffic signal pedestrian phase.

6.3.2 On-site observations of the Howth Road / Sybil Hill Road intersection were conducted in 2015, 2017 and also most recently in February 2019, in order to assess the traffic signal phasing and staging arrangements, and the overall operation and performance of the junction. Assessment of the junction over this extended period also informed an appraisal of traffic growth patterns in the area.

6.3.3 Traffic on all arms was observed to move relatively freely, with intermittent queues developing on Brookwood Avenue and Sybil Hill Road during peak hours. The longest queue lengths on Sybil Hill Road were observed during the evening peak hour; up to 12 no. left turning and straight-ahead vehicles queuing at the start of the green phase, and up to 5 no. right-turning vehicles queuing. The majority of queues were observed to clear in a single cycle once the signals changed at the junction.

6.3.4 Localised queueing was also observed along Sybil Hill Road during the morning peak hour, which appeared to be largely due to vehicles dropping off pupils at the secondary and primary schools in the vicinity of the junction.

6.3.5 The traffic lights at this junction are under the control of the Dublin City Council Traffic Control System (SCATS). Traffic signal stages were observed on site to vary in duration depending on traffic demand. Detailed site measurements were therefore undertaken during the course of the traffic count surveys to establish the average duration of each stage within the overall traffic signal cycle under peak traffic demand conditions. The typical sequence of the traffic signal stages observed at the junction are shown in Figure 6.2.

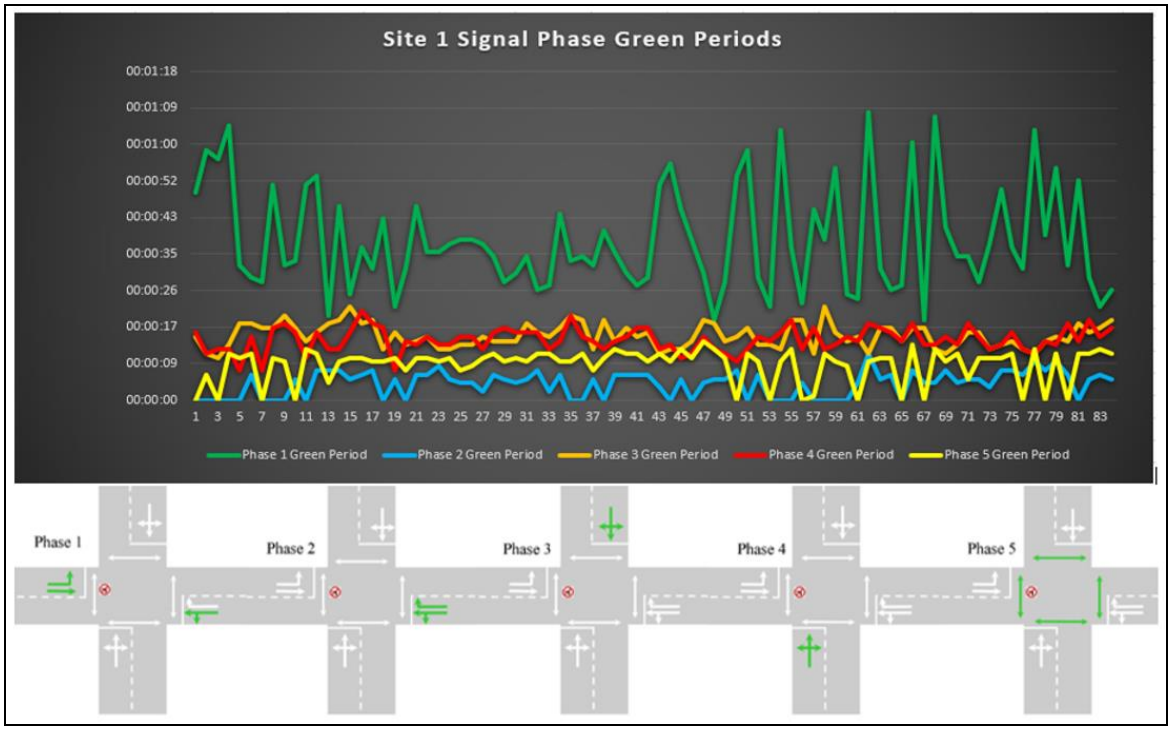

Figure 6.2: Signal Phases, Staging and Typical Green Periods for Howth Road / Sybil Hill Road Junction

6.4 R808 Sybil Hill Road / Vernon Avenue

6.4.1 Traffic count surveys were undertaken for the Sybil Hill Road / Vernon Avenue signalised T-junction in 2015, 2017, and most recently in February 2019. It was observed on site that the junction performed well in peak hour traffic, and appeared to have significant additional capacity. All queuing traffic at the start of the green phase was found to clear the junction in a single cycle.

6.5 Traffic Count Survey results

6.5.1 Detailed traffic flow survey results were obtained from the analysed survey data. In order to establish traffic growth patterns in the immediate vicinity of the subject lands the 2019 traffic count data was compared with previous 2015 and 2017 data in terms of total peak hour junction flows. This comparison is presented in Table 6.1 below.

Table 6.1: Comparison of 2019 Traffic Count Data with Previous 2015 & 2017 Data

Junction	Period	Peak Hour Total Junction Traffic Volume from Combined 2015 & 2017 Data	Peak Hour Total Junction Traffic Volume from 2019 Data	% Difference
R105 Howth Road / R808 Sybil Hill Road	Peak AM: 08:00 – 09:00	2,095 vehicles	2,074 vehicles	-1.0%
	Peak PM: 17:00 – 18:00	1,995 vehicles	1,878 vehicles	-5.9%
R808 Sybil Hill Road / Vernon Avenue	Peak AM: 08:00 – 09:00	910 vehicles	943 vehicles	+3.6%
	Peak PM: 17:00 – 18:00	890 vehicles	833 vehicles	-6.4%

6.5.2 It was found from the collated data that the recorded flows in 2019 had, on average, shown an overall decline for the area from flows previously recorded in 2015 and 2017. This is consistent with wider data, including the DCC / NTA *Canal Cordon Report 2018*, which shows that traffic to and from the city centre has decreased over the past 10 years. To ensure current traffic conditions and flow patterns are accounted for ILTP used the 2019 data as the existing 'Base Year' scenario. This 2019 traffic survey data is included in **Appendix C**.

6.5.3 The turning counts and flows for the AM 08:00 – 09:00 peak hour for the R105 Howth Road / R808 Sybil Hill Road junction are illustrated in Figure 6.3.

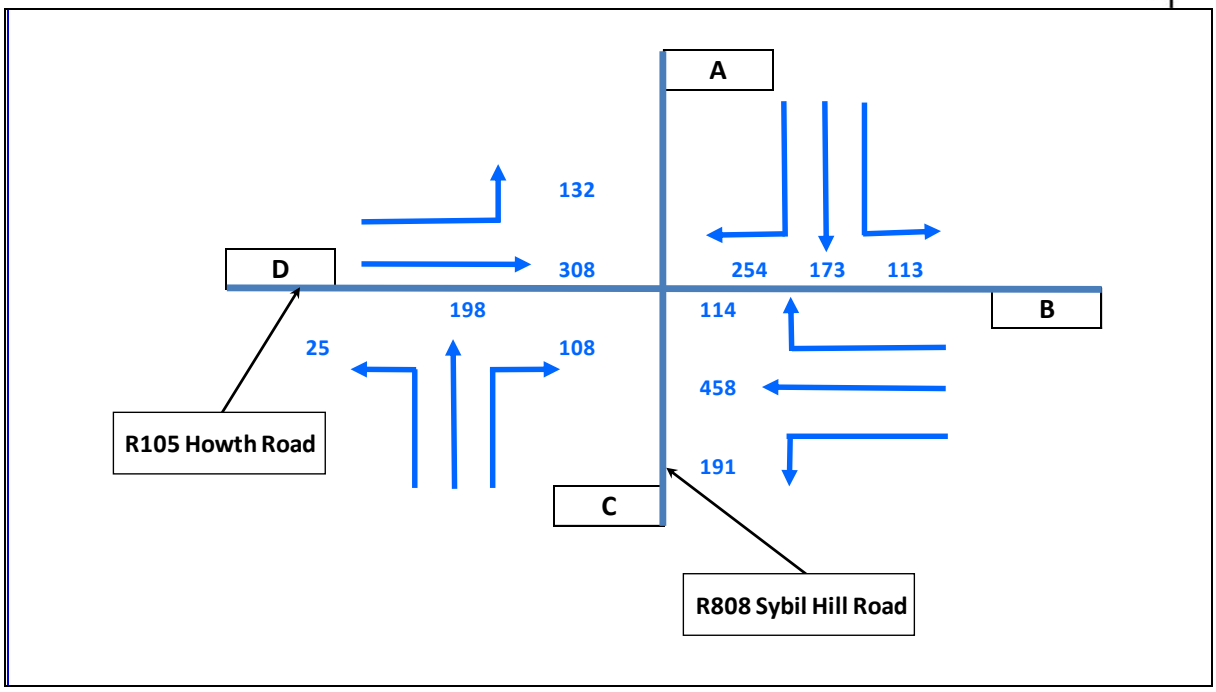

Figure 6.3: 2019 Base Year AM Peak Hour Turning Counts for R105 Howth Road / R808 Sybil Hill Road Junction

6.5.4 The corresponding turning counts and flows for the PM 17:00 – 18:00 peak hour are shown in Figure 6.4.

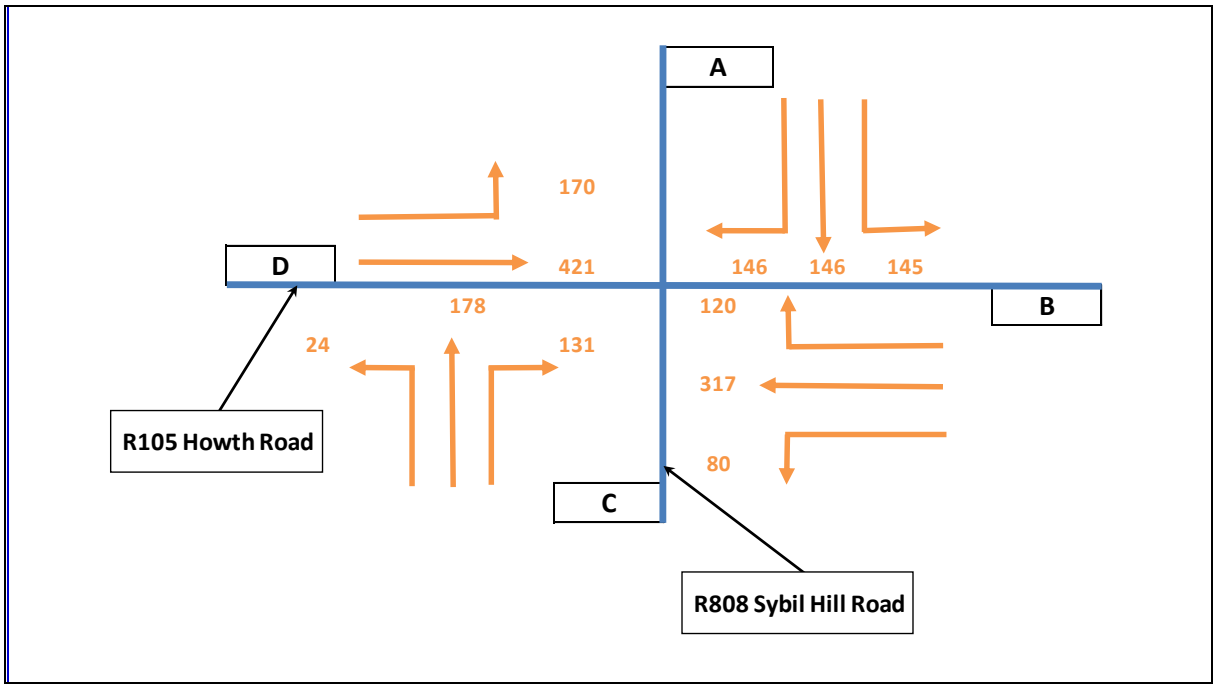

Figure 6.4: 2019 Base Year PM Peak Hour Turning Counts for R105 Howth Road / R808 Sybil Hill Road Junction

6.5.5 The turning movements in and out of the existing St Paul's College and Vincentian's Residence entrances are shown in Figures 6.5 and 6.6, which were recorded during the 2019 traffic count surveys. The turning movements shown include for:

- Northern Access – Current Vincentian Residence and proposed access for development
- Middle Access – Access to St Paul's Secondary School
- Southern Access – Access to St Paul's Secondary School

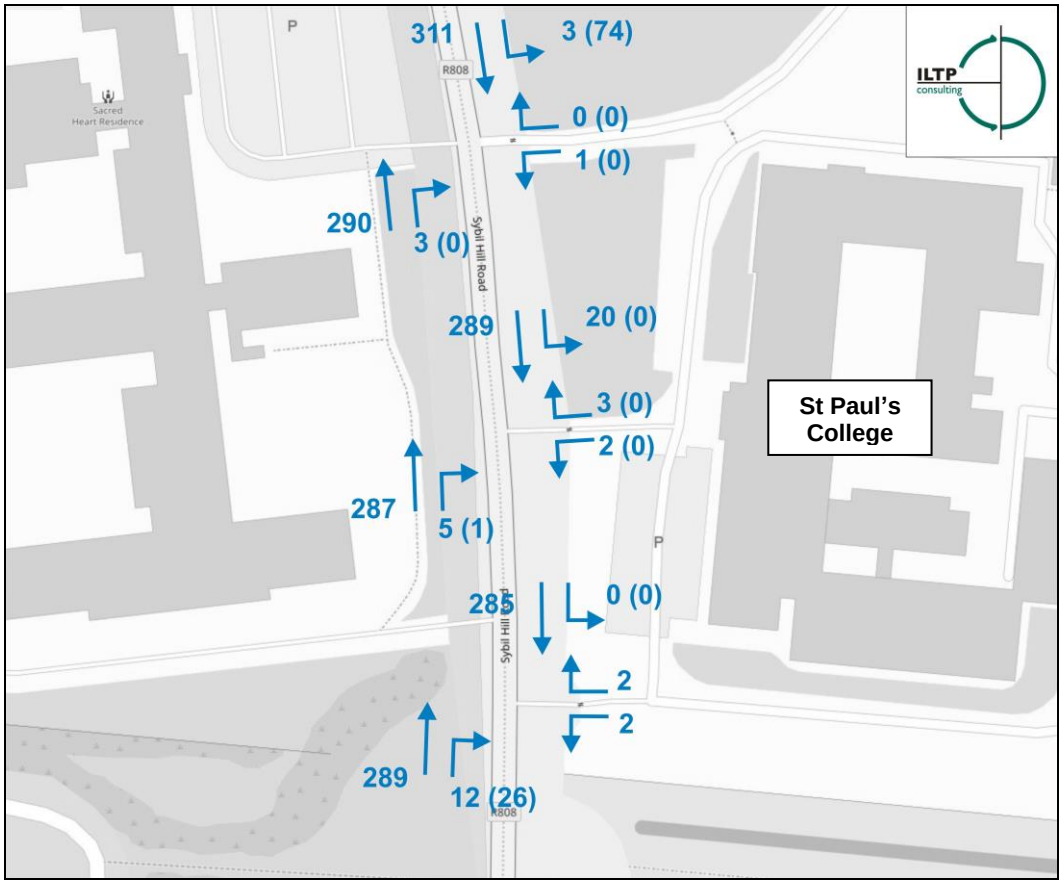

Figure 6.5: 2019 AM Peak Hour Traffic Flows and Turning Counts for St Paul's Secondary School and Vincentian's Residence
Note: Cycle movements to and from accesses denoted by ( )

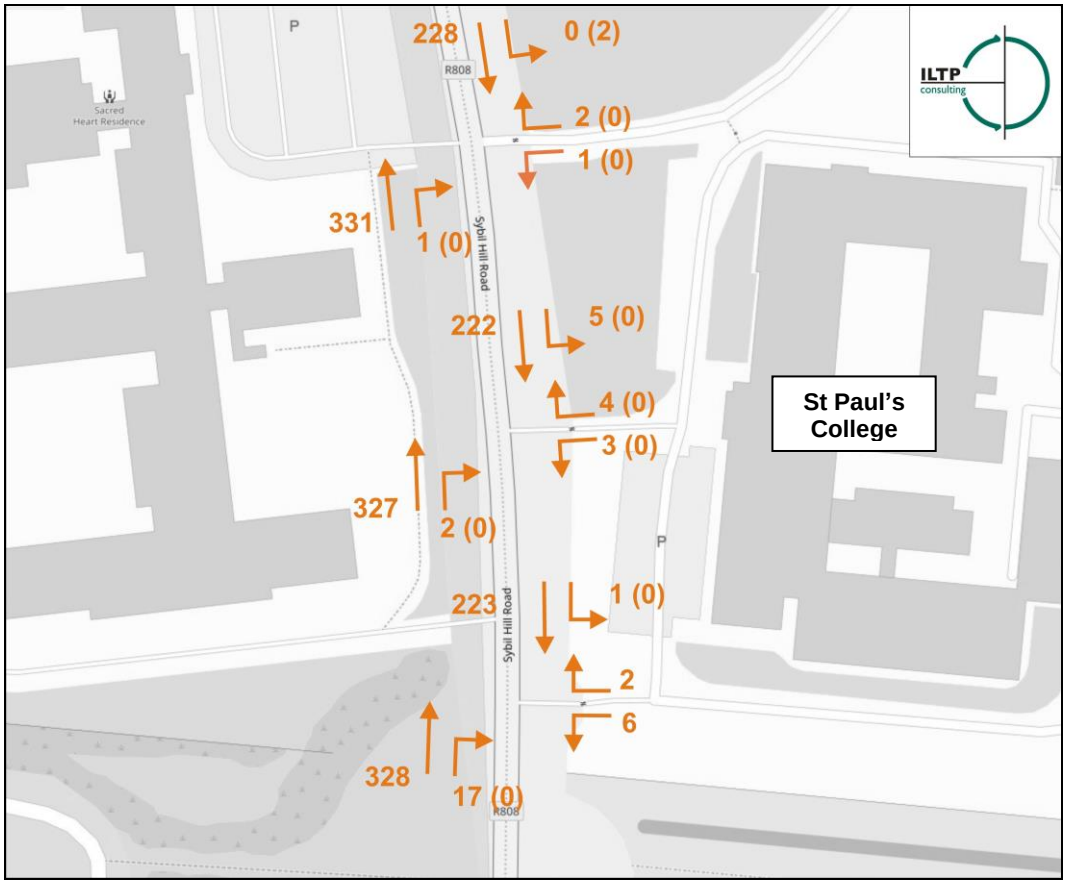

Figure 6.6: 2019 PM Peak Hour Traffic Flows and Turning Counts for St Paul's Secondary School and Proposed Access Junction
Note: Cycle movements to and from accesses denoted by ( )

6.5.6 The traffic count surveys undertaken at the existing St Paul's College and the Vincentian's Residence entrances show that vehicular turning manoeuvres in and out of these accesses are reasonably low during morning and evening peak periods (see Figure 6.5 and 6.6). This recorded data also showed higher cyclist movements (101 no.) into the school than vehicular movements (43 no.) during the AM peak traffic hour (see Figure 6.5), which indicates a high uptake of more sustainable travel modes in St Paul's College.

6.5.7 The traffic count data shows that through-traffic flows on Sybil Hill Road in the vicinity of the Proposed Development are relatively equal in both directions during the AM peak hour (see Figures 6.3 and 6.5). During the PM peak hour however, northbound traffic flows on Sybil Hill Road were higher, which may be partly due to commuter traffic travelling from the city centre. (see Figures 6.4 and 6.6).

6.5.8 From the ILTP traffic surveys undertaken the peak hourly two-way traffic flow for Sybil Hill Road was recorded to be 604 vehicles per hour. For a local distributor road with a lane width exceeding 3 metres, as is the case with Sybil Hill Road, the Peak Hour Flow Capacity would be upwards of 1,100 vehicles per hour (Data source: *Transport in the Urban Environment*, The Institution of Highways & Transportation). Sybil Hill Road is therefore operating at well below its threshold capacity.

7 TRIP GENERATION AND DISTRIBUTION FOR THE PROPOSED DEVELOPMENT

7.1 Trip Generation

7.1.1 The Proposed Development will generate an increased level of traffic on the local road network.

7.1.2 To calculate the likely increase in traffic volumes trip rates were established for each proposed land use type and quantum using ILTP's own experience of comparable developments of similar size and nature in Ireland, and with reference to the TRICS (Trip Rate Information Computer System) database.

7.1.3 In respect to the separate Sports Hall and Playing Pitches development proposed under DCC planning ref. 3777/17, which has not yet been adjudicated on by the Board (ABP ref. 301482-18), these facilities would be for the use of the school during school hours and local community groups and sports organisations outside of school hours. As a sensitivity analysis the projected traffic impact from the proposed sports hall and playing pitches is included for in this Traffic & Transport Assessment report. Therefore for the purpose of Trip Generation no additional trips are projected for the morning peak period, and an additional 20 no. movements over and above current movements are projected during the evening peak period. This is considered a conservative projection given the proposed car parking provision of 24 no. spaces.

7.1.4 The proposed crèche is estimated to cater for up to 115 childcare spaces. The proposed crèche will cater primarily for children from the proposed residential development. The provision of a crèche will generate some additional staff movements, the majority of which would be likely to be generated outside of the traditional AM and PM peak periods. To provide a robust traffic model however, ILTP have assumed that 40% of vehicular trips to and from the crèche would be dedicated external vehicular trips by staff and parents not residing in the proposed St Paul's residential development, and these have been included in Table 7.2.

7.1.5 The final Trip Rates can be seen in Table 7.1, with final Trip Generation figures presented in Table 7.2.

Table 7.1: Proposed Trip Rates for Proposed St Paul's Residential Development & Adjoining Sports Hall / Playing Pitches Development (DCC ref. 3777/17, ABP ref. 301482-18)

Land Use	Number of Units / Area	AM Peak Trip Rates		PM Peak Trip Rates	
		Arr	Dep	Arr	Dep
Residential (Apartment)	657	0.05	0.14	0.1	0.06
Crèche*	612m^2	2.30/100m^2	1.95/100m^2	2.75/100m^2	2.90/100m^2
St Paul's College Sports Hall & Playing Pitches (planning application ref. 3777/17)	NA	0	0	-	-

* Trip Rates for Total Internal & External Vehicular Trips

Table 7.2: Final Trip Generation for Proposed St Paul's Residential Development & Adjoining St Paul's College Sports Hall / Playing Pitches Development (DCC ref. 3777/17, ABP ref. 301482-18)

Land Use	Number of Units / Area	AM Peak Trips		PM Peak Trips	
		Arr	Dep	Arr	Dep
Residential (Apartment)	657	32.9	92.0	65.7	39.4
Crèche (Projected External Trips)	612m^2	5.6	4.8	6.7	7.1
St Paul's College Sports Hall & Playing Pitches (DCC planning application ref. 3777/17)	NA	0	0	20	20
Total		**39**	**97**	**93**	**67**

7.1.6 Overall for the combined proposed St Paul's residential development and adjoining St Paul's College Sports Hall / Playing Pitches application, the Trip Generation assessment yielded an estimate of an additional 39 no. inward and 97 no. outward trips for the AM peak hour (08:00 – 09:00). An additional 93 no. inward trips and 67 no. outward trips were estimated for the PM peak hour (17:00 – 18:00).

7.1.7 As the AM and PM peaks are the times of the day with the highest level of traffic volumes it can be assumed that if the road network can perform effectively at these times it will meet all demands placed upon it.

7.2 Trip Generation for Permitted MKN Residential Development Adjoining Subject Site

7.2.1 In order to assess the worse-case scenario for impact of the newly proposed St Paul's Residential Development on the wider traffic network ILTP have also taken account of the recent permitted planning application by MKN for a residential development to the immediate north of the subject site (ref. 4242/15, and amended by ref. 2977/17), which is currently partially occupied by residents, but still under construction. In order to ensure a robust and worse case scenario Traffic Impact Assessment is carried out ILTP have assumed that no residents have occupied the MKN development, and have applied the full projected trip generation figures from the permitted MKN development to the base flows for the St. Pauls application.

7.2.2 The parent application for the MKN development, ref. 4242/15 included 76 no. residential units (68 no. apartments, 8 no. houses) with 105 car parking spaces to be provided. A Crèche and Café / Community Centre were also included in the application.

7.2.3 The parent application also included a *Traffic Appraisal Report* by ORS Consulting Engineers, dated November 2015, which contained trip rates and trip generation figures for the development

7.2.4 The subsequent application ref. 2977/17 proposed a change to the number of houses and apartments, and included 71 no apartments and 7 no. houses. This application did not include a revised traffic assessment however, but the following was stated in the applicant's *Planning Report*, dated May 2017:

"The additional 3 no. units are minor in the context of the overall permitted scheme. There are no proposed increases to car parking provision and no increase in traffic impact over that already assessed and deemed acceptable is expected."

7.2.5 ILTP have therefore used the trip rates and trip generation rates included with the parent MKN application, ref. 4242/15

7.2.6 The combined Trip Generation figures for the proposed St Paul's Residential Development and permitted MKN Residential Development are shown in Table 7.3. The trip rates used by ILTP (St. Pauls) and ORS (MKN) are broadly similar.

Table 7.3: Trip Generation for Proposed St Paul's Residential Development, Proposed Sports Hall & Playing Pitches development (ref. 3777/17) and Permitted MKN Residential Development (ref. 4242/15)

Land Use	Number of Units	AM Peak Trips		PM Peak Trips	
		Arr	Dep	Arr	Dep
Residential (Apartment)	657	32.9	92.0	65.7	39.4
Crèche (Proposed External Trips)	612m^2	5.6	4.8	6.7	7.1
St Paul's College Sports Hall & Playing Pitches (planning application ref. 3777/17)	NA	0	0	20	20
Total		**39**	**97**	**93**	**67**
MKN - Residential (Apartment)	68	3	12	11	5
MKN - Residential (House)	8	1	3	3	2
MKN - Residential (Crèche)	-	4	3	3	4
MKN - Residential (Café / Community)	-	1	0	1	1
MKN Total		**9**	**18**	**18**	**12**
Combined St Paul's Residential, Sports Hall / Playing Pitches and MKN Total		**48**	**115**	**111**	**79**

7.2.7 In order to provide a robust base model ILTP have included the projected traffic from the permitted MKN development (DCC ref. 4242/15) with the 2019 Baseline figures.

7.2.8 ILTP are confident that the assumptions made for determining trip generation volumes are robust and that in reality traffic generated by the development is likely to be lower than predicted. There are a number of factors which influence this:

- The trip generation does not take into account measures proposed in the mobility management plan.
- NTA and Dublin City Council policy encourages less dependency on the private car and promotes public transport use.

7.3 Trip Distribution

7.3.1 Based on the traffic conditions observed during site visits and traffic surveys, the nature of the development, and the proximity to Dublin City Centre, ILTP estimated the Trip Distribution for the proposed St Paul's residential development, separate St Paul's College Sports Hall / Playing Pitches development, and MKN development as follows:

Vehicles departing

- 50% are estimated to turn left onto Sybil Hill Road and 50% to turn right.
- Of the 50% turning right towards the Howth Road junction, 15% are projected to turn left (city bound), 20% to travel north on Brookwood Avenue in the direction of Artane and the M50, and 15% to turn right in an easterly direction towards Howth.
- The 50% turning left onto the R808 Sybil Hill Road are expected to be predominantly city bound traffic. 5% are projected to turn right onto Vernon Avenue, with 45% continuing southbound along the R808 (Vernon Avenue). The Sybil Hill Road / Vernon Avenue junction is signal controlled and was observed to have significant spare capacity to accommodate the projected additional flows from the Proposed Development.
- Given the close proximity to the city centre this traffic is then expected to disperse between the various link roads on the R808; including Mount Prospect Avenue, Seafield Road, Kincora Road and Clontarf Road. The impact of the development at these link road junctions would be expected to dissipate to below the threshold levels included in the TII / NRA document *Traffic and Transport Assessment Guidelines*, May 2014.

Vehicles arriving

- Due to the right-turn restriction at the Howth Road junction, a reduced proportion is expected to arrive at the development from the north. Of the 15% projected to depart the Site and turn left on Howth Road, this traffic is estimated to be redistributed for vehicles arriving to the Site as follows:
  - 5% from Brookwood Avenue
  - 5% from Vernon Avenue (west)
  - 5% from R808 Vernon Avenue / Clontarf Road
- 60% of total traffic arriving to the Site will therefore arrive from the south. This includes 10% turning left from Vernon Avenue onto Sybil Hill Road
- Of the 40% arriving from the north (Howth Road junction), 25% are estimated to be via Brookwood Avenue, and 15% turning left from the Howth Road.

7.3.2 The total estimated combined Trip Distribution for the proposed St Paul's residential development, St Paul's College Sports Hall / Playing Pitches development and MKN development during the morning 08:00 – 09:00 and evening 17:00 – 18:00 peak hours is summarised in Figure 7.1.

