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Clongriffin
to City Centre

Draft Preferred Route Options Report

November 2020



Project Ireland 2040
Building Ireland's Future

BUS CONNECTS

SUSTAINABLE TRANSPORT FOR A BETTER CITY.

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National Transport Authority

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Appendix A – Feasibility and Options Assessment Report

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Glossary of Technical Terms

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

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

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

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

Virtual Bus Priority – This refers to cases where physical bus priority (i.e. bus lanes) is not provided, and instead, bus priority is provided within the general traffic lane through the use of signal controlled priority or bus gates to control the movements of general traffic.

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

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

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

Executive Summary

Introduction

The purpose of this report is to present an overview of the draft Preferred Route Option (PRO) for the 'Clongriffin to City Centre' Core Bus Corridor (CBC) as well as describing the options assessed, and changes made to the scheme since the public consultation in early 2019.

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

The objectives are to:

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

Scheme Overview & Assessment Process

The Clongriffin to City Centre CBC commences at Clongriffin DART Station and is routed via Clongriffin Main Street which will be extended to join the Malahide Road at a new junction to the north of the Clare Hall Junction. The CBC is then routed via Malahide Road to the junction with Marino Mart/Fairview. From Marino Mart/Fairview the CBC ties into a separate project, Clontarf to City Centre Cycle Scheme currently proposed by Dublin City Council and is not considered as part of this report.

Where substantial revisions have been made to the design since the publication of the Emerging Preferred Route (EPR) Option in November 2018, options have been assessed using a Multi-Criteria Assessment (MCA) to determine the draft preferred option. The methodology used is consistent with that carried out during the initial route optioneering work which informed the EPR Option. This additional assessment does not supersede work done during earlier stages but rather complements it and is a direct response to issues raised by the public during the public consultation process. This assessment has also been carried out in the context of more detailed information now available, including topographical survey.

The following list highlights the material scheme changes between the published EPR Option and the draft PRO:

- Between Kilmore Road junction and Killester Avenue, it is proposed to move the western cycle track and footpath inside the green area to minimise any impact on the existing wall and trees.
- Between Killester Avenue junction and Collins Avenue the road alignment has been changed which will allow the retention of the mature trees and heritage wall.
- Between Griffith Avenue junction and Clontarf Road junction it is proposed to close Haverty Road to general traffic at St Aidan's Park to create a quiet street for cyclists.

1. Introduction and Background

1.1 Introduction

The BusConnects Dublin - Core Bus Corridors Infrastructure Works (herein after called the CBC Infrastructure Works) involves the development of continuous bus priority infrastructure and improved pedestrian & cycling facilities on sixteen radial core corridors in the Greater Dublin Area, across the local authority jurisdictions of Dublin City Council, South Dublin County Council, Dún Laoghaire-Rathdown County Council, Fingal County Council, and Wicklow County Council. Overall the CBC Infrastructure Works encompasses the delivery of approximately 230km of dedicated bus lanes and 200kms of cycle tracks along 16 of the busiest corridors in Dublin.

The Transport Strategy for the Greater Dublin Area 2016 – 2035 sets out a network of the bus corridors forming the “Core Bus Network” for the Dublin region. Sixteen indicative radial core bus corridors were initially identified for redevelopment. This is shown in Figure 1.1 below (extract from Transport Strategy for the Greater Dublin Area 2016-2035):

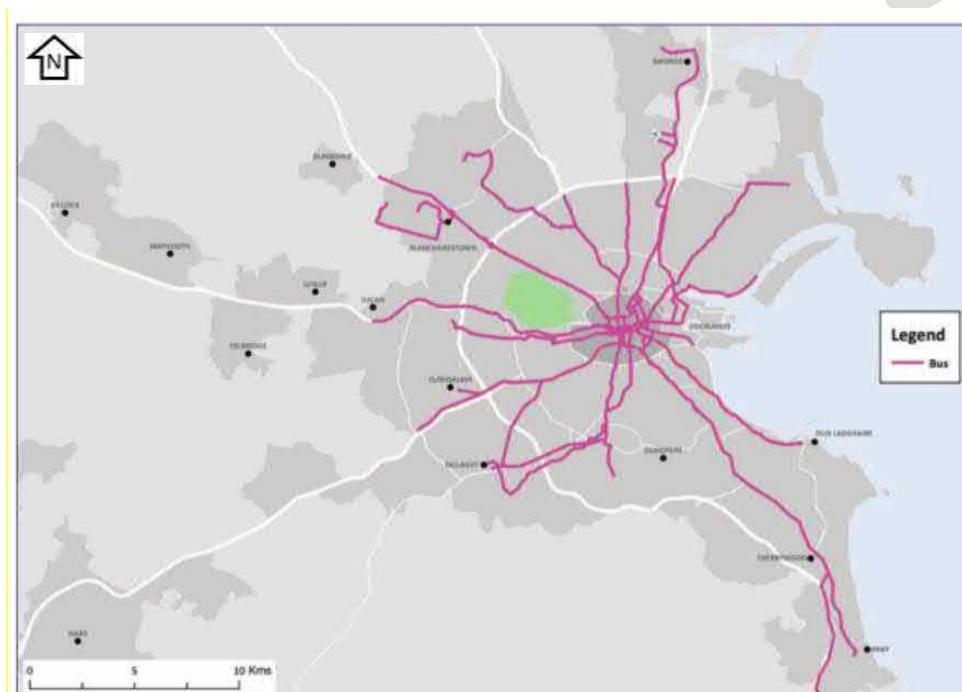


Figure 1-1: 2035 Core Bus Network – Radial Corridors.

These corridors had dedicated bus lanes along only less than one third of their lengths which meant that for most of the journey, buses and cyclists were competing for space with general traffic and were negatively affected by the increasing levels of congestion. This resulted in delayed buses and unreliable journey times for passengers. The sixteen indicative radial core bus corridors are:

- Clongriffin to City Centre Core Bus Corridor;
- Swords to City Centre Core Bus Corridor;
- Ballymun to City Centre Core Bus Corridor;
- Finglas to Phibsborough Core Bus Corridor;
- Blanchardstown to City Centre Core Bus Corridor;
- Lucan to City Centre Core Bus Corridor;
- Liffey Valley to City Centre Core Bus Corridor;
- Clondalkin to Drimnagh Core Bus Corridor;
- Greenhills to City Centre Core Bus Corridor;

- Tallaght to Terenure Core Bus Corridor;
- Kimmage to City Centre Core Bus Corridor;
- Rathfarnham to City Centre Core Bus Corridor;
- Bray to City Centre Core Bus Corridor;
- UCD Ballsbridge to City Centre Core Bus Corridor;
- Blackrock to Merrion Core Bus Corridor; and
- Ringsend to City Centre Core Bus Corridor.

1.2 Background

The aim of the CBC Infrastructure Works is to provide enhanced walking, cycling and bus infrastructure on key access corridors in the Dublin region, which will enable and deliver efficient, safe, and integrated sustainable transport movement along these corridors.

The objectives are to:

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

In June 2018 the National Transport Authority (NTA) published the Core Bus Corridors Project Report. The report was a discussion document outlining proposals for the delivery of a CBC network across Dublin. The 'Clongriffin to City Centre CBC' is identified in this document as forming part of the radial Core Bus Network. The BusConnects radial CBC network is shown in in Figure 1.2, with the Clongriffin CBC highlighted in Red.

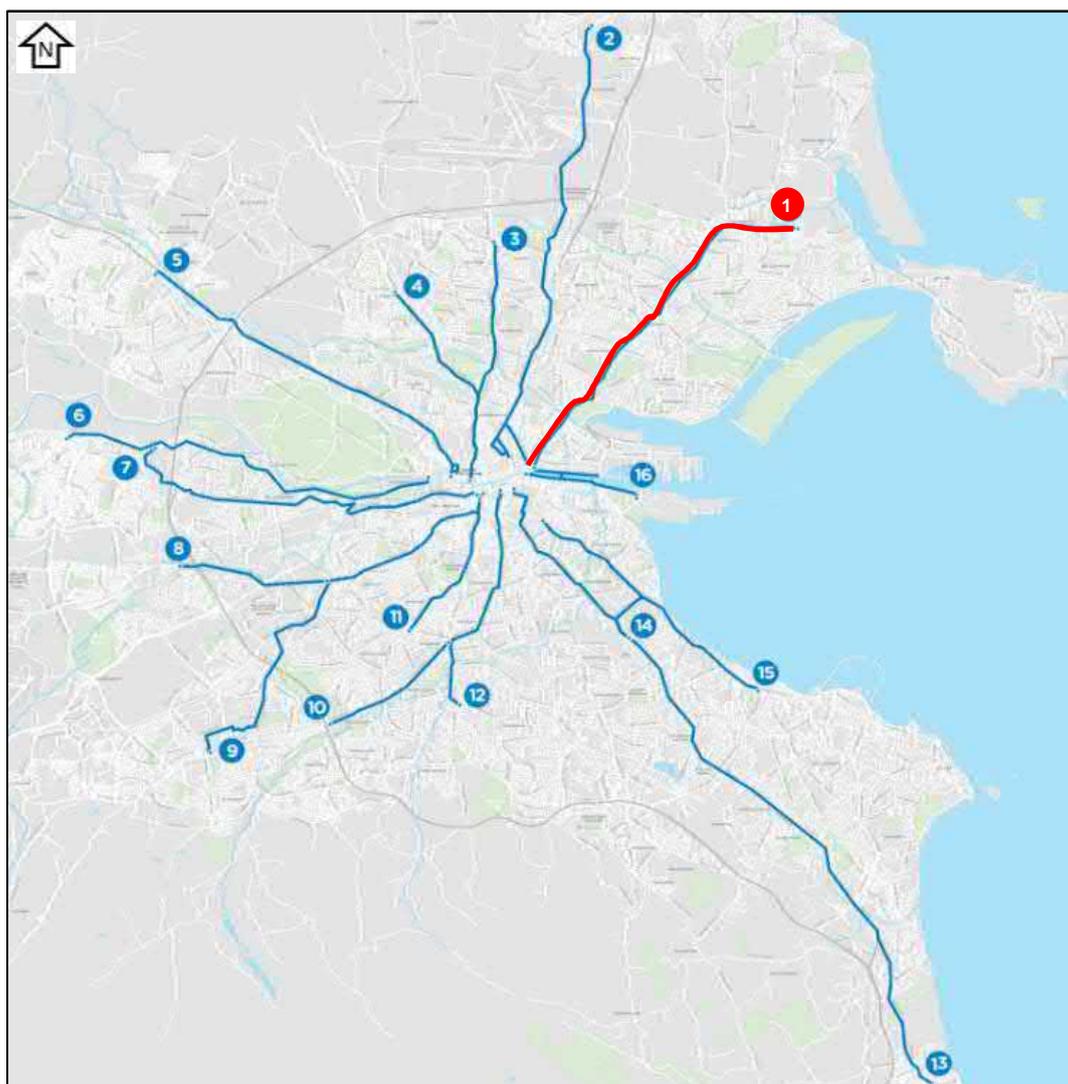


Figure 1-2: BusConnects Radial CBC Network.

Following this, a public consultation for the sixteen radial CBCs took place on a phased basis from November 2018 to May 2019. As part of this process the ‘Clongriffin to City Centre Core Bus Corridor CBC Feasibility Study and Options Assessment Report’ was published, which identified feasible options along the corridor, assessed these options and arrived at an EPR Option. During this public consultation submissions were invited from the public to provide comment on the EPR Option proposals and to inform subsequent design stages. A second round of public consultation commenced on 4th March 2020 and ran until the 17th of April 2020 when submissions were once again invited from the public on the draft PRO.

A comprehensive review of feedback received during both public consultations has been undertaken. Based on this review, as well as availability of new information (e.g. topographical survey), alternative options have been considered in a number of areas along the Clongriffin to City Centre route which seek to address issues of concern to the public, as well as general refinements to the scheme to reduce the overall impact of the proposals, while still achieving the objectives of the scheme.

This report presents a summary of the issues raised in the public consultations and details the alternative options considered, and assessment of same, in order to identify a draft Preferred Route Option (PRO).

1.3 Approach for this Report

This 'Draft Preferred Route Option Report' has been prepared for the Clongriffin to City Centre CBC (the CBC), which will build on the previous 'Clongriffin to City Centre Core Bus Corridor CBC Feasibility Study and Options Assessment Report'.

The Study Area Analysis and Multi Criteria Analysis for the previously proposed feasible route options are considered to still be valid unless otherwise detailed and updated in this draft PRO Report. Any additional design work or optioneering has been assessed against the previously identified EPR Option in order to determine the draft PRO. Additional design development and the resulting updated draft PRO drawings referenced in this report have been based on:

- Updated topographical survey information;
- Output from public engagement and consultation activities on the EPR Option and Draft Preferred Route Option Proposals;
- Clarifications to the previous assessment in the 'Clongriffin to City Centre Core Bus Corridor CBC Feasibility Study and Options Assessment Report';
- Further design development and options assessment; and
- Change in the extent of the scheme.

This report has been prepared for the Clongriffin to City Centre Corridor, which has built upon the previously prepared Feasibility and Options Assessment Report.

1.4 Report Structure

This report shall be structured as follows:

- Chapter 2: Planning and Policy Context – This chapter outlines the general background information to the CBC Infrastructure Works. It also outlines the policy context in which the CBC was developed and presents the concept of the CBC network as outlined in the Transport Strategy for the Greater Dublin Area 2016-2035 (NTA 2015) and the CBC Infrastructure Works.
- Chapter 3: Background and Public Consultation – This chapter outlines the summary of the non-statutory public consultation process.
- Chapter 4: Study Area – In this chapter, the study area for the CBC is detailed. The integration of the scheme with existing and planned transport networks is considered, along with considerations of the scheme for other road users.
- Chapter 5: Review of the 'Clongriffin to City Centre Core Bus Corridor CBC Feasibility Study and Options Assessment Report' – This chapter is a summary of the options assessment that was previously carried out in each section of the 'Clongriffin to City Centre Core Bus Corridor CBC Feasibility Study and Options Assessment Report'. An assessment has been made on the validity of the previous options assessment in the context of additional information collected, including through more detailed survey work undertaken and feedback from the public consultation process. Issues arising and material changes resulting from the design development are detailed.
- Chapter 6: Option Assessment – This chapter subsequently updates the previous options assessment work undertaken in light of the additional considerations set out in Chapter 5.
- Chapter 7: Preferred Route Option – This chapter gives the overall conclusions of the options assessment process and describes the draft PRO proposal.
- Chapter 8: Next Steps – This chapter details the "next steps" in the delivery of the CBC.

The Appendix contains background information for this corridor including the Route Feasibility and Options Assessment Report (see Appendix A) and the Emerging Preferred Route Brochure (see Appendix C).

2. Planning and Policy Context

2.1 Introduction

This chapter summarises a review of transport and planning policy which is relevant to the route selection process for this CBC. Specific details for each of the policies and how the proposed road development complies with these, and more local and regional policies, are outlined below:

- Transport Strategy for the Greater Dublin Area, 2016-2035;
- Greater Dublin Area Cycle Network Plan;
- Dublin City Council Development Plan 2016-2022; and
- The Clongriffin-Belmayne (North Fringe) Local Area Plan 2012-2018.

2.2 Greater Dublin Area Transport Strategy (2016-2035).

The CBC Infrastructure Works has evolved from and is a key component of the ‘Transport Strategy for the Greater Dublin Area 2016-2035’ (the ‘GDA Transport Strategy’), the purpose of which is “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 strategy identifies a “Core Bus Network”, representing the most important bus routes within the Greater Dublin Area, generally characterised by high passenger volumes, frequent services and significant trip attractors along the routes. The identified core network comprises sixteen radial bus corridors, three orbital bus corridors and six regional bus corridors. The indicative core radial bus network is shown in Figure 2.1.

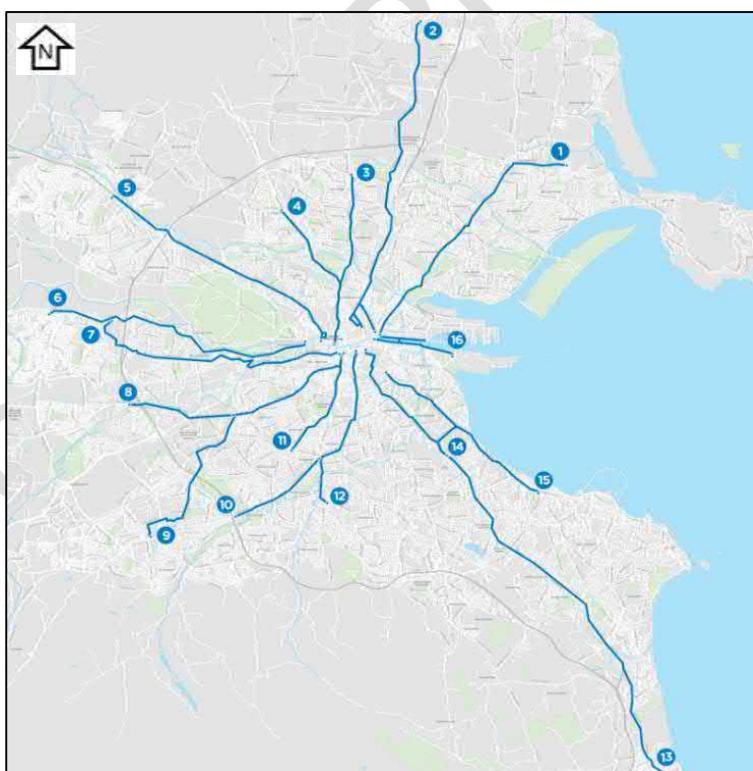


Figure 2-1: Radial Core Bus Corridors

The GDA Transport Strategy states that it is intended to provide continuous bus priority, as far as is practicable, along the core bus routes. This will result in a more efficient and reliable bus service with lower journey times, increasing the attractiveness of public transport in these areas and facilitating a shift to more sustainable modes of transport.

The Clongriffin to City Centre CBC was identified as a BRT corridor, Clongriffin to Tallaght Bus Rapid Transit (BRT) Route, in this strategy. As design and planning work progressed on all CBC's, it became clear that the level of differentiation between the BRT corridors and the Core Bus Corridors would, ultimately, be limited, and that all of the Core Radial Bus Corridors should be developed to provide a BRT level of service. Therefore the 2 BRT corridors in this Strategy have now been subsumed into the CBC programme with all routes providing a similar level of bus priority.

2.3 Greater Dublin Area Cycle Network Plan

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

There are a number of primary (Routes 1C, NO4) and secondary (Routes NO3, NO4, NO5) cycle routes identified along the Clongriffin to City Centre Corridor. During the course of the analysis carried out to identify the preferred core bus corridor, the provision of these cycle routes was considered at all stages. Therefore, as part of the options assessment process, any upgrading of infrastructure to provide bus priority also needs to consider and provide for the required cycling infrastructure, where practicable, to the appropriate level and quality of service (as defined by the NTA National Cycle Manual) required for primary and secondary cycle routes.

2.4 Dublin City Council Development Plan 2016-2022

The Dublin City Council (DCC) Development Plan recognises the challenge that transport has in making an important contribution to make towards achieving a sustainable city. These key challenges for the City are outlined as follows:

- *Effective integration of land-use and transportation, and the management of access and mobility.*
- *Pro-active engagement and collaboration with communities to bring about further modal shift and effective mobility management.*
- *The expansion of the strategic cycle network along all major water bodies including the River Liffey and the canals.*
- *Improving the city centre environment for pedestrians through public realm enhancements and through improvement of the strategic pedestrian network.*
- *Ensuring maximum benefits are achieved from public transport improvements including Luas cross-city and the anticipated Bus Rapid Transit network.*
- *Managing city centre road-space to best address the competing needs of public transport, pedestrians, cyclists, and the private car.*
- *Increasing significantly the existing mode share for active modes, i.e. walking and cycling, and supporting the forthcoming National Policy Framework for Alternative Fuels Infrastructure.*

Therefore, sustainable forms of transport such as public transport, walking, and cycling are strongly promoted in this plan, which takes a pro-active approach to influencing travel behaviour and effective traffic management.

Table 2.1: DCC Development Plan Objectives for Modal Change and Active Travel aligned with the proposed development

Movement and Transport: Promoting Modal Change and Active Travel	
MT2:	Whilst having regard to the necessity for private car usage and the economic benefit to the city centre retail core as well as the city and national economy, to continue to promote modal shift from private car use towards increased use of more sustainable forms of transport such as cycling, walking and public transport, and to co-operate with the NTA, Transport Infrastructure Ireland (TII) and other transport agencies in progressing an integrated set of transport objectives. Initiatives contained in the government's 'Smarter Travel' document and in the NTA's draft transport strategy are key elements of this approach.

Table 2.2: DCC Development Plan Objectives for Public Transport aligned with the proposed development

Movement and Transport: Public Transport	
MT3:	To support and facilitate the development of an integrated public transport network with efficient interchange between transport modes, serving the existing and future needs of the city in association with relevant transport providers, agencies and stakeholders.
MT4:	To promote and facilitate the provision of Metro, all heavy elements of the DART Expansion Programme including DART Underground (rail interconnector), the electrification of existing lines, the expansion of Luas, and improvements to the bus network in order to achieve strategic transport objectives.
MT5:	To work with the relevant transport providers, agencies and stakeholders to facilitate the integration of active travel (walking, cycling etc.) with public transport, thereby making it easier for people to access and use the public transport system.
MT6: (i)	To work with Iarnród Eireann, the NTA, TII and other operators to progress a coordinated approach to improving the rail network, integrated with other public transport modes to ensure maximum public benefit and promoting sustainable transport and improved connectivity.

2.5 The Clongriffin-Belmayne (North Fringe) Local Area Plan 2012-2018

The Clongriffin – Belmayne (North Fringe) Local Area Plan 2012 the life of the plan was extended for a further 5 years in 2017.

The Local Area Plan seeks the preparation of an integrated Masterplan for the lands. The development of the Masterplan lands is to supplement and underpin the growth of the new housing areas at Belmayne and Clongriffin in Dublin 13. The development of the wider area, known as Clongriffin – Belmayne (North Fringe), has been on-going since 2000 and the areas' strategic importance for providing housing for the City is reflected in Regional and National planning policy.

