Proposed Residential Development
at
Railpark West
Maynooth
County Kildare

Traffic Impact Assessment
including
Quality Audit
Stage 1/2 Road Safety Audit
DMURS Compliance Statement

Prepared for
Maynooth Montane Limited

December 2025

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Contents.

1.0 Introduction.

1.1 TPS M Moran & Associates as specialist traffic consultants have been retained by Maynooth Montane Limited to undertake a Traffic Impact Assessment (TIA) relating to a proposed residential development on lands at Railpark West, Maynooth, County Kildare.

1.2 The proposed development consists of 139 residential units of which 36 are houses and 103 are residential apartments containing a mix of 1, 2, 3, and 4 bedrooms. In addition, it is also proposed to seek permission for a Crèche for up to 105 children most of whom can be expected to access the Crèche from within the proposed residential development site. For the purposes of this TIA, we refer to this development proposal as Railpark West LRD.

1.3 The applicant will in the future, be submitting a planning application for an additional residential development on lands to the east of the current planning application site. At this stage it is proposed this residential development may consist of over 300 units. This future residential scheme is still at the preliminary design stage will be assessed within a future TIA.

1.4 In order to determine a ‘*’worst case”* traffic situation, this TIA will also assess the traffic issues associated with both these residential developments which will only have vehicular access from the Maynooth Eastern Relief Road (MERR).

2.0 Background Information.

2.1 During the preparation of this TIA, we together with Furey Consulting Engineers, met with Mr George Willoughby, Senior Engineer within the Transportation & Road Safety Department of Kildare County Council to discuss various technical matters relating to the proposed development.

2.2 We also met with members of the Design Team advising DRES Properties on their proposed development of some 581 residential units and neighbourhood centre on lands to the west and south of this application site.

2.3 These meetings provided Furey Consulting Engineers and TPS M Moran & Associates with the following:

- Current Status and projected completion of the Maynooth Eastern Relief Road (MERR).
- Traffic projections and the various traffic modelling assigned to the MERR, which does not include the M4 Motorway or M4 Junction Interchanges.
- Design criteria and design character of the MERR.
- Projected traffic distribution of the DRES development proposal.
- Junction hierarchy within MERR.
- Connectivity between the DRES development proposal and this application site.

2.4 We have also undertaken a review of the Traffic Impact Assessment prepared by Roughan & O’Donovan assessing the impact of the DRES Properties development proposal for the previously mentioned 581 residential units, proposed crèche, and neighbourhood centre on lands to the west and south of this application site.

2.5 The findings of the Roughan & O’Donovan, Traffic Impact Assessment indicate these land use developments will have very limited impact on the surrounding existing road network and the proposed MERR, through to the projected years of 2045. Similarly, the existing junctions and proposed new junctions connecting with MERR are projected to operate well within capacity through to this projected assessment year of 2045.

2.6 In order to maintain consistency with the findings set out within the Roughan & O'Donovan Traffic Impact Assessment, we will reference where appropriate their traffic turning movements, traffic growth projections, capacity assessments, and the extent of reserve capacity Roughan & O'Donovan identified within various road links and junctions within their assessment cordon.

3.0 Extent of Traffic Impact Assessment.

3.1 The methodology used within this Traffic Impact Assessment (TIA) complies with best practices for Traffic Impact Assessments indicated within key publications, which include:

- 'Traffic and Transport Assessment Guidelines' National Roads Authority (May 2014)
- 'Guidelines for Traffic Impact Assessments' The Institution of Highways and Transportation.
- Kildare County Development Plan 2023 – 2029.
- Design Manual for Urban Roads and Streets.
- PE-PAG-02017 Project Appraisal Guidelines for National Roads Unit 5.3 - Travel Demand Projection (October 2021).

3.2 In addition, reference is made to the TRICS 2025(a) land use database as a source for determining trip generation and the Transport Research Laboratory UK traffic modelling program PICADY10 used within this report for the assessment of road link and junction capacity.

3.3 This TIA assesses the roads and traffic conditions in the vicinity of the proposed residential development site. The relative level of impact of the proposed development is likely to have on the adjacent road network is also assessed. The TIA addresses the likely traffic impact of the proposed development, based on the following:

- Assessment of the projected traffic conditions on the road network in the vicinity of the proposed development site where it connects with MERR.
- Assessment of the trip rates associated with the proposed residential development.
- Assignment of the trip distribution patterns associated with the proposed development onto the adjacent road network and MERR.
- Proposed Site Access arrangements.
- Capacity and operational assessments of the likely impact of the proposed development on the adjacent road network.
- Compliance with the Design Manual for Urban Roads and Streets Statement.
- Mobility Management Travel Plan.
- Quality Audit including Stage 1/2 Road Safety Audit.

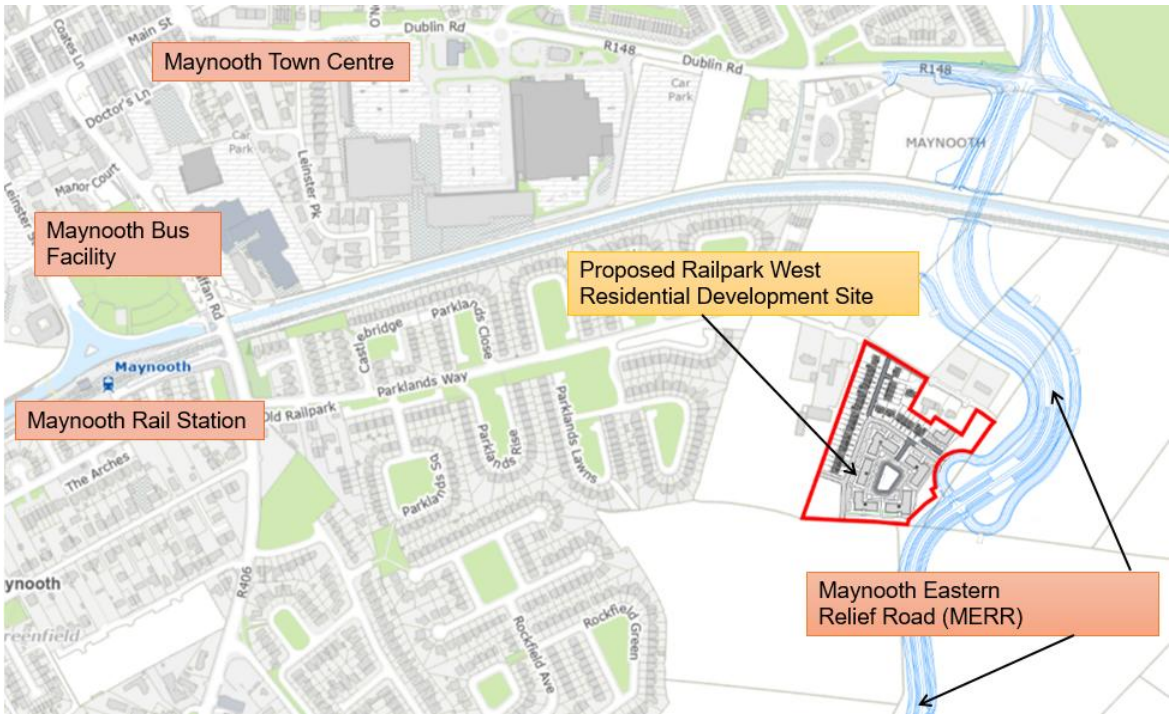
3.4 For the purposes of assessments within this TIA, we have assumed that the proposed residential development would be complete by 2030.

3.5 Background information used within the report has been derived from technical information and layout plans prepared by Duignan Queen Project Architects, for this residential development proposal.

4.0 Proposed Development Site and Maynooth Easter Relief Road (MERR).

4.1 The proposed residential development of 139 units within the Railpark West LRD lands is located some 1.5kms to the east of Maynooth Town Centre will only take vehicular access from MERR by means of a priority arrangement. This priority junction forms the western arm of a 4-arm crossroad arrangement with MERR which in time will also provide access to zoned lands to the north within the Parklands area.

4.2 The location of this junction and the proposed Railpark West LRD development site where it connects with MERR is shown within Map 1.0 below:



Railpark West LRD Site Location. Map 1.0

4.3 The eastern arm of this junction will in time provide access to the future Railpark East lands zoned for future residential development with these lands located to the east of MERR.

4.4 The Maynooth Eastern Relief Road (MERR) is a Kildare County Council Development Plan road's objective, which was approved via a Part 8 Planning Application in 2022, with the Compulsory Purchase Order for the required land take approved in early 2024.

4.5 As stated within the EIA Screening Report the objective of the MERR when operational is …''to *reduce congestion within Maynooth town centre through the provision of new road infrastructure, including sustainable transport facilities, pedestrian/cyclist facilities and bus stops. The need for the proposed development is supported by existing national, regional and local planning policy''.*

- *The proposed road development will achieve the following objectives, and this evidences the need for the proposed development:*
- *Improve connectivity to road users travelling between the M4 Dublin to Sligo Road and the R157 Dunboyne Road to County Meath, removing the need to travel through Maynooth;*
- *Provide a safer alternative to minor roads within the locality which may currently be used to avoid traffic in Maynooth;*
- *Contribute to the goals contained in the Smarter Travel – A Sustainable Transport Future policy by including new walking and cycling facilities along the length of the proposed development;*

- *Provide access to the Royal Canal for pedestrians and cyclists, facilitating access for locals to Maynooth and the Maynooth Train Station via the Royal Canal Greenway and to enable walking and cycling loops within the local area as part of the proposed development;*

- *Provide new road infrastructure to manage the continued development of Maynooth and contribute to alleviate traffic demands through Maynooth town by providing an alternative route to locations such as schools on the R405 Celbridge Road and on the Moyglare Road as well as the National University of Ireland Maynooth (NUIM);*

- *Provide necessary road infrastructure which will allow for the future development of zoned lands to the east of Maynooth town. The Maynooth Eastern Ring Road has been approved for Local Infrastructure Housing Activation Fund (LIHAF) funding; and*

- *Provide improved connectivity and access to public transportation along the route as well as an extensive pedestrian and cyclist facilities to enable and promote the use of sustainable travel.*

4.6 The MERR is some 1.5kms in length and will connect by means of a new a traffic signal junction with the R405 Regional Road (to the south) and a new traffic signal junction with the R148 to the north of the application site.

4.7 The MERR is currently at the pre-tender qualification design stage. We have been advised that when the various approvals are in place construction is projected to commence later this year with a projected construction period of 18 months.

4.8 From our discussions with Kildare County Council and Roughan & O'Donovan Consulting Engineers for this road project, MERR is designed as an urban relief road and will operate with a 50kph posted speed limit. The operation of this speed limit is reinforced by the alignment of MERR containing reduced road bends within its alignment.

4.9 MERR is designed to contain the following cross section:

- Two-way carriageway width of 7.0metres with 0.5m hard strips adjacent to this carriageway.
- 5.0metre verges on both sides of the carriageway.
- Segregated cycleways and pedestrian footpaths along both side of the carriageway.

4.10 It is also proposed that existing pedestrian and cycle tracks will in time connect with the proposed cycleways and pedestrian links located along the length of the MERR.

4.11 The proposed MERR development will help achieve the above aims by providing a ring road to the east of Maynooth town including footpaths and cycleways which can connect to the town centre via the Royal Canal walkway. The new junctions will provide pedestrian crossing facilities ensuring the safety of pedestrians and cyclists, and segregated cycle tracks.

5.0 Proposed Railpark West LRD Development Site Proximity to Public Transport.

5.1 The proposed Railpark West LRD development site is located just over 1km to the east of the Maynooth Train Station and various bus stop locations along the Straffan Road (R406) to the west. These public transport links can readily be access by non-car modes like cycling and waking via the existing Castlebridge residential estates.

5.2 The Maynooth Train Station is located to the west of the proposed residential development site and can be accessed from this via the Castlebridge residential estate in less than a 15-minute walk or a 5-minute bicycle trip.

5.3 This Maynooth Rail Station rail line forms part of the strategic Western Line and Western Suburban line which serves the four Dublin City Centre stations including Pearse Station, Tara St, Connolly Station, and Docklands. On weekdays the Dublin to Maynooth rail route operates over 30 suburban trains and over 10 intercity trains each way.

5.4 12 other suburban stations also serve Maynooth rail station. This railway station also serves Sligo, Collooney, Ballymote, Boyle, Carrick-On-Shannon, Dromod, Longford, Edgeworthstown, Mullingar, Enfield, Kilcock.

5.5 In addition, Irish Rail also propose to upgrade the rail line between Maynooth, M3 Parkway and Dublin Connolly with the introduction of DART+West which is the first of the infrastructural projects of the DART+Programme to be delivered and will significantly increase rail capacity on the Maynooth / M3 Parkway Lines. The objectives of DART+West are to:

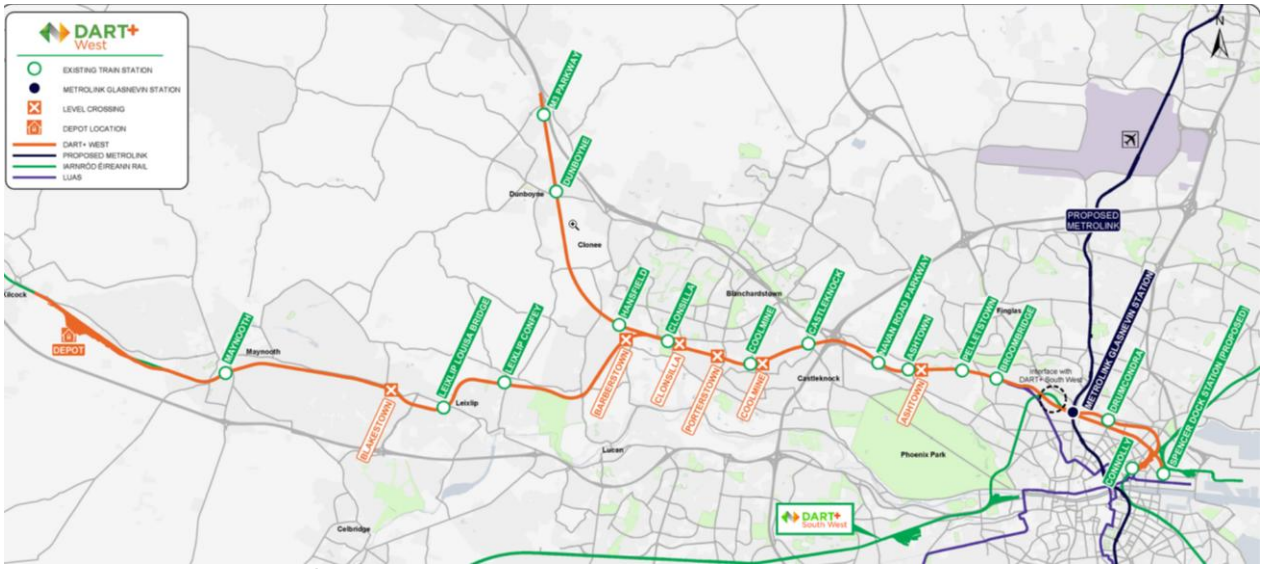
- Increase peak passenger capacity from 5,000 to 13,200 passengers per hour per direction and increase train frequency between Maynooth and M3 Parkway and Dublin City- facilitating fast, frequent and reliable transport to the surrounding communities.
- Enhance public transport opportunities for work, education or leisure purposes.
- Facilitate the development and future growth of existing and new communities that will greatly benefit from the connectivity that DART+West will deliver.
- Alleviate road congestion, particularly at the existing level crossings.
- Build a sustainable and connected city region, supporting the transition to a low carbon and climate resilient society.
- Facilitate sustainable choices by encouraging a move away from private cars to reliable, efficient and safe public transport network.
- Improve multimodal transport connectivity through interchange with the Luas at Broombridge and the proposed Spencer Dock station and with the Metrolink at Glasnevin/Phibsborough (Station to be delivered as part of the MetroLink Railway Order).
- Improve journey time reliability.

5.6 This upgrade will be achieved by investment in infrastructure, and changing to electrified, high-capacity DART trains and increasing the frequency of trains, for communities in Maynooth, Leixlip, Clonsilla, Coolmine, Castleknock, Navan Road, Ashtown, Broombridge and Drumcondra on the Maynooth line, as well as Hansfield, Dunboyne and M3 Parkway on the M3 Parkway line.

5.7 New communities to be served by DART+West will include Pelletstown, and Phibsborough/Glasnevin, which will see a new interchange station for the future MetroLink.

5.8 When complete DART+West will enable an increase in capacity of services from 7 to 15 per hour, subject to demand, increasing the current passenger capacity of 4,500 per hour to 13,750 per hour.

5.9 As well as more frequent and higher capacity, communities will also benefit from reduced noise and emissions from electrification of the route. The extent of the DART+West is shown within Map 2.0 below:



DART + West. Layout Plan. Map 2.0

5.10 The provision of the MERR and DART+West also fulfils the National Transport Agency objective, within its Transport Strategy comprises a longer-term analysis of the needs of the transport network within the Greater Dublin Area (GDA). The Strategy builds upon the previous 2011 Draft Transport Strategy which recognised the need to reduce car commuting mode share and aimed to reduce car commuting mode share to 45% by 2030. The Strategy therefore recognises the need to invest in public transport solutions for the long-term sustainable development of the GDA.

5.11 The aims of the Strategy include:

1. *Implement the DART Expansion Programme, which will provide DART services to Maynooth in the west which will deliver a very substantial increase in peak hour capacity on this line.*

2. *Develop orbital roads around town centre accompanied by and facilitating enhanced public transport, cycling and pedestrian facilities in the relevant centre.*

3. *Develop appropriate road links to service development areas and Enhance pedestrian and cycle safety through the provision of safer road junctions, improved pedestrian crossing facilities and the incorporation of appropriate cycle measures including signalised crossings where necessary.*

5.12 The application site is also located within a 15-minute walk of Maynooth Bus Turnaround Facility located on the Straffan Road. From this facility Dublin Bus operates the bus routes 66, 66x and 67 from Dublin City Centre to Maynooth. These bus services connect Maynooth with Dublin City Centre providing over 140 bus trips per day.

5.13 In addition, Bus Eireann operate national bus services within this Bus Turn Around that connect Dublin through Maynooth with Galway, Sligo, Westport, and Ballina. These national bus routes are shown within Table 1.0 below:

Route	From	Via	Destination	Daily
20	Dublin	Dublin Airport, Maynooth, Athlone	Galway	8
22	Dublin	Dublin Airport, Maynooth, Mullingar, Longford, Charlestown	Ballina	7
23	Dublin	Maynooth, Mullingar, Longford, Carrick on Shannon	Sligo	2
115	Dublin	Maynooth, Mullingar,	Longford	12

National Bus Eireann Services Via Maynooth. Table 1.0

5.14 At present a 24-hour independent bus service still also operates from the Maynooth Bus Turnaround Facility also connecting Maynooth with Dublin Airport.

6.0 Requirement for a Traffic Impact Assessment.

6.1 The former National Roads Authority, now, Transport Infrastructure Ireland published the 'Traffic and Transport Assessment Guidelines' in September 2014 which provided specific advice on when a Traffic Impact Assessment should be undertaken. In addition, the Kildare County Council Development Plan also provides advice when a Traffic Impact Assessment should also be undertaken.

6.2 These guidelines identified thresholds for land use development based on land use trip attraction or land use trip generation which impact on adjacent road links or junctions receiving the proposed development.

6.3 These guidelines also provided advice on acceptable traffic modelling programs, traffic data sources, and road safety issues to be considered with the relevant Local Authority. These thresholds are set down below:

Thresholds.

This section considers the thresholds at which the production of Traffic and Transport Assessments in relation to planning applications is recommended.

It is important to identify proposals that will affect National Roads, and which may have other transport implications at the earliest stages of development planning and design. This will help to ensure that additional costs and delays to the developer are avoided and facilitate best practice evaluation by planning authorities, the NRA and other transport agencies. Table 1.4 of the Traffic Management Guidelines (DoT/DoEHLG/DTO, 2003) gives the thresholds above which a Transport Assessment is automatically required. The thresholds concerned are reproduced below.

- *Traffic to and from the development exceeds 10% of the traffic flow on the adjoining road.*
- *Traffic to and from the development exceeds 5% of the traffic flow on the adjoining road where congestion exists, or the location is sensitive.*
- *Residential development in excess of 200 dwellings.*
- *Retail and leisure development in excess of 1,000m2.*
- *Office, education, and hospital development in excess of 2,500m2*
- *Industrial development in excess of 5,000m2*
- *Distribution and warehousing in excess of 10,000m2*

6.4 Further guidance is set down within Transport Infrastructure Ireland: PE-PAG-02016 Project Appraisal Guidelines for National Roads Unit 5.2 - Data Collection October 2016 in relation to traffic data collection. The relevant extracts of this publication are reproduced below:

3. Data Collection Considerations

There are a number of considerations to be taken into account prior to, and during the data collection process, these include:

- *Neutral Periods.*
- *Survey Specifications; and*
- *Data Checking/Cleaning.*

In order to ensure an unbiased sample, all data collection should be carried out during a "neutral" or representative month, avoiding national and local holiday periods, local school holidays, mid-terms, and any other abnormal traffic periods.

6.5 The relevant sections derived from the above publications also form part of this TIA for consideration by Kildare County Council.

7.0 Kildare County Council Transport Policy Objectives.

7.1 The Kildare and County Development Plan 2023 to 2029 sets out within Chapter 15 of this Plan, within the section headed Management Standards, a series of transportation related objectives, which we consider are relevant which require the technical assessment the proposed residential development site. Extracts of these policy objectives are shown below:

Extract 15.7.4 Road and Street Network

- The principles, approaches and standards set out in the Design Manual for Urban Roads and Streets (2019) apply to the design of all urban roads and streets (with a speed limit of 60 km/h or less), except national roads and in exceptional circumstances, certain urban roads and streets with the written consent of the relevant Authority.

- The standards set out in the TII publication DN-GEO-03031 Rural Road Link Design (2017) applies to Single and Dual Carriageway roads (including Motorways) in rural areas. It also applies to single carriageway Urban Relief Roads and Urban Dual Carriageways and Motorways.

- The Council requires the submission of a Traffic and Transport Assessment (TTA) as part of planning applications for larger developments, as outlined in Table 15.6 below, in accordance with the TII publication PE-PDV-02045 Traffic and Transport Assessment Guidelines (2014).

- These guidelines advise that applicants should consult with the Transportation Department of the Council prior to submission of an application.

- The design of development proposals must address the functionality and safety of the road. Two processes specifically address these design concerns: Road Safety Impact Assessment (RSIA) and Road Safety Audit (RSA).

- A) Road Safety Impact Assessment (RSIA) is described in the EU Directive on Road Infrastructure Safety Management (EU RISM) 2008/96/EC as a strategic comparative analysis of the impact of a new road, or in instances of substantial modifications to an existing road, on the safety and performance of the road network. (Refer to TII standards: PE-PMG-02001 Road Safety Impact Assessment, 2017)

- B) Road Safety Audit (RSA) involves the evaluation of road schemes during design, construction and early operation to identify potential hazards to all road users. RSA is to be carried out on all new national road infrastructure projects and on any schemes/proposal which results in a permanent change to the layout of a national road. (Refer to TII standard: GE-STY-01024 Road Safety Audit, 2017 and GE-STY-01027 Road Safety Audit Guidelines, 2017).

8.0 Existing Roads and New Road Proposals.

8.1 The proposed residential development site, which is currently occupied by pastureland is located some 1.5kms to the east of Maynooth Town Centre. The existing site of some 2.77 hectares is bounded to the west by the established residential estates of Castlebridge and Parklands which are accessed from the Straffan Road (R406) by means of a ghost island priority junction.

8.2 The principle internal estate road serving the Castlebridge and Parklands residential estates operates, along its length, with a 3-tonne weight restriction, and with a series of traffic calming measures that includes single give way lane chicanes, a radar speed message sign advising motorists of the approach speed and parking restrictions located at intervals along the length of this road.

