Ringsend to City Centre Core Bus Corridor Scheme

February 2023

Preferred Route Option Report

BUS CONNECTS

SUSTAINABLE TRANSPORT FOR A BETTER CITY.

Contents

Glossary of Technical Terms

Bus Gate – A Bus Gate is a sign-posted short length of stand-alone bus lane. This short length of road is restricted exclusively to buses, taxis and cyclists plus emergency vehicles. It facilitates bus priority by removing general through traffic along the overall road where the bus gate is located. General traffic will be directed by signage to divert away to other roads before they arrive at the Bus Gate.

Carbon - The term Carbon is used to refer to carbon emissions or Green House Gas Emissions interchangeably'

Cycle Lane – A cycle lane is a lane on the carriageway that is reserved either exclusively or primarily for cycling and is separated from general traffic or bus lanes by road markings.

Cycle Track – A cycle track is a separate section of the road dedicated for cycling only. This space will generally be isolated from other vehicular traffic by a physical kerb.

Greenway – A greenway is a recreational corridor for non-motorised journeys, developed in an integrated manner which enhances both the environment and quality of life of the surrounding area. These routes should meet satisfactory standards of width, gradient and surface condition to ensure that they are both user-friendly and low-risk for users of all abilities.

Protected Junctions - Refers to junctions, which provide physical kerb buildouts to protect cyclists through the junction. Due to the inherently complex nature of mixed mode movements at junctions, the provision for cyclists at junctions is a critical factor in managing conflict and providing safe junctions for all road users. As such, this is the preferred layout for signalised junctions as part of the Infrastructure Works where practicable.

Quiet Street Treatment – Where roadway widths cannot facilitate cyclists without significant impact on bus priority, alternative cycle routes are explored for short distances away from the bus route. Such offline options may include directing cyclists along streets with minimal general traffic other than car users who live on the street. They are called Quiet Streets due to the low amount of general traffic and are deemed suitable for cyclists sharing the roadway with the general traffic without the need to construct segregated cycle tracks or painted cycle lanes. The Quiet Street Treatment would involve appropriate advisory signage for both the general road users and cyclists.

Signal Controlled Priority - Signal Control Priority uses traffic signals to enable buses to get priority ahead of other traffic on single lane road sections, but it is only effective for short distances. This typically arises where the bus lane cannot continue due to obstructions on the roadway. An example might be where a road has pinch-points where it narrows due to existing buildings or structures that cannot be demolished to widen the road to make space for a bus lane. It works through the use of traffic signal controls (typically at junctions) where the bus lane and general traffic lane must merge ahead and share the road space for a short distance until the bus lane recommences downstream. The general traffic will be stopped at the signal to allow the bus pass through the narrow section first and when the bus has passed, the general traffic will then be allowed through the lights

Executive Summary

Introduction

The purpose of this report is to present an overview of the Preferred Route Option (PRO) for the Ringsend to City Centre Core Bus Corridor (CBC) Scheme as well as describing the options assessed, and changes made to the Proposed Scheme since the first non-statutory public consultation in early 2019.

The aim of the Ringsend to City Centre CBC Scheme is to provide enhanced walking, cycling and bus infrastructure on this key access corridor in the Dublin region, which will enable and deliver efficient, safe, and integrated sustainable transport movement along the corridor.

The objectives are to:

- Enhance the capacity and potential of the public transport system by improving bus speeds, reliability, and punctuality through the provision of bus lanes and other measures to provide priority to bus movement over general traffic movements.
- Enhance the potential for cycling by providing safe infrastructure for cycling, segregated from general traffic wherever practicable.
- Support the delivery of an efficient, low carbon and climate resilient public transport service, which supports the achievement of Ireland's emission reduction targets.
- Enable compact growth, regeneration opportunities and more effective use of land in Dublin, for present and future generations, through the provision of safe and efficient sustainable transport networks.
- Improve accessibility to jobs, education, and other social and economic opportunities through the provision of improved sustainable connectivity and integration with other public transport services; and
- Ensure that the public realm is carefully considered in the design and development of the transport infrastructure and seek to enhance key urban focal points where appropriate and feasible.

Scheme Overview & Assessment Process

The Ringsend to City Centre CBC runs along both sides of the River Liffey from the Talbot Memorial Bridge at the Customs House in Dublin City Centre to the Tom Clarke East Link Bridge at the Point at the eastern edge of the city beside Dublin Port. The route runs along the north and south quays of the River Liffey and includes the proposed Public Transport Bridge across the River Dodder and the entrance to Grand Canal Dock at Britain Quay. The Proposed Scheme also includes the provision of a cycling route to join with the East Coast Trail through Ringsend and Irishtown and to serve the Poolbeg Strategic Development Zone lands to the east of Seán Moore Road. The entire study area lies within the administrative area of Dublin City Council.

The Proposed Scheme includes the provision of continuous bus lanes in both directions on the existing bus corridor along the north quays from Matt Talbot Memorial Bridge to the Tom Clarke East Link Bridge.

A new bus corridor will be created along the south quays of the River Liffey with a new link across the River Dodder to Ringsend. Only limited bus priority is required along the south quays as there is little traffic due to the local access nature of much of the route. Bus priority will consist of intermittent westbound bus lanes and signal controlled priority along other sections. Eastbound, buses will join the

south quays via Samuel Beckett Bridge, and will share the general traffic lane on Sir John Rogerson's Quay Extension to the proposed Dodder Public Transport Opening Bridge, which forms part of the Proposed Scheme.

Continuous two-way cycle tracks will also be provided along both sides of the river. A two-way cycle route will be provided through Ringsend from the Dodder Public Transport Bridge to Beach Road at Irishtown via a combination of quiet streets, shared paths through parkland and cycle tracks.

The length of the scheme is 1.6 km along each of the north and south quays for a combined total bus corridor length of 3.2 km, and the cycle route through Ringsend is a further 1.1 km in length, with an overall total scheme length of 4.3 km.

Where substantial revisions have been made to the design since the publication of the Emerging Preferred Route (EPR) Option in December 2017, options have been assessed using a Multi-Criteria Analysis (MCA) to determine the preferred option. The methodology used is consistent with that carried out during the initial route optioneering work which informed the EPR Option.

This additional assessment does not supersede the work done during earlier stages but rather builds on it and is a direct response to issues raised by the public during the non-statutory public consultation process and further design development. This assessment has also been carried out in the context of more detailed information now available, including topographical survey.

A full review was undertaken of the previous design proposals as published for the Emerging Preferred Route. This review was informed by additional technical information and the feedback received from the non-statutory Public Consultations. The review was undertaken in two Sections:

Section 1: Talbot Memorial Bridge to Tom Clarke East link Bridge over 1.6km

Section 2: East of Tom Clarke East Link Bridge (cycling route only) over 1.1km

The Emerging Preferred Route has been adjusted to adopt the following changes in the Preferred Route Option:

1) Continuous bus lanes to be provided in both directions on north quays. The EPR did not include a westbound bus lane on the north quays west of Samuel Beckett Bridge.

2) Scherzer Bridges at George's Dock and Spencer Dock to be dismantled, restored and sympathetically relocated; immediately to one side of their current positions where they will carry footpaths and cycle tracks but no longer will have to carry heavy traffic loading. This will facilitate widening from two lanes to four lanes (2 bus lanes and 2 traffic lanes) continuously along the north quays compared with the EPR.

3) Retain right turning movements from north quays only where required for essential access or public transport movements only. (westbound at Commons Street, Park Lane and New Wapping Street).

4) Provide for westbound bus priority along the south quays by installing short sections of westbound bus lane on Sir John Rogerson's Quay from Forbes Street to the southern end of the Samuel Beckett Bridge and on City Quay from Lombard Street to Matt Talbot Bridge.

5) Traffic access to be maintained eastbound to Sir John Rogerson's Quay Extension for access and servicing. The EPR included an eastbound bus lane between Cardiff Lane and Forbes Street, but this would not provide any meaningful additional bus priority; and

6) Cycle provision on Beckett Bridge to remain as existing.

7) A more direct cycle route along the western side of Ringsend Park.

8) Retain existing grass verge at Pigeon House Road and instead provide a shared on-road cycle facility with additional traffic calming; Provide improved walking and cycling route through

Ringsend Park. The EPR proposed an off-road route at Pigeon House Road requiring the removal of all parking.

9) A slightly modified cycle route is proposed at Strand Street in Irishtown with an additional branch cycle route via Bremen Road to the Poolbeg SDZ area.

1. Introduction and Background

1.1. Introduction

This report presents the Preferred Route Option (PRO) for the Ringsend to City Centre Core Bus Corridor (CBC) Scheme (herein after called the Proposed Scheme).

The Proposed Scheme runs over 1.6km from the Tom Clarke East Link Bridge at the Point to the Talbot Memorial Bridge at the Customs House in Dublin City Centre. The Proposed Scheme runs along the north and south quays of the River Liffey and includes the proposed Public Transport Bridge across the River Dodder and the entrance to Grand Canal Dock at Britain Quay. The Proposed Scheme also includes the provision of a 1.1km cycling route to join with the East Coast Trail through Ringsend and Irishtown and to serve the Poolbeg Strategic Development Zone (SDZ) lands. The entire study area lies within the administrative area of Dublin City Council.

The Proposed Scheme will significantly enhance travel by public transport by providing continuous bus priority as well as improved pedestrian and cycling infrastructure on the north and south quays to/from the City Centre. Currently these key access corridors are characterised by traffic congestion and discontinuous inadequate bus and cycling infrastructure, meaning that for most of the journey, buses and cyclists are competing for space with the general traffic, impacting on the attractiveness of these sustainable modes. The objectives of the Proposed Scheme include provision of necessary bus, cycle, and walking infrastructure enhancements that will facilitate modal shift from car dependency contributing to an efficient, low carbon and climate resilient City. Refer to Figure 1-1 for scheme location.

Figure 1-1: Ringsend to City Centre Core Bus Corridor Scheme

1.2. The Core Bus Corridor Infrastructure Works

The Proposed Scheme is one of twelve stand-alone core bus corridor schemes to be delivered under the BusConnects Dublin - Core Bus Corridors Infrastructure Works (herein after called the CBC Infrastructure Works). The CBC Infrastructure Works, once completed, will deliver the radial core corridors identified in the Greater Dublin Area Transport Strategy 2016-2035 (herein after called the GDA Transport Strategy) Core Bus Network which is discussed below.

The BusConnects Dublin Programme is the National Transport Authority's (NTA) programme to greatly improve bus services in the Greater Dublin Area and the CBC Infrastructure Works is one element of that Programme, itself containing 12 stand-alone CBC Schemes. It is a key part of the Government's polices to improve public transport and address climate change in Dublin and other cities.

The NTA established a dedicated BusConnects Infrastructure team to advance the planning and construction of the CBC Infrastructure Works. It comprises an inhouse team including technical and communications resources and external service providers procured from time-to-time to assist the internal team in the planning and design of the 12 CBC Schemes.

The CBC Infrastructure Works will deliver a major component of the overall Core Bus Network as identified in the GDA Transport Strategy, encompassing the delivery of approximately 230km of dedicated bus lanes and 200kms of cycle tracks along 12 stand-alone CBC Schemes.

The 12 stand-alone Core Bus Corridor Schemes to be delivered under the CBC Infrastructure Works are (see Figure 1-2):

- The Clongriffin to City Centre Core Bus Corridor Scheme;
- The Swords to City Centre Core Bus Corridor Scheme;
- The Ballymun / Finglas to City Centre Core Bus Corridor Scheme;
- The Blanchardstown to City Centre Core Bus Corridor Scheme;
- The Lucan to City Centre Core Bus Corridor Scheme;
- The Liffey Valley to City Centre Core Bus Corridor Scheme;
- The Tallaght / Clondalkin to City Centre Core Bus Corridor Scheme;
- The Kimmage to City Centre Core Bus Corridor Scheme;
- The Templeogue / Rathfarnham to City Centre Core Bus Corridor Scheme;
- The Bray to City Centre Core Bus Corridor Scheme;
- The Belfield / Blackrock to City Centre Core Bus Corridor Scheme; and
- **The Ringsend to City Centre Core Bus Corridor Scheme.**

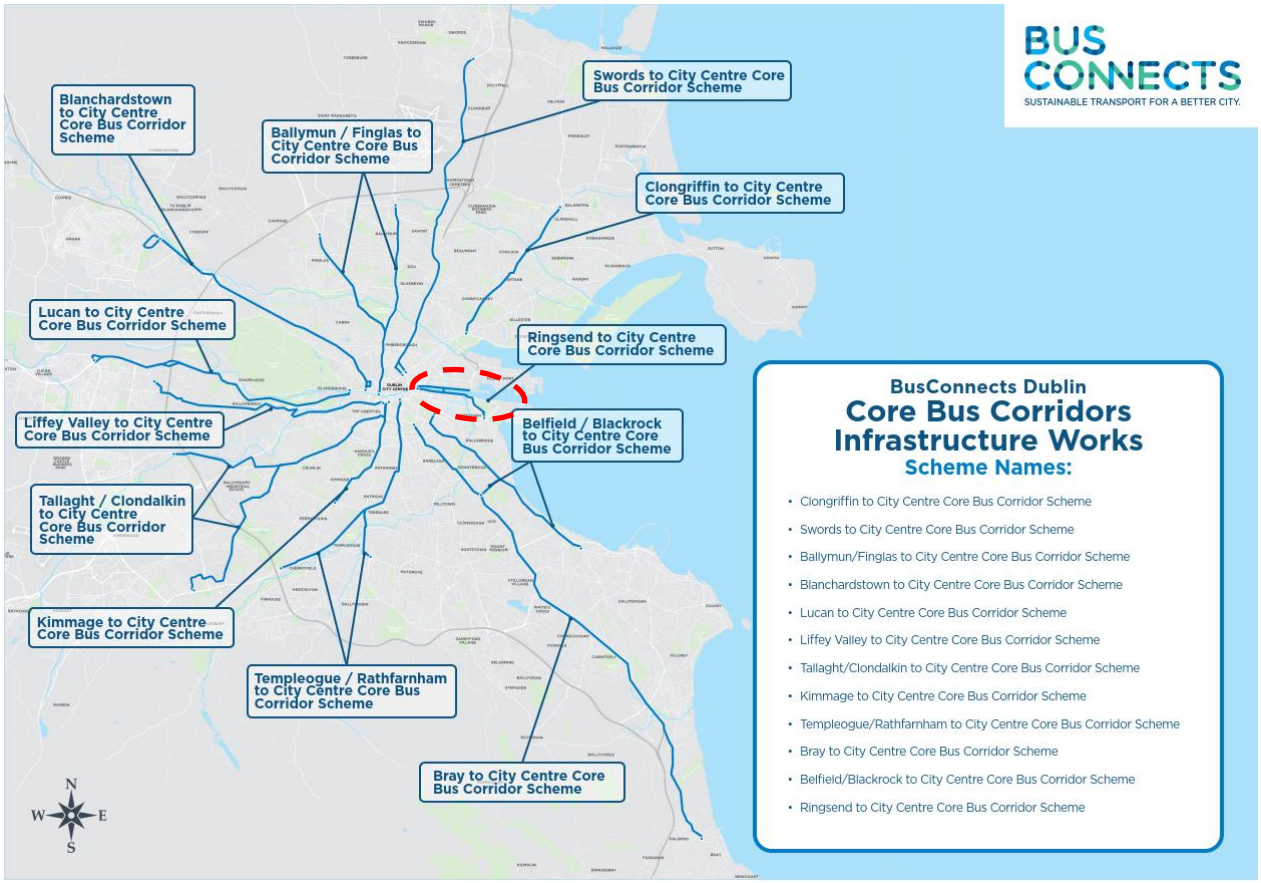


Figure 1-2: Core Bus Corridor Infrastructure Works with the proposed scheme highlighted.

1.3. Approach for this Report

In June 2018, the National Transport Authority (NTA) published the Core Bus Corridors Project Report. The report was a discussion document outlining proposals for the delivery of a CBC network across Dublin. The Ringsend to City Centre CBC' is identified in this document as forming part of the radial Core Bus Network.

As part of this process the 'Ringsend to City Centre Core Bus Corridor CBC Feasibility Study and Options Assessment Report' was published, which identified feasible options along the corridor, assessed these options and arrived at an Emerging Preferred Route (EPR) Option. Submissions were invited from the public to provide comment on the EPR Option proposals and to inform subsequent design stages. A second round of non-statutory public consultation commenced on 4th of March 2020 and ran until the 17th of April 2020 when submissions were once again invited from the public on the draft Preferred Route Option. Finally, a third non-statutory public consultation was held between the 4th of November 2020 and the 16th of December 2020, and a final round of submissions was invited from the public on the refined draft Preferred Route Option.

This Preferred Route Option Report has been prepared for the Proposed Scheme, which will build on the assessment carried out in the Feasibility Study and Options Assessment Report.

These Feasibility and Options Assessment reports referenced above, along with their associated appendices as published, are included in Appendix F.

The Study Area Analysis and Multi-Criteria Analysis (MCA) for the previously proposed feasible route options are considered to still be valid unless otherwise detailed and updated in this PRO Report. Any

additional design work or optioneering has been assessed against the previously identified EPR Option and draft PRO in order to determine the PRO. Additional design development has been detailed in this report, and the resulting PRO referenced in this report has been based on:

- Updated topographical survey information;
- Output from public engagement and consultation activities on the EPR Option and Draft Preferred Route Option Proposals;
- Clarifications to the previous assessment in the 'Ringsend to City Centre CBC Feasibility & Options Report';
- Further design development and options assessment; and
- Change in the extent of the Proposed Scheme.

1.4. Report Structure

This report is structured as follows:

- **Chapter 2: Planning and Policy Context** – This chapter summarises a review of transport and planning policy which is relevant to the route selection process for the Proposed Scheme.
- **Chapter 3: Background and Non-Statutory Public Consultation** – This chapter outlines the summary of the non-statutory public consultation process.
- **Chapter 4: Study Area** – In this chapter, the study area for the Proposed Scheme is detailed. The integration of the Proposed Scheme with existing and planned transport networks is considered, along with considerations of the Proposed Scheme for other road users.
- **Chapter 5: Review of The Feasibility Study and Options Assessment Reports** – This chapter is a summary of the options assessment that was previously carried out in each section of the previous Feasibility and Options Reports. An assessment has been made on the validity of the previous options assessment in the context of additional information collected, including through more detailed survey work undertaken and feedback from the public consultation process. Issues arising and material changes resulting from the design development are detailed.
- **Chapter 6: Options Assessment** – This chapter updates the previous options assessment work undertaken in light of the additional considerations set out in Chapter 5.
- **Chapter 7: Preferred Route Option** – This chapter gives the overall conclusions adopted from the Proposed Scheme options assessment process and identifies and describes the PRO proposal.

2. Planning and Policy Context

This chapter summarises a review of transport and planning policies which are relevant to the route selection process for the Proposed Scheme.

2.1. Transport Strategy for the Greater Dublin Area, 2022-2042

2.1.1. Introduction

The Transport Strategy for the Greater Dublin Area 2022-2042 (Transport Strategy) replaces the prior transport strategy for the period 2016 to 2035. That prior transport strategy set out to contribute to the economic, social, and cultural progress of the Greater Dublin Area (GDA) by providing for the efficient, effective, and sustainable movement of people and goods. In other words, it was about making the Dublin region a better place for people who live and work there, and for those who visit. Under the Dublin Transport Authority Act 2008, the National Transport Authority (NTA) must review its transport strategy every 6 years. Arising from the review of the 2016 plan, an updated strategy has been developed which sets out the framework for investment in transport infrastructure and services over the next two decades to 2042.

Since the prior transport strategy was approved by government in 2016, the NTA, along with the Councils, other transport delivery agencies and transport operators, have worked to build and develop that strategy's projects and proposals. With respect to BusConnects Dublin, work was commenced, and is ongoing on the largest ever investment programme on the bus network to deliver high levels of bus priority on all the main corridors to not only support and significantly improve the operation of bus services now and into the future, but that is proofed for resilience to enable the operation for more frequent services as required. The Proposed Scheme is a fundamental element of this ongoing work.

The challenges outlined in the GDA Transport Strategy 2016 - 2035 and the identified need for BusConnects Dublin as determined in the preparation of that prior strategy remain. The evidence from the detailed corridor studies undertaken in the preparation of the prior strategy is still valid and robust. The GDA Transport Strategy, which was published by the NTA in 2023, provides a statutory planning basis and framework for the planning and delivery of transport infrastructure and services in the GDA.

The overall aim of the GDA Transport Strategy 2016 – 2035 was stated as being "To provide a sustainable, accessible and effective transport system for the Greater Dublin Area which meets the region's climate change requirements, serves the needs of urban and rural communities, and supports economic growth". The new GDA Transport Strategy 2022 -2042 similarly states that subject to obtaining statutory planning approvals, it is the intention of the NTA to implement the 12 Core Bus Corridor schemes as set out in the BusConnects Dublin programme. They will facilitate faster and more reliable bus journeys on the busiest bus corridors in the Dublin region, making the overall bus system more convenient and useful for more people.