Table 2.3: Clongriffin - Belmayne (North Fringe) Local Area Plan 2012 Plan Key Movement and Transport Policies

Key Movement and Transport Policies	
MTP1:	To facilitate the completion of the existing road infrastructure network as identified in the movement and transport strategy.
MTP2	To promote co-ordination with Fingal County Council in the implementation of the trans-boundary road projects including completion of the Main Street into the Baldoyle/Stapolin LAP for public transport, walking and cycling priority, works to the junction of the R107/R139 and Drumnigh Cross re-alignment.
MTP3	To promote increased cycling and pedestrian activity by the development of cycle and pedestrian network of routes that connect with local parks, community facilities, employment areas, retail areas and public transport facilities.

Table 2.4: Clongriffin - Belmayne (North Fringe) Local Area Plan 2012 Plan Key Movement and Transport Objectives

Movement and Transport Objectives	
MTO1:	To develop routes through sites that are likely to remain vacant in the long term, as pedestrian/cyclists routes, eliminate barriers to movement and provide significantly enhanced permeability and through access to adjoining streets that are safe and pleasant to use by all.
MTO2:	To provide new patterns of pedestrian and cycle movement in both the east-west and north-south directions throughout the area that is coherent, direct, safe and convenient
MTO4	To facilitate enhanced patronage and efficient utilisation of public transport and promote walking and cycling, through a range of means including a reduced provision of car parking for commercial development
MTO6	To undertake an area wide traffic management plan including a review of the traffic operations of the R139/R107 Junction and Grange Road/Kilbarrack Road/Raheny Road Junctions
MTO10	That the design of all streets fully comply with the design standards and requirements of the Roads and Traffic Department of Dublin City Council to facilitate the orderly taking in charge process for all public roads. Requirements of Dublin City Council for street design including public lighting, traffic and pedestrian control signalling, street signage and traffic calming shall be ascertained at the design stages and completed if requested before taking in charge.
MTO12:	To liaise with Dublin Bus and the NTA on the operation of bus services and alignment of bus routes through the area having regard to the location of new housing, community facilities and other services and new street completions (offering the potential for new route options) as they occur in the LAP area.

2.6 The Aim of the BusConnects Core Bus Corridor Infrastructure Works

The aim of the BusConnects Infrastructure Works is to transform Dublin's bus system, with the CBC project aiming to provide 230kms of dedicated bus lanes and 200km of cycle lanes on sixteen of the busiest bus corridors in and out of the city centre. This project is fundamental to addressing the congestion issues in the Dublin region with the population due to grow by 25% by 2040, bringing it to almost 1.55m.

Across Dublin, 67% of public transport journeys each day are made by bus, carrying three and four times the number of passengers that travel on the Luas or Dart and commuter rail. The popularity of cycling to work has also increased in popularity, up by 43% since 2011. Through the development of continuous bus priority and segregated cycle lanes we can meet the growing demand for fast, reliable, punctual and convenient bus journeys in and out of the city centre, and safe cycling facilities for this growing numbers of cyclists.

2.7 The Core Bus Corridor Objectives

The objectives are to:

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

- Enable compact growth, regeneration opportunities and more effective use of land in Dublin, for present and future generations, through the provision of safe and efficient sustainable transport networks;
- Improve accessibility to jobs, education and other social and economic opportunities through the provision of improved sustainable connectivity and integration with other public transport services; and
- Ensure that the public realm is carefully considered in the design and development of the transport infrastructure and seek to enhance key urban focal points where appropriate and feasible.

Work in Progress

3. Background and Public Consultation

3.1 Existing Bus Services

The Clongriffin Corridor is the busiest, non-interurban, bus routes in Dublin carrying over 8,400 passengers in the peak periods (2017 Quality Bus Corridor Monitoring Report, NTA). The primary bus routes along the Clongriffin Corridor are indicated in Figure 3.1 and listed below:

- Route 14 - From Beaumont (Ardlea Rd.) To Dundrum Luas Station
- Route 15 - From Clongriffin To Ballycullen Rd.
- Route 27 - From Clare Hall To Jobstown
- Route 27a - From Eden Quay To Blunden Drive
- Route 27b - Eden Quay To Harristown
- Route 27x - From UCD Belfield Towards Clare Hall
- Route 42 - From Talbot St. Towards Sand's Hotel (Portmarnock)
- Route 43 - From Talbot St. To Swords Business Park



Figure 3-1: Dublin Bus Core Routes –
Serving Malahide Road to Clongriffin

Figure 3.2 to Figure 3.5 uses information obtained from the Bus Routes Automatic Vehicle Location (AVL) data over a typical period in 2019. The bus journey times for the route between Connolly Station and Park Avenue (Clongriffin) during the AM and PM peak are observed to vary from 37 to 49minutes in the inbound direction and between 29 and 39minutes in the outbound direction. These figures also summarise the variation and the cumulative time during the inbound AM peak hour and the outbound PM peak hour. This illustrates that there is a reasonably consistent journey time along this corridor, which reflects the presence of the existing bus lanes over most of its length, however it also highlights that the journey time could be 10 minutes, or more, faster in the peak direction should improved bus priority be provided.

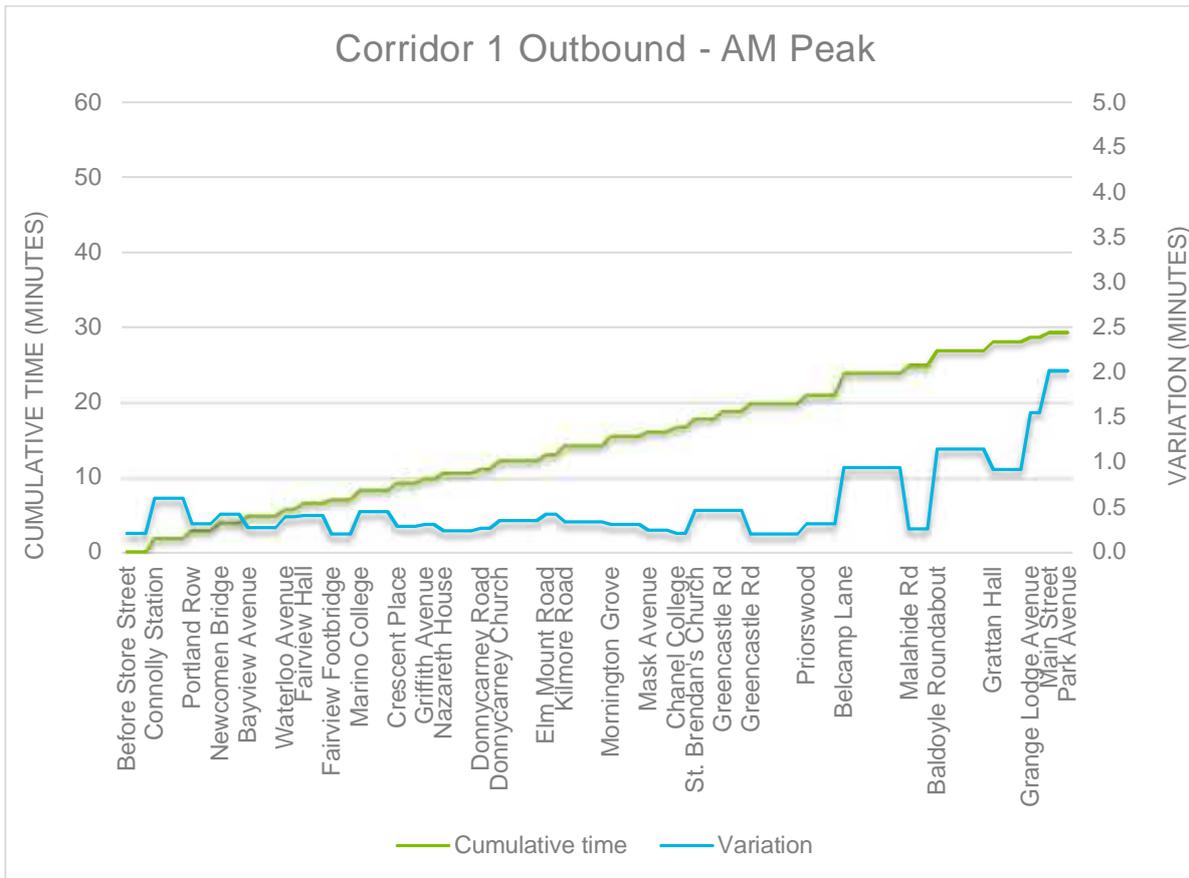


Figure 3-2: Clongriffin to City Centre, Outbound AVL AM Peak Times for Buses

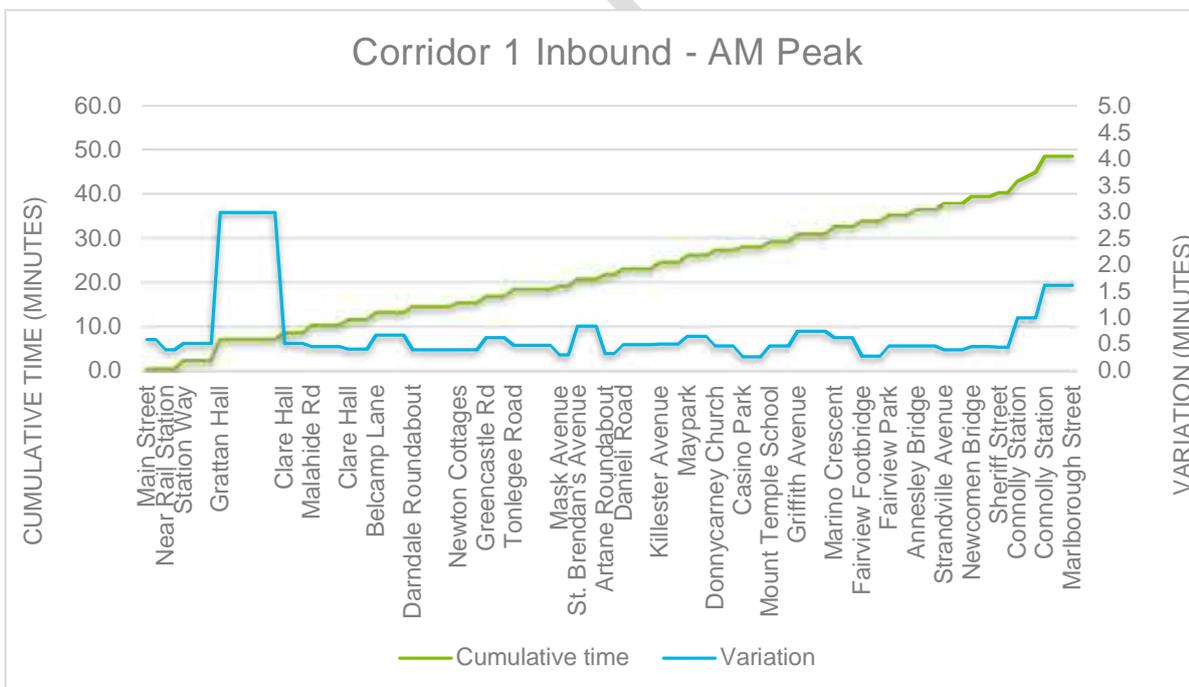


Figure 3-3: Clongriffin to City Centre, Inbound AVL AM Peak Times for Buses

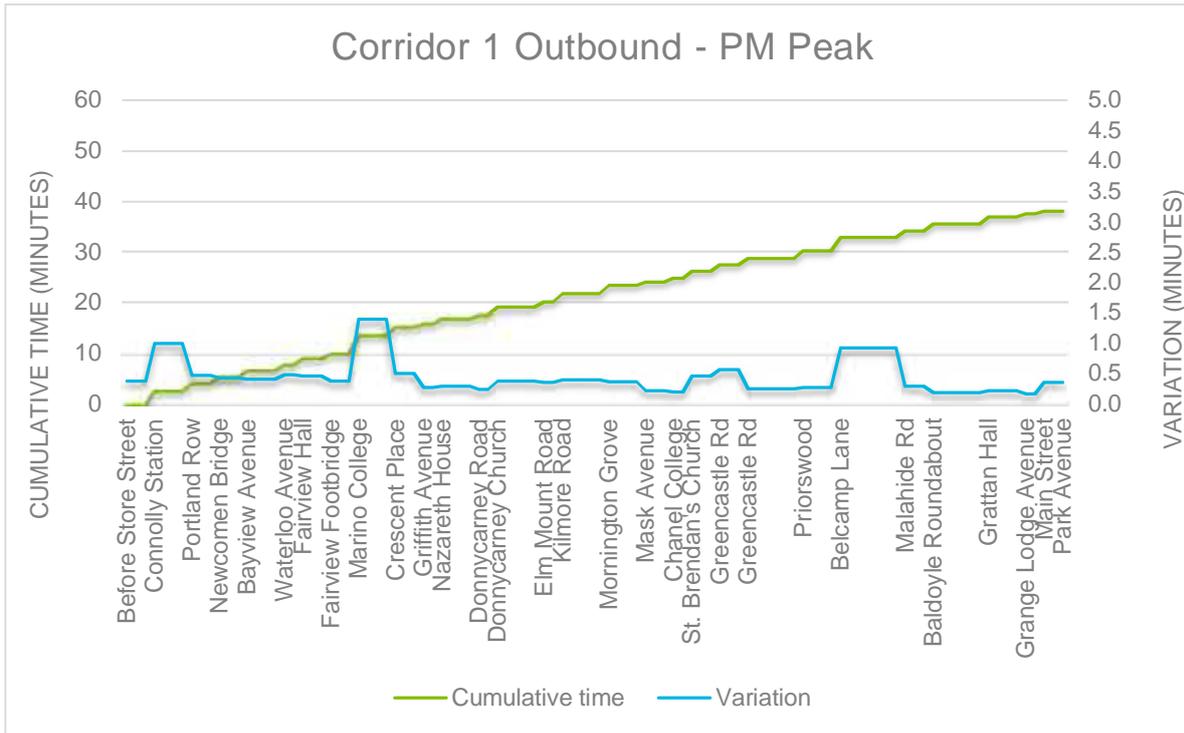


Figure 3-4: Clongriffin to City Centre, Outbound AVL PM Peak Times for Buses

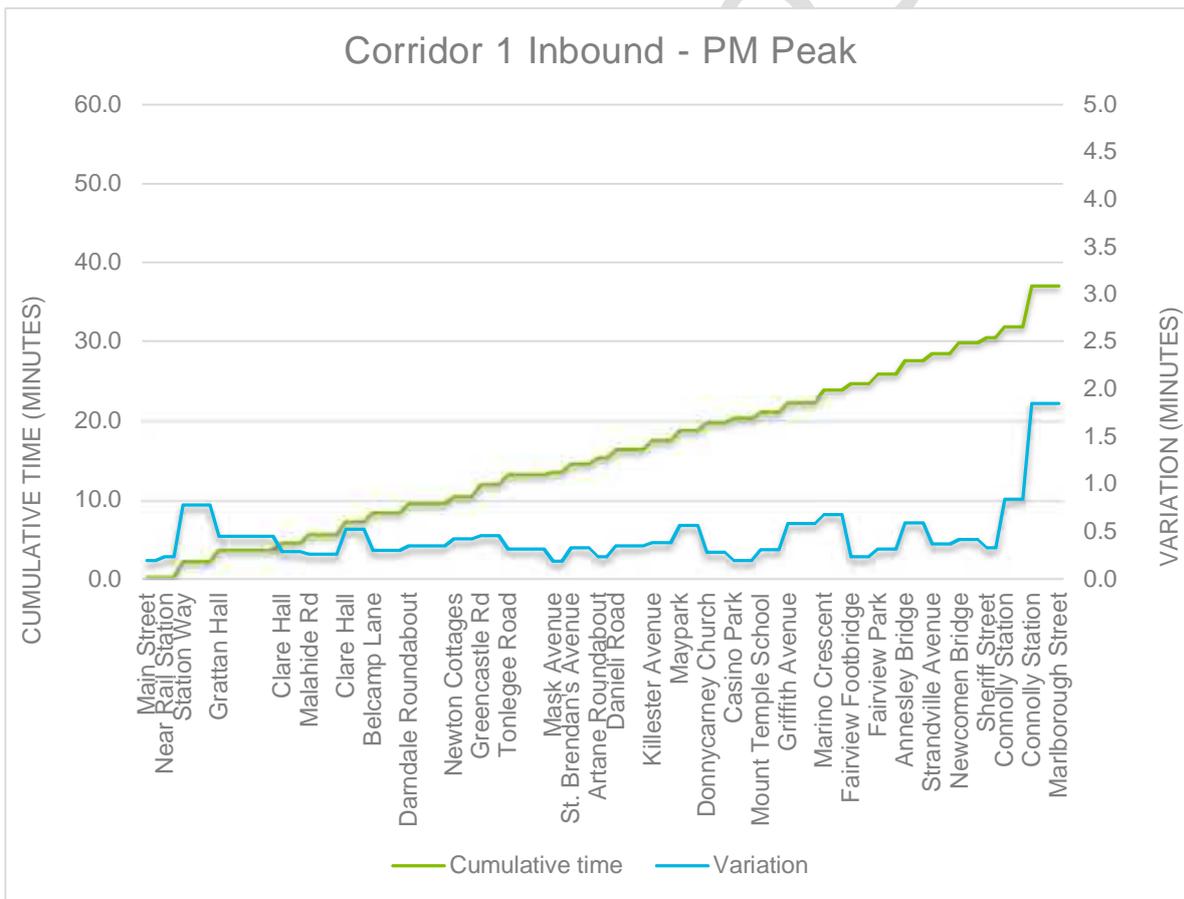


Figure 3-5: Clongriffin to City Centre, Inbound AVL PM Peak Times for Buses

3.2 Dublin Area Revised Bus Network

In 2017, the NTA began work on reviewing the Dublin Area Bus Network, in collaboration with bus operators and other stakeholders (incl. local authorities). Jarrett Walker and Associates, a transport planning practice with specific expertise in bus network redesign, was appointed to provide advice and technical support. The “Dublin Area Bus Network Redesign” project was launched by the NTA, which looked at the existing bus network and the radial Core Bus Network identified in the GDA Transport Strategy. The output from the Bus Network Review was published and available for public comment in August 2018 and again in October 2019.

Figure 3.6 indicates the final output from this study and illustrates that the D-Spine (D1,D2,D3,D4,D5) runs from the City Centre to the North East, serving areas along the Clongriffin Corridor. From the Clontarf Road/Malahide Road junction, Routes D1 to D5 will follow the same corridor, with bus headways of 5 minutes envisaged. Route D1 and Route D3 terminates at Clongriffin Dart Station. Route D2 will terminate near Clare Hall at the Belmayne Avenue/R139 Roundabout. Route D4 leaves the Malahide road at the Ardlea Road to head westward to Santry Park. Route D5 leaves the Malahide road at Gracefield Road to travel Eastwards and northwards to Blunden Drive

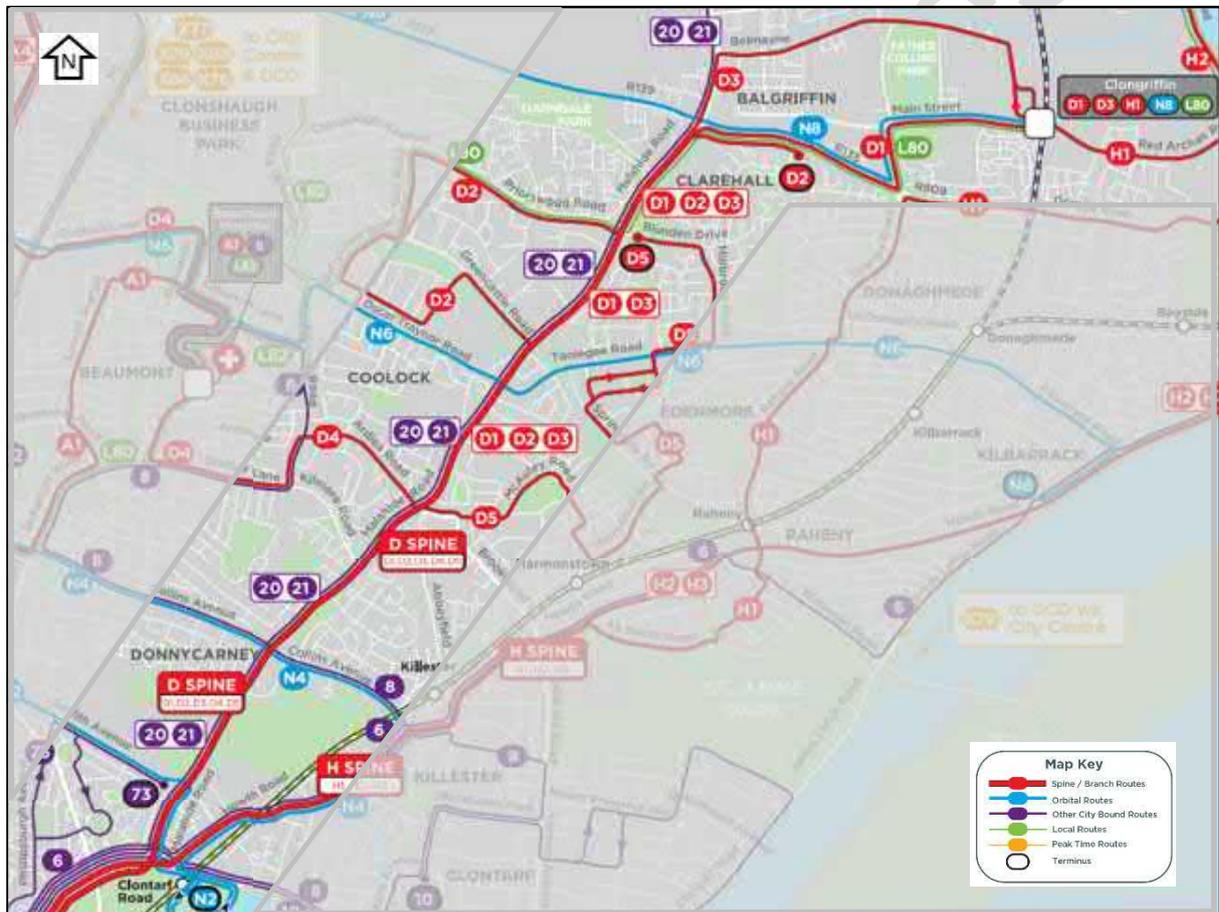


Figure 3-6: Revised Bus Network – North East Quadrant

3.3 Clongriffin to City CBC Feasibility Study and Options Assessment Report and Emerging Preferred Route

In early 2016, the NTA initiated plans to develop the network of CBCs identified in the GDA Transport Strategy. As part of this body of work, the 'Clongriffin to City Centre Core Bus Corridor CBC Feasibility Study and Options Assessment Report' (April 2018) was prepared which identified feasible options along the corridor, assessed these options and arrived at an EPR Option. These proposals formed the basis for the first Non-Statutory Public Consultation on this CBC corridor.

