Proposed Residential Development

Glenamuck North (Northern Site), Kilternan, Dublin 18.

TRAFFIC & TRANSPORT ASSESSMENT

Issue P02 – 29 January 2026

Doc Ref.: 4428-MHT-XX-ZZ-RP-T-0001

Prepared For:

Durkan Carrickmines Developments Limited

MEINHARDT

PROPOSED RESIDENTIAL DEVELOPMENT

GLENAMUCK NORTH (NORTHERN SITE), KILTERNAN, DUBLIN 18.

TRAFFIC & TRANSPORT ASSESSMENT

Quality Assurance Page

Issue	Date	Prepared By	Checked By	Approved By	Remarks
P01	09/01/2026	C. Dring	A. Lacey	A. Lacey	Draft for Quality Audit
P02	29/01/2026	C. Dring	A. Lacey	A. Lacey	Planning Issue

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1 Introduction

Meinhardt has been commissioned by Durkan Carrickmines Developments Limited (The Applicant) to prepare a Traffic & Transport Assessment (TTA) to assist Dún-Laoghaire Rathdown County Council (DLRCC) in its assessment of a planning application for a Large Residential Development (LRD) at Glenamuck, Kilternan, Dublin 18.

This TTA sets out the guidance context for the proposed development, the accessibility of the site, the likely vehicle travel demands of the proposed development, the transport impact of the proposed development and identifies measures necessary to mitigate any adverse effects on the local transport network. This TTA also includes a statement of compliance with DMURS for the proposed site layout.

The number of vehicular trips predicted to be generated as a result of the proposed development are described within Section 4. These additional trips are subsequently analysed in conjunction with traffic flow data collected at the subject site at peak time to calculate the impact of the proposed development on the surrounding network.

The proposed development site is located in the townland of Glenamuck North, approximately 1.2km northeast of Kilternan Village, 1.3km southwest of Carrickmines Retail Park and 1.8km southeast of Stepaside Village. The site is bounded to the south by the newly constructed Glenamuck District Distributor Road (GDDR), to the west by agricultural land, to the north by De La Salle Palmerstown FC and the future Jamestown Park, and to the east by Bective Rangers FC.

The site is currently a greenfield site which has been zoned in the newly published Kilternan – Glenamuck Local Area Plan (KGLAP) (which is detailed in Section 2), ‘To provide residential development and to improve residential amenity while protecting the existing residential amenities. There are overhead 220kV and 110kV powerlines passing through the site which have been taken into account and respected within the proposed development layout.

The proposed application boundary is presented in Figure 1-1.

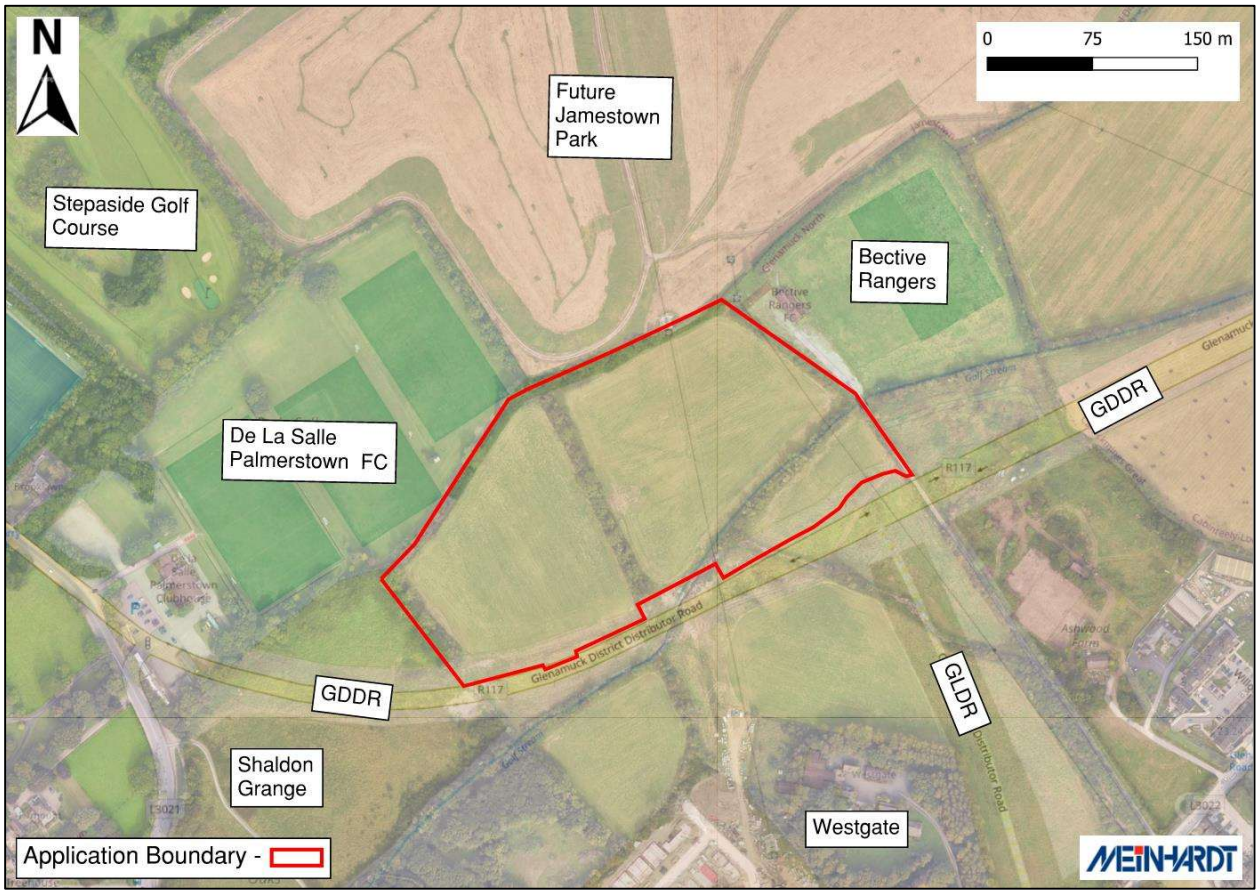


Figure 1-1: Proposed Application Boundary

1.1 Proposed Development

Durkan Carrickmines Developments Limited intend to apply for permission for a Large-Scale Residential Development at a site in the townland of Glenamuck North, Kilternan, Dublin 18. The site is generally bounded by: the Glenamuck District Distributor Road to the south, which is recently constructed (to be known as the Kilternan Road); agricultural land to the west; De La Salle Palmerstown Football Club and the future Jamestown Park to the north; and Bective Rangers Football Club to the east.

Road works are proposed to the approved Glenamuck District Roads Scheme (ACP Ref. HA06D.303945) to provide access to the development from the Kilternan Road which will include any necessary tie-ins to the existing footpath and cycle track.

The development will principally consist of the construction of a creche (c. 571 sq m) and 219 No. residential units comprising 69 No. houses (51 No. 3 -bed units and 18 No. 4-bed units), 108 No. apartments (38 No. 1-bed units, 31 No. 2-bed units and 39 No. 3-bed units) and 42 No. duplexes (11 No. 1-bed units, 9 No. 2-bed units, and 22 No. 3-bed units). The proposed development will range in height from 2 No. to 4 No. storeys.

The development also provides: car, bicycle and motorcycle parking; bin storage; ancillary storage; private balconies, terraces and gardens; hard and soft landscaping; boundary treatments; lighting; substations; and all other associated site works above and below ground.

The proposed site layout plan for the residential and creche development is shown in Figure 1-2.

Figure 1-2: Proposed Site Layout Plan (Source: NMP Architects)

1.2 Scoping

As part of the LRD process a pre-planning meeting took place between DLRCC and the applicant on the 17th of July 2025. DLRCC subsequently issued an LRD Opinion document stating whether or not the documentation submitted with the consultation request constitutes a reasonable basis on which to make a planning application for permission for the proposed LRD, as per Section 32B of the Planning and Development Act 2000 (as amended).

It is noted that as part of this LRD Opinion there was a specific request made by DLRCC for the provision of a Traffic Impact Assessment which shall assess all potential impacts to the GDRS scheme and the existing local road network including the future impact from relevant committed developments.

Following this, a further pre-planning consultation took place on the 4th of September between Brendan Mitchell and Liam Gorman of Meinhardt and Tom Kilbride (Executive Engineer, Transportation Planning DLRCC). The following items were raised in relation to traffic and transport:

1. Car Parking Ratios;
2. Traffic Analysis;
3. Connections to Future Developments.
4. Main Access Junction.

Items 2 and 4 are analysed in detail in the following sections, while Items 1 and 3 are addressed in the Mobility Management Plan (4428-MHT-XX-ZZ-RP-T-0002), prepared by Meinhardt and submitted with this application.

1.3 Report Structure

Following on from this introduction the structure of the TTA will be as follows:

Chapter 2: details the relevant policy and guidance documents applicable to the TTA, from national to local level, with particular focus on the recently published KGLAP.

Chapter 3: provides a written and visual summary of the existing and proposed road network surrounding the subject site, setting the context for the road infrastructure discussed within the TTA.

Chapter 4: outlines the estimated future trips generated by the proposed development during peak hours, based on TRICS 8 software outputs.

Chapter 5: presents the findings of a traffic survey undertaken at the subject site and compares projected development trips with existing traffic flows to assess the likely impact on the local road network.

Chapter 6: demonstrates that the proposed development has been designed in accordance with DMURS, detailing compliance with key layout principles and supported by extracts from the General Arrangement Drawing (4428-MHT-XX-ZZ-DR-C-0100) prepared by Meinhardt.

Chapter 7: Provides a summary of the conclusions drawn from the TTA.

2 Guidance and Proposals

2.1 National Planning Framework

The National Planning Framework (NPF) which was published in 2018 and revised in 2025 by the Department of Housing, Local Government and Heritage is defined as:

"The Government's high-level strategic plan for shaping the further growth and development of our country out to the year 2040"

The NPF prioritises ten National Strategic Outcomes which are as follows:

1. Compact Growth
2. Enhanced Regional Accessibility
3. Strengthened Rural Economies and Communities
4. Sustainable Mobility
5. A Strong Economy supported by Enterprise, Innovation and Skills
6. High-Quality International Connectivity
7. Enhanced Amenity and Heritage
8. Transition to a Low Carbon and Climate Resilient Society
9. Sustainable Management of Water, Waste and other Environmental Resources
10. Access to Quality Childcare, Education and Health Services"

Environmentally sustainable public transport is listed as one of the NPF's strategic investment priorities. The location of new developments in locations that can support sustainable development is mentioned as an important factor in achieving this goal. Dún-Laoghaire Rathdown is part of the Dublin region which has a high level of population growth. In this area, the NPF states that:

''*development should be primarily based on employment growth, accessibility by sustainable transport modes and quality of life, rather than unsustainable commuting patterns''*

The NPF includes a number of policies that are deemed particularly relevant to the proposed development.

- **National Policy Objective 22**: ''*In urban areas, planning and related standards, including in particular building height and car parking, will be based on performance criteria that seek to achieve well-designed, high-quality outcomes in order to achieve targeted growth.''*
- **National Policy Objective 37:** *''Ensure the integration of safe and convenient alternatives to the car into the design of our communities, by prioritising walking and cycling accessibility to both existing and proposed developments and integrating physical activity facilities for all ages.''*
- **National Policy Objective 70:** *''Promote renewable energy use and generation at appropriate locations within the built and natural environment to meet national objectives towards achieving a low carbon economy by 2050''*
- **National Policy Objective 93:** *''Improve air quality and help prevent people being exposed to unacceptable levels of pollution in our urban and rural areas through integrated land use and spatial planning that supports public transport, walking and cycling as more favourable modes of transport to the private car, the promotion of energy efficient buildings and homes, heating systems with zero local emissions, green infrastructure planning and innovative design solutions.''*

2.2 National Development Plan 2026-2042

The National Development Plan 2026-2035 (NDP), published by the Department of Public Expenditure, NDP Delivery and Reform, sets out the Government's investment strategy and budget for the period 2026-2035. "*It is an ambitious plan that balances the significant demand for public investment across all sectors and regions of Ireland with a major focus on improving the delivery of infrastructure projects to ensure speed of delivery and value for money.*

The NDP puts an emphasis on sustainable mobility which it defines as:

- *"Comfortable and affordable journeys to and from work, home, school, college, shops and leisure;*
- *Travelling by cleaner and greener transport; and*
- *A shift away from the private car to greater use of active travel (walking and cycling) and public transport*."

To achieve this objective, strategic land use planning and transport-led development are essential. A house in a location with convenient access to public transport links and active travel (cycling and walking) infrastructure will reduce greenhouse gas emissions. Along with investment in upgrading and decarbonising Ireland's public transport network and upgrading sustainable mobility infrastructure will reduce greenhouse gas emissions.

It is noted that the proposed development is well positioned to take advantage of surrounding existing and proposed active travel and public transport infrastructure. For further details see the Mobility Management Plan (4428-MHT-XX-ZZ-RP-T-0002) prepared by Meinhardt, submitted with this application.

2.3 Design Manual for Urban Roads and Streets

The Design Manual for Urban Roads and Streets (DMURS), published by the Department of Transport, Tourism and Sport and the Department of Environment, Community and Local Government, updated in 2019, provides guidance relating to the design of urban roads and streets. It presents a series of approaches and standards that are necessary to achieve balanced and best design practice with regards to individual streets and overall transport networks. Section 7 sets out a review of the proposed development layout against key standards from the DMURS. For more information on the design please refer to Meinhardt General Arrangement Drawing No. 4428-MHT-XX-ZZ-DR-C-0100 and the proposed site layout drawings produced by MCORM Architecture & Urban Design, submitted with this application.

2.4 Dun–Laoghaire Rathdown County Council Development Plan 2022-2028

The *Dún Laoghaire-Rathdown County Development Plan 2022-2028* outlines the policy for Traffic & Transport in the Dun Laoghaire-Rathdown area. The overall policy approach is:

- *"To adopt the 'Avoid-Shift-Improve Approach' to transport.*
- *To integrate land use and transport policies.*
- *To support the demand management approach which focuses on moving people from the private car to more sustainable modes.*
- *To improve permeability for the pedestrian and cyclist.*
- *To provide attractive high-quality inclusive and connected walking and cycling networks with direct routes to local destinations and public transport hubs.*
- *To adopt a balanced approach to road and street design in accordance with the four core principles of the 'Design Manual for Urban Roads and Streets' (2019) (DMURS) - connected networks, multifunctional streets, pedestrian focus and a multi-disciplinary approach resulting in a more place based/integrated street design.*

- *To reduce traffic speeds and improve safety*
- *To reduce through traffic"*

In terms of TTA's and Road Safety Audit's (RSA), Policy Objective T26: Traffic and Transport Assessments and Road Safety Audits Objective, states:

> *"It is a Policy Objective to require Traffic and Transport Assessments and/or Road Safety Audits for major developments – in accordance with the TII's 'Traffic and Transport Assessment Guidelines' (2014) - to assess the traffic impacts on the surrounding road network and provide measures to mitigate any adverse impacts - all in accordance with best practice guidelines."*

In terms of Traffic Management, Policy Objective T29: Traffic Management, states

> *"It is a Policy Objective to introduce Traffic Management Schemes on particular roads and in appropriate areas throughout the County to reduce vehicle speeds to an acceptable level and to reduce the potential for traffic congestion and associated vehicular emissions in urban areas."*

The proposed development aligns with these objectives, as detailed in this report, which outlines its impact on the surrounding road network and the traffic management measures proposed to improve safety and reduce congestion.