2.1.1 The Core Bus Network as identified in the GDA Transport Strategy

The delivery of an efficient reliable bus service is an essential component of the GDA Transport Strategy as it will provide a viable and readily accessible alternative to private general traffic that is causing congestion problems in the GDA. As Dublin is a low density city there are few areas with the size and concentration of population for rail based public transport. This means that for most corridors in Dublin, bus travel represents the optimum form of public transport. Dublin City Bus Services carried 153 million passengers in 2019. In percentage terms, the bus system accounts for over 65% of public transport

passenger journeys in the GDA; the Luas carries 20%, and DART and commuter rail services deliver the remaining 15%.

In terms of geographical reach and coverage, bus operations extend across every corridor in the Dublin region. Luas operates two fixed lines - Red and Green and heavy rail operates four railway services – Kildare, Maynooth, Northern and South-eastern lines. While the GDA Transport Strategy identified key rail-based enhancements it is underpinned by the bus-based city-wide public transport system. The GDA Transport Strategy identified a “Core Bus Network”, representing the most important bus routes within the GDA, generally characterised by high passenger volumes, frequent services and significant trip attractors along the routes. The Core Bus Network forms part of an overall integrated transport system planned for the GDA. In developing the GDA Transport Strategy, alternatives were considered by the NTA at both a corridor and overall network level.

The identified Core Bus Network comprised radial bus corridors, orbital bus corridors and regional bus corridors. These corridors are generally characterised by discontinuity, whereby the corridors currently have dedicated bus lanes along only less than one third of their lengths which means that for most of the journey, buses and cyclists are competing for space with general traffic and are negatively affected by the increasing levels of congestion. This results in delayed buses and unreliable journey times for passengers.

The GDA Transport Strategy 2016 - 2035 stated that it was intended to provide continuous bus priority, as far as is practicable, along the core bus routes, with the objective of supporting a more efficient and reliable bus service with lower journey times, increasing the attractiveness of public transport in these areas, and facilitating a shift to more sustainable modes of transport. As mentioned previously, the new GDA Transport Strategy 2022 -2042 similarly states that subject to obtaining statutory planning approvals, it is the intention of the NTA to implement the 12 Core Bus Corridor Schemes as set out in the BusConnects Dublin programme. They will facilitate faster and more reliable bus journeys on the busiest bus corridors in the Dublin region, making the overall bus system more convenient and useful for more people.

2.2 Greater Dublin Area Cycle Network Plan

During the course of the analysis carried out to identify the preferred core bus corridor, the provision of these cycle routes was considered at all stages. Therefore, as part of the options assessment process, any upgrading of infrastructure to provide bus priority also needs to consider and provide for the required cycling infrastructure, where practicable, to the appropriate level and quality of service (as defined by the NTA National Cycle Manual) required for primary and secondary cycle routes.

The Greater Dublin Area Cycle Network Plan was adopted by the NTA in early 2014 following a period of consultation with the public and various stakeholders. This plan forms the strategy for the implementation of a high quality, integrated cycle network for the Greater Dublin Area.

There are a number of primary and secondary cycle routes identified along the Proposed Scheme as follows:

Radial Primary Route 5 from the City Centre to Lucan runs along the proposed scheme between Matt Talbot Memorial Bridge and Tom Clarke East Link Bridge.

- The River Dodder Greenway Route S03 intersects the proposed scheme at the east side of the Dodder Public Transport Bridge;
- The Grand Canal and Royal Canal Premium Cycle Routes (comprising routes S01 and N01), cross the River Liffey at Beckett Bridge and run along the proposed scheme on the south quays between Samuel Beckett Bridge and Forbes Street; and

- The East Coast Trail (1E & 13E) / National Route N5 crossing the River Liffey at the Tom Clarke East Link Bridge runs along the proposed scheme between the east side of the Dodder Public Transport Bridge and Beach Road.

During the course of the analysis carried out to identify the preferred route option, the provision of these cycle routes was considered at all stages. Therefore, as part of the options assessment process, any upgrading of infrastructure to provide bus priority also needs to consider and provide for the required cycling infrastructure, where practicable, to the appropriate level and quality of service (as defined by the NTA National Cycle Manual) required for primary and secondary cycle routes.

In preparing the GDA Transport Strategy (2022 - 2042) the NTA also carried out a review of the GDA Cycle Network Plan. This review culminated in the preparation of the 2022 Greater Dublin Area Cycle Network which was published alongside the GDA Transport Strategy (2022 - 2042). With respect to the Proposed Scheme, the 2022 Greater Dublin Area Cycle Network is broadly aligned with the 2013 GDA Cycle Network Plan.

Notable differences between the 2022 Greater Dublin Area Cycle Network and the 2013 GDA Cycle Network Plan include:

- The coastal cycle route along Strand Road in Sandymount and through Irishtown and Ringsend is now a Primary radial route rather than a Secondary route.
- Several additional Secondary routes are now included in the Ringsend and Poolbeg areas, with one following Pigeon House Road and Sean Moore Road.
- More Greenway links are included through Ringsend Park, at Irishtown Stadium and Sean Moore Park.

In order to ensure consistency with previous work in determining the Emerging Preferred Route (EPR) the assessments carried out within this report reference the 2013 GDA Cycle Network Plan.

2.3 Development Plan, Local Area Plans and Strategic Development Zones

2.3.1. Dublin City Council Development Plan (2022 – 2028)

The Dublin City Council Development Plan (2022 – 2028) was adopted on the 2nd of November 2022 and came into effect on the 14th of December. It guides how the city will develop to meet the needs of its residents, visitors and workers. A SEA, AA and SFRA were produced as part of the Dublin City Council Development Plan.

The vision of the Dublin City Council Development Plan is to champion compact city living, distinct character, a vibrant culture, and a diverse, smart, green, innovation-based economy. DCC aims to establish the city as one of Europe's most sustainable, dynamic, and resourceful city regions. The Dublin City Council Development Plan places sustainable transport as a core principle in the future development of the city:

> *'Within the next 10 years, Dublin will have an established international reputation as one of Europe's most sustainable, dynamic, and resourceful city regions. Dublin, through the shared vision of its citizens and civic leaders, will be a beautiful, compact city, with a distinct character, a vibrant culture and a diverse, smart, green, innovation-based economy. It will be a socially inclusive city of urban neighbourhoods with excellent community and civic infrastructure based on the principles of the 15 minute city, all connected by an exemplary public transport, cycling and walking system and interwoven with a high quality bio-diverse, green space network. In short, the vision is for a capital city where people will seek to live, work, experience, invest and socialise, as a matter of choice.'*

In 'Translating the Core Strategy into Development Plan Policies and Objectives', the core strategy has the following supports:

'The Core Strategy will promote development and appropriate intensification along the routes of the three key public transport projects to be developed over the development plan period comprising Bus Connects (2021 – 2023)'.

The Dublin City Council Development Plan recognises that increasing capacity on public transport including bus corridors is a means to promoting modal change and active travel.

Within the transport objectives of the Dublin City Council Development Plan, bus improvements are identified as projects to be supported. The key policies are set out in **Table 2.1**.

Table 2.1: Dublin City Council Development Plan Relevant Transport Policies

Relevant Transport Policies	
SC1 Consolidation of the Inner City	To consolidate and enhance the inner city, promote compact growth, and maximise opportunities provided by existing and proposed public transport by linking the critical mass of existing and emerging communities such as Docklands, Heuston Quarter, Grangegorman, Stoneybatter, Smithfield, the Liberties, the North East Inner City and the south and north Georgian cores with each other, and to other regeneration areas.
SC8 Development of the Inner Suburbs	To support the development of the inner suburbs and outer city in accordance with the strategic development areas and corridors set out under the Dublin Metropolitan Area Strategic Plan and fully maximise opportunities for intensification of infill, brownfield, and underutilised land where it aligns with existing and pipeline public transport services and enhanced walking and cycling infrastructure
QHSN11 15-Minute City	To promote the realisation of the 15-minute city which provides for liveable, sustainable urban neighbourhoods and villages throughout the city that deliver healthy placemaking, high quality housing and well designed, intergenerational and accessible, safe, and inclusive public spaces served by local services, amenities, sports facilities, and sustainable modes of public and accessible transport where feasible.
CEE12 Transition to a Low Carbon, Climate Resilient City Economy	To support the transition to a low carbon, climate resilient city economy, as part of, and in tandem with, increased climate action mitigation and adaptation measures.
SMT1 Modal Shift and Compact Growth	To continue to promote modal shift from private car use towards increased use of more sustainable forms of transport such as active mobility and public transport, and to work with the National Transport Authority (NTA), Transport Infrastructure Ireland (TII) and other transport agencies in progressing an integrated set of transport objectives to achieve compact growth.
SMT2 Decarbonising Transport	To support the decarbonising of motorised transport and facilitate the rollout of alternative low emission fuel infrastructure, prioritising electric vehicle (EV) infrastructure.
SMT3 Integrated Transport Network	To support and promote the sustainability principles set out in National and Regional documents to ensure the creation of an integrated transport network that services the needs of communities and businesses of Dublin City and the region.
SMT4 Integration of Public Transport Services and Development	To support and encourage intensification and mixed-use development along public transport corridors and to ensure the integration of high quality permeability links and public realm in tandem with the delivery of public transport services, to create attractive, liveable, and high quality urban places.

Table 2.2 (continued): Dublin City Council Development Plan Relevant Transport Policies

Relevant Transport Policies	
SMT8 Public Realm Enhancements	To support public realm enhancements that contribute to place making and liveability and which prioritise pedestrians in accordance with Dublin City Council's Public Realm Strategy ('Your City – Your Space'), the Public Realm Masterplan for the City Core (The Heart of the City), the Grafton Street Quarter Public Realm Plan and forthcoming public realm plans such as those for the Parnell Square Cultural Quarter Development and the City Markets Area.
SMT02 Improving the Pedestrian Network	To improve the pedestrian network and prioritise the introduction of tactile paving, ramps and kerb dishing at appropriate locations, including pedestrian crossings, taxi ranks, bus stops and rail platforms in order to optimise accessibility for all users.
SMT12 Pedestrians and Public Realm	To enhance the attractiveness and liveability of the city through the continued reallocation of space to pedestrians and public realm to provide a safe and comfortable street environment for pedestrians of all ages and abilities.
SMT14 City Centre Road Space	To manage city centre road-space to best address the needs of pedestrians and cyclists, public transport, shared modes and the private car, in particular, where there are intersections between DART, Luas and Metrolink and with the existing and proposed bus network.
SMT16 Walking, Cycling and Active Travel	To prioritise the development of safe and connected walking and cycling facilities and prioritise a shift to active travel for people of all ages and abilities, in line with the city's mode share targets.
SMT18 The Pedestrian Environment	To continue to maintain and improve the pedestrian environment and strengthen permeability by promoting the development of a network of pedestrian routes including laneway connections which link residential areas with recreational, educational and employment destinations to create a pedestrian environment that is safe, accessible to all in accordance with best accessibility practice.
SMT19 Integration of Active Travel with Public Transport	To work with the relevant transport providers, agencies, and stakeholders to facilitate the integration of active travel (walking/cycling etc.) with public transport, ensuring ease of access for all.
SMT22 Key Sustainable Transport Projects	To support the expeditious delivery of key sustainable transport projects so as to provide an integrated public transport network with efficient interchange between transport modes, serving the existing and future needs of the city and region and to support the integration of existing public transport infrastructure with other transport modes. In particular the following projects subject to environmental requirements and appropriate planning consents being obtained: (inter alia): • BusConnects Core Bus Corridor projects.

2.4 Aims and Objectives of Core Bus Corridor Scheme

The aim of delivering the Ringsend to City Centre CBC Scheme is to provide enhanced walking, cycling and bus infrastructure on this key access corridor in the Dublin region, which will enable and deliver efficient, safe, and integrated sustainable transport movement along the corridor.

The objectives are to:

- Enhance the capacity and potential of the public transport system by improving bus speeds, reliability and punctuality through the provision of bus lanes and other measures to provide priority to bus movement over general traffic movements;
- Enhance the potential for cycling by providing safe infrastructure for cycling, segregated from general traffic wherever practicable;
- Support the delivery of an efficient, low carbon and climate resilient public transport service, which supports the achievement of Ireland's emission reduction targets;
- Enable compact growth, regeneration opportunities and more effective use of land in Dublin, for present and future generations, through the provision of safe and efficient sustainable transport networks;
- Improve accessibility to jobs, education and other social and economic opportunities through the provision of improved sustainable connectivity and integration with other public transport services; and
- Ensure that the public realm is carefully considered in the design and development of the transport infrastructure and seek to enhance key urban focal points where appropriate and feasible.

3. Background and Public Consultation

3.1 Ringsend to City Centre Core Bus Corridor Feasibility and Options Assessment Report and Emerging Preferred Route

In early 2016, the NTA initiated plans to develop the network of CBCs identified in the GDA Transport Strategy. As part of this body of work, the 'Ringsend to City Centre Core Bus Corridor CBC Feasibility Study and Options Assessment Report' (December 2017) was prepared which identified feasible options along the corridor, assessed these options and arrived at an Emerging Preferred Route Option. These proposals formed the basis for the first non-statutory public consultation on the Core Bus Corridor.

3.2 First Non-Statutory Public Consultation – Emerging Preferred Route

The first non-statutory public consultation on the BusConnects CBCs took place on a phased basis. The first phase of consultation occurred from 14th November 2018 to 29th March 2019. The second phase ran from 23rd January 2019 to the 30th of April 2019 and the final phase ran from 26th February 2019 until the 31st of May 2019. The Ringsend to City Centre CBC EPR Option formed part of the final phase of consultation, which closed on the 31st of May 2019. The Information Brochure published as part of this consultation is included in Appendix G of this report.

There were 17 submissions received relating to the Ringsend to City Centre CBC. These submissions ranged from individual submissions by residents, commuters and local representatives, to detailed proposals from public bodies, various associations and private sector businesses.

A brief summary of the feedback received on the Proposed Scheme during the public consultation is presented in this section of the report. While a variety of matters were raised in the submissions, the key issues emerging from the consultation were as follows:

1) Cycling facilities;
2) Pedestrian facilities;
3) Bus services and stops;
4) Environmental and community impacts;
5) Loss of car parking;
6) Flooding; and
7) Traffic and access.

Further detail on these issues can be found in the Public Consultation Submission Report – 1st Non-Statutory Public Consultation contained in Appendix B of this report.

3.3 Development of the Draft Preferred Route Option

Following the first non-statutory public consultation, a review was undertaken of the scheme proposals along the route based on the following new information which was available for consideration:

- Detailed topographical survey along the route corridor.

- Submissions received during the first non-statutory public consultation; and
- Issues raised during meetings with community forum, resident groups, and one-on-one meetings with directly impacted property owners.

As part of this review new options were developed for consideration in specific areas where issues were identified. These new options were subject to further options assessment (as detailed in Section 6 of this report) to identify the draft Preferred Rout Option (PRO). The selected draft PRO identified formed the basis for the second non-statutory public consultation between 4th March and 17th April 2020.

The key changes adopted in the draft Preferred Route Option are as follows:

- The existing pinch-points at the "Scherzer" opening bridges at George's Dock on Custom House Quay and at Spencer Dock on North Wall Quay will be removed to enable continuous separate bus lanes in both directions. The landmark old bridge structures will be refurbished and reinstalled to one side of their existing locations, where they will carry pedestrians and cyclists across the waterway channels alongside the replacement wider road bridges;
- Revised traffic management arrangements will remove right-turns along the North Quays at North Wall Avenue, Castleforbes Road, Guild Street and Commons Street with an alternative access route from Sherriff Street from the north;
- The design of cycling facilities was refined with segregation at bus stops;
- The pedestrian route along the north quays of the River Liffey was improved by a proposed boardwalk on the river side of the two small restaurant buildings on the campshire opposite Excise Walk; and
- It is no longer proposed to provide a cycle route along the green space along Pigeon House Road. Instead, a more direct cycling facility is proposed through Ringsend Park towards the Poolbeg Special Development Zone at Sean Moore Road. This revised route will form part of the *East Coast Trail* cycle route that can be extended towards Sandymount along the coastline of Dublin Bay South. Traffic calming along Pigeon House Road will be enhanced to facilitate shared use by cyclists.

3.4 Second Non-Statutory Public Consultation – Draft Preferred Route Option

In March 2020 the Draft PRO was published with the second round of public consultations running from the 4th of March 2020 through to the 17th April 2020. The Information Brochure published as part of this consultation is included in Appendix H of this report. Due to COVID-19 restrictions being imposed by Government in mid-March the planned Public Information Events were impacted. Consequently, there were 7 submissions received relating to the Proposed Scheme.

The Public Consultation Submissions Reports for the 2nd and 3rd Non-Statutory Public Consultation are included in Appendix C. The content of the submissions received is summarised below.

There were 7 submissions received in which the key issues were:

1) Aspects of the cycling facilities:
    a) Shared spaces between cyclists and pedestrians are unwelcome.
    b) Some narrow areas along the north quays campshires were noted.
    c) Connection to the Dodder Greenway at Thorncastle Street.
    d) Improvement on Beckett Bridge for the cycle route southbound right-turn.

e) Clarify proposal for cycle route through Ringsend Park – widening beside footpath.

2) Desire for buses to turn right southbound on the East Link Bridge towards the proposed new public transport bridge across the mouth of the River Dodder.

3) More quiet street measures on Pigeon House Road to deter through traffic.

4) Various concerns about connectivity to the Poolbeg area for new housing development.

5) Extend the CBC along Sean Moore Road and clarify proposed BusConnects route at Poolbeg.

The issues raised during the second public consultation were considered in the further development of the draft PRO. Subsequently, it was determined by the NTA that a third non-statutory public consultation would be conducted prior to finalising the PRO.

3.5 Development of the Updated Draft Preferred Route Option

Following the second non-statutory public consultation, a review was undertaken of the Proposed Scheme proposals along the route based on the following new information which was available for consideration:

- Updated topographical survey along the route corridor.
- Submissions received during the second non-statutory public consultation; and
- Issues raised during meetings with community forums, resident groups, and one-on-one meetings with directly impacted property owners.

As part of this review, several new options were reviewed further, and new options were developed for consideration in specific areas where issues were identified. These new options were subject to further options assessment to identify the updated PRO that was subsequently identified and formed the basis for the third non-statutory public consultation in November / December 2020.

3.6 Third Non-Statutory Public Consultation – Updated Draft Preferred Route Option

The third round of non-statutory public consultation for the Proposed Scheme took place from the 4th of November 2020 until 16th December 2020 on the updated draft PRO. The Information Brochure published as part of this consultation are included in Appendix HI.

With the continuing effect of the COVID-19 pandemic and associated Government restrictions, the third non-statutory public consultations were held virtually. Virtual consultation rooms for each Proposed Scheme were developed and published. Along with offering a call back facility, these rooms provided a description of each Preferred Route from start to finish with supporting maps and included information of all revisions made, if any, since the previous rounds of non-statutory public consultation as well as other supporting documents.

The consultation period remained open until the 16th of December 2020 and submissions were accepted by email, through the virtual consultation rooms or by post. All relevant information including the updated Information Brochures and the Emerging Preferred Route public consultation reports were made available on the BusConnects website (https://busconnects.ie) to view and download.

The Public Consultation Submissions Reports for the 2nd and 3rd Non-Statutory Public Consultation have been included in Appendix C. The next sections below summarize the content of the submissions received.

3 submissions were received in relation to the then Ringsend CBC updated draft PRO as part of the third public consultation. A summary of the key issues raised during the third public consultation is outlined below.

1) Environment: Request that impacts on trees should be avoided;
2) Public Transport Routes Public transport routes – Queries in relation to bus routing on east side of Dodder Public Transport Bridge;
3) Programme – why can't East Link Footbridge be delivered at the same time; and
4) Comments on the design of bus and cycle facilities:
    a. Shared spaces should be avoided; and
    b. Design of cycling facilities at bus stops criticised.

Further details on these issues are included in the Public Consultation Submissions Report for the 2nd and 3rd Non-Statutory Public Consultation in Appendix C. The issues raised during the third non-statutory public consultation have been considered in the further development of the PRO.

4. The Study Area

4.1 Introduction

In this chapter, the study area for the proposed scheme is detailed. The integration of the proposed scheme with existing and planned transport networks is considered. The study area included in the Feasibility Study & Options Assessment Report ran from the Matt Talbot Bridge to Sean Moore Road in an east – west direction, and from the River Liffey to Grand Canal Street in a north-south direction, as shown in Figure 4-1 below. This Study Area was generally developed to include the main trip generators between Ringsend and the City Centre.

The entire study area lies within the administrative area of Dublin City Council.

