CHAPTER EIGHTEEN MATERIAL ASSETS – TRAFFIC & TRANSPORT

18.1. INTRODUCTION

This chapter of EIAR has been undertaken and prepared in support of the proposed development's planning application. This document outlines the transport considerations associated with the proposed development, including a review of the existing transport context, a description of the transport proposals for the proposed development and an assessment of the impact of those proposals.

18.2. ASSESSMENT METHODOLOGY

The proposed application site (Phase II) is part of a phased development proposal for a significant city centre, regeneration area or Masterplan Site (MS). This MS is divided into four different phases of delivery as detailed in Section 1.6.3 in Chapter 1.0 Introduction. The overall MS layout which illustrates the indicative layout of the subject site and adjoining lands in the ownership of the applicant is displayed in Chapter 1.0, Figure 1.4 and full details of the proposed development phases are provided in Chapter 2.0. The assessment takes a holistic approach and examines the wider MS area, taking into account the proposed future phases of development based on the available information.

The assessment methodology for the traffic-related impact is based on the guidelines provided in TII Traffic and Transport Assessment Guidelines (PE-PDV-02045) [1], published in May 2014. Based on the guidelines, the assessment involved the following:

Baseline Transportation Review: Undertake a review of current planning policies and objectives, existing public transport services, walking and cycling network and existing roads infrastructure;

Baseline Traffic Flow Review: Undertake site visits to review current traffic conditions and to make observations on same. Identify key junctions where traffic count survey information is required;

Future Transport Infrastructure Review: Undertake a review of current transport policies, plans and strategy to identify future short, medium and long term transport proposals which may have a material impact on the travel behaviour associated with the proposed development;

Development Proposals Review: Review the proposed development in terms of provision for access by walking, cycling, public transport and car;

Transport Characteristics Review: Undertake an assessment of the likely modal share, trip generation, assignment and distribution having regard to existing and potential future traffic patterns on the local road network;

Identification of Local Road Network Proposals: Identify proposed junction works on the local road network in terms of new junctions, improvements for pedestrians, cyclists and traffic at existing junctions;

Assessment of Road Impact – Operational Phase: Undertake an assessment of the key junctions during the operational base year, opening year, opening year plus five and opening year plus fifteen assessment years for both 'without development' and 'with development' scenarios in order to determine future operation and any necessary mitigation measures required; and,

Assessment of Road Impact – Construction Phase: Undertake an assessment of the potential traffic generation during the construction phase and assess the percentage traffic impact likely to occur and to identify any appropriate mitigation.

18.3. EXISTING RECEIVING ENVIRONMENT

18.3.1. Site Location

Cleeves Riverside Quarter has a unique location, situated on the northern bank of the River Shannon, yet also being assigned part of the City Centre Area. The river visually separates the site from Limerick city centre which allows it to form a stronger relationship with the immediate context west of the river, including residential neighborhoods, educational facilities and public open space, including the Westfield Wetlands, as shown in Figure 18.1

Figure 18.1 Cleeves Riverside Quarter development site in the context of Limerick City and hinterlands (Maps data: Google, ©2025 Airbus)

The site consists of two separate parts, located north and south of North Circular Road, comprising Cleeves, a former industrial site which is bisected by the North Circular Road; the Salesians Convent and Secondary School, which is located to the north of the Cleeves site; and St. Michaels Rowing Club located between the river and O'Callaghan Strand.

The site is bounded by Stonetown Terrace Road to the northeast; O'Callaghan Strand to the southeast; Condell Road (R527) to the southwest; and, Salesian Primary School and the 'Fernhill' residential estate to the northwest and west respectively. The planning boundary of the site is shown in Figure 18.2

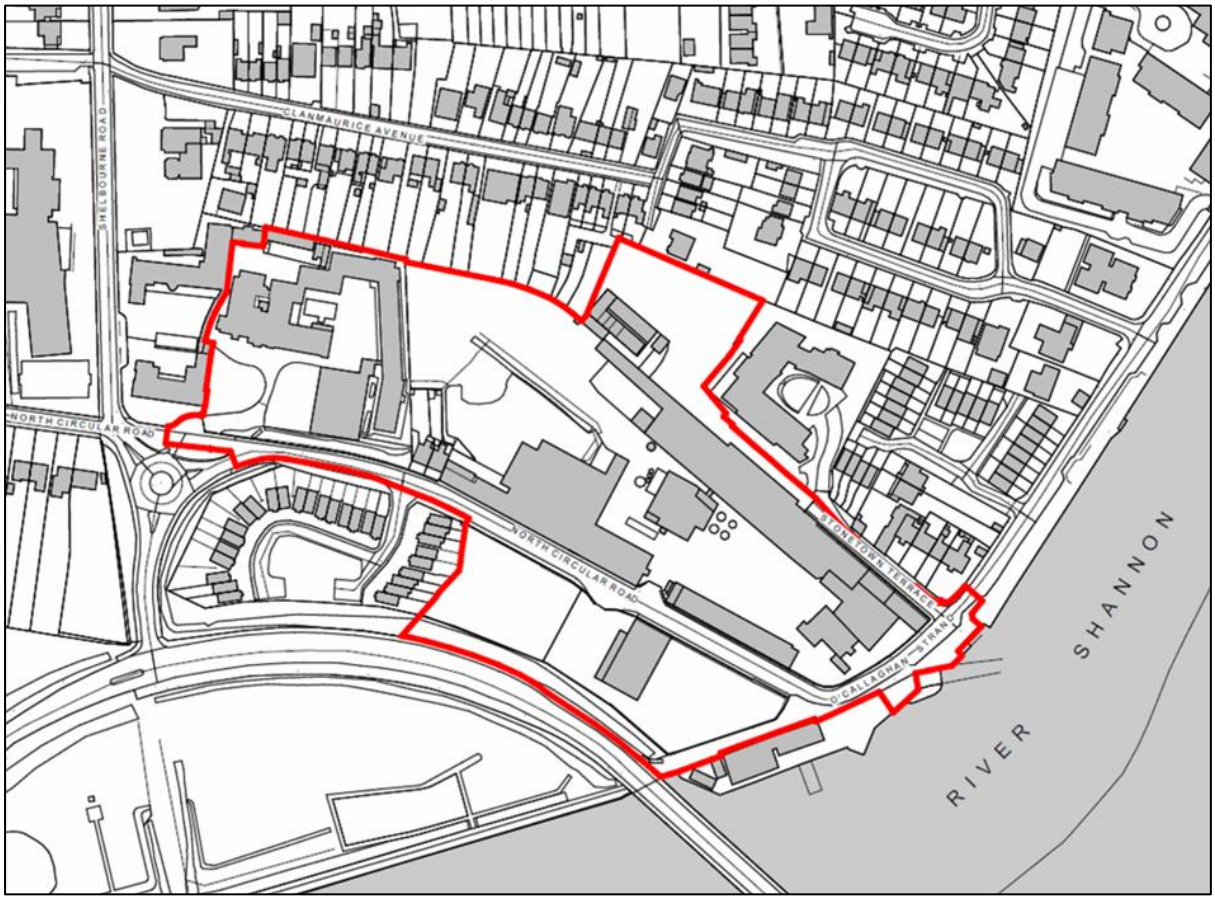

Figure 18. 1 Planning boundary

18.3.2. Surrounding Road Network

The road network surrounding the site is made up of regional and local roads, as shown in Figure 18.3 and described below:

- R445 Ennis Road is part of a regional road that commences at Sarsfield Bridge / Sarsfield Street and continues in a northwestern direction out of Limerick city centre where it connects into the wider national road network at a junction with the N18. Access to Shannon Airport and Galway is provided via this junction.
- R464 Shelbourne Road Lower intersects with the R445 Ennis Road at its northern extent and continues south towards the Salesians roundabout. It provides access to residential and educational facilities. At its intersection with the R445 Ennis Road, the R464 continues northeast out of Limerick city as Shelbourne Road.
- R527 Condell Road is part of a regional road that runs adjacent to the site. It runs roughly parallel to the R445 Ennis Road and provides an alternative route into Limerick city centre, connecting into the R527 Shannon Bridge.
- R527 Shannon Bridge is part of a regional road that crosses the Shannon Bridge, connecting into R527 Condell Road at its northwestern extent and the Shannonbridge Roundabout at its southeastern extent.
- R857 Lower Mallow Street connects the R527 Shannon Bridge to the central business district

of Limerick where it intersects with R526 Henry Street and terminates at R527 O'Connell Street.

- North Circular Road is a local distributor road that bisects the site. At its southeastern extent it connects into O'Callaghan Strand. Heading west from the site, it provides access to Fernhill residential estate, intersects with the R464 Shelbourne Road Lower and continues around a residential area before linking back into the road network surrounding the site at a junction with Clanmaurice Avenue and the R464.
- Stonetown Terrace is a local road that forms the northeastern boundary of the site. Stonetown Terrace provides access to a residential apartment block.
- O'Callaghan Strand forms the southeastern boundary of the site. It connects to North Circular Road at its southern extent and the R445 Ennis Road to the north.
- Clanmaurice Avenue / Clanmaurice Gardens is a local road running east–west from the R464 Shelbourne Road Lower towards Strandville Gardens. These roads provide residential access only - there is no vehicular access between Clanmaurice Gardens and Strandville Gardens.
- The Bishops Quay runs along the riverfront on the opposite side of the River Shannon from the site. This road provides local access to riverside developments, including residential and commercial properties. It connects into the Shannonbridge Roundabout at its western extent and Howley's Quay at its eastern extent. Howley's Quay transitions into Harvey's Quay which transitions into Honan's Quay which passes under the Sarsfield Bridge and terminates at Arthur's Quay Park.

Figure 18.3 Existing road network (Maps data: Google, ©2025 Airbus)

18.3.3. Parking

There are presently approximately 145 car parking spaces in the vicinity of the site, as shown in Figure 18.4. This includes approximately 120 spaces within the existing Euro Car Parks on North Circular Road as well as on-street parking on North Circular Road, O'Callaghan Strand and Stonetown Terrace. There are also three coach parking spaces located on North Circular Road.

Figure 18.4 Existing car parking surrounding the site (Maps data: Google, ©2025 Airbus)

18.3.4. Pedestrians

Due to the site's city centre location, there are many trip attractors within walking distance. The pedestrian catchment to/from the site in 5-minute increments up to 20 minutes is shown in Figure 18-4. Within a 5- to 10-minute walk of the site is mostly residential development with a couple of schools, including Salesians Primary School and Ardscoil Rís. Limerick city centre is located within a 10-minute walk, and Colbert Station and Thomond Park are accessible within a 20-minute walk. The Technological University of the Shannon (TUS) – Moylish Campus and Mary Immaculate College lie just outside the 20-minute walking catchment.

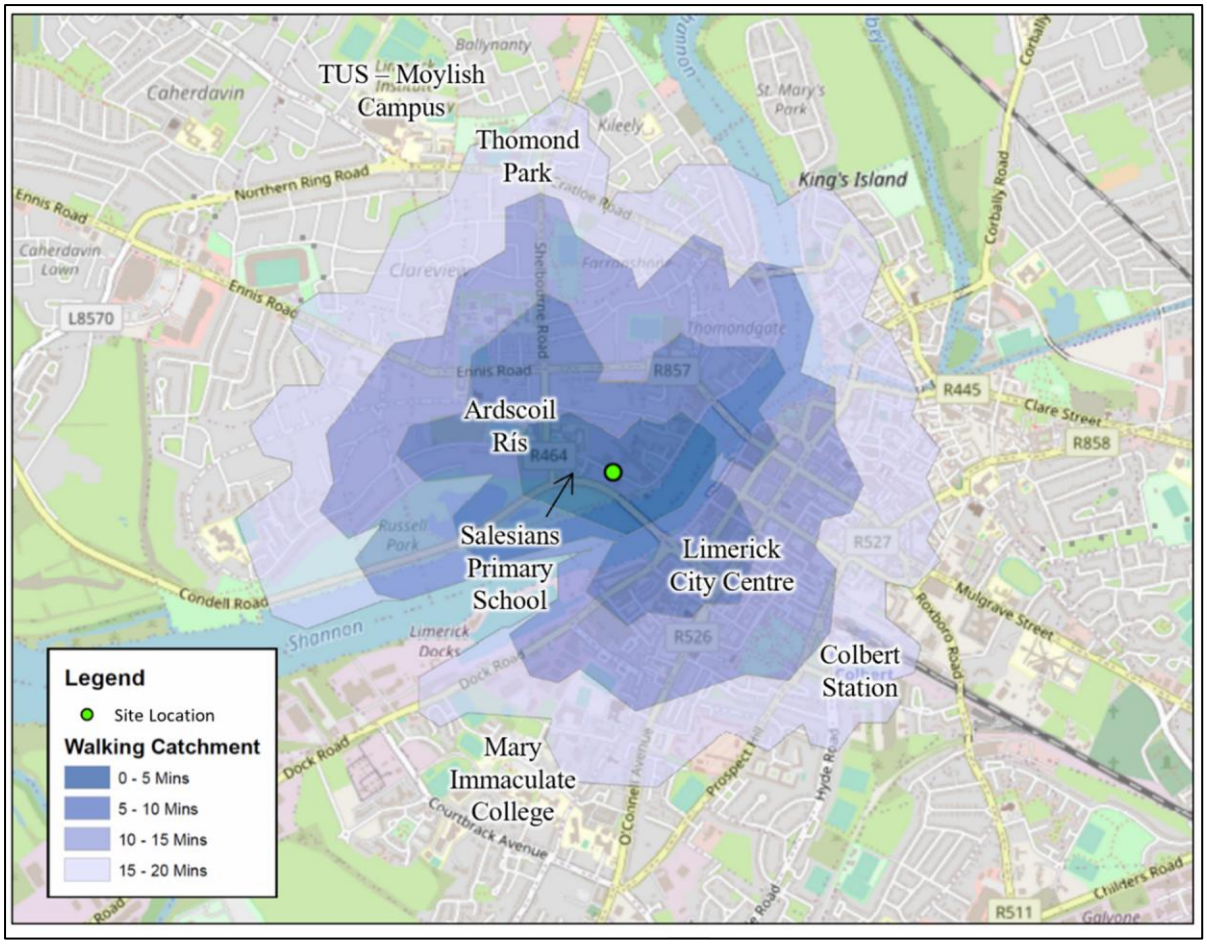

Figure 18.5 Pedestrian Walking Catchment

The riverfront promenade along O'Callaghan Strand provides a pedestrian link from the site to the R445 Ennis Road and across the Sarsfield Bridge into the northern end of the city centre.

Along the southern edge of the site, a walkway links O'Callaghan Strand to the R527 Condell Road and Shannon Bridge via steps and a ramp. An underpass is also provided for access to the Westfields Wetlands.

A new pedestrian and cycle bridge is proposed to cross the River Shannon near the site as part of LCCC's World Class Waterfront proposal. When built, this will further improve pedestrian connectivity to the site.

Figure 18.6 Key pedestrian movements and connectivity in the vicinity of the site (Maps data: Google, ©2025 Airbus)

The pedestrian network in the vicinity of the site is shown in Figure 18-5. There are footpaths of varying quality on both sides of most surrounding roads and several uncontrolled pedestrian crossings in the vicinity of the site.

Figure18.7 Existing pedestrian infrastructure in the vicinity of the site

In the direct vicinity of the site, uncontrolled pedestrian crossings are located at the junction between Stonetown Terrace and O'Callaghan Strand and on the North Circular Road. At the two current access points to the site on North Circular Road, the current footpaths provide poor crossing facilities. Both crossings are very wide with no distinct pedestrian markings or tactile paving. The footpath across the northern access provides a dropped kerb, however at the southern access, no dropped kerb is provided as can be seen in Figure 18.8 below.

Figure18.8 Example of poor pedestrian connectivity across existing site access points

18.3.5. Cycling

The cycling catchment to/from the site in 10-minute increments up to 30 minutes is shown in Figure 18-9 Limerick city centre, Colbert Station, Thomond Park, Mary Immaculate College, and TUS' Moylish Campus are all located within 10-minutes cycle of the site. Dooradoyle, Coonagh Cross Shopping Centre and Parteen are located within a 20-minute cycle and Mungret and the University of Limerick are located within a 30- minute cycle.

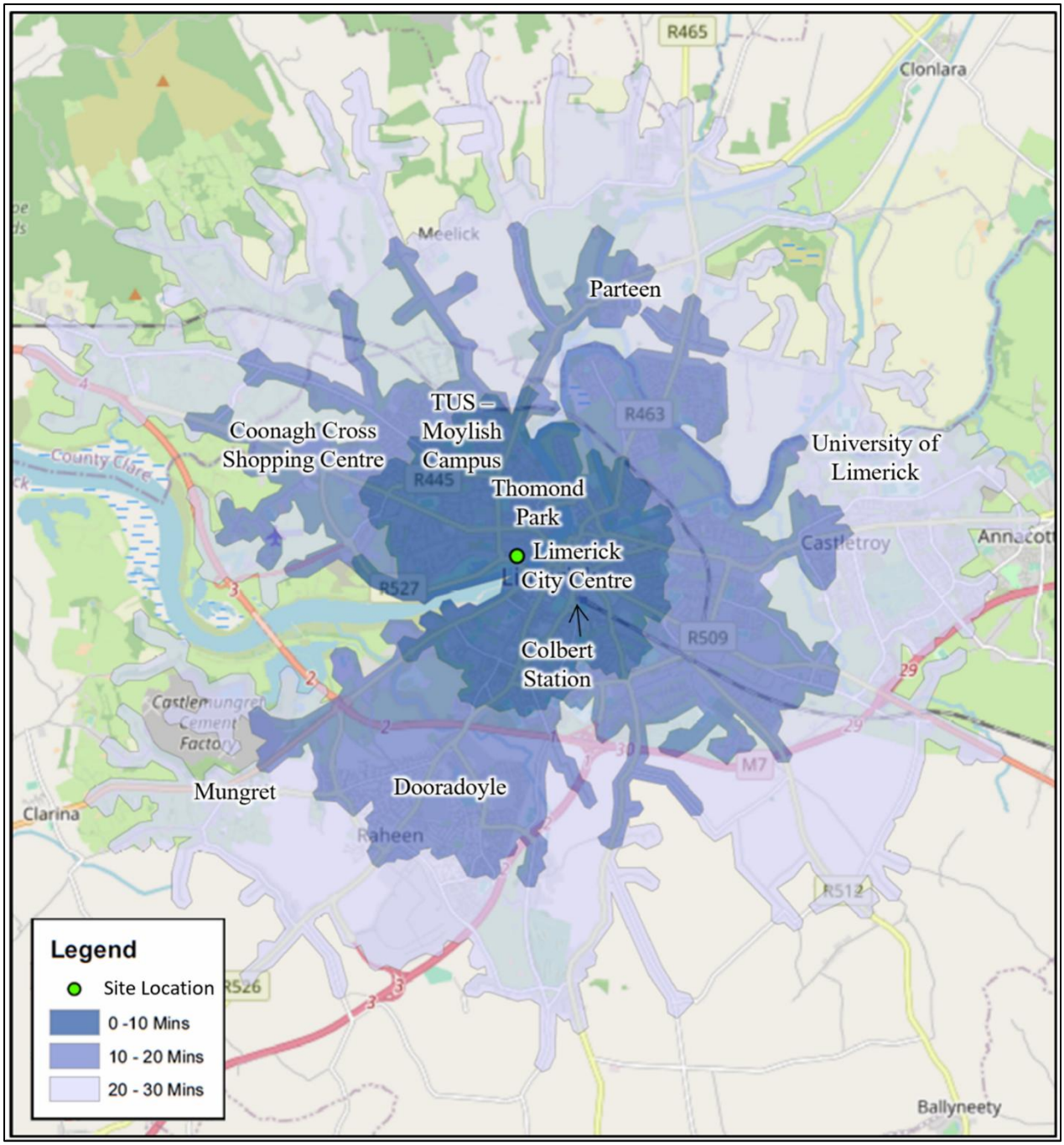

Figure18.9 Cycling catchment area

Despite the site being located within a short cycling distance of many key destinations, there is limited cycling infrastructure in the vicinity of the site. The nearest cycle lane is a dedicated two-way cycle lane on Shannon Bridge (see 10). This cycle lane extends from the R527 / R510 / The Bishops Quay roundabout and to the R527 / R464 roundabout to the southwest of the site. Though this cycle lane was originally introduced as part of the city's temporary COVID-19 mobility measures, design work has since commenced to provide permanent cycling infrastructure along Shannon Bridge.

