PUNCH consulting engineers

Phase 1 – Corrib Causeway – Dyke Road

Traffic and Transportation Assessment
232116-PUNCH-XX-XX-RP-C-0001

March 2025

Document Control

Document Number: **232116-PUNCH-XX-XX-RP-C-0001**

Status	Rev	Description	Date	Prepared	Checked	Approved
A0	P05	Planning Issue	14 March 2025	T. Nash	J. Tiernan	J. Tiernan

Table of Contents

1 Non-Technical Summary

1. The proposed development consists of a new residential development of 219 no. apartment units and a childcare facility (approximately 241m^2). The proposed development forms part of an overall three phase masterplan development, the Corrib Causeway 'Site Development Framework'. The current proposal is phase 1 with phases 2 and 3 to follow subject to separate development consent.

2. The layout of the proposed development requires the removal of a proportion of the existing public car park. 165 public car parking spaces will remain following the proposed development works.

3. For the purposes of our assessment, the TRICS database was consulted to provide an equivalent trip rate for the proposed development site.

4. It is proposed to access the proposed development via two new access points from Dyke Road, Galway. The existing site access will no longer be in use.

5. An assessment of the surrounding existing junctions was carried out in accordance with Transport Infrastructure Ireland Guidelines. The assessment found that the predicted development trips generated by the proposed development will have very little traffic impact on the existing junctions.

6. Parking spaces for the proposed development have been provided to meet the requirements set out in the Galway City Council Development Plan as well as national policy relating to parking provision for residential developments located in sustainable transport locations.

7. Secure cycle parking facilities have been provided within the development which exceed the requirements set out in the Galway City Council Development Plan.

2 Introduction

This report was prepared on behalf of Galway City council (GCC) and has been completed by PUNCH Consulting Engineers for a proposed residential development at Dyke Road, Terryland, Galway City.

The assessment has been carried out in accordance with TII's Traffic and Transport Assessment Guidelines PE-PDV-02045 (May 2014) and makes reference to the Design Manual for Urban Roads & Streets (DMURS). Sections from the Galway City Council Development Plan (2023-2029) have been used to help describe the development location and its local context.

The purpose of the TTA report is to assess the potential impact of the proposed development on the existing local transport network and to ensure that the proposed site access will have adequate capacity to carry the development traffic and the future growth in existing road traffic to the design year and beyond. An assessment of the accessibility of the site for cyclists, pedestrians and public transport users has also been made.

2.1 Scoping

Consultation was undertaken between the design team and GCC representatives from various technical departments on several occasions to allow them to express their views/comments regarding the proposed development prior to the submission of the planning application to An Bord Pleanála on their behalf. The views of GCC as part of this engagement process have been considered in writing this report.

3 Existing Conditions

3.1 Site Location

The subject lands are located to the north of Galway City Centre and are bounded by Dyke Road to the west, an existing public carpark to the south, Galway Retail Park to the east and the Black Box Theatre and Terryland Park to the north. The site is currently a public car park and vehicular access to the site is currently from the west from Dyke Road.

The site is located approximately 650m north of Eyre Square, 800m north of Ceannt Train & Bus Station. All of this makes the site highly accessible to pedestrians, cyclists, public and private transport and is considered a Sustainable Location. Figure 3-1 indicates the location of the subject lands.

Figure 3-1: Site Location

3.2 Existing Road Network

The site location in relation to the wider road network is detailed in Figure 3-2 below.

Figure 3-2 – Site location and surrounding road network

A brief description of the local road network and the major road junctions is provided below:

3.2.1 Dyke Road L1004

Dyke Road is a semi-urban road to the north of Galway City and on the east bank of the River Corrib see Figure 3-3. Dyke Road is a two-way single carriageway with a single wide footpath on the western side of the carriageway until the overpass at which point the footpath ends and restarts on the eastern side. There are no existing designated cycle lanes. The road is height restricted to 2.28m when it passes below the N6. The speed limit on the road is 50 km/h.

Figure 3-3: Dyke Road (Looking South) © Google Maps.

3.2.2 Headford Road R866

Headford Road is an urban road linking the N6 with the city centre. Headford Road is a two-way single carriageway with a turning lane, the road widens to a dual carriageway approximately 500m north of the site where it becomes the N6. There are wide footpaths on both sides of the carriageway. There are some cyclelanes along parts of this road. The speed limit on the road is 50 km/h. Refer to Figure 3-4 below.

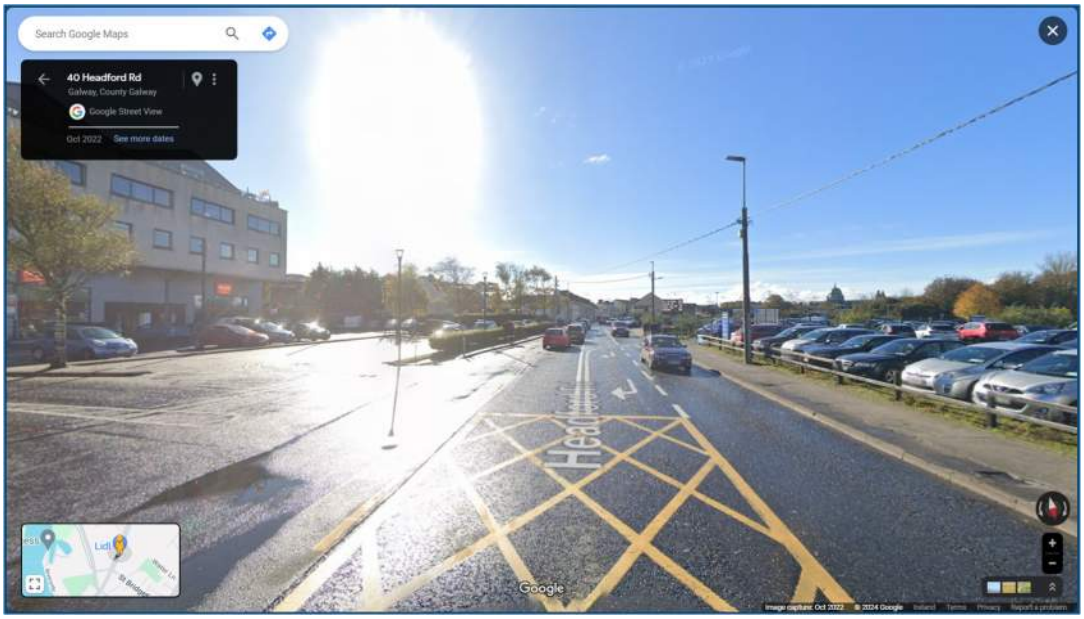


Figure 3-4: Headford Road (Looking South) © Google Maps.

3.2.3 St Brendan's Ave

St Brendan's Avenue is a street linking Headford Rd and Prospect Hill via Bóthar na mBan. It is a narrow two-way single carriageway with narrow footpaths, the footpath on one side is not continuous. There are no existing designated cycle lanes. Refer to Figure 3-5 below.

Figure 3-5: St Brendan's Ave (Looking South) © Google Maps.

3.2.4 St Bridget's Place

St Brendan's Avenue is a street linking Headford Rd and Prospect Hill. It is a narrow two-way single carriageway with footpaths on both sides. There are no existing designated cycle lanes. Refer to Figure 3-6 below.

Figure 3-6: St Bridget's Place (Looking South) © Google Maps

3.3 Existing Traffic Flows

Classified turning count traffic surveys of 3No. junctions were completed by IDASO on behalf of GCC on Thursday 16th November 2023. Surveys on a Thursday during school term are generally considered representative of peak traffic times for residential developments and the extent of the surveys was agreed in advance with GCC engineering representatives. The traffic survey locations are shown in Figure 3-7 below.

1. Existing Public Car Park Priority Controlled Junction
2. Dyke Road/Headford Road/St Briget's Place Priority Controlled Crossroad Junction
3. Dyke Road/Headford Road/St Brendan's Avenue Signal Controlled Crossroad Junction

Figure 3-7: Turning Count Survey Locations 1-3

The traffic surveys undertaken found that the mean morning peak hour traffic flow at the existing junctions surrounding the development generally occurred between 08:00 and 09:00 (AM). The evening peak hour flow was found to be between 16:00 and 17:00 (PM). Junctions 2 & 3 show higher peak PCUs at the Interim lunchtime peak of 12:00-13:00. The surveyed peak hour turning PCUs at each surveyed junction are presented in Figures 3-8 to Figure 3-10.

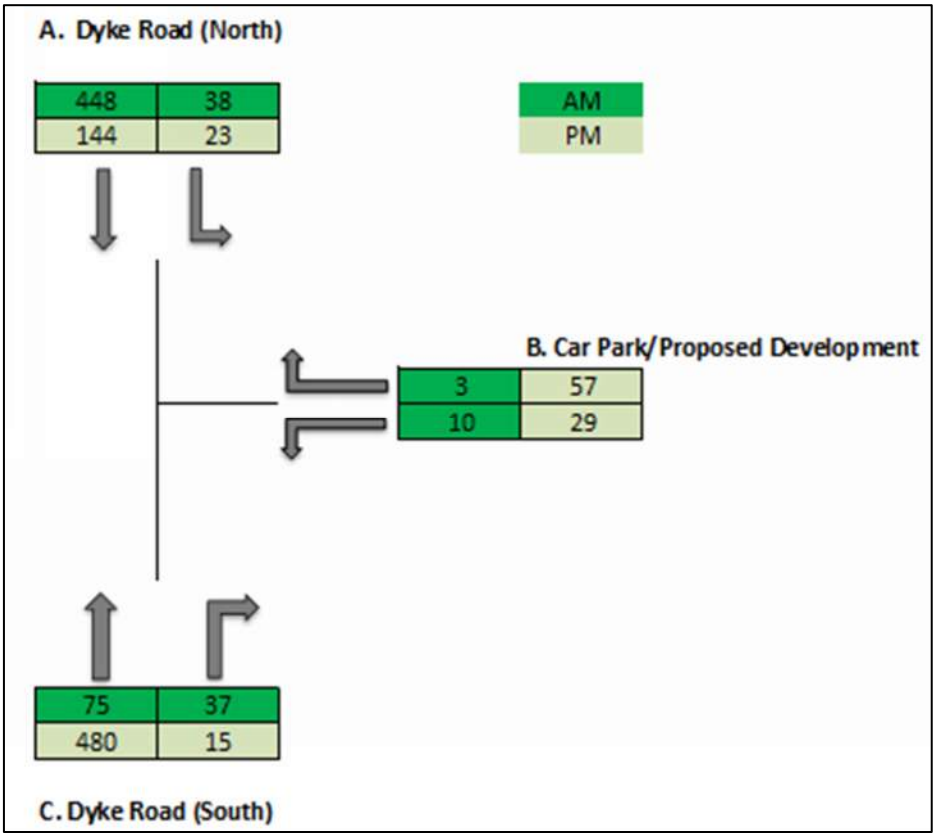


Figure 3-8 Junction 1 (existing Car Park) November 2023 Peak Hour Traffic Survey Results (PCUs)

