13 MATERIAL ASSETS (TRANSPORTATION)

13.1 INTRODUCTION

This chapter of the Environmental Impact Assessment Report (EIAR) provides an assessment of the impact on traffic and transportation of the Proposed Development. The Proposed Development which is the subject of these 3no. concurrent planning applications consists of Site 3, Site 4 and Site 5. Dublin Central is underpinned by a Masterplan (refer to Figure 13.1 below indicating the Dublin Central Masterplan area) which will be assessed also.

A full description of the development can be found in Chapter 3: Description of Proposed Development of this EIAR.

This chapter was completed by Brian McCann, BE, MSc(Eng), DIC, CEng, FIEI, MIStructE, MConsEI.

Brian has in excess of 30 years' experience of transportation planning and assessment.

13.1.1 Dublin Central Masterplan Site

The 2.2 ha Dublin Central Masterplan site comprises four blocks located in the administrative area of Dublin City Council within the area bounded by Parnell Street, O'Connell Street Upper, Henry Street and Moore Street. See Figure 13.1.

Figure 13.1: Location Map – Dublin Central Masterplan Site.

13.1.2 Proposed Development – Sites 3, 4 and 5

The site for Sites 3, 4 and 5 with a combined area of 0.82 ha comprises two blocks in the administrative area of Dublin City Council within the area bounded by O'Rahilly Parade, Moore Lane, Henry Place and Henry Street. See Figure 13.2.

Future development comprising Sites 1, 2AB and 2C is proposed to be located in a separate block bounded by Parnell Street to the north, O'Connell Street Upper to the east, Henry Street to the south and Moore Lane to the west.

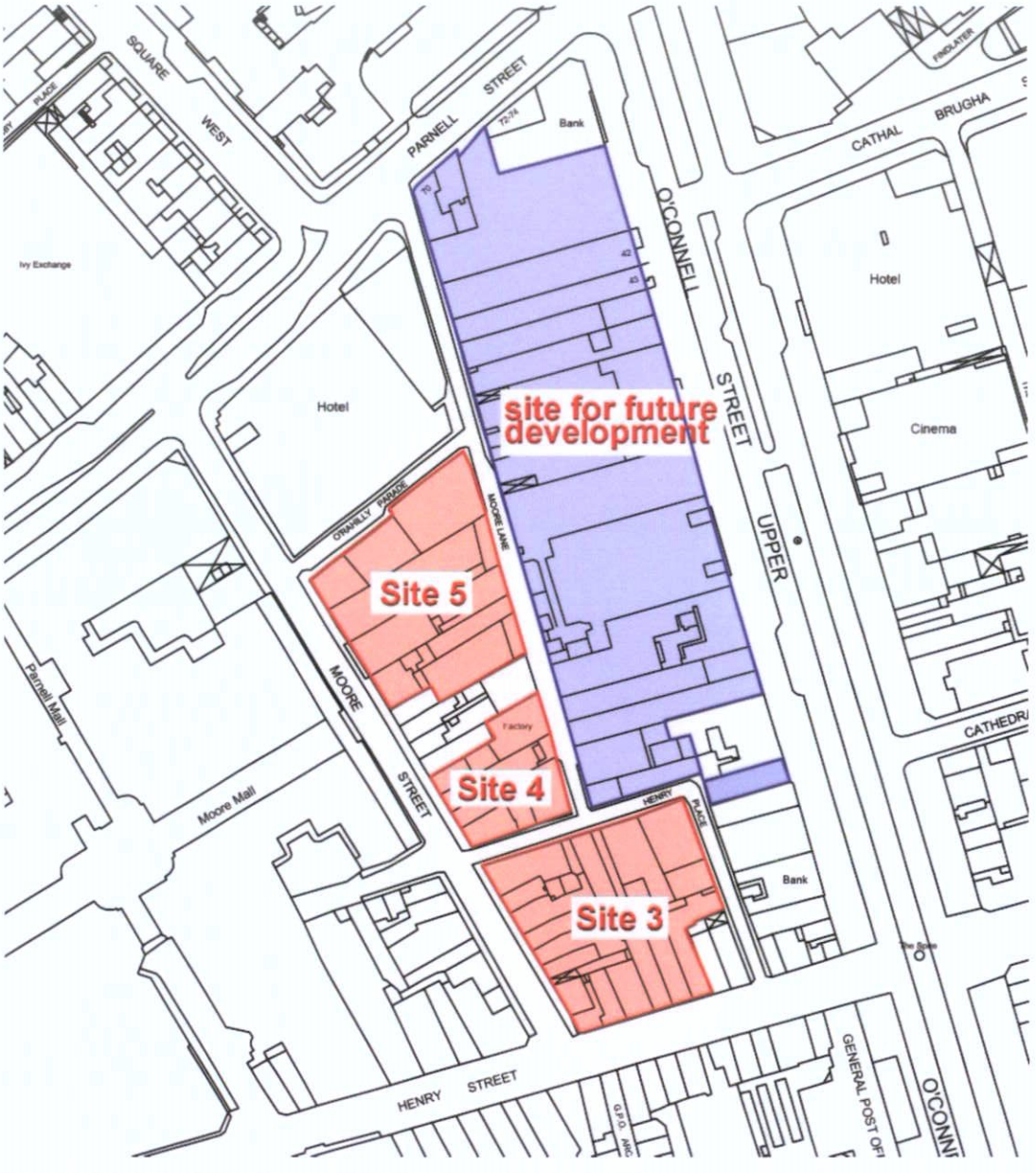

Figure 13.2: Location Map – Proposed Development – Sites 3, 4 and 5.

13.1.3 Project Timelines

Development of Site 1 of Dublin Central is programmed to commence in late 2022 with completion some three years later at the end of 2025.

Development of Site 2AB and 2C of Dublin Central is programmed to commence with the MEW in late 2022 with completion some seven years later at the end of 2029.

Development of Sites 3 and 4 of Dublin Central is programmed to commence in mid-2023 with a completion some five years later in mid-2027.

Development of Site 5 of Dublin Central is programmed to commence with the MEW in late 2022 with completion some ten years later in late 2032.

13.2 ASSESSMENT METHODOLOGY

13.2.1 Scope

This chapter of the EIAR is a comprehensive review of all the potential transport impacts of the overall development including a detailed assessment of the transportation systems provided and the impact of the Proposed Development on the surrounding environment and transportation network.

13.2.2 Methodology

Chapter 13.0 of the EIAR was prepared by Waterman Moylan in accordance with the requirements of Section 8.5.5 of the Dublin City Development Plan 2016 – 2022 and Traffic and Transport Assessment Guidelines, Transport Infrastructure Ireland, May 2014 using the following methodology: -

(a) Desktop review of the planning stage documentation provided by the project design team.

