



Dublin City Centre Transport Study

EXECUTIVE SUMMARY

Consultation Document June 2015



Comhairle Cathrach
Bhaile Átha Cliath
Dublin City Council



Údarás
Náisiúnta Iompair
National Transport Authority

An aerial photograph of a city street intersection, likely in Dublin. A railway bridge with multiple tracks runs diagonally across the frame. Below the bridge, there are tram tracks and a road with several vehicles, including a red double-decker bus. The surrounding area includes various buildings, some with multiple stories, and a green park area. The image has a blue tint and a white geometric border framing the text.

"The Study seeks to address the imminent transport issues facing the core city centre area, to facilitate the implementation of the Dublin City Council Development Plan, and to safeguard the future growth of the city."

*"In 2014, there were circa **192,000** journeys into the City Centre each weekday in the peak morning period alone (7am to 10am). By 2023, it is anticipated that Dublin City Centre will have to cater for an additional **42,000** journeys in the morning peak, an increase of over **20%.**"*

Introduction

As Ireland's economic recovery continues, it is essential that Dublin, as the main economic driver of the state, is primed to cater for the consequent growth in activity. In 2014, there were circa 192,000 journeys into the City Centre each weekday in the peak morning period alone (7am to 10am). By 2023, it is anticipated that Dublin City Centre will have to cater for an additional 42,000 journeys in the morning peak, an increase of over 20%. It will not be possible, or desirable, to cater for this growth in demand by car – instead the increase will have to be accommodated by public transport, cycling and walking.

This Study, focusing on the period 2015-2023, provides a platform for the implementation of the policies and objectives already set out in the current Dublin City Development Plan. Chapter 5 of the Development Plan states that

“Dublin City Council will seek to achieve modal share targets crossing the canals of 55% for public transport, 15% for cycling, 10% for walking and 20% for private car use in the annual cordon count by 2017.”

The Study seeks to address the imminent transport issues facing the core city centre area, to facilitate the implementation of the Dublin City Council Development Plan, and to safeguard the future growth of the city, both in terms of general economic development and more specifically in terms of new transport infrastructure. The Luas Cross City project, which will provide a critical north-south public transport alignment through the city, will impact on road space, junction capacity and existing public transport usage within the city. The construction and operation of Luas Cross City will require a significant reconfiguration of current transport arrangements. This study addresses these issues, as well as proposing measures to counter long-standing constraints of the existing City Centre transport network. This will ensure that capacities are in place to meet the demands of

future growth in the City, as well as optimising the use of the City Centre's limited road space to maximise the benefits for people living, working and visiting Dublin City Centre.

The key objectives of this Study, developed in partnership by Dublin City Council and the National Transport Authority (NTA), are to:

1. Protect the investment that has been, and continues to be made in public transport across the city;
2. Guarantee the future development potential of the City Centre, and improve confidence in the ability of the City Centre to be the key focus of future investment;
3. Increase the capacity, reliability and use of public transport into and within the City Centre;
4. Improve the quality of service for cycling and walking, with particular emphasis on the 'core' City Centre;
5. Ensure that the city develops in a way which will provide a better living and working environment for residents and visitors alike; and,
6. Provide an agreed framework for continued transport investment within the City Centre.

Between 2010 and 2015, funding of approximately €97 million was provided by the NTA to Dublin City Council for transport infrastructure in the city. A myriad of projects were delivered under this funding programme, spanning bus infrastructure, road resurfacing, cycling and walking schemes, along with Real Time Passenger Information (RTPI) and traffic management systems.

It is envisaged that over the lifetime of this study, around €150 million will be made available to Dublin City Council to enable the delivery of the proposals set out in this study. This is in addition to the €368 million already committed to the Luas Cross City and other projects such as rail improvement and bus fleet investment.

Current Travel Patterns

Dublin City Council, in conjunction with the NTA, carries out annual monitoring of traffic crossing the canals. Details of this survey are set out in the main text of this Study and in particular demonstrate the relative importance of the bus as a means of transport into the City Centre, the significant growth of cycling in recent years (114% increase 2006-2014), and the steady decline in the use of the private car (17% decrease 2006-2014).