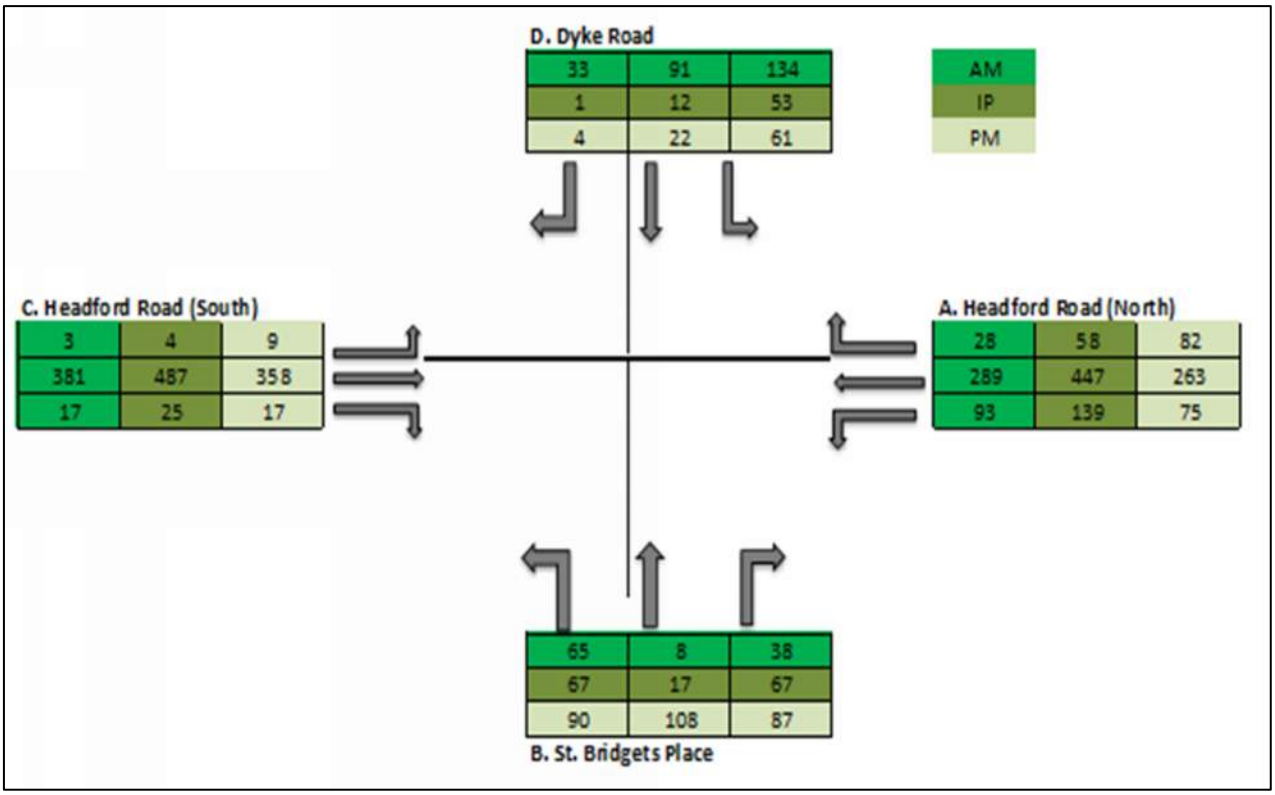


Figure 3-9 Junction 2 (Dyke Road/Headford Road – Priority Junction) November 2023 Peak Hour Traffic Survey Results (PCUs)

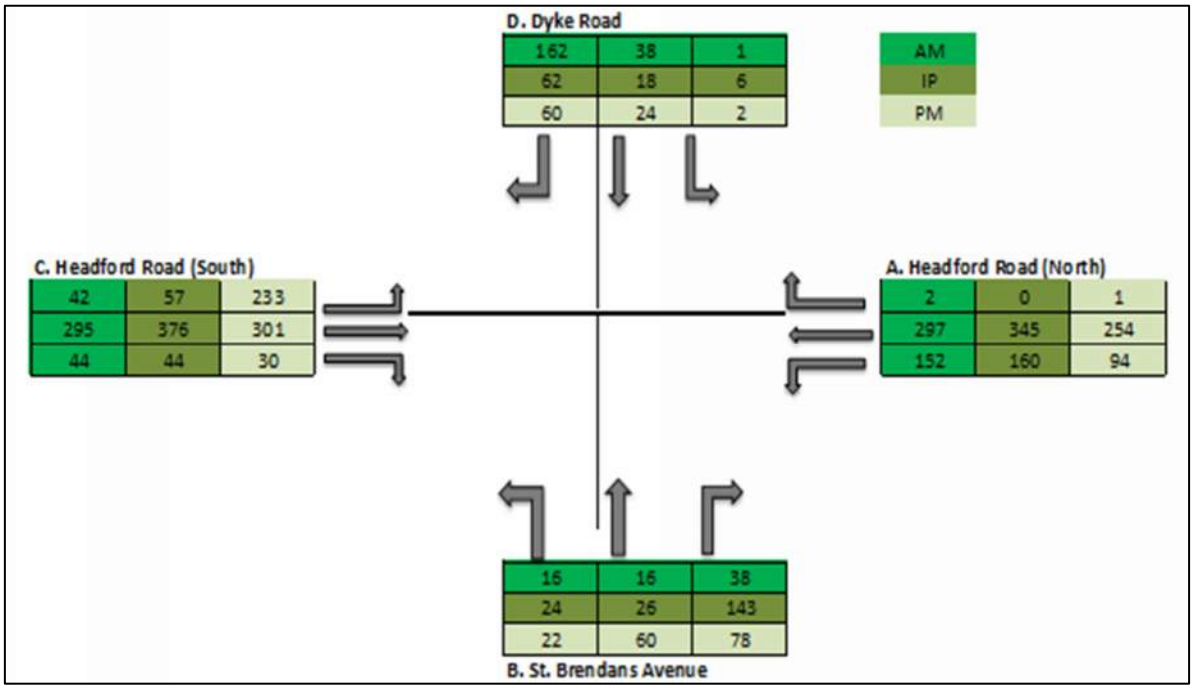


Figure 3-10 Junction 3 (Dyke Road/Headford Road – Signal Junction) November 2023 Peak Hour Traffic Survey Results (PCUs)

3.4 Existing Public Car Park Usage

The proposed development site is an active public car park. The proposed phase 1 development will require the partial removal of the existing public car park.

To accurately assess the impact of the removal of carparking spaces a carpark survey was carried out. The survey was carried out over three consecutive days from Thursday 16th to Saturday 18th November 2023 between the hours of 07:00-19:00. This gathered representation weekday and weekend usage data. The extent of the survey was agreed in advance with GCC engineering representatives.

The car park was divided into two separate areas closely resembling that of the reduced size due to the proposed development, see Figure 3-11 below. Car Park 1 (northern) consists of 311 spaces and Car Park 2 (Southern) consist of 243 spaces, providing a total of 554 available parking spaces that were surveyed.

Figure 3-11 Dyke Road Public Car Park Parking Survey Split – November 2023

For the entire survey, Carpark 2 had a higher occupancy than Carpark 1, with users choosing to use Carpark 1 only when Carpark 2 had started to fill up. The overall carpark tended to fill up from the southern end (city-side) first with user preference to park close to the Headford Road. Some users of Carpark 1 also tended to park close to the pedestrian access to Galway Retail Park located to the east. Figure 3-12 highlights the difference in occupancy rates between the two sections of the carpark on weekdays (Weekday Car Park 1 maximum occupancy = 16%; Weekday Car Park 2 maximum occupancy = 88%). This changes on Saturday with a higher rate of occupancy in the northern section (Carpark 1) on Saturday (Weekend Car Park 1 maximum occupancy = 42%; Weekend Car Park 2 maximum occupancy = 69%), see Figure 3-13.

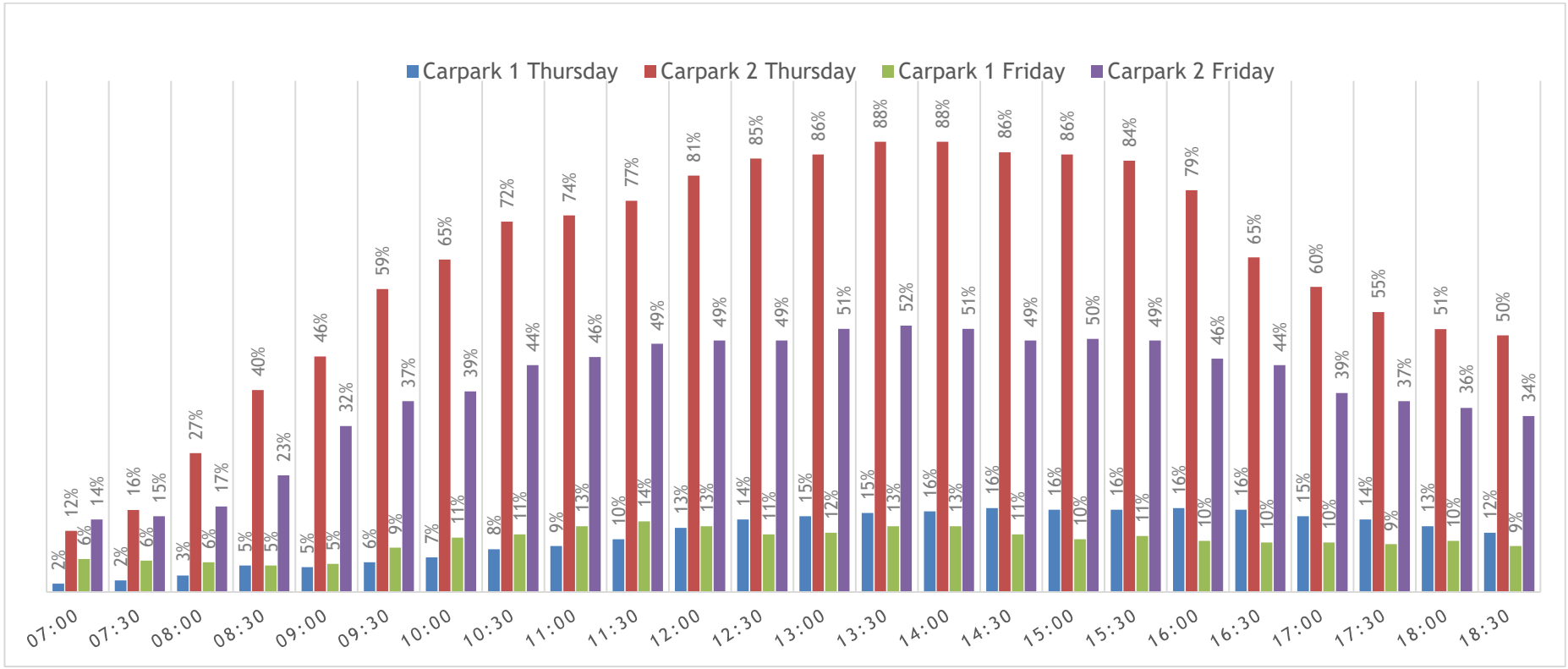


Figure 3-12 Dyke Road Public Carpark Occupancy Rates- Weekdays

The overall surveyed maximum capacity of the combined car parks was 263 on the weekday and 350 on the weekend.