Figure 18.10 Shannon Bridge dedicated two-way cycle lane

Other than the cycle lane on Shannon Bridge, there are no other cycle lanes in the vicinity of the site. However, there may be improvements to the surrounding cycle network in future. O'Callaghan Strand is identified in the Limerick and Shannon Metropolitan Area Transport Study (LSMATS) as a secondary cycle route. Ennis Road and Sarsfield Bridge are also identified in LSMATS as primary routes. The Limerick city cycle network connects into the larger Cycle Connects network for County Limerick which is shown in Figure 18.11.

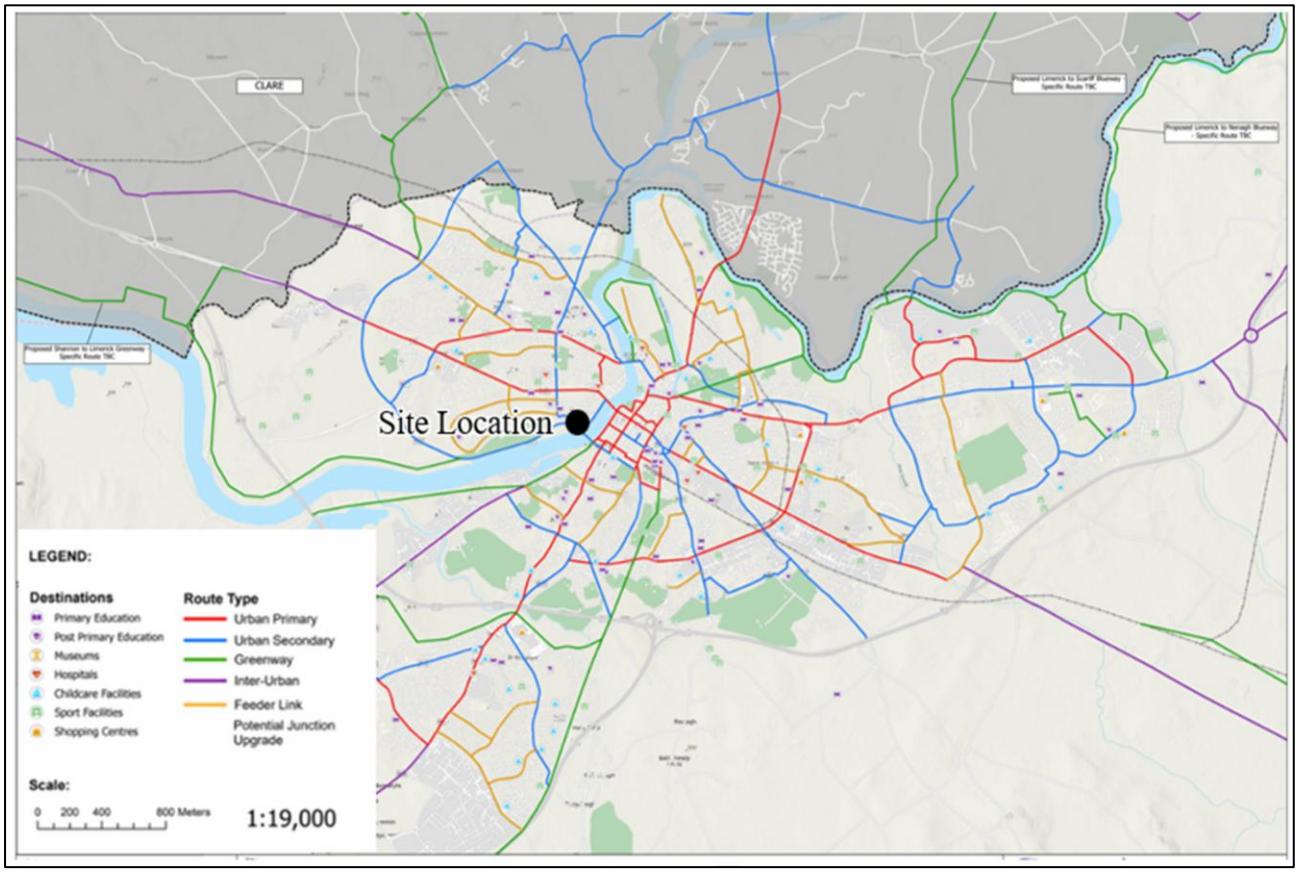

Figure 18.11 Limerick urban cycle network as part of Cycle Connects

The nearest Transport for Ireland (TfI) Bikes stations are located adjacent to the Sarsfield Bridge, and on Bishops Quay, as shown in Figure 18-12 below. Based on the typical spacing of the stations, the project site could easily be identified as the location for one or more stations when the scheme is expanded.

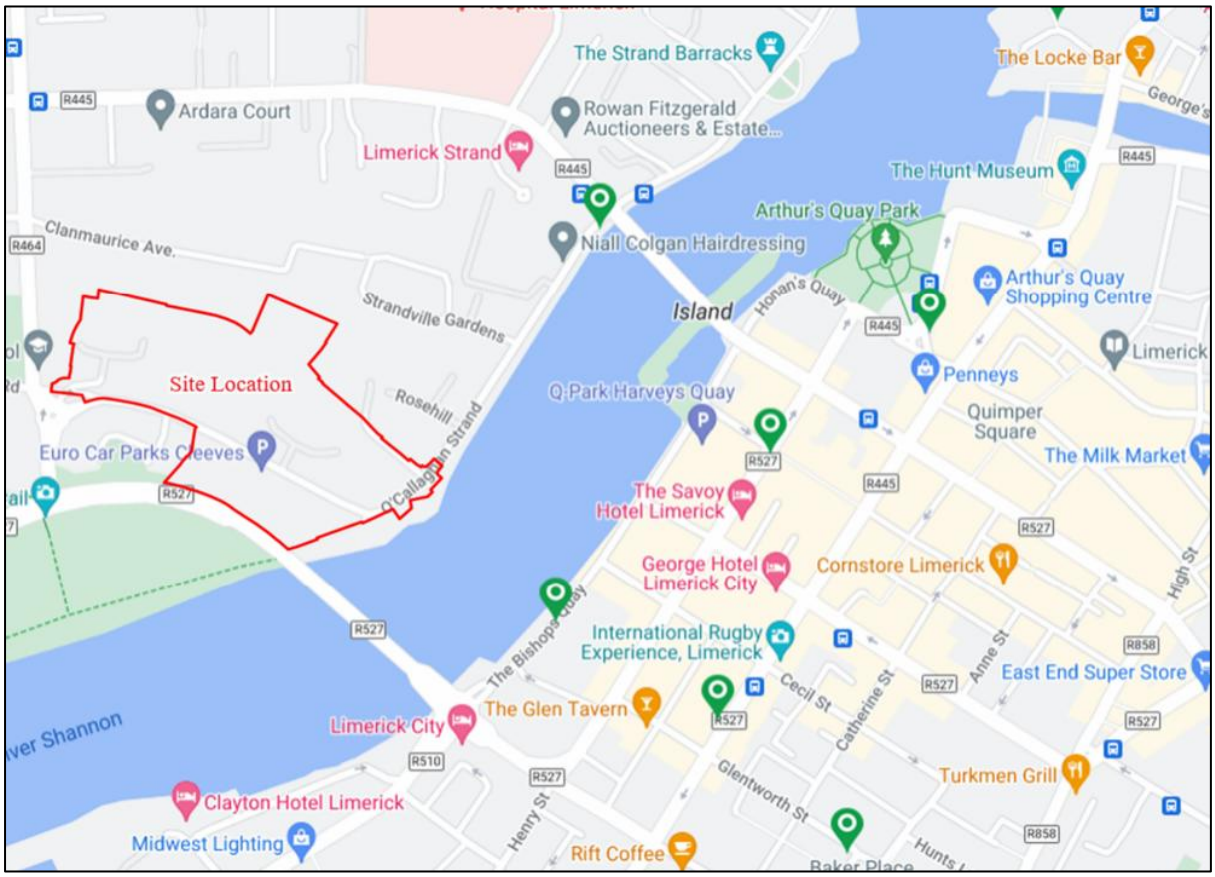

Figure 18.12 Nearby Tfl bikes stations

18.3.6. Public Transport

18.3.6.1 Bus

The closest local bus stops to the site are located along the R445 Ennis Road to the north of the site. Bus stops for the 303, 302, and 306 and 343 bus routes are accessible by a 6-minute walk to the northeast, adjacent to the Sarsfield Bridge as shown in Figure 18.13 below.

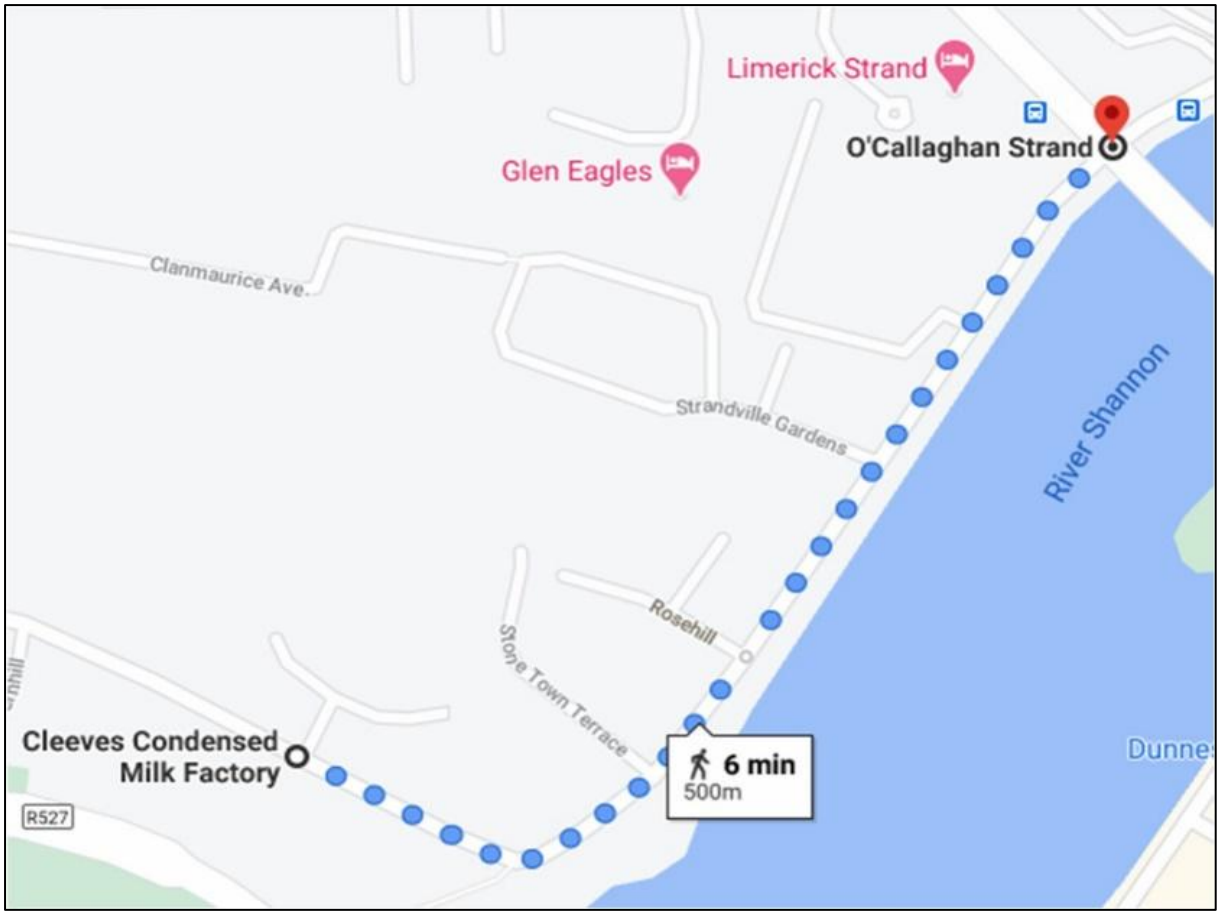

Figure 18.13 Route to Sarsfield Bridge bus stops

Bus stops for the 306 and 343 bus routes are accessible by a 7-minute walk to the northwest, at the Union Cross junction as shown in Figure 18.14 below.

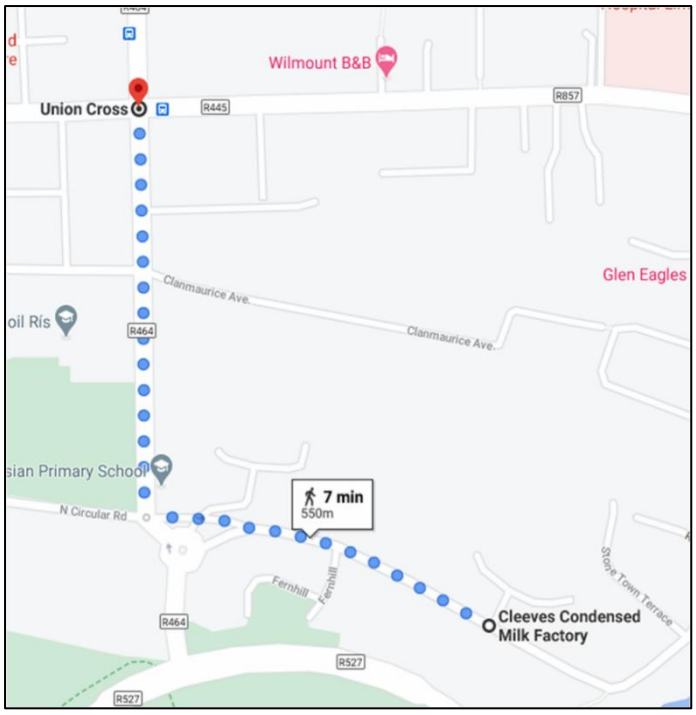

Figure 18.14 Route to Union Cross bus stops

Access to regional bus services at Arthurs Quay is a 12-minute walk to the east of the site as shown Figure 18.15 below.

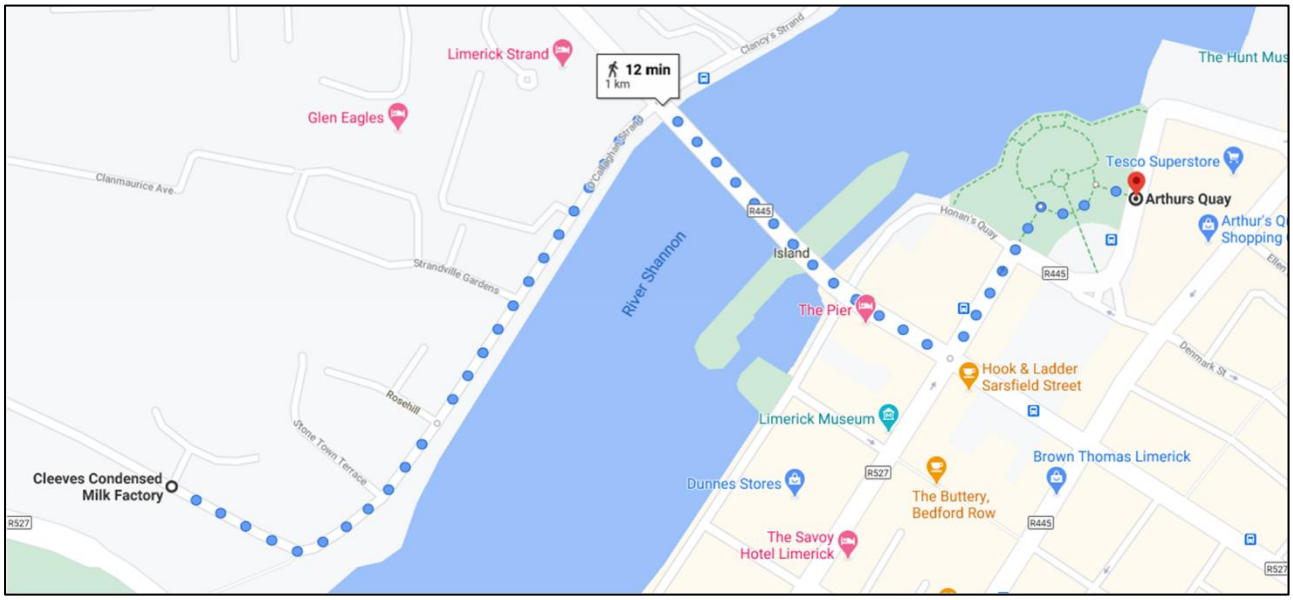

Figure 18.15 Route to Arthurs Quay regional bus terminus

The frequency of all the bus routes are summarised below:

- **Bus Route 303** [2]: Runs between Kilmallock Road and Pineview via Henry St:
    - Inbound from Kilmallock Road (Rosmor) towards Pineview: Nearest stop is Clancy Strand (Opp Treaty Stone) for people arriving from the town centre.
        - Mon–Fri: First bus arrives at the Clancy Strand stop from Rosmor at approximately 6:50 AM. After that, frequent buses arrive at 15-minute intervals from 7:25 AM until approximately 10:50 PM. Last bus arrives around 11:20 PM.
        - Saturday: Almost similar to weekday service.
        - Sunday and Public Holidays: Operates at 30-minute intervals, with the first bus at approximately 7:50 AM and the last bus at around 11:20 PM.
    - **Outbound from Pineview to Kilmallock via William St**: Nearest stop is Sarsfield Bridge, which can be used for departing to the town centre.
        - Mon–Fri: First bus at Sarsfield Bridge departs at 6:40 AM. From 7:10 AM onwards, buses run at 15-minute intervals until 11:10 PM, with the last bus at around 11:40 PM.
        - Saturday: Similar to weekday service.
        - Sunday and Public Holidays: Buses run at approximately 30-minute intervals, with the first service from Sarsfield Bridge at around 7:40 AM and the last bus at around 11:40 PM.
- **Bus Route 302** [3]**:** Runs from Henry Street to Sarsfield Bridge in one direction.
    - Mon-Fri: Bus from Henry Street arrives at Sarsfield Bridge at 7:04 AM, and from around 7:45 AM onwards, it runs at 30-minute intervals until approximately 11:45 PM.
    - Saturday: Operates at 20-minute intervals, with the first bus arriving at Sarsfield Bridge from Henry Street at around 7:40 AM and the last bus at approximately 11:50 PM.
    - Sunday and Public holidays: Operates at 30-minute intervals, with the first bus arriving from Henry Street at around 10:20 AM and the last bus at approximately 11:50 PM.
- **Bus Route 306** [4]**:**

- Inbound (Edward Street to Sarsfield Street)
  - Weekdays (Mon–Fri): First bus arrives at Sarsfield Bridge at 7:45 AM. Hourly service until 11:41 PM. After 8:30 AM, buses start from Henry Street instead of Edward Street.
  - Saturday: Same as weekday service.
  - Sunday: Service starts from Henry Street. Hourly buses from 10:15 AM to 12:00 AM.
- Outbound (Ballycannon to Edward Street via Sarsfield Street)
  - Weekdays (Mon–Fri): Hourly service from 8:00 AM to 12:00 AM. After 8:00 PM, buses terminate at Sarsfield Street.
  - Saturday: Same as weekday service.
  - Sunday: No service.