The overall mode share for car is now 33%, while 48% of people now travel into the City Centre by public transport and 16% walking or cycling. The table below provides details of the number of people crossing the Canal Cordon each day from 2006 to 2014.

Means of Travel	2006	2007	2008	2009	2010	2011	2012	2013	2014
Bus	59,874	57,201	60,438	56,168	50,420	54,251	52,007	56,177	56,671
Rail	33,534	35,692	32,324	25,723	23,580	22,932	23,999	24,969	24,866
LUAS	9,029	9,171	9,242	8,776	9,111	9,949	10,014	10,835	11,670
All Public Transport	102,437	102,064	102,004	90,667	83,111	87,132	86,047	91,981	93,207
Car	76,850	71,597	67,732	71,043	71,978	69,681	68,626	68,072	64,169
Taxi	1,453	2,154	1,930	2,739	2,260	2,674	3,271	3,111	2,775
Walk	17,114	18,594	18,360	14,618	15,092	14,551	17,070	17,495	19,711
Cycle	4,839	5,676	6,143	6,326	5,952	6,870	7,943	9,061	10,349
Goods	2,291	1,445	1,223	1,087	993	1,176	1,099	1,045	1,087
Motorcycles	2,395	2,429	2,375	2,060	1,656	1,485	1,425	1,423	1,372
Total Person Trips	207,379	203,959	199,767	188,540	181,042	183,569	185,481	192,188	192,670



Principles

The Guiding Principles that underpinned the development of this Study are as follows:

Principle 1	To protect the investment that already has been, and continues to be, made in public transport in the city.
Principle 2	To increase the capacity for the movement of people and goods into and within the City Centre, and facilitate efficient and effective goods delivery.
Principle 3	To develop a safer City Centre for all transport modes and users
Principle 4	To improve accessibility and permeability to, and within, the City Centre for pedestrians, cyclists and public transport users, while also maintaining an appropriate level of access for vehicular traffic for commercial and retail purposes.
Principle 5	To make it easier for people to use the transport networks.
Principle 6	To provide opportunities to enhance the Public Realm through transport interventions in the City Centre.

To develop specific transport proposals, this Study developed an overarching approach on how to best reconfigure Dublin's transport network into an efficient and effective system, capable of catering for the future transport needs of the city. This 'Network Framework'

analysed and developed each mode as an individual network – bus, rail, cycling, pedestrian and vehicular – whilst ensuring that the finalised transport proposals are not developed in isolation, but rather as elements of an integrated transport system for Dublin City Centre.

"The overall mode share for car is now 33%, while 48% of people now travel into the City Centre by public transport and 16% walking or cycling."

Traffic Network Proposals

Traffic patterns in Dublin have changed over the last 10 years with new bridge and road infrastructure in place, and with an increasing number of people now choosing public transport, walking and cycling as their mode of transport. More people now reside within the City Centre, and there is a strong desire to ensure that Dublin develops into a more liveable city, where the impact of traffic is minimised.

With the economic upturn there is now evidence of increased volumes of traffic on the radial approaches to Dublin and on the M50. As the economy continues its recovery and employment rises, without positive intervention, increased congestion and longer journey times on the key routes to Dublin City, and within the City Centre itself, will become an increasing feature of the City.

Significant traffic changes have already been introduced to facilitate Luas Cross City construction works. Following the commencement of passenger services in 2017 Luas Cross City will have a major impact on street and junction capacity, and will necessitate further substantial changes to the traffic network. Luas Cross city will include extensive sections of shared running from Dawson Street to O'Connell Street, and without careful design there is a danger that Luas trams will be caught up in traffic congestion, and that the service reliability will be prone to disruption due to general traffic.

Similarly, only sections of the bus network in the City Centre are segregated from general traffic. As such, there are frequently delays, with the reliability of the bus network affected by any incidents, events or accidents which cause general traffic to be delayed.