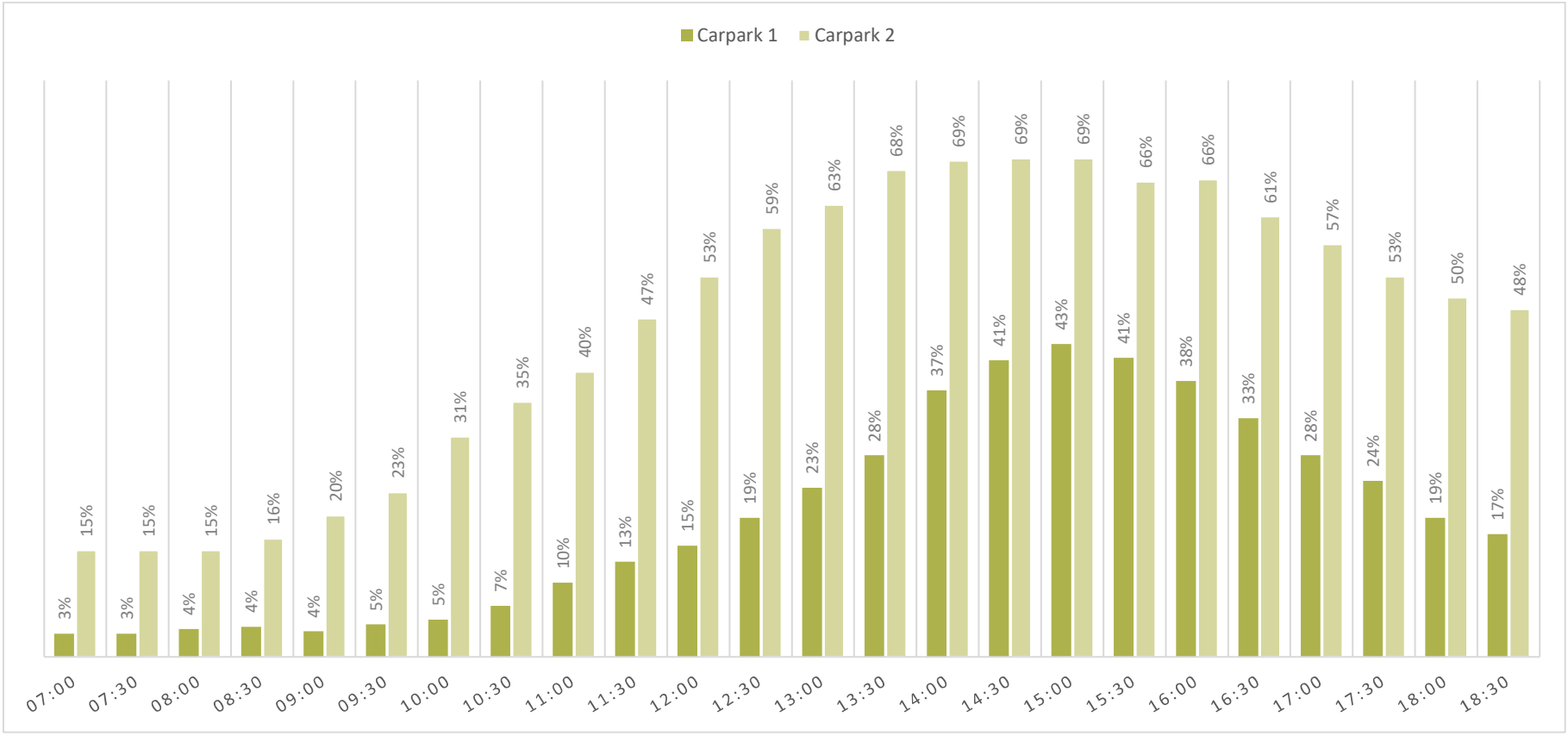


Figure 3-13 Dyke Road Public Car Park Occupancy Rates - Saturday

At peak time (2-4pm Weekday) there were 176 spaces unused in Car Park 1. The 1 No. existing accessible parking bay was never used during the survey. The 2 No. existing EV parking bays (both in Car Park 2) were each utilised once each weekday and not used on the Saturday (total 4 users during survey).

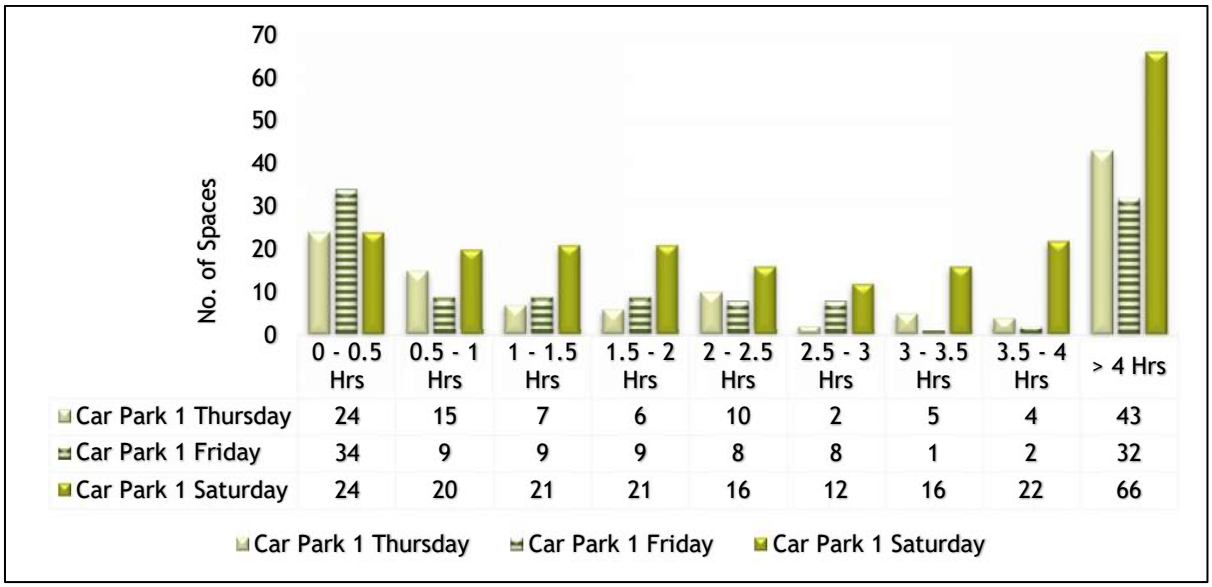
In general, users of the carpark tend to park closest to the city centre, Figure 3-14 highlights where users chose to park most frequently. Figure 3-14 shows what percentage of the time across the survey each space was occupied.

Spaces at the northern end of the carpark where almost never used with most spaces occupied for less than 10% of the survey time. In the northern section (Carpark 1) 171 spaces were occupied less than 10% of the survey time. Overall, 179 spaces in the carpark were in use less than 10% of the time and 276 spaces were in use less than 20% of the time.

Across the entire carpark, 112 spaces were not used during the survey, this includes 109 spaces in Car Park 1 not used at all during the 3-day survey.

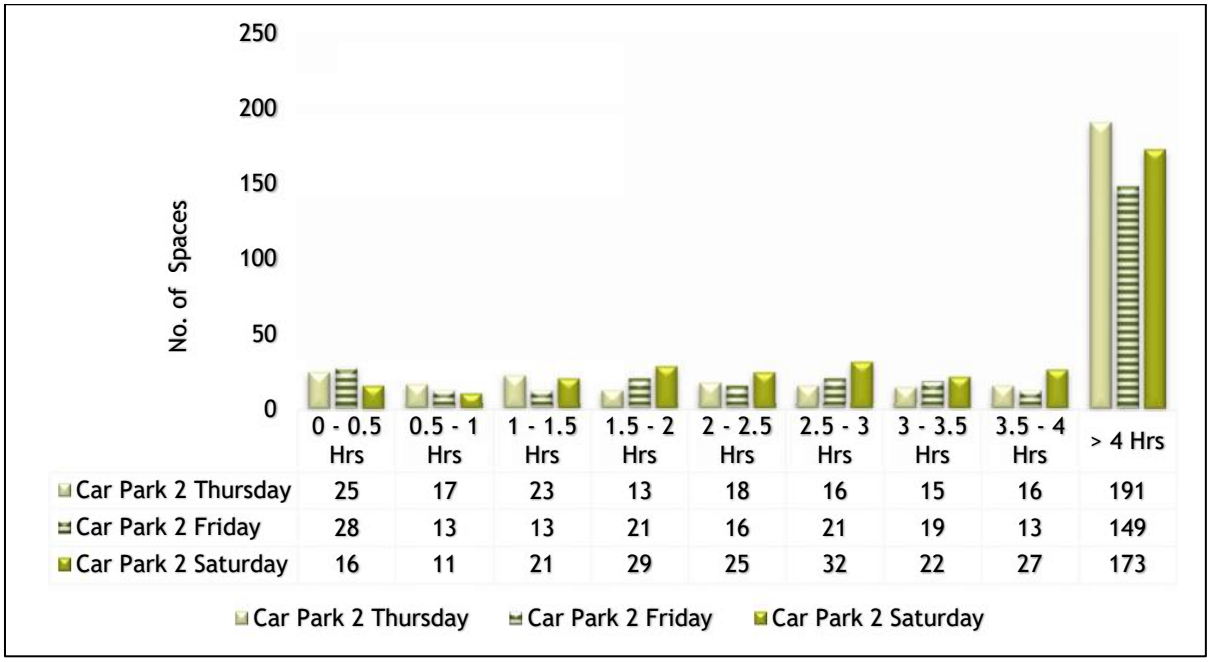
Figure 3-14 Dyke Road Public Carpark Average Usage

Additionally, the carpark survey recorded the length of time each space was occupied by individual cars i.e. when a car first used a space and how long that same car remained in that space. This is shown in Figure 3-15 and 3-16 below.



	0 - 0.5 Hrs	0.5 - 1 Hrs	1 - 1.5 Hrs	1.5 - 2 Hrs	2 - 2.5 Hrs	2.5 - 3 Hrs	3 - 3.5 Hrs	3.5 - 4 Hrs	> 4 Hrs
Car Park 1 Thursday	24	15	7	6	10	2	5	4	43
Car Park 1 Friday	34	9	9	9	8	8	1	2	32
Car Park 1 Saturday	24	20	21	21	16	12	16	22	66

Figure 3-15 Dyke Road Public Carpark 1 Duration of Stay



	0 - 0.5 Hrs	0.5 - 1 Hrs	1 - 1.5 Hrs	1.5 - 2 Hrs	2 - 2.5 Hrs	2.5 - 3 Hrs	3 - 3.5 Hrs	3.5 - 4 Hrs	> 4 Hrs
Car Park 2 Thursday	25	17	23	13	18	16	15	16	191
Car Park 2 Friday	28	13	13	21	16	21	19	13	149
Car Park 2 Saturday	16	11	21	29	25	32	22	27	173

Figure 3-16 Dyke Road Public Carpark 2 Duration of Stay

Users of both sections tended to be using the spaces for long periods of time. The southern section (Carpark 2) were generally long stay users with most parking early in the day and staying there for a long duration. A large amount of those parking in the southern section (carpark 2) stayed parked for a full workday i.e. 8 hours or more. This was 113, 60 and 63 spaces occupied longer than 8hrs on Thursday, Friday and Saturday respectively.

While it is proposed to remove 389 spaces from the overall existing public carpark the majority of these spaces are not being used throughout the day based on the survey carried out in November 2023.

