# Barry's Field Development
## at Carrigaline Road, Douglas, Cork



# Traffic & Transport Assessment

January 2025

MHL & Associates Ltd.
Consulting Engineers

**Document Control Sheet**

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| | | | | | |

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# 1 NON-TECHNICAL SUMMARY

MHL & Associates Ltd (Consulting Engineers) have been appointed by Barry's Field Ltd. to prepare a Traffic & Transport Assessment (TTA) in support of a planning application for the development of their lands at Carrigaline Road, Douglas, Cork. This report represents a Summary Traffic & Transport Assessment, in advance of the final planning application.

*The client is seeking permission for the following Large-Scale Residential Development (LRD) located at Carrigaline Road and Churchyard Lane, Douglas, Cork, comprising of the construction of 124 no. residential apartments (consisting of a mix of 1, 2 and 3 bed units), 1 no. cafe unit and 2 no. office units, in a development ranging in height from 1 to 5 storeys and all associated site development works including footpaths, car and bicycle parking, drainage, bicycle and bin stores, lighting, fencing, landscaping/amenity areas, ESB substation/switchroom and plant room. Site development works include 2 no. new uncontrolled pedestrian crossings and footpath improvements on Churchyard Lane which requires the removal of 6 no. existing on-street car parking spaces. The proposed development works include a connection and construction of a new storm water and foul sewer along Carrigaline Road. Access to the site will be via a new vehicle access point and a new pedestrian connection from Carrigaline Road and 2 new pedestrian connections onto Churchyard Lane. The new vehicular access requires the removal of 4 no. existing car parking spaces.*

This TTA will assess how the proposed development will impact the surrounding transport network. It will consider appropriate access arrangements and the transport choices available to future users of the application site and how the existing/proposed transport infrastructure surrounding the site will influence that choice. The impact of traffic demand generated by the proposals will be considered and quantified.

The key junctions in the vicinity of the proposed development are shown in Figure 2.1 and are as follows:

- Junction 1. Priority T-Junction of East Douglas Street/Church Street
- Junction 2: Roundabout Junction of East Douglas Street/R610 Douglas Relief Road/R610 Rochestown Road/L2470 Maryborough Hill/R609 Carrigaline Road ('The Fingerpost Roundabout').
- Junction 3. Signalised slip junction of R855 Carrigaline Rd/Carrigaline Rd.
- Junction 4. Priority Junction of East Douglas Street/Carrigaline Road
- Junction 5. Development Access Junction

The proposed scheme is to incorporate a limited number of vehicular parking spaces, reflective of local and national guidance with respect to Sustainable Urban Housing. A total of 26no. parking spaces are to be provided. Significant cycle parking is proposed (270no. spaces for residents with an additional 4no. commercial spaces), and a variety of measures aimed at improved connectivity to sustainable travel modes are proposed. A Mobility Management Plan is being prepared as part of the application, setting out particular sustainable travel proposals and opportunities for the site.

The scheme presents enhanced pedestrian connectivity for the wider village with access links from the development to a variety of local roads and travel nodes. The site will provide pedestrian connectivity between Carrigaline Road and Churchyard Lane.

Vehicular access for the residents and visitors is to be provided through the proposed entrance on the Carrigaline Road (resulting in the loss of 4no. on-street parking spaces). No vehicular access is proposed onto Churchyard Lane. The applicant proposes to improve the existing pedestrian infrastructure on Churchyard Lane in the form of 2no. raised pedestrian crossings from the development onto the existing footpath. This will involve the removal of a small number of parking on Churchyard Lane so that these crossings can be incorporated.

The methodology broadly follows the May 2014, NRA Transport Assessment Guidelines format. The scope of this study has been issued to Cork City Council's Traffic & Transportation Department for approval. Based on these requirements, Technical Notes will be setting out the key parameters relating to the traffic modelling, trip generation, modal shift targets, trip distribution, assessment years, traffic count data and the presentation of results.

It is proposed that the TTA should encompass traffic commentary on 5 No. junctions (J1 to J5). The junctions will be considered for the "without development Scenario" and "With development Scenario".

This report describes the existing traffic conditions, estimates the future traffic generated by the proposed development and assesses the impact of this generated traffic on the surrounding road network.

Traffic counts conducted in May 2023 were used to assess the surrounding road network. These traffic counts allow for the assessment of existing traffic conditions with the application of agreed growth factors and provide a basis for assessing the impact of the proposed development. An additional traffic count was conducted by MHL & Associates on 13/01/2025 at Junction 4 in order to assess the impact of the proposed development on Junction 4 and the Development Junction (J5).

The trips generated from the proposed development were taken as a worst-case scenario, whereby all parking spaces vacate and refill within the morning and evening peak hours. This would suggest a total of 52no. trips are generated for both AM and PM peaks.

The TTI Traffic and Transport Assessment Guidelines stipulate thresholds for transport assessments, warranted only when the "Traffic to and from the development" exceed 5% of the traffic flow on the adjoining road where congestion exists, or the location is sensitive. Proposed developments, with generated development traffic flow beneath this 5% threshold, would therefore not require a Traffic and Transportation Assessment to be carried out as its impact to the adjoining road network would be considered very minimal.

The additional % traffic flows arising from the proposed development, for which minimal vehicular parking is to be provided will fall below the 5% threshold required for traffic assessments to be deemed necessary at the existing junctions. Due to J5 (Development Access Junction) being located on a one-way road with only left turns possible, it was deemed unnecessary for traffic modelling to be carried out. The junctions listed would not require to be analysed as the development impact on them is below the requirement threshold.

It is stated that "In locations that experience particularly heavy congestion and when traffic flows from a proposed development are less than 5% of the traffic flows on the adjoining

road, a Transport Assessment may still be required". It is on this basis that this TTA has been prepared.

The development of such a residential apartment development, with limited vehicle parking is reflective of the accessible urban location, high-quality public transport available to future residents and the quantum and quality of cycle parking provisions. This proposal is consistent with the Design Standards for New Apartments - Guidelines for Planning Authorities (March 2018).

## 2 EXISTING CONDITIONS

The development site is located approximately 3.5km south of Cork City in the centre of Douglas Village, along the Carrigaline Road, as shown in Figures 2.1 and 2.2 below. The site's location in context of adjoining road junctions analysed in this report J1-J3. The junction assessed as part of this Assessment were arrived at through pre-planning consultation with Cork City Council's Road and Transport Department. Preliminary analysis was also carried out at adjoining junctions. Detailed traffic modelling of all the referenced junctions will be included in the final application Traffic & Transport Assessment.

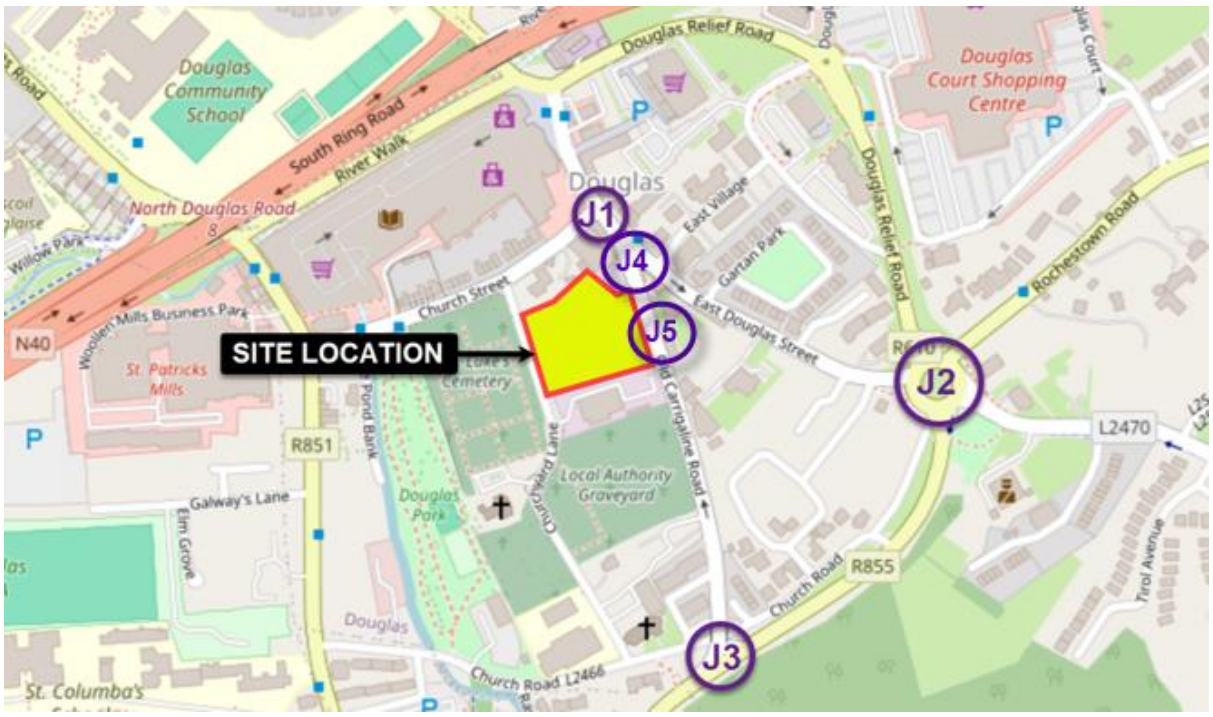



**Figure 2.1 Site location relative to Douglas Village. Analysed junctions noted.**

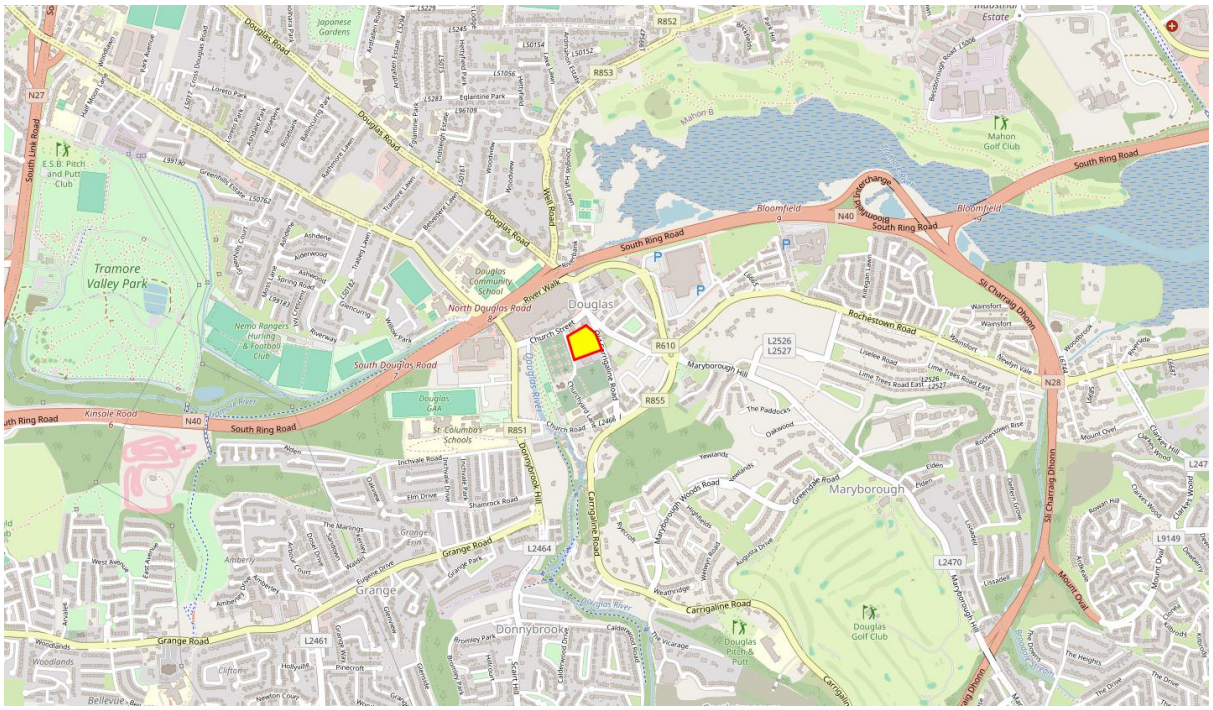



**Figure 2.2 Site Location showing site relative to Douglas area & Cork City Centre**

## 3 PROPOSED DEVELOPMENT

*The client is seeking permission for the following Large-Scale Residential Development (LRD) located at Carrigaline Road and Churchyard Lane, Douglas, Cork, comprising of the construction of 124 no. residential apartments (consisting of a mix of 1, 2 and 3 bed units), 1 no. cafe unit and 2 no. office units, in a development ranging in height from 1 to 5 storeys and all associated site development works including footpaths, car and bicycle parking, drainage, bicycle and bin stores, lighting, fencing, landscaping/amenity areas, ESB substation/switchroom and plant room. Site development works include 2 no. new uncontrolled pedestrian crossings and footpath improvements on Churchyard Lane which requires the removal of 6 no. existing on-street car parking spaces. The proposed development works include a connection and construction of a new storm water and foul sewer along Carrigaline Road. Access to the site will be via a new vehicle access point and a new pedestrian connection from Carrigaline Road and 2 new pedestrian connections onto Churchyard Lane. The new vehicular access requires the removal of 4 no. existing car parking spaces.*

The layout of the applicant's proposed development site extents (red boundary) is shown below:

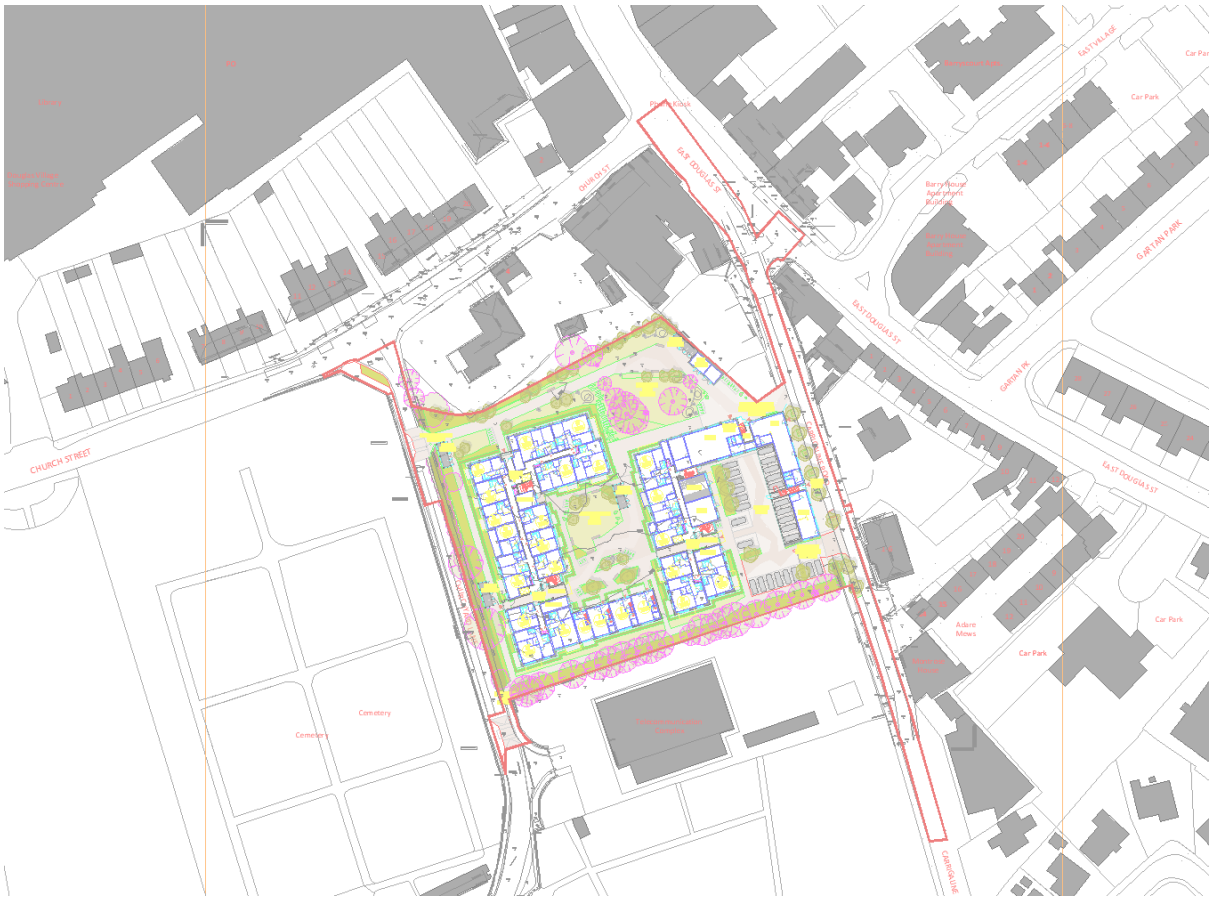



**Figure 3.1 Site Layout Plan showing the proposed site layout**

### 3.1 Urban Realm Proposals

The applicant proposes to improve the existing pedestrian infrastructure on Churchyard Lane in the form of 2no. uncontrolled raised pedestrian crossings from the development onto the existing footpath. This will involve the removal of a small number of parking on Churchyard Lane so that these crossings can be incorporated.

## 4 TRIP GENERATION

Trip Generation is the means by which the traffic "generated" by a proposed new development is estimated. In the interest of robustness, this analysis assumes a 100% turnover on the available parking provided (26 inbound and 26 outbound). It was therefore assumed that, in the **worst case scenario**, during peak hours for a working day at the development, a maximum of 52no. vehicles will enter and 52no. vehicles will exit i.e. giving a peak turnover of **52 inbound** and **52 outbound** vehicles per peak hour.

## 5 TRAFFIC FORECASTING

The base year is the present year of 2023, for which traffic counts were carried out. The Opening Year, Opening Year +5 and Opening Year + 15, in keeping with the Guidelines for Traffic and Transportation Assessments as published by the NRA. The traffic has been factored appropriately from the Base Year for all future scenarios.

The Transport Infrastructure Ireland "Project Appraisal Guidelines for National Roads" was used to calculate growth factors for the road network traffic. Table 5.1 below shows the calculated growth factors:

| | | | Cars/LGV | HGV | Combined |
|---|---|---|---|---|---|
| Count % | | | 95% | 5% | |
| **2023** | **to** | **2027** | 1.069 | 1.123 | **1.072** |
| **2023** | **to** | **2032** | 1.126 | 1.255 | **1.133** |
| **2023** | **to** | **2042** | 1.150 | 1.421 | **1.164** |

**NRA Project Appraisal Guidelines- 5.5 forecasting**

*Appendix 3 - Guidance on traffic modelling*

**Table 5.1: Future Growth Rates**

Additional traffic counts were undertaken in January 2025 so that Junction 4 and Junction 5 could be assessed. These were growthed

The effects of traffic growth on the existing network plus the additional traffic generated by the proposed development, have been compiled and are shown in junction diagrams of the affected junctions, as outlined in Figure 9.1. Traffic models for all future design years will be developed in the final TTA for the "Do Nothing" and "With Development" scenarios.

## 6 MODAL SPLIT

In predicting the level of traffic that will be generated by the proposed development, the mode of transport (modal choice) and quantity of traffic generated (trip attraction) must be considered. This is a mixed-use development, and it is therefore likely that a significant level of multi-use trips will be generated between the apartment and commercial elements of the development. It is also likely that convenience land uses such as the café may also attract considerable levels of pass-by traffic, a further reduction in trip generation. The office use for the development is to be a Work From Home proposal which will limit the private vehicle generation from the site as residents will be able to make use of the provided office spaces.
The lack of parking provision will ensure that sustainable travel modes will be employed by residents and visitors to the site. The trip generation developed for the purposes of this analysis is based on the assumption that a proportion of visitors and residents will travel to and from the site by taxi, car share mode or similar means. This assumption represents a conservative approach to the traffic analysis and aligns with the modal profile generated by TRICS, reflecting a "worst case" traffic scenario.

Traffic reductions resultant from the outlined modal shift have not been assigned to estimated future year traffic flows for this study. Any modal shift proposal or trip generation reductions will be agreed with Cork City Council.

With respect to expected future Modal Shift Targets the DLUTS study sets out ambitions for the Douglas area as follows:

"DLUTS has been prepared in the context of national policies, strategies and guidelines, in particular the Department of Transport Tourism and Sport's Planning Guidelines for Spatial Planning and National Roads 2012 and the Department of Transport, Tourism and Sport's

Smarter Travel: A Sustainable Transport Future, A New Policy for Ireland 2009-2020. One of the key aims for DLUTS is to secure more compact development that reduces overall demand for transport and encourages modal shift towards sustainable travel modes (e.g. walking, cycling and public transport), whilst also ensuring the strategic traffic function of national roads is maintained."

A key target of the referenced Smarter Travel document is outlined below:

"*Car drivers will be accommodated on other modes such as walking, cycling, public transport and car sharing (to the extent that commuting by these modes will rise to 55% by 2020) or through other measures such as e-working*".

The County Development Plan (Section 10.4) states that:
"*This plan acknowledges that in the north and south 'environs' of Cork City there already exists a relatively high standard of public transport with many services operating on 15min all-day frequency. In Douglas, the Douglas Land Use & Transportation Study has identified an extensive programme of walking and cycling infrastructure improvements with a view to making walking and cycling the 'mode of choice' for many journeys between the adjoining residential areas and the shops, schools and workplaces in the village centre.*
*The implementation of this programme is currently being funded by the National Transport Authority and to support this approach, this plan proposes to limit the provision of car parking for many forms of development in these locations, reducing costs for developers who choose to locate in an area with good public transport and encouraging a gradual shift towards walking, cycling and public transport for many shopping and work/school related journeys.*
*There is potential to follow this approach in some other urban centres close to Cork City in the County Metropolitan Cork Strategic Planning Area.*"

DLUTS outlines that "there is considerable demand for parking within the DLUTS Area. Both the Douglas Court Shopping Centre and Douglas Village Shopping Centre provide large amounts of off-street car parking. Parking in the village centre is mostly on-street, with large amounts of this being taken up by medium and long stay parking. This suggests that the on-street parking in the village centre is being used by people working in the area and not by passing trade. Parking demand measures, including parking charges, have (*in 2012*) recently been introduced in the village centre in order to manage the demand in the area." The current pay parking arrangement in Douglas village controls parking in the village and has served to reduce on-street long stay parking. The "DLUTS Integrated Strategy" outlines how the DLUTS plan will support such a development:




**Figure 6.1 DLUTS Integrated Strategy**

The ambitions set out in the DLUTS study in relation to Transport Principle, Urban Design Principles and Land Use Principle align with the proposals presented in this application.

Transport Principles: the subject development will promote sustainable travel modes, improve circulation and connectivity within Douglas Village.

Urban Design Principles: the proposed development will present a safe comfortable urban environment, enrich the urban form, improve connections for movements, work with the landscape, promote sustainable lifestyle by providing town centre residential units close to employment hubs, provide high quality public realm space, provide a highly efficient use of land in the town centre.

Land Use Principles: the development is to be mixed use and will promote sustainable lifestyles by providing residential units close to employment locations, located in the town centre and not on the periphery, improve available recreation and open space.

# 7 TRIP DISTRIBUTION

The current distribution of traffic on the road network was used to determine directional split to and from the proposed development. Baseline traffic splits were used at Junction 1 and Junction 2 while expected traffic flows to local amenities and strategic road networks were used to determine the directional splits at Junction 3 and for traffic exiting the development. This peak hour directional split pattern is assumed to remain constant with the passage of time. The associated traffic distribution for Am and PM peak hours are shown in the following figures.

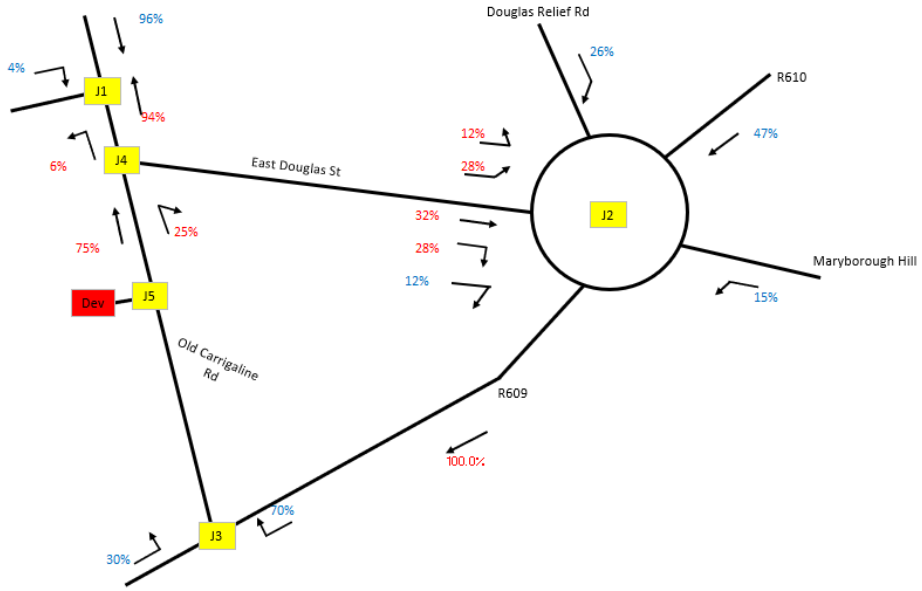



**Figure 7.1 AM Peak Development Traffic Distribution**

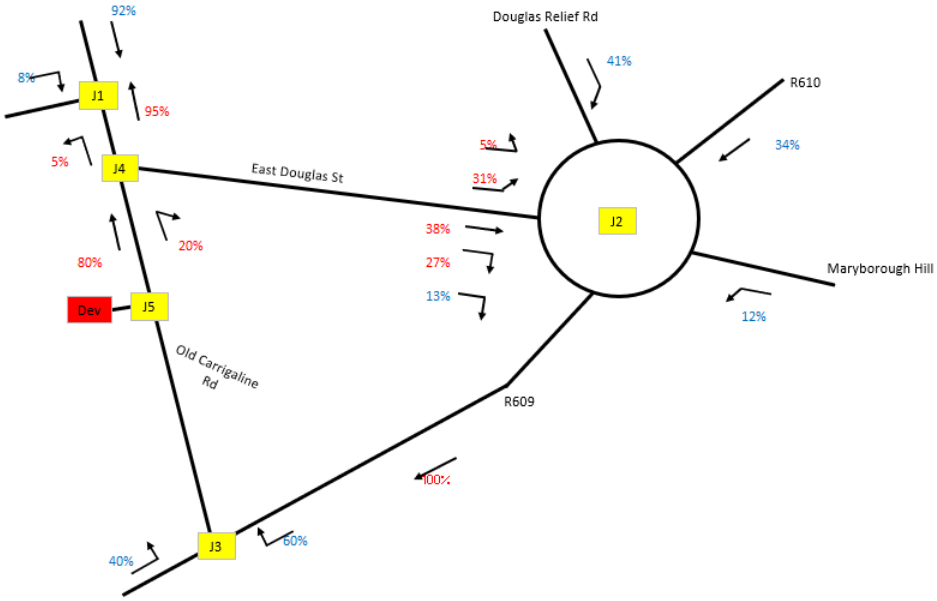



**Figure 7.2 PM Peak Development Traffic Distribution**

# 8 Traffic Volumes

Traffic counts taken at each of the assessed junctions were used as a basis of the analysis, producing morning and evening O/D matrices. The traffic flows through each of the junctions are shown below in the following figures.