3.4 1st Non-Statutory Public Consultation – Emerging Preferred Route Option

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

There were 91 submissions received relating to the Clongriffin to City Centre CBC. These submissions ranged from individual submissions by residents, commuters and local representatives, to detailed proposals from public bodies, various associations and private sector businesses.

A brief summary of the feedback received on the Clongriffin to City Centre CBC during the public consultation is presented in this section of the report.

While a variety of matters were raised in the submissions, the key issues emerging from the consultation were as follows:

- Disability Access.
- Noncompliance with Design Standards.
- Cyclist Safety.
- Pedestrian Safety.
- Driver Safety.
- Environmental Issues.
- Local Heritage Concerns.
- Malahide Road Access.
- Marino/ Fairview Diversion.
- Loss (property value, revenue, loss of function / parking, future planning gain etc.).
- Suggestions and New Ideas.

3.5 Development of Draft Preferred Route Option

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

- Detailed topographical survey along the route corridor;
- Submissions received during the first non-statutory public consultation; and
- Issues raised during meetings with community forum, resident groups and one-on-one meetings with directly impacted landowners.

As part of this review, several new design options were developed for consideration in specific areas where issues were identified. These new design options were subject to further options assessment

as detailed in Section 6 of this report. The key route developments between the first round of consultation and the second are summarised below:

- Between Kilmore Road junction and Killester Avenue, it is proposed to move the northbound cycle track and footpath inside the green area to minimise any impact on the existing walls and trees.
- Between Killester Avenue junction and Collins Avenue the road alignment has been altered to allow the retention of the mature trees and stone wall.
- Between Griffith Avenue junction and Clontarf Road junction it is proposed to close Haverty Road to general traffic at St Aidan's Park Road to create a quiet street for cyclists.

3.6 2nd Non-Statutory Public Consultation – Draft Preferred Route Option

In March 2020 the Draft Preferred Route Option was published with the second round of public consultations running from the 4th March 2020 through to the 17th April 2020. A public consultation open day was held on Wednesday the 11th March 2020 in the Bonnington Hotel. While this public consultation was completed, due to Covid-19 restrictions being imposed by Government in mid-March the planned Public Information Events were impacted. Consequently, there were just 30 submissions received relating to this CBC. These submissions ranged from individual submissions by residents, commuters and local representatives, to detailed proposals from various associations and private sector businesses.

A brief summary of the feedback received on the Clongriffin to City Centre CBC during this second round of public consultation are presented below, in general the comments were similar to those received in the first round of consultation:

- Disability Access.
- Noncompliance with Standards.
- Pedestrian Safety.
- Driver Safety.
- Cyclist Safety.
- Environmental Issues.
- Local Heritage Concerns.
- Malahide Road Access.
- Marino/ Fairview Diversion.
- Loss (property value, revenue, loss of function / parking, future planning gain etc.).

No material changes have resulted from the 2nd round of public consultation.

4. Study Area

4.1 Introduction

In the previously completed Feasibility and Options Assessment Report, the study area was taken to consider roads within 500m of the existing bus corridor. The Clongriffin to City Centre CBC study area ran from Clongriffin to the City Centre at Custom House Quay. The study area was generally developed to include the main trip generators between the City Centre and Clongriffin either side of the central spine formed by the existing Malahide Road (R107)

Due to the size of the study area and the vast quantity of information that would need to be reviewed the area was divided into two sections as shown in Figure 4.1.

Following the first public consultation it was determined that the study area for the scheme does not need to be amended and therefore remains as shown and described in the Feasibility and Options Assessment Study.

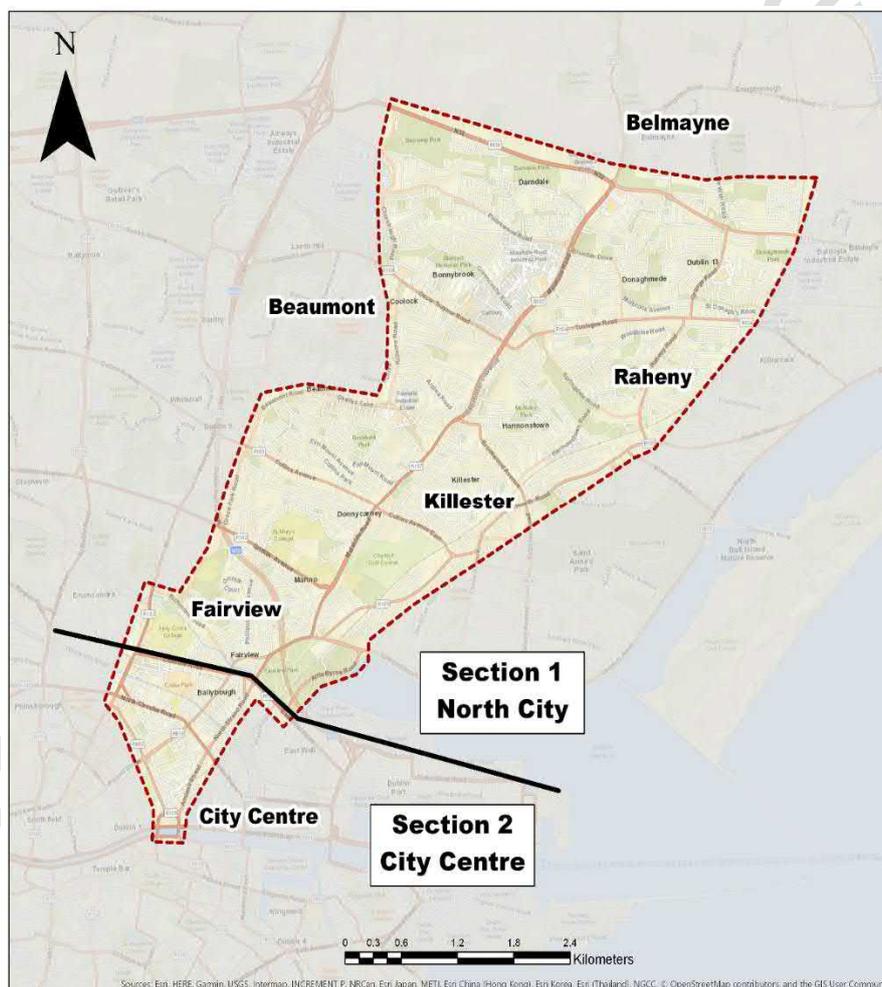


Figure 4-1: Study Area

4.2 Physical Constraints and Opportunities

As the study area has not altered from the previously published Feasibility and Options Assessment Report the noted potential physical constraints and opportunities remain valid.

- River Liffey, River Tolka and The Royal Canal (limited options for crossing restricts design options);
- Public transport infrastructure such as DART, LUAS, Dublin Bus and Irish Rail;
- Planned and committed developments including Belmayne/Clongriffin LAP;
- Trees and other natural and ecological features including rivers and streams;
- Architectural, archaeological and heritage sites and features;
- Protected structures adjacent to the route;
- Existing urban and sub-urban roads and street networks;
- Limited availability of land in urban and suburban areas; and
- Large blocks of land, such as Clontarf Golf Club and Ardscoild Rís

4.3 Integration with Existing and Proposed Public Transport Network

One of the key objectives of the proposed CBC scheme is to enhance interchange between the various modes of public transport operating in the city and wider metropolitan area, both now and in the future. The Emerging Preferred Route Option was developed to provide improved existing or new interchange opportunities with other transport services, including:

- DART stations;
- Existing Dublin Bus services at numerous locations along the route;
- LUAS;
- Greater Dublin Area Cycle Network Plan (GDACNP);
- Future public transport proposals such as DART Interconnector and Metro North; and
- Interface with Proposed Dublin Bus Network Re-design.

Figure 4.2 below is an extract from BusConnects Network Redesign maps and shows the different interfaces along the corridor between Clongriffin to Marino Mart/ Fairview which is primarily along D Spine.

5. Review of Previous Options and Feasibility Report

5.1 Introduction

Following a comprehensive review of the potential route options within the study area a 2-stage assessment process was used to narrow down the number of routes available to one optimal route per study area. These 2 routes then converged to form the overall Emerging Preferred Route Option which was presented at public consultation for information and feedback.

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

5.2 Assessment Methodology

The development of the Emerging Preferred Option during the feasibility and options stage was carried out in 2 stages. The first stage was a high-level route options assessment or 'sifting' process which appraised several potentially viable route options.

5.2.1 Stage 1 – Route Options Assessment – Sifting Stage

A 'spider's web' of route options was produced that would accommodate the objectives of the CBC for each study area as shown in Figure 5.1.

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

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

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

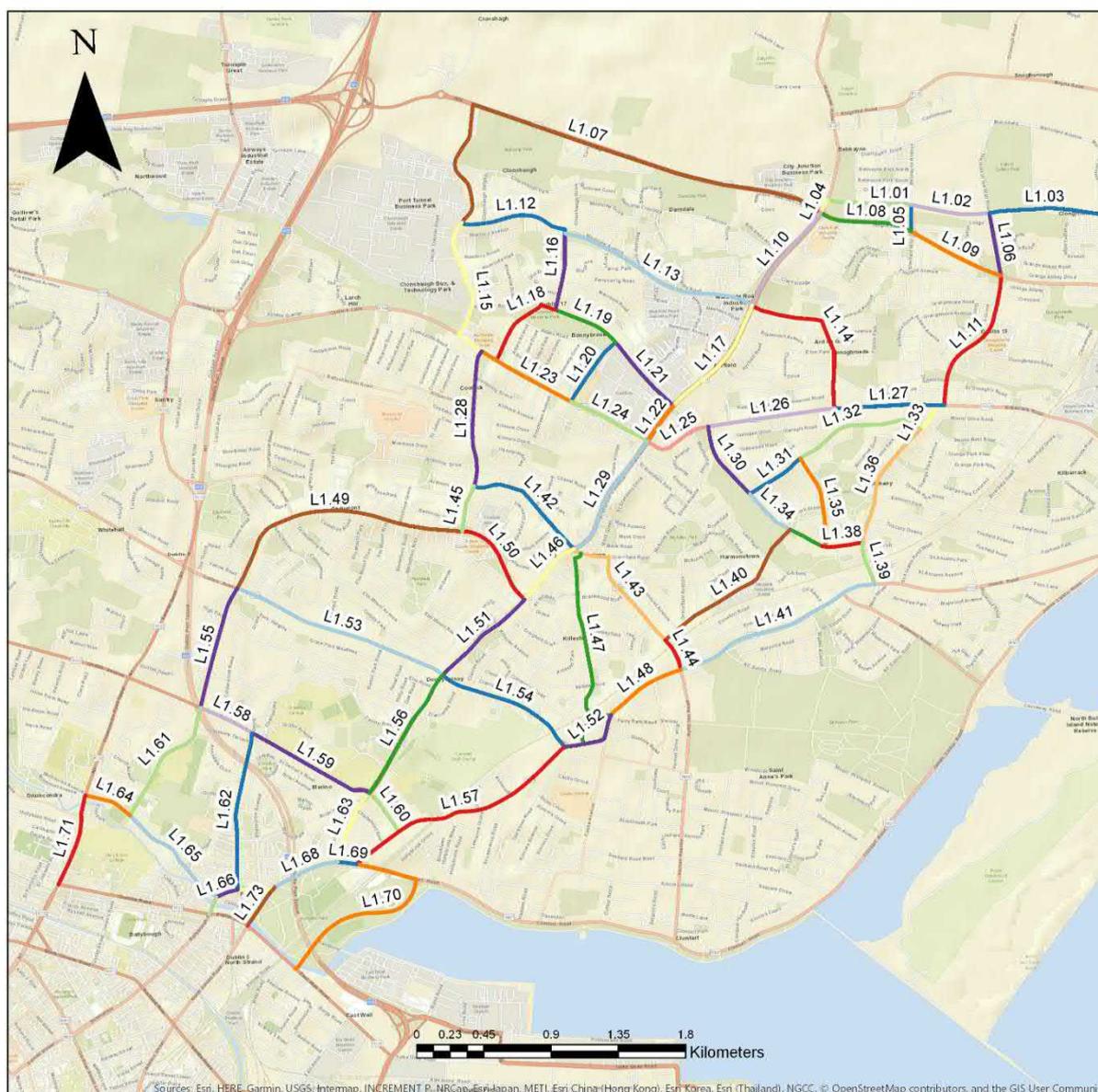


Figure 5-1: Spiders Web of Route Options

5.2.2 Stage 2 – Route Options Assessment – Detailed Assessment

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

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

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

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

Table 5.1 presents a summary of the CBC assessment criteria and sub criteria used as part of the Stage 2 detailed route options assessment process.

Table 5.1: Assessment Criteria

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

Following the application of the MCA the Emerging Preferred Route Option was carried forward to first round of public consultation.

5.3 Emerging Preferred Route Option Summary

5.3.1 EPR Option

The Emerging Preferred Route Option from Clontarf to Fairview is outlined below:

- The CBC commences at Clongriffin DART Station and is routed via Clongriffin Main Street which will be extended to join the Malahide Road at a new junction to the north of Clare Hall Junction. The CBC is then routed via Malahide Road to the junction with Marino Mart/Fairview. From here the CBC ties into a separate project, Clontarf to City Centre Cycle Scheme currently proposed by Dublin City Council.
- Bus lanes will be constructed along Clongriffin Main Street in accordance with the LAP, these have already been constructed in some locations. A new bus only junction will be constructed where Clongriffin Main Street meets Malahide Road and signals will provide priority for buses using the CBC route. Works on the junction with the R139 will allow for bus priority to be provided at the signals and enhance facilities for cyclists and pedestrians.
- Further south along the Malahide Road existing bus lanes will be used and segregated cycle lanes will be provided by using existing verge space or by reducing the width of the median where appropriate. All signalised junctions along this route will be upgraded to provide enhanced bus priority and pedestrian/cycle facilities. The existing roundabouts at Artane and at Priorswood Road junctions will be upgraded to signalised junctions. Some commercial parking north of the junction with Kilmore Road will be affected, along with land take from gardens which would result in a reduction in off-street parking capacity. Although parking for at least one car will still be possible in all of these properties.

- The Malahide Road will be widened to provide bus lanes on the sections where they do not currently exist, and new segregated cycle lanes will be provided for the whole length. Road widening can mostly be facilitated with land take from public green areas and parks. However, some additional land take from portions of front gardens would be required in the vicinity of Collins Avenue and south of Griffith Avenue. In these sections, the cross section will be reduced to minimise land take. Parking capacity in these gardens will be reduced, but parking will still be available.
- Malahide Road is constrained for the section between Brian Road and Clontarf Road junctions, here cyclists in both directions will be diverted along Haverty Road and Brian Road. Southbound cyclists will be required to cross the road twice and two new toucan/cycling crossings will need to be introduced.

5.3.2 Areas Identified for Re-Examination

Table 5-2 indicates the results of the multi-criteria assessment undertaken as part of the Feasibility and Options Assessment Study for the preferred route options for each section between Clongriffin and Fairview. Following the initial public consultation and review of the previous assessment no changes are proposed to the Emerging Preferred Route for this corridor. No rating has changed for any of these options, as such they are being taken forward as the Preferred Route Option for the Clongriffin to City Centre corridor.

Table 5-2: Clontarf to Fairview Assessment Summary for Preferred Route Options.

Assessment Criteria	Clongriffin to Clare Hall Route Option 1	Clare Hall to Kilmore Road Route Option 2
Economy	Green	Green
Integration	Green	Green
Accessibility & Social Inclusion	Yellow	Green
Safety	Yellow	Green
Environment	Green	Green

For the section south of Kilmore Road there is only one viable route along the Malahide Road for the remainder of this corridor. This is primarily due to the lack of north-south roads through this area and significant constraints such as Clontarf Golf Club. The proposed route from Clongriffin to Fairview (Figure 5.2) meets the scheme objectives and is the Preferred Route Option for this corridor for the following reasons:

- It delivers end-to-end bus lanes providing improved journey time reliability;
- It has a significantly lower capital cost than other routes;
- It has a faster and more reliable journey time than other routes; and
- It is more favourable under the Environmental criterion than other routes.



Figure 5-2: Preferred Route Option for the Clongriffin CBC

(Source: © OpenStreetMap Contributors)

While not impacting on the selection of the route option the following design options were considered as part of the development of the Preferred Route Option:

- Killester Avenue to Kilmore Road (Outbound) – separated footway to retain trees;
- Killester Avenue Junction to Collins Avenue (Inbound) – Realign road into Park to retain existing Mature Trees; and
- Closure of Haverty Road to general traffic to prevent “Rat-Running”.

These 3 design changes do not impact on the route selection and therefore have no impact on the outcome of this report; however, they have been outlined in more detail in Chapter 6 as they are significant changes to the design.

6. Options Assessment

6.1 Design Changes

As previously noted the EPR routing is being carried forward as the Preferred Route Option, although the following material design changes have been identified:

- Between Kilmore Road junction and Killester Avenue, it is proposed to move the western cycle track and footpath inside the green area to minimise any impact on the existing wall and trees.
- Between Killester Avenue junction and Collins Avenue the road alignment has been changed which will allow the retention of the mature trees and heritage wall.
- Between Griffith Avenue junction and Clontarf Road junction it is proposed to close Haverty Road to general traffic at St Aidan's Park to create a quiet street for cyclists

An overview of these changes is outlined in the following sections.

6.2 Kilmore Road Junction to Killester Avenue

The Emerging Preferred Route as outlined in the Feasibility and Option Assessment Report indicated there was a Cycle track and Footpath alongside the northbound carriageway in the northbound direction, towards Clongriffin.

On review of this scheme it became apparent that this proposal would have had a severe impact on the existing boundary wall and approximately 20 mature trees. To minimise the impact on both the wall and the trees an alternative proposal was looked at to move both the cycle track and footpath away from the carriageway and into the adjacent green area. In looking at this proposal we considered the following criteria Economy, Integration, Accessibility and Social Inclusion, Safety and Environment.

From an Economy, Integration and Accessibility and Social Inclusion perspectives it was concluded that this proposal was neutral compared to the original proposal.

Regarding safety it was noted that it was a slightly positive compared to the original proposal. It is noted that there was a potential personal security risk for users being slightly isolated from the main road though this is felt to be offset by having both cyclists and pedestrians being further away from the vehicular traffic and reducing the height of the wall between the green area and the paths so as pedestrians and cyclists are visible from the road at all times. In this regard it is also proposed to place lighting for the Cycle track and Footpath. This will allow better visibility to and from the road to the Cycle track and Footpath.

From an environmental perspective it was concluded that this proposal was advantageous in comparison to the original proposal in particular due to the retention of the existing trees, milestone and wall.

Table 6.1: Kilmore Road Junction to Killester Avenue Assessment

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

Therefore, the revised proposal, of setting back the footpath within the green area, is to be taken forward for design development as part of the Preliminary Design Process.

6.2.1 Killester Avenue Junction to Collins Avenue

The Emerging Preferred Route as outlined in the Feasibility and Option Assessment Report indicated the setting back of a stone wall to the front of Thorndale. On review of this scheme it became apparent that this proposal would have had a severe impact on the existing stone wall and approximately 22 mature and significant trees to the back of this wall.

To minimise the impact on both the wall and the trees an alternative proposal was looked at to retain the existing stone wall and relocate the road eastwards into May Park as an alternative. The effect of doing this is that the existing southbound footpath would be converted to a cycle track and to minimise the impact on the semi-mature trees within the park it is proposed to utilise the existing footpath within the park. This will require the existing park fence to be removed and a new footpath and railing to be constructed within the Park.

In looking at this proposal relative to the existing proposal we considered the following criteria Economy, Integration, Accessibility and Social Inclusion, Safety and Environment.

From an Economy, Integration and Accessibility and Social Inclusion, and Safety perspectives it was concluded that this proposal was neutral compared to the original proposal.

From an environmental perspective it was concluded that this proposal was preferable to the original proposal in particular due to the minimising the effects on the existing mature trees and the retention of the semi-mature trees within May Park by setting back the boundary further.

Table 6.2: Kilmore Road Junction to Killester Avenue Assessment

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

Therefore, the revised proposal, of realigning the Malahide Road towards May Park, is to be taken forward for design development as part of the Preliminary Design Process.

6.2.2 Closure of Haverty Road to general traffic

The Emerging Preferred Route as outlined in the Feasibility and Option Assessment Report indicated that traffic movements on Haverty Road would remain as per the existing situation, which is a peak hour turn ban, which is ignored by a substantial number of drivers. An example can be seen in Figure 6.1 which was taken during the hours of operation of the right turn ban at this location.



Figure 6-1: Right Turn from Marino Park Avenue to Haverty Road

Following feedback from the community where a request was made to prevent through traffic using this road, an assessment of the option was carried out and it was determined that it is feasible to close Haverty Road to general traffic at St Aidan's Park Road end thereby creating a quiet street for residences and cyclists.

In looking at this proposal we considered the following criteria Economy, Integration, Accessibility and Social Inclusion, Safety and Environment.

From an Economy, Integration and Accessibility and Social Inclusion perspectives it was concluded that this proposal was neutral compared to the original proposal.

Regarding safety it was noted that it was a slightly positive compared to the original proposal as the quantity of traffic would be limited to local traffic, removing the drivers using the area for shortcuts. It is noted that that emergency and refuse vehicles could find this proposal restrictive; it is therefore proposed to use a form of flexible barriers which would allow these vehicles use the junction at St Aidan's Park Road end if necessary.

From an environmental perspective it was concluded that this proposal was preferable to the original proposal due to the reduction of traffic on this narrow residential street.

