

6 TRANSPORT

6.1 Introduction

This section describes the likely significant effects of the proposed development in relation to traffic and transportation. These effects are described in the context of the potential impacts identified as part of the previously submitted planning application, which was partially granted under ref. ABP-306569-20.

The development to which this submission relates involves a proposal for 198no. 'Build-To-Rent' residential apartments, along with approximately 639m² of ancillary amenity space, 223m² of Food & Beverage, 596m² of replacement office space, ancillary residential bicycle storage and a Building Maintenance Unit.

In terms of traffic and transport impact analysis, the relevant modifications to the previously proposed tower element associated with the redevelopment of the former Hickey's site are the provision of 38 additional residential units and the reduction in office space of (-909m² + 596 m² =) c.313 m² over six floors at the interface of the proposed Block A with the consented Block B2, when compared to the previously proposed scheme.

The present proposal, although pertaining only to the tower, considers the consented development (ref. ABP-306569-20) with regard to access, cycle parking, car parking and impacts on the transport networks; as it is directly linked to and is to be facilitated by transport facilities proposed under the consented scheme.

Chapter 3 provides a description of the proposed development whilst **Chapter 4** describes the construction strategy. The following aspects are particularly relevant to the traffic and transportation assessment:

- Design

Throughout the design development for the proposed development, consideration has been given to the movement of pedestrians, cyclists, vehicles and construction vehicles to and through the site.

- Construction

In relation to the volume of traffic projected for the construction of the consented development, no additional volume of traffic is expected to be generated during the peak period of construction activity as part of the proposed development. This chapter includes the assessment of traffic generated to facilitate the required works for the construction of Block A.

- Operation

During operation, no additional car parking spaces are to be provided as part of the proposed development. Therefore, no additional car trips are envisaged to be generated by the development, so no traffic impact assessment is required to be carried out for the proposed development.

This chapter presents details of the traffic inputs required for other assessments contained within this EIAR.

This assessment was undertaken by Tiago Oliveira of Arup. Tiago is an Associate Director at Arup in Dublin, who is involved in various transportation projects, and provides traffic and transportation advice for a number of projects in which Arup is involved in Ireland and elsewhere in the world. Tiago has experience in different areas of Transport Planning, including Traffic and Transportation Assessments, Masterplanning, Streetscape Design, Sustainable Transport and Transport Strategies. He holds a Licenciatura (5-year degree) in Geography and Urban Planning.

Please refer to **Chapter 1** for further details on his relevant qualifications and experience.

6.2 Assessment Methodology

6.2.1 General

This chapter assesses the impact of the proposed development on the road network during both the construction and operational stages. The following sections present the methodology for specific elements of this assessment.

For the purposes of a robust assessment, the traffic which is generated by the existing uses on site have not been considered in the traffic assessment. This is noted to be minimal in any case.

6.2.1.1 Construction Traffic Impact Assessment

The changes to this scheme when compared with the scheme that was assessed and partly consented in the previous planning application are insignificant in terms of the impacts of construction traffic. Therefore, the assessment contained in the previous EIAR, which identified no significant traffic impacts, is considered to be valid in this instance.

6.2.1.2 Operational Traffic Impact Assessment

The proposed development is to be facilitated by permitted car parking provision proposed as part of the consented development. No additional car parking spaces are provided as part of the proposed development, and therefore, no additional car trips are envisaged to be generated by the development. There will therefore be a negligible effect on traffic during the operational stage of the development. For this reason, a full operational traffic impact assessment was not required to be undertaken.

6.2.2 Guidance and Legislation

This EIAR has been prepared with due regard to guidance on EIA as outlined in **Chapter 1**.

The assessment in this chapter has been undertaken in line with the guidance in Transport Infrastructure Ireland (2014) Traffic and Transport Assessment Guidelines.

6.2.3 Study Area

For the purposes of this assessment, the study area has been defined as the road network in the immediate vicinity of the site. This includes Parkgate Street, Conyngham Road, Infirmary Road, Wolfe Tone Quay, Frank Sherwin Bridge, and Victoria Quay, as well as any impacts on the Luas that may arise.

The extent of the site is presented in Figure 6. 1.

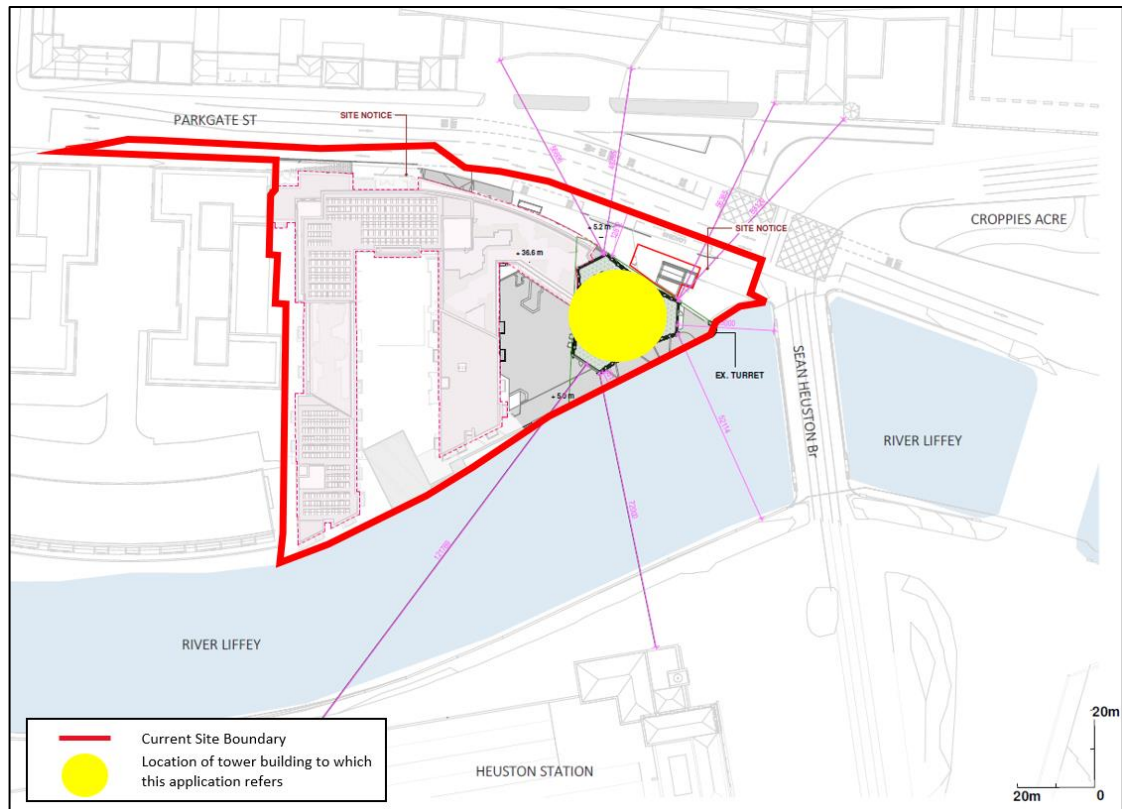


Figure 6. 1: Site Location

6.2.4 Site Visits

A number of informal site visits were undertaken to understand the existing road infrastructure in the area and to observe existing traffic conditions.