- **Bus Route 343** [5]**:** It runs between Shannon Airport and Limerick Bus Station. For both direction nearest stop is along Ennis Road (Strand Hotel and Union Cross):
  - Mon-Friday: 24-hr service buses at 20 to 30-min frequency
  - Saturday: 24-hr services with 30-min frequency, except between 12 am to 4 am, where it runs at 1-hr frequency
  - Sunday:1-hr frequency

The 2040 bus network proposals included in LSMATS are shown in Figure 18.16 below. The proposed bus network shows potential bus services along North Circular Road, however, North Circular Road is not one of the streets subject to bus priority measures, as shown in Figure 18.17. It is however, a street that can carry bus services, should it form part of a route in the future. Bus priority measures along other roads in the vicinity of the site, i.e. the Ennis Road, which will improve the reliability and speed of these services.

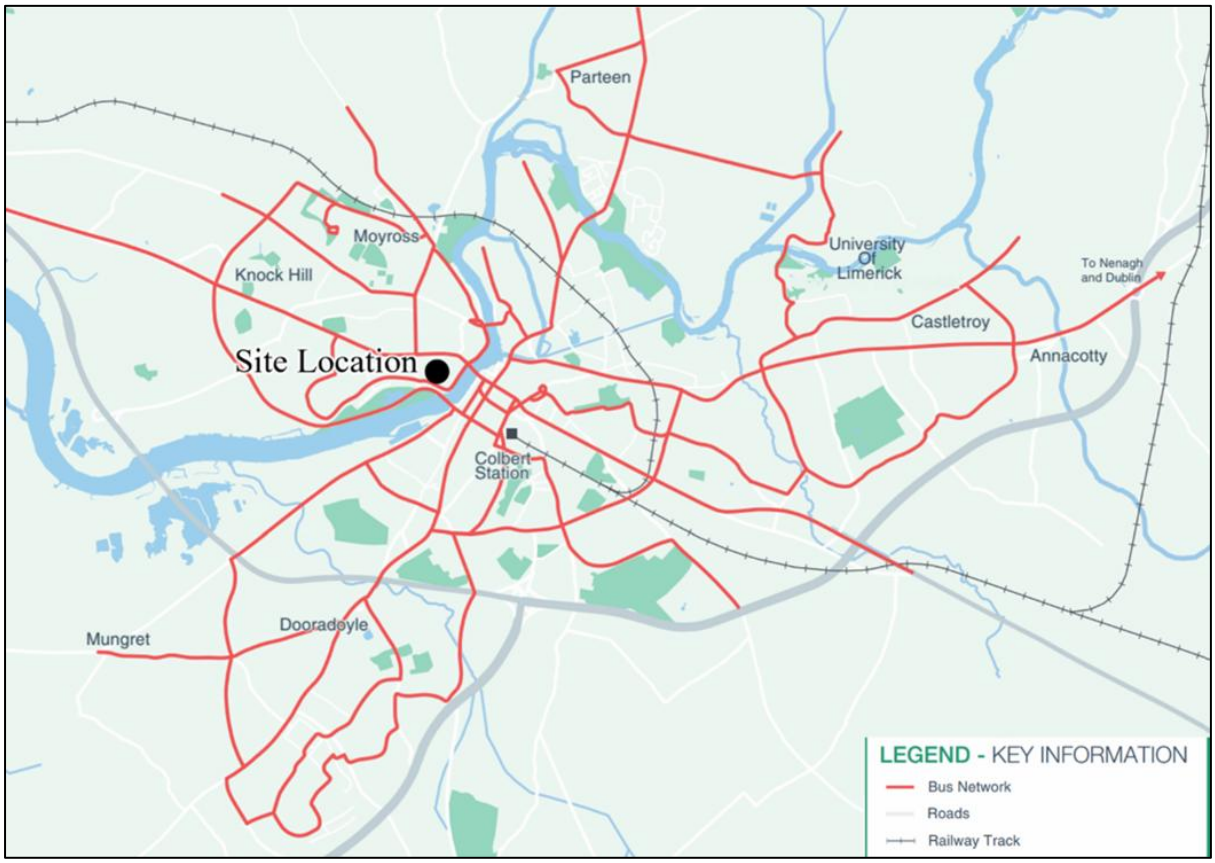

Figure 18.16 LSMATS proposed 2040 bus service network

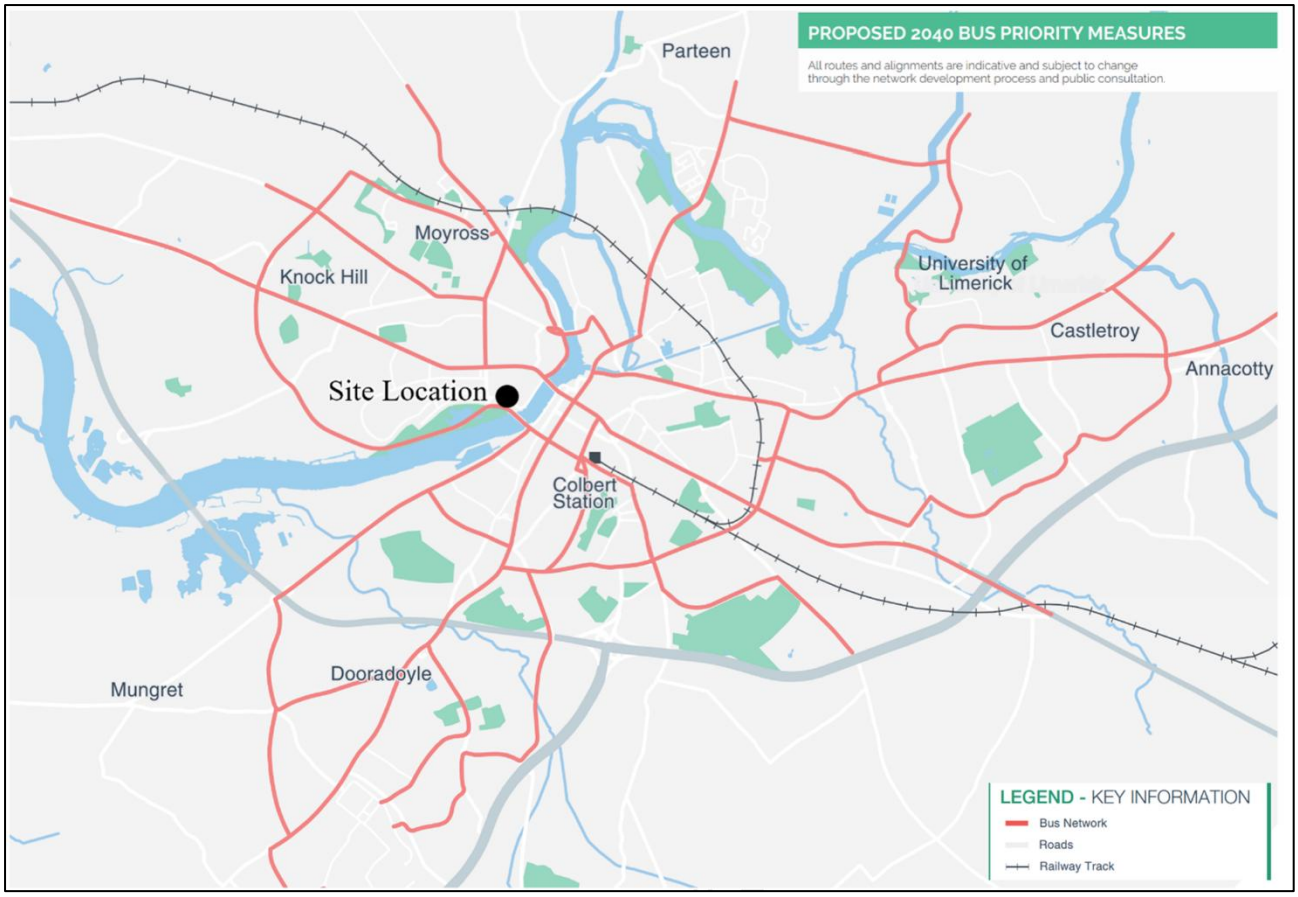

Figure 18.17 LSMATS bus priority measures

The level of bus service in Limerick City is due to increase with BusConnects. The redesign of the bus network is one of the nine key elements of BusConnects Limerick that aims to transform the City's bus system, making public transport more useful to more people. The subject site is located within reasonable walking distance to all bus routes.

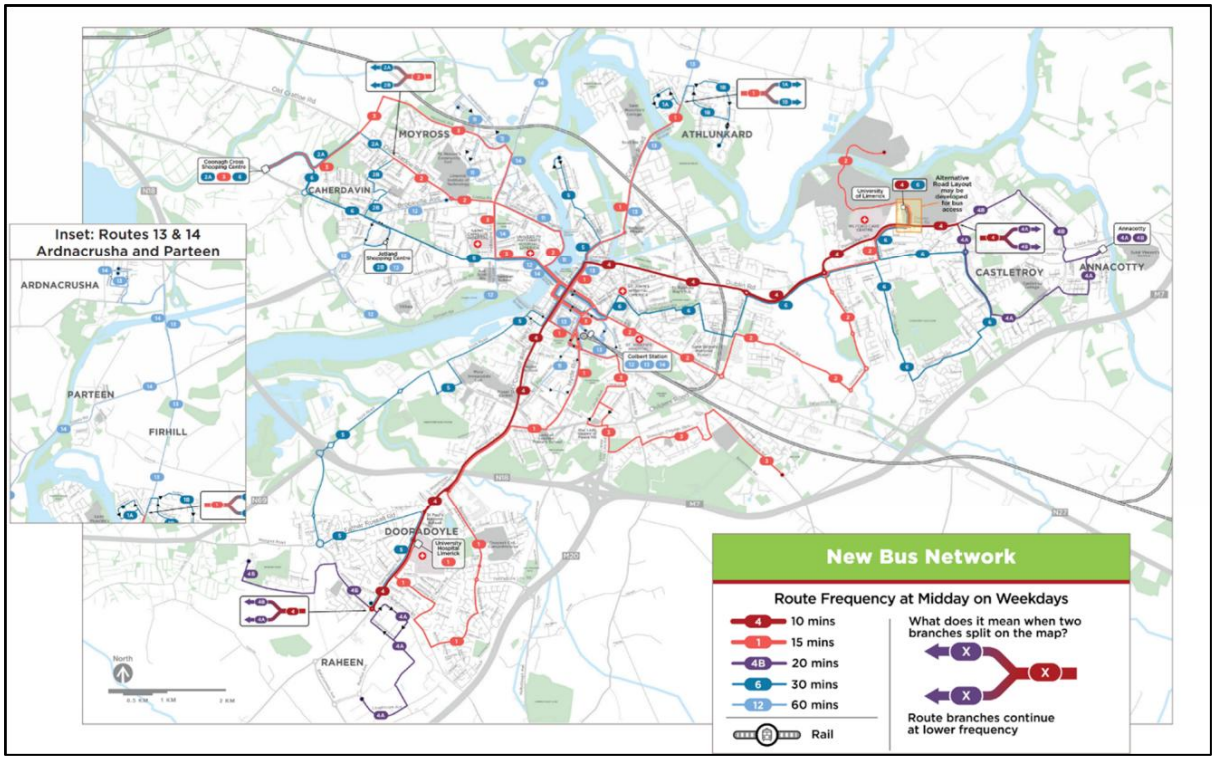

Figure 18.18 BusConnects Limerick new network

The Connecting Ireland scheme will provide the site with access to the wider public transport network, as shown in Figure 18-18.

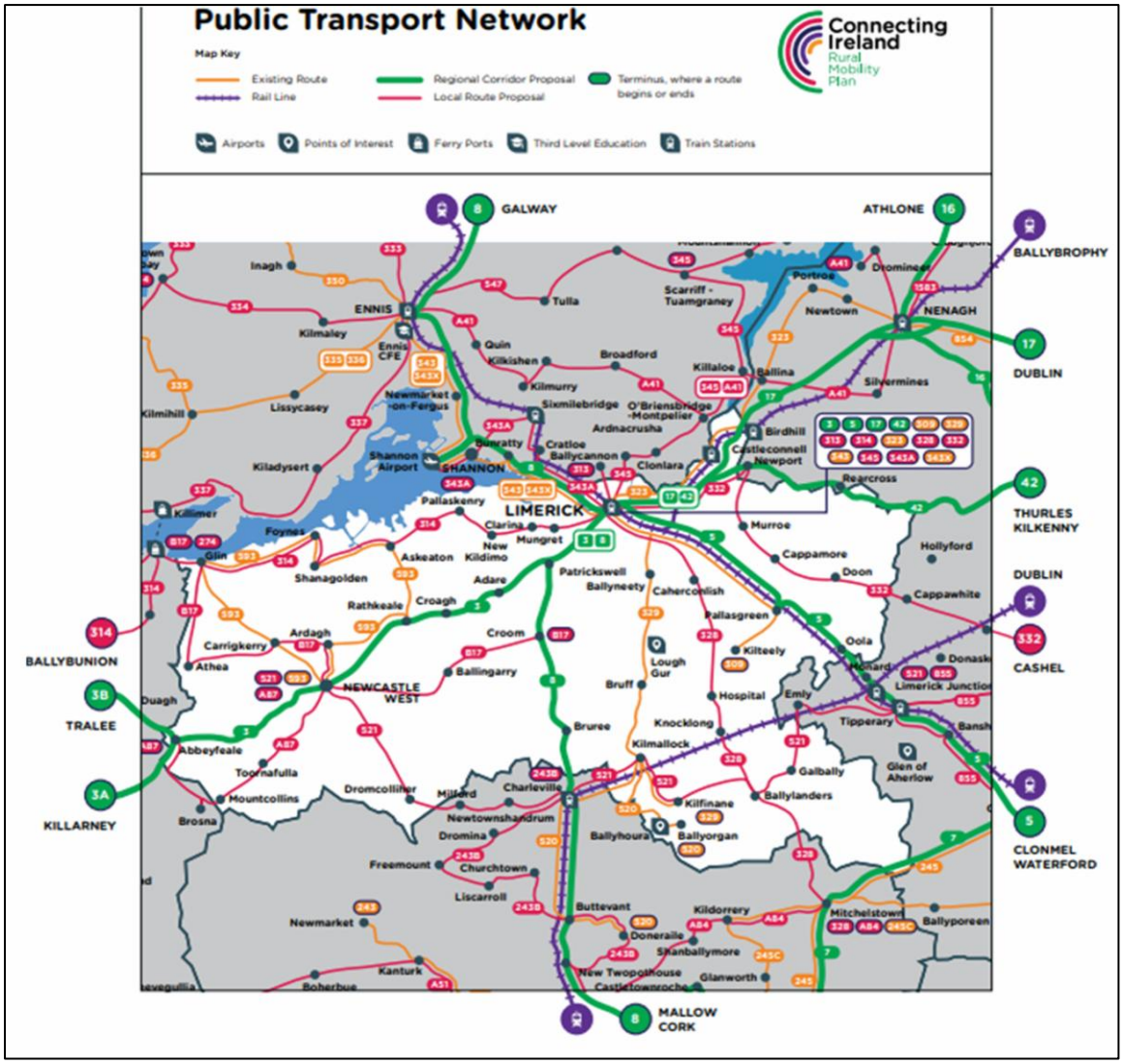

Figure 18.19: Proposed public transport network for Limerick as per Connecting Ireland Rural Mobility Plan

18.3.6.2 Rail

Access to Colbert Train Station, with direct rail connections to Dublin, Galway, and Waterford is within a 20-minute walk to the southeast of the site as shown in Figure 18.20 below.

Figure 18.20: Walking route to Colbert Station

18.3.6.3 Public Transport Capacity

To assess the public transport capacity, the following steps were undertaken:

- Based on the number of residential units in the Phase 2 development and the average household size in Limerick City and suburbs, the potential number of residents was estimated.
- Using the age profile of the population in Limerick City and suburbs, the percentage of people aged 15 and above was determined. It was assumed that individuals aged 5 to 15 would attend nearby primary/secondary schools, and therefore no new public transport trips are anticipated from this age group.
- For those aged 15 and above, the proportions of employed, students, retired, and unemployed individuals were identified.
- Based on the above, the number of people likely to commute for work or education from the proposed residential development was calculated.
- Using the mode share data for bus and train travel in Limerick City and suburbs, the number of residents expected to use public transport for commuting was estimated.

Summary of calculations:

- Total residential development comprises of 302 residential units.
- According to CSO 2022 data, the average household size in Limerick in April 2022 was 2.70 persons [6]. Therefore, approximately 816 residents are expected to live in the development.
- Based on CSO 2022 data, for Limerick City and suburbs,
    - 18% of people are below 15 years
    - 6% are in age bracket of 16 to 20
    - 62% are in age bracket if 20 to 64 and remaining 14% are above 65 [7].
- Based on the above, approximately 52 residents are aged 15–20, and 508 residents are aged 20–64.
- Based on CSO 2022 data, Labour force participation rate in Limerick is 58% [8].
- It was assumed that all 100% of those between 15 to 20 will be going for education, while 58% of those aged 20–64 will be employed.
- Therefore, approximately 300 residents will commute for work, and 55 residents for education

- Mode share for public transport (CSO 2022) [9].:
  - **5%** of workers use public transport.
  - **10%** of students use public transport.
  - Only **0.2%** use trains; hence, all public transport trips are assumed to be by bus.
- Based on this, approximately 20-21 residents are expected to use the bus for commuting.
- These trips will be distributed between 6:00 AM and 10:00 AM.
- According to CSO data, 45% of commuters travel between 8:00 AM and 9:00 AM [9], resulting in a peak of 9–10 additional bus users during that hour.
- As noted in Section 18.3.6.1, the following bus routes serve the area:
  - 4 buses on Route 303
  - 2 buses each on Routes 302 and 345
  - 1 bus on Route 306
  - This totals 9 buses per hour.
- With an estimated 9–10 additional commuters, this equates to 1–2 extra passengers per bus, which is minimal and unlikely to impact existing capacity.

