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Bray 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.

BusConnects Dublin Core Bus Corridor Infrastructure Works – Package B

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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 'Bray 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 Bray 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 Bray to City Centre CBC commences at the junction of Leeson Street Lower and St. Stephen's Green. The corridor runs along Leeson Street Lower and Upper, and Sussex Road. The corridor continues along Morehampton Road and Donnybrook Road, through Donnybrook Village and on to the Stillorgan Road, serving the UCD Interchange via the Stillorgan Road Overbridge.

The CBC continues on the Stillorgan Road to Loughlinstown Roundabout, passing Mount Merrion, Stillorgan, Cornelscourt, Cabinteely and Loughlinstown. From Loughlinstown Roundabout, adjacent to St Columcille's Hospital, the corridor runs along the Dublin Road to St Anne's Church and then continues south through Shankill village. The corridor runs through Wilford Junction and along the Dublin Road until it terminates in Bray, to the north side of the River Dargle crossing.

Where substantial revisions have been made to the design since the publication of the Emerging Preferred Route (EPR) Option in January 2019, 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, tree survey and traffic information.

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

- Following traffic modelling carried out in the Anglesea Rd / Stillorgan Rd section of the corridor, a better understanding of the traffic throughput requirements was developed. A revised cross section and lane configuration has been adopted for the link adjacent to the Church of the Sacred Heart in Donnybrook.
- From Eglinton Terrace to Belmont Avenue, the southbound bus lane is maintained through the midway bend. A signal controlled priority junction has been introduced at Eglinton Terrace in the northbound direction to provide buses with a level of priority through this section. This follows the review of additional topographical surveys which provided a better indication of space constraints, and consideration of signal controlled priority along narrow sections of road to improve cyclist safety.
- Following review of topography information, the lane configuration was investigated further at Leeson St Lower to consider reducing the impact on heritage kerbing and existing footpath widths on this busy pedestrian street. A bus gate and local access only provision has been introduced at this location, with inbound general traffic undertaking a local diversion via Hatch St Lower and Earlsfort Terrace. This diversion requires the introduction of two-way general traffic on Earlsfort Terrace between the Hatch St Lower junction and St Stephen's Green.
- Following local community feedback from the previous public consultation, additional options for cycle provision were assessed between Crinken Lane and Stonebridge Road. The proposed cycle route now requires cyclists to share bus lanes between Loughlinstown Roundabout and Stonebridge Road. This provides the most direct route for cyclists along the existing Dublin Road, while minimising impact on adjacent properties and mature planted areas. No dedicated bus lanes or segregated cycle routes are provided through the village centre. This proposal will maintain wider footways and the current village environment.

Additional design development has been undertaken along other sections of the route. Design development is mostly notable at Sections 3.2B (Wilford Roundabout to Crinken Lane), and 3.2E (St. Anne's Roundabout to Loughlinstown Roundabout).

The Preferred Route Option design is provided in full in Appendix B.

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):

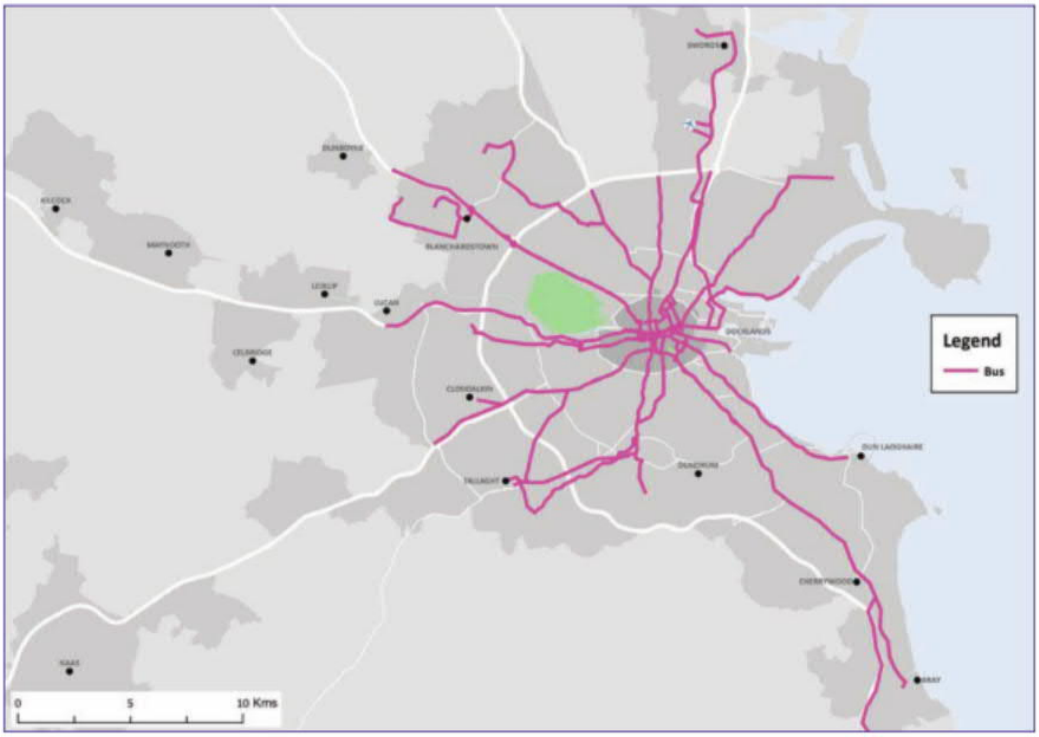


Figure 1.1: 2035 Core Bus Network – Radial Corridors

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. Following the completion of feasibility and options studies, the sixteen radial corridors are being progressed, as the following 16 Core Bus Corridors:

- 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 'Bray 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 Figure 1.2, with the Bray to City Centre CBC highlighted in red.

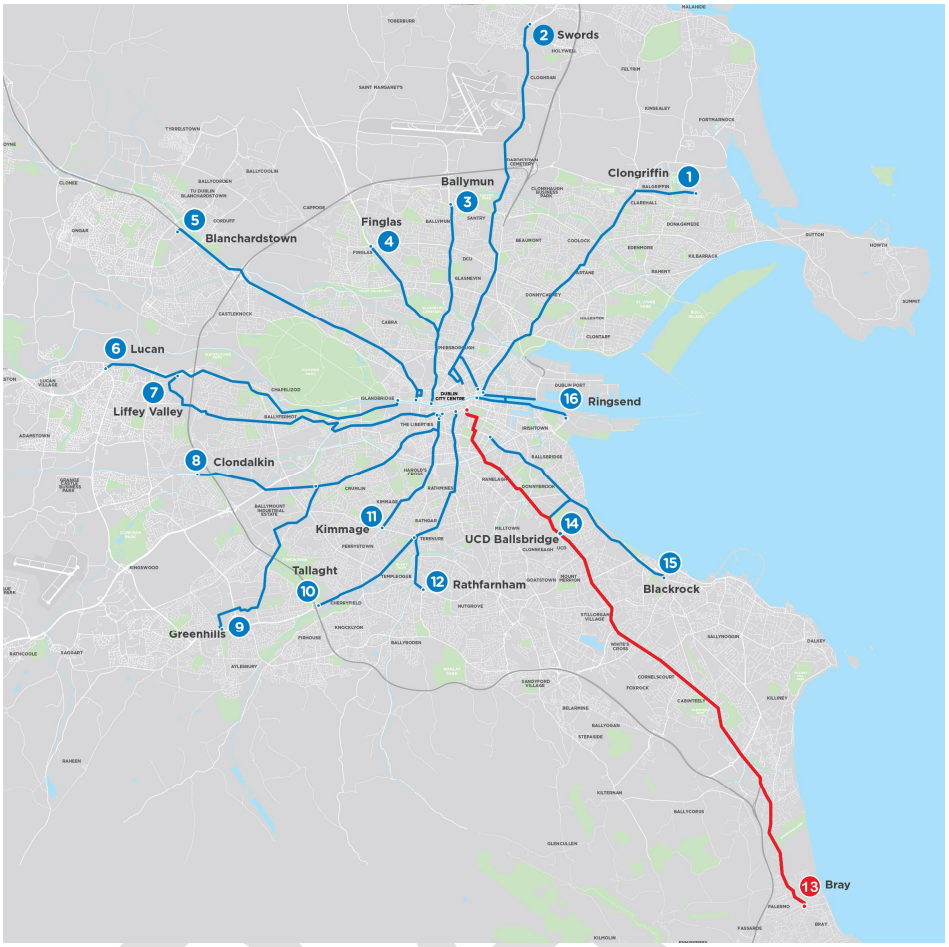


Figure 1.2: BusConnects Radial CBC Network (the CBC highlighted)

Following this, a public consultation for the sixteen radial CBCs took place on a phased basis from November 2018 until May 2019. As part of this process the Bray to UCD Feasibility and Options Report, and the UCD to City Centre Route Options Assessment Study Report were published (Appendix C), which identified feasible options along the corridor, assessed these options and arrived at an EPR Option (Appendix D). 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 Bray to City Centre CBC 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 Bray to City Centre CBC (the CBC), which will build on the previous Bray to UCD Feasibility and Options Report, and the UCD to City Centre Route Options Assessment Study 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 engagement and consultation activities on the EPR Option and draft Preferred Route Option Proposals;
- Clarifications to the previous assessment in the Bray to UCD Feasibility and Options Report, and the UCD to City Centre Route Options Assessment Study Report;
- Further design development and options assessment; and
- Change in the extent of the scheme.

1.4 Report Structure

The structure for the remainder of this report is set out 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 Bray to UCD Feasibility and Options Report, and the UCD to City Centre Route Options Assessment Study Report – This chapter is a summary of the options assessment that was previously carried out in each section of the Bray to UCD Feasibility and Options Report, and the UCD to City Centre Route Options Assessment Study 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: Draft 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.

2. Planning and Policy Context

This chapter summarises a review of transport and planning policy which is relevant to the route selection process for the CBC.

2.1 Transport Strategy for the Greater Dublin Area, 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. This core bus network is shown in Figure 2.1.

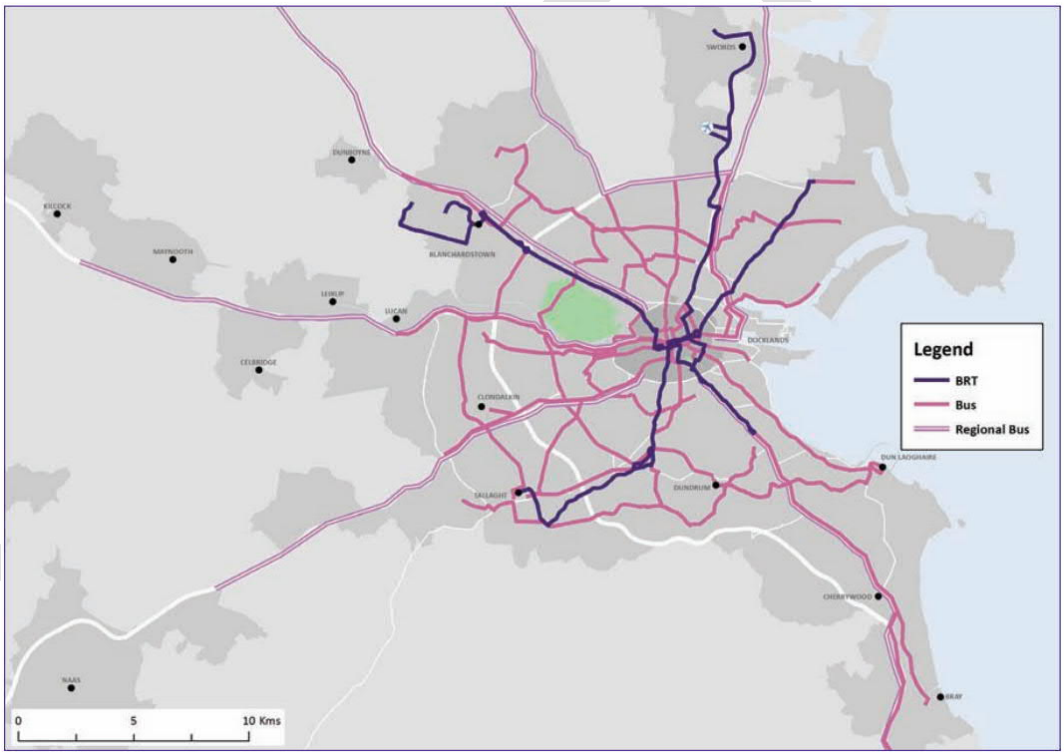


Figure 2.1: GDA Transport Strategy Overall Core Bus Network

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 Bray to City Centre CBC (the CBC) is identified as an enabling element as part of the CBC Infrastructure Works.

2.2 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 12, 12A, S03, S04, S05), secondary (Routes C7, S01a, S02, 13E/N5, S04, S06, 13C, 13G), Inter Urban (Route D4) and Greenway (Dodder Greenway) cycle routes identified along the CBC. During the earlier assessment process which identified the CBC EPR Option, the provision of these cycle routes was considered at all stages. Therefore, as part of the options assessment process, any upgrading of infrastructure to provide bus priority also needs to consider and provide for the required cycling infrastructure, where practicable, to the appropriate level and quality of service (as defined by the NTA National Cycle Manual) required for primary and secondary cycle routes.

2.3 Development Plan, Local Area Plans and Strategic Development Zones

2.3.1 Dublin City Council Development Plan (2016 – 2022)

The current Development Plan for Dublin City Council (DCC) came into effect on 21st October 2016. The 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.

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 2.1: DCC Development Plan Policies for Modal Change and Active Travel 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, Transport Infrastructure Ireland (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.

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

2.3.2 South Dublin County Council Development Plan (2016 – 2022)

The current Development Plan for South Dublin County Council (SDCC) 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.'

The SDCC Development Plan includes transport and mobility policies and objectives to promote the sustainable development of the County by supporting and guiding national agencies in delivering major improvements to the public transport network and to ensure existing and planned public transport services provide an attractive and convenient alternative to the car. The Development Plan recognises that one of the major challenges facing the County during the life of this Plan is the need to promote and provide for sustainable transport options, whilst maintaining the effectiveness of the County's road network.

In terms of transport infrastructure, the following Policies and Objectives have been identified in the County Development Plan which support the proposed development:

Transport and Mobility Policy 1 Overarching	
TM1 Objective 1:	*To support and guide national agencies in delivering major improvements to the transport network.*
TM1 Objective 2:	*To spatially arrange activities around, and improve access to, existing and planned public transport infrastructure and services.*
TM1 Objective 3:	*To focus on improvements to the local road and street network that will better utilise existing road space and encourage a transition towards more sustainable modes of transport, while also ensuring sufficient road capacity exists for the residual proportion of the trips which will continue to be taken by private vehicle.*
TM1 Objective 5:	*To balance the needs of road users and the local community with the need to support the development of a sustainable transportation network.*
TM1 Objective 6:	*To support the delivery of sufficient public transport and road capacity to facilitate sustainable new development in the County.*

Table 2.3: SDCC Development Plan Overarching Objectives aligned with the proposed development

The Development Plan outlines the policy of SDCC to promote the sustainable development of the County by supporting and guiding national agencies in delivering major improvements to the public transport network and to ensure existing and planned public transport services provide an attractive and convenient alternative to the car.

Transport and Mobility Policy 2 Public Transport	
TM2 Objective 1:	*To secure the implementation of major public transport projects as identified within the relevant public transport strategies and plans for the Greater Dublin Area....*
TM2 Objective 2:	*To establish future public transport routes that will support the County's medium to long term development, in particular orbital routes*
TM2 Objective 3:	*To generate additional demand for public transport services through integrated land use planning and maximising access to existing and planned public transport services throughout the network*
TM2 Objective 4:	*To create an interlinked network that maximises the efficiency of existing services, reduces overall journey times and facilitates easy exchanges between modes and/or routes*

Table 2.4: SDCC Development Plan Objectives for Public Transport aligned with the proposed development

These objectives result in SDCC identifying a number of actions outlined below:

- 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.
- Identify opportunities for multi-modal interchange and transport hubs at key locations (such as Centres, cross cutting infrastructure) to increase the efficiency and flow of public transport services.

The development plan identifies the need to re-balance movement priorities towards more sustainable modes of transportation by prioritising the development of walking and cycling facilities within a safe and traffic calmed street environment.

Transport and Mobility Policy 3 Walking and Cycling	
TM3 Objective 1:	To create a comprehensive and legible County-wide network of cycling and walking routes that link communities to key destinations, amenities and leisure activities with reference to the policies and objectives contained in Chapter 9 (Heritage, Conservation and Landscape) particularly those that relate to Public Rights of Way and Permissive Access Routes
TM3 Objective 3:	To ensure that all streets and street networks are designed to prioritise the movement of pedestrians and cyclists within a safe and comfortable environment for a wide range of ages, abilities and journey types.

Table 2.5: SDCC Development Plan Objectives for walking and cycling aligned with the proposed development

2.3.3 Dun Laoghaire Rathdown County Council Development Plan 2016-2022

Dun Laoghaire Rathdown County Council's (DLRCC) Development Plan sets out the Council's proposed policies for the continuing sustainable development of the County for the period 2016 to 2022.

The development plan recognises that the "provision of a good quality bus infrastructure and associated services has the potential to provide the capacity needed to move the large volumes of people who travel to work, education, shops and leisure facilities around the County and beyond each day".

The County Development Plan incorporates objectives to enhance movement across the region, and to deliver on the transportation needs of the DLRCC area, as per Policy ST12 and ST13 as follows:

Public Transport - Bus, Quality Bus Corridors (QBC) and Bus Rapid Transit (BRT)	
Policy ST12: Quality Bus Network	It is Council policy to co-operate with the NTA and other relevant agencies to facilitate the implementation of the Bus Network measures as set out in the NTA's 'Greater Dublin Area Draft Transport 2016-2035' and to extend the bus network to other areas where appropriate subject to design, public consultation, approval, finance and resources.
Policy ST13: Bus Rapid Transit (BRT	It is Council policy to co-operate with the NTA and other relevant agencies to facilitate the introduction of Bus Rapid Transit measures as set out in the NTA's 'Greater Dublin Area Draft Transport Strategy 2016- 2035' where appropriate subject to design, public consultation, approval, finance and resources

Table 2.6 - DLRCC Development Plan Objectives Bus, QBCs and BRTs aligned with the proposed development

2.3.4 Wicklow County Development Plan 2016-2022

Wicklow County Council's (WCC) Development Plan sets out the Council's proposed policies for the continuing sustainable development of the County for the period 2016 to 2022.

The development plan recognises that the "*the integration of good land use planning with transportation is a key that can unlock significant improvements in the quality of life, in ways that are tangible to many in Wicklow, who have long identified car dependency and commuting as being a major drawback to living in the County.*

Reducing the need to travel long distances by private car, and increasing the use of sustainable and healthy alternatives, can bring multiple benefits to both our environment and communities".

The County Development Plan incorporates objectives to enhance movement across the region, and to deliver on the transportation needs of the WCC area, as per Policy TR1 and TR7 as follows:

Infrastructure	
TR1	To cooperate with NTA and other relevant transport planning bodies in the delivery of a high quality, integrated transport system in the Greater Dublin Area
TR7	To promote the delivery of improved and new bus services both in and out of the County but also within the County

Table 2.7 - WCC Development Plan Objectives for Infrastructure aligned with the proposed development

2.3.5 Bray Municipal District Local Area Plan 2018 – 2024

Wicklow County Council adopted The Bray Municipal District Local Area Plan (LAP) on 11th May 2018. The LAP notes that the strategy of this plan to "…craft land use policies to produce settlements of such form and layout that facilitates and encourages sustainable forms of movement and transport, prioritising walking, cycling and public transport…"

The LAP also recognises "….the progress made in the national public transport network over the past number of years, while acknowledging that deficiencies still exist within the Bray Municipal District and the wider County. The key to getting people out of their cars and into public transport is to have a reliable, convenient, frequent and fast service available, that brings people to the places they want to go, and in the case of the Bray MD this will primarily mean into (1) Bray town centre, to the transport hub at Bray train station and the main employment zones in Bray that are outside the town centre, such as along the Southern Cross Road and (2) Dublin, namely Dublin city centre, Sandyford and the M50 ring …".

The Bray Municipal District Local Area Plan incorporates objectives to enhance movement across the region, and to deliver on the transportation needs of the Bray area, as per Policy PT1, PT2, PT6 and PT7 as follows:

Public Transport Objectives	
PT1	To cooperate with NTA and other relevant transport planning bodies in the delivery of a high quality, integrated transport system in the Bray MD area.
PT2	To support and facilitate the implementation of measures to improve overall accessibility, public transport and walking / cycling opportunities within the Municipal District and between the Municipal District and other centres of population and activity identified in the Bray and Environs Local Transport Study, currently being undertaken by the NTA, Wicklow County Council and TII.
PT6	To improve the capacity of the N11 / M11 in a manner capable of facilitating greater free flow of public transport and reducing congestion at junctions serving Bray.
PT7	To promote the delivery of improved and new bus services both in and out of the District but also within the District by:

	· facilitating the needs of existing or new bus providers with regard to bus stops and garaging facilities (although unnecessary duplication of bus stops on the same routes / roads will not be permitted); · facilitating the provision of bus priority where a requirement for such is identified by the NTA; · requiring the developers of large-scale new employment and residential developments in Bray that are distant (more than 2km) from train / LUAS stations to fund / provide feeder bus services until public bus services have been extended to that location.

Table 2.8 - Bray Municipal District LAP Objectives for Public Transport aligned with the proposed development

2.3.6 Stillorgan Local Area Plan 2018 - 2024

Dun Laoghaire Rathdown County Council adopted the Stillorgan Local Area Plan on 10th September 2018. The LAP notes that the strategy of the plan is to "…*enhance the sense of place and community within Stillorgan, improving its vitality and viability as a District Centre. The Plan strategy is to seek a transformative improvement in the quality of the public realm where priority movement for pedestrians, cyclists and public transport will be ensured and the creation of a high quality age friendly environment will be a prerequisite. The influence and impact of the private car on the environs of the District Centre will be moderated*."

In relation to public transport, the LAP notes that "*The LAP Area is presently well-served by bus infrastructure with a significant number of Dublin Bus Routes providing access to both the City Centre and Dún Laoghaire Town Centre. The N11 QBC is the premier bus corridor in the Dublin Metropolitan Area with the 46A operating the highest frequency service on the overall Dublin Bus Network with 8-minute headways during daytime. This service offers a journey time from Stillorgan to Stephens Green of approximately 25 minutes.*

The National Transport Authority (NTA) plans to redesign Dublin's bus system with continuous bus corridors, a redesign of the network of buses, cashless fare payments and a redesign of the bus livery. This project, 'BusConnects', will have implications for the Stillorgan QBC, which has been designated for improvement."

The Stillorgan Local Area Plan incorporates objectives to enhance movement across the region, and to deliver on the transportation needs of the Stillorgan area, as per Policy MV1, MV2, MV3, MV5, MV6 & MV7 as follows:

Movement and Public Transport Objectives	
MV1	Dún Laoghaire-Rathdown Council will co-operate and liaise with the NTA and TII in relation to securing appropriate improvements to the road network within the Plan Area in accordance with the Stillorgan Village Area Movement Framework Plan. These improvements will be brought to the Dundrum Area Committee for consultation.
MV2	It is an objective of the Council to promote sustainable transport forms such as walking, cycling and public transport as set out in the Government's 'Smarter Travel, A Sustainable transport Future 2009- 2020'.
MV3	It is an objective of the Council to provide for high quality pedestrian and cycle network within the LAP Area with high levels of permeability, passive surveillance and supervision where feasible and to ensure that this network will provide attractive legible and direct links to the District Centre, Bus Stops, Stillorgan Luas Stop and the wider area outside the Plan Boundary.

MV5	It is an objective of the Council to ensure that all proposals for new roads, streets and residential layouts comply with the 'Design Manual for Urban Roads and Streets' (DMURS, 2013) which focuses on the needs of pedestrians, cyclists and public transport users.
MV6	It is an objective of the Council to ensure that all new cycling infrastructure be provided in accordance with the standards set out in the National Cycle Manual (2012) published by the NTA, where practicable, recognising the challenges in retrofitting infrastructure within the existing road network.
MV7	It is an objective of the Plan that the Planning Authority will encourage the NTA, as the responsible statutory body, to increase the frequency of Bus services on the Old Dublin road, serving the Stillorgan Shopping Centre in order tocater for those with mobility issues and senior citizens living in the wider Kilmacud / Stillorgan area.

Table 2.9 - Stillorgan LAP Objectives for Public Transport aligned with the proposed development

2.4 The Aim of the Bus Connects Core Bus Corridor Infrastructure Works

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. These works are 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 tracks the CBC 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.

2.5 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.

3. Background and Public Consultation

3.1 Bray to City Centre Core Bus Corridor CBC Feasibility Study and Options Assessment Reports 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 Bray to UCD Feasibility and Options Report, and the UCD to City Centre Route Options Assessment Study Report were 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 the CBC.

3.2 First Non-Statutory Public Consultation – Emerging Preferred Route

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

1,225 submissions were received, ranging from personal submissions from residents and commuters to proposals from public bodies, specialists, various associations and private sector businesses. These submissions comprised emails (1,148), letters (41) and meeting notes recorded by the NTA (36).

A brief summary of the feedback received on the Bray 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:

1) Proposals at Shankill Village, specifically road widening, tree loss, and impacts on the village centre;
2) Access and parking, particularly along Corbawn Lane and in Shankill village centre;
3) Anticipated increase in traffic volumes;
4) Impact on local businesses, specifically in Donnybrook and Shankill;
5) Community, and the perceived impact that wider roads would have on community cohesion;
6) Safety and speed, particularly the perception that bus lanes would mean faster general traffic and less safety for pedestrians;
7) Land acquisition and accommodation works;
8) Construction stage issues;
9) Bus stops and bus service, including in particular the removal of certain bus stops and rationalisation;
10) Landscaping, specifically the loss of trees along the road side;
11) Air pollution, perceived to increase on assumption that more traffic would use roads if bus lanes added;
12) Cyclists, and specifically safety along busy roads and at junctions;
13) Noise and vibration, particularly if bus lanes are being brought closer to properties;
14) Unsuitable design solutions; and
15) Heritage and conservation, specifically the impact on adjacent old boundary walls.

Further detail on these issues can be found in the Bray to City Centre Core Bus Corridor Emerging Preferred Route First Non-Statutory Public Consultation Report (March 2020).

3.3 Development of the Draft Preferred Route Option

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

- Updated topographical survey information;
- Output from subsequent engagement and consultation activities that have taken place since the Emerging Preferred Route Option was published;
- Clarifications of the assessments in the previous Feasibility & Options Assessment Reports;
- Further design development and options assessment; and
- Changes in the extent of the scheme.

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

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

The draft PRO was published in March 2020 and a second round of public consultation commenced on 4th March 2020 and ran until the 17th of April 2020.

Due to Covid 19 restrictions being imposed by Government in mid-March the planned Public Information Events were impacted. Consequently there were 40 submissions received relating to the CBC (compared to 1,225 submissions following the First Public Consultation). 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 Bray 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:

1) Effects on community and landscape;
2) Increased traffic impact;
3) Recommendations for cycle design;
4) Removal of segregated cycle infrastructure through Shankill;
5) Recommendations for junction operations based on local knowledge.

The issues raised during the second public consultation have been considered in the further development of the draft PRO.

Subsequently it was determined by NTA that a third non-statutory public consultation would be conducted prior to finalising the PRO.

4. The Study Area

4.1 Introduction

In this chapter, the study area for the Bray to City Centre CBC scheme is detailed and divided into four distinct sections, which also contain sub-sections where necessary to allow more discrete analysis in the updated MCAs. Potential scheme specific constraints and opportunities within the Study Area are discussed, and the potential for integration of the scheme with existing and planned transport networks is considered, along with considerations of the scheme for other road users.

Previously this scheme consisted of two standalone schemes, and two distinct study areas. These had a common overlapping merge point between Belfield and Foster's Avenue along the R138 Stillorgan Road, which allowed the two study areas to be combined into a single study area. This has required the reassessment of certain elements within the MCAs to ensure a consistent and accurate analysis of the elements within the new overall study area.

The Study Area from the Route Options Assessment Study Report for the UCD to City Centre scheme is shown in Figure 4.1. This Study Area has been renumbered for this combined report as follows:

- Section 1: St. Stephen's Green to UCD (Leeson Street Lower to Foster's Avenue)

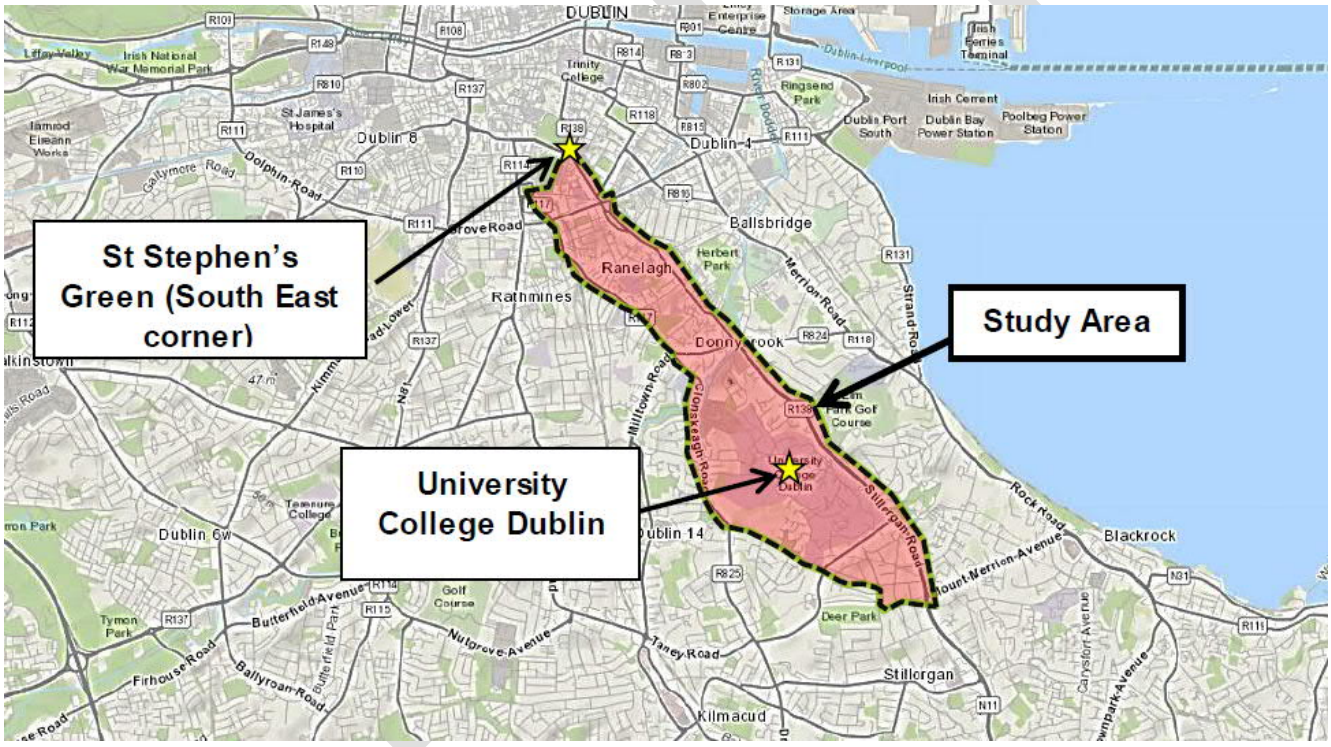


Figure 4.1 - UCD to City Centre Route Options Assessment Study Report Study Area

The Study Area from the Feasibility and Options Report for the Bray to UCD scheme is shown in Figure 4.2.

Figure 4.2 - Bray to UCD Feasibility and Options Report Study Area

This Study Area was split into 3 sections, which have been renumbered for this combined report as follows:

- Section 2: UCD to Loughlinstown (Foster's Avenue to Wyattville Road)
- Section 3: Loughlinstown to Bray North (Wyattville Road to Wilford Roundabout)
- Section 4: Bray North to Bray South (Wilford Roundabout to Southern Cross Road)

Merging the two study areas to combine the revised Bray to City Centre CBC Scheme gives the updated study area.

4.2 Study Area Sections

The Bray to City Centre Core Bus Corridor study area runs from Leeson Street Lower at St. Stephen's Green to Bray. The study area is a combination of the two previous study areas which were developed to include the main trip generators between Leeson Street and Bray either side of the central spine formed by the existing R138/N31/N11/R119/R761 route and encompassing the urban area to the south of Bray. The study area lies within the administrative areas of Dublin City Council, Dun Laoghaire Rathdown County Council, and Wicklow County Council.

To facilitate the assessment process, the section splits along the previous two study areas have been maintained while merging the two previous areas into one larger study area:

Section 1: St. Stephen's Green to UCD (Leeson Street Lower to Foster's Avenue)
Section 2: UCD to Loughlinstown (Foster's Avenue to Wyattville Road)

Section 3: Loughlinstown to Bray North (Wyattville Road to Wilford Roundabout)
Section 4: Bray North to Bray South (Wilford Roundabout to Southern Cross Road)

4.3 Physical Constraints and Opportunities

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

- River Dargle crossing in Bray (area of funnelling where limited space either side of the corridor restricts design options)
- Grand Canal crossing in city centre (area of funnelling where limited crossing points available either side due to adjacent CBC schemes)
- Public transport infrastructure such as DART, LUAS Green Line and proposed bus interchange at UCD
- Planned and committed developments including Cherrywood Strategic Development Zone, Woodbrook / Shanganagh, Fassaroe and Old Connaught development plans and Stillorgan Village Area Movement Framework Plan
- M11 and M50 motorways and potential M11 widening scheme
- Donnybrook Stadium
- Trees and other natural and ecological features including rivers and streams
- Morehampton Road Wildlife Sanctuary
- Architectural, archaeological and heritage sites and features
- Existing urban and sub-urban roads and street networks
- Limited availability of land in urban and suburban areas.

4.4 Integration with Existing and Proposed Public Transport Network

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

- Interface with other CBC Schemes

CBC14 UCD Ballsbridge to City Centre is proposed to interface with the CBC at Nutley Lane Junction on to the R138 Stillorgan Road and continues on to terminate at the proposed UCD Bus Interchange.

CBC15 Blackrock to Merrion is proposed to run parallel to the CBC along the Rock Road and Merrion Road within an accessible distance.

- Bus Network

The following bus services currently serve some or all of the CBC:

2, 7b, 7d, 11, 17, 25x, 27x, 32x, 37, 39, 39a, 41x, 45a, 45b, 46a, 46e, 47, 51x, 63, 63a, 66x, 67x, 75, 75a, 77x, 84, 84a, 84x, 111, 116, 118, 133, 133x, 145, 155, 164, 175, 180, 181, 185, 533, 700, 702, 740, 740-A, 824, 845, 904, 910, UCD06, X2

One of the key components of the updated BusConnects Network Redesign has been the development of complimentary orbital, radial, suburban and peak routes which allow cross over and interaction for primary corridors with more locally focused routes.

The CBC runs along the primary E spine, covering E1 from St. Stephen's Green to the Fran O'Toole Bridge in Bray and E2 from St. Stephen's Green to Kill Lane. The CBC has direct interactions with the following proposed routes:

Spine/Branch Routes: D Spine at St. Stephen's Green, B Spine at Nutley Lane / UCD Interchange

Orbital Routes: Orbital Route O at Grand Parade, Orbital Route S2 at Appian Way/Waterloo Rd, Orbital Routes S4 and S6 at UCD Interchange, Orbital Route S8 at Newtownpark Avenue/Leopardstown Rd

Other City Bound Routes: 23, 24, 81, 82, 86, 87, 88 at St. Stephen's Green

Local Routes: L13 between Nutley Lane and Stillorgan, L25 at Lower Kilmacud Road, L26 at Clonkeen Road, L27 at Johnstown Road, L22 at Wyattville Road, L11 between St. Anne's and Castle Street, L14 at St. Peter's Rd, and the L15 at Upper Dargle Road

Peak Time Routes: P11, P12, P13, P16 at Lower Kilmacud Road (inbound), X2 at Wyattville Road (inbound), X1 at Loughlinstown (inbound)

- Metropolitan Light Rail – LUAS, Metro

The Transport Strategy for the Greater Dublin Area, 2016 – 2035 proposes a LUAS extension to Bray that will cross the CBC at some point between Shankill and Bray, which is yet to be finalised.

The Transport Strategy for the Greater Dublin Area, 2016 – 2035 also outlines the proposed Metro North scheme which has a station planned at St. Stephen's Green which will be within walking distance of the CBC.

- Metropolitan Heavy Rail - DART

The Transport Strategy for the Greater Dublin Area, 2016 – 2035 highlights that the DART south-eastern line, which currently has stops at Shankill and Bray close to the CBC, has a proposed new DART station to be located by the proposed Woodbrook development between Shankill and Bray, which will also be close to and within interactive distances with the CBC.

- Park&Ride

The Transport Strategy for the Greater Dublin Area, 2016 – 2035 also outlines that a strategic Park&Ride facility may be implemented at Woodbrook which could serve both the DART and LUAS and would be located close to the CBC.

4.5 Compatibility with Other Road Users

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

As referenced earlier, the Greater Dublin Area Cycle Network Plan was adopted by the NTA in early 2014 and there are a large number of primary (Routes 12, 12A, S03, S04, S05), secondary (Routes C7, S01a, S02, 13E/N5, S04, S06, 13C, 13G), Inter Urban (Route D4) and Greenway (Dodder Greenway) cycle routes identified along the Bray 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. Where it is considered impractical to construct pedestrian or cycle facilities along a particular section of the CBC route, such facilities may need to be provided along a suitable alternative route.

At discrete locations where segregated cycle facilities cannot be provided along the CBC route and there are no suitable routing alternatives, cyclists will share the bus lane with other vehicles. Such proposals need careful consideration and design to ensure the safety of cyclists.

General traffic flow and local access will generally be maintained along the CBC corridor although it is inevitable that there will be impacts on traffic capacity along the route associated with the reallocation of road space to CBC

priority and cycle tracks and the introduction of turning movement restrictions. Any reductions in traffic carrying capacity of the road network will need to be considered in the context of the overall planned significant increase in quality and level of service of other modes (including increased capacity provision) on the CBC route once implemented.

5. Review of the Previous Options & Feasibility Report

5.1 Introduction

The Bray to UCD Feasibility and Options Report, and the UCD to City Centre Route Options Assessment Study Report, both prepared at the concept/feasibility stage, undertook a two stage process to identify emerging preferred routes that were later combined into the EPR for the CBC. This chapter describes the methodology previously undertaken to arrive at the summary of outcomes shown in Table 5.1, and identifies areas that have been re-examined as part of the development of the Preferred Route Option for the Bray to City Centre CBC, which are then taken forward and discussed in Chapter 6 of this report.

5.2 Summary of Outcomes from Previous Options and Feasibility Reports

An initial "spiders-web" of potential routes that could feasibly accommodate the CBC was developed for the entire study area across the two previous scheme extents (Bray to UCD, UCD to City Centre).

The routes that passed the Stage 1 Sifting were taken forward and combined into a number of feasible longer routes between points. These route options were then assessed by a "Multi-Criteria Analysis" (MCA) process, in which routes were ranked in a comparative manner under a number of criteria.

The methodology above has been applied to the two previous scheme extents. The summary of outcomes shown in Table 5.1 below is aligned with the individual sections taken forward for the Bray to City Centre CBC, as discussed in Section 4.2.

Study Area	Stage 1: No of Route Options considered at sifting stage	Stage 1: No of feasible Route Options	Stage 2: No of end to end Route Options	Stage 2: Emerging Preferred Route	Number of Sub-sections assessed
Section 1 (City Centre to UCD)	57	34	1	LV02	5
Section 2 (UCD to Loughlinstown)	50	29	4	3B	-
Section 3 (Loughlinstown to Bray North)	18	10	5	2B	5
Section 4 (Bray North to Bray South)	18	4	2	1A	-

Table 5.1 - Summary of Outcomes from previous Options and Feasibility Reports

Post sift EPR route options from the Options and Feasibility Report and the Route Options Assessment Study Report are shown in Figures 5.1 to 5.4 below.

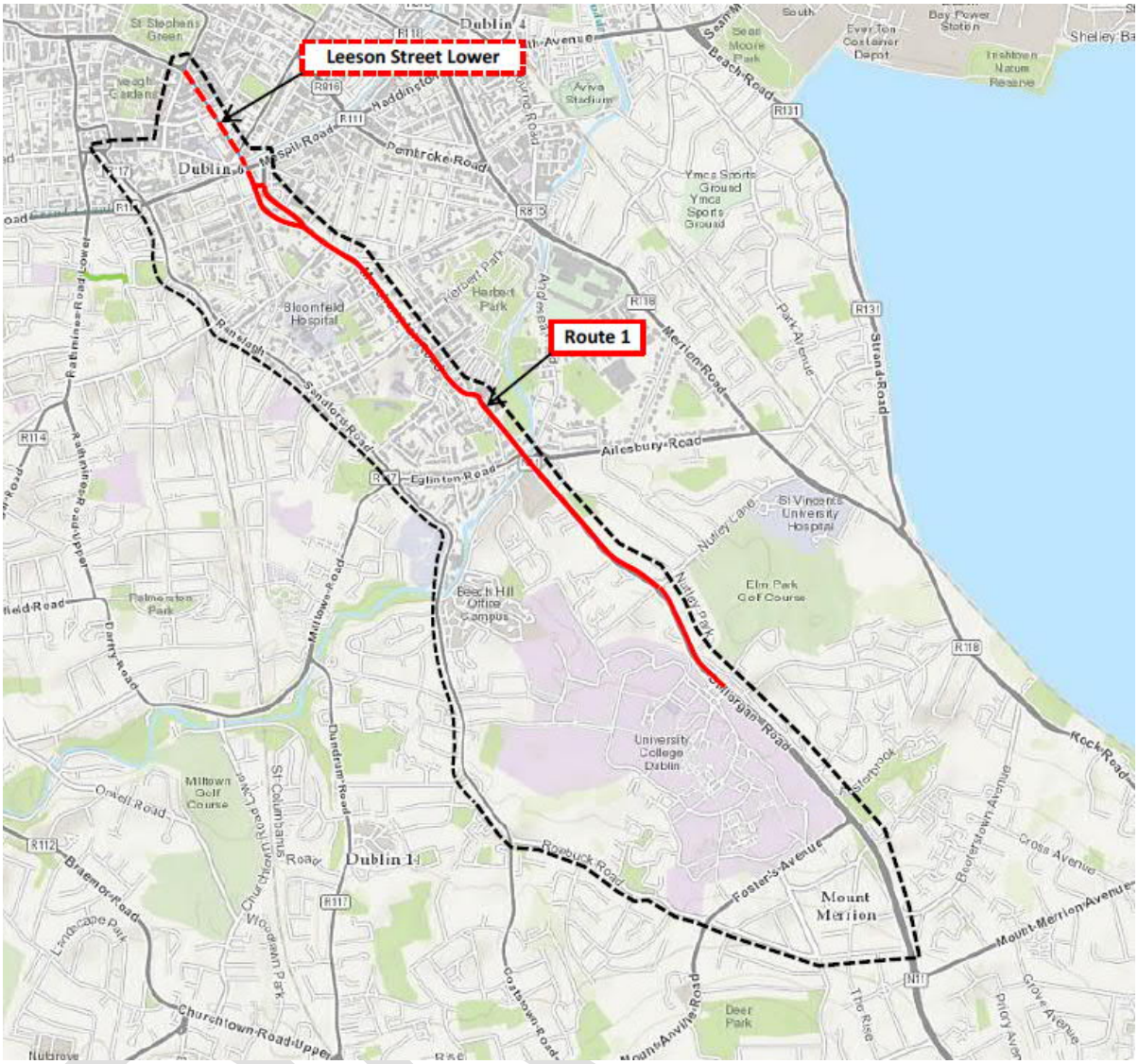


Figure 5.1 - Previous UCD to City Centre Route Options Assessment Study Report Viable Route Options for Section 1

From the previous Route Options Assessment Study Report for the City Centre to UCD scheme, the sifting process for the Section 1 study area resulted in one feasible route, namely Leeson St (Upper & Lower), Morehampton Rd, Donnybrook Rd, and the R138 Stillorgan Road. This route is shown in Figure 5.1 above. This ties in with the E Spine corridor from the BusConnects Network Redesign proposals.

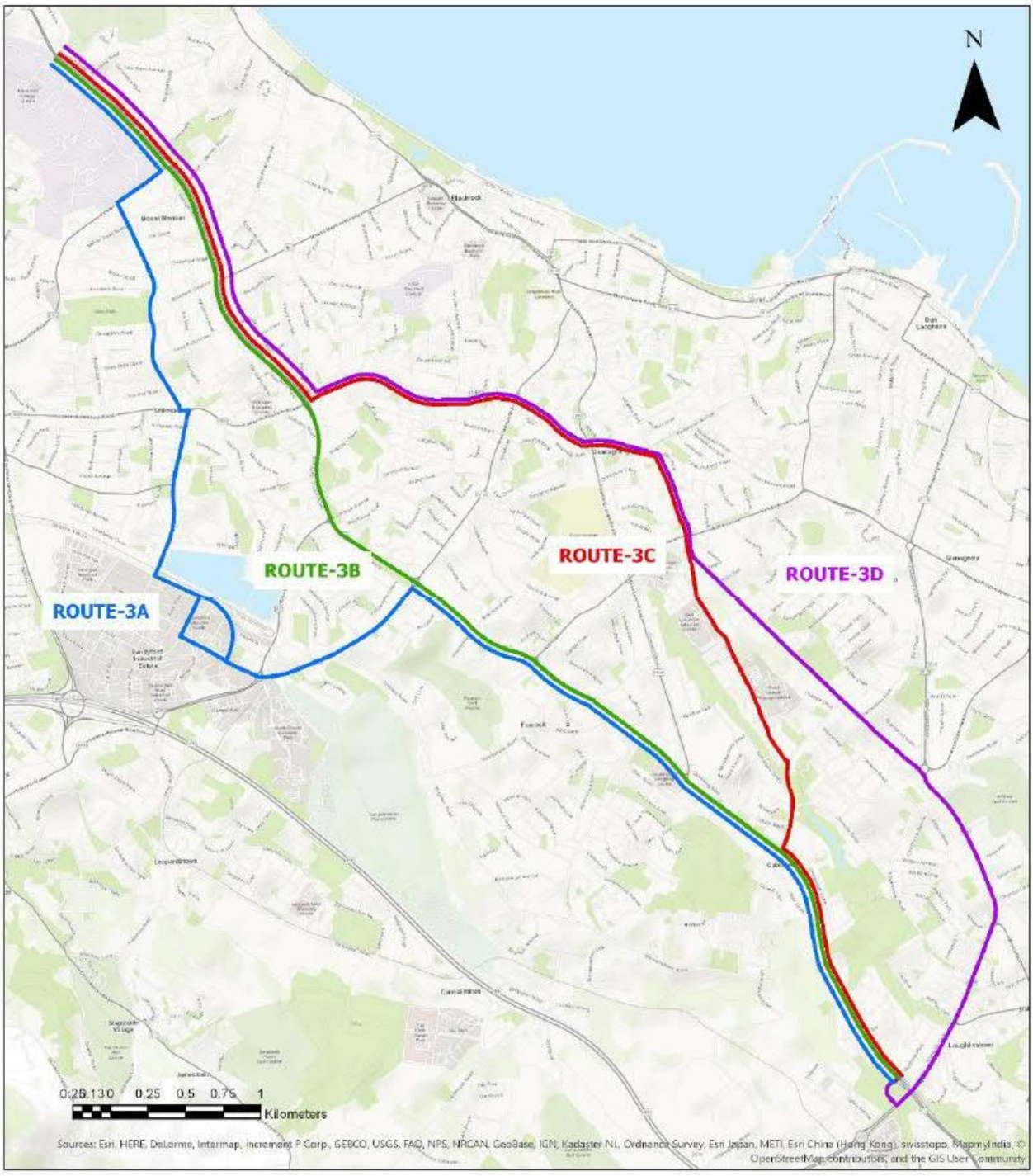


Figure 5.2 – Previous Bray to UCD Feasibility and Options Report Route Viable Options for Section 2

From the previous Feasibility and Options Report for the Bray to UCD scheme, the sifting process for the Section 2 study area resulted in four feasible routes, shown in Figure 5.2 above. Route Option 3B was proposed as the EPR for this section. This ties in with the E Spine corridor from the BusConnects Network Redesign proposals.

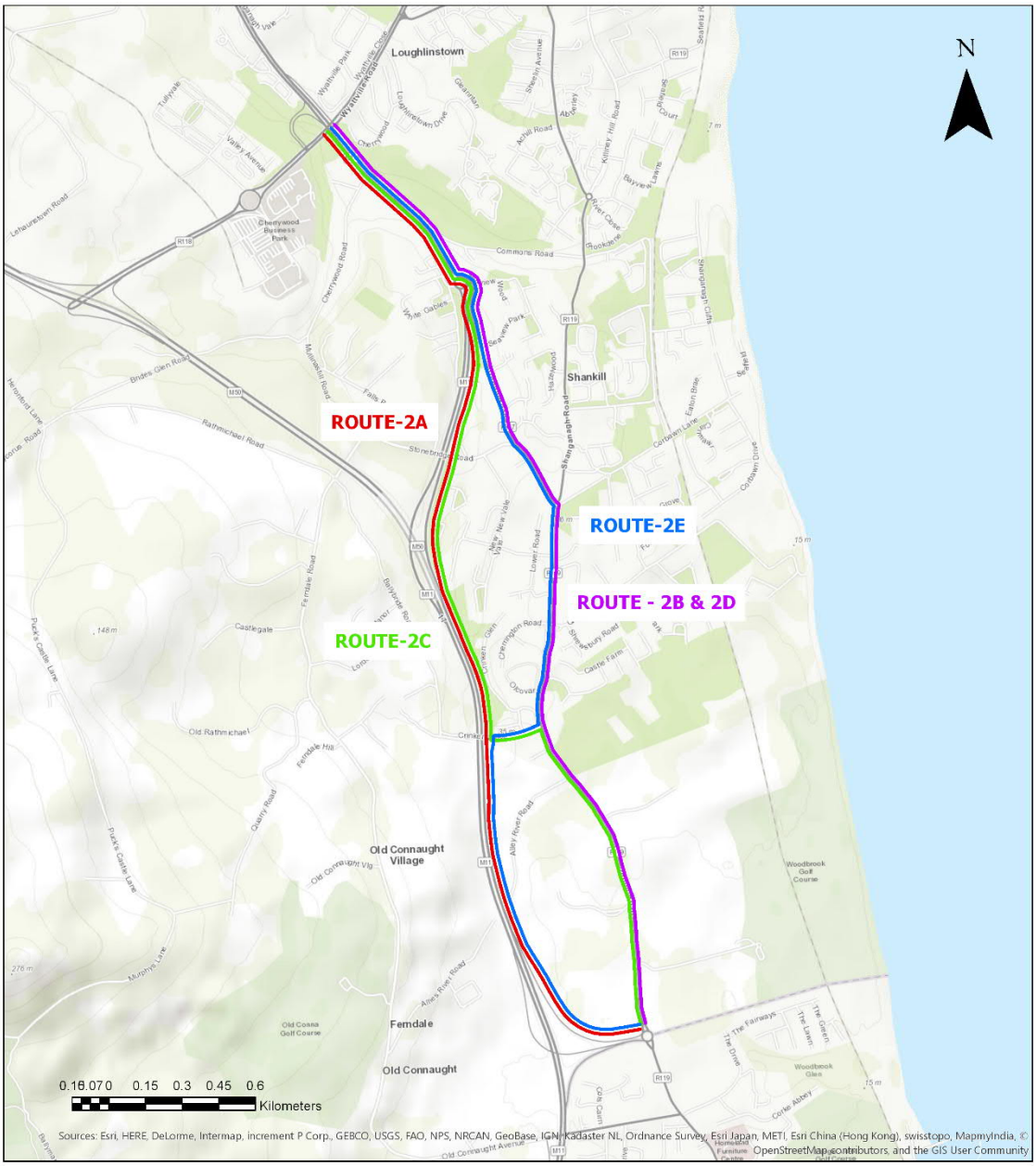


Figure 5.3 – Previous Bray to UCD Feasibility and Options Report Route Viable Options for Section 3

From the previous Feasibility and Options Report for the Bray to UCD scheme, the sifting process for the Section 3 study area resulted in five feasible routes, shown in Figure 5.3 above. Route Option 2B was proposed as the EPR for this section. This ties in with the E Spine corridor from the BusConnects Network Redesign proposals.