2.5 Kilternan-Glenamuck Local Area Plan 2025

The recently published KGLAP 2025 is the third iteration of the plan and establishes a framework for the future development of lands within the Kilternan – Glenamuck area. Over the past decade, the plan area has experienced significant change and growth, with a marked acceleration in the delivery of new residential schemes. This has resulted in the provision of the GDRS which when completed will effectively bypass Kilternan Village. The completion of this scheme will alter how residents in the surrounding community's move and will provide new links through the area with the aim of ultimately providing a more connected community.

The land governed by the KGLAP has been divided into character areas, which reflect the analysis carried out during the plan making process and have regard to:

- The historic evolution of settlement within the LAP area,
- The two previous Local Area Plans (2007 and 2013),
- Development over the last 20 years,
- Planned transport infrastructure which will redefine the area and presents the opportunity to create a compact, strong, distinctive and successful community.

The proposed development site falls within the Glenamuck North Character area which comprises the western portion of the GDDR from its junction with the GLDR to its junction with the Enniskerry Road. Possible development sites within the lands governed by the KGLAP have also been identified in the form of Site Development Framework's (SDF), the proposed development is located primarily in SDF3 as shown in Figure 2-1.

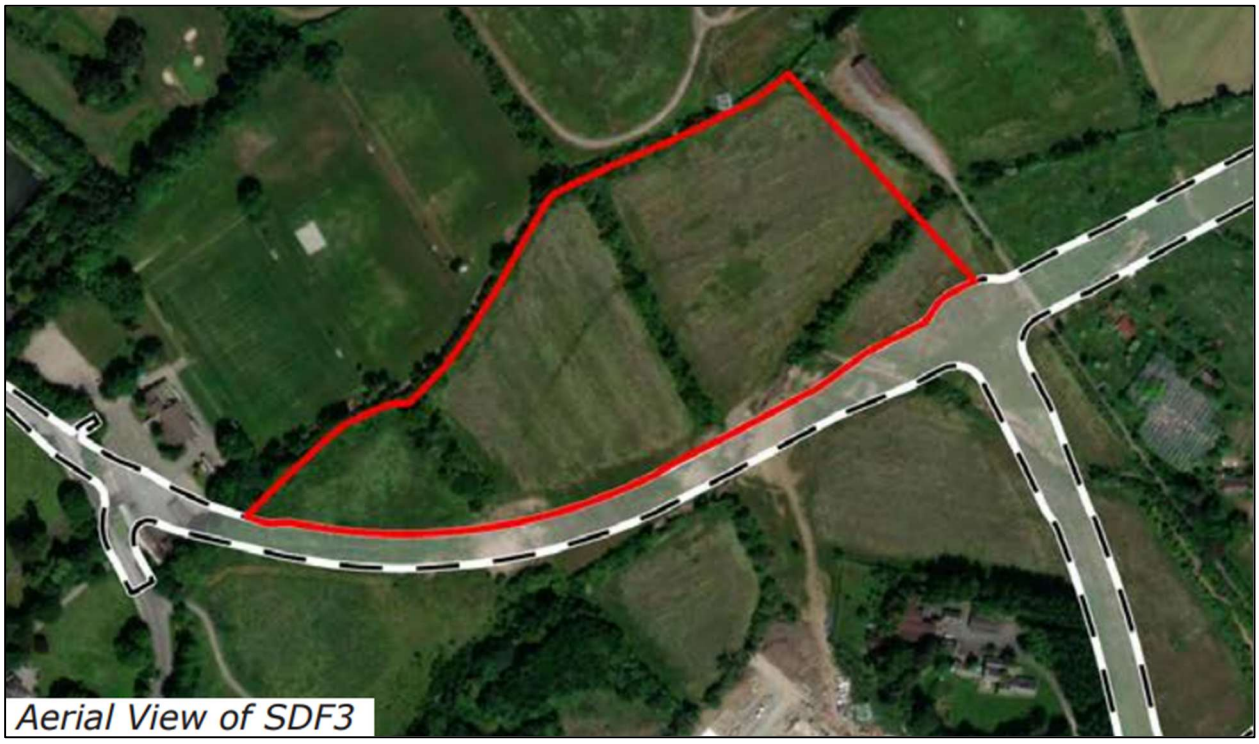


Figure 2-1: Aerial View of SDF3 (Source: KGLAP 2025)

These lands are subject to land use zoning objective 'A' – '*To provide residential development and improve residential amenity while protecting the existing residential amenities*.' There have been four movement objectives set out for SDF3 which must be successfully met to ensure that any development on these lands is in compliance with the KGLAP. These movement objectives and how they are being achieved within the proposed development layout are detailed within the Mobility Management Plan (MHT-4428-XX-ZZ-RP-T-0002) prepared by Meinhardt submitted with this application.

Movement Objective No.3 states that '*Vehicular access to the land parcel will be via one access from the Kilternan Road unless otherwise agreed with the Local Authority.'*

A single vehicular entrance to the site is proposed from the GDDR, located to the west of the site due to the presence of a culverted stream at the central frontage. The entrance has been positioned to ensure visibility splays can be successfully achieved to allow for sufficient stopping sight distances (associated with a speed limit of 50km/hr) in both an east and westerly direction. For further details on the proposed site access see Section 7.2.

3 Existing Road Network

The proposed site location and the wider road network is detailed in Figure 3-1. A brief summary of each of the roads and a picture of the route in question are detailed in the section below.

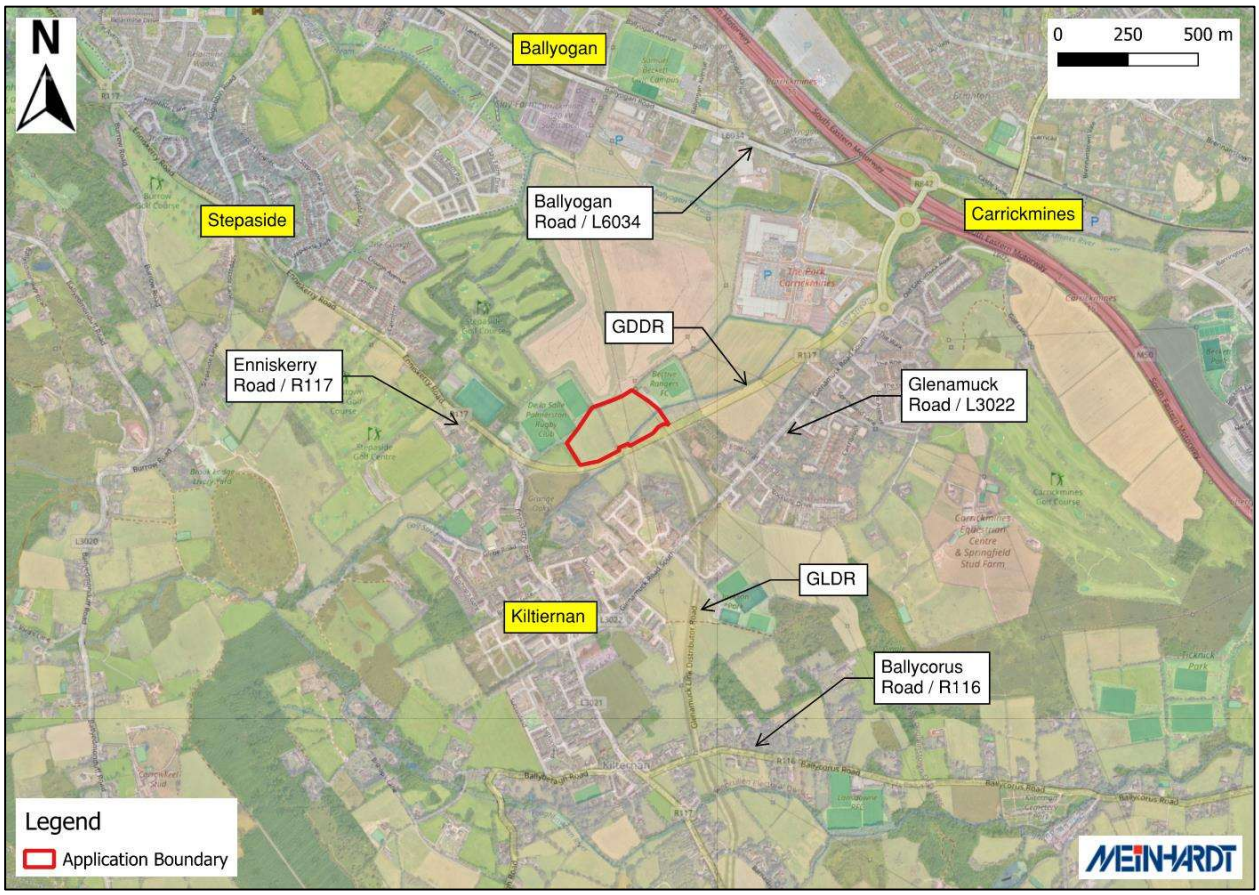


Figure 3-1: Proposed Application Boundary and the Surrounding Road Network

3.1 Enniskerry Road (R117)

The Enniskerry Road (R117) is located approximately 400m west of the site, where it connects to the GDDR at a newly constructed junction at De La Salle Palmerstown FC. The route provides access north-west towards Stepaside and Dundrum, and south-east towards Kilternan Village and Enniskerry. It is a single lane two-way carriageway with a continuous footpath on one side and a narrower, discontinuous footpath on the other, as illustrated in Figure 3-2. The section of the road adjoining the GDDR has a speed limit of 50km/hr.

Figure 3-2: Enniskerry Road (R117) (Looking Southeast) - Source: Google Maps

3.2 Glenamuck District Distributor Road (GDDR)

The GDDR bounds the site to the south and forms part of the newly constructed GDRS. A street view of the route during construction is shown in Figure 3-3. It comprises approximately 650m of two-lane carriageway extending from its junction with the Enniskerry Road (R117) at De La Salle Palmerstown FC to its junction with the GLDR, followed by approximately 900m of four-lane dual carriageway connecting to the Glenamuck Road South Roundabout at Carrickmines. Dedicated pedestrian footpaths and cycle lanes are provided on both sides along its full extent. The route is subject to a 50 km/h speed limit.

Figure 3-3: View of the GDDR (Looking West) – Source: Google Maps

3.3 Glenamuck Road (L3022)

The Glenamuck Road (L3022) links Kilternan Village to the Glenamuck Road South Roundabout at Carrickmines, where it connects northwards to Ballyogan Road. The route includes a narrow footpath on one side (as shown in Figure 3-4); however, it is not considered suitable for pedestrians or cyclists due to high traffic volumes and constrained width. Although the road retains a rural character, it has been subject to significant residential development in recent years. It was anticipated that the road would be unable to accommodate future traffic demand and would constrain further development in the area, which led to the implementation of the GDRS.

Figure 3-4: Glenamuck Road (L3022) (Looking West) - Source: Google Maps

3.4 Glenamuck Link Distributor Road (GLDR)

The GLDR extends for approximately 1.8km as a two-lane carriageway from its junction with the GDDR at the southeast corner of the site to a new junction with the Enniskerry Road (R117) south of Kilternan Village. It also accommodates a four-arm junction with the Ballycorus Road (R116). Similar to the GDDR, it will incorporate full active travel facilities of pedestrian footpaths and cycle paths in both directions. The route is subject to a 50 km/h speed limit. Figure 3-5 illustrates the junction of the GLDR and the GDDR.

Figure 3-5: GDDR in the Foreground (Running East – West) and the GLDR in the Background (Running South – North) – Source: Google Maps

3.5 Ballycorus Road (R116)

The Ballycorus Road extends from Kilternan Village in the west to Shankill in the east. It has a discontinuous footpath on one side (as shown in Figure 3-6) leading out from Kilternan Village, however, in the main the route is not designed for pedestrians or cyclists. The road has a rural character and is predominantly lined with detached houses constructed in the late 20th century. Ballycorus Road is subject to a 50km/hr speed limit.

Figure 3-6: Ballycorus Road (R116) (Looking East) - Source: Google Maps

3.6 Ballyogan Road (L6034)

The Ballyogan Road extends for approximately 2.4km from Junction 15 of the M50 at Carrickmines in the southeast to its junction with Kilgobbin Road and Murphystown Way in the northwest. In the main it runs parallel to the Luas Green line and has dedicated active travel facilities in the form of pedestrian footpaths and cycle lanes on both sides, as shown in Figure 3-7. Ballyogan Road is subject to a speed limit of 50km/hr.

Figure 3-7: Ballyogan Road (L6034) (Looking South East) – Source: Google Maps

4 Travel Demands

4.1 Introduction

This section assesses the likely future vehicle travel demands to and from the proposed development. To estimate vehicle travel demands, the Trip Rate Information Computer System (TRICS) 8 database was consulted for the proposed land use types in a suburban / edge of town area / neighbourhood centre. The recommended trip rates from TRICS were extracted from the database and applied to the proposed residential and creche development based on size and spatial parameters. The full TRICS output files are included in Appendix A.

Note that the peak hours extracted from TRICS reflect the busiest AM and PM periods on the surrounding road network. For this people trip assessment, 08:00-09:00 AM and 17:00-18:00 PM have been selected, providing a robust analysis. Two separate TRICS analyses have been undertaken for the residential units: one for 'Houses Privately Owned' and one for 'Apartments Privately Owned'. This approach provides a more accurate assessment of the proposed development, which comprises a mix of private houses, apartments, and duplex units. It should be noted that rounding errors may apply to all trip generation calculations. The trip rate was then factored up by 219 to calculate the number of trips generated to account for the total number of units proposed.

For the trips generated from the creche, it has been assumed that only 20% would be trips from outside the development and that the remaining 80% would be internal trips. This assumption has been made as many of the new and proposed developments in the vicinity also include creches reducing the need for the residents to travel for childcare. The high level of pedestrian and cycling infrastructure in the areas will also encourage an uptake in travelling via these active modes, reducing reliability on the private vehicle. The internal trip rate calculations can be seen in Table 4-2.