The traffic counts conducted on Junction 3 (R609 Carrigaline Rd/ Carrigaline Rd) were two-way traffic along the R609 and so the current year scenario shows no vehicles along the Carrigaline Rd.




**Figure 8.1 Junction 1 Movements**

| AM PEAK HOUR TRAFFIC FLOWS | | | | | | | | | PM PEAK HOUR TRAFFIC FLOWS | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Movement | | | | | | | | Movement | | | | | |
| | | | 1 | 2 | 3 | 4 | 5 | 6 | | | 1 | 2 | 3 | 4 | 5 | 6 |
| SITE J1 | | Base Year | | | | | | | | Base Year | | | | | | |
| | | Measured Flows | 511 | 31 | 17 | 11 | 35 | 441 | | Measured Flows | 457 | 24 | 45 | 36 | 30 | 534 |
| | | Development Traffic | 18 | 1 | 0 | 0 | 0 | 2 | | Development Traffic | 19 | 1 | 0 | 0 | 0 | 2 |
| | 2027 | Opening Year | | | | | | | 2027 | Opening Year | | | | | | |
| | | Do Nothing | 548 | 33 | 18 | 12 | 38 | 473 | | Do Nothing | 490 | 26 | 48 | 39 | 32 | 572 |
| | | With Development | 566 | 34 | 18 | 12 | 38 | 475 | | With Development | 508 | 27 | 48 | 39 | 32 | 574 |
| | 2032 | Opening Year +5 | | | | | | | 2032 | Opening Year +5 | | | | | | |
| | | Do Nothing | 579 | 35 | 19 | 12 | 40 | 500 | | Do Nothing | 518 | 27 | 51 | 41 | 34 | 605 |
| | | With Development | 597 | 36 | 19 | 12 | 40 | 502 | | With Development | 536 | 28 | 51 | 41 | 34 | 607 |
| | 2042 | Opening Year +15 | | | | | | | 2042 | Opening Year +15 | | | | | | |
| | | Do Nothing | 595 | 36 | 20 | 13 | 41 | 513 | | Do Nothing | 532 | 28 | 52 | 42 | 35 | 621 |
| | | With Development | 613 | 37 | 20 | 13 | 41 | 516 | | With Development | 550 | 29 | 53 | 42 | 35 | 623 |

**Figure 8.2 Junction 1 Turning Counts**




**Figure 8.3 Junction 2 Movements**

| AM PEAK HOUR TRAFFIC FLOWS | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Movement | | | | | | | | | | | | | | |
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| SITE J2 | 2023 | Base Year | | | | | | | | | | | | | | | | |
| | | Measured Flows | 115 | 237 | 197 | 383 | 204 | 9 | 18 | 345 | 66 | 55 | 165 | 282 | 52 | 58 | 51 | 22 |
| | | Development Traffic | 7 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 4 | 2 | 2 | 1 |
| | | | | | | | | | | | | | | | | | | |
| | 2027 | Opening Year | | | | | | | | | | | | | | | | |
| | | Do Nothing | 123 | 254 | 211 | 411 | 219 | 10 | 19 | 370 | 71 | 59 | 177 | 302 | 56 | 62 | 55 | 24 |
| | | With Development | 131 | 254 | 211 | 411 | 225 | 10 | 19 | 370 | 73 | 59 | 177 | 302 | 60 | 64 | 56 | 24 |
| | 2032 | Opening Year +5 | | | | | | | | | | | | | | | | |
| | | Do Nothing | 130 | 268 | 223 | 434 | 231 | 10 | 20 | 391 | 75 | 62 | 187 | 319 | 59 | 66 | 58 | 25 |
| | | With Development | 138 | 268 | 223 | 434 | 237 | 10 | 20 | 391 | 77 | 62 | 187 | 319 | 63 | 68 | 60 | 26 |
| | 2042 | Opening Year +15 | | | | | | | | | | | | | | | | |
| | | Do Nothing | 134 | 276 | 229 | 446 | 237 | 10 | 21 | 401 | 77 | 64 | 192 | 328 | 61 | 67 | 59 | 26 |
| | | With Development | 141 | 276 | 229 | 446 | 244 | 10 | 21 | 401 | 79 | 64 | 192 | 328 | 65 | 70 | 61 | 26 |

| PM PEAK HOUR TRAFFIC FLOWS | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Movement | | | | | | | | | | | | | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | Base Year | | | | | | | | | | | | | | | | |
| | Measured Flows | 328 | 261 | 364 | 320 | 271 | 6 | 20 | 190 | 95 | 44 | 190 | 174 | 105 | 150 | 123 | 18 |
| | Development Traffic | 6 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 3 | 2 | 2 | 0 |
| | | | | | | | | | | | | | | | | | |
| 2027 | Opening Year | | | | | | | | | | | | | | | | |
| | Do Nothing | 352 | 280 | 390 | 343 | 291 | 6 | 21 | 204 | 102 | 47 | 204 | 187 | 113 | 161 | 132 | 19 |
| | With Development | 358 | 280 | 390 | 343 | 296 | 6 | 21 | 204 | 104 | 47 | 204 | 187 | 116 | 163 | 133 | 20 |
| 2032 | Opening Year +5 | | | | | | | | | | | | | | | | |
| | Do Nothing | 372 | 296 | 412 | 362 | 307 | 7 | 23 | 215 | 108 | 50 | 215 | 197 | 119 | 170 | 139 | 20 |
| | With Development | 378 | 296 | 412 | 362 | 312 | 7 | 23 | 215 | 109 | 50 | 215 | 197 | 122 | 172 | 141 | 21 |
| 2042 | Opening Year +15 | | | | | | | | | | | | | | | | |
| | Do Nothing | 382 | 304 | 424 | 372 | 315 | 7 | 23 | 221 | 111 | 51 | 221 | 202 | 122 | 175 | 143 | 21 |
| | With Development | 388 | 304 | 424 | 372 | 321 | 7 | 23 | 221 | 112 | 51 | 221 | 202 | 126 | 177 | 145 | 21 |

**Figure 8.4 Junction 2 Turning Counts**




**Figure 8.5 Junction 3 Movements**

| AM PEAK HOUR TRAFFIC FLOWS | | | | | | | | | PM PEAK HOUR TRAFFIC FLOWS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Movement | | | | | | | | | Movement | | | | | |
| | | | 1 | 2 | 3 | 4 | | | | | | 1 | 2 | 3 | 4 | | |
| SITE J3 | Base Year | | | | | | | | Base Year | | | | | | | | |
| | | Measured Flows | 413 | 0 | 0 | 226 | | | | Measured Flows | 260 | 0 | 0 | 331 | | |
| | | Development Traffic | 0 | 8 | 18 | 2 | | | | Development Traffic | 0 | 10 | 16 | 1 | | |
| | 2027 | Opening Year | | | | | | | 2027 | Opening Year | | | | | | |
| | | Do Nothing | 443 | 0 | 0 | 242 | | | | Do Nothing | 279 | 0 | 0 | 355 | | |
| | | With Development | 443 | 8 | 18 | 244 | | | | With Development | 279 | 10 | 16 | 356 | | |
| | 2032 | Opening Year +5 | | | | | | | 2032 | Opening Year +5 | | | | | | |
| | | Do Nothing | 468 | 0 | 0 | 256 | | | | Do Nothing | 295 | 0 | 0 | 375 | | |
| | | With Development | 468 | 8 | 18 | 258 | | | | With Development | 295 | 10 | 16 | 376 | | |
| | 2042 | Opening Year +15 | | | | | | | 2042 | Opening Year +15 | | | | | | |
| | | Do Nothing | 481 | 0 | 0 | 263 | | | | Do Nothing | 303 | 0 | 0 | 385 | | |
| | | With Development | 481 | 8 | 18 | 265 | | | | With Development | 303 | 10 | 16 | 387 | | |

**Figure 8.6 Junction 3 Turning Counts**




**Figure 8.7 Junction 4 Movements**

| AM PEAK HOUR TRAFFIC FLOWS | | | | | | | | PM PEAK HOUR TRAFFIC FLOWS | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Movement | | | | | | | Movement | | | | | |
| | | | 1 | 2 | 3 | 4 | | | | 1 | 2 | 3 | 4 | | |
| SITE J4 | Base Year | | | | | | | Base Year | | | | | | | |
| | | Measured Flows | 542 | 54 | 0 | 458 | | | Measured Flows | 481 | 46 | 0 | 579 | | |
| | | Development Traffic | 20 | 6 | 0 | 2 | | | Development Traffic | 21 | 5 | 0 | 2 | | |
| | 2027 | Opening Year | | | | | | 2027 | Opening Year | | | | | | |
| | | Do Nothing | 581 | 58 | 0 | 491 | | | Do Nothing | 516 | 49 | 0 | 621 | | |
| | | With Development | 601 | 64 | 0 | 493 | | | With Development | 536 | 55 | 0 | 623 | | |
| | 2032 | Opening Year +5 | | | | | | 2032 | Opening Year +5 | | | | | | |
| | | Do Nothing | 614 | 61 | 0 | 519 | | | Do Nothing | 545 | 52 | 0 | 656 | | |
| | | With Development | 633 | 68 | 0 | 521 | | | With Development | 566 | 57 | 0 | 658 | | |
| | 2042 | Opening Year +15 | | | | | | 2042 | Opening Year +15 | | | | | | |
| | | Do Nothing | 631 | 63 | 0 | 533 | | | Do Nothing | 560 | 54 | 0 | 674 | | |
| | | With Development | 650 | 69 | 0 | 535 | | | With Development | 581 | 59 | 0 | 676 | | |

**Figure 8.8 Junction 4 Turning Counts**




**Figure 8.9 Junction 5 Movements**

| SITE J5 - Development Junction | AM PEAK HOUR TRAFFIC FLOWS | | | | | | | | PM PEAK HOUR TRAFFIC FLOWS | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Movement | | | | | | | | Movement | | | | | |
| | | | 1 | 2 | 3 | | | | | | 1 | 2 | 3 | | | |
| | Base Year | | | | | | | | Base Year | | | | | | | |
| | | Measured Flows | 462 | 0 | 0 | | | | | Measured Flows | 395 | 0 | 0 | | | |
| | | Development Traffic | 0 | 26 | 26 | | | | | Development Traffic | 0 | 26 | 26 | | | |
| | 2027 | Opening Year | | | | | | | 2027 | Opening Year | | | | | | |
| | | Do Nothing | 495 | 0 | 0 | | | | | Do Nothing | 423 | 0 | 0 | | | |
| | | With Development | 495 | 26 | 26 | | | | | With Development | 423 | 26 | 26 | | | |
| | 2032 | Opening Year +5 | | | | | | | 2032 | Opening Year +5 | | | | | | |
| | | Do Nothing | 523 | 0 | 0 | | | | | Do Nothing | 447 | 0 | 0 | | | |
| | | With Development | 523 | 26 | 26 | | | | | With Development | 447 | 26 | 26 | | | |
| | 2042 | Opening Year +15 | | | | | | | 2042 | Opening Year +15 | | | | | | |
| | | Do Nothing | 538 | 0 | 0 | | | | | Do Nothing | 460 | 0 | 0 | | | |
| | | With Development | 538 | 26 | 26 | | | | | With Development | 460 | 26 | 26 | | | |

**Figure 8.10 Junction 5 Turning Counts**

# 9 TRAFFIC ASSESSMENT

## 9.1 FUTURE YEAR TRAFFIC PATTERNS

The impact of the estimated future year development traffic on the existing network traffic flows are set out in the following for the peak hours. These flows are based on the traffic movements identified in Section 8.

The increase in traffic at each of the junction (Junction J1 - Junction J5) for the peak hours is outlined in Figure 9.1 below:

| JUNCTION NO. | Development Flows/Junction Flow | |
|---|---|---|
| | AM | PM |
| **J1** | 22 / 1121 | 22/1207 |
| | **2.0%** | **1.81%** |
| **J2** | 25 / 2422 | 21 / 2850 |
| | **1.02%** | **0.73%** |
| **J3** | **28 / 685** | **27 / 634** |
| | **4.07%** | **4.3%** |
| **J4** | 28 / 1130 | 28 / 1186 |
| | **2.49%** | **2.37%** |
| **J5** | **52 / 495** | **52 / 423** |
| | **10.5%** | **12.28%** |

**Figure 9.1: Percentage traffic flow increase at individual junction resultant from development traffic**

As might be expected, the proposed development results in a very minor percentage increase at junctions in its immediate vicinity. The highest percentage increase, at junction J5 – Development Access Junction. It can be seen that the development will result in a 12.28% increase at this junction, however, due to the Carrigaline Road being one-way no capacity issues are expected at the proposed junction. The development will result in less than a 5% increase at all existing junctions.