Therefore, the impact of the Phase 2 residential development on public transport capacity is **not significant**.

18.3.7. Baseline Traffic

Traffic surveys were carried out in the vicinity of the site during the last week of November 2024. Junction turning counts took place over a 24-hr period on Thursday, 28 November 2024. Survey locations are shown in Figure 18.21 below.

Figure 18.21 Traffic survey locations (Maps data: Google, ©2025 Airbus)

Based on the traffic count data, the peak periods identified for the road network surrounding the site are weekdays from 07:45 – 08:45 (AM peak) and 17:00 – 18:00 (PM peak). Figure 18-22 and Figure 18-23 provide a graphical representation of the traffic flows through the survey locations at peak times.

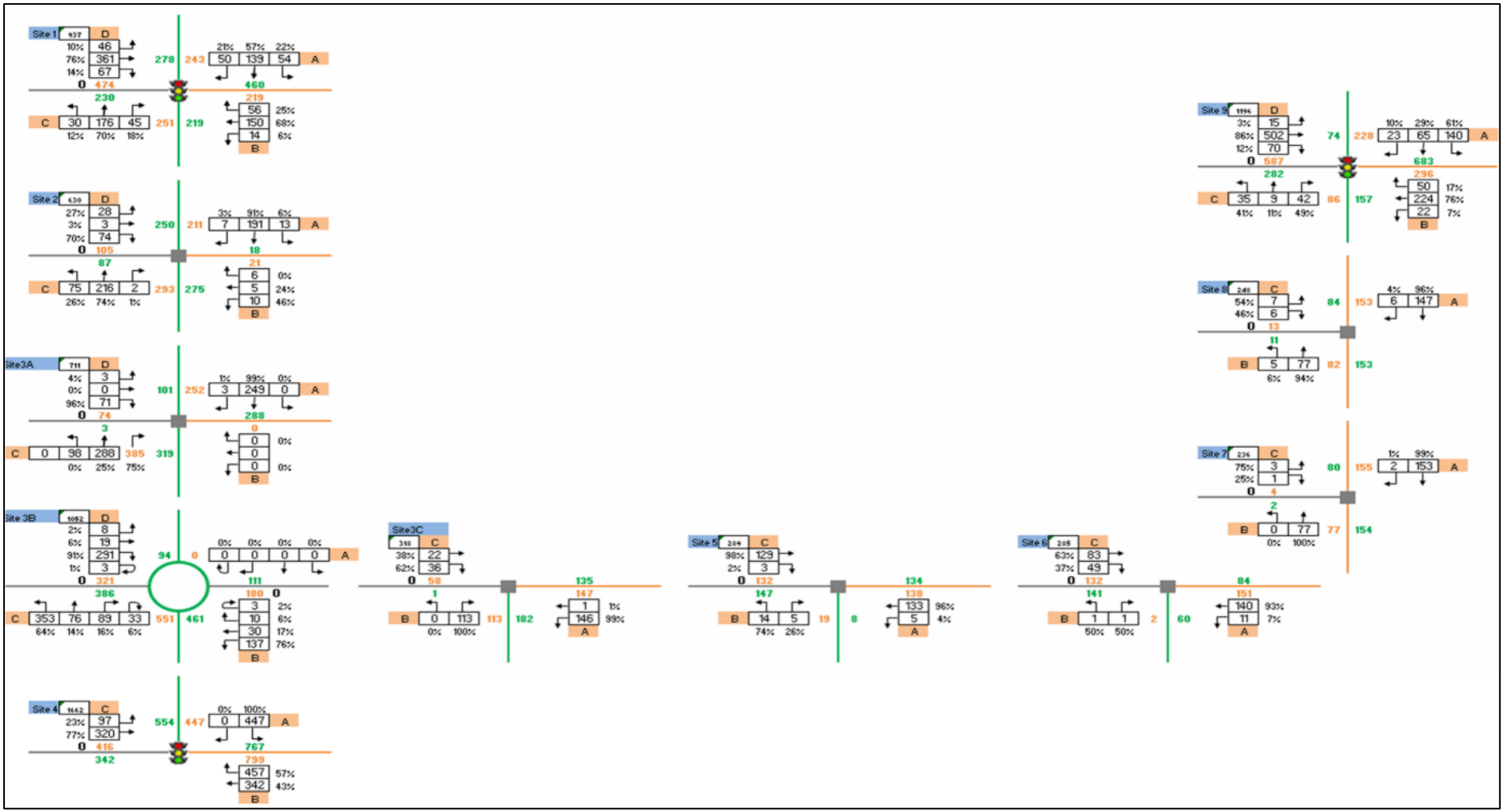

Figure 18.22 Traffic count volumes during AM peak (07:45 - 08:45)

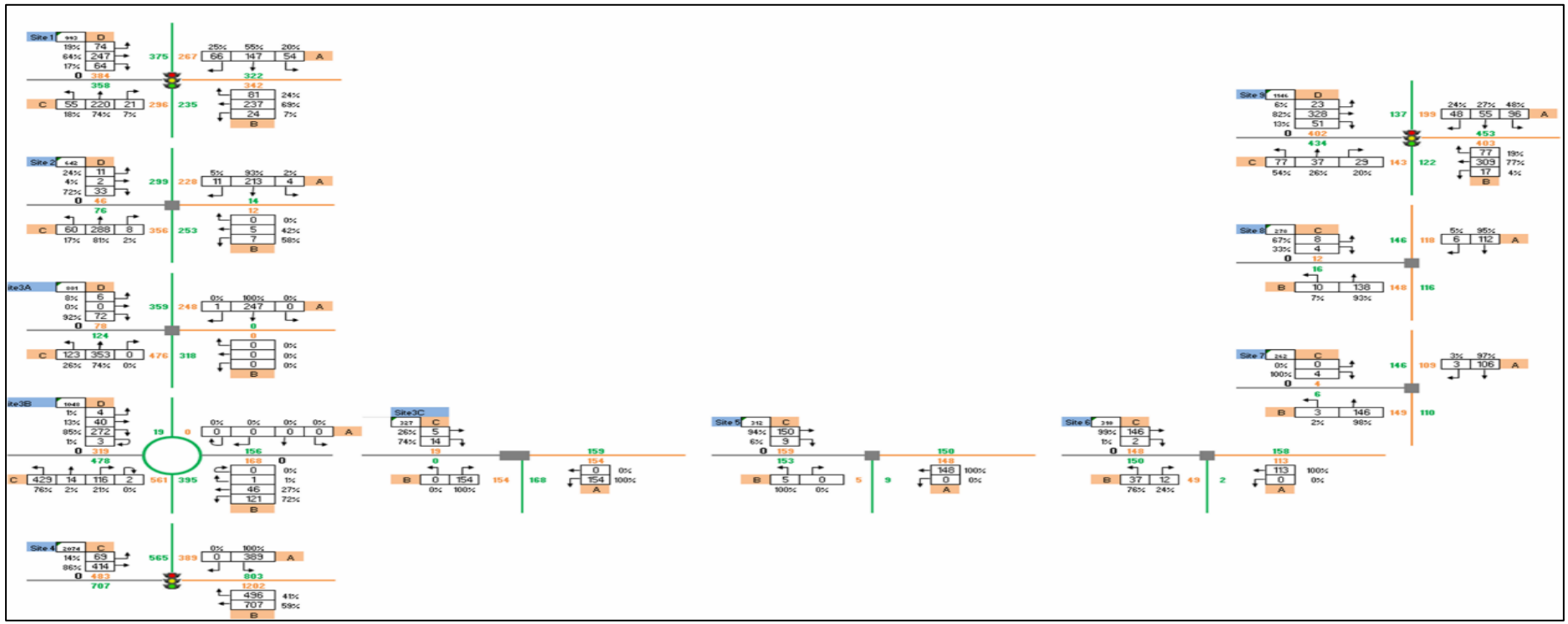

Figure 18.23 Traffic count analysis scenario, volumes PM peak times (17:00 - 18:00)

18.4. CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

18.4.1. Development Description

The site comprising 5.09 hectares in area as defined in Chapter 1.0 Figure 1.1 and described in Section 1.7.2, that being the same as the red line boundary on the application for approval drawings and for which planning permission is sought, comprising Phase II development.

The proposed application site (Phase II) is part of a phased development proposal for a significant city centre, regeneration area or Masterplan Site (MS). This MS is divided into four different phases of delivery as detailed in Section 1.6.3 in Chapter 1.0 Introduction. The overall MS layout which illustrates the indicative layout of the subject site and adjoining lands in the ownership of the applicant is displayed in Chapter 1.0, Figure 1.4 and full details of the proposed development phases are provided in Chapter 2.0, Section 2.2.4.

The proposed development includes:

A. Demolition of a number of structures to facilitate development including (i) Salesians Secondary School and Fernbank House; (ii) 2 no. houses on North Circular Road; (iii) Residual piers from the basin of the reservoir; (iv) Upper Reservoir on Stonetown Terrace comprising 2 no. concrete water tanks, pump house and liquid storage tank; (v) 1960's lean-to building structures adjoining the Cold Store (former Weaving Mill); (vi) remaining fabric of c20th rear lean-to of the Flaxmill Building; (vii) c.1960s office building adjoining the Packing Store and Cheese Plant on North Circular Road; (viii) Cluster of buildings including altered part of the Linen Store, the former Linen Store, Storage Building, and Office/Lab building at O'Callaghan Strand / Stonetown Terrace with partial retention of existing stone wall; (ix) warehouse on the Shipyard site; and (x) partial removal of stone boundary wall defining the Cleeves site adjoining O'Callaghan Strand / Stonetown Terrace and around the Shipyard site.

B Construction and phased delivery of:

i. Residential Development in 4 development 'zones' within the site ranging in height from 3 – 7 storeys (with screened service plant at roof level) comprising; (a) 234 no. residential units; (b) 270 no. student bedspaces with ancillary resident services at ground floor level; (c) 299sqm of commercial floorspace; and (d) a creche. The specific development details of each proposed development zone comprise the following:

- Salesians Zone – 1 no. building with 2 no. blocks extending to 6 and 7 storeys comprising 146 no. apartments (76 no. 1 bed; and 70 no. 2 bed); a creche; semi basement car and bicycle parking; reception area, plant rooms, and refuse storage, with screened external plant and photovoltaic panels at roof level; 20 no. 3 storey 3 bed triplexe units with photovoltaic panels at roof level; and 30 no. car parking spaces for the dedicated use of the adjoining Salesians Primary School.
- Quarry Zone – 1 no. Purpose Built Student Accommodation (PBSA) building with 3 no. blocks extending to 6 and 7 storeys comprising 270 no. bedspaces with study rooms, shared areas, exercise room, reception area, plant rooms, refuse storage and bicycle parking all at ground floor level and screened external plant and photovoltaic panels at roof level. Provision is made for telecommunication antennae on the roof top of one block. Consent is also sought for use of the PBSA accommodation, outside of student term time, for short-term letting purposes.
- Stonetown Terrace Zone – 1 no. building extending to 4 - 5 storeys comprising 38 no. apartments (6 no. studios; 12 no. 1 beds; and 20 no. 2 beds) with plant rooms and refuse

storage at ground level, ancillary infrastructure at basement level at northern end of the block, with screened external plant and photovoltaic panels at roof level; 9 no. 3 storey 3 bed townhouses with photovoltaic panels at roof level; and a dedicated secure bicycle storage facility.

- O'Callaghan Strand Zone – 1 no. building extending to 4 / 5 storeys comprising 21 no. apartments (9 no. 1 bed and 12 no. 2 bed) with an open roof structure accommodating communal open space, plant and photovoltaic panels; and 299qm of commercial ground floorspace intended to accommodate Class 1, Class 2 and / or Class 3 uses, with provision for car parking in the undercroft.

ii. Dedicated mobility hub with canopy and photovoltaic panels including double stacker bicycle parking; and EV Charging spaces, within the Shipyard Zone. A dedicated pedestrian/cycle link connects North Circular Road with Condell Road. The remaining area of the zone shall accommodate temporary car parking and a temporary external event space to be used on a periodic basis as the need arises, pending future redevelopment proposals as detailed in the Masterplan (Stage IV).

iii. Extensive provision of Public Realm including creation of the Reservoir/Quarry Park, the Flaxmill Square and the Riverside Corridor. Significant areas of civic and green spaces are provided, incorporating formal and informal play space; nature based SuDs, permeability and access; and a riverside canopy with photovoltaic panels functioning as an outdoor event space and incorporating heritage interpretative panels

iv. 3 no. dedicated bat houses;

v. Telecommunication antennae on roof of Block 2A of the PBSA, including (a) 9 no. Support poles to support 2 no. antennae each; (b) 6 no. microwave dishes affixed to the plant screen; and (c) associated telecommunications equipment and cabinets (effectively screened). To facilitate technologically acceptable locations at the time of delivery, a micro-siting allowance of 3m is proposed on the roof top of Block 2A of the PBSA for the infrastructure.

vi. Provision of vehicular access/egress points including (a) utilisation of existing access points to the Salesians Zone, to the Flaxmill and Quarry Zones and to the Mobility Hub on the Shipyard Site Zone; (ii) reopening an existing (currently blocked) access point off O'Callaghan Strand; (iii) new access points to the proposed undercroft carparking at Salesians from the North Circular Road and at the end of Stonetown Terrace road which provides access to the Stonetown Terrace Zone; and (iv) emergency access only from Stonetown Terrace to the Flaxmill Zone;

vii. Provision of 30 no. dedicated car parking spaces to serve the Salesians Primary School; and

viii. All ancillary site development works including (a) water services, foul and surface water drainage and associated connections across the site and serving each development zone; (b) attenuation proposals; (c) raising the level of North Circular Road between Fernhill and O'Callaghan Strand; (d) refuse collection store (e) car and bicycle parking to serve the development; (f) public lighting; (g) all landscaping works.; and (h) temporary construction measures including (i) construction access to the Quarry site including provision of a temporary access across the reservoir; and (ii) temporary use of onsite mobile crusher.

The layout plan for the proposed development is shown in Figure 18.24.

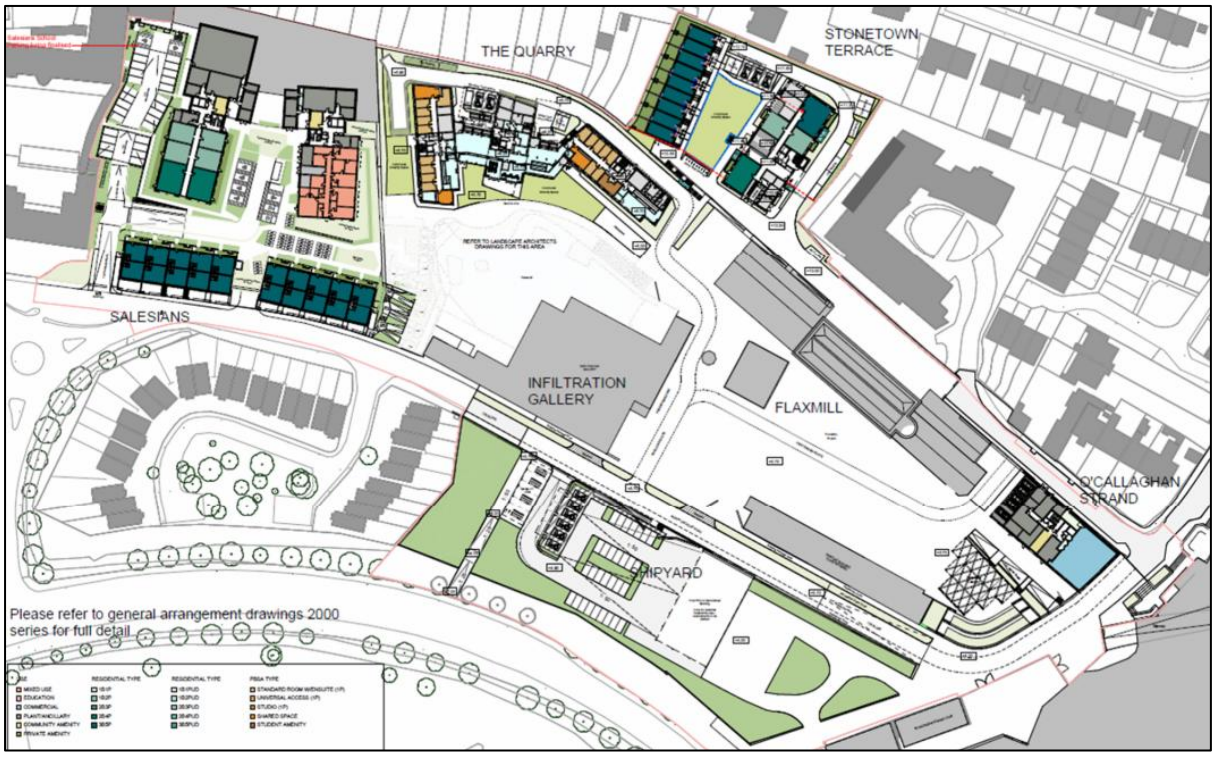

Figure 18.24 Layout plan showing the Cleeves Riverside Quarter

18.4.2. Mobility Strategy

The Cleeves Riverside Quarter Masterplan is underpinned by a number of urban design principles. Relevant to this TTA is the principle to support and encourage sustainable mobility patterns among its residents and visitors. The design of the proposed development aligns with this principle by prioritising pedestrian and cycling permeability between the site and the city centre and within the development itself. Vehicular movements within the proposed development will be restricted to certain areas to support sustainable mobility and placemaking. The roads surrounding the proposed development, North Circular Road, O'Callaghan Strand and Stonetown Terrace, will be traffic calmed and designed to have pedestrian and cyclist priority. Limited car parking provision will be provided to encourage residents and visitors to travel to/from the site via active travel and public transport. A diagram showing the mobility strategy for the proposed development is provided in Figure 18.25.