A rebalancing of the available road space will be required on various streets to facilitate the introduction of additional capacity for public transport, cycling and walking. Significant changes to the traffic network in the City Centre will be necessary, with the objective of guaranteeing that the overall transport system is capable of operating efficiently and reliably, with consistent journey times. These changes will ensure that:

- The current and planned future investment in public transport is protected in order to safeguard the benefits of the investment;
- Public transport will operate efficiently and reliably;
- The passenger carrying capacity of public transport can be increased into the future, enabling more people to travel into and within the City Centre; and,
- Cycling and walking provision will be enhanced and that significant public realm improvements can be advanced.

"More people now reside within the City Centre, and there is a strong desire to ensure that Dublin develops into a more liveable city, where the impact of traffic is minimised."

The alterations necessary to ensure that the City can achieve the requirements of the Development Plan and the objectives set out above include:

- Conversion of certain streets to public transport/ cycling/pedestrian access only to enable improved bus, tram, cycle and pedestrian movement around the central area;
- Removal of through-traffic which currently traverses the central area, thereby releasing certain road space to other modes of transport. This will be achieved through reinforcement, and enhancement, of orbital movement, beginning on the approaches to the M50 and utilising the M50 and the other orbital routes towards the canals;
- Rationalisation of car parking access/egress and car park locations, while retaining appropriate and adequate car parking for retail and commercial functions;
- Introduction of a City Centre Zone for managing deliveries within the City Centre; and,
- Expansion and associated rationalisation of City Centre taxi ranks.



Bus / BRT Proposals

The key objective in relation to the bus network is to safeguard the efficiency of the bus operating environment in the context of Luas Cross City and increased congestion, as well as enabling the bus network to transport a significantly increased number of commuters, shoppers and visitors into Dublin City each day.

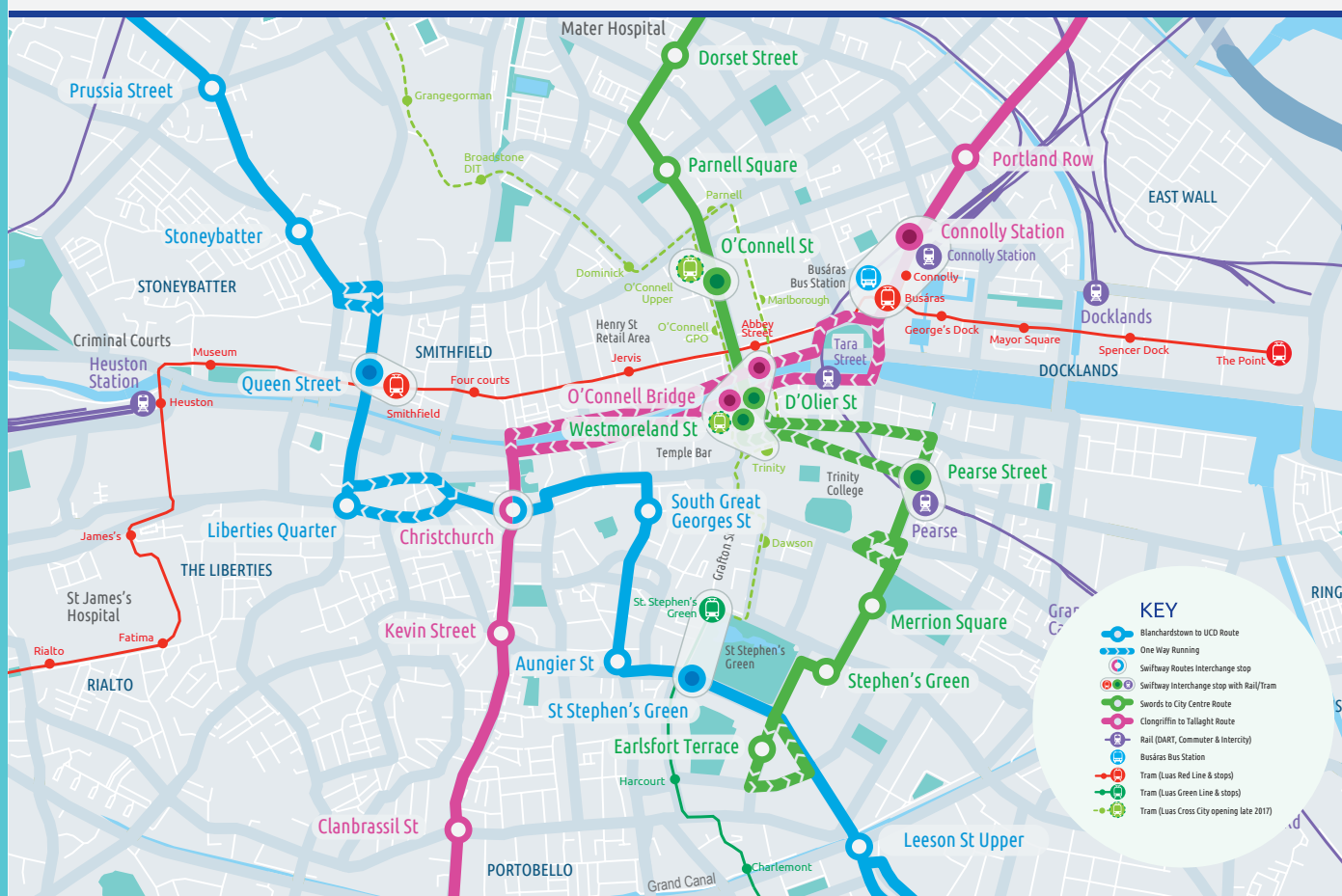
To achieve this objective it is proposed:

