

Appendix E2.1

Finglas to
Phibsborough Core
Bus Corridor
Options Study
– Feasibility and
Options Assessment
Report November
2016



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Finglas – Phibsborough Core Bus Corridor

Feasibility Study and Options Assessment: Report DRAFT



Client: National Transport Authority

Date: 22nd November 2016

Job Number: 16_079

Civil
Engineering

Structural
Engineering

Transport
Engineering

Environmental
Engineering

Project
Management

Health
and Safety

CONSULTING ENGINEERS



Document Control Sheet

Project Name: Finglas to Phibsborough Core Bus Corridor
Project Number: 16_079
Report Title: Feasibility Study and Options Route Options Assessment: Report
Filename: RPT-16_079-003

Issue No.	Issue Status	Date	Prepared by	Checked by
1 st	DRAFT	22/11/2016	MS	GE
A	DRAFT	19/01/2017	MS	GE
B	DRAFT	18/07/2017	JC	GE
C	DRAFT	11/09/2017	JC	GE
D	DRAFT	27/10/2017	JC	GE
E	DRAFT	14/11/2017	JC	GE
F	ISSUE	30/11/2017	JC	GE



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Definitions

- **Scheme:** This refers to the measures, which will need to be put in place to deliver the Finglas to City centre Core Bus Corridor (CBC) infrastructure and priority measures.
- **Study Area:** The area along the Finglas to City Centre corridor within which route options have been identified and assessed.
- **Study Area Section:** An identifiable extent of study area between two locations.
- **Route:** The road, or alternative location, along which the Finglas to City Centre CBC service will be provided. The route is not necessarily confined to a single road/street. It could for example be partially diverted onto an adjacent/parallel road/street.
- **Route Options:** Short sections of route at specific locations where number of options exist on adjacent or nearby roads.
- **End-to-End Route Options:** Various route options are combined to form “end-to-end” route options.
- **Journey Time:** The time taken to make a journey between two distinct points including dwell times stops and delays at junctions.
- **Route Options Assessment Study:** The assessment process for potentially viable route options carried out in order to identify the nature and extent of the effects, both positive and negative, on the existing and planned transport infrastructure and receiving environment. The outcome of the route options assessment study is a recommendation for a preferred route for the proposed scheme.

Executive Summary

This report presents the route options assessment work undertaken for the Finglas to Phibsborough Core Bus Corridor (CBC) scheme and makes a recommendation on a preferred route.

A concept scheme design for the CBC has been prepared and has been presented.

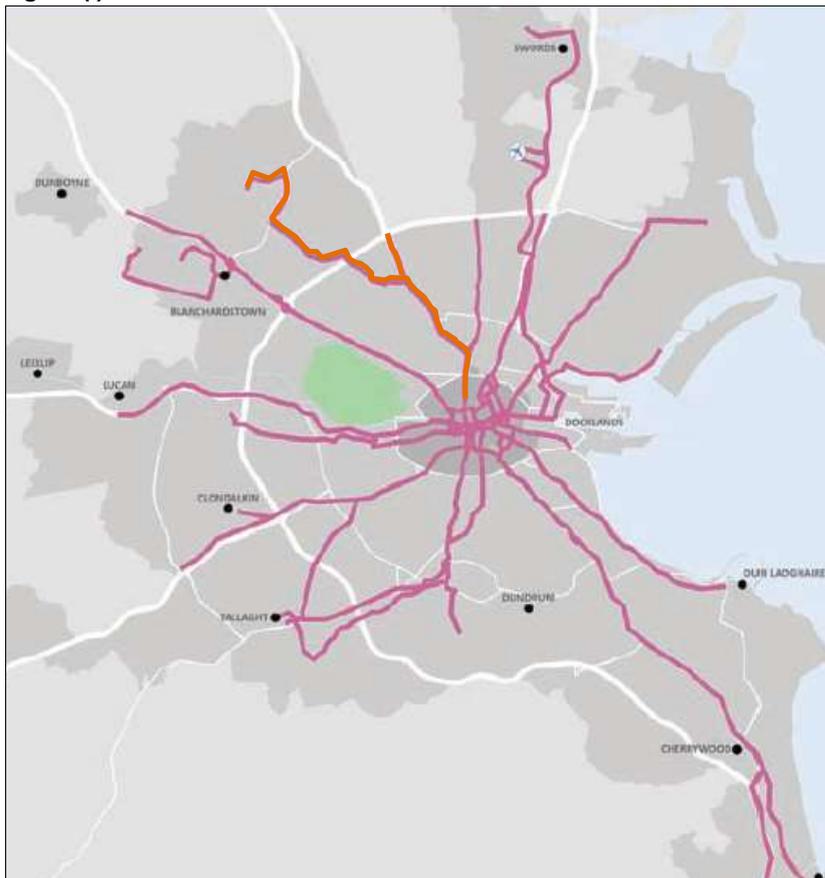
Transport Context

The Transport Strategy for the Greater Dublin Area 2016 – 2035 identified a core bus network for the Greater Dublin Area (GDA). This core network represents the most important bus routes in the region, and are generally characterised by a high frequency of bus services, high passenger volumes and with significant trip attractors located along the route. The identified core network comprises sixteen radial bus corridors, three orbital bus corridors and six regional bus corridors.

Included in the GDA Transport Strategy are objectives to develop the Core Bus network to achieve, as far as practicable, continuous priority for bus movement on the sections of the Core Bus Network within the Metropolitan Area, with the goal of making the overall bus system more efficient and attractive to users.

The Finglas to Phibsborough CBC is identified as part of the Core Bus Network and is presented in **Figure (i)**. For context, the Finglas CBC is highlighted in orange.

Figure (i): Radial Core Bus Corridor Network



CBC Scheme Objectives

Having regard to the findings of the transport context for the proposed CBCs in the GDA, the following objectives have been established for the Finglas - Phibsborough CBC:

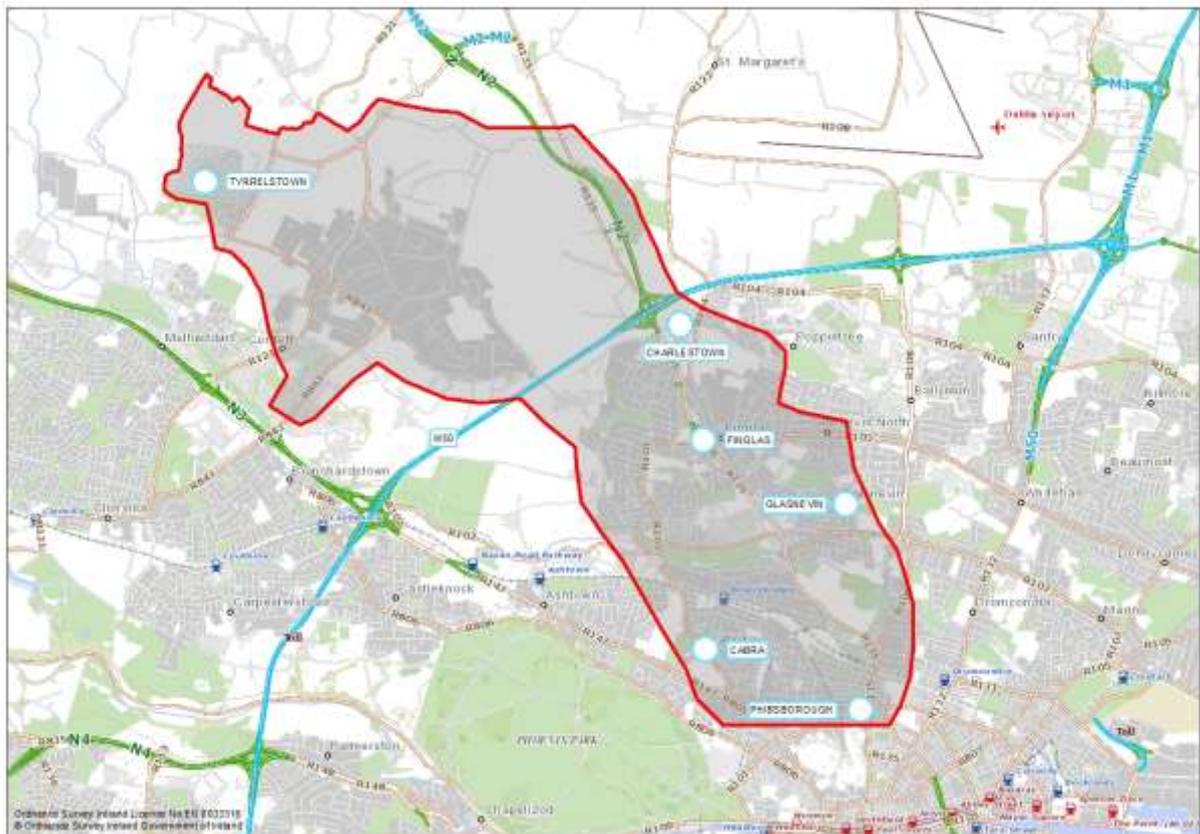
- Deliver the on street infrastructure necessary to provide continuous priority for bus movements along the Core Bus Corridor. This will mean enhanced bus lane provision on the corridor, removing current delays in relevant locations and enabling the bus to provide a faster alternative to car traffic along the route, making bus transport a more attractive alternative for road users. It will also make the bus system more efficient, as faster bus journeys means that more people can be moved with the same level of vehicle and driver resources; and
- Provide any cycle facilities along the route that are required under the Greater Dublin Area Cycle Network Plan (published by the NTA, 2013) to the target Quality of Service(s) specified therein and to give consideration to further providing cycle facilities along sections of the route where they may be not expressly required under the Cycle Network Plan.

The Study Area

Generally speaking, the study area was taken to include roads within a 500 m radius of the existing bus corridor, but extends beyond this in places to consider potentially feasible route options. The study area also considers the presence of other existing or proposed transport service routes (as part of the GDA Transport Strategy) in the vicinity.

The study area considered is presented in **Figure (ii)**.

Figure (ii): Study Area



Route Options Assessment Methodology

A two-stage assessment was adopted:

- An initial '**Stage 1**' high-level route options assessment or 'sifting' process which appraised potentially viable route options in terms of ability to achieve scheme objectives and whether they could be practically delivered; and
- Routes which passed this initial stage were taken forward to a more detailed '**Stage 2**' assessment.

At the start of the Stage 1 assessment, an initial 'spiders-web' of potential route options that could accommodate a CBC was identified for each study area section.

This was narrowed down using a high level qualitative method based on professional judgement and a general appreciation for existing physical conditions/constraints within the study area from available survey information and site visits. This exercise identified route options that would either not achieve the scheme objectives or would be subject to significant impact and/or cost to achieve these objectives (e.g. excessive land-take).

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

The Stage 2 assessment comprised a more detailed qualitative and quantitative assessment, using criteria established to compare route options. The first step in the Stage 2 assessment was to combine shorter route options which passed the Stage 1 assessment, to form longer end-to-end routes within each study area section.

Following this, an initial indicative scheme for each route option was determined based on the specific constraints along the route (e.g. bus lane in each direction with cycle lanes, bus lanes in each direction only, bus lane in one direction only etc.). In particularly constrained locations, a number of variant scheme options were considered and assessed as necessary.

The indicative scheme for each route option was then progressed to a 'Multi-Criteria Analysis' (MCA) of route options under the following main criteria:

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

An appreciation of the constraints and opportunities within the study area, as well as the defined project objectives, led to establishment of project-specific route options assessment sub-criteria under each of the main criteria listed above. **Table (i)** presents a summary of the CBC assessment criteria and sub criteria used as part of the 'Stage 2' detailed route options assessment process.

Table (i): Assessment Criteria

Assessment Criteria	Assessment Sub-Criteria
Economy	Capital Cost
	Transport Reliability and Quality of Service
Integration	Land Use Integration
	Residential, Employment and Educational Catchments

	Transport Network Integration
	Cycling Integration
Accessibility & Social Inclusion	Key Trip Attractors
	Deprived Geographic Areas
Safety	Road Safety
	Pedestrian Safety
Environment	Archaeology, Architectural and Cultural Heritage
	Flora and Fauna
	Soils and Geology
	Hydrology
	Landscape and Visual
	Air Quality
	Noise & Vibration
	Land Use Character

The Emerging Preferred Route

Based on the conclusions from the route options assessment process, an emerging preferred route has been identified, as presented in **Figure (iv)** and is described in the following section.

Figure (iv): Emerging Preferred Route



Describing the emerging preferred route in the Tyrrelstown to city centre direction, the CBC commences at Tyrrelstown Boulevard roundabout and travels south to the roundabout where R121 intersects with Damastown Avenue. From here it continues east along the Cruiserath Road until Ballycoolin roundabout. It continues along Ballycoolin Road through to Snugborough roundabout until the Cappagh Road roundabout. It is proposed to convert the three roundabouts on the Ballycoolin Road to signalised junctions to improve bus priority (by providing bus lanes to the stop lines and left turn lanes where left turn public traffic is deemed to be high from site observations) as well as safety for pedestrian and cyclists. It is proposed to agree with IDA a pedestrian access to Ballycoolin Industrial State midway along the Ballycoolin Road. From the Cappagh Road roundabout, the route travels south onto the bridge over the M50, where the construction of a new bridge is proposed to provide the bus lanes, cycling and pedestrian facilities. Along this section, it is proposed; to provide new and upgraded cycle and pedestrian facilities, and to redistribute the road space to provide the new bus lanes. The cycle facilities proposed would provide a raised adjacent dedicated facility of 2m minimum width, along with 2m minimum width for footpaths where possible. The existing grass verges, central medians and central islands would be removed in order to accommodate any widening for the proposed scheme. The existing traffic lane layout would be maintained throughout the section (unless otherwise stated) but would have reduced traffic lane widths to 3m. New bus stops in both directions are proposed; adjacent to the Tyrrelstown Boulevard roundabout, between Boulevard Bealing Village Road and Damastown Avenue on the R121, adjacent to the proposed new toucan crossing at the entrance to Bristol Myers Squibb, on the Ballycoolin Road adjacent to its junction with the Cappagh Road.

After travelling onto the bridge over the M50 the proposed CBC route continues along Cappagh Road and turns east at the junction with Ratoath Road to continue along the Cappagh Road until the intersection of the Finglas Road (R135) and Church Street. It is proposed to construct a new junction and

install a bus gate “bus only” right turn onto the R135 at the end of Church Street. On the Cappagh Road from its junction with the Ratoath Road and continuing onto Church Street, cycle facilities are not feasible in this section due to the proximity of adjacent residential and commercial properties. However there is adequate space available to provide bus lanes, cycle tracks and pedestrian facilities in both directions for the remainder of this section. The cycle tracks would provide a raised adjacent dedicated facility of 2m minimum width, along with 2m minimum width for footpaths where possible. Widening would be a combination of private and public land take, including setting back of boundaries, utilising grass verges and central medians. A new at grade pedestrian crossing connecting Finglas Town Centre at Church St will be also provided. New bus stops in both directions are proposed; on Cappagh Road adjacent to Coláiste Eoin and Church Street adjacent to the Finglas Parochial National School, south of the junction of where Church Street meets Finglas Road. The existing traffic lane layout would be maintained throughout the section (unless otherwise stated) but would have reduced traffic lane widths to 3m.

From here, the route travels along the Finglas Road (R135) until Prospect Avenue. Along this section new and upgraded bus lanes, cycle and pedestrian facilities would be provided along its length in both directions. It is proposed that all the junctions in this section would be upgraded to provide for more bus priority. Bus lanes will be provided right up to the stop lines of junctions, along with the provision of left turn lanes for public traffic (where there is large left turning traffic volumes from on site observations). In order to accommodate the proposed scheme, route widening and redistribution of the existing road space would be required, in the form of utilising grass verges and central medians. Along this section of the proposed route the existing traffic lane layout would be maintained throughout (unless otherwise stated) but would have reduced traffic lane widths to 3m.

The inbound route continues along Prospect Avenue and Botanic Road, and re-joins the outbound route section on Prospect Road to the bridge over the Royal Canal. The outbound route travels from Prospect Road and diverges left to the Finglas Road. Bus lanes, cycle and pedestrian facilities are proposed on Prospect Avenue and Botanic Road, but are not feasible on Prospect Road (in both directions) and the beginning of the Finglas road in the outbound direction. The cycle tracks would provide a raised adjacent dedicated facility of 2m minimum width, along with 2m minimum width for footpaths where possible. Outbound on the Finglas Road where it merges with Prospect Avenue, the junction would be upgraded to allow for more bus priority, by the provision of a straight ahead bus lane and a dedicated right turn bus lane. Widening would be required in this section and would mainly consist of private land take including setting back of residential boundaries.

The route then continues from the bridge over the Royal Canal onto the Phibsborough Road to its intersection with the North Circular Road. Bus lanes of 4m in width are proposed in order to create a shared lane for buses and cyclists along with a 2m wide pedestrian facilities are proposed along this section. Widening is not feasible in this section due to the proximity of building lines. Existing pedestrian crossings at Glasnevin Cemetery, Botanic Road and Phibsborough Road will be upgraded to toucan crossings.

The northern section of the CBC route begins on Charlestown Place at its intersection with the North Road (R135) until it intersects with Saint Margaret’s Road. From there it travels south along Saint Margaret’s Road, intersects with the Finglas Road and finally links up with the CBC route at the upgraded junction at Church Street. It is proposed to provide bus lanes, cycle and pedestrian facilities in both directions along Charlestown Place and Saint Margaret’s Road. The cycle tracks would provide a raised adjacent dedicated facility of 2m minimum width, along with 2m minimum width for footpaths where possible. Bus lanes are proposed along the Finglas Road. Widening is proposed to upgrade the junctions and merges along this section to provide improved bus priority (by providing; bus lanes up to the stop lines and, left and right turn only bus lanes). One new inbound bus stop is proposed opposite the entrance of Lidl. Widening would be a combination of private and public land take, including setting back of boundaries, utilising grass verges and central medians.

Concept Scheme Design Summary

The Emerging Preferred Route is 13.6km long from end to end. The existing bus priority infrastructure along the emerging preferred route is approximately only 25% (3.5km) in the inbound direction and

15% (2.1km) in the outbound direction. The proposed scheme would improve bus priority infrastructure to 98.5% (13.4km) in the inbound and 100% (13.6km) in the outbound. In general, the proposed scheme will provide increase bus priority through junctions, particularly by upgrading the signalised junctions and the existing roundabouts on the Ballycoolin Road. This increased priority will ensure journey time reliability and reduce delays. Bus priority is not provided inbound through Church St for approx. 200m on approach to the junction with Finglas Road due to lack of available space and existing low traffic volume. An inbound bus gate is proposed for right turning buses at the junction of Church Street/Finglas Road.

In addition to bus priority, new and upgraded cycle facilities are proposed along the entire length of the proposed CBC route, except for the section along Cappagh road and Church Street between their junctions with the Ratoath Road and the Finglas Road. Similarly on the Charlestown to Finglas section of the proposed scheme cycle facilities are proposed along the entire length, except for the section along the Finglas Road between its intersection with the Saint Margaret Road and Church Street. Dedicated raised adjacent cycle tracks (in both directions) of 2m minimum width in accordance with the National Cycling manual would be provided, along with the provision of 2m wide footpaths (in both directions) where possible. A bus gate to allow right turn only for buses is proposed in the inbound direction on Church Street at its intersection with the Finglas Road. Pedestrian safety would also be improved at a number of junctions due to signalised crossings and reduced speeds. Furthermore new toucan crossings are proposed; adjacent to Bristol Myers Squibb and IBM Ireland on the Ballycoolin Road, along with the upgrade of all existing pedestrian crossings to toucan crossings.

As part of the proposed scheme, 16 new bus stops are recommended on both sides of Ballycoolin Road, Cappagh Road and Church St and an additional inbound stop at St. Margaret's Road. The provision of these stops is critical to the viability of the catchment for this CBC as it allows it to serve large population and employment in the Finglas area.

A new bridge is proposed over the M50 at the location of the existing bridge on the Cappagh Road, to ensure that the required traffic/pedestrian/cycling facilities are provided.

Cost Estimate

A high level cost estimate was prepared based on the concept scheme design discussed above. From this, the proposed CBC scheme infrastructure cost is expected to be approximately €55m.

Scheme Benefits

The majority of current bus routes travel through Ballycoolin Business Park (routes: 220, 236 and 38) and Finglas Town Centre (routes: 220 and 40). The new route and the provision of new bus stops make the CBC accessible for people while it avoids congested areas.

Through the provision of increased bus priority infrastructure, the proposed scheme would improve both the overall journey times for buses along the route and the journey time reliability. A review of available journey time data along the route illustrates the issues that will be largely addressed by the proposed scheme.

Bus route 40D generally overlaps with the emerging preferred route (between Tyrrelstown and Parnell Street). By examining the automatic vehicle location (AVL) data from Dublin Bus, currently there are issues with journey time reliability along the route.

Journey times during the core hours of bus operation (7:00 – 19:00) are observed to vary between 40 to 46 minutes in the inbound direction and 42 minutes and 44 minutes in the outbound direction. The variation in traffic times is most likely due to the lack of bus priority on large sections of the route and compounded by traffic congestion and passenger boarding times which are high. Meanwhile in the late evening (after 19:00 hrs) compared to the AM peak (07:00 to 09:30), average journey times and average speeds are significantly improved. After 19:00 hrs, it was observed that the inbound average journey time reduced to 32 minutes and 33 minutes in the outbound direction. This reflects the benefits of an uncongested network. Therefore a bus priority network allows buses to move along the route quicker and with more reliable journey times.

Key to the provision of a high quality bus network is journey time reliability which makes the system more efficient in terms of number of people moved by the same level of vehicles and driver resources, in addition to user satisfaction in terms of reliability of their journey time and bus arrivals. This scheme will address the current journey time variability at key locations including at Finglas Village, the Finglas Road, Jamestown Road, the Ballycoolin Roundabout and the Snugborough Roundabout.

The proposed CBC would cater for the large population catchment to the south-west of Finglas area.

Additionally to the proposed bus priority infrastructure, the proposed scheme would upgrade the existing priority junctions along Ballycoolin Road to signalised junctions which would also reduce delays and ensure reliability. Also, the proposed new “bus only” right turn lane and on-road pedestrian crossing at the junction of Church St and R135 would:

- Provide a bus gate facility onto the Finglas Road (R135) in addition to reducing the severance of the Finglas Road for pedestrians and cyclists and,
- Enhance the public realm area around Finglas Town Centre

In reference to GDA Cycle Network Plan, the scheme will deliver 3.2 km of new and upgraded primary cycle route no. 3B. This section includes the Finglas Road from its junction with Church Street to Prospect Road and links Finglas Village to Phibsborough and further beyond to the city centre. Works will involve the provision of dedicated cycle tracks ensuring a minimum width of 2m is achieved where possible.

It will also deliver 1.8 km, 2.9 km and 0.7km of new and upgraded secondary cycle routes nos. N04, N05 and 5E. All three route sections link Tyrrelstown, Mulhuddart and Corduff to Ballycoolin industrial estate, and further beyond to Finglas Village. These cycle route sections include:

- The Cappagh Road from Cappagh Road roundabout to its junction with Cardiffsbridge Road (Route no. N04)
- The R121 from Ballycoolin roundabout to Cappagh Road roundabout (Route no. N05)
- The R121 from Tyrrelstown Boulevard roundabout to Church Road roundabout (Route no. 5E)

Works will include the provision of dedicated cycle tracks ensuring a minimum width of 2m is achieved where possible.

The proposed CBC scheme will provide improved pedestrian facilities in terms of increased number of pedestrian crossings at stops and presence of footpaths along desire lines to stops. In situations where it is proposed to upgrade junctions, toucan crossings would be provided for pedestrians.

Next Steps

This report has identified an emerging preferred route for the bus infrastructure along this Core Bus Corridor for which a concept design has been developed.

The next project stage (The development of a Preliminary Design) will further refine and update the initial concept design along the route. Further account will be taken of likely public transport service levels, particularly the bus service patterns and any changes to the overall bus network which may arise from the separate bus network review process. The proposals will be amended, if and as required, to integrate any resultant changes. The Preliminary Design will define the final practically achievable scheme for the CBC, taking into account more detailed studies of constraints, impacts and environmental assessment required at a local level.

Prior to finalisation of the CBC scheme design, a public consultation process will be undertaken, with inputs and feedback received incorporated where practical and appropriate to do so.

This Preliminary Design will form the basis of the planning consent process for the scheme, which will require a development consent application to be made directly to An Bord Pleanála, due to the nature and extent of the proposed works.

1 Introduction

1.1 Preamble

Clifton Scannell Emerson Associates (CSEA) were commissioned by the National Transport Authority (NTA) to carry out a feasibility and route options assessment study for the Finglas to Phibsborough Core Bus Corridor (CBC). This report presents the findings of the study and presents a preferred route for the core bus corridor from Finglas to the City Centre.

This report considers the infrastructure required to provide bus priority and cycle facilities only and does not define the bus services that may use the CBC. Although bus services for the CBC have not yet been defined, it is assumed that a number of high frequency bus services will avail of this infrastructure.

The report sets out the detailed assessment undertaken of potentially viable route options within the identified study area and a concept scheme design along the preferred route option is presented.

1.2 Report Structure

The report structure is detailed below:

- **Section 2** – The strategic transport policy context which has led to the identification of a need for the delivery of a CBC on this corridor is discussed in this section. The objectives set out for the CBC scheme are also set out.
- **Section 3** – The objectives of the core bus network and the proposed scheme are presented. The extent of the CBC study area is defined along with constraints and opportunities, the integration of the corridor with the wider public transport network and the compatibility with other road users. The study area is split into four sections.
- **Section 4** – The methodology for identifying and assessing the feasibility of the various route options potentially available within the study area is discussed in this section including:
 - The selection and determination of initial criteria for screening and assessing technically feasible route options, based on distinct, project-specific objectives
 - The definition of assessment criteria
 - The identification of study area sections where practical route options have been considered and presentation of an initial network (“spiders-web”) of options examined
- **Section 5 and 6** – Details the route options assessment for each of the four study area sections.
- **Section 7** – The Emerging Preferred Route is identified and described.
- **Section 8** – The next steps for the project are set out in this section.

2 Transport Planning Context

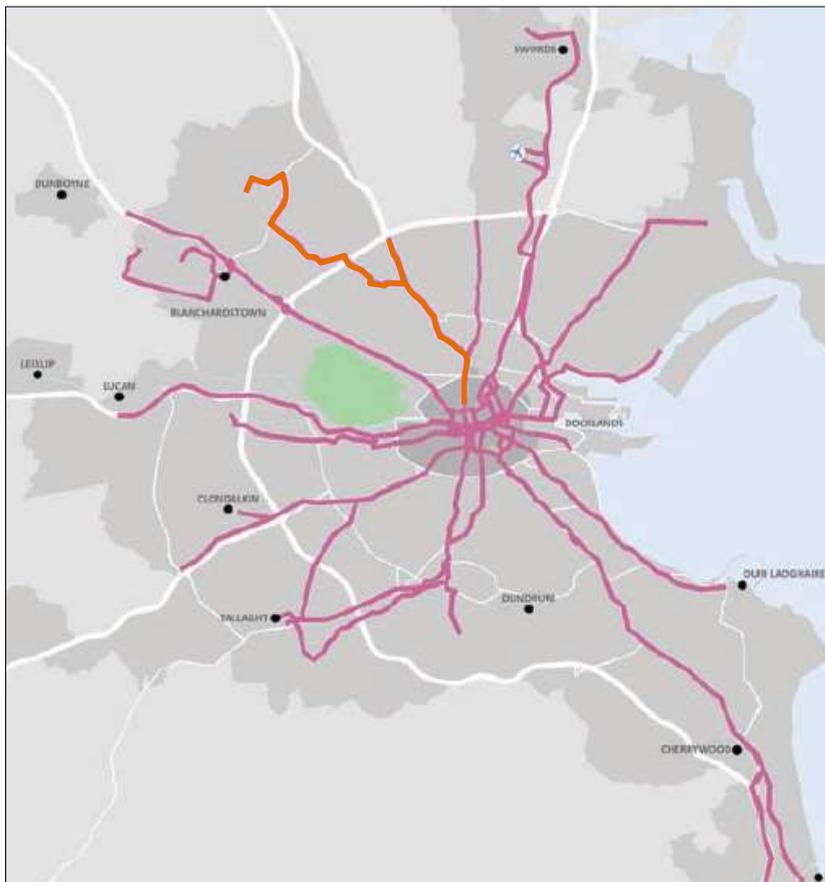
2.1 Transport Strategy for the Greater Dublin Area, 2016-2035

The NTA published the Transport Strategy for the Greater Dublin Area, 2016 – 2035 at the beginning of 2016. The strategy identifies a “Core Bus Network”, representing the most important bus routes within the Greater Dublin area, generally characterised by high passenger volumes, frequent services and significant trip attractors along the routes. The identified core network comprises sixteen radial bus corridors, three orbital bus corridors and six regional bus corridors.

The Strategy states that it is intended to provide continuous bus priority, as far as is practicable, along the core bus routes. This will result in 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.

The Finglas to Phibsborough CBC is identified as part of the Core Bus Network. The radial Core Bus Network identified in the GDA Transport Strategy is shown in Figure 2.1 below with the Finglas CBC highlighted in orange.

Figure 2.1: Finglas to Phibsborough Radial Core Bus Corridor



2.2 Infrastructure and Capital Investment 2016-2021

The ‘Medium Term Exchequer Framework’ was published by the Department of Public Expenditure and Reform in September 2015. It presented the findings of a Government-wide review of infrastructure and capital investment policy and outlined the Government’s commitment to ensuring that the country’s stock of infrastructure is capable of facilitating economic growth.

This report identifies the need to improve public transport facilities noting:

“It is therefore essential that road, rail and public transport networks are developed and maintained to the standard required to ensure the safe and efficient movement of people and freight. In addition, get-

ting people out of cars and onto public transport has a key role to play in reducing Ireland's carbon emissions, by providing a viable, less polluting alternative to car and road transport for many journeys."

The report also provided commitment with regard to funding for a variety of transport related projects including:

"There will be funding for:

- *Further upgrading of Quality Bus Corridors".*

2.3 Integrated Implementation Plan 2013-2018

The NTA published the Integrated Implementation Plan 2013 – 2018 in February 2014. This report sets out the short term infrastructure investment programme for the Greater Dublin Area for a five year period up to 2018.

This report identified the need to further develop the quality bus network in the Greater Dublin Area in order to achieve: *"...as far as practicable, continuous inbound priority and the maximum possible out-bound priority on key bus routes into Dublin City Centre."*

2.4 Greater Dublin Area Cycle Network Plan

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 (Route 3B) and secondary (Routes 5E, 5D, NO5, NO4, 3B) cycle routes identified between Finglas and Phibsborough. 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 analysis, any upgrading of infrastructure to provide bus priority also provides cycling infrastructure, where practical, to the appropriate level and quality of service (as defined by the NTA National Cycle Manual) required for primary and secondary cycle routes.

2.5 Core Bus Corridor Scheme Objective

Having regard to the findings of the transport context for the proposed CBC's in the GDA, the following objectives have been established for the Finglas to Phibsborough CBC Corridor:

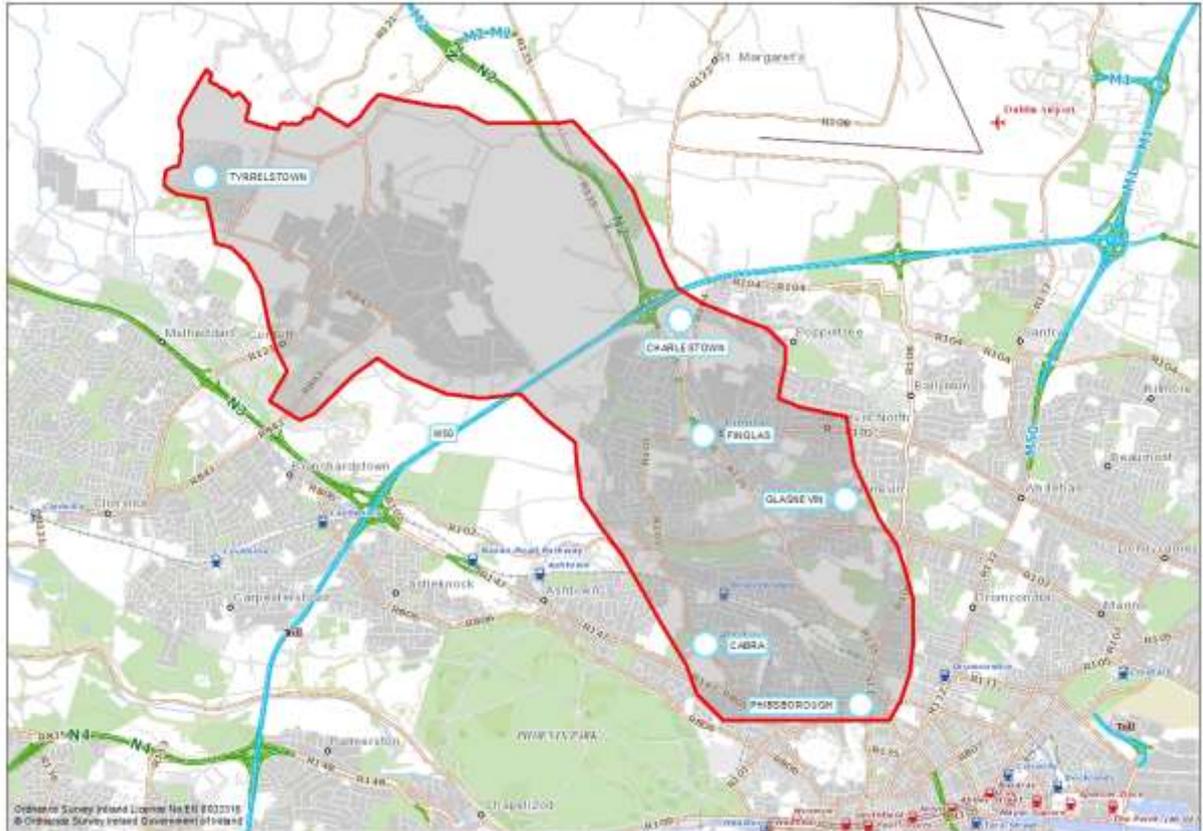
- Deliver the on street infrastructure necessary to provide continuous priority for bus movements along the Core Bus Corridor. This will mean enhanced bus lane provision on the corridor, removing current delays in relevant locations and enabling the bus to provide a faster alternative to car traffic along the route, making bus transport a more attractive alternative for road users. It will also make the bus system more efficient, as faster bus journeys means that more people can be moved with the same level of vehicle and driver resources.
- Provide any cycle facilities along the route that are required under the Greater Dublin Area Cycle Network Plan (published by the NTA, 2013) to the target Quality of Service(s) specified therein and to give consideration to further providing cycle facilities along sections of the route where they may be not expressly required under the Cycle Network Plan.

3 Study Area

The proposed Finglas to City Centre CBC serves the area shown in **Figure 3.1** below that comprises of the area between Tyrrelstown/Hollystown to the north-west to Phibsborough to the south east. The area includes several trip attractors along, or close to the route.

These include Tyrrelstown, Ballycoolin Industrial Estate, Cappagh National Orthopaedic Hospital, Finglas, Jamestown Industrial Estate and Glasnevin Cemetery.

Figure 3.1: Towns within the study area.



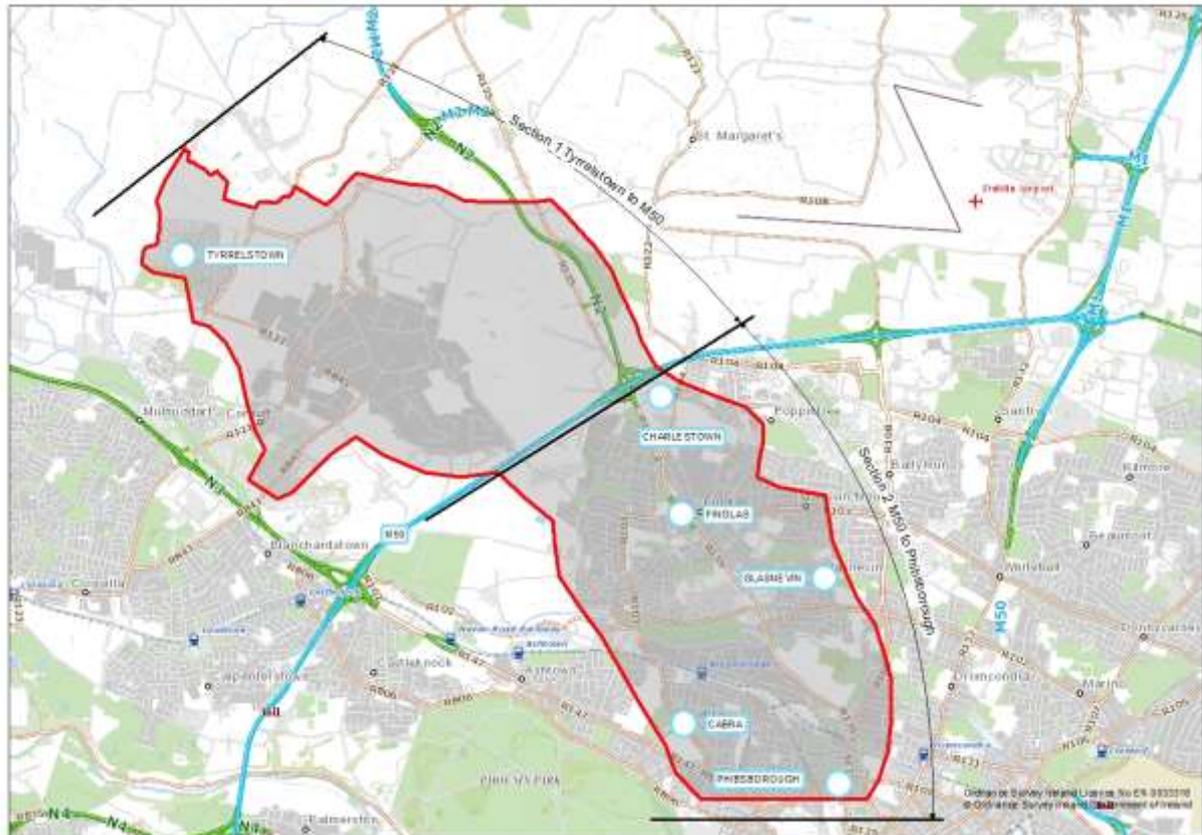
3.1 Study Area Sections for Sifting

In order to simplify the assessment process, the study area was divided in two sections:

- **Section 1: Tyrrelstown to M50**
- **Section 2: M50 to Phibsborough**

The extent of each section is shown in **Figure 3.2** below.

