

Limerick City & County Council in partnership with Limerick Twenty Thirty DAC

Cleeves Riverside Quarter

Traffic and Transport Assessment (incl. Mobility Management Plan)

Reference: CRQMP-ARUP-ZZ-ZZ-RP-YT-0001

C01 | 3 October 2025

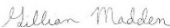
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1. Introduction

This Traffic and Transport Assessment (TTA) has been prepared by Arup on behalf of Limerick City & County Council, in partnership with Limerick Twenty Thirty DAC as part of the planning application for the proposed Cleeves Riverside Quarter Development.

Limerick City & County Council, in partnership with Limerick Twenty Thirty DAC, intends to seek the approval of An Coimisiún Pleanála in accordance with Section 175 and 177AE of the Planning and Development Act 2000, as amended, for a mixed-use development that seeks the regeneration and adaptive reuse of a strategic brownfield site, as part of the Limerick City and County Council ‘World Class Waterfront revitalisation and transformation project’.

The purpose of this report is to outline 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, an assessment of the impact of those proposals and an outline mobility management plan (MMP).

2. The Proposed Development

The proposed development comprises Phase II, of an overall Masterplan with four phases of development proposed. Phase II is subsequent to ongoing stabilisation and repair of the Flaxmill protected structure (Phase I). Phase III is intended to comprise an educational campus, inclusive of the adaptive reuse of the Flaxmill Building as part of that development and will be subject to a future separate application. Phase IV comprising the Shipyard site will be the final phase of development.

The proposed development provides for the (A) Demolition of a number of structures to facilitate development and (B) Construction and phased delivery of (i) buildings within the site ranging in height from 3 – 7 stories (with screened plant at roof level) including (a) 234 no. residential units; (b) 270 no. student bedspaces (PBSA) with ancillary resident services at ground floor level; (c) 256sqm of commercial floorspace; and (d) a creche; (ii) extensive public realm works; (iii) riverside canopy and heritage interpretative panels; (iv) 3 no. dedicated bat houses; (v) Mobility Hub with canopy; and (vi) 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 measures; (c) raising the level North Circular Road; (d) car and bicycle parking; (e) public lighting; (f) telecommunication antennae; and (g) all landscaping work. Consent is also sought for use of PBSA accommodation, outside student term time, for short-term letting purposes.

3. Existing context

3.1 Site location

The Cleeves site 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 neighbourhoods, educational facilities and public open space, including the Westfield Wetlands, as shown in Figure 3-1.



Figure 3-1 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 3-2.

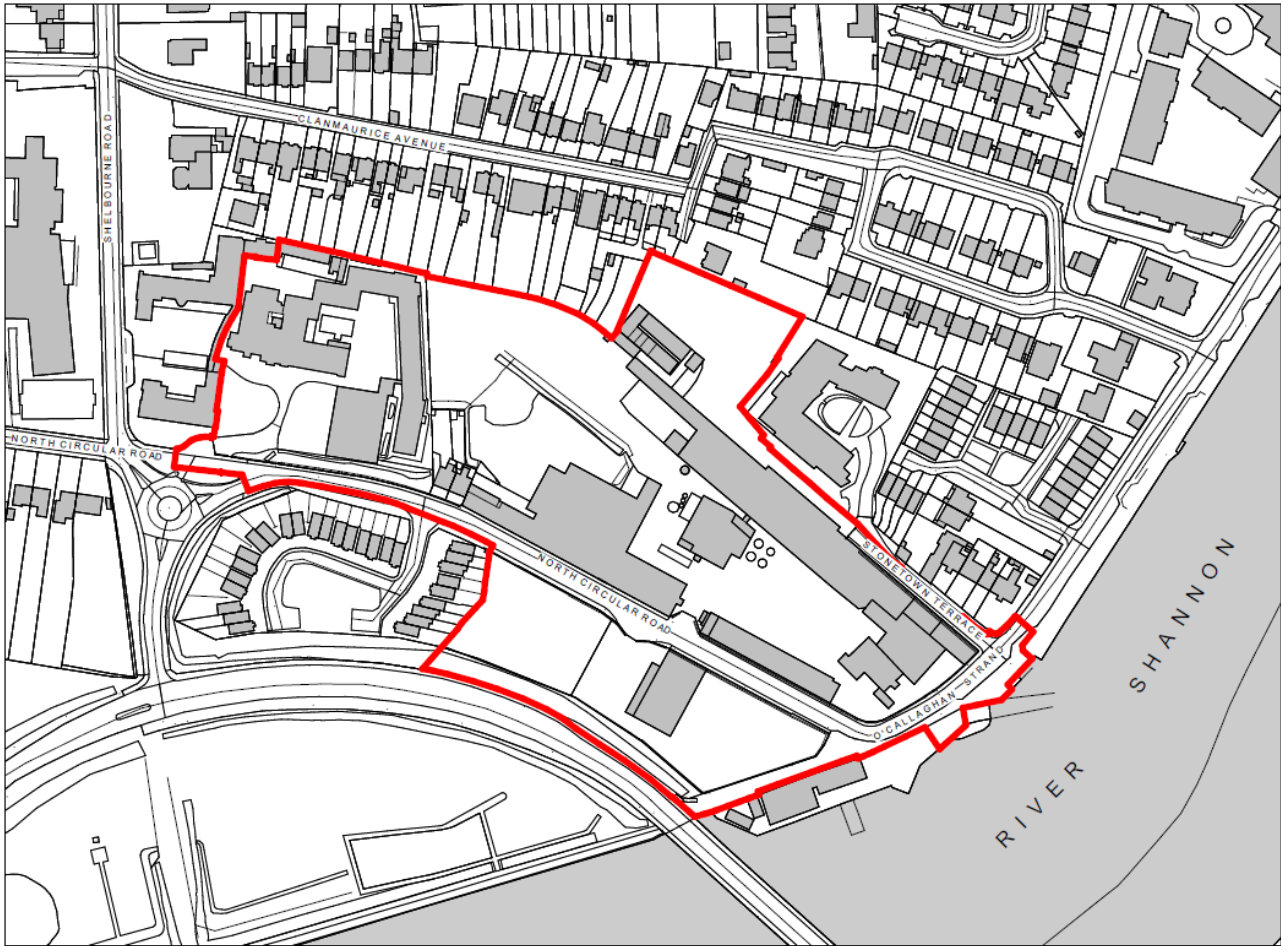


Figure 3-2 Planning boundary

3.2 Surrounding road network

The road network surrounding the site is made up of regional and local roads, as shown in Figure 3-3 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 3-3 Existing road network (Maps data: Google, ©2025 Airbus)

It should be noted that proposed traffic calming measures at the Salesians roundabout are being undertaken by LCCC under the Roads Traffic Act 1994. These works are outside the scope of this planning application.

3.3 Parking

There are presently approximately 145 car parking spaces in the vicinity of the site, as shown in Figure 3-4. 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 3-4 Existing car parking surrounding the site (Maps data: Google, ©2025 Airbus)

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 3-5. 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.

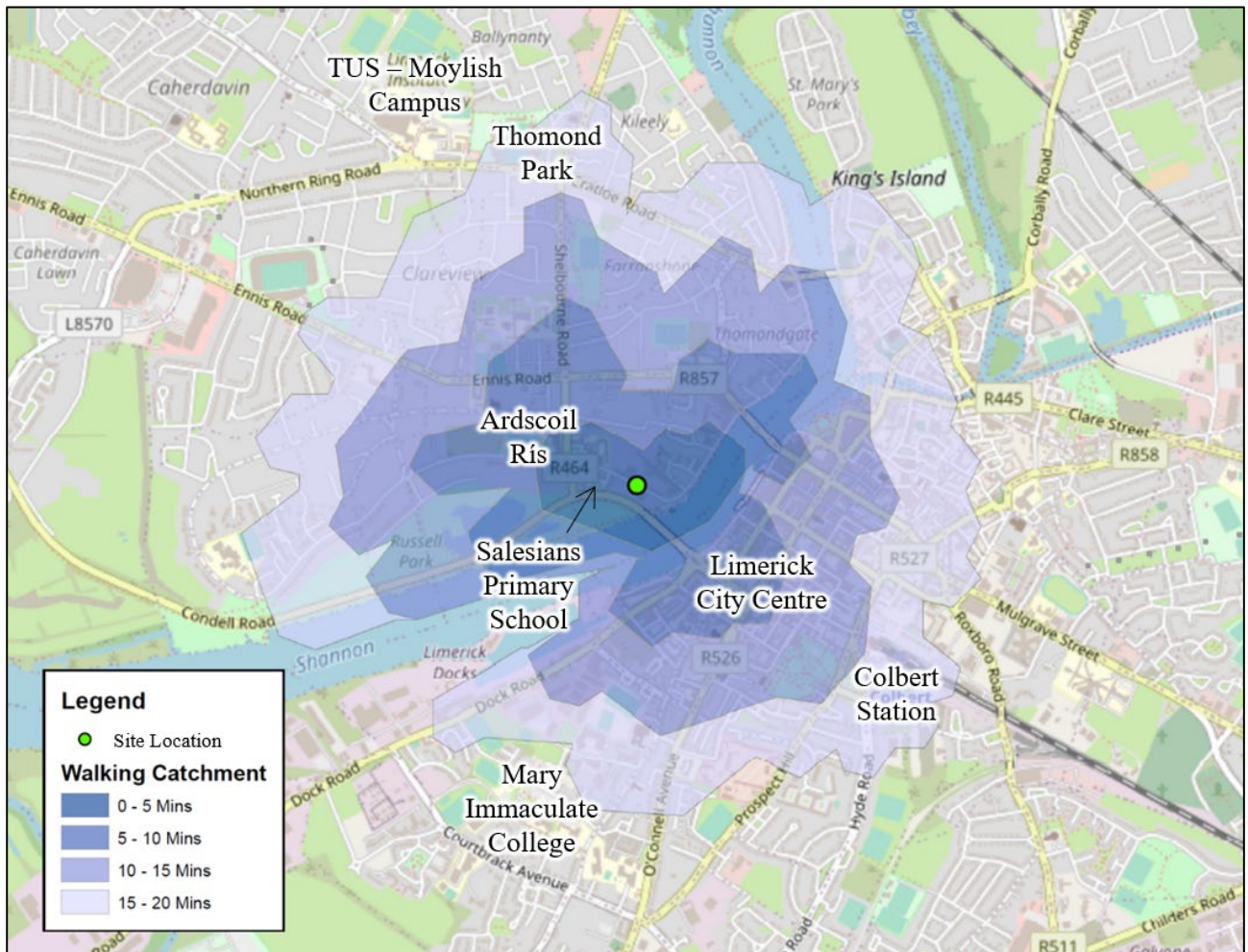


Figure 3-5 Pedestrian walking catchment

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 by LCCC as part of the World Class Waterfront proposal. This proposal is in the early conceptual stages of the development and is not part of this planning application. The bridge will cross the River Shannon near the site.



Figure 3-6 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 3-7. There are footpaths of varying quality on both sides of most surrounding roads and several uncontrolled pedestrian crossings in the vicinity of the site.



Figure 3-7 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 3-8 below.



Figure 3-8 Example of poor pedestrian connectivity across existing site access points

3.5 Cycling

The cycling catchment to/from the site in 10-minute increments up to 30 minutes is shown in Figure 3-9. 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.

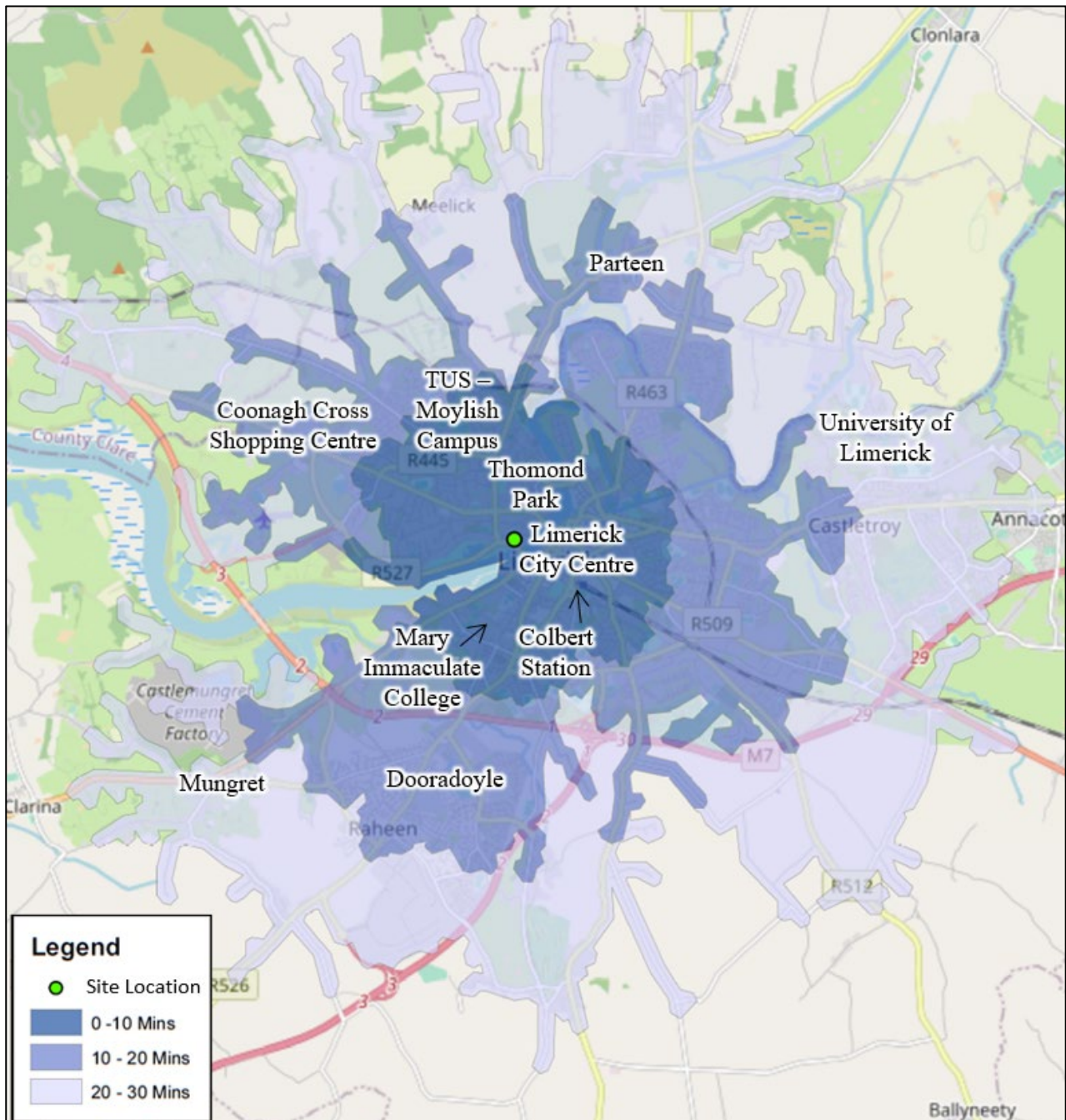


Figure 3-9 Cycling catchment area

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 Figure 3-10). 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 3-10 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 3-11.