- To increase the passenger carrying capacity of the bus network, including the enlargement of the bus fleet, with additional services to be provided on existing busy routes, plus the introduction of new routes;
- To maximise the performance of the bus network by ensuring that sufficient road capacity and junction priority are provided to allow buses to operate efficiently, with reliable and predictable journey times;
- To introduce high capacity Bus Rapid Transit (BRT) style services along specific routes; and,
- To further optimise the routing of the bus corridors through the City Centre area, improving interchange arrangements and optimising the efficiency of the service.

Proposed changes, both in the City Centre and the wider Greater Dublin Area, will make public transport, and in particular bus, a more attractive option for many users, facilitating a mode shift away from the private car for all trip purposes, particularly commuting.



City Centre Network Map



Rail Network Proposals

Although the primary mode of public transport in the Dublin region is bus, rail based transport still plays a significant role. Based on the 2014 Canal Cordon survey, 12.9% of the trips each morning are by train (DART/Commuter) while 6.1% are by Luas.

While proposals have been advanced for underground rail/metro services, it is unlikely that such services will be operational during the period of this Study. Nevertheless, rail transport will continue to play an important role in transporting passengers into and out of the city each day.

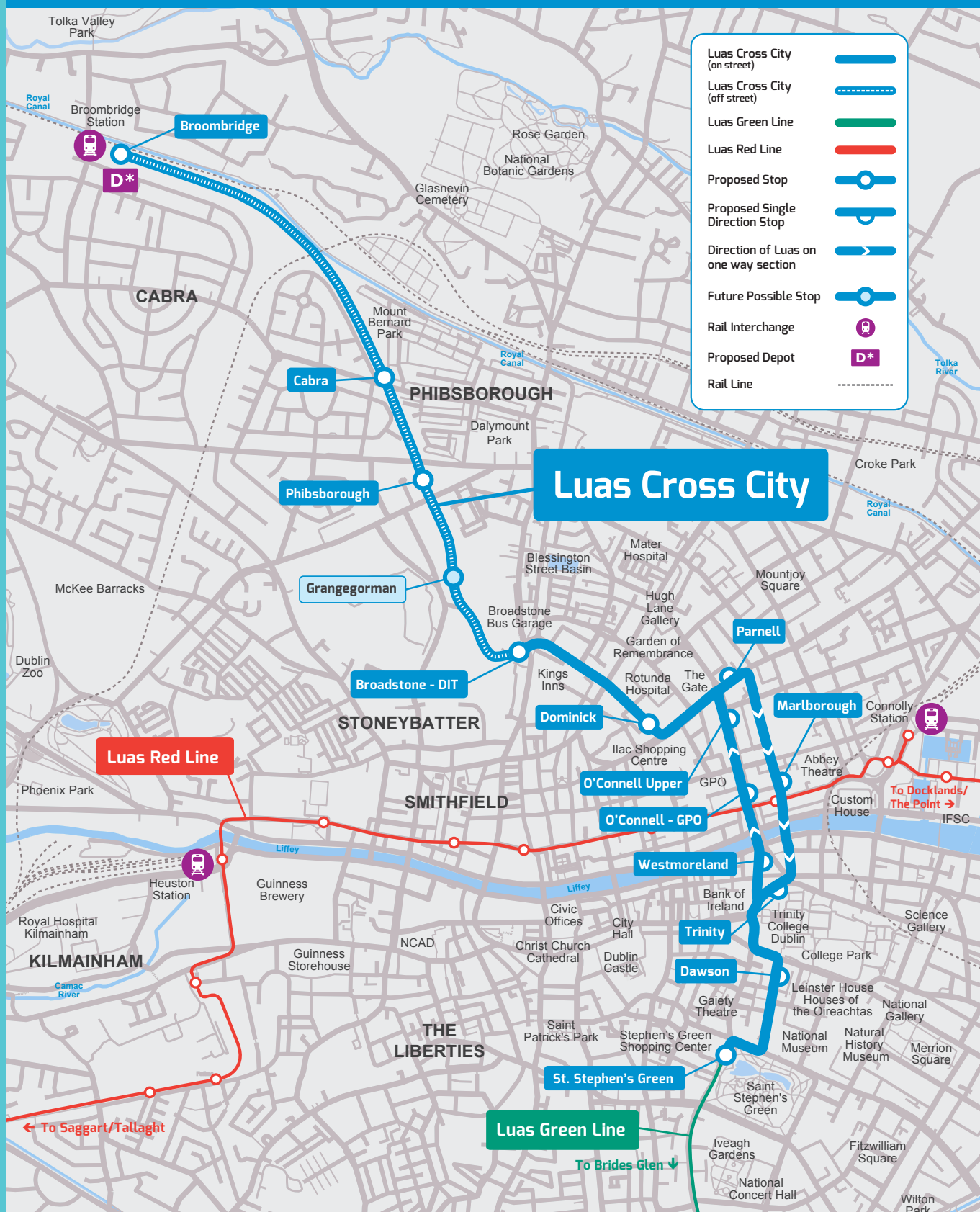
To support the implementation of improved rail provision, it is intended:

- To facilitate the introduction of passenger services on Luas Cross City, currently under construction;
- To increase the frequency and carrying capacity of the DART Service;