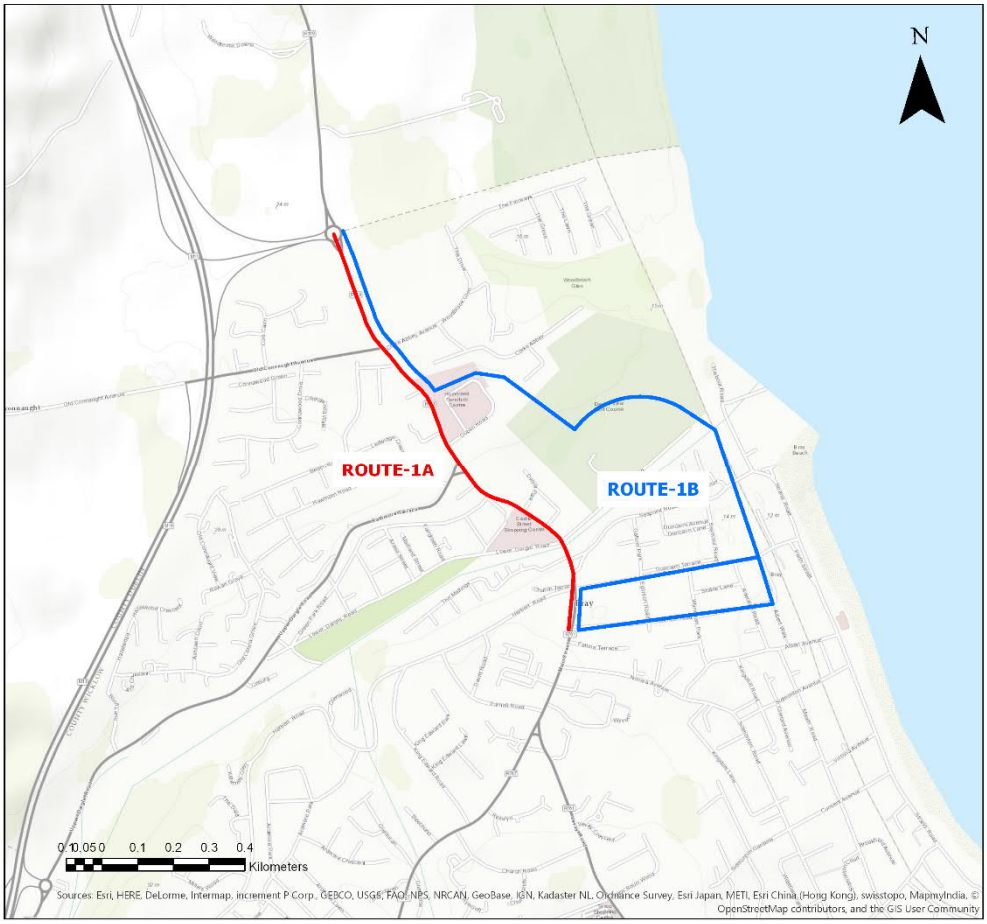


Figure 5.4 – Previous Bray to UCD Feasibility and Options Report Viable Route Options for Section 4

From the previous Feasibility and Options Report for the Bray to UCD scheme, the sifting process for the Section 4 study area resulted in two feasible routes, shown in Figure 5.4 above. Route Option 1A was proposed as the EPR for this section. This ties in with the E Spine corridor from the BusConnects Network Redesign proposals.

5.3 Assessment Methodology for the Preferred Route

5.3.1 Assessment Methodology

The first step in the assessment process was to review the Emerging Preferred Route in the Options and Feasibility Reports.

A number of locations along the Emerging Preferred Route were identified where there was potential to revisit scheme proposals to address issues raised in the public consultation or identified through a review of additional information. For each area identified, additional options were developed and if considered feasible, would be passed through a Multi-Criteria Assessment (MCA) in a similar manner to the Emerging Preferred Route assessment process.

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

The methodology for the assessment of new options explored at this stage is the same as outlined in the Options and Feasibility Report. A summary of the MCA process is outlined below.

5.3.2 Multi-Criteria Analysis (MCA) process

The Emerging Preferred Route from the Options and Feasibility Report was assessed by a "Multi-Criteria Analysis" (MCA) process, in which routes were ranked in a comparative manner under a number of criteria.

The MCA comprised a more detailed qualitative and quantitative assessment, using criteria established to compare route options. 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
- Physical Activity

Physical Activity was scoped out of the multi-criteria assessment at this stage as all route options are considered to promote physical activity equally and it is, therefore, not considered to be a key differentiator between route options. This was previously used in the UCD to City Centre analysis but was not used as part of the Bray to UCD analysis. Project-specific route options assessment criteria were established for the CBC Infrastructure Works by the NTA. These were tailored to have commonality with the Common Appraisal Framework guidelines where practical. Table 5.2 presents a summary of the CBC assessment criteria and sub criteria used as part of the detailed route options assessment process.

Assessment Criteria	Assessment Sub-Criteria
1. Economy	1.a Capital Cost
	1.b Transport Reliability and Quality of Service
2. Integration	2.a Land Use Integration
	2.b Residential, Employment and Educational Catchments
	2.c Transport Network Integration
	2.d Cycling Integration
3. Accessibility & Social Inclusion	3.a Key Trip Attractors
	3.b Deprived Geographic Areas
4. Safety	4.a Road Safety

5. Environment	5.a Archaeology and Cultural Heritage
	5.b Architectural Heritage
	5.c Flora and Fauna
	5.d Soils and Geology
	5.e Hydrology
	5.f Landscape and Visual
	5.g Air Quality
	5.h Noise & Vibration
	5.i Land Use Character

Table 5.2 - MCA Assessment Criteria

These criteria are discussed further in section 4.4 of the UCD to City Centre Route Options Assessment Study Report, and section 4.3 of the Bray to UCD Feasibility and Options Report.

Route options are then compared based on a five point scale, ranging from having significant advantages to having significant disadvantages over other route options. Table 5.3 shows the colour coding of the five point scale, with advantageous routes graded “dark green” and disadvantageous routes graded “red”.

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

Table 5.3 - Route Options Colour Coded Ranking Scale

5.4 Study Area Section 1 – St. Stephen's Green to UCD

5.4.1 Emerging Preferred Route

The EPR previously identified along this section of the CBC corridor is presented in Figure 5.5.

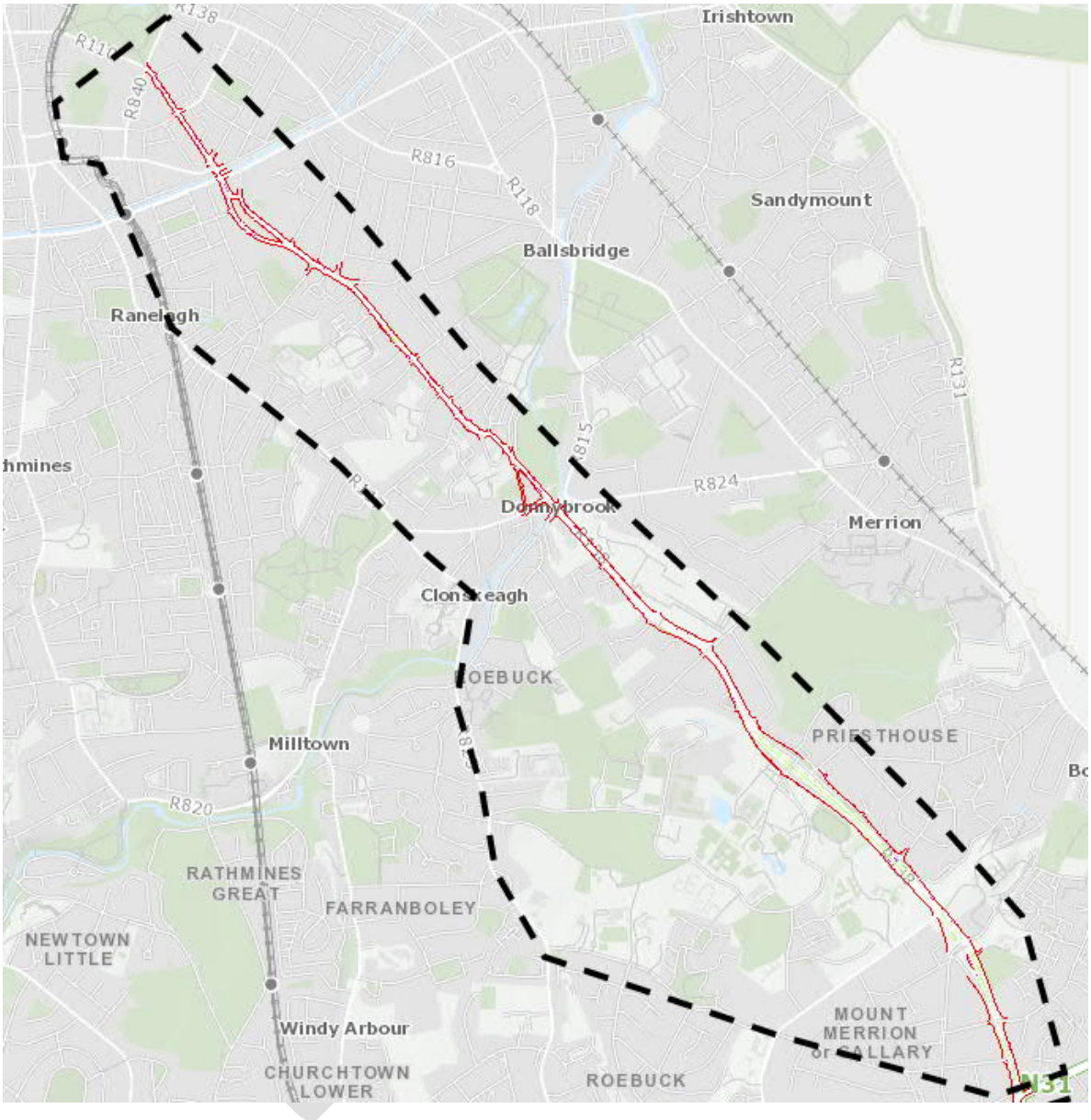


Figure 5.5 - Emerging Preferred Route: Section 1

The EPR Option for Study Area Section 1 is as outlined in the previous Route Options Assessment Study Report with the exception of the starting point for the scheme. The starting point for Section 1 has been changed to the Leeson St Lower junction on St Stephen's Green, as presented in Figure 5.5, as it is considered that sufficient bus infrastructure and cycle segregation currently exists beyond this point.

5.4.2 Areas Identified for Re-examination

Following a reassessment of the design based on public consultation submissions and a subsequent additional topographical survey, material changes have been recorded in three areas.

1.1A (Stillorgan Road/UCD to Anglesea Bridge, specifically the link passing Donnybrook Church), where, following additional traffic modelling, the lane configuration proposed in the previous report was found to not allow for acceptable traffic flows through the junction.

1.1C (Eglinton Terrace to Belmont Avenue, specifically the tight bend past Pembroke Cottages), where the lane configuration proposed in the previous report was found to not provide sufficient carriageway widths following additional topographical surveys.

The Route Options Assessment Study previously prepared did not assess options along Lower Leeson St., stopping at the Upper Leeson St. junction with Grand Parade, due to the lack of route options between this point and the end of the scheme. As part of the design development Lower Leeson St. has been reconsidered and an alternative option has been assessed here. The issue at this location related to the provision of segregated cycle tracks within the available carriageway cross section, and the impact on footpath widths. This section will be referred to as Section 1.1F.

5.5 Study Area Section 2 - UCD to Loughlinstown

The Study Area Analysis and Multi Criteria Analysis for the Emerging Preferred Route for Section 2 outlined in the Feasibility and Options Report have been evaluated by the design team and are considered to still be valid.

The EPR previously identified along this section of the CBC corridor is presented in Figure 5.6.

As outlined in Section 4.2, the Study Area for Section 2 originally, and still, extends from UCD to Loughlinstown.

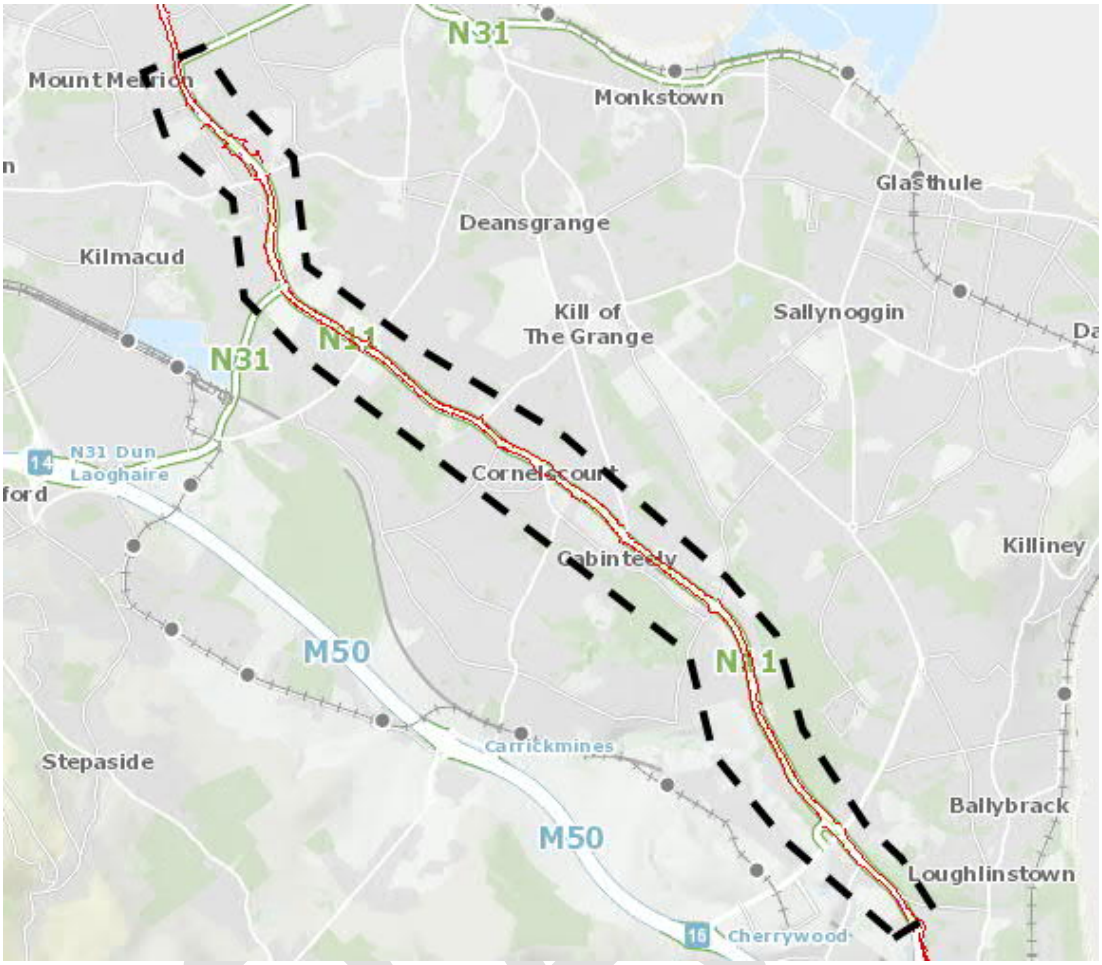


Figure 5.6 - Emerging Preferred Route: Section 2

5.6 Study Area Section 3 - Loughlinstown to Bray North

5.6.1 Emerging Preferred Route

The EPR previously identified along this section of the CBC corridor is presented in Figure 5.7.

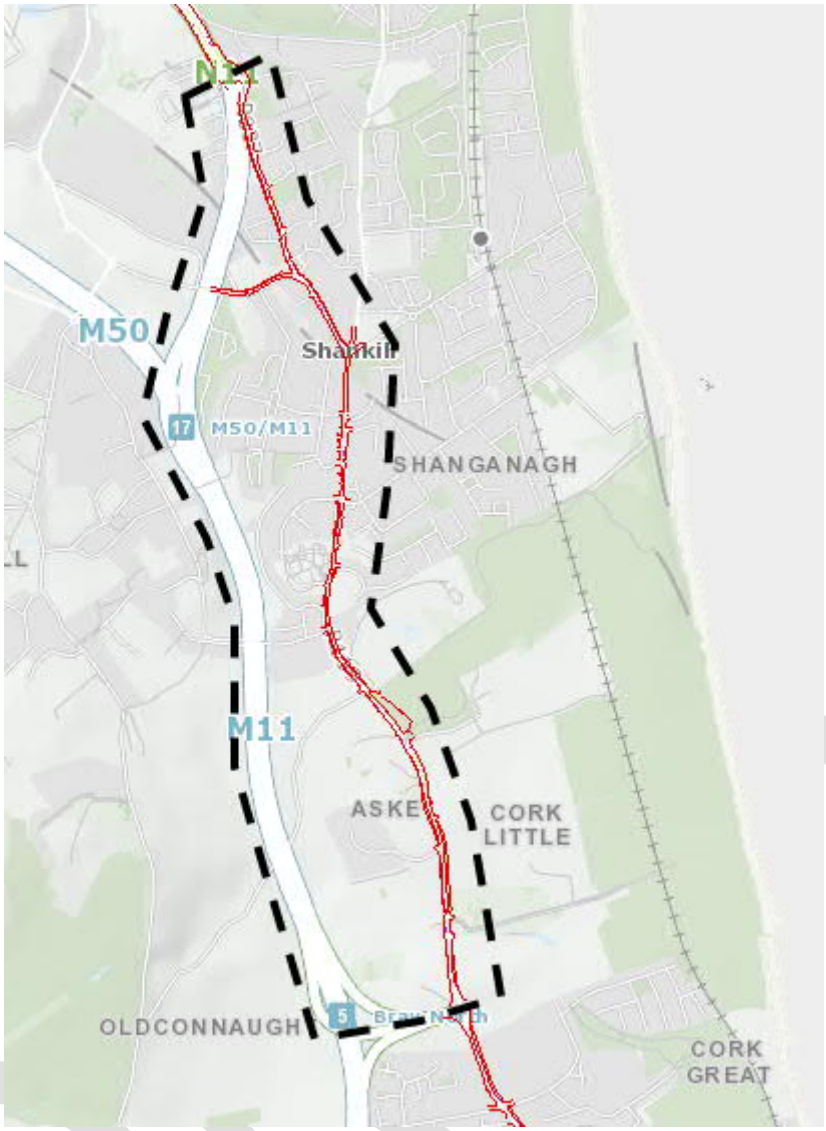


Figure 5.7 - Emerging Preferred Route: Section 3

As outlined in Section 4.2, the Study Area for Section 3 originally, and still, extends from Loughlinstown to Bray North.

In summary, the EPR Option for Study Area Section 3 is as outlined in the previous Options & Feasibility Report, as presented in Figure 5.7.

5.6.2 Areas Identified for Re-examination

Following a reassessment of the design based on public consultation submissions and subsequent additional surveys, material changes have been recorded in two areas.

3.2C (cycle provision between Crinken Lane and Stonebridge Road). Following feedback from the public consultation additional options for cycle provision were assessed.

3.2D (Crinken Lane to St Anne's Roundabout). Following feedback from the public consultation, and additional topographical survey information, additional options for carriageway cross sections were assessed.

Additional design development has been undertaken along other sections of the route, which are not considered material changes requiring updated MCAs. These are mostly notable at Sections 3.2B (Wilford Roundabout to Crinken Lane), and 3.2E (St. Anne's Roundabout to Loughlinstown Roundabout).

5.7 Study Area Section 4 - Bray North to Bray South

The Study Area Analysis and Multi Criteria Analysis for the Emerging Preferred Route for Section 4 outlined in the Feasibility and Options Report have been evaluated by the design team and are considered to still be valid.

The EPR previously identified along this section of the CBC corridor is presented in Figure 5.8.

As outlined in Section 4.2, the Study Area for Section 4 originally, and still, extends from Bray North to Bray South. It is noted that the termination point for the Scheme has been changed to end the Scheme on the northern approach to the Fran O'Toole bridge, where previously the bridge was included in the Scheme.

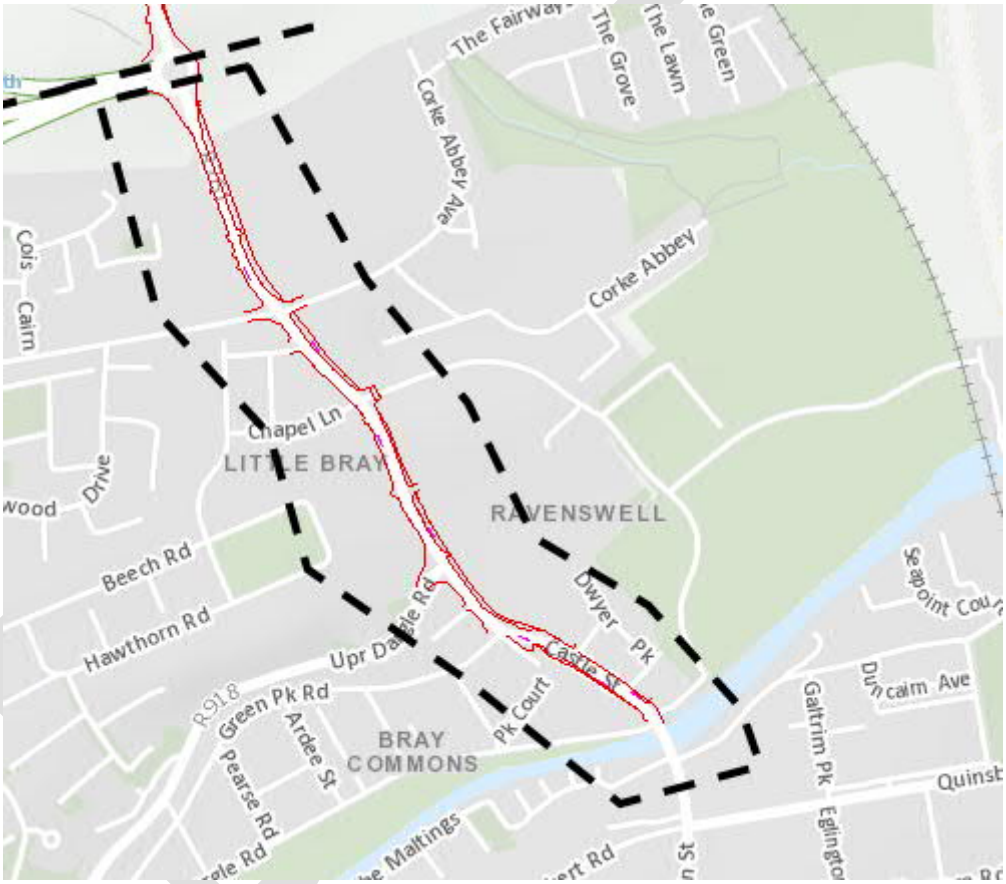


Figure 5.8 - Emerging Preferred Route: Section 4

5.8 Summary

A summary of the EPR review areas discussed in this chapter and taken forward for detailed options assessment is presented below:

- Section 1 – Further detailed option assessment has been carried out at Section 1.1A (Stillorgan Rd / UCD to Anglesea Bridge), Section 1.1C (Eglinton Terrace to Belmont Avenue), and Section 1.1F (Leeson St Lower).
- Section 2 - The EPR is materially unchanged from that outlined in the Feasibility and Options Report.

- Section 3 - Further detailed option assessment has been carried out at Section 3.2C (Cycling Provision from Crinken Lane to Loughlinstown Roundabout), and Section 3.2D (Crinken Lane to St. Anne's Roundabout).
- Section 4 - The EPR is materially unchanged from that outlined in the Feasibility and Options Report.

6. Option Assessment

6.1 Introduction

This chapter reassesses the Emerging Preferred Route sections identified in the Route Options Assessment Study Report and the Feasibility and Options Report, taking into account updated topographical survey information, further design development and the output from engagement and consultation activities that have taken place since the previous Emerging Preferred Route was last published.

6.2 Section 1 - St. Stephen's Green to UCD

6.2.1 Introduction

The Study Area Analysis and Multi Criteria Analysis for the previously proposed feasible route options for Section 1 outlined in the Route Options Assessment Study Report have been evaluated by the design team and are considered still to be valid.

Changes along the route in relation to cross sections and lane provisions have been recorded at Sections 1.1A (Stillorgan Road/UCD to Anglesea Bridge, specifically the link passing Donnybrook Church), 1.1C (Eglinton Terrace to Belmont Avenue, specifically the bend past Pembroke Cottages), and 1.1F in relation to the available cross section for improved segregated cycle tracks.

6.2.2 Section 1A – Stillorgan Road / UCD to Anglesea Bridge

6.2.2.1 Introduction

Following the Multi-Criteria Analysis for the Emerging Preferred Route in the Route Options Assessment Study Report, Option 1A2 was considered the most desirable option by providing better road safety and reduced visual impacts.

However, with further traffic modelling carried out on the Anglesea Rd / Stillorgan Rd junction a better understanding of the traffic throughput requirements was developed, and the lane configuration was investigated further. As such 1A2 from the Emerging Preferred Route was reassessed against a new option, 1A3, which provided a revised cross section and lane configuration past Donnybrook Church.

6.2.2.2 Options Considered

This section travels along the Donnybrook Road and the Stillorgan Road.

The two options considered (1A2 and 1A3) follow the same route as 1A2 as detailed in the previous Feasibility and Options Report.

6.2.2.3 Emerging Preferred Route Option 1A2

This section's EPR option was to provide a single southbound (outbound) general traffic lane with bus lane past the Beaver Row junction before widening out into two general traffic lanes further along the Stillorgan Rd south of the junction as shown below in Figure 6.1. The footpath outside the Church was proposed to be widened to provide extra space for cyclists and pedestrians, made possible by reducing the number of outbound general traffic lanes by one. Two general inbound traffic lanes and one bus lane were provided in the northbound direction. This is a reduction form the current cross section, which has 4 lanes in total northbound. Segregated cycle tracks are provided in each direction on either side of the junctions.

In the southbound direction, the single general traffic lane carried on from Donnybrook Rd, through the junction with Eglinton Rd, over Anglesea Bridge (with a shared left turn lane) through the junction with Anglesea Rd and

Beaver Row, and past the Church of the Sacred Heart. Once past the Church, the southbound carriageway would widen to two general lanes of traffic and one bus lane. This would carry on through Nutley Lane junction as far as Belfield.

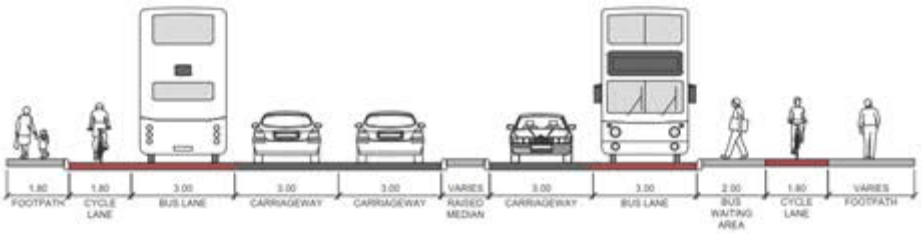


Figure 6.1 - EPR cross section after Anglesea Bridge

6.2.2.4 Route Option 1A3

Figure 6.2 illustrates the indicative scheme design for Option 1A3 immediately past Anglesea Rd junction, which has two inbound and two outbound general traffic lanes, as well as a bus lane and cycle track in each direction. This will create additional stacking space for outbound traffic between Eglinton Rd and Anglesea Rd in Section 1B compared to Option 1A2. This cross section continues on the Stillorgan Rd through the Nutley Lane junction as far as Belfield.

There is no requirement for land take on either side of the carriageway immediately south of Anglesea Rd junction with either option.

Formalised island bus stops have been provided rather than sections of shared area at the bus stop, providing safer segregation to both pedestrians and cyclists. Coach stops have also been included along this section. The coach stops will be provided in laybys so as to not delay other buses or cyclists, as these coaches have the potential to be stopped for a number of minutes considering passengers may have luggage to load and unload.

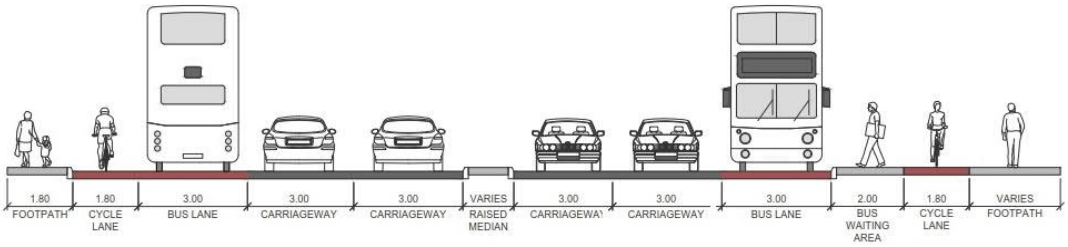


Figure 6.2 - Indicative cross section for Option 1A3 outside Donnybrook Church

6.2.2.5 Option Assessment

The Multi Criteria Appraisal tables are included in Appendix A. A summary of the MCA for Section 1A is provided in Table 6.1 below.

MCA criteria	Assessment Sub-Criteria	Option 1A2	Option 1A3
Economy	1a Capital Cost		
	1b Transport Reliability and Quality of Service		

Integration	2a Land Use Integration		
	2b Residential Population and Employment Catchments		
	2c Transport Network Integration		
	2d Cycle Network Integration		
	2e Traffic Network Integration		
Accessibility and Social Inclusion	3a Key Trip Attractors		
	3b Deprived Geographic Areas		
Safety	4a Road Safety		
Environment	5a Archaeological and Cultural Heritage		
	5b Architectural Heritage		
	5c Flora and Fauna		
	5d Soils and Geology		
	5e Hydrology		
	5f Landscape and Visual		
	5g Air Quality		
	5h Noise and Vibration		
	5i Land Use Character		

Table 6.1 - MCA at Section 1A

In terms of Economy, Option 1A2 would require the existing southbound carriageway at Donnybrook Church to be reconfigured as footpath and cycle tracks. It is assumed the options are the same for the remainder of the route in terms of Capital Cost. Option 1A3 would require less reconfiguration in this respect overall, though the overall cost difference is not significant. Quality of Service is considered the same for both options.

In terms of integration, provision of coach laybys in Option 1A3 will reduce the potential for delays caused by loading coaches. The incorporation of island bus stops will also reduce delays to cyclists at bus stops. The addition of an extra outbound lane will provide additional storage in this very short section leading to Section 1A and cycle facilities in general have been improved. In all these respects of traffic operation and integration Option 1A3 performs better than Option 1A2.

Both options perform the same in terms of Accessibility and Social Inclusion.

Option 1A3 performs better than Option 1A2 in terms of Road Safety as a result of the inclusion of island bus stops, and the revised junction design at Nutley Lane, which incorporates segregated cycle turning provisions.

Both options perform the same in terms of Environment.

A summary of the assessment and relative ranking of route options against the five main assessment criteria is presented in Table 6.2 below.

MCA criteria	Option 1A2	Option 1A3
Economy		
Integration		
Accessibility and Social Inclusion		
Safety		
Environment		

Table 6.2 - Section 1A Summary

Based on the assessment undertaken, Option 1A3 appears to offer more benefits than Option 1A2. Option 1A3 is the Preferred Route Option for the Anglesea Rd to Belfield section for the following reasons:

- It provides coach laybys and island bus stops, ensuring reliability of journey times for buses and less delays for cyclists
- It provides better management of general traffic through the Anglesea Rd junction for southbound traffic
- It performs well under the Integration and Road Safety criteria, and provides a safer Nutley Lane junction due to the enhanced cycle design

6.2.3 Section 1C – Eglinton Terrace to Belmont Avenue

6.2.3.1 Introduction

Following the Multi-Criteria Analysis for the Emerging Preferred Route in the Route Options Assessment Study Report, Option 1C1 was considered the most desirable option due to the economic cost comparison and the reduced land use integration and visual impacts.

However, following review of additional topographical surveys and consideration of the option to assess signal controlled priority along narrow sections of road to improve cyclist safety, the lane configuration was investigated further. As such 1C1 from the Emerging Preferred Route was reassessed against four new options, 1C3, 1C4, 1C5, and 1C6.

6.2.3.2 Options Considered

This section travels along the Donnybrook Road.

The five options considered (1C1, 1C3, 1C4, 1C5, and 1C6) follow the same route as 1C1 as detailed in the previous Feasibility and Options Report.

6.2.3.3 Emerging Preferred Route Option 1C1

To preserve the existing village streetscape, Scheme Option 1C1 would provide adequate bus and cycle facilities albeit within a reduced carriageway design width.

This scheme option would avoid the demolition of existing buildings and footpaths along with the ancillary works associated with demolition (i.e. the relocation of services etc.) by providing one traffic lane and one shared bus and cycle lane on both the inbound and outbound carriageways, as shown in Figure 6.3 below. The lanes would not have any additional curve widening on the tight bend midway along the section.

There are no parking spaces identified in this section which would be affected by the proposed works.

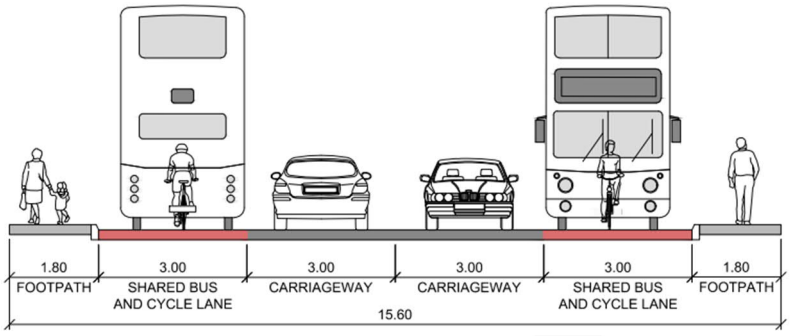


Figure 6.3 - EPR Option 1C1 cross section at Eglinton Terrace

6.2.3.4 **Route Option 1C3** - Northbound Bus Lane with Southbound Queue Relocation

A number of new options were generated for this section as swept path analysis confirmed that providing the cross-section for Option 1C1 was not achievable due to the horizontal alignment constraints and 3m lane widths. All new developed options allow for vehicle movements through this section without encroaching on adjacent lanes.

Figure 6.4 - Option 1C3

This option, detailed in Figure 6.4, would see a northbound bus lane for the entire section with no junction in place at Eglinton Terrace, only a pedestrian crossing. For southbound buses a signal controlled priority junction would be in place at Belmont Avenue which would stop general traffic and allow buses to proceed through this section, as the overall cross section width only allows for one outbound lane. Northbound and southbound cycle lanes would be included in this proposal but may be reduced to 1.8m at pinch points.

6.2.3.5 **Route Option 1C4 - Queue Relocation Each Side**

This option, illustrated in Figure 6.5, would see no dedicated northbound or southbound bus lanes through the section. Buses would receive priority signal controlled priority junctions either side of the section, at Belmont Ave (southbound) and Eglinton Terrace (northbound). The full 2m cycle provision could be carried through this section under this scenario.

Figure 6.5 - Option 1C4

6.2.3.6 **Route Option 1C5 - Southbound bus lane with Northbound merge of bus lane**

This option, illustrated in Figure 6.6, would see the full length of dedicated bus lane in the southbound direction, whereas the northbound bus lane would merge with the northbound general traffic to pass through the pinch point. This would require buses and general traffic to merge together before progressing through the narrow section before the bus lane would restart after passing The Crescent.

A segregated northbound cycle track would only be possible after The Crescent, while no segregated southbound cycle track would be possible, requiring southbound cyclists to share the bus lane.

Figure 6.6 - Option 1C5

Route Option 1C6 - Southbound Bus Lane with Northbound queue relocation

This option, illustrated in Figure 6.7, would see a continuation of southbound bus lane through the midway bend. A signal controlled priority junction at Eglinton Terrace in the northbound direction would provide buses with a

level of priority through this section. North and southbound segregated cycle tracks would be provided along the entire section.

Figure 6.7 - Option 1C6

6.2.3.7 Option Assessment

The Multi Criteria Appraisal tables are included in Appendix A. A summary of the MCA for Section 1C is provided in Table 6.3 below.

MCA criteria	Assessment Sub-Criteria	Option 1C1	Option 1C3	Option 1C4	Option 1C5	Option 1C6
Economy	1a Capital Cost					
	1b Transport Reliability and Quality					
Integration	2a Land Use Integration					
	2b Residential Population and Employment Catchments					
	2c Transport Network Integration					
	2d Cycle Network Integration					
	2e Traffic Network Integration					
	3a Key Trip Attractors					

Accessibility and Social Inclusion	3b Deprived Geographic Areas					
Safety	4a Road Safety					
Environment	5a Archaeological and Cultural Heritage					
	5b Architectural Heritage					
	5c Flora and Fauna					
	5d Soils and Geology					
	5e Hydrology					
	5f Landscape and Visual					
	5g Air Quality					
	5h Noise and Vibration					
	5i Land Use Character					

Table 6.3 - MCA at Section 1C

In terms of Economy, Options 1C3, 1C4, 1C5 and 1C6 perform better due to the journey time reliability for bus services with signal controlled priority providing buses with more priority over general traffic than the other options.

In terms of Integration, Options 1C3, 1C4, and 1C6 perform better for cycling integration due to the provision of segregated cycle tracks, where the other options require cyclists to share road space with buses and/or general traffic. Option 1C1 performs best for Traffic Network Integration as the proposals have the least impact on general traffic. Option 1C4 has the most impact on general traffic as both directions are subject to signal controlled priority for buses.

All options perform the same in terms of Accessibility and Social Inclusion.

Options 1C3, 1C4 and 1C6 perform best in terms of road safety due to the segregated cycle track provisions.

All options perform the same in terms of Environment.

A summary of the assessment and relative ranking of route options against the five main assessment criteria is presented in Table 6.4 below.

MCA criteria	Option 1C1	Option 1C3	Option 1C4	Option 1C5	Option 1C6
Economy					
Integration					

Accessibility and Social Inclusion					
Safety					
Environment					

Table 6.4 - Section 1C Summary

Based on the assessment undertaken, the two highest scoring options were 1C3 and 1C6. Both of these had a full bus lane in one direction and a queue location (signal controlled priority) facility in the other, with 1C3 having the northbound lane and 1C6 having the southbound bus lane. Due to the alignment and land available an overall greater length of bus lane can be achieved in option 1C6. The northbound bus lane can restart sooner than the southbound bus lane could if it operated under a pre-signal facility.

Option 1C6 is the Preferred Route Option for the Eglinton Terrace to Belmont Avenue section for the following reasons:

- It provides more dedicated bus lane provision (either with bus lanes or signal controlled priority) than the other options
- It provides more or the same amount of segregated cycle tracks than the other options
- It provides more or the same amount of journey time reliability than the other options

Therefore, Option 1C6 is the Preferred Route Option.

6.2.4 Section 1F – Leeson St Lower

6.2.4.1 Introduction

The previous Route Options Assessment Study Report and associated MCAs did not investigate options for this length of the route, taking Leeson St Lower as the only viable route option over this length. The Route Options Assessment Study Report stated

“Only a single reasonably direct route can be established between the Grand Canal and St. Stephen’s Green, i.e. along Leeson Street Lower. After examining the local road network and taking cognisance of proposals to implement bus corridors along Dun Laoghaire and Rathfarnham that originate from Stephen's Green (i.e. via Leeson Street Lower), it was decided not to include Leeson Street Lower in the route options development for the UCD to City Centre corridor.”

However, the lane configuration was investigated further as part of the Preferred Route Option development based on revised topographical surveys, to consider reducing the impact on the heritage kerbs at the narrow approach to St. Stephen’s Green and maintaining the existing footpath widths on this busy pedestrian street while also improving cycle track segregation. As such 1F1 from the Emerging Preferred Route was reassessed against one new option, 1F2.

6.2.4.2 Options Considered

This section travels along Leeson St Lower.

The new option considered, 1F2, follows the same route as 1F1 as detailed in the previous Feasibility and Options Report for the bus lanes and cycle tracks, but includes a revised cross section based on a general inbound traffic diversion along Hatch St Lower and Earlsfort Terrace.

6.2.4.3 Emerging Preferred Route Option 1F1

The proposed alignment layout for Leeson St Lower maintained the existing current cross section in terms of lane configuration, namely two northbound traffic lanes, one being a dedicated bus lane and the other a general traffic lane. A single southbound bus lane was provided. Segregated cycle tracks were provided in both directions. Due to the current kerb to kerb widths, the proposed segregated cycle tracks were proposed to be constructed into the current footpaths, reducing the available footpath widths. An extract from this proposed EPR design is shown in Figure 6.8 below.

Figure 6.8 – Option 1F1

6.2.4.4 Route Option 1F2

An additional design was considered between St Stephen's Green and the Hatch St Lower/Pembroke St Upper junction that would provide the full segregated cycle tracks and bus lanes in both directions, while also maintaining the heritage granite kerbs and retaining the current footpath widths, considering the heavy pedestrian usage of this section of road. To achieve the necessary widths between the existing kerbs for bus and cycle lanes, it was necessary to assess if the general inbound traffic lane could be diverted to St. Stephen's Green on another route.

This option places a bus gate to the north of the Leeson Lane junction on Leeson St Lower. There is local access for two way general traffic between the Hatch St Lower / Pembroke St Upper junction for access to properties on this road as far as Leeson Lane. General northbound traffic is diverted on to Hatch St Lower, and around Earlsfort Terrace, where it travels east to the Earlsfort Terrace / St. Stephen's Green junction. This would require the introduction of two-way general traffic on Earlsfort Terrace eastwards from the Hatch St Lower junction.

This is illustrated in Figure 6.9.

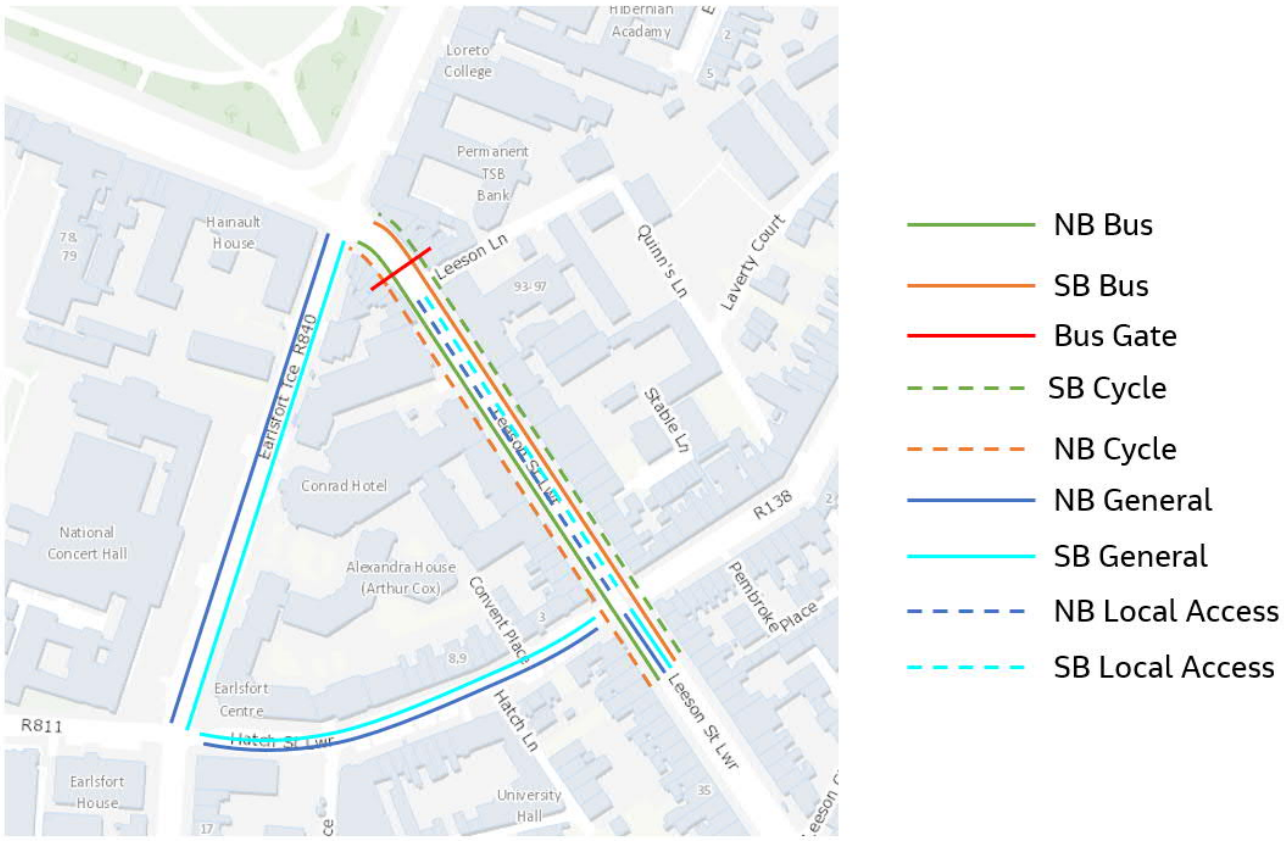


Figure 6.9 – Option 1F2

6.2.4.5 Option Assessment

The Multi Criteria Appraisal tables are included in Appendix A. A summary of the MCA for Section 1F is provided in Table 6.5 below.

MCA criteria	Assessment Sub-Criteria	Option 1F1	Option 1F2
Economy	1a Capital Cost		
	1b Transport Reliability and Quality of Service		
Integration	2a Land Use Integration		
	2b Residential Population and Employment Catchments		
	2c Transport Network Integration		
	2d Cycle Network Integration		
	2e Traffic Network Integration		
	3a Key Trip Attractors		

Accessibility and Social Inclusion	3b Deprived Geographic Areas		
Safety	4a Road Safety		
Environment	5a Archaeological and Cultural Heritage		
	5b Architectural Heritage		
	5c Flora and Fauna		
	5d Soils and Geology		
	5e Hydrology		
	5f Landscape and Visual		
	5g Air Quality		
	5h Noise and Vibration		
	5i Land Use Character		

Table 6.5 - MCA at Sub-section 1F

In terms of Economy, the capital cost of Option 1F1 would be slightly lower that 1F2 due to the need to only provide minor works to one junction. Option 1F2 requires minor works to two junctions, which would cost slightly more than the one junction and kerb realignment for Option 1F1. For Journey Time Reliability, Option 1F2 performs better than 1F1 as northbound general traffic is removed from the Leeson St Lower approach to the junction with St. Stephen's Green.

In terms of Integration, both options perform the same for public transport and cycling as there is no change to the bus or cycle routes. Option 1F1 performs slightly better than 1F2 for general traffic integration due to the slightly shorter distance that general traffic would have to travel from Hatch St Lower to St. Stephen's Green.

Both options perform the same in terms of Accessibility and Social Inclusion.

Option 1F2 performs better than Option 1F1 in terms of Road Safety as a result of the additional space for cyclists and pedestrians along Leeson St Lower towards the busy St. Stephen's Green junction.

Option 1F2 performs better in terms of Environment, specifically on Landscape and Visual and Air Quality. For Landscape and Visual, the retention of existing heritage granite kerbs maintains the visual character of the city centre Georgian streetscape. For Air Quality, Leeson St Lower between Hatch St Lower and St. Stephen's Green is a busier route for pedestrians that Hatch St Lower and Earlsfort Terrace. Relocating the general traffic will reduce traffic and improve air quality for pedestrians and cyclists, particularly for the two schools on this section of road.

A summary of the assessment and relative ranking of route options against the five main assessment criteria is presented in Table 6.6 below.

MCA criteria	Option 1F1	Option 1F2

Economy		
Integration		
Accessibility and Social Inclusion		
Safety		
Environment		

Table 6.6 - Section 1F Summary

Based on the assessment undertaken, Option 1F2 appears to offer more benefits than Option 1F1. It performs well under the Road Safety and Environment criteria. Option 1F2 is the Preferred Route Option for the Leeson St Lower section for the following reasons:

- It provides more Journey Time Reliability at the Leeson St Lower / St. Stephen's Green junction
- It provides a safer environment with more space for pedestrian and cyclists, particularly outside the two schools on this section of road
- It allows for the retention of heritage granite kerbs on Leeson St Lower

6.3 Section 2 - UCD to Loughlinstown

6.3.1 Introduction

The Study Area Analysis and Multi Criteria Analysis for the previously proposed feasible route options for Section 2 outlined in the Feasibility and Options Report have been evaluated by the design team and are considered still to be valid.

6.4 Section 3 - Loughlinstown to Bray North

6.4.1 Introduction

The Study Area Analysis and Multi Criteria Analysis for the previously proposed feasible route options for Section 3 outlined in the Feasibility and Options Report have been evaluated by the design team and are considered still to be valid.

Material changes along the route in relation to cross sections and lane provisions have been recorded at Subsection 3.2C (cycle facilities between Crinken Lane and Stonebridge Road), and Subsection 3.2D (Crinken Lane to St Anne's Roundabout).

No material changes have been recorded at Subsection 3.2B (Wilford Roundabout to Crinken Lane) or Subsection 3.2E (St Anne's Roundabout to Loughlinstown Roundabout), but changes resulting from general design development are also discussed below.

6.4.2 Section 3.2B – Wilford Roundabout to Crinken Lane

6.4.2.1 Introduction

The current provision over this length comprises of a two lane carriageway with advisory cycle lanes from Wilford Roundabout as far as Shanganagh Cemetery. From here the cross section switches to two traffic lanes, a northbound bus lane and a southbound cycle lane as far as the northern end of Shanganagh Park. At this point it reverts to two lanes with advisory cycle lanes, which become defined cycle lanes on the approach to Crinken Lane. This is shown in Figure 6.10.

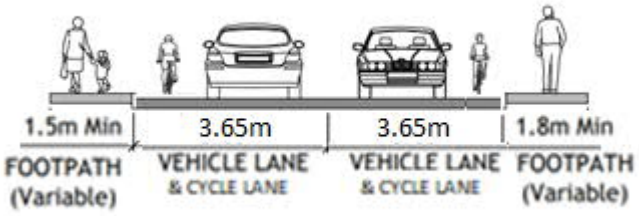


Figure 6.10 - Indicative Current Cross Section for Subsection 3.2B

6.4.2.2 Development of Design

The design on this section has been reviewed following the previous EPR with a view to minimising the impacts while maintaining the necessary level of bus priority and cycle segregation.

The EPR design proposed a full suite of two segregated cycle tracks, two bus lanes, and two general traffic lanes, as illustrated in Figure 6.11.

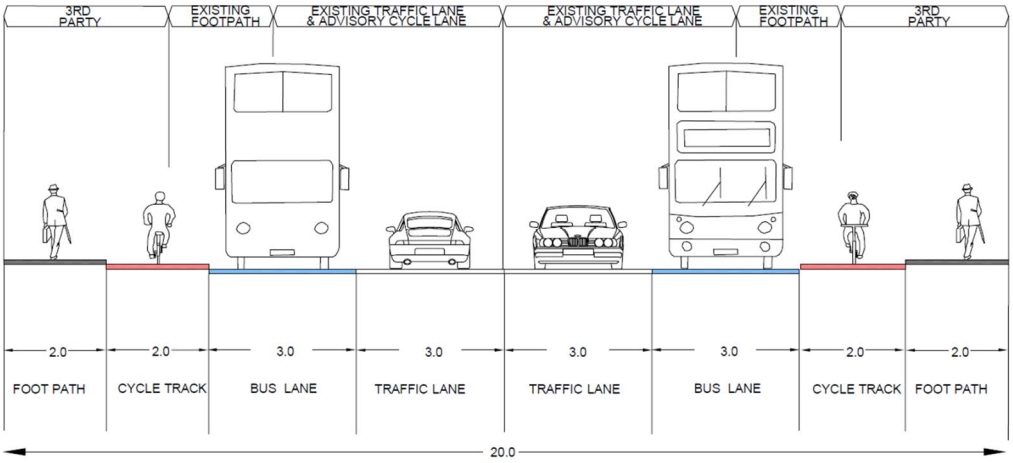


Figure 6.11 - Proposed EPR Subsection 3.2B Indicative Cross Section

The design for this section was developed further as part of the Preferred Route Option development following completion of additional topographic surveys, and tree surveys, which allowed for a more detailed analysis of the impacts the proposed EPR would have. The assessment also took into account the responses from the Public Consultations which outlined that heritage wall and roadside tree loss along this section would impact on the visual identity and feel for this length of road.

Signal controlled priority was applied for northbound buses from Wilford Roundabout to enable a reduction in impact on properties immediately north of the junction by locally shortening the bus lane extents here. Signal priority measures which commenced in the adjacent section through Shankill village were extended for southbound buses as far as the Shanganagh Castle grounds to avoid impact on properties south of Crinken Lane.

In a number of locations cycle tracks and footpaths have been brought behind the roadside tree line to maintain the roadside tree canopy along the road. At these locations the intention is to remove the ground level shrubbery and crown the trees to ensure there is visibility from the road to the newly relocated footpaths and cycle tracks. These will then run behind the trees to offer a quieter and safer route for pedestrians and cyclists. To optimise the protection of the roadside trees in front of Shanganagh Cemetery, a section of the northbound cycle track has

been relocated to the east of the route to create a two way cycle track from St. James Church, past Shanganagh Cemetery, and through Shanganagh Park, where it crosses back to the west side of the road around Allies River Road.

Proposed entrances for recently approved housing developments at Shanganagh Castle and Woodbrook have been incorporated into the design and have been considered when assessing the most appropriate local alignment in addition to newly available survey information.

There are ongoing discussions with Dun Laoghaire County Council around the incorporation of the emerging Shanganagh Park and Cemetery Masterplan interactions with the road into the design.

The above design development has enabled the reduction in impact on adjacent heritage walls, properties and trees that was evident as a result of the updated topographical survey and tree survey in the area, while maintaining the proposed bus infrastructure and achieving the intended journey time reliability.

6.4.3 Section 3.2C – Cycle Provision between Crinken Lane and Loughlinstown Roundabout

6.4.3.1 Introduction

Cycling provision between Loughlinstown Roundabout and Crinken Lane was assessed in the Feasibility and Options Report in two sections – from Loughlinstown Roundabout to the Dublin Rd / Shanganagh Rd junction, and from the Dublin Rd / Shanganagh Rd junction to Crinken Lane.

In this previous report, from Loughlinstown Roundabout to Dublin Rd / Shanganagh Rd junction two options for cycling provision were assessed. From the Dublin Rd / Shanganagh Rd junction southwards to Crinken Lane four options were assessed.

Following the Multi-Criteria Analysis for the Emerging Preferred Route in the Feasibility and Options Report, Option 1, illustrated in Figure 6.12, was considered the most desirable cycling option between Loughlinstown Roundabout to Dublin Rd / Shanganagh Rd junction due to its directness.

