



Figure 13.4: Entrance to Moore Lane Car Park.

13.3.1.4 Pedestrian Facilities – Existing

Pedestrian facilities in the area of the subject site comprise a series of footpaths on both sides of the surrounding streets being Parnell Street, O'Connell Street, Henry Street and Moore Street.

In addition, signal operated pedestrian crossings with drop kerbs and tactile paving are provided on Parnell Street and O'Connell Street Upper.

The footpaths on O'Connell Street Upper are wide and operate satisfactorily.

The footpaths on Parnell Square West and Parnell Square East are narrow and can become congested due to the high number of bus passengers waiting to board.

The footpath on the south side of Parnell Street is narrow with regular congestion due to its narrow width and significant volume of pedestrians.

Footpaths are provided on both sides of Moore Street partly occupied by street traders.

Extensive on-street deliveries take place one-way westbound on Henry Street prior to 11h00 after which the street is pedestrian only.

There are no pedestrian facilities on O'Rahilly Parade, Moore Lane, and Henry Place where on-street deliveries can take place all day.

13.3.1.5 Cycle Facilities – Existing

A north – south cycle lane is provided along both sides of O'Connell Street Upper passing the eastern frontage of the subject site. An advisory cycle lane is provided on Parnell Street westbound.

Cycle parking is provided on Moore Street, Parnell Street, Parnell Square and at the Ambassador Cinema.

There are no cycle facilities on Henry Street, O'Rahilly Parade, Moore Lane, or Henry Place.

However, the Proposed Development is within a short walking distance of a number of Dublin Bike stations including which are listed in Table 13.1.

| Station Location | Station Size | Walking Time to Development |
|----------------------|--------------|-----------------------------|
| Cathal Brugha Street | 20 | 3 min |
| Parnell Street | 20 | 3min |
| Princes Street | 23 | 3 min |
| Parnell Square North | 20 | 5 min |
| Jervis Street | 21 | 6 min |

Table 13.1: Proximity of DCC Bicycle Stations to Development.

13.3.1.6 Motorcycle Facilities – Existing

No parking for motorcycles is provided in the area of the subject site.

13.3.1.7 Tram Services – Existing

The Luas Green line operates between Brides Glen and Broombridge. The Luas Red Line operates between Saggart / Tallaght and the 3Arena / Connolly. The two lines intersect at the junction of O’Connell Street and Abbey Street adjacent to the south-east corner of the site for Dublin Central.

The Luas system has sixty-seven stations on 42 km of revenue earning track. Between them, the two Luas lines carry some 42 million passengers per year.

In the area of the subject site, there is a one-way northbound track along O’Connell Street Upper, Parnell Street and Dominick Street. Along Parnell Street between O’Connell Street Upper and Dominick Street, the northbound Luas track shares the carriageway with a westbound traffic lane.

The corresponding southbound Luas track is routed along Dominick Street, Parnell Street and Marlborough Street.

The permanent way also includes a turnback facility at the Parnell Monument for northbound traffic.

The walking distance to the nearby LUAS stops from Dublin Central are set out below: -

- O’Connell Street Upper 2 minutes’ walk (Northbound Green Line)
- Dominick Street 3 minutes’ walk (Green Line)
- Middle Abbey Street 5 minutes’ walk (Red Line)
- Parnell Street 4 minutes’ walk (Southbound Green Line)

Luas services operate at 2 – 15-minute intervals in both directions on both lines.

13.3.1.8 Rail Services – Existing

One of the two major stations for local and intercity rail traffic is located at Connolly Station on Amiens Street. LUAS services link Abbey Street with Connolly Station and Store Street at 10-minute intervals in both directions. Connolly Station is a 10 – 12-minute walk from the subject site.

13.3.1.9 Bus Services – Existing

The Proposed Development is located adjacent to the epicentre of bus transport in Dublin. Bus transport within 200 metres (2 - 5 minutes’ walk) of the development includes: -

- Dublin Bus city services on O’Connell Street Upper (31 No routes).
- Private interurban and airport services on O’Connell Street Upper.

There is an extensive provision of bus stops on O'Connell Street Upper and Parnell Square serving these routes. The locations of the stops on O'Connell Street Upper along the eastern frontage of the subject site are shown in Figure 13.5.

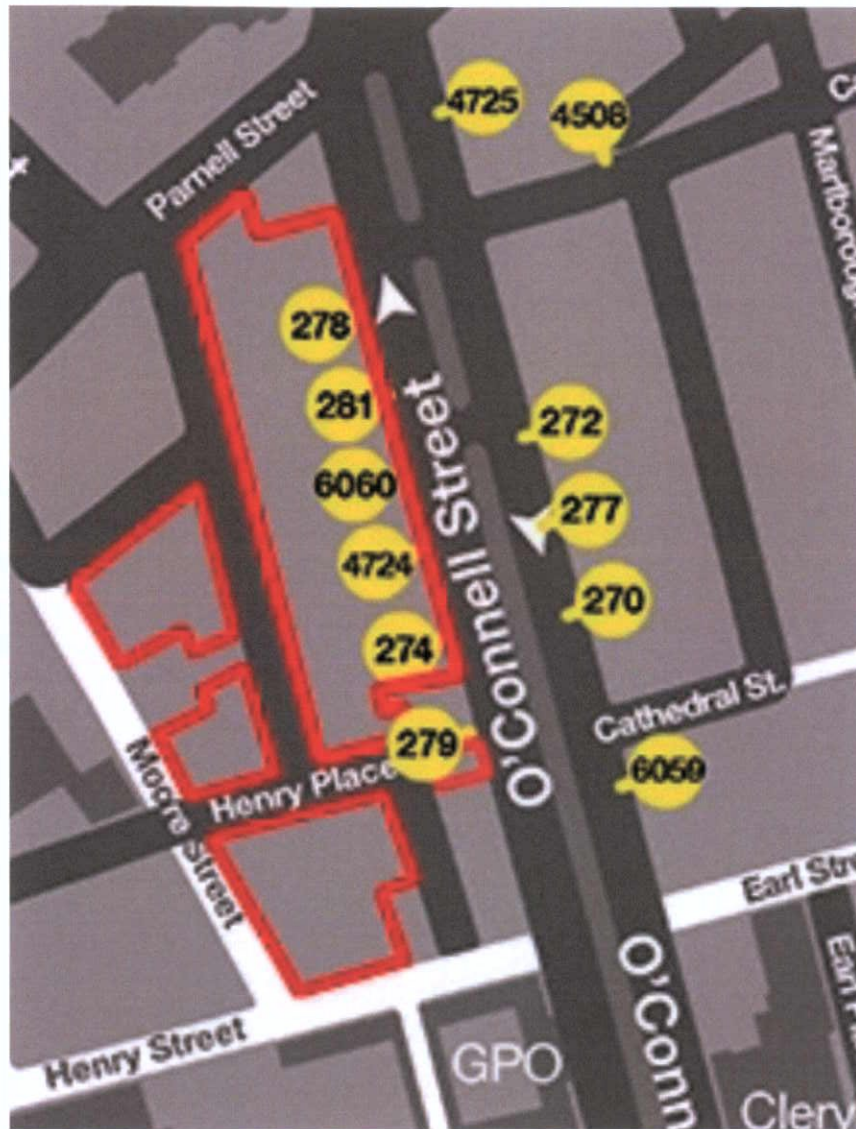


Figure 13.5: Bus Stops on O'Connell Street Upper.

13.3.1.10 Interurban Bus Services – Existing

Bus Eireann

The major station in Dublin for interurban services to all parts of Ireland including Northern Ireland is located in Busaras adjacent to the LUAS stop at Store Street. LUAS services link Abbey Street with Store Street at 10-minute intervals in both directions. Busaras is an 8 - 10-minute walk from the Proposed Development.

Aircoach

Aircoach operate a 24-hour service at 10 – 20-minute intervals to Dublin Airport through O'Connell Street Upper from Sandyford, Greystones Cork, and Belfast. O'Connell Street Upper is a 2 - 3-minute walk from the Proposed Development.

City Link

City Link provides an hourly service in each direction from Dublin Airport to Galway via Bachelors Quay (eastbound) and Aston Quay (westbound). City Link also provides seven return services per day from Dublin Airport to Limerick also via Bachelors Quay (northbound) and Aston Quay (southbound). Both quays are a 6 - 7-minute walk from the subject site.

Wexford Bus

Wexford Bus provides 13 return services between Wexford and Dublin Airport via Custom House Quay (northbound) and Georges Quay (southbound). Both quays are a 9 - 10-minute walk from the subject site.

13.3.1.11 Loading Bays – Existing

No dedicated loading bays were noted in the area of the subject site other than the shared taxi and loading bay located on the south side of Parnell Street between Moore Lane and Moore Street. The operational hours for the loading bay are 06h00 – 11h00 Monday – Sunday.

Extensive on-street deliveries take place on Henry Street prior to 11h00.

On-street deliveries take place all day on Moore Lane, O’Rahilly Parade and Henry Place.

13.3.1.12 Taxi Facilities – Existing

A taxi rank is located in front of the Gate Theatre on Parnell Square East.

A shared taxi and loading bay are located on the south side of Parnell Street between Moore Lane and Moore Street. The operational hours for taxis are 11h00 – 06h00 Monday – Sunday.

No other taxi facilities were noted in the area of the subject site following removal of the taxi rank from O’Connell Street Upper opposite the Carlton Cinema as part of the works for the Luas Green Line extension to Broombridge in 2017.

13.3.1.13 Road Traffic – Existing

Historic Traffic Surveys

Background

Due to the restrictions imposed by Covid-19, it was not possible to carry out a traffic survey for this EIAR. However, between 2008 and 2020, a number of traffic surveys were carried out in the area of the subject site including: -

- Traffic Impact Assessment (TIA), Dublin Central, ILTP Consulting, October 2008.
- Environmental Impact Study (EIS), Luas St Stephen’s Green to Broombridge, RPA, 2011.

Dublin Central 2008

A series of Classified Traffic Counts were carried out on Wednesday, 31 May 2006, Thursday, 15 June 2006, and Thursday, 26 October 2006.

The surveys were carried out at three junctions at the following locations on Parnell Street during the AM and PM Peak Hours: -

- **Location 1:** Junction Parnell Street, Parnell Square East, and O'Connell Street Upper.
- **Location 8:** Junction Parnell Street and Moore Street.
- **Location 9:** Junction Parnell Street, Parnell Square West, and Moore Lane.

The primary movement recorded was 1,100 – 1, 200 vehicles per hour westbound on Parnell Street between O'Connell Street Upper and Parnell Square West.

Luas 2011

Traffic surveys were undertaken in October 2008 at a total of 41no. junctions including: -

- **Junction 22:** O'Connell Street Upper / Cathal Brugha Street.
- **Junction 26:** O'Connell Street Upper / Parnell Street.
- **Junction 27:** Parnell Street / Parnell Square West.
- **Junction 30:** Parnell Street / Dominick Street.

The results of the survey were incorporated into the *LUAS BXD Local Area Model (LAM)* but not reproduced in the EIS.

Canal Cordon Survey

Each November, traffic counts have been carried out by DCC, DTO and NTA at 33 locations on a canal-based cordon around Dublin. The counts cover the AM peak period 07h00 – 10h00.

An annual report is published by DCC in May of each year. The results of the canal cordon survey since 2006 would indicate an ongoing reduction in the number of private cars and goods balanced by increases in public transport, cycling and walking.

TII Traffic Survey 2018

Background

As part of the preparation of a planning application for Metrolink, traffic surveys were carried out by TII on Thursday 17th May 2018 at the locations shown in Figure 13.6.

Junction 9 at the intersection of O'Connell Street Upper and Parnell Street is located to the northeast of the subject site.