(b) Visits to the site and surrounding area including a review of the existing transportation facilities and observation of traffic movements.

(c) Review of public transport services, routes, and timetables.

(d) Review of proposals for transportation improvements by TII, NTA and DCC.

(e) Review of future trips to and from the Proposed Development.

(f) Review of public transport capacity, existing and proposed.

(g) Assessment of the transportation impacts of the Dublin Central development.

13.2.3 Transport Assessment

For the purpose of planning assessment Dublin Central has been divided into a number of planning applications and transport assessments.

The transport elements of Sites 3, 4 and 5 are described in *Volume 1: Transport Assessment – Sites 3, 4 and 5.*

The transport elements of Sites 1 and 2 (AB and C) are described in *Volume 2: Transport Assessment – Sites 1 and 2.*

The transport elements of the overall development are described in *Volume 3: Transport Assessment – Overall Development.*

13.2.4 Contents of Transport Assessment

In compliance with Section 4.1.4 of Appendix 4 of the Dublin City Development Plan 2016 – 2022, the contents of the TAs include: -

- A Non-Technical Summary
- A description of the existing development and traffic/transportation conditions including information on the existing and proposed public transport facilities.
- A description of the Proposed Development.
- The traffic / transportation implications of the development including consideration of
- Trip attraction / mode choice
- Trip distribution
- The time periods applicable to the TA.
- The impact(s) of the development on the local and surrounding street network.
- The effect(s) of the development on the environment (natural and man-made) and urban fabric.
- Road and traffic considerations.

13.2.5 Threshold for Transport Assessment

Section 4.1.3 of Appendix 4 of the Dublin City Development Plan 2016 – 2022 requires the submission of a Transport Assessment where a Proposed Development meets one or more of the following criteria: -

- Traffic to and from the development exceeds 10% of the traffic flow on the adjoining road.
- Traffic to and from the development exceeds 5% of the traffic flow on the adjoining road where congestion exists, or the location is sensitive.
- Residential development in excess of 200 dwellings
- Retail and leisure development in excess of 1,000 sqm.

In the case of the subject development, it is the threshold for the size of the Proposed Development rather than the volume of traffic to and from the development which is likely to be exceeded.

13.3 RECEIVING ENVIRONMENT (BASELINE SITUATION)

13.3.1 Dublin Central Masterplan Site

13.3.1.1 Location and Description

The site for the Proposed Development is located in the administrative area of Dublin City Council (DCC) within the area bounded by Parnell Street, O' Connell Street Upper, Henry Street to the south and Moore Street. The site comprises the city blocks highlighted in Figure 13.1.

At the time of writing in March 2021, the existing land uses on the site comprised: -

(a) A number of vacant plots.

(b) A number of discreet buildings some of which were partly or totally vacant.

(c) A diverse collection of 1 – 6 storey buildings accommodating a mix of land uses including convenience shops, retail outlets, financial institutions, offices, and other non-retail uses.

(d) A number of car parks, van parks and depots.

13.3.1.2 Road Network – Existing

The subject site is located at Junction 34 (Parnell Square West / Parnell Street) on the Inner Orbital Route. See Figure 13.3.

The purpose of the Inner Orbital Route which roughly encircles the core of Dublin city centre, is to provide a route from one side of the city centre to another which avoids the busiest traffic in the core of the city. It is also an access route to the car parks in the City Centre.

The subject site is located within the block bounded by the R803 Parnell Street to the north, Henry Street to the south, O'Connell Street Upper to the east and Moore Street to the west. See Figure 13.2. Internal lanes within the block are Moore Lane, O'Rahilly Parade and Henry Place.

O'Connell Street Upper is a dual carriageway with a bus lane, traffic lane and Luas line northbound on the west side. Along the bus lane, there is a proliferation of bus stops and a multi-purpose inset lay-bys.

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.

Signalised junctions with pedestrian facilities at provided on Parnell Street at the junctions with O'Connell Street Upper, Parnell Square West, and Dominick Street.

Traffic movements are one-way southbound on Moore Lane between Parnell Street and O'Rahilly Parade. Between O'Rahilly Parade and Henry Place, traffic movements are two-way on Moore Lane with a 24-hour clearway designation and double yellow lines on both sides.

Traffic movements on O'Rahilly Parade are two-way with double yellow lines on both sides.

Traffic movements on Henry Place are two-way with a 24-hour clearway designation and double yellow lines on both sides.