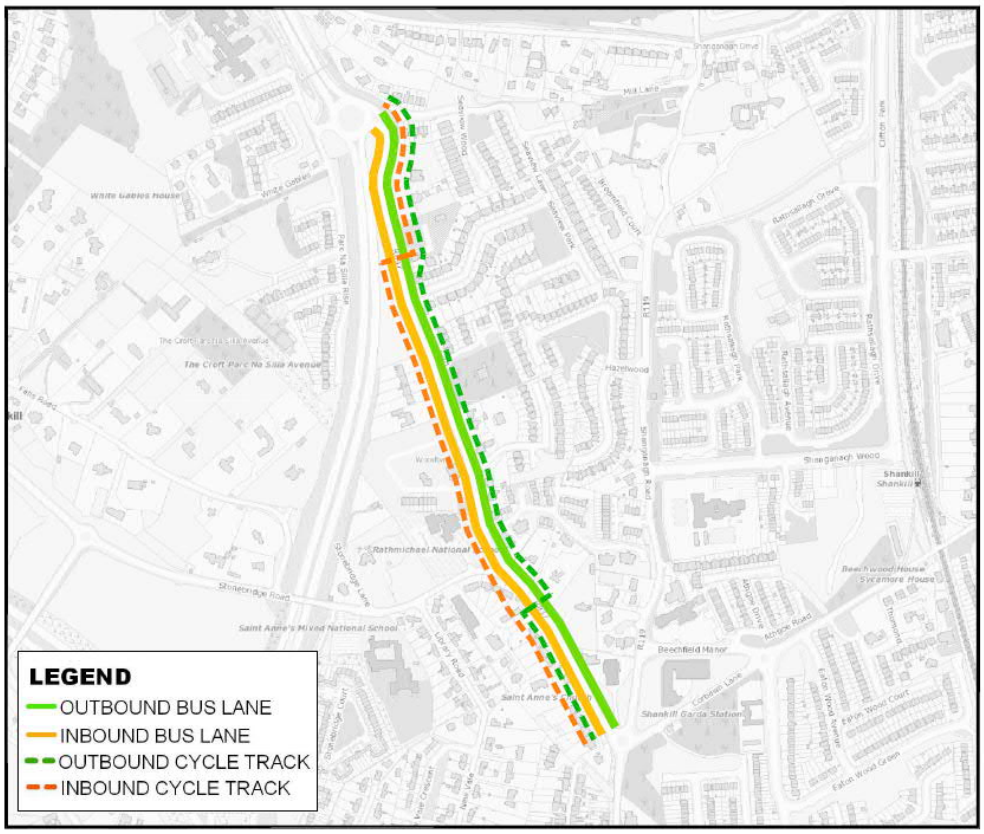


Figure 6.12 - EPR Cycle Route Option 1 from St. Anne's Church to Loughlinstown Roundabout

Option 1, illustrated in Figure 6.13, was considered the most cycling desirable option between the Dublin Rd / Shanganagh Rd junction and Crinken Lane as it had less impact along the main road in terms of cycle provision, and a safer route by removing cyclists from the main road.

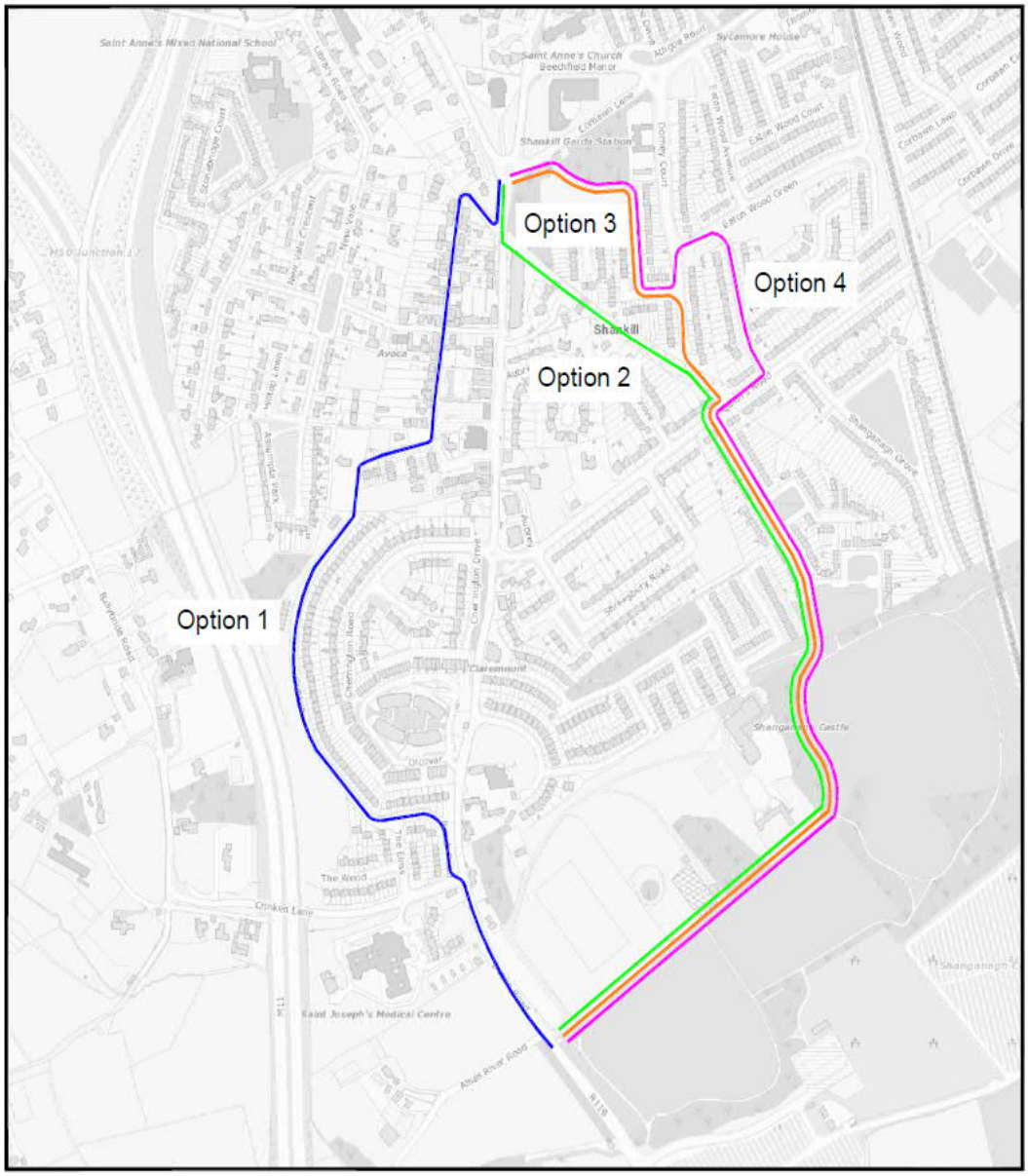


Figure 6.13 – EPR Cycle Route Options from Crinken Lane to St. Anne's Roundabout

As part of the public consultation, a large number of the responses from the Shankill area highlighted their concerns around the proposed cycle solution. These concerns included the limited infrastructure through the village which responders thought would still to be used by commuters, the narrowness of Lower Road and the impact it was thought to have on residents, the level difference between Lower Road and Dublin Road which would require a ramp, and the new cycle traffic this proposal would bring to Mountainview and Stonebridge Close.

Separate community forums in the area raised concerns regarding the impact that the proposed cycle provisions had on adjacent properties between St. Anne's Church and Loughlinstown Roundabout, as they increased the required cross section by 4m. These forums also highlighted that at present some considered it unsafe for children to cycle to the schools located on Stonebridge Road due to current road widths and traffic levels.

As a result of the above the cycling provision was investigated further.

It was decided that a more appropriate break point between the two sections was Stonebridge Rd instead of Shanganagh Rd. These are shown in Figure 6.14.

Option 1 between Loughlinstown Roundabout and the Dublin Rd / Shanganagh Rd junction was reassessed against two new options, 3.2C1 and 3.2C2, between Loughlinstown Roundabout and Stonebridge Rd. This is referred to as Cycling Subsection 1.

Option 1 between Dublin Rd / Shanganagh Rd junction and Crinken Lane was reassessed against five new options, 3.2C3, 3.2C4, 3.2C5, 3.2C6, and 3.2C7. This is referred to as Cycling Subsection 2.

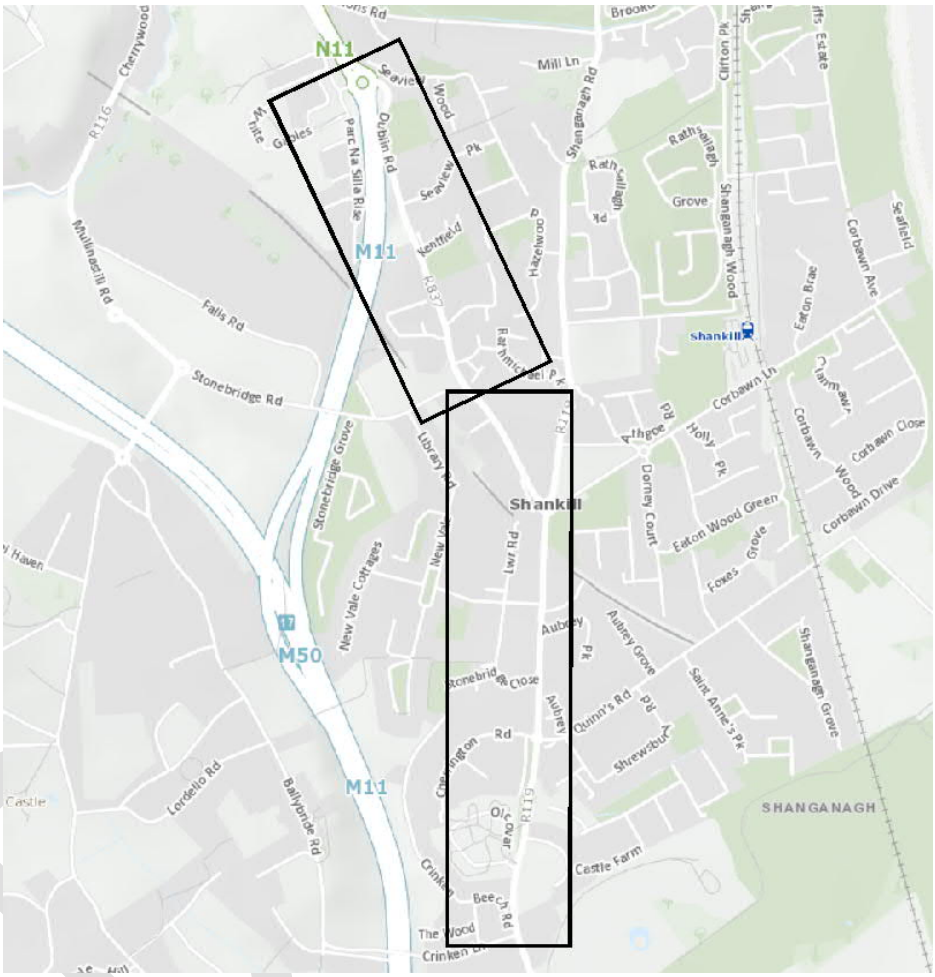


Figure 6.14 – Subsections 1 and 2 for Cycling Provision Assessment between Loughlinstown Roundabout and Crinken Lane

6.4.3.2 Options Considered

This section travels along the Dublin Rd, but also takes adjacent roads into account for the considered options. These other roads are the M11, Stonebridge Lane and Stonebridge Rd for Cycling Subsection 1 (Options 3.2C1 and 3.2C2), and Library Rd, New Vale, Assumpta Park, Stonebridge Close, Lower Rd, Mountainview, and the Elms for Cycling Subsection 2 (Options 3.2C3, 3.2C4, 3.2C5, 3.2C6, and 3.2C7).

6.4.3.3 Cycling Subsection 1, 3.2C1 M11 Cycle Track

Option 3.2C1 (M11 Cycle Track) would require clearance and construction along the grassed verge of the M11, including construction of additional vehicle restraints, and retaining walls and earthworks to provide sufficient width for the cycle track through the verge slope at narrower locations and along the necessary ramp. It would also require the removal of additional screening trees along this link. The track would be required to ramp back up

to Stonebridge Road over a considerable length as a result of the level differences. Additional lighting would also be required to improve security for cyclists. This is shown in Figure 6.15.

Figure 6.15 – Option 3.2C1 M11 Cycle Track Loughlinstown to Stonebridge Rd

6.4.3.4 Cycling Subsection 1, Option 3.2C2 (Dublin Rd Cycle Route)

This option would not provide segregated cycle tracks between Loughlinstown Roundabout and Stonebridge Road, and would require cyclists to share bus lanes along this length. It would however provide a more direct route for cyclists along the existing road, and would tie in with the GDA Cycle Network Primary Route that runs on the Dublin Rd. The route for this cycle option is shown in Figure 6.16 below.

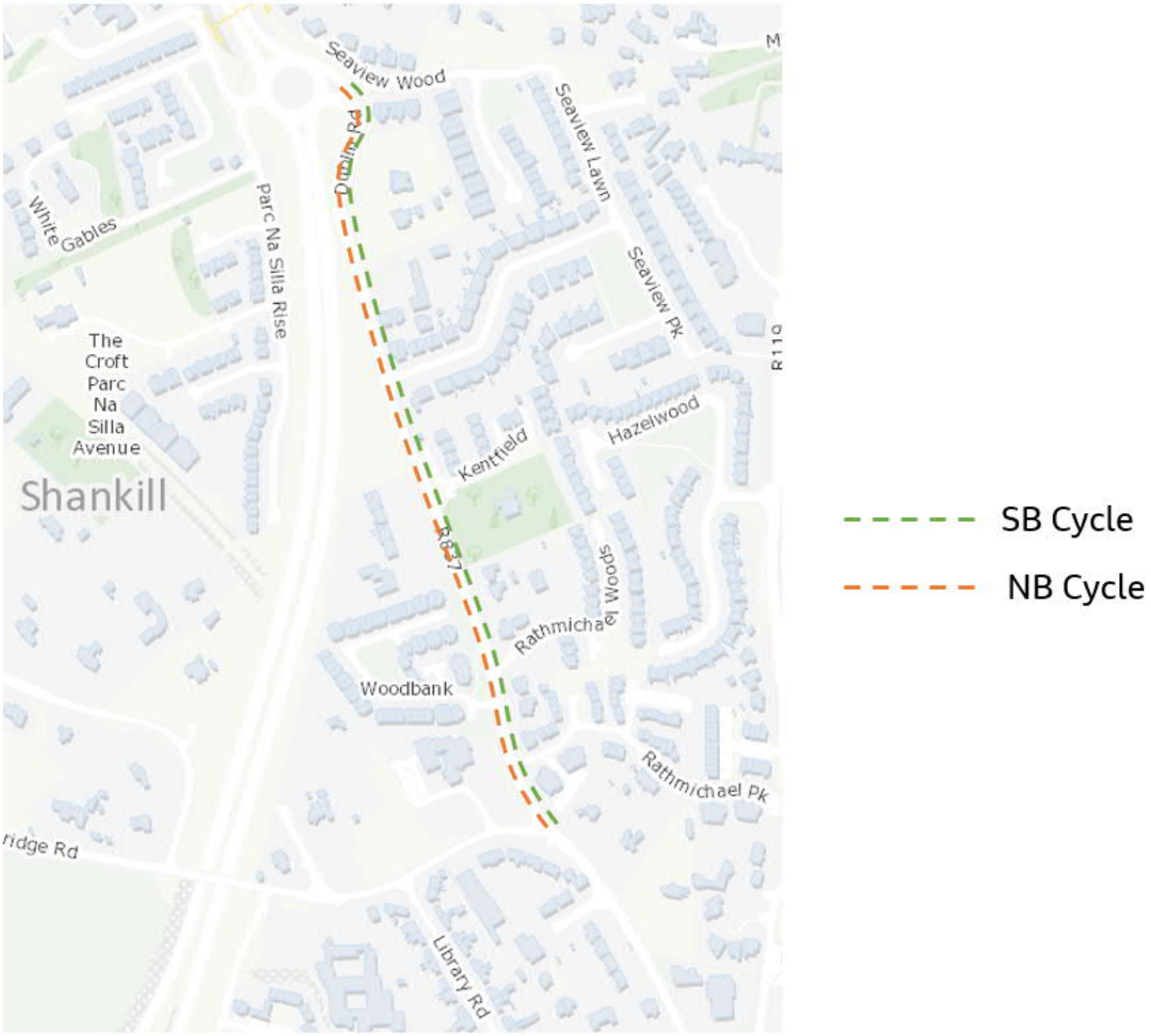


Figure 6.16 – Option 3.2C2 Dublin Rd Cycle Route

6.4.3.5 Options Assessment – Subsection 1

The Multi Criteria Appraisal tables are included in Appendix A. A summary of the MCA for Cycling Subsection 1 is provided in Table 6.7 below.

MCA criteria	Assessment Sub-Criteria	EPR Option (1)	Option 3.2C1 (M11 Cycle Track)	Option 3.2C2 (Dublin Rd Cycling Route)
Economy	1a Capital Cost			
	1b Transport Reliability and Quality			
Integration	2a Land Use integration			

	2b Residential Population and Employment Catchments			
	2c Transport Network Integration			
	2d Cycle Network Integration			
	2e Traffic Network Integration			
Accessibility & Social Inclusion	3a Key Trip Attractors			
	3b Deprived Geographical Areas			
Safety	4a Road Safety			
Environment	5a Archaeology, and Cultural Heritage			
	5b Architectural Heritage			
	5c Flora and Fauna			
	5d Soils and Geology			
	5e Hydrology			
	5f Landscape and Visual			
	5g Air Quality			
	5h Noise and Vibration			
	5i Land Use Character			

Table 6.7 – Cycling Subsection 1 MCA between Loughlinstown Roundabout and Stonebridge Rd

In terms of Economy, Option 3.2C2 performs best as it requires no additional construction. EPR Option 1 and 3.2C1 perform best in terms of Journey Time Reliability as the cyclists would not interfere with bus travel times.

In terms of Integration, EPR Option 1 and 3.2C2 perform best as they serve the main population, transport and commercial elements in the locality, while Option 3.2C1 is located away from these. This is the same reason these two options perform best in terms of Accessibility and Social Inclusion.

In terms of Safety, EPR Option 1 and Option 3.2C1 perform best as they provide segregated cycle facilities.

In terms of Environment, Option 3.2C2 performs best as it has the least impact on the existing environment, with Option 3.2C1 next and EPR Option 1 performing worst by comparison.

A summary of the assessment and relative ranking of route options against the five main assessment criteria is presented in Table 6.8 below.

MCA criteria	EPR Option 1	Option 3.2C1	Option 3.2C2
Economy			
Integration			
Accessibility and Social Inclusion			
Safety			
Environment			

Table 6.8 – Cycling Subsection 1 MCA Summary

From this assessment the option taken forward was New Option 3.2C2 – Dublin Rd Cycling Route. Although this option does not provide segregated cycle infrastructure along this section, it is considered the most appropriate solution to bring forward over this section taking into account the impact of cycle infrastructure on adjacent properties and planted areas, the associated requirement for specific structural earthwork solutions along the M11, and input from the local community.

6.4.3.6 Cycling Subsection 2, Option 3.2C3, Cycle Provision between Stonebridge Road and Crinken Lane

Option 3.2C3 is a continuation of the M11 cycle track option. After ramping up to Stonebridge Road from the M11 verge this would continue along Stonebridge Grove with a dedicated two-way cycle track before passing through onto the M11 verge. It would continue along the verge until before the Lordello Road bridge where it would pass back though the tree line, under the bridge and onto the green space leading to Mountainview. It would then carry on through Mountainview and The Elms and on to Crinken Lane to eventually re-join the Dublin Road. This is shown in Figure 6.17**.**

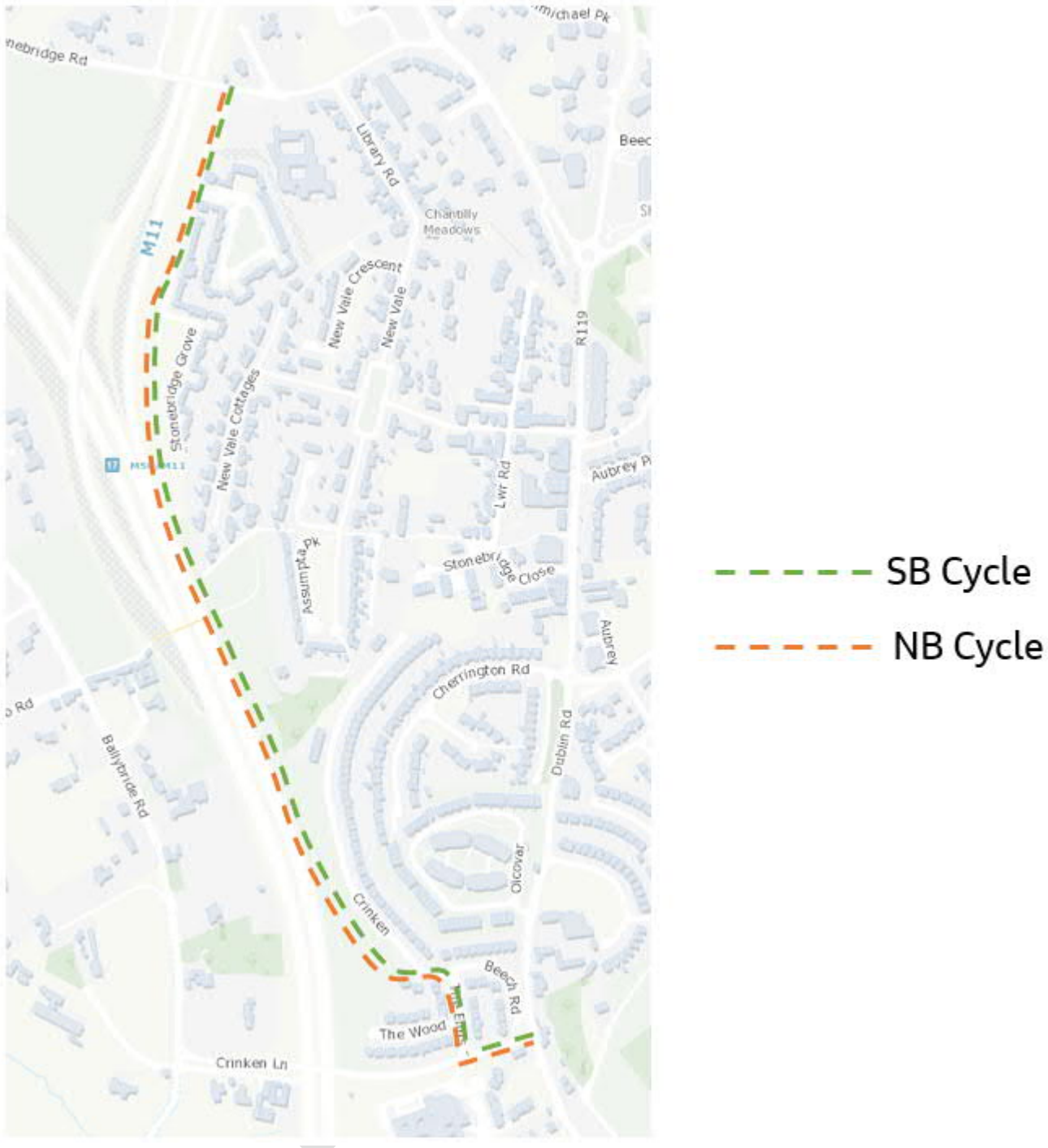


Figure 6.17 – Option 3.2C3 M11 Cycle Track Stonebridge Rd to Crinken Lane

6.4.3.7 Cycling Subsection 2, Option 3.2C4, Library Rd to Stonebridge Close

Option 3.2C4 would bring advisory cycle lanes and quiet street treatment along Stonebridge Rd to Library Rd, where they would continue along Library Rd and New Vale, along the laneway by Assumpta Park and up to Lower Rd. Towards the top of Lower Rd the cycle lanes would pass through an existing wall on to Stonebridge Close and out on to the Dublin Rd. At this point the cyclists would have to share the single traffic lane with other vehicles and buses until Crinken Lane where space permits the widening to include segregated cycle tracks. This is shown in Figure 6.18.

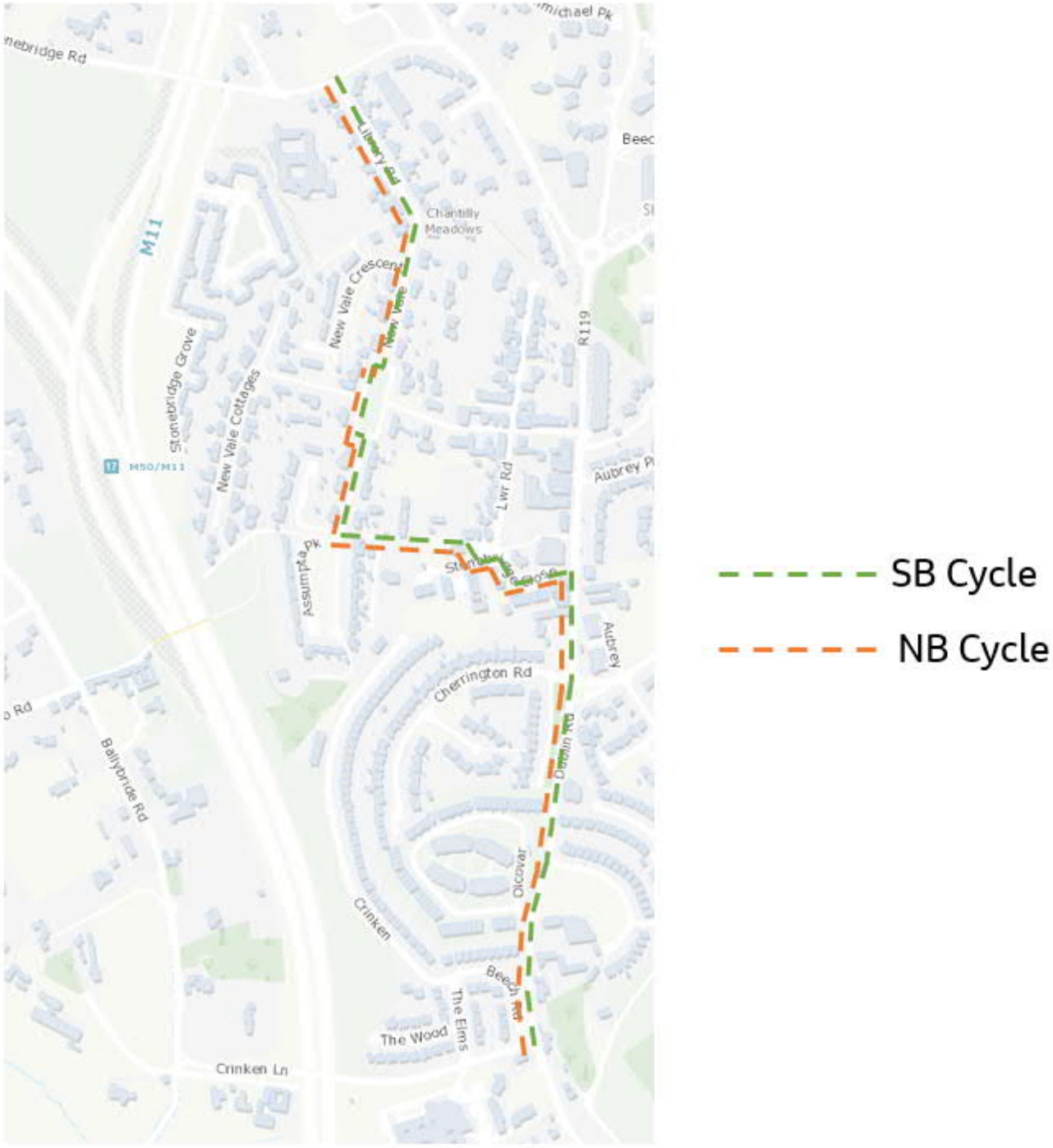


Figure 6.18 – Option 3.2C4 Cycle Track Stonebridge Rd to Crinken Lane via Assumpta Park and Stonebridge Close

6.4.3.8 Cycling Subsection 2, Option 3.2C5, Library Rd / Assumpta Park / Mountainview

Option 3.2C5 is the same as Option 3.2C4 as far as the laneway at Assumpta Park. The cycle lane would take a right turn along the lane to the rear of the houses on Assumpta Park to eventually pass through onto Mountainview. It would then carry on to The Elms and Crinken Lane, and on to the Dublin Road. This is shown in Figure 6.19.

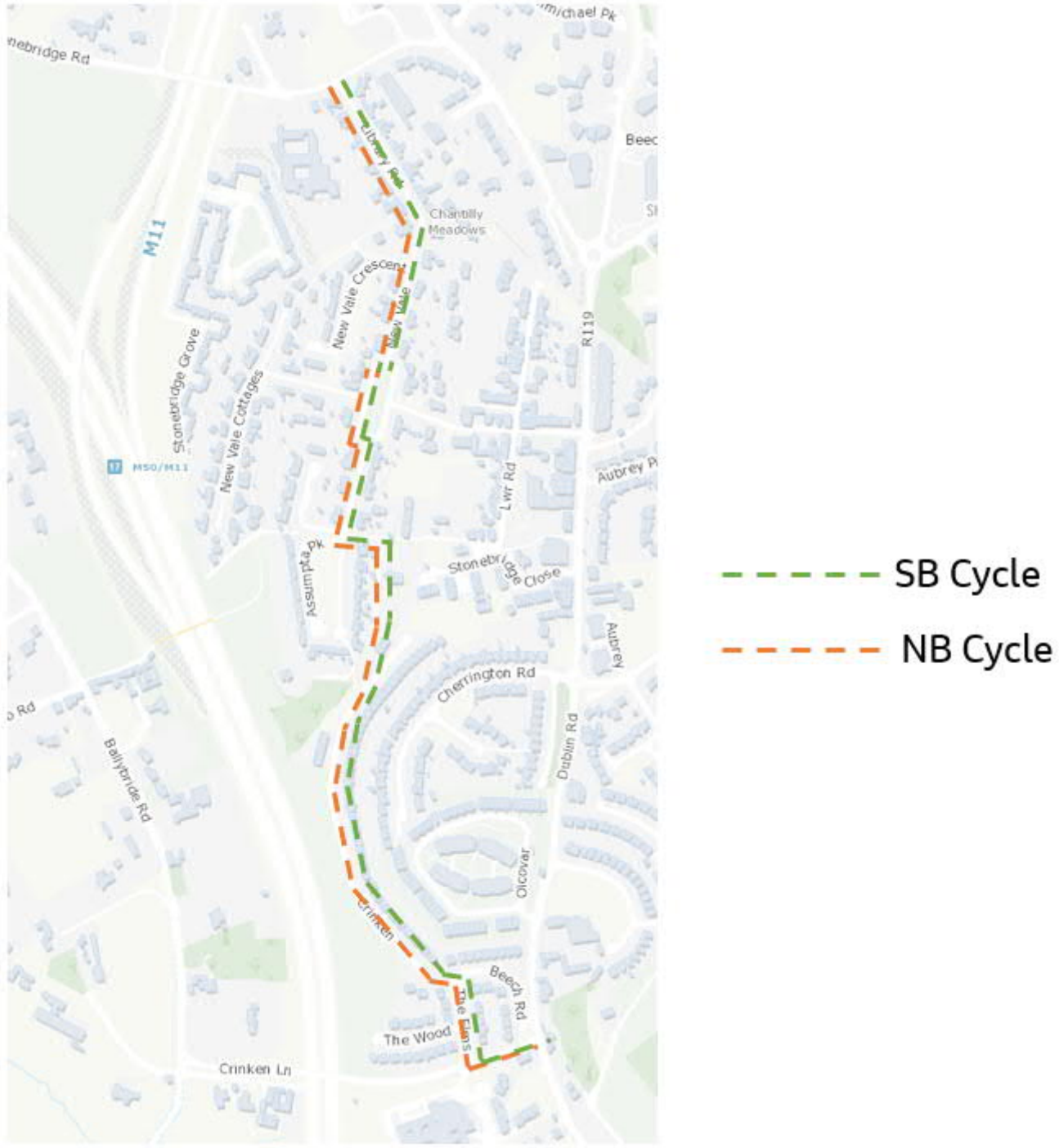


Figure 6.19 – Option 3.2C5 Cycle Track Stonebridge Rd to Crinken Lane via Assumpta Park and Mountainview

6.4.3.9 Cycling Subsection 2, Option 3.2C6, Dublin Rd Cycle Route

Option 3.2C6 is a continuation of Option 3.2C2 – Dublin Rd Cycle Route. This would not provide any segregated cycle infrastructure along this link. Cyclists would share bus lanes with buses where available, and general carriageways with general traffic at other locations. A speed limit of 30kph would be in place between Stonebridge Rd and the bus priority signal between Cherrington Drive and Castle Farm. This is shown in Figure 6.20.

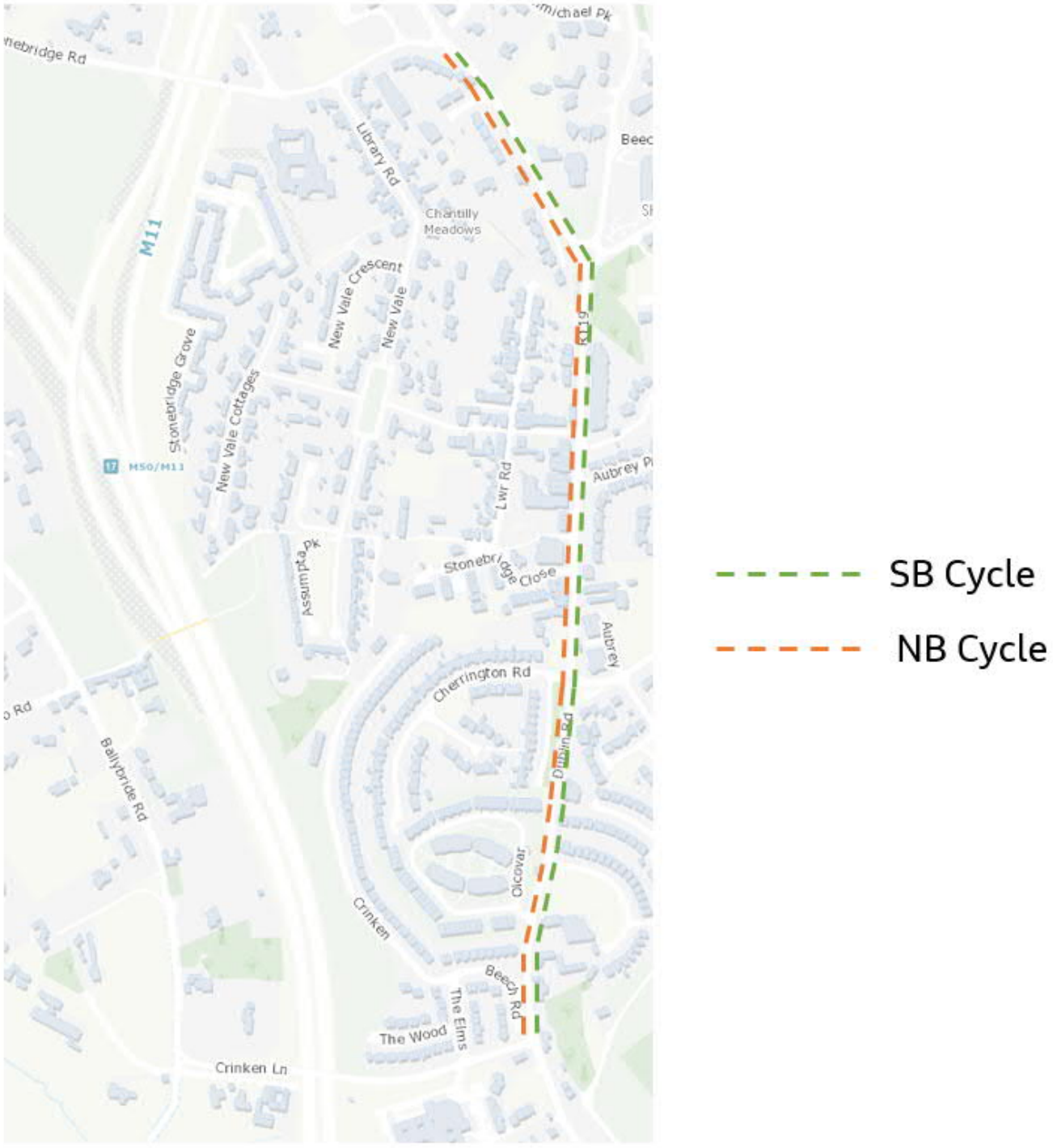


Figure 6.20 – Option 3.2C6 Dublin Rd Cycling Route

6.4.3.10 Cycling Subsection 2, Option 3.2C7, Corbawn Lane to Stonebridge Rd

Option 3.2C7 provides for a short section of segregated cycle track that would link Corbawn Lane to Stonebridge Road. This would run from Corbawn Lane with a two way segregated cycle track past St. Anne's Church, requiring land to be taken from the frontage and car park of the church, and from the boundary of four properties heading towards Stonebridge Road.

A Toucan Crossing would be provided to bring cyclists across the road to a continuation of the two-way cycle track on the northern side of Stonebridge Road. This would carry on as far as St Anne's National School. This option

would provide cycle infrastructure along the GDA Cycle Network Plan Inter Urban Route D4 which runs along Stonebridge Road and Dublin Road as far as Corbawn Lane. It would also improve cycle access to both schools on Stonebridge Road. This link also provides the start of a dedicated cycle link to the Cherrywood LUAS stop across the M11 bridge along Stonebridge Road. This is shown in Figure 6.21.

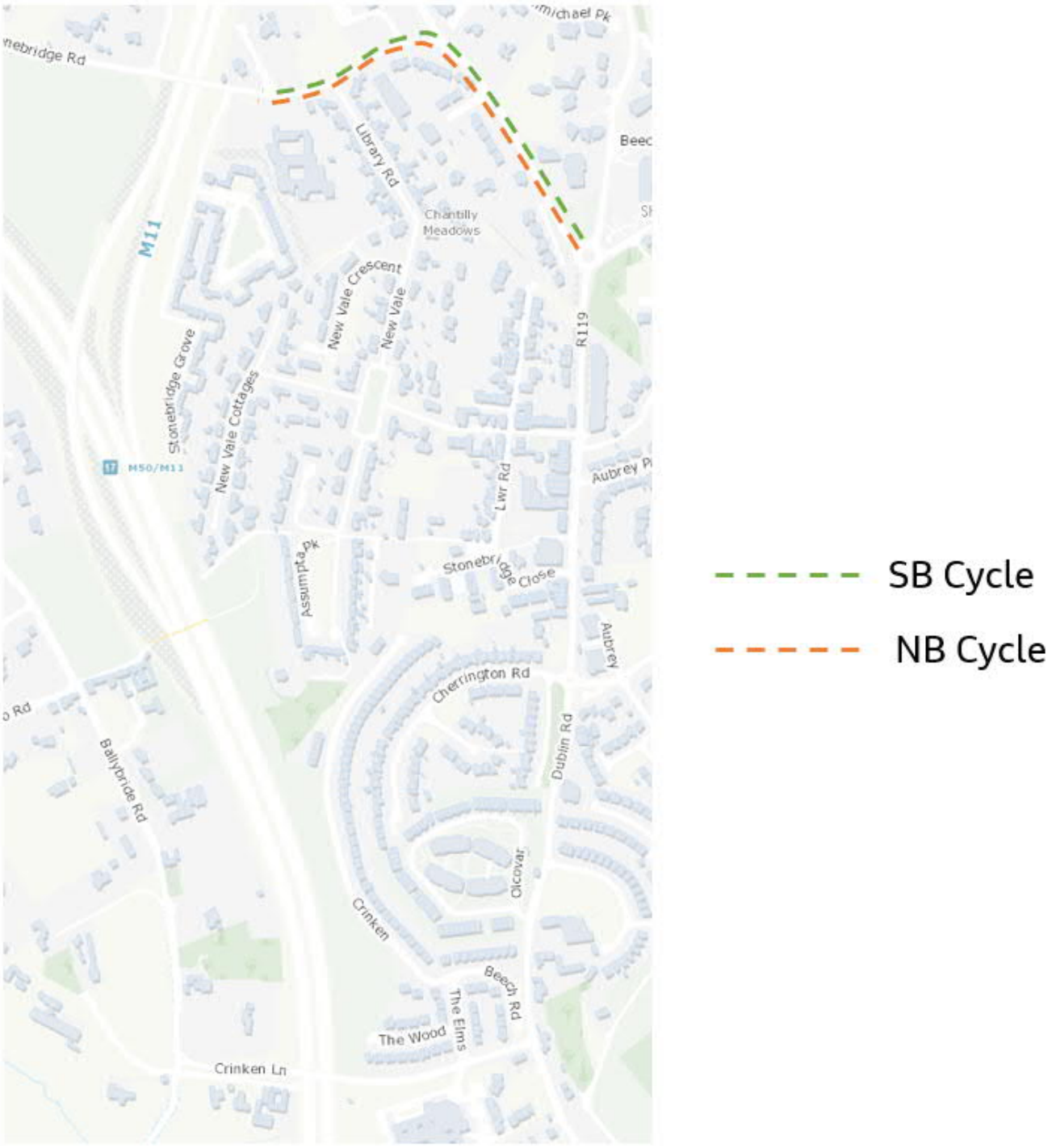


Figure 6.21 – Option 3.2C7 Cycle Track Stonebridge Rd to Corbawn Lane

6.4.3.11 Options Assessment – Subsection 2

The Multi Criteria Appraisal tables are included in Appendix A. A summary of the MCA for Cycling Subsection 2 is provided in Table 6.9 below.

MCA criteria	Assessment Sub-Criteria	EPR Option 1	Option 3.2C3 (M11 Cycle Track)	Option 3.2C4 (Library Rd / Stonebridge Close)	Option 3.2C5 (Library Rd / Assumpta Park)	Option 3.2C6 (Dublin Rd Cycle Route)	Option 3.2C7 (Corbawn Lane to Stonebridge Rd)
Economy	1a Capital Cost						
	1b Transport Reliability and Quality						
Integration	2a Land Use integration						
	2b Residential Population and Employment Catchments						
	2c Transport Network Integration						
	2d Cycle Network Integration						
	2e Traffic Network Integration						
Accessibility & Social Inclusion	3a Key Trip Attractors						
	3b Deprived Geographic Areas						
Safety	4a Road Safety						
Environment	5a Archaeology						

	and Cultural Heritage						
	5b Architectural Heritage						
	5c Flora and Fauna						
	5d Soils and Geology						
	5e Hydrology						
	5f Landscape and Visual						
	5g Air Quality						
	5h Noise and Vibration						
	5i Land Use Character						

Table 6.9 - MCA at Subsection 3.2C2 Cycle Provision between Crinken Lane and Stonebridge Road

In terms of Economy, Options 3.2C3 and 3.2C7 perform worst under Capital Cost as they require segregated cycle tracks to be constructed, while the majority of the rest of the options run on existing carriageways as quiet routes. Options 3.2C4 and 3.2C5 do require cycle track construction off line though, as well as works to create a viable route for the cycle track. In terms of Journey Time Reliability, the options that share Dublin Rd with bus lanes (3.2C4, 3.2C6, and 3.2C7) perform the worst as they may impact on bus time reliability.

In terms of Integration, the M1 Option (3.2C3) performs the worst as it does not provide any linkages for cyclists to Shankill. Option 3.2C7 appears to perform the best as it provides safe cycling links for local school access, and maintains the GDA CNP primary route on the Dublin Rd, despite not providing cycle segregation for the entire length.

The M11 option (3.2C3) performs the worst in terms of Accessibility and Social Inclusion, as it does not pass the GDA CNP primary route through Shankill Village.

The M11 option (3,2C3) and the Library Rd / Assumpta Park option (3.2C5) perform best in terms of Road Safety due to the segregated cycle track provision and least length running on the Dublin Road, respectively.

The Dublin Road Cycle Route (3.2C6) performs best in terms of Environment, due to negligible impacts beyond the existing, with 3.2C5 & 3.2C7 performing well too. The M11 option (3.2C3) performs worst under this criterion due to the impact on trees and the overall construction effort required along the M11 verge.

A summary of the assessment and relative ranking of route options against the five main assessment criteria is presented in Table 6.10 below.

MCA criteria	Option 1	Option 3.2C3	Option 3.2C4	Option 3.2C5	Option 3.2C6	Option 3.2C7
Economy						
Integration						
Accessibility and Social Inclusion						
Safety						
Environment						

Table 6.10 – Cycling Subsection 2 MCA Summary

From this assessment the option taken forward was New Option 3.2C7 – Corbawn Lane to Stonebridge Road. Although this does not provide segregated cycle infrastructure along the entire length of this section, the impact of providing this cycling infrastructure on adjacent properties and planted areas was considerable. Following local community engagement Option 3.2C7 was developed to provide safer cycling between residential areas and the two schools on Stonebridge Road. It also provides cycling infrastructure along a section of GDA CMP Inter Urban Route D4, and provides a cycle link from the western side of the M11 along Stonebridge Road across the main traffic route and on towards Shankill DART station. The GDA CNP primary route through Shankill is still viable, and a speed limit of 30kph will be introduced from Stonebridge Rd to the bus priority signal proposed between Cherrington Drive and Castle Farm.

A combination of Options 3.2C2 and 3.2C7 is the Preferred Route Option for the cycle route between Loughlinstown Roundabout and Crinken Lane for the following reasons:

- It provides for safe cycle provision along the GDA CNP Primary Route in this area
- It minimises the impact on the environment
- It responds to the input from the local community

6.4.4 Section 3.2D – Crinken Lane to St. Anne's Roundabout

6.4.4.1 Introduction

Following the Multi-Criteria Analysis for the Emerging Preferred Route in the Feasibility and Options Report, Option 2.2D was considered the most desirable option due to the journey time reliability and transport network integration it provided.

As part of the public consultation, a large number of the responses from the Shankill area highlighted their concerns around the proposals. These concerns related to the impact that the proposals may have to the feel of the Village centre, and the impact that the lane widening may have south of the Village centre.

Following the Public Consultation feedback, a new topographical survey and tree survey, and the option to assess signal controlled priority along sections of road, the lane configuration was investigated further. As such 2.2D from the Emerging Preferred Route was reassessed against three new options, 3.2D4, 3.2D5, and 3.2D6.

6.4.4.2 Options Considered

This section travels along the Dublin Road.

The four options considered (2.2D, 3.2D4, 3.2D5, and 3.2D6) follow the same route as 2.2D as detailed in the previous Feasibility and Options Report.

6.4.4.3 Emerging Preferred Route Option 2.2D

The previous Emerging Preferred Route Option is shown in Figure 6.22.

This option would provide a northbound bus lane between Crinken Lane and Quinn's Road junction, with a section of northbound bus lane through Shankill Village between Stonebridge Close and Lower Road junctions, and a southbound bus lane between Lower Road and Crinken Lane junctions.

This option would result in land acquisition to facilitate road widening along the Dublin Road between Crinken Lane and Lower Road junctions, including portions of gardens and public open space. It would require the removal of mature trees, while residential off-street parking would not be affected.

Provision of northbound and southbound bus lanes through Shankill Village would require removal of on-street parking, loss of street trees and a reconfiguration of the road and pedestrian space including narrowing of existing footpath widths. Enhanced priority could be provided for northbound buses on the approach to Shankill Village with the signalisation of the Quinn's Road and Lower Road junctions and implementation of signal controlled priority at these locations.

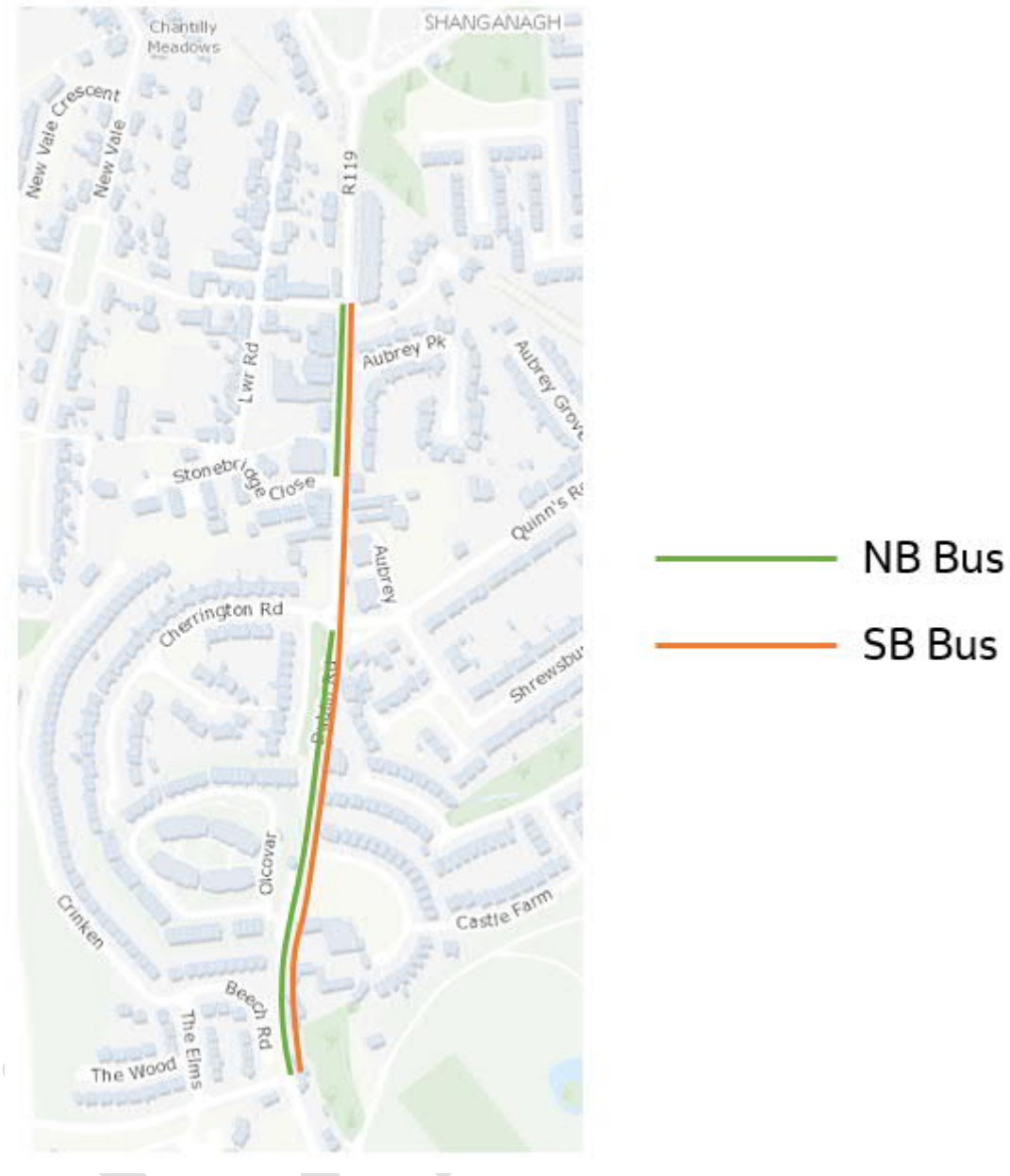


Figure 6.22 - Previous EPR route for Subsection 2.2D

6.4.4.4 Route Option 3.2D4 – Cycle Lanes through Village

Two combined traffic lanes for buses and general traffic to share would be maintained through Shankill village with signal controlled priority in place at St Anne's Church junction and at Quinn's Rd roundabout to serve the village.

A northbound bus lane would run from Crinken Lane to Quinn's Rd, while additional signal controlled priority measures may be provided for southbound buses as required. Bus stops would artificially hold traffic back from passing buses, reinforcing bus priority. Cycle lanes through Shankill village would ensure buses would not be held up by slower cycles, however these cycle lanes would only be provided between Stonebridge Close and Lower Road due to space constraints, and cyclists would be expected to share the carriageway with buses and cars either side of these extents. This is shown in Figure 6.23.

Figure 6.23 – Option 3.2D4

6.4.4.5 Route Option 3.2D5 – Northbound bus lane through the village

Two general traffic lanes would be maintained through Shankill village with a northbound bus lane from Stonebridge Close to Lower Rd junction, and signal controlled priority at St Anne's Church junction and at Quinn's Rd roundabout to provide initial bus priority through this section.

Bus stops will artificially hold traffic back from passing buses, reinforcing bus priority. This is shown in Figure 6.24.

Figure 6.24 - Option 3.2D5

6.4.4.6 Route Option 3.2D6 – Maximise public realm through the village

Two combined traffic lanes would be maintained through Shankill village with signal controlled priority systems in place between St Anne's Church junction and a signal located south of Cherrington Drive. In the northbound direction signal controlled priority would also be in place from just north of the entrance to Olcovar as far as Quinn's Rd, while in the southbound direction it would also run from Quinn's Rd to Crinken Lane. Bus stops will artificially hold traffic back from passing buses, reinforcing bus priority. Speed restrictions would be in place through the village.

A 30kph speed restriction is proposed for the village section to minimise conflict impacts and enhance the village feel. This is shown in Figure 6.25.

Figure 6.25 - Option 3.2D6

6.4.4.7 Option Assessment

The Multi Criteria Appraisal tables are included in Appendix A. A summary of the MCA for Section 3.2D is provided in Table 6.11 below.