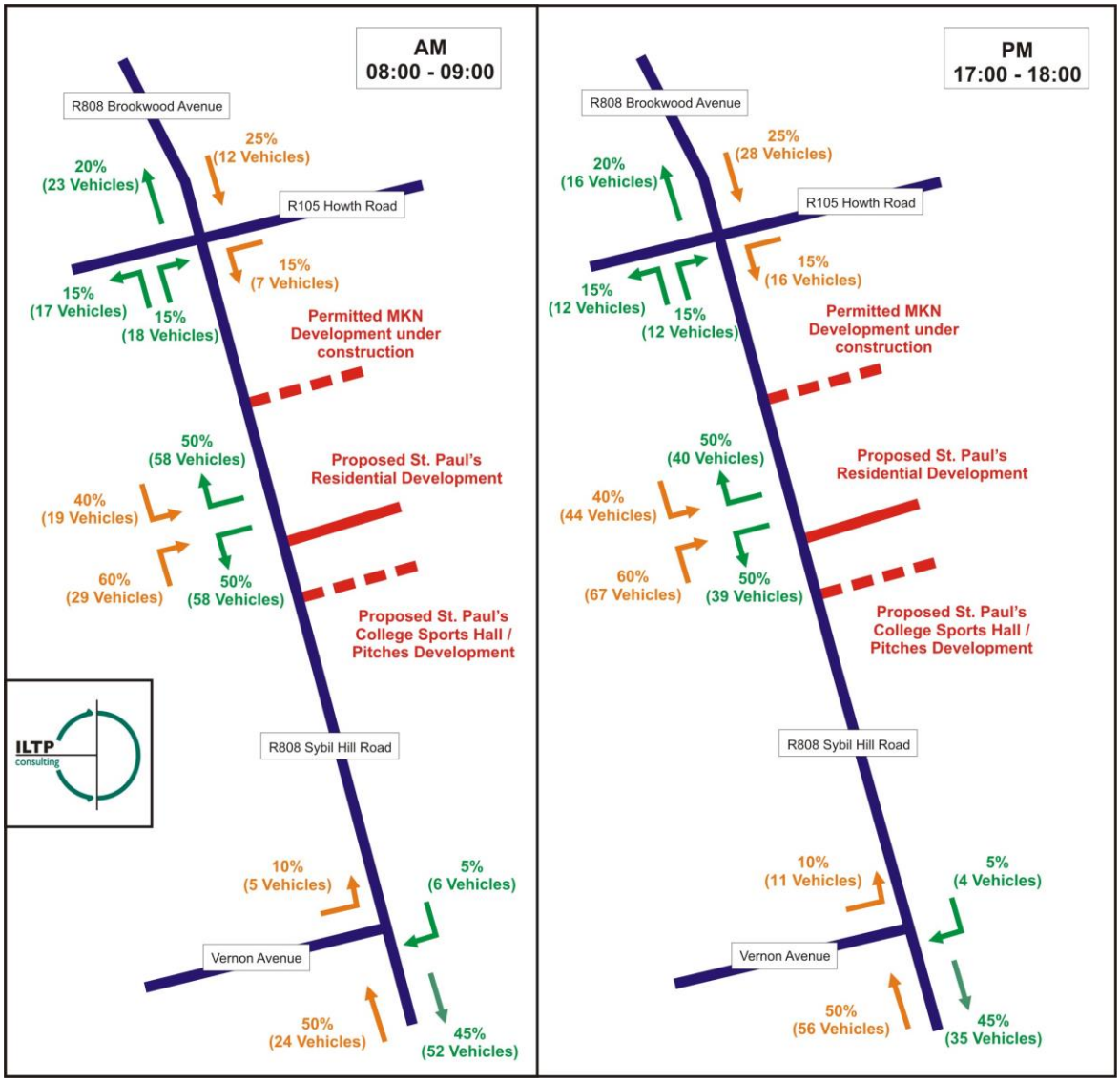

Figure 7.1: ILTP Projected Combined Trip Distribution for Proposed St. Pauls Residential Development, Proposed St Paul's College Sports Hall / Playing Pitches Development (DCC. Ref. 3777/17 & ABP ref. 301482-18) and Permitted MKN Development

8 TRAFFIC MODELLING RESULTS

8.1 Assessment of Future Traffic Conditions

8.1.1 Using the NTA / DCC annual Cordon Count (*Canal Cordon Report 2018 - Report on Trends in Mode Share of Vehicles and People Crossing the Canal Cordon 2006 to 2018*, April 2019) and other data sources ILTP undertook a review of recent trends in traffic volumes for Dublin City Centre and the wider environs. The Cordon Count Report shows that in overall terms there has been a significant decline since 2006 in the number of vehicles coming into Dublin during the Cordon Count period. Car numbers crossing the canal cordon have continued to decline in recent years, with a total reduction of 16.8% between 2006 and 2018.

8.1.2 This decline in private car usage is promoted and supported by Policy objectives at National and Local level. *Smarter Travel a Sustainable Transport Future* has as its goal a shift from car dependency to more sustainable modes of transport as such future planned development will have to have a high level of sustainability. This will in turn lead to a move away from car dependency particularly in city locations served by rail and bus public transport such as the proposed regeneration.

8.1.3 Furthermore the *Smarter Travel* document states that:

> *"The total kilometers travelled by the car fleet in 2020 will not increase significantly from current total car kilometres."*

8.1.4 This will be particularly true in Town Centre locations and on radial routes into and out of Dublin City Centre. It is noted however, that traffic levels on radials routes into and out of Dublin City Centre, have actually declined over the past 10 years, as is shown in sources such as the DCC / NTA *Canal Cordon Report 2018*.

8.1.5 It is further noted that the current *Dublin City Development Plan 2016 - 2022* targets an ongoing reduction in private car trips crossing the Canal Cordon.

8.1.6 On the basis that these Government and Local mode shift targets are met the decline in private car usage recently recorded by the Canal Cordon surveys is set to continue.

8.1.7 In terms of future traffic growth rates, TII has traffic projections for the period 2016 – 2050. There are different growth rates for different areas. The low growth projection within the Dublin metropolitan area is less than 1.5 percent per annum. Sybil Hill Road is an arterial route connecting with Dublin City and as such it can be expected that the growth projections for Dublin City are very relevant to this development.

8.1.8 Due to the subject site also being in a long established urban area with a high degree of public transport provision, possible growth in traffic levels for the future year assessments are considered to be quite limited.

8.1.9 It is considered that background traffic at the subject site will not grow, or if there is any growth it will be extremely low due to the established urban setting, the provision of bus and rail public transport and planned improvements in the cycling and pedestrian environment. This is in line the policies and objectives set down in *Smarter Travel - A Sustainable Transport Future 2009 – 2020* and the current CDP.

8.1.10 It was also confirmed from traffic count surveys conducted between 2015 and 2019 that traffic in the vicinity of the subject site, on average, did not grow but marginally declined in this four year period.

8.1.11 Furthermore, current Government and DCC modal shift targets to more sustainable forms of transport are likely to yield a notable drop in background traffic in the short to medium term, particularly where frequent and reliable PT services are in operation within a convenient short walking distance, as is the case with the Proposed Development.

8.2 PICADY Junction Analysis – Proposed Access Junction

8.2.1 In order to test the performance of the proposed access junction, a PICADY analysis was conducted.

8.2.2 The PICADY software package was used to calculate the RFC (ratio of flow to capacity) factor. This is often used to assess capacity of priority junctions. This measures the observed flow of a link against the theoretical capacity of the link. RFC is calculated thus;-

$$\% \text{ RFC} = \frac{\text{Observed Flow}}{\text{Link capacity}} X \quad 100$$

8.2.3 In transport Terms, RFC values of 85% or less are considered satisfactory, meaning at levels of RFC below 85% the junction is normally deemed to be operating within the design capacity and that no significant delays or queues arise.

8.3 PICADY Input and Results

8.3.1 The traffic flows and turning movements for the proposed St Paul's access junction, as inputted into Picady, are shown in Figure 8.1. These include the AM and PM periods. The traffic volumes include for the MKN development as straight through traffic as it would have a separate access junction. The analysis also includes for vehicular movements recorded at the existing entrance during peak traffic hour periods.

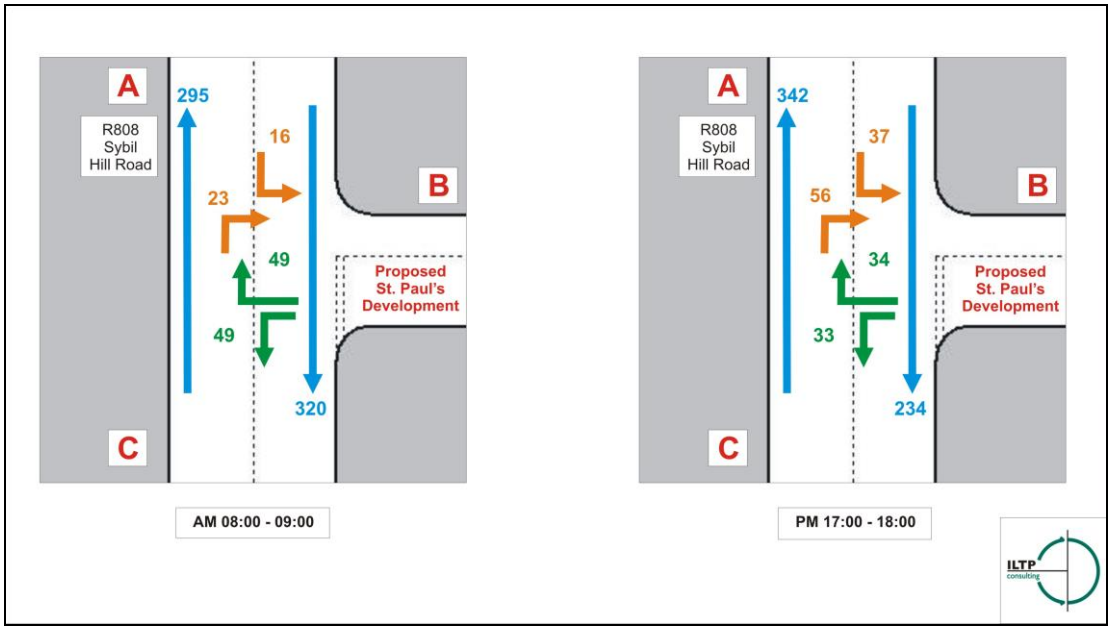

Figure 8.1: Picady Input for Proposed Access Junction

8.3.2 The results of the PICADY Assessment are shown in Tables 8.1 and 8.2.

Table 8.1: AM Peak Hour PICADY Analysis

Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
B-AC	1.63	7.48	0.218	-	0.27	0.28	-	4.1	0.17
C-AB	0.64	11.65	0.055	-	0.08	0.09	-	1.3	0.09
C-A	4.66	-	-	-	-	-	-	-	-
A-B	0.27	-	-	-	-	-	-	-	-
A-C	5.33	-	-	-	-	-	-	-	-

Table 8.2: PM Peak Hour PICADY Analysis

Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
B-AC	1.12	7.56	0.148	-	0.17	0.17	-	2.6	0.16
C-AB	1.71	12.45	0.137	-	0.28	0.28	-	4.2	0.09
C-A	4.92	-	-	-	-	-	-	-	-
A-B	0.62	-	-	-	-	-	-	-	-
A-C	3.90	-	-	-	-	-	-	-	-

8.3.3 The full PICADY model input and output records are included in **Appendix B**.

8.3.4 The PICADY results for the junction show that the proposed junction will operate at or below 22% capacity with the peak hour development traffic in place. This confirms the proposed access has more than adequate capacity for the Proposed Development.

8.4 LinSig Signalised Junction Analysis - R105 Howth Road / R808 Sybil Hill Road - Capacity Assessment

8.4.1 The R105 Howth Road / R808 Sybil Hill Road junction is approximately 200 metres from the proposed access road to the subject site, and experiences relatively high traffic flows particularly during the morning and evening peak hours. As part of this Traffic Impact Assessment ILTP performed an analysis of the capacity of this signalised junction using LinSig Version 3.2.40.0 under the following scenarios:

- **2019 Base Year** – This scenario represents the existing situation and allows for the calibration and validation of the model to existing traffic conditions.
- **2021 Opening Year Without Development** - This scenario considers traffic for the 2021 Opening Year with the permitted MKN development fully constructed and occupied / in use and without the proposed St Paul's residential development and St Paul's College Sports Hall / Pitches development.

- **2021 Opening Year With Development** - This scenario considers traffic for the 2021 Opening Year with the proposed St Paul's residential development, proposed St Paul's College Sports Hall / Pitches development and permitted MKN development fully operational.

8.4.2 The LinSig Model is based on the 1 hour time periods, 08:00 – 09:00 and 17:00 – 18:00, and presents an optimised solution for the network, effectively simulating the Dublin City Council operated SCATS controller on site. The cycle and average stage times input into the model are in line with on-site measurements.

8.4.3 The ILTP LinSig model for the Howth Road / Sybil Hill Road junction is displayed in Figure 8.2.

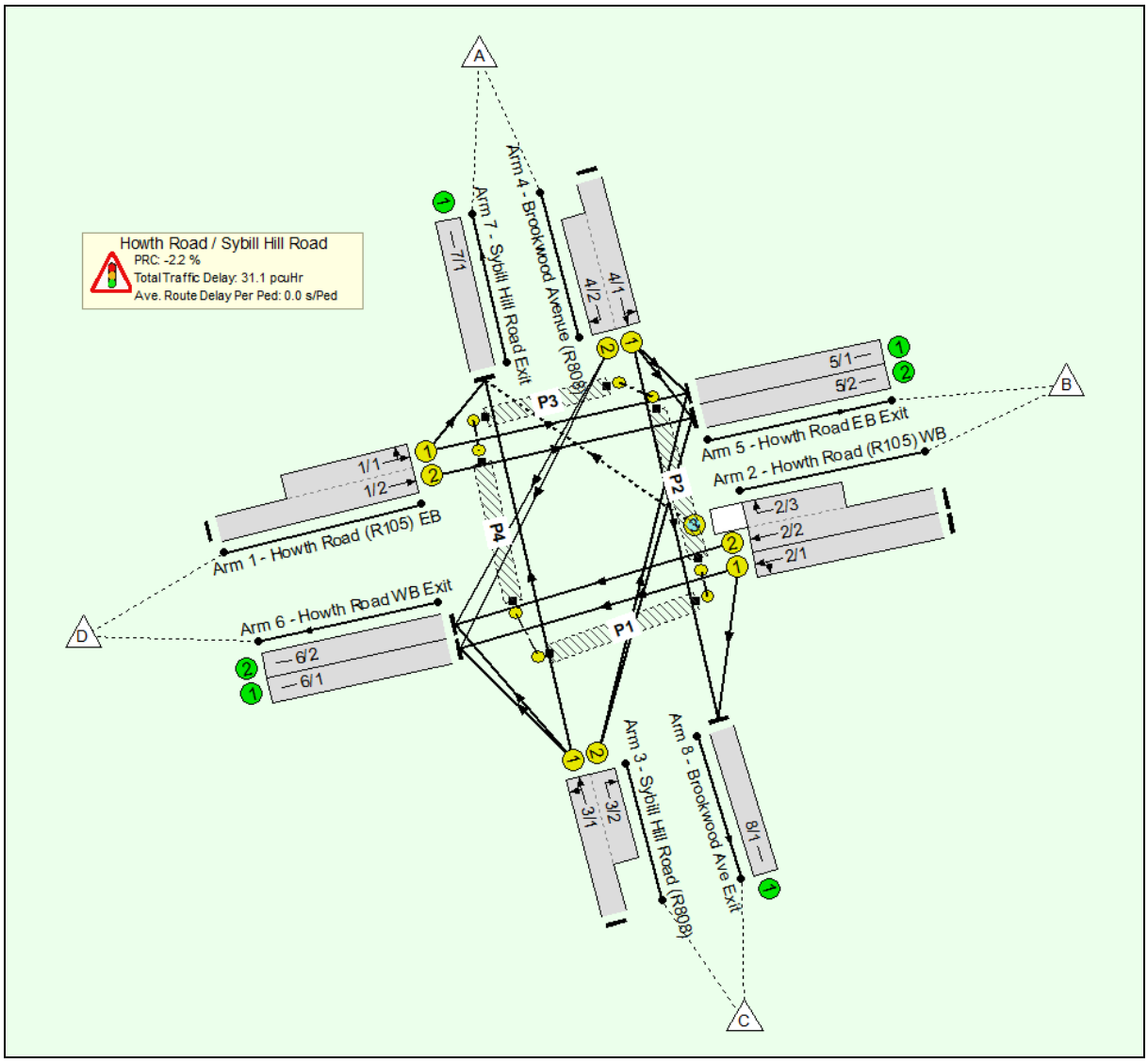

Figure 8.2: LinSig model of R105 Howth Road / R808 Sybil Hill Road junction

8.4.4 As shown in Figure 8.2, the ILTP Linsig model has included for recent upgrades implemented at the junction including changing the Brookwood Avenue and Sybil Hill Road arms from a single lane approach to formal two-lane approach.

8.5 LinSig Input and Results

8.5.1 The Opening Year traffic volume inputs into LinSig, with and without the proposed St Paul's residential development and St Paul's College Sports Hall / Playing Pitches, are shown in Figures 8.3 to 8.6.

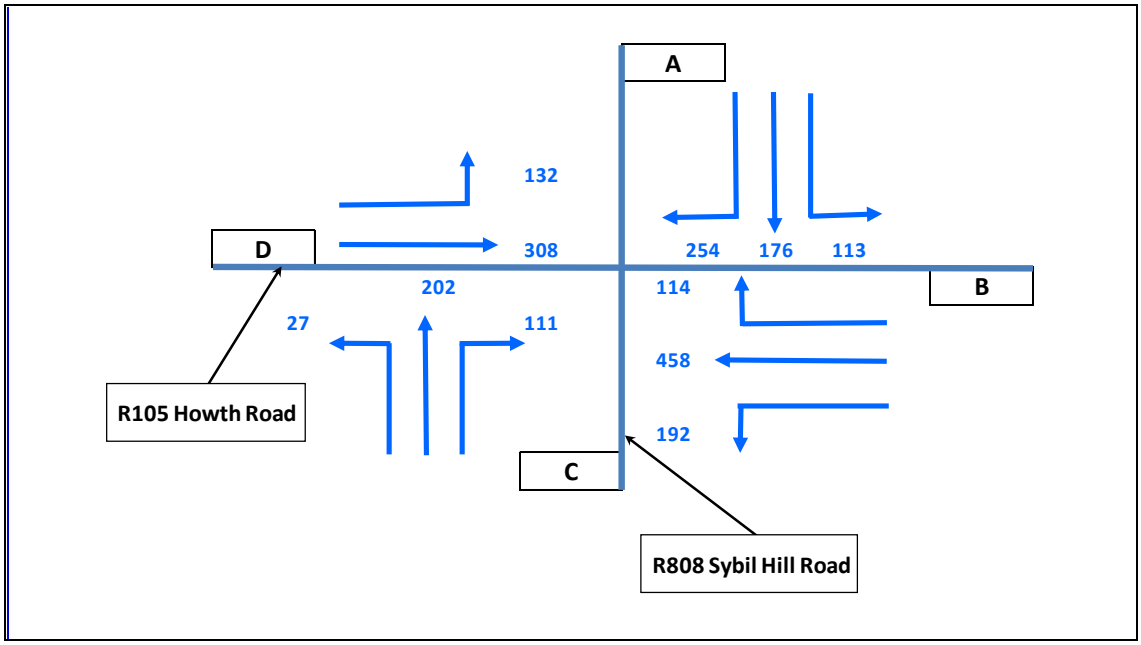

Figure 8.3: 2021 Opening Year with Permitted MKN Development and without Proposed St Paul's Residential Development and St Paul's College Sports Hall / Pitches Development – AM 08:00 – 09:00

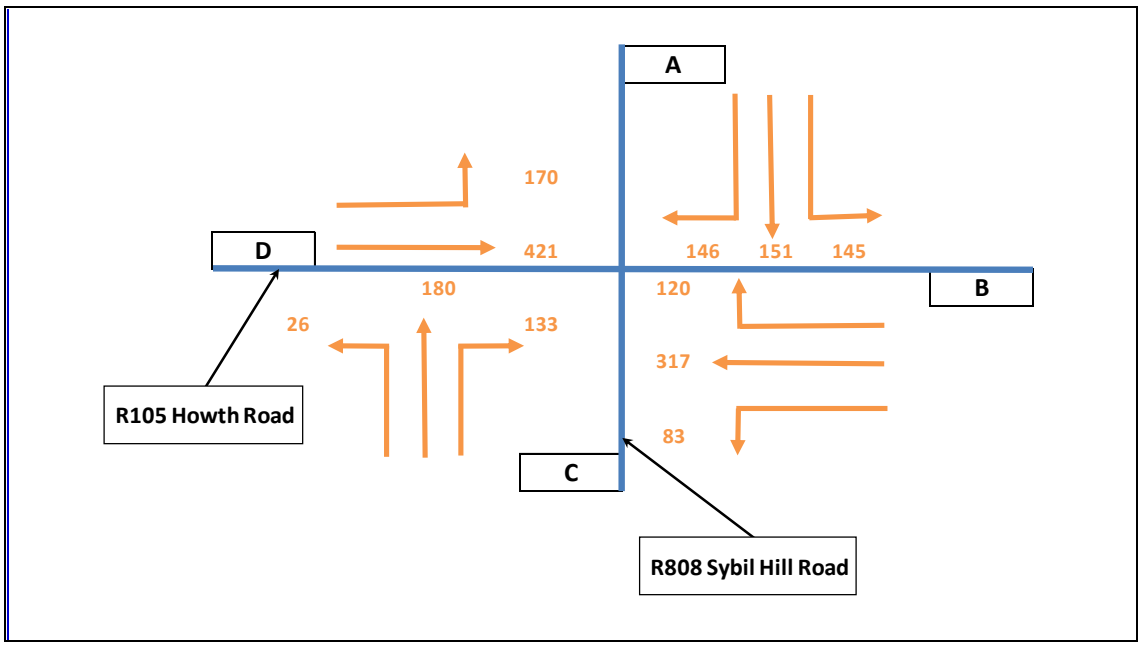

Figure 8.4: 2021 Opening Year with permitted MKN Development and without Proposed St Paul's Residential Development and St Paul's College Sports Hall / Pitches Development – PM 17:00 – 18:00

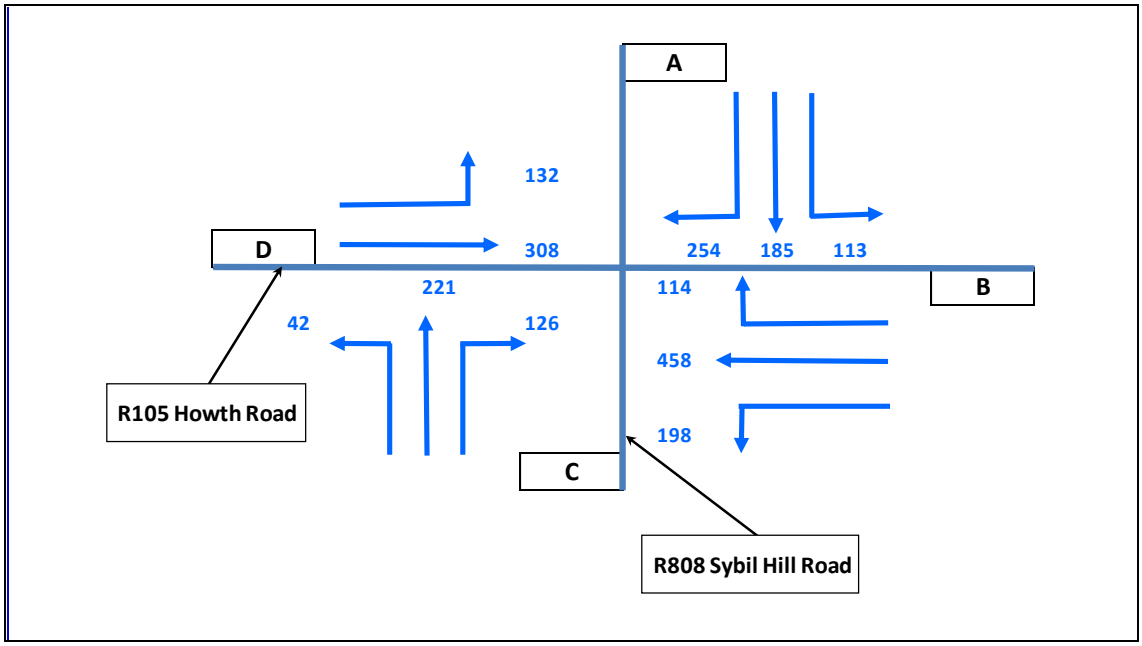

Figure 8.5: 2021 Opening Year with Proposed St Paul's Residential Development, adjoining St Paul's College Sports Hall / Playing Pitches Development and Permitted MKN Development - AM 08:00 – 09:00

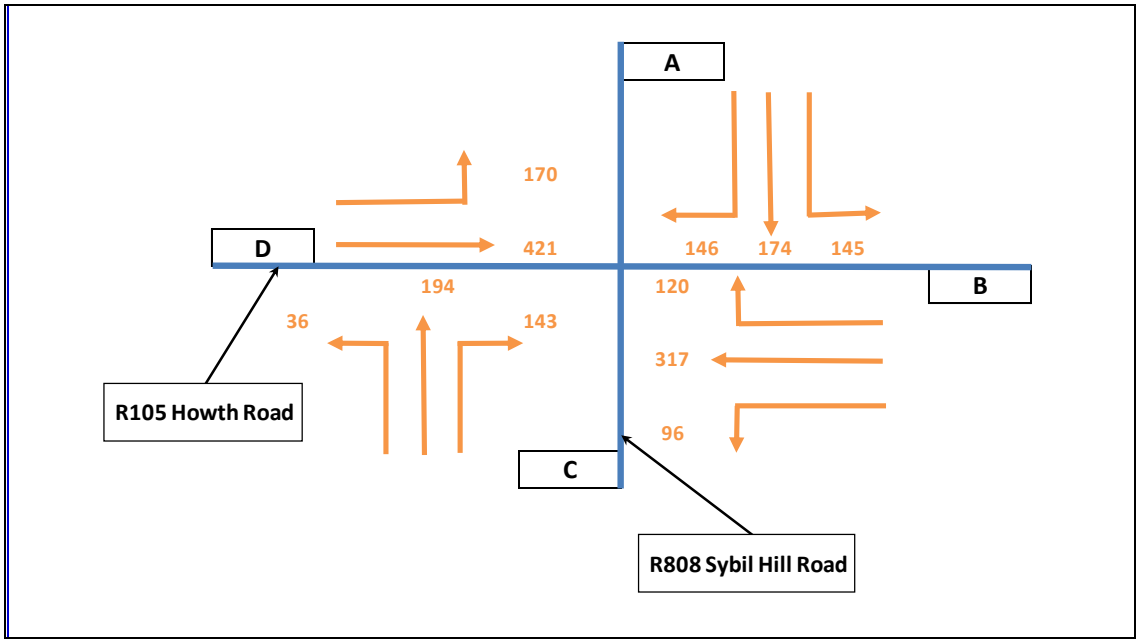

Figure 8.6: 2021 Opening Year with St Paul's Residential Development & adjoining St Paul's College Sports Hall / Playing Pitches Development and Permitted MKN Development – PM 17:00 – 18:00

8.5.2 The overall change in traffic flow through this junction from the proposed St Paul's Residential Development and adjoining St Paul's College Sports Hall / Pitches Development is projected to increase by approximately 3.1% during the morning peak hour and 3.8% during the evening peak hour. These increases are below the 5% Traffic Impact Assessment threshold which would normally be regarded as having a reasonable impact on the junction (TII / NRA document *Traffic and Transport Assessment Guidelines*, May 2014).

8.5.3 The results of the various scenarios modelled in LinSig are presented in Table 8.3 in terms of Degree of Saturation.

Table 8.3: Existing R105 Howth Road / R808 Sybil Hill Road Junction Performance Assessment – LinSig Traffic Model Output Results

Scenario		Degree of Saturation per Arm			
		Howth Road Eastbound	Howth Road Westbound	Sybil Hill Road	Brookwood Avenue
2019 Base Year	**AM**	56.2%	58.4%	84.6%	92.0%
	PM	75.5%	43.8%	78.8%	92.1%
2021 Opening Year, with MKN Development and without St Paul's Residential and St Paul's College Sports Hall / Playing Pitches Developments	**AM**	56.2%	58.5%	86.9%	93.0%
	PM	75.5%	43.8%	80.3%	93.7%
2021 Opening Year, with St Paul's Residential Development, St Paul's College Sports Hall / Playing Pitches Development, & MKN Development	**AM**	56.2%	58.7%	99.7%	95.8%
	PM	75.5%	43.8%	89.4%	100.9%

8.5.4 The results of the various scenarios modelled in LinSig are presented in Table 8.3 in terms of Degree of Saturation. Values over 90% are typically regarded as experiencing occasional traffic congestion, with queues of vehicles beginning to form. It should be noted that at many urban junctions the Degree of Saturation exceeds 100% for a portion of the peak period. The extent and duration of the queues which form as a result are managed, to minimise interference spreading through the network. To this end the control of multiple signalised junctions by specialist vehicle detection controller software such as MOVA (Microprocessor Optimised Vehicle Actuation) is used. The existing Howth Road / Sybil Hill Road junction is also linked and monitored by the DCC SCATS system.

8.5.5 The main LinSig model results can be summarised as follows:

- For the '**Base Year 2019'** model, the existing Howth Road approaches are operating within capacity, however the Brookwood Avenue and Sybil Hill Road approaches are already near capacity during peak traffic hours. This is as expected given that the traffic signals are set in favour of Howth Road which is a high frequency bus route, with the side roads given minimum green time. These results are broadly in line with the observed conditions during the traffic surveys.

- The junction performance is similar for the '**2021 Opening Year model, with the MKN development fully occupied but without the St Paul's residential development**'. All arms remain within capacity.

- For the '**2021 Opening Year, with the St Paul's residential development** model, the Howth Road Eastbound and Westbound arms show marginal increases in the Degree of Saturation, but still have reserve capacity overall. The Sybil Hill Road approach is at capacity during the AM peak traffic period, and the Brookwood Avenue approach is at capacity during the PM peak traffic period. This is typical of many urban junctions during peak traffic periods.

8.5.6 The LinSig traffic modelling analysis undertaken shows that the junction can satisfactorily accommodate the projected additional traffic from the Proposed Development.

8.6 Traffic Signal Optimisation – Sensitivity Test

8.6.1 The Howth Road / Sybil Hill Road junction is operated using vehicle detection and is linked to the DCC SCATS system. The junction can therefore be adapted on a needs basis to assign appropriate priority to various junction approaches, and optimise junction performance by increasing green time for approaches at or nearing capacity.

8.6.2 ILTP therefore undertook a sensitivity analysis for the LinSig traffic model to include an additional 3 seconds of green time on average allocated to each of the Brookwood Avenue and Sybil Hill Road arms. ILTP applied these increased signal times to the LinSig model to determine the effect on the capacity of the junction.

8.6.3 The output results for ILTP's modified Linsig model are summarised in Table 8.4.

Table 8.4: R105 Howth Road / R808 Sybil Hill Road Junction Sensitivity Test – With Proposed Development and Signal Optimisations

Scenario		Degree of Saturation per Arm			
		Howth Road Eastbound	Howth Road Westbound	Sybil Hill Road	Brookwood Avenue
Opening Year 2021, with St Paul's and Sensitivity Test	**AM**	58.9%	62.1%	88.6%	87.8%
	PM	79.4%	46.3%	80.1%	91.3%

8.6.4 These minor signal time modifications result in an improvement in the capacity of the junction with all approaches operating within capacity with the Proposed Development in place.

8.6.5 The Howth Road is a high frequency bus route and it is considered preferable that good bus priority be maintained on Howth Road in line with Government and local policy. ILTP consider therefore that this optimisation of the existing Howth Road / Sybil Hill Road junction is not necessary.

8.7 Summary Findings

8.7.1 This robust assessment assumes combined trip generation figures for the proposed St Paul's residential development and proposed St Paul's College Sports Hall / Playing Pitches development and permitted MKN development, and confirms that the adjoining road network can satisfactorily accommodate the projected development traffic.

8.7.2 It is further noted that if current Government and DCC mode share targets are met, as reaffirmed in the *DCC Development Plan 2016 – 2022*, then significant reductions in background traffic can be expected in the short to medium term in line with greater shift to more sustainable modes of transport The *National Development Plan 2018 - 2027* includes DART expansion on the nearby rail corridor, and there are also significant plans to improve bus connectivity in the area, which will further transport mode shift. Therefore over time overall traffic in the area is likely to decline in line with increased Capital Investment in non-motorised modes of travel.

9 CONSTRUCTION TRAFFIC IMPACT ASSESSMENT

9.1 Construction Activity

9.1.1 The impacts associated with the construction phase of the St Paul's development have been assessed in this section.

9.1.2 This Construction Traffic Impact Assessment has been undertaken with reference to the cut and fill estimates in Table 9.1 below which were provided by O'Connor Sutton Cronin Consulting Engineers.

9.1.3 For further details relating to the construction phase of the Proposed Development refer to the *Construction & Demolition Waste Management Plan (CDWMP)*, and *Construction Environmental Management Plan (CEMP)*, which are included separately with the planning application for the Proposed Development.