6.2.5 Consultation

As part of the previous planning application, a meeting was held on 1st March 2019 with Dublin City Council (DCC) during the pre-planning process. Issues relevant to traffic and transportation were tabled, such as car parking, cycle parking, service and emergency access and in particular the design and configuration of 42A Parkgate Street. These were discussed and subsequently addressed during the design development process.

The need or otherwise for a full traffic impact assessment was also discussed. In light of the relatively small amount of car parking proposed as part of the consented scheme, it was agreed in principle that a full assessment would not be required. This is considered valid for the present planning application.

A subsequent meeting was held on 16th October 2019 in DCC, where the updated scheme was presented and the requirements for planning were discussed, with particular focus on minor works required outside the area within the applicant's ownership on Parkgate Street, and whether or not these should be included as part of the application. These works were considered relevant to the application and were therefore included. This is considered valid for the present planning application, which relies on the provision of transport-related infrastructure and facilities that are delivered as part of the previous planning application.

6.2.6 Categorisation of the Baseline Environment

As part of the previous planning application (ref. ABP-306569-20), desk-based research was undertaken to understand the existing transport-related context of the area, in conjunction with informal site visits to Parkgate Street.

A topographical survey was undertaken to understand the levels of the site and the surrounding area, particularly to address issues pertaining to ramps and pedestrian access to the development. A pedestrian survey was undertaken in December 2019 in order to understand the volume of pedestrians using the Sean Heuston bridge throughout an average day. A new survey has not been able to be carried-out over the past year, due to the severe disruption to travel patterns caused by the COVID-19 pandemic and associated lockdown measures.

6.2.7 Impact Assessment Methodology

As noted in Section 0, the proposed development is to be facilitated by permitted car parking provision of the consented development. No additional car parking spaces are provided as part of the proposed development. Consequently, no additional traffic is likely to be generated on the network during the operational stage. Accordingly, no traffic impact assessment has been undertaken for the operational phase of the proposed development.

The predicted traffic impact associated with the construction of the proposed development has been determined on the basis of the redevelopment of the entire site, by estimating the expected peak hour construction traffic trips based on the quantities of material to be exported from the site.

6.3 Receiving Environment (Baseline Situation)

6.3.1 Site Location

The proposed development is located in the west of Dublin City Centre. The site is bounded by Parkgate Street to the north, Parkgate Business Centre to the west, and the River Liffey to the south. Heuston Station lies directly across the river to the south, and the main entrance to Phoenix Park lies approximately 230m to the west of the site.

The red line associated with this planning application includes the full site for which the previous planning application sought permission. This is due to the fact that there are elements of the already consented scheme that provide for the present proposals, including car and cycle parking provision, for example.

6.3.2 Local Road Network

The existing road network in the vicinity of the site is illustrated in Figure 6. 2 and described below.

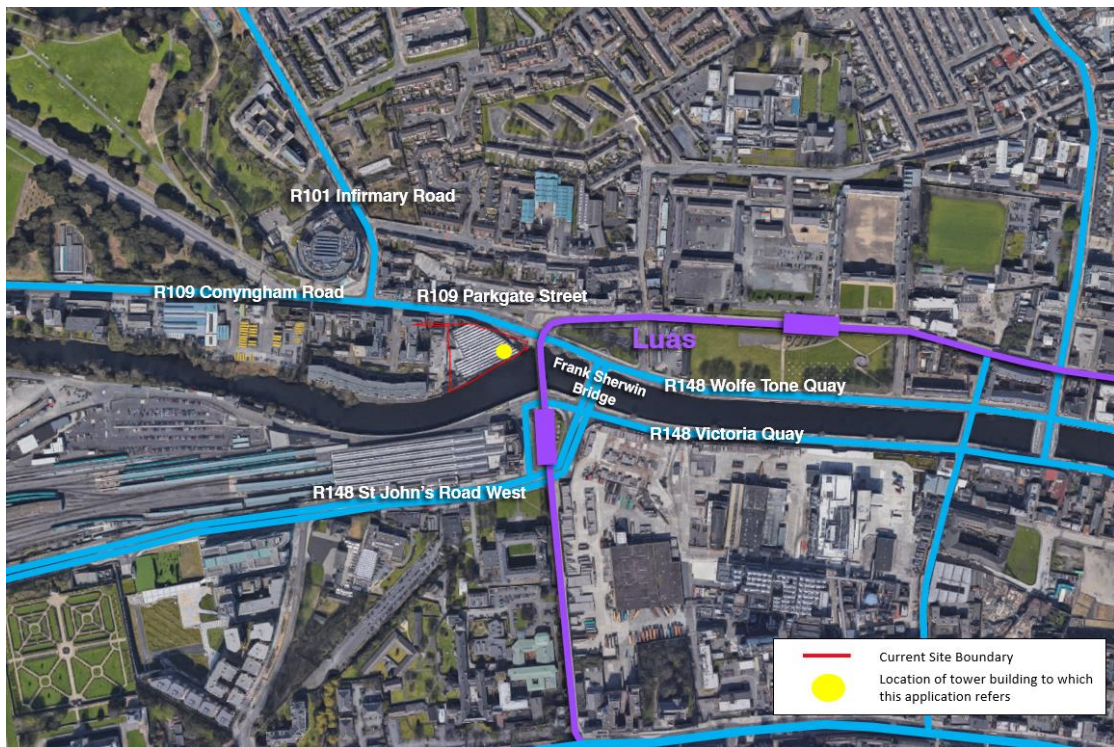


Figure 6. 2: Road Network

The site is located on the R109 Parkgate Street, which is an important link into, and out of, Dublin City. It links to Conyngham Road which runs along the southern edge of Phoenix Park to Islandbridge and Chapelizod to the west. To the north, Infirmaroy Road provides a link to the North Circular Road and the northern areas of the city.

To the east Parkgate Street connects to Wolfe Tone Quay which runs along the northern edge of the River Liffey providing a link to the city. Frank Sherwin Bridge provides a link to Victoria Quay which runs along the southern edge of the River Liffey, and St Johns Road West which provides a link to Kilmainham and the Con Colbert Road, providing a link to the M50.

6.3.3 Pedestrian Facilities

A pedestrian footpath runs along Parkgate Street to the north of the site connecting to Phoenix Park and Conyngham Road to the west, and along the northern bank of the River Liffey into Dublin City Centre to the east. Sean Heuston Luas Bridge provides a connection across the River Liffey to Heuston Station and Heuston South Quarter to the southwest.