4.2 Proposed Vehicle Trip Rates

Table 4-1 presents the anticipated vehicle trip rates for the proposed unit types during the weekday AM and PM peak hours. The full output files from TRICS are included in Appendix A.

Table 4-1: Weekday Vehicle Peak Trip Rates (Per Unit)

TRICS 8 Trip Rate Generation		Weekday AM Peak (08:00-09:00)		Weekday PM Peak (17:00-18:00)	
Unit Type	Trip Rate Parameter	In	Out	In	Out
Houses	Per Unit	0.167	0.370	0.363	0.177
Apartments / Duplexes	Per Unit	0.057	0.185	0.134	0.065
Creche	Per 100m²	4.046	3.017	2.701	3.215

The peak hour periods for trip generation on weekdays occur between 08:00-09:00 in the morning (AM) and 17:00-18:00 in the evening (PM). These peaks are expected as a result of commuter traffic as well as school drop-offs and collections within these timeframes. It can therefore be assumed that the local road network will be at its busiest during these periods from Monday – Friday. Table 4-1 indicates that private house units generate more trips on average than apartment / duplex units, which is expected as they are allocated a greater number of parking spaces. Further details on car parking provision for the proposed development are set out in the Mobility Management Plan (MHT-4428-XX-ZZ-RP-T-0002) prepared by Meinhardt and submitted with this application.

4.3 Proposed Trip Generation

Table 4-2 presents the expected trip generation for weekday AM and PM peak hours related to the proposed land uses. These values are based on the people vehicle trip rates as shown in Table 4-1 for 'Houses Privately Owned', 'Apartments Privately Owned' and 'Nursery'.

Table 4-2: Weekday Vehicle Peak Trip Generation

TRICS 8 Trip Rate Generation		Weekday AM Peak (08:00-09:00)		Weekday PM Peak (17:00-18:00)	
Unit Type	**No. of Units**	**In**	**Out**	**In**	**Out**
Houses	69	11.5	25.5	25.0	12.2
Apartments / Duplexes	150	8.6	27.8	20.1	9.8
Total	219	20	53	45	22
Unit Type	**GFA (100m²)**	**In**	**Out**	**In**	**Out**
Creche	5.71	23	17	15	18
Creche Internal Trips Reduction					
% New Traffic Generated		0.2			
Peak Trips with Reduction		5	3	3	4
Total Trips		9		7	
Total Trips Generated (Arrival/Departure)		**25**	**57**	**48**	**26**
Total Trips Generated		**81**		**74**	

Table 4-2 indicates that the total number of weekday two-way vehicle trips is 81 in the morning peak and 74 during the evening peak. These trip generation figures are considered reasonable in terms of the development in question given that other trips are facilitated using public transport and active travel facilities, while additional trips occur in the hours either side of the peak. In addition, the prevalence of hybrid and remote working further reduces the number of trips generated.

4.4 Summary

The TRICS database was used to derive vehicle trip rates for the proposed residential and crèche development. The development is forecast to generate approximately 81 two-way trips in the AM peak (08:00–09:00) and 74 in the PM peak (17:00–18:00). The context of these trips, together with the potential impacts of other committed developments on the surrounding road network (as detailed in Section 3) is discussed in Section 5.

5 Traffic Generation Analysis

5.1 Introduction

As detailed in the Section 3, the proposed development site fronts onto the GDDR which forms part of the wider GDRS. This scheme is currently being implemented by DLRCC to improve the multi-modal transport infrastructure in the Glenamuck/Carrickmines/Kilternan area. The GDDR officially opened to traffic on the 19th of June 2025 while the GLDR is expected to be delivered by the end of Q2 2026.

The development is forecast to generate approximately 81 two-way trips in the AM peak (08:00–09:00) and 74 in the PM peak (17:00–18:00), as detailed in Section 4. To give these trip numbers context in terms of the local road network a traffic survey was conducted outside the subject site during the AM peak hour of (08:00-09:00) as this was the timeframe which generated the single highest number of two-way trips according to the TRICS analysis. The total number of vehicles passing the proposed site entrance point in both directions over the course of the hour was tallied and is analysed in the sections below.

5.2 Traffic Survey

A summary of the traffic survey data collected on the 9th September 2025 adjacent to the subject site is presented in Table 5-1. During the park AM hour (8:00-9:00), a total of 348 vehicles were recorded travelling westbound towards Kilternan Village, while 680 vehicles were observed travelling eastbound towards Carrickmines and Junction 15 of the M50. This equates to 1,028 two-way vehicle movements on the GDDR at the site location during the morning peak, with approximately two-thirds of vehicles travelling towards the M50 and one-third towards Kilternan Village.

Table 5-1: Traffic Survey Data

Traffic Survey				
8:00 - 9:00 (AM Peak)				
Mode	**Car**	**HGV/Bus**	**Van**	**Motorbike**
No of Trips (To Kiltiernan)	290	44	14	0
Total One Way Trips (To Kiltiernan)	348			
No of Trips (To Carrickmines)	620	12	44	4
Total One Way Trips (To Carrickmines)	680			
Total Two Way Trips on Network	**1028**			

5.3 Impact of the Proposed Development

This section provides context on the anticipated impact of the traffic generated by the proposed development on the surrounding road network. As detailed in Section 4.3, the proposed development is forecast to generate approximately 81 two-way trips in the AM peak hour and 74 two-way trips in the PM peak hour. The traffic survey conducted at the subject site during the AM peak hour found there to be a total of 1028 trips on the network during this period. This would result in an increase of 7.88% as a result of the trips generated by the proposed development compared to the base flow recorded during the traffic survey.

Figure 5-1 presents a series of thresholds used to determine when a Transport Assessment is required for a proposed development. This table is taken from the Department of Transport's (DoT) 'Traffic Management

Guidelines' Document which was first published in September 2019 and subsequently reviewed in May 2022.

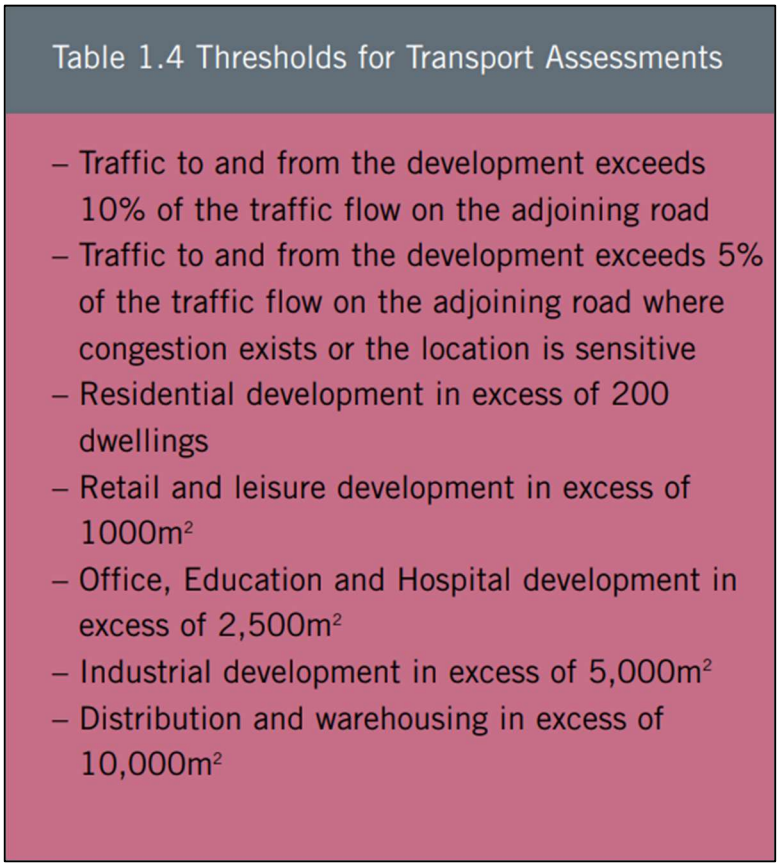


Figure 5-1: Thresholds for Transport Assessments (Source: DOT 'Traffic Management Guidelines' September 2019, May 2022)

The first three threshold criteria are relevant to the proposed residential development. Based on the manual traffic count that was conducted and the number of trips generated by the development in the AM peak, the increase in traffic on the adjoining road is approximately 7.88%. This falls below the 10% threshold listed in Figure 5-1, as it is not a congested road it does.

Although the proposed development comprises more than 200 units which would generally require a full Transport Assessment, a full network analysis will not be undertaken as at the time of LRD application the GLDR is not operational therefore base year junction turning counts could not be carried out to accurately assess the impact of the proposed development.

Junctions 11 analysis of the entrance junction to the proposed development was carried out. This was done utilising the manual traffic count that was completed for the AM peak and has been factored up for the Opening Year (2028), Opening Year +5 (2033) and Opening Year +15 (2043). This analysis was carried out on the entrance junction to show that the addition of the proposed development will not have an adverse effect on the existing road network that the traffic is joining. The results of this analysis can be seen in the following section, as well as the cumulative impacts of other permitted developments.

6 Traffic Assessment

6.1 Growth Rates

The Transport Infrastructure Ireland 2016 publication "Project Appraisal Guidelines for National Roads Units 5.3," was used to calculate growth factors for the road network traffic. Table 5.1 below shows the calculated growth factors to convert from 2025 to 2028 to be 1.050, 2025 to 2033 to be 1.102 and from 2025 to 2043 to be 1.160 respectively.

Table 6-1 Future Growth Rates for Dublin Metropolitan Area

CENTRAL GROWTH RATE			Cars/LGV	HGV	Combined
Vehicle Count %:			98%	2%	
2025	**to**	**2028**	1.049	1.091	**1.050**
2025	**to**	**2033**	1.100	1.204	**1.102**
2025	**to**	**2043**	1.155	1.389	**1.160**
TII Publication - Project Appraisal Guidelines for National Roads Unit 5.3 - Travel Demand Projections					
Table 6.1 Link-Based Growth Rates: Metropolitan Area Annual Growth Rates					

6.2 Junctions 11 Analysis

In order to assess the proposed development junction, a junction model was produced using modelling software Junctions 11. The output movements from the models are based on the junction arms. The arms are designated A to C for T-Junctions as shown in Figure 6-1.

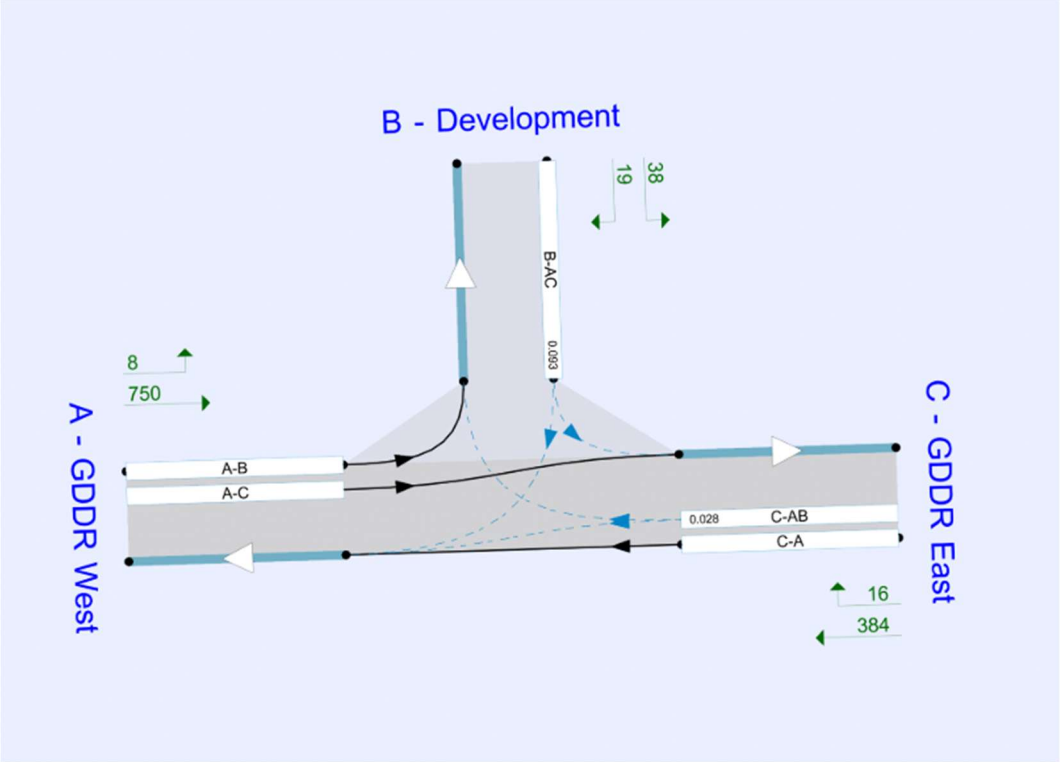


Figure 6-1 Development Junction Diagram

The output result sheets from JUNCTIONS 11 (PICADY 11) comprise tables of demand flows, capacities, queues and delays for each 15-minute interval within the peak hour analysis. These tables include the start and finish times for each junction arm, traffic demand, the Ratio of Flow to Capacity (RFC), initial queue lengths and queuing delays.

The RFC provides the basis for assessing the operational performance and acceptability of both proposed and existing junction layouts. In general, an RFC value of 0.85 or less during peak periods is considered acceptable. An RFC of 0.85 indicates that, at peak times, the junction is operating at approximately 85% of its theoretical capacity, thereby retaining a practical reserve capacity to accommodate fluctuations in traffic demand, such as those that may occur during bank holiday periods or other atypical conditions.

The degree of saturation is a measure of how close a junction is operating to its practical capacity. Within the JUNCTIONS 11 methodology, a junction with an RFC of approximately 0.85 is typically considered to be operating at 100% of its practical capacity.

The following sections present the results of the traffic model analysis for the AM peak hour (08:00–09:00) for the base year and future opening year scenarios. Full Junctions 11 output data is provided in Appendix B.

6.2.1 Development Junction Analysis

Table 6-2 Junction Analysis Results

	AM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2025 Base Year				
Stream B-AC	D1	0	0	0	A
Stream C-AB		0	0	0	A
	2028 Opening Year With				
Stream B-AC	D5	0.2	10.91	0.16	B
Stream C-AB		0.1	5.14	0.05	A
	2033 Opening Year +5 With				
Stream B-AC	D6	0.2	11.34	0.17	B
Stream C-AB		0.1	5.11	0.05	A
	2043 Opening Year +15 With				
Stream B-AC	D7	0.2	11.86	0.17	A
Stream C-AB		0.1	5.08	0.05	A

A maximum RFC of 17% occurs in the AM peak for the 2043 With Development scenario on Arm B-AC. A delay of approximately 12 seconds will be experienced along this arm, while Arm C-AB remains largely unaffected. The junction experiences a minimal increase in RFC as a result of the traffic generated by the development. The future year scenarios without the development have been omitted fromTable 6-2, as the junction would not exist in the absence of the proposed development. Full results table can be seen in Appendix B.