**This percentage impact on these junctions points to them being sub-threshold for analysis in a Traffic and Transport Assessment, as per the NRA Traffic & Transport Assessment Guidelines. Full analysis has not been carried out on all junctions as a result.**

The Cork City Council document Douglas Land Use Transportation Strategy outlines an overall transportation plan for the village of Douglas. The plan was published following final Council approval in July 2013. The strategy considers on-going and likely future traffic & transportation issues in the area. The plan makes specific reference to necessary junction and road network improvement works as well as outlining recommended development quanta. Of particular note in the DLUTS document are the Transport Recommendations:

- 23 no. key junctions to be upgraded to provide improved bus priority, pedestrian, cycle, and traffic movements
- 30 kph speed limit in village centre to improve safety and encourage a village atmosphere
- East West Link Bridge linking Donnybrook Hill to the Carrigaline road to remove through traffic from village centre

- 36 km of walking and cycling routes including Mangala, Tramore Valley Park and City connectivity
- Public Transport priority on East Douglas St with elimination of through traffic
- One-way east bound on Church Road so as to improve road safety in the area
- Key junctions incorporated into City Traffic Dept's SCOOT system to improve traffic efficiency
- Schools Travel Planning with support from Green Flag for Schools programme

These improvements will all serve to improve sustainable travel connectivity for Douglas and for the subject site. Improvements to pedestrian and cycling routes throughout the Douglas area is central to the plan. The removal of traffic on East Douglas Street and implementation of public transport priority will improve connectivity for residents of the applicant site and aligns with the proposal to carry out urban renewal works along the front to of the site. See the image below from DLUTS showing the intended urban renewal of East Douglas Street in the vicinity of the site.

DLUTS describes the East Douglas area as follows:
"East Village Area is in the heart of the town centre and has a mix of uses comprising the 'East Village Street' together with the cinema site and surrounding retail area south of the filling station. There is poor use of land in the northern part of the cinema site, which is a gateway into Douglas at the filling station. The area is characterised by barriers to permeability through the area, poor junction design, poor pedestrian and cyclist connectivity, high vacancy levels and high noise levels from the N40."

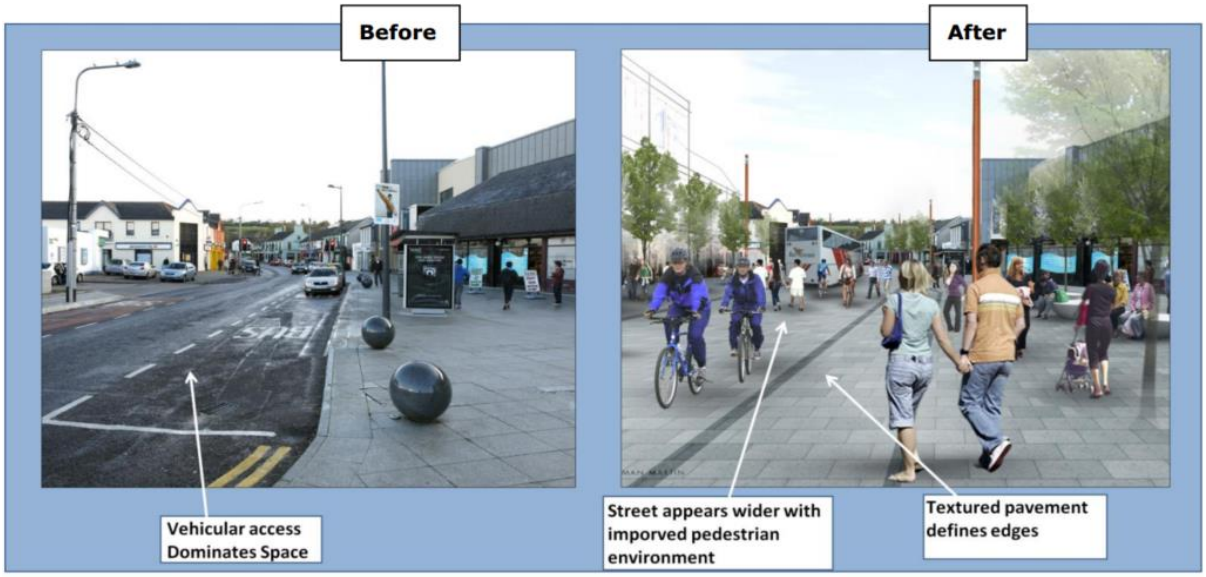



**Figure 9.2: Imagery of East Douglas Street shared space proposal**
**(Ref: Figure 10.1, Douglas Land Use & Transport Strategy (DLUTS) Final Report)**

A number of traffic management improvements, junction improvements and sustainable travel projects presented in DMURS have been carried out since its publication. Implementation of a number of projects are also currently on-going. The delivery of the Public Realm Improvements are identified to be delivered by 2032.



**Figure 9.3: Imagery of East Douglas Street shared space proposal**
**(Ref: Figure 10.16, Douglas Land Use & Transport Strategy (DLUTS) Final Report)**

## 10 CUMULATIVE IMPACT

The cumulative impact of the scheme on the surrounding roads network for future years is determined by modelling future scenarios on future projected traffic data and expected development traffic.

The impact of the proposed development on the nearby junctions will be minimal as has been shown in the analysis. Junction capacity is increased, with the inclusion of the proposed development, by less than 5% at all junctions.

Traffic increase on the existing junctions (J1, J2, J3 and J4) are increased by less than 5% by the inclusion of the development traffic. The proposed development will increase traffic volumes at each of the nearby assessed junctions J1 by approximately 2%, at junction J2 by 1.02%, at Junction J3 by 4.3% and at Junction J4 by 2.49% for the estimated current year traffic flows.

The proposed development Junction J5, will experience a maximum traffic flow percentage increase of 12.28%. However, as Carrigaline Road is a one-way carriageway with left turns only permitted to/from the development there is no capacity issues expected on the proposed junction.

Therefore, the overall analysis shows minimal impact from the proposed development vehicles flows on the surrounding road network.

## 11 ROAD SAFETY

A detailed Stage 1/2 road safety Audit has been prepared to supplement the planning application.

## 12 ENVIRONMENTAL IMPACT

The location and nature of the application will ensure that commuting modes will be particularly sustainable in terms of lower traffic generation, reducing private car usage and CO2 production, helping to mitigate the environmental impact of the proposed development. The proximity of the site to the wider village will afford future residents ease of shopping, promoting a modal shift to walking for groceries, and local services. The proposed layout will provide excellent pedestrian and cycle connectivity to the village and local services for both residents and local commuters.

## 13 INTERNAL LAYOUT/ PARKING

The internal site layout is shown below in Figure 13.1. A full drawing pack of the site has been submitted as part of this application.

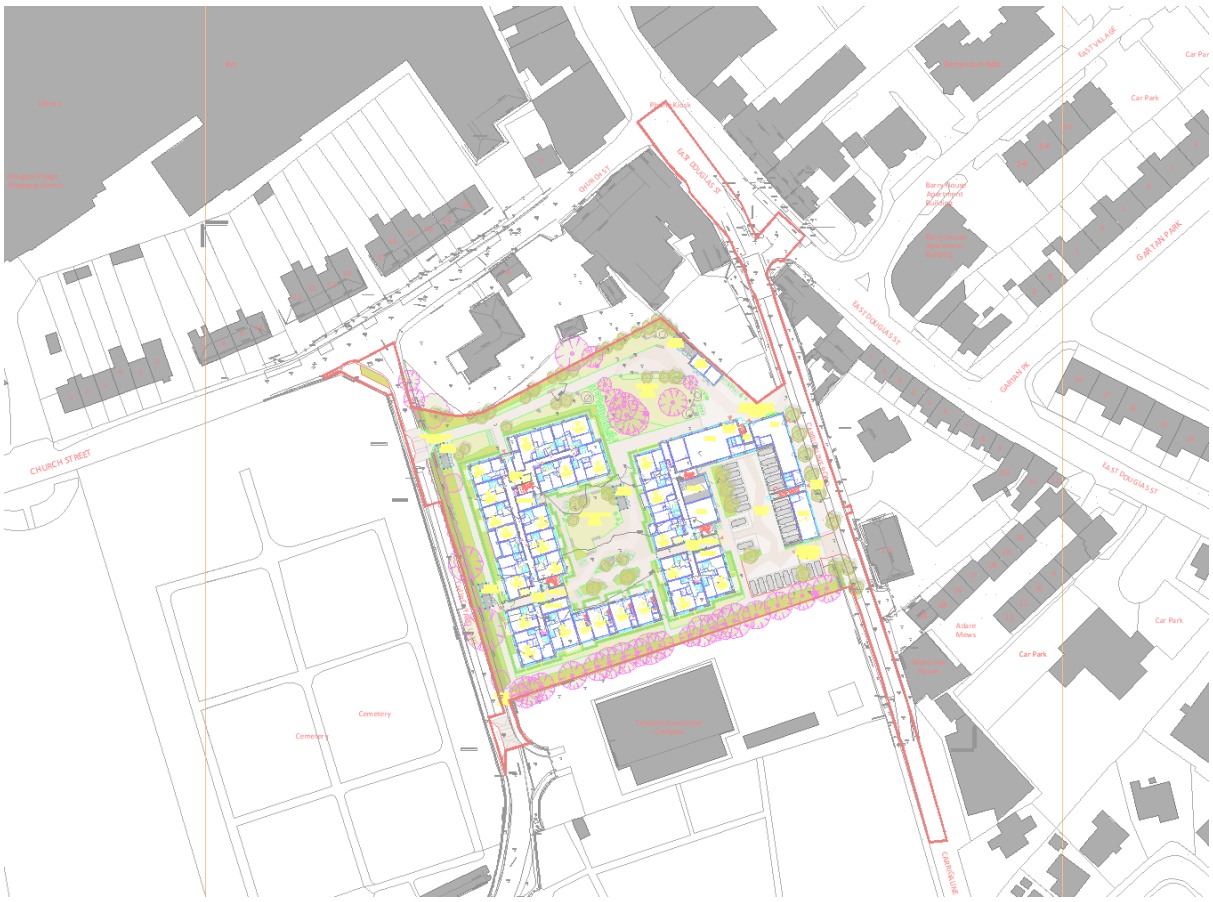



**Figure 13.1 Proposed site layout showing connectivity for pedestrians**

The car space provision from Cork City Council's Development Plan 2022-2028 (Variation 1) stipulates that a maximum of 163No. spaces may be appropriate, as shown in Table 13.1. The proposal to include only 26 vehicular parking spaces aligns with Cork City Council and national transportation objectives to reduce car-based commuter travel.

| Units | No./Floor Area (m2) | CCC Development Plan | CCC Max Allowed Parking Spaces |
|---|---|---|---|
| **Café/Offices** | 396 | 1 per 50m$^2$ | 8 |
| **Residential Unit** | 124No. | 1.25 per Unit | 155 |
| **TOTAL** | | | 163 |

**Table 13.1 Car parking provision as per CCC Development Plan requirements**

In accordance with the "Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities" published by the Department of Housing, Planning and Local Government recommends that the removal of car parking requirements may be appropriate where there are better mobility solutions. The document further states that "In larger scale and higher density developments, comprising wholly of apartments in more central locations that are well served by public transport, the default policy is for car parking provision to be minimised, substantially reduced or wholly eliminated in certain circumstances. The policies above would be particularly applicable in highly accessible areas such as in or adjoining city cores or at a confluence of public transport systems such rail and bus stations located in close proximity."

A Car Parking Management Plan is included in Appendix B of this report. A Mobility Management plan has also been prepared for the development and a Mobility manager will be tasked with implementing this plan. Given the low provision of car parking spaces, they will be designated primarily for residents to ensure fair and secure access. To compliment this, a car-sharing scheme will be promoted to reduce the need for private vehicle ownership while promoting sustainable mobility. The development will also include clear signage to maintain order and prevent unauthorized use.

It is submitted that the subject site is particularly well served by public transport and is located at the confluence of 6 city bus routes, including a night-time service. These bus routes are high quality, high frequency services. See section 14 for further details.

A detailed Parking Occupancy Survey was carried out in the village for information on current parking conditions. This survey outlines the level of parking occupancy on a street-by-street basis in Douglas Village, in the vicinity of the site and allow the applicant to present how visitors to the site may be accommodated in existing on-street parking.

The Cork City Development Plan 2022-2028 (Table 11.14) sets out Bicycle Parking Requirements for new developments. It requires a provision of 0.5 parking stands per 1no. unit, 1 per 150m2 GFA for offices/cafes. The Table below sets out the proposed against the required bicycle parking for such a site.

| Units | No./Floor Area (m2) | CCC Development Plan | CCC Min. Allowed Parking Spaces |
|---|---|---|---|
| **Café / offices** | 396 | 1 per 150m$^2$ | 3 |
| **Residential Unit** | 124No. | 0.5 per Unit | 112 |
| **TOTAL** | | | 115 |
| **Total Bicycle Parking Provided** | | | **274** |

**Table 13.2 Bicycle parking provision as per CCC Development Plan requirements**

The provision of vehicle parking and cycle parking stands aligns more closely with the "Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities" published by the Department of Housing, Planning and Local

Government, which recommends that the removal of car parking requirements may be appropriate where there are better mobility solutions.

The document further states that "In larger scale and higher density developments, comprising wholly of apartments in more central locations that are well served by public transport, the default policy is for car parking provision to be minimised, substantially reduced or wholly eliminated in certain circumstances."

It is submitted that the subject site is particularly well served by public transport and is located at the confluence of 6 city bus routes, including a night-time service. These bus routes are high quality, high frequency services.

A detailed Parking Occupancy Survey was undertaken by Traffinomics Limited for MHL between 06:00 and 00:00 on the 02nd of September 2021. The locations of which can be seen below in Figure 13.2. It was found that there is a total of 99 parking spaces available in the vicinity of the development, 56 of which are located along East Douglas Street.




**Figure 13.2: Parking Occupancy Survey Locations**

The survey found that on average throughout the day 45% of parking spaces are unoccupied. A breakdown of available spaces at each time interval throughout the day can be seen below in Figure 13.3.