A pedestrian survey was undertaken along the Sean Heuston Bridge in December 2019, in order to determine the volume of pedestrian usage across the day. The survey results show that 1,065 pedestrians use Sean Heuston Bridge between 9.00 and 10.00 in the morning and 1,181 between 18.00 and 19.00 in the evening, equating to about 18 and 20 movements per minute on average, respectively. A new survey has not been able to be carried-out over the past year, due to the severe disruption to travel patterns caused by the COVID-19 pandemic and associated lockdown measures.

6.3.4 Cyclist Facilities

There are no permanent cycle facilities immediately adjacent to the site along Parkgate Street. To the west, an advisory cycle lane is provided on the westbound side of Conyngham Road, starting at the entrance to Phoenix Park, with cycle facilities provided within the bus lane for the eastbound direction. Mandatory cycle lanes are provided along both sides of Chesterfield Avenue within Phoenix Park. To the east, an advisory cycle lane is provided within the bus lane along Wolfe Tone Quay on the northern side of the River Liffey. To the south, advisory cycle lanes are provided on St John's Road West in both directions.

However, the cycle network in Dublin has seen a number of temporary improvements in the past year, mostly related to measures to address the changes in travel patterns that resulted from the COVID-19 pandemic.

Interim measures associated with the proposed Liffey Cycle scheme have been introduced, which are proposed to eventually be replaced by the full Liffey Cycle Scheme as proposed.

Generally, these measures included the replacement of one car lane with a cycle lane with extra pedestrian space where possible. The section of Parkgate Street immediately adjacent to the development has been the subject of such a redesign, as shown in Figure 6. 3.

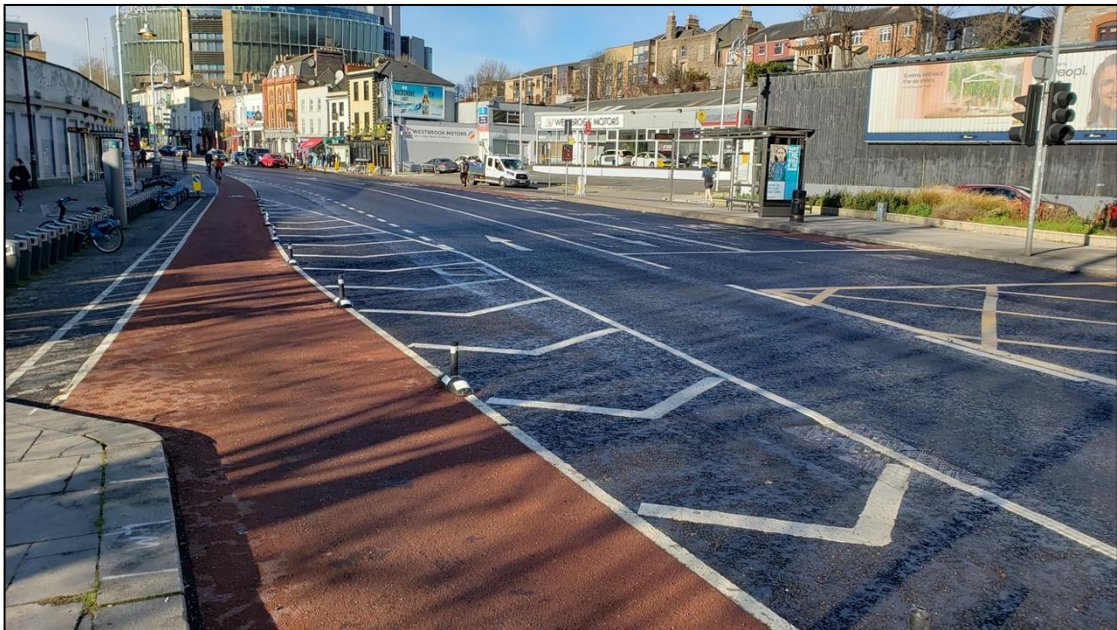


Figure 6. 3: Temporary Redesign Parkgate Street

Also related to COVID-19 measures, are proposals that modify the access to and from Phoenix Park. For example, the gates to side entrances were closed to cars during the summer and are now closed during the weekends. A traffic management study is being undertaken by OPW/DCC, with consultation expected in the new year.

In addition, parking along either side Chesterfield Avenue was converted to temporary segregated cycle lanes (see Figure 6. 4), with previous footpath style cycle routes converted back to footpaths. It's unclear whether this is to be made permanent but will likely be included in the traffic management study.



Figure 6. 4: Temporary segregated cycle lanes at Chesterfield Avenue

This site lies adjacent to primary route '5' in the GDA Cycle Network Plan, which runs from Blanchardstown through Castleknock, along Chesterfield Avenue through Phoenix Park, and along the River Liffey as far as the East Link Bridge. The recently announced plans for the Liffey Cycle Route propose to create segregated cycle facilities on either side of the Liffey along the entirety of the River from Heuston Station/Parkgate Street to the East Link Bridge.

Figure 6. 5 presents the cycle network in the vicinity of the site.

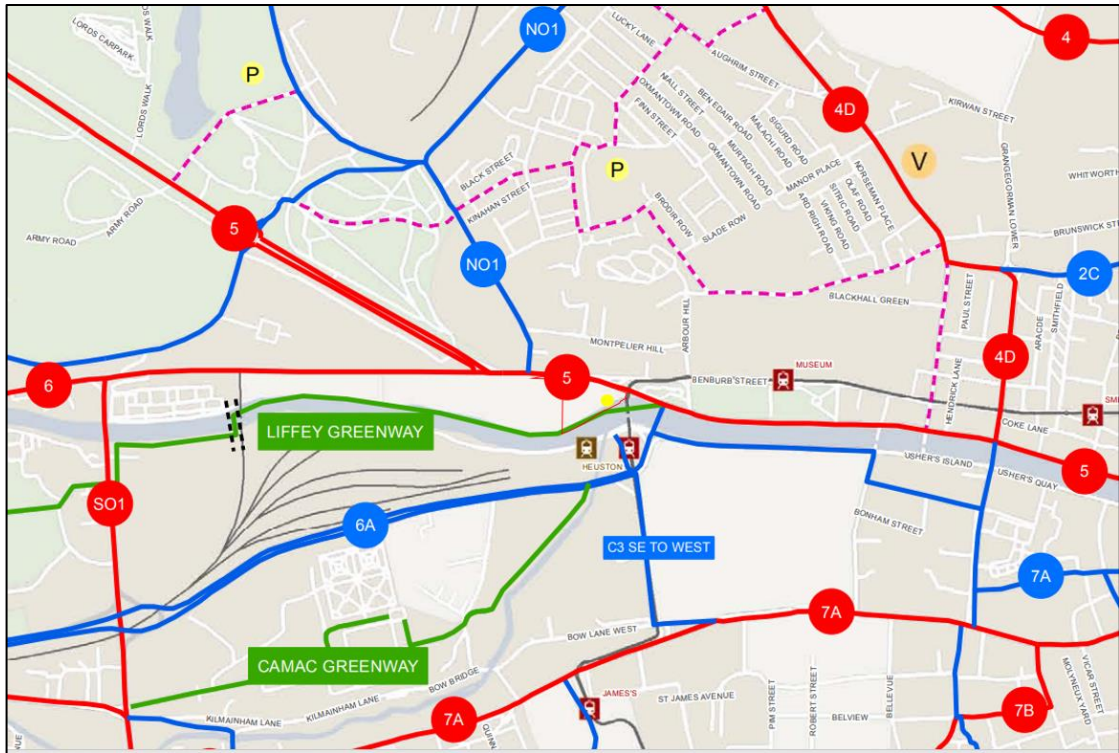


Figure 6. 5: Extract from the GDA Cycle Network Plan

There are a number of Dublin Bikes stands in the vicinity of the proposed development. Station no. 92 lies directly in front of the site along Parkgate St, with Station no. 86 directly across the road. Station no. 100 is located at Heuston Station, just across the Sean Heuston Bridge. In addition, there are five other stations within 600m of the site. The site location in the context of nearby bike stations is presented in Figure 6. 6.