Figure 3.2: Study Area Sections

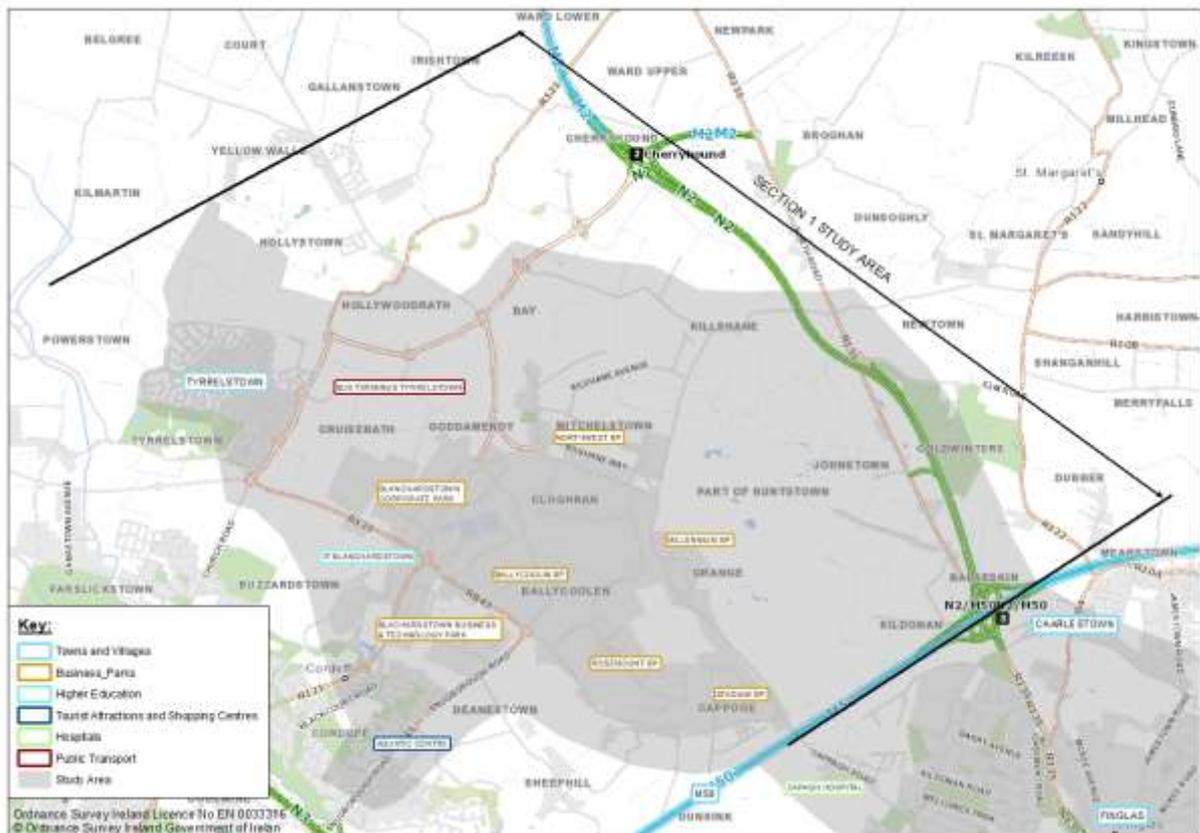


3.1.1 Section 1: Tyrrelstown to M50

Section 1, shown in **Figure 3.3** below, comprises the area from the Boulevard roundabout in Tyrrelstown to the bridge over the M50.

The land-use along this section of the CBC is mainly industrial with trip attractors such as Blanchardstown Corporate Park, Ballycoolin Business Park and Rosemount Industrial State, the residential areas of Tyrrelstown Town and Corduff, IT Blanchardstown and the National Aquatic Centre.

Figure 3.3: Section 1 Study Area – Tyrrelstown to M50



3.1.2 Section 2: M50 to Phibsborough

Section 2, presented in **Figure 3.4** below covers the area between:

- M50 and Phibsborough (**Section 2 Sub-section A: M50 and Phibsborough**)
- Charlestown and Finglas Town (**Section 2 Sub-section B: Charlestown to Finglas**)

The land use in the area “Cappagh Road-Phibsborough” is predominantly residential, serving Finglas Town, Glasnevin and Cabra. There are other key attractors including Cappagh National Orthopaedic Hospital, Glasnevin Museum, the Botanic Gardens and the current Broombridge Rail station that will connect to the future Luas stop.

The main trip attractors within the area “Charlestown - Finglas Town” include North Road Industrial Estate, Charlestown Shopping Centre, Jamestown Business Park and Finglas Village Centre. The land-use in this area is a mix of residential and commercial uses.

Figure 3.4: Section 2 Study Area – M50 to Phibsborough



3.2 Physical Constrains and Opportunities

There are a number of constraints and opportunities, both natural (i.e. existing natural environment) and physical (the built environment), that were considered as part of the analysis since they constrain route options within the study area. These include:

- Proximity to key attractors and population.
- Geometry of the road.
- Significant land take.
- Serious impact on adjoining business.
- Service of the general population west of the M50.
- Future development plans.

-
- Difficulties relocating existing on street parking spaces.
 - Impact of land take to offset parking losses on existing driveways.
 - Availability of space between building lines.

3.3 Integration with Existing and Proposed Public Transport Network

One of the key objectives of the proposed CBC 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 with this in mind and, in so far as possible, seek to provide for improved existing or new interchange opportunities with other transport services including:

- Bus services at numerous locations along the route.
- Future Luas Cross City Phibsborough stop.

3.4 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.

Where it is considered impractical to construct pedestrian or cycle facilities along a particular section of the CBC route, such facilities will need to be provided along a suitable alternative route.

There may be locations where segregated cycle facilities cannot be provided along the CBC route and there is no suitable routing alternative. In such instances, it may be possible for cyclists to share with vehicles in the bus lane. Such proposals need careful consideration and design to ensure the safety of cyclists, with additional mitigation measures, such as traffic calming measures and other urban realm design solutions possibly required.

General traffic flow and local access will generally be maintained along the CBC corridor although it is inevitable that there will be impacts on traffic capacity along the route associated with the reallocation of road space to CBC priority and cycle lanes and the introduction of turning movement restrictions. However, reductions in traffic carrying capacity of the road network need to be considered in the context of the overall planned significant increase in quality and level of service (including increased capacity provision) on the CBC route once implemented.

4 Assessment Methodology

4.1 General

This section outlines the methodology used in the assessment of feasible routes for the Core Bus Corridor. The assessment was based on a two-stage approach:

- Initially a “Stage 1 – Sifting” assessment was carried out on all possible route options. This process was a high-level assessment whereby routes were appraised on their ability to meet the criteria for a core bus corridor and whether they could practically be delivered. A simple pass/fail result was given for each route at this stage.
- The routes that passed Stage 1 were then taken forward and combined into a number of feasible longer routes between points. These were then assessed by a “Multi-Criteria Analysis” process, in which routes were ranked in a comparative manner under a number of criteria.

4.2 Stage 1: Route Options Assessment – Sifting Stage

An initial “spiders-web” of potential routes was developed for the entire study area. This entailed identifying possible routes that could potentially accommodate the core bus corridor. This “spiders-web” of route options was chosen with reference to the CBC characteristics and the scheme objectives as set out in Section 2, the physical constraints and opportunities present (Section 3.3) and the ability to integrate with other public transport modes and users (Section 3.4). While developing this “spiders-web”, particular attention was paid to the routes potential to practically accommodate bus priority measures and, thereby facilitate fast and reliable journey times.

Once this spider web of routes was developed, it was narrowed down as part of the sifting process.

This process was a high level qualitative method based on experienced engineering judgement of the practicality and feasibility of providing a core bus corridor along each route. This exercised identified options that would either not achieve the scheme objectives or would be subject to excessive impacts and/or cost to achieve these objectives, (e.g. excessive land-take, environmental impact etc.)

4.3 Stage 2: Multi Criteria Analysis

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

The first step in the Stage 2 assessment was to combine shorter route options which passed the Stage 1 assessment, to form longer end-to-end routes within each study area section. Following this, an initial indicative scheme for each route option was determined based on the specific constraints along the route (e.g. bus lane in each direction with cycle lanes, bus lanes in each direction only, bus lane in one direction only etc.). Where necessary, a number of variant scheme options were considered and assessed as necessary.

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

- Economy
- Integration
- Accessibility and Social Inclusion
- Safety
- Environment.

Each of the above criteria is sub-divided further to allow for a detailed analysis to be carried out. These criteria and sub criteria are defined, such that, the selection process for the preferred route options will facilitate selection based on the defined project objectives. Opportunities and constraints will

also be noted for each route option. **Table 4.1** shows a summary of the assessment criteria and sub criteria.

The route options MCA for each study area is presented in **Appendix 1**.

Table 4.1: Assessment Criteria

Assessment Criteria	Assessment Sub-Criteria
1- Economy	1.a. Capital Cost
	1.b. Transport Reliability and Quality of Service
2- Integration	2.a. Land Use Integration
	2.b. Residential, Employment and Educational Catchments
	2.c. Transport Network Integration
	2.d. Cycling Integration
3- Accessibility & Social Inclusion	3.a. Key Trip Attractors
	3.b. Deprived Geographic Areas
4- Safety	4.a. Road Safety
	4.b. Pedestrian Safety
5- Environment	5.a. Archaeology, Architectural and Cultural Heritage
	5.b. Flora and Fauna
	5.c. Soils and Geology
	5.d. Hydrology
	5.e. Landscape and Visual
	5.f. Air Quality
	5.g. Noise & Vibration
	5.h. Land Use Character

4.3.1 Economy (1)

4.3.1.1 Capital Cost (1.a.)

Capital cost estimates are determined from both the indicative infrastructure cost estimate and land acquisition cost. The methodology used, generally based on per-kilometre rates, is described below.

Indicative Infrastructure Cost Estimate

This sub-criterion is established to assess route options for their likely capital infrastructure cost. Each route option has been assessed relative to the nature and extent of infrastructure works requirements to deliver the scheme objectives.

The indicative scheme design for each route was used to determine the extent of the works required to provide the required bus and cycle facilities. These works were categorised and grouped together and their assumed costs are shown in **Table 4.2** below.

All cost estimates quoted exclude VAT

Table 4.2: Route Sections Infrastructure Cost Estimate Assumptions

Construction Category	Construction Works Assumptions	Cost
Major Road Construction	<ul style="list-style-type: none"> - Site Clearance - Services protection/diversion/relocation (power supply, telecoms, gas etc.) - Drainage - Major earthworks (embankments, retaining walls etc.) - Full pavement construction in large areas - Milling and overlay where required - Kerbs, footpaths, cycle tracks (removal and new) - Road lighting (replacement, cabling ducting etc.) - Road markings and signage - Street furniture - Landscaping - Boundary treatments - Accommodation works where required 	€5,000,000 per km
Road Space Redistribution	<ul style="list-style-type: none"> - Site Clearance - Services protection/diversion/relocation (power supply, telecoms) - Limited earthworks - Minor drainage works - Full pavement construction in small areas - Milling and overlay where required - Kerbs, footpaths, cycle tracks (removal and new) - Road lighting (relocation, ducting etc.) - Road markings and signage - Street furniture - Landscaping - Boundary treatments - Accommodation works where required 	€2,500,000 per km
Junctions	<ul style="list-style-type: none"> - Site Clearance - Services protection/diversion/relocation (power supply, telecoms) - Limited earthworks - Minor drainage works - Traffic signals (ducting, chambers, cabling, controller, signals etc.) - Kerbs, footpaths, cycle tracks (removal and new) - Road lighting (relocation, ducting etc.) - Road markings and signage - Street furniture 	€500,000 per junction

Construction Category	Construction Works Assumptions	Cost
	<ul style="list-style-type: none"> - Landscaping - Boundary treatments - Accommodation works where required 	
Alternative Cycle Route	<ul style="list-style-type: none"> - Site Clearance - Services protection/diversion/relocation (power supply, telecoms) - Limited earthworks - Minor drainage works - Kerbs, footpaths, cycle tracks (removal and new) - Road lighting (relocation, ducting etc.) - Road markings and signage - Street furniture - Landscaping - Boundary treatments - Accommodation works where required 	€1,750,000 per km
Bus Stops	<ul style="list-style-type: none"> - Raised kerbs and platforms - Paving - Shelters - RTPI infrastructure - Street furniture 	€50,000 per bus stop
Bridge over the M50	<ul style="list-style-type: none"> - Provision of new bridge over M50 including foundations, piers and all other ancillary works 	€1,000,000 per bridge

Land Acquisition Cost Estimate

This criterion evaluates the likely costs associated with land acquisition and associated boundary/accommodation works for each route option. The assessment takes consideration of both:

- The number of adjacent public/commercial/residential/industrial properties, from which land acquisition would be required as well as the extent (area) of land acquisition likely to be necessary.
- The costs associated with boundary/accommodation works.

For the purposes of route options comparison and assessment, the extent of land acquisition required for each route option is calculated by applying a typical cross-section to each option based on ordnance survey mapping and existing surveys where available. The typical cross-section used for this purposes is as follows:

- 3.0 m bus lane.
- 3.0 m traffic lane.
- 2.0 m footpath.
- 2.0 m cycle track.

In some areas, the above standard widths were tailored where required on route options in order to deal with any constraints while ensuring the scheme objectives were still met.

The areas of land-take required are presented as being either public land or private land. For the purposes of comparing route options, public land is generally defined as the space within the road reserve (e.g. property boundary wall to property boundary wall). Areas outside the road reserve are assumed to be private land except where it is clear that it is owned by a public entity (e.g. a public park, areas taken into maintenance etc.). Any private land that may be located within the road reserve, but are not clearly private land, are considered as public areas as part of this methodology. This exercise has been based on available Ordnance Survey mapping and topographical survey.

The methodology typically adopted in calculating the land acquisition costs is very site specific (value of the property, costs of acquiring and moving to a new property etc.). However, for the purpose of this

assessment, a high level assessment methodology has been used to develop a cost per square metre for private land acquisition based on valuations carried out by the NTA and TII for other public transport projects. Using this information, a rate of €1,500/m² has been applied to route options to derive an indicative cost for private land-take for all route options.

For the purposes of this assessment, no cost has been assumed for public land acquisition.

4.3.1.2 Transport Reliability and Quality of Service (1.b.)

Journey time

This sub-criterion assesses the extent to which journey time savings for public transport services can be achieved on each route. This is dependent on the provision of some or all of the following measures being implemented:

- Enhancement of existing bus lanes and/or provision of new bus lanes along road links
- Provision of bus lanes to stop lines at junctions
- Use of traffic signals to provide virtual priority (e.g. queue relocation)
- Removal of 'pinch points' for bus services along the route
- Rationalisation of existing bus stops in terms of location, indentation, spacing etc.

Journey times for each route option have been calculated using predicted average speeds for busses through each route. These predicted speeds are based on the amount of bus priority attainable on each route while also allowing for the nature of the roads within each route. Where no bus priority is possible, existing average speed data from busses was used, based on current automatic vehicle location information from Dublin Bus. In general, the following assumptions were used for evaluation:

- Maximum speed of 50 km/h reducing to 30 km/h within the City Centre areas.
- Dwell time of 20 seconds per stop on average
- Average delays of 30s per signalised junction and 15s per priority junction

Delays at junctions and stops include delays associated with deceleration/acceleration to/from a stationary position.

Bus priority

This sub-criterion is used to assess the level of bus priority attainable along each route. The level of priority is generally calculated based on the degree of road space given to dedicated bus lanes along the route along with the provision for busses at junctions. This information feeds into the journey time calculation discussed above.

4.3.2 Integration (2)

4.3.2.1 Land Use Integration (2.a.)

This criterion identifies the extent to which a route would encourage or support planned development and provide for economic opportunities. As part of this assessment, cognisance was taken of the ability of each route to offer opportunities to regenerate particular streets or areas or enhance the urban environment in general.

The interaction of routes with Local Area Plans (LAPs), masterplans or specific objectives in the County Development Plans are also considered under this criterion.

4.3.2.2 Residential, Employment and Educational Catchment (2.b.)

This criterion compares the existing population that could potentially use the route (i.e. residential, employment and 2nd /3rd level education) within 5, 10 and 15 minute walk catchments of a CBC stop on the route. This quantifies the number of potential CBC users a particular route option could have.

The rating of the catchments has taken into consideration the population within 5, 10 and 15 minutes separately as follows:

-
- 0 to 5 min walk: the population within this distance has been multiplied x3 since it is the population that will most likely use the CBC.
 - 5 to 10 min walk: the population within this distance has been multiplied x2 since it is the population that will less likely than the one within 0-5 min walk use the CBC.
 - 10 to 15 min walk: in this case the population has been multiplied x1 since it is the population that will least likely use the CBC.

The catchment areas in terms of the residential, working and school population within 5, 10 and 15 minutes of the proposed bus routes have been compared using a weighting system. The intention is to give greater priority to the 0 to 5 minute catchment, over the 5 to 10 minute and the 10 to 15 minute catchment because those within 5 minutes are more likely to be attracted to use the bus services than those over 5 and over 10 minutes from the bus stop. The 0-5 minute catchment was given three times the weighting as the 10-15 minutes and twice the weighting as the 5-10 minutes catchment.

4.3.2.3 Transport Network Integration (2.c.)

This criterion analyses the connectivity of the routes options with the existing and proposed transport services (i.e. are there adequate transportation interchanges to facilitate connectivity).

In addition, the suitability of proposed interchange locations will be taken into account. This includes considering details such as; is adequate space provided at interchange locations for facilities (e.g. safe walking areas to and from stops, cycle parking, etc.) These factors will be taken into account when comparing the routes.

4.3.2.4 Cycling Integration (2.d.)

This criterion assesses a route options degree of success in achieving cycle track segregation while maintaining a high quality cycle facility. The assessment considers the compatibility with GDA Cycle Network Plan and the quality of infrastructure for cyclists.

4.3.3 Accessibility and Social Inclusion (3)

4.3.3.1 Key Trip Attractors (3.a.)

The key trip attractors within approximately 10 min walking distance of each CBC route are identified in this criterion. The following land-uses have been defined as key trip attractors for the purpose of this assessment:

- Education (2nd and 3rd level centres).
- Retail and leisure centres.
- Medical.
- Employment.

4.3.3.2 Deprived Geographic Areas (3.b.)

This criterion assesses the impact of the CBC route options on the areas within 10 minute walk defined as “very deprived” and “deprived” in the Pobal Deprivation Index. RAPID areas (Revitalising Areas by Planning, Investment and Development) within the 10 minute walk boundary are also taken into consideration.

RAPID was a focused Government initiative to target the most disadvantaged urban areas and provincial towns in the country and sought to improve the lives of the residents of its communities through among other things, improving the delivery of public services through integration and coordination.

The Pobal HP Deprivation Index is a method of measuring the relative affluence or disadvantage of a particular geographical area using various datasets from the 2011 census. For the purpose of this assessment the Pobal HP Deprivation Index was examined by small area to determine which routes served deprived areas.

4.3.4 Safety (4)

4.3.4.1 Road Safety (4.a.)

In general, it is likely that road accidents will be reduced along the Core Bus Corridor due to modal shift. However, the reduction in accidents is unlikely to vary between different route options. For the purposes of comparing routes, the number and type of junctions is used to assess road safety as this is an indication of the number of potential conflicts on each route. Accident data from the RSA is noted but is not used to differentiate between routes.

4.3.4.2 Pedestrian safety (4.b.)

This criterion assesses the safety of passengers accessing the stops along the route. This is predominantly concerned with the proximity of stops to crossing facilities and the presence of footpaths along desire lines to stops.

4.3.5 Environment (5)

The scope and methodology for the environmental assessment was established by considering what environmental aspects are likely to be impacted and are therefore of importance in evaluating the route options. Based on this, the following environmental parameters were scoped out of the Environmental Assessment:

- **Agronomy:** Given the urban/suburban nature of the proposed scheme and the assumption that buses will run on predominantly existing road infrastructure this aspect is not considered to be relevant to the assessment.
- **Hydrogeology:** Hydrogeology is not considered to be a determining factor in the selection of the preferred route option. Also at this stage of the design process it is not possible to determine the quality, type or duration of these impacts, particularly as the location and type of structures e.g. underpasses, bridges etc. is unknown.
- **Property/Land Acquisition:** This aspect has been considered separately as part of the Economy criterion in the overall multi-criteria analysis commensurate with the information available at the route option assessment stage.
- **Socio-economics:** Elements of socio-economics such as journey times, catchment analysis, transport integration, quality of service for cyclists etc. are assessed under other non-environmental criteria and are therefore considered and captured elsewhere as part of the multi-criteria analysis.

For all remaining environmental criteria, the potential impacts of route options are assessed at desktop study level. The environmental constraints considered are outlined in the following sections.

4.3.5.1 Archaeology, Architectural and Cultural Heritage (5.a.)

The provision of bus priority infrastructure has the potential to impact on the archaeological, architectural and cultural heritage environment. At this stage of the assessment, the exact nature and extent of potential impacts cannot be determined for all route sections assessed.

For the purposes of this assessment heritage features of archaeological, architectural and cultural heritage significance along or immediately adjacent to the route were identified and mapped. Impacts associated with each route are then compared and ranked in order of preference.

Features considered included the following:

- National and Recorded Monuments (sites recorded on the Record of Monuments and Places (RMP sites)).
- Protected Structure (sites recorded on the Record of Protected Structures (RPS)).
- Sites recorded on the National Inventory of Architectural Heritage (NIAH).
- Areas of Archaeological and Cultural Heritage Merit.
- Architectural Conservation Areas (ACAs) and other sites / areas of Architectural Heritage Merit.
- Sites/areas of archaeological potential and recently identified archaeological sites.

-
- Conservation Areas.
 - Greenfield areas with unknown archaeological potential.

It is important to note that the proposed route will primarily travel on existing established road networks. Other than locations of potential significant widening of the existing road curtilage, it is currently not anticipated that adjacent structures and buildings will be impacted by the proposed CBC scheme (while acknowledging that the designation of, and protection afforded to a Protected Structure is not restricted to the structure itself but to all elements within its curtilage, e.g. coal cellars and boundary elements). Within the City Centre, the selection of a preferred route option will, in most instances involve the running bus services in the vicinity of numerous Protected Structures irrespective of which route section is preferred (archaeological, architectural and cultural heritage is only one of the criteria being considered as part of the MCA analysis).

4.3.5.2 Flora and Fauna (5.b.)

The provision of bus priority infrastructure has the potential to impact on flora and fauna.

A broad assessment of the likely impacts of each of the route options on the key ecological receptors was undertaken, with an indication as to which, if any, of these were likely to be significant, and at what geographical level. The impacts were compared to allow an order of preference to be determined.

Features considered included the following:

- Records of rare or protected plant species
- Records of protected fauna
- Identified designated ecological areas and other areas of ecological importance including ecological corridors and areas of green infrastructure
- Watercourses and fisheries waters.

It should be noted that the CBC routes generally make use of existing road corridors and, as such, are unlikely to have a major effect on Flora and Fauna in the majority of locations.

4.3.5.3 Soils and Geology (5.c.)

The potential impact of routes on soil and geology as a result of land take and possible excavation is analysed in this criterion.

Attributes (and impacts) assessed for each route option included the following (where relevant):

- Historic land use and potential contamination.
- Geology / Areas of Geological Significance.
- Soil quality, drainage characteristics and range of agricultural uses of soil along each route
- Potential implications for existing quarry or mining activities and future extractable reserves.

4.3.5.4 Hydrology (5.d.)

This criterion focuses on the impact on surface water as a result of land take, especially on floodplains and floods zones. The flood risk for each route is also considered as part of this criterion.

Attributes (and impacts) assessed for each route option included the following (where relevant):

- Watercourses crossed by each route corridor and potential impact on water quality arising from re-alignment works.
- Discharge to receiving waters and drainage network.
- Aquatic ecological sites close to and downstream of water crossings.
- Surface water abstraction close to and downstream of water crossings.
- Established amenity value of surface waters traversed by each route.

-
- Potential increase (or reduction) in flood risk to existing properties.

4.3.5.5 Landscape and Visual (5.e.)

This criterion assesses the possible effects of each route on the surrounding landscapes and streetscapes.

The assessment comprised the compilation of a desktop understanding of:

- The landscape/townscape, its character and features.
- The visual environment, including the location of residential and other properties and views over the landscape.
- The landscape planning context, including landscape designations, open spaces, identified views and prospects, etc.
- Relationship with protected structures, conservation areas, national monuments etc.

4.3.5.6 Air Quality (5.f.)

The potential of each route to effect air quality as a result of widening, increased traffic etc. is assessed in this section.

The provision of bus priority infrastructure has the potential to impact the air quality along the route. The assessment considered each route section, in terms of sensitive receptors and density of development in order to identify the most suitable route from an air quality perspective.

The TII guidelines define sensitive receptor locations as: residential housing, schools, hospitals, places of worship, sports centres and shopping areas, i.e. locations where members of the public are likely to be regularly present.

It is important to note that the proposed route will primarily travel on existing established road networks. For the purposes of this assessment, air quality impact is quantified based on whether the road is moving closer to sensitive receptors i.e. road widening. However, any road widening would result in only marginal impacts to air quality at sensitive receptors and therefore the severity of any air quality impact would be minimal.

4.3.5.7 Noise and Vibration (5.g.)

This criterion assesses the noise and vibration impact of each route, e.g. where road widening may bring traffic closer to sensitive receptors.

Similar to Air Quality, noise and vibration impact is quantified based on whether the road is moving closer to sensitive receptors i.e. road widening. As noted above, any road widening would result in only marginal impacts to noise and vibration at sensitive receptors and therefore the severity of any noise and vibration impact would be minimal.

4.3.5.8 Land Use Character (5.h.)

The effect of each route on the existing land use character is assessed in this section. This includes severance of land or effects to the viability of land to be used for its intended purpose or impacts on land use character through land-take, removal of parking and loading, etc.

4.3.6 Route Option Summary Table

For each study area section, a route options assessment table in Project Appraisal Balance Sheet (PABS) format has been prepared, which contains the appraisal of route options under each of the assessment criteria.

The route options summary table for each study area is presented in **Appendix 1**.

Route options have been compared based on a five point scale, ranging from having significant advantages to having significant disadvantages over other route options. **Table 4.3** shows the colour coding of the five point scale, with advantageous routes graded to “dark green” and disadvantageous routes graded to “red”.

Table 4.3: Route Options Colour Coded Ranking Scale

Colour	Description
	Significant advantages over the other options.
	Some advantages over other options.
	Neutral compared to other options.
	Significant disadvantages over other options.
	Significant disadvantages over the other options.

The extent of reporting may vary between each study area section route options assessment, depending on the significance attached to specific criterion in terms of route differentiation.

At the end of each study area section route options assessment, an overall Multi Criterion Appraisal (MCA) table is provided, bringing together each of the individual criterion assessments. This table is then summarised for each study area section under the main assessment criterion as set out in **Table 4.1**.

A qualitative appraisal of, and conclusions from, the route options assessment is then provided, highlighting the key issues considered in determining the recommended route option. It should be noted that a balanced approach is taken when assessing the preferred routes. All criteria are considered in undertaking the assessment and a lower ranking on one criterion will not necessarily mean that the route is not suitable.

The recommended route options from each study area section are then collated to provide the emerging preferred end-to-end route.

5 Section 1: Tyrrelstown to M50

5.1 Stage 1: Sifting Process

As previously described, there are a number of route options that have been considered within this study area. In order to find the potential “end to end” routes, the roads available for the CBC routing have been subdivided into shorter sections for the purposes of the “Stage 1” route options sifting process.

The **Figure 5.1** shows the initial potential route options for Section 1 before the sifting process.

The sifting process summary is described in **Table 5.1**.

Figure 5.1: Section 1 Route Options: Tyrrelstown to M50



Table 5.1: Section 1 Route Option Sifting (Stage 1) Summary_ Tyrrelstown to M50

Route Option Number	Comments	Pass/Fail
FR1	Section of road through Tyrrelstown which extends along Boulevard Bealing Village, Rathmore Village, The Boulevard Cruise Park and the Boulevard. This route consists of 1 all-vehicle lane in both directions and extends through a number of roundabouts along its length. The estate road is generally 6m wide with a 12m wide road reservation. This route option is not considered feasible due to insufficient priority through the Tyrrelstown Residential Area. This route option could impact significantly on bus services due to spatial constraints. There is also minimum land take potential in order to provide a Core Bus Corridor.	Fail
FR2	Section of road from the R121 roundabout at the Carlton Hotel Blanchardstown to a roundabout on the eastern side of the road. This route consists of 1 all-vehicle lane in each direction and has a road reservation width of 17.5m. At present, this route is a cul-de-sac with a turning area for buses at its northern end. This route however relies on FR9 & FR12 which have failed the initial sift, therefore this route also fails the initial sift.	Fail
FR3	Section of R121 which extends between the two roundabouts fronting Tyrrelstown Housing Estate. This route consists of 2 all-vehicle lanes in both directions. There is ample space to facilitate a Core Bus Corridor in each direction along this section of the route with the introduction of priority bus measures in both directions. This route therefore passes the initial sift.	Pass
FR4	Section of R121 which extends from the southern roundabout at Tyrrelstown Housing Estate to the roundabout at the northern end of Church Road. This route consists of 2 all-vehicle lanes in both directions. There is ample space to facilitate a Core Bus Corridor in each direction along this section of the route with the introduction of priority bus measures in both directions. This route therefore passes the initial sift.	Pass
FR5	Section of R121 from the R121 roundabout at the northern end of Church Road to the western boundary with Bristol Myres Squibb. This route consists of 1 all-vehicle lane in each direction with a painted central island. The road width is generally 9.5m in width with a reservation width of 17.5m. This is a potentially feasible route, where a Core Bus Corridor is feasible with the removal of existing grass verges and landscaping. Therefore, this route passes the initial sift.	Pass
FR6	Section of road through Blanchardstown Corporate Park from the R121 to the roundabout on the north east side of the Park. This route consists of 1 all-vehicle lane in each direction. The road width is generally 8m with a 12m road reservation width. This option would require substantial land take from adjacent sites to provide bus priority. It may also be necessary to remove the existing roundabouts and change them to signalised junctions. The geometry of the road means that the route is unsuitable and that FR18 would be more suitable for a route in this general direction.	Fail

Route Option Number	Comments	Pass/Fail
	Therefore, this route has failed the initial sift.	
FR7	Section of road from the roundabout on the eastern side of the Carlton Hotel Blanchardstown Road eastwards along a road extension through undeveloped lands. This road is constructed but is not yet open to the public. This route consists of 1 all-vehicle lane in each direction. The current carriageway width is approximately 9m with a road reservation of 18m. This route however relies on FR9 & FR12, which have failed the initial sift. Therefore, this route also fails the initial sift.	Fail
FR8	Section of R121 northbound from the roundabout at the Carlton Hotel Blanchardstown through the next roundabout heading eastbound to the next roundabout. This route consists of 2 all-vehicle lanes in both directions. There is ample space to facilitate a Core Bus Corridor in each direction along this section of the route with the introduction of priority bus measures in both directions. This route therefore passes the initial sift.	Pass
FR9	Section of road through undeveloped lands between the Carlton Hotel Blanchardstown and the Blanchardstown 220kV ESB Station in the townland of Goddamendy. This road is constructed but is not yet open to the public. This route consists of 1 all-vehicle lane in each direction. The current carriageway width is approximately 9m with a road reservation of 18m. FR8 is a more attractive route option as an alternative given the lesser amount of construction work required in order to make it feasible as a Core Bus Corridor.	Fail
FR10	Section of R121 from the western boundary with Bristol Myres Squibb to the entrance to Blanchardstown Corporate Park. This route consists of 1 all-vehicle lane in each direction with a painted central island. The road is generally 9.5m in width with a reservation width of 17.5m. It is therefore a potentially feasible route for a Core Bus Corridor with the removal of existing grass verges and landscaping. This route extends through a large employment area. Therefore, this route passes the initial sift.	Pass
FR11	Section of road through College Business Park from the Park entrance on the R121 to the northern existing roundabout in the Park. The route consists of 2 all-vehicle lanes from the entrance to the first roundabout and 1 all-vehicle lanes in each direction for the remainder. The dual carriageway portion of the route has sufficient width to provide a Core Bus Corridor, however it would be necessary to remove the existing grass verges and landscaping to form a Core Bus Corridor along the remainder of the route. This route is reliant on the construction of FR120 through private lands on the northern end of the route which is not feasible because of current developments. This route option therefore does not pass the Stage 1 sift.	Fail
FR12	This route option has not yet been constructed, it is an extension of route option FR7 through undeveloped lands to the north of	Fail

Route Option Number	Comments	Pass/Fail
	Bristol Myres Squibb. This route would utilise a possible road extension eastwards through industrial zoned lands to link with the Ballycoolin Distributor Road. There is no current need for this road to service the area given the number of roads surrounding the lands. This route option therefore does not pass the Stage 1 sift.	
FR13	Section of northern distributor road between roundabouts north of the Blanchardstown 220kV ESB Station in the townland of Goddamendy. This route consists of 2 all-vehicle lanes in both directions. There is ample space to facilitate a Core Bus Corridor in each direction along this section of the route with the introduction of priority bus measures in both directions. This route is on the northern outskirts of the Blanchardstown Industrial Area and services a small population, however it is a link between other viable routes and should be considered. This route therefore passes the initial sift.	Pass
FR14	Section of northern distributor road between roundabouts at the townland of Bay. This route consists of 2 all-vehicle lanes in both directions. There is ample space to facilitate a Core Bus Corridor in each direction along this section of the route with the introduction of priority bus measures in both directions. This route does not serve the key trip attractors or the general population west of the M50. For this reason, this option does not pass the Stage 1 sift.	Fail
FR15	Section of road from the northern distributor road eastbound through farmlands to meet the Kilshane Road. This route consists of 1 all-vehicle lane in each direction. The carriageway width here is narrow at 6m with no cycle or pedestrian facilities. It is a potentially feasible route; however, significant land take would be required in order to bring the road cross-section up to a suitable standard. In addition, this route does not serve the key trip attractors or the general population west of the M50. For these reasons this option does not pass the Stage 1 sift.	Fail
FR16	Section of road leading south off the northern distributor road to the east of Blanchardstown 220kV ESB Station in the townland of Goddamendy to the roundabout at the stations entrance. This route consists of 2 all-vehicle lanes in both directions. There is ample space to facilitate a Core Bus Corridor in each direction along this section of the route with the introduction of priority bus measures in both directions. This route therefore passes the initial sift.	Pass
FR17	Section of road leading south off the entrance roundabout to the Blanchardstown 220kV ESB Station to the entrance roundabout to Blanchardstown Corporate Park's northern entrance. This route consists of 2 all-vehicle lanes in both directions. There is ample space to facilitate a Core Bus Corridor in each direction along this section of the route with the introduction of priority bus measures in both directions. This route extends through a large	Pass

Route Option Number	Comments	Pass/Fail
	employment area. This route therefore passes the initial sift.	
FR18	Section of road leading south along the eastern boundary of Blanchardstown Corporate Business Park. This route consists of 2 all-vehicle lanes in both directions. There is ample space to facilitate a Core Bus Corridor in each direction along this section of the route with the introduction of priority bus measures in both directions. This route extends through a large employment area. This route therefore passes the initial sift.	Pass
FR19	Section of R121 from the southern entrance to Blanchardstown Corporate Park to the roundabout east of the entrance. This route consists of 1 all-vehicle lane in each direction with a painted central island and right turning lane. The road is generally 9.5m in width with a reservation width of 26m. Therefore, it is a potentially feasible route where a Core Bus Corridor is feasible with the removal of existing grass verges and landscaping. This route extends through a large employment area. This route therefore passes the initial sift.	Pass
FR20	Section of R121 from the roundabout on the south eastern corner of Blanchardstown Corporate Park to the entrance to College Business Park. This route consists of 1 all-vehicle lane in each direction. The road width is generally 8m with a reservation width of 23m. It is therefore a potentially feasible route where a Core Bus Corridor is feasible with the removal of existing grass verges and landscaping. This route therefore passes the initial sift.	Pass
FR21	Section of Blackcourt Road from the roundabout entrance at College Business Park to its junction with Corduff Distributor Road. This route consists of 1 all-vehicle lane in each direction. The road width is generally 9m with a reservation width of 17m, it is therefore a potentially feasible route for a Core Bus Corridor with the removal of existing grass verges and landscaping and some possible land take. This route therefore passes the initial sift.	Pass
FR22	Section of Corduff Distributor Road from its junction with Blackcourt Road, through the housing estate, to its junction with the R843 Snugborough Road. This route consists of 1 all-vehicle lane in each direction. The road is generally 9m in width with a reservation width of 12.5m. Land take is required to facilitate a Core Bus Corridor. This route therefore passes the initial sift.	Pass
FR23	Section of R843 that extends from the roundabout on the Ballycoolin Road to its junction with Ashling Heights. This route consists of 1 all-vehicle lane in each direction. The road width is generally 14.5m with a reservation width of 25m. A bus lane exists in both directions along the majority of the route. There is ample space to facilitate a Core Bus Corridor in each direction along this route with the introduction of priority bus measures in both directions. This route therefore passes the initial sift.	Pass
FR24	Section of Ballycoolin Road from the roundabout on the south	Pass

Route Option Number	Comments	Pass/Fail
	eastern corner of Blanchardstown Corporate Park to the entrance to IDA Ireland Business & Technology Park. This route consists of 1 all-vehicle lane in each direction. The road width is generally 9.5m with a reservation width of 21m. It is therefore a potentially feasible route for a Core Bus Corridor. This route extends through a large employment area. This route therefore passes the initial sift.	
FR25	Section of Ballycoolin Road from the entrance to IDA Ireland Business & Technology Park to the entrance to Rosemount Business Park. This route consists of 1 all-vehicle lane in each direction. The road width is generally 9.5m with a reservation width of 21m. It is therefore a potentially feasible route for a Core Bus Corridor. This route extends through a large employment area. This route therefore passes the initial sift.	Pass
FR26	Section of road leading into the north western entrance of Blanchardstown Corporate Business Park 2. The first portion of this road consists of a 2 all-vehicle lanes in each direction, which converge into 1 all-vehicle lane in each direction up to the Bus Gate. There is ample space to facilitate a Core Bus Corridor in each direction along the entrance section of the route (2-lane) with the introduction of priority bus measures in both directions. The road width for the remainder of the route is generally 7.5m with a 13m road reservation. Land take will be required in order to facilitate a Core Bus Corridor along the remainder of the route. This route extends through a large employment area. This route leads to a bus gate and therefore it should be considered. This route therefore passes the initial sift.	Pass
FR27	Section of road dedicated to bus only through Blanchardstown Corporate Business Park 2. This route is feasible for a Core Bus Corridor.	Pass
FR28	Section of road from the southern end of the bus gate to the entrance to IDA Ireland Business & Technology Park. This route consists of 1 all-vehicle lane in each direction. The road width is generally 6m with a reservation width of 14m. Land acquisition is required in order to make this a feasible route for a Core Bus Corridor. This route extends through a large employment area. This route therefore passes the initial sift.	Pass
FR29	Section of road leading east off the entrance roundabout to the Blanchardstown 220kV ESB Station to the entrance roundabout to North West Business Park. This route consists of 2 all-vehicle lanes in both directions. There is ample space to facilitate a Core Bus Corridor in each direction along this section of the route with the introduction of priority bus measures in both directions. This route however relies on FR30 & FR31, which have failed the initial sift. Therefore, this route also fails the initial sift.	Fail
FR30	Section of road to the north of the North West Business Park. This route has 1 all-vehicle lane in each direction and a 21m	Fail

Route Option Number	Comments	Pass/Fail
	wide reservation. Therefore, a Core Bus Corridor is feasible. At present, there is only 1 site entrance off this route. As FR30 runs parallel to FR31 and their starting and end points are the same, the 2 options can be compared. FR31 is more accessible to the adjoining businesses and is therefore the preferable option. Thus, FR30 does not pass the stage 1 sift.	
FR31	Section of road along North West Business Park, western side. This route has 1 all-vehicle lane in each direction and a 15m wide reservation. Therefore, a Core Bus Corridor is feasible with some land take. This route is a more suitable alternative when compared to FR30 due to its proximity to a majority of the companies in the business park. This route however relies on FR34 & FR38, which have failed the initial sift. Therefore, this route also fails the initial sift.	Fail
FR32	Section of road along North West Business Park, eastern side. This route has 1 all-vehicle lane in each direction. The road width is generally 9m with a 15m wide road reservation. Therefore, a Core Bus Corridor is feasible with some land take. This route is a more suitable alternative when compared to FR30 due to its proximity to the majority of the companies in the Business Park. This route however relies on FR34 & FR38, which have failed the initial sift. Therefore, this route also fails the initial sift.	Fail
FR33	Section of Kilshane Road from the junction with an unnamed road to the eastern roundabout of Northwest Business Park. This route consists of 1 all-vehicle lane in each direction. The carriageway width is approximately 7.5m with no cycle or pedestrian facilities. It is a potentially feasible route; however, significant land take would be required in order to bring the road cross section up to a suitable standard. In addition, this route does not serve the key trip attractors or the general population west of the M50. For these reasons, this option does not pass the Stage 1 sift.	Fail
FR34	Section of road through Rosemount Business Park from Northwest Business Park to the Ballycoolin Road. This route consists of 1 all-vehicle lane in each direction. This is a potentially feasible route with a current road width of approximately 9m and a road reservation of 16m. However, significant land take would be required in order to bring the road cross section up to a suitable standard. The land take may have an impact on adjoining businesses and for this reason this option does not pass the Stage 1 sift.	Fail
FR35	Section of Ballycoolin Road from the Rosemount Business Park entrance to the roundabout junction with the Cappagh Road. This route consists of 1 all-vehicle lane in each direction. The road reservation is 21m in width and is therefore a potentially feasible route for a Core Bus Corridor. This route extends through a large employment area.	Pass

Route Option Number	Comments	Pass/Fail
FR37	Section of N2 National Road from the R135 Finglas Road slip lane to the M50 junction. This route consists of 3 all-vehicle lanes in each direction. This is a potentially feasible route along the N2. Although the route provides sufficient geometry for a Core Bus Corridor, the routes FR14 & FR15 suggest that this route does not serve the key trip attractors or the general population west of the M50. For this reason, this option does not pass the Stage 1 sift.	Fail
FR38	Section of Cappagh Road from the Northwest Business Park roundabout to its junction with the roundabout on the Ballycoolin Road. This route consists of 1 all-vehicle lane in each direction. The road width is generally 9.5m with a reservation of 21m in width and is therefore a potentially feasible route for a Core Bus Corridor. This route skirts the eastern boundary of a large employment area but doesn't service the majority of the employment population. To the east of this route is Huntstown Quarry, which provides limited employment opportunities when compared to alternative routes. For this reason, this option does not pass the Stage 1 sift.	Fail
FR39	Section of Kilshane Road from the junction with an unnamed road to the Kilshane Cross junction on the R135. This route consists of 1 all-vehicle lane in each direction. The carriageway width is approximately 7.5m with no cycle or pedestrian facilities. It is a potentially feasible route. However, significant land take would be required in order to bring the road cross section up to a suitable standard. In addition, this route does not serve the key trip attractors or the general population west of the M50. For these reasons, this option does not pass the Stage 1 sift.	Fail
FR40	Section of R135 Finglas Road from Kilshane Cross to the N2 National Road. This route consists of 1 all-vehicle lane in each direction. The road is generally 10m in width with a 13.5m road reservation. This is a potentially feasible route. However, land take would be required in order to bring the road cross section up to a suitable standard. In addition, this route does not serve the key trip attractors or the general population west of the M50. For this reason, this option does not pass the Stage 1 sift.	Fail
FR120	This route option has not yet been constructed; it is an extension of the route through College Business Park (FR11), which would join the Cruiserath Road at the western boundary to Bristol Myers Squibb. There is no defined cross section for this road. Therefore, the Core Bus Corridor requirements could be incorporated into the designs. The lands which this route traverses have recently been sold for development and therefore this option is unavailable. For this reason, this option does not pass the Stage 1 sift.	Fail

Following the "Stage 1" sift, 20 of the 40 road sections analysed to create the potential routes passed the initial sifting stage. These routes are shown in **Figure 5.2** below.

