

Project

Terenure to Tallaght Core Bus Corridor

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CBC Feasibility Study and
Options Assessment Report
– Volume I

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EXECUTIVE SUMMARY

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

Core Bus Network

The proposed scheme forms part of the planned Core Bus Network (CBN) which was identified for the region in the Greater Dublin Area (GDA) Transport Strategy 2016-2035. The CBN is set out as representing '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 Terenure - Tallaght corridor generally aligns with the Tallaght-Rathfarnham-Terenure corridor as one of the 16 radial bus corridors forming the Core Bus Network, which also includes the following corridors:-

- Clontarf – East Wall
- M1/ M50 – Dublin Port Tunnel
- Clongriffin – Artane – Fairview
- Swords – Airport – Drumcondra
- Ballymun – Phibsboro
- Finglas – Phibsboro
- Blanchardstown – Cabra – Stoneybatter
- Liffey Valley – Ballyfermot
- Tallaght – Walkinstown – Crumlin
- Lucan – Palmerstown – Kilmainham
- Marley Park – Rathmines
- Bray/N11 – UCD – Donnybrook
- Dun Laoghaire – Blackrock – Ballsbridge
- Ringsend – Pearse Street

CBC Scheme Objectives

The following scheme specific objectives have been set for the proposed scheme:

- 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

The proposed Terenure-Tallaght Core Bus Corridor (CBC) will serve a transport corridor with several key destinations along, or close to the route including Templeogue and Terenure district centres.

The corridor is already a busy transport artery, with additional capacity required to cater for the travel growth predicted. Core Bus services can provide an attractive primary public transport service for the short and medium term and will act as a feeder to widen the rail catchment in the long term.

It is not practical that the proposed scheme would directly serve all destinations within the broader study area, whilst maintaining a core scheme objective of journey time reduction and reliability. As such, the introduction of the proposed scheme will also result in a rationalisation of the wider bus network and service provision along the corridor. This network rationalisation will complement the proposed scheme; improve overall transport accessibility; and enhance the level of service provision for existing/new public transport users, which include those using other Core Bus Corridors as identified in the GDA Transport Strategy (2016 – 2035). The study area considered, and the subsections into which it was divided are illustrated in Figure (i) below.



Figure (i): Study Area Sections

Route Options Assessment Methodology

A two-stage assessment was adopted:

- An initial 'Stage 1' high-level route options assessment or 'sifting' process which appraised routes 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. Route options considered in the Stage 1 assessment are illustrated in Figure (ii) below.

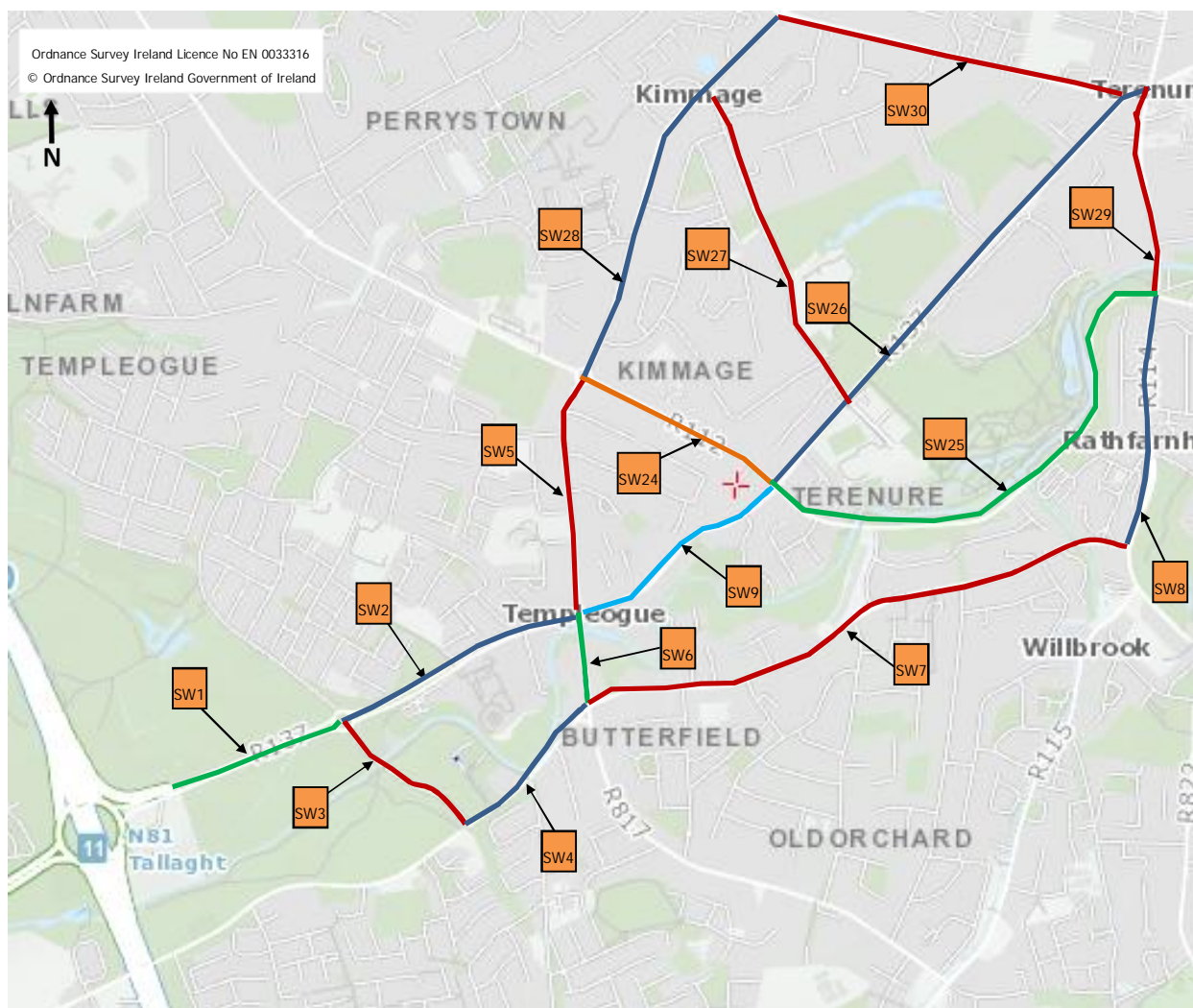


Figure (ii): Spiders Web of Route Options

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

This Stage 1 assessment focused on engineering constraints together with a desktop study, identifying high-level environmental constraints and an analysis of population catchments.

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 (where appropriate), bus lane in each direction, 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) which evaluated the route options under the following main assessment 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 the establishment of project-specific route options assessment sub-criteria under each of the 5 main criteria listed above. Table (i) presents a summary of the CBC assessment criteria and associated sub criteria used as part of the Stage 2 detailed route options assessment process. The assessment criteria are described further in Section 4 of this report.

Assessment Criteria	Assessment Sub-Criteria
1. Economy	1a. Capital Cost
	1b. Transport Reliability and Quality (Journey Time)
	1c. Level of Bus Priority Provision
2. Integration	2a. Land Use Policy
	2b. Residential Population and Employment Catchments
	2c. Transport Network Integration
	2d. Cycle Network Integration
	2e. Traffic Network Integration
3. Accessibility & Social Inclusion	3a. Key Trip Attractors (Education/Health/Commercial/Employment)
	3b. Deprived Geographic Areas
4. Safety	4a. Road Safety
	4b. Pedestrian Safety
5. Environment	5a. Archaeology and Cultural Heritage
	5b. Architectural Heritage
	5c. Flora & Fauna
	5d. Soils, Geology & Hydrology
	5e. Landscape and Visual
	5f. Air Quality
	5g. Noise & Vibration
	5h. Land Use Character

Table (i): MCA Assessment Criteria

Options Assessment

The routes assessed in the MCA for each of the study areas two route sections are summarised in the following paragraphs. Full details of the assessment are presented and discussed in Sections 4, 5 & 6 of this report, with the full assessment presented in Appendix A & B.

Study Area Section 1: Between the R137 Templeogue Road/N81/M50 interchange (roundabout junction) and the Springfield Ave/Templeville Road corridor

Following the 'Stage 1' sift for the Section 1 study area; the remaining feasible route options were combined to form a single cohesive route between the R137 Templeogue Road/N81/M50 interchange (Junction No. 11) and the Springfield Ave/Templeville Road corridor. The route is illustrated in Figure iii below.

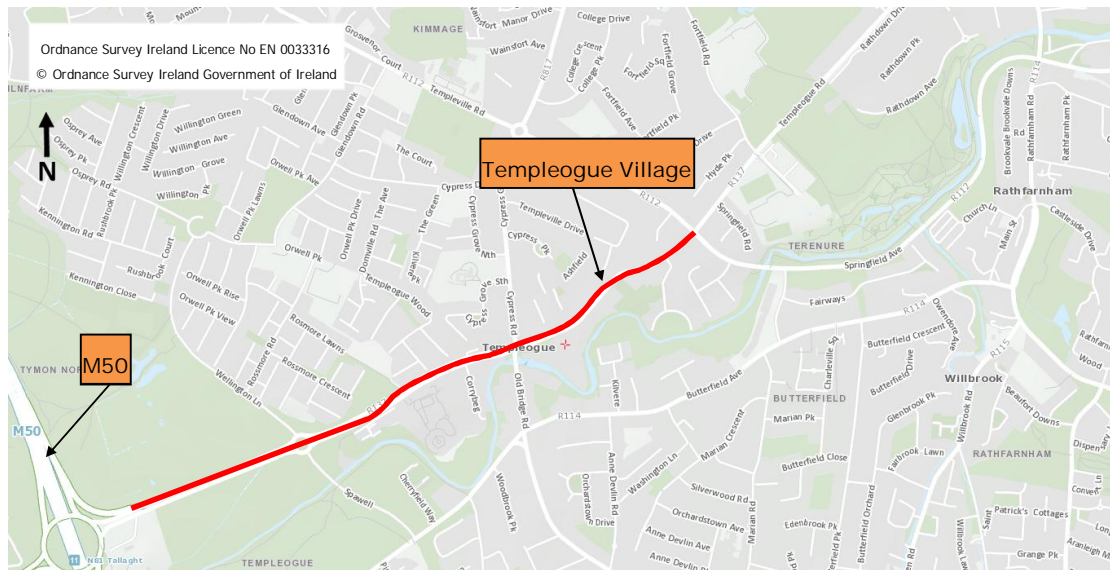


Figure iii: Section 1 Cohesive Route

Due to a number of existing constraints within Templeogue Village, (i.e. the section of Templeogue Road between the Cypress Grove Road/Old Bridge Road junction and the Springfield Ave/Templeville Road junction), this section required specific consideration which enabled the identification of alternative scheme options (5 no.) for this section (Figure iv):-

- Option S1-1 – Full inbound bus lane provision, partial outbound bus lane provision, full inbound & outbound cycle lane provision, 50kph speed limit;
- Option S1-2 – Partial inbound & outbound bus lane provision, full inbound & outbound cycle lane provision, 50kph speed limit;
- Option S1-3 – Full inbound bus lane provision, partial outbound bus lane provision, cycle diversion, 30kph speed limit;
- Option S1-4 – Partial inbound & outbound bus lane provision, cycle diversion, 30kph speed limit; and
- Option S1-5 – Full inbound & outbound bus lane provision, cycle facilities alternate between segregated and shared with buses, 30kph speed limit.

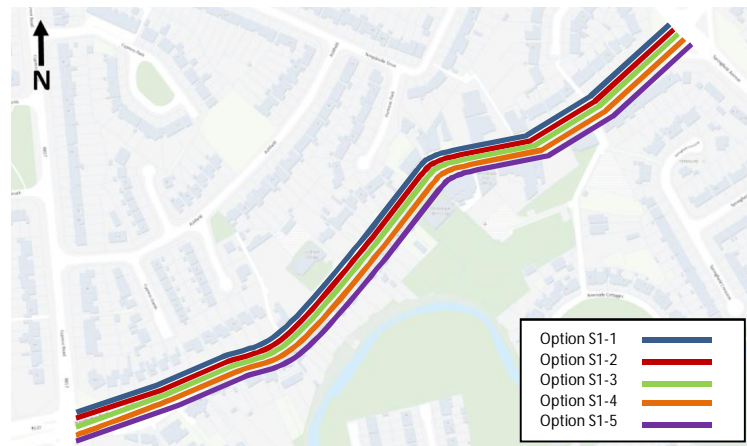


Figure iv: Section 1 - Templeogue Road Sub-section

The results of the assessment reveal that option S1-5 offers more benefits over the other four route options. Option S1-5 is therefore preferred route for the section of Templeogue Road between the Cypress Grove Road/Old Bridge Road junction and the Springfield Ave/Templeville Road junction for the following principal reasons: -

- It delivers end to end bus lanes through this section of Templeogue Road, thereby providing improved journey time reliability;
- It will provide shorter journey times;
- It serves a high level of residential and employment catchments within 5, 10 and 15-minute walking distance;
- Users of the CBC service will be able to integrate with existing and future proposed public transport infrastructure, such as the Rathfarnham to City Centre Core Bus Corridor; and
- It would provide an improvement on road safety for all users.

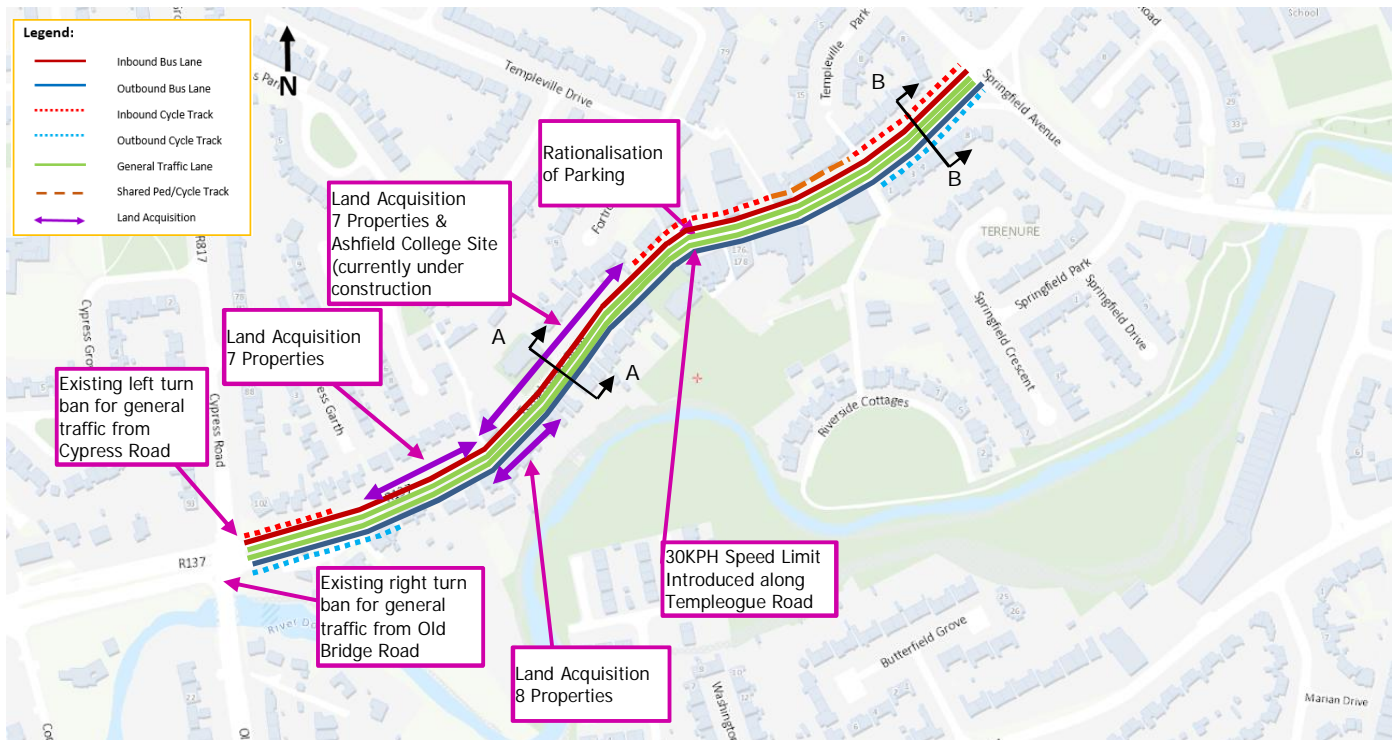


Figure v: Templeogue Village Scheme Option S1-5 Proposal

Study Area Section 2: Between the Springfield Ave/Templeville Road corridor and the Rathfarnham Road/Terenure Road West corridor

Following the 'Stage 1' sift for the Section 2 study area, 2 route options were remaining. However, route option SW29 which passed the Stage 1 assessment was not taken forward to the Stage 2 assessment as it was an isolated link which ran along the proposed Rathfarnham – City Centre CBC route. Therefore, the cohesive route for Section 2 will be SW26 which is illustrated in Figure vi below.

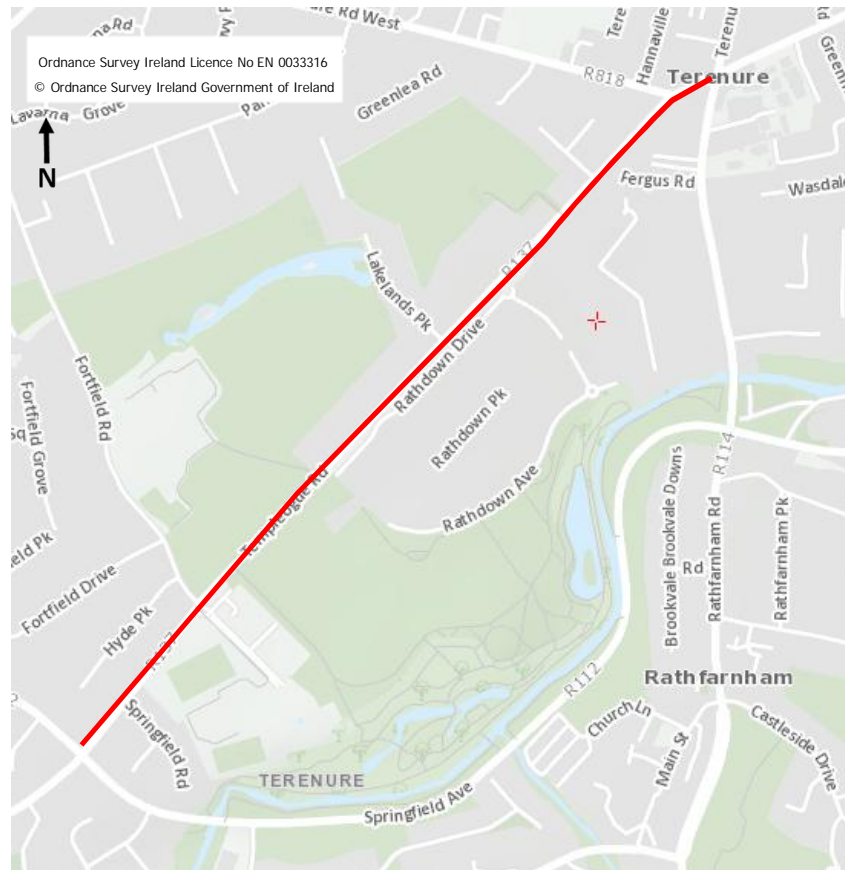


Figure vi: Section 2 Cohesive Route

Due to a number of existing constraints, the section of Templeogue Road between the Fortfield Road/Templeogue Road junction and Terenure Road West/Terenure Place/Templeogue Road junction (Figure vii), required specific consideration which enabled the identification of alternative scheme options (12 no.) for this section:-

- Option S2-1 – Full inbound & outbound bus lane provision, full inbound & outbound cycle lane provision;
- Option S2-2 – Full inbound & outbound bus lane provision (with the exception of a 50m section of Templeogue Road approaching Rathdown Park where bus lanes in both direction will not be provided), no general traffic lanes along Templeogue Road from Rathdown Park to Terenure Cross (Bus Gate), full inbound & outbound cycle lane provision;
- Option S2-3 – Full inbound & outbound bus lane provision, no general traffic lanes along Templeogue Road from Rathdown Avenue to Terenure Cross (Bus Gate), full inbound & outbound cycle lane provision;

- Option S2-4 – Inbound bus lane provided on Rathdown Park and Outbound bus lane provided on Fergus Road, full inbound & outbound cycle lane provided on Templeogue Road;
- Option S2-5 – Full inbound & outbound bus lane provision, no cycle facilities provided on Templeogue Road from Lakelands Park to Terenure Village, cycle diversion, parallel & feeder cycle routes provided;
- Option S2-6 – Full inbound & outbound bus lane provision, no outbound general traffic lane from Terenure Road West/Templeogue Road junction to Rathdown Park (Bus Gate), no cycle facilities provided on Templeogue Road from Lakelands Park to Terenure Village, cycle diversion, parallel & feeder cycle routes provided;
- Option S2-7 – Full inbound & outbound bus lane provision, no inbound general traffic lane from Rathdown Park/Templeogue Road junction to Terenure Road West/Templeogue Road junction (Bus Gate), no cycle facilities provided on Templeogue Road from Lakelands Park to Terenure Village, cycle diversion, parallel & feeder cycle routes provided;
- Option S2-8 – Full inbound & outbound bus lane provision, no general traffic lane from Fortfield Road/Templeogue Road junction to Terenure Road West/Templeogue Road junction (Bus Gate), full inbound & outbound cycle lane provision.
- Option S2-9 – Full inbound and partial outbound bus lane provision, no inbound general traffic from Fortfield Road/Templeogue Road junction to Rathdown Park (Bus Gate, residential access only), no inbound general traffic lane from Rathdown Park/Templeogue Road junction to Terenure Road West/Templeogue Road junction (Bus Gate), no cycle facilities provided on Templeogue Road from Lakelands Park to Rathdown Park, cycle diversion, parallel & feeder cycle routes provided, outbound cycle facilities provided from Terenure Road West/Templeogue Road junction to Rathdown Park/Templeogue Road junction;
- Option S2-10 – Partial outbound bus lane provided along the route, no inbound general traffic from Fortfield Road/Templeogue Road junction to Rathdown Park (Bus Gate, residential access only), no inbound general traffic lane from Rathdown Park/Templeogue Road junction to Terenure Road West/Templeogue Road junction (Bus Gate), no cycle facilities provided on Templeogue Road from

Fortfield Road/Templeogue Road junction to Rathdown Park/Templeogue Road, cycle diversion, parallel & feeder cycle routes provided, outbound cycle facilities provided from Terenure Road West/Templeogue Road junction to Rathdown Park/Templeogue Road junction;

- Option S2-11 – Full inbound and partial outbound bus lane provision, no inbound general traffic from Fortfield Road/Templeogue Road junction to Rathdown Park (Bus Gate, residential access only), no inbound general traffic lane from Rathdown Park/Templeogue Road junction to Terenure Road West/Templeogue Road junction (Bus Gate), no cycle facilities provided on Templeogue Road from Fortfield Road/Templeogue Road junction to Rathdown Park/Templeogue Road, cycle diversion, parallel & feeder cycle routes provided, outbound cycle facilities provided from Terenure Road West/Templeogue Road junction to Rathdown Park/Templeogue Road junction;
- Option S2-12 – Partial outbound bus lane provided along the route, no inbound general traffic from Fortfield Road/Templeogue Road junction to Olney Grove (Bus Gate, residential access only), no inbound general traffic lane from Olney Grove/Templeogue Road junction to Terenure Road West/Templeogue Road junction (Bus Gate), no footpath provided on the eastern side of Templeogue Road from Fortfield Road to Rathdown Crescent (existing footpath layout), two-way cycle route will be provided through Bushy Park adjacent to Templeogue Road, shared/mixed street will be provided along Rathdown, outbound cycle facilities provided from Terenure Road West/Templeogue Road junction to Rathdown Park/Templeogue Road junction.

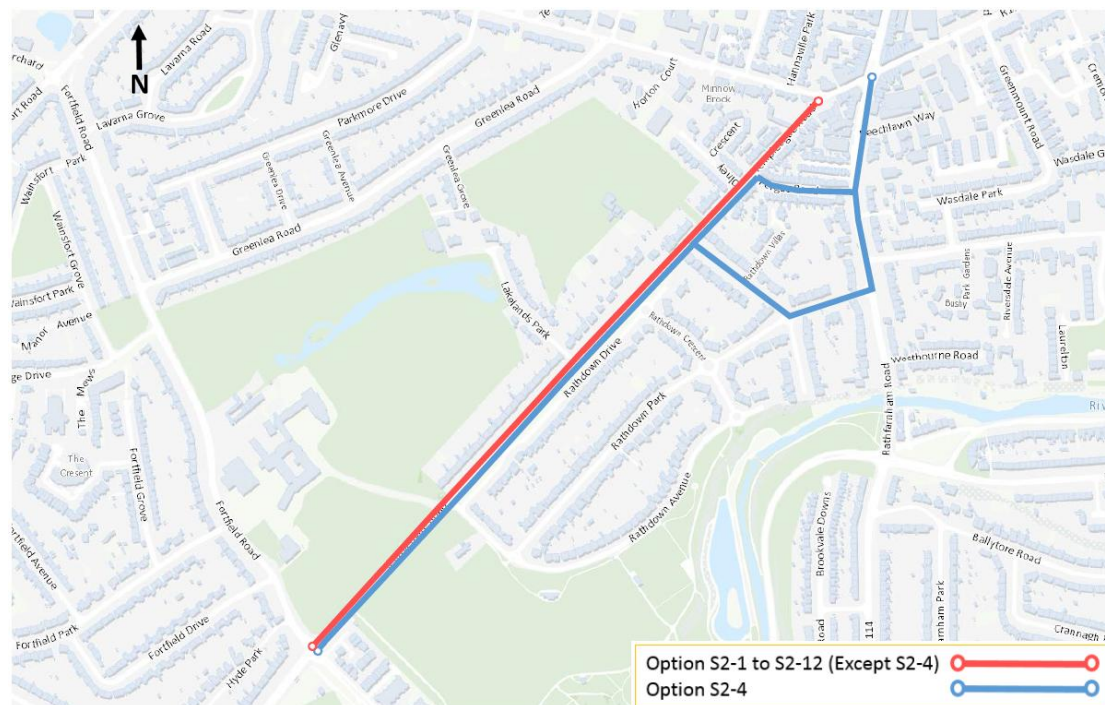


Figure vii: Section 2 - Templeogue Road Sub-section

The results of the assessment reveal that option S2-12 offers more benefits over the other eleven route options. Option S2-12 is therefore preferred route for the section of Templeogue Road between the Fortfield Road/Templeogue Road junction and Terenure Road West/Templeogue Road junctions for the following principal reasons:-

- It provides bus priority facilities along this section of Templeogue Road, thereby providing improved journey time reliability;
- It will provide shorter more reliable journey times;
- It serves a high level of residential and employment catchments within 5, 10 and 15-minute walking distance;
- Users of the CBC service will be able to integrate with existing and future proposed public transport infrastructure; and
- It would provide an improvement on road safety for all users.

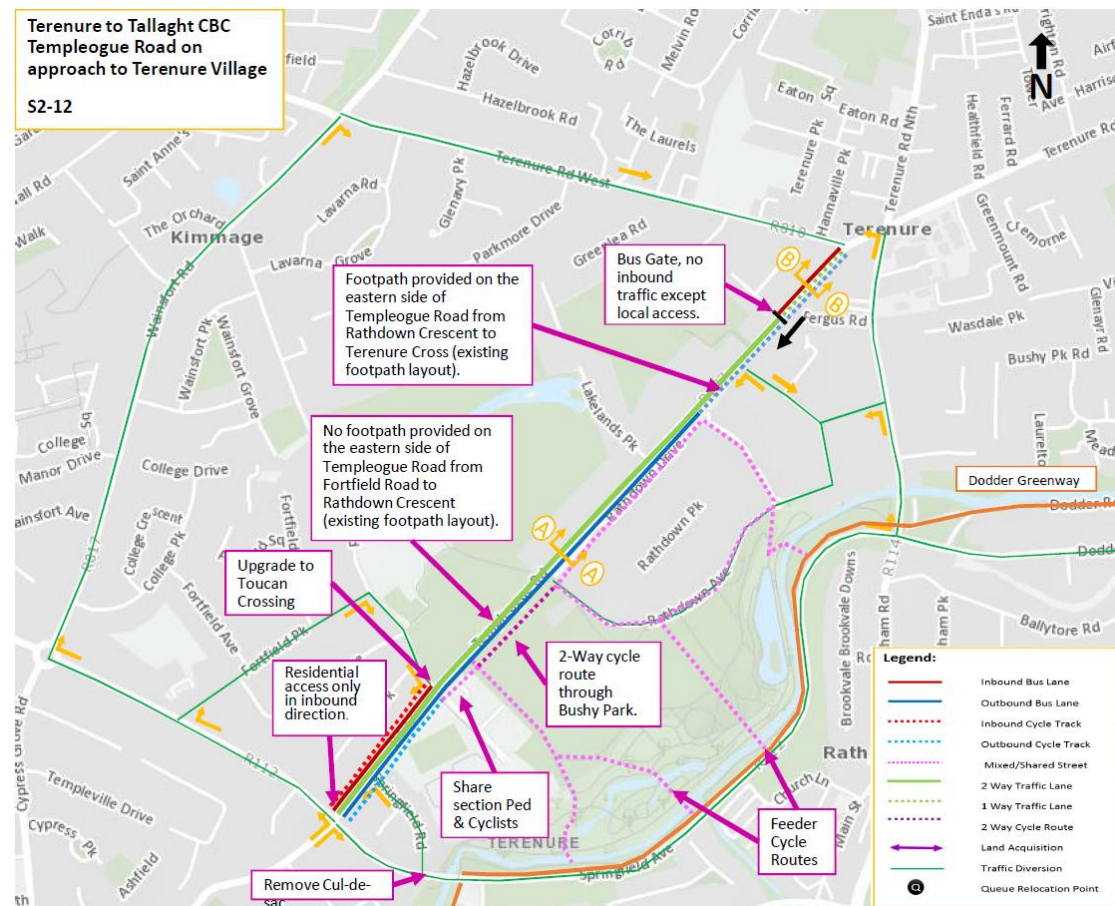


Figure viii: Templeogue Road Scheme Option S2-12 Proposal

The Emerging Preferred Route

Based on the findings of the route options assessment process, an emerging preferred route for the CBC scheme has been identified, as presented in Figure (ix) below, and is described in the following paragraphs.

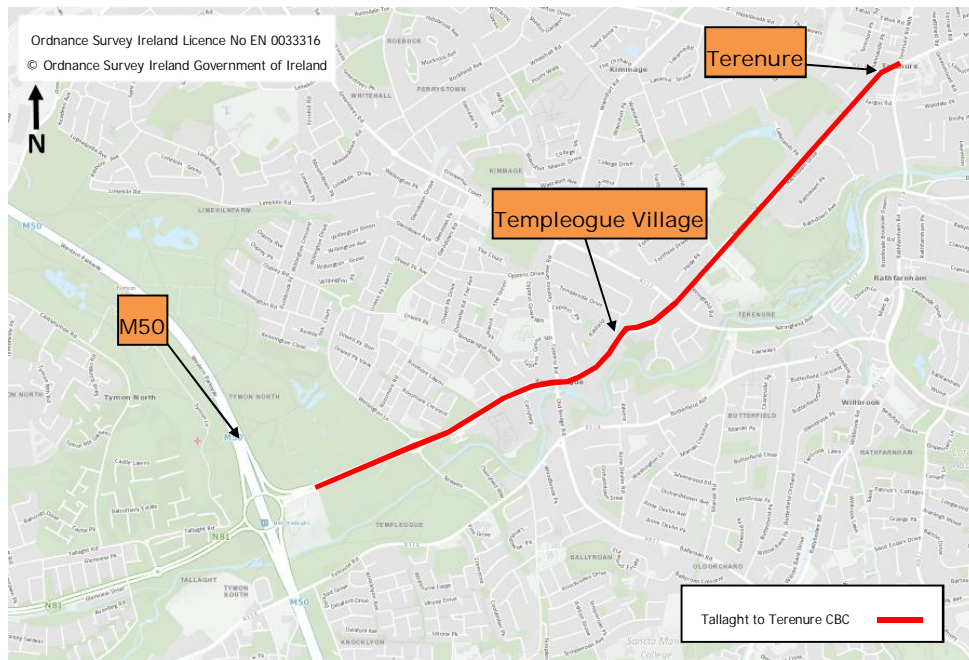


Figure ix: Terenure to Tallaght Core Bus Corridor Emerging Preferred Route

The emerging preferred CBC scheme commences approximately 270m to the northeast of the R137 Templeogue Road/M50/N81 interchange (roundabout junction) on Templeogue Road. New/upgraded bus lanes will be provided in both directions between the aforementioned CBC scheme starting point east of the M50 Junction 11 and the Wellington Lane/Spawell Road junction. At the northeast bound approach to the Wellington Lane/Spawell Road junction, the traffic signals at the existing pedestrian crossing will be upgraded to include a bus pre-signal to enable buses to be given priority over general vehicles on approach to the junction. The bus lanes (in both directions) will be continued through the junction.

The existing two-way cycle track along the northern side of the route will also be upgraded, aligning with Secondary route 9B as identified in the Cycle Network Plan.

Between the Wellington Lane/Spawell Road junction and the Templeogue Road/Cypress Grove Road/Old Bridge Road junction new/upgraded bus lanes will be provided in both directions. At the southwest bound approach to the Wellington Lane/Spawell Road junction, the traffic signals at the existing pedestrian crossing will be upgraded to include a bus pre-signal to enable buses to be given priority over general vehicles on approach to the junction.

The Templeogue Road/Cypress Grove Road/Old Bridge Road junction will be reconfigured to ensure buses are given priority over general vehicle traffic.

The existing two-way cycle track along the northern side of the route between the Wellington Lane/Spawell Road junction and the Templeogue House access will also be upgraded; permitting northeast bound cyclists only, whilst a new cycle track will be provided along the southern side of the carriageway for southwest bound cyclists. These cycle tracks on the northern and southern sides of the carriageway will be extended to/from the Templeogue Road/Cypress Grove Road/Old Bridge Road junction. These proposals align with Secondary route 9B as identified in the CNP.

On the approaches to/from Templeogue Village, (i.e. between the Cypress Grove Road/Old Bridge Road junction and the Springfield Ave/Templeville Road junction), continuous bus lanes will be provided in both directions along Templeogue Road. The existing right turn ban for general traffic from Old Bridge Road will be retained. Similarly the existing left turn ban for general traffic from Cypress Grove Road will be retained.

Cycle lanes will be provided along both sides of the carriageway on the approaches to/from Templeogue Road/Cypress Grove Road/Old Bridge Road junction and the Templeogue Road/Springfield Ave/Templeville Road junction aligning with Secondary Route 9B as identified in the GDA Cycle Network Plan.

The inbound cycle lane will terminate approximately 70m northeast of the Templeogue Road/Cypress Grove Road/Old Bridge Road junction after which cyclists will join the adjacent bus lane. Cyclists will continue in the inbound bus lane for approximately 300m, where they are then provided with a segregated cycle track. This cycle track continues for approximately 135m where it then merges with a shared pedestrian/cycle track for a distance of 70m (approx.). An on-road cycle lane is then provided up to and through the junction.

Outbound from the Templeogue Road/Springfield Ave/Templeville Road junction there is a cycle lane provided for approximately 95m. Cyclists will then continue in the outbound bus lane until a cycle lane is provided approximately 100m from the Templeogue Road/Cypress Grove Road/Old Bridge Road junction.

A 30kph speed limit will be implemented along Templeogue Road to provide a safer cycling environment for cyclists who wish to continue their journey along Templeogue Road. The new sections of bus lane and cycle lanes can be accommodated with carriageway widening along the northern and southern sides of

the carriageway. The scheme proposals through Templeogue Village will provide enhanced facilities for both pedestrians and cyclists.

Concept Scheme Design Summary

Cost Estimate

A high-level cost estimate has been prepared based on the concept scheme design and a number of assumptions regarding the scheme details. As such the proposed Clondalkin to City Centre Core Bus Corridor scheme infrastructure is anticipated to be in the region of €8.1-11.1 million excluding VAT.

Journey Time Benefits

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

An analysis of the available comparable bus journey time data along the route has revealed there is a significant variance in the journey times for bus services along the corridor throughout the day. A difference of up to 17 minutes in journey times has been recorded, demonstrating that the current poor journey time reliability for bus passengers could be addressed by the proposed scheme.

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.

DRAFT

1.0 INTRODUCTION AND BACKGROUND

1.1 Preamble

- 1.1.1 This report presents the principal findings of the detailed route options assessment work undertaken for the Terenure to Tallaght Core Bus Corridor scheme (hereafter referred to as the 'proposed scheme') following which a recommendation on a preferred route is made.
- 1.1.2 This route options assessment report describes the detailed assessment of potential viable route options within the study area identified for the proposed scheme against established assessment criteria.

1.2 Report Structure

- 1.2.1 The route option assessment process and corresponding report structure are detailed below: -
- Section 1 – This initial section provides an introduction and background to the planned Core Bus Network;
 - Section 2 – The strategic transport policy context which has led to the identification of a need for the delivery of the Terenure to Tallaght CBC is outlined. The objectives for the proposed scheme are presented;
 - Section 3 – The proposed Study Area and associated three sub-sections are described identifying key constraints and opportunities, the integration of the Terenure to Tallaght CBC with the wider public transport network and its compatibility with other road users.
 - Section 4 – The methodology for identifying and assessing the feasibility of the various route options is discussed in this section including: -
 - the identification of study area sections where practical route options were considered and presentation of the 'spiders web' network of potential route options; and
 - the selection and determination of initial criteria for screening and assessing technically feasible route options, based on distinct, project-specific objectives; and

- the definition of assessment criteria.
- Section 5 – details the route option assessment for Section 1 of the Study Area,
- Section 6 – details the route option assessment for Section 2 of the Study Area,
- Section 7 – The preferred route for the proposed scheme is described, the cost estimate for the proposed scheme is outlined and the journey time benefits are defined.
- Section 8 - the next steps for the project are set out in this section

1.3 Core Bus Network

- 1.3.1 One of the principal additions to the latest edition (2016 – 2035) of the NTA Transport Strategy for the GDA was the identification of a 'Core Bus Network' (CBN) for the region. The CBN is set out as representing '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. While this network represents the core high frequency bus routes, it is supplemented by other bus services operating on lower frequency routes and by local buses running on other routes.
- 1.3.2 The Core Bus Network will serve significant origins and destinations in the Dublin Metropolitan Area and throughout the GDA, particularly those locations not directly served by heavy and light rail. It will also provide greater opportunity for reliable and convenient interchange with these services.
- 1.3.3 In order to ensure an efficient, reliable and effective bus system, it is intended, as part of the Strategy to develop the Core Bus Network to achieve, as far as practicable, continuous priority for bus movement on the portions of the Core Bus Network within the Metropolitan Area. This will mean enhanced bus lane provision on these corridors, removing current delays on the bus network at the relevant locations and enabling the bus to provide a faster alternative to car based travel along these routes, therefore making bus transport a more attractive alternative for road users. It will also make the overall bus system more efficient, as faster bus journeys means that more people can be moved with the same level of vehicle and driver resources'.

1.3.4 The Terenure - Tallaght corridor generally aligns with the Tallaght-Rathfarnham-Terenure corridor as one of the 16 radial bus corridors forming the Core Bus Network (as illustrated in Figure 1.1 below), which also includes the following:-

- Clontarf – East Wall
- M1/ M50 – Dublin Port Tunnel
- Clongriffin – Artane – Fairview
- Swords – Airport – Drumcondra
- Ballymun – Phibsboro
- Finglas – Phibsboro
- Blanchardstown – Cabra – Stoneybatter
- Liffey Valley – Ballyfermot
- Tallaght – Walkinstown – Crumlin
- Lucan – Palmerstown – Kilmainham
- Marley Park – Rathmines
- Bray/N11 – UCD – Donnybrook
- Dun Laoghaire – Blackrock – Ballsbridge
- Ringsend – Pearse Street

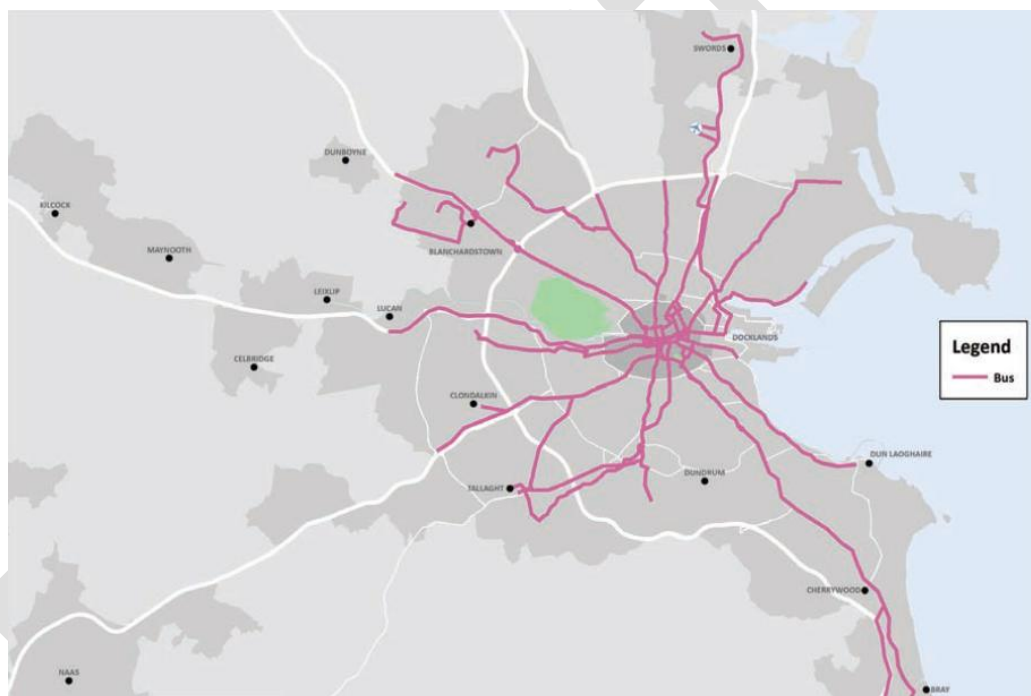
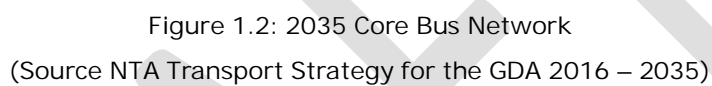


Figure 1.1: 2035 Core Bus Network - Radial Corridors
(Source NTA Transport Strategy for the GDA 2016 – 2035)

1.3.5 The combined CBN comprising, Radial, Orbital & Regional corridors as well as the 2035 Bus Rapid Transit Network is illustrated in Figure 1.2 below.



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2.0 TRANSPORT PLANNING AND POLICY CONTEXT

2.1 Introduction

- 2.1.1 This section of the report provides an overview of the national, regional and local transportation policy relevant to the Terenure-Tallaght CBC scheme. These documents provide the policy framework for the development of an improved bus corridor between Terenure and Tallaght. Relevant extracts from the documents are outlined in this section and commentary provided where necessary.

2.2 Greater Dublin Area Transport Strategy 2016-2035

- 2.2.1 The GDA Transport Strategy 2016-2035 outlines the transport vision and objectives to '*contribute to the economic, social and cultural progress of the Greater Dublin Area by providing for the efficient, effective and sustainable movement of people and goods*'. The current strategy was adopted in April 2016 as an update to the original 2012 draft strategy. One of the principal amendments to the Strategy was the introduction of a 'Core Bus Network' (CBN) which was identified for the region and has been discussed previously in Section 1.3 above.
- 2.2.2 The *Outer Orbital Movement Study* & the *Inner Orbital Study* (both published by the NTA in September 2015) informed the development of the updated Transport Strategy and focussed on distinct areas with a view to determining the most appropriate form of transport 'solution' to serve these areas.
- 2.2.3 The Outer Orbital Movement Study investigated the connection of 5 key centres within the Dublin area namely; Swords, Blanchardstown, Tallaght, Dundrum & Dun Laoghaire. The connection between Tallaght and Dundrum is of most relevant to the Clondalkin CBC with a number of options considered as part of the Outer Orbital study traversing the subject study area namely along the Old Greenhills Road, N81 and Templeogue Road.
- 2.2.4 The Inner Orbital Study focussed on a study area between the M50 and the City Centre, from Finglas to Rathmines, forming a half ring shape around Dublin City Centre. It was recommended that 2 additional orbital bus routes be introduced to serve the study area as shown in Figure 2.1 below. This includes the provision of a

'long orbital bus route' from Churchtown/ Rathfarnham to Finglas and from Rathmines to Glasnevin.

