



## **Traffic and Transport Assessment**

Strategic Housing Development at Kilnahue, Gorey, Co. Wexford

March 2022

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**Client Name:** Gerard Gannon Properties  
**Document Reference:** 13-119r.013 Traffic and Transport Assessment  
**Project Number:** 13-119

### Quality Assurance – Approval Status

This document has been prepared and checked in accordance with  
Waterman Group's IMS (BS EN ISO 9001: 2015 and BS EN ISO 14001: 2015)

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# 1. Introduction

## 1.1 Context

This Traffic and Transport Assessment (TTA) has been prepared by Waterman Moylan on behalf of Gerard Gannon Properties to accompany a planning application to An Bord Pleanála for a proposed Strategic Housing Development (SHD) in lands at Kilnahue & Gorey Hill, Gorey, Co. Wexford.

The proposed development consists of a total of 421 No. residential units - comprising of 133 No. houses, 60 No. duplexes (30 No. Duplex Houses and 30 No. Duplex Apartments) and 228 no. apartments, a Crèche with an area of 565 sqm and Retail Units with an area of 210 sqm. The detailed breakdown of the proposed residential scheme is as follows:

Description	1-Bed	2-Bed	3-Bed	4-Bed	Total
Houses	-	-	115	18	133
Apartments	76	145	7	-	228
Duplexes	4	26	30	-	60
Crèche	565m <sup>2</sup>				-
Retail	210 m <sup>2</sup>				
<b>Total</b>	<b>80</b>	<b>171</b>	<b>152</b>	<b>18</b>	<b>421</b>

**Table 1:** Proposed Breakdown of Residential Units.

## 1.2 Scope

This TTA is a comprehensive review of the potential traffic impacts of the overall development, including a detailed assessment of the transportation systems provided and the impact of the proposed development on the surrounding road network.

## 1.3 Standards

This Traffic and Transport Assessment has been prepared in accordance with the requirements of the Traffic and Transport Assessment Guidelines published by NRA/TII in May 2014.

## 1.4 Threshold for Transport Assessment

Section 2.1 of the Traffic and Transport Assessment Guidelines (May 2014) requires submission of a Transport Assessment where a proposed development meets one or more of the following criteria:

- 1) Traffic to and from the development exceeds 10% of the traffic flow on the adjoining road;
- 2) Traffic to and from the development exceeds 5% of the traffic flow on the adjoining road where congestion exists, or the location is sensitive;
- 3) Residential development in excess of 200 dwellings;
- 4) Retail and leisure development in excess of 1,000sqm;
- 5) Office, education and hospital development in excess of 2,500sqm;
- 6) Industrial development in excess of 5,000sqm;

7) Distribution and warehousing in excess of 10,000sqm.

In the case of the subject development, threshold no. 3 is exceeded.

## 1.5 Contents of the Transport Assessment

In accordance with Section 3.3 of the Traffic and Transport Assessment Guidelines (May 2014), the contents of this TTA include:

- Description of the existing and proposed traffic/transportation conditions including information on the current traffic, critical junctions, pedestrians, cycle and public transport facilities;
- A description of the proposed development;
- The traffic and transportation implications of the development including consideration of trip generation and trip distribution;
- The time periods applicable to the TTA;
- The potential impact of the proposed development on the surrounding road network;
- Review of the historical data related to road safety;
- Description of car and cycle parking requirements and proposals;

## 1.6 Location of Proposed Development Site

The proposed development site is located to the west of Gorey town. It is bounded to the northeast by the Kilnahue Lane, to the northwest and southwest by greenfield lands and to the southeast by the R725 Carnew Road, a Petrol Station and some existing residential dwellings. The location of the subject site is illustrated in Figure 1.

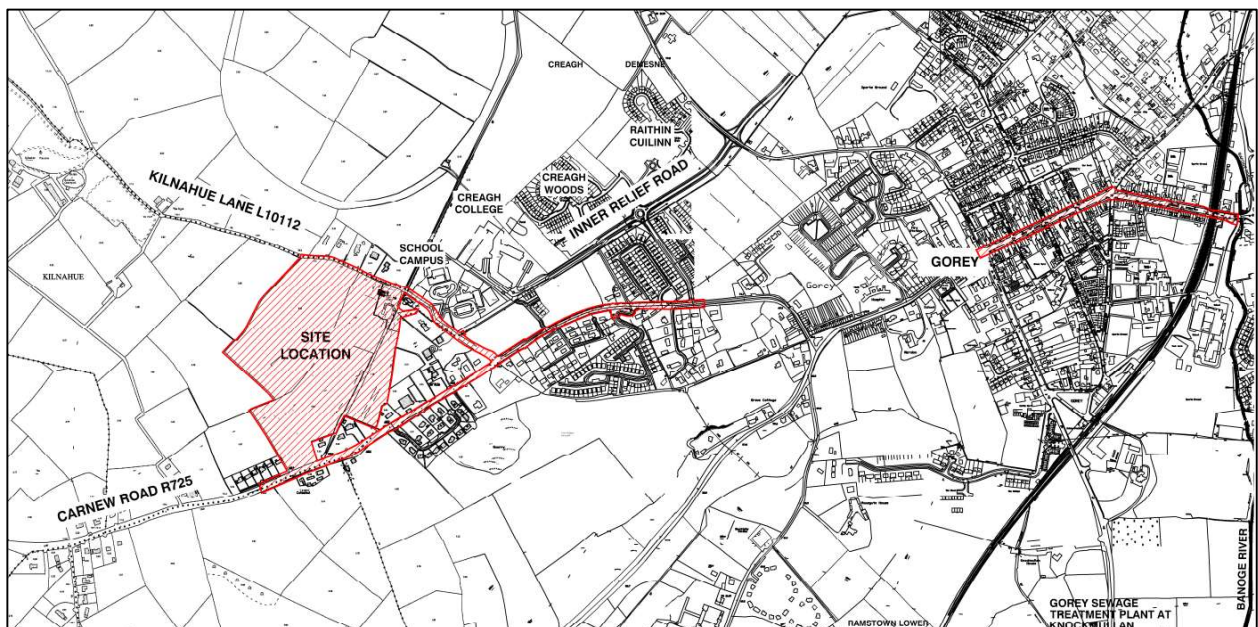


Figure 1: Location of the Proposed Development Site (Source: Google Maps).

## 1.7 Background

There has been a number of planning applications made in respect of the subject development site. These planning applications are summarised below.

A ten-year planning permission (Planning Reg. Ref. No. 20140557) was sought in July 2014 for a residential development consisting of 206 residential units, a creche, a vehicular access point onto R725 Carnew Road and upgrades/improvements on Kilnahue Lane including provision of two additional vehicular access points, drainage and all associated site works.

Wexford County Council refused permission for the development and cited two reasons for refusal, namely a traffic hazard and insufficient drainage information. The traffic hazard issues cited in the decision for refusal is as stated below:

*'The development of 206 dwellings and a crèche would result in a traffic hazard as inadequate proposals have been submitted to carry out the necessary road, footpath and cycle lane improvements which are required to ensure safe access and to provide the required connectivity to the development and the surrounding area. The proposed development would therefore result in a traffic hazard and would be contrary to the proper planning and sustainable development.'*

As outlined in the Planning Report (Reg. Ref. No. 20140557) conclusion:

*'In order for the road issues to be adequately addressed a detailed Traffic Management Plan for the traffic flows on Kilnahue Lane, Carnew Road, Holyfort Road and the link road area would be required.'*

According to the Planning Report the recommendations of such a Plan may require the following:

- alteration to the proposed layout
- help to reduce potential nuisance to residents of the area during the construction phase
- the primary school complex requires a high standard of pedestrian and cycle linkages
- the efficient flow of traffic to and from the school complex is key to the success of traffic management and thus drop off and collection times
- addressing existing restraints on Kilnahue Lane to deliver the cycleway and footpath
- identifying all proposed upgrades to the local road network

All the recommendations above, together with the technical issues relating to upgrading of Kilnahue Lane and Carnew Road, were fully addressed in the revised planning application submitted to Wexford County Council in June 2016 (Reg. Ref. No. 20160623).

Wexford County Council granted the permission for the development on 20<sup>th</sup> February 2017, which was subsequently refused by An Bord Pleanála on 18<sup>th</sup> July 2017 under Ref. PL26.248159, mainly citing the Gorey Town and Environs Local Area Plan 2017 – 2023 published on 10<sup>th</sup> April 2017.

The reason and consideration No. 4 of the ABP decision to refuse permission pertains to the traffic impact and cites the following:

*"Having regard to the uncertainty regarding the timing of, and statutory approvals that may be required for, the improvement works outlined in the application to the R725 (Carnew) Road, to Kilnahue Lane and to the junction of Kilnahue Lane with R725, it is considered that any development of the subject lands would be*

*premature pending the provision of these improvement works. Furthermore, it is considered that, if development prior to the carrying out and completion of these improvements works, the proposed development would endanger public safety by reason of traffic hazard, including hazard to pedestrians and cyclists. The proposed development would, therefore, be contrary to the proper planning and sustainable development of the area.”*

The subject application addresses any potential concerns that the local planning authority may have pertaining to the level of influence that the subject revised development may have upon the local transportation system.

**1.8 Programme**

It is programmed that construction of the proposed scheme will commence in 2022 for completion in 2024.

**1.9 Assessment Years**

The years that have been assessed within this TTA are the following:

Base Year	:	2021
Opening Year (With / Without Development)	:	2024
Opening Year + 5 Years Forecast (With / Without Development)	:	2029
Opening Year + 15 Years Forecast (With / Without Development):		2039

These assessment years are in line with the ‘Transport Assessment Guidelines (May 2014).

Details of each assessment year is presented later in this report.

## 2. Policy Framework

### 2.1 Wexford County Development Plan (2013-2019)

The Wexford County Development Plan 2013-2019 is the over-arching strategic framework document for the proper planning and sustainable development, in spatial, economic, social and environmental terms of the entire functional area of County Wexford. This Plan sets out the long-term vision for the development of the County, while protecting and enhancing its environment through employing the principles of sustainable development in the policies and objectives set out therein.

#### 2.1.1 Transportation

**“Objective T01:** *To support the sustainable transport principles outlined in Smarter Travel: A Sustainable Transport Future (Department of Transport, 2009).”*

**“Objective T02:** *To integrate land use and transport in the development and application of land use planning objectives in a manner which reduces reliance on car-based travel and promotes more sustainable transport choices.”*

**“Objective T23:** *To require that a Traffic and Transportation Assessment (TTA) is undertaken for larger proposed developments in order to assess the implications for the capacity and efficient operation of national roads and to ensure that the national road links and junctions in the vicinity of the development are adequate to accommodate the proposed development without causing delays to existing and future road based traffic. The TTA should include a Mobility Management Plan which promotes sustainable travel.”*

#### 2.1.2 Public Transport

**“Objective T04:** *To support and facilitate proposals, including infrastructure developments, which enhance the quality, frequency and speed of existing train and bus public transport services in and to/from the county and to support and facilitate the provision of new services.”*

**“Objective T05:** *To support the use and zoning of land in suitable locations which facilitates public transport usage and to support the development of appropriately sited and designed facilities, such as additional stations, car and cycle parking, taxi ranks, bus parking facilities, bus shelters and bus lanes which facilitate increased public transport usage; all of which contribute to the development of integrated sustainable transport systems.”*

#### 2.1.3 Walking and Cycling

**“Objective T10:** *To encourage walking and cycling by all sections of the community through:*

- *Promoting walking and cycling as sustainable transport modes and healthy recreation activities throughout the county;*
- *Promoting cycling and pedestrian friendly development layouts, provide facilities at public transport nodes, towns and villages, plan for and make provision for the integration of cyclist and pedestrian needs when considering new development proposals;*
- *Promoting cycling and walking facilities as integral to the provision of vehicular traffic facilities;*

- *Requiring the provision of drop kerbs at all junctions and central island refuges to facilitate ease of access for elderly and mobility restricted people;*
- *Requiring that proposed developments are sited and designed in a manner which facilitates and encourages safe walking and cycling;*
- *Supporting the installation of infrastructure measures (for example new/wider pavements, roads crossings and cycle parking facilities), retrofitted if necessary, which facilitates and encourages safe walking and cycling;*
- *Supporting the preparation of walking and cycling audits for the settlements in the county;*
- *Ensuring that the needs of walkers and cyclists are given thorough consideration in all planning documents, including town development plans, local area plans, village design statements and public realm plans reduced by or in conjunctions with the Council;*
- *Ensuring that the needs of walkers and cyclists are given full consideration in proposals to maintain and upgrade public roads, in undertaking traffic calming and proposals to maintain or change local speed limits in all town, village and rural locations.”*

## 2.1.4 Road Infrastructure

### *Regional Roads*

**“Objective T26:** *To manage and maintain the regional road network in the county in a manner which safeguards the strategic function of regional roads.”*

**“Objective T28:** *To control new and significant intensification of existing, access/egress points from/to non-class 1 regional roads except for circumstances where a need for the development at that location has been clearly established and where there is no suitable alternative access possible onto a local road. This shall also apply where a shared access to the non-class 1 regional road is proposed and where access to the non-class 1 regional road is proposed via a private lane.”*

**“Objective T29:** *To promote:*

- *The development of inner relief routes which may have regional road status, for traffic in Gorey Town, Wexford Town, New Ross Town and Enniscorthy Town to include possible new river crossings in Wexford and New Ross;*
- *The upgrade of the R700 which provides an important link between Counties Wexford and Kilkenny.”*

### *Local Roads*

**“Objective T30:** *To manage and maintain local roads in the county having regard to their important function, as resources allow.”*

**“Objective T31:** *To facilitate access proposals to local roads on a site by site basis having regard to the characteristics of the site and the road where access is proposed.”*

### *Universal Roads*

**“Objective T32:** *To promote and encourage road safety having regard to the National Roads Safety Strategy and to exercise its functions with regard to the maintenance and improvement of all regional and local roads in a manner which has regard to the safety of all potential users of those roads including*

agricultural vehicles, cyclists, pedestrians and public transport and to protect the biodiversity and amenity value of roadside landscaping.”

**“Objective T33:** To assess the detailed siting and design of proposals for new or intensified use of existing accessed to roads on their merits having regard to the objectives of this chapter and the development managements standards contained in Chapter 18.”

**“Objective T34:** To restrict development:

- Where the local roads network is deficient including considerations of capacity, width, alignment, surface or structural condition;
- Which would create serious traffic congestion;
- Which would unduly obstruct other road users.”

**“Objective T35:** To undertake traffic managements schemes, which may include reductions in speed limits and/or other measures, with a view to enhancing safety for all road users, where considered appropriate to do so as resources allow.”

**“Objective T36:** To restrict advertising or lighting proposals in the proximity of roads having due regard to safety and amenity issues and the development management standards in Chapter 18 of the Plan.”

**“Objective T37:** To support and facilitate the provision of charging points for electric vehicles.”

### 2.1.5 Parking and Servicing

**“Objective T40:** To retain, maintain and provide appropriately sited and designed parking facilities for cars, buses, motorcycles, and cycles where required and as resources allow.”

**“Objective T41:** To require developments to:

- Provide adequate, well designed and safe parking and waiting provision for private cars, taxis, buses, motorbikes, cycles, which meets the development management standards in Chapter 18, which has regard to the promotion of good urban and rural design and the safety of all road users and facilitates accessed by walking, cycling and public transport.
- Provide adequate arrangements for servicing and deliveries which meet best practice standards having regard to the need to promote good urban and rural design and to protect public safety.”

## 2.2 Gorey Town & Environs Local Area Plan 2017 - 2023

The Gorey Town & Environs Local Area Plan was published by Wexford County Council in April 2017 and was developed in accordance with Sections 18, 19 and 20 of the Planning and Development Act, 2000 (as amended). It has been prepared to help provide sustainable communities in the LAP and to ensure that wellbeing and quality of life is provided to all citizens. In terms of Access, Transport and Movement Strategy within the LAP area, the most relevant objectives include:

### 2.2.1 Access and Movement Objectives

**“Objective AMS01:** To ensure the design of all streets and roads in the plan area complies with the objectives and guidelines in the Design Manual for Urban Roads and Streets (Department of Transport, and Department of the Environment, Community and Local Government, 2013) and the Urban Design

*Strategy, the Access and Movement Strategy and the Urban Design Guidelines contained in Section 3.6 of the LAP.”*

*“Objective AMS02: To secure the provision in tandem with new developments, or provide subject to available resources, the footpath and pedestrian linkage objectives detailed on Map 3.”*

*“Objective AMS03: To undertake an accessibility audit of existing footpaths in the plan area in order to identify and implement a scheme of work required to provide accessible and safe footpaths for all users.”*

*“Objective AMS04: To secure the provision in tandem with new developments, or provide subject to available resources, the cycle objectives detailed on Map 4.”*

*“Objective AMS05: To support the development of a public transport hub incorporating an accessible inter-modal transport node with park and ride facilities at an appropriate location in the plan area.”*



## 3. Receiving Environment

### 3.1 Existing Road Network

#### 3.1.1 Roads

The subject site is bounded by two roads, the R725 Carnew Road to the south and the Kilnahue Lane to the north. Access to the proposed development is via both roads.

Carnew Road is part of the R725 regional road. R725 is approximately 53 km in length and runs in an east-west direction from Gorey through Carnew and Shillelagh to Carlow.

The speed limit along the R725 adjacent to the proposed site access is 60kph, changing to 80kph heading west and to 50kph heading east from the junction with Kilnahue Lane. To the west of this junction, the R725 is 6m wide with a footpath running on the northern side of the carriageway for approximately 240m up until the petrol service station.

To the east of the junction with Kilnahue Lane, the R725 is 6m wide with footpath, cycle path and layby parking provided along the northern side for the first 80m. The layby parking and the cycle path ends whilst the footpath continues.

Kilnahue Lane is a single carriageway road running north-south to the east and north of the subject site from its junction with R725. It is generally 6m wide and provides local access to a small number of houses, to two primary schools and to a motor service commercial unit.

To the east of its carriageway, for approximately 300m, Kilnahue Lane has a footpath (2m wide) and a two-way cycle path (3m wide), which currently facilitate access to the school site.

Approaching the intersection with R725, a pedestrian crossing is provided on Kilnahue Lane.

#### 3.1.2 Junctions

The existing primary junctions in the area surrounding the proposed development site are:

- **Junction A (Existing Priority-controlled T-junction):** R725 Carnew Road / Kilnahue Lane.
- **Junction B (Existing Priority-controlled T-junction):** Kilnahue Lane / Access Road to School Site.

The location of these junctions in relation to the subject site is illustrated in Figure 2 below. As part of the proposed development, Junction A will be signalised as requested by Wexford County Council. Refer to Dwg. P4130 as part of this planning application.

As mentioned above, direct vehicular accesses to the subject development are projected via R725 Carnew Road to the south and Kilnahue Lane to the north. There are proposals for construction of one single access junction off R725 Carnew Road and two access junctions off Kilnahue Lane. All three junctions will be priority controlled. Details of each junction is provided later in this report. The location of each projected vehicular access is illustrated in Figure 2 in the form of black and white arrows.



**Figure 2:** Local Road Network and Primary Junctions (Source: Google Earth).

## 3.2 Existing Public Transport

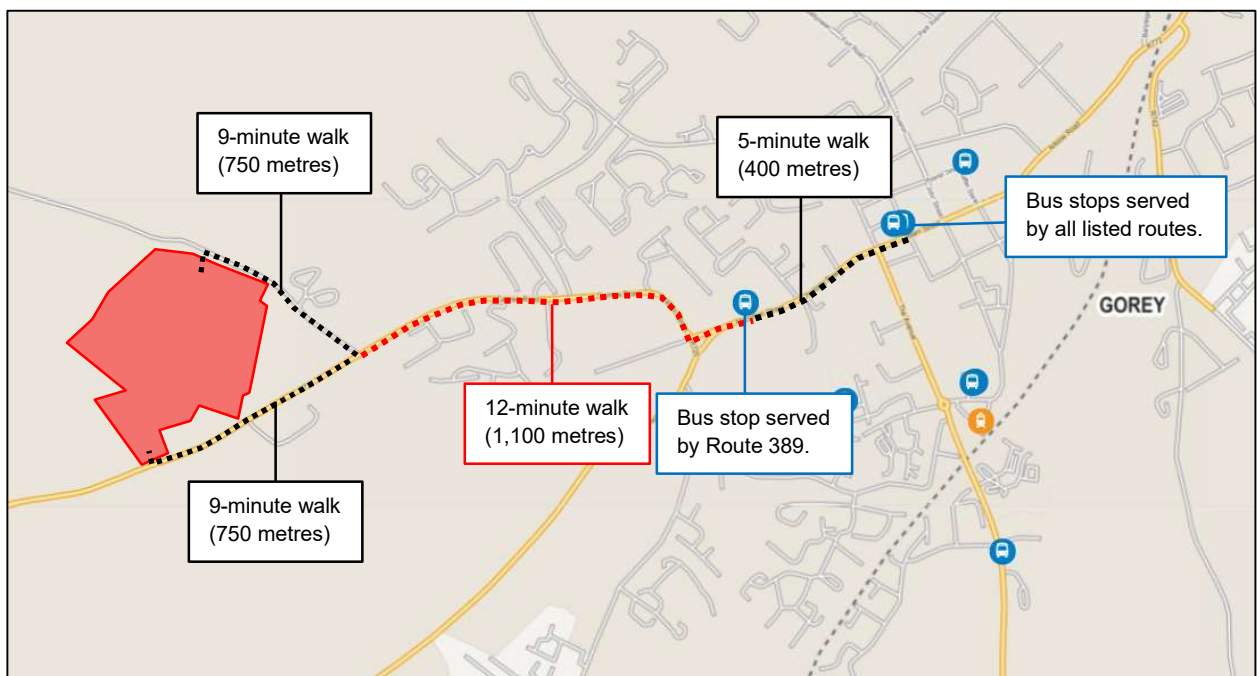
### 3.2.1 Bus Network

Gorey town is served by a number of public bus routes. The closest bus stops in relation to the subject site are located in Gorey town centre, approximately 1.85 to 2.25 km (21 to 26-minute walk) to the east – See Figure 3. The routes serving these bus stops are outlined below.

- **Route 2 (Expressway):** Dublin Airport – Wexford Station. To Wexford, this route operates at a frequency of 1 to 2 hours during the whole day, with the first bus departing from Gorey at 1h50 AM and the last at 23h46 PM. On the opposite direction – to Dublin Airport, this route also operates at a 1-to-2-hour frequency during the whole day, with the first bus departing from Gorey at 2h45 in the AM and the last at 21h20 in the PM.
- **Route 133X (Bus Eireann):** Gorey (Main Street) – Busaras. This route operates one service from Gorey to Busaras in Dublin City. The bus leaves Gorey at 6h50 in the AM and arrives in Busaras at 8h15. No service is provided on the opposite direction.
- **Route 379 (Bus Eireann):** Rosslare Harbour – Ballycanew – Wexford Station. This route operates only one service on Mondays and one service on Saturdays. On Mondays, the bus arrives in Gorey at 14h45 and leaves the town 15h30. On Saturdays, the bus arrives in Gorey at 09h40 and leaves the town at 12h05 towards Wexford.
- **Route 740 (Wexford Bus):** Redmond Square – Dublin Airport. From Monday to Friday (excluding bank holidays), this route operates with a frequency of 30 minutes to two hours during the whole

day. First bus leaves Gorey at 2h25 in the morning and the last at 20h20. On the opposite direction, this route operates at 20 minutes to 1.5 hour frequency during the whole day, with the first bus leaving Gorey at 7h10 and the last at 00h35.