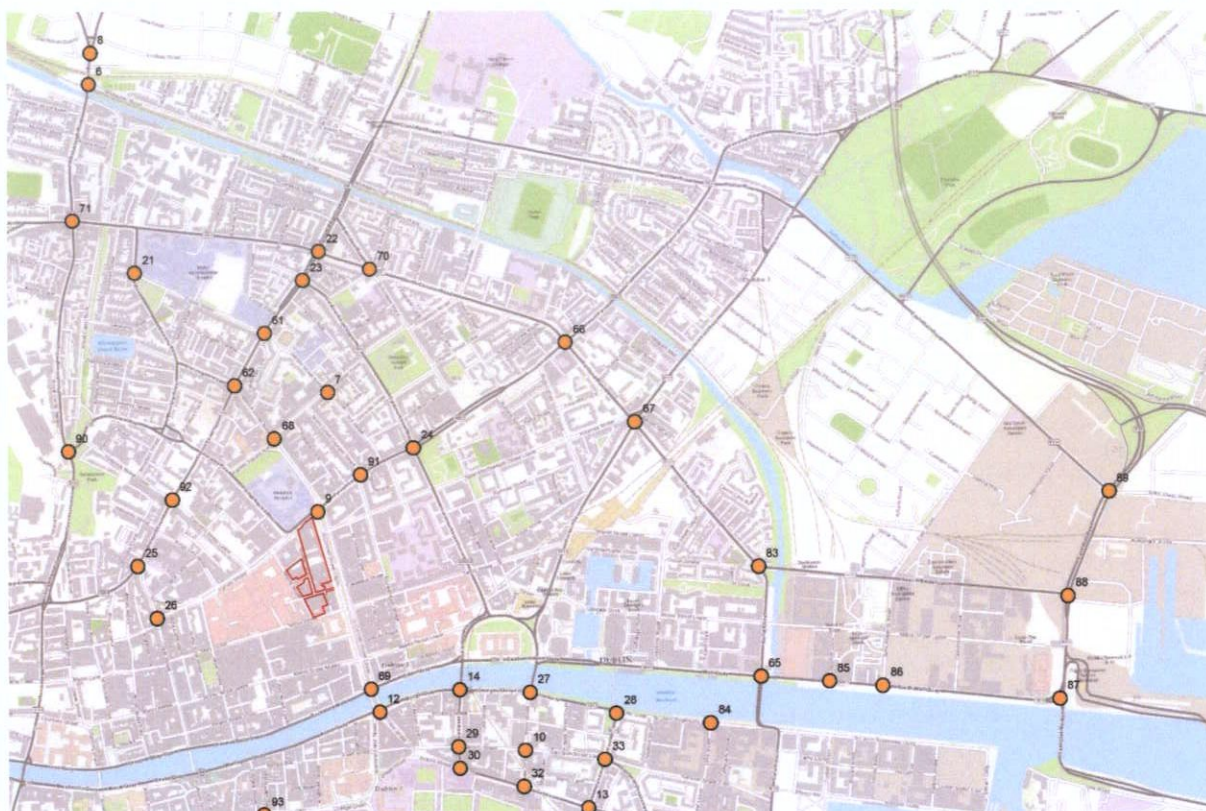


Figure 13.6: TII Traffic Survey Locations May 2018.

Results of Survey

A summary of the survey results from the count at nine of the junctions for a period of 24 hours from 00h00 to is presented in Table 13.2.

These junctions are located on the emerging preferred haul routes for construction traffic described in Section 13.5.1.1.5 of this EIAR.

| Junction | Location | Approach Flow 00h00 – 23h59 (pcu) |
|----------|---|-----------------------------------|
| 9 | O'Connell Street Upper Parnell Street Cavendish Row | 26,826 |
| 22 | Dorset Street N Circular Road | 56,640 |
| 24 | Summerhill Gardiner Street Parnell Street | 29,030 |
| 25 | Bolton Street Capel Street | 28,649 |
| 62 | Dorset Frederick Street Blessington St | 36,197 |
| 66 | Summerhill Portland Row N Circular Road | 35,200 |
| 83 | Seville Place Guild Street | 18,987 |
| 88 | East Wall Road Sherriff Street | 39,780 |
| 92 | Dorset Street Dominick Street | 26,862 |

Table 13.2: Summary of Traffic Survey May 2018 (pcu).

Dublin City Council Traffic Survey 2020

A classified traffic survey was carried out by Dublin City Council on Tuesday, 4 February 2020. The results of the survey for Parnell Street in the AM Peak Hour are presented in Figure 13.7.



Figure 13.7: Traffic Survey AM Peak Hour February 2020.

13.3.1.14 Cycle Traffic – Existing

The City Centre Cycle and Pedestrian Counts are carried out by Dublin City Council each May at a number of locations along The Quays between Heuston Station and the East Link Bridge.

For the purpose of this EIAR, only the survey results for Location 25 at Parnell Street / Dominick Street were interrogated.

The total number of cyclists and pedestrians recorded travelling in any direction at Location 25 during the 12-hour period between 07h00 and 19h00 are set out in Table 13.3.

| Year | 2015 | 2016 | 2017 |
|-------------|--------|--------|--------|
| Cycles | 1,685 | 1,659 | 1,686 |
| Pedestrians | 16,878 | 15,615 | 15,593 |

Table 13.3: Cycle and Pedestrian Survey Parnell Street 2015 - 2017 (12 hour).

13.3.1.15 Pedestrian Traffic – Existing

Due to Covid-19 restrictions, it was not possible to carry out a pedestrian movement survey for this EIAR.

However, between 2008 and 2020, a number of pedestrian movement surveys were carried out in the area of the subject site including: -

- Pedestrian Benefits Report, Atkins, October 2008.
- City Centre Cycle and Pedestrian Counts, Dublin City Council, 201 – 2020.
- Urban Baseline study, Space Syntax, 2018.
- Dublin City Centre Footfall, Dublin City Council, 2019.

Based on the results of these surveys, baseline traffic flows for a weekday in 2020 are presented in Figure 13.8 for the off-peak hours between 10h00 and 16h00.

These movements exclude the reductive impact of the Covid-19 restrictions.

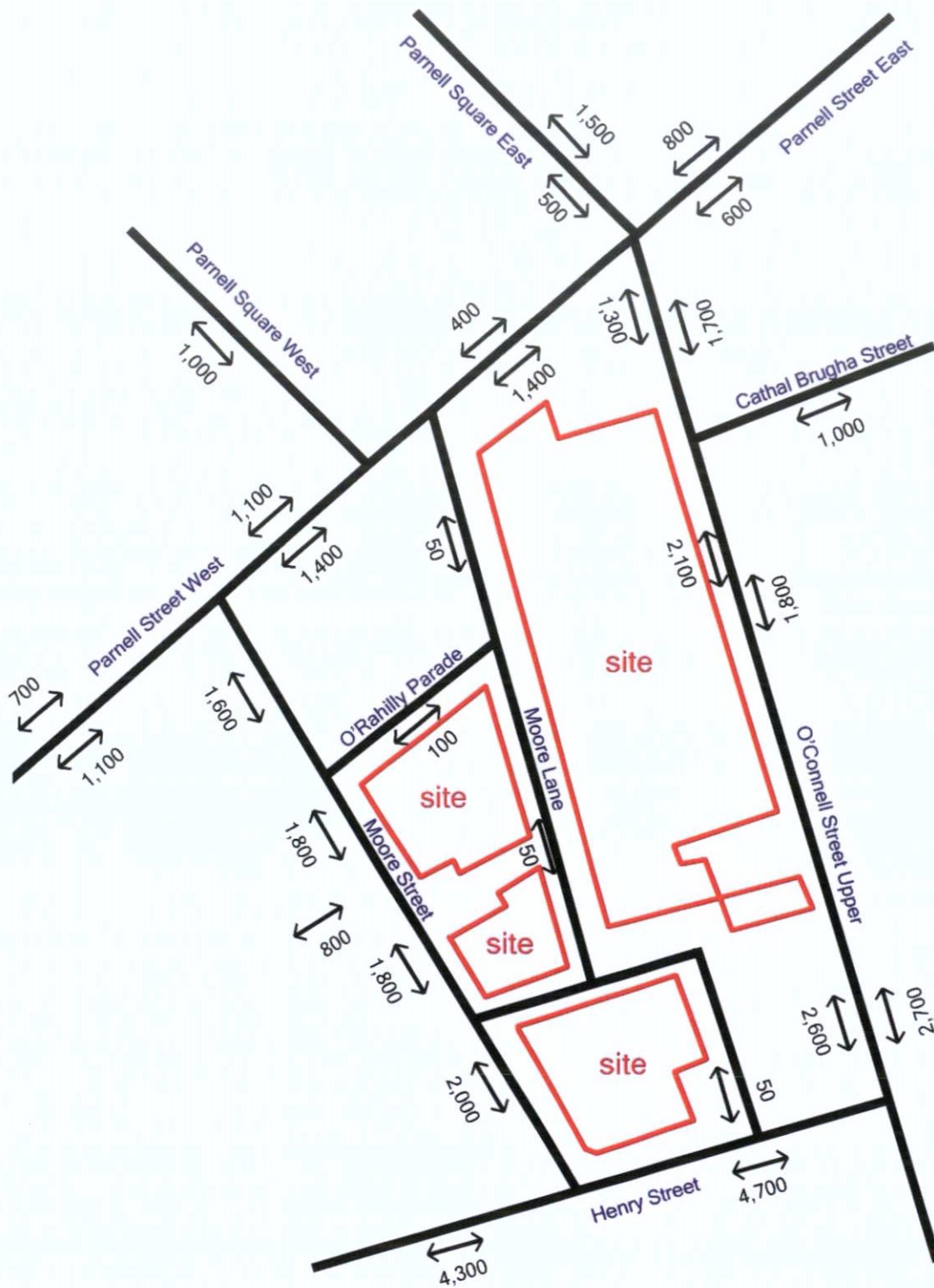


Figure 13.8: Base Pedestrian Movements (pph) 10h00 – 16h00 (Numbers rounded for clarity)

13.3.1.16 Deliveries to Adjoining Premises – Existing

Due to the restrictions imposed by Covid-19, it was not possible to undertake a survey of deliveries to adjacent premises for this EIAR.

13.3.1.17 Traffic Conditions – Existing

Operating conditions on the street network around the site are generally reasonable. However, short term congestion occurs regularly on Parnell Street between O'Connell Street Upper and Parnell Square West.

Dublin City Council's approach to traffic management in the city seeks to restrict through traffic and calm traffic generally within the City Centre giving increased levels of priority for pedestrians, achieve modal share targets crossing the canal of 55% for public transport, 15% for cycling, 10% for walking and 20% for private car use by 2017.

Although none of the roads within the city centre are designated as national primary roads, the major roads carry significant volumes of traffic and provide important links to the local, regional, and national road network. The existing road network is running at or close to capacity during peak hours.

13.3.1.18 Public Transport Improvements – Bus

Bus Connects is an ongoing project by the National Transport Authority (NTA) to deliver a more efficient, reliable, and better bus system for the Greater Dublin Area (GDA). This will be achieved by redesigning the bus network to provide a more efficient network with high frequency spines, new orbital routes, and increased services.

The project was programmed for delivery during the period 2021 – 2023. However, the impact of the Coronavirus Covid-19 is likely to affect this timescale.

O'Connell Street Upper, Parnell Square East, Parnell Street and Parnell Square West are four of the essential primary links in the proposed network. See Figure 13.10.

No information on the proposed works to O'Connell Street Upper or Parnell Street to accommodate Bus Connects or the timing for their implementation has become available up to the time of writing in March 2021. Current proposals available to the public just stop short of O'Connell Street Upper at the junction with Parnell Street. See Figure 13.9 below.