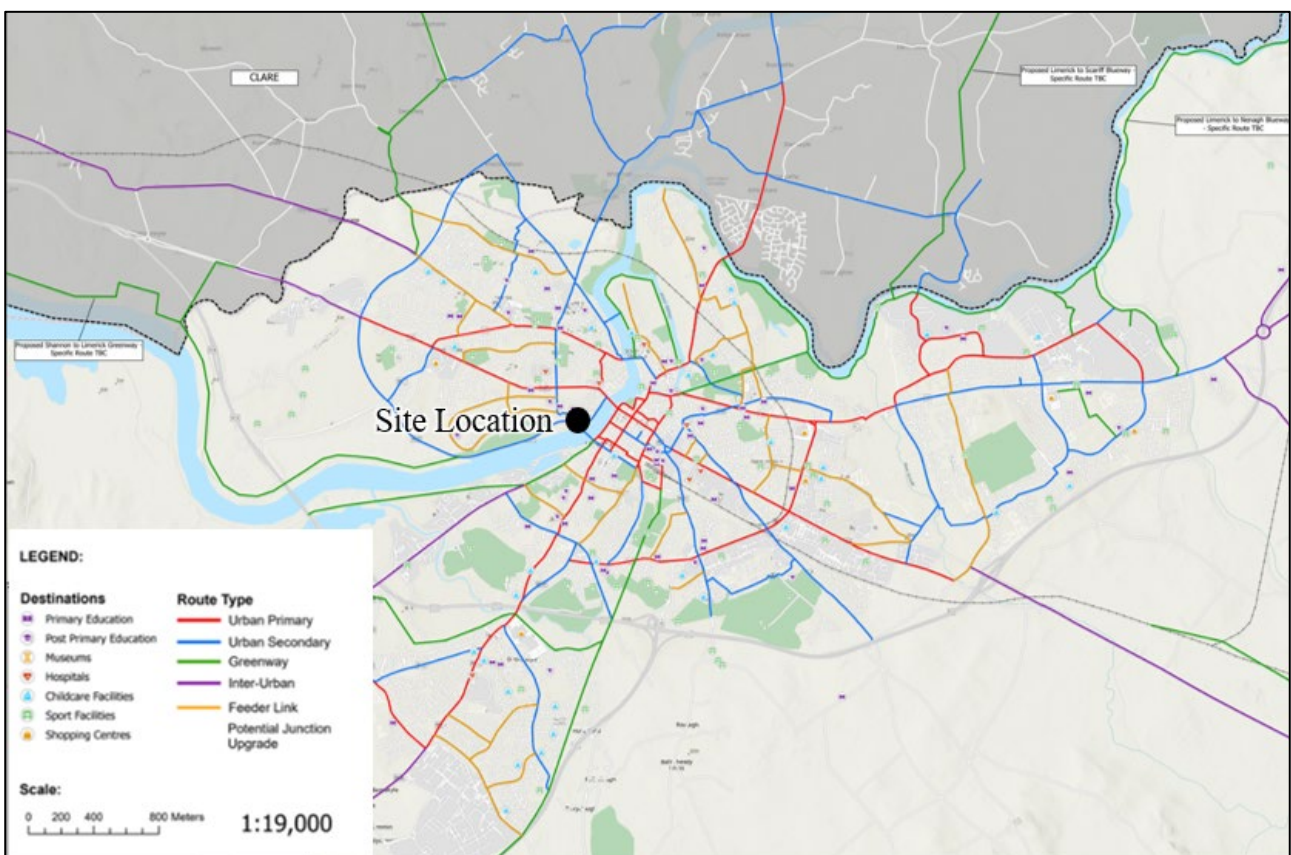


Figure 3-11 Limerick urban cycle network as part of Cycle Connects

The nearest Transport for Ireland (TfI) bike stations are located adjacent to the Sarsfield Bridge, and on The Bishops Quay, as shown in Figure 3-12 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.

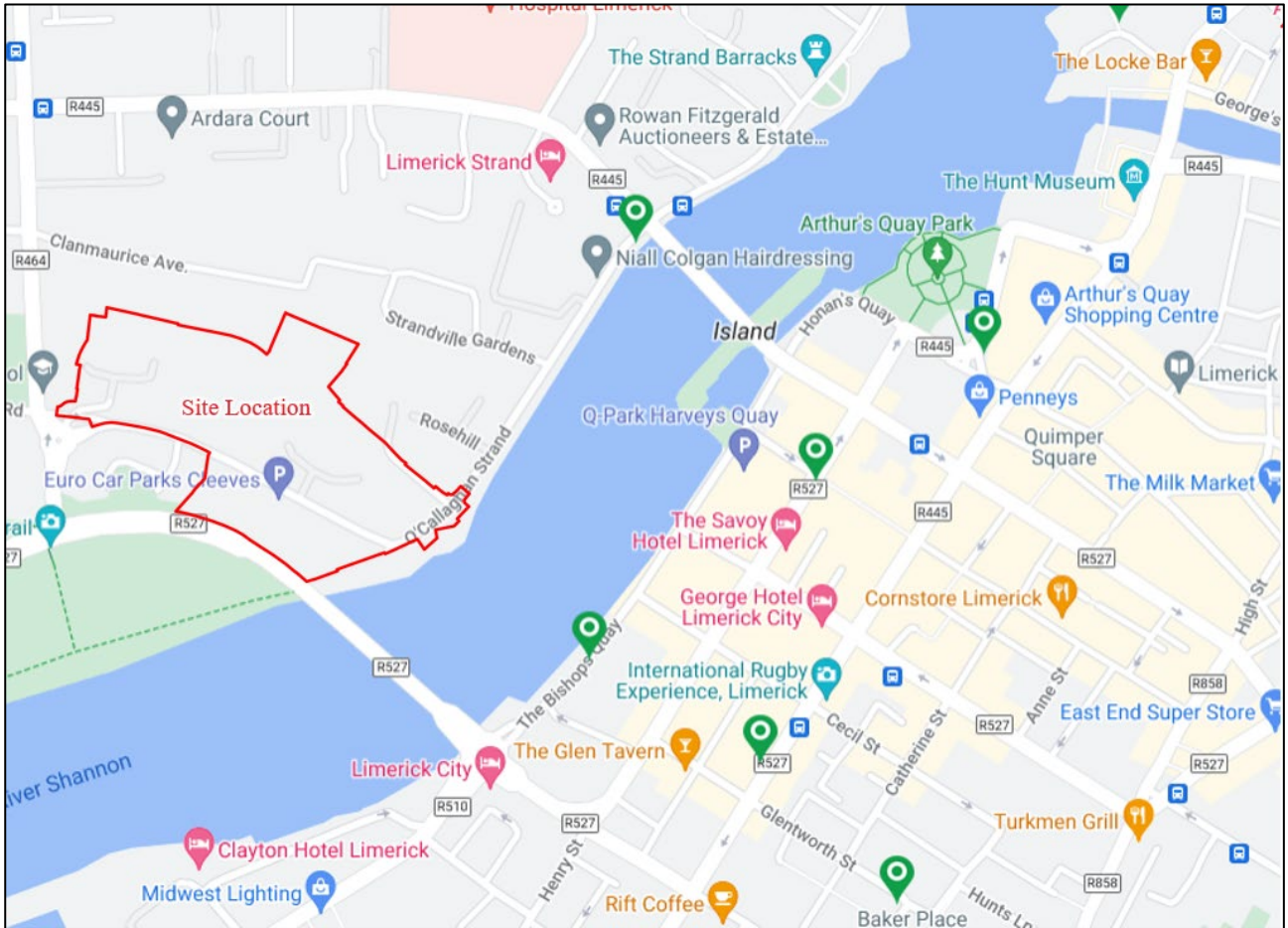


Figure 3-12 Nearby TfL bikes stations

3.6 Public Transport

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 3-13 below.

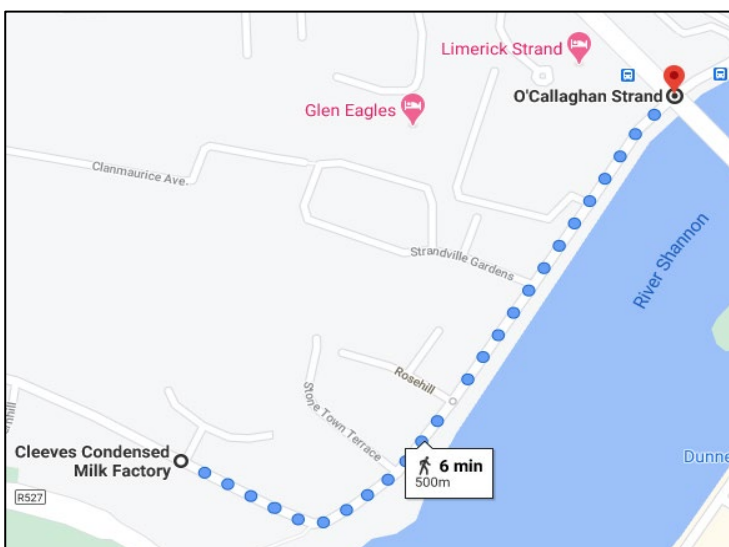


Figure 3-13 Route to Sarsfield Bridge bus stops

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 3-14 below.

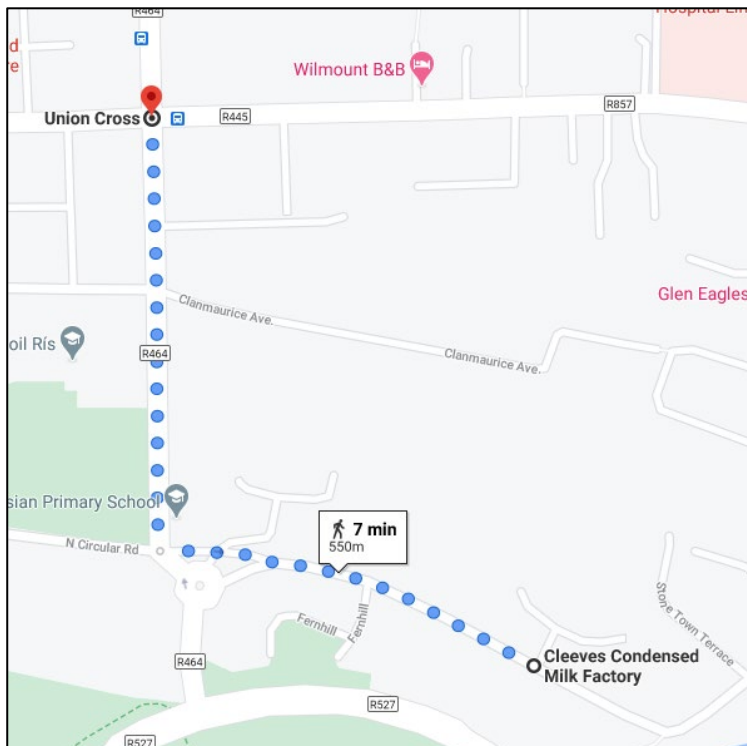


Figure 3-14 Route to Union Cross bus stops

Access to regional bus services at Arthurs Quay is a 12-minute walk to the east of the site as shown in Figure 3-15 below.

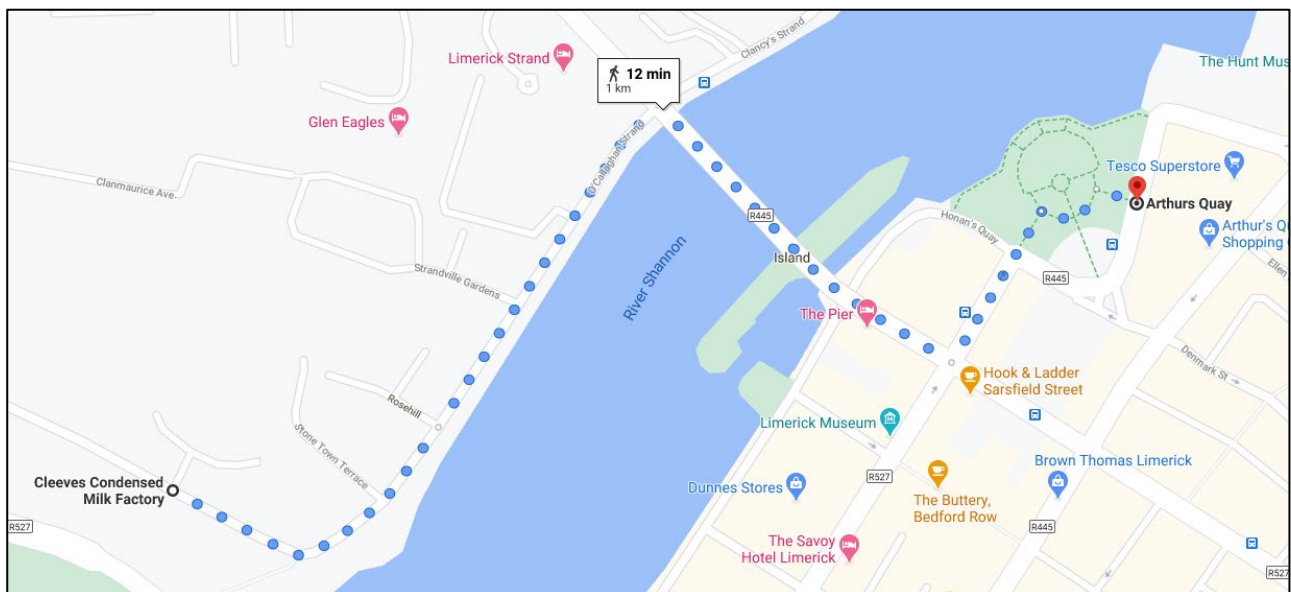


Figure 3-15 Route to Arthurs Quay regional bus terminus

The 2040 bus network proposals included in LSMATS are shown in Figure 3-16 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 3-17. 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.