- **Route 740A (Wexford Bus):** Gorey – Dublin Airport. On weekdays, this route operates 9 services during the whole day. The frequency of bus is generally hourly with the first bus leaving Gorey at 6h00 in the morning and the last at 17h40 in the evening. On weekends, the service reduces to 6, with the first at 7h10 and the last at 17h40.
- **NUM11 (Wexford Bus):** Gorey (Main Street) – Whitmore Jewe – Maynooth University. This route only operates on weekdays, with the only bus leaving Gorey at 07h00 AM towards Maynooth, and the only service arriving in Gorey at 19h00 from Monday do Thursday and at 18h55 on Fridays.
- **Route X2 (Expressway):** Wexford Station – Dublin Airport. Only one service per direction is operated by this route. The bus leaves Gorey town on a daily basis at 6h40 towards Dublin Airport and at 18h00 towards Wexford.
- **Route 879 (Gorey Bus Links):** Gorey – Courtown – Ballygarrett – Ballycanew. This is a local route linking Gorey to the surrounding cities. From Monday to Friday, it operates three services, leaving Gorey at 9h15 in the AM and at 13h10 and 17h10 in the PM.
- **Route ITC07 (Dunnes Coaches):** Gorey Main Street – Carlow College. This route operates one single service. It leaves Gorey at 07h20 in the morning and arrives back at 18h23 in the PM.
- **Route 389 (Local Link Wexford):** Gorey Main Street – Knockmullen – Pollshone From Monday to Friday, this route operates four services, leaving Gorey towards Ardamine at 8h09, 18h40, 19h40 and 20h40. On Saturdays, the bus leaving at 8h09 is substituted by a service at 12h19. On Sundays, two services are provided, one leaving Gorey at 11h19 and the other at 18h49.



**Figure 3:** Walking Distance from the Site to the Nearest Bus Stops.

As can be seen from the above, the shortest walking route to the nearest bus stops which are served by all bus routes listed above, is via R725 Carnew Road / Main Street. The listed bus routes provide many opportunities for those wishing to travel to Dublin City, Dublin Airport, Wexford and a number of closer cities and towns such as Carlow. Bus journey time to Dublin city centre is approximately 2 hours, to Dublin Airport is approximately 2.5 hours and to Wexford city is approximately 1 hour.

### 3.2.2 Rail Service

Gorey town is served by Irish Rail. The Gorey train station is located on R741 southeast of Gorey Shopping Centre. It provides access to Dublin City and Wexford, in addition to a number of stations along the route. From Gorey to Dublin, five services are provided on weekdays (leaving Gorey Station at: 5h50, 6h43, 8h25, 14h00 and 18h36), four services on Saturdays (leaving Gorey Station at: 6h45, 8h27, 14h02 and 19h01) and three services on Sundays (leaving Gorey Station at: 10h46, 15h31 and 19h12). On the opposite direction, from Gorey to Wexford, the weekday services leave Gorey Station at 11h27, 15h28, 18h31, 19h35 and 20h28, the Saturday services leave Gorey Station at 9h53, 15h25 and 20h26, and the Sunday services leave Gorey Station at 12h09, 15h29 and 20h32. The train journey time from Gorey to Dublin is approximately 1 hour and 45 minutes and to Wexford is 45 minutes.

The distance between the proposed development and the train station in Gorey is approximately 2.4 km (c. 28-minute walk and 7-minute cycle). Gorey train station provides cycle parking and car parking facilities which could facilitate combined travels for those wishing to travel to Dublin (i.e., cycle-train and car-train).

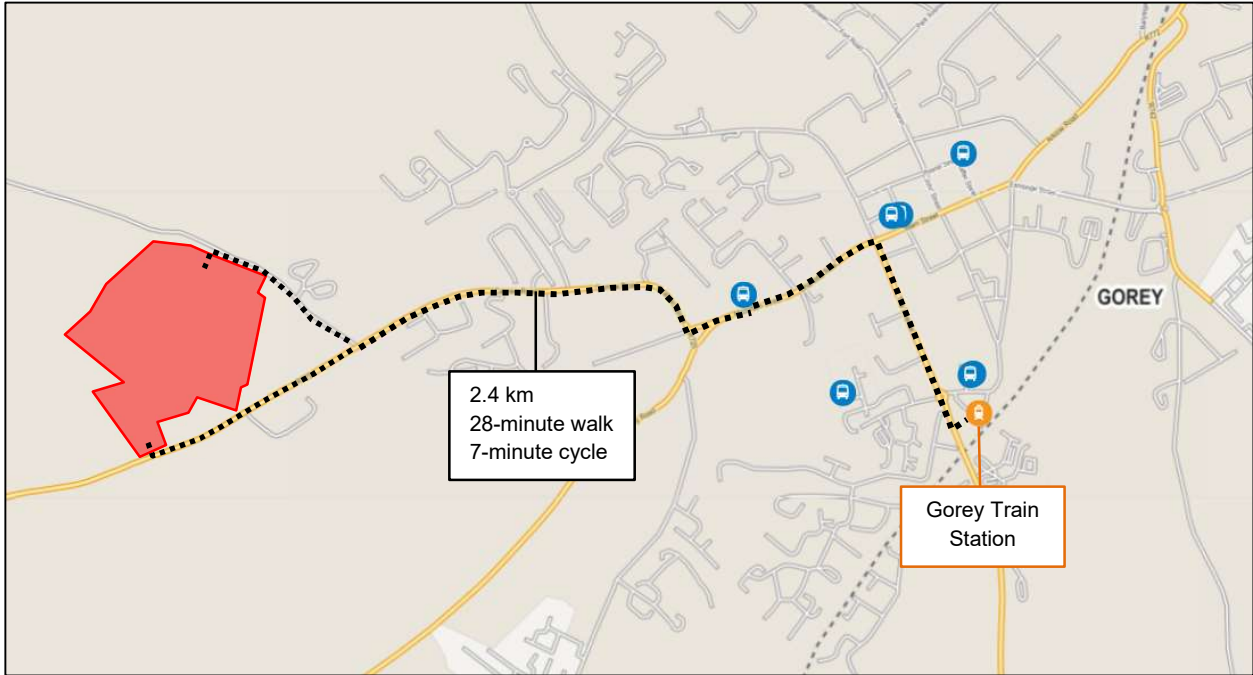


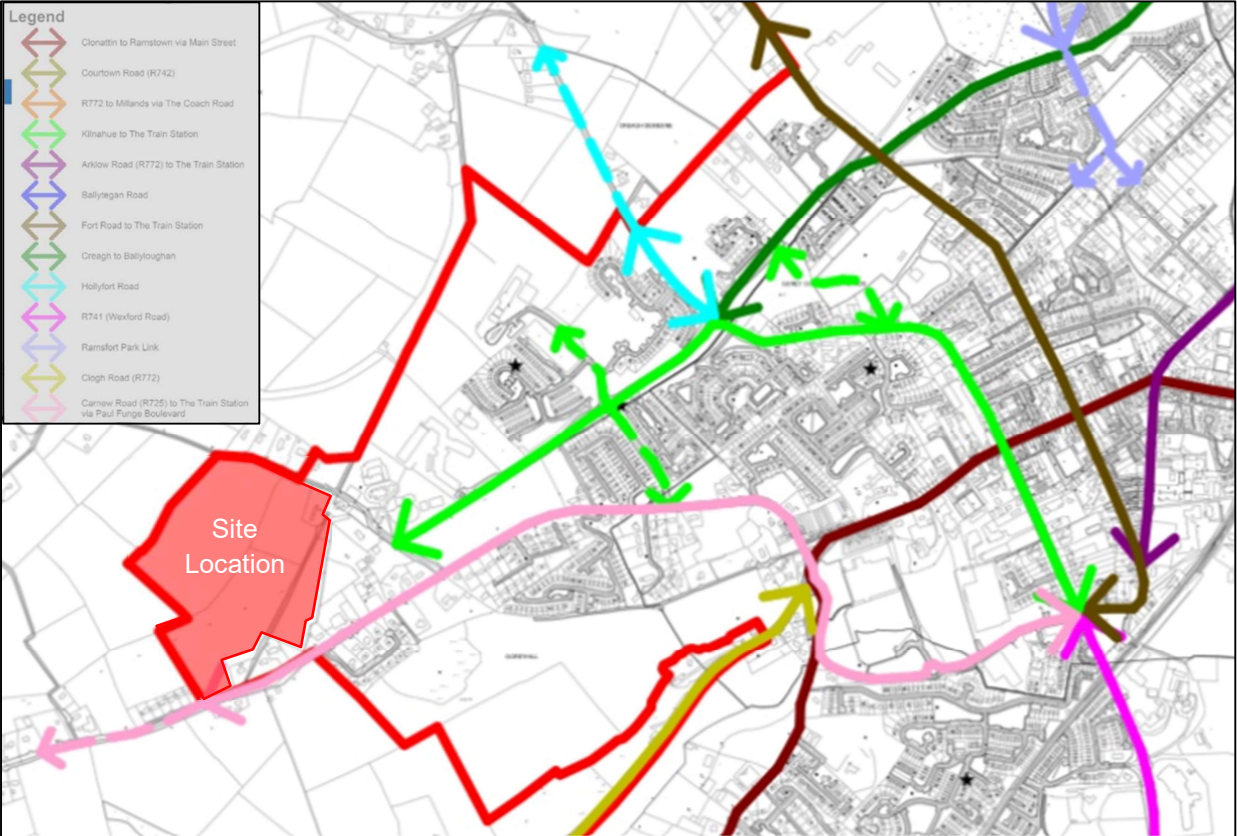
Figure 4: Walking Distance from the Site to the Gorey Train Station.

### 3.3 Cycle Network

In the vicinity of the subject development site, cyclists can benefit from the provision of approximately 300 metres of off-road cycle tracks along the northern side of Kilnahue Lane (from the School Site to R725

Carnew Road) and from 80 metres of cycle tracks on R725 Carnew Road from Kilnahue Lane heading east. Currently, these cycle facilities do not link to a wider cycle network.

Proposals for Gorey town cycle network plan were published by Wexford County Council in 2017 within the Gorey Town and Environs Local Area Plan (2017 – 2023). The plan sets out a vision and a strategy for the construction of a comprehensive network of cycling routes throughout Gorey town. An extract from ‘Map 4 – Proposed Cycle Network’ of the LAP is reproduced in Figure 5 below.



**Figure 5:** Proposed Gorey Cycle Network (Extracted from: Map 4 of Gorey LAP 2017-2023).

As can be seen from the above two dedicated cycle routes are planned to serve the western section of Gorey town, one along the R725 Carnew Road (light pink route) and the other along Person’s Brook – Hollyfort Road – R741 (green route). Both routes lead to Gorey Train Station. A portion of the ‘cycle green route’ from Creagh College to Pearson’s Brook / Hollyfort Road roundabout is already constructed and opened to the public.

As part of the subject development works a local cycle network is proposed – refer to Figure 6 below. In summary, the overall proposal includes three north-south cycle routes throughout the site and the provision of a two-way off-road cycle track on Kilnahue Lane along the northern boundary of the site which will link to the existing cycle track at the nearby school campus. A dedicated toucan crossing is proposed on Kilnahue Lane to the north of the site to provide users (particularly children) with a safe point for crossing the road.

The proposed local cycle network will link to the cycle infrastructure projected for Gorey town in the LAP (illustrated in Figure 5 above) and will facilitate cyclist progression towards local schools and college, Gorey train station and Gorey town centre and associated facilities.

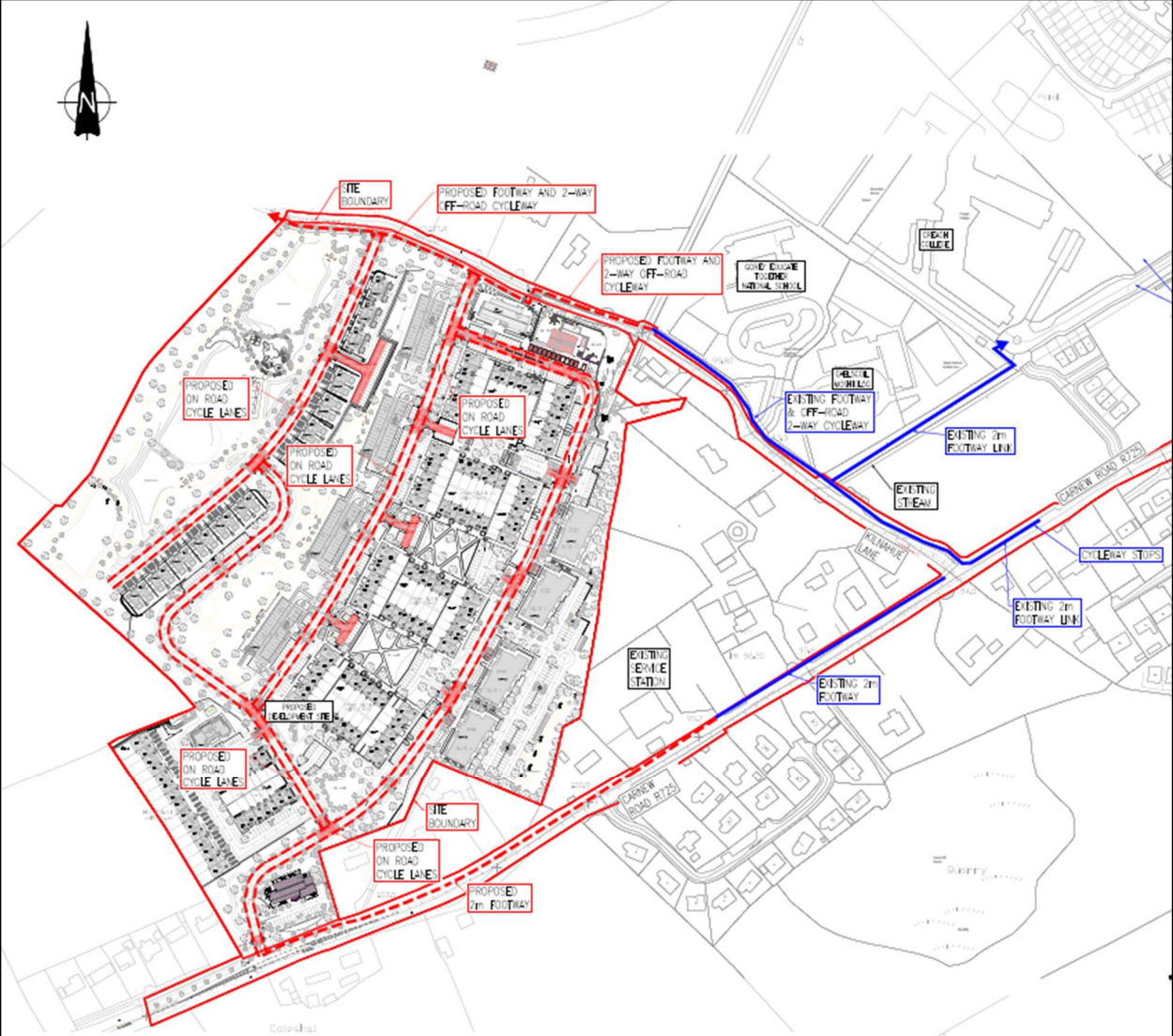
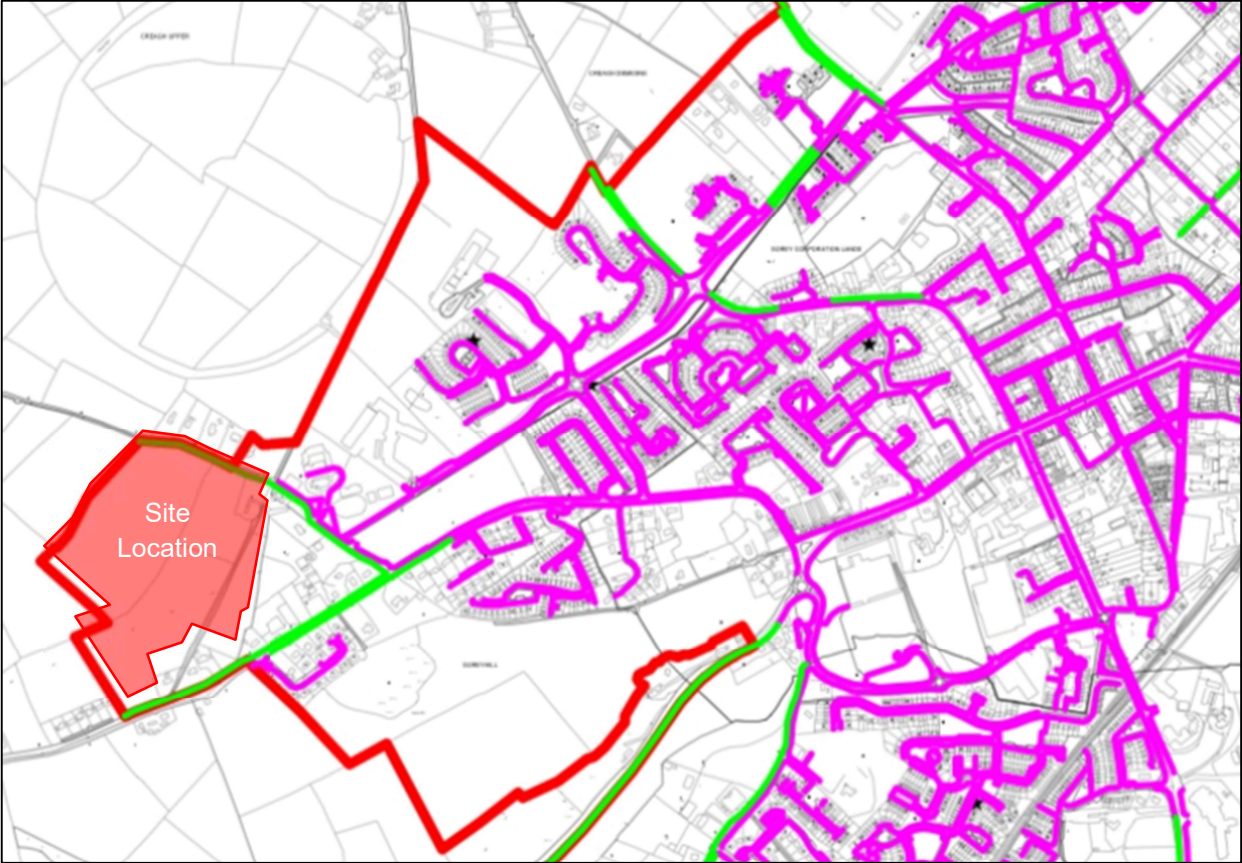


Figure 6: Local Cycle/Pedestrian Network – Proposed Development Works.

### 3.4 Pedestrian Network

The existing pedestrian network surrounding the proposed development site comprises of footpaths along the northern/eastern side of the Kilnahue Lane from the school site up until its junction with R725 Carnew Road, which continues along the northern side of the R725 Carnew Road eastwards. To the west of the junction, R725 Carnew Road comprises footpaths along the northern side of the road up until the petrol station. A pedestrian crossing with dropped kerbs and tactile paving is provided on Kilnahue Lane on the approach to the junction with R725 Carnew Road.

Proposals for Gorey town pedestrian network plan were published by Wexford County Council in 2017 within the Gorey Town and Environs Local Area Plan (2017 – 2023). The plan indicates new footpaths to be constructed to expand the pedestrian network in the town in a comprehensive manner. An extracted from “Map 3 – Proposed Footpaths Network” of the LAP is reproduced in Figure 7 below, where purple lines indicate existing footpaths and green lines indicate new/planned footpaths.



**Figure 7:** Proposed Pedestrian Network (Extracted from: Gorey LAP 2017-2023).

As part of the subject development works a local pedestrian network which complies with the proposals set out under the LAP is proposed – refer to Figure 6 above. In summary, the overall proposal includes north-south pedestrian facilities through the site, the provision of footpaths with dedicated pedestrian crossings along Kilnahue Lane to the north of the site which will link to the existing footpaths at the nearby school campus, a footpath along the northern side of R725 Carnew Road from the proposed site access up until the petrol station to connect with the existing network and a dedicated pedestrian crossing on the site access road at its junction with R725 Carnew Road.

### 3.5 Road Safety

Traffic collision data has been reviewed for the period 2005 – 2016 from the Road Safety Authority (RSA) traffic collision database. This review will assist to identify any potential safety concerns in relation to the existing road network. These incidents are categorised into class of severity, which includes minor (M), serious (S), or fatal (F). The analysis is shown in Figure 8.

From the information obtained consulting the RSA Traffic Collision Database, there has been one fatal and five minor collisions that occurred on R725 Carnew Road in the section between the junction with Kilnahue Lane (Gorey Hill) and the junction with R772. Details of these recorded collisions are presented in Table 2. No collisions were recorded along or in the vicinity of the site frontage either on R725 Carnew Road or Kilnahue Lane.

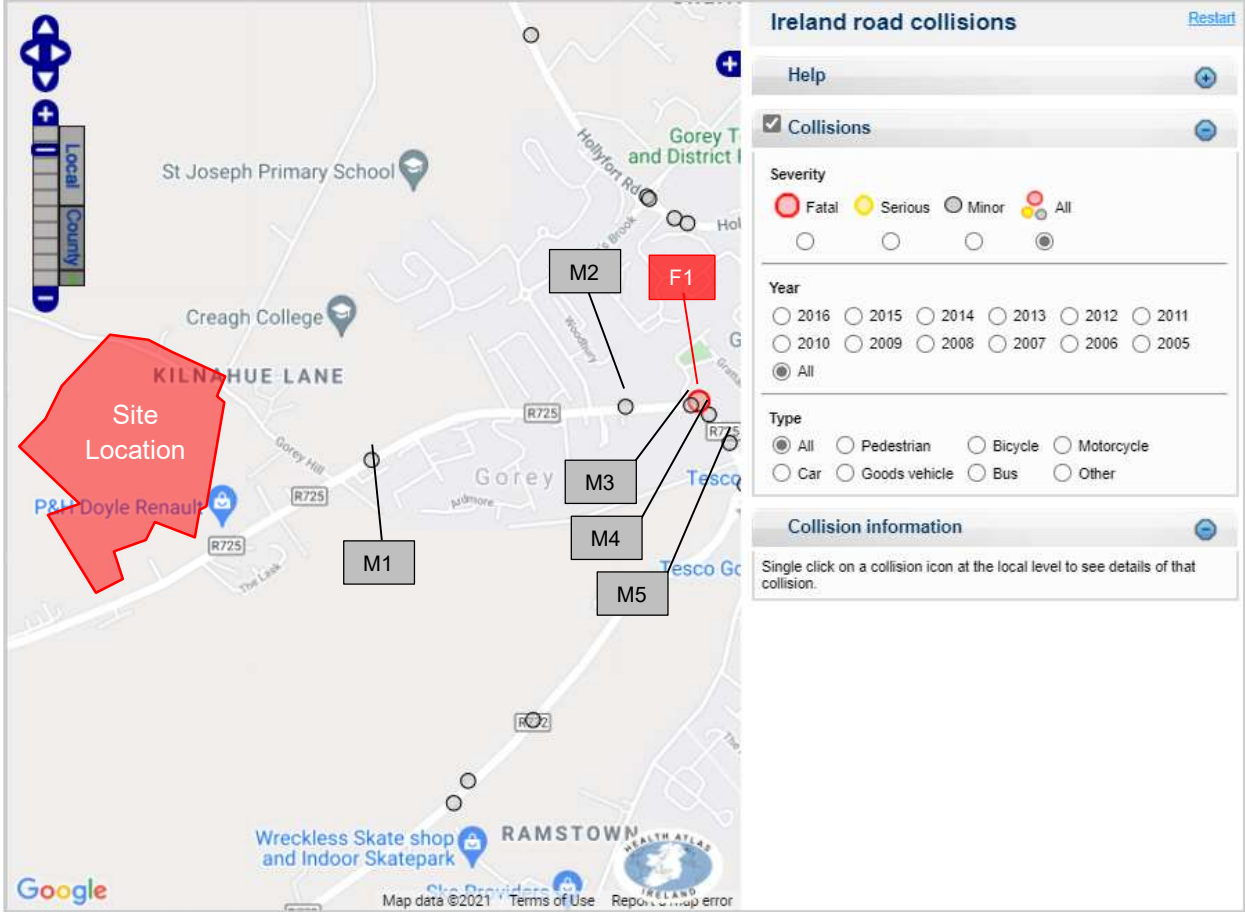


Figure 8: Local Traffic Collision Data (Source: Road Safety Authority Database).