Table 6.3: Closure of Haverty Road to general traffic Assessment

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

Therefore, the revised proposal, of closing Haverty Road to through traffic, is to be taken forward for design development as part of the Preliminary Design Process.

7. Draft Preferred Route Option

7.1 Introduction

This chapter of the report describes the Draft Preferred Route Option and concept scheme design for the Clongriffin to City Centre Corridor. The updated concept scheme design drawings are included in Appendix C of this report.

7.2 Draft Preferred Route Option Scheme Design Description

The 10km Clongriffin to City Centre CBC (7km Clongriffin to Fairview) begins at the DART Station in Clongriffin and continues to Dublin City Centre via Northern Cross, Coolock, Artane, Donnycarney, Marino and Fairview. In addition to the primary corridor a 800m alternative cycle route is provided between the Malahide Road and Fairview. The following section outlines a more detailed description of the corridor.

7.2.1 Clongriffin DART Station to Malahide Road via Clongriffin Main Street

At Clongriffin DART Station, it is proposed to retain the existing pedestrian, bus stop and bus turnaround facilities. It is intended to route buses through Clongriffin Main Street. Limited works are proposed for this existing section of the Main Street. Existing bus and cycle infrastructure will be maintained. It is proposed to extend the Main Street between the Hole in the Wall Road and Belmayne Avenue as per the Clongriffin/Belmayne Local Area Plan. A new section of road between Main Street and the Malahide Road will be constructed (previously permitted under separate DCC Part VIII process) with new junction to the north of Clare Hall junction incorporating bus lanes in both directions. A bus and cycle only section will be provided at this junction. General traffic will not be permitted to use this access. Access to Main Street for general traffic will remain unchanged through Belmayne.

7.2.2 Mayne River Avenue to Grace field Road – Malahide Road

The CBC is then proposed to be routed along the Malahide Road to the junction with the R105 at Marino Mart/Fairview. The following junctions are intended to be upgraded to provide bus priority and enhanced pedestrian and cyclist facilities:

- Malahide Road/R139 Clarehall Avenue;
- Malahide Road/Entrance to Clarehall Shopping Centre;
- Malahide Road/Blunden Drive/Priorswood Road;
- Malahide Road/Tonglegee Road/Brookville Crescent; and
- Malahide Road/Gracefield Road.

At Clarehall Avenue, it is proposed to modify this junction by removing the existing left turn slip road on each approach. It is intended to replace these slips roads with dedicated left turn lanes. On the northbound approach on the Malahide Road, it is proposed to extend the bus lane to the stop line. The Emerging Preferred Route Option published in November 2018 proposed to maintain the 60kph speed limit on the Malahide road between Clarehall Avenue and the existing roundabout at Gracefield Road, it is now proposed that the speed limit is reduced to 50kph from Clarehall Avenue towards the City Centre (DCC currently following the statutory process to make this change).

Between Clarehall Avenue and Blunden Drive, a single bus lane and two general traffic lanes will be maintained. The left slip road into the Clarehall Shopping Centre is intended to be removed, however, a dedicated left turn lane will be provided to service this traffic movement.

The Emerging Preferred Route published indicated the proposal to upgrade the existing roundabout on Blunden Drive to a fully signalised junction. This modification will involve the removal of some median hedging and trees, though compensatory planting will be placed at the junction. The layout of this junction has now been altered to provide more segregation for cyclists approaching and through the junction.

The proposed pedestrian and cycle track linking Ayrefield Drive and Malahide Road is still proposed, however the proposed Toucan crossing has been relocated to more directly align with this new access.

At the junction of Tonglegee Road/Brookville Crescent, it is intended to remove the existing left turn slip roads and modify the junction to include for left turn lanes. Accommodation will be made for the future provision of cycle facilities on Tonglegee Road and Brookville Crescent as part of these proposed junction modifications.

Between Tonglegee Road junction and Gracefield Road junction, it is intended to retain the single bus and general traffic lane in each direction. A northbound segregated cycle track will be provided between the Malahide Road and Brookville Park. Southbound cyclists are proposed to be redirected on to the adjoining quiet street, St. Brendan's Avenue. Cyclists can then re-join the Malahide Road at Gracefield Road.

The Emerging Preferred Route indicated the proposal to upgrade the existing roundabout at Gracefield Road to a fully signalised junction. As with most other junctions in the revised scheme the cycle facilities have been enhanced as part of the current review process with more segregation provided.

7.2.3 Gracefield Road and Clontarf Road–Malahide Road

Between Gracefield Road and Clontarf Road junctions, it is proposed to upgrade the following junctions on the Malahide Road:

- Malahide Road/Collins Avenue;
- Malahide Road/Copeland Avenue/Griffith Avenue; and
- Malahide Road/Clontarf Road.

Between Gracefield Road junction and Killester Avenue, it is intended to provide a continuous bus lane with a single general traffic lane in each direction. Dedicated cycle tracks and footway facilities will be maintained through this section. To accommodate this, limited areas of land take from private properties between these junctions is proposed. The indicative extents of this land take are included in the Appendix of this brochure. The Emerging Preferred Route indicated that between Kilmore Road junction and Killester Avenue the western cycle track and footpath impacted on the existing wall and trees. It is now proposed to move the northbound cycle track and footpath inside the green area to minimise any impact on the existing wall and trees. This proposal also allows for the footpath adjacent the southbound carriageway to maintain its current width.

Between Killester Avenue junction and Collins Avenue, it is proposed to maintain the road cross section as described in the previous section. The existing road between these junctions required widening to accommodate the desired lane widths and bus stop facilities. The Emerging Preferred Route indicated that land take may be required from the surrounding green space in Thorndale Grove and Mayfield Park, which impacted a stone wall and mature trees. The current proposal now indicates that land take will only be required from May Park, so the mature trees and wall opposite can be retained. Between Mayfield Park and Collins Avenue it is proposed to utilise land take from private properties. The indicative extents of this land take are included in the Appendix of this brochure.

Between Collins Avenue Junction and Griffith Avenue Junction, it is proposed to remove the existing left turn slip road from Collins Avenue East Road. Again, it is intended to provide a continuous bus lane with a single general traffic lane in each direction. Currently, there are no continuous dedicated cycle tracks in both directions on this section of the Malahide Road. This issue is proposed to be addressed by road widening works. This widening may involve land take between Donnycarney Church and Clancarthy Road, Clontarf Golf Club and Bowling Club grounds and Nazareth House. The indicative extents of this land take are included in the Appendix of this brochure. The proposed works may also require the removal of existing trees currently located on Traffic Islands or between the existing road and footpath, although opportunities to enhance the streetscape have been identified as part of this review.

Between Griffith Avenue junction and Clontarf Road junction, it is proposed to continue the bus and general traffic lanes in both directions. There are currently only three traffic lanes on this section of

road. To facilitate the new four lane arrangement, it is intended to utilise limited land take from adjacent properties at the following locations:

- Between Copeland Avenue and Marino Avenue;
- Between Charlemont Road and Crescent Place; and
- Between Brian Road and St. Aidan's Park.

Because of the significant additional impacts on private properties, if cycle tracks were to be included on this section of the Malahide Road, it is intended to provide an alternative cycle route through a parallel, less trafficked route along Brian Road, Carleton Road and Haverty Road. Cyclists will then re-join Marino Mart and tie-in with the Clontarf to City Centre Cycle Scheme (currently being developed by Dublin City Council). The Emerging Preferred Route indicated that Haverty Road would remain as a through route, after taking into account the safety and convenience of all road users, as well as the residents of the area, it is now proposed to close Haverty Road for vehicular traffic at St Aidan's Park Road end of the street. Provision will be made to allow emergency vehicles use this junction. This proposal will also help to further reduce traffic on Brian Road, Carleton Road and Haverty Road.

The proposed bus lane works will tie into the proposed bus and cycle facilities on Clontarf Road, which is being advanced by Dublin City Council and has received Part VIII approval in 2017.

7.3 Carbon

In developing the Draft PRO, consideration has been given to the carbon generated by the scheme during construction. Many of the changes made to the scheme design since the EPR proposal have resulted in a minor changes in the construction carbon generated by the scheme. Construction carbon will continue to be considered and assessed as part of the evolving scheme design and the preparation of the supporting EIAR documentation

7.4 Summary

The Draft PRO runs to approximately 6.7 km long from end to end excluding the approximately 0.9km section which forms part of Dublin City Council's Belmayne Main Street and Belmayne Avenue scheme. The updated concept scheme design drawings show the extent of the infrastructure proposed to deliver this CBC and the length of the primary interventions are summarised in the tables below.

Table 7.1: Bus Priority Comparison

Bus Priority	Existing (km)	Proposed (km)
Bus Lanes		
Inbound	5.9	6.7
Outbound	4.8	6.7
Total Bus Priority (both directions)	10.7	13.4 (+25%)

Table 7.2: Cycle Facility Comparison

Cycle Facilities	Existing (km)	Proposed (km)
Cycle Lanes – Segregated		
Inbound	0.5	5.3
Outbound	0.4	5.7
Cycle Lanes – Non-segregated		
Inbound	3.6	1.1
Outbound	4.3	0.5
Total Cycle Facilities (both directions)	8.8	12.6 (+43%)

8. Next Steps

This report has identified a Draft PRO for the bus infrastructure along this CBC for which an updated concept design has been developed.

The next project stage (the development of a preliminary design) will further refine and update the concept design along the route taking into account any further feedback from the 3rd round of public consultation. 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, considering more detailed studies of constraints, impacts and environmental assessment required at a local level.

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.

Work in Progress

Appendix A – Feasibility and Options Assessment Report for Clongriffin to City Centre CBC

Work in Progress

The EPR Feasibility and Options Assessment Report for the Clongriffin to City Centre CBC is available on the NTA BusConnects Website, it can be accessed by clicking the links below:

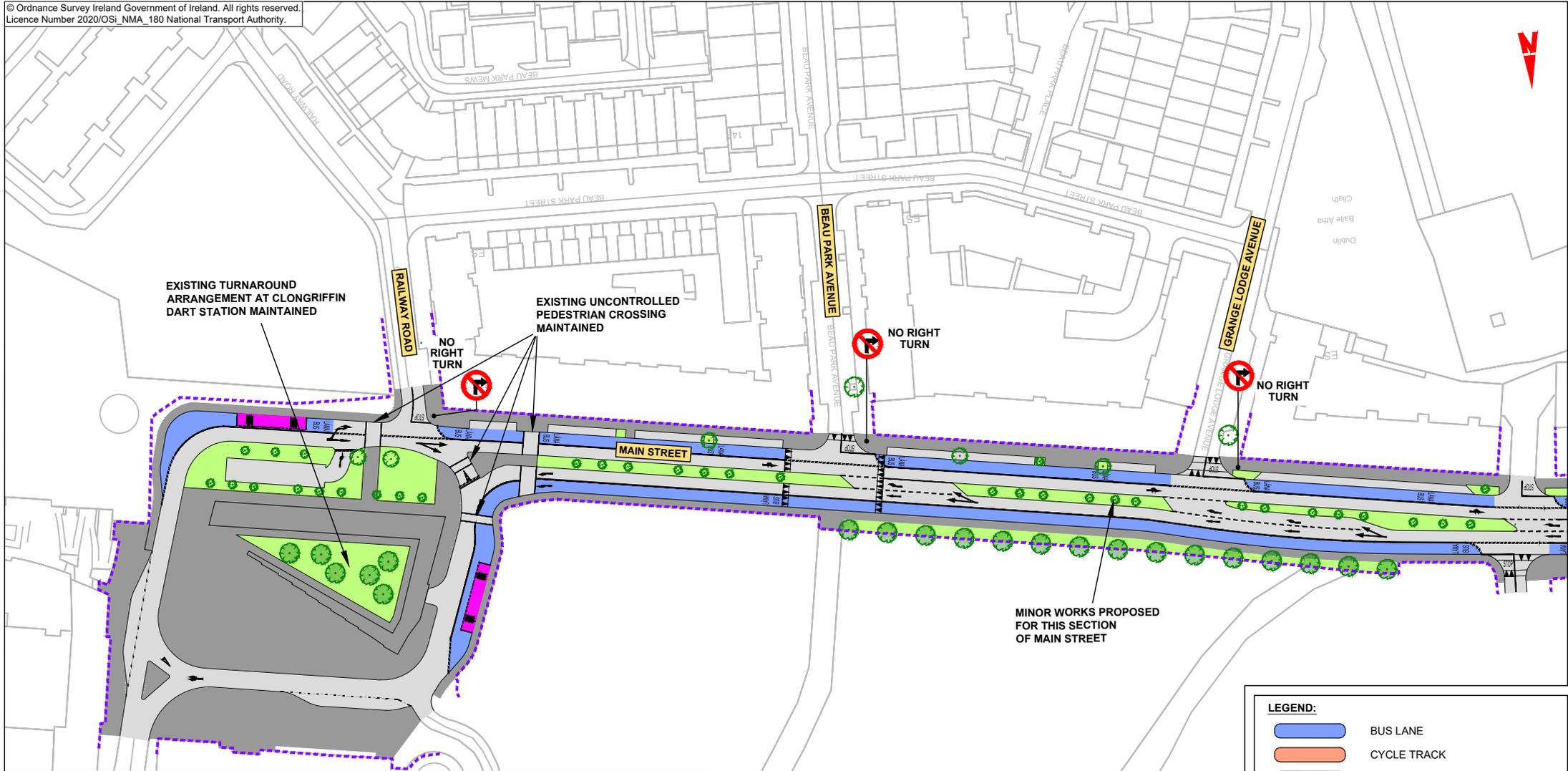
- Clongriffin to City Centre CBC - Route Selection Report
<https://busconnects.ie/media/1382/clongriffin-to-city-centre-cbc-route-selection-report.pdf>
- Clongriffin to City Centre CBC - Concept Design Drawings
<https://busconnects.ie/media/1381/clongriffin-to-city-centre-cbc-concept-design-drawings.pdf>
- Appendix A - MCA Tables
<https://busconnects.ie/media/1378/appendix-a-mca-tables.pdf>
- Appendix C - Technical Note on Junctions
<https://busconnects.ie/media/1379/appendix-c-technical-note-on-junctions.pdf>
- Appendix D - Junction modelling report
<https://busconnects.ie/media/1380/appendix-d-junction-modelling-report.pdf>

If links above are not working the documents can be found in the following locations:

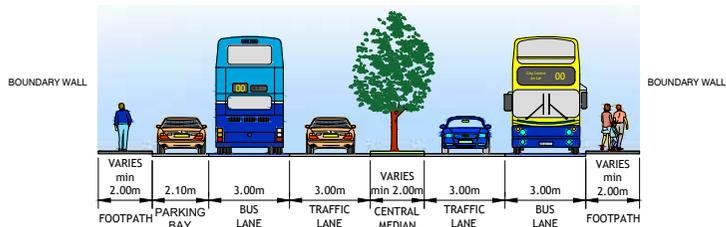
<https://busconnects.ie/initiatives/core-bus-corridor-background-information/technical-documents/>

Appendix B – Draft Preferred Route Option Drawings

Work in Progress

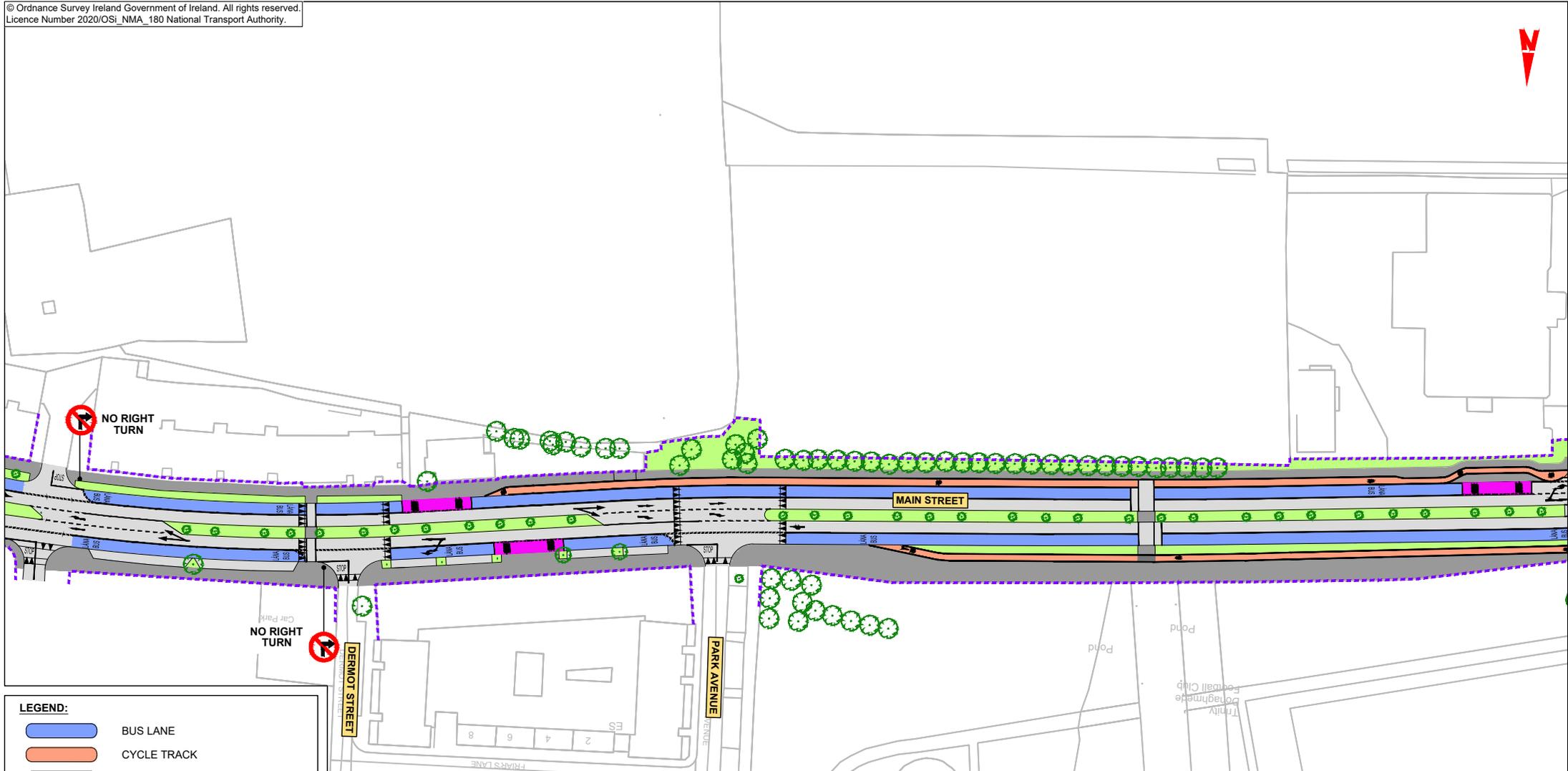


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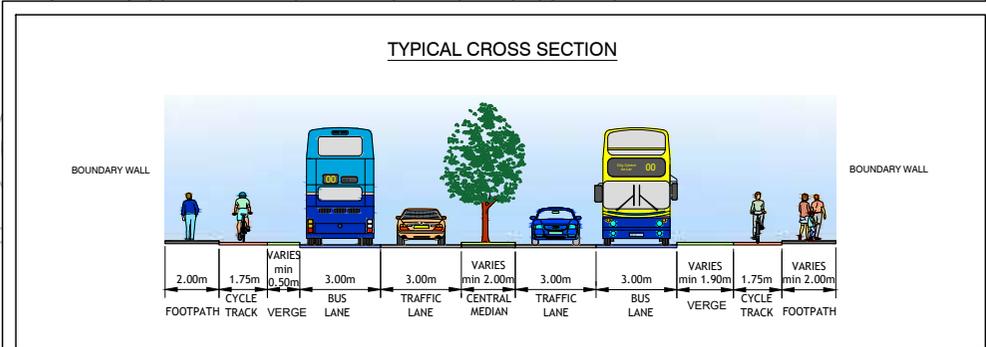
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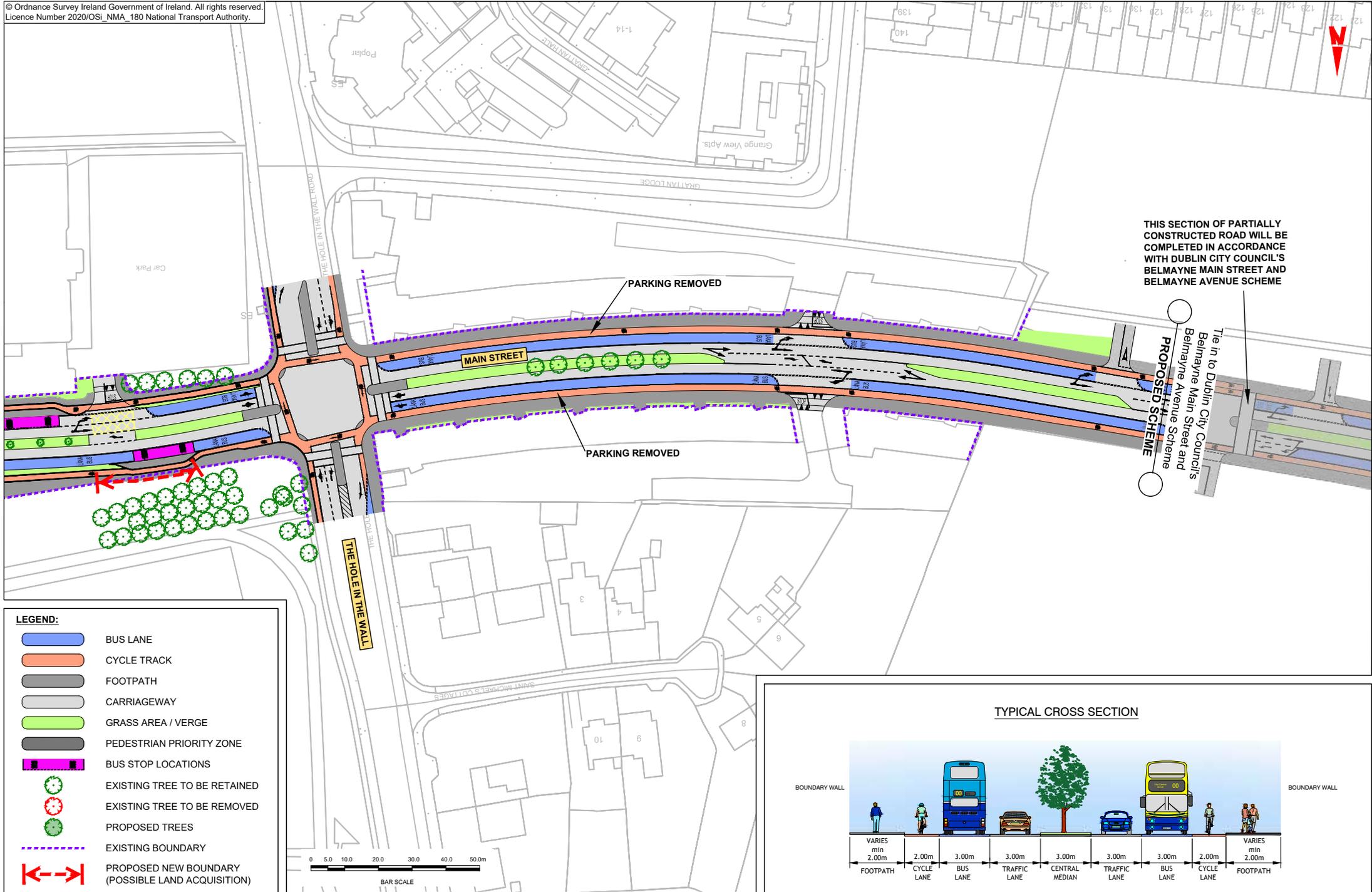
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- CYCLE TRACK
- FOOTPATH
- CARRIAGEWAY
- GRASS AREA / VERGE
- PEDESTRIAN PRIORITY ZONE
- BUS STOP LOCATIONS
- EXISTING TREE TO BE RETAINED
- EXISTING TREE TO BE REMOVED
- PROPOSED TREES
- EXISTING BOUNDARY
- PROPOSED NEW BOUNDARY (POSSIBLE LAND ACQUISITION)



LEGEND:

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THIS SECTION OF PARTIALLY COMPLETED ROAD WILL BE COMPLETED IN ACCORDANCE WITH DUBLIN CITY COUNCIL'S BELMAYNE MAIN STREET AND BELMAYNE AVENUE SCHEME

The in to Dublin City Council's Belmayne Main Street and Belmayne Avenue Scheme
PROPOSED SCHEME

PARKING REMOVED

PARKING REMOVED

MAIN STREET

THE HOLE IN THE WALL

SANCT MICHAEL'S COTTAGES

THE HOLE IN THE WALL ROAD

Car Park

Poplar

Grange View Apts.