The analysis shows that the junction is operating well below capacity for all With Development scenarios up to and including 2043, and any queues or delays are negligible.

6.3 Cumulative Impacts

As part of the Glenamuck District Distributor Road project, DBFL completed an Environmental Impact Assessment Report. In Chapter 7, Traffic and Transport, the EIAR assessed the projected traffic impacts associated with the road, taking into account both committed developments and the future residential and mixed-use growth within the Kiltiernan–Glenamuck Local Area Plan (LAP) area. The LAP parcels were explicitly considered in the road design, with each contributing a proportion of trips to the overall network for analysis. Accordingly, the distributor road was planned to accommodate the cumulative traffic demand from these lands, ensuring the surrounding network can safely support both existing and future developments, including the proposed scheme.

The projected future year trip generation was calculated in the EIAR for each individual parcel of land. A map of these parcels can be seen in Figure 6-2 below.

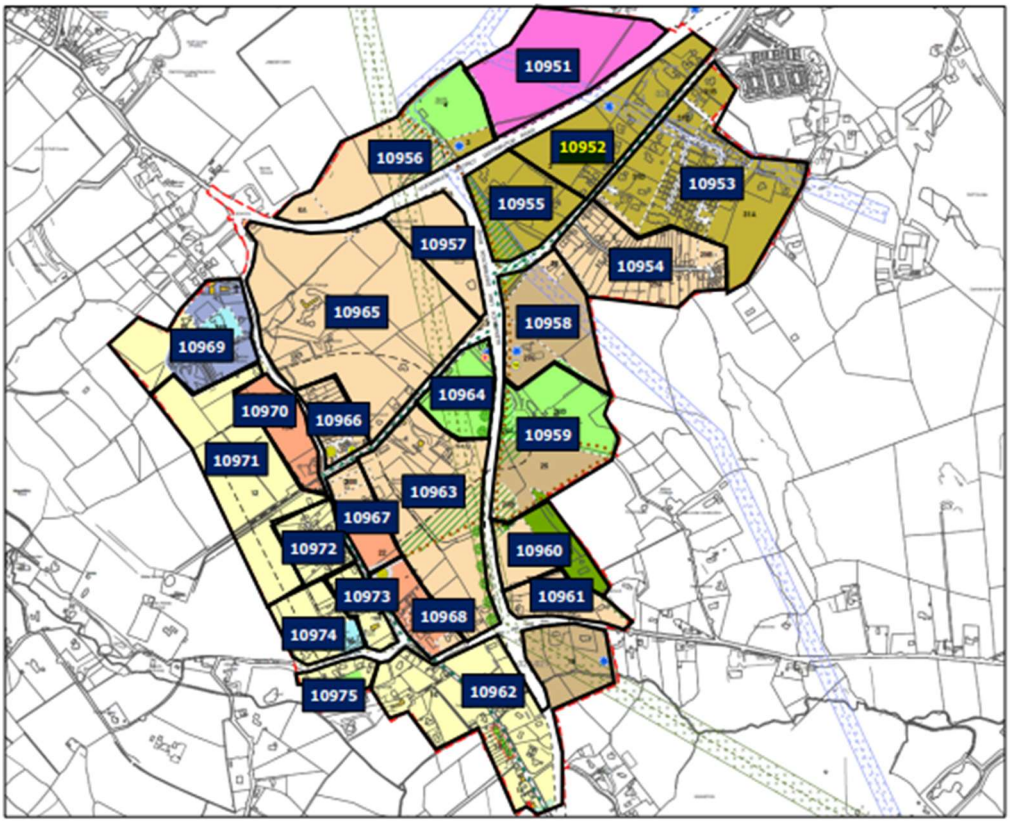


Figure 6-2 EIAR Model Zoning in LAP Area

Analysis has been undertaken to compare the trip rates calculated for the proposed development along with other committed/permitted developments in the area to the figures that were generated in the EIAR Chapter 7. The committed developments to be included in the analysis are Shaldon Grange (ABP31221421) and Glenamuck Manor (ABP30397819), the proposed development on the southern site (live application) which was lodged on the 18th of December 2025 is also discussed and compared in this section. See table below for comparison of the figures.

Table 6-3 EIAR and Transport Assessment Trip Rate Comparison with permitted developments

Development Name	LAP Zone	EIAR Projected Total Units in Zone	EIAR Projected Trips for Zone		EIAR Trip Rate		No. of Units	Transport Assessment (TA) Calculated Trips		TA Calculated Trip Rate	
			AM	PM	AM	PM		AM	PM	AM	PM
Glenamuck North (Northern Site) *[Proposed Development]*	10956	170	81.8	81.8	0.481	0.481	219	81	74	0.370	0.338
Glenamuck Manor	10965	630	289.4	289.4	0.459	0.459	203	65	62	0.320	0.305
Shaldon Grange							130	58	64	0.446	0.492

The EIAR prepared by DBFL for the Glenamuck District Distributor Road assigns trip rates to each LAP parcel based on projected residential development, which informed the design capacity of the road. The zone the proposed development, Glenamuck North (Northern Site), is located in in the EIAR assumed a trip rate of 0.481 trips per unit in both the AM and PM peak periods, based on 170 projected units generating approximately 82 trips in both peaks.

By comparison, the peak hour trip rates calculated in this report are 0.370 in the AM peak and 0.338 in the PM peak, derived from 219 units and 571m^2 creche, generating 81 AM peak trips and 74 PM peak trips. These rates are notably lower than those assumed in the EIAR, despite the higher unit count. This indicates that the proposed development generates fewer peak-hour trips per dwelling than the conservative assumptions adopted in the EIAR for the LAP lands.

A similar trend is evident when the proposed development is considered alongside committed developments in other LAP lands assessed within the EIAR. For Glenamuck Manor which contains 203no. units and a 480 m^2 creche, the EIAR assumed peak-hour trip rates of 0.459 trips per unit, whereas the Transport Assessment for that development indicates lower calculated rates of approximately 0.320 in the AM peak and 0.305 in the PM peak. Likewise, Shaldon Grange, comprising 130 residential units, generates 58 AM peak trips and 64 PM peak trips, equating to trip rates of 0.446 and 0.492 respectively, which are comparable to and within the range of the conservative assumptions adopted in the EIAR.

Analysis of the live application for Glenamuck North (Southern Site) which was lodged on the 18th December 2025, located in LAP Zones 10965 & 10957, shows that trip rates calculated in the TA are approximately 0.393 in the AM peak and 0.378 in the PM peak. These trips are based of 135no. units and are, similar to the developments listed above, below the projected trips rates for both zones from the EIAR and are presented in Table 6-4.

Table 6-4 Glenamuck North (Southern Site) TA and EIAR Trip Rate Comparison

Development Name	LAP Zone	EIAR Projected Total Units in Zone	EIAR Projected Trips for Zone		EIAR Trip Rate		No. of Units	Transport Assessment (TA) Calculated Trips		TA Calculated Trip Rate	
			AM	PM	AM	PM		AM	PM	AM	PM
Glenamuck North (Southern Site)	10965	630	289.4	289.4	0.459	0.459	135	53	51	0.393	0.378
	10957	135	67.0	67.0	0.496	0.496					

Overall, the evidence demonstrates that the trip rates used in the EIAR represent a robust and precautionary assessment of future development within the LAP area. The proposed development, together with adjacent committed and proposed schemes, generate peak-hour traffic levels that are consistent with or below those assumed in the EIAR, confirming that the cumulative traffic impacts of development within the LAP lands have been appropriately accounted for in the design of the Glenamuck District Distributor Road.

In conclusion, a full Transport Assessment is not required for the proposed development. As demonstrated above, the predicted traffic generation for both the AM and PM peak hours is modest relative to the capacity of the local network, with increases well below the 10% threshold identified in the Department of Transport guidance. Junction analysis using Junctions 11 shows that the development's access operates comfortably within capacity for all future year scenarios, with negligible delays and minimal RFC increases. Furthermore, cumulative impacts have been considered in the context of the Glenamuck District Distributor Road and other permitted and proposed developments, confirming that the network can safely accommodate the proposed development. Collectively, these findings demonstrate that the proposed scheme can be accommodated without the need for a full Transport Assessment.

7 DMURS Statement of Compliance

7.1 Introduction

This section of the TS contains a statement that the proposed development has been designed in accordance with the DMURS (Design Manual for Urban Roads and Streets, May 2019). Compliance of key aspects of the proposed development layout with the principles of DMURS are outlined below with extracts from Drawing No 4428-MHT-XX-ZZ-DR-C-0100 produced by Meinhardt included in this application.

7.2 Site Entrance

The proposed site access has been designed in accordance with DMURS. It incorporates a 6m wide vehicular entrance with an uncontrolled pedestrian crossing across the access in addition to a ramped cycle track crossing along the GDDR frontage. The junction between the cycle track and the access road has been designed in accordance with Junction TL401 (Standard Cycle Track Crossing Side Road with Priority – Fully Set Back) of the Cycle Design Manual (CDM).

The pedestrian crossing has been designed in accordance with DMURS Advice Note 6 (Priority Junction Tightening Measures). The design includes a stop line, associated signage and tactile paving to alert visually impaired users to the crossing point. For further details see Figure 7-1 or Meinhardt General Arrangement Drawing (4428-MHT-XX-ZZ-DR-C-0100) submitted with this application.

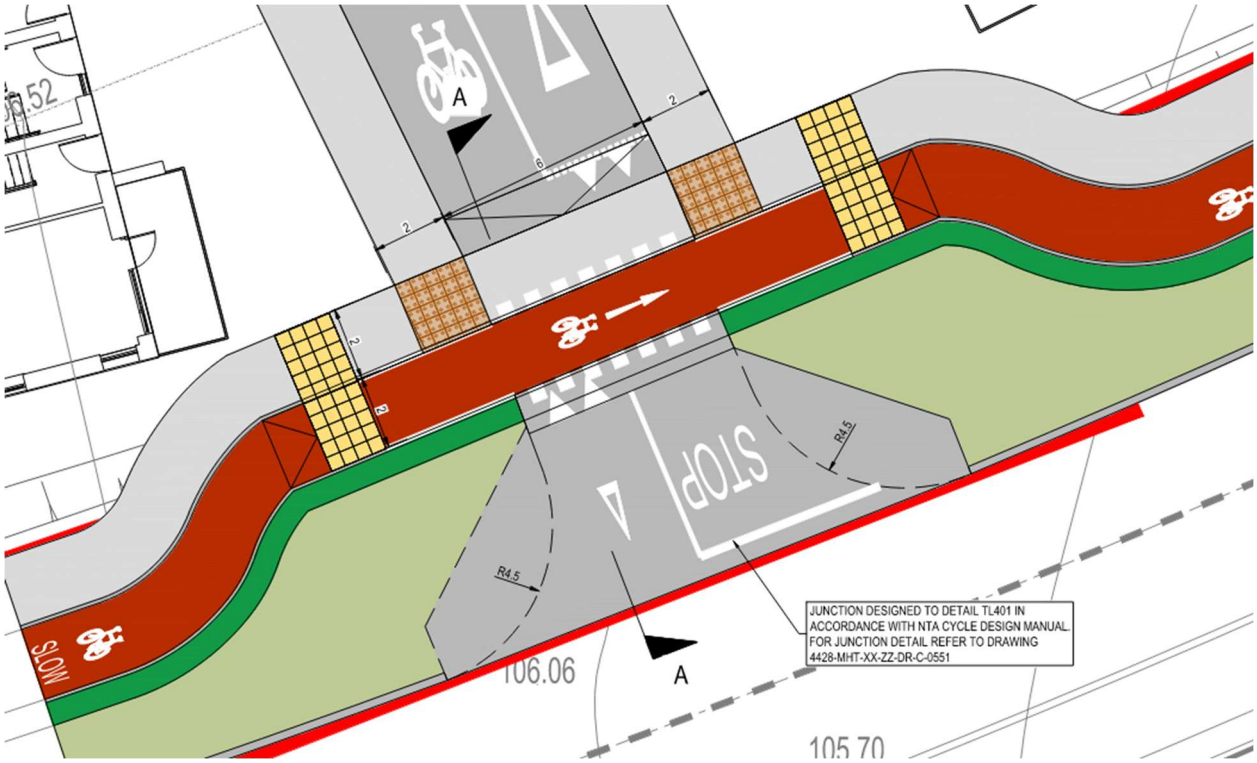


Figure 7-1 Proposed Development Access Junction Arrangement

7.3 Pedestrian Facilities and Access

A dedicated network of high-quality pedestrian facilities is provided throughout the proposed development site in the form of 2m wide DMURS-compliant footpaths. These are located primarily along the access roads, with additional feature routes provided through the public open space and the 'Strategic Green Corridor', which runs north–south through the site. Pedestrian movement is also accommodated within shared surface zones, where a 1.2m refuge strip is provided alongside the 4.8m carriageway.

Numerous uncontrolled pedestrian crossings are provided throughout the development at access road junctions along key desire lines. These crossings include dropped kerbs and tactile paving to assist visually

impaired users. Dedicated pedestrian linkages are also provided to the future Jamestown Park to the north, Bective Rangers to the east, and any future development on lands to the west, all in the form of 2m wide DMURS-compliant footpaths. In addition, three connection points are proposed from the development site to the pedestrian facilities on the GDDR. Collectively, these linkages enhance connectivity and permeability within the local area, supporting active travel and facilitating pedestrian movement in all directions.

For further details on the pedestrian facilities and access within the development Meinhardt General Arrangement Drawing (4428-MHT-XX-ZZ-DR-C-0100) submitted with this application.

7.4 Cyclist Facilities

There is good permeability throughout the site for cyclists with the development junction providing direct access onto the dedicated cyclist facilities provided on the GDDR which links the site to the Greater Dublin Area Cycle Network in both the north and south directions. Any cycle paths are proposed to be 2m in width and have been designed in accordance with Section 2.6 of the Cycle Design Manual.

As outlined in Section 7.2, the junction of the GDDR cycle track and the site access road has been designed in accordance with Junction TL401 (Standard Cycle Track Crossing Side Road with Priority – Fully Set Back) of the Cycle Design Manual (CDM). Further details on cyclist facilities can be see in the Meinhardt General Arrangement Drawing (4428-MHT-XX-ZZ-DR-C-0100) submitted with this application.