Project Number: 16_079

Project: Finglas to Phibsborough Core Bus Corridor

Title: Feasibility Study and Options Assessment Report



Figure 5.2: Section 1 Tyrrelstown to M50 Route Options Remaining After Stage 1 Sifting



5.2 Stage 2: Route Options Assessment

Following the “Stage 1” sift, the remaining routes have been combined to present 4 cohesive route options between Tyrrelstown and the M50. These route options are shown in **Figures 5.3 to 5.6** and described in the following sections.

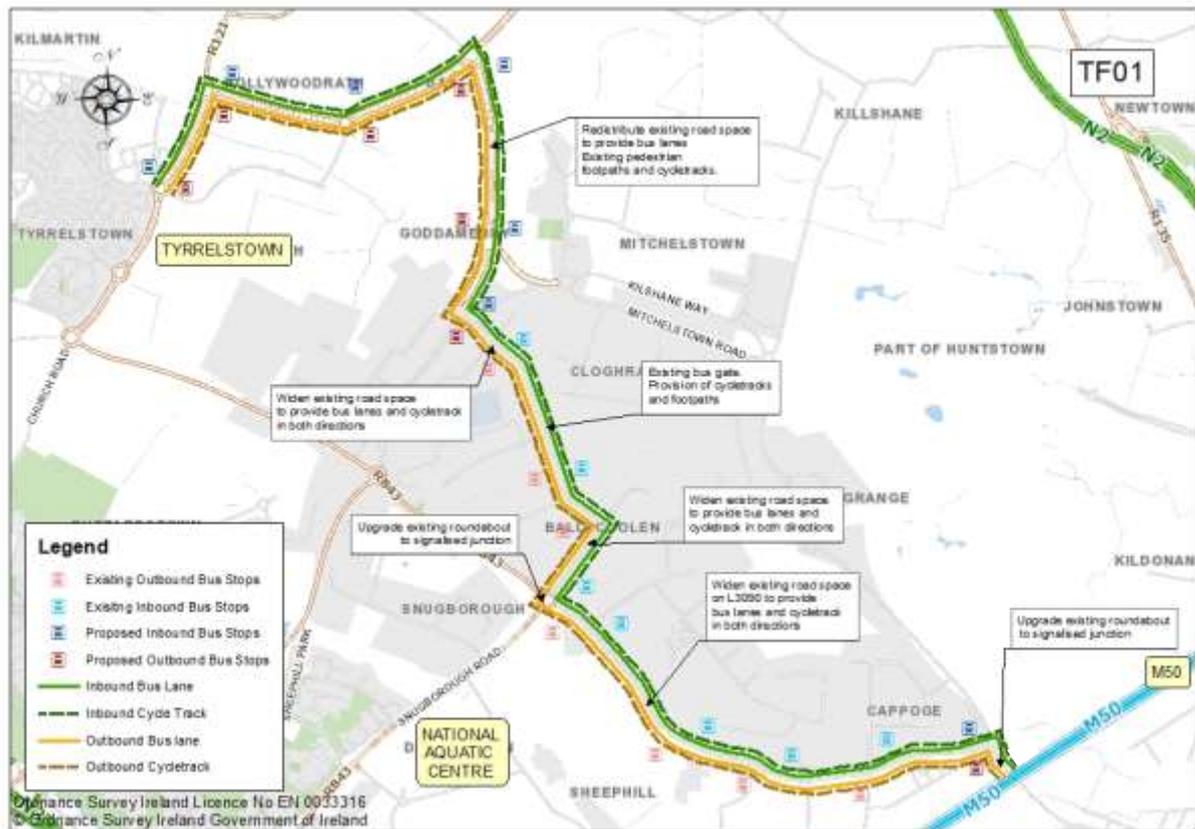
In order to facilitate the analysis of the route options, they have been named as follows:

- TF01: via the northern road and through Ballycoolin Industrial State.
- TF02: via R121 and through Ballycoolin Industrial State.
- TF03: straight via R121.
- TF04: via R121 and though Corduff.

5.2.1 TF01 Route Option

Route option TF01 via the northern road and through Ballycoolin Industrial State is shown in **Figure 5.3** below:

Figure 5.3: TF01 Route Option



Inbound: This route runs through the northern industrial catchment still underdeveloped using the recently completed Cherrywood/N2/N3 link dual carriageway until the Texaco Petrol Station adjacent to the roundabout. It turns east at this roundabout and continues along to the bus gate after the mini roundabout. After the bus gate, the route turns south at Symantec junction until Snugborough roundabout, where it turns east and continues until Cappagh Road roundabout. From here, it turns south onto the bridge over the M50.

Outbound: Outbound CBC service would follow the same route (in the opposite direction) as taken by inbound service.

Stops: a total of 28 stops in both directions would be provided along this route to maximise the residential, employment and educational catchment.

The journey time for this route is approximately 16 minutes over a distance of 6.3 km.

It is proposed to provide priority bus lanes along with upgraded cycle tracks and pedestrian facilities from Tyrrelstown Boulevard roundabout along the Cherrywood/N2/N3 link dual carriageway until Texaco Petrol Station roundabout. The cycle tracks will be upgraded in order to provide a dedicated facility of 2m minimum width, along with 2m minimum width for footpaths where possible. In order to provide bus lanes, upgraded cycle and footpath facilities along this section, land take would be required in the form of the adjacent grass verge in both directions. Furthermore there would be a number of young trees in the grass verge that would also be removed in order to facilitate widening.

From the Texaco Petrol Station adjacent to the roundabout bus priority and new/upgraded cycle tracks will be provided through the Ballycoolin Industrial Estate until the Snugborough Road roundabout and its intersection with the Ballycoolin Road. There is an existing bus gate in the middle of the industrial estate resulting in no through traffic except for buses. As traffic is deemed to be that of users of the

industrial estate, volumes are low compared to the surrounding link roads. Therefore buses will share the exiting road space with the traffic from the industrial estate. Dedicated raised adjacent cycle tracks of 2m minimum width and footpaths of 2m minimum widths will be provided along this length in both directions where possible. Portions of public land take in the form grass verge would be required along the entire length of the section to facilitate widening.

From the Snugborough Roundabout and along until the bridge over the M50 on the Cappagh Road there are bus lanes proposed in both directions. Dedicated raised adjacent cycle tracks of 2m minimum width and footpaths of 2m minimum widths will be provided along this length in both directions where possible. This will be achieved by redistributing the existing central island and adjacent grass verges along its length. This will result in the removal of a number of young trees in the grass verge. Approx. 50m of boundary would be set back by 2m to accommodate the widening adjacent to the entrance of 'The Cobbles' housing estate. Further widening to accommodate a separate 'straight-on' and 'left turn' traffic lane will be required at the entrance to Stadium Business Park and Premier Business Park. This will be in the form of setting back the existing boundary by 2m over a length of 50m at both locations.

On approach to the junction of Ballycoolin Road and Cappagh Road public land adjacent to the Cappoge Cottages in the inbound direction will require approx. 2m over a length of 70m to provide a left turn pocket for public traffic. South of the Cappoge Cottages, in the outbound direction existing concrete bollards would need to be reset back to the entrance of the adjacent property (approx. length of 20m). In order to accommodate a new bridge over the M50 public and private land take would be required on the inbound and outbound approaches to the existing bridge. The boundary would be set back 17m over a length of 80m on the northern approach and would require the removal of dense vegetation. Similarly on the southern approach the boundaries would be set back by 17m over a length of 170m in the along with the removal of a large earth mound in the inbound direction, while in the out bound direction the boundary would be set back by 2m over a length of 170m.

New bus stops on both sides are proposed; adjacent to the Tyrrelstown Boulevard roundabout, 4 no. sets along Cherrywood/N2/N3 link dual carriageway, adjacent to the entrance to Blanchardstown Corporate Park 2 and the Ballycoolin Road adjacent to its junction with the Cappagh Road.

The existing traffic lane layout would be maintained throughout the section (unless otherwise stated) but would have reduced traffic lane widths to 3m.

Snugborough roundabout and Cappagh Road roundabout would be upgraded to signalised junctions in order to minimise the potential delays. Additionally, a new bridge over the M50 would be constructed to provide the required cycling/pedestrian/traffic/CBC facilities. Bus lanes will be provided right up to the stop lines of these junctions, along with the provision of left turn lanes for public traffic (where there is large left turning traffic volumes from on site observations).

The following issues have been considered in the assessment:

- Use of the existing bus gate.
- Need to upgrade 2 roundabouts to a traffic signal controlled junction
- Removal of young trees along the route.
- Construction of a new bridge over the M50.

5.2.2 TF02 Route Option

Route option TF02 via R121 and through Ballycoolin Industrial State is shown in **Figure 5.4** below:

Figure 5.4: TF02 Route Option



Inbound: This route starts at Tyrrelstown Boulevard roundabout and turns south along the R121 until its intersection with the Damastown Avenue, where it turns east and continues along the R121 until the Ballycoolin roundabout. The route turns north at this roundabout and continues onto the Texaco Petrol Station adjacent to Roundabout, where it follows TF01 route until the bridge over the M50.

Outbound: Outbound CBC service would follow the same route as taken by inbound service.

Stops: a total of 28 stops would be provided along this route to maximise the residential, employment and educational catchment.

The journey time for this route is approximately 16 minutes over a distance of 6.4 km.

It is proposed to provide priority bus lanes along with upgraded cycle tracks and pedestrian facilities in both directions from Tyrrelstown Boulevard roundabout along the R121 to where it turns into Blanchardstown Corporate Park and onto Corduff Road. The cycle tracks would provide a raised adjacent dedicated facility of 2m minimum width, along with 2m minimum width for footpaths where possible. Along the entire length of this section there is adequate space available for widening as there is central islands, central medians and grass verges in both directions. A significant number of young trees in the grass verges would be removed to cater for the widening. The roundabouts on the R121 with its intersections of the Boulevard Bealing Village Road and the Damastown Avenue would be upgraded to cater for a bus priority lanes through the roundabouts in the inbound direction and will provide bus lanes right up to the stops lines in the outbound direction. New pedestrian crossings would be provided at these upgraded roundabouts, also at the upgraded Ballycoolin signalised junction along with a toucan crossing adjacent to Bristol Myers Squibb.

From here the proposed CBC would travel along the Corduff Road until it reaches its roundabout with the entrance to Blanchardstown Corporate Park 2. It is proposed to provide bus priority, along with

upgraded dedicated cycling and pedestrian facilities on this section of the route. There is adequate space available along this section for widening as central medians and grass verges would be removed to accommodate extra lane provision. The existing dual carriageway traffic lanes will be maintained but would be reduced in width to 3m per lane. All junctions along the proposed will be upgraded to improve bus priority. Bus lanes will be provided right up to the stop lines of junctions, along with the provision of left turn lanes for public traffic (where there is large left turning traffic volumes from on site observations).

From here route option TF02 is the same as TF01 until the bridge over the M50.

New bus stops on both sides are proposed; adjacent to the Tyrrelstown Boulevard roundabout, between Boulevard Bealing Village Road and Damastown Avenue, adjacent to the proposed new toucan crossing at the entrance to Bristol Myers Squibb, adjacent to the entrance to Blanchardstown Corporate Park 2 and the Ballycoolin Road adjacent to its junction with the Cappagh Road.

Ballycoolin roundabout, Snugborough roundabout and Cappagh Road roundabout would be upgraded to signalised junctions in order to minimise potential delays and improve bus priority. Additionally, a new bridge over the M50 would be constructed to provide the required cycling/pedestrian/traffic/CBC facilities. Bus lanes will be provided right up to the stop lines of these junctions, along with the provision of left turn lanes for public traffic (where there is large left turning traffic volumes from on site observations).

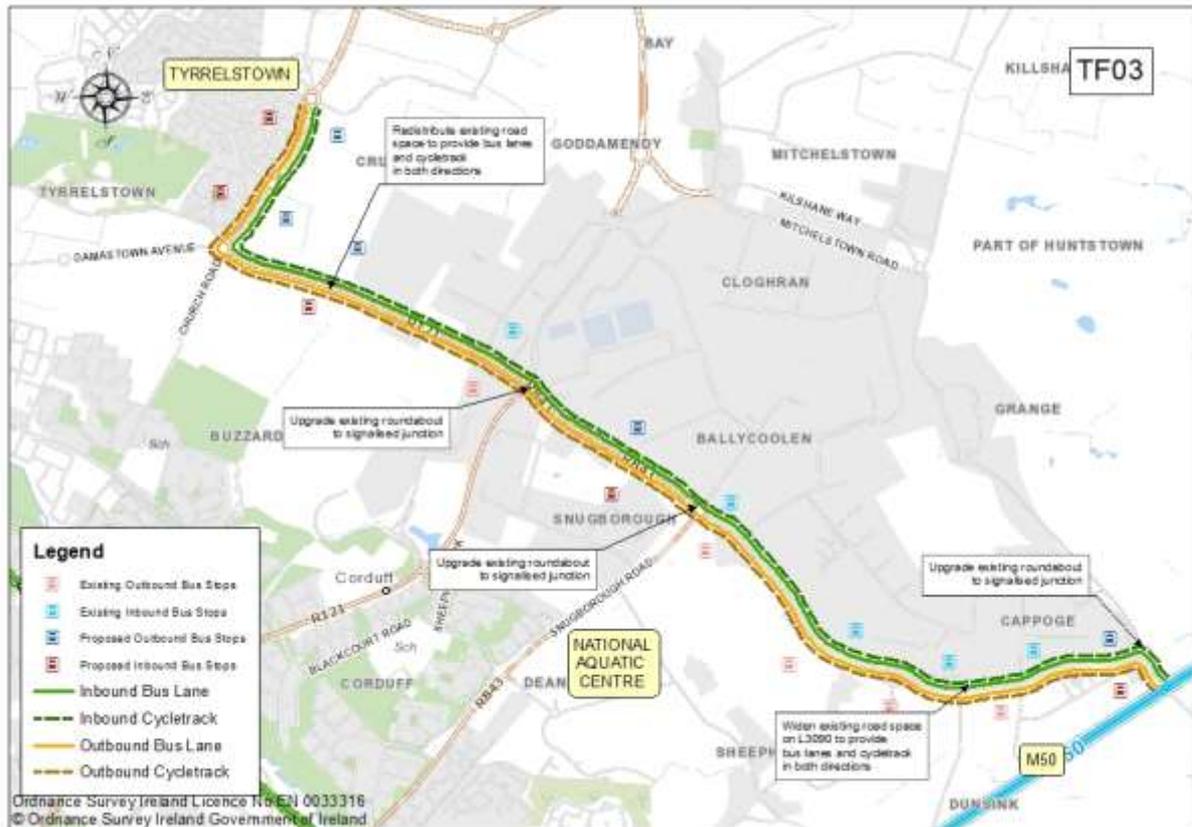
The following issues have been considered in the assessment:

- Use of the existing bus gate.
- Need to upgrade 3 roundabouts to a traffic signal controlled junction
- Removal of young trees along the route.
- Construction of a new bridge over the M50.

5.2.3 TF03 Route Option

Route option TF03 straight via R121. Preferred Route Option is shown in **Figure 5.5** below:

Figure 5.5: TF03 Route Option



Inbound: This route follows TF02 route until Ballycoolin roundabout where it continues straight along the Ballycoolin Road to Snugborough roundabout. The route then follows TF01 route until the bridge over the M50.

Outbound: Outbound CBC service would follow the same route as taken by inbound service.

Stops: a total of 20 stops would be provided along this route to maximise the residential, employment and educational catchment.

The journey time for this route is approximately 11 minutes over a distance of 5.1 km.

As route option TF03 is a combination of TF01 and TF02, it offers priority bus lanes and dedicated cycle and pedestrian facilities. Route option TF03 offers a more direct route when compared to the other route options, while at the same time serving large population catchments of Tyrrelstown, Blanchardstown Corporate Park, Blanchardstown Industrial Park and Rosemount Business Park.

It is proposed to provide bus lanes, cycle and pedestrian facilities in both directions along the Ballycoolin Road from its intersections with the Blanchardstown Road North and the Snugborough road. The cycle tracks would provide a raised adjacent dedicated facility of 2m minimum width, along with 2m minimum width for footpaths where possible. Along the entire length of this section there is adequate space available for widening as there is central islands, central medians and grass verges in both directions that can be utilised to facilitate the proposed scheme. A significant number of young trees in the grass verges would be removed to cater for the widening. The existing traffic lane layout would be maintained throughout the section (unless otherwise stated) but would have reduced traffic lane widths to 3m.

Ballycoolin roundabout and Snugborough roundabout would be upgraded to signalised junctions in order to minimise the potential delays and improve bus priority through the junction. Bus lanes will be

provided right up to the stop lines of these junctions, along with the provision of left turn lanes for public traffic (where there is large left turning traffic volumes from on site observations). New pedestrian crossings would be provided at the upgraded Ballycoolin signalised junction along with a toucan crossing adjacent to Dataplex/IBM Ireland. Additionally, a new bridge over the M50 would be constructed to provide the required cycling/pedestrian/traffic/CBC facilities. A new bus stop in both directions is proposed adjacent to the IBM Ireland.

The following issues have been considered in the assessment:

- Construction of a new bridge over the M50.
- Need to upgrade 3 roundabouts along the R121 to traffic signal controlled junctions
- Removal of young trees along the route.
- Design of pedestrian access to Pay Pal in order to maximise the employment catchment of the route.
- Pedestrian gate use to be agreed with IDA to ensure the connection of Ballycoolin Industrial State with the CBC.

5.2.4 TF04 Route Option

Route option TF04 via R121 and through Corduff is shown in **Figure 5.6** below:

Figure 5.6: TF04 Route Option



Inbound: This route follows TF02 route until Ballycoolin roundabout, where it turns south and runs along the R121 until Blanchardstown roundabout. Then the route continues along Blackcourt Road and turns east at Saint Patricks Church junction to continue until the junction with Ashling Heights where it turns east. At the junction with Snugborough Road the route turns north and it runs along this road until Snugborough Roundabout. The route then follows TF01 route until the bridge over the M50.

Outbound: Outbound CBC service would follow the same route as taken by inbound service.

Stops: a total of 35 stops would be provided along this route to maximise the residential, employment and educational catchment.

Route option TF04 is the same as route options TF02 & TF03 from the Tyrrelstown Boulevard roundabout along the R121 to where it turns onto Blanchardstown Road North. From here it travels along Blanchardstown Road North and proceed onto Blackcourt Road. It is proposed to provide bus lanes, new and upgraded raised adjacent cycle lanes of 2m minimum width and 2m wide footpaths where possible. There is adequate space available along this section for widening as public land take in the form of grass verges would be removed to accommodate the proposed facilities. A significant number of young trees in the grass verges would be removed to cater for the widening. The roundabout at the intersection of Blanchardstown Road North and the Blackcourt Road would be widened into the existing grass verges to accommodate through bus lanes. The existing traffic lane layout would be maintained but would have a reduced lane width of 3m throughout this section.

From here the route passes Saint Patricks Church and travels along Snugborough Road via Ashling Heights. This route option is the same as options TP01, TP02 and TP03 from the intersection of Snugborough Road and Ballycoolin Road to the bridge over the M50 on the Cappagh Road. It is proposed to provide bus lanes, new and upgraded raised adjacent cycle lanes of 2m minimum width and 2m wide footpaths where possible. Between the Blackcourt Road and Ashling Heights there is ade-

quate space available along this section for widening as public land take in the form of grass verges would be removed to accommodate the proposed facilities. A significant number of young trees in the grass verges would be removed to cater for the widening. Along the entire length of the Snugborough Road the existing bus lanes will be retained but widening into the adjacent grass verges will be required at the entrance to the National Aquatic centre to ensure full bus lane priority through the junction. Along the length of this section the existing number of traffic lanes and their configuration will be retained.

The journey time for this route is approximately 20 minutes over a distance of 7.6 km.

Ballycoolin roundabout, Snugborough roundabout and Cappagh Road roundabout would be upgraded to signalised junctions in order to minimise the potential delays and improve bus priority. Additionally, a new bridge over the M50 would be constructed to provide the required cycling/pedestrian/traffic/CBC facilities. Bus lanes will be provided right up to the stop lines of these junctions, along with the provision of left turn lanes for public traffic (where there is large left turning traffic volumes from on site observations).

The following issues have been considered in the assessment:

- Construction of a new bridge over the M50.
- Need to upgrade 3 roundabout to a traffic signal controlled junction
- Removal of young trees along the route.
- Widening works would affect a residential area.

5.3 Assessment Summary

The “Stage 2” route options assessment summary table for “**Section 1: Tyrrelstown to M50**” area is presented in **Appendix 1.1**.

The relative ranking of route options against the scheme assessment sub-criteria is summarised in **Table 5.2** below:

Table 5.2: Section 1 Route Options Assessment Summary (Sub-Criteria)

Assessment Criteria	Assessment Sub-Criteria	TF01	TF02	TF03	TF04
Economy	Capital Cost	Green	Orange	Green	Orange
	Transport Reliability and Quality of Service	Orange	Orange	Green	Red
Integration	Land Use Integration	Orange	Green	Green	Green
	Residential, Employment and Educational Catchments	Orange	Green	Green	Green
	Transport Network Integration	Orange	Green	Green	Green
	Cycling Integration	Yellow	Yellow	Yellow	Yellow
Accessibility & Social Inclusion	Key Trip Attractors	Orange	Green	Green	Green
	Deprived Geographic Areas	Orange	Green	Green	Green
Safety	Road Safety	Orange	Orange	Green	Orange
	Pedestrian Safety	Yellow	Yellow	Yellow	Yellow
Environment	Archaeology, Architectural and Cultural Heritage	Yellow	Yellow	Yellow	Yellow
	Flora and Fauna	Orange	Orange	Green	Green
	Soils and Geology	Yellow	Yellow	Yellow	Yellow
	Hydrology	Yellow	Yellow	Yellow	Yellow
	Landscape and Visual	Orange	Orange	Green	Green
	Air Quality	Yellow	Yellow	Yellow	Yellow
	Noise & Vibration	Yellow	Yellow	Yellow	Yellow
	Land Use Character	Orange	Orange	Green	Orange

In terms of ‘Economy’, route option TF03 represents the cheapest solution as it has less land acquisition and infrastructure costs. The most expensive options (TF02 and TF04) require more widening of the existing road network to facilitate more key trip attractors. Furthermore TF01 and TF02 have high land acquisition costs to facilitate widening. Route option TF03 scores the best in terms of transport reliability and quality of service, as it has the shortest journey time when compared to its route length.

Route option TF04 rank more favourably in terms of 'Residential and Educational Catchments' as it proposes to serve the National Aquatic Centre, Institute of Technology Blanchardstown (ITB) and a large population area. Route options TF02 and TF03 have a larger catchment regarding employment than TF04. Route option TF01 has practically no catchment regarding education therefore it proves to be the least favourable.

Under 'Accessibility and Social Inclusion', route option TF04 directly serve more key trip attractors.

In terms of 'Safety' route option TF03 ranks best over the other options. Route option TF03 has less junctions, therefore lowering the number of potential conflicts for vehicles. In terms of pedestrian safety all route options have no distinct advantage over another.

However TF03 and TF04 has some advantages over route options TF01 and TF02. They are as a result of less land to be acquired therefore having a lower potential impact on flora & fauna.

In addition to the previous table, a summary of the assessment and relative ranking of route options against the five main assessment criteria is shown in **Table 5.3** below.

Table 5.3: Section 1 Route Options Assessment Summary (Main Criteria)

Assessment Criteria	TF01	TF02	TF03	TF04
Economy	Green	Yellow	Green	Red
Integration	Red	Green	Green	Green
Accessibility & Social Inclusion	Red	Green	Green	Green
Safety	Yellow	Yellow	Green	Yellow
Environment	Yellow	Yellow	Green	Green

Based on the assessment undertaken, route option TF03 offers the most benefits out of all routes. Therefore route option TF03 better meets the scheme objectives and is the preferred option for the following reasons:

- It delivers end-to-end bus lanes through the route section providing improved journey time reliability
- Has the lowest capital cost coupled with the opportunity for journey time reliability and bus service efficiency
- Serves a good residential and employment catchment
- It delivers high quality cycle facilities along a parallel route
- It offers a safer route compared to other options and
- It has comparatively lower potential impact on the environment across all sub criteria

The assessment found that the TF03 route provides more benefits compared to the other options. Therefore, the preferred route for Section 1 is the **TF03**.

6 Section 2: M50 to Phibsborough

6.1 Stage 1: Sifting Process

Using a similar methodology to that used for Section 1, the available route options within this study area have been subdivided into shorter sections in order to carry out the “Stage 1” route options sifting process for Section 2. This sifting process is described in **Table 6.1**.

Figure 6.1 show the potential route options for Section 2 before the sifting process.

Figure 6.1: Section 2 Route Options: M50 to Phibsborough

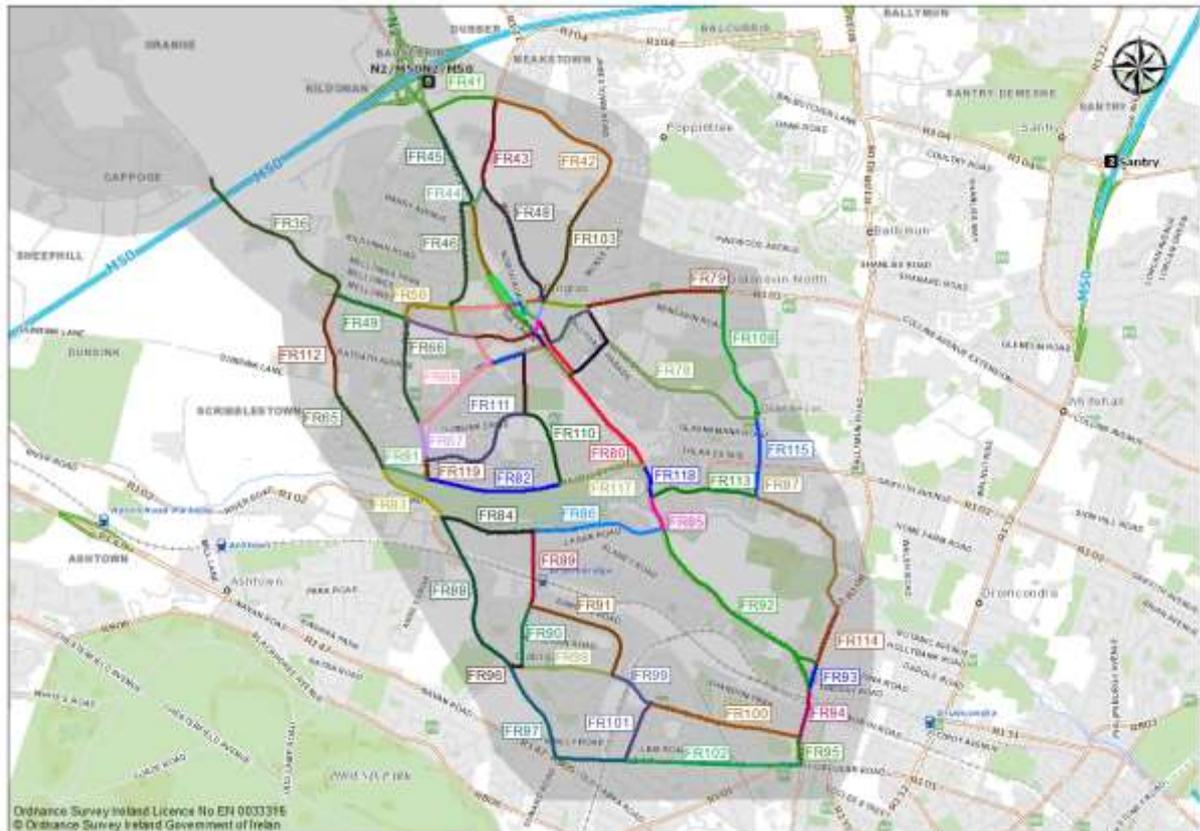


Table 6.1: Section 2 Route Option Sifting (Stage1) Summary_M50 to Phibsborough

Route Option Number	Comments	Pass/Fail
FR36	Section of the Cappagh Road extending over the M50. This route consists of 1 all vehicle lane in both directions with a number of right turning lanes along its length. The route is 7.5m in width at its narrowest point (at the M50 bridge) and typically has a reservation of 15m. A new bridge over the M50, coupled with significant private land take, would be required in order to provide a dedicated core bus corridor. This route, however, serves a large population and a number of the key trip attractors. This route therefore passes the initial sift.	Pass
FR41	Section of Charlestown Road which links the R135 and St. Margaret’s Road. This section of road is a 1-way all vehicle lane which opens into 2-way all vehicle lanes in the eastbound direction and 2-way all vehicle lanes in the westbound direction. The road reserva-	Pass

Route Option Number	Comments	Pass/Fail
	tion is in the order of 18m between kerbs therefore there would be no major construction disruption. There is sufficient width in the road reservation to accommodate a core bus corridor, however some manipulation of the junction and utilisation of the left hand ghost island would be required in order to facilitate this. This route services the Charlestown catchment area. This route therefore passes the initial sift.	
FR42	Section of St. Margaret's Road from the R104 Road to the Jamestown Road Roundabout. This section of road consists of 1 all-vehicle lane in both directions and can be classified as a local distributor road. The road carriageway is 9m in width and has an overall reservation of 13.5m. Land take would be required to achieve the required road cross section. This route services the local trip attractors and population. This route, however, relies on FR103 which has failed the initial sift, therefore this route also fails the initial sift.	Fail
FR43	Section of St. Margaret's Road (R104) from the Charlestown Junction to McKee Avenue. This section of road consists of 1 all-vehicle lane in both directions with a series of access points off it to local businesses and private residential properties. The road width is generally 9m with a road reservation width of 15m. This route therefore requires land take to achieve an acceptable width for a Core Bus Corridor. This route therefore passes the initial sift.	Pass
FR44	Section of St. Margaret's Road (R104) from the McKee Avenue junction to the roundabout on the R135. This section of road consists of 1 all-vehicle lane in both directions with a 2-lane entry to the R135 roundabout travelling inbound. The road width is generally 9m with a road reservation width of 17.5m. This route therefore requires land take to achieve an acceptable width for a Core Bus Corridor. This route therefore passes the initial sift.	Pass
FR45	Section of R135 between the M50 junction and the roundabout at the junction with St. Margaret's Road (R104). This route consists of 2 all-vehicle lanes in both directions for the entire route. A bus lane exists in the inbound direction. However, it merges with the traffic lane circa 200m before the R135/ R104 roundabout. There is ample space to facilitate a core bus corridor in each direction along this route with the introduction of priority bus measures in both directions. This route therefore passes the initial sift.	Pass
FR46	Section of road along Casement Road. This route consists of 1 all-vehicle lane in both directions which extends through an existing housing estate. The width of this route is 6m with a reservation of 11m. Undesignated on street parking exists along the full length of this route. Land take is required in order to achieve an acceptable width for a Core Bus Corridor. However, due to the circuitous nature of the route, it does not conform to the requirements of a Core Bus Corridor and fails the initial sift.	Fail
FR47	Section of R135 between the roundabouts at the junction with St.	Pass

Route Option Number	Comments	Pass/Fail
	Margaret's Road (R104) and the inbound slip lane off the R135. This route consists of 1 all-vehicle lane inbound and 2 all-vehicle lanes outbound. A bus lane exists in the inbound direction and for a short distance in the outbound direction. There is ample space to facilitate a core bus corridor in each direction along this route with the introduction of priority bus measures in both directions. This route therefore passes the initial sift.	
FR48	Section of McKee Avenue from its junction with the R104 St. Margaret's Road to Seamus Ennis Road. This section of road consists of 1 all-vehicle lane in both directions and meets a junction in Finglas Village. The road width is generally 7m with a road reservation of 14m in width. In order for this route to be feasible, land take would be required. The existing driveways of the houses along McKee Avenue are short and there is no space for re-designation of parking spaces. A pinch point between existing buildings exists at the routes entrance into the village. For these reasons, this route fails the initial sift.	Fail
FR49	Section of Cappagh Road from the junction with Ratoath Road to junction with Cardiffsbridge Road. This section consists of 1 all-vehicle lane in both directions. The road is 7.5m in width with an overall reservation of 14m. This suggests that the route may be feasible. However, land take would be required in order to achieve sufficient geometry for a core bus corridor. This route therefore passes the initial sift.	Pass
FR50	Section of Cardiffsbridge Road and Mellows Road. This route consists of 1 all-vehicle lane in both directions. On street parking exists along Mellows Road which would have to be relocated to front gardens or adjoining streets. The existing road width is 9m and overall reservation is 21m, indicating that there is sufficient width to achieve a Core Bus Corridor with little or no land take. This route therefore passes the initial sift.	Pass
FR51	Section of Cappagh Road that extends from the Cardiffsbridge Road junction to the roundabout at Finglaswood Road. The route is approximately 7m in width and the overall reservation is approximately 13.5m. The majority of the houses along this route have no driveways meaning that the residents park in undesignated areas on the side of the road. Land take would be required on the southern side of the road in order to make this route feasible. This route therefore passes the initial sift.	Pass
FR52	Section that extends along Finglaswood Road from the roundabout at the Cappagh Road to the roundabout at Mellows Road. The route is approximately 6m in width and the overall reservation is approximately 12m. Although the route would be feasible for a core bus corridor following land take, there is undesignated parking on the street. There is also no option for re-designation in the surrounding area. When this route is compared to FR50 this route is a less favourable option and due to these reasons it fails the initial sift.	Fail

Route Option Number	Comments	Pass/Fail
FR53	Section of Mellows Road between the roundabout at Finglas Road and the junction at North Road. The road generally consists of 1 all-vehicle lane in both directions with a series of access points off it to local business and residential areas. The route diverges to provide 2 all-vehicle lanes in both directions as the road meets the R135 exit. This layout continues over the bridge that runs over the R135 through to the junction at North Road. The road is approximately 9m in width. The overall reservation of 23m provides potential for a core bus corridor, following land take on Mellows Road before the bridge. This route is therefore a feasible option.	Pass
FR54	Section of road along the Seamus Ennis Road between the North Road junction and the Main Street junction. The road is approximately 13.5m in width and the overall reservation is approximately 20m in width. This is a feasible route option. However, in order to achieve sufficient width, minor land take would be required. This route therefore passes the initial sift.	Pass
FR55	Section of R135 inbound on ramp from Finglas Village leading off the grade separated junction travelling inbound. The route consists of 2 all-vehicle lanes in the inbound direction. There is ample space to facilitate a core bus corridor in the inbound direction along this route with the introduction of priority bus measures in both directions. This route therefore passes the initial sift.	Pass
FR56	Section of road along Seamus Ennis Road between the Main Street junction and the junction at Jamestown Road. This route has an entrance to the car park for Supervalu as well as an entrance to the car park for a small number of shops along the Seamus Ennis Road. The road consists of 1 all-vehicle lane in both directions. However, the road widens as a central median appears to provide a junction to the car park for the row of shops along the road. This route is a feasible option for the core bus corridor provided the central median is removed as well as a small amount of land take. This route therefore passes the initial sift.	Pass
FR57	Section of road along Main Street that extends from the junction at Seamus Ennis Road to the junction at Finglas Road. The route has 1 all-vehicle lane in both directions. The width of the road is approximately 7.5m with overall reservation width of 12.5m. Given the narrow nature of this route it is not feasible to fit a Core Bus Corridor and therefore it fails the initial sift.	Fail
FR58	Section of road through Finglas Village that extends from the Seamus Ennis Road junction to the Finglas Road junction. The road is approximately 7.8m in one direction with an overall reservation of 11m. This suggests that there is sufficient space currently available for a core bus corridor in one direction. As this route is designated as a primary cycle route, additional width may be required for a cycle lane/track. This route therefore passes the initial sift.	Pass
FR59	Section of Cappagh Road that extends from the roundabout at the R103 junction to the Patrickswell Place junction. The existing road	Pass