- To facilitate the introduction of passenger services on the Phoenix Park Tunnel Link, which will become operational in 2016; and,
- To enhance interchange opportunities between rail services and other public transport modes.



LUAS CROSS CITY ROUTE MAP

St. Stephen's Green - Broombridge



Cycling Network Proposals

While a number of significant cycling schemes have been implemented in Dublin City in recent years, and further projects are already either in design or moving to construction, the development of a high quality, safe cycling network is a key objective of Dublin City Council and the NTA.

A core cycle network has been defined, based upon the Greater Dublin Area Cycling Network Plan published in 2013, which will provide high quality cycle facilities into and through the City Centre. It is intended that many of the key cycling routes will be developed as segregated facilities, with cyclists separated from vehicular traffic.

The cycling proposals set out in the Study include:

- Development of key Primary Cycle Routes from the Greater Dublin Area Cycle Network Plan to form the strategic cycle network for the City Centre area - this will be aligned with the development of the overall Greater Dublin Area Cycle Network;

- Where appropriate, segregated cycle ways (i.e. physically separated from vehicular lanes) will be developed, and when this is not possible, alternative measures will be implemented to enhance the safety of cyclists (e.g. lower speed roads, vehicle restrictions etc.);
- Where possible, one-way streets will be made two-way for cyclists, most likely through the introduction of contraflow cycling;
- Land use 'cells' within the City Centre will be cycle friendly; and,
- The location and security/design of cycle parking will be considered in the design of the City Centre network.