Reference	Year	Vehicle	Circumstances	Day of Week	Time
M1	2007	Goods Vehicle	Unknown	Friday	03:00 - 07:00
M2	2009	Car	Rear end, straight	Tuesday	16:00 - 19:00
M3	2008	Car	Single vehicle only	Saturday	23:00 - 03:00
M4	2012	Car	Single vehicle only	Wednesday	07:00 -10:00
M5	2005	Car	Head-on right turn	Thursday	16:00 - 19:00
F1	2007	Car	Unknown	Saturday	19:00 - 23:00

**Table 2:** Summary of Traffic Collision Data (Source: Road Safety Authority Database).

## 4. Proposed Development

### 4.1 Development Description

The development proposed as part of the subject application consists of 421 no. residential units – comprising of 133 no. houses, 60 no. duplexes (30 no. duplex apartments and 30 no. duplex houses) and 228 no. apartments, a Creche with 565 sqm of area and a Community Hub & Retail Units with a total of 361 sqm of area. The breakdown of the proposed residential development is:

Type	1-Bed	2-Bed	3-Bed	4-Bed	Total
Apartment	76	145	7	-	228
Duplex Apartment	4	26	-	-	30
Duplex Housing	-	-	30	-	30
Housing	-	-	115	18	133
<b>Total</b>	<b>80</b>	<b>171</b>	<b>152</b>	<b>18</b>	<b>421</b>

**Table 3:** Proposed Breakdown of Residential Units.

### 4.2 Site Access Points

Vehicular access to the subject development is proposed via one new priority-controlled T-junction on R725 Carnew Road to the south of the site, and via two new priority-controlled T-junctions on Kilnahue Lane to the north of the site – See Figure 9. In addition to these vehicular access points – which will be accessible by all modes of transport, one pedestrian/cyclist links is also proposed to the north of the site to Kilnahue Lane. The location of this pedestrian/cyclist link is also shown in Figure 9 below.

### 4.3 Proposed Junction Sightlines

Section 18.29.3 of the Wexford County Development Plan 2013 – 2019 states the following with regards to sightlines for public roads within a 50kph or 60kph speed limit: *“Sightlines shall be measured from a point 3m back from the edge of the public (2m in the case of a proposed access/egress to be used for single dwelling house), at the centre point of the proposed access/egress to points on the nearside of the public road in both directions.”*

Accordingly, the visibility splays for the proposed R725 Carnew Road junction - which, in the section where the junction is proposed, is subject to a speed limit of 60kph, were designed with 3.0m x 90m sightlines. A dedicated lane for right turns into the site and an island for eastbound traffic are also included as part of the proposed layout. These will provide with a safe and secure day-to-day operation of the junction. The proposed junction layout and designed sightlines are shown on Waterman Moylan Drawing No. 13-119-P4110 accompanying the documentation package.

The primary junction proposed on Kilnahue Lane was designed with visibility splay of 2.4m x 90m as per DMURS. The proposed layout of this junctions is shown on the Waterman Moylan Drg. No. 13-119-P4130 accompanying the subject application.



**Figure 9:** Location of Site Access Points.

#### 4.4 Internal Road Network

All internal roads in the proposed development are designed for a speed limit of 30kph with generally 8.0m wide carriageways (i.e., 2.5m wide vehicle lanes) with 1.5m wide on-road cycle lanes and minimum 1.8m

footpaths along both sides. On street parking intermixed with soft verges will separate footpaths from the main carriageway. All road intersections within the development itself will be priority controlled with raised tables where appropriate. The low design speeds and traffic calming measures will ensure the safe operation of these junctions.

#### **4.5 Pedestrian and Cycle Infrastructure**

The designed pedestrian layout of the proposed development comprises of:

- a) pedestrian pathways on both sides of the internal roads;
- b) a c.280 metres long footpath on Kilnahue Lane along the northern boundary of the site;
- c) a dedicated pedestrian/cyclist crossing on Kilnahue Lane to the north of the site; and
- d) a footpath along the northern side of R725 Carnew Road from the proposed vehicular access point up until the existing petrol station c. 300 metres to the east.
- e) A splitter island and entry gate to the reduced speed area on the R725 into Gorey has been provided

All footpaths for the proposed development, including the footpaths proposed along the R725 Carnew Road and the Kilnahue Lane, will be provided in accordance with Section 4.3.1 of the DMURS which suggests that a minimum 1.8m footpath should be provided. The proposed pathways will connect with the current pedestrian network on both R725 Carnew Road and Kilnahue Lane. Valuable north-south and east-west routes connecting communal open spaces within the development and to the surrounding context are also proposed.

With regards to cycle facilities, as part of the subject development works a local cycle network is proposed – refer to Figure 6. In summary, the overall proposal includes three north-south cycle routes with 1.5m wide cycle lanes throughout the site and the provision of a two-way off-road cycle track on Kilnahue Lane along the northern boundary which will link up with the existing cycle track at the nearby school campus.

The proposed local cycle network will link to the cycle infrastructure projected for Gorey town in the LAP (illustrated in Figure 5) and will facilitate cyclist progression towards local schools and college, to Gorey town centre and associated facilities, and to Gorey train station.

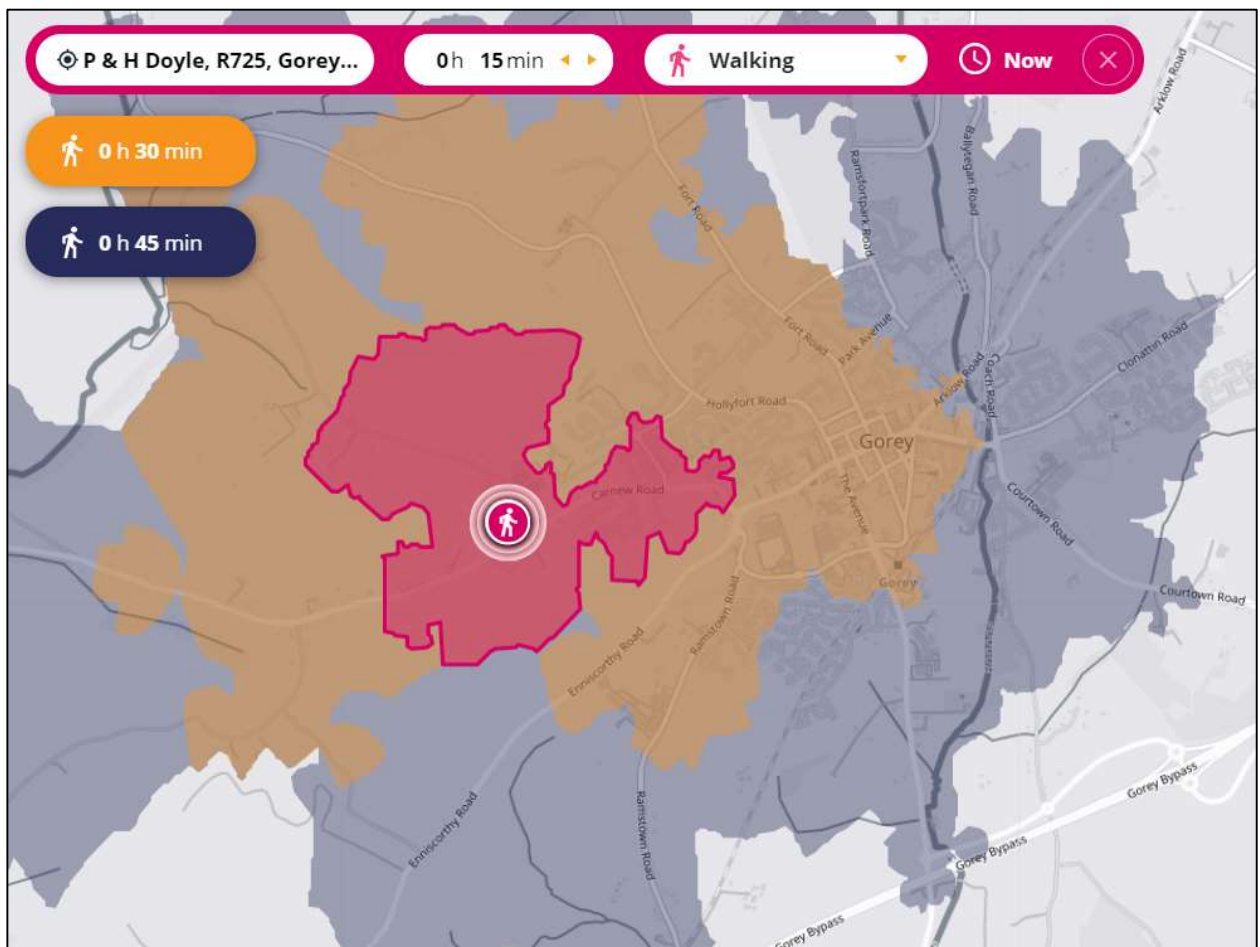
#### **4.6 Access to Refuse Vehicles**

The proposed development will be accessible for refuse vehicle. Turning paths layout is shown on Waterman Moylan No. 13-119-P4150 accompanying the subject application.

## 5. Site Accessibility

### 5.1 Pedestrian Accessibility

The document “The Route to Sustainable Commuting”, published by the National Transport Authority (NTA), described acceptable walking distances for pedestrians without mobility impairment. This document states that 4,000m or approximately 50 minutes is the preferred maximum walking distance. Figure 10 below shows the walking distances achieved from the site in 15 minutes, 30 minutes and 45 minutes, all below the NTA's preferred 50-minute maximum.

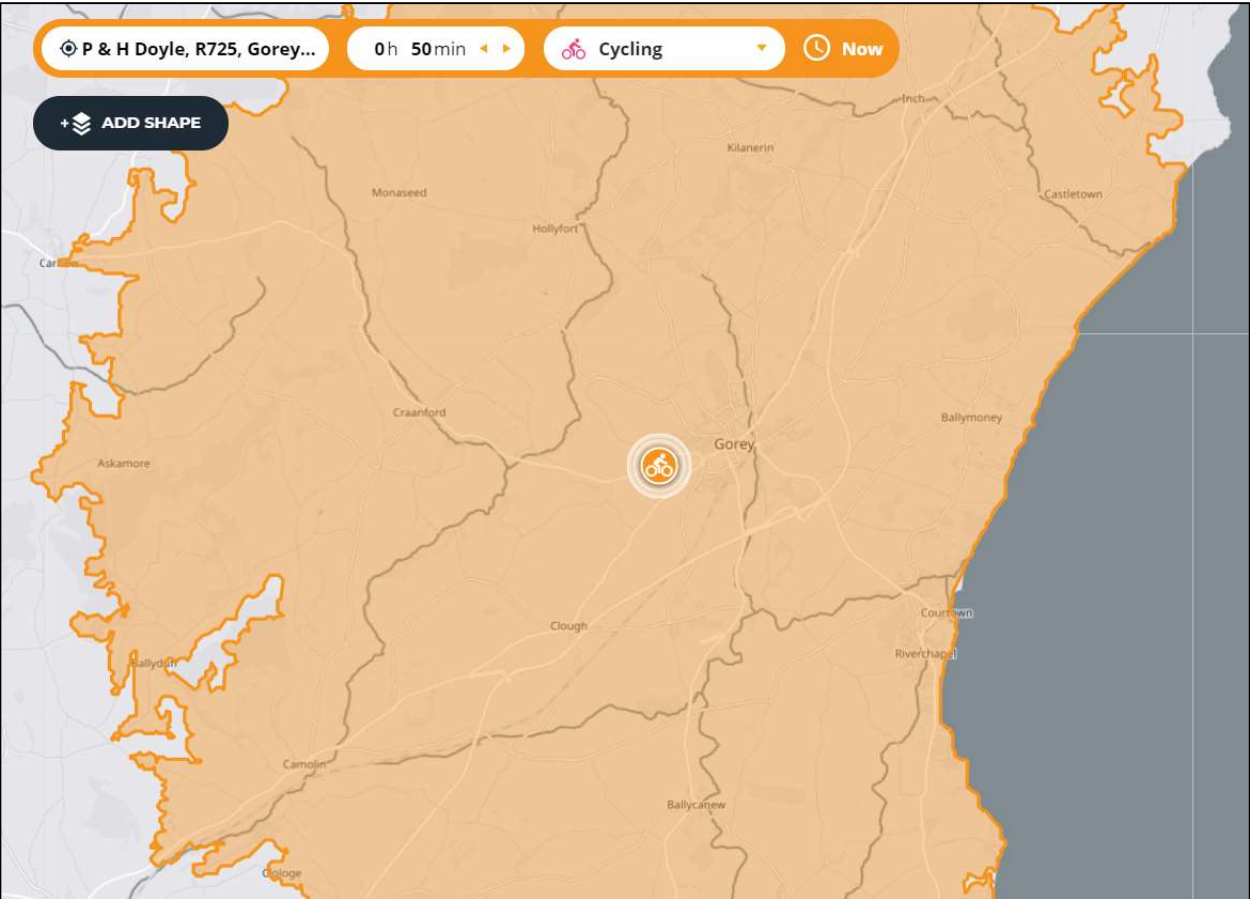


**Figure 10:** Walking Isochrones from the Proposed Development.

As can be seen from the above figure, the majority of Gorey town is reachable within the 30-minute walking range from the proposed development, including a number of educational facilities (Gorey Educate Together National School, Gaelscoil Moshilog, Creagh College, St. Joseph Primary School, amongst others), the Gorey Shopping Centre, the Gorey District Hospital, the Gorey Town and District Park, the Gorey Train Station and Gorey Main Street. The whole town is accessible within the 45 minutes walking band.

## 5.2 Cycling Accessibility

The NTA’s “The Route to Sustainable Commuting” sets out acceptable cycling distances for cyclists without mobility impairment. It states that 10km is the maximum distance people will travel by bicycle. Based on an average cycling speed of 12km/h, a 50-minute bike journey would have a distance of approximately 10km. Figure 11 below shows the cycling distance achieved from the site in 50 minutes.



**Figure 11:** 50-minute Cycle Range from the Proposed Development.

As can be noted from above, a number of towns are reached from the site within the range of 50 minutes cycling.

## 6. Traffic Survey

In order to quantify the volumes of traffic movements at key junctions on the road network surrounding the subject site, a set of classified turning movement traffic counts were commissioned.

A Manual Classified Traffic Survey was carried out by 'IDASO' on Thursday 7<sup>th</sup> October 2021 at 3 no. sites during the period of 24 hours. The surveyed sites were:

- **Site 1 (Existing Priority-controlled T-junction):** R725 Carnew Road / Kilnahue Lane.
- **Site 2 (Existing Priority-controlled T-junction):** Kilnahue Lane / Access Road to School Site.
- **Site 3 (Section of road):** Section of R725 Carnew Road where the site access is proposed.

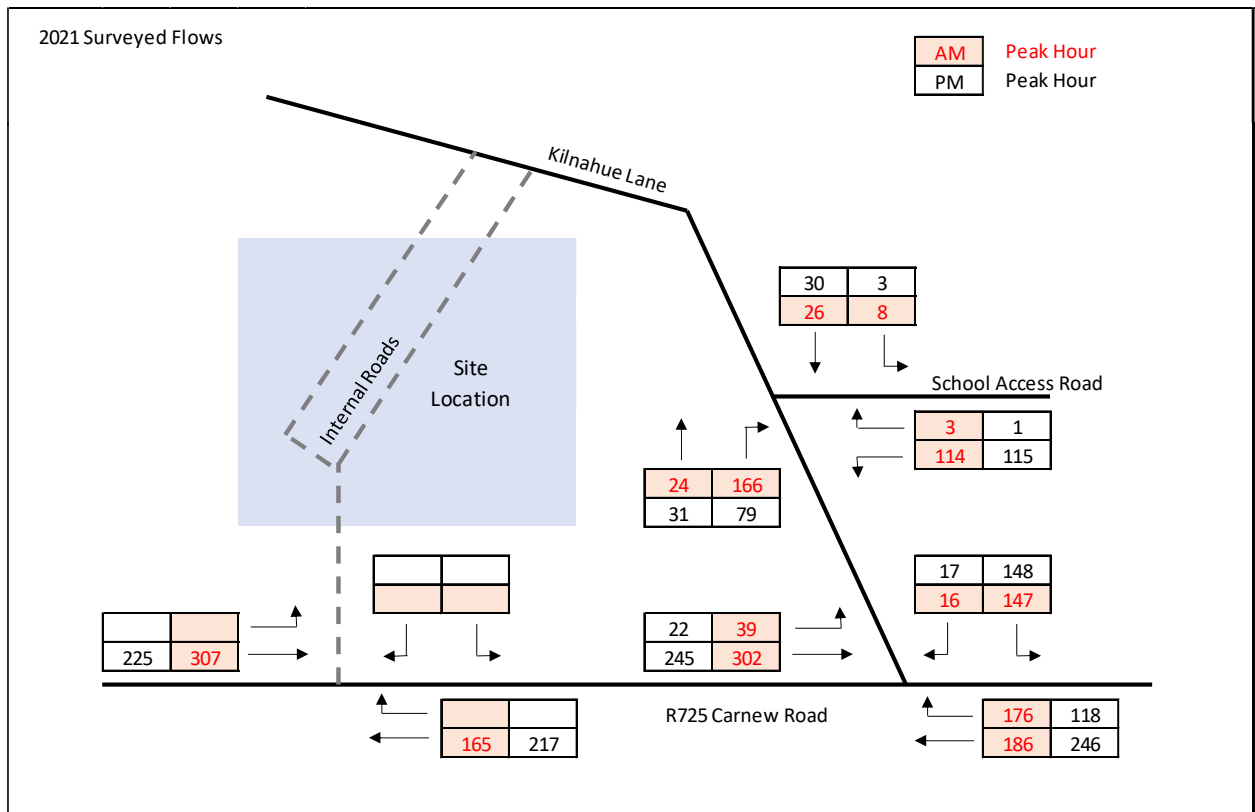
The survey was carried out on the date identified above to ensure that flows were representative of normal term time and hence not affected by school holidays or other public holidays or events. As such they provide a reasonable representation of a neutral month during a period of normal school and employment activity.

The location of the surveyed sites in relation to the subject development site is shown in Figure 12 below.



**Figure 12:** Location of Surveyed Junctions.

The results of the survey indicated that the peak hour traffic levels through the junctions occurred between the hours of 08h00 and 09h00 in the AM and 14h00 and 15h00 in the PM. These peak hours coincide with the drop-off and collection time of the school site at Kilnahue Lane. The peak hour volumes are illustrated in Figure 13. Full traffic survey is included in Appendix A.



**Figure 13:** 2021 Surveyed AM and PM Peak Hour Flows.



## 7. Trip Generation and Distribution

### 7.1 Trip Generation

#### 7.1.1 Car Trip Rates

In order to assess the likely impact of the traffic generation arising from the proposed development, TRICS software has been consulted. TRICS is the national standard of trip generation and analysis in Ireland. It is a database system which allows users to identify representative trip rates and to establish potential levels of trip generation for a wide variety of developments. Full car trip rates have been provided in Appendix B and summarised in Table 4 below.

The AM and PM peak hours of the surrounding road network (surveyed sites) were recorded at 08h00-09h00 and 14h00-15h00, respectively. The trip rates for these AM and PM peak intervals are shown below.

Land Use	Calculation Factor	AM Trip Rates (08h00 to 09h00)		PM Trip Rates (14h00 to 15h00)	
		Arr.	Dep.	Arr.	Dep.
<b>Residential</b>	per unit	0.128	0.318	0.111	0.128
<b>Creche</b>	per 100 sqm	5.946	3.271	2.279	1.288
<b>Retail</b>	per 100 sqm	9.946	9.946	10.270	10.378

**Table 4:** Car Trip Rates – Source: TRICS Database.

#### 7.1.2 Car Trip Generation

The potential peak hour traffic generation for the proposed development is presented in Table 5 below. It has been calculated based on the proposed 421 No. residential units, 565 sqm childcare facility and the community hub & retail units with 361 sqm of area.

Whilst it is envisaged that the creche and the community hub/retail will solely serve the residents of the subject development, in reality this may not always be the case. As such, in order to provide a robust assessment, it has been assumed that 70% of the traffic to/from the Creche and 50% of the traffic to/from the Community Hub / Retail will originate from the local road network external to the subject site. The traffic generation below has been discounted to reflect this.

From the calculations below, it can be seen that the subject proposed development is estimated to generate a total of 261 car trips in the AM peak hour period (96 arrivals and 165 departures) and a total of 153 trips in the PM peak hour period (75 arrivals and 78 departures).

Land Use	Development Size	AM Peak Hour Trips (08h00 to 09h00)		PM Peak Hour Trips (14h00 to 15h00)	
		Arr.	Dep.	Arr.	Dep.
<b>Residential</b>	421 units	54	134	47	54
<b>Creche</b>	565 sqm	24	13	9	5
<b>Community Hub/Retail</b>	361 sqm	18	18	19	19
<b>Total</b>		96	165	75	78

**Table 5: Car Trip Generation - Proposed Development.**

## 7.2 Trip Distribution

In order to determine the amount of new car trips expected to travel through each surveyed junction in the vicinity of the proposed development site, the calculated car trips for the proposed development have been distributed. The estimated traffic to/from the proposed development has been distributed between the following access points:

- **Access Point (AP.1):** Proposed priority-controlled T-junction on R725 Carnew Road.
- **Access Points (AP.2 and AP.3):** Proposed priority-controlled T-junctions on Kilnahue Lane.

Given the location of the proposed Access Point AP.1 - providing a more direct access to R725 Carnew Road, for the purpose of this assessment, it was assumed that this access will serve the majority of the proposed development trips (70%) whilst Access Points (AP.2 and AP.3) are assumed to serve the remaining 30%.

Generally, based on the location of the proposed development in relation to Gorey town centre and associated employment and commercial facilities and the shortest routes to/from M1/N1 motorway, the estimated car trips were assumed to have the following trip distribution characteristics:

- 70% to/from the proposed T-junction on R725 Carnew Road, of which
  - 55% to/from east along R725 Carnew Road;
  - 15% to/from west along R725 Carnew Road;
- 30% to/from the proposed T-junctions on Kilnahue Lane, of which
  - 30% to/from south along Kilnahue Lane and to/from east along R725 Carnew Road.