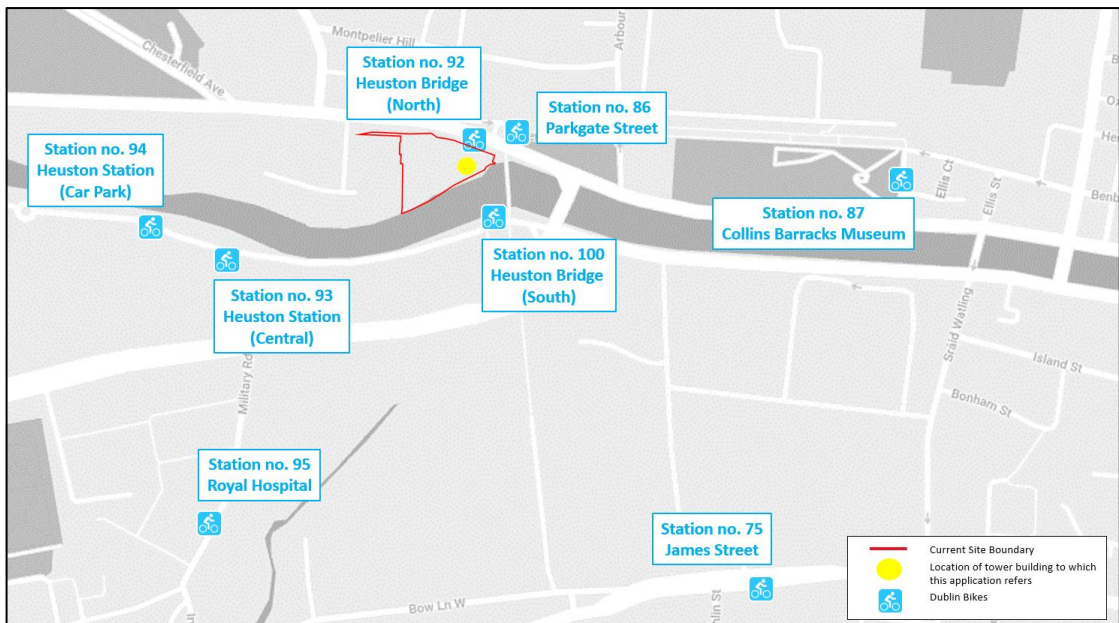


Figure 6. 6: Dublin Bikes Stations in vicinity of Site

6.3.5 Public Transport Facilities

This site is very well served by public transport. Heuston Station lies directly across the River Liffey to the south, which provides regional rail connections to the west and south. The area in front of the station acts as a transport hub, with a Luas red line station, a number of local and regional bus route stops, and a Dublin Bikes stand all located in this area.

The Luas red line provides connections to Tallaght and Saggart in the west, and Connolly and The Point to the east.

The 25, 26, 66/a/b, 67, and 69 bus routes all pass through Parkgate street, with the westbound bus stop located directly in front of the site, and the eastbound stop located across the road. The 25a/b and the 79/a pass along St Johns Rd West with stops just south of Heuston Station. The 145 and the 747 Airport Bus both terminate at Heuston station.

The public transport routes in the vicinity of the site are shown in Figure 6. 7.

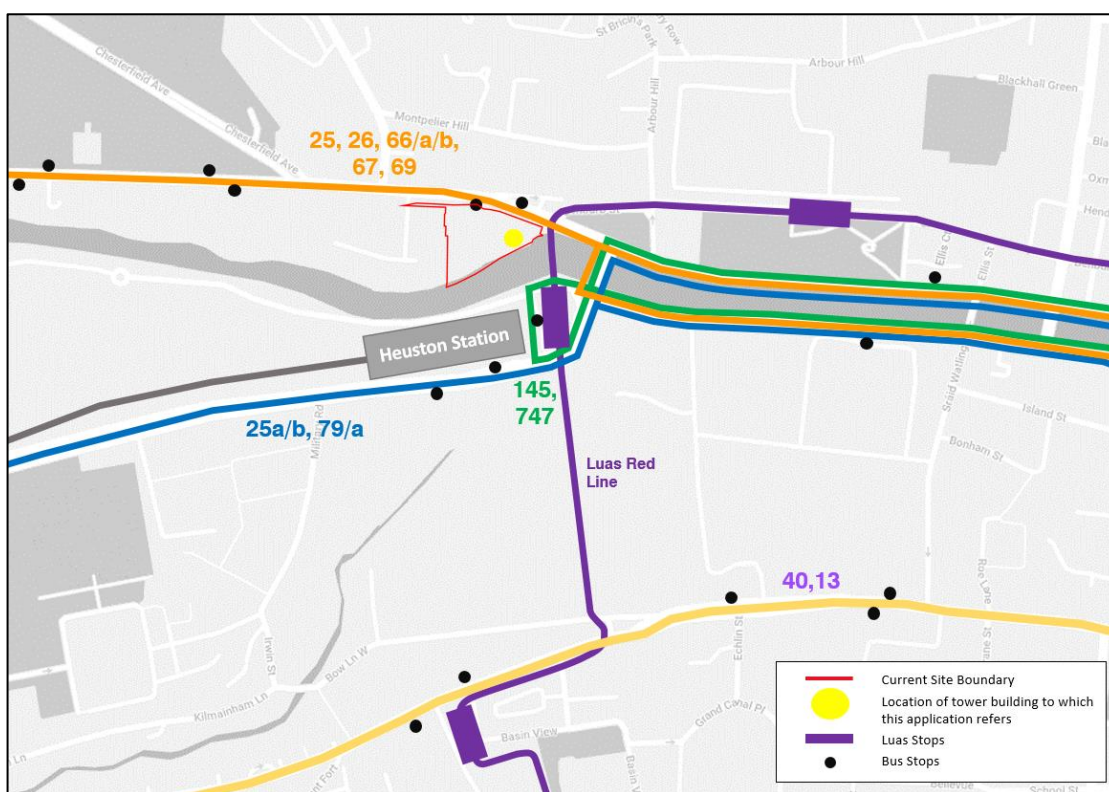


Figure 6. 7: Public Transport Options in the Vicinity of the Site

Under the draft Dublin Area Revised Bus Network proposals as part of BusConnects, Heuston Station will act as a major transport interchange and terminus for a number of key routes.