Route Option Number	Comments	Pass/Fail
	has a width of approximately 7.5m. The road serves Saint Fergal's Boys National School. The majority of the houses along this route have no driveways meaning that the residents park in undesignated areas on the side of the road. Land take would be required on the southern side of the road in order to make this route feasible. This route therefore passes the initial sift.	
FR60	Section of road that extends from the Patrickswell Place junction on Cappagh Road to the R135 junction at the top of Church Street. The intention of this section is to form a link at the eastern end of Church St. inbound onto the R103 Finglas Road with the formation of a bus gate through the central median. The road consists of 1 all-vehicle lane in both directions. The width of the route is approximately 8m with an overall reservation width of 13m. The removal of on street parking coupled with areas of land take will be necessary in making this a feasible route option.	Pass
FR61	Section of R135 Finglas Road from the R135 on ramp to the Church Street junction. This route consists of 1 all-vehicle lanes in each direction. A bus lane exists in both directions. There is ample space to facilitate a core bus corridor in each direction along this route with the introduction of priority bus measures in both directions. This route therefore passes the initial sift.	Pass
FR62	Section of R135 Finglas Road from the Church Street junction to the Wellmount Road junction. This route consists of 1 all-vehicle lanes in each direction. A bus lane exists in both directions. There is ample space to facilitate a core bus corridor in each direction along this route with the introduction of priority bus measures in both directions. This route therefore passes the initial sift.	Pass
FR63	Section of Finglas Road that extends from the junction at the top of Main Street to the junction at Ballygall Road. At present, the road width is approximately 6.5m. The overall reservation is 12m. Given the narrow nature of this route it is not feasible to fit a Core Bus Corridor and therefore it fails the initial sift.	Fail
FR64	Section of road along Patrickswell Place. The road extends from the roundabout at Wellmount Road to a junction at Cappagh Road. The road consists of 1 all-vehicle lane in both directions. The existing road width is 8m with an overall reservation of approximately 15-25m. There is ample space to facilitate a Core Bus Corridor in each direction along this route. This route therefore passes the initial sift.	Pass
FR65	Section of Ratoath Road that extends from Dunsink Lane to Tolka Valley Road. The existing road width is approximately 6.5m however the overall reservation width is greater than 19m. This route consists of 1 all-vehicle lane in both directions. The route has a number of exits that serve residential areas containing a large number of housing estates. The route is therefore feasible with a minimum amount of land take necessary. When this route is compared to FR66, FR66 is viewed as a more	Fail

Route Option Number	Comments	Pass/Fail
	favourable option as it services a greater population and trip attractors therefore FR65 fails the initial sift.	
FR66	Section of Cardiffsbridge Road along the R103 from the Cappagh Road junction to the Wellmount Road junction. This route consists of 1 all vehicle lane in both directions. The approximate width of the road is 8m with a reservation width of 16.5m. The road serves a number of residential areas as well as a third level college and a number of shops including Dunnes Stores. There is also undesignated parking along the Cardiffsbridge Road. This route is feasible for a Core Bus Corridor with some minor land take along its route. This route therefore passes the initial sift.	Pass
FR67	Section of R103 Cardiffsbridge Road that extends from its junction with St. Helena's Road to its junction with Wellmount Road. The route consists of a 1 all-vehicle lane in both directions. The road contains a small roundabout at the exit on to Wellmount Road. The road is generally 7m in width with a reservation width of 14.5m. Land take is necessary in order to achieve a viable width of Core Bus Corridor. This route therefore passes the initial sift.	Pass
FR68	Section of Wellmount Road from the Cardiffsbridge junction onto Patrickswell Place until it meets the R103 Cappagh Road. The road consists of 1 all-vehicle lane in both directions. The road is approximately 9m in width with an overall reservation of 20m. With a minimal amount of land take, this route proves to be feasible for the allocation of a core bus corridor. However, given the circuitous nature of the route relative to its adjoining routes, it fails the initial sift.	Fail
FR69	Section of Wellmount Road that extends from the Farnham Drive junction to the junction at the R135. The route has 1 all-vehicle lane in both directions. The road is approximately 9m in width with an overall reservation of 20m. There is sufficient width to accommodate a Core Bus Corridor. This route therefore passes the initial sift.	Pass
FR70	<p>Section of R103 Seamus Ennis Road that extends from the junction at Jamestown Road to the junction at Glasanaon Road. Road consists of 1 all-vehicle lane in both directions. Existing route is approximately 8.5m in width with an overall reservation of 22m, leaving sufficient width for a Core Bus Corridor. On street parking exists at its western end which would have to be relocated. There is also undesignated parking in front of St. Canices National School, which will have to be removed.</p> <p>Due to the circuitous nature of the route, it does not conform to the requirements of a Core Bus Corridor and fails the initial sift.</p>	Fail
FR71	Section of road along Ballygall Road West. Route extends from junction at Finglas Road to junction at Glasanaon Road. Road is generally quite narrow with an average width of approximately 6.5m. The overall reservation is 14m in general but this tapers into a width of 8.5m at its eastern end with building restrictions at either side. The road is generally quite narrow with undesignated parking alongside a majority of the residential properties. Due to the pinch	Fail

Route Option Number	Comments	Pass/Fail
	point on the eastern end of the section, this section fails the initial sift.	
FR72	Section of road at the top of Glasanaon Road that extends from the junction at R103 Seamus Ennis Road to the exit for Ballygall Road West. Route consists of 1 all-vehicle lane in both directions with an approximate road width of 6.5m. The overall reservation is greater than 18m which is sufficient for a Core Bus Corridor. This route however relies on FR70 which has failed the initial sift, therefore this route also fails the initial sift.	Fail
FR73	Section of R135 Finglas Road that extends from the Wellmount Road junction to the Finglas Place junction. This route consists of 1 all-vehicle lane inbound and 2 all-vehicle lanes outbound. A bus lane exists in the inbound direction and for a short distance in the outbound direction. There is ample space to facilitate a core bus corridor in each direction along this route with the introduction of priority bus measures in both directions.	Pass
FR74	Section of Finglas Road that extends from the Ballygall Road West junction to the Finglas Place junction. This route is approximately 9m in width with an overall reservation of approximately 18m. The road consists of 1 all-vehicle lane in both directions. However, there is undesignated parking at roadside for the duration of this route. As this route is designated as a primary cycle route, additional width may be required. This route however relies on FR63 and FR71 which has failed the initial sift, therefore this route also fails the initial sift.	Fail
FR75	Section of road along Finglas Place that extends from the R135 junction to the Finglas Road junction. The road consists of 1 all-vehicle lane in both directions. The existing road width is approximately 12.5m and the overall reservation has a width of greater than 16m, therefore providing sufficient width to accommodate a Core Bus Corridor. This route, however, relies on FR74 and FR76, which have failed the initial sift. Therefore this route also fails the initial sift.	Fail
FR76	Section of road along Finglas Place through to Ballygall Place and its junction with Glasanaon Road. The route has an approximate road width of 7.5m. A portion of this section is a local access path only and a new carriageway would have to be introduced along a length of approximately 75m of this section. Significant land take would be required to make this a viable route for a Core Bus Corridor. This route however relies on FR77 which has failed the initial sift, therefore this route also fails the initial sift.	Fail
FR77	Section of Glasanaon Road that extends from the Ballygall Road West junction to the Ballygall Place junction. The road generally consists of 1 all-vehicle lane in both directions. The road width is approximately 8m and the overall reservation is approximately 12m. There is undesignated parking outside of some of the residential properties. Land take is required along this route in order to	Fail

Route Option Number	Comments	Pass/Fail
	achieve the widths necessary for a Core Bus Corridor. This route however relies on FR72 which has failed the initial sift, therefore this route also fails the initial sift.	
FR78	Section of Glasanaon Road which extends from Ballygall Place to its junction with Ballygall Road. East. The route serves a large residential population, Saint Canices Boys National School, Gaelscoil Ui Earcain, Mother of Divine Grace School and Johnstown Park. It generally consists of a 1 way all-vehicle lane in both directions with an approximate road width of 7m and reservation width of 13.5m. It is therefore a potential feasible route for a core bus corridor. However, in order for the road to provide sufficient widths for this corridor, land take is necessary along the section. Pinch points exist between dwellings along the eastern end of the route which would require the removal of front gardens and private parking. For these reasons, this route fails the initial sift.	Fail
FR79	Section of Glasnevin Avenue along the R103. The route consists of 1 all-vehicle lane in both directions. The route serves Saint Canices Boys National School as well as an exit that is within 100m of Be-neavin De La Salle College. It also serves a large amount of residential areas which contain a large population. The road has an average width of 9.5m and an overall reservation width of 21m. This route, however, relies on FR70 which has failed the initial sift. Therefore, this route also fails the initial sift.	Fail
FR80	Section of R35 that extends from the Finglas Place junction to the Tolka Valley Road junction. This route consists of 1 all-vehicle lane inbound and 2 all-vehicle lanes outbound. A bus lane exists in the inbound direction and for a short distance in the outbound direction. There is ample space to facilitate a core bus corridor in each direction along this route with the introduction of priority bus measures in both directions. This route therefore passes the initial sift.	Pass
FR81	Section of Tolka Valley Road that extends from the Ratoath Road junction to the R103 Cardiffsbridge Road junction. The route consists of 1 all-vehicle lane in both directions. The road width is approximately 9m and the reservation width is approximately 15.5m. Land take is required along this route in order to achieve the required widths. This route, however, relies on FR65 which has failed the initial sift. Therefore, this route also fails the initial sift.	Fail
FR82	Section of Tolka Valley Road that extends from the Cardiffsbridge Road junction to the St. Helens Road junction. The road generally consists of 1 all-vehicle lane in both directions. The road is approximately 10m wide and the overall reservation is approximately 16m. There is designated parking along the southern side of the road which would require relocation. Land take required along this route in order to achieve the required widths. This route therefore passes the initial sift.	Pass
FR83	Section of Ratoath Road that extends from the Tolka Valley Road junction to the Ballyboggan Road junction. The route generally	Fail

Route Option Number	Comments	Pass/Fail
	consists of 1 all-vehicle lane in both directions. The route also contains a bridge over the Tolka River which is approximately 15m wide. The safe operation of a Core Bus Corridor would require lengthening to the width of the bridge and land take along the route. This route however relies on FR84 and FR88, which has failed the initial sift. Therefore, this route also fails the initial sift.	
FR84	Section of Ballyboggan Road that extends from the Ratoath Road junction to the exit for Lagan Road. The route consists of 1 all-vehicle lane in both directions with a bus lane in the westbound direction only. The road width is 10m with an overall reservation of 16m. Land take required along this route in order to achieve the required widths. This route however relies on FR86 and FR89 which has failed the initial sift, therefore this route also fails the initial sift.	Fail
FR85	Section of R135 that extends from the Old Finglas Road junction to its junction with Ballyboggan Road. This route consists of 1 all-vehicle lane inbound and 2 all-vehicle lanes outbound. A bus lane exists in the inbound direction. There is ample space to facilitate a core bus corridor in each direction along this route with the introduction of priority bus measures in both directions. This route therefore passes the initial sift.	Pass
FR86	Section of Ballyboggan Road that extends from the junction at the R135 to the exit for Lagan Road. This route currently consists of 1 all-vehicle lane in both directions. The current road width is approximately 8m with an overall reservation of 16m in general. Land take required along this route in order to achieve the required widths, however pinch points exist between the dwellings in Glasnevin Woods and buildings within Dublin Industrial Estate which would reduce the continuity of the route. This route therefore fails the initial sift.	Fail
FR87	Section of Old Finglas Road that extends from the junction with Cremore Villas to the junction at Botanic Road. The route consists of 1 all-vehicle lane in both directions. The route is generally narrow with an average width of approximately 7m and an overall reservation of approximately 12m. On street parking exists along the southern end of this section. Land take and relocation of car parking is required along this route in order to achieve the widths necessary for a Core Bus Corridor. This route skirts the western boundary of the study area therefore reducing its potential serviceability of key trip attractors and population. Due to the circuitous nature of the route it does not conform to the requirements of a Core Bus Corridor and fails the initial sift.	Fail
FR88	Section of Ratoath Road that extends from the junction at Ballyboggan Road to the roundabout at Fassaugh Avenue. The route generally consists of 1 all-vehicle lane in both directions. It also consists of undesignated parking at certain parts along the route and comprises a narrow bridge over the Grand Canal. New bridge installed without bus lanes therefore a second bridge would be re-	Fail

Route Option Number	Comments	Pass/Fail
	quired in order to achieve the required widths. Land take and relocation of car parking is required along this route, however as the sections following this have failed this section also fails the initial sift.	
FR89	Section of Broombridge Road that extends from the junction at Ballyboggan Road through to the roundabout at Carnlough Road. The route consists of 1 all-vehicle lane in both directions with a section in the middle of the route where the road becomes one way as it runs over a bridge. The approximate road width at the bridge is 5m. Roadway is 1-way over the rail line and canal at present. Land take along the full length of this section is required. A new bridge is required over the rail line and canal required in order to achieve an acceptable width of Core Bus Corridor. Existing on street parking on Broombridge Road as some of the properties here do not have driveways. There is no scope to relocate these parking spaces and also the sections following this have failed therefore this section fails the initial sift.	Fail
FR90	Section of Broombridge Road that extends from the roundabout at Carnlough Road through to the junction at Fassaugh Avenue. The route generally consists of 1 all-vehicle lane in both directions with undesignated parking at either side of the road. The route runs through a residential area. The width of the road is approximately 8.5m and the overall reservation is approximately 15m in width. Land take required in order to achieve an acceptable width of Core Bus Corridor. Existing on street parking as some of the properties here do not have driveways. There is no scope to relocate these parking spaces and also a land take would reduce the depths of the existing driveways and therefore this section fails the initial sift.	Fail
FR91	Section of Carnlough Road that extends from the roundabout at Broombridge Road to the junction at Fassaugh Avenue. The road generally consists of 1 all-vehicle lane in both directions that runs through a residential area. There is undesignated parking on either side of the road. The road is approximately 7m wide with overall reservations of approximately 12m. Land take required in order to achieve an acceptable width of Core Bus Corridor. Existing on street parking as some of the properties here do not have driveways. There is no scope to relocate these parking spaces and also a land take would reduce the depths of the existing driveways and therefore this section fails the initial sift.	Fail
FR92	Section of R135 that extends from its junction with Ballyboggan Road to its junctions with Botanic Road. This route consists of 1 all-vehicle lanes in both directions with a bus lane in both directions between Ballyboggan Road and Claremont Lawns. There is ample space to facilitate a core bus corridor in each direction along this section of the route with the introduction of priority bus measures in both directions. The remainder of the route from Claremont Lawns to Botanic Road consists of 1 all-vehicle lanes in both directions with a bus lane in the direction only. Removal of on street car parking is necessary in	Pass

Route Option Number	Comments	Pass/Fail
	order to achieve the required width to introduce an outbound Core Bus Corridor. Bus facilities could be further improved in the inbound direction with remarking of the road. This route therefore passes the initial sift.	
FR93	Section of R108 Botanic Road from its junction with the Finglas Road to its junction with Lindsay Road. This section consists of 2 all-vehicle lanes and 1 bus lane all leading inbound. Bus facilities could be further improved in the inbound direction with remarking of the road. This route therefore passes the initial sift.	Pass
FR94	Section of R108 Phibsborough Road from junction with Connaught St. to North Circular Road. This section consists of 1 all-vehicle lane in both directions with 2 lanes inbound between Whitworth Road and Connaught Street. A bus lane exists in both directions along this section. There is ample space to facilitate a core bus corridor in each direction along this route with the introduction of priority bus measures in both directions. This route therefore passes the initial sift.	Pass
FR95	Section of R108 Phibsborough Road from junction with Lindsay Road to its junction with Connaught St. This section consists of 1 all-vehicle lane in both directions with a bus lane in the outbound direction along half of the section. There is no scope to widen the carriageway along this section but bus priority facilities could be introduced in the inbound direction.	Pass
FR96	Section of Fassaugh Avenue from its junction with the R805 Ratoath Road to its junction with Broombridge Road. This section consists of 1 all-vehicle lane in both directions. The road width is generally 9m with a reservation width of 14.5m. Land take required in order to achieve an acceptable width of Core Bus Corridor. On street parking exists along this section. There is no scope to relocate these parking spaces and the existing gardens are too short to accommodate driveways. For these reasons this section fails the initial sift.	Fail
FR97	Section of R805 Ratoath Road from the roundabout at Nephin Road and Fassaugh Ave. to the junction of the R147 Cabra Road with Quarry Road. This section consists of 1 all-vehicle lane in both directions. The road width is generally 7m along the Ratoath Road and 9m along the Cabra Road with a general reservation width of 15.5m along both. A pinch point exists at the rail bridge crossing which would require a bridge widening. Land take would be necessary here in order to achieve the required widths for a Core Bus Corridor, however as this section leads into a failed section there is no scope for it to pass and therefore fails the initial sift.	Fail
FR98	Section of Fassaugh Avenue from its junction with Broombridge Road to its junction with Carnlough Road. This section consists of 1 all-vehicle lane in both directions. Land take required in order to achieve an acceptable width of Core Bus Corridor. On street parking exists at both private and commercial properties along this sec-	Fail

Route Option Number	Comments	Pass/Fail
	tion. There is no scope to relocate these parking spaces and the existing gardens are too short to accommodate driveways. For these reasons this section fails the initial sift.	
FR99	Section of Fassaugh Avenue from its junction with Carnlough Road to the roundabout on Fassaugh Road. This section consists of 1 all-vehicle lane in both directions. The carriageway width is generally 9m with a road reservation width of 15.5m. A pinch point exists at the rail bridge crossing which would require a bridge widening. Land take required in order to achieve an acceptable width of Core Bus Corridor. The western portion of this route has on street car parking in front of the dwellings as some of the properties here do not have driveways. There is no scope to relocate these parking spaces and therefore this section fails the initial sift.	Fail
FR100	Section of Fassaugh Road from the roundabout at Quarry Road leading onto Connaught St. to its junction with the R135. This section consists of 1 all-vehicle lane in both directions. The carriageway width is generally 9m with a reservation width of 13-15m. The majority of this route has on street car parking in front of the dwellings. In order to achieve the required widths for a Core Bus Corridor the on street parking would have to be removed and land take is required to the front of the dwellings. There is no scope to relocate these parking spaces and the existing gardens are too short to accommodate driveways. For these reasons this section fails the initial sift.	Fail
FR101	Section of Quarry Road from Cabra Road to Fassaugh Road. This section consists of 1 all-vehicle lane in both directions. The carriageway width is generally 9m with a road reservation width of 15m On street car parking exists along this route. In order to achieve the required widths for a Core Bus Corridor the on street parking would have to be removed and land take is required to the front of the dwellings and shops. The removal of car parking from the front of the commercial area would have an impact on the businesses. There is no scope to relocate either of these parking spaces and therefore this section fails the initial sift.	Fail
FR102	<p>Section of R147 Cabra Road from junction with Quarry Road to the junction with the R108 Phibsborough Road. This section consists of 1 all-vehicle lane in both directions. The western side of this section is lined with mature trees. The road width here is generally 9m with a road reservation of 16.5m with the exception of the rail bridge crossing which is 7m in width between kerbs and 11m between the bridge parapets. Significant private land take would be required to achieve the required widths for a Core Bus Corridor. Parking in front of the commercial area would be reduced with the loss of a number of spaces.</p> <p>The eastern part of this section before it joins with the North Circular Road has on street parking throughout as the properties here do not have driveways. As this route is designated as a primary cycle route, additional width may be required. There is no scope to relocate the parking spaces coupled with the requirement to potentially</p>	Fail

Route Option Number	Comments	Pass/Fail
	widen the required Core Bus Corridor's cross section concludes that this section fails the initial sift.	
FR103	<p>Section of Jamestown Road from the junction with Sycamore Road to the junction at Seamus Ennis Road. This section of road consists of 1 all-vehicle lane in both directions. The width of the road is approximately 7m and 12m between building at the entry point to the village. The route serves a number of residential areas and businesses. Land take would be required for this route to be considered as a Core Bus Corridor.</p> <p>Due to the pinch point between existing buildings at the entry of this route into the village this route fails the initial sift.</p>	Fail
FR104	<p>Section of road along Church Street from the R135 to Finglas Main Street. This section of road consists of 1 all-vehicle lane in both directions and has been turned into a cul-de-sac at its southern end. The intention of this section would be to open the link to the R135 and create an inbound bus gate, therefore creating an inbound only Core Bus Corridor to facilitate Finglas Village. Widening of the street and structural works to the adjoining pedestrian bridge would be required. This route therefore passes the initial sift.</p>	Pass
FR105	<p>Section of R135 inbound off ramp towards Finglas Village leading up to a grade separated junction. The existing route currently has 2 lanes and should therefore be considered as a feasible option for an inbound core bus corridor. This route therefore passes the initial sift.</p>	Pass
FR106	<p>Section of R135 that extends from the Finglas Village off ramp to the Finglas Village on ramp. The existing route currently has a bus lane in both directions and should therefore be considered as a feasible option for a core bus corridor. Bus facilities could be further improved in both directions with remarking of the road. This route therefore passes the initial sift.</p>	Pass
FR107	<p>Section of R103 from the R135 Finglas Road off ramp to its junction with North Road. This section of road consists of 2 all-vehicle lanes in each direction. There is ample space to facilitate a core bus corridor in each direction along this route with the introduction of priority bus measures in both directions. This route therefore passes the initial sift.</p>	Pass
FR108	<p>Section of Beneavin Drive from the R103 Glasnevin Ave. Roundabout onto Ballygall Road East to the junction with Fitzmaurice Road. The route consists of 1 all-vehicle lane in both directions along a 7m wide carriageway and reservation width of 11m. Land take would be required to the front and rear of some of the properties in order to achieve an acceptable width of Core Bus Corridor. A number of pinch points between buildings exist along this route which would result in poor road geometry and potential hazards. For this reason, this route fails the initial sift.</p>	Fail

Route Option Number	Comments	Pass/Fail
FR109	Section of Farnham Drive from the Wellmount Road. To St. Helen's Road. The route consists of 1 all-vehicle lane in both directions along a 6.5m wide carriageway. There is some on street car parking adjacent to the park which would have to be relocated. Land take would be required to the front of some properties in order to achieve an acceptable width of Core Bus Corridor. This route therefore passes the initial sift.	Pass
FR110	Section of St. Helen's Road from the Farnham Drive junction to its junction with the R102 Tolka Valley Road. The route consists of 1 all-vehicle lane in both directions along a 6.5m wide carriageway with 15m wide reservation. Land take required along this route in order to achieve the required widths for a Core Bus Corridor. This route is considered a feasible route given the trip attractors which it serves. This route therefore passes the initial sift.	Pass
FR111	Section of St. Helen's Road from the R103 Cardiffsbridge junction to its junction with Farnham Drive. The route consists of 1 all-vehicle lane in both directions along a 6.5m wide carriageway with a 15.5m wide reservation. Significant land take required along this route in order to achieve the required widths. However, given the circuitous nature of the route relative to its adjoining routes it fails the initial sift.	Fail
FR112	Section of road along Ratoath road that extends from FR65. The road has an average width of approximately 6 to 9m and a road reservation of between 9 and 23m. The section consists of 1 all-vehicle lane in both directions. It is generally quite narrow suggesting that a large amount of land take is required in order to achieve a sufficient width for a core bus corridor. Significant engineering works and road realignment would also be recommended for this section. This route skirts the western boundary of the study area and is considered a less favourable option when compared with FR66. This route therefore fails the initial sift.	Fail
FR113	Section of the R102 Old Finglas Road from the R135 Finglas Road to its junction with Cremore Villas. The route consists of 1 all-vehicle lane in both directions along a 9m wide carriageway with a road reservation width of 15m. Land take is required along this route in order to achieve the widths necessary for a Core Bus Corridor. Significant Engineering works would be necessary to the rear of the properties along Violet Hill Drive due to the large level differences. In addition this route relies on FR87 and FR115 which has failed the initial sift, therefore this route also fails the initial sift.	Fail
FR114	Section of R108 Botanic Road from its junction with Fairfield Road to its junction with the R108 Finglas Road. This section consists of 1 all-vehicle lane in both directions with a bus lane in the inbound direction along the southern half of the section. The route is along an 11m wide carriageway with a road reservation width of 17.5m In order to achieve an acceptable width of Core Bus Corridor significant land take would be required along both sides of the section. This route however relies on FR87 which has failed the initial sift,	Fail

Route Option Number	Comments	Pass/Fail
	therefore this route also fails the initial sift.	
FR115	Section of Ballygall Road East from its junction with Glasanaon Road transitioning into Cremore Villas to its junction with the Old Finglas Road. The route consists of 1 all-vehicle lane in both directions along a 9m wide carriageway with a 16m road reservation. On street parking exists along the route. Land take and relocation of parking is required along this route in order to achieve the widths necessary for a Core Bus Corridor. This route however relies on FR87 and FR113 which has failed the initial sift, therefore this route also fails the initial sift.	Fail
FR116	Section of Wellmount Road from the Patrickswell Place Roundabout to its junction with Farnham Drive. This section consists of 1 all-vehicle lane in both directions. The road is approximately 9m in width with an overall reservation of 20m. With some minor adjustment to the road cross section it would be acceptable for a Core Bus Corridor. This route therefore passes the initial sift.	Pass
FR117	Section of Tolka Valley Road that extends from the St. Helens Road junction to the R103 Finglas Road. The road generally consists of 1 all-vehicle lane in both directions. The road is approximately 9m wide and the overall reservation is approximately 16m at its narrowest point. There is also designated parking along one side of the western end of the road which would require relocating. Undesignated parking exists along the western end of the section. Land take and parking removal required along this route in order to achieve the required widths. This route therefore passes the initial sift.	Pass
FR118	Section of R135 Finglas Road from the junction with R102 Tolka Valley Road to its junction with the R102 Old Finglas Road. This route consists of 1 all-vehicle lane inbound and 2 all-vehicle lanes outbound. A bus lane exists in both directions. There is ample space to facilitate a core bus corridor in each direction along this route with the introduction of priority bus measures in both directions. This route therefore passes the initial sift.	Pass
FR119	Section of R103 Cardiffsbridge Road from its junction with St. Helena's Road to the junction with Tolka Valley Road. The route consists of 1 all-vehicle lane in both directions. The road width is approximately 7m and the reservation width is approximately 14.5m. Land take is required along this route in order to achieve the required widths. This route therefore passes the initial sift.	Pass
FR121	Section of R135 outbound off ramp towards Finglas Village leading up to a grade separated junction. The existing route currently has 2 lanes and should therefore be considered as a feasible option for an outbound core bus corridor. This route therefore passes the initial sift.	Pass
FR122	Section of R103 Mellows Road which bridges the R135. The route consists of 2 all-vehicle lanes in both directions, 1 lane in each di-	Pass

Route Option Number	Comments	Pass/Fail
	rection leads onto the on ramp to the R135. The road width is approximately 14m and the reservation width is approximately 19m. A new bridge would be required to facilitate a Core Bus Corridor which is possible within the available space. This route therefore passes the initial sift.	

Following completion of the “Stage 1” sift, 42 of the 82 road sections analysed were found to pass the initial sifting. These 42 remaining routes are shown in **Figure 6.2** and **Figure 6.3**.

Figure 6.2: Section 2 Route Options Remaining After Stage 1 Sifting



Figure 6.3: Section 2 (zoomed in version of Figure 6.2) Route Options Remaining After Stage 1 Sifting



In order to facilitate the analysis of the remaining routes, after the “Stage 1” Sifting, two sub-sections have been defined:

- **Section 2 Sub-section A: M50 to Phibsborough**
- **Section 2 Sub-section B: Charlestown to Finglas**

The routes in each sub-section have been combined to present 5 cohesive routes within Section 2 Sub-section A and 3 cohesive routes within Section 2 Sub-section B.

6.2 Stage 2: Route Options Assessment- Section 2 Sub-section A

For the purposes of the Stage 2 assessment, the remaining routes in this section were combined to form 5 distinct and cohesive route options through the area.

In order to facilitate the analysis of the route options, the four routes within ‘Sub-section A’ have been named as follows:

- FP01 (A): Cappagh Road, Mellows Road and Finglas Village centre to R135 until Phibsborough.
- FP01 (B): Cappagh Road, Mellows Road and An Bothar Thuaidh to R135 until Phibsborough.
- FP02: Cappagh Road, Cardiffsbridge Road and Tolka Valley Road to R135 until Phibsborough.
- FP03: Cappagh Road and Church St to R135 until Phibsborough.
- FP04: Cappagh Road, Patrickswell Pl, Wellmount Road, Farnham Dr, St Helena’s Road, Tolka Valley Road to R135 until Phibsborough.

6.2.1 Section 2_Sub-section A - Common Route

Having completed the Stage 1 sift, the remaining routes are presented in Figure 6.2 and 6.3. There is only one route available to connect Section 1 (Tyrrelstown to M50) with Section 2 (M50 to Phibsborough). This route section begins on Cappagh Road and extends over the M50 where it continues to the intersection of Cappagh Road and Cardiffsbridge Road.

Similarly there is only one route remaining after the Stage 1 sift that connects the section between the junction of Finglas Road and Tolka Valley Road to Phibsborough. Therefore a Multi Criteria Analysis (MCA) wasn't required as these routes were 'common' among all route options. As a result Section 2_Sub-Section A has a route section that is common to all route options. See **Figure 6.4** below.

Inbound: This 'common route' starts at the Cappagh Road roundabout, onto the bridge over the M50 where it continues to the junction with Cardiffsbridge Road. At this point it branches off into different options. The 'common route' resumes at the junction of Tolka Valley Road and Finglas Road, where it continues to into Phibsborough.

Outbound: Outbound route would follow the same route (in the opposite direction) as taken by inbound services.

Stops: a total of 28 stops in both directions would be provided along the CBC common route to maximise the residential, employment and educational catchment.

This journey time for the common route is approximately 14 minutes (in one direction) over a distance of 4.2 km.

This common route links up with Section 1: Tyrrelstown to M50 at the bridge over the M50 on the Cappagh Road. It is proposed to provide (in both directions) bus lanes, new and upgraded raised adjacent cycle lanes of 2m minimum width and 2m wide footpaths where possible. Existing road space would be redistributed on the Cappagh Road from its bridge over the M50 to where it joins the Ratoath Road. Widening will be required in the form of setting back private boundaries in this section. Approx. 70m of boundary would be set back by 3m to accommodate the widening adjacent to the Cappagh National Orthopaedic Hospital and 100m of existing boundary would be set back by 3m to accommodate the widening adjacent to the Heathfield Housing estate potentially impacting on residential parking. The existing traffic lane layout would be maintained throughout the section (unless otherwise stated) but would have reduced traffic lane widths to 3m. The existing junction of Cappagh Road and Ratoath Road will have its signalised junction upgraded to improve bus priority. Adjacent public land around the junction in the form of grassed areas would be required to accommodate bus lanes up to the stops lines at this junction.

From this junction it is proposed to provide (in both directions) bus lanes and footpaths of 2m minimum width where possible on the Cappagh Road from this junction to its junction with Cardiffsbridge Road. Dedicated raised cycling facilities are not feasible on this section, due to the proximity of the existing adjacent residential properties and the need to retain minimum driveway lengths of 5m. Cyclists would share bus lanes with buses for this length. As a result existing on street parking would be restricted due to the provision of bus lanes. Most properties have an alternative of off street parking by using the surrounding streets and for the approx. 20 properties that don't the scheme would maintain a minimum driveway length 5m. Land take from the existing residences located on the Cappagh Road between Abbotstown Road and Cardiffsbridge Road in the outbound direction would require setback of their boundary walls by approximately 2.5m, therefore reducing driveway lengths to a minimum of 5m. On the opposite side of the road to these houses, the widening of 3m over a length of 250m to the existing green space will be required. The existing traffic lane layout would be maintained throughout the section (unless otherwise stated) but would have reduced traffic lane widths to 3m.

When examining the Finglas Road between its junction with the Tolka Valley Road to where it diverges onto Prospect Avenue existing road space will be distributed to provide bus lanes, raised adjacent cycle tracks minimum 2m wide and footpaths 2m minimum width where possible in both directions. This will be achieved by redistributing the existing central median and adjacent grass verges along its length. This will result in the removal of a number of trees in the both the central median and grass verge along the length of this section. The existing traffic lane layout would be maintained throughout the section (unless otherwise stated) but would have reduced traffic lane widths to 3m.

Outbound on the Phibsborough Road from the North Circular Road to the junction of Finglas Road and Dalcassian Downs bus priority lanes will be provided but the provision of cycle tracks are not feasible in this section. This is due to the proximity of both residential and commercial properties along its length.

Existing perpendicular parking (approx. 28 spaces) opposite Glasnevin Cemetery entrance will be revised to parallel parking (approx. 11), along with a proposal to setback the adjacent boundary by 3m over a length of 150m to accommodate the proposed scheme. The junctions on the Finglas Road with; Tolka Valley road, Old Finglas Road, Ballyboggan Road, Slaney Road and Claremont Road would be upgraded with new signals to improve bus priority with bus lanes proposed right up to the stop line.

Outbound on the Finglas Road with its junction with Prospect Avenue, the existing road space will be revised to add an extra outbound bus lane through the junction to the Finglas Road. The existing outbound traffic lane will be maintained in this location but reduced in width to 3m. Widening will required to facilitate this outbound bus lane in the form of private land take. The existing boundary would be set back by approx. 1m for 19 residential properties (while at the same time retaining a 5m zone to the front of the houses) and approx. 3m along the front of St Vincents Secondary School. Of the effected residents along this section, only 3 use a front drive way for parking and alternative parking would be arranged on the adjacent side street to accommodate these residential properties.

The Botanic Road between Prospect Avenue and the beginning of the Finglas Road would require private land take form adjacent properties to accommodate the provision of a 2m wide dedicated cycle track. The existing boundary would be set back by approx. 1m for 21 residential properties (while at the same time retaining a 5m zone to the front of the houses). The existing traffic lane layout would be maintained throughout the section (unless otherwise stated) but would have reduced traffic lane widths to 3m.

On Botanic Road from the Lindsay Road, continuing onto the Phibsborough Road to its junction with North Circular Road, raised adjacent cycle tracks are not feasible along this section due to the proximity of both residential and business properties along its length in both directions. Alternatively cyclists could be accommodated by sharing road space on the Royal Canal Bank Road with public traffic, which is a designated Primary Cycling route (No.3B). However the bus lanes in both directions on the Phibsborough Road from the bridge over the Royal Canal to the its junction with the North Circular Road will be provided with 4m wide in order to accommodate both buses and cyclists.

Existing pedestrian crossings at Glasnevin Cemetery, Botanic Road and Phibsborough Road will be upgraded to toucan crossings.

Issues listed below have been considered in the assessment.

- Widening of bridge over M50
- No dedicated cycling facilities on Cappagh Road between its junctions Ratoath Road and Finglas Road
- New signalised junctions

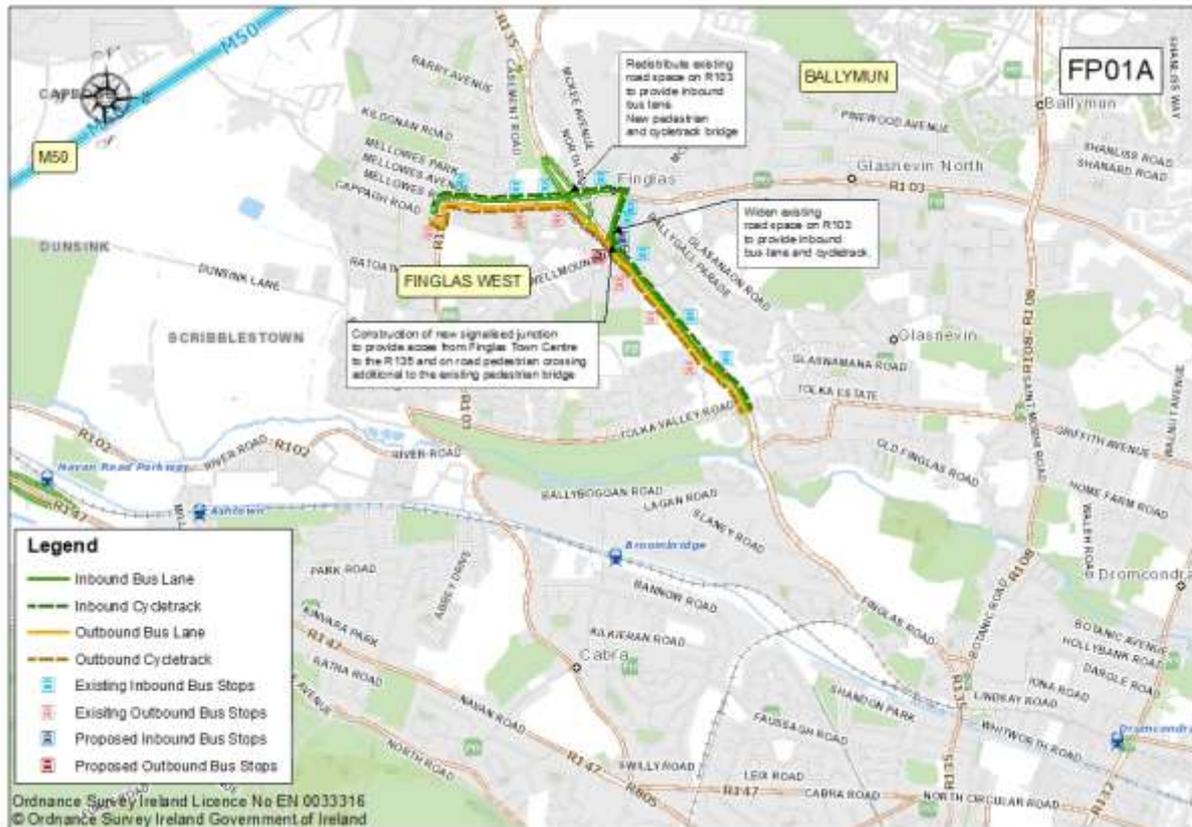
Figure 6.4: Section 2_Sub-Section A Common Route



6.2.2 FP01 (A) Route Option

Route option FP01 (A) via Mellows Road and Finglas Village is shown in **Figure 6.5** below

Figure 6.5: Route Option FP01 (A) Indicative Scheme Design



Inbound: This route begins at the junction of Cappagh Road/ Cardiffsbridge Road, where it travels north and continues along Mellows Road to the bridge over the R135. It continues along Seamus Ennis Road and turns south onto Jamestown Road to join the R135 through to the proposed new junction with Church Street. From here, the route runs along the R135 from Church Street to Tolka Valley Road.

Outbound: the outbound route would follow the same route as inbound services (in the opposite direction of travel) until the ramp that connects with Mellows Road.

Stops: a total of 17 stops in both directions would be provided along the CBC route to maximise the residential, employment and educational catchment.

This route's journey time is approximately 9 minutes (in one direction) over a distance of 2.7 km.