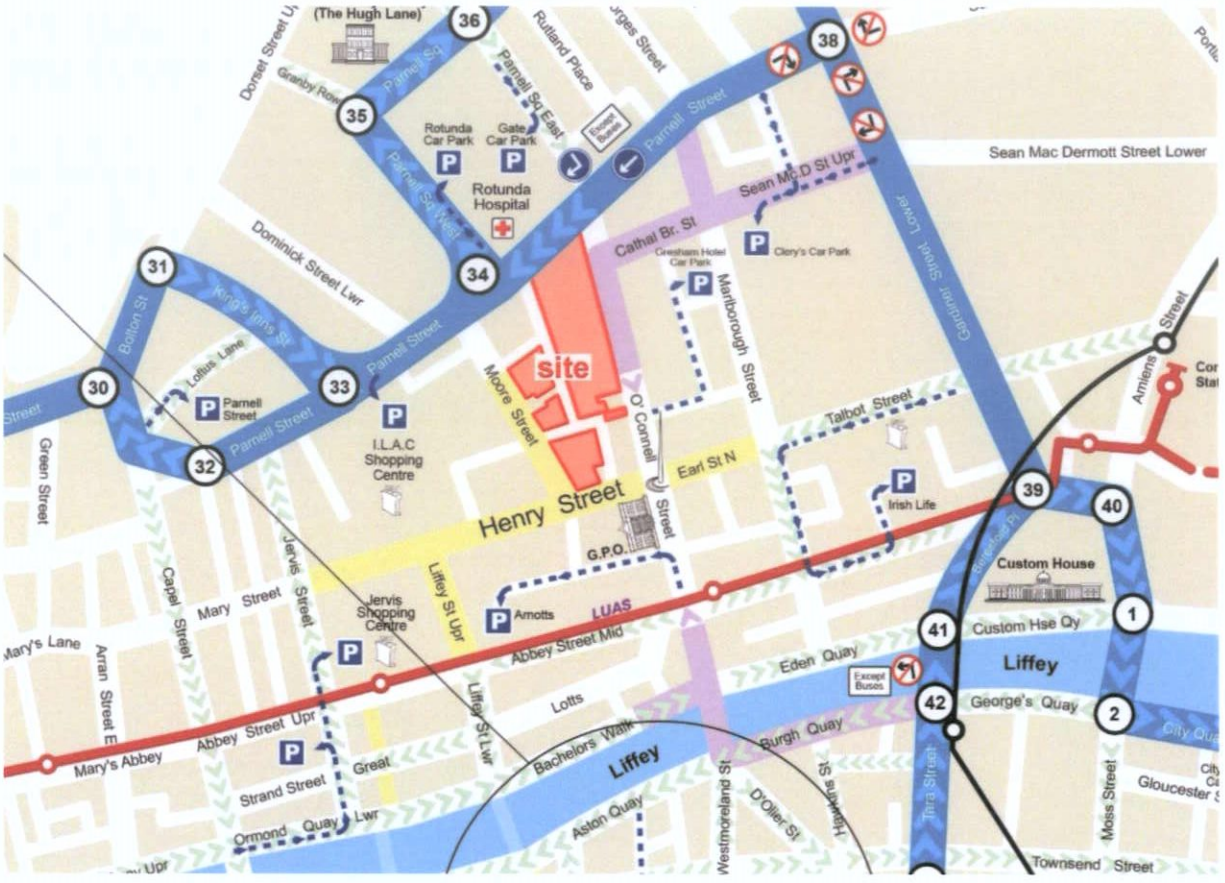

Figure 13.3: Map of Inner Orbital Route (Luas Green Line omitted for clarity).

13.3.1.3 Car Parking – Existing

The existing parking provision on the subject site comprises number of car parks, van parks and depots including: -

- Moore Lane Car Park at the rear of 47 O'Connell Street (c. 95 / 121 spaces).
- Car parking at O'Rahilly Parade (c. 12 spaces).
- Dublin City Council waste depot at O'Rahilly Parade (c. 10 street cleaning vehicles).
- Car parking at 51 O'Connell Street Upper (c. 25 spaces).

The total car parking provision on the subject site in March 2020 was some 160 spaces.

There is no on-street car parking on O'Connell Street Upper or on Parnell Street Nor is there any on-street car parking on O'Rahilly Parade, Moore Lane, or Henry Place

Off-street car parking is provided in the ILAC Centre and within the grounds of the Rotunda Hospital.

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.

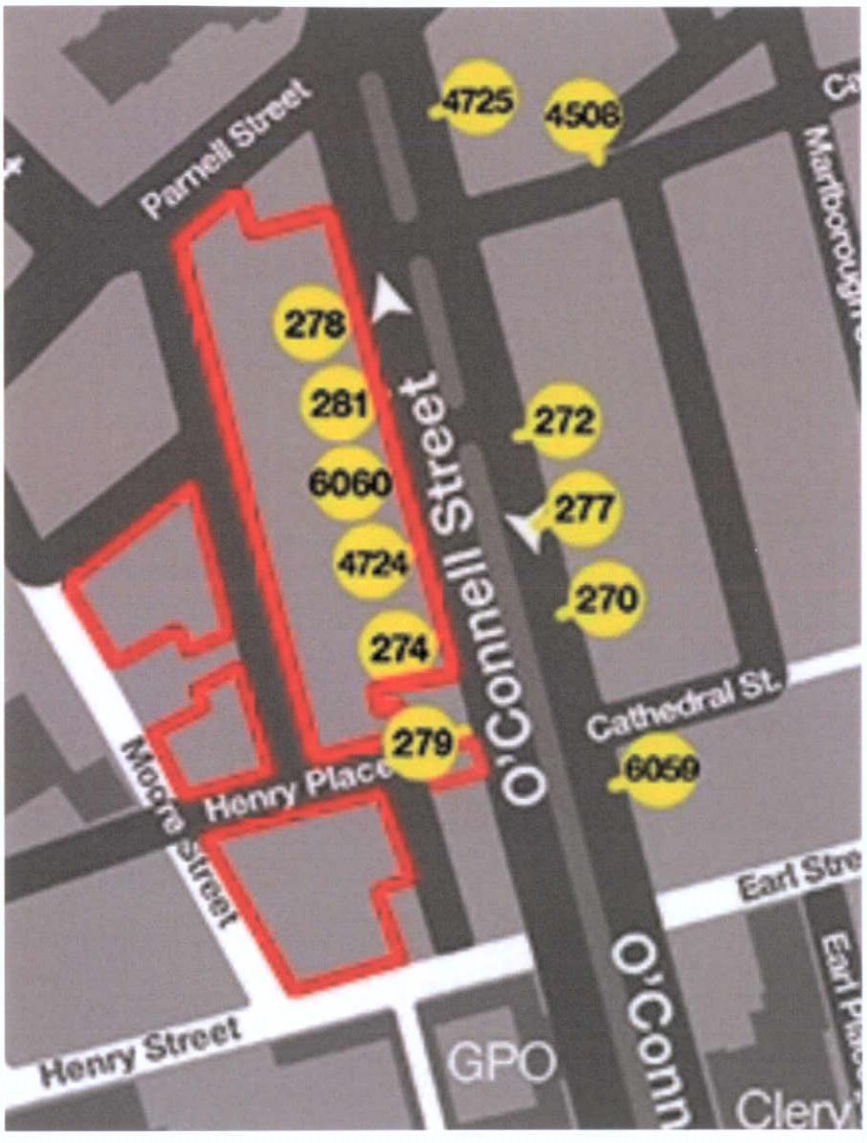

Figure 13.5: Bus Stops on O'Connell Street Upper.

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 location 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.