GRANTAN LODGE

1-14

139

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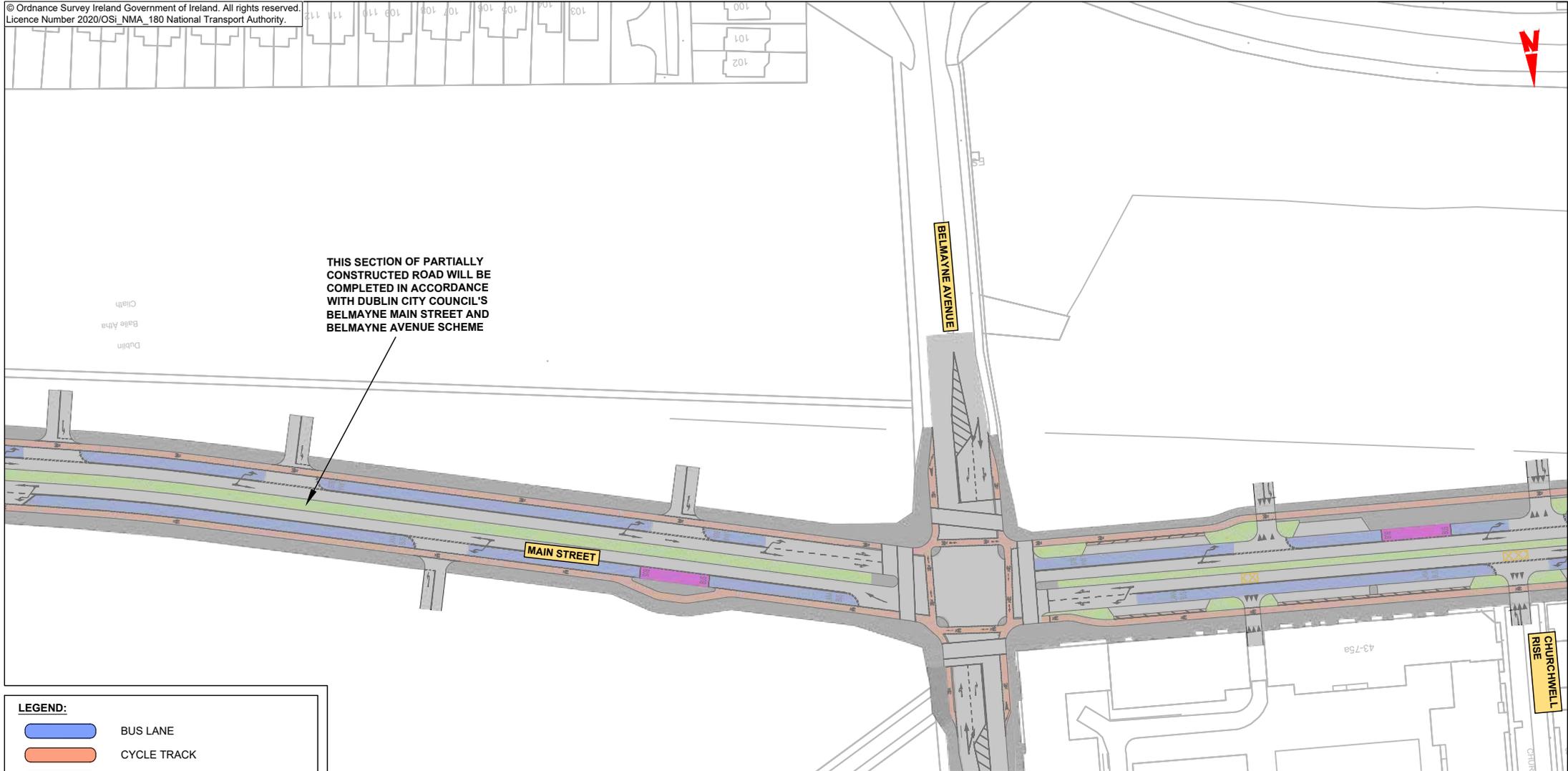
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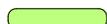
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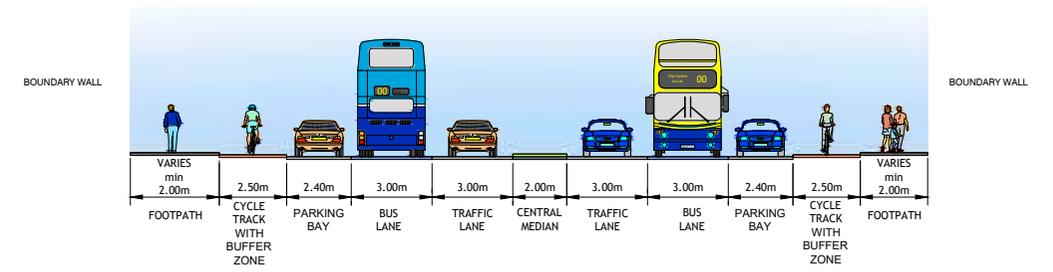


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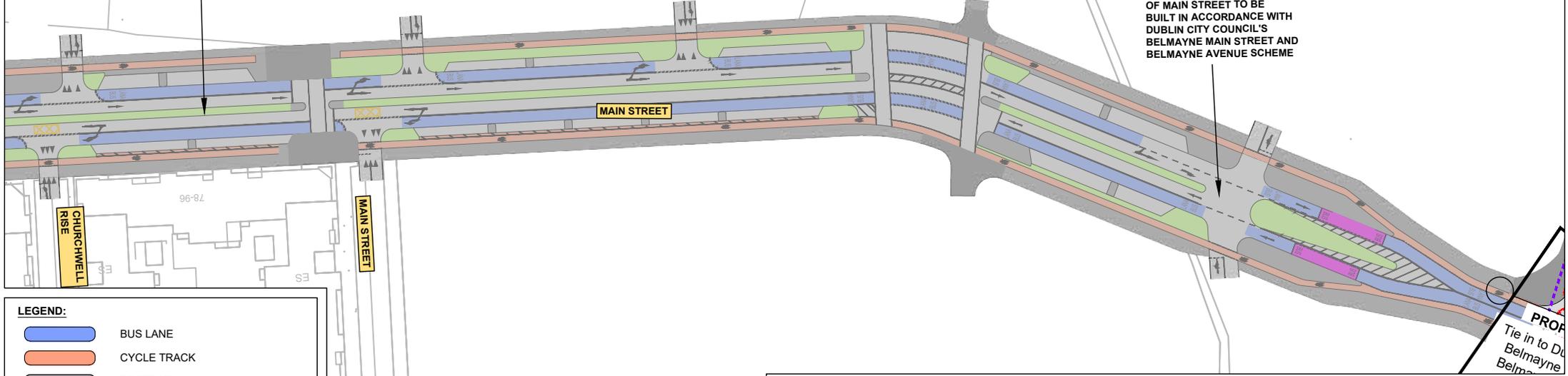


CLAREHALL AVENUE



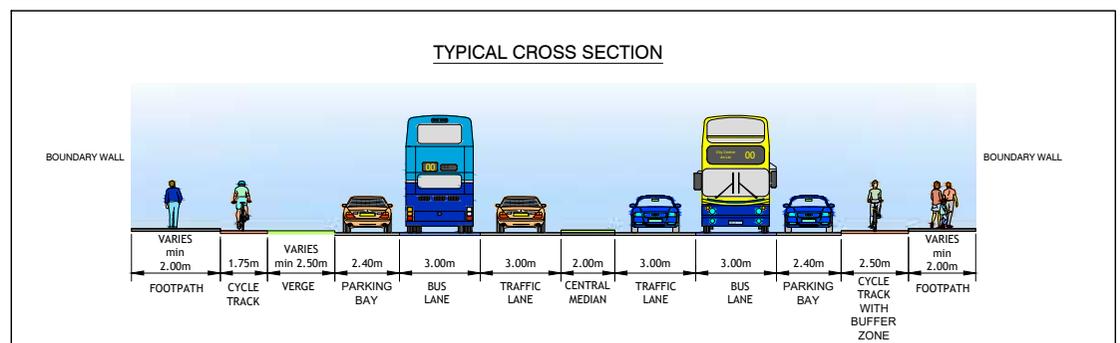
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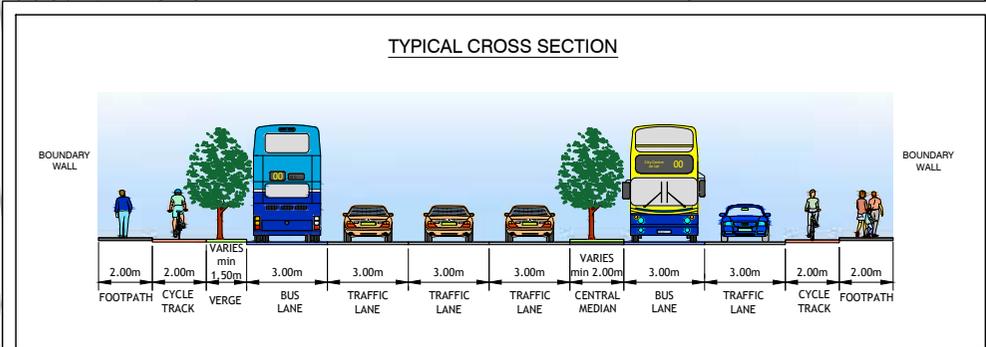
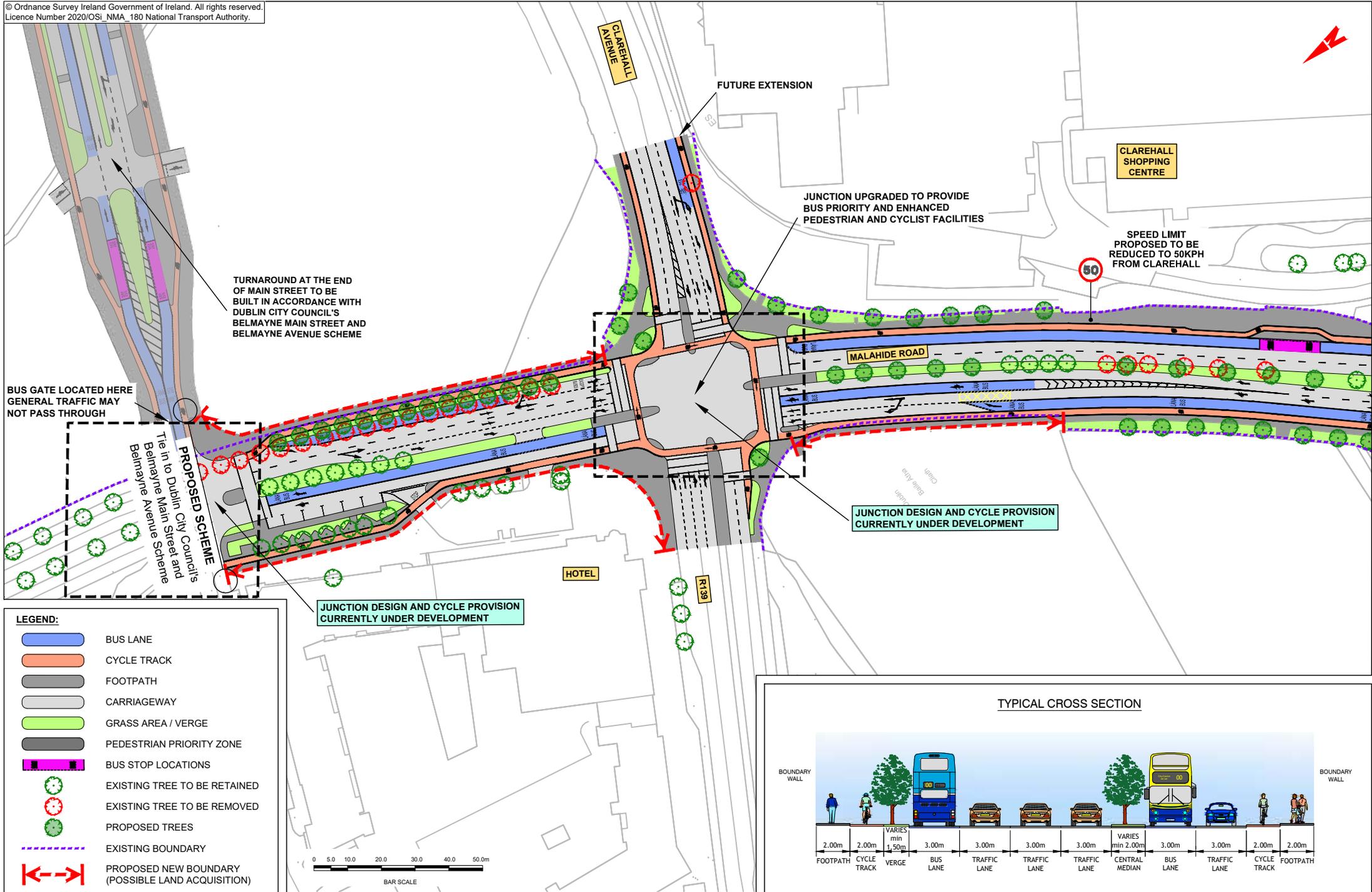
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BELMAYNE AVENUE SCHEME

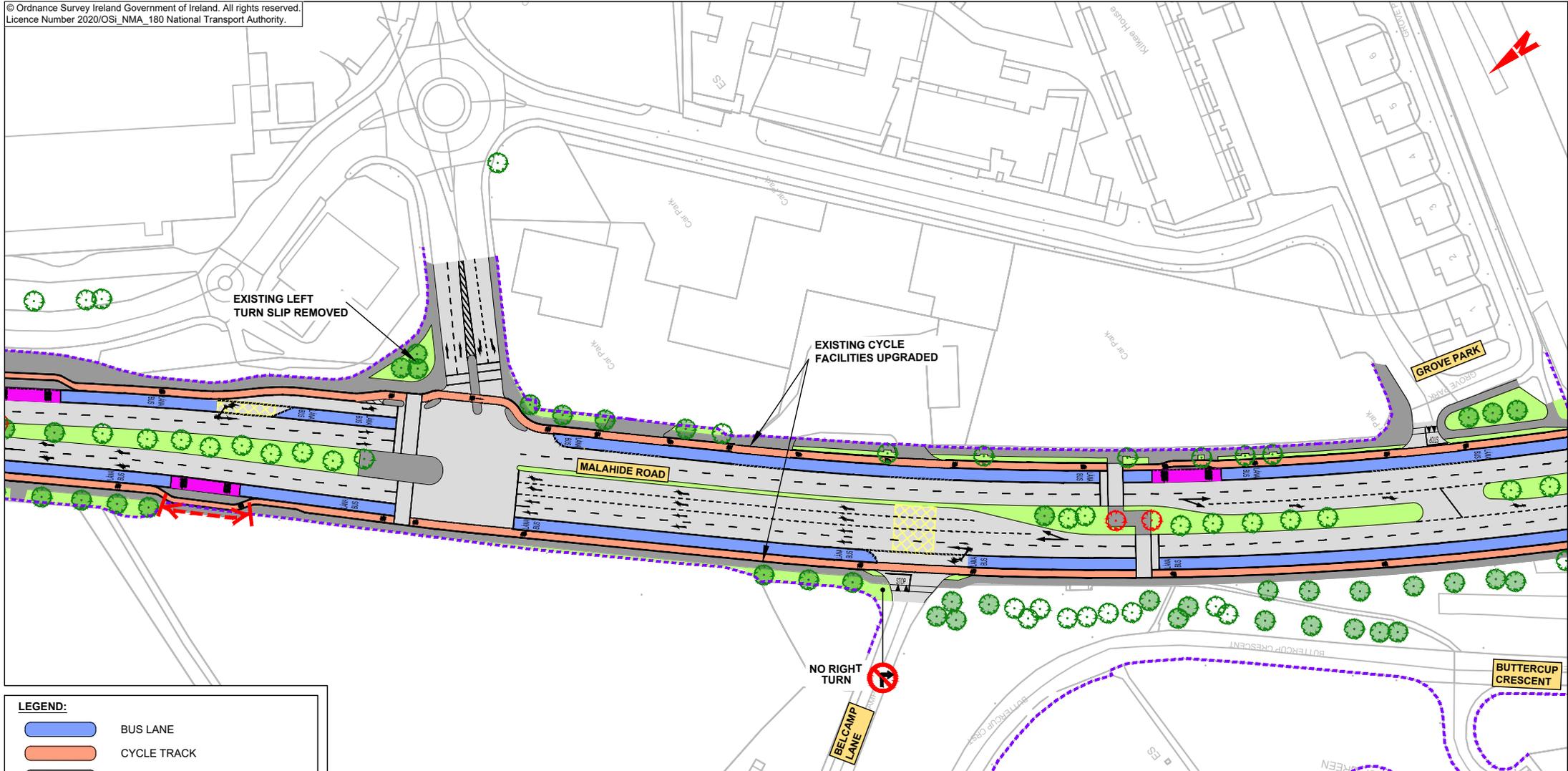


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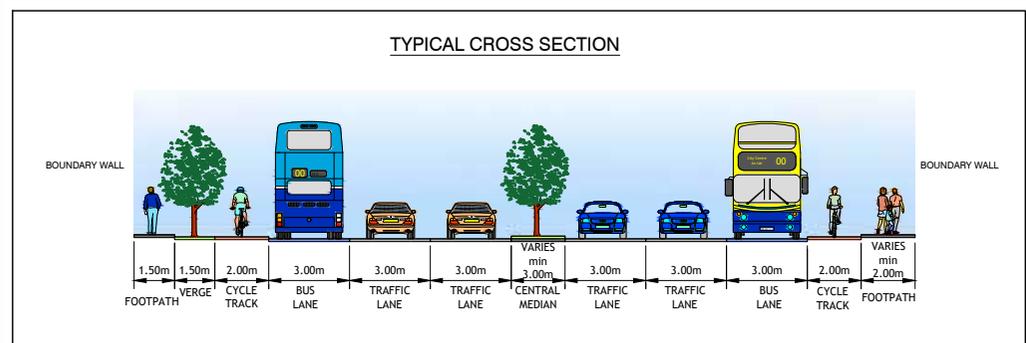