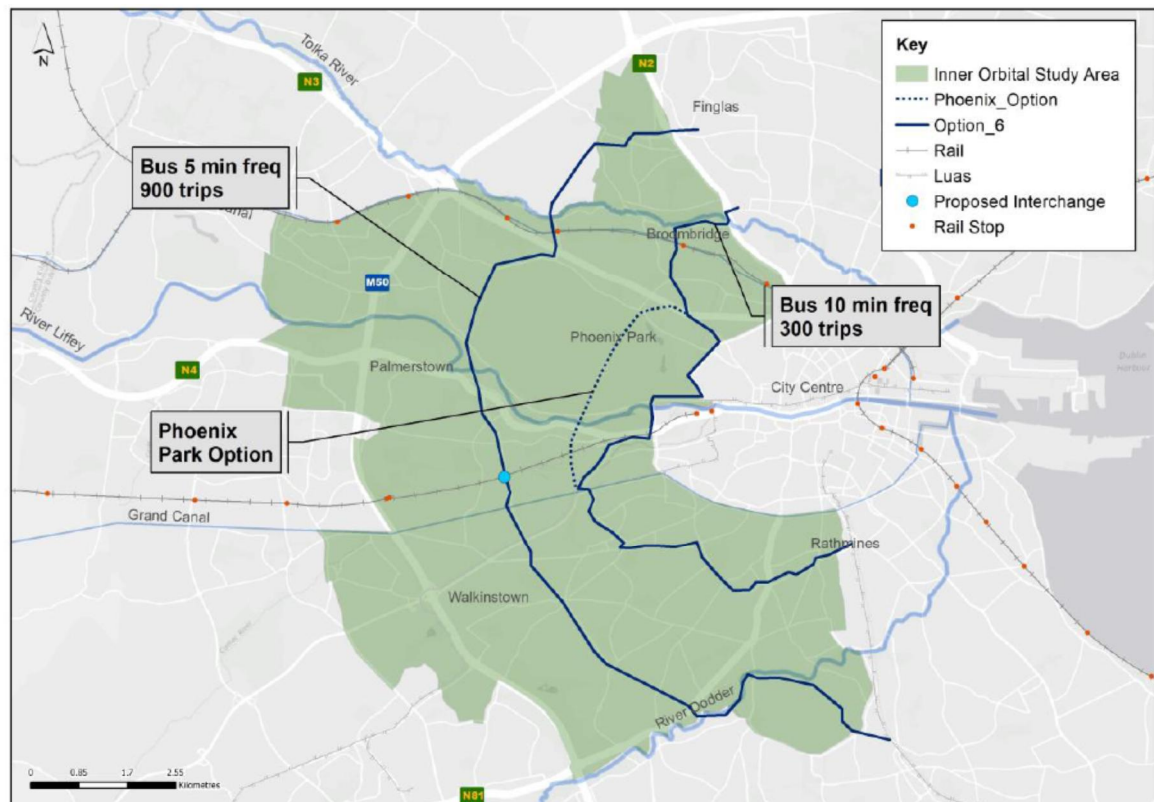


Figure 2.1: Inner Orbital Study Area and Proposed Orbital Bus Routes

2.3 Project Ireland 2040, National Development Plan 2018—2027

2.3.1 The recently published National Development Plan includes a number of Sustainable Mobility 'major National Infrastructure Projects' for appraisal and delivery within the lifetime of the Plan including:-

- BusConnects for Ireland's Cities;
- Dart Expansion Programme; and
- Metro Link.

2.3.2 The Plan aims to:- *'deliver a public transport network that will provide high-quality passenger interchange points, which facilitate convenient transfer between efficient and integrated public transport services.'*

2.4 Integrated Implementation Plan 2013 – 2018

2.4.1 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 including investment in existing bus services.

2.4.2 The proposals in relation to Bus investment are encompassed in four investment themes: -

1. Bus Fleet Investment;
2. Bus Stop and Shelter Provision;
3. General Bus Network Improvements; and
4. Bus Rapid Transit Schemes.

2.4.3 Investment themes 2 & 3 are of most relevance to the subject scheme. More specifically, the Integrated Implementation Plan proposes the following measures in relation to bus network improvements:

- *'Further development of a quality bus network appropriate to serve the needs of the GDA;*
- *Seeking to achieve, as far as practicable, continuous inbound priority and the maximum possible outbound priority on key bus routes into Dublin City Centre;*
- *Enhancing bus priority at other urban locations in the GDA;*
- *Seeking enhanced bus prioritisation at signalised traffic junctions in the GDA;*
- *Improving the level of interchange facilities between services and with other transport modes;*
- *Creation of bus hubs or bus focal points in key urban locations in the GDA; and*
- *Reducing the level of bus layover and parking in central urban areas.'*

2.4.4 These measures will provide an interim transport solution in the shorter term, pending the development of a higher capacity rail solution, such as a New Metro North amongst others.

2.5 Dublin City Centre Transport Study

2.5.1 The Dublin City Centre Transport Study has been prepared to integrate the transport policies and proposals of Dublin City Council (DCC) and the National Transport Authority (NTA) and inform an agreed framework for strategic investment. The study was issued for public consultation in June 2015 and proposes the following relevant measures to improve the operation, management and efficiency of the bus network within Dublin City: -

- To maximise the performance of the bus network by ensuring that sufficient road capacity and junction priority are provided to allow buses to operate efficiently, with reliable and predictable journey times; and
- To further optimise the routing of the bus corridors through the City Centre area, improving interchange arrangements and optimising the efficiency of the service.

2.6 Infrastructure & Capital Investment 2016 – 2021: Medium – Term Exchequer Framework

2.6.1 The 'Medium Term Exchequer Framework' was published by the Department of Public Expenditure and Reform (DEPR) 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. The investment programme included proposed expenditure of €3.6 billion on public transport which included '*further upgrading of Quality Bus Corridors*' amongst other items.

2.7 Dublin City Council Development Plan (2016 – 2022)

2.7.1 The current Development Plan for Dublin City Council came into effect on 21st October 2016 and contains some objectives in relation to bus travel which are of general relevance to the Scheme such as:

- *To support improvements to the city's bus network and related services to encourage greater usage of public transport in accordance with the objectives of the NTA's strategy and the Government's 'Smarter Travel' document.*

- *To facilitate and support measures proposed by transport agencies to enhance capacity on existing public transport lines and services, to provide/improve interchange facilities and provide new infrastructure.*
- *To review future strategic provision of bus depots/garages in the city in consultation with Dublin Bus and the NTA.*

2.8 South Dublin County Council Development Plan 2016-2022

2.8.1 The current Development Plan for South Dublin County Council came into effect on 12th June 2016 and generally seeks to *'ensure an integrated strategy for transport and mobility that enhances access and movement within and through the County, while promoting change, in favour of sustainable modes'*.

2.8.2 It is a stated action of the Plan to *'work with the NTA to secure the extension and expansion of the Core Bus Network and other bus services to serve new areas of employment, housing and tourism potential, whilst also improving the efficiency and frequency of services within more established areas'*.

2.9 Greater Dublin Area Cycle Network Plan

2.9.1 In August 2013, the NTA published the Greater Dublin Area Cycle Network Plan. Following a period of consultation with the public and various stakeholders it was officially adopted and published in early 2014. The plan undertook a review of existing cycle facilities in the GDA and set out the strategy for the development of an integrated cycle network for the future.

2.9.2 The Plan identified the following route additions which pass through the subject Terenure -Tallaght CBC study area: -

- Primary Route 9A: *'follows Kimmage Road to the Kimmage Cross Roads (KCR), then Fortfield Road and Wainsfort Road to join the N81 Templeogue Road and onward out to Tallaght town centre'*.
- Primary Route SO5: *'from Liffey Valley Shopping Centre southward Fonthill Road and Ninth Lock Road to Clondalkin Village and Tallaght'*;
- Primary Route 8B: *'branches off Route 8A midway along Crumlin Road at Windmill Road and follows a slightly meandering route mainly along minor*

residential streets through Crumlin Cross and Greenhills to Tymon Park and onward to Tallaght via the outer end of the Greenhills Road.;

- Secondary Route 9C: *'is an alternative to the Harold's Cross route from Route 8C at Clogher Road via Stannaway Road west of Kimmage and then along Wellington Lane to join Route 9A at Spawell to connect to Tallaght. It also provides a continuation from Route 9A west of Tallaght via Fortunestown and Citywest to Saggart;'*
- Secondary Route 9B: *'splits from Route 9A at Harold's Cross and follows Terenure Road through Terenure Cross and then Templeogue Road through Templeogue Village to re-join Route 9A at Templeogue Bridge. This route provides inter-connection with Route 10 towards the southeast city centre via Rathmines';*
- Secondary Route 10A: *"turns south-westward along Butterfield Avenue (also on Route SO4) and runs parallel to the River Dodder to Firhouse and Oldcourt beside Old Bawn Bridge on Orbital Route SO6. Knocklyon Road and Ballycullen Road are local secondary routes that branch off southward at various points. There are also northward links across the River Dodder to Radial Route 9 at Spawell and Templeogue Bridge';*
- River Dodder Greenway *'from the River Liffey to Tallaght, via Ballsbridge, Milltown, Churchtown and on to the south west'.*

2.9.3 It is therefore important that any upgrade to bus priority infrastructure within the subject Terenure-Tallaght CBC study area takes cognisance of the objectives of the Plan and, where practical, provides cycle infrastructure to the appropriate level and quality of service (as defined by the NTA National Cycle Manual) required for the identified routes.

2.10 Policy Conclusion

2.10.1 The various studies discussed in the preceding sub-sections set out the transport planning policy context and need for the proposed scheme. The need for the scheme is predominantly borne out of the need to provide a higher quality bus service, than currently exists, to serve the Terenure-Tallaght corridor in the short to medium term.

2.11 CBC Scheme Objectives

2.11.1 Having regard to the findings of the transport planning and policy context for the proposed CBC's in the GDA, the following objectives have been established for the Terenure - Tallaght 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; 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.

3.0 STUDY AREA

3.1 Introduction

3.1.1 This section of the report focusses on the study area for the scheme and the characteristics of the two sub-sections of this area in terms of physical features, opportunities and constraints as well as identifying potential for integration with other travel modes and road users.

3.1.2 Arising from the transport policy context, the broad study area identified for the proposed scheme is illustrated in Figure 3.1 below. The study area extends beyond the immediate alignment of existing bus corridors ensuring all practical opportunities to deliver the necessary service requirements are fully explored and any supplementary traffic measures as required can be identified. The study area also considers the presence of other existing/proposed corridors which will increase the opportunities to transfer between modes and services.

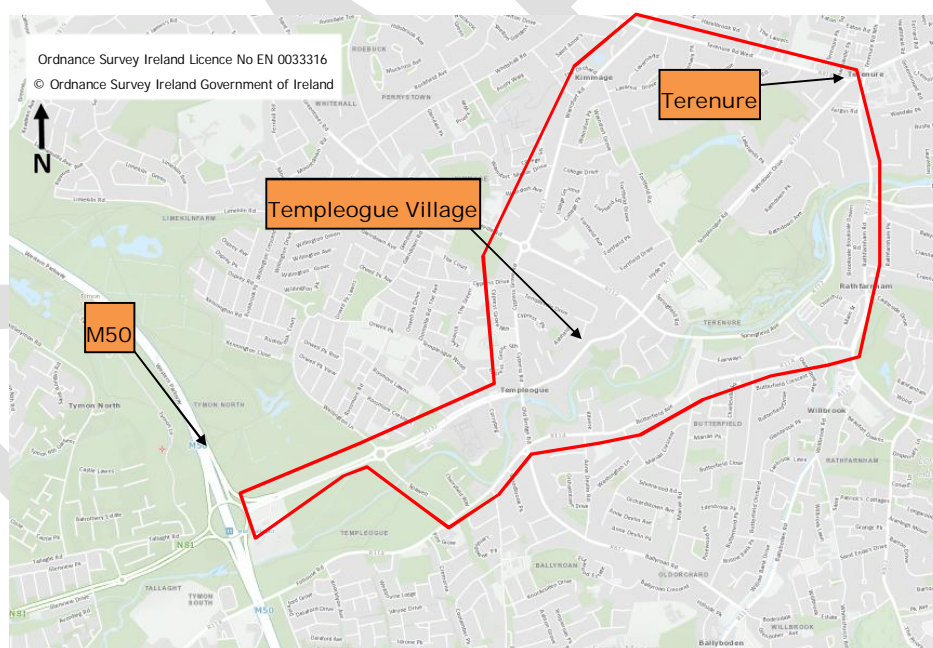


Figure 3.1: Proposed Scheme Study Area

3.2 Study Area Sections

3.2.1 The study area has been divided into two more manageable sub sections to simplify the assessment process as illustrated below in Figure 3.2: -

- Section 1 – R137 Templeogue Road/N81/M50 interchange (roundabout junction) and the Springfield Ave/Templeville Road corridor; and

- Section 2 – between the Springfield Ave/Templeville Road corridor and the Rathfarnham Road/Terenure Road West corridor.



Figure 3.2: Study Area Sections

3.3 Physical Constraints and Opportunities

- 3.3.1 There are a number of constraints and opportunities, both natural (i.e. existing natural environment) and physical (the built environment), which may constrain route options for the proposed scheme within the defined study area. Any constraints will be examined/addressed through the route option assessment process detailed later in this report.

3.4 Compatibility with Other Road Users

- 3.4.1 A key objective of the proposed scheme is to improve pedestrian and cyclist facilities along the route. In general, segregated facilities will be proposed for these modes along the Primary Cycle Network. The scheme will provide for cycle facilities along the routes 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.
- 3.4.2 Where it is considered impractical to construct pedestrian or cycle facilities along a particular section of the CBC route (and it is considered inappropriate to reroute the bus), such facilities will need to be provided along a suitable alternative route.

- 3.4.3 There may be locations where segregated cycle facilities cannot be provided along the CBC route and there is no suitable rerouting alternative. In this instance, it may be possible for cyclists to share with vehicles in the bus lane. However, such proposals need careful consideration and design to ensure the safety of cyclists, with additional mitigation measures, such as speed restrictions for vehicles in bus lanes being applied.
- 3.4.4 General traffic will 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 the bus lanes and the introduction of turning movement restrictions. Reductions in traffic carrying capacity of the road network need however to be considered in the context of the overall significant increase in efficiency and reliability of the bus services that will be achieved.

3.5 Integration with Existing and Proposed Public Transport Network

- 3.5.1 One of the objectives of the proposed scheme is to enhance interchange between the various modes of public transport operating in the city, 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; provide for interchange opportunity with existing and planned future transport services, including:
- The proposed Rathfarnham to City Centre Core Bus Corridor; and
 - Existing Dublin Bus services at numerous locations along the route.

4.0 ROUTE OPTION ASSESSMENT STRUCTURE & METHODOLOGY

4.1 Assessment Process

4.1.1 This section of the report presents the structure and methodology used for the assessment of route options within the study area. A two-stage assessment was adopted:

- An initial 'Stage 1' high-level route options assessment or 'sifting' process which appraised routes in terms of ability to achieve scheme objectives (as outlined in Section 2.11) and whether they could be practically delivered; and
- Routes which passed this initial stage were taken forward to a more detailed 'Stage 2' multi-criteria assessment.

4.1.2 As outlined in Section 3 and illustrated in Figure 3.2 above, the study area has been divided into 2 sections to simplify the assessment process:

- Section 1 – between the R137 Templeogue Road/N81/M50 interchange (roundabout junction) and the Springfield Ave/Templeville Road corridor; and
- Section 2 – between the Springfield Ave/Templeville Road corridor and the Rathfarnham Road/Terenure Road West corridor.

4.1.3 The north-eastern extents of the study area have been assumed as being the general area of Terenure Cross where it will provide opportunity for interchange with the proposed Rathfarnham to City Centre Core Bus Corridor.

4.1.4 The assessment process is illustrated Figure 4.1 below.

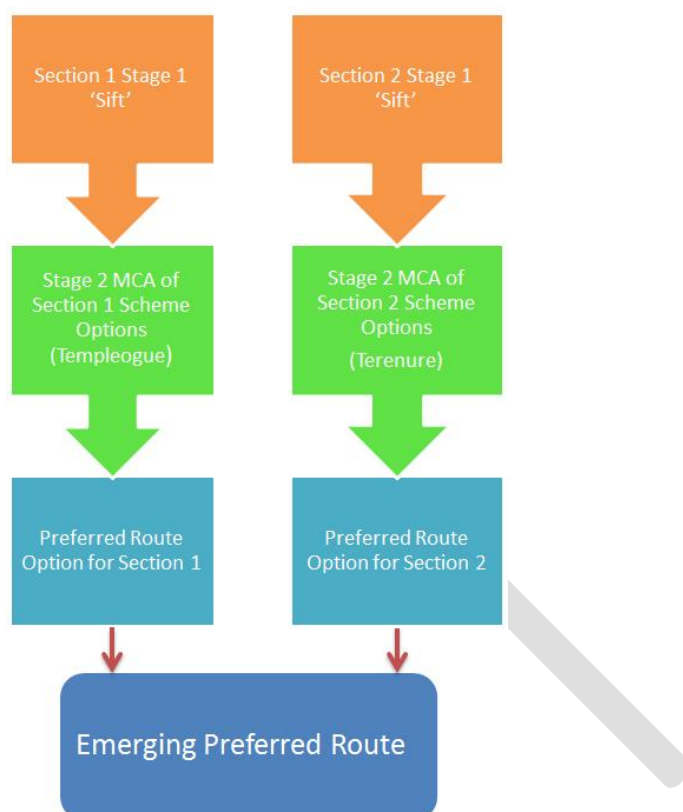


Figure 4.1: Route Options Assessment Process

4.2 Assessment Structure

- 4.2.1 The assessment of the route options is structured in a manner whereby the Stage 1 and Stage 2 option assessments are conducted for each Section of the Study area before proceeding to the assessment for the following section. The sections are addressed in a west to east direction from the R137 Templeogue Road/N81/M50 interchange roundabout junction (i.e. Section 1 of the study area) with this eastwards direction taken to be 'inbound' and the opposite direction classified as 'outbound'.
- 4.2.2 As there are a large number of potential 'end-to-end' routes within the study area, these routes have been subdivided into shorter links/sections for the purposes of the 'Stage 1' route options sifting process. Following the initial route sifting process, the remaining routes have been combined to form longer routes/connections where possible.
- 4.2.3 The 'Stage 1' route options sifting process assesses potential route options within the study area at a high level against the appraisal criteria described in the following

sections. Figure 4.2 below presents the initial range of potential route options or 'Spiders Web' of route connections identified for the study area.

4.3 Route Option Assessment Methodology Stage 1: Sifting

4.3.1 Within the study area, several corridors exist which could potentially deliver the primary scheme objectives. A 'Spiders - Web' (Figure 4.2) illustrating these potential corridors was developed to enable a sifting exercise to be undertaken on the individual links within the study area to determine: -

- (i) If they could meet the identified schemes objectives; and
- (ii) if bus priority could be reasonably delivered along them. Bus priority would take the form of segregated facilities or where this may not be achievable due to physical constraints, ITS measures such as queue relocation or advanced signalling.

4.3.2 The identification of these initial route options took cognisance of the physical constraints and opportunities present and the ability to integrate with other public transport modes. Of relevance in developing the spiders-web was the potential for the road or route sections to facilitate fast and reliable journey times and thereby be able to practically accommodate bus priority.

4.3.3 At the Stage 1 'sifting' stage, the initial 'spiders-web' of route options 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 cost and/or impact to achieve these objectives (e.g. excessive land-take).

4.3.4 Conversely, some route options may fail the Stage 1 assessment as a result of not satisfying the scheme objectives in relation to bus services but may be considered at a later stage to provide for diversion of traffic or cycle facilities in conjunction with bus services on an alternative route. Further to this, some routes not identified as part of the 'Spiders Web' within or outside the study area may be used as alternative routes for cyclists in conjunction with bus services along a different route.

4.3.5 This assessment stage focused on engineering constraints, as identified by the findings of both the desktop study and site audits, thereby considering: -

- Technical feasibility;
- Transport planning implications; and
- Environmental issues.

4.3.6 Within the cohesive route options, there are a number of scheme options which have been considered owing to the generally constrained nature of sections of the routes. The majority of scheme options considered are concentrated in the vicinity of the following sections:

- Templeogue Village; and
- Templeogue Road/Terenure Road West/Terenure Place (approaches to/from).

4.3.7 The resulting study areas spiders-web of potential stage 1 route options is presented in Figure 4.2. These adopted routes are discussed in further detail within Chapter 5, and Chapter 6 of this report.

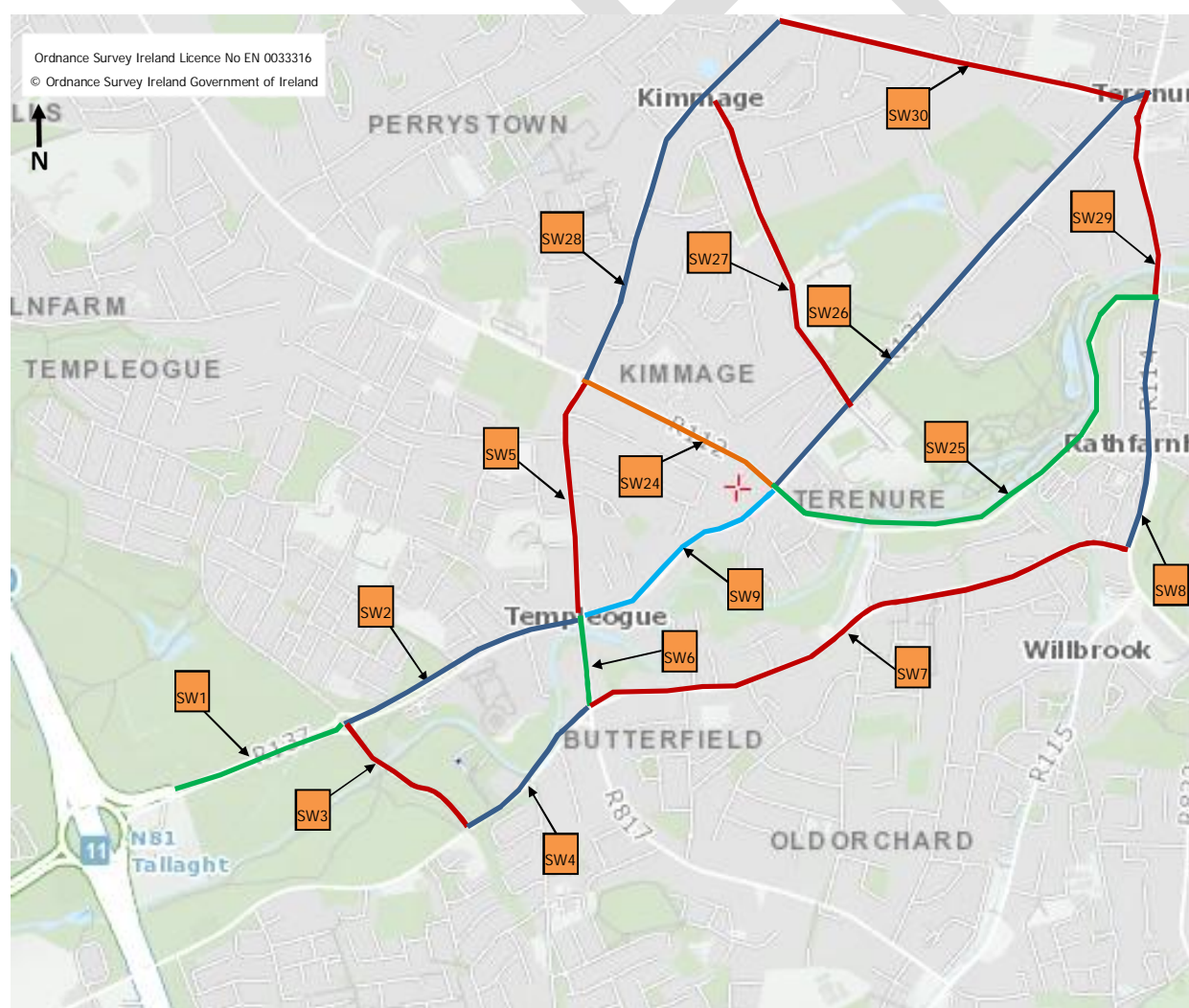


Figure 4.2: Spiders Web of Route Options

4.4 Stage 2: Route Options Assessment – Detailed Assessment

- 4.4.1 Following completion of the 'Stage 1' assessment, the remaining routes have been combined to form cohesive 'end to end' routes where possible and progressed to Stage 2 of the assessment process. It should be noted that certain route options which pass the Stage 1 assessment may not be taken forward to the Stage 2 assessment as they may be isolated links which do not combine with other route options to form cohesive routes.
- 4.4.2 This stage comprised a more detailed qualitative and quantitative assessment, using criteria established to compare route options.
- 4.4.3 The 'Guidelines on a 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;
 - Physical Activity;
 - Safety; and
 - Environment.
- 4.4.4 An appreciation of constraints and opportunities within the study area as well as the defined project objectives, led to the establishment of project-specific route options assessment criteria.
- 4.4.5 These were tailored to have commonality to the Common Appraisal Framework guidelines where practical.
- 4.4.6 The physical activity criterion, added to the most recent Common Appraisal Framework, relates to the health benefits derived from using different transport modes. The subject scheme options under consideration relate to the same mode of travel (bus). As such, this criterion will not produce any relative differences between the options. Therefore, this criterion will not be applied in the multi – criteria assessment for the subject scheme.

4.4.7 The physical benefits associated with the scheme will be quantified as part of a future Cost – Benefit Analysis.

4.4.8 Table 4.1 presents a summary of the assessment criteria and sub criteria used as part of the 'Stage 2' detailed route options assessment process.

Assessment Criteria	Assessment Sub-Criteria
1. Economy	1a. Capital Cost
	1b. Transport Reliability and Quality (Journey Time)
	1c. Level of Bus Priority Provision
2. Integration	2a. Land Use Policy
	2b. Residential Population and Employment Catchments
	2c. Transport Network Integration
	2d. Cycle Network Integration
	2e. Traffic Network Integration
3. Accessibility & Social Inclusion	3a. Key Trip Attractors (Education/Health/Commercial/Employment)
	3b. Deprived Geographic Areas
4. Safety	4a. Road Safety
	4b. Pedestrian Safety
5. Environment	5a. Archaeology and Cultural Heritage
	5b. Architectural Heritage
	5c. Flora & Fauna
	5d. Soils, Geology & Hydrology
	5e. Landscape and Visual
	5f. Air Quality
	5g. Noise & Vibration
	5h. Land Use Character

Table 4.1: Assessment Criteria

4.4.9 In applying these criteria to the assessment process, it is clearly recognised that for different sections of the study area corridor, greater emphasis may need to be applied to some criterion over others in terms of their significance and influence on the route selection process. In some instances, certain criteria such as Residential & Employment catchments will be almost identical between route options. As such, these will not be specifically assessed in such cases.

1. Economy

a. Capital Cost

4.4.10 Capital cost estimates consist of both the indicative infrastructure cost estimate and land acquisition costs. The methodology used in determining these costs, standardised to per-kilometre rates, is described below.

i. Indicative Infrastructure Cost Estimate

4.4.11 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 requirements to deliver the scheme objectives. In order to evaluate route options, a degree of initial outline design has been undertaken for some routes to inform infrastructure requirements. Infrastructure costs include:

- **Carriageway:** whether potential re-alignment (i.e. re-alignment of the carriageway) is necessary and the extent of new or existing pavement reconstruction works required;
- **Drainage:** the extent to which additional drainage works, or modification of existing drainage networks is required;
- **Services/Utilities:** the extent of utility service protection or relocation works required;
- **Lighting:** whether existing public lighting would need to be replaced or a new public lighting system required along a particular route option;
- **Structures:** whether the introduction of the proposed scheme on a route would require existing structures to be modified or replaced and consideration of any new structures to be provided;
- **Construction traffic management:** an assessment of the extent of the likely traffic management measures (e.g. potential diversion of traffic away from the route) required to construct the proposed scheme along routes; and
- **Cycle route infrastructure:** The practicality and extent of works required to accommodate cycle route infrastructure along route options.

4.4.12 For the purposes of the route options assessment, a high-level cost estimate has been prepared for each type of construction i.e. upgrade to existing bus lanes within

existing reservation, widening of existing reservation including boundary treatment and/or land acquisition etc.

ii. Land Acquisition Cost Estimate

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

- 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; and
- The costs associated with boundary/accommodation works.

4.4.14 For the purposes of route options comparison and assessment, the extent of land acquisition required for each route option is calculated by developing an outline design for each option based on ordnance survey mapping available, and applying the following typical scheme characteristics: -

- 3.0 m wide Bus lane;
- 3.0 m wide Traffic Lane in areas with posted speed limit less than 60 km/h;
- 3.25 m wide Traffic Lane in areas with posted speed limit greater than 60 km/h;
- 2.0 m Footpath;
- 2.0 m Cycle Track (1 way) where such a provision is required for a Primary Route based on the GDA Cycle Network Plan;
- 1.75m Cycle Track (1 way) where such a provision is required for a Secondary Route based on the GDA Cycle Network Plan;
- 3.5m Cycle Track (2 way); and
- Shared running between cyclists and motorists where vehicular speeds and volumes permit such a regime as per the National Cycle Manual guidance.

4.4.15 Outline designs prepared for some route options also considered any specific constraints and tailored the above assumptions where appropriate to practically minimise land-take without compromising on the overall scheme objectives to maximise bus priority. It should be noted that the lane provisions above are generally achievable in both directions with some exceptions where alternative

routing for cyclists and/or separation of inbound/outbound bus and traffic lanes have been designed.

4.4.16 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 between physical boundaries on either side of a road (e.g. property boundary wall to property boundary wall). Areas outside the road reservation are assumed to be private land except where it is clear that it is owned by a public entity (e.g. a public park). Any private land that may be located within the road reservation, but are not clearly private land, are considered as public areas as part of this methodology. This exercise has been based on a combination of available Ordnance Survey mapping, topographical survey and site measurements.

4.4.17 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 (sqm) for private land acquisition based on valuations carried out by TII (RPA) for other public transport projects. Using this information, a rate of €1,500/sqm has been applied to route options to derive an indicative cost for private land-take for all route options.

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

b. Transport Reliability and Quality of Service

4.4.19 This criterion assesses route options in terms of the degree to which transport reliability and quality of service is likely to be achieved, with associated economic benefits. The assessment considers the following attributes:-

i. Journey Time

4.4.20 The extent to which journey time savings, and associated economic benefits, for public transport services, including the CBC, can be achieved on a route. This would be practically achieved through the extent to which any or all of the following measures can be implemented:-

- Enhancement of existing bus and / or provision of new bus priority along road links;

- Provision of bus priority through junctions (preferably through signal controlled junctions);
- Local upgrading of road sections to provide more carriageway space and therefore, additional capacity;
- Removal of 'pinch points' for bus services and traffic along the route; and
- Rationalisation of existing bus stops in terms of location, indentation (i.e. ability to provide laybys to avoid blockage of bus lanes) and spacing.

4.4.21 Journey times for each route option have been calculated by comparing the time required by a bus to travel between common start and end points on each route. Where both the start and end points are not the same for each route option (e.g. at the start/end of the route/the scheme terminus), the journey time is calculated between one common point and the end of the route. The following assumptions have been made in calculating the comparative journey times along route options: -

- Operational speed (free-flow) of 50 kph in suburban areas and 30 kph in City Centre areas;
- Dwell time of 20 seconds per stop on average (assumes introduction of cashless fares as part of the CBC/Bus Service upgrade programme in the Greater Dublin Area); and
- Delay of 15 seconds per junction on average (assumes buses stop at every second junction i.e. 30 second delay at every second junction).

4.4.22 These assumptions assume dedicated bus priority infrastructure or free-flowing traffic conditions along a route section by direction of travel. Where the indicative scheme determined for a route suggests that this is not practically achievable, modified speeds and delay assumption are applied as appropriate. These additional delays are estimated based on available queue length information, automatic vehicle location information from Dublin Bus and estimates of the impact of traffic management measures (such as queue relocation). Delays at junctions and stops include delays associated with deceleration /acceleration to/from a stationary position.

ii. Number of Signalised Junctions

4.4.23 The number of signalised junctions along each route have been compared. Regardless of the level of practical or feasible bus priority provided at signalised

junctions, there will always be an element of delay to buses associated with signalised junctions, even with the most efficient signalling system being provided. While it is impossible to completely avoid signalised junctions on any route option, this risk of potential delay has been considered when comparing route options. This feeds into the overall journey time calculations as indicated above.

c. Level of Bus Priority Provision

4.4.24 The level of bus priority achievable along route options has been considered and compared. The level of priority is predominantly concerned with the degree to which road space can practically be allocated to buses, the amount of protection afforded to this priority (i.e. segregation) and the provision at junctions such as bus lanes at the stop line. This feeds into the overall journey time calculations as indicated above.

2. Integration

a. Land-Use Policy

4.4.25 This criterion identifies the extent to which a route would encourage or support planned development and provide for economic opportunities; whether particular route options offer synergies with other urban enhancement proposals and whether route options afford the potential to regenerate particular streets or quarters.

4.4.26 The interaction of routes with Local Area Plans (LAPs), masterplans or specific objectives in the County Development Plans are also considered under this criterion where they propose specific transport related objectives or policies.

b. Residential Population and Employment Catchments

i. Residential Population Catchments

4.4.27 This criterion compares the existing residential populations within 5 and 10-minute walk catchments from bus stops on the CBC routes and is representative of the number of potential users for a particular route option. The assessment does not quantitatively assess the future populations of zoned, but yet undeveloped residential development lands along route options. The analysis involved extracting 2011 population statistics from the Central Statistics Office (CSO) 'small areas' dataset.

GeoDirectory was used to assist in calculating the proportional figures for the population within the specific contour bands for each of the routes. This information was subsequently used to calculate the population living within the contours.

ii. Employment Population Catchments

4.4.28 This criterion compares the existing employment populations within a 10-minute walk catchment. The analysis involved extracting information from the 2011 POWSCAR (Place of Work, School or College - Census of Anonymised Records) data, which contains data on employment and school goers within specific areas. The areas used for the analysis were taken from the NTA's multi-modal transport model of the Greater Dublin Area and correspond to the zones defined in the model. These zones are effectively modified Central Statistics Office (CSO) boundaries. GeoDirectory was used to assist in calculating the proportional figures for the employment units within the specific contour bands for each of the routes. This information was subsequently used to calculate the number of people working within the contours. As with the residential population catchments, the assessment does not quantitatively assess the future populations of zoned, but yet undeveloped commercial development lands along route options.

c. Transport Network Integration

4.4.29 This criterion identifies the extent to which route options would maximise wider public transport usage and reach in terms of facilitating efficient interchange between transport modes (e.g. Luas, DART, rail stations, public (other CBC) and private bus operators & Dublinbikes). Linked to this, is the availability of space at potential interchange locations for facilities such as cycle parking areas, covered interchange areas, safe walking areas to and from stops, kiss-and-ride etc.

d. Cycle Network Integration

4.4.30 This criterion is established to assess route options for the practicality of achieving cycle track segregation and their potential to integrate high quality cycle facilities. The assessment considers the following: -

i. Compatibility with the GDA Cycle Network Plan

4.4.31 This criterion considers whether a route option forms part of the GDA Cycle Network Plan, with routes where CBC and designated Cycle Routes overlap given a higher designation in terms of benefits arising where cycle infrastructure can be provided as part of the proposed scheme. In some instances, however it may be more appropriate to provide a parallel cycle track off the CBC route. Consideration is also given to cycle routes intersecting with the CBC route.

ii. Quality of Infrastructure for Cyclists

4.4.32 The quality of cycle provision practically achievable on route options has been assessed. For comparison purposes, the highest level of practical cycle provision achievable on each route has been determined and compared between route options.

e. Traffic Network Integration

4.4.33 A comparative assessment of the expected traffic impact of each option has been undertaken for routes formed by combining route options which remain from the previous assessment stages. This assessment was undertaken based on professional judgement and an understanding of traffic conditions in the Study Area established following traffic surveys undertaken.

4.4.34 This represents a high-level assessment of the traffic impact of the route options considered in the Stage 2 Multi – Criteria Analysis (MCA). The anticipated traffic impact expected to be incurred by motorists using private vehicles as a result of the different route options will be assessed. The dis-benefit experienced by motorists in respect of reduced junction capacity and restricted movements will be considered. To this end, data gathered, such as traffic count surveys, is also used to establish the likely traffic impacts.

3. Accessibility and Social Inclusion

a. Key Trip Attractors

4.4.35 This assessment criterion identifies key trip attractors located within approximate 15-minute walk catchments which would generate significant demand for the CBC service but would not be otherwise picked up by either the employment or residential catchment analysis. For the purposes of this assessment the following land-uses have been considered as key trip attractors:

- Education (schools and universities);
- Commercial centres (shopping centres, town centres etc.);
- Healthcare (hospitals);
- Employment (business parks, large office developments etc.); and
- Leisure (parks, sports grounds etc.)

b. Deprived Geographic Areas

4.4.36 The possible impact of the route options on deprived areas including RAPID (Revitalising Areas by Planning, Investment and Development) areas according to the Pobal Deprivation Index was investigated.

4. Safety

a. Road Safety

4.4.37 Generally, the introduction of CBC will result in a reduction in road incidents due to people switching from private car to public transport. However, the reduction in incidents is unlikely to differ between various route options, particularly over the short sections being investigated as part of this assessment.

4.4.38 Therefore, for the purposes of comparing route options, the number of junctions along the route has been used as a proxy for road safety. The number of junctions is effectively a measure of the number of potential conflicts on the route and therefore a measure of the potential for a collision.

4.4.39 The type of movement required by the bus at junctions on the route is also considered with routes where turning movements (either left or right) are required being assigned a lower ranking in terms of safety.

b. Pedestrian Safety

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

5. Environmental

4.4.41 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. A list of the environmental topics considered is outlined in Table 4.2.

Aspect	Rational
Included in Environmental Assessment	
5.a./5.b. Archaeological, Architectural and Cultural Heritage	The provision of CBC infrastructure has the potential to impact on the archaeological, architectural and cultural heritage environment. At this stage of the assessment process, a conservative approach has been adopted in assessing the potential for impact and this is further described below
5.c. Flora and Fauna	The provision of CBC infrastructure has the potential to impact on flora and fauna.
5.d. Soils, Geology & Hydrology	The provision of CBC infrastructure has the potential to impact on soil and geology as a result of land-take and possible ground excavation (including potential to encounter ground contamination). In relation to Hydrology, the provision of CBC infrastructure has the potential to impact on surface water bodies as a result of land-take (with particular emphasis on floodplains and flood zones).
5.e. Landscape and Visual	The provision of CBC infrastructure has the potential to impact the townscape/streetscape along the CBC route.
5.f Air Quality	The provision of CBC infrastructure has the potential to impact the air quality along the CBC route.
5.g. Noise & Vibration	The provision of CBC infrastructure has the potential to impact the noise environment along the CBC route.
5.h. Land Use Character	The provision of CBC infrastructure has the potential to impact on land use character through land-take, severance or reduction of viability which prevents or reduces it from being used for its intended use.
Scoped out of Environmental Assessment	
Agronomy	Given the urban/suburban nature of the proposed scheme and the assumption that the CBC 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 will be considered as part of the multi-criteria analysis.

Table 4.2: Environmental Aspects Considered

4.4.42 When preparing the Environmental Impact Statement (EIS) for the preferred route and scheme design, the environmental topics which have been scoped out (and others that are not considered relevant for the route options assessment), will be reviewed and incorporated into the EIS as appropriate.

a/b. Archaeological, Architectural and Cultural Heritage

4.4.43 As mentioned previously a conservative approach has initially been adopted in undertaking the route options assessment in relation to the archaeological, architectural and cultural heritage environment. The constraints comprise Recorded Monuments and Protected Structures (RMPs) within 50m of each CBC route section, extending to 250m in greenfield areas. Sites of archaeological and cultural heritage merit and sites of architectural heritage merit which are directly intersected by the CBC route sections are also included within the scope of this assessment.

4.4.44 During the detailed design of the proposed scheme, where applicable, appropriate mitigation for construction will be included which will seek, where practicable, to ensure preservation in situ of archaeological remains and the avoidance of impacts on archaeological, architectural and cultural heritage constraints.

4.4.45 As a result, the assessment effectively evaluates the potential for impact on architectural heritage from façade to façade which provides for a comparative and qualitative evaluation of Protected Structures along route sections, in particular along heavily developed sections such as those identified within the City Centre.

4.4.46 Whilst the CBC route will primarily travel on existing established road networks, some routes within the study area have greater potential that adjacent structures and buildings will be impacted by the proposed 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). The selection of a viable route options in these areas will involve the running of the CBC service 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). The detailed design of the proposed scheme will seek to avoid and minimise impacts on architectural heritage.

c. Flora and Fauna

4.4.47 The provision of bus priority infrastructure has the potential to impact on flora & 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.

4.4.48 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; and
- Watercourses and fisheries waters.

d. Soils, Geology & Hydrology

4.4.49 The provision of bus priority infrastructure has the potential to impact on soil and geology as a result of land-take and possible ground excavation (including potential to encounter ground contamination).

4.4.50 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 corridor; and
- Potential implications for existing quarry or mining activities and future extractable reserves.

4.4.51 The impact at each geographic level was compared to allow an order of preference to be determined. The provision of bus priority infrastructure has the potential to impact on surface water bodies as a result of land-take (with particular emphasis on floodplains and flood zones). 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 corridor, and
- potential increase (or reduction) in flood risk to existing properties.

4.4.52 The impact at each geographic level was compared to allow an order of preference to be determined. The provision of bus priority infrastructure has the potential to impact on surface water bodies as a result of land-take (with particular emphasis on floodplains and flood zones). 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 corridor, and
- potential increase (or reduction) in flood risk to existing properties.

4.4.53 The impact at each geographic level was compared to allow an order of preference to be determined.

e. Landscape and Visual

4.4.54 The provision of bus priority infrastructure has the potential to impact the townscape/streetscape along the route. 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.; and
- relationship with protected structures, conservation areas, national monuments etc.

4.4.55 The impact at each geographic level was compared to allow an order of preference to be determined.

f. Air Quality

4.4.56 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.

4.4.57 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.

4.4.58 The impacts associated with each route option were compared to allow an order of preference to be determined.

4.4.59 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.

g. Noise & Vibration

4.4.60 The provision of bus priority infrastructure has the potential to impact the noise environment 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.

- 4.4.61 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.
- 4.4.62 The impacts associated with each route option were compared to allow an order of preference to be determined.
- 4.4.63 Similar to air quality, noise & vibration 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.

h. Land Use Character

- 4.4.64 The provision of bus priority infrastructure has the potential to impact on land use character through land-take, severance or reduction of viability which prevents or reduces it from being used for its intended use.

4.5 Route Options Summary Table

- 4.5.1 For each study area section, a route options summary table in Project Appraisal Balance Sheet (PABS) format has been prepared which collates and summarises the appraisal of route options under each of the assessment criterion.
- 4.5.2 The route options summary table for each study area section is presented in Appendix A and B, for Sections 1 and 2, respectively.
- 4.5.3 For each individual assessment criterion considered, routes have been relatively compared against each other based on a five-point scale, ranging from having significant advantages to having significant disadvantages over other route options. For illustrative purposes, this five-point scale is colour coded as presented in Table 4.3, with advantageous routes graded to 'dark green' and disadvantaged routes graded to 'dark red'.