3.5 Future Transport Proposals

Future transport proposals for Galway City are designed to enhance mobility, reduce congestion, promote sustainability, and improve the quality of life for its residents. These proposals encompass a wide range of initiatives, from public transport enhancements to active travel infrastructure. The relevant proposals to the proposed development are described further:

3.5.1 Galway City Council - City Development Plan

The proposed site is situated in the Galway City Council City Development Plan 2023-2029 area. The surrounding lands are mentioned in the development plan as "Headford Road Regeneration Sites". The Development Plan notes the development of a greenway connecting University of Galway and Menlough via the proposed Clifden Railway Pedestrian and Cycle Bridge and riverside walk along Dyke Road as a key objective. A Non-Statutory Public Consultation was carried out on the current proposals for this proposed bridge in March/April 2024, no further update has been made available since this date. See Figure 3-17 for location in relation to the proposed development site.

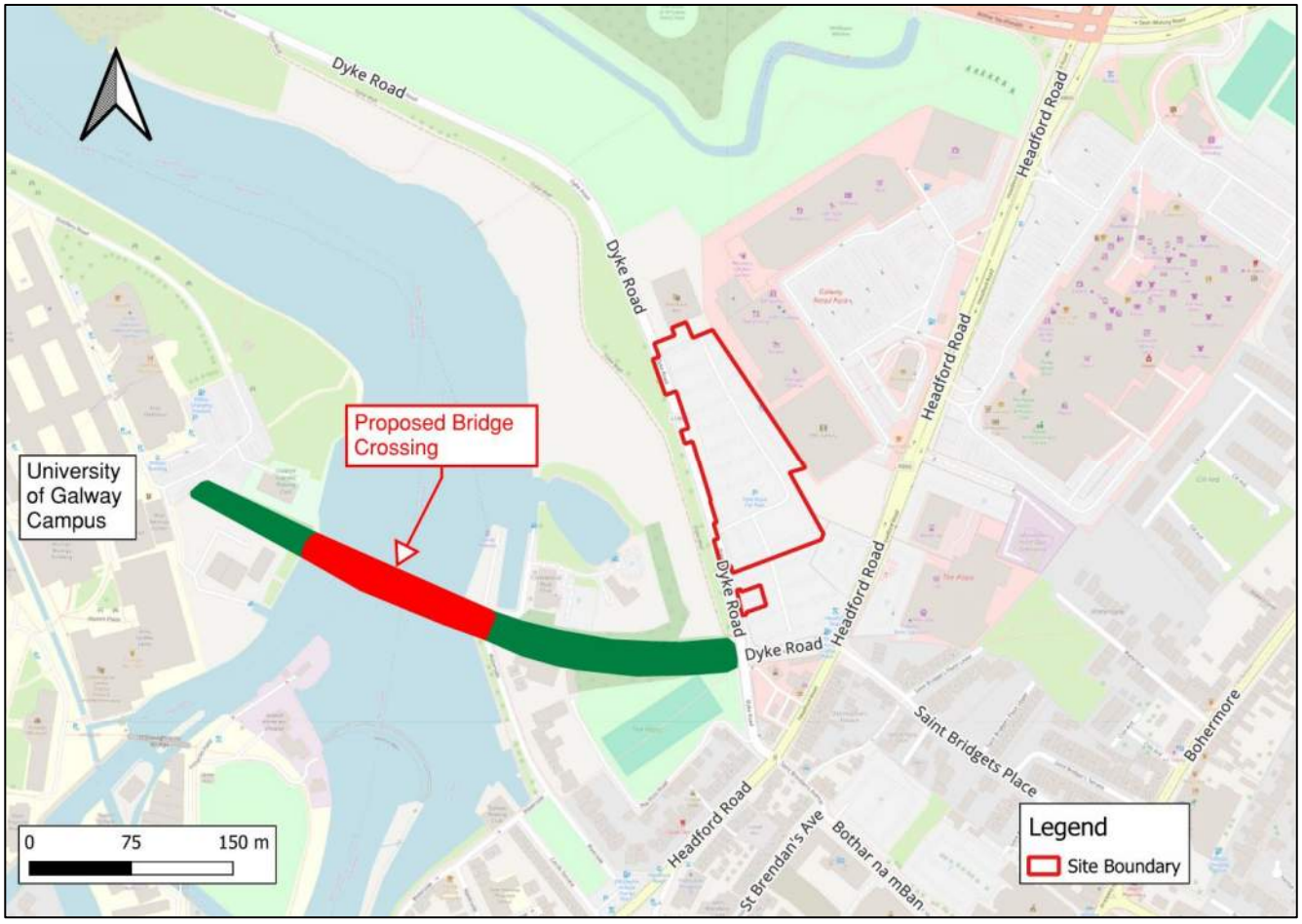


Figure 3-17 Proposed Clifden Railway Pedestrian and Cycle Bridge and Riverside walk along Dyke Road

Other such objectives in the Headford Road Regeneration area are to prioritise the improvement of active travel facilities, and reduction of car dependency.

3.5.2 Galway Transport Strategy

The Galway Transport Strategy has been developed by Galway County Council, Galway City Council and the NTA as a consolidated strategy for proposed transport proposals. The strategy encompasses all modes of transport and includes an implementation strategy.

Proposals local and relevant to the proposed development site include improvements to the junction of Bóthar na mBan and Headford Road as part of the Inner-City Access Route, Extension of the bus lane on Headford Road, the implementation of traffic calming measures along Dyke Road to improve safety for cyclists and works to Headford Road to improve safety for cyclists.

3.5.3 Galway City Cycle Network

The Dyke Road is referenced as a 'Feeder Network' in the Galway City Cycle Network connecting the secondary routes of Headford Road and Coolough Road. GCC have indicated that future cycle facilities on the Dyke Road are proposed on the dyke itself and no cycle lane provision on the road is currently required to meet their objectives for cycle provision in the area.

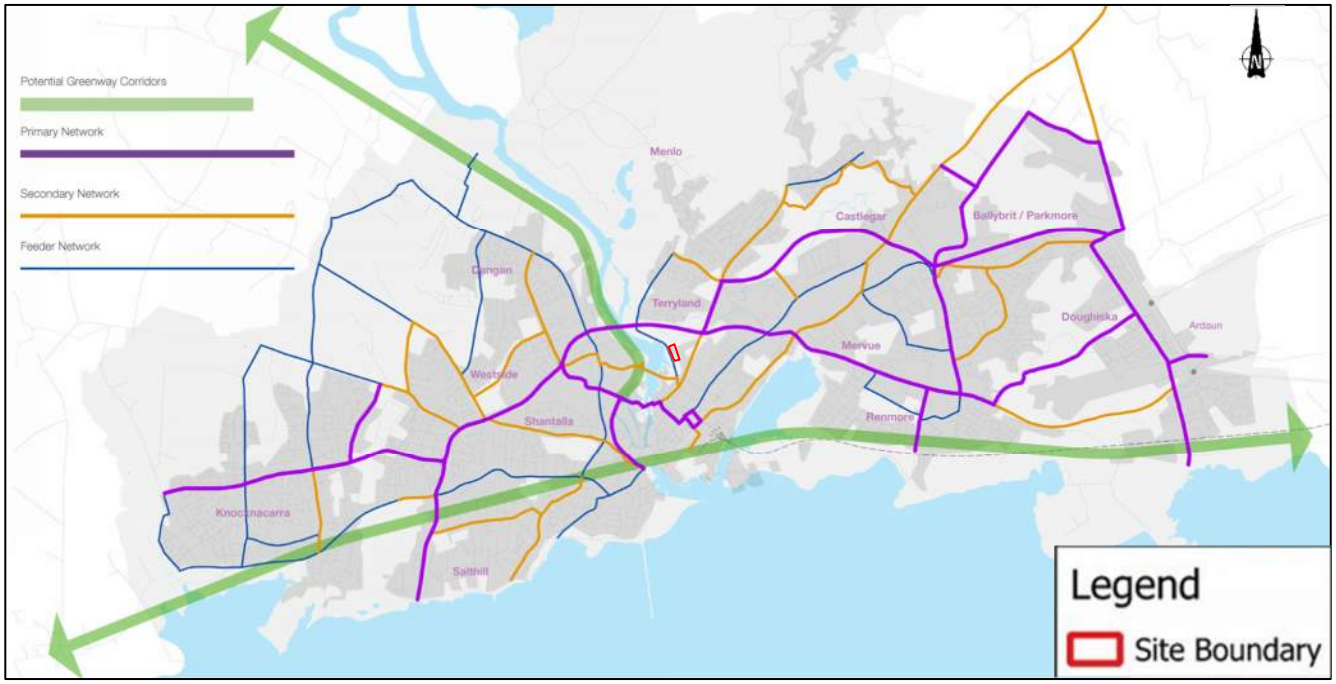


Figure 3-18 Galway City Cycle Network

3.5.4 BusConnects Galway

BusConnects is a key part of the Government's polices to improve public transport and address climate change in Galway. The aim of BusConnects is to "deliver an enhanced bus system that is better for the city, its people and the environment" (busconnects.ie).

Key components of this proposal include:

1. Enhanced Bus Network: Redesigning bus routes to provide more direct, frequent and reliable services. The new network will aim to reduce travel times and improve connections between different parts of the city and its suburbs.
2. Bus Priority Measures: Implementing dedicated bus lanes and priority signalling at traffic lights to reduce delays caused by traffic congestion.
3. Modern Fleet: Introducing a new fleet of low-emission buses to reduce the environmental impact of public transport.

Both Dyke Road and Headford Road are included on the Galway BusConnects scheme. Refer to Figure 3-19 below for an extract of the proposed bus network and associated development in relation to the proposed site. The relevant Bus Connects upgrades shown below are adjacent the Phase 2 works and do not affect the current site proposals. Planning permission was granted for this scheme in October 2024 (Reg. Ref. ABP 314597). This section of the BusConnects scheme is the **Cross-City Link (University Road to Dublin Road)**. The Scheme will form a central route for public transport, cyclists and better connect places of interest for pedestrians along an east-west corridor through Galway City centre. The aim of the Scheme is to provide improved walking, cycling and bus infrastructure on this key access corridor in Galway City, which will enable and deliver efficient, safe, and integrated sustainable transport movement along the corridor.