"the development of a high quality, safe cycling network is a key objective of Dublin City Council and the NTA."



Pedestrian Network / Public Realm

The pedestrian environment serves all users, including residents, commuters, tourists and shoppers. It must serve a range of needs, including catering for the heavy flows of commuters moving to and from work every day. The need to grow the public transport network will increase the pedestrian flows within the City Centre and will require additional footpath space.

A core pedestrian network, based on the network outlined in Dublin City Council's Development Plan, is proposed, highlighting the key strategic pedestrian corridors which should be designed to prioritise the ease of pedestrian movement and activity. This core network will have to provide a high quality of pedestrian facilities, with a corresponding level of priority given to pedestrian movements at junctions. It is proposed that, as an outcome of this Study, the following measures will be implemented:

- Development of a defined 'strategic' pedestrian network, which sets out pedestrian priority routes within the City Centre pedestrian environment;
- Wider footpaths at important locations and pedestrian priority at key junctions;
- Provision for tourists by linking key Dublin tourist destinations into the 'strategic' network;
- Ensure that the needs of mobility impaired and disabled pedestrians are considered in the design of new facilities;
- Good signage, surfaces and lighting;
- The removal of unnecessary street clutter to facilitate ease of movement for pedestrians and the mobility impaired; and,
- Where possible, pedestrian friendly areas of public open space to be established and enhanced. This will be cognisant of the public open spaces identified in the City Council's Public Realm Strategy.



Specific Measures

This Study sets out a number of individual scheme proposals which are central to achieving the network objectives outlined above. The implementation of the specific transport proposals will provide a basis upon which to reconfigure the physical layout of the core City Centre area, thereby improving social and commercial opportunities, and providing a basis for an enhancement of the public realm of the City Centre.

The locations of the City Centre site specific schemes are illustrated in the map overleaf and an overview of the specific proposals are set out in the subsequent sections.

College Green

College Green forms an important part of the city's north-south public transport corridor. The introduction of Luas Cross City, together with the need to cater for increasing levels of cycling and pedestrian movement through this area, will reduce the traffic lanes to effectively one lane in each direction. Arising from this it is proposed to:

- Extend the current "bus gate" to operate on a 24-hour basis, restricted to Luas, bus, cyclists and pedestrians – cars, vans and taxis will be excluded;
- Provide enhanced cycling facilities through this key link;
- Widen footpaths to the extent practicable; and
- Facilitate the development of a major civic space at College Green.

A photomontage of a possible layout of College Green is set out below.





1 COLLEGE GREEN

Widened footpaths, cycle lanes, Luas and reduction in lanes to one in each direction. No private cars or taxis.



2 WESTMORELAND STREET

Widened footpaths, Luas, cycle lanes, two bus/BRT lanes and local access.



3 D'OLIER STREET

Wide central median to provide additional bus stops to ease congestion. Cycle lanes, three bus/BRT lanes and local access.



4 SUFFOLK STREET & ST. STEPHEN'S GREEN NORTH

To be pedestrianised.



5 BACHELOR'S WALK

Only Buses, Taxis, Cyclists and Pedestrians. No private cars. Arrangements for deliveries and local access will be provided.



6 GEORGE'S QUAY

Only Buses, Taxis, Cyclists and Pedestrians. No private cars. Arrangements for deliveries and local access will be provided. (NOTE: This location is indicative and alternative locations on the South Quays will be assessed).

Westmoreland Street

The proposed changes to the College Green Bus Gate mean that Westmoreland Street will cease to be a through route for car traffic, providing an opportunity to reconfigure Westmoreland Street. While local access traffic will still be able to enter the street through D'Olier Street, the reduction in vehicular traffic means that more of the current road space can be given over to providing a high quality pedestrian environment, as well as segregated cycling facilities. The footpaths on Westmoreland Street and O'Connell Bridge will be substantially widened to mirror the existing footpath widths on O'Connell Street, and the removal of the left turn from Westmoreland Street to Aston Quay will eliminate a major source of conflict between pedestrians and vehicles on this thoroughfare.