8.3 It should be noted this internal estate road is used as a major pedestrian and cyclist link connecting existing residential estates with the nearby Maynooth Rail Station and Bus Turn around and bus stops.

8.4 To the north of the proposed Railpark West LRD development site is bounded by a number of single residential dwellings and new residential development units currently under construction. These residential land uses are accessed from the most eastern section of the Parklands residential estate. Further to the north of the Railpark West LRD site is the Maynooth to Dublin Rail Line and adjacent to this rail line is the Royal Canal.

8.5 As previously discussed, the proposed Railpark West LRD development site will be accessed by all vehicular traffic (including all construction traffic) from the MERR by means of an at grade priority junction.

8.6 This junction will form the western arm of a 4-arm crossroad arrangement with the MERR which also mentioned will also provide access to zoned lands to the north within the Parklands area.

8.7 The eastern arm of this junction off the MERR is proposed to provide vehicular access to the Railpark East residential development site providing access to some 315 residential units.

9.0 Existing and Projected Traffic Situation.

9.1 Within this Section of the TIA reference is made to the Roughan & O'Donovan TIA, which identified the existing traffic situation on the existing road links and junctions within their traffic survey cordon.

9.2 This traffic survey cordon extended from the R405 in the south to the R148 to the north, and included existing road links, that will connect with the MERR by means of new traffic signal junctions. This traffic survey cordon also included Griffin Rath Manor within the R405 and the Dunboyne Road within the R148 junctions, which will also connect as road links into these new traffic signal junctions.

9.3 These traffic surveys identified the existing peak traffic periods identified the following time periods as being the peak traffic periods within the traffic survey cordon:

- AM Peak Hour: 0800hrs to 0900hrs.
- PM Peak Hour: 1700hrs to 1800hrs.

9.4 When these recorded traffic turning movements, projected traffic movements are applied to the MERR based on traffic turning movements to and from the R148 and the R405. The following baseline two-way traffic flows (as Passenger Car Units, PCU's). These projected peak hour two-way traffic flows are shown within Table 2.0 and Table 3.0 below:

Peak Hours at 2030	MERR to R148	R148 to MERR	Total
AM Peak	862	482	1344
PM Peak	450	846	1296

MERR/R148 Two-Way Traffic Flows. Table 2.0

Peak Hours at 2030	MERR to R405	R405 to MERR	Total
AM Peak	646	509	1305
PM Peak	759	357	866

MERR/R405 Two-Way Traffic Flows at 2030. Table 3.0

9.5 Traffic growth factors similar to those assessed within the Roughan & O'Donovan TIA are also applied to these various two-way traffic flows recorded within the above traffic projections, to determine a series of road link performances at future years. These average traffic projections are used within the capacity assessments discussed within Section 11.0 of

this TIA for the years 2030, and 2045 set as the development opening year, and 15-years post opening.

9.6 The extent of these traffic growth factors is based on the Transport Infrastructure Ireland: Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projection (October 2021). These guidelines suggest 1.97% medium traffic growth from 2024 until 2030 and 0.62% medium traffic growth for light vehicles from 2030 to 2040. We will also apply 0.62% traffic growth to the future years of 2040 to 2045 to ensure the analysis yields worst case traffic modelling scenarios.

10.0 Proposed Development Trip and Traffic Generation.

10.1 In order to assess the likely traffic associated with the proposed residential development we have reviewed the TRICS 2025(a) trip rate database (Trip Rate Information Computer System).

10.2 TRICS 2025(a) is a database that uses survey information to estimate traffic generation for planning purposes. The database consists of over 8,500 traffic surveys, which therefore yields empirical rather than theoretical trip rate generation figures.

10.3 The TRICS 2025(a) land use database is accepted by Local Authorities, Regional Authorities and An Coimisiun Pleanala as an appropriate traffic modelling tool to determine land use trip attraction or trip generation rates.

10.4 This TRICS 2025(a) database output file for the proposed development consisting of 139 residential units of which 36 are houses and 103 are residential apartments containing a mix of 1, 2, 3, and 4 bedrooms is attached within Appendix 1.0 with a summary of the daily and AM and PM peak hour period output files for this proposed residential development is shown in Table 4.0 and Table 5.0 below:

Estimate TRIP rates

State TRP Figure & Extrapolate Results

Estimated TRIP rate value: 36 Per 1 DWELLS

DESCRIPTIVE NOTE ON TRICS FOR DATA RECIPIENTS

NOTE ON TRICS CALCULATION ROUNDINGS

TRIP RATE VALUE PER 1 DWELLS	No. Days	Ave. DWELLS	ARRIVALS Total Rate: 2.366 Peak: 17:00-18:00	Total: 85.187 Estimated Trip Rate	DEPARTURES Total Rate: 2.352 Peak: 08:00-09:00	Total: 84.698 Estimated Trip Rate	TOTALS Total Rate: 4.718 Peak: 08:00-09:00
00:00-07:00	No data available for this period						
07:00-08:00	161	136	0.073	2.632	0.278	10.001	0.351
08:00-09:00	161	136	0.147	5.298	0.365	13.153	0.512
09:00-10:00	161	136	0.132	4.764	0.162	5.827	0.294
10:00-11:00	161	136	0.117	4.206	0.138	4.973	0.255
11:00-12:00	161	136	0.126	4.537	0.134	4.817	0.260
12:00-13:00	161	136	0.146	5.239	0.143	5.143	0.289
13:00-14:00	161	136	0.149	5.374	0.143	5.158	0.292
14:00-15:00	161	136	0.156	5.632	0.173	6.219	0.329
15:00-16:00	161	136	0.244	8.769	0.169	6.076	0.413
16:00-17:00	161	136	0.264	9.510	0.158	5.692	0.422
17:00-18:00	161	136	0.330	11.881	0.161	5.812	0.491
18:00-19:00	161	136	0.264	9.502	0.150	5.397	0.414
19:00-20:00	7	66	0.109	3.922	0.100	3.608	0.209
20:00-21:00	7	66	0.109	3.922	0.078	2.824	0.187

36 Houses Projected Daily Trips. Table 4.0

Estimate TRIP rates

State TRP Figure & Extrapolate Results

Estimated TRIP rate value 103 Per 1 DWELLS

DESCRIPTIVE NOTE ON TRICS FOR DATA RECIPIENTS

NOTE ON TRICS CALCULATION ROUNDINGS

TRIP RATE VALUE PER 1 DWELLS	No. Days	Ave. DWELLS	ARRIVALS Total Rate: 0.923 Peak: 17:00-18:00	Total: 95.243 Estimated Trip Rate	DEPARTURES Total Rate: 0.932 Peak: 08:00-09:00	Total: 95.977 Estimated Trip Rate	TOTALS Total Rate: 1.855 Peak: 17:00-18:00
00:00-06:00			No data available for this period				
06:00-07:00	1	42	0.000	0.000	0.000	0.000	0.000
07:00-08:00	56	102	0.026	2.643	0.104	10.698	0.130
08:00-09:00	56	102	0.043	4.381	0.129	13.251	0.172
09:00-10:00	56	102	0.054	5.557	0.057	5.847	0.111
10:00-11:00	56	102	0.049	5.050	0.059	6.082	0.108
11:00-12:00	56	102	0.053	5.449	0.066	6.824	0.119
12:00-13:00	56	102	0.062	6.354	0.064	6.643	0.126
13:00-14:00	56	102	0.060	6.209	0.065	6.662	0.125
14:00-15:00	56	102	0.055	5.702	0.057	5.847	0.112
15:00-16:00	56	102	0.078	8.073	0.059	6.100	0.137
16:00-17:00	56	102	0.090	9.304	0.059	6.064	0.149
17:00-18:00	56	102	0.114	11.766	0.066	6.788	0.180
18:00-19:00	56	102	0.107	11.060	0.066	6.843	0.173
19:00-20:00	21	133	0.075	7.772	0.045	4.626	0.120
20:00-21:00	21	133	0.057	5.922	0.036	3.701	0.093

103 Apartments Projected Daily Trips. Table 5.0

10.5 The AM peak hour and PM peak hour trips generation associated with the proposed overall 139 residential unit development is further summarised and shown within Table 6.0 below:

Railpark West LRD Development	AM Peak		PM Peak	
	Arrivals	Departures	Arrivals	Departures
36 Housing Units	6	14	12	6
103 Apartment Units	5	14	12	7
Total	11	28	24	13

139 Residential Unit Development AM/PM Peak Hour Trip Generation. Table 6.0

10.6 From Table 6.0 above, the proposed residential development has been identified as generating limited traffic levels during the AM and PM peak hour traffic periods.

10.7 It is also proposed that an additional unit would operate as a Crèche facility within in the development site. It is our experience that this land use would not generate new trips but would involve a series of linked trips with residents dropping off or collecting children as part of a work-related trip or as a school related trip.

Estimation of Traffic Growth.

10.8 We do not consider that the levels of car ownership will fluctuate significantly at these sites upon completion and therefore the traffic at the site could reasonably be expected to experience very limited traffic growth in relation to time.

10.9 Car ownership would need to dramatically increase at the site in order to have a significant effect on the capacity of the surrounding road network. We do not consider this scenario likely and therefore we have not taken account for traffic growth in the estimated levels of traffic to and from the development site over time.

10.10 In contrast to the above, the levels of traffic on the surrounding road network will increase over time. In Table 6.2 of the '*Project Appraisal Guidelines for National Roads Units 5.3 – Travel Demand Projections PE-PAG-02017(October2021)* published by Transport Infrastructure for Ireland county traffic growth projections are provided.

10.11 This publication produces link-based traffic growth rates from 2016 to 2030, 2030 to 2040 and 2040 to 2050 within Low, Central and High Sensitivity Growth Rates.

10.12 For the purposes of this traffic assessment, we are assuming this development (if permitted) have a projected completion year 2030 with 2045 being the design year 15 years post completion.

10.13 In addition, we will use similar traffic growth factors similar to those considered within the Roughan & O'Donovan TIA. These traffic growth factors are applied to these various two-way traffic flows recorded within the 2024 traffic surveys, to determine a series of road link performances at the future years of 2030, 2035, 2045 set as the development opening year, 5-years post opening and 15-years post opening.

10.14 As previously discussed traffic growth factors of 1.97% medium traffic growth from 2024 until 2030 and 0.62% medium traffic growth for light vehicles from 2030 to 2040 extending to 2045 are applied to the previously discussed traffic projections at 2030 assigned within the MERR.

10.15 It should be noted that the application of an annual growth factor to a peak hour traffic situation can be regarded as excessive and is generally only undertaken by traffic engineers to identify a 'worst case' situation for traffic modelling purposes. It should also be noted that these traffic growth projections can also be assigned as traffic projections covering land use development in this area.

10.16 In addition, we also assign as a percentage of peak hour trips the DRES Properties residential development routing through this junction, together with the Railpark East residential development also routing through the eastern arm of this junction off the MERR.

10.17 From discussions with the DRES Properties Design Team, the project 20% of the DRES Properties development traffic routing through this junction during the AM and PM peak periods.

10.18 The DRES Properties development trip generation is discussed in detail within the Roughan & O'Donovan TIA which indicates the projected AM and PM trip generation associated with this development residential development proposal.

10.19 Based on 20% of their development traffic accessing via Railpark West LRD lands and access the MERR via the crossroads junction the following AM and PM trips shown within Table 7.0 may route through this junction:

DRES Development	Inbound	Outbound
AM Peak	18	35
PM Peak	29	17

DRES Properties Traffic Residential Traffic Routing via Railpark Lands. Table 7.0

11.0 Capacity of Proposed MERR Junction with Railpark Lands.

11.1 It is proposed to access the Railpark West LRD residential development lands and the future the Railpark East residential lands from the MERR, via the new cross junction being constructed as part of the MERR project.

11.2 In order to assess the impact of the traffic associated with the proposed development may have on this junction we have modelled this junction using the computer-modelling program PICADY10.

11.3 PICADY10 output results consist of tables of demand flows for each time segment of the time-period analysis. These tables contain start and finish times for each arm, traffic demand data, capacity, ratio of flow to capacity findings, start queue length, end queue length, and queuing delay.

11.4 This traffic-modelling period covers the recorded critical AM and PM peak period at 2030 and 2045. Included within this traffic modelling is the highest projected two-way AM and PM traffic flows assigned to the MERR, Railpark West LRD development traffic and as previously mentioned includes 20% of the DRES residential development routing through this junction during these peak traffic periods.

11.5 A copy of the AM and PM peak hour PICADY10 data and results for these AM and PM peak hour PICADY10 capacity assessments are attached within Appendix 2.0 to this report with a summary of the output results shown within Table 8.0, Table 9.0, Table 10.0, and Table 11.0 below:

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	336	0.000	0	0.0	0.000	A
A-BCD	19	488	0.039	19	0.0	8.448	A
A-B	0			0			
A-C	665			665			
D-ABC	69	433	0.160	69	0.2	10.880	B
C-ABD	0	957	0.000	0	0.0	0.000	A
C-D	14			14			
C-A	555			555			

AM Peak at 2030. Table 8.0

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	245	0.000	0	0.0	0.000	A
A-BCD	97	1193	0.081	97	0.2	3.614	A
A-B	0			0			
A-C	895			895			
D-ABC	69	391	0.178	69	0.2	12.323	B
C-ABD	0	361	0.000	0	0.0	0.000	A
C-D	14			14			
C-A	444			444			

AM Peak at 2045. Table 9.0

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	272	0.000	0	0.0	0.000	A
A-BCD	23	529	0.044	23	0.1	7.833	A
A-B	0			0			
A-C	972			972			
D-ABC	33	425	0.078	33	0.1	10.107	B
C-ABD	0	808	0.000	0	0.0	0.000	A
C-D	37			37			
C-A	444			444			

PM Peak at 2030. Table 10.0

18:30 - 18:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	268	0.000	0	0.0	0.000	A
A-BCD	24	521	0.045	24	0.1	7.965	A
A-B	0			0			
A-C	962			962			
D-ABC	33	414	0.080	33	0.1	10.385	B
C-ABD	0	813	0.000	0	0.0	0.000	A
C-D	37			37			
C-A	484			484			

PM Peak at 2045. Table 11.0

Arm A	**MERR North**
Arm B	**Railpark East**
Arm C	**MERR South**
Arm D	**Railpark West LRD**

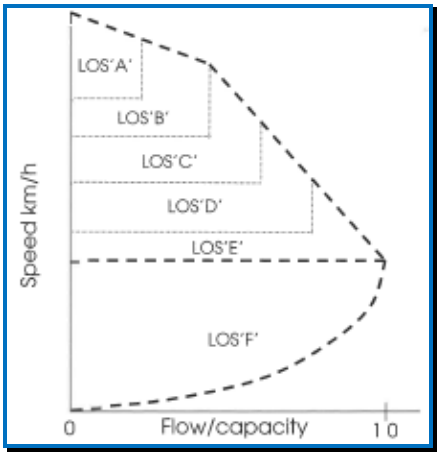
11.6 From the above summary Tables it is indicated that the proposed junction connecting the MERR serving these various land uses including the application site can accommodate the projected, and future growth traffic growth projections at completion in 2030 and the future year of 2045.

11.7 These tables also indicate that during the AM and PM peak traffic periods the proposed junction experiences almost free flow traffic conditions with no material queuing projected within this junction, operating with reserve capacity of over 85% during the critical peak traffic period at 2045.

11.8 The relative Level of Service within the proposed site access at its junction with this junction is identified as B within the above PICADY10 assessment representing "stable flow urban traffic conditions", as set out within the Highway Capacity Manual.

11.9 Urban Level of Service gauges, in a qualitative manner, the extent of congestion within a road link. Variables such as travel time and traffic speed form part of the qualitative description.

11.10 Level of Service gauges, in a qualitative manner, the extent of congestion within a road link. Variables such as travel time and traffic speed form part of the qualitative description. Level of Service A represents almost free flow traffic conditions with Level of Service F indicating the road link is over capacity as discussed within Diagram 1.0 below:



Level of Service Linkage. Diagram 1.0

12.0 Compliance with The Design Manual for Urban Roads.

12.1 It is proposed to access the residential development site from the Internal Spine Route by means of a series of simple priority T junctions. These proposed site access arrangements, and the general internal site layout is shown within Furey Consulting Engineers Design Brief.

12.2 It is proposed that all these site access junction arrangements and all the road links within the proposed residential development can be designed to meet the standards set out within the Design Manual for Urban Roads and Streets (DMURS).

12.3 DMURS places the emphasis not on road link or junction capacity but the sharing of the available road space. DMURS was launched by the Department of Transport and the Department of Environment in March 2013 with the focus on pedestrians, cyclists, and public transport.

12.4 The current DMURS 2019 manual sets out design guidance and standards for constructing new and reconfiguring existing urban roads, streets, and access points in Ireland, incorporating good planning and design practice.

12.5 The manual aims to end the practice of designing streets as traffic corridors, and instead focuses on the needs of pedestrians, cyclists, and public transport users. DMURS seeks that designers consider first:

1. Pedestrians
2. Cyclists
3. Public Transport
4. and finally, the private motor car

12.6 DMURS sets out 4 principles which should be incorporated with the development of an urban form. These are:

Design Principle 1:
To support the creation of integrated street networks which promote higher levels of permeability and legibility for all users, and more sustainable forms of transport.

Design Principle 2:
The promotion of multi-functional, place- based streets that balance the needs of all users within a self-regulating environment.

Design Principle 3:
The quality of the street is measured by the quality of the pedestrian environment.

Design Principle 4:
Greater communication and co-operation between design professionals through the promotion of a plan led, multidisciplinary approach to design.

12.7 In addition, street networks can be designed to maximise connectivity between destinations to promote higher levels of permeability and legibility for all users, more sustainable forms of transport. This will allow people to move from place to place in a direct manner with greater route choice.

12.8 The proposed site layout places a priority on sustainable forms of travel which includes provision for dedicated pedestrian routes connecting the development with the public routes. These routes can also be used by cyclists. Thus, maximizing the connectivity between the application site and the public realm.

12.9 This priority can be achieved by the use of various materials and finishes, promotion of shared areas and pedestrian priority within the various internal links within the application site.

12.10 The proposed site layout ensures a balance between the various users accessing the site from the public realm and provides a transition from this realm to promote a real sense of place within the site as set out within the objectives of DMURS.

12.11 The main spine route through the site connects with various route corridors by means of simple priority arrangements which can be raised at key intersections, road bends and carriageway lengths to achieve a shared balance between all road users through these areas with priority assigned to pedestrians and cyclist.

12.12 This design of the internal access routes also seeks a good mix of in curtilage parking for residents and visitors within the site area where through these raised platform features pedestrian, cyclists and vehicular traffic can be integrated.

12.13 Providing these measures achieves a rebalance of priority to promote safer and more desirable environment for all road users.

12.14 The design character of these internal access routes is based on a 30kph urban speed limit. This design speed is the maximum speed at which it is envisaged/intended that the majority of vehicles will travel under normal conditions. In this regard priority will be given to pedestrians and cyclists.

12.15 These design criteria are also based on Table 4.1 of DMURS which is shown below:

PEDESTRIAN PRIORITY VEHICLE PRIORITY

FUNCTION	CENTRE	N'HOOD	SUBURBAN	BUSINESS/ INDUSTRIAL	RURAL FRINGE
ARTERIAL	30-40 KM/H	40-50 KM/H	40-50 KM/H	50-60 KM/H	60-80 KM/H
LINK	30 KM/H	30-50 KM/H	30-50 KM/H	50-60 KM/H	60-80 KM/H
LOCAL	10-30 KM/H	10-30 KM/H	10-30 KM/H	30-50 KM/H	60 KM/H
CONTEXT					

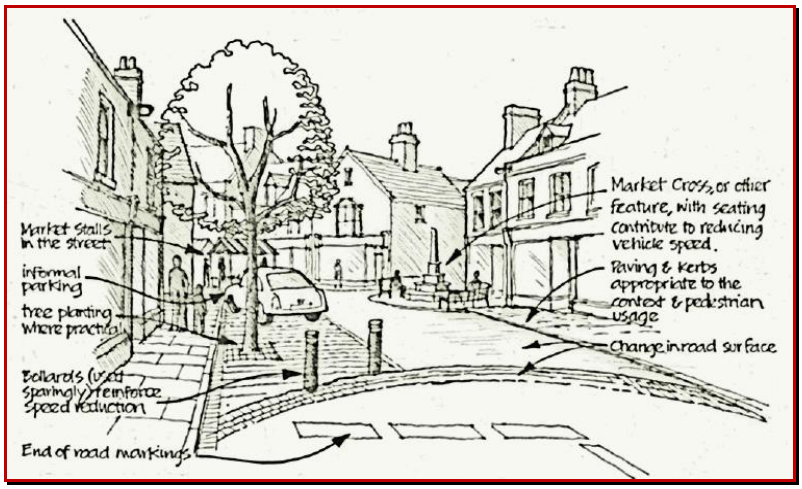
Table 4.1: Design speed selection matrix indicating the links between place, movement and speed that need to be taken into account in order to achieve effective and balanced design solutions.

12.16 As advised within DMURS the design should successfully balance the functional needs of the different users, enhance the sense of place, and manage vehicular speed in a manner that does not overly rely on extensive regulatory controls or physically intrusive measures for enforcement.

12.17 In short, place can be used to manage movement. Such road links including transition zones and homezones can be designed to be self-regulating.

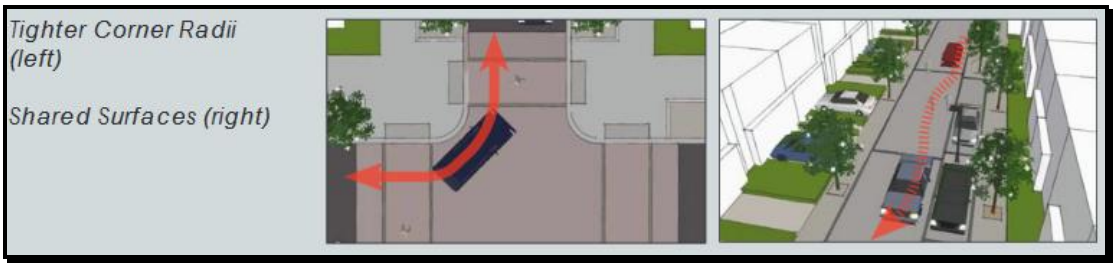
12.18 It is proposed to integrate the connectivity between the proposed internal estate roads with the provision of a series of transition zones. These facilities will increase the effectiveness of the streets around a focal point highlighting their place value.

12.19 Approaching this transition zone may include reduced carriageway width, additional treed areas, pedestrian corridors, peppered seating areas, or surface treatment measures. Collectively these measures will optimise the transition as a sense of place within the proposed Railpark West LRD site. An example from DMURS of a type of transition area is shown below:



Transition Zone

12.20 The internal junctions can be designed to easily create navigation by both driver, pedestrians and cyclists through reduced junction radii and kerb heights. An example derived from DMURS is shown below:



12.21 The proposed parking layout adjacent to the internal access routes may contain section of linear or perpendicular car parking spaces which achieves the following:

- Calms traffic by increasing driver caution, visually narrows the carriageway and reduces forward visibility.
- Add to the vitality of communities by supporting activities that front on to the street through the generation of pedestrian activity as people come and go from the vehicles.
- Contribute to pedestrian and cyclist comfort by providing a buffer between the vehicular carriageway and the footpath.
- Provide a good level of passive security.

12.22 It is also proposed to use quality materials and finishes which enables the definition of all elements within the internal access route pedestrian and cyclist areas and the dedicated parking areas particularly where it is used to define segregation or integration within these areas.

12.23 High quality and contrasting materials can be used within the proposed residential development site to define and inform all road and car parking users of the change in function of space to demark roads, verges, footpaths, cycle areas and parking areas.