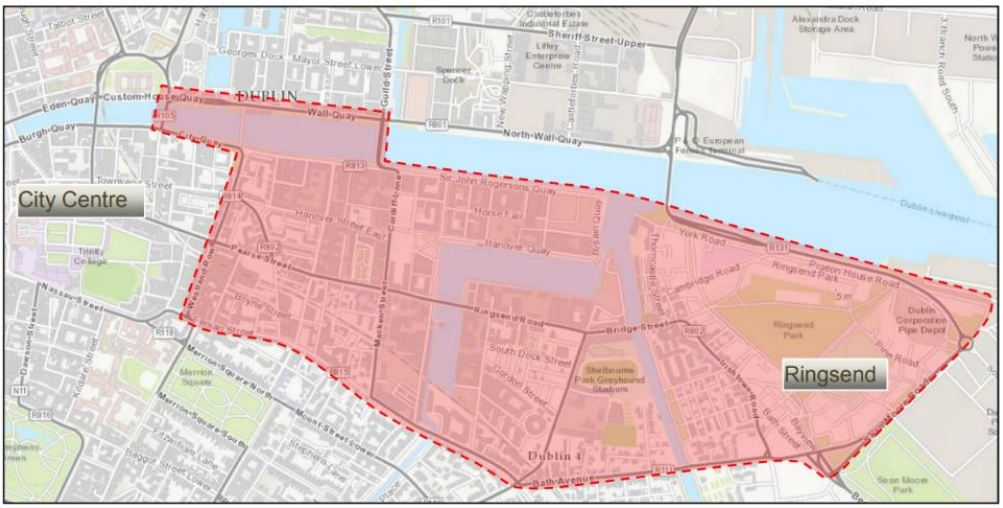


Figure 4.1: Study Area as defined in the Feasibility Study and Options Assessment Report for the Ringsend to City Centre CBC

The study area extents was extended to include all of the north quays / campshires, so as to fully include for the major public transport services that use the full length of the River Liffey corridor from the Point to the City Centre. This extension to the study area is shaded in green on Figure 4.2.

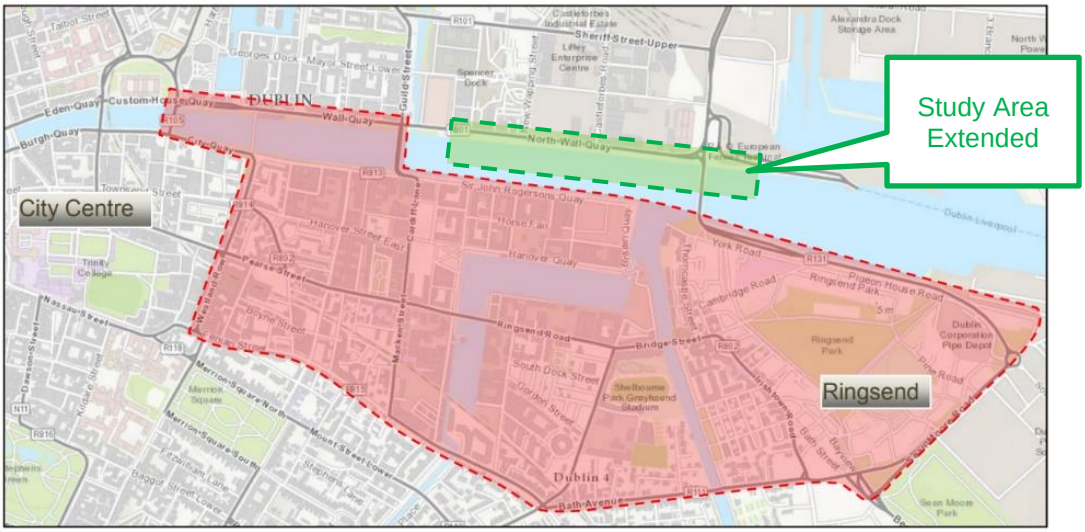


Figure 4.2: Route Sections

4.2 Physical Constraints and Opportunities

There are constraints and opportunities, both natural (i.e. existing natural environment) and physical (the built environment), which affect the potential route options for the proposed scheme within the defined study area including:

- The River Liffey traverses the study area;
- Any route on the south quays must traverse the proposed River Dodder Public Transport Bridge to connect to Ringsend;
- Existing heritage bridges at George's Dock and the Royal Canal pose obstructions to traffic;
- Existing buildings along the campshires pose obstructions to pedestrians and cyclists;
- Existing cycle connectivity along the north quays in particular is discontinuous;
- Existing bridges across the River Liffey.

The proposed scheme presents a significant opportunity to connect other infrastructure through the provision of high quality bus and cycling infrastructure through the eastern edge of Dublin City Centre.

4.3 Integration with Public Transport Network

One of the key objectives of the Proposed Scheme is to enhance interchange between the various modes of public transport operating in the city and wider metropolitan area, both now and in the future. Route options within the study area have therefore been developed in so far as possible to seek to provide for improved existing or new interchange opportunities with other transport services including:

- Greater Dublin Area (GDA) Cycle Network Plan
- Bus network:
    - Existing bus routes – City Routes 33d, 33x, 41x, 142 and 151, and Regional Routes 133, 133x, 100x, Nx, 101x and 22, Aircoach, Dublin Express, Swords Express, Fingal Express and Private Coach Services;
    - Revised Dublin Bus Network Redesign routes – Spines D, G1, G2, C3 and C4, and routes O, N4, 22, 23, 24, 60, 71 and 72.
- Metropolitan Light Rail – LUAS MetroLink:
    - LUAS Red Line tram service along Mayor Street.
- Metropolitan heavy rail – Inter-City, Commuter and DART:
    - Future railway station at Park Lane as part of the proposed DART+ West project that will Commuter/DART services to Maynooth and Dunboyne.

The proposed CBC works will significantly improve public transport priority along the north quays in particular, which will benefit existing public and private bus services between the Dublin Tunnel and the city centre. There will be significant improvements in journey time reliability for these services.

4.3.1 Existing Bus Services

The existing bus and scheduled coach routes along the Proposed Scheme are listed below and shown on Figure 4-3:

Dublin Bus

- Route 33d – Portrane to Custom House Quay;
- Route 33x – Skerries to Custom House Quay;
- Route 41x – Knocksedan to UCD Belfield
- Route 142 – Portmarnock to UCD Belfield
- Route 151 – Docklands (east Road) to Foxborough

Aircoach

Dublin Express

Bus Éireann

- Route 133 – Dublin Airport to Wicklow
- Route 133x – Gorey to Dublin
- Route 100x – Dublin to Dundalk
- Route Nx – Navan Express
- Route 101x – Dublin to Drogheda
- Route 22 – Dublin Airport to Ballina

Swords Express

- Route 500 – Brackenstown to City Centre
- Route 503 – Brackenstown to City Centre
- Route 506 – Brackenstown to City Centre
- Route 507 – Brackenstown to City Centre
- Route 500x – Brackenstown to City Centre
- Route 501 – Sword Village to City Centre
- Route 502 – Sword Village to City Centre
- Route 505 – Sword Village to City Centre
- Route 501x – Sword Village to City Centre

Fingal Express

- 833 – Lusk to Dublin City
- 833a – Lusk to Dublin City
- 833b – Lusk to Dublin City

Big Bus Tours

City Sightseeing Tours

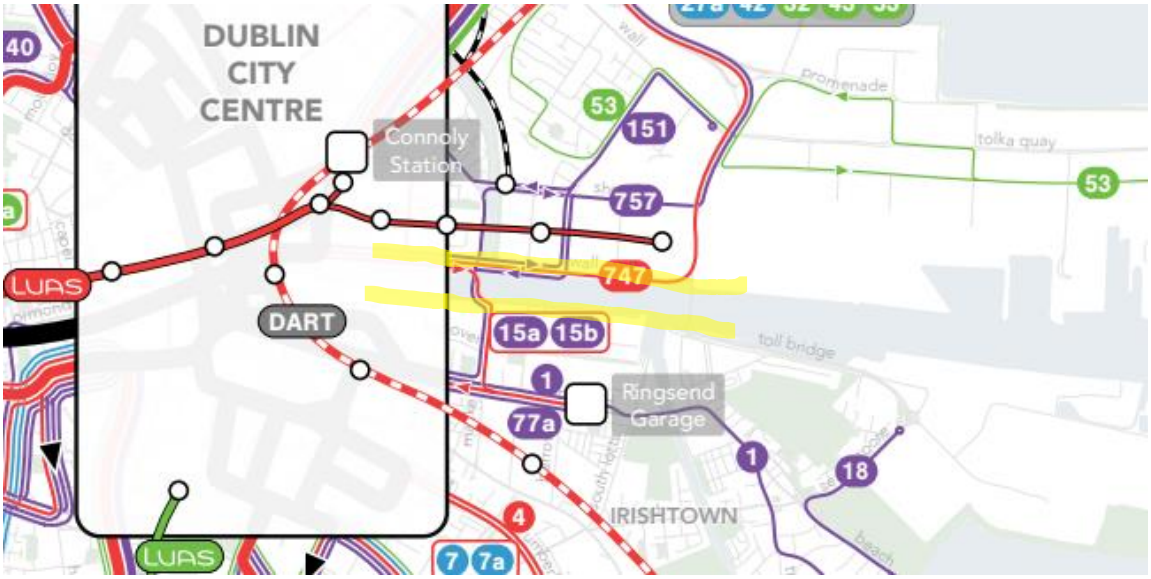


Figure 4-3: Dublin Bus Existing Services – Ringsend / North Wall Corridor with Proposed Scheme highlighted

Note: Routes 747 and 757 are no longer in operation.

4.3.2 Dublin Area Revised Bus Network

BusConnects Dublin will introduce a redesigned, higher capacity bus network which is more coherently planned and more understandable, delivering a better overall bus system for Dublin and the surrounding areas as shown in Figure 4.4.

The following is a list of the different Spines & Branches, Orbital Routes, Radial Routes and Local Routes that interact with the Proposed Scheme

- Spines & Branches

  G-SPINE Liffey Valley - City Centre - Ringsend
  - G1 Red Cow Luas - City Centre - Ringsend
  - G2 Liffey Valley - City Centre – Ringsend

    C Spine Lucan – City Centre - Ringsend
  - C3 Maynooth - City Centre - Ringsend
  - C4 Celbridge - City Centre – Ringsend

  D SPINE: Malahide Road – City Centre - Crumlin, crossing the Proposed Scheme corridor at Memorial Bridge
- Orbital Routes
  - O Route – Inner orbital route (North and South Circular)
  - N4 Blanch. SC - Finglas - DCU - Collins Ave - Docklands
- Radial Routes
  - 22 Swords – City Centre – Merrion Square crossing the corridor at Memorial Bridge
  - 23 Charlestown – City Centre – Merrion Square crossing the corridor at Memorial Bridge
  - 24 Airport - Charlestown – City Centre – Merrion Square crossing the corridor at Memorial Bridge
  - 60 Red Cow - Cherry Orchard - Decies Rd. - Spencer Doc

- 71 Tallaght to East Wall
- 72 Crumlin Children's Hospital to East Wall

- Local Routes
  - L91 Sheriff Street to Talbot Street

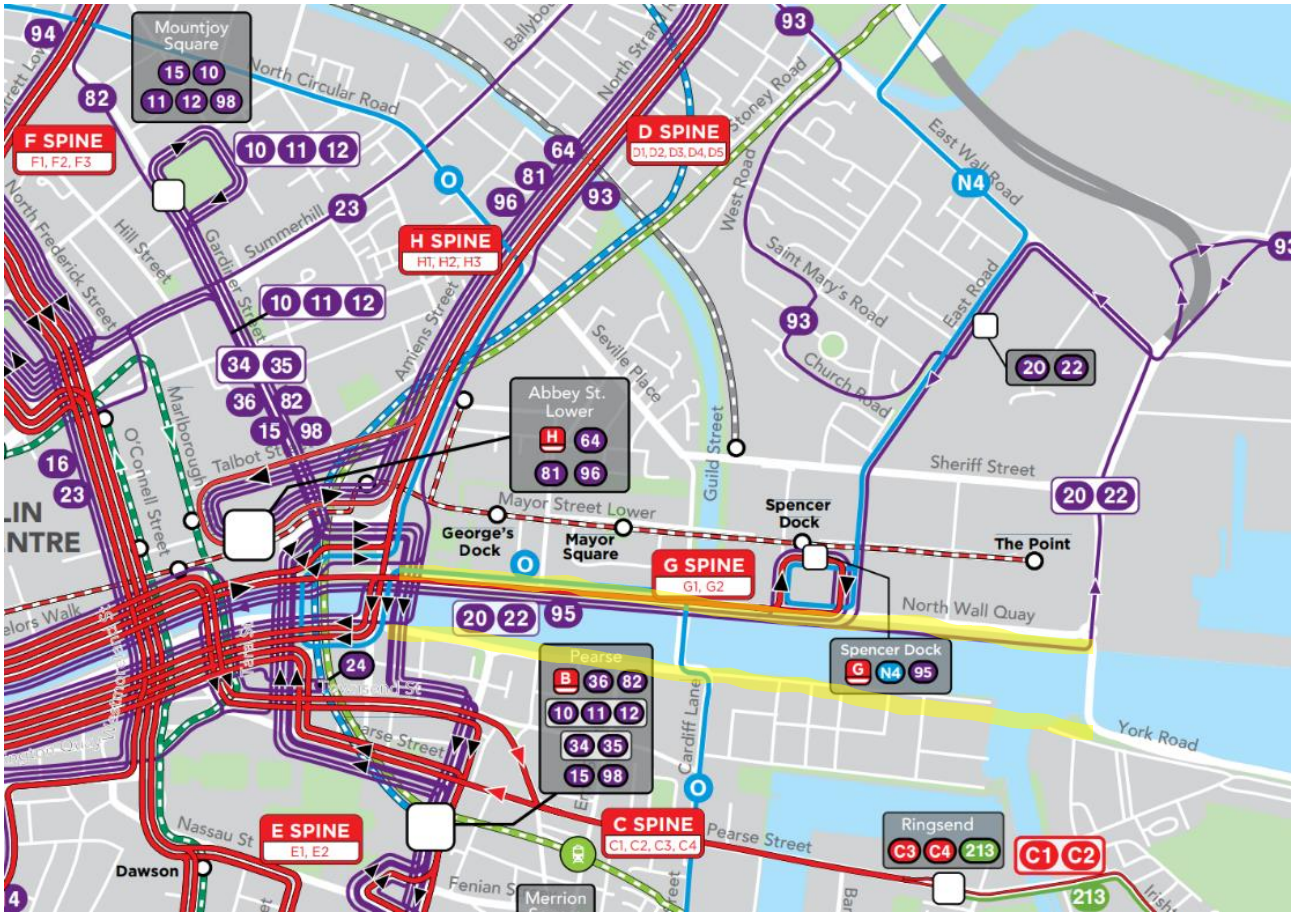


Figure 4.4: Revised Bus Network – East City Centre Area with the Proposed Scheme highlighted

Note: There are no proposed bus services indicated along the south quays in the above Bus Network Plan. This is because of the absence of the key link across the River Dodder to link the south docklands to Ringsend and beyond to the east at the Poolbeg Peninsula. When such a link becomes available, and as the Poolbeg Strategic Development Zone becomes populated, a new bus route will be provided along the south quays to provide the necessary high quality public transport connectivity bypassing the existing constrained route through Ringsend Village and over the narrow River Dodder Bridge on Ringsend Road where bus priority is not possible.

4.4 Compatibility with Other Road Users

A key objective of the proposed scheme is to improve pedestrian and cyclist facilities along the route. In general, segregated facilities should be proposed for these modes.

Pedestrians Facilities

For pedestrians it is proposed where practicable to simplify and shorten the road crossings at major junctions, which can be a barrier to mobility. The design development has also undertaken an audit of

the public realm for pedestrians so that necessary improvements can be undertaken through application of *Universal Design* principles to ensure that barriers to mobility are removed for people with mobility and visual impairments.

Cyclists

Figure 4-5 shows an extract from the GDA Cycle Network Plan and shows the different interfaces of proposed cycle routes along the corridor of the Proposed Scheme.

Figure 4.5: Greater Dublin Area Cycle Network Plan with the Proposed Scheme highlighted (primary routes shown red; secondary blue; greenways green; and feeders pink)

The proposed core bus corridor will include the following sections of the GDA Cycle Network Plan:

- The River Liffey Cycleway / Route 5 from Talbot Memorial Bridge to Tom Clarke East Link Bridge.
- National Route N5 from Seán Moore Road to the Tom Clarke East Link Bridge
- The East Coast Trail 13E from Seán Moore Road to Beckett Bridge

Other cycle routes intersect the Proposed Scheme at the following locations from south to north:

- The River Dodder Greenway / Route S03.
- The Grand Canal and Royal Canal Premium Cycle Routes (comprising routes S01 and N01), crossing the River Liffey at Beckett Bridge.

5. Review of the Previous Feasibility Study and Options Assessment Report

5.1 Introduction

Following a comprehensive review of the potential route options within the study area a two-stage assessment process was used to narrow down the number of routes available to one optimal route per study area. These routes then converged to form the overall EPR Option which was presented at the non-statutory EPR public consultation for information and feedback.

As part of the non-statutory EPR public consultation process, the preparation of the Feasibility and Options Assessment Report served to give the public a greater insight to how the process took place in addition to providing a transparency to the process of elimination used to determine the optimal route, given the information available and best engineering judgement.

From a review of submissions received as part of the non-statutory EPR public consultation process, as well as a review of the topographical survey carried out since the publication of the EPR Option, a number of issues were identified which could be overcome through the implementation of alternative design solutions. These issues are described in the following sections.

5.2 Route Options Assessment Methodology

The first step in the assessment process was to review the Feasibility and Options Assessment Report. The development of the EPR Option during the feasibility and options assessment stage was carried out in two stages. The first stage was a high-level route options assessment or 'sifting' process which appraised several potentially viable route options in terms of their ability to achieve the project objectives. The second stage of the option assessment is a comparison of each viable scheme option for each of the study area sections using a Multi-Criteria Assessment (MCA) to determine the EPR Option.

This additional assessment does not supersede work undertaken during earlier stages but complements it and responds to issues raised by the public during the non-statutory public consultation process or issues identified by additional information available to the Design Team.

5.2.1 Stage 1 – Route Options Assessment – Sifting Stage

A 'spider's web' of route options was produced that would accommodate the objectives of the Proposed Scheme as shown in Figure 5.1.

As part of the sifting stage each of the route options were assessed using a high level qualitive method, based on professional judgement and general appreciation for existing constraints and conditions within the study area that could be ascertained from available surveys and site visits.

This exercise screened and assessed technically feasible route options, based on distinct, project specific objectives. In addition to being assessed on their individual merits, routes were also screened relative to each other allowing some routes to be ruled out if more suitable alternatives existed.

This assessment stage focused on engineering constraints together with a desktop study, identifying high level environmental constraints and population catchment analysis.

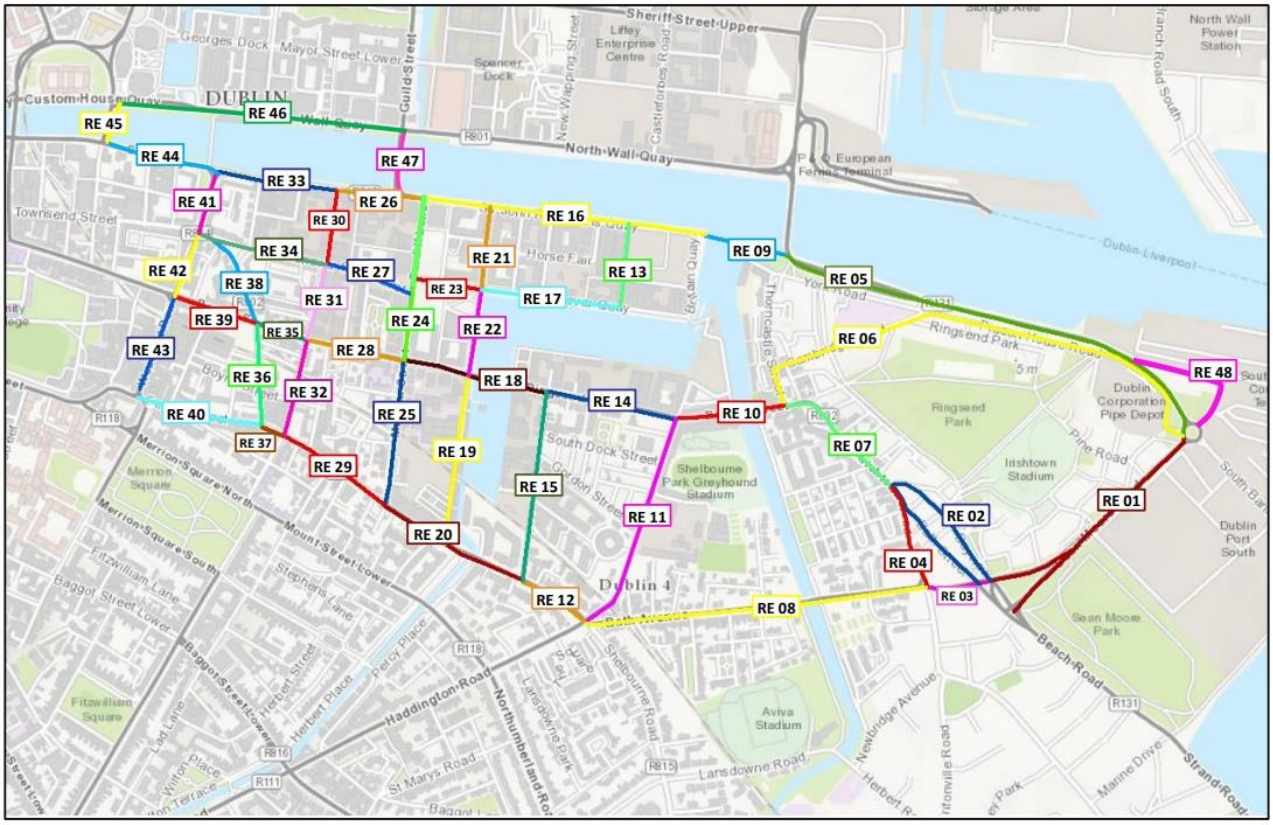


Figure 5.1: Spider's Web Assessment from Feasibility and Options Assessment Report

5.2.2 Stage 2 – Route Options Assessment – Detailed Assessment

Following completion of Stage 1, the remaining potentially viable options were progressed to Stage 2 of the assessment process. This process involved a more detailed qualitative and quantitative assessment using criteria established to compare the route options.