MCA criteria	Assessment Sub-Criteria	EPR Option 2.2D	Option 3.2D4	Option 3.2D5	Option 3.2D6
Economy	1a Capital Cost				
	1b Transport Reliability and Quality				
Integration	2a Land Use Integration				

	2b Residential Population and Employment Catchments				
	2c Transport Network Integration				
	2d Cycle Network Integration				
	2e Traffic Network Integration				
Accessibility and Social Inclusion	3a Key Trip Attractors				
	3b Deprived Geographic Areas				
Safety	4a Road Safety				
Environment	5a Archaeology and Cultural Heritage				
	5b Architectural Heritage				
	5c Flora & Fauna				
	5d Soils and Geology				
	5e Hydrology				
	5f Landscape and Visual				
	5g Air Quality				
	5h Noise and Vibration				
	5i Land Use Character				

Table 6.11 - MCA at Section 3.2D

In terms of Economy, Option 3.2D4 performs worst while the remainder have positives and negatives associated with them. Option 3.2D6 is the best performing in terms of Capital Cost due to the minimisation of intervention.

In terms of Integration, Option 2.2D performs the worst, while the other options perform equally well in terms of Cycle Network Integration. All options perform similarly for the other Integration criteria.

All options perform the same in terms of Accessibility and Social Inclusion.

Options 3.2D4 and 3.2D6 perform best in terms of Road Safety due to the segregated cycle tracks (3.2D4) and reduced speeds through the Village (3.2D6).

Option 3.2D6 performs best in terms of Environment, mainly due to the minimal impact on the visual identity of the Village. Options 3.2D4 and 3.2D5 perform relatively well or neutrally under Environmental criteria. EPR Option 2.2D performs worst due to the overall impact through the village.

A summary of the assessment and relative ranking of route options against the five main assessment criteria is presented in Table 6.12 below.

MCA criteria	EPR Option 2.2D	Option 3.2D4	Option 3.2D5	Option 3.2D6
Economy				
Integration				
Accessibility and Social Inclusion				
Safety				
Environment				

Table 6.12 - Section 3.2D MCA Summary

Based on the assessment undertaken Option 3.2D6 is the Preferred Route Option for Section 3.2D. Although no dedicated bus lanes or segregated cycle route is provided through the village centre this option is preferred due to the strong community engagement around this issue. Compared to other options, Option 3.2D6 will provide wider footways, traffic speed restrictions, and maintain the current village environment.

Option 3.2D6 is the Preferred Route Option for the Crinken Lane to St. Anne's Roundabout section for the following reasons:

- It minimises the impact to the visual identity of Shankill Village and addresses community feedback
- It maintains existing footway widths through the Village, with a reduced speed limit providing improved road safety.

6.4.5 Section 3.2E – St. Anne's Church to Loughlinstown Roundabout

6.4.5.1 Introduction

The current provision over this length comprises of a general traffic lane in each direction with an advisory cycle lane in both directions. Around Seaview Gate, at the Easter Region Ambulance Service building, a northbound bus lane also develops on the approach to Loughlinstown Roundabout. At St. Rita's a toucan crossing allows cyclists to cross to the eastern side of the road to/from the northbound continuation of a two-way cycle track. After the toucan crossing the northbound bus lane becomes a second general traffic lane on approach to the roundabout. There is housing alongside both sides of the road, with minor junctions to housing estates and apartments as well. On the northbound approach to Loughlinstown Roundabout there is a bank of screening planting between the Dublin Road and the M11.

6.4.5.2 Development of Design

The design on this section has been reviewed following the EPR with a view to minimising the impacts while maintaining the necessary level of bus priority.

The EPR design proposed a full suite of two segregated cycle tracks, two bus lanes, and two general traffic lanes, as illustrated in Figure 6.26, from St. Anne's Church Roundabout to Loughlinstown Roundabout.

At St. Anne's Church, and at Seaview Gate, toucan crossings were to be provided to cross cyclists to two-way cycle tracks coming off the N11, and on the approach to the previously proposed cycle lane diversion along Lower Road. This layout required widening on both sides of the carriageway for the majority of the length, and on one side of the carriageway for the remainder.

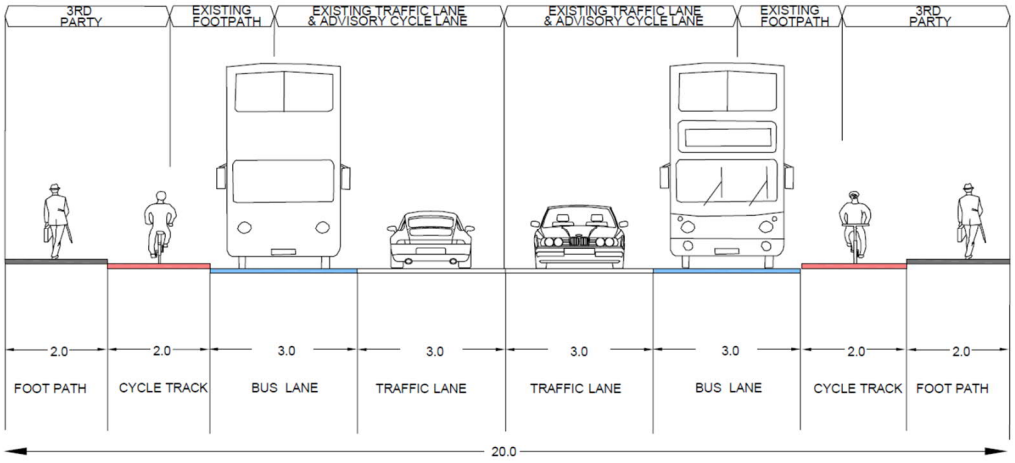


Figure 6.26 - EPR cross section on Dublin Road

Following the first Public Consultation, taking comments from the public into account, the cycle tracks on this section were removed from the design due to the additional impact that the 4m of cross section had on adjacent lands and properties.

An updated topographical survey and tree survey were procured which informed additional design development. Options were assessed for combinations of signal controlled priority taking adjacent properties and trees into account.

Signal controlled priority was proposed northbound from the new junction at St Anne's Church for Shanganagh Rd / Dublin Rd, as far as Station Rd, and then from the Dublin Rd / Stonebridge Rd junction northbound as far as the entrance into the Woodbank development. It was proposed southbound from the Dublin Rd / Stonebridge Rd junction as far as the Dublin Rd / Station Rd junction.

A section of two way cycle track is proposed between the Dublin Rd / Stonebridge Rd junction and the new Dublin Rd / Shanganagh Rd junction.

From the Dublin Rd / Shanganagh Rd junction north to the Dublin Rd / Stonebridge Rd junction the necessary widening is entirely to the east of the carriageway. From the Dublin Rd / Stonebridge Rd junction north to the Loughlinstown Roundabout the necessary widening is entirely to the west of the carriageway.

6.5 Section 4 - Bray North to Bray South

6.5.1 Introduction

The Study Area Analysis and Multi Criteria Analysis for the previously proposed feasible route options for Section 4 outlined in the Feasibility and Options Report have been evaluated by the design team and are considered still to be valid.

7. Preferred Route Option

7.1 Introduction

Chapter 6 of this report presented an appraisal of all route options considered for the Bray to City Centre CBC. Following this appraisal, the preferred options have been combined to form an end-to-end Preferred Route Option. This chapter of the report presents and describes the Preferred Route Option. The updated Preferred Route Option scheme design drawings are included in Appendix B.

7.2 Preferred Route Option Description

The Preferred Route Option is presented in Figure 7.1 below:

Figure 7.1 - Preferred Route Option

7.3 Preferred Route Option Design Description

7.3.1 Section 1 - **St. Stephen's Green to UCD**

The Preferred Route for the CBC commences at the junction of Leeson Street Lower and St. Stephen's Green. The corridor runs along Leeson Street Lower and Upper with continuous bus priority and segregated cycle tracks in each direction, including the one-way system on Sussex Road. Traffic between Hatch St Lower/Pembroke St Upper and St Stephen's Green is now proposed to be restricted to buses and local access only. Local vehicular access will

be maintained to Leeson Street Lower from the Hatch Street Lower/Pembroke Street Upper junction. Inbound general traffic will be diverted along Hatch Street Lower and Earlsfort Terrace.

Continuous bus priority and segregated cycle tracks are proposed in each direction along Morehampton Road and Donnybrook Road through Donnybrook Village and the Stillorgan Road to UCD through a combination of bus lanes and Signal Controlled Priority.

On sections of Morehampton Road the cycle tracks are brought behind the tree line. The continuous bus priority and segregated cycle tracks will impact a number of on-street parking bays between Waterloo Road and Herbert Park.

A 'No Right Turn' sign has been added from Morehampton Road onto Auburn Avenue to reduce crossing point conflicts.

From Mulberry Lane to Rampart Lane the northbound bus lane has been removed to allow for two reduced width segregated cycle tracks, while the southbound bus lane has been retained along this narrow section. From Rampart Lane southwards to Eglinton Road two bus lanes and two segregated cycle tracks are provided in addition to a general traffic lane in each direction.

On Donnybrook Road in the southbound direction there is a straight ahead and left turn lane, a straight ahead general traffic lane, a bus lane, and a cycle track provided between Eglinton Road and Anglesea Road. The northbound approach on the Stillorgan Road towards Beaver Row has a cycle track, bus lane, a combined left and ahead general traffic lane, and a right turn lane. Between Beaver Row and Eglinton Road there is a cycle track, bus lane, and a combined left and ahead traffic lane.

South of Anglesea Road the current carriageway layout of cycle track, bus lane and two general traffic lanes in each direction is maintained towards the end of this section at UCD.

Land take may be required between Anglesea Road and Nutley Lane.

7.3.2 Section 2 - UCD to Loughlinstown

At the Belfield Interchange UCD Entrance, it is proposed to retain a bus lane on the southbound on-ramp, northbound off-ramp and northbound on-ramp, and to provide a new bus lane on the southbound off ramp and Stillorgan Road Overbridge, plus segregated cycle tracks on each of the junction arms and on the overbridge.

The final UCD bus interchange arrangement will be developed in collaboration with the emerging UCD Masterplan. It is intended to provide segregated cycle tracks on each of the junction arms and on the overbridge.

On the Stillorgan Road between Seafield Road and Foster's Avenue it is intended to provide a bus lane, a one-way segregated cycle track, and two general traffic lanes in each direction. A short length of two-way segregated cycleway will be provided on each side in this area due to the proximity to UCD. This will run from the Stillorgan Road Overbridge and Fosterbrook by the southbound carriageway, and from Foster's Avenue and the newly proposed cycle entrance into UCD (opposite Seafield Rd) by the northbound carriageway.

Between Belfield Park and Lower Kilmacud Road it is proposed to provide a bus lane and two general traffic lanes plus a segregated cycle track in each direction. A new Toucan Crossing is planned between Patrician Villas and St. Laurence Park, along with widening of the current subway on the eastern side. A new dedicated footpath is to be provided between the Lower Kilmacud Road and the Old Dublin Road on both sides of the Stillorgan Road.

It is proposed to maintain one bus lane and two general traffic lanes in each direction. Improved segregated cycle tracks and pedestrian footways will be provided along this section of the route where appropriate.

At the junction with Westminster Road it is proposed to remove the existing U-turn filter lane to facilitate a new Toucan Crossing. It is intended to provide a new pedestrian link from the Stillorgan Road to South Park.

Footpaths are no longer proposed between the Old Bray Road and Cornelscourt Shopping Centre pedestrian bridge, and between Clonkeen Road and Johnstown Road junctions, as alternative walking routes exist. A short section of northbound cycle track will be diverted locally along St Brigid's Church Road to achieve improved cycle track widths and segregation. Additional traffic calming measures are proposed on St Brigid's Church Road to accommodate this. It is also proposed to close the junction of The Hill and N11 Stillorgan Road to maintain continuous segregated cycling facilities at this location.

A new footpath is proposed on either side of the Stillorgan Road between the new junction on the N11 at Druid's Glen Road and Wyattville Road. Improvements have been made to cycle track provisions at the Wyattville Road junction. The existing adjacent northbound Bray Road slip towards Cherrywood Road will be retained as a one-way northbound road and cycle route.

At the Loughlinstown Roundabout it is proposed to signalise the existing roundabout on three arms and to provide a continuous bus lane southbound through the junction towards Shankill.

Land take may be required at the Talbot Hotel, UCD, between Fosters Avenue and Roebuck Avenue opposite Coláiste Eoin and Coláiste Íosagáin, south of Brewery Road adjacent to the northbound carriageway, north of Kill Lane adjacent to the northbound carriageway, north of St Laurence's College in front of Shanganagh Vale, at St Laurence's College, and around Wyattville Road junction.

7.3.3 Section 3 - Loughlinstown to Bray North

Between Loughlinstown Roundabout and St Anne's Church it is intended to provide a bus lane and general traffic lane in both directions. Where bus lanes are not continuous signal controlled, priority will be provided.

Segregated cycle tracks have been omitted between Loughlinstown Roundabout and Stonebridge Road along the CBC. It is intended to provide a two-way cycle track from the Shanganagh Road junction along the Dublin Road and Stonebridge Road as far as Stonebridge Close to provide a cycle link to the two schools on Stonebridge Road, and from Stonebridge Road junction on Dublin Road as far south as the proposed Shanganagh Road junction.

The junction between Dublin Road and Shanganagh Road is proposed to be upgraded to a signalised junction with new pedestrian crossing facilities and Signal Controlled Priority for buses. Access from Corbawn Lane on to Shanganagh Road will become exit only. A dedicated right-turn lane is proposed from Shanganagh Road onto Beechfield Manor.

The design between the Shanganagh Road junction and the Crinken Lane is now proposed to retain the existing general traffic lanes with no bus or cycle lanes, apart from a section of the northbound carriageway where a bus lane is provided from Crinken Lane to just north of the entrance to Olcovar. Signal controlled priority will be provided along this section.

Quinn's Road roundabout is to be upgraded to a signalised junction. Where widening is required to accommodate the bus lane and improved footpaths the intention is, where possible, to maintain the tree line along the Dublin Road and provide the footpath behind the road side tree line. Improved lighting and crowning of trees will be provided to enhance visibility.

From Crinken Lane to the Wilford Roundabout it is proposed to provide northbound and southbound bus lanes, segregated cycle tracks and general traffic lanes.

At Shanganagh Park, the design has been revised to move the northbound and southbound cycle lanes into the park, alongside the southbound footpath, with a newly proposed boundary fence set back to enable the retention of the roadside tree line. New lighting and crowned trees will be provided to ensure through visibility. Playground areas will be retained in their current location as part of BusConnects proposals. Their final future location will be coordinated with Dun Laoghaire Rathdown County Council as part of ongoing liaison regarding the emerging Shanganagh Park and Cemetery Masterplan.

7.3.4 Section 4 - Bray North to Bray South

From the M11 junction (Wilford Roundabout) to the Dargle River Crossing, it is proposed to continue with a bus lane, general traffic lane and a segregated cycle track in each direction. It is proposed to replace the Wilford Roundabout with a new signalised junction.

It is proposed to provide a southbound bus lane and two general traffic lanes on Castle Street to the Fran O'Toole bridge, where this scheme will end.

Land take may be required on both sides of the road along this section of the route.

7.4 Summary

7.4.1 Infrastructure Provision

The Preferred Route is approximately 18.6 km long from end to end. The updated concept scheme design drawings show the extent of the infrastructure proposed to deliver this CBC, also summarised below:

- 69% Existing bus priority (outbound)
- 68% Existing bus priority (citybound)
- 92.7% Proposed bus priority (outbound) including signal controlled priority sections
- 94.6% Proposed bus priority (citybound) including signal controlled priority sections

- 92% Existing dedicated cycle provision (outbound)
- 86% Existing dedicated cycle provision (citybound)
- 93% Proposed dedicated cycle provision (outbound)
- 93% Proposed dedicated cycle provision (citybound)

Signal controlled priority is proposed at specific locations where constraints require its provision instead of full bus lanes. These are at the following locations:

- Leeson St Lower / Wilton Terrace junction (SB)
- Leeson St Upper / Grand Parade junction (NB)
- Leeson St Upper / Wellington Place (SB)
- Donnybrook Road / Eglinton Terrace junction (NB/SB)
- Dublin Road / Stonebridge Road junction (NB/SB)
- Dublin Road / Shanganagh Road junction (NB/SB)
- Dublin Road / Castle Farm (NB)
- Dublin Road / M11 Junction (Wilford Roundabout (NB)
- Dublin Road / Upper Dargle Road (NB/SB)

7.4.2 Scheme Benefits

Segregated cycle lanes have been provided along the majority of this route, with gaps in provision mitigated with signalised bus priority between Loughlinstown Roundabout and Crinken Lane. Segregated cycle tracks are provided along 93% of the route as a result of design development. In addition, all major junctions have now been designed and optimised for cycle safety.

Bus Journey Time Reliability has been improved by means of continuous bus lanes or signal controlled priority, and the provision of coach laybys to remove loading coaches from the running bus lanes where appropriate.

Along the route, improvements and enhancements will be made to footpaths, walkways and pedestrian crossings. Additional landscaping and outdoor amenities will be provided to improve the local urban realm.

The improved travel times combined with increased services will promote an efficient, reliable and frequent public transport service.

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 change in the construction carbon generated by the scheme. Notable changes that have led to a reduction in the construction carbon footprint of the scheme include the following:

- Further design development leading to optimisation of the cross section across the CBC, and reductions in the cross section extents in the area south of Loughlinstown Roundabout in particular
- Retention of existing kerb lines and lane widths where possible, in areas such as the Leeson St Lower section and areas along the Stillorgan Road
- The removal of bridge construction works over the Dargle River
- Optimisation of junction layouts and bus stop layouts to reduce site clearance, earthworks and retaining works
- More considered approach to tree retention taking tree survey information into account

Construction carbon will continue to be considered and assessed as part of the evolving scheme design and the preparation of the supporting Environmental Impact Assessment Report documentation.

8. Next Steps

This Draft PRO Report has identified a Preferred Route Option for the bus infrastructure along the Bray to City Centre CBC for which an updated concept design has been developed.

The next stage (the development of a Preliminary Design) will further refine and update the concept design along the CBC. 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 potential constraints, impacts and environmental assessment required at a local level, and submissions arising from the third non-statutory public consultation.

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.

Appendices

Appendix A. Multi Criteria Assessment

MCA Section 1A - UCD to Anglesea Bridge			
Assessment Criteria	Assessment Sub-Criteria	Previous MCA	New Option
		Scheme Option 1A2 (1 outbound lane past church)	Scheme Option 1A3 (2 outbound lanes past church)
Economy	1.a. Capital Cost	Would require the existing southbound carriageway at Donnybrook Church to be reconfigured as footpath and cycle tracks	
	Rank		
	1.b. Transport Reliability and Quality	Length: 1.5km No. of signalised intersections: 3	Length: 1.5km No. of signalised intersections: 3
	Rank		
Integration	2.a. Land Use Integration	Integrates with existing / planned residential, medical and leisure uses in this established area.	Integrates with existing / planned residential, medical and leisure uses in this established area.
	Rank		
	2.b. Residential Population and Employment Catchments	All scheme options use the same bus stops, hence the residential and employment catchments are the same.	All scheme options use the same bus stops, hence the residential and employment catchments are the same.
	Rank		
	2.c. Transport Network Integration	Potential for interchange with neighbouring Core Bus Corridors. (Previous Report Text). Wider footway provision at Donnybrook Church providing better access to bus stop and public attractor.	Coach lay-bys added to remove delays caused by loading coaches. Interaction with Merrion to City Centre CBC has been designed in. New Nutley Lane junction layout will provide for specific bus and cycle right turn movements. Developed with emerging UCD Interchange proposals.
	Rank		
	2.d. Cycle Network Integration	Both directions of route 1A align with primary route 12 as identified in the GDA Cycle Network Plan. See report Section 2 Figure 2.2 and 2.3.(AECOM/ROD Options and Feasibility Report)	Same route as previous option in line with GDA Cycle Network Plan. Where possible island bus stops have been provided to remove cycle / bus interaction. New Nutley Lane junction design allows for all cycle manoeuvres to be carried out separate from pedestrians and vehicles conflicts. The new junction better connects to the Ballsbridge to City Centre CBC.
	Rank		
	2.e. Traffic Network Integration	This scheme option would provide a new streetscape which would increase pedestrian facilities by widening the northern footpath whilst maintaining full bus and cyclist facilities. This is achieved by extending the outbound one lane configuration before widening to two lanes, reducing overall general traffic road space. There are no parking spaces identified in this section which would be affected by the proposed works. The extension of one lane would have some impact upon the existing traffic network.	Two outbound straight ahead lanes now provided immediately past the Anglesea Rd junction to help clear outbound traffic through the junction. Inbound, left turn lane combined with straight ahead lane. No parking spaces along this section have been identified as affected.
	Rank		
Accessibility & Social Inclusion	3.a. Key Trip Attractors (Education/Health/Commercial/Employment)	All scheme options follow the same route and hence, serve the same trip attractors.	All scheme options follow the same route and hence, serve the same trip attractors.
	Rank		
	3.b. Deprived Geographic Areas	This option primarily serves areas considered affluent, marginally above and marginally below as identified in the Pobal Deprivation Index.	This option primarily serves areas considered affluent, marginally above and marginally below as identified in the Pobal Deprivation Index.
	Rank		
Safety	4.a. Road Safety	No. of Junctions: 3 Bus Turning movements: Inbound: No turning movements required (Previous Report Text - assumed 1 right turn required for Nutley Lane) Outbound: 1 right turn movement required Scheme Option 1A2 would increase footpath width at Donnybrook church, providing safe facilities for pedestrians and those accessing public transport.	No. of Junctions: 3 Bus Turning movements: Inbound: 1 right turn movement required at Nutley Lane Outbound: 1 right turn movement required from Beaver Row Same number of junctions and turning movements, but more considered Nutley Lane junction layout (removal of left turn slip and "Semi-Dutch" style junction will be safer for cyclists. Island bus stop layout and coach lay-bys provide safer bus and cycle interactions.) By providing a safer cycling facilities through kerbed cycle ways, island bus stops and safer/more protected progression through junctions it is envisaged that this will attract less confident cyclists and families to use their bikes more often
	Rank		
Environment	5.a. Archaeology and Cultural Heritage	Route 1 is in immediate proximity to 15 recorded monuments, including Stephen's Green, which is a National Monument. This scheme option would not impact on any of the recorded monuments.	Route 1 is in immediate proximity to 15 recorded monuments, including Stephen's Green, which is a National Monument. This scheme option would not impact on any of the recorded monuments.
	Rank		
	5.b. Architectural Heritage	1 protected structure fronting onto Stillorgan Road.	1 protected structure fronting onto Stillorgan Road.
	Rank		
	5.c. Flora & Fauna	Same for both options	Same for both options
	Rank		
	5.d. Soils and Geology	No appreciable impacts	No appreciable impacts
	Rank		
	5.e. Hydrology	No appreciable impacts	No appreciable impacts
	Rank		
	5.f. Landscape and Visual	Same for both options	Same for both options
	Rank		
	5.g. Air Quality	No appreciable impacts	No appreciable impacts
	Rank		
	5.h. Noise and Vibration	No change from current layout usage	No appreciable impacts
	Rank		
	5.i Land Use Character	No change from current layout usage	No appreciable impacts
	Rank		

MCA Section 1C - Eglinton Terrace to Belmont Avenue

Assessment Criteria	Assessment Sub-Criteria	Previous MCA	New Option	New Option	New Option	New Option
		Scheme Option 1C1 (Shared bus and cycle Lanes)	Scheme Option 1C3 (Northbound bus lane, Southbound queue relocation)	Scheme Option 1C4 (Queue relocation both directions)	Scheme Option 1C5 (Southbound bus lane, Northbound Pinch Point Merge)	Scheme Option 1C6 (Southbound bus lane, Northbound queue relocation)
Economy	1.a. Capital Cost	0 sq.m. of residential land (From Previous Report)	Length: 0.11km Some localised kerb realignment and associated drainage works, where 1.5m cycle lanes used no widening beyond previous option Bus Stops: 1 0 sq.m. of residential land	Length: 0.11km Minor road and kerb works only Bus Stops: 1 0 sq.m. of residential land	Length: 0.11km Some localised kerb realignment and associated drainage works, where 1.5m cycle lanes used no widening beyond previous option Bus Stops: 1 0 sq.m. of residential land	Length: 0.11km Some localised kerb realignment and associated drainage works, where 1.5m cycle lanes used no widening beyond previous option Bus Stops: 1 0 sq.m. of residential land
	Rank	🟩	🟧	🟩	🟧	🟧
	1.b. Transport Reliability and Quality	Length: 0.11km No. of signalised intersections: 1 Dedicated bus lanes in both directions At point where bus lane is shared with cyclists, bus speeds will be restricted by slowest cyclist in the shared lane, hence this scores lower	Length: 0.11km No. of signalised intersections: 1 Northbound dedicated bus lane, Southbound bus priority signal entering section, dedicated segregated cycle lanes will ensure cyclists do not impede buses	Length: 0.11km No. of signalised intersections: 2 Bus priority signal and queue relocation, dedicated segregated cycle lanes will ensure cyclists do not impede buses on in both directions	Length: 0.11km No. of signalised intersections: 1 Southbound dedicated bus lane through this section. No pre-signal junction will be provided for northbound priority and buses and general traffic will merge before the pinch point chicane. No cycle facilities will be provided through section.	Length: 0.11km No. of signalised intersections: 2 Southbound dedicated bus lane, Priority will be given to Northbound buses from Pre-signal at Eglington Terrace. As this option has segregated cycle lanes and therefore will not need to use bus lanes this will ensure cyclists do not impede buses and affect their reliability / journey time.
	Rank	🟧	🟩	🟩	🟩	🟩
Integration	2.a. Land Use Integration	Maintains existing land use characteristics.	Maintains existing land use characteristics.	Maintains existing land use characteristics.	Maintains existing land use characteristics.	Maintains existing land use characteristics.
	Rank	🟨	🟨	🟨	🟨	🟨
	2.b. Residential Population and Employment Catchments	All scheme options use the same bus stops, hence the residential and employment catchments are the same.	All scheme options use the same bus stops, hence the residential and employment catchments are the same.	All scheme options use the same bus stops, hence the residential and employment catchments are the same.	All scheme options use the same bus stops, hence the residential and employment catchments are the same.	All scheme options use the same bus stops, hence the residential and employment catchments are the same.
	Rank	🟨	🟨	🟨	🟨	🟨
	2.c. Transport Network Integration	No difference over short length	No difference over short length	No difference over short length	No difference over short length	No difference over short length
	Rank	🟨	🟨	🟨	🟨	🟨
	2.d. Cycle Network Integration	Both directions of route 1.C1 align with primary route 12 as identified in the GDA Cycle Network Plan. See report Section 2 Figure 2.2 and 2.3. (AECOM/ROD Options and Feasibility Report) This scheme option proposes a shared bus and cycle lane in both directions so scores lower than other Scheme Options.	Both directions of route 1.C3 align with primary route 12 as identified in the GDA Cycle Network Plan. See report Section 2 Figure 2.2 and 2.3. (AECOM/ROD Options and Feasibility Report) This scheme option proposes an dedicated segregated cycle lane in both directions so scores better than Scheme Option 1.C1.	Both directions of route 1.C4 align with primary route 12 as identified in the GDA Cycle Network Plan. See report Section 2 Figure 2.2 and 2.3. (AECOM/ROD Options and Feasibility Report) This scheme option proposes an dedicated segregated cycle lane in both directions so scores better than Scheme Option 1.C1.	This scheme option proposes a shared bus and cycle lane in both directions so scores lower than other Scheme Options.	Both directions of route 1.C6 align with primary route 12 as identified in the GDA Cycle Network Plan. See report Section 2 Figure 2.2 and 2.3. This scheme option proposes an dedicated segregated cycle lane in both directions so scores better than Scheme Option 1.C1.
	Rank	🟧	🟩	🟩	🟧	🟩
	2.e. Traffic Network Integration	Each scheme option would maintain one inbound and outbound traffic lane. Route 1.C1 would provide separate traffic and bus lanes.	Each scheme option would maintain one inbound and outbound traffic lane. Route 1.C3 would provide a dedicated Northbound bus lane, and a shared Southbound traffic and bus lane. Southbound bus priority given at start of link.	Each scheme option would maintain one inbound and outbound traffic lane. Route 1.C4 would provide a shared traffic and bus lane in each direction, with bus priority signals entering and exiting the link, along with bus lanes on approach to signals at either end.	Scheme option would maintain one inbound and outbound traffic lane. Route 1.C5 would provide a dedicated southbound bus lane but require general traffic to merge with buses on the northbound approach.	Each scheme option would maintain one inbound and outbound traffic lane. Route 1.C5 would provide a dedicated Southbound bus lane, and a shared Northbound traffic and bus lane. Northbound bus priority given at start of link.
	Rank	🟩	🟩	🟥	🟧	🟩
Accessibility & Social Inclusion	3.a. Key Trip Attractors (Education/Health/Commercial/Employment)	All options follow the same route and hence, serve the same trip attractors.	All options follow the same route and hence, serve the same trip attractors.	All options follow the same route and hence, serve the same trip attractors.	All options follow the same route and hence, serve the same trip attractors.	All options follow the same route and hence, serve the same trip attractors.
	Rank	🟨	🟨	🟨	🟨	🟨
	3.b. Deprived Geographic Areas	All options primarily serve an area considered affluent in the Pobal Deprivation Index.	1	All options primarily serve an area considered affluent in the Pobal Deprivation Index.	All options primarily serve an area considered affluent in the Pobal Deprivation Index.	All options primarily serve an area considered affluent in the Pobal Deprivation Index.
	Rank	🟨	🟨	🟨	🟨	🟨
Safety	4.a. Road Safety	No. of Junctions: 2 (2 pedestrian crossings) Turning movements: Inbound: No turning movements required for bus Outbound: No turning movements required for bus Scheme Option 1.C1 would mix cyclists with buses.	No. of Junctions: 2 (2 pedestrian crossings) Turning movements: Inbound: No turning movements required for bus Outbound: No turning movements required for bus Scheme Option 1.C3 would segregate cyclists from buses so scores higher.	No. of Junctions: 3 (3 pedestrian crossings) Turning movements: Inbound: No turning movements required for bus Outbound: No turning movements required for bus Scheme Option 1.C4 would segregate cyclists from buses so scores higher.	No. of Junctions: 2 Turning movements: Inbound: No turning movements required for bus Outbound: No turning movements required for bus Scheme Option 1.C5 would mix cyclists with buses and would also require buses and general traffic to merge into one lane in advance of the pinch point.	No. of Junctions: 2 (2 pedestrian crossings) Turning movements: Inbound: No turning movements required for bus Outbound: No turning movements required for bus Scheme Option 1.C5 would segregate cyclists from buses. The reduction of a bus lane provides more comfortable swept paths compared to the full cross-sectional provision of 2 bus lanes and 2 general traffic where without additional land take progression through the chicane was at risk of vehicles encroaching on the adjacent lanes.
	Rank	🟧	🟩	🟩	🟧	🟩
Environment	5.a. Archaeology and Cultural Heritage	The following records are located adjacent to Donnybrook Rd; Enclosure DU018-060021, 16th/17th century DU018-060001, Ecclesiastical enclosure DU018-060009, House (fortified) DU018-060020 and Windmill DU018-060006. As further information is not available on the state of these records, it is unclear if they still exist. It is not likely that significant environmental affects will occur from the extent of the proposed works. An 18th/19th Century house (DU018-061) is also recorded on the corner of Morehampton Rd and Belmont Avenue and is marked as a Site of Archaeological Interest in the Dublin City Development Plan (DCDP) 2016-2022. Donnybrook Rd is also within a Zone of Archaeological Interest as designated in the DCDP. Ground works may therefore result in impacts.	The following records are located adjacent to Donnybrook Rd; Enclosure DU018-060021, 16th/17th century DU018-060001, Ecclesiastical enclosure DU018-060009, House (fortified) DU018-060020 and Windmill DU018-060006. As further information is not available on the state of these records, it is unclear if they still exist. It is not likely that significant environmental affects will occur from the extent of the proposed works. An 18th/19th Century house (DU018-061) is also recorded on the corner of Morehampton Rd and Belmont Avenue and is marked as a Site of Archaeological Interest in the Dublin City Development Plan (DCDP) 2016-2022. Donnybrook Rd is also within a Zone of Archaeological Interest as designated in the DCDP. Ground works may therefore result in impacts.	The following records are located adjacent to Donnybrook Rd; Enclosure DU018-060021, 16th/17th century DU018-060001, Ecclesiastical enclosure DU018-060009, House (fortified) DU018-060020 and Windmill DU018-060006. As further information is not available on the state of these records, it is unclear if they still exist. It is not likely that significant environmental affects will occur from the extent of the proposed works. An 18th/19th Century house (DU018-061) is also recorded on the corner of Morehampton Rd and Belmont Avenue and is marked as a Site of Archaeological Interest in the Dublin City Development Plan (DCDP) 2016-2022. Donnybrook Rd is also within a Zone of Archaeological Interest as designated in the DCDP. Ground works may therefore result in impacts.	The following records are located adjacent to Donnybrook Rd; Enclosure DU018-060021, 16th/17th century DU018-060001, Ecclesiastical enclosure DU018-060009, House (fortified) DU018-060020 and Windmill DU018-060006. As further information is not available on the state of these records, it is unclear if they still exist. It is not likely that significant environmental affects will occur from the extent of the proposed works. An 18th/19th Century house (DU018-061) is also recorded on the corner of Morehampton Rd and Belmont Avenue and is marked as a Site of Archaeological Interest in the Dublin City Development Plan (DCDP) 2016-2022. Donnybrook Rd is also within a Zone of Archaeological Interest as designated in the DCDP. Ground works may therefore result in impacts.	The following records are located adjacent to Donnybrook Rd; Enclosure DU018-060021, 16th/17th century DU018-060001, Ecclesiastical enclosure DU018-060009, House (fortified) DU018-060020 and Windmill DU018-060006. As further information is not available on the state of these records, it is unclear if they still exist. It is not likely that significant environmental affects will occur from the extent of the proposed works. An 18th/19th Century house (DU018-061) is also recorded on the corner of Morehampton Rd and Belmont Avenue and is marked as a Site of Archaeological Interest in the Dublin City Development Plan (DCDP) 2016-2022. Donnybrook Rd is also within a Zone of Archaeological Interest as designated in the DCDP. Ground works may therefore result in impacts.
	Rank	🟨	🟨	🟨	🟨	🟨
	5.b. Architectural Heritage	The houses along Belmont Avenue and Mount Eden Road are within an Architectural Conservation Area as illustrated in the DCDP zoning maps. Three protected structures are also indicated on the DCDP maps; a house at 2 Belmont Avenue, The Old Magdalene Laundry at The Crescent and The Irish Sisters of Charity Chapel at The Crescent. Significant impacts are not likely.	The houses along Belmont Avenue and Mount Eden Road are within an Architectural Conservation Area as illustrated in the DCDP zoning maps. Three protected structures are also indicated on the DCDP maps; a house at 2 Belmont Avenue, The Old Magdalene Laundry at The Crescent and The Irish Sisters of Charity Chapel at The Crescent. Significant impacts are not likely.	The houses along Belmont Avenue and Mount Eden Road are within an Architectural Conservation Area as illustrated in the DCDP zoning maps. Three protected structures are also indicated on the DCDP maps; a house at 2 Belmont Avenue, The Old Magdalene Laundry at The Crescent and The Irish Sisters of Charity Chapel at The Crescent. Significant impacts are not likely.	The houses along Belmont Avenue and Mount Eden Road are within an Architectural Conservation Area as illustrated in the DCDP zoning maps. Three protected structures are also indicated on the DCDP maps; a house at 2 Belmont Avenue, The Old Magdalene Laundry at The Crescent and The Irish Sisters of Charity Chapel at The Crescent. Significant impacts are not likely.	The houses along Belmont Avenue and Mount Eden Road are within an Architectural Conservation Area as illustrated in the DCDP zoning maps. Three protected structures are also indicated on the DCDP maps; a house at 2 Belmont Avenue, The Old Magdalene Laundry at The Crescent and The Irish Sisters of Charity Chapel at The Crescent. Significant impacts are not likely.
	Rank	🟨	🟨	🟨	🟨	🟨
	5.c. Flora & Fauna	There are no trees along Route 1.C which could be impacted.	At least two trees outside shops unaffected by route 1.C3 if parking organised to mitigate.	At least two trees outside shops unaffected by route 1.C4 if parking organised to mitigate.	At least two trees outside shops unaffected by route 1.C5 if parking organised to mitigate.	At least two trees outside shops unaffected by route 1.C6 if parking organised to mitigate.
	Rank	🟨 1	🟨	🟨	🟨	🟨
	5.d. Soils and Geology	No appreciable impacts	No appreciable impacts	No appreciable impacts	No appreciable impacts	No appreciable impacts
	Rank	🟨	🟨	🟨	🟨	🟨
	5.e. Hydrology	No appreciable impacts	No appreciable impacts	No appreciable impacts	No appreciable impacts	No appreciable impacts
	Rank	🟨	🟨	🟨	🟨	🟨
	5.f. Landscape and Visual	Maintains existing streetscape of Donnybrook Village.	Maintains existing streetscape of Donnybrook Village.	Maintains existing streetscape of Donnybrook Village.	Maintains existing streetscape of Donnybrook Village.	Maintains existing streetscape of Donnybrook Village.
	Rank	🟨	🟨	🟨	🟨	🟨
	5.g. Air Quality	There is expected to be minimal change in air quality in comparing these two options. Impacts may occur from construction and alteration of buildings.	There is expected to be minimal change in air quality in comparing these two options. Impacts may occur from construction and alteration of buildings.	There is expected to be minimal change in air quality in comparing these two options. Impacts may occur from construction and alteration of buildings.	There is expected to be minimal change in air quality in comparing these two options. Impacts may occur from construction and alteration of buildings.	There is expected to be minimal change in air quality in comparing these two options. Impacts may occur from construction and alteration of buildings.
	Rank	🟨	🟨	🟨	🟨	🟨
	5.h. Noise and Vibration	There is expected to be minimal change in noise and vibration due to increased bus load. Short term impacts may occur from construction and demolition of buildings.	There is expected to be minimal change in noise and vibration due to increased bus load. Short term impacts may occur from construction and demolition of buildings.	There is expected to be minimal change in noise and vibration due to increased bus load. Short term impacts may occur from construction and demolition of buildings.	There is expected to be minimal change in noise and vibration due to increased bus load. Short term impacts may occur from construction and demolition of buildings.	There is expected to be minimal change in noise and vibration due to increased bus load. Short term impacts may occur from construction and demolition of buildings.
	Rank	🟨	🟨	🟨	🟨	🟨
	5.i Land Use Character	No appreciable impacts	No appreciable impacts	No appreciable impacts	No appreciable impacts	No appreciable impacts
	Rank	🟨	🟨	🟨	🟨	🟨

MCA Section 1F - Leeson St Lower (St Stephen's Green)			
Assessment Criteria	Assessment Sub-Criteria	EPR Option	New Option
		Scheme Option 1F1 (general traffic and reduced footways)	Scheme Option 1F2 (bus gate, retain existing footways)
Economy	1.a. Capital Cost	Minor carriageway improvements over 250m on approach to St. Stephen' Green junction (Kerb works, drainage relocation). Minor junction works at Hatch St/Leeson St Lower and St. Stephen's Green / Leeson St Lower.	Minor carriageway improvements on Earlsfort Terrace and Leeson St Lower Minor junction works at Leeson St Lower / Hatch St Lower, Earlsfort Terrace / Hatch St Lower and St. Stephen's Green / Leeson St Lower.
	Rank		
	1.b. Transport Reliability and Quality	Buses have priority over general traffic at the St. Stephen's Green junction, but still have to allow for a general traffic phase, which will reduce slightly the journey time reliability of buses on this section.	Buses are the only motorised traffic using the St. Stephen's Green junction so the available signal time is fully dedicated to them.
	Rank		
Integration	2.a. Land Use Integration	Same for both options over this short distance as no difference between bus routes	Same for both options over this short distance as no difference between bus routes
	Rank		
	2.b. Residential Population and Employment Catchments	Same for both options over this short distance as no difference between bus routes	Same for both options over this short distance as no difference between bus routes
	Rank		
	2.c. Transport Network Integration	Same for both options over this short distance as no difference between bus routes	Same for both options over this short distance as no difference between bus routes
	Rank		
	2.d. Cycle Network Integration	Same for both options over this short distance as no difference between segregated cycle routes	Same for both options over this short distance as no difference between segregated cycle routes
	Rank		
	2.e. Traffic Network Integration	General traffic has a slightly quicker route from Hatch St Lower to St. Stephen's Green.	General traffic will have approximately an additional 270m to travel between Hatch St Lower and St. Stephen's Green. Beyond the immediate links, there is no appreciable impact on wider traffic flows.
	Rank		
Accessibility & Social Inclusion	3.a. Key Trip Attractors (Education/Health/Commercial/Employment)	Same for both options over this short distance as no difference between bus routes	Same for both options over this short distance as no difference between bus routes
	Rank		
	3.b. Deprived Geographic Areas	Same for both options over this short distance as no difference between bus routes	Same for both options over this short distance as no difference between bus routes
	Rank		
Safety	4.a. Road Safety	Reduced footpath widths are required at the Leeson st Lower / St. Stephen's Green junction to provide for segregated cycle tracks as well as the three traffic lanes. This is a very busy pedestrian section.	Segregated cycle tracks can be provided without reducing footpath widths, which provides vulnerable road users with more usable safe space.
	Rank		
Environment	5.a. Archaeology and Cultural Heritage	Same for both options over this short distance	Same for both options over this short distance
	Rank		
	5.b. Architectural Heritage	Same for both options over this short distance	Same for both options over this short distance
	Rank		
	5.c. Flora & Fauna	Same for both options over this short distance	Same for both options over this short distance
	Rank		
	5.d. Soils and Geology	Same for both options over this short distance	Same for both options over this short distance
	Rank		
	5.e. Hydrology	Same for both options over this short distance	Same for both options over this short distance
	Rank		
	5.f. Landscape and Visual	Removal of existing heritage granite kerbs would be required to fit the necessary cycle tracks in at the approach to St. Stephen's Green along Leeson St Lower	There is no requirement to remove the existing heritage granite kerbs.
	Rank		
	5.g. Air Quality	General traffic and associated air quality impacts will remain on Leeson St Lower	General traffic will be removed from the heavily pedestrianised section of Leeson St Lower on the approach to St. Stephen's Green junction, and from outside the two schools on this section of road
	Rank		
	5.h. Noise and Vibration	Same for both options over this short distance	Same for both options over this short distance
	Rank		
	5.i Land Use Character	Same for both options over this short distance	Same for both options over this short distance
	Rank		

		MCA Section 3.2C1 - Cycling Loughlinstown Roundabout to Stonebridge Road		
Assessment Criteria	Assessment Sub-Criteria	Previous MCA	New Option	New Option
		EPR Option (Section 2 - Sub-section St Anne's to Loughlinstown Roundabout) Dublin Road	Scheme Option 3.2C1 (M11 Cycle Track)	Scheme Option 3.2C2 (Dublin Rd Cycle Route)
Economy	1.a. Capital Cost	0.9km Would require 660m2 (220m x 3m) dense site clearance. Additional private land purchase beyond the alternative would be required along 325m of the route, including from private dwellings and a school. Potential additional lands costs to provide a relocated playing pitch for the school.	0.8km in total Would require 2575m2 (515m x 5m) of dense site clearance and cycle track provision. Private land purchase not considered necessary as entirely along motorway verge.	0km in total No lands required
	Rank			
	1.b. Transport Reliability and Quality (Journey Time)	Cycle priority provided along segregated tracks that will not impede the reliability of bus journey times	Cycle priority provided along segregated adjacent tracks that will not impede the reliability of bus journey times	Cyclists would need to share bus lanes and general traffic lanes, potentially slowing traffic along narrow sections of road
	Rank			
Integration	2.a. Land Use Integration	Links residential areas along Dublin Rd to educational attractors on Stonebridge Rd	Does not link any specific planned or current residential, educational, commercial or leisure development areas along the route	Cyclists using main road which would link planned or current residential and educational attractors along the route
	Rank			
	2.b. Residential Population and Employment Catchments	This option directly serves the adjacent housing along Dublin Rd and the two schools along the route	This option would not be directly accessible to people in this area and would require travel along a road without direct cycle provision to get to the new cycle route	No specific cycle provision but cyclists along the main route would use the road along with rest of traffic
	Rank			
	2.c. Transport Network Integration	Cyclists on new route can park at cycle parking facilities and take other forms of public transport along the route	Cyclists on this route are not in a position to park and ride on other modes of public transport as no connections available	Cyclists on road would be able to park and use other modes of public transport along main route
	Rank			
	2.d. Cycle Network Integration	Segregated cycle tracks provided alongside bus lanes. This cycle route is in accordance with the GDA CNP	Segregated cycle track provided adjacent to the M11, which is in accordance with the GDA CNP, although adjacent to the GDA CNP route. This provides link to and infrastructure Stonebridge Rd which is part of GDA CNP Inter Urban Route D4	Route would align with the GDA CNP Primary Route. However no specific cycle segregation provided.
	Rank			
	2.e. Traffic Network Integration	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria
	Rank			

Accessibility & Social Inclusion	3.a. Key Trip Attractors (Education/Health/Commercial/Employment)	This option directly links the adjacent housing along Dublin Rd and the two schools along the route	This option does not link the Dublin Rd houses to the adjacent schools, nor to the wider trip attractors along the network	Although not segregated cycle facilities, this option directly links the adjacent housing along Dublin Rd and the two schools along the route
	Rank			
	3.b. Deprived Geographic Areas	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria
	Rank			
Safety	4.a. Road Safety	This option has a common toucan crossing with the other option. Beyond that it passes in front of 4 driveways and the entrance to an apartment block. It passes through 1 other junction on Stonebridge Rd with a toucan crossing provided.	This option has a common toucan crossing with the EPR option. Beyond that it runs on a cycle track with no other interfaces adjacent to the M11 until it has to cross Stonebridge Rd to continue to the next section, via a proposed toucan crossing.	This option has a toucan crossing after Loughlinstown roundabout to cater for cyclists from the two way cycle track around the roundabout, but apart from that it has no provision for cyclists who would have to share the carriageway with buses
	Rank			
Environment	5.a. Archaeology and Cultural Heritage	Requires the widening of the existing carriageway into planted motorway verge, and into private gardens	Requires the construction of a two way cycle track along a newly planted verge of the M11, with little anticipated impact	No additional impact resulting from this option
	Rank			
	5.b. Architectural Heritage	Requires the widening of the existing carriageway into planted motorway verge, and into private gardens, including the associated impact on property boundary walls	Requires the construction of a two way cycle track along a newly planted verge of the M11, with little anticipated impact	No additional impact resulting from this option
	Rank			
	5.c. Flora & Fauna	Tree line of approx. 225m affected along Dublin Rd	Tree line of approx. 525m affected adjacent to the M11	No additional impact resulting from this option
	Rank			
	5.d. Soils and Geology	Widening of existing road into adjacent properties seen as less invasive as the majority of affected land has been landscaped and/or built on previously	This option considered more invasive due to need to impact a wider width of dense and established trees for the cycle track and construction widths	No additional impact resulting from this option
	Rank			
	5.e. Hydrology	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria
	Rank			
	5.f. Landscape and Visual	This option involves additional road widening beyond the alternative of approx. 3m along the Dublin Rd. Land take from 5 gardens is required along some of the route. Replanting could be provided in the front gardens.	This option requires removal of established trees for the entire length, thinning the screening tree line of 10 back gardens and 1 housing development from the M11. Some but not all properties may have space for replanting in their back gardens.	No additional impact resulting from this option
	Rank			
	5.g. Air Quality	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria
	Rank			
	5.h. Noise and Vibration	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria
	Rank			
	5.i Land Use Character	On Dublin Road, requiring land take	On verge along M11, no real impact on land use character or private lands	No additional impact resulting from this option
	Rank			

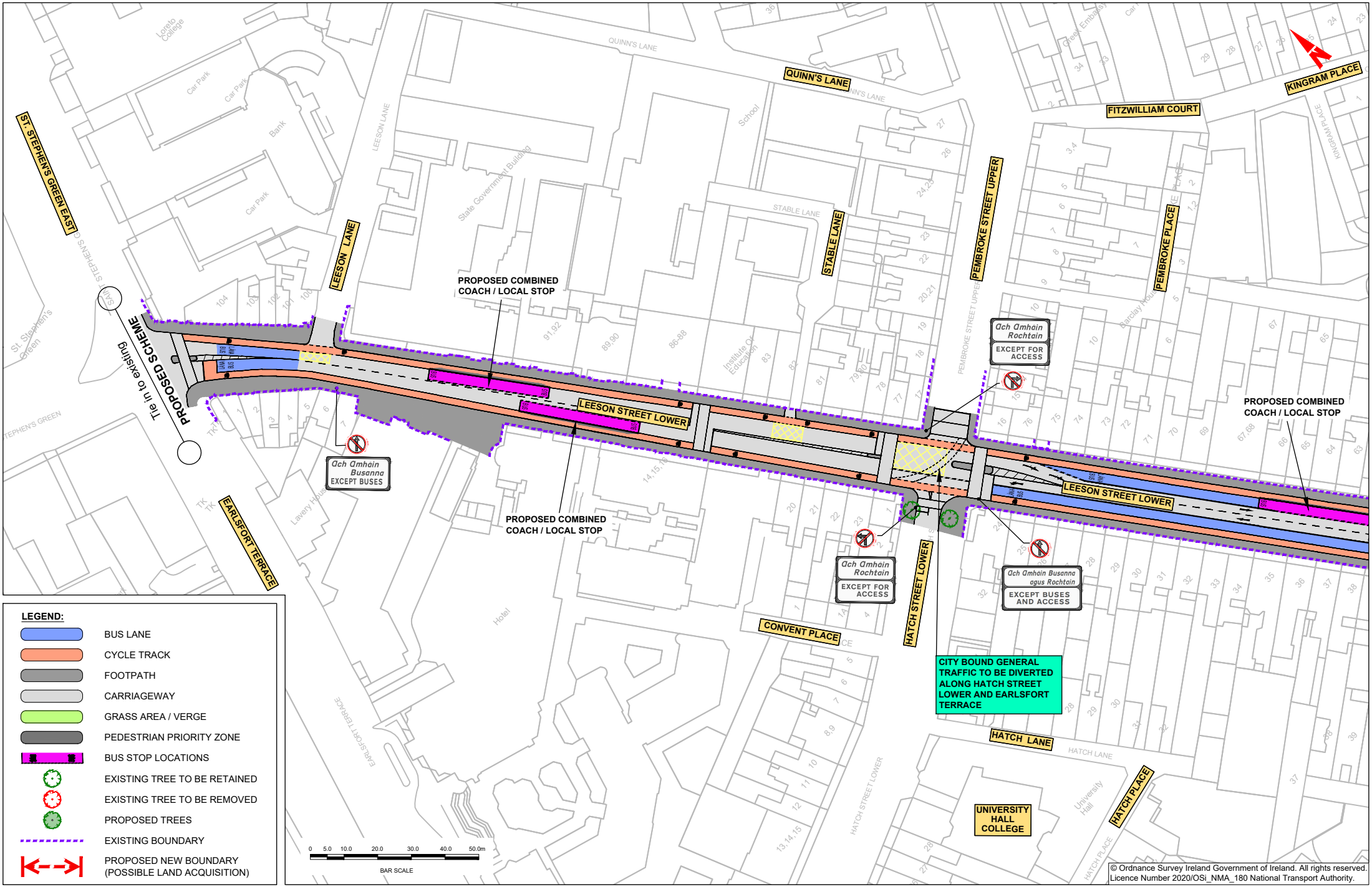
		MCA Section 3.2C2 - Cycling Stonebridge Road to Crinken Lane					
Assessment Criteria	Assessment Sub-Criteria	Previous MCA	New Option	New Option	New Option	New Option	New Option
		EPR Option (Dublin Rd as far as St Anne's, diversion to Lower Rd-Stonebridge Close-Mountainview)	Scheme Option 3.2C3 (M11 Cycle Track)	Scheme Option 3.2C4 (Library Road / Stonebridge Close)	Scheme Option 3.2C5 (Library Road / Assumpta Park)	Scheme Option 3.2C6 (Dublin Rd Cycle Route)	Scheme Option 3.2C7 (Corbawn Lane to Stonebridge Rd)
Economy	1.a. Capital Cost		1.4km	1.4km	1.3km	0km	0.6km
	Rank						
	1.b. Transport Reliability and Quality	Segregated cycle track provided on Dublin Rd beside CBC which would not affect bus reliability, cycle diversion then onto adjacent local roads. Cycle crossing of mainline to get to Lower Rd would require signals which may affect JTR.	Dedicated adjacent cycle track provided, no impact on bus reliability	Northbound cyclists would share bus lane from Crinken Lane to Quinn's Rd, and southbound cyclists would share general traffic lane operating under signal controlled priority, potentially affecting bus time reliability	Dedicated adjacent cycle track provided, no impact on bus reliability	No segregated cycle provision, cyclists will share either general traffic or bus lanes with vehicles, potentially causing delays to other vehicles	Two-way cycle track along Dublin Rd from Corbawn Lane to Stonebridge Rd on the southbound footpath, crossing to Stonebridge Rd running on the north footpath as far as Stonebridge Close. Cyclists would share road with traffic/buses along remainder of the section length
	Rank						
Integration	2.a. Land Use Integration	Links adjacent residential areas to schools on Stonebridge Rd, medical facilities and library, and onwards onto main village street	Does not link to any specific community services or residential areas within Shankill	Links adjacent residential areas to schools on Stonebridge Rd, medical facilities and library, and onwards onto main village street	Links adjacent residential areas to schools on Stonebridge Rd, library, and onwards to Crinken Lane where it joins main route	Cyclists using main road which would link planned or current residential and educational attractors along the route	Links adjacent residential areas to church and schools along Stonebridge Rd
	Rank						
	2.b. Residential Population and Employment Catchments	This option directly serves housing along the western side of Shankill, but is not a direct route	This option would not be directly accessible to people along most of this section of the route and would require travel along a road without direct cycle provision to get to the new cycle route	This option directly serves housing along the western side of Shankill, but is not a direct route	This option directly serves housing along the western side of Shankill, but is not a direct route	This options serves Shankill Village and connects all population areas along the Dublin Rd	This option provides a cycle link from the main housing concentration in Shankill, to safely link to the two main schools in the village
	Rank						
	2.c. Transport Network Integration	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria
	Rank						
	2.d. Cycle Network Integration	This option is considered less preferable due to previous consultation feedback and narrowness of Lower Rd	This option provides the best direct straight route for a dedicated segregated cycle track adjacent to the M11, in accordance with the GDA CNP. However, it is only accessible to Shankill residents at two points, as noted in 2b above.	This option is less preferable due to tight laneway from Hilltop Lawn to Stonebridge Close, past the HSE building	This option is considered less preferable due to narrow lane from Hilltop Lawn	Route would align with the GDA CNP Primary Route. However no specific cycle segregation provided.	This option would not provide a continuous segregated cycle network from Bray to Loughlinstown but it does provide a segregated cycle option to two schools from the main population centre in the area. GDA CNP still accessible along Dublin Rd.
	Rank						
	2.e. Traffic Network Integration	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria
	Rank						
Accessibility & Social Inclusion	3.a. Key Trip Attractors (Education/Health/Commercial/Employment)	Links adjacent residential areas to schools on Stonebridge Rd, medical facilities and library, and onwards onto main village street	Does not link to any specific community services or residential areas within Shankill, but provides commuter linkage onwards to employment areas	Links adjacent residential areas to schools on Stonebridge Rd, medical facilities and library, and onwards onto main village street	Links adjacent residential areas to schools on Stonebridge Rd, library, and onwards to Crinken Lane where it joins main route	Despite lack of segregated cycle facilities this option directly links the adjacent housing along Dublin Rd and the two schools along the route	This option directly links the main housing centre to two large schools in the area
	Rank						
	3.b. Deprived Geographic Areas	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria
	Rank						
Safety	4.a. Road Safety	This option is considered less appropriate due to the narrowness of side roads and the number of junctions it passes through	This option is considered good under this criteria as it is entirely segregated and does not pass through any major junctions	This option is considered to perform poorly due to the section that passes along the main Dublin Rd and through the associated junctions, and runs with the main traffic flows for sections along Dublin Rd	This option is considered good in that it has minor road junctions it passes through, but does not run along the main Dublin Rd with other traffic or through major junctions	This option is considered to perform poorly due all of it using the main Dublin Rd and passing through the associated junctions. A 30kph section through the Village would be incorporated as part of this option.	This option would provide a segregated cycle track for school children from the main housing centre to two schools, with toucan crossings at required locations. On the remainder of the route cyclists would share the general carriageway with cars and buses. A 30kph section through the Village would be incorporated as part of this option.
	Rank						
	6.a. Archaeology and Cultural Heritage	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria
	Rank						