12.24 DMURS also sets out a number of recommendations and standards which should be incorporated with a proposed residential design. These design features are set out within Table 14.0 below:

Function	DMURS Objective	Confirm
Place	Does the design of residential streets strike the right balance between the different functions of the street, including a sense of place? Will the development prioritise public transport, cycling and walking, and dissuade the use of cars. Ensure accessibility for everyone, including people with disabilities. Include measures to ensure satisfactory standards of personal safety and traffic safety	Yes

	within the neighbourhood. Will the plan ensure a compact and easily walkable form of development that will make walking and cycling, especially for local trips, more attractive than using the car? Has the design sought, where possible, to create child and pedestrian-friendly car-free areas, especially in higher density schemes, through the careful location of access streets and parking areas?	
Internal Access Routes	The movement towards more integrated and sustainable forms of development will result in a shift away from dendritic street layouts to highly connected networks which maximise permeability, particularly for pedestrians and cyclists. When designing new street networks designers should implement solutions that support the development of sustainable communities.	Yes
Materials and Finishes	The use of materials and finishes is one of the most defining elements of a street, particularly where it is used to define the levels of segregation and integration within a street. The material palette can define space, calm traffic, and improve legibility, reducing the need for barriers, signage and line marking in favour of texture and colour. Materials can be used to enhance the value of place and produce more attractive and cost-effective streets.	Yes
Surfaces	Pedestrianised and shared surfaces are an effective way of promoting place and providing pedestrians and cyclists with a more enjoyable experience, particularly in areas of historic significance. These streets operate as linear 'squares' or corridors of public open space. Pedestrianised streets fully segregate pedestrians and cyclists from motor vehicular movement (although emergency access is possible and limited access may also be provided for service vehicles). They are generally only appropriate in areas where higher levels of activity can be sustained throughout the day and into the evening period, as the removal of vehicular traffic will reduce surveillance levels.	Yes
Vehicular Speed	On lightly trafficked/low-speed streets, designers are generally directed to create Shared Streets where cyclists and motor vehicles share the carriageway. Where low design speeds (i.e. 30km/h) are desirable changes in the colour or texture of the carriageway should be used periodically, such as at crossings or at strategic locations, such as Focal Points. Where shared carriageways are proposed (i.e. 10-20 km/h) changes in colour and texture should be applied to the full length of the street.	Yes
Traffic Calming	Permeable layouts provide more frequent junctions which have a traffic-calming effect as drivers slow and show greater levels of caution.	Yes
Pedestrians	Raised tables, or platforms, may be placed strategically throughout a network to promote lower design speeds, slow turning vehicles at junctions and enable pedestrians to cross the street at grade.	Yes
Cyclists	Designing for cyclists must also be given a high priority. Trips by bicycle have the potential to replace motor vehicles as an alternative means of transport for short to medium range trips (and in some cases longer range trips). Cycling also promotes a healthy lifestyle.	Yes
Footpaths	Good pedestrian facilities (such as wide footpaths and well-designed crossings) also make walking a more convenient and pleasurable experience that will further encourage pedestrian activity.	Yes
Street Lighting	Good quality lighting promotes a safer environment by ensuring inter-visibility between users. Poorly illuminated carriageways and cycle lanes can also make it difficult for users to identify potential hazards. The quality of lighting will also have a major impact on perceptions of security.	Yes
Infrastructure	A drainage system which seeks to emulate or restoring a more natural hydrological regime so that the impact of urbanisation on downstream flooding and water quality is minimised. The material palette can define space, calm traffic and improve legibility, reducing the need for barriers, signage and line marking in favour of texture and colour. Materials can be used to enhance the value of place and produce more attractive and cost-effective streets.	Yes
Kerbing	Kerbs traditionally provided a street drainage function but have more recently come to define the pedestrian domain from the vehicular carriageway. In so doing kerbs are key to establishing the level of segregation or integration which is to occur within a street. Lower kerbs, or lack thereof, can therefore create a greater sense of shared space and can be used to calm traffic	Yes
Project Design	The design team should include a broad range of professionals with varying levels of technical expertise in streets/road design. Design input should ideally be sought from a range of skill sets to ensure that a holistic design approach is implemented.	Yes
Concluding Statement	The proposed residential development can achieve and be designed to comply with the recommendations and standards set out within DMURS.	Yes

DMURS Requirements. Table 14.0

12.25 In addition, these materials can through the use of tonal colours define space, calm traffic and improve legibility for all road users within the site where the priority will be allocated to the pedestrian or cyclist through this use of tonal and high-quality road and street finishes.

12.26 Having a DMURS based design enables sections within the proposed development site to also operate as Homezones.

12.27 A Homezone is a residential street(s) in which the living environment clearly predominates over any provision for traffic. It is an environment where the wider needs of residents are fully accommodated. In a home-zone people share what would formerly have been the carriageway and pavement and, if it is well designed; vehicles can only travel at a maximum speed that is a little faster that walking pace.

12.28 This means that other elements can be introduced into the street, including, areas for children to play, planting such as street trees, bicycle parking and facilities such as seats at which residents can meet.

12.29 A Homezone should fulfil a number of objectives:

- Turn the residential street into valued public space and not just a place for movement.
- Foster a sense of community.
- Encourage a greater diversity of activity and use of the street by residents.
- Reduce social isolation, particularly amongst the elderly; Increase opportunities for active and creative children's play.
- Increase natural surveillance, deterring casual crime.
- Reduce traffic speeds significantly - to around 16kph.
- Improve (or at least maintain) the safety of residential areas and perhaps more importantly, residents' perceptions of safety.
- Enable less mobile members of the community children, older people, and disabled people to reclaim their local environment from the car.
- Encourage people to walk and cycle within their local area and to nearby destinations.
- Improve the environmental quality of urban streets.
- Help to increase the attractiveness of urban living.

12.30 The proposed internal site layout also places a priority on sustainable forms of travel which includes provision for dedicated pedestrian routes connecting the various residential clusters with the public routes.

13.0 Mobility Management Travel Plan.

13.1 It is also possible to introduce a Mobility Management Travel Plan within this proposed development site which can be operated by the applicant in conjunction with the residents within the development site to both encourage and facilitate existing and future residents to travel by sustainable means.

13.2 This Mobility Management Travel Plan would further reduce the demand for travel by car and, by default car parking demand.

13.3 The operation of the Mobility Management Plan would also fulfil the transport policies set out with the Kildare County Development Plan 2023 to 2029 encourages non car trips.

13.4 Operating a Mobility Management Plan within the application site can be a travel demand measure to promote alternative sustainable modes of transport, reduce the attractiveness of private car use, and to mitigate against traffic congestion in urban areas by providing for the transportation needs of people in an orderly and planned manner.

13.5 This Mobility Management Plan seeks to optimise the potential to use alternative modes to the private car, such as walking, cycling and public transport.

13.6 A key objective of the Mobility Management Plan is to promote and encourage a high level of permeability to and through the site, in particular for pedestrians and cyclists. The Mobility Management Plan can enable the following benefits:

- Improved access requirements to employment, education and other social infrastructure,
- Optimise permeability for walking and cycling,
- Reduced traffic generation compared to similar developments without the same level of pedestrian and cycle connections and access to public transport,
- Reduced car parking demand and reduced congestion on the local road network due to lower demand for private transport and /or more efficient use of private motor cars,
- Improved safety for pedestrians,
- A reduction in car parking and car set down demand, resulting in improved operational efficiency and safety for all residents,
- Improved public image for the development sense of place and a desirable place to live,
- Improved health and wellbeing for residents.

13.7 This Plan could be prepared within 6 to 12 months of completion of the development when it is expected the development would be fully occupied which would enable detailed travel surveys to be carried out in conjunction with residents.

13.8 A series of measures will then be developed using this information to further encourage sustainable travel away from the private car travel towards alternative methods further reducing for car ownership.

13.9 Welcome travel information packs could form part of the marketing material for the development site and could be distributed to all new residents within the development.

13.10 It is envisaged that the packs will contain information about public transport, walking and cycling routes as well as information about local services within reasonable comfortable walking distance. The packs could also contain specific information on walking and cycling distances to key destinations within the Maynooth Town Centre and Maynooth Environs.

13.11 The information packs could also promote the benefits of walking and cycling including increased concentration, better awareness of road and personal safety issues, decreased traffic congestion and associated amenity impacts, environmental benefits, interpersonal and social benefits, financial benefits.

13.12 In relation to cycling specifically the pack will inform residents of the location and accessibility of secure bicycle parking. The pack will also publicise the Government Bike to Work Scheme (www.biketowork.ie).

13.13 In relation to public transport the packs will publicise the availability of Real Time Information on the Irish Rail or Bus Eireann or local private public transport operator's website as well as the availability of the National Journey Planner (available on the Transport for Ireland website), which provides journey planning, timetable, and travel information from all public transport providers in the area.

13.14 A key consideration in the design of this development is the delivery of a high level of permeability through the site, particularly for pedestrians and cyclists, by providing connections to existing public transport services and local services.

13.15 In summary, from a travel demand and mobility management perspective, the site is ideally located adjacent to transport infrastructure to support the use of more sustainable transport modes such as walking, cycling and public transport services.

13.16 Furthermore, the Mobility Management Travel Plan would be a live document with ongoing updates by the operator based on the experience of measures implemented and future sustainable targets in conjunction with occupants of this residential development.

13.17 The operation of a Mobility Management Travel Plan within this development site fully complies within the transportation objectives of the Kildare County Development Plan 2023 to 2029.

14.0 Quality Audit and Stage 1/2 Road Safety Audit.

14.1 We have retained Bruton Consulting Engineers Ltd to undertake the Quality Audit and Stage 1/2 Road Safety Audit of the proposed residential development. Bruton Consulting Engineers Ltd has carried out more than 2,500 Audits over the last 35 years where they acted as the Team Leader and/or Team Member. The audits covered all sizes of developments and transport schemes in all stages of progress (feasibility, design, construction, traffic management).

14.2 All their auditors are Chartered Engineers through Engineers Ireland, they are approved by Transport Infrastructure Ireland (TII) to carry out road safety audits and have the necessary qualifications and competence to act as Team Leaders and/or Team members.

14.3 This Quality Audit and Stage 1/2 Road Safety Audit, together with a signed feedback form, is attached within Appendix 3.0. We confirm that all matters raised within the Audit can be implemented within the future detailed design of road infrastructure supporting this planning application if Kildare County Council are minded to grant planning permission for this development.

14.4 A Quality Audit includes the following:

- Access Audit.
- Walking Audit.
- Accessibility and Cycle Audit.

14.5 The Quality Audit is therefore focused on issues such as:

- The design rationale as it related to vehicle, cycle, and pedestrian movements.
- Pedestrian movement through the site.
- Access requirements for all modes of transport.
- Access requirements for the disabled and other vulnerable users.
- Any road safety concerns associated with the scheme.
- The scheme as it is experienced by those entering it and moving round within the internal streets, including how this affects road user behaviour.
- Any other issues considered relevant to each constituent element of the Quality Audit process.

14.6 A Quality Audit is a defined process, independent of, but involving, the design team that, through planning, design, construction, and management stages of a project provides a check that high quality places are delivered and maintained by all relevant parties, for the benefit of all end users.

14.7 A Quality Audit is a process, applied to urban roads, traffic management or development schemes, which systematically reviews projects using a series of discrete but linked evaluations and ensures that the broad objectives of place, functionality, maintenance, and safety are achieved.

14.8 Quality Audits were introduced in the publication Design Manual for Urban Roads and Streets following concerns that in the design of new streets, provisions made for motor vehicles frequently led to a poorly designed public realm. In an urban area there is a high level of competing demand from different classes of road users.

14.9 A well-balanced street will have minimal visual clutter and obstacles; it will use durable materials and most importantly, will encourage a degree of negotiation between road users as they make their way through it.

14.10 Quality Audits involves various assessments of the impacts of a street scheme in terms of road safety and the use of streets by the community. Access for disabled people, pedestrians, cyclists, and drivers of motor vehicles is considered.

14.11 In the context of a Quality Audit, road safety assessment is considered to be an appropriate method of examining road safety issues as it incorporates both the hazard identification techniques used in road safety audit and formal risk assessment techniques.

14.12 This allows the opportunity at an early stage for road safety issues to be considered in a more dynamic way within the design process, and to ensure that safety issues are considered as part of the design rather than after design work is completed.

14.13 It should be noted that, in a Quality Audit, it is not the intention that suggestions or recommendations would be binding on the design team; they are offered for detailed consideration in the detailed design process.

14.14 All the recommendations of the Quality Audit have been accepted by the Design Team and can also be incorporated within the detailed design of the proposed residential development scheme.

15.0 Car Parking Provision.

15.1 The Kildare County Council Development Plan 2023-2029 at Table 15.1 provides guidance in relation to the extent of car parking which should be provided to serve land use development. Table 15.9 within this Plan, sets out the number of parking spaces based on the number of residential units and the extent of bedrooms provided within the Apartments or Dwellings. This Plan also states:

> *'Residential', parking standards are maximum standards, having regard to the need to balance demand for parking against the need to promote more sustainable forms of transport, to limit traffic congestion and to protect the quality of the public realm from the physical impact of parking.", Car Parking Standards for* ***Residential should also be a maximum standard*** *to promote more sustainable forms of transport. This would be in line with other development plans throughout Ireland and in accordance with the Design Standards for New Apartments document.*
>
> *In relation to apartment developments, the document should reference the Sustainable Urban Housing: Design Standards for New Apartments (2020) or any subsequent guidelines and the Urban Development and Building Height Guidelines (2018) for guidance regarding the appropriate provision of car parking for apartments.*

15.2 In addition, the Sustainable and Compact Settlement Guidelines indicate that reduced car parking can also be considered when a land use development is located close to an urban centre and where sustainable transport options prevail.

15.3 The proposed Railpark West LRD site can be regarded as an Intermediate Location based on these guidelines, given its proximity to public transport facilities. Section 4.20 of the Apartment Guidelines indicates that:

Intermediate Urban Locations (including sites within 1,000-1,500m of high• capacity transport hubs or 5-10 minutes from frequent urban bus services) Peripheral and Less Accessible Urban Locations.

15.4 Section 4.23 of these Guidelines also states:

In suburban/urban locations served by public transport or close to town centres/employment areas, and particularly for housing schemes with more than 45 dwellings per hectare, planning authorities must consider a reduced overall car parking standard.

15.5 The proposed residential development of 139 units, within a site of 2.77hectares, yields a density of 50.10 dwellings per hectare, which is the above the specified threshold set out within Section 4.23 above.

15.6 As previously mentioned, the proposed development would consist of a 139 residential unit development on land zoned for residential development off the MERR at Maynooth, County Kildare. The proposed residential development consists of 36 houses and 103 are residential apartments containing a mix of 1, 2, 3, and 4 bedrooms together with a Crèche for up to 105 children.

15.7 It is proposed to provide driveways for 2 parking spaces adjacent to each housing unit, resulting in 72 car parking spaces. The 103 apartments would each have a dedicated single parking space with 6 visitor spaces. 8 parking spaces are proposed within the Crèche site area.

15.8 It is also proposed to provide bicycle parking for each residential apartment, with a total cycle parking capacity for 195 long term and 56 visitor cycle parking spaces, within the 8 secure bicycle enclosures adjacent to the apartment blocks. 18 cycle parking space are also proposed within the Crèche made up of 6 staff cycle spaces, 6 visitor cycle spaces, and 6 cargo spaces.

15.9 The extent of these proposals is shown in detail within Duignan Queen Architects, Project Design Brief.

15.10 We consider this extent of parking to be more than sufficient to cater for the development proposal.

16.0 Technical Comment on Local Authority Opinion LRD 2025003.

16.1 Following a series of meetings with Kildare County Council to discuss various technical aspects of the proposed development, a number of technical issues were raised within correspondence issued by the Local Authority on the 18th of July 2025.

16.2 This correspondence, within Item 1g Layout and Design, and within the Roads and Transportation Section at Item, 1, Item 2, Item 5, Item 6, Item 9, and Item 10 are traffic and transportation stating:

Layout/Design.

1. *Revised layout and design elements addressing the following issues is required:*
(g) The layout needs to be fully compliant with DMURS.

Roads/ Transportation.

1. Applicant requested to note a condition relation the MERR.

- *Filtered permeability link for walking and cycling a the number of locations within the development:*

- *to the northwest road of the development from the Parklands Grove Road where the connection should be accessible, with no locked gates and have public lighting. The proposed access design should include footpath and cycle path design, kerbing, tactile paving, landscaping, public lighting, gates and railing details. The design should include measures to enhance the safety of pedestrians and cyclists and to provide passive surveillance measures to discourage anti-social behaviour. Lockable gates will not be permitted and are to be excluded from the proposals.*
- *To the adjoining development to the south of the proposed development.*
- *From the end of the existing Parklands Grove Road to the green amenity area at the north east corner of the development. The creation of active travel linkage is envisaged in the Kildare County Development Plan and there was a pedestrian/cyclist connection envisaged for the KDA for this area Reference Maynooth LAP Section 11.4 for your*
- *There is a concern that the footpath and green open space to the north east of the proposed Creche may not have adequate passive surveillance. The creation of a loop walkway is seen as having the potential to create an amenity and allow for active travel.*

5 *The Applicant is requested to submit details of the proposed vehicular access into the development where priority to be given to Vulnerable Road Users (VRUs) at the access point*

6. *The Applicant is requested to submit a Site Layout Plan at a scale of 1:500 indicating:*
   (a) Vehicular parking to be in accordance with Chapter 15 of Kildare County Development Plan 2023-2029.
   (b) Corner radii and lines of sight at junctions to be in accordance with the Design Manual for Urban Roads and Streets (DMURS) 2019.
   (c) Longitudinal gradients to be in accordance with the Design Manual for urban Roads and Streets (DMURS) 2019.
   (d) Details on how surface-water runoff is collected, disposed of, and not discharged onto the public road network. Finished ground levels and falls to be indicated on this drawing.
   (e) Dished kerbs incorporating tactile paving at pedestrian crossing points within the development site.
   (f) Electric vehicle (EV) charge points / sockets units. The EV Charger is to be compatible with the Sustainable Energy Authority of Ireland's Triple E Register.
   (g) The Main Access Road (Primary Local Street) within the Development should be 6 metres wide with side roads (Secondary Local Streets and Home Zones) of 5.5m in width. 2- metre-wide footpaths and a 1-metre-wide grass verge should be provided internally for roads of the application site. Circulation aisles at parking areas to be a minimum of 6.0 metres in width. Footpaths to be a concrete finish, 2.0 metres wide with applicable kerb upstands.
   (h) Stop signage and road markings are to be in accordance with the Department of Transport, Tourism and Sport's Traffic Signs Manual.
   (i) Details of 30 km/h Slow Zones signage and their respective locations in the residential development in accordance with the Department of Transport, Tourism and Sport's traffic signs advice note TSAN-2016-02.
   (k) 2.0-metre-wide footpaths.
   (l) Signage and road markings to be in accordance with the Department of Transport, Tourism and Sport (DTTAS) Traffic Signs Manual

9 *The Applicant is requested to prepare a Quality Audit and look at pedestrian and cycle linkage between the development and the rest of Maynooth including Town Centre and Railway Station. The Applicant is also requested to submit a stage 1 and 2 Road Safety Audit / Assessment (RSA) by an independent approved and certified auditor. The RSA is to assess:*
   (a) The internal areas of the proposed residential development.
   (b) The interface with the existing public road / footpath network.

   The Applicant is requested to make the necessary changes to the design proposals following the stage 1 and 2 RSA. The Applicant is requested to note that if the application is subsequently granted, then a stage 3 audit / assessment will be required

10 *Following changes to the carriageway alignments to introduce traffic calming in the form of horizontal deflection; the Applicant is requested to submit a critical swept path analysis on the Site using software such as Autotrack.*

Layout Plan drawings at scales of 1:250 for a fire tender and a 3 axle refuse collection vehicle 2.50 metres wide by 9.86 metres long demonstrating access and egress to and from the Public Road and the manoeuvrability of these vehicles within the application site.

16.3 These matters are addressed within the TPS M Moran & Associates response attached within Appendix 4.0 of this TIA.

17.0 Conclusions.

17.1 This Traffic Impact Assessment relates to a proposed 139 residential unit development on lands zoned for residential development off the MERR at Maynooth, County Kildare. The proposed residential development consists of 139 residential units of which 36 are houses and 103 are residential apartments containing a mix of 1, 2, 3, and 4 bedrooms together with a Crèche.

17.2 The proposed residential development has been designed to fully accord with the standards set out within the Design Manual for Urban Roads and Streets.

17.3 In this report the projected traffic situation on the surrounding road network has been identified. The level of traffic impact the proposed residential development is likely to have on this adjacent road network has also been assessed and it has been identified how the traffic associated with the proposed development can be accommodated within the existing and proposed road network.

17.4 Capacity assessments have been carried out on the critical junction, the proposed Railpark West LRD site access with MERR which indicates that under the forecast future traffic conditions there will be sufficient practical reserve capacity at this junction to accommodate the traffic associated with the proposed residential development and future residential land uses accessing via this junction.

17.5 As such, we conclude the proposed residential development can be regarded as having no material operational traffic impact on the MERR as the critical adjacent road link.