Colour	Description
Dark Green	Significant advantages over the other options
Light Green	Some advantages over other options
Yellow	Neutral compared to other options
Orange	Some disadvantages over other options
Dark Red	Significant disadvantages compared to other options

Table 4.3: Route Options Colour Coded Ranking Scale

- 4.5.4 The extent of reporting may vary between each study area section and the route options being assessed, depending on the significance attached to specific criterion in terms of route differentiation.
- 4.5.5 At the end of each study individual area section route options assessment, an overall Multi Criterion Appraisal (MCA) table is provided, bringing together each of the individual criterion assessments.
- 4.5.6 This is then summarised for each study area section under the main assessment criterion as set out in Table 4.1.
- 4.5.7 A qualitative appraisal of the conclusions from the route options assessment is then provided, highlighting the key issues considered in determining recommended route options ('preferred' and in some instances, where applicable, 'next preferred'). 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, for example, will not necessarily mean that the route is not suitable.

5.0 SECTION 1 ROUTE OPTION ASSESSMENT

5.1 Introduction

5.1.1 This chapter sets out the two-stage assessment procedure and results for Section 1 of the study area (between the R137 Templeogue Road/N81/M50 Junction 11 and the Springfield Ave/Templeville Road corridor).

5.2 Section 1: Stage 1 (Sifting) - Route Option Assessment

5.2.1 The potential route options considered as part of the Stage 1 route option assessment for Section 1 of the study area are presented in Figure 5.1 whilst Table 5.1 below presents a summary of the Stage 1 route options sifting process.

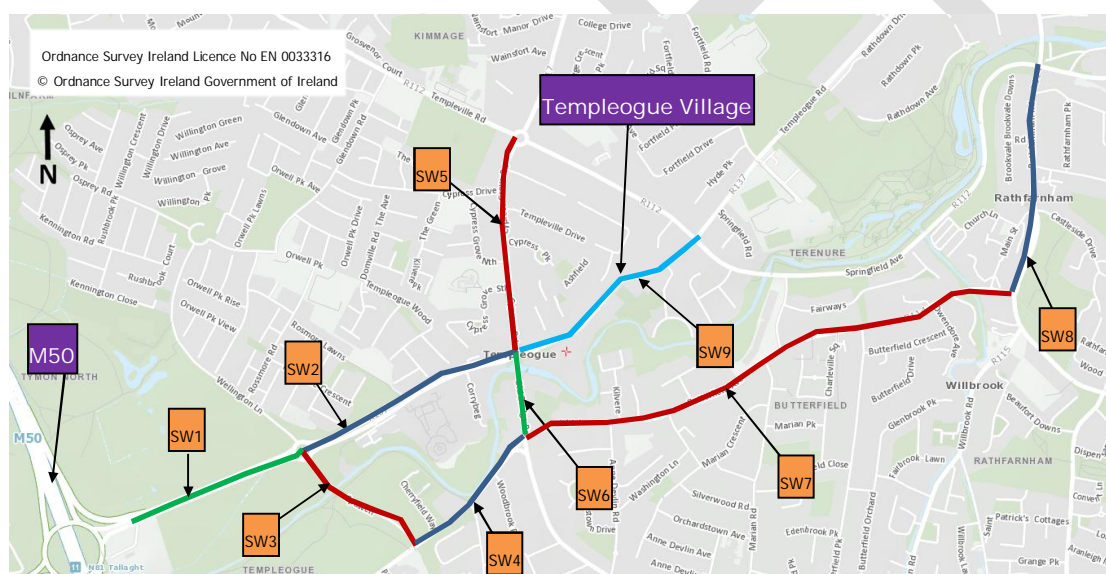


Figure 5.1: Route Options within Section 2 of Study Area

Table 5.1: Route Option Sifting (Stage 1) Summary – Section 2

Route Option	Name / Section	Area Characteristics	Comments	Pass /Fail
SW1	Templeogue Road (between M50 interchange & Wellington Lane/Spawell Road junction)	<ul style="list-style-type: none"> Leisure – Dodder Valley Park, Spawell Golf/Leisure Centre Commercial Proposed Primary Cycle route (GDA CNP No. 9A) 	<p>The route ranges in width from approximately 40-43m (including footways & cycle tracks where present).</p> <p>Eastbound from the M50 interchange there are 3 general traffic lanes, approximately 330m east of the interchange the nearside lane merges with lane 2. From this point 2 general traffic lanes and a bus lane continue east for a distance of approximately 255m, after which the bus lane terminates and a 3 general traffic lane approach is provided to the Wellington Lane/Spawell Road roundabout junction.</p> <p>Westbound from the Wellington Lane/Spawell Road roundabout junction there are 2 general traffic lanes and a bus lane. The bus lane continues west for approximately 320m after which it terminates and a 3 lane approach is provided to the M50 interchange.</p> <p>There is a shared pedestrian/cycle route along the northern side of the carriageway.</p> <p>There are no pedestrian or cycle facilities provided along the southern side of the carriageway.</p> <p>There is a central median provided along the full length of this route separating eastbound and westbound traffic.</p> <p>Full bus priority could be achieved by widening the carriageway into adjacent verges/central median. This section will therefore be carried forward to the Stage 2 Assessment.</p>	Pass
SW2	Templeogue Road (between Wellington Lane/Spawell Road/ Templeogue Road junction and Cypress Road/Old Bridge Road/Templeogue Road junction)	<ul style="list-style-type: none"> Residential Proposed Primary Cycle route (GDA CNP No. 9A) 	<p>The route ranges in width from approximately 32-42m (including footways /cycle tracks where present).</p> <p>Eastbound from the Wellington Lane/Spawell Road/Templeogue junction there are 2 general traffic lanes and a bus lane. The bus lane terminates approximately 100m from the Cypress Road/Old Bridge Road/Templeogue Road junction to provide a 3 lane flared approach to the junction.</p> <p>There is a shared pedestrian/cycle track along the northern side of the carriageway.</p> <p>Westbound from the Cypress Road/Old Bridge Road/Templeogue Road junction, for the first 100m there are 3 general traffic lanes which merge to form 2 general traffic lanes. The 2 general traffic lanes and the hard shoulder continue west until approximately 110m east of the Wellington Lane/Spawell Road/Templeogue junction where a 3 lane approach is provided.</p> <p>A shared pedestrian/cycle track is provided for the first 200m of the route, after which the cycle track and footway are separated by a verge. The cycle track continues for another 145m before terminating. There are no westbound cycle facilities along the remainder of the route.</p> <p>Bus priority could be accommodated in both directions by widening the carriageway into the adjacent verges/central median. Section therefore carried forward to the Stage 2 Assessment.</p>	Pass
SW3	Spawell Road	<ul style="list-style-type: none"> Leisure – Dodder Valley Park Proposed Primary Cycle route (GDA CNP No. 9A) 	<p>The route ranges in width from approximately 15-32m (including footways/cycle tracks where present).</p> <p>There is one general traffic lane in each direction. The southbound lane widens to 2 and subsequently 3 lanes on approach to Firrhouse Road. Similarly the northbound lane widens to 2 and then subsequently 3 lanes on approach to Templeogue Road. There is a pedestrian footway along the eastern side of the carriageway and a shared pedestrian/cycle route along the western side.</p> <p>There is a pinch point at the bridge over the River Dodder (approximately 14.9m) where it would not be possible to accommodate bus priority in addition to the provision of cycle facilities however it may be feasible to accommodate bus lanes by providing a parallel pedestrian/cycle bridge to enable the existing carriageway to be widened, subject to further investigation.</p> <p>Nonetheless the link is isolated (i.e. SW7 has failed the Stage 1 sift), and therefore will not be carried forward to the Stage 2 Assessment.</p>	Fail

Table 5.1: Route Option Sifting (Stage 1) Summary – Section 2

Route Option	Name / Section	Area Characteristics	Comments	Pass /Fail
SW4	Firrhhouse Road	<ul style="list-style-type: none"> Residential Leisure – Dodder Valley Park Proposed Primary Cycle route (GDA CNP No. 9A) 	<p>The route ranges in width from approximately 20-30m (including footways/cycle tracks where present).</p> <p>North-eastbound from the Spawell Road junction there are 2 general traffic lanes available up to the Knocklyon Road junction. From the Knocklyon junction for a distance of approximately 160m there is 1 general traffic lane and a bus lane. The bus lane terminates approximately 80m from the Old Bridge Road junction with the carriageway widening to provide a 3 lane flared approach to the junction. a cycle lane is provided north eastbound along this section.</p> <p>South-westbound from the Old Bridge Road junction there is 1 general traffic lane which widens to 2 lanes on approach to the Knocklyon Road junction. Southwest of the Knocklyon Road junction there is 1 general traffic lane and a 95m section of bus lane. The bus lane terminates and a 2-lane approach to the Spawell Road junction is provided. There is a cycle lane provided south-westbound between the Old Bridge Road junction and the Knocklyon Road junction, after which there are no south-westbound cycle facilities.</p> <p>Bus priority may be achievable in both directions by widening the carriageway into the adjacent verges. Nonetheless the link is isolated (i.e. SW7 has failed the Stage 1 sift), and therefore will not be carried forward to the Stage 2 Assessment.</p>	Fail
SW5	Cypress Road- Cypress Grove Road	<ul style="list-style-type: none"> Residential Proposed Secondary Cycle route (GDA CNP No. 9A) 	<p>The route ranges in width from approximately 21-32m (including footways & verges where present).</p> <p>Northbound from Templeogue Road there is one general traffic lane which then widens to provide a flared approach to the Templeville Road junction.</p> <p>Similarly, southbound there is one general traffic lane which then widens to provide a two lane flared approach to the Templeogue Road junction.</p> <p>There are cycle tracks available along both sides of the carriageway.</p> <p>Bus priority may be achievable in both directions by widening the carriageway into the adjacent verges. Nonetheless the link is isolated and diverts away from the Rathfarnham CBC corridor and therefor would not permit interchange. As such this section is not carried forward to the Stage 2 Assessment.</p>	Fail
SW6	Old Bridge Road	<ul style="list-style-type: none"> Residential Proposed Secondary Cycle route (GDA CNP No. 9A) 	<p>The route ranges in width from approximately 17.5-18m (including footways & verges where present).</p> <p>Northbound from the Butterfield Ave/Firrhhouse Road junction there is one general traffic lane and a bus lane (which starts approximately 35m north of the aforementioned junction. The general traffic lane and bus lane continue north until the bus lane terminates approximately 97m south of the Templeogue junction, after which two general traffic lanes are provided on approach to the Templeogue Road junction.</p> <p>Southbound there are two general traffic lanes and an advisory cycle lane, however the advisory cycle lane encroaches into the nearside general traffic lane.</p> <p>Bus priority may be achievable in both directions by widening the carriageway into the adjacent verges and by widening the bridge at the northern section of the route. Nonetheless the link is isolated (i.e. SW7 has failed the Stage 1 sift), and therefore will not be carried forward to the Stage 2 Assessment.</p>	Fail
SW7	Butterfield Avenue	<ul style="list-style-type: none"> Residential Retail – Rathfarnham Shopping Centre Proposed Primary Cycle route (GDA CNP No. 10A) Proposed Primary Cycle route (GDA CNP No. SO4) 	<p>The route ranges in width from approximately 14.9-23m (including footways).</p> <p>Eastbound from Old Bridge Road there is one general traffic lane which then widens to provide a flared approach Main St junction, after which there is a 3 lane flared approach provided to the Rathfarnham Road junction.</p> <p>Westbound from the Rathfarnham Road junction there are 2 general traffic lanes which then widen to provide a 3 lane flared approach to the Main St junction. Continuing west from the Main St junction, there is one general traffic lane which then widens to provide a two lane flared approach to the Old bridge Road junction.</p> <p>There are no cycle facilities provided along the route.</p> <p>The provision of bus priority would require land take from the majority of the residential properties along the route and would result in the loss of front gardens/driveways where in some instances the residents would be left with no parking alternative. Section therefore not carried forward to the Stage 2 Assessment.</p>	Fail
SW8	Rathfarnham Road	<ul style="list-style-type: none"> Residential Retail (Rathfarnham Village) Proposed Primary route (GDA CNP No. 10) 	<p>This route ranges in carriageway width from 14m (2 general traffic lanes including cycle lane) to 17m (2 general traffic and 2 bus lanes with no cycle lanes).</p> <p>Bus priority may be achieved for majority of the link. Necessary removal of on-street car parking at shops/Yellow House pub. Reallocation of traffic lanes from general traffic to buses may be needed to ensure bus priority at junctions.</p> <p>The link forms part of the proposed Rathfarnham CBC, nonetheless the link is isolated (i.e. SW7 has failed the Stage 1 sift), however parts of the route could be used to form diversionary routes within Section 2.</p>	Pass

Table 5.1: Route Option Sifting (Stage 1) Summary – Section 2

Route Option	Name / Section	Area Characteristics	Comments	Pass /Fail
SW9	Templeogue Road (between the Cypress Road/Old Bridge Road/Templeogue Road junction and the Springfield Ave/Templeville Road corridor)	<ul style="list-style-type: none"> Residential Retail (Templeogue Village) Leisure – Templeogue Tennis Club Proposed Secondary cycle route (GDA CNP No. 9B) 	<p>The route ranges in width from approximately 12m – 27m (including footways and verges where present).</p> <p>Northeast bound along Templeogue Road from the Cypress Road/Old Bridge Road/Templeogue Road junction there is a single general traffic lane. A 36m section of bus lane provided approximately 95m west of the Springfield Ave/Templeville Road junction which then ends to provide a 2 lane flared approach to the junction. There is an advisory cycle lane provided from the Cypress Road/Old Bridge Road/Templeogue Road junction (which encroaches into the general traffic lane) which then transitions to a segregated cycle track through Templeogue Village where the northeast bound cycle facilities terminate.</p> <p>Southwest bound along Templeogue Road from the Springfield Ave/Templeville Road junction there is a single general traffic lane which then widens to provide a 3 lane flared approach to the Cypress Road/Old Bridge Road/Templeogue Road junction. There is a mandatory cycle lane provided southwest bound which again transitions into a segregated cycle track through Templeogue Village, after which it transitions to an advisory cycle lane, continuing until approximately 135m east of the Cypress Road/Old Bridge Road/Templeogue Road junction.</p> <p>Bus priority may be achievable in both directions by widening the carriageway and/or implementing general traffic diversions/traffic management measures, subject to further investigation. Section therefore carried forward to the Stage 2 Assessment.</p>	Pass

5.2.2 Of these 9-potential links considered within Section 1, 4 have progressed to the next assessment stage (SW 1, 2, 8 & 9). These route options are presented in Figure 5.2 below.

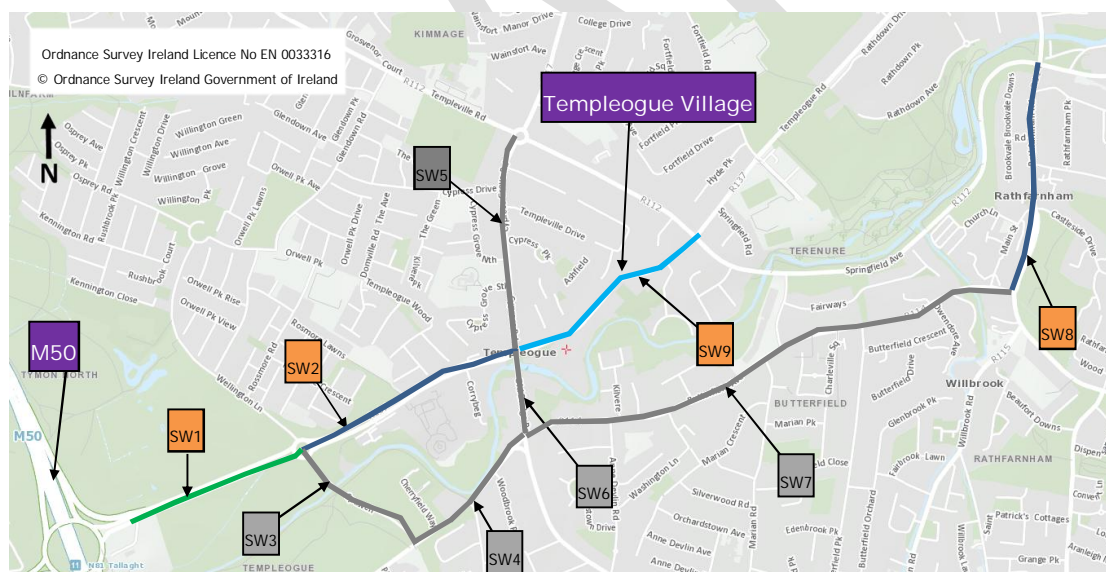


Figure 5.2: Route Options passing Stage 1 'Sift' in Section 2

5.3 Section 1: Stage 2 – Option Assessment

Introduction

5.3.1 Following the 'Stage 1' sift for the Section 1 study area, the remaining 4 number route options were combined to form a single cohesive route between the R137

Templeogue Road/N81/M50 interchange roundabout junction and the Springfield Ave/Templeville Road corridor. The route is illustrated in Figure 5.3 below.

- 5.3.2 It should be noted that link SW8 which passed the Stage 1 assessment was not taken forward to the Stage 2 assessment as it was an isolated link and did not combine with other route options to form a cohesive route.

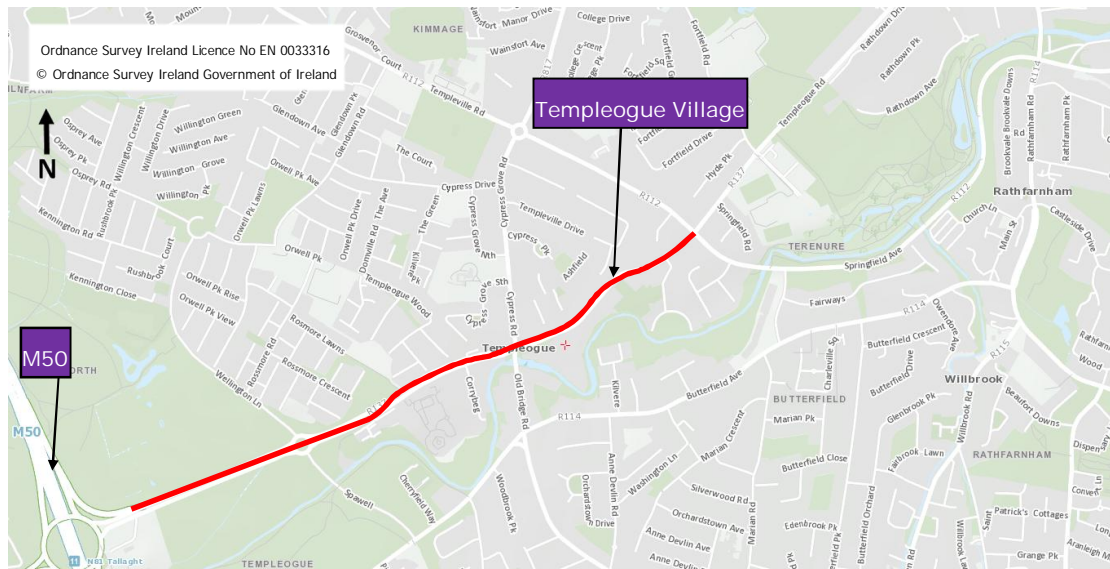


Figure 5.3: Section 1 Cohesive Route

- 5.3.3 Due to a number of existing constraints within Templeogue Village, (i.e. the section of Templeogue Road, between the Cypress Grove Road/Old Bridge Road junction and the Springfield Ave/Templeville Road junction), it required specific consideration which enabled the identification of alternative scheme options (5 no.) for this section. A Multi Criteria Analysis has been undertaken on these alternative scheme options in order to determine the most appropriate scheme for this section of Templeogue Road.

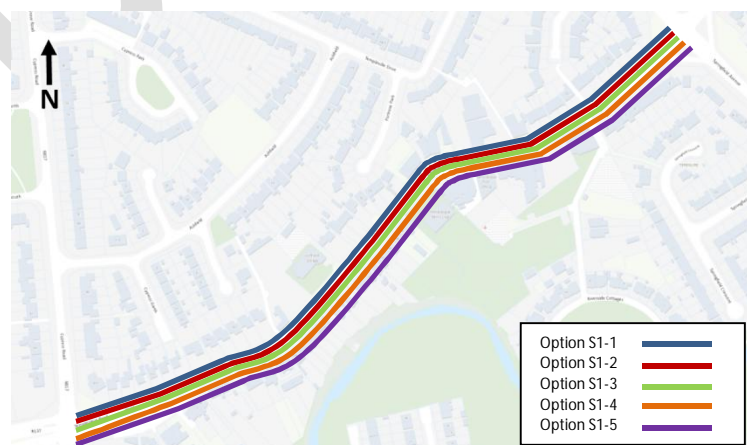


Figure 5.4: Section 1 - Templeogue Road Sub-section

Templeogue Village Scheme Option S1-1

- 5.3.4 Inbound: The CBC service will proceed north eastbound along Templeogue Road from the Cypress Grove Road/Old Bridge Road junction to the Springfield Ave/Templeville Road junction.
- 5.3.5 Outbound: The outbound service follows the same route as the inbound.
- 5.3.6 Stops: There will be no additions to the quantum of bus stop provision along this section.
- 5.3.7 The journey time for this scheme option along Templeogue Road from the Cypress Grove Road/Old Bridge Road junction to the Springfield Ave/Templeville Road junction is approximately 3 minutes over a distance of approximately 0.70KM.
- 5.3.8 The proposals for the CBC service for the S1-1 scheme option include the following measures:-
- The Templeogue Road/Cypress Grove Road/Old Bridge Road junction will be upgraded to ensure buses are given priority up to the stop lines (both directions).
 - A bus gate will be implemented on Templeogue Road to ensure only inbound (north-eastbound) buses (and cyclists) are permitted entry from the Cypress Grove Road/Old Bridge Road junction. The existing right turn ban for general traffic from Old Bridge Road will be retained. Similarly the existing left turn ban for general traffic from Cypress Grove Road will be retained. From the aforementioned bus gate, a bus lane will be provided inbound along Templeogue Road. Between the Templeogue Road/Riverside Cottages junction and the Springfield Ave/Templeville Road junction two-way general traffic will be permitted, with the inbound bus lane continued to the stop line at the junction.
 - South-westbound from the Springfield Ave/Templeville Road junction a bus lane will be provided for outbound bus services. This bus lane will terminate after a distance of approximately 140m at new traffic signal controls on Templeogue Road, after which buses will be required to merge into the adjacent general vehicle traffic lane. At these aforementioned signals outbound buses will be given priority over general vehicular traffic. An outbound (south-westbound) bus lane will be provided approximately 120m

in advance of the Cypress Grove Road/Old Bridge Road junction. This outbound bus lane will be continued up to the stop line at the junction.

- Cycle lanes will be provided along both sides of the carriageway aligning with Secondary Route 9B as identified in the GDN Cycle Network Plan.
- The Templeogue Road/ Springfield Ave/Templeville Road junction will be upgraded to ensure buses are given priority up to the stop lines (both directions).

5.3.9 The new sections of bus lane and cycle lanes can be accommodated with carriageway widening along the northern side of the carriageway.

5.3.10 The Option S1-1 proposals are presented in Figure 5.5 whilst sample cross sections are presented in Figures 5.6 & 5.7 below.

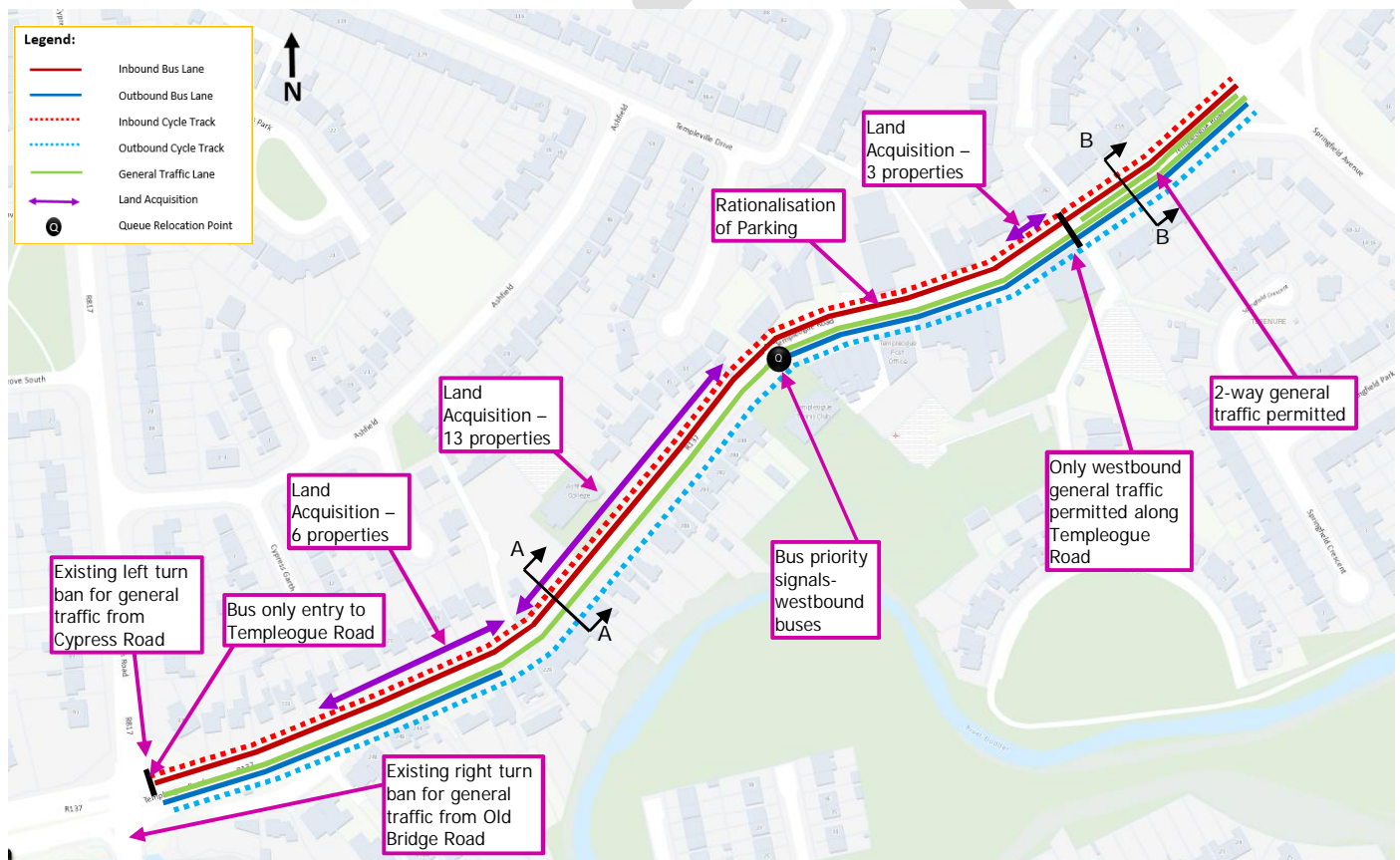


Figure 5.5 Templeogue Village Scheme Option S1-1 Proposal

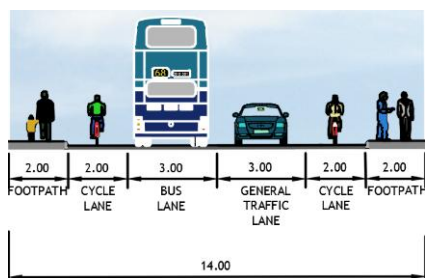


Figure 5.6: S1-1 Cross Section AA

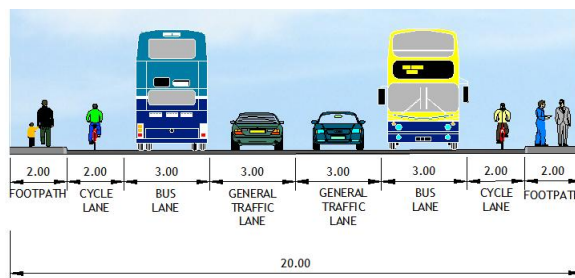


Figure 5.7: S1-1 Cross Section BB

5.3.11 It is anticipated that this option would cost approximately €2.7 million (€1.9 million infrastructure costs, €0.8 million land acquisition costs).

Templeogue Village Scheme Option S1-2

5.3.12 Inbound: The CBC service will proceed north eastbound along Templeogue Road from the Cypress Grove Road/Old Bridge Road junction to the Springfield Ave/Templeville Road junction.

5.3.13 Outbound: The outbound service follows the same route as the inbound.

5.3.14 Stops: There will be no additions to the quantum of bus stop provision along this section.

5.3.15 The journey time for this scheme option along Templeogue Road from the Cypress Grove Road/Old Bridge Road junction to the Springfield Ave/Templeville Road junction is approximately 3 minutes over a distance of approximately 0.70KM.

5.3.16 The proposals for the CBC service for the S1-2 scheme option include the the following measures:-

- The Templeogue Road/Cypress Grove Road/Old Bridge Road junction will be upgraded to ensure buses are given priority up to the stop lines (both directions).
- A bus gate will be implemented on Templeogue Road to ensure only inbound (north-eastbound) buses (and cyclists) are permitted entry from the Cypress Grove Road/Old Bridge Road junction. The existing right turn ban for general traffic from Old Bridge Road will be retained. Similarly the existing left turn ban for general traffic from Cypress Grove Road will be retained. Between the aforementioned bus gate and the Templeogue Road/Riverside Cottages junction buses will share with local access traffic in the general traffic lane.

From the Templeogue Road/Riverside Cottages junction an inbound bus lane will be provided and will be continued to the stop line at the junction.

- South-westbound from the Springfield Ave/Templeville Road junction a bus lane will be provided for outbound bus services. This bus lane will terminate after a distance of approximately 140m at new traffic signal controls on Templeogue Road, after which buses will be required to merge into the adjacent general vehicle traffic lane. At these aforementioned signals outbound buses will be given priority over general vehicular traffic. An outbound (south-westbound) bus lane will be provided approximately 120m in advance of the Cypress Grove Road/Old Bridge Road junction. This outbound bus lane will be continued up to the stop line at the junction.
- Cycle lanes will be provided along both sides of the carriageway aligning with Secondary Route 9B as identified in the GDN Cycle Network Plan.
- The Templeogue Road/ Springfield Ave/Templeville Road junction will be upgraded to ensure buses are given priority up to the stop lines (both directions).

5.3.17 The new sections of bus lane and cycle lanes can be accommodated with carriageway widening along the northern side of the carriageway.

5.3.18 The Option S1-2 proposals are presented in Figure 5.8 whilst sample cross sections are presented in Figures 5.9 & 5.10 below.

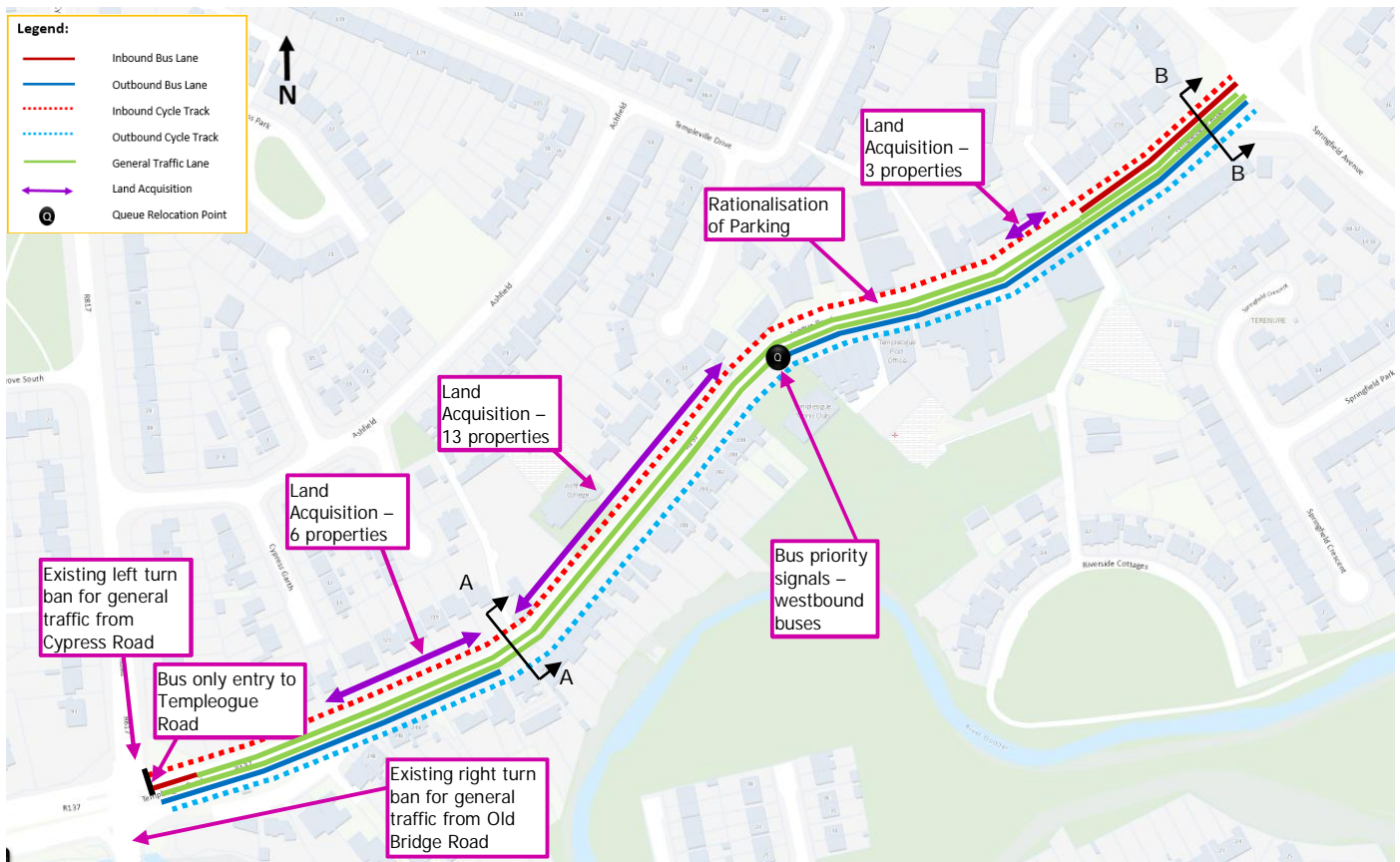


Figure 5.8 Templeogue Village Scheme Option S1-2 Proposal

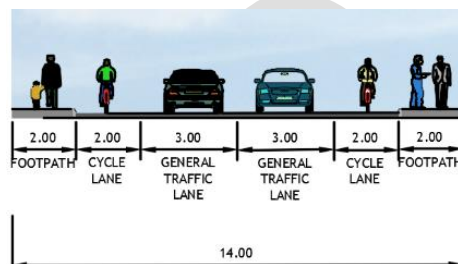


Figure 5.9: S1-2 Cross Section AA

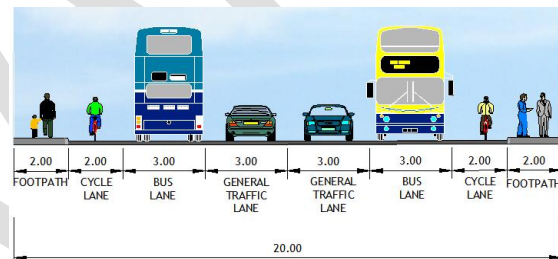


Figure 5.10: S1-2 Cross Section BB

5.3.19 It is anticipated that this option would cost approximately €2.7 million (€1.9 million infrastructure costs, €0.8 million land acquisition costs).

Templeogue Village Scheme Option S1-3

5.3.20 Inbound: The CBC service will proceed north eastbound along Templeogue Road from the Cypress Grove Road/Old Bridge Road junction to the Springfield Ave/Templeville Road junction.

5.3.21 Outbound: The outbound service follows the same route as the inbound.

5.3.22 Stops: There will be no additions to the quantum of bus stop provision along this section.

5.3.23 The journey time for this scheme option along Templeogue Road from the Cypress Grove Road/Old Bridge Road junction to the Springfield Ave/Templeville Road junction is approximately 3 minutes over a distance of approximately 0.70KM.

5.3.24 The proposals for the CBC service for the S1-3 scheme option include the following measures:-

- The Templeogue Road/Cypress Grove Road/Old Bridge Road junction will be upgraded to ensure buses are given priority up to the stop lines (both directions).
- A bus gate will be implemented on Templeogue Road to ensure only inbound (north-eastbound) buses (and cyclists) are permitted entry from the Cypress Grove Road/Old Bridge Road junction. The existing right turn ban for general traffic from Old Bridge Road will be retained. Similarly, the existing left turn ban for general traffic from Cypress Grove Road will be retained. From the aforementioned bus gate, a bus lane will be provided inbound along Templeogue Road. Between the Templeogue Road/Riverside Cottages junction and the Springfield Ave/Templeville Road junction two-way general traffic will be permitted, with the inbound bus lane will be continued to the stop line at the junction.
- South-westbound from the Springfield Ave/Templeville Road junction a bus lane will be provided for outbound bus services. This bus lane will terminate after a distance of approximately 140m at new traffic signal controls on Templeogue Road, after which buses will be required to merge into the adjacent general vehicle traffic lane. At these aforementioned signals outbound buses will be given priority over general vehicular traffic. An outbound (south-westbound) bus lane will be provided approximately 120m in advance of the Cypress Grove Road/Old Bridge Road junction. This outbound bus lane will be continued up to the stop line at the junction.
- The Templeogue Road/ Springfield Ave/Templeville Road junction will be upgraded to ensure buses are given priority up to the stop lines (both directions).
- Cycle lanes will be provided along both sides of the carriageway between the Templeogue Road/Riverside Cottages junction and the Springfield Ave/Templeville Road junction aligning with Secondary Route 9B as identified

in the GDN Cycle Network Plan. Between the Templeogue Road/Riverside Cottages junction and the Cypress Grove Road/Old Bridge Road junction cyclists can divert onto an alternative route via Old Bridge Road - Butterfield Ave - Kilvere – Dodder Greenway – Riverside Cottages. This proposed diversionary route aligns with the South Dublin County Council Proposed Dodder Greenway Part 8 proposals.

- A 30kph speed limit will be implemented along Templeogue Road to provide a safer cycling environment for cyclists who wish to continue their journey along Templeogue Road.

5.3.25 The scheme proposals along this section can generally be accommodated within the existing roadside boundaries however some widening will be required along the northern side of the carriageway.

5.3.26 The Option S1-3 proposals are presented in Figure 5.11 whilst sample cross sections are presented in Figures 5.12 & 5.13 below.

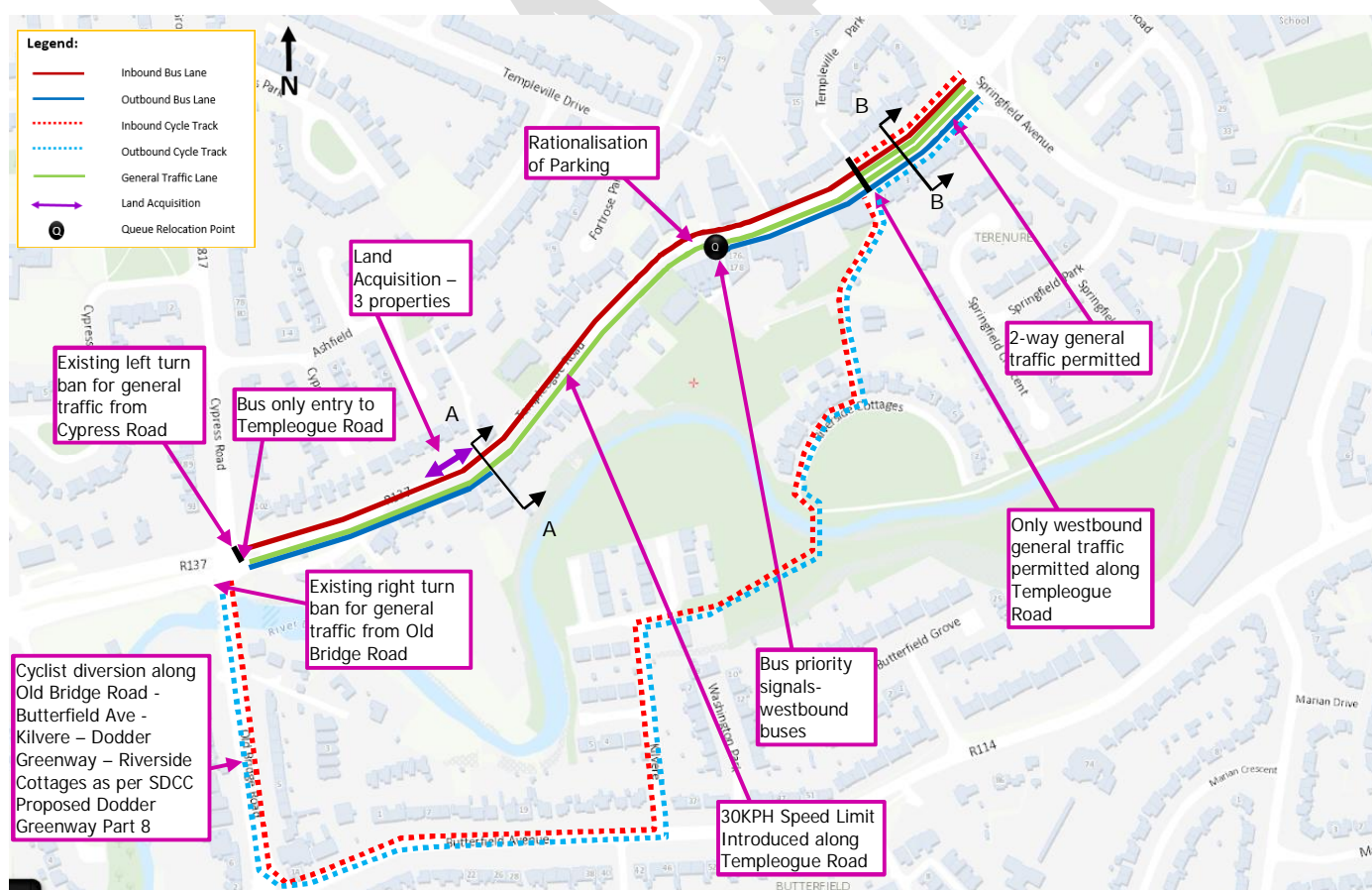


Figure 5.11 Templeogue Village Scheme Option S1-3 Proposal

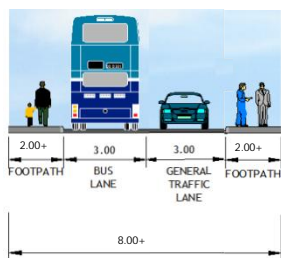


Figure 5.12: S1-3 Cross Section AA

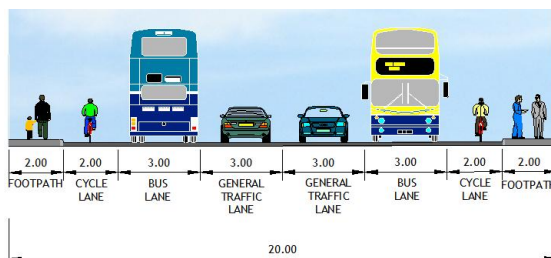


Figure 5.13: S1-3 Cross Section BB

5.3.27 It is anticipated that this option would cost approximately €1.95 million (€1.85 million infrastructure costs, €0.095 million land acquisition costs).

Templeogue Village Scheme Option S1-4

5.3.28 Inbound: The CBC service will proceed north eastbound along Templeogue Road from the Cypress Grove Road/Old Bridge Road junction to the Springfield Ave/Templeville Road junction.

5.3.29 Outbound: The outbound service follows the same route as the inbound.

5.3.30 Stops: There will be no additions to the quantum of bus stop provision along this section.

5.3.31 The journey time for this scheme option along Templeogue Road from the Cypress Grove Road/Old Bridge Road junction to the Springfield Ave/Templeville Road junction is approximately 3 minutes over a distance of approximately 0.70KM.

5.3.32 The proposals for the CBC service for the S1-4 scheme option include the following measures:-

- The Templeogue Road/Cypress Grove Road/Old Bridge Road junction will be upgraded to ensure buses are given priority up to the stop lines (both directions).
- A bus gate will be implemented on Templeogue Road to ensure only inbound (north-eastbound) buses (and cyclists) are permitted entry from the Cypress Grove Road/Old Bridge Road junction. The existing right turn ban for general traffic from Old Bridge Road will be retained. Similarly, the existing left turn ban for general traffic from Cypress Grove Road will be retained. Between the aforementioned bus gate and the Templeogue Road/Riverside Cottages junction buses will share with local access traffic in the general traffic lane.