The redevelopment of Westmoreland Street will provide a premium walking environment along one of the most prominent streets in the city, providing an enhanced linkage between the city's two principal commercial centres of Henry Street / O'Connell Street and the Grafton Street Quarter. The inclusion of cycle facilities,

bus and Luas Cross City stops, together with a proposed BRT stop, will ensure the street remains one of the city's most accessible locations. A photomontage of what a re-designed Westmoreland Street could look like is illustrated below.

D'Olier Street

The reconfiguration of D'Olier Street will see the street developed into a key bus interchange location, with the introduction of a new median which will accommodate additional bus stops, with a new BRT stop proposed on the eastern side of the street. Footpath widening, tree planting and other streetscape improvements, will also make the street a much more attractive place. Coupled with the bus gate changes in College Green, and the transformation of Bachelors Walk into a public transport, cycling and pedestrian only corridor, car through traffic will be removed from D'Olier Street, with only local access traffic permitted. Safe, segregated cycling facilities will be provided on the west side of the street. A photomontage of a re-designed D'Olier Street might look like is illustrated below.

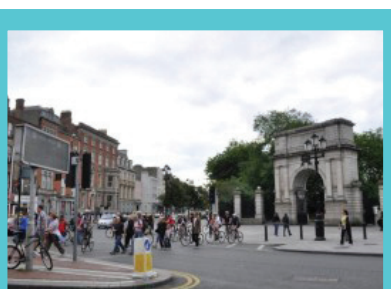


Suffolk Street

The construction of Luas Cross City requires the re-design and reorientation of street space in College Green and Grafton Street Lower. This reconfiguration of the movement of public transport opens up the opportunity of pedestrianising Suffolk Street, extending and complementing the Grafton Street commercial area. A photomontage of a pedestrianised Suffolk Street is shown below.

St Stephens Green North

The changes arising from Luas Cross City, including the implementation of new access arrangements to the RCSI and St Stephen's Green Car Parks via St Stephens Green South, means a new civic space could be created on St Stephen's Green North between its junctions with Dawson Street and extending to Glovers Alley on St Stephens Green West. A photomontage of a possible layout is shown below.



North Quays / South Quays

The north and south Quays allow direct routing of major volumes of traffic through the heart of the City Centre. Traffic volumes at the junctions on both sides of O'Connell Bridge are in the order of 70,000 vehicles per day (this equates to 60% of the traffic volumes using the M50 per day and the same as the daily volume on the N3 at Blanchardstown). Major conflicts arise between pedestrians and vehicles at these locations with almost 100,000 pedestrians also using this area on a daily basis.

Given the need to cater for the new Luas Cross City service and an increased level of bus service, in addition to the development of the Liffey Cycle Route and the provision of better pedestrian facilities, it is intended to reconfigure Bachelors Walk as a public transport, cycling and pedestrian only corridor. This will require the diversion of general car traffic from Bachelors Walk between its junction with Jervis Street and its junction with O'Connell Street.

Mirroring the arrangements on the north Quays, it is proposed to introduce a public transport, cycling and pedestrian only link along the south Quays, at either Aston Quay, Burgh Quay or Georges Quay, depending on the outcome of more detailed analysis. General through traffic will be rerouted around the central area, circumnavigating this currently congested area of the city.

Removing private vehicle traffic from these areas, will dramatically improve the environment of this area, allowing

a more integrated central city area to develop, with a greater level of connection between areas north and south of the river. It will also significantly enhance bus, cycle and pedestrian arrangements along the Quays and resolve some of the major problems that currently exist.

Interchange Locations

Central to improving public transport provision in Dublin City is the concept of interchange, where passengers can easily change between different public transport services. To facilitate this, some key locations will act as strategic public transport interchanges, enabling convenient transfer between modes and services. These include the following locations.