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use: 03 - RESIDENTIAL

Category: A - HOUSES PRIVATELY OWNED

Selected Vehicle Type: Total Vehicles

Selected regions and areas:

01	**GREATER LONDON**		
	EG	EALING	1 day
	EN	ENFIELD	1 day
02	**SOUTH EAST**		
	BO	BEDFORD	1 day
	CT	CENTRAL BEDFORDSHIRE	1 day
	ES	EAST SUSSEX	5 days
	HC	HAMPSHIRE	8 days
	HF	HERTFORDSHIRE	1 day
	KC	KENT	1 day
	MW	MEDWAY	2 days
	SC	SURREY	2 days
	WS	WEST SUSSEX	1 day
03	**SOUTH WEST**		
	BC	BOURNEMOUTH CHRISTCHURCH & POOLE	1 day
	CW	CORNWALL	1 day
	DC	DORSET	2 days
	GS	GLOUCESTERSHIRE	2 days
	NS	NORTH SOMERSET	4 days
	SD	SWINDON	1 day
	SM	SOMERSET	3 days
	TB	TORBAY	1 day
04	**EAST ANGLIA**		
	CA	CAMBRIDGESHIRE	1 day
	NF	NORFOLK	6 days
	PB	PETERBOROUGH	3 days
	SF	SUFFOLK	5 days
05	**EAST MIDLANDS**		
	DS	DERBYSHIRE	1 day
	LE	LEICESTERSHIRE	1 day
	LN	LINCOLNSHIRE	2 days
	NM	WEST NORTHAMPTONSHIRE	1 day
	NN	NORTH NORTHAMPTONSHIRE	1 day
	NT	NOTTINGHAMSHIRE	1 day
06	**WEST MIDLANDS**		
	OT	STOKE ON TRENT	1 day
	SH	SHROPSHIRE	2 days
	ST	STAFFORDSHIRE	2 days
	WK	WARWICKSHIRE	3 days
	WM	WEST MIDLANDS	4 days
	WO	WORCESTERSHIRE	3 days
07	**YORKSHIRE & NORTH LINCOLNSHIRE**		
	BY	BARNSLEY	1 day
	LS	LEEDS	1 day
	NY	NORTH YORKSHIRE	7 days
	SE	SHEFFIELD	1 day
	YO	YORK	1 day
08	**NORTH WEST**		
	AC	CHESHIRE WEST & CHESTER	3 days
	BP	BLACKPOOL	1 day
	EC	CHESHIRE EAST	3 days
	LC	LANCASHIRE	8 days
	MS	MERSEYSIDE	1 day
09	**NORTH**		
	CU	CUMBERLAND	1 day
	DH	DURHAM	1 day

	FU	WESTMORLAND & FURNESS	1 day
	IM	ISLE OF MAN	3 days
	TW	TYNE & WEAR	2 days
10	**WALES**		
	CF	CARDIFF	1 day
	CM	CARMARTHENSHIRE	1 day
	CP	CAERPHILLY	1 day
	PS	POWYS	2 days
	RC	RHONDDA CYNON TAFF	1 day
	VG	VALE OF GLAMORGAN	1 day
11	**SCOTLAND**		
	AG	ANGUS	1 day
	EA	EAST AYRSHIRE	1 day
	FA	FALKIRK	1 day
	HI	HIGHLAND	9 days
	PK	PERTH & KINROSS	1 day
12	**CONNAUGHT**		
	CS	SLIGO	3 days
	GA	GALWAY	2 days
	LT	LEITRIM	1 day
	MA	MAYO	1 day
	RO	ROSCOMMON	3 days
13	**MUNSTER**		
	CL	CLARE	1 day
	CR	CORK	1 day
14	**LEINSTER**		
	CC	CARLOW	1 day
	KK	KILKENNY	2 days
	ME	MEATH	1 day
	WC	WICKLOW	2 days
	WX	WEXFORD	1 day
16	**ULSTER (REPUBLIC OF IRELAND)**		
	CV	CAVAN	1 day
	DN	DONEGAL	4 days
	MG	MONAGHAN	1 day
17	**ULSTER (NORTHERN IRELAND)**		
	DE	DERRY	1 day
	TY	TYRONE	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:	4 to 50 (units:DWELLS)
Range Selected by User:	4 to 50 (units:DWELLS)
Parking Spaces Range:	6 - 2696

Public Transport Provision:

Selection by:	All Surveys Included
Date Range:	05/05/87 to 30/06/25

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	20 days
Monday	25 days
Saturday	1 days
Sunday	5 days
Thursday	38 days
Tuesday	31 days
Wednesday	38 days

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

Selected survey types:

Manual count	148
Direction ATC Count	10

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	69 days
Edge of Town Centre	17 days
Neighbourhood Centre	30 days
Suburban Area	42 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
Industrial Zone	2 days
No Sub Category	17 days
Residential Zone	112 days
Village	26 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	18 days
Servicing vehicles Unknown	134 days

Secondary Filtering Selection:

Use Class:

C3	158 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 - 15312

Population within 1 mile:

1,000 or Less	4 surveys
1,001 to 5,000	43 surveys
10,001 to 15,000	37 surveys
15,001 to 20,000	17 surveys
20,001 to 25,000	10 surveys
25,001 to 50,000	14 surveys
5,001 to 10,000	33 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	9 surveys
125,001 to 250,000	31 surveys
25,001 to 50,000	23 surveys
250,001 to 500,000	19 surveys
5,000 or Less	5 surveys
5,001 to 25,000	33 surveys
50,001 to 75,000	19 surveys
75,001 to 100,000	19 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	50 surveys
1.1 to 1.5	95 surveys
1.6 to 2.0	11 surveys
Not Known	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	137 surveys
Yes	21 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:

1a (Low) - Very poor	1 surveys
No PTAL Present	157 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

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

Total Vehicles

Calculation factor: 1 DWELLS

Estimated TRIP rate value per 36 DWELLS shown in shaded columns

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. DWELLS	Arrivals	Estimated Trip Rate	Departures	Estimated Trip Rate	Totals	Estimated Trip Rate
00:00-01:00	**9**	**21**	**0.037**	**1.340**	**0.043**	**1.532**	**0.080**	**2.872**
01:00-02:00	**9**	**21**	**0.032**	**1.149**	**0.016**	**0.574**	**0.048**	**1.723**
02:00-03:00	**9**	**21**	**0.032**	**1.149**	**0.032**	**1.149**	**0.064**	**2.298**
03:00-04:00	**9**	**21**	**0.043**	**1.532**	**0.037**	**1.340**	**0.080**	**2.872**
04:00-05:00	**9**	**21**	**0.043**	**1.532**	**0.032**	**1.149**	**0.075**	**2.681**
05:00-06:00	**9**	**21**	**0.011**	**0.383**	**0.043**	**1.532**	**0.054**	**1.915**
06:00-07:00	**10**	**22**	**0.055**	**1.982**	**0.060**	**2.147**	**0.115**	**4.129**
07:00-08:00	**154**	**29**	**0.080**	**2.886**	**0.254**	**9.149**	**0.334**	**12.035**
08:00-09:00	**158**	**29**	**0.184**	**6.639**	**0.411**	**14.788**	**0.595**	**21.427**
09:00-10:00	**158**	**29**	**0.180**	**6.480**	**0.230**	**8.277**	**0.410**	**14.757**
10:00-11:00	**158**	**29**	**0.167**	**5.995**	**0.189**	**6.798**	**0.356**	**12.793**
11:00-12:00	**158**	**29**	**0.182**	**6.551**	**0.188**	**6.782**	**0.370**	**13.333**
12:00-13:00	**158**	**29**	**0.201**	**7.227**	**0.196**	**7.068**	**0.397**	**14.295**
13:00-14:00	**158**	**29**	**0.218**	**7.847**	**0.205**	**7.394**	**0.423**	**15.241**
14:00-15:00	**158**	**29**	**0.208**	**7.473**	**0.224**	**8.078**	**0.432**	**15.551**
15:00-16:00	**158**	**29**	**0.288**	**10.367**	**0.231**	**8.332**	**0.519**	**18.699**
16:00-17:00	**158**	**29**	**0.324**	**11.679**	**0.202**	**7.267**	**0.526**	**18.946**
17:00-18:00	**158**	**29**	**0.368**	**13.238**	**0.222**	**7.990**	**0.590**	**21.228**
18:00-19:00	**158**	**29**	**0.291**	**10.471**	**0.203**	**7.314**	**0.494**	**17.785**
19:00-20:00	**10**	**20**	**0.457**	**16.447**	**0.365**	**13.157**	**0.822**	**29.604**
20:00-21:00	**10**	**20**	**0.335**	**12.061**	**0.315**	**11.330**	**0.650**	**23.391**
21:00-22:00	**9**	**21**	**0.207**	**7.468**	**0.176**	**6.319**	**0.383**	**13.787**
22:00-23:00	**9**	**21**	**0.176**	**6.319**	**0.096**	**3.447**	**0.272**	**9.766**
23:00-00:00	**9**	**21**	**0.122**	**4.404**	**0.080**	**2.872**	**0.202**	**7.276**
Total Rates:			**4.241**	**152.619**	**4.050**	**145.786**	**8.291**	**298.405**

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.

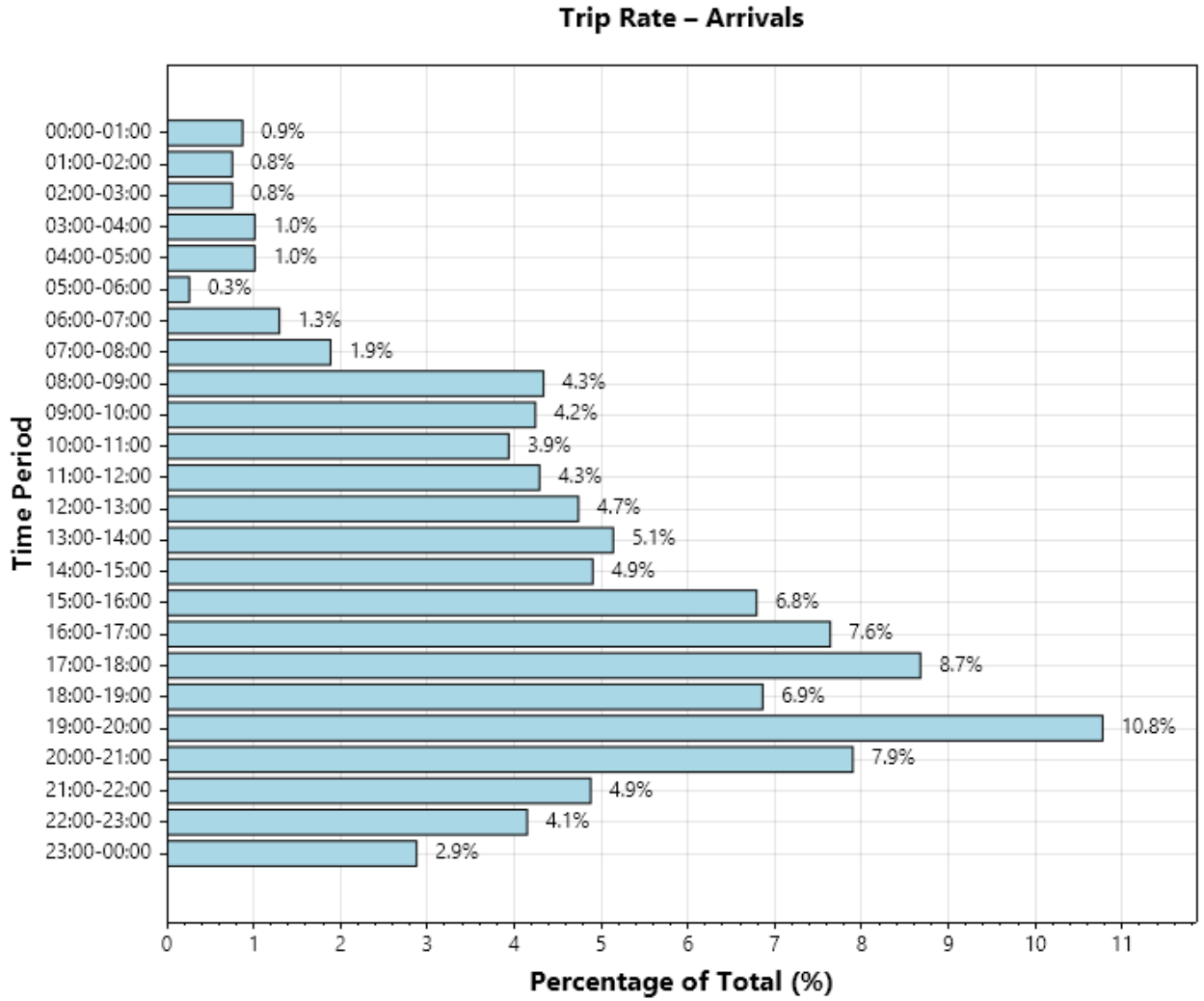
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected 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:	4 - 50 (units: DWELLS)
Survey date date range:	05/05/1987 - 06/11/2024
Number of weekdays (Monday-Friday):	152
Number of Saturdays:	1
Number of Sundays:	5
Surveys automatically removed from selection:	56
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.

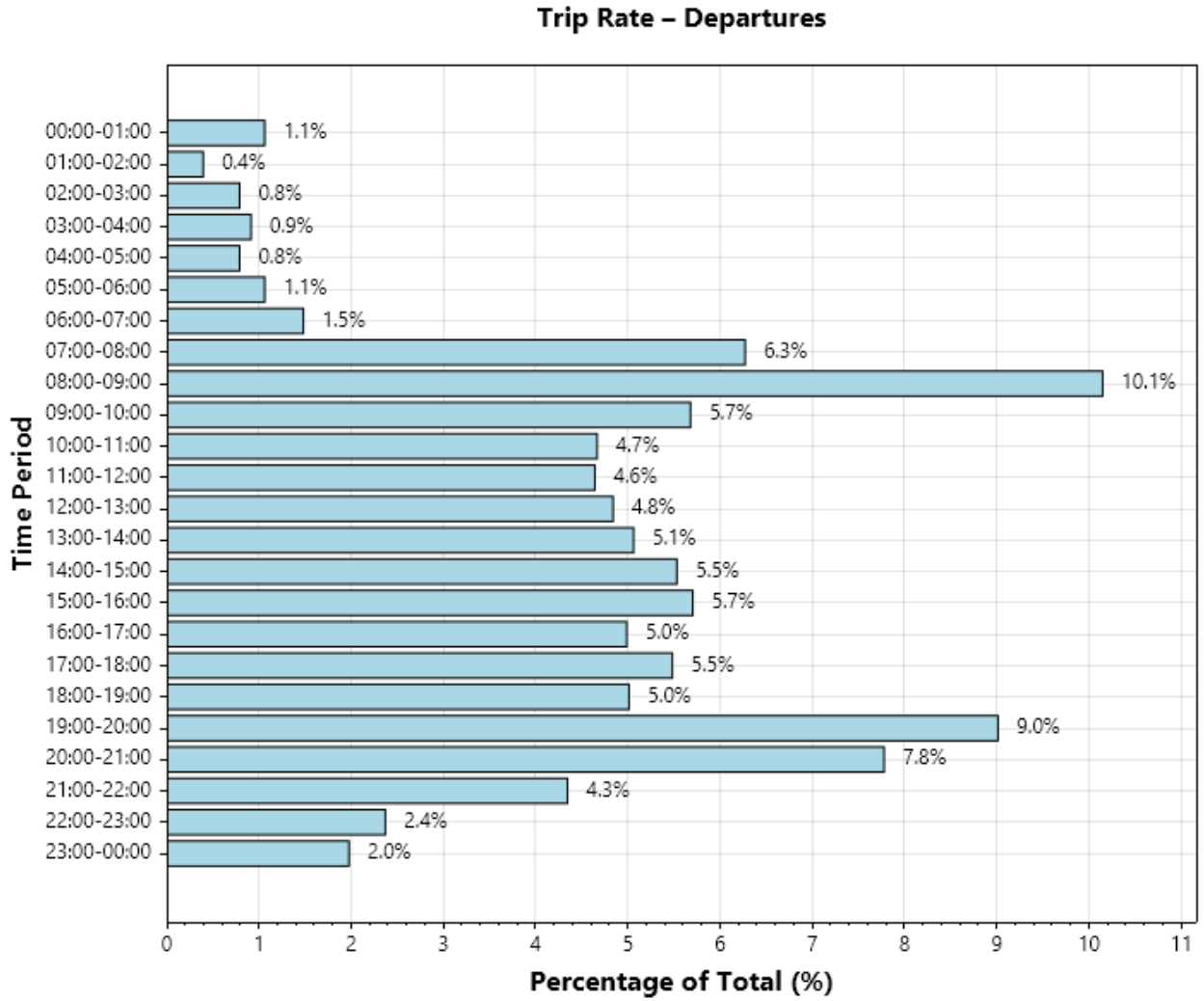
Trip Rate Total Vehicles – Arrivals



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

Generated on: 2025-12-16 09:59

Trip Rate Total Vehicles – Departures



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

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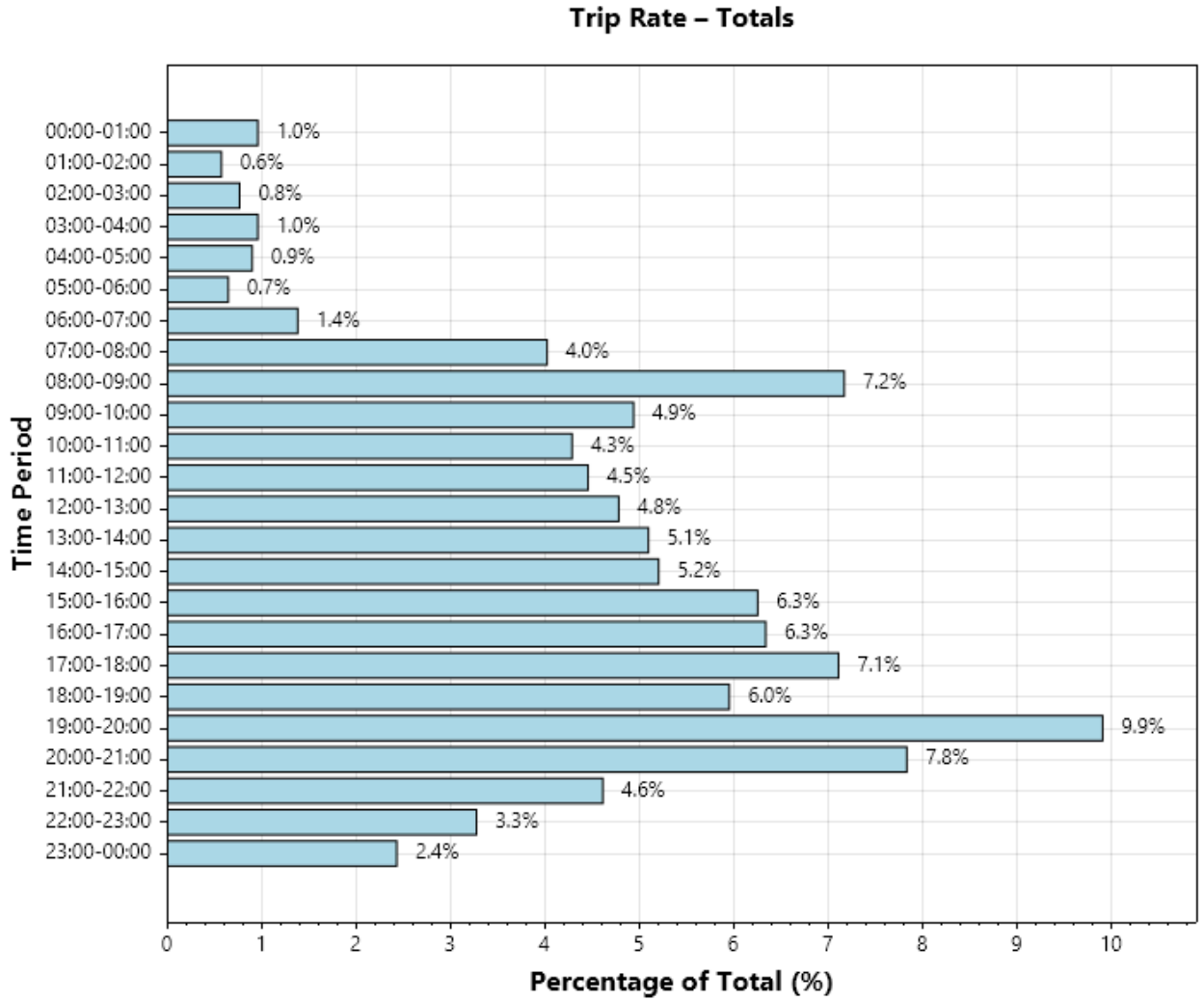
Trip Rate Total Vehicles – Totals



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

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TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use: 03 - RESIDENTIAL

Category: C - FLATS PRIVATELY OWNED

Selected Vehicle Type: Total Vehicles

Selected regions and areas:

01	**GREATER LONDON**		
	MR	MERTON	1 day
	TH	TOWER HAMLETS	1 day
	WH	WANDSWORTH	1 day
02	**SOUTH EAST**		
	BH	BRIGHTON & HOVE	1 day
	CT	CENTRAL BEDFORDSHIRE	1 day
	HF	HERTFORDSHIRE	2 days
	SC	SURREY	3 days
	SS	SOUTHEND ON SEA	1 day
03	**SOUTH WEST**		
	DV	DEVON	1 day
04	**EAST ANGLIA**		
	NF	NORFOLK	2 days
	PB	PETERBOROUGH	1 day
	SF	SUFFOLK	2 days
05	**EAST MIDLANDS**		
	DY	DERBY	2 days
	NG	NOTTINGHAM	2 days
06	**WEST MIDLANDS**		
	OT	STOKE ON TRENT	1 day
	WM	WEST MIDLANDS	2 days
07	**YORKSHIRE & NORTH LINCOLNSHIRE**		
	BY	BARNSLEY	1 day
	NY	NORTH YORKSHIRE	1 day
08	**NORTH WEST**		
	AC	CHESHIRE WEST & CHESTER	1 day
09	**NORTH**		
	CU	CUMBERLAND	1 day
	FU	WESTMORLAND & FURNESS	1 day
	TV	TEES VALLEY	1 day
	TW	TYNE & WEAR	1 day
10	**WALES**		
	CO	CONWY	1 day
	FS	FLINTSHIRE	1 day
11	**SCOTLAND**		
	EB	CITY OF EDINBURGH	1 day
	GC	GLASGOW CITY	1 day
	HI	HIGHLAND	1 day
	SA	SOUTH AYRSHIRE	1 day
	SR	STIRLING	1 day
12	**CONNAUGHT**		
	GA	GALWAY	1 day
13	**MUNSTER**		
	WA	WATERFORD	1 day
14	**LEINSTER**		
	KD	KILDARE	1 day
	LU	LOUTH	3 days
	WT	WESTMEATH	1 day
	WX	WEXFORD	1 day
15	**GREATER DUBLIN**		
	DL	DUBLIN	2 days
16	**ULSTER (REPUBLIC OF IRELAND)**		
	MG	MONAGHAN	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:	Total Bedrooms
Actual Range:	51 to 146 (units:Total Bedrooms)
Range Selected by User:	51 to 150 (units:Total Bedrooms)
Parking Spaces Range:	0 - 550

Public Transport Provision:

Selection by:	All Surveys Included
Date Range:	19/07/91 to 24/06/25

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	7 days
Saturday	3 days
Sunday	1 days
Thursday	8 days
Tuesday	11 days
Wednesday	13 days

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

Selected survey types:

Manual count	50
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	4 days
Edge of Town Centre	21 days
Neighbourhood Centre	4 days
Suburban Area	17 days
Town 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:

Built-Up Zone	10 days
Commercial Zone	1 days
Development Zone	1 days
No Sub Category	12 days
Residential Zone	26 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	10 days
Servicing vehicles Unknown	40 days

Secondary Filtering Selection:

Use Class:

C3	50 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:

611 - 12464

Population within 1 mile:

1,001 to 5,000	4 surveys
10,001 to 15,000	9 surveys
15,001 to 20,000	5 surveys
20,001 to 25,000	5 surveys
25,001 to 50,000	15 surveys
5,001 to 10,000	8 surveys
50,001 to 100,000	4 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	1 surveys
125,001 to 250,000	13 surveys
25,001 to 50,000	3 surveys
250,001 to 500,000	14 surveys
5,001 to 25,000	6 surveys
50,001 to 75,000	9 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:

0.5 or Less	1 surveys
0.6 to 1.0	14 surveys
1.1 to 1.5	34 surveys
1.6 to 2.0	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
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:

1b - Very poor	1 surveys
2 - Poor	1 surveys
6b - Excellent	1 surveys
No PTAL Present	47 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	**AC-03-C-01**	**BLOCKS OF FLATS**	**CHESHIRE WEST & CHESTER**

NEW CRANE STREET
CHESTER
Edge of Town Centre
Residential Zone
Site area: 0.30000001192092896 hect
Survey date: Friday 17/10/2008 Survey Type: Manual

2	**AN-03-C-01**	**BLOCK OF FLATS**	**ANTRIM**

STOCKMANS WAY
BELFAST
Suburban Area
No Sub Category
Site area: 0.5 hect
Survey date: Tuesday 25/11/2008 Survey Type: Manual

3	**BH-03-C-01**	**BLOCK OF FLATS**	**BRIGHTON & HOVE**

OLD SHOREHAM RD
BRIGHTON
HOVE
Suburban Area
Residential Zone
Site area: 0.3100000023841858 hect
Survey date: Tuesday 26/09/2017 Survey Type: Manual

4	**BY-03-C-01**	**BLOCKS OF FLATS**	**BARNSLEY**

HEELIS STREET
BARNSLEY
Edge of Town Centre
Built-Up Zone
Site area: 0.10000000149011612 hect
Survey date: Tuesday 08/09/2020 Survey Type: Manual

5	**CO-03-C-01**	**BLOCKS OF FLATS**	**CONWY**

MOSTYN BROADWAY
LLANDUDNO
Edge of Town Centre
Built-Up Zone
Site area: 0.44999998807907104 hect
Survey date: Monday 26/03/2018 Survey Type: Manual

6	**CT-03-C-02**	**BLOCKS OF FLATS**	**CENTRAL BEDFORDSHIRE**

STANBRIDGE ROAD
LEIGHTON BUZZARD
Edge of Town Centre
Residential Zone
Site area: 0.6800000071525574 hect
Survey date: Tuesday 15/05/2018 Survey Type: Manual

7	**CU-03-C-01**	**BLOCK OF FLATS**	**CUMBERLAND**

KING STREET
CARLISLE
Town Centre
Built-Up Zone
Site area: 0.20999999344348907 hect
Survey date: Thursday 12/06/2014 Survey Type: Manual