The indicative proposed scheme for each route option was then progressed to a multi-criteria assessment. The 'Common Appraisal Framework for Transport Projects and Programmes' published by the Department of Transport, Tourism and Sport (DTTAS), March 2016, requires proposed schemes to undergo a Multi-Criteria Assessment (MCA) under the following criteria;

- Economy;
- Integration;
- Accessibility and Social Inclusion;
- Safety;
- Environment; and
- Physical Activity.

Physical Activity was scoped out of the MCA at this stage. As all route options carried forward promote physical activity equally, it is not considered to be a key differentiator between route options.

Table 5-1 presents a summary of the Proposed Scheme assessment criteria and sub criteria used as part of the Stage 2 detailed route options assessment process.

Table 5-1: Assessment Criteria

Assessment Criteria	Assessment Sub-Criteria
Economy	1.a. Capital Cost
	1.b. Journey-time Reliability and Consistency
Integration	2.a. Land Use Integration
	2.b. Residential Population and Employment Catchments
	2.c. Public Transport Network Integration
	2.d. Traffic Network Integration
	2.e. Cyclists and Pedestrian Integration
Accessibility and Social Inclusion	3.a. High Volume Trip Attractors
	3.b. Deprived Geographic Areas
Safety	4. Road Safety
Environment	5.a. Flora and Fauna
	5.b. Archaeological, Architectural and Cultural Heritage
	5.c. Soils and Geology
	5.d. Hydrology
	5.e. Landscape and visual
	5.f. Noise, Vibration and Air Quality
	5.g. Land Use and the Built Environment

(Note: In the previous Feasibility Study and Options Assessment Report, Architectural Heritage was listed as a separate sub-criterion to Archaeology and Cultural Heritage. These have been combined in this assessment for consistency with the other BCID CBCs. Similarly, Air Quality was considered separately to Noise and Vibration but has been combined in this assessment).

Options were compared based on a five-point scale, ranging from having significant advantages to having significant disadvantages over other route options. Table 5.2 shows the colour coding of the five-point scale, with advantageous routes graded “dark green” and disadvantageous routes graded “red.

Table 5-2: Assessment Ranking

Assessment Ranking	Description
	Significant advantages over the other options
	Some advantages over the other options
	Neutral compared to other options
	Some disadvantages over other options
	Significant disadvantages compared to other options

Where the design has undergone a change in respect of infrastructure provision or route choice, this has been recorded and explained. An MCA has been undertaken which assessed the newly developed and designed solutions against the EPR Option from the ‘Ringsend to City Centre Core Bus Corridor Options Study – Feasibility and Options Assessment’. Where the design has undergone more general updates and enhancements, as expected during design development, these have not been subject to a new MCA.

5.3 Emerging Preferred Route Option Summary – Ringsend to City Centre CBC

5.3.1 EPR Option

The Emerging Preferred Route for the Ringsend to City Centre CBC is shown in Figure 5.2.

The proposed scheme is considered in 2 separate sections as follows and as shown on Figure 4.2:

Section 1: Matt Talbot Bridge to Tom Clarke East Link Bridge ["Campshires Section"]; and

Section 2: Tom Clarke East Link Bridge to Seán Moore Road ["Cycleway Section"].

Section 1 comprises the area of bus lane provision – i.e. along the north and south quays between the Matt Talbot Memorial Bridge and the Tom Clarke East Link Bridge. The proposed scheme includes the provision of the Dodder Public Transport (Opening) Bridge between Britain Quay and York Road. At the eastern end of the proposed Dodder Public Transport Bridge, the bus lanes will connect to East Link Road. The study area extents have been extended to include all of the north quays / campshires, in order to ensure all city bus services, including private coaches via the M50 Dublin Tunnel, are catered for in the design.

Buses will use East Link Road through Section 2 but a more direct route is required for cyclists. Therefore, the focus of the PRO in this section is the provision of high-quality cycling facilities towards the East Coast Trail and the Poolbeg SDZ area.

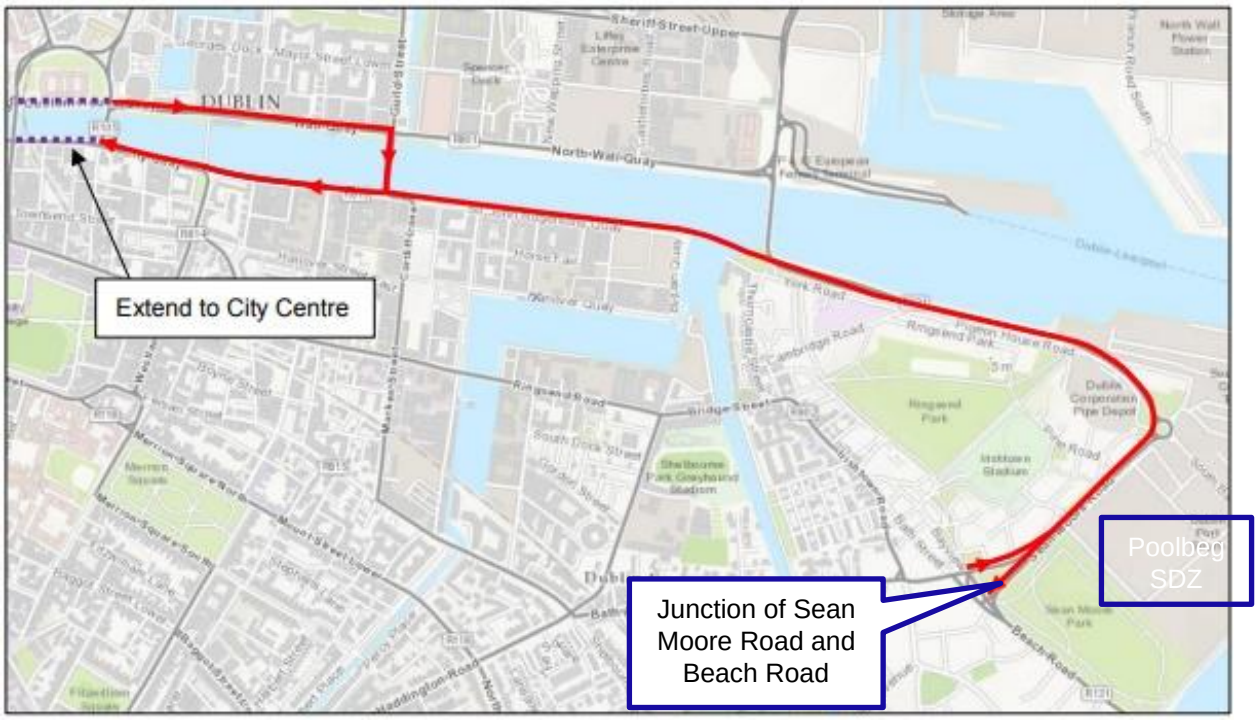


Figure 5.2: Emerging Preferred Route from earlier Feasibility and Options Assessment Study

The Emerging Preferred Route proposed a split routing for buses, as follows:

Inbound: The route will connect Sean Moore Road to Talbot Memorial Bridge via East Link Road, across the proposed bridge to Sir John Rogerson's Quay along the south quays to Talbot Memorial Bridge.

Outbound: Buses will travel eastwards from Talbot Memorial Bridge along the north quays to Samuel Beckett Bridge where they turn right across the bridge to Sir John Rogerson's Quay on the southern side, and then continue eastwards to the proposed Dodder Bridge and onto East Link Road.

This bus route is approximately 3.3km in each direction to / from the junction of Sean Moore Road and Beach Road in Irishtown, via East Link Road. Bus priority measures are only necessary for the western part of the corridor between Talbot Memorial Bridge and Tom Clarke East Link Bridge over a length of 1.6km. In the eastern part of the route from Tom Clarke Bridge to Poolbeg there is no congestion to delay buses and bus priority measures are not necessary, and the Proposed Scheme will provide cycling facilities only in Section 2.

In addition to the proposed Core Bus Corridor Spine C to Ringsend, this route will be partly shared in the revised bus service network plan with Spine G which extends along the north Liffey quays to New Wapping Street, plus other bus services further east to the Point (routes 71, 72 & L91) as well as the numerous other bus and coach services heading to and from the Dublin Tunnel that serve Dublin Airport, Swords and a variety of destinations further north. Therefore this CBC corridor includes a need for bus priority measures along both sides of the River Liffey between Memorial Bridge and Tom Clarke Bridge.

Bus priority is proposed over a distance of 1.6km on each side of the River Liffey for a total length of 3.2km.

The proposed Liffey Cycle Route, as included in the GDA Cycle Network Plan, will extend along both sides of the River Liffey from the Phoenix Park at the western end to Tom Clarke Bridge at the eastern end. This overlaps with the proposed Ringsend CBC and has been incorporated into the Proposed Scheme. The length of cycle route in the corridor therefore consists of 1.6km x 2 along the River Liffey plus a further 1.1km through Ringsend, for a total of 4.3km.

5.3.2 Route Sections Identified for Review

After this assessment process, it is considered that the options assessment presented in the "Ringsend to City Centre Core Bus Corridor Feasibility Study and Options Assessment Report" has appropriately assessed route options and that the selected corridor offers the most benefits for pedestrians, cyclists and buses, and the extents appropriately consider the infrastructure requirements of the new proposed bus network. However, upon review of the topographical survey and public consultation submissions, a number of issues were identified that could potentially be addressed through the consideration of alternative options along this route section.

Following a thorough review of the Feasibility Study and Options Assessment report, submissions to the non-statutory public consultation and topographical survey subsequently undertaken, a number of areas were identified as requiring further review, and alternative design solutions have therefore been explored in this area in determining a PRO. These are summarised in the following sections. Further details are presented in Chapter 6.

5.3.2.1 Section 1 – Matt Talbot Memorial Bridge to Tom Clarke East Link Bridge

The EPR proposal provided for a pair of two-way bus corridors on both sides of the River Liffey east of the Samuel Beckett Bridge, and for a split bus corridor west of the Samuel Beckett Bridge with an inbound bus lane along the south quays and an outbound bus lane along the north quays. It was also proposed to provide southbound bus lanes (fully or partly) on Tom Clarke Bridge and on Samuel Beckett Bridge and for buses to turn right, westbound, at the southern ends of both bridges. The existing narrow Scherzer Bridges at George's Dock and Spencer Dock were retained, which meant that there were short gaps in the proposed bus lanes at those locations.

Two key issues were raised in the non-statutory public consultations:

- Concerns over traffic diversion proposals associated with the provision of bus priority.
- Concerns over pedestrian safety and interaction with cyclists on Samuel Beckett Bridge.

Based on the public consultation submissions received, the following aspects of the proposed scheme were identified as requiring further review:

1) Bus Priority Options on the North Quays
2) Bus Priority Options at the Scherzer Bridges on the North Quays
3) Right Turns from the North Quays
4) Bus Priority Options on the South Quays
5) Access and Servicing Arrangements on the South Quays
6) Cycling Facilities at Samuel Beckett Bridge

5.3.2.2 Section 2 - Tom Clarke East Link Bridge to Seán Moore Road

The EPR proposal for this sub-section provided a two-way cycle track along the grass verge on the northern side of York Road and Pigeon House Road eastwards to the junction at Cambridge Avenue and then to turn south-westwards along a narrow laneway to be widened at the eastern edge of Ringsend Park to Irishtown, where it would turn south-eastwards alongside Strand Street and Pembroke Street as far as Sean Moore Road.

Concerns were raised in the non-statutory public consultations about the impacts of this proposal at Pigeon House Road, at Ringsend Park and at Strand Street in Irishtown.

The following aspects of the proposed scheme were identified as requiring further review:

1) Route of Cycling Facility through Section 2.
2) Cycle Track in Irishtown area.

5.4 Carbon Considerations for the Route Options

In the case of the Proposed Scheme, carbon arises from the three potential sources namely User Carbon, Capital Carbon and Operational Carbon.

- User Carbon is produced by cars, light and heavy goods vehicles and buses. The majority of the current bus fleet is combustion engine based but a programme to transition the fleet to electric vehicles is in place. The Climate Action Plan 2023 outlines a range of targets for the electrification of private and public service vehicles in the medium term;
- Capital Carbon is produced by road construction and is a necessary investment to reconfigure the roadway infrastructure to facilitate a shift to sustainable modes for the safe, efficient and

reliable movement of people. The Proposed Scheme is designed to put the infrastructure in place to facilitate a long-term User Carbon footprint reduction; and

- The Operational Carbon arises from the operations along the route such as junction signals, street lighting and routine maintenance.

The Proposed Scheme will start with an increase in carbon (capital carbon) from the construction activities: a necessary investment to achieve the long-term decarbonisation outcomes by facilitating the following Proposed Scheme objectives:

- Enhance the capacity and potential of the public transport system by improving bus speeds, reliability and punctuality through the provision of bus lanes and other measures to provide priority to bus movement over general traffic movements; and
- Support the delivery of an efficient, low carbon and climate resilient public transport service, which supports the achievement of Ireland's emission reduction targets.

The impacts of construction capital carbon were initially considered as part of the route options assessment process. Ultimately the capital carbon elements for the Proposed Scheme will be less than that of the user carbon footprint and as such it was not considered to be a reasonable differentiator for the purposes of route options assessment. Although carbon was not directly assessed for the route options, each route option was assessed using a range of environmental factors including Noise and Air Quality which reflect similar contributory elements (i.e. construction and operational stage impacts) to that for carbon emissions.

Furthermore, the development of the preferred route option supports enhanced bus capacity and public transport potential in line with the objectives, which would contribute to reductions in user carbon and contribute towards the 500,000 additional trips by public transport by 2030 outlined as a target in the Climate Action Plan 2023.

In developing the PRO, consideration was given to the carbon generated by the Proposed Scheme during construction and operation. Many of the changes made to the Proposed Scheme design since the EPR proposal have resulted in minor changes in the construction carbon generated by the Proposed Scheme such as reducing lane widths to 3m, the altering of junction layouts, cycle tracks and footpaths. Additionally, significant design iterations were undertaken to mitigate against traffic re-distribution impacts and consequent impacts on greenhouse gas (GHG) emissions.

The preferred route proposals will improve bus journey times and reliability, which will contribute to achieving reductions in user carbon through an efficient public transport service. This would in turn make the existing bus services more attractive to existing road users and thereby encourage mode change from private car-based transport to more sustainable public transport commuting.

Construction carbon has been considered and assessed as part of the evolving Proposed Scheme design and the preparation of the supporting Environmental Impact Assessment Report (EIAR) documentation.

6. Options Assessment

During 2019 and 2020, a full review was undertaken of the previous design proposals as published for the Emerging Preferred Route. This chapter updates the previous options assessment work undertaken in light of the additional considerations set out in Chapter 5. This review was informed by additional technical information and the feedback received from the non-statutory public consultations.

The options assessment for this Section is arranged as follows:

Section 1: Talbot Memorial Bridge to Tom Clarke East Link Bridge; and

Section 2: Tom Clarke East Link Bridge to Sean Moore Road.

6.1 Section 1 – Matt Talbot Memorial Bridge to Tom Clarke East Link Bridge

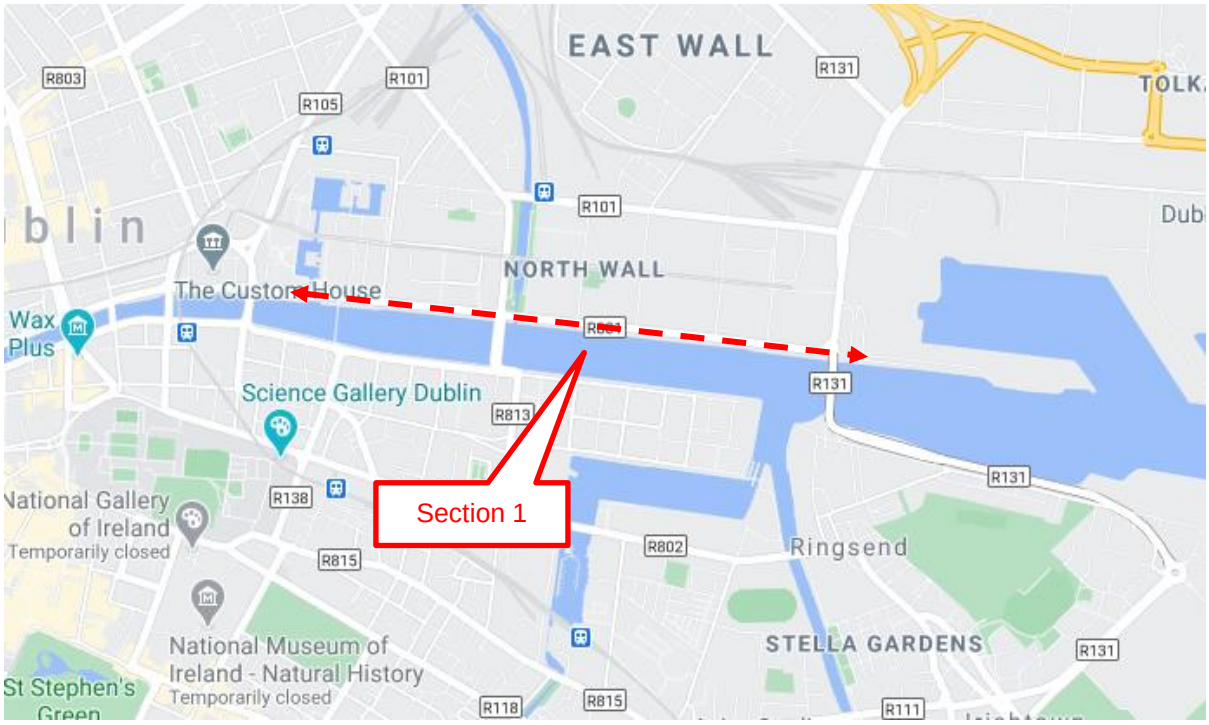


Figure 6.1: Section 1 from Talbot Memorial Bridge to Tom Clarke East Link Bridge (Google Maps)

6.1.1 Bus Priority Options in Section 1 – North Quays

The EPR proposed the removal of the inbound bus lane on the North Quays and its relocation to the south quays. This would require the provision of a right turn facility for buses, taxis and coaches coming from East Wall Road towards the city centre from either the Tom Clarke East Link Bridge or the Samuel Beckett Bridge or both. The widening of the Tom Clarke East Link Bridge for the provision of a right turn lane has not progressed and it is uncertain if and when it will. The provision of a right turn lane for buses from the Samuel Beckett Bridge would be difficult to accommodate geometrically due to a step in levels across the median island and would also require buses to make a very tight left turn from North Wall

Quay onto the bridge, which was restricted as a condition in the original planning consent for the bridge. Alternative options have been reappraised, as follows:

Option A. Retention of bus lanes in both directions on North Wall Quay and Custom House Quay.

Option B. EPR proposal with split routing via North and South Quays with right turn from Tom Clarke East Link Bridge.

Option C. EPR proposal with split routing via North and South Quays with right turn from Samuel Beckett Bridge;

Option D. EPR proposal with split routing via North and South Quays with right turns from both Tom Clarke East link Bridge and Samuel Beckett Bridge.