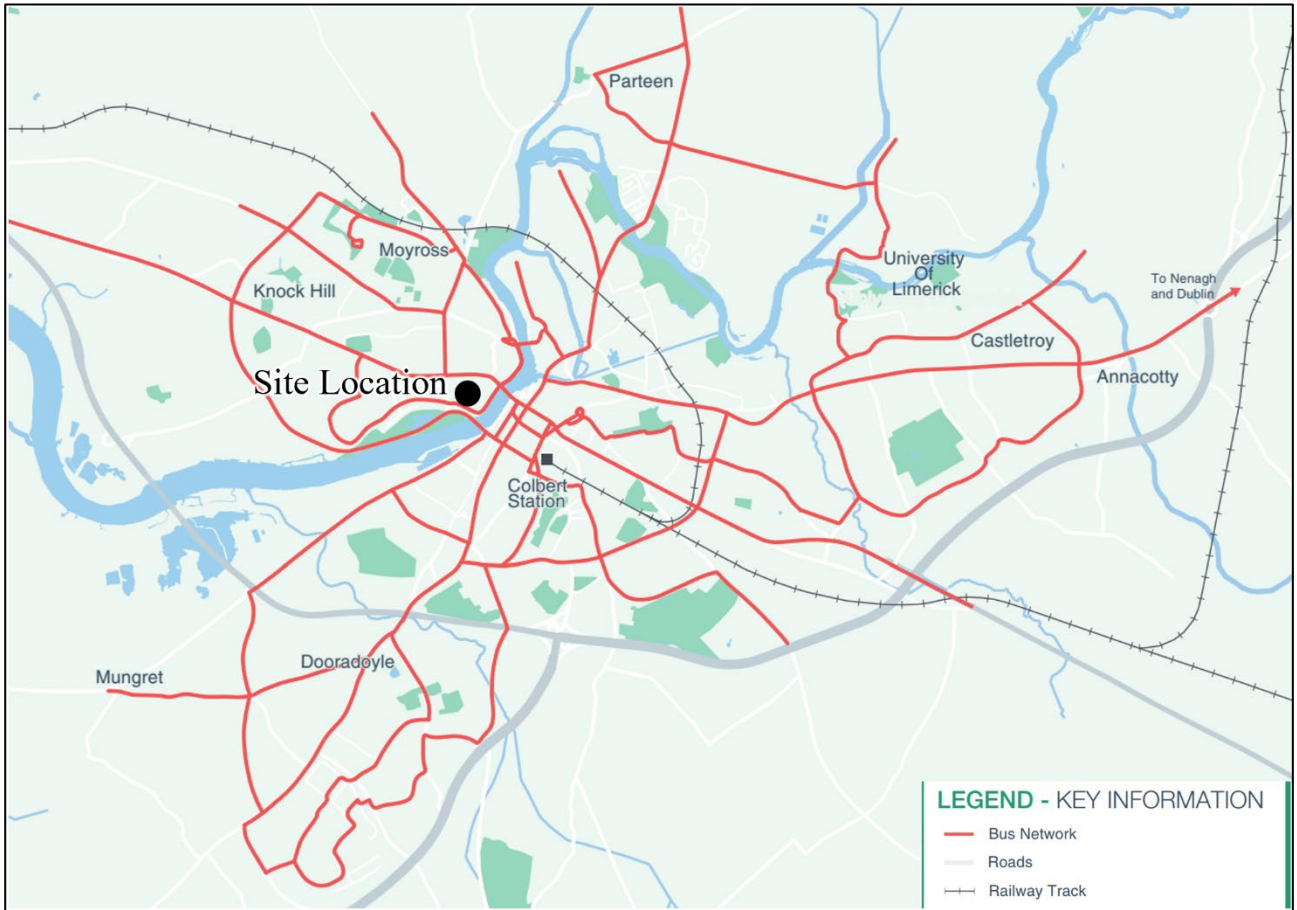


Figure 3-16 LSMATS proposed 2040 bus service network

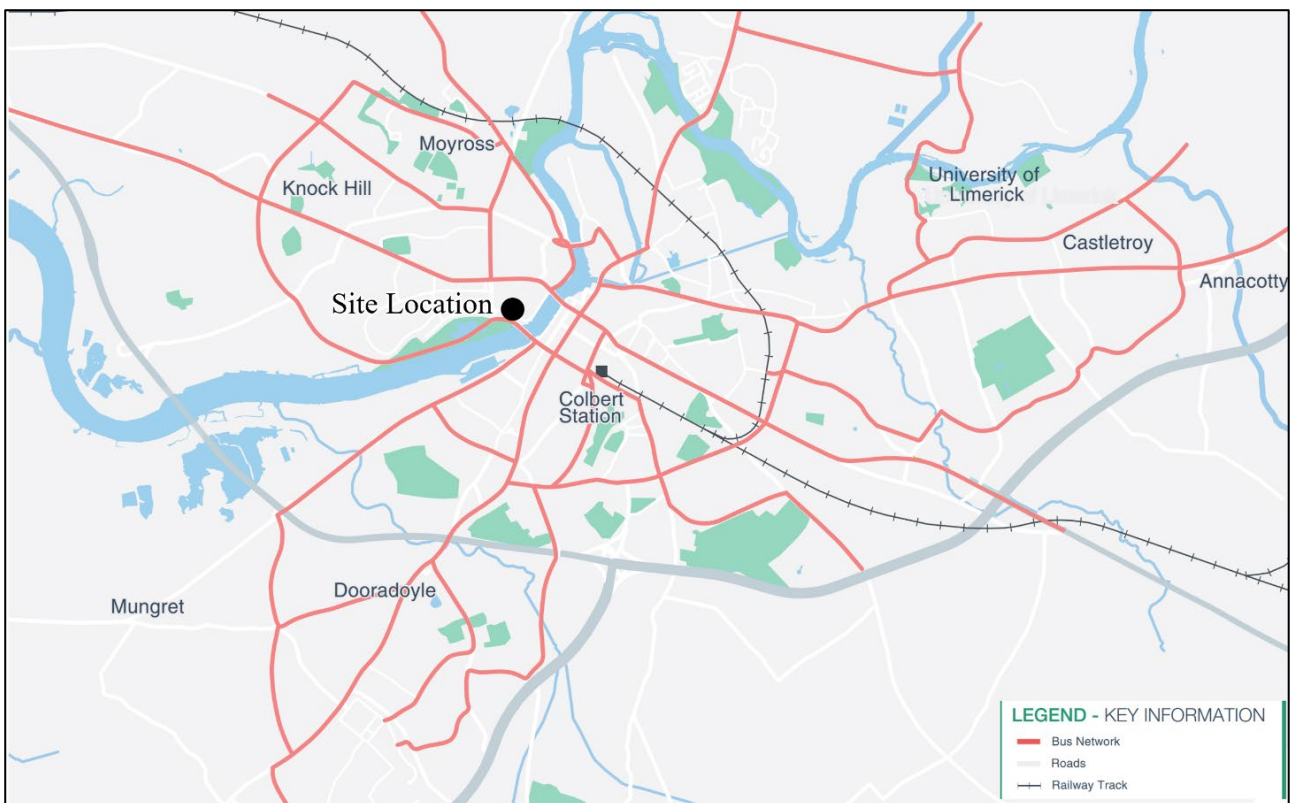


Figure 3-17 LSMATS 2040 bus priority measures

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.

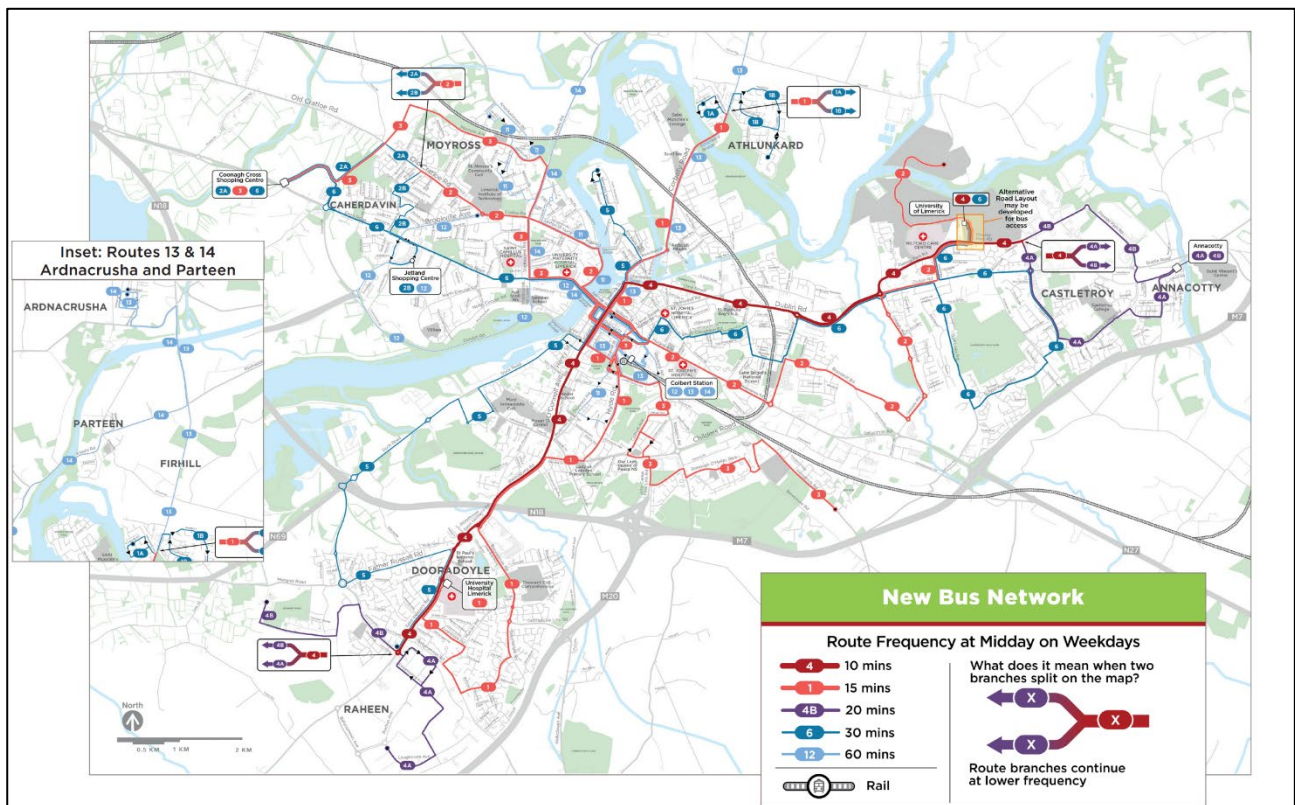


Figure 3-18 BusConnects Limerick new network

The Connecting Ireland scheme will provide the site with access to the wider public transport network, as shown in Figure 3-19.

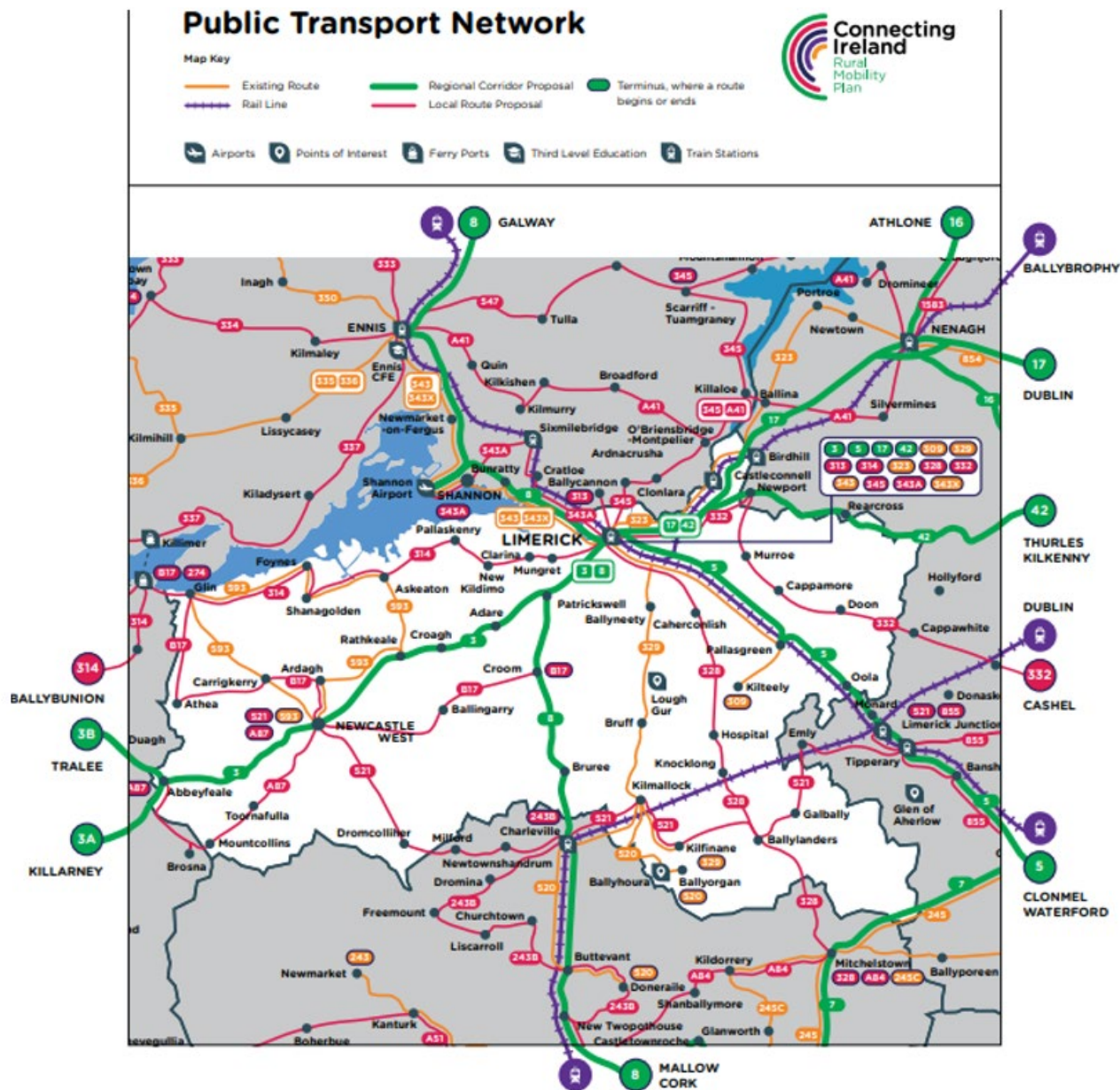


Figure 3-19 Proposed public transport network for Limerick as per Connecting Ireland Rural Mobility Plan

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 3-20 below.

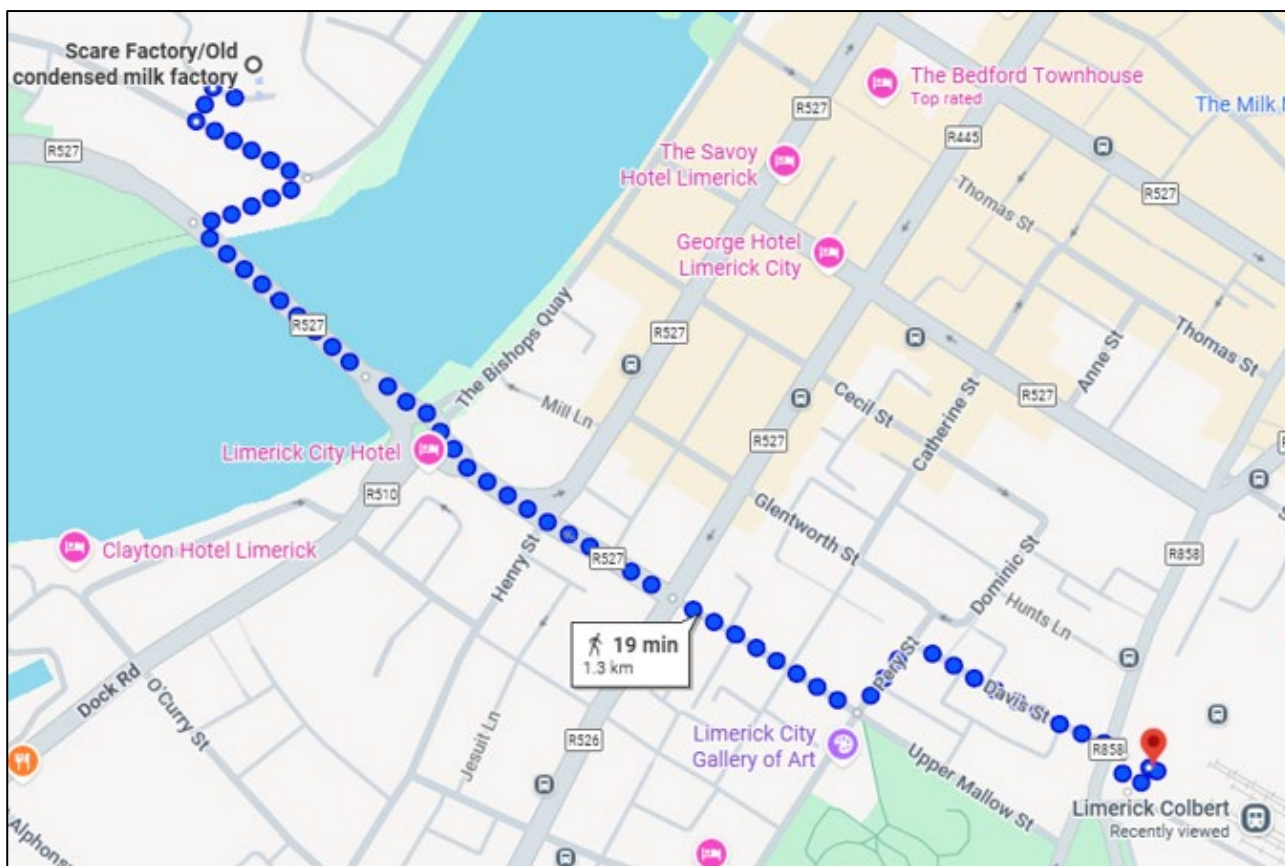


Figure 3-20 Walking route to Colbert Station

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 3-21 below.



Figure 3-21 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 3-22 and Figure 3-23 provide graphical representations of the traffic flows through the survey locations at peak times.