9.1.4 It is anticipated that, following grant of planning permission, construction will start in 2021, and the development will be fully completed by end of 2024.

9.1.5 The works will be phased in such a way as to allow the road network to remain open with existing capacity maintained at all times.

9.1.6 The following assumptions were made as part of the evaluation process:

- 11 Hours operation per day Monday - Friday (07.00 – 18.00)
- 6 Hours operation Saturday (08.00 – 14.00)
- 18 tonne (11m^3) capacity vehicles with potential occasional use of 27 tonne capacity articulated lorries
- 45 Months anticipated construction time

9.2 Proposed Haul Route for Construction Traffic

9.2.1 A detailed construction traffic management plan will be prepared and submitted to the Planning Authority prior to commencement of construction of the development.

9.2.2 Various route proposals were assessed for accessing the Site, however, it was decided that the route with the least impact on the adjoining road network would be the most prudent, as it would reduce conflict with other vehicles. In particular the avoidance of use of the local road network was prioritised.

9.2.3 The proposed routes for HGV movements during the construction period are shown in Figure 9.1. The primary R107 Malahide Road route will be used for most HGV movements to facilitate construction traffic movement to and from the M50 and Port Tunnel.

9.2.4 Construction traffic will also access the Site from the north along the R808 Brookwood Avenue, and egress the Site in the same direction. This minimises impact on the nearby Howth Road / Sybil Hill Road junction, as all construction traffic can pass through the junction via 'Straight-Ahead' movements. This negates the need to turn left and right, which can contribute to delays by swinging into adjacent traffic lanes.

9.2.5 The R105 Howth Road was also considered as an alternative route to and from the city centre, however there is no right-turn permitted from Howth Road onto Sybil Hill Road.

9.2.6 The proposed haul route will be agreed with the Local Authority prior to commencement on site.

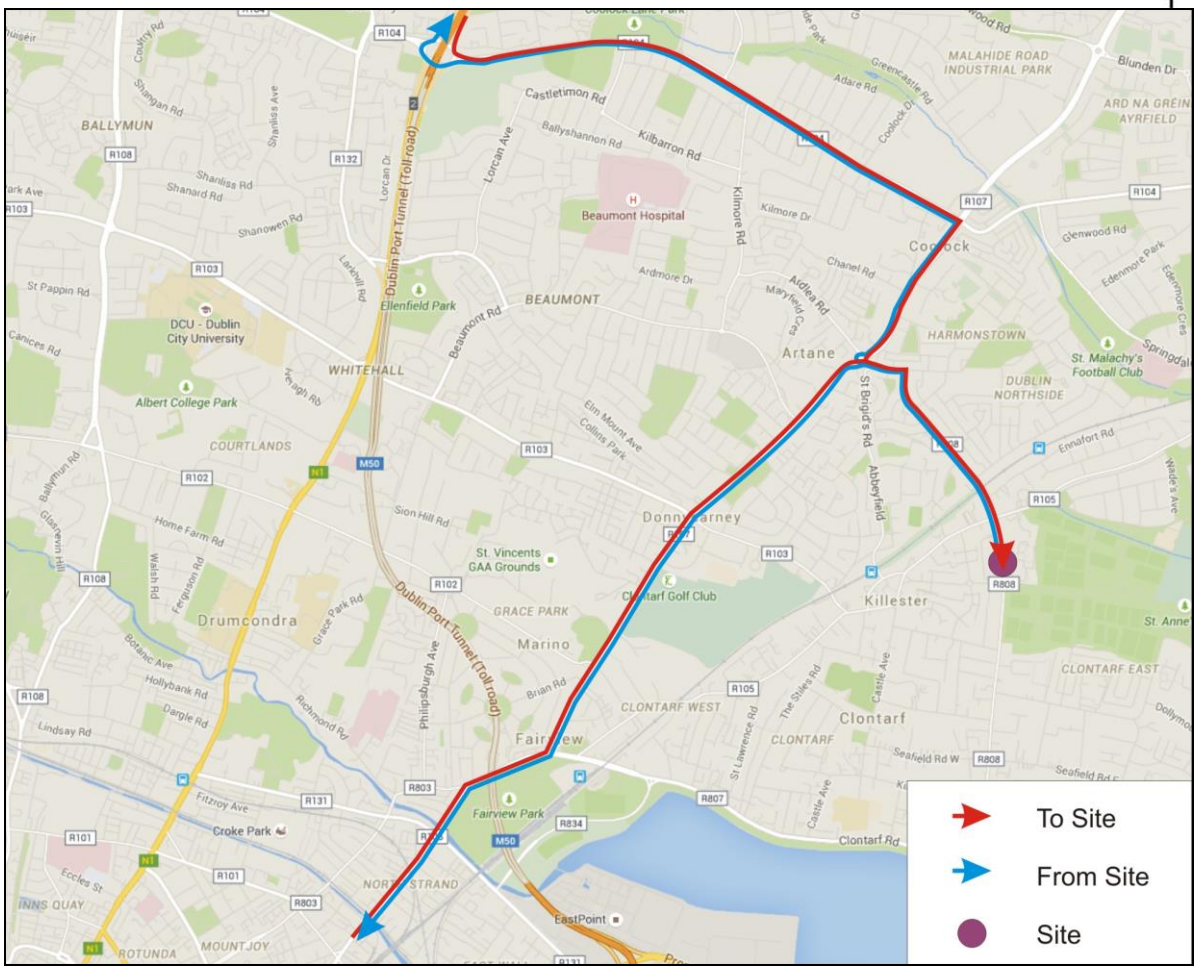

Figure 9.1: Proposed Route for Truck Movements during Construction Period

9.3 Construction HGV Movements

9.3.1 An estimate of total excavation and fill volumes is presented in Table 9.1, as provided by O'Connor Sutton Cronin Consulting Engineers. The balance of excavated material will be generally disposed off site to a licensed facility.

Table 9.1: Estimation of Excavation and Fill Quantities

Total Excavated Volume (m^3)	Total Fill Volume Required on Site (m^3)	Net Cut Volume Exported from Site (m^3)
78,078	2,536	75,542

9.3.2 Based on the quantities of excavation to be moved from the Site, demolition waste removal, and general site deliveries for the intended construction works, the projected HGV movements to and from the site were determined for the relevant construction activities, as presented in Table 9.2.

9.3.3 Demolition waste includes the off-site reuse, recycling and disposal of materials such as glass, concrete, bricks, tiles, ceramics, plasterboard, metals and timber.

Table 9.2: Estimation of HGV Movements

Construction Activity / Stage	Estimated Period	Volume / Tonnes of Material	Total Number of HGVs Required	Average One-Way HGV Movements per Day	Average AM Peak Hour On-Way HGV Movements	Average PM Peak Hour One-Way HGV Movements
Demolition Waste Removal	1 month	195 tonnes + 40 m^3 bituminous products	20	2	1	1
Exporting Excavated Material (Bulk Earthworks Stage)	6 months	75,542 m^3	6,867	100	9	9
Deliveries	39 months	-	-	80	7	7

9.3.4 Of the main construction activities / stages set out in Table 9.2, the highest projected concentration of HGV movements arriving and departing the Site are associated with the bulk earthworks excavation stage. The bulk earthworks stage is projected to take place over a maximum period of 6 months, and require an average of 100 no. one-way HGV movements per day. Allowing for possible short-term intensifications of excavation activities during this 6-month bulk earthworks excavation period, it is further projected that there may be up to 150 no. HGV loads of excavated material departing the Site per day. This equates to a projected peak of 300 no. one-way HGV movements per day.

9.3.5 Beyond the bulk earthworks stage, other stages during construction are estimated to have lower HGV volumes and lower traffic volumes overall.

9.3.6 For completeness, ILTP have undertaken an assessment of the projected peak construction traffic movements associated with the bulk earthworks excavation stage.

9.3.7 It is proposed that all HGVs arriving to and departing from the Site would travel via the designated construction haul route shown in Figure 9.1. Therefore, all HGVs during construction stage are expected to travel via Brockwood Avenue and the Howth Road / Sybil Hill junction to the north of the Proposed Development entrance.

9.3.8 Excluding HGV drivers, it is estimated that the bulk earthworks stage would require a maximum of 15-20 personnel on site. It is further estimated that there will be a maximum of 50 car / light vehicle traffic movements per day associated with these site personnel during the earthworks stage. Given typical construction working hours the majority of these personnel are expected to arrive to site in advance of the 08:00 – 09:00 morning peak hour and after the 17:00 - 18:00 evening peak hour.

9.3.9 The projected peak construction traffic movements associated with the bulk earthworks excavation stage are shown in Table 9.3.

Table 9.3: Estimation of Peak One-Way Construction Traffic Movements during Bulk Earthworks Excavation Stage

Construction Activity / Stage	Estimated Period	Projected HGV Movements per Day	Projected Car / Light Vehicle Movements per Day	Projected Total Movements per Day	Projected Total Vehicle Movements for AM Peak Hour	Projected Total Vehicle Movements for PM Peak Hour
Exporting Excavated Material (Bulk Earthworks Stage)	6 months	300 (150 Loads)	50	350	32	32

9.3.10 The projected peak one-way construction traffic movements during the bulk earthworks excavation stage are 350 no. vehicular movements per day. This is averaged over an 11 hour working day as 32 no. vehicular movements per hour, including the peak traffic hour periods.

9.3.11 This projected peak volume of construction traffic, including both truck and staff movements, is lower than the daily and peak hour traffic volumes projected for the fully occupied development during the operational stage, which included up to 160 no. vehicular movements per hour during the PM peak traffic hour (see Table 7.2).

9.3.12 Therefore, in Traffic Impact Assessment terms, the most onerous scenario to assess in terms of capacity and traffic impact is the operational stage of the development.

9.4 Traffic Management Plan

9.4.1 As part of the construction works the appointed contractor shall prepare a Construction Traffic Management Plan which will outline their approach to the project and detail potential impacts for the public road system. This may include provision of transport facilities and the encouragement of car sharing and public transport usage by staff. It will also include measures to mitigate any potential noise and air quality impacts resulting from construction activities, namely from traffic movements in and out of the Site.

9.4.2 A more detailed Traffic Management Plan will be prepared and agreed with the Transportation Department of Dublin City Council to provide for mitigation of the impact of construction traffic associated with the Proposed Development.

9.5 Construction Traffic Mitigation Measures

9.5.1 The Construction Traffic Management Plan will include the following measures to mitigate the impact of construction traffic:

General:

- Tracked excavators will be moved to and from the Site on low-loaders and will not be permitted to drive onto the adjacent roadway.
- Vehicles delivering or removing material with potential for dust emissions to an off-site location shall be enclosed or covered with tarpaulin at all times to restrict the escape of dust.

- The applicant shall at all times keep all public and private roads and footpaths entirely free of excavated materials, debris and rubbish.

- Public roads outside the Site shall be regularly inspected for cleanliness, as a minimum on a daily basis, and cleaned as necessary. A road sweeper will be made available to ensure that public roads are kept free of debris.

- A wheel wash facility will be employed at the exit of the Site so that traffic leaving the site compound will not generate dust or cause the build-up of aggregates and fine material in the public domain.

- The applicant is committed to implementing sustainable construction practices and as such will be seeking to reduce the quantities of waste material being carried off the Site to a minimum.

- A site liaison officer will be identified as a single contact point for the Planning Authority and local community to deal with any issues that may arise in a prompt and efficient manner.

- Construction work will be limited to normal working hours; that are 07.00 – 18.00 on weekdays and 08.00 – 14.00 on Saturdays. All deliveries of materials, plant and machinery to the Site and removals of waste or other material will take place within the permitted hours of work. Vehicle movements will be planned to ensure arrival and departure times are maintained inside the agreed working hours.

- Deliveries will be co-ordinated to prevent queuing of vehicles adversely affecting traffic flow and to minimise disruption to local traffic. They will be timed and coordinated to avoid conflict with collection of waste, other deliveries (particularly to adjoining owners), and rush hour traffic. Large deliveries will be scheduled outside peak traffic hours to minimise disruption.

- No day time or night time parking of site vehicles or construction staff vehicles will be permitted outside agreed areas.

- The applicant shall be responsible for and make good any damages to existing roads or footpaths caused by his own contractors or suppliers transporting to and from the Site.

- The contractor shall confine his activities to the area of the Site occupied by the works and the builders' compound, as far as practicably possible, during any particular phase of the works.

- Properly designed and designated access and egress points to the construction site will be used to minimise impact on external traffic.

- Banksman and/or traffic lights will be used to control the exit of construction vehicles from the Site onto the public road, if required.

- Establishment and maintenance of a Truck holding area within the Site.

- All construction workers will be encouraged to use public transport, and also to car share.

Safety on the Public Road:

- Priority to keep vehicles and pedestrians apart.
- Separate entry and exit gateways will be provided for pedestrians and vehicles with a gate man in attendance to interface with the traffic and public to facilitate safe access and egress of vehicles.
- Firm, level, and well-drained pedestrian walkways will be provided.
- Measures will be implemented to ensure drivers driving out onto public roads can see both ways along the footway before they move on to it.
- Footpaths will not be blocked resulting in pedestrians having to step onto the carriageway.

9.6 Summary of Construction Traffic Impact Assessment

9.6.1 The overall level of traffic generated by the construction works is projected to be lower than that included in this TIA for the operational stage of the Proposed Development. A number of steps will be implemented to ensure the existing road network continues to operate efficiently throughout the construction process.

9.6.2 All construction HGV traffic will be directed via the main designated construction traffic haul routes.

10 MOBILITY MANAGEMENT PLAN / TRAVEL PLAN

10.1 Introduction

10.1.1 A Mobility Management Plan (MMP), or Travel Plan, is a wide range of policies, programmes, services and products that influence how, why, when & where people travel to make travel behaviour more sustainable.

10.1.2 Figure 10.1 represent graphically the interlinking approaches and strategies utilised in the preparation of Mobility Management Plan. Within this MMP we have sought to consider transportation demand, transportation supply and land use.

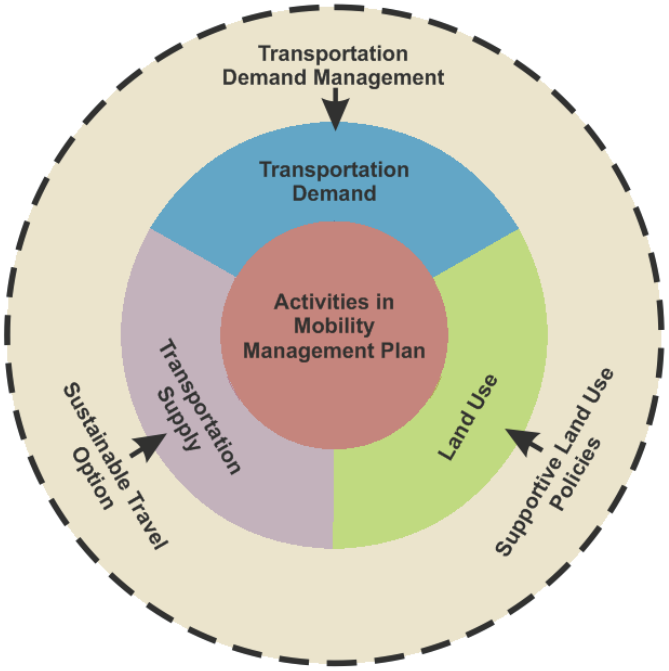

Figure 10.1: Mobility Management Plan Strategies

10.1.3 Mobility Management can be described, as a transport demand management mechanism that seeks to provide for the transportation needs of people and goods. It can be applied as a strategic demand management tool or as a site-specific tool measure. The aim is to reduce the demand for and use of cars by increasing the attractiveness and practicality of other modes of transport. Mobility Management encourages individuals, companies or institutions to satisfy their transport needs by the efficient and integrated use of available transport facilities.

10.1.4 The UK Dept of Transport has produced a document entitled *'Making residential travel plans work – guidelines for new development'*." This document has guided the preparation and drafting of this MMP strategy. In addition the DTO guideline document "*Route to Sustainable Commuting: an Employer's guide to travel plans*" and "*A Sustainable Transport Future*" produced by the Department of Transport have influenced the preparation of this MMP.

10.1.5 The use of MMP is an important element in meeting targets set down in the *Smarter Travel A Sustainable Transport Future.*

10.1.6 The Department of Transport published the policy document *Smarter Travel A Sustainable Transport Future – A New Transport Policy Document for Ireland 2009 –2020* in early 2009. This document sets down the policies and measures required to reduce travel demand and ensure that a far greater proportion of travel is done using sustainable modes of transport.

10.2 Objectives of Mobility Management Plan

10.2.1 A Mobility Management Plan would have the effect of reducing in overall terms both the amount of trips generated by a particular development, and would ensure that greater numbers use public transport. A mobility management strategy would therefore act as a form of mitigation by reducing the overall level of traffic that would be on the surrounding roads in the future.

10.2.2 This Mobility Management Plan includes provision for the appointment of a Mobility Manager, and details of access to the appointed Mobility Manager by the residents in the development.

10.3 Mobility Management Plan Study

10.3.1 ILTP have undertaken a comprehensive study of the proposed future traffic management within the study area involved consideration of the following:

- Public Transport Network Upgrades
- Non Motorised Transport Upgrades
- Car and Bicycle Parking

10.4 Public Transport Network Upgrades

10.4.1 The recently Government published *Infrastructure and Capital Investment 2016 –2021* includes DART expansion on the nearby rail corridor and includes for further upgrades to the QBC network. This will further enhance public transport in the area.

10.5 Non-Motorised Transport Network Upgrades

10.5.1 There are significant improvements planned for the bicycle network in the vicinity of the subject lands. The planned improvements are set out in the NTA *Greater Dublin Area Cycle Network Plan*. This includes a secondary cycle network planned on the R808 adjacent to the subject site and a primary cycle network planed on the R105 nearby.

10.5.2 An 8.5km section of the Dublin Bay Cycle Path has also recently been opened. This off-road cycle path which runs from Clontarf to Sutton along Dublin bay has been completed 25 years after work began.

10.6 Car and Bicycle Parking

10.6.1 ILTP propose to apply the CDP standard of 1:1 parking space to apartment ratio for 2-bed and 3-bed apartments. ILTP further propose that zero car parking spaces be allocated to the 1-bed apartments.

10.6.2 For the apartments this equates to an overall average provision of 459 no. car parking spaces for the apartment units.

10.6.3 A further provision of 28 no. visitor spaces is proposed, which is 6% of the dedicated apartment spaces.

10.6.4 The Proposed Development also includes provision at basement level for electric car charge points at car parking spaces to enable those residents who own electric cars to charge them overnight.

10.6.5 It is projected that up to 17 staff members will work in the creche at any one time. The 9 no. staff car parking spaces for the crèche are proposed to be located within the underground car park. These car parking spaces are conveniently located to the lifts to allow staff to directly access the crèche via the lifts.

10.6.6 It is proposed that 28 no. car parking spaces be allocated for shared use, and these will be managed by the Management Company. These spaces will be for shared use to facilitate car parking demand for creche drop-off and visitors to apartments.

10.6.7 Given that the crèche is proposed to mainly facilitate residents of the Proposed Development most will be dropped off at the crèche on foot. Therefore the proposed shared parking provision should be more than adequate to accommodate the peak drop off demand.

10.6.8 In addition, it is proposed to provide an additional 2 no. dedicated electric car parking at surface level to enable those residents who own electric cars to charge them overnight.

10.6.9 A 'Go Car' car club facility is also proposed for the St Paul's Residential Development in order to reduce the need for car ownership whilst making cars available for residents to meet periodic car needs. The Go-Car facility will be exclusively for residential uses and would be operated and managed by the Management Company. It is proposed that 2 no. 'Go-Car' car parking spaces be provided at surface level

10.6.10 It is proposed that 5% of the total parking provision be allocated for disabled access parking on an 'as-needs' basis.

10.6.11 The required cycle parking provision for the proposed residential development was also determined with regard to current Development Plan Standards and the Apartment Guidelines. It is proposed to provide 1,314 no. cycle parking spaces in the basement, which equates on average to 2 no. cycle parking spaces per residential unit. It is further proposed to provide an additional 329 no. cycle parking spaces at surface level which is approximately 1 no. cycle parking space per 2 no. residential units. A portion of the proposed cycle parking provision can also be allocated to meet the cycle parking requirements of the creche.

10.6.12 It is good practice from a sustainable development perspective to apply measures to restrain private car usage. Measures such as parking control are important in encouraging alternative forms of travel to the private car. However, it is desirable that the quantum of parking should be set at a reasonable level in order to ensure illegal parking outside of the subject site is not generated. The proposed parking adheres to these principles, and to Development Plan standards, and is appropriate for a site of this kind and location.

10.6.13 Full details of the proposed car and cycle parking provision and allocation are included in Section 5 above.

10.7 Mobility Management Plan

10.7.1 **Mobility Manager -** Most fundamental to the success of such a venture is the appointment of a Mobility Manager by the Management Company for the residential units. This individual will be responsible for the delivery of the programme and will act as an interface between the various stakeholder groups within the development.

10.7.2 The Mobility Manager will also be involved in monitoring of the mode of travel from the residential development. This ideally will be done on an annual basis. Monitoring of travel patterns will facilitate the provision of sustainable transport modes and ensure that once modal targets are met that there is no slippage and instead efforts made to further improve the situation. The Management Company concierge will also be located at the entrance to the scheme which will help with monitoring.

10.7.3 A Mobility Manager for the proposed residential development will be appointed after the completion and occupation of the first residential block. The Mobility Manager will have a role in promoting and monitoring the provisions of travel plans within the residential development.

10.7.4 The Mobility Manager will at the outset of the occupation of the first block of residential units implement a number of key measures. These will include

- Providing new residents with a Travel Welcome Pack giving full details of transport options, cycle/walking maps and information on local services
- Instigate and regularly update a travel notice board in each of the blocks providing travel information. This may also be provided online subject to demand.
- Promote the use of Go Car and car share scheme within the development

10.8 Personalised Travel Planning

10.8.1 Alongside the roll-out of these standardised measures a travel plan will be implemented with the objective of developing a sustainable transportation and access policy for residents of the Proposed Development both during and after the construction.

10.8.2 The travel plan aims to create:

- Healthier, stress free and cheaper commutes to work and school for residents
- Manage travel options that provide realistic alternatives to single occupant car commutes
- More informed travel choices for residents
- Integration with other relevant initiatives such as the Green Schools Travel Programme and work based mobility management plans

10.8.3 Central to the plan is the creation and communication of travel options available to all those accessing the proposed and planned developments.

10.9 Application of Personalised Travel Planning

10.9.1 In order to maximise its effectiveness it should be implemented from the outset of the scheme in order to establish sustainable travel patterns at an early stage. A detailed PTP will need to be established and agreed between the developers of the scheme, the Council and any other relevant bodies, all of whom will have a stake in the initiative. Broadly it will include the following elements:

10.9.2 **Personalised Travel Programme -** A programme that will assess the targets of the plan, the most appropriate means of delivering those targets and a system of ongoing monitoring, feedback and improvement;

10.9.3 **Information tailoring and provision -** The success of the scheme is based on the provision of tailored and relevant information to each user.

10.9.4 **Incentivisation -** As part of a marketing strategy, incentives can be organised to promote increased use of public transport and promote the financial benefits of becoming a non car owning household.

10.9.5 **Monitoring -** In order to measure the success of the scheme entire as well as individual initiatives within the scheme, regular monitoring and evaluation against key performance indicators should be undertaken. This will be done on an annual basis.

10.9.6 **Formulation of individual initiatives -** The overall programme will be a composite of several sub-initiatives, as deemed appropriate to the local area. These may include, among others, all or some of the following: -

- Car-sharing / Pooling / Car Club initiatives;
- Cycle/ Walk to work initiatives;
- Walk to School initiatives;
- PT Incentivisation schemes
- Tele-working initiatives
- Cycle training
- Community Travel Forum

10.10 Evaluation and Reporting

10.10.1 The functioning of the Mobility Management Plan will be overseen on an ongoing basis. This will ensure that travel notice boards are kept up to date and that new residents are provided with travel packs and a full induction session.

10.10.2 More formal measurement of the travel behaviour can be undertaken on an annual basis, to include seeking input from the local authority and the Management Company. This can determine if the objectives of the Mobility Management Plan are being met.

10.10.3 Following on from this analysis measures required to remedy any deficiencies can be identified and implemented.

11 SUMMARY & CONCLUSIONS

11.1 Summary

11.1.1 ILTP Consulting were commissioned by Crekav Trading GP Ltd to undertake a Traffic & Transport Assessment (TTA) for a proposed residential development on lands at St Paul's, Raheny, Dublin 5. The primary purpose of this TTA is to assess the potential impact this development may have on the surrounding road network and to identify measures to mitigate these impacts and promote sustainable transport patterns. The TTA also provided the traffic and transport inputs into the EIAR.

11.1.2 The Proposed Development comprises a total of 657 no. apartments in 9 no. separate 5-9 storey residential blocks, in addition to a basement car parking facility. The proposed scheme also includes a 612 sq. m commercial crèche.

11.1.3 The proposed residential development will be accessed via R808 Sybil Hill Road, at a point 200m to the south of the Howth Road junction. Howth Road is a primary arterial road connecting the suburbs of North Dublin with the City Centre.

11.1.4 The Proposed Development site is well served by both existing bus and rail services which are within short walking distances, which offer an attractive alternative to the use of private car for commuting and other purposes. This significantly reduces the impact from the Proposed Development on the surrounding road network.

11.1.5 Site appraisals and fully classified traffic counts in the environs of the Proposed Development were previously undertaken by ILTP in 2015 and 2017, with new surveys conducted in February 2019. These showed an overall slight decline in traffic in the AM and PM peaks. This is consistent with overall traffic patterns in Dublin City as confirmed by the recently published NTA *Canal Cordon Report 2018* which shows continuing decline in radial traffic in and out of the city centre in the AM and PM traffic periods.

11.1.6 Trip Generation figures for the new development were devised using comparable development trip generation rates, which were verified by the TRICS software. The trip generation rates used are likely to be an overestimation on the net new trip generation rates due to the location of the Proposed Development and the Mobility Management Plan proposals.

11.1.7 ILTP carried out a junction capacity assessment for the proposed upgraded access road off Sybil Hill Road using the PICADY software.

11.1.8 The traffic flow levels on Sybil Hill Road are relatively low in comparison with other urban roads in the area and the route is currently running well within the link capacity of this type of urban route.

11.1.9 It is proposed to upgrade the existing access to the Vincentian's Residence and extend same to provide access to the new residential development located to the rear of the school. Access to the school will remain unaltered by the Proposed Development and a gated access to the school will also be provided off the Proposed Development access to provide linkage between the Vincentian's Residence and the school.

11.1.10 An upgraded priority junction is proposed off Sybil Hill Road to serve the new development. The proposed access road also includes for on-road cycle lanes from the junction with Sybil Hill Road to beyond the access to the Vincentian's Residence, to give a safe cycle route from Sybil Hill Road to beyond the school and Vincentian's Residence access points. This cycle route will link with the DCC Cycle Network planned for the area. Beyond the side entrances to the development the nature of the new access road will become solely residential in nature, with landscaping and traffic management measure to ensure that cyclists and cars can share the carriageway.

11.1.11 The proposed residential development is located approximately 200m from Sybil Hill Road. This is beneficial in preventing overspill of car parking on to Sybil Hill Road and ensuring that the proposed residential area will also remain free from external car parking.

11.1.12 The proposed residential development adjoins St. Anne's Park along three sides. Four pedestrian links are proposed between the Proposed Development and St. Anne's Park. These pedestrian links could also allow direct access to the park for residents, which would further increase the use of the park and would also reduce walk and cycle distance to Bus and Dart services.

11.1.13 The Picady analysis has found that the proposed access junction onto Sybil Hill Road will operate at less than 22% of its capacity with the development in place.

11.1.14 The pedestrian crossing to the south of the proposed access will provide gaps in the traffic on Sybil Hill Road, which will further aid access and egress to the Proposed Development. The final location of this pedestrian crossing will be agreed with the local authority.

11.1.15 Based on the traffic conditions observed during site visits and traffic surveys, the nature of the development, and the proximity to Dublin City Centre, ILTP estimated a 50/50 split in Trip Distribution for traffic exiting the development. Therefore the traffic flow will dissipate left and right, with less that one additional vehicle per minute from the development being added to Sybil Hill Road in either direction.

11.1.16 The traffic flows at Sybil Hill Road/Vernon Avenue are signal controlled and the overall impact of the Proposed Development will be very low at this location. Beyond this the traffic dissipates further to well below threshold levels.

11.1.17 The junction of Howth Road/Sybil Hill Road is currently heavily used at peak times and particularly so during school opening and closing times at the nearby primary school. The current signal setting gives priority to the main road with minimum green time allocated to Sybil Hill Road and Brookwood Avenue. This is appropriate as Howth Road is a high frequency bus route.

11.1.18 The capacity of this junction was assessed using the LinSig Signalised Junction Modelling software. This shows that, by applying robust traffic generation figures, the overall change in traffic flow through this junction from the proposed St Paul's Residential Development and adjoining St Paul's College Sports Hall / Pitches Development is projected to increase by approximately 3.1% during the morning peak hour and 3.8% during the evening peak hour. These increases are below the 5% Traffic Impact Assessment threshold which would normally be regarded as having a reasonable impact on the junction. However based on our experience the increase in traffic from the new development is likely to result in changes to traffic patterns in the area rather than an increase in traffic on the wider network. Therefore the traffic increases assumed in both this TIA ad the EIAR for the Proposed Development represent a worse case scenario.

11.1.19 The LinSig Traffic Model shows that the existing Howth Road approaches are operating within capacity, which is a high frequency bus corridor. This is as expected given that the traffic signals are set in favour of Howth Road, with the side roads given minimum green time.

11.1.20 The LinSig traffic modelling analysis undertaken shows that the junction can satisfactorily accommodate the projected additional traffic from the Proposed Development.

11.1.21 A sensitivity test showed that minor signal time modifications to the Howth Road / Sybil Hill Road junction would result in a further improvement in the capacity of the Brookwood Avenue and Sybil Hill Road approaches with the Proposed Development in place. ILTP consider however that optimisation of the existing Howth Road / Sybil Hill Road junction is not necessary as it is preferable that higher priority is afforded to the Howth Road which is a high frequency bus corridor.

11.1.22 Analysis of radial traffic movement to the city centre using the Annual Cordon Counts collated by DCC shows that radial traffic flows into the city centre are in gradual decline. The roll out of the cycle network by DCC has already resulted in large increases in cycling numbers. Proposed enhancements of public transport infrastructure in the area, such as the proposed Bus Connects upgrades in the area and also the *National Development Plan 2018 - 2027* proposed DART expansion on the nearby rail corridor, will further promote modal shift in the area. It is also further noted that if current Government and DCC mode share targets are met, as reaffirmed in the *DCC Development Plan 2016 – 2022*, then further reductions in background traffic can be expected in the short to medium term in line with greater shift to more sustainable modes of transport.

11.1.23 The internal layout car parking provision and Mobility Management Plan initiatives proposed will further promote greater use of more sustainable travel modes. In addition to providing adequate parking for the needs of the new residents, Go Car, electric car parking points and disabled access spaces are also to be provided. Generous cycle parking is provided for within the development and provision is made for some visitor car parking spaces also. The MMP includes for the appointment of a Mobility Manager by the Management Company for the residential development, which will ensure active participation of the new residents in promoting sustainable travel patterns.