From the Templeogue Road/Riverside Cottages junction an inbound bus lane will be provided and will be continued to the stop line at the junction. Between the Templeogue Road/Riverside Cottages junction and the Springfield Ave/Templeville Road junction two-way general traffic will be permitted.

- South-westbound from the Springfield Ave/Templeville Road junction a bus lane will be provided for outbound bus services. This bus lane will terminate after a distance of approximately 140m at new traffic signal controls on Templeogue Road, after which buses will be required to merge into the adjacent general vehicle traffic lane. At these aforementioned signals outbound buses will be given priority over general vehicular traffic. An outbound (south-westbound) bus lane will be provided approximately 120m in advance of the Cypress Grove Road/Old Bridge Road junction. This outbound bus lane will be continued up to the stop line at the junction.
- The Templeogue Road/ Springfield Ave/Templeville Road junction will be upgraded to ensure buses are given priority up to the stop lines (both directions).
- Cycle lanes will be provided along both sides of the carriageway between the Templeogue Road/Riverside Cottages junction and the Springfield Ave/Templeville Road junction aligning with Secondary Route 9B as identified in the GDN Cycle Network Plan. Between the Templeogue Road/Riverside Cottages junction and the Cypress Grove Road/Old Bridge Road junction cyclists can divert onto an alternative route via Old Bridge Road - Butterfield Ave - Kilvere - Dodder Greenway - Riverside Cottages. This proposed diversionary route aligns with the South Dublin County Council Proposed Dodder Greenway Part 8 proposals.
- A 30kph speed limit will be implemented along Templeogue Road to provide a safer cycling environment for cyclists who wish to continue their journey along Templeogue Road.

5.3.33 The scheme proposals along this section can generally be accommodated within the existing roadside boundaries however some widening will be required along the northern side of the carriageway.

5.3.34 The Option S1-4 proposals are presented in Figure 5.14 whilst sample cross sections are presented in Figures 5.15 & 5.16 below.

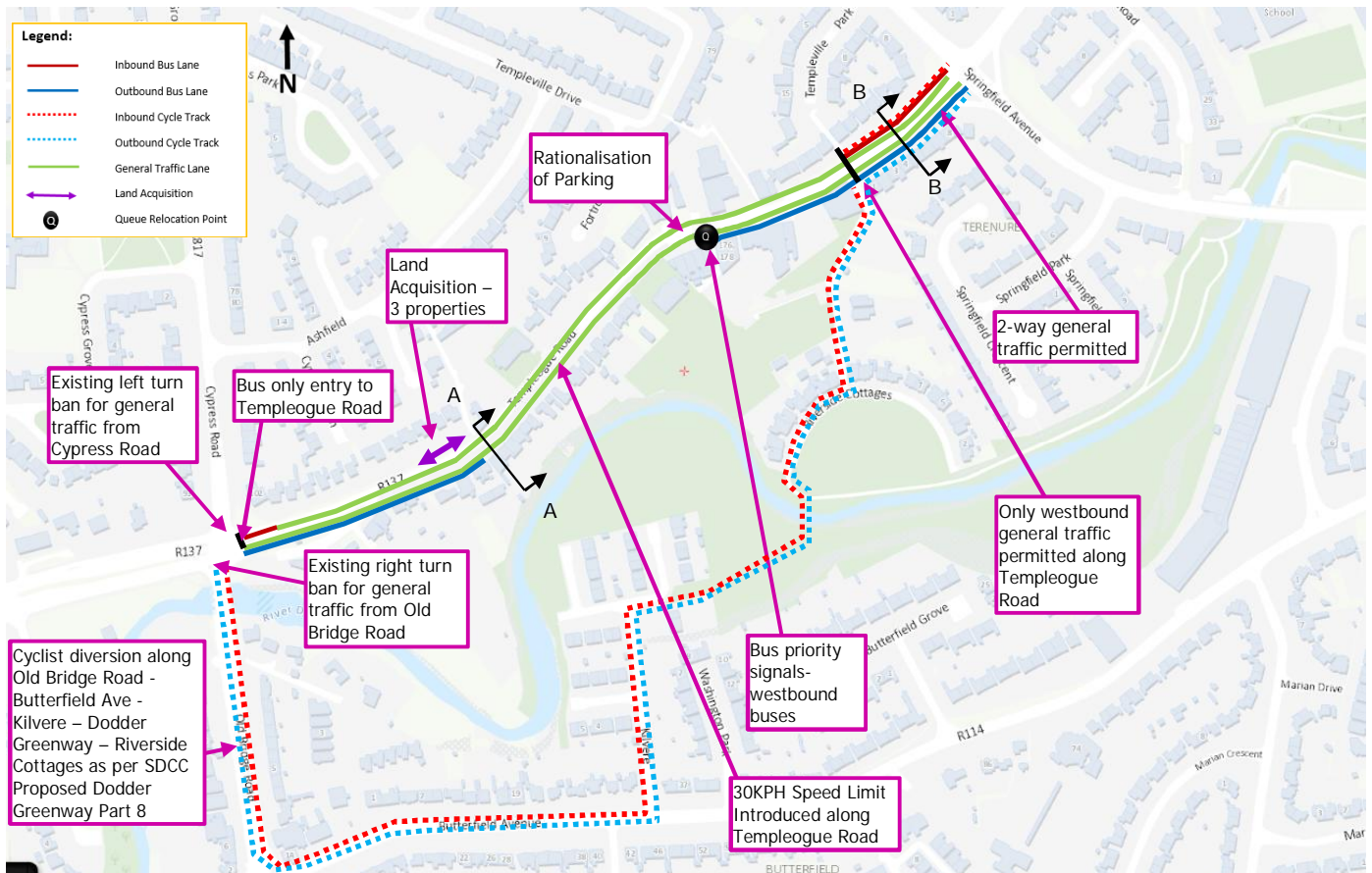


Figure 5.14 Templeogue Village Scheme Option S1-4 Proposal

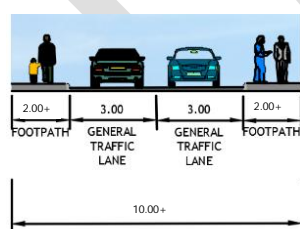


Figure 5.15: S1-4 Cross Section AA

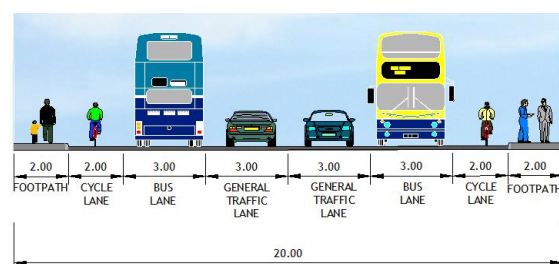


Figure 5.16: S1-4 Cross Section BB

5.3.35 It is anticipated that this option would cost approximately €1.95 million (€1.85 million infrastructure costs, €0.095 million land acquisition costs).

Templeogue Village Scheme Option S1-5

5.3.36 Inbound: The CBC service will proceed north eastbound along Templeogue Road from the Cypress Grove Road/Old Bridge Road junction to the Springfield Ave/Templeville Road junction.

5.3.37 Outbound: The outbound service follows the same route as the inbound.

5.3.38 Stops: There will be no additions or reductions to the quantum of bus stop provision along this section.

5.3.39 The journey time for this scheme option along Templeogue Road from the Cypress Grove Road/Old Bridge Road junction to the Springfield Ave/Templeville Road junction is approximately 3 minutes over a distance of approximately 0.70KM.

5.3.40 The proposals for the CBC service for the S1-5 scheme option include the following measures:-

- The Templeogue Road/Cypress Grove Road/Old Bridge Road junction and the Templeogue Road/Springfield Ave/Templeville Road junction will be upgraded to ensure buses are given priority up to the stop lines (both directions).
- Continuous bus lanes will be provided in both directions along Templeogue Road between the Cypress Grove Road/Old Bridge Road junction and the Springfield Ave/Templeville Road junction. The existing right turn ban for general traffic from Old Bridge Road will be retained. Similarly the existing left turn ban for general traffic from Cypress Grove Road will be retained.
- Cycle lanes will be provided along both sides of the carriageway on the approaches to/from Templeogue Road/Cypress Grove Road/Old Bridge Road junction and the Templeogue Road/Springfield Ave/Templeville Road junction aligning with Secondary Route 9B as identified in the GDN Cycle Network Plan.
- The inbound cycle lane will terminate approximately 70m northeast of the Templeogue Road/Cypress Grove Road/Old Bridge Road junction after which cyclists will join the adjacent bus lane. Cyclists will continue in the inbound bus lane for approximately 300m, where they are then provided with a segregated cycle track. This cycle track continues for approximately 135m where it then merges with a shared pedestrian/cycle track for a distance of

70m (approx.). An on-road cycle lane is then provided up to and through the junction.

- Outbound from the Templeogue Road/Springfield Ave/Templeville Road junction there is a cycle lane provided for approximately 95m. Cyclists will then continue in the outbound bus lane until a cycle lane is provided approximately 100m from the Templeogue Road/Cypress Grove Road/Old Bridge Road junction.
- A 30kph speed limit will be implemented along Templeogue Road to provide a safer cycling environment for cyclists who wish to continue their journey along Templeogue Road.

5.3.41 The new sections of bus lane and cycle lanes can be accommodated with carriageway widening along the northern and southern sides of the carriageway.

5.3.42 The Option S1-5 proposals are presented in Figure 5.17 whilst sample cross sections are presented in Figures 5.18 & 5.19 below.

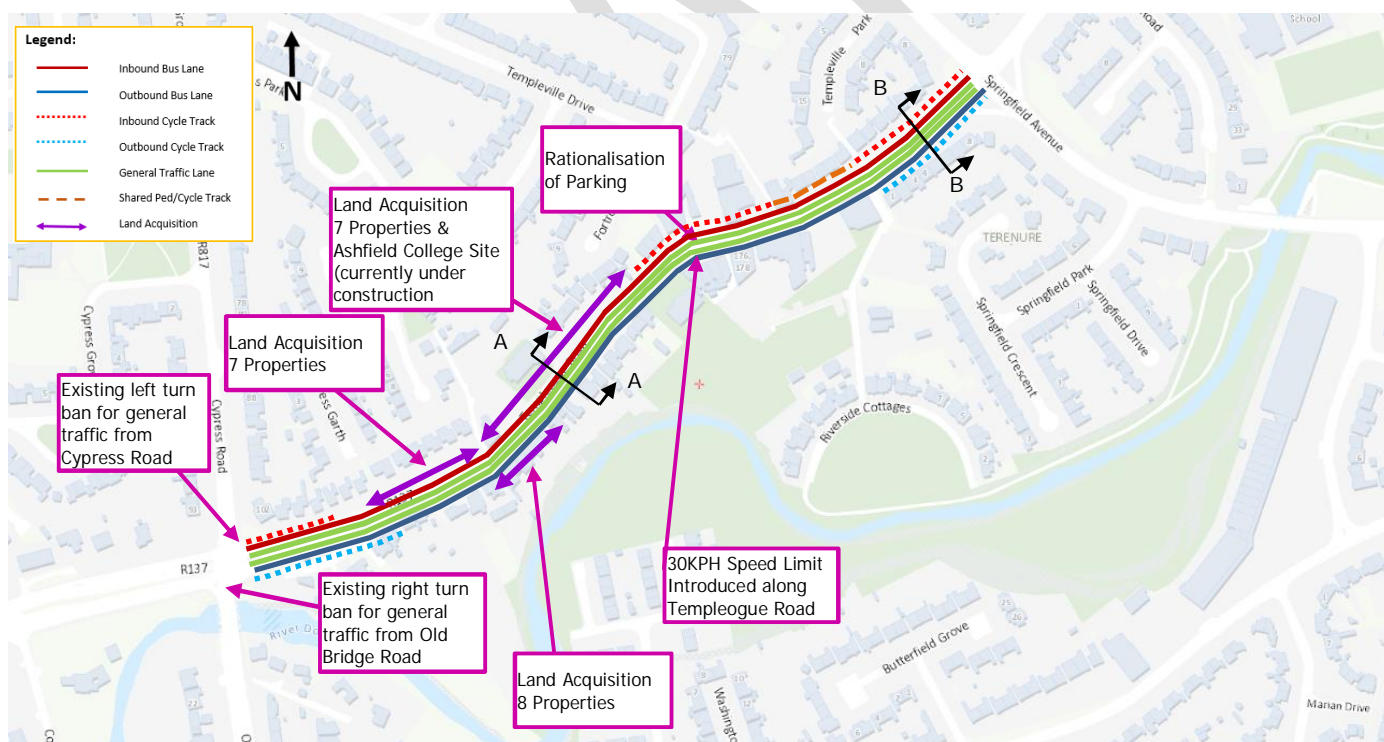


Figure 5.17 Templeogue Village Scheme Option S1-5 Proposal

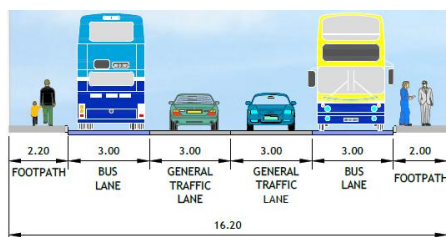


Figure 5.18: S1-5 Cross Section AA

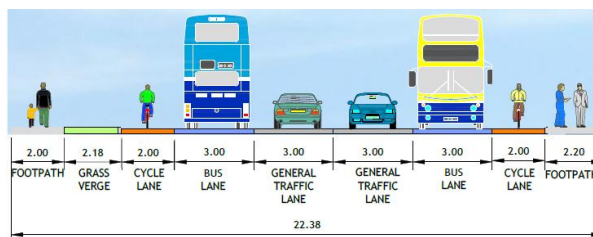


Figure 5.19: S1-5 Cross Section BB

5.3.43 It is anticipated that this option would cost approximately €3.3 million (€2.3 million infrastructure costs, €1 million land acquisition costs).

Stage 2 Route Options Multi-Criteria Analysis

5.3.44 The 'Stage 2' route options assessment summary tables for the section of Templeogue Road, (between the Cypress Grove Road/Old Bridge Road junction and the Springfield Ave/Templeville Road junction) are presented in Table A1 of Appendix A. The relative ranking of scheme options against the assessment sub-criteria are summarised in Table 5.6 below. Criterion and sub-criterion that produce relatively little differences between the options (Neutral compared to other options in the five-point scale) have not been included in the Scheme options Assessment Summary Tables.

Section 1 Summary						
Appraisal Criteria	Sub-Criteria	Option S1-1	Option S1-2	Option S1-3	Option S1-54	Option S1-5
1 Economy	1A Capital Cost					
	1B Transport Quality & Reliability					
2 Integration	2D Cycling Integration					
	2E Traffic Network Integration					
4 Safety	4A Road Safety					
5 Environment	5A Archaeology & Cultural Heritage					
	5C Flora & Fauna					

Table 5.6: Section 1 (Templeogue Road) Scheme Options MCA Summary (Sub-Criteria)

5.3.45 In terms of 'Economy', the primary differentiator between route options is the Transport Quality & Reliability. Option S1-5 provides continuous bus lanes (in both

directions) and therefore offers better journey time reliability when compared to the other 4 scheme options.

5.3.46 When appraising the scheme options under the Integration criteria, although scheme options S1-1 and S-2 provide dedicated cycle facilities along the corridor section, the banning of general vehicles travelling northeast bound along Templeogue Road between the Old Bridge Road/Cypress Road/Templeogue Road junction and the Riverside Cottages junction may result in an increase in traffic on adjacent alternative vehicle routes. In comparison the scheme option S1-5 cycle facility provision alternates between cycle lanes and a shared pedestrian/cycle track, whilst at the locations where there is no inbound/outbound cycle lane provision, cyclists can utilise the adjacent bus lanes. Furthermore a 30kph speed limit is proposed along the route to ensure a safer cycling environment. In addition scheme option S1-5 also permits two-way general vehicle travel along Templeogue Road, as per the existing situation.

5.3.47 Under sub-criteria Road Safety, although scheme options S1-1 and S1-5 both provide segregated bus facilities, S1-5 is ranked higher as the scheme involves the introduction of a 30kph speed limit. The severity of any incidents will reduce with lower vehicle speeds.

5.3.48 A summary of the assessment and relative ranking of route options against the six main assessment criteria is presented in Table 5.7 below.

Section 1 Summary Sub Criteria					
Appraisal Criteria	Option S1-1	Option S1-2	Option S1-3	Option S1-54	Option S1-5
1 Economy					
2 Integration					
4 Safety					

Table 5.6: Section 1 (Templeogue Road) Scheme Options MCA Summary (Main Criteria)

5.3.49 Based on the assessment undertaken, scheme option S1-5 offers more benefits over the other four options under assessment. Option S1-5 is therefore preferred route for Templeogue Village (i.e. the section of Templeogue Road between the Cypress Grove Road/Old Bridge Road junction and the Springfield Ave/Templeville Road junction) for the following reasons: -

- It delivers end to end bus lanes through this section of Templeogue Road, thereby providing improved journey time reliability;
- It will provide shorter journey times;

- It serves a high level of residential and employment catchments within 5, 10 and 15-minute walking distance;
- Users of the CBC service will be able to integrate with existing and future proposed public transport infrastructure; and
- It would provide an improvement on road safety for all users.

5.3.50 Based on the multi-criteria assessment undertaken for the Templeogue Village section of the study area, scheme option S1-5 is identified as the preferred scheme option and as such will form part of the emerging preferred route.

6.0 SECTION 2 ROUTE OPTION ASSESSMENT

6.1 Introduction

6.1.1 This chapter sets out the two-stage assessment procedure and results for Section 2 of the study area (between the Springfield Ave/Templeville Road corridor and the Rathfarnham Road/Terenure Road West corridor).

6.2 Section 2: Stage 1 (Sifting) - Route Option Assessment

6.2.1 The potential route options considered as part of the Stage 1 route option assessment for Section 2 of the study area are presented in Figure 6.1 whilst Table 6.1 below presents a summary of the Stage 1 route options sifting process.

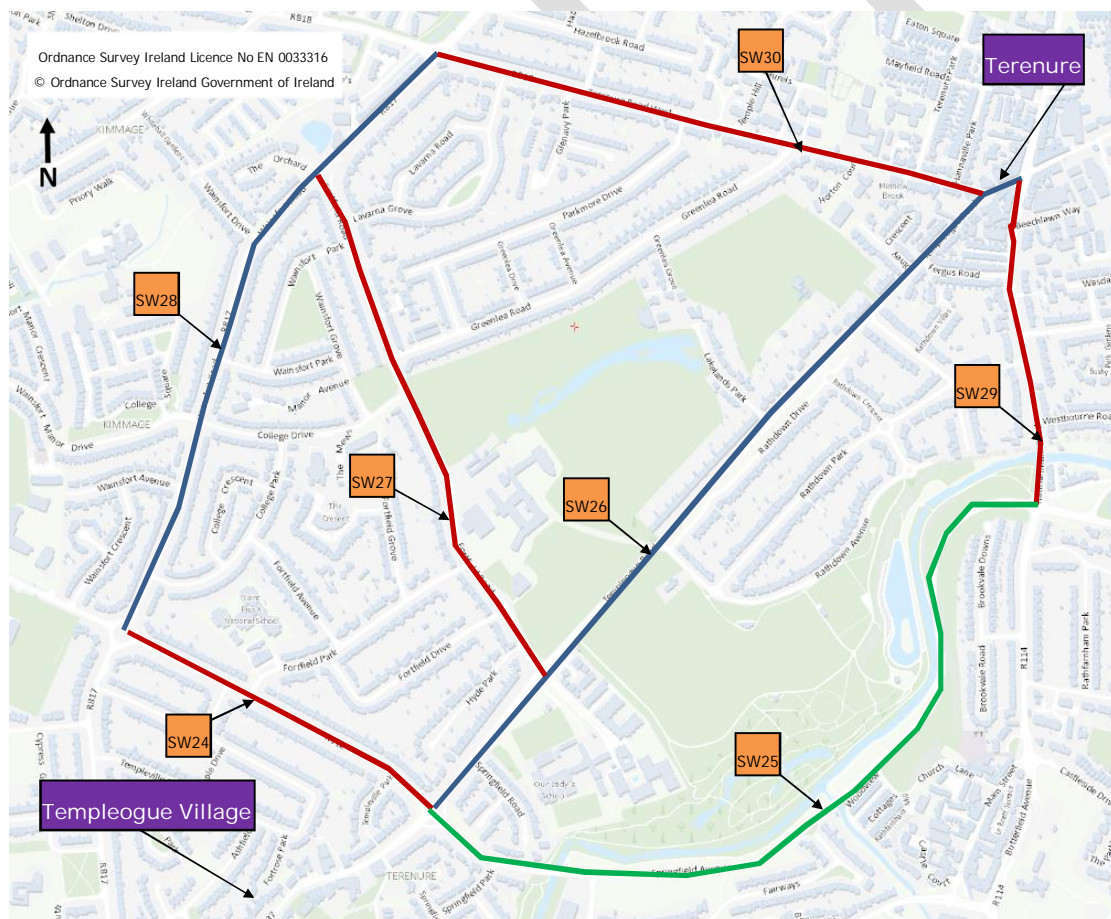


Figure 6.1: Route Options within Section 2 of Study Area

Table 6.1: Route Option Sifting (Stage 1) Summary – Section 2

Route Option	Name / Section	Area Characteristics	Comments	Pass /Fail
SW24	Templeville Road	<ul style="list-style-type: none"> Residential Educational – St Pius X National School Proposed Secondary Cycle route (GDA CNP No. SO4) 	<p>The route ranges in width from approximately 21m – 22m (including footways and verges where present).</p> <p>Northwest bound along Templeville Road from Templeogue Road there is a single general traffic lane which widens to provide a flared approach to the Cypress Grove Road junction. An advisory cycle lane is also provided.</p> <p>South-westbound from the Cypress Grove Road junction there is a single general traffic lane which widens to provide a flared approach to the Templeogue Road junction. Again there is an advisory cycle lane provided.</p> <p>Bus priority may be achievable in both directions by widening the carriageway into the adjacent verges. The link is isolated and diverts away from the key destination of Terenure. As such this section is not carried forward to the Stage 2 Assessment.</p>	Fail
SW25	Springfield Avenue	<ul style="list-style-type: none"> Residential Leisure – Dodder Valley Park Proposed Secondary Cycle route (GDA CNP No. SO4) 	<p>The route ranges in width from approximately 10.5m – 20m (including footways).</p> <p>There is a single general traffic lane provided in each direction which widen to provide flared approaches to the Templeogue Road and Rathfarnham Road junctions.</p> <p>There are cycle facilities provided along both sides of the carriageway, alternating between shared pedestrian/cycle tracks and segregated cycle tracks with parallel footways.</p> <p>Bus priority may be achievable in both directions by widening the carriageway into the adjacent verges. The bridge over the Rover Dodder would also require widening.</p> <p>The provision of a CBC along this link would add an extra 0.6KM to the journey distance for those travelling through section 2 of the study area and would thereby reduce the attractiveness of the route for bus users. In addition, the route diverts away from the key destination of Terenure and towards a route that would be served by the proposed Rathfarnham CBC. As such this section is not carried forward to the Stage 2 Assessment.</p>	Fail
SW26	Templeogue Road (between the Springfield Ave/Templeville Road corridor and Terenure Cross)	<ul style="list-style-type: none"> Residential Educational – Our Lady's School Retail (Terenure Cross) Leisure – Bushy Park, VEC Sports Grounds Proposed Secondary cycle route (GDA CNP No. 9B) 	<p>The route ranges in width from approximately 11.4 - 21.5m (including footways and verges where present).</p> <p>There is a single general traffic lane provided in each direction, in addition to advisory cycle lanes (which encroach into the adjacent traffic lanes). There is a 420m section of bus lane provided northeast-bound from the Rathdown Avenue. Bus priority may be achievable in both directions by widening the carriageway and/or implementing general traffic diversions/traffic management measures, subject to further investigation. Section therefore carried forward to the Stage 2 Assessment.</p>	Pass
SW27	Fortfield Road	<ul style="list-style-type: none"> Residential Educational – Terenure College Proposed GDA CNP Feeder Cycle Route 	<p>The route ranges in width from approximately 15.5 - 30m (including footways and verges where present).</p> <p>There is a single general traffic lane provided in each direction, the southeast bound of which widens to provide flared approaches to the Templeogue Road junction.</p> <p>The provision of bus priority would require land take from the majority of the residential properties along the route. The link is isolated and diverts away from the key destination of Terenure, therefore the section therefore not carried forward to the Stage 2 Assessment.</p>	Fail
SW28	Wainsfort Road	<ul style="list-style-type: none"> Residential Proposed Secondary cycle route (GDA CNP No. 9A) 	<p>The route ranges in width from approximately 15.5 - 30m (including footways and verges where present).</p> <p>There is a single general traffic lane provided in each direction, in addition to advisory cycle lanes.</p> <p>The provision of bus priority would require carriageway widening into the adjacent verge areas and would result in the loss of trees along the route which would negatively impact on the visual amenity of this residential street. In addition land take would be required from the adjacent residential properties along the northern section of the route which would result in a loss of approximately 50% of the front gardens/driveways of these properties. Furthermore the route diverts away from the key destination of Terenure, as such this section is not carried forward to the Stage 2 Assessment.</p>	Fail
SW29	Rathfarnham Road	<ul style="list-style-type: none"> Residential Retail (Rathfarnham Village) Proposed Primary route (GDA CNP No. 10) 	<p>This route ranges in carriageway width from 14m (2 general traffic lanes including cycle lane) to 17m (2 general traffic and 2 bus lanes with no cycle lanes).</p> <p>Bus priority may be achieved for majority of the link. Necessary removal of on-street car parking at shops/Yellow House pub. Reallocation of traffic lanes from general traffic to buses may be needed to ensure bus priority at junctions.</p> <p>The link forms part of the proposed Rathfarnham CBC, nonetheless the link is isolated (i.e. SW7 has failed the Stage 1 sift), however parts of the route could be used to form diversionary routes for traffic within Section 2.</p>	Pass

Table 6.1: Route Option Sifting (Stage 1) Summary – Section 2

Route Option	Name / Section	Area Characteristics	Comments	Pass /Fail
SW30	Terenure Road West	<ul style="list-style-type: none"> Residential Educational – Presentation College Retail (Terenure Cross) •Proposed Secondary route (GDA CNP No. SO3) 	<p>The route ranges in width from approximately 10.5-11.5m (including footways).</p> <p>There is a single general traffic lane provided in each direction. There are no cycle facilities available.</p> <p>The provision of bus priority would require carriageway widening into the adjacent residential properties along the route which would result in a loss of approximately 50% of the front gardens/driveways of these properties.</p> <p>As such this section is not carried forward to the Stage 2 Assessment.</p>	Fail

Table 6.1: Route Option Sifting (Stage 1) Summary – Section 2

6.2.2 Of these 7-potential links considered within Section 2, two have progressed to the next assessment stage (SW 26 & 29). These route options are presented in Figure 6.2 below.

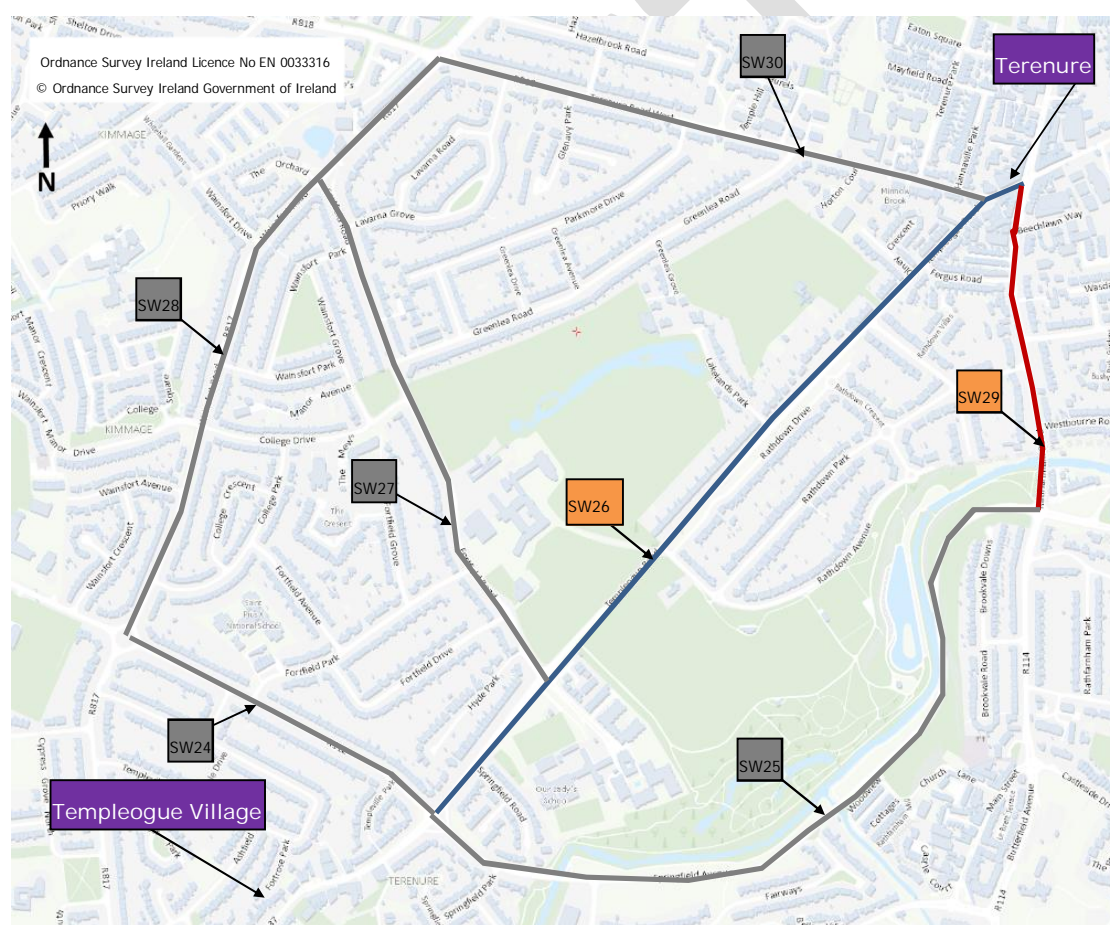


Figure 6.2 Route Options passing Stage 1 'Sift' in Section 2 of Study Area

6.3 Section 2: Stage 2 – Option Assessment

Introduction

- 6.3.1 Following the 'Stage 1' sift for the Section 2 study area, 2 route options were remaining. However, link SW29 which passed the Stage 1 assessment was not taken forward to the Stage 2 assessment as it was an isolated link which ran along the proposed Rathfarnham – City Centre CBC route. Therefore, the cohesive route option for Section 2 will be SW26 which is illustrated in Figure 6.3 below.

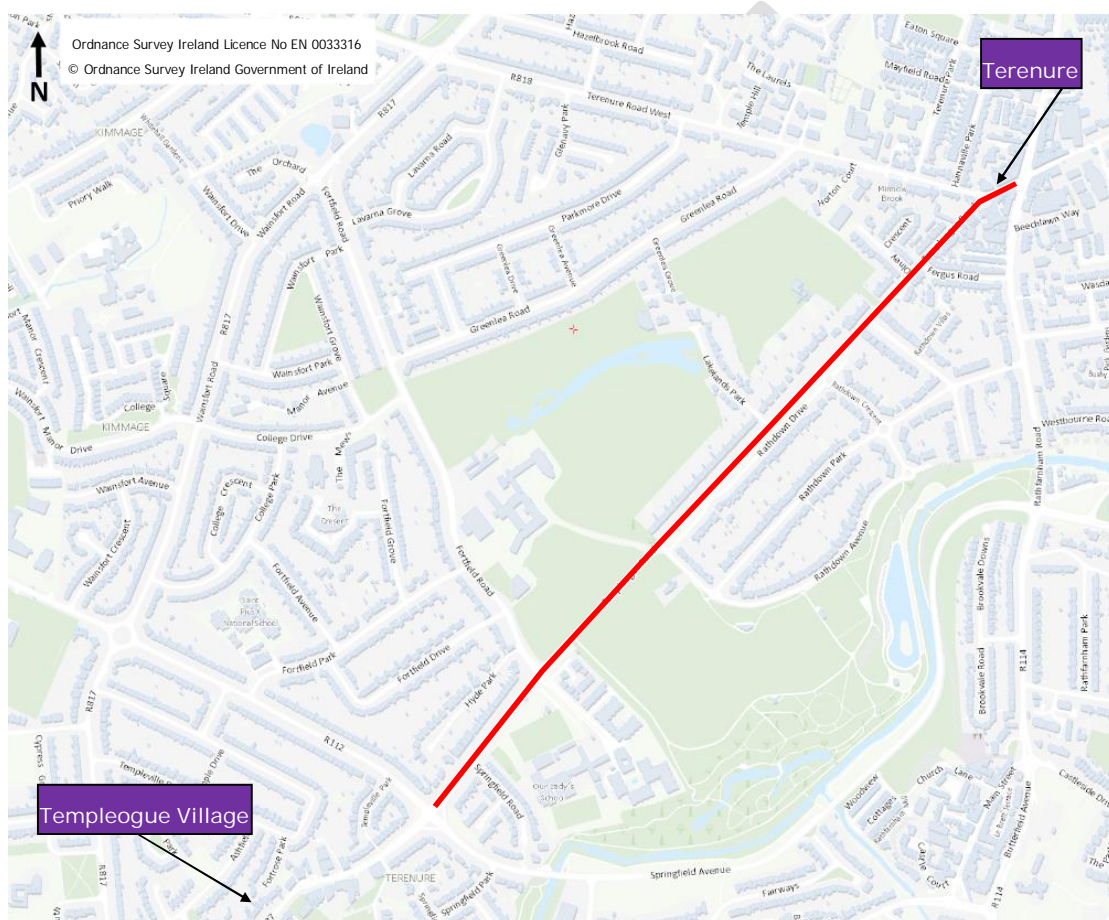


Figure 6.3: Section 2 Cohesive Route

- 6.3.2 Due to a number of existing constraints, the section of Templeogue Road, (between the Fortfield Road/Templeogue Road junction and the Terenure Road East/Templeogue Road junction), required specific consideration which required the identification of alternative scheme options (12 no.) for this section. An MCA has been undertaken on these alternative scheme options in order to determine the most appropriate scheme for this section of Templeogue Road.

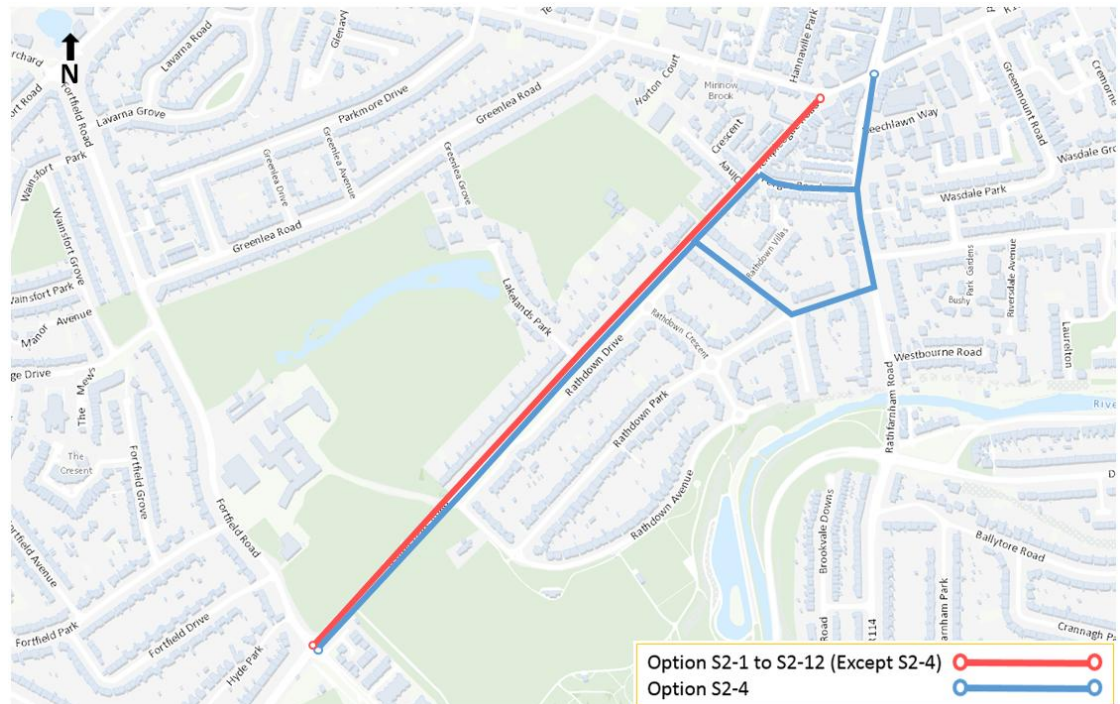


Figure 6.4: Section 2 - Templeogue Road Sub-section

Templeogue Road Scheme Option S2-1:

- 6.3.3 Inbound: The CBC service will proceed north eastbound along Templeogue Road from the Fortfield Road/Templeogue Road junction to the Terenure Road East/Templeogue Road junction.
- 6.3.4 Outbound: The outbound service follows the same route as the inbound.
- 6.3.5 Stops: There has been rationalisation of bus stops which are in close proximity to one another (less than 300m) such as the bus stop at Templeogue Road, Bushy Park (No. 1159) as shown in Figure 6.5.



6.3.7 The proposals for the CBC service for the S2-1 scheme option include the following measures:-

- 6.3.8 The new sections of bus lane and cycle lanes can be accommodated with carriageway widening into Bushy Park, the Green area adjacent to Rathdown Drive and residential properties (300m length) on approach to the Terenure Village. There

will also be a requirement to remove front car parking spaces from 8-10 residential properties on the northern side of Templeogue Road.

6.3.9 The Option S2-1 proposals are presented in Figure 6.6 whilst sample cross sections are presented in Figures 6.6 & 6.7 below.

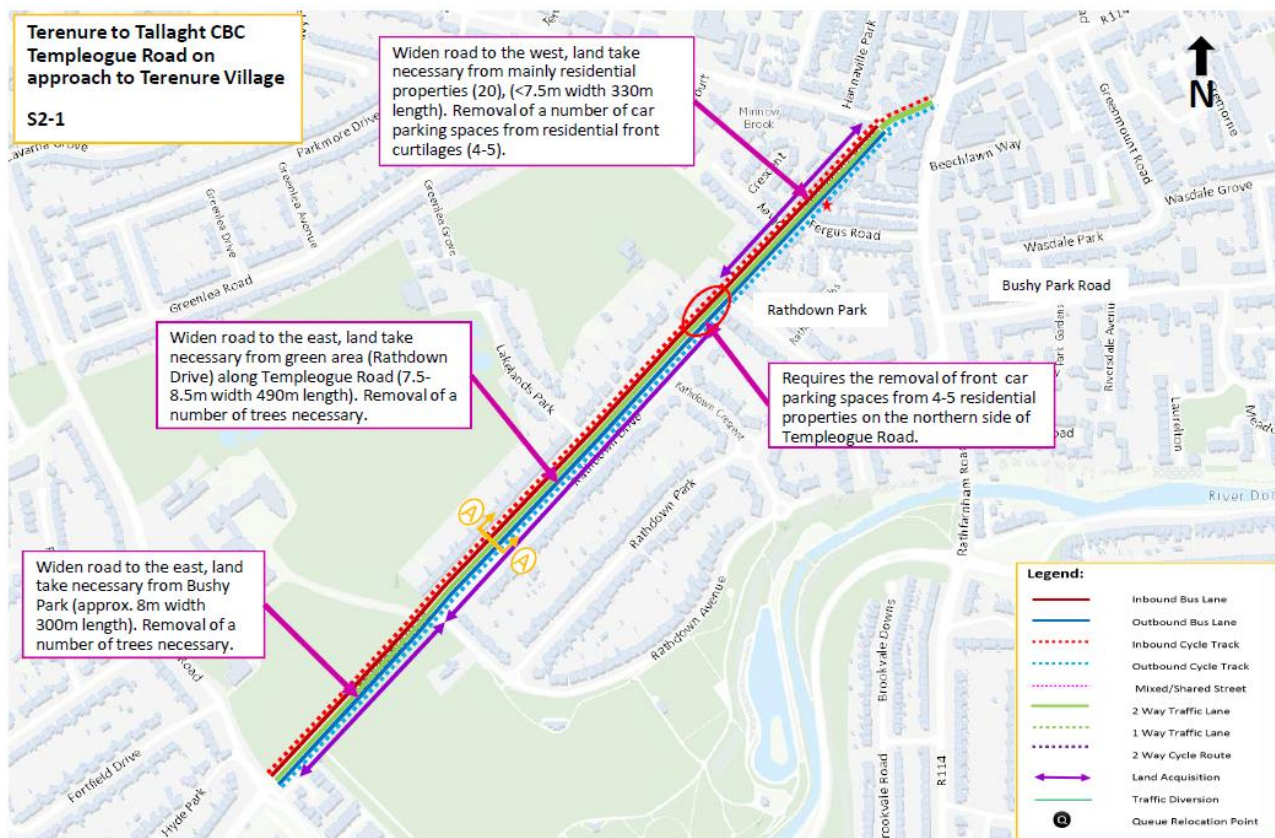


Figure 6.6 Templeogue Road Scheme Option S2-1 Proposal

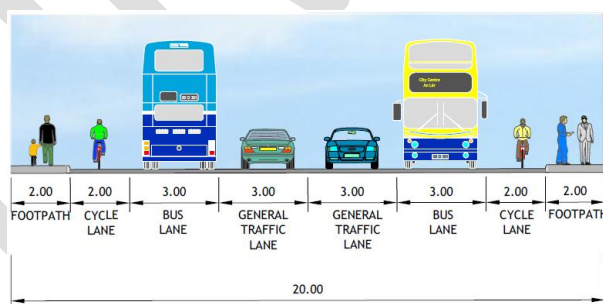


Figure 6.7: S2-1 Cross Section AA

6.3.10 It is anticipated that this option would cost approximately €7.9 million (€4.3 million infrastructure costs, €3.6 million land acquisition costs).

Templeogue Road Scheme Option S2-2:

- 6.3.11 Inbound: The CBC service will proceed north eastbound along Templeogue Road from the Fortfield Road/Templeogue Road junction to the Terenure Road East/Templeogue Rd junction.
- 6.3.12 Outbound: The outbound service follows the same route as the inbound.
- 6.3.13 Stops: There has been rationalisation of bus stops which are in close proximity to one another (less than 300m) such as the bus stop at Templeogue Road, Bushy Park (No. 1159) as shown in Figure 6.5.
- 6.3.14 The journey time for this scheme option along Templeogue Road from the Fortfield Road/Templeogue Road junction to the Terenure Road West/Templeogue Road junction is approximately 4 minutes over a distance of approximately 1.15km.
- 6.3.15 The proposals for the CBC service for the S2-2 scheme option include the following measures:-
- Bus lanes in both directions from Fortfield Road/Templeogue Road junction to Templeogue Road/Terenure Road West with the exception of a 50m section of Templeogue Road approaching Rathdown Park where bus lanes in both direction will not be provided owing to the proximity of properties and the requirement to remove residential front garden car parking.
 - Segregated cycle facilities will be provided along both sides of the Templeogue Road between Fortfield Road/Templeogue Road junction and the Terenure Road West/Templeogue Road junction aligning with Secondary Route 9B as identified in the GDN Cycle Network Plan.
 - A bus gate will be implemented on Templeogue Road at Rathdown Park/Templeogue Road junction and Terenure Road West/Templeogue Road junction to ensure only buses and cyclists are permitted, local access traffic will share with buses in the proposed bus lanes.
 - The Fortfield Road/Templeogue Road junction will be upgraded to ensure buses are given priority up to the stop lines (both directions).
- 6.3.16 The new sections of bus lane and cycle lanes can be accommodated with carriageway widening into Bushy Park, the Green area adjacent to Rathdown Drive and residential properties on approach to the Terenure Village.

6.3.17 The Option S2-2 proposals are presented in Figure 6.8 whilst sample cross sections are presented in Figures 6.9 - 6.11 below.