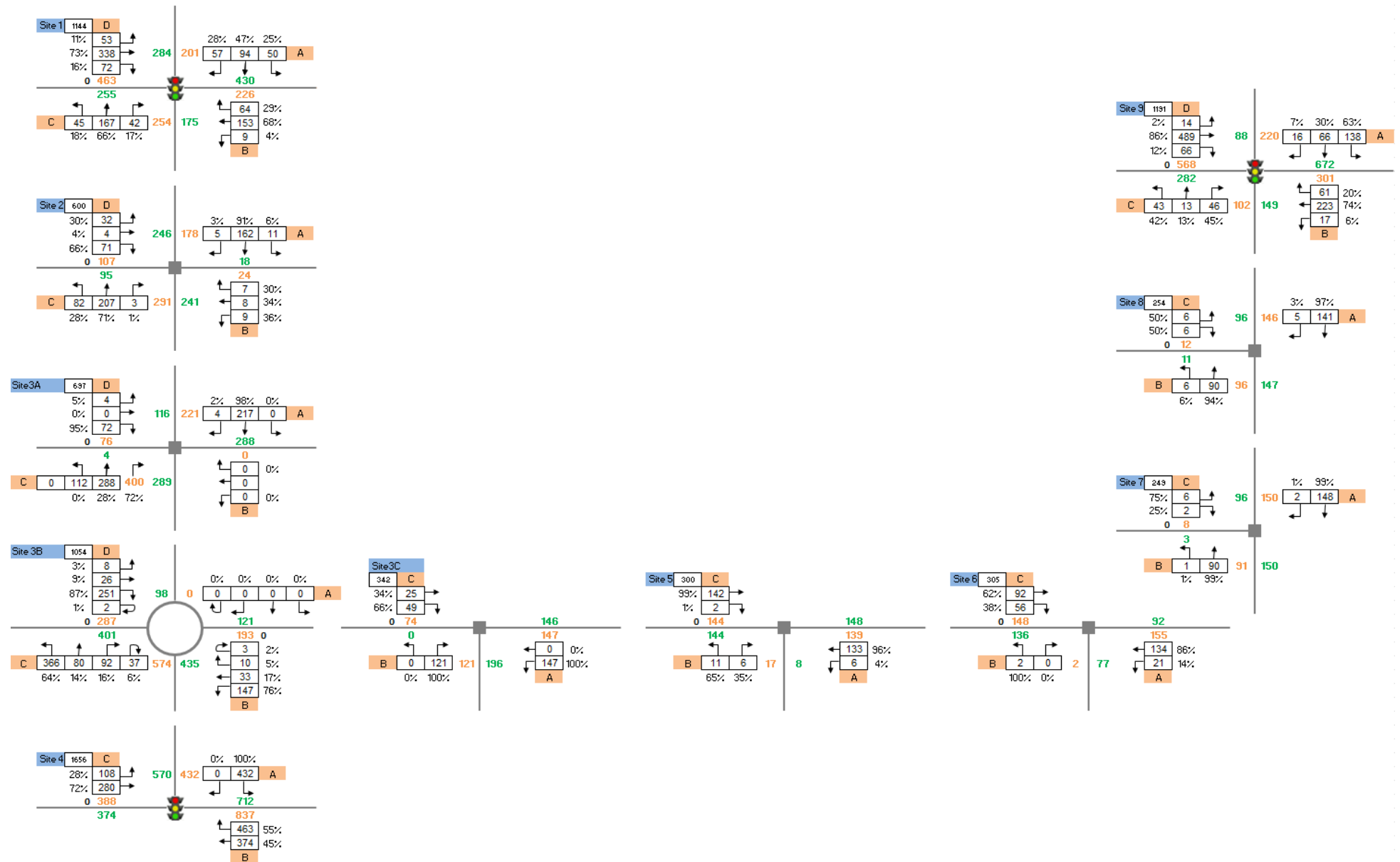


Figure 3-22 Traffic count volumes during AM peak (07:45 - 08:45)

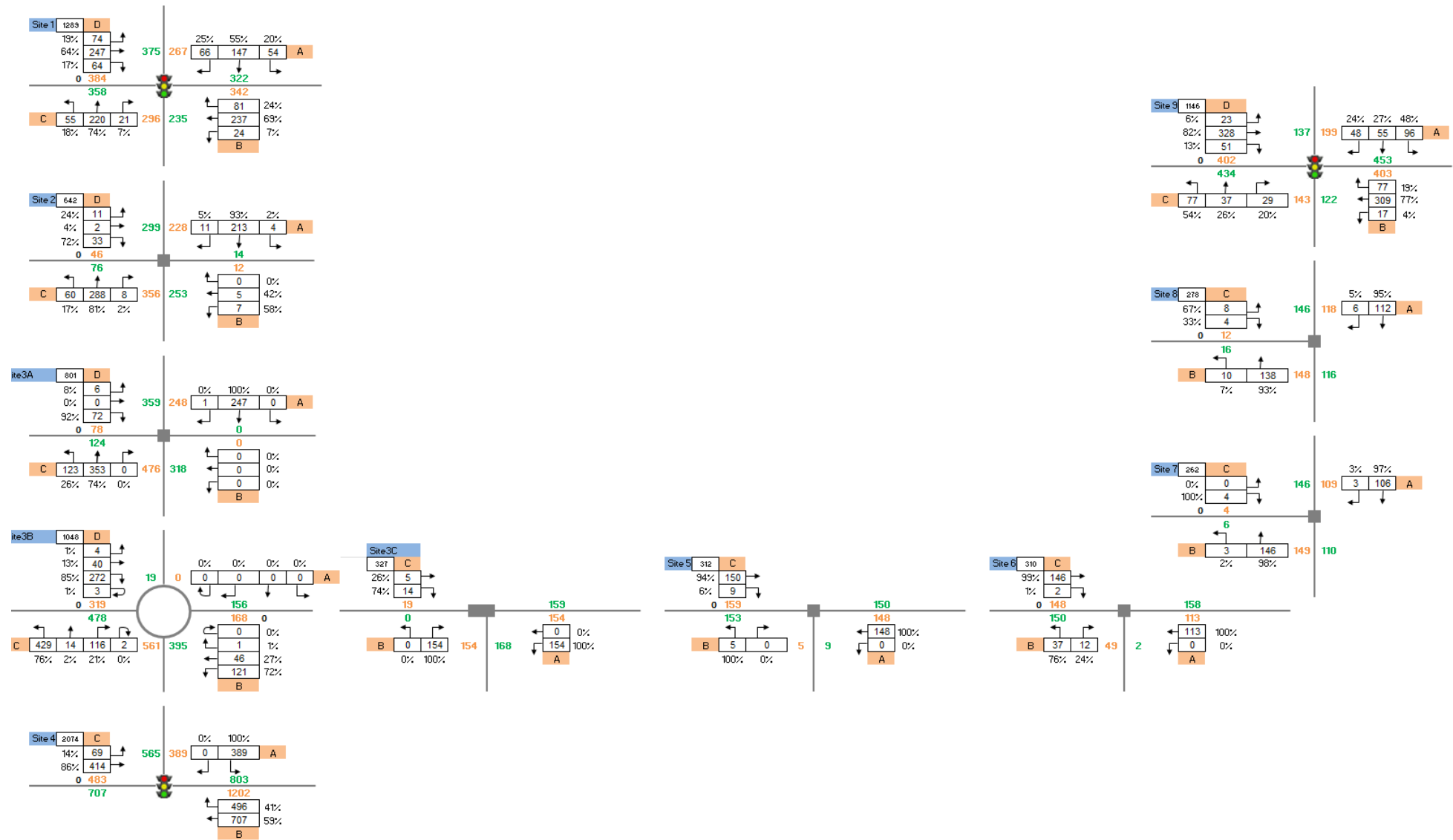


Figure 3-23 Traffic count analysis scenario, volumes PM peak times (17:00 - 18:00)

4. Transport considerations for the proposed development

4.1 Development description

The development site as defined in red on the Site Layout Plan comprises 5.10 hectares. The proposed development as described in the public notices is set out hereunder.

The proposed development comprises Phase II, of an overall Masterplan with four phases of development proposed. Phase II is subsequent to ongoing stabilisation and repair of the Flaxmill protected structure (Phase I). Phase III is intended to comprise an educational campus, inclusive of the adaptive reuse of the Flaxmill Building as part of that development and will be subject to a future separate application. Phase IV comprising the Shipyard site will be the final phase of development.

Two structures within the site are designated protected structures; the Flaxmill Building (PS Ref no.264 & NIAH No. 21512053) and the octagonal brick chimney (PS Ref no.265 & NIAH No. 21512059), which are to be retained.

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 Cleaves 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 triplex 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; naturebased 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 4-1.

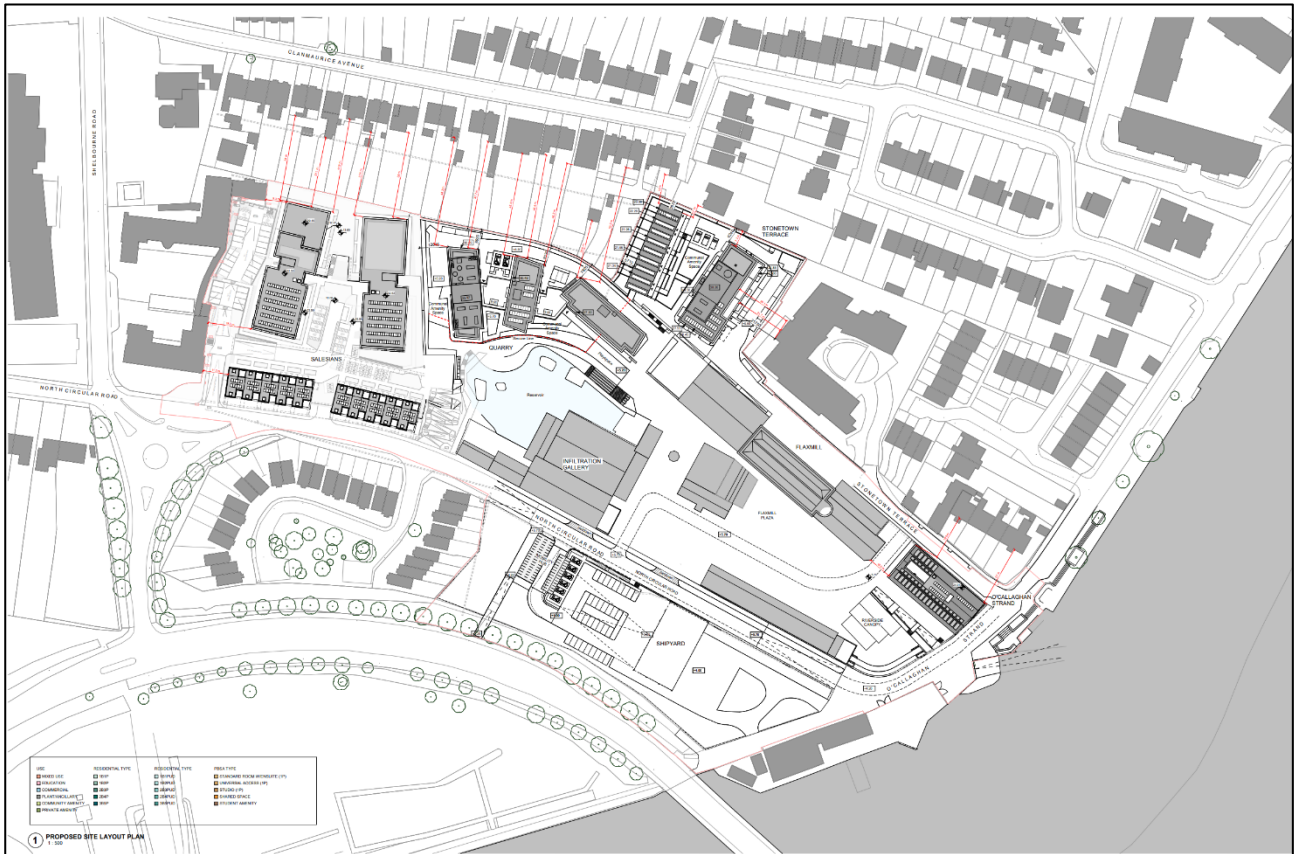


Figure 4-1 Layout plan showing the Cleeves Riverside Quarter

4.2 Mobility strategy

The Cleaves 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 4-2.

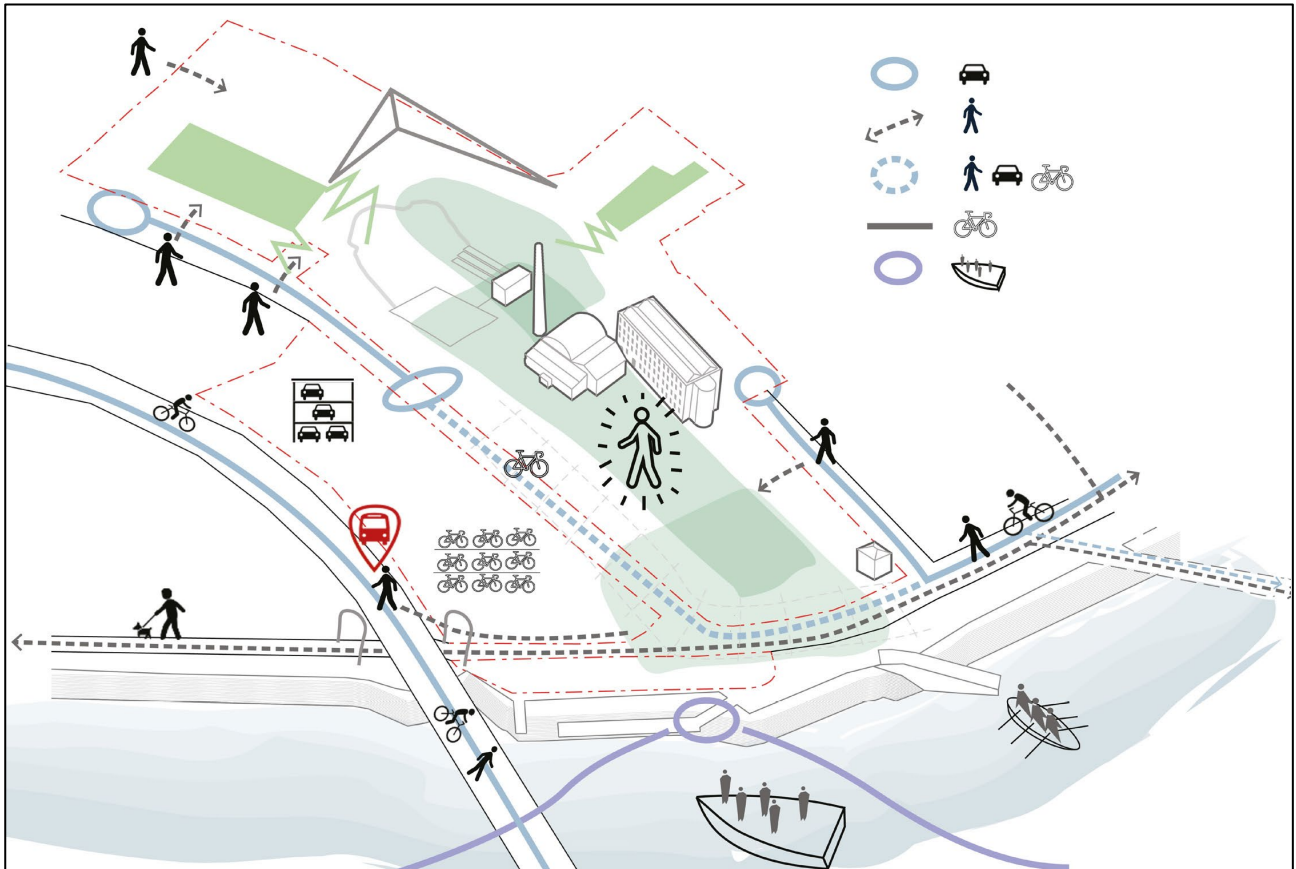


Figure 4-2 Mobility strategy diagram

4.3 Access routes

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 Figure 4-3). 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.