Option E. Bus lanes in both directions on North Wall Quay and Custom House Quay with general traffic westbound only;

Option F. Bus lanes in both directions on North Wall Quay and Custom House Quay with general traffic eastbound only;

Option G. Public transport only on North Wall Quay and Custom House Quay

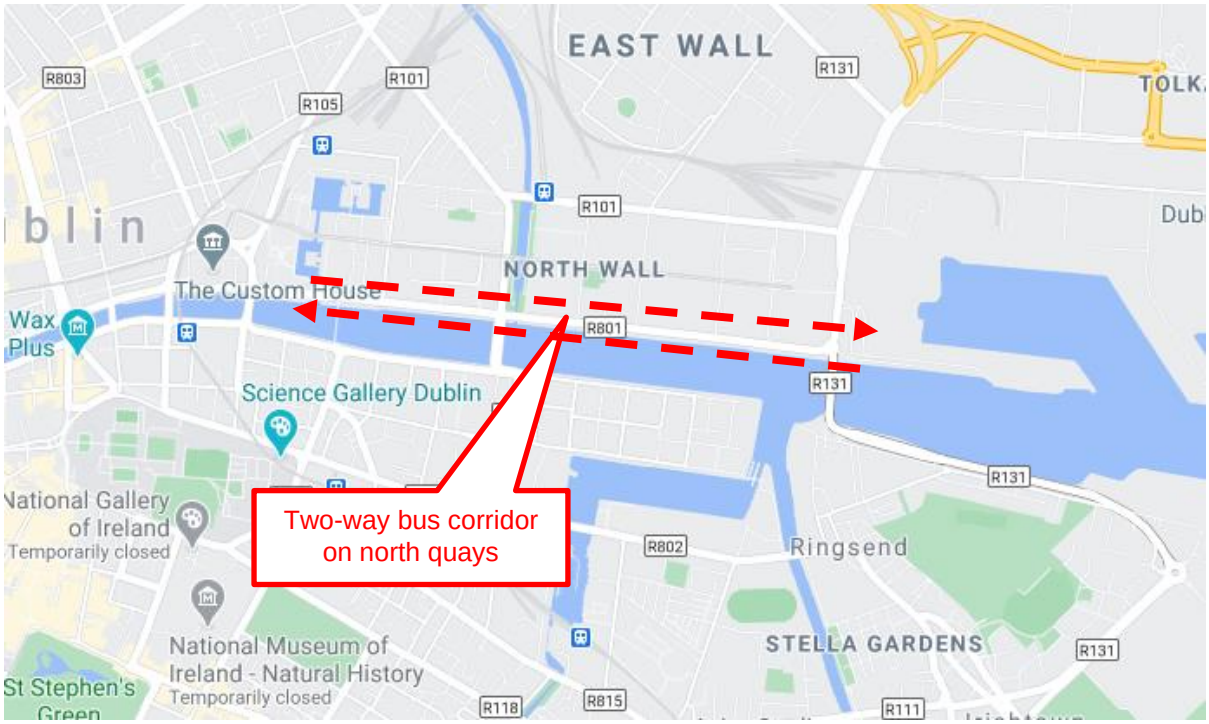


Figure 6.1.1a: Option A for Bus Priority in Section 1

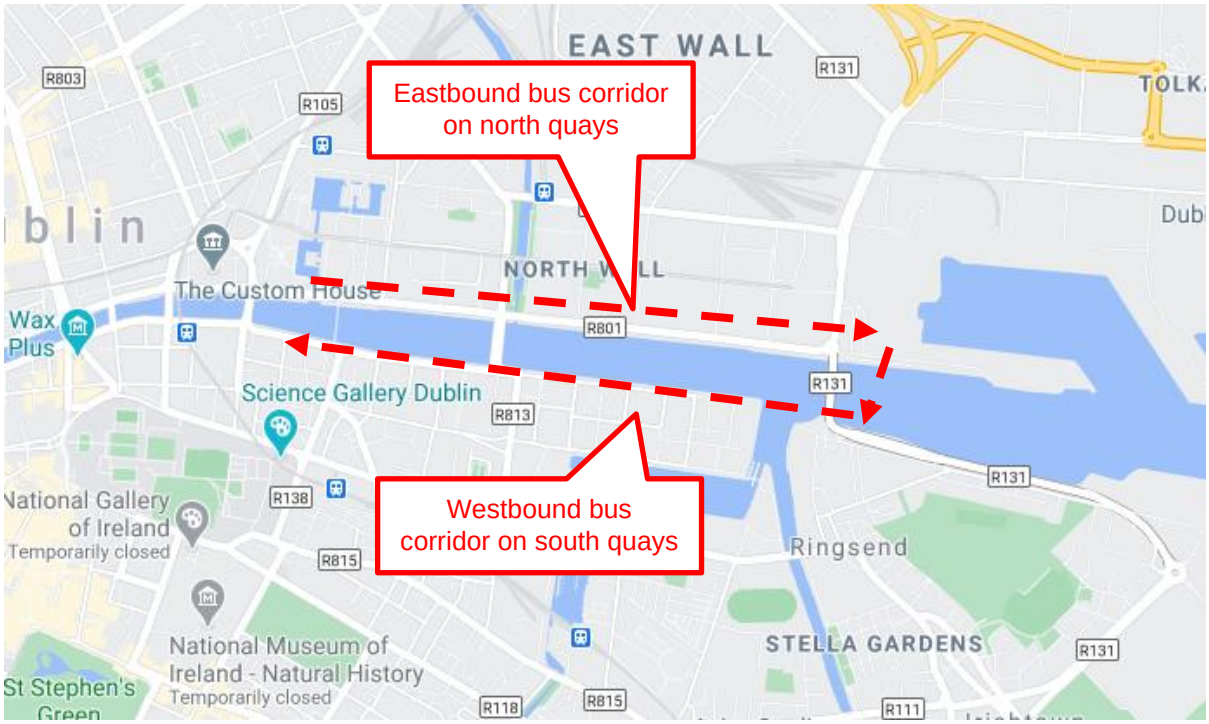


Figure 6.1.1b: Option B for Bus Priority in Section 1

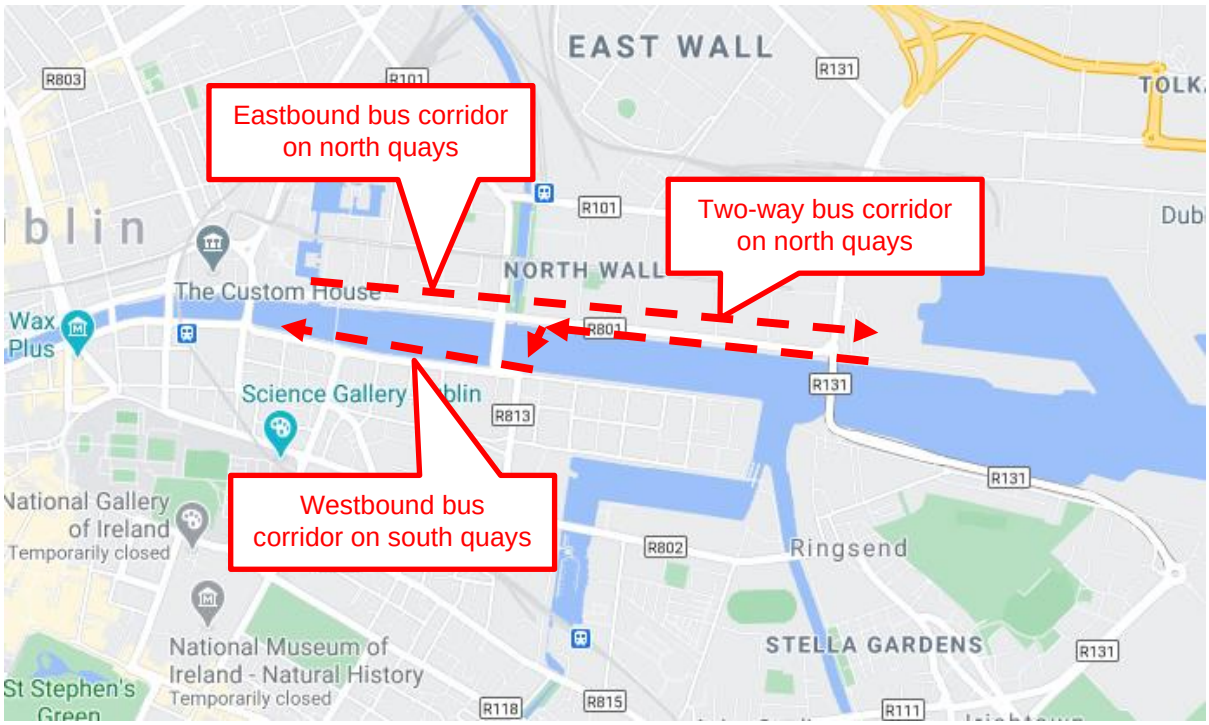


Figure 6.1.1c: Option C for Bus Priority in Section 1

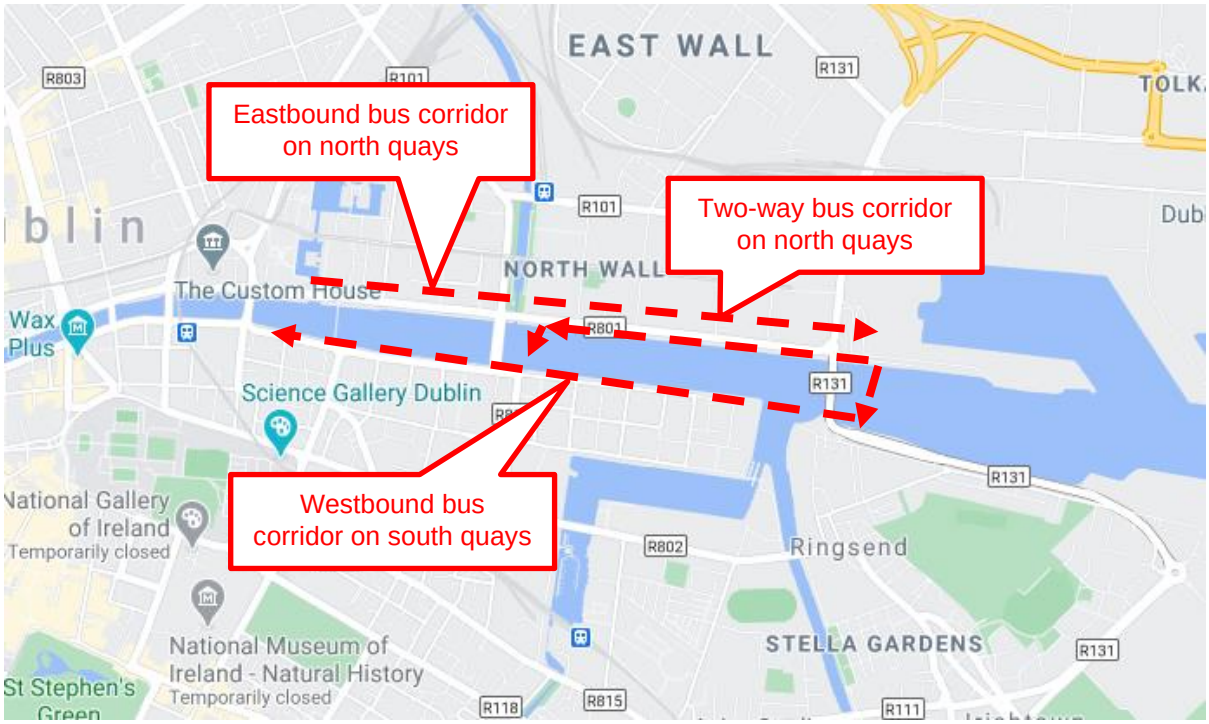


Figure 6.1.1d: Option D for Bus Priority in Section 1

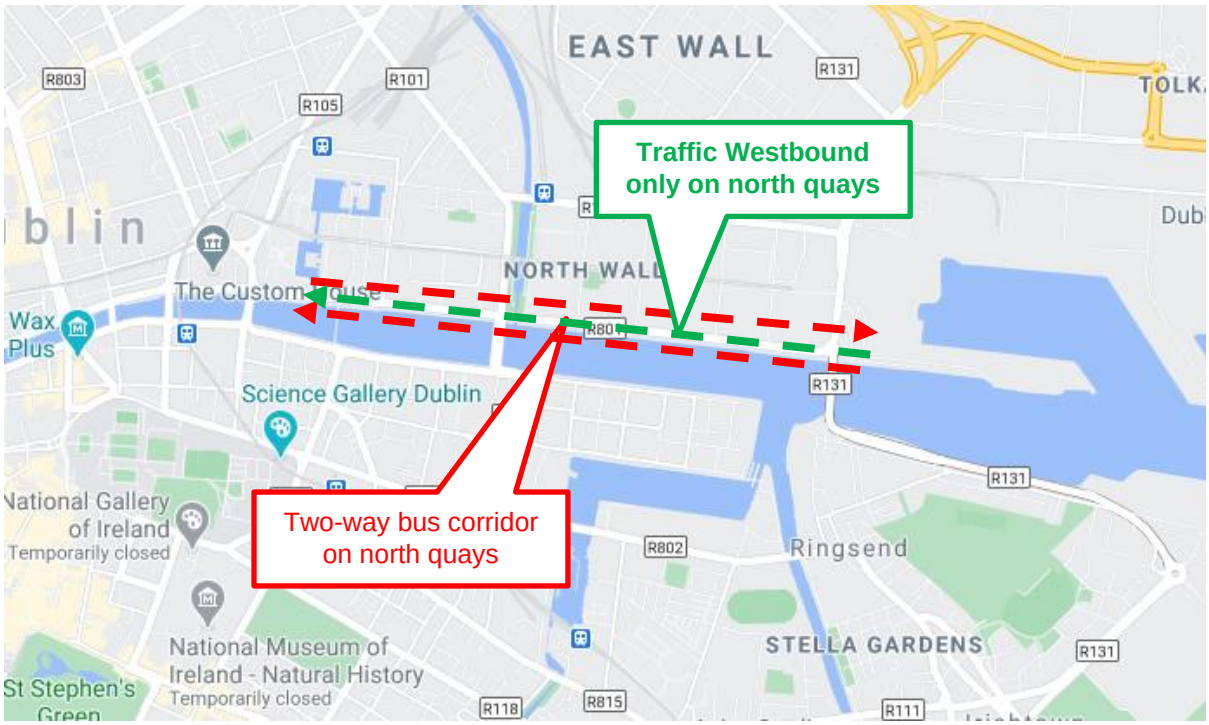


Figure 6.1.1e: Option E for Bus Priority in Section 1

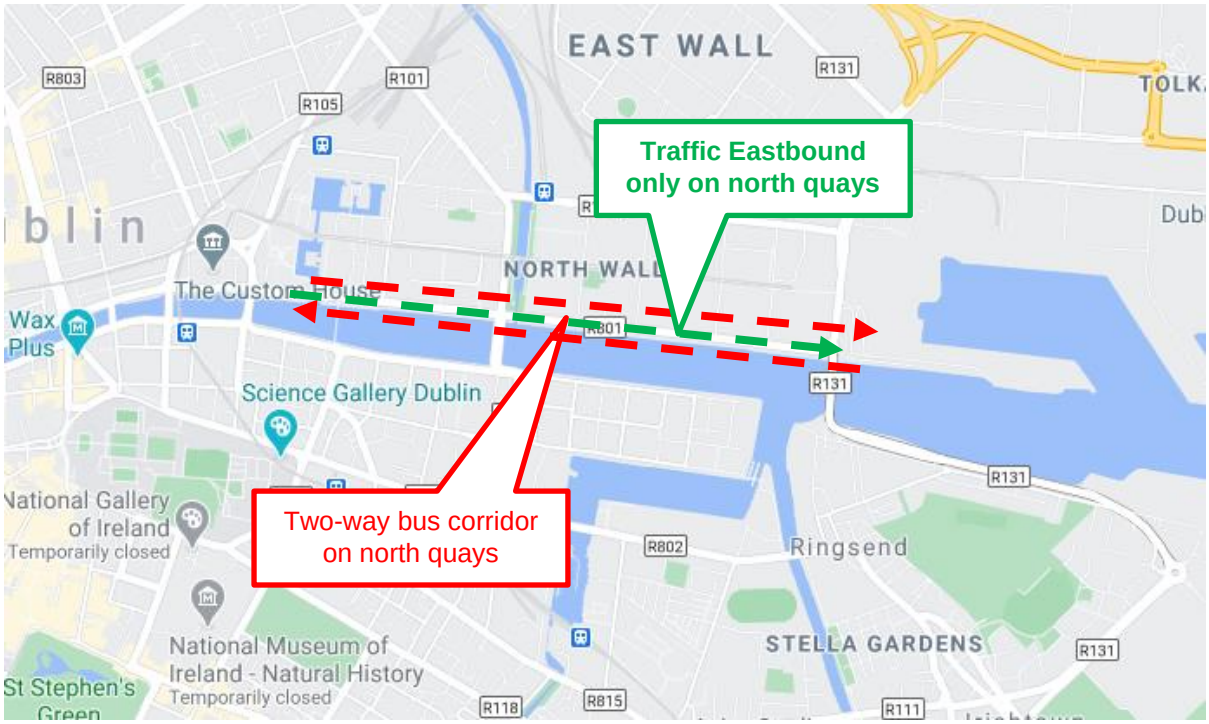


Figure 6.1.1f: Option F for Bus Priority in Section 1

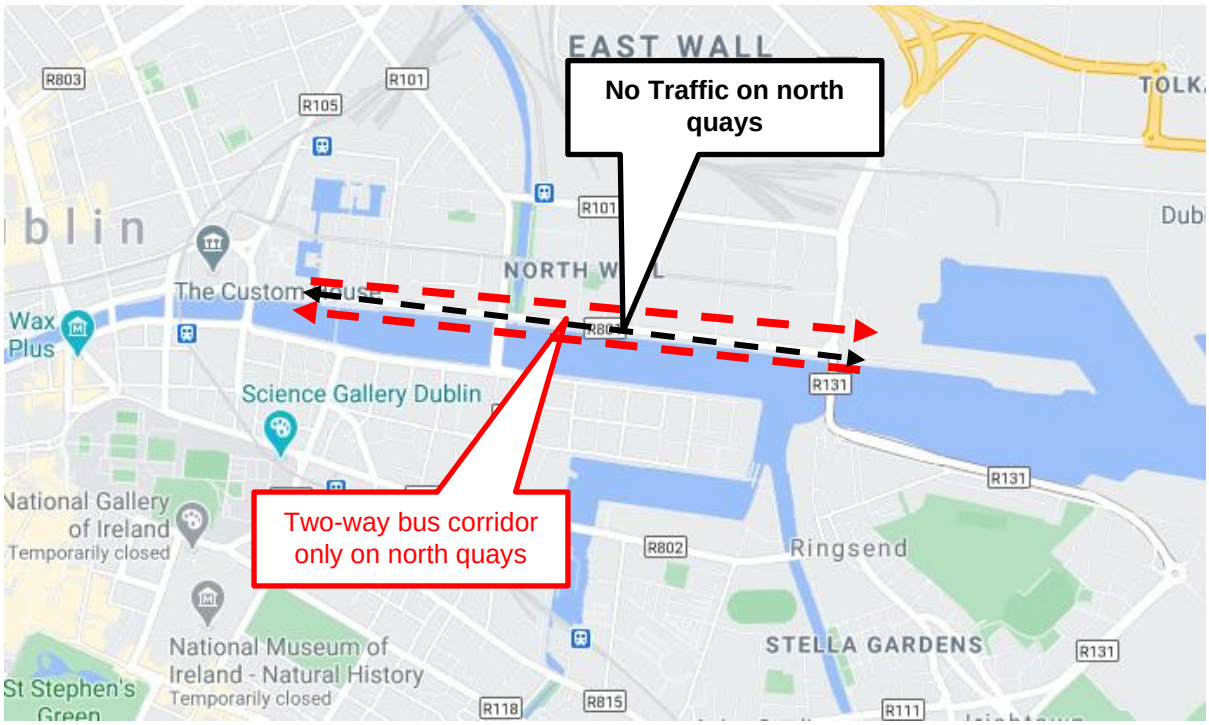


Figure 6.1.1g: Option G for Bus Priority in Section 1

Table 6.1.1.1– Evaluation of Options for Bus Facility Routing on North Quays

Assessment Criteria	Option A Bus Lanes in both directions on North Quays	Option B Split routing from Tom Clarke Bridge	Option C Split routing west of Beckett Bridge EPR	Option D Options B and C combined	Option E Option A with westbound general traffic only	Option F Option A with eastbound general traffic only	Option G Public transport only on north quays
Economy							
Journey Time reliability (Buses)							
Capital Cost							
Integration							
Integration with Land-Use policy							
Residential Population and Employment Catchments							
Public Transport Network							
Cycle Network							
Traffic Network							
Accessibility & Social Inclusion							
Key Trip Attractors within Catchment							
Deprived Geographic Areas							
Safety							
Road Safety							
Environment							
Flora and Fauna							
Archaeology & Cultural Heritage							

Assessment Criteria	Option A Bus Lanes in both directions on North Quays	Option B Split routing from Tom Clarke Bridge	Option C Split routing west of Beckett Bridge EPR	Option D Options B and C combined	Option E Option A with westbound general traffic only	Option F Option A with eastbound general traffic only	Option G Public transport only on north quays
Soils & Geology							
Hydrology							
Land Use and the Built Environment							
Noise, Vibration & Air Quality							
Landscape & Visual							

In terms of economy, options dependent on right turns are more vulnerable to delays. Options requiring greater levels of investment score poorer in terms of cost. Options B and D would require the widening of the Tom Clarke East Link Bridge to provide a right turn lane (or potentially the provision of a pedestrian cycle bridge adjacent), which would have significant cost and potential environmental implications. Option C would not cater for the other bus services along the northern side of the River Liffey east of Samuel Beckett Bridge. Options A, E F and G score highest under this heading with the other options with greater journey time vulnerability and cost scoring poorer.