7.5 Corner Radii

As per Section 4.3.3 of DMURS, the corner radii at the proposed site access junction along the GDDR have been minimised in order to reduce vehicular speeds, creating a safer environment for all road users. At this site access junction, corner radii have been reduced to 4.5m. Internally within the development, corner radii range from 1m to 4.5m, reflecting the low frequency of large vehicle movements and supporting the objective of maintaining low vehicular speeds.

The site access has been analysed by way of swept path analysis to demonstrate that it is capable of accommodating the infrequent movement of large vehicles (i.e. refuse vehicles, emergency vehicles). For more information refer to Meinhardt Swept Path Analysis Drawings No. 4428-MHT-XX-ZZ-DR-T-0001 and 4428-MHT-XX-ZZ-DR-T-0002 submitted with this application.

7.6 Car Parking

The proposed development contains a mixture of on-street and in-curtilage car parking. The in-curtilage parking occurs in the case of the housing units while the on-street parking is typically associated with the apartment and duplex units in addition to the visitor parking.

A total of 179 on-street parking spaces are proposed as illustrated in 4428-MHT-XX-ZZ-DR-C-0100. The perpendicular spaces are designed with a width of 2.4m and a length of 5m, while the parallel car parking spaces measure 2.5m in width and 6m in length. This is in accordance with DMURS, minimum length of 4.8m and width of 2.4m for perpendicular spaces and 6m and 2.4m for parallel spaces.

Additionally, it is proposed to include 9 no. accessible parking spaces within the development, in line with the 4% required from the development plan. Finally, it is proposed to provide 36 designated on-street EV parking spaces for the apartment, duplex and visitor spaces in line with DLRCC guidance. For further details on the proposed car parking provision within the development refer to the Mobility Management Plan (4428-MHT-XX-ZZ-RP-T-0002) prepared by Meinhardt and submitted with this application.

7.7 Creche Set Down Area

It is proposed to include a set-down area adjacent to the creche development as per the DLRCC development plan. A multi-purpose set-down area is proposed in this case to ensure the most efficient use of the space available. The set-down area will incorporate three parking spaces. These spaces will be available for short-term parking during the crèche's designated peak drop-off and collection times (i.e.,

08:00–09:00 and 16:00–19:00). This policy will be communicated to parents via the welcome handbook provided on their child's first day at the creche. Outside of these times, the set-down area must be kept clear for deliveries and emergency access. All deliveries to the crèche will be scheduled to occur outside of the peak drop off / collection hours listed above.

For further details on the set-down area see Meinhardt General Arrangement Drawing (4428-MHT-XX-ZZ-DR-C-0100) submitted with this application.

7.8 Shared Surface Homezones

The proposed development layout incorporates three shared surface areas (homezones), one of which is a partial section of through road, with the remaining two located within cul-de-sacs. Each shared surface provides a 4.8m carriageway with an adjacent 1.2m pedestrian refuge to ensure safe pedestrian movement at all times. These areas are designed with bends, horizontal deflections, and short lengths to encourage low vehicular speeds and create a safe environment for all users. In accordance with DMURS, shared surface streets are considered '*highly desirable where movement priorities are low and there is a high place value in promoting more liveable streets (i.e. homezones).'*

As these areas are located within cul-de-sacs, and at the quieter extremities of the site in the case of the through road, they represent suitable locations for incorporating a shared liveable streetscape, given the low movement priorities at these points.

For further details see Meinhardt General Arrangement Drawing (4428-MHT-XX-ZZ-DR-C-0100) submitted with this application.

7.9 Swept Path Analysis

Refuse and emergency vehicle access is facilitated within the proposed site layout. Swept path analysis drawings have been produced demonstrating a large refuse vehicle manoeuvring within and egressing the proposed development site, confirming the acceptability of the site to accommodate such vehicles. It is noted that the refuse vehicle will reverse down the Homezone adjacent to the creche to facilitate rubbish collection in the absence of enough space to perform a full turning manoeuvre, this is acceptable for short distances.

Additionally, swept path analysis has been completed for a standard fire tender vehicle to ensure it can pass through the entire development in the case of an emergency.

For further details see Meinhardt Drawing No's 4428-MHT-XX-ZZ-DR-T-0001 to 4428-MHT-XX-ZZ-DR-T-0003 submitted with this application.

7.10 Sightlines

The standard visibility splay for a junction with a 50km/h design speed on a bus route (as is the case on the GDDR) is 49 metres in both directions from a setback of 2.4 metres.

In relation to setback distance, DMURS states the following;

"priority junctions in urban areas should be designed as Stop junctions, and a maximum X distance of 2.4 metres should be used. In difficult circumstances this may be reduced to 2.0 metres where vehicle speeds are slow and flows on the minor arm are low. However, the use of a 2.0 metre X distance may result in some vehicles slightly protruding beyond the major carriageway edge, and may result in drivers tending to nose out cautiously into traffic. Care should be taken to ensure that cyclists and drivers can observe this overhang from a reasonable distance and manoeuvre to avoid it without undue difficulty."

The standard visibility splay for a junction with a 50km/h design speed on the major arm (the GDDR /R117) is 49 metres in both directions from a setback of 2.4 metres. Visibility splays have been prepared for the proposed entrance for further details see Meinhardt Drawing No. 4428-MHT-XX-ZZ-DR-T-0010 submitted with this application.

Sightlines for the internal junctions have also been reviewed. Speed limits within the proposed development will be 30km/h. In accordance with DMURS, for 30km/h visibility should be 23m in both directions. Please refer to Meinhardt Drawing No. 4428-MHT-XX-ZZ-DR-T-0010 submitted with this application for further details.

8 Summary and Conclusion

8.1 Summary

Meinhardt has been commissioned by Durkan Carrickmines Developments Limited (The Applicant) to prepare a Traffic & Transport Assessment (TTA) to assist Dún-Laoghaire Rathdown County Council (DLRCC) in its assessment of a planning application for a Large Residential Development (LRD) at Glenamuck, Kilternan, Dublin 18.

Durkan Carrickmines Developments Limited intend to apply for permission for a Large-Scale Residential Development at a site in the townland of Glenamuck North, Kilternan, Dublin 18. The site is generally bounded by: the Glenamuck District Distributor Road to the south, which is recently constructed (to be known as the Kilternan Road); agricultural land to the west; De La Salle Palmerstown Football Club and the future Jamestown Park to the north; and Bective Rangers Football Club to the east.

Road works are proposed to the approved Glenamuck District Roads Scheme (ACP Ref. HA06D.303945) to provide access to the development from the Kilternan Road which will include any necessary tie-ins to the existing footpath and cycle track.

The development will principally consist of the construction of a creche (c. 571 sq m) and 219 No. residential units comprising 69 No. houses (51 No. 3 -bed units and 18 No. 4-bed units), 108 No. apartments (38 No. 1-bed units, 31 No. 2-bed units and 39 No. 3-bed units) and 42 No. duplexes (11 No. 1-bed units, 9 No. 2-bed units, and 22 No. 3-bed units). The proposed development will range in height from 2 No. to 4 No. storeys.

The development also provides: car, bicycle and motorcycle parking; bin storage; ancillary storage; private balconies, terraces and gardens; hard and soft landscaping; boundary treatments; lighting; substations; and all other associated site works above and below ground.

Section 3 provides a written and visual summary of the existing and proposed road network surrounding the subject site, setting the context for the road infrastructure discussed within the TTA. These roads include the GDDR, GLDR, Enniskerry Road (R117), Ballyogan Road (L6034), Glenamuck Road (L3022) and the Ballycorus Road (R116).

The TRICS database was used to derive vehicle trip rates for the proposed residential and crèche development. The development is forecast to generate approximately 81 two-way trips in the AM peak (08:00–09:00) and 73 in the PM peak (17:00–18:00).

Traffic analysis undertaken as part of this TTA demonstrates that the level of traffic generated by the proposed development represents a modest increase on existing flows along the Glenamuck District Distributor Road. A traffic survey undertaken during the weekday AM peak hour recorded approximately 1,028 two-way vehicle movements at the site location. The additional trips generated by the development would equate to an increase of approximately 7.88% over surveyed base flows, which is below the 10% threshold identified within the Department of Transport Traffic Management Guidelines. Junction capacity analysis of the proposed site access, undertaken using Junctions 11 software for future assessment years up to 2043 for the AM peak, confirms that the junction will operate well within capacity, with negligible delays and queuing.

Vehicular access to the site is proposed via a new entrance along the GDDR on the southern boundary. This will incorporate an uncontrolled pedestrian crossing and a ramped setback crossing of the cycle path. Sightlines at the proposed access have been assessed in accordance with DMURS requirements for a 50

km/h speed environment on a bus route, while swept path analysis confirms that the development can accommodate and be traversed by both refuse and fire tender vehicles. The proposed layout has also been reviewed to ensure that key elements including corner radii, cycle paths, shared surfaces, and pedestrian facilities are designed in full compliance with DMURS standards.

8.2 Conclusion

The proposed development has been designed in full compliance with DMURS, with particular consideration given to creating a safe, attractive, and comfortable living environment for all future residents and those associated with the creche. The traffic and transport analysis concludes that the proposed development will not give rise to any significant adverse impacts on the surrounding road network. The forecast traffic generation is modest, the proposed site access junction operates well within capacity for all assessed future scenarios and cumulative impacts have already been accounted for within the design of the Glenamuck District Distributor Road. Accordingly, the proposed development is considered acceptable from a traffic and transportation perspective and can be supported by the existing and planned transport infrastructure in the area.

Appendix A – TRICS Outputs

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use: 03 - RESIDENTIAL

Category: C - FLATS PRIVATELY OWNED

Total Vehicles

Selected regions and areas:

01	**GREATER LONDON**		
	BN	BARNET	2 days
02	**SOUTH EAST**		
	BH	BRIGHTON & HOVE	1 day
	HF	HERTFORDSHIRE	1 day
04	**EAST ANGLIA**		
	CA	CAMBRIDGESHIRE	1 day
	NF	NORFOLK	1 day
05	**EAST MIDLANDS**		
	NG	NOTTINGHAM	2 days
08	**NORTH WEST**		
	MS	MERSEYSIDE	1 day
11	**SCOTLAND**		
	SR	STIRLING	1 day
15	**GREATER DUBLIN**		
	DL	DUBLIN	1 day

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:	DWELLS
Actual Range:	0.31 to 2.04 (units:DWELLS)
Range Selected by User:	50 to 200 (units:DWELLS)
Parking Spaces Range:	50 - 300

Public Transport Provision:

Selection by:	All Surveys Included
Date Range:	01/01/16 to 04/09/24

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	2 days
Thursday	1 days
Tuesday	4 days
Wednesday	4 days

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

Selected survey types:

Manual count	11
Direction ATC Count	0

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 undertaking using machines

Selected Locations:

Edge of Town	1 days
Neighbourhood Centre (PPS6 Local Centre)	3 days
Suburban Area (PPS6 Out of Centre)	7 days

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:

Development Zone	1 days
No Sub Category	3 days
Residential Zone	7 days

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.

Inclusion of Servicing Vehicle Counts:

Servicing vehicles Excluded	6 days
Servicing vehicles Included	5 days

Secondary Filtering Selection:

Use Class:

C3	11 surveys

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

0 - 0

Population within 1 mile:

1,001 to 5,000	3 surveys
20,001 to 25,000	3 surveys
25,001 to 50,000	4 surveys
50,001 to 100,000	1 surveys

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

Population within 5 miles:

125,001 to 250,000	3 surveys
250,001 to 500,000	3 surveys
50,001 to 75,000	1 surveys
500,001 or More	4 surveys

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	7 surveys
1.1 to 1.5	4 surveys

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:

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:

No	8 surveys
Yes	3 surveys

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:

4 - Good	2 surveys
No PTAL Present	9 surveys

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.

COVID-19 Restrictions:

Yes - At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions

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.

1 **BH-03-C-01** **BLOCK OF FLATS** **BRIGHTON & HOVE**
OLD SHOREHAM RD
BRIGHTON
HOVE
Suburban Area (PPS6 Out of Centre)
Residential Zone
Site area: 0.31 hect
Survey date: Tuesday 26/09/2017 Survey Type: Manual

2 **BN-03-C-02** **BLOCKS OF FLATS** **BARNET**
OAKLEIGH ROAD
WHETSTONE
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Site area: 0.8 hect
Survey date: Wednesday 13/09/2023 Survey Type: Manual

3 **BN-03-C-03** **BLOCKS OF FLATS** **BARNET**
OAKLEIGH ROAD
WHETSTONE
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Site area: 0.8 hect
Survey date: Thursday 05/09/2024 Survey Type: Manual

4 **CA-03-C-03** **BLOCKS OF FLATS** **CAMBRIDGESHIRE**
CROMWELL ROAD
CAMBRIDGE
Suburban Area (PPS6 Out of Centre)
No Sub Category
Site area: 1.2 hect
Survey date: Monday 18/09/2017 Survey Type: Manual

5 **DL-03-C-18** **BLOCKS OF FLATS** **DUBLIN**
HAROLD'S CROSS ROAD
DUBLIN
Suburban Area (PPS6 Out of Centre)
Residential Zone
Site area: 0.77 hect
Survey date: Wednesday 19/05/2021 Survey Type: Manual

6 **HF-03-C-07** **BLOCKS OF FLATS** **HERTFORDSHIRE**
OXHEY DRIVE
WATFORD
SOUTH OXHEY
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Site area: 0.65 hect
Survey date: Wednesday 07/06/2023 Survey Type: Manual

7 **MS-03-C-02** **BLOCKS OF FLATS** **MERSEYSIDE**
SOUTH FERRY QUAY
LIVERPOOL
BRUNSWICK DOCK
Suburban Area (PPS6 Out of Centre)
Development Zone
Site area: 1.536 hect
Survey date: Tuesday 13/11/2018 Survey Type: Manual

8 **NF-03-C-02** **MIXED FLATS & HOUSES** **NORFOLK**
HALL ROAD
NORWICH
LAKENHAM

Suburban Area (PPS6 Out of Centre)
Residential Zone
Site area: 2.04 hect
Survey date: Monday 18/11/2019 Survey Type: Manual

9 **NG-03-C-01** **HOUSES (SPLIT INTO FLATS)** **NOTTINGHAM**
LAWRENCE WAY
NOTTINGHAM
Suburban Area (PPS6 Out of Centre)
No Sub Category
Site area: 0.8 hect
Survey date: Tuesday 08/11/2016 Survey Type: Manual

10 **NG-03-C-02** **HOUSES (SPLIT INTO FLATS)** **NOTTINGHAM**
CASTLE MARINA ROAD
NOTTINGHAM
Suburban Area (PPS6 Out of Centre)
No Sub Category
Site area: 1.5 hect
Survey date: Wednesday 09/11/2016 Survey Type: Manual