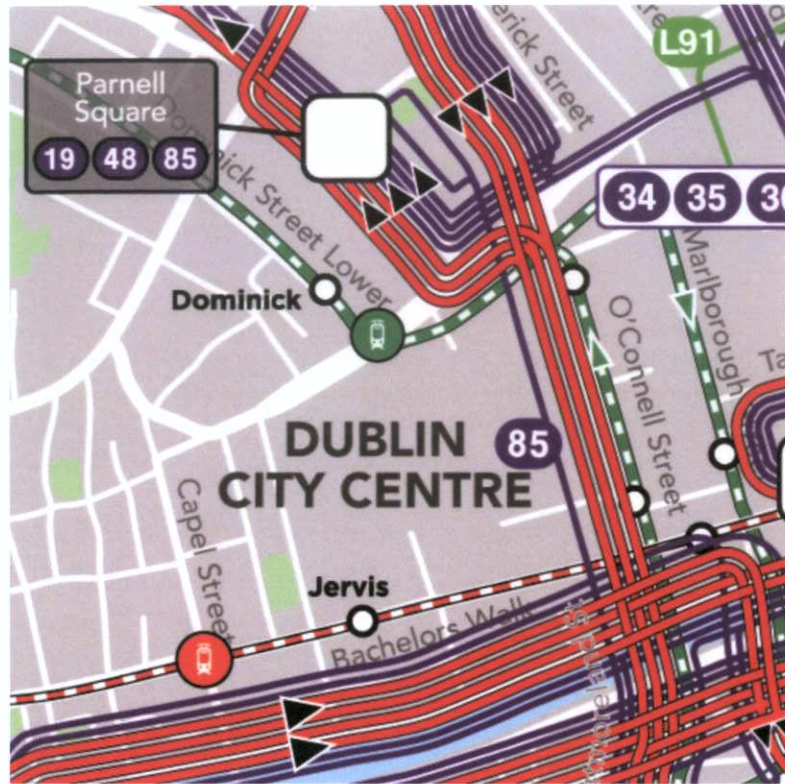


Figure 13.9: Bus Connects – Revised Bus Network 2020 (Site boundary omitted for clarity).

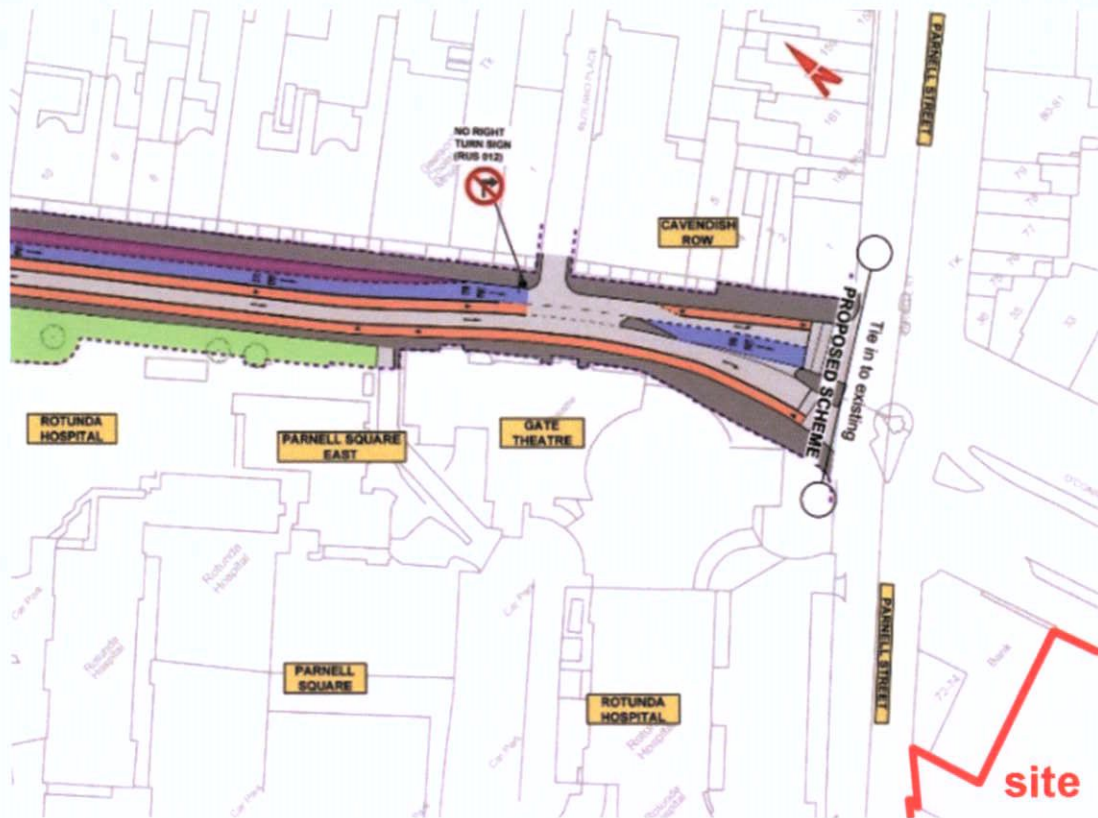


Figure 13.10: Bus Connects Proposals at Parnell Square.

13.3.1.19 Public Transport Improvements – Rail

The MetroLink Project, currently being promoted under the auspices of the National Transport Authority (NTA) and Transport Infrastructure Ireland (TII), provides for a high-capacity, high-frequency rail service between Swords and the LUAS Green Line at Charlemont.

The line will be some 19 km long and carry up to 50 million passengers per year.

Within the City Centre, it is proposed that the line be located underground with one of the stations at O'Connell Street Upper. The Preferred Route announced in 2018 provided for this station to be located directly under O'Connell Street Upper.

The National Transport Agency (NTA) and Transport Infrastructure Ireland (TII) approached the Applicant in 2018 with a view to locating a future MetroLink Station serving O'Connell Street Upper within the Dublin Central site, in an effort to avoid locating the Station within the central median of O'Connell Street Upper. TII is in the process of finalizing the design of the MetroLink project. TII is expected to make an Application for a Railway Order for the MetroLink project, including the O'Connell Street Upper Station, in Q2 / Q3 2021.

The Applicant has agreed a Memorandum of Understanding with the NTA/TII to complete the enabling works that would accommodate the future station, but which would also ensure that the Applicant's project was structurally independent of, and not prejudicial to, the MetroLink project. These enabling works comprise the provision of a structural 'box' positioned below ground, within which the MetroLink project can be positioned and above which the Applicant's project can be constructed. The provision of this structural box (sometimes referred to as the "Station Box") and its ancillary works below ground are known collectively as the Metro Enabling Works (MEW) in the context of the Applicant's overall Dublin Central project.

The provision of the MetroLink O'Connell Street Upper Station and its associated tunnel works would be completed by the NTA/TII once ready to do so and subject to the required consents being in place. It is envisaged that the MEW works would be completed in advance of the NTA/TII tunnel boring machines reaching the area.

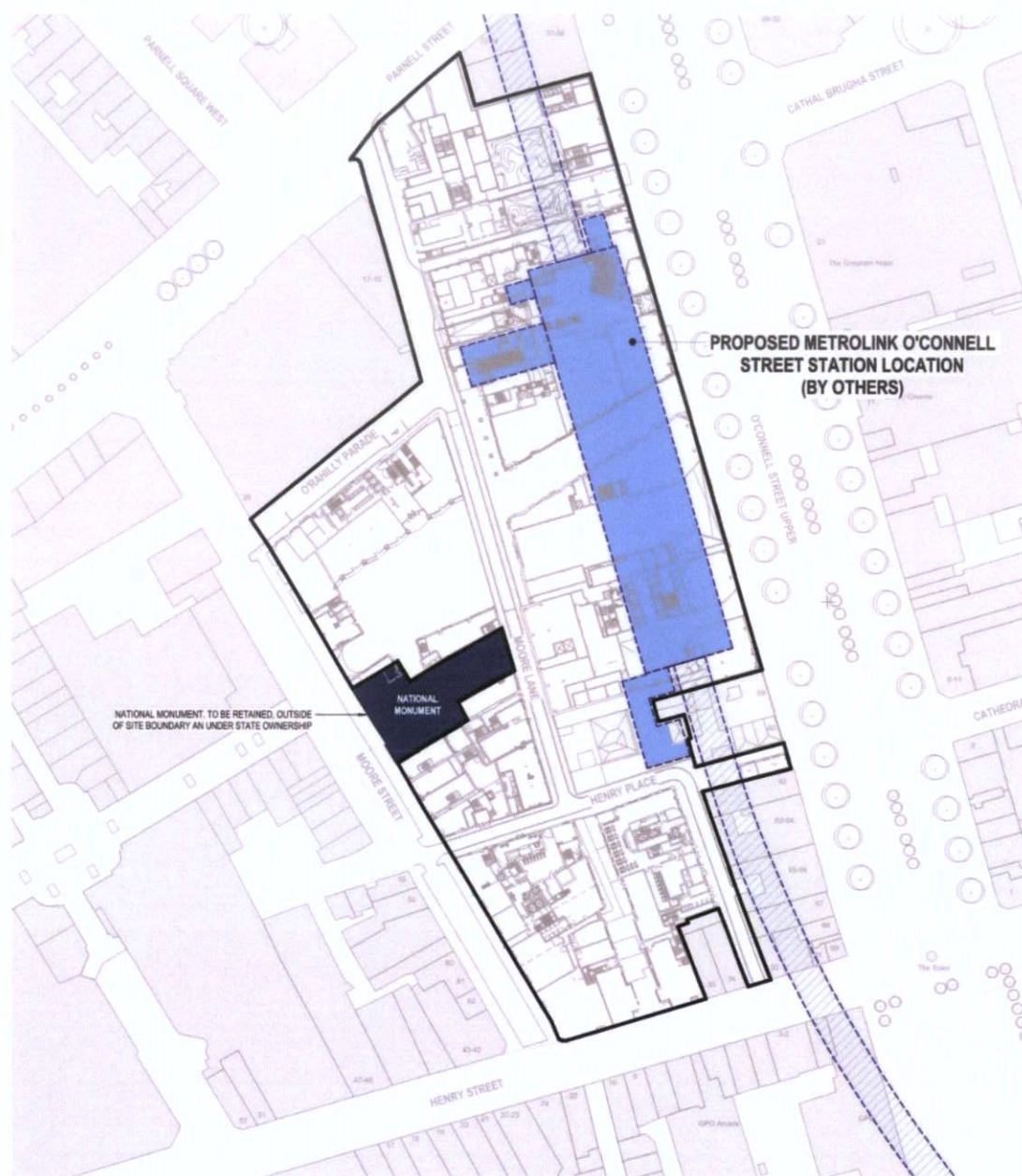


Figure 13.11: Location Plan for Metrolink Station at O'Connell Street Upper.

13.3.1.20 Parnell Square Contraflow Cycle Facility

Dublin City Council in conjunction with the National Transport Authority are introducing a new cycling link that will provide a direct route for cyclists on O'Connell Street Upper wishing to access Dorset Street. The works will involve introducing a contraflow cycle lane on Cavendish Row/Parnell Square East and improving the cycling facilities on North Frederick Street for both northbound and southbound cyclists.

The main elements of the proposed work include: -

- Re-allocating a section of the carriageway at the northern end of O'Connell Street Upper to allow for the introduction of a protected cycle lane and stacking area for northbound cyclists.
- Introduction of dedicated cycle signals to allow cyclists access the contraflow on Cavendish Row.

At the time of writing in March 2021, the Parnell Square Contraflow Cycle Facility was under construction along the O'Connell Street Upper frontage of the Dublin Central site. See Figure 13.12.

When finished, the traffic provision on O'Connell Street Upper over the 100 metres between 43 O'Connell Street Upper and the Parnell Monument, will be reduced to: -

- The existing footpath.
- A two-way cycle lane with a width of 2.5 metres.
- A traffic island with a width of 1.0 metres.
- A single one-way all-purpose northbound traffic lane with a width of 3.5 metres.
- A single one-way northbound Luas line.