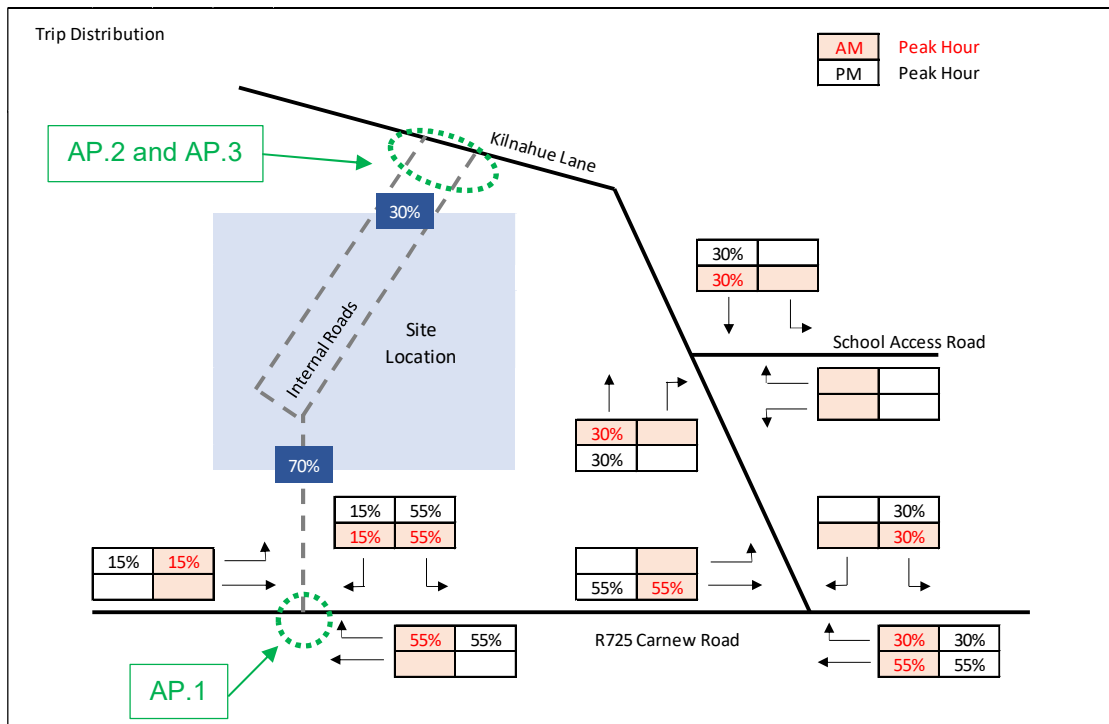


Figure 14: Trip Distribution.

## 8. Traffic Growth

It has been assumed within this Traffic and Transportation Assessment for the subject site that the proposed development will be constructed over a period of approximately 3 years. Therefore, the assumed year of opening is 2024.

In line with the 'Traffic and Transport Assessment Guidelines (May 2014)' which this TTA is based on, the junctions were also assessed for the future design years of 2029 (Opening Year +5 Years) and 2039 (Opening Year +15 Years).

The background traffic growth rates used to factor up the 2021 baseline flows are in accordance with the 'Table 6.2: Link-Based Growth Rates: County Annual Growth Rates (excluding Metropolitan Area)' within the TII Publications – Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projections (May 2019). These are:

- 1.021 (Central Growth) growth factor from 2021 to 2024
- 1.056 (Central Growth) growth factor from 2021 to 2029
- 1.082 (Central Growth) growth factor from 2021 to 2039

Figure 15 below illustrates the AM and PM forecast traffic flows for the future assessment year of 2039 (worst-case) which includes the 2021 baseline flows extrapolated into 2039 and the trips generated by the Proposed Development.

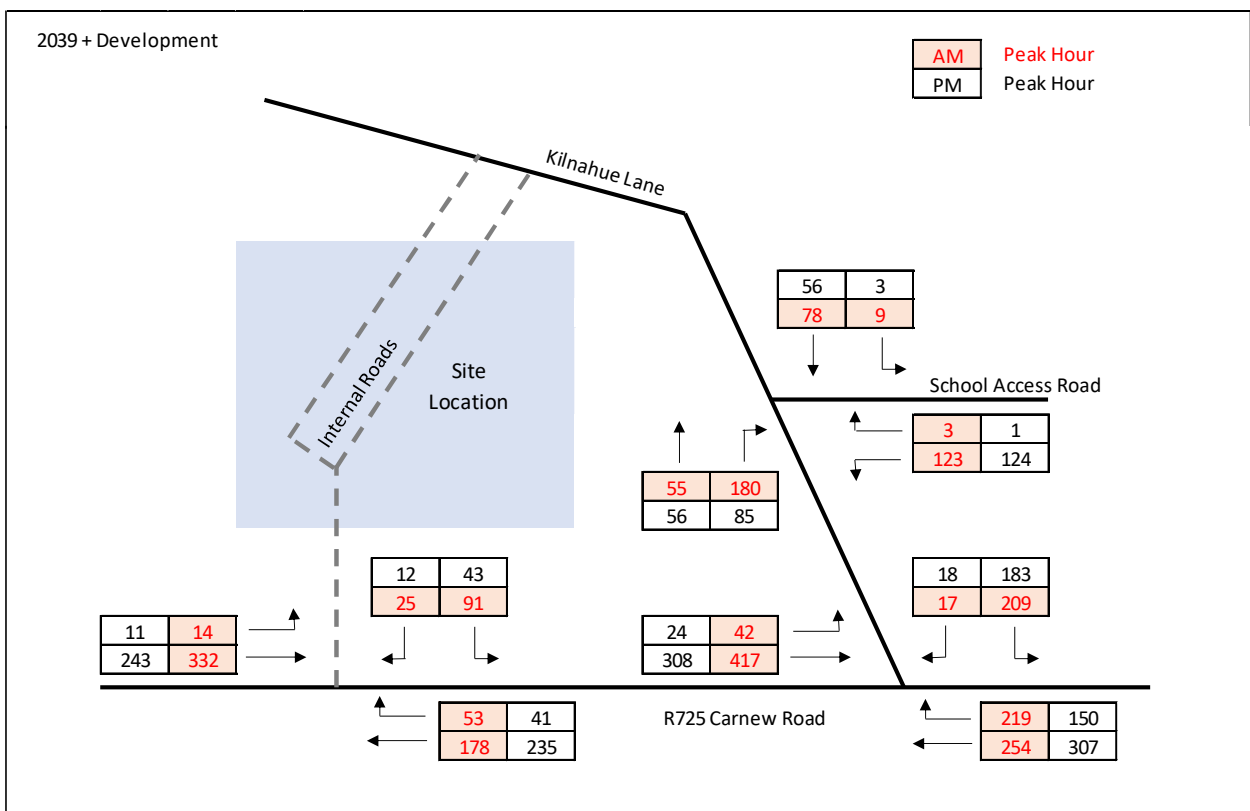


Figure 15: Forecast Traffic – 2039 + Proposed Development.

## 9. Junction Assessment

### 9.1 Junctions Assessed

The junctions that have been assessed within this Traffic and Transport Assessment are the following:

- **Site 1 (Existing Priority-controlled T-junction):** R725 Carnew Road / Kilnahue Lane
- **Site 2 (Existing Priority-controlled T-junction):** Kilnahue Lane / Access Road to School Site
- **Site 3 (Proposed Priority-controlled T-junction):** R725 Carnew Road / Proposed Site Access Road

### 9.2 Methodology

#### 9.2.1 Traffic Increase

The extent of traffic impact from the proposed development has been determined by initially checking where generated traffic would exceed 10% of the traffic flow on the adjoining road or 5% on the road where congestion exists, or the location is sensitive. This is in line with the TII Traffic and Transport Assessment Guidelines (May 2014). A summary of the surveyed two-way traffic and the expected traffic increase at each studied junction is presented below.

Junction	Junction Existing Flow – AM Peak Hour	Junction Existing Flow – PM Peak Hour	Additional Traffic Two-way Flow (AM)	Additional Traffic Two-way Flow (PM)	% Expected Increase (AM)	% Expected Increase (PM)
Site 1	866	796	222	130	25.64%	16.33%
Site 2	341	259	78	46	22.87%	17.76%
Site 3	472	442	183	107	38.77%	24.21%

**Table 6:** Existing and Expected Two-way Traffic Flows.

As can be seen from above, all assessed junctions (existing and proposed) are expected to receive a two-way traffic increase higher than 10%. Therefore, they have been modelled and the results are shown in the next sections.

#### 9.2.2 Modelling Background

There are various modelling software packages available to assess every type of junction. Waterman Moylan uses PICADY to analyse priority-controlled junctions. This programme utilises the junction's geometry and traffic flows input by the user to determine Ratio of Flow to Capacity (RFC) and queue length for each approach of the junction.

Typically, a junction is said to be working satisfactorily when the RFC of each approach does not exceed 0.85 (85%). Acceptable RFC values are considered to be in the range of 0.85 to 1.0 with higher values indicating restrained movements.

### 9.3 Assessment Scenarios

The performance of the junctions has been analysed for the critical AM and PM Peak Hours (08h00 – 09h00 and 14h00 – 15h00) for the following scenarios:

- **BASE YEAR – 2021:** Existing road network with 2021 surveyed flows.
- **DO NOTHING - 2024:** Existing road network with 2021 baseline traffic flows factored up.
- **DO NOTHING - 2029:** Existing road network with 2021 baseline traffic flows factored up.
- **DO NOTHING - 2039:** Existing road network with 2021 baseline traffic flows factored up.

As Site 3 is a junction proposed as part of the subject application, for the DO NOTHING scenarios, it has not been modelled.

- **DO SOMETHING - 2024 (Opening Year):** Proposed junctions on the road network + 2021 baseline traffic flows factored up + Proposed Development trips.
- **DO SOMETHING - 2029 (Opening Year + 5 Years):** Proposed junctions on the road network + 2021 baseline traffic flows factored up + Proposed Development trips.
- **DO SOMETHING - 2039 (Opening Year + 15 Years):** Proposed junctions on the road network + 2021 baseline traffic flows factored up + Proposed Development trips.

For the DO SOMETHING scenarios, Sites 1, 2 and 3 have been modelled.

### 9.4 Analysis Results

#### 9.4.1 Existing Site 1: R725 Carnew Road / Kilnahue Lane

Site 1 is an existing priority-controlled T-junction located east of proposed development site. This junction has been modelled based on its current configuration and the PICADY analysis results are summarised in Table 7. The arms of the junction were labelled as follows within the PICADY model:

- Arm A: R725 Carnew Road (SW).
- Arm B: Kilnahue Lane (W).
- Arm C: R725 Carnew Road (NE).

It will be seen from the PICADY analysis results below that the subject Site 1 is currently operating well within capacity during both AM and PM peak hours with the highest RFC at 0.35 and a corresponding queue of 0.7 vehicle recorded on R725 Carnew Road (NE) in the AM and with the highest RFC at 0.32 and a corresponding queue of 0.5 vehicle also recorded on Kilnahue Lane (W) in the PM.

Stream	AM (08h00 to 09h00)		PM (14h00 to 15h00)	
	Queue (veh.)	RFC	Queue (veh.)	RFC
2021 (BASE YEAR)				
Stream B-AC	0.5	0.33	0.5	0.32
Stream C-AB	0.7	0.35	0.4	0.24
DO NOTHING - 2024				
Stream B-AC	0.5	0.33	0.5	0.33
Stream C-AB	0.7	0.36	0.4	0.24
DO SOMETHING – 2024				
Stream B-AC	0.8	0.45	0.6	0.38
Stream C-AB	1.1	0.45	0.6	0.30
DO NOTHING – 2029				
Stream B-AC	0.5	0.35	0.5	0.34
Stream C-AB	0.8	0.37	0.5	0.25
DO SOMETHING – 2029				
Stream B-AC	0.9	0.47	0.6	0.39
Stream C-AB	1.2	0.47	0.6	0.31
DO NOTHING – 2039				
Stream B-AC	0.6	0.36	0.5	0.35
Stream C-AB	0.8	0.39	0.5	0.26
DO SOMETHING – 2039				
Stream B-AC	0.9	0.48	0.7	0.40
Stream C-AB	1.2	0.48	0.7	0.32

**Table 7: Site 1 - PICADY Analysis Results.**

For the opening year of 2024 – DO SOMETHING, with the baseline flows factored up and the addition of the trips generated by the proposed development, Site 1 would continue to operate well within capacity during both peak hours, with the highest RFC at 0.45 and a corresponding queue of 1.1 vehicle recorded on R725 Carnew Road (NE) in the AM and with the highest RFC at 0.38 and a corresponding queue of 0.6 vehicle recorded on Kilnahue Lane (W) for the PM. The increase on RFC values from the 2024 – DO NOTHING are: 12% on Kilnahue Lane (W) and 9% on R725 Carnew Road (NE) in the AM and 5% on Kilnahue Lane (W) and 6% on R725 Carnew Road (NE) in the PM.

In the future year of 2039 – DO SOMETHING, the analysis results indicate that Site 1 would continue to operate well within capacity during both peak hours, with the highest RFC at 0.48 and a corresponding queue of 1.2 vehicle recorded on R725 Carnew Road (NE) in the AM and with the highest RFC at 0.40 and a corresponding queue of 0.7 vehicle recorded on Kilnahue Lane (W) in the PM. The increase on RFC values from 2039 – DO NOTHING are: 12% on Kilnahue Lane (W) and 9% on R725 Carnew Road (NE) in the AM and 5% on Kilnahue Lane (W) and 6% on R725 Carnew Road (NE) in the PM. Full PICADY output report for Site 1 is provided in Appendix D.

#### 9.4.2 Existing Site 2: Kilnahue Lane / Access Road to School Site

Site 2 is an existing priority-controlled T-junction located east of proposed development site which currently provides access to an existing school site. This junction has been modelled based on its current configuration and the PICADY analysis results are summarised in Table 8. The arms of the junction were labelled as follows within the PICADY model:

- Arm A: Kilnahue Lane (N).
- Arm B: School Access Road (E).
- Arm C: Kilnahue Lane (S).

Stream	AM (08h00 to 09h00)		PM (14h00 to 15h00)	
	Queue (veh.)	RFC	Queue (veh.)	RFC
2021 (BASE YEAR)				
Stream B-AC	0.2	0.19	0.2	0.18
Stream C-AB	0.4	0.29	0.2	0.14
DO NOTHING – 2024				
Stream B-AC	0.2	0.19	0.2	0.19
Stream C-AB	0.4	0.30	0.2	0.14
DO SOMETHING – 2024				
Stream B-AC	0.2	0.19	0.2	0.19
Stream C-AB	0.5	0.31	0.2	0.15
DO NOTHING – 2029				
Stream B-AC	0.2	0.20	0.2	0.19
Stream C-AB	0.5	0.31	0.2	0.15
DO SOMETHING – 2029				
Stream B-AC	0.2	0.20	0.2	0.19
Stream C-AB	0.5	0.32	0.2	0.15
DO NOTHING – 2039				
Stream B-AC	0.3	0.20	0.2	0.20
Stream C-AB	0.5	0.32	0.2	0.15
DO SOMETHING – 2039				
Stream B-AC	0.3	0.21	0.2	0.20
Stream C-AB	0.5	0.33	0.2	0.15

**Table 8:** Site 2 - PICADY Analysis Results.

It can be seen from the PICADY analysis results above that the subject Site 2 is currently operating well within capacity during both AM and PM peak hours with the highest RFC at 0.29 and a corresponding queue of 0.4 vehicle recorded on Kilnahue Lane (S) in the AM and with the highest RFC at 0.18 and a corresponding queue of 0.2 vehicle recorded on the School Access Road (E) in the PM.

For the opening year of 2024 – DO SOMETHING, with the baseline flows factored up and the addition of the trips generated by the proposed development, Site 2 would continue to operate well within capacity during both peak hours, with the highest RFC at 0.31 and a corresponding queue of 0.5 vehicle recorded on Kilnahue Lane (S) in the AM and with the highest RFC at 0.19 and a corresponding queue of 0.2 vehicle



recorded on the School Access Road (E) for the PM. The increase on RFC values from the 2024 – DO NOTHING are: 1% on Kilnahue Lane (S) in both AM and PM peak hours.

In the future year of 2039 – DO SOMETHING, the analysis results indicate that Site 2 would continue to operate well within capacity during both peak hours, with the highest RFC at 0.33 and a corresponding queue of 0.5 vehicle recorded on Kilnahue Lane (S) in the AM and with the highest RFC at 0.20 and a corresponding queue of 0.2 vehicle recorded on the School Access Road (E) in the PM. The increase on RFC values from 2039 – DO NOTHING are: 1% on the School Access Road (E) and 1% on Kilnahue Lane (S) in the AM. Full PICADY output report for Site 2 is provided in Appendix D.

**9.4.3 Proposed Site 3: R725 Carnew Road / Proposed Site Access Road**

Site 3 is a priority-controlled T-junction proposed on R725 Carnew Road to provide the main access to the subject proposed development. As previously described, this junction was projected with a dedicated turning lane for right turns onto the site and was designed in accordance with Wexford County Development Plan 2013 – 2019 requirements. This junction has been modelled based on its proposed configuration (illustrated in Waterman Moylan Drawing No. 13-119-P4142 accompanying the documentation package) and the PICADY analysis results are summarise in Table 9. It is worth restating that, as a proposed junction, it has only been modelled for the DO SOMETHING scenarios. The arms of the junction were labelled as follows within the PICADY model:

- Arm A: R725 Carnew Road (W).
- Arm B: Site Access Road (N).
- Arm C: R725 Carnew Road (E).

Stream	AM (08h00 to 09h00)		PM (14h00 to 15h00)	
	Queue (veh.)	RFC	Queue (veh.)	RFC
<b>DO SOMETHING – 2024</b>				
Stream B-AC	0.3	0.21	0.1	0.10
Stream C-B	0.1	0.08	0.1	0.06
<b>DO SOMETHING – 2029</b>				
Stream B-AC	0.3	0.21	0.1	0.10
Stream C-B	0.1	0.08	0.1	0.06
<b>DO SOMETHING – 2039</b>				
Stream B-AC	0.3	0.21	0.1	0.10
Stream C-B	0.1	0.08	0.1	0.06

**Table 9: Site 3 - PICADY Analysis Results.**

It can be seen from the PICADY analysis results as summarised above that the proposed Site 3 would operate well within capacity for the opening year of DO SOMETHING – 2024 during both peak hours and would continue to do so for the 2039 – DO SOMETHING, with the highest RFC at 0.21 and a corresponding queue of 0.3 vehicle recorded on the Site Access Road (N) in the AM and with the highest RFC at 0.10 and a corresponding queue of 0.1 vehicle also recorded on the Site Access Road (N) for the PM. Full PICADY output report for Site 3 is provided in Appendix D.

## 9.5 Site 1 – Sensitivity Analysis

To the north and west of the proposed development site, Kilnahue Lane and R725 Carnew Road, respectively, are bounded by a number of green field zoned lands, which are expected to receive future developments in the future.

Trips generated by these potential future developments are likely to travel along Kilnahue Lane and R725 Carnew Road to/from Gorey town centre and M11 motorway and are likely to further increase the traffic demand on the assessed junctions, particularly on Site 1 (Kilnahue Lane / R725 Carnew Road).

In this regard, a sensitivity analysis of Site 1 has been undertaken as part of this TTA in order to provide a robust appraisal of its potential future operational capacity (in 2039) and also to understand whether signals will be required or not. The sensitivity analysis was undertaken for the following scenarios:

- **2039 SENSITIVITY 1 (+79 additional residential units):** with the baseline flows factored up + trips generated by the proposed development + trips generated by 79 extra residential units.
- **2039 SENSITIVITY 2 (+129 additional residential units):** with the baseline flows factored up + trips generated by the proposed development + trips generated by 129 extra residential units.
- **2039 SENSITIVITY 3 (+179 additional residential units):** with the baseline flows factored up + trips generated by the proposed development + trips generated by 179 extra residential units.
- **2039 SENSITIVITY 4 (+229 additional residential units):** with the baseline flows factored up + trips generated by the proposed development + trips generated by 229 extra residential units.
- **2039 SENSITIVITY 5 (+329 additional residential units):** with the baseline flows factored up + trips generated by the proposed development + trips generated by 329 extra residential units.
- **2039 SENSITIVITY 6 (+429 additional residential units):** with the baseline flows factored up + trips generated by the proposed development + trips generated by 429 extra residential units.

Trip generation and assignment for the potential future residential units has been calculated based on the residential TRICS trip rates in Table 4 and the trip distribution characteristics as set out in Section 7.2.

A summary of the PICADY analysis results of each sensitivity scenario for Site 1 is presented in Table 10 below. Where:

- Arm A is R725 Carnew Road south-western approach.
- Arm B is Kilnahue Lane northern approach.
- Arm C is R725 Carnew Road north-eastern approach.

The results as summarised in Table 10 below – extracted from PICADY output report attached in Appendix D, indicate that for the worst sensitivity scenario (2039 SENSITIVITY 6 (+ 429 additional residential units)), with the baseline flows factored up, trips to and from the proposed development trips and the inclusion of the trips generated by 429 additional residential units, Site 1 would continue to operate within capacity during both peak hours, with the highest RFC at 0.58 and a corresponding queue of 1.4 vehicle recorded on Kilnahue Lane (N) in the AM and with the highest RFC at 0.44 and a corresponding queue of 0.8 vehicle also recorded on Kilnahue Lane (N) in the PM.

The corresponding delay on Kilnahue Lane (N) for the AM peak hour is 18.64 seconds per vehicle, which, when combined with the RFC and Queue parameters summarised above gives a Level of Service (LOS) of C. Note that the overall junction LOS in the AM peak hour is A.

For the PM peak hour, the corresponding delay on Kilnahue Lane (N) is 12.96 seconds per vehicle, which, when combined with the RFC and Queue parameters summarised above gives a Level of Service (LOS) of B. Note that the overall junction LOS in the PM peak hour is also A.

	AM						PM					
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Junction LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Junction LOS
<b>Site 1 - Sensitivity Analysis - 2039 SENSITIVITY 1 (+ 79 UNITS)</b>												
Stream B-AC	D1	1.0	15.05	0.50	C	A	D2	0.7	12.10	0.41	B	A
Stream C-AB		1.3	9.95	0.49	A			0.7	6.91	0.33	A	
<b>Site 1 - Sensitivity Analysis - 2039 SENSITIVITY 2 (+ 129 UNITS)</b>												
Stream B-AC	D3	1.0	15.49	0.51	C	A	D4	0.7	12.25	0.41	B	A
Stream C-AB		1.3	10.10	0.50	B			0.7	6.94	0.33	A	
<b>Site 1 - Sensitivity Analysis - 2039 SENSITIVITY 3 (+ 179 UNITS)</b>												
Stream B-AC	D5	1.1	15.97	0.52	C	A	D6	0.7	12.34	0.42	B	A
Stream C-AB		1.4	10.26	0.51	B			0.7	6.99	0.34	A	
<b>Site 1 - Sensitivity Analysis - 2039 SENSITIVITY 4 (+ 229 UNITS)</b>												
Stream B-AC	D7	1.1	16.41	0.53	C	A	D8	0.7	12.45	0.42	B	A
Stream C-AB		1.4	10.42	0.52	B			0.8	7.03	0.34	A	
<b>Site 1 - Sensitivity Analysis - 2039 SENSITIVITY 5 (+ 329 UNITS)</b>												
Stream B-AC	D9	1.2	17.49	0.56	C	A	D10	0.8	12.70	0.43	B	A
Stream C-AB		1.5	10.76	0.53	B			0.8	7.11	0.35	A	
<b>Site 1 - Sensitivity Analysis - 2039 SENSITIVITY 6 (+ 429 UNITS)</b>												
Stream B-AC	D11	1.4	18.64	0.58	C	A	D12	0.8	12.96	0.44	B	A
Stream C-AB		1.6	11.14	0.55	B			0.8	7.22	0.37	A	

**Table 10:** Site 1 - PICADY Sensitivity Analysis Results – Extract from PICADY Output Report.

From the analysis results as summarised above, it can be concluded that the existing priority-controlled Site 1 (Kilnahue Lane / R725 Carnew Road) would have capacity to accommodate the proposed development plus potential future residential units as it currently is, without the need of signalisation. It is worth mentioning that this junction and a section of the R725 Carnew Road were recently upgraded by Wexford County Council.