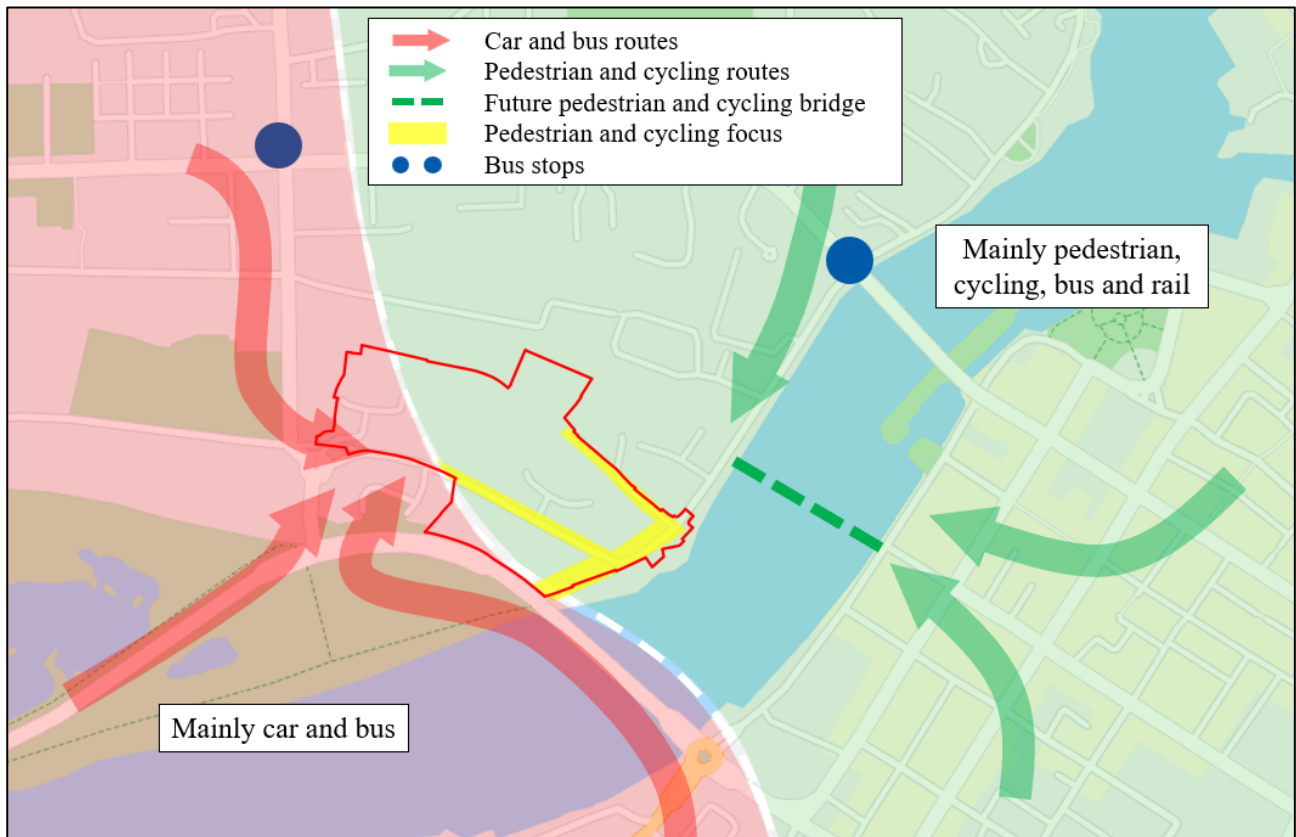


Figure 4-3 Site access strategy overview

4.3.2 Pedestrian and cycling access

As noted in the mobility strategy (Section 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 4-4 shows the access points and routes through the proposed development for pedestrians and cyclists.

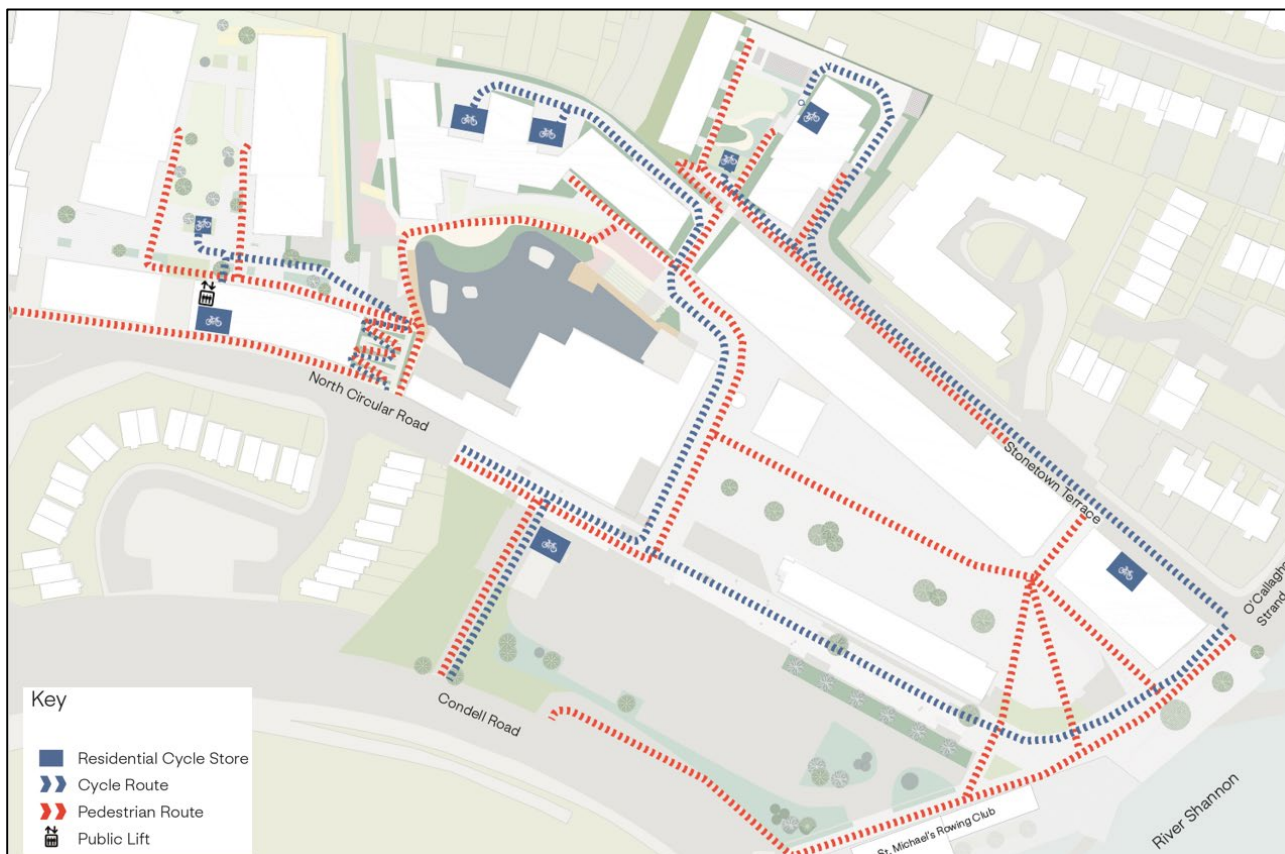


Figure 4-4 Pedestrian and cyclist access routes

4.3.3 Vehicular access

The proposed development has four vehicular access/egress points, as shown in Figure 4-5. 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 would 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 4-5 Vehicular access points to the proposed development

4.3.4 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.

4.3.4.1 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. As noted in Section 3.2, works to the Salesians roundabout are being separately delivered by LCCC under the Roads Traffic Act 1994. These works will facilitate fire tender access to the proposed development off the Salesians roundabout. 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 4-6.



Figure 4-6 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 4-7.

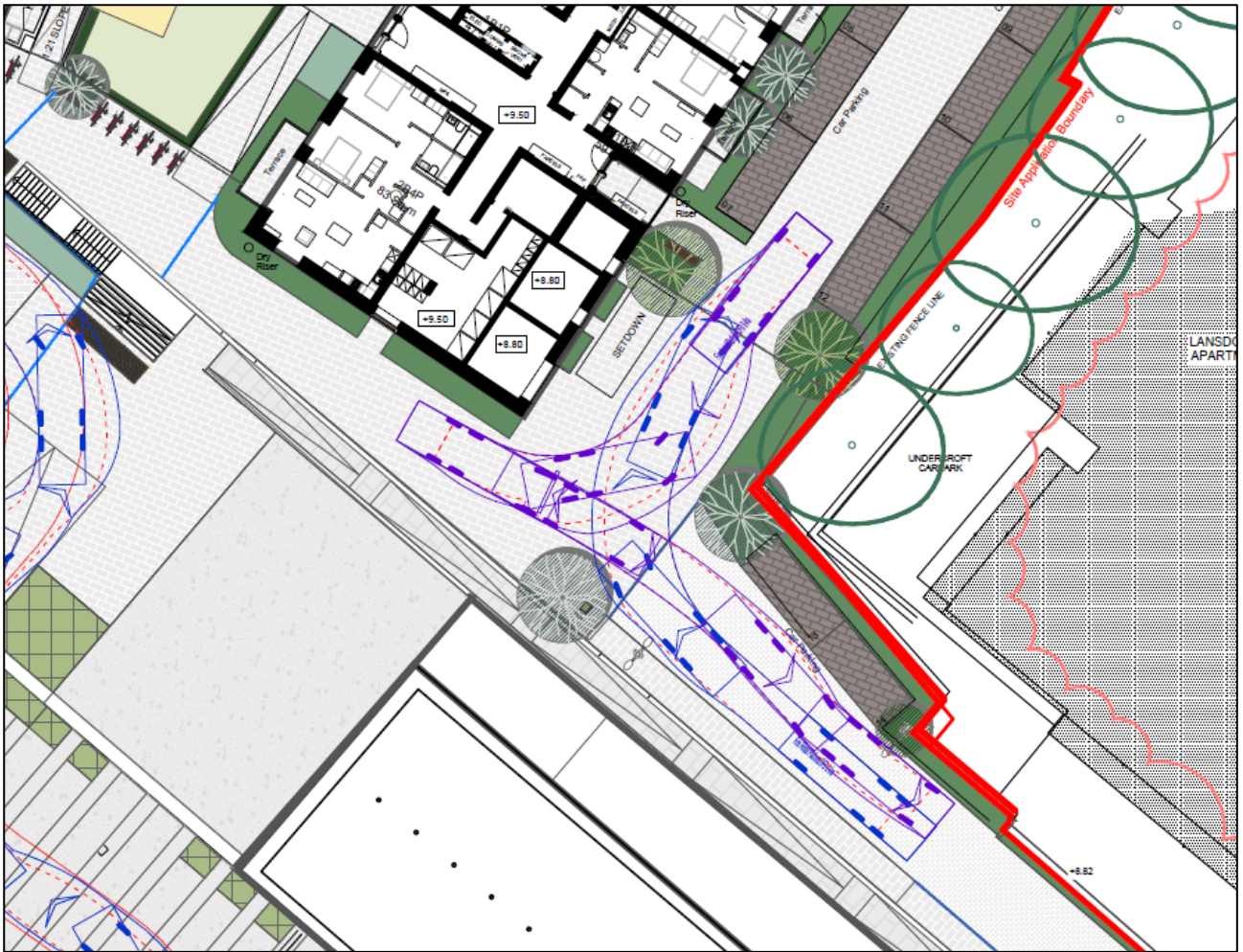


Figure 4-7 Fire tender tracking for Stonetown Terrace

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 4-8.

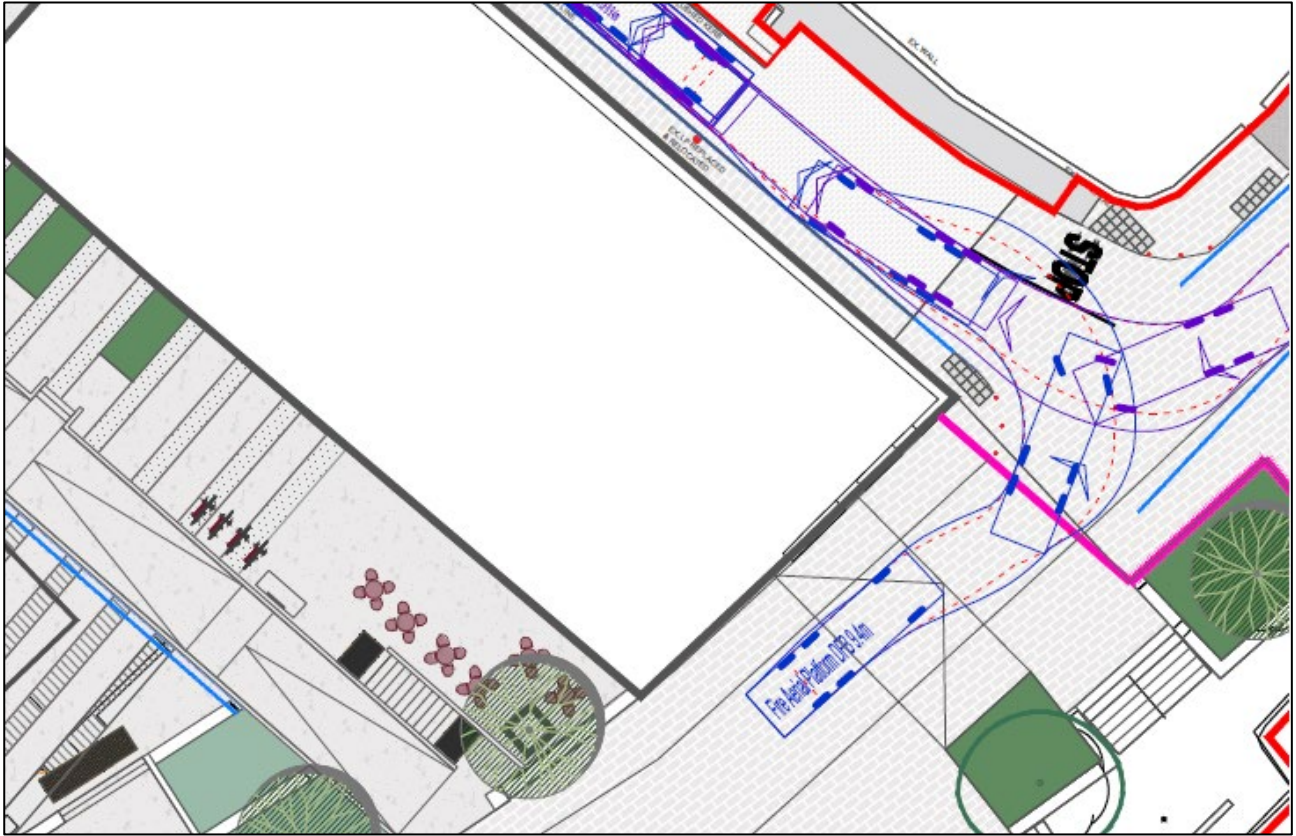


Figure 4-8 Fire tender tracking for O'Callaghan Strand

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 4-9.