It is proposed to provide priority bus lanes along with new and upgraded cycle tracks and pedestrian facilities from the junction of Cappagh Road and Cardiffsbridge Road along the Cardiffsbridge Road and Mellows Road until bridge over the Finglas Road (R135). Inbound bus lanes and cycle tracks will be provided over the bridge onto the Seamus Ennis Road where the route (right turning buses and cyclists only) will travel south onto the Jamestown Road and a new road link would be developed to link up with the Finglas Road (R135) opposite from its junction with Church Street. Widening will be required along the entire length of this section. As a result residential parking in the inbound direction and the grass verges in both directions on the Mellows Road will be removed, along with on street car parking on the Seamus Ennis Road to accommodate the proposed scheme. To provide inbound bus lanes and cycle tracks on the existing one-way Jamestown Road a public traffic lane would be removed along with constructing a new Bus-only right turn merge lane onto the R135 (opposite church street). Furthermore there are a number of young trees in the grass verge adjacent to Finglas Area

Office and Sports Centre and Finglas Fire Station that would also be removed in order to facilitate the widening.

Outbound bus lanes and cycle tracks would link up with the Mellows Road via the off ramp from the R135, resulting in the lane re-configuration on the off ramp, to left turn bus lane only and a shared left/right turn lanes for public traffic.

Where this route option joins the Finglas Road (R135), bus lanes, new and upgraded cycle tracks and footpaths are proposed to the point where this option links up with the common route at the junction of Finglas Road and Tolka Valley Road. Cycle tracks of 2m minimum width, along with 2m minimum width for footpaths where possible are proposed. The existing road space would be redistributed in both directions by reducing the traffic and bus lanes to 3m wide each. There is adequate space available along this section for widening as grass verges would be removed to accommodate any extra lane provision.

Church Street/ R135 junction would be upgraded to allow the bus access from Finglas Town Centre to the R135 and the installation of a new pedestrian crossing in addition to the existing pedestrian bridge. Further junctions along the Finglas Road including its intersection with Finglas Road and Glenhill Road would be upgraded to allow more through bus priority, this will be achieved by bringing bus lanes all the way to the stop lines.

One bus stop on either side would be provided on the Finglas Road adjacent to Church Street.

Issues listed below have been considered in the assessment.

- Construction of a new pedestrian/cycling bridge over the R135 at Seamus Ennis Road.
- Finglas Town Centre pinch point due to insufficient width on Main Street.
- Upgrade of the junction of Church Street/R135 to provide bus access from Finglas Town Centre.
- New pedestrian crossing connecting Church Street with Finglas Town Centre to be provided.

Project Number: 16_079

Project: Finglas to Phibsborough Core Bus Corridor

Title: Feasibility Study and Options Assessment Report

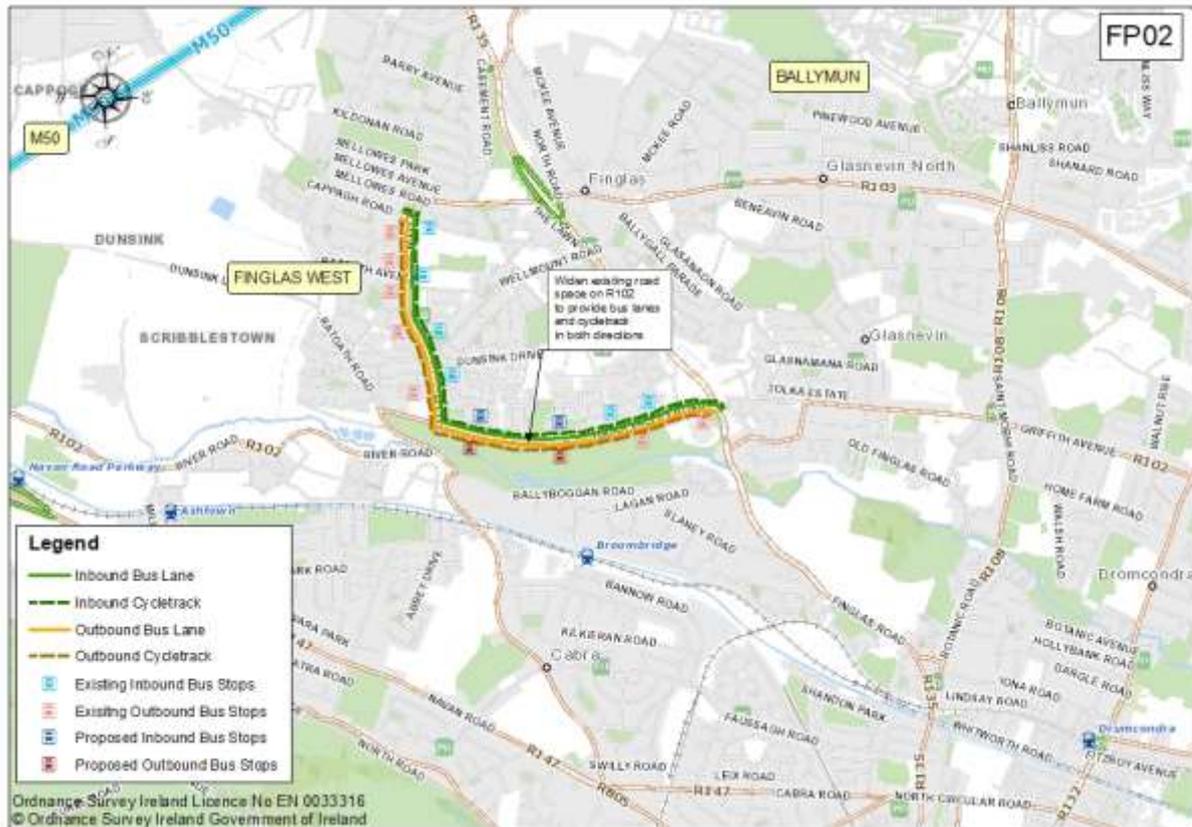


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- New pedestrian crossing to connect Church St with Finglas Town Centre to be provided.

6.2.4 FP02 Route Option

Route option FP02 via Cardiffsbridge Road and Tolka Valley Road is shown in **Figure 6.7** below:

Figure 6.7: Route Option FP02 Indicative Scheme Design



Inbound: This route runs south along Cardiffsbridge Road from the junction with Cappagh Road until Tolka Valley Road. The route continues along Tolka Valley Road until the R135 where it joins the common area of the route.

Outbound: Outbound route would follow the same route (in the opposite direction) as taken by inbound services.

Stops: a total of 17 stops would be provided along the CBC route to maximise the residential, employment and educational catchment.

This route's journey time is approximately 10 minutes over a distance of 2.7 km.

It is proposed to provide priority bus lanes along with upgraded cycle tracks and pedestrian facilities from the junction of Cappagh Road and Cardiffsbridge Road along the Cardiffsbridge Road to where it turns east onto the Tolka Valley Road. Along the entire length of this section widening will be required in the form of utilising grass verges in both directions, along with the removal of a significant number of young trees to cater for the widening. Existing boundaries of 7 no. residential properties at Valeview Gardens would be set back by 2m over a length of 70m in order to accommodate bus lanes, 2m wide raised adjacent cycle facilities and 2m wide footpaths in both directions. Where parking for these residents is affected, alternative parking could be accommodated on Berryfield Drive.

The existing traffic lane layout would be maintained throughout this section but would have a reduced lane width of 3m in each direction. The roundabout at the intersection of Cardiffsbridge Road and Wellmount Road will be upgraded to allow bus priority through the roundabout by the inclusion of a bus priority lane.

On street parking will be removed from the front of residential properties such as; opposite the Church of the Annunciation and opposite the College of Further Education ALAN (Coláiste Íde College of Fur-

ther Education). Most of these properties have sufficient driveway space to fit one car parking space. Any effected parking could be accommodated on adjacent streets.

This route links up with the common route at Finglas Road via the Tolka Valley Road. It is proposed to provide bus lanes, cycle tracks and footpaths in both directions along the entire length of this route section. The cycle tracks would provide a raised adjacent dedicated facility of 2m minimum width, along with 2m minimum width for footpaths where possible. Along the entire length of the section adequate space would be available for widening as there is available grass verge and public land on the northern side of the proposed route. A significant number of young trees in the grass verge would be removed to cater for the widening. In order to maintain the on street parking adjacent to the Tolka Valley Park, the railing boundary would be set back by 4 meters over a length of 1.4km. Similarly to maintain on street parking on the Tolka Valley Road adjacent to the Prospect Hill apartments, 3m widening over 300m into the slope on the southern side of the road would be required to accommodate the proposed route section. The existing traffic lane layout would be maintained throughout this section but would have a reduced traffic lane width of 3m in each direction.

Two bus stops on either side will be provided on the Tolka Valley Road adjacent to Kippure Park and Carrigallen Park.

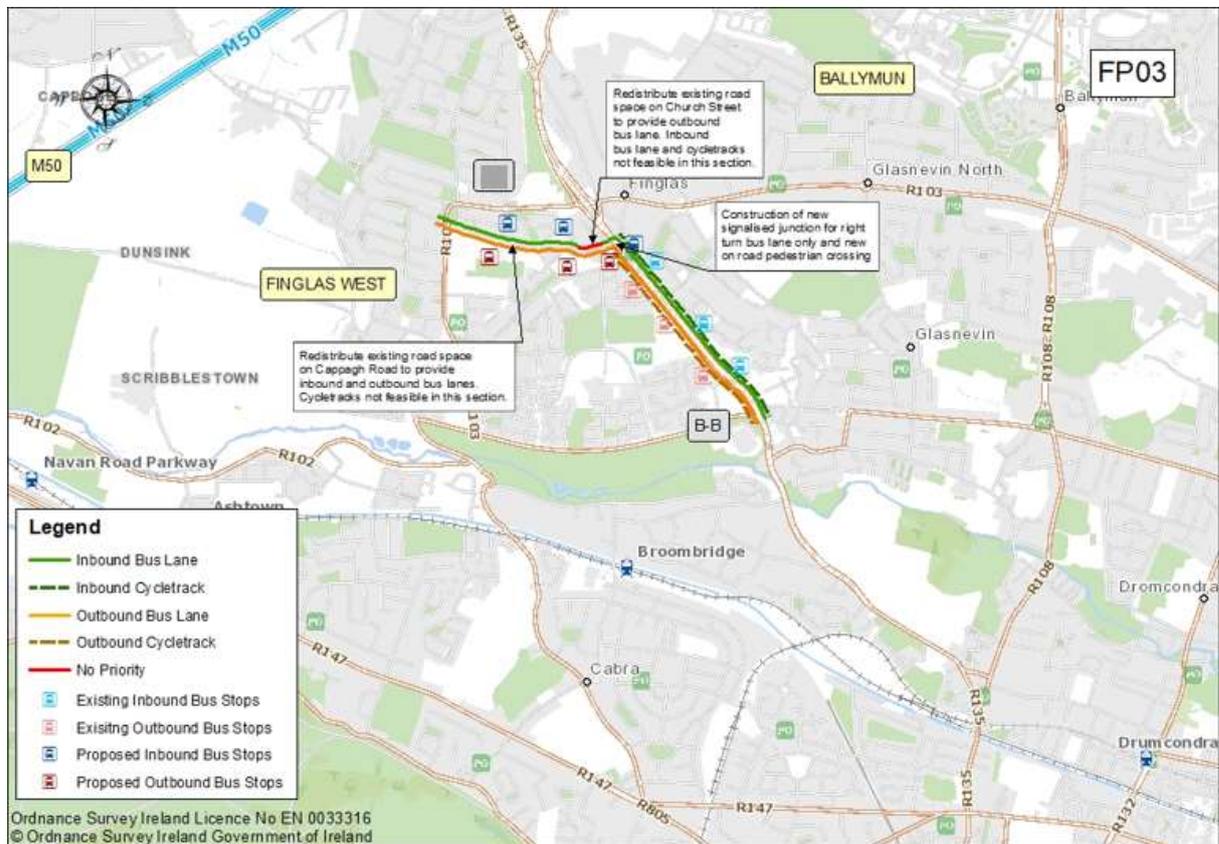
Issues listed below have been considered in the assessment.

- The route runs far from Finglas Town Centre.

6.2.5 FP03 Route Option

Route option FP03 via Church St is shown in **Figure 6.8** below.

Figure 6.8: Route Option FP03 Indicative Scheme Design.



Inbound: This starts at the junction Cappagh Road/Cardiffsbridge junction and continues along Cappagh Road until the R135 where the new junction and pedestrian access to Finglas Town Centre is proposed.

Outbound: Outbound route would follow the same route (in the opposite direction of travel) as taken by inbound services.

Stops: a total of 12 stops would be provided in both directions along the CBC route to maximise the residential, employment and educational catchment.

This route's journey time is approximately 8 minutes (in each direction of travel) over a distance of 2.6 km.

This route section continues on from the common route onto Cappagh Road, where it continues onto Church Street where joins the Finglas Road. It is proposed to provide bus lanes and footpaths in both directions along this length of this route section. Due to the proximity of adjacent properties along this section, dedicated cycling facilities are not feasible. In order to accommodate priority bus lanes widening will be undertaken at several locations along this section. The existing boundary would be set back by approx. 2m at the Church of the Annunciation, Coláiste Eoin, Saint Fergal Boys National School and Kingdom Hall of Jehovah's Witness. In all these cases green space would be required with no affect to parking. The existing boundary would be set back by approx. 1.5m over a section of 40m at Mellowes Court and by 2.5m over a distance of 50m at Finglas Parochial National School. Due to the proximity of residential and commercial properties on Church Street an inbound bus lane is not feasible over a length of 150m on its approach to the junction with the Finglas Road. On street parking along the entire length of this route will be removed to accommodate the proposed scheme, except for parking allowances adjacent to the businesses on church street and adjacent to the Church of the Annunciation. Alternative parking could be accommodated on adjacent side streets.

The roundabout at Cappagh Road and Finglaswood Road will be converted to a 'T' junction allowing priority for the Cappagh Road and bus lane priority. The existing traffic lane layout would be maintained throughout this section but would have a reduced traffic lane width of 3m in each direction.

Church Street/Finglas Road (R135) junction would be upgraded to a signalised junction, facilitating a 'bus only' right turn (in the inbound direction) and provision of a new pedestrian crossing, enhancing pedestrian access to Finglas Town Centre. As a result the existing pedestrian bridge that facilitates pedestrians to safely cross over the Finglas Road would be removed

Two bus stops on either side will be provided on Cappagh Road adjacent to Coláiste Eoin and Church Street adjacent to the Finglas Parochial National School.

The route continues on the Finglas Road to where it links up with the common route at its intersection with Tolka Valley Road. It is proposed to provide bus lanes, new and upgraded cycle tracks and footpaths in both directions along this length of this route section. The cycle tracks would provide a raised adjacent dedicated facility of 2m minimum width, along with 2m minimum width for footpaths where possible. Along the entire length of this section there is adequate space available for widening as the space would be redistributed from central grass median and grass verge (in both directions) to accommodate the proposed route. As a result a number of trees will be removed in the verges and median.

All junctions along this section will be upgraded to provide increased bus priority. Bus lanes would be provided right up the stop lines of all junctions. The existing traffic lane layout would be maintained throughout this section but would have a reduced traffic lane width of 3m in each direction.

To cater for the large catchment of Finglas Village, a new bus stop on either side will be provided south of the junction of where Church Street intersects the Finglas Road.

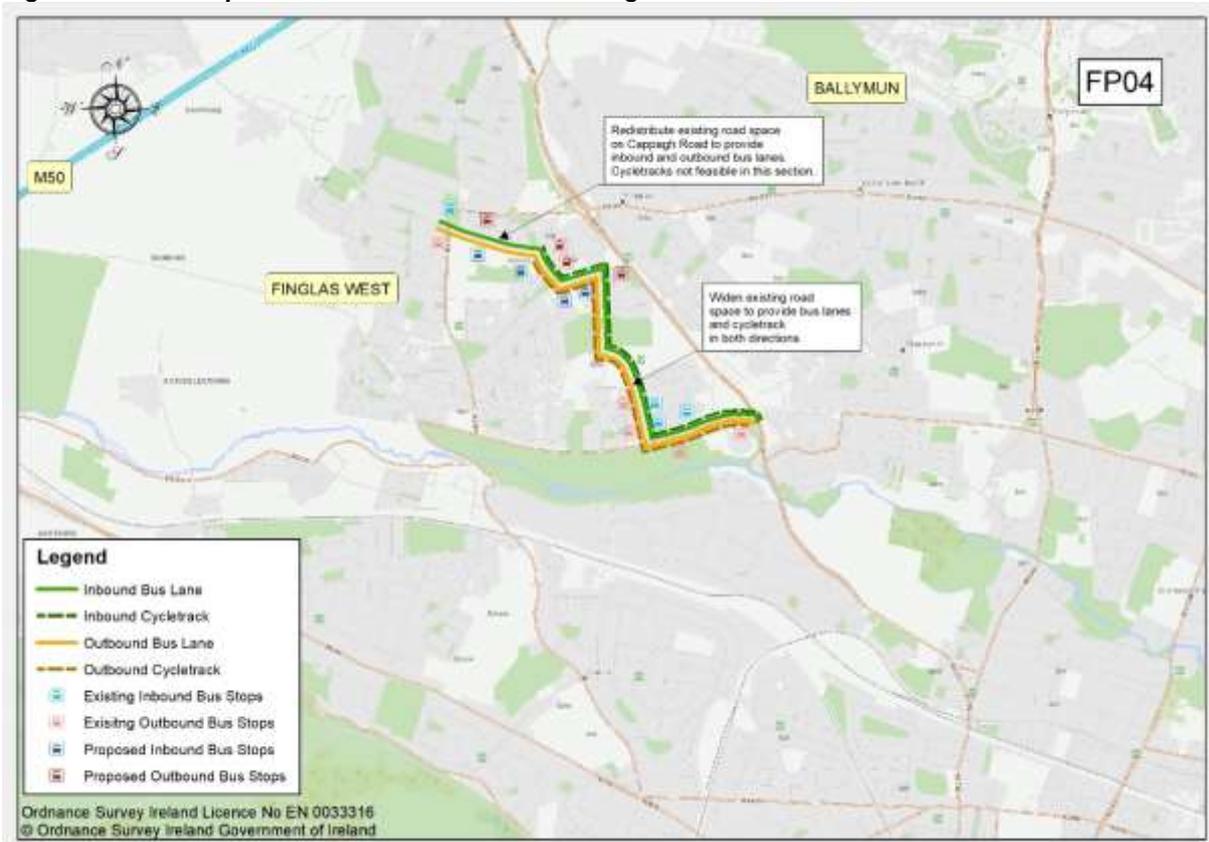
Issues listed below have been considered in the assessment.

- Upgrade of the junction Church St/R135 to provide bus only right turn.
- New pedestrian crossing to connect Church St with Finglas Town Centre to be installed.
- Pinch point along Church St that would only allow the provision of an outbound bus lane and that would require the diversion of the cycling facilities along Cardiffsbridge Road and Mellows Road to ensure the full cycling facilities.
- Removal of parking on both sides of Cappagh Road and Church Street from the junction of Ratoath Road and Cappagh Road to the junction of Church Street and Finglas Road.

6.2.6 FP04 Route Option

Route option FP04 via Patrickswell Pl, Wellmount Road, Farnham Dr, St Helena's Road and Tolka Valley is shown in **Figure 6.9** below:

Figure 6.9: Route Option FP04 Indicative Scheme Design



Inbound: This route follows the same route as the FP03 until the junction of Cappagh Road with Patrickswell Place, where it realigns south to continue along this road to the next roundabout where it realigns east and runs along Wellmount Road. The route then turns south to continue along Farnham Drive and St. Helena's Road until the junction with Tolka Valley Road, where it realigns east and continues along this road until the R135.

Outbound: Outbound route would follow the same route (in the opposite direction) as taken by inbound services.

Stops: a total of 14 stops would be provided in both directions along the CBC route to maximise the residential, employment and educational catchment.

This route's journey time is approximately 9 minutes (in each direction) over a distance of 2.5 km.

It is proposed to provide bus lanes, cycle facilities and footpaths in both directions along Patrickswell Place and Wellmount Road to where it intersects with Farnham Drive. The cycle tracks would provide a raised adjacent dedicated facility of 2m minimum width, along with 2m minimum width for footpaths where possible. There is adequate space available along this section for widening as grass verges would be removed to accommodate the proposed scheme. As a result there would be a number of young trees in the grass verge that would also be removed in order to facilitate widening.

The junctions on Patrickswell Place with Cappagh Road and Wellmount Road will be upgraded to allow for bus priority. This will be provided by bringing bus lanes right up to the stop lines. The existing traffic lane layout would be maintained throughout this section but would have a reduced traffic lane width of 3m in each direction.

It is proposed to provide bus lanes, cycle facilities and footpaths in both directions along Farnham Drive and St Helena's Road to where it intersects with Tolka Valley Drive. From here the route follows route option FP02 where it joins the common route. The cycle tracks would provide a raised adjacent dedicated facility of 2m minimum width, along with 2m minimum width for footpaths where possible. On street parking outside Erins Isle GAA Club will be removed to accommodate the proposed scheme. On Farnham Drive there is adequate space available along this section for widening as concrete verges in the inbound direction would be removed to accommodate the proposed scheme. Similarly on St Helena's Road there is adequate space available along this section for widening as grass verges on both directions would be removed to accommodate the proposed scheme. As a result there will be a significant number of trees removed in the grass verges to accommodate the proposed scheme.

The junctions on Farnham Drive with Wellmount Road and St Helena's Road will be upgraded to allow for bus priority. This will be provided by bringing bus lanes right up to the stop lines. The existing traffic lane layout would be maintained throughout this section but would have a reduced traffic lane width of 3m in each direction.

Three bus stops on either side will be provided on; Patrickswell Place adjacent to Aylward Green, Wellmount Road adjacent to Saint Michael's Secondary School and Farnham Drive adjacent to Finn Eber Square.

The following issues have been considered in the assessment:

- Pinch point along Church Street that would not allow the provision of bus lanes in both directions and would require cycling facilities to be shared with traffic.

6.2.7 Assessment Summary Section 2_Sub-section A

The "Stage 2" route options assessment summary table for "**Section 2 Sub-section A: M50 to Phibsborough**" area is presented in **Appendix 1.2**

The relative ranking of route options against the scheme assessment sub-criteria is summarised in **Table 6.2** below:

Table 6.2: Section 2_Sub-section A Route Options Assessment Summary (Sub-criteria)

Assessment Criteria	Assessment Sub-Criteria	FP01(A)	FP01(B)	FP02	FP03	FP04
Economy	Capital Cost	Orange	Green	Orange	Green	Orange
	Transport Reliability and Quality of Service	Orange	Green	Orange	Green	Orange
Integration	Land Use Integration	Green	Green	Orange	Green	Orange
	Residential, Employment and Educational Catchments	Green	Green	Orange	Green	Orange
	Transport Network Integration	Orange	Green	Green	Green	Green
	Cycling Integration	Yellow	Yellow	Yellow	Yellow	Yellow
Accessibility & Social Inclusion	Key Trip Attractors	Yellow	Yellow	Yellow	Yellow	Yellow
	Deprived Geographic Areas	Green	Green	Green	Orange	Green
Safety	Road Safety	Orange	Orange	Green	Green	Green
	Pedestrian Safety	Orange	Green	Orange	Green	Green
Environment	Archaeology, Architectural and Cultural Heritage	Yellow	Yellow	Yellow	Yellow	Yellow
	Flora and Fauna	Green	Green	Orange	Green	Orange
	Soils and Geology	Yellow	Yellow	Yellow	Yellow	Yellow
	Hydrology	Yellow	Yellow	Yellow	Yellow	Yellow
	Landscape and Visual	Green	Green	Orange	Green	Orange
	Air Quality	Yellow	Yellow	Yellow	Yellow	Yellow
	Noise & Vibration	Yellow	Yellow	Yellow	Yellow	Yellow
	Land Use Character	Orange	Green	Green	Green	Orange

In terms of 'Economy', route option FP03 represents the cheapest solution as it does not require land acquisition and has the lowest infrastructure costs. However the difference in cost between the five options is not very significant. In terms of reliability and quality of service all routes are similar regarding journey time and route length.

Route option FP01 (A) and FP01 (B) rank the most favourably in terms of 'Residential, Employment and Educational Catchments'. Route option FP02 ranks very well in terms of residential catchments but ranks poorly in terms of employment and educational catchments. Route option FP03 ranks better than FP02 and slightly better than FP04 as either don't serve Finglas Village.

Under 'Accessibility and Social Inclusion', there is little to differentiate between the route options with each route serving a similar number of key trip attractors.

In terms of 'Safety' route options FP03 and FP04 rank best over the other options. Route option FP03 has the least number of junctions on its route therefore lowering the number of potential conflicts for vehicles. In terms of pedestrian safety, route option FP04 ranks slightly better than the other options as more stops are located within 50m of pedestrian crossings.

Overall in terms of 'Environment', no one route option has a particular advantage over another. However FP01 (B) and FP03 has some advantages over other route options. They are as a result of less land to be acquired therefore having a lower potential impact on flora & fauna and landscape & visual. As option FP03 has no land acquisition, it becomes the most favourable route.

Additionally, a summary of the assessment and relative ranking of route options against the five main assessment criteria is shown in **Table 6.3** below:

Table 6.3: Section 2_Sub-section A Route Options Assessment Summary (Main Criteria)

Assessment Criteria	FP01(A)	FP01(B)	FP02	FP03	FP04
Economy	Yellow	Green	Yellow	Green	Yellow
Integration	Yellow	Green	Yellow	Green	Yellow
Accessibility & Social Inclusion	Green	Green	Green	Yellow	Green
Safety	Yellow	Yellow	Yellow	Green	Green
Environment	Green	Green	Yellow	Green	Yellow

Based on the assessment undertaken, route option FP03 offers the most benefits out of all routes. Therefore route option FP03 better meets the scheme objectives and is the preferred option for the following reasons:

- Has the lowest capital cost coupled with the opportunity for journey time reliability and bus service efficiency
- It integrates well with existing bus routes
- Serves a good residential and employment catchment
- It offers a safer route compared to other options and
- It has comparatively lower potential impact on the environment across most sub criteria

Following completion of option assessment, the FP03 route was found to show more benefits over the other options. Therefore, the preferred route for Section 2_Sub-section A is the **FP03**.

6.2.8 Route Options Assessment Section 2_Sub-section A - Full Route Summary

Combining FP03 with the common routes outlined previously gives the total route for the CBC from the M50 to Phibsborough as shown in **Figure 6.10** below.

Figure 6.10: Section 2_Sub-section A FP03 Full Route



This route starts at M50 Bridge and runs along Cappagh Road to Church Street. The stops along this route section serve Cappagh National Orthopaedic Hospital and Finglas West area, as well as the schools along Church Street.

At the Church Street/R135 junction, a new signalised junction will be constructed to allow a bus only right turn and a pedestrian access to Finglas Town Centre by the installation of a new on-road pedestrian crossing additional to the existing pedestrian crossing.

After this junction, the routes continues along the R135 towards Phibsborough. The route diverges from the Finglas Road onto Prospect Ave where the inbound route travels along Botanic Road and the outbound route remains on the Finglas Road (R135). Along this route section, the stops serve many key attractors such as Finglas Town centre, Clearwater shopping centre and Glasnevin burial grounds, as well as many residential areas.

Once both inbound and outbound routes join at Prospect Road, the route continues along the bridges over the railway line and Royal Canal until Phibsborough/North Circular Road junction where it terminates.

6.3 Stage 2: Route Options Assessment - Section 2_Sub-section B

After the “Stage 1” sift, the remaining routes within sub-section B have been combined to present 3 cohesive routes named as follows:

- CF01: from the North Road (R135) along the R135.
- CF02: from the North Road (R135) along Charlestown PI, St Margaret's Road to the R135.

- CF03: from the North Road (R135) along Charlestown Pl, Melville Road, Jamestown Road, Semus Ennis Road and An Bothar Thuaidh to the R135.

6.3.1 CF01 Route Option

Route option CF01 via the R135 is shown in **Figure 6.11** below:

Figure 6.11: CF01 Route Option



Inbound: This route runs along the R135 from the junction with Finglas North Road to the junction with Church Street.

Outbound: the outbound CBC service would run parallel to the inbound service all along the route.

Stops: a total of 2 stops, would be provided along this route option in order to maximise the residential, employment and educational catchment

This route's journey time is approximately 3 minutes over a distance of 1.7 km.

It is proposed to provide bus lanes in both directions along the North Road and Finglas Road to where it intersects with Church Street. However priority bus lanes are not feasible for approx. 100m inbound from the intersection of North Road and Charlestown Place, due to the existing road layout approaching the existing M50 interchange of Junction 5 (City Centre/Finglas/Derry/Ashbourne). Raised adjacent cycle tracks, 2m wide would be provided in both directions on the North Road until adjacent to Plunket Crescent. From this point cyclist in both directions would share space with buses in the bus lanes to the point where the Finglas Road intersects with Church Street. Alternatively inbound cyclists would travel along Charlestown Place, turn right onto Saint Margaret's Road, traveling through Finglas Village and finally joining Finglas Road via a cyclist/pedestrian access on Church Road. Out bound cyclist could travel this route in reverse but would use the exiting pedestrian bridge (this would have to be upgraded to cater for cyclists) over the Finglas Road.

In the inbound direction on the North Road, approx. 230m on the approach to the roundabout of the intersection of Casement Road, an existing traffic lane would be revised to a bus priority lane, this includes a bus priority lane through the roundabout (inbound and outbound). The bus lanes would join

up with the existing bus lane on the Finglas Road (R135) as far as its intersection with Church Street. In the outbound direction on the Finglas Road (R135) from approx. 100m after the merge of traffic from the Mellows Road, 1 no. existing outbound traffic lane would be revised to a proposed new bus priority lane that would travel along this section of the route option through the Casement Road roundabout to the point at which bus lanes are not feasible as previously outlined. The existing traffic lane layout would be maintained throughout this section (unless otherwise stated) but would have a reduced traffic lane width of 3m in each direction.

One bus stop on either side would be provided on the Finglas Road adjacent to Plunket Crescent.

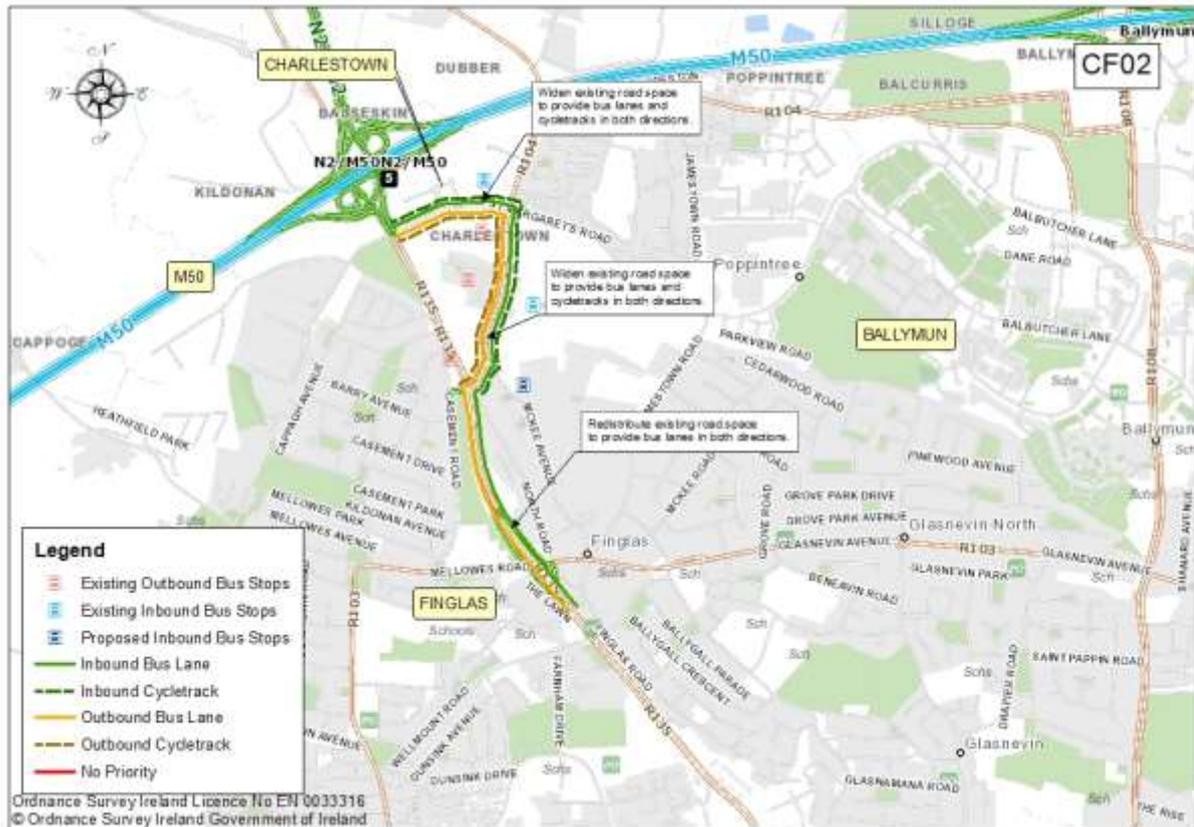
Issues listed below have been considered in the assessment.

- Redistribution of the road space and conversion of all vehicle lanes into bus lane would affect the traffic along the R135.

6.3.2 CF02 Route Option

Route option CF02 via Charlestown PI and St Margaret's Road is shown in **Figure 6.12** below:

Figure 6.12: CF02 Route Option



Inbound: This route runs along Finglas North Road from the junction with the R135 until the junction with St Margaret's Road where it realigns south and it continues along this road until the R135. Then the route follows the same route as the CF01 route until Church Street.

Outbound: the outbound CBC service would run parallel to the inbound service all along the route.

Stops: a total of 6 stops would be provided along this route option in order to maximise the residential, employment and educational catchment

This CBC route's journey time is approximately 7 minutes over a distance of 2.2 km.

It is proposed to provide priority bus lanes along with upgraded cycle tracks and pedestrian facilities in both directions on Charlestown Place and Saint Margaret's Road from their junctions with the North Road and the Finglas Road. The cycle tracks would provide a raised adjacent dedicated facility of 2m minimum width, along with 2m minimum width for footpaths where possible. In order to provide bus lanes, upgraded cycle and footpath facilities along this section, land take would be required in the form of the adjacent private land in the outbound direction. The existing boundary would be setback by 5m over a length of 200m. Adjacent to the Charlestown Shopping Centre the exiting boundary would be setback by 2m over a 70m length, to facilitate a right turn bus lane from the Charlestown Place Road to Saint Margaret's Road.

Further land take will be required along Saint Margaret's road. In the inbound direction the existing boundary would be set back by approx.; 4m over a length of 70m of green space adjacent to 'Golt-food', 4m over a length of 180m adjacent to commercial properties (Finglas Auto Parts, Polonez Cash and Carry, Manhattan Peanuts Ltd and Ashtown Packaging) resulting in a loss of car parking spaces, however alternative car parking could be achieved from within these properties. The existing boundary in the outbound direction would be set back by approx.; 1m over a length of 70m adjacent to an existing astro turf pitch, 3m over a length of 100m for 6 no. residential properties and 3m over a length of

60m for 2no. residential properties (while at the same time retaining a 5m zone to the front of the houses). The existing boundary adjacent to the 'Atlas Autoservice' would be set back by approx. 4m over a length of 60m resulting in the loss of 14 car parking spaces, however alternative car parking could be achieved from surrounding businesses.

Further widening will be required from the entrance of Lidl on Saint Margaret's Road to its intersection with the North Road. The existing boundary at Lidl and North Road Motor Company is proposed to be set back by approx. 2m, resulting in the loss of car parking, however car parking layout could be revised to mitigate the loss of parking. A significant amount of trees will be removed to facilitate the widening.

At the junction of Saint Margaret's Road and Melville Road the existing junction layout would be revised to allow for improved bus priority. In the inbound direction the road space would be revised to provide a bus priority right turn lane. Similarly in the outbound direction the road space would be revised to provide a bus priority left turn lane. The existing mini roundabout at the intersection of Saint Margaret's Road and McKee Avenue would be upgraded to a signalised junction with bus lanes to be provided to the stop lines. The existing traffic lane layout would be maintained throughout this section (unless otherwise stated) but would have a reduced traffic lane width of 3m in each direction.

One new inbound bus stop is proposed opposite the entrance of Lidl.

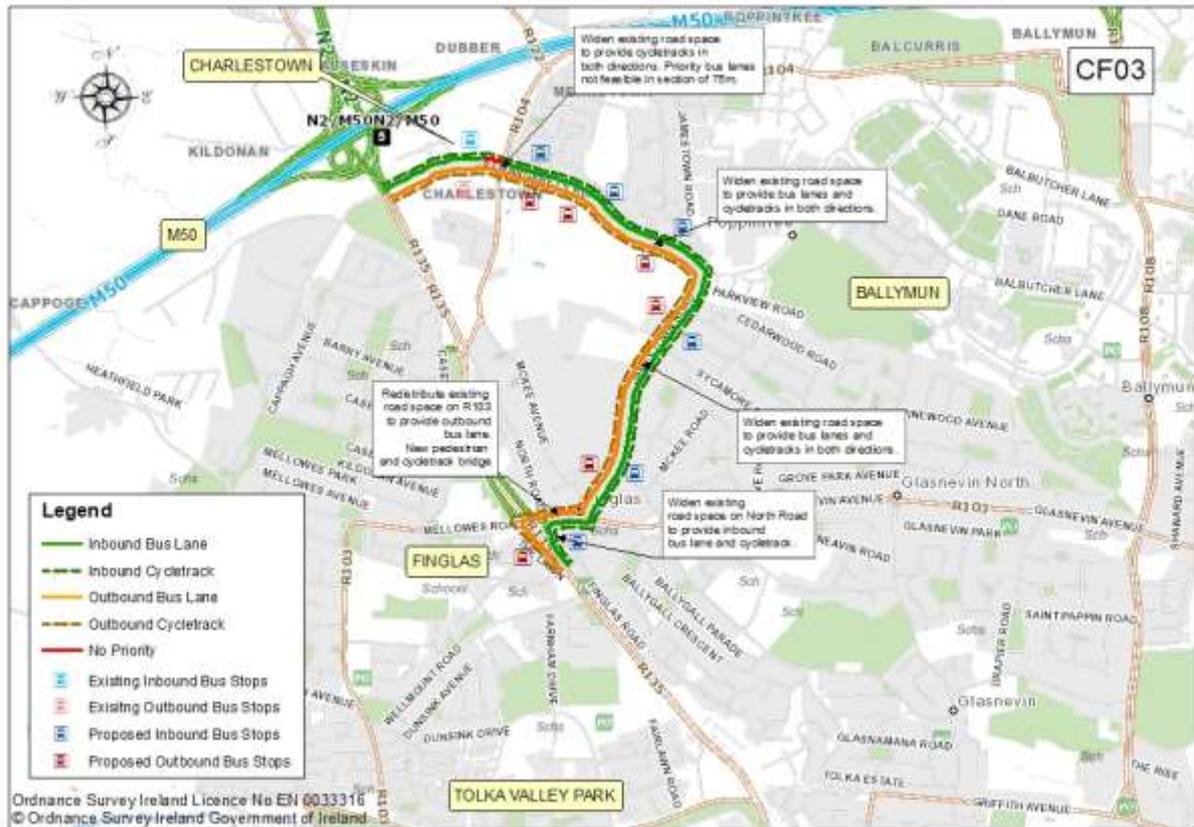
Some issues have been analysis in this route's assessment as listed below:

- Redistribution of the road space and conversion of an all vehicle lane into a bus lane would affect the traffic along the R135.