11 **SR-03-C-03** **BLOCK OF FLATS & TERRACED** **STIRLING**
KERSEBONNY ROAD
STIRLING
CAMBUSBARRON
Edge of Town
Residential Zone
Site area: 1.3 hect
Survey date: Tuesday 01/09/2020 Survey Type: Manual

DESELECTED SURVEYS

Site Ref	Survey Date	Reason for Deselection
BM-03-C-01	12-11-2018	london
BT-03-C-01	28-09-2016	london
BT-03-C-03	16-11-2023	london
HF-03-C-04	10-06-2021	Removed: Site re-surveyed by HF-03-C-07
HM-03-C-02	30-04-2019	london
RD-03-C-03	26-04-2018	london
RD-03-C-04	15-05-2019	Removed: Site re-surveyed by RD-03-C-05
RD-03-C-05	30-06-2021	Removed: Site re-surveyed by RD-03-C-06
RD-03-C-06	28-06-2022	Removed: Site re-surveyed by RD-03-C-07
RD-03-C-07	14-06-2023	london

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

Total Vehicles

Calculation factor: 1 DWELLS

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. DWELLS	Arrivals	Departures	Totals
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	**11**	**101**	**0.032**	**0.141**	**0.173**
08:00-09:00	**11**	**101**	**0.057**	**0.185**	**0.242**
09:00-10:00	**11**	**101**	**0.063**	**0.083**	**0.146**
10:00-11:00	**11**	**101**	**0.066**	**0.074**	**0.140**
11:00-12:00	**11**	**101**	**0.057**	**0.064**	**0.121**
12:00-13:00	**11**	**101**	**0.072**	**0.079**	**0.151**
13:00-14:00	**11**	**101**	**0.060**	**0.069**	**0.129**
14:00-15:00	**11**	**101**	**0.066**	**0.060**	**0.126**
15:00-16:00	**11**	**101**	**0.112**	**0.055**	**0.167**
16:00-17:00	**11**	**101**	**0.104**	**0.069**	**0.173**
17:00-18:00	**11**	**101**	**0.134**	**0.065**	**0.199**
18:00-19:00	**11**	**101**	**0.110**	**0.065**	**0.175**
19:00-20:00	**2**	**115**	**0.026**	**0.022**	**0.048**
20:00-21:00	**2**	**115**	**0.017**	**0.004**	**0.021**
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			**0.976**	**1.035**	**2.011**

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

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

Parameter Summary:

Trip rate parameter range selected:	50 - 200 (units: DWELLS)
Survey date date range:	08/11/2016 - 05/09/2024
Number of weekdays (Monday-Friday):	11
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	10
Surveys manually removed from selection:	0

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

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use: 03 - RESIDENTIAL

Category: A - HOUSES PRIVATELY OWNED

Total Vehicles

Selected regions and areas:

02	**SOUTH EAST**		
	ES	EAST SUSSEX	1 day
	HC	HAMPSHIRE	3 days
	KC	KENT	1 day
	WS	WEST SUSSEX	4 days
03	**SOUTH WEST**		
	DC	DORSET	1 day
04	**EAST ANGLIA**		
	CA	CAMBRIDGESHIRE	1 day
	NF	NORFOLK	7 days
	SF	SUFFOLK	1 day
08	**NORTH WEST**		
	AC	CHESHIRE WEST & CHESTER	1 day
13	**MUNSTER**		
	TI	TIPPERARY	1 day
17	**ULSTER (NORTHERN IRELAND)**		
	AN	ANTRIM	1 day

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:	DWELLS
Actual Range:	1.38 to 6.8 (units:DWELLS)
Range Selected by User:	50 to 100 (units:DWELLS)
Parking Spaces Range:	50 - 250

Public Transport Provision:

Selection by:	All Surveys Included
Date Range:	01/01/16 to 17/09/24

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	4 days
Thursday	7 days
Tuesday	5 days
Wednesday	6 days

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

Selected survey types:

Manual count	22
Direction ATC Count	0

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 undertaking using machines

Selected Locations:

Edge of Town	12 days
Neighbourhood Centre (PPS6 Local Centre)	6 days
Suburban Area (PPS6 Out of Centre)	4 days

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:

No Sub Category	2 days
Out of Town	2 days
Residential Zone	12 days
Village	6 days

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.

Inclusion of Servicing Vehicle Counts:

Servicing vehicles Excluded	18 days
Servicing vehicles Included	4 days

Secondary Filtering Selection:

Use Class:

C3	22 surveys

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

0 - 0

Population within 1 mile:

1,001 to 5,000	6 surveys
10,001 to 15,000	1 surveys
15,001 to 20,000	2 surveys
20,001 to 25,000	1 surveys
25,001 to 50,000	1 surveys
5,001 to 10,000	11 surveys

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

Population within 5 miles:

100,001 to 125,000	3 surveys
125,001 to 250,000	2 surveys
25,001 to 50,000	5 surveys
5,001 to 25,000	5 surveys
50,001 to 75,000	3 surveys
75,001 to 100,000	4 surveys

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 surveys
1.1 to 1.5	17 surveys
1.6 to 2.0	3 surveys

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:

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:

No	5 surveys
Yes	17 surveys

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	22 surveys

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.

COVID-19 Restrictions:

Yes - At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions

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.

1	**AC-03-A-06**	**DETACHED HOUSES**	**CHESHIRE WEST & CHESTER**

COMMON LANE
NEAR CHESTER
WAVERTON
Neighbourhood Centre (PPS6 Local Centre)
Village
Site area: 6.8 hect
Survey date: Friday 29/04/2022 Survey Type: Manual

2	**AN-03-A-10**	**DETACHED & SEMI-DETACHED**	**ANTRIM**

FERRARD GRANGE
ANTRIM
Suburban Area (PPS6 Out of Centre)
Residential Zone
Site area: 3.5 hect
Survey date: Friday 07/06/2024 Survey Type: Manual

3	**CA-03-A-08**	**DETACHED & SEMI-DETACHED**	**CAMBRIDGESHIRE**

GIDDING ROAD
SAWTRY
Neighbourhood Centre (PPS6 Local Centre)
Village
Site area: 2.68 hect
Survey date: Thursday 13/10/2022 Survey Type: Manual

4	**DC-03-A-09**	**MIXED HOUSES**	**DORSET**

A350
SHAFTESBURY
Edge of Town
No Sub Category
Site area: 1.65 hect
Survey date: Friday 19/11/2021 Survey Type: Manual

5	**ES-03-A-07**	**MIXED HOUSES & FLATS**	**EAST SUSSEX**

NEW ROAD
HAILSHAM
HELLINGLY
Edge of Town
Residential Zone
Site area: 3.49 hect
Survey date: Thursday 07/11/2019 Survey Type: Manual

6	**HC-03-A-23**	**HOUSES & FLATS**	**HAMPSHIRE**

CANADA WAY
LIPHOOK
Suburban Area (PPS6 Out of Centre)
Residential Zone
Site area: 1.4 hect
Survey date: Tuesday 19/11/2019 Survey Type: Manual

7	**HC-03-A-27**	**MIXED HOUSES**	**HAMPSHIRE**

DAIRY ROAD
ANDOVER
Edge of Town
Residential Zone
Site area: 2.5 hect
Survey date: Tuesday 16/11/2021 Survey Type: Manual

8	**HC-03-A-37**	**MIXED HOUSES**	**HAMPSHIRE**

REDFIELDS LANE
FLEET
CHURCH CROOKHAM
Edge of Town

Residential Zone
Site area: 3.46 hect
Survey date: Wednesday 27/03/2024 Survey Type: Manual

9 **KC-03-A-03** **MIXED HOUSES & FLATS** **KENT**
HYTHE ROAD
ASHFORD
WILLESBOROUGH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Site area: 1.38 hect
Survey date: Thursday 14/07/2016 Survey Type: Manual

10 **NF-03-A-25** **MIXED HOUSES & FLATS** **NORFOLK**
WOODFARM LANE
GORLESTON-ON-SEA
Edge of Town
Residential Zone
Site area: 3.1 hect
Survey date: Tuesday 21/09/2021 Survey Type: Manual

11 **NF-03-A-26** **MIXED HOUSES** **NORFOLK**
HEATH DRIVE
HOLT
Edge of Town
Residential Zone
Site area: 3.51 hect
Survey date: Wednesday 22/09/2021 Survey Type: Manual

12 **NF-03-A-27** **MIXED HOUSES & FLATS** **NORFOLK**
YARMOUTH ROAD
NEAR NORWICH
BLOFIELD
Neighbourhood Centre (PPS6 Local Centre)
Village
Site area: 3.69 hect
Survey date: Thursday 16/09/2021 Survey Type: Manual

13 **NF-03-A-34** **MIXED HOUSES** **NORFOLK**
NORWICH ROAD
SWAFFHAM
Edge of Town
Out of Town
Site area: 3.15 hect
Survey date: Tuesday 27/09/2022 Survey Type: Manual

14 **NF-03-A-36** **MIXED HOUSES** **NORFOLK**
LONDON ROAD
WYMONDHAM
Edge of Town
No Sub Category
Site area: 3.2 hect
Survey date: Thursday 29/09/2022 Survey Type: Manual

15 **NF-03-A-40** **MIXED HOUSES** **NORFOLK**
MILL LANE
NEAR NORWICH
HORSFORD
Neighbourhood Centre (PPS6 Local Centre)
Village
Site area: 3.1 hect
Survey date: Tuesday 11/10/2016 Survey Type: Manual

16 **NF-03-A-50** **MIXED HOUSES** **NORFOLK**
BRANDON ROAD
SWAFFHAM
Edge of Town
Residential Zone
Site area: 2.79 hect
Survey date: Friday 14/10/2016 Survey Type: Manual

17 **SF-03-A-07** **MIXED HOUSES** **SUFFOLK**
FOXHALL ROAD
IPSWICH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Site area: 3.7 hect
Survey date: Thursday 09/05/2019 Survey Type: Manual

18 **TI-03-A-01** **MIXED HOUSES** **TIPPERARY**
BRITTAS ROAD
THURLES
Edge of Town
Out of Town
Site area: 3.43 hect
Survey date: Thursday 17/06/2021 Survey Type: Manual

19 **WS-03-A-10** **MIXED HOUSES** **WEST SUSSEX**
TODDINGTON LANE
LITTLEHAMPTON
WICK
Edge of Town
Residential Zone
Site area: 2.27 hect
Survey date: Wednesday 07/11/2018 Survey Type: Manual

20 **WS-03-A-16** **DETACHED & SEMI-DETACHED** **WEST SUSSEX**
BRACKLESHAM LANE
BRACKLESHAM BAY
Neighbourhood Centre (PPS6 Local Centre)
Village
Site area: 1.9 hect
Survey date: Wednesday 09/11/2022 Survey Type: Manual

21 **WS-03-A-17** **MIXED HOUSES & FLATS** **WEST SUSSEX**
SHOPWHYKE ROAD
CHICHESTER
Edge of Town
Residential Zone
Site area: 2.9 hect
Survey date: Wednesday 01/03/2023 Survey Type: Manual

22 **WS-03-A-25** **PRIVATE HOUSES & FLATS** **WEST SUSSEX**
LIDSEY ROAD
WOODGATE
Neighbourhood Centre (PPS6 Local Centre)
Village
Site area: 2.4 hect
Survey date: Wednesday 18/09/2024 Survey Type: Manual

DESELECTED SURVEYS

Site Ref	Survey Date	Reason for Deselection
HC-03-A-18	29-11-2016	Removed: Site re-surveyed by HC-03-A-19
HC-03-A-19	27-11-2017	Removed: Site re-surveyed by HC-03-A-20

Site Ref	Survey Date	Reason for Deselection
HC-03-A-20	20-11-2018	Removed: Site re-surveyed by HC-03-A-23

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

Total Vehicles

Calculation factor: 1 DWELLS

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. DWELLS	Arrivals	Departures	Totals
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	**22**	**73**	**0.089**	**0.326**	**0.415**
08:00-09:00	**22**	**73**	**0.167**	**0.370**	**0.537**
09:00-10:00	**22**	**73**	**0.158**	**0.190**	**0.348**
10:00-11:00	**22**	**73**	**0.148**	**0.170**	**0.318**
11:00-12:00	**22**	**73**	**0.132**	**0.154**	**0.286**
12:00-13:00	**22**	**73**	**0.184**	**0.181**	**0.365**
13:00-14:00	**22**	**73**	**0.188**	**0.191**	**0.379**
14:00-15:00	**22**	**73**	**0.183**	**0.198**	**0.381**
15:00-16:00	**22**	**73**	**0.290**	**0.196**	**0.486**
16:00-17:00	**22**	**73**	**0.305**	**0.191**	**0.496**
17:00-18:00	**22**	**73**	**0.363**	**0.177**	**0.540**
18:00-19:00	**22**	**73**	**0.259**	**0.158**	**0.417**
19:00-20:00					
20:00-21:00					
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			**2.466**	**2.502**	**4.968**

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

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

Parameter Summary:

Trip rate parameter range selected:	50 - 100 (units: DWELLS)
Survey date date range:	14/07/2016 - 18/09/2024
Number of weekdays (Monday-Friday):	22
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	3
Surveys manually removed from selection:	0

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

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use: 03 - RESIDENTIAL

Category: K - MIXED PRIV HOUS (FLATS AND HOUSES)

Total Vehicles

Selected regions and areas:

02	**SOUTH EAST**		
	SC	SURREY	1 day
	WS	WEST SUSSEX	1 day
03	**SOUTH WEST**		
	CW	CORNWALL	1 day
12	**CONNAUGHT**		
	CS	SLIGO	1 day
13	**MUNSTER**		
	TI	TIPPERARY	1 day

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:	DWELLS
Actual Range:	2.58 to 6.3 (units:DWELLS)
Range Selected by User:	0 to 400 (units:DWELLS)
Parking Spaces Range:	200 - 400

Public Transport Provision:

Selection by:	All Surveys Included
Date Range:	01/01/16 to 11/06/24

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	2 days
Tuesday	1 days
Wednesday	1 days

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

Selected survey types:

Manual count	5
Direction ATC Count	0

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 undertaking using machines

Selected Locations:

Edge of Town	3 days
Neighbourhood Centre (PPS6 Local Centre)	2 days

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	3 days
Village	2 days

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.

Inclusion of Servicing Vehicle Counts:

Servicing vehicles Excluded	5 days

Secondary Filtering Selection:

Use Class:

C3	5 surveys

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

0 - 0

Population within 1 mile:

1,001 to 5,000	1 surveys
15,001 to 20,000	1 surveys
20,001 to 25,000	1 surveys
5,001 to 10,000	2 surveys

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

Population within 5 miles:

125,001 to 250,000	2 surveys
25,001 to 50,000	1 surveys
5,001 to 25,000	1 surveys
50,001 to 75,000	1 surveys

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 surveys
1.1 to 1.5	3 surveys

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:

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:

No	3 surveys
Yes	2 surveys

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	5 surveys

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.