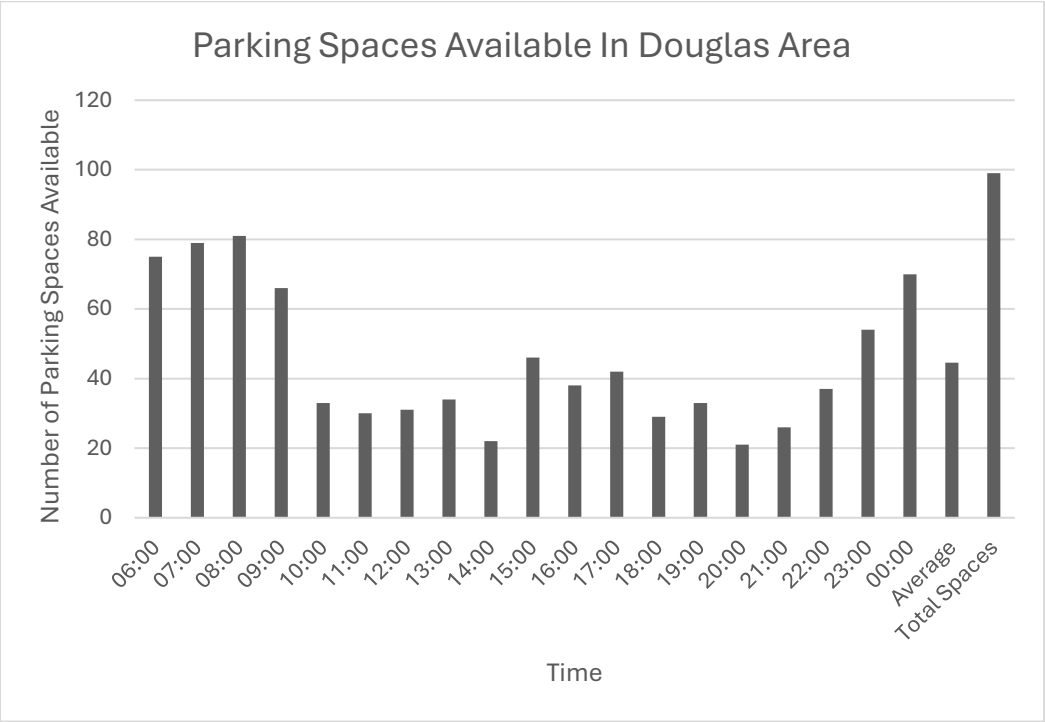



**Figure 13.3: Parking availability in Douglas Village area**

Whilst it is not intended that residents of the development will utilise on street parking, the parking survey serves to present that there is sufficient on street parking in the area to accommodate visitors to the site. Throughout the day there is a minimum of 20 parking spaces available at all times which will allow sufficient space for visitors to park on the streets surrounding the development.

This survey outlines the level of parking occupancy on a street-by-street basis in Douglas Village, in the vicinity of the site and allow the applicant to present how visitors to the site may be accommodated in existing on-street parking.

Cork City Council manage parking control in the Douglas Area. This management of on street parking controls parking throughout the day.

# 14 PUBLIC TRANSPORT

As part the Mobility Management Plan, an assessment of the existing sustainable transport modes in the area is to be undertaken. Bus Éireann currently offer many routes within proximity of the development.

The proposed development is located directly adjacent to the village bus stops, allowing excellent connectivity to the city bus services. This city bus service provides a public transport link from the site to Cork city (207, 216, 219, 220, 223, 223X) linking the site to Cork train terminus and City Centre Bus Station, allowing for sustainable transport modes to be availed of.

A schematic representation of the city bus services in the vicinity of the site is shown in Figure 14.1 below:

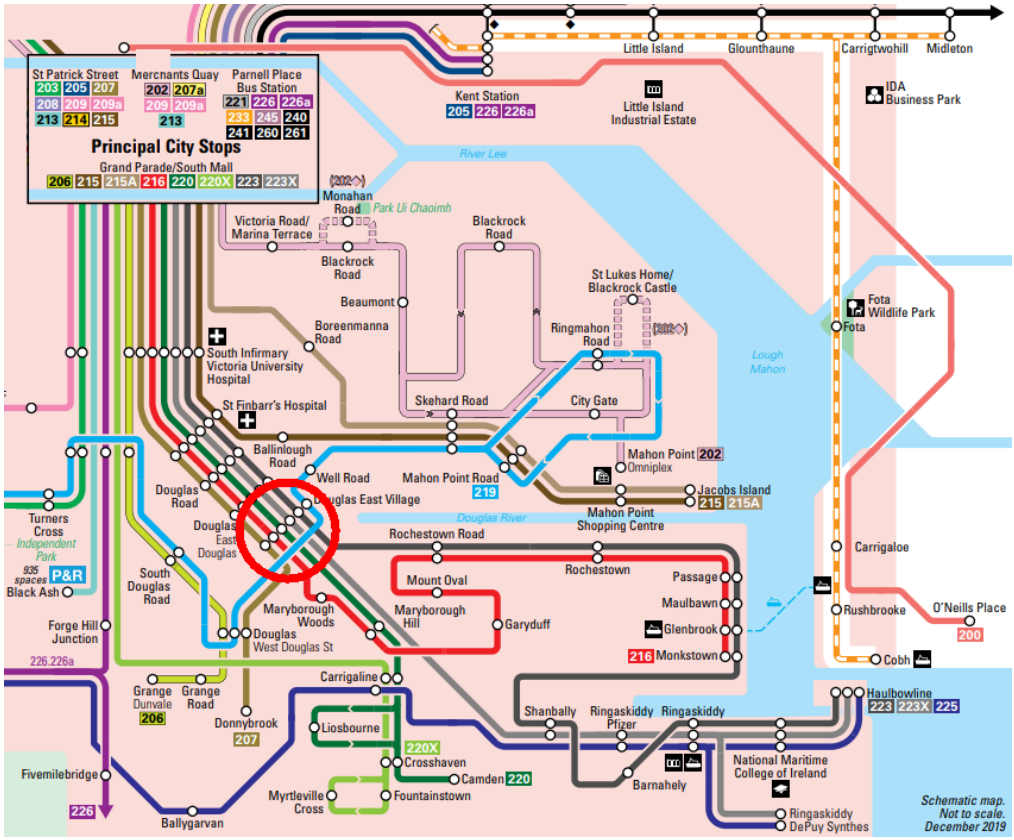



**Figure 14.1 City Bus Routes**

The recently published CMATS document proposes that that the site will be served by a Bus Connects service.

CMATS presents an indicative Core Radial Bus Network. The indicative Core Radial Bus Network connects the external corridors to the City Centre and has been refined to pair Cross-City travel demand to maximise the utilisation of the bus services on these corridors. A significant improvement in the frequency of bus services on these radial routes is also proposed, with most routes expected to operate at a frequency of 15 minutes or better. 9 radial routes are identified including the Rochestown Apple route which will serve the applicant site. See figure 14.2 below showing an extract from the document.

CMATS also presents Short Term Bus Network Implementation plans. It recommends the development of a BusConnects network for Cork based on CMATS network. Prioritisation of the following BusConnects corridors are recommended in the short term:

- East-West interim bus corridor following Light Rail corridor;
- **Douglas Road and South Douglas Road Corridor;**
- N20 Mallow Road Corridor;
- Summerhill North / Ballyhooly RoadCorridor;
- Hollyhill (Apple Campus) to CityCentre;
- Dunkettle to City Centre.

The proposed development will benefit from existing and proposed bus services. The provision of high density residential units, the development will also serve to support investment in the Douglas Road and South Douglas Road BusConnects corridor.

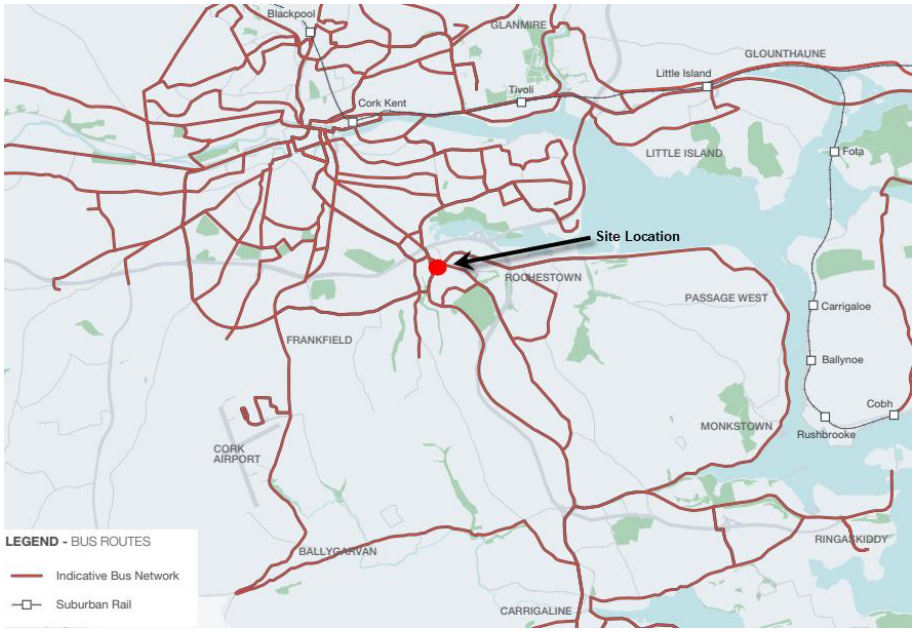



**Figure 14.2 CMATS Bus Proposals**

## 15 PEDESTRIAN / CYCLIST

As part of this application, significant improvements to the local pedestrian connectivity is proposed. These improvements align with the Local Area Plan and DLUTS objectives to improve pedestrian connectivity and accessibility. All footpaths to be dished at all entrances and crossings with tapered/ dropped kerbs and tactile paving used on approaches in accordance with the design guidelines for use with tactile paving. This is to accommodate wheelchair access and guide the visually impaired people safely through the development.

Cycle parking is to be provided on site at ground level for residents, ensuring that access to/from the site by bicycle is unhindered. Ground floor level parking (4no. spaces in the form of Sheffield stands for commercial purposes) will also serve the commercial elements of the proposal.

The City Development Plan sets out a requirement of 1 cycle stand per apartment. The application proposes at least 198 secure cycle stands, reflective of a provision of 1 cycle stand per bed, in accordance with the "Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities". 270no. spaces are to be provided for residents (208 of which are covered, double stack at a rate of 1 per bedroom and 62no. are to be visitor spaces in open sheffield stands at a rate of 0.5 per apartment as per apt guidelines.

Existing cycle facilities are outlined in the figure 15.1.

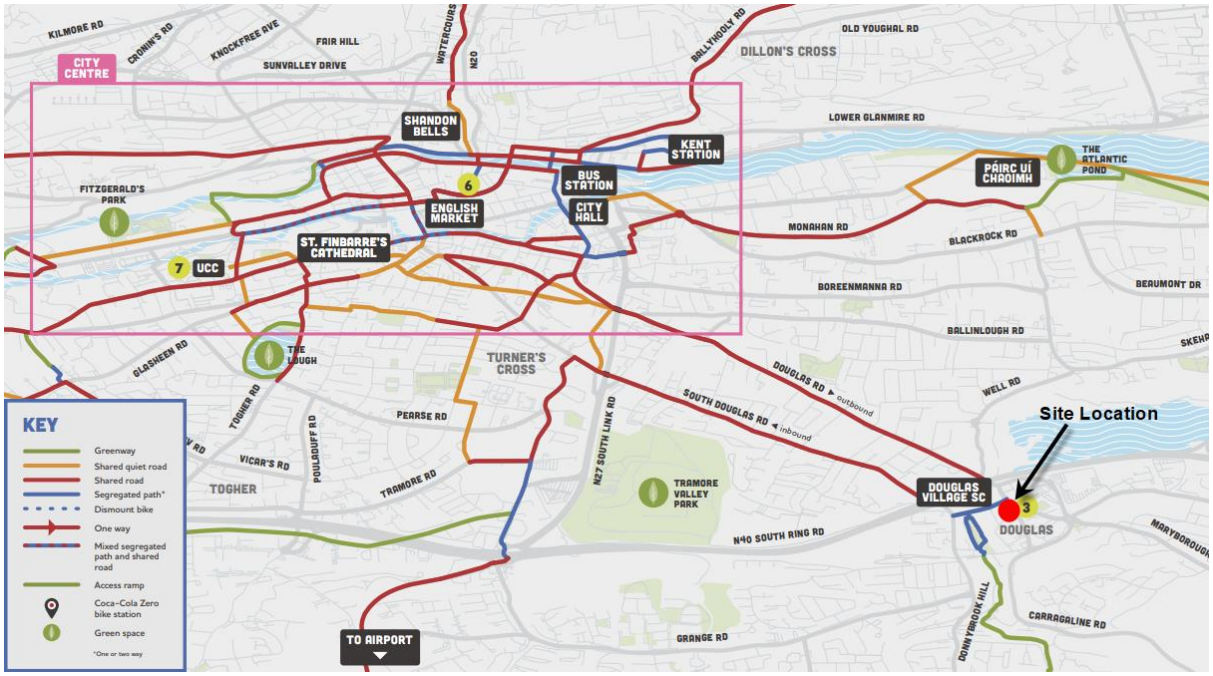



**Figure 15.1 Existing Cork City Cycle Network Map**

Proposed cycle network improvements for Cork City and Environ are set out in the CMAT document. Figure 15.2 below also shows the CMATS proposed cycle measures planned in the vicinity of the site. As shown a number of Primary Cycle Routes are proposed along routes abounding the site, including along East Douglas Street. Primary routes have been designated as such because they experience the highest level of demand. Primary routes

are typically direct and provide medium-long radial connections to key destinations across the CMA.