Full PICADY output report for the sensitivity analysis of Site 1 is provided in Appendix D.

## 10. Car Parking

### 10.1 Wexford County Development Plan 2013 - 2019

Standards for car parking in new developments are set out in Chapter 18 - Table 39 of the Wexford County Development Plan 2013 - 2019 (WCDP). Based on that table, the car parking standards for the proposed development are listed in Table 11 below.

Land Use	WCDP Car Parking Standards
House	2 spaces per unit
Apartment	1.5 space per unit
Creche	1 space per 4 children plus 1 space per employee
Retail	1 space per 20 sqm

**Table 11: WCDP Car Parking Standards.**

There are no specific car parking standards set out for duplexes within the Wexford County Development Plan 2013 – 2019. Therefore, for the purpose of calculation, the car parking standards for the apartments have been applied for the duplex apartment units and the standards for the houses have been applied for the duplex housing units. The current WCDP 2013-2019 also does not set out standards for visitor car parking spaces.

Applying the car parking standards set out above, the car parking required to serve the proposed development is 764 spaces, as listed in Table 12 below.

Land Use	Development Size	Spaces Required
Apartments	228 units	342 spaces
Duplex Apartments	30 units	45 spaces
Duplex Housing	30 units	60 spaces
Houses	133 units	266 spaces
Creche	11 staff 89 Children	11 spaces for staff 22.2 spaces for drop-off
Retail & Community	361 sqm	18 spaces
<b>Total</b>	<b>-</b>	<b>764 spaces</b>

**Table 12: WCDP - Car Parking Spaces Required.**

## 10.2 Sustainable Urban Housing: Design Standards for New Apartments 2020

In December 2020, a revised version of the document “Sustainable Urban Housing: Design Standard for New Apartments” was released. The parking standards set out in this document are considerably lower than those contained in the Wexford County Development Plan 2013 – 2019 in respect to apartment developments.

As per the definitions contained in that document, the proposed development is located in a peripheral and/or less accessible urban location. Based on that, the following extract from the “Design Standards for New Apartments” summarises the guidelines for parking relevant to the proposed development.

***“Peripheral and/or Less Accessible Urban Locations:*** *As a benchmark guideline for apartments in relatively peripheral or less accessible urban locations, one car parking space per unit, together with an element of visitor parking, such as one space for every 3-4 apartments, should generally be required.”*

As mentioned previously, for the purpose of parking calculation in this TTA, the proposed duplex apartment units have been treated as apartments. Based on that, the car parking requirements for the proposed apartment and duplex apartment units is as follows.

### **228 Apartment Units Proposed:**

1 resident car parking space per unit = 228 car parking spaces for the apartment residents (long stay).

1 visitor car parking space per 3-4 units = 57-76 car parking spaces for the apartment visitors (short stay).

### **30 Duplex Apartment Units Proposed:**

1 resident car parking spaces per unit = 30 car parking spaces for the duplex apartment residents (long stay).

1 visitor car parking space per 3-4 units = 8-10 car parking spaces for the duplex apartment visitors (short stay).

## 10.3 Summary of Car Parking Requirements

For ease of reference, the car parking requirements as described in the sections above are summarised in Table 13 below.

Document	Type	Apartment	Duplex Apartment	Duplex Housing	Houses	Creche	Retail
Wexford County Development Plan	Long Stay	342	45	60	266	11	18
	Short Stay	-	-	-	-	22	-
Design Standard for New Apartments	Long Stay	228	30	-	-	-	-
	Short Stay	57-76	8-10	-	-	-	-

**Table 13:** Summary of Car Parking Requirements.

## 10.4 Car Parking Proposed

The number of car parking spaces proposed to serve the proposed development is presented in Table 14 below.

Land Use	Development Size	Car Parking Rate	Car Parking Proposed
Apartments	228 units	1.5	342
Duplex (Apartments/Houses)	60 units	1.75	105
Houses	133 units	2.0	266
Creche	11 staff 89 Childcare Spaces	-	9 12 (*)
Retail/Community	361 sqm	1 space per 26 sqm	7 (*)
Community Staff Parking			7
Visitor (at main park)			18
<b>Total</b>	-	-	<b>759 spaces</b>

**Table 14:** Car Parking Spaces Proposed.

(\*) The retail and community will use the creche drop off spaces at the same time. These spaces are considered dual use.

From above, it can be seen that a total of 759 car parking spaces are proposed as part of the overall scheme to serve the proposed development. Of this 37 will be reserved for visitors, 16 of which are disabled/accessible spaces. This is in line with the requirements set out above and therefore considered appropriate for the subject development.

### 10.4.1 Parking for People with Disabilities

Section 18.29.7 of the Wexford County Development Plan 2013 – 2019 states the following with regards to Parking for People with Disabilities:

*“Buildings not normally visited by the public: Minimum one space (for people with disabilities) of appropriate dimensions in every 25 standard spaces, up to the first 100 spaces; thereafter, one space per every 100 standard spaces or part thereof.”*

In total, 38 car parking spaces for people with disabilities will be provided within the development.

### 10.4.2 Electric Vehicle Charging Points

Section 18.29.6 of the Wexford County Development Plan 2013 – 2019 states the following with regards to Electric Vehicles Charging Points:

*“There are three charging point options available: home charge points, public charge points in places such as on-street and shopping centre car parks and fast charge points (along inter-urban transport routes). The*

*Council will facilitate and encourage the provision of charging points for Electric Vehicles in appropriate locations. **The Council will require the provision of at least 1 electric vehicle charging point in a new car park for new development where 40 or more car parking spaces are provided.***

Accordingly, a number of spaces will be provided to meet this specific requirement.

## 11. Bicycle Parking

### 11.1 Wexford County Development Plan 2013 - 2019

With regards to bicycle parking, the Wexford County Development Plan 2013 - 2019 (WCDP) states that *“The Council will require that convenient, safe and secure cycle parking facilities of sufficient capacity are provided for all new retail, employment and leisure developments. **Apartment complexes will also be required to provide communal cycle storage facilities.** The Council will have regard to the National Cycling Manual (National Transport Authority, 2011) in its assessment of required cycle parking facilities.”*

From the extract above, it is understood that of all types of residential developments, only apartment complexes require cycle storage facilities to be provided. Cycle parking for the houses and duplex houses, for example, could be provided privately within the curtilage of each unit.

### 11.2 National Cycle Manual – Bicycle Parking, NTA 2011

Section 5.5.7 of the National Cycle Manual (NCM) sets out the following guidance in respect to bicycle parking in new developments:

Location	Minimum number of bicycle parking spaces
Housing developments	2 private secure bicycle spaces per 100 sq.m (note –design should not require bicycle access via living area) 1 visitor bicycle space per two housing units
Offices	10% of employee numbers, (subject to minimum of 10 bicycle places or one bike space for every car space, whichever is the greater)
Schools	10% of pupil registration numbers, minimum 10 places Consider separate teacher / employee parking
Other developments	1 bike space for every car space
Shops	1 space per 100 sq m
Public Transport pick-up points (Rail, tram, taxi Ranks & QBCs)	2.5% of number of daily boarders at that point / station, subject to minimum of 10 bicycle places
Off-street car-parks (incl. Multi-storey)	10% of total car-spaces, subject to a minimum provision of 50 spaces
Park and Ride locations	Consider sheltered parking at P+R
On-street (public)	Minimum of 5-10 spaces, depending on expected level of usage
Events	5% of forecast attendees

**Figure 16:** Bicycle Parking Requirements – Extract from NTA 2011.

As per the extract above, the National Cycle Manual recommends new housing developments to provide bicycle parking at a rate of 2 private secure spaces per 100 sqm plus 1 visitor bicycle parking space per two housing units.



No cycle parking standards for new Creches are contained in the NCM. In that case, the “Schools” standard set out under that document was used to calculate cycle parking spaces requirement for the Creche, which is “10% of pupil registration number”.

For the retail, the standard for new “Shops” was used, which is “1 space per 100 sqm”.

Based on the understanding of the WCDP extract in Section 11.1 above, the above cycle parking rates from the National Cycle Manual have only been applied to the proposed apartments/duplex apartments, the proposed Creche and the proposed Retail. The proposed houses and duplex houses were excluded from the calculation. The results are as follows:

Land Use	Size of Development	No. of Units	Bicycle Parking Spaces Required	
			Residents	Visitors
Apartments	15,168 sqm	228	152	114
Duplex Apartments	2,642 sqm	30	26	15
<b>Total Apt</b>	-	<b>258</b>	<b>178</b>	<b>129</b>
Total Creche	89 Pupils	-	9 spaces in total	
Total Retail & Commercial	361 sqm	-	4 spaces in total	

**Table 15:** National Cycle Manual (2011) - Car Parking Spaces Required.

### 11.3 Sustainable Urban Housing: Design Standards for New Apartments 2020

Section 4.17 of the Design Standard for New Apartments (December 2020) sets out a minimum standard of cycle storage space for new apartments as follows:

*“A general minimum standard of 1 cycle storage space per bedroom shall be applied. For studio units, at least 1 cycle storage space shall be provided. Visitor cycle parking shall also be provided at a standard of 1 space per 2 residential units.”*

Based on the above, bike parking spaces for the proposed apartments and duplex apartments is as follows:

#### **228 Apartment Units Proposed:**

1 resident bike parking space per bedroom:

(84 no. 1-bedroom + 137 no. 2-bedroom + 7 no. 3-bedroom) = 379 bedrooms = 379 bike parking spaces.

1 visitor bike parking space per 2 apartment units:

228 apartment units = 114 bike spaces for visitors.

#### **30 Duplex Apartment Units Proposed:**

1 resident bike parking space per bedroom:

(4 no. 1-bedroom + 26 no. 2-bedroom) = 56 bedrooms = 56 bike parking spaces.

1 visitor bike parking space per 2 units:

30 apartment units = 15 bike spaces for visitors.

## 11.4 Bicycle Parking Proposed

The bicycle parking spaces proposed for the subject development is showed in Table 16 below.

Land Use	Development Size	Cycle Parking Rate	Cycle Parking Proposed
Apartments	228 units	1.86	424
Duplex Apartments	30 units	0.53	16
Creche	89 Childcare Spaces	22% of childcare spaces	20
Retail	361 sqm	1 space per 18 sqm	20
<b>Total</b>	-	-	<b>480 spaces</b>

**Table 16:** Cycle Parking Proposed.

From above, it can be seen that a total of 480 cycle parking spaces is proposed as part of the overall scheme to serve the proposed development, 440 for the apartment and duplex apartment units, 20 for the Creche and 20 to serve the retail & community hub.

Cycle parking for the apartments and duplex apartments are proposed on dedicated bike storage in close proximity to the served units.

For the proposed houses and duplex houses, cycle parking spaces will be provided privately within the curtilage of each unit.

## 12. Conclusion

Waterman Moylan has been appointed by Gerard Gannon Properties. to prepare this Traffic and Transport Assessment for a proposed strategic housing development (SHD) on lands at Kilnahue & Gorey Hill, Gorey, Co. Wexford.

The proposed development consists of a total of 421 No. residential units - comprising of 133 No. houses, 60 No. duplexes (30 No. duplex apartments and 30 No. duplex houses) and 228 No. apartments, a Creche with 565 sqm of area and a Community Hub & Retail Units with a total of 361 sqm of area.

Vehicular access to the subject development is proposed via one new priority-controlled T-junction on R725 Carnew Road to the south of the site, and via two new priority-controlled T-junctions on Kilnahue Lane to the north of the site.

It is estimated that the proposed overall development will generate a total of 261 peak hour car trips during the AM (96 inbound and 165 outbound) and a total of 153 car trips during the PM peak hour (75 inbound and 78 outbound).

The following three junctions were modelled as part of the subject assessment:

**Site 1 (Existing Priority-controlled T-junction):** R725 Carnew Road / Kilnahue Lane

**Site 2 (Existing Priority-controlled T-junction):** Kilnahue Lane / Access Road to School Site

**Site 3 (Proposed Priority-controlled T-junction):** R725 Carnew Road / Proposed Site Access Road

Sites 1 and 2 have been modelled based on its current configurations and the results indicate that both junctions are currently working within capacity during the AM and PM peak hours and will continue to do so for the opening year of 2024 and the future assessment year of 2039 + Development.

Site 3 has been modelled based on its proposed configuration and the results indicate that this junction would operate well within capacity for the future assessment year of 2039 + Development.

Therefore, it can be concluded that there is sufficient capacity in the surrounding road network to facilitate the proposed strategic housing development.

This report should be read in conjunction with the Travel Plan accompanying the documentation package. It is recommended that the measures within the Travel Plan are implemented during the development's operation.

## **APPENDICES**

### **A. 2021 Traffic Survey**

**IDASO**  
Innovative Data Solutions



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**Data A**  
Traffic Transc

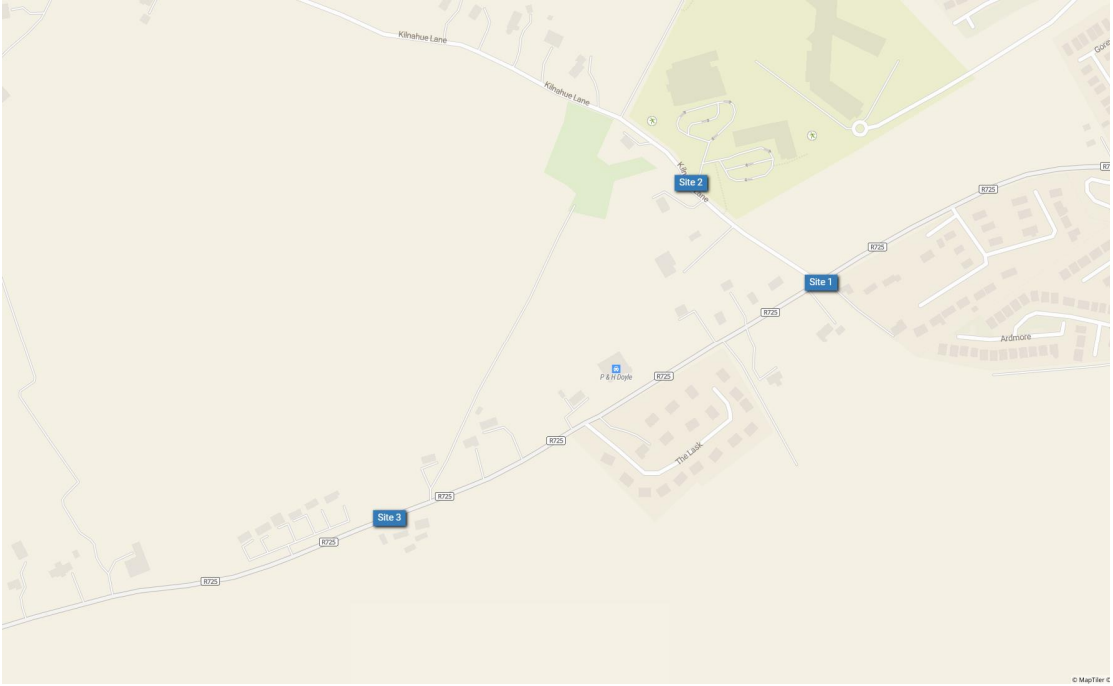
159 21348 Carnew

**with**

**analysis Services**  
partech - Commercial Innovation

**| compliments**

Survey Name: 159 21348 Carnew  
Date: Thu 07 Oct 2021











16:45	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	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
17:15	0	0	1	0	0	0	0	0	1	1	0	0
17:30	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
<b>H/TOT</b>	0	0	1	0	0	0	0	0	1	1	0	0
18:00	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
18:30	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
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0
19:00	0	0	0	0	0	0	0	0	0	0	0	0
19:15	0	0	0	0	0	0	0	0	0	0	0	0
19:30	0	0	0	0	0	0	0	0	0	0	0	0
19:45	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0
20:00	0	0	0	0	0	0	0	0	0	0	0	0
20:15	0	0	0	0	0	0	0	0	0	0	0	0
20:30	0	0	0	0	0	0	0	0	0	0	0	0
20:45	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0
21:00	0	0	0	0	0	0	0	0	0	0	0	0
21:15	0	0	0	0	0	0	0	0	0	0	0	0
21:30	0	0	0	0	0	0	0	0	0	0	0	0
21:45	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0	0	0	0
22:15	0	0	0	0	0	0	0	0	0	0	0	0
22:30	0	0	0	0	0	0	0	0	0	0	0	0
22:45	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	0	0	0
23:15	0	0	0	0	0	0	0	0	0	0	0	0
23:30	0	0	0	0	0	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0
<b>24 TOT</b>	0	0	1	0	0	0	0	0	1	1	0	0

Lane

A => B						TOT	PCU	P/C	M/C	A => C			
CAR	TAXI	LGV	OGV1	OGV2	PSV					CAR	TAXI	LGV	OGV1
0	0	0	0	0	0	0	0	0	0	2	0	0	0
0	0	0	0	0	0	0	0	0	0	1	0	0	1
0	0	0	0	0	0	0	0	0	0	3	0	0	0
0	0	0	0	0	0	0	0	0	0	1	0	0	0
0	0	0	0	0	0	0	0	0	0	7	0	0	1
0	0	0	0	0	0	0	0	0	0	1	0	0	0
0	0	0	0	0	0	0	0	0	0	2	0	0	0
0	0	0	0	0	0	0	0	0	0	1	0	0	0
0	0	0	0	0	0	0	0	0	0	2	0	0	0
0	0	0	0	0	0	0	0	0	0	6	0	0	0
0	0	0	0	0	0	0	0	0	0	2	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	1	0	1	0
0	0	0	0	0	0	0	0	0	0	3	0	1	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	1	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	1	0	0	0
0	0	0	0	0	0	0	0	0	0	2	0	0	0
0	0	0	0	0	0	0	0	0	0	1	0	1	0
0	0	0	0	0	0	0	0	0	0	1	0	0	0
0	0	0	0	0	0	0	0	0	0	1	0	0	0
0	0	0	0	0	0	0	0	0	0	4	0	1	0
0	0	0	0	0	0	0	0	0	0	7	0	2	0
0	0	0	0	0	0	0	0	0	0	4	0	1	1
0	0	0	0	0	0	0	0	0	0	9	0	0	1
0	0	0	0	0	0	0	0	0	0	14	0	0	0
0	0	0	0	0	0	0	0	0	0	4	0	1	0
0	0	0	0	0	0	0	0	0	0	31	0	2	2
0	0	0	0	0	0	0	0	0	0	8	0	1	1
0	0	0	0	0	0	0	0	0	0	4	0	1	2
0	0	0	0	0	0	0	0	0	0	9	0	2	0
0	0	0	0	0	0	0	0	0	0	9	0	6	3
0	0	0	0	0	0	0	0	0	0	30	0	10	6

0	0	0	0	0	0	0	0	0	0	10	0	2	0
0	0	0	0	0	0	0	0	0	0	30	0	6	0
0	0	0	0	0	0	0	0	0	0	27	0	5	1
0	0	0	0	0	0	0	0	0	0	28	0	5	0
0	0	0	0	0	0	0	0	0	0	95	0	18	1
0	0	0	0	0	0	0	0	0	0	25	1	3	0
0	0	0	0	0	0	0	0	0	0	33	0	4	3
0	0	0	0	0	0	0	0	0	1	47	0	2	0
0	0	0	0	0	0	0	0	0	0	48	0	8	2
0	0	0	0	0	0	0	0	0	1	153	1	17	5
0	0	0	0	0	0	0	0	0	0	45	0	5	2
0	0	0	0	0	0	0	0	0	0	19	0	6	2
0	0	0	0	0	0	0	0	0	0	37	0	9	4
0	0	0	0	0	0	0	0	0	0	29	0	9	4
0	0	0	0	0	0	0	0	0	0	130	0	29	12
0	0	0	0	0	0	0	0	0	0	28	0	7	1
0	0	0	0	0	0	0	0	0	0	23	0	4	5
0	0	0	0	0	0	0	0	0	0	32	0	2	0
0	0	0	0	0	0	0	0	0	0	32	0	5	2
0	0	0	0	0	0	0	0	0	0	115	0	18	8
0	0	0	0	0	0	0	0	0	0	30	0	7	3
0	0	0	0	0	0	0	0	0	0	36	0	2	1
0	0	0	0	0	0	0	0	0	0	47	0	4	0
0	0	0	0	0	0	0	0	0	0	42	2	7	1
0	0	0	0	0	0	0	0	0	0	155	2	20	5
0	0	0	0	0	0	0	0	0	0	37	1	3	4
0	0	0	0	0	0	0	0	0	0	41	0	3	1
0	0	0	0	0	0	0	0	0	0	36	0	4	3
0	0	0	0	0	0	0	0	0	0	51	0	11	0
0	0	0	0	0	0	0	0	0	0	165	1	21	8
0	0	1	0	0	0	1	1	1	0	53	0	5	1
0	0	0	0	0	0	0	0	0	0	54	1	8	1
0	0	0	0	0	0	0	0	0	0	42	1	6	2
0	0	0	0	0	0	0	0	0	0	50	0	5	0
0	0	1	0	0	0	1	1	1	0	199	2	24	4
0	0	0	0	0	0	0	0	0	0	51	0	3	1
0	0	0	0	0	0	0	0	0	0	45	0	9	1
0	0	0	0	0	0	0	0	0	0	57	0	7	2
0	0	0	0	0	0	0	0	0	1	48	0	14	1
0	0	0	0	0	0	0	0	0	1	201	0	33	5
0	0	0	0	0	0	0	0	0	0	43	0	7	0
0	0	0	0	0	0	0	0	0	0	61	0	4	2
0	0	0	0	0	0	0	0	0	0	64	0	2	2
0	0	0	0	0	0	0	0	0	0	50	0	8	3
0	0	0	0	0	0	0	0	0	0	218	0	21	7
0	0	0	0	0	0	0	0	0	0	48	1	8	4
0	0	0	0	0	0	0	0	0	0	54	0	4	1
0	0	0	0	0	0	0	0	0	0	54	0	6	2

0	0	0	0	0	0	0	0	0	0	72	1	7	1
0	0	0	0	0	0	0	0	0	0	228	2	25	8
0	0	0	0	0	0	0	0	0	0	69	0	13	0
0	0	1	0	0	0	1	1	0	0	58	0	11	1
0	0	0	0	0	0	0	0	0	1	72	0	14	2
0	0	0	0	0	0	0	0	0	0	77	0	11	0
0	0	1	0	0	0	1	1	0	1	276	0	49	3
0	0	0	0	0	0	0	0	0	0	56	0	9	1
0	0	0	0	0	0	0	0	0	0	62	0	8	1
0	0	0	0	0	0	0	0	0	0	59	0	8	1
0	0	0	0	0	0	0	0	1	0	41	0	5	1
0	0	0	0	0	0	0	0	1	0	218	0	30	4
0	0	0	0	0	0	0	0	0	0	48	0	1	2
0	0	0	0	0	0	0	0	0	0	41	0	5	1
0	0	0	0	0	0	0	0	0	0	53	0	5	0
0	0	0	0	0	0	0	0	0	0	42	0	1	1
0	0	0	0	0	0	0	0	0	0	184	0	12	4
0	0	0	0	0	0	0	0	0	0	32	0	2	0
0	0	0	0	0	0	0	0	0	0	29	0	1	0
0	0	0	0	0	0	0	0	0	0	31	0	1	2
0	0	0	0	0	0	0	0	0	0	38	0	2	2
0	0	0	0	0	0	0	0	0	0	130	0	6	4
0	0	0	0	0	0	0	0	0	0	32	0	1	1
0	0	0	0	0	0	0	0	0	0	21	0	0	0
0	0	0	0	0	0	0	0	0	0	19	0	5	0
0	0	0	0	0	0	0	0	0	0	20	0	1	1
0	0	0	0	0	0	0	0	0	0	92	0	7	2
0	0	0	0	0	0	0	0	0	0	10	0	1	0
0	0	0	0	0	0	0	0	0	0	8	0	0	0
0	0	0	0	0	0	0	0	0	0	6	0	1	0
0	0	0	0	0	0	0	0	0	0	1	0	1	0
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0	0	0	0	0	0	0	0	0	0	10	0	0	1
0	0	0	0	0	0	0	0	0	0	5	0	0	0
0	0	0	0	0	0	0	0	0	0	2	0	0	1
0	0	0	0	0	0	0	0	0	0	2	0	0	0
0	0	0	0	0	0	0	0	0	0	19	0	0	2
0	0	2	0	0	0	2	2	2	3	2689	8	348	91