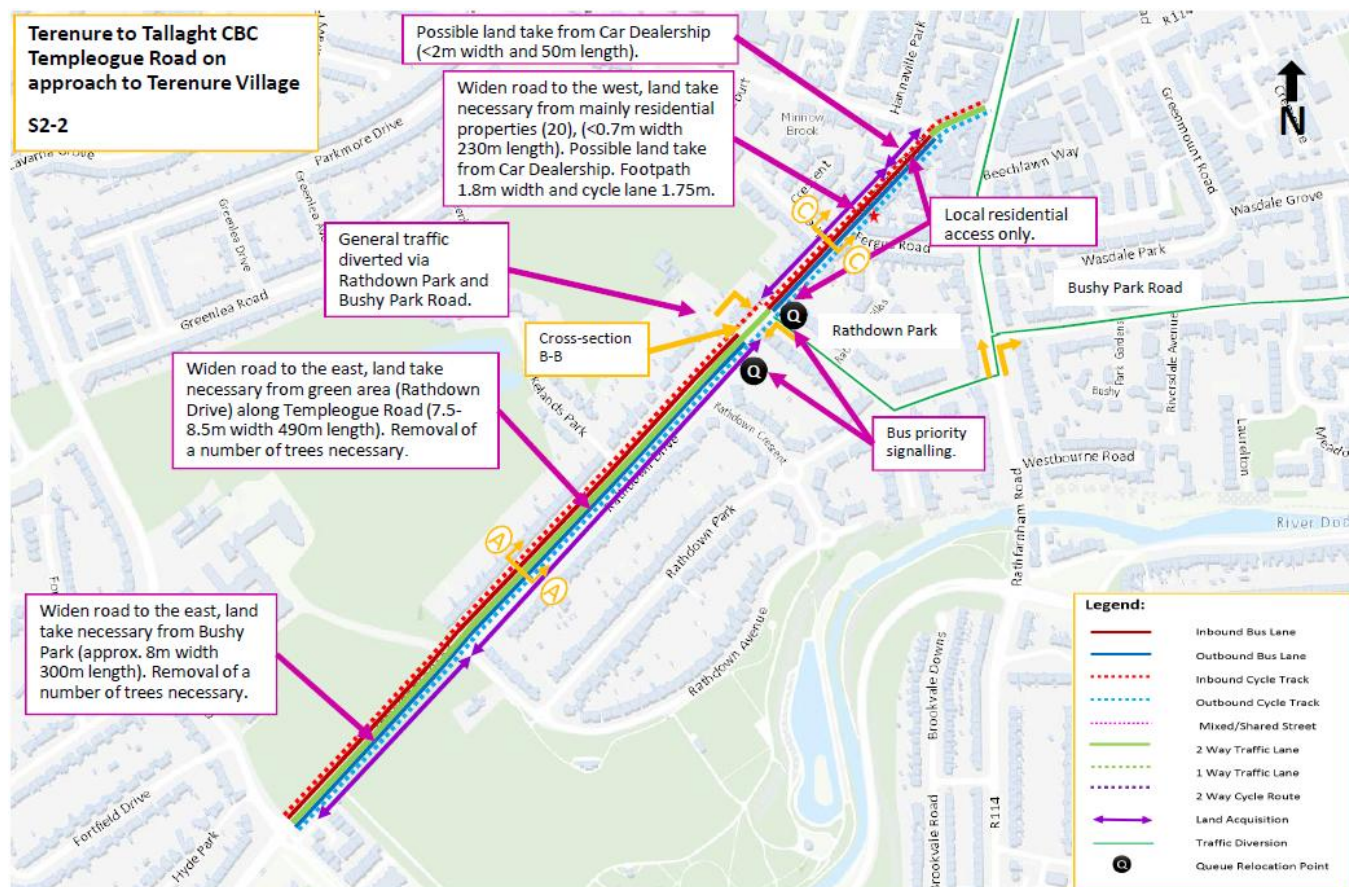


Figure 6.8 Templeogue Road Scheme Option S2-2 Proposal

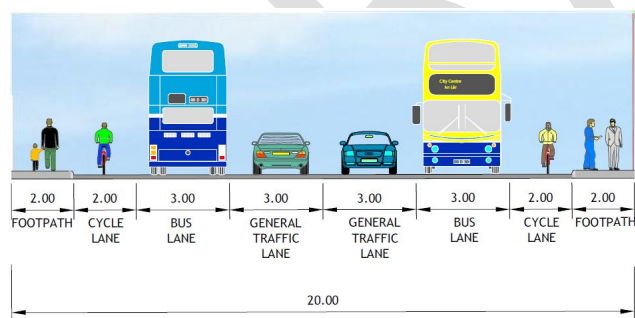


Figure 6.9: S2-2 Cross Section AA

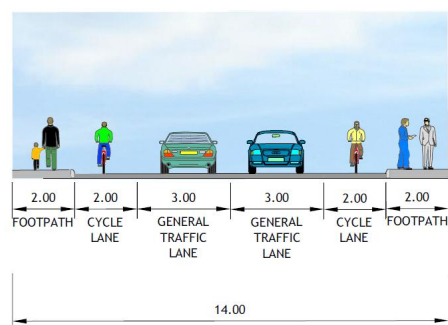


Figure 6.10: S2-2 Cross Section BB

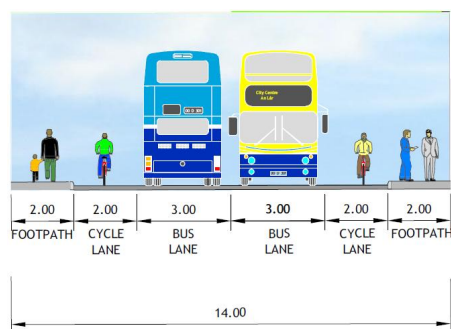


Figure 6.11: S2-2 Cross Section CC

6.3.18 It is anticipated that this option would cost approximately €4.2 million (€3.9 million infrastructure costs, €0.3 million land acquisition costs).

Templeogue Road Scheme Option S2-3:

6.3.19 Inbound: The CBC service will proceed north eastbound along Templeogue Road from the Fortfield Road/Templeogue Road junction to the Terenure Road East/Templeogue Road junction.

6.3.20 Outbound: The outbound service follows the same route as the inbound.

6.3.21 Stops: There has been rationalisation of bus stops which are in close proximity to one another (less than 300m) such as the bus stop at Templeogue Road, Bushy Park (No. 1159) as shown in Figure 6.5.

6.3.22 The journey time for this scheme option along Templeogue Road from the Fortfield Road/Templeogue Road junction to the Terenure Road West/Templeogue Road junction is approximately 3 minutes over a distance of approximately 1.15km.

6.3.23 The proposals for the CBC service for the S2-3 scheme option include the following measures:-

- Continuous Bus lanes will be provided in both directions along Templeogue Road from the Fortfield Road/Templeogue Road junction to Templeogue Road/Terenure Road West junction.
- Segregated cycle facilities will be provided along both sides of the Templeogue Road between Fortfield Road/Templeogue Road junction and the Terenure Road West/Templeogue Road junction aligning with Secondary Route 9B as identified in the GDN Cycle Network Plan.
- A bus gate will be implemented on Templeogue Road at Rathdown Avenue/Templeogue Road junction and Terenure Road West/Templeogue Road junction to ensure only buses and cyclists are permitted, local access traffic will share with buses in the proposed bus lanes.
- General traffic can divert onto an alternative route via Rathdown Ave – Rathown Park – Rathfarnham Road – Terenure Road North or Bushy Park Road.

- The new sections of bus lane and cycle lanes can be accommodated with carriageway widening into Bushy Park, the Green area adjacent to Rathdown Drive and residential properties on approach to the Terenure Village.
- The Fortfield Road/Templeogue Road junction will be upgraded to ensure buses are given priority up to the stop lines (both directions).
- Segregated cycle facilities will be provided along both sides of the Templeogue Road between Fortfield Road/Templeogue Road junction and the Terenure Road West/Templeogue Road junction aligning with Secondary Route 9B as identified in the GDN Cycle Network Plan.
- The Fortfield Road/Templeogue Road junction will be upgraded to ensure buses are given priority up to the stop lines (both directions).

6.3.24 The new sections of bus lane and cycle lanes can be accommodated with carriageway widening into Bushy Park, the Green area adjacent to Rathdown Drive and residential properties on approach to the Terenure Village.

6.3.25 The Option S2-1 proposals are presented in Figure 6.12 whilst sample cross sections are presented in Figures 6.13 & 6.14 below.

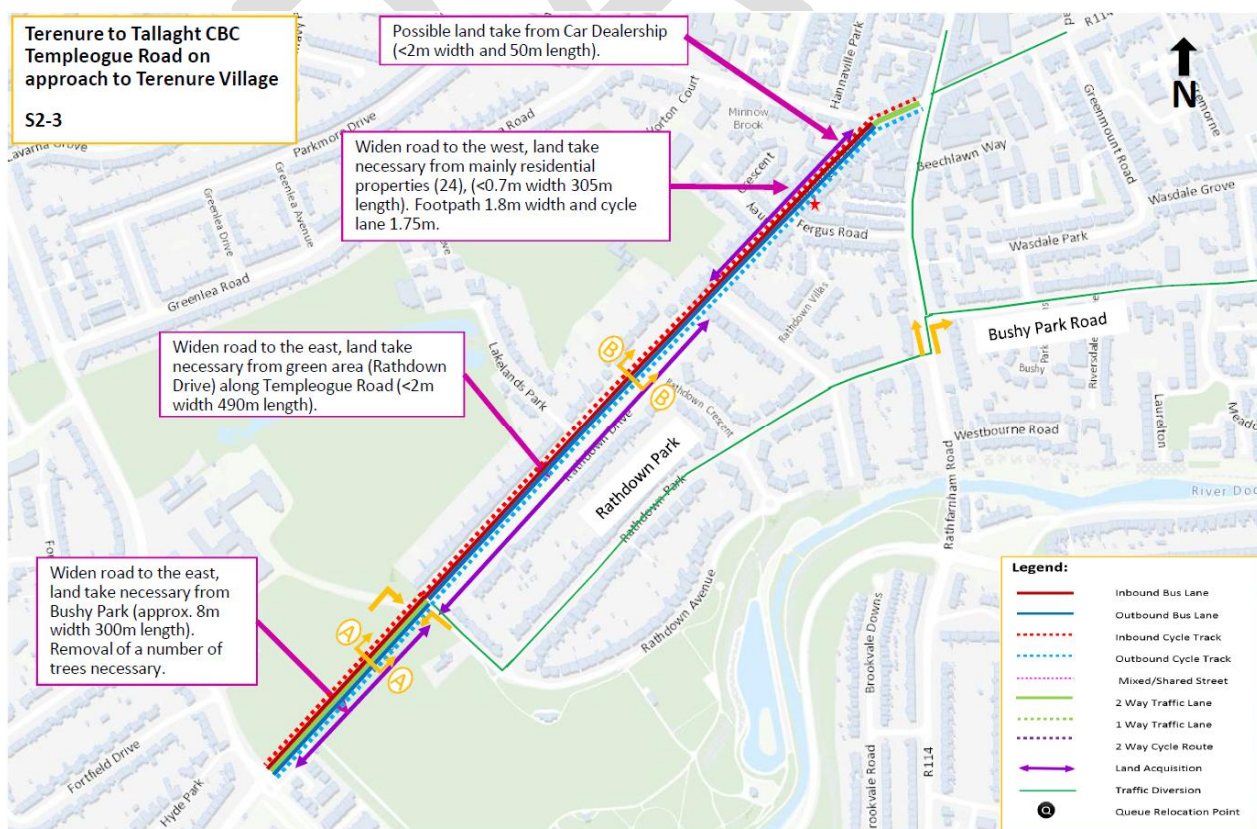


Figure 6.12 Templeogue Road Scheme Option S2-3 Proposal

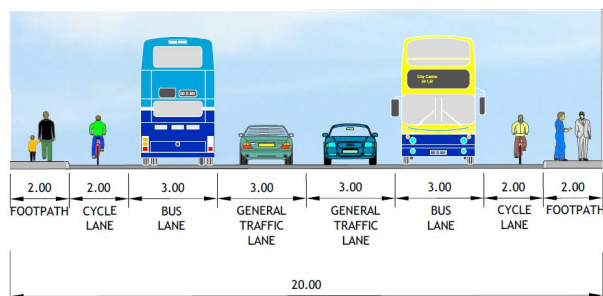


Figure 6.13: S2-3 Cross Section AA

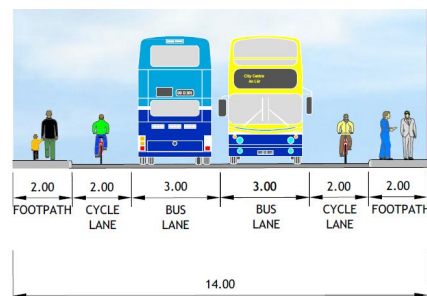


Figure 6.14: S2-3 Cross Section BB

6.3.26 It is anticipated that this option would cost approximately €3.6 million (€3.3 million infrastructure costs, €0.3 million land acquisition costs).

Templeogue Road Scheme Option S2-4

6.3.27 Inbound: The CBC service will proceed north eastbound along Templeogue Road from the Fortfield Road/Templeogue Road junction to the Rathdown Park/Templeogue Road junction. The CBC will proceed east along Rathdown Park to Rathfarnham Road where it will connect with the Rathfarnham CBC.

6.3.28 Outbound: The outbound CBC service will proceed along Rathfarnham Road to Fergus Road where it will connect with Templeogue Road. The CBC route will continue on Templeogue Road to Fortfield Road/Templeogue Road junction.

6.3.29 Stops: There has been rationalisation of bus stops which are in close proximity to one another (less than 300m) such as the bus stop at Templeogue Road, Bushy Park (No. 1159).

6.3.30 The journey time for this scheme option along Templeogue Road from the Fortfield Road/Templeogue Road junction to the Terenure Road West/Templeogue Road junction is approximately 5 minutes in the inbound direction over a distance of approximately 1.55km and 5 minutes in the outbound direction over a distance of approximately 1.36km.

6.3.31 The proposals for the CBC service for the S2-4 scheme option include the following measures:-

- Bus lanes will be provided in both directions along Templeogue Road from Fortfield Road/Templeogue Road junction to Rathdown Park/Templeogue Junction.

- Inbound bus lane will be provided on Rathdown Park and then connecting with the Rathfarnham CBC on Rathfarnham Road.
- Outbound bus lane will be provided on Fergus Road connecting Rathfarnham Road to Templeogue Road. From Fergus Road/Templeogue Road junction to Rathdown Park/Templeogue Road junction outbound buses will share with general traffic in the general traffic lane.
- Cycle lanes will be provided along both sides of Templeogue Road between Fortfield Road/Templeogue Road junction and the Terenure Road West/Templeogue Road junction aligning with Secondary Route 9B as identified in the GDA Cycle Network Plan.
- Buses will be given priority over general vehicular traffic when merging into general traffic lanes or connecting with the Rathfarnham CBC.
- The Fortfield Road/Templeogue Road junction will be upgraded to ensure buses are given priority up to the stop lines (both directions).

6.3.32 The new sections of bus lane and cycle lanes can be accommodated with carriageway widening into Bushy Park, the Green area adjacent to Rathdown Drive and residential properties on approach to the Terenure Village. Requires the removal of front car parking spaces from 2-3 residential properties on the northern side of Templeogue Road.

6.3.33 The Option S2-4 proposals are presented in Figure 6.15 whilst sample cross sections are presented in Figures 6.16 & 6.17 below.

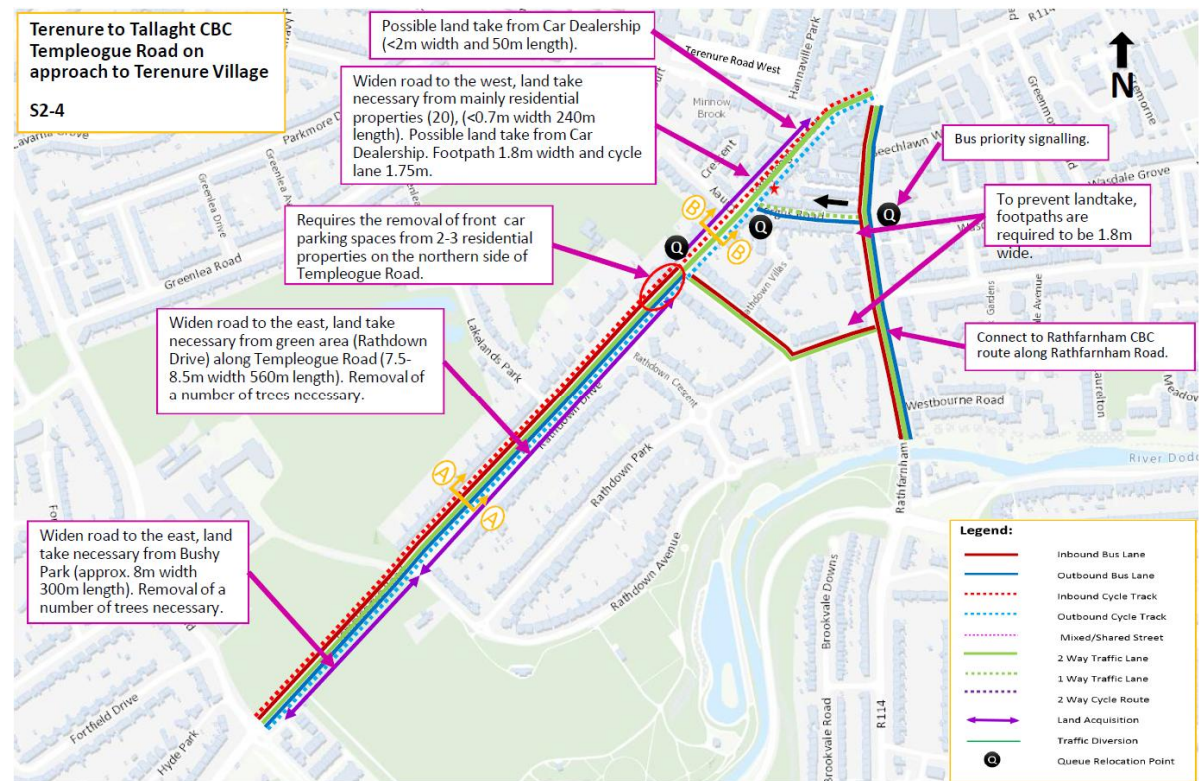


Figure 6.15 Templeogue Road Scheme Option S2-4 Proposal

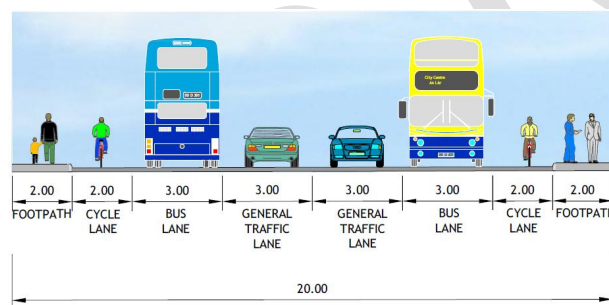


Figure 6.16: S2-4 Cross Section AA

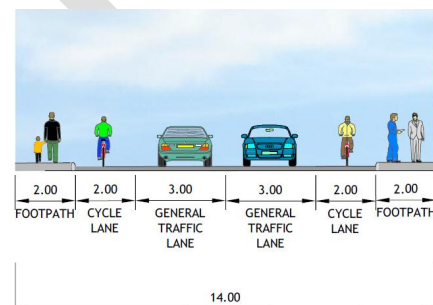


Figure 6.17: S2-4 Cross Section BB

6.3.34 It is anticipated that this option would cost approximately €4.5 million (€4.2 million infrastructure costs, €0.3 million land acquisition costs).

Templeogue Road Scheme Option S2-5

6.3.35 Inbound: The CBC service will proceed north eastbound along Templeogue Road from the Fortfield Road/Templeogue Road junction to the Terenure Road East/Templeogue Road junction.

6.3.36 Outbound: The outbound service follows the same route as the inbound.

6.3.37 Stops: There has been rationalisation of bus stops which are in close proximity to one another (less than 300m) such as the bus stop at Templeogue Road, Bushy Park (No. 1159) as shown in Figure 6.5.

6.3.38 The journey time for this scheme option along Templeogue Road from the Fortfield Road/Templeogue Road junction to the Terenure Road West/Templeogue Road junction is approximately 3 minutes over a distance of approximately 1.15km.

6.3.39 The proposals for the CBC service for the S2-5 scheme option include the following measures:-

- Continuous bus lanes will be provided in both directions along Templeogue Road from the Fortfield Road/Templeogue Road junction to Templeogue Road/Terenure Road West junction.
- Segregated cycle facilities will be provided along both sides of Templeogue Road between Fortfield Road and Lakelands Park aligning with Secondary Route 9B as identified in the GDA Cycle Network Plan. Between Lakelands Park/Templeogue Road junction and Terenure Road West/Templeogue Road junction cyclists can divert onto an alternative route via Lakelands Park – Greenlea Grove – Greenlea Road – Terenure Road West. Also, feeder cycle routes are proposed to link with the South Dublin County Council Proposed Dodder Greenway Part 8 proposals.
- The Fortfield Road/Templeogue Road junction will be upgraded to ensure buses are given priority up to the stop lines (both directions).

6.3.40 The new sections of bus lane and cycle lanes can be accommodated with carriageway widening into Bushy Park, the green area adjacent to Rathdown Drive and residential properties on approach to the Terenure Village. Requires the removal of car parking spaces from the front of 2-3 residential properties on the northern side of Templeogue Road.

6.3.41 The Option S2-5 proposals are presented in Figure 6.18 whilst sample cross sections are presented in Figures 6.19 & 6.20 below.

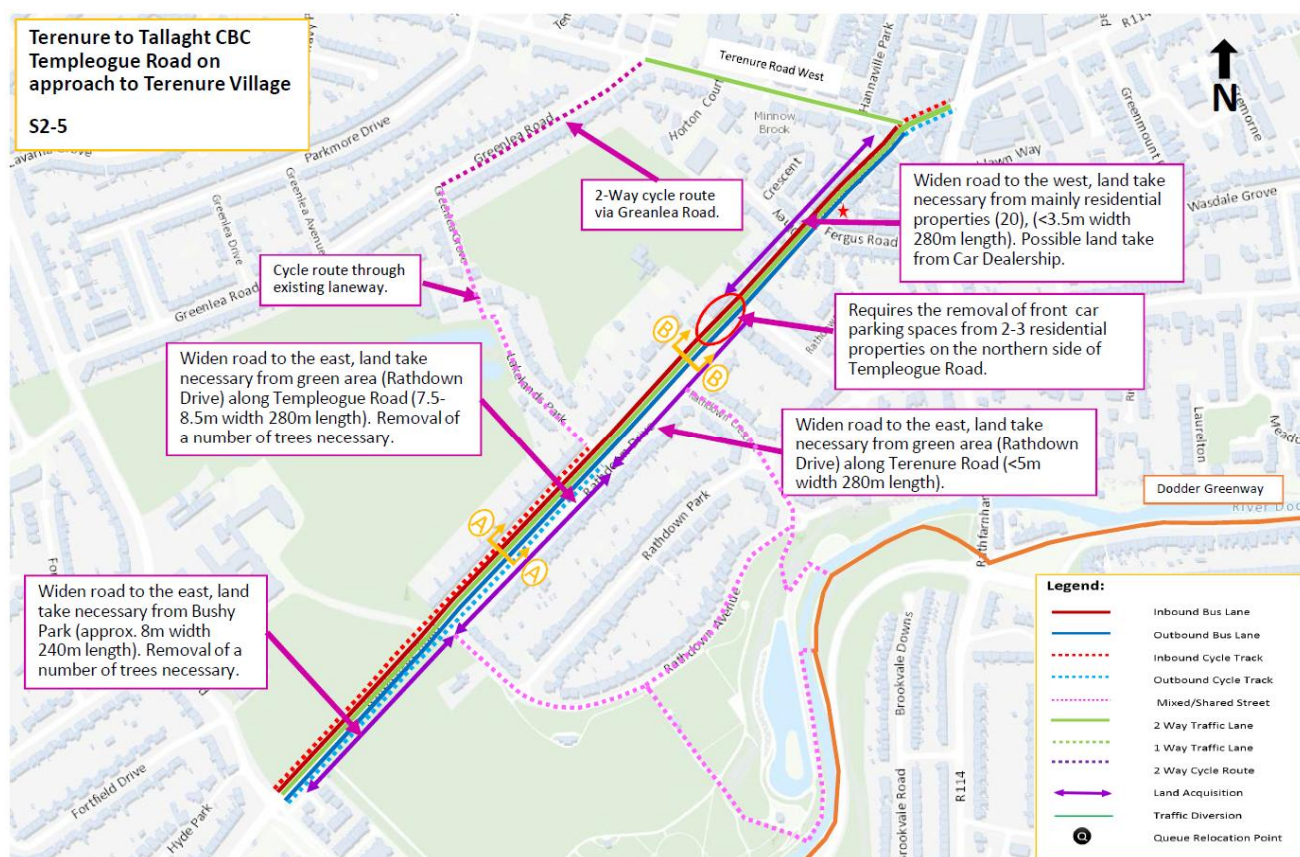


Figure 6.18 Templeogue Road Scheme Option S2-5 Proposal

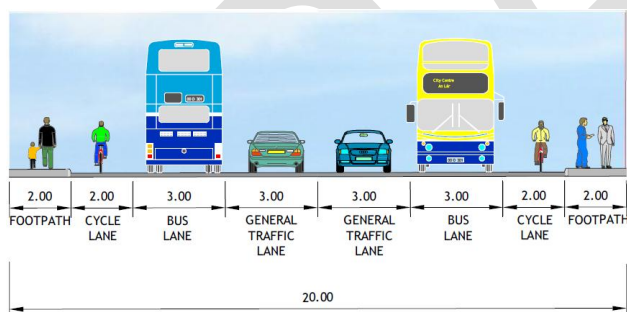


Figure 6.19: S2-5 Cross Section AA

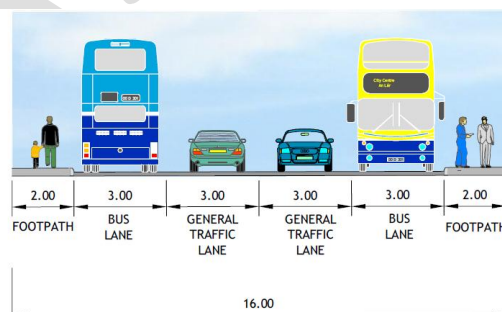


Figure 6.20: S2-5 Cross Section BB

6.3.42 It is anticipated that this option would cost approximately €5.9 million (€4.3 million infrastructure costs, €1.6 million land acquisition costs).

Templeogue Road Scheme Option S2-6

6.3.43 Inbound: The CBC service will proceed north eastbound along Templeogue Road from the Fortfield Road/Templeogue Road junction to the Terenure Road East/Templeogue Road junction.

6.3.44 Outbound: The outbound service follows the same route as the inbound.

6.3.45 Stops: There has been rationalisation of bus stops which are in close proximity to one another (less than 300m) such as the bus stop at Templeogue Road, Bushy Park (No. 1159) as shown in Figure 6.5.

6.3.46 The journey time for this scheme option along Templeogue Road from the Fortfield Road/Templeogue Road junction to the Terenure Road West/Templeogue Road junction is approximately 3 minutes over a distance of approximately 1.15km.

6.3.47 The proposals for the CBC service for the S2-6 scheme option include the following measures:-

- Continuous bus lanes will be provided in both directions along Templeogue Road from the Fortfield Road/Templeogue Road junction to Templeogue Road/Terenure Road West junction.
- Removal of outbound general traffic lane on Templeogue Road from Terenure Cross to Rathdown Park to reduce the required land acquisition on residential properties approaching Terenure Cross.
- Segregated cycle facilities will be provided along both sides of Templeogue Road between Fortfield Road and Lakelands Park aligning with Secondary Route 9B as identified in the GDA Cycle Network Plan. Between Lakelands Park/Templeogue Road junction and Terenure Road West/Templeogue Road cyclists can divert onto an alternative route via Lakelands Park – Greenlea Grove – Greenlea Road – Terenure Road West. Also, feeder cycle routes are proposed to link with the South Dublin County Council Proposed Dodder Greenway Part 8 proposals.
- The Fortfield Road/Templeogue Road junction will be upgraded to ensure buses are given priority up to the stop lines (both directions).

6.3.48 The new sections of bus lane and cycle lanes can be accommodated with carriageway widening into Bushy Park and the Green area adjacent to Rathdown Drive.

6.3.49 The Option S2-6 proposals are presented in Figure 6.21 whilst sample cross sections are presented in Figures 6.22 - 6.24 below.

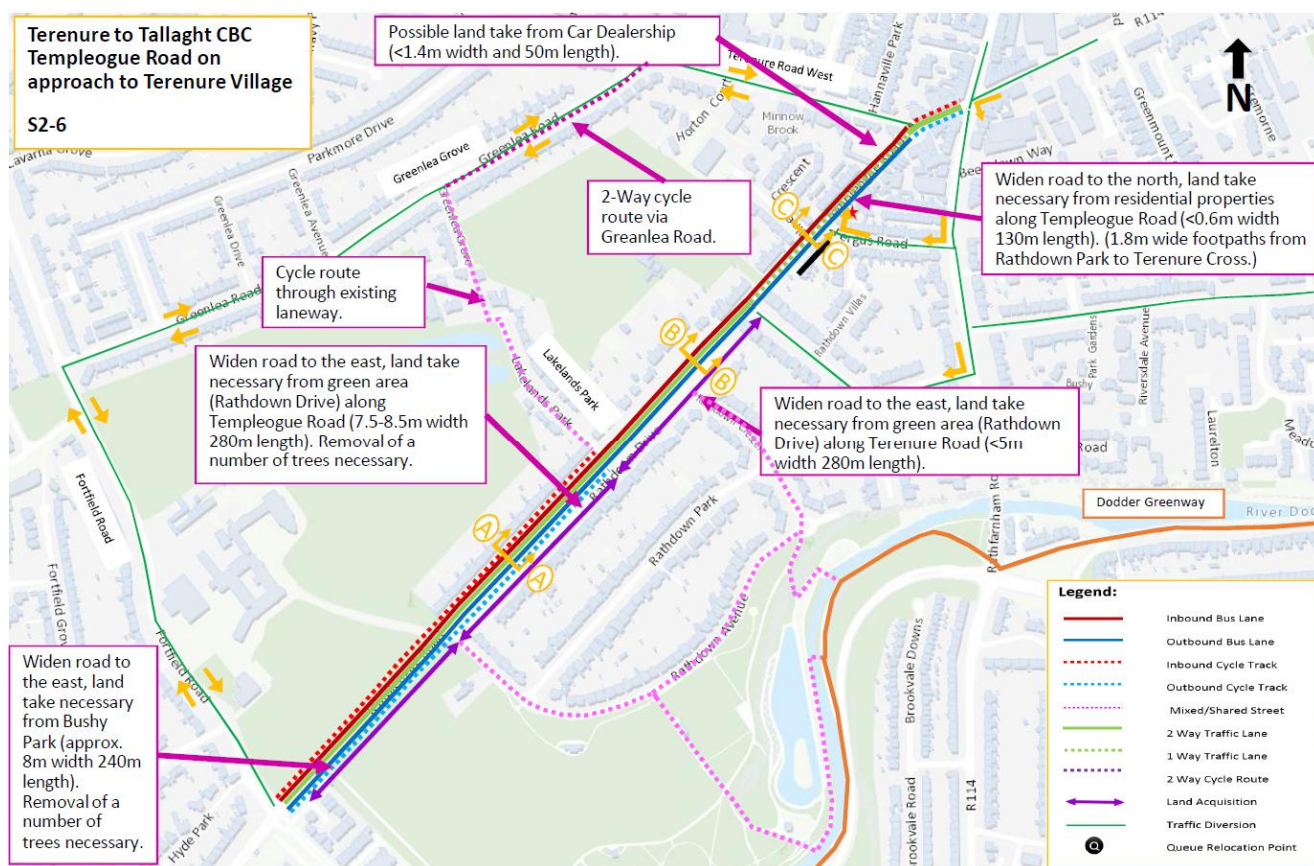


Figure 6.21 Templeogue Road Scheme Option S2-6 Proposal

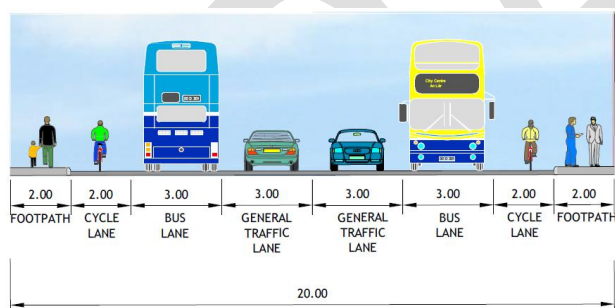


Figure 6.22: S2-6 Cross Section AA

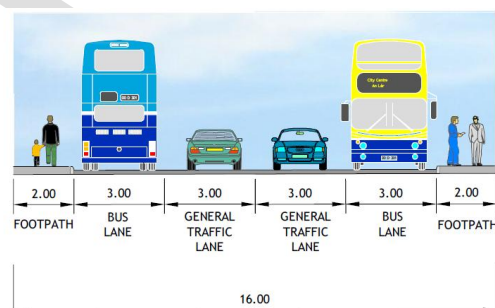


Figure 6.23: S2-6 Cross Section BB

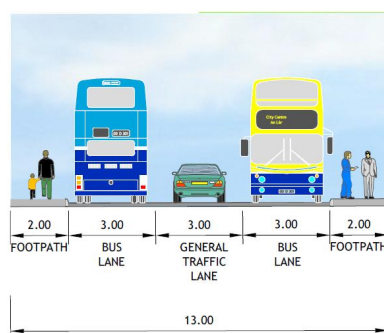


Figure 6.24: S2-6 Cross Section CC

It is anticipated that this option would cost approximately €4.0 million (€3.8 million infrastructure costs, €0.2 million land acquisition costs).

Templeogue Road Scheme Option S2-7

6.3.50 Inbound: The CBC service will proceed north eastbound along Templeogue Road from the Fortfield Road/Templeogue Road junction to the Terenure Road East/Templeogue Road junction.

6.3.51 Outbound: The outbound service follows the same route as the inbound.

6.3.52 Stops: There has been rationalisation of bus stops which are in close proximity to one another (less than 300m) such as the bus stop at Templeogue Road, Bushy Park (No. 1159) as shown in Figure 6.5.

6.3.53 The journey time for this scheme option along Templeogue Road from the Fortfield Road/Templeogue Road junction to the Terenure Road West/Templeogue Road junction is approximately 3 minutes over a distance of approximately 1.15km.

6.3.54 The proposals for the CBC service for the S2-6 scheme option include the following measures:-

- Continuous bus lanes will be provided in both directions along Templeogue Road from the Fortfield Road/Templeogue Road junction to Templeogue Road/Terenure Road West junction.
- Removal of inbound general traffic lane on Templeogue Road from Rathdown Park to Terenure Cross to reduce the required land acquisition on residential properties approaching Terenure Cross.
- Segregated cycle facilities will be provided along both sides of Templeogue Road between Fortfield Road and Lakelands Park aligning with Secondary Route 9B as identified in the GDA Cycle Network Plan. Between Lakelands Park/Templeogue Road junction and Terenure Road West/Templeogue Road cyclists can divert onto an alternative route via Lakelands Park – Greenlea Grove – Greenlea Road – Terenure Road West. Also, feeder cycle routes are proposed to link with the South Dublin County Council Proposed Dodder Greenway Part 8 proposals.
- The Fortfield Road/Templeogue Road junction will be upgraded to ensure buses are given priority up to the stop lines (both directions).

6.3.55 The new sections of bus lane and cycle lanes can be accommodated with carriageway widening into Bushy Park and the Green area adjacent to Rathdown Drive.

6.3.56 The Option S2-7 proposals are presented in Figure 6.25 whilst sample cross sections are presented in Figures 6.26 - 6.28 below.

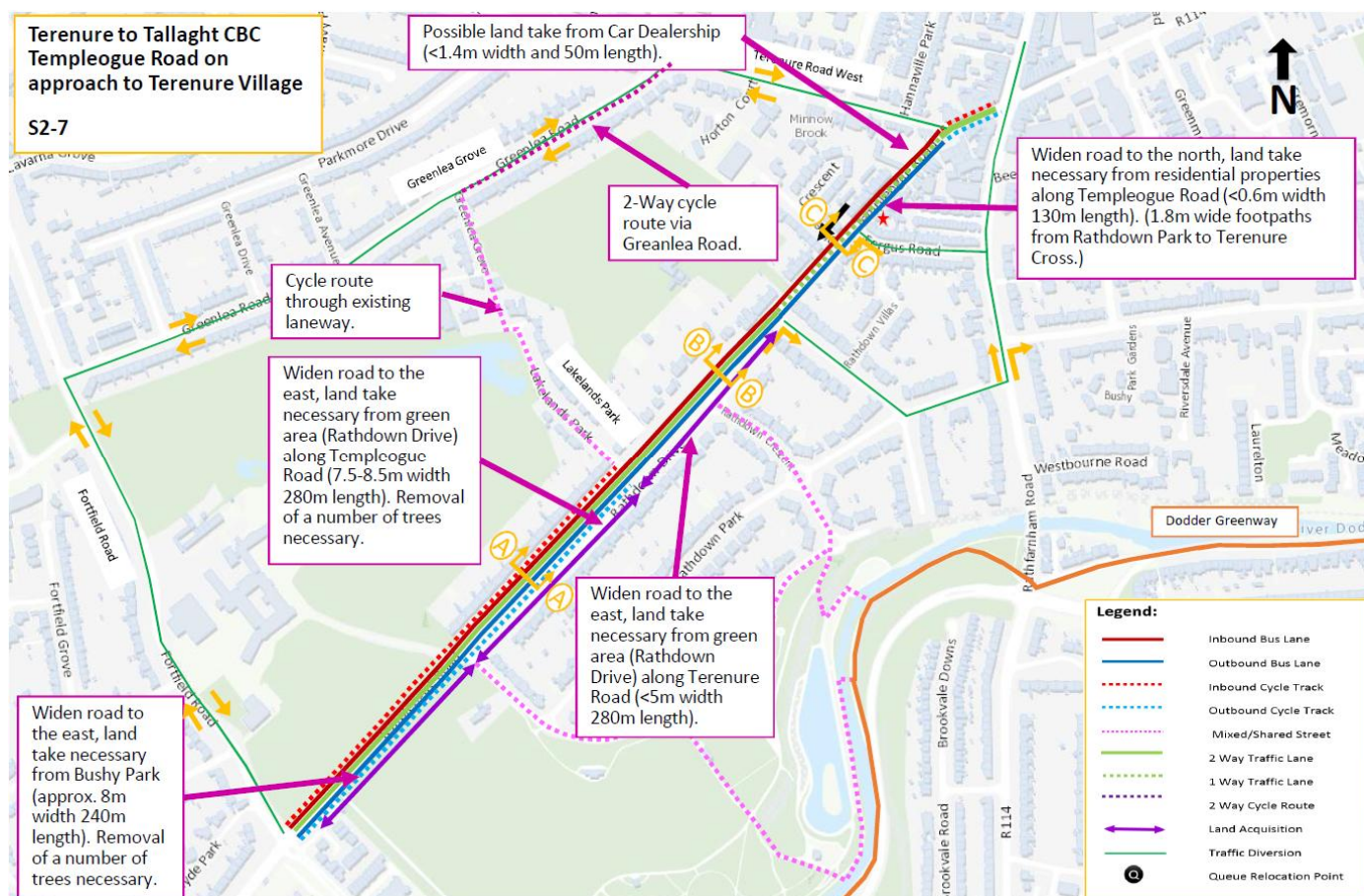


Figure 6.25 Templeogue Road Scheme Option S2-7 Proposal

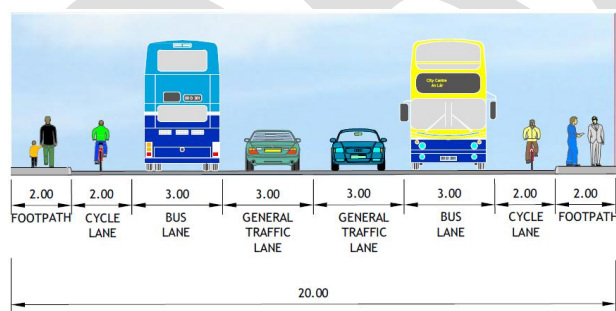


Figure 6.26: S2-7 Cross Section AA

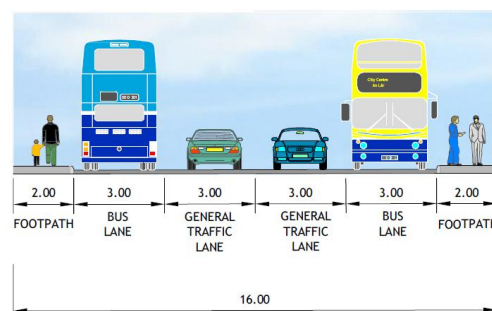


Figure 6.27: S2-7 Cross Section BB

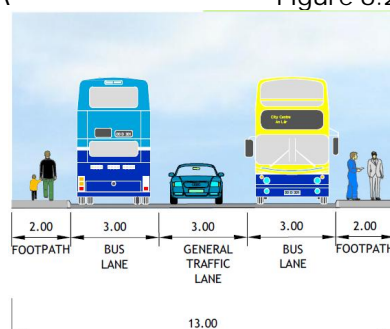


Figure 6.28: S2-7 Cross Section BB

6.3.57 It is anticipated that this option would cost approximately €4.0 million (€3.8 million infrastructure costs, €0.2 million land acquisition costs).

Templeogue Road Scheme Option S2-8

6.3.58 Inbound: The CBC service will proceed north eastbound along Templeogue Road from the Fortfield Road/Templeogue Road junction to the Terenure Road East/Templeogue Road junction.

6.3.59 Outbound: The outbound service follows the same route as the inbound.

6.3.60 Stops: There has been rationalisation of bus stops which are in close proximity to one another (less than 300m) such as the bus stop at Templeogue Road, Bushy Park (No. 1159) as shown in Figure 6.5.

6.3.61 The journey time for this scheme option along Templeogue Road from the Fortfield Road/Templeogue Road junction to the Terenure Road West/Templeogue Road junction is approximately 3 minutes over a distance of approximately 1.15km.

6.3.62 The proposals for the CBC service for the S2-8 scheme option include the following measures:-

- Continuous bus lanes will be provided in both directions along Templeogue Road from the Fortfield Road/Templeogue Road junction to Templeogue Road/Terenure Road West junction.
- A bus gate will be implemented on Templeogue Road to ensure only buses and cyclists are permitted entry from the Fortfield Road/Templeogue Road junction to Terenure Road West/Templeogue Road junction. Between the aforementioned bus gates, local access traffic will share with buses in the proposed bus lanes.
- Segregated cycle facilities will be provided along both sides of Templeogue Road between Fortfield Road and Lakelands Park aligning with Secondary Route 9B as identified in the GDA Cycle Network Plan.
- The Fortfield Road/Templeogue Road junction will be upgraded to ensure buses are given priority up to the stop lines (both directions).

6.3.63 The new sections of bus lane and cycle lanes can be accommodated with carriageway widening into Bushy Park, the Green area adjacent to Rathdown Drive and residential properties on approach to the Terenure Village.

6.3.64 The Option S2-8 proposals are presented in Figure 6.29 whilst sample cross sections are presented in Figures 6.30 below.