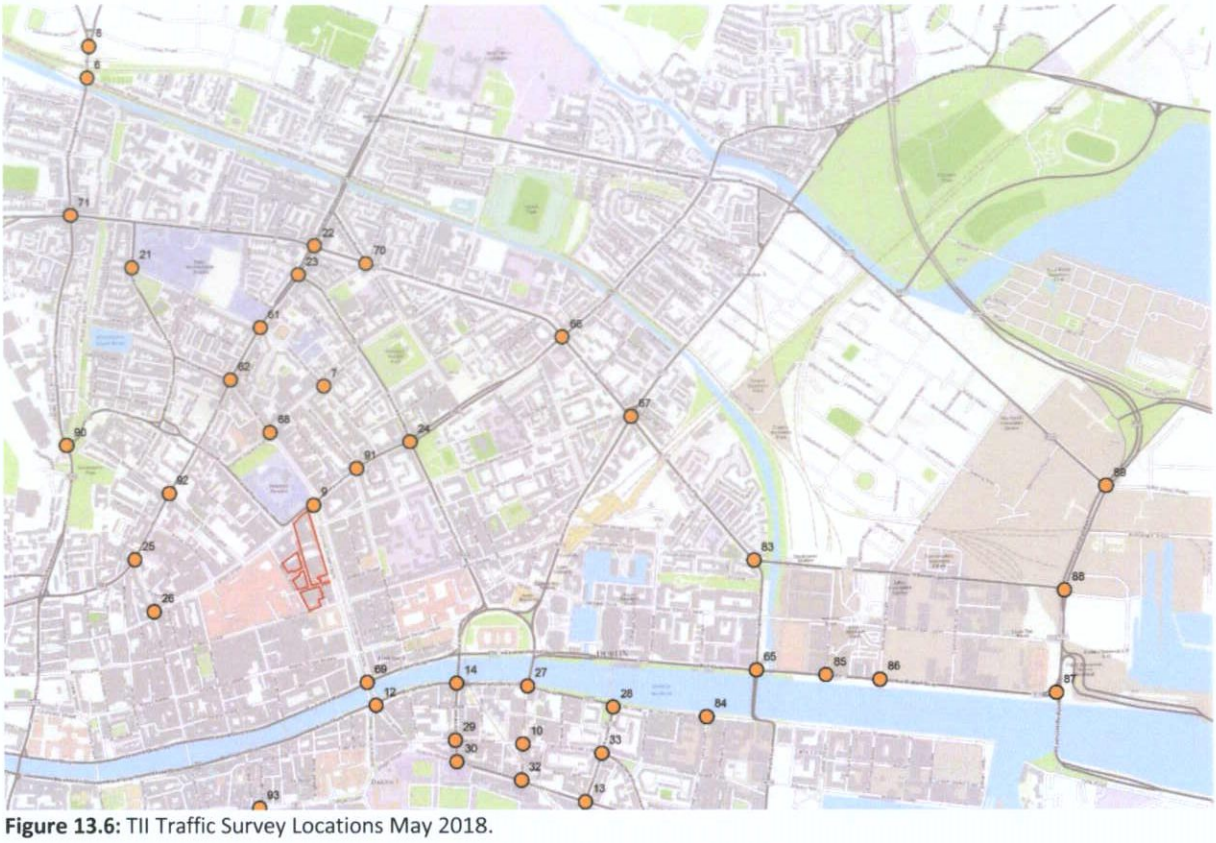

Figure 13.6: TII Traffic Survey Locations May 2018.

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 and16h00.

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.

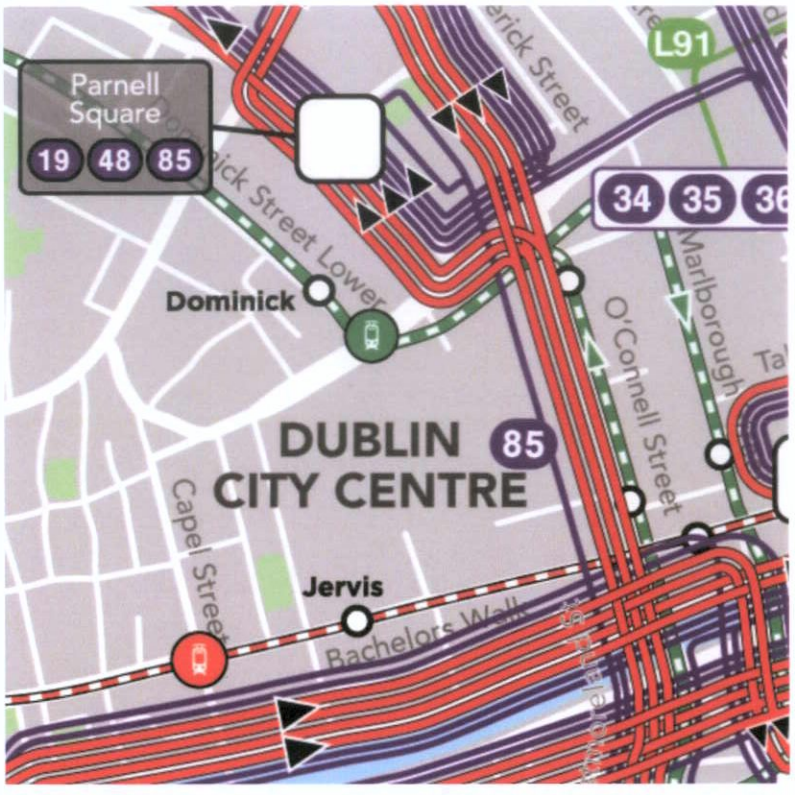

Figure 13.9: Bus Connects – Revised Bus Network 2020 (Site boundary omitted for clarity).

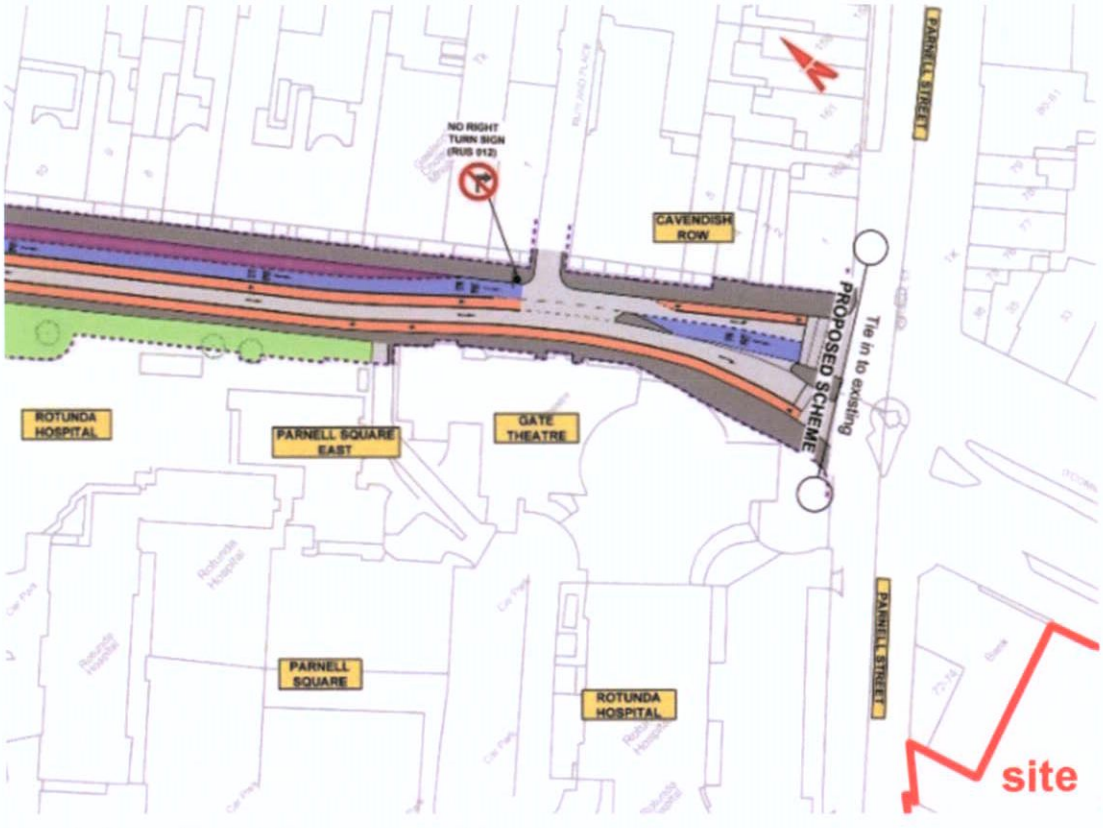

Figure 13.10: Bus Connects Proposals at Parnell Square.