Under Integration, Options E, F and G, while offering advantages for public transport and bicycles along the north quays, have the potential for significant extraneous impacts as a result of traffic displacement and reducing the accessibility of Dublin Port and the Dublin tunnel and therefore score poorly. This will also reduce accessibility, meaning they score similarly poorly under the Accessibility and Social Inclusion heading.

Under Safety, options providing enhanced cycling infrastructure (e.g. new bridges) score well. Options requiring large vehicles making challenging turning manoeuvres score poorly. Option A retains existing geometric constraints at buildings along the campshires and scores poorly as a result.

In terms of the environment, options causing significant traffic displacement with associated noise and air impacts, and options requiring the construction of new bridges with attendant environmental risks score poorly.

A summary of the assessment and relative ranking of route options against the five main assessment criteria is presented in Table 6.1.1.2.

Table 6.1.1.2 – Evaluation of Options for Bus Facility Routing on North Quays – MCA Summary

Assessment Criteria	Option A Bus Lanes in both directions on North Quays	Option B Split routing with Right Turn at Tom Clarke Bridge	Option C Split routing with Right Turn at Beckett Bridge EPR	Option D Options B and C combined	Option E Option A with westbound general traffic only	Option F Option A with eastbound general traffic only	Option G Public transport only on north quays
Economy							
Integration							
Accessibility & Social Inclusion							
Safety							
Environment							
Preference	**1**	**5**	**2**	**2**	**5**	**4**	**5**

The options assessment has concluded that it is preferable to maintain the bus lanes along North Wall Quay; therefore Option A is preferred.

6.1.2 Bus Priority Options in Section 1 – Scherzer Bridges

There are two historic pairs of formerly opening Scherzer Bridges on the North Quays at the entrances to George's Dock in the IFSC and Spencer Dock at the mouth of the Royal Canal. These pose a significant barrier to bus priority – in particular the pair at Spencer Dock, which compromise the operation of the Samuel Beckett Bridge / Guild Street junction. Neither pair of opening bridges has been opened in the past 50 years. George's Dock is now used for other functions with no navigational access, and there are fixed boardwalks on either side of the old opening bridges. Access to the Royal Canal is via the sea lock upstream of the Spencer Dock Scherzer Bridges, and these bridges were fixed shut in the early 2000s. Fixed pedestrian and cycle bridges were installed immediately adjacent to these bridges in 2019. Waterways Ireland has confirmed that it is no longer necessary for the bridges at Spencer Dock to open for taller vessels and they only require the normal vertical clearance as for the rest of the canal, but with allowance for rising sea levels.

Alternative options for the treatment of these historic structures have been explored as part of the PRO development in order to maximise bus priority along the north quays. The options reviewed are:

Option A. Retain bridges in situ.

Option B. Retain bridges at George's Dock only. The constraint to traffic is less pronounced at George's Dock than at Spencer Dock. The negative and positive impacts of removing the bridges would be less if the intervention was only undertaken at Spencer Dock.

Option C. Retain bridges at Spencer Dock only. The constraint to traffic is more pronounced at Spencer Dock, and the logic of removing the historic bridges at George's Dock while retaining the constraint at this location is questionable. The other negative and positive impacts of removing the bridges would be less if the intervention was only undertaken at George's Dock.

Option D. Retain eastbound bridges only in situ. This would benefit traffic exiting the city only but could leave a confused layout visually, with half of the historic structure retained over one half of the road only.

Option E. Retain westbound bridges only in situ This would benefit traffic entering the city only but could leave a confused layout visually, with half of the historic structure retained over one half of the road only.

Option F. Replace all bridges. This would involve the demolition and removal of the existing bridges and their replacement with a simple unobtrusive concrete bridge structure.

Option G. Relocate and replace all bridges. This would involve the careful deconstruction of the historic bridges and their reconstruction adjacent to the roadway to carry pedestrian and cycle traffic. New four lane simple unobtrusive concrete bridges would be constructed in between to carry the road carriageway.

Table 6.1.2.1 Bus Priority in Section 1: Scherzer Bridges - Evaluation of Options

Assessment Criteria	Option A Retain Existing EPR	Option B Retain George's Dock Bridges Only	Option C Retain Spencer Dock Bridges Only	Option D Retain eastbound bridges only	Option E Retain westbound bridges only	Option F Replace all bridges	Option G Relocate and replace all bridges
Economy							
Journey Time reliability (Buses)							
Capital Cost							
Integration							
Integration with Land-Use policy							
Residential Population and Employment Catchments							
Public Transport Network							
Cycle Network							
Traffic Network							
Accessibility & Social Inclusion							
Key Trip Attractors							

Assessment Criteria	Option A Retain Existing EPR	Option B Retain George's Dock Bridges Only	Option C Retain Spencer Dock Bridges Only	Option D Retain eastbound bridges only	Option E Retain westbound bridges only	Option F Replace all bridges	Option G Relocate and replace all bridges
within Catchment							
Deprived Geographic Areas							
Safety							
Road Safety							
Environment							
Flora and Fauna							
Archaeology & Cultural Heritage							
Soils & Geology							
Hydrology							
Land Use and the Built Environment							
Noise, Vibration & Air Quality							
Landscape & Visual							

In terms of economy, options requiring works to the bridges score poorer in terms of cost, while options retaining some or all of the bridges score poorer in terms of economy.

In terms of integration, options retaining the bridges are more consistent with planning policy and score better in that regard. In terms of transport network integration, options involving the retention of the bridges score more poorly.

In terms of Accessibility and Social Inclusion, there is no difference between the options.

In terms of safety, the bridges pose a hazard to traffic and their retention results in poorer scores for safety.

In terms of environment, options involving works to the bridges score more poorly under architectural and ecological sub-criteria. From a landscape and visual perspective, the retention of the structures fully intact, or relocated to a more prominent location score most favourably.

A summary of the assessment and relative ranking of route options against the five main assessment criteria is presented in Table 6.1.2.2.

Table 6.1.2.2 – Evaluation of Options for Scherzer Bridges – MCA Summary

Assessment Criteria	Option A Retain Existing EPR	Option B Retain George's Dock Bridges Only	Option C Retain Spencer Dock Bridges Only	Option D Retain eastbound bridges only	Option E Retain westbound bridges only	Option F Replace all bridges	Option G Relocate and replace all bridges
Economy							
Integration							
Accessibility & Social Inclusion							
Safety							
Environment							
Preference	4	3	5	6	6	2	1

The conclusion of the options assessment is that the relocation of the historic Scherzer Bridges to each side of their current locations and the provision of new bridges in between is preferable and Option G was selected as the preferred option. This will allow the hazard traffic poses to the bridges and vice versa to be better addressed. An industrial heritage, architecture and conservation study was commissioned to determine whether such an intervention would have a positive or negative impact. From the initial work undertaken, it is considered that the intervention would be potentially positive from a landscape perspective. The study further concluded that it would be acceptable from a heritage perspective, once the case for relocating the structures at all had been established. Figure 6.1.2 shows the potential relocation and reverse orientation of the bridges at Spencer Dock following heritage expert advice:

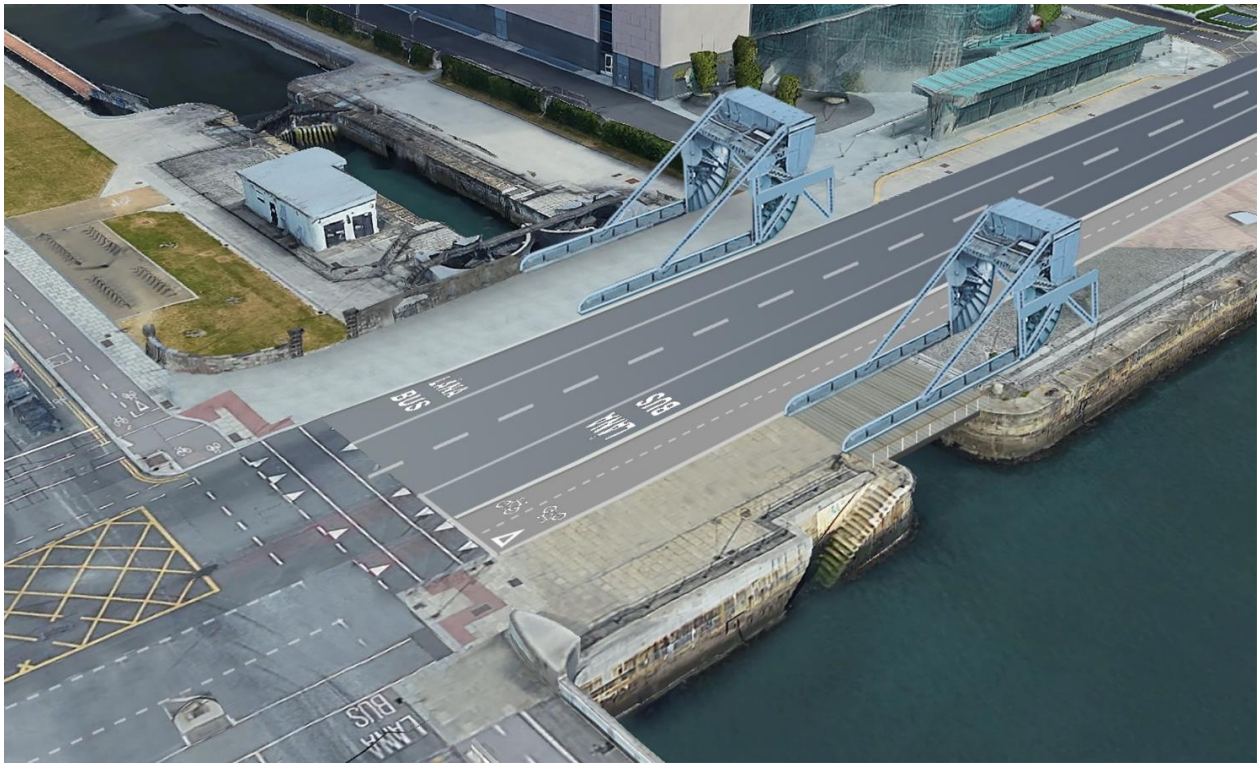


Figure 6.1.2: Potential relocation of Scherzer Bridges at Spencer Dock

6.1.3 Bus Priority in Section 1 – Right Turns from North Quays

In the context of the bus priority improvements being implemented in accordance with 6.1.1 and 6.1.2 above, the review of the EPR raised concern about the impact of right turns on bus priority along the north quays. Such right turns must be accommodated either with dedicated turning lanes, or with turning from the traffic lane, which would result in through traffic entering the bus lane to pass the turning vehicles. These would have operational impacts on the bus lanes and general traffic lanes. Alternative access is generally available via Sheriff Street from East Wall Road or from Guild Street except at one or two locations. Therefore, the potential to remove the right turns has been explored with a view to protecting bus priority. The following options have been explored:

Option A. Retain right turning provisions as existing with provision of right turn lanes.

Option B. Retain right turn provisions as existing without provision of right turn lanes.

Option C. Remove all right turns.

Option D. Retain right turns where required for essential access or public transport movements only – i.e. Commons Street, Park Lane and New Wapping Street.

Table 6.1.3.1 – Evaluation of Right Turning Provisions from North Quays

Assessment Criteria	Option A Retain right turns with lanes EPR	Option B Retain right turns without lanes	Option C Remove all right turns	Option D Retain right turns for public transport only
Economy				
Journey Time reliability (Buses)				
Capital Cost				
Integration				
Integration with Land-Use policy				
Residential Population and Employment Catchments				
Public Transport Network				
Cycle Network				
Traffic Network				
Accessibility & Social Inclusion				
Key Trip Attractors within Catchment				
Deprived Geographic Areas				
Safety				
Road Safety				
Environment				
Flora and Fauna				
Archaeology & Cultural Heritage				
Soils & Geology				
Hydrology				
Land Use and the Built Environment				
Noise, Vibration & Air Quality				
Landscape & Visual				

In terms of economy Option D scores best s it provides the best priority for buses at the lowest scheme cost.

For integration, Option A is ranked first as it avoids diversion of traffic movements, however, the diversion impacts will be quite minor in the other options.

In terms of Accessibility and Social Inclusion, there is no difference between the options.

For road safety Options C and D are best as they limit traffic conflicts due to turning movements.

For environment, Option A ranks lowest as it would entail widening works with impacts that would not arise for the other options.

A summary of the assessment and relative ranking of route options against the five main assessment criteria is presented in Table 6.1.3.2.

Table 6.1.3.2 – Evaluation of Right Turning Provisions from North Quays – MCA Summary

Assessment Criteria	Option A Retain right turns with lanes EPR	Option B Retain right turns without lanes	Option C Remove all right turns	Option D Retain right turns for public transport only
Economy				
Integration				
Accessibility & Social Inclusion				
Safety				
Environment				
Preference	**2**	**4**	**2**	**1**

The above options assessment indicates that the complete removal of right turns would adversely impact on public transport services. Therefore, it is preferable to provide for right turns where these vehicles need to make such manoeuvres (as well as for essential access). These situations pertain at the Commons Street, Park Lane and New Wapping Street junctions westbound and at the Samuel Beckett Bridge junction eastbound. The retention of other right turning provisions is not recommended, and these movements should be redirected via Sheriff Street. Option D was selected as the preferred option.

6.1.4 Bus Priority Options in Section 1 – South Quays

In the context of the retention of bus lanes on the North Quays as set out in 6.1.1 above, the proposed introduction of bus priority on the south quays has been reviewed. Four possible options have been considered, as follows:

Option A. No bus priority on the south quays west of Beckett Bridge with all bus movements via North Quays.

Option B. EPR: Westbound priority with eastbound movements via North Quays and Beckett Bridge.

Option C. Westbound priority on the south quays as per EPR with eastbound movements via Townsend Street. This would be a slight revision to the EPR, with eastbound bus movements routed via Townsend Street rather than the north quays, thereby avoiding a complicated right turn movement at the Beckett Bridge / Guild Street junction.

Option D. Limited westbound bus priority on the south quays. This would involve the introduction of a westbound bus lane on City Quay between Talbot Memorial Bridge and Lombard Street and on Sir John Rogerson's Quay between Forbes Street and Samuel Beckett Bridge. The existing traffic circulation arrangements would be maintained east of this

point, with access traffic continuing to access the Lime Street / Windmill Lane area as it does at present

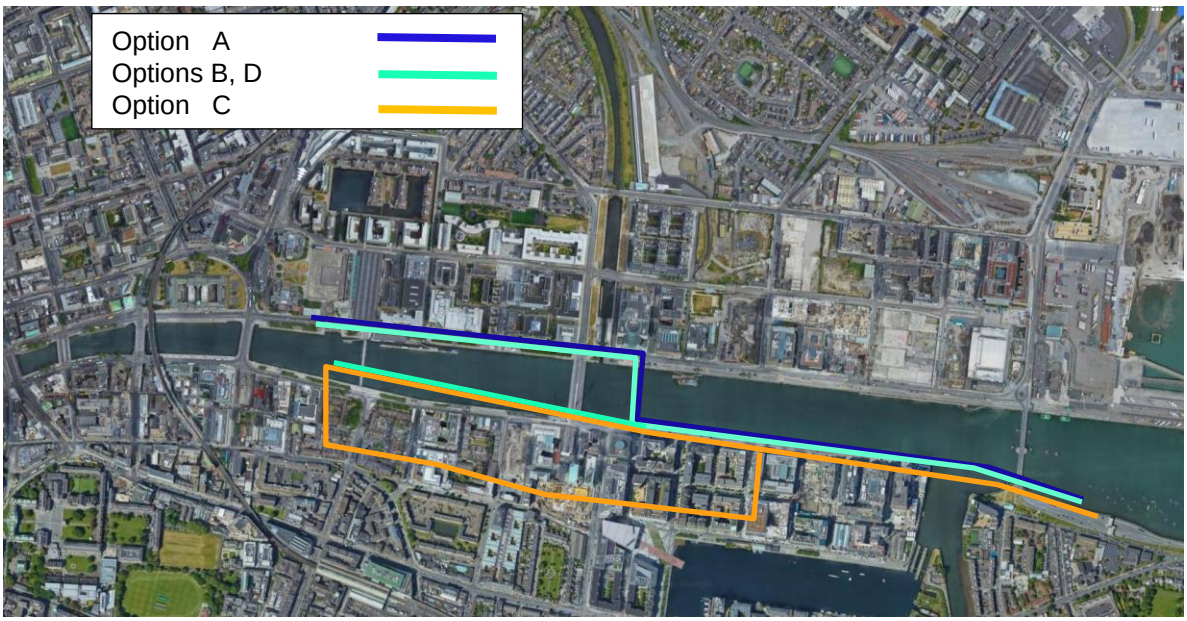


Figure 6.4: Options for Bus Facilities on South Quays

Table 6.1.4.1 – Evaluation of Options for Bus Facility Routing on South Quays

Assessment Criteria	Option A Buses on North Quays west of Beckett Bridge	Option B All westbound buses on the south quays west of Beckett Bridge EPR	Option C EPR with eastbound buses via Townsend St	Option D Limited westbound priority on South Quays
Economy				
Journey Time reliability (Buses)				
Capital Cost				
Integration				
Integration with Land-Use policy				
Residential Population and Employment Catchments				
Public Transport Network				
Cycle Network				
Traffic Network				
Accessibility & Social Inclusion				

Assessment Criteria	Option A Buses on North Quays west of Beckett Bridge	Option B All westbound buses on the south quays west of Beckett Bridge EPR	Option C EPR with eastbound buses via Townsend St	Option D Limited westbound priority on South Quays
Key Trip Attractors within Catchment				
Deprived Geographic Areas				
Safety				
Road Safety				
Environment				
Flora and Fauna				
Archaeology & Cultural Heritage				
Soils & Geology				
Hydrology				
Land Use and the Built Environment				
Noise, Vibration & Air Quality				
Landscape & Visual				

In terms of economy Option D scores best as it provides sufficient priority for buses at the second lowest scheme cost.

For integration, Option D is ranked first as it provides the most direct route for westbound buses with only limited diversion of local access traffic movements.

In terms of Accessibility and Social Inclusion, there is no difference between the options.

For road safety there is no difference between the options.

For environment, there is no difference between the options.

A summary of the assessment and relative ranking of route options against the five main assessment criteria is presented in Table 6.1.4.2.

Table 6.1.4.2 – Evaluation of Options for Bus Facility Routing on South Quays – MCA Summary

Assessment Criteria	Option A Buses on North Quays west of Beckett Bridge	Option B EPR Design	Option C EPR with eastbound buses via Townsend St	Option D Limited westbound priority on South Quays
Economy				
Integration				

Assessment Criteria	Option A Buses on North Quays west of Beckett Bridge	Option B EPR Design	Option C EPR with eastbound buses via Townsend St	Option D Limited westbound priority on South Quays
Accessibility & Social Inclusion				
Safety				
Environment				
Preference	**2**	**4**	**2**	**1**

The options assessment has concluded in favour of Option D for localised westbound bus priority along the south quays

6.1.5 Access and Servicing Arrangements in Section 1 – South Quays

The measures proposed under 6.1.4 require a review of proposed car access and circulation at *Sir John Rogerson's Quay Extension*. This was raised as an unwelcome change during the non-statutory public consultations. The area is a de facto cul-de-sac for general traffic since only buses, pedestrians and cyclists will be able to continue onward to Ringsend over the Dodder Public Transport Bridge. In that context, a full access restriction from the Cardiff Lane junction may not be warranted. Several options have been reconsidered to manage private car access:

Option A. No bus priority

Option B. EPR: Two-way bus lanes between Cardiff Lane and Forbes Street.

Option C. Eastbound bus lane only between Cardiff Lane and Forbes Street.

Option D. Westbound bus lane only between Forbes Street and Cardiff Lane.

Option E. Eastbound bus lane only between Cardiff Lane and Forbes Street with westbound bus access via Misery Hill.

Option F. Westbound bus lane only between Forbes Street and Cardiff Lane with Eastbound Bus access via Misery Hill.

In options where the westbound bus lane is omitted, there would be a vulnerability to bus services in the event of congestion on Cardiff Lane / Beckett Bridge, since cars unable to join the northbound or southbound traffic streams would in turn obstruct westbound buses. There is no scope for congestion eastbound, since there is no obstacle to traffic flow to the east.