This area will also include an inset coach set down area for one coach with a length of 15.0 metres and a depth of 2.5 metres. A dedicated cycle signal will be provided at the junction of O'Connell Street Upper and Parnell Street. Accordingly, the traffic signals at this junction will in the future cater for four groups of movements being general traffic including buses, LUAS, cyclists, and pedestrians.

The Parnell Square Contraflow Cycle Facility has been incorporated into the traffic modelling described in Section 13.5.1.1.10 of this EIAR.



Figure 13.12: Parnell Square Contraflow Cycle Facility.

13.3.2 Proposed Development – Site 3, 4 & 5

The Receiving Environment for the Proposed Development will be the same as that for the Dublin Central Masterplan Site and described in Section 13.3.1 of this chapter.

13.4 CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

13.4.1 Dublin Central Masterplan

The Dublin Central Masterplan will include a number of land uses in a series of blocks on an overall site of 2.2 ha off O'Connell Street Upper.

The Proposed Development which is illustrated in Figures 13.13 and 13.14 will comprise the following land uses in a series of multi-storey buildings of varying heights: -

- Retail 5,672 sq. m.
- Offices 44,217 sq. m.
- Food and Beverage 2,456 sq. m.
- Cultural 183 sq. m.
- Hotel 15,269 sq. m (210 bedrooms).
- Residential 7,905 sq. m (94 apartments).
- Metro Enabling Works 1,386 sq. m.
- Total 77,090 sq. m.
- Car Parking (33 spaces).
- Cycle parking (686 spaces).
- Access to the Metrolink underground station below the development.
- Public open space.

The development includes Metro Enabling Works for the future underground station at O'Connell Street Upper envisaged or planned at Sites 2AB and 2C as part of the Dublin Central Masterplan and to be undertaken by DCGP Ltd on behalf of TII / NTA in advance of tunnelling and station construction works.

In addition, the Proposed Development will include resurfacing works to O'Rahilly Parade, Moore Lane and Henry Place, reversal of traffic flow on Moore Lane from southbound to northbound and pedestrianisation on Moore Lane and Henry Place after 11h00.

The Proposed Development will also include the retention of a number of protected buildings and facades.

Full details in relation to the Proposed Development can be found in Chapter 3.0 of this EIAR.



Figure 13.13: Site Layout – Ground Level 00.



Figure 13.14: Site Layout – Basement Level.

13.4.1.1 Summary of Land Use and Gross Floor Areas

The land uses and gross floor areas proposed for the various sites are set out in Table 13.4.

| | Site 1 | Site 2AB | Site 2C | Site 3 | Site 4 | Site 5 | Total |
|---|---------------|---------------|---------------|---------------|--------------|--------------|---------------|
| Use | sq. m | sq. m | sq. m | sq. m | sq. m | sq. m | sq. m |
| Office | 3,610 | 17,484 | 17,029 | - | 295 | 5,799 | 44,217 |
| Hotel | 8,094 | - | - | 7,175 | - | - | 15,270 |
| Residential | - | - | - | 6,452 | 1,454 | - | 7,906 |
| Retail | - | 1,876 | 1,255 | 1,954 | 617 | - | 5,672 |
| Café / Restaurant | - | 625 | 150 | 138 | 864 | 679 | 2,456 |
| Cultural / Gallery / Cafe | - | - | - | 123 | - | - | 123 |
| Extension to National Monument for ancillary use to National Monument – a cultural facility | - | - | - | - | 60 | - | 60 |
| Metro Enabling Works | - | 555 | 831 | - | - | - | 1,386 |
| Total | 11,704 | 20,541 | 19,235 | 15,842 | 3,290 | 6,478 | 77,090 |

Table 13.4: Summary of Land Use and Gross Floor Areas (sq. m).

13.4.1.2 Access

Pedestrian access to the Proposed Development will be from the surrounding streets and lanes. Pedestrian access to the future Metrolink Station will be from the public open space between O'Connell Street Upper and Moore Lane.

Vehicular access to the car parking at basement level will be from Moore Lane via a traffic-controlled ramp at the location shown in Figure 13.15.

Cycle access to the cycle parking will also be from the surrounding streets and lanes at the locations shown in Figure 13.15.

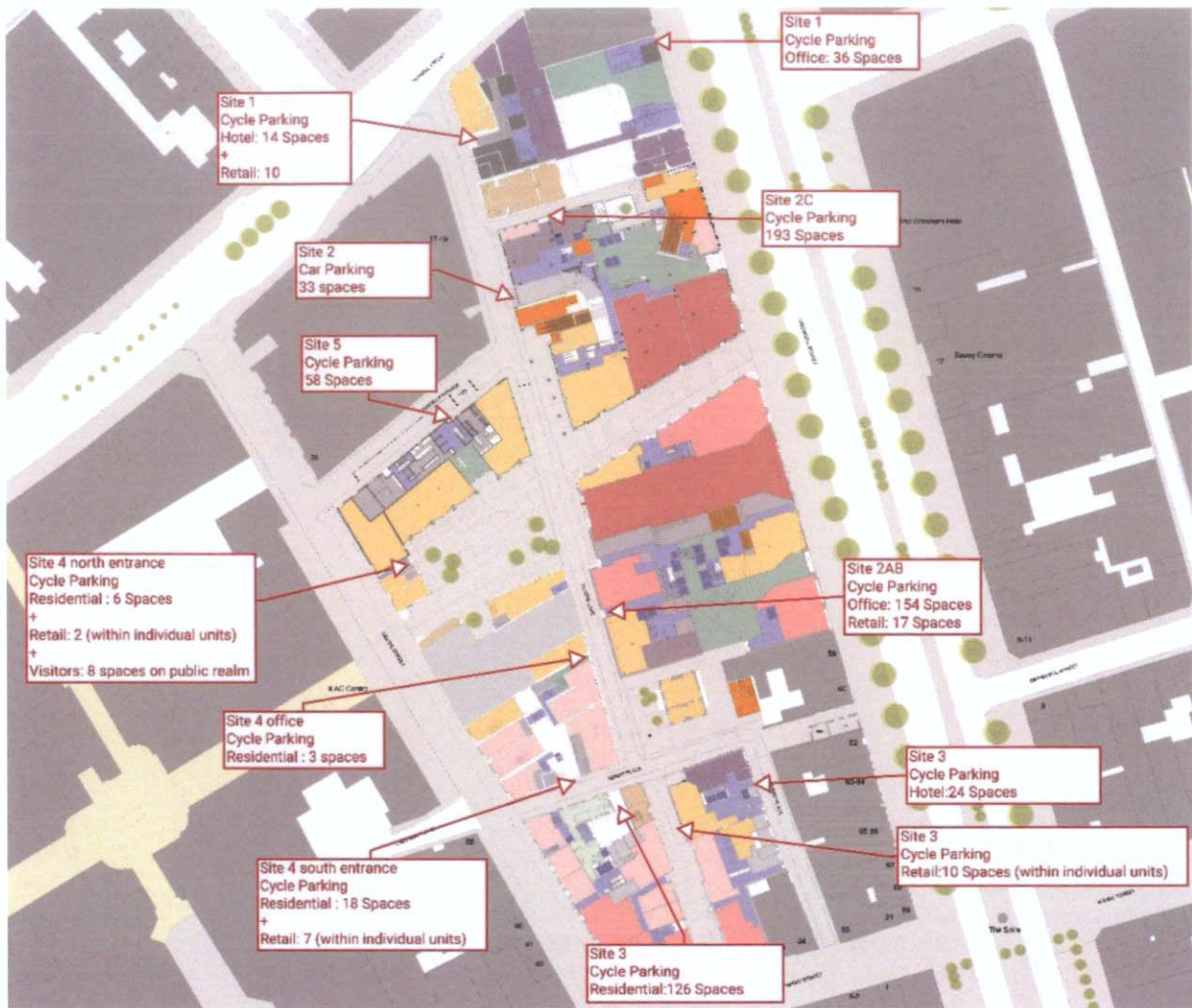


Figure 13.15: Access to Car and Cycle Parking.

13.4.1.3 Public Streets

Subject to the approval of Dublin City Council, it is proposed to reorder the existing streets in the area of the subject site as illustrated in Figure 13.16 and described below.

- **O'Rahilly Parade** (Moore Street – Moore Lane)
One-way eastbound at all times with a loading bay on the south side (48m).
- **Moore Lane** (Parnell Street – O'Rahilly Parade).
One-way northbound at all times with a loading bay on the east side (24m)
- **Moore Lane** (O'Rahilly Parade – Henry Place).
Two-way as existing 06h00 – 11h00 with pedestrian zone after 11h00.
- **Henry Place**
Two-way as existing 06h00 – 11h00 with pedestrian zone after 11h00.

There are no proposals for the provision of traffic signals or cycle lanes on Moore Lane, O'Rahilly Parade or Henry Place.

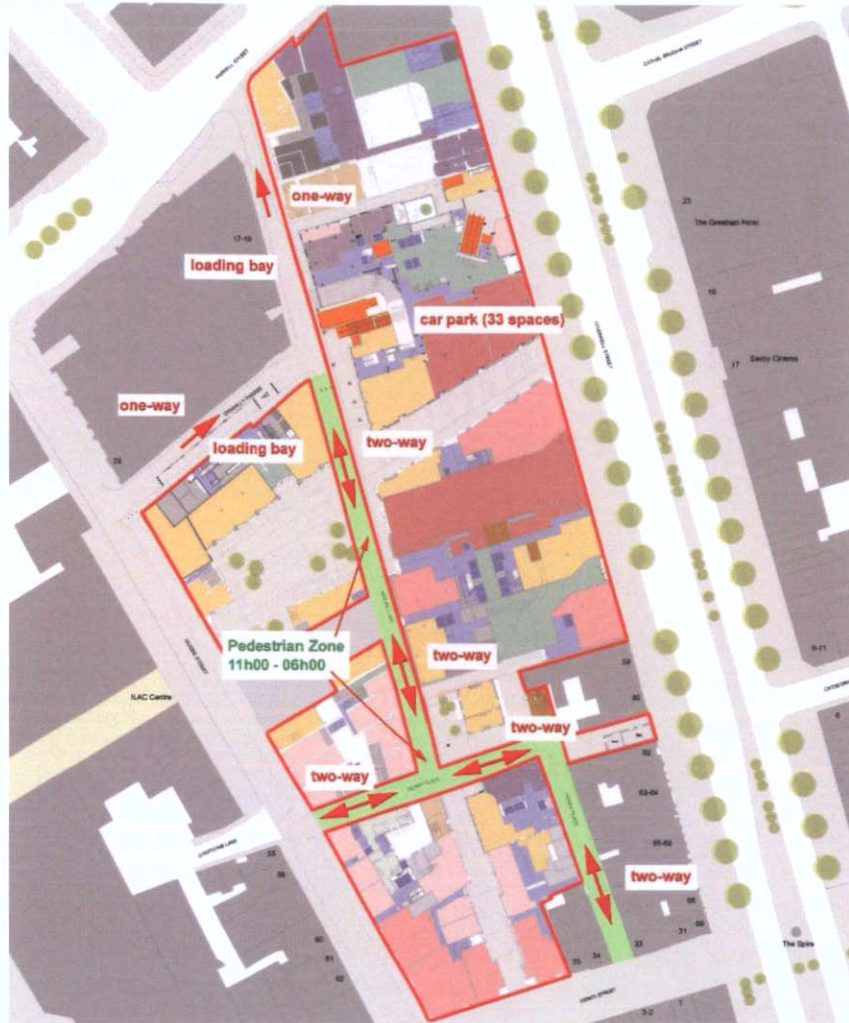


Figure 13.16: Street Layout – Proposed.