6.3.3 CF03 Route Option

Route option CF03 via Charlestown Pl, Melville Road, Jamestown Road, Seamus Ennis Road and An Bothar Thuaidh is shown in **Figure 6.13** below:

Figure 6.13: Route Option CF03



Inbound: This route follows the CF02 route until the junction with St Margaret’s Road where it continues east along Melville Road until the roundabout where it turns south. Then it continues along Jamestown Road until the junction with Seamus Ennis Road where it realigns west. Once at Seamus Ennis Road, it continues until the bridge over the R135 where the inbound route turns south to join the R135 through An Bothar Thuaidh Road and the outbound runs along the R135 to Mellower Road and crosses the bridge. Then the route follows the same route as the CF01 route until Church Street.

Outbound: the outbound CBC service would run parallel to the inbound service all along the route.

Stops: a total of 14 stops would be provided along this route option in order to maximise the residential, employment and educational catchment

This CBC route’s journey time is approximately 13 minutes over a distance of 3.2 km.

Route CF03 is the same as route option CF02 on Charlestown Place from its intersection with North Road and Saint Margaret’s Road. From here bus lanes, cycle facilities and footpaths in both directions are proposed on Melville Road and onto Jamestown Road. The cycle tracks would provide a raised adjacent dedicated facility of 2m minimum width, along with 2m minimum width for footpaths where possible. There is adequate space available along this section for widening as grass verges would be removed to accommodate the proposed scheme. As a result there would be a number of young trees in in the grass verge that would also be removed in order to facilitate widening. However significant widening will be required along Jamestown Road between Sycamore Road and Seamus Ennis Road. Existing boundaries would be set back by approx. 3m over this entire length on both sides. A large number of residential gardens and commercial properties would be affected.

The roundabout between the intersection of Melville Road and Jamestown Road will be upgraded to provide for improved bus priority. Bus lanes will be provided up to the stop lines and through the

roundabout in the inbound and outbound direction. The existing traffic lane layout would be maintained throughout this section (unless otherwise stated) but would have a reduced traffic lane width of 3m in each direction.

It is proposed to provide bus lanes, cycle tracks and footpaths in both directions on the Seamus Ennis Road and further in the inbound direction on the onramp to the Finglas Road. The outbound route would travel along the off ramp from the Finglas Road to the Seamus Ennis Road. The cycle tracks would provide a raised adjacent dedicated facility of 2m minimum width, along with 2m minimum width for footpaths where possible. The on-ramp to the Finglas Road would require widening along its length to accommodate an inbound bus lane and a raised adjacent 2m wide cycle track. The existing traffic lanes on the off-ramp would be reduced to 1 no. 3m wide traffic lane and a retaining structure would be required along this length as the current grassed slope will be removed to accommodate this widening. The off ramp from the Finglas Road (R135) would require the re-distribution of the traffic lane configuration with the addition of a right turn bus only lane and retaining left turn and right turn lanes for public traffic. The existing traffic lane layout would be maintained throughout this section (unless otherwise stated) but would have a reduced traffic lane width of 3m in each direction.

Six new bus stops on either side are proposed on Melville Road; Adjacent to Melville Square, adjacent to Melville Court, adjacent to Melville Court, on Jamestown Road; adjacent to Sycamore Road, adjacent to Clune Road, on Finglas Road; on the on/off ramps to the Finglas Road.

Some issues have been analysis in this route's assessment as listed below:

- Bus priority would not be achieved along 75 m approaching the junction Charlestown PI/ St Margaret's Road.
- Widening works may affect residential areas.
- Redistribution of the road space and conversion of all vehicle lanes into bus lane would affect the traffic along the R135.

6.3.4 Assessment Summary Section 2_Sub-section B

The "Stage 2" route options assessment summary table for "**Section 2 Sub-section B: Charlestown to Finglas**" area is presented in **Appendix 1.3**.

The relative ranking of route options against the scheme assessment sub-criteria is summarised in **Table 6.4** below:

Table 6.4: Section 2_Sub-section B Route Options Assessment Summary (Sub-criteria)

Assessment Criteria	Assessment Sub-Criteria	CF01	CF02	CF03
Economy	Capital Cost	Green	Light Green	Red
	Transport Reliability and Quality of Service	Light Green	Light Green	Red
Integration	Land Use Integration	Yellow	Yellow	Light Green
	Residential, Employment and Educational Catchments	Yellow	Light Green	Green
	Transport Network Integration	Yellow	Light Green	Light Green
	Cycling Integration	Yellow	Yellow	Yellow
Accessibility & Social Inclusion	Key Trip Attractors	Yellow	Light Green	Light Green
	Deprived Geographic Areas	Light Green	Yellow	Light Green
Safety	Road Safety	Light Green	Yellow	Light Green
	Pedestrian Safety	Yellow	Light Green	Yellow
Environment	Archaeology, Architectural and Cultural Heritage	Yellow	Yellow	Yellow
	Flora and Fauna	Light Green	Light Green	Yellow
	Soils and Geology	Yellow	Yellow	Yellow
	Hydrology	Yellow	Yellow	Yellow
	Landscape and Visual	Yellow	Light Green	Yellow
	Air Quality	Yellow	Yellow	Yellow
	Noise & Vibration	Yellow	Yellow	Yellow
	Land Use Character	Light Green	Light Green	Yellow

In terms of 'Economy', route option CF01 is the cheapest option as it requires less infrastructure works and land acquisition. However, CF02 provides better quality of service over CF01 as it serves more stops.

In terms of 'Integration' and catchments, route option CF03 ranks the best. Route option CF01 has reasonable residential, employment and educational catchments, but route option CF02 ranks slightly more favourable as it has better residential and employment catchments.

In terms of 'Accessibility and Social Inclusion' route option CF02 and CF03 serve more key trip attractors than route option CF01.

In terms of 'Safety' route option CF01 and CF03 are slightly more favourable than route option CF02. Regarding pedestrian safety route option CF02 is the preferred option as all bus stops have pedestrian crossings located within 50m of the stops.

Overall in terms of 'Environment', no one route option has a particular advantage over another option. However CF02 and CF01 have some advantages over route option CF03. They are as a result of less land to be acquired, therefore having a lower potential impact on flora & fauna and landscape & visual.

In addition to the previous table, a summary of the assessment and relative ranking of route options against the five main assessment criteria is shown in the following **Table 6.5**:

Table 6.5: Section 2_Sub-section B Route Options Assessment Summary (Main Criteria)

Assessment Criteria	CF01	CF02	CF03
Economy			
Integration			
Accessibility & Social Inclusion			
Safety			
Environment			

Based on the assessment undertaken, route option CF02 offers the most benefits out of all routes. Therefore route option CF02 better meets the scheme objectives and is the preferred option for the following reasons:

- It delivers end-to-end bus lanes through the route section providing improved journey time reliability
- It has comparatively lower potential impact on the environment across all sub criteria
- Overall it has more advantages associated with it when compared to the other route options

The assessment found that the CF02 route provides more benefits compared to the other options. Therefore, the preferred route for Section 2_Sub-section B is **CF02**.

7 Emerging Preferred Route

The purpose of this section is to present the final conclusions of the assessment process for the end-to-end route options considered and to recommend a preferred route.

7.1 Introduction

Sections 6 and 7 of this report presented an appraisal of each of the potential route options for the two study area sections identified. Within each study area section, where potential route options were considered viable (i.e. the routes that made it past the initial sifting process), they were assessed in accordance with the methodology set out in Section 4. This included a “Multi-Criteria Analysis” under the headings of Economy, Integration, Accessibility and Social Inclusion, Safety and Environment.

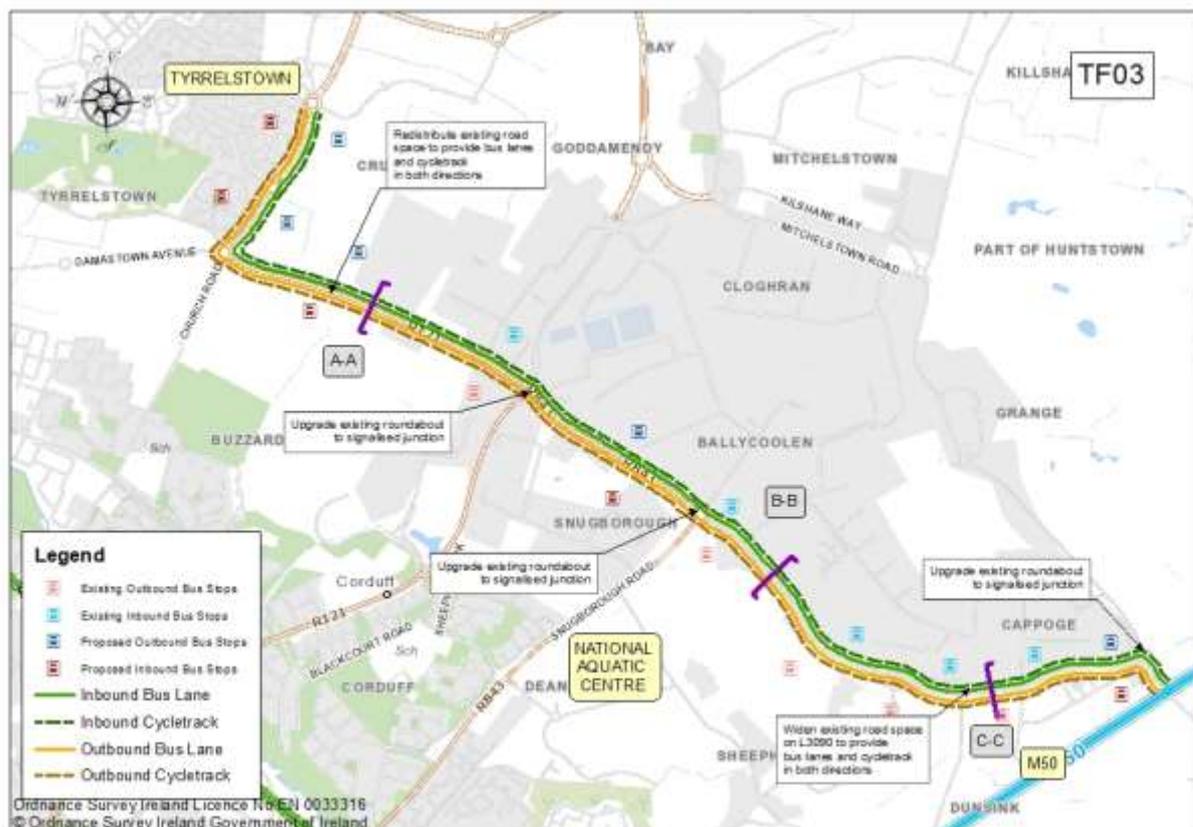
Following this appraisal, an emerging preferred route option was identified for each section.

7.1.1 Section 1_Tyrrelstown to M50

The capital cost and the journey time give the route TF03 a clear advantage over the other routes. The integration and accessibility is similar along the routes running through Ballycoolin industrial estate. However, the integration and accessibility is significantly worse for the routes running north from Tyrrelstown than for those running north along Corduff. However, the safety and the environmental impact make the route TF03 more beneficial than the other route options along this section.

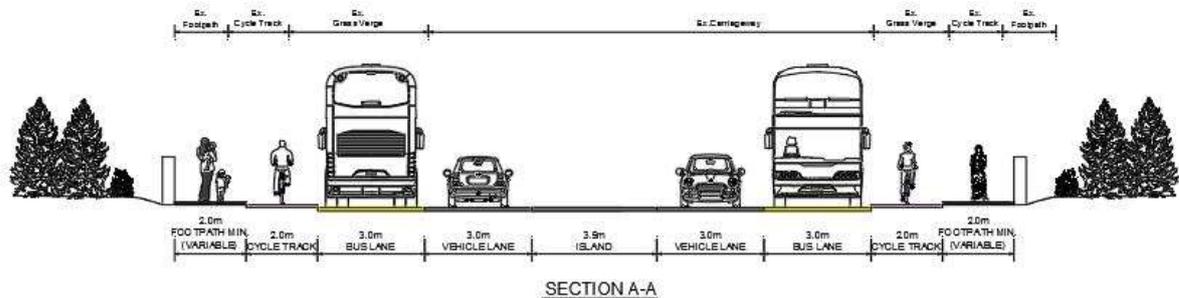
The TF03 route runs straight from Tyrrelstown to the M50 via R121, as shown in **Figure 7.1** below.

Figure 7.1: Preferred Route for Section 1: Tyrrelstown to M50



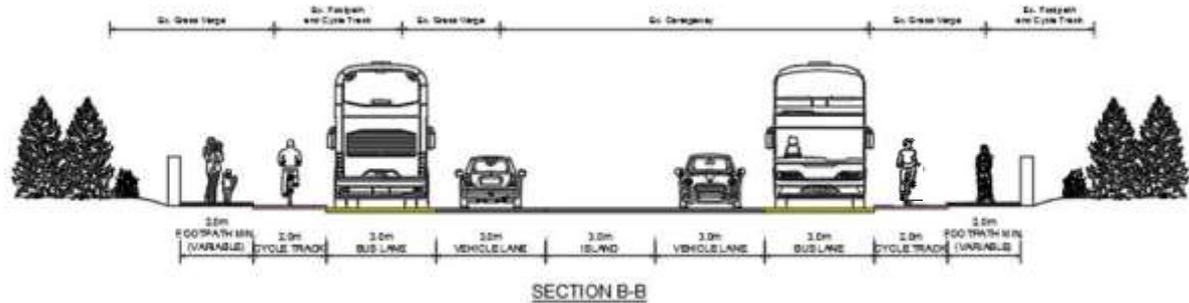
Section A-A, shown in **Figure 7.2** below, is indicative of the road space redistribution along the R121 from the Damastown Avenue roundabout to the Ballycoolin Cross Road roundabout. It is proposed to provide bus lanes, cycle and pedestrian facilities in both directions along this section of the proposed route. The cycle tracks would provide a raised adjacent dedicated facility of 2m minimum width, along with 2m minimum width for footpaths where possible. Along the entire length of this section there is adequate space available for widening as there is central islands, central medians and grass verges in both directions that can be utilised to facilitate the proposed scheme.

Figure 7.2: Section A-A of TF03 Route Option



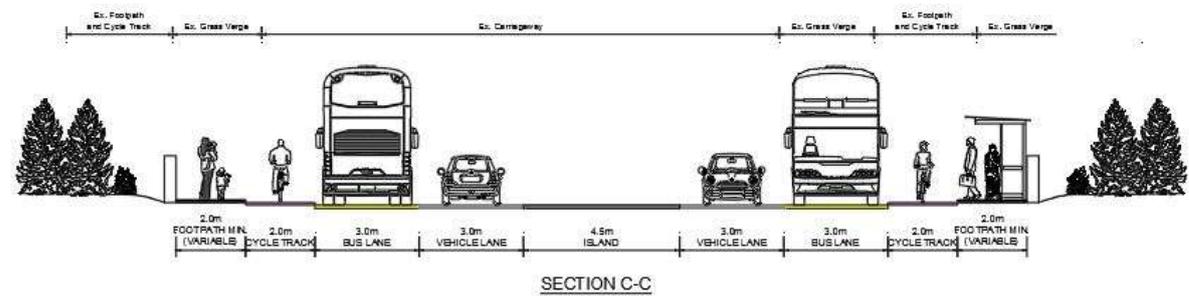
Section B-B and C-C, shown in **Figure 7.3 & 7.4** below, are indicative of the road space redistribution along the Ballycoolin Road. From here and along until the bridge over the M50 (on the Cappagh Road) there are bus lanes proposed in both directions. Dedicated raised adjacent cycle tracks of 2m minimum width and footpaths of 2m minimum widths will be provided along this length in both directions where possible. This will be achieved by redistributing the existing central island and adjacent grass verges along its length.

Figure 7.3: Section B-B of TF03 Route Option



Section CC, in **Figure 7.4** below, shows road widening proposed at bus stop 7238 (Ballycoolin Road & Stadium Business Park) to fit the proposed bus, traffic, pedestrian and cycling facilities.

Figure 7.4: Section C-C of TF03 Route Option



7.1.2 Section 2_Sub-Section A: M50 to Phibsborough

Using the same methodology utilised for Section 1_Tyrrelstown to M50, regarding cost and journey time benefits, option FP03 was the most favourable of all the Section 2_Sub-Section A: M50 to Phibsborough routes.

Regarding integration, despite the fact that cycling integration along Church Street is not achievable, the routing of cycling facilities along Mellows Road and the high population catchment of the route makes the FP03 route very similar to the FP01 (B) route, with FP01 (B) running along Mellows Road and onto the R135 straight after the bridge. Therefore, these options were equivalent from an integration point of view. However the new access to Finglas Town that FP01 (A), FP01 (B) and FP03 routes

include, improves the area, therefore creating an open space for pedestrians and bus users which means these routes have a more favourable land use integration than the routes FP02 and FP04 that do not serve Finglas Town centre area.

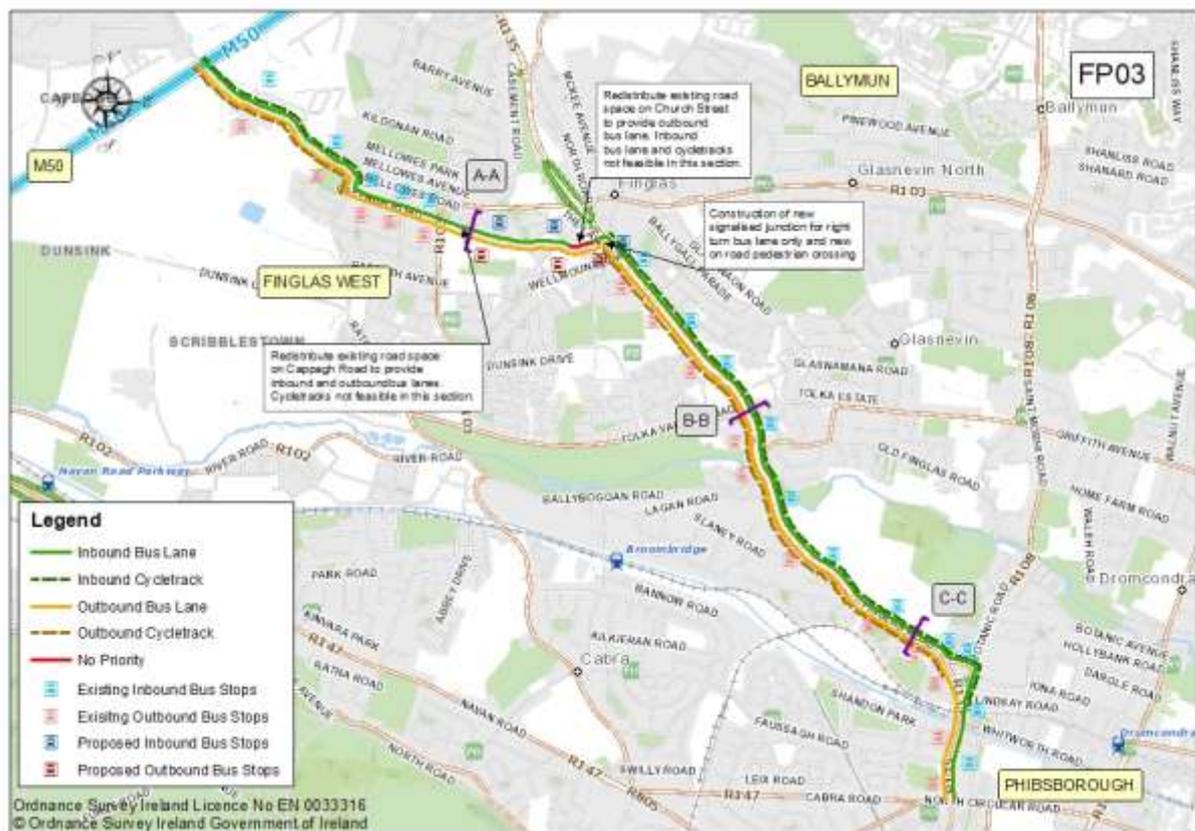
Under 'Accessibility and Social Inclusion', route option TF04 directly serve more key trip attractors.

However TF03 and TF04 has some advantages over route options TF01 and TF02. They are as a result of less land to be acquired therefore having a lower potential impact on flora & fauna.

Therefore, the **FP03** route was found to be the best overall route for this section and was named the sections preferred route.

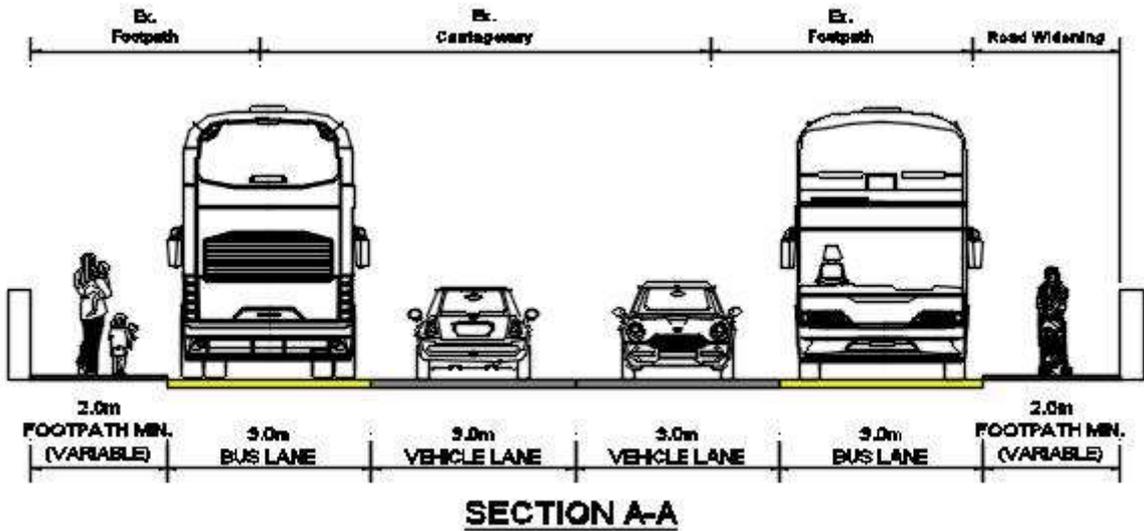
Route FP03 continues along Cappagh Road from the bridge over the M50, onto Church Street. From here it intersects with the Finglas Road and finally terminates on the Phibsborough Road with its intersection with the North Circular Road.

Figure 7.5: Preferred Route for Section 2_Sub-section A: M50 to Phibsborough



Section A-A, shown in **Figure 7.6**, shows the road space allocation on Cappagh Road after its junction with Cardiffsbridge Road. Due to the proximity of adjacent residential properties, cycling facilities would not be feasible along this section of the route. However, cyclists would be diverted along Melloes Road (Secondary Cycle Route No. 4) and would tie into the proposed scheme through Finglas Village. An inbound bus lane and outbound bus lane would be provided along with 2 traffic lanes (one in each direction) and pedestrian facilities (2m width where possible in both directions) for this section of the proposed route along Cappagh road and Church Street.

Figure 7.6: Section A-A of FP03 Route Option



Section B-B, shown in **Figure 7.7** below, shows the typical cross section along the Finglas Road (R135) where full bus priority and cycling facilities will be provided, along with traffic and pedestrian facilities and central reservation for vegetation.

Figure 7.7: Section B-B of FP03 Route Option

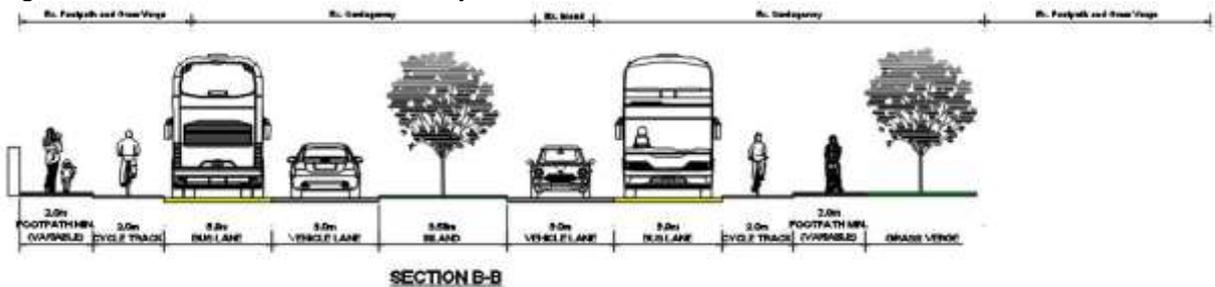
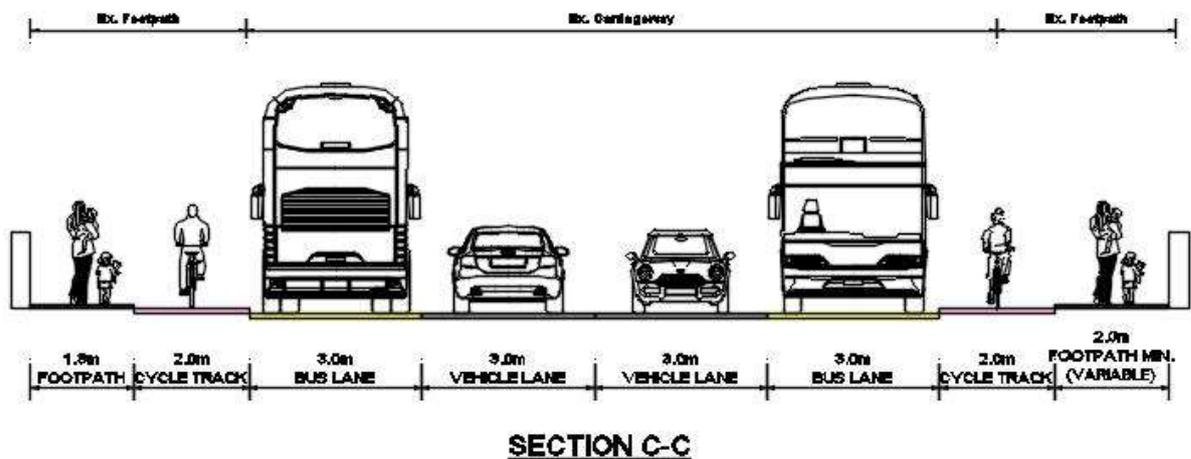


Figure 7.8 shows Section C-C on the Finglas Road on approach to Prospect Way. It is proposed to provide bus lanes, cycle facilities and footpaths in both directions.

Figure 7.8: Section C-C of FP03 Route Option



The route continues onto Prospect Road and Phibsborough Road to where it terminates at intersection with the North Circular Road. Due to the proximity of residential and business properties along this

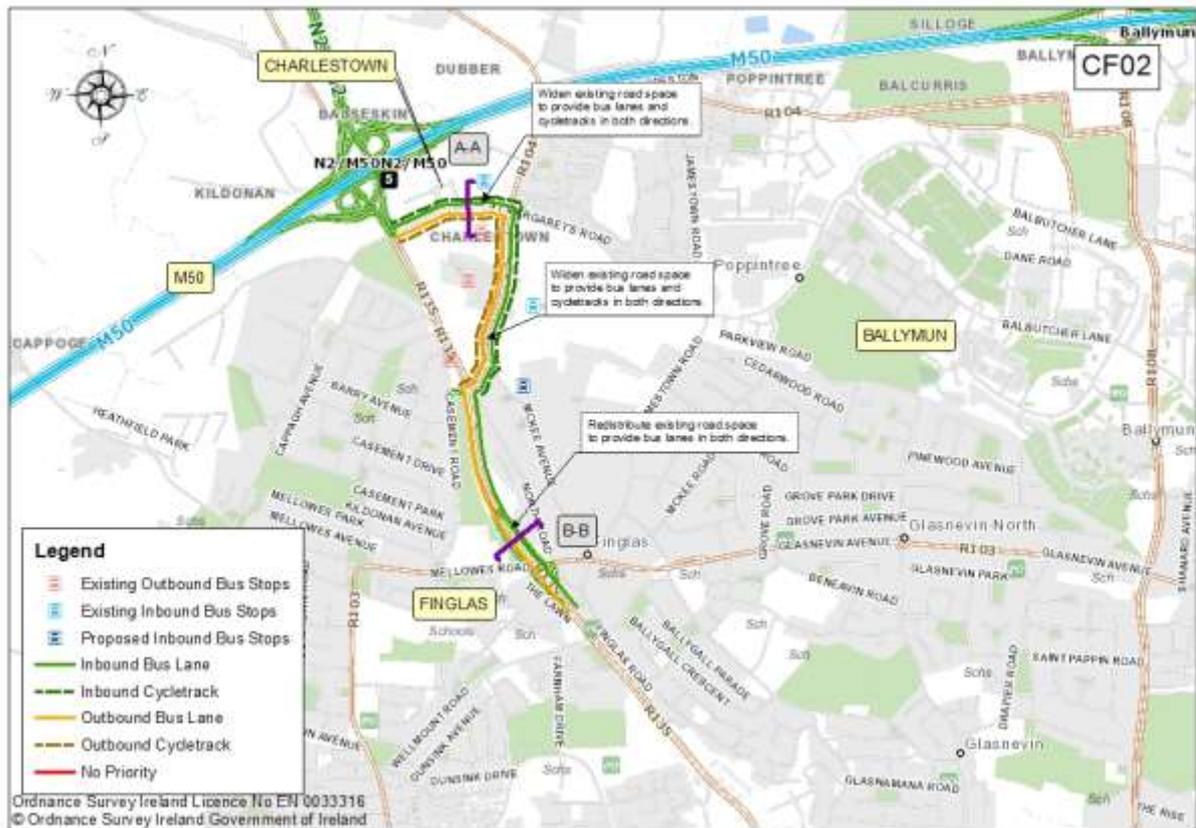
section in both directions cycle facilities are not feasible, therefore priority bus lanes and pedestrian footpaths would be provided in both directions.

7.1.3 Section 2_Sub-section B: Charlestown to Finglas

In this section, route CF01, which runs along the Finglas Road (R135) straight from the intersection of the North Road and Charlestown Place, is the best route option in terms of economic aspects. This route, however, performs the worst in terms of integration, with the CF03 route performing best in this performance category. However, considering all aspects, including accessibility, environmental and cost, route **CF02** performed the best overall for this section and was named the preferred route.

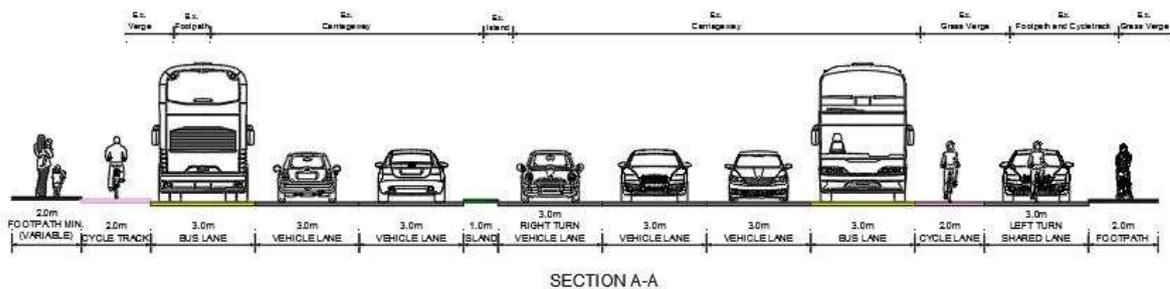
The CF02 route runs along Charlestown PI and St Margaret's Road to the Finglas Road (R135). **Figure 7.9** below shows the preferred route.

Figure 7.9: Preferred Route for Section 2_Sub-section B: Charlestown to Finglas



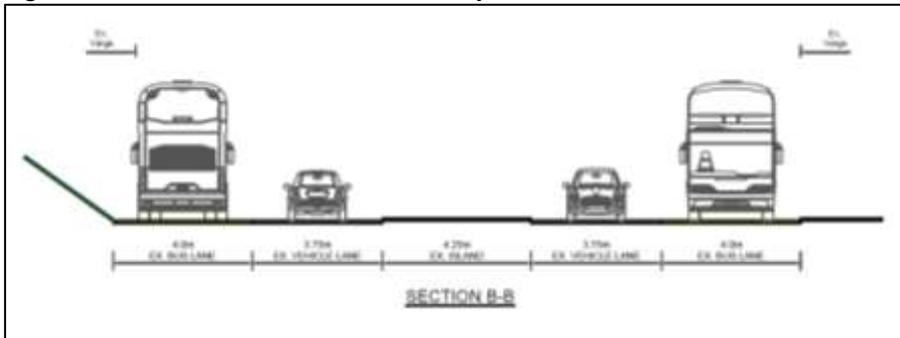
Section A-A, in **Figure 7.10**, shows the cross section at Charlestown Road where widening works will be carried out in order to fit the proposed traffic, bus, cycling and pedestrian facilities.

Figure 7.10: Section A-A of CF02 Route Option



Section B-B, **Figure 7.11** below shows road distribution along the R135 where bus lanes and traffic lanes are provided while the cycling and pedestrian facilities are diverted along McKee Avenue.

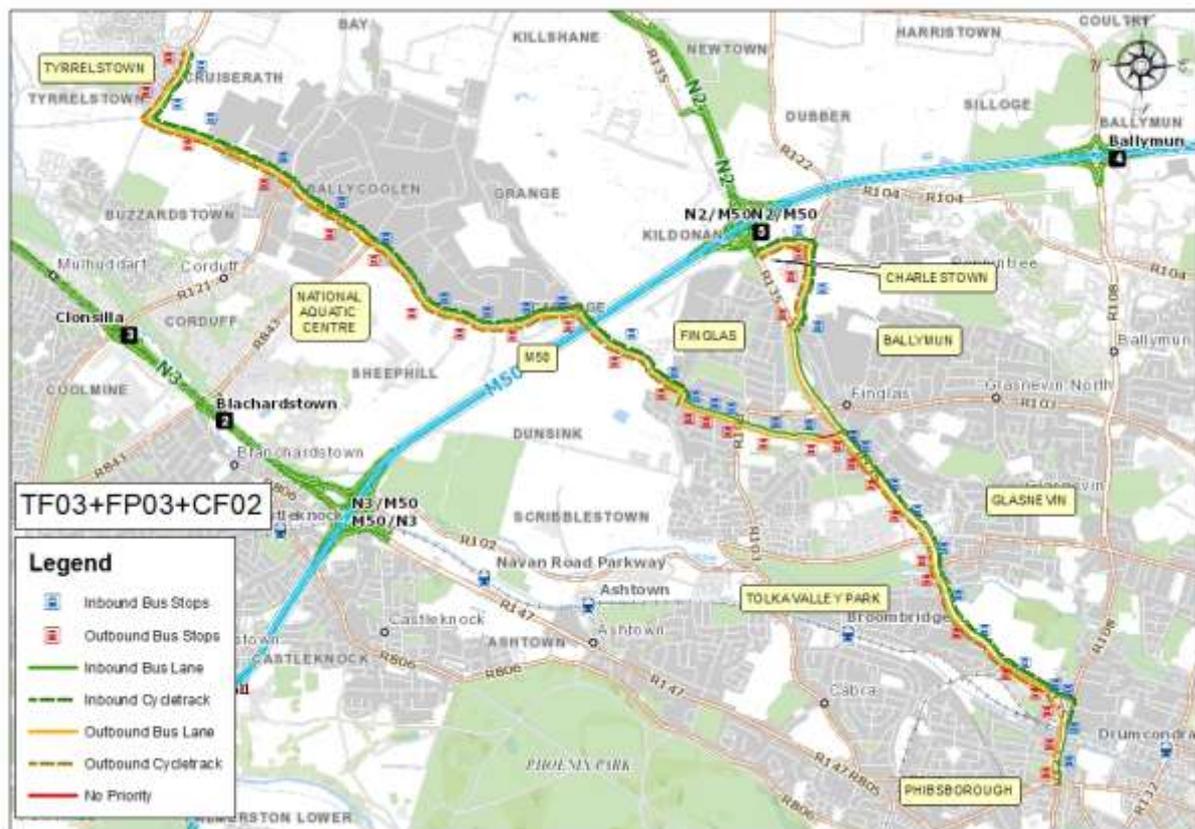
Figure 7.11: Section B-B of CF02 Route Option



7.2 Recommended Preferred Route

Based on the conclusions from the route options assessment process, the recommended preferred route for the proposed scheme is presented in **Figure 7.12**.

Figure 7.12: Recommended Preferred Route



Describing the emerging preferred route in the Tyrrelstown to city centre direction, the CBC commences at Tyrrelstown Boulevard roundabout and travels south to the roundabout where R121 intersects with Damastown Avenue. From here it continues east along the Cruiserath Road until Ballycoolin roundabout. It continues along Ballycoolin Road through to Snugborough roundabout until the Cappagh Road roundabout. It is proposed to convert the three roundabouts on the Ballycoolin Road to signalised junctions to improve bus priority (by providing bus lanes to the stop lines and left turn lanes where left turn public traffic is deemed to be high from site observations) as well as safety for pedestrian and cyclists. It is proposed to agree with IDA a pedestrian access to Ballycoolin Industrial State midway along the Ballycoolin Road. From the Cappagh Road roundabout, the route travels south onto

the bridge over the M50, where the construction of a new bridge is proposed to provide the bus lanes, cycling and pedestrian facilities. Along this section, it is proposed; to provide new and upgraded cycle and pedestrian facilities, and to redistribute the road space to provide the new bus lanes. The cycle facilities proposed would provide a raised adjacent dedicated facility of 2m minimum width, along with 2m minimum width for footpaths where possible. The existing grass verges, central medians and central islands would be removed in order to accommodate any widening for the pro-posed scheme. The existing traffic lane layout would be maintained throughout the section (unless otherwise stated) but would have reduced traffic lane widths to 3m. New bus stops in both directions are proposed; adjacent to the Tyrrelstown Boulevard roundabout, between Boulevard Bealing Village Road and Damastown Avenue on the R121, adjacent to the proposed new toucan crossing at the entrance to Bristol Myers Squibb, on the Ballycoolin Road adjacent to its junction with the Cappagh Road.

After travelling onto the bridge over the M50 the proposed CBC route continues along Cappagh Road and turns east at the junction with Ratoath Road to continue along the Cappagh Road until the intersection of the Finglas Road (R135) and Church Street. It is proposed to construct a new junction and install a bus gate "bus only" right turn onto the R135 at the end of Church Street. On the Cappagh Road from its junction with the Ratoath Road and continuing onto Church Street, cycle facilities are not feasible in this section due to the proximity of adjacent residential and commercial properties. However there is adequate space available to provide bus lanes, cycle tracks and pedestrian facilities in both directions for the remainder of this section. The cycle tracks would provide a raised adjacent dedicated facility of 2m minimum width, along with 2m minimum width for footpaths where possible. Widening would be a combination of private and public land take, including setting back of boundaries, utilising grass verges and central medians. A new at grade pedestrian crossing connecting Finglas Town Centre at Church St will be also provided. New bus stops in both directions are proposed; on Cappagh Road adjacent to Coláiste Eoin and Church Street adjacent to the Finglas Parochial National School, south of the junction of where Church Street meets Finglas Road. The existing traffic lane layout would be maintained throughout the section (unless otherwise stated) but would have reduced traffic lane widths to 3m.