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.

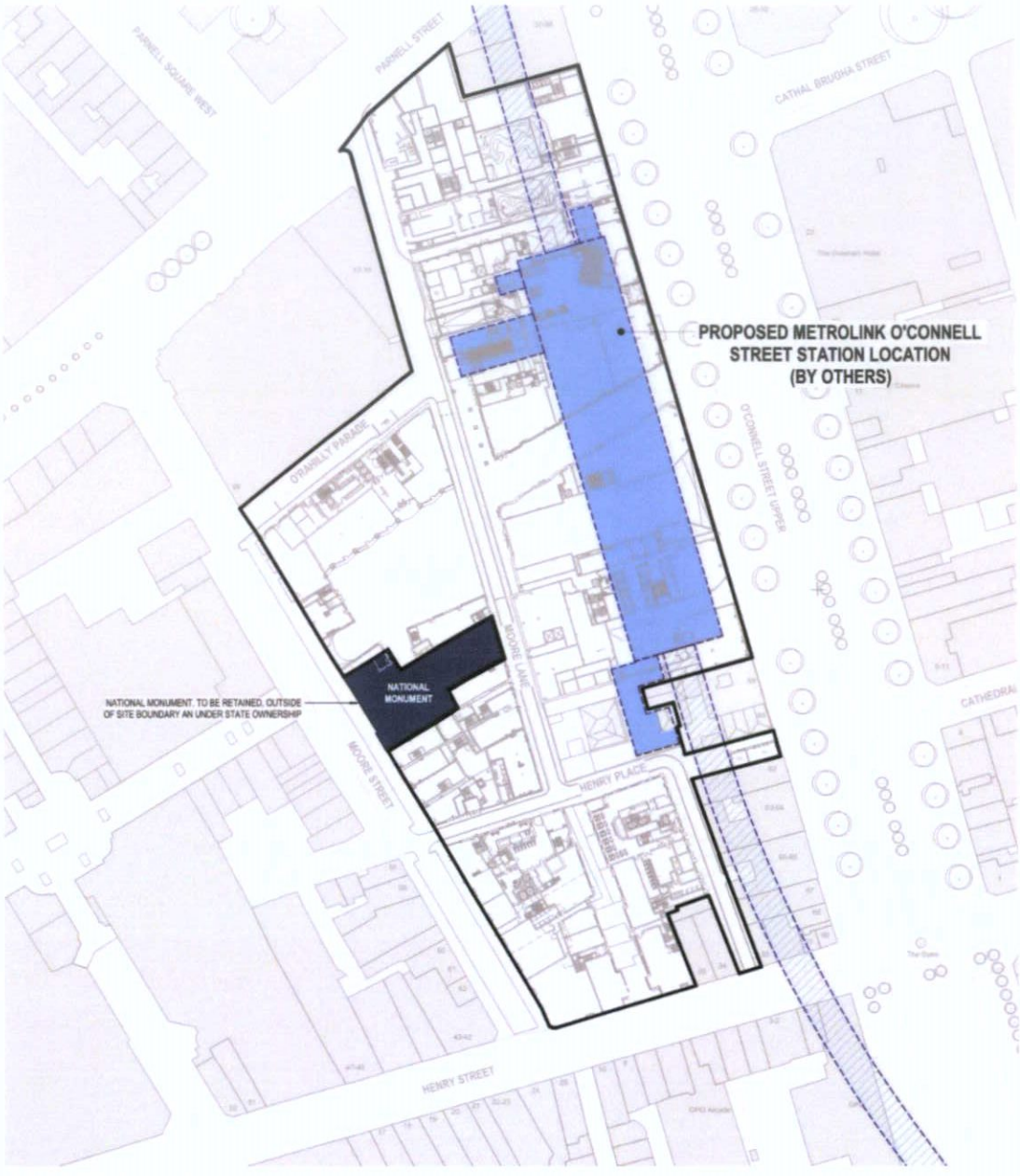

Figure 13.11: Location Plan for Metrolink Station at O'Connell Street Upper.

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 pf 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.