13.4.1.4 Servicing and Deliveries

Servicing and deliveries will be managed during the Operational Stage under the Servicing Strategy for Dublin Central.

Servicing and deliveries will take place on Moore Lane south of O'Rahilly Parade and on Henry Place between the hours of 06h00 and 11h00 Monday – Sunday. After 11h00, both Moore Lane and Henry Place will become pedestrian priority areas similar to Henry Street.

Servicing and deliveries will take place on O'Rahilly Parade and Moore lane north of O'Rahilly Parade on a 24-hour basis Monday – Sunday.

Deliveries will be undertaken in rigid trucks and vans. Loading bays will be provided on Moore Lane (24m) and O'Rahilly Parade (48m) as shown on Figure 13.16. Other deliveries will be on-street.

Waste collection will also take place using the same facilities and access.

13.4.1.5 Car Parking

13.4.1.5.1 Dublin City Development Plan 2016 – 2022

Standards for car parking in new developments are set out in Table 16.1 of the Dublin City Development Plan 2016 – 2022 and the Parking Areas are delineated on Map J.

As shown on Map J, Dublin Central is located within Parking Area 1.

The maximum car parking standards for Dublin Central based on a location in Zone 1 are reproduced in Table 13.5.

| Land Use | Standard |
|--------------------------|---------------------------|
| Retail | 1 space per 350 sq. m GFA |
| Offices | 1 space per 400 sq. m GFA |
| Restaurant / Cafe | None |
| Cultural | 1 space per 400 sq. m |
| Hotel | 1 space per 4 bedrooms |
| Residential – Apartments | 1 space per dwelling |

Table 13.5: Maximum Car Parking Standards, Dublin City Development Plan 2016 – 2022.

13.4.1.5.2 Car Parking – Development Plan

Based on the car parking standards set out in the Dublin City Development Plan, the maximum quantum of car parking for Dublin Central would be 275 spaces as calculated in Table 13.6.

| Land Use | Size | Standard | Spaces |
|-------------------|---------------|-----------------------|------------|
| Retail | 5,672 sqm | 1 per 350 sq. m GFA | 16 |
| Offices | 44,217 sqm | 1 per 400 sq. m GFA | 111 |
| Restaurant / Cafe | 2,456 sqm | None | - |
| Cultural | 183 sqm | 1 per 400 sq. m GFA | 1 |
| Hotel | 210 rooms | 1 per 4 rooms | 53 |
| Residential | 94 apartments | 1 space per apartment | 94 |
| Metro Enabling | 1,386 sqm | - | - |
| | | Total | 275 |

Table 13.6: Maximum Car Parking for Dublin Central.

13.4.1.5.3 Car Parking for Apartments

Guidelines for the provision of car parking in new apartments are set out in *Sustainable Urban Housing: Design Standards for New Apartments* issued by the Department of Housing, Heritage and Local Government in December 2020. Section 4.18 – 4.27 of the Standards addresses the issue of car parking.

Qualifications in the standards for reduced parking for new apartments include: -

- Location within 10 minutes walking distance of DART and/or commuter rail.
- Location within 5 minutes walking distance of bus service with minimum 10-minute peak hour frequency.

The subject site is well within these walk time criteria. In addition, it is located within the City Centre and will enjoy easy access to high frequency public transport.

Having regard to these standards, the availability of public transport together, the location of the development and the modest number of apartments, no car parking is included within Dublin Central for the residential units.

13.4.1.5.4 Proposed Car Parking

Having regard to its City Centre location and the high availability of public transport in the surrounding area, the proposed provision of car parking has been reduced to 33 spaces to be located in Site 2.

13.4.1.6 Cycle Parking

13.4.1.6.1 Dublin City Development Plan 2016 – 2022

Standards for cycle parking in new developments are set out in Table 16.2 of the Dublin City Development Plan 2016 – 2022. As shown on Map J, Dublin Central is located within Parking Area 1.

The cycle parking standards for the Proposed Development at Dublin Central are reproduced in Table 13.7.

| Land Uses | DCC Standards |
|----------------------|---|
| Retail | 1 space per 150 sq. m |
| Offices | 1 space per 100 sq. m |
| Restaurant / Cafe | 1 space per 150 sq. m |
| Cultural | 1 space per 100 sq. m |
| Hotel | None |
| Residential | 1 space per unit |
| Residential Visitors | To be decided on a case by case basis |
| Train Stations | 7 spaces per number of trains in 2-hour period AM (min. of 100) |

Table 13.7: Cycle Parking Standards Dublin City Development Plan 2016 – 2022.

13.4.1.6.2 Cycle Parking Required

Based on the cycle parking standards set out in the Dublin City Development Plan, the quantum of cycle parking required for the Proposed Development is 611 spaces as calculated in Table 13.8 below.

| Land Uses | No. Units/GFA | DCC Standards | Parking Required |
|----------------------|---------------|----------------------|------------------|
| Retail | 5,978 sq. m | 1 no. per 150 sq. m | 38 |
| Offices | 44,217 sq. m | 1 no. per 100 sq. m | 442 |
| Restaurant/Café | 2,718 sq. m | 1 no. per 150 sq. m | 16 |
| Hotel | 210 no. rooms | None | - |
| Residential | 94 no. units | 1no. per unit | 94 |
| Residential Visitors | 94 no. units | 1 no. per 5no. units | 19 |
| Train Stations | 48 no. trains | 7 no. per train | - |
| | | Total | 611 |

Table 13.8: Cycle Parking Required.

13.4.1.6.3 Proposed Cycle Parking

The proposed provision of cycle parking at Dublin Central Masterplan is 689no. spaces located as shown below. Access to these spaces is shown on Figure 13.15.

- **Site 1:** 60no. spaces.
- **Site 2:** 364no. spaces.
- **Site 3:** 160no. spaces.
- **Site 4:** 44no. spaces.
- **Site 5:** 58no. spaces.
- **Total:** 686no. spaces.

This total does not include spaces to be provided by NTA / TII for the future Metrolink Station.

13.4.1.6.4 Future Cycle Parking for Metrolink Station

Assuming a 5-minute frequency in both directions, the number of trains passing through the O'Connell Street Upper Station would be 48 in 2-hours.

This level of service would generate a cycle parking requirement of 336 spaces which are expected to be included by TII in their future planning application for Metrolink.

13.4.1.7 Cumulative Development

The Characteristics of the Cumulative Development are the same as the Characteristics of the Proposed Development described in Section 13.4.1.

13.4.2 The Proposed Development – Site 3, 4 & 5

The Proposed Development will include a number of land uses in a series of blocks to the west of O'Connell Street Upper between Moore Street and Moore Lane:

The Proposed Development which is illustrated in Figure 13.17 will comprise the following land uses in a series of multi-storey buildings of varying heights: -

- Retail 2,571 sq. m.
- Offices 6,094 sq. m.
- Food and Beverage 1,681 sq. m.
- Cultural 183 sq. m.
- Hotel 7,175 sq. m (150 bedrooms).
- Residential 7,905 sq. m (94 apartments).
- Cycle parking 262no. spaces.

In addition, the Proposed Development will include resurfacing works to O'Rahilly Parade, Moore Lane and Henry Place, reversal of traffic flow on Moore Lane from southbound to northbound and pedestrianisation on Moore Lane and Henry Place after 11h00.

The Proposed Development will also include the retention of a number of protected buildings and facades.



Figure 13.17: Site Layout – Ground Level 00. Proposed Development outlined in red – future development outlined in blue.

13.4.2.1 Access

Pedestrian access to the Proposed Development will be from the surrounding streets and lanes. Pedestrian access to the future Metrolink Station will be from the public open space between O’Connell Street Upper and Moore Lane.

Cycle access to the cycle parking will be from the surrounding streets and lanes at the locations shown in Figure 13.18.

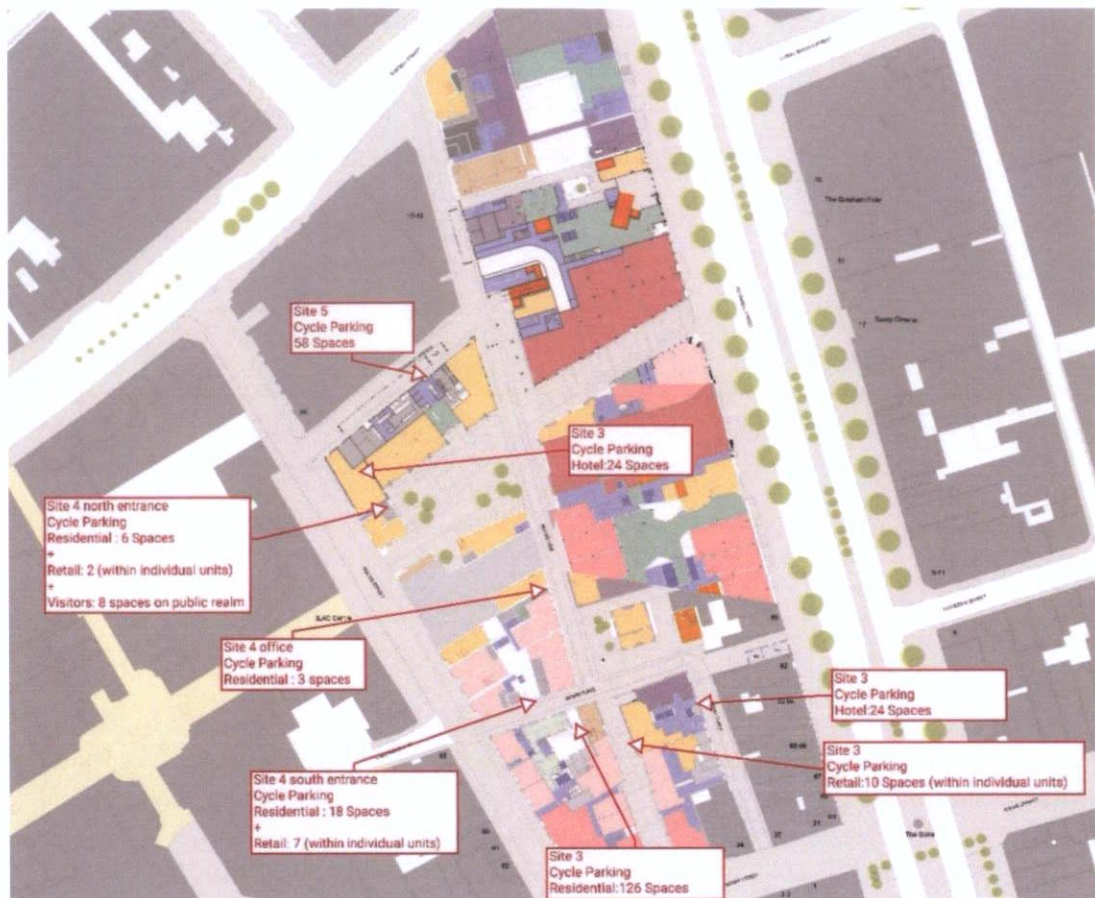


Figure 13.18: Access to Cycle Parking

13.4.2.2 Public Streets

Subject to the approval of Dublin City Council, it is proposed to reorder the existing streets in the area of the subject site as illustrated in Figure 13.19 and described below.

- O'Rahilly Parade (Moore Street – Moore Lane)
One-way eastbound at all times with loading bay on south side (48m)
- Moore Lane (Parnell Street – O'Rahilly Parade)
One-way northbound at all times with loading bay on east side (24m)
- Moore Lane (O'Rahilly Parade – Henry Place)
Two-way as existing 06h00 – 11h00 with pedestrian zone after 11h00.
- Henry Place
Two-way as existing 06h00 – 11h00 with pedestrian zone after 11h00.