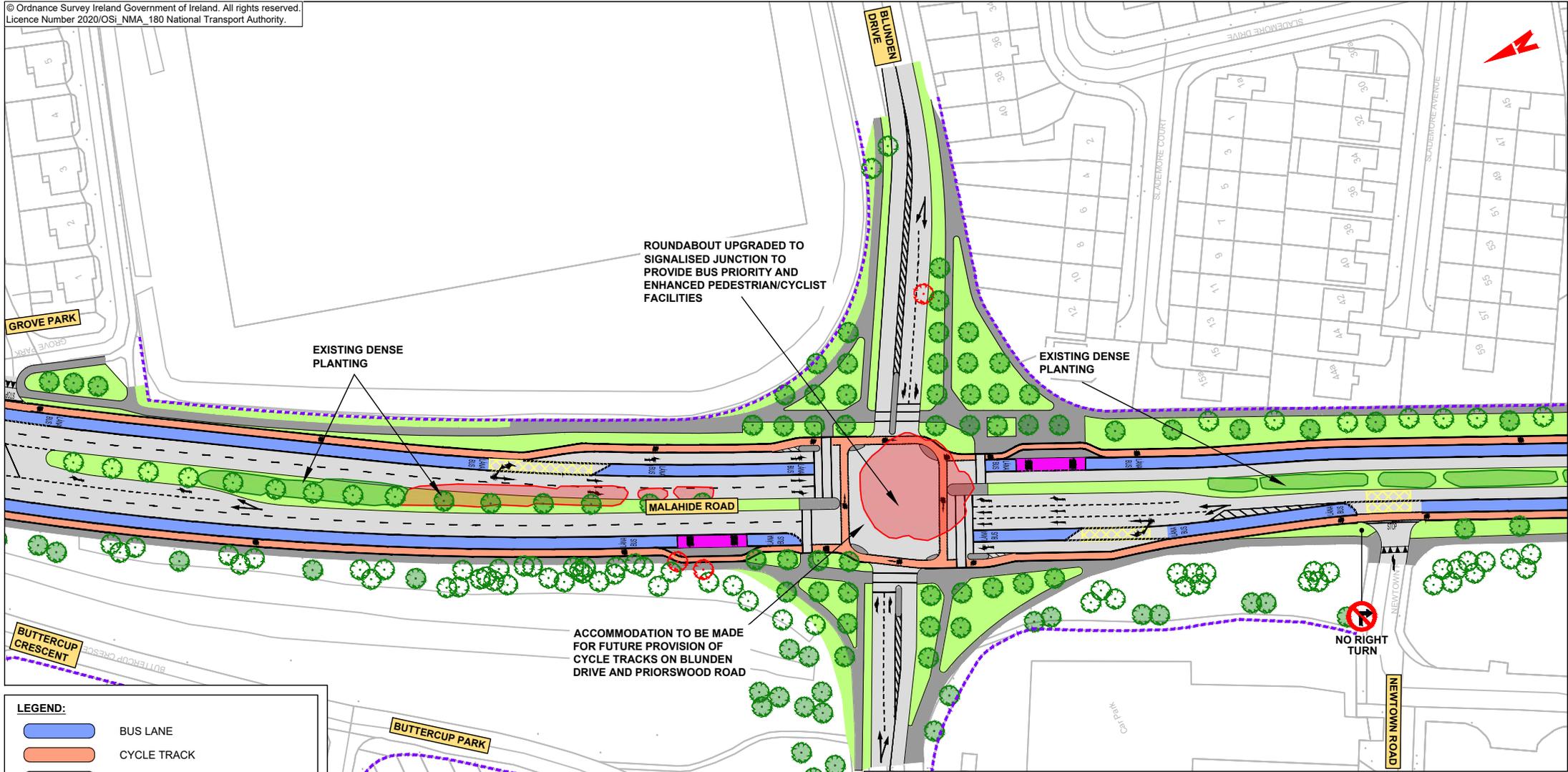




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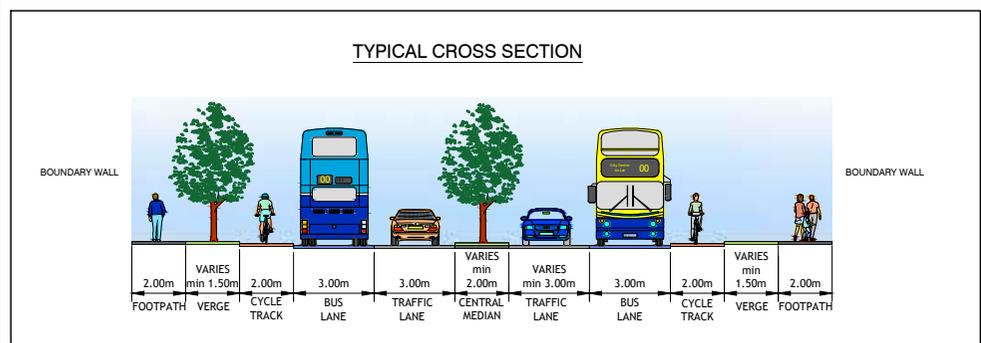
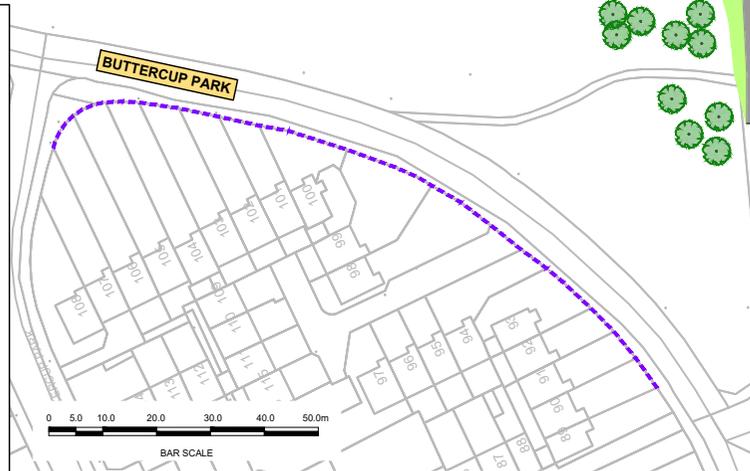
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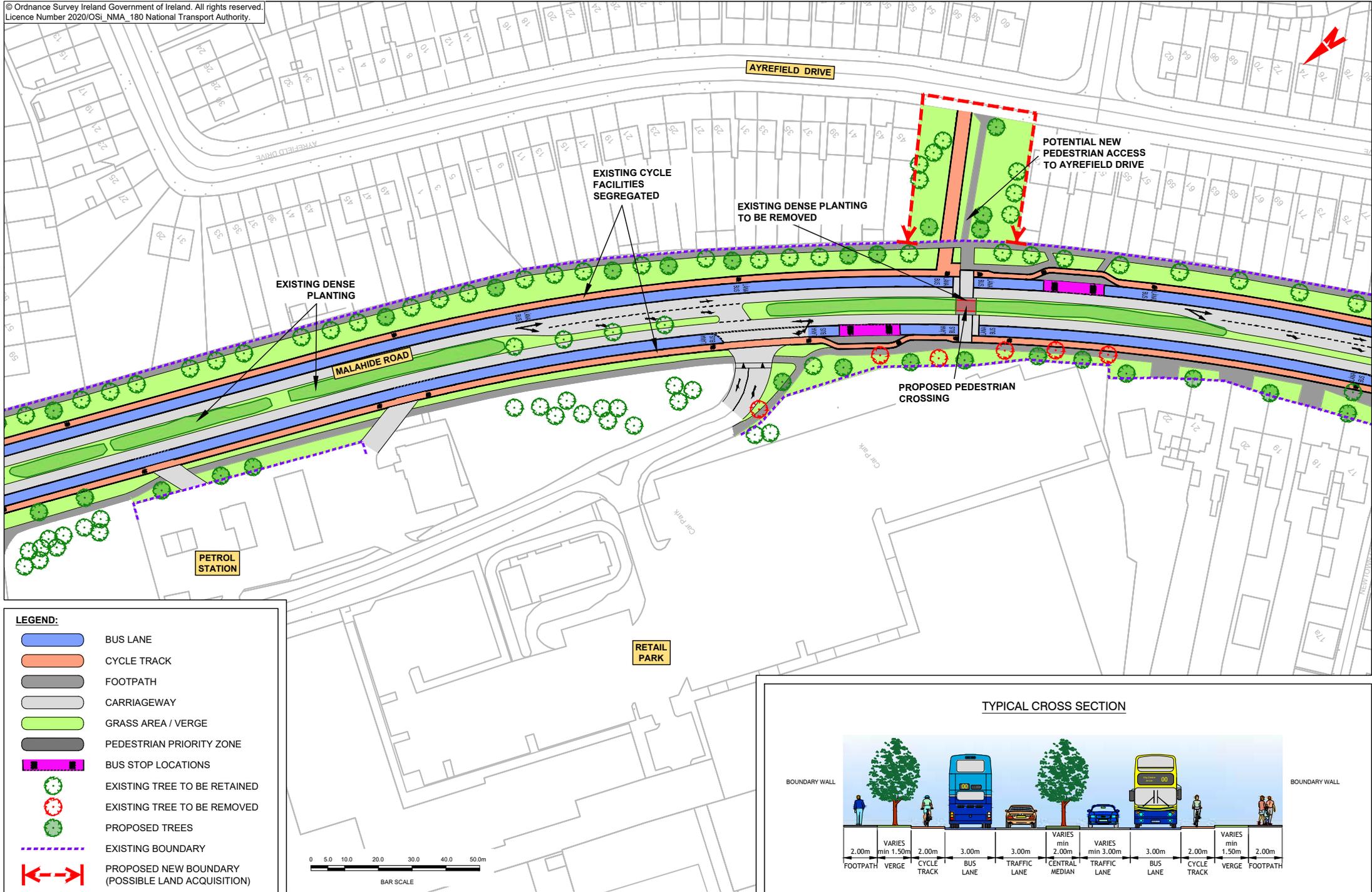


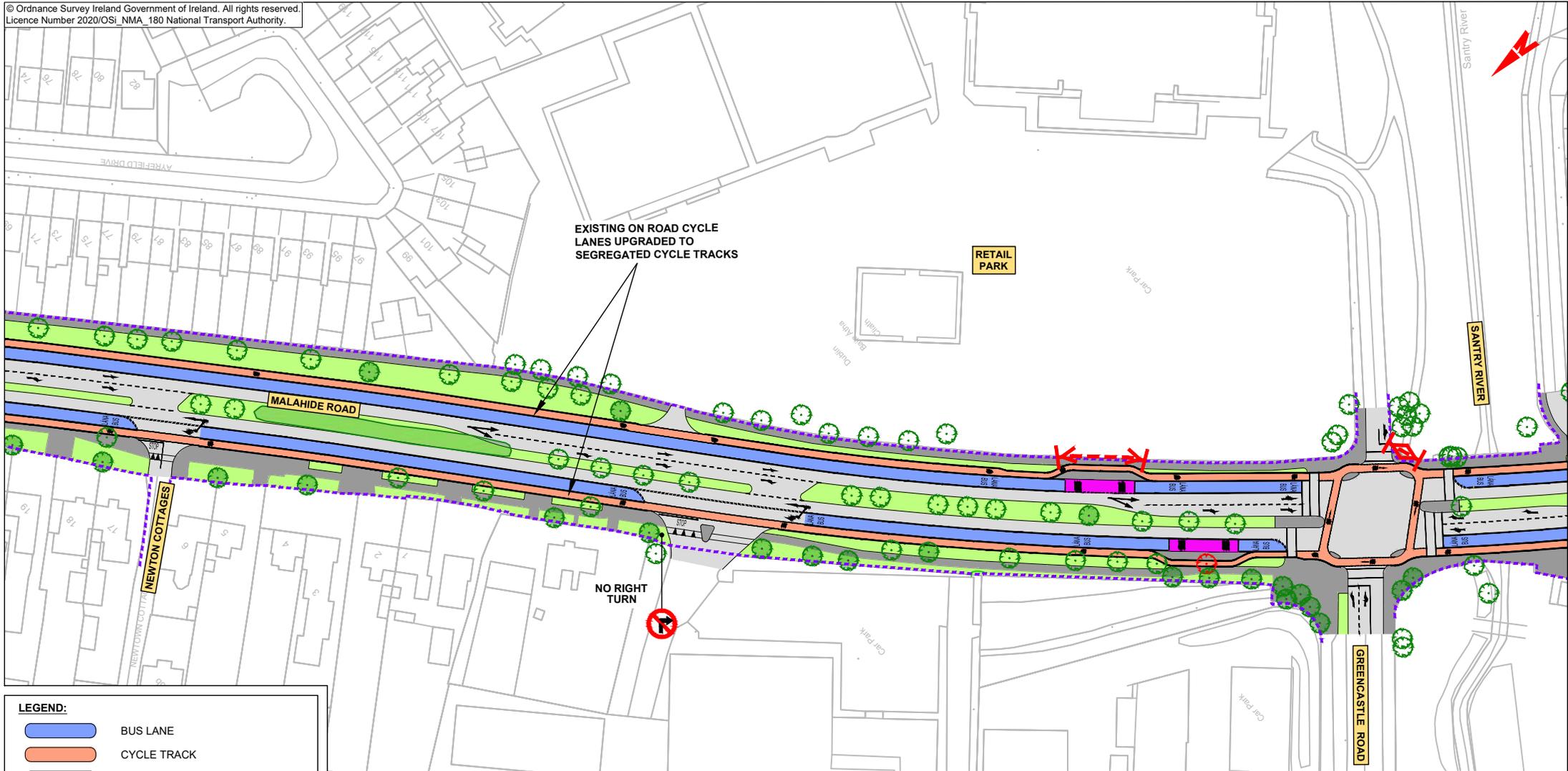


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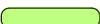
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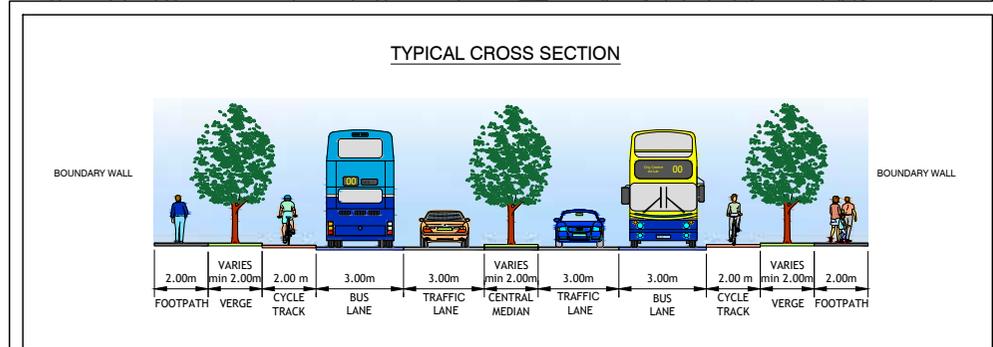


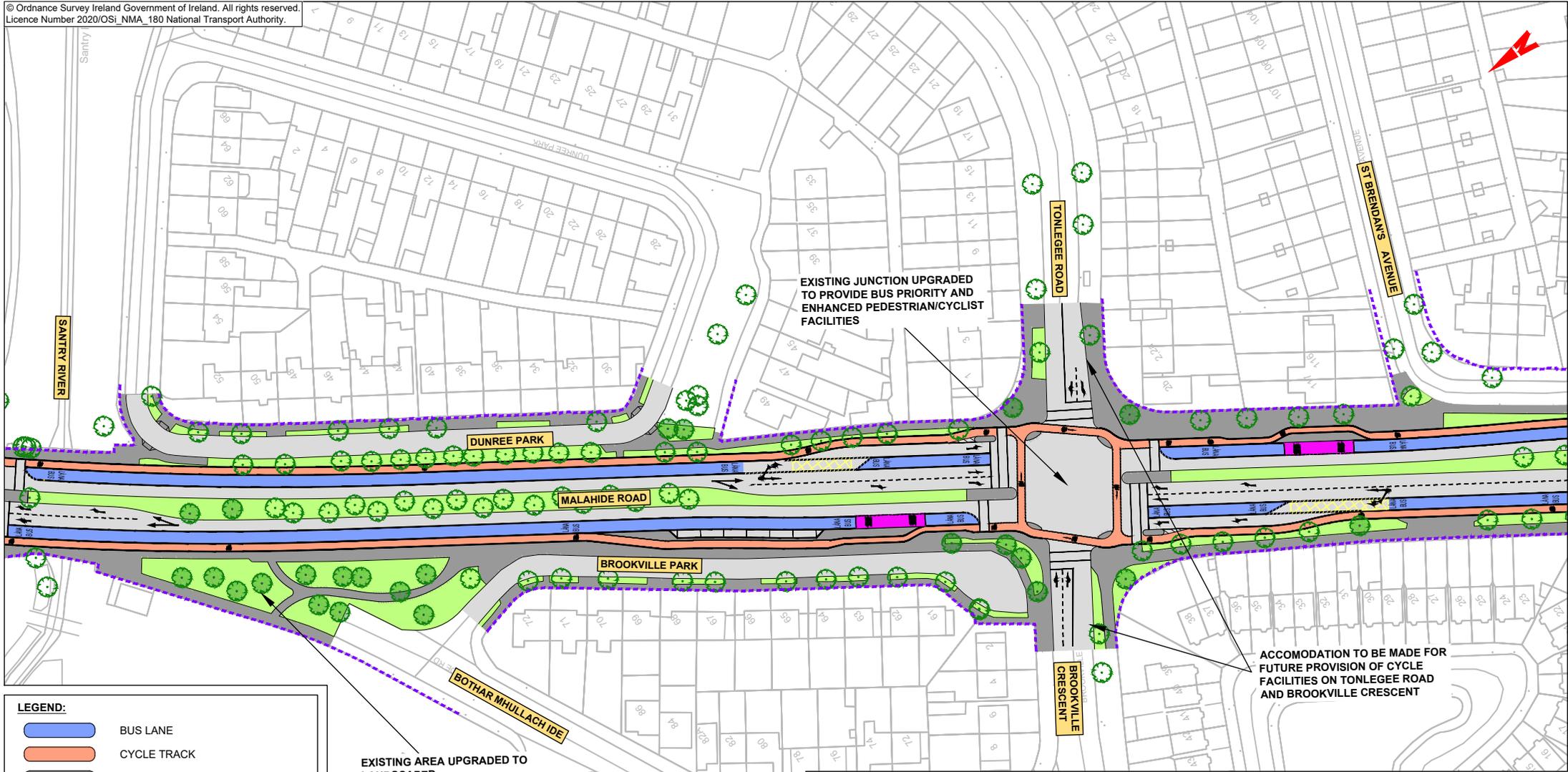




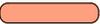
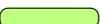
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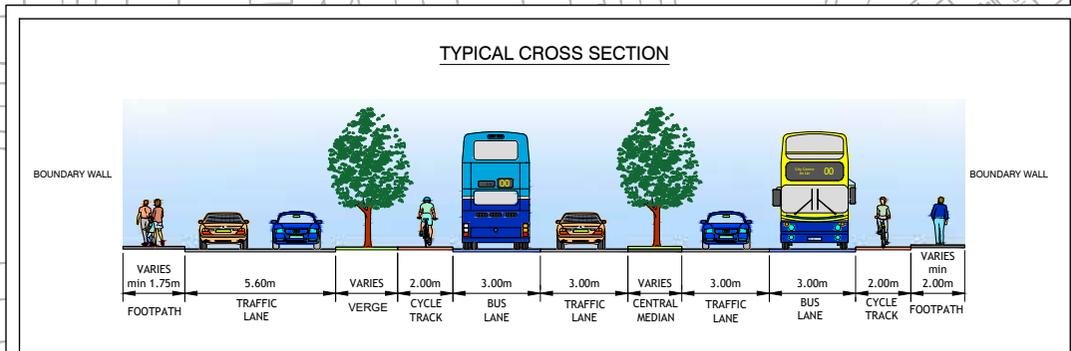
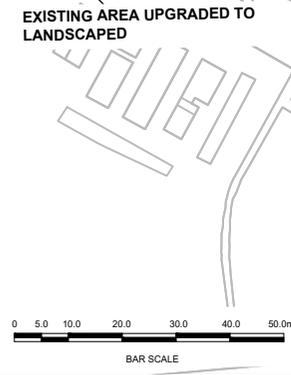
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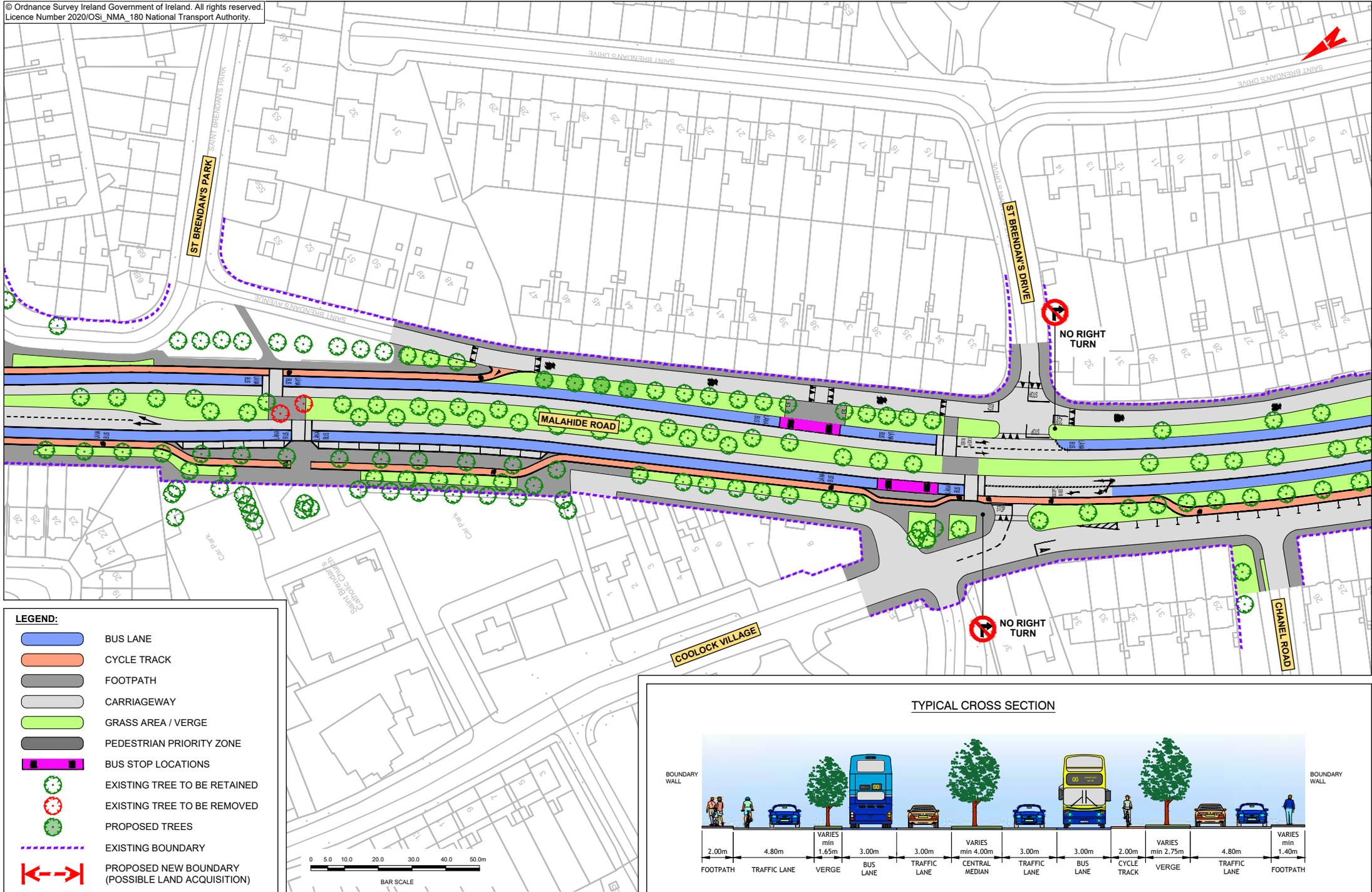