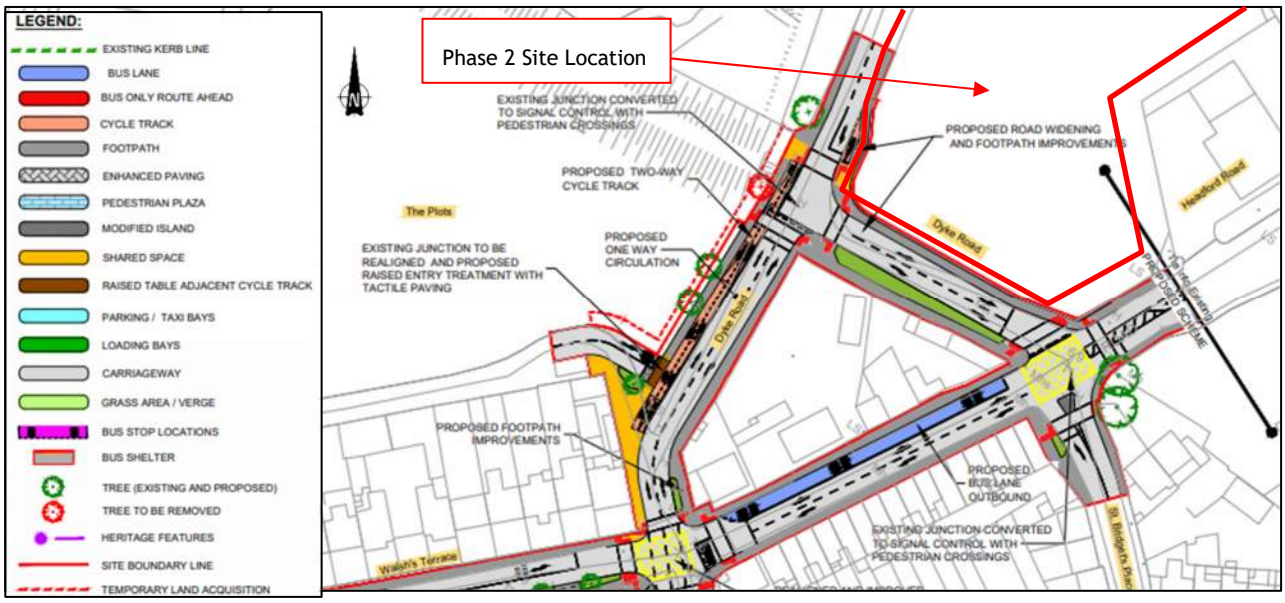


Figure 3-19 Extract from Bus Connects Route Beside Proposed Site (Ref: NTA Sheet 3)

The NTA's final Bus Connects network redesign was published in December 2023. Route 7 is relevant to the development site with a regular 20-minute service planned on that route. Refer to Figure 3-20 for further information.

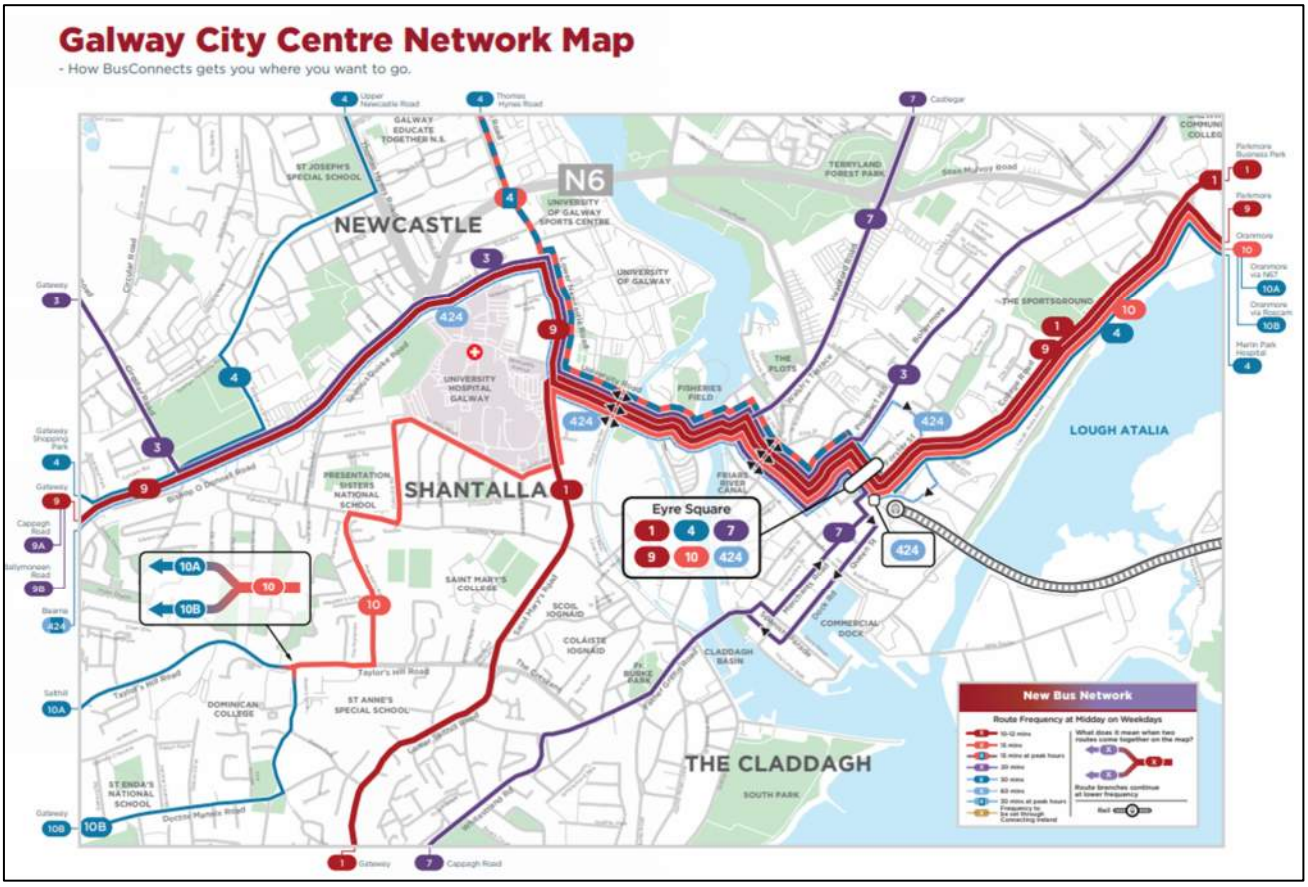


Figure 3-20: Extract from Bus Connects Galway City Centre Network Map

3.6 Coordination with Other Projects

In assessing the traffic impacts of the subject development, the following other developments were considered based on the current data available:

Planning ref 2460108: Permission for demolition of a vacant industrial structure (115 sq m), the external canopy structure (170 sq m) and the boundary walls along the southern, western and north-western boundaries of the site; and the construction of a 15 No. storey hotel (including part mezzanine at ground floor level) providing 189 No. bedrooms (7,514 sq m), incorporating food and beverage areas and provision of a single storey service building to the northwest of the site on a 0.2217 Ha site.

Planning ref 23248: Permission for development which consists of: Partial amalgamation of the existing licensed discount food store (Unit 1) and adjoining retail unit (Unit 2) on the ground floor and associated change of use of extended Unit 1 area to convenience retail. Amended floor areas as follows: Increase in Unit 1 floor area by 618m2 to provide a gross floor area of 1832m2 and Decrease in Unit 2 floor area by584m2 to provide a gross floor area by 629m2. Demolition of existing Unit 1 Entrance Pod (20 sq.m). Relocation of existing permitted signage on the front elevation. Provision of freestanding trolley bay. Alterations to external fenestration of Unit's 1 & 2. Reconfiguration and realignment of existing carpark. Relocation of the existing Unit 1 store entrance; and All associated site development works.

Planning ref 22259: Permission for development which consists of minor amendments to previously approved development (PL 20/184, ABP-309673-21). Demolition of an ESB Unit enclosure and construction of a seven/eight storey development including four number retail units a gym and student accommodation.

Planning ref 21219: Permission for development which will consist of construction of a new car wash and office units, including new advertisement signage to ground floor fascia at Side Elevation (West) and Front Elevation (South) including site and ancillary works.

Planning ref 2047: Permission for Large-scale, mixed-use development consisting of 376 no. apartments, retail units, café/restaurant/bar units, hotel, office use, childcare facility, car parking and other services and associated site works.

Planning ref 19107: Permission for new raw water intake works located on the east bank of the River Corrib, 100m downstream of Quincentenary Bridge to supply the Terryland Water Treatment Plant.

Planning ref 1847: Permission for construction of 27 no. duplex / apartments including 3 to 6 storey apartment block and all associated site development works and services.

None of the above considered planning applications will have a considerable impact on traffic generation in the area local to the proposed development site therefore no further traffic consideration of these proposed developments has been included in this report.

4 Proposed Development

The proposed development will consist of the construction of a new residential development of 219 no. apartment units and a childcare facility (approx. 241 sq m) in the form of 1 no. new residential block (5 - 9 storeys over lower ground floor level) with associated car parking, bicycle parking, public and communal open spaces, and all ancillary works on a site area of 1.144 ha.

The proposed layout for the development is detailed in the series of drawings by MOLA Architects and Murray & Associates Landscape Architects accompanying this report and an extract is included in Figure 4-1.

The proposed development includes for improved pedestrian facilities on the Dyke Road. A new pedestrian crossing will be provided on Dyke Road providing connectivity from the proposed development to the River Corrib.

A new raised boardwalk along the western elevation of the proposed building provides access for residents to their individual cores. The pedestrian routes and desire lines have been created to comply with the requirements indicated in the Draft Headford Road Framework Plan.

The layout of the proposed development requires the removal of a proportion of the existing public car park. 165 public car parking spaces will remain following the proposed development works. A new junction will be created with Dyke Road which requires minor modifications to the existing car park.

Existing access to the Black Box Theatre will remain unchanged.

4.1 Corrib Causeway Site Development Framework

The Proposed Development is part of an overall three phased masterplan which will deliver a residential-led, mixed-use development, refer to Figure 4-2. The current proposal is phase 1 with phases 2 and 3 to follow subject to separate development consent. Phase 2, an existing car park south of the site, is intended to be redeveloped for civic, commercial and cultural uses. If the existing Black Box theatre located north of the site is relocated, there is potential for the site to be developed into an additional residential block which would be Phase 3. Until redevelopment is confirmed, the current uses of the Black Box theatre and car parking will remain operational.

The overall Corrib Causeway vision document and the accompanying Draft Development Framework Plan have been subject to public consultation through website (https://corribcauseway.ie/). The development of a wider site has been split as follows:

Phase 1 (the Proposed Development)

Phase 2 (referred to as River Side Residential Neighbourhood)

Phase 3 (referred to as the Terryland Forest Residential Neighbourhood)