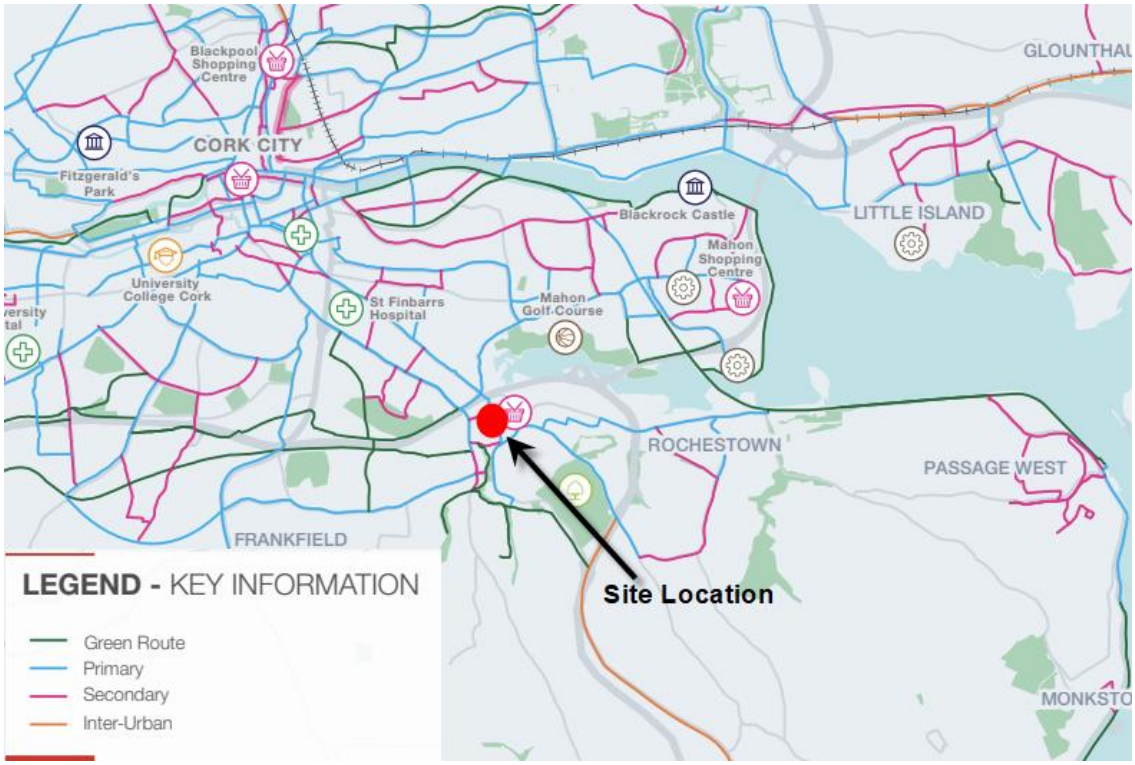



**Figure 15.2 CMATS Cycle Network Map**

## 16 ACCESSIBILITY AND INTEGRATION

The site is very accessible to the public transport system with services to Cork City centre with services readily available directly in front of the site entrance on East Douglas Street. The development of the site will further enhance the integration of these lands into the area.

## 17 ACCESS FOR PEOPLE WITH DISABILITIES

All crossing points, footpaths, public lighting, signage, and road markings should be provided in accordance with the required standards. All footpaths will have adequate width to accommodate the mobility impaired and gradients and cross-falls will be designed to the National Disability Authority (NDA) guidelines as well all crossing points, with drop kerbs and tactile paving for the visually impaired.

## 18 MITIGATION

The availability of a number of city bus routes in the immediate vicinity of the site will present residents of the proposed development the option to utilise non-car travel modes, accessing the city centre, the bus terminal at Parnell Place and the train terminus at Kent Station. This service will produce tangible modal shifts in the road network usage. The proposed pedestrian connectivity improvement to the existing footpath infrastructure to the site will provide improved facilities and connectivity for cycle and pedestrian travel

modes, allowing residents and visitors of the site to safely avail of this sustainable mode of transport, including the bus network and nearby taxi rank. The development of the proposed cycle improvements, adjacent to the site, will provide excellent connectivity to residents to the city centre and local Douglas area. Also, the planned core BusConnects intentions for the Douglas area, to be delivered in the short term, will ensure a high-quality public transport service to the site.

## REFERENCES


- National Roads Authority (2014) Traffic and Transport Assessment Guidelines NRA, Dublin
- Institution of Highways & Transportation (1994) Guidelines for Traffic Impact Assessment IHT, London
- Transport Infrastructure Ireland (2016) Project Appraisal Guidelines for National Roads Unit 16.0- Estimating AADT on National Roads
- Transport Infrastructure Ireland (2016) Project Appraisal Guidelines for National Roads Unit 5.3- Travel Demand Projections
- Communities and Local Government Department for Transport 2007 Guidance on Transport Assessment
- Guidelines for Traffic Impact Assessments" as published by the Institution of Highways & Transportation U.K. in 1994
- National Disability Authority (NDA) guidelines – Towards Best Practice in Provision of Transport Services
- Cork City Council Development Plan (2022-2028) published by Cork City Council
- TII approved junction simulation modelling program (LinSig traffic modelling suite)
- Trip Rate Information Computer System (TRICS)
- Traffic Surveys undertaken by independent third-party traffic enumerators NDC Transportation Surveys. (07:00-09:00 & 17:00-18:00)

# APPENDIX A – TRAFFIC COUNT DATA

## Irish Traffic Surveys LTD

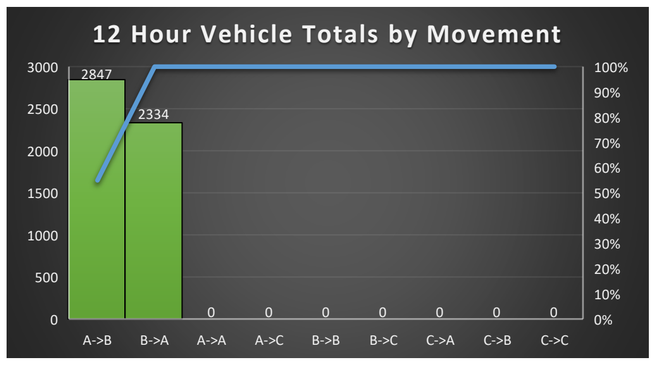
| | |
|---|---|
| Survey Name : | ITS J-732 Douglas |
| Site: | Junction Turn Count Survey |
| Date: | 10.05.23 |
| Time: | 07:00-19:00 |
| Location: | 2 way flow on the main road at R609 |
| Classification: | Car, LGV, OGV1, OGV2, PSV, MC, PC |

Irish Traffic Surveys

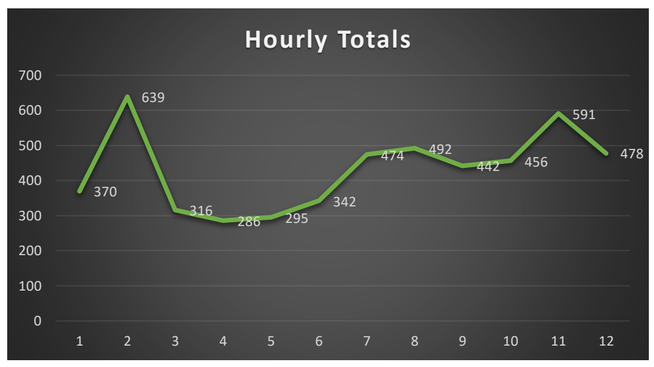
**Site 4**




| 12hr Matrix | A | B | C |
|---|---|---|---|
| A | 0 | 2847 | 0 |
| B | 2334 | 0 | 0 |
| C | 0 | 0 | 0 |
| Totals | A | B | C |
| Entries | 2847 | 2334 | 0 |
| Exits | 2334 | 2847 | 0 |

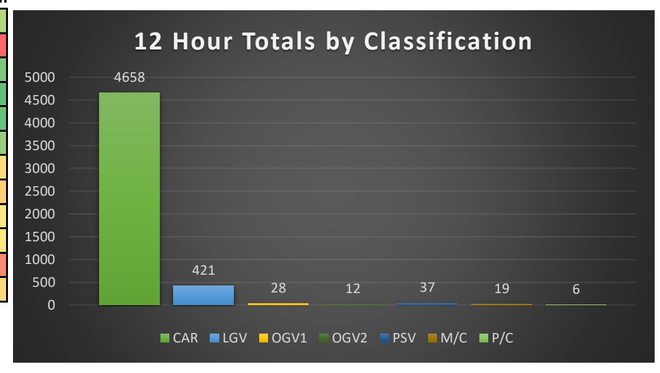



| Movement | 12hr Total | % Total |
|---|---|---|
| A->A | 0 | 0.0% |
| A->B | 2847 | 55.0% |
| A->C | 0 | 0.0% |
| B->A | 2334 | 45.0% |
| B->B | 0 | 0.0% |
| B->C | 0 | 0.0% |
| C->A | 0 | 0.0% |
| C->B | 0 | 0.0% |
| C->C | 0 | 0.0% |
| Total | 5181 | 100.0% |




| TIME | Period total | % of 12hr Total |
|---|---|---|
| 7:00 | 370 | 7% |
| 8:00 | 639 | 12% |
| 9:00 | 316 | 6% |
| 10:00 | 286 | 6% |
| 11:00 | 295 | 6% |
| 12:00 | 342 | 7% |
| 13:00 | 474 | 9% |
| 14:00 | 492 | 9% |
| 15:00 | 442 | 9% |
| 16:00 | 456 | 9% |
| 17:00 | 591 | 11% |
| 18:00 | 478 | 9% |
| **Total** | 5181 | 100% |

| TIME | CAR | LGV | OGV1 | OGV2 | PSV | M/C | P/C | % of 12hr Total |
|---|---|---|---|---|---|---|---|---|
| 7:00 | 312 | 51 | 3 | 2 | 2 | 0 | 0 | 7% |
| 8:00 | 595 | 33 | 1 | 0 | 9 | 1 | 0 | 12% |
| 9:00 | 269 | 40 | 2 | 1 | 3 | 0 | 1 | 6% |
| 10:00 | 247 | 32 | 3 | 0 | 2 | 2 | 0 | 6% |
| 11:00 | 252 | 32 | 5 | 2 | 2 | 2 | 0 | 6% |
| 12:00 | 304 | 33 | 1 | 0 | 2 | 0 | 2 | 7% |
| 13:00 | 420 | 44 | 2 | 1 | 5 | 1 | 1 | 9% |
| 14:00 | 447 | 32 | 4 | 3 | 4 | 2 | 0 | 9% |
| 15:00 | 410 | 17 | 5 | 3 | 2 | 3 | 2 | 9% |
| 16:00 | 402 | 48 | 1 | 0 | 3 | 2 | 0 | 9% |
| 17:00 | 549 | 36 | 1 | 0 | 2 | 3 | 0 | 11% |
| 18:00 | 451 | 23 | 0 | 0 | 1 | 3 | 0 | 9% |
| **Total** | **4658** | **421** | **28** | **12** | **37** | **19** | **6** | |
| **% Total** | **89.91%** | **8.13%** | **0.54%** | **0.23%** | **0.71%** | **0.37%** | **0.12%** | |



## Irish Traffic Surveys LTD

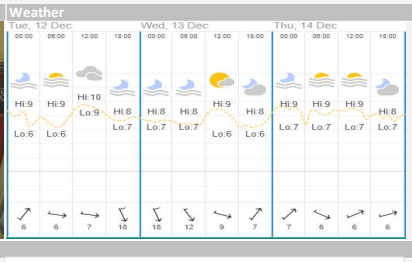
| | |
|---|---|
| Survey Name : | ITS J-810 Primary Care Centres Cork |
| Site: | JTC 3 |
| Date: | 13.12.2023 |
| Time: | 07:00-10:00 and 16:00-19:00 |
| Location: | 51.877359, -8.436163 |
| Classification: | CAR, LGV, OGV1, OGV2, PSV, MC, PC,PEDS |

Irish Traffic Surveys

### Site 3

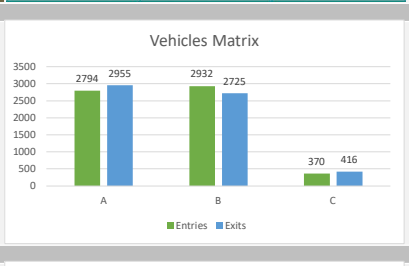



### Weather



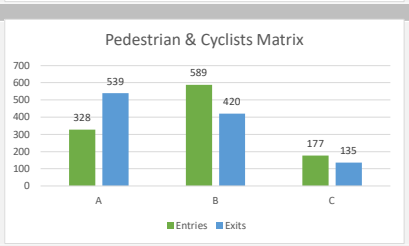

### 12 Hr Vehicles Matrix

| Arm | A | B | C |
|---|---|---|---|
| A | 1 | 2550 | 243 |
| B | 2758 | 1 | 173 |
| C | 196 | 174 | 0 |
| **Totals** | **A** | **B** | **C** |
| Entries | 2794 | 2932 | 370 |
| Exits | 2955 | 2725 | 416 |



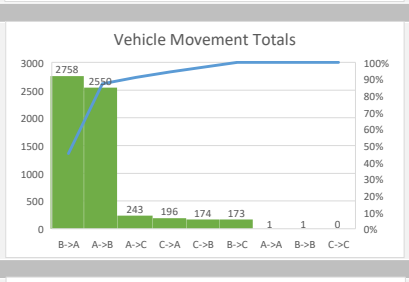

### 12 Hr Pedestrian & Cyclists Matrix

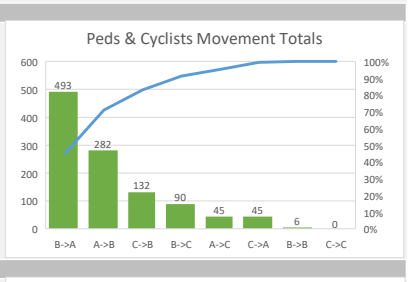
| Arm | A | B | C |
|---|---|---|---|
| A | 1 | 282 | 45 |
| B | 493 | 6 | 90 |
| C | 45 | 132 | 0 |
| **Totals** | **A** | **B** | **C** |
| Entries | 328 | 589 | 177 |
| Exits | 539 | 420 | 135 |