0	0	81	81.5	0	0	0	0	0	0	0	0	0	0
7	9	279	301.1	0	0	3	0	1	0	0	0	4	4
0	1	83	84	0	0	3	0	0	0	0	0	3	3
1	0	71	72.8	0	0	2	0	0	0	0	0	2	2
1	1	91	93.7	0	0	3	0	1	0	0	0	4	4
0	0	88	88	0	0	3	0	0	0	0	0	3	3
2	2	333	338.5	0	0	11	0	1	0	0	0	12	12
0	1	67	68.5	0	0	2	0	0	0	0	0	2	2
0	0	71	71.5	0	0	2	0	0	0	0	0	2	2
1	0	69	70.8	0	0	1	0	0	0	0	0	1	1
0	1	49	49.7	0	0	1	0	0	0	0	0	1	1
1	2	256	260.5	0	0	6	0	0	0	0	0	6	6
0	0	51	52	0	0	2	0	1	0	0	0	3	3
0	1	48	49.5	0	0	1	0	1	0	0	0	2	2
0	0	58	58	0	0	1	0	0	0	0	0	1	1
0	0	44	44.5	0	0	2	0	0	0	0	0	2	2
0	1	201	204	0	0	6	0	2	0	0	0	8	8
0	2	36	38	0	0	2	0	0	0	0	0	2	2
0	0	30	30	0	0	1	0	0	0	0	0	1	1
0	0	34	35	0	0	0	0	0	0	0	0	0	0
0	0	42	43	0	0	2	0	0	0	0	0	2	2
0	2	142	146	0	0	5	0	0	0	0	0	5	5
0	0	34	34.5	0	0	1	0	0	0	0	0	1	1
0	1	22	23	0	0	0	0	0	0	0	0	0	0
0	1	25	26	0	0	1	0	0	0	0	0	1	1
0	0	22	22.5	0	0	1	0	0	0	0	0	1	1
0	2	103	106	0	0	3	0	0	0	0	0	3	3
0	0	11	11	0	0	0	0	0	0	0	0	0	0
0	0	8	8	0	0	0	0	0	0	0	0	0	0
0	0	7	7	0	0	0	0	0	0	0	0	0	0
0	0	2	2	0	0	0	0	0	0	0	0	0	0
0	0	28	28	0	0	0	0	0	0	0	0	0	0
0	0	11	11.5	0	0	0	0	0	0	0	0	0	0
0	0	5	5	0	0	0	0	0	0	0	0	0	0
0	0	3	3.5	0	0	0	0	0	0	0	0	0	0
1	0	3	4.3	0	0	0	0	0	0	0	0	0	0
1	0	22	24.3	0	0	0	0	0	0	0	0	0	0
48	37	3226	3367.5	2	0	519	5	15	4	0	12	557	569.4





















C => A						TOT	PCU	P/C	M/C	C => B			
CAR	TAXI	LGV	OGV1	OGV2	PSV					CAR	TAXI	LGV	OGV1
6	0	0	0	0	0	6	6	0	0	0	0	0	0
1	0	0	0	0	1	2	3	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	1	1	0	0	0	0	0	0
8	0	0	0	0	1	9	10	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	1	1	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	3	3	0	0	0	0	0	0
4	0	0	0	0	0	4	4	0	0	0	0	0	0
1	0	0	0	0	0	1	1	0	0	0	0	0	0
3	0	0	0	0	0	3	3	0	0	0	0	0	0
1	0	1	0	1	0	3	4.3	0	0	0	0	0	0
2	0	1	0	0	0	3	3	0	0	0	0	0	0
7	0	2	0	1	0	10	11.3	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	1	0	0	4	4.5	0	0	0	0	0	0
1	0	0	0	0	0	1	1	0	0	0	0	0	0
2	0	0	0	0	0	3	2.2	0	0	0	0	0	0
6	0	0	1	0	0	8	7.7	0	0	0	0	0	0
0	0	1	0	1	0	2	3.3	0	0	0	0	0	0
2	0	1	0	0	0	3	3	0	0	0	0	0	0
2	0	0	0	0	0	2	2	0	0	0	0	0	0
2	0	0	3	1	0	6	8.8	0	0	0	0	0	0
6	0	2	3	2	0	13	17.1	0	0	0	0	0	0
3	0	0	0	0	0	3	3	0	0	0	0	0	0
4	0	1	0	0	0	5	5	0	0	0	0	0	0
15	0	5	0	0	0	20	20	0	0	0	0	0	0
11	0	2	0	0	1	14	15	0	0	0	0	0	0
33	0	8	0	0	1	42	43	0	0	0	0	0	0
20	0	3	1	0	0	24	24.5	0	0	0	0	0	0
17	0	4	0	1	0	22	23.3	0	0	0	0	0	0
30	0	2	0	0	0	32	32	0	0	0	0	0	0
17	0	6	1	0	2	26	28.5	0	0	0	0	0	0
84	0	15	2	1	2	104	108.3	0	0	0	0	0	0

12	0	10	2	0	1	25	27	0	0	0	0	0	0
36	0	6	1	1	6	50	57.8	0	0	0	0	0	0
36	0	6	3	1	0	46	48.8	0	0	0	0	0	0
44	0	14	3	1	0	62	64.8	0	0	0	0	0	0
128	0	36	9	3	7	183	198.4	0	0	0	0	0	0
50	0	9	0	0	1	60	61	0	0	0	0	0	0
91	0	9	5	0	1	106	109.5	0	0	0	0	0	0
63	0	8	1	1	0	73	74.8	0	0	0	0	0	0
55	0	7	1	0	0	63	63.5	0	0	0	0	0	0
259	0	33	7	1	2	302	308.8	0	0	0	0	0	0
64	0	4	0	1	0	69	70.3	0	0	0	0	0	0
72	1	5	3	2	0	83	87.1	0	0	0	0	0	0
43	1	3	3	0	0	50	51.5	0	0	0	0	0	0
48	0	7	1	2	0	58	61.1	0	0	0	0	0	0
227	2	19	7	5	0	260	270	0	0	0	0	0	0
36	0	11	2	1	0	50	52.3	0	0	0	0	0	0
37	0	8	1	0	1	47	48.5	0	0	0	0	0	0
45	1	5	0	0	0	51	51	0	0	0	0	1	0
46	0	6	0	1	0	53	54.3	0	0	0	0	0	0
164	1	30	3	2	1	201	206.1	0	0	0	0	1	0
23	0	4	4	0	1	32	35	0	0	0	0	0	0
32	0	8	1	3	0	44	48.4	0	0	0	0	0	0
43	0	6	1	1	0	52	53	0	0	0	0	0	0
38	1	8	1	1	0	49	50.8	0	0	0	0	0	0
136	1	26	7	5	1	177	187.2	0	0	0	0	0	0
38	1	5	0	0	0	44	44	0	0	0	0	0	0
44	2	6	4	1	0	57	60.3	0	0	0	0	0	0
44	0	2	3	1	0	50	52.8	0	0	0	0	0	0
31	0	4	2	1	0	38	40.3	0	0	0	0	0	0
157	3	17	9	3	0	189	197.4	0	0	0	0	0	0
47	0	9	2	2	0	60	63.6	0	0	0	0	0	0
33	0	4	0	3	1	41	45.9	0	0	0	0	0	0
38	1	7	1	0	0	47	47.5	0	0	0	0	0	0
46	0	7	3	3	0	60	64.6	0	0	0	0	0	0
164	1	27	6	8	1	208	221.6	0	0	0	0	0	0
52	0	6	2	1	0	61	63.3	0	0	0	0	0	0
47	0	7	1	2	1	58	62.1	0	0	0	0	0	0
56	0	5	0	0	2	63	65	0	0	0	0	0	0
54	0	7	0	1	1	63	65.3	0	0	0	0	0	0
209	0	25	3	4	4	245	255.7	0	0	0	0	0	0
45	1	4	1	0	2	53	55.5	0	0	0	0	0	0
51	0	3	1	1	2	58	61.8	0	0	0	0	0	0
33	0	2	2	2	0	39	42.6	0	0	0	0	0	0
35	0	8	2	0	0	45	46	0	0	0	0	0	0
164	1	17	6	3	4	195	205.9	0	0	0	0	0	0
48	0	3	2	1	1	55	58.3	0	0	0	0	0	0
61	2	7	2	1	2	75	79.3	0	0	0	0	0	0
41	0	6	3	0	0	51	51.9	0	0	0	0	0	0

50	0	4	1	0	0	55	55.5	0	0	0	0	0	0
200	2	20	8	2	3	236	245	0	0	0	0	0	0
57	1	13	2	0	0	73	74	0	0	0	0	0	0
48	0	3	2	1	0	54	56.3	0	0	0	0	0	0
56	0	7	0	0	1	64	65	0	0	0	0	0	0
48	0	7	1	0	1	57	58.5	0	0	0	0	0	0
209	1	30	5	1	2	248	253.8	0	0	0	0	0	0
49	0	5	0	0	1	56	56.2	0	0	0	0	0	0
44	0	2	0	0	1	47	48	0	0	0	0	0	0
45	0	3	1	0	0	49	49.5	0	0	0	0	0	0
42	0	2	2	0	0	46	47	0	0	0	0	0	0
180	0	12	3	0	2	198	200.7	0	0	0	0	0	0
34	0	3	1	0	0	39	38.7	0	0	0	0	0	0
27	0	0	0	0	0	27	27	0	0	0	0	0	0
34	0	2	0	0	0	36	36	0	0	0	0	0	0
43	0	0	1	0	0	44	44.5	0	0	0	0	0	0
138	0	5	2	0	0	146	146.2	0	0	0	0	0	0
27	0	0	0	0	0	27	27	0	0	0	0	0	0
25	0	1	0	0	0	26	26	0	0	0	0	0	0
17	0	1	1	0	0	19	19.5	0	0	0	0	0	0
14	0	0	0	0	0	14	14	0	0	0	0	0	0
83	0	2	1	0	0	86	86.5	0	0	0	0	0	0
6	0	0	0	0	0	6	6	0	0	0	0	0	0
19	0	1	0	0	0	20	20	0	0	0	0	0	0
6	0	0	0	0	0	6	6	0	0	0	0	0	0
11	0	0	1	0	0	12	12.5	0	0	0	0	0	0
42	0	1	1	0	0	44	44.5	0	0	0	0	0	0
4	0	0	0	0	0	4	4	0	0	0	0	0	0
4	0	0	0	0	0	4	4	0	0	0	0	0	0
5	0	1	0	0	0	6	6	0	0	0	0	0	0
5	0	0	0	0	0	5	5	0	0	0	0	0	0
18	0	1	0	0	0	19	19	0	0	0	0	0	0
1	0	0	0	0	0	1	1	0	0	0	0	0	0
1	0	0	0	0	0	1	1	0	0	0	0	0	0
4	0	0	0	0	0	4	4	0	0	0	0	0	0
2	0	0	0	0	0	2	2	0	0	0	0	0	0
8	0	0	0	0	0	8	8	0	0	0	0	0	0
2634	12	328	83	41	31	3135	3256.2	0	0	0	0	1	0











0	0	0	0	0	0	0	0	0	0	0	0	0	0
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0	0	0	0	0	0	0	0	0	0	0	0	0	0
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TOT	PCU	C => B								TOT	PCU	P/C	M/C
		P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV				
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0	0	0	0	0	0	0	0	0	0	0	0	69	0
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0	0	0	0	0	0	0	0	0	0	0	0	20	0
0	0	2	0	0	0	0	0	2	2	2	3	2346	3









TOT	PCU	C => B								TOT	PCU	P/C	M/C
		P/C	M/C	CAR	TAXI	LGV	OGV1	OGV2	PSV				
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0	0	0	0	8	0	0	0	0	1	9	10	0	0
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0	0	0	0	1	0	0	0	0	0	1	1	0	0
0	0	0	0	3	0	0	0	0	0	3	3	0	0
0	0	0	0	5	0	0	0	0	0	5	5	0	0
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0	0	0	0	3	0	0	0	0	0	3	3	0	0
0	0	0	0	2	0	0	0	1	0	3	4.3	0	0
0	0	0	0	1	0	1	0	0	0	2	2	0	0
0	0	0	0	7	0	1	0	1	0	9	10.3	0	0
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0	0	0	0	2	0	0	1	0	0	3	3.5	0	0
0	0	0	0	1	0	0	0	0	0	1	1	0	0
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0	0	0	0	5	0	0	1	0	0	6	6.5	0	0
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0	0	0	0	3	0	0	0	0	0	3	3	0	0
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0	0	0	0	33	0	5	4	1	0	43	46.3	0	0
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0	0	0	0	33	0	5	2	1	0	41	43.3	0	0
0	0	0	0	34	0	2	3	1	0	40	42.8	0	0
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0	0	0	0	33	0	3	2	2	0	40	43.6	0	0
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0	0	0	0	55	0	4	0	1	1	61	63.3	0	0
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0	0	0	0	43	0	0	1	0	1	45	46.5	0	0
0	0	0	0	3	0	0	0	0	0	3	3	0	0
0	0	0	0	3	0	0	0	0	0	3	3	0	0
0	0	0	0	6	0	0	1	0	0	7	7.5	0	0
0	0	0	0	5	0	0	0	0	0	5	5	0	0
0	0	0	0	17	0	0	1	0	0	18	18.5	0	0
0	0	0	0	1	0	0	0	0	0	1	1	0	0
0	0	0	0	1	0	0	0	0	0	1	1	0	0
0	0	0	0	4	0	0	0	0	0	4	4	0	0
0	0	0	0	2	0	0	0	0	0	2	2	0	0
0	0	0	0	8	0	0	0	0	0	8	8	0	0
0	0	3	1	2376	9	255	74	40	34	2792	2912	0	0







## **B. TRICS Trip Rates**

Calculation Reference: AUDIT-561501-211018-1011

**TRIP RATE CALCULATION SELECTION PARAMETERS:**

Land Use : 01 - RETAIL  
Category : I - SHOPPING CENTRE - LOCAL SHOPS

**TOTAL VEHICLES**

Selected regions and areas:

<b>02 SOUTH EAST</b>	
EX ESSEX	1 days
<b>11 SCOTLAND</b>	
SR STIRLING	1 days

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

**Primary Filtering selection:**

*This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.*

Parameter: Gross floor area  
Actual Range: 375 to 550 (units: sqm)  
Range Selected by User: 210 to 800 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 08/07/16

*This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.*

Selected survey days:

Thursday	1 days
Friday	1 days

*This data displays the number of selected surveys by day of the week.*

Selected survey types:

Manual count	2 days
Directional ATC Count	0 days

*This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.*

Selected Locations:

Suburban Area (PPS6 Out of Centre)	1
Edge of Town	1

*This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.*

Selected Location Sub Categories:

Residential Zone	2
------------------	---

*This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.*

**Secondary Filtering selection:**

Use Class:

n/a	2 days
-----	--------

*This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.*

Population within 500m Range:

All Surveys Included



**Secondary Filtering selection (Cont.):**

Population within 1 mile:

5,001 to 10,000	1 days
20,001 to 25,000	1 days

*This data displays the number of selected surveys within stated 1-mile radii of population.*

Population within 5 miles:

75,001 to 100,000	2 days
-------------------	--------

*This data displays the number of selected surveys within stated 5-mile radii of population.*

Car ownership within 5 miles:

1.1 to 1.5	2 days
------------	--------

*This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.*

Petrol filling station:

Included in the survey count	0 days
Excluded from count or no filling station	2 days

*This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.*

Travel Plan:

Yes	1 days
No	1 days

*This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.*

PTAL Rating:

No PTAL Present	2 days
-----------------	--------

*This data displays the number of selected surveys with PTAL Ratings.*

LIST OF SITES relevant to selection parameters

<b>1</b>	<b>EX-01-I-02</b>	<b>LOCAL SHOPS</b>		<b>ESSEX</b>
	QUEENS ROAD			
	BRAINTREE			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:	375 sqm		
	Survey date: FRIDAY	08/07/16		Survey Type: MANUAL
<b>2</b>	<b>SR-01-I-02</b>	<b>LOCAL SHOPS</b>		<b>STIRLING</b>
	ALLOA ROAD			
	STIRLING			
	Edge of Town			
	Residential Zone			
	Total Gross floor area:	550 sqm		
	Survey date: THURSDAY	26/06/14		Survey Type: MANUAL

*This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

**TOTAL VEHICLES**

**Calculation factor: 100 sqm**

**BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	463	10.054	2	463	10.595	2	463	20.649
08:00 - 09:00	2	463	9.946	2	463	9.946	2	463	19.892
09:00 - 10:00	2	463	8.973	2	463	8.000	2	463	16.973
10:00 - 11:00	2	463	9.730	2	463	9.297	2	463	19.027
11:00 - 12:00	2	463	9.622	2	463	10.054	2	463	19.676
12:00 - 13:00	2	463	10.270	2	463	9.622	2	463	19.892
13:00 - 14:00	2	463	9.405	2	463	9.730	2	463	19.135
14:00 - 15:00	2	463	10.270	2	463	10.378	2	463	20.648
15:00 - 16:00	2	463	10.811	2	463	11.351	2	463	22.162
16:00 - 17:00	2	463	13.730	2	463	12.216	2	463	25.946
17:00 - 18:00	2	463	15.459	<b>2</b>	<b>463</b>	<b>16.108</b>	<b>2</b>	<b>463</b>	<b>31.567</b>
18:00 - 19:00	<b>2</b>	<b>463</b>	<b>15.568</b>	2	463	15.243	2	463	30.811
19:00 - 20:00	2	463	12.865	2	463	12.865	2	463	25.730
20:00 - 21:00	2	463	8.216	2	463	9.514	2	463	17.730
21:00 - 22:00	2	463	4.541	2	463	4.865	2	463	9.406
22:00 - 23:00									
23:00 - 24:00									
<b>Total Rates:</b>			159.460			159.784			319.244

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

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

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**Parameter summary**

Trip rate parameter range selected: 375 - 550 (units: sqm)  
 Survey date range: 01/01/13 - 08/07/16  
 Number of weekdays (Monday-Friday): 2  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys automatically removed from selection: 0  
 Surveys manually removed from selection: 0

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

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

**CARS**

**Calculation factor: 100 sqm**

**BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	463	7.135	2	463	7.676	2	463	14.811
08:00 - 09:00	2	463	7.784	2	463	7.784	2	463	15.568
09:00 - 10:00	2	463	7.459	2	463	6.595	2	463	14.054
10:00 - 11:00	2	463	8.216	2	463	8.000	2	463	16.216
11:00 - 12:00	2	463	8.541	2	463	8.865	2	463	17.406
12:00 - 13:00	2	463	9.081	2	463	8.324	2	463	17.405
13:00 - 14:00	2	463	8.216	2	463	8.541	2	463	16.757
14:00 - 15:00	2	463	9.189	2	463	9.081	2	463	18.270
15:00 - 16:00	2	463	9.514	2	463	9.946	2	463	19.460
16:00 - 17:00	2	463	11.892	2	463	10.703	2	463	22.595
17:00 - 18:00	2	463	12.973	<b>2</b>	<b>463</b>	<b>13.730</b>	2	463	26.703
18:00 - 19:00	<b>2</b>	<b>463</b>	<b>13.838</b>	2	463	13.405	<b>2</b>	<b>463</b>	<b>27.243</b>
19:00 - 20:00	2	463	12.108	2	463	11.892	2	463	24.000
20:00 - 21:00	2	463	7.351	2	463	8.649	2	463	16.000
21:00 - 22:00	2	463	4.324	2	463	4.649	2	463	8.973
22:00 - 23:00									
23:00 - 24:00									
<b>Total Rates:</b>			137.621			137.840			275.461

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

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

Calculation Reference: AUDIT-561501-210427-0439

**TRIP RATE CALCULATION SELECTION PARAMETERS:**

Land Use : 04 - EDUCATION  
Category : D - NURSERY

**TOTAL VEHICLES**

Selected regions and areas:

12 CONNAUGHT  
RO ROSCOMMON 2 days

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

**Primary Filtering selection:**

*This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.*

Parameter: Gross floor area  
Actual Range: 500 to 509 (units: sqm)  
Range Selected by User: 256 to 1300 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 27/04/18

*This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.*

Selected survey days:

Friday 2 days

*This data displays the number of selected surveys by day of the week.*

Selected survey types:

Manual count 2 days  
Directional ATC Count 0 days

*This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.*

Selected Locations:

Edge of Town Centre 1  
Edge of Town 1

*This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.*

Selected Location Sub Categories:

Residential Zone 2

*This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.*

**Secondary Filtering selection:**

Use Class:

E(f) 2 days

*This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.*

Population within 500m Range:

All Surveys Included

**Secondary Filtering selection (Cont.):**

Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	1 days

*This data displays the number of selected surveys within stated 1-mile radii of population.*

Population within 5 miles:

5,001 to 25,000	2 days
-----------------	--------

*This data displays the number of selected surveys within stated 5-mile radii of population.*

Car ownership within 5 miles:

1.1 to 1.5	2 days
------------	--------

*This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.*

Travel Plan:

No	2 days
----	--------

*This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.*

PTAL Rating:

No PTAL Present	2 days
-----------------	--------

*This data displays the number of selected surveys with PTAL Ratings.*

LIST OF SITES relevant to selection parameters

<b>1</b>	<b>RO-04-D-01</b>	<b>NURSERY</b>		<b>ROSCOMMON</b>
	PARK VIEW			
	ROSCOMMON			
	CRUBY HILL			
	Edge of Town			
	Residential Zone			
	Total Gross floor area:		500 sqm	
	Survey date: FRIDAY		26/09/14	Survey Type: MANUAL
<b>2</b>	<b>RO-04-D-02</b>	<b>NURSERY</b>		<b>ROSCOMMON</b>
	CIRCULAR ROAD			
	ROSCOMMON			
	BALLYPHEASAN			
	Edge of Town Centre			
	Residential Zone			
	Total Gross floor area:		509 sqm	
	Survey date: FRIDAY		27/04/18	Survey Type: MANUAL

*This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.*

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

**TOTAL VEHICLES**

Calculation factor: 100 sqm

**BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	505	0.496	2	505	0.297	2	505	0.793
08:00 - 09:00	<b>2</b>	<b>505</b>	<b>5.946</b>	2	505	3.271	2	505	9.217
09:00 - 10:00	2	505	5.649	<b>2</b>	<b>505</b>	<b>6.244</b>	<b>2</b>	<b>505</b>	<b>11.893</b>
10:00 - 11:00	2	505	0.396	2	505	0.793	2	505	1.189
11:00 - 12:00	2	505	1.586	2	505	0.396	2	505	1.982
12:00 - 13:00	2	505	3.271	2	505	4.460	2	505	7.731
13:00 - 14:00	2	505	1.982	2	505	1.982	2	505	3.964
14:00 - 15:00	2	505	2.279	2	505	1.288	2	505	3.567
15:00 - 16:00	2	505	0.892	2	505	1.982	2	505	2.874
16:00 - 17:00	2	505	1.982	2	505	2.081	2	505	4.063
17:00 - 18:00	2	505	3.766	2	505	5.055	2	505	8.821
18:00 - 19:00	2	505	0.000	2	505	0.793	2	505	0.793
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
<b>Total Rates:</b>			28.245			28.642			56.887