The inner orbital ‘O’, which will run in both directions in a loop around the North Circular Road and the South Circular Road will have its terminus located at Heuston Station and run along Parkgate Street, adjacent to the site. The N2 northern orbital would run from Heuston Station through Stoneybatter, Cabra, Glasnevin, and on to Clontarf, and the S2 orbital would run from Heuston through Rialto, Kimmage, Rathmines, Ranelagh, Ballsbridge, and on to Sandymount.

In addition to these orbital routes, the ‘C’ radial spine would run east/west through Heuston, which would run from Poolbeg Ln and Sandymount in the East, to Liffey Valley, Lucan and on to Maynooth and Celbridge in the West. Other radial spines which pass close to the site include the ‘B’ Spine which would run between Blanchardstown and UCD/Dun Laoghaire, and the ‘G’ Spine which would run between Liffey Valley/Red Cow and Spencer Dock.

Two of the minor radial routes would also pass along Parkgate Street, the 14, which would run from Liffey Valley through Chapelizod into the City Centre, and then south through Rathmines to Ballinteer, and the 93 which would run from Rathcoole into the city centre and terminate in Dublin Port.

The planned routes in the vicinity of the development are presented in Figure 6. 8.

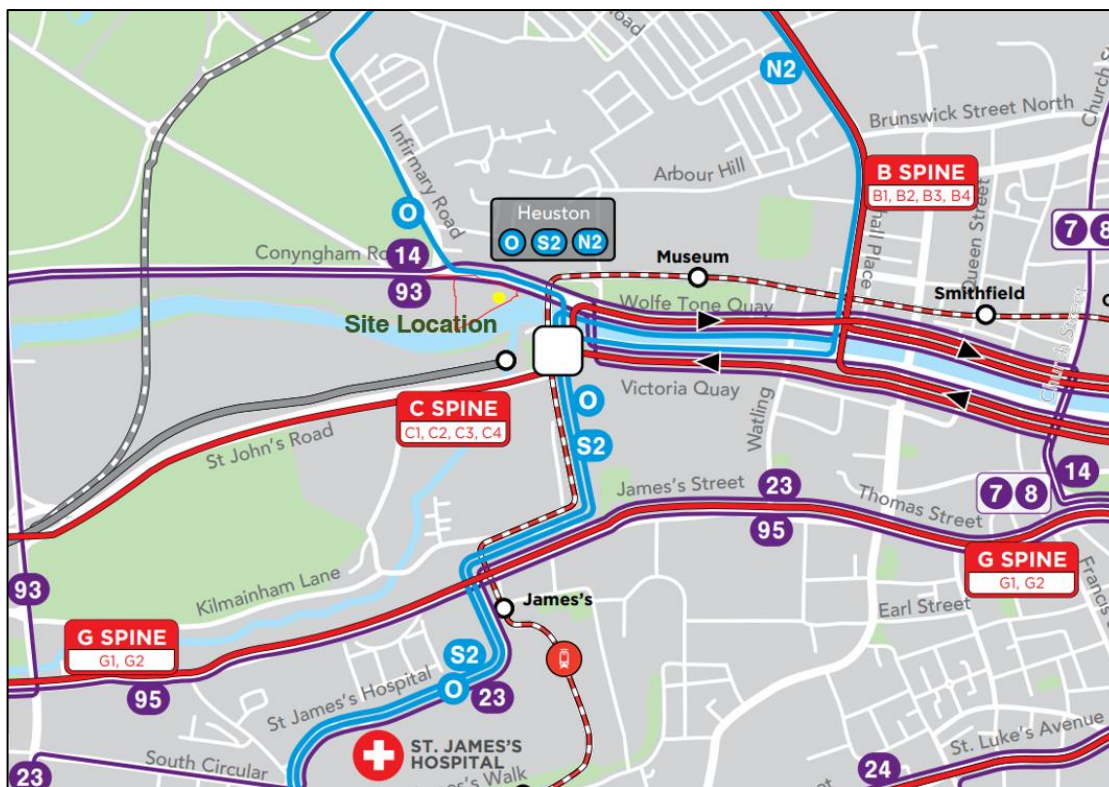


Figure 6. 8: Extract from the Draft BusConnects Bus Network Redesign Proposals

6.4 Potential Effect of the Proposed Development

This section outlines the proposed development and the likely changes to the existing traffic and transportation networks during both the construction and operational phase of the proposed development.

6.4.1 Construction Phase

6.4.1.1 Site Access and Vehicular Routes

It is anticipated that all construction vehicles accessing and egressing the site will do so from a construction access point on Parkgate Street. Construction traffic travelling to and from the site will do so via the Conyngham Road, South Circular Road, and Con Colbert Road/Chapelizod Bypass from where they will access the M50 and the national road network. This will keep trucks to an established HGV route, minimising their impact on residential areas. A Construction Environmental Management Plan (CEMP), which includes a Construction Traffic Management Plan (CTMP) has been prepared and will be agreed with Dublin City Council and An Garda Síochána in advance of the works.

Figure 6. 9 shows the designated construction traffic route to/from the site.