### Movement Totals

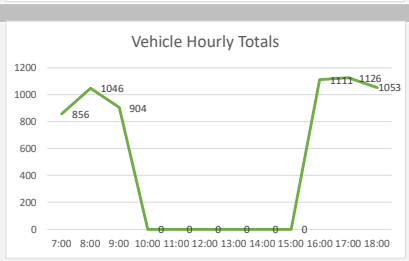
| Arm | Vehicle Totals | Pedestrian & Cyclists |
|---|---|---|
| A->A | 1 | 1 |
| A->B | 2550 | 282 |
| A->C | 243 | 45 |
| B->A | 2758 | 493 |
| B->B | 1 | 6 |
| B->C | 173 | 90 |
| C->A | 196 | 45 |
| C->B | 174 | 132 |
| C->C | 0 | 0 |
| **Total** | **6096** | **1094** |

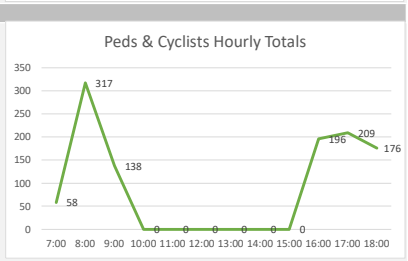



### Hourly Totals

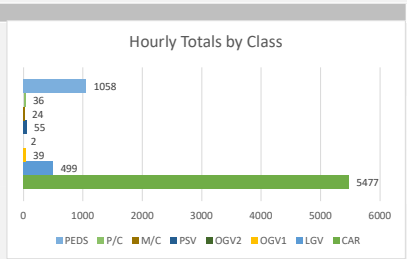
| TIME | Vehicle Total | Pedestrian & Cyclists |
|---|---|---|
| 7:00 | 856 | 58 |
| 8:00 | 1046 | 317 |
| 9:00 | 904 | 138 |
| 10:00 | 0 | 0 |
| 11:00 | 0 | 0 |
| 12:00 | 0 | 0 |
| 13:00 | 0 | 0 |
| 14:00 | 0 | 0 |
| 15:00 | 0 | 0 |
| 16:00 | 1111 | 196 |
| 17:00 | 1126 | 209 |
| 18:00 | 1053 | 176 |
| **Total** | **6096** | **1094** |




### Hourly Totals by Class

| TIME | CAR | LGV | OGV1 | OGV2 | PSV | M/C | P/C | PEDS | % of 12hr Total |
|---|---|---|---|---|---|---|---|---|---|
| 7:00 | 731 | 100 | 9 | 0 | 13 | 3 | 7 | 51 | 14% |
| 8:00 | 949 | 84 | 2 | 0 | 9 | 2 | 9 | 308 | 17% |
| 9:00 | 781 | 89 | 19 | 2 | 9 | 4 | 5 | 133 | 15% |
| 10:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% |
| 11:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% |
| 12:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% |
| 13:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% |
| 14:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% |
| 15:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0% |
| 16:00 | 1011 | 84 | 7 | 0 | 6 | 3 | 4 | 192 | 18% |
| 17:00 | 1022 | 85 | 1 | 0 | 7 | 11 | 6 | 203 | 19% |
| 18:00 | 983 | 57 | 1 | 0 | 11 | 1 | 5 | 171 | 17% |
| **Total** | **5477** | **499** | **39** | **2** | **55** | **24** | **36** | **1058** | |
| **% Total** | **76.18%** | **6.94%** | **0.54%** | **0.03%** | **0.76%** | **0.33%** | **0.50%** | **14.71%** | |



**Irish Traffic Surveys LTD**

| | |
|---|---|
| Survey Name : | ITS J-732 Douglas |
| Site: | Junction Turn Count Survey |
| Date: | 10.05.23 |
| Time: | 07:00-19:00 |
| Location: | 5 Arm Finger Post and Roundabout/Douglas/Cork |
| Classification: | Car, LGV, OGV1, OGV2, PSV, MC, PC |

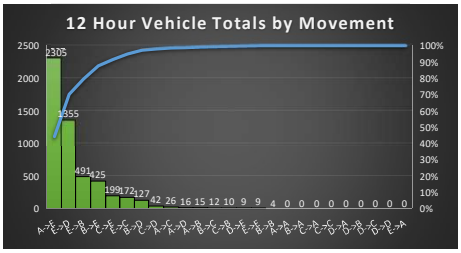
Irish Traffic Surveys

Site 5

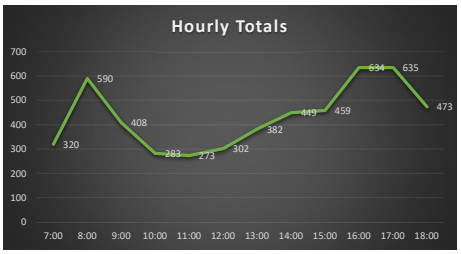



| 12hr Matrix | A | B | C | D | E |
|---|---|---|---|---|---|
| A | 12 | 3068 | 2421 | 2471 | 0 |
| B | 3931 | 8 | 154 | 2188 | 0 |
| C | 2695 | 197 | 8 | 627 | 0 |
| D | 2131 | 2075 | 596 | 9 | 0 |
| E | 414 | 1052 | 1112 | 866 | 0 |
| Totals | A | B | C | D | E |
| Entries | 7972 | 6281 | 3527 | 4811 | 3444 |
| Exits | 9183 | 6400 | 4291 | 6161 | 0 |

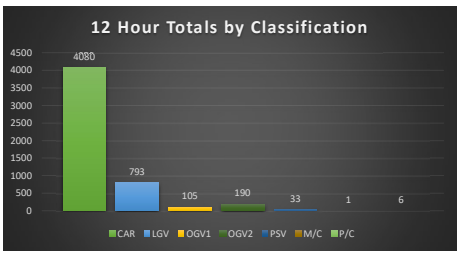
| Movement | 12hr Total | % Total |
|---|---|---|
| A->A | 0 | 0.0% |
| A->B | 15 | 0.3% |
| A->C | 26 | 0.5% |
| A->D | 16 | 0.3% |
| A->E | 2305 | 44.3% |
| B->A | 0 | 0.0% |
| B->B | 4 | 0.1% |
| B->C | 12 | 0.2% |
| B->D | 127 | 2.4% |
| B->E | 425 | 8.2% |
| C->A | 0 | 0.0% |
| C->B | 10 | 0.2% |
| C->C | 0 | 0.0% |
| C->D | 42 | 0.8% |
| C->E | 199 | 3.8% |
| D->A | 0 | 0.0% |
| D->B | 0 | 0.0% |
| D->C | 0 | 0.0% |
| D->D | 0 | 0.0% |
| D->E | 9 | 0.2% |
| E->A | 0 | 0.0% |
| E->B | 491 | 9.4% |
| E->C | 172 | 3.3% |
| E->D | 1355 | 26.0% |
| E->E | 9 | 0.2% |
| Total | 5208 | 100.0% |




| TIME | Period total | % of 12hr Total |
|---|---|---|
| 7:00 | 320 | 6% |
| 8:00 | 590 | 11% |
| 9:00 | 408 | 8% |
| 10:00 | 283 | 5% |
| 11:00 | 273 | 5% |
| 12:00 | 302 | 6% |
| 13:00 | 382 | 7% |
| 14:00 | 449 | 9% |
| 15:00 | 459 | 9% |
| 16:00 | 634 | 12% |
| 17:00 | 635 | 12% |
| 18:00 | 473 | 9% |
| **Total** | 5208 | 100% |




| TIME | CAR | LGV | OGV1 | OGV2 | PSV | M/C | P/C | % of 12hr Total |
|---|---|---|---|---|---|---|---|---|
| 7:00 | 245 | 66 | 2 | 4 | 3 | 0 | 0 | 6% |
| 8:00 | 474 | 79 | 12 | 19 | 5 | 0 | 1 | 11% |
| 9:00 | 317 | 52 | 15 | 23 | 1 | 0 | 0 | 8% |
| 10:00 | 201 | 45 | 17 | 16 | 4 | 0 | 0 | 5% |
| 11:00 | 212 | 27 | 11 | 20 | 3 | 0 | 0 | 5% |
| 12:00 | 218 | 54 | 10 | 18 | 2 | 0 | 0 | 6% |
| 13:00 | 298 | 56 | 6 | 20 | 2 | 0 | 0 | 7% |
| 14:00 | 362 | 62 | 5 | 16 | 3 | 0 | 1 | 9% |
| 15:00 | 366 | 59 | 9 | 19 | 4 | 0 | 2 | 9% |
| 16:00 | 493 | 108 | 10 | 19 | 2 | 0 | 2 | 12% |
| 17:00 | 509 | 112 | 5 | 7 | 1 | 1 | 0 | 12% |
| 18:00 | 385 | 73 | 3 | 9 | 3 | 0 | 0 | 9% |
| **Total** | 4080 | 793 | 105 | 190 | 33 | 1 | 6 | |
| **% Total** | **78.34%** | **15.23%** | **2.02%** | **3.65%** | **0.63%** | **0.02%** | **0.12%** | |



# APPENDIX B – CAR PARKING MANAGEMENT PLAN

# CAR PARKING MANAGEMNT PLAN

| | |
|---|---|
| MHL Project Number: | 24091TT |
| Project Title: | Residential Development, Churchyard Lane, Douglas, Cork |
| Author: | BM |
| Date: | 17/01/2025 |
| Subject: | Car Parking Management Plan |
| Document Status: | For Planning |

## 1.0 INTRODUCTION

MHL Consulting Engineers have been engaged to prepare Traffic and Transport Engineering consultancy services for the proposed mixed use at Barry's Field in Douglas. The site abounds the Carrigaline Road to the east and Churchyard Lane to the west The scheme is comprise of 124 residential units, office space and a cafe (combined G.F.A. 396m$^2$).

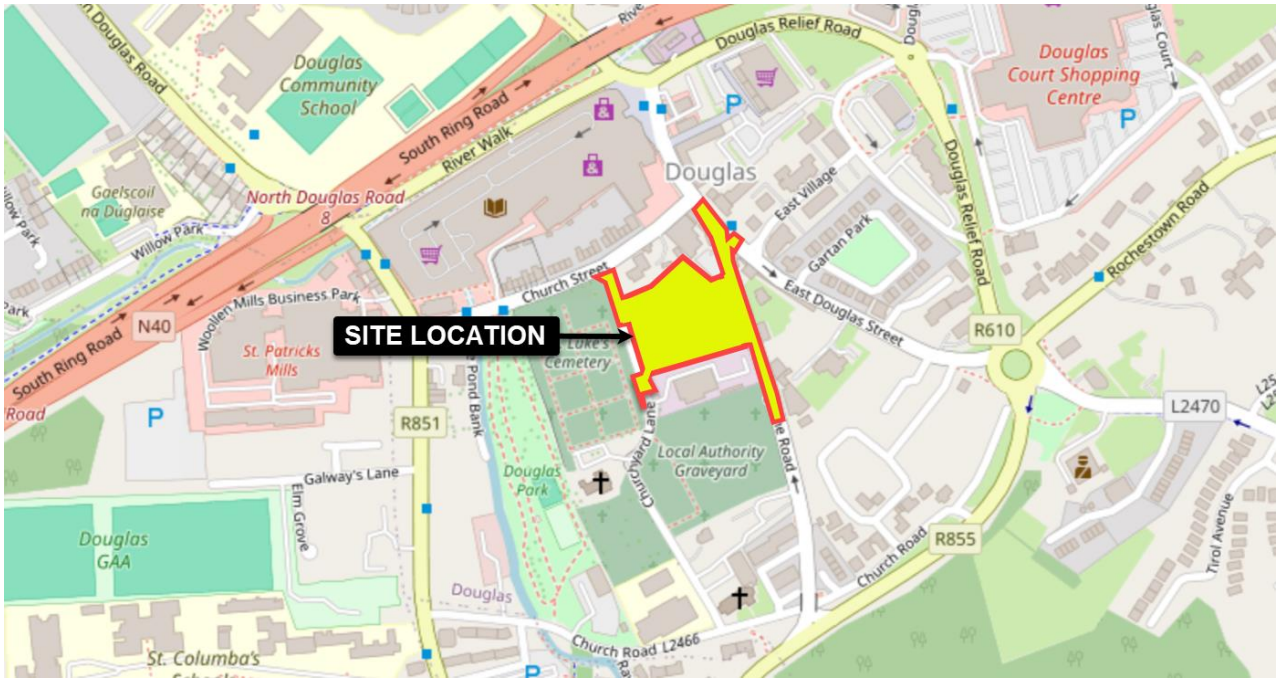



**Figure 1 - Site Location**

It is proposed to deliver 26 parking spaces to cater for this scheme, therefore the preparation of this Car Parking Management Plan is most important. In order to present this rationale and in order to present any traffic and transport impact MHL have prepared the following supplemental documents, which should be considered in the context of this report:

- **Mobility Management Plan:**
- **Traffic & Transport Assessment**
- **Stage 1 & 2 Road Safety Audit**

This schedule of design reports has been developed through preliminary consultation with Cork City Council's Transport Department. This report is being prepared in response to an item raised by Cork City Council in the Section 32 Opinion, following a Pre-Planning submission by the applicant.