11.1.24 The construction traffic will not have a significant negative impact on the local road network and will be directed via designated construction traffic routes. The proposed construction phasing and traffic management plan will minimise impact on local residents, schools, care facilities and businesses and ensure that Sybil Hill Road and the adjoining road network remains operational at all times.

11.2 Conclusions

11.2.1 This robust assessment assumes combined trip generation figures for the proposed St Paul's residential, Sports Hall / Playing Pitches and permitted MKN developments, and confirms that the adjoining road network can satisfactorily accommodate the projected development traffic.

11.2.2 The newly proposed St Paul's residential development accords with the policies as set down in the *Dublin City Development Plan 2016 – 2022*. The Proposed Development is fully supported by National, Regional and Local Plan policies and has evolved in a manner so that it fully supports the principles for sustainable transport as set out in Smarter Travel.

11.2.3 While this new Traffic & Transport Assessment assumed very robust, worse case scenario assumptions in respect to traffic flows and traffic generation, it demonstrates that with the proposed access and egress arrangement the net overall traffic impact would be readily accommodated in the road network. The proposed residential development will promote sustainable travel patterns due to its location, layout, design and proximity to the public transport and cycle networks. These will be complimented with a MMP and the appointment of a Mobility Manager to promote sustainable travel patterns by residents. The proposed residential development is located such that it will not have any significant traffic impact on the existing residential development in the area. The access and internal layout is designed in accordance with DMURS and includes for good permeability and will promote and facilitate sustainable travel patterns as part of the overall development.

A APPENDIX

A.1 *Dublin City Development Plan 2016 – 2022* Car Parking Standards

Table 16.1 – Maximum Car Parking Standards for Various Land-Uses

Land-Use	Zone	Car Spaces
Enterprise and Employment/Offices/ General Industry (inc warehousing)	1 2 3	1 per 400 sq.m GFA (Gross floor area) 1 per 200 sq.m GFA 1 per 100 sq.m GFA
Retail Supermarkets exceeding 1,000sq.m GFA	1 2 3	None 1 per 100 sq.m GFA[1] 1 per 30 sq.m GFA[1]
Other Retail and Main Street, Financial Offices (excl. retail warehouse)	1 2 3	1 per 350 sq.m GFA 1 per 275 sq.m GFA 1 per 75 sq.m GFA
Industry	1 2 3	1 per 400 sq.m GFA 1 per 200 sq.m GFA 1 per 75 sq.m GFA
Warehouse Retail (non-food)	1 2 3	1 per 300 sq.m GFA 1 per 200 sq.m GFA 1 per 35 sq.m GFA
Warehouse	1 and 2 3	1 per 450 sq.m GFA 1 per 200 sq.m GFA
Residential	1 and 2 3	1 per dwelling 1.5 per dwelling
Elderly Persons Dwellings/ Warden-Supervised Dwellings/ Sheltered Housing	1 2 and 3	1 per 4 dwellings 1 per 2 dwellings
Youth Hostel	1 2 3	None 1 per 30 bed-spaces 1 per 15 bed-spaces
Student Hostel/Student Accommodation	1 2 3	None (see section 16.10.7 for requirements) 1 per 20 bed-spaces 1 per 10 bed-spaces
Residential Institution	1 2 3	None 1 per 20 bed-spaces 1 per 10 bed-spaces
Hotels and Guest Houses	1 2 3	1 per 4 rooms 1 per 3 rooms 1 per 1 room
Clinics and Group Practices	1 2 and 3	1 per consulting room 2 per consulting room
Churches, Theatres, Cinemas and Auditoriums	1 2 3	1 per 100 seats 1 per 25 seats 1 per 10 seats
Restaurants, Cafés and Take-aways	1 2 and 3	None 1 per 150 sq.m seating area

Land-Use	Zone	Car Spaces
Public Houses	1 2 3	None 1 per 300 sq.m NFA (net floor area) 1 per 50 sq.m NFA
Schools	1 2 and 3	None 1 per Classroom
Colleges of Further Education	1 2 and 3	None 1 per classroom and 1 per 30 students
Funeral Homes	1, 2 and 3	4 off-street parking spaces
Hospitals (Out-patient facilities)	1 2 3	1 per 150 sq.m GFA 1 per 100 sq.m GFA 1 per 60 sq.m GFA
Nursing Home	1 2 and 3	1 per 3 patient beds 1 per 2 patient beds
Cultural and Recreational Buildings	1 2 3	1 per 400 sq.m GFA 1 per 250 sq.m GFA 1 per 100 sq.m GFA
Nightclub/Dance Hall/Dance Club	1 2 3	None 1 per 10 sq.m floor area 1 per 3 sq.m floor area
Other Cultural and Recreational and Leisure Uses	1, 2 and 3	Dependent on nature and location of use

[1] Car parking above maximum permitted standards may be acceptable in very limited circumstances at the discretion of Dublin City Council. Such circumstances could include proposals where overspill car parking may arise, where the need to protect the primacy of the city in the regional retail hierarchy is identified, or where the need to accommodate car parking as part of a larger scheme of civic importance is apparent. In all cases, the applicant must fully engage with Dublin City Council at pre-planning stage regarding the acceptability of departure from maximum standards.

Where a deviation from maximum standards is to be considered, the acceptability of proposals will be assessed against a number of criteria including, inter alia:

- The civic importance of the scheme
- The identified need for public car parking in the area
- The accessibility of the surrounding area
- Road capacity and impact on the road network
- The mix and appropriateness of uses proposed
- The impact on the public realm, streetscape and urban fabric of the city
- The impact on the grain and vitality of city streets
- Compliance with Section 4.5.5, 'The Public Realm'
- Compliance with policies to make efficient use of finite urban land and consolidate the city
- Compliance with policies to safeguard investment in public transport and encourage modal shift.

In addition, proposals will be informed by a Transport Assessment, the scope of which must be agreed by Dublin City Council prior

B APPENDIX

B.1 PICADY Analysis

PICADY

GUI Version: 5.1 AE
Analysis Program Release: 5.0 (MAY 2010)

For sales and distribution information, program advice and maintenance, contact:

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Run Analysis

Parameter	Values
File Run	I:\ILTP Projects\StPauls\Data\Picady\2019 TTA\2021 Opening Year.vpi
Date Run	16 August 2019
Time Run	12:22:57
Driving Side	Drive On The Left

Arm Names and Flow Scaling Factors

Arm	Arm Name	Flow Scaling Factor (%)
Arm A	R808	100
Arm B	Proposed Access	100
Arm C	R808	100

Stream Labelling Convention

Stream A-B contains traffic going from A to B etc.

Run Information

Parameter	Values
Run Title	St Pauls Residential Development Proposed Access
Location	Sybill Hill Road
Date	16 August 2019
Enumerator	-
Job Number	STPAULS
Status	TIA
Client	Crekav Trading GP Limited
Description	2021 Opening Year Assessment of Proposed Access Junction onto Sybil Hill Road

Errors and Warnings

Parameter	Values
Warning	No Errors Or Warnings

Geometric Data

Geometric Parameters

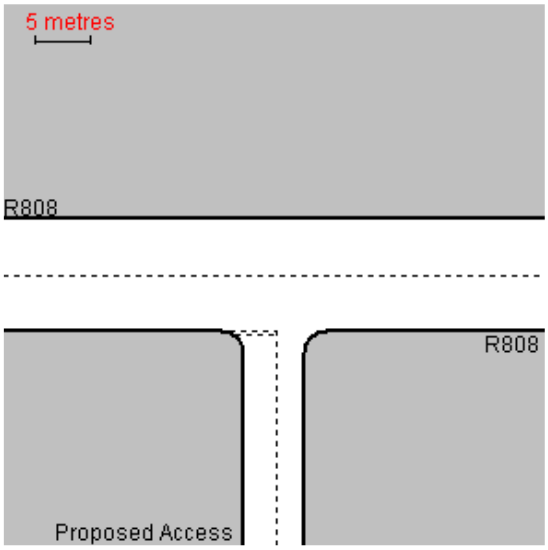
Parameter	Minor Arm B
Major Road Carriageway Width (m)	8.00
Major Road Kerbed Central Reserve Width (m)	0.00
Major Road Right Turning Lane Width (m)	2.20
Minor Road First Lane Width (m)	3.00
Minor Road Visibility To Right (m)	100
Minor Road Visibility To Left (m)	100
Major Road Right Turn Visibility (m)	100
Major Road Right Turn Blocks Traffic	Yes (if over 0 veh)

Slope and Intercept Values

Stream	Intercept for Stream	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	560.751	0.093	0.236	0.148	0.337
B-C	686.890	0.096	0.243	-	-
C-B	631.874	0.224	0.224	-	-

Note: Streams may be combined in which case capacity will be adjusted
These values do not allow for any site-specific corrections

Junction Diagram



Demand Data

Modelling Periods

Parameter	Period	Duration (min)	Segment Length (min)
First Modelling Period	08:00-09:00	60	15
Second Modelling Period	17:00-18:00	60	15

Direct Entry Flows

Demand Set: St Pauls Proposed Access - AM Peak
Modelling Period: 08:00-09:00

Segment: 08:00-08:15

Arm	Flow (veh/min)
Arm A	5.60
Arm B	1.63
Arm C	5.30

Segment: 08:15-08:30

Arm	Flow (veh/min)
Arm A	5.60
Arm B	1.63
Arm C	5.30

Segment: 08:30-08:45

Arm	Flow (veh/min)
Arm A	5.60
Arm B	1.63
Arm C	5.30

Segment: 08:45-09:00

Arm	Flow (veh/min)
Arm A	5.60
Arm B	1.63
Arm C	5.30

Demand Set: St Pauls Proposed Access - PM Peak
Modelling Period: 17:00-18:00

Segment: 17:00-17:15

Arm	Flow (veh/min)
Arm A	4.52
Arm B	1.12
Arm C	6.63

Segment: 17:15-17:30

Arm	Flow (veh/min)
Arm A	4.52
Arm B	1.12
Arm C	6.63

Segment: 17:30-17:45

Arm	Flow (veh/min)
Arm A	4.52
Arm B	1.12
Arm C	6.63

Segment: 17:45-18:00

Arm	Flow (veh/min)
Arm A	4.52
Arm B	1.12
Arm C	6.63

Turning Counts

Demand Set: St Pauls Proposed Access - AM Peak
Modelling Period: 08:00-09:00

From/To	Arm A	Arm B	Arm C
Arm A	-	16	320
Arm B	49	-	49
Arm C	295	23	-

Demand Set: St Pauls Proposed Access - PM Peak
Modelling Period: 17:00-18:00

From/To	Arm A	Arm B	Arm C
Arm A	-	37	234
Arm B	34	-	33
Arm C	342	56	-

Turning proportions are calculated from turning count data

Turning Proportions

Demand Set: St Pauls Proposed Access - AM Peak
Modelling Period: 08:00-09:00

From/To	Arm A	Arm B	Arm C
Arm A	0.000	0.048	0.952
Arm B	0.500	0.000	0.500
Arm C	0.928	0.072	0.000

Demand Set: St Pauls Proposed Access - PM Peak
Modelling Period: 17:00-18:00

From/To	Arm A	Arm B	Arm C
Arm A	0.000	0.137	0.863
Arm B	0.507	0.000	0.493
Arm C	0.859	0.141	0.000

Heavy Vehicles Percentages

Demand Set: St Pauls Proposed Access - AM Peak
Modelling Period: 08:00-09:00

From/To	Arm A	Arm B	Arm C
Arm A	-	10.0	10.0
Arm B	10.0	-	10.0
Arm C	10.0	10.0	-

Demand Set: St Pauls Proposed Access - PM Peak
Modelling Period: 17:00-18:00

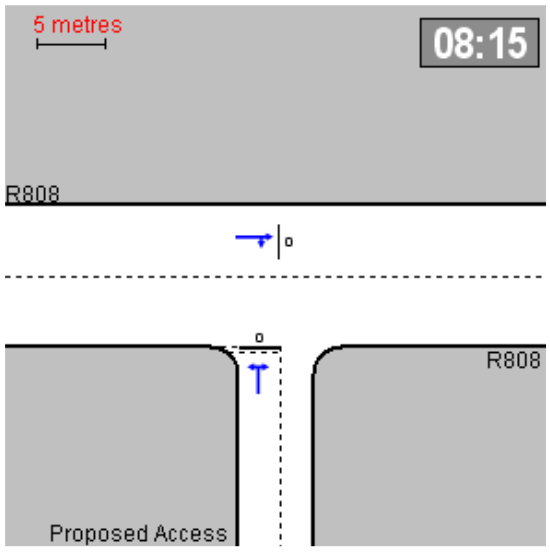
From/To	Arm A	Arm B	Arm C
Arm A	-	10.0	10.0
Arm B	10.0	-	10.0
Arm C	10.0	10.0	-

Default proportions of heavy vehicles are used

Queue Diagrams

Demand Set: Sum of Demand Sets for Modelling Period: 08:00 - 09:00
Modelling Period: 08:00-09:00
View Extent: 40m

Queue Interval 1: 08:00-08:15



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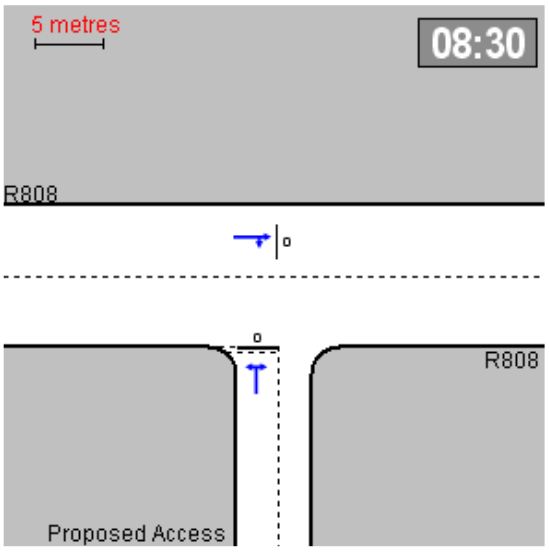
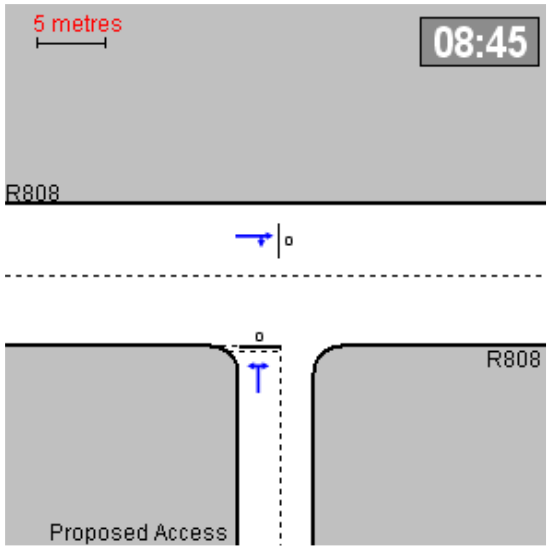
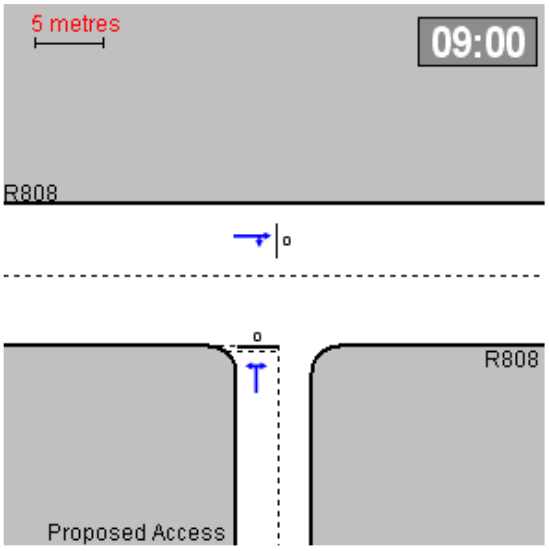


Queue Interval 3: 08:30-08:45



Queue Interval 4: 08:45-09:00



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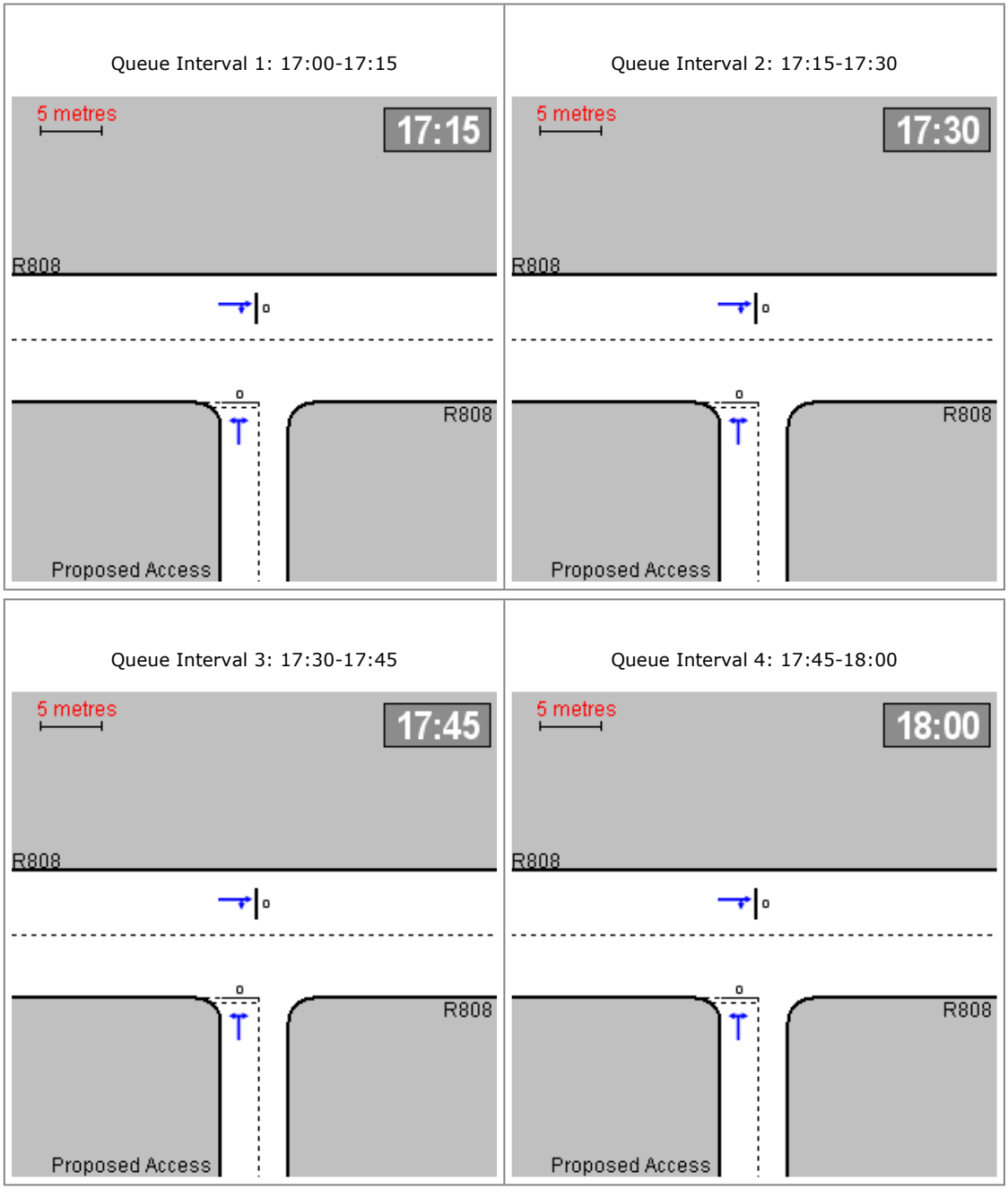
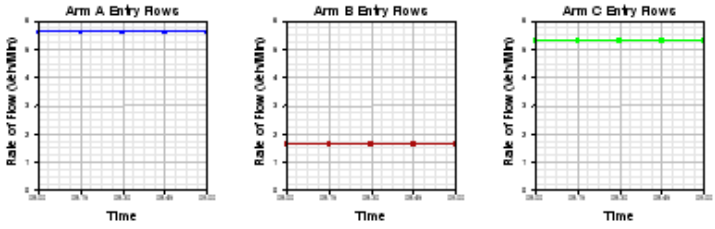
View Extent: 40m



Demand Data Graph

Demand Set: St Pauls Proposed Access - AM Peak
Modelling Period: 08:00-09:00



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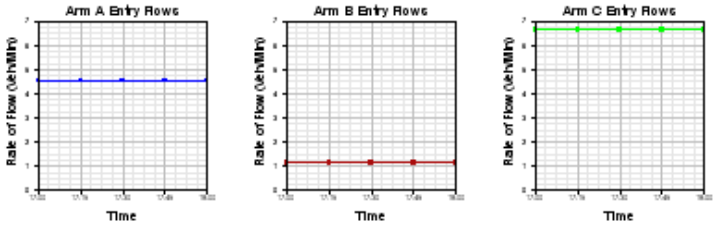
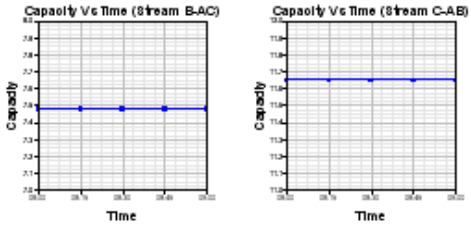
Modelling Period: 17:00-18:00


Arm A Entry Flows
Rate of Flow (Veh/Min)
Time
Arm B Entry Flows
Rate of Flow (Veh/Min)
Time
Arm C Entry Flows
Rate of Flow (Veh/Min)
Time

Capacity Graph

Demand Set: Sum of Demand Sets for Modelling Period: 08:00 - 09:00
Modelling Period: 08:00-09:00



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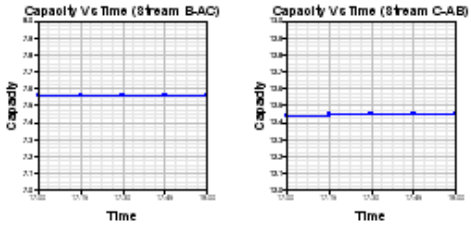
Modelling Period: 17:00-18:00



RFC Graph

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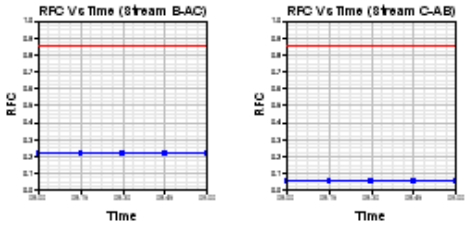
Modelling Period: 08:00-09:00



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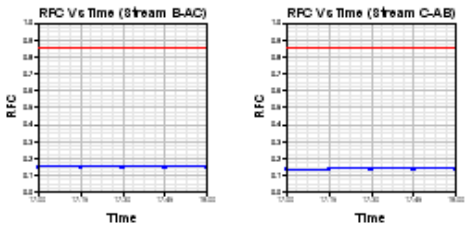
Modelling Period: 17:00-18:00



Start Queue Graph

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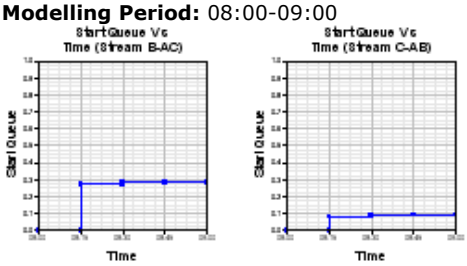
Modelling Period: 08:00-09:00



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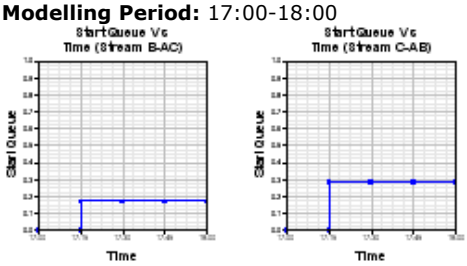
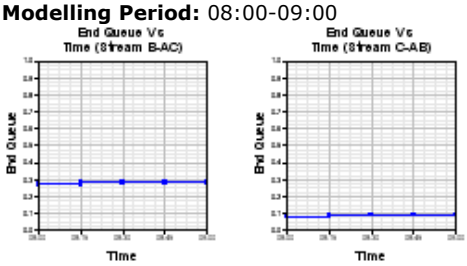
Modelling Period: 17:00-18:00

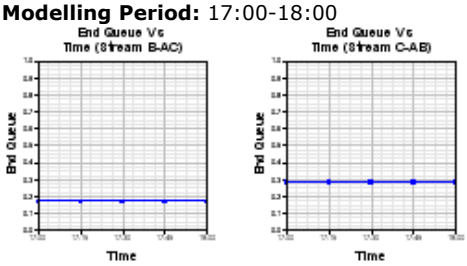


End Queue Graph

Demand Set: Sum of Demand Sets for Modelling Period: 08:00 - 09:00
Modelling Period: 08:00-09:00

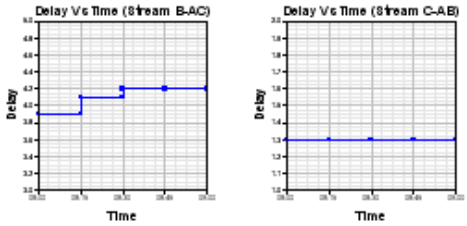


Demand Set: Sum of Demand Sets for Modelling Period: 17:00 - 18:00
Modelling Period: 17:00-18:00

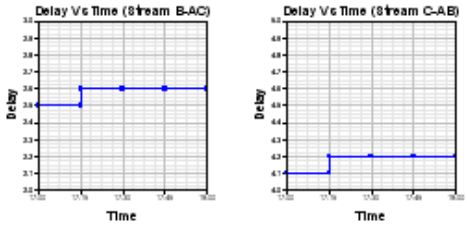


Delay Graph

Demand Set: Sum of Demand Sets for Modelling Period: 08:00 - 09:00
Modelling Period: 08:00-09:00



Demand Set: Sum of Demand Sets for Modelling Period: 17:00 - 18:00
Modelling Period: 17:00-18:00



Queues & Delays

Demand Set: Sum of Demand Sets for Modelling Period: 08:00 - 09:00
Modelling Period: 08:00-09:00

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
08:00-08:15	B-AC	1.63	7.48	0.218	-	0.00	0.27	-	3.9	0.17
	C-AB	0.63	11.65	0.054	-	0.00	0.08	-	1.3	0.09
	C-A	4.67	-	-	-	-	-	-	-	-
	A-B	0.27	-	-	-	-	-	-	-	-
	A-C	5.33	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
08:15-08:30	B-AC	1.63	7.48	0.218	-	0.27	0.28	-	4.1	0.17
	C-AB	0.64	11.65	0.055	-	0.08	0.09	-	1.3	0.09
	C-A	4.66	-	-	-	-	-	-	-	-
	A-B	0.27	-	-	-	-	-	-	-	-
	A-C	5.33	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
08:30-08:45	B-AC	1.63	7.48	0.218	-	0.28	0.28	-	4.2	0.17
	C-AB	0.64	11.65	0.055	-	0.09	0.09	-	1.3	0.09
	C-A	4.66	-	-	-	-	-	-	-	-
	A-B	0.27	-	-	-	-	-	-	-	-
	A-C	5.33	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
08:45-09:00	B-AC	1.63	7.48	0.218	-	0.28	0.28	-	4.2	0.17
	C-AB	0.64	11.65	0.055	-	0.09	0.09	-	1.3	0.09
	C-A	4.66	-	-	-	-	-	-	-	-
	A-B	0.27	-	-	-	-	-	-	-	-
	A-C	5.33	-	-	-	-	-	-	-	-

Demand Set: Sum of Demand Sets for Modelling Period: 17:00 - 18:00
Modelling Period: 17:00-18:00

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
17:00-17:15	B-AC	1.12	7.56	0.148	-	0.00	0.17	-	2.5	0.15
	C-AB	1.70	12.44	0.136	-	0.00	0.28	-	4.1	0.09
	C-A	4.93	-	-	-	-	-	-	-	-
	A-B	0.62	-	-	-	-	-	-	-	-
	A-C	3.90	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
17:15-17:30	B-AC	1.12	7.56	0.148	-	0.17	0.17	-	2.6	0.16
	C-AB	1.71	12.45	0.137	-	0.28	0.28	-	4.2	0.09
	C-A	4.92	-	-	-	-	-	-	-	-
	A-B	0.62	-	-	-	-	-	-	-	-
	A-C	3.90	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
17:30-17:45	B-AC	1.12	7.56	0.148	-	0.17	0.17	-	2.6	0.16
	C-AB	1.71	12.45	0.137	-	0.28	0.28	-	4.2	0.09
	C-A	4.92	-	-	-	-	-	-	-	-
	A-B	0.62	-	-	-	-	-	-	-	-
	A-C	3.90	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
17:45-18:00	B-AC	1.12	7.56	0.148	-	0.17	0.17	-	2.6	0.16
	C-AB	1.71	12.45	0.137	-	0.28	0.28	-	4.2	0.09
	C-A	4.92	-	-	-	-	-	-	-	-
	A-B	0.62	-	-	-	-	-	-	-	-
	A-C	3.90	-	-	-	-	-	-	-	-

Entry capacities marked with an '(X)' are dominated by a pedestrian crossing in that time segment.
In time segments marked with a '(B)', traffic leaving the junction may block back from a crossing so impairing normal operation of the junction.
Delays marked with '##' could not be calculated.

Overall Queues & Delays

Queueing Delay Information Over Whole Period

Demand Set: Sum of Demand Sets for Modelling Period: 08:00 - 09:00
Modelling Period: 08:00-09:00

Stream	Total Demand (veh)	Total Demand (veh/h)	Queueing Delay (min)	Queueing Delay (min/veh)	Inclusive Delay (min)	Inclusive Delay (min/veh)
B-AC	97.8	97.8	16.4	0.2	16.4	0.2
C-AB	38.1	38.1	5.1	0.1	5.1	0.1
C-A	279.9	279.9	-	-	-	-
A-B	16.0	16.0	-	-	-	-
A-C	320.0	320.0	-	-	-	-
All	**751.8**	**751.8**	**21.5**	**0.0**	**21.5**	**0.0**

Demand Set: Sum of Demand Sets for Modelling Period: 17:00 - 18:00
Modelling Period: 17:00-18:00

Stream	Total Demand (veh)	Total Demand (veh/h)	Queueing Delay (min)	Queueing Delay (min/veh)	Inclusive Delay (min)	Inclusive Delay (min/veh)
B-AC	67.2	67.2	10.2	0.2	10.3	0.2
C-AB	102.3	102.3	16.7	0.2	16.7	0.2
C-A	295.5	295.5	-	-	-	-
A-B	37.0	37.0	-	-	-	-
A-C	234.2	234.2	-	-	-	-
All	**736.2**	**736.2**	**27.0**	**0.0**	**27.0**	**0.0**

Delay is that occurring only within the time period.
Inclusive delay includes delay suffered by vehicles which are still queuing after the end of the time period.
These will only be significantly different if there is a large queue remaining at the end of the time period.