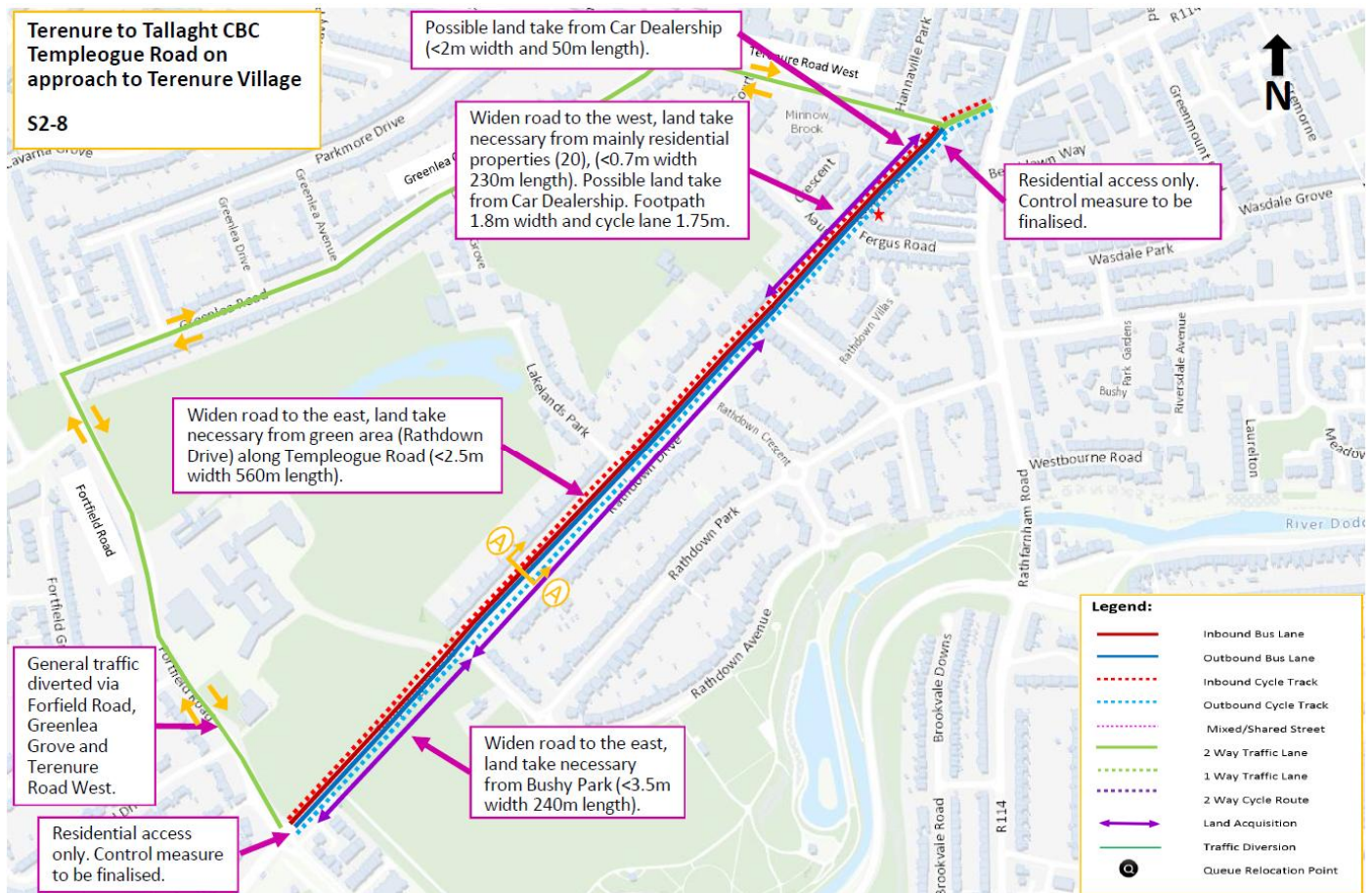


Figure 6.29 Templeogue Road Scheme Option S2-8 Proposal

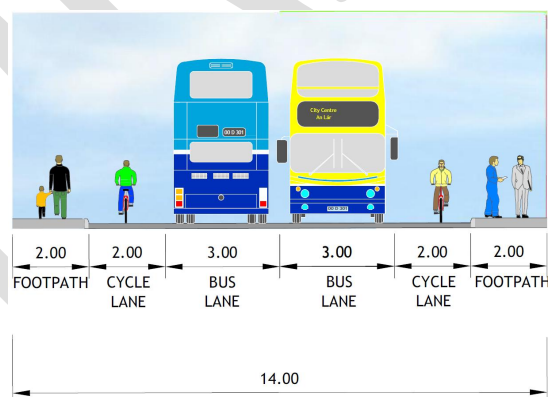


Figure 6.30: S2-8 Cross Section AA

6.3.65 It is anticipated that this option would cost approximately €3.1 million (€2.9 million infrastructure costs, €0.2 million land acquisition costs).

Templeogue Road Scheme Option S2-9

6.3.66 Inbound: The CBC service will proceed north eastbound along Templeogue Road from the Fortfield Road/Templeogue Road junction to the Terenure Road East/Templeogue Road junction.

6.3.67 Outbound: The outbound service follows the same route as the inbound.

6.3.68 Stops: There has been rationalisation of bus stops which are in close proximity to one another (less than 300m) such as the bus stop at Templeogue Road, Bushy Park (No. 1159) as shown in Figure 6.5.

6.3.69 The journey time for this scheme option along Templeogue Road from the Fortfield Road/Templeogue Road junction to the Terenure Road West/Templeogue Road junction is approximately 3 minutes in the inbound direction and 5 minutes in the outbound direction over a distance of approximately 1.15km.

6.3.70 The proposals for the CBC service for the S2-9 scheme option include the following measures:-

- Bus lanes will be provided in both directions for the majority of the route along Templeogue Road, with the exception of a 300m section of Templeogue Road from Rathdown Park to Terenure Cross where outbound bus lane will not be provided.
- Removal of inbound general traffic lane on Templeogue Road from Rathdown Park to Terenure Cross to reduce the required land acquisition on residential properties approaching Terenure Cross.
- A bus gate will be implemented on Templeogue Road to ensure only inbound (north-eastbound) buses and cyclists are permitted entry from Springfield Avenue/Templeogue Road junction to Rathdown Park (Local access will be permitted).
- Segregated cycle facilities will be provided along both sides of Templeogue Road between Fortfield Road and Lakelands Park aligning with Secondary Route 9B as identified in the GDA Cycle Network Plan. Between Lakelands Park/Templeogue Road junction and Terenure Road West/Templeogue Road junction cyclists can divert onto an alternative route via Lakelands Park – Greenlea Grove – Greenlea Road – Terenure Road West. Also, feeder cycle roads are

proposed to link with the South Dublin County Council Proposed Dodder Greenway Part 8 proposals.

- The Fortfield Road/Templeogue Road junction will be upgraded to ensure buses are given priority up to the stop lines (both directions).

6.3.71 The new sections of bus lane and cycle lanes can be accommodated with carriageway widening into Bushy Park and the Green area adjacent to Rathdown Drive.

6.3.72 The Option S2-9 proposals are presented in Figure 6.31 whilst sample cross sections are presented in Figures 6.32 & 6.33 below.

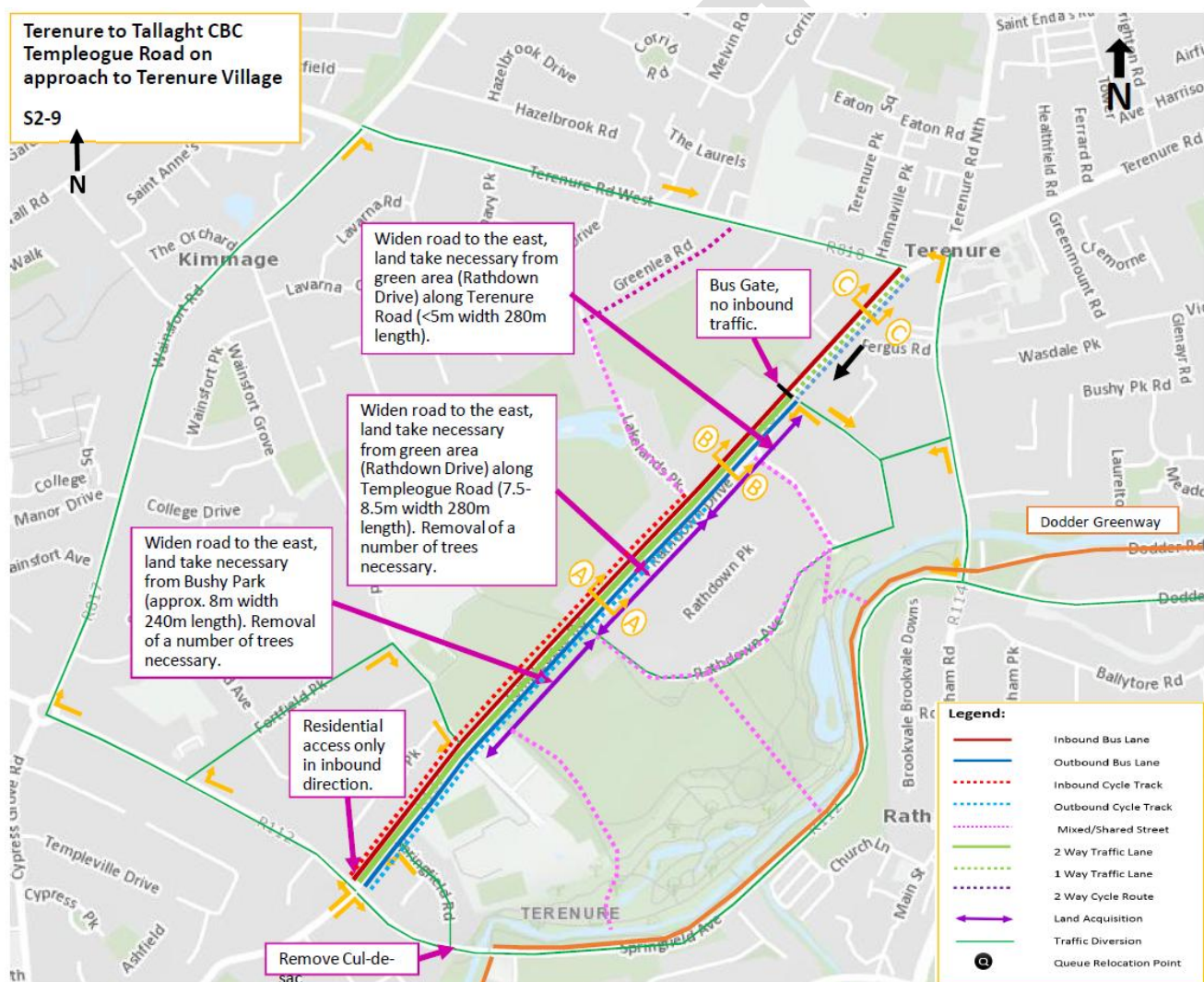


Figure 6.31 Templeogue Road Scheme Option S2-9 Proposal

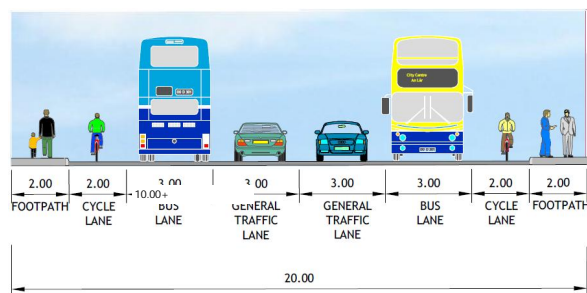


Figure 6.32: S1-3 Cross Section AA

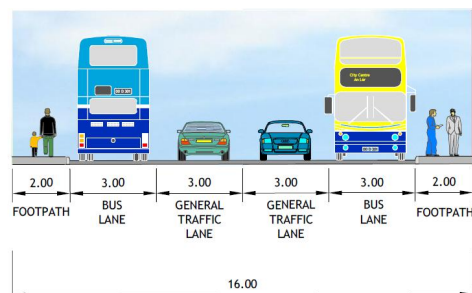


Figure 6.33: S1-3 Cross Section BB

6.3.73 It is anticipated that this option would cost approximately €3.5 million (€3.3 million infrastructure costs, €0.2 million land acquisition costs).

Templeogue Road Scheme Option S2-10

6.3.74 Inbound: The CBC service will proceed north eastbound along Templeogue Road from the Fortfield Road/Templeogue Road junction to the Terenure Road East/Templeogue Road junction.

6.3.75 Outbound: The outbound service follows the same route as the inbound.

6.3.76 Stops: There has been rationalisation of bus stops which are in close proximity to one another (less than 300m) such as the bus stop at Templeogue Road, Bushy Park (No. 1159) as shown in Figure 6.5.

6.3.77 The journey time for this scheme option along Templeogue Road from the Fortfield Road/Templeogue Road junction to the Terenure Road West/Templeogue Road junction is approximately 3 minutes in the inbound direction and 6 minutes in the outbound direction over a distance of approximately 1.15km.

6.3.78 The proposals for the CBC service for the S2-10 scheme option include the following measures:-

- Outbound bus lane will be provided along Templeogue Road from Rathdown Park to Fortfield Road.
- Inbound bus lane will be provided from along from Rathdown Park/Templeogue Road junction to Terenure Road West/Templeogue Road junction.
- A bus gate will be implemented on Templeogue Road to ensure only inbound (north-eastbound) buses and cyclists are permitted entry from Springfield

Avenue/Templeogue Road junction to Rathdown Park/Templeogue junction (Local access will be permitted).

- No inbound traffic lane between Fortfield Road/Templeogue Road junction and Rathdown Park/Templeogue junction (Local access will be permitted).
- Outbound cycle facilities provided along Templeogue Road from Terenure Cross to Rathdown Park. Between Lakelands Park/Templeogue Road junction and Terenure Road West/Templeogue Road cyclists can divert onto an alternative route via Lakelands Park – Greenlea Grove – Greenlea Road – Terenure Road West. Also, feeder cycle roads are proposed to link with the South Dublin County Council Proposed Dodder Greenway Part 8 proposals.
- Removal of inbound general traffic lane on Templeogue Road from Rathdown Park to Terenure Cross to reduce the required land acquisition on residential properties approaching Terenure Cross.
- The Fortfield Road/Templeogue Road junction will be upgraded to ensure buses are given priority up to the stop lines (both directions).

6.3.79 The new sections of bus lane and cycle lanes can be accommodated with carriageway widening into Bushy Park and a small proportion of the green area adjacent to Rathdown Drive.

6.3.80 The Option S2-10 proposals are presented in Figure 6.34 whilst sample cross sections are presented in Figures 6.35 & 6.36 below.

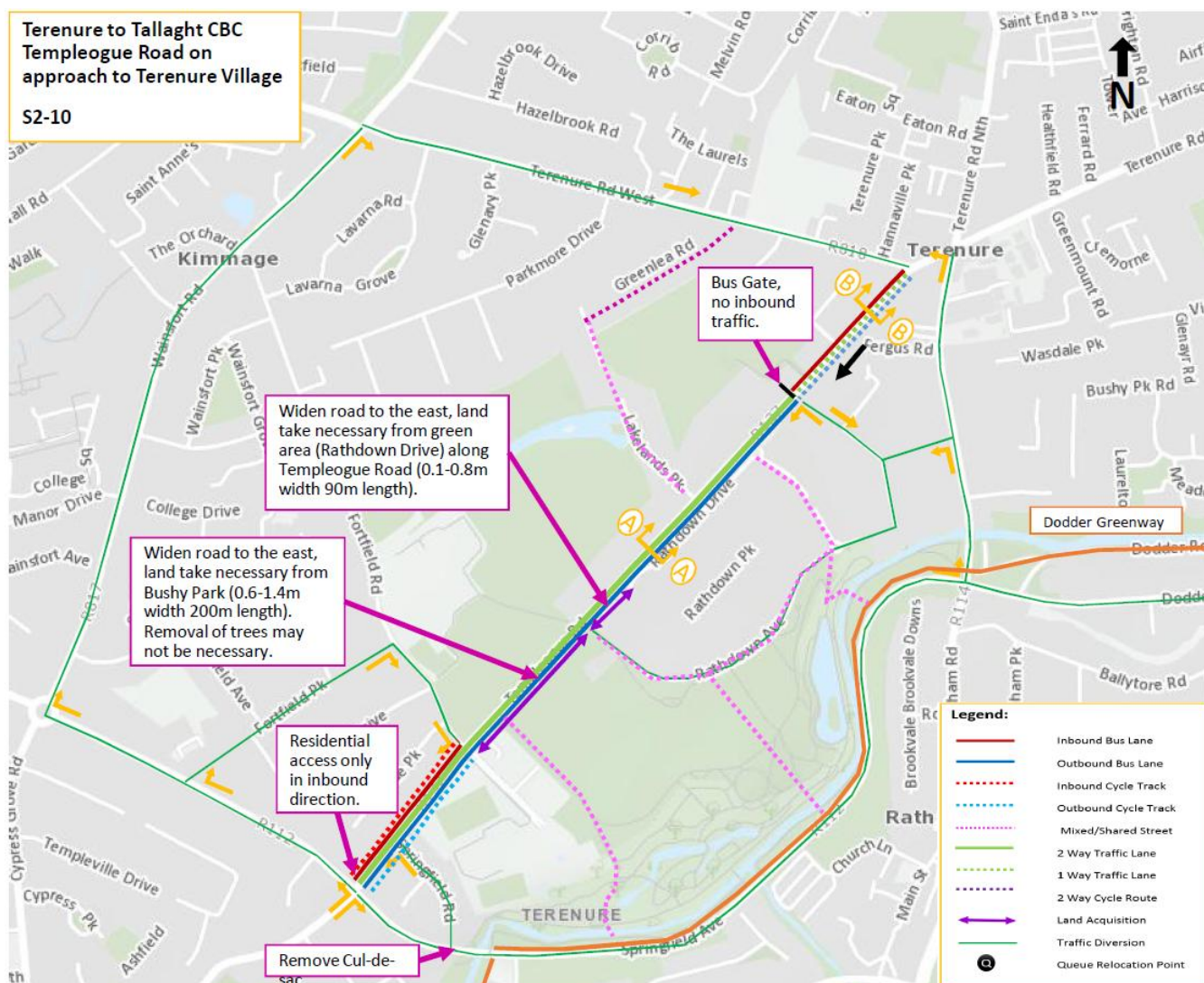


Figure 6.34 Templeogue Road Scheme Option S2-10 Proposal

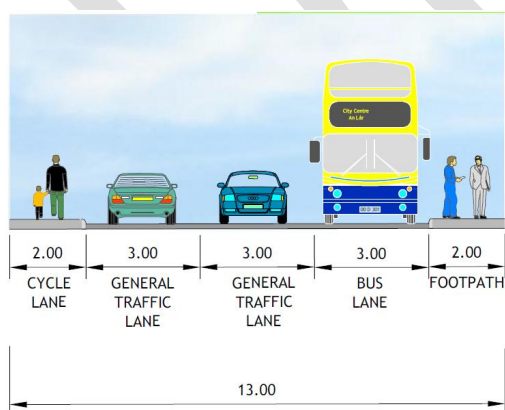


Figure 6.35: S2-10 Cross Section AA

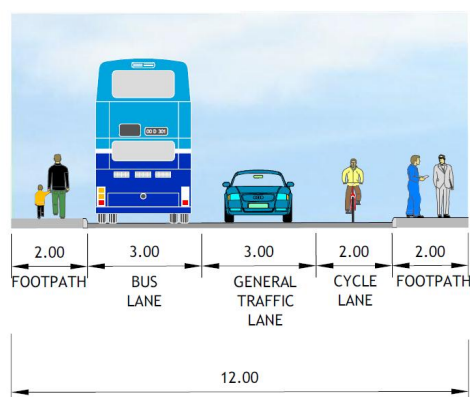


Figure 6.36: S2-10 Cross Section BB

6.3.81 It is anticipated that this option would cost approximately €1.8 million (€1.6 million infrastructure costs, €0.2 million land acquisition costs).

Templeogue Road Scheme Option S2-11

6.3.82 Inbound: The CBC service will proceed north eastbound along Templeogue Road from the Fortfield Road/Templeogue Road junction to the Terenure Road East/Templeogue Road junction.

6.3.83 Outbound: The outbound service follows the same route as the inbound.

6.3.84 Stops: There has been rationalisation of bus stops which are in close proximity to one another (less than 300m) such as the bus stop at Templeogue Road, Bushy Park (No. 1159) as shown in Figure 6.5.

6.3.85 The journey time for this scheme option along Templeogue Road from the Fortfield Road/Templeogue Road junction to the Terenure Road West/Templeogue Road junction is approximately 3 minutes in the inbound direction and 5 minutes in the outbound direction over a distance of approximately 1.15km.

6.3.86 The proposals for the CBC service for the S2-11 scheme option include the following measures:-

- Bus lanes will be provided in both directions for the majority of the route along Templeogue Road, with the exception of a 300m section of Templeogue Road from Rathdown Park to Terenure Cross where outbound bus lane will not be provided.
- Removal of inbound general traffic lane on Templeogue Road from Rathdown Park to Terenure Cross to reduce the required land acquisition on residential properties approaching Terenure Cross.
- A bus gate will be implemented on Templeogue Road to ensure only inbound (north-eastbound) buses and cyclists are permitted entry from Springfield Avenue/Templeogue Road junction to Rathdown Park (Local access will be permitted).
- Outbound cycle facilities provided along Templeogue Road from Terenure Cross to Rathdown Park. Between Lakelands Park/Templeogue Road junction and Terenure Road West/Templeogue Road junction cyclists can divert onto an alternative route via Lakelands Park – Greenlea Grove – Greenlea Road – Terenure Road West. Also, feeder cycle roads are proposed to link with the South Dublin County Council Proposed Dodder Greenway Part 8 proposals.

- The Fortfield Road/Templeogue Road junction will be upgraded to ensure buses are given priority up to the stop lines (both directions).

6.3.87 The new sections of bus lane and cycle lanes can be accommodated with carriageway widening into Bushy Park and the Green area adjacent to Rathdown Drive.

6.3.88 The Option S2-11 proposals are presented in Figure 6.37 whilst sample cross sections are presented in Figures 6.38 & 6.39 below.

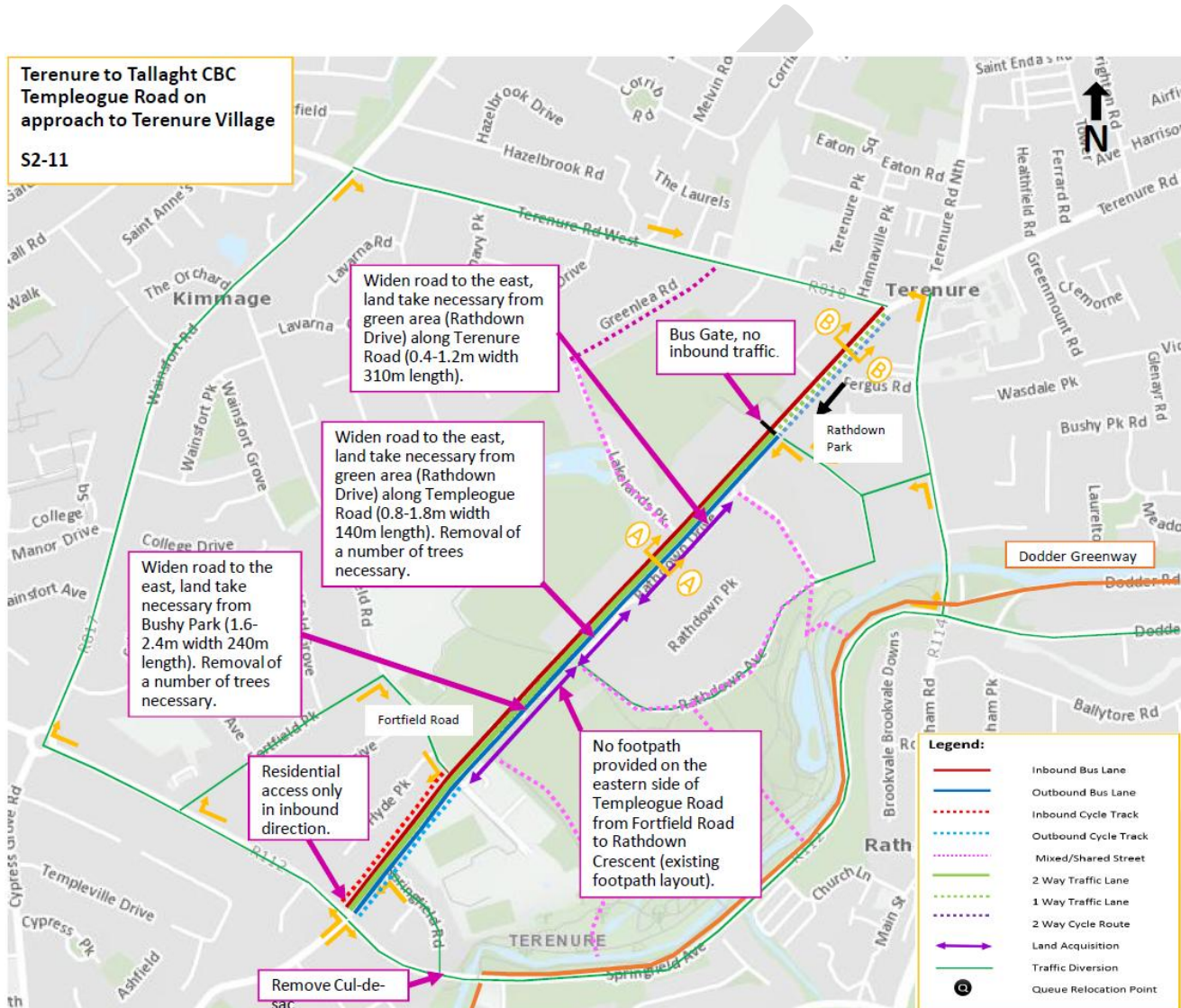


Figure 6.37 Templeogue Road Scheme Option S2-11 Proposal

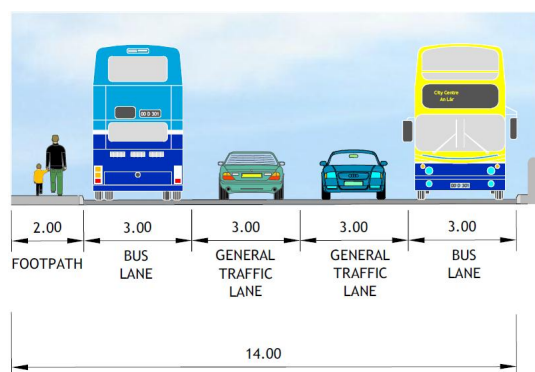


Figure 6.38: S2-11 Cross Section AA

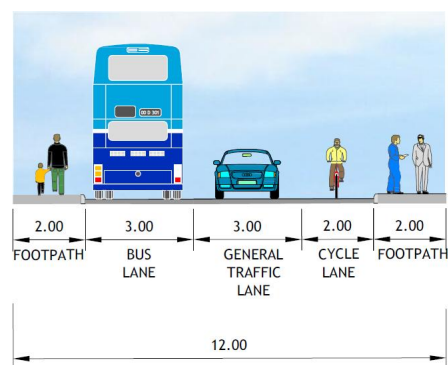


Figure 6.39: S2-11 Cross Section BB

6.3.89 It is anticipated that this option would cost approximately €1.9 million (€1.7 million infrastructure costs, €0.2 million land acquisition costs).

Templeogue Road Scheme Option S2-12

6.3.90 Inbound: The CBC service will proceed north eastbound along Templeogue Road from the Fortfield Road/Templeogue Road junction to the Terenure Road East/Templeogue Road junction.

6.3.91 Outbound: The outbound service follows the same route as the inbound.

6.3.92 Stops: There has been rationalisation of bus stops which are in close proximity to one another (less than 300m) such as the bus stop at Templeogue Road, Bushy Park (No. 1159) as shown in Figure 6.5.

6.3.93 The journey time for this scheme option along Templeogue Road from the Fortfield Road/Templeogue Road junction to the Terenure Road West/Templeogue Road junction is approximately 3 minutes in the inbound direction and 6 minutes in the outbound direction over a distance of approximately 1.15km.

6.3.94 The proposals for the CBC service for the S2-12 scheme option include the following measures:-

- Outbound bus lane will be provided along Templeogue Road from Rathdown Park to Springfield Avenue.
- Inbound bus lane will be provided between Olney Grove/Templeogue Road junction to Terenure Road West/Templeogue Road junction.
- A bus gate will be implemented on Templeogue Road to ensure only inbound (north-eastbound) buses and cyclists are permitted entry from Springfield

Avenue/Templeogue Road junction to Rathdown Park/Templeogue junction (Local access will be permitted).

- No inbound traffic lane between Fortfield Road/Templeogue Road junction and Rathdown Park/Templeogue junction (Local access will be permitted).
- Two-way cycle route will be provided through Bushy Park adjacent to Templeogue Road. Shared/mixed street will be provided along Rathdown Drive. Segregated cycle facilities will be provided in the outbound direction from Terenure Road West/Templeogue Road junction to Rathdown Drive pedestrian access/new proposed Toucan crossing. Also, feeder cycle routes are proposed to link with the South Dublin County Council Proposed Dodder Greenway Part 8 proposals.
- Removal of inbound general traffic lane on Templeogue Road from Olney Grove to Terenure Cross, to reduce the required land acquisition on residential properties approaching Terenure Cross.
- The Fortfield Road/Templeogue Road junction will be upgraded to ensure buses are given priority up to the stop lines (both directions).

6.3.95 The new sections of bus lane and cycle lanes can be accommodated with carriageway widening along the southern side of the carriageway.

6.3.96 The Option S2-12 proposals are presented in Figure 6.40 whilst sample cross sections are presented in Figures 6.41 & 6.42 below.

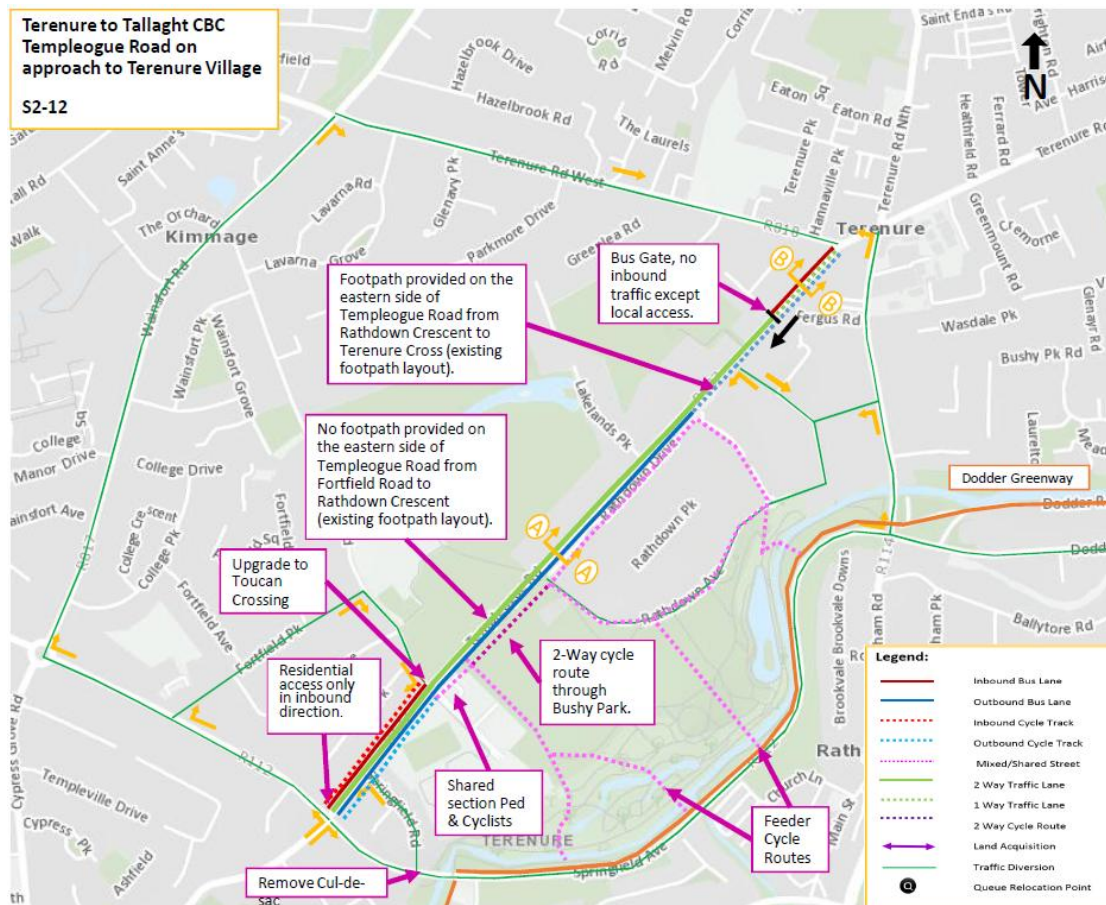


Figure 6.40 Templeogue Road Scheme Option S2-12 Proposal

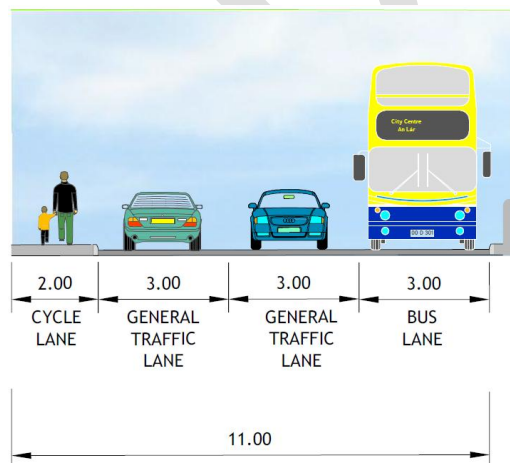


Figure 6.41: S2-12 Cross Section AA

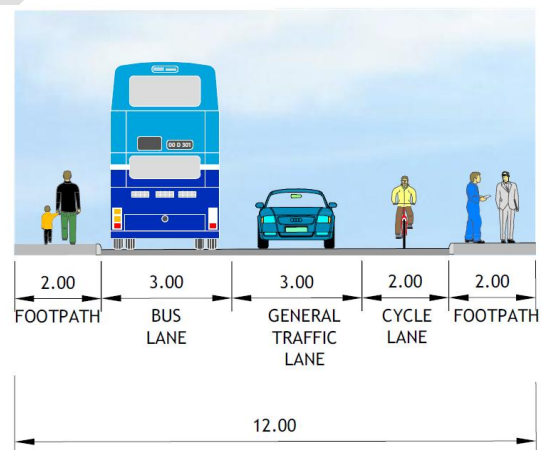


Figure 6.42: S2-12 Cross Section BB

6.3.97 It is anticipated that this option would cost approximately €1.4 million (€1.4 million infrastructure costs, €0.0 million land acquisition costs).

Stage 2 Route Options Multi-Criteria Analysis

6.3.98 the section of Templeogue Road, (between the Fortfield Road/Templeogue Road junction and the Terenure Road West/Templeogue Road/Terenure Place junction) are presented in Table B1 of Appendix B. The relative ranking of scheme options against the assessment sub-criteria are summarised in Table 6.2 below. Criterion and sub-criterion that produce relatively little differences between the options (Neutral compared to other options in the five-point scale) have not been included in the Scheme options Assessment Summary Tables.

Terenure to Tallaght CBC (sub-criteria) Templeogue Road on approach to Terenure Village													
Appraisal Criteria	Sub-Criteria	Option S2-1	Option S2-2	Option S2-3	Option S2-4	Option S2-5	Option S2-6	Option S2-7	Option S2-8	Option S2-9	Option S2-10	Option S2-11	Option S2-12
1 Economy	1A Capital Cost	Red	Yellow	Green	Yellow	Red	Yellow	Yellow	Green	Green	Green	Green	Green
	1B Transport Quality & Reliability	Green	Green	Green	Red	Green	Green	Green	Green	Yellow	Yellow	Yellow	Yellow
2 Integration	2B Residential Population and Employment Catchments	Green	Green	Green	Yellow	Green	Green	Green	Green	Green	Green	Green	Green
	2D Cycle Network Integration	Green	Green	Green	Green	Yellow	Yellow	Yellow	Green	Green	Red	Red	Yellow
	2E Traffic Network Integration	Green	Yellow	Red	Green	Green	Yellow	Green	Red	Yellow	Yellow	Yellow	Yellow
3 Accessibility & Social Inclusion	3A Key Trip Attractors	Green	Green	Green	Yellow	Green	Green	Green	Green	Green	Green	Green	Green
4 Safety	4A Road Safety	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Green	Yellow
	4B Pedestrians Safety	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow
5 Environment	5C Flora & Fauna	Red	Red	Yellow	Red	Red	Red	Red	Yellow	Red	Green	Green	Green
	5E Landscape and Visual	Red	Yellow	Green	Yellow	Red	Yellow	Yellow	Green	Yellow	Green	Green	Green
	5F Air Quality	Red	Green	Yellow	Yellow	Red	Yellow	Yellow	Green	Yellow	Green	Green	Green
	5G Noise & Vibration	Red	Green	Yellow	Yellow	Red	Yellow	Yellow	Green	Yellow	Green	Green	Green
	5H Land Use Character	Red	Red	Red	Green	Green	Yellow	Yellow	Red	Yellow	Yellow	Yellow	Yellow

Table 6.2: Section 2 (Templeogue Road) Scheme Options MCA Summary (Sub-Criteria)

6.3.99 In terms of 'Economy', the primary differentiator between route options is the land acquisition, which will have an impact on the Capital Cost. Option S2-1 & option S2-5 have the largest land acquisition cost due to the land take required to residential properties on approach to Terenure Cross. Route option S2-12 requires no land acquisition.

6.3.100 In terms of journey times, S2-4 performs the worst compared to the other options. It has the longest bus route in both the inbound and outbound directions and it also has the largest number of junctions. Options S2-10 & S2-12 have no inbound bus on

Templeogue Road from Fortfield Road to Rathdown Park, however, there is an inbound Bus Gate (no inbound traffic with the exception of local access) along the section, therefore buses will use general traffic lanes with very low volumes of predominantly residential traffic.

- 6.3.101 In terms of 'Integration', a differentiator between route options would be that option S2-3 & S2-8 provide for only bus lanes on Templeogue Road which would have a significant traffic impact in terms of movement restrictions and increased traffic/congestion on the surrounding road network. Due to the traffic diversions, there will be increased traffic on residential roads e.g. in option S2-3 to commute inbound from Fortfield Road to Terenure Village, motorists would have to take a lengthy detour via Rathdown Avenue and Rathfarnham Road. Options S2-8 to S2-12 have only an inbound Bus Gates (no inbound general traffic permitted) on Templeogue Road however outbound general traffic will be still permitted.
- 6.3.102 In terms of 'Cycle Network Integration', options S2-1, S2-2, S2-3, S2-4 and S2-8 score highest because they provide segregated cycle facilities along the entire CBC. These cycle routes align with the GDA Cycle Network Plan proposal for Secondary Route 9B. Options S2-3 to S2-8 perform the worst because they do not provide segregated cycle facilities along the CBC, however they do provide alternative routes and feeder routes to the proposed Dodder Greenway.
- 6.3.103 In terms of 'Accessibility & Social Inclusion', route option S2-4 is considered to be the least attractive option. Option S2-4 does not provide bus facilities along Templeogue Road through Terenure Village, therefore bypassing a number of amenities, such as Terenure Library and commercial properties.
- 6.3.104 In terms of 'Road Safety', a differentiator between route options would be that option S2-4 has an additional turning movement compared to the other options, while options S2-11 & S2-12 have no segregated inbound bus lane for the majority of the route. In terms of 'Pedestrian Safety', all the options except for S2-11 & S2-12 provide a new footpath on the eastern side of Templeogue Road from Fortfield Road to Rathdown Park.
- 6.3.105 In terms of 'Flora & Fauna', route option S2-12 is considered to be the most attractive option as it does not impact on any trees along the route. Options S2-1, S2-2 & S2-4 involve the possible removal of a large number of trees to the east of Templeogue Road from Fortfield Road to Rathdown Park.

- 6.3.106 In terms of 'Landscape and Visual', options CB4, CB5, CB6 & CB7 are considered the least attractive options. S2-1 & S2-5 involve the possible land acquisition of up to 8m (max) width along the eastern side of Templeogue into Bushy Park & the green area of Rathdown Drive. They also involve the possible land acquisition of up to 7.5m from residential properties (330m length). Removal of a number of car parking spaces from residential front curtilages and land acquisition from car dealership.
- 6.3.107 In terms of 'Air Quality' and 'Noise & Vibration', Options S2-10, S2-11 & S2-12 are considered to be the most attractive options. These options only permit inbound residential access onto Templeogue Road. This reduces the impact on Noise & Vibration and Air Quality. It also reduces the number of vehicles rerouting via residential roads such as Rathdown Park due to proposed bus gates. These options also do not involve extensive widening of the carriageway to provide bus lanes which would increase the proximity of vehicles to residential premises, houses and gardens.
- 6.3.108 In terms of 'Land Use Character', options S2-1, S2-2, S2-3 & S2-8 are considered the least attractive options. Options S2-3 & S2-8 restrict access to commercial amenities (Terenure Village) and residential properties due to the provision of a Bus Gate in both directions along Templeogue Road from Fortfield Road to Terenure Cross which would affect the viability of the facilities. Option S2-12 only restricts access in the inbound direction (Bus Gate). Options S2-1 & S2-2 require a large level of entering Terenure Village which would have an effect on the viability of the car dealership from being used for its intended use.
- 6.3.109 A summary of the assessment and relative ranking of route options against the six main assessment criteria is presented in Table 6.3 below.

Terenure to Tallaght CBC (main criteria)												
Templeogue Road on approach to Terenure Village												
Appraisal Criteria	Option S2-1	Option S2-2	Option S2-3	Option S2-4	Option S2-5	Option S2-6	Option S2-7	Option S2-8	Option S2-9	Option S2-10	Option S2-11	Option S2-12
1 Economy	Yellow	Yellow	Green	Red	Yellow	Green	Green	Green	Yellow	Green	Green	Green
2 Integration	Green	Green	Yellow	Green	Green	Yellow	Green	Yellow	Green	Red	Red	Yellow
3 Accessibility & Social Inclusion	Green	Green	Green	Yellow	Green	Green	Green	Green	Green	Green	Green	Green
4 Safety	Green	Green	Green	Yellow	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow
5 Environment	Red	Red	Red	Yellow	Red	Red	Red	Yellow	Red	Green	Green	Green

Table 6.3: Section 2 (Templeogue Road) Scheme Options MCA Summary (Main Criteria)

6.3.110 Based on the assessment undertaken, route option S2-8 & S2-12 offer overall similar benefits over the other options. Option S2-8 achieves more of the Scheme objectives by providing bus lanes and cycle facilities along this section the CBC route. However, Option S2-8 involves the removal of general traffic in both directions along Templeogue Road from Fortfield Road Avenue to Terenure Cross, which would have a significant traffic impact in terms of movement restrictions and increased traffic/congestion on the surrounding Road network. Restricted access to the commercial amenities (Terenure Village) due to the removal of general traffic lanes on Templeogue Road would also affect the viability of the facilities in Terenure Village. Therefore S2-12, is the preferred route option for the Southern Section for the following reasons:

- It is the lowest in terms of Capital Cost;
- It is one of the most attractive option in terms of Environmental;
- It is the only option that has no affect on Flora and Fauna.

6.3.111 Based on the assessment undertaken, scheme option S2-12 more provides an enhanced level of service whilst not compromising existing adjacent uses unduly as a result of land acquisition which would affect the residential characteristics. Option S2-12 is therefore preferred route for the section of Templeogue Road, (between the Fortfield Road/Templeogue Road junction and the Terenure Road West/Templeogue Road Road junction) for the following reasons: -

- It provides bus priority facilities along this section of Templeogue Road, thereby providing improved journey time reliability;
- It will provide shorter journey times;
- It serves a high level of residential and employment catchments within 5, 10 and 15-minute walking distance;
- Users of the CBC service will be able to integrate with existing and future proposed public transport infrastructure; and
- It would provide an improvement on road safety for all users.

6.3.112 Based on the multi-criteria assessment undertaken for this section of the study area, scheme option S2-12 is identified as the preferred scheme option and as such will form part of the emerging preferred route.