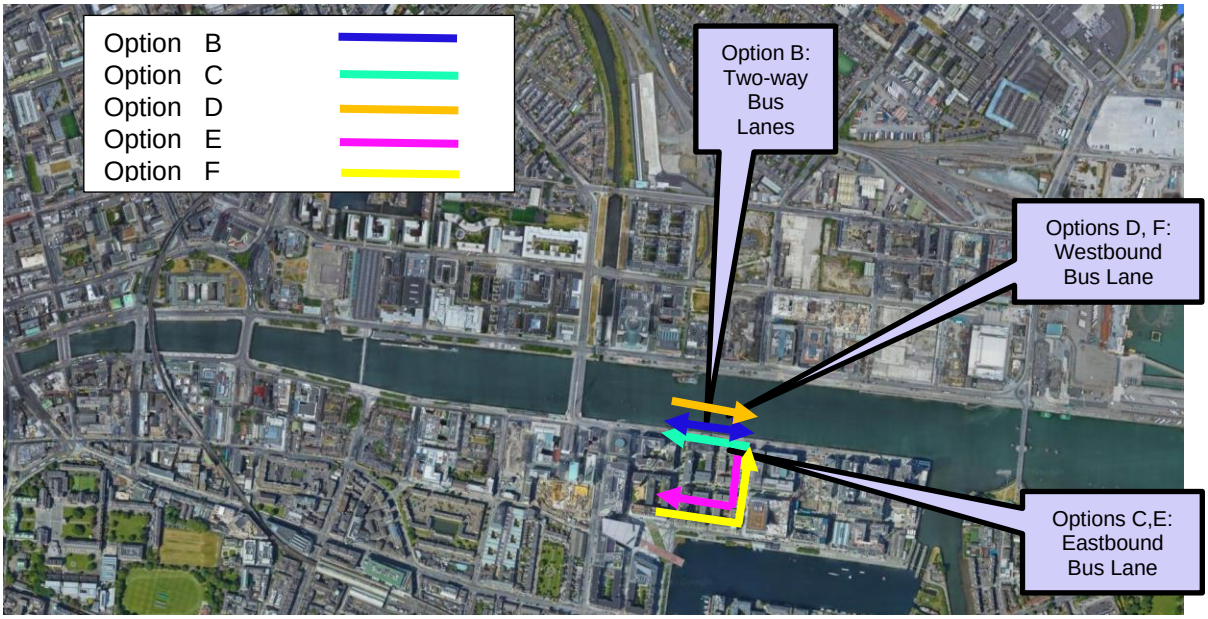


Figure 6.5: Possible Access Arrangements at Sir John Rogerson's Quay Extension

Table 6.1.5.1 – Evaluation of Access Arrangements at Sir John Rogerson's Quay Extension

Assessment Criteria	Option A No Bus Priority	Option B Two way bus lanes on SJRQ EPR	Option C Eastbound bus lane on SJRQ	Option D Westbound bus lane on SJRQ	Option E Eastbound bus lane on SJRQ Westbound Misery Hill	Option F Westbound bus lane on SJRQ Eastbound Misery Hill
Economy						
Journey Time reliability (Buses)						
Capital Cost						
Integration						
Integration with Land-Use policy						
Residential Population and Employment Catchments						
Public Transport Network						
Cycle Network						

Assessment Criteria	Option A No Bus Priority	Option B Two way bus lanes on SJRQ EPR	Option C Eastbound bus lane on SJRQ	Option D Westbound bus lane on SJRQ	Option E Eastbound bus lane on SJRQ Westbound Misery Hill	Option F Westbound bus lane on SJRQ Eastbound Misery Hill
Traffic Network						
Accessibility & Social Inclusion						
Key Trip Attractors within Catchment						
Deprived Geographic Areas						
Safety						
Road Safety						
Environment						
Flora and Fauna						
Archaeology & Cultural Heritage						
Soils & Geology						
Hydrology						
Land Use and the Built Environment						
Noise, Vibration & Air Quality						
Landscape & Visual						

In terms of economy Option D scores best as it provides best priority for buses at the second lowest scheme cost.

For integration, Option D is ranked first as it provides the most direct route for westbound buses with only limited diversion of local access traffic movements.

In terms of Accessibility and Social Inclusion, there is no difference between the options.

For road safety there is no difference between the options.

For environment, there is no difference between the options.

A summary of the assessment and relative ranking of route options against the five main assessment criteria is presented in Table 6.1.5.2

Table 6.1.5.2 – Evaluation of Access Arrangements at Sir John Rogerson's Quay Extension – MCA Summary

Assessment Criteria	Option A No Bus Priority	Option B Two way bus lanes on SJRQ EPR	Option C Eastbound bus lane on SJRQ	Option D Westbound bus lane on SJRQ	Option E Eastbound bus lane on SJRQ Westbound Misery Hill	Option F Westbound bus lane on SJRQ Eastbound Misery Hill
Economy						
Integration						
Accessibility & Social Inclusion						
Safety						
Environment						
Preference	**3**	**2**	**5**	**1**	**6**	**4**

The options assessment has indicated that westbound bus priority is best provided by a bus lane westbound on Sir John Rogerson's Quay between Forbes Street and Cardiff Lane.

6.1.6 Pedestrian and Cycling Facilities on Samuel Beckett Bridge

There is an existing two-way cycle track beside the footpath on the eastern side of Samuel Beckett Bridge as shown in Figure 6.6a. Comments were received during the first public consultation about the limited space for pedestrians and cyclists on Samuel Beckett Bridge. In the EPR it was proposed to remove the northbound cycle track on the eastern side of the bridge as shown in Figure 6.6b. The following options have been considered at this location:

Option A. EPR: Remove the northbound part of the two-way cycle track on eastern side and widen the footpath by 1.5m from 2m to 3.5m. Northbound cyclists will be required to cross to the cycle track on the western side of the bridge.

Option B. No change to existing arrangement that retains 2m footpath and 3m two-way cycle track.

Option C. Remove southbound bus lane and provide two-way cycle track on the road. Widen the eastern footpath from 2m to 5m. The cycle track would be located on the bus lane and separated from the footpath by the traffic safety barrier.

Figure 6.6a: Existing arrangement at of Samuel Beckett Bridge east side

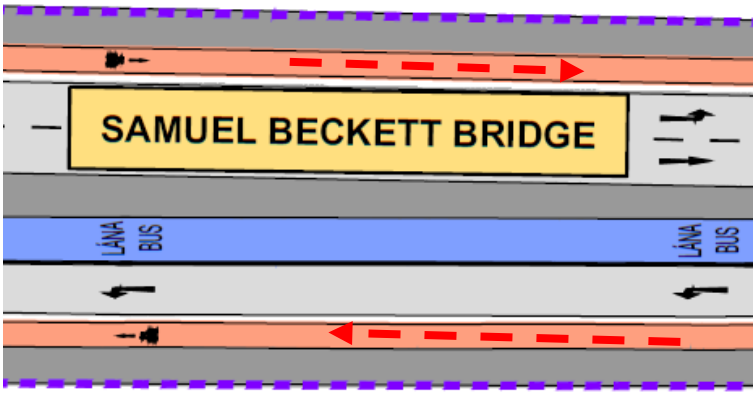


Figure 6.6b EPR proposal at Samuel Beckett Bridge east side: one-way cycle tracks

Table 6.1.6.1 – Evaluation of Pedestrian & Cycling Facility Options on Samuel Beckett Bridge

Assessment Criteria	Option A Remove northbound cycle track east side EPR	Option B Retain Existing Arrangement	Option C Replace SB Bus Lane with cycle track and widen footpath east side
Economy			
Journey Time reliability (Buses)			
Capital Cost			
Integration			
Integration with Land-Use policy			
Residential Population and Employment Catchments			
Public Transport Network			
Cycle Network			
Traffic Network			
Accessibility & Social Inclusion			
Key Trip Attractors within Catchment			
Deprived Geographic Areas			
Safety			
Road Safety			
Environment			
Flora and Fauna			
Archaeology & Cultural Heritage			
Soils & Geology			
Hydrology			
Land Use and the Built Environment			
Noise, Vibration & Air Quality			
Landscape & Visual			

In terms of economy Option B scores best as it retains priority for buses and is the lowest cost option.

For integration, Option B is ranked first as it retains a high-quality link in the cycle route network compared to Option A. Option C would scores poorly for public transport network as it would lose a section of southbound bus lane on the bridge.

In terms of Accessibility and Social Inclusion, there is no difference between the options.

For road safety Option C is preferred as it removes the conflict between pedestrians and cyclists on the bridge.

For environment, there is no difference between the options.

A summary of the assessment and relative ranking of route options against the five main assessment criteria is presented in Table 6.1.6.2.

Table 6.1.6.2 – Evaluation of Pedestrian & Cycling Facility Options on Samuel Beckett Bridge – MCA Summary

Assessment Criteria	Option A (EPR) Remove northbound cycle track east side	Option B Retain Existing Arrangement	Option C Replace SB Bus Lane with cycle track and widen footpath east side
Economy			
Integration			
Accessibility & Social Inclusion			
Safety			
Environment			
Preference	**3**	**1**	**2**

Option B is preferred overall to retain the existing arrangement on Samuel Beckett Bridge.

6.1.7 Conclusions and Draft Preferred Route Option for Section 1

The following key changes are proposed to the earlier EPR design in Section 1:

1) Continuous bus lanes will be provided in both directions on north quays.
2) The Scherzer Bridges at George's Dock and Spencer Dock will be dismantled, restored and sympathetically relocated beside their current positions to carry the footpaths and cycle tracks.
3) Retain right turning movements from north quays where required for essential access or for public transport movements only. These situations pertain at the Commons Street, Park Lane and New Wapping Street junctions westbound and at the Samuel Beckett Bridge junction eastbound for bus only.
4) Provide for key sections of contra-flow westbound bus lanes and signal control priority along the south quays for appropriate bus priority.
5) Traffic access to be maintained eastbound to Sir John Rogerson's Quay Extension for access and servicing; and
6) The existing arrangement for cyclists and pedestrians on the eastern side of Beckett Bridge are to remain as existing. The preliminary design will provide a wider area for pedestrians and cyclists at the southeast corner of the bridge onto Sir John Rogerson's Quay by narrowing the traffic lanes.

6.2 Section 2 –Tom Clarke East Link Bridge to Seán Moore Road

6.2.1 Route of Cycling Facility through Section 2

On foot of the significant local opposition to the EPR proposal for a cycle track along Pigeon House Road in the first public consultation, a number of alternative options were considered. This included an option via the western side of Ringsend Park, which itself attracted some adverse comments through the non-statutory public consultation process. These options are shown on Figure 6.7 with coloured lines as indicated on this list:

Option A. EPR proposal for a cycle track along York Road, Pigeon House Road and the eastern edge of Ringsend Park.

Option B. Quiet street cycle route on Pigeon House Road

Option C. More direct route along the western side of Ringsend Park and then sharing the same route as Option A through Irishtown.

Option D. Combination of B and C

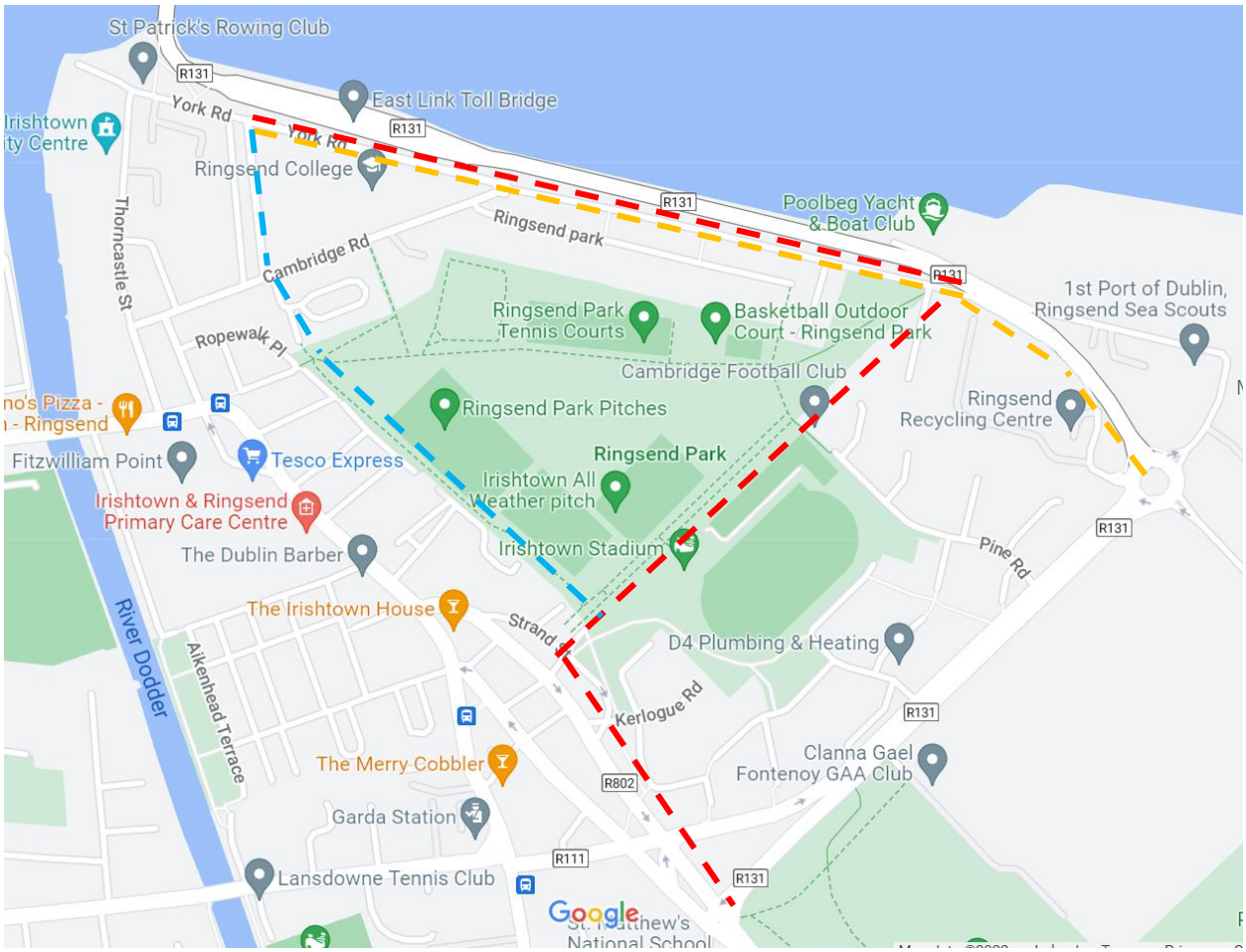


Figure 6.7 Cycle Route Options in Section 2

Table 6.2.1.1 – Evaluation of Options for Cycle Routing through Section 2

Assessment Criteria	Option A Cycle Track along Pigeon House Road EPR	Option B Quiet street route on Pigeon House Road	Option C Ringsend Park West Route	Option D Options B and C combined
Economy				
Journey Time reliability (Buses)				
Capital Cost				
Integration				
Integration with Land-Use policy				
Residential Population and Employment Catchments				
Public Transport Network				
Cycle Network				
Traffic Network				
Accessibility & Social Inclusion				
Key Trip Attractors within Catchment				
Deprived Geographic Areas				
Safety				
Road Safety				
Environment				
Flora and Fauna				
Archaeology & Cultural Heritage				
Soils & Geology				
Hydrology				
Land Use and the Built Environment				
Noise, Vibration & Air Quality				
Landscape & Visual				

In terms of economy Option B scores best as it is the lowest cost option.

However, for integration, Option B is ranked last as it offers the least integration for the cycle route network, including for the main desire line along the *East Coast Trail* directly towards Sandymount. Option D provides the best integration as it caters for both desire lines towards Poolbeg and Sandymount.

In terms of Accessibility and Social Inclusion, there is no difference between the options.

For road safety Option B is not quite as good as the other options which all provide full segregation for cyclists from vehicular traffic.

For environment, Option B is best as it involves no works on green spaces, and all other options rank the same.

A summary of the assessment and relative ranking of route options against the five main assessment criteria is presented in Table 6.2.1.2.

Table 6.2.1.2 – Evaluation of Options for Cycle Routing through Section 2 – MCA Summary

Assessment Criteria	Option A Cycle Track along Pigeon House Road EPR	Option B Quiet street route on Pigeon House Road	Option C Ringsend Park Route	Option D Options B and C combined
Economy				
Integration				
Accessibility & Social Inclusion				
Safety				
Environment				
Preference	4	3	2	1

The assessment has concluded that there are more attractive, lower impact solutions than that indicated on the EPR. The combination of Options B and C offers the best solution for cyclists and will avoid impacting on the green area in front of the houses on Pigeon House Road, thereby addressing a significant concern that arose during Public Consultation No. 1. Pigeon House Road has been closed to through general traffic since Public Consultation No. 1 so the concerns that arose previously about through traffic and trucks no longer arise.

The design of the cycling route through Ringsend Park should be progressed carefully, having regard to existing park users, landscaping, and ecology. A wider shared use path is the preferred solution, and this can be achieved with minimal impact on the trees. Concerns were expressed during the public consultation in relation to potential anti-social behaviour in Ringsend Park if it were open 24 hours a day, 7 days a week. However, Fairview Park and Booterstown/Blackrock Park are open at night with cycle routes through them without such problems being notable.

6.2.2 Cycle Route Options in Irishtown Area

Concerns were raised by the public about impacts of the proposal at the south-eastern corner of Ringsend Park – on the historic quay wall, on trees and on parking. Several alternative designs were devised to avoid these impacts, and these have been compared with the EPR:

Option A. EPR proposal along the eastern side of Ringsend Park and then along the footpath beside the old sea wall between Strand Street and Kerlogue Road.

Option B. Revised option via Kerlogue Road. The revised proposal involves slightly adjusting (but not reducing) the parking provision at the Strasbourg Terrace Car Park, avoiding all existing mature trees, and shared use of Kerlogue Road with additional traffic calming.

Option C. Modified option via Strand Street avoiding EPR route impacts.

Option D. Revised option via Bremen Road. This option would start similarly to Option B but would connect to the proposed Poolbeg SDZ site rather than connecting directly towards Beach Road.

Option E. Combination of Options C and D, but with a shared path rather than a separate cycle track over shorter length to join Bremen Road beside the stadium.