Connolly Station / Busaras

The area of Amiens Street and Store Street represents, informally, the biggest public transport hub in the city, with Connolly Train and DART Station, Luas Red line and Busaras Intercity and Commuter bus station all located at this focal point. It is proposed to prepare a Masterplan, potentially as part of an international design competition, which will seek to enhance this area, and improve the interchange potential which is currently poor at this location. Options that will be considered include:

- The possible removal of the Connolly Luas Stop and the potential reuse of this area as a Commuter Bus Terminus;

"Traffic volumes at the junctions on both sides of O'Connell Bridge are in the order of 70,000 vehicles per day (this equates to 60% of the traffic volumes using the M50 per day and the same as the daily volume on the N3 at Blanchardstown)."

- A potential overhead walkway to link Connolly Station to Busaras and Luas
- The enhancement of the public realm in this sensitive area of architectural heritage; and
- Complementary changes to the traffic arrangements on Beresford Place / Memorial Road.

Heuston Station

Heuston Station is already a key interchange location between trains, bus and Luas. It is proposed to develop a new multi-story car park in its environs which would serve intercity train users as well as commuters accessing public transport options at Heuston Station. This provision will be linked with possible changes to road access arrangements that may be developed as part of a new local area plan for the Heuston area.

Westmoreland Street / D'Olier Street

The previously proposed changes to Westmoreland Street and D'Olier Street will enable those streets to act a focus point for transport services, with convenient connection between Luas, BRT, Bus plus DART and rail services at Tara Street.

Dockland Bridges

As part of the Docklands Strategic Development Zone, three new bridges are proposed: two new pedestrian/cycle-only links across the River Liffey and a new road-

bridge linking Thorncastle Street (Ringsend) to Sir John Rogerson's Quay – across the mouth of the River Dodder. These new links will facilitate greater connectivity between the north and south Quays in this area, including access to public transport, as well as providing a new road link into the Ringsend area.

Coach Parking Facilities

It is intended to remove a large amount of the current bus and coach layover in the City Centre (particularly a feature of areas of architectural heritage – Mountjoy Square, Merrion Square, Marlborough Street) through the provision of an off-street / easy-access Coach Parking Facility close to the City Centre, providing rest and convenience facilities for drivers.

City Centre Taxi Ranks

There is a demand for additional taxi rank capacity beyond what currently exists, and, it is proposed to identify opportunities to extend taxi rank provision within the City Centre area. This Study proposes that a review of taxi rank provision will be undertaken, considering full-time or night-time only rank locations, as well as new opportunities such as the use of off-street facilities (e.g. existing multi-storey car parks), as large scale taxi depots / ranks, operated in a similar fashion to the taxi facility successfully serving Dublin Airport.



Outcomes

The implementation of the proposals set out in this study will result in positive outcomes for the City, providing long-term transport, tourism, commercial/retail and public realm benefits for the City Centre.

These benefits are listed below, and set out in more detail in Chapter Eleven of the main report:

- **Future Proofing the City** – building on the existing and future investment in public transport within the city, and ensure that these assets are protected, and utilised appropriately into the future;
- **Realising key objectives of the City Development plan;**
- **Facilitating New Transport Infrastructure** – in particular ensuring that the City Centre road network has been modified to adequately cater for the future operation of Luas Cross City and the BRT / Bus Network;
- **Improved Efficiency** – of overall transport efficiency by optimally using scarce City Centre road space, allowing more people to access more parts of the city more easily;
- **Improved Environment, Urban Realm and Ambience** - enhancing the streetscape of the City Centre and freeing up more space where people can walk, shop, socialise and appreciate their surroundings; and,
- **Tourism, Commercial and Retail Benefits** - improving the overall commercial/retail and tourist environment, with additional transport capacity for shoppers and visitors and a vastly improved linkage between the core shopping areas on the north and south sides of the city.



"...building on the existing and future investment in public transport within the city, and ensure that these assets are protected, and utilised appropriately into the future..."

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