8	**DL-03-C-02**	**BLOCKS OF FLATS**	**DUBLIN**

MAIN STREET
NEAR DUBLIN
RATHCOOLE
Edge of Town
Commercial Zone

Site area: 0.8500000238418579 hect
Survey date: Wednesday 14/02/2007 Survey Type: Manual

9 **DL-03-C-03** **BLOCKS OF FLATS** **DUBLIN**
SUMMERHILL
DUBLIN
Town Centre
Development Zone
Site area: 0.18000000715255737 hect
Survey date: Tuesday 27/02/2007 Survey Type: Manual

10 **DV-03-C-01** **BLOCK OF FLATS** **DEVON**
BONHAY ROAD
EXETER
Edge of Town Centre
Residential Zone
Site area: 0.25999999046325684 hect
Survey date: Monday 10/07/2017 Survey Type: Manual

11 **DY-03-C-02** **FLATS** **DERBY**
BURTON ROAD
DERBY
NEW NORMANTON
Suburban Area
Residential Zone
Site area: 0.30000001192092896 hect
Survey date: Saturday 09/07/2011 Survey Type: Manual

12 **DY-03-C-03** **BLOCKS OF FLATS** **DERBY**
CAESAR STREET
DERBY
Suburban Area
Residential Zone
Site area: 0.17000000178813934 hect
Survey date: Wednesday 25/09/2019 Survey Type: Manual

13 **EB-03-C-01** **BLOCKS OF FLATS** **CITY OF EDINBURGH**
MYRESIDE ROAD
EDINBURGH
CRAIGLOCKHART
Suburban Area
Residential Zone
Site area: 0.5199999809265137 hect
Survey date: Tuesday 26/05/2015 Survey Type: Manual

14 **FS-03-C-01** **BLOCK OF FLATS** **FLINTSHIRE**
WREXHAM STREET
MOLD
Edge of Town Centre
Built-Up Zone
Site area: 0.20999999344348907 hect
Survey date: Monday 06/07/2009 Survey Type: Manual

15 **FU-03-C-01** **BLOCK OF FLATS** **WESTMORLAND & FURNESS**
BRIDGE LANE
PENRITH
Edge of Town
No Sub Category
Site area: 0.5600000023841858 hect
Survey date: Wednesday 11/06/2014 Survey Type: Manual

16 **GA-03-C-01** **FLATS** **GALWAY**
BALLYLOUGHANE ROAD

GALWAY
Suburban Area
No Sub Category
Site area: 0.46000000834465027 hect
Survey date: Thursday 31/10/2013
Survey Type: Manual

17	**GC-03-C-01**	**BLOCK OF FLATS**	**GLASGOW CITY**

FERSIT STREET
GLASGOW
MANESWOOD
Suburban Area
Built-Up Zone
Site area: 0.30000001192092896 hect
Survey date:
Survey Type: Manual

18	**HF-03-C-03**	**BLOCK OF FLATS**	**HERTFORDSHIRE**

SHENLEY ROAD
BOREHAMWOOD
Edge of Town Centre
Built-Up Zone
Site area: 0.5 hect
Survey date: Thursday 14/11/2019
Survey Type: Manual

19	**HF-03-C-07**	**BLOCKS OF FLATS**	**HERTFORDSHIRE**

OXHEY DRIVE
WATFORD
SOUTH OXHEY
Neighbourhood Centre
Residential Zone
Site area: 0.6499999761581421 hect
Survey date: Wednesday 07/06/2023
Survey Type: Manual

20	**HI-03-C-01**	**FLATS**	**HIGHLAND**

SHORE STREET
INVERNESS
Town Centre
Residential Zone
Site area: 0.6000000238418579 hect
Survey date: Wednesday 20/05/2009
Survey Type: Manual

21	**KD-03-C-01**	**BLOCK OF FLATS**	**KILDARE**

STATION ROAD
KILDARE
Edge of Town Centre
Residential Zone
Site area: 0.7599999904632568 hect
Survey date: Friday 22/05/2009
Survey Type: Manual

22	**LU-03-C-01**	**BLOCKS OF FLATS**	**LOUTH**

DONORE ROAD
DROGHEDA
Edge of Town Centre
Residential Zone
Site area: 0.4699999988079071 hect
Survey date: Thursday 12/09/2013
Survey Type: Manual

23	**LU-03-C-02**	**BLOCK OF FLATS**	**LOUTH**

NICHOLAS STREET
DUNDALK
Edge of Town Centre
Residential Zone
Site area: 0.2199999988079071 hect
Survey date: Monday 16/09/2013
Survey Type: Manual

24	**LU-03-C-04**	**BLOCKS OF FLATS**	**LOUTH**

RIVER COURT
DROGHEDA
Neighbourhood Centre
Residential Zone
Site area: 0.9300000071525574 hect
Survey date: Wednesday 22/09/2021 Survey Type: Manual

25	**MG-03-C-01**	**BLOCK OF FLATS**	**MONAGHAN**

MALL ROAD
MONAGHAN
Edge of Town Centre
No Sub Category
Site area: 0.25999999046325684 hect
Survey date: Friday 06/09/2013 Survey Type: Manual

26	**MR-03-C-03**	**BLOCK OF FLATS**	**MERTON**

BURLINGTON ROAD
NEW MALDEN
WEST BARNES
Neighbourhood Centre
No Sub Category
Site area: 0.17000000178813934 hect
Survey date: Thursday 07/09/2023 Survey Type: Manual

27	**NF-03-C-01**	**BLOCKS OF FLATS**	**NORFOLK**

PAGE STAIR LANE
KING'S LYNN
Edge of Town Centre
Built-Up Zone
Site area: 0.41999998688697815 hect
Survey date: Thursday 11/12/2014 Survey Type: Manual

28	**NF-03-C-02**	**MIXED FLATS & HOUSES**	**NORFOLK**

HALL ROAD
NORWICH
LAKENHAM
Suburban Area
Residential Zone
Site area: 2.0399999618530273 hect
Survey date: Monday 18/11/2019 Survey Type: Manual

29	**NG-03-C-01**	**HOUSES (SPLIT INTO FLATS)**	**NOTTINGHAM**

LAWRENCE WAY
NOTTINGHAM
Suburban Area
No Sub Category
Site area: 0.800000011920929 hect
Survey date: Tuesday 08/11/2016 Survey Type: Manual

30	**NG-03-C-03**	**BLOCK OF FLATS**	**NOTTINGHAM**

CANAL STREET
NOTTINGHAM
Town Centre
Built-Up Zone
Site area: 0.18400000035762787 hect
Survey date: Monday 02/10/2023 Survey Type: Manual

31	**NY-03-C-01**	**BLOCKS OF FLATS**	**NORTH YORKSHIRE**

BOROUGHBRIDGE ROAD
NORTHALLERTON
ROMANBY

Suburban Area
No Sub Category
Site area: 0.5 hect
Survey date: Monday 22/09/2003 Survey Type: Manual

32 **OT-03-C-01** **BLOCKS OF FLATS** **STOKE ON TRENT**
ETRURIA COURT
STOKE-ON-TRENT
HUMBERT ROAD
Suburban Area
No Sub Category
Site area: 0.27000001072883606 hect
Survey date: Wednesday 26/11/2008 Survey Type: Manual

33 **PB-03-C-02** **BLOCK OF FLATS** **PETERBOROUGH**
WESTFIELD ROAD
PETERBOROUGH
NETHERTON
Suburban Area
No Sub Category
Site area: 0.5099999904632568 hect
Survey date: Tuesday 18/10/2011 Survey Type: Manual

34 **SA-03-C-01** **BLOCK OF FLATS** **SOUTH AYRSHIRE**
RACECOURSE ROAD
AYR
Edge of Town Centre
Residential Zone
Site area: 1.5800000429153442 hect
Survey date: Tuesday 16/09/2014 Survey Type: Manual

35 **SC-03-C-02** **FLATS** **SURREY**
CONSTITUTION HILL
WOKING
Suburban Area
Built-Up Zone
Site area: 0.23999999463558197 hect
Survey date: Wednesday 23/07/2008 Survey Type: Manual

36 **SC-03-C-03** **FLATS** **SURREY**
KINGS ROAD
WOKING
Suburban Area
Residential Zone
Site area: 0.3400000035762787 hect
Survey date: Saturday 19/07/2008 Survey Type: Manual

37 **SC-03-C-04** **BLOCK OF FLATS** **SURREY**
LONDON ROAD
GUILDFORD
BURPHAM
Edge of Town
Residential Zone
Site area: 0.7200000286102295 hect
Survey date: Saturday 23/10/2010 Survey Type: Manual

38 **SF-03-C-01** **BLOCKS OF FLATS** **SUFFOLK**
STATION HILL
BURY ST EDMUNDS
Edge of Town Centre
Built-Up Zone
Site area: 0.6000000238418579 hect
Survey date: Thursday 18/12/2014 Survey Type: Manual

39	**SF-03-C-04**	**BLOCKS OF FLATS**	**SUFFOLK**

SAINT MARY'S ROAD
IPSWICH
Suburban Area
Residential Zone
Site area: 0.7466999888420105 hect
Survey date: Wednesday 16/09/2020 Survey Type: Manual

40	**SR-03-C-02**	**FLATS**	**STIRLING**

ROSEBERRY TERRACE
STIRLING
Edge of Town Centre
Residential Zone
Site area: 0.3400000035762787 hect
Survey date: Wednesday 18/06/2014 Survey Type: Manual

41	**SS-03-C-02**	**BLOCK OF FLATS**	**SOUTHEND ON SEA**

WESTCLIFF PARADE
SOUTHEND-ON-SEA
WESTCLIFF
Edge of Town Centre
Residential Zone
Site area: 0.3700000047683716 hect
Survey date: Tuesday 22/10/2013 Survey Type: Manual

42	**TH-03-C-04**	**BLOCK OF FLATS**	**TOWER HAMLETS**

LEVEN ROAD
POPLAR
ABERFELDY VILLAGE
Neighbourhood Centre
No Sub Category
Site area: 0.5 hect
Survey date: Friday 21/06/2019 Survey Type: Manual

43	**TV-03-C-02**	**FLATS**	**TEES VALLEY**

ACKLAM ROAD
MIDDLESBROUGH
LINTHORPE
Suburban Area
Residential Zone
Site area: 0.8500000238418579 hect
Survey date: Wednesday 29/06/2011 Survey Type: Manual

44	**TW-03-C-01**	**BLOCKS OF FLATS**	**TYNE & WEAR**

CAULDWELL AVENUE
WHITLEY BAY
MONKESEATON
Edge of Town
Residential Zone
Site area: 0.4000000059604645 hect
Survey date: Friday 15/10/2021 Survey Type: Manual

45	**WA-03-C-01**	**BLOCKS OF FLATS**	**WATERFORD**

UPPER YELLOW ROAD
WATERFORD
Suburban Area
Residential Zone
Site area: 0.6000000238418579 hect
Survey date: Tuesday 12/05/2015 Survey Type: Manual

46	**WH-03-C-01**	**BLOCKS OF FLATS**	**WANDSWORTH**

AMIES STREET

CLAPHAM JUNCTION
Edge of Town Centre
Residential Zone
Site area: 0.49000000953674316 hect
Survey date: Wednesday 09/05/2012 Survey Type: Manual

47	**WM-03-C-03**	**FLATS**	**WEST MIDLANDS**

LODE LANE
SOLIHULL
Edge of Town Centre
No Sub Category
Site area: 1.1799999475479126 hect
Survey date: Friday 21/09/2007 Survey Type: Manual

48	**WM-03-C-04**	**BLOCKS OF FLATS**	**WEST MIDLANDS**

GILLQUART WAY
COVENTRY
PARKSIDE
Edge of Town Centre
Residential Zone
Site area: 0.6000000238418579 hect
Survey date: Friday 11/11/2016 Survey Type: Manual

49	**WT-03-C-01**	**FLATS**	**WESTMEATH**

NORTHGATE STREET
ATHLONE
Edge of Town Centre
No Sub Category
Site area: 0.4000000059604645 hect
Survey date: Wednesday 20/06/2007 Survey Type: Manual

50	**WX-03-C-01**	**BLOCKS OF FLATS**	**WEXFORD**

UPPER GEORGE'S STREET
WEXFORD
Edge of Town Centre
Residential Zone
Site area: 0.4099999964237213 hect
Survey date: Thursday 20/04/2023 Survey Type: Manual

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

Total Vehicles

Calculation factor: 1 Total Bedrooms

Estimated TRIP rate value per 103 Total Bedrooms shown in shaded columns

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. Total Bedrooms	Arrivals	Estimated Trip Rate	Departures	Estimated Trip Rate	Totals	Estimated Trip Rate
00:00-01:00								
01:00-02:00								
02:00-03:00								
03:00-04:00								
04:00-05:00								
05:00-06:00								
06:00-07:00								
07:00-08:00	50	94	0.017	1.774	0.072	7.426	0.089	9.200
08:00-09:00	50	94	0.029	2.979	0.099	10.186	0.128	13.165
09:00-10:00	50	94	0.039	3.987	0.054	5.520	0.093	9.507
10:00-11:00	50	94	0.037	3.790	0.044	4.513	0.081	8.303
11:00-12:00	50	94	0.039	4.009	0.040	4.140	0.079	8.149
12:00-13:00	50	94	0.047	4.841	0.043	4.381	0.090	9.222
13:00-14:00	50	94	0.046	4.775	0.052	5.389	0.098	10.164
14:00-15:00	50	94	0.044	4.491	0.045	4.600	0.089	9.091
15:00-16:00	50	94	0.056	5.739	0.041	4.206	0.097	9.945
16:00-17:00	50	94	0.066	6.813	0.043	4.469	0.109	11.282
17:00-18:00	50	94	0.089	9.178	0.049	5.016	0.138	14.194
18:00-19:00	50	94	0.080	8.280	0.045	4.666	0.125	12.946
19:00-20:00	3	103	0.049	5.000	0.036	3.667	0.085	8.667
20:00-21:00	3	103	0.029	3.000	0.023	2.333	0.052	5.333
21:00-22:00	1	94	0.064	6.574	0.032	3.287	0.096	9.861
22:00-23:00								
23:00-00:00								
Total Rates:			0.731	75.231	0.718	73.799	1.449	149.030

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.

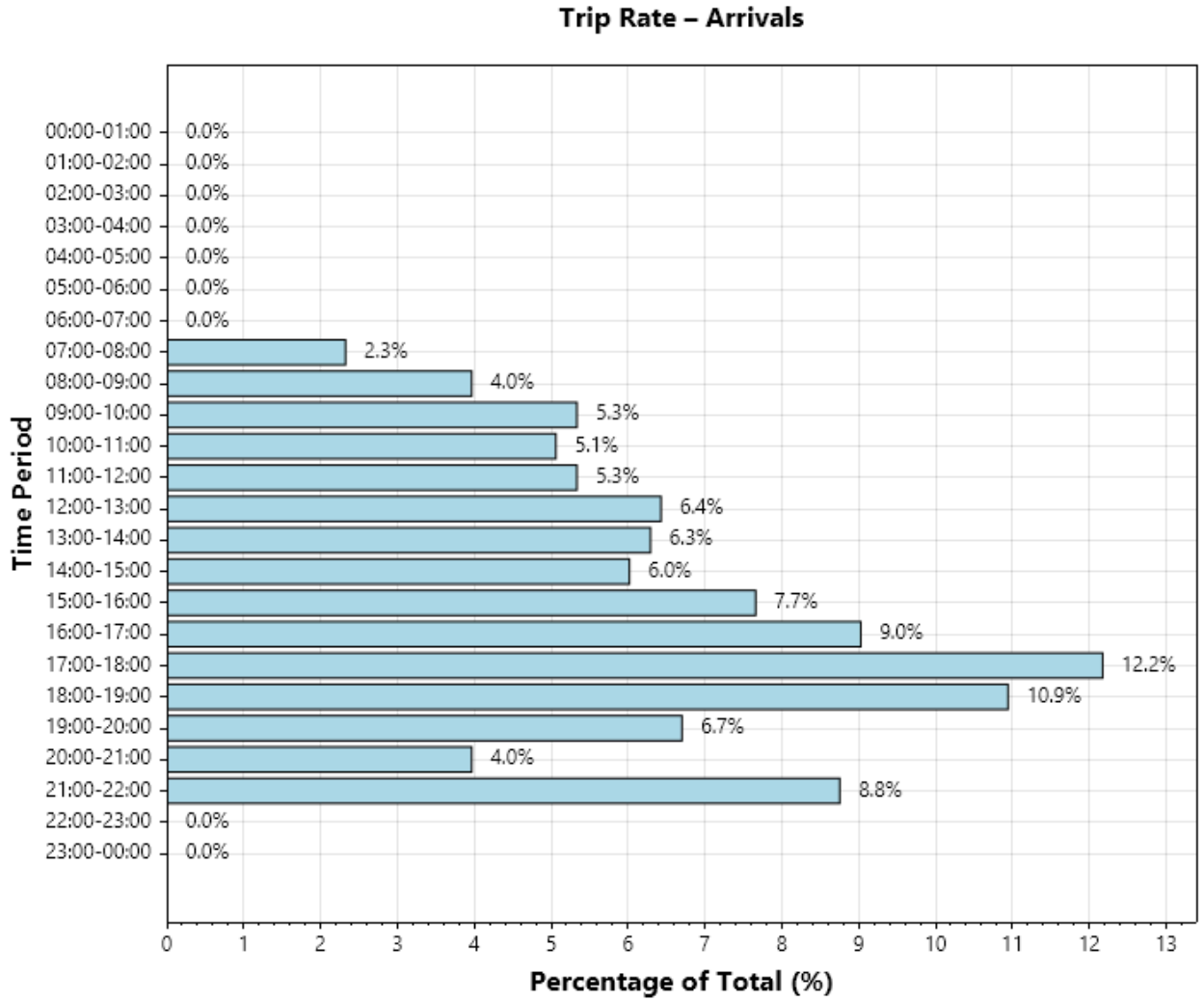
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected 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:	51 - 150 (units: Total Bedrooms)
Survey date date range:	22/09/2003 - 02/10/2023
Number of weekdays (Monday-Friday):	46
Number of Saturdays:	3
Number of Sundays:	1
Surveys automatically removed from selection:	2
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.

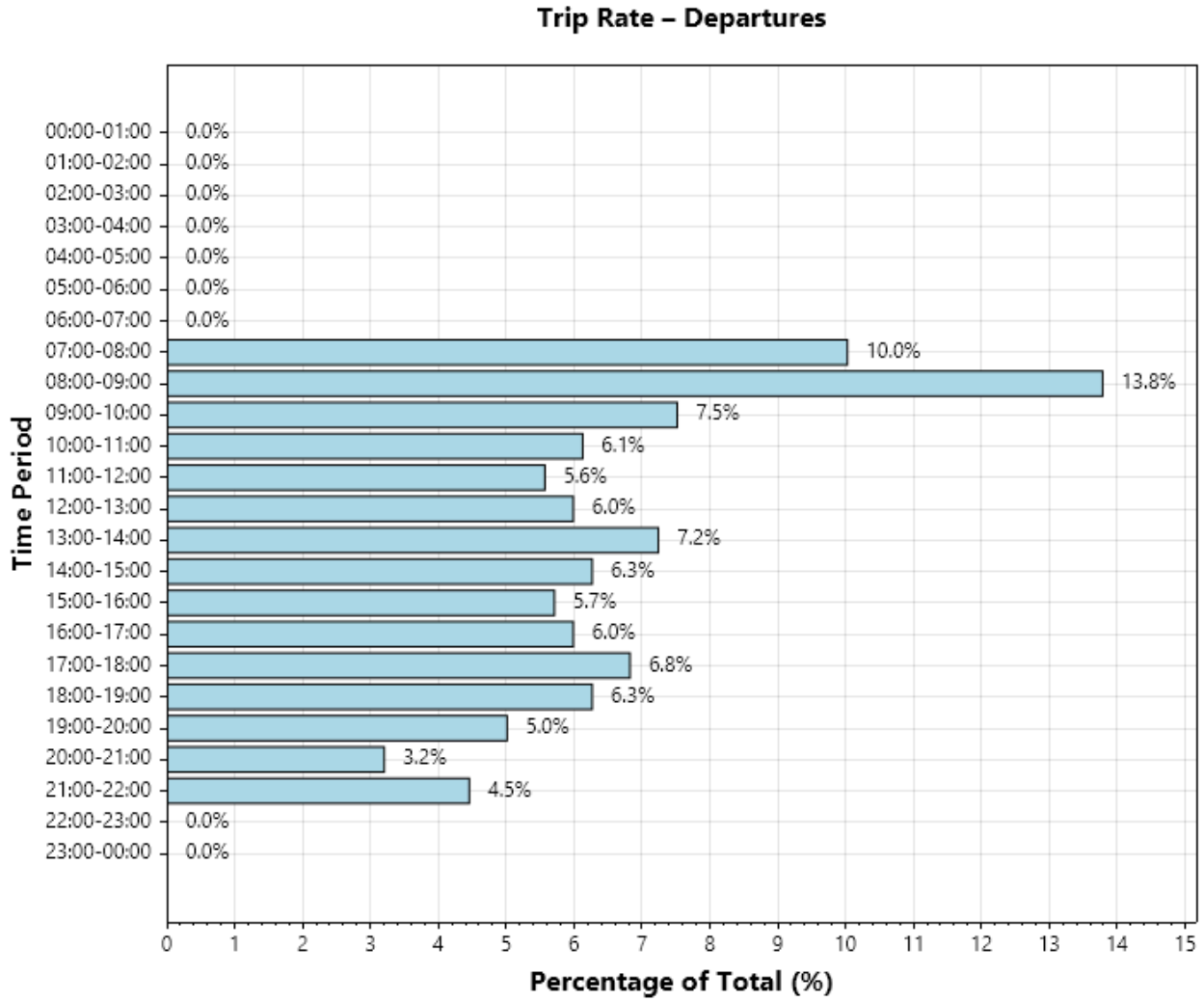
Trip Rate Total Vehicles – Arrivals



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

Generated on: 2025-12-16 10:03

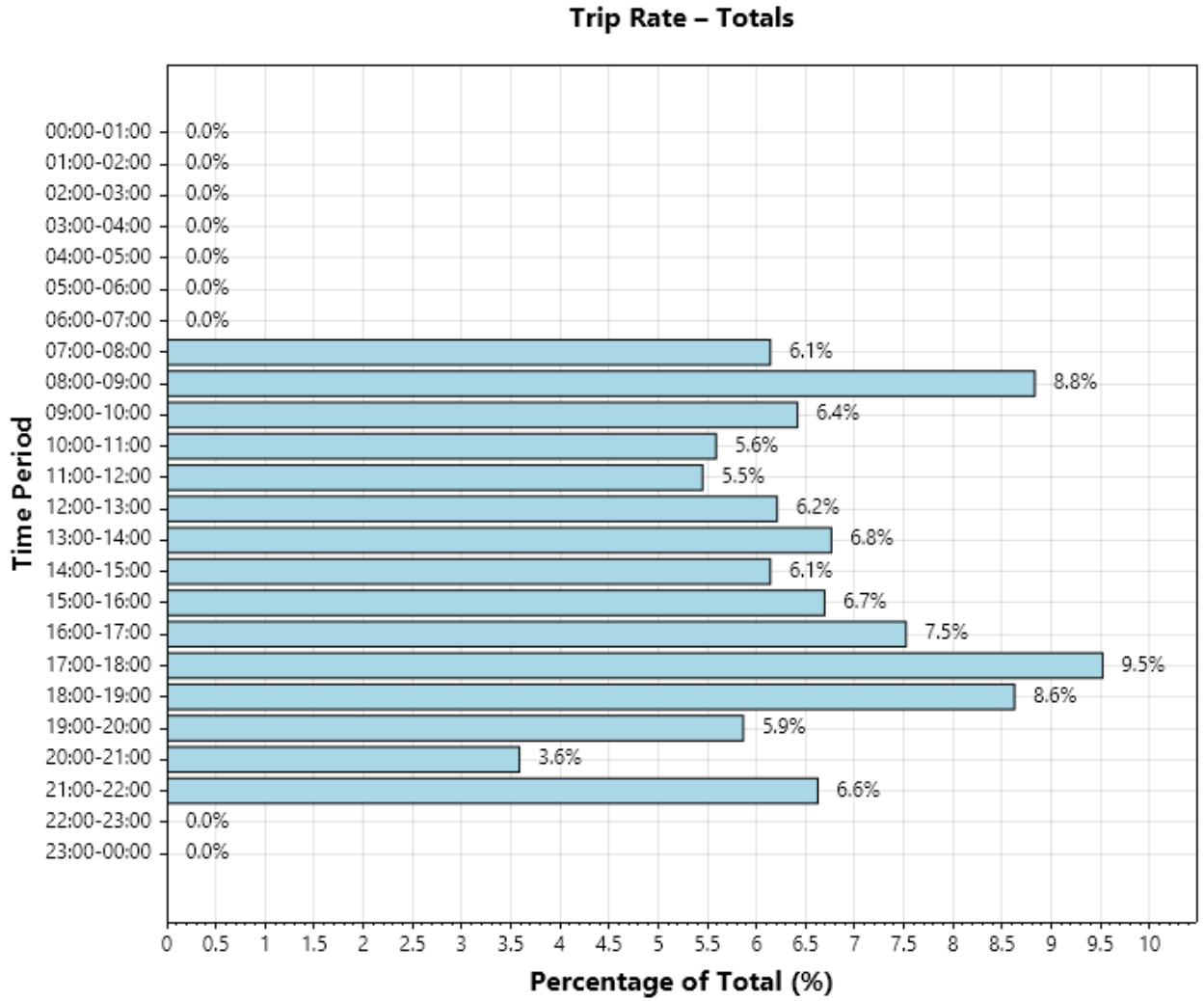
Trip Rate Total Vehicles – Departures



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

Generated on: 2025-12-16 10:03

Trip Rate Total Vehicles – Totals



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

Generated on: 2025-12-16 10:03

Junctions 10
PICADY 10 - Priority Intersection Module
Version: 10.0.1.1519
For sales and distribution information, program advice and maintenance, contact TRL Software: +44 (0)1344 379777 software@trl.co.uk trlsoftware.com