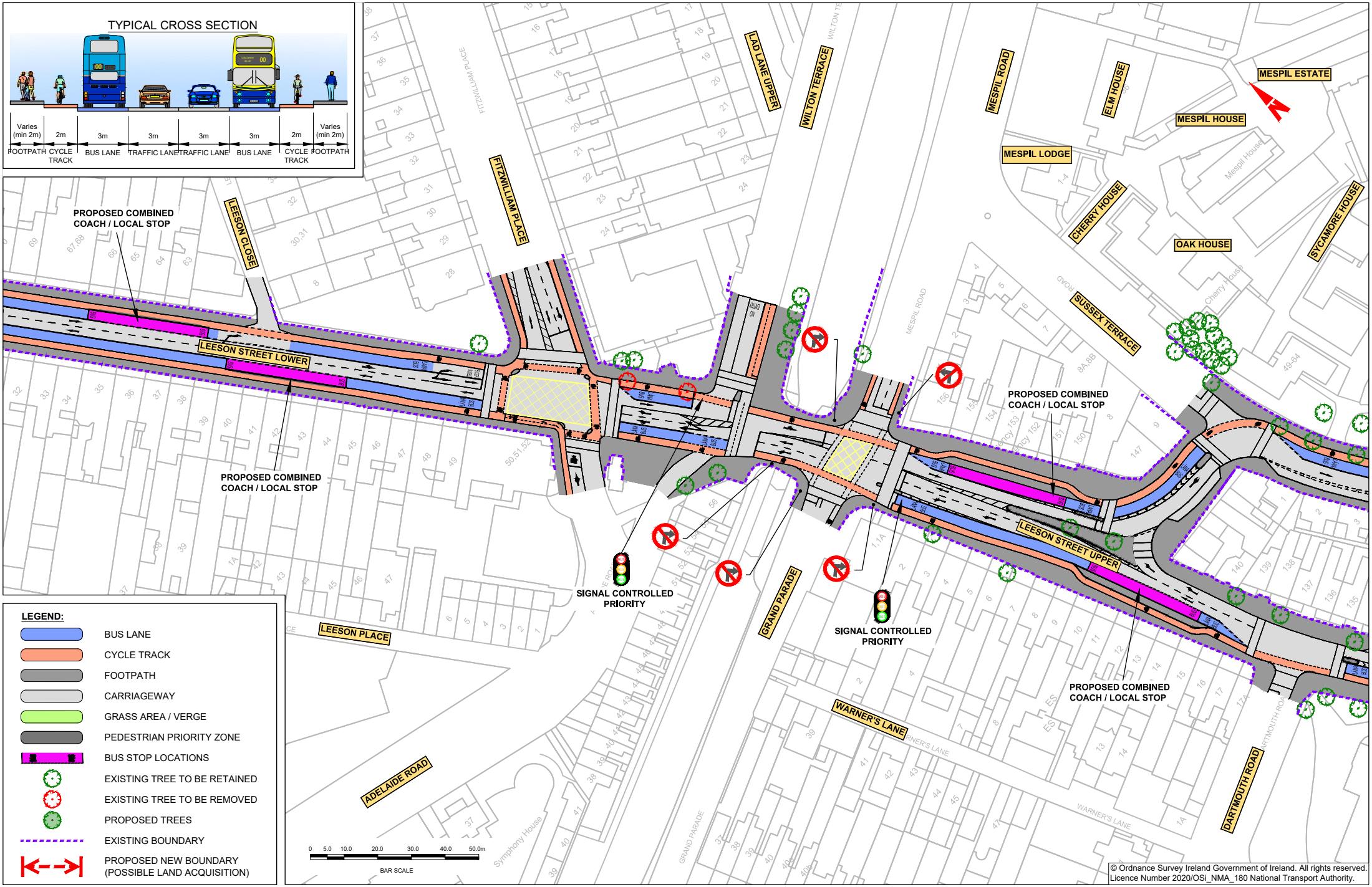
Environment	6.b. Architectural Heritage	This option has potential to have some impact on adjacent architectural stock or properties	This option will have least if any impact on adjacent architectural stock	This option has the potential to have more of an impact on adjacent architectural stock or properties than other options south of Quinn's Rd	This option has potential to have some impact on adjacent architectural stock or properties	This option will have no impact on any adjacent architectural heritage as no additional land required for cycle tracks	This option will have an impact on a section of St Anne's church boundary wall, which will need to be relocated, along with the statue
	Rank						
	6.c. Flora & Fauna	Less dense tree clearance of approx. 400m2 (100m x 4m wide) required to bring track from Dublin Rd to Lower Rd	Tree line of approx. 500m2 (100m x 5m width) to be affected to enable cycle track to cross M11 tree line	Less tree clearance required but some anticipated due to need to widen Dublin Rd south of Quinn's Rd	Considered likely to have little flora and fauna impact	This option will have no impact on any adjacent flora or fauna as no additional land required for cycle tracks	This option will impact on the portion of St Anne's church boundary that is hedgerows, but these would be impacts in any case by the required road widening.
	Rank						
	6.d. Soils and Geology	Option considered to have some but not most soils and geology impact	Option considered to have most soil impact due to route along M11 verge and tree line	Option considered to have some but not most soils and geology impact	Option considered to have some but not most soils and geology impact	No additional impact as a result of cycle tracks	Option considered to have some but not most soils and geology impact
	Rank						
	6.e. Hydrology	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria
	Rank						
	6.f. Landscape and Visual	Considered less favourable due to impact on currently quiet residential streets (Lower Rd, Mountainview)	Considered better performing due to reduced visual and community impact as minimising the passing of route through residential areas, and utilises current unused lands.	Considered worse performing due to potential impact on cultural heritage monument opposite Stonebridge Close and Crinken Cottage	Considered less favourable due to impact on currently quiet residential streets (Library Rd, New Vale, Mountainview), and impact on small gardens at end of Assumpta Park.	No additional impact as a result of cycle tracks	Considered acceptable due to reduced impact along provided cycle track
	Rank						
	6.g. Air Quality	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria
	Rank						
	6.h. Noise and Vibration	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria
	Rank						
	6.i Land Use Character	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria	Options are equal for this criteria
	Rank						

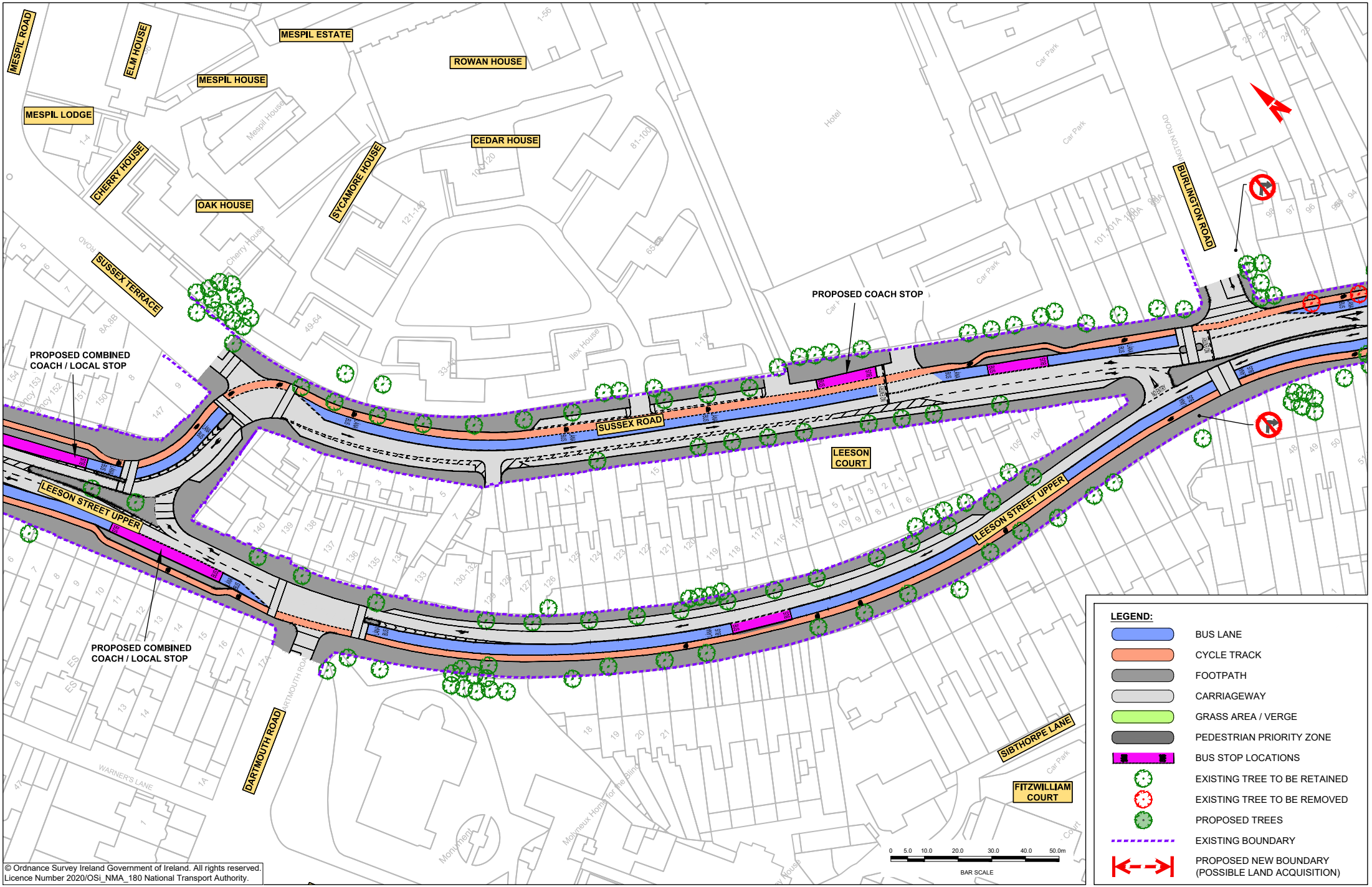
MCA Section 3.2D - Crinken Lane to St. Anne's Roundabout

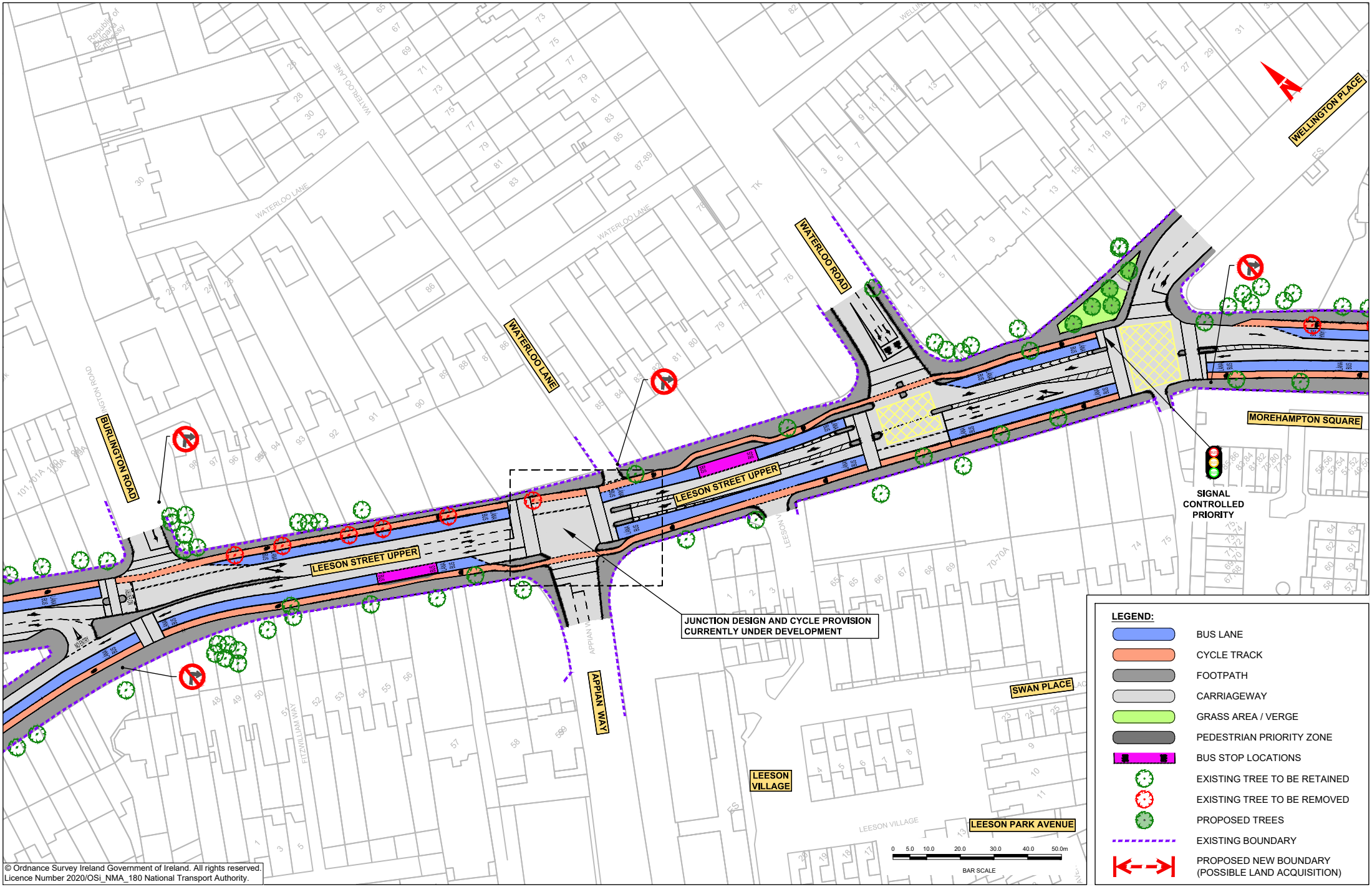
Assessment Criteria	Assessment Sub-Criteria	Previous MCA	New Option	New Option	New Option
		EPR Option 2.2D from previous assessment	Scheme Option 3.2D4 (double cycle lanes through village, revised Quinn's Road to Crinken Lane link)	Scheme Option 3.2D5 (northbound bus lane through village, revised Quinn's Lane to Crinken Lane link)	Scheme Option 3.2D6 (max-public realm through village, revised Quinn's Lane to Crinken Lane link)
Economy	1.a. Capital Cost	Road widening to provide bus lanes on both sides of the road through Shankill Village, and more land take to south of village	Minimal cost intervention to provide cycle paths. Same lesser land take costs as options 5 & 6 south of village	Additional kerbing and drainage works, alongside specific bus provision for third lane. Same lesser land take costs as options 4 & 6 south of village	Minor cost intervention compared to other options, but higher likely paving costs depending on materials. Same lesser land take costs as options 4 & 5 south of village
	Rank	🟧	🟧	🟧	🟩
	1.b. Transport Reliability and Quality	Bus lanes are provided for southbound buses through Shankill Village, the northbound bus lane stretches from the Stonebridge Close junction to the Lower Road junction, and from Quinn's Rd junction to Crinken Lane. Two queue relocation systems will be used at Quinn's Road and Lower Road junctions to provide priority for northbound buses. These bus priority measures will reduce delays when the village is congested and will lead to faster and more reliable journey times. Sperate bus lanes provided back as far as Crinken Lane.	Two combined traffic lanes are maintained through Shankill village with bus signal priority systems in place at St Anne's church junction and at Quinn's Rd roundabout to serve the village. A Northbound bus lane is in place from Crinken Lane to Quinn's Rd, while additional queue relocation measures may be provided Southbound as the traffic modelling dictates. Further, bus stops will artificially hold traffic back from passing buses, reinforcing bus priority. Cycle lanes through Shankill village will ensure buses not held up by slower cycles.	Two general lanes are maintained through Shankill village with a Northbound bus lane from Stonebridge Close to Lower Rd junction, and a bus signal priority systems in place at St Anne's church junction and at Quinn's Rd roundabout to serve the village. Only two combined lanes provided from Quinn's Rd to Stonebridge Close. A Northbound bus lane is in place from Crinken Lane to Quinn's Rd, while additional queue relocation measures may be provided Southbound as the traffic modelling dictates. Further, bus stops will artificially hold traffic back from passing buses, reinforcing bus priority.	Two combined traffic lanes are maintained through Shankill village with bus signal priority systems in place at St Anne's church junction and south of Cherrington Drive to serve the village. Further, bus stops will artificially hold traffic back from passing buses, reinforcing bus priority. A Northbound bus lane is in place from Crinken Lane as far as the Olcovar entrance only. Speed restrictions will be in place through the village. Although shared lanes through Shankill village will mean buses may be held up behind cyclists, a 30kph speed restriction is proposed for village section to minimise conflict impacts and enhance village feel which will reduce the impact of bus delay compared to other options (as buses would also expect to travel more slowly through the village compared to these options).
	Rank	🟩	🟧	🟩	🟧
Integration	2.a. Land Use Integration	DLRCoCo Development Plan "To protect, provide for and-or improve mixed-use neighbourhood centre facilities" in Shankill Village, and "To protect and-or improve residential amenity" south of village. No difference between options.	DLRCoCo Development Plan "To protect, provide for and-or improve mixed-use neighbourhood centre facilities" in Shankill Village, and "To protect and-or improve residential amenity" south of village. No difference between options.	DLRCoCo Development Plan "To protect, provide for and-or improve mixed-use neighbourhood centre facilities" in Shankill Village, and "To protect and-or improve residential amenity" south of village. No difference between options.	DLRCoCo Development Plan "To protect, provide for and-or improve mixed-use neighbourhood centre facilities" in Shankill Village, and "To protect and-or improve residential amenity" south of village. No difference between options.
	Rank	🟨	🟨	🟨	🟨
	2.b. Residential Population and Employment Catchments	Options considered equal under this criteria	Options considered equal under this criteria	Options considered equal under this criteria	Options considered equal under this criteria
	Rank	🟨	🟨	🟨	🟨
	2.c. Transport Network Integration	Options considered equal under this criteria	Options considered equal under this criteria	Options considered equal under this criteria	Options considered equal under this criteria
	Rank	🟨	🟨	🟨	🟨
	2.d. Cycle Network Integration	Ties in with broader cycle route provision either side of village, but indirect diversion route provided through Shankill may be ignored	Ties in with broader cycle route provision, and provides direct segregated path through village	Ties in with broader cycle route provision, but no specific cycle lanes provided	Ties in with broader cycle route provision, but no specific cycle lanes provided. Slower speeds should be more inviting for cyclists
	Rank	🟧	🟩	🟩	🟩
	2.e. Traffic Network Integration	Bus priority signals will hinder traffic when used, but private traffic has dedicated lanes along route in both directions apart from Stonebridge Close to Quinn's Rd northbound.	Bus priority signals will hinder traffic when used, and private cars will be unable to pass buses at bus stops. Northbound bus lane south of village will provide separate traffic lane for private vehicles.	Bus priority signals will hinder traffic when used, and private cars will be unable to pass buses at southbound bus stop, but northbound private cars will have separate lane from buses through village. Northbound bus lane south of village will provide separate traffic lane for private vehicles.	Bus priority signals will hinder traffic when used, and private cars will be unable to pass buses at bus stops. Speed restrictions will further slow traffic through village.
	Rank	🟨	🟨	🟨	🟨
Accessibility & Social Inclusion	3.a. Key Trip Attractors (Education/Health/Commercial/Employment)	Options considered equal under this criteria	Options considered equal under this criteria	Options considered equal under this criteria	Options considered equal under this criteria
	Rank	🟨	🟨	🟨	🟨
	3.b. Deprived Geographic Areas	Options considered equal under this criteria	Options considered equal under this criteria	Options considered equal under this criteria	Options considered equal under this criteria
	Rank	🟨	🟨	🟨	🟨
Safety	4.a. Road Safety	4 traffic lanes provided along most of route including through village, and off-route diverted cycle path also provided	2 lanes of traffic provided through village, and three south of village. Segregated cycle lanes provided	3 lanes of traffic through village, and south of village. Cycles share traffic lanes	2 lanes of traffic provided through village, with three lanes south of village. Cycles share traffic/bus lanes. Reduced speeds implemented through village
	Rank	🟧	🟩	🟧	🟩
Environment	5.a. Archaeology and Cultural Heritage	Largest impact on cultural heritage (property boundaries) due to 4 lane provision through and beyond village	Reduced impact on cultural heritage of property boundaries due to reduced lane provision in Shankill village and beyond compared to Sub Option 3 from previous assessment	Reduced impact on cultural heritage of property boundaries due to reduced lane provision in Shankill village and beyond compared to Sub Option 3 from previous assessment	Reduced impact on cultural heritage of property boundaries due to reduced lane provision in Shankill village and beyond compared to Sub Option 3 from previous assessment
	Rank	🟧	🟩	🟩	🟩
	5.b. Architectural Heritage	Largest impact on architectural heritage due to 4 lane provision beyond village	Reduced impact on architectural heritage due to 3 lane provision beyond village	Reduced impact on architectural heritage due to 3 lane provision beyond village	Reduced impact on architectural heritage due to 2/3 lane provision beyond village
	Rank	🟧	🟩	🟩	🟩
	5.c. Flora & Fauna	4 lane provision between Crinken Lane and Quinn's Rd roundabout will have largest impact of all options on trees adjacent to road and through village	Cycle paths will work with trees in village, and reduced lane provision outside of village will reduce impact on adjacent trees (though not fully remove)	No change in village, and reduced lane provision outside of village will reduce impact on adjacent trees (though not fully remove)	No change in village, and reduced lane provision outside of village will reduce impact on adjacent trees (though not fully remove)
	Rank	🟧	🟩	🟩	🟩
	5.d. Soils and Geology	Options considered equal under this criteria	Options considered equal under this criteria	Options considered equal under this criteria	Options considered equal under this criteria
	Rank	🟨	🟨	🟨	🟨
	5.e. Hydrology	Options considered equal under this criteria	Options considered equal under this criteria	Options considered equal under this criteria	Options considered equal under this criteria
	Rank	🟨	🟨	🟨	🟨
	5.f. Landscape and Visual	This option requires reallocation of road reserve from two lanes with parking both sides, to a three-lane carriageway with parking on one side only and removal of street trees and reduction in footpath widths through the village. This Option has a more severe visual impact on the streetscape of Shankill Village. 4 lane provision will have greatest impact on landscape along this section beyond the village	2 lane provision through village with cycle paths will improve visual character compared to other routes	3 lane provision through village and beyond will have slight negative effect compared to Sub Options 3.2D4 & 3.2D6, but less of an impact compared to Sub Option 3	Enhanced public realm provision and no additional lanes though village will provide greatest positive impact for visual feel of these route options
	Rank	🟥	🟩	🟧	🟩
	5.g. Air Quality	Bus priority signals and in line bus stops will cause standing traffic with associated air quality impacts	Bus priority signals and in line bus stops will cause standing traffic with associated air quality impacts	Bus priority signals and in line bus stops will cause standing traffic with associated air quality impacts	Bus priority signals and in line bus stops will cause standing traffic with associated air quality impacts
	Rank	🟨	🟨	🟨	🟨
	5.h. Noise and Vibration	General and bus traffic will be brought closer to properties through village so option considered worse than others.	General and bus traffic will be brought no closer to properties through village so option considered better than others.	General and bus traffic will be brought closer to properties through village so option considered worse than others.	General and bus traffic will be brought no closer to properties through village so option considered better than others.
	Rank	🟧	🟩	🟧	🟩
	5.i Land Use Character	Change to feel of village setting, and greater impact south of village	Change to feel of village setting, and greater impact south of village	Change to feel of village setting, and greater impact south of village	Minimal impact to village setting and reduced impact of adjacent lands by moving footpath behind tree line in places south of Quinn's Rd. Will encourage slower movement by all modes which will enhance the 'place' nature of the village rather than the 'movement' function of the corridor of other options which will detract from the land use character
	Rank	🟧	🟧	🟧	🟩

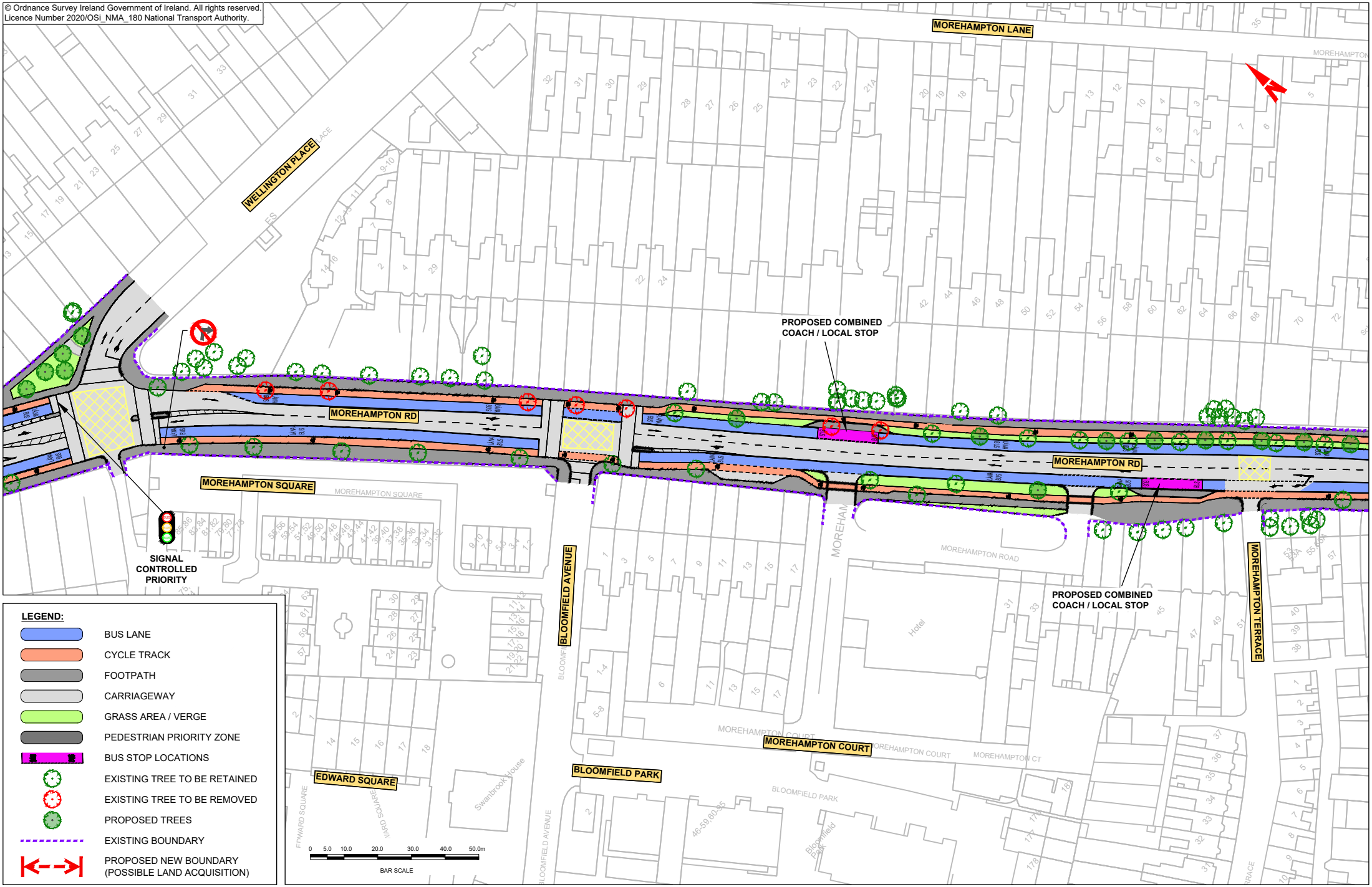
Appendix B. Preferred Route Option Drawings





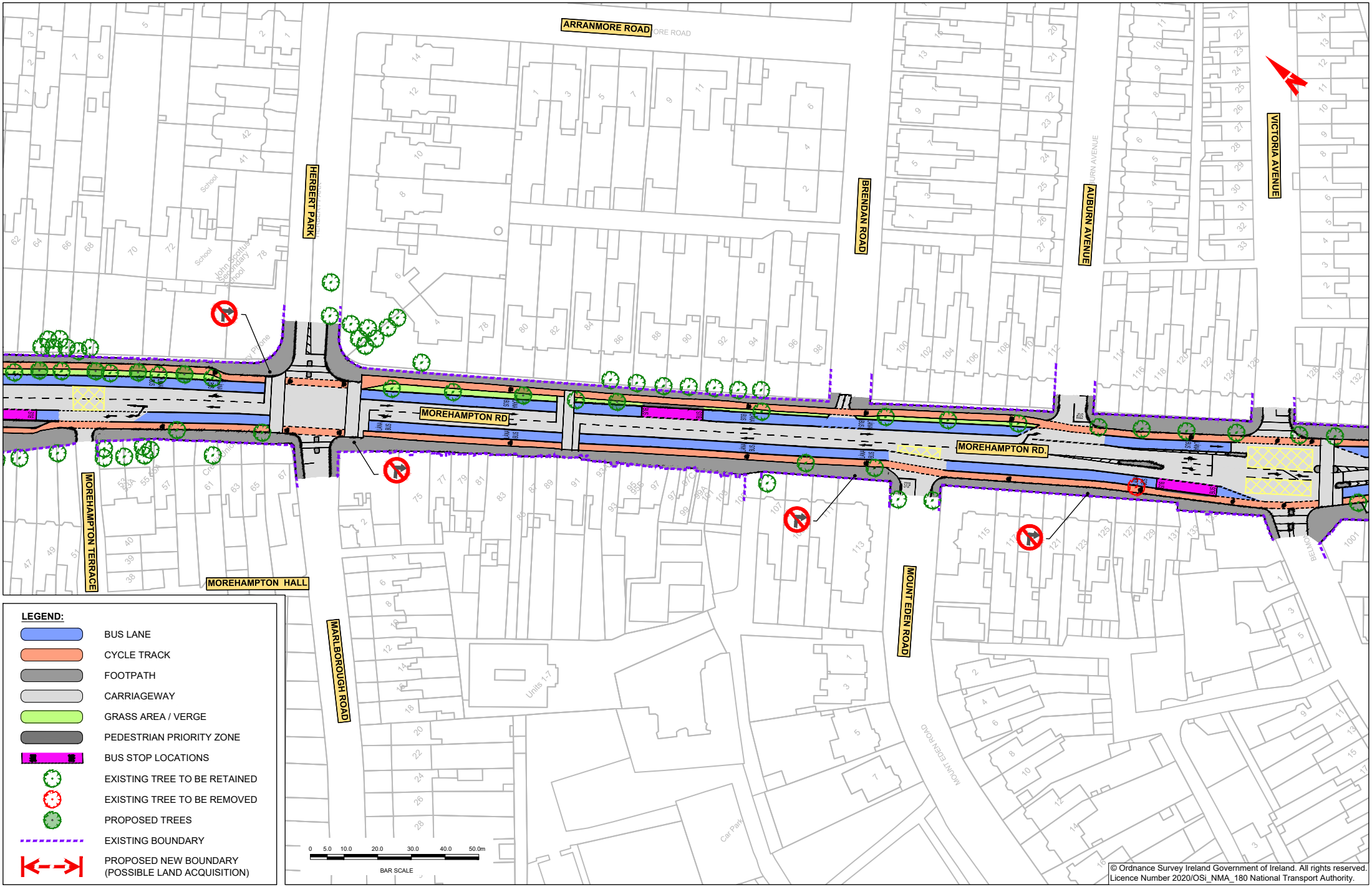


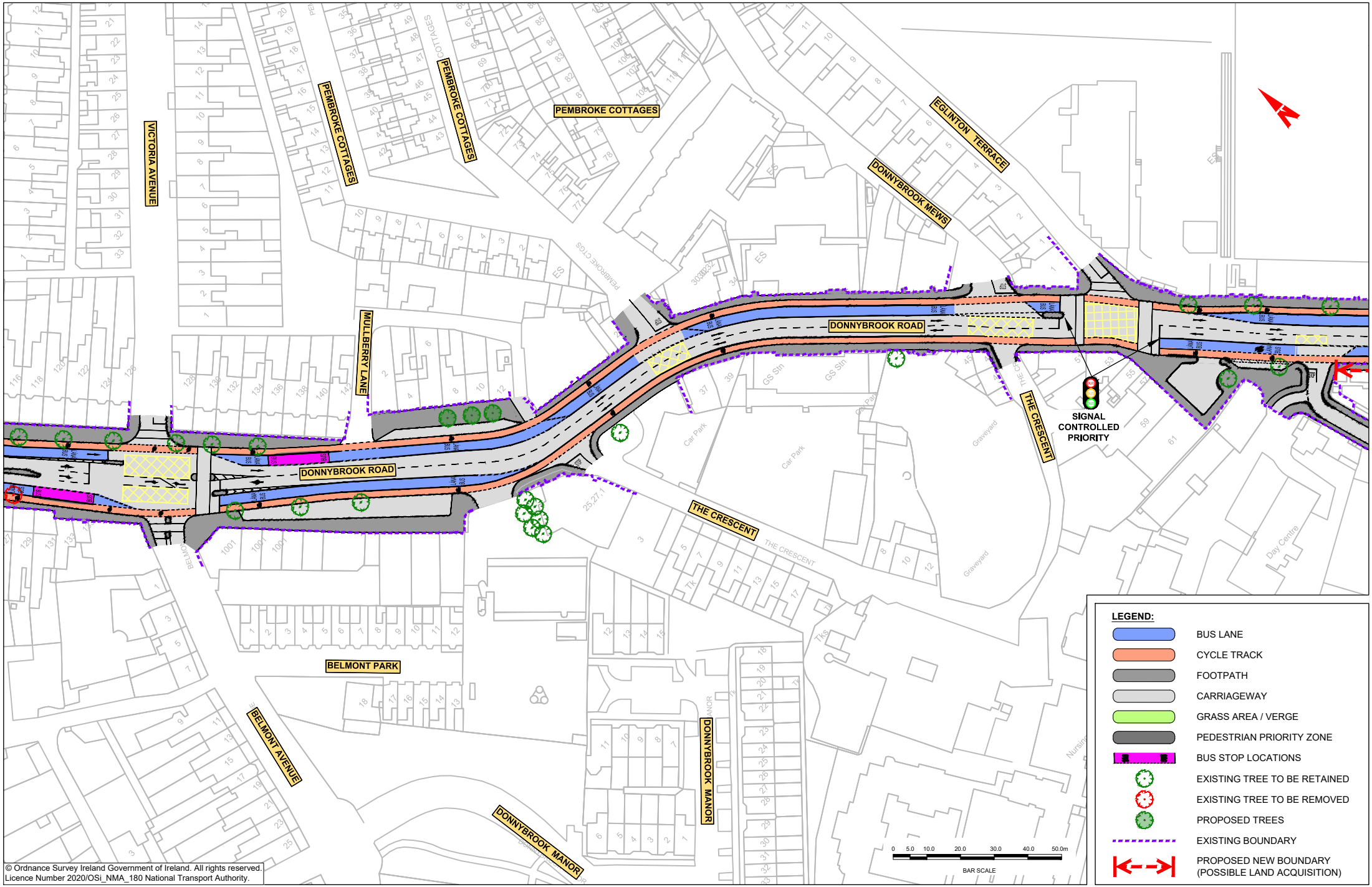


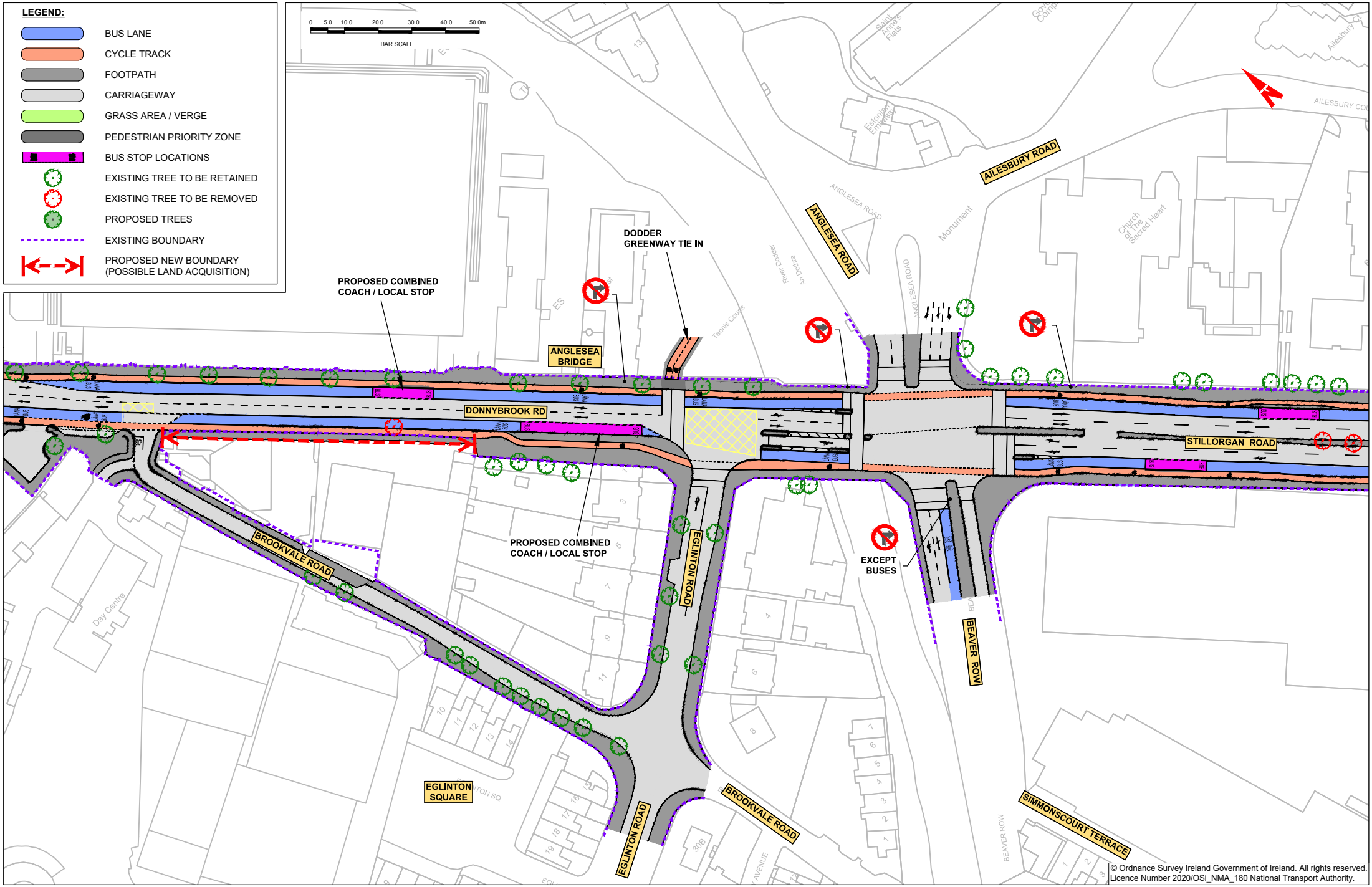


LEGEND:

- BUS LANE
- 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:
BUS LANE
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)
0 5.0 10.0 20.0 30.0 40.0 50.0m
BAR SCALE
PROPOSED COMBINED COACH / LOCAL STOP
DODDER GREENWAY TIE IN
ANGLESEA BRIDGE
DONNYBROOK RD
PROPOSED COMBINED COACH / LOCAL STOP
BROOKVALE ROAD
EGLINTON ROAD
EGLINTON SQUARE
EGLINTON ROAD
BROOKVALE ROAD
EXCEPT BUSES
BEAVER ROW
SIMMONSCOURT TERRACE
AILESBURY ROAD
ANGLESEA ROAD
ANGLESEA ROAD
STILLORGAN ROAD
Monument
Church of The Sacred Heart
Day Centre
Tennis Courts
River Dodder
An Dodhra
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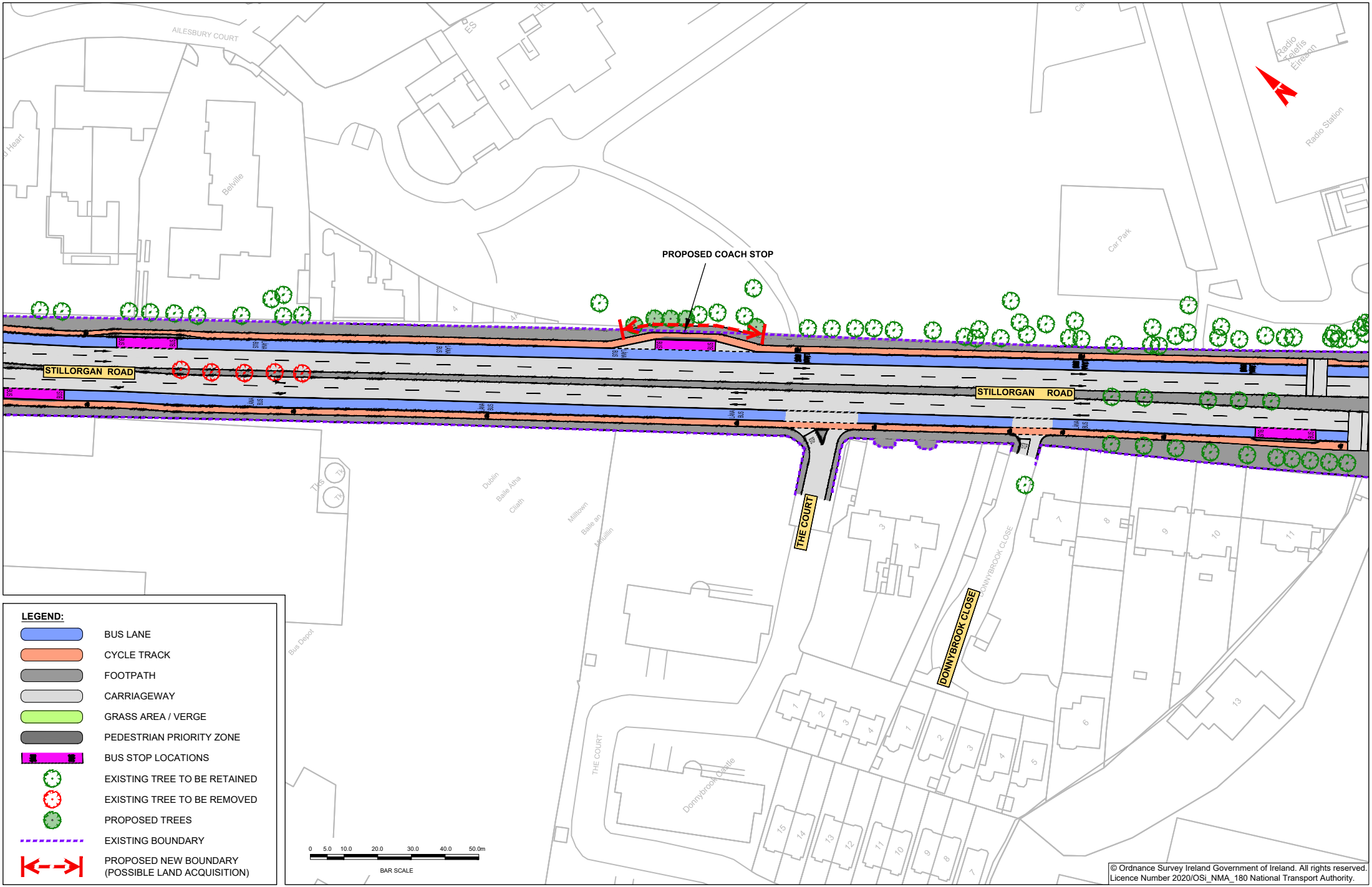

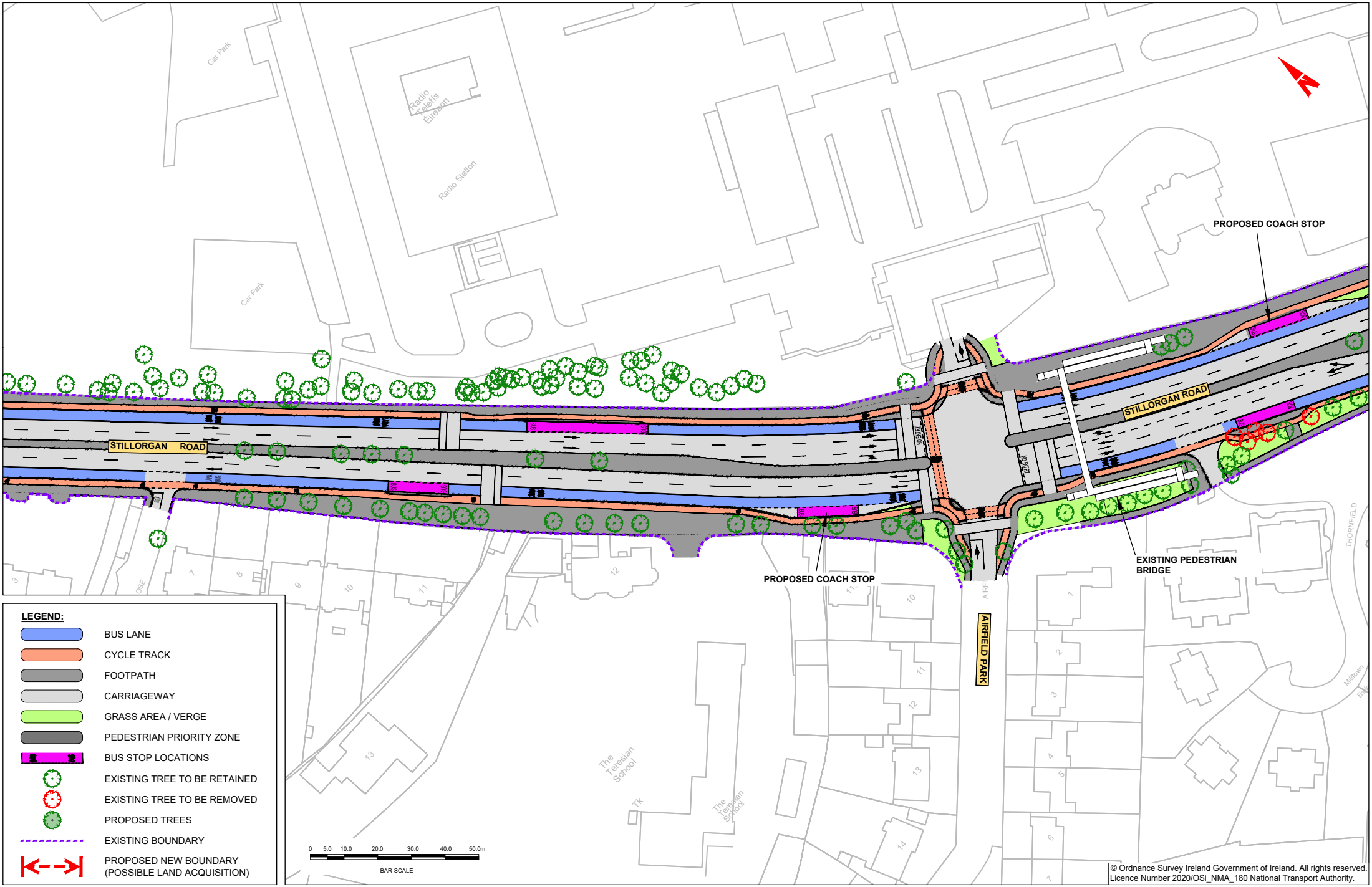

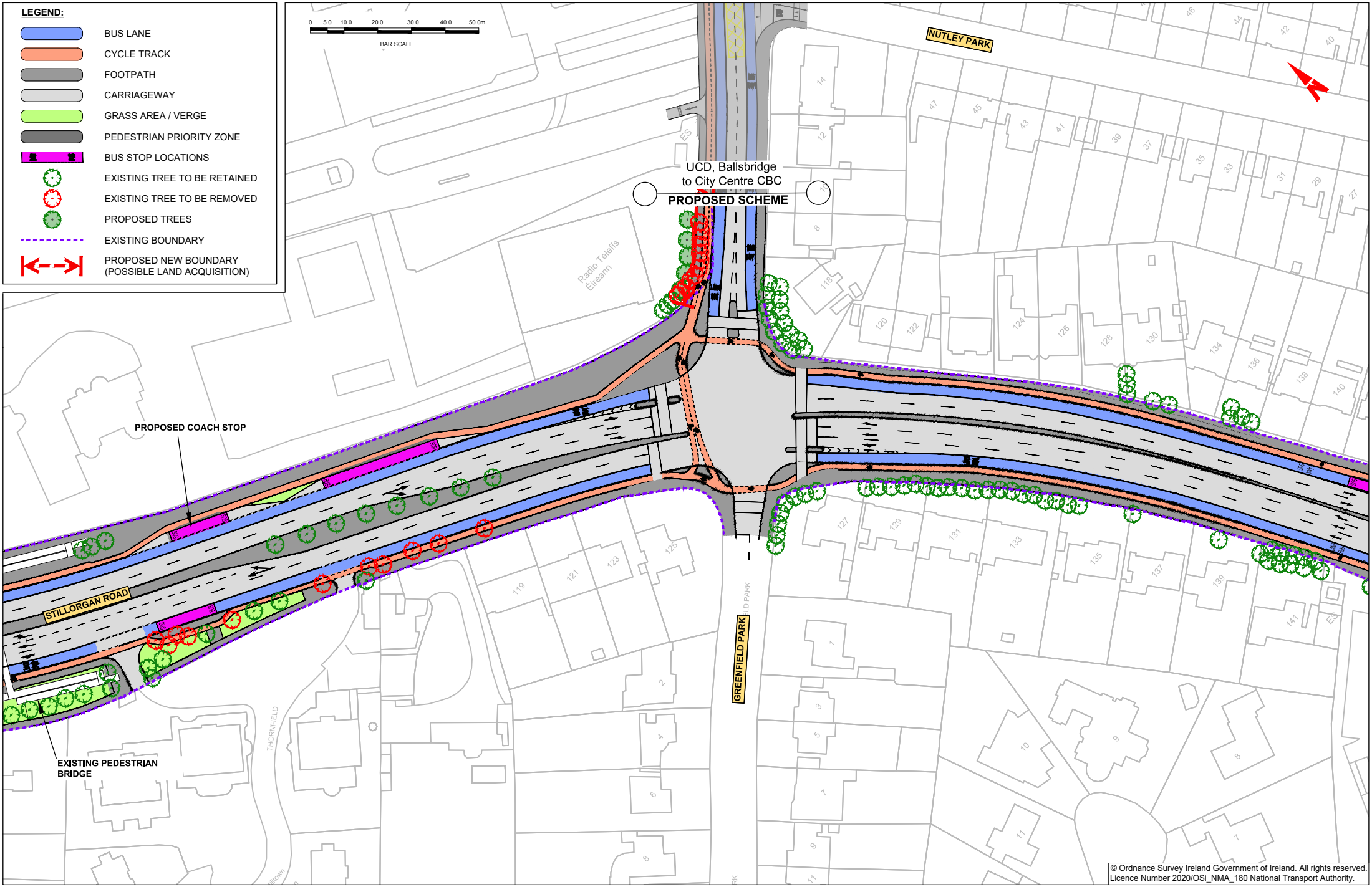
LEGEND:
BUS LANE
CYCLE TRACK
FOOTPATH
CARRIAGEWAY
GRASS AREA / VERGE
PEDESTRIAN PRIORITY ZONE
BUS STOP LOCATIONS
EXISTING TREE TO BE RETAINED
EXISTING TREE TO BE REMOVED
PROPOSED TREES
EXISTING BOUNDARY
PROPOSED NEW BOUNDARY (POSSIBLE LAND ACQUISITION)
0 5.0 10.0 20.0 30.0 40.0 50.0m
BAR SCALE
N
NUTLEY PARK
UCD, Ballsbridge to City Centre CBC
PROPOSED SCHEME
Radio Teilifís Éireann
PROPOSED COACH STOP
STILLORGAN ROAD
GREENFIELD PARK
THORNFIELD
EXISTING PEDESTRIAN BRIDGE
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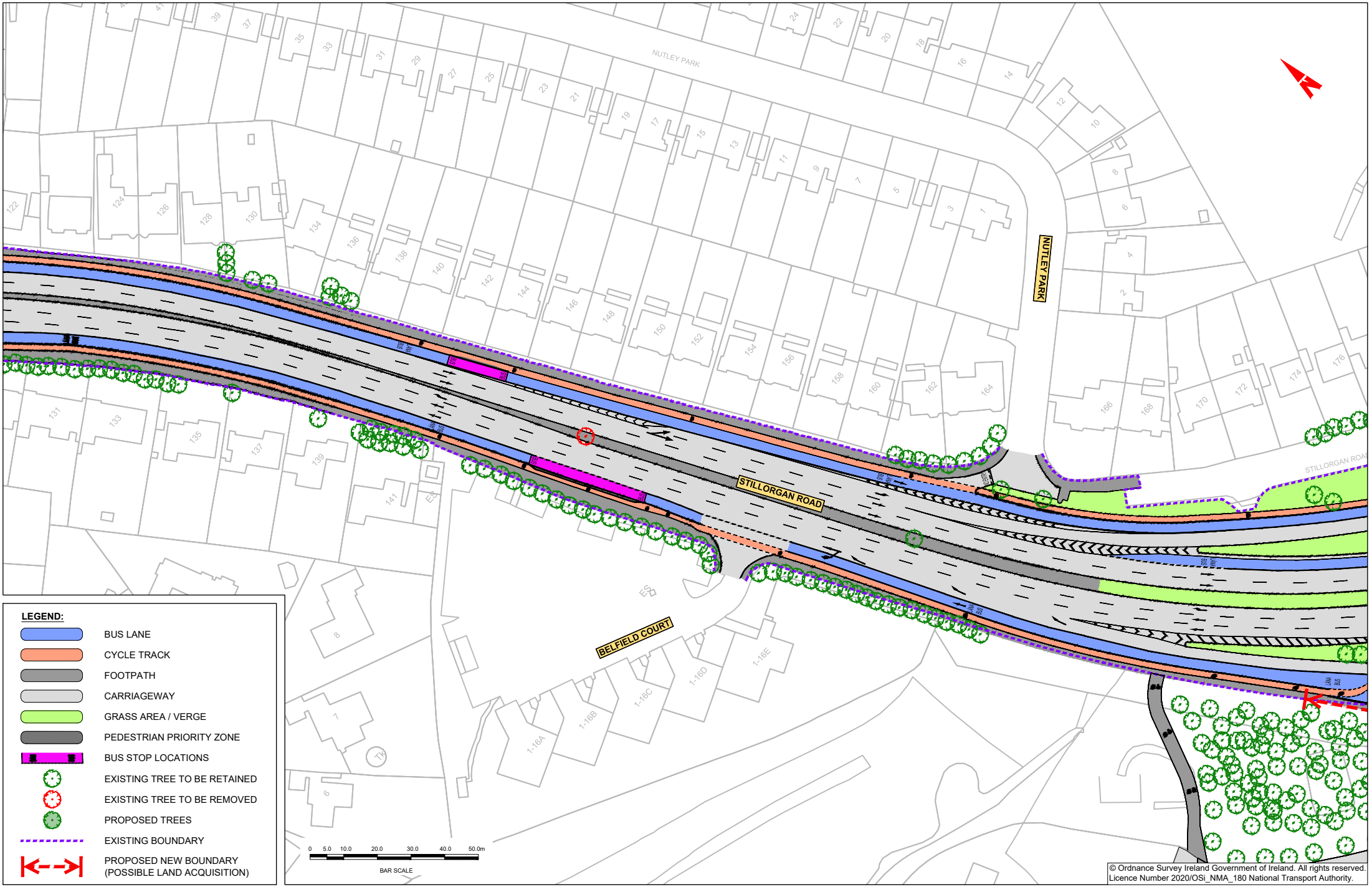