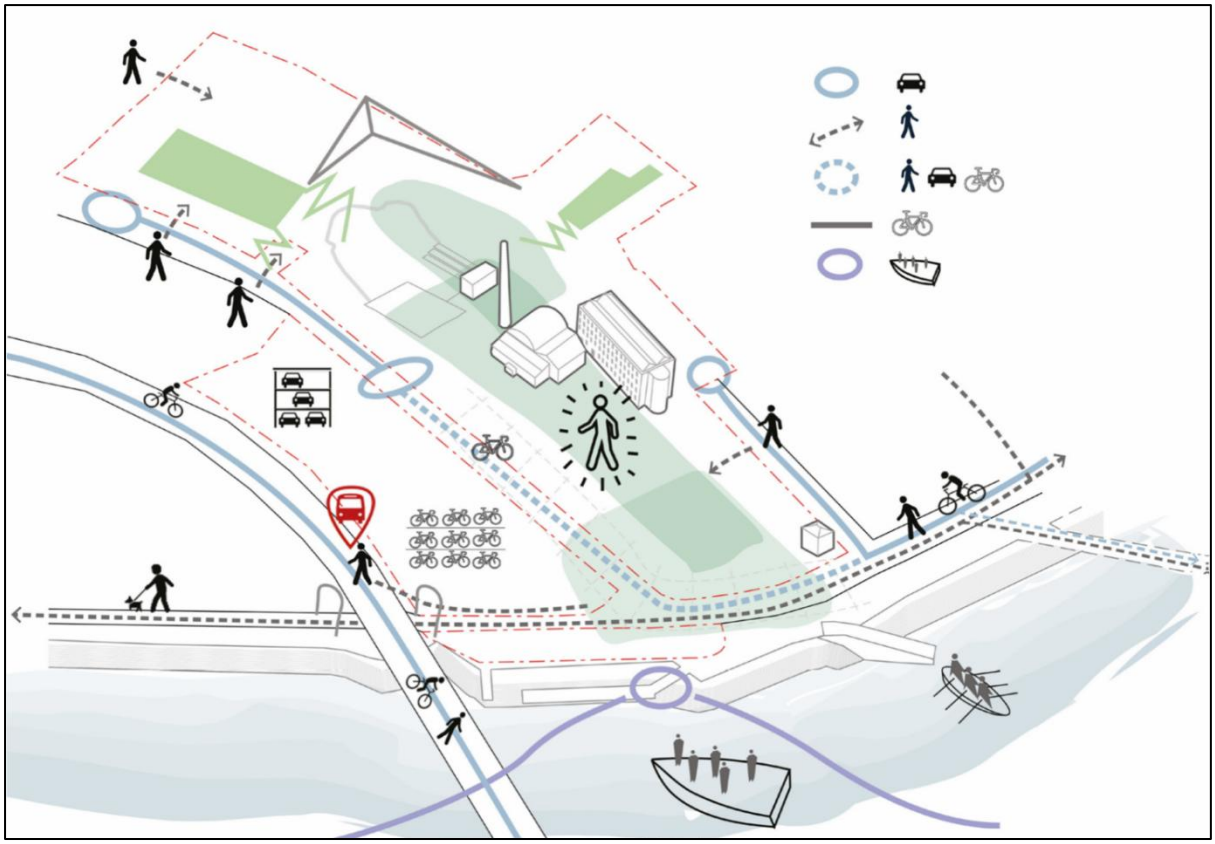

Figure 18.25 Mobility strategy diagram

18.4.3. Access routes

18.4.3.1 Site access, strategy overview

When examining the potential routes to/from the proposed development by different modes, it becomes apparent that there is a general split in the direction by which different modes might access the proposed development. Most car trips are expected to originate from the west of the proposed development, whereas the majority of expected pedestrian and cyclist trips are expected from the east (see Table18.26 below). It should be noted that while there will also be pedestrians and cyclists travelling to/from the west of the proposed development, and cars travelling to/from the east (via O'Callaghan Strand), however these are expected to be in the minority of trips.

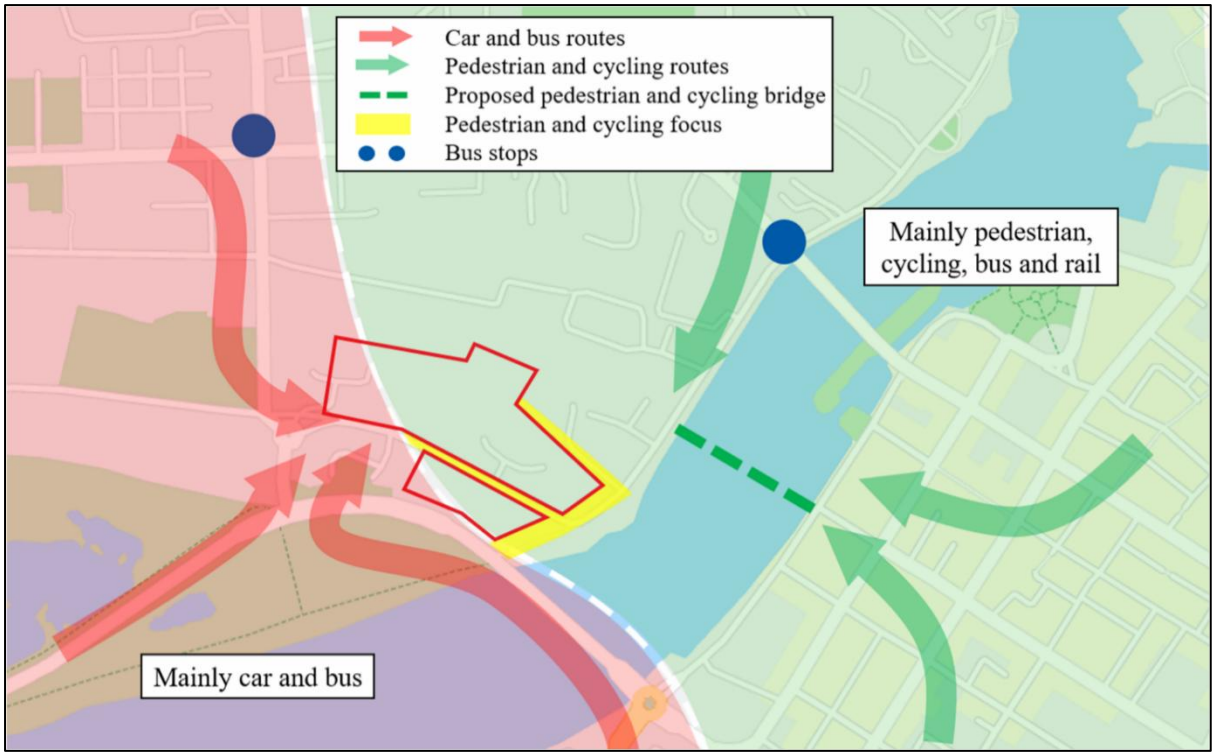

Figure 18.26 Site access strategy overview

18.4.3.2 Pedestrian and Cycling Access

As noted in the mobility strategy (Section 18.4.2), pedestrian and cyclist movements will be prioritised within the proposed development to encourage walking and cycling as the primary modes of travel. As such, pedestrians and cyclists will be provided with as many access points as possible to support connectivity to/from the proposed development, as well as permeability through the proposed development. Figure 18.27 shows the access points and routes through the proposed development for pedestrians and cyclists.

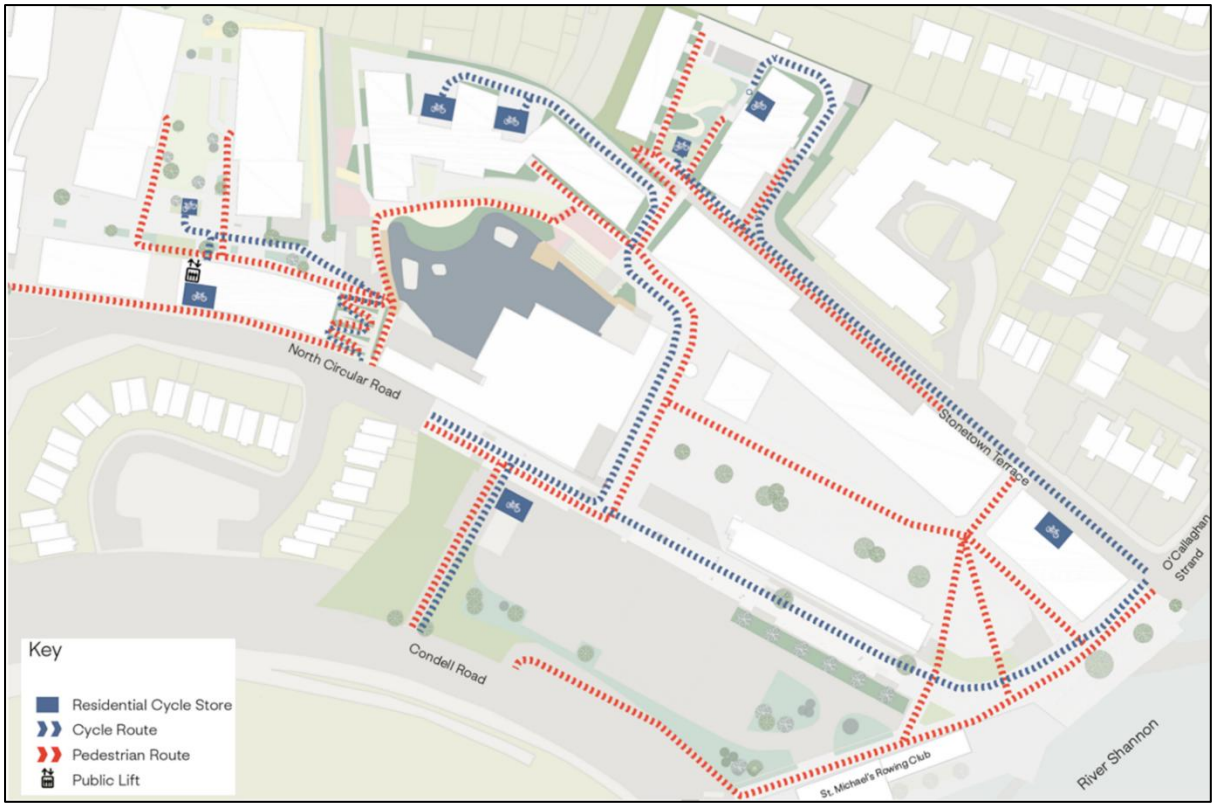

Figure 18.27 Pedestrian and cyclist access routes

18.4.4. Vehicular Access

The proposed development has four vehicular access/egress points, as shown in Figure 18.28. Access points to the Salesians Zone (1), to the Flaxmill and Quarry Zones (3) and to the mobility hub on the Shipyard Zone (4) are new access points, but they replace existing entrance locations. There are two new access points proposed, including one providing access to the undercroft carparking at Salesians (2) and the other at the end of Stonetown Terrace (6) providing access to the Stonetown Terrace Zone. In addition, an access provided from Stonetown Terrace to the Flaxmill Zone will enable occasional traffic associated with emergency vehicles and access to parking spaces located under the footprint of the O'Callaghan Strand building (5).

As noted above, North Circular Road will be designed to operate as a shared space. A narrow vehicle circulation area (between 4.8 and 5.2m wide) will encourage low speeds and help to create an environment where pedestrians and cyclists have priority. Pedestrian comfort zones will be provided to enable the safe circulation of pedestrians at all times. Strategic positioning of landscape features will contribute to traffic calming and to the character of the street. Three laybys will be provided along the road to ensure the operational needs of the development are met. Further, it is proposed to regrade the North Circular Road to a flood protection level of 5.7m AOD as a key flood mitigation measure that will ensure emergency access during a 1-in-200-year flood event and protect the Quarry and Flaxmill sites from tidal flooding.

Stonetown Terrace currently operates as a shared space, however this will be enhanced through careful landscape design.

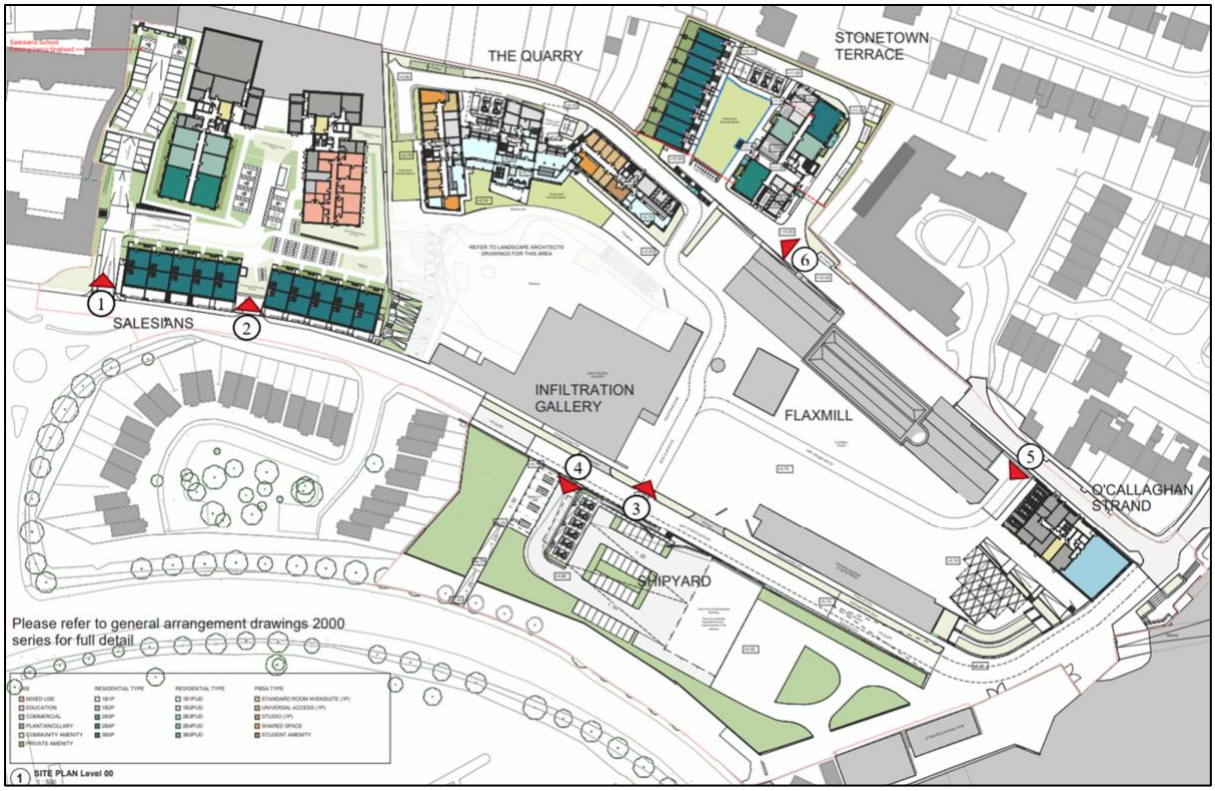

Figure 18.28 Vehicular access points to the proposed development

18.4.5. Access for emergency services, waste collection and deliveries

The access for emergency vehicles, as well as for the normal operational needs associated with waste collection, maintenance and deliveries has been considered from the outset of the design process so as to ensure that these often-onerous requirements would be seamlessly accommodated in the scheme, with no detriment to the desired high-quality of pedestrian and shared spaces throughout.

18.4.5.1 Emergency services

The internal areas are designed to be driveable by emergency vehicles such as fire tenders, addressing the requirements of the fire strategy for the development. Vehicular tracking has been undertaken at each of these locations to confirm that emergency vehicles can navigate the proposed development as described below. The full vehicular tracking for the site is provided in Appendix A. In a flooding event, the design, which includes the raising of North Circular Road, ensures that all zones within the proposed development will continue to be accessible by emergency vehicles.

Fire tender access for the Salesians Zone will be via the Salesians roundabout, using the area opposite the school, as is the case at present for access to the existing Salesians school and car park. From the Salesians courtyard, the fire tender will be able to access the apartment and triplexes located within the Salesians Zone. The latter will also have direct access off North Circular Road. Vehicle tracking for the fire tender access to Salesians is provided in Figure 18.29.

Figure 18.29 Fire tender tracking for Salesians Zone

Emergency access to the Stonetown Terrace Zone will be via Stonetown Terrace. In this case, vehicles will do a 3-point turn at the entrance of the zone partially using a grasscrete area, as shown in Figure 18.30 below.

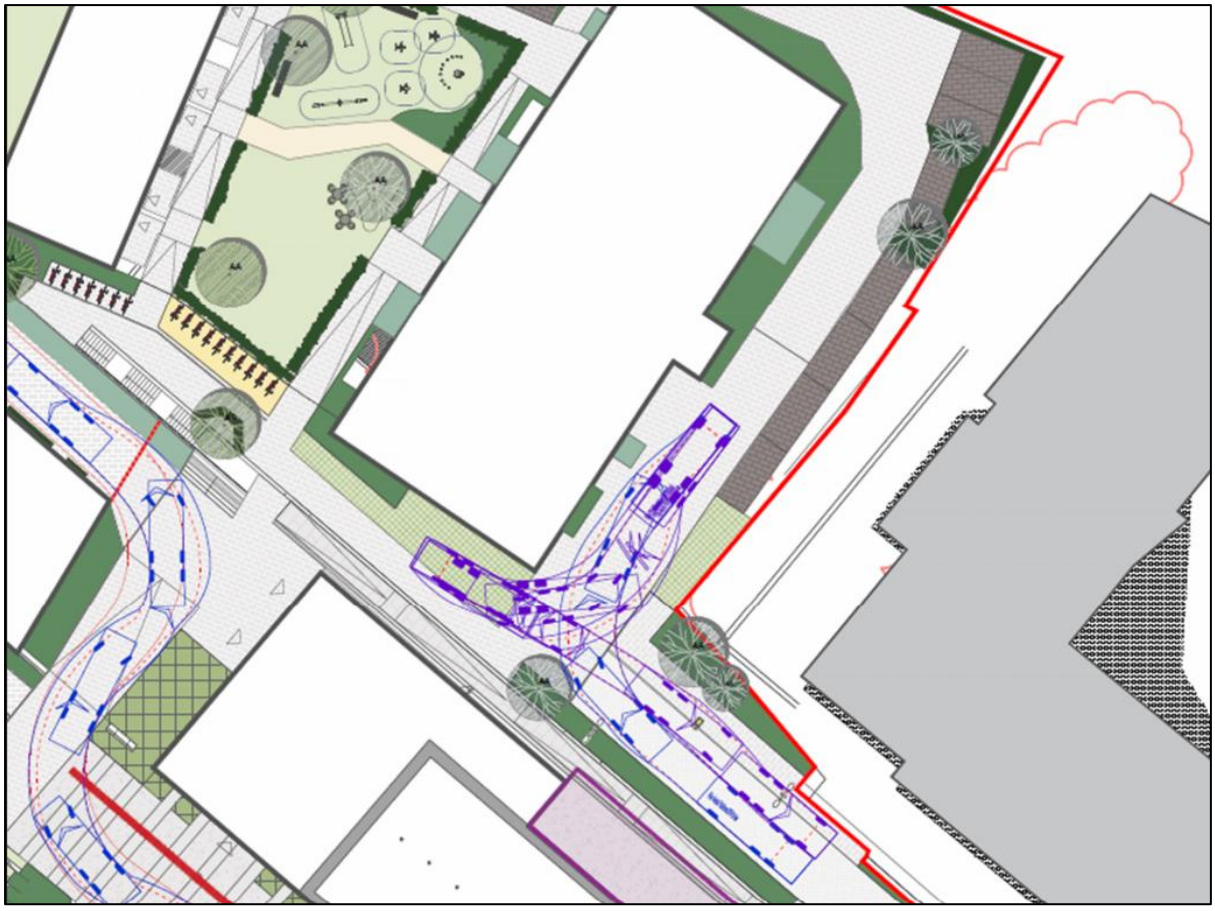

Figure 18.30 Fire tender tracking for Stonetown Terrace [to be updated with revised Stonetown Terrace layout and tracking for submission]

Emergency access to the O'Callaghan Strand Zone will be via Stonetown Terrace, off O'Callaghan Strand. Vehicular tracking for fire tender for the O'Callaghan Strand Zone is provided in Figure 18-31.