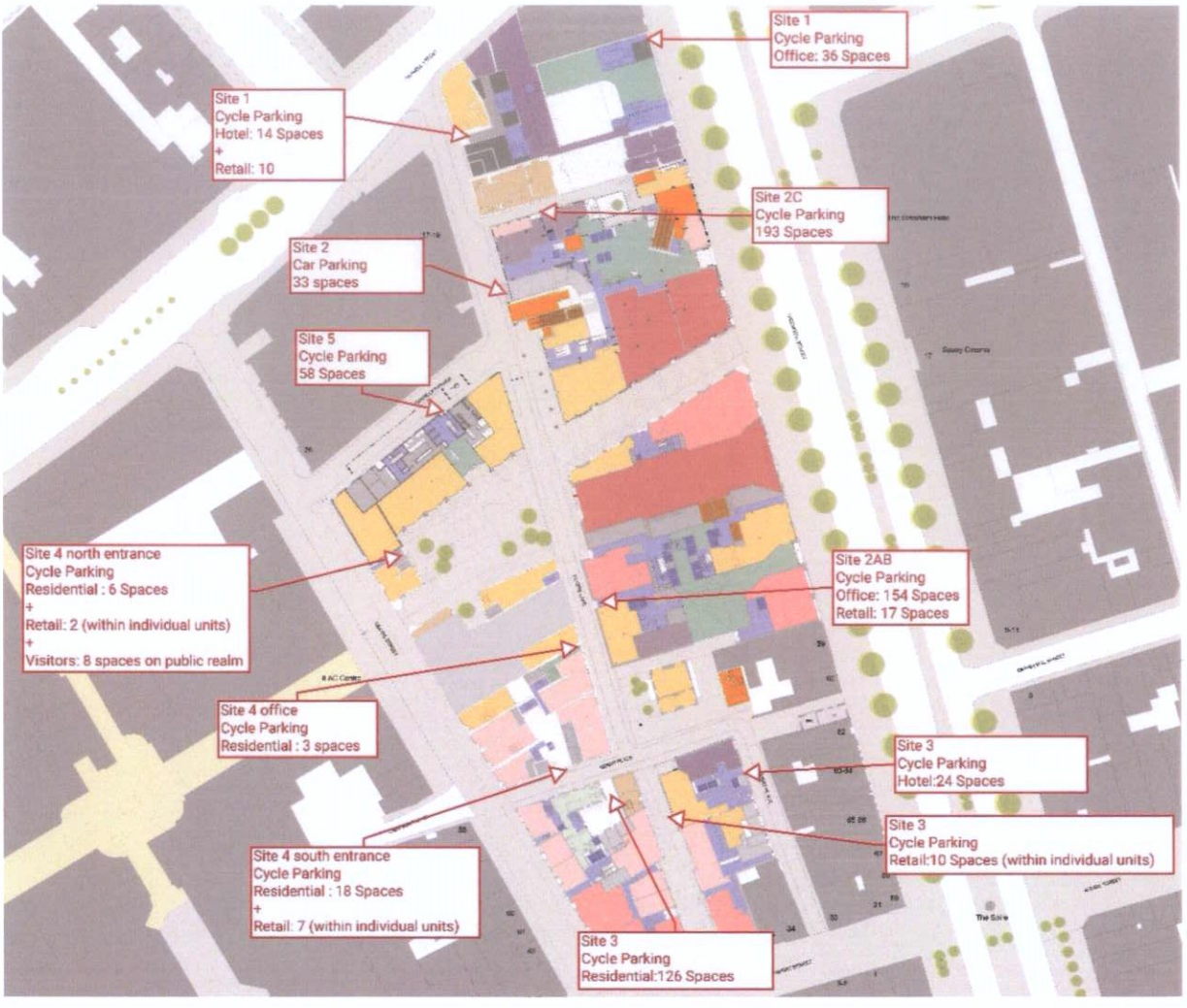

Figure 13.15: Access to Car and Cycle Parking.

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.

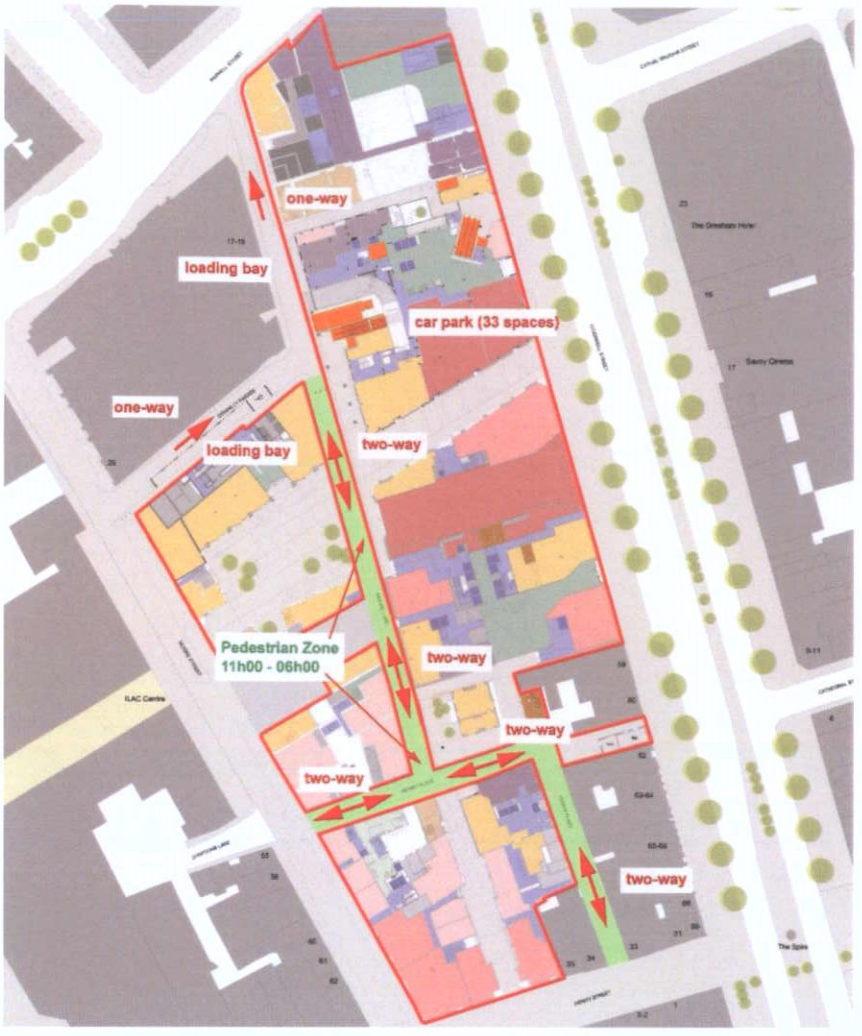

Figure 13.16: Street Layout – Proposed.

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 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 13.16. 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 ate 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.