PICADY 5 Run Successful

C APPENDIX

C.1 Traffic Survey DAta

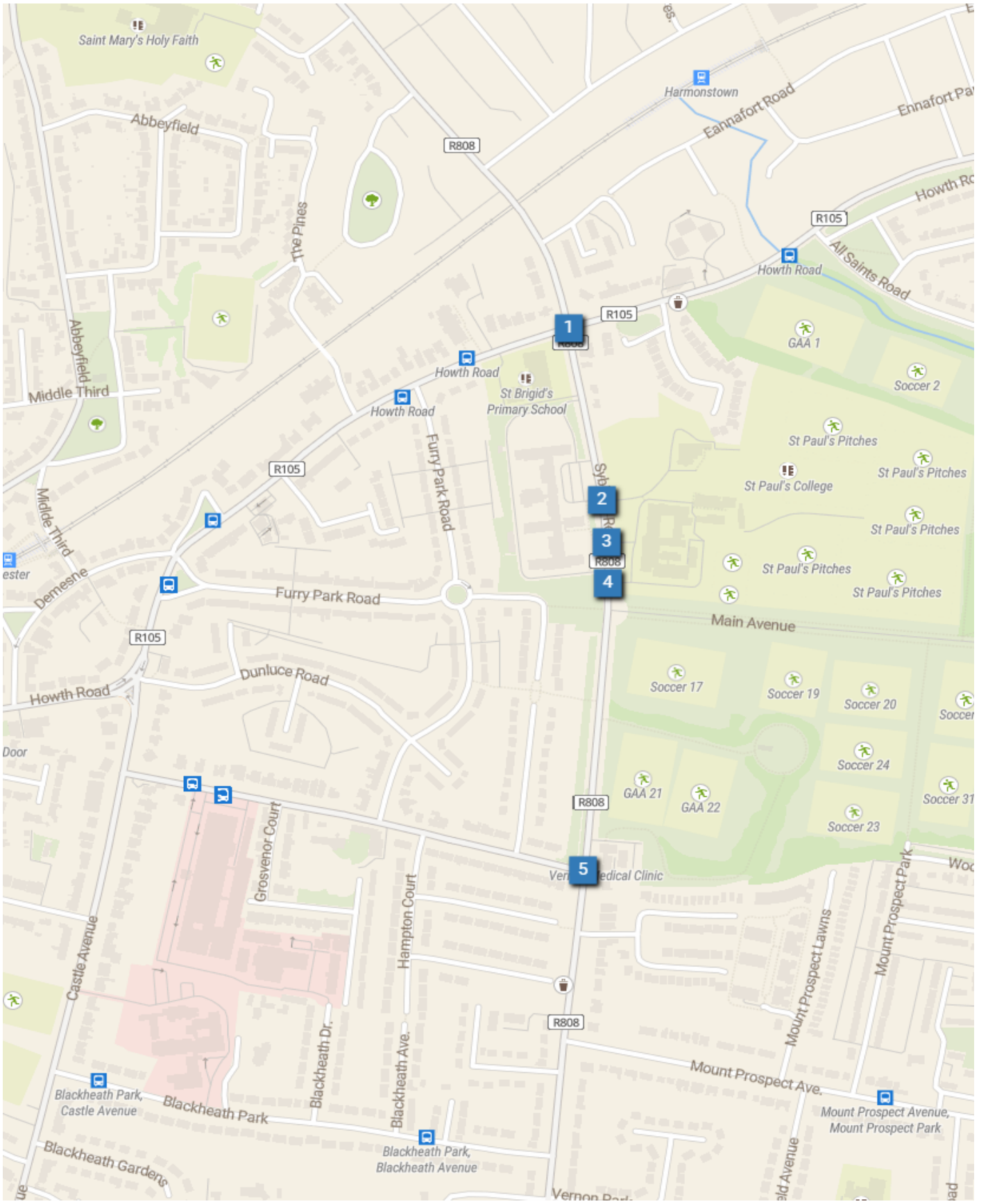
Data Analysis Services
Traffic-Transportation- Commercial-Innovation

031 19050 Raheny

with compliments

IDASO

Survey Name: 031 19050 Raheny
Date: 13 Feb 2019



IDASO

Survey Name: 031 19050 Raheny
Site: 1
Location: Brookwood Ave / Howth Rd / Sybil Hill Rd
Date: 13-Feb-2019

	A => A								A => B							
TIME	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU
07:00	0	0	0	0	0	0	0	0	0	0	7	2	1	0	10	12.3
07:15	0	0	0	0	0	0	0	0	0	0	8	1	0	0	9	9.5
07:30	0	0	0	0	0	0	0	0	0	0	17	3	3	0	23	28.4
07:45	0	0	0	0	0	0	0	0	0	0	19	2	0	1	22	24
H/TOT	0	0	0	0	0	0	0	0	0	0	51	8	4	1	64	74.2
08:00	0	0	0	0	0	0	0	0	0	0	31	0	0	0	31	31
08:15	0	0	0	0	0	0	0	0	0	0	17	1	0	0	18	18.5
08:30	0	0	0	0	0	0	0	0	0	0	25	0	0	0	25	25
08:45	0	0	0	0	0	0	0	0	0	0	33	6	0	0	39	42
H/TOT	0	0	0	0	0	0	0	0	0	0	106	7	0	0	113	116.5
09:00	0	0	0	0	0	0	0	0	0	0	33	3	0	0	36	37.5
09:15	0	0	0	0	0	0	0	0	0	0	13	4	2	0	19	23.6
09:30	0	0	0	0	0	0	0	0	0	0	15	3	1	0	19	21.8
09:45	0	0	0	0	0	0	0	0	0	0	19	2	0	0	21	22
H/TOT	0	0	0	0	0	0	0	0	0	0	80	12	3	0	95	104.9
10:00	0	0	0	0	0	0	0	0	0	0	18	3	0	0	21	22.5
10:15	0	0	0	0	0	0	0	0	0	0	20	1	0	0	21	21.5
10:30	0	0	0	0	0	0	0	0	0	0	21	2	1	0	24	26.3
10:45	0	0	0	0	0	0	0	0	0	0	13	1	0	0	14	14.5
H/TOT	0	0	0	0	0	0	0	0	0	0	72	7	1	0	80	84.8
11:00	0	0	0	0	0	0	0	0	0	0	27	5	0	0	32	34.5
11:15	0	0	0	0	0	0	0	0	0	0	22	5	1	0	28	31.8
11:30	0	0	0	0	0	0	0	0	0	0	32	4	0	0	36	38
11:45	0	0	0	0	0	0	0	0	1	0	32	3	0	0	36	36.7
H/TOT	0	0	0	0	0	0	0	0	1	0	113	17	1	0	132	141
12:00	0	0	0	0	0	0	0	0	0	0	25	1	2	0	28	31.1
12:15	0	0	0	0	0	0	0	0	0	0	17	2	2	0	21	24.6
12:30	0	0	0	0	0	0	0	0	0	0	32	8	1	0	41	46.3
12:45	0	0	0	0	0	0	0	0	0	1	27	4	0	0	32	33.4
H/TOT	0	0	0	0	0	0	0	0	0	1	101	15	5	0	122	135.4
13:00	0	0	0	0	0	0	0	0	0	0	35	7	0	0	42	45.5
13:15	0	0	0	0	0	0	0	0	1	0	32	2	0	0	35	35.2
13:30	0	0	0	0	0	0	0	0	0	0	32	3	0	0	35	36.5
13:45	0	0	0	0	0	0	0	0	0	0	28	1	0	0	29	29.5
H/TOT	0	0	0	0	0	0	0	0	1	0	127	13	0	0	141	146.7
14:00	0	0	0	0	0	0	0	0	0	0	36	3	0	0	39	40.5
14:15	0	0	0	0	0	0	0	0	0	0	39	3	0	0	42	43.5
14:30	0	0	0	0	0	0	0	0	1	0	21	1	0	1	24	24.7
14:45	0	0	0	0	0	0	0	0	0	0	27	2	0	0	29	30
H/TOT	0	0	0	0	0	0	0	0	1	0	123	9	0	1	134	138.7
15:00	0	0	0	0	0	0	0	0	2	0	25	5	1	0	33	35.2
15:15	0	0	0	0	0	0	0	0	0	0	22	0	0	0	22	22
15:30	0	0	0	0	0	0	0	0	0	0	21	2	0	0	23	24
15:45	0	0	0	0	0	0	0	0	0	1	38	3	0	0	42	42.9
H/TOT	0	0	0	0	0	0	0	0	2	1	106	10	1	0	120	124.1
16:00	0	0	0	0	0	0	0	0	1	0	24	2	0	0	27	27.2
16:15	0	0	0	0	0	0	0	0	0	0	29	0	0	0	29	29
16:30	0	0	0	0	0	0	0	0	0	0	32	0	0	0	32	32
16:45	0	0	0	0	0	0	0	0	0	0	43	3	0	0	46	47.5
H/TOT	0	0	0	0	0	0	0	0	1	0	128	5	0	0	134	135.7
17:00	0	0	0	0	0	0	0	0	0	0	32	1	0	0	33	33.5
17:15	0	0	0	0	0	0	0	0	1	0	36	2	0	0	39	39.2
17:30	0	0	0	0	0	0	0	0	0	0	27	3	0	0	30	31.5
17:45	0	0	0	0	0	0	0	0	1	0	44	0	0	0	45	44.2
H/TOT	0	0	0	0	0	0	0	0	2	0	139	6	0	0	147	148.4
18:00	0	0	0	0	0	0	0	0	1	0	44	1	0	0	46	45.7
18:15	0	0	0	0	0	0	0	0	0	0	31	1	0	0	32	32.5
18:30	0	0	0	0	0	0	0	0	1	0	24	0	1	0	26	26.5
18:45	0	0	0	0	0	0	0	0	0	0	29	1	0	0	30	30.5
H/TOT	0	0	0	0	0	0	0	0	2	0	128	3	1	0	134	135.2
12 TOT	0	0	0	0	0	0	0	0	10	2	1274	112	16	2	1416	1485.6

IDASO

Survey Name: 031 19050 Raheny
Site: 1
Location: Brookwood Ave / Howth Rd / Sybil Hill Rd
Date: 13-Feb-2019

	A => C								A => D							
TIME	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU
07:00	2	0	18	4	0	0	24	24.4	1	0	46	6	2	0	55	59.8
07:15	1	0	35	5	2	0	43	47.3	5	2	49	3	1	0	60	57.6
07:30	0	1	28	7	2	0	38	43.5	3	1	41	1	3	0	49	50.4
07:45	4	1	36	8	2	0	51	53.8	7	0	48	8	0	0	63	61.4
H/TOT	7	2	117	24	6	0	156	169	16	3	184	18	6	0	227	229.2
08:00	7	0	48	2	1	0	58	54.7	4	0	54	7	0	0	65	65.3
08:15	21	0	42	5	0	0	68	53.7	14	0	57	6	1	0	78	71.1
08:30	22	0	37	3	2	0	64	50.5	17	2	57	3	1	0	80	68
08:45	9	0	28	4	1	0	42	38.1	11	1	58	7	0	0	77	71.1
H/TOT	59	0	155	14	4	0	232	197	46	3	226	23	2	0	300	275.5
09:00	2	0	33	3	1	0	39	40.2	5	0	54	3	2	0	64	64.1
09:15	0	0	30	4	0	1	35	38	6	0	35	2	1	0	44	41.5
09:30	0	1	29	3	2	0	35	38.5	2	0	34	5	0	0	41	41.9
09:45	3	0	23	8	0	1	35	37.6	2	0	24	7	0	0	33	34.9
H/TOT	5	1	115	18	3	2	144	154.3	15	0	147	17	3	0	182	182.4
10:00	0	0	18	3	2	0	23	27.1	1	0	24	9	1	1	36	42
10:15	0	0	31	7	0	0	38	41.5	0	0	31	7	0	0	38	41.5
10:30	3	0	21	5	1	0	30	31.4	0	0	24	2	0	0	26	27
10:45	1	0	39	4	2	0	46	49.8	0	1	34	2	1	0	38	39.7
H/TOT	4	0	109	19	5	0	137	149.8	1	1	113	20	2	1	138	150.2
11:00	2	1	26	2	1	0	32	32.1	2	2	24	0	1	0	29	27.5
11:15	0	0	40	3	0	0	43	44.5	0	0	25	4	3	0	32	37.9
11:30	1	0	30	4	2	0	37	40.8	0	0	18	5	1	0	24	27.8
11:45	0	0	22	2	1	0	25	27.3	3	0	18	1	1	0	23	22.4
H/TOT	3	1	118	11	4	0	137	144.7	5	2	85	10	6	0	108	115.6
12:00	0	0	32	4	0	0	36	38	1	0	32	2	0	0	35	35.2
12:15	2	0	34	3	1	1	41	43.2	1	0	21	5	0	0	27	28.7
12:30	0	0	37	1	1	0	39	40.8	2	0	27	4	0	0	33	33.4
12:45	2	0	41	4	2	0	49	52	2	0	22	1	0	0	25	23.9
H/TOT	4	0	144	12	4	1	165	174	6	0	102	12	0	0	120	121.2
13:00	0	1	32	4	1	0	38	40.7	0	0	45	5	0	1	51	54.5
13:15	2	0	24	2	1	0	29	29.7	2	0	29	2	1	0	34	34.7
13:30	0	0	43	2	1	0	46	48.3	1	0	40	0	0	0	41	40.2
13:45	0	0	38	4	0	0	42	44	0	0	35	3	0	0	38	39.5
H/TOT	2	1	137	12	3	0	155	162.7	3	0	149	10	1	1	164	168.9
14:00	4	0	38	6	0	0	48	47.8	1	0	31	5	0	1	38	40.7
14:15	0	0	27	4	0	0	31	33	1	0	37	2	0	0	40	40.2
14:30	2	0	34	2	0	0	38	37.4	1	1	27	3	1	1	34	36.4
14:45	1	0	38	2	2	0	43	45.8	4	0	28	4	3	0	39	41.7
H/TOT	7	0	137	14	2	0	160	164	7	1	123	14	4	2	151	159
15:00	2	0	35	5	0	0	42	42.9	1	1	40	7	0	0	49	51.1
15:15	0	0	33	3	2	0	38	42.1	2	2	24	2	0	0	30	28.2
15:30	3	0	35	3	1	0	42	42.4	0	0	35	4	0	0	39	41
15:45	2	0	33	4	0	0	39	39.4	0	0	32	5	0	1	38	41.5
H/TOT	7	0	136	15	3	0	161	166.8	3	3	131	18	0	1	156	161.8
16:00	1	0	39	4	0	0	44	45.2	3	0	39	4	1	0	47	47.9
16:15	1	0	34	2	0	0	37	37.2	0	1	28	3	0	0	32	32.9
16:30	2	0	33	1	0	0	36	34.9	1	0	38	2	0	0	41	41.2
16:45	3	0	39	3	0	0	45	44.1	0	0	36	5	0	0	41	43.5
H/TOT	7	0	145	10	0	0	162	161.4	4	1	141	14	1	0	161	165.5
17:00	5	0	29	1	0	0	35	31.5	0	0	31	1	0	0	32	32.5
17:15	1	1	43	1	0	0	46	45.1	0	1	29	2	0	0	32	32.4
17:30	2	0	41	0	1	0	44	43.7	1	0	32	0	0	0	33	32.2
17:45	1	0	28	1	0	0	30	29.7	1	0	48	2	0	0	51	51.2
H/TOT	9	1	141	3	1	0	155	150	2	1	140	5	0	0	148	148.3
18:00	0	0	30	1	0	0	31	31.5	1	0	22	0	1	0	24	24.5
18:15	0	0	39	0	0	0	39	39	1	0	35	1	1	0	38	39
18:30	0	0	31	2	0	0	33	34	2	0	43	1	1	0	47	47.2
18:45	0	0	38	3	0	0	41	42.5	1	0	56	4	1	0	62	64.5
H/TOT	0	0	138	6	0	0	144	147	5	0	156	6	4	0	171	175.2
12 TOT	114	6	1592	158	35	3	1908	1940.7	113	15	1697	167	29	5	2026	2052.8

IDASO

Survey Name: 031 19050 Raheny
Site: 1
Location: Brookwood Ave / Howth Rd / Sybil Hill Rd
Date: 13-Feb-2019

	B => A								B => B							
TIME	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU
07:00	0	0	12	0	0	0	12	12	0	0	0	0	0	0	0	0
07:15	0	0	21	1	2	0	24	27.1	0	0	0	0	0	0	0	0
07:30	1	0	24	0	0	0	25	24.2	0	0	0	0	0	0	0	0
07:45	0	0	16	0	1	0	17	18.3	0	0	0	0	0	0	0	0
H/TOT	1	0	73	1	3	0	78	81.6	0	0	0	0	0	0	0	0
08:00	0	0	27	0	3	0	30	33.9	0	0	0	0	0	0	0	0
08:15	0	0	29	1	0	0	30	30.5	0	0	0	0	0	0	0	0
08:30	0	0	30	2	0	0	32	33	0	0	0	0	0	0	0	0
08:45	1	0	20	2	0	0	23	23.2	0	0	0	0	0	0	0	0
H/TOT	1	0	106	5	3	0	115	120.6	0	0	0	0	0	0	0	0
09:00	0	0	36	1	0	0	37	37.5	0	0	0	0	0	0	0	0
09:15	0	0	30	4	1	0	35	38.3	0	0	0	0	0	0	0	0
09:30	0	0	23	2	1	0	26	28.3	0	0	0	0	0	0	0	0
09:45	0	0	20	3	2	0	25	29.1	0	0	0	0	0	0	0	0
H/TOT	0	0	109	10	4	0	123	133.2	0	0	0	0	0	0	0	0
10:00	0	0	22	3	1	0	26	28.8	0	0	0	0	0	0	0	0
10:15	0	0	33	3	2	0	38	42.1	0	0	0	0	0	0	0	0
10:30	0	0	19	7	1	0	27	31.8	0	0	0	0	0	0	0	0
10:45	0	0	23	1	1	0	25	26.8	0	0	0	0	0	0	0	0
H/TOT	0	0	97	14	5	0	116	129.5	0	0	0	0	0	0	0	0
11:00	0	0	22	3	1	1	27	30.8	0	0	0	0	0	0	0	0
11:15	0	0	25	7	2	0	34	40.1	0	0	0	0	0	0	0	0
11:30	0	0	21	2	1	0	24	26.3	0	0	0	0	0	0	0	0
11:45	0	0	22	6	1	0	29	33.3	0	0	0	0	0	0	0	0
H/TOT	0	0	90	18	5	1	114	130.5	0	0	0	0	0	0	0	0
12:00	1	0	30	3	1	0	35	37	0	0	0	0	0	0	0	0
12:15	2	0	23	2	2	0	29	31	0	0	0	0	0	0	0	0
12:30	0	0	30	0	1	1	32	34.3	0	0	0	0	0	0	0	0
12:45	0	0	25	7	0	0	32	35.5	0	0	0	0	0	0	0	0
H/TOT	3	0	108	12	4	1	128	137.8	0	0	0	0	0	0	0	0
13:00	1	0	26	2	0	0	29	29.2	0	0	0	0	0	0	0	0
13:15	0	0	28	4	0	1	33	36	0	0	0	0	0	0	0	0
13:30	1	0	26	1	0	0	28	27.7	0	0	0	0	0	0	0	0
13:45	0	0	38	0	1	0	39	40.3	0	0	0	0	0	0	0	0
H/TOT	2	0	118	7	1	1	129	133.2	0	0	0	0	0	0	0	0
14:00	0	0	32	3	0	0	35	36.5	0	0	0	0	0	0	0	0
14:15	0	0	32	1	0	0	33	33.5	0	0	0	0	0	0	0	0
14:30	1	0	32	3	0	0	36	36.7	0	0	0	0	0	0	0	0
14:45	0	0	37	0	1	0	38	39.3	0	0	0	0	0	0	0	0
H/TOT	1	0	133	7	1	0	142	146	0	0	0	0	0	0	0	0
15:00	0	0	44	5	0	0	49	51.5	0	0	0	0	0	0	0	0
15:15	1	0	25	4	1	0	31	33.5	0	0	0	0	0	0	0	0
15:30	0	0	24	2	3	0	29	33.9	0	0	0	0	0	0	0	0
15:45	0	0	31	6	0	0	37	40	0	0	0	0	0	0	0	0
H/TOT	1	0	124	17	4	0	146	158.9	0	0	0	0	0	0	0	0
16:00	0	0	24	3	1	0	28	30.8	0	0	0	0	0	0	0	0
16:15	0	0	33	1	0	0	34	34.5	0	0	0	0	0	0	0	0
16:30	0	0	24	4	1	0	29	32.3	0	0	0	0	0	0	0	0
16:45	0	0	29	5	0	0	34	36.5	0	0	0	0	0	0	0	0
H/TOT	0	0	110	13	2	0	125	134.1	0	0	0	0	0	0	0	0
17:00	0	0	29	3	0	0	32	33.5	0	0	0	0	0	0	0	0
17:15	1	0	24	1	0	0	26	25.7	0	0	0	0	0	0	0	0
17:30	0	0	24	0	0	0	24	24	0	0	0	0	0	0	0	0
17:45	0	0	35	4	0	0	39	41	0	0	0	0	0	0	0	0
H/TOT	1	0	112	8	0	0	121	124.2	0	0	0	0	0	0	0	0
18:00	0	0	31	1	0	0	32	32.5	0	0	0	0	0	0	0	0
18:15	0	0	38	0	0	0	38	38	0	0	0	0	0	0	0	0
18:30	0	1	22	1	0	0	24	23.9	0	0	0	0	0	0	0	0
18:45	0	0	28	1	1	0	30	31.8	0	0	0	0	0	0	0	0
H/TOT	0	1	119	3	1	0	124	126.2	0	0	0	0	0	0	0	0
12 TOT	10	1	1299	115	33	3	1461	1555.8	0	0	0	0	0	0	0	0

IDASO

Survey Name: 031 19050 Raheny
Site: 1
Location: Brookwood Ave / Howth Rd / Sybil Hill Rd
Date: 13-Feb-2019

	B => C								B => D							
TIME	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU
07:00	2	0	6	0	1	0	9	8.7	9	1	144	13	0	1	168	167.7
07:15	2	0	10	2	1	0	15	15.7	12	2	149	17	6	1	187	193.5
07:30	0	0	17	2	2	0	21	24.6	20	2	147	10	2	3	184	177.4
07:45	0	0	24	3	1	0	28	30.8	27	0	115	4	2	2	150	135
H/TOT	4	0	57	7	5	0	73	79.8	68	5	555	44	10	7	689	673.6
08:00	3	0	30	0	0	0	33	30.6	35	1	96	4	0	5	141	119.4
08:15	3	0	64	3	0	0	70	69.1	37	2	113	13	0	4	169	148.7
08:30	6	0	59	0	0	0	65	60.2	35	4	90	1	0	3	133	106.1
08:45	5	0	33	0	2	0	40	38.6	27	2	109	7	1	3	149	134
H/TOT	17	0	186	3	2	0	208	198.5	134	9	408	25	1	15	592	508.2
09:00	1	0	20	4	0	0	25	26.2	11	3	114	7	1	3	139	136.2
09:15	0	0	10	4	0	0	14	16	8	2	115	7	1	2	135	134.2
09:30	0	0	14	2	1	0	17	19.3	8	0	103	7	1	0	119	117.4
09:45	1	0	18	4	0	0	23	24.2	3	2	94	9	2	2	112	117.5
H/TOT	2	0	62	14	1	0	79	85.7	30	7	426	30	5	7	505	505.3
10:00	0	0	15	1	0	0	16	16.5	3	0	71	7	4	4	89	99.3
10:15	0	0	16	1	1	0	18	19.8	5	0	89	9	2	2	107	112.1
10:30	0	0	20	1	0	0	21	21.5	4	1	72	5	5	1	88	94.2
10:45	0	0	37	1	0	0	38	38.5	1	0	92	8	0	1	102	106.2
H/TOT	0	0	88	4	1	0	93	96.3	13	1	324	29	11	8	386	411.8
11:00	0	0	18	1	1	0	20	21.8	2	1	93	7	2	4	109	116.9
11:15	2	1	14	1	0	0	18	16.3	1	1	62	7	3	1	75	82
11:30	0	0	19	2	1	0	22	24.3	0	1	72	8	1	1	83	88.7
11:45	0	0	11	0	1	0	12	13.3	3	1	67	8	0	2	81	84
H/TOT	2	1	62	4	3	0	72	75.7	6	4	294	30	6	8	348	371.6
12:00	0	1	24	3	1	0	29	31.2	1	0	73	10	2	2	88	96.8
12:15	2	0	13	2	1	0	18	18.7	4	1	79	6	2	2	94	97.8
12:30	1	0	24	0	0	0	25	24.2	5	1	80	8	1	3	98	101.7
12:45	0	0	30	2	2	0	34	37.6	2	0	68	5	2	0	77	80.5
H/TOT	3	1	91	7	4	0	106	111.7	12	2	300	29	7	7	357	376.8
13:00	0	0	30	1	0	0	31	31.5	1	2	79	6	0	2	90	93
13:15	0	1	13	3	0	0	17	17.9	1	1	87	8	1	1	99	103.9
13:30	0	0	20	1	0	0	21	21.5	2	0	69	8	1	2	82	87.7
13:45	1	0	24	1	0	0	26	25.7	2	0	79	7	0	2	90	93.9
H/TOT	1	1	87	6	0	0	95	96.6	6	3	314	29	2	7	361	378.5
14:00	0	0	29	2	0	0	31	32	3	1	76	6	0	1	87	88
14:15	0	0	16	4	0	0	20	22	1	0	70	5	2	1	79	84.3
14:30	0	0	22	4	0	0	26	28	0	0	85	13	1	3	102	112.8
14:45	0	0	20	1	1	0	22	23.8	0	0	49	4	1	1	55	59.3
H/TOT	0	0	87	11	1	0	99	105.8	4	1	280	28	4	6	323	344.4
15:00	2	0	21	0	3	0	26	28.3	2	1	93	6	1	1	104	107.1
15:15	0	0	21	0	0	0	21	21	3	0	94	4	0	1	102	102.6
15:30	0	0	18	1	1	0	20	21.8	0	1	79	7	0	3	90	95.9
15:45	1	0	22	0	0	0	23	22.2	2	0	71	6	2	1	82	87
H/TOT	3	0	82	1	4	0	90	93.3	7	2	337	23	3	6	378	392.6
16:00	1	0	18	0	0	0	19	18.2	3	0	74	2	1	2	82	83.9
16:15	0	0	20	0	1	1	22	24.3	2	0	73	9	0	3	87	92.9
16:30	2	0	32	1	0	0	35	33.9	2	0	87	7	0	3	99	103.9
16:45	0	0	23	4	1	0	28	31.3	3	0	74	9	0	2	88	92.1
H/TOT	3	0	93	5	2	1	104	107.7	10	0	308	27	1	10	356	372.8
17:00	0	0	16	1	0	0	17	17.5	3	0	67	4	1	2	77	79.9
17:15	1	0	21	0	0	0	22	21.2	2	0	66	4	0	1	73	74.4
17:30	0	0	15	0	0	0	15	15	6	1	79	5	1	5	97	100.4
17:45	0	0	27	0	0	0	27	27	0	0	75	5	0	1	81	84.5
H/TOT	1	0	79	1	0	0	81	80.7	11	1	287	18	2	9	328	339.2
18:00	0	1	21	1	0	0	23	22.9	1	0	74	7	0	2	84	88.7
18:15	0	0	20	2	0	0	22	23	2	0	66	4	0	1	73	74.4
18:30	0	0	18	1	0	0	19	19.5	1	0	70	3	0	2	76	78.7
18:45	2	0	32	2	0	0	36	35.4	2	0	73	5	0	1	81	82.9
H/TOT	2	1	91	6	0	0	100	100.8	6	0	283	19	0	6	314	324.7
12 TOT	38	4	1065	69	23	1	1200	1232.6	307	35	4116	331	52	96	4937	4999.5

IDASO

Survey Name: 031 19050 Raheny
Site: 1
Location: Brookwood Ave / Howth Rd / Sybil Hill Rd
Date: 13-Feb-2019

	C => A								C => B							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**SV (BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**SV (BUS**	**TOT**	**PCU**
07:00	0	0	18	1	0	1	20	21.5	1	0	2	0	2	0	5	6.8
07:15	2	0	28	3	1	0	34	35.2	0	0	6	1	1	0	8	9.8
07:30	3	0	44	5	2	0	54	56.7	0	0	3	3	0	0	6	7.5
07:45	2	0	43	4	0	0	49	49.4	1	0	7	0	1	0	9	9.5
H/TOT	7	0	133	13	3	1	157	162.8	2	0	18	4	4	0	28	33.6
08:00	2	0	46	0	0	0	48	46.4	0	0	15	1	0	1	17	18.5
08:15	2	0	54	4	0	0	60	60.4	0	0	23	2	2	0	27	30.6
08:30	4	0	50	1	2	1	58	58.9	0	0	33	2	0	0	35	36
08:45	2	0	38	1	0	1	42	41.9	2	0	27	2	0	0	31	30.4
H/TOT	10	0	188	6	2	2	208	207.6	2	0	98	7	2	1	110	115.5
09:00	0	0	26	3	1	0	30	32.8	0	0	19	0	0	0	19	19
09:15	1	0	23	2	2	0	28	30.8	0	0	11	0	0	0	11	11
09:30	1	0	31	2	0	0	34	34.2	1	0	14	0	0	0	15	14.2
09:45	0	0	36	3	0	0	39	40.5	0	0	15	6	1	0	22	26.3
H/TOT	2	0	116	10	3	0	131	138.3	1	0	59	6	1	0	67	70.5
10:00	0	0	41	3	2	0	46	50.1	0	0	21	1	0	0	22	22.5
10:15	0	0	28	7	0	0	35	38.5	0	0	11	1	0	0	12	12.5
10:30	5	0	41	3	2	1	52	53.1	6	0	18	1	0	0	25	20.7
10:45	1	0	24	3	0	0	28	28.7	0	0	12	1	1	0	14	15.8
H/TOT	6	0	134	16	4	1	161	170.4	6	0	62	4	1	0	73	71.5
11:00	0	0	23	5	1	0	29	32.8	0	0	12	0	1	0	13	14.3
11:15	1	0	34	9	1	0	45	50	0	0	23	4	0	0	27	29
11:30	1	1	24	1	0	0	27	26.1	2	0	17	4	0	0	23	23.4
11:45	1	0	38	4	0	0	43	44.2	2	0	16	1	1	0	20	20.2
H/TOT	3	1	119	19	2	0	144	153.1	4	0	68	9	2	0	83	86.9
12:00	1	0	33	4	1	0	39	41.5	1	0	15	1	1	0	18	19
12:15	0	0	35	4	0	0	39	41	1	0	24	2	0	0	27	27.2
12:30	5	0	22	4	1	0	32	31.3	0	0	12	0	1	0	13	14.3
12:45	3	0	47	4	0	0	54	53.6	1	0	15	1	0	0	17	16.7
H/TOT	9	0	137	16	2	0	164	167.4	3	0	66	4	2	0	75	77.2
13:00	33	0	61	3	0	0	97	72.1	6	0	30	4	1	0	41	39.5
13:15	5	0	43	2	0	0	50	47	0	0	26	3	0	0	29	30.5
13:30	5	0	23	5	0	0	33	31.5	0	1	28	1	1	0	31	32.2
13:45	1	0	33	7	0	0	41	43.7	0	0	15	0	0	0	15	15
H/TOT	44	0	160	17	0	0	221	194.3	6	1	99	8	2	0	116	117.2
14:00	1	0	40	1	1	0	43	44	0	0	20	1	0	0	21	21.5
14:15	4	0	44	8	0	0	56	56.8	1	0	19	1	0	0	21	20.7
14:30	1	0	39	2	0	0	42	42.2	1	0	33	1	0	0	35	34.7
14:45	2	0	34	5	2	0	43	46.5	1	0	22	1	0	0	24	23.7
H/TOT	8	0	157	16	3	0	184	189.5	3	0	94	4	0	0	101	100.6
15:00	1	0	53	4	0	1	59	61.2	1	0	25	4	0	0	30	31.2
15:15	1	0	39	8	3	0	51	58.1	0	0	21	1	0	0	22	22.5
15:30	0	1	39	11	2	0	53	60.5	1	0	19	3	0	0	23	23.7
15:45	1	0	38	5	1	0	45	48	2	0	31	1	0	0	34	32.9
H/TOT	3	1	169	28	6	1	208	227.8	4	0	96	9	0	0	109	110.3
16:00	1	0	36	5	1	0	43	46	0	0	17	1	0	0	18	18.5
16:15	3	0	46	9	0	0	58	60.1	0	0	25	0	0	0	25	25
16:30	4	0	32	6	1	0	43	44.1	1	0	22	0	0	0	23	22.2
16:45	0	0	43	15	0	0	58	65.5	3	0	29	1	0	0	33	31.1
H/TOT	8	0	157	35	2	0	202	215.7	4	0	93	2	0	0	99	96.8
17:00	4	1	37	8	1	0	51	52.5	0	0	30	2	0	0	32	33
17:15	1	1	47	4	0	0	53	53.6	1	0	42	1	0	0	44	43.7
17:30	1	0	36	3	1	0	41	43	0	0	22	1	0	0	23	23.5
17:45	3	0	39	0	0	0	42	39.6	2	0	31	2	0	0	35	34.4
H/TOT	9	2	159	15	2	0	187	188.7	3	0	125	6	0	0	134	134.6
18:00	1	0	39	5	0	0	45	46.7	2	0	30	2	0	0	34	33.4
18:15	4	0	40	3	0	0	47	45.3	1	0	19	3	0	0	23	23.7
18:30	0	0	33	4	1	0	38	41.3	0	0	27	1	0	0	28	28.5
18:45	1	1	48	3	0	0	53	53.1	0	0	19	1	0	0	20	20.5
H/TOT	6	1	160	15	1	0	183	186.4	3	0	95	7	0	0	105	106.1
12 TOT	115	5	1789	206	30	5	2150	2202	41	1	973	70	14	1	1100	1120.8