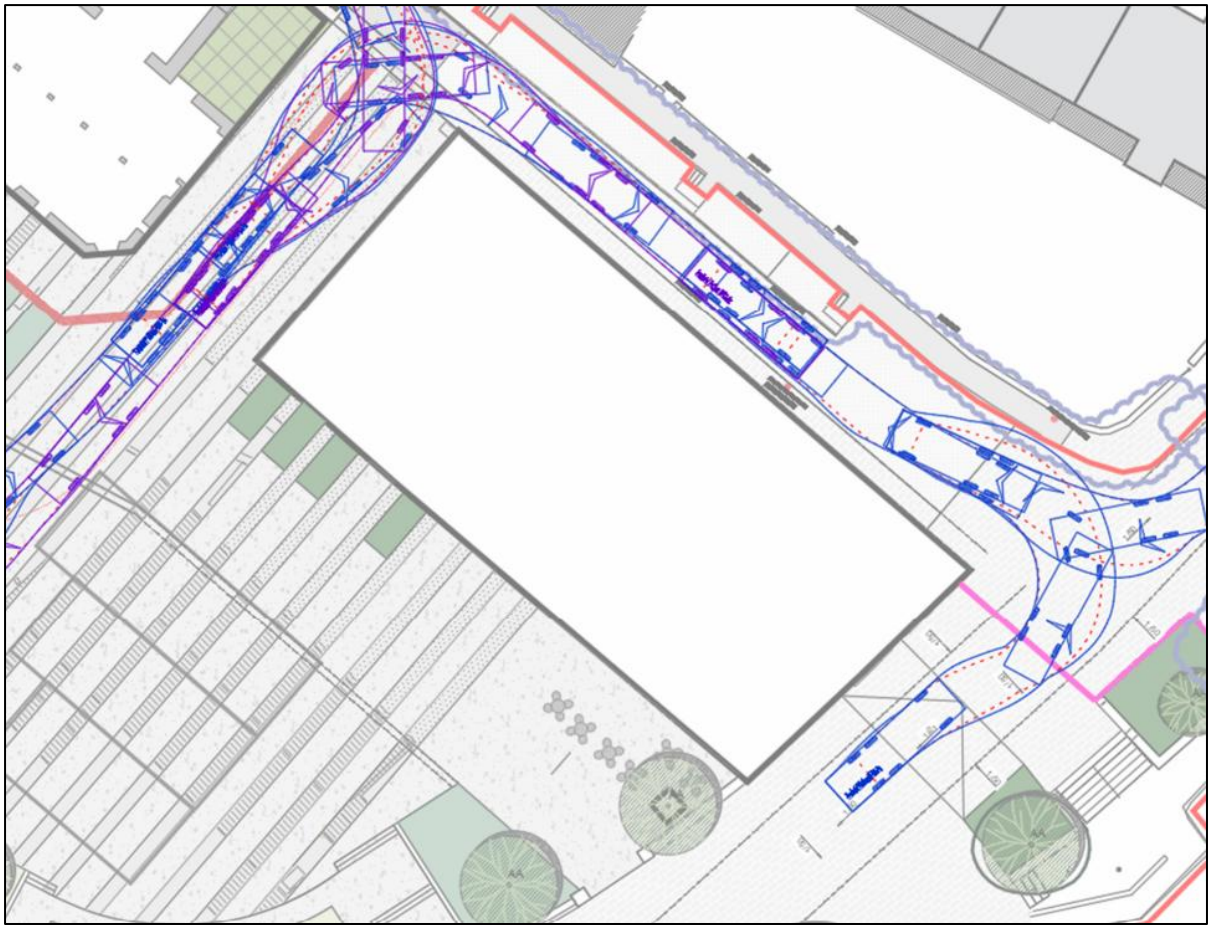

Figure 18-31 Fire tender tracking for O'Callaghan Strand

Emergency access to the Quarry PBSA will be through the proposed development. Emergency vehicles travelling from the east of the site can access the Quarry PBSA via Stonetown Terrace, whereas emergency vehicles travelling from the west will be able to access the Quarry PBSA through the Flaxmill Zone via North Circular Road. The vehicular tracking through the Flaxmill Zone is provided in Figure 18-32.

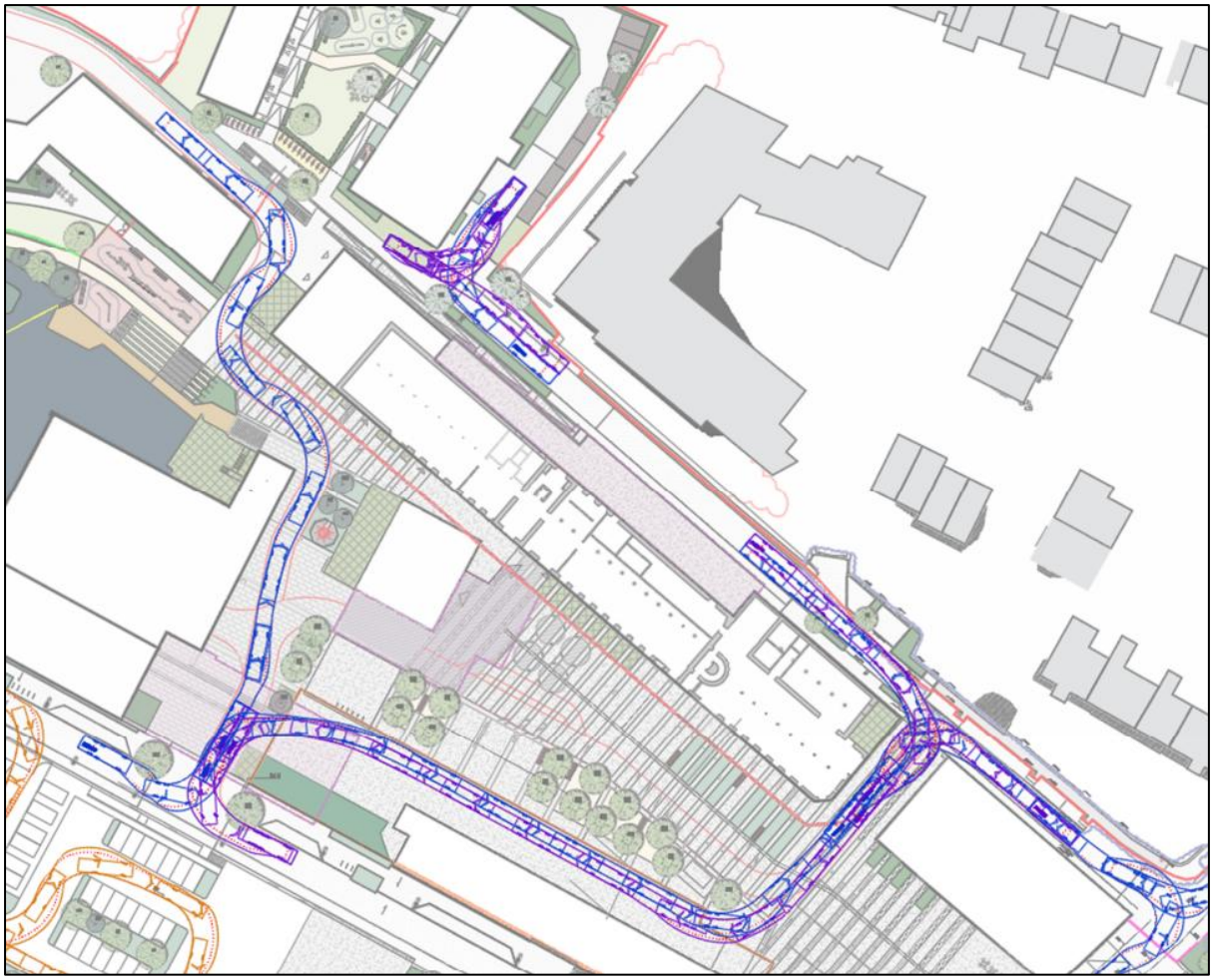

Figure 18.32 Fire tender tracking through the Flaxmill Zone

At the Quarry PBSA, emergency vehicles will be able to reverse and turn around using the movement shown in Figure 18.33 which includes circulation over areas of grasscrete.

Figure 18.33 Fire tender tracking for Quarry PBSA

Fire tender tracking has also been carried out for the mobility hub located on the Shipyard Zone, as shown in Figure 18.34.

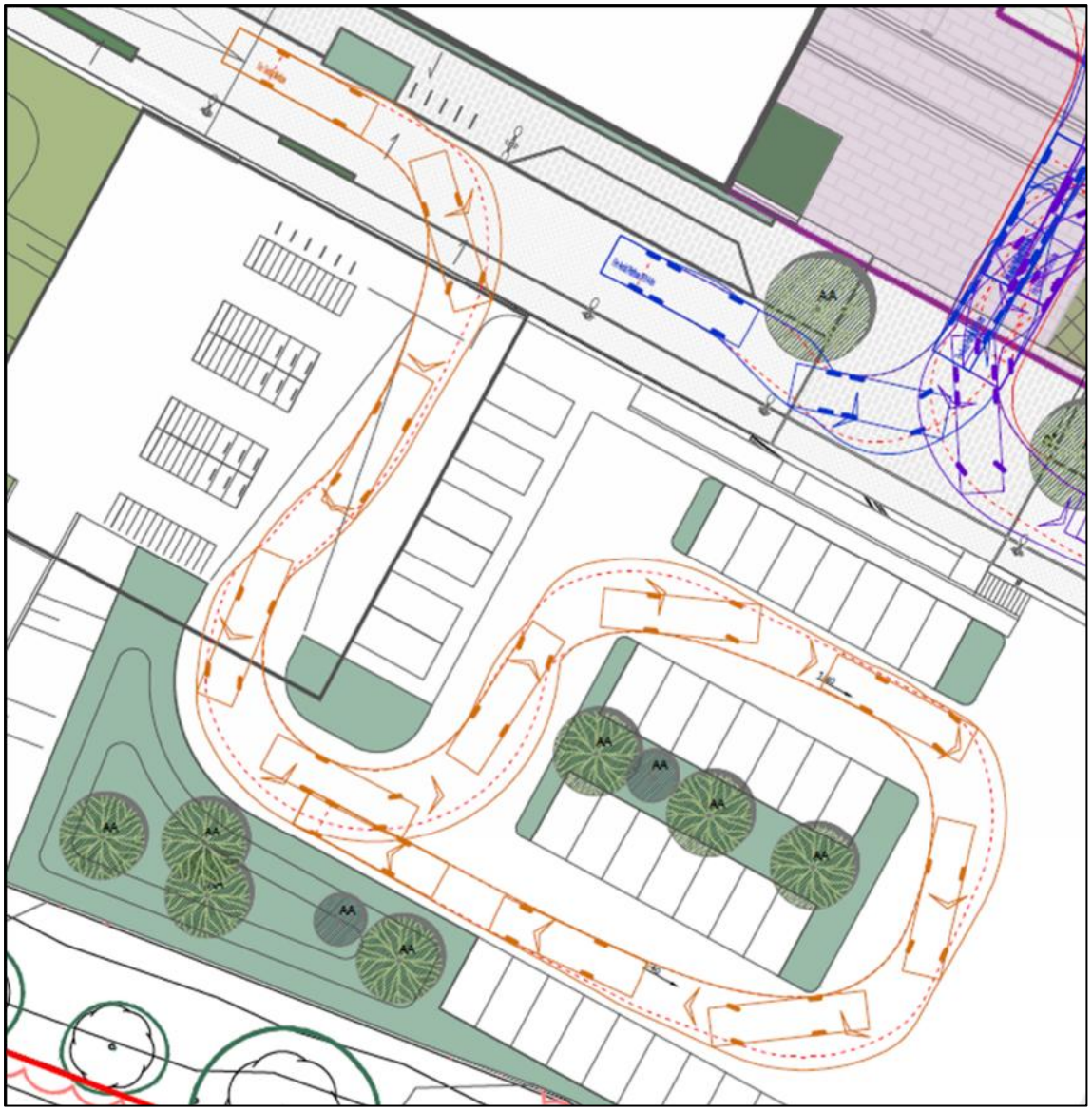

Figure 18.34 Fire tender tracking for mobility hub

18.4.5.2 Waste Collection

Waste collection will be centrally controlled, with storage areas within the development and dedicated waste collection bays provided on adequate locations on the street. The bin handling within the site and externally to the laybys will be done by mechanised means, sympathetic to the desired high-quality of the public realm throughout the scheme. Locations for waste collection are shown in Figure 18.35.

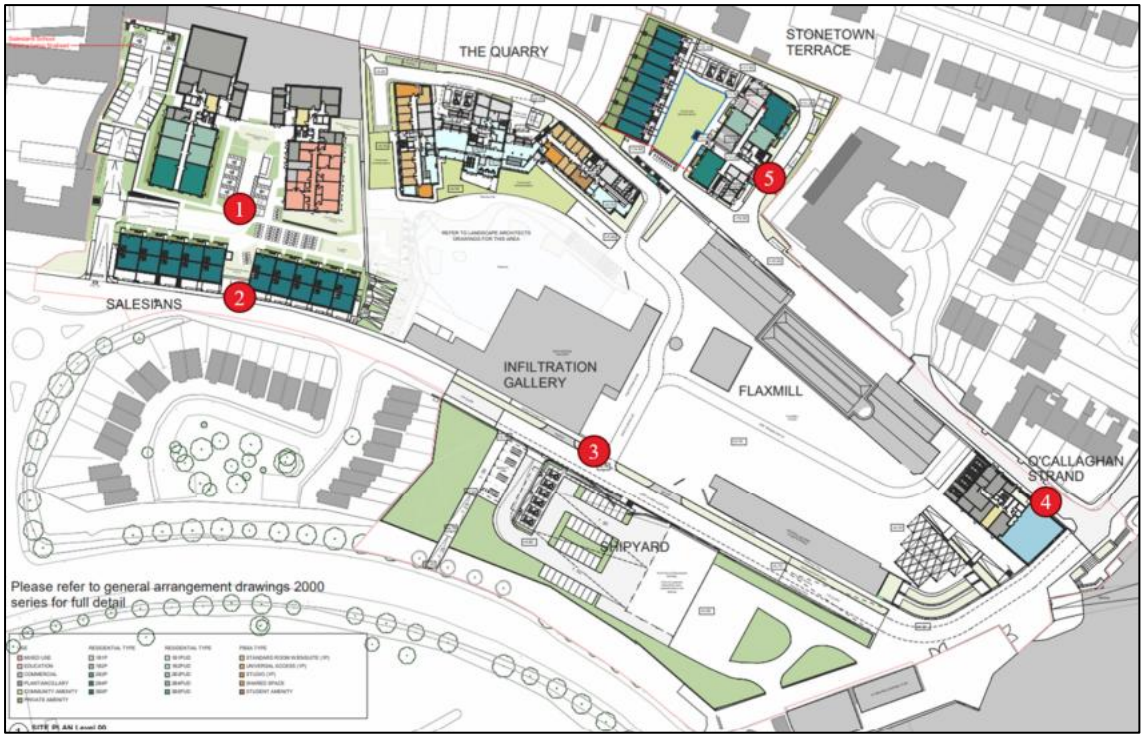

Figure 18.35 Main waste collection locations for the proposed development

Waste collection for the Salesians Zone will primarily take place within the courtyard for the apartment buildings (1), whereas waste collection for the Salesians triplexes will take place on-street on North Circular Road (2).

For the Quarry Zone, waste will be collected from laybys on North Circular Road (3). Bin handling within the Zone and externally to the laybys will be completed through mechanised means. The potential impact on North Circular Road of the handling of larger volumes of waste will be mitigated through careful just-in-time scheduling and the provision of dedicated screened storage at that location.

For the Stonetown Terrace Zone, it is proposed that waste is collected from the top of Stonetown Terrace (5). Waste generated at the O'Callaghan Strand Zone will be collected along Stonetown Terrace (4).

Vehicular tracking has been undertaken at each of these locations to confirm that waste collection vehicles can navigate the proposed development. Waste collection vehicle tracking for each zone is provided in Figure 18.36 to Figure 18.39.