From here, the route travels along the Finglas Road (R135) until Prospect Avenue. Along this section new and upgraded bus lanes, cycle and pedestrian facilities would be provided along its length in both directions. It is pro-posed that all the junctions in this section would be upgraded to provide for more bus priority. Bus lanes will be provided right up to the stop lines of junctions, along with the provision of left turn lanes for public traffic (where there is large left turning traffic volumes form on site observations). In order to accommodate the proposed scheme, route widening and redistribution of the existing road space would be required, in the form of utilising grass verges and central medians. Along this section of the proposed route the existing traffic lane layout would be maintained throughout (unless otherwise stated) but would have reduced traffic lane widths to 3m.

The inbound route continues along Prospect Avenue and Botanic Road, and re-joins the outbound route section on Prospect Road to the bridge over the Royal Canal. The outbound route travels from Prospect Road and diverges left to the Finglas Road. Bus lanes, cycle and pedestrian facilities are proposed on Prospect Avenue and Botanic Road, but are not feasible on Prospect Road (in both directions) and the beginning of the Finglas road in the outbound direction. The cycle tracks would provide a raised adjacent dedicated facility of 2m minimum width, along with 2m minimum width for footpaths where possible. Outbound on the Finglas Road where it merges with Prospect Avenue, the junction would be upgraded to allow for more bus priority, by the provision of a straight ahead bus lane and a dedicated right turn bus lane. Widening would be required in this section and would mainly consist of private land take including setting back of residential boundaries.

The route then continues from the bridge over the Royal Canal onto the Phibsborough Road to its intersection with the North Circular Road. Bus lanes of 4m in width are proposed in order to create a shared lane for buses and cyclists along with a 2m wide pedestrian facilities are proposed along this section. Widening is not feasible in this section due to the proximity of building lines. Existing pedestrian crossings at Glasnevin Cemetery, Botanic Road and Phibsborough Road will be upgraded to toucan crossings.

The northern section of the CBC route begins on Charlestown Place at its intersection with the North Road (R135) until it intersects with Saint Margaret's Road. From there it travels south along Saint Margaret's Road, intersects with the Finglas Road and finally links up with the CBC route at the upgraded junction at Church Street. It is proposed to provide bus lanes, cycle and pedestrian facilities in both directions along Charlestown Place and Saint Margaret's Road. The cycle tracks would provide a raised adjacent dedicated facility of 2m minimum width, along with 2m minimum width for footpaths where possible. Bus lanes are proposed along the Finglas Road. Widening is proposed to upgrade the junctions and merges along this section to provide improved bus priority (by providing; bus lanes up to the stop lines and, left and right turn only bus lanes). One new inbound bus stop is proposed opposite the entrance of Lidl. Widening would be a combination of private and public land take, including setting back of boundaries, utilising grass verges and central medians.

7.3 Proposed Stop Locations and Route Catchments

A total of 64 stops are distributed along the route, 17 of which are new and have been located in order to maximise accessibility to the CBC service and serve major trip attractors (shopping centres, business parks, residential areas).

The locations of the new proposed stops are described in **Table 8.1**. In order to facilitate the description process, the stops have been described by pairs (inbound and outbound stops).

Table 7.1: CBC New Proposed Stop Locations and Description

Stop Name	Location	Stop Description
Tyrrelstown Boulevard.	R121 just south of Boulevard roundabout.	Directly serves Tyrrelstown commercial centre, Tyrrelstown Educate Together National School and north east Tyrrelstown residential area.
Tyrrelstown South.	R121 just south of Boulevard Bealing roundabout.	Serves south east Tyrrelstown residential area and Powerstown Educate Together NS Tyrrelstown.
Ballycoolin Road West	Ballycoolin Road, to the north west of the entrance of Bristol Myers Squibb.	Directly services Blanchardstown Corporate Park and College Business and Technology Park
Ballycoolin Road	Ballycoolin Road, at the entrance of the IDA road.	Directly serves Ballycoolin Industrial Estate through the pedestrian gate accessing the IDA road. Access to be confirmed with IDA Ireland.
Ballycoolin Road East	On approach to junction of Ballycoolin Road and Cappagh Road	Directly services Rosemount Business Park and Keypoint Business Park
Cappagh Road	R103, inbound and outbound stops located east side of the exiting mini roundabout.	Directly serves Finglas West residential area along with a local schools in the area.
Church St	Inbound stop located to the west of Glebe View on Cappagh Road. Outbound stop located to the east of Glebe View on Church Street.	Directly serves Finglas West residential area along with a local schools in the area.
Finglas Village	R135, just south of the proposed new signalised junction at Church Street.	Serves Finglas Village centre through the existing pedestrian bridge and the proposed new on road pedestrian crossing.
Roundabout McKee Avenue (<u>inbound</u>)	R104, inbound stop just in front of the existing outbound bus stop.	Serves commercial and residential area north Finglas as well as the area west R135 through the existing pedestrian bridge.

Residential and employment catchments (5, 10, 15 minute walk distances) along the preferred route, based on the stop locations identified, are presented in **Figure 7.13**.

Figure 7.13: Preferred Route 5, 10 and 15 min Walk Catchments

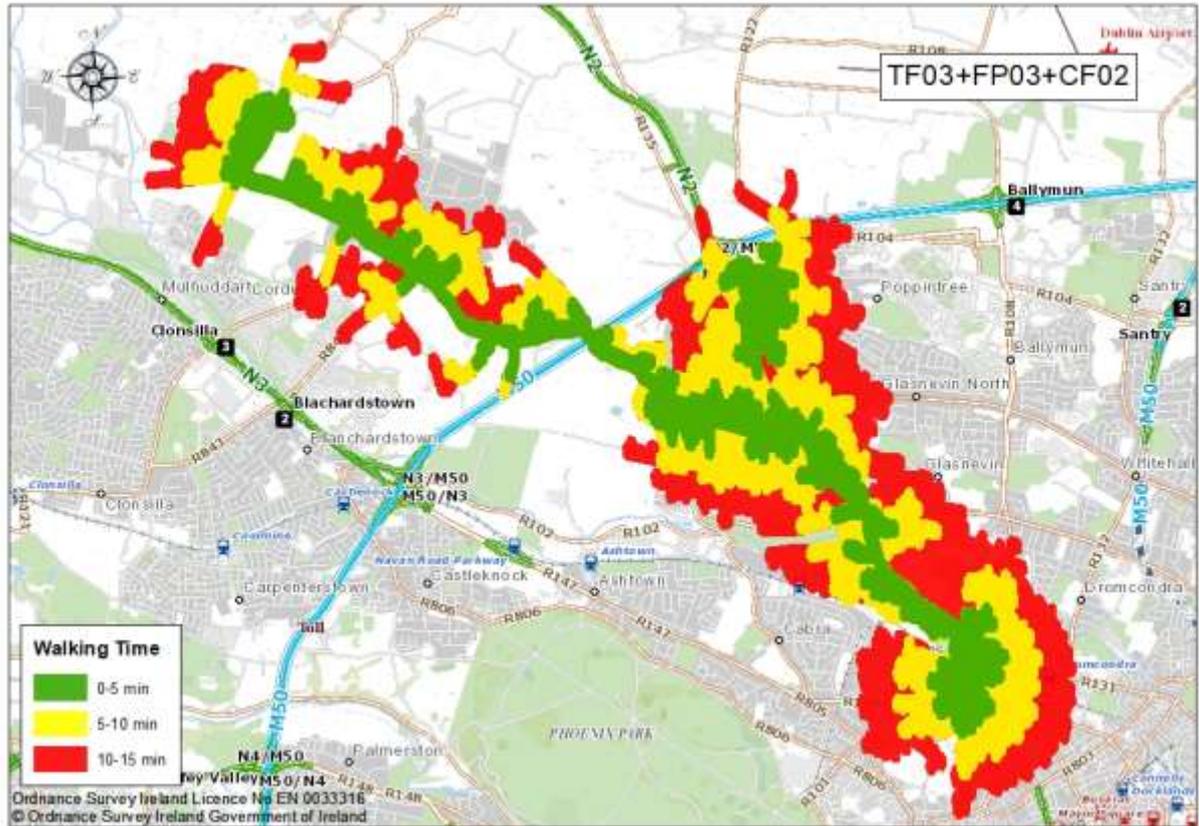


Table 7.2 presents a summary of existing catchment populations along the route.

Table 7.2: Preferred Route Catchments

Walk Distance from CBC Stop	Residential Population	Employment Population	Educational Population
0 – 5 mins	19914	33513	17747
5 – 10 mins	8067	13923	11603
10 – 15 mins	2885	601	2069
15 mins (total)	30866	48037	31419

7.4 Concept Scheme Design Sections Descriptions

A concept scheme has been undertaken for the Emerging Preferred Route showing the proposed bus and cycle facilities in more detail. These drawings are included in **Appendix 2**.

7.4.1 Section 1_Tyrrelstown to M50

Length of Scheme Section: 5.1km

Indicative Infrastructure Cost: €17.6m

Indicative Land Acquisition Cost: €2.6m

Total Indicative Cost of Scheme Section: €20.2m

It is proposed to provide priority bus lanes along with upgraded cycle tracks and pedestrian facilities in both directions from Tyrrelstown Boulevard roundabout along the R121 road. The cycle tracks would provide a raised adjacent dedicated facility of 2m minimum width, along with 2m minimum width for footpaths where possible. Along the entire length of this section there is adequate space available for widening as there is central islands, central medians and grass verges in both directions. A significant number of young trees in the grass verges would be removed to cater for the widening. The roundabouts on the R121 with its intersections of the Boulevard Bealing Village Road and the Damastown Avenue would be upgraded to cater for a bus priority lanes through the roundabouts in the inbound direction and will provide bus lanes right up to the stops lines in the outbound direction. New pedestrian crossings would be provided at these upgraded roundabouts, also at the upgraded Ballycoolin signalised junction along with a toucan crossing adjacent to Bristol Myers Squibb.

It is proposed to provide bus lanes, cycle and pedestrian facilities in both directions along the Ballycoolin Road from its intersections with the Blanchardstown Road North and the Snugborough road. The cycle tracks would provide a raised adjacent dedicated facility of 2m minimum width, along with 2m minimum width for footpath where possible. Along the entire length of this section there is adequate space available for widening as there is central islands, central medians and grass verges in both directions that can be utilised to facilitate the proposed scheme. A significant number of young trees in the grass verges would be removed to cater for the widening. The existing traffic lane layout would be maintained throughout the section (unless otherwise stated) but would have reduced traffic lane widths to 3m.

From the Snugborough Roundabout and along until the bridge over the M50 on the Cappagh Road there are bus lanes proposed in both directions. Dedicated raised adjacent cycle tracks of 2m minimum width and footpaths of 2m minimum widths will be provided along this length in both directions where possible. This will be achieved by redistributing the existing central island and adjacent grass verges along its length. This will result in the removal of a number of young trees in the grass verge. Approx. 50m of boundary would be set back by 2m to accommodate the widening adjacent to the entrance of 'The Cobbles' housing estate. Further widening to accommodate a separate 'straight-on' and 'left turn' traffic lane will be required at the entrance to Stadium Business Park and Premier Business Park. This will be in the form of setting back the existing boundary by 2m over a length of 50m at both locations.

On approach to the junction of Ballycoolin Road and Cappagh Road public land adjacent to the Cappoge Cottages in the inbound direction will require approx. 2m over a length of 70m to provide a left turn pocket for public traffic. South of the Cappoge Cottages, in the outbound direction existing concrete bollards would need to be reset back to the entrance of the adjacent property (approx. length of 20m). In order to accommodate a new bridge over the M50 public and private land take would be required on the inbound and outbound approaches to the existing bridge. The boundary would be set back 17m over a length of 80m on the northern approach and would require the removal of dense vegetation. Similarly on the southern approach the boundaries would be set back by 17m over a length of 170m in the along with the removal of a large earth mound in the inbound direction, while in the out bound direction the boundary would be set back by 2m over a length of 170m.

Ballycoolin roundabout and Snugborough roundabout would be upgraded to signalised junctions in order to minimise the potential delays and improve bus priority through the junction. Bus lanes will be provided right up to the stop lines of these junctions, along with the provision of left turn lanes for public traffic (where there is large left turning traffic volumes form on site observations). New pedestrian crossings would be provided at the upgraded Ballycoolin signalised junction along with a toucan crossing adjacent to Dataplex/IBM Ireland. Additionally, a new bridge over the M50 would be constructed to provide the required cycling/pedestrian/traffic/CBC facilities. A new bus stop in both directions is proposed adjacent to the IBM Ireland.

For locations and descriptions of proposed new bus stop locations refer to section '7.3 Proposed Stop Locations and Route Catchments', Table 7.1.

7.4.2 Section 2_Sub-Section A: M50 to Phibsborough

Length of Scheme Section: 6.3km

Indicative Infrastructure Cost: €21.5m

Indicative Land Acquisition Cost: €5.3m

Total Indicative Cost of Scheme Section: €26.8m

This route links up with Section 1: Tyrrelstown to M50 at the bridge over the M50 on the Cappagh Road. It is proposed to provide (in both directions) bus lanes, new and upgraded raised adjacent cycle lanes of 2m minimum width and 2m wide footpaths where possible. Existing road space would be re-distributed on the Cappagh Road from its bridge over the M50 to where it joins the Ratoath Road. Widening will be required in the form of setting back private boundaries in this section. Approx. 70m of boundary would be set back by 3m to accommodate the widening adjacent to the Cappagh National Orthopaedic Hospital and 100m of existing boundary would be set back by 3m to accommodate the widening adjacent to the Heathfield Housing estate potentially impacting on residential parking. The existing traffic lane layout would be maintained throughout the section (unless otherwise stated) but would have reduced traffic lane widths to 3m. The existing junction of Cappagh Road and Ratoath Road will have its signalised junction upgraded to improve bus priority. Adjacent public land around the junction in the form of grassed areas would be required to accommodate bus lanes up to the stops lines at this junction.

From this junction it is proposed to provide (in both directions) bus lanes and footpaths of 2m minimum width where possible on the Cappagh Road to its junction with Cardiffsbridge Road. Dedicated raised cycling facilities are not feasible on this section, due to the proximity of the existing adjacent residential properties and the need to retain minimum driveway lengths of 5m. Cyclists would share bus lanes with buses for this length. As a result existing on street parking would be restricted due to the provision of bus lanes. Most properties have an alternative of off street parking by using the surrounding streets and for the approx. 20 properties that don't the scheme would maintain a minimum driveway length 5m. Land take from the existing residences located on the Cappagh Road between Abbotstown Road and Cardiffsbridge Road in the outbound direction would require setback of their boundary walls by approximately 2.5m, therefore reducing driveway lengths to a minimum of 5m. On the opposite side of the road to these houses, the widening of 3m over a length of 250m to the existing green space will

be required. The existing traffic lane layout would be maintained throughout the section (unless otherwise stated) but would have reduced traffic lane widths to 3m.

This route travels along Cappagh Road, where it continues onto Church Street where joins the Finglas Road. It is proposed to provide bus lanes and footpaths in both directions along this length of this route section. Due to the proximity of adjacent properties along this section, dedicated cycling facilities are not feasible. In order to accommodate priority bus lanes widening will be undertaken at several locations along this section. The existing boundary would be set back by approx. 2m at the Church of the Annunciation, Coláiste Eoin, Saint Fergal Boys National School and Kingdom Hall of Jehovah's Witness. In all these cases green space would be required with no affect to parking. The existing boundary would be set back by approx. 1.5m over a section of 40m at Mellows Court and by 2.5m over a distance of 50m at Finglas Parochial National School. Due to the proximity of residential and commercial properties on Church Street an inbound bus lane is not feasible over a length of 150m on its approach to the junction with the Finglas Road. On street parking along the entire length of this route will be removed to accommodate the proposed scheme, except for parking allowances adjacent to the businesses on church street and adjacent to the Church of the Annunciation. Alternative parking could be accommodated on adjacent side streets.

The roundabout at Cappagh Road and Finglaswood Road will be converted to a 'T' junction allowing priority for the Cappagh Road and bus lane priority. The existing traffic lane layout would be maintained throughout this section but would have a reduced traffic lane width of 3m in each direction.

Church Street/Finglas Road (R135) junction would be upgraded to a signalised junction, facilitating a 'bus only' right turn (in the inbound direction) and provision of a new pedestrian crossing, enhancing pedestrian access to Finglas Town Centre. As a result the existing pedestrian bridge that facilitates pedestrians to safely cross over the Finglas Road would be removed

Two bus stops on either side will be provided on Cappagh Road adjacent to Coláiste Eoin and Church Street adjacent to the Finglas Parochial National School.

The route continues on the Finglas Road to where it intersects with Tolka Valley Road. It is proposed to provide bus lanes, new and upgraded cycle tracks and footpaths in both directions along this length of this route section. The cycle tracks would provide a raised adjacent dedicated facility of 2m minimum width, along with 2m minimum width for footpath where possible. Along the entire length of this section there is adequate space available for widening as the space would be redistributed from central grass median and grass verge (in both directions) to accommodate the proposed route. As a result a number of trees will be removed in the verges and median.

All junctions along this section will be upgraded to provide increased bus priority. Bus lanes would be provided right up the stop lines of all junctions. The existing traffic lane layout would be maintained throughout this section but would have a reduced traffic lane width of 3m in each direction.

When examining the Finglas Road between its junction with the Tolka Valley Road to where it diverges onto Prospect Avenue existing road space will be distributed to provide bus lanes, raised adjacent cycle tracks minimum 2m wide and footpaths 2m minimum width where possible in both directions. This will be achieved by redistributing the existing central median and adjacent grass verges along its length. This will result in the removal of a number of trees in the both the central median and grass verge along the length of this section. The existing traffic lane layout would be maintained throughout the section (unless otherwise stated) but would have reduced traffic lane widths to 3m.

Outbound on the Phibsborough Road from the North Circular Road to the junction of Finglas Road and Dalcassian Downs bus priority lanes will be provided but the provision of cycle tracks are not feasible in this section. This is due to the proximity of both residential and commercial properties along its length.

Existing perpendicular parking (approx. 28 spaces) opposite Glasnevin Cemetery entrance will be revised to parallel parking (approx. 11), along with a proposal to setback the adjacent boundary by 3m over a length of 150m to accommodate the proposed scheme. The junctions on the Finglas Road with; Tolka Valley road, Old Finglas Road, Ballyboggan Road, Slaney Road and Claremont Road would be upgraded with new signals to improve bus priority with bus lanes proposed right up to the stop line.

Outbound on the Finglas Road with its junction with Prospect Avenue, the existing road space will be revised to add an extra outbound bus lane through the junction to the Finglas Road. The existing out-

bound traffic lane will be maintained in this location but reduced in width to 3m. Widening will be required to facilitate this outbound bus lane in the form of private land take. The existing boundary would be set back by approx. 1m for 19 residential properties (while at the same time retaining a 5m zone to the front of the houses) and approx. 3m along the front of St Vincents Secondary School. Of the effected residents along this section, only 3 use a front drive way for parking and alternative parking would be arranged on the adjacent side street to accommodate these residential properties.

The Botanic Road between Prospect Avenue and the beginning of the Finglas Road would require private land take from adjacent properties to accommodate the provision of a 2m wide dedicated cycle track. The existing boundary would be set back by approx. 1m for 21 residential properties (while at the same time retaining a 5m zone to the front of the houses). The existing traffic lane layout would be maintained throughout the section (unless otherwise stated) but would have reduced traffic lane widths to 3m.

On Botanic Road from the Lindsay Road, continuing onto the Phibsborough Road to its junction with North Circular Road, raised adjacent cycle tracks are not feasible along this section due to the proximity of both residential and business properties along its length in both directions. Alternatively cyclists could be accommodated by sharing road space on the Royal Canal Bank Road with public traffic, which is a designated Primary Cycling route (No. 3B). However the bus lanes in both directions on the Phibsborough Road from the bridge over the Royal Canal to the its junction with the North Circular Road will be provided with 4m wide in order to accommodate both buses and cyclists.

Existing pedestrian crossings at Glasnevin Cemetery, Botanic Road and Phibsborough Road will be upgraded to toucan crossings.

For locations and descriptions of proposed new bus stop locations refer to section '7.3 Proposed Stop Locations and Route Catchments', Table 7.1.

7.4.3 Section 2_Sub-Section B: Charlestown to Finglas

Length of Scheme Section: 2.2km

Indicative Infrastructure Cost: €6.3m

Indicative Land Acquisition Cost: €1.5m

Total Indicative Cost of Scheme Section: €7.8m

It is proposed to provide priority bus lanes along with upgraded cycle tracks and pedestrian facilities in both directions on Charlestown Place and Saint Margaret's Road from their junctions with the North Road and the Finglas Road. The cycle tracks would provide a raised adjacent dedicated facility of 2m minimum width, along with 2m minimum width for footpaths where possible. In order to provide bus lanes, up-graded cycle and footpath facilities along this section, land take would be required in the form of the adjacent private land in the outbound direction. The existing boundary would be setback by 5m over a length of 200m. Adjacent to the Charlestown Shopping Centre the existing boundary would be setback by 2m over a 70m length, to facilitate a right turn bus lane from the Charlestown Place Road to Saint Margaret's Road.

Further land take will be required along Saint Margaret's road. In the inbound direction the existing boundary would be set back by approx.; 4m over a length of 70m of green space adjacent to 'Golt-food', 4m over a length of 180m adjacent to commercial properties (Finglas Auto Parts, Polonez Cash and Carry, Manhattan Peanuts Ltd and Ashtown Packaging) resulting in a loss of car parking spaces, however alternative car parking could be achieved from within these properties. The existing boundary in the outbound direction would be set back by approx.; 1m over a length of 70m adjacent to an existing astro turf pitch, 3m over a length of 100m for 6 no. residential properties and 3m over a length of 60m for 2no. residential properties (while at the same time retaining a 5m zone to the front of the houses). The existing boundary adjacent to the 'Atlas Autoservice' would be set back by approx. 4m over a length of 60m resulting in the loss of 14 car parking spaces, however alternative car parking could be achieved from surrounding businesses.

Further widening will be required from the entrance of Lidl on Saint Margaret's Road to its intersection with the North Road. The existing boundary at Lidl and North Road Motor Company is proposed to be set back by approx. 2m, resulting in the loss of car parking, however car parking layout could be re-

vised to mitigate the loss of parking. A significant amount of trees will be removed to facilitate the widening.

At the junction of Saint Margaret's Road and Melville Road the existing junction layout would be revised to allow for improved bus priority. In the inbound direction the road space would be revised to provide a bus priority right turn lane. Similarly in the outbound direction the road space would be revised to provide a bus priority left turn lane. The existing mini roundabout at the intersection of Saint Margaret's Road and McKee Avenue would be upgraded to a signalised junction with bus lanes to be provided to the stop lines. The existing traffic lane layout would be maintained throughout this section (unless otherwise stated) but would have a reduced traffic lane width of 3m in each direction.

For locations and descriptions of proposed new bus stop locations refer to section '7.3 Proposed Stop Locations and Route Catchments', Table 7.1.

7.5 Concept Scheme Design Summary

7.5.1 Proposed Infrastructure

The Emerging Preferred Route is 13.6km long from end to end. The existing bus priority infrastructure along the Emerging Preferred Route is approximately only 25% (3.5km) in the inbound direction and 15% (2.1km) in the outbound direction. The proposed scheme would improve bus priority infrastructure to 98.5% (13.4km) in the inbound and 100% (13.6km) in the outbound. In general, the proposed scheme will provide increase bus priority through junctions, particularly by upgrading the signalised junctions and the existing roundabouts on the Ballycoolin Road. This increased priority will ensure journey time reliability and reduce delays. Bus priority is not provided inbound through Church St for approx. 200m on approach to the junction with Finglas Road due to lack of available space and existing low traffic volume. An inbound bus gate is proposed for right turning buses at the junction of Church Street/Finglas Road.

In addition to bus priority, new and upgraded cycle facilities are proposed along the entire length of the proposed CBC route, except for the section along Cappagh road and Church Street between their junctions with the Ratoath Road and the Finglas Road. Similarly on the Charlestown to Finglas section of the proposed scheme cycle facilities are proposed along the entire length, except for the section along the Finglas Road between its intersection with the Saint Margaret Road and Church Street. Dedicated raised adjacent cycle tracks (in both directions) of 2m minimum width in accordance with the National Cycling manual would be provided, along with the provision of 2m wide footpaths (in both directions) where possible. A bus gate to allow right turn only for buses is proposed in the inbound direction on Church Street at its intersection with the Finglas Road. Pedestrian safety would also be improved at a number of junctions due to signalised crossings and reduced speeds. Furthermore new toucan crossings are proposed; adjacent to Bristol Myers Squibb and IBM Ireland on the Ballycoolin Road, along with the upgrade of all existing pedestrian crossings to toucan crossings.

For locations and descriptions of proposed new bus stop locations refer to section '7.3 Proposed Stop Locations and Route Catchments', Table 7.1.

A new bridge is proposed over the M50 at the location of the existing bridge on the Cappagh Road, to ensure that the required traffic/pedestrian/cycling facilities are provided.

7.5.2 Cost Estimate

A high level cost estimate was prepared based on the concept scheme design discussed above. From this, the proposed CBC scheme infrastructure cost is expected to be approximately €55m.

7.5.3 Scheme Benefits

The majority of current bus routes travel through Ballycoolin Business Park (routes: 220, 236 and 38) and Finglas Town Centre (routes: 220 and 40). The new route and the provision of new bus stops make the CBC accessible for people while it avoids congested areas.

Through the provision of increased bus priority infrastructure, the proposed scheme would improve both the overall journey times for buses along the route and the journey time reliability. A review of

available journey time data along the route illustrates the issues that will be largely addressed by the proposed scheme.

Bus route 40D generally overlaps with the emerging preferred route (between Tyrrelstown and Parnell Street). By examining the automatic vehicle location (AVL) data from Dublin Bus, currently there are issues with journey time reliability along the route.

Journey times during the core hours of bus operation (7:00 – 19:00) are observed to vary between 40 to 46 minutes in the inbound direction and 42 minutes and 44 minutes in the outbound direction. The variation in traffic times is most likely due to the lack of bus priority on large sections of the route and compounded by traffic congestion and passenger boarding times which are high. Meanwhile in the late evening (after 19:00 hrs) compared to the AM peak (07:00 to 09:30), average journey times and average speeds are significantly improved. After 19:00 hrs, it was observed that the inbound average journey time reduced to 32 minutes and 33 minutes in the outbound direction. This reflects the benefits of an uncongested network. Therefore a bus priority network allows buses to move along the route quicker and with more reliable journey times.

Key to the provision of a high quality bus network is journey time reliability which makes the system more efficient in terms of number of people moved by the same level of vehicles and driver resources, in addition to user satisfaction in terms of reliability of their journey time and bus arrivals. This scheme will address the current journey time variability at key locations including at Finglas Village, the Finglas Road, Jamestown Road, the Ballycoolin Roundabout and the Snugborough Roundabout.

The proposed CBC would cater for the large population catchment to the south-west of Finglas area.

Additionally to the proposed bus priority infrastructure, the proposed scheme would upgrade the existing priority junctions along Ballycoolin Road to signalised junctions which would also reduce delays and ensure reliability. Also, the proposed new “bus only” right turn lane and on-road pedestrian crossing at the junction of Church St and R135 would:

- Provide a bus gate facility onto the Finglas Road (R135) in addition to reducing the severance of the Finglas Road for pedestrians and cyclists and,
- Enhance the public realm area around Finglas Town Centre

In reference to GDA Cycle Network Plan, the scheme will deliver 3.2 km of new and upgraded primary cycle route no. 3B. This section includes the Finglas Road from its junction with Church Street to Prospect Road and links Finglas Village to Phibsborough and further beyond to the city centre. Works will involve the provision of dedicated cycle tracks ensuring a minimum width of 2m is achieved where possible.

It will also deliver 1.8 km, 2.9 km and 0.7km of new and upgraded secondary cycle routes nos. N04, N05 and 5E. All three route sections link Tyrrelstown, Mulhuddart and Corduff to Ballycoolin industrial estate, and further beyond to Finglas Village. These cycle route sections include:

- The Cappagh Road from Cappagh Road roundabout to its junction with Cardiffsbridge Road (Route no. N04)
- The R121 from Ballycoolin roundabout to Cappagh Road roundabout (Route no. N05)
- The R121 from Tyrrelstown Boulevard roundabout to Church Road roundabout (Route no. 5E)

Works will include the provision of dedicated cycle tracks ensuring a minimum width of 2m is achieved where possible.

The proposed CBC scheme will provide improved pedestrian facilities in terms of increased number of pedestrian crossings at stops and presence of footpaths along desire lines to stops. In situations where it is proposed to upgrade junctions, toucan crossings would be provided for pedestrians.

8 Next Steps

This report has identified an emerging preferred route for the bus infrastructure along this Core Bus Corridor for which a concept design has been developed.

The next project stage (The development of a Preliminary Design) will further refine and update the initial concept design along the route. Further account will be taken of likely public transport service levels, particularly the bus service patterns and any changes to the overall bus network which may arise from the separate bus network review process. The proposals will be amended, if and as required, to integrate any resultant changes. The Preliminary Design will define the final practically achievable scheme for the CBC, taking into account more detailed studies of constraints, impacts and environmental assessment required at a local level.

Prior to finalisation of the CBC scheme design, a public consultation process will be undertaken, with inputs and feedback received incorporated where practical and appropriate to do so.

This Preliminary Design will form the basis of the planning consent process for the scheme, which will require a development consent application to be made directly to An Bord Pleanála, due to the nature and extent of the proposed works.



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Associates

Finglas to City Centre Feasibility Study and Options Assessment: Appendix 1



Client: National Transport Authority

Date: 16th November 2016

Job Number: 16_079

Civil
Engineering

Structural
Engineering

Transport
Engineering

Environmental
Engineering

Project
Management

Health
and Safety

CONSULTING ENGINEERS



Document Control Sheet

Project Name: Finglas to City Centre Core Bus Corridor Options Studies
Project Number: 16_079
Report Title: Feasibility Study and Options Assessment Report: Appendix 1
Filename: RPT-16_079-003

Issue No.	Issue Status	Date	Prepared by	Checked by
1 st	DRAFT	16/11/16	MS	GE
B	DRAFT	18/07/17	JC	GE
C	DRAFT	11/09/17	JC	GE
F	ISSUE	30/11/2017	JC	GE

Appendix 1.1: Section 1 Multi Criteria Analysis

Assessment Criteria	Assessment Sub-Criteria	Route Option TF01	Route Option TF02	Route Option TF03	Route Option TF04
Economy	Capital Cost	<p>Indicative Scheme Infrastructure Works Cost: (€14.5m)</p> <ul style="list-style-type: none"> - Widening works along the route from Texaco Petrol roundabout to the existing bus gate and after the bus gate until Snugborough roundabout. - Widening of Ballycoolin road from the proposed new signalised junction to Cappagh Road roundabout. - Widening of Cappagh road from the proposed junction to the M50. - Redistribution of road space on the M50 Bridge. - Construction of a new bridge over the M50. - Provision of signalised junctions to replace existing roundabouts at Snugborough and Cappagh roads. - Upgrading of existing cycle tracks where required - Use existing bus lanes where available. 	<p>Indicative Scheme Infrastructure Works Cost: (€21.8m)</p> <ul style="list-style-type: none"> - Redistribution of road space on the R121 from Boulevard roundabout to Ballycoolin Road roundabout. - Redistribution of road space on the R121 from the proposed new signalised junction to Texaco Petrol roundabout. - Widening works along the route from Texaco Petrol roundabout to the existing bus gate and after the bus gate until Snugborough roundabout. - Widening of Ballycoolin road from the proposed new signalised junction to Cappagh Road roundabout. - Widening of Cappagh road from the proposed junction to the M50. - Redistribution of road space on the M50 Bridge. - Construction of a new bridge over the M50. 	<p>Indicative Scheme Infrastructure Works Cost: (€17.6m)</p> <ul style="list-style-type: none"> - Redistribution of road space on the R121 from Boulevard roundabout to Ballycoolin Road roundabout. - Redistribution of road space from the proposed signalised junction to Snugborough roundabout. - Widening of Ballycoolin road from the proposed new signalised junction to Cappagh Road roundabout. - Widening of Cappagh road from the proposed junction to the M50. - Redistribution of road space on the M50 Bridge. - Construction of a new bridge over the M50. - Provision of signalised junctions to replace existing roundabouts at Ballycoolin, Snugborough and Cappagh roads. - Upgrading of exist- 	<p>Indicative Scheme Infrastructure Works Cost: (€27.4m)</p> <ul style="list-style-type: none"> - Redistribution of road space on the R121 from Boulevard roundabout to Ballycoolin Road roundabout. - Redistribution of road space on the R121 from Ballycoolin Road roundabout to Blanchardstown roundabout - Widening of the route from Blanchardstown roundabout to Snugborough road. - Redistribution of road space on the Snugborough road from Ashling Heights to Snugborough roundabout. - Widening of Ballycoolin road from the proposed new signalised junction to Cappagh Road roundabout. - Widening of Cappagh road from the proposed junction to the M50. - Redistribution of road space on the M50

Assessment Criteria	Assessment Sub-Criteria	Route Option TF01	Route Option TF02	Route Option TF03	Route Option TF04
		<ul style="list-style-type: none"> - Upgrading existing stops and construction of new stops. <p>Land Acquisition Cost: (€7.6m)</p> <ul style="list-style-type: none"> - 5030 m² private land. - 16 private properties affected. <p>Total Indicative Cost: €22.1m</p>	<ul style="list-style-type: none"> - Provision of signalised junctions to replace existing roundabouts at Ballycoolen, Snughborough and Cappagh roads. - Upgrading of existing cycle tracks where required - Use existing bus lanes where available. - Upgrading existing stops and construction of new stops. <p>Land Acquisition Cost: (€7.6m)</p> <ul style="list-style-type: none"> - 5032 m² private land - 16 private properties affected <p>Total Indicative Cost: €29.4m</p>	<ul style="list-style-type: none"> - ing cycle tracks where required - Use existing bus lanes where available. - Upgrading existing stops and construction of new stops. <p>Land Acquisition Cost: (€2.6m)</p> <ul style="list-style-type: none"> - 1701 m² private land - 11 private properties affected <p>Total Indicative Cost: €20.2m</p>	<ul style="list-style-type: none"> - Bridge. - Provision of signalised junctions to replace existing roundabouts at Ballycoolen, Snughborough and Cappagh roads. - Construction of a new bridge over the M50. - Upgrading of existing cycle tracks where required - Use existing bus lanes where available. - Upgrading existing stops and construction of new stops. <p>Land Acquisition Cost: (€2.6m)</p> <ul style="list-style-type: none"> - 4287 m² public land - 1750 m² private land - 11 private properties affected <p>Total Indicative Cost: €30m</p>
	<i>Rank</i>				
	Transport Reliability and Quality of Service	<p>Journey time: 16 minutes</p> <p>Length of route: 6.3 km</p> <p>Priority: Bus priority provided for</p>	<p>Journey time: 16 minutes</p> <p>Length of route: 6.3 km</p> <p>Priority: Full bus priority provided</p>	<p>Journey time: 11 minutes</p> <p>Length of route: 4.9 km</p> <p>Priority: Full bus priority provided</p>	<p>Journey time: 20 minutes</p> <p>Length of route: 7.6 km</p> <p>Priority: Full bus priority provided</p>

Assessment Criteria	Assessment Sub-Criteria	Route Option TF01	Route Option TF02	Route Option TF03	Route Option TF04
		100 % of inbound and outbound routes including through junctions.	for 100 % of inbound and outbound routes including through junctions.	for 100 % of inbound and outbound routes including through junctions.	for 100 % of inbound and outbound routes including through junctions.
	<i>Rank</i>				
Integration	Land Use Integration	Would serve the future residential and industrial developments north of Tyrrelstown. Would provide services to Ballycoolin Industrial Estate business park.	Would serve the future industrial development south of Tyrrelstown. Would provide service to Ballycoolin Industrial Estate business park.	Would serve the future industrial development south of Tyrrelstown and along Ballycoolin Road. Would improve the service to IBM and Pay Pal by ensuring the availability of a pedestrian access to the "IDA" road and a back pedestrian access to Pay Pal.	Would serve the future industrial development south of Tyrrelstown. Would provide service to Ballycoolin Industrial Estate. Corduff residential area would be served.
	<i>Rank</i>				
	Residential, employment and educational catchments	<p>Residential Population Catchment</p> <ul style="list-style-type: none"> - 1830 within 5 minute walk of route - 5227 within 10 minute walk of route - 8377 within 15 minute walk of route <p>Employment Catchment</p> <ul style="list-style-type: none"> - 2724 within 5 minute walk of route - 4091 within 10 minute walk of route - 12498 within 15 minute walk of route <p>Educational Catchment</p>	<p>Residential Population Catchment</p> <ul style="list-style-type: none"> - 2036 within 5 minute walk of route - 3741 within 10 minute walk of route - 9475 within 15 minute walk of route <p>Employment Catchment</p> <ul style="list-style-type: none"> - 2934 within 5 minute walk of route - 4431 within 10 minute walk of route - 11947 within 15 minute walk of route <p>Educational Catchment</p>	<p>Residential Population Catchment</p> <ul style="list-style-type: none"> - 2036 within 5 minute walk of route - 4567 within 10 minute walk of route. - 9500 within 15 minute walk of route. <p>Employment Catchment</p> <ul style="list-style-type: none"> - 3142 within 5 minute walk of route. - 4002 within 10 minute walk of route - 11593 within 15 minute walk of route <p>Educational Catchment</p>	<p>Residential Population Catchment</p> <ul style="list-style-type: none"> - 5959 within 5 minute walk of route - 10194 within 10 minute walk of route - 19233 within 15 minute walk of route <p>Employment Catchment</p> <ul style="list-style-type: none"> - 1180 within 5 minute walk of route - 3165 within 10 minute walk of route - 9208 within 15 minute walk of route <p>Educational Catchment</p>

Assessment Criteria	Assessment Sub-Criteria	Route Option TF01	Route Option TF02	Route Option TF03	Route Option TF04
		<p>(2nd and 3rd Levels)</p> <ul style="list-style-type: none"> - 0 within 5 minute walk of route - 0 within 10 minute walk of route - 4 within 15 minute walk of route 	<p>(2nd and 3rd Levels)</p> <ul style="list-style-type: none"> - 1481 within 5 minute walk of route - 1481 within 10 minute walk of route - 1485 within 15 minute walk of route 	<p>(2nd and 3rd Levels)</p> <ul style="list-style-type: none"> - 1481 within 5 minute walk of route - 1481 within 10 minute walk of route - 1490 within 15 minute walk of route 	<p>(2nd and 3rd Levels)</p> <ul style="list-style-type: none"> - 1481 within 5 minute walk of route - 1965 within 10 minute walk of route - 2046 within 15 minute walk of route
	<i>Rank</i>				
	Transport Network Integration	Route interchanges well with proposed orbital bus services from Texaco Petrol roundabout. However, the route section north of Tyrrelstown does not interchanges with any existing orbital bus services.	Interchanges well with proposed orbital bus services.	Interchanges well with proposed orbital bus services.	Interchanges well with proposed orbital bus services.
	<i>Rank</i>				
	Cycling Integration	3.6 km of this route is designated as a secondary cycle route. Segregated cycle tracks will be constructed along the entire route	3.6 km of this route is designated as a secondary cycle route. Segregated cycle tracks will be constructed along the entire route	3.7 km of this route is designated as a secondary cycle route. Segregated cycle tracks will be constructed along the entire route	5.1 km of this route is designated as a secondary cycle route. Segregated cycle tracks will be constructed along the entire route
<i>Rank</i>					
Accessibility & Social Inclusion.	Key Trip Attractors	<p>Retail/Leisure</p> <ul style="list-style-type: none"> - Tyrrelstown Town Centre. <p>Employment</p> <ul style="list-style-type: none"> - Blanchardstown Corporate Park. 	<p>Education</p> <ul style="list-style-type: none"> - Powerstown Educate Together NS Tyrrelstown. <p>Retail/Leisure</p>	<p>Education</p> <ul style="list-style-type: none"> - Powerstown Educate Together NS Tyrrelstown. <p>Retail/Leisure</p>	<p>Education</p> <ul style="list-style-type: none"> - Powerstown Educate Together NS Tyrrelstown. - St. Patricks Junior NS.