There are no proposals for the provision of traffic signals or cycle lanes on Moore Lane, O'Rahilly Parade or Henry Place.



Figure 13.19: Street Layout – Proposed. Proposed Development outlined in red – future development outlined in blue.

13.4.2.3 Servicing and Deliveries

This EIAR is accompanied by a detailed *'The Dublin Central Masterplan Servicing Strategy'* developed by Sweco for Dublin Central GP Limited. This TA should be read in conjunction with that Strategy.

Servicing and deliveries will take place on Moore Lane south of O'Rahilly Parade and on Henry Place between the hours of 06h00 and 11h00 Monday – Sunday. After 11h00, both Moore Lane and Henry Place will be pedestrian priority areas similar to Henry Street.

Servicing and deliveries will take place on O'Rahilly Parade and Moore lane north of O'Rahilly Parade Place on a 24-hour basis Monday – Sunday.

Deliveries will be undertaken in rigid trucks and vans. Loading bays will be provided on Moore Lane (24m) and O'Rahilly Parade (48m) as shown on Figure 13.19. Other deliveries will be on-street.

Waste collection will also take place using the same facilities and access.

A detailed Servicing Strategy has been prepared by SWECO UK Ltd and accompanies this planning submission. This transport assessment should be read in conjunction with the SWECO Servicing Strategy.

13.4.2.4 Car Parking

13.4.2.4.1 Dublin City Development Plan 2016 – 2022

Standards for car parking in new developments are set out in Table 16.1 of the Dublin City Development Plan 2016 – 2022 and Parking Areas are illustrated on Map J. As shown on Map J, Dublin Central is located within Parking Area 1.

The maximum car parking standards for Dublin Central based on a location in Zone 1 are reproduced in Table 13.9.

| Land Use | Standard |
|--------------------------|---------------------------|
| Retail | 1 space per 350 sq. m GFA |
| Offices | 1 space per 400 sq. m GFA |
| Restaurant / Cafe | None |
| Cultural | 1 space per 400 sq. m |
| Hotel | 1 space per 4 bedrooms |
| Residential – Apartments | 1 space per dwelling |

Table 13.9: Maximum Car Parking Standards, Dublin City Development Plan 2016 – 2022.

13.4.2.4.2 Car Parking – Development Plan

Based on the car parking standards set out in the Dublin City Development Plan, the maximum quantum of car parking for Sites 3, 4 and 5 at Dublin Central would be 155 spaces as calculated in Table 13.10.

| Land Use | Size | Standard | Spaces |
|-------------------|------------------|-----------------------|------------|
| Retail | 2,571 sq. m | 1 per 350 sq. m GFA | 7 |
| Offices | 6,094 sq. m | 1 per 400 sq. m GFA | 15 |
| Restaurant / Cafe | 1,681 sq. m | None | - |
| Cultural | 183 sq. m | 1 space per 400 sq. m | 1 |
| Hotel | 150no. rooms | 1 per 4 rooms | 38 |
| Residential | 94no. apartments | 1 space per apartment | 94 |
| | | Total | 155 |

Table 13.10: Maximum Car Parking for Dublin Central – Sites 3, 4 and 5.

13.4.2.4.3 Car Parking for Apartments

Guidelines for the provision of car parking in new apartments are set out in Sustainable Urban Housing: Design Standards for New Apartments issued by the Department of Housing, Heritage and Local Government in December 2020. Section 4.18 – 4.27 of the Standards addresses the issue of car parking.

Qualifications in the standards for reduced parking for new apartments include: -

- Location within 10 minutes walking distance of DART and/or commuter rail.
- Location within 5 minutes walking distance of bus service with minimum 10-minute peak hour frequency.

The subject site is well within these walk time criteria. In addition, it is located within the City Centre and will enjoy easy access to high frequency public transport.

Having regard to these standards, the availability of public transport together, the location of the development and the modest number of apartments, no car parking for the residential units is included within Dublin Central for the residential units.

13.4.2.4.4 Proposed Car Parking

Having regard to its City Centre location and the high availability of public transport in the surrounding area, no car parking is proposed for any of the other land uses in Sites 3, 4 or 5.

13.4.2.5 Cycle Parking

13.4.2.5.1 Dublin City Development Plan 2016 - 2022

Standards for cycle parking in new developments are set out in Table 16.2 of the Dublin City Development Plan 2016 – 2022.

As shown on Map J, Dublin Central is located within Parking Area 1.

The cycle parking standards for the Proposed Development at Dublin Central are reproduced in Table 13.11.

| Land Uses | DCC Standards |
|-------------------|---|
| Retail | 1 space per 150 sq. m |
| Offices | 1 space per 100 sq. m |
| Restaurant / Cafe | 1 space per 150s q. m |
| Cultural | 1 space per 100 sq. m |
| Hotel | None |
| Residential | 1 space per unit Visitor spaces to be determined on a case by case basis |

Table 13.11: Cycle Parking Standards, Dublin City Development Plan 2016 – 2022.

13.4.2.5.2 Cycle Parking Required

Based on the cycle parking standards set out in the Dublin City Development Plan, the quantum of cycle parking required for Sites 3, 4 and 5 is 204 spaces as calculated in Table 13.12 below.

| Land Uses | No. Units/GFA | DCC Standards | Parking Required |
|---------------------|------------------|-----------------------|------------------|
| Retail | 2,571 sq. m | 1 per 150 sq. m | 17 |
| Offices | 6,094 sq. m | 1 per 100 sq. m | 61 |
| Restaurant/Café | 1,681 sq. m | 1 per 150 sq. m | 11 |
| Cultural | 183 sq. m | 1 space per 100 sq. m | 2 |
| Hotel | 150no. rooms | None | - |
| Residential | 94no. apartments | 1 per unit | 94 |
| Residential Visitor | 94no. apartments | 1 per 5 units | 19 |
| | | Total | 204 |

Table 13.12: Cycle Parking Required – Sites 3, 4 and 5.

13.4.2.5.3 Proposed Cycle Parking

The proposed provision of cycle parking in Sites 3, 4 and 5 at Dublin Central is 262 spaces located as shown below.

- **Site 3:** 160no. spaces
- **Site 4:** 44no. spaces
- **Site 5:** 58no. spaces
- Total:** 262 spaces

Access to these spaces is shown on Figure 13.18.

13.4.2.6 Cumulative Development

The Characteristics of the Cumulative Development are the same as the Characteristics of the Proposed Development described in Section 13.5.1.

13.5 POTENTIAL IMPACT OF THE PROPOSED DEVELOPMENT

13.5.1 Dublin Central Masterplan

13.5.1.1 Construction Stage

13.5.1.1.1 Construction Phasing

Due to its location and size together, it is proposed to construct the Dublin Central development on a number of sites over a period of ten years between 2022 and 2032.

The locations of the various sites are shown in Figure 13.20.



Figure 13.20: Construction Phasing

13.5.1.1.2 Construction Program

The construction program for the various construction sites of the Dublin Central development between 2022 and 2032 is presented in Figure 13.21.

The construction activities on each site can be broadly sub-divided into three categories, demolition / excavation, construction and fit-out.

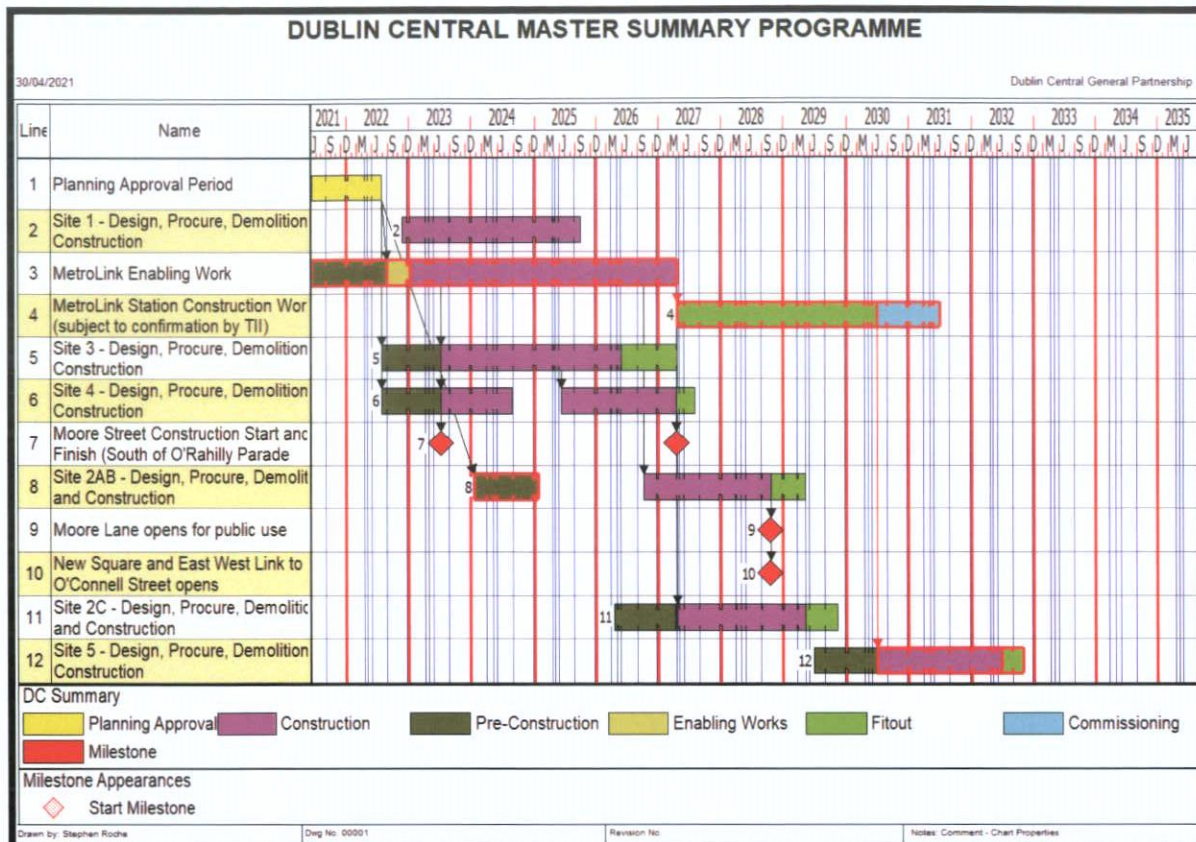


Figure 13.21: Construction Program.

13.5.1.1.3 Preliminary Construction Traffic Management Plan

Construction traffic from this development is addressed in the *Preliminary Construction Traffic Management Plan* (PCTMP) issued by Waterman Moylan in April 2021.

The purpose of the Plan is to address how construction traffic will access and egress this City Centre development site. It also addresses the impact of construction related traffic on the surrounding road network during the construction stage.

The objectives of the Plan are to ensure that the construction traffic for Dublin Central can be accommodated on the surrounding street network without significant impact on other road users.

It will ultimately be the responsibility of the main appointed Contractor to prepare and submit the detailed *Construction Traffic Management Plan* to Dublin City Council for approval. The preliminary plan has been discussed with Dublin City Council and will be used to provide guidance to the main Contractor when he commences the preparation of the detailed plan.

The construction of Dublin Central is programmed to extend over a period of 7 years between 2022 and 2029. However, the major heavy construction is expected to be carried out during the first four years from 2022 to 2026.

During the construction period, there will be a number of high activity sites where construction related traffic will be significant.

The most intensive of these sites are likely to be: -

- (a) Demolition of existing buildings and removal of demolition waste off site.
- (b) Excavation of Metro Enabling Works and disposal of the excavated spoil.
- (c) Pouring of the concrete box and frame.

The nature of the construction process is such that the traffic generated will comprise short periods of intense activity interspersed with longer periods with relatively low level of truck movements into and out of the site. In addition, the various activities will occur at multiple locations around the site giving rise to a need for multiple access for construction traffic from the street network.