IDASO

Survey Name: 031 19050 Raheny
Site: 1
Location: Brookwood Ave / Howth Rd / Sybil Hill Rd
Date: 13-Feb-2019

	C => C								C => D							
TIME	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU
07:00	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
07:15	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
07:30	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
07:45	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
H/TOT	0	0	0	0	0	0	0	0	0	0	9	0	0	0	9	9
08:00	0	0	0	0	0	0	0	0	1	0	2	0	0	0	3	2.2
08:15	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	5
08:30	0	0	0	0	0	0	0	0	1	0	10	1	0	0	12	11.7
08:45	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	7
H/TOT	0	0	0	0	0	0	0	0	2	0	24	1	0	0	27	25.9
09:00	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	5
09:15	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	6
09:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
09:45	0	0	0	0	0	0	0	0	1	0	6	0	0	0	7	6.2
H/TOT	0	0	0	0	0	0	0	0	1	0	18	0	0	0	19	18.2
10:00	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	4
10:15	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	5
10:30	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	6
10:45	0	0	0	0	0	0	0	0	0	0	8	1	0	0	9	9.5
H/TOT	0	0	0	0	0	0	0	0	0	0	23	1	0	0	24	24.5
11:00	0	0	0	0	0	0	0	0	0	0	2	0	1	0	3	4.3
11:15	0	0	0	0	0	0	0	0	0	0	11	0	0	0	11	11
11:30	0	0	0	0	0	0	0	0	0	0	6	0	1	0	7	8.3
11:45	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	5
H/TOT	0	0	0	0	0	0	0	0	0	0	24	0	2	0	26	28.6
12:00	0	0	0	0	0	0	0	0	0	0	5	1	0	0	6	6.5
12:15	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	3.5
12:30	0	0	0	0	0	0	0	0	1	1	6	1	0	0	9	8.1
12:45	0	0	0	0	0	0	0	0	1	0	4	0	1	0	6	6.5
H/TOT	0	0	0	0	0	0	0	0	2	1	17	3	1	0	24	24.6
13:00	0	0	0	0	0	0	0	0	1	0	10	1	0	0	12	11.7
13:15	0	0	0	0	0	0	0	0	1	0	12	1	0	1	15	15.7
13:30	0	0	0	0	0	0	0	0	0	0	8	1	0	0	9	9.5
13:45	0	0	0	0	0	0	0	0	1	0	6	0	1	0	8	8.5
H/TOT	0	0	0	0	0	0	0	0	3	0	36	3	1	1	44	45.4
14:00	0	0	0	0	0	0	0	0	0	0	6	2	0	0	8	9
14:15	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	5
14:30	0	0	0	0	0	0	0	0	0	0	15	0	0	0	15	15
14:45	0	0	0	0	0	0	0	0	0	0	6	2	1	0	9	11.3
H/TOT	0	0	0	0	0	0	0	0	0	0	32	4	1	0	37	40.3
15:00	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
15:15	0	0	0	0	0	0	0	0	0	0	5	1	0	0	6	6.5
15:30	0	0	0	0	0	0	0	0	0	0	9	0	0	0	9	9
15:45	0	0	0	0	0	0	0	0	1	0	5	0	0	0	6	5.2
H/TOT	0	0	0	0	0	0	0	0	1	0	21	1	0	0	23	22.7
16:00	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	7
16:15	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	6
16:30	0	0	0	0	0	0	0	0	1	0	3	1	0	0	5	4.7
16:45	0	0	0	0	0	0	0	0	0	0	10	0	0	0	10	10
H/TOT	0	0	0	0	0	0	0	0	1	0	26	1	0	0	28	27.7
17:00	0	0	0	0	0	0	0	0	1	0	11	0	0	0	12	11.2
17:15	0	0	0	0	0	0	0	0	0	0	6	1	0	0	7	7.5
17:30	0	0	0	0	0	0	0	0	2	0	3	0	0	0	5	3.4
17:45	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
H/TOT	0	0	0	0	0	0	0	0	3	0	23	1	0	0	27	25.1
18:00	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	7
18:15	0	0	0	0	0	0	0	0	0	0	8	0	0	0	8	8
18:30	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	6
18:45	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	5
H/TOT	0	0	0	0	0	0	0	0	0	0	26	0	0	0	26	26
12 TOT	0	0	0	0	0	0	0	0	13	1	279	15	5	1	314	318

IDASO

Survey Name: 031 19050 Raheny
Site: 1
Location: Brookwood Ave / Howth Rd / Sybil Hill Rd
Date: 13-Feb-2019

	D => A								D => B							
TIME	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU
07:00	1	0	9	0	0	0	10	9.2	0	0	8	3	0	0	11	12.5
07:15	0	0	7	2	1	0	10	12.3	0	0	22	5	2	2	31	38.1
07:30	0	0	11	2	0	1	14	16	2	1	36	4	0	2	45	46.8
07:45	1	0	17	2	0	0	20	20.2	1	0	35	4	0	1	41	43.2
H/TOT	2	0	44	6	1	1	54	57.7	3	1	101	16	2	5	128	140.6
08:00	1	0	22	2	0	0	25	25.2	5	0	58	2	0	2	67	66
08:15	1	0	24	1	0	0	26	25.7	4	0	76	7	1	2	90	93.6
08:30	4	0	30	3	1	0	38	37.6	1	0	68	2	1	2	74	77.5
08:45	1	0	45	3	1	0	50	52	3	1	76	8	1	1	90	93.3
H/TOT	7	0	121	9	2	0	139	140.5	13	1	278	19	3	7	321	330.4
09:00	0	0	25	2	2	0	29	32.6	2	0	53	7	0	2	64	67.9
09:15	0	1	13	1	0	0	15	14.9	1	0	44	4	2	3	54	60.8
09:30	0	0	13	1	1	0	15	16.8	0	0	42	5	1	1	49	53.8
09:45	1	0	31	6	0	0	38	40.2	2	1	55	11	3	2	74	83.2
H/TOT	1	1	82	10	3	0	97	104.5	5	1	194	27	6	8	241	265.7
10:00	0	0	17	4	0	0	21	23	3	0	57	6	3	2	71	77.5
10:15	1	0	26	1	0	0	28	27.7	1	0	59	4	2	0	66	69.8
10:30	0	0	61	4	1	3	69	75.3	2	1	28	3	0	0	34	33.3
10:45	2	0	68	8	1	2	81	86.7	0	0	24	3	0	0	27	28.5
H/TOT	3	0	172	17	2	5	199	212.7	6	1	168	16	5	2	198	209.1
11:00	1	0	19	0	0	0	20	19.2	0	1	58	20	2	3	84	99
11:15	1	1	18	2	1	0	23	23.9	3	0	50	7	3	1	64	70
11:30	1	0	30	2	0	0	33	33.2	4	1	67	6	3	2	83	88.1
11:45	0	1	24	2	0	0	27	27.4	2	1	64	8	4	2	81	90
H/TOT	3	2	91	6	1	0	103	103.7	9	3	239	41	12	8	312	347.1
12:00	1	0	34	5	0	0	40	41.7	1	0	64	7	1	2	75	81
12:15	0	0	31	2	0	0	33	34	3	0	66	9	3	2	83	91
12:30	0	0	30	3	2	0	35	39.1	1	1	76	13	2	1	94	102.7
12:45	2	0	30	6	1	0	39	41.7	0	0	81	4	3	3	91	99.9
H/TOT	3	0	125	16	3	0	147	156.5	5	1	287	33	9	8	343	374.6
13:00	0	1	27	3	0	0	31	31.9	2	0	78	7	0	1	88	90.9
13:15	1	0	25	4	0	0	30	31.2	2	2	92	6	2	1	105	108.8
13:30	3	0	48	3	0	0	54	53.1	5	0	81	4	1	3	94	96.3
13:45	2	0	24	4	1	0	31	32.7	6	0	76	8	0	1	91	91.2
H/TOT	6	1	124	14	1	0	146	148.9	15	2	327	25	3	6	378	387.2
14:00	0	0	30	5	0	0	35	37.5	1	0	82	10	0	3	96	103.2
14:15	1	0	26	2	0	0	29	29.2	3	1	91	7	2	1	105	109.1
14:30	12	1	55	6	2	0	76	71.4	3	1	96	7	0	3	110	113.5
14:45	1	1	40	3	0	0	45	45.1	3	2	82	5	2	2	96	99.5
H/TOT	14	2	151	16	2	0	185	183.2	10	4	351	29	4	9	407	425.3
15:00	4	1	34	7	0	0	46	45.7	1	2	87	5	1	0	96	97.8
15:15	0	0	32	2	1	0	35	37.3	2	0	97	10	2	5	116	127
15:30	1	0	34	4	2	0	41	44.8	1	0	81	13	0	2	97	104.7
15:45	3	2	21	2	0	0	28	25.4	3	1	62	5	1	2	74	76.8
H/TOT	8	3	121	15	3	0	150	153.2	7	3	327	33	4	9	383	406.3
16:00	2	0	38	4	0	0	44	44.4	6	1	100	15	2	2	126	132.7
16:15	4	0	51	1	1	0	57	55.6	5	1	88	7	0	2	103	103.9
16:30	2	0	32	9	1	0	44	48.2	4	3	84	6	0	2	99	99
16:45	2	0	34	4	0	0	40	40.4	6	3	99	8	0	0	116	113.4
H/TOT	10	0	155	18	2	0	185	188.6	21	8	371	36	2	6	444	449
17:00	6	1	35	5	0	0	47	44.1	5	2	108	10	0	5	130	134.8
17:15	7	1	41	8	2	0	59	59.4	17	2	86	5	0	1	111	99.7
17:30	5	0	42	6	0	0	53	52	16	5	90	8	0	2	121	111.2
17:45	8	0	26	3	0	0	37	32.1	13	1	92	3	0	1	110	101.5
H/TOT	26	2	144	22	2	0	196	187.6	51	10	376	26	0	9	472	447.2
18:00	4	0	37	3	0	0	44	42.3	28	2	99	4	0	3	136	117.4
18:15	6	0	35	2	0	0	43	39.2	19	0	110	7	2	3	141	134.9
18:30	7	0	38	2	0	0	47	42.4	20	1	125	5	0	4	155	144.9
18:45	1	1	23	6	1	0	32	34.9	8	4	95	3	1	3	114	111
H/TOT	18	1	133	13	1	0	166	158.8	75	7	429	19	3	13	546	508.2
12 TOT	101	12	1463	162	23	6	1767	1795.9	220	42	3448	320	53	90	4173	4290.7

IDASO

Survey Name: 031 19050 Raheny
Site: 1
Location: Brookwood Ave / Howth Rd / Sybil Hill Rd
Date: 13-Feb-2019

	D => C								D => D							
TIME	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	1	0	0	0	0	0	1	0.2	0	0	0	0	0	0	0	0
08:15	3	0	0	0	0	0	3	0.6	0	0	0	0	0	0	0	0
08:30	2	0	0	0	0	0	2	0.4	0	0	0	0	0	0	0	0
08:45	2	0	0	0	0	0	2	0.4	0	0	0	0	0	0	0	0
H/TOT	8	0	0	0	0	0	8	1.6	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15	1	0	0	0	0	0	1	0.2	0	0	0	0	0	0	0	0
09:30	1	0	0	0	0	0	1	0.2	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	2	0	0	0	0	0	2	0.4	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	1	0	0	0	0	0	1	0.2	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	0	1	0.2	0	0	0	0	0	0	0	0
13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30	1	0	0	0	0	0	1	0.2	0	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	0	1	0.2	0	0	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	1	0	0	0	0	0	1	0.2	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	1	0	0	0	0	0	1	0.2	0	0	0	0	0	0	0	0
12 TOT	13	0	1	0	0	0	14	3.6	0	0	0	0	0	0	0	0

IDASO

Survey Name: 031 19050 Raheny
Site: 2
Location: Sybil Hill Rd / St Pauls College
Date: 13-Feb-2019

	A => A								A => B							
TIME	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1.5
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1.5
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
H/TOT	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
16:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
17:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
18:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
12 TOT	0	0	0	0	0	0	0	0	0	0	6	1	0	0	7	7.5

IDASO

Survey Name: 031 19050 Raheny
Site: 2
Location: Sybil Hill Rd / St Pauls College
Date: 13-Feb-2019

	A => C								B => A							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**SV (BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**SV (BUS**	**TOT**	**PCU**
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
H/TOT	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
08:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
08:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
H/TOT	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
09:45	0	0	1	1	0	0	2	2.5	0	0	0	0	0	0	0	0
H/TOT	0	0	2	1	0	0	3	3.5	0	0	0	0	0	0	0	0
10:00	1	0	0	0	0	0	1	0.2	0	0	0	0	0	0	0	0
10:15	0	0	0	1	0	0	1	1.5	0	0	2	0	0	0	2	2
10:30	7	0	1	0	0	0	8	2.4	0	0	1	0	0	0	1	1
10:45	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
H/TOT	8	0	2	1	0	0	11	5.1	0	0	3	0	0	0	3	3
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	1	0	0	0	0	0	1	0.2	0	0	0	0	0	0	0	0
11:30	1	0	0	0	0	0	1	0.2	0	0	0	0	0	0	0	0
11:45	3	0	0	0	0	0	3	0.6	0	0	0	0	0	0	0	0
H/TOT	5	0	0	0	0	0	5	1	0	0	0	0	0	0	0	0
12:00	1	0	0	0	0	0	1	0.2	0	0	2	0	0	0	2	2
12:15	1	0	1	0	0	0	2	1.2	0	0	0	0	0	0	0	0
12:30	7	0	0	0	0	0	7	1.4	0	0	0	0	0	0	0	0
12:45	1	0	0	0	0	0	1	0.2	0	0	0	0	0	0	0	0
H/TOT	10	0	1	0	0	0	11	3	0	0	2	0	0	0	2	2
13:00	48	0	0	0	0	0	48	9.6	0	0	0	0	0	0	0	0
13:15	2	0	0	0	0	0	2	0.4	0	0	1	0	0	0	1	1
13:30	3	0	1	0	0	0	4	1.6	0	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	53	0	1	0	0	0	54	11.6	0	0	1	0	0	0	1	1
14:00	1	0	1	0	0	0	2	1.2	0	0	0	0	0	0	0	0
14:15	1	0	0	0	0	0	1	0.2	0	0	1	0	0	0	1	1
14:30	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
14:45	1	0	2	0	0	0	3	2.2	0	0	0	0	0	0	0	0
H/TOT	3	0	4	0	0	0	7	4.6	0	0	1	0	0	0	1	1
15:00	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	2	0	0	0	2	2	0	0	1	0	0	0	1	1
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	2	0	0	0	2	2	0	0	1	0	0	0	1	1
18:00	7	0	0	0	0	0	7	1.4	0	0	1	0	0	0	1	1
18:15	1	0	1	0	0	0	2	1.2	0	0	0	0	0	0	0	0
18:30	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	8	0	2	0	0	0	10	3.6	0	0	1	0	0	0	1	1
12 TOT	87	0	15	2	0	0	104	35.4	0	0	13	0	0	0	13	13

IDASO

Survey Name: 031 19050 Raheny
Site: 2
Location: Sybil Hill Rd / St Pauls College
Date: 13-Feb-2019

	B => B								B => C							
TIME	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU
07:00	0	0	0	0	0	0	0	0	1	0	23	1	1	1	27	29
07:15	0	0	0	0	0	0	0	0	2	1	41	4	1	0	49	50.1
07:30	0	0	0	0	0	0	0	0	2	0	48	8	2	0	60	65
07:45	0	0	0	0	0	0	0	0	2	0	47	2	1	0	52	52.7
H/TOT	0	0	0	0	0	0	0	0	7	1	159	15	5	1	188	196.8
08:00	0	0	0	0	0	0	0	0	3	0	56	1	0	1	61	60.1
08:15	0	0	1	0	0	0	1	1	1	0	75	4	2	0	82	85.8
08:30	0	0	1	0	0	0	1	1	3	0	80	3	2	1	89	91.7
08:45	0	0	1	0	0	0	1	1	1	0	61	3	0	1	66	67.7
H/TOT	0	0	3	0	0	0	3	3	8	0	272	11	4	3	298	305.3
09:00	0	0	0	0	0	0	0	0	0	0	42	3	1	0	46	48.8
09:15	0	0	0	0	0	0	0	0	2	0	42	2	2	0	48	50
09:30	0	0	0	0	0	0	0	0	2	0	41	2	0	0	45	44.4
09:45	0	0	0	0	0	0	0	0	1	0	60	10	1	0	72	77.5
H/TOT	0	0	0	0	0	0	0	0	5	0	185	17	4	0	211	220.7
10:00	0	0	0	0	0	0	0	0	0	0	64	3	1	0	68	70.8
10:15	0	0	0	0	0	0	0	0	0	0	49	7	0	0	56	59.5
10:30	0	0	0	0	0	0	0	0	3	0	58	4	2	1	68	71.2
10:45	0	0	0	0	0	0	0	0	2	0	50	4	1	0	57	58.7
H/TOT	0	0	0	0	0	0	0	0	5	0	221	18	4	1	249	260.2
11:00	0	0	1	0	0	0	1	1	1	0	33	4	2	0	40	43.8
11:15	0	0	0	0	0	0	0	0	1	0	61	11	2	0	75	82.3
11:30	0	0	0	0	0	0	0	0	2	1	42	5	0	0	50	50.3
11:45	0	0	0	0	0	0	0	0	1	0	61	5	1	0	68	71
H/TOT	0	0	1	0	0	0	1	1	5	1	197	25	5	0	233	247.4
12:00	0	0	0	0	0	0	0	0	0	0	55	7	2	0	64	70.1
12:15	0	0	0	0	0	0	0	0	0	0	58	7	1	0	66	70.8
12:30	0	0	1	0	0	0	1	1	0	1	38	4	1	0	44	46.7
12:45	0	0	0	0	0	0	0	0	4	0	71	5	0	0	80	79.3
H/TOT	0	0	1	0	0	0	1	1	4	1	222	23	4	0	254	266.9
13:00	0	0	0	0	0	0	0	0	2	0	86	7	1	0	96	99.2
13:15	0	0	0	0	0	0	0	0	1	0	73	2	0	1	77	78.2
13:30	0	0	0	0	0	0	0	0	2	1	55	6	1	0	65	67.1
13:45	0	0	0	0	0	0	0	0	2	0	44	7	1	0	54	57.2
H/TOT	0	0	0	0	0	0	0	0	7	1	258	22	3	1	292	301.7
14:00	0	0	0	0	0	0	0	0	1	0	76	4	1	0	82	84.5
14:15	0	0	0	0	0	0	0	0	3	0	66	6	0	0	75	75.6
14:30	0	0	0	0	0	0	0	0	4	0	83	4	2	0	93	94.4
14:45	0	0	0	0	0	0	0	0	2	0	45	6	1	1	55	58.7
H/TOT	0	0	0	0	0	0	0	0	10	0	270	20	4	1	305	313.2
15:00	0	0	0	0	0	0	0	0	3	0	79	6	0	0	88	88.6
15:15	0	0	0	0	0	0	0	0	1	0	60	11	4	0	76	85.9
15:30	0	0	0	0	0	0	0	0	0	1	64	15	1	0	81	89.2
15:45	0	0	0	0	0	0	0	0	5	0	64	5	1	0	75	74.8
H/TOT	0	0	0	0	0	0	0	0	9	1	267	37	6	0	320	338.5
16:00	0	0	0	0	0	0	0	0	1	0	63	6	0	0	70	72.2
16:15	0	0	0	0	0	0	0	0	3	0	69	8	0	0	80	81.6
16:30	0	0	0	0	0	0	0	0	6	0	61	9	1	0	77	78
16:45	0	0	0	0	0	0	0	0	2	0	74	14	0	0	90	95.4
H/TOT	0	0	0	0	0	0	0	0	12	0	267	37	1	0	317	327.2
17:00	0	0	0	0	0	0	0	0	6	0	82	7	1	0	96	96
17:15	0	0	0	0	0	0	0	0	1	1	88	5	0	0	95	96.1
17:30	0	0	0	0	0	0	0	0	3	0	68	3	1	0	75	75.4
17:45	0	0	0	0	0	0	0	0	3	0	72	3	0	0	78	77.1
H/TOT	0	0	0	0	0	0	0	0	13	1	310	18	2	0	344	344.6
18:00	0	0	0	0	0	0	0	0	7	0	78	3	0	0	88	83.9
18:15	0	0	0	0	0	0	0	0	2	0	66	6	0	0	74	75.4
18:30	0	0	0	0	0	0	0	0	1	0	69	3	1	0	74	76
18:45	0	0	1	0	0	0	1	1	1	1	63	3	0	0	68	68.1
H/TOT	0	0	1	0	0	0	1	1	11	1	276	15	1	0	304	303.4
12 TOT	0	0	6	0	0	0	6	6	96	7	2904	258	43	7	3315	3425.9

IDASO

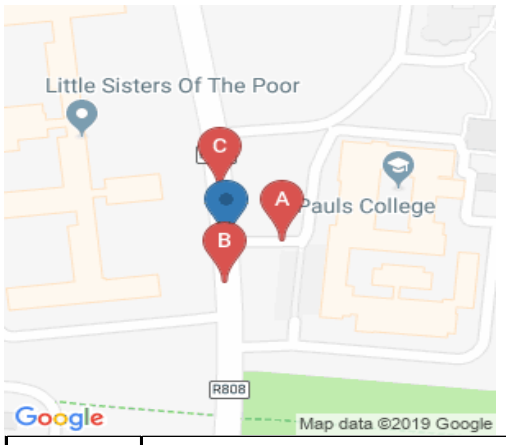
Survey Name: 031 19050 Raheny
Site: 2
Location: Sybil Hill Rd / St Pauls College
Date: 13-Feb-2019

	C => A								C => B							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**SV (BUS**	**TOT**	**PCU**	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**SV (BUS**	**TOT**	**PCU**
07:00	0	0	0	0	0	0	0	0	4	0	22	3	1	0	30	29.6
07:15	0	0	0	0	0	0	0	0	3	0	35	5	3	0	46	50
07:30	0	0	0	0	0	0	0	0	0	0	40	11	4	0	55	65.7
07:45	0	0	2	0	0	0	2	2	2	1	52	9	3	0	67	73.2
H/TOT	0	0	2	0	0	0	2	2	9	1	149	28	11	0	198	218.5
08:00	4	0	0	0	0	0	4	0.8	5	0	67	2	1	0	75	73.3
08:15	22	0	0	1	0	0	23	5.9	10	0	78	3	0	0	91	84.5
08:30	32	0	0	0	0	0	32	6.4	3	0	89	5	2	0	99	101.7
08:45	16	0	2	0	0	0	18	5.2	2	0	57	4	3	0	66	70.3
H/TOT	74	0	2	1	0	0	77	18.3	20	0	291	14	6	0	331	329.8
09:00	2	0	0	0	0	0	2	0.4	1	0	47	6	1	0	55	58.5
09:15	1	0	0	0	0	0	1	0.2	0	0	40	7	0	1	48	52.5
09:30	0	0	2	1	0	0	3	3.5	1	1	40	4	3	0	49	53.5
09:45	0	0	0	0	0	0	0	0	4	0	42	12	0	1	59	62.8
H/TOT	3	0	2	1	0	0	6	4.1	6	1	169	29	4	2	211	227.3
10:00	0	0	0	0	0	0	0	0	0	0	33	5	2	0	40	45.1
10:15	0	0	0	0	0	0	0	0	0	0	39	8	1	0	48	53.3
10:30	1	0	0	0	0	0	1	0.2	3	0	41	7	1	0	52	54.4
10:45	0	0	0	0	0	0	0	0	1	0	66	3	2	0	72	75.3
H/TOT	1	0	0	0	0	0	1	0.2	4	0	179	23	6	0	212	228.1
11:00	0	0	0	0	0	0	0	0	2	1	43	5	1	0	52	53.6
11:15	0	0	0	0	0	0	0	0	2	1	55	3	0	0	61	60.3
11:30	0	0	0	0	0	0	0	0	1	0	50	6	3	0	60	66.1
11:45	0	0	0	0	0	0	0	0	0	0	40	1	1	0	42	43.8
H/TOT	0	0	0	0	0	0	0	0	5	2	188	15	5	0	215	223.8
12:00	0	0	0	0	0	0	0	0	0	1	55	6	1	0	63	66.7
12:15	0	0	0	0	0	0	0	0	3	0	44	4	3	1	55	59.5
12:30	0	0	0	0	0	0	0	0	1	0	52	1	1	0	55	56
12:45	0	0	1	0	0	0	1	1	1	0	65	6	2	0	74	78.8
H/TOT	0	0	1	0	0	0	1	1	5	1	216	17	7	1	247	261
13:00	0	0	0	0	0	0	0	0	1	1	60	4	1	0	67	68.9
13:15	1	0	0	0	0	0	1	0.2	1	1	40	5	1	0	48	50.4
13:30	0	0	0	0	0	0	0	0	1	0	55	2	1	0	59	60.5
13:45	0	0	1	0	0	0	1	1	1	0	63	5	0	0	69	70.7
H/TOT	1	0	1	0	0	0	2	1.2	4	2	218	16	3	0	243	250.5
14:00	0	0	0	0	0	0	0	0	4	0	66	5	0	0	75	74.3
14:15	0	0	0	0	0	0	0	0	0	0	41	6	0	0	47	50
14:30	0	0	1	0	0	0	1	1	2	0	54	5	0	0	61	61.9
14:45	0	0	0	0	0	0	0	0	2	0	55	3	3	0	63	66.8
H/TOT	0	0	1	0	0	0	1	1	8	0	216	19	3	0	246	253
15:00	0	0	0	0	0	0	0	0	2	0	51	4	3	0	60	64.3
15:15	0	0	0	0	0	0	0	0	0	0	57	3	2	0	62	66.1
15:30	0	0	0	0	0	0	0	0	3	0	49	2	1	0	55	54.9
15:45	0	0	0	0	0	0	0	0	4	0	60	5	0	0	69	68.3
H/TOT	0	0	0	0	0	0	0	0	9	0	217	14	6	0	246	253.6
16:00	0	0	0	0	0	0	0	0	1	0	52	4	0	0	57	58.2
16:15	0	0	0	0	0	0	0	0	3	0	53	1	1	1	59	59.4
16:30	0	0	1	0	0	0	1	1	4	0	63	3	0	0	70	68.3
16:45	2	0	0	0	0	0	2	0.4	2	0	59	7	0	0	68	69.9
H/TOT	2	0	1	0	0	0	3	1.4	10	0	227	15	1	1	254	255.8
17:00	2	0	0	0	0	0	2	0.4	2	0	47	2	0	0	51	50.4
17:15	0	0	0	0	0	0	0	0	1	1	61	0	0	0	63	61.6
17:30	0	0	0	0	0	0	0	0	2	0	59	1	1	0	63	63.2
17:45	0	0	0	0	0	0	0	0	1	0	55	1	0	0	57	56.7
H/TOT	2	0	0	0	0	0	2	0.4	6	1	222	4	1	0	234	231.9
18:00	0	0	0	0	0	0	0	0	0	1	51	1	0	0	53	52.9
18:15	0	0	0	0	0	0	0	0	0	0	56	0	0	0	56	56
18:30	0	0	1	0	0	0	1	1	1	0	55	2	0	0	58	58.2
18:45	0	0	1	0	0	0	1	1	1	1	67	5	0	0	74	75.1
H/TOT	0	0	2	0	0	0	2	2	2	2	229	8	0	0	241	242.2
12 TOT	83	0	12	2	0	0	97	31.6	88	10	2521	202	53	4	2878	2975.5

IDASO

Survey Name: 031 19050 Raheny
Site: 2
Location: Sybil Hill Rd / St Pauls College
Date: 13-Feb-2019