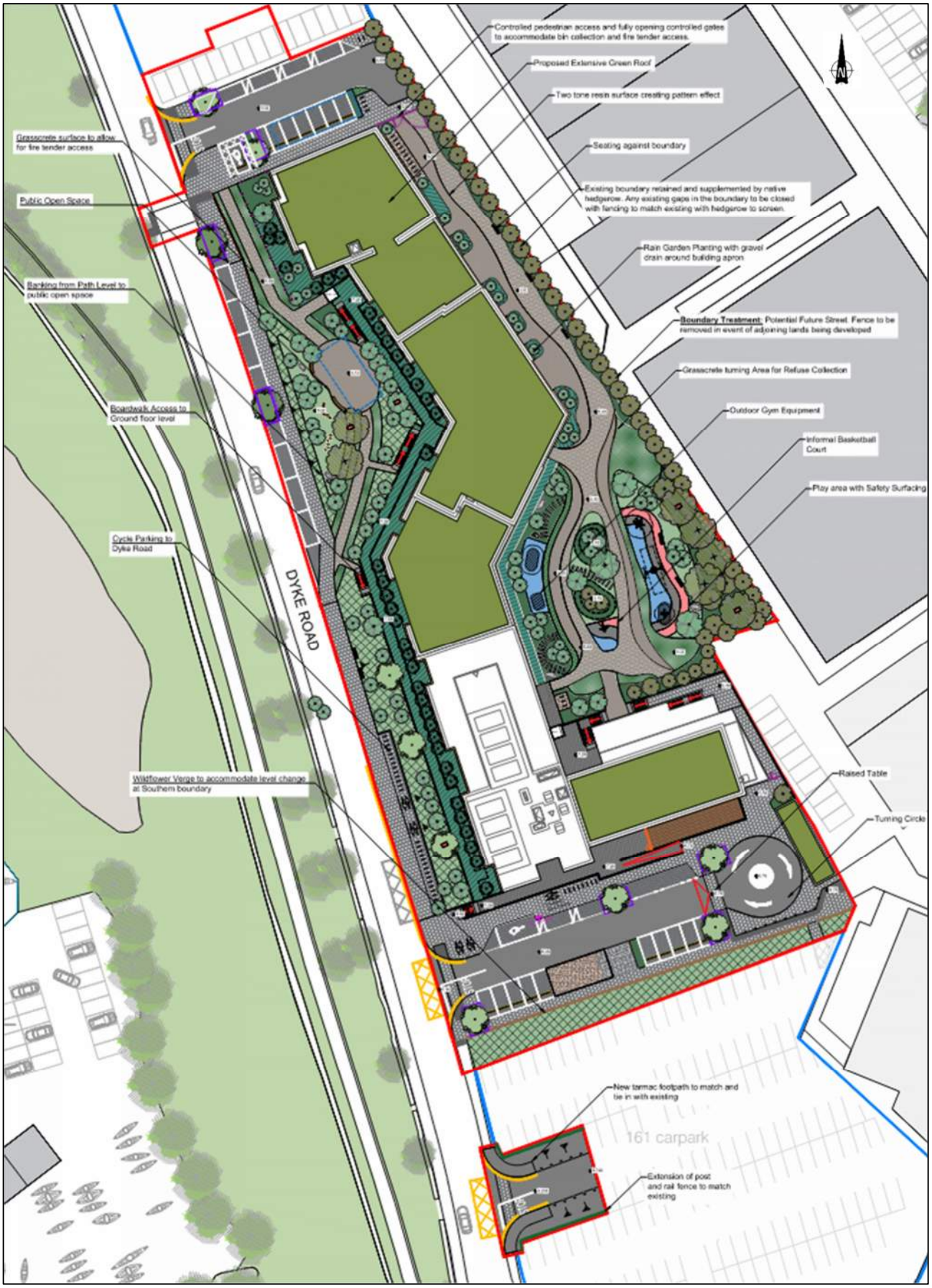


Figure 4-1 – Proposed Site Layout

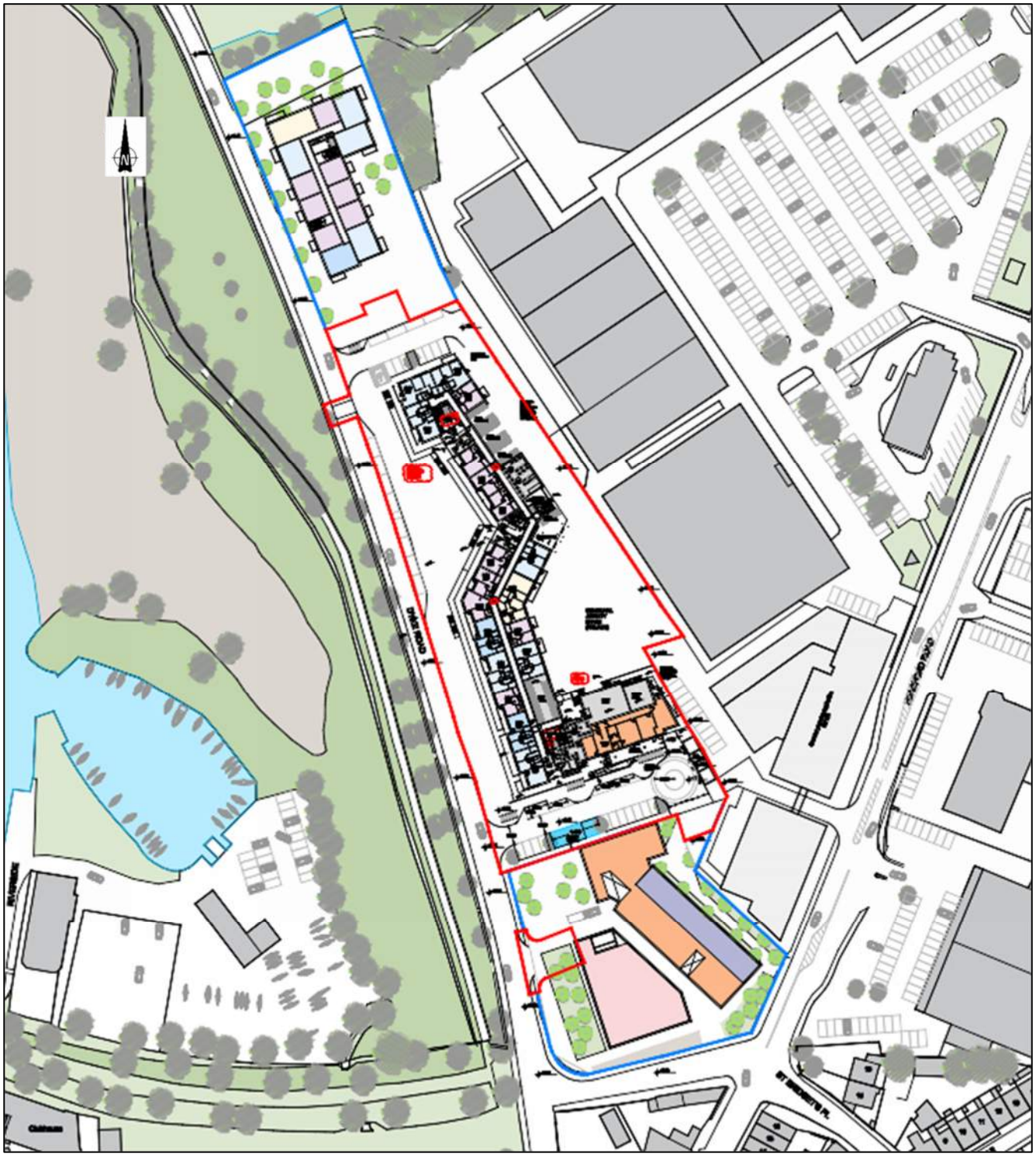


Figure 4-2 – Proposed Masterplan Layout

5 Vehicular Trip Generation

5.1 Proposed Development Generated Vehicle Trips

The purpose of this section is to determine the overall number of trips that will be generated by the proposed development. The proposed development includes apartments and a creche.

In order to estimate the likely volumes of traffic that will be generated by the proposed development, trip rates recommended by TRICS (Trip Rate Information Computer System) were extracted from the database and applied pro-rata to the relevant Gross Floor Area and number of apartments within the development. Full details of the TRICS analysis are reproduced in Appendix A.

Land Use	Calculation Factor		Trip rate				Additional Number of Trips			
			AM Peak		PM Peak		AM Peak		PM Peak	
	GFA (m^2)	No. of Units	AM Arriv	AM Depart	PM Arriv	PM Depart	AM Arriv	AM Depart	PM Arriv	PM Depart
Apartments		219	0.045	0.084	0.102	0.077	10	18	22	17
Creche	240		5.657	4.82	3.738	4.329	14	12	9	10
Total							23	30	31	27

Table 5-1 Estimated AM and PM peak hour traffic (PCUs) generated by proposed using TRICS

5.2 Reduced Trips with Removal of Public Car Park

The November 2023 car park survey information was utilised in order to approximate the number of trips that will be affected by the reduced public car park provision. Of the 554 spaces available during the survey on the Thursday when turning counts were carried out, 263 spaces were actually used. This equated to 89 AM Peak movements and 124 PM Peak movements at the car park access on that day.

The proposed development will reduce the capacity of the public car park by approximately 38% of the surveyed use to 165. Therefore, we predict the Peak Hour traffic to be reduced by the same proportion, -33 in the AM Peak and -47 in the PM Peak.

5.3 Traffic Generation Summary

Overall, with the proposed development, there will be a net minor increase in traffic on Dyke Road.

	AM Peak Predicted Movements	PM Peak Predicted Movements
Proposed Development Increase	+53	+58
Public Car Park Reduction	-33	-47
Overall Impact	+20	+11

Table 5-2 Estimated AM and PM peak hour overall traffic (PCUs) generated by proposed development

6 Modal Split

According to the Census 2022 for residents of the Galway City Council Local Authority Area the most common means of travel to work, school, college or childcare is driving a car at 29%. The next most common means of travel is by foot. Figure 6-1 below shows the full breakdown of modal split for Galway City.

The proposed development is situated in a central location and based off the existing use as a carpark used by commuting workers it can be assumed that residents of the proposed development will be more likely to choose walking as their primary means of transport.

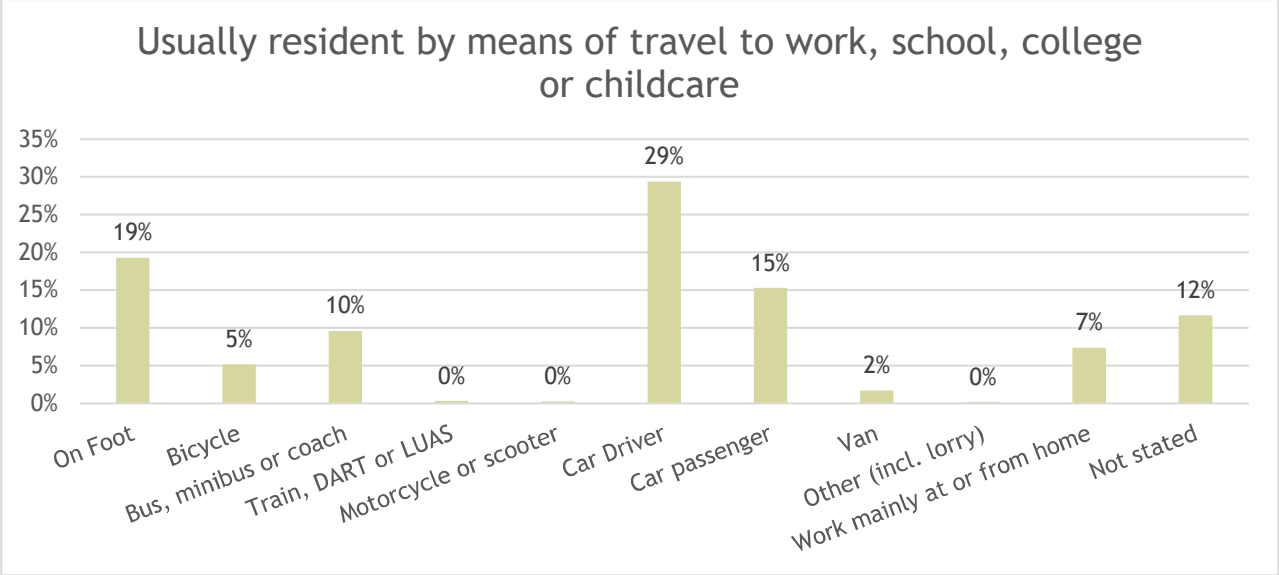


Figure 6-1 – Modal Split (Census 2022, Galway City Council Local Authority Area)

It should be noted that, when the census data for the city and suburbs is compared with the more local Small Area Map (Dyke Road Area, A068020002) the primary means of travel shifts towards walking at (43%) of respondents opting for this mode and only 16% opting for commuting by car (either driving, passenger or van). For the purposes of the TTA, the more conservative values from the overall Galway City Council Local Authority Area data are presented.