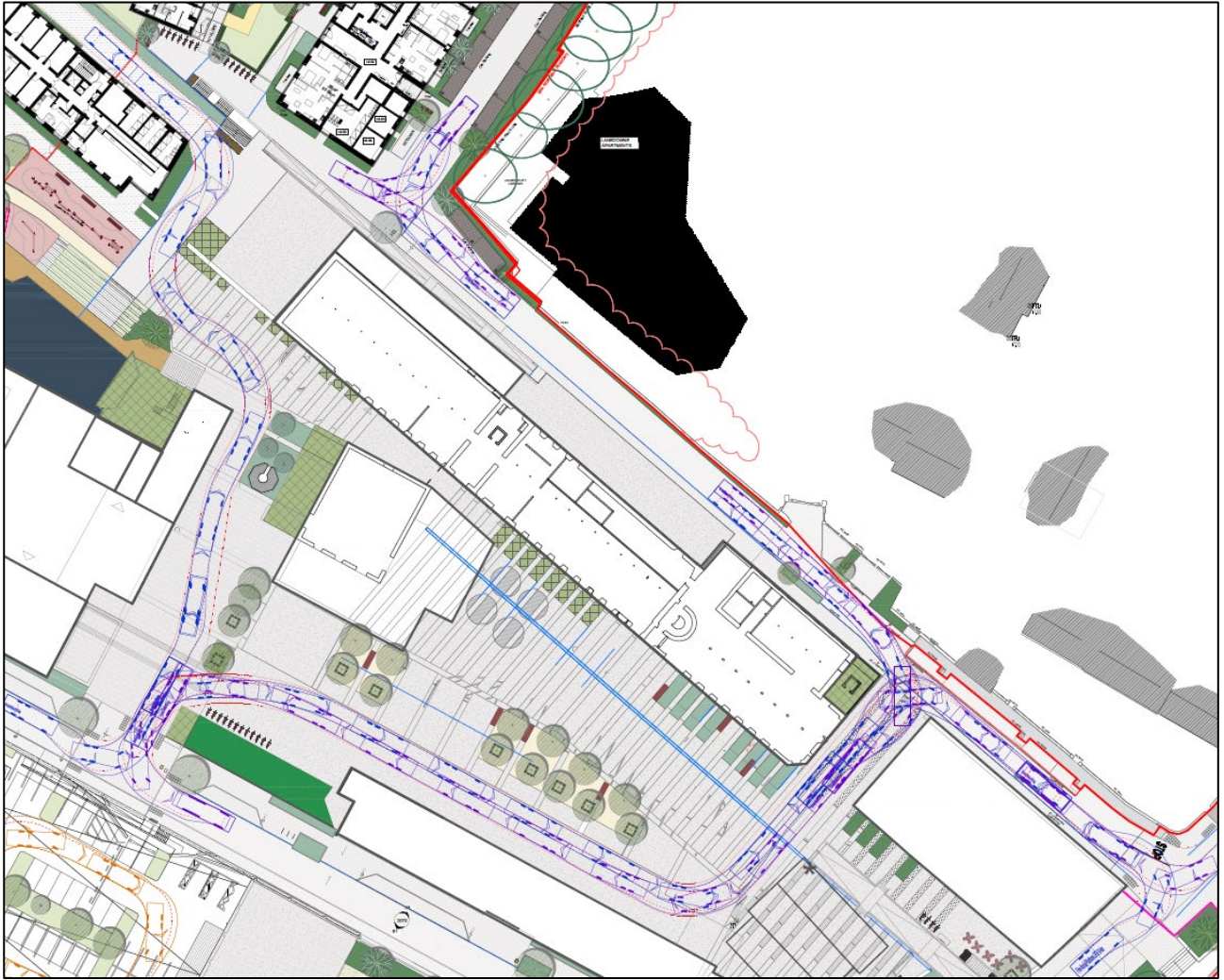


Figure 4-9 Fire tender tracking through the Flaxmill Zone

At the Quarry PBSA, emergency vehicles will be able to reverse and turn around using the movement shown in Figure 4-10, which includes circulation over areas of grasscrete.



Figure 4-10 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 4-11.

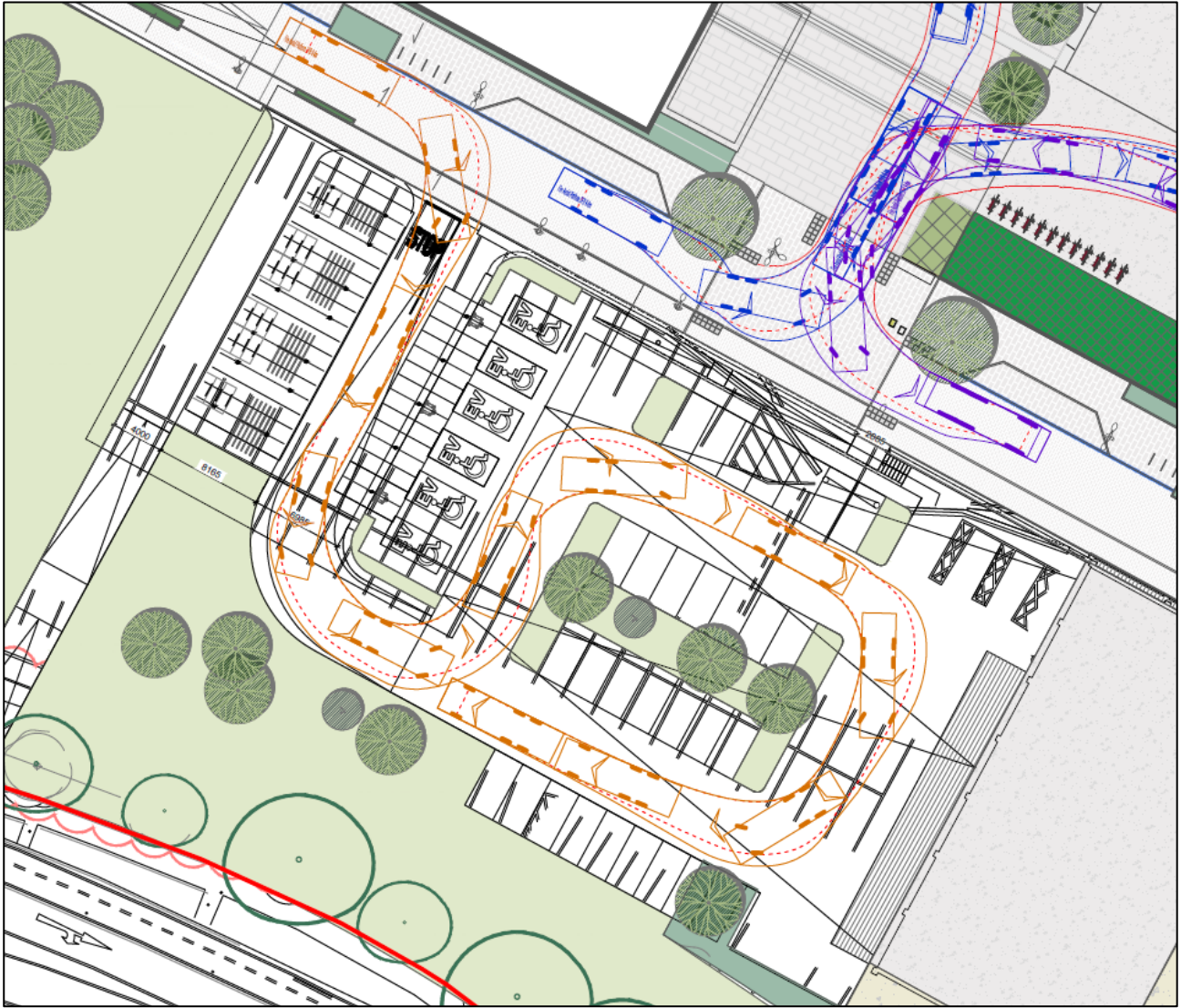


Figure 4-11 Fire tender tracking for mobility hub

4.3.4.2 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 4-12.

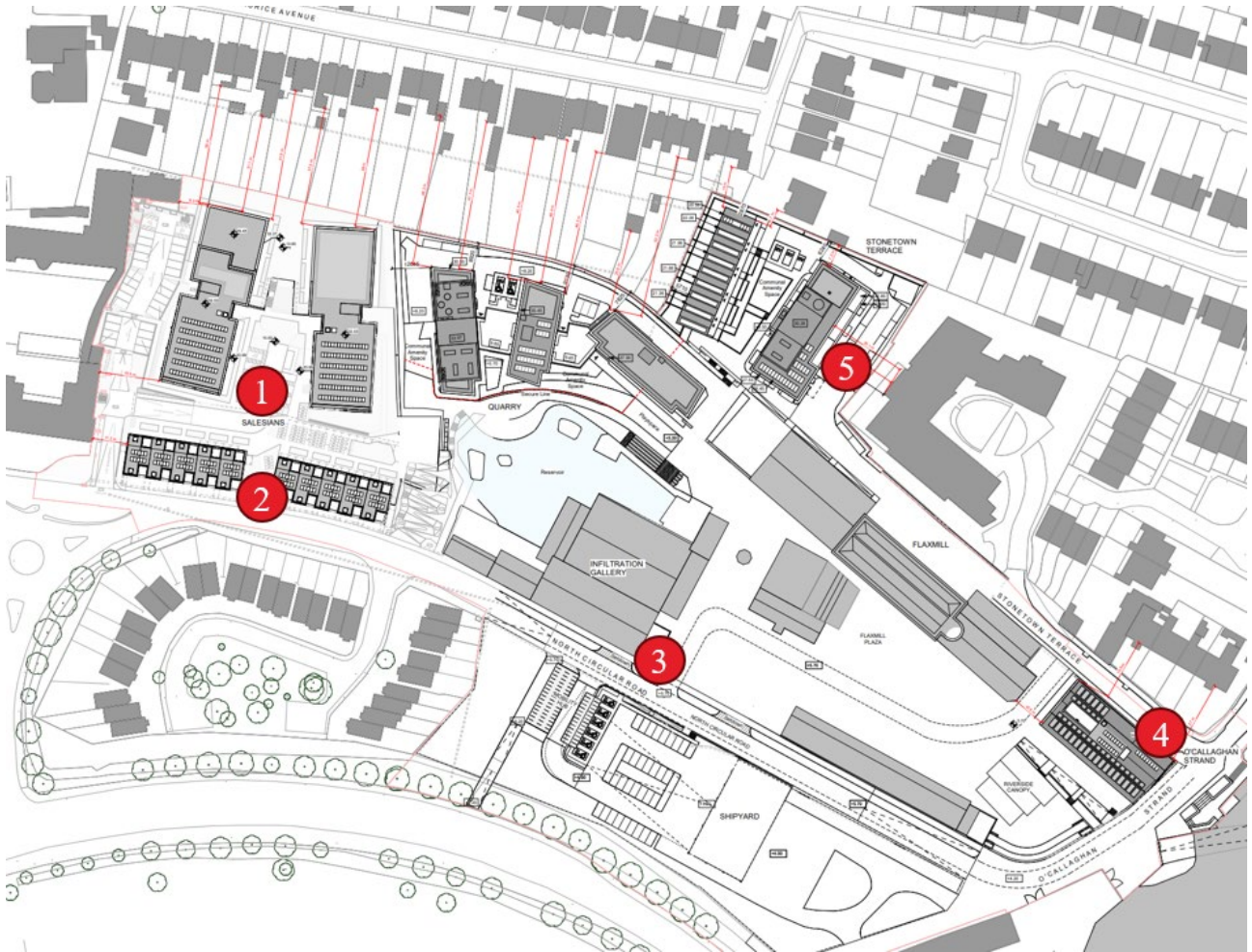


Figure 4-12 Main waste collection locations for the proposed development

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 4-13.



Figure 4-13 Vehicle tracking for waste collection vehicles at Salesians Zone (1)

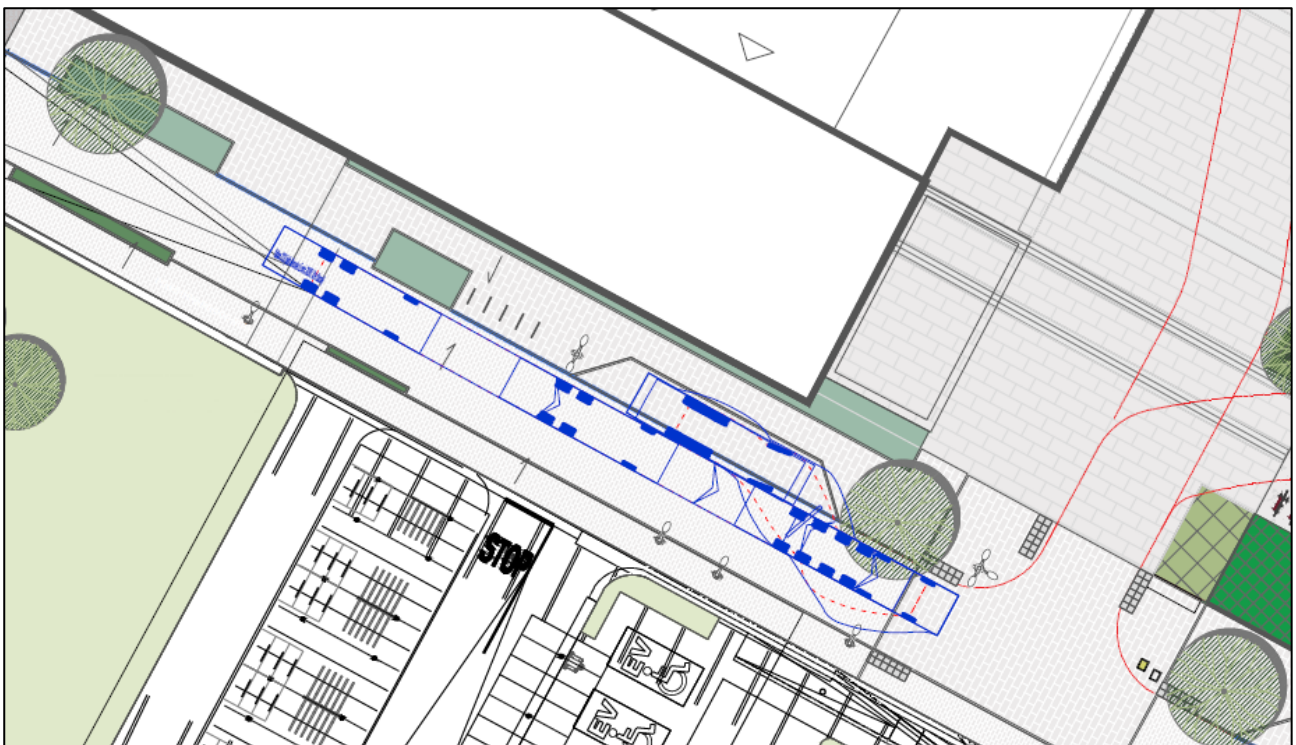


Figure 4-14 Vehicle tracking for waste collection along North Circular Road (3)

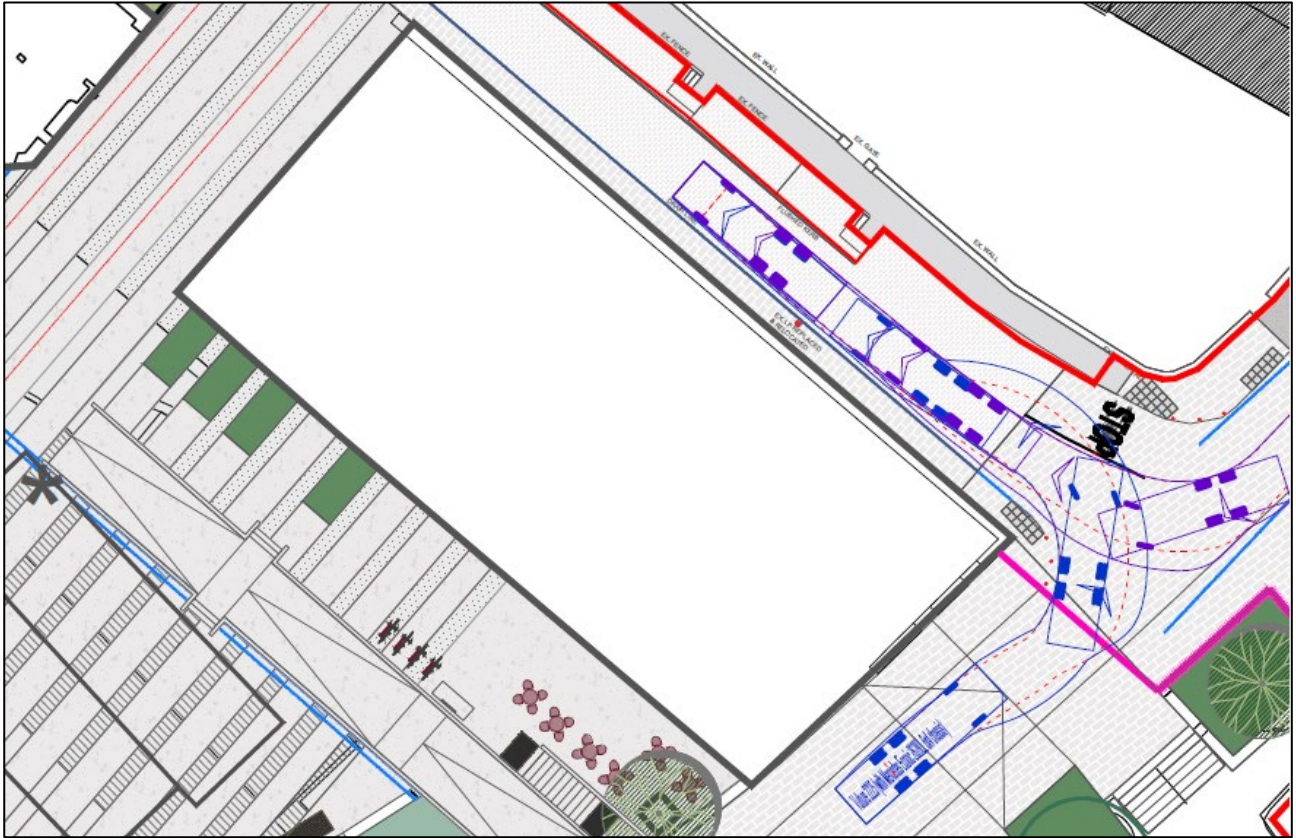


Figure 4-15 Vehicle tracking for waste collection vehicles at O'Callaghan Strand (4)