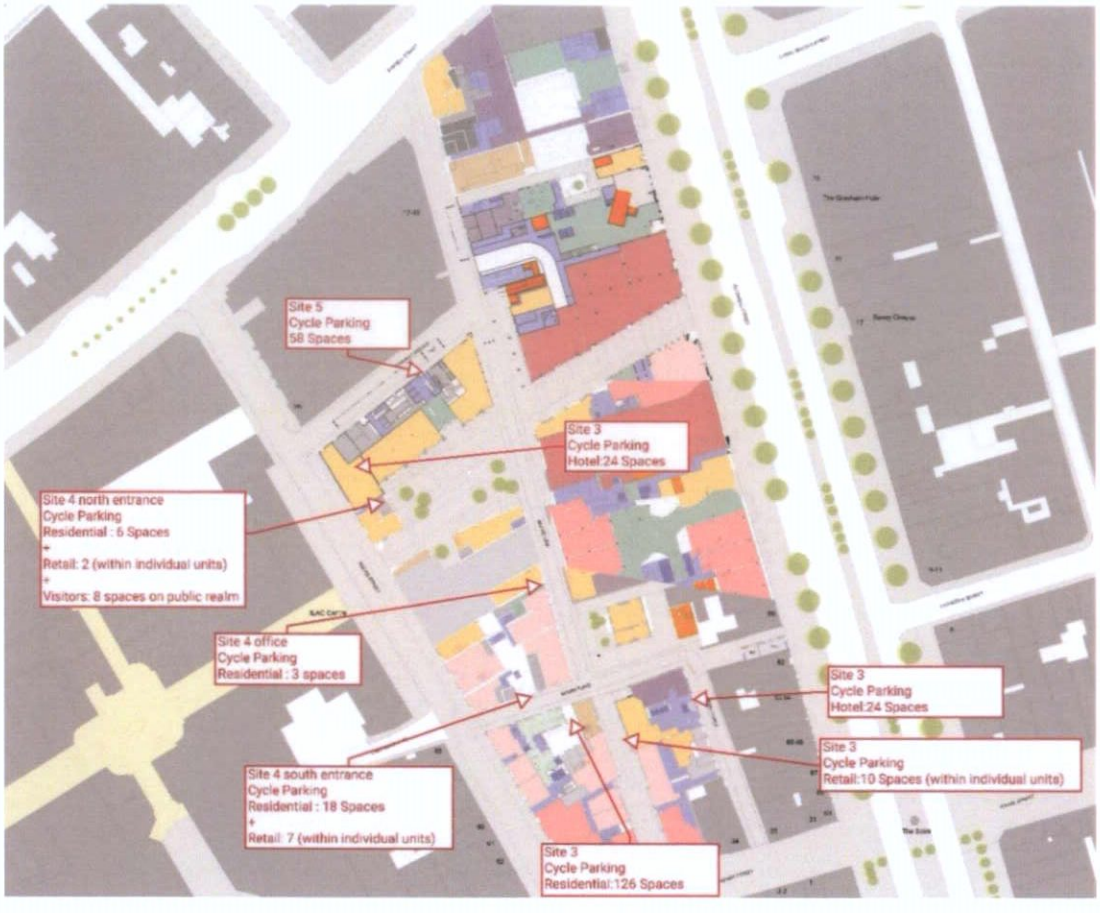

Figure 13.18: Access to Cycle Parking

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.

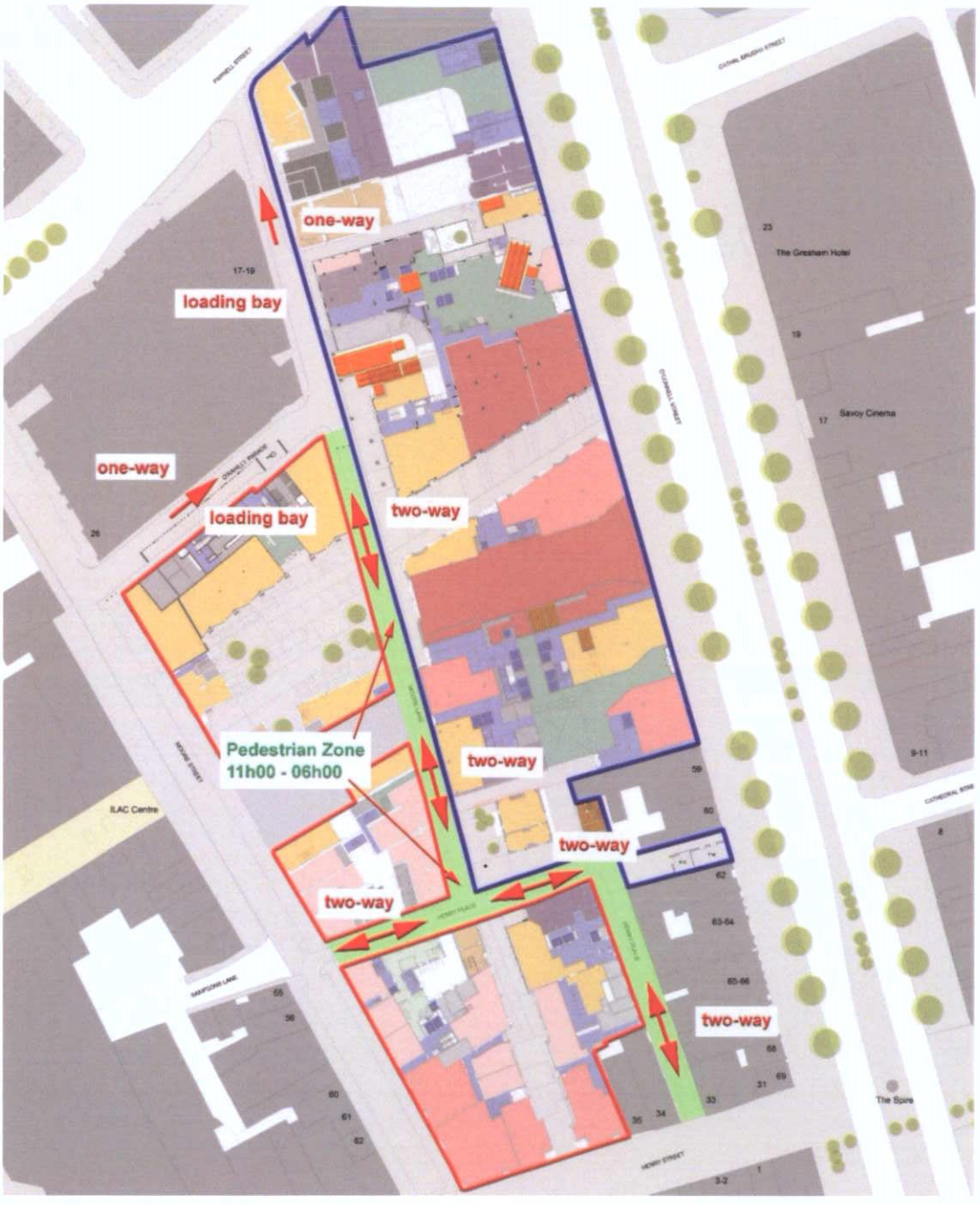

Figure 13.19: Street Layout – Proposed. Proposed Development outlined in red – future development outlined in blue.

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.