Filename: RAILPARK WEST AM PEAK @ 2045.
Report generation date: 06/10/2025 13:23:30

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	2045			
Stream B-ACD	0.0	0.00	0.00	A
Stream A-BCD	0.0	8.45	0.04	A
Stream D-ABC	0.2	10.88	0.16	B
Stream C-ABD	0.0	0.00	0.00	A

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

File summary

File Description

Title	MAYNOOTH
Location	RAILPARK WEST
Site number	01
Date	01/10/2025
Version	PICADY10
Status	TIA
Identifier	NIALL
Client	MONTANE
Job number	125-A10
Enumerator	LAPTOP-ICUG9LBN\tpsmm
Description	ISSUE

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	Per Hour	s	-Min	Per Min

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2045	AM	ONE HOUR	08:45	10:15	15

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way	Two-way	Two-way	Two-way		0.69	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.69	A

Arms

Arms

Arm	Name	Description	Arm type
A	MERR NORTH		Major
B	RAILPARK EAST		Minor
C	MERR SOUTH		Major
D	RAILPARK WEST		Minor

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)
A	7.00	No	No	70.0	✓	1.00
C	7.00	No	No	70.0	✓	1.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	70	70
D	One lane	3.00	70	70

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
A-D	574	-	-	-	-	-	-	0.213	0.304	0.213	-	-	-
B-A	562	0.098	0.247	0.247	-	-	-	0.156	0.354	-	0.247	0.247	0.124
B-C	701	0.103	0.260	-	-	-	-	-	-	-	-	-	-
B-D, nearside lane	562	0.098	0.247	0.247	-	-	-	0.156	0.354	0.156	-	-	-
B-D, offside lane	562	0.098	0.247	0.247	-	-	-	0.156	0.354	0.156	-	-	-
C-B	643	0.238	0.238	0.341	-	-	-	-	-	-	-	-	-
D-A	701	-	-	-	-	-	-	0.260	-	0.103	-	-	-
D-B, nearside lane	562	0.156	0.156	0.354	-	-	-	0.247	0.247	0.098	-	-	-
D-B, offside lane	562	0.156	0.156	0.354	-	-	-	0.247	0.247	0.098	-	-	-
D-C	562	-	0.156	0.354	0.124	0.247	0.247	0.247	0.247	0.098	-	-	-

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

Default vehicle mix	Vehicle mix varies over time	Vehicle mix source	PCU Factor for a HV (PCU)
Yes	Yes	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A	MERR NORTH	Yes	621	100.000
B	RAILPARK EAST	Yes	0	100.000
C	MERR SOUTH	Yes	517	100.000
D	RAILPARK EAST	Yes	63	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	**B**	**C**	**D**
From	**A**	0	0	605	16
	B	0	0	0	0
	C	504	0	0	13
	D	40	0	23	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	10	10	10	10
	B	10	10	10	10
	C	10	10	10	10
	D	10	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.00	0.00	0.0	A
A-BCD	0.04	8.45	0.0	A
A-B				
A-C				
D-ABC	0.16	10.88	0.2	B
C-ABD	0.00	0.00	0.0	A
C-D				
C-A				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	419	0.000	0	0.0	0.000	A
A-BCD	12	507	0.025	12	0.0	8.006	A
A-B	0			0			
A-C	455			455			
D-ABC	47	503	0.094	47	0.1	8.666	A
C-ABD	0	1061	0.000	0	0.0	0.000	A
C-D	10			10			
C-A	379			379			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	385	0.000	0	0.0	0.000	A
A-BCD	15	498	0.030	15	0.0	8.204	A
A-B	0			0			
A-C	543			543			
D-ABC	57	475	0.119	56	0.1	9.469	A
C-ABD	0	1018	0.000	0	0.0	0.000	A
C-D	12			12			
C-A	453			453			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	336	0.000	0	0.0	0.000	A
A-BCD	19	488	0.039	19	0.0	8.448	A
A-B	0			0			
A-C	665			665			
D-ABC	69	433	0.160	69	0.2	10.867	B
C-ABD	0	957	0.000	0	0.0	0.000	A
C-D	14			14			
C-A	555			555			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	336	0.000	0	0.0	0.000	A
A-BCD	19	488	0.039	19	0.0	8.448	A
A-B	0			0			
A-C	665			665			
D-ABC	69	433	0.160	69	0.2	10.880	B
C-ABD	0	957	0.000	0	0.0	0.000	A
C-D	14			14			
C-A	555			555			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	384	0.000	0	0.0	0.000	A
A-BCD	15	498	0.030	15	0.0	8.207	A
A-B	0			0			
A-C	543			543			
D-ABC	57	475	0.119	57	0.2	9.485	A
C-ABD	0	1018	0.000	0	0.0	0.000	A
C-D	12			12			
C-A	453			453			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	419	0.000	0	0.0	0.000	A
A-BCD	12	507	0.025	12	0.0	8.010	A
A-B	0			0			
A-C	455			455			
D-ABC	47	503	0.094	48	0.1	8.690	A
C-ABD	0	1061	0.000	0	0.0	0.000	A
C-D	10			10			
C-A	379			379			

Junctions 10
PICADY 10 - Priority Intersection Module
Version: 10.0.1.1519
For sales and distribution information, program advice and maintenance, contact TRL Software: +44 (0)1344 379777 software@trl.co.uk trlsoftware.com

Filename: RAILPARK WEST PM @2045
Report generation date: 01/10/2025 16:28:18

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	2045			
Stream B-ACD	0.0	0.00	0.00	A
Stream A-BCD	0.1	7.96	0.05	A
Stream D-ABC	0.1	10.38	0.08	B
Stream C-ABD	0.0	0.00	0.00	A

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

File summary

File Description

Title	MAYNOOTH
Location	RAILPARK WEST
Site number	01
Date	01/10/2025
Version	PICADY10
Status	TIA
Identifier	NIALL
Client	MONTANE
Jobnumber	125-A10
Enumerator	LAPTOP-ICUG9LBN\tpsmm
Description	ISSUE

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	Per Hour	s	-Min	Per Min

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2045	AM	ONE HOUR	17:45	19:15	15

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way	Two-way	Two-way	Two-way		0.34	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.34	A

Arms

Arms

Arm	Name	Description	Arm type
A	MERR NORTH		Major
B	RAILPARK WEST		Minor
C	MERR SOUTH		Major
D	RAILPARK WEST		Minor

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)
A	7.00	No	No	70.0	Yes	1.00
C	7.00	No	No	70.0	Yes	1.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	70	70
D	One lane	3.00	70	70

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
A-D	574	-	-	-	-	-	-	0.213	0.304	0.213	-	-	-
B-A	562	0.098	0.247	0.247	-	-	-	0.156	0.354	-	0.247	0.247	0.124
B-C	701	0.103	0.260	-	-	-	-	-	-	-	-	-	-
B-D, nearside lane	562	0.098	0.247	0.247	-	-	-	0.156	0.354	0.156	-	-	-
B-D, offside lane	562	0.098	0.247	0.247	-	-	-	0.156	0.354	0.156	-	-	-
C-B	643	0.238	0.238	0.341	-	-	-	-	-	-	-	-	-
D-A	701	-	-	-	-	-	-	0.260	-	0.103	-	-	-
D-B, nearside lane	562	0.156	0.156	0.354	-	-	-	0.247	0.247	0.098	-	-	-
D-B, offside lane	562	0.156	0.156	0.354	-	-	-	0.247	0.247	0.098	-	-	-
D-C	562	-	0.156	0.354	0.124	0.247	0.247	0.247	0.247	0.098	-	-	-

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

Default vehicle mix	Vehicle mix varies over time	Vehicle mix source	PCU Factor for a HV (PCU)
Yes	Yes	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A	MERR NORTH	Yes	895	100.000
B	RAILPARK EAST	Yes	0	100.000
C	MERR SOUTH	Yes	474	100.000
D	RAILPARK WEST	Yes	30	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	**B**	**C**	**D**
From	**A**	0	0	876	19
	B	0	0	0	0
	C	440	0	0	34
	D	19	0	11	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	10	10	10	10
	B	10	10	10	10
	C	10	10	10	10
	D	10	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-ACD	0.00	0.00	0.0	A
A-BCD	0.05	7.96	0.1	A
A-B				
A-C				
D-ABC	0.08	10.38	0.1	B
C-ABD	0.00	0.00	0.0	A
C-D				
C-A				

Main Results for each time segment

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	373	0.000	0	0.0	0.000	A
A-BCD	15	524	0.029	15	0.0	7.774	A
A-B	0			0			
A-C	659			659			
D-ABC	23	494	0.046	22	0.1	8.397	A
C-ABD	0	963	0.000	0	0.0	0.000	A
C-D	26			26			
C-A	331			331			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	330	0.000	0	0.0	0.000	A
A-BCD	18	521	0.035	18	0.0	7.878	A
A-B	0			0			
A-C	786			786			
D-ABC	27	462	0.058	27	0.1	9.109	A
C-ABD	0	900	0.000	0	0.0	0.000	A
C-D	31			31			
C-A	396			396			

18:15 - 18:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	268	0.000	0	0.0	0.000	A
A-BCD	24	521	0.045	23	0.1	7.964	A
A-B	0			0			
A-C	962			962			
D-ABC	33	414	0.080	33	0.1	10.380	B
C-ABD	0	813	0.000	0	0.0	0.000	A
C-D	37			37			
C-A	484			484			

18:30 - 18:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	268	0.000	0	0.0	0.000	A
A-BCD	24	521	0.045	24	0.1	7.965	A
A-B	0			0			
A-C	962			962			
D-ABC	33	414	0.080	33	0.1	10.385	B
C-ABD	0	813	0.000	0	0.0	0.000	A
C-D	37			37			
C-A	484			484			

18:45 - 19:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	329	0.000	0	0.0	0.000	A
A-BCD	18	521	0.035	18	0.0	7.882	A
A-B	0			0			
A-C	786			786			
D-ABC	27	462	0.058	27	0.1	9.116	A
C-ABD	0	900	0.000	0	0.0	0.000	A
C-D	31			31			
C-A	396			396			

19:00 - 19:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	0	373	0.000	0	0.0	0.000	A
A-BCD	15	524	0.029	15	0.0	7.780	A
A-B	0			0			
A-C	659			659			
D-ABC	23	494	0.046	23	0.1	8.408	A
C-ABD	0	963	0.000	0	0.0	0.000	A
C-D	26			26			
C-A	331			331			

Title: **DMURS Quality Audit Including Stage 1 Road Safety Audit, For; Proposed Railpark Phase 1 Residential Development, Maynooth, Co. Kildare.**

Client: **TPS M Moran & Associates on behalf of Montane Developments**

Date: **December 2025**

Report reference: **2917R01**

VERSION: **FINAL (16-12-2025)**

Prepared By:

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CONTENTS SHEET

Contents

1.0 Introduction

This report was prepared in response to a request from Michael Moran, TPS M Moran and Associates, for a DMURS Quality Audit including a Stage 1 Road Safety Audit for a proposed residential scheme known as Railpark Phase 1, in Maynooth, Co. Kildare on behalf of Montane Developments.

The Audit Team comprised of;

Team Leader:	**Norman Bruton**, BE CEng FIEI, Cert Comp RSA.
	TII Auditor Approval no. NB 168446
Team Member:	**Owen O'Reilly**, B.SC. Eng Dip Struct. Eng NCEA Civil Dip Civil. Eng CEng MIEI
	TII Auditor Approval no. OO1291756

The Audits involved the examination of drawings and other material provided and a site visit by both audit team members, together, on the 1st of December 2025. The weather at the time of the site visit was dry and the road surface was damp.

The Stage 1 Road Safety Audit has been carried out in accordance with the requirements of TII Publication Number GE-STY-01024, dated May 2025.

The Quality Audit has been carried out in accordance with the guidance in the Design Manual for Urban Roads and Streets (DMURS), produced by Department of Transport Tourism and Sport in March 2013 and as updated in June 2019 including Advice Notes. The Quality Audit is composed of a number of distinct audits which include an Accessibility Audit, a Walking Audit and a Cycling Audit (i.e. aspects of a Quality Audit carried out independent of the Design Team.

Many issues raised in the Road Safety Audit would also be raised in the various aspects of the Quality Audit, however to avoid repetition items that are common to more than the Road Safety Audit have been included in a table at the start of Section 3.0 of this report.

The scheme has been examined and this report compiled in respect of the consideration of those matters that have an adverse effect on road safety. It has not been examined or verified for compliance with any other standards or criteria. The problems identified in this report are considered to require action in order to improve the safety of the scheme for road users.

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

The information supplied to the Audit Team is listed in **Appendix A.** The feedback form is contained in **Appendix B.** A plan drawing showing the problem locations is contained in **Appendix C**.

2.0 Background

It is proposed to construct a new residential scheme off the future Maynooth Eastern Relief Road MERR). The site is located at the end of the Parklands residential development on a cul-de sac street known as Railpark.

Vehicular access will be via a priority T-junction off a collector road of the MERR (referred to as the MERR West Slip Road) close to an at grade- junction and bus stops.

The proposed layout of the MERR is shown on the drawings.

Pedestrian and cyclist access will be provided onto Railpark.

Future extensions of some the internal roads can be facilitated for future phases.

The site location is provided below.

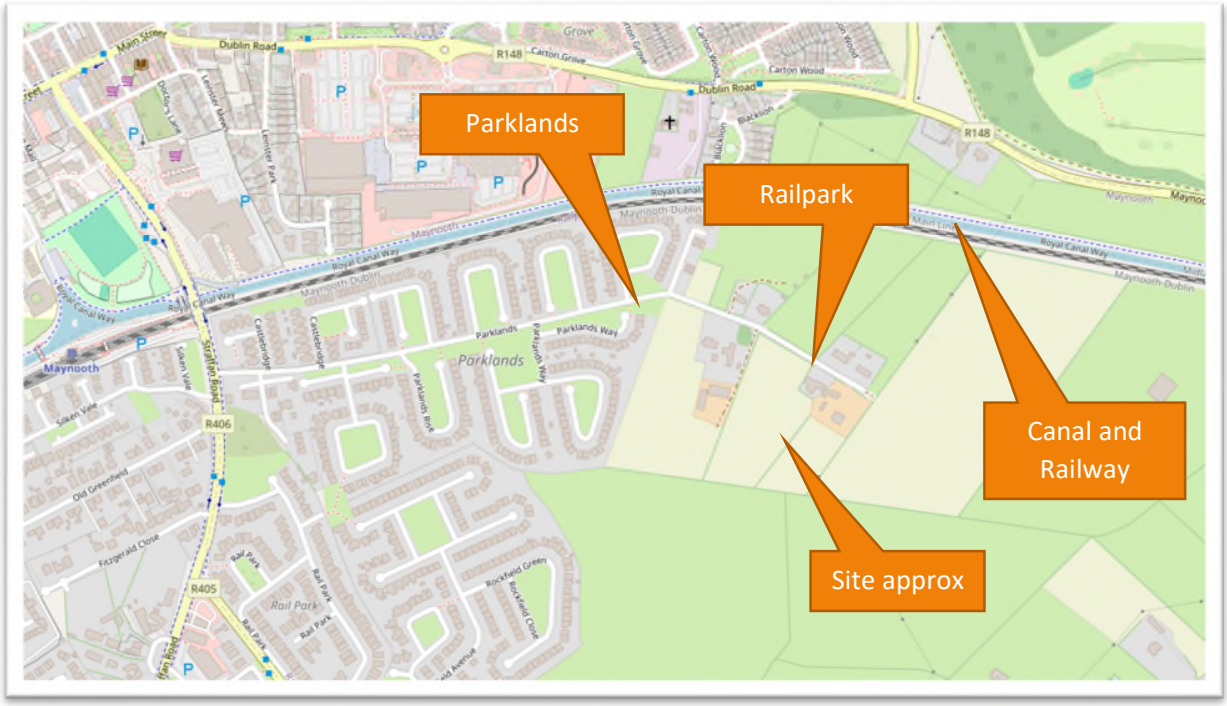
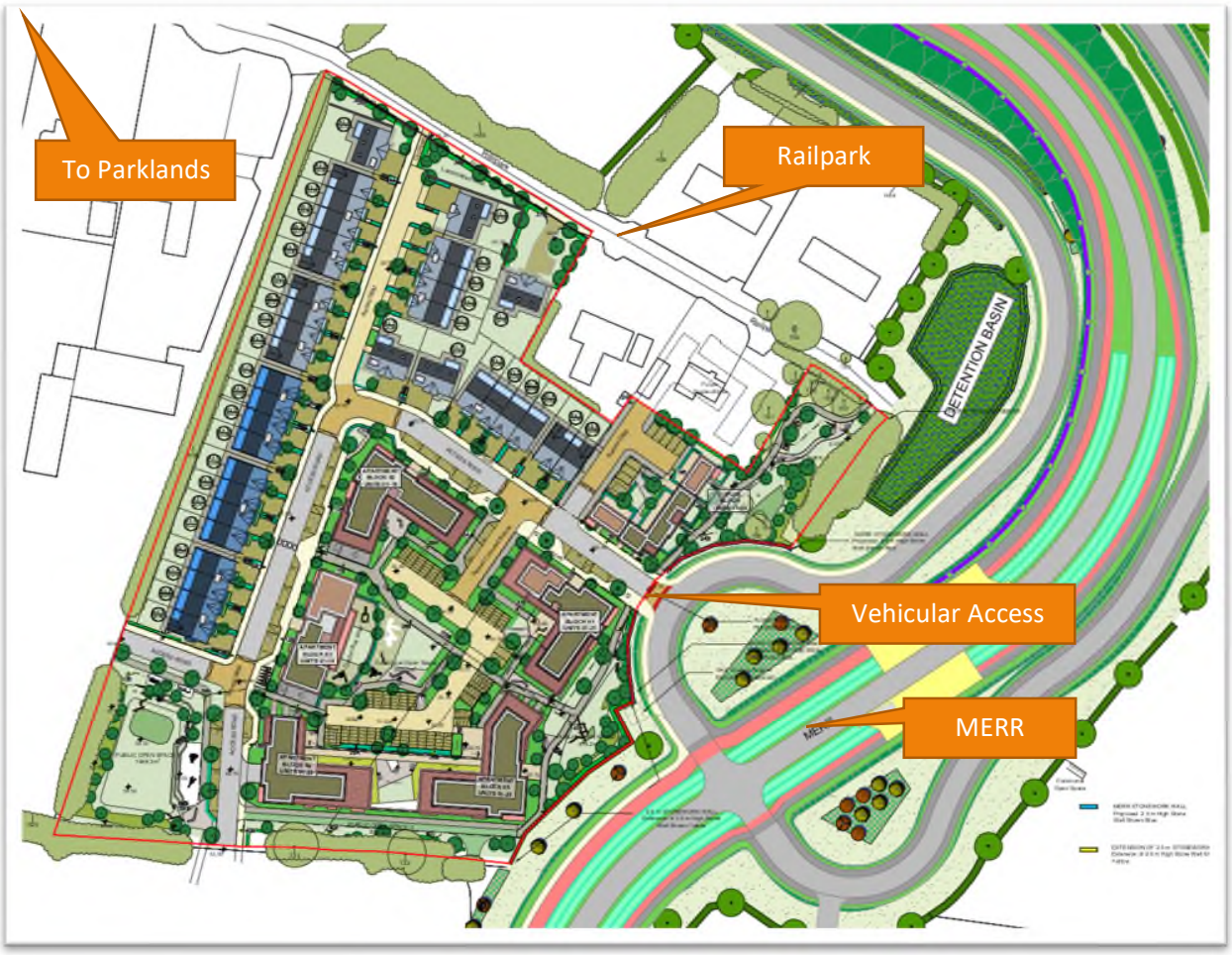


Image courtesy of Openstreetmaps.org.

The layout showing the MERR is provided below.


To Parklands
Railpark
DETENTION BASIN
Vehicular Access
MERR

3.0 Issues Common to More Audits than RSA

Below is a summary table of problems raised in the Road Safety Audit that would also be raised in the Quality Audit however are not repeated for clarity and brevity.

Problem Reference	Road Safety Audit	Access Audit	Walking Audit	Cycling Audit
4.1	✓		✓	✓
4.2	✓	✓	✓	
4.3	✓	✓	✓	✓
4.4	✓	✓	✓	

4.0 Items Raised in This Stage 1 Road Safety Audit.

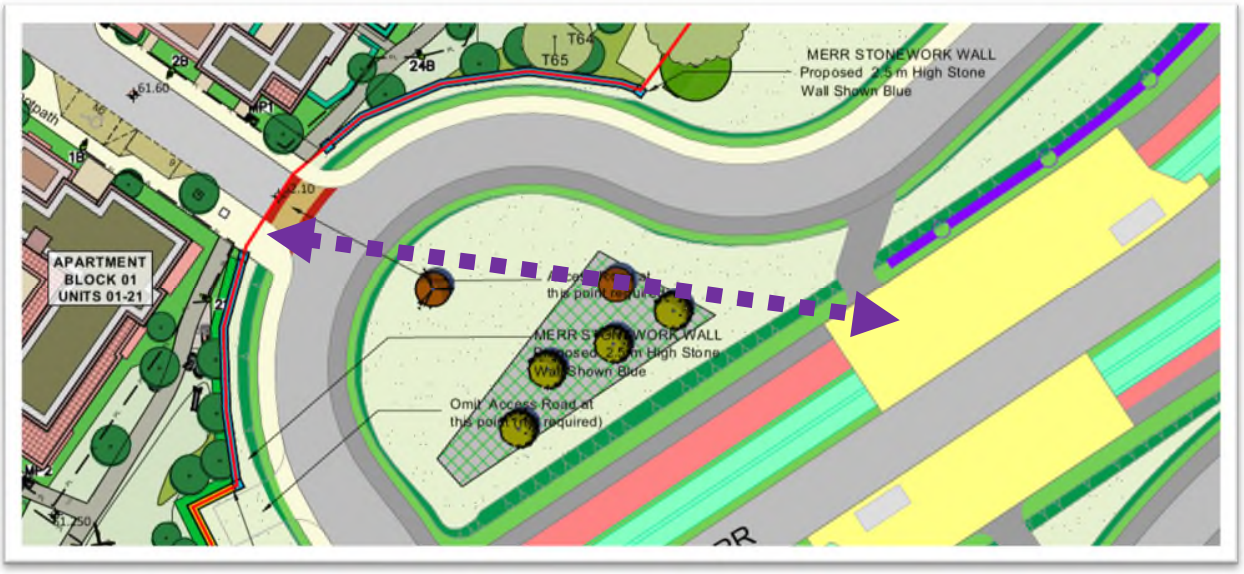
4.1 Problem

LOCATION

Drawing 24-004-P-1.200 Duignan Queen Architects, Site Layout Plan, MERR Bus stop Pedestrian link.