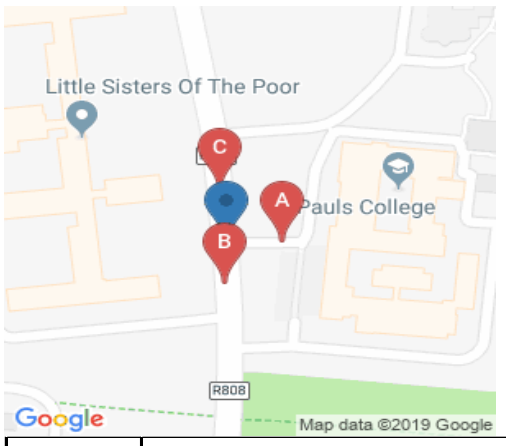
	C => C							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**SV (BUS**	**TOT**	**PCU**
07:00	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
08:00	0	0	3	0	0	0	3	3
08:15	0	0	4	1	0	0	5	5.5
08:30	0	0	3	0	0	0	3	3
08:45	0	0	3	0	0	0	3	3
H/TOT	0	0	13	1	0	0	14	14.5
09:00	0	0	1	0	0	0	1	1
09:15	0	0	1	0	0	0	1	1
09:30	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0
H/TOT	0	0	2	0	0	0	2	2
10:00	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0
10:30	0	0	2	0	0	0	2	2
10:45	0	0	1	0	0	0	1	1
H/TOT	0	0	3	0	0	0	3	3
11:00	0	0	0	0	0	0	0	0
11:15	0	0	2	0	0	0	2	2
11:30	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0
H/TOT	0	0	2	0	0	0	2	2
12:00	0	0	2	0	0	0	2	2
12:15	0	0	0	0	0	0	0	0
12:30	0	0	1	0	0	0	1	1
12:45	0	0	2	0	0	0	2	2
H/TOT	0	0	5	0	0	0	5	5
13:00	0	0	3	0	0	0	3	3
13:15	0	0	2	0	0	0	2	2
13:30	0	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0	0
H/TOT	0	0	5	0	0	0	5	5
14:00	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0
16:45	0	0	1	0	0	0	1	1
H/TOT	0	0	1	0	0	0	1	1
17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
12 TOT	0	0	31	1	0	0	32	32.5



IDASO

Survey Name: 031 19050 Raheny
Site: 3
Location: Sybil Hill Rd / St Pauls College
Date: 13-Feb-2019

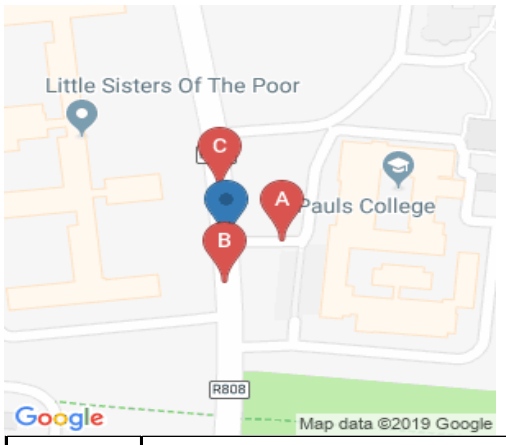
	A => A								A => B							
TIME	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
08:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
H/TOT	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
10:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
H/TOT	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
13:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
13:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
H/TOT	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
H/TOT	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
17:00	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
18:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
12 TOT	0	0	0	0	0	0	0	0	0	0	16	0	0	0	16	16



IDASO

Survey Name: 031 19050 Raheny
Site: 3
Location: Sybil Hill Rd / St Pauls College
Date: 13-Feb-2019

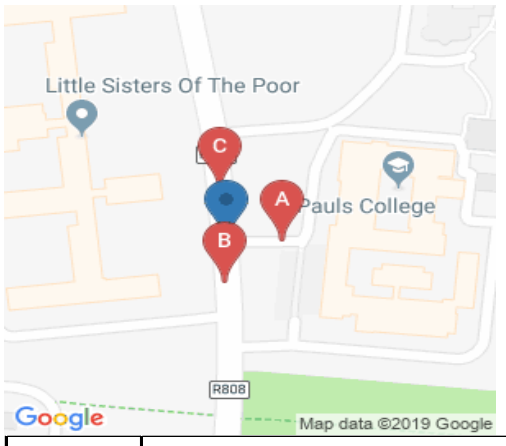
	A => C								B => A							
TIME	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
H/TOT	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
08:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
08:15	0	0	0	1	0	0	1	1.5	0	0	1	0	0	0	1	1
08:30	0	0	0	0	0	0	0	0	1	0	2	0	0	0	3	2.2
08:45	0	0	2	0	0	0	2	2	0	0	1	0	0	0	1	1
H/TOT	0	0	2	1	0	0	3	3.5	1	0	5	0	0	0	6	5.2
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
09:45	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
H/TOT	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0
10:00	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0
10:15	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
10:30	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
10:45	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
H/TOT	0	0	5	0	0	0	5	5	0	0	0	0	0	0	0	0
11:00	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
11:45	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1
H/TOT	0	0	2	0	0	0	2	2	0	0	2	0	0	0	2	2
12:00	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0
12:15	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
12:30	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0
12:45	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1
H/TOT	0	0	6	0	0	0	6	6	0	0	1	0	0	0	1	1
13:00	0	0	5	1	0	0	6	6.5	0	0	1	0	0	0	1	1
13:15	0	0	3	0	0	0	3	3	0	0	0	0	0	0	0	0
13:30	0	0	2	0	0	0	2	2	0	0	1	0	0	0	1	1
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	10	1	0	0	11	11.5	0	0	2	0	0	0	2	2
14:00	0	0	3	1	0	0	4	4.5	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	4	1	0	0	5	5.5	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
15:30	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
H/TOT	0	0	2	0	0	0	2	2	0	0	1	0	0	0	1	1
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0
16:30	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0
16:45	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
H/TOT	0	0	5	0	0	0	5	5	0	0	0	0	0	0	0	0
17:00	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
17:45	0	0	2	0	0	0	2	2	0	0	1	0	0	0	1	1
H/TOT	0	0	4	0	0	0	4	4	0	0	2	0	0	0	2	2
18:00	0	0	4	0	0	0	4	4	0	0	0	0	0	0	0	0
18:15	0	0	2	0	0	0	2	2	0	0	1	0	0	0	1	1
18:30	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
18:45	0	0	1	0	0	0	1	1	0	0	4	0	0	0	4	4
H/TOT	0	0	8	0	0	0	8	8	0	0	5	0	0	0	5	5
12 TOT	0	0	50	3	0	0	53	54.5	1	0	19	0	0	0	20	19.2



IDASO

Survey Name: 031 19050 Raheny
Site: 3
Location: Sybil Hill Rd / St Pauls College
Date: 13-Feb-2019

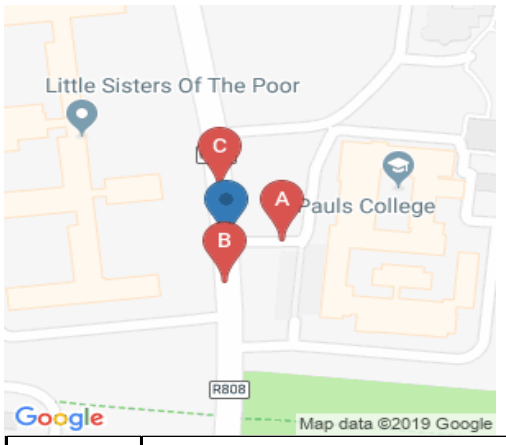
	B => B								B => C							
TIME	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU
07:00	0	0	0	0	0	0	0	0	1	0	22	2	0	1	26	27.2
07:15	0	0	0	0	1	0	1	2.3	3	0	41	3	2	0	49	50.7
07:30	0	0	0	0	0	0	0	0	3	0	48	8	2	0	61	65.2
07:45	0	0	0	0	0	0	0	0	2	0	48	2	1	0	53	53.7
H/TOT	0	0	0	0	1	0	1	2.3	9	0	159	15	5	1	189	196.8
08:00	0	0	0	0	0	0	0	0	3	0	55	1	0	1	60	59.1
08:15	0	0	1	0	0	0	1	1	2	0	74	4	2	0	82	85
08:30	0	0	0	0	0	0	0	0	3	0	79	4	2	1	89	92.2
08:45	0	0	1	0	0	0	1	1	1	0	60	3	0	1	65	66.7
H/TOT	0	0	2	0	0	0	2	2	9	0	268	12	4	3	296	303
09:00	0	0	0	0	0	0	0	0	0	0	42	2	1	0	45	47.3
09:15	0	0	0	0	0	0	0	0	2	0	41	2	2	0	47	49
09:30	0	0	0	0	0	0	0	0	2	0	41	1	0	0	44	42.9
09:45	0	0	0	0	0	0	0	0	1	0	61	10	1	0	73	78.5
H/TOT	0	0	0	0	0	0	0	0	5	0	185	15	4	0	209	217.7
10:00	0	0	0	0	0	0	0	0	0	0	60	3	1	0	64	66.8
10:15	0	0	0	0	0	0	0	0	0	0	51	8	0	0	59	63
10:30	0	0	0	0	0	0	0	0	2	0	56	3	2	1	64	67.5
10:45	0	0	0	0	0	0	0	0	1	0	48	5	1	0	55	58
H/TOT	0	0	0	0	0	0	0	0	3	0	215	19	4	1	242	255.3
11:00	0	0	0	0	0	0	0	0	1	0	34	4	2	0	41	44.8
11:15	0	0	0	0	0	0	0	0	1	0	61	11	2	0	75	82.3
11:30	0	0	0	0	0	0	0	0	2	1	42	4	0	0	49	48.8
11:45	0	0	0	0	0	0	0	0	1	0	60	5	1	0	67	70
H/TOT	0	0	0	0	0	0	0	0	5	1	197	24	5	0	232	245.9
12:00	0	0	0	0	0	0	0	0	0	0	54	7	2	0	63	69.1
12:15	0	0	0	0	0	0	0	0	0	0	57	8	1	0	66	71.3
12:30	0	0	0	0	0	0	0	0	0	1	36	4	1	0	42	44.7
12:45	0	0	1	0	0	0	1	1	5	0	72	5	0	0	82	80.5
H/TOT	0	0	1	0	0	0	1	1	5	1	219	24	4	0	253	265.6
13:00	0	0	0	0	0	0	0	0	3	0	76	6	1	0	86	87.9
13:15	0	0	0	0	0	0	0	0	1	0	70	2	0	1	74	75.2
13:30	0	0	0	0	0	0	0	0	2	1	51	7	1	0	62	64.6
13:45	0	0	0	0	0	0	0	0	2	0	46	7	1	0	56	59.2
H/TOT	0	0	0	0	0	0	0	0	8	1	243	22	3	1	278	286.9
14:00	0	0	1	0	0	0	1	1	1	0	71	3	1	0	76	78
14:15	0	0	0	0	0	0	0	0	3	0	66	6	0	0	75	75.6
14:30	0	0	0	0	0	0	0	0	1	0	82	4	2	0	89	92.8
14:45	0	0	0	0	0	0	0	0	2	0	46	5	1	1	55	58.2
H/TOT	0	0	1	0	0	0	1	1	7	0	265	18	4	1	295	304.6
15:00	0	0	0	0	0	0	0	0	2	0	79	6	0	0	87	88.4
15:15	0	0	0	0	0	0	0	0	0	0	61	9	4	0	74	83.7
15:30	0	0	0	0	0	0	0	0	0	1	63	15	1	0	80	88.2
15:45	0	0	0	0	0	0	0	0	2	0	63	5	1	0	71	73.2
H/TOT	0	0	0	0	0	0	0	0	4	1	266	35	6	0	312	333.5
16:00	0	0	0	0	0	0	0	0	1	0	62	6	0	0	69	71.2
16:15	0	0	0	0	0	0	0	0	3	0	67	8	0	0	78	79.6
16:30	0	0	0	0	0	0	0	0	3	0	59	9	1	0	72	75.4
16:45	0	0	0	0	0	0	0	0	1	0	69	14	0	0	84	90.2
H/TOT	0	0	0	0	0	0	0	0	8	0	257	37	1	0	303	316.4
17:00	0	0	0	0	0	0	0	0	5	0	85	6	1	0	97	97.3
17:15	0	0	0	0	0	0	0	0	1	1	85	5	0	0	92	93.1
17:30	0	0	0	0	0	0	0	0	2	0	67	3	1	0	73	74.2
17:45	0	0	0	0	0	0	0	0	3	0	70	3	0	0	76	75.1
H/TOT	0	0	0	0	0	0	0	0	11	1	307	17	2	0	338	339.7
18:00	0	0	0	0	0	0	0	0	4	0	76	3	0	0	83	81.3
18:15	0	0	0	0	0	0	0	0	2	0	66	4	0	0	72	72.4
18:30	0	0	0	0	0	0	0	0	1	0	71	3	0	0	75	75.7
18:45	0	0	0	0	0	0	0	0	1	1	62	2	0	0	66	65.6
H/TOT	0	0	0	0	0	0	0	0	8	1	275	12	0	0	296	295
12 TOT	0	0	4	0	1	0	5	6.3	82	6	2856	250	42	7	3243	3360.4



IDASO

Survey Name: 031 19050 Raheny
Site: 3
Location: Sybil Hill Rd / St Pauls College
Date: 13-Feb-2019

	C => A								C => B							
TIME	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU
07:00	0	0	0	0	0	0	0	0	4	0	23	2	1	0	30	29.1
07:15	0	0	0	0	0	0	0	0	2	1	36	4	3	0	46	49.7
07:30	0	0	0	0	0	0	0	0	0	0	40	11	4	0	55	65.7
07:45	0	0	1	0	0	0	1	1	2	0	49	9	3	0	63	69.8
H/TOT	0	0	1	0	0	0	1	1	8	1	148	26	11	0	194	214.3
08:00	0	0	2	0	0	0	2	2	4	0	63	3	1	0	71	70.6
08:15	0	0	10	1	0	0	11	11.5	8	0	67	3	0	0	78	73.1
08:30	0	0	7	0	0	0	7	7	3	0	82	5	2	0	92	94.7
08:45	0	0	0	0	0	0	0	0	2	0	56	4	3	0	65	69.3
H/TOT	0	0	19	1	0	0	20	20.5	17	0	268	15	6	0	306	307.7
09:00	0	0	0	0	0	0	0	0	1	0	47	5	1	0	54	57
09:15	0	0	0	0	0	0	0	0	0	0	41	8	0	1	50	55
09:30	0	0	1	0	0	0	1	1	1	1	39	4	3	0	48	52.5
09:45	0	0	1	0	0	0	1	1	3	0	40	11	0	1	55	59.1
H/TOT	0	0	2	0	0	0	2	2	5	1	167	28	4	2	207	223.6
10:00	0	0	1	0	0	0	1	1	1	0	34	5	2	0	42	46.3
10:15	0	0	1	1	0	0	2	2.5	0	0	38	7	1	0	46	50.8
10:30	0	0	3	0	0	0	3	3	1	0	37	7	1	0	46	50
10:45	0	0	3	0	0	0	3	3	1	0	63	3	2	0	69	72.3
H/TOT	0	0	8	1	0	0	9	9.5	3	0	172	22	6	0	203	219.4
11:00	0	0	1	0	0	0	1	1	2	1	41	1	1	0	46	45.6
11:15	0	0	0	0	0	0	0	0	2	1	55	3	0	0	61	60.3
11:30	0	0	1	0	0	0	1	1	1	0	49	6	3	0	59	65.1
11:45	0	0	0	0	0	0	0	0	0	0	41	0	1	0	42	43.3
H/TOT	0	0	2	0	0	0	2	2	5	2	186	10	5	0	208	214.3
12:00	0	0	1	0	0	0	1	1	0	1	54	6	1	0	62	65.7
12:15	0	0	1	0	0	0	1	1	4	0	42	4	3	1	54	57.7
12:30	0	0	2	0	0	0	2	2	1	0	50	1	1	0	53	54
12:45	0	0	3	0	0	0	3	3	1	0	60	6	2	0	69	73.8
H/TOT	0	0	7	0	0	0	7	7	6	1	206	17	7	1	238	251.2
13:00	0	0	3	0	0	0	3	3	1	1	58	4	1	0	65	66.9
13:15	0	0	0	0	0	0	0	0	1	1	48	5	1	0	56	58.4
13:30	0	0	0	0	0	0	0	0	1	0	55	2	1	0	59	60.5
13:45	0	0	0	1	0	0	1	1.5	1	0	63	4	0	0	68	69.2
H/TOT	0	0	3	1	0	0	4	4.5	4	2	224	15	3	0	248	255
14:00	0	0	0	0	0	0	0	0	4	0	66	5	0	0	75	74.3
14:15	0	0	1	0	0	0	1	1	0	0	39	6	0	0	45	48
14:30	0	0	2	0	0	0	2	2	2	0	51	6	0	0	59	60.4
14:45	0	0	2	0	0	0	2	2	2	0	53	3	3	0	61	64.8
H/TOT	0	0	5	0	0	0	5	5	8	0	209	20	3	0	240	247.5
15:00	0	0	0	0	0	0	0	0	3	0	50	4	3	0	60	63.5
15:15	0	0	0	0	0	0	0	0	0	0	57	2	2	0	61	64.6
15:30	0	0	0	0	0	0	0	0	1	0	49	3	1	0	54	56
15:45	0	0	0	0	0	0	0	0	3	0	59	4	0	0	66	65.6
H/TOT	0	0	0	0	0	0	0	0	7	0	215	13	6	0	241	249.7
16:00	0	0	1	1	0	0	2	2.5	1	0	51	3	0	0	55	55.7
16:15	0	0	0	0	0	0	0	0	2	0	51	1	1	1	56	57.2
16:30	0	0	1	0	0	0	1	1	3	0	61	3	0	0	67	66.1
16:45	0	0	1	0	0	0	1	1	2	0	57	7	0	0	66	67.9
H/TOT	0	0	3	1	0	0	4	4.5	8	0	220	14	1	1	244	246.9
17:00	0	0	0	0	0	0	0	0	2	0	48	2	0	0	52	51.4
17:15	0	0	0	0	0	0	0	0	1	1	60	0	0	0	62	60.6
17:30	0	0	3	0	0	0	3	3	0	0	56	1	1	0	58	59.8
17:45	0	0	2	0	0	0	2	2	1	0	52	1	0	0	54	53.7
H/TOT	0	0	5	0	0	0	5	5	4	1	216	4	1	0	226	225.5
18:00	0	0	3	0	0	0	3	3	1	0	51	1	0	0	53	52.7
18:15	0	0	3	0	0	0	3	3	0	0	53	0	0	0	53	53
18:30	0	0	5	0	0	0	5	5	1	0	53	2	0	0	56	56.2
18:45	0	0	16	0	0	0	16	16	2	0	50	5	0	0	57	57.9
H/TOT	0	0	27	0	0	0	27	27	4	0	207	8	0	0	219	219.8
12 TOT	0	0	82	4	0	0	86	88	79	8	2438	192	53	4	2774	2874.9



IDASO

Survey Name: 031 19050 Raheny
Site: 3
Location: Sybil Hill Rd / St Pauls College
Date: 13-Feb-2019

	C => C							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**SV (BUS**	**TOT**	**PCU**
07:00	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0
08:15	0	0	1	0	0	0	1	1
08:30	0	0	1	0	0	0	1	1
08:45	0	0	1	0	0	0	1	1
H/TOT	0	0	3	0	0	0	3	3
09:00	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0
11:45	0	0	1	0	0	0	1	1
H/TOT	0	0	1	0	0	0	1	1
12:00	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0
12:45	0	0	1	0	0	0	1	1
H/TOT	0	0	1	0	0	0	1	1
13:00	0	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0	0
14:15	0	0	1	0	0	0	1	1
14:30	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0
H/TOT	0	0	1	0	0	0	1	1
15:00	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0
15:45	0	0	1	0	0	0	1	1
H/TOT	0	0	1	0	0	0	1	1
16:00	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0
16:30	0	0	1	0	0	0	1	1
16:45	0	0	2	0	0	0	2	2
H/TOT	0	0	3	0	0	0	3	3
17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
12 TOT	0	0	10	0	0	0	10	10

IDASO

Survey Name: 031 19050 Raheny
Site: 4
Location: R808 / St Pauls College
Date: 13-Feb-2019

	A => A								A => B							
TIME	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
08:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
09:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1.5
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1.5
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.2
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.2
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.2
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.2
12:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.2
12:15	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
12:30	0	0	0	0	0	0	0	0	3	0	1	0	0	1	5	3.6
12:45	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.2
H/TOT	0	0	0	0	0	0	0	0	5	0	3	0	0	1	9	6
13:00	0	0	0	0	0	0	0	0	11	0	2	0	0	0	13	4.2
13:15	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	4
13:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
13:45	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0.6
H/TOT	0	0	0	0	0	0	0	0	14	0	7	0	0	0	21	9.8
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
15:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
15:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
H/TOT	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
16:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
16:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
16:30	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2	1.2
16:45	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2	2.2
H/TOT	0	0	0	0	0	0	0	0	2	0	3	0	0	1	6	5.4
17:00	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	3.5
H/TOT	0	0	0	0	0	0	0	0	0	0	5	1	0	0	6	6.5
18:00	0	0	0	0	0	0	0	0	1	0	7	0	0	0	8	7.2
18:15	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	6
H/TOT	0	0	0	0	0	0	0	0	1	0	15	0	0	0	16	15.2
12 TOT	0	0	0	0	0	0	0	0	24	0	39	2	0	2	67	50.8

IDASO

Survey Name: 031 19050 Raheny
Site: 4
Location: R808 / St Pauls College
Date: 13-Feb-2019

	A => C								B => A							
TIME	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
08:00	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
08:15	0	0	0	0	0	0	0	0	5	0	2	0	0	0	7	3
08:30	0	0	1	0	0	0	1	1	13	0	5	0	0	0	18	7.6
08:45	0	0	1	0	0	0	1	1	8	0	3	0	0	0	11	4.6
H/TOT	0	0	2	0	0	0	2	2	26	0	12	0	0	0	38	17.2
09:00	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	1.7
09:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
09:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	1	0	2	1	0	0	4	3.7
10:00	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
10:15	0	0	0	1	0	0	1	1.5	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	1	0	0	1	1.5	0	0	2	0	0	0	2	2
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	3	0	3	0	0	0	6	3.6	0	0	0	0	0	0	0	0
13:15	0	0	2	0	0	0	2	2	0	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	3	0	5	0	0	0	8	5.6	0	0	0	0	0	0	0	0
14:00	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1
14:45	0	0	1	0	0	0	1	1	0	0	2	0	0	0	2	2
H/TOT	0	0	3	0	0	0	3	3	0	0	3	0	0	0	3	3
15:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
15:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
15:30	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2	1.2
15:45	0	0	1	0	0	0	1	1	1	0	2	0	0	0	3	2.2
H/TOT	0	0	1	0	0	0	1	1	2	0	5	0	0	0	7	5.4
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	1	0	0	1	1.5	0	0	0	0	0	0	0	0
16:30	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1
16:45	0	0	2	0	0	0	2	2	0	0	4	0	0	1	5	6
H/TOT	0	0	3	1	0	0	4	4.5	0	0	5	0	0	1	6	7
17:00	0	0	1	0	0	0	1	1	0	0	4	0	0	0	4	4
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	1	0	0	0	1	1	0	0	13	0	0	0	13	13
H/TOT	0	0	2	0	0	0	2	2	0	0	17	0	0	0	17	17
18:00	0	0	3	0	0	0	3	3	0	0	15	0	0	0	15	15
18:15	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	5
18:45	0	0	2	0	0	0	2	2	0	0	33	0	0	0	33	33
H/TOT	0	0	6	0	0	0	6	6	0	0	53	0	0	0	53	53
12 TOT	3	0	22	2	0	0	27	25.6	29	0	101	1	0	1	132	110.3

IDASO

Survey Name: 031 19050 Raheny
Site: 4
Location: R808 / St Pauls College
Date: 13-Feb-2019

	B => B								B => C							
TIME	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU
07:00	0	0	0	0	0	0	0	0	1	0	22	2	0	1	26	27.2
07:15	0	0	0	0	0	0	0	0	3	0	42	3	3	0	51	54
07:30	0	0	0	0	0	0	0	0	2	0	47	8	2	0	59	64
07:45	0	0	0	0	0	0	0	0	3	0	49	2	1	0	55	54.9
H/TOT	0	0	0	0	0	0	0	0	9	0	160	15	6	1	191	200.1
08:00	0	0	0	0	0	0	0	0	2	0	55	2	0	1	60	60.4
08:15	0	0	1	0	0	0	1	1	3	0	74	5	2	0	84	86.7
08:30	0	0	1	0	0	0	1	1	3	0	79	3	2	1	88	90.7
08:45	0	0	3	0	0	0	3	3	1	0	60	3	0	1	65	66.7
H/TOT	0	0	5	0	0	0	5	5	9	0	268	13	4	3	297	304.5
09:00	0	0	1	0	0	0	1	1	0	0	40	3	1	0	44	46.8
09:15	0	0	0	0	0	0	0	0	2	0	41	2	2	0	47	49
09:30	0	0	0	0	0	0	0	0	2	0	41	1	0	0	44	42.9
09:45	0	0	0	0	0	0	0	0	1	0	59	10	1	0	71	76.5
H/TOT	0	0	1	0	0	0	1	1	5	0	181	16	4	0	206	215.2
10:00	0	0	0	0	0	0	0	0	0	0	60	4	1	0	65	68.3
10:15	0	0	0	0	0	0	0	0	0	0	48	7	0	0	55	58.5
10:30	0	0	2	0	0	0	2	2	3	0	56	4	2	1	66	69.2
10:45	0	0	0	0	0	0	0	0	1	0	48	4	1	0	54	56.5
H/TOT	0	0	2	0	0	0	2	2	4	0	212	19	4	1	240	252.5
11:00	0	0	1	0	0	0	1	1	1	0	33	4	2	0	40	43.8
11:15	0	0	1	0	0	0	1	1	1	0	60	11	2	0	74	81.3
11:30	0	0	0	0	0	0	0	0	2	1	39	5	0	0	47	47.3
11:45	0	0	0	0	0	0	0	0	1	0	59	5	1	0	66	69
H/TOT	0	0	2	0	0	0	2	2	5	1	191	25	5	0	227	241.4
12:00	0	0	0	0	0	0	0	0	0	0	54	7	2	0	63	69.1
12:15	0	0	0	0	0	0	0	0	0	0	58	7	1	0	66	70.8
12:30	0	0	0	0	0	0	0	0	0	1	34	4	1	0	40	42.7
12:45	0	0	0	0	0	0	0	0	5	0	76	5	0	0	86	84.5
H/TOT	0	0	0	0	0	0	0	0	5	1	222	23	4	0	255	267.1
13:00	0	0	0	0	0	0	0	0	1	0	68	5	1	0	75	78
13:15	0	0	0	0	0	0	0	0	1	0	68	2	0	1	72	73.2
13:30	0	0	0	0	0	0	0	0	2	1	51	7	1	0	62	64.6
13:45	0	0	0	0	0	0	0	0	2	0	46	7	1	0	56	59.2
H/TOT	0	0	0	0	0	0	0	0	6	1	233	21	3	1	265	275
14:00	0	0	0	0	0	0	0	0	1	0	67	4	1	0	73	75.5
14:15	0	0	0	0	0	0	0	0	3	0	65	6	0	0	74	74.6
14:30	0	0	0	0	0	0	0	0	4	0	80	5	2	0	91	92.9
14:45	0	0	0	0	0	0	0	0	2	0	45	4	1	1	53	55.7
H/TOT	0	0	0	0	0	0	0	0	10	0	257	19	4	1	291	298.7
15:00	0	0	0	0	0	0	0	0	3	0	78	6	0	0	87	87.6
15:15	0	0	0	0	0	0	0	0	2	0	60	10	4	0	76	84.6
15:30	0	0	0	0	0	0	0	0	0	1	62	14	1	0	78	85.7
15:45	0	0	0	0	0	0	0	0	5	0	62	5	1	0	73	72.8
H/TOT	0	0	0	0	0	0	0	0	10	1	262	35	6	0	314	330.7
16:00	0	0	1	0	0	0	1	1	1	0	62	6	0	0	69	71.2
16:15	0	0	0	0	0	0	0	0	3	0	66	7	0	0	76	77.1
16:30	0	0	0	0	0	0	0	0	6	0	57	9	1	0	73	74
16:45	0	0	0	0	0	0	0	0	4	0	65	14	0	0	83	86.8
H/TOT	0	0	1	0	0	0	1	1	14	0	250	36	1	0	301	309.1
17:00	0	0	0	0	0	0	0	0	6	0	84	6	1	0	97	96.5
17:15	0	0	0	0	0	0	0	0	1	1	85	5	0	0	92	93.1
17:30	0	0	0	0	0	0	0	0	3	0	70	3	1	0	77	77.4
17:45	0	0	1	0	0	0	1	1	3	0	69	3	0	0	75	74.1
H/TOT	0	0	1	0	0	0	1	1	13	1	308	17	2	0	341	341.1
18:00	0	0	0	0	0	0	0	0	6	0	72	3	0	0	81	77.7
18:15	0	0	0	0	0	0	0	0	2	0	63	5	0	0	70	70.9
18:30	0	0	0	0	0	0	0	0	1	0	69	4	1	0	75	77.5
18:45	0	0	0	0	0	0	0	0	1	1	62	2	0	0	66	65.6
H/TOT	0	0	0	0	0	0	0	0	10	1	266	14	1	0	292	291.7
12 TOT	0	0	12	0	0	0	12	12	100	6	2810	253	44	7	3220	3327.1

IDASO

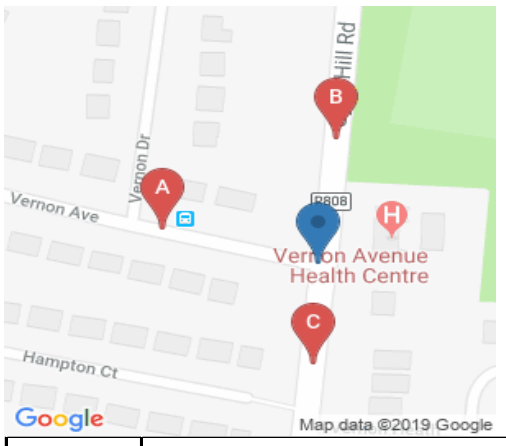
Survey Name: 031 19050 Raheny
Site: 4
Location: R808 / St Pauls College
Date: 13-Feb-2019