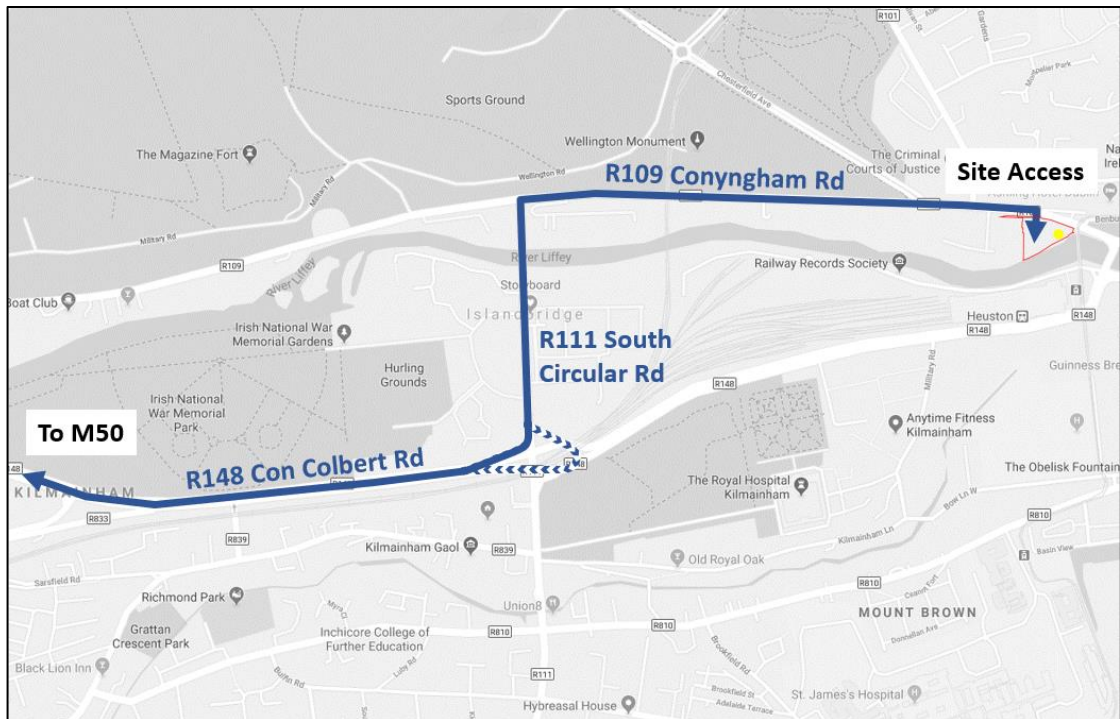


Figure 6. 9: Designated Construction Traffic Route

6.4.1.2 Pedestrian Facilities

During certain stages of construction, it may be necessary to close part of the footpath along Parkgate Street. If this were to occur, a minor diversion for pedestrians would be provided along the carriageway of the road immediately adjacent to the footpath, closing off one lane of traffic to westbound vehicles. There are two vehicle lanes in the westbound direction, so no detours would be required for vehicles. As mentioned, a CEMP which includes a CTMP has been prepared and will be agreed with Dublin City Council and An Garda Síochána in advance of the works.

6.4.1.3 Cycle Facilities

Cycle parking spaces will be provided on site for construction staff and in addition lockers will be provided to provide necessary storage for cyclist’s personal belongings. There are also several Dublin Bikes stations in the vicinity of the site near Heuston Station.

As part of the granted development it will be necessary to permanently re-locate Dublin Bikes Station No. 92 on Parkgate Street due to the provision of a loading bay in the current location of the station. It is likely that the relocation will occur early in the construction phase. The new location for the Dublin Bikes Station will be confirmed by DCC.

6.4.1.4 Public Transport

It is not envisaged that there will be any impact on public transport infrastructure or services during the construction of this development. The location of a crane will take account of Transport Infrastructure Ireland’s guidance regarding proximity to the Luas line, and therefore will not impact on the Luas operations.

6.4.1.5 Car Parking

No car parking is being provided on site for staff as the location of the proposed development is in the centre of Dublin and can be easily accessed by public transport, walking and cycling. If staff drive, they will have to park in the wider area such as Phoenix Park, Royal Hospital Kilmainham, or the various city centre car parks. However, the majority of these trips will likely occur before 7:00 and thus will not impact the network during the peak period of traffic volume.

6.4.1.6 Construction Traffic Trip Generation

This section includes an assessment of the traffic generated during the peak period of construction activity to facilitate the required construction works. It must be noted that construction works are expected to be carried-out on a site-wide basis under the previously consented scheme (ref. ABP-306569-20). Therefore, the traffic impact of the most onerous construction phases for the redevelopment of the entire site has already been assessed under the previous EIAR.

The most onerous construction period with regard to traffic generation is expected to be the excavation and demolition stages. It is unlikely that all the demolition and excavation activities will happen at the same time. However, for robustness, this assessment assumes that they will occur at the same time.

Also, it is expected that the excavation and demolition construction stages of the overall proposed development will take approximately 3 and 4 months, respectively, inclusive of Block A. However, for the purposes of this assessment and its robustness, it has been assumed that the entirety of the works for these particular construction stages will occur over a period of 2 months. This means an assumption of the same volume of trips but distributed by a shorter time period, thus resulting in a robust scenario whereby more trips would be generated per day or hour.

It is estimated that 14,400m³ of bulk excavation across the site will result from the works and approximately 2,250m³ of demolition waste across the site (based on an estimate of 2,695 tonnes, at 1.2T/m³) will require removal from the site. On the basis of a 10m³ truck capacity, approximately 28 trucks per day are needed over the 2-month period. This equates to less than 2.5 trucks per hour on average. During peak construction periods this number could potentially double to 5 trucks per hour. Considering that these are 2-way movements (i.e. one truck = two movements), a total of 10 two-way trips in a peak construction hour is estimated to take place for the construction of the overall proposed development.

The construction works associated with Block A are expected to require a similar intensity of activity as for the construction of the overall proposed development. However, in this case the programme of construction works will comprise a shorter period of time. Therefore, the traffic generation associated with the construction of Block A is also expected to not be more than 28 trucks per day, thus, 2.5 trucks per hour on average. This could potentially double to 5 trucks (10 movements) per hour during peak construction activity.

In conclusion, and in light of the capacity of the neighbouring road network, the volumes of traffic associated with the construction of Block A are expected not to have any significant impact on the local traffic network.

6.4.1.7 Indirect Effects

There are no significant direct effects expected during the construction phase of the development, and therefore there are no significant indirect effects identified.

6.4.1.8 Cumulative Effects

Having reviewed the existing granted planning applications in the vicinity of the site as detailed in Appendix 21.1, no relevant proposed developments have been identified that could be considered to result in significant cumulative effects in the context of the proposed development during the construction stage.

It is worth noting that the permitted development would have normally been considered as cumulative development, but due to its interrelations with the present proposals, it has been considered in the present impact assessment.

6.4.2 Operation Phase

6.4.2.1 Site Access

Vehicles will access the site from Parkgate Street at the northernmost point of the site. This entrance will provide access to the car parking spaces at ground level and at the basement.

6.4.2.2 Car Parking

No car parking is being proposed as part of this planning application. However, the car parking that was provided with the overall scheme, which was partly consented, will cater for the needs of the tower, as well as the other already consented uses. The car parking has been accepted on the basis described below.

As per the Dublin City Development Plan 2016-2022 the maximum permissible number of car parking spaces for the entire site (consented and proposed developments) would be 530 spaces, with 519 for the residential component of the development (1 per unit), 10 for the office component (1 per 400m²) and 1 for the retail (1 per 350m²).

The proposed development is to be facilitated by permitted car parking provision of the consented development. No changes to permitted basement car parking arrangements are proposed.

The consented development will provide 26 car parking spaces to serve the entire site, of which three will be accessible car parking spaces. This limited provision of car parking was rationalised on the basis of the advantageous location of the site in terms of transport accessibility conditions.

13 car parking spaces will be provided at the ground level and 10 will be provided in the basement car park of building B1. This will be allocated to car share to cater for the occasional (non-commuting) needs of the development's population, such as weekly shopping, weekend needs (family, day trips), occasional purchase of bulky items such as furniture, etc.

The car share facility will be managed centrally and will operate on the basis of online bookings. The vehicles will be securely parked within the development and therefore will be for sole use of the scheme.

A total of three accessible parking spaces will be provided: two accessible spaces on the ground level and one accessible space on the basement.

Three of the proposed car parking spaces will include electric vehicle (EV) charging points/stations and EV ducting will be provided for all remaining car parking spaces.