The purpose of the report is as follows:

• To demonstrate that the proposed site car parking provision is entirely sustainable given the current car ownership and modal splits for the journey to work or education and for day to day living at the location;
• To demonstrate the sustainability in transportation terms of residents utilising non-car based forms of travel by demonstrating the high level of service that is provided by the transport infrastructure in place at the site with regards to,walking, cycling, public bus services, and DART; and
• To identify both physical elements and strategies to be incorporated within the proposed new development which will facilitate and create incentives for both residents of and visitors to the development to use the available modes of public transport along with walking and cycling in preference over private car use

## 2.0 CAR PARKING PROVISION

### 2.1 Introduction

This section details the car and cycle parking requirements under the Cork City Development Plan. The car space provision from Cork City Council's Development Plan 2022-2028 (Variation 1) stipulates that a maximum of 164No. spaces may be appropriate, as shown in Table 2.1. The proposal to include only 26 vehicular parking spaces aligns with Cork City Council and national transportation objectives to reduce car-based commuter travel.

| Units | No./Floor Area | CCC Development Plan | CCC Max Allowed Parking Spaces |
|---|---|---|---|
| **Café/Offices** | 396 $m^2$ | 1 per 50$m^2$ | 8 |
| **Residential Unit** | 124 No. | 1.25 per Unit | 155 |
| **TOTAL** | | | 163 |

**Figure 2.1 Car parking provision as per CCC Development Plan requirements**

The Cork City Development Plan 2022-2028 sets out Bicycle Parking Requirements for new developments. It requires a provision of 0.5 parking stands per 1no. unit, 1 per 150m2 GFA for offices/cafes. The Table below sets out the proposed against the required bicycle parking for such a site.

| Units | No./Floor Area | CCC Development Plan | CCC Min. Required Cycle Spaces |
|---|---|---|---|
| **Café / offices** | 396 $m^2$ | 1 per 150$m^2$ | 3 |
| **Residential Unit** | 124 No. | 0.5 per Unit | 112 |
| **TOTAL** | | | 115 |

**Figure 2.2 Cycle parking requirements as per CCC Development Plan**

The proposal will provide in excess of 238% of the required cycle parking, with a car parking provision of 0.2 spaces per residential unit. Argument for this restricted level of car parking provision is based on the requirements of the "Sustainable Urban Housing: Design Standards for New Apartments", Prepared by the Department of Housing, Local Government and Heritage. The area's designation in the Development Plan as an Inner Urban Suburb. It will be argued that the proposed residential parking provision is entirely sustainable given the current car ownership and modal splits for the journey to work for existing residents living close to the subject site.

In accordance with the "Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities" published by the Department of Housing, Planning and Local Government recommends that the removal of car parking requirements may be appropriate where there are better mobility solutions. The document further states that "In larger scale and higher density developments, comprising wholly of apartments in more central locations that are well served by public transport, the default policy is for car parking provision to be minimised, substantially reduced or wholly eliminated in certain circumstances. The policies above would be particularly applicable in highly accessible areas such as in or adjoining city cores or at a confluence of public transport systems such rail and bus stations located in close proximity." The document also outlines that "in suburban/urban locations served by public transport or close to town centres or employment areas and particularly for housing schemes with more than 45 dwellings per hectare net (18 per acre), planning authorities must consider a reduced overall car parking standard and apply an appropriate maximum car parking standard."

As outlined in the MMP the subject site is particularly well served by public transport and is located at the confluence of 6 city bus routes, including a night-time service. These bus routes are high quality, high frequency services.

The supporting MMP outlines the transport connectivity constraints and opportunities for the site (referencing existing and planned future infrastructure improvement). It will outline a package of measures put in place to encourage and support the uptake of sustainable travel commuting habits amongst the residents of the proposed development. The report outlines how a reduction in the demand and use of the private car can be achieved and highlights the use of alternative modes of transport. The MMP considers commuter options and possible transport options for the future residents commuting to a variety of high demand destination such as the City Centre, UCC, CUH and MTU.

## 2.2 Projected Car Usage

Car ownership levels and modal split data from the 2022 Census for Electoral Districts close to the subject site can assist in providing a case for the sustainability in transportation terms of no residents having access to a car space.

In order to demonstrate that the proposed level of car parking is sustainable this report will assess existing demand for car ownership and car travel within the general environs of the subject site using the Census data. This data enables the proportion of households in the general vicinity of the subject site who do not own a car to be established as well as the proportion of commuters presently living in the area using the private car for their journey to work.

A preliminary review of CSO Census data (2022 census) for the relevant Small Area (CSO SAP Ref: 047132071) shows existing travel patterns for residents. See figure 2 below:

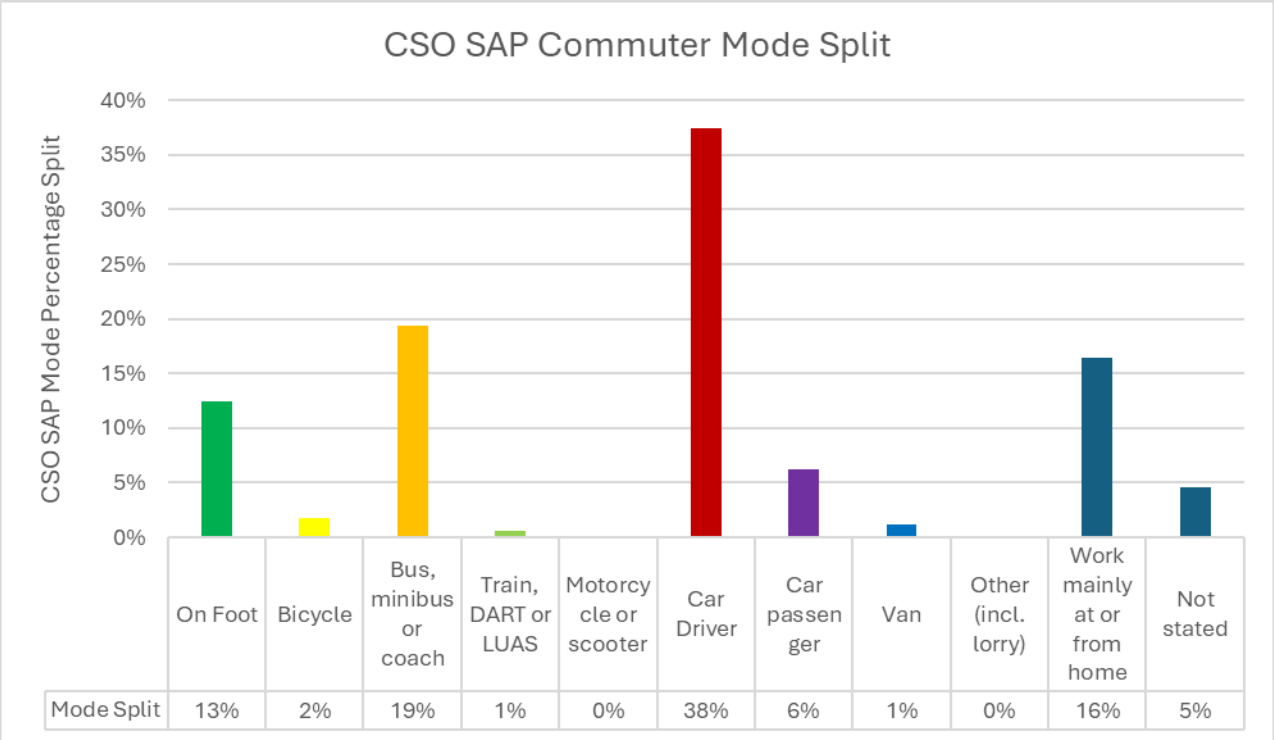



**Figure 2.3 Commuter Mode Split for the local CSO Small Area**

Figure 2.3 shows that 34% of existing commuters travel to work, school or college by sustainable travel modes (Walking/Cycling/Bus/Train), of which 13% walk. This is a very high uptake in walking as a commuter mode and points to the level of pedestrian connectivity for the proposed site. It shows that 38% of commuters are car drivers and 16% work from home. Given the provision of 20% parking for the proposed development the requirement for a significant adoption of sustainable modes is clear. It should be noted though that this Small Area includes a

significant number of older, established housing estates (including "The Gardens", "Douglas Lawn", "The Belfry" and "Adare Mews") all of which have their own designated parking spaces. The SAP details show that this area comprises of 57% Apartments and 43% Houses. See the site location with reference to the CSO Small Areas Population(SAP).




**Figure 2.4 Site shown with reference to local CSO Small Areas**

Given the proportion of houses (with designated parking) in the SAP it is submitted that achieving an appropriate mode share utilising sustainable modes, and operating with 20% car parking per unit, is achievable for the location.

The proportion of "Working Mainly from Home" residents in the area is also a split that is likely to be gained upon for this scheme. The intended use of the **office space** in the development is to serve remote workers, facilitating residents to work in an appropriate environment, but outside of the apartment. It is anticipated that there will be a significant uptake of residents using this facility and its availability to residents represents a very significant measure in achieving an appropriate modal split for residents.

## 3.0 CAR PARKING DESIGNATION AND ENFORCEMENT

As part of the scheme it is proposed to implement Access Control with the installation of an access barrier at the site entrance. See the site layout below:

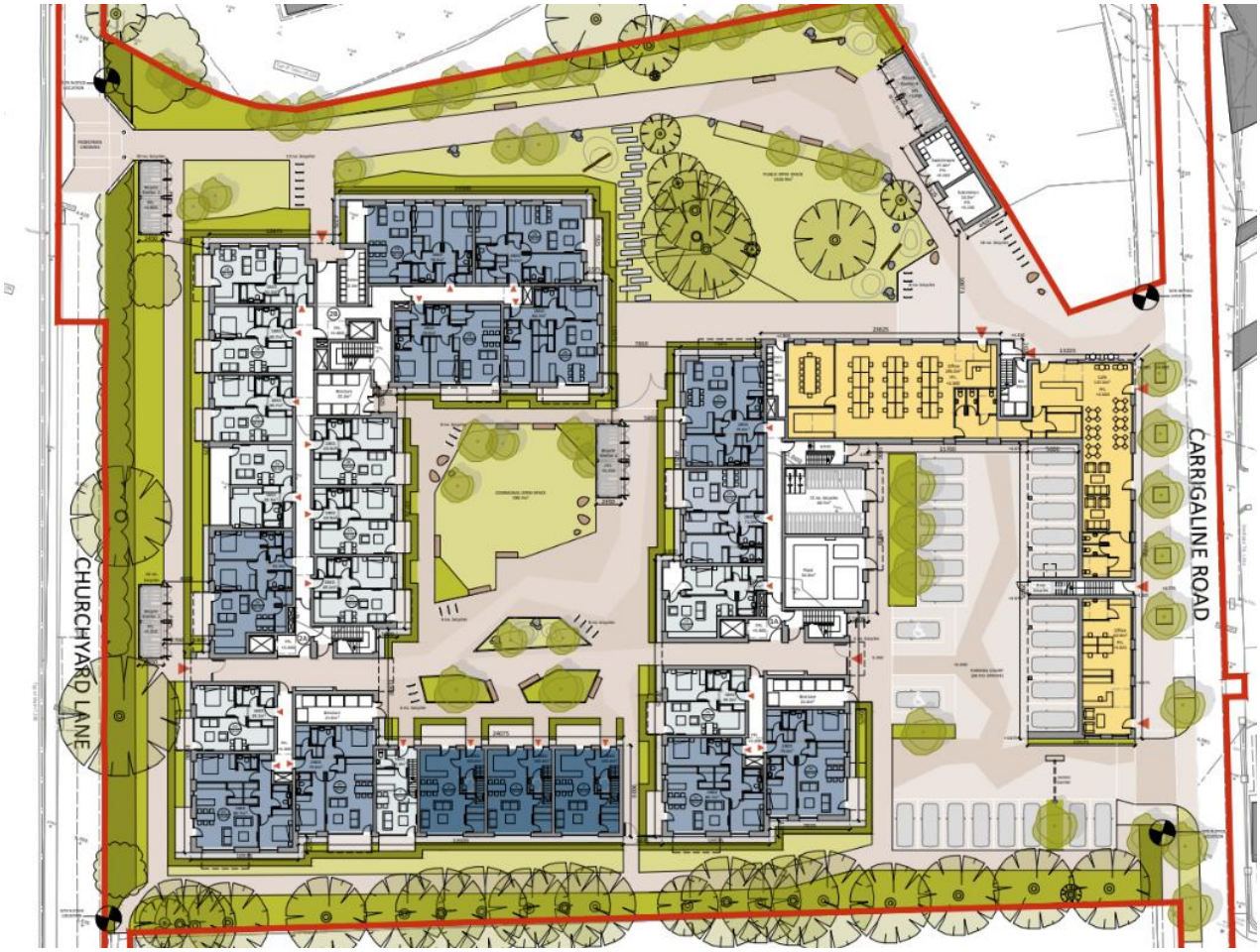



**Figure 3.1 Site and Car Park layout**

The site is to accommodate 26 spaces of which 5 shall include EV chargers and all spaces will be ducted for future EV charge capability. 2 No. disabled spaces are also included. Access to the car park will only be available to the residents through the on site concierge who will manage access.

A detailed Parking Occupancy Survey was undertaken by Traffinomics Limited for MHL and is referenced in the TTA. The survey found that there is significant spare parking capacity available for visitor uses to the site in evenings and night time, ensuring that visitors to the site can be accommodated.

2 No. Car Club spaces are also to be provided at the entrance, just outside the access barrier. This will allow site residents and also local residents to use the car club vehicles. Preliminary discussions have been held with an operator for the provision of these vehicles. These vehicle will provide an important function for residents of the apartments and the number of rental cars may increase depending on uptake of the service.