PROBLEM

There are no proposed crossing facilities for pedestrian to get to the MERR bus stop along the desire line from the proposed development. This could lead to an informal path through the grassed area resulting in slips and falls.



RECOMMENDATION

It is recommended that a path for pedestrians be provided to the bus stop that aligns with the future desire lines.

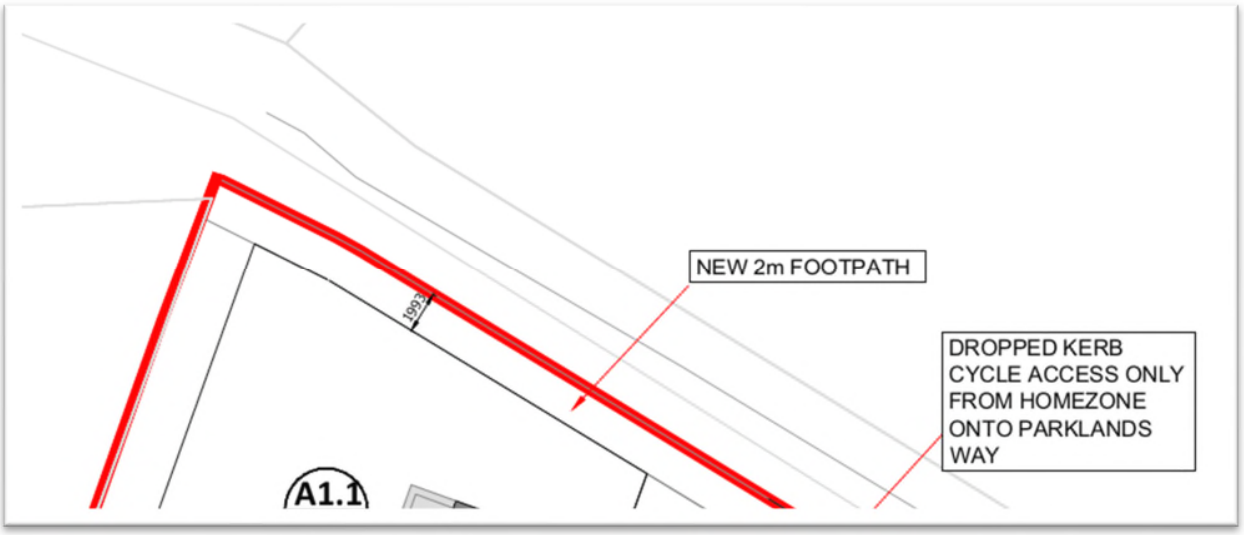
4.2 Problem

LOCATION

Drawing 24-004-P-1.200 Duignan Queen Architects, Railpark street.

PROBLEM

It is proposed to provide a 2m footpath along Railpark for the extent of the site west of the second existing residential unit. There is however a section of Railpark before the Parklands development without a footpath. Pedestrians will have share space with vehicular traffic on this narrow lane which would increase the risk of collisions.



RECOMMENDATION

It is recommended that a footpath be continued to meet the existing footpath at Parklands or that the street be converted to a shared use street with suitable pedestrian refuge areas.

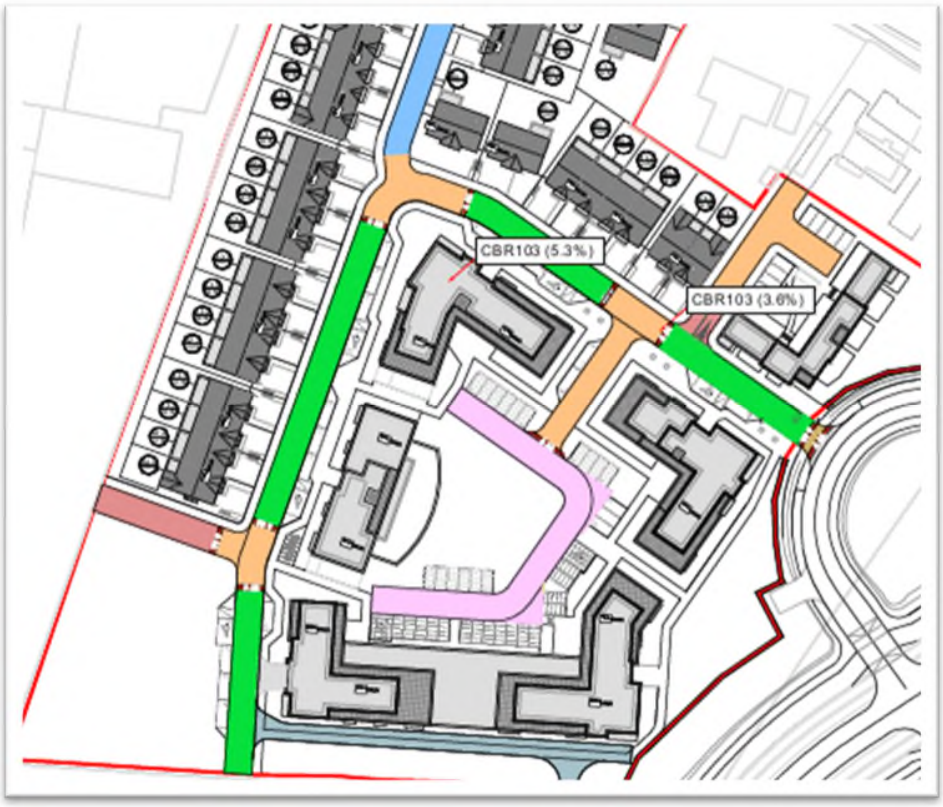
4.3 Problem

LOCATION

Drawing 25M2-FCE-XX-XX-DR-C-4200 S4 P02, Street Classification.

PROBLEM

Road no. 1 has been classified as an 'arterial street'. It is unclear if it is to be used as a future link to the road network that would attract commercial vehicles. Such vehicles would not be suitable for mixing with a residential environment and could lead to collisions with vulnerable road users.



RECOMMENDATION

It is recommended that the function and future use of the proposed arterial street be assessed against the criteria set out in DMURs and if commercial or through traffic is to use it then it should not be routed through a residential area.

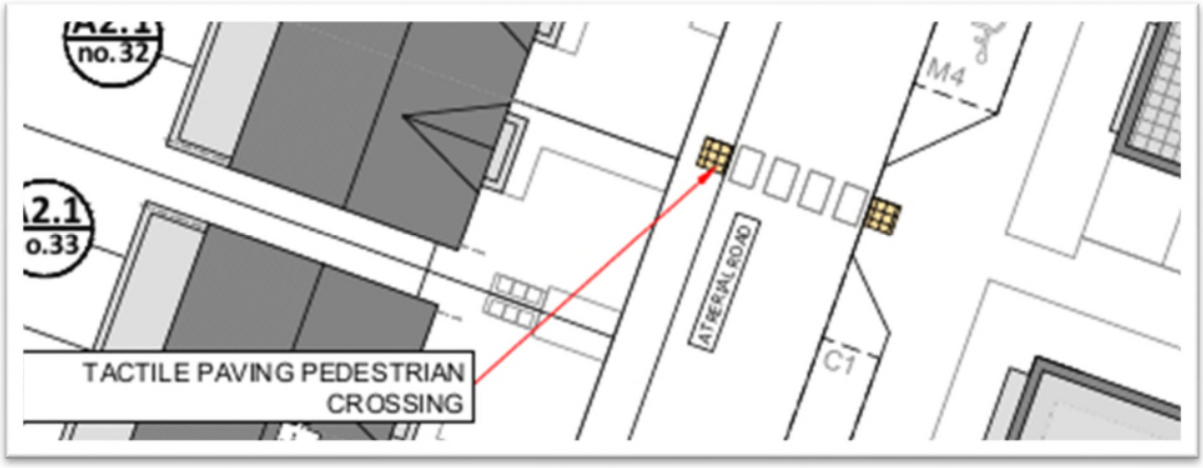
4.4 Problem

LOCATION

Drawing 25M2-FCE-XX-XX-DR-C-1101 S4 P04, uncontrolled pedestrian crossing, Road 1.

PROBLEM

An uncontrolled pedestrian crossing is shown at the rear of an in-curtilage parking space. This could lead to collisions with pedestrians is a driver reverses out of the parking space, especially in poor weather and lighting conditions.



RECOMMENDATION

It is recommended that the crossing not be provided at the rear of a parking space.

5.0 Items Raised in This Stage 1 Quality Audit – Accessibility Audit.

5.1 Issue

LOCATION

Disabled parking spaces.

ISSUE

It is unclear if at-grade access is to be provided to the footpath adjacent to the disabled parking spaces. A lack of a dropped kerb could lead to inaccessibility for the mobility impaired.

Example only

RECOMMENDATION

It is recommended that dropped kerbs be provided at the buffer zones of the disabled parking spaces.

6.0 Items Raised in This Stage 1 Quality Audit – Walking Audit.

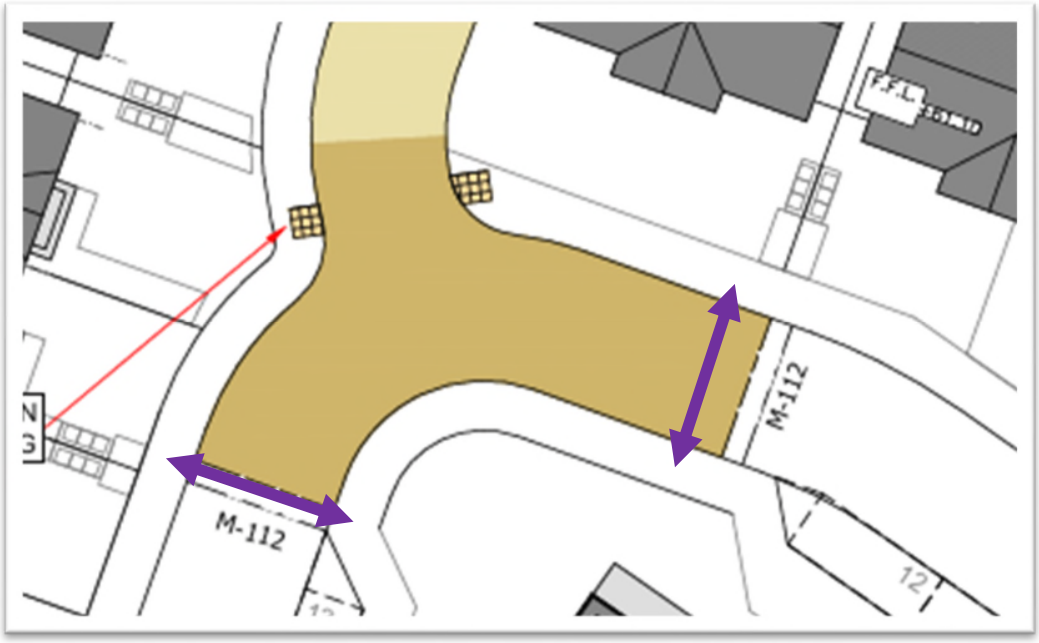
6.1 Issue

LOCATION

Uncontrolled pedestrian crossings.

ISSUE

Some uncontrolled pedestrian crossing are shown at the raised tables. Additional crossing points may be required to meet with desire lines.



Examples only

RECOMMENDATION

It is recommended that additional crossing points be provided to match future desire lines. Crossing points should not be to the rear of in-curtilage parking spaces or at the tapers of raised tables.

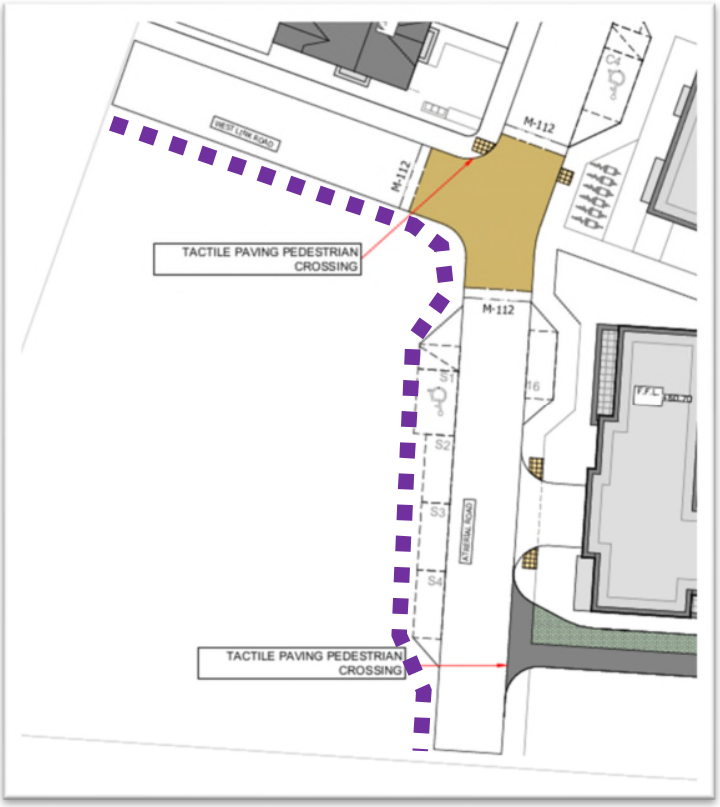
6.2 Issue

LOCATION

West Link Road and Arterial Route.

ISSUE

It is unclear (shown on some drawings) if a footpath is to be provided on the western side of the arterial route and southern side of the West Link Road. Future phases of development may lead to a desire line for pedestrians and if the space is not allocated for a footpath it may not be feasible in the future. There is also a need for users of the parallel parking spaces including the disabled parking space to be able to access a footpath.



RECOMMENDATION

It is recommended that footpaths be provided along with adeqaute crossing facilities.

7.0 Items Raised in This Stage 1 Quality Audit – Cycling Audit.

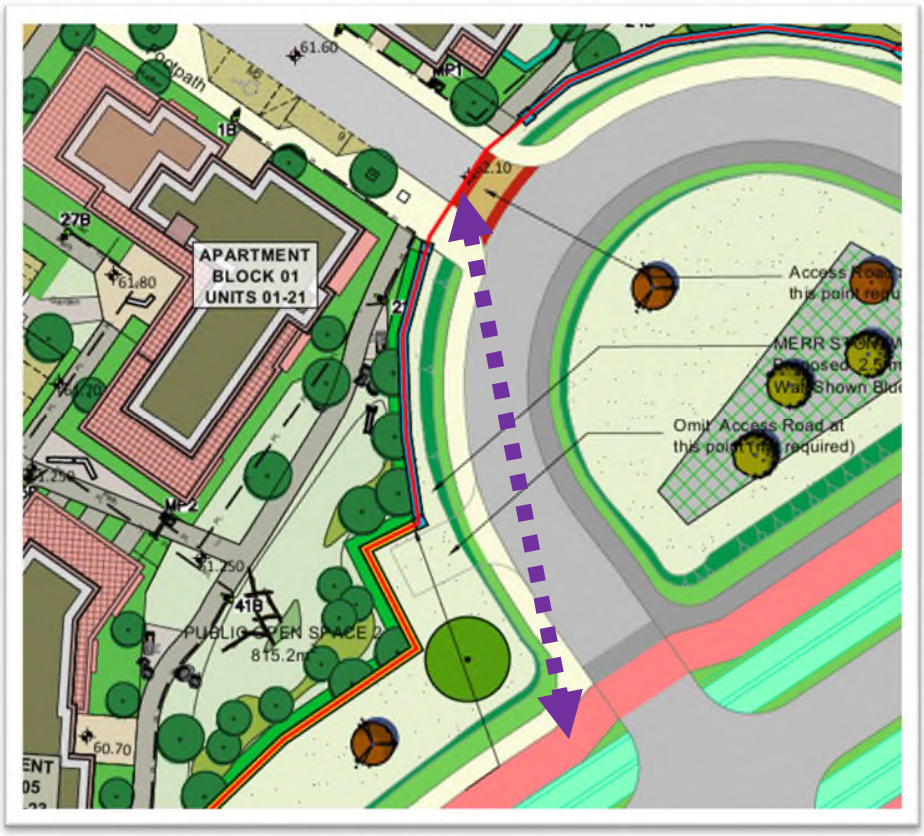
7.1 Issue

LOCATION

Drawing 24-004-P-1.200 Duignan Queen Architects, Site Layout Plan, MERR Cycle Link.

ISSUE

There is no link proposed on the collector road for cyclists to get from the development to the MERR and vice versa. Cyclists would have to share space with vehicular traffic.



RECOMMENDATION

It is recommended that a two-way cycle facility be provided.

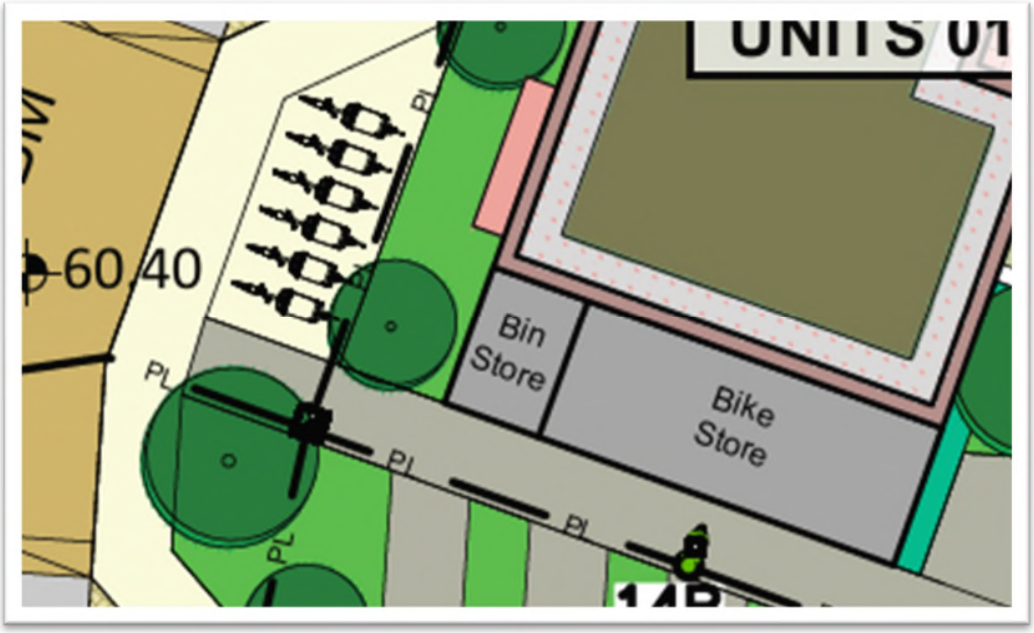
7.2 Issue

LOCATION

Drawing 24-004-P-1.200 Duignan Queen Architects, Bike storage.

ISSUE

It is unclear if any bicycle storage is being provided for cargo bikes. Cargo bikes take additional room to store and the proposed outdoor spaces would not be suitable for longer term parking and could lead to an unnecessary increase in car journeys.



RECOMMENDATION

It is recommended that sheltered storage for cargo bikes be provided.

8.0 Audit Statements.

Road Safety Audit Statement

We certify that we have examined the information provided and the site. The examination has been carried out with the sole purpose of identifying any features of the design which could be removed or modified in order to improve the safety of the scheme.

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

Quality Audit Statement

We certify that we have carried out this audit in accordance with DMURS for those areas independent of the Design team.

Norman Bruton **Signed:** Norman Bruton ___

(Audit Team Leader) **Dated:** __16-12-2025_____

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

(Audit Team Member) **Dated:** 16-12-2015_____

Appendix A

List of Material Supplied for this Road Safety Audit and Quality Audit;

- Drawing 24-004-P-1.200 Duignan Queen Architects
- Drawing 25M2-FCE-XX-XX-DR-C-4200-S4-P02 ROAD BUILDUPS SHEET 1
- Drawing 25M2-FCE-XX-XX-DR-C-4201-S4-P02 ROAD BUILDUPS SHEET 2
- Drawing 25M2-FCE-XX-XX-DR-C-4202-S4-P02 ROAD BUILDUPS SHEET 3
- Drawing 25M2-FCE-XX-XX-DR-C-4300-S4-P01 TYPICAL DETAILS
- Drawing 25M2-FCE-XX-XX-DR-C-1100-S4-P04 ROAD LAYOUT
- Drawing 25M2-FCE-XX-XX-DR-C-1101-S4-P04 SIGNAGE AND ROAD MARKINGS LAYOUT
- Drawing 25M2-FCE-XX-XX-DR-C-1111-S4-P05 SWEPT PATH ASSESSMENTS - FIRE TENDER
- Drawing 25M2-FCE-XX-XX-DR-C-1112-S4-P04 SWEPT PATH ASSESSMENTS - REFUSE VEHICLE
- Drawing 25M2-FCE-XX-XX-DR-C-1530-S4-P01 SIGHTLINE LAYOUT
- Drawing 25M2-FCE-XX-XX-DR-C-2100-S4-P01 CONSTRUCTION ACCESS LAYOUT
- Drawing 25M2-FCE-XX-XX-DR-C-4100-S4-P03 ROAD LONGITUDINAL SECTIONS
- Drawing 25M2-FCE-XX-XX-DR-C-4110-S4-P03 ARTERIAL ROAD CROSS SECTIONS

Appendix B

Feedback Forms (Road Safety Audit & Quality Audit)

SAFETY AUDIT FORM – FEEDBACK ON AUDIT REPORT

Scheme: Railpark West (Phase 1)

Stage: 1 Road Safety Audit
Date Audit (Site Visit) Completed: 1-12-2025

Paragraph No. in Safety Audit Report	Issue accepted (yes/no)	Recommended measure accepted (yes/no)	Alternative measures (describe)	Alternative measures accepted by Auditors (Yes/No)
4.1	Yes	Yes		
4.2	Yes	Yes		
4.3	Yes	Yes		
4.4	Yes	Yes		

Signed.....
Design Team Leader

Date.....3TH December 2025

Signed.....
Audit Team Leader

Date.....16-12-2025.....

Signed.....
Employer/Developer

Date.....9/12/25.....