7.0 EMERGING PREFERRED ROUTE

7.1 Introduction

- 7.1.1 This section of the report presents the final conclusions from the assessment process for the end-to-end route options considered and recommends a preferred route. A description of the preferred route is given together with ancillary measures required on other streets and key issues to be addressed through the scheme design development.
- 7.1.2 It was established early during the initial assessment process, that the Core Bus Network, as defined in the 'Transport Strategy for the Greater Dublin Area 2016 – 2035', is characterised by routes with a high frequency of bus services, high passenger volumes and with significant trip attractors along the route. It is along these routes where the demand for travel necessitates and justifies a greater level of infrastructural investment in order to minimise delays to these services.
- 7.1.3 Therefore, to the east of the R137 Templeogue Road/N81/M50 interchange (Junction 11) represents a natural starting point at western extents of the study area, as the anticipated travel demand between this point and the City Centre would justify the level of infrastructure proposed as part of the Transport Strategy for the GDA.
- 7.1.4 Chapters 5 and 6 of this report presented an appraisal to each of the potential route options for Sections 1 and 2 of the study area. Where a potential route was identified within each section, they have been assessed in accordance with the methodology set out in Chapter 4 of this report. This assessment process included Multi-criteria Analysis under the headings of Economy, Integration, Accessibility & Social Inclusion, Safety and Environment. Following the undertaking of the Multi Criteria Analysis, the emerging preferred routes/schemes for each of the study area sections were combined to create an end to end emerging preferred route for the entire study area.

7.2 Recommended Preferred Route

- 7.2.1 The preferred route for the proposed scheme is presented in Figure 7.1 below and described in the following paragraphs.

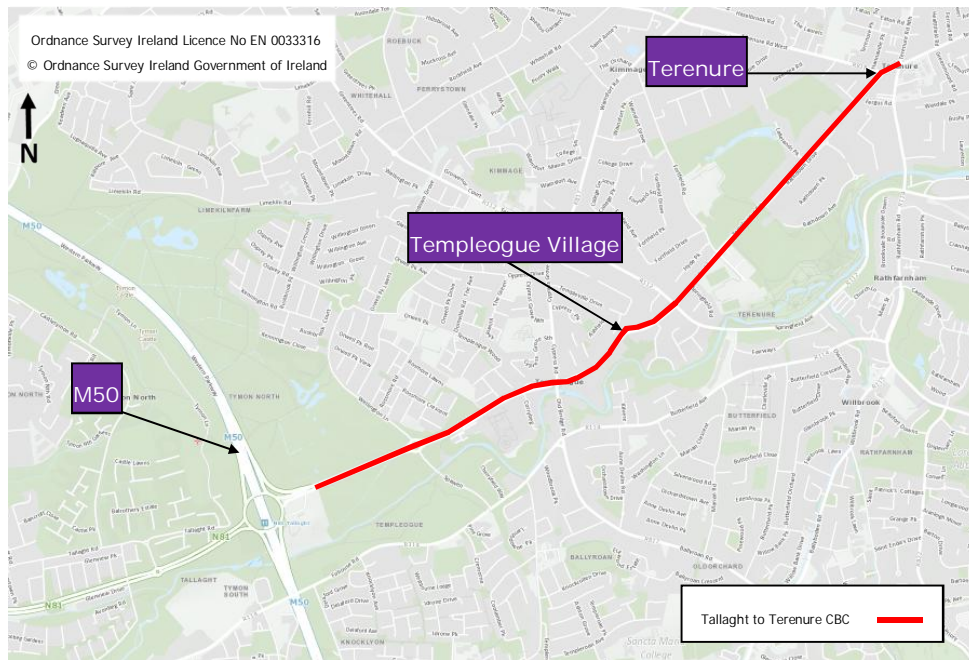


Figure 7.1: Terenure to Tallaght Core Bus Corridor Emerging Preferred Route

7.2.2 The preferred route commences to the east of the R137 Templeogue Road/N81/M50 interchange (roundabout junction). The route then continues northeast along Templeogue Road where it merges with the proposed Rathfarnham to City Centre CBC at Terenure Cross.

7.2.3 Outbound CBC services would follow the same route as the inbound CBC services.

7.3 Concept Scheme Design

Section 1: between the R137 Templeogue Road/M50/N81 interchange (roundabout junction) and the Springfield Ave/Templeville Road corridor (Sheet 01 to Sheet 5, Volume II Concept Scheme Drawings)

Length of Scheme Section: 1.95KM

Indicative Infrastructure Cost: €4.4-6.4 million

Indicative Land Acquisition Cost: €1.1 million

Total Indicative Cost of Scheme Section: €5.5-7.5 million

7.3.1 The emerging preferred CBC scheme commences approximately 270m to the northeast of the R137 Templeogue Road/M50/N81 interchange (roundabout junction) on Templeogue Road. New/upgraded bus lanes will be provided in both

directions between the aforementioned CBC scheme starting point and the Wellington Lane/Spawell Road junction. At the northeast bound approach to the Wellington Lane/Spawell Road junction, the traffic signals at the existing pedestrian crossing will be upgraded to include a bus pre-signal to enable buses to be given priority over general vehicles on approach to the junction. The bus lanes (in both directions) will be continued through the junction.

- 7.3.2 The existing two-way cycle track along the northern side of the route will also be upgraded, aligning with Secondary route 9B as identified in the CNP.
- 7.3.3 Between the Wellington Lane/Spawell Road junction and the Templeogue Road/Cypress Grove Road/Old Bridge Road junction new/upgraded bus lanes will be provided in both directions. At the southwest bound approach to the Wellington Lane/Spawell Road junction, the traffic signals at the existing pedestrian crossing will be upgraded to include a bus pre-signal to enable buses to be given priority over general vehicles on approach to the junction.
- 7.3.4 The Templeogue Road/Cypress Grove Road/Old Bridge Road junction will be reconfigured to ensure buses are given priority over general vehicle traffic.
- 7.3.5 The existing two-way cycle track along the northern side of the route between the Wellington Lane/Spawell Road junction and the Templeogue House access will also be upgraded; permitting northeast bound cyclists only, whilst a new cycle track will be provided along the southern side of the carriageway for southwest bound cyclists. These cycle tracks on the northern and southern sides of the carriageway will be extended to/from the Templeogue Road/Cypress Grove Road/Old Bridge Road junction. These proposals align with Secondary route 9B as identified in the CNP.
- 7.3.6 On the approaches to/from Templeogue Village (i.e. between the Cypress Grove Road/Old Bridge Road junction and the Springfield Ave/Templeville Road junction) continuous bus lanes will be provided in both directions along Templeogue Road. The existing right turn ban for general traffic from Old Bridge Road will be retained. Similarly the existing left turn ban for general traffic from Cypress Grove Road will be retained.
- 7.3.7 Cycle lanes will be provided along both sides of the carriageway on the approaches to/from Templeogue Road/Cypress Grove Road/Old Bridge Road junction and the Templeogue Road/Springfield Ave/Templeville Road junction aligning with Secondary Route 9B as identified in the GDA Cycle Network Plan.

- 7.3.8 The inbound cycle lane will terminate approximately 70m northeast of the Templeogue Road/Cypress Grove Road/Old Bridge Road junction after which cyclists will join the adjacent bus lane. Cyclists will continue in the inbound bus lane for approximately 300m, where they are then provided with a segregated cycle track. This cycle track continues for approximately 135m where it then merges with a shared pedestrian/cycle track for a distance of 70m (approx.). An on-road cycle lane is then provided up to and through the junction.
- 7.3.9 Outbound from the Templeogue Road/Springfield Ave/Templeville Road junction there is a cycle lane provided for approximately 95m. Cyclists will then continue in the outbound bus lane until a cycle lane is provided approximately 100m from the Templeogue Road/Cypress Grove Road/Old Bridge Road junction.
- 7.3.10 A 30kph speed limit will be implemented along Templeogue Road to provide a safer cycling environment for cyclists who wish to continue their journey along Templeogue Road. The new sections of bus lane and cycle lanes can be accommodated with carriageway widening along the northern and southern sides of the carriageway.

Section 2 – between the Springfield Ave/Templeville Road corridor and the Rathfarnham Road/Terenure Road West corridor (Sheet 05 to Sheet 09, Volume II Concept Scheme Drawings)

Length of Scheme Section: 1.68KM

Indicative Infrastructure Cost: €2.5 – 3.5 million

Indicative Land Acquisition Cost: €0.8 million

Total Indicative Cost of Scheme Section: €2.6 – 3.6 million

- 7.3.11 Continuous bus lanes will be provided in both directions along Templeogue Road between the Templeville Road/Springfield Ave junction to Fortfield Road/Templeogue Road. A bus gate will be implemented on Templeogue Road to ensure only inbound (north-eastbound) buses and cyclists are permitted entry from Springfield Avenue/Templeogue Road junction (local access will be permitted). The existing right turn ban for general traffic from Templeogue Village will be retained.
- 7.3.12 Cycle lanes will be provided along both sides of the carriageway to/from Templeogue Road/ Springfield Ave/Templeville Road junction and the Fortfield Road/Templeogue

Road junction aligning with Secondary Route 9B as identified in the GDA Cycle Network Plan.

- 7.3.13 Continuous bus lanes will be provided in the outbound direction along Templeogue Road between the Fortfield Road/Templeogue Road junction to Rathdown Drive pedestrian access off Templeogue Road. A bus gate will be implemented on Templeogue Road to ensure only inbound (north-eastbound) buses and cyclists are permitted entry from Fortfield Road/Templeogue Road junction (local access will be permitted) to Olney Grove.
- 7.3.14 Two-way cycle track will be provided adjacent to the footpath through Bushy Park. Shared/mixed street will be provided along Rathdown Drive.
- 7.3.15 An inbound Bus Gate will be provided from Olney Grove/Templeogue Road junction to Terenure Road West/Templeogue junction. No inbound general traffic lane will be provided on this section of Templeogue Road, therefore, a right turn ban will be required Fergus Road and a Left Turn ban will be required on Olney Grove.
- 7.3.16 Segregated cycle facilities will be provided in the outbound direction from Terenure Road West/Templeogue Road junction to the pedestrian access/new proposed Toucan crossing Rathdown Drive pedestrian.
- 7.3.17 The traffic signals at the existing Rathdown Drive pedestrian crossing will be upgraded to include a bus pre-signal to enable outbound buses to be given priority over general vehicles.
- 7.3.18 The existing road layout of Terenure Place between Terenure Road West/Templeogue Road junction and Templeogue Road/Rathfarnham Road/Terenure Road North junction will be maintained. The existing right turn ban for general traffic (except for buses) from Terenure Village to Rathfarnham Road Village will be retained.

7.4 Concept Scheme Design Summary

Cost Estimate

- 7.4.1 A high-level cost estimate has been prepared based on the concept scheme design and a number of assumptions regarding the scheme details. As such the proposed Terenure to Tallaght Core Bus Corridor scheme infrastructure is anticipated to be in the region of €8.1–11.1 million excluding VAT.

Journey Time Benefits

- 7.4.2 Through the provision of increased bus priority infrastructure, the proposed scheme would improve both the overall journey times for buses along the route and their journey time reliability.
- 7.4.3 An analysis of the available comparable bus journey time data along the route has revealed there is a significant variance in the journey times for bus services along the corridor throughout the day. A difference of up to 17 minutes in journey times has been recorded, demonstrating that the current poor journey time reliability for bus passengers could be addressed by the proposed scheme.

8.0 NEXT STEPS

- 8.1.1 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.
- 8.1.2 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.
- 8.1.3 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.
- 8.1.4 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.

9.0 APPENDIX A-SECTION 1 ROUTE OPTIONS ASSESSMENT

DRAFT

Table A1: Templeogue Village Route Options Assessment

Appraisal Criteria	Sub-Criteria	Templeogue Village Option S1-1	Templeogue Village Option S1-2	Templeogue Village Option S1-3	Templeogue Village Option S1-4	Templeogue Village Option S1-5
1 Economy	1A Capital Cost	<p>€2,732,768.00</p> <p><u>Indicative Infrastructure costs €1,943,768.00 include:</u></p> <ul style="list-style-type: none"> New bus lanes (continuous inbound, two-thirds of route outbound) along Templeogue Road between the Templeogue Road/Cypress Grove Road/Old Bridge Road junction and the Templeogue Road/Springfield Ave/Templeville Road junction Reconfiguration of the Templeogue Road/Cypress Grove Road/Old Bridge Road and the Templeogue Road/Springfield Ave/Templeville Road signal controlled junctions New traffic signals (bus priority) on Templeogue Road Reconfiguration of vehicle parking in Templeogue The provision of cycle tracks (both directions) along the corridor Improved Pedestrian Facilities along the proposed corridor <p><u>Land Acquisition Costs €789,000</u></p> <ul style="list-style-type: none"> 526 sqm Private Land 22 residential properties affected 	<p>€2,732,768.00</p> <p><u>Indicative Infrastructure costs €1,943,768.00 include:</u></p> <ul style="list-style-type: none"> New bus lanes (short sections on approach to/from junctions inbound, two-thirds of route outbound) along Templeogue Road between the Templeogue Road/Cypress Grove Road/Old Bridge Road junction and the Templeogue Road/Springfield Ave/Templeville Road junction Reconfiguration of the Templeogue Road/Cypress Grove Road/Old Bridge Road and the Templeogue Road/Springfield Ave/Templeville Road signal controlled junctions New traffic signals (bus priority) on Templeogue Road Reconfiguration of vehicle parking in Templeogue The provision of cycle tracks (both directions) along the corridor Improved Pedestrian Facilities along the proposed corridor <p><u>Land Acquisition Costs €789,000</u></p> <ul style="list-style-type: none"> 526 sqm Private Land 22 residential properties affected 	<p>€1,949,188.00</p> <p><u>Indicative Infrastructure costs €1,854,688 include:</u></p> <ul style="list-style-type: none"> New bus lanes (continuous inbound, two-thirds of route outbound) along Templeogue Road between the Templeogue Road/Cypress Grove Road/Old Bridge Road junction and the Templeogue Road/Springfield Ave/Templeville Road junction Reconfiguration of the Templeogue Road/Cypress Grove Road/Old Bridge Road and the Templeogue Road/Springfield Ave/Templeville Road signal controlled junctions New traffic signals (bus priority) on Templeogue Road Reconfiguration of vehicle parking in Templeogue The provision of cycle tracks (both directions) on approach to/from the Templeogue Road/Springfield Ave/Templeville Road junction The provision of the proposed cycle diversion route via Old Bridge Road - Butterfield Ave - Kilvere - Dodder Greenway - Riverside Cottages Improved Pedestrian Facilities along the proposed corridor <p><u>Land Acquisition Costs €94,500</u></p> <ul style="list-style-type: none"> 63 sqm Private Land 3 residential properties affected 	<p>€1,949,188.00</p> <p><u>Indicative Infrastructure costs €1,854,688 include:</u></p> <ul style="list-style-type: none"> New bus lanes (short sections on approach to/from junctions inbound, two-thirds of route outbound) along Templeogue Road between the Templeogue Road/Cypress Grove Road/Old Bridge Road junction and the Templeogue Road/Springfield Ave/Templeville Road junction Reconfiguration of the Templeogue Road/Cypress Grove Road/Old Bridge Road and the Templeogue Road/Springfield Ave/Templeville Road signal controlled junctions New traffic signals (bus priority) on Templeogue Road Reconfiguration of vehicle parking in Templeogue The provision of cycle tracks (both directions) on approach to/from the Templeogue Road/Springfield Ave/Templeville Road junction The provision of the proposed cycle diversion route via Old Bridge Road - Butterfield Ave - Kilvere - Dodder Greenway - Riverside Cottages Improved Pedestrian Facilities along the proposed corridor <p><u>Land Acquisition Costs €94,500</u></p> <ul style="list-style-type: none"> 63 sqm Private Land 3 residential properties affected 	<p>€3,316,152.00</p> <p><u>Indicative Infrastructure costs €2,275,152.00 include:</u></p> <ul style="list-style-type: none"> New bus lanes (continuous inbound and outbound) between the Templeogue Road/Cypress Grove Road/Old Bridge Road junction and the Templeogue Road/Springfield Ave/Templeville Road junction Reconfiguration of the Templeogue Road/Cypress Grove Road/Old Bridge Road and the Templeogue Road/Springfield Ave/Templeville Road signal controlled junctions Reconfiguration of vehicle parking in Templeogue The provision of cycle tracks (both directions) on approach to/from the Templeogue Road/Cypress Grove Road/Old Bridge Road junction and the Templeogue Road/Springfield Ave/Templeville Road junction The provision of an inbound cycle track and shared surface area inbound from Templeogue Village connecting with the proposed cycle tracks on approach to the Templeogue Road/Springfield Ave/Templeville Road junction Improved Pedestrian Facilities along the proposed corridor <p><u>Land Acquisition Costs €1,041,000</u></p> <ul style="list-style-type: none"> 694 sqm Private Land 23 residential properties affected
	Rank					
	1B Transport Quality & Reliability	<p>Journey Time 3mins (inbound & outbound)</p> <p>Approximate Length: 0.7KM</p> <p>Inbound full bus priority provided Outbound bus priority provided for two thirds of the route. Bus pre-signal on Templeogue Road ensures priority outbound.</p> <p>Greater journey time reliability (inbound) than options 2 & 4). Less reliability than option 5.</p>	<p>Journey Time 3mins (inbound & outbound)</p> <p>Approximate Length: 0.7KM</p> <p>Inbound bus shares with local access general traffic for majority of route. Outbound bus priority provided for two thirds of the route. Bus pre-signal on Templeogue Road ensures priority outbound.</p> <p>Less journey time reliability (inbound) than options 1, 3 & 5.</p>	<p>Journey Time 3mins (inbound & outbound)</p> <p>Approximate Length: 0.7KM</p> <p>Inbound full bus priority provided Outbound bus priority provided for two thirds of the route. Bus pre-signal on Templeogue Road ensures priority outbound.</p> <p>Greater journey time reliability (inbound) than options 2 & 4. Less reliability than option 5.</p>	<p>Journey Time 3mins (inbound & outbound)</p> <p>Approximate Length: 0.7KM</p> <p>Inbound bus shares with local access general traffic for majority of route. Outbound bus priority provided for two thirds of the route. Bus pre-signal on Templeogue Road ensures priority outbound.</p> <p>Less reliability (inbound) than options 1, 3 and 5.</p>	<p>Journey Time 3mins (inbound & outbound)</p> <p>Approximate Length: 0.7KM</p> <p>Inbound full bus priority provided Outbound Inbound full bus priority provided</p> <p>Good journey time reliability for Bus services. Full bus priority provided.</p>
	Rank					
	2A Land Use Policy	<p>The route offers the potential to connect with lands zoned "To protect, and enhance the outstanding natural character and amenity of the Liffey Valley, Dodder Valley and Dublin Mountain areas".</p> <p>The proposed CBC would encourage/support planned development and provide for economic opportunities.</p>	<p>The route offers the potential to connect with lands zoned "To protect, and enhance the outstanding natural character and amenity of the Liffey Valley, Dodder Valley and Dublin Mountain areas".</p> <p>The proposed CBC would encourage/support planned development and provide for economic opportunities.</p>	<p>The route offers the potential to connect with lands zoned "To protect, and enhance the outstanding natural character and amenity of the Liffey Valley, Dodder Valley and Dublin Mountain areas".</p> <p>The proposed CBC would encourage/support planned development and provide for economic opportunities.</p>	<p>The route offers the potential to connect with lands zoned "To protect, and enhance the outstanding natural character and amenity of the Liffey Valley, Dodder Valley and Dublin Mountain areas".</p> <p>The proposed CBC would encourage/support planned development and provide for economic opportunities.</p>	<p>The route offers the potential to connect with lands zoned "To protect, and enhance the outstanding natural character and amenity of the Liffey Valley, Dodder Valley and Dublin Mountain areas".</p> <p>The proposed CBC would encourage/support planned development and provide for economic opportunities.</p>
	Rank					

Table A1: Templeogue Village Route Options Assessment

Appraisal Criteria	Sub-Criteria	Templeogue Village Option S1-1	Templeogue Village Option S1-2	Templeogue Village Option S1-3	Templeogue Village Option S1-4	Templeogue Village Option S1-5
2 Integration	2B Residential Population and Employment Catchments	<u>Residential Population Catchments</u> <ul style="list-style-type: none"> - 5-minute walking catchment of approx. 2027 - 10-minute walking catchment of approx. 4909 - 15-minute walking catchment of approx. 12696 <u>Employment catchments</u> <ul style="list-style-type: none"> - 5-minute walking catchment of approx. 359 - 10-minute walking catchment of approx. 1324 - 15-minute walking catchment of approx. 2182 	<u>Residential Population Catchments</u> <ul style="list-style-type: none"> - 5-minute walking catchment of approx. 2027 - 10-minute walking catchment of approx. 4909 - 15-minute walking catchment of approx. 12696 <u>Employment catchments</u> <ul style="list-style-type: none"> - 5-minute walking catchment of approx. 359 - 10-minute walking catchment of approx. 1324 - 15-minute walking catchment of approx. 2182 	<u>Residential Population Catchments</u> <ul style="list-style-type: none"> - 5-minute walking catchment of approx. 2027 - 10-minute walking catchment of approx. 4909 - 15-minute walking catchment of approx. 12696 <u>Employment catchments</u> <ul style="list-style-type: none"> - 5-minute walking catchment of approx. 359 - 10-minute walking catchment of approx. 1324 - 15-minute walking catchment of approx. 2182 	<u>Residential Population Catchments</u> <ul style="list-style-type: none"> - 5-minute walking catchment of approx. 2027 - 10-minute walking catchment of approx. 4909 - 15-minute walking catchment of approx. 12696 <u>Employment catchments</u> <ul style="list-style-type: none"> - 5-minute walking catchment of approx. 359 - 10-minute walking catchment of approx. 1324 - 15-minute walking catchment of approx. 2182 	<u>Residential Population Catchments</u> <ul style="list-style-type: none"> - 5-minute walking catchment of approx. 2027 - 10-minute walking catchment of approx. 4909 - 15-minute walking catchment of approx. 12696 <u>Employment catchments</u> <ul style="list-style-type: none"> - 5-minute walking catchment of approx. 359 - 10-minute walking catchment of approx. 1324 - 15-minute walking catchment of approx. 2182
	Rank					
	2C Transport Network Integration	Potential for interchange with local bus services	Potential for interchange with local bus services	Potential for interchange with local bus services	Potential for interchange with local bus services	Potential for interchange with local bus services
	Rank					
	2D Cycling Integration	This route option comprises Secondary Route 9B as identified in the GDA Cycle Network Plan. Inbound: This route option respects the cycle route identified. Outbound: This route option respects the cycle route identified.	This route option comprises Secondary Route 9B as identified in the GDA Cycle Network Plan. Inbound: This route option respects the cycle route identified. Outbound: This route option respects the cycle route identified.	This route option comprises Secondary Route 9B as identified in the GDA Cycle Network Plan. This route option diverts cyclists onto Secondary Cycle Route SO4 along Old Bridge Road and the proposed Dodder Greenway resulting in a longer route for cyclists travelling southwest-northeast. Inbound (northeast bound) cyclists can share the bus lane with buses, whilst outbound cyclists can share the general traffic lane with all vehicles. A 30kph speed limit is proposed along the route to ensure a safer cycling environment for those cyclists that do not wish to undertake the diversion.	This route option comprises Secondary Route 9B as identified in the GDA Cycle Network Plan. This route option diverts cyclists onto Secondary Cycle Route SO4 along Old Bridge Road and the proposed Dodder Greenway resulting in a longer route for cyclists travelling southwest-northeast. Inbound (northeast bound) cyclists can share the general traffic lane with local access traffic and inbound buses, whilst outbound cyclists share the general traffic lane with all vehicles. A 30kph speed limit is proposed along the route to ensure a safer cycling environment for those cyclists that do not wish to undertake the diversion.	This route option comprises Secondary Route 9B as identified in the GDA Cycle Network Plan. The inbound (northeast bound) cycle facility provision alternates between cycle lanes and a shared pedestrian/cycle track. At the locations where there is no inbound cycle lane provision, cyclists can utilise the bus lane. Outbound cyclists can utilise the bus lane. A 30kph speed limit is proposed along the route to ensure a safer cycling environment.
	Rank					
	2E Traffic Network Integration	The banning of general vehicles travelling northeast bound along Templeogue Road between the Old Bridge Road/Cypress Road/Templeogue Road junction and the Riverside Cottages junction may result in an increase in traffic on adjacent alternative vehicle routes.	The banning of general vehicles (with the exception of local access vehicles) travelling northeast bound along Templeogue Road between the Old Bridge Road/Cypress Road/Templeogue Road junction and the Riverside Cottages junction may result in an increase in traffic on adjacent alternative vehicle routes.	The banning of general vehicles travelling northeast bound along Templeogue Road between the Old Bridge Road/Cypress Road/Templeogue Road junction and the Riverside Cottages junction may result in an increase in traffic on adjacent alternative vehicle routes.	The banning of general vehicles (with the exception of local access vehicles) travelling northeast bound along Templeogue Road between the Old Bridge Road/Cypress Road/Templeogue Road junction and the Riverside Cottages junction may result in an increase in traffic on adjacent alternative vehicle routes.	Two-way general traffic will be permitted along the route. .
	Rank					
	3A Key Trip Attractors	<u>Educational Land Use catchments</u> <ul style="list-style-type: none"> - 5-minute walking catchment of approx. 822 - 10-minute walking catchment of approx. 2471 - 15-minute walking catchment of approx. 4960 <u>Retail/leisure/commercial Land Uses</u> <ul style="list-style-type: none"> - Templeogue Tennis Club - Templeogue Village 	<u>Educational Land Use catchments</u> <ul style="list-style-type: none"> - 5-minute walking catchment of approx. 822 - 10-minute walking catchment of approx. 2471 - 15-minute walking catchment of approx. 4960 <u>Retail/leisure/commercial Land Uses</u> <ul style="list-style-type: none"> - Templeogue Tennis Club - Templeogue Village 	<u>Educational Land Use catchments</u> <ul style="list-style-type: none"> - 5-minute walking catchment of approx. 822 - 10-minute walking catchment of approx. 2471 - 15-minute walking catchment of approx. 4960 <u>Retail/leisure/commercial Land Uses</u> <ul style="list-style-type: none"> - Templeogue Tennis Club - Templeogue Village 	<u>Educational Land Use catchments</u> <ul style="list-style-type: none"> - 5-minute walking catchment of approx. 822 - 10-minute walking catchment of approx. 2471 - 15-minute walking catchment of approx. 4960 <u>Retail/leisure/commercial Land Uses</u> <ul style="list-style-type: none"> - Templeogue Tennis Club - Templeogue Village 	<u>Educational Land Use catchments</u> <ul style="list-style-type: none"> - 5-minute walking catchment of approx. 822 - 10-minute walking catchment of approx. 2471 - 15-minute walking catchment of approx. 4960 <u>Retail/leisure/commercial Land Uses</u> <ul style="list-style-type: none"> - Templeogue Tennis Club - Templeogue Village
	Rank					
	3B Deprived Geographic Areas	Route option serves areas of Marginally Above Average to Affluent means from the Pobal Deprivation Index.	Route option serves areas of Marginally Above Average to Affluent means from the Pobal Deprivation Index.	Route option serves areas of Marginally Above Average to Affluent means from the Pobal Deprivation Index.	Route option serves areas of Marginally Above Average to Affluent means from the Pobal Deprivation Index.	Route option serves areas of Marginally Above Average to Affluent means from the Pobal Deprivation Index.

Table A1: Templeogue Village Route Options Assessment

Appraisal Criteria	Sub-Criteria	Templeogue Village Option S1-1	Templeogue Village Option S1-2	Templeogue Village Option S1-3	Templeogue Village Option S1-4	Templeogue Village Option S1-5
	Rank					
4 Safety	4A Road Safety	Turning Movements required: 0 Speed Limit 50kph Provision of segregated cycle facilities reduces the likelihood of cycle/vehicle incidents. Removal of inbound general traffic from the route significantly reduces traffic volumes and thereby reduces the likelihood of incident occurrence.	Turning Movements required: 0 Speed Limit 50kph Provision of segregated cycle facilities reduces the likelihood of cycle/vehicle incidents. Removal of inbound general traffic (except for local access traffic) from the route significantly reduces traffic volumes and thereby reduces the likelihood of incident occurrence.	Turning Movements required: 0 Speed Limit 30kph Removal of inbound general traffic from the route significantly reduces traffic volumes and thereby reduces the likelihood of incident occurrence. The severity of any incidents will reduce with lower vehicle speeds.	Turning Movements required: 0 Speed Limit 30kph Removal of inbound general traffic (except for local access traffic) from the route significantly reduces traffic volumes and thereby reduces the likelihood of incident occurrence. The severity of any incidents will reduce with lower vehicle speeds.	Turning Movements required: 0 Speed Limit 30kph The provision of bus lanes (which can also be utilised by cyclists) that are separate to the general traffic lanes reduces the likelihood of bus/general vehicle and cycle/general vehicle incidents. The severity of any incidents will reduce with lower vehicle speeds.
	4B Pedestrian Safety	No. of Pedestrian Crossings 2 Good pedestrian facility provision	No. of Pedestrian Crossings 2 Good pedestrian facility provision	No. of Pedestrian Crossings 2 Good pedestrian facility provision	No. of Pedestrian Crossings 2 Good pedestrian facility provision	No. of Pedestrian Crossings 2 Good pedestrian facility provision
5 Environment	5A Archaeology & Cultural Heritage	No Recorded Monument or site of archaeological and cultural heritage merit was identified within the assessment area	No Recorded Monument or site of archaeological and cultural heritage merit was identified within the assessment area	1 Recorded Monument or site of archaeological and cultural heritage merit was identified within the assessment area: Riverside Cottages, Templeogue	1 Recorded Monument or site of archaeological and cultural heritage merit was identified within the assessment area: Riverside Cottages, Templeogue	No Recorded Monument or site of archaeological and cultural heritage merit was identified within the assessment area
	Rank					
5 Environment	5B Architectural Heritage	1 no. protected structure was identified within the assessment area.	1 no. protected structure was identified within the assessment area.	1 no. protected structure was identified within the assessment area.	1 no. protected structure was identified within the assessment area.	1 no. protected structure was identified within the assessment area.
	Rank					
	5C Flora & Fauna	Impact on trees <u>Removal of trees may be required on:</u> Templeogue Road	Impact on trees <u>Removal of trees may be required on:</u> Templeogue Road	Impact on trees <u>Removal of trees may be required on:</u> Templeogue Road & along the route of the proposed Dodder Greenway	Impact on trees <u>Removal of trees may be required on:</u> Templeogue Road & along the route of the proposed Dodder Greenway	Impact on trees <u>Removal of trees may be required on:</u> Templeogue Road
	Rank					
	5D Soils, Geology & Hydrology	No appreciable impacts	No appreciable impacts	No appreciable impacts	No appreciable impacts	No appreciable impacts
	Rank					
	5E Landscape & Visual	Potential negative impacts associated with carriageway widening and land take from properties (22 no) along Templeogue and the subsequent necessity to remove trees to facilitate widening.	Potential negative impacts associated with carriageway widening and land take from properties (22 no) along Templeogue and the subsequent necessity to remove trees to facilitate widening.	Potential negative impacts associated with carriageway widening and land take from properties (3 no) along Templeogue and the subsequent necessity to remove trees to facilitate widening. Potential negative impacts associated with provision of new/upgraded cycle route through Riverside cottages and along the route of the proposed Dodder Greenway.	Potential negative impacts associated with carriageway widening and land take from properties (3 no) along Templeogue and the subsequent necessity to remove trees to facilitate widening. Potential negative impacts associated with provision of new/upgraded cycle route through Riverside cottages and along the route of the proposed Dodder Greenway.	Potential negative impacts associated with carriageway widening and land take from properties (23 no) along Templeogue and the subsequent necessity to remove trees to facilitate widening.
	Rank					
	5F Air Quality	Existing Bus corridor – no impact.	Existing Bus corridor – no impact.	Existing Bus corridor – no impact.	Existing Bus corridor – no impact.	Existing Bus corridor – no impact.
	Rank					

Table A1: Templeogue Village Route Options Assessment

Appraisal Criteria	Sub-Criteria	Templeogue Village Option S1-1	Templeogue Village Option S1-2	Templeogue Village Option S1-3	Templeogue Village Option S1-4	Templeogue Village Option S1-5
	5G Noise & Vibration	Existing Bus corridor – no impact.	Existing Bus corridor – no impact.	Existing Bus corridor – no impact.	Existing Bus corridor – no impact.	Existing Bus corridor – no impact.
	Rank					
5 Environment	5H Land Use Character	The level of land take required on Templeogue Road (22 residential properties affected) would not affect the viability of residential properties from being used for its intended use. Sufficient access and parking space will still be provided.	The level of land take required on Templeogue Road (22 residential properties affected) would not affect the viability of residential properties from being used for its intended use. Sufficient access and parking space will still be provided.	The level of land take required on Templeogue Road (3 residential properties affected) would not affect the viability of residential properties from being used for its intended use. Sufficient access and parking space will still be provided.	The level of land take required on Templeogue Road (3 residential properties affected) would not affect the viability of residential properties from being used for its intended use. Sufficient access and parking space will still be provided.	The level of land take required on Templeogue Road (23 residential properties affected) would not affect the viability of residential properties from being used for its intended use. Sufficient access and parking space will still be provided.
	Rank					

10.0 APPENDIX B - SECTION 2 ROUTE OPTIONS ASSESSMENT

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Table B1: Templeogue Road on approach to Terenure Village													
Appraisal Criteria	Sub-Criteria	Option S2-1	Option S2-2	Option S2-3	Option S2-4	Option S2-5	Option S2-6	Option S2-7	Option S2-8	Option S2-9	Option S2-10	Option S2-11	Option S2-12
		Bus lanes and cycle lanes in both directions along Templeogue Road	No general traffic lanes along Templeogue Road from Rathdown Park to Terenure Cross. Bus lanes and cycle lanes only	No general traffic lanes from Rathdown Avenue to Terenure Cross. Bus lanes and cycle lanes only	Inbound bus lane provided on Rathdown Park and Outbound bus lane provided on Fergus Road	No cycle facilities provided on Templeogue Road from Lakelands Park to Terenure Village. Parallel & feeder cycle routes provided.	Inbound traffic lane from Rathdown Park to Terenure Village. Parallel & feeder cycle routes provided.	Outbound traffic lane from Rathdown Park to Terenure Village. Parallel & feeder cycle routes provided.	No general traffic lanes along Templeogue Road from Fortfield Road to Terenure Cross. Bus lanes and cycle lanes only.	No inbound general traffic lanes from Springfield Ave to Rathdown Park (Residential access only) outbound general traffic permitted. Bus Gate/no inbound traffic from Rathdown Park to Terenure Cross.	No inbound bus along Templeogue Road lane from Fortfield Road to Rathdown Park. Outbound bus lane provided from Rathdown Park to Springfield Avenue. Bus Gate/no inbound traffic from Rathdown Park to Terenure Cross.	Bus lanes in both directions along Templeogue Road from Springfield Ave to Rathdown Park. No footpath facilities provided on the eastern side of Templeogue road from Fortfield Road to Rathdown Cres. Bus Gate/no inbound traffic from Rathdown Park to Terenure Cross.	No inbound bus along Templeogue Road lane from Fortfield Road to Rathdown Park. Outbound bus lane provided from Rathdown Park to Springfield Avenue. No footpath facilities provided on the eastern side of Templeogue road from Fortfield Road to Rathdown Cres. Bus Gate/no inbound traffic from Olney Grove to Terenure Cross.
1 Economy	1A Capital Cost	€8,257,800.00 <u>Indicative Infrastructure costs €4,696,800.00 include:</u> <ul style="list-style-type: none">Bus lanes will be provided in both directions along entire section of Templeogue Road.Segregated cycle route is proposed along entire section of Templeogue Road.	€4,554,700.00 <u>Indicative Infrastructure costs €4,255,700.00 include:</u> <ul style="list-style-type: none">Bus lanes in both directions along entire section with the exception of a 50m section of Templeogue Road approaching Rathdown Park where bus lanes in both direction will not be provided owing to the proximity of properties and the requirement to remove residential front garden car parking.Removal of General Traffic lanes along Templeogue Road from Rathdown Park to Terenure Cross.Segregated cycle route is proposed along entire section of Templeogue Road.	€3,959,500.00 <u>Indicative Infrastructure costs €3,661,000.00 include:</u> <ul style="list-style-type: none">Bus lanes will be provided in both directions along entire section of Templeogue Road.Removal of General Traffic lanes along Templeogue Road from Rathdown Avenue to Terenure Cross.Segregated cycle route is proposed along entire section of Templeogue Road.	€4,866,900.00 <u>Indicative Infrastructure costs €4,568,400.00 include:</u> <ul style="list-style-type: none">Bus lanes will be provided in both directions along Templeogue Road from Fortfield Road to Rathdown Park.One-way Bus lane provided inbound on Rathdown Road connecting with the Rathfarnham CBC on Rathfarnham Road.Outbound on Fergus Road connectingRathfarnham Road to Templeogue Road.Segregated cycle route is proposed along entire section of Templeogue Road.	€6,327,700.00 <u>Indicative Infrastructure costs €4,710,700.00 include:</u> <ul style="list-style-type: none">Bus lanes will be provided in both directions along entire section of Templeogue Road.Segregated cycle route is proposed along Templeogue Road between Fortfield Road and Lakelands Park.Segregated cycle route is proposed via Lakelands Park & Greenlea Road.Feeder cycle roads are proposed to link with the proposed Dodder Greenway.	€4,386,700.00 <u>Indicative Infrastructure costs €4,181,200.00 include:</u> <ul style="list-style-type: none">Bus lanes will be provided in both directions along entire section of Templeogue Road.Removal of outbound general traffic lane on Templeogue Road from Terenure Cross to Rathdown Park.Segregated cycle route is proposed along Templeogue Road between Fortfield Road and Lakelands Park.Segregated cycle route is proposed via Lakelands Park & Greenlea Road.Feeder cycle routes are proposed to link with the proposed Dodder Greenway.	€4,386,700.00 <u>Indicative Infrastructure costs €4,181,200.00 include:</u> <ul style="list-style-type: none">Bus lanes will be provided in both directions along entire section of Templeogue Road.Removal of inbound general traffic lane on Templeogue Road from Rathdown Park to Terenure Cross.Segregated cycle route is proposed along Templeogue Road between Fortfield Road and Lakelands Park.Segregated cycle route is proposed via Lakelands Park & Greenlea Road.Feeder cycle routes are proposed to link with the proposed Dodder Greenway.	€3,462,400.00 <u>Indicative Infrastructure costs €3,244,900.00 include:</u> <ul style="list-style-type: none">Bus lanes will be provided in both directions along entire section of Templeogue Road.Removal of General Traffic lanes along Templeogue Road from Fortfield Road to Terenure Cross.Segregated cycle route is proposed along entire section of Templeogue Road.	€3,825,800.00 <u>Indicative Infrastructure costs €3,630,800.00 include:</u> <ul style="list-style-type: none">Bus lanes will be provided in both directions for the majority of the route along Templeogue Road, with the exception of a 300m section of Templeogue Road from Rathdown Park to Terenure Cross where outbound bus lane will not be provided.No inbound traffic lane from Springfield Avenue to Rathdown Park (Residential access only).Segregated cycle route is proposed along Templeogue Road and Lakelands Park.Bus Gate/no inbound traffic lane from Rathdown Park to Terenure Cross.Feeder cycle routes are proposed to link with the proposed Dodder Greenway.Outbound cycle facilities provided along Templeogue Road from Terenure Cross to Rathdown Park.	€2,086,400.00 <u>Indicative Infrastructure costs €1,891,400.00 include:</u> <ul style="list-style-type: none">Outbound bus lane will be provided from Rathdown Park to Springfield Avenue.No inbound traffic lane from Springfield Avenue to Rathdown Park (Residential access only).Segregated cycle facilities in both directions from Springfield Ave to Fortfield Road.Bus Gate/no inbound traffic lane from Rathdown Park to Terenure Cross.Feeder cycle routes are proposed to link with the proposed Dodder Greenway.Outbound cycle facilities provided along Templeogue Road from Terenure Cross to Rathdown Park.	€2,191,800.00 <u>Indicative Infrastructure costs €1,996,800.00 include:</u> <ul style="list-style-type: none">Outbound bus lane will be provided from Rathdown Park to Springfield Avenue.No inbound traffic lane from Springfield Avenue to Rathdown Park (Residential access only).No footpath provided on the eastern side of Templeogue Road from Fortfield Road to Rathdown Crescent (existing footpath layout).Segregated cycle facilities in both directions from Springfield Ave to Fortfield Road.Bus Gate/no inbound traffic lane from Olney Grove to Terenure Cross.Feeder cycle routes are proposed to link with the proposed Dodder Greenway.Outbound cycle facilities provided along Templeogue Road from Terenure Cross to Rathdown Park.	€1,656,000.00 <u>Indicative Infrastructure costs €1,656,000.00 include:</u> <ul style="list-style-type: none">Outbound bus lane will be provided from Rathdown Park to Springfield Avenue.No inbound traffic lane from Springfield Avenue to Rathdown Park (Residential access only).No footpath provided on the eastern side of Templeogue Road from Fortfield Road to Rathdown Crescent (existing footpath layout).Segregated cycle facilities in both directions from Springfield Ave to Fortfield Road.Bus Gate/no inbound traffic lane from Olney Grove to Terenure Cross.Feeder cycle routes are proposed to link with the proposed Dodder Greenway.Outbound cycle facilities provided along Templeogue Road from Terenure Cross to Rathdown Park.
		<u>Land Acquisition Costs €3,561,000.00</u> <ul style="list-style-type: none">2374 sqm Private Land5693 sqm Public Land24 residential properties affected 1 commercial property affected	<u>Land Acquisition Costs €298,500.00</u> <ul style="list-style-type: none">199 sqm Private Land5693 sqm Public Land20 residential properties affected 1 commercial property affected	<u>Land Acquisition Costs €298,500.00</u> <ul style="list-style-type: none">199 sqm Private Land2814 sqm Public Land24 residential properties affected 1 commercial property affected	<u>Land Acquisition Costs €298,500.00</u> <ul style="list-style-type: none">199 sqm Private Land2814 sqm Public Land24 residential properties affected 1 commercial property affected	<u>Land Acquisition Costs €1,617,000.00</u> <ul style="list-style-type: none">1078 sqm Private Land4846 sqm Public Land24 residential properties affected 1 commercial property affected	<u>Land Acquisition Costs €205,500.00</u> <ul style="list-style-type: none">137 sqm Private Land4846 sqm Public Land12 residential properties affected 1 commercial property affected	<u>Land Acquisition Costs €205,500.00</u> <ul style="list-style-type: none">137 sqm Private Land4846 sqm Public Land12 residential properties affected 1 commercial property affected	<u>Land Acquisition Costs €217,500.00</u> <ul style="list-style-type: none">145 sqm Private Land2814 sqm Public Land18 residential properties affected 1 commercial property affected	<u>Land Acquisition Costs €195,000.00</u> <ul style="list-style-type: none">130 sqm Private Land4,864 sqm Public Land3 residential properties affected 0 commercial property affected	<u>Land Acquisition Costs €195,000.00</u> <ul style="list-style-type: none">130 sqm Private Land227 sqm Public Land3 residential properties affected 0 commercial property affected	<u>Land Acquisition Costs €195,000.00</u> <ul style="list-style-type: none">130 sqm Private Land914 sqm Public Land3 residential properties affected 0 commercial property affected	<u>Land Acquisition Costs €0</u> <ul style="list-style-type: none">0 sqm Private Land0 sqm Public Land0 residential properties affected 0 commercial property affected
	Rank												