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

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

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**Parameter summary**

Trip rate parameter range selected: 500 - 509 (units: sqm)  
 Survey date range: 01/01/13 - 27/04/18  
 Number of weekdays (Monday-Friday): 2  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys automatically removed from selection: 0  
 Surveys manually removed from selection: 0

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



Calculation Reference: AUDIT-561501-210415-0433

**TRIP RATE CALCULATION SELECTION PARAMETERS:**

Land Use : 03 - RESIDENTIAL  
 Category : K - MIXED PRIV HOUS (FLATS AND HOUSES)

**TOTAL VEHICLES**

Selected regions and areas:

<b>01</b>	<b>GREATER LONDON</b>	
	BE BEXLEY	1 days
	BN BARNET	1 days
	HD HILLINGDON	1 days
<b>02</b>	<b>SOUTH EAST</b>	
	WS WEST SUSSEX	1 days

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

**Primary Filtering selection:**

*This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.*

Parameter: No of Dwellings  
 Actual Range: 276 to 482 (units: )  
 Range Selected by User: 250 to 500 (units: )

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 27/05/19

*This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.*

Selected survey days:

Monday	1 days
Thursday	3 days

*This data displays the number of selected surveys by day of the week.*

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

*This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.*

Selected Locations:

Edge of Town Centre	1
Edge of Town	3

*This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.*

Selected Location Sub Categories:

Residential Zone	4
------------------	---

*This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.*

**Secondary Filtering selection:**

Use Class:

C3 4 days

*This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.*

Population within 500m Range:

All Surveys Included

Population within 1 mile:

10,001 to 15,000 1 days

20,001 to 25,000 1 days

25,001 to 50,000 2 days

*This data displays the number of selected surveys within stated 1-mile radii of population.*

Population within 5 miles:

75,001 to 100,000 1 days

250,001 to 500,000 1 days

500,001 or More 2 days

*This data displays the number of selected surveys within stated 5-mile radii of population.*

Car ownership within 5 miles:

0.6 to 1.0 2 days

1.1 to 1.5 2 days

*This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.*

Travel Plan:

Yes 4 days

*This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.*

PTAL Rating:

No PTAL Present 1 days

0 None 1 days

2 Poor 1 days

3 Moderate 1 days

*This data displays the number of selected surveys with PTAL Ratings.*

LIST OF SITES relevant to selection parameters

<b>1</b>	<b>BE-03-K-01</b>	<b>MIXED HOUSES &amp; FLATS</b>	<b>BEXLEY</b>
		SLADE GREEN ROAD	
		ERITH	
		SLADE GREEN	
		Edge of Town	
		Residential Zone	
		Total No of Dwellings:	276
		Survey date: THURSDAY	20/09/18
			Survey Type: MANUAL
<b>2</b>	<b>BN-03-K-02</b>	<b>HOUSES &amp; FLATS</b>	<b>BARNET</b>
		FRITH LANE	
		MILL HILL	
		MILL HILL EAST	
		Edge of Town	
		Residential Zone	
		Total No of Dwellings:	479
		Survey date: THURSDAY	07/07/16
			Survey Type: MANUAL
<b>3</b>	<b>HD-03-K-02</b>	<b>MIXED HOUSES &amp; FLATS</b>	<b>HILLINGDON</b>
		HILLINGDON ROAD	
		UXBRIDGE	
		Edge of Town Centre	
		Residential Zone	
		Total No of Dwellings:	482
		Survey date: MONDAY	24/09/18
			Survey Type: MANUAL
<b>4</b>	<b>WS-03-K-04</b>	<b>MIXED HOUSES &amp; FLATS</b>	<b>WEST SUSSEX</b>
		HILLS FARM LANE	
		HORSHAM	
		BROADBRIDGE HEATH	
		Edge of Town	
		Residential Zone	
		Total No of Dwellings:	371
		Survey date: THURSDAY	28/06/18
			Survey Type: MANUAL

*This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.*

TRIP RATE for Land Use 03 - RESIDENTIAL/K - MIXED PRIV HOUS (FLATS AND HOUSES)

**TOTAL VEHICLES**

**Calculation factor: 1 DWELLS**

**BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	4	402	0.065	4	402	0.218	4	402	0.283
08:00 - 09:00	4	402	0.128	<b>4</b>	<b>402</b>	<b>0.318</b>	<b>4</b>	<b>402</b>	<b>0.446</b>
09:00 - 10:00	4	402	0.141	4	402	0.185	4	402	0.326
10:00 - 11:00	4	402	0.108	4	402	0.122	4	402	0.230
11:00 - 12:00	4	402	0.110	4	402	0.124	4	402	0.234
12:00 - 13:00	4	402	0.135	4	402	0.119	4	402	0.254
13:00 - 14:00	4	402	0.132	4	402	0.137	4	402	0.269
14:00 - 15:00	4	402	0.111	4	402	0.128	4	402	0.239
15:00 - 16:00	4	402	0.183	4	402	0.155	4	402	0.338
16:00 - 17:00	4	402	0.194	4	402	0.138	4	402	0.332
17:00 - 18:00	4	402	0.256	4	402	0.133	4	402	0.389
18:00 - 19:00	<b>4</b>	<b>402</b>	<b>0.267</b>	4	402	0.138	4	402	0.405
19:00 - 20:00	3	412	0.194	3	412	0.146	3	412	0.340
20:00 - 21:00	3	412	0.155	3	412	0.086	3	412	0.241
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
<b>Total Rates:</b>			2.179			2.147			4.326

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

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

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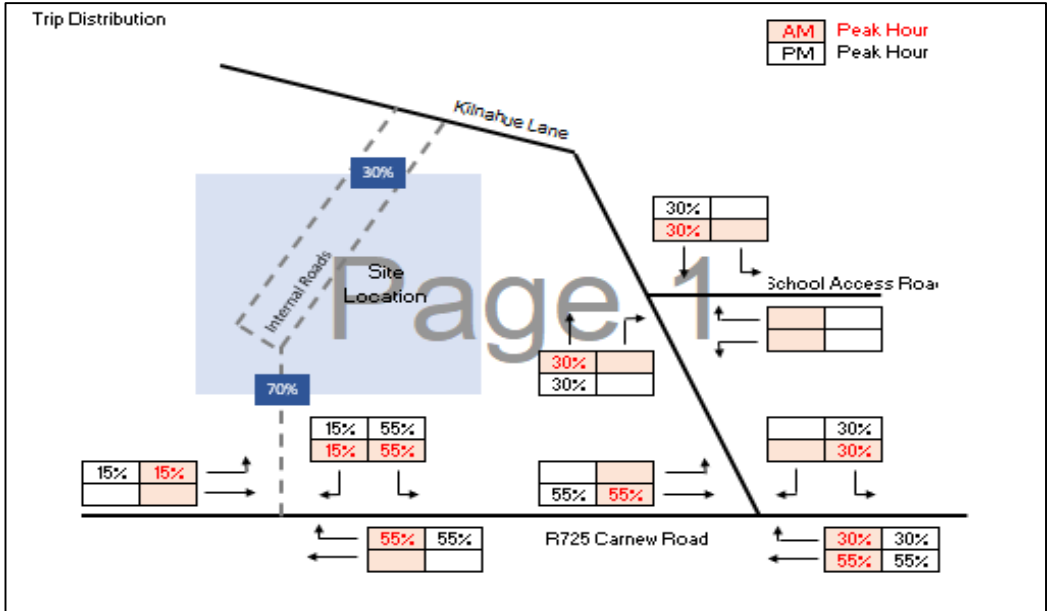
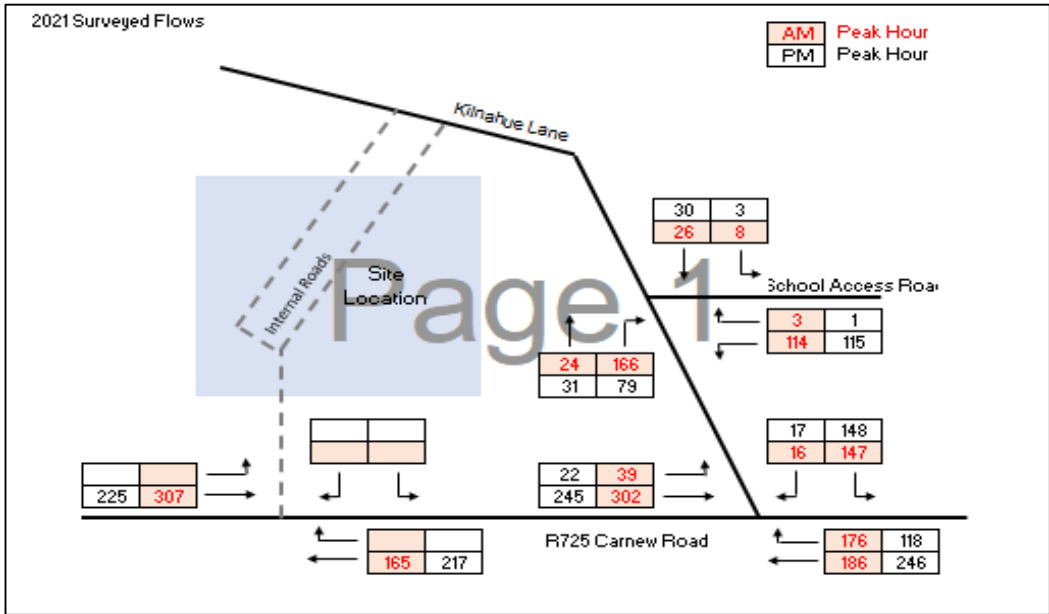
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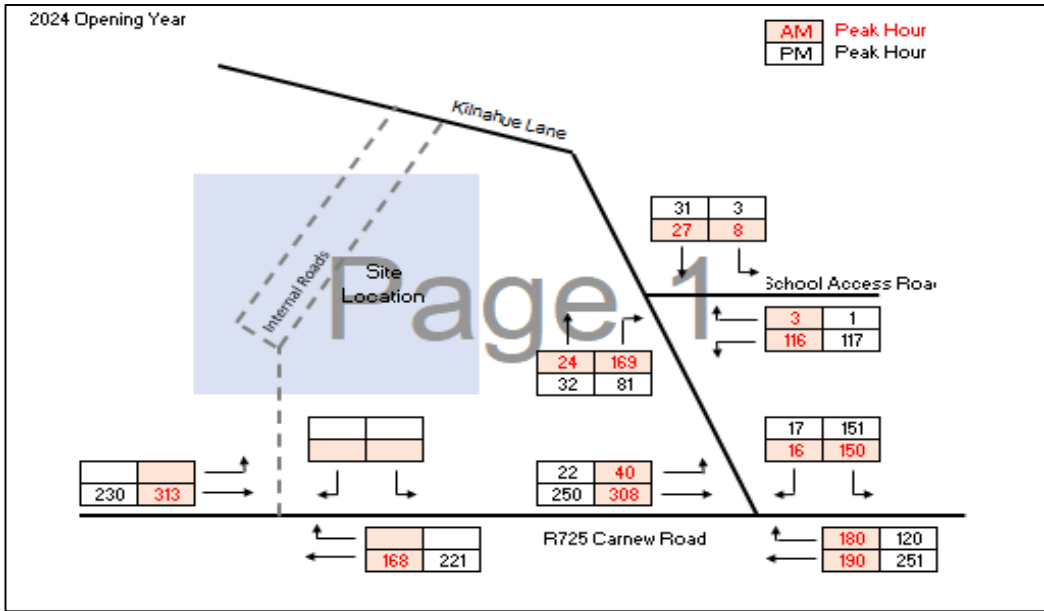
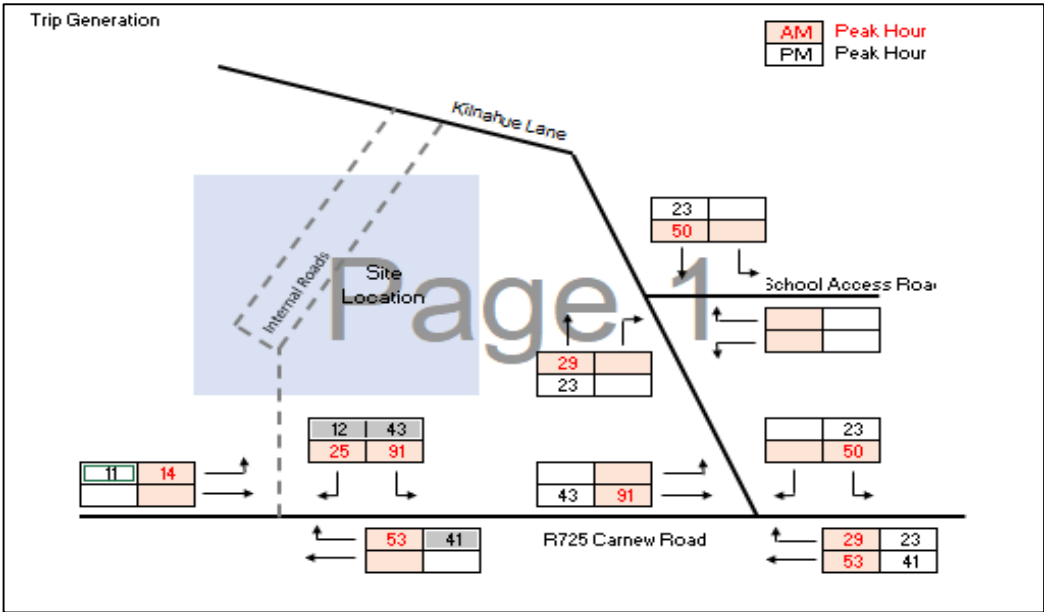
**Parameter summary**

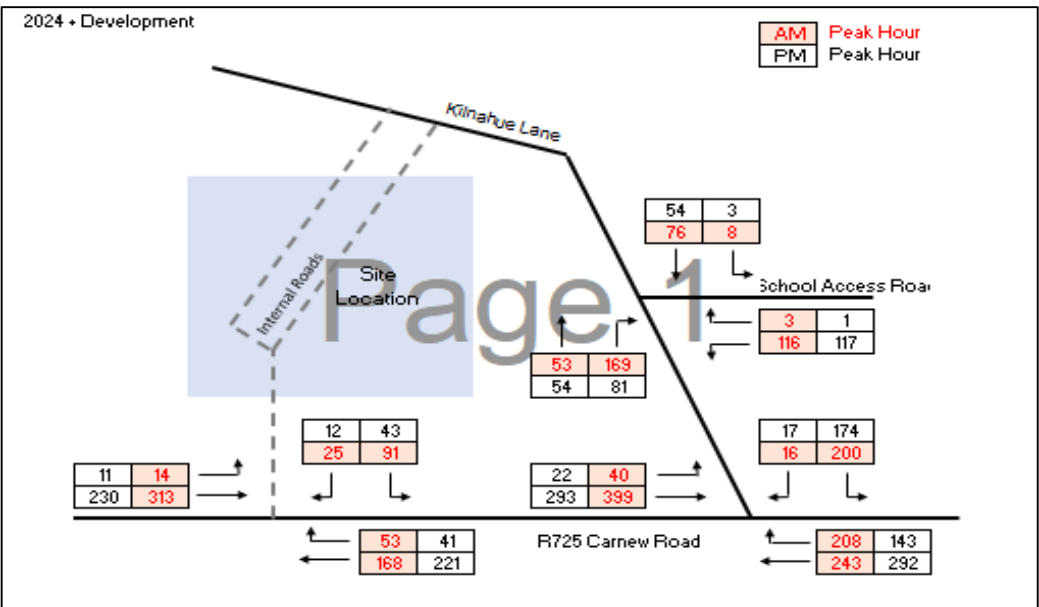
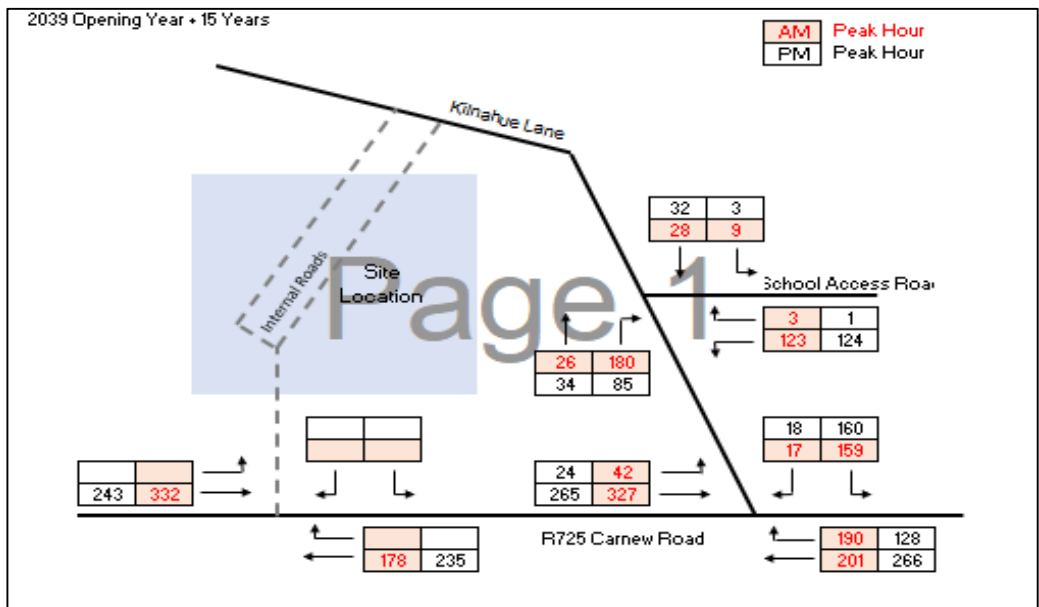
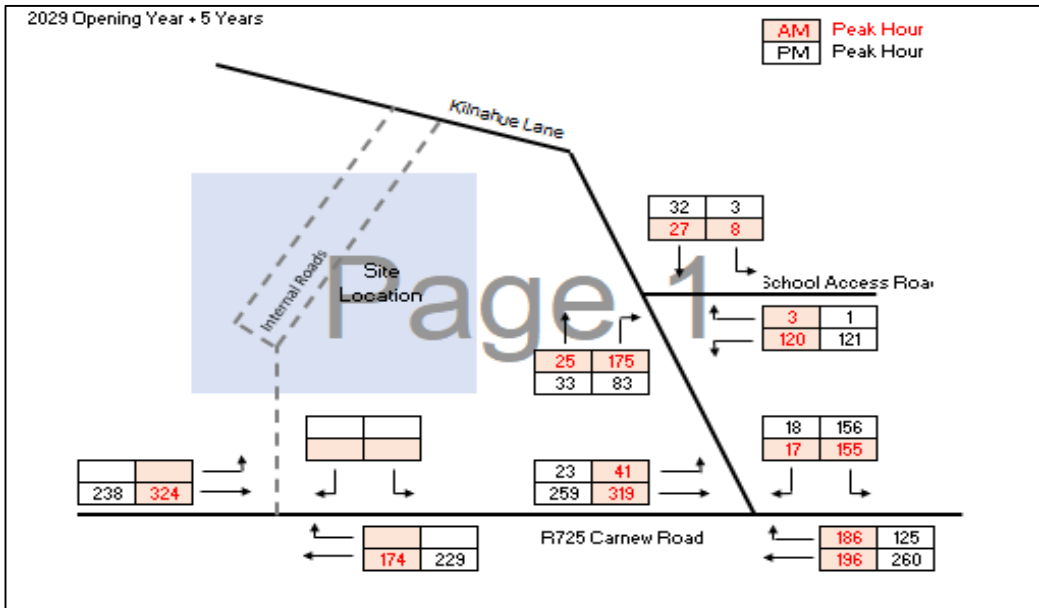
Trip rate parameter range selected: 276 - 482 (units: )  
 Survey date range: 01/01/13 - 27/05/19  
 Number of weekdays (Monday-Friday): 4  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys automatically removed from selection: 0  
 Surveys manually removed from selection: 0

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

## C. Traffic Flow Diagrams











## **D. PICADY Output Reports**

Junctions 9
PICADY 9 - Priority Intersection Module
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Filename: Site 1.j9  
 Path: M:\Projects\13\13-119\Design\PICADY\Planning 2021\SITE 1  
 Report generation date: 12/01/2022 15:11:07

«Site 1 - 2021 (BASE YEAR), AM

- »Junction Network
- »Arms
- »Traffic Demand
- »Origin-Destination Data
- »Vehicle Mix
- »Results

Summary of junction performance

	AM						PM					
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Junction LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Junction LOS
<b>Site 1 - 2021 (BASE YEAR)</b>												
Stream B-AC	D1	0.5	10.63	0.33	B	A	D2	0.5	10.17	0.32	B	A
Stream C-AB		0.7	7.99	0.35	A			0.4	6.29	0.24	A	
<b>Site 1 - DO NOTHING 2024</b>												
Stream B-AC	D3	0.5	10.77	0.33	B	A	D4	0.5	10.29	0.33	B	A
Stream C-AB		0.7	8.10	0.36	A			0.4	6.32	0.24	A	
<b>Site 1 - DO SOMETHING 2024</b>												
Stream B-AC	D5	0.8	13.56	0.45	B	A	D6	0.6	11.36	0.38	B	A
Stream C-AB		1.1	9.22	0.45	A			0.6	6.70	0.30	A	
<b>Site 1 - DO NOTHING 2029</b>												
Stream B-AC	D7	0.5	11.11	0.35	B	A	D8	0.5	10.58	0.34	B	A
Stream C-AB		0.8	8.29	0.37	A			0.5	6.39	0.25	A	
<b>Site 1 - DO SOMETHING 2029</b>												
Stream B-AC	D9	0.9	14.12	0.47	B	A	D10	0.6	11.75	0.39	B	A
Stream C-AB		1.2	9.54	0.47	A			0.6	6.78	0.31	A	
<b>Site 1 - DO NOTHING 2039</b>												
Stream B-AC	D11	0.6	11.32	0.36	B	A	D12	0.5	10.75	0.35	B	A
Stream C-AB		0.8	8.42	0.39	A			0.5	6.44	0.26	A	
<b>Site 1 - DO SOMETHING 2039</b>												
Stream B-AC	D13	0.9	14.45	0.48	B	A	D14	0.7	11.93	0.40	B	A
Stream C-AB		1.2	9.74	0.48	A			0.7	6.85	0.32	A	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

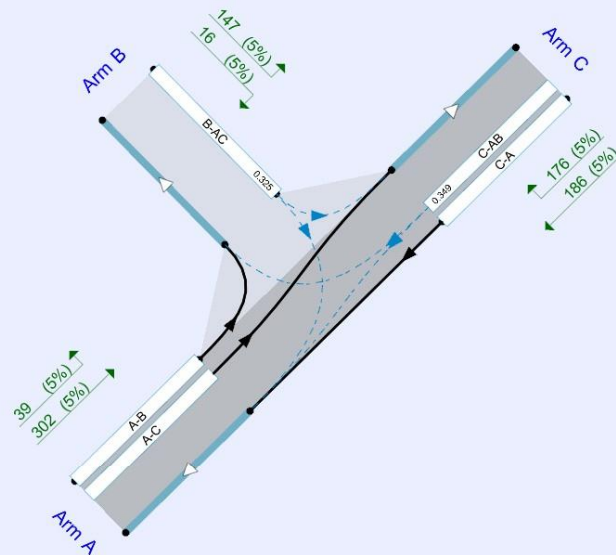
**File summary**

**File Description**

<b>Title</b>	(untitled)
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<b>Site number</b>	<input type="checkbox"/>
<b>Date</b>	04/12/2018
<b>Version</b>	<input type="checkbox"/>
<b>Status</b>	(new file)
<b>Identifier</b>	<input type="checkbox"/>
<b>Client</b>	<input type="checkbox"/>
<b>Jobnumber</b>	<input type="checkbox"/>
<b>Enumerator</b>	DOMAINf.silva
<b>Description</b>	<input type="checkbox"/>

**Units**

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin



Flows show original traffic demand (Veh/hr).  
Streams (downstream end) show RFC ()

The junction diagram reflects the last run of Junctions.

### Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
<input type="checkbox"/>	<input type="checkbox"/>	0.85	36.00	20.00

### Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Site 1	100.000

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Single time segment only
D1	2021 (BASE YEAR)	AM	FLAT	08:00	09:00	60	✓

# Site 1 - 2021 (BASE YEAR), AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SITE 1	T-Junction	Two-way	<input type="checkbox"/>	4.22	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description	Arm type
A	R725 Carnew Road (S)	<input type="checkbox"/>	Major
B	Kilnahue Lane	<input type="checkbox"/>	Minor
C	R725 Carnew Road (N)	<input type="checkbox"/>	Major

### Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.00	<input type="checkbox"/>	<input type="checkbox"/>	200.0	✓	0.00

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

### Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	40	30

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	505	0.092	0.233	0.146	0.332
B-C	643	0.099	0.249	-	-
C-B	690	0.267	0.267	-	-

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

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

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

## Traffic Demand

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

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A	<input type="checkbox"/>	<input checked="" type="checkbox"/>	341	100.000
B	<input type="checkbox"/>	<input checked="" type="checkbox"/>	163	100.000
C	<input type="checkbox"/>	<input checked="" type="checkbox"/>	362	100.000

## Origin-Destination Data

### Demand (Veh/hr)

<input type="checkbox"/>	To			
From	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	0	39	302
	<input type="checkbox"/>	16	0	147
	<input type="checkbox"/>	186	176	0

## Vehicle Mix

### Heavy Vehicle Percentages

<input type="checkbox"/>	To			
From	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	0	5	5
	<input type="checkbox"/>	5	0	5
	<input type="checkbox"/>	5	5	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.33	10.63	0.5	B
C-AB	0.35	7.99	0.7	A
C-A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A-B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A-C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Main Results for each time segment

#### 08:00 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	163	501	0.325	163	0.5	10.626	B
C-AB	241	690	0.349	240	0.7	7.989	A
C-A	121	<input type="checkbox"/>	<input type="checkbox"/>	121	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A-B	39	<input type="checkbox"/>	<input type="checkbox"/>	39	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A-C	302	<input type="checkbox"/>	<input type="checkbox"/>	302	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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**Filename:** Site 2.j9  
**Path:** M:\Projects\13\13-119\Design\PICADY\Planning 2021\SITE 2  
**Report generation date:** 12/01/2022 15:15:43

«Site 2 - DO SOMETHING 2039, PM

- »Junction Network
- »Arms
- »Traffic Demand
- »Origin-Destination Data
- »Vehicle Mix
- »Results

Summary of junction performance

	AM						PM					
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Junction LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Junction LOS
<b>Site 2 - 2021 (BASE YEAR)</b>												
Stream B-AC	D1	0.2	7.04	0.19	A	A	D2	0.2	6.97	0.18	A	A
Stream C-AB		0.4	8.50	0.29	A			0.2	6.95	0.14	A	
<b>Site 2 - DO NOTHING 2024</b>												
Stream B-AC	D3	0.2	7.07	0.19	A	A	D4	0.2	7.00	0.19	A	A
Stream C-AB		0.4	8.57	0.30	A			0.2	6.98	0.14	A	
<b>Site 2 - DO SOMETHING 2024</b>												
Stream B-AC	D5	0.2	7.25	0.19	A	A	D6	0.2	7.08	0.19	A	A
Stream C-AB		0.5	8.59	0.31	A			0.2	6.90	0.15	A	
<b>Site 2 - DO NOTHING 2029</b>												
Stream B-AC	D7	0.2	7.12	0.20	A	A	D8	0.2	7.05	0.19	A	A
Stream C-AB		0.5	8.69	0.31	A			0.2	7.00	0.15	A	
<b>Site 2 - DO SOMETHING 2029</b>												
Stream B-AC	D9	0.2	7.31	0.20	A	A	D10	0.2	7.14	0.19	A	A
Stream C-AB		0.5	8.73	0.32	A			0.2	6.93	0.15	A	
<b>Site 2 - DO NOTHING 2039</b>												
Stream B-AC	D11	0.3	7.17	0.20	A	A	D12	0.2	7.10	0.20	A	A
Stream C-AB		0.5	8.80	0.32	A			0.2	7.03	0.15	A	
<b>Site 2 - DO SOMETHING 2039</b>												
Stream B-AC	D13	0.3	7.36	0.21	A	A	D14	0.2	7.18	0.20	A	A
Stream C-AB		0.5	8.85	0.33	A			0.2	6.95	0.15	A	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.



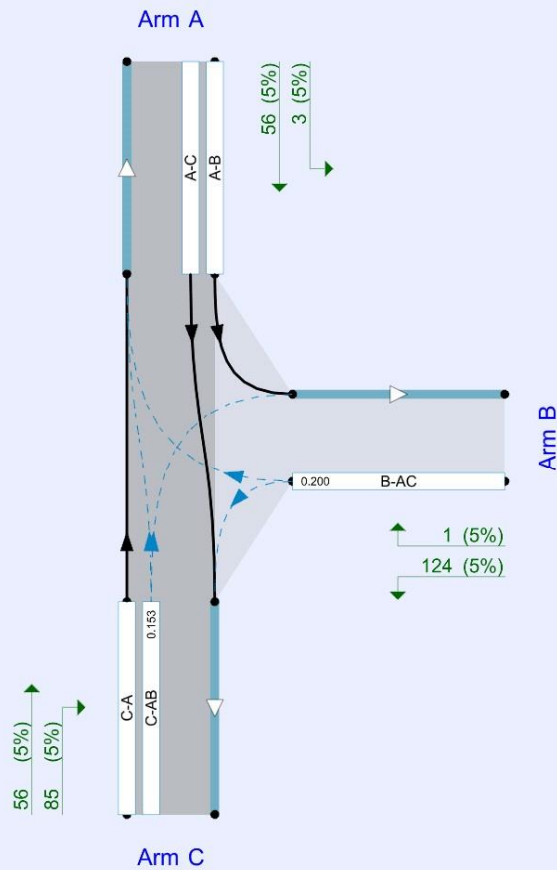
## File summary

### File Description

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<b>Site number</b>	<input type="checkbox"/>
<b>Date</b>	05/12/2018
<b>Version</b>	<input type="checkbox"/>
<b>Status</b>	(new file)
<b>Identifier</b>	<input type="checkbox"/>
<b>Client</b>	<input type="checkbox"/>
<b>Jobnumber</b>	<input type="checkbox"/>
<b>Enumerator</b>	DOMAINf.silva
<b>Description</b>	<input type="checkbox"/>

## Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin



Flows show original traffic demand (Veh/hr).  
Streams (downstream end) show RFC ()

The junction diagram reflects the last run of Junctions.

### Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
<input type="checkbox"/>	<input type="checkbox"/>	0.85	36.00	20.00

### Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Site 2	100.000

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Single time segment only
D14	DO SOMETHING 2039	PM	FLAT	14:00	15:00	60	✓

# Site 2 - DO SOMETHING 2039, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	SITE 2	T-Junction	Two-way	<input type="checkbox"/>	4.76	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description	Arm type
A	Kilnahue Lane (N)	<input type="checkbox"/>	Major
B	School Access Road (E)	<input type="checkbox"/>	Minor
C	Kilnahue Lane (S)	<input type="checkbox"/>	Major

### Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.00	<input type="checkbox"/>	<input type="checkbox"/>	75.0	✓	0.00

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

### Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	100	80

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	550	0.100	0.253	0.159	0.362
B-C	674	0.103	0.261	-	-
C-B	617	0.239	0.239	-	-

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

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

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

## Traffic Demand

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

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A	<input type="checkbox"/>	<input checked="" type="checkbox"/>	59	100.000
B	<input type="checkbox"/>	<input checked="" type="checkbox"/>	125	100.000
C	<input type="checkbox"/>	<input checked="" type="checkbox"/>	141	100.000

## Origin-Destination Data

### Demand (Veh/hr)

	To			
From	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	0	3	56
	<input type="checkbox"/>	1	0	124
	<input type="checkbox"/>	56	85	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To			
From	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	0	5	5
	<input type="checkbox"/>	5	0	5
	<input type="checkbox"/>	5	5	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.20	7.18	0.2	A
C-AB	0.15	6.95	0.2	A
C-A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A-C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Main Results for each time segment

#### 14:00 - 15:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	125	626	0.200	125	0.2	7.185	A
C-AB	94	611	0.153	93	0.2	6.952	A
C-A	47	<input type="checkbox"/>	<input type="checkbox"/>	47	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AB	3	<input type="checkbox"/>	<input type="checkbox"/>	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A-C	56	<input type="checkbox"/>	<input type="checkbox"/>	56	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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**Filename:** Site 3.j9  
**Path:** M:\Projects\13\13-119\Design\PICADY\Planning 2021\SITE 3  
**Report generation date:** 12/01/2022 15:18:30

- »Site 3 - DO SOMETHING 2024, AM
- »Site 3 - DO SOMETHING 2024, PM
- »Site 3 - DO SOMETHING 2029, AM
- »Site 3 - DO SOMETHING 2029, PM
- »Site 3 - DO SOMETHING 2039, AM
- »Site 3 - DO SOMETHING 2039, PM

**Summary of junction performance**

	AM					PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	<b>Site 3 - DO SOMETHING 2024</b>									
Stream B-AC	D1	0.3	8.13	0.21	A	D2	0.1	6.90	0.10	A
Stream C-B		0.1	6.01	0.08	A		0.1	5.68	0.06	A
	<b>Site 3 - DO SOMETHING 2029</b>									
Stream B-AC	D3	0.3	8.19	0.21	A	D4	0.1	6.93	0.10	A
Stream C-B		0.1	6.04	0.08	A		0.1	5.70	0.06	A
	<b>Site 3 - DO SOMETHING 2039</b>									
Stream B-AC	D5	0.3	8.23	0.21	A	D6	0.1	6.95	0.10	A
Stream C-B		0.1	6.06	0.08	A		0.1	5.71	0.06	A

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

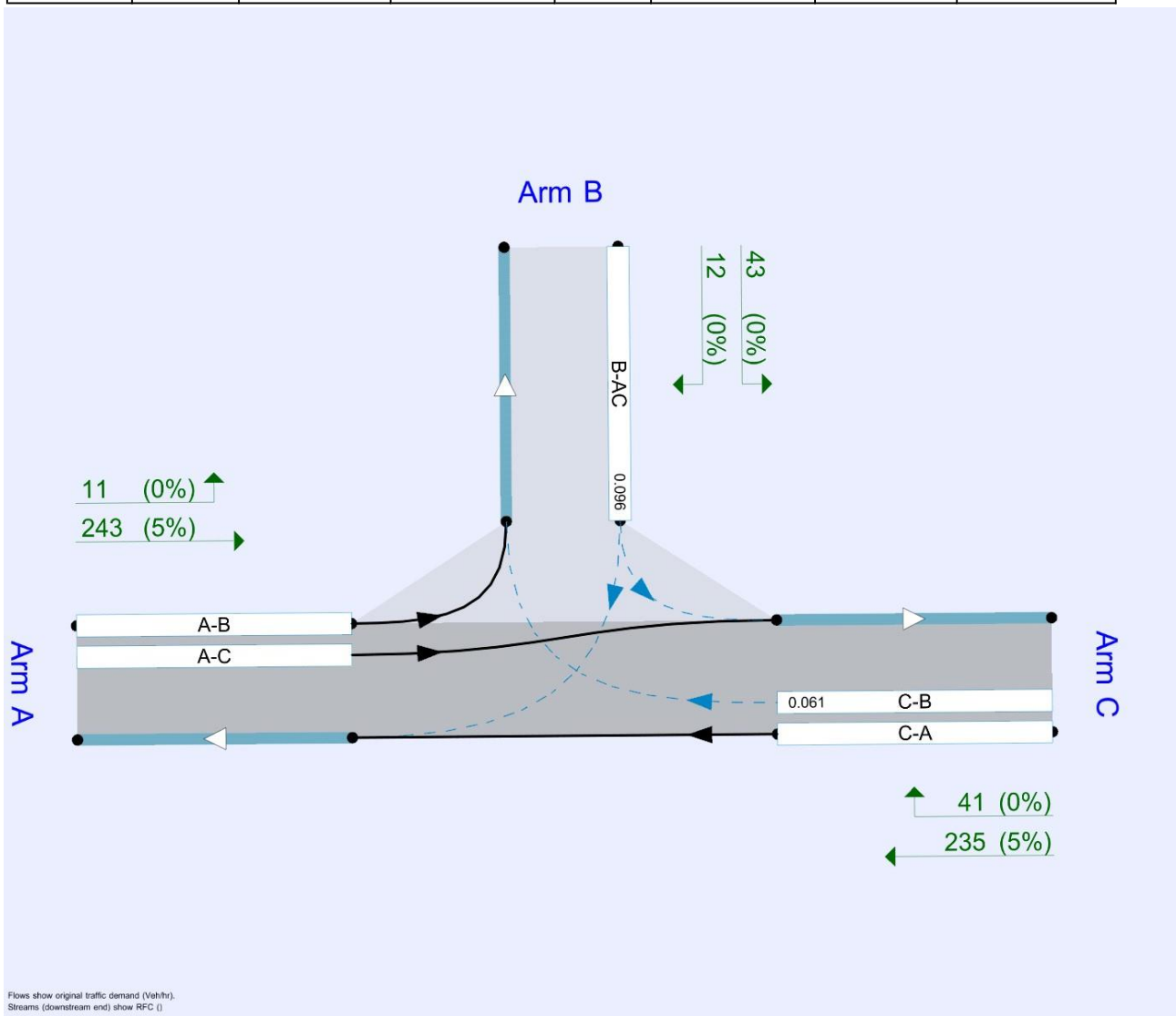
**File summary**

**File Description**

<b>Title</b>	<input type="checkbox"/>
<b>Location</b>	<input type="checkbox"/>
<b>Site number</b>	<input type="checkbox"/>
<b>Date</b>	19/04/2021
<b>Version</b>	<input type="checkbox"/>
<b>Status</b>	(new file)
<b>Identifier</b>	<input type="checkbox"/>
<b>Client</b>	<input type="checkbox"/>
<b>Jobnumber</b>	<input type="checkbox"/>
<b>Enumerator</b>	DOMAINf.silva
<b>Description</b>	<input type="checkbox"/>

### Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

### Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
<input type="checkbox"/>	<input type="checkbox"/>	0.85	36.00	20.00

### Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Single time segment only
D1	DO SOMETHING 2024	AM	FLAT	08:00	09:00	60	✓
D2	DO SOMETHING 2024	PM	FLAT	14:00	15:00	60	✓
D3	DO SOMETHING 2029	AM	FLAT	08:00	09:00	60	✓
D4	DO SOMETHING 2029	PM	FLAT	14:00	15:00	60	✓
D5	DO SOMETHING 2039	AM	FLAT	08:00	09:00	60	✓
D6	DO SOMETHING 2039	PM	FLAT	14:00	15:00	60	✓

### Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Site 3	100.000



# Site 3 - DO SOMETHING 2024, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	<input type="checkbox"/>	1.83	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description	Arm type
A	R725 Carnew Road (W)	<input type="checkbox"/>	Major
B	Site Access Road (N)	<input type="checkbox"/>	Minor
C	R725 Carnew Road (E)	<input type="checkbox"/>	Major

### Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	9.00	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3.00	180.0	<input type="checkbox"/>	-

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

### Minor Arm Geometry

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

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	552	0.087	0.221	0.139	0.316
B-C	681	0.091	0.229	-	-
C-B	737	0.248	0.248	-	-

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

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

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

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Single time segment only
D1	DO SOMETHING 2024	AM	FLAT	08:00	09:00	60	<input checked="" type="checkbox"/>



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

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A	<input type="checkbox"/>	<input checked="" type="checkbox"/>	327	100.000
B	<input type="checkbox"/>	<input checked="" type="checkbox"/>	116	100.000
C	<input type="checkbox"/>	<input checked="" type="checkbox"/>	221	100.000

## Origin-Destination Data

### Demand (Veh/hr)

	To			
From	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	0	14	313
	<input type="checkbox"/>	25	0	91
	<input type="checkbox"/>	168	53	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To			
From	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	0	0	5
	<input type="checkbox"/>	0	0	0
	<input type="checkbox"/>	5	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.21	8.13	0.3	A
C-A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C-B	0.08	6.01	0.1	A
AB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Main Results for each time segment

#### 08:00 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	116	558	0.208	116	0.3	8.134	A
C-A	168	<input type="checkbox"/>	<input type="checkbox"/>	168	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C-B	53	652	0.081	53	0.1	6.007	A
AB	14	<input type="checkbox"/>	<input type="checkbox"/>	14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AC	313	<input type="checkbox"/>	<input type="checkbox"/>	313	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

# Site 3 - DO SOMETHING 2024, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	<input type="checkbox"/>	1.05	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Single time segment only
D2	DO SOMETHING 2024	PM	FLAT	14:00	15:00	60	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A	<input type="checkbox"/>	✓	241	100.000
B	<input type="checkbox"/>	✓	55	100.000
C	<input type="checkbox"/>	✓	262	100.000

## Origin-Destination Data

### Demand (Veh/hr)

<input type="checkbox"/>	To			
From	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	0	11	230
	<input type="checkbox"/>	12	0	43
	<input type="checkbox"/>	221	41	0

## Vehicle Mix

### Heavy Vehicle Percentages

<input type="checkbox"/>	To			
From	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	0	0	5
	<input type="checkbox"/>	0	0	0
	<input type="checkbox"/>	5	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.10	6.90	0.1	A
C-A	□	□	□	□
C-B	0.06	5.68	0.1	A
AB	□	□	□	□
AC	□	□	□	□

### Main Results for each time segment

#### 14:00 - 15:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	55	577	0.095	55	0.1	6.899	A
C-A	221	□	□	221	□	□	□
C-B	41	675	0.061	41	0.1	5.681	A
AB	11	□	□	11	□	□	□
AC	230	□	□	230	□	□	□

# Site 3 - DO SOMETHING 2029, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	<input type="checkbox"/>	1.80	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Single time segment only
D3	DO SOMETHING 2029	AM	FLAT	08:00	09:00	60	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A	<input type="checkbox"/>	✓	338	100.000
B	<input type="checkbox"/>	✓	116	100.000
C	<input type="checkbox"/>	✓	227	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From	<input type="checkbox"/>	0	14	324	
	<input type="checkbox"/>	25	0	91	
	<input type="checkbox"/>	174	53	0	
	<input type="checkbox"/>				

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From	<input type="checkbox"/>	0	0	5	
	<input type="checkbox"/>	0	0	0	
	<input type="checkbox"/>	5	0	0	
	<input type="checkbox"/>				

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.21	8.19	0.3	A
C-A	□	□	□	□
C-B	0.08	6.04	0.1	A
AB	□	□	□	□
AC	□	□	□	□

### Main Results for each time segment

#### 08:00 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	116	555	0.209	116	0.3	8.189	A
C-A	174	□	□	174	□	□	□
C-B	53	649	0.082	53	0.1	6.036	A
AB	14	□	□	14	□	□	□
AC	324	□	□	324	□	□	□

# Site 3 - DO SOMETHING 2029, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	<input type="checkbox"/>	1.03	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Single time segment only
D4	DO SOMETHING 2029	PM	FLAT	14:00	15:00	60	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A	<input type="checkbox"/>	✓	249	100.000
B	<input type="checkbox"/>	✓	55	100.000
C	<input type="checkbox"/>	✓	270	100.000

## Origin-Destination Data

### Demand (Veh/hr)

<input type="checkbox"/>	To			
From	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	0	11	238
	<input type="checkbox"/>	12	0	43
	<input type="checkbox"/>	229	41	0

## Vehicle Mix

### Heavy Vehicle Percentages

<input type="checkbox"/>	To			
From	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	0	0	5
	<input type="checkbox"/>	0	0	0
	<input type="checkbox"/>	5	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.10	6.93	0.1	A
C-A	□	□	□	□
C-B	0.06	5.70	0.1	A
AB	□	□	□	□
AC	□	□	□	□

### Main Results for each time segment

#### 14:00 - 15:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	55	574	0.096	55	0.1	6.930	A
C-A	229	□	□	229	□	□	□
C-B	41	672	0.061	41	0.1	5.700	A
AB	11	□	□	11	□	□	□
AC	238	□	□	238	□	□	□

# Site 3 - DO SOMETHING 2039, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	<input type="checkbox"/>	1.78	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Single time segment only
D5	DO SOMETHING 2039	AM	FLAT	08:00	09:00	60	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A	<input type="checkbox"/>	✓	346	100.000
B	<input type="checkbox"/>	✓	116	100.000
C	<input type="checkbox"/>	✓	231	100.000

## Origin-Destination Data

### Demand (Veh/hr)

		To			
From	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	0	14	332	
	<input type="checkbox"/>	25	0	91	
	<input type="checkbox"/>	178	53	0	

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
From	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	0	0	5	
	<input type="checkbox"/>	0	0	0	
	<input type="checkbox"/>	5	0	0	



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.21	8.23	0.3	A
C-A	□	□	□	□
C-B	0.08	6.06	0.1	A
AB	□	□	□	□
AC	□	□	□	□

### Main Results for each time segment

#### 08:00 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	116	553	0.210	116	0.3	8.229	A
C-A	178	□	□	178	□	□	□
C-B	53	647	0.082	53	0.1	6.057	A
AB	14	□	□	14	□	□	□
AC	332	□	□	332	□	□	□

# Site 3 - DO SOMETHING 2039, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	<input type="checkbox"/>	1.01	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Traffic Demand

### Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Single time segment only
D6	DO SOMETHING 2039	PM	FLAT	14:00	15:00	60	✓

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

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A	<input type="checkbox"/>	✓	254	100.000
B	<input type="checkbox"/>	✓	55	100.000
C	<input type="checkbox"/>	✓	276	100.000

## Origin-Destination Data

### Demand (Veh/hr)

<input type="checkbox"/>	To			
From	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	0	11	243
	<input type="checkbox"/>	12	0	43
	<input type="checkbox"/>	235	41	0

## Vehicle Mix

### Heavy Vehicle Percentages

<input type="checkbox"/>	To			
From	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	0	0	5
	<input type="checkbox"/>	0	0	0
	<input type="checkbox"/>	5	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.10	6.95	0.1	A
C-A	□	□	□	□
C-B	0.06	5.71	0.1	A
AB	□	□	□	□
AC	□	□	□	□

### Main Results for each time segment

#### 14:00 - 15:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	55	573	0.096	55	0.1	6.950	A
C-A	235	□	□	235	□	□	□
C-B	41	671	0.061	41	0.1	5.712	A
AB	11	□	□	11	□	□	□
AC	243	□	□	243	□	□	□

# UK and Ireland Office Locations