6.4.2.3 Pedestrian Accessibility

Pedestrian facilities and the public realm will be enhanced with the proposed and consented development (ABP Ref. 30659-20).

As part of the granted development, the eastern courtyard will be accessible to the public, allowing through access for pedestrians and providing a new public plaza with outdoor seating, landscaping, and entrances to the retail units.

A public river walk will be provided along the southern edge of the site, providing a view of the River Liffey and Heuston Station. The eastern end of the river walk will connect to the external footpath, providing more space for pedestrians at what is currently a constrained area of the footpath.

As part of the previous application, Transport Infrastructure Ireland requested information regarding pedestrian movements across Sean Heuston Bridge and the potential interactions of the development with Luas movements. In this context, the applicant commissioned surveys to enable the identification of potential impacts of additional pedestrian movements at this location. As part of this application, a new survey has not been able to be carried-out over the past year, due to the severe disruption to travel patterns caused by the COVID-19 pandemic and associated lockdown measures. For this reason, the results from the 2019 survey have been utilised to assess the potential increase in volume of pedestrians using the Sean Heuston bridge.

The 2019 survey results showed that 1,065 pedestrians use Sean Heuston Bridge between 9.00 and 10.00 in the morning and 1,181 between 18.00 and 19.00 in the evening, equating to about 18 and 20 movements per minute on average, respectively.

The likely person trips generated by the development during the identified busiest periods at the bridge (as above) was calculated using the TRICS (Trip Rate Information Computer System) trip rate database. It was estimated that the development would generate a total of 230 in the morning (9.00-10.00) and 302 person trips the evening (18.00-19.00).

These trips were assigned to the various modes, of which the relevant ones were pedestrian (22%) and public transport (40%). The latter is relevant as it is considered that half of these will use the bridge as a connection to trains, Luas and buses. The pedestrian volumes were assigned to the local pedestrian network, with 20% of them using Sean Heuston Bridge.

The total flows on the bridge were therefore robustly estimated to be in the order of 59 in the morning (9.00-10.00) and 77 in the evening (18.00-19.00), equating to 5.5% and 6.5% of the present total peak hour flows, respectively. This was not considered to be significant in the context of an urban setting and the fact that the present proposals aim to encourage sustainable travel.

As part of the proposed development, additional pedestrian volumes are expected to be generated as a result of the increased number of residential units. The aforementioned methodology has also been used in this case to forecast the additional pedestrian volume generation of the proposed development. It is predicted that the addition of 38 residential units will generate a total flow on the bridge of 3 person trips in the morning (9.00-10.00) and 5 the evening (18.00-19.00). Thus, equating to 0.3% and 0.5% of the present total peak hour flows, respectively.

The additional pedestrian trips generated by the development are deemed to be insignificant in the context of the volumes and capacity of the existing networks and the trips generated by the previously granted scheme.

6.4.2.4 Cycle Accessibility

Cycle parking is accessed via safe dedicated stairwells with wheeling ramps to facilitate access and egress. As part of the granted scheme, there will also be dedicated storage for bicycles at ground level, basement and in the gateway entrance spaces. As required by the Dublin City Development Plan and in accordance with the sustainability objectives of the project, bicycle parking spaces for the office accommodation with appropriate changing shower and drying room facilities will also be provided in the basement of building B1.

The permitted cycle parking quantum is 551 cycle parking spaces. In accordance with Dublin City Development Plan standards of 1 cycle parking space per residential unit, the addition of 38 residential units gives rise to the provision of 38 new cycle parking spaces. The additional cycle parking will be split between block A (22 spaces) and building B1 (16 spaces).

Despite the proposed reduction in office space, the permitted number of cycle parking spaces is maintained. Thus, resulting in an overall provision of cycle parking spaces above the minimum required by the Dublin City Development Plan cycle parking standards.

It must be noted that as part of the permitted development it will be necessary to permanently relocate Dublin Bikes Station No. 92 on Parkgate due to the provision of a loading bay in the current location of the station. The new location for the Dublin Bikes Station will be confirmed by DCC.

6.4.2.5 Public Transport

It is not envisaged that there will be any impact on physical public transport infrastructure as part of this development. The addition of 38 residential units, along with no additional car parking provision means that public transport usage is likely to increase as a result of this development. There are a large number of public transport options in the area including the Luas red line along with multiple high frequency bus routes, so there is ample capacity to serve the expected increase in demand.

6.4.2.6 Service, Deliveries and Emergency Access

There are no modifications proposed to the service and emergency strategies outlined for the granted scheme.

As per the granted scheme, services such as waste collection and deliveries will use the loading bay to be provided for the development on Parkgate Street (see Figure 6.). This provides necessary capacity and flexibility for service and delivery and, on a less frequent basis, the courtyards can also be accessed, as illustrated in Figure 6.10 below.

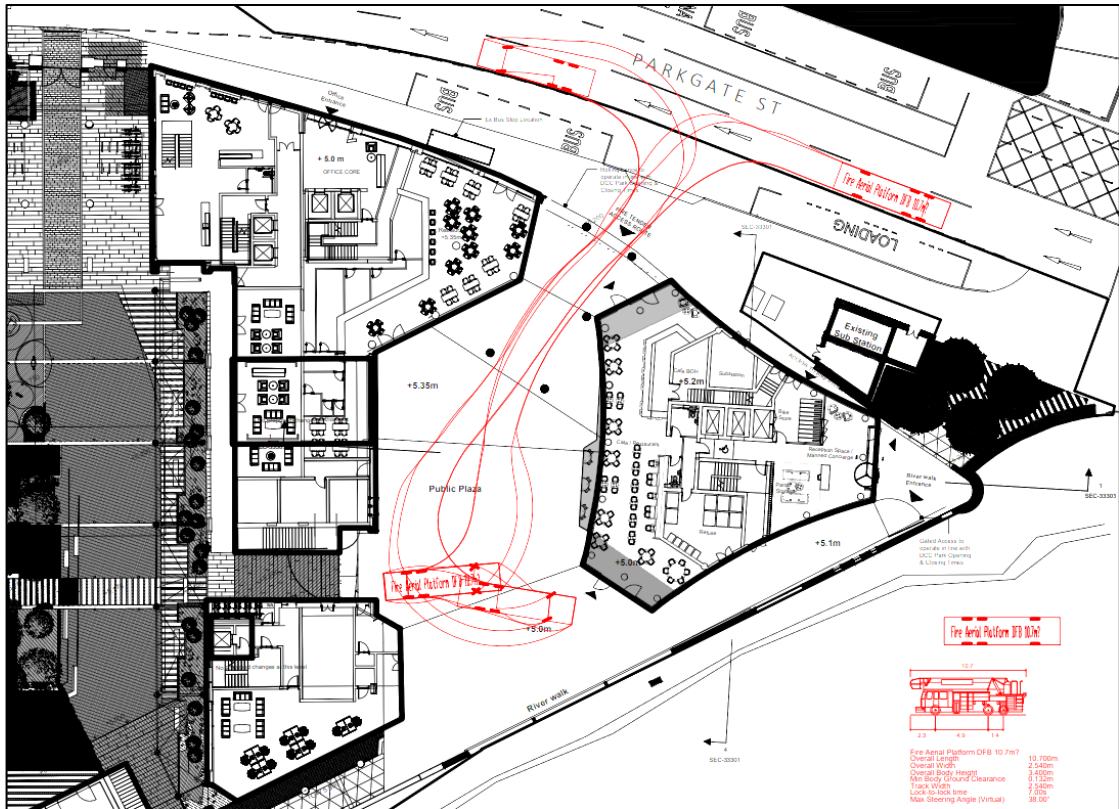


Figure 6. 10: Proposed Emergency Access Route

Emergency access will be provided through the entrances into each of the courtyards, with a route provided between the two courtyards. Figure 6.11 shows the proposed emergency access route.