13.5.1.1.4 Predicted Traffic Movements

The expected traffic movements during the construction period will vary significantly from month to month depending on the activity in progress.

For the purpose of this EIAR and the PCTMP, a worst-case scenario has been assumed based on: -

- A 10-hour day between 08h00 and 18h00 Monday – Friday.
- 20 working days per month.

The single largest activity in terms of truck movements will be the excavation for Site 2 including the station box extending to 133,565 cubic metres over a period of 12 months between 2025 and 2026.

The excavated material is expected to be removed in 32 tonne trucks with a self-weight of 12 tonnes and a carrying capacity of 20 tonnes. On the basis of a maximum soil weight of 1.3 - 1.7 tonnes per cubic metre, each truck would have a capacity of 12 – 15 cubic metres per truck.

Based on an average payload of 8 cubic metres per truck, this operation is predicted to generate an average of 67 arrivals and 67 departures per working day equivalent to 7 arrivals and 7 departures in the AM peak hour between 08h00 and 09h00.

Allowing for other on-site activities during the same period particularly completion and fit-out to Sites 3 and 4, the construction related truck movements during the AM peak hour between 08h00 and 09h00 are expected to peak at 12 arrivals and 12 departures per hour.

Overall, the expected HGV movements during the construction stage are predicted to vary from 65 – 95 arrivals per day and 65 – 95 departures per day.

These movements represent some 1% of the existing traffic flow of 1,100 – 1,400 vehicles per hour each way on Parnell Street during the same period.

13.5.1.1.5 Haul Routes

The Preliminary Construction Traffic Management Plan (PCTMP) for this development requires that all deliveries to and collection from the subject site comply with the DCC requirements for HGV movements including the use of the designated HGV Routes illustrated in Figure 13.22.

Two construction routes to the site have been identified both to Parnell Street. One would be via Summerhill and Parnell Street and the second preferred route via Dorset Street and Dominick Street Lower as shown in Figure 13.23.

Traffic and other movements on the road network during the construction Site will be managed by carrying out the works in a number of stages to a sequence to be prepared in conjunction with Dublin City Council and implemented by the main Contractor.

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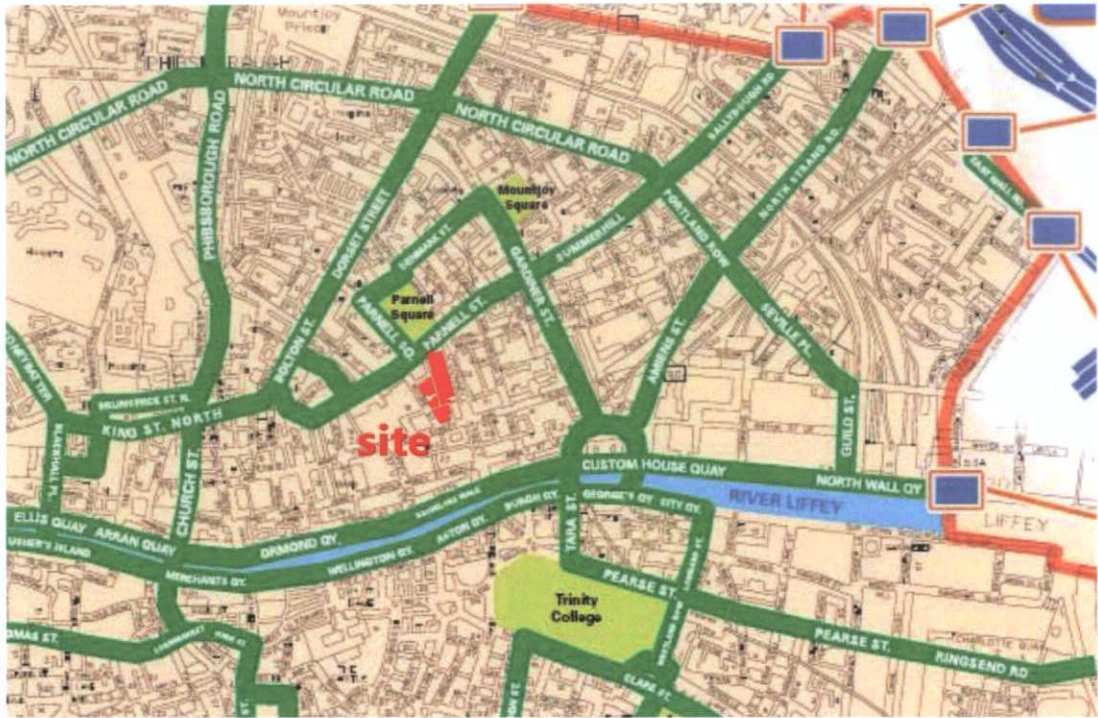


Figure 13.22: Designated HGV Routes in the City Centre.



Figure 13.23: Emerging Haul Routes for Construction Traffic (Inbound in green and outbound in red).

13.5.1.1.6 Local Traffic Management

The local traffic management for construction vehicles in the area of the site has been based inter alia on the haul routes described above and a series of tracking checks carried out on the local roads and junctions using Autotrack.

Based on these constraints, a series of proposals for a number of differing construction scenarios was prepared. The scenarios were based on the project phasing from Figure 13.20 and the construction program from Figure 13.21.

Two alternative scenarios were developed in detail based on clockwise and anti-clockwise circulation around the block bounded by Moore Street, O'Rahilly Parade and Moore Lane.

The preferred option is the anticlockwise circulation included the local traffic management proposals presented in Figure 13.24. Inbound access for the majority of construction vehicles is proposed from Parnell Street to Moore Street / O'Rahilly Parade and outbound departures from Moore Lane to Parnell Street.

This preferred option was selected on the basis of a number of local constraints including: -

- The lack of a stacking lane on Parnell Street in advance of the left turn into Moore Lane should there be a delay entering Moore Lane for whatever reason.
- The restricted width of the left turn from Parnell Street around Conway's public house into Moore Lane which could cause delays due to the slow deliberate turning for vehicles across a busy restricted area.
- The relatively easy right (and left) turns from Parnell Street to Moore Street.
- The availability of a stacking area for the right (and left) turns from Parnell Street into Moore Street.
- Local traffic management on Moore Lane would require the presence of temporary traffic signals and/or flagmen at different locations and at different times to facilitate vehicles passing depending on the movements in progress.

Arrivals are proposed from Parnell Street via Moore Street and O'Rahilly Parade. Some limited departures are proposed to O'Connell Street Upper via Henry Street up to 11h00 after which Henry Street is restricted to pedestrians only. The remaining departures are proposed to Parnell Street via Moore Lane.

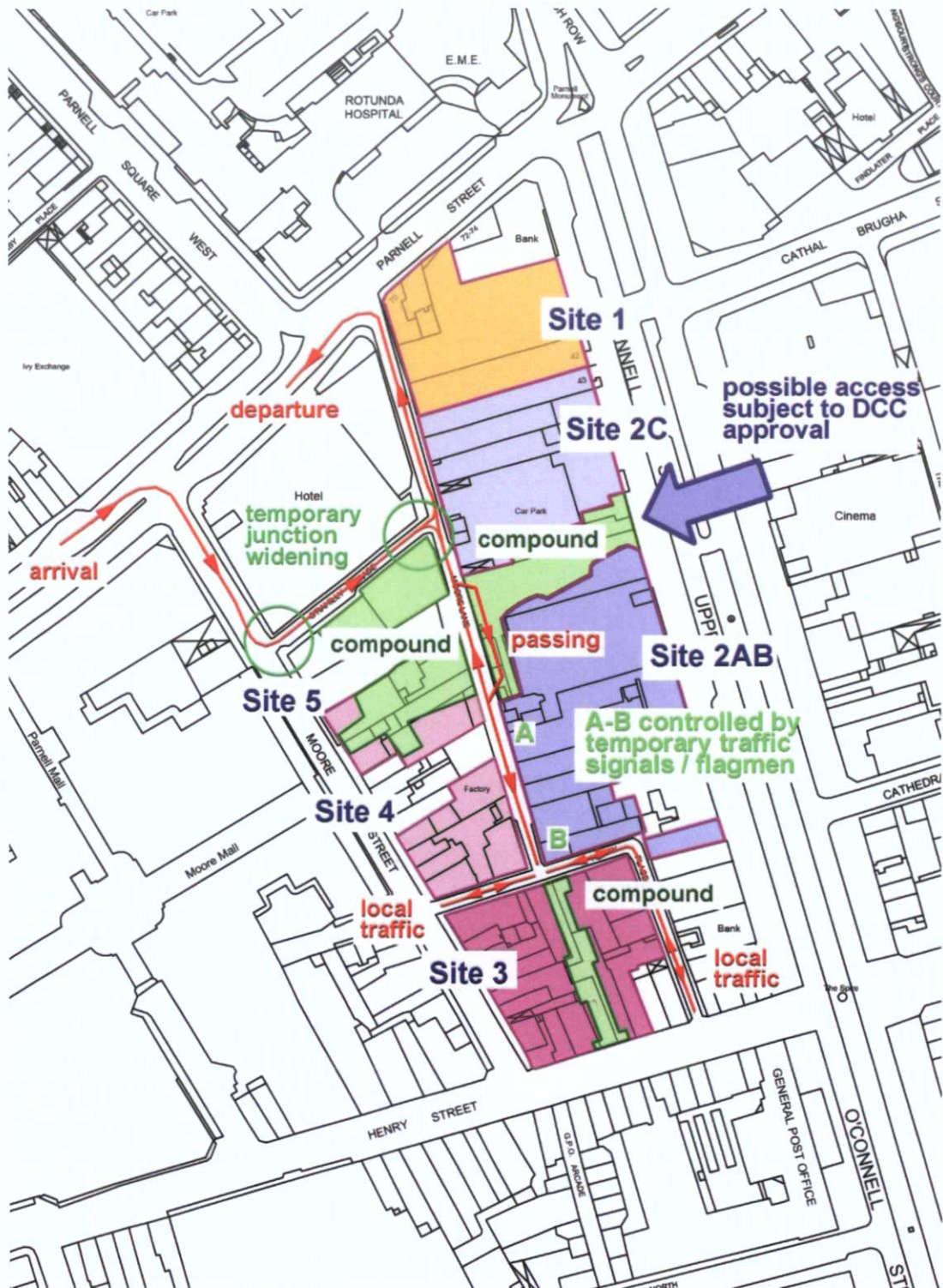


Figure 13.24: Construction Traffic Management.

13.5.1.1.7 Alternative Access for Long Vehicles to Site 3

Arising from the restricted junctions at both ends of O’Rahilly Parade, an alternative part time access to Site 3 from Parnell Street via Moore Lane is also proposed. This access would be for long vehicles only and would operate in the mornings up to 11h00 as illustrated in Figure 13.25.

Long vehicles travelling south on Moore Lane would require the presence of temporary traffic signals and/or flagmen at different locations at different times depending on the movements in progress.