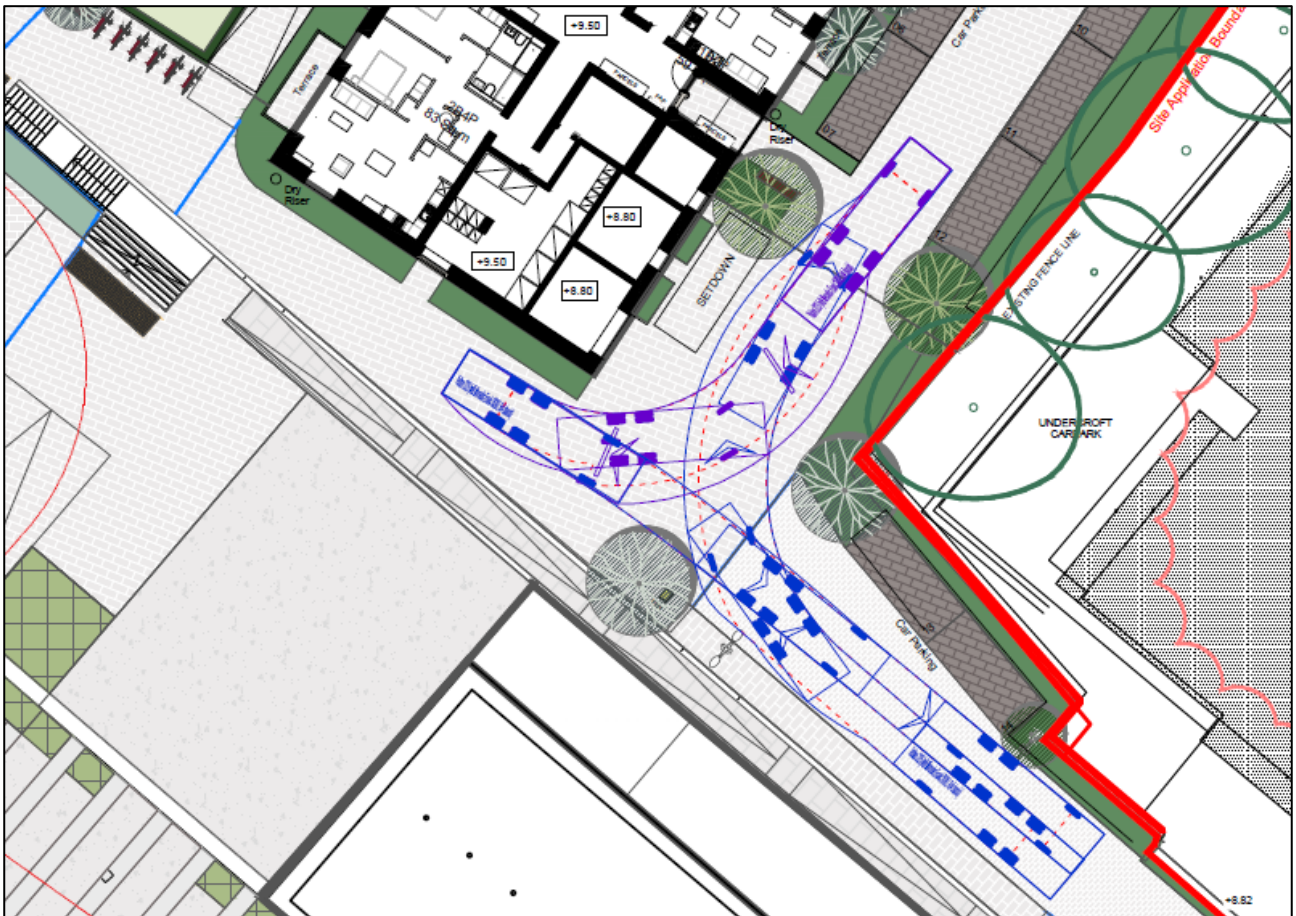


Figure 4-16 Vehicle tracking for waste collection vehicles at Stonetown Terrace (5)

4.3.4.3 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 Sections 4.3.4.1 and 4.3.4.2 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.

4.4 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.

4.4.1 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 3.4 and 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. In future, 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 further 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 be explored as part of the educational campus (Phase III), which would cater for students living on site. It should be noted that a 0.03 car parking ratio is considered to be appropriate for the Phase II Quarry PBSA regardless of Phase III being delivered.

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 undercroft 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 would be managed centrally and would operate on the basis of online bookings.

The parking provision for each residential zone, including both standard and accessible spaces, is shown in Table 4-1.

Table 4-1 Residential and PBSA parking provision per zone

	Stonetown Terrace	Salesians	O'Callaghan Strand	Quarry PBSA	Shipyard	Total
Standard spaces	12	45	4	6		67
Accessible spaces	2	4	1	2		9
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.

4.4.2 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.

4.4.3 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)*.

4.4.4 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.

4.4.5 Total car parking provision for proposed development

The total car parking provision for the proposed development, including residential, PBSA, visitor and creche parking is 116 spaces, as shown in Table 4-2 below. The Salesians Primary School parking has not been included in this table given that it is being replaced like-for-like. Figure 4-17 provides a visual representation of the information presented in the table below.

Table 4-2 Total parking provision for the proposed development

Use / Zone		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	Shipyards	9	1	10
Visitor	Shipyards	24	2	26*
Creche	Salesians	3**	1	4
Total				116
* temporary parking spaces				
** includes 2 parent and child spaces				

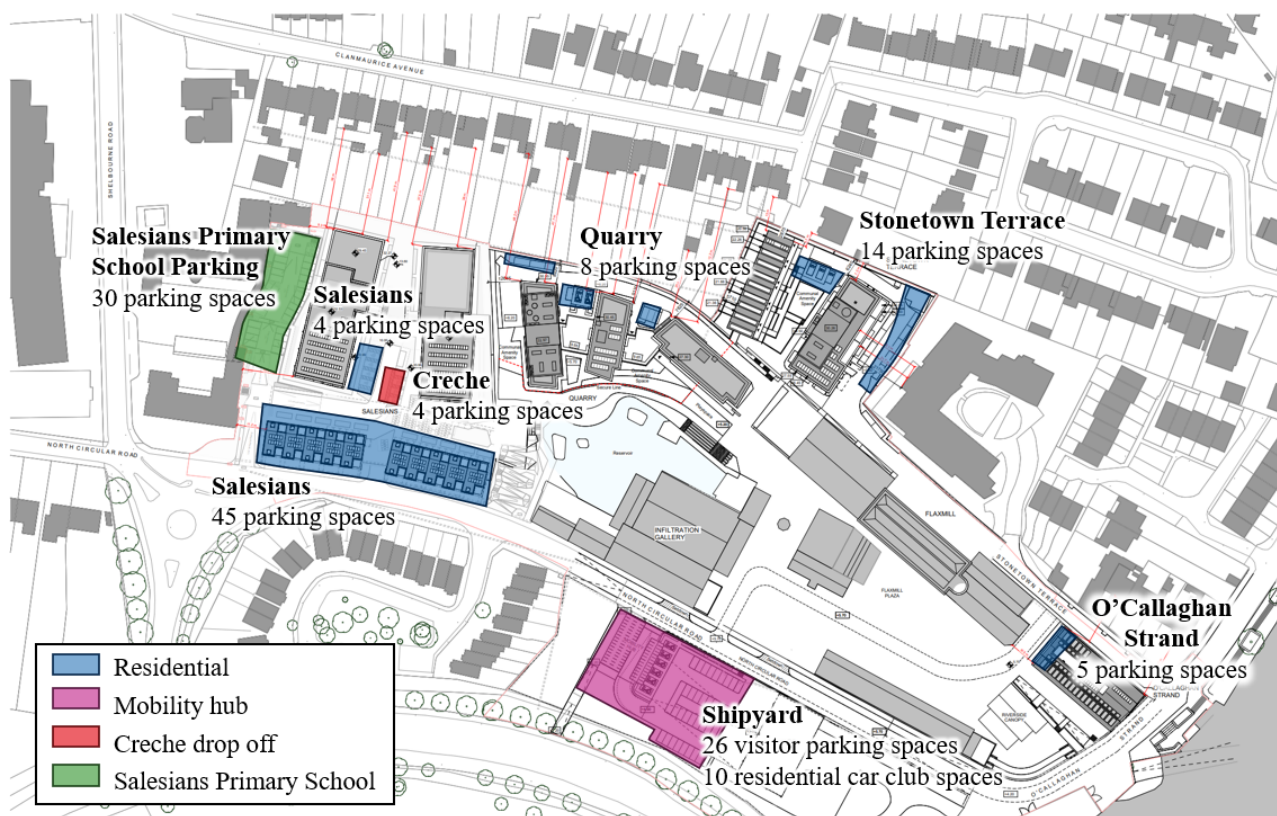


Figure 4-17 Parking provision and locations

4.4.6 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.

4.5 Cycle parking provision

The proposed cycle parking provision serving the development 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.

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.

4.5.1 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.

5. Design Manual for Urban Roads and Streets compliance statement

5.1 Purpose of compliance statement

The Design Manual for Urban Roads and Streets (DMURS) was published in 2013 to replace existing national standards in relation to road and street design in urban areas in Ireland. DMURS sets out a design philosophy that prioritises the movement of pedestrians and cyclists in urban areas to support sustainable and attractive communities. This DMURS compliance statement describes how the design for the proposed development aligns with the principles set out in DMURS.

5.2 Movement/Place and Hierarchy of Modes

5.2.1 Character of the Proposals

In accordance with DMURS, streets will be designed as balanced spaces reflecting both the linear needs of users and the desired quality as a Place. The proposals aim at creating a new neighbourhood which is human-scale and firmly focused on the needs of pedestrians over and above the needs of vehicles.

5.2.2 Modal Hierarchy

DMURS sets out a modal hierarchy to be considered in designing roads and streets in the urban environment which calls for pedestrians to be considered first in the modal hierarchy, followed by cyclists, public transport and finally private motor vehicles. The proposed development has been designed to prioritise pedestrian and cyclist movements, support planned public transportation services in the vicinity and facilitate, but not encourage, necessary movements by private vehicles.

The quantum of car parking provided with these proposals is extremely limited and will, in itself, act as a significant factor to achieve a sustainable modal split, where walking, cycling and public transport use are the preponderant models of travel to and from the development.

5.3 Permeability, Placemaking and Streetscape

5.3.1 Permeable Neighbourhood

The proposed development supports and encourages walking and cycling as the primary modes of transport by ensuring permeability for pedestrians and cyclists to and through the site. The site is presently limited in terms of permeability, but the proposals include a number of additional access points and internal connections that significantly improve the permeability and connectivity with adjacent areas. These connections are mostly pedestrian and cycling and, where vehicles are accommodated, these are pedestrian/cycle focused areas.

5.3.2 Placemaking

The plan for the proposed development responds to the modal hierarchy identified in DMURS by providing high-quality pedestrian spaces that prioritise pedestrian and cyclist movements and provide a sense of place. The street environments in the vicinity of the proposed development have been designed as shared spaces. The materials and finishes, as well as the planting proposed for these areas support a low-speed, traffic calmed environment, which will discourage through-traffic, hence maintaining traffic volumes at low levels.

5.3.3 Safety and Comfort

The proposals include a number of pedestrian spaces that will offer opportunities for gathering and lingering, as well as functioning as nodes in the internal pedestrian network. All spaces are designed as safe and comfortable, with good levels of passive-surveillance, thus enabling their usage by all ages and abilities, and at all times of the day.

5.3.4 Planting

Thoughtful but ever-present soft landscape features will enhance the people-centric character of the development, including along vehicular areas such as the North Circular Road / O'Callaghan Strand corridor.

5.3.5 Active Frontages and Street Activity

The proposed development brings about the opportunity to re-activate the street frontages along North Circular Road, O'Callaghan Strand and Stonetown Terrace, through the addition of attractors along these links. The human-centric design will ensure that activity can take place safely and comfortably, even in situations where the space may be shared with vehicles.

5.3.6 Street Geometry

Features such as narrow vehicular circulation areas, horizontal deflections, tight junction radii, or presence of planting throughout, will discourage vehicular speeds and through-traffic, thus enabling the sharing of spaces with pedestrians and cyclists.

5.3.7 Surface Materials

The surface materials selected for the proposals differ from the normal street appearance throughout the city, and will reinforce the pedestrian-focused character of the streets and other spaces. Where possible, the use of signage and line marking has been minimised to reinforce the human scale and pedestrian priority.

5.4 Pedestrian and Cyclist Environment

The development has been designed to provide an attractive environment for walking and cycling, which is safe and comfortable to all users and where the interaction with vehicular traffic is adequately managed through traffic-calming and general disincentive of through trips by car.

5.4.1 Pedestrian-focused spaces

The whole development will be pedestrian-focused, with varying degrees of accommodation of vehicular traffic. Where vehicles interact with pedestrians, the design of the streets will be such that will encourage low speeds and discourage unnecessary journeys by car.

5.4.2 Accommodation of Cycling

In addition to the traffic-free or traffic-calmed environment designed throughout, which provides safe and comfortable cycling conditions, significant numbers of cycle parking have been provided throughout the site. These cater for both the long-stay needs of residents through secure and sheltered clusters of cycle stands associated with each residential block, but also for the short-stay demand associated with visitors. The latter are in convenient, publicly-accessible locations throughout the masterplan.

6. Assessment of Impact

This section contains an assessment of the traffic impacts associated with the proposed development during both construction and operation, as well as an assessment of the impacts of the full Masterplan. It should be noted that this TTA accompanies the planning application for the proposed development only (Phase II of the Masterplan). The impact assessment presented for the full Masterplan is based on information currently available for Phase III and Phase IV and should therefore be considered preliminary. The impact assessment has primarily focused on the Salesians roundabout as this is the key junction in the vicinity of the proposed development.

6.1 Construction impacts

6.1.1 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).

6.1.2 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 3.7).

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 uplift results in a 2% increase in flows through the Salesians roundabout during the AM and PM peak periods as shown in Table 6-1. This is considered to be a marginal uplift, especially considering the robust trip generation assumption and the temporary nature of construction traffic.

Table 6-1 Comparison of total traffic volumes through the Salesians roundabout – existing v. construction

	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%

6.2 Operational impacts

6.2.1 Operational trip generation

6.2.1.1 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 6-2 below.

Table 6-2 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 6-3 below.

Table 6-3 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 4.4.1), 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 6-4 below.

Table 6-4 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

6.2.1.2 Visitor trip generation

The mobility hub within the Shipyard Zone will include 26 temporary visitor spaces as noted in Section 4.4.2. 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 6-5 below.

Table 6-5 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

6.2.1.3 Peak hour trip

The resultant peak hour trips based on the residential and visitor generation is outlined in Table 6-6 below.

Table 6-6 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

6.2.2 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 3.7).

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 6-7.

Table 6-7 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 6-8.