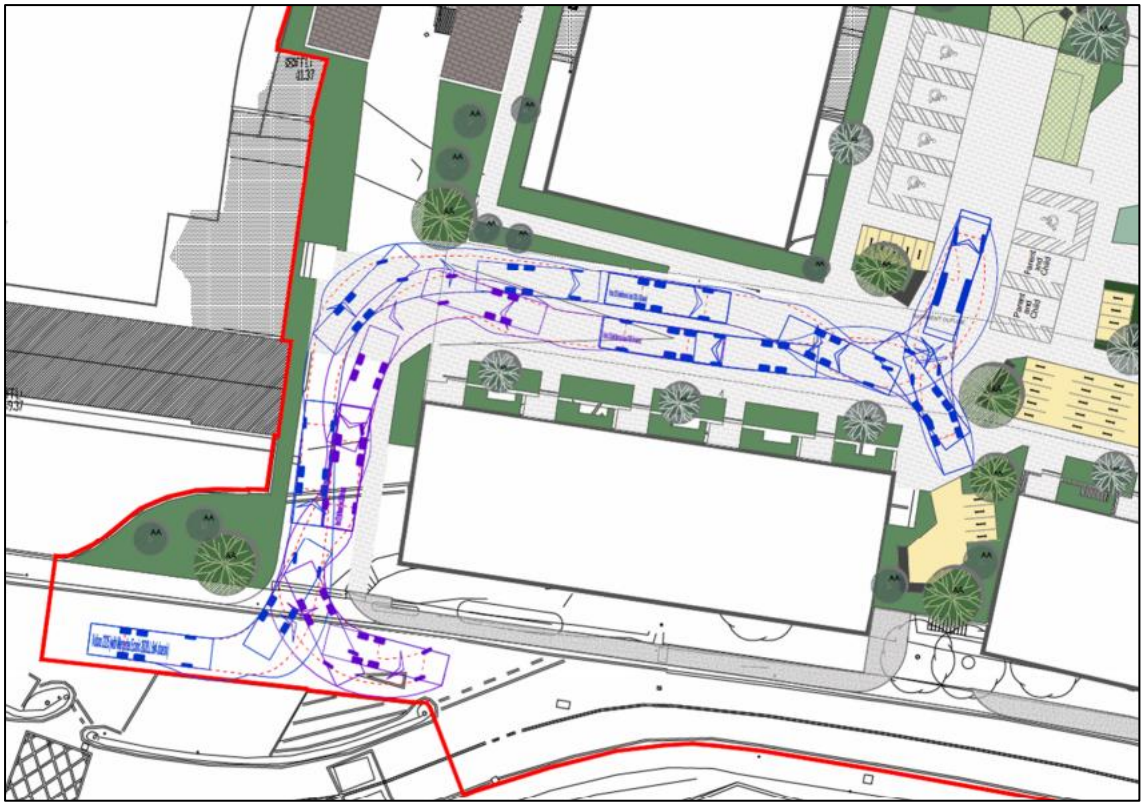

Figure 18.36 Vehicle tracking for waste collection vehicles at Salesians Zone (1)

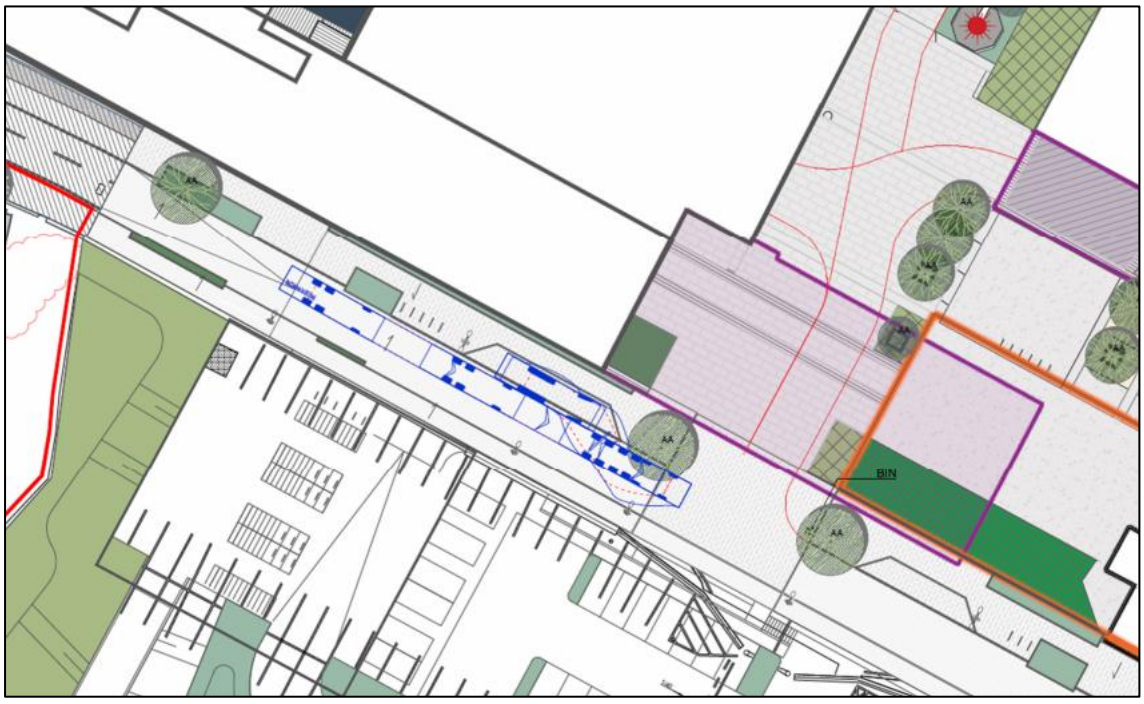

Figure 18.37 Vehicle tracking for waste collection along North Circular Road (3)

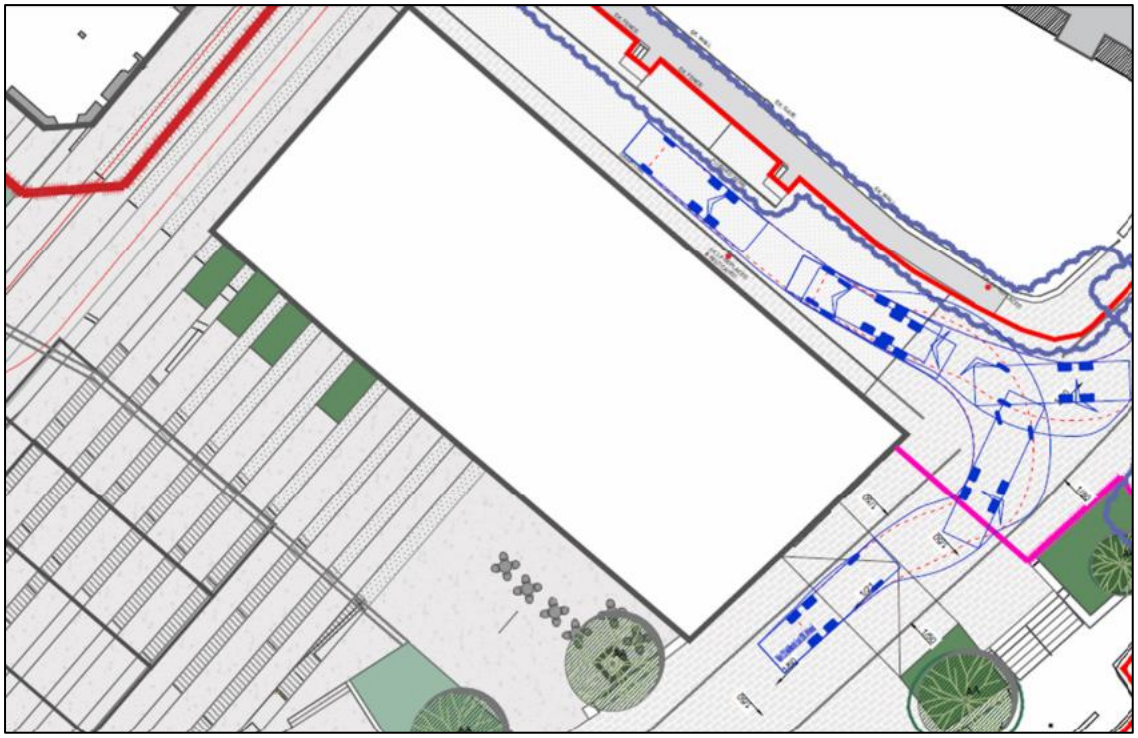

Figure 18.38 Vehicle tracking for waste collection vehicles at O'Callaghan Strand (4)

Figure 18.39 Vehicle tracking for waste collection vehicles at Stonetown Terrace (5)

18.4.5.3 Deliveries

The proposed limited provision of residential car parking will bring about additional pressure on activities such as deliveries, including food shopping deliveries and online shopping, occasionally including bulky

items. The delivery locations for the various residential zones within the proposed development are largely the same as those for waste collection, discussed in the previous section.

Deliveries to the Salesians Zone will primarily take place within the courtyard for the apartment buildings, whereas deliveries for the Salesians triplexes will be on-street on North Circular Road.

For the Quarry Zone, it is currently proposed that deliveries will take place at dedicated delivery laybys on North Circular Road to ensure minimal impact on the internal public realm.

Deliveries to the Stonetown Terrace Zone will take place at the top of Stonetown Terrace and deliveries to the O'Callaghan Strand Zone will take place along Stonetown Terrace.

As shown in Section 18.4.5 above, all internal areas of the proposed development are accessible by fire tender and waste collection vehicles, both of which are larger than delivery vehicles. As such, all internal areas are also accessible by delivery vehicles which provides capacity and flexibility to accommodate any potential requirements associated with deliveries.

18.4.6. Car Parking Provision

As noted throughout this report, the proposed development is located on a site that facilitates sustainable transport due to its city centre location. These existing conditions, along with planned infrastructure improvements in the surrounding area, and the mobility strategy for the proposed development are expected to encourage residents and visitors to use primarily sustainable transport modes to access the site. As such, the level of car parking for the proposed development has been provided to be as low as reasonably possible.

The following sections describe the car parking provision for the various uses within the proposed development. The proposed parking provision takes into account the parking requirements set out in the Limerick Development Plan 2022 – 2028 and the Sustainable Urban Housing Design Standards for New Apartments 2025.

18.4.6.1 Residential Parking Provision

Car parking for the Stonetown Terrace, Salesians and O'Callaghan Strand zones has been provided at a ratio of 0.24 - 0.34 spaces per dwelling. This is deemed to be reasonable and workable ratio given the site's proximity to the city centre and the many trip attractors located within a 10 – 20 minute walk or cycle (refer to Section 18.3.4 and 18.3.5). A total of 234 residential units and 68 car parking spaces are proposed across the Stonetown Terrace, Salesians and O'Callaghan Strand zones.

The car parking ratio for the Quarry Zone is 0.03 spaces per bed, which translates to eight car parking spaces for 270 beds. Similar to above, this is deemed to be a reasonable and workable ratio given the site's city centre location and proximity to trip attractors. Further to this, it is expected that a number of students living in the Quarry PBSA will be studying within the educational campus (Phase III of the Masterplan), therefore limiting the demand for car parking amongst students given the walkability between home and college. It is also envisaged that a frequent bus shuttle service will explored as part of the educational campus (Phase III), which would cater for students living on site.

In accordance with the Building Regulations – Technical Guidance Document M 2022 (Access and Use),

5% of the total number of parking spaces for each residential zone have been designated as accessible parking spaces. Surface car parking is provided in the Quarry PBSA and Stonetown Terrace zones and a basement car park is located beneath the Salesians triplexes. The parking at O'Callaghan Strand is located beneath the under croft of the building.

In order to accommodate the occasional use of a car for the car-free apartments, a residential car club is also being provided as part of a dedicated mobility hub within the Shipyard Zone. The residential car club will provide 10 car-sharing spaces for private use of the residents, without general public access. These cars will be available for residents to use for trips where a car is required such as a shopping trip, weekend needs (family/day trips), occasional transport of bulky items, etc. This facility will be managed centrally and will operate on the basis of online bookings.

The parking provision for each residential zone, including both standard and accessible spaces, is shown in Table 18.1 below.

Table 18- 1: Residential and PBSA parking provision per site

Type	Stonetown Terrace	Salesians	O'Callaghan Strand	Quarry PBSA	Shipyard	Total
Standard spaces	12	45	4	6		69
Accessible spaces	2	4	1	2		11
Residential car club spaces					10	10
Total	**14**	**49**	**5**	**8**	**10**	**86**

In accordance with the minimum requirement of 1 no. EV Charge Point space per five car parking spaces, a total of 17 no. EV spaces are provided within the parking distributed around the residential units and PBSA. An additional 6 no. charging points are provided in the Mobility Hub. Ducting shall be provided for every parking space.

18.4.6.2 Visitor Parking Provision

As part of the mobility hub within the Shipyard Zone, 26 temporary visitor car parking spaces are being provided. These spaces are intended to function as general visitor spaces to serve the proposed development, as well as Phase III (the educational campus) of the Masterplan.

18.4.6.3 Creche Drop-off

Four additional parking spaces are being provided in the Salesians courtyard for proposed creche use. Current provision includes one accessible parking space, two Parent and Child spaces and one standard parking space. The layout of these spaces follows the National Disability Authority - Universal Design Guidelines for Early Learning and Care Settings (2019).

18.4.6.4 Salesians Primary School parking

A total of 30 no. surface car parking spaces are provided within the Salesians Zone on the western boundary adjoining Salesians primary school. The car parking is provided for the dedicated use of the adjoining Salesians Primary School only and is being delivered on foot of an agreement with the Salesian Sisters, following disposal of land to the Council.

18.4.6.5 Total Car Parking Provision

The total car parking provision for the proposed development, including residential, PBSA, visitor and creche parking is 116 spaces, as shown in Table 18.2 below. The Salesians Primary School parking has not been included in this table given that it is being replaced like-for-like. Figure 18-40 provides a visual representation of the information presented in the table below.

Table 18- 2: Total parking provision for the proposed development

Location		Car Parking		
		Standard Spaces	**Accessible Spaces**	**Total Spaces**
Residential	Salesians	45	4	49
	Stonetown Terrace	12	2	14
	O'Callaghan Strand	4	1	5
Student residential	Quarry (PBSA)	6	2	8
Dedicated residential / PBSA car club	Shipyard	9	1	10
Visitor	Shipyard	24	2	26*
Creche	Salesians	3**	1	4
Total				**116**

** temporary parking spaces*

*** includes 2 parent and child spaces*

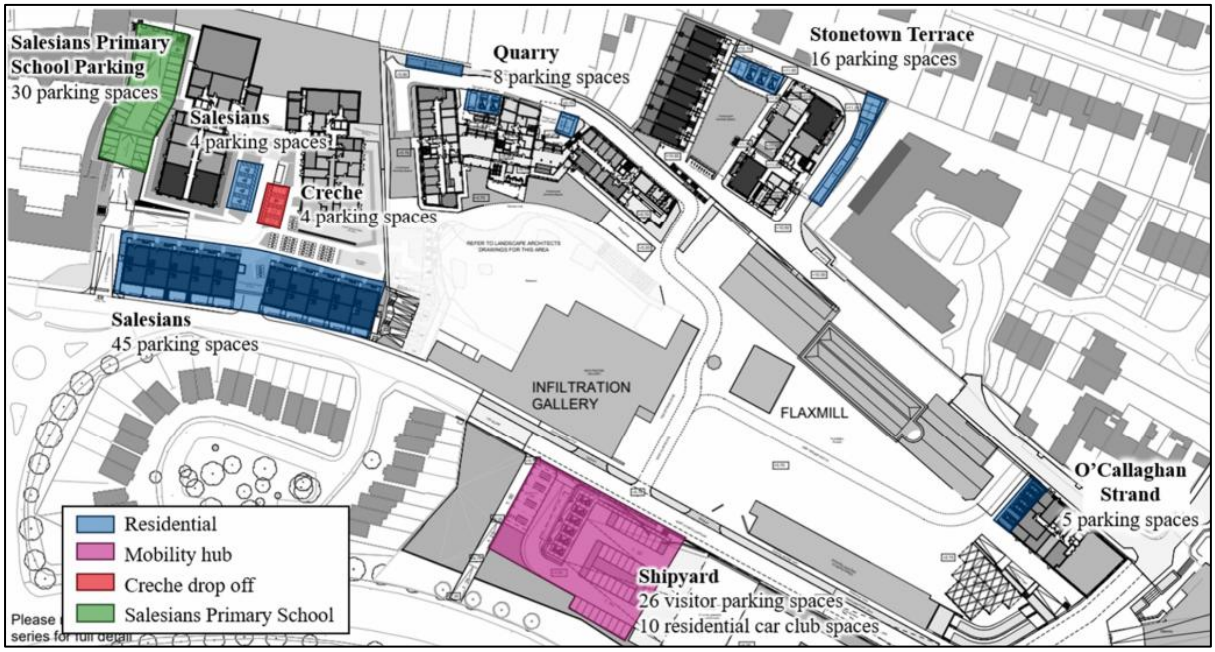

Figure 18-40 Parking provision and locations

18.4.7. Cycle Parking Provision

The proposed cycle parking provision serving the development is in accordance with the parking requirements set out in the Limerick Development Plan 2022 – 2028 and the Sustainable Urban Housing Design Standards for New Apartments 2025.

The Design Standards for New Apartments indicates that one bicycle parking space is required per residential bedroom and one visitor space per two residential units. There are 394 beds provided across 234 residential units and therefore, 394 residential cycle parking spaces and 117 visitor cycle parking spaces are required in accordance with the Design Standards.

The Limerick Development Plan 2022 – 2028 indicates that for student accommodation in Zone 1, one cycle parking space is required per five beds. There are 270 beds provided in the Quarry PBSA and therefore 54 cycle parking spaces are required.

The total cycle parking provision for the residential developments is well in excess of the minimum required, with 448 spaces provided for residents (including 54 spaces for the Quarry PBSA). These spaces are being provided in safe, covered areas within the various residential developments.

In addition to this, there are 117 visitor spaces located throughout the proposed development, including 36 cargo cycle parking spaces and 84 double stacker cycle parking spaces in the mobility hub (Shipyard Zone). This is deemed to be a reasonable quantum considering the cycle sharing schemes that will be available for use.

There are also 3 cycle parking spaces being provided for creche use.

18.5. LIKELIHOOD OF SIGNIFICANT EFFECTS

This section contains an assessment of the traffic impacts associated with the proposed development (Phase II) during both construction and operation. The impact assessment has primarily focused on the Salesians roundabout as this is the key junction in the vicinity of the proposed development. It should be noted that a “Do Nothing” scenario was considered as part of the operational assessment but was excluded from this section as this scenario, unusually, is anticipated to have a lesser impact than that of the operational phase.

18.5.1 Construction Phase

18.5.1.1 Construction Trip Generation

Due to the complexity of the site and separate zones to be built, the construction activities will be phased, with the intensity of trips being limited at any given time. It has been robustly assumed that during construction of any one zone, there will be no more than 20 additional construction vehicular trips per hour (10 in / 10 out).

18.5.1.2 Construction Impact Assessment

To assess the impact of traffic generated during the construction of the proposed development, the construction trip generation has been compared against the existing traffic flows on the Salesians

roundabout (Section 18.3.6)

As noted above, it is expected that there will be no more than 20 additional construction vehicular trips per hour (10 in / 10 out). For robustness purposes, it has been assumed that 100% of construction vehicles travel through the Salesians roundabout.

The construction traffic flows through the Salesians roundabout during the AM and PM peak periods as shown in Table 18.3 below.".

Table 18- 3: Comparison of total traffic volumes through the Salesians roundabout – existing v. construction

Peak Period	Existing volumes through Salesians roundabout	Expected volumes (with construction traffic generation)	% change
AM peak	1,052	1,072	2%
PM peak	1,048	1,068	2%

As part of the initial screening assessment, additional volume due to the development at each of the 11 no. key junctions identified previously above was assessed. In line with TII's Traffic and Transport Assessment Guidelines (PE-PDV-02045) [1], published in May 2014, junctions are only assessed in detail if:

- Development traffic exceeds 10% of turning movements at junctions.
- Development traffic exceeds 5% of turning movements at junctions if location has potential to become congested or sensitive.

For the purposes of this assessment, Salesians Roundabout can be considered to be sensitive as it is located close to Quays and thus subjected to the 5% threshold. Based on Table 18- 3 above, the additional trips due to full masterplan is less than 5% of the baseline traffic. Hence, the junction was not considered for the further analysis and the impact of the construction trips can be considered "not-significant".

18.5.2 Operational Phase

18.5.2.1 Operational trip generation

Residential trip generation

The expected AM and PM peak period residential traffic generated by the proposed development has been calculated by applying person trip rates from TRICS. Person trip rates for both student accommodation and residential units have been obtained from TRICS and are shown in Table 18.4 below.