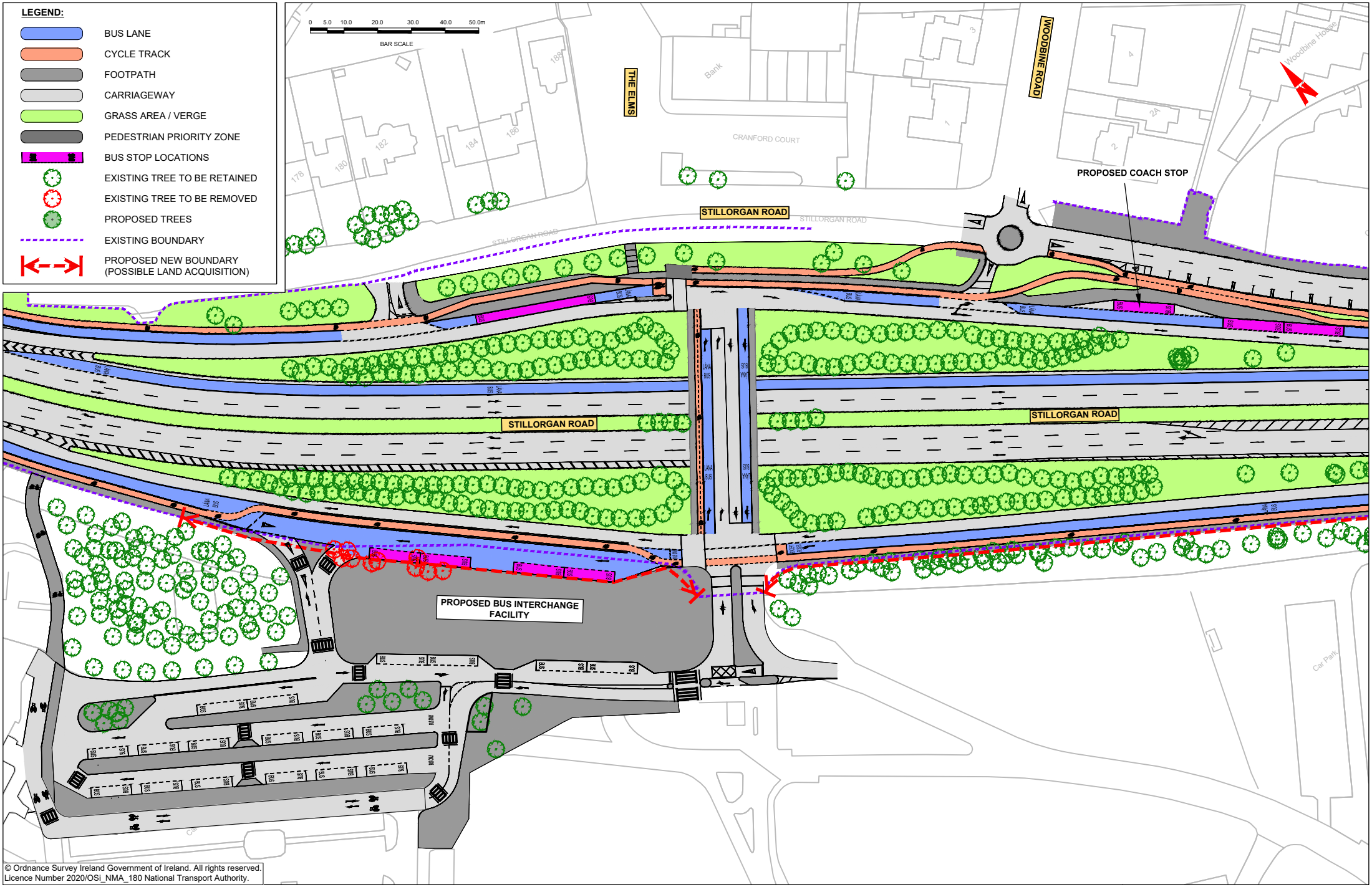
LEGEND:
BUS LANE
CYCLE TRACK
FOOTPATH
CARRIAGEWAY
GRASS AREA / VERGE
PEDESTRIAN PRIORITY ZONE
BUS STOP LOCATIONS
EXISTING TREE TO BE RETAINED
EXISTING TREE TO BE REMOVED
PROPOSED TREES
EXISTING BOUNDARY
PROPOSED NEW BOUNDARY (POSSIBLE LAND ACQUISITION)
0 5.0 10.0 20.0 30.0 40.0 50.0m
BAR SCALE
THE ELMS
WOODBINE ROAD
CRANFORD COURT
Bank
Woodbine House
PROPOSED COACH STOP
STILLORGAN ROAD
STILLORGAN ROAD
STILLORGAN ROAD
STILLORGAN ROAD
PROPOSED BUS INTERCHANGE FACILITY
Car Park
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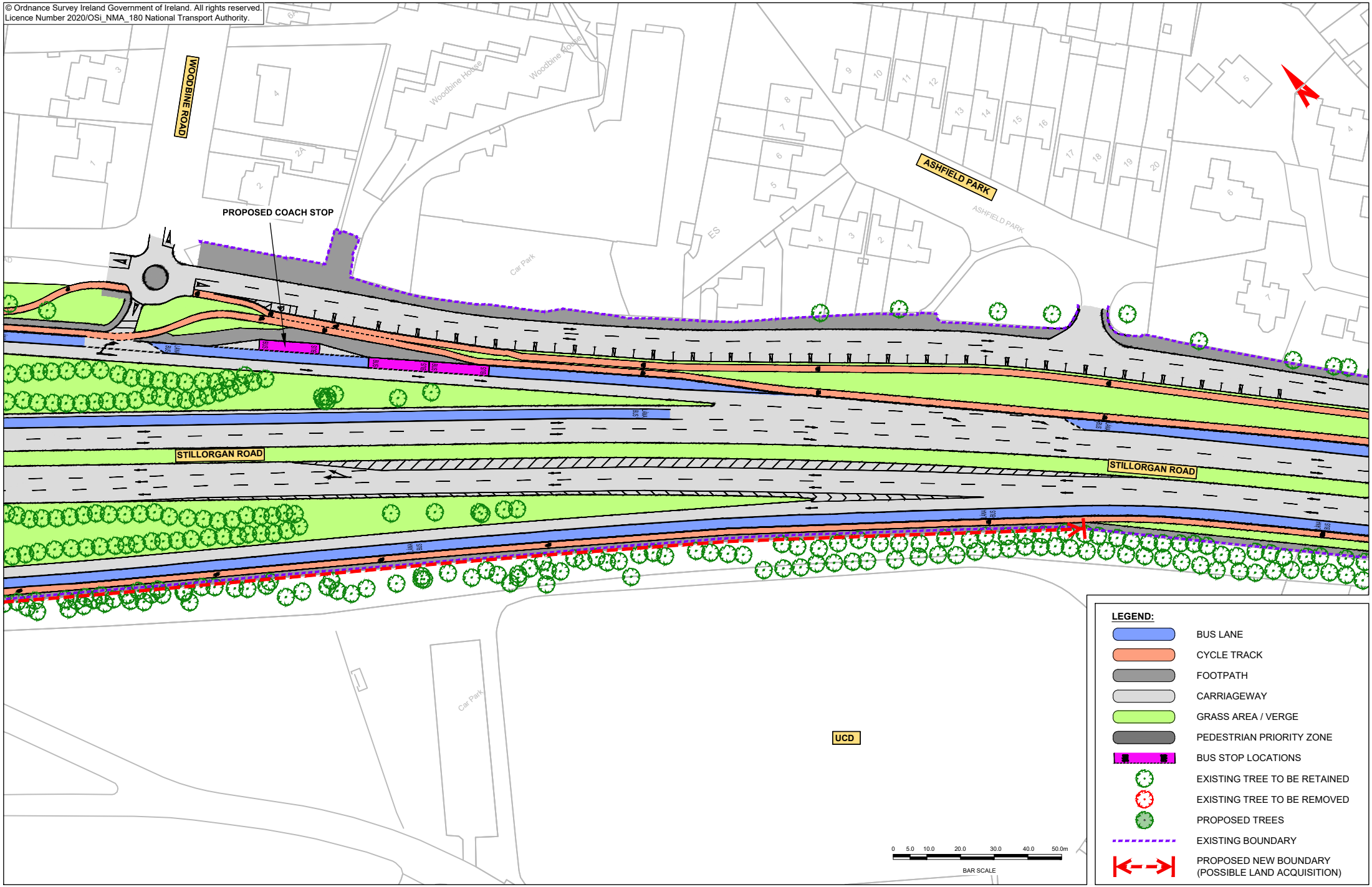

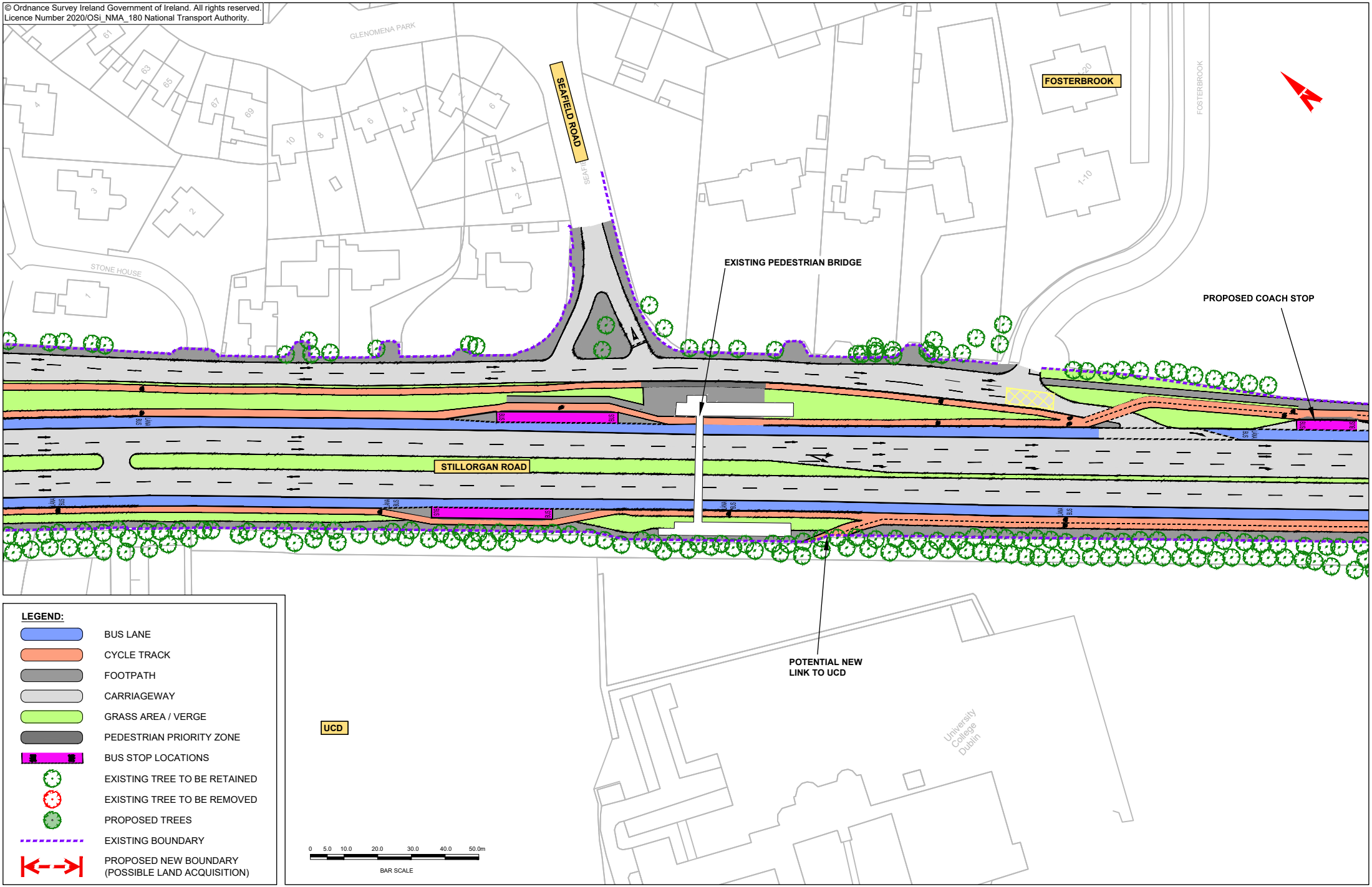

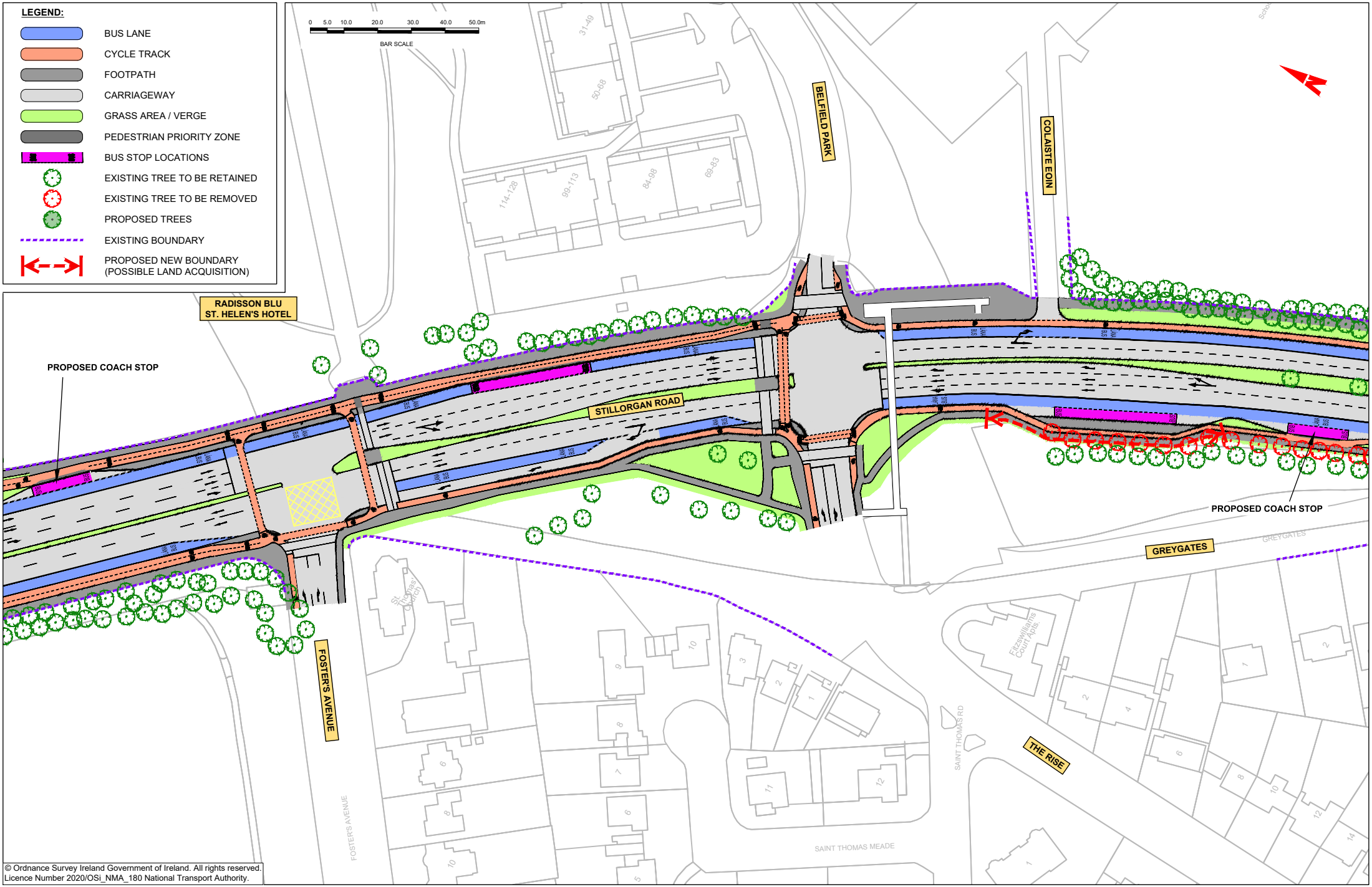
LEGEND:
BUS LANE
CYCLE TRACK
FOOTPATH
CARRIAGEWAY
GRASS AREA / VERGE
PEDESTRIAN PRIORITY ZONE
BUS STOP LOCATIONS
EXISTING TREE TO BE RETAINED
EXISTING TREE TO BE REMOVED
PROPOSED TREES
EXISTING BOUNDARY
PROPOSED NEW BOUNDARY (POSSIBLE LAND ACQUISITION)
0 5.0 10.0 20.0 30.0 40.0 50.0m
BAR SCALE
RADISSON BLU ST. HELEN'S HOTEL
PROPOSED COACH STOP
STILLORGAN ROAD
BELFIELD PARK
COLAISTE EOIN
PROPOSED COACH STOP
GREYGATES
FOSTER'S AVENUE
SAINT THOMAS MEADE
SAINT THOMAS RD
THE RISE
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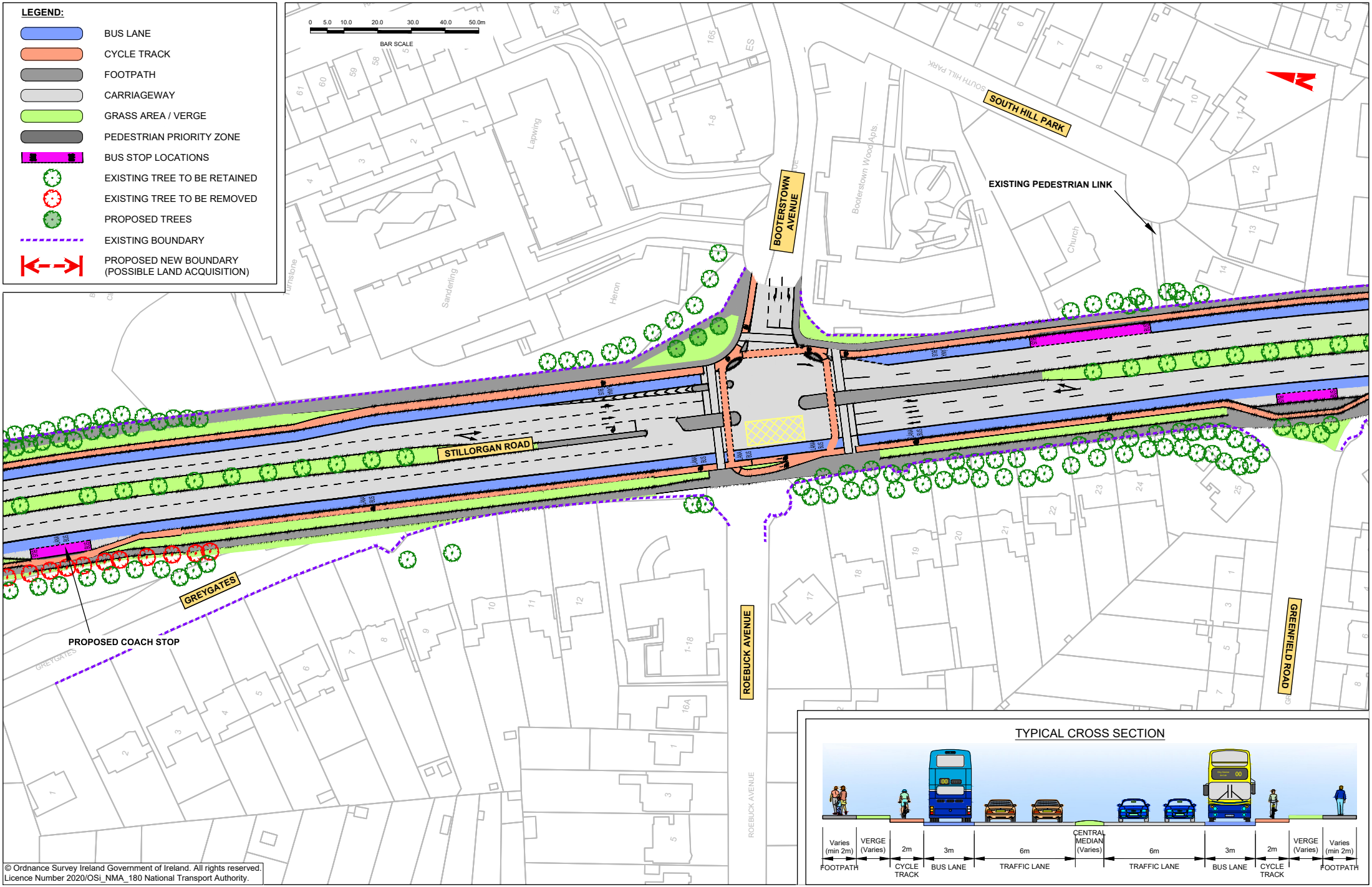

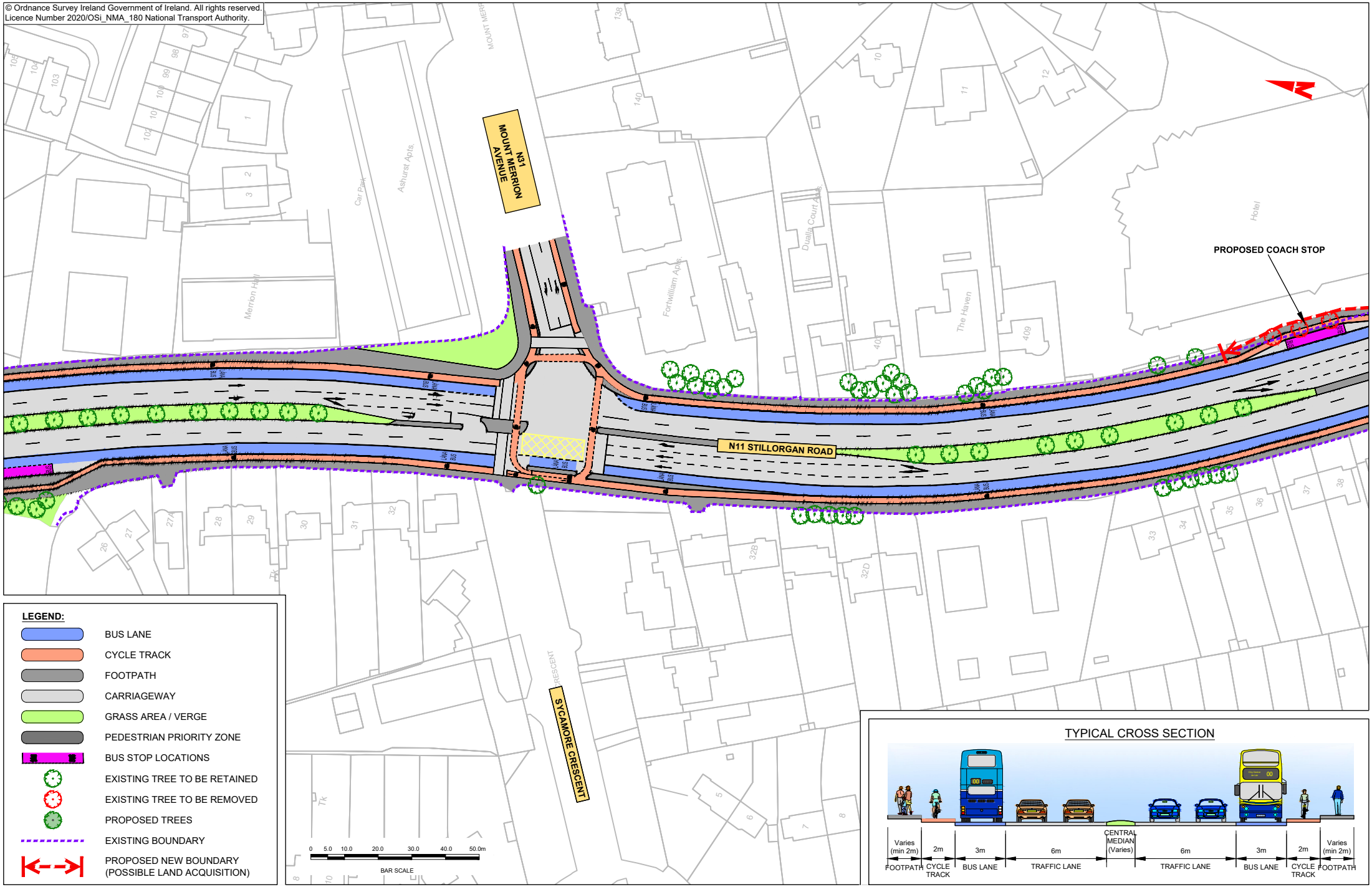

LEGEND:

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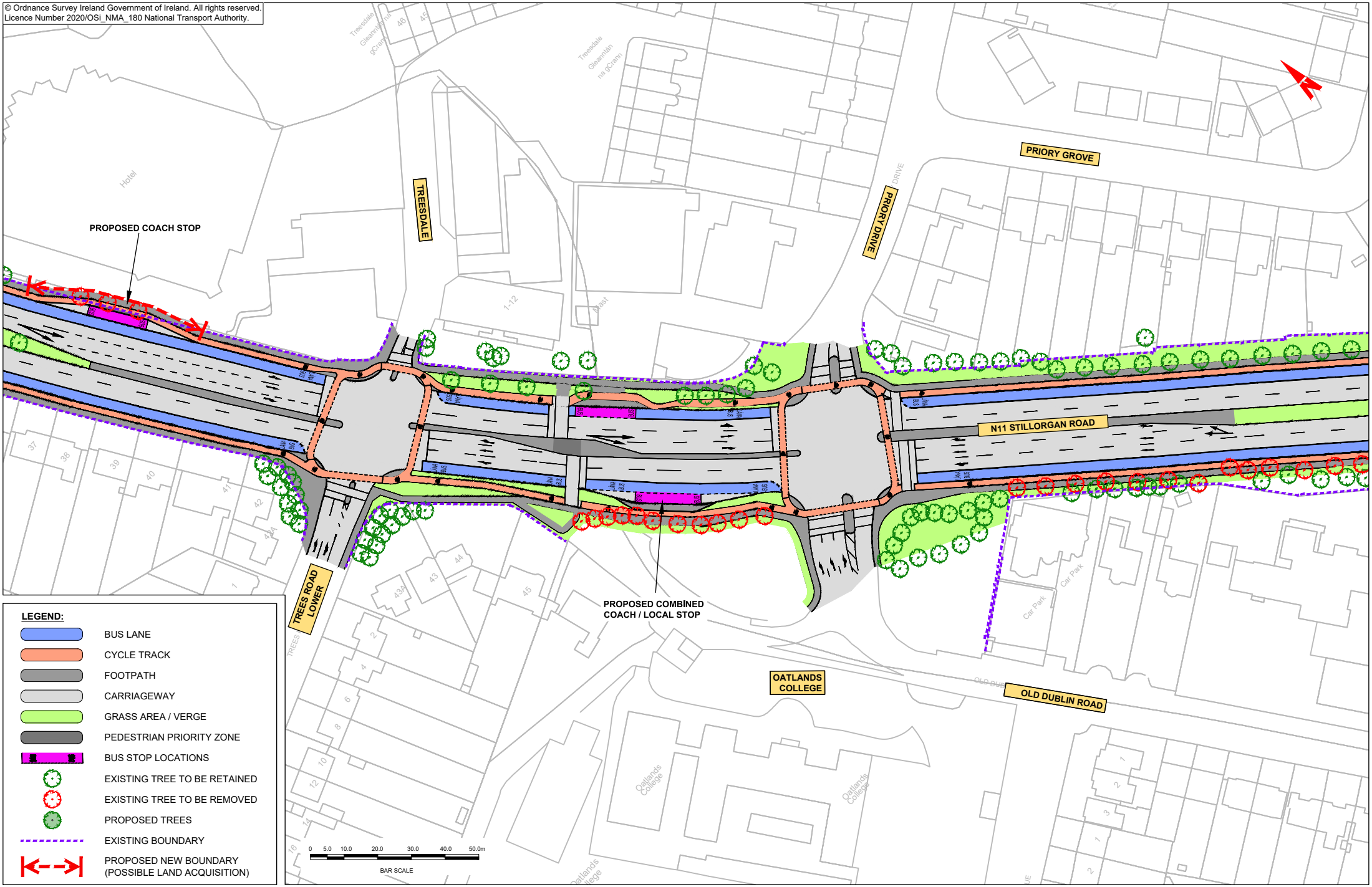
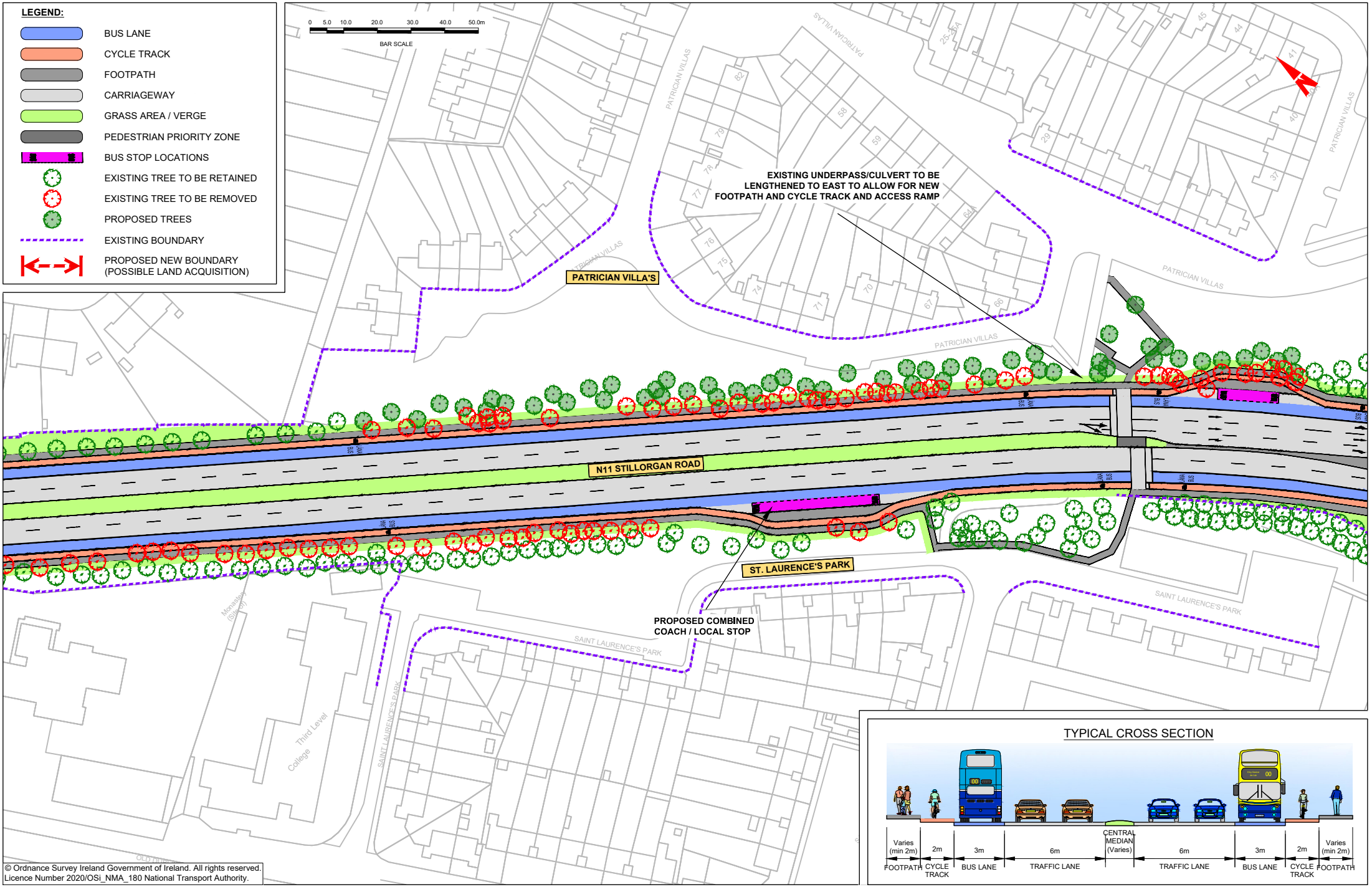
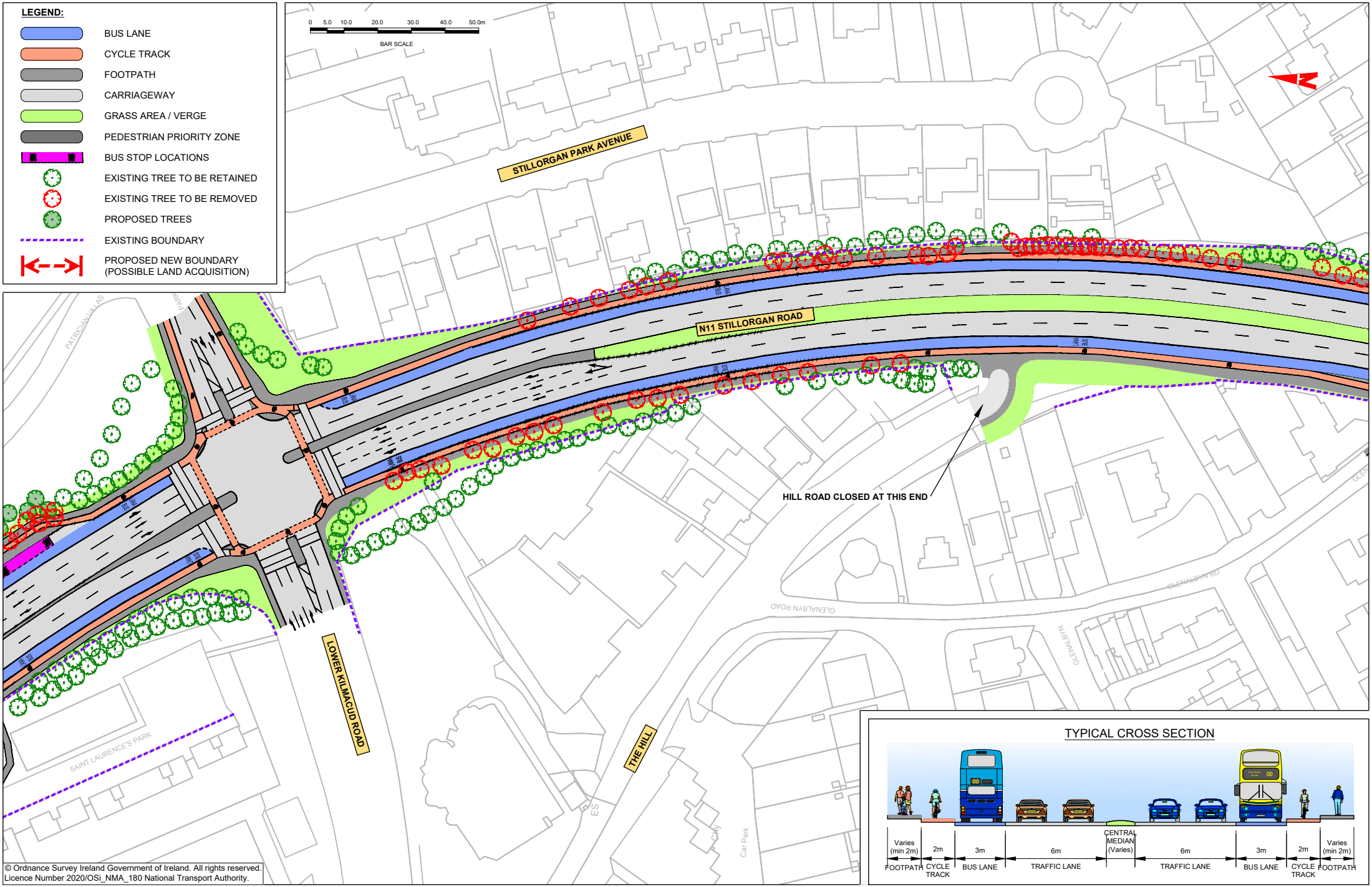
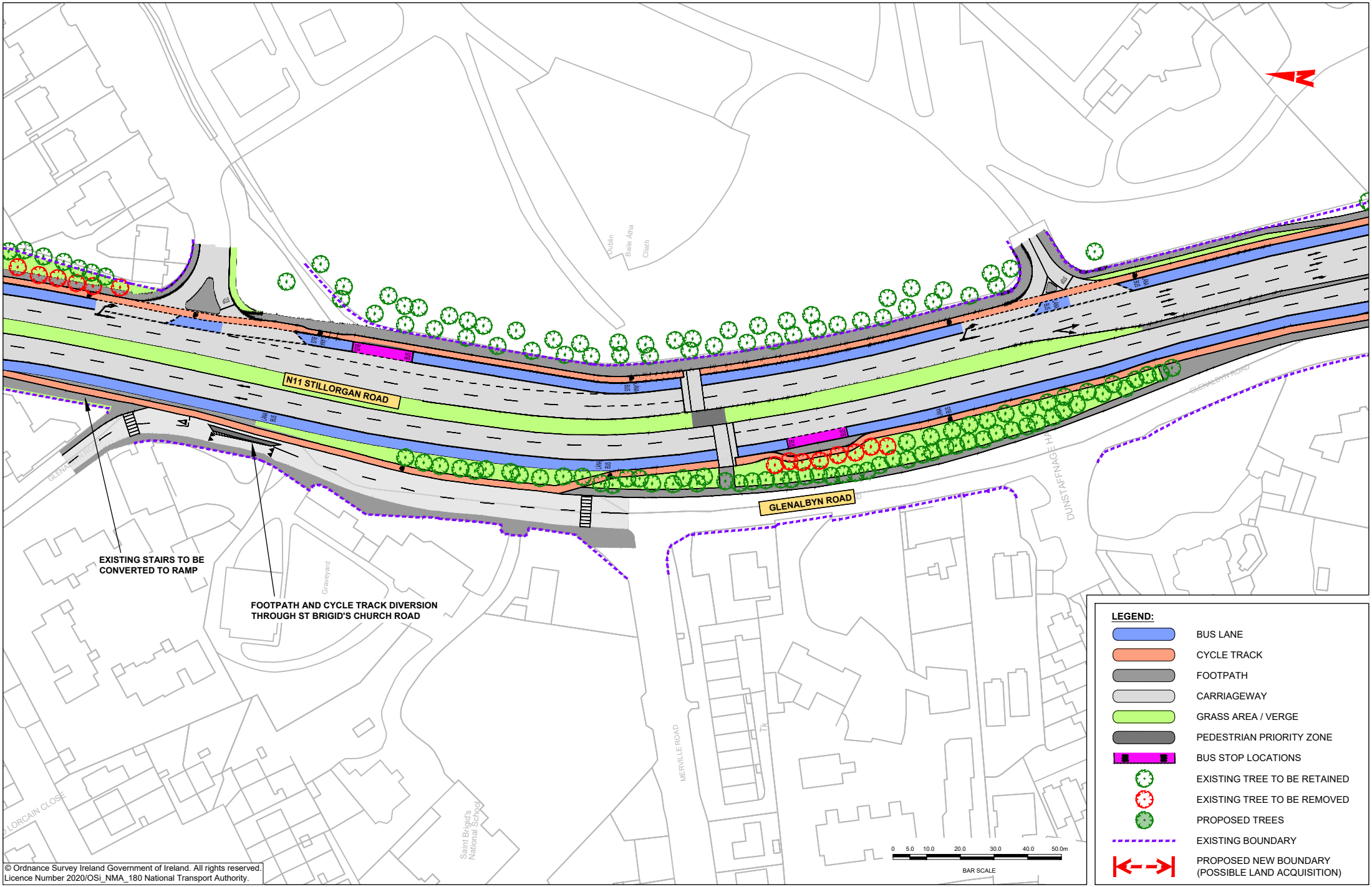
- EXISTING TREE TO BE REMOVED
- PROPOSED TREES
- EXISTING BOUNDARY
- PROPOSED NEW BOUNDARY (POSSIBLE LAND ACQUISITION)

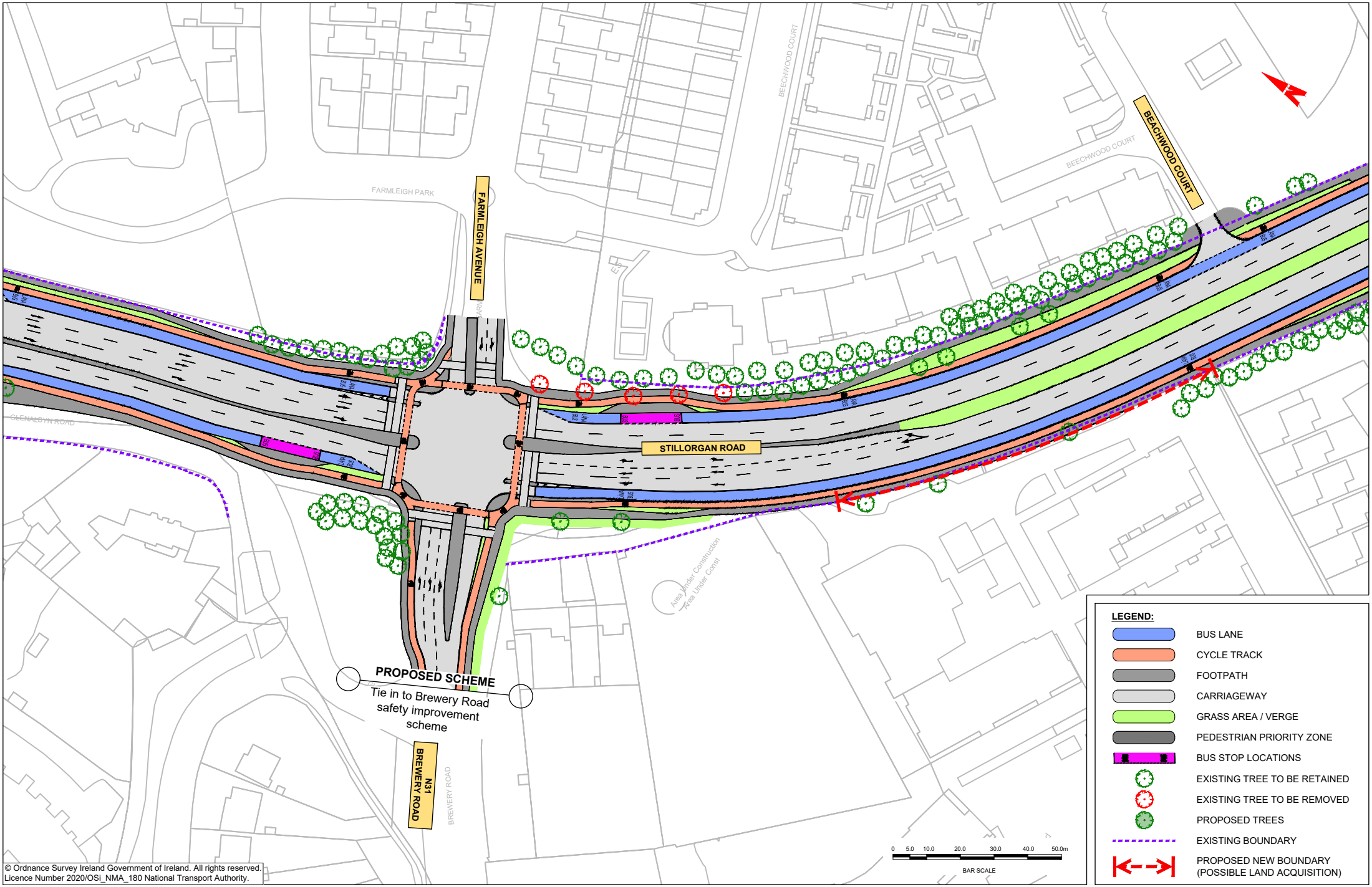
TYPICAL CROSS SECTION











LEGEND:

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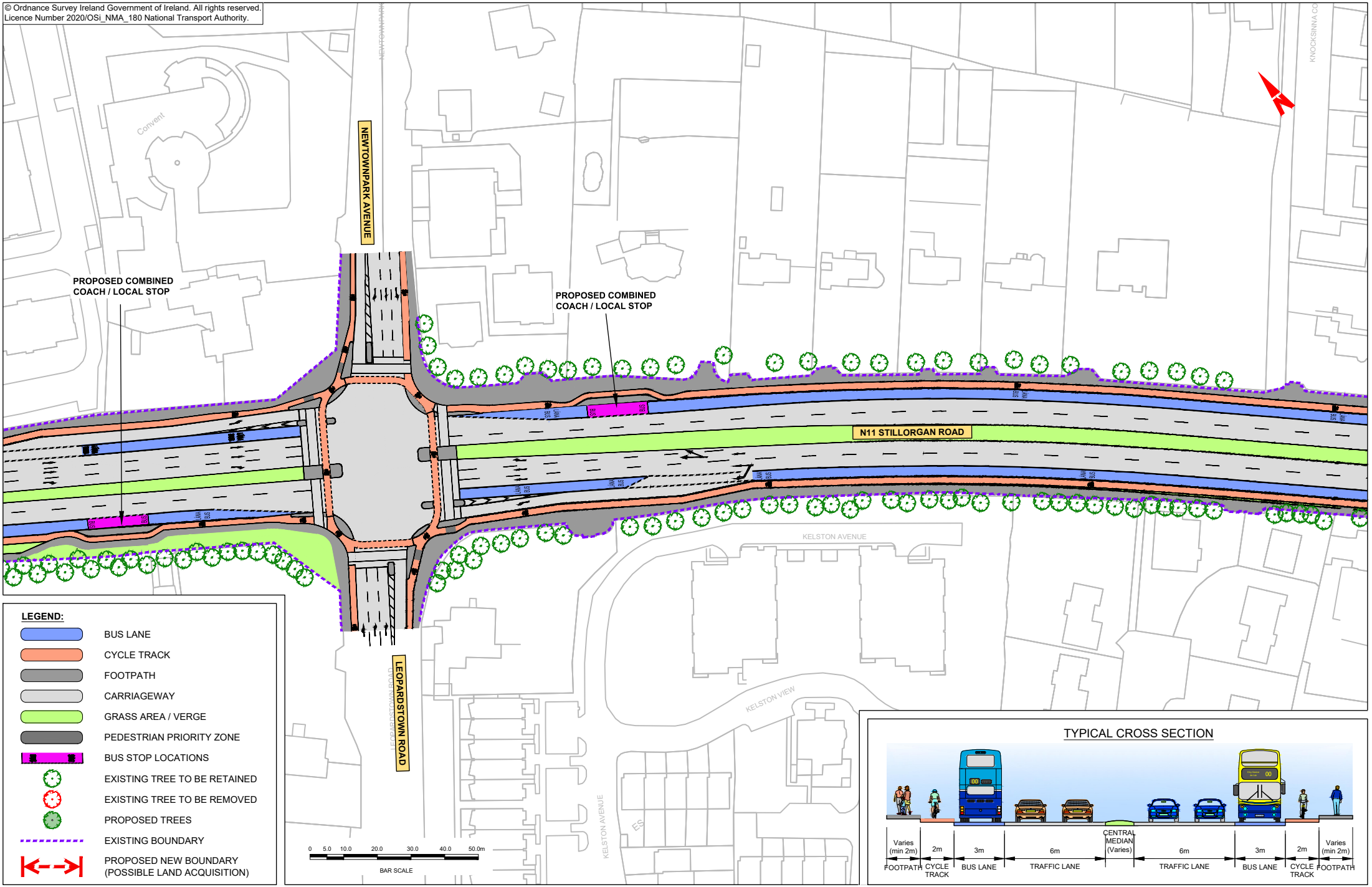
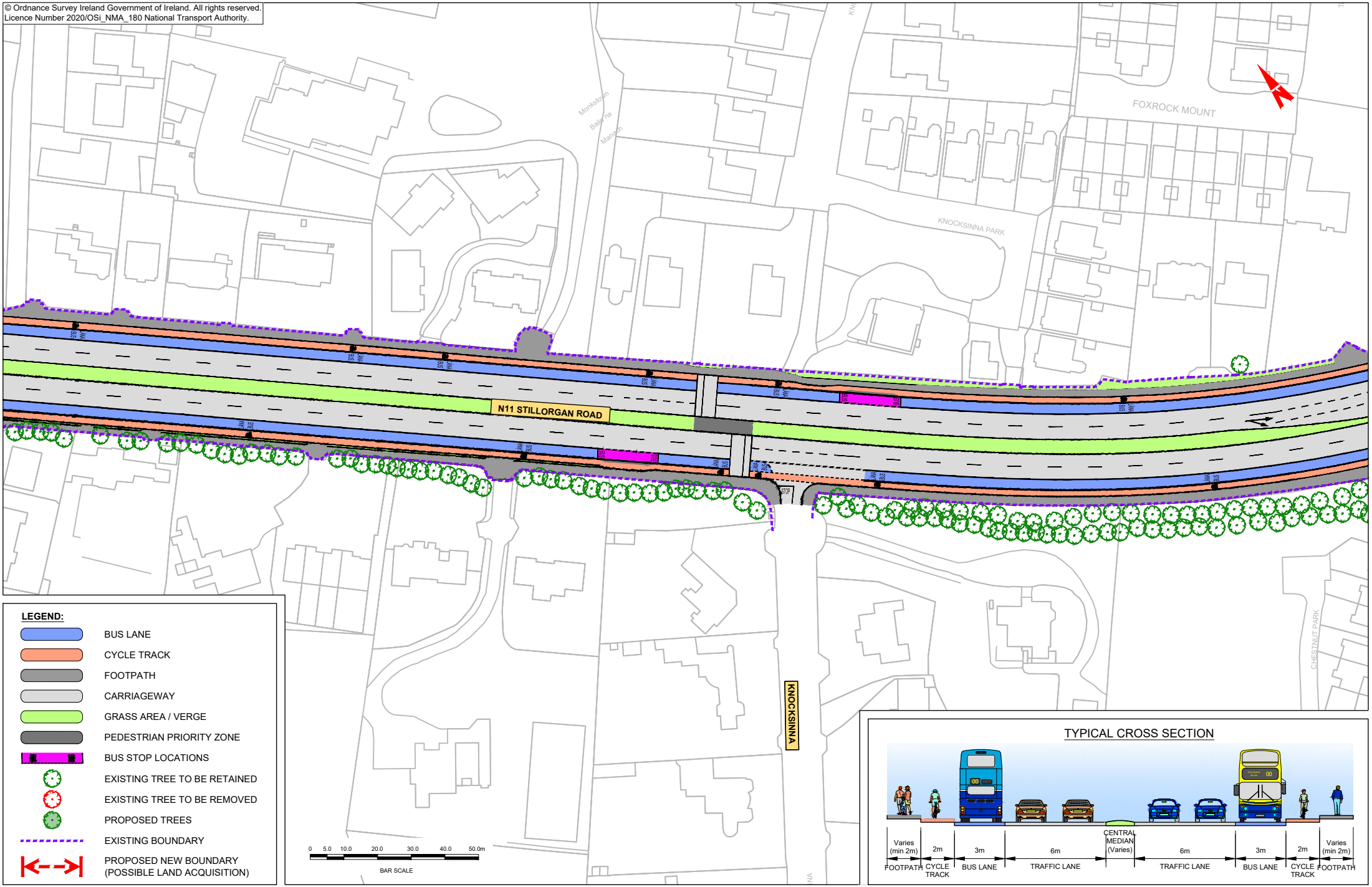
- EXISTING BOUNDARY
- PROPOSED NEW BOUNDARY (POSSIBLE LAND ACQUISITION)