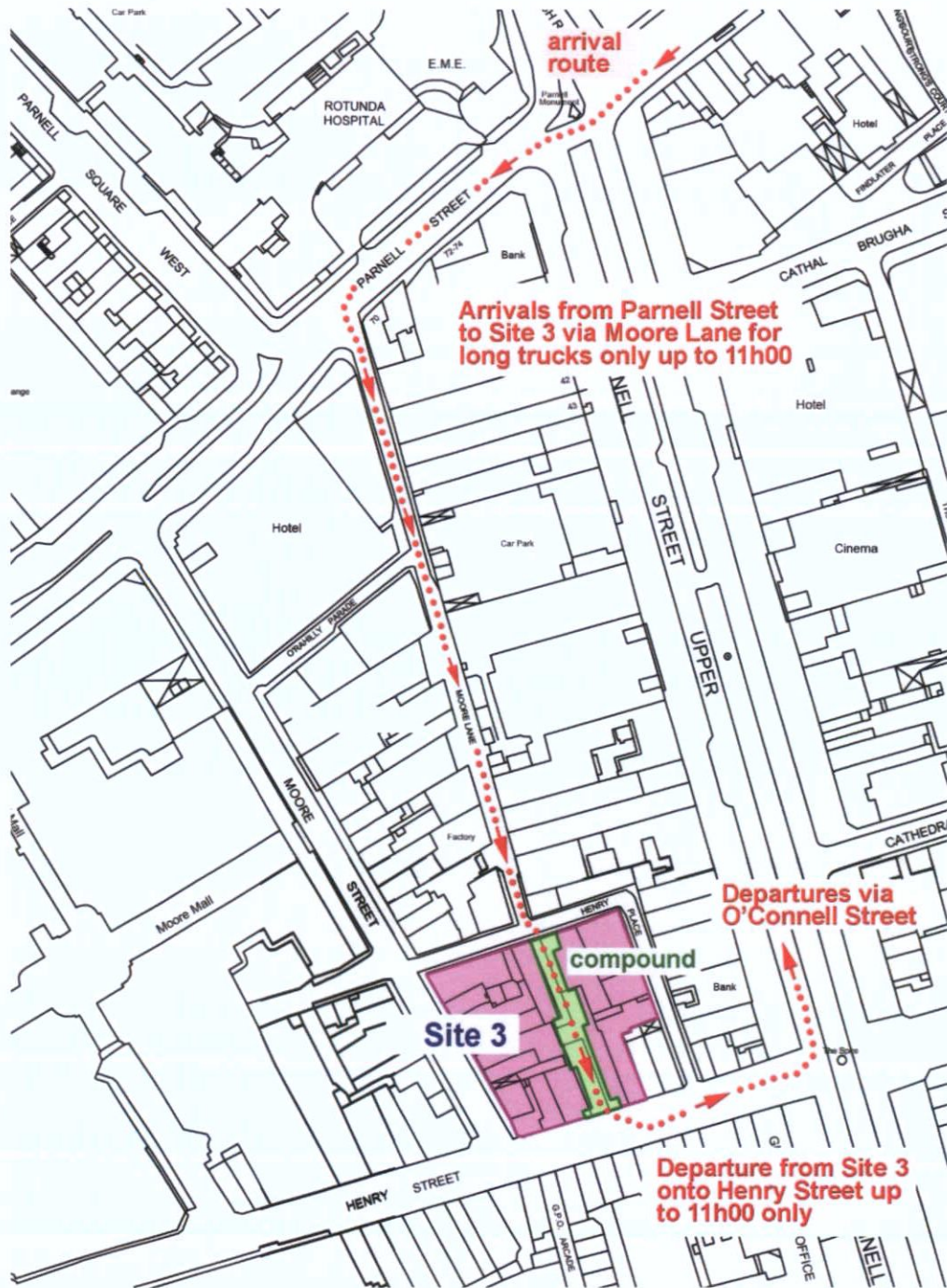


Figure 13.25: Alternative Access for Long Vehicles to Site 3.

13.5.1.1.8 Temporary Street and Junction Upgrade Works

The layout and width of the existing streets and lanes in the area of the subject site is such that the identification of the preferred option has generated a requirement for temporary local upgrades to the network.

The upgrades required, which are shown on Figure 11.26, comprise local junction widening at either end of O’Rahilly Parade and local carriageway widening midway along Moore Lane.

The temporary upgrade works required for the construction traffic movements include: -

- (a) Junction Moore Street and O’Rahilly Parade
 - Relocation of existing street furniture.
 - Realignment of existing kerbs.
- (b) Junction O’Rahilly Parade and Moore Lane
 - Removal of existing depot boundary wall.
 - Realignment of existing kerbs.
- (c) Moore Lane
 - Removal of existing boundary wall to create passing area.

Details of the widening works are included on the drawings which form part of the planning applications for Dublin Central to Dublin City Council.

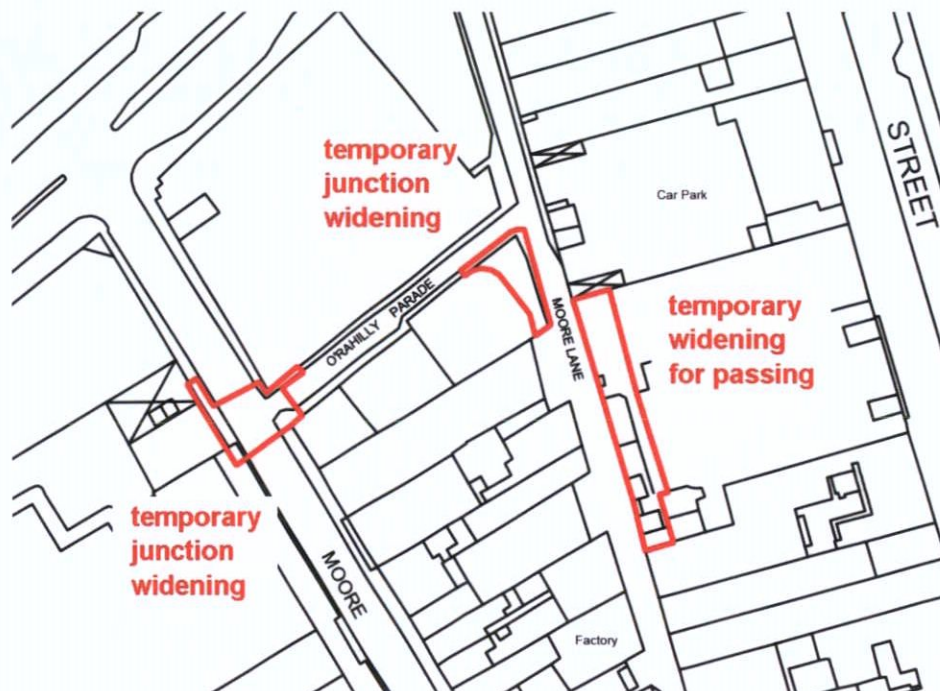


Figure 13.26: Temporary Street and Junction Upgrade Works.

13.5.1.1.9 Parking During Construction

For the purpose of this chapter of the EIAR, it has been assumed that there will be no car parking for construction staff on site.

Construction staff will either travel to site by public transport or park off-site.

13.5.1.1.10 Traffic Modelling

TRANSYT Overview

The traffic modelling described in this EIAR was carried out by Waterman Moylan using the industry standard software package TRANSYT.

TRANSYT is a computer program for studying everything from isolated road junctions to large signal-coordinated networks. It is capable of developing optimum signal settings for representative traffic conditions of a system. Priority intersections (non-signalised junctions) and roundabouts can also be modelled using TRANSYT, however this is only appropriate where these junctions form part of a larger network comprised of signalised junctions.

TRANSYT contains two main components – a traffic model and a signal optimiser. The traffic model predicts a Performance Index (PI) for a network based on a fixed signal timing plan and set of average traffic flows. The PI is a measure of the overall cost associated with congestion and is a weighted combination of total vehicle delay and stops experienced by traffic within the modelled network. The signal optimisation component within TRANSYT modifies signal timings and assesses whether those adjustments have reduced the PI.

The output report of a TRANSYT model also includes a number of other results to evaluate the studied system, such as Degree of Saturation percentage (DOS%) figure, Mean Maximum Queue (MMQ) and Mean Delay per pcu for each link on the road network.

Degree of Saturation (DOS):

DOS, also referred to as Volume to Capacity Ratio (v/c), is a measure of performance which represents the capacity of a junction/traffic lane/link to accommodate the vehicular demand and indicates how near the network is to the maximum capacity available. A DOS less than 85% generally indicates that adequate capacity is available, and vehicles are not expected to experience significant queues and delays. As the DOS approaches 100%, traffic flow may become unstable, and delay and queuing conditions may occur.

Mean Maximum Queue (MMQ):

MMQ is the highest estimated mean number of Passenger Car Units (pcu) queued in any lane of a junction approach link, averaged over the entire analysis period.

Mean Delay per Vehicle (seconds):

Mean Delay per vehicle is the average delay experienced by a vehicle on a junction approach link or traffic stream as a result of having to queue at signals or having to give way at a priority junction.

Description of Modelled Network

Four junctions along the section of Parnell Street between its intersections with O'Connell Street Upper and Dominick Street have been assessed. The junctions modelled were: -

Junction 1: Parnell Street @ O'Connell Street Upper and Parnell Square East

This junction is a signalised crossroads with LUAS line and new northbound cycle phase. Its layout has been recently altered as part of the Parnell Square Contraflow Cycle Scheme to comprise the following configuration: -

- Reduction of O'Connell Street Upper (southern approach) to a single 3.5m wide traffic lane catering for all traffic with no bus priority.
- Inclusion of north-south signal phase on O'Connell Street Upper (southern approach) for cyclists wishing to cross Parnell Street towards Parnell Square East.
- Reduction of Parnell Square East (northern approach) to one lane for right turns onto Parnell Street (western approach).

Junction 2: Parnell Street @ Parnell Square West (Signalised T-junction with LUAS line).

Junction 3: Parnell Street @ Moore Street (Priority-controlled T-junction).

Junction 4: Parnell Street @ Dominick Street (Signalised T-junction with LUAS line).

Between O'Connell Street Upper and Parnell Square West, Parnell Street is a 24-hour clearway with one traffic lane westbound on the south side of the street, one shared traffic lane/LUAS line westbound in the centre of the street and one eastbound LUAS line on the north side of the street.

Between Parnell Square West and Moore Street, Parnell Street is a 24-hour clearway with one traffic lane westbound on the south side of the street, one traffic lane eastbound in the centre of the street separated by a median from two LUAS lines on the north side of the street.

Between Moore Street and Dominick Street, Parnell Street is a 24-hour clearway with two traffic lanes westbound on the south side, one traffic lane eastbound in the centre of the street separated by a median from two LUAS lines on the north side of the street.

Approach

The approach undertaken for carrying out this TRANSYT analysis consisted of: -

- 1) Inputting local Sydney Coordinated Adaptive Traffic System (SCATS) provided by Dublin City Council (DCC) which include vehicle/tram flows and stage sequences and timings of each signalised junction.
- 2) Setting up TRANSYT models of each junction to establish the base scenario.
- 3) Adding Proposed Development's construction traffic to the base scenario to project the Construction Stage scenario.
 - a. Comparing both assessed scenarios to identify any potential effects that may arise during the Construction Stage of the Proposed Development.

During the Construction Stage, the appointed Contractor will be required to maintain access along Moore Lane and Henry Place to existing properties at the times currently permitted by Dublin City Council or as may otherwise be agreed with the property owners and DCC.

Assessed Scenarios

The performance of the modelled road network as described above has been analysed for the critical AM Peak Hour 09h45 to 10h45 (based on surveyed results by DCC for Tuesday 4th February 2020) for the following scenarios: -

- **Base Scenario:** Road network with baseline flows (including LUAS line and new northbound cycle phase on Junction 1) and without subject development trips.
- **Construction Stage:** Road network with baseline flows (including LUAS line and new northbound cycle phase on Junction 1) with construction traffic added to the baseline flows. In this scenario, a slight change to the road network configuration has been adopted which consists of Moore Lane (from Parnell Street to O'Rahilly Parade) been reversed to northbound traffic only to facilitate construction traffic departing from the subject site.

Construction of TRANSYT Base Network

Having adopted the approach and the extent of the study area, the TRANSYT models have been developed. Typical input data to construct a TRANSYT model include traffic flows (vehicles or pcu per time segment), traffic signal controller phases and stages, intergreen times, saturation flows and lane lengths. Stage sequences and timings, intergreen times, and traffic flows were provided by DCC for all signalised junctions in the form of SCATS.