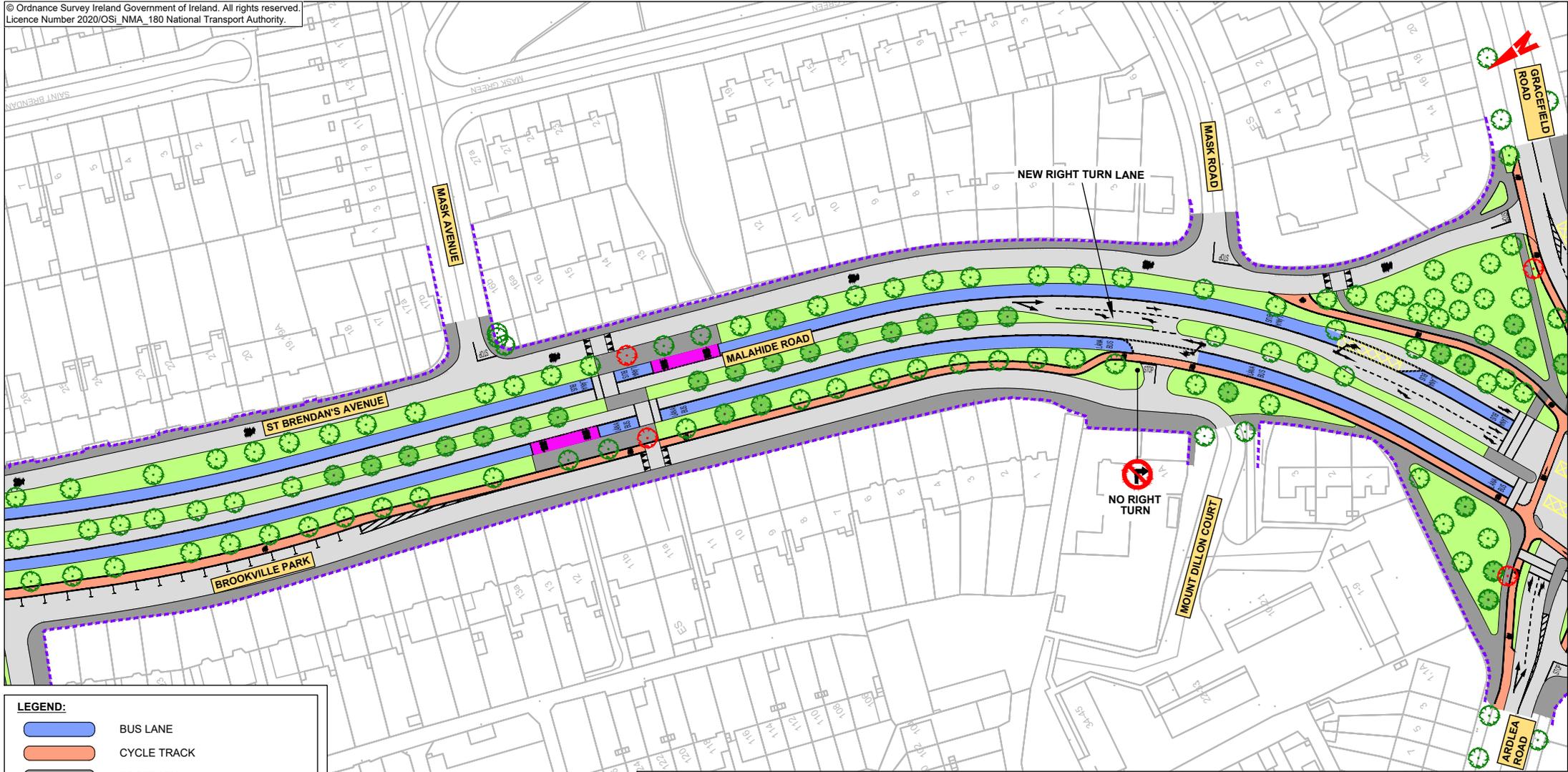


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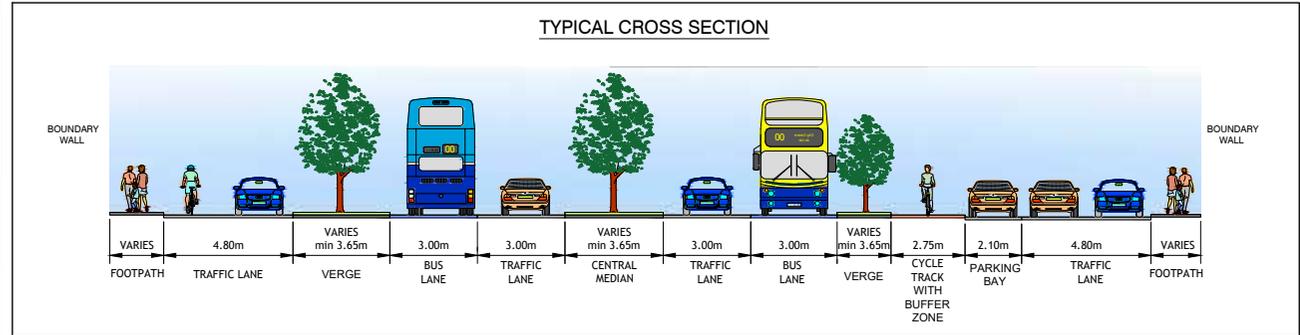
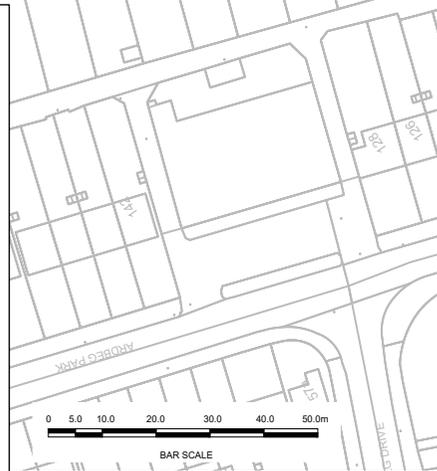


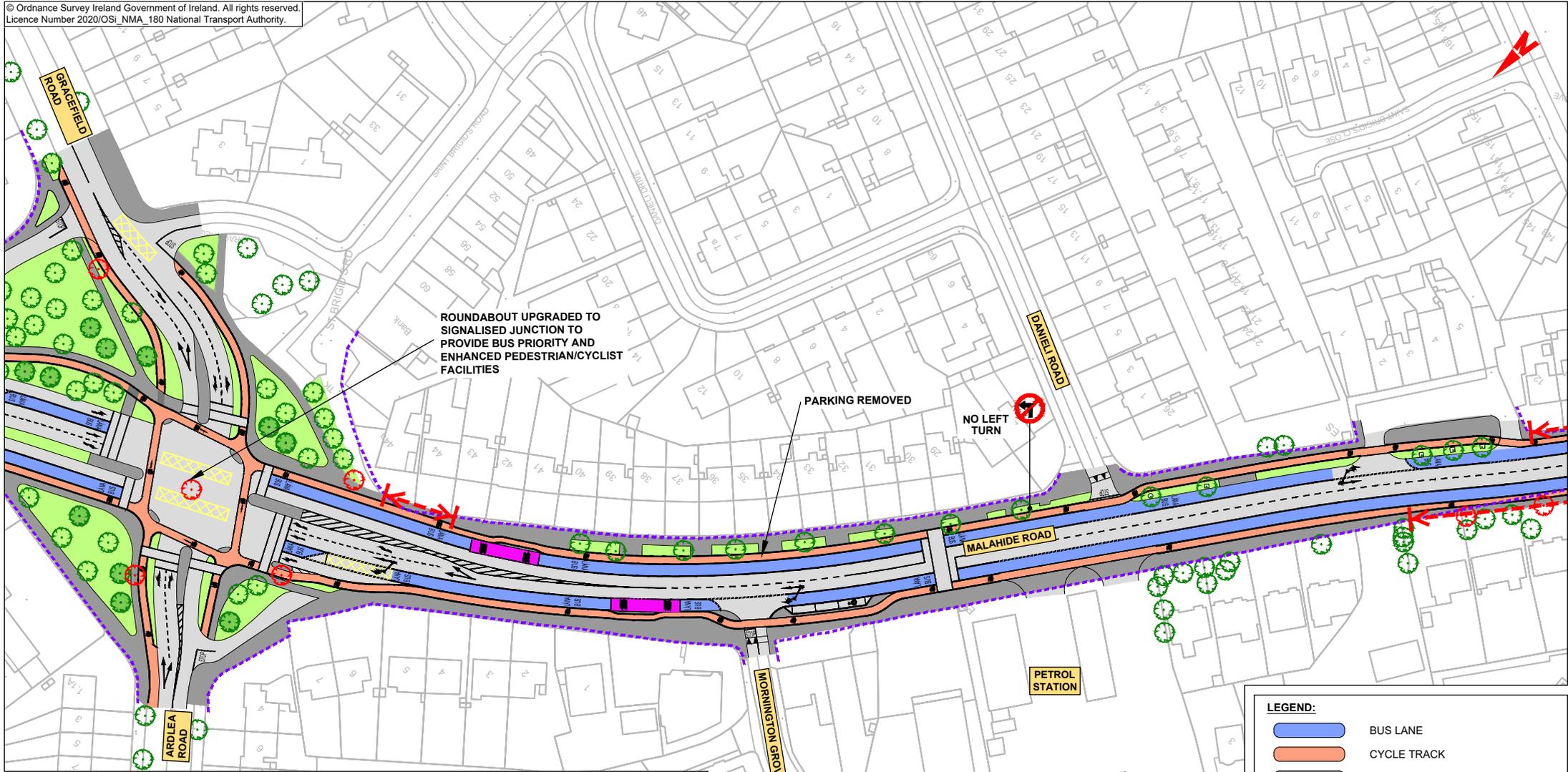




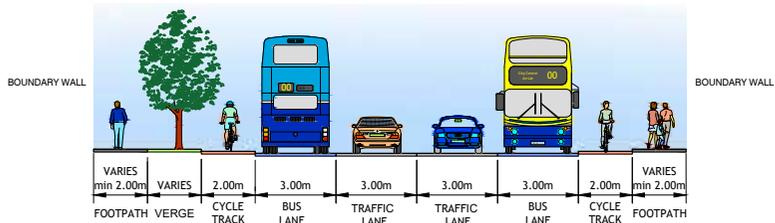
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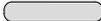
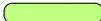


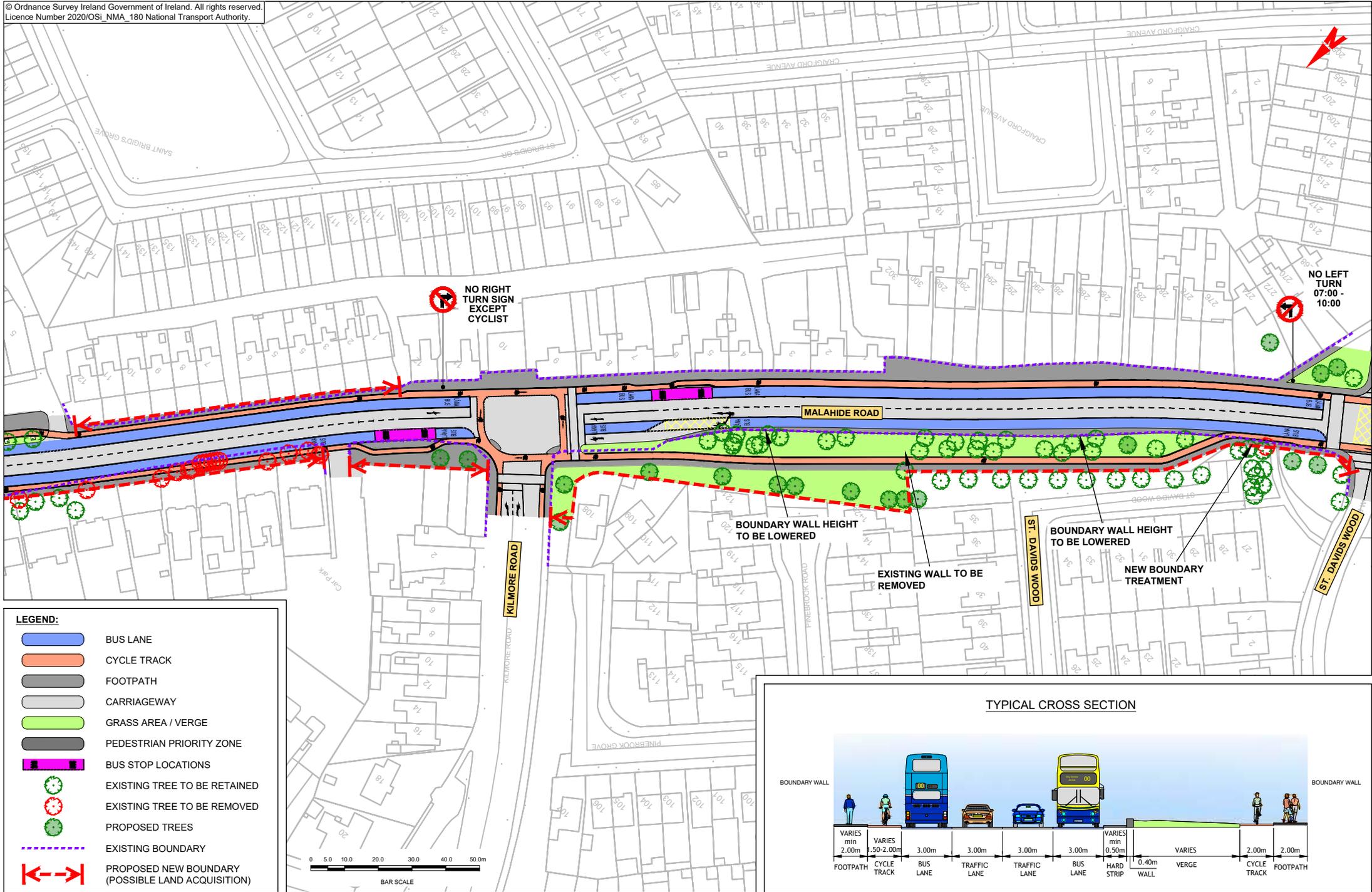


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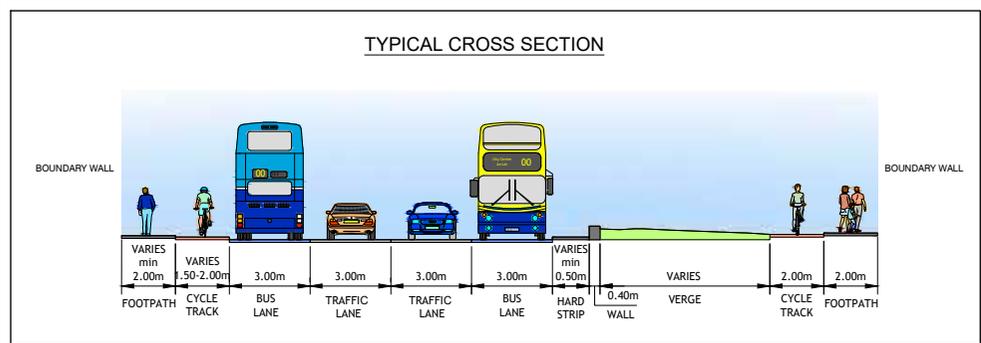
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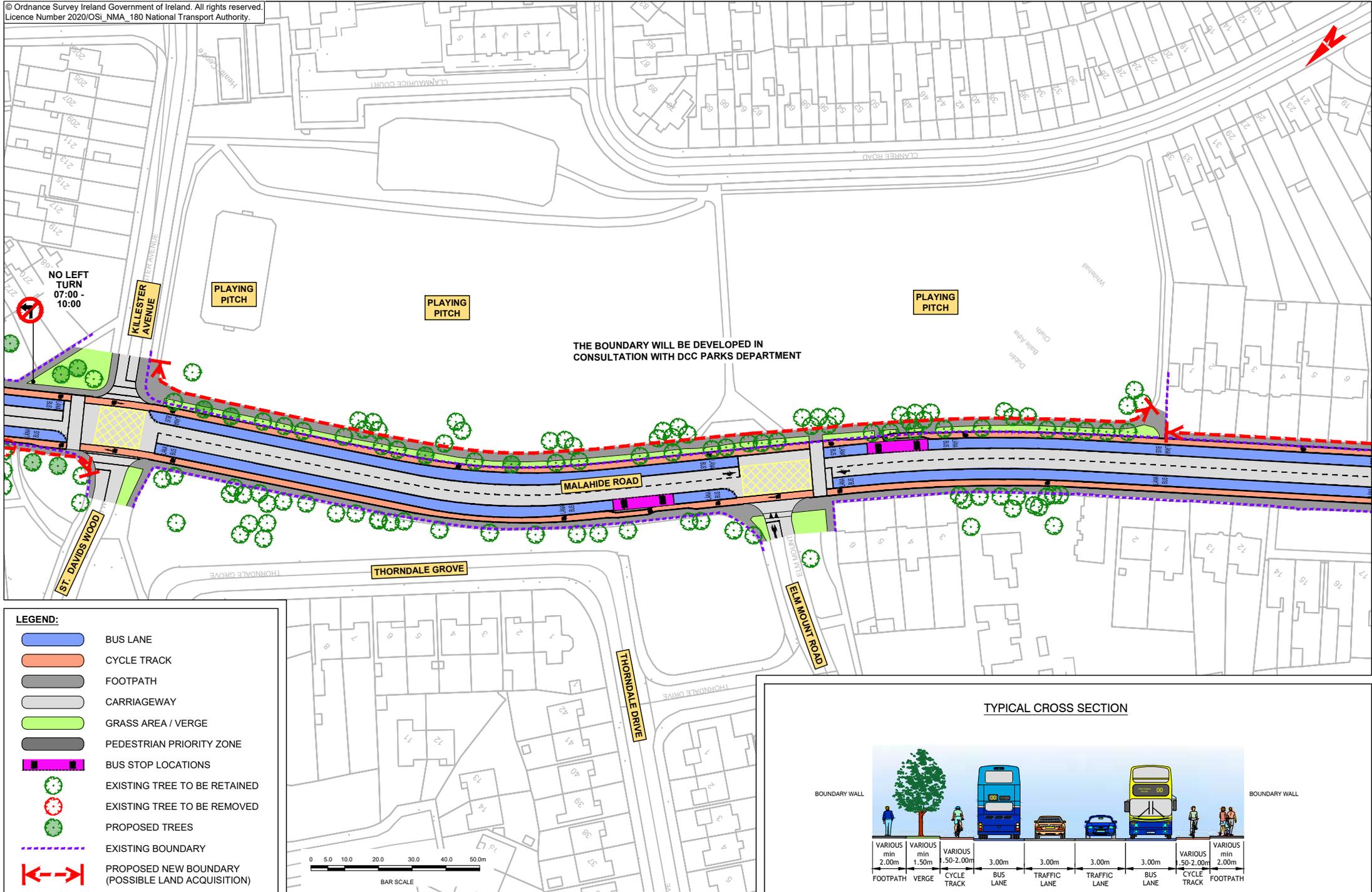
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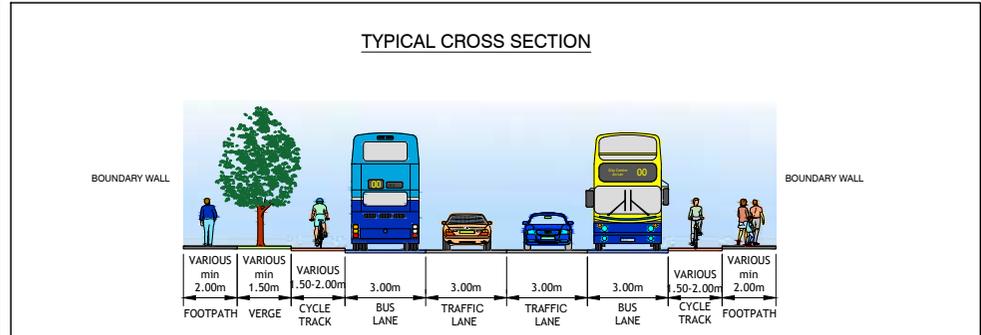