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- BUS LANE
- CYCLE TRACK
- FOOTPATH
- CARRIAGEWAY
- GRASS AREA / VERGE
- PEDESTRIAN PRIORITY ZONE
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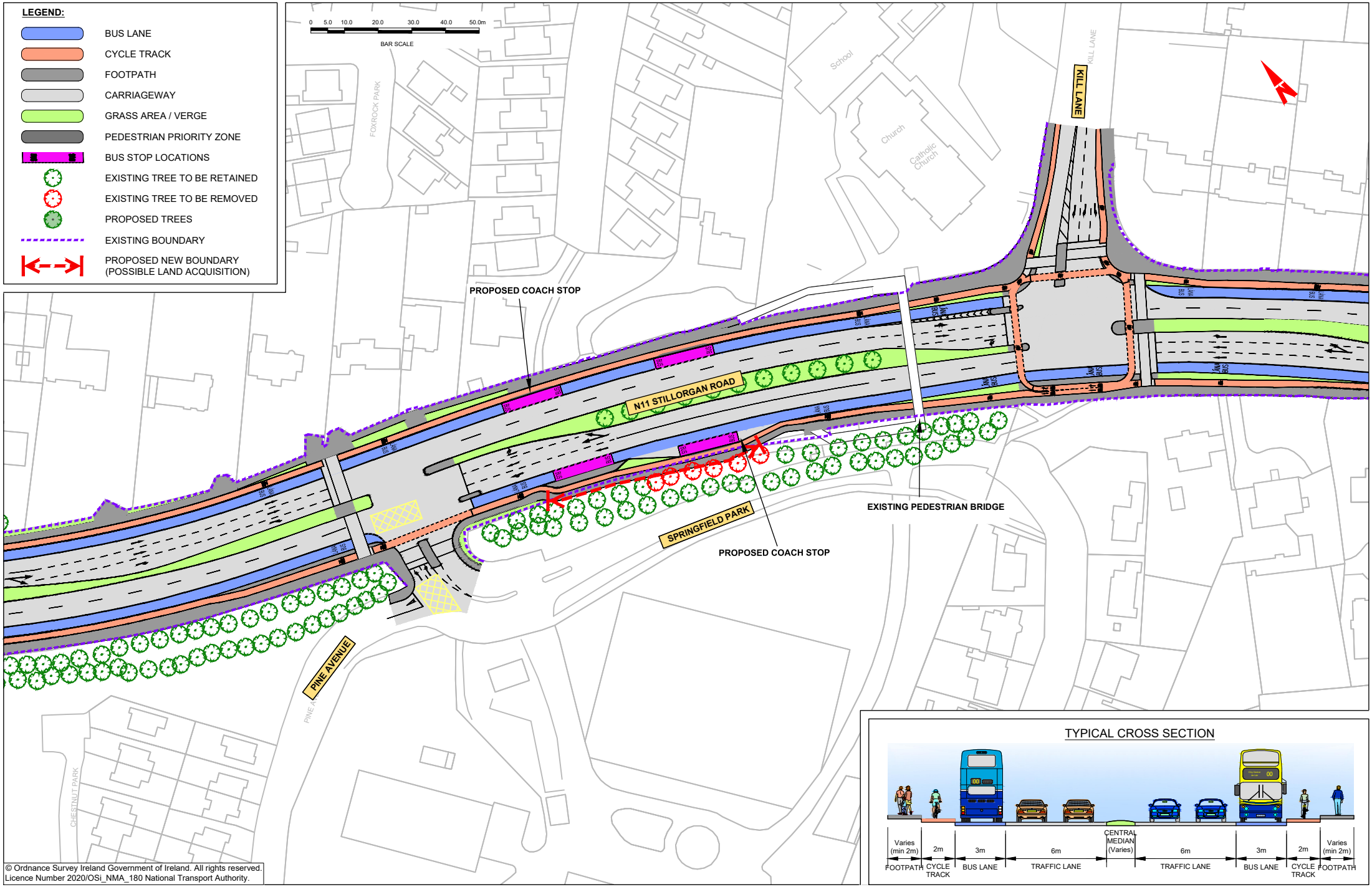
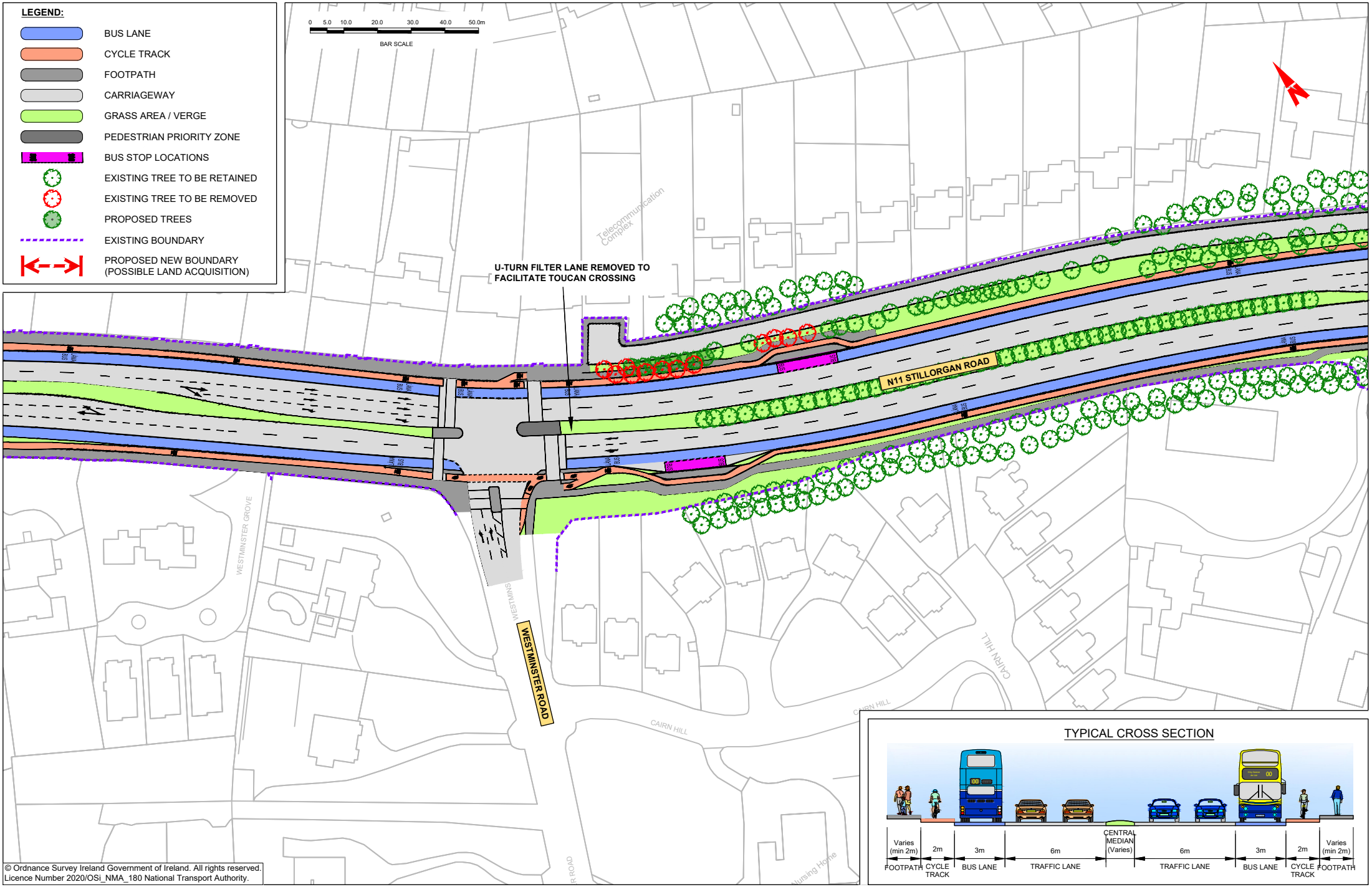
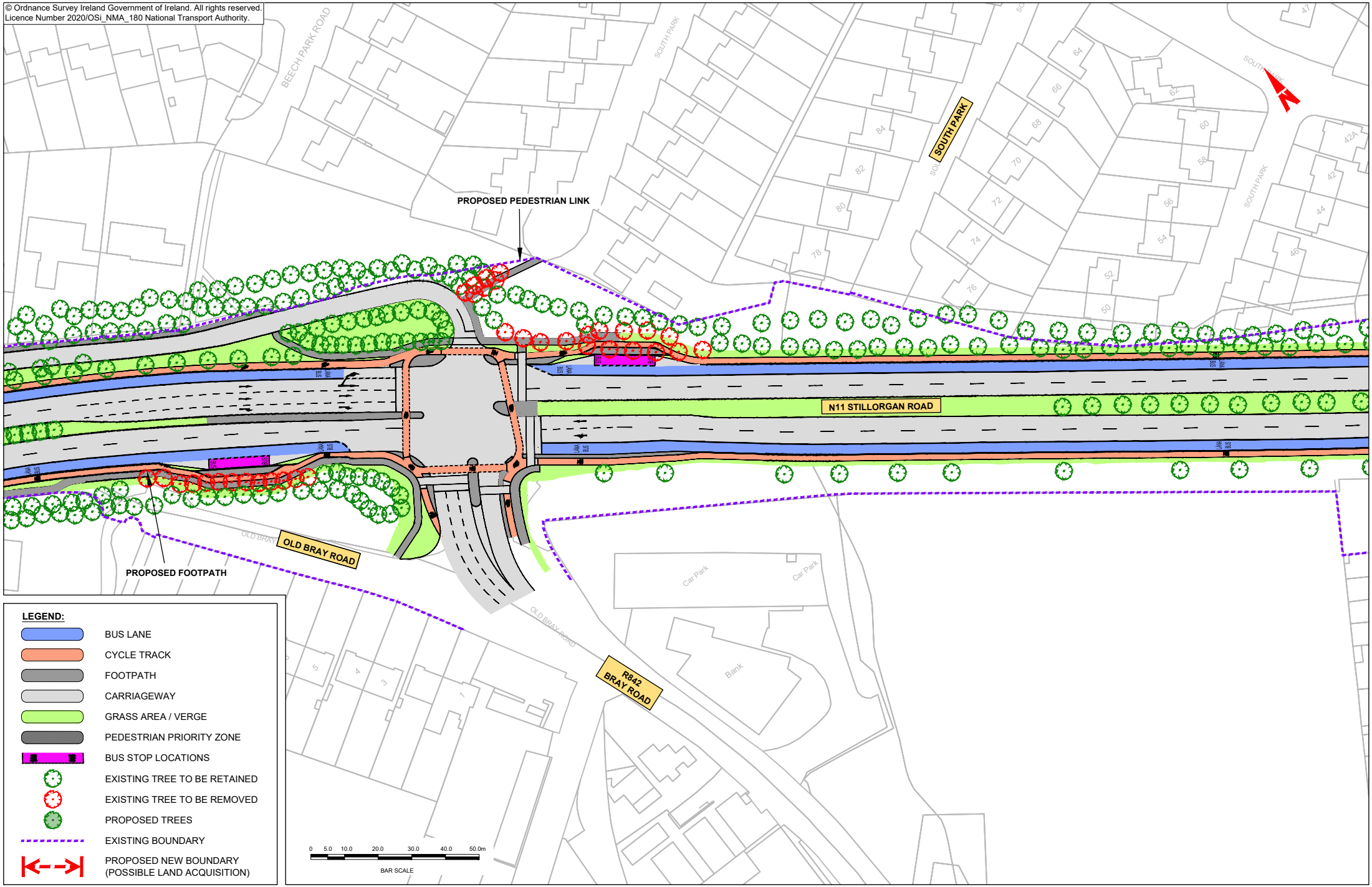
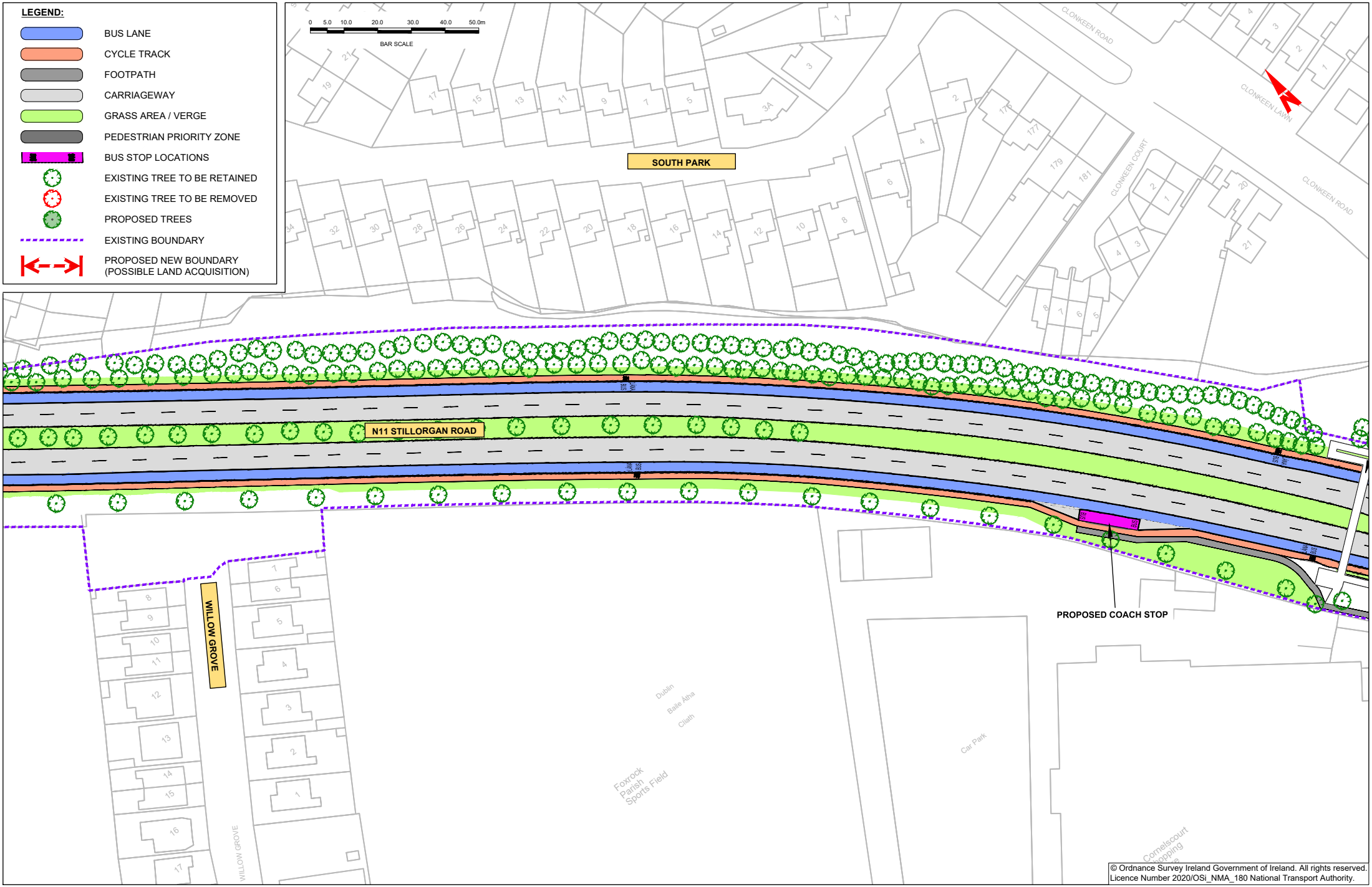
TYPICAL CROSS SECTION








LEGEND:
BUS LANE
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)
0 5.0 10.0 20.0 30.0 40.0 50.0m
BAR SCALE
SOUTH PARK
N11 STILLORGAN ROAD
WILLOW GROVE
PROPOSED COACH STOP
CLONKEEN ROAD
CLONKEEN LAWN
CLONKEEN COURT
Foxrock Parish Sports Field
Car Park
Dublin
Baile Átha Cliath
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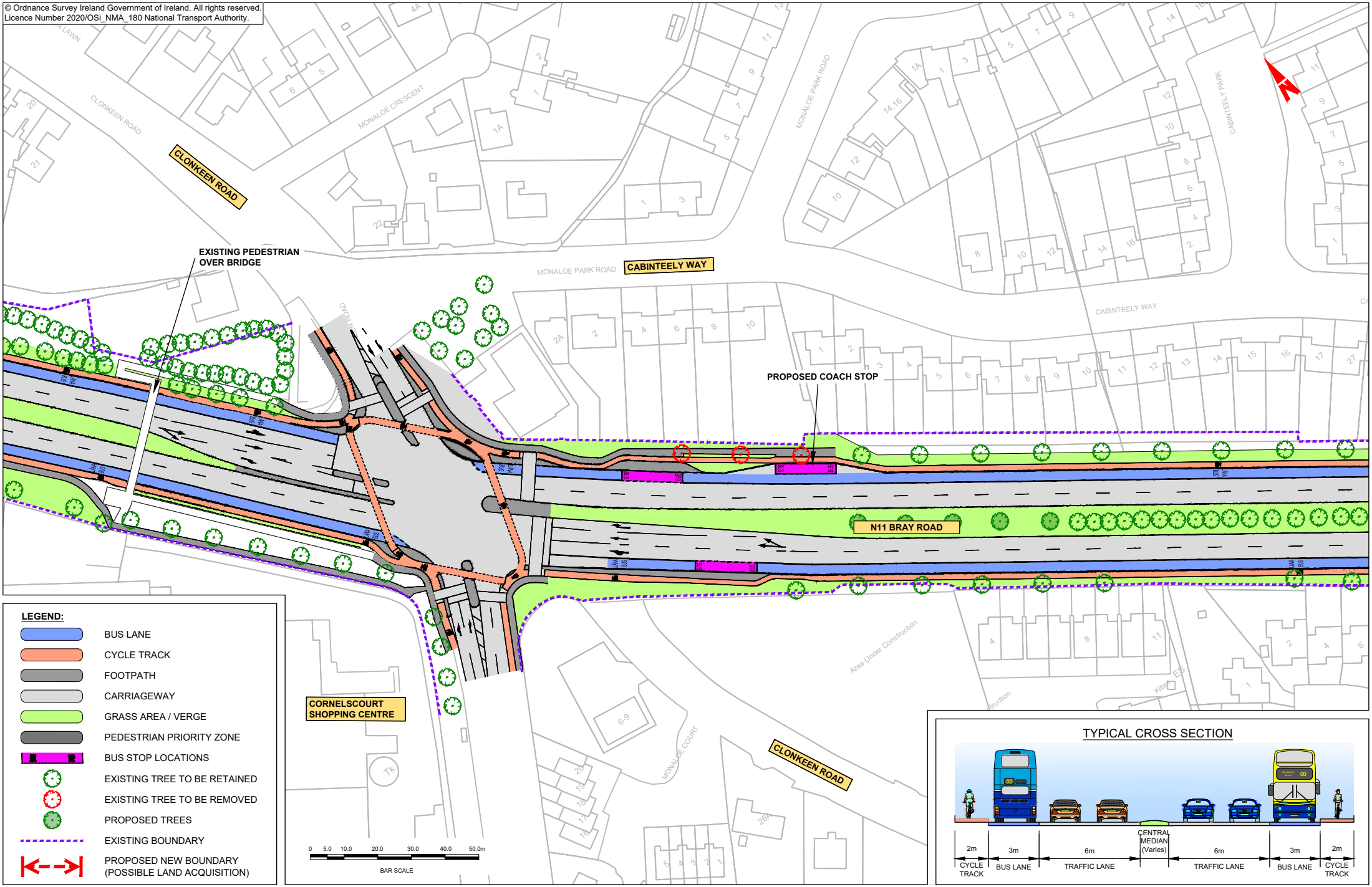

LEGEND:

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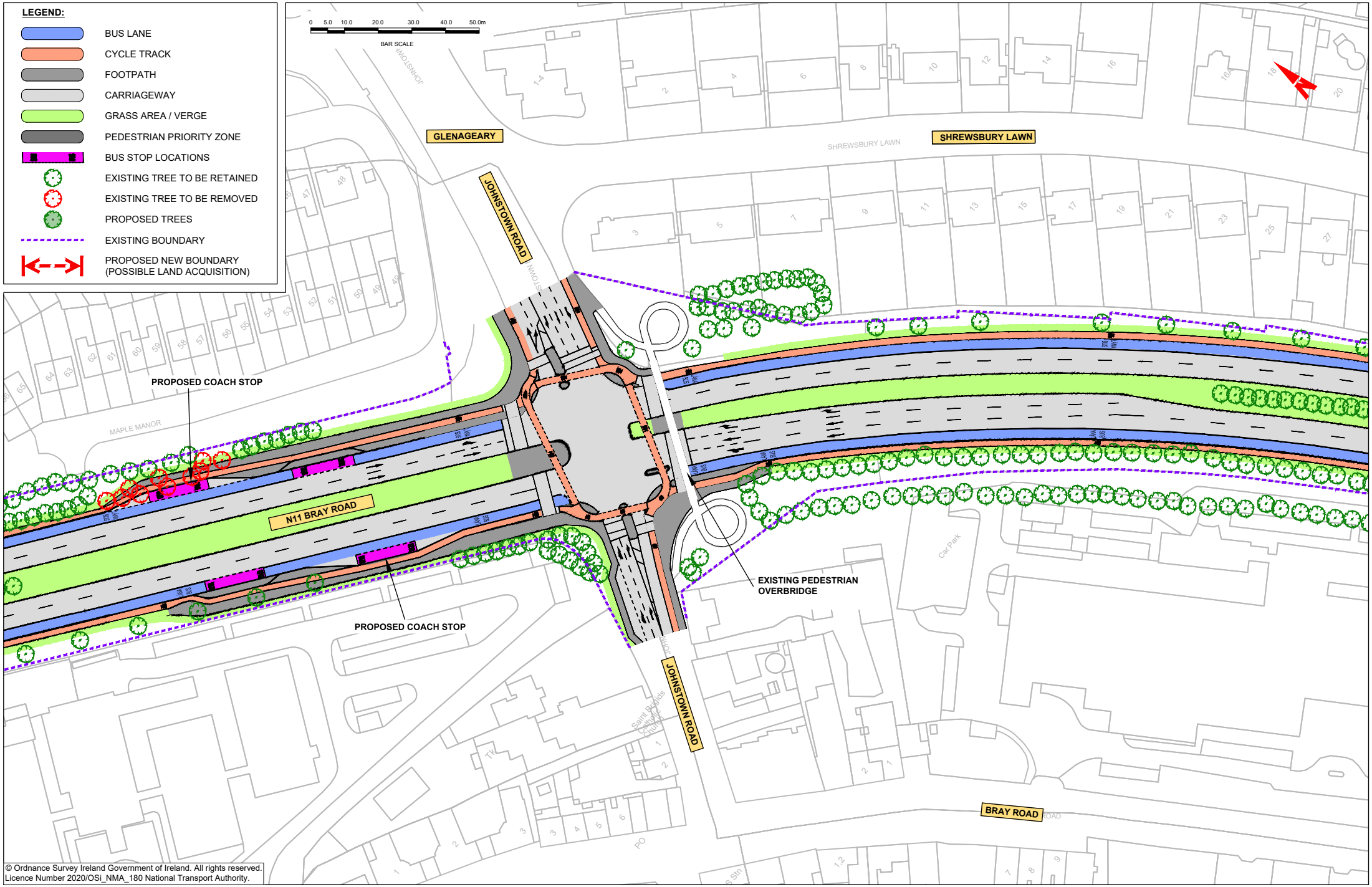
- EXISTING TREE TO BE REMOVED
- PROPOSED TREES
- EXISTING BOUNDARY
- PROPOSED NEW BOUNDARY (POSSIBLE LAND ACQUISITION)

TYPICAL CROSS SECTION


LEGEND:
BUS LANE
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)
0 5.0 10.0 20.0 30.0 40.0 50.0m
BAR SCALE
GLENAGEARY
SHREWSBURY LAWN
JOHNSTOWN ROAD
PROPOSED COACH STOP
N11 BRAY ROAD
PROPOSED COACH STOP
EXISTING PEDESTRIAN OVERBRIDGE
JOHNSTOWN ROAD
BRAY ROAD
MAPLE MANOR
Car Park
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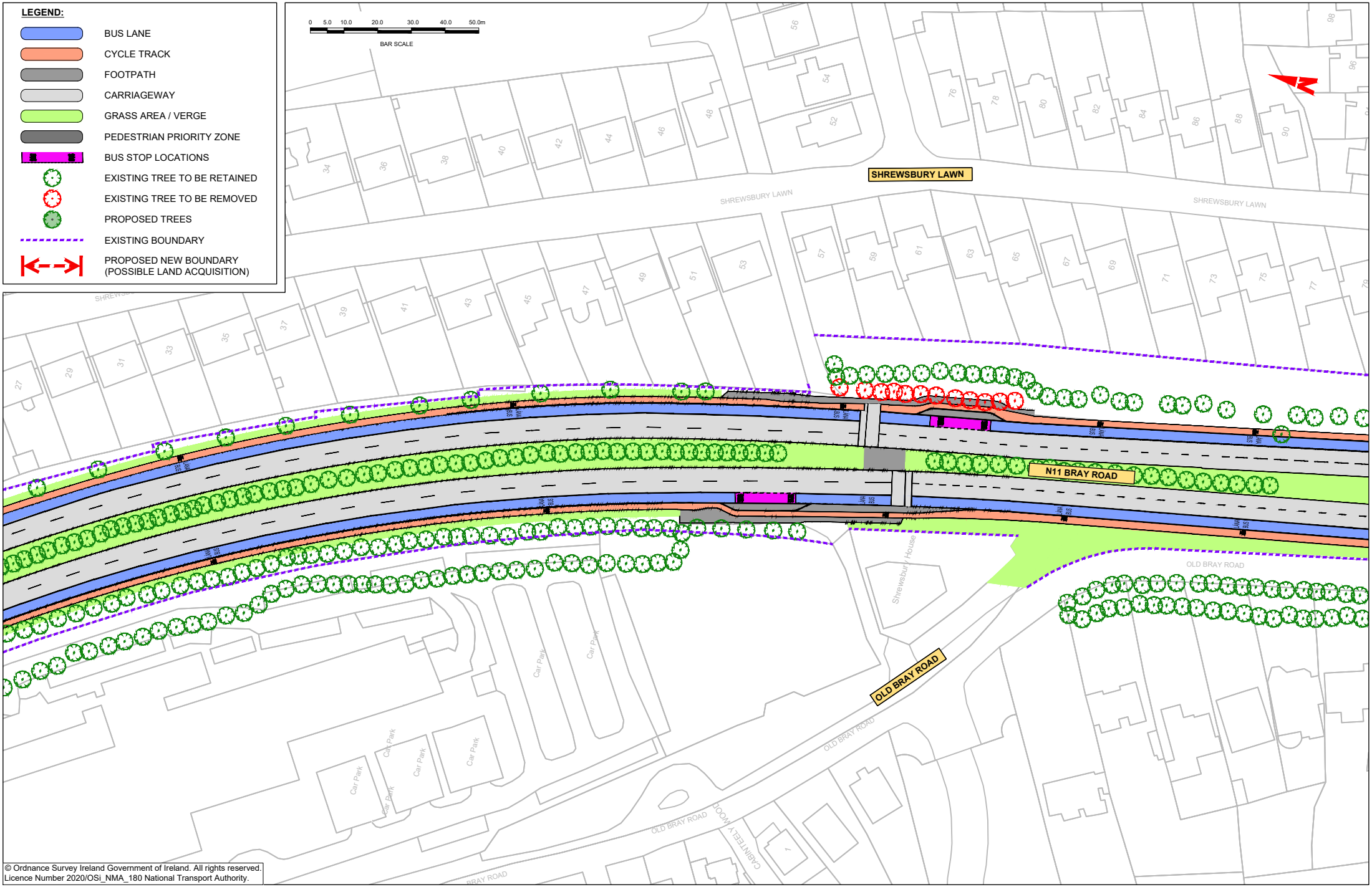
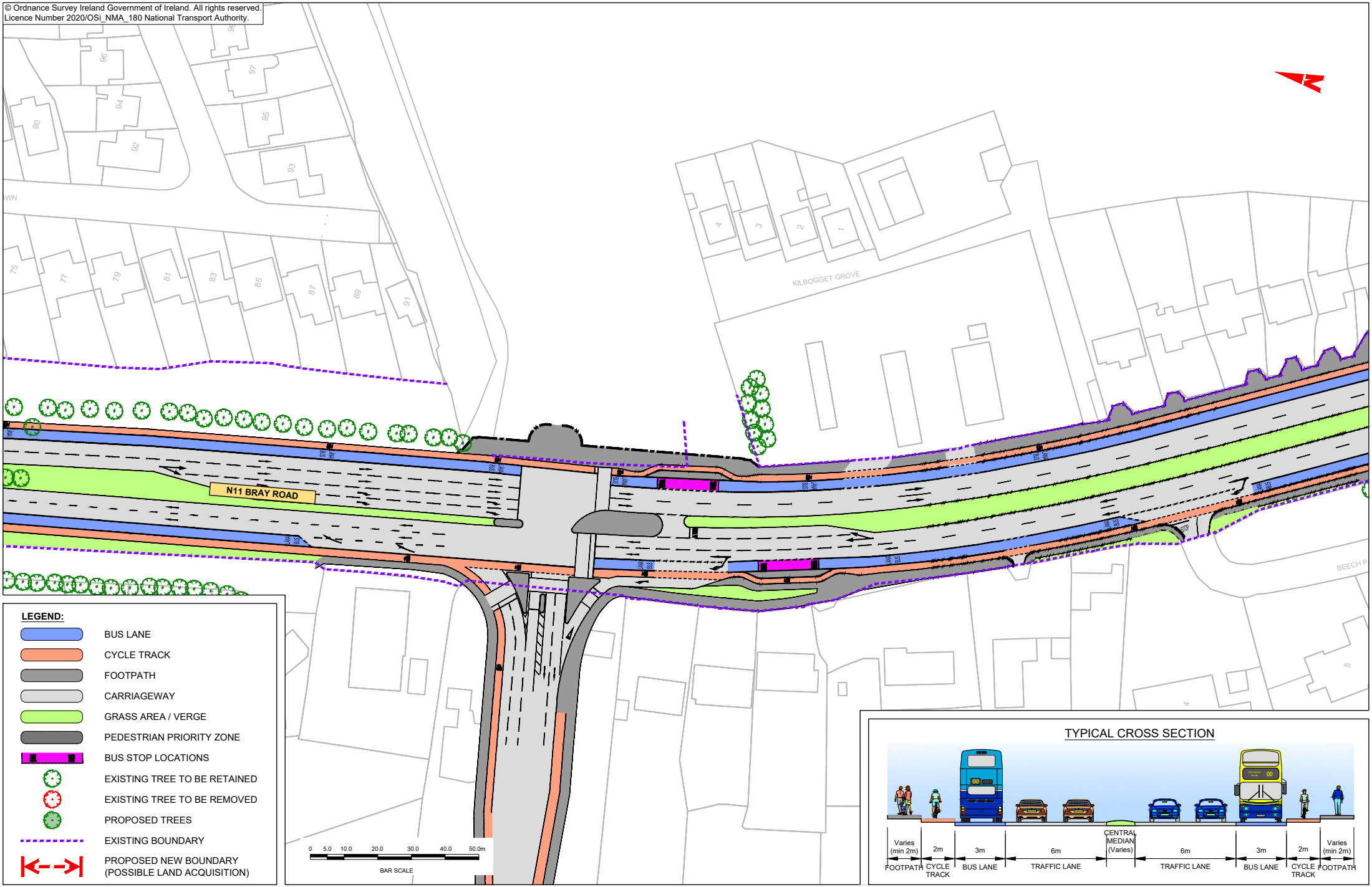
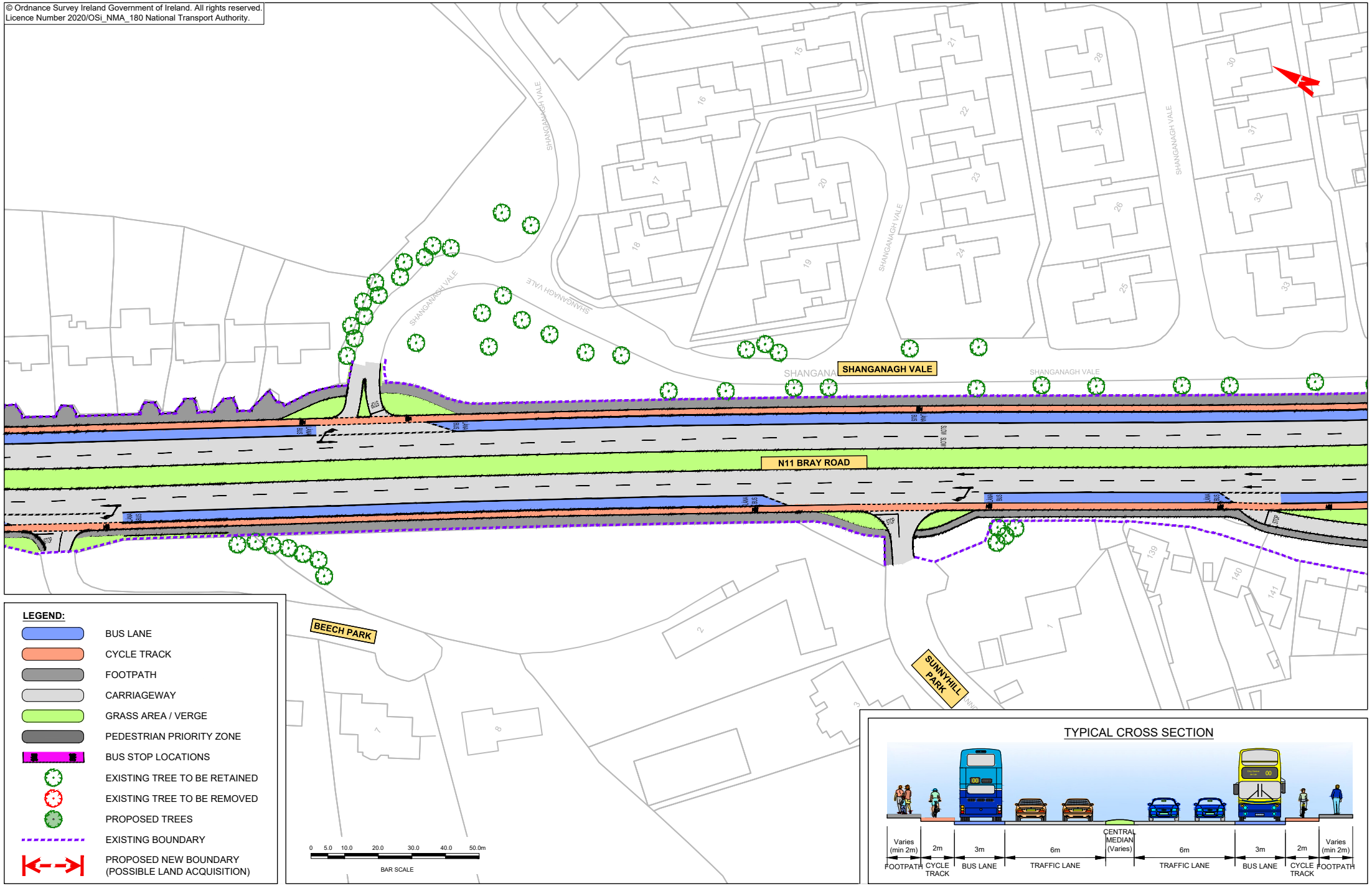






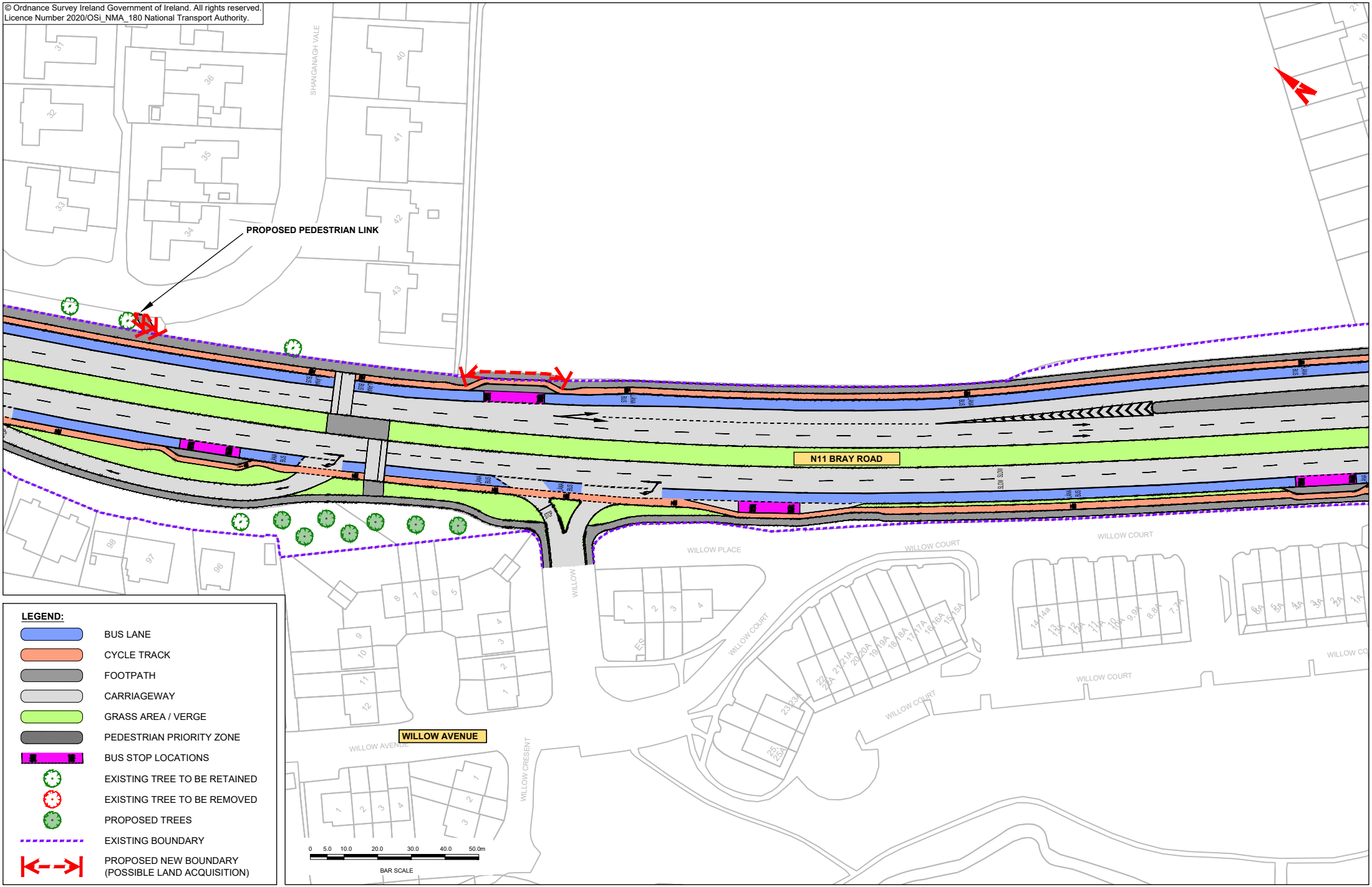
LEGEND:

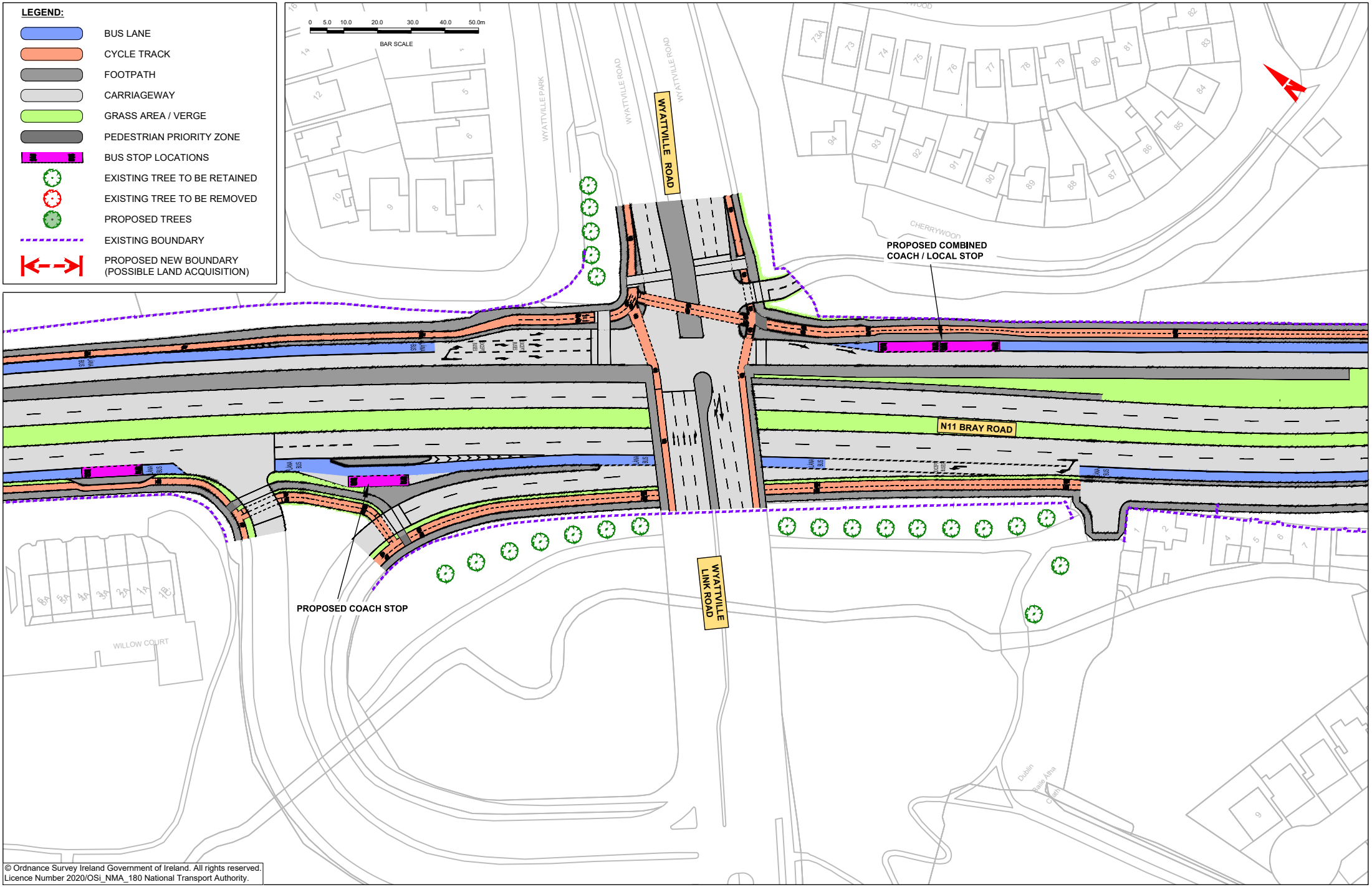
- BUS LANE
- CYCLE TRACK
- FOOTPATH
- CARRIAGEWAY
- GRASS AREA / VERGE
- PEDESTRIAN PRIORITY ZONE
- BUS STOP LOCATIONS
- EXISTING TREE TO BE RETAINED
- EXISTING TREE TO BE REMOVED
- PROPOSED TREES
- EXISTING BOUNDARY
- PROPOSED NEW BOUNDARY (POSSIBLE LAND ACQUISITION)

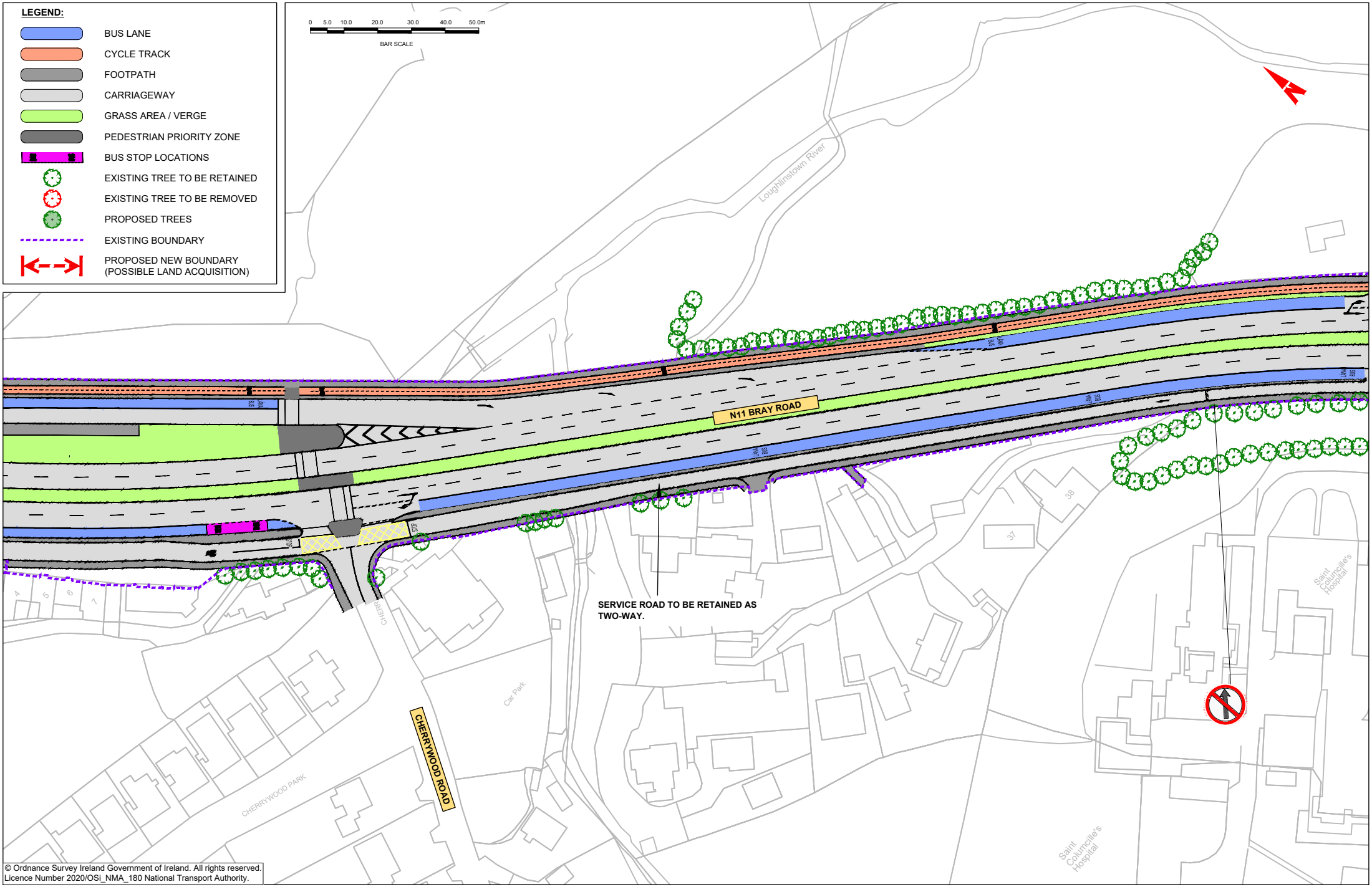
0 5.0 10.0 20.0 30.0 40.0 50.0m

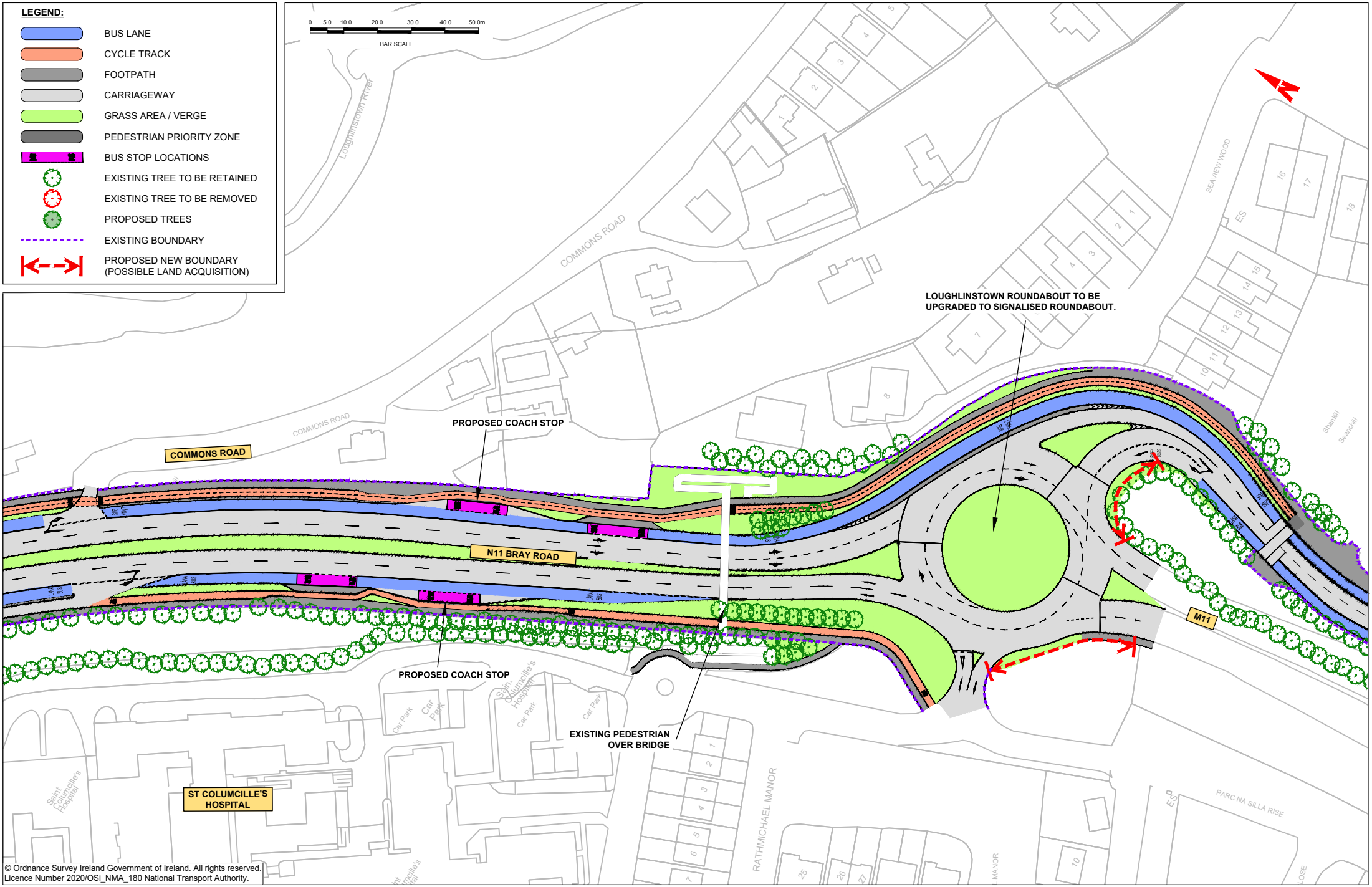
BAR SCALE

TYPICAL CROSS SECTION









LEGEND:

- BUS LANE
- 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)

0 5.0 10.0 20.0 30.0 40.0 50.0m

BAR SCALE

SEAVIEW PARK

KENTFIELD

M11

PARC NA SILLA RISE

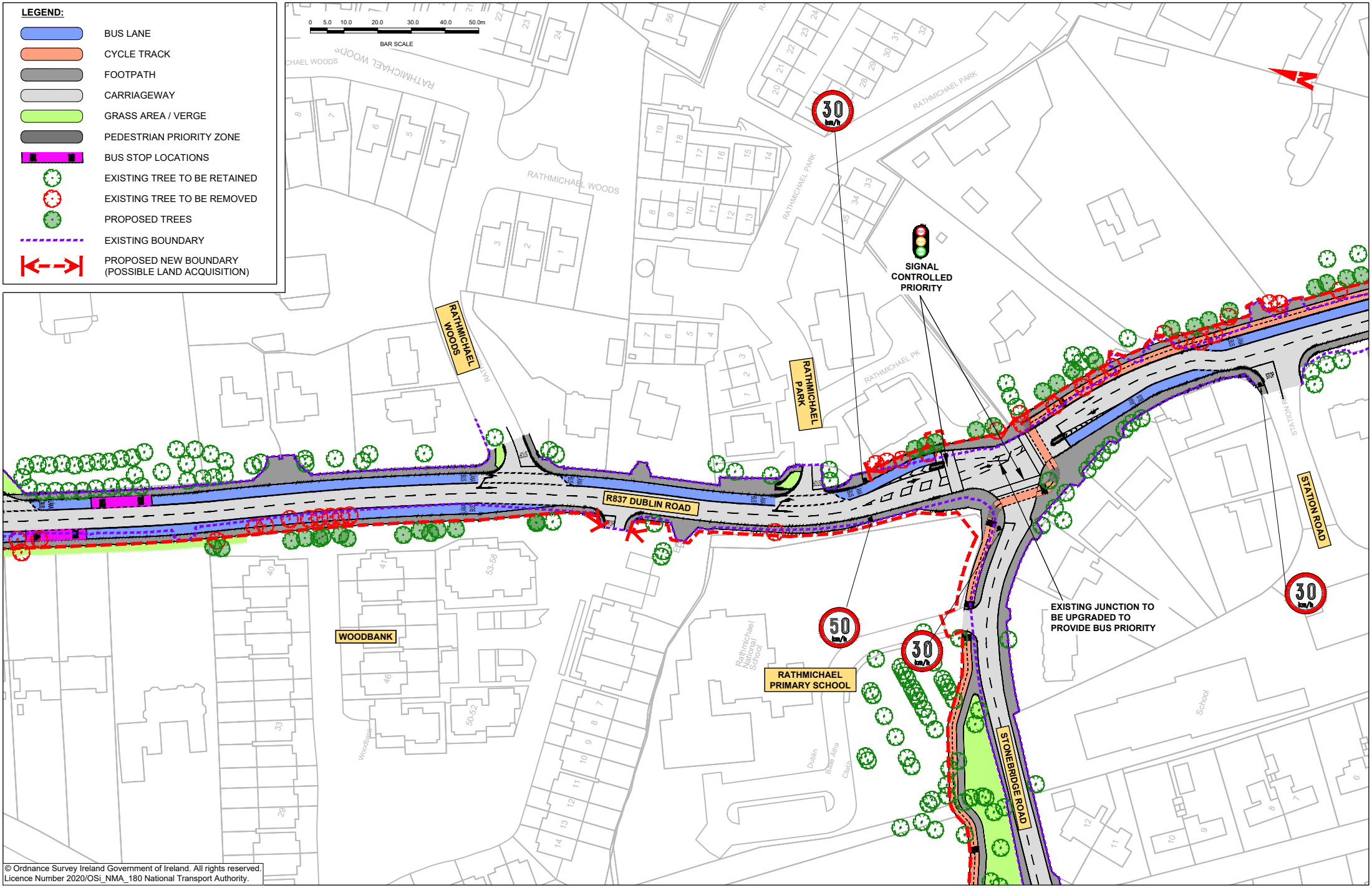
PARC NA SILLA LANE

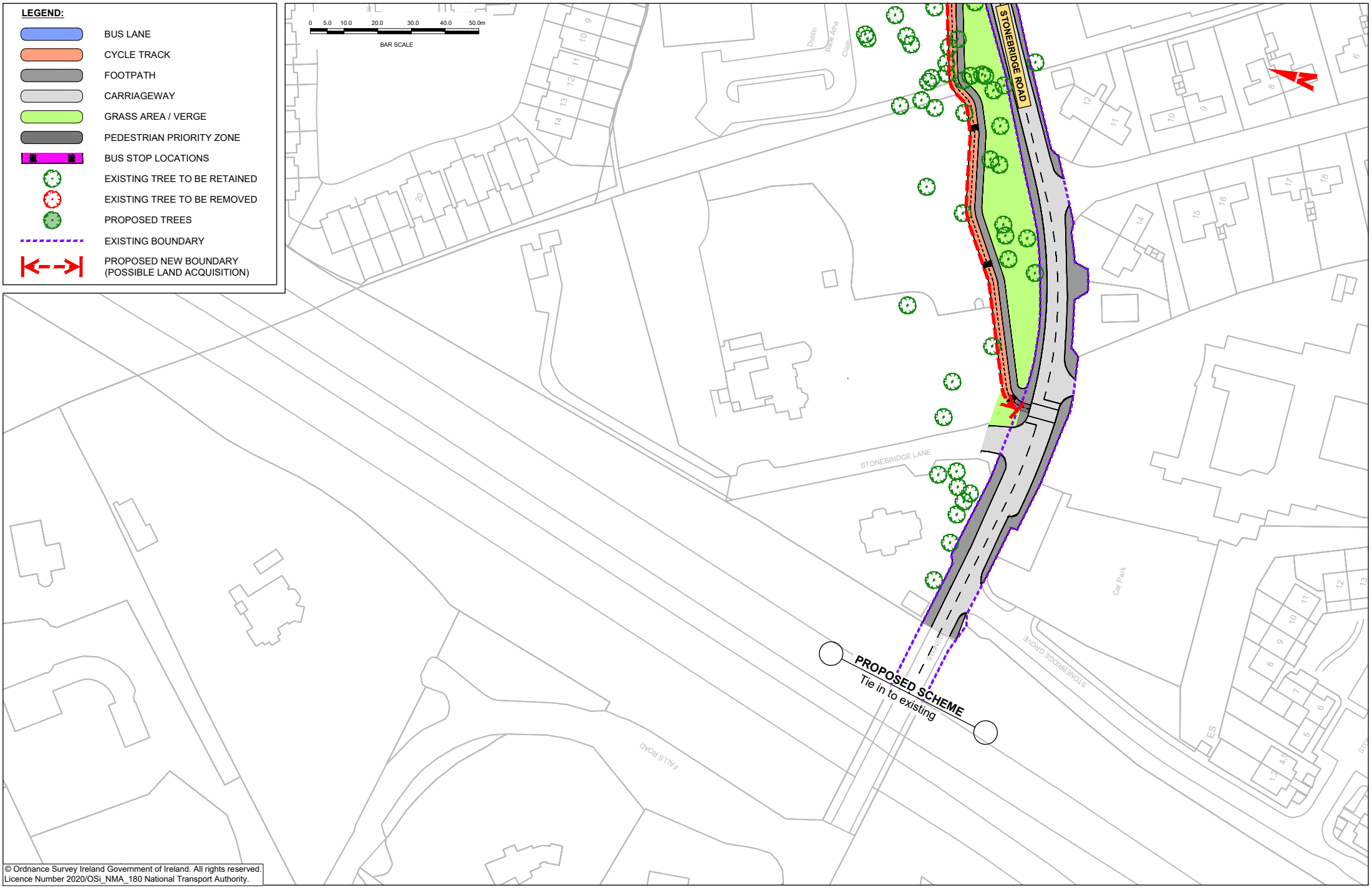
Ambulance Station

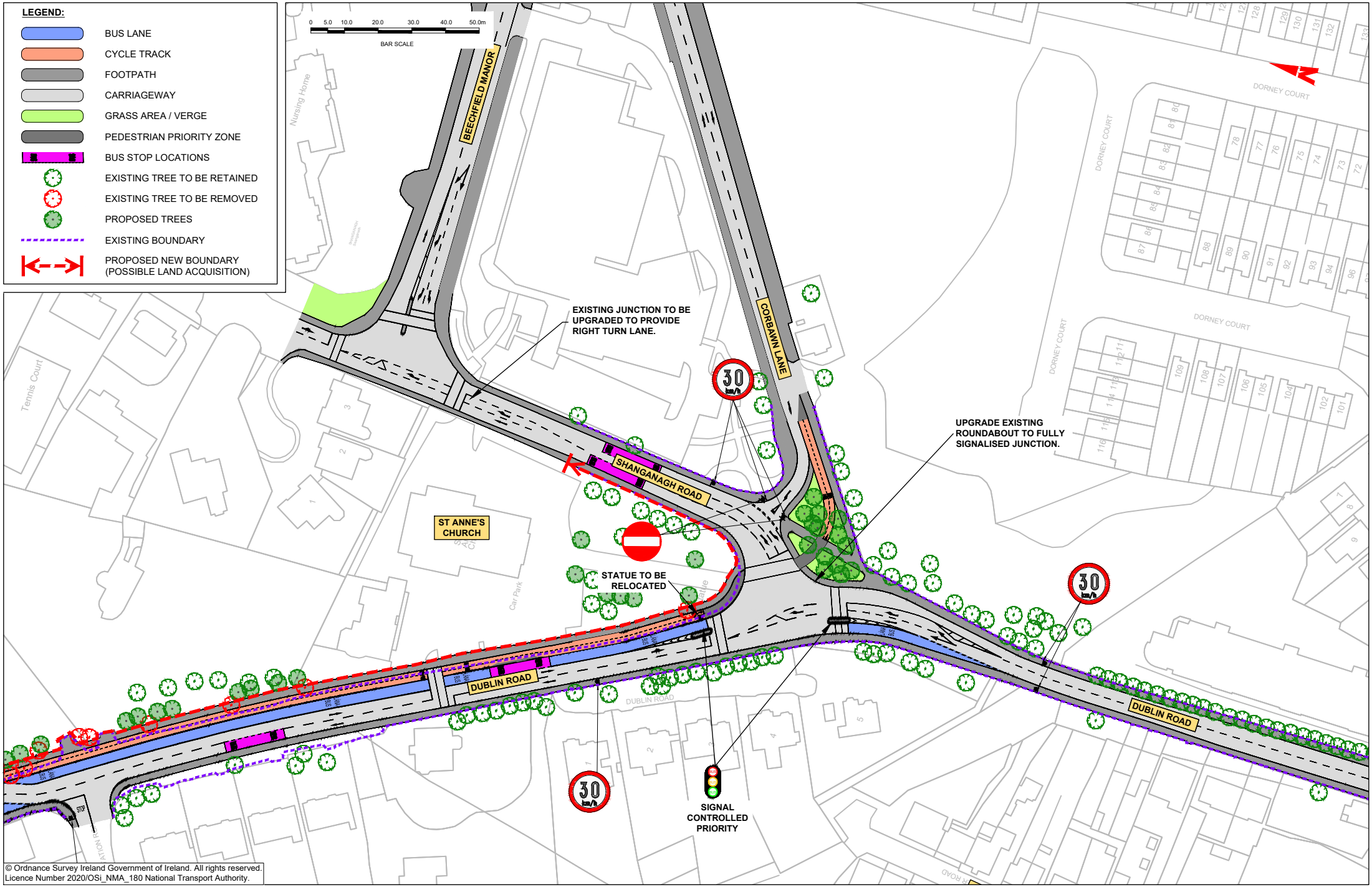
Shankill

Seanchill

TYPICAL CROSS SECTION






LEGEND:
BUS LANE
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)
0 5.0 10.0 20.0 30.0 40.0 50.0m
BAR SCALE
BEECHFIELD MANOR
CORBAWN LANE
SHANGANAGH ROAD
DUBLIN ROAD
DORNEY COURT
ST ANNE'S CHURCH
EXISTING JUNCTION TO BE UPGRADED TO PROVIDE RIGHT TURN LANE.
UPGRADE EXISTING ROUNDABOUT TO FULLY SIGNALISED JUNCTION.
STATUE TO BE RELOCATED
SIGNAL CONTROLLED PRIORITY
30 km/h
Nursing Home
Tennis Court
Car Park
STOP
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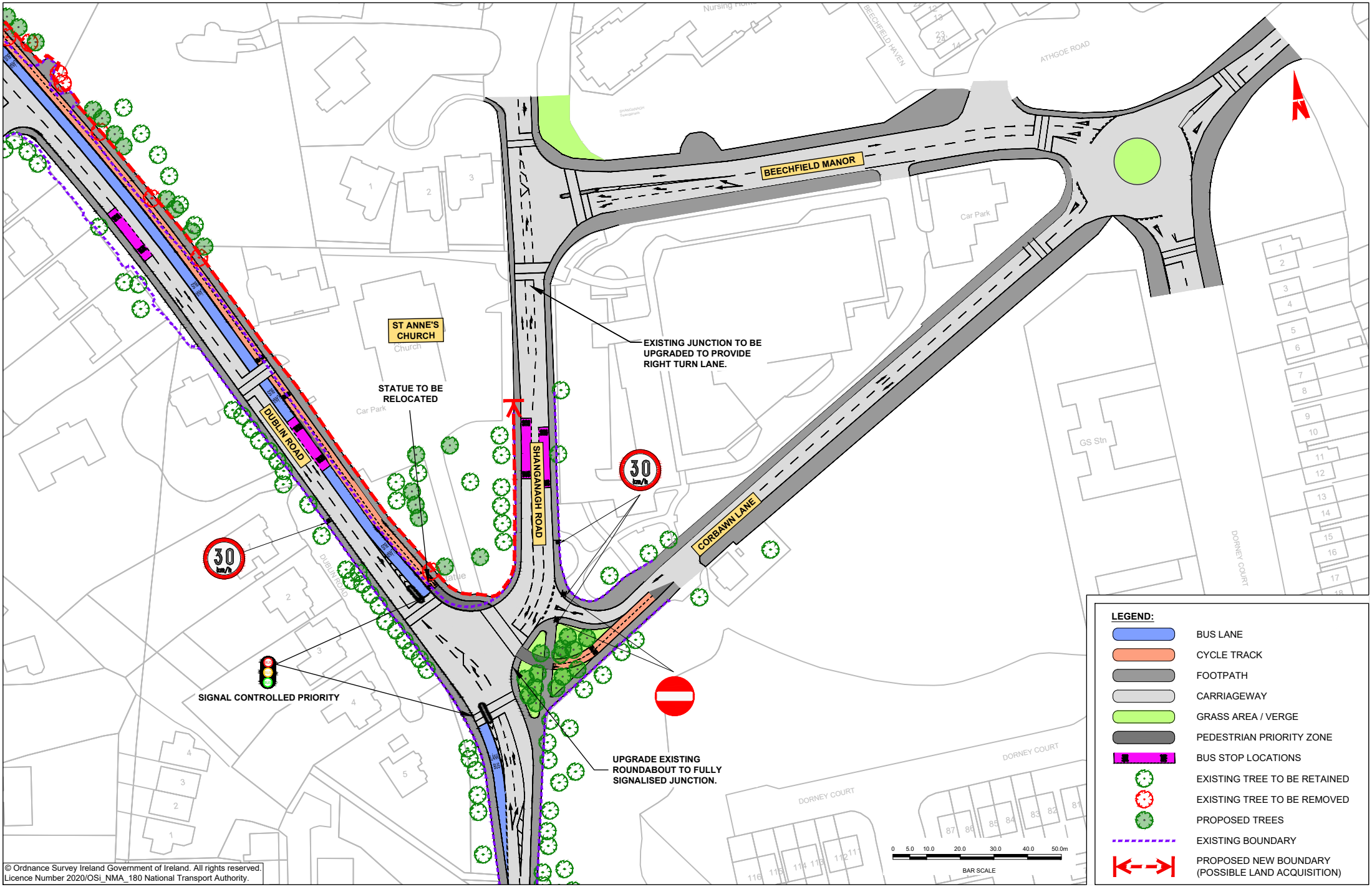

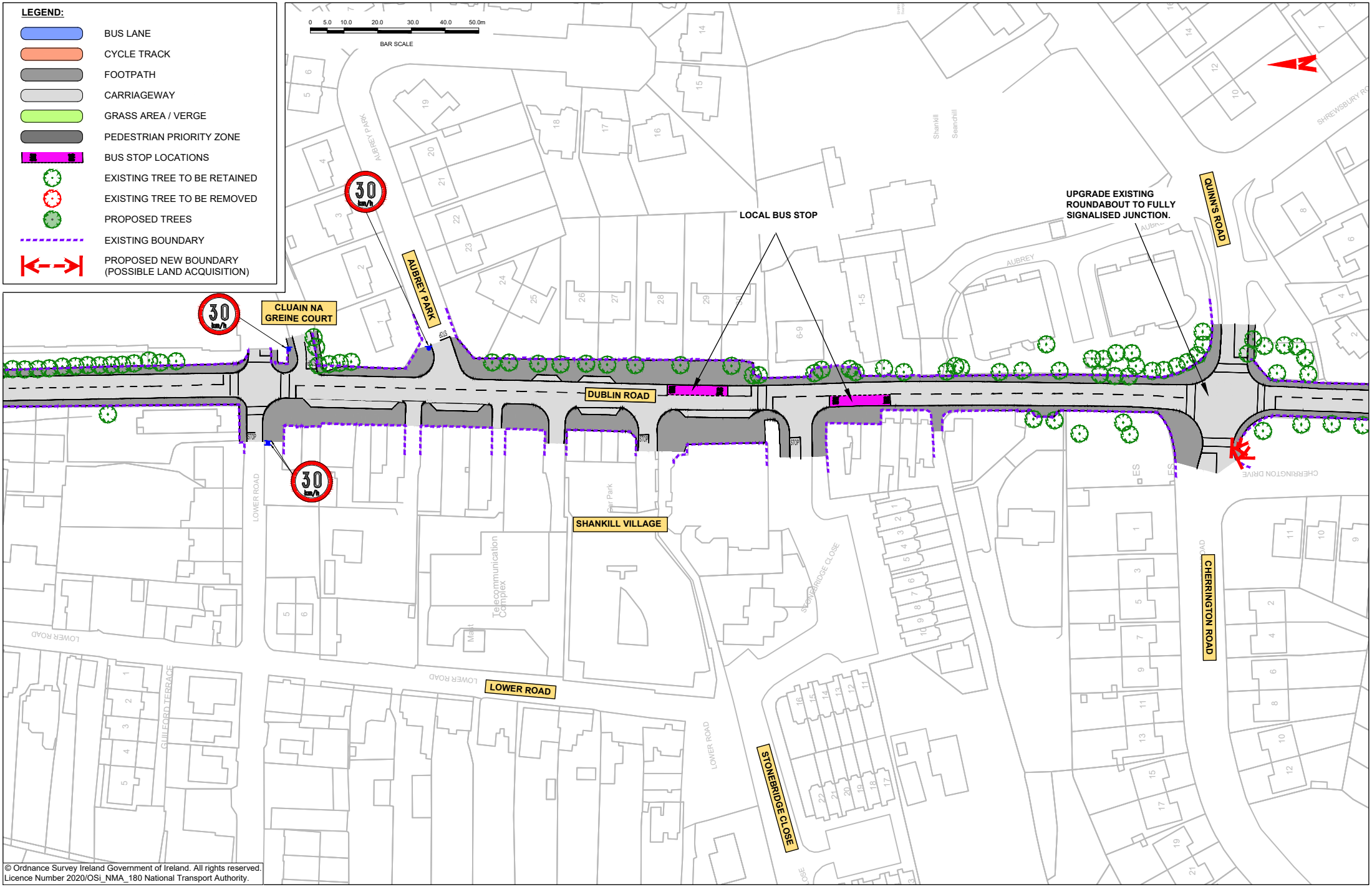
LEGEND:
BUS LANE
CYCLE TRACK
FOOTPATH
CARRIAGEWAY
GRASS AREA / VERGE
PEDESTRIAN PRIORITY ZONE
BUS STOP LOCATIONS
EXISTING TREE TO BE RETAINED
EXISTING TREE TO BE REMOVED
PROPOSED TREES
EXISTING BOUNDARY
PROPOSED NEW BOUNDARY (POSSIBLE LAND ACQUISITION)
0 5.0 10.0 20.0 30.0 40.0 50.0m
BAR SCALE
30 km/h
CLUAIN NA GREINE COURT
AUBREY PARK
LOCAL BUS STOP
UPGRADE EXISTING ROUNDABOUT TO FULLY SIGNALISED JUNCTION.
QUINN'S ROAD
DUBLIN ROAD
SHANKILL VILLAGE
LOWER ROAD
STONEBRIDGE CLOSE
CHERRINGTON ROAD
LOWER ROAD
GUILFORD TERRACE
Telecommunication Complex
Fair Park
Shankill
Seanchill
AUBREY
CHERRINGTON DRIVE
SHREWSBURY RD
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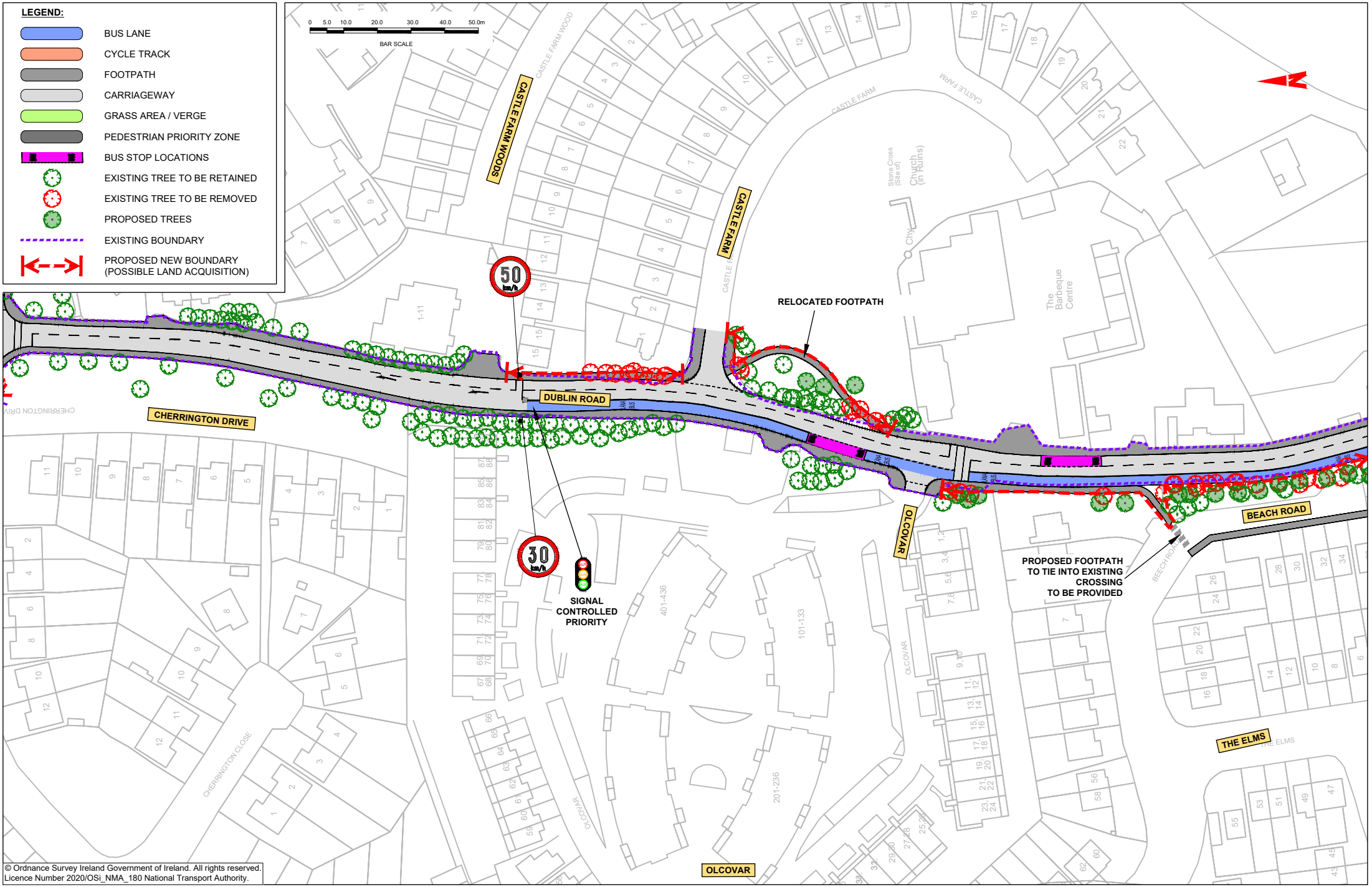
LEGEND:
BUS LANE
CYCLE TRACK
FOOTPATH
CARRIAGEWAY
GRASS AREA / VERGE
PEDESTRIAN PRIORITY ZONE
BUS STOP LOCATIONS
EXISTING TREE TO BE RETAINED
EXISTING TREE TO BE REMOVED
PROPOSED TREES
EXISTING BOUNDARY
PROPOSED NEW BOUNDARY (POSSIBLE LAND ACQUISITION)
0 5.0 10.0 20.0 30.0 40.0 50.0m
BAR SCALE
CASTLE FARM WOOD
CASTLE FARM
CASTLE FARM
Stone Cross (Site of)
Church (in Ruins)
The Barbeque Centre
50 km/h
RELOCATED FOOTPATH
CHERRINGTON DRIVE
DUBLIN ROAD
30 km/h
SIGNAL CONTROLLED PRIORITY
OLCOVAR
BEACH ROAD
PROPOSED FOOTPATH TO TIE INTO EXISTING CROSSING TO BE PROVIDED
THE ELMS
CHERRINGTON CLOSE
OLCOVAR
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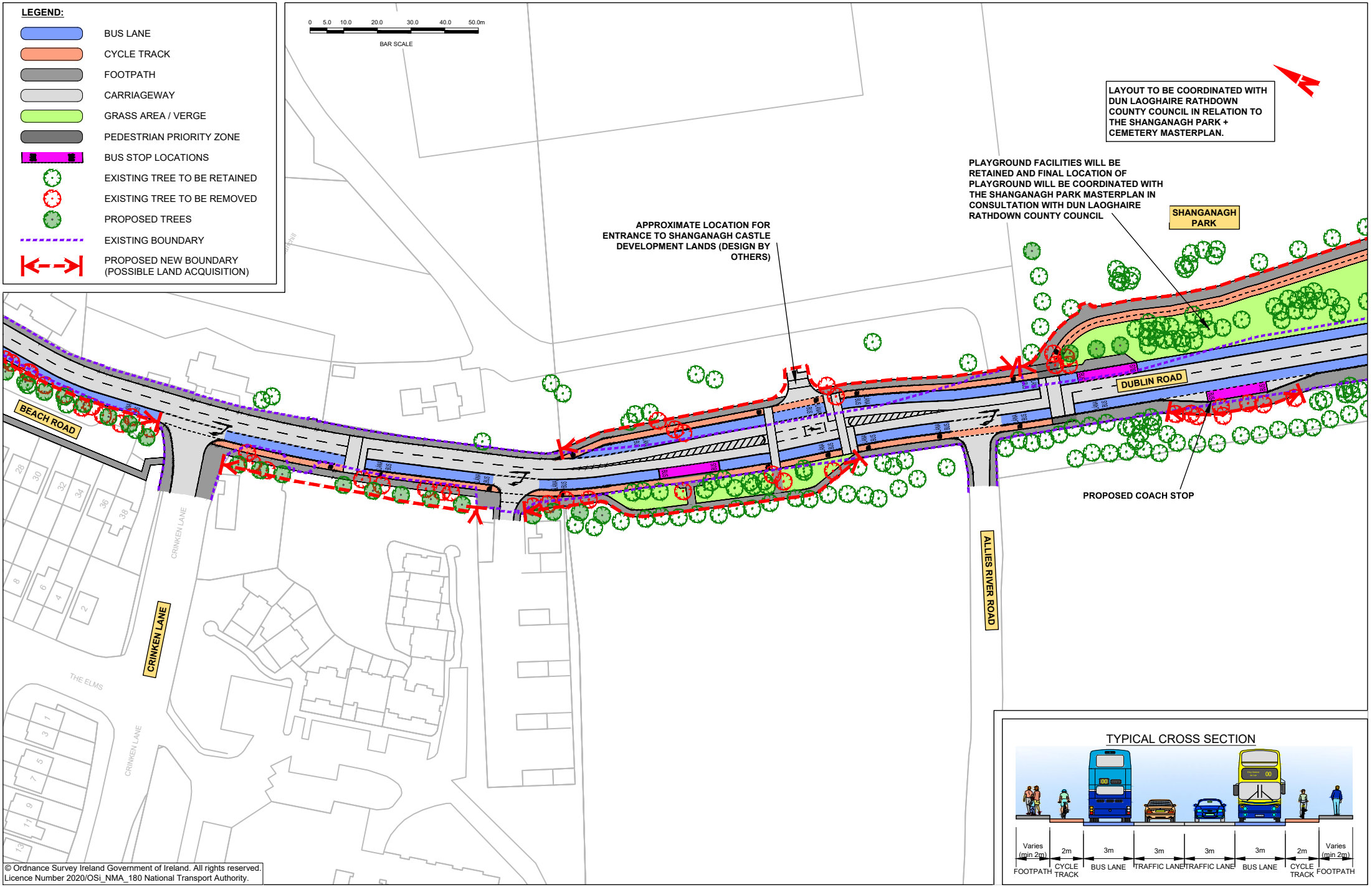

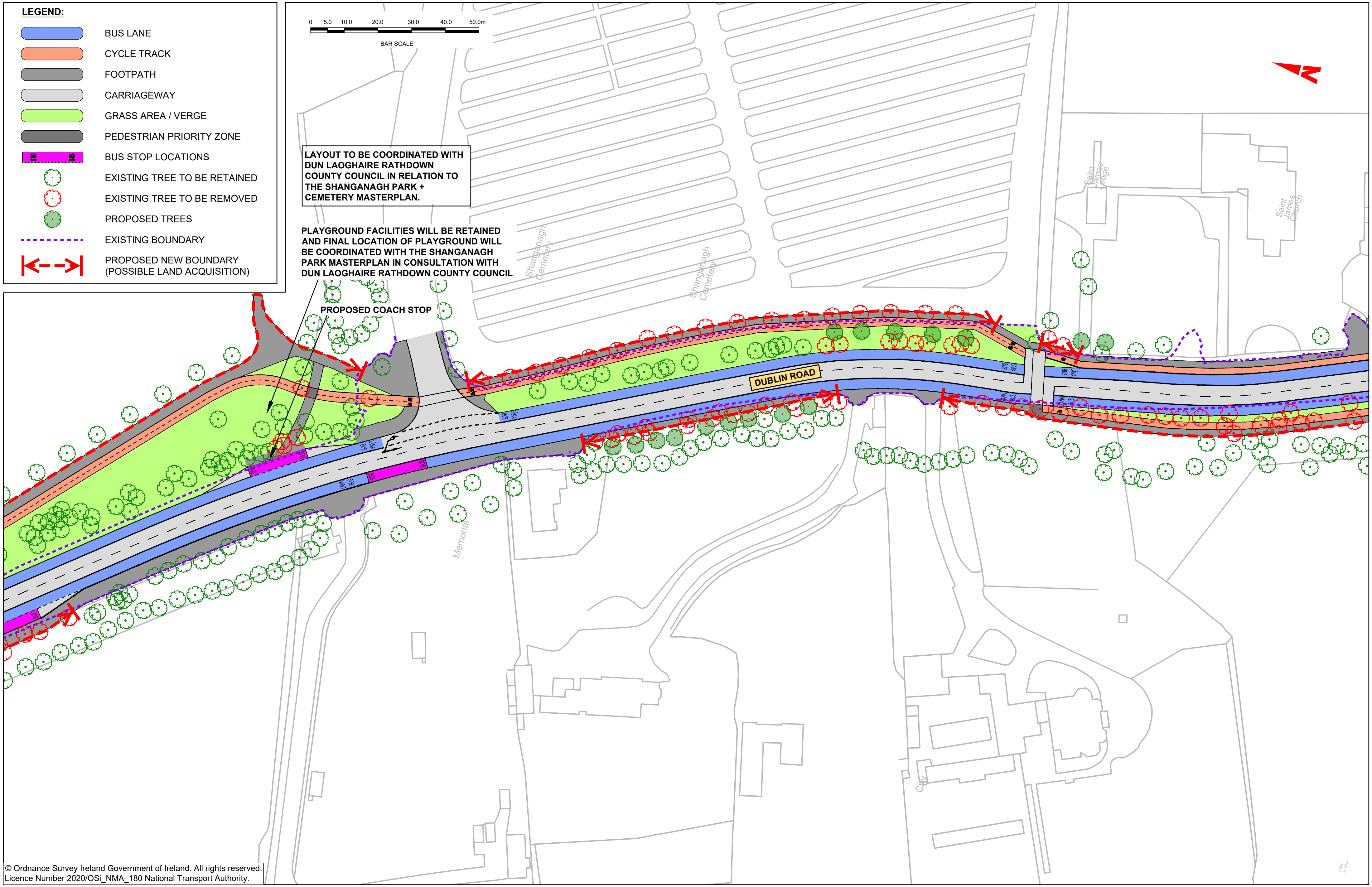

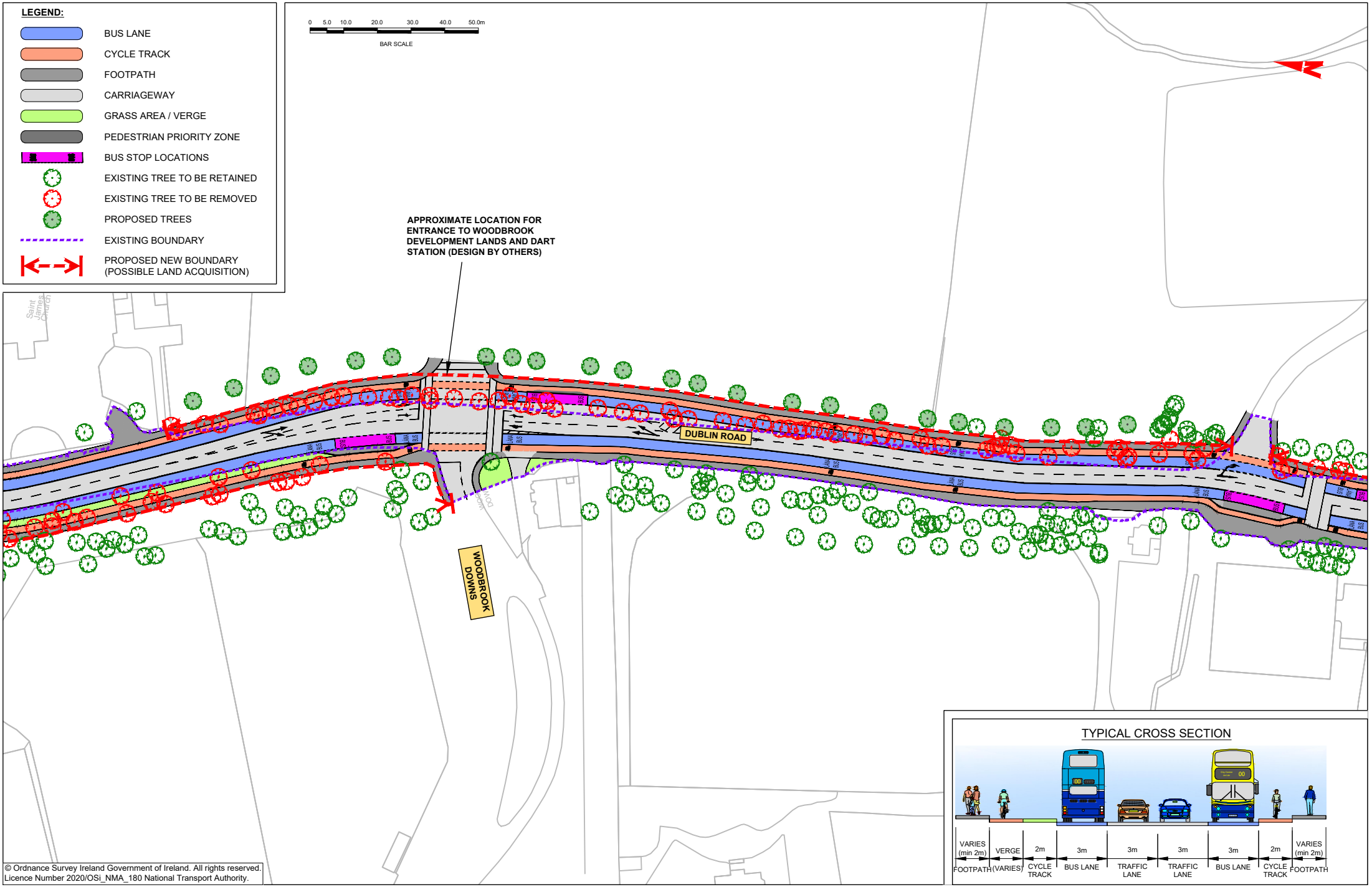

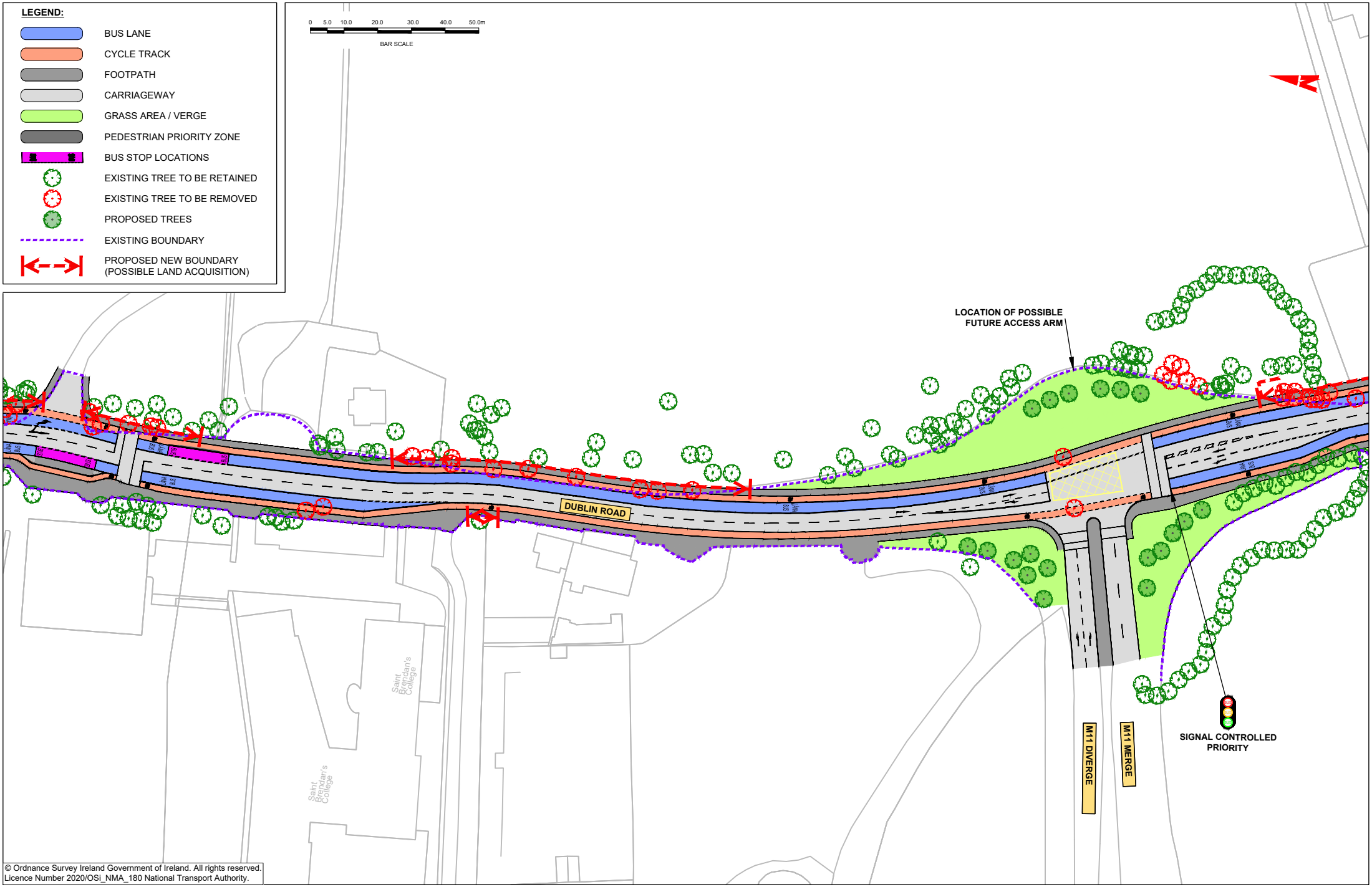

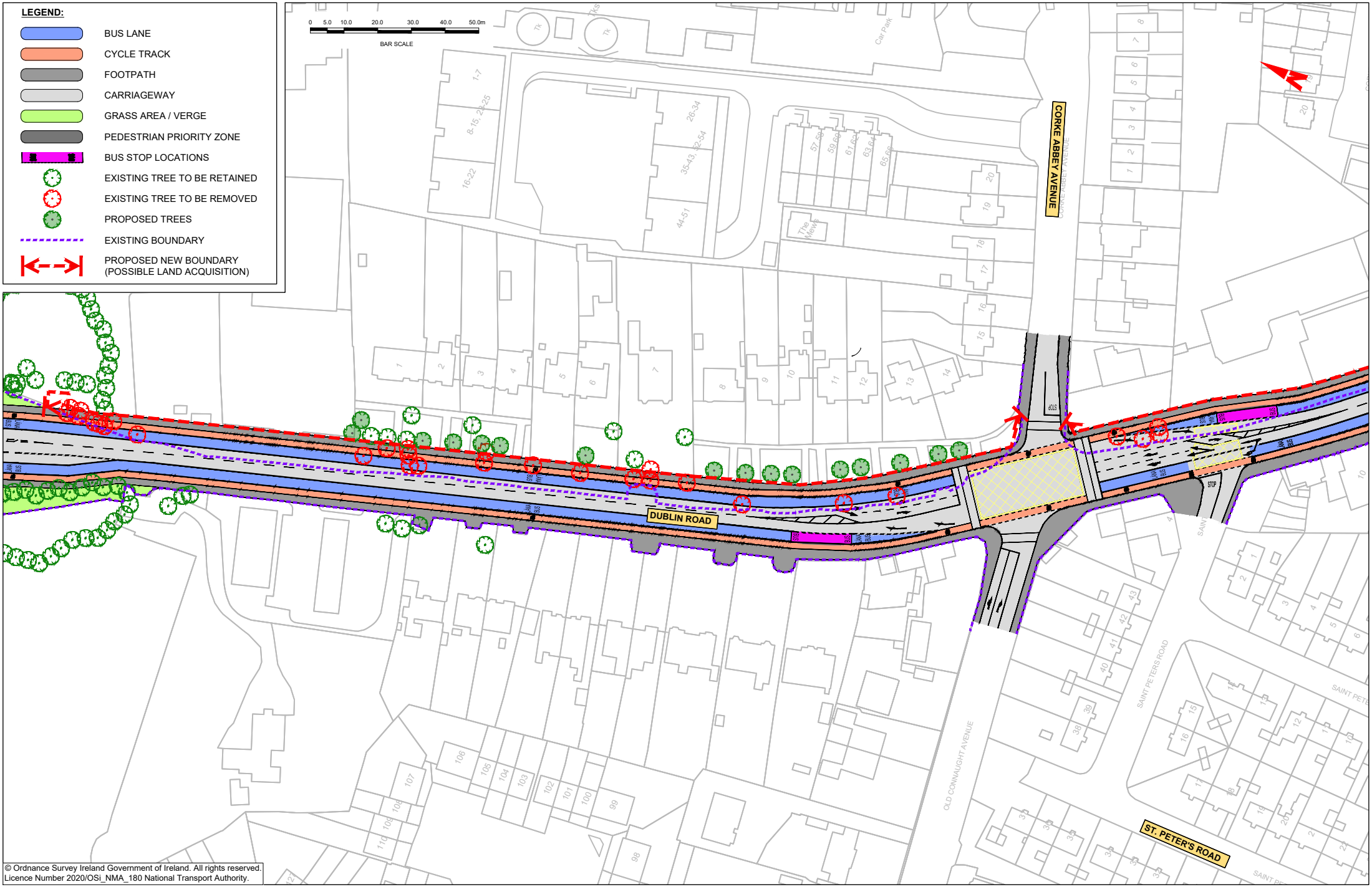
LEGEND:
BUS LANE
CYCLE TRACK
FOOTPATH
CARRIAGEWAY
GRASS AREA / VERGE
PEDESTRIAN PRIORITY ZONE
BUS STOP LOCATIONS
EXISTING TREE TO BE RETAINED
EXISTING TREE TO BE REMOVED
PROPOSED TREES
EXISTING BOUNDARY
PROPOSED NEW BOUNDARY (POSSIBLE LAND ACQUISITION)
0 5.0 10.0 20.0 30.0 40.0 50.0m
BAR SCALE
CORKE ABBEY AVENUE
DUBLIN ROAD
OLD CONNAUGHT AVENUE
SAINT PETERS ROAD
ST. PETER'S ROAD
STOP
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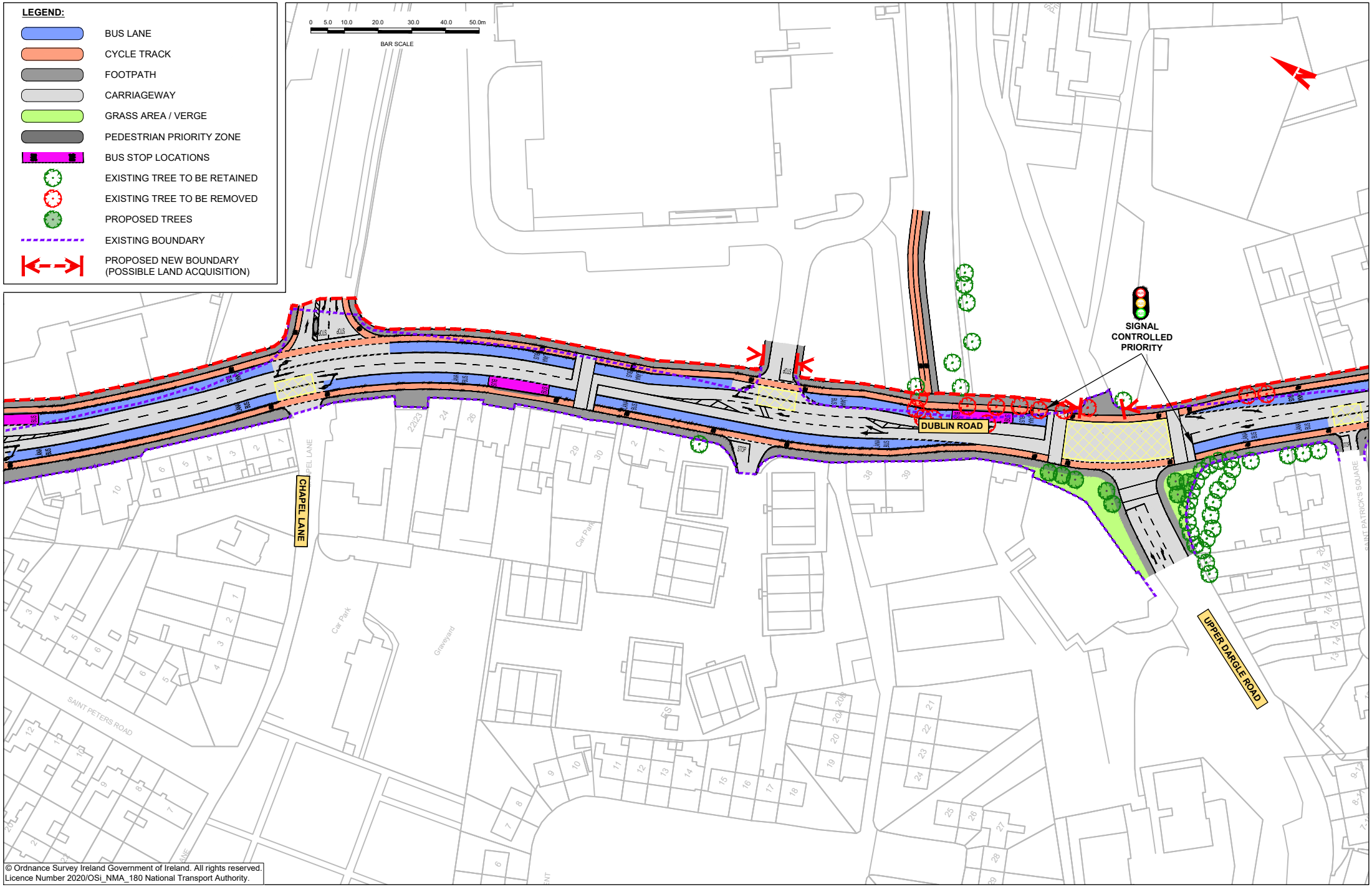
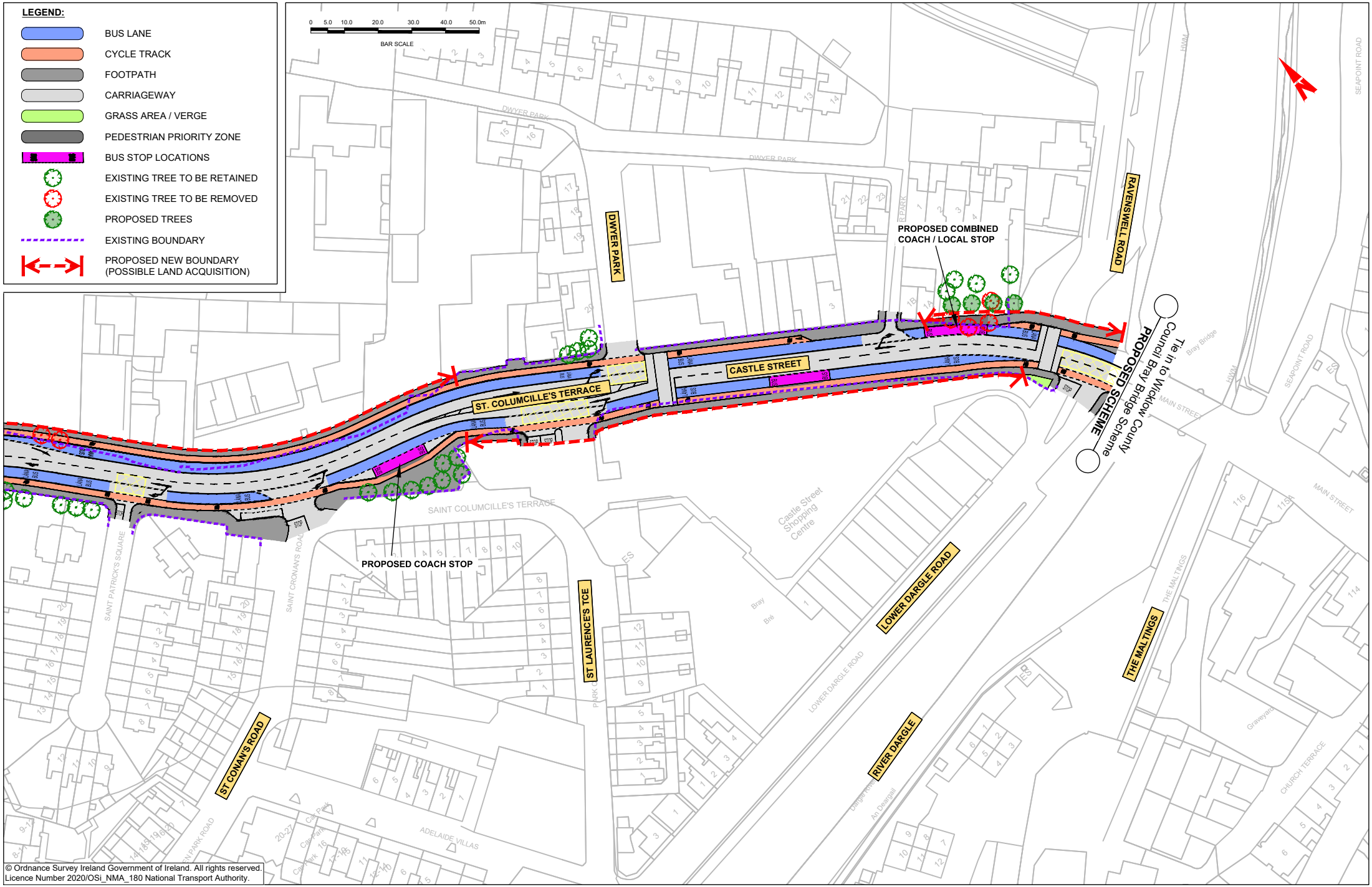