Assessment Criteria	Assessment Sub-Criteria	Route Option TF01	Route Option TF02	Route Option TF03	Route Option TF04
		<ul style="list-style-type: none"> - Through Ballycoolin Business Park. - Rosemount Industrial State 	<ul style="list-style-type: none"> - Tyrrelstown Town Centre. <p>Employment</p> <ul style="list-style-type: none"> - Blanchardstown Corporate Park. - Through Ballycoolin Business Park. - Rosemount Industrial State 	<ul style="list-style-type: none"> - Tyrrelstown Town Centre. <p>Employment</p> <ul style="list-style-type: none"> - Blanchardstown Corporate Park. - Ballycoolin Business Park - Rosemount Industrial State. 	<ul style="list-style-type: none"> - Institute of Technology ITB <p>Retail/Leisure</p> <ul style="list-style-type: none"> - National Aquatic Centre. - Tyrrelstown Town Centre. <p>Employment</p> <ul style="list-style-type: none"> - Blanchardstown Corporate Park. - Blanchardstown Snugborough Business & Technology Park. - Ballycoolin Business Park. - Rosemount Industrial State.
	<i>Rank</i>				
	Deprived Geographic Areas	Route option does not directly serve any RAPID area. There are 2 disadvantaged areas, as shown on the Pobal deprivation maps, within a 10 minute walk of the route.	Route option does not directly serve any RAPID area. There is 4 disadvantaged areas, as shown on the Pobal deprivation maps, within a 10 minute walk of the route.	Route option does not directly serve any RAPID area. There are 4 disadvantaged areas, as shown on the Pobal deprivation maps, within a 10 minute walk of the route.	Route option does not directly serve any RAPID area. There are 8 disadvantaged areas, as shown on the Pobal deprivation maps, within a 10 minute walk of the route.
	<i>Rank</i>				
Safety	Road Safety	<p>No. of junctions:</p> <ul style="list-style-type: none"> - 2 signalised - 9 priority <p>Vehicle Accident Data</p>	<p>No. of junctions:</p> <ul style="list-style-type: none"> - 2 signalised - 10 priority <p>Vehicle Accident Data</p>	<p>No. of junctions:</p> <ul style="list-style-type: none"> - 3 signalised - 5 priority 	<p>No. of junctions:</p> <ul style="list-style-type: none"> - 5 signalised - 10 priority

Assessment Criteria	Assessment Sub-Criteria	Route Option TF01	Route Option TF02	Route Option TF03	Route Option TF04
		(since 2005) - 20+ minor - 2 fatal	(since 2005) - 25+ minor - 2 serious - 2 fatal	Vehicle Accident Data (since 2005) - 20+ minor - 1 serious - 2 fatal	Vehicle Accident Data (since 2005) - 20+ minor - 2 serious - 2 fatal
	<i>Rank</i>				
	Pedestrian Safety	Footpaths are available on both sides along this route. Pedestrian crossings located within 50 m of all stops. Pedestrian Accident Data (since 2005) None	Footpaths are available on both sides along this route. Pedestrian crossings located within 50 m of all stops. Pedestrian Accident Data (since 2005) None	Footpaths are available on both sides along this route. Pedestrian crossings located within 50 m of all stops. Pedestrian Accident Data (since 2005) None	Footpaths are available on both sides along this route. Pedestrian crossings located within 50m of all stops. Pedestrian Accident Data (since 2005) 1 serious
	<i>Rank</i>				
Environment	Archaeology, Architectural and Cultural Heritage	There are 4 recorded monuments/places identified along this route and they will not be affected.	There is 1 recorded monument/place identified along this route and it will not be affected.	There is 1 recorded monument/place identified along this route and it will not be affected.	There is 1 recorded monument/place identified along this route and it will not be affected.
	<i>Rank</i>				
	Flora and Fauna	Land-take may impact on areas of road side grass verge, hedgerows and a small number of trees.	Land-take may impact on areas of road side grass verge, hedgerows and a small number of trees.	Land-take may impact on areas of road side grass verge and hedgerows.	Land-take may impact on areas of road side grass verge and a small number of trees.
	<i>Rank</i>				
	Soils and Geology	Minimal potential for impacts to soils and geology.	Minimal potential for impacts to soils and geology.	Minimal potential for impacts to soils and geology.	Minimal potential for impacts to soils and geology.
	<i>Rank</i>				
	Hydrology	There is minimal risk of			

Assessment Criteria	Assessment Sub-Criteria	Route Option TF01	Route Option TF02	Route Option TF03	Route Option TF04
		flooding along this route.			
	<i>Rank</i>				
	Landscape and Visual	Some impact on landscape and visual aesthetics in localised areas where widening may require removal of trees and hedgerows.	Some impact on landscape and visual aesthetics in localised areas where widening may require removal of trees and hedgerows.	Some impact on landscape and visual aesthetics in localised areas where widening may require removal of trees and hedgerows.	Some impact on landscape and visual aesthetics in localised areas where widening may require removal of trees and hedgerows.
	<i>Rank</i>				
	Air Quality	Where road widening is required, traffic may be relocated closer to sensitive areas, possibly resulting in an increase in pollutants.	Where road widening is required, traffic may be relocated closer to sensitive areas, possibly resulting in an increase in pollutants.	Where road widening is required, traffic may be relocated closer to sensitive areas, possibly resulting in an increase in pollutants.	Where road widening is required, traffic may be relocated closer to sensitive areas, possibly resulting in an increase in pollutants.
	<i>Rank</i>				
	Noise & Vibration	Where road widening is required, traffic may be relocated closer to sensitive areas, possibly resulting in an increase in noise and vibration.	Where road widening is required, traffic may be relocated closer to sensitive areas, possibly resulting in an increase in noise and vibration.	Where road widening is required, traffic may be relocated closer to sensitive areas, possibly resulting in an increase in noise and vibration.	Where road widening is required, traffic may be relocated closer to sensitive areas, possibly resulting in an increase in noise and vibration.
	<i>Rank</i>				
Land Use Character	Route option has little impact on existing land use as it is contained within the existing roads reservation for the majority of its length.	Route option has little impact on existing land use as it is contained within the existing roads reservation for the majority of its length.	Route option has little impact on existing land use as it is contained within the existing roads reservation for the majority of its length.	Route option has little impact on existing land use as it is contained within the existing roads reservation for the majority of its length.	

Assessment Criteria	Assessment Sub-Criteria	Route Option TF01	Route Option TF02	Route Option TF03	Route Option TF04
		The land acquisition of 5030m ² is taken from various private land owners. No resident is affected.	The land acquisition, 5032m ² is taken from various private land owners. No resident is affected.	The land acquisition of 1701m ² is taken from various private land owners. No resident is affected.	The land acquisition of 6037m ² is taken from both local authority (4287 m ²) and private owners (1750 m ²). No residents are affected.
	<i>Rank</i>				

Appendix 1.2: Section 2_Sub-section A Multi Criteria Analysis

Assessment Criteria	Assessment Sub-Criteria	Route Option FP01 (A)	Route Option FP01 (B)	Route Option FP02	Route Option FP03	Route Option FP04
Economy	Capital Cost	<p>Indicative Scheme Infrastructure Works Cost: (€10m)</p> <ul style="list-style-type: none"> - Widening of Cappagh road from the M50 to the bridge over the R135. - Redistribution of road space along the bridge over the R135. - New pedestrian/cycling bridge proposed for the provision of cycling and pedestrian facilities required. - Widening of Seamus Ennis road from the bridge over the R135 to Jamestown road. - Proposed to open a link to the R135 from Finglas Main Street. This link will allow right turn for buses only and a pedestrian crossing to connect Cappagh Road with Finglas Centre. - Redistribution of the 	<p>Indicative Scheme Infrastructure Works Cost: (€9.3m)</p> <ul style="list-style-type: none"> - Widening of Cappagh road from the M50 to the bridge over the R135. - Redistribution of road space along the bridge over the R135. - New pedestrian/cycling bridge proposed for the provision of cycling and pedestrian facilities required. - Widening of An Bother Thuaidh road from the bridge over R135 to the R135 (inbound). Proposed to maintain the 2m width existing foot-path. - Widening of the R135 from An Brothar Thuaidh road to Church Street (inbound). - Proposed to open a 	<p>Indicative Scheme Infrastructure Works Cost: (€10.2m)</p> <ul style="list-style-type: none"> - Widening of the route from the M50 along Cappagh road, Cardiffsbridge road and Tolka Valley road to R135. - Upgrading of existing cycle tracks where required - Use existing bus lanes where available. - Upgrading existing stops and construction of new stops. <p>Land Acquisition Cost: (€2.1m)</p> <ul style="list-style-type: none"> - 1374 m2 private land - 1149 m2 public land - 15 private properties affected <p>Total Indicative Cost: €12.3m</p>	<p>Indicative Scheme Infrastructure Works Cost: (€8.2m)</p> <ul style="list-style-type: none"> - Widening of Cappagh road from the M50 to Cardiffsbridge road. - Redistribution of Cappagh road from Cardiffsbridge road to R135 for the provision of an outbound bus lane along 350m approaching the roundabout and an inbound bus lane along the rest of the road approaching the R135. - Proposed to open a link to the R135 from Finglas Main Street. This link will allow right turn for buses only and a pedestrian crossing to connect Cappagh Road with Finglas Centre. - Cycling facilities to be provided along 	<p>Indicative Scheme Infrastructure Works Cost: (€9.8m)</p> <ul style="list-style-type: none"> - Widening of Cappagh road from the M50 to Cardiffsbridge road. - Redistribution of Cappagh road from Cardiffsbridge road to Patrickswell for the provision of an outbound bus lane along 350m approaching the roundabout and an inbound bus lane along the rest of the road until the junction with Patrickswell PI. - Widening of the route from Cappagh Road along Patrickswell PI, Wellmount Road, Farnham Dr, St. Helena's Road and Tolka Valley Road to R135. - Upgrading of existing cycle tracks where

Assessment Criteria	Assessment Sub-Criteria	Route Option FP01 (A)	Route Option FP01 (B)	Route Option FP02	Route Option FP03	Route Option FP04
		<p>road space on Jamestown road from Seamus Ennis road to R135.</p> <ul style="list-style-type: none"> - Redistribution of the road space on the R135 to create an outbound core bus corridor. - Redistribution of the road space on the R135 from Church Street to Tolka Valley Rd. - Upgrading of existing cycle tracks where required - Use existing bus lanes where available. - Upgrading existing stops and construction of new stops. <p>Land Acquisition Cost: (€3.2m)</p> <ul style="list-style-type: none"> - 2075 m2 private land. - 482 m2 public land. - 18 private properties affected. <p>Total Indicative Cost: €13.2m</p>	<p>link to the R135 from Finglas Main Street. This link will allow right turn for buses only and a pedestrian crossing to connect Cappagh Road with Finglas Centre.</p> <ul style="list-style-type: none"> - Redistribution of the road space on the R135 to create an outbound core bus corridor. - Redistribution of the road space on the R135 from Church Street to Tolka Valley Road. - Upgrading of existing cycle tracks where required - Use existing bus lanes where available. - Upgrading existing stops and construction of new stops. <p>Land Acquisition Cost: (€1.2m)</p> <ul style="list-style-type: none"> - 789 m2 private land. - 672 m2 public land. - 12 private properties affected. 		<p>Cardiffsbridge Road and Mellowes Road.</p> <ul style="list-style-type: none"> - Redistribution of the road space on the R135 from Church Street to Tolka Valley Road. - Upgrading of existing cycle tracks where required - Use existing bus lanes where available. - Upgrading existing stops and construction of new stops. <p>Land Acquisition Cost: (€0m)</p> <ul style="list-style-type: none"> - 0 m2 private land - 319 m2 public land - 6 private properties affected. <p>Total Indicative Cost: €8.2m</p>	<p>required</p> <ul style="list-style-type: none"> - Use existing bus lanes where available. - Upgrading existing stops and construction of new stops. <p>Land Acquisition Cost: (€2.8m)</p> <ul style="list-style-type: none"> - 1851 m2 private land - 7632 m2 public land - 35 private properties affected. <p>Total Indicative Cost: €12.6m</p>

Assessment Criteria	Assessment Sub-Criteria	Route Option FP01 (A)	Route Option FP01 (B)	Route Option FP02	Route Option FP03	Route Option FP04
			Total Indicative Cost: €10.5m			
	<i>Rank</i>					
	Transport Reliability and Quality of Service	<p>Journey time: 9 minutes</p> <p>Length of route: 2.7 km</p> <p>Priority:</p> <ul style="list-style-type: none"> - Bus priority provided for 100% of inbound route. - Bus priority provided for 100% of out-bound route. 	<p>Journey time: 8 minutes</p> <p>Length of route: 2.6 km</p> <p>Priority:</p> <ul style="list-style-type: none"> - Bus priority provided for 100% of inbound route. - Bus priority provided for 100% of out-bound route. 	<p>Journey time: 10 minutes</p> <p>Length of route: 2.7 km</p> <p>Priority:</p> <ul style="list-style-type: none"> - Bus priority provided for 100% of inbound route. - Bus priority provided for 100% of out-bound route. 	<p>Journey time: 8 minutes</p> <p>Length of route: 2.6 km</p> <p>Priority:</p> <ul style="list-style-type: none"> - Bus priority provided for 92% of inbound route. - Bus priority cannot be achieved along 200m along Church Street. - Bus priority provided for 100% of out-bound route. 	<p>Journey time: 9 minutes</p> <p>Length of route: 2.5 km</p> <p>Priority:</p> <ul style="list-style-type: none"> - Bus priority provided for 100% of inbound route. - Bus priority provided for 100% of out-bound route.
	<i>Rank</i>					
Integration	Land Use Integration	This route serves already developed residential area along Mellows Road as well as Finglas Town Centre mixed facilities area.	This route serves already developed residential area along Mellows Road as well as Finglas Town Centre mixed facilities area.	This route serves already developed residential area and educational facilities along Cardiffsbridge Road.	This route serves already developed residential area along Cappagh Road and Mellows Road Finglas Town Centre mixed facilities area, along with Cappagh Road and Church St educational facilities.	This route serves educational facilities along Cappagh Road and St Helena's Road and already developed residential areas.

Assessment Criteria	Assessment Sub-Criteria	Route Option FP01 (A)	Route Option FP01 (B)	Route Option FP02	Route Option FP03	Route Option FP04
	<i>Rank</i>					
	Residential, employment and educational catchments	<p>Residential Population Catchment</p> <ul style="list-style-type: none"> - 10209 within 5 minute walk of route. - 19324 within 10 minute walk of route. - 29183 within 15 minute walk of route. <p>Employment Catchment</p> <ul style="list-style-type: none"> - 2030 within 5 minute walk of route. - 2589 within 10 minute walk of route. - 4513 within 15 minute walk of route. <p>Educational Catchment (2nd and 3rd Levels)</p> <ul style="list-style-type: none"> - 1106 within 5 minute walk of route. - 1131 within 10 minute walk of route. - 1626 within 15 minute walk of route. 	<p>Residential Population Catchment</p> <ul style="list-style-type: none"> - 10209 within 5 minute walk of route. - 19324 within 10 minute walk of route. - 29183 within 15 minute walk of route. <p>Employment Catchment</p> <ul style="list-style-type: none"> - 2030 within 5 minute walk of route. - 2589 within 10 minute walk of route. - 4513 within 15 minute walk of route. <p>Educational Catchment (2nd and 3rd Levels)</p> <ul style="list-style-type: none"> - 1106 within 5 minute walk of route. - 1131 within 10 minute walk of route. - 1626 within 15 minute walk of route. 	<p>Residential Population Catchment</p> <ul style="list-style-type: none"> - 10625 within 5 minute walk of route. - 18130 within 10 minute walk of route. - 23019 within 15 minute walk of route. <p>Employment Catchment</p> <ul style="list-style-type: none"> - 738 within 5 minute walk of route. - 1765 within 10 minute walk of route. - 2611 within 15 minute walk of route. <p>Educational Catchment (2nd and 3rd Levels)</p> <ul style="list-style-type: none"> - 800 within 5 minute walk of route. - 1255 within 10 minute walk of route. - 1275 within 15 minute walk of route. 	<p>Residential Population Catchment</p> <ul style="list-style-type: none"> - 8604 within 5 minute walk of route. - 17867 within 10 minute walk of route. - 28207 within 15 minute walk of route. <p>Employment Catchment</p> <ul style="list-style-type: none"> - 1841 within 5 minute walk of route. - 2514 within 10 minute walk of route. - 4512 within 15 minute walk of route. <p>Educational Catchment (2nd and 3rd Levels)</p> <ul style="list-style-type: none"> - 1106 within 5 minute walk of route. - 1131 within 10 minute walk of route. - 1626 within 15 minute walk of route. 	<p>Residential Population Catchment</p> <ul style="list-style-type: none"> - 9696 within 5 minute walk of route. - 17854 within 10 minute walk of route. - 24792 within 15 minute walk of route. <p>Employment Catchment</p> <ul style="list-style-type: none"> - 2092 within 5 minute walk of route. - 2514 within 10 minute walk of route. - 2670 within 15 minute walk of route. <p>Educational Catchment (2nd and 3rd Levels)</p> <ul style="list-style-type: none"> - 1112 within 5 minute walk of route. - 1259 within 10 minute walk of route. - 1275 within 15 minute walk of route.
	<i>Rank</i>					
	Transport Network Integration	Redistribution of the road space in Finglas Town centre will affect the traffic of the area.	Route will not affect the traffic of the area since it interchanges well with existing ser-	Route will not affect the traffic of the area since it interchanges well with existing ser-	Route will not affect the traffic of the area since it interchanges well with existing ser-	Route will not affect the traffic of the area since it interchanges well with existing ser-

Assessment Criteria	Assessment Sub-Criteria	Route Option FP01 (A)	Route Option FP01 (B)	Route Option FP02	Route Option FP03	Route Option FP04
			vices.	vices.	vices.	vices.
	<i>Rank</i>					
	Cycling Integration	Cycling facilities will be provided all along this route. Segregated cycling tracks will be provided along the designated primary and secondary cycle routes where possible.	Cycling facilities will be provided all along this route. Segregated cycling tracks will be provided along the designated primary and secondary cycle routes where possible.	Cycling facilities will be provided all along this route. Segregated cycling tracks will be provided along the designated primary and secondary cycle routes where possible.	Cycling facilities will be provided all along this route. As cycling facilities cannot be fitted along Church St, cycling facilities will be provided along Car-diffsbridge Road and Mellows Road. Segregated cycling tracks will be provided along the designated primary and secondary cycle routes where possible.	Cycling facilities will be provided all along this route. Segregated cycling tracks will be provided along the designated primary and secondary cycle routes where possible.
	<i>Rank</i>					
Accessibility & Social Inclusion.	Key Trip Attractors	<p>Education</p> <ul style="list-style-type: none"> - New Cross College. - Saint Vincent's secondary school. <p>Retail/Leisure</p> <ul style="list-style-type: none"> - Finglas area office & sports centre. - Finglas Village Centre. - Tesco Extra Finglas. <p>Medical</p>	<p>Education</p> <ul style="list-style-type: none"> - New Cross College. - Saint Vincent's secondary school. <p>Retail/Leisure</p> <ul style="list-style-type: none"> - Finglas area office & sports centre. - Finglas Village Centre. - Tesco Extra Finglas. - Glasnevin Museum. - Phibsborough centre. 	<p>Education</p> <ul style="list-style-type: none"> - New Cross College. - Saint Vincent's secondary school. - Colaiste Ide College of further education. <p>Retail/Leisure</p> <ul style="list-style-type: none"> - Cappagh shopping centre. <p>Medical</p> <ul style="list-style-type: none"> - Cappagh National Orthopaedic Hospi- 	<p>Education</p> <ul style="list-style-type: none"> - New Cross College. - Saint Vincent's secondary school. - Colaiste Eoin. - St Michaels secondary school. <p>Retail/Leisure</p> <ul style="list-style-type: none"> - Tesco Extra Finglas. - Finglas Village Centre. <p>Medical</p>	<p>Education</p> <ul style="list-style-type: none"> - New Cross College. - Saint Vincent's secondary school. - Colaiste Eoin. - St Michaels secondary school. <p>Retail/Leisure</p> <ul style="list-style-type: none"> - Tesco Extra Finglas. <p>Medical</p> <ul style="list-style-type: none"> - Cappagh National Orthopaedic Hospi-

Assessment Criteria	Assessment Sub-Criteria	Route Option FP01 (A)	Route Option FP01 (B)	Route Option FP02	Route Option FP03	Route Option FP04
		- Cappagh National Orthopaedic Hospital.	Medical - Cappagh National Orthopaedic Hospital.	tal. Employment - Finglas Business Park.	- Cappagh National Orthopaedic Hospital.	tal. - Finglas addiction support team. Employment - Finglas Business Park.
	<i>Rank</i>					
	Deprived Geographic Areas	This route option crosses Dublin-Finglas RAPID area. There are 36 disadvantaged areas and 17 very disadvantaged areas, as shown on the Pobal deprivation maps, within 10 minute walk of the route.	This route option crosses Dublin-Finglas RAPID area. There is 36 disadvantaged area and 17 very disadvantaged, as shown on the Pobal deprivation maps, within 10 minute walk of the route.	This route option directly serves Dublin-Finglas RAPID area. There are 29 disadvantaged areas and 22 very disadvantaged areas, as shown on the Pobal deprivation maps, within 10 minute walk of the route.	This route option crosses Dublin-Finglas RAPID area. There are 34 disadvantaged area and 14 very disadvantaged, as shown on the Pobal deprivation maps, within 10 minute walk of the route.	This route option directly serves Dublin-Finglas RAPID area. There are 32 disadvantaged area and 19 very disadvantaged, as shown on the Pobal deprivation maps, within 10 minute walk of the route.
	<i>Rank</i>					
Safety	Road Safety	No. of junctions: - 10 signalised - 3 priority	No. of junctions: - 7 signalised - 3 priority	No. of junctions: - 6 signalised - 2 priority	No. of junctions: - 3 signalised - 1 priority	No. of junctions: - 2 signalised - 4 priority
	<i>Rank</i>					
	Pedestrian Safety	Footpaths are available on both sides along this route. Pedestrian crossings located within 50 m of 20 stops of a total of 23 along the route.	Footpaths are available on both sides along this route. Pedestrian crossings located within 50 m of 19 stops of a total of 21 along the route.	Footpaths are available on both sides along this route. Pedestrian crossings located within 50 m of 22 stops of a total of 26 along the route.	Footpaths are available on both sides along this route. Pedestrian crossings located within 50 m of 8 stops of a total of 12 along the route.	Footpaths are available on both sides along this route. Pedestrian crossings located within 50 m of 26 stops of a total of 26 along the route.

Assessment Criteria	Assessment Sub-Criteria	Route Option FP01 (A)	Route Option FP01 (B)	Route Option FP02	Route Option FP03	Route Option FP04
	<i>Rank</i>					
Environment	Archaeology, Architectural and Cultural Heritage	The Tolka bridge is recorded as a National Monument.	The Tolka bridge is recorded as a National Monument.	The Tolka bridge is recorded as a National Monument.	The Tolka bridge is recorded as a National Monument.	The Tolka bridge is recorded as a National Monument.
	<i>Rank</i>					
	Flora and Fauna	Land-take may impact on areas of road side grass verge along with large number of trees.	Land-take may impact on areas of road side grass verge along with large number of trees.	Land-take may impact on areas of road side grass verge and public open space along with large number of trees.	Land-take may impact on areas of road side grass verge along with large number of trees.	Land-take may impact on areas of road side grass verge and public open space along with large number of trees.
	<i>Rank</i>					
	Soils and Geology	Minimal potential for impacts to soils and geology.	Minimal potential for impacts to soils and geology.	Minimal potential for impacts to soils and geology.	Minimal potential for impacts to soils and geology.	Minimal potential for impacts to soils and geology.
	<i>Rank</i>					
	Hydrology	There is minimal risk of flooding along this route.	There is minimal risk of flooding along this route.	There is minimal risk of flooding along this route.	There is minimal risk of flooding along this route.	There is minimal risk of flooding along this route.
	<i>Rank</i>					
	Landscape and Visual	Some impact on landscape and visual aesthetics in localised areas where widening may require removal of trees and grass verges.	Some impact on landscape and visual aesthetics in localised areas where widening may require removal of trees and grass verges.	Some impact on landscape and visual aesthetics in localised areas where widening may require removal of trees grass verges and hedgerows.	Some impact on landscape and visual aesthetics in localised areas where widening may require removal of trees and grass verges.	Some impact on landscape and visual aesthetics in localised areas where widening may require removal of trees, grass verges and hedgerows.
	<i>Rank</i>					
Air Quality	Where road widening is required, traffic may be relocated closer to	Where road widening is required, traffic may be relocated closer to	Where road widening is required, traffic may be relocated closer to	Where road widening is required, traffic may be relocated closer to	Where road widening is required, traffic may be relocated closer to	

Assessment Criteria	Assessment Sub-Criteria	Route Option FP01 (A)	Route Option FP01 (B)	Route Option FP02	Route Option FP03	Route Option FP04
		sensitive areas, possibly resulting in an increase in pollutants.	sensitive areas, possibly resulting in an increase in pollutants.	sensitive areas, possibly resulting in an increase in pollutants.	sensitive areas, possibly resulting in an increase in pollutants.	sensitive areas, possibly resulting in an increase in pollutants.
	<i>Rank</i>					
	Noise & Vibration	Where road widening is required, traffic may be relocated closer to sensitive areas, possibly resulting in an increase in noise and vibration.	Where road widening is required, traffic may be relocated closer to sensitive areas, possibly resulting in an increase in noise and vibration.	Where road widening is required, traffic may be relocated closer to sensitive areas, possibly resulting in an increase in noise and vibration.	Where road widening is required, traffic may be relocated closer to sensitive areas, possibly resulting in an increase in noise and vibration.	Where road widening is required, traffic may be relocated closer to sensitive areas, possibly resulting in an increase in noise and vibration.
	<i>Rank</i>					
	Land Use Character	Some parking spaces would be affected along Seamus Ennis Road and Jamestown Road that would affect three shopping centre parking areas.	This route option has little impact on existing land use, as it is mainly contained within the existing roads reservation area.	This route option would affect two private gardens and public grass verges.	This route option has little impact on existing land use, as it is mainly contained within the existing roads reservation area.	This route option would affect six private gardens and public grass verges.
	<i>Rank</i>					

Appendix 1.3: Section 2_Sub-section B Multi Criteria Analysis

Assessment Criteria	Assessment Sub-Criteria	Route Option CF01	Route Option CF02	Route Option CF03
Economy	Capital Cost	<p>Indicative Scheme Infrastructure Works Cost: (€3.5m)</p> <ul style="list-style-type: none"> - Redistribution of the North Road space from Finglas North Road to Casement Road roundabout. Provision of bus lane along with cycling and pedestrian facilities where required. Use of the existing facilities and bus lane where possible. North Road/Finglas North Road junction will be maintained. - Redistribution of the North Road space from Casement Road roundabout to Church St using the existing bus lanes. - Upgrading of existing cycle tracks where required. - Use existing bus lanes where available. - Upgrading existing stops and construction of new stops. <p>Land Acquisition Cost: (€69,645)</p> <ul style="list-style-type: none"> - 46 m² private land - 716 m² public land - 1 private property affected 	<p>Indicative Scheme Infrastructure Works Cost: (€6.3m)</p> <ul style="list-style-type: none"> - Widening of the route from North Road along Charlestown PI and Margaret’s Road to Casement Road roundabout. - Redistribution of the North Road space from Casement Road roundabout to Church St using the existing bus lanes. - Upgrading of existing cycle tracks where required. - Use existing bus lanes where available. - Upgrading existing stops and construction of new stops. <p>Land Acquisition Cost: (€1.5m)</p> <ul style="list-style-type: none"> - 1002 m² private land - 615 m² public land - 12 private properties affected 	<p>Indicative Scheme Infrastructure Works Cost: (€13m)</p> <ul style="list-style-type: none"> - Widening of the route from North Road along Charlestown PI, Melville Road, Jamestown Road and Seamus Ennis Road to the bridge over Finglas Road. - Redistribution of road space along the bridge over the R135 - New pedestrian/cycling bridge proposed to facilitate pedestrian and cycling facilities required. - Widening of An Bothar Thuaidh road from the bridge over the R135 to the R135 (inbound). - Widening of the R135 from An Brothar Thuaidh road to Church Street (inbound). - Upgrading of existing cycle tracks where required. - Use existing bus lanes where available. - Upgrading existing stops and construction of new stops. <p>Land Acquisition Cost: (€10.7m)</p> <ul style="list-style-type: none"> - 7134 m² private land

Assessment Criteria	Assessment Sub-Criteria	Route Option CF01	Route Option CF02	Route Option CF03
		<p>Total Indicative Cost: €3.6m</p>	<p>Total Indicative Cost: €7.8m</p>	<ul style="list-style-type: none"> - 804 m² public land - 44 private properties affected <p>Total Indicative Cost: €23.7m</p>
	<i>Rank</i>			
	Transport Reliability and Quality of Service	<p>Journey time: 3 minutes</p> <p>Length of route: 1.7 km</p> <p>Priority: Bus priority provided for 93% of in-bound route. Bus priority cannot be achieved along the area approaching the North Road/Finglas North Road junction. Bus priority provided for 93% of out-bound route. Bus priority cannot be achieved along the area approaching the North Road/Finglas North Road junction.</p>	<p>Journey time: 7 minutes</p> <p>Length of route: 2.2 km</p> <p>Priority: Bus priority provided for 100% of in-bound route. Bus priority provided for 100% of out-bound route.</p>	<p>Journey time: 13 minutes</p> <p>Length of route: 3.2 km</p> <p>Priority: Bus priority provided for 97% of in-bound route. Bus priority cannot be achieved along 75m approaching the junction with St. Margaret's Road. Bus priority provided for 100% of out-bound route.</p>
	<i>Rank</i>			
Integration	Land Use Integration	This route mainly supports recreational, residential and employment areas.	This route mainly supports recreational, residential and employment areas.	This route supports recreational, residential and employment areas as well as areas provided with mixed

Assessment Criteria	Assessment Sub-Criteria	Route Option CF01	Route Option CF02	Route Option CF03
				services facilities.
	<i>Rank</i>			
	Residential, employment and educational catchments	<p>Residential Population Catchment</p> <ul style="list-style-type: none"> - 2241 within 5 minute walk of route. - 4793 within 10 minute walk of route. - 7768 within 15 minute walk of route. <p>Employment Catchment</p> <ul style="list-style-type: none"> - 35 within 5 minute walk of route. - 3266 within 10 minute walk of route. - 3969 within 15 minute walk of route. <p>Educational Catchment (2nd and 3rd Levels)</p> <ul style="list-style-type: none"> - 10 within 5 minute walk of route. - 30 within 10 minute walk of route. - 467 within 15 minute walk of route. 	<p>Residential Population Catchment</p> <ul style="list-style-type: none"> - 1937 within 5 minute walk of route. - 5953 within 10 minute walk of route. - 12653 within 15 minute walk of route. <p>Employment Catchment</p> <ul style="list-style-type: none"> - 1460 within 5 minute walk of route. - 3187 within 10 minute walk of route. - 4052 within 15 minute walk of route. <p>Educational Catchment (2nd and 3rd Levels)</p> <ul style="list-style-type: none"> - 1 within 5 minute walk of route. - 30 within 10 minute walk of route. - 41 within 15 minute walk of route. 	<p>Residential Population Catchment</p> <ul style="list-style-type: none"> - 6485 within 5 minute walk of route. - 11628 within 10 minute walk of route. - 25670 within 15 minute walk of route. <p>SCORE: 37298</p> <p>Employment Catchment</p> <ul style="list-style-type: none"> - 2795 within 5 minute walk of route. - 4657 within 10 minute walk of route. - 6320 within 15 minute walk of route. <p>SCORE: 10977</p> <p>Educational Catchment (2nd and 3rd Levels)</p> <ul style="list-style-type: none"> - 15 within 5 minute walk of route. - 448 within 10 minute walk of route. - 866 within 15 minute walk of route.
	<i>Rank</i>			

Assessment Criteria	Assessment Sub-Criteria	Route Option CF01	Route Option CF02	Route Option CF03
	Transport Network Integration	Redistribution of the road space may slightly impact on the existing traffic.	Traffic in the area will not be affected by the new bus route.	Traffic in the area will not be affected by the new bus route.
	<i>Rank</i>			
	Cycling Integration	Segregated cycling tracks will be provided along the entire route.	1.19 km of this route is designated as a secondary cycle route. Segregated cycling tracks will be provided along the route.	2.75 km of this route is designated as a secondary cycle route. Segregated cycling tracks will be provided along the route.
	<i>Rank</i>			
Accessibility & Social Inclusion.	Key Trip Attractors	<p>Education</p> <ul style="list-style-type: none"> - Saint Kevin's Boys National School. - Saint Joseph's Girls national school. <p>Retail/Leisure</p> <ul style="list-style-type: none"> - North Road industrial estate. 	<p>Education</p> <ul style="list-style-type: none"> - Saint Kevin's Boys National School. - Saint Joseph's Girls national school. <p>Retail/Leisure</p> <ul style="list-style-type: none"> - Charlestown Shopping centre. - Jamestown Little industrial estate. - Finglas meat market. 	<p>Education</p> <ul style="list-style-type: none"> - St Canice's Girls National School. <p>Retail/Leisure</p> <ul style="list-style-type: none"> - Charlestown Shopping centre. - Century Business Park. - Jamestown Business Park. - Finglas Village centre
	<i>Rank</i>			
	Deprived Geographic Areas	This route option serves Dublin-Finglas RAPID area. There are 12 disadvantaged areas and 4 very disadvantaged areas, as shown on the Pobal deprivation	This route option serves Dublin-Finglas RAPID area. There is 10 disadvantaged area and 3 very disadvantaged, as shown on the Pobal deprivation maps, within a	This route option serves and crosses Dublin-Finglas RAPID area. There are 20 disadvantaged areas and 1 very disadvantaged areas, as shown on the Pobal deprivation

Assessment Criteria	Assessment Sub-Criteria	Route Option CF01	Route Option CF02	Route Option CF03
		maps, within a 10 minute walk of the route.	10 minute walk of the route.	maps, within a 10 minute walk of the route.
	<i>Rank</i>			
Safety	Road Safety	<p>No. of junctions:</p> <ul style="list-style-type: none"> - 1 priority <p>Vehicle Accident Data (since 2005)</p> <ul style="list-style-type: none"> - 25 minor - 3 serious 	<p>No. of junctions:</p> <ul style="list-style-type: none"> - 2 signalised - 2 priority <p>Vehicle Accident Data (since 2005)</p> <ul style="list-style-type: none"> - 20 minor - 3 serious 	<p>No. of junctions:</p> <ul style="list-style-type: none"> - 4 signalised - 1 priority <p>Vehicle Accident Data (since 2005)</p> <ul style="list-style-type: none"> - 27 minor - 3 serious
	<i>Rank</i>			
	Pedestrian Safety	<p>Footpaths are available on both sides along this route.</p> <p>Pedestrian crossings located within 50 m of 4 of a total of 4 stops along the route.</p> <p>Pedestrian Accident Data (since 2005)</p> <ul style="list-style-type: none"> - 1 minor - 2 fatal 	<p>Footpaths are available on both sides along this route.</p> <p>Pedestrian crossings located within 50 m of 6 of a total of 6 stops along the route.</p> <p>Pedestrian Accident Data (since 2005)</p> <p>No accident recorded</p>	<p>Footpaths are available on both sides along this route.</p> <p>Pedestrian crossings located within 50 m of 9 of a total of 14 stops along the route.</p> <p>Pedestrian Accident Data (since 2005)</p> <ul style="list-style-type: none"> - 2 minor - 1 serious
<i>Rank</i>				
Environment	Archaeology, Architectural and Cultural	There is no recorded National Monument or Architectural Heritage along this route.	There is no recorded National Monument or Architectural Heritage along this route.	There is no recorded National Monument or Architectural Heritage along this route.

Assessment Criteria	Assessment Sub-Criteria	Route Option CF01	Route Option CF02	Route Option CF03
	Heritage			
	<i>Rank</i>			
	Flora and Fauna	Land-take may impact on sections of roadside grass verge.	Land-take may impact on sections of roadside grass verge, hedgerows and a small number of trees.	Land-take may impact on sections of roadside grass verge and hedgerows along with a large number of trees.
	<i>Rank</i>			
	Soils and Geology	Minimal potential for impacts to soils and geology.	Minimal potential for impacts to soils and geology.	Minimal potential for impacts to soils and geology.
	<i>Rank</i>			
	Hydrology	There is minimal risk of flooding along this route.	There is minimal risk of flooding along this route.	There is minimal risk of flooding along this route.
	<i>Rank</i>			
	Landscape and Visual	Some impact on landscape and visual aesthetics in localised areas where widening may require removal of grass verge and a wall.	Some impact on landscape and visual aesthetics in localised areas where widening may require removal of trees and hedgerows.	Some impact on landscape and visual aesthetics in localised areas where widening may require removal of trees and hedgerows.
	<i>Rank</i>			
	Air Quality	Where road widening is required, traffic may be relocated closer to sensitive areas, possibly resulting in an increase in pollutants.	Where road widening is required, traffic may be relocated closer to sensitive areas, possibly resulting in an increase in pollutants.	Where road widening is required, traffic may be relocated closer to sensitive areas, possibly resulting in an increase in pollutants.
	<i>Rank</i>			

Assessment Criteria	Assessment Sub-Criteria	Route Option CF01	Route Option CF02	Route Option CF03
	Noise & Vibration	Where road widening is required, traffic may be relocated closer to sensitive areas, possibly resulting in an increase in noise and vibration.	Where road widening is required, traffic may be relocated closer to sensitive areas, possibly resulting in an increase in noise and vibration.	Where road widening is required, traffic may be relocated closer to sensitive areas, possibly resulting in an increase in noise and vibration.
	<i>Rank</i>			
	Land Use Character	Route option has little impact on existing land use as it is contained within the existing roads reservation for the majority of its length. The land acquisition of 763m ² is taken from both local authority (716 m ²) and private owners (46 m ²). 1 resident is affected.	Route option has little impact on existing land use as it is contained within the existing roads reservation for the majority of its length. The land acquisition of 1616m ² is taken from both local authority (615 m ²) and private owners (1002 m ²). 6 residents are affected.	Route option has little impact on existing land use as it is contained within the existing roads reservation for the majority of its length. The land acquisition of 7938m ² is taken from both local authority (804 m ²) and private owners (7134 m ²). 4 residents are affected.
	<i>Rank</i>			

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