Table B1: Templeogue Road on approach to Terenure Village													
Appraisal Criteria	Sub-Criteria	Option S2-1	Option S2-2	Option S2-3	Option S2-4	Option S2-5	Option S2-6	Option S2-7	Option S2-8	Option S2-9	Option S2-10	Option S2-11	Option S2-12
1 Economy	1B Transport Quality & Reliability	Journey Time: 3mins Length:1.15km No. of Junctions: 2 No. of Pedestrian Crossings: 2 Full priority provided along entire route in both directions, good journey time reliability for Bus services.	Journey Time: 4mins Length:1.2km No. of Junctions: 2 No. of Pedestrian Crossings: 2 Full priority in both directions is provided along route with the exception of a 50m section of Templeogue Road approaching Rathdown Park where bus lanes in both direction will not be provided	Journey Time: 3mins Length:1.15km No. of Junctions: 2 No. of Pedestrian Crossings: 2 Full priority provided along entire route in both directions, good journey time reliability for Bus services.	Journey Time: 5mins (inbound) Length:1.55km No. of Junctions: 6 Journey Time: 5mins (outbound) Length:1.36km No. of Junctions: 4 No. of Pedestrian Crossings: 2 Full priority provided along entire route in both directions with the exception of a 145m section of Templeogue Road between Fergus Road and Rathdown Park where bus lanes in outbound direction will not be provided. Increase in journey time due to an increase in the number of junctions and right turn movements.	Journey Time: 3mins Length:1.15km No. of Junctions: 2 No. of Pedestrian Crossings: 2 Full priority provided along entire route in both directions, good journey time reliability for Bus services.	Journey Time: 3mins Length:1.15km No. of Junctions: 2 No. of Pedestrian Crossings: 2 Full priority provided along entire route in both directions, good journey time reliability for Bus services.	Journey Time: 3mins Length:1.15km No. of Junctions: 2 No. of Pedestrian Crossings: 2 Full priority provided along entire route in both directions, good journey time reliability for Bus services.	Journey Time: 3mins Length:1.15km No. of Junctions: 2 No. of Pedestrian Crossings: 2 Full priority provided along entire route in both directions, good journey time reliability for Bus services.	Journey Time: 3mins (inbound) Journey Time: 5mins (outbound) Length:1.15km No. of Junctions: 2 No. of Pedestrian Crossings: 2 Full priority provided in the inbound direction, good journey time reliability for Bus services. No bus lanes provided in the outbound direction from Terenure Cross to Rathdown Park.	Journey Time: 3mins (inbound) Journey Time: 6mins (outbound) Length:1.15km No. of Junctions: 2 No. of Pedestrian Crossings: 2 No inbound bus priority provided from Fortfield Road to Rathdown Park. Outbound bus lane will be provided from Rathdown Park to Springfield Avenue. Bus Gate/no inbound traffic lane from Rathdown Park to Terenure Cross, therefore buses will use general traffic lanes with very low volume of residential traffic.	Journey Time: 3mins (inbound) Journey Time: 5mins (outbound) Length:1.15km No. of Junctions: 2 No. of Pedestrian Crossings: 2 Full priority provided in the inbound direction, good journey time reliability for Bus services. No bus lanes provided in the outbound direction from Terenure Cross to Rathdown Park.	Journey Time: 3mins (inbound) Journey Time: 6mins (outbound) Length:1.15km No. of Junctions: 2 No. of Pedestrian Crossings: 2 No inbound bus priority provided from Fortfield Road to Rathdown Park. Outbound bus lane will be provided from Rathdown Park to Springfield Avenue. Bus Gate/no inbound traffic lane from Rathdown Park to Terenure Cross, therefore buses will use general traffic lanes with very low volume of residential traffic.
	Rank												
2 Integration	2A Land Use Policy	Integrates with existing residential, educational & leisure uses in this established area.	Integrates with existing residential, educational & leisure uses in this established area.	Integrates with existing residential, educational & leisure uses in this established area	Integrates with existing residential, educational & leisure uses in this established area	Integrates with existing residential, educational & leisure uses in this established area	Integrates with existing residential, educational & leisure uses in this established area	Integrates with existing residential, educational & leisure uses in this established area	Integrates with existing residential, educational & leisure uses in this established area.	Integrates with existing residential, educational & leisure uses in this established area.	Integrates with existing residential, educational & leisure uses in this established area.	Integrates with existing residential, educational & leisure uses in this established area.	Integrates with existing residential, educational & leisure uses in this established area.
	Rank												
	Population and Employment	<u>Residential Population Catchments</u> - 5 minute walk catchment of approximately 2,147 - 10 minute walk catchment of approximately 6,591 <u>Employment catchments</u> - 10 minute walk catchment of approximately 1,439	<u>Residential Population Catchments</u> - 5 minute walk catchment of approximately 2,147 - 10 minute walk catchment of approximately 6,591 <u>Employment catchments</u> - 10 minute walk catchment of approximately 1,439	<u>Residential Population Catchments</u> - 5 minute walk catchment of approximately 2,147 - 10 minute walk catchment of approximately 6,591 <u>Employment catchments</u> - 10 minute walk catchment of approximately 1,439	<u>Residential Population Catchments</u> - 5 minute walk catchment of approximately 1,335 - 10 minute walk catchment of approximately 3,983 <u>Employment catchments</u> - 10 minute walk catchment of approximately 1,227	<u>Residential Population Catchments</u> - 5 minute walk catchment of approximately 2,147 - 10 minute walk catchment of approximately 6,591 <u>Employment catchments</u> - 10 minute walk catchment of approximately 1,439	<u>Residential Population Catchments</u> - 5 minute walk catchment of approximately 2,147 - 10 minute walk catchment of approximately 6,591 <u>Employment catchments</u> - 10 minute walk catchment of approximately 1,439	<u>Residential Population Catchments</u> - 5 minute walk catchment of approximately 2,147 - 10 minute walk catchment of approximately 6,591 <u>Employment catchments</u> - 10 minute walk catchment of approximately 1,439	<u>Residential Population Catchments</u> - 5 minute walk catchment of approximately 2,147 - 10 minute walk catchment of approximately 6,591 <u>Employment catchments</u> - 10 minute walk catchment of approximately 1,439	<u>Residential Population Catchments</u> - 5 minute walk catchment of approximately 2,147 - 10 minute walk catchment of approximately 6,591 <u>Employment catchments</u> - 10 minute walk catchment of approximately 1,439	<u>Residential Population Catchments</u> - 5 minute walk catchment of approximately 2,147 - 10 minute walk catchment of approximately 6,591 <u>Employment catchments</u> - 10 minute walk catchment of approximately 1,439	<u>Residential Population Catchments</u> - 5 minute walk catchment of approximately 2,147 - 10 minute walk catchment of approximately 6,591 <u>Employment catchments</u> - 10 minute walk catchment of approximately 1,439	<u>Residential Population Catchments</u> - 5 minute walk catchment of approximately 2,147 - 10 minute walk catchment of approximately 6,591 <u>Employment catchments</u> - 10 minute walk catchment of approximately 1,439
	Rank												
	2C Transport Network Integration	Potential for interchange with local bus services. Potential for interchange with the Rathfarnham CBC at Terenure Cross.	Potential for interchange with local bus services. Potential for interchange with the Rathfarnham CBC at Terenure Cross.	Potential for interchange with local bus services. Potential for interchange with the Rathfarnham CBC at Terenure Cross.	Potential for interchange with local bus services. Potential for interchange with the Rathfarnham CBC along Rathfarnham Road.	Potential for interchange with local bus services. Potential for interchange with the Rathfarnham CBC at Terenure Cross.	Potential for interchange with local bus services. Potential for interchange with the Rathfarnham CBC at Terenure Cross.	Potential for interchange with local bus services. Potential for interchange with the Rathfarnham CBC at Terenure Cross.	Potential for interchange with local bus services. Potential for interchange with the Rathfarnham CBC at Terenure Cross.	Potential for interchange with local bus services. Potential for interchange with the Rathfarnham CBC at Terenure Cross.	Potential for interchange with local bus services. Potential for interchange with the Rathfarnham CBC at Terenure Cross.	Potential for interchange with local bus services. Potential for interchange with the Rathfarnham CBC at Terenure Cross.	Potential for interchange with local bus services. Potential for interchange with the Rathfarnham CBC at Terenure Cross.
	Rank												

Table B1: Templeogue Road on approach to Terenure Village													
Appraisal Criteria	Sub-Criteria	Option S2-1	Option S2-2	Option S2-3	Option S2-4	Option S2-5	Option S2-6	Option S2-7	Option S2-8	Option S2-9	Option S2-10	Option S2-11	Option S2-12
2 Integration	2D Cycling Integration	<p>This route option is identified as Secondary route 9B in the GDA Cycle Network Plan.</p> <p>This proposed cycle route is adjacent to the CBC route along Templeogue Road.</p>	<p>This route option is identified as Secondary route 9B in the GDA Cycle Network Plan.</p> <p>This proposed cycle route is adjacent to the CBC route along Templeogue Road.</p>	<p>This route option is identified as Secondary route 9B in the GDA Cycle Network Plan.</p> <p>This proposed cycle route is adjacent to the CBC route along Templeogue Road.</p>	<p>This route option is identified as Secondary route 9B in the GDA Cycle Network Plan.</p> <p>The proposed removal of segregated cycle facilities on Templeogue Road from Rathdown Park to Terenure Cross does not align with the GDA Cycle Network Plan proposal for route 9B, however, separate feeder cycle routes are proposed to connect with the proposed Dodder Greenway (Dodder Greenway/Primary Route SO3).</p> <p>A two-way cycle route is also proposed via Lakelands Park and Greenlea Road.</p> <p>Proposed cycle route is adjacent to the proposed CBC route along Templeogue Road.</p>	<p>This route option is identified as Secondary route 9B in the GDA Cycle Network Plan.</p> <p>The proposed removal of segregated cycle facilities on Templeogue Road from Lakelands Park to Terenure Cross does not align with the GDA Cycle Network Plan proposal for route 9B, however, separate feeder cycle routes are proposed to connect with the proposed Dodder Greenway (Dodder Greenway/Primary Route SO3).</p> <p>A two-way cycle route is also proposed via Lakelands Park and Greenlea Road.</p>	<p>This route option is identified as Secondary route 9B in the GDA Cycle Network Plan.</p> <p>The proposed removal of segregated cycle facilities on Templeogue Road from Lakelands Park to Terenure Cross does not align with the GDA Cycle Network Plan proposal for route 9B, however, separate feeder cycle routes are proposed to connect with the proposed Dodder Greenway (Dodder Greenway/Primary Route SO3).</p> <p>A two-way cycle route is also proposed via Lakelands Park and Greenlea Road.</p>	<p>This route option is identified as Secondary route 9B in the GDA Cycle Network Plan.</p> <p>The proposed removal of segregated cycle facilities on Templeogue Road from Lakelands Park to Terenure Cross does not align with the GDA Cycle Network Plan proposal for route 9B, however, separate feeder cycle routes are proposed to connect with the proposed Dodder Greenway (Dodder Greenway/Primary Route SO3).</p> <p>A two-way cycle route is also proposed via Lakelands Park and Greenlea Road.</p>	<p>This route option is identified as Secondary route 9B in the GDA Cycle Network Plan.</p> <p>This proposed cycle route is adjacent to the CBC route along Templeogue Road.</p>	<p>This route option is identified as Secondary route 9B in the GDA Cycle Network Plan.</p> <p>The proposed removal of inbound segregated cycle facilities on Templeogue Road from Lakelands Park to Terenure Cross does not align with the GDA Cycle Network Plan proposal for route 9B, however, separate feeder cycle routes are proposed to connect with the proposed Dodder Greenway (Dodder Greenway/Primary Route SO3).</p> <p>A two-way cycle route is also proposed via Lakelands Park and Greenlea Road.</p> <p>Segregated outbound cycle facilities provided on Templeogue Road from Terenure Cross to Rathdown Park.</p>	<p>This route option is identified as Secondary route 9B in the GDA Cycle Network Plan.</p> <p>No inbound or outbound cycle facilities provided along Templeogue Road from Fortfield Road to Rathdown Park.</p> <p>A two-way cycle route is also proposed via Lakelands Park and Greenlea Road.</p> <p>Segregated outbound cycle facilities provided on Templeogue Road from Terenure Cross to Rathdown Park.</p>	<p>This route option is identified as Secondary route 9B in the GDA Cycle Network Plan.</p> <p>No inbound or outbound cycle facilities provided along Templeogue Road from Fortfield Road to Rathdown Park.</p> <p>A two-way cycle route is also proposed via Lakelands Park and Greenlea Road.</p> <p>Segregated outbound cycle facilities provided on Templeogue Road from Terenure Cross to Rathdown Park.</p>	<p>This route option is identified as Secondary route 9B in the GDA Cycle Network Plan.</p> <p>No inbound or outbound cycle facilities provided along Templeogue Road from Fortfield Road to Rathdown Park.</p> <p>A two-way cycle route is proposed through Bushy Park from Fortfield Road to Rathdown Ave.</p> <p>Outbound cycle facilities provided on Templeogue Road from Terenure Village to Rathdown Crescent.</p>
	Rank												
	2E Traffic Network Integration	No appreciable impacts.	50m section approaching Rathdown Park in the inbound direction where bus lanes in both directions will not be provided due to width constraints. Option S2-2 which does not provide for general traffic along Templeogue Road between Rathdown Park and Terenure Cross would have a significant traffic impact in terms of movement restrictions and increased traffic/congestion on Rathfarnham Road, Bushy Park road and Greenlea Road. Due to the traffic diversions, there will be an increased traffic on residential roads (Rathdown Park, Rathdown Avenue).	It is considered that Option S2-2 which does not provide for general traffic between Rathdown Avenue and Terenure Cross would have a significant traffic impact in terms of movement restrictions and increased traffic/congestion on Rathfarnham Road, Bushy Park road and Greenlea Road. Due to the traffic diversions, there will be an increased traffic on residential roads (Rathdown Park, Rathdown Avenue).	Bus priority signalling along Templeogue Road at Rathdown Park and Fergus Road will have an impact on general traffic.	No appreciable impacts.	It is considered that Option S2-6 which provides for inbound traffic only along Templeogue Road from Rathdown Park to Terenure Cross would have a significant traffic impact in terms of movement restrictions and increased traffic/congestion on Rathfarnham Road and Bushy Park road. Due to the traffic diversions, there will be an increased traffic on residential roads (Fergus Road and Rathdown Park).	It is considered that Option S2-7 which provides for outbound traffic only along Templeogue Road from Rathdown Park to Terenure Cross would have a significant traffic impact in terms of movement restrictions and increased traffic/congestion on Rathfarnham Road, Bushy Park road and Fortfield Road. Due to the traffic diversions, there will be an increased traffic on residential roads (Fergus Road, Greenlea Road and Rathdown Park).	It is considered that Option S2-8 which does not provide for general traffic along Templeogue Road between Rathdown Park and Terenure Cross would have a significant traffic impact in terms of movement restrictions and increased traffic/congestion on Fortfield Road and Greenlea Road.	It is considered that Option S2-9 which provides for local traffic only in the inbound direction on Templeogue Road would have a traffic impact in terms of movement restrictions and increased traffic/congestion on Springfield Avenue, Rathfarnham Road and Terenure Road West. Due to the traffic diversions, there will be an increased traffic on residential roads (Fortfield Park, Rathdown Park, Springfield Road). Outbound general traffic permitted on Templeogue Road.	It is considered that Option S2-10 which provides for local traffic only in both directions on Templeogue Road would have a traffic impact in terms of movement restrictions and increased traffic/congestion on Springfield Avenue, Rathfarnham Road and Terenure Road West. Due to the traffic diversions, there will be an increased traffic on residential roads (Fortfield Park, Rathdown Park, Springfield Road). Outbound general traffic permitted on Templeogue Road.	It is considered that Option S2-11 which provides for local traffic only in both directions on Templeogue Road would have a traffic impact in terms of movement restrictions and increased traffic/congestion on Springfield Avenue, Rathfarnham Road and Terenure Road West. Due to the traffic diversions, there will be an increased traffic on residential roads (Fortfield Park, Rathdown Park, Springfield Road). Outbound general traffic permitted on Templeogue Road.	It is considered that Option S2-12 which provides for local traffic only in both directions on Templeogue Road would have a traffic impact in terms of movement restrictions and increased traffic/congestion on Springfield Avenue, Rathfarnham Road and Terenure Road West. Due to the traffic diversions, there will be an increased traffic on residential roads (Fortfield Park, Rathdown Park, Springfield Road). Outbound general traffic permitted on Templeogue Road.
	Rank												
3 Accessibility and Social Inclusion	3A Key Trip Attractors	In terms of trip attractors, a differentiator between route options involves the provision of bus lanes in both directions along Templeogue Road through Terenure Village with all its amenities.	In terms of trip attractors, a differentiator between route options involves the provision of bus lanes in both directions along Templeogue Road through Terenure Village with all its amenities.	In terms of trip attractors, a differentiator between route options involves the provision of bus lanes in both directions along Templeogue Road through Terenure Village with all its amenities.	S2-4 does not provide bus lanes in both directions along Templeogue Road through Terenure Village, therefore bypassing a number of amenities, such as Terenure Library and commercial properties. Also, the rerouted bus route results in a greater walking distance to Presentation Primary & Senior school from the nearest bus stop.	In terms of trip attractors, a differentiator between route options involves the provision of bus lanes in both directions along Templeogue Road through Terenure Village with all its amenities.	In terms of trip attractors, a differentiator between route options involves the provision of bus lanes in both directions along Templeogue Road through Terenure Village with all its amenities.	In terms of trip attractors, a differentiator between route options involves the provision of bus lanes in both directions along Templeogue Road through Terenure Village with all its amenities.	In terms of trip attractors, a differentiator between route options involves the provision of bus lanes in both directions along Templeogue Road through Terenure Village with all its amenities.	In terms of trip attractors, a differentiator between route options involves the provision of bus lanes in both directions along Templeogue Road through Terenure Village with all its amenities.	In terms of trip attractors, a differentiator between route options involves the provision of bus lanes in both directions along Templeogue Road through Terenure Village with all its amenities.	In terms of trip attractors, a differentiator between route options involves the provision of bus lanes in both directions along Templeogue Road through Terenure Village with all its amenities.	In terms of trip attractors, a differentiator between route options involves the provision of bus lanes in both directions along Templeogue Road through Terenure Village with all its amenities.
	Rank												

Table B1: Templeogue Road on approach to Terenure Village													
Appraisal Criteria	Sub-Criteria	Option S2-1	Option S2-2	Option S2-3	Option S2-4	Option S2-5	Option S2-6	Option S2-7	Option S2-8	Option S2-9	Option S2-10	Option S2-11	Option S2-12
3 Accessibility and Social Inclusion	3B Deprived Geographic Areas	Route option serves area of Affluent means from the Pobal Deprivation Index.	Route option serves area of Affluent means from the Pobal Deprivation Index.	Route option serves area of Affluent means from the Pobal Deprivation Index.	Route option serves area of Affluent means from the Pobal Deprivation Index.	Route option serves area of Affluent means from the Pobal Deprivation Index.	Route option serves area of Affluent means from the Pobal Deprivation Index.	Route option serves area of Affluent means from the Pobal Deprivation Index.	Route option serves area of Affluent means from the Pobal Deprivation Index.	Route option serves area of Affluent means from the Pobal Deprivation Index.	Route option serves area of Affluent means from the Pobal Deprivation Index.	Route option serves area of Affluent means from the Pobal Deprivation Index.	Route option serves area of Affluent means from the Pobal Deprivation Index.
	Rank												
4 Safety	4A Road Safety	No. of Junctions: 2 0 turn movements required Fully segregated bus lanes in both directions for the entire route section.	No. of Junctions: 2 0 turn movements required. Fully segregated bus lanes in both directions for majority of the section.	No. of Junctions: 2 0 turn movements required. Fully segregated bus lanes in both directions for the entire route section.	No. of Junctions: 5 (inbound) No. of Junctions: 4 (outbound) 3 turn movements required in the inbound direction (1 right turn and 2 left turns). 2 turn movement required in the outbound direction (1 right turn and 1 left turn). Fully segregated bus lanes in both directions for majority of the section, with the exception of a 145m section of Templeogue Road between Fergus Road and Rathdown Park where an outbound bus lane will not be provided.	No. of Junctions: 2 0 turn movements required. Fully segregated bus lanes in both directions for the entire route section.	No. of Junctions: 2 0 turn movements required. Fully segregated bus lanes in both directions for the entire route section.	No. of Junctions: 2 0 turn movements required. Fully segregated bus lanes in both directions for the entire route section.	No. of Junctions: 2 0 turn movements required. Fully segregated bus lanes in both directions for the entire route section.	No. of Junctions: 2 0 turn movements required. Fully segregated bus lanes in both directions for the majority of the section, with the exception of a 300m section of Templeogue Road between Terenure Cross and Rathdown Park where an outbound bus lane will not be provided.	No. of Junctions: 2 0 turn movements required No Inbound bus lane provided along Templeogue Road from Fortfield Road to Rathdown Park. Fully segregated outbound bus lane for the majority of the section, with the exception of a 300m section of Templeogue Road between Terenure Cross and Rathdown Park where an outbound bus lane will not be provided.	No. of Junctions: 2 0 turn movements required Fully segregated bus lanes in both directions for the majority of the section, with the exception of a 300m section of Templeogue Road between Terenure Cross and Rathdown Park where an outbound bus lane will not be provided	No. of Junctions: 2 0 turn movements required No Inbound bus lane provided along Templeogue Road from Fortfield Road to Rathdown Park. Fully segregated outbound bus lane for the majority of the section, with the exception of a 300m section of Templeogue Road between Terenure Cross and Rathdown Park where an outbound bus lane will not be provided.
	Rank												
	4B Pedestrian Safety	Footpaths will be provided both sides of Templeogue Road. Signalised pedestrian crossing provided on Templeogue Road by Terenure College. An additional pedestrian crossing will be provided on Templeogue Road by VEC Sports Ground and VEC Football Club.	Footpaths will be provided both sides of Templeogue Road. Signalised pedestrian crossing provided on Templeogue Road by Terenure College. An additional pedestrian crossing will be provided on Templeogue Road by VEC Sports Ground and VEC Football Club.	Footpaths will be provided both sides of Templeogue Road. Signalised pedestrian crossing provided on Templeogue Road by Terenure College. An additional pedestrian crossing will be provided on Templeogue Road by VEC Sports Ground and VEC Football Club.	Footpaths will be provided both sides of Templeogue Road. Signalised pedestrian crossing provided on Templeogue Road by Terenure College. An additional pedestrian crossing will be provided on Templeogue Road by VEC Sports Ground and VEC Football Club.	Footpaths will be provided both sides of Templeogue Road. Signalised pedestrian crossing provided on Templeogue Road by Terenure College. An additional pedestrian crossing will be provided on Templeogue Road by VEC Sports Ground and VEC Football Club.	Footpaths will be provided both sides of Templeogue Road. Signalised pedestrian crossing provided on Templeogue Road by Terenure College. An additional pedestrian crossing will be provided on Templeogue Road by VEC Sports Ground and VEC Football Club.	Footpaths will be provided both sides of Templeogue Road. Signalised pedestrian crossing provided on Templeogue Road by Terenure College. An additional pedestrian crossing will be provided on Templeogue Road by VEC Sports Ground and VEC Football Club.	Footpaths will be provided both sides of Templeogue Road. Signalised pedestrian crossing provided on Templeogue Road by Terenure College. An additional pedestrian crossing will be provided on Templeogue Road by VEC Sports Ground and VEC Football Club.	Footpaths will be provided both sides of Templeogue Road. Signalised pedestrian crossing provided on Templeogue Road by Terenure College. An additional pedestrian crossing will be provided on Templeogue Road by VEC Sports Ground and VEC Football Club.	Footpaths will be provided both sides of Templeogue Road. Signalised pedestrian crossing provided on Templeogue Road by Terenure College. An additional pedestrian crossing will be provided on Templeogue Road by VEC Sports Ground and VEC Football Club.	No footpath provided on the eastern side of Templeogue Road from Fortfield Road to Rathdown Park, however pedestrian facilities provided in adjacent Bushy Park. Signalised pedestrian crossing provided on Templeogue Road by Terenure College. An additional pedestrian crossing will be provided on Templeogue Road by VEC Sports Ground and VEC Football Club.	No footpath provided on the eastern side of Templeogue Road from Fortfield Road to Rathdown Park, however pedestrian facilities provided in adjacent Bushy Park. Signalised pedestrian crossing provided on Templeogue Road by Terenure College. An additional pedestrian crossing will be provided on Templeogue Road by VEC Sports Ground and VEC Football Club.
	Rank												
5 Environment	5A Archaeology & Cultural Heritage	No Recorded Monuments identified within the assessment area.	No Recorded Monuments identified within the assessment area.	No Recorded Monuments identified within the assessment area.	No Recorded Monuments identified within the assessment area.	No Recorded Monuments identified within the assessment area.	No Recorded Monuments identified within the assessment area.	No Recorded Monuments identified within the assessment area.	No Recorded Monuments identified within the assessment area.	No Recorded Monuments identified within the assessment area.	No Recorded Monuments identified within the assessment area.	No Recorded Monuments identified within the assessment area.	No Recorded Monuments identified within the assessment area.
	Rank												

Table B1: Templeogue Road on approach to Terenure Village													
Appraisal Criteria	Sub-Criteria	Option S2-1	Option S2-2	Option S2-3	Option S2-4	Option S2-5	Option S2-6	Option S2-7	Option S2-8	Option S2-9	Option S2-10	Option S2-11	Option S2-12
5 Environment	5B Architectural Heritage	1 Recorded Monument identified within the assessment area on the eastern side of Templeogue Road between Fergus Road and Terenure Cross (DCC Development Plan 2016-2022). As this option does not involve land take by this monument, this will have no impact.	1 Recorded Monument identified within the assessment area on the eastern side of Templeogue Road between Fergus Road and Terenure Cross (DCC Development Plan 2016-2022). As this option does not involve land take by this monument, this will have no impact.	1 Recorded Monument identified within the assessment area on the eastern side of Templeogue Road between Fergus Road and Terenure Cross (DCC Development Plan 2016-2022). As this option does not involve land take by this monument, this will have no impact.	1 Recorded Monument identified within the assessment area on the eastern side of Templeogue Road between Fergus Road and Terenure Cross (DCC Development Plan 2016-2022). As this option does not involve land take by this monument, this will have no impact.	1 Recorded Monument identified within the assessment area on the eastern side of Templeogue Road between Fergus Road and Terenure Cross (DCC Development Plan 2016-2022). As this option does not involve land take by this monument, this will have no impact.	1 Recorded Monument identified within the assessment area on the eastern side of Templeogue Road between Fergus Road and Terenure Cross (DCC Development Plan 2016-2022). As this option does not involve land take by this monument, this will have no impact.	1 Recorded Monument identified within the assessment area on the eastern side of Templeogue Road between Fergus Road and Terenure Cross (DCC Development Plan 2016-2022). As this option does not involve land take by this monument, this will have no impact.	1 Recorded Monument identified within the assessment area on the eastern side of Templeogue Road between Fergus Road and Terenure Cross (DCC Development Plan 2016-2022). As this option does not involve land take by this monument, this will have no impact.	1 Recorded Monument identified within the assessment area on the eastern side of Templeogue Road between Fergus Road and Terenure Cross (DCC Development Plan 2016-2022). As this option does not involve land take by this monument, this will have no impact.	1 Recorded Monument identified within the assessment area on the eastern side of Templeogue Road between Fergus Road and Terenure Cross (DCC Development Plan 2016-2022). As this option does not involve land take by this monument, this will have no impact.	1 Recorded Monument identified within the assessment area on the eastern side of Templeogue Road between Fergus Road and Terenure Cross (DCC Development Plan 2016-2022). As this option does not involve land take by this monument, this will have no impact.	1 Recorded Monument identified within the assessment area on the eastern side of Templeogue Road between Fergus Road and Terenure Cross (DCC Development Plan 2016-2022). As this option does not involve land take by this monument, this will have no impact.
	Rank												
	5C Flora & Fauna	Possible removal of a large number of trees to the east of Templeogue Road from Fortfield Road to Rathdown Park (includes a number of mature trees, 5693m2).	Possible removal of a large number of trees to the east of Templeogue Road from Fortfield Road to Rathdown Park (includes a number of mature trees, 5693m2).	Possible removal of a number of trees to the east of Templeogue Road from Fortfield Road to Rathdown Avenue (trees from Bushy Park, 2814m2).	Possible removal of a large number of trees to the east of Templeogue Road from Fortfield Road to Rathdown Park (includes a number of mature trees, 5693m2).	Possible removal of a number of trees to the east of Templeogue Road from Fortfield Road to Lakelands Park (includes a number of mature trees, 4846m2).	Possible removal of a number of trees to the east of Templeogue Road from Fortfield Road to Lakelands Park (includes a number of mature trees, 4846m2).	Possible removal of a number of trees to the east of Templeogue Road from Fortfield Road to Lakelands Park (includes a number of mature trees, 4846m2).	Widening to the east of Templeogue road by <3.5m (possible removal of a number of trees, 2814m2).	Possible removal of a number of trees to the east of Templeogue Road from Fortfield Road to Lakelands Park (includes a number of mature trees, 4846m2).	Relocation of boundary wall & removal of a small proportion green area to the east of Templeogue Road from Fortfield Road to Lakelands Park (277m2).	Relocation of boundary wall & removal of a small proportion green area to the east of Templeogue Road from Fortfield Road to Lakelands Park (914m2).	No appreciable impacts.
	Rank												
	5D Soils, Geology & Hydrology	No appreciable impacts	No appreciable impacts	No appreciable impacts	No appreciable impacts	No appreciable impacts	No appreciable impacts	No appreciable impacts	No appreciable impacts	No appreciable impacts	No appreciable impacts	No appreciable impacts	No appreciable impacts
	Rank												

Table B1: Templeogue Road on approach to Terenure Village													
Appraisal Criteria	Sub-Criteria	Option S2-1	Option S2-2	Option S2-3	Option S2-4	Option S2-5	Option S2-6	Option S2-7	Option S2-8	Option S2-9	Option S2-10	Option S2-11	Option S2-12
5 Environment	5E Landscape & Visual	<p>Possible land acquisition along the eastern side of Templeogue Road from Fortfield Road to Rathdown Avenue (approx. 8m width 300m length, includes a number of mature trees).</p> <p>Possible land acquisition along the eastern side of Templeogue Road from the green area of Rathdown Drive (7.5-8.5m width 490m length, includes a number of mature trees).</p> <p>Possible land acquisition along the northern side of Templeogue Road between Rathdown Park and Terenure Cross from mainly residential properties, (<7.5m width 330m length). Removal of a number of car parking spaces from residential front curtilages and land acquisition from car dealership.</p>	<p>Possible land acquisition along the eastern side of Templeogue Road from Fortfield Road to Rathdown Avenue (approx. 8m width 300m length, includes a number of mature trees).</p> <p>Possible land acquisition along the eastern side of Templeogue Road from the green area of Rathdown Drive (7.5-8.5m width 490m length, includes a number of mature trees).</p> <p>Possible land acquisition along the northern side of Templeogue Road from mainly residential properties, (<0.7m width 230m length).</p> <p>Possible land acquisition along the northern side of Templeogue Road from car dealership, (<2m width 50m length).</p>	<p>Possible land acquisition along the eastern side of Templeogue Road from Fortfield Road to Rathdown Avenue (approx. 8m width 300m length, includes a number of mature trees).</p> <p>Possible land acquisition along the eastern side of Templeogue Road from the green area of Rathdown Drive (2.5-8.5m width 490m).</p> <p>Possible land acquisition along the northern side of Templeogue Road from mainly residential properties, (<0.7m width 305m length).</p> <p>Possible land acquisition along the northern side of Templeogue Road from car dealership, (<2m width 50m length).</p>	<p>Possible land acquisition along the eastern side of Templeogue Road from Fortfield Road to Rathdown Avenue (approx. 8m width 300m length, includes a number of mature trees).</p> <p>Possible land acquisition along the eastern side of Templeogue Road from the green area of Rathdown Drive (7.5-8.5m width 560m length, includes a number of mature trees).</p> <p>Possible land acquisition along the northern side of Templeogue Road between Rathdown Park and Terenure Cross from mainly residential properties, (<0.7m width 240m length).</p> <p>Possible land acquisition along the northern side of Templeogue Road between Rathdown Park and Terenure Cross from mainly residential properties, (<3.5m width 280m length).</p>	<p>Possible land acquisition along the eastern side of Templeogue Road from Fortfield Road to Rathdown Avenue (approx. 8m width 240m length, includes a number of mature trees).</p> <p>Possible land acquisition along the eastern side of Templeogue Road from the green area of Rathdown Drive (7.5-8.5m width 280m length, includes a number of mature trees).</p> <p>Possible land acquisition along the eastern side of Templeogue Road from the green area of Rathdown Drive (<5m width 280m length).</p> <p>Possible land acquisition along the northern side of Templeogue Road between Rathdown Park and Terenure Cross from mainly residential properties, (<3.5m width 280m length).</p>	<p>Possible land acquisition along the eastern side of Templeogue Road from Fortfield Road to Rathdown Avenue (approx. 8m width 240m length, includes a number of mature trees).</p> <p>Possible land acquisition along the eastern side of Templeogue Road from the green area of Rathdown Drive (<5m width 280m length).</p> <p>Possible land acquisition along the northern side of Templeogue Road between Rathdown Park and Terenure Cross from mainly residential properties, (<0.6m width 130m length).</p> <p>Possible land acquisition along the northern side of Templeogue Road from car dealership, (<1.4m width 50m length).</p>	<p>Possible land acquisition along the eastern side of Templeogue Road from Fortfield Road to Rathdown Avenue (approx. 8m width 240m length, includes a number of mature trees).</p> <p>Possible land acquisition along the eastern side of Templeogue Road from the green area of Rathdown Drive (7.5-8.5m width 280m length, includes a number of mature trees).</p> <p>Possible land acquisition along the eastern side of Templeogue Road from the green area of Rathdown Drive (<5m width 280m length).</p> <p>Possible land acquisition along the northern side of side of Templeogue Road between Rathdown Park and Terenure Cross from mainly residential properties, (<0.6m width 130m length).</p> <p>Possible land acquisition along the northern side of Templeogue Road from car dealership, (<1.4m width 50m length).</p>	<p>Possible land acquisition along the eastern side of Templeogue Road from Fortfield Road to Rathdown Avenue (approx. <3.5m width m length).</p> <p>Possible land acquisition along the eastern side of Templeogue Road from the green area of Rathdown Drive (<2.5width 560m length).</p> <p>Possible land acquisition along the northern side of Templeogue Road from car dealership, (<2m width 50m length).</p> <p>Possible land acquisition along the northern side of Templeogue Road between Rathdown Park and Terenure Cross from mainly residential properties, (<0.7m width 230m length).</p>	<p>Possible land acquisition along the eastern side of Templeogue Road from Fortfield Road to Rathdown Avenue (0.6-1.4m width 200m length). No removal of trees.</p> <p>Possible land acquisition along the eastern side of Templeogue Road from the green area of Rathdown Drive (0.1-0.8m width 90m). No removal of trees.</p> <p>Possible land acquisition along the eastern side of Templeogue Road from the green area of Rathdown Drive (<5m width 280m length).</p> <p>No land acquisition between Rathdown Park and Terenure Cross.</p>	<p>Possible land acquisition along the eastern side of Templeogue Road from Fortfield Road to Rathdown Avenue (1.6-2.4m width 240m length).</p> <p>Possible land acquisition along the eastern side of Templeogue Road from the green area of Rathdown Drive (0.8-1.8m width 140m length).</p> <p>Possible land acquisition along the eastern side of Templeogue Road from the green area of Rathdown Drive (0.4-1.2m width 310m length).</p>	No appreciable impacts.	
	Rank												
	5F Air Quality	<p>Possible impacts due to increased trafficking of road networks and increased proximity of vehicles to houses and gardens if bus lane installed on Templeogue Road.</p>	<p>The positive impact due to reduced trafficking by replacing the existing general traffic lanes on Templeogue Road from Rathdown Park to Terenure Cross will be exceeded by the negative impact due to the increased traffic on residential roads (Rathdown Park and Rathdown Avenue).</p>	<p>The positive impact due to reduced trafficking by replacing the existing general traffic lanes on Templeogue Road from Rathdown Park to Terenure Cross will be exceeded by the negative impact due to the increased traffic on residential roads especially Rathdown Park.</p>	<p>Possible impacts due to increased trafficking on residential roads and increased proximity of vehicles to houses and gardens if bus lane installed on Rathdown Park and Fergus Road.</p>	<p>Possible impacts due to increased trafficking of road networks and increased proximity of vehicles to houses and gardens if bus lane installed on Templeogue Road. Existing heavily traffic bus route already so potential for impacts is not as great.</p>	<p>Option S2-8 to Option S2-12 only permit inbound residential access for the entire section. This reduces the impact on Noise & Vibration and Air Quality. Option S2-6, however only replaces the existing outbound general traffic lane on Templeogue Road from Terenure Cross to Rathdown Park.</p>	<p>Option S2-8 to Option S2-12 only permit inbound residential access for the entire section. This reduces the impact on Noise & Vibration and Air Quality. Option S2-7, however only replaces the existing outbound general traffic lane on Templeogue Road from Terenure Cross to Rathdown Park.</p>	<p>S2-8 only permits residential access. This reduces the impact on Noise & Vibration and Air Quality. It also reduces the number of vehicles rerouting via residential roads such as and Rathdown Park due to proposed bus gates</p>	<p>S2-9 only permits inbound residential access. This reduces the impact on Noise & Vibration and Air Quality. However, possible impacts due to increased proximity of vehicles to residential premises, houses and gardens if bus lane installed.</p>	<p>S2-10 only permits residential access. This reduces the impact on Noise & Vibration and Air Quality. It also reduces the number of vehicles rerouting via residential roads such as and Rathdown Park due to proposed bus gates.</p>	<p>S2-11 only permits residential access. This reduces the impact on Noise & Vibration and Air Quality. It also reduces the number of vehicles rerouting via residential roads such as and Rathdown Park due to proposed bus gates.</p>	<p>S2-12 only permits residential access. This reduces the impact on Noise & Vibration and Air Quality. It also reduces the number of vehicles rerouting via residential roads such as and Rathdown Park due to proposed bus gates.</p>
	Rank												
	5G Noise & Vibration	<p>Possible impacts due to increased trafficking of road networks and increased proximity of vehicles to houses and gardens if bus lane installed on Templeogue Road.</p>	<p>The positive impact due to reduced trafficking by replacing the existing general traffic lanes on Templeogue Road from Rathdown Park to Terenure Cross will be exceeded by the negative impact due to the increased traffic on residential roads (Rathdown Park and Rathdown Avenue).</p>	<p>The positive impact due to reduced trafficking by replacing the existing general traffic lanes on Templeogue Road from Rathdown Park to Terenure Cross will be exceeded by the negative impact due to the increased traffic on residential roads especially Rathdown Park.</p>	<p>Possible impacts due to increased trafficking on residential roads and increased proximity of vehicles to houses and gardens if bus lane installed on Rathdown Park and Fergus Road.</p>	<p>Possible impacts due to increased trafficking of road networks and increased proximity of vehicles to houses and gardens if bus lane installed on Templeogue Road. Existing heavily traffic bus route already so potential for impacts is not as great.</p>	<p>Option S2-8 to Option S2-12 only permit inbound residential access for the entire section. This reduces the impact on Noise & Vibration and Air Quality. Option S2-6, however only replaces the existing outbound general traffic lane on Templeogue Road from Terenure Cross to Rathdown Park.</p>	<p>Option S2-8 to Option S2-12 only permit inbound residential access for the entire section. This reduces the impact on Noise & Vibration and Air Quality. Option S2-7, however only replaces the existing outbound general traffic lane on Templeogue Road from Terenure Cross to Rathdown Park.</p>	<p>S2-8 only permits residential access. This reduces the impact on Noise & Vibration and Air Quality. It also reduces the number of vehicles rerouting via residential roads such as and Rathdown Park due to proposed bus gates</p>	<p>S2-9 only permits inbound residential access. This reduces the impact on Noise & Vibration and Air Quality. However, possible impacts due to increased proximity of vehicles to residential premises, houses and gardens if bus lane installed.</p>	<p>S2-10 only permits residential access. This reduces the impact on Noise & Vibration and Air Quality. It also reduces the number of vehicles rerouting via residential roads such as and Rathdown Park due to proposed bus gates.</p>	<p>S2-11 only permits residential access. This reduces the impact on Noise & Vibration and Air Quality. It also reduces the number of vehicles rerouting via residential roads such as and Rathdown Park due to proposed bus gates.</p>	<p>S2-12 only permits residential access. This reduces the impact on Noise & Vibration and Air Quality. It also reduces the number of vehicles rerouting via residential roads such as and Rathdown Park due to proposed bus gates.</p>
Rank													

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Appraisal Criteria	Sub-Criteria	Option S2-1	Option S2-2	Option S2-3	Option S2-4	Option S2-5	Option S2-6	Option S2-7	Option S2-8	Option S2-9	Option S2-10	Option S2-11	Option S2-12
5 Environment	5H Land Use Character	<p>Possible removal of a large number of trees to the east of Templeogue Road from Fortfield Road to Rathdown Park (includes a number of mature trees, 5693m2).</p> <p>Land acquisition along the northern side of Templeogue Road between Rathdown Park and Terenure Cross from mainly residential properties, (<7.5m width 330m length). Removal of a number of car parking spaces from residential front curtilages.</p> <p>The level of land take required entering Terenure Village would have an effect on the viability of the car dealership from being used for its intended use.</p>	<p>Possible removal of a large number of trees to the east of Templeogue Road from Fortfield Road to Rathdown Park (includes a number of mature trees, 5693m2).</p> <p>The level of land take required entering Terenure Village would have an effect on the viability of the car dealership from being used for its intended use.</p> <p>Restricted access to the commercial amenities (Terenure Village) due to the removal of general traffic lanes on Templeogue Road from Rathdown Park to Terenure Cross which would affect the viability of the facilities.</p>	<p>Possible removal of a large number of trees to the east of Templeogue Road in Bushy Park (includes a number of mature trees, 2814m2).</p> <p>The level of land take required entering Terenure Village would have an effect on the viability of the car dealership from being used for its intended use.</p> <p>Restricted access to the commercial amenities (Terenure Village) due to the removal of general traffic lanes on Templeogue Road from Fortfield Road to Terenure Cross which would affect the viability of the facilities.</p>	<p>Possible removal of a large number of trees to the east of Templeogue Road from Fortfield Road to Rathdown Park (includes a number of mature trees, 5693m2).</p> <p>Possible land acquisition along the northern side of Templeogue Road between on approach to Rathdown Road from mainly residential properties. Removal of a number of car parking spaces from residential front curtilages.</p> <p>The level of land take required entering Terenure Village would have an effect on the viability of the car dealership from being used for its intended use.</p>	<p>Possible removal of a large number of trees to the east of Templeogue Road from Fortfield Road to Rathdown Park (includes a number of mature trees, 4846m2).</p> <p>Possible land acquisition along the northern side of Templeogue Road between on approach to Rathdown Road from mainly residential properties. Removal of a number of car parking spaces from residential front curtilages.</p> <p>The level of land take required entering Terenure Village would have an effect on the viability of the car dealership from being used for its intended use.</p>	<p>Possible removal of a large number of trees to the east of Templeogue Road from Fortfield Road to Rathdown Park (includes a number of mature trees, 4846m2).</p> <p>The level of land take required entering Terenure Village would have an effect on the viability of the car dealership from being used for its intended use.</p> <p>Restricted access to the commercial amenities (Terenure Village) due to the provision of one-way traffic on Templeogue Road from Rathdown Park to Terenure Cross which would affect the viability of the facilities.</p>	<p>Possible removal of a large number of trees to the east of Templeogue Road from Fortfield Road to Rathdown Park (includes a number of mature trees, 4846m2).</p> <p>The level of land take required entering Terenure Village would have an effect on the viability of the car dealership from being used for its intended use.</p> <p>Restricted access to the commercial amenities (Terenure Village) due to the provision of one-way traffic on Templeogue Road from Rathdown Park to Terenure Cross which would affect the viability of the facilities.</p>	<p>Restricted access to the commercial amenities (Terenure Village) due to the removal of general traffic lanes on Templeogue Road from Fortfield Road Avenue to Terenure Cross which would affect the viability of the facilities.</p>	<p>Possible removal of a large number of trees to the east of Templeogue Road from Fortfield Road to Rathdown Park (includes a number of mature trees, 4846m2).</p> <p>Restricted access to the commercial amenities (Terenure Village) due to no inbound traffic along Templeogue Road from Rathdown Park to Terenure Cross which would affect the viability of the facilities.</p>	<p>Restricted access to the commercial amenities (Terenure Village) due to no inbound traffic along Templeogue Road from Rathdown Park to Terenure Cross which would affect the viability of the facilities.</p>	<p>Restricted access to the commercial amenities (Terenure Village) due to no inbound traffic along Templeogue Road from Rathdown Park to Terenure Cross which would affect the viability of the facilities.</p>	<p>Restricted access to the commercial amenities (Terenure Village) due to no inbound traffic along Templeogue Road from Rathdown Park to Terenure Cross which would affect the viability of the facilities.</p>
	Rank												