The Mobility Management Plan and Public Transport Capacity Assessment supplied alongside this report will provide a deeper breakdown of the modal split and expected transport trends in the local area.

7 Trip Assignment and Distribution

Currently the existing site is an active public car park. The distribution of the existing traffic flow is more distributed to and from the north of the Dyke Road, most likely avoiding the city centre traffic.

With the changed use of the development site to a mostly residential development and creche, the distribution of the traffic is expected to act differently than existing. For a conservative assessment of the worst-case impact on the surrounding road network, we have assumed that all traffic will utilise the city centre junctions of Dyke Road and Headford Road. This would mean all traffic accessing the development and the reduced capacity public car park form the southern direction.

8 Traffic Forecasting

In the absence of any specific local traffic growth information it was assumed that baseline traffic will continue to grow at the levels recommended by the TII in the Project Appraisal Guidelines (PAG) – Unit 5.3 - Travel Demand Projections publication by the TII (October 2021). The Project Appraisal Guidelines describe three levels of transport model functionality. The static model, which reflects traffic volumes on the basis of link flows, is best suited to the proposed development. Such models do not attempt any route assignment, and hence are applicable for networks where no change in traffic flows will result from a proposed scheme. We have used figures from Table 6.1 'Link-Based Growth Rates' for the Metropolitan area of Galway City.

The year of opening of the scheme was assumed to be 2026. A 15-year analysis period for the scheme would give a design year of 2041. The central growth factors from the Project Appraisal Guidelines – Unit 5.3 publication are appropriate and are detailed below:

- TII Link Based Growth Rates: Annual Growth Factor for 2016-2030 = 1.0169(LVs) and 1.0217(HVs)
- TII Link Based Growth Rates: Annual Growth Factor for 2030-2040 = 1.0097(LVs) and 1.0182(HVs)
- TII Link Based Growth Rates: Annual Growth Factor for 2040-2050 = 1.0095(LVs) and 1.0220(HVs)

With regards to the volume of traffic using the road, generally the passenger car is adopted as the standard unit and other vehicles are assessed in terms of PCU's. Cars and Light Goods Vehicles are grouped together as Light Vehicles (LV). All other Goods Vehicles, Buses and Coaches are defined as Heavy Vehicles (HV).

Estimated future baseline traffic flows on the road network in the vicinity of the proposed development were calculated by applying these factors to the November 2023 surveyed flows.

9 Assessment and Road Impact

The impact on the local external road network has been assessed in this TTA.

This involved examining the projected traffic flows on the local road network both 'with' and 'without' the proposed development in place. The morning and evening peak periods have been examined in order to assess the busiest case in terms of local traffic on the road network and traffic generated by the proposed development.

9.1 Junction Analysis

The junctions as detailed in previous sections, were each assessed for the proportion of generated development traffic against the existing background traffic. Where the generated development traffic accounted for less than 10% (5% for congested junctions) of the existing background traffic, TII document PE-PDV-02045 states that junction capacity modelling of that junction is not required as the predicted development trips generated are deemed to have very little impact on that existing junction.

See Table 9-1 below for the calculated percentage of development trips from the proposed development against the existing traffic. The traffic distribution discussed in Section 7 is the most conservative assessment.

Table 9-1 Proposed Development Traffic versus existing background traffic

Site	Junction	Trips Generated		Background Traffic 2023	%	Threshold	Modelling Required
1	Existing Public Car Park Priority Controlled Junction	AM	20	611	3.3%	10%	No
		PM	11	748	1.5%		
2	Dyke Road/Headford Road/St Briget's Place Priority Controlled Crossroad Junction	AM	20	1179	1.7%	5%	No
		PM	11	1176	0.9%		
3	Dyke Road/Headford Road/St Brendan's Avenue Signal Controlled Crossroad Junction	AM	20	1101	1.8%	5%	No
		PM	11	1158	0.9%		

As the table above shows the threshold for further capacity assessment is not met.

10 Road Safety

A Quality and Road Safety Audit for the development has been undertaken and supplied as a separate report. The recommendations of the audit have been incorporated into the current site design.

The Road Safety Authority no longer provides road traffic collision data based off localised areas and therefore the current road safety in the area cannot be accurately assessed.

11 Parking

11.1 Car Parking

The Sustainable Residential Development and Compact Settlements - Guidelines for Planning Authorities published in January 2024 set out policy and guidance in relation to the planning and development of urban and rural settlements, with a focus on sustainable residential development and the creation of compact settlements. They are accompanied by a companion non-statutory Design Manual that illustrates best practice examples of how the policies and objectives of the Guidelines can be applied. It outlines the evolution of wider policy since the publication of the Section 28 Guidelines (the Sustainable Urban Housing: Design Standard for New Apartments), including:

- National Planning Framework (2018)
- Housing for All (2021)
- Housing for All Action Plan Update (2022)
- National Sustainable Mobility Policy (2022)
- Climate Action Plan (2024)

It provides a summary of the emerging policy approach in relation to density and development standards for housing. The approach is aligned to NPF priorities for compact growth and to Action 9 of Housing for All priorities to provide a greater range of high-quality housing options. It also addresses a number of transport specific issues, including:

- *"The availability of car parking has a critical impact on travel choices for all journeys, including local trips. With ongoing investment in active travel and public transport across all urban areas and particularly in our cities and larger towns, the number of locations with access to everyday needs and employment within a short walk or cycle or via a regular public transport connection is increasing all the time. In areas where car-parking levels are reduced studies show that people are more likely to walk, cycle, or choose public transport for daily travel. In order to meet the targets set out in the National Sustainable Mobility Policy 2022 and in the Climate Action Plan 2023 for reduced private car travel it will be necessary to apply a graduated approach to the management of car parking within new residential development."*
- *"The approach should take account of proximity to urban centres and sustainable transport options, in order to promote more sustainable travel choices. Car parking ratios should be reduced at all urban locations, and should be minimised, substantially reduced or wholly eliminated at locations that have good access to urban services and to public transport."*

In accordance with the definitions outlined in the 'Sustainable Residential Development and Compact Settlements - Guidelines for Planning Authorities' (specifically Table 3.8), the Corrib Causeway Development is located within an 'Accessible Location' given its proximity to a 'High-Capacity Public Transport Node or Interchange'. Refer to the PUNCH Public Transport Capacity Assessment report included in the planning documentation for further site specific information.

> ***"High-Capacity Public Transport Node or Interchange***
> *Lands within 1,000 metres (1km) walking distance of an existing or planned high-capacity urban public transport node or interchange, namely an interchange or node that includes DART, high frequency Commuter Rail, light rail or MetroLink services; or locations within 500 metres walking distance of an existing or planned BusConnects 'Core Bus Corridor' stop..."*
>
> ***"Accessible Location***
> *Lands within 500 metres (i.e. up to 5-6 minute walk) of existing or planned high frequency (i.e. 10 minute peak hour frequency) urban bus services."*

As a result, the default position per specific planning policy requirements (SPPR) 3 of the Sustainable Residential Development and Compact Settlements Guidelines is that car-parking provision should be substantially reduced.

Similarly the 2023 Sustainable Urban Housing: Design Standard for New Apartments guidelines contain several transport-related issues relevant to the proposed development including:

- *A default policy for car parking provision to be minimised, substantially reduced or wholly eliminated in highly accessible areas such as 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;*
- *These locations are most likely to be in cities, especially in or adjacent to (i.e. within 15 minutes walking distance of) city centres or centrally located employment locations. This includes within 5 minutes walking distance of high frequency (min 10 minute peak hour frequency) bus services.*

As per the Galway City Council Development Plan 2023-2029, the proposed site lies within the area classed as 'Inner Residential Areas'. Part B Section 11.3.3 of this plan for Inner Residential Areas states:

- Maximum 1 car parking space per dwelling
- For new developments in the inner residential areas at locations that are served by public transport or close to high density employment areas, a reduced overall car parking standard can apply, in particular on grounds of sustainability or urban design.

The conclusion that the site can be defined as a central/highly accessible sustainable location is evident through various factors. Firstly, its location approximately 600m from the city centre enhances accessibility and promotes the feasibility of cycling and walking as viable transportation alternatives. Additionally, its proximity to key public transport hubs such as Galway (Ceannt) train station facilitates numerous public transportation options. Furthermore, the abundance of bus services in the vicinity of the proposed development also underscores the sites accessibility. Finally, the BusConnects development in the vicinity of the site is set to significantly bolster high frequency transportation systems.

It is proposed to provide 33 No. residential car parking spaces for the 219no. units, equating to 0.15 car spaces per unit. The lower provision is aimed at reducing the additional traffic loading in the area due to the good sustainable transport connectivity available in the area (refer to site specific Public Transport Capacity Assessment Report included in the planning documentation).

2 No. additional set down car spaces are provided in the southern car park for the creche.

The parking provision must be viewed in relation to 'Sustainable Urban Housing: Design Standards for New Apartments, 2023' and the 'Sustainable Residential Development and Compact Settlements - Guidelines for Planning Authorities' (January 2024). Therefore, the proposed provision of parking facilities is considered sustainable and balanced in terms of adequate provision of parking and promotion of more sustainable transport options.

Car Sharing Facilities

Car clubs are being widely used as a way of reducing the need for private car ownership. Communal cars are currently available at various locations throughout Galway City. Motorists can book slots using an online phone application. Cars are rented per hour with fuel, tax and insurance all included in the hire price. GoCar, DriveYou and Yuko currently offer Car Club services in Galway City. Each Car Club vehicle has the potential to replace the journeys of up to 15 private cars. This is based on European research for the car share market.

5No. parking spaces will be dedicated for car club use only in this car space provision. As an example, applying this rationale for 5 no. GoCar spaces results in an 'equivalent provision' of 26+(5x15) = 101 no. private car spaces which equates to 0.46 car parking spaces per residential unit (i.e. 101/219).

At this time, it is proposed to use the scheme operated by GoCar but an equivalent shared car scheme could be used. A letter of intent from GoCar is provided in Appendix B.

Accessible Parking Provision

2no. parking spaces (6% of the total number of spaces) will be designated accessible car-parking spaces in accordance with the GCC Development Plan 2023-2029. The accessible spaces are to be demarcated with yellow lines, a protected hatched area and appropriate road markings to identify these spaces. The proposed location of the disabled parking spaces are in close proximity to the building entrances.

Electric Vehicle Charging Points (EVCP)

A minimum of 10% will be EVCP as per the Galway City Development Plan standards. All spaces will be cabled for future EV use. This is in accordance with the *Statutory Instrument No. 393/2021 - European Union (Energy Performance of Buildings) Regulations 2021* requirements.

11.2 Cycle Parking

Cycling is to be significantly encouraged as part of the development. Cycling infrastructure is continually being introduced and improved around the development and within the whole of Galway City and its suburbs.

Many of the cycle lanes within Galway City and suburbs are shared with bus corridors connecting key locations, more and more designated cycle lanes with edge protection are being established within Galway City/ suburbs to ensure the safety and comfort of cyclists in accordance with the Cycle Design Manual.