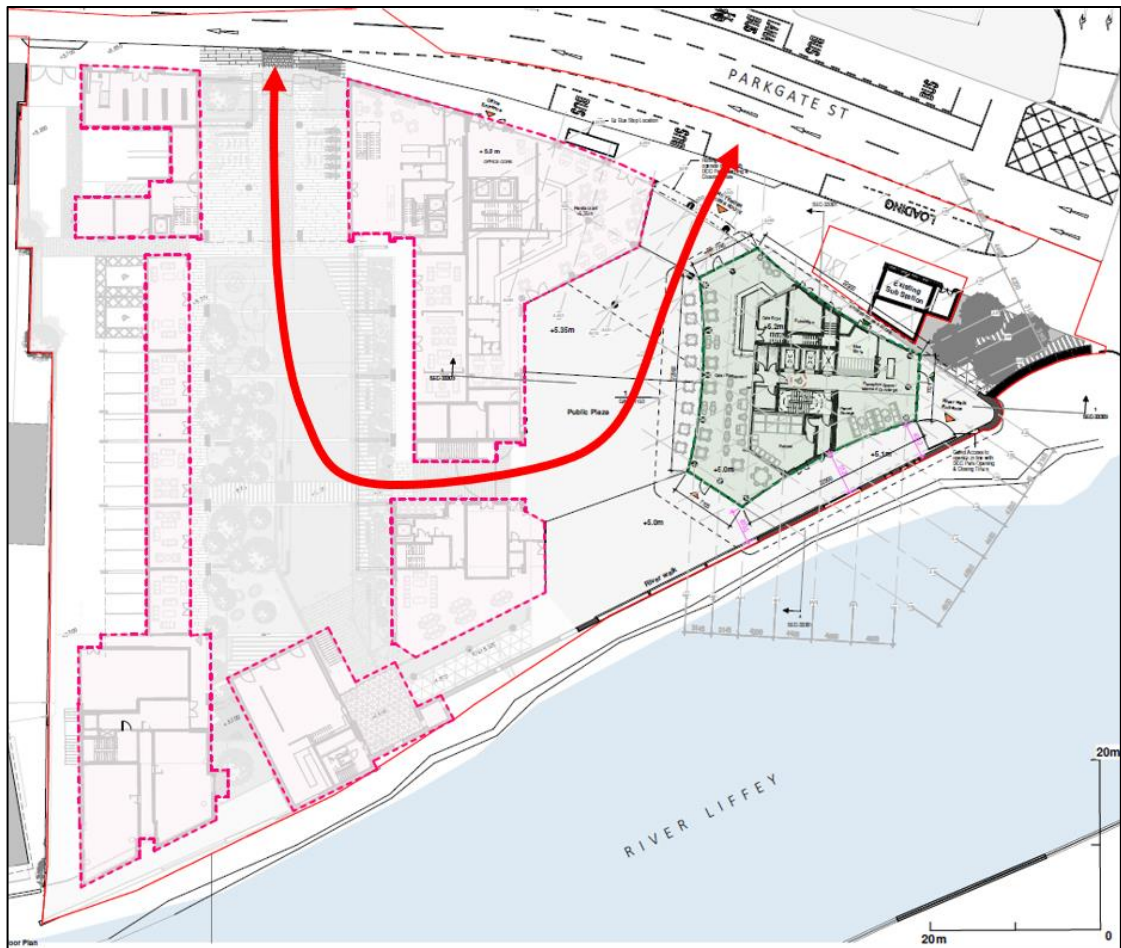


Figure 6. 11: Proposed Emergency Access Route

6.4.2.7 Operational Traffic Trip Generation

It is envisaged that the additional occupants will adopt sustainable travel patterns, consistent with the site's excellent conditions for walking, cycling and public transport.

No additional car parking spaces are proposed, and therefore, no additional car trips are envisaged to be generated by the development. In addition, in the previous application it was concluded that the trip generation resulting from the provision of parking spaces within the consented development would have a negligible impact to the overall volume of traffic in the area.

The site will also generate trips due to deliveries and waste collection, whose numbers are anticipated to be relatively small and will not have a notable effect on the adjacent roads and junctions.

6.4.2.8 Indirect Effects

As there are no significant direct effects expected during the operational phase of the development, there are therefore no significant indirect effects identified.

6.4.2.9 Cumulative Effects

Having reviewed the existing granted planning applications in the vicinity of the site as detailed in Appendix 21.1, no relevant proposed developments have been identified that could be considered to

result in significant cumulative effects in the context of the proposed development during the operational stage.

It is worth noting that the permitted development would have normally been considered as cumulative development, but due to its interrelations with the present proposals, it has been considered in the present impact assessment.

6.5 Mitigation Measures (Ameliorative, Remedial or Reductive Measures)

This section outlines the various mitigation measures that will minimise or eliminate the potential effects of the scheme in terms of traffic and transportation.

6.5.1 Mitigation During Construction

The following mitigation measures are proposed for the construction phase of the scheme:

Construction Environmental Management Plan and Construction Traffic Management Plan

A Construction Environmental Management Plan (CEMP) has been prepared (see Appendix 4.1.). A Construction Traffic Management Plan (CTMP) has been included as a section within the CEMP. The contractor will develop a detailed CTMP in order to implement the requirements of the CEMP prepared as part of this application. This will be developed by the appointed contractor in advance of the works and will be agreed with Dublin City Council and An Garda Síochána.

6.5.2 Mitigation During Operation

The development will have a pro-active Mobility Management Plan (MMP) that will include measures to further encourage sustainable transport trips. A Framework MMP has been included in the Transport Statement, which is submitted as part of the planning application documentation.

6.5.3 Monitoring

Since there are no significant effects anticipated, no monitoring has been proposed with respect to effects from construction or operational traffic associated with the proposed development.

6.6 Residual Effects of the Proposed Development

Since no significant traffic effect is predicted to arise from either the construction or operational stages, there are no residual effects anticipated. Cumulative effects have also been considered.

6.7 Difficulties Encountered

No difficulties were encountered in the compilation of this chapter.