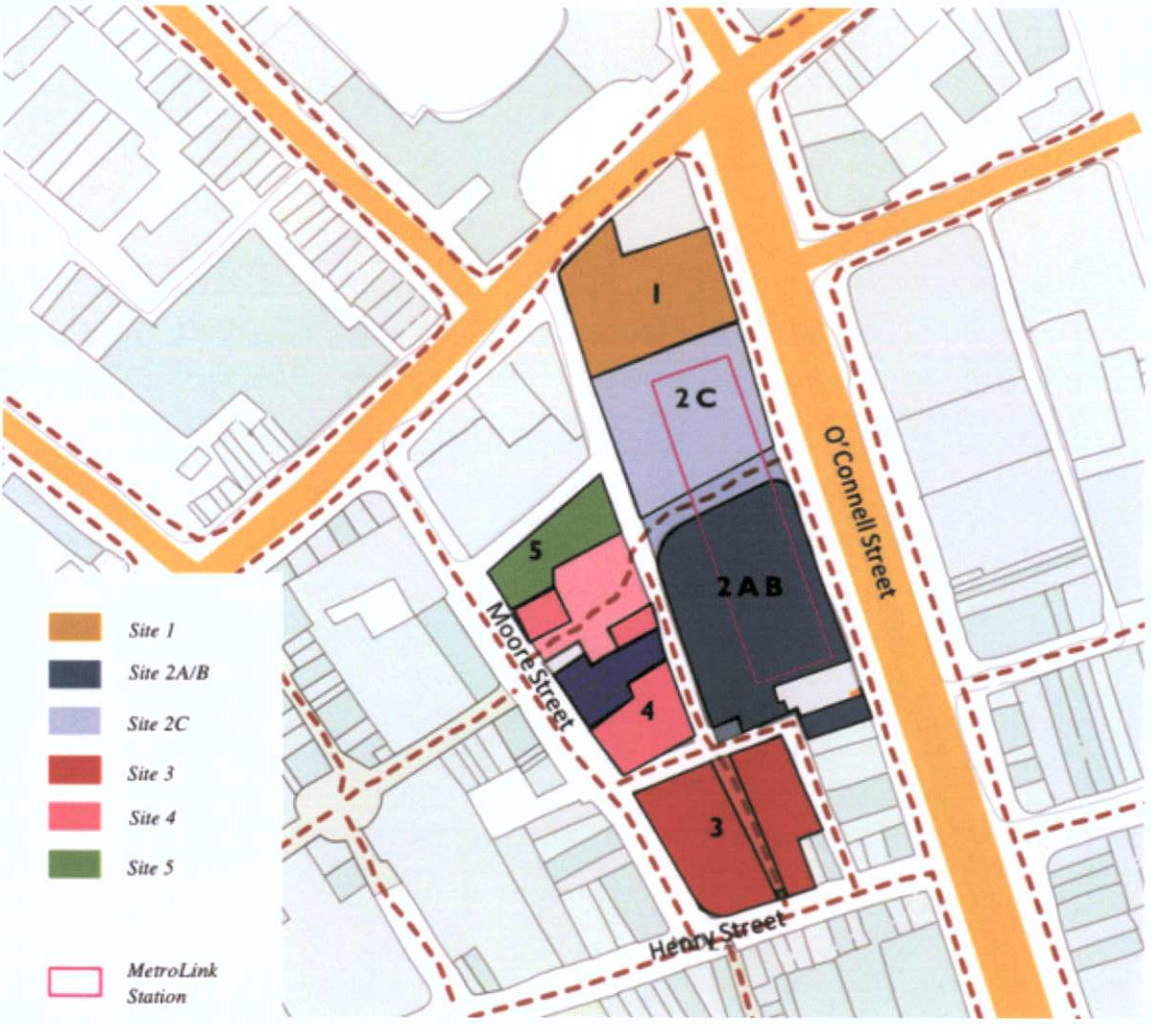

Figure 13.20: Construction Phasing

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.

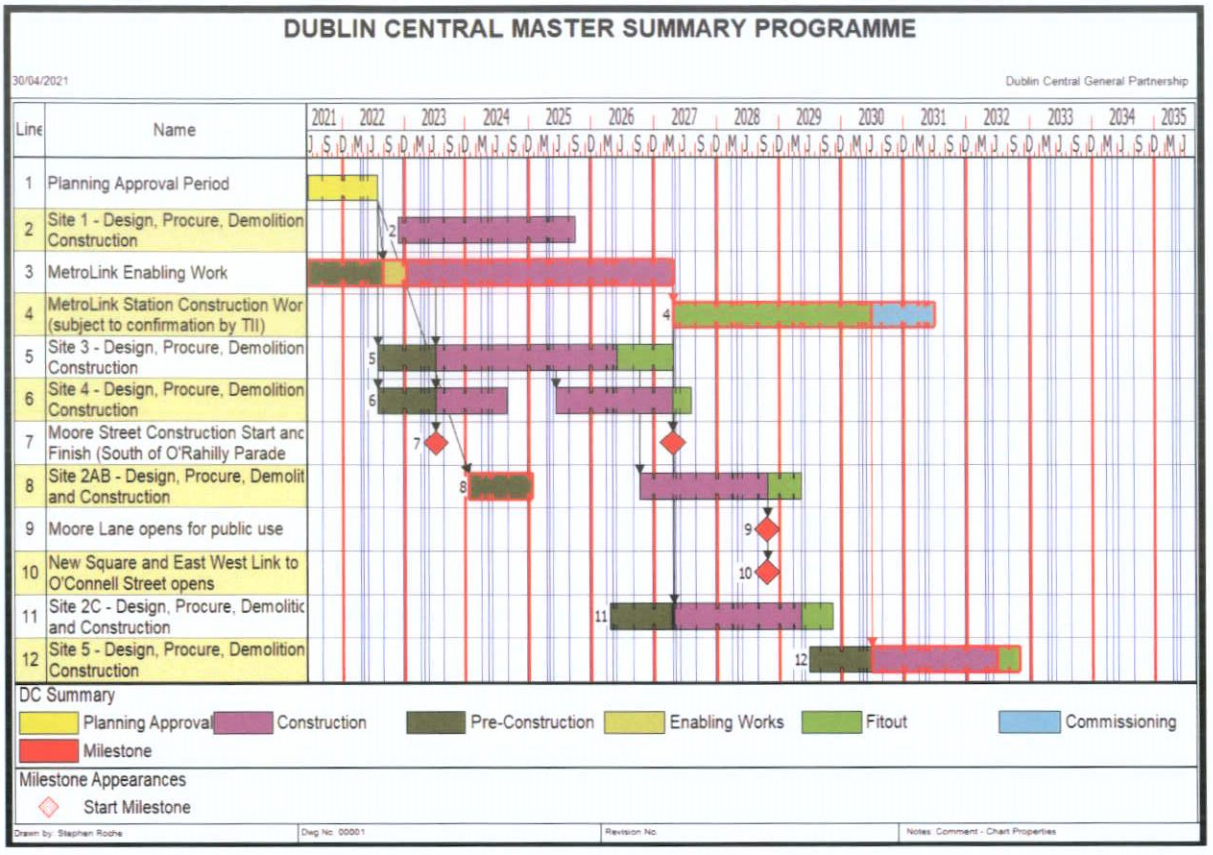

Figure 13.21: Construction Program.

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 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.