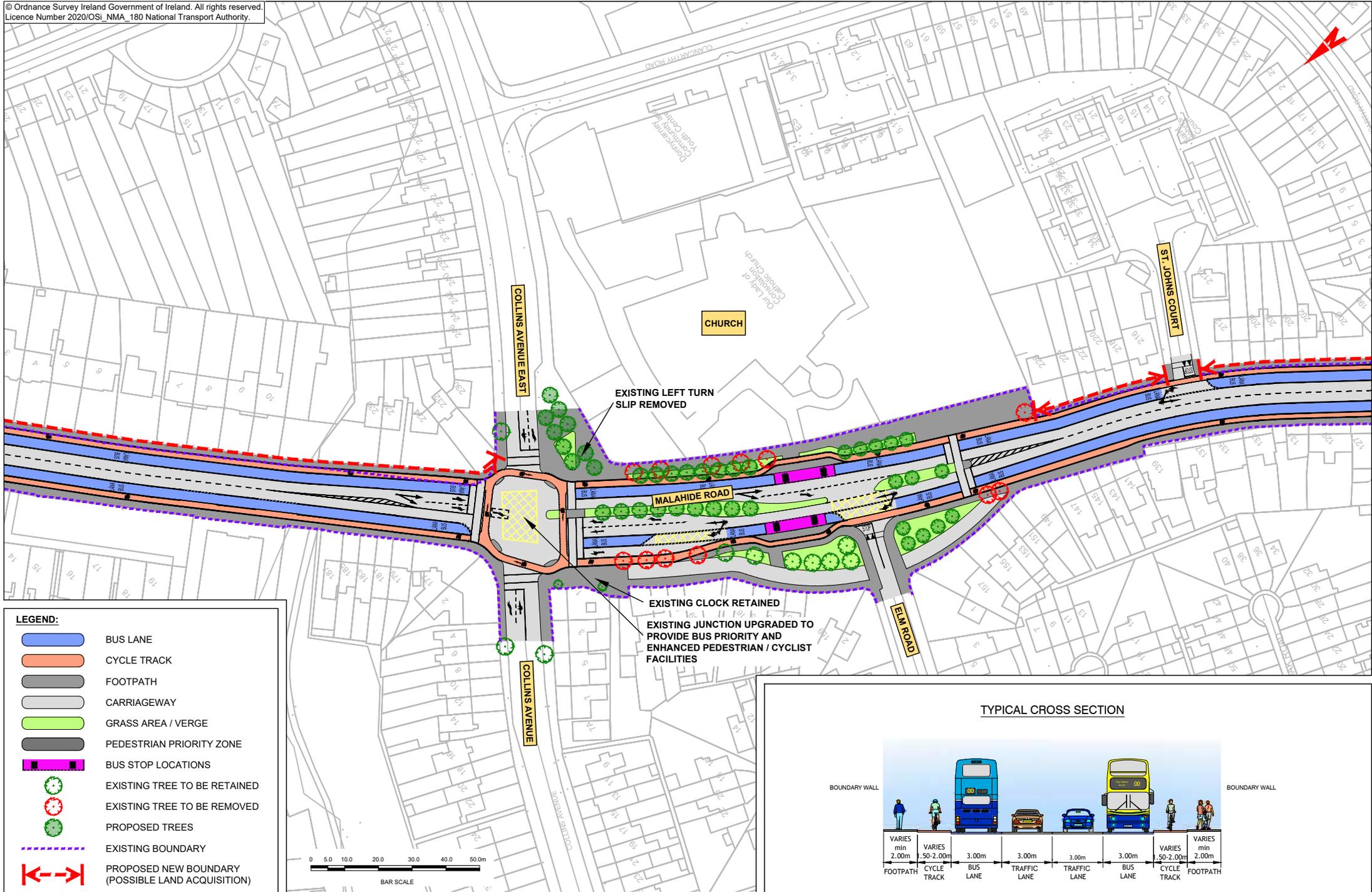


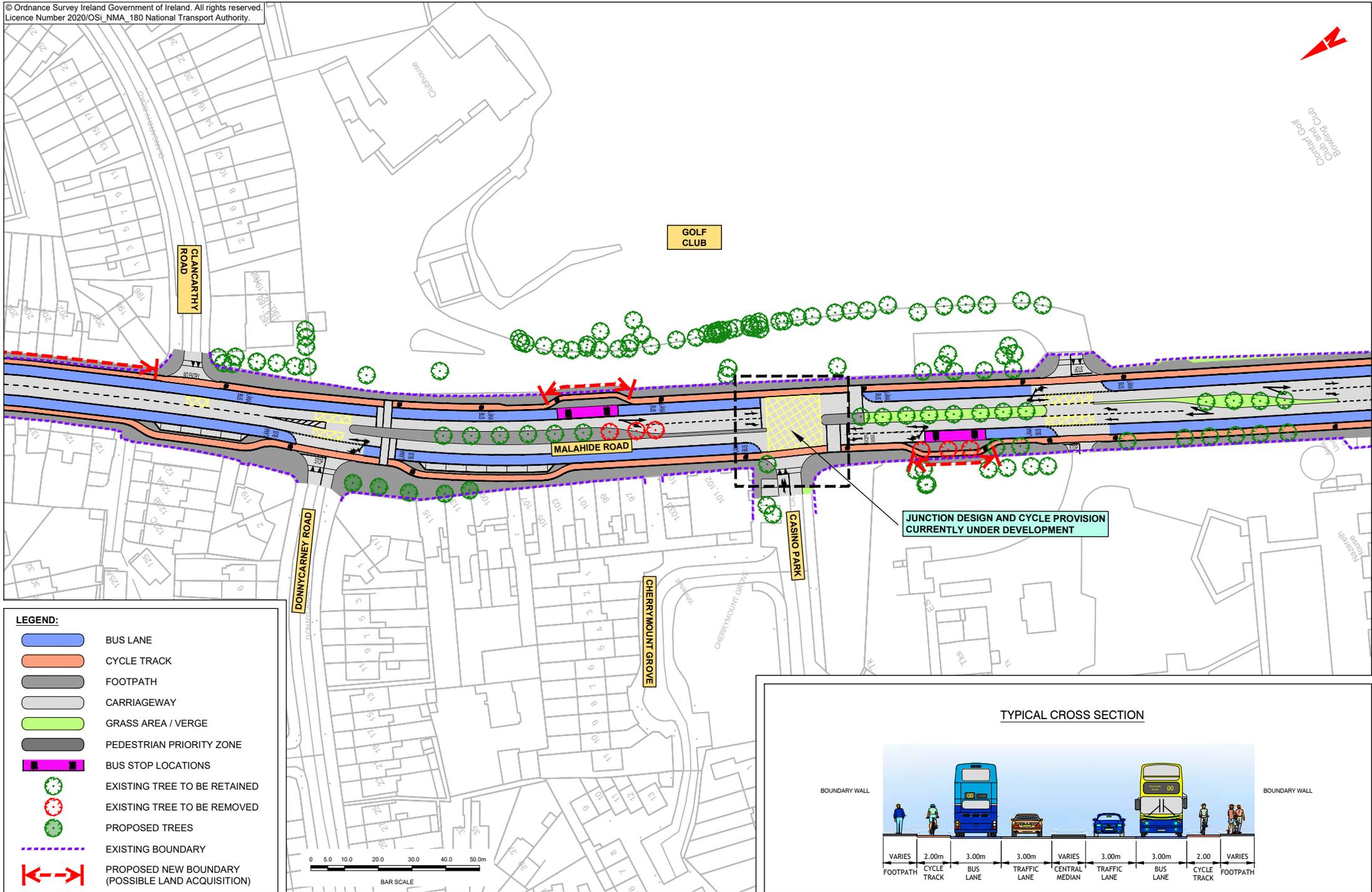
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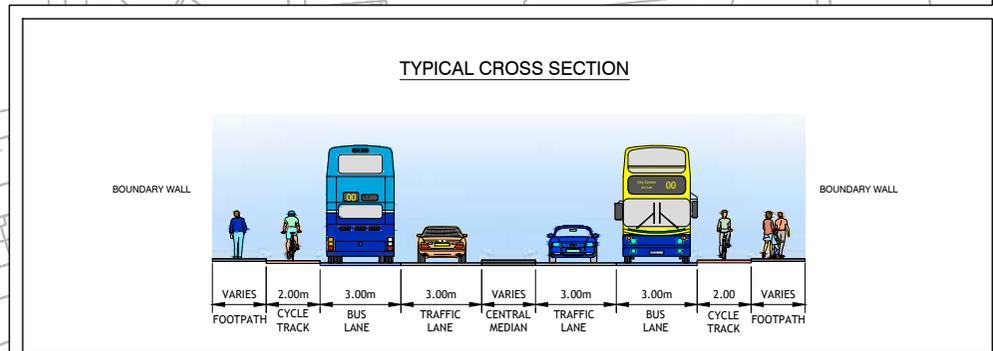


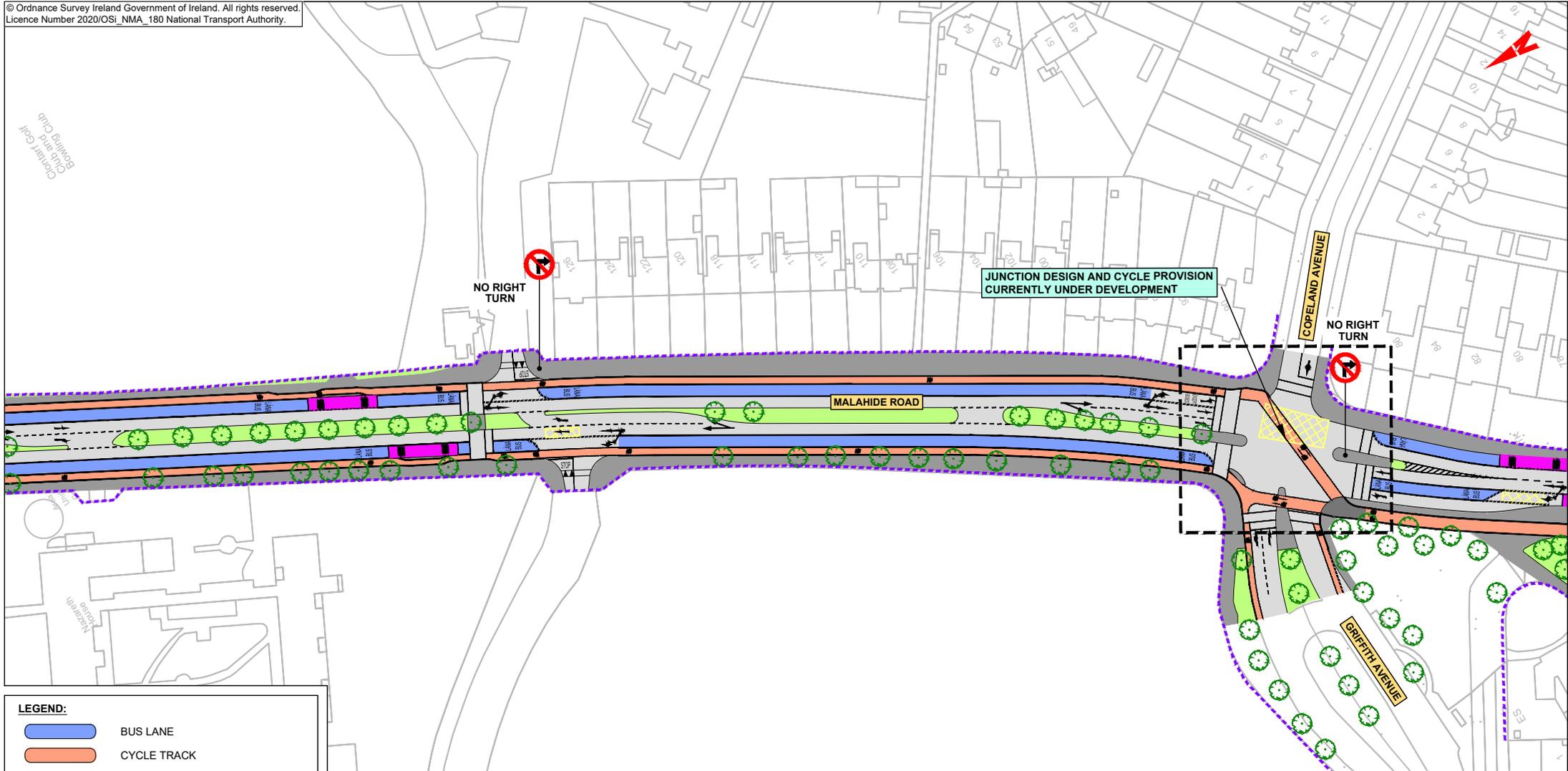




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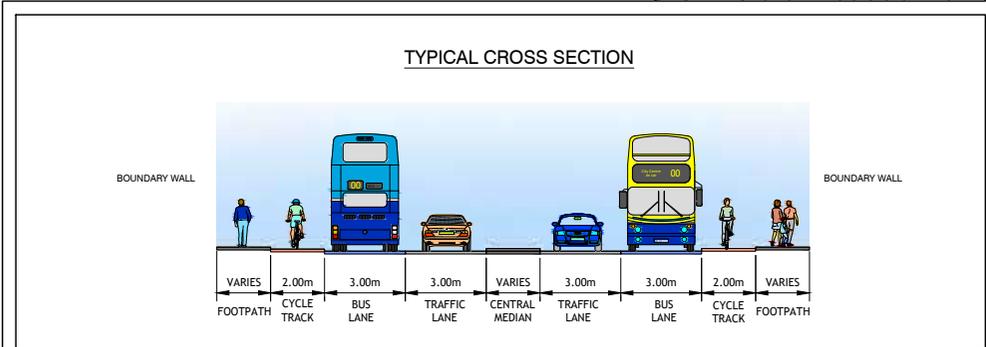
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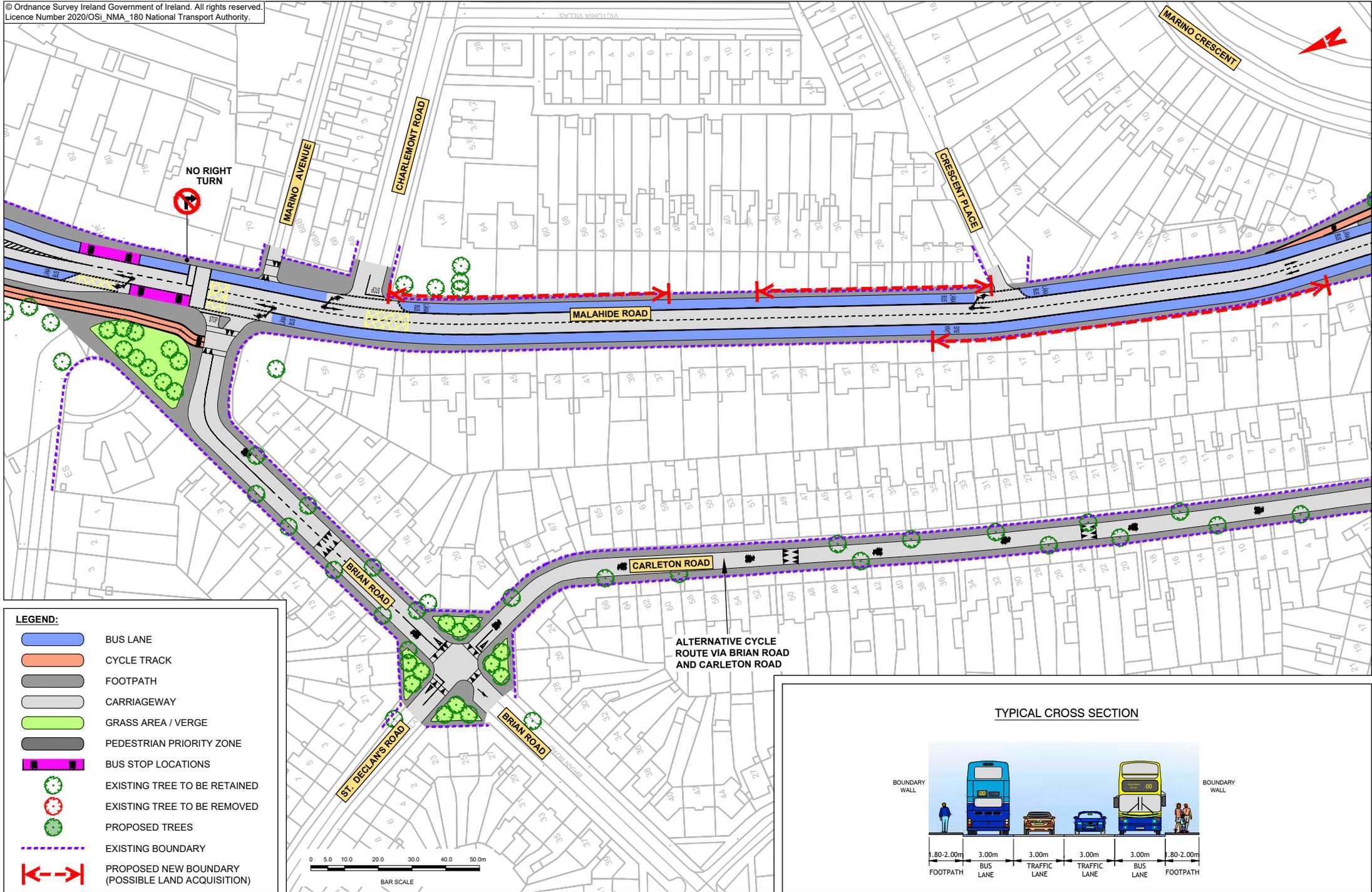




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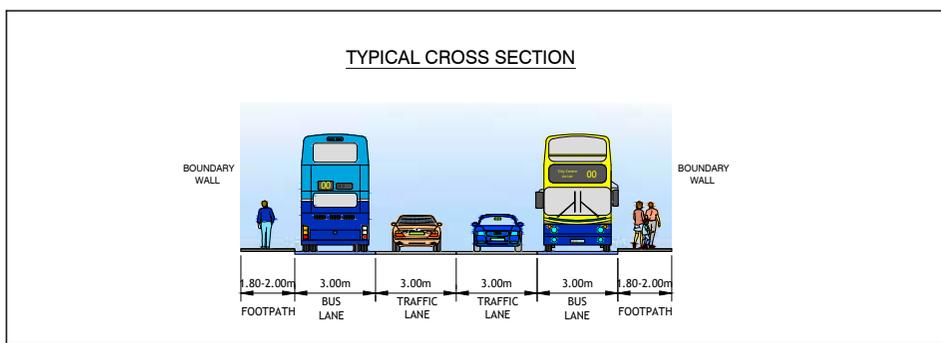
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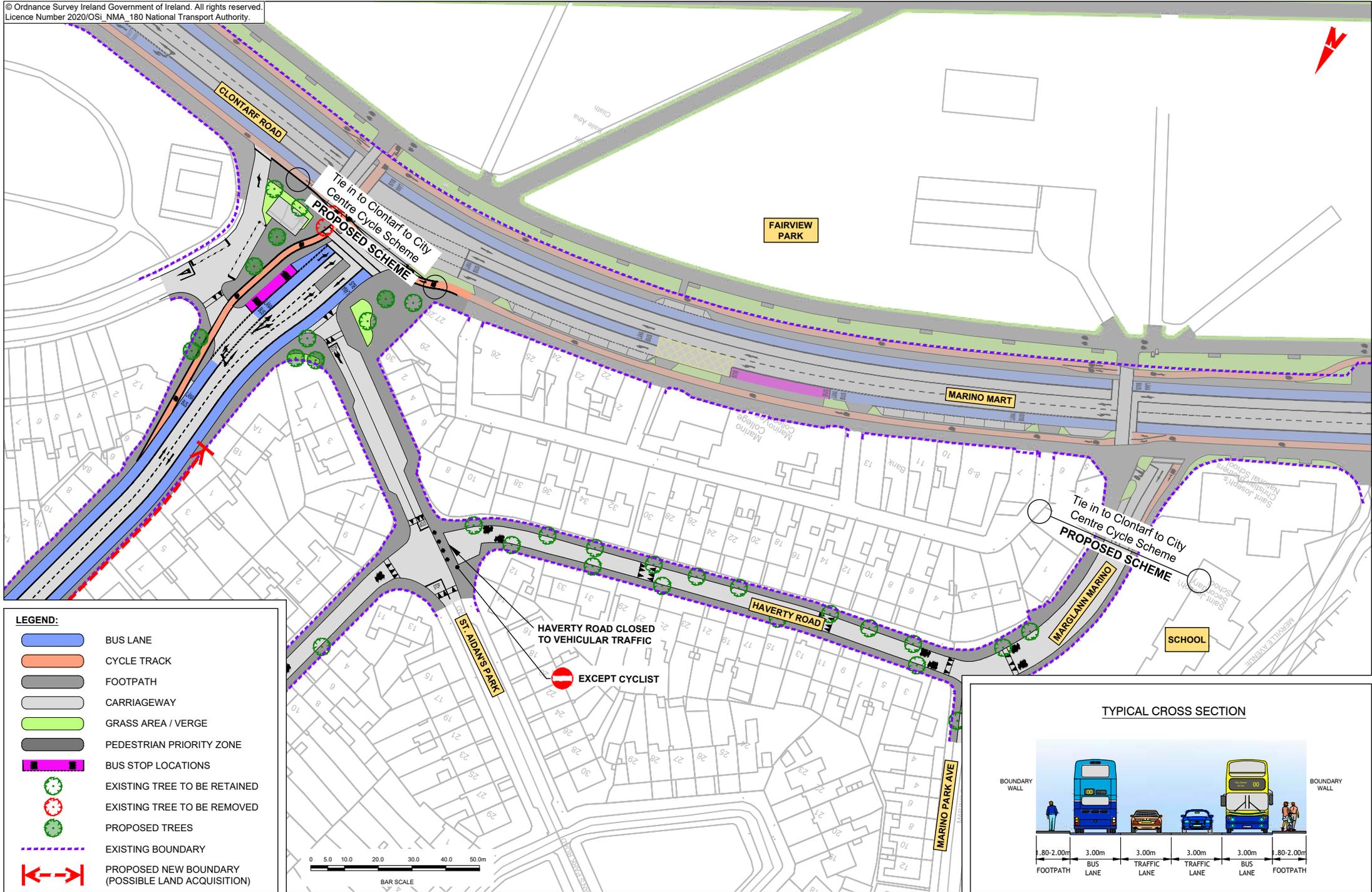




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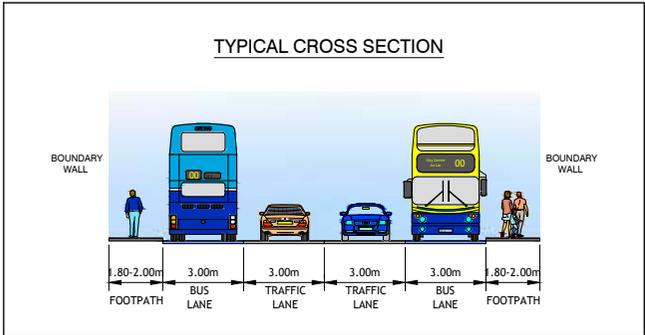


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HAVERTY ROAD CLOSED TO VEHICULAR TRAFFIC EXCEPT CYCLIST



Appendix C – Emerging Preferred Route

Work in Progress

The Emerging Preferred Route Public Consultation Brochure and Drawings from November 2018 is available from the NTA BusConnects Website, and can be accessed by clicking on the links below:

<https://busconnects.ie/media/1402/busconnects-cbc1-clongriffin-to-city-centre-final-for-web-low-res.pdf>

Work in Progress



Údarás Náisiúnta Iompair
National Transport Authority

Harcourt Lane,
Dún Scéine,
Dublin 2.
D02 WT20

Jacobs ARUP SYSTRA