With a proposed reduction in transportation emissions of 50% by 2030 based on the government's 'Climate Action Plan 2024' there is a major emphasis to make the shift towards active travel including cycling. With this emphasis will come investment by government to make cities like Galway more sustainable to live and work in.

Access to the development is a shared surface for vehicles, cyclists and pedestrians via the two new proposed access points of the development.

Cycle parking serving the proposed residential development is provided in accordance with the Galway City Council Development Plan 'Table 11.3' and the Sustainable Residential Development and Compact Settlements - Guidelines for Planning Authorities. The applicable cycle parking standards are noted in Table 11-1 below:

Table 11-1: Cycle Parking Minimum Requirements

Type	No units	Requirement	Total Requirement
Apartments (Long Stay)	219 (339 bedroom)	1 per bedroom	339
Apartments (Short Stay)	219	1 per 5 units	44
Creche		25% car park spaces	8
Total			393

There are 465 bicycle parking spaces proposed for the proposed development. For details and distribution of the cycle parking facilities throughout the proposed development, please refer to the architectural site layout plans.

25 cycle spaces (5.5%) are provided as cargo bike parking/larger non-standard spaces and thus satisfies the requirement that 5% of cycle spaces be 'Universal Design Vehicle Spaces' in line with Section 6.3 of the NTA's Cycle Design Manual.

Cycle charging points are also included in the site layout.

The cycle parking facilities and their utilisation will be monitored to determine actual vs forecasted demands and amendments to the cycle parking arrangements will be actioned as required as part of the on-going mobility management strategy for the development.

11.3 Parking Summary

The proposed vehicular and cycle parking quantum associated with the Phase 1 development is designed to facilitate and encourage a positive modal shift at the development towards alternative sustainable modes of transport in the interest of compliance with the following policies:

- The National Sustainable Mobility Policy
- Climate Action Plan 2024
- National Investment Framework for Transport in Ireland (NIFTI)
- Sustainable and Compact Settlements Guidelines for Planning Authorities
- The Sustainable Urban Housing: Design Standards for New Apartments' (July 2023)
- Galway City Council Development Plan 2023-2029

The reduced car parking provision is justified on the basis of existing modal split patterns in the area, the availability of public transport, the provision of car sharing facilities and a generous provision of cycle parking facilities as outlined in detail above.

12 Public Transport, Pedestrians/ Cyclists

To ensure future transport sustainability and to endeavour to make new developments as accessible as possible to travel by other modes of transport, an assessment has been made of the proposed and existing pedestrian, cyclist and public transport facilities.

A detailed Mobility Management Plan is also provided as a separate report with this planning application.

To adequately assess the available public transport in the locality a Public Transport Capacity Assessment (PTCA) has been provided in addition to this TTA.

12.1 Public Transport

12.1.1 Train Services

Galway (Ceannt) train station is located 800m walk from the proposed development.

The train station is the terminus of the line and regularly has direct services to Dublin and to Limerick (via Ennis). Passengers can avail of services too Cork Waterford and Tralee Via connections in Limerick.

12.1.2 Bus Services

The central location of the development means that there are many bus stops within 500m walking distance of the development. Table 12-1 below shows local bus stops and routes serving them.

Table 12-1: Local Bus Stops and Routes

Bus Stop ID	Name	Routes	Walking Distance	Average Walking time
523721	Headford Rd	407	300m	4 min
523021	Francis Street	402, 404, 405, 407, 411	550m	7 min
522571	University Rd	402, 404, 405, 410, 411 ,412	750m	10 mins
522331	Eyre Square	401, 402, 404, 405, 407, 409, 410, 411 ,412	650m	9 mins
N/A	Fairgreen Bus Station	401, 404, 409	550m	9 mins
N/A	Ceannt Bus Station	401, 404, 409	800m	11 mins
523691	College Rd	401, 404, 409	850m	13 mins

12.2 Pedestrians

The proposed development is located centrally in the city with many services in walking distance. The proposed BusConnects scheme will include for improved footpaths and cycle lanes in the area. Table 12-2 below shows local destination points and walking distances.

Table 112-2: Local Destination Points and Walking Distances/Times

Name	Walking Distance	Average Walking time
Galway Retail Park	300m	4 min
Galway Shopping Centre	450m	6 min
Eyre Square	650m	9 min
Galway (Ceannt) train station	800m	11 mins
University of Galway	1km	14 mins
University Hospital Galway	1.2km	17 mins
Spanish Arch	1.2km	17 mins

The proposed development includes for improved pedestrian facilities on the Dyke Road. A new raised boardwalk provides access for residents to their individual cores. The pedestrian routes and desire lines have been created to comply with the requirements indicated in the Draft Headford Road Framework Plan.

12.3 Cycling

The central location of the development means cycling will often be as quick or quicker than driving to many locations. See Table 12-2 for local destinations and distances to the proposed development. Cycling enhances both the environment and quality of life of the surrounding area. Cycling has an important transport role, in reducing car usage. The consequential reduction in emissions improves air quality, aids the ecological system and results in less noise pollution.

The proposed development incorporates a considerably high quantum of cycle parking for the residents.

Headford Road has cycle lanes and Dyke Road is designated as a feeder route due to the low vehicular traffic. The permitted and proposed BusConnects scheme incorporates cycle lanes with the enabling works and several improvements are noted in the future transport proposals discussed in Section 3.5.

13 Construction Stage Traffic

13.1 Construction Phase

The volumes of traffic that will be generated during the construction phase of the proposed development will be small in comparison to the existing traffic volumes.

The construction stage therefore does not require quantitative traffic analysis, however in order to minimise disruption due to construction, wheel washing facilities will be installed at the site access during the construction stage to reduce the amount of dirt and debris carried on to the public roadway during the excavation operations, etc.

13.2 Construction Traffic Management Plan

The successful contractor will be required to prepare a Construction Transport Management Plan (CTMP) prior to the commencement of development and implement the plan for the duration of the works. This will involve consultation with the local authority and/or the Gardaí, and once agreed will be adhered to for all aspects of construction that involves movement of vehicles in and out of the site.

Construction traffic travelling to the site will use the Dyke Road for access. The dominant traffic route will be via the N6/Headford Road to Dyke Road. All deliveries shall be provided with instructions/directions on accessing the site from the Dyke Road, and deliveries shall be scheduled outside of peak commuting hours.

Vehicle parking for construction personnel will be accommodated within the development site. To the extent possible, personnel will also be encouraged to use public transport, and information on local transportation will be published on site.

The eastern existing public footpath on Dyke Road is likely to be impacted by the project however there is an alternative footpath on the western side of Dyke Road

Construction operations on site and deliveries to the site will be in accordance with the Construction and Environmental Management Plan (CEMP).

The preparation of the CTMP will entail an assessment of existing nearby employment, educational, recreational and commercial facilities to establish the peak times for vehicles, cyclists and pedestrians. This information would be used to develop the optimum start/finish/delivery times to minimise impact on these existing facilities.

Construction vehicle movements will be minimised through:

a. Consolidation of delivery loads to/from the site and manage large deliveries on site to occur outside of peak traffic periods;
b. Use of precast/prefabricated materials where possible;
c. ‘Cut’ material generated by the construction works will be re-used on site where possible, through various accommodation works;
d. Adequate storage space on site will be provided;
e. A strategy will be developed to minimize construction material quantities as much as possible;

Construction staff vehicle movements will also be minimized by promoting the use of public transport, shared use of vehicles, cycling and walking.

14 Summary and Conclusion

1. The proposed development consists of a new residential development of 219 no. apartment units and a childcare facility (approximately 241m^2). The proposed development is part of an overall three phased Corrib Causeway Masterplan. The current proposal is phase 1 with phases 2 and 3 to follow subject to separate development consent.

2. The layout of the proposed development requires the removal of a proportion of the existing public car park. 165 public car parking spaces will remain following the proposed development works.

3. For the purposes of our assessment, the TRICS database was consulted to provide an equivalent trip rate for the proposed development site.

4. It is proposed to access the proposed development via two new access points from Dyke Road, Galway. The existing site access will no longer be in use.

5. An assessment of the surrounding existing junctions was carried out in accordance with Transport Infrastructure Ireland Guidelines. The assessment found that the predicted development trips generated by the proposed development will have very little traffic impact on the existing junctions.

6. Parking spaces for the proposed development have been provided to meet the requirements set out in the Galway City Council Development Plan as well as national policy relating to parking provision for residential developments located in sustainable transport locations.

7. Secure cycle parking facilities have been provided within the development which exceed the requirements set out in the Galway City Council Development Plan.

Appendix A TRICS Data

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
TOTAL VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	10	118	0.031	10	118	0.064	10	118	0.095
08:00 - 09:00	10	118	0.045	10	118	0.084	10	118	0.129
09:00 - 10:00	10	118	0.059	10	118	0.057	10	118	0.116
10:00 - 11:00	10	118	0.043	10	118	0.056	10	118	0.099
11:00 - 12:00	10	118	0.059	10	118	0.072	10	118	0.131
12:00 - 13:00	10	118	0.046	10	118	0.053	10	118	0.099
13:00 - 14:00	10	118	0.061	10	118	0.059	10	118	0.120
14:00 - 15:00	10	118	0.067	10	118	0.072	10	118	0.139
15:00 - 16:00	10	118	0.087	10	118	0.070	10	118	0.157
16:00 - 17:00	10	118	0.102	10	118	0.077	10	118	0.179
17:00 - 18:00	10	118	0.099	10	118	0.072	10	118	0.171
18:00 - 19:00	10	118	0.070	10	118	0.061	10	118	0.131
19:00 - 20:00	2	143	0.077	2	143	0.060	2	143	0.137
20:00 - 21:00	2	143	0.039	2	143	0.021	2	143	0.060
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.885			0.878			1.763

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:	24 - 467 (units:)
Survey date date range:	01/01/16 - 06/06/23
Number of weekdays (Monday-Friday):	10
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

Appendix B Go Car Letter of Intent

The Land Development Agency
Dyke Road
Galway City

19th June 2024

To Whom It May Concern,

This is a letter to confirm that GoCar intends to provide a car sharing service in the Corrib Causeway, Dyke Road, Galway City. GoCar representatives have discussed the project with representatives of The Land Development Agency and are excited to provide a car sharing service at this location. The development consists of 219 unit dwellings, made up of 219 apartments within the Dyke Road, Galway City area. The developer proposes to have available five (5) spaces for vehicles for public service at surface level within the development.

GoCar is Ireland's leading car sharing service with over 60,000 members and over 950 cars and vans on fleet. Each GoCar which is placed in a community has the potential to replace the journeys of up to 15 private cars. The Department of Housing's Design Standards for New Apartments - Guidelines for Planning Authorities 2018 outline: "For all types of location, where it is sought to eliminate or reduce car parking provision, it is necessary to ensure... provision is also to be made for alternative mobility solutions including facilities for car sharing club vehicles."

Carsharing is a sustainable service. By allowing multiple people to use the same vehicle at different times, car sharing reduces car ownership, car dependency, congestion, noise, and air pollution. It frees up land which would otherwise be used for additional parking spaces. Most GoCar users only use a car when necessary and walk and use public transport more often than car owners.

By having GoCar car sharing vehicles in a development such as this, the residents therein will have access to pay-as-you go driving, in close proximity to their homes, which will increase usership of the service.

I trust that this information is satisfactory. For any queries, please do not hesitate to contact me.

D Ralston

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