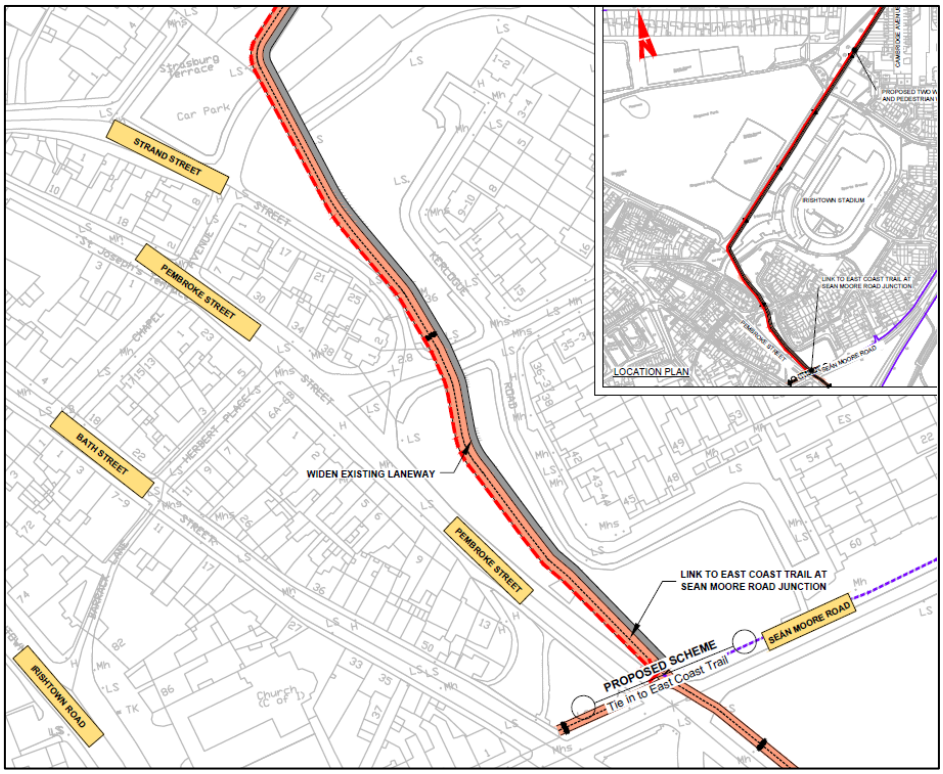


Figure 6.8a Option A: EPR proposed cycle route at Irishtown

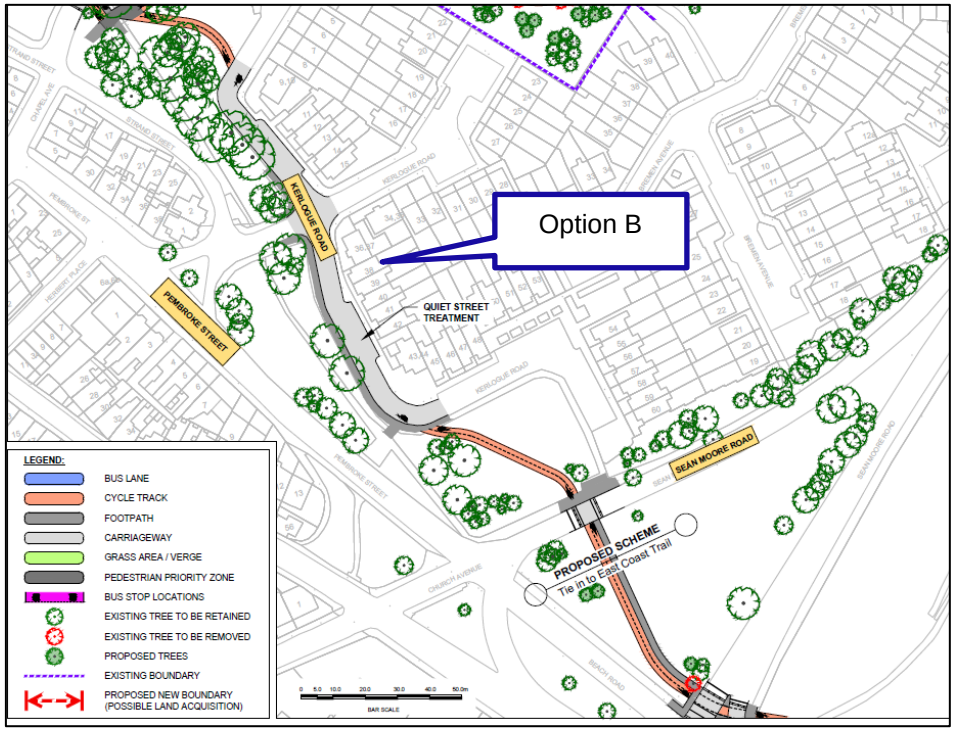
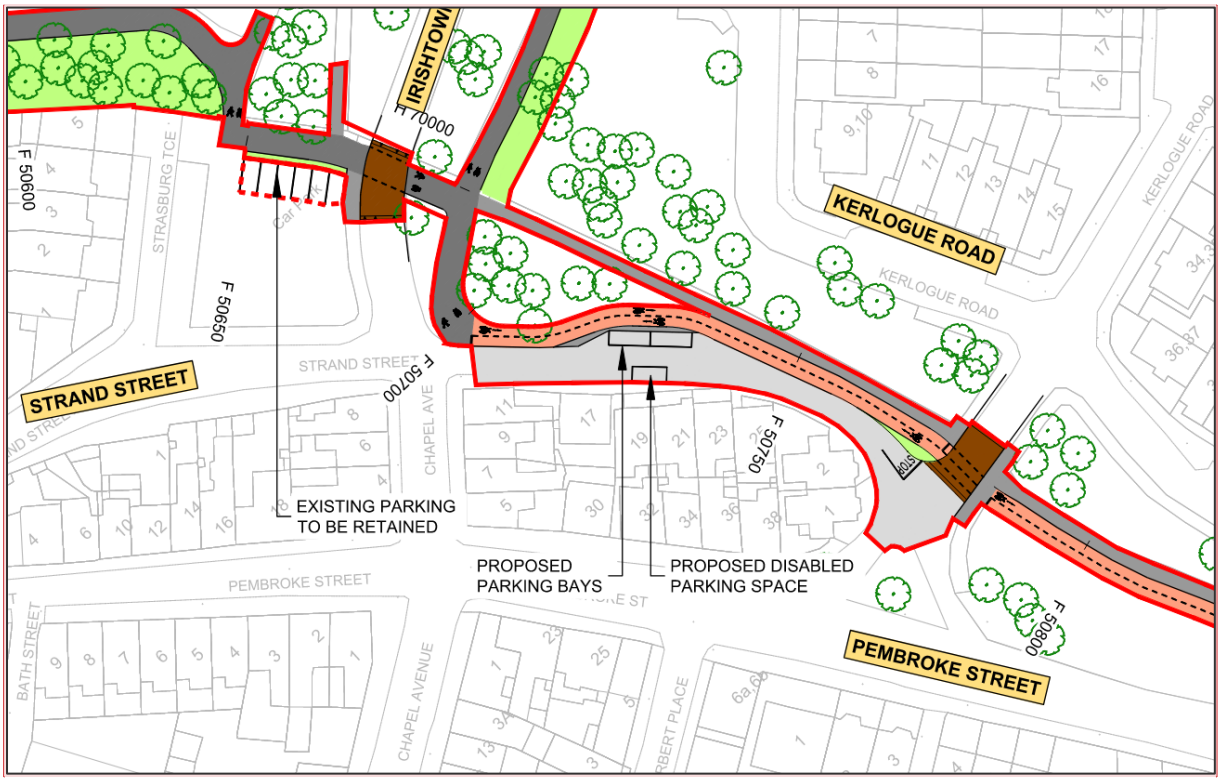
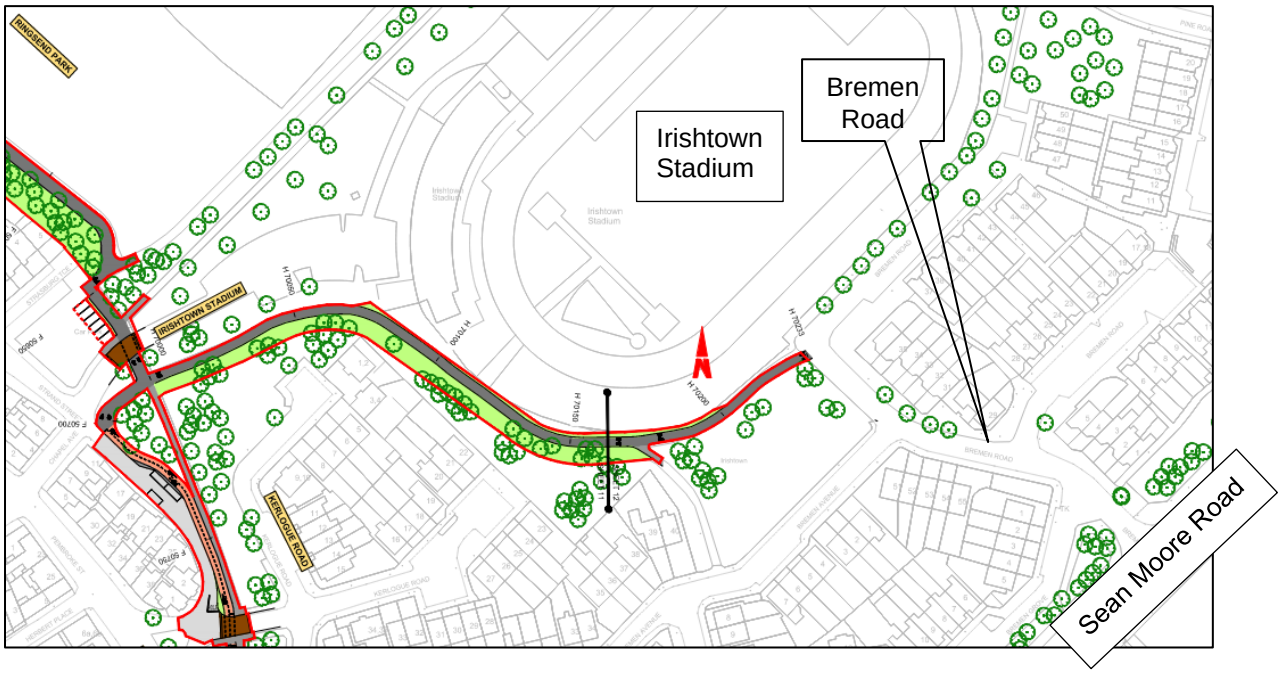


Figure 6.8b Option B Kerlogue Road cycle route option at Irishtown



[DA1]

Figure 6.8c Option C: Modified Strand Street cycle route option at Irishtown



gure 6.8d Option D: Cycle route via Irishtown Stadium & Bremen Road to Sean Moore Road

Table 6.2.2.1 – Evaluation of Options for Cycle Route at Irishtown

Assessment Criteria	Option A EPR Proposal	Option B Kerlogue Road Route	Option C Modified Strand Street Route	Option D Bremen Road Route	Option E Options C and D combined
Economy					
Journey Time reliability (Buses)					
Capital Cost					
Integration					
Integration with Land-Use policy					
Residential Population and Employment Catchments					
Public Transport Network					
Cycle Network					
Traffic Network					
Accessibility & Social Inclusion					
Key Trip Attractors within Catchment					
Deprived Geographic Areas					
Safety					
Road Safety					
Environment					
Flora and Fauna					
Archaeology & Cultural Heritage					
Soils & Geology					
Hydrology					
Land Use and the Built Environment					
Noise, Vibration & Air Quality					
Landscape & Visual					

In terms of economy Option B scores best as it is the lowest cost option.

Option E provides the best integration as it caters for both desire lines towards Poolbeg and Sandymount.

In terms of Accessibility and Social Inclusion, there is no difference between the options.

For road safety Option E provides the most segregation for cyclists from vehicular traffic.

For environment, Option B is best as it involves the least loss of green spaces.

A summary of the assessment and relative ranking of route options against the five main assessment criteria is presented in Table 6.2.2.2.

Table 6.2.2.2 – Evaluation of Options for Cycle Route at Irishtown – MCA Summary

Assessment Criteria	Option A EPR Proposal	Option B Kerlogue Road Route	Option C Revised Strand Street Route	Option D Bremen Road Route	Option E Options C and D combined
Economy					
Integration					
Accessibility & Social Inclusion					
Safety					
Environment					
Preference	**5**	**2**	**3**	**4**	**1**

The preferred solution is Option E which provides the most connectivity for cyclists to both the East Coast Trail and the proposed Poolbeg SDZ development.

6.2.3 Conclusions and Draft Preferred Route Option for Section 2

The following key changes are proposed to the earlier EPR design in Section 2:

1) A more direct cycle route is proposed along the western edge of Ringsend Park;
2) The existing grass verge at Pigeon House Road is retained and instead cyclists can use the quiet street which has been closed to through traffic.
3) A modified cycle route is proposed along the side of Strand Street in Irishtown to avoid impacts on trees.
4) An additional branch cycle route on a shared path is proposed via Irishtown Stadium and Bremen Road towards the Poolbeg SDZ development site.
5) Overall in Section 2 there will be a direct spine route that heads southwards towards Sandymount with 2 branch routes towards the Poolbeg SDZ area.

7. Preferred Route Option

7.1 Introduction

This chapter of the report presents and describes the preferred route option identified and the preferred route option Proposed Scheme design for the Ringsend to City Centre Core Bus Corridor. The Preferred Route Option design drawings are included in Appendix A of this report.

7.2 Preferred Route Option Scheme Design Description

The Ringsend to City Centre Core Bus Corridor Scheme is shown in Figure 7-1

Figure 7-1: Ringsend to City Centre Core Bus Corridor Scheme

The Proposed Scheme was considered in two sections:

Section 1 begins at the Memorial Bridge at the western end and extends 1.6km along both sides of the River Liffey to Tom Clarke (East Link) Bridge at the eastern end.

Section 2 consists of a 1.1km cycle route through the Ringsend and Irishtown areas to provide links to both the Poolbeg Special Development Zone lands and to connect to the East Coast Trail at Beach Road for future continuation south-eastwards along the shore of Dublin Bay South.

Details of the Preferred Route Option in each section are provided in the following descriptions.

7.2.1 Section 1: Along the River Liffey Quays

The preferred route option in Section 1 will be as follows:

Bus Corridor on the North Quays:

1) Continuous bus lanes will be provided over a length of 1.6km along the northern quays from the Memorial Road junction at Matt Talbot Memorial Bridge to the Point roundabout junction at Tom Clarke East Link Bridge. This will significantly increase the extent of bus priority compared to the approximate one third of the route that has bus lanes at present.

2) The historic lifting Scherzer Bridges at George's Dock and Spencer Dock (Royal Canal) will be dismantled and rehabilitated before being reconstructed on each side of the existing road carriageway to carry the footpaths and cycle track. New replacement bridges will be provided on the road with four lanes (two bus lanes and two traffic lanes). This will remove the existing pinch-points where the bus lanes are truncated which will significantly improve the level of service for bus on the north quays, while protecting the iconic bridge structures for posterity.

3) Right turning movements by general traffic will be banned on the north quays except where required for essential access or public transport (i.e. at Commons Street, Park Lane, New Wapping Street westbound) and all other movements will be rerouted via Sheriff Street. At Samuel Beckett Bridge the eastbound right-turn by general traffic will be prohibited which will remove a source of congestion on the north quays, and this will enable a bus lane to be provided to replace the existing right turn lane.

Bus Corridor on the South Quays:

4) On the south quays, where there is no existing continuous traffic route, the proposed bus corridor will be provided with short sections of bus lane between Forbes Street and Samuel Beckett Bridge and between Lombard Street East and Matt Talbot Bridge to achieve the necessary priority in the westbound direction. This will facilitate a westbound bus route along the full 1.6km length of the south quays through Section 1.

5) Eastbound buses will use the facility on the north quays as far as Samuel Beckett Bridge before crossing to the south side and continuing east.

6) At the eastern end of this section a proposed new public transport opening bridge over the River Dodder will link the bus corridor through to Ringsend.

7) Local adjustments to traffic management arrangements are necessary along the south quays to facilitate the westbound bus corridor on Sir John Rogerson's Quay between Cardiff Lane and Forbes Street.

Pedestrian and Cycle Route along the River Liffey:

1) A continuous two-way cycleway will be provided on both banks of the River Liffey for the full 1.6km distance of Section 1 for a combined length of 3.2km.

2) On the eastern side of the Samuel Beckett Bridge the existing two-way cycle track will be retained, with some localised widening to create more space from the south-eastern corner of the bridge linking along Sir John Rogerson's Quay.

3) New boardwalks will be added to improve pedestrian provision at two pinch-points caused by buildings along the north quays just east of Seán O'Casey bridge and at the Excise Walk junction.

4) The proposed new opening bridge across the River Dodder will provide a new direct connection to Ringsend along the southern side of the River Liffey for pedestrian and cyclists.

7.2.2 Section 2: Ringsend & Irishtown

The preferred route option in Section 2 will be as follows:

1) The main cycle route will link south-eastwards from Tom Clarke Bridge along the quiet streets of Pembroke Cottages and Cambridge Park to Ringsend Park, where a shared facility for pedestrians and cyclists will be provided along the western edge of the park. From the south-western corner of the park a two-way cycle track will be provided along the eastern side of Strand Street and Pembroke Street in Irishtown to the junction with Sean Moore Road and will connect into Sean Moore Park for future continuation along the coastline of Dublin Bay South. The design has been adjusted to reduce local impacts along the local streets in Irishtown.

2) A secondary cycle route to Poolbeg will be available along Pigeon House Road with cyclists to share the quiet street with local access traffic only. (This road was closed to through traffic in 2020). It is no longer proposed to provide a cycle track along the grass verge on the northern side of this road; and

3) In Irishtown a link cycle route will be provided through the residential area at Irishtown Stadium with a wider shared path across green open space. The cycle route link to Sean Moore Road will then share the quiet local street on Bremen Road.

7.3 Scheme Changes Summary

7.3.1 Scheme Changes Summary for Section 1

The following key changes are proposed to the earlier EPR design in Section 1:

1) Continuous bus lanes will be provided in both directions on north quays. The EPR did not include a westbound bus lane on the north quays west of Samuel Beckett Bridge.

2) Historic Scherzer Bridges at George's Dock and Spencer Dock are to be dismantled, restored and sympathetically relocated; immediately to one side of their current positions where they will carry footpaths and cycle tracks but no longer will have to carry heavy traffic loading. This will facilitate improved two-way bus priority along the north quays compared with the EPR.

3) Right turning movements by general traffic will be banned on the north quays except where required for essential access or public transport (i.e. at Commons Street, Park Lane, New Wapping Street westbound) and all other movements will be rerouted via Sheriff Street. At Samuel Beckett Bridge the eastbound right-turn by general traffic will be prohibited which will remove a source of congestion on the north quays, and this will enable a bus lane to be provided to replace the existing right turn lane.

4) On the south quays westbound bus priority will be provided by short sections of westbound bus lane between Forbes Street and Samuel Beckett Bridge and between Lombard Street East and Matt Talbot Bridge. The EPR included longer lengths of bus lane between Creighton Street and Lombard Street East.

5) Traffic access is to be maintained eastbound to Sir John Rogerson's Quay Extension for access and servicing. The EPR included an eastbound bus lane between Cardiff Lane and Forbes Street, but this would not provide any meaningful additional bus priority; and

6) The existing provisions for pedestrians and cyclists on the eastern side of Samuel Beckett Bridge will be retained with some localised widening to create more space from the south-eastern corner of the bridge linking along Sir John Rogerson's Quay.

7.3.2 Scheme Changes Summary for Section 2

The following key changes are proposed to the earlier EPR design in Section 2:

1) A more direct 1 km long cycle route is proposed along the western side of Ringsend Park compared to the EPR route which was 1.5km long via Pigeon House Road and along the eastern side of Ringsend Park.

2) The existing grass verge at Pigeon House Road is to be retained and no cycle track provided. Instead cyclists will share the quiet street which has been closed to through traffic.

3) At Irishtown the proposed cycle route has been modified along the edge of Strand Street and Pembroke Street to avoid the impacts for trees involved with the EPR proposal.

4) In Irishtown a link cycle route will be provided through the residential area at Irishtown Stadium with a wider shared path across green open space. The cycle route link to Sean Moore Road will then share the quiet local street on Bremen Road.

7.4 Route Summary

The PRO for the Ringsend to City Centre Core Bus Corridor is approximately 1.6 km long from end to end (plus 1km of cycling facilities through Ringsend). The Preferred Route drawings in Appendix A show the extent of the infrastructure proposed to deliver this CBC and the length of the primary interventions are summarised in Table 7-1 and Table 7-2 below.

Table 7-1: Bus Priority Comparison

Bus Priority	Existing (km)	Proposed (km)
North Quays		
Inbound Bus Lane	0.6	1.6
Outbound Bus Lane	0.5	1.6
Total Bus Priority (both directions) - North	1.1	3.2 (+191%)
South Quays		
Inbound Bus Lane	0	0.75
Inbound Signal Controlled Priority	0	0.25
Outbound Bus Lane	0	0.85
Outbound Signal Controlled Priority	0	0.65
Total Bus Priority (both directions) - South	0	2.5 (+2400%)
Combined Total Bus Priority	1.1	5.7 (+375%)[1]

Bus priority measures are proposed at the following locations:

Outbound direction bus priority:

- Signal controlled priority to permit bus-only right-turn from North Wall Quay to Samuel Beckett Bridge.

Inbound direction bus priority:

- Signal controlled priority section at Sir John Rogerson's Quay / City Quay from Cardiff Lane to Lombard Street East

Table 7-2: Cycle Facility Comparison

Cycle Facilities	Existing (km)	Proposed (km)
North Quays		
Cycle Tracks – Segregated		
Inbound (west)	1.1	1.6
Outbound (east)	0.8	1.6
Cycle Lanes – Non-segregated		
Inbound (west)	0.1	0
Outbound (east)	0.8	0
Total Segregated Cycle Facilities	**1.9**	**3.2 (+68%)**
South Quays		
Cycle Tracks – Segregated		
Inbound (west)	0.9	1.6
Outbound (east)	1.4	1.6
Total Segregated Cycle Facilities	**2.3**	**3.2 (+39%)**
Ringsend		
Two-way cycle track	0	0.4
Shared path with pedestrian priority	0	0.44
Quiet Street (non-segregated)	0	0.26
Total Cycle Facilities - Ringsend	0	1.1
Combined Total Cycling Facilities	**4.2**	**7.2 (+71%)**

7.5 Scheme Benefits

7.5.1 Bus Journey Times

Through the provision of increased bus priority infrastructure, the proposed scheme will improve both the overall journey times for buses along the route and their journey time reliability. This will help to realise the aims and objectives of the Proposed Scheme as set out in Section 2.4 of this report.

Bus priority is achieved along the Proposed Scheme mainly through dedicated bus lanes and signal-controlled priority at 2 locations and a public transport only bridge. This will reduce bus journey times and improve reliability by largely removing interaction between bus traffic and general traffic.

7.5.2 Walking and Cycling

The Proposed Scheme will provide considerable benefits for cyclists and pedestrians.

The provision of dedicated cycling infrastructure along the Proposed Scheme, or on parallel routes in some cases, will improve the level of service provided for cyclists along the route, making cycling trips safer and more attractive.

The Proposed Scheme will deliver substantial elements of the GDA Cycle Network Plan, as well as linking with other proposed cycling schemes, contributing towards the development of a comprehensive cycling network for Dublin.

In particular the proposed River Dodder Bridge will open up a major new link for pedestrians and cyclists that avoids the restrictions at the narrow bridge over the river at Ringsend Road. Various improvements will be provided at junctions for enhanced street crossings and better separation of pedestrians and cyclists.

A number of public realm upgrades are proposed at focal points along the route such as feature points along the Liffey Campshires. Widened footpaths, high quality hard and soft landscaping and street furniture would be provided, where practicable, in areas of high activity to contribute towards a safer, more attractive environment of pedestrians. The scheme would also provide improved pedestrian crossing facilities along the route.

NTA

Údarás Náisiúnta Iompair
National Transport Authority

National Transport Authority
Dún Scéine
Harcourt Lane
Dublin 2
D02 WT20

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Building Ireland's Future