COVID-19 Restrictions:

Yes - At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions

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.

1	**CS-03-K-01**	**FLATS & MIXED HOUSES**	**SLIGO**

STATION ROAD
BALLISODARE
Neighbourhood Centre (PPS6 Local Centre)
Village
Site area: 6.3 hect
Survey date: Monday 27/05/2019 Survey Type: Unknown

2	**CW-03-K-01**	**MIXED HOUSES & FLATS**	**CORNWALL**

TRELOWEN DRIVE
PENRYN
Edge of Town
Residential Zone
Site area: 2.58 hect
Survey date: Thursday 28/03/2019 Survey Type: Unknown

3	**SC-03-K-01**	**MIXED HOUSES & FLATS**	**SURREY**

DE BURGH GARDENS
TADWORTH
Neighbourhood Centre (PPS6 Local Centre)
Village
Site area: 3.2 hect
Survey date: Tuesday 22/06/2021 Survey Type: Unknown

4	**TI-03-K-01**	**DETACHED HOUSES & FLATS**	**TIPPERARY**

SLIEVENAMON ROAD
THURLES
CLONGOWER
Edge of Town
Residential Zone
Site area: 3.3 hect
Survey date: Wednesday 23/09/2020 Survey Type: Unknown

5	**WS-03-K-03**	**MIXED HOUSES & FLATS**	**WEST SUSSEX**

LITTLEHAMPTON ROAD
WORTHING
WEST DURRINGTON
Edge of Town
Residential Zone
Site area: 3.15 hect
Survey date: Thursday 12/05/2016 Survey Type: Unknown

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	No. Days	Ave. DWELLS	Arrivals	Departures	Totals
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	5	144	0.053	0.163	0.216
08:00-09:00	5	144	0.104	0.242	0.346
09:00-10:00	5	144	0.139	0.152	0.291
10:00-11:00	5	144	0.109	0.156	0.265
11:00-12:00	5	144	0.109	0.128	0.237
12:00-13:00	5	144	0.143	0.120	0.263
13:00-14:00	5	144	0.138	0.136	0.274
14:00-15:00	5	144	0.134	0.171	0.305
15:00-16:00	5	144	0.185	0.124	0.309
16:00-17:00	5	144	0.188	0.136	0.324
17:00-18:00	5	144	0.262	0.131	0.393
18:00-19:00	5	144	0.184	0.109	0.293
19:00-20:00					
20:00-21:00					
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			1.748	1.768	3.516

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

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

Parameter Summary:

Trip rate parameter range selected:	0 - 400 (units: DWELLS)
Survey date date range:	12/05/2016 - 22/06/2021
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

Audit Code: 731a6384-5c06-4e05-a14b-1eb69405ec02

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use: 04 - EDUCATION

Category: D - NURSERY

Selected Vehicle Type: Total Vehicles

Selected regions and areas:

01	**GREATER LONDON**		
	KI	KINGSTON	1 day
	LB	LAMBETH	1 day
	RB	REDBRIDGE	2 days
02	**SOUTH EAST**		
	BH	BRIGHTON & HOVE	1 day
	KC	KENT	1 day
	SC	SURREY	2 days
03	**SOUTH WEST**		
	BA	BATH & NORTH EAST SOMERSET	2 days
	BR	BRISTOL CITY	1 day
	DC	DORSET	1 day
	SD	SWINDON	1 day
04	**EAST ANGLIA**		
	CA	CAMBRIDGESHIRE	1 day
	SF	SUFFOLK	1 day
05	**EAST MIDLANDS**		
	DY	DERBY	1 day
	LE	LEICESTERSHIRE	1 day
	LN	LINCOLNSHIRE	1 day
	NN	NORTH NORTHAMPTONSHIRE	2 days
06	**WEST MIDLANDS**		
	WK	WARWICKSHIRE	1 day
	WM	WEST MIDLANDS	2 days
07	**YORKSHIRE & NORTH LINCOLNSHIRE**		
	DR	DONCASTER	1 day
	NY	NORTH YORKSHIRE	1 day
08	**NORTH WEST**		
	GM	GREATER MANCHESTER	1 day
09	**NORTH**		
	DH	DURHAM	2 days
	TV	TEES VALLEY	1 day
	TW	TYNE & WEAR	3 days
10	**WALES**		
	MT	MERTHYR TYDFIL	1 day
	NW	NEWPORT	1 day
	RC	RHONDDA CYNON TAFF	1 day
11	**SCOTLAND**		
	DU	DUNDEE CITY	1 day
	EA	EAST AYRSHIRE	1 day
	ER	EAST RENFREWSHIRE	7 days
	HI	HIGHLAND	1 day
	SR	STIRLING	1 day
12	**CONNAUGHT**		
	RO	ROSCOMMON	1 day
14	**LEINSTER**		
	WT	WESTMEATH	1 day

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:	GFA
Actual Range:	109 to 2350 (units:sqm)
Range Selected by User:	109 to 2350 (units:sqm)
Parking Spaces Range:	3 - 57

Public Transport Provision:

Selection by:	All Surveys Included
Date Range:	17/12/97 to 06/09/23

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	7 days
Monday	6 days
Thursday	10 days
Tuesday	9 days
Wednesday	16 days

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

Selected survey types:

Manual count	48
Direction ATC Count	0

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 undertaking using machines

Selected Locations:

Edge of Town	14 days
Neighbourhood Centre	12 days
Suburban Area	22 days

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:

Built-Up Zone	1 days
Development Zone	1 days
No Sub Category	13 days
Residential Zone	29 days
Village	4 days

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.

Inclusion of Servicing Vehicle Counts:

Servicing vehicles Included	7 days
Servicing vehicles Unknown	41 days

Secondary Filtering Selection:

Use Class:

E(f)	48 surveys

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

143 - 10232

Population within 1 mile:

1,001 to 5,000	8 surveys
10,001 to 15,000	9 surveys
15,001 to 20,000	7 surveys
20,001 to 25,000	4 surveys
25,001 to 50,000	11 surveys
5,001 to 10,000	6 surveys
50,001 to 100,000	3 surveys

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

Population within 5 miles:

100,001 to 125,000	5 surveys
125,001 to 250,000	10 surveys
25,001 to 50,000	4 surveys
250,001 to 500,000	14 surveys
5,001 to 25,000	2 surveys
50,001 to 75,000	2 surveys
500,001 or More	5 surveys
75,001 to 100,000	6 surveys

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

Car ownership within 5 miles:

0.5 or Less	1 surveys
0.6 to 1.0	27 surveys
1.1 to 1.5	19 surveys
2.1 to 2.5	1 surveys

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:

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:

No	48 surveys

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:

1b - Very poor	1 surveys
2 - Poor	1 surveys
No PTAL Present	46 surveys

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.

COVID-19 Restrictions:

Yes - At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions

1	**BA-04-D-01**	**NURSERY**	**BATH & NORTH EAST SOMERSET**

WESTON ROAD
BATH
Edge of Town
Residential Zone
Gross floor area: 825 sqm
Survey date: Thursday 05/10/2006 Survey Type: Manual

2	**BA-04-D-02**	**NURSERY**	**BATH & NORTH EAST SOMERSET**

MIDFORD ROAD
BATH
COMBE DOWN
Neighbourhood Centre
Residential Zone
Gross floor area: 300 sqm
Survey date: Thursday 15/09/2022 Survey Type: Manual

3	**BH-04-D-01**	**NURSERY**	**BRIGHTON & HOVE**

CONNAUGHT ROAD
BRIGHTON
HOVE
Neighbourhood Centre
Residential Zone
Gross floor area: 185 sqm
Survey date: Friday 22/09/2017 Survey Type: Manual

4	**BR-04-D-01**	**NURSERY**	**BRISTOL CITY**

BURCHELLS GREEN ROAD
BRISTOL
KINGSWOOD
Suburban Area
Residential Zone
Gross floor area: 718 sqm
Survey date: Tuesday 02/05/2023 Survey Type: Manual

5	**CA-04-D-01**	**NURSERY**	**CAMBRIDGESHIRE**

MILTON ROAD
CAMBRIDGE
CHESTERTON
Neighbourhood Centre
Residential Zone
Gross floor area: 500 sqm
Survey date: Survey Type: Manual

6	**DC-04-D-01**	**NURSERY**	**DORSET**

OLGA ROAD
DORCHESTER
VICTORIA PARK
Suburban Area
No Sub Category
Gross floor area: 987 sqm
Survey date: Thursday 15/10/1998 Survey Type: Manual

7	**DH-04-D-01**	**NURSERY**	**DURHAM**

PEA ROAD
STANLEY
Edge of Town
No Sub Category
Gross floor area: 750 sqm
Survey date: Tuesday 10/06/2003 Survey Type: Manual

8	**DH-04-D-02**	**NURSERY**	**DURHAM**

PRIORY ROAD
DURHAM
FRAMWELLGATE MOOR
Suburban Area
Residential Zone
Gross floor area: 382 sqm
Survey date: Thursday 27/11/2008 Survey Type: Manual

9	**DR-04-D-01**	**NURSERY**	**DONCASTER**

BAWTRY ROAD
DONCASTER
Suburban Area
Residential Zone
Gross floor area: 1250 sqm
Survey date: Friday 13/05/2022 Survey Type: Manual

10	**DU-04-D-01**	**NURSERY**	**DUNDEE CITY**

LONGTOWN TERRACE
DUNDEE
Suburban Area
Residential Zone
Gross floor area: 325 sqm
Survey date: Survey Type: Manual

11	**DY-04-D-02**	**NURSERY**	**DERBY**

MAXWELL AVENUE
DERBY
DARLEY ABBEY
Edge of Town
Residential Zone
Gross floor area: 415 sqm
Survey date: Thursday 12/07/2018 Survey Type: Manual

12	**EA-04-D-01**	**NURSERY**	**EAST AYRSHIRE**

ALTONHILL AVENUE
KILMARNOCK
Edge of Town
No Sub Category
Gross floor area: 592 sqm
Survey date: Thursday 19/05/2005 Survey Type: Manual

13	**ER-04-D-01**	**NURSERY**	**EAST RENFREWSHIRE**

PRINTERS LAND
BUSBY
Edge of Town
No Sub Category
Gross floor area: 921 sqm
Survey date: Tuesday 25/05/1999 Survey Type: Manual

14	**ER-04-D-02**	**NURSERY**	**EAST RENFREWSHIRE**

ARTHURLIE AVENUE
BARRHEAD
AUEHENBACK
Neighbourhood Centre
No Sub Category
Gross floor area: 351 sqm
Survey date: Tuesday 15/06/1999 Survey Type: Manual

15	**ER-04-D-03**	**NURSERY**	**EAST RENFREWSHIRE**

ROSEMOUNT AVENUE
NEWTON MEARNS
Edge of Town

Residential Zone
Gross floor area: 407 sqm
Survey date: Tuesday 10/11/1998 Survey Type: Manual

16 **ER-04-D-04** **NURSERY** **EAST RENFREWSHIRE**
STEWARTON ROAD
NEWTON MEARNS
GREENLAW
Edge of Town
No Sub Category
Gross floor area: 205 sqm
Survey date: Tuesday 08/06/1999 Survey Type: Manual

17 **ER-04-D-06** **NURSERY** **EAST RENFREWSHIRE**
WOODFARM ROAD
GIFFNOCK
Neighbourhood Centre
No Sub Category
Gross floor area: 398 sqm
Survey date: Tuesday 18/05/1999 Survey Type: Manual

18 **ER-04-D-07** **NURSERY** **EAST RENFREWSHIRE**
HIGH STREET
NEILSTON
Neighbourhood Centre
Village
Gross floor area: 341 sqm
Survey date: Tuesday 28/09/1999 Survey Type: Manual

19 **ER-04-D-08** **NURSERY** **EAST RENFREWSHIRE**
WOODFARM ROAD
GIFFNOCK
Neighbourhood Centre
No Sub Category
Gross floor area: 350 sqm
Survey date: Tuesday 31/08/1999 Survey Type: Manual

20 **GM-04-D-01** **NURSERY** **GREATER MANCHESTER**
RUFFORD ROAD
MANCHESTER
WHALLEY RANGE
Suburban Area
Residential Zone
Gross floor area: 200 sqm
Survey date: Survey Type: Manual

21 **HI-04-D-01** **NURSERY** **HIGHLAND**
STRATHERRICK ROAD
INVERNESS
UPPER DRUMMOND
Suburban Area
No Sub Category
Gross floor area: 2350 sqm
Survey date: Friday 26/05/2006 Survey Type: Manual

22 **KC-04-D-01** **NURSERY** **KENT**
PEMBURY ROAD
TONBRIDGE
Suburban Area
Residential Zone
Gross floor area: 210 sqm
Survey date: Wednesday 09/12/2009 Survey Type: Manual

23 **KI-04-D-01** **NURSERY** **KINGSTON**
WINDMILL LANE
SURBITON
LONG DITTON
Suburban Area
Residential Zone
Gross floor area: 149 sqm
Survey date: Wednesday 22/06/2016 Survey Type: Manual

24 **LB-04-D-01** **NURSERY** **LAMBETH**
ST MARYS GARDEN
LAMBETH
LAMBETH
Suburban Area
Built-Up Zone
Gross floor area: 109 sqm
Survey date: Wednesday 19/11/2008 Survey Type: Manual

25 **LE-04-D-01** **NURSERY** **LEICESTERSHIRE**
WIGSTON ROAD
LEICESTER
OADBY
Edge of Town
Residential Zone
Gross floor area: 375 sqm
Survey date: Thursday 30/10/2014 Survey Type: Manual

26 **LN-04-D-01** **NURSERY** **LINCOLNSHIRE**
NEWARK ROAD
LINCOLN
SWALLOW BECK
Suburban Area
Residential Zone
Gross floor area: 600 sqm
Survey date: Tuesday 31/10/2017 Survey Type: Manual

27 **MT-04-D-01** **NURSERY** **MERTHYR TYDFIL**
BREWERY ROAD
MERTHYR TYDFIL
DOWLAIS
Suburban Area
No Sub Category
Gross floor area: 200 sqm
Survey date: Tuesday 09/10/2007 Survey Type: Manual

28 **NN-04-D-01** **NURSERY** **NORTH NORTHAMPTONSHIRE**
ROCKINGHAM ROAD
KETTERING
Suburban Area
Residential Zone
Gross floor area: 850 sqm
Survey date: Tuesday 07/06/2022 Survey Type: Manual