	C => A								C => B							
TIME	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU
07:00	0	0	0	0	0	0	0	0	3	1	34	2	0	0	40	38
07:15	0	0	0	0	0	0	0	0	1	0	37	4	5	0	47	54.7
07:30	0	0	0	1	0	0	1	1.5	0	0	40	10	4	0	54	64.2
07:45	0	0	0	0	0	0	0	0	2	0	47	9	3	0	61	67.8
H/TOT	0	0	0	1	0	0	1	1.5	6	1	158	25	12	0	202	224.7
08:00	0	0	0	0	0	0	0	0	5	0	66	2	1	0	74	72.3
08:15	0	0	0	0	0	0	0	0	8	0	65	3	0	0	76	71.1
08:30	0	0	0	0	0	0	0	0	3	0	79	5	2	0	89	91.7
08:45	0	0	0	0	0	0	0	0	2	0	55	4	3	0	64	68.3
H/TOT	0	0	0	0	0	0	0	0	18	0	265	14	6	0	303	303.4
09:00	0	0	0	0	0	0	0	0	1	0	46	5	1	0	53	56
09:15	0	0	0	0	0	0	0	0	0	0	42	8	0	1	51	56
09:30	0	0	0	0	0	0	0	0	1	1	38	5	3	0	48	53
09:45	0	0	0	0	0	0	0	0	3	0	39	10	0	1	53	56.6
H/TOT	0	0	0	0	0	0	0	0	5	1	165	28	4	2	205	221.6
10:00	1	0	0	0	0	0	1	0.2	0	0	35	5	2	0	42	47.1
10:15	0	0	0	0	0	0	0	0	0	0	36	7	1	0	44	48.8
10:30	0	0	0	0	0	0	0	0	1	0	38	7	1	0	47	51
10:45	0	0	0	0	0	0	0	0	1	0	62	3	2	0	68	71.3
H/TOT	1	0	0	0	0	0	1	0.2	2	0	171	22	6	0	201	218.2
11:00	0	0	0	0	0	0	0	0	0	1	41	5	1	0	48	51.2
11:15	0	0	0	0	0	0	0	0	4	1	55	3	0	0	63	60.7
11:30	0	0	0	0	0	0	0	0	0	0	48	5	3	0	56	62.4
11:45	0	0	0	0	0	0	0	0	0	0	39	2	1	0	42	44.3
H/TOT	0	0	0	0	0	0	0	0	4	2	183	15	5	0	209	218.6
12:00	0	0	1	0	0	0	1	1	0	1	50	6	1	0	58	61.7
12:15	0	0	2	0	0	1	3	4	0	3	42	4	3	0	52	56.1
12:30	0	0	0	0	0	0	0	0	1	0	49	1	1	0	52	53
12:45	0	0	0	0	0	0	0	0	1	0	56	6	1	0	64	67.5
H/TOT	0	0	3	0	0	1	4	5	2	4	197	17	6	0	226	238.3
13:00	0	0	0	0	0	0	0	0	2	1	59	4	2	0	68	70.4
13:15	0	0	0	0	0	0	0	0	1	1	42	5	1	0	50	52.4
13:30	0	0	0	0	0	0	0	0	1	0	53	2	1	0	57	58.5
13:45	0	0	0	0	0	0	0	0	1	0	63	4	0	0	68	69.2
H/TOT	0	0	0	0	0	0	0	0	5	2	217	15	4	0	243	250.5
14:00	0	0	0	0	0	0	0	0	4	0	66	5	0	0	75	74.3
14:15	0	0	0	0	0	0	0	0	0	0	39	6	0	0	45	48
14:30	0	0	0	0	0	0	0	0	2	0	51	5	0	0	58	58.9
14:45	0	0	0	0	0	0	0	0	1	0	51	2	3	0	57	61.1
H/TOT	0	0	0	0	0	0	0	0	7	0	207	18	3	0	235	242.3
15:00	0	0	0	0	0	0	0	0	2	0	49	4	2	0	57	60
15:15	0	0	0	0	0	0	0	0	0	0	57	3	3	0	63	68.4
15:30	0	0	0	0	0	0	0	0	3	0	50	2	1	0	56	55.9
15:45	0	0	0	0	0	0	0	0	3	0	58	5	0	0	66	66.1
H/TOT	0	0	0	0	0	0	0	0	8	0	214	14	6	0	242	250.4
16:00	0	0	1	0	0	0	1	1	1	0	50	3	0	0	54	54.7
16:15	0	0	0	0	0	0	0	0	2	0	48	1	1	1	53	54.2
16:30	0	0	1	0	0	0	1	1	3	0	62	3	0	0	68	67.1
16:45	0	0	0	0	0	0	0	0	2	0	56	8	0	0	66	68.4
H/TOT	0	0	2	0	0	0	2	2	8	0	216	15	1	1	241	244.4
17:00	0	0	0	0	0	0	0	0	2	0	53	2	0	0	57	56.4
17:15	0	0	0	0	0	0	0	0	1	1	58	0	0	0	60	58.6
17:30	0	0	0	0	0	0	0	0	2	0	57	1	1	0	61	61.2
17:45	0	0	1	0	0	0	1	1	2	0	49	1	0	0	52	50.9
H/TOT	0	0	1	0	0	0	1	1	7	1	217	4	1	0	230	227.1
18:00	0	0	1	0	0	0	1	1	0	1	51	1	0	0	53	52.9
18:15	0	0	1	0	0	0	1	1	3	0	52	0	0	0	55	52.6
18:30	0	0	0	0	0	0	0	0	1	0	50	2	0	0	53	53.2
18:45	0	0	8	0	0	0	8	8	2	0	40	2	0	0	44	43.4
H/TOT	0	0	10	0	0	0	10	10	6	1	193	5	0	0	205	202.1
12 TOT	1	0	16	1	0	1	19	19.7	78	12	2403	192	54	3	2742	2841.6

IDASO

Survey Name: 031 19050 Raheny
Site: 4
Location: R808 / St Pauls College
Date: 13-Feb-2019

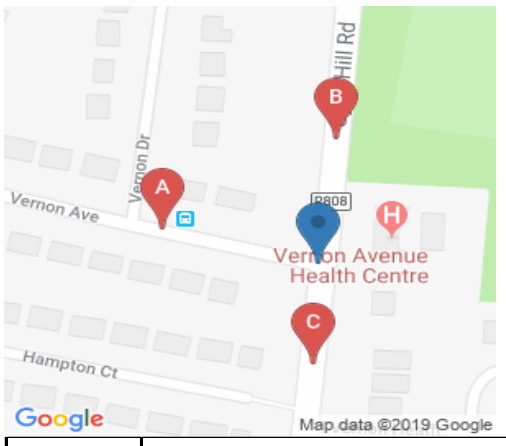
	C => C							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**SV (BUS**	**TOT**	**PCU**
07:00	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0
08:15	0	0	1	0	0	0	1	1
08:30	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0
H/TOT	0	0	1	0	0	0	1	1
09:00	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0
12:45	0	0	2	0	0	0	2	2
H/TOT	0	0	2	0	0	0	2	2
13:00	0	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0
14:45	0	0	0	1	0	0	1	1.5
H/TOT	0	0	0	1	0	0	1	1.5
15:00	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
18:00	0	0	1	0	0	0	1	1
18:15	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0
H/TOT	0	0	1	0	0	0	1	1
12 TOT	0	0	4	1	0	0	5	5.5



IDASO

Survey Name: 031 19050 Raheny
Site: 5
Location: R808 / Sybil Hill Rd
Date: 13-Feb-2019

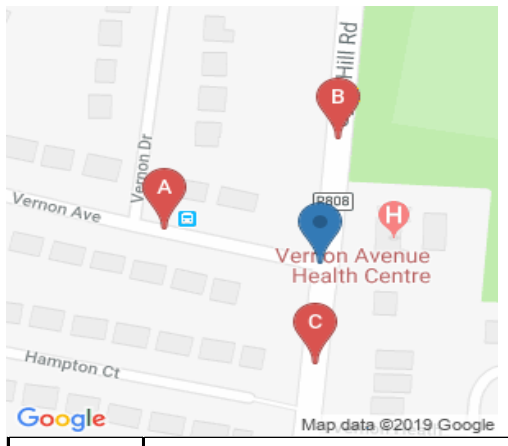
	A => A								A => B							
TIME	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU
07:00	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
07:15	0	0	0	0	0	0	0	0	0	0	4	1	0	0	5	5.5
07:30	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	4
07:45	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
H/TOT	0	0	0	0	0	0	0	0	0	0	14	1	0	0	15	15.5
08:00	0	0	0	0	0	0	0	0	0	0	4	1	0	0	5	5.5
08:15	0	0	0	0	0	0	0	0	5	0	6	1	1	0	13	10.8
08:30	0	0	0	0	0	0	0	0	0	0	21	1	0	0	22	22.5
08:45	0	0	0	0	0	0	0	0	0	0	17	0	0	0	17	17
H/TOT	0	0	0	0	0	0	0	0	5	0	48	3	1	0	57	55.8
09:00	0	0	0	0	0	0	0	0	0	0	6	1	0	0	7	7.5
09:15	0	0	0	0	0	0	0	0	0	0	10	0	0	0	10	10
09:30	0	0	0	0	0	0	0	0	0	0	9	0	0	0	9	9
09:45	0	0	0	0	0	0	0	0	0	0	11	0	0	0	11	11
H/TOT	0	0	0	0	0	0	0	0	0	0	36	1	0	0	37	37.5
10:00	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	6
10:15	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	7
10:30	0	0	0	0	0	0	0	0	0	0	8	1	0	0	9	9.5
10:45	0	0	0	0	0	0	0	0	1	0	11	0	0	0	12	11.2
H/TOT	0	0	0	0	0	0	0	0	1	0	32	1	0	0	34	33.7
11:00	0	0	0	0	0	0	0	0	0	0	8	0	0	0	8	8
11:15	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
11:30	0	0	0	0	0	0	0	0	1	0	8	0	0	0	9	8.2
11:45	0	0	0	0	0	0	0	0	0	0	9	1	0	0	10	10.5
H/TOT	0	0	0	0	0	0	0	0	1	0	28	1	0	0	30	29.7
12:00	0	0	0	0	0	0	0	0	0	0	6	2	1	0	9	11.3
12:15	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	7
12:30	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	5
12:45	0	0	0	0	0	0	0	0	0	0	9	0	0	0	9	9
H/TOT	0	0	0	0	0	0	0	0	0	0	27	2	1	0	30	32.3
13:00	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	7
13:15	0	0	0	0	0	0	0	0	0	0	14	0	0	0	14	14
13:30	0	0	0	0	0	0	0	0	0	0	15	0	0	0	15	15
13:45	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	7
H/TOT	0	0	0	0	0	0	0	0	0	0	43	0	0	0	43	43
14:00	0	0	0	0	0	0	0	0	0	0	11	0	0	0	11	11
14:15	0	0	0	0	0	0	0	0	0	0	18	1	0	0	19	19.5
14:30	0	0	0	0	0	0	0	0	0	0	22	1	0	0	23	23.5
14:45	0	0	0	0	0	0	0	0	0	0	5	2	0	0	7	8
H/TOT	0	0	0	0	0	0	0	0	0	0	56	4	0	0	60	62
15:00	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	7
15:15	0	0	0	0	0	0	0	0	0	0	10	1	0	0	11	11.5
15:30	0	0	0	0	0	0	0	0	0	0	11	2	0	0	13	14
15:45	0	0	0	0	0	0	0	0	1	0	6	0	0	0	7	6.2
H/TOT	0	0	0	0	0	0	0	0	1	0	34	3	0	0	38	38.7
16:00	0	0	0	0	0	0	0	0	0	0	19	0	0	0	19	19
16:15	0	0	0	0	0	0	0	0	1	0	12	0	0	0	13	12.2
16:30	0	0	0	0	0	0	0	0	2	0	13	1	0	0	16	14.9
16:45	0	0	0	0	0	0	0	0	0	0	16	0	0	0	16	16
H/TOT	0	0	0	0	0	0	0	0	3	0	60	1	0	0	64	62.1
17:00	0	0	0	0	0	0	0	0	0	0	20	1	0	0	21	21.5
17:15	0	0	0	0	0	0	0	0	0	0	18	1	0	0	19	19.5
17:30	0	0	0	0	0	0	0	0	0	0	9	0	0	0	9	9
17:45	0	0	0	0	0	0	0	0	0	0	18	0	0	0	18	18
H/TOT	0	0	0	0	0	0	0	0	0	0	65	2	0	0	67	68
18:00	0	0	0	0	0	0	0	0	0	0	18	1	0	0	19	19.5
18:15	0	0	0	0	0	0	0	0	1	0	8	1	0	0	10	9.7
18:30	0	0	0	0	0	0	0	0	1	0	17	0	0	0	18	17.2
18:45	0	0	0	0	0	0	0	0	0	0	25	0	0	0	25	25
H/TOT	0	0	0	0	0	0	0	0	2	0	68	2	0	0	72	71.4
12 TOT	0	0	0	0	0	0	0	0	13	0	511	21	2	0	547	549.7



IDASO

Survey Name: 031 19050 Raheny
Site: 5
Location: R808 / Sybil Hill Rd
Date: 13-Feb-2019

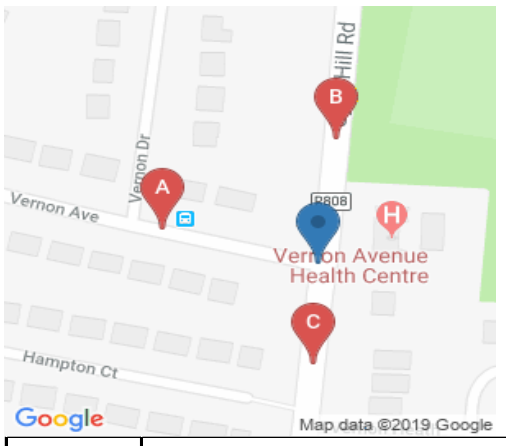
	A => C								B => A							
TIME	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU
07:00	0	0	4	1	0	0	5	5.5	0	0	3	0	0	0	3	3
07:15	0	0	5	1	0	0	6	6.5	0	0	3	0	1	0	4	5.3
07:30	0	0	9	2	1	1	13	16.3	0	0	5	0	0	0	5	5
07:45	1	2	19	1	0	0	23	21.5	1	0	11	1	0	0	13	12.7
H/TOT	1	2	37	5	1	1	47	49.8	1	0	22	1	1	0	25	26
08:00	3	0	32	2	1	0	38	37.9	0	0	11	0	0	0	11	11
08:15	7	0	28	0	0	0	35	29.4	0	0	16	1	0	0	17	17.5
08:30	3	0	25	2	0	0	30	28.6	0	0	26	1	0	0	27	27.5
08:45	1	0	29	1	2	0	33	35.3	1	0	20	0	0	0	21	20.2
H/TOT	14	0	114	5	3	0	136	131.2	1	0	73	2	0	0	76	76.2
09:00	0	0	28	1	1	1	31	33.8	0	0	5	0	0	0	5	5
09:15	0	0	13	2	0	0	15	16	0	0	6	0	0	0	6	6
09:30	1	0	16	1	2	0	20	22.3	0	0	7	0	0	0	7	7
09:45	1	0	24	1	0	1	27	27.7	0	0	5	0	0	0	5	5
H/TOT	2	0	81	5	3	2	93	99.8	0	0	23	0	0	0	23	23
10:00	1	0	20	2	1	0	24	25.5	0	0	2	1	0	0	3	3.5
10:15	1	0	16	2	0	0	19	19.2	0	0	3	0	1	0	4	5.3
10:30	0	0	26	0	1	0	27	28.3	0	0	2	0	0	0	2	2
10:45	0	0	20	0	1	1	22	24.3	0	0	10	0	0	0	10	10
H/TOT	2	0	82	4	3	1	92	97.3	0	0	17	1	1	0	19	20.8
11:00	1	0	14	2	1	0	18	19.5	0	0	3	0	0	0	3	3
11:15	0	0	15	1	0	0	16	16.5	0	0	6	0	0	0	6	6
11:30	0	1	13	4	0	0	18	19.4	2	0	4	1	0	0	7	5.9
11:45	0	0	12	2	1	1	16	19.3	0	0	6	0	0	0	6	6
H/TOT	1	1	54	9	2	1	68	74.7	2	0	19	1	0	0	22	20.9
12:00	1	0	21	1	0	0	23	22.7	0	0	5	0	0	0	5	5
12:15	1	0	28	1	0	0	30	29.7	0	0	6	0	0	0	6	6
12:30	0	0	24	0	0	0	24	24	0	0	6	0	0	0	6	6
12:45	0	0	28	2	1	1	32	35.3	0	0	5	2	0	0	7	8
H/TOT	2	0	101	4	1	1	109	111.7	0	0	22	2	0	0	24	25
13:00	1	0	34	1	0	0	36	35.7	1	0	9	0	0	0	10	9.2
13:15	0	0	27	1	1	0	29	30.8	0	0	6	0	0	0	6	6
13:30	1	0	25	2	0	0	28	28.2	0	0	8	0	0	0	8	8
13:45	3	0	44	0	0	1	48	46.6	1	0	8	1	0	0	10	9.7
H/TOT	5	0	130	4	1	1	141	141.3	2	0	31	1	0	0	34	32.9
14:00	1	0	25	2	1	0	29	30.5	2	0	7	1	0	0	10	8.9
14:15	1	0	23	0	0	0	24	23.2	0	0	8	1	0	0	9	9.5
14:30	0	1	24	0	1	0	26	26.7	0	0	4	0	0	0	4	4
14:45	4	0	32	3	2	0	41	41.9	0	0	6	1	0	0	7	7.5
H/TOT	6	1	104	5	4	0	120	122.3	2	0	25	3	0	0	30	29.9
15:00	1	0	29	0	0	0	30	29.2	0	0	5	2	0	0	7	8
15:15	1	0	31	0	1	0	33	33.5	0	0	7	0	0	0	7	7
15:30	0	0	27	0	0	1	28	29	0	0	8	0	0	0	8	8
15:45	1	0	27	3	0	1	32	33.7	1	0	13	0	0	0	14	13.2
H/TOT	3	0	114	3	1	2	123	125.4	1	0	33	2	0	0	36	36.2
16:00	2	0	30	1	0	0	33	31.9	0	0	4	0	0	0	4	4
16:15	0	0	31	2	0	0	33	34	0	0	6	0	0	0	6	6
16:30	0	0	24	1	0	0	25	25.5	0	0	5	1	0	0	6	6.5
16:45	1	0	30	0	0	0	31	30.2	0	0	16	1	0	0	17	17.5
H/TOT	3	0	115	4	0	0	122	121.6	0	0	31	2	0	0	33	34
17:00	1	0	28	2	0	1	32	33.2	0	0	10	0	0	0	10	10
17:15	1	0	34	1	0	0	36	35.7	1	0	6	0	0	0	7	6.2
17:30	3	1	41	0	0	0	45	42	0	0	3	0	0	0	3	3
17:45	4	1	34	1	0	0	40	36.7	0	0	5	0	0	0	5	5
H/TOT	9	2	137	4	0	1	153	147.6	1	0	24	0	0	0	25	24.2
18:00	2	1	28	1	0	1	33	32.3	0	0	9	0	0	0	9	9
18:15	5	0	42	1	1	0	49	46.8	0	0	5	0	0	0	5	5
18:30	2	0	34	0	0	0	36	34.4	0	0	0	0	0	0	0	0
18:45	1	0	31	1	1	1	35	37	0	0	5	0	0	0	5	5
H/TOT	10	1	135	3	2	2	153	150.5	0	0	19	0	0	0	19	19
12 TOT	58	7	1204	55	21	12	1357	1373.2	10	0	339	15	2	0	366	368.1



IDASO

Survey Name: 031 19050 Raheny
Site: 5
Location: R808 / Sybil Hill Rd
Date: 13-Feb-2019

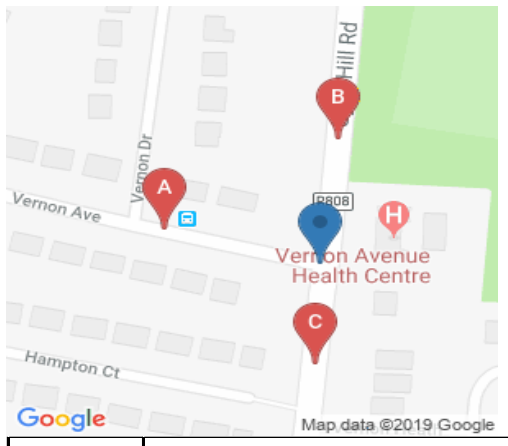
	B => B								B => C							
TIME	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU
07:00	0	0	0	0	0	0	0	0	5	0	20	2	0	0	27	24
07:15	0	0	0	0	0	0	0	0	2	0	32	6	4	0	44	50.6
07:30	0	0	0	0	0	0	0	0	0	0	35	10	4	0	49	59.2
07:45	0	0	0	0	0	0	0	0	1	1	33	9	3	0	47	54
H/TOT	0	0	0	0	0	0	0	0	8	1	120	27	11	0	167	187.8
08:00	0	0	0	0	0	0	0	0	5	0	52	2	1	0	60	58.3
08:15	0	0	0	0	0	0	0	0	9	0	49	2	0	0	60	53.8
08:30	0	0	0	0	0	0	0	0	5	0	53	4	2	0	64	64.6
08:45	0	0	0	0	0	0	0	0	3	0	43	4	3	0	53	56.5
H/TOT	0	0	0	0	0	0	0	0	22	0	197	12	6	0	237	233.2
09:00	0	0	0	0	0	0	0	0	1	0	40	6	1	0	48	51.5
09:15	0	0	0	0	0	0	0	0	1	0	39	7	0	1	48	51.7
09:30	0	0	0	0	0	0	0	0	0	1	29	3	3	0	36	40.8
09:45	0	0	0	0	0	0	0	0	2	0	37	11	0	1	51	55.9
H/TOT	0	0	0	0	0	0	0	0	4	1	145	27	4	2	183	199.9
10:00	0	0	0	0	0	0	0	0	0	0	29	4	2	0	35	39.6
10:15	0	0	0	0	0	0	0	0	0	0	35	7	0	0	42	45.5
10:30	0	0	0	0	0	0	0	0	2	0	35	6	1	0	44	46.7
10:45	0	0	0	0	0	0	0	0	0	0	52	4	2	0	58	62.6
H/TOT	0	0	0	0	0	0	0	0	2	0	151	21	5	0	179	194.4
11:00	0	0	0	0	0	0	0	0	0	1	39	5	1	0	46	49.2
11:15	0	0	0	0	0	0	0	0	2	1	51	3	0	0	57	56.3
11:30	0	0	0	0	0	0	0	0	0	0	42	3	3	0	48	53.4
11:45	0	0	0	0	0	0	0	0	0	0	32	1	1	0	34	35.8
H/TOT	0	0	0	0	0	0	0	0	2	2	164	12	5	0	185	194.7
12:00	0	0	0	0	0	0	0	0	1	1	44	6	1	0	53	55.9
12:15	0	0	0	0	0	0	0	0	0	0	35	4	3	0	42	47.9
12:30	0	0	0	0	0	0	0	0	3	0	47	1	1	1	53	53.4
12:45	0	0	0	0	0	0	0	0	1	0	46	5	1	0	53	56
H/TOT	0	0	0	0	0	0	0	0	5	1	172	16	6	1	201	213.2
13:00	0	0	0	0	0	0	0	0	1	1	54	5	2	0	63	66.7
13:15	0	0	0	0	0	0	0	0	3	1	37	6	1	0	48	49.3
13:30	0	0	0	0	0	0	0	0	0	0	47	2	1	0	50	52.3
13:45	0	0	0	0	0	0	0	0	2	0	56	3	0	0	61	60.9
H/TOT	0	0	0	0	0	0	0	0	6	2	194	16	4	0	222	229.2
14:00	0	0	0	0	0	0	0	0	3	0	62	4	0	0	69	68.6
14:15	0	0	0	0	0	0	0	0	1	0	34	5	0	0	40	41.7
14:30	0	0	0	0	0	0	0	0	1	0	44	4	0	0	49	50.2
14:45	0	0	0	0	0	0	0	0	1	0	41	1	3	0	46	49.6
H/TOT	0	0	0	0	0	0	0	0	6	0	181	14	3	0	204	210.1
15:00	0	0	0	0	0	0	0	0	4	0	45	3	2	0	54	54.9
15:15	0	0	0	0	0	0	0	0	0	0	44	2	3	0	49	53.9
15:30	0	0	0	0	0	0	0	0	0	0	43	3	1	0	47	49.8
15:45	0	0	0	0	0	0	0	0	2	0	52	5	0	0	59	59.9
H/TOT	0	0	0	0	0	0	0	0	6	0	184	13	6	0	209	218.5
16:00	0	0	0	0	0	0	0	0	2	0	44	2	0	0	48	47.4
16:15	0	0	0	0	0	0	0	0	2	0	43	2	1	1	49	50.7
16:30	0	0	0	0	0	0	0	0	2	0	57	2	0	0	61	60.4
16:45	0	0	0	0	0	0	0	0	3	0	47	6	0	1	57	58.6
H/TOT	0	0	0	0	0	0	0	0	9	0	191	12	1	2	215	217.1
17:00	0	0	0	0	0	0	0	0	2	0	46	2	0	0	50	49.4
17:15	0	0	0	0	0	0	0	0	1	1	56	0	0	0	58	56.6
17:30	0	0	0	0	0	0	0	0	0	0	56	1	1	0	58	59.8
17:45	0	0	0	0	0	0	0	0	2	0	48	1	0	0	51	49.9
H/TOT	0	0	0	0	0	0	0	0	5	1	206	4	1	0	217	215.7
18:00	0	0	0	0	0	0	0	0	1	1	52	1	0	0	55	54.1
18:15	0	0	0	0	0	0	0	0	4	0	51	0	0	0	55	51.8
18:30	0	0	0	0	0	0	0	0	0	0	50	2	0	0	52	53
18:45	0	0	0	0	0	0	0	0	1	0	39	2	0	0	42	42.2
H/TOT	0	0	0	0	0	0	0	0	6	1	192	5	0	0	204	201.1
12 TOT	0	0	0	0	0	0	0	0	81	9	2097	179	52	5	2423	2514.9



IDASO

Survey Name: 031 19050 Raheny
Site: 5
Location: R808 / Sybil Hill Rd
Date: 13-Feb-2019

	C => A								C => B							
TIME	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	SV (BUS	TOT	PCU
07:00	1	0	15	0	0	1	17	17.2	2	0	22	2	0	1	27	27.4
07:15	0	0	28	0	0	0	28	28	1	0	38	1	3	0	43	46.6
07:30	1	0	43	3	3	0	50	54.6	1	0	40	10	2	0	53	59.8
07:45	1	0	85	1	0	0	87	86.7	3	0	52	1	1	0	57	56.4
H/TOT	3	0	171	4	3	1	182	186.5	7	0	152	14	6	1	180	190.2
08:00	3	0	55	1	1	1	61	61.4	2	0	51	0	0	1	54	53.4
08:15	4	0	54	3	1	0	62	61.6	3	0	79	3	1	0	86	86.4
08:30	6	0	42	2	0	0	50	46.2	4	0	66	2	2	1	75	76.4
08:45	5	1	49	2	0	0	57	53.4	1	0	56	3	1	1	62	65
H/TOT	18	1	200	8	2	1	230	222.6	10	0	252	8	4	3	277	281.2
09:00	1	0	47	2	0	0	50	50.2	1	0	34	3	0	0	38	38.7
09:15	1	0	40	1	0	0	42	41.7	1	0	33	2	2	0	38	40.8
09:30	0	0	25	3	1	1	30	33.8	1	0	34	2	0	0	37	37.2
09:45	1	0	22	5	0	0	28	29.7	0	0	45	10	1	0	56	62.3
H/TOT	3	0	134	11	1	1	150	155.4	3	0	146	17	3	0	169	179
10:00	0	0	11	1	0	0	12	12.5	0	0	54	4	1	0	59	62.3
10:15	0	0	21	2	0	1	24	26	1	0	39	6	0	0	46	48.2
10:30	0	0	13	2	0	0	15	16	0	0	51	3	2	1	57	62.1
10:45	2	0	19	2	1	0	24	24.7	1	0	43	3	1	0	48	50
H/TOT	2	0	64	7	1	1	75	79.2	2	0	187	16	4	1	210	222.6
11:00	2	0	21	1	0	0	24	22.9	0	0	31	4	2	0	37	41.6
11:15	2	0	23	3	0	1	29	29.9	0	0	53	11	2	0	66	74.1
11:30	0	0	39	4	0	0	43	45	0	0	37	4	0	1	42	45
11:45	2	0	23	2	2	0	29	31	1	0	42	4	1	0	48	50.5
H/TOT	6	0	106	10	2	1	125	128.8	1	0	163	23	5	1	193	211.2
12:00	0	0	26	0	1	1	28	30.3	0	0	52	6	1	0	59	63.3
12:15	1	0	24	0	0	0	25	24.2	0	1	45	6	1	0	53	56.7
12:30	1	0	24	0	1	0	26	26.5	0	0	28	4	1	0	33	36.3
12:45	2	0	17	0	2	0	21	22	2	0	67	5	0	0	74	74.9
H/TOT	4	0	91	0	4	1	100	103	2	1	192	21	3	0	219	231.2
13:00	2	0	30	0	1	1	34	34.7	0	0	62	6	1	0	69	73.3
13:15	1	0	30	1	0	0	32	31.7	3	0	53	3	0	1	60	60.1
13:30	0	0	20	2	0	0	22	23	2	1	39	7	1	0	50	52.6
13:45	0	1	32	2	0	0	35	35.4	1	0	37	6	0	1	45	48.2
H/TOT	3	1	112	5	1	1	123	124.8	6	1	191	22	2	2	224	234.2
14:00	4	0	32	0	1	0	37	35.1	2	0	54	4	1	0	61	62.7
14:15	1	0	32	4	0	1	38	40.2	2	0	50	5	0	0	57	57.9
14:30	3	0	36	0	0	0	39	36.6	9	0	60	3	2	0	74	70.9
14:45	1	0	27	3	0	0	31	31.7	3	0	44	6	1	1	55	57.9
H/TOT	9	0	127	7	1	1	145	143.6	16	0	208	18	4	1	247	249.4
15:00	1	0	26	2	1	0	30	31.5	3	0	69	5	0	0	77	77.1
15:15	0	0	19	3	0	0	22	23.5	1	0	49	11	4	0	65	74.9
15:30	2	0	21	2	1	0	26	26.7	2	1	46	11	1	0	61	65.6
15:45	0	0	21	0	2	1	24	27.6	3	0	59	5	1	0	68	69.4
H/TOT	3	0	87	7	4	1	102	109.3	9	1	223	32	6	0	271	287
16:00	0	0	28	0	0	0	28	28	1	0	49	6	0	0	56	58.2
16:15	0	0	29	0	0	1	30	31	3	0	51	7	0	0	61	62.1
16:30	4	0	27	0	0	0	31	27.8	5	0	43	10	1	0	59	61.3
16:45	3	0	35	1	0	0	39	37.1	0	0	54	13	0	1	68	75.5
H/TOT	7	0	119	1	0	1	128	123.9	9	0	197	36	1	1	244	257.1
17:00	3	0	20	2	0	0	25	23.6	5	0	65	6	1	0	77	77.3
17:15	0	0	27	1	0	1	29	30.5	1	1	59	5	0	0	66	67.1
17:30	1	0	30	1	0	0	32	31.7	5	0	63	4	1	0	73	72.3
17:45	0	1	30	1	0	0	32	31.9	2	0	65	2	0	0	69	68.4
H/TOT	4	1	107	5	0	1	118	117.7	13	1	252	17	2	0	285	285.1
18:00	1	0	18	0	0	0	19	18.2	5	0	63	2	0	0	70	67
18:15	3	1	33	0	0	0	37	34	1	0	56	6	0	0	63	65.2
18:30	1	1	24	0	0	0	26	24.6	2	0	54	3	1	0	60	61.2
18:45	3	0	38	0	0	0	41	38.6	2	1	72	2	0	0	77	75.8
H/TOT	8	2	113	0	0	0	123	115.4	10	1	245	13	1	0	270	269.2
12 TOT	70	5	1431	65	19	11	1601	1610.2	88	5	2408	237	41	10	2789	2897.4



IDASO

Survey Name: 031 19050 Raheny
Site: 5
Location: R808 / Sybil Hill Rd
Date: 13-Feb-2019

	C => C							
TIME	**PCL**	**MCL**	**CAR**	**LGV**	**HGV**	**SV (BUS**	**TOT**	**PCU**
07:00	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
13:00	0	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0
12 TOT	0	0	0	0	0	0	0	0