Table 18- 4: Person trip rates used in residential trip generation calculation (Source: TRICS)

	AM peak (07:45 – 08:45)		PM peak (17:00 – 18:00)	
	Arrivals	Departures	Arrivals	Departures
Student Accommodation (per resident)	0.019	0.089	0.122	0.091
Residential (per dwelling)	0.056	0.094	0.096	0.074

To calculate the overall number of person trips generated by the proposed development, the person trip rates extracted from TRICS have been applied to the number of residents expected to live in the proposed development. This is assumed to be 270 students and 749 residents based on the residential accommodation schedule for the proposed development. Applying the resident numbers to the TRICS person trip rates results in the person trips included in Table 18.5 below.

Table 18- 5: Person trips associated with student accommodation and residential units

	AM peak (07:45 – 08:45)		PM peak (17:00 – 18:00)	
	Arrivals	**Departures**	**Arrivals**	**Departures**
Student Accommodation (per resident)	5	24	33	25
Residential (per dwelling)	42	70	72	55

The person trips presented in the table above represents the trips to/from the proposed development by all modes of transport. The total number of residential vehicular trips generated by the proposed development has been calculated by applying an estimate car mode split for the area to these person trips. Considering the city centre location of the proposed development and the low residential car parking provision (see Section 18.4.6.1), it is expected that the car mode share will be approximately 15%. This results in a total residential trip generation of 21 trips during the AM peak and 28 trips during the PM peak, as shown in Table 18.6

Table 18- 6: Total residential vehicular trip generation associated with the proposed development

	AM peak (07:45 – 08:45)		PM peak (17:00 – 18:00)	
	Arrivals	**Departures**	**Arrivals**	**Departures**
Student Accommodation (per resident)	1	4	5	4
Residential (per dwelling)	6	11	11	8
Total residential trip generation	**7**	**14**	**16**	**12**

Visitor trip generation

The mobility hub within the Shipyard Zone will include 26 visitor spaces as noted in Table 18.2 Using the number of trips generated by the existing Euro Car Parks and adjusting for the available capacity of the visitor parking provided for the proposed development results in the expected visitor trip generation provided in Table 18.7 below.

Table 18- 7: Total visitor vehicular trip generation associated with the proposed development

	AM peak (07:45 – 08:45)		PM peak (17:00 – 18:00)	
	Arrivals	**Departures**	**Arrivals**	**Departures**

Visitor trip generation	10	1	1	8

Peak hour trip

The resultant peak hour trips based on the residential and visitor generation is outlined in Table 18.8 below.

Table 18- 8: Predicted peak hour trip generation to/from the proposed development

	AM peak (07:45 – 08:45)		PM peak (17:00 – 18:00)	
	Arrivals	**Departures**	**Arrivals**	**Departures**
Residential trip generation	7	14	16	12
Visitor trip generation	10	1	1	8
Total trip generation	17	15	17	20

18.5.2.2 Operational impact assessment

The impact of traffic generated by the proposed development has also been assessed using the residential and visitor vehicular trip generation and the baseline traffic flows on the surrounding road network (Section 18.3.6)

Given that the baseline traffic on the surrounding road network includes traffic generated by the Euro Car Parks which will be closed as part of the proposed development, an assessment of the net change in traffic volumes has been carried out.

During the AM and PM peak periods, the existing Euro Car Parks generates 62 trips and 51 trips, respectively, whereas the proposed development generates 32 vehicles in the AM peak and 37 vehicles in the PM peak. This represents an overall decrease in traffic on the road network surrounding the site during peak times as shown in Table 18.9 below.

Table 18-9: Change in traffic on the surrounding road network as a result of the proposed development

	Reduction in traffic as a result of proposals (removal of existing Euro Car Parks)	**Traffic generated by proposed development**	**Net change in traffic volumes**
AM peak	-62	32	-30
PM peak	-51	37	-14

Trip distribution has been derived from the observed traffic to/from the Euro Car Parks. Existing traffic analysis indicates that 81% and 76% of vehicles accessing the Euro Car Parks during AM and PM peak times, respectively, travel through the Salesians roundabout.

Applying these percentages to the proposed development traffic, allows for an understanding of the change in traffic volumes through this roundabout.

It is estimated that the reduction in traffic flows generated by the development at the Salesians roundabout will be as significant as 21 vehicles in the AM and 2 vehicles in the PM. This change in traffic corresponds to a reduction of 2% when considering the total traffic volumes at the roundabout during the AM peak and a reduction of 1% in total traffic volumes during the PM peak as shown in Table 18.10. Therefore, the impact of the operational trips can be considered “imperceptible”.

Table 18-10: Comparison of total traffic volumes through the Salesians roundabout – existing v. operational

	Existing volumes (with Euro Car Parks traffic generation)	Expected volumes (with proposed development traffic generation)	% change
AM peak	1,052	1,028	-2%
PM peak	1,048	1,037	-1%

18.6 CUMULATIVE IMPACTS

18.6.1 Overview

While not the subject of this planning application, a preliminary assessment of the traffic impact for future phases of the Masterplan (Phase III and Phase IV) has been carried out. It should be noted that this assessment relies on the information currently available for Phase III and Phase IV and therefore the assumptions and figures used in the assessment are indicative at this stage.

No other development has been granted planning permission nearby; hence, as part of the cumulative masterplan, trips associated with the full masterplan are considered only as part of the cumulative assessment.

18.6.2 Car Parking Provision for future stages of the Masterplan

Phase III of the Masterplan includes a proposed educational campus. As such, it is envisaged that no additional car parking will be provided as part of Phase III. It is intended that the 26 visitor spaces provided on the mobility hub will serve both the visitor needs of the proposed development and of the future educational campus. Phase IV of the Masterplan relates to the development of the Shipyard Zone which is expected to include office development and approximately 200 car parking spaces. This parking provision is expected to include the 36 spaces currently being proposed for the mobility hub as part of the proposed development (Phase II). As such, the net increase in car parking spaces being provided as part of Phase IV will be 164 spaces. This will be revisited as part of the Phase IV design.

18.6.3. Cycle Parking Provision for future stages of the Masterplan

The cycle parking being provided as part of the mobility hub within the Shipyard Zone is intended for use by visitors to both the proposed development and the future educational campus (Phase III of the Masterplan). Further visitor cycle parking may be provided within the Flaxmill Zone as part of the future educational campus works. This will be reviewed as part of the Phase III design. Similarly, cycle parking for Phase IV of the Masterplan (office development within the Shipyard Zone) will be reviewed as part of the Phase IV design. For both Phases III and IV, cycle parking will be provided in line with the

development standards set out in the Limerick Development Plan 2022 – 2028, as well as will the demands associated with the emerging proposals.

18.6.4. Public Transport Capacity: Full Masterplan Development

- **Phase I Heritage Works:** This phase is not expected to generate any additional public transport trips.
- **Phase II Residential & Public Realm Works (the proposed development):** A detailed assessment of public transport demand for Phase 2 is provided in Section 18.3.6.3. With the enhanced connectivity proposed under the BusConnects Limerick initiative (see Figure 18.18), public transport accessibility to the area is expected to improve, supporting future demand.
- **Phase III TUS Educational Masterplan:** As outlined in Section 18.4.6.1, it is envisaged that a dedicated and frequent shuttle bus service will be explored as part of the educational campus. This service would cater specifically to students residing on-site, reducing reliance on existing public transport services.
- **Phase IV Shipyard Site:** The final phase involves significant commercial development at the Shipyard site, including approximately 23,000 sqm of commercial floorspace, with some provision for office use. As the timeline and detailed nature of this phase are currently undefined, it is not possible to accurately estimate public transport demand at this stage. However, the proposed BusConnects Limerick improvements—particularly increased bus service frequency near the site—are expected to accommodate future demand effectively. Importantly, the travel patterns associated with this phase will differ from those of the residential development. Most trips will be inbound during the morning peak and outbound in the evening, which is the reverse of the residential travel demand. As a result, the transport demand from Phase 2 and Phase 4 will not be cumulative in terms of peak load on the network.

Based on this assumption, and with enhanced connectivity provided by BusConnects Limerick, the overall impact of the full masterplan on public transport capacity is expected to be slight.

18.6.5 Full Masterplan Trip Generation

As noted in Section 18.6.2 (Car parking provision for future stages of the Masterplan), Phase III of the Masterplan is intended to comprise an educational campus and no additional car parking will be provided as part of this development. Therefore, it is expected that there will be no change in traffic generation or impact related to Phase III as compared to previous phases. As such, no traffic analysis of Phase III has been carried out. The trip generation and assessment of impact related to Phase IV is included in subsequent sections.

The trip generation associated with Phase IV of the Masterplan has been based on the trip generation for the existing Euro Car Parks given the expected similarities in trip patterns. The Euro Car Parks trip generation during AM and PM peak periods has been determined using the baseline traffic data (Section 18.3.7), presented in Table 18.11 below.

Table 18- 11: Trip generation for the existing Euro Car Parks during peak times

	AM peak (07:45 – 08:45)		**PM peak (17:00 – 18:00)**	
	Arrivals	**Departures**	**Arrivals**	**Departures**

Euro Car Parks trip generation (based on 120 spaces)	60	2	2	49

The trip generation for Phase IV of the Masterplan has been calculated by factoring the Euro Car Parks trip generation figures to reflect the increased capacity associated with Phase IV, i.e. 164 spaces compared with approximately 120 spaces in the Euro Car Parks. The Phase IV trip generation is shown in Table 18.12 below.

Table 18-12: Trip generation for Phase IV of Masterplan during peak times

	AM peak (07:45 – 08:45)		**PM peak (17:00 – 18:00)**	
	Arrivals	**Departures**	**Arrivals**	**Departures**
Phase IV trip generation (based on 164 spaces)	82	3	3	67

18.6.6 Full Masterplan Impact Assessment

The impact of traffic generated by the full Masterplan (Phase I – IV) has been assessed by adding the trip generation associated with Phase IV of the Masterplan (Section 18.6.4) to the proposed development operational trip generation (Section 18.6.2) and comparing that to the baseline traffic flows at the Salesians roundabout (Section 18.3.7).

Trip distribution has been derived from the observed traffic to/from the Euro Car Parks. Existing traffic analysis indicates that 81% and 76% of vehicles accessing the Euro Car Parks during AM and PM peak times, respectively, travel through the Salesians roundabout. Applying these percentages to the trip generation associated with the full Masterplan allows for an understanding of the change in traffic volumes through this roundabout when the full Masterplan is implemented.

It is estimated that the total increase in traffic flows generated by the development at the Salesians roundabout will be 45 vehicles in the AM and 42 vehicles in the PM. This change in traffic corresponds to a 4% increase in total traffic volumes during the AM and PM peaks as compared to baseline traffic flows as shown in Table 18.13 below..

Table 18- 13: Change in traffic on the surrounding road network: Full masterplan development

	Reduction in traffic as a result of proposals	**Traffic generated by proposed development (Phase2)**	**Traffic generated by proposed development (Phase4)**	**Net change in traffic volumes**
AM peak	-62	32	85	55
PM peak	-51	37	70	56

It is estimated that the total increase in traffic flows generated by the development at the Salesians roundabout will be 45 vehicles in the AM and 42 vehicles in the PM. This change in traffic corresponds to a 4% increase in total traffic volumes during the AM and PM peaks as compared to baseline traffic flows as shown in Table 18.14 below.

Table 18- 14: Comparison of total traffic volumes through the Salesians roundabout – existing v. full Masterplan

	2024 traffic volumes (with Euro Car Parks)	Expected volumes (with full Masterplan – all phases implemented)	% change
AM peak	1,052	1,097	4%
PM peak	1,048	1,090	4%

As part of the initial screening assessment, additional volume due to the development at each of the 11 no. key junctions identified previously above was assessed. In line with TII's Traffic and Transport Assessment Guidelines, PE-PDV-02045) [1], published in May 2014, junctions are only assessed in detail if:

- Development traffic exceeds 10% of turning movements at junctions.
- Development traffic exceeds 5% of turning movements at junctions if location has potential to become congested or sensitive.

For the purposes of this assessment, Salesians Roundabout can be considered to be sensitive as it is located near quays and subject to the 5% threshold. Based on Table 18.14 above, the additional trips due to full masterplan is less than 5% of the baseline traffic. Hence, the junction was not considered for the further analysis and the impact of the full masterplan trips can be considered "not-significant".

18.7 REMEDIAL & MITIGATION MEASURES

18.7.5 Construction Phase Mitigation

An Outline Construction Traffic Management Plan has been developed to mitigate traffic impacts during the construction phase. This report is provided in the Appendix of the CEMP. This report will be developed by the contractor in line with the parameters set out in the Construction Traffic Management Plan. The contractor's detailed Construction Traffic Management Plan will address the following key issues:

- A dedicated person will be appointed for the management of the deliveries during the construction stage. It will also be this person's duty to make sure the construction routes are adhered to without fail.
- The Applicant will conduct a pre- and post-construction condition survey on the public road, with the developer liable to repair any damage to the public road attributed to the construction of the proposed development.
- Deliveries will be scheduled to avoid morning and evening peak hours. This will avoid HGV traffic arriving during the morning peak hours and creating conflict with local residents' commute or school run. Construction personnel will be encouraged to car-pool, or to travel to site in minibuses.
- During the construction phase, clear construction warning signs will be placed on the approach to the site access point, in accordance with Chapter 8 of the Traffic Signs Manual. The site entrance points will also be appropriately signed. Access to the construction site will be controlled by onsite personnel and all visitors will be asked to sign in and out of the site by security/site personnel. Site visitors will receive a suitable Health and Safety site induction and Personal Protective Equipment ("PPE") will be worn.

- To control, prevent and minimise dirt on the access route and emissions of dust and other airborne contaminants during the construction works, the following mitigation measures will also be implemented.
    - Wheel washing facilities should consist of a water bowser with pressure washer. The bowser will contain water only and no other additives. Run-off from this activity will be directed to the drainage situated on the lower boundary of the construction compound. All drivers will be required to check that their vehicle is free of dirt, stones and dust prior to departing from the site.
    - Drivers will adopt driving practices that minimise dust generation including a 30km/h internal access road speed limit; and
    - Any dust generating activities will be avoided or minimised, wherever practical, during windy conditions.
- Once construction of the Proposed Development is completed, all machinery and equipment will be removed and hard standing within the Solar Farm site excavated. The area will be regraded with the stockpiled topsoil to a natural profile. Road surfaces, road markings, etc. will be fully reinstated as is and in such a manner that there is no change to the operation of the local road network.

The contractor will develop a detailed Logistics Plan to identify the delivery schedule requirements for every delivery. It is proposed that the contractor will operate a “Just in Time” delivery philosophy to minimise materials stored on site and reduce congestion in and around the works compound.

18.7.6 Operation Phase Mitigation

The Mobility Management Plan (MMP) submitted with the application will be implemented and continuously reviewed / updated to mitigate the anticipated increase in traffic volumes. Efforts will be made to utilise local public transport network, road network and active travel facilities in the most efficient ways possible that will be encouraged through appropriate cycle parking and storage facilities on the proposed development. Staff will be made aware about the public transport facilities nearby. The measure will also include making people aware about “Cycle to Work Scheme” and “Taxsaver Commuter Ticket Scheme”. A Road Safety Audit was conducted and included in the planning application. This audit has resulted in improvements to the overall scheme from a road safety perspective by updating the proposed design to mitigate potential road safety risk. Further details provided in Road Safety Audit included as part of planning application submission.

18.8 RESIDUAL IMPACTS

18.8.1 Construction Phase

The traffic-related residual effects of the proposed development are anticipated to be “slight”.

18.8.2 Operational Phase

The traffic-related residual effects of the proposed development are anticipated to be “moderate”.

18.9 MONITORING

18.9.1 Construction Phase

The proposed development will have the following monitoring requirements:

- The Applicant will conduct a pre- and post-construction condition survey on the public road, with the developer liable to repair any damage to the public road attributed to the construction of the proposed development.
- The Applicant will set up a Project website in order to keep local residents and businesses updated with construction road impacts.

18.9.2 Operational Phase

No monitoring requirements are necessary for the proposed development.

18.10 REFERENCES

[1] TII, "Traffic and Transport (PE-PDV-02045)," May 2014. [Online]. Available: https://cdn.tii.ie/publications/PE-PDV-02045-01.pdf. [Accessed 13 October 2025].

[2] Buseireann, "Bus Éireann - Route 303: Serving Pineview to Kilmallock Road via Henry Street," August 2025. [Online]. Available: https://assets-us-01.kc-usercontent.com/db136e73-39a4-0017-c8cc-5f063ce7fc95/f7b539f9-e37e-452e-9bb6-55ec70c270d8/timetable-303-aug25.pdf. [Accessed 10 October 2025].

[3] B. Éireann, "Bus Éireann - Route 302: Serving Henry Street to Sarsfield Street," August 2025. [Online]. Available: https://assets-us-01.kc-usercontent.com/db136e73-39a4-0017-c8cc-5f063ce7fc95/219f7e13-047a-4aec-8894-688e29882dc8/timetable-302-aug25.pdf. [Accessed 13 October 2025].

[4] B. Éireann, "Bus Éireann - Route 306: Serving Edward Street to Sarsfield via Henry Street," August 2025. [Online]. Available: https://assets-us-01.kc-usercontent.com/db136e73-39a4-0017-c8cc-5f063ce7fc95/c191f90f-5405-4dd8-874f-52bb238f04c4/timetable-306-aug25.pdf. [Accessed 13 October 2025].

[5] B. Éireann, "Bus Éireann - Route 343: Serving Limerick to Shannon via Bunratty," December 2024. [Online]. Available: https://assets-us-01.kc-usercontent.com/db136e73-39a4-0017-c8cc-5f063ce7fc95/32a1f2a2-87b0-41fe-a07f-d41d9f2e451c/timetable-343-dec24.pdf. [Accessed 13 October 2025].

[6] CSO, "Press Statement Census 2022 Results Profile 3 - Households, Families and Childcare Limerick," Central Statistic Office, 31 August 2023. [Online]. Available: https://www.cso.ie/en/csolatestnews/pressreleases/2023pressreleases/pressstatementcensus2022resultsprofile3-householdsfamiliesandchildcarelimerick/. [Accessed 16 October 2025].

[7] CSO, "Sex, Age and Marital Status for Limerick city and suburbs," cso, 2022. [Online]. Available: https://visual.cso.ie/?body=entity/ima/cop/2022&boundary=C04160V04929&guid=fe12eecc-1fac-4b44-9c3d-54e9d080f92e&theme=0. [Accessed 16 October 2025].

[8] CSO, “Press Statement Census 2022 Results Profile 7 - Employment, Occupations and Commuting Limerick,” CSO, 05 December 2023. [Online]. Available: https://www.cso.ie/en/csolatestnews/pressreleases/2023pressreleases/pressstatementcensus2022resultsprofile7-employmentoccupationsandcommutinglimerick/. [Accessed 16 October 2025].

[9] CSO, “Commuting: Limerick city and suburbs,” CSO, 2022. [Online]. Available: https://visual.cso.ie/?body=entity/ima/cop/2022&boundary=C04160V04929&guid=fe12eecc-1fac-4b44-9c3d-54e9d080f92e&theme=10. [Accessed 16 October 2025].