29 **NN-04-D-02** **NURSERY** **NORTH NORTHAMPTONSHIRE**
PARK AVENUE
KETTERING
Suburban Area
Residential Zone
Gross floor area: 182 sqm
Survey date: Wednesday 26/09/2012 Survey Type: Manual

30 **NW-04-D-01** **NURSERY** **NEWPORT**
CHEPSTOW ROAD

NEAR NEWPORT
LANGSTONE
Neighbourhood Centre
Village
Gross floor area: 284 sqm
Survey date: Wednesday 12/10/2022 Survey Type: Manual

31 **NY-04-D-03** **NURSERY** **NORTH YORKSHIRE**
WETHERBY ROAD
KNARESBOROUGH
Suburban Area
Residential Zone
Gross floor area: 300 sqm
Survey date: Survey Type: Manual

32 **RB-04-D-01** **NURSERY** **REDBRIDGE**
CASTLETON ROAD
ILFORD
CHADWELL HEATH
Suburban Area
Residential Zone
Gross floor area: 129 sqm
Survey date: Tuesday 07/10/2014 Survey Type: Manual

33 **RB-04-D-02** **NURSERY** **REDBRIDGE**
RAY LODGE ROAD
WOODFORD GREEN
Edge of Town
Residential Zone
Gross floor area: 666 sqm
Survey date: Wednesday 22/11/2017 Survey Type: Manual

34 **RC-04-D-01** **NURSERY** **RHONDDA CYNON TAFF**
HEOL Y COLEG
NEAR CARDIFF
NANTGARW
Neighbourhood Centre
Village
Gross floor area: 664 sqm
Survey date: Thursday 06/05/2021 Survey Type: Manual

35 **RO-04-D-01** **NURSERY** **ROSCOMMON**
PARK VIEW
ROSCOMMON
CRUBY HILL
Edge of Town
Residential Zone
Gross floor area: 500 sqm
Survey date: Friday 26/09/2014 Survey Type: Manual

36 **SC-04-D-01** **NURSERY** **SURREY**
DELL ROAD
STONELEIGH
Neighbourhood Centre
No Sub Category
Gross floor area: 495 sqm
Survey date: Thursday 18/12/1997 Survey Type: Manual

37 **SC-04-D-02** **NURSERY** **SURREY**
GRABURN WAY
EAST MOLESEY
ELMBRIDGE
Suburban Area

Residential Zone
Gross floor area: 290 sqm
Survey date: Wednesday 17/12/1997 Survey Type: Manual

38 **SD-04-D-01** **NURSERY** **SWINDON**
SHREWSBURY ROAD
SWINDON
WALCOT
Suburban Area
Residential Zone
Gross floor area: 500 sqm
Survey date: Thursday 22/09/2016 Survey Type: Manual

39 **SF-04-D-01** **NURSERY** **SUFFOLK**
IXWORTH ROAD
NEAR BURY ST EDMUNDS
THURSTON
Neighbourhood Centre
Village
Gross floor area: 600 sqm
Survey date: Tuesday 09/05/2006 Survey Type: Manual

40 **SR-04-D-01** **NURSERY** **STIRLING**
HENDERSON STREET
STIRLING
BRIDGE OF ALLAN
Edge of Town
No Sub Category
Gross floor area: 250 sqm
Survey date: Survey Type: Manual

41 **TV-04-D-01** **NURSERY** **TEES VALLEY**
COTSWOLD DRIVE
REDCAR
Edge of Town
Residential Zone
Gross floor area: 150 sqm
Survey date: Friday 19/05/2017 Survey Type: Manual

42 **TW-04-D-01** **NURSERY** **TYNE & WEAR**
STATION ROAD
NEWCASTLE
HEBBURN
Suburban Area
No Sub Category
Gross floor area: 420 sqm
Survey date: Survey Type: Manual

43 **TW-04-D-02** **NURSERY** **TYNE & WEAR**
ETTRICK GROVE
SUNDERLAND
HIGH BARNES
Suburban Area
Residential Zone
Gross floor area: 500 sqm
Survey date: Wednesday 28/11/2012 Survey Type: Manual

44 **TW-04-D-03** **NURSERY** **TYNE & WEAR**
JUBILEE ROAD
NEWCASTLE UPON TYNE
GOSFORTH
Suburban Area
Residential Zone

Gross floor area: 725 sqm
Survey date: Tuesday 21/05/2019 Survey Type: Manual

45 **WK-04-D-01** **NURSERY** **WARWICKSHIRE**
THE RIDGEWAY
STRATFORD UPON AVON
Edge of Town
Residential Zone
Gross floor area: 340 sqm
Survey date: Friday 29/06/2018 Survey Type: Manual

46 **WM-04-D-01** **NURSERY** **WEST MIDLANDS**
SCHOOL ROAD
BIRMINGHAM
YARDLEY WOOD
Suburban Area
Residential Zone
Gross floor area: 850 sqm
Survey date: Wednesday 19/09/2007 Survey Type: Manual

47 **WM-04-D-02** **NURSERY** **WEST MIDLANDS**
BERTRAM ROAD
BIRMINGHAM
SMALL HEATH
Neighbourhood Centre
Residential Zone
Gross floor area: 880 sqm
Survey date: Friday 19/11/2021 Survey Type: Manual

48 **WT-04-D-01** **NURSERY** **WESTMEATH**
DUBLIN ROAD
ATHLONE
GARRYCASTLE
Edge of Town
Development Zone
Gross floor area: 625 sqm
Survey date: Tuesday 19/06/2007 Survey Type: Manual

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

Total Vehicles

Calculation factor: 100 sqm

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. GFA	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00					
06:00-07:00	**2**	**214**	**0.000**	**0.000**	**0.000**
07:00-08:00	**44**	**508**	**1.641**	**0.876**	**2.517**
08:00-09:00	**48**	**512**	**4.046**	**3.017**	**7.063**
09:00-10:00	**48**	**512**	**2.025**	**2.236**	**4.261**
10:00-11:00	**48**	**512**	**0.516**	**0.443**	**0.959**
11:00-12:00	**48**	**512**	**1.232**	**1.167**	**2.399**
12:00-13:00	**48**	**512**	**1.655**	**1.740**	**3.395**
13:00-14:00	**48**	**512**	**1.122**	**1.366**	**2.488**
14:00-15:00	**48**	**512**	**0.907**	**0.777**	**1.684**
15:00-16:00	**48**	**512**	**1.159**	**1.496**	**2.655**
16:00-17:00	**47**	**507**	**1.619**	**1.724**	**3.343**
17:00-18:00	**46**	**516**	**2.701**	**3.215**	**5.916**
18:00-19:00	**45**	**524**	**0.297**	**0.801**	**1.098**
19:00-20:00	**1**	**129**	**0.000**	**0.000**	**0.000**
20:00-21:00					
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			**18.920**	**18.858**	**37.778**

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

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

Parameter Summary:

Trip rate parameter range selected:	109 - 2350 (units: sqm)
Survey date date range:	17/12/1997 - 26/06/2023
Number of weekdays (Monday-Friday):	48
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	7
Surveys manually removed from selection:	0

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

Appendix B – Junctions 11 Output

Junctions 11

PICADY 11 - Priority Intersection Module

Version: 11.1.0.2307

For sales and distribution information, program advice and maintenance, contact TRL Software:
+44 (0)1344 379777 software@trl.co.uk trlsoftware.com

Filename: (new file)
Path:
Report generation date: 09/01/2026 14:26:18

Summary of junction performance

	AM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2025 - Base				
Stream B-AC	D1	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2028 - Opening Without				
Stream B-AC	D2	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2033 - Opening +5 Without				
Stream B-AC	D3	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2043 - Opening +15 Without				
Stream B-AC	D4	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2028 - Opening With				
Stream B-AC	D5	0.2	10.91	0.16	B
Stream C-AB		0.1	5.14	0.05	A
	2033 - Opening +5 With				
Stream B-AC	D6	0.2	11.34	0.17	B
Stream C-AB		0.1	5.11	0.05	A
	2043 - Opening +15 With				
Stream B-AC	D7	0.2	11.86	0.17	B
Stream C-AB		0.1	5.08	0.05	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

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

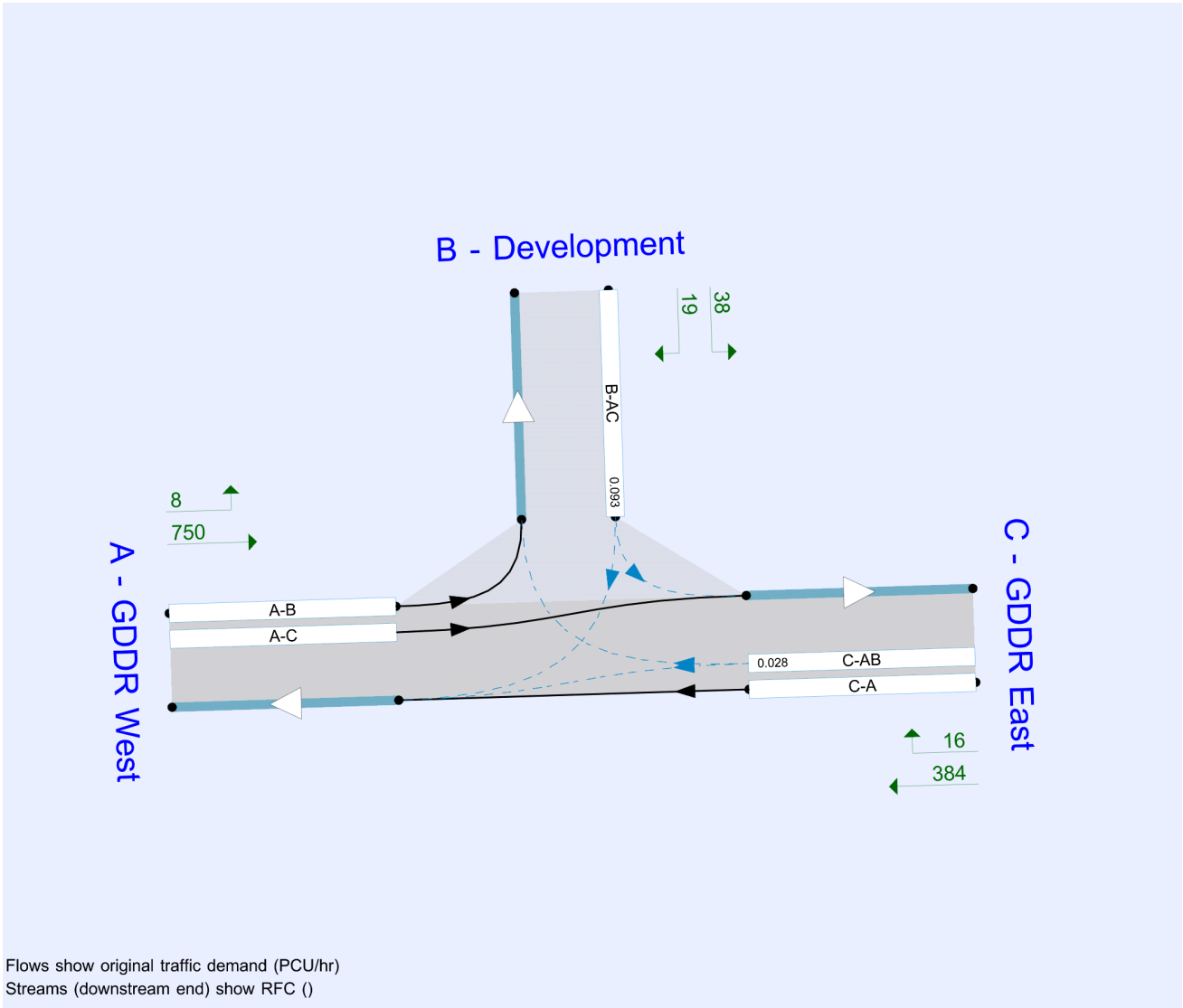
File summary

File Description

Title	
Location	
Site number	
Date	09/01/2026
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	MEINHARDT-UK\Christina.Dring
Description	

Units

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



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

The junction diagram reflects the last run of Junctions.

Analysis Options

PICADY short flare model	Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 11.1			0.85	36.00	20.00

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2033	Opening +5 With	AM	ONE HOUR	08:00	09:30	15

D6 - 2033 | Opening +5 With | AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Development Junction	T-Junction	Two-way	Two-way	Two-way		0.66	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.66	A

Arms

Arms

Arm	Name	Description	Arm type
A	GDDR West		Major
B	Development		Minor
C	GDDR East		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - GDDR East	6.70			150.0	✓	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 - Development	One lane	3.00	90	90

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	552	0.098	0.246	0.155	0.352
B-C	681	0.101	0.256	-	-
C-B	661	0.248	0.248	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

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 overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - GDDR West		✓	758	100.000
B - Development		✓	57	100.000
C - GDDR East		✓	400	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - GDDR West	B - Development	C - GDDR East
From	A - GDDR West	0	8	750
	B - Development	19	0	38
	C - GDDR East	384	16	0

Vehicle Mix

Heavy Vehicle %

		To		
		A - GDDR West	B - Development	C - GDDR East
From	A - GDDR West	0	0	0
	B - Development	0	0	0
	C - GDDR East	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.17	11.34	0.2	B
C-AB	0.05	5.11	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43	0.00	463	0.093	43	0.1	8.563	A
C-AB	20	0.00	725	0.028	20	0.0	5.107	A
C-A	281	0.00			281			
A-B	6	0.00			6			
A-C	565	0.00			565			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	51	0.00	428	0.120	51	0.1	9.538	A
C-AB	27	0.00	743	0.036	27	0.0	5.029	A
C-A	333	0.00			333			
A-B	7	0.00			7			
A-C	674	0.00			674			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	63	0.00	380	0.165	63	0.2	11.334	B
C-AB	39	0.00	770	0.051	39	0.1	4.925	A
C-A	401	0.00			401			
A-B	9	0.00			9			
A-C	826	0.00			826			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	63	0.00	380	0.165	63	0.2	11.342	B
C-AB	39	0.00	770	0.051	39	0.1	4.927	A
C-A	401	0.00			401			
A-B	9	0.00			9			
A-C	826	0.00			826			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	51	0.00	428	0.120	51	0.1	9.558	A
C-AB	27	0.00	743	0.036	27	0.1	5.031	A
C-A	333	0.00			333			
A-B	7	0.00			7			
A-C	674	0.00			674			

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43	0.00	463	0.093	43	0.1	8.586	A
C-AB	20	0.00	725	0.028	20	0.0	5.108	A
C-A	281	0.00			281			
A-B	6	0.00			6			
A-C	565	0.00			565			

The Greenway,
Block C Ardilaun Court,
St. Stephens Green,
Dublin 2
D02 TD28
Republic of Ireland

www.meinhardt.ie