QUALITY AUDIT – FEEDBACK FORM

Scheme: Railpark West (Phase 1)
Quality Audit- Stage 1 (Planning Stage)
Date Audit (site visit) 1-12-2025

Paragraph No. in Quality Audit Report	Problem accepted (yes/no)	Recommended measure accepted (yes/no)	Alternative measures (describe)	Alternative measures accepted by Auditors (Yes/No)
5.1	Yes	Yes		
6.1	Yes	Yes		
6.2	Yes	Yes		
7.1	Yes	Yes		
7.2	Yes	Yes		

Signed.....
Design Team Leader

Date 9th December 2025

Signed.....
Audit Team Leader

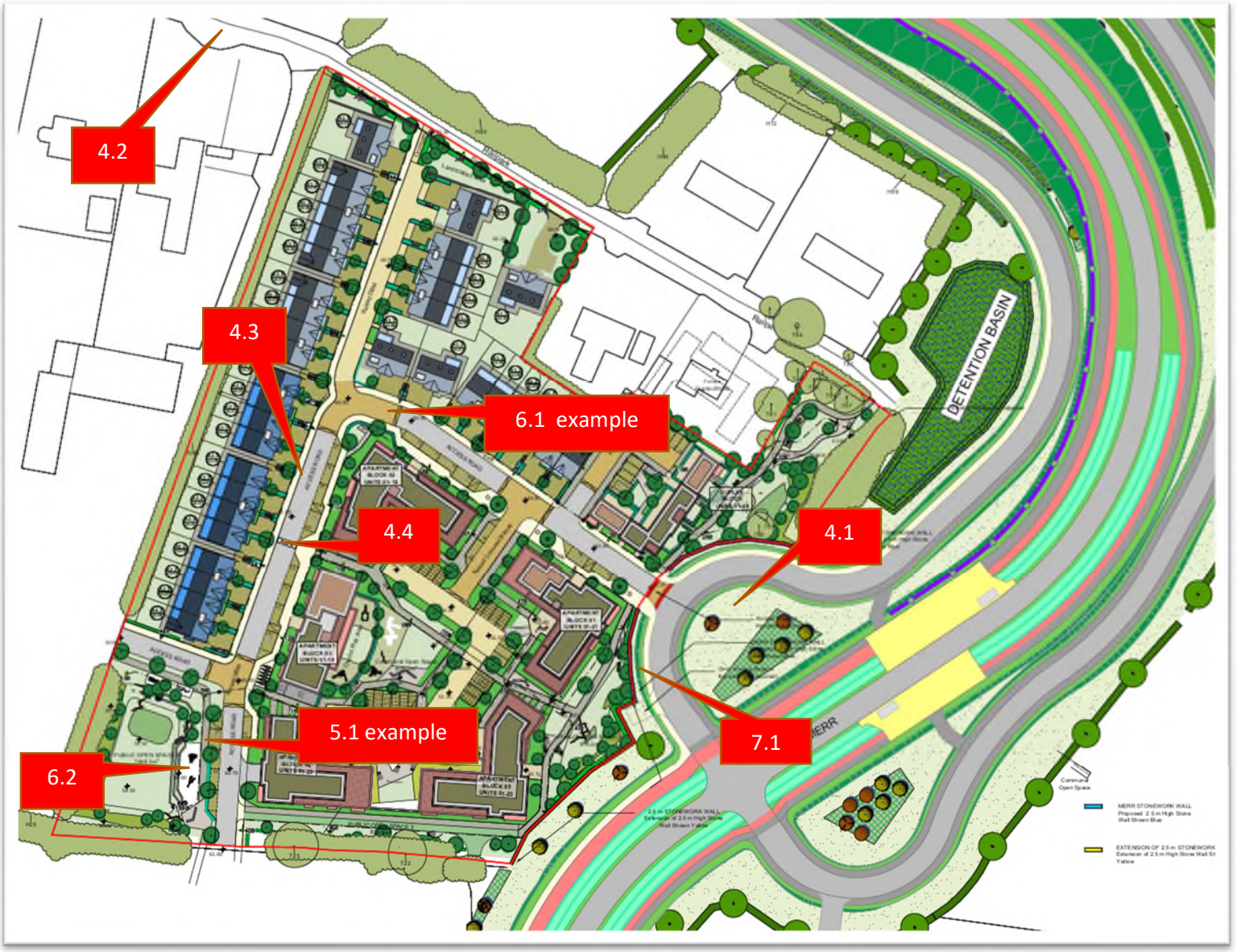
Date: 16-12-2025

Signed.....
Employer/Developer

Date 9/12/25

Appendix C

Problem Location Plan.


4.2
4.3
6.1 example
4.4
4.1
5.1 example
7.1
6.2
DETENTION BASIN

Kildare County Council LRD Opinion: Ref: 2025003.	TPS M Moran & Associates Response
1. Revised layout and design elements addressing the following issues is required: ***(g) The layout needs to be fully compliant with DMURS.***	The proposed site layout has been designed to fully comply with DMURS. As set out within Section 12.0 of the TIA, the proposed internal site layout also places a priority on sustainable forms of travel which includes provision for dedicated pedestrian routes connecting the various residential clusters with the public routes. The proposed site layout ensures a balance between the various users accessing the site from the public realm and provides a transition from this realm to promote a real sense of place within the site as set out within the objectives of DMURS.
1. Applicant requested to note a condition relation the MERR. • ***Filtered permeability link for walking and cycling the number of locations within the development:*** • ***to the northwest road of the development from the Parklands Grove Road where the connection should be accessible, with no locked gates and have public lighting. The proposed access design should include footpath and cycle path design, kerbing, tactile paving, landscaping, public lighting, gates and railing details. The design should include measures to enhance the safety of pedestrians and cyclists and to provide passive surveillance measures to discourage anti-social behaviour. Lockable gates will not be permitted and are to be excluded from the proposals.*** • ***To the adjoining development to the south of the proposed development.*** • ***From the end of the existing Parklands Grove Road to the green amenity area at the northeast corner of the development. The creation of active travel linkage is envisaged in the Kildare County Development Plan and there was a pedestrian/cyclist connection envisaged for the KDA for this area Reference Maynooth LAP Section 11.4 for your*** • ***There is a concern that the footpath and green open space to the northeast of the proposed Creche may not have adequate passive surveillance. The creation of a loop walkway is seen as having the potential to create an amenity and allow for active travel.***	This matter is fully discussed within the Furey Consulting Engineers Design Brief and within Duignan Queen Architects, Revised Site Layout Plans.
5 The Applicant is requested to submit details of the proposed vehicular access into the development where priority to be given to Vulnerable Road Users (VRUs) at the access point	This matter is fully discussed within the Furey Consulting Engineers Revised Site Layout Plans.
6 The Applicant is requested to submit a Site Layout Plan at a scale of 1:500 indicating:	

(a) Vehicular parking to be in accordance with Chapter 15 of Kildare County Development Plan 2023-2029. ***(b) Corner radio and lines of sight at junctions to be in accordance with the Design Manual for Urban Roads and Streets (DMURS) 2019.*** ***(c) Longitudinal gradients to be in accordance with the Design Manual for urban Roads and Streets (DMURS) 2019.*** ***Details on how surface-water runoff is collected, disposed of, and not discharged onto the public road network. Finished ground levels and falls to be indicated on this drawing.*** ***(e) Dished kerbs incorporating tactile paving at pedestrian crossing points within the development site.*** ***(f) Electric vehicle (EV) charge points / sockets units. The EV Charger is to be compatible with the Sustainable Energy Authority of Ireland's Triple E Register.*** ***(g) The Main Access Road (Primary Local Street) within the Development should be 6 metres wide with side roads (Secondary Local Streets and Home Zones) of 5.5m in width. 2- metre-wide footpaths and a 1-metre-wide grass verge should be provided internally for roads of the application site. Circulation aisles at parking areas to be a minimum of 6.0 metres in width. Footpaths to be a concrete finish, 2.0 metres wide with applicable kerb upstands.*** ***(h) Stop signage and road markings are to be in accordance with the Department of Transport, Tourism and Sport's Traffic Signs Manual.*** ***(i) Details of 30 km/h Slow Zones signage and their respective locations in the residential development in accordance with the Department of Transport, Tourism and Sport's traffic signs advice TSAN-2016-02.*** ***(k) 2.0-metre-wide footpaths.*** ***(l) Signage and road markings to be in accordance with the Department of Transport, Tourism and Sport (DTTAS) Traffic Signs Manual***	These matters are fully discussed within the Furey Consulting Engineers Revised Site Layout Plans.
9 The Applicant is requested to prepare a Quality Audit and look at pedestrian and cycle linkage between the development and the rest of Maynooth including Town Centre and Railway Station. The Applicant is also requested to submit stage 1 and 2 Road Safety Audit / Assessment (RSA) by an independent approved and certified auditor. The RSA is to assess: ***(a) The internal areas of the proposed residential development.*** ***(b) The interface with the existing public road / footpath network.*** ***The Applicant is requested to make the necessary changes to the design proposals following the stage 1 and 2 RSA. The Applicant is requested to note that if the application is subsequently granted, then a stage 3 audit / assessment will be required***	Bruton Consulting Engineers Ltd have undertaken the Quality Audit and Stage 1/2 Road Safety Audit of the proposed residential development. The recommendations of the Quality Audit can also be incorporated within the detailed design of the proposed residential development scheme.
10 Following changes to the carriageway alignments to introduce traffic calming in the form of horizontal deflection; the Applicant is requested to submit a critical swept path analysis on the Site using software such as Autotrack. ***Layout Plan drawings at scales of 1:250 for a fire tender and a 3 axle refuse collection vehicle 2.50 metres wide by 9.86 metres long demonstrating access and access to and from the Public Road and the manoeuvrability of these vehicles within the application site.***	This matter is fully discussed within the Furey Consulting Engineers Revised Site Layout Plans.

4. Roads/ Transport	
(g) The layout needs to be fully compliant with DMURS.	The proposed site layout has been designed to fully comply with DMURS. As set out within Section 12.0 of the TIA, the proposed internal site layout also places a priority on sustainable forms of travel which includes provision for dedicated pedestrian routes connecting the various residential clusters with the public routes. The proposed site layout ensures a balance between the various users accessing the site from the public realm and provides a transition from this realm to promote a real sense of place within the site as set out within the objectives of DMURS.
1. Applicant requested to note a condition relation the MERR. • Filtered permeability link for walking and cycling the number of locations within the development: • To the northwest road of the development from the Parklands Grove Road where the connection should be accessible, with no locked gates and have public lighting. The proposed access design should include footpath and cycle path design, kerbing, tactile paving, landscaping, public lighting, gates and railing details. The design should include measures to enhance the safety of pedestrians and cyclists and to provide passive surveillance measures to discourage anti-social behaviour. Lockable gates will not be permitted and are to be excluded from the proposals. • To the adjoining development to the south of the proposed development. • From the end of the existing Parklands Grove Road to the green amenity area at the north east corner of the development. The creation of active travel linkage is envisaged in the Kildare County Development Plan and there was a pedestrian/cyclist connection envisaged for the KDA for this area Reference Maynooth LAP Section 11.4 for your info. • There is a concern that the footpath and green open space to the north east of the proposed Creche may not have adequate passive surveillance.	There are permeability links for walking and cycling at the below locations: • To the northwest road of the development from the Parklands Grove Road. The connection has no locked gates and will be adequately lit. The link includes a cycle path to the point at which it connects to Parklands Grove Road with a pedestrian path to the northwest corner of the application site, and includes all required kerbing, tactile paving, landscaping, and public lighting. No barriers are proposed. • To the adjoining development to the south of the proposed development. As above, the connection includes all required kerbing, footpaths, tactile paving, landscaping, and public lighting. • Pedestrian connectivity from the existing Parklands Grove Road to the green amenity area at the north east corner of the development is not proposed as indicated on the Architectural and Landscape design packs. An existing hedgerow is proposed to be retained within this application however there is adequate space reserved for a future cycle and footpath to be formed along the Parklands Grove Road. The Creche has been redesigned to allow for improved passive surveillance along the open space to the north east. Future development is possible on lands not under the control of the applicant to further improve the passive surveillance of this area. The proposed site layout places a priority on sustainable forms of travel which includes provision for dedicated pedestrian and cycling routes connecting the development with the public routes. These routes can also be used by cyclists. Thus, maximising the

The creation of a loop walkway is seen as having the potential to create an amenity and allow for active travel.	connectivity between the application site and the public realm.
2. The Applicant is requested to clarify the buffer between the driveways and the vehicular carriageway on the road labelled home-zone on the north west side of the site. There is a concern regarding the intervisibility between pedestrians exiting the drivers and cars travelling along the relatively long straight stretch of Road.	The buffer created is low level planting (grass and or a flowerbed) broken by short stretches of pedestrian path which will not cause any obstruction to sightlines. The proposal is fully in compliance with DMURS.
5. The Applicant is requested to submit details of the proposed vehicular access into the development where priority to be given to Vulnerable Road Users (VRUs) at the access point.	As this land lies outside of the control of the applicant, the applicant proposes how a schematic layout of a VRU priority access can be formed during the creation of the site entrance onto the MERR spur road. This proposal is detailed on the Furey Consulting Engineers design package.
6. The Applicant is requested to submit a Site Layout Plan at a scale of 1:500 indicating: a) Vehicular parking to be in accordance with Chapter 15 of Kildare County Development Plan 2023 — 2029. b) Corner radii and lines of sight at junctions to be in accordance with the Design Manual for Urban Roads and Streets (DMURS) 2019. c) Longitudinal gradients to be in accordance with the Design Manual for urban Roads and Streets (DMURS) 2019. d) Details on how surface-water runoff is collected, disposed of, and not discharged onto the public road network. Finished ground levels and falls to be indicated on this drawing. e) Dished kerbs incorporating tactile paving at pedestrian crossing points within the development site. f) Electric vehicle (EV) charge points / sockets units. The EV Charger is to be compatible with the Sustainable Energy Authority of Ireland's Triple E Register. g) The Main Access Road (Primary Local Street) within the Development	a) It is proposed to provide driveways for 2 parking spaces adjacent to each housing unit, resulting in 72 car parking spaces. The 103 apartments would each have a dedicated single parking space with 6 visitor spaces. 8 parking spaces are proposed within the Crèche site area. The overall parking proposal is indicated on the Architectural Site Layouts. b) Corner radii ar in general kept to 3.0m on internal roads, and 6.0m for the site entrance which is fully in compliance with DMURS. A sightline of 2.4m x 42.0m is indicated on Furey Consulting Engineers design package (drawing no. 25M2-FCE-XX-XX-DR-C-1530-S4-P01 SIGHTLINE LAYOUT). Internal estate sightlines of 2.4m x 23.0m are shown for junctions within the estate. c) Longitudinal gradients are in accordance with the Design Manual for urban Roads and Streets (DMURS) with full details included in Furey Consulting Engineers design package (drawing no. 25M2-FCE-XX-XX-DR-C-4100-S4-P03 ROAD LONGITUDINAL SECTIONS). d) Details of surface water run-off provision is dealt with under separate cover. e) Dished kerbs incorporating tactile paving at pedestrian crossing points are located at key positions within the development site, and are indicated

should be 6 metres wide with side roads (Secondary Local Streets and Home Zones) of 5.5m in width. 2-metre-wide footpaths and a 1-metre-wide grass verge should be provided internally for roads of the application site. Circulation aisles at parking areas to be a minimum of 6.0 metres in width. Footpaths to be a concrete finish, 2.0 metres wide with applicable kerb upstands. h) Stop signage and road markings are to be in accordance with the Department of Transport, Tourism and Sport's Traffic Signs Manual. i) Details of 30 km/h Slow Zones signage and their respective locations in the residential development in accordance with the Department of Transport, Tourism and Sport's traffic signs advice note TSAN-2016-02. j) Surface water attenuation within the application site and surface water disposal arrangements located at public open space. This shall be in accordance with the Greater Dublin Strategic Drainage Study (GDSDS) and the recommendations pertaining to Sustainable Urban Drainage Systems (SUDs). k) 2.0-metre-wide footpaths. l) Signage and road markings to be in accordance with the Department of Transport, Tourism and Sport (DTTAS) Traffic Signs Manual.	on both the Architectural Site Layouts and Furey Consulting Engineers design package. f) Details of Electric vehicle (EV) charge points / sockets units is dealt with under separate cover. g) The Main Access Road within the Development (named the Arterial Road on Furey Consulting Engineers design package) is 6.0m wide. Side roads measure 5.5m in width generally with the exception of some roads such as the West Link Road and Apartment Street 1 which measure 6.0m in width. 2.0 metre-wide footpaths are provided throughout however a 1.0m wide grass verge is not proposed internally as the addition unnecessary separation of the buildings from the street does not accord with the provisions within DMURS where narrower streets reduce driver speed by creating a sense of enclosure, increasing perceived risk, requiring more caution at frequent junctions, and forcing drivers to slow for parked cars or oncoming vehicles. Circulation aisles at parking areas measure 6.0m in width as mentioned above. h) Stop signage and road markings provided in accordance with the Department of Transport, Tourism and Sport's Traffic Signs Manual and are included in Furey Consulting Engineers design package (drawing no. 25M2-FCE-XX-XX-DR-C-1101-S4-P05 SIGNAGE AND ROAD MARKINGS LAYOUT). i) Details of 30 km/h Slow Zones signage are also detailed in Furey Consulting Engineers design package (drawing no. 25M2-FCE-XX-XX-DR-C-1101-S4-P05 SIGNAGE AND ROAD MARKINGS LAYOUT). j) As above, details of surface water run-off provision is dealt with under separate cover. k) As mentioned previously, footpaths measure 2.0m in width. l) See response to item (h).
9. The Applicant is requested to prepare a Quality Audit and look at pedestrian and cycle linkage between the development and the rest of Maynooth	This report was prepared in response to a request from Michael Moran, TPSM Moran and Associates, for a DMURS Quality Audit including a Stage 1 Road Safety Audit for a

including Town Centre and Railway Station. The Applicant is also requested to submit a stage 1 and 2 Road Safety Audit / Assessment (RSA) by an independent approved and certified auditor. The RSA is to assess: a) The internal areas of the proposed residential development. b) The interface with the existing public road / footpath network. c) The Applicant is requested to make the necessary changes to the design proposals following the stage 1 and 2 RSA. The Applicant is requested to note that if the application is subsequently granted, then a stage 3 audit / assessment will be required.	proposed residential scheme known as Railpark West, in Maynooth, Co. Kildare on behalf of Montane Developments. The Audit Team comprised of; Team Leader: **Norman Bruton**, BE CEng FIEI, Cert Comp RSA. **TII Auditor Approval no.** NB 168446 Team Member: **Owen O'Reilly**, B.SC. Eng Dip Struct. Eng NCEA Civil Dip Civil. Eng CEng MIEI TII Auditor Approval no. OO1291756 The Audits involved the examination of drawings and other material provided and a site visit by both audit team members, together, on the 1st of December 2025. The weather at the time of the site visit was dry and the road surface was damp. **The Stage 1 Road Safety Audit** has been carried out in accordance with the requirements of TII Publication Number GE-STY-01024, dated May 2025. **The Quality Audit** has been carried out in accordance with the guidance in the Design Manual for Urban Roads and Streets (DMURS), produced by Department of Transport Tourism and Sport in March 2013 and as updated in June 2019 including Advice Notes. The Quality Audit is composed of a number of distinct audits which include an Accessibility Audit, a Walking Audit and a Cycling Audit (i.e. aspects of a Quality Audit carried out independent of the Design Team. Many issues raised in the Road Safety Audit would also be raised in the various aspects of the Quality Audit, however to avoid repetition items that are common to more than the Road Safety Audit have been included in a table at the start of Section 3.0 of this report. The scheme has been examined and this report compiled in respect of the consideration of those matters that have an adverse effect on road safety. It has not been examined or verified for compliance with any other standards or criteria. The problems identified in this report are considered to require action in order to improve the safety of the scheme for road users. The Quality Audit is included within Section 14 of the TIA.

10. Following changes to the carriageway alignments to introduce traffic calming in the form of horizontal deflection; the Applicant is requested to submit a critical swept path analysis on the Site using software such as Autotrack. Layout Plan drawings at scales of 1:250 for a fire tender and a 3 axle refuse collection vehicle 2.50 metres wide by 9.86 metres long demonstrating access and egress to and from the Public Road and the maneuverability of these vehicles within the application site.	Critical swept path analysis on the Site using Autodesk Vehicle Tracking has been carried out by Furey Consulting Engineers and is indicated on drawings no. "25M2-FCE-XX-XX-DR-C-1112-S4-P04 SWEPT PATH ASSESSMENTS - REFUSE VEHICLE" and "25M2-FCE-XX-XX-DR-C-1111-S4-P05 SWEPT PATH ASSESSMENTS - FIRE TENDER". Drawings are prepared at a scale of 1:500 at A1 which adequately demonstrates compliance with swept path movements. The vehicles assessed are a fire tender and a 3 axle refuse collection vehicle 2.50 metres wide by 9.86 metres long (modelled off a Vulture 225 refuse vehicle) and demonstrates access and egress to and from the Public Road and the manoeuvrability of these vehicles within the application site.
14. The applicants are requested to revise the car parking requirements to ensure the apartment units complies with section 4.24 of the Apartment Guidelines (peripheral location) and the level of car parking associated with creche meets the requirements set out in table 15.8 of the KCDP.	The proposed residential development of 139 units, within a site of 2.77hectares, yields a density of 50.10 dwellings per hectare. The proposed development would consist of a 139 residential unit development on land zoned for residential development off the MERR at Maynooth, County Kildare. The proposed residential development consists of 36 houses and 103 are residential apartments containing a mix of 1, 2, 3, and 4 bedrooms together with a Crèche for up to 105 children. It is proposed to provide driveways for 2 parking spaces adjacent to each housing unit, resulting in 72 car parking spaces. The 103 apartments would each have a dedicated single parking space with 6 visitor spaces. 8 parking spaces are proposed within the Crèche site area.
16. Turning bays should be provided at the end of the roads to prevent bin lorries and rigid trucks such as furniture lorries reversing past houses.	As per item 14 above, adequate turning facilities have been proposed and assessed using Autodesk Vehicle Tracking software.
17. CBR tests should be undertaken in accordance with Section 2.16 of the Department of Environment and Local Government "Recommendations for Site Development Works for Housing Areas" and as required to determine the subgrade strength under the proposed site access road. A suitable pavement design should be	CBRs have been carried out at various locations throughout the site and are included in the infrastructure report prepared by Kavanagh Burke. Road designs have been prepared by Furey Consulting Engineers for various roads within the development using the CBR results. These are indicated on drawings no. "25M2-FCE-

carried out in accordance with TII document DN-PAV-03021 considering the results.	XX-XX-DR-C-4200-S4-P02 ROAD BUILDUPS SHEET 1", "25M2-FCE-XX-XX-DR-C-4201-S4-P02 ROAD BUILDUPS SHEET 2", and "25M2-FCE-XX-XX-DR-C-4202-S4-P02 ROAD BUILDUPS SHEET 3".
18. The site access roads within the development should be finished with a surface course of Stone Mastic Asphalt, SMA 14 surf PMB 65/105-60 des 45mm thick, in compliance with clause 942 of NRA/TII specification or a similar approved surface course.	As above, Furey Consulting Engineers have prepared designs for the internal roads which include a surface course finish of 45mm Stone Mastic Asphalt, SMA 14 surf PMB 65/105-60 des 45mm thick, in compliance with clause 942and indicated on drawings no. "25M2-FCE-XX-XX-DR-C-4200-S4-P02 ROAD BUILDUPS SHEET 1", "25M2-FCE-XX-XX-DR-C-4201-S4-P02 ROAD BUILDUPS SHEET 2", and "25M2-FCE-XX-XX-DR-C-4202-S4-P02 ROAD BUILDUPS SHEET 3".
22. The applicants are required to justify the car parking provision for the apartments units as per SPPR 3 (iii) of the SRDCSGs as required under section 4.6 of the Planning Design Standards for Apartments Guidelines for Planning Authorities, 2025.	The proposed residential 103 apartments containing a mix of 1, 2, 3, and 4 bedrooms. The 103 apartments would each have a dedicated single parking space with 6 visitor spaces.
23. The level of car parking associated with creche falls short of the requirements set out in table 15.8 of the KCDP of 0.5 spaces per staff member plus 1 per 4 children. Revision to same are required.	8 parking spaces are proposed within the Crèche site area. 18 cycle parking space are also proposed within the Crèche made of 6 staff cycle spaces, 6 visitor cycle spaces, and 6 cargo spaces.
24. The applicants are required to demonstrate the bicycle parking provision for the houses and apartments units are align with the requirements for the quantity and design of bicycle parking are set out in Section 5.25 (including SPPR 4) of the SRDCSG	It is also proposed to provide bicycle parking for each residential apartment, with a total cycle parking capacity for 195 long term and 56 visitor cycle parking spaces, within the 8 secure bicycle enclosures adjacent to the apartment blocks.