Table 6-8 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%

6.3 Full Masterplan impacts

6.3.1 Overview and assumptions

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.

As noted in Section 4.4.6 (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.

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. The 36 car parking spaces currently proposed for the Shipyard Zone as part of the proposed development (Phase II), will be moved from their current temporary location within the mobility hub and will be incorporated into the basement of the Phase IV development. As such, the net increase in car parking spaces being provided as part of Phase IV is 164 spaces. The trip generation and assessment of impact related to Phase IV is included in subsequent sections.

6.3.2 Full Masterplan trip generation

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 3.7), presented in Table 6-9 below.

Table 6-9 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 6-10.

Table 6-10 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

6.3.3 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 6.3.2) to the proposed development

operational trip generation (Section 6.2.1) and comparing that to the baseline traffic flows at the Salesians roundabout (Section 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 6-11.

Table 6-11 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 (Phase I – Phase IV) implemented)	% change
AM peak	1,052	1,097	4%
PM peak	1,048	1,090	4%

7. Mobility Management Plan (MMP)

7.1 Purpose

A key principle of the Cleeves masterplan is to promote sustainable mobility, and the proposed development has been designed in accordance with this principle, as demonstrated in this TTA. To help the proposed development deliver on this principle, this MMP has been prepared to influence resident's travel habits from the outset of the proposed development's occupation.

7.2 Objectives

The primary objectives of this MMP are as follows:

- Minimise car dependency and demand
- Create awareness of the sustainable travel modes available
- Promote the use of sustainable travel modes
- Reduce the environmental effects associated with increased car use such as congestion, parking impacts, longer journey times and increased pollution; and
- Set and work towards achievable modal split targets based on strategies to improve alternative modes of transport.

7.3 Mode split targets

7.3.1 Existing mode split

The mode split for the proposed development area has been derived from the Central Statistics Office (CSO) Small Area Census Data 2022. Several Small Areas in the vicinity of the proposed development were selected and the commuter data for those areas were aggregated into an average modal split. Figure 7-1 illustrates the average mode split in the vicinity of the proposed development.

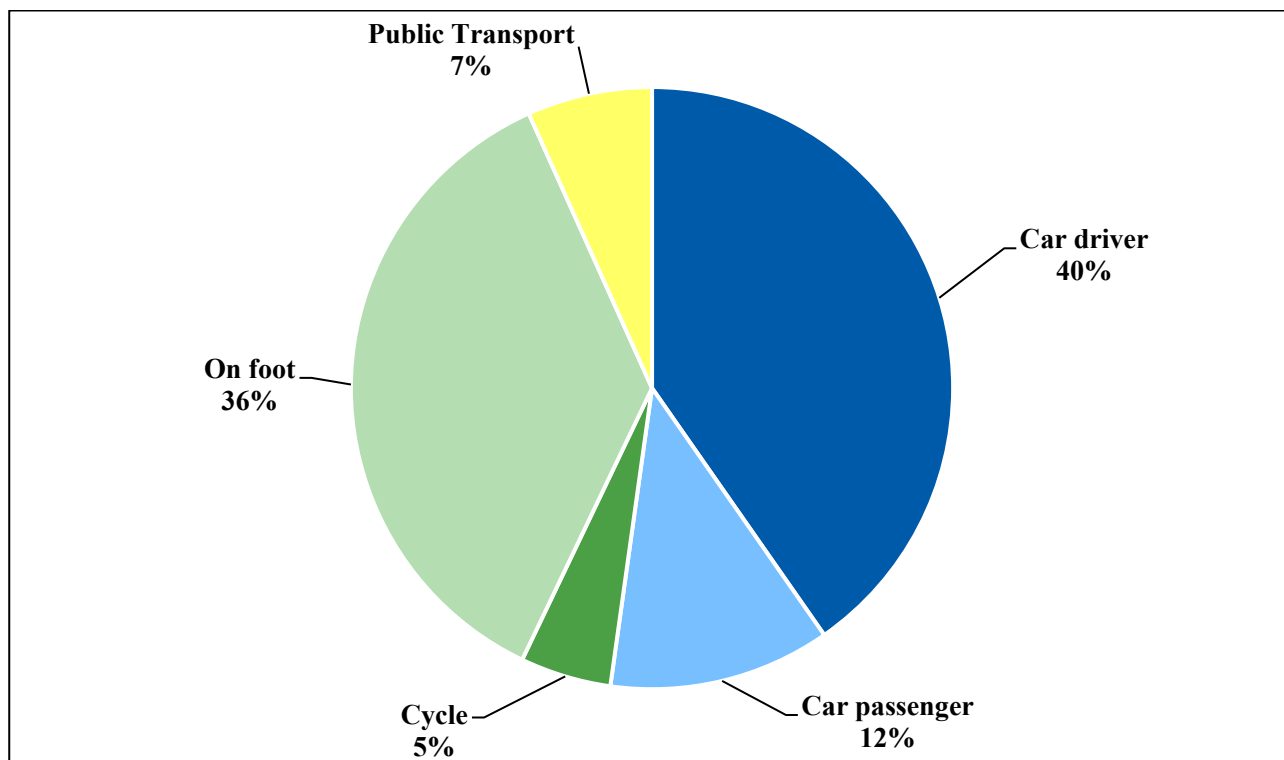


Figure 7-1 Average mode split in the vicinity of the proposed development (Source: CSO Small Area Census Data 2022)

7.3.2 Target mode split

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 level of car parking being provided for the proposed development, are expected to encourage residents and visitors to use primarily sustainable transport modes to access the site. This is reflected in the target mode split for the proposed development with a 50% target mode share for walking, 20% for cycling, 15% for public transport and 15% for private vehicles (as driver) as shown in Figure 7-2.

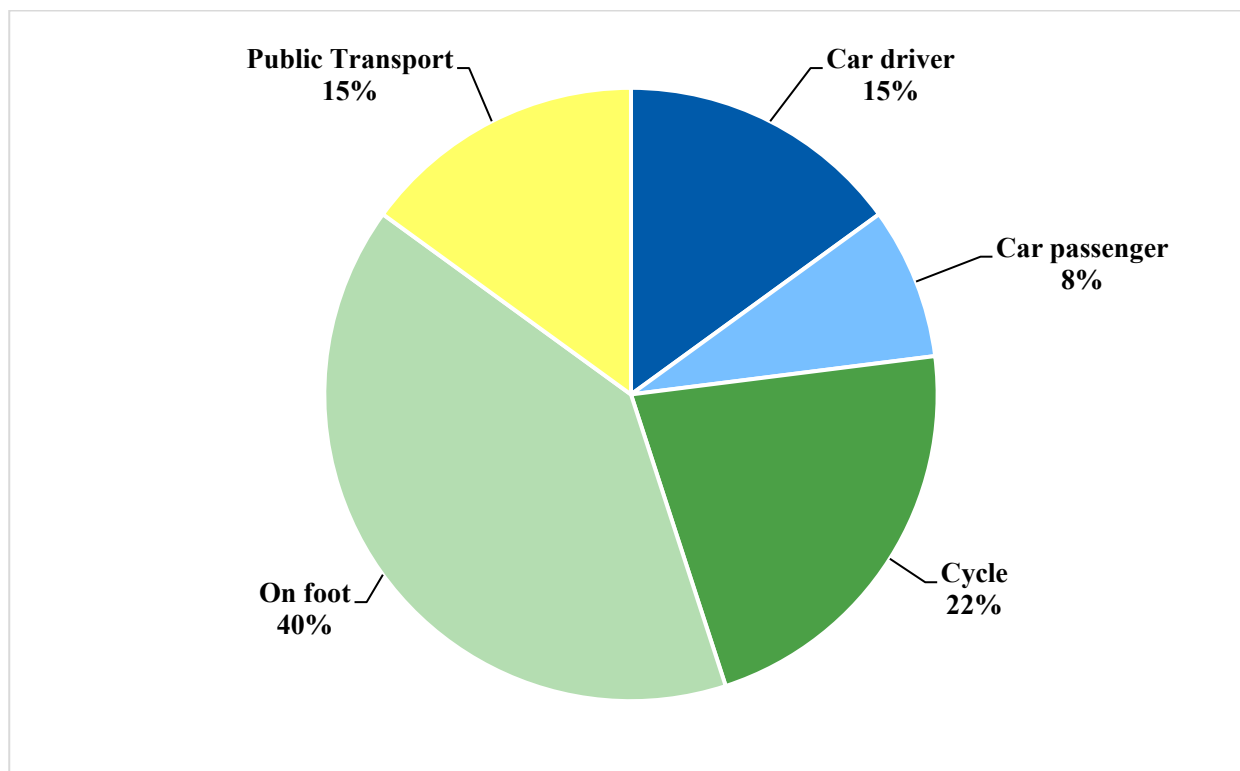


Figure 7-2 Target mode split for the proposed development

7.4 MMP measures

A non-exhaustive list of mobility management measures is provided in Table 7-1 below.

Table 7-1 MMP measures

Mode	Measure
Walking and Cycling	Organise a cycling maintenance class
	Provide a cycle repair stands in residential cycle parking areas
	Display local area maps for cyclists/walkers interested in local routes
	Publicise local bike share schemes operating in the area
Public Transport	Promote Tax Saver monthly and annual commuter tickets for public transport. Highlight potential savings to residents
Other	Reduced car parking provision
	Introduce parking management measures, e.g. permit parking, paid parking, or needs-based parking policies
	Carry out surveys of resident's travel patterns to determine mode share

7.5 MMP management

7.5.1 MMP coordinator

An MMP coordinator will be appointed to oversee the development, implementation and promotion of the MMP. The MMP coordinator will be responsible for the following tasks:

- Develop and support a culture of sustainable travel into and within the development
- Raise awareness of sustainable transport options available to residents
- Act as a single point of contact for all queries relating to the MMP and transport issues in the area and to centrally coordinate the MMP initiatives

- Coordinate the development and implementation of the MMP
- Liaise with external bodies and local public transport operators on transport issues in the area
- Liaise with car-sharing and bike-sharing operators
- Promote smarter travel events in the area
- Coordinate the monitoring and reporting of the MMP progress towards achieving targets and setting clear dates for actions to ensure that the MMP makes progress.

7.5.2 Communication and marketing

An on-going communication strategy will ensure that the MMP initiatives being implemented are promoted to residents. Events and initiatives will be promoted through a range of marketing means, including:

- Information about the sustainable transport options available to residents being included in for rent/sale listings
- Posters in building common areas
- Circulation of emails to notify residents of specific events
- Induction Manual containing information on all travel options available to staff and residents
- Quarterly newsletters will notify residents of any upcoming transport related changes (additional bus routes/stops, new cycle parking locations etc.) and promote upcoming events.

7.5.3 Travel survey

Within three months of occupation of the proposed development a travel survey will be undertaken to determine a baseline transport modal split. This will allow baseline travel patterns to be established and targets to be set and will also be a forum for residents to comment on any issues relating to their commute. Following this, a travel survey will be carried out annually.

7.6 Monitoring and review

An annual review will be carried out on each of the MMP measures to assess progress. Travel pattern data will be obtained by undertaking a survey of existing travel patterns and subsequent annual travel surveys. Monitoring of the MMP and progress is fundamental to identify problem areas and initiate corrective measures to ensure targets are achieved. This monitoring programme will be carried out on an on-going basis. The basic procedure will consist of:

- Reviewing the implementation of the MMP measures
- Carrying out a travel survey
- Monitoring the achievement of targets, and
- Proposing corrective measures where required.

8. Conclusion

This report presents a TTA in support of the planning application for Phase II of the Cleeves Riverside Quarter Masterplan (the proposed development). Subsequent phases of the Masterplan (Phase III and Phase IV) will be the subjects of separate planning applications. This TTA has outlined the transport considerations associated with the proposed development, including a review of the existing transport context, a description of the transport proposals, an impact assessment of those proposals and an outline MMP for the development.

Supporting and encouraging sustainable mobility patterns amongst residents and visitors is one of the key principles of the Masterplan and the proposed development. The design of the proposed development prioritises pedestrian and cyclist movement and permeability as much as possible. Vehicular access to the development will be restricted to certain areas so as to support sustainable mobility and placemaking. Access for emergency services and servicing needs (e.g. waste collection and deliveries) will be facilitated as well.

Car parking will be provided at locations throughout the site but will be limited in terms of quantity. This will encourage residents and visitors to travel using sustainable transport modes. The central urban location of the proposed development, as well as planned improvements to the active travel and public transport networks in the vicinity of the site, supports this ambition. To accommodate occasional car use by residents, a residential car club is also being provided as part of a dedicated mobility hub. Visitor parking is also incorporated into this mobility hub. Cycle parking is being provided in line with the requirements of the Limerick Development Plan 2022 – 2028 and the Sustainable Urban Housing Design Standards for New Apartments 2025 to support residents in using this as a primary mode of travel.

To assess the traffic impact of the proposed development, the residential and visitor vehicular trip generation has been assessed against the existing traffic flows on the surrounding road network. Based on this assessment, it is expected that the proposed development will result in a net reduction in traffic on the road network due to the removal of the existing Euro Car Parks on North Circular Road as part of the proposals.

The MMP included in the final chapter of this TTA will support the sustainable mobility ambitions of the proposed development by encouraging and promoting active travel and public transport. This includes the appointment of an MMP coordinator who will be responsible for implementing and promoting MMP measures, as well as monitoring and reviewing progress against the target mode split.

The proposals contained in this TTA are consistent with existing transport policy and sustainability objectives, including those set out in the Limerick Development Plan 2022 – 2028. The transportation elements of the proposed development have been designed to support and encourage sustainable mobility amongst residents and visitors. There is no traffic impact as a result of the proposed development and therefore there are no transport-related reasons to hinder the grant of planning by LCCC.

Appendix A

Vehicle tracking drawings



Fire Aerial Platform DFB 9.4m	Fire Tender Medium
Overall Length 9.400m	Overall Length 9.400m
Overall Width 2.540m	Overall Width 2.290m
Overall Body Height 3.400m	Overall Body Height 4.000m
Min Body Ground Clearance 0.120m	Min Body Ground Clearance 0.120m
Track Width 2.540m	Track Width 2.290m
Lowest Ground Clearance 7.50m	Lowest Ground Clearance 5.00m
Max Steering Angle (Virtual) 38.00°	Wall to Wall Turning Radius 11.000m

C01	03/10/25	ES	GM	TO
P03	12/08/25	ES	GM	TO
P02	29/07/25	ES	GM	TO
P01	20/11/24	ES	TO	TO
Issued for planning (Status A2)				
Rev	Date	By	Chkd	Appd

ARUP

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Client
LTT

Project Title
Cleaves Riverside Quarter
Limerick

Drawing Title
Masterplan Ground Floor
Tracking - Fire Truck

Scale at A1
1:500

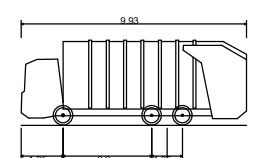
Role
Planning

Suitability
A2 - Issued for planning

Arup Job No
277975-00

Name
CRQMP-ARUP-ZZ-00-SK-YT-0001-001

Rev
C01



Vulture 2225 (with Mercedes 6x4 chassis)
Overall Length 8.500m
Overall Width 2.400m
Overall Body Height 3.200m
Min Body Ground Clearance 2.400m
Track Width 2.400m
Lockdown time 5.00m
Wall to Wall Turning Radius 9.100m

C01	03/10/25	ES	GM	TO
P03	12/08/25	ES	GM	TO
P02	29/07/25	ES	GM	TO
P01	20/11/24	ES	TO	TO
Issued for planning (Status A2)				
Rev	Date	By	Chkd	Appd

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Client
LTT

Project Title
Cleaves Riverside Quarter
Limerick

Drawing Title
Masterplan Ground Floor
Tracking - Refuse Truck

Scale at A1	1:500		
Role	Planning		
Suitability	A2 - Issued for planning		
Arup Job No	277975-00		Rev C01
Name	CRQMP-ARUP-ZZ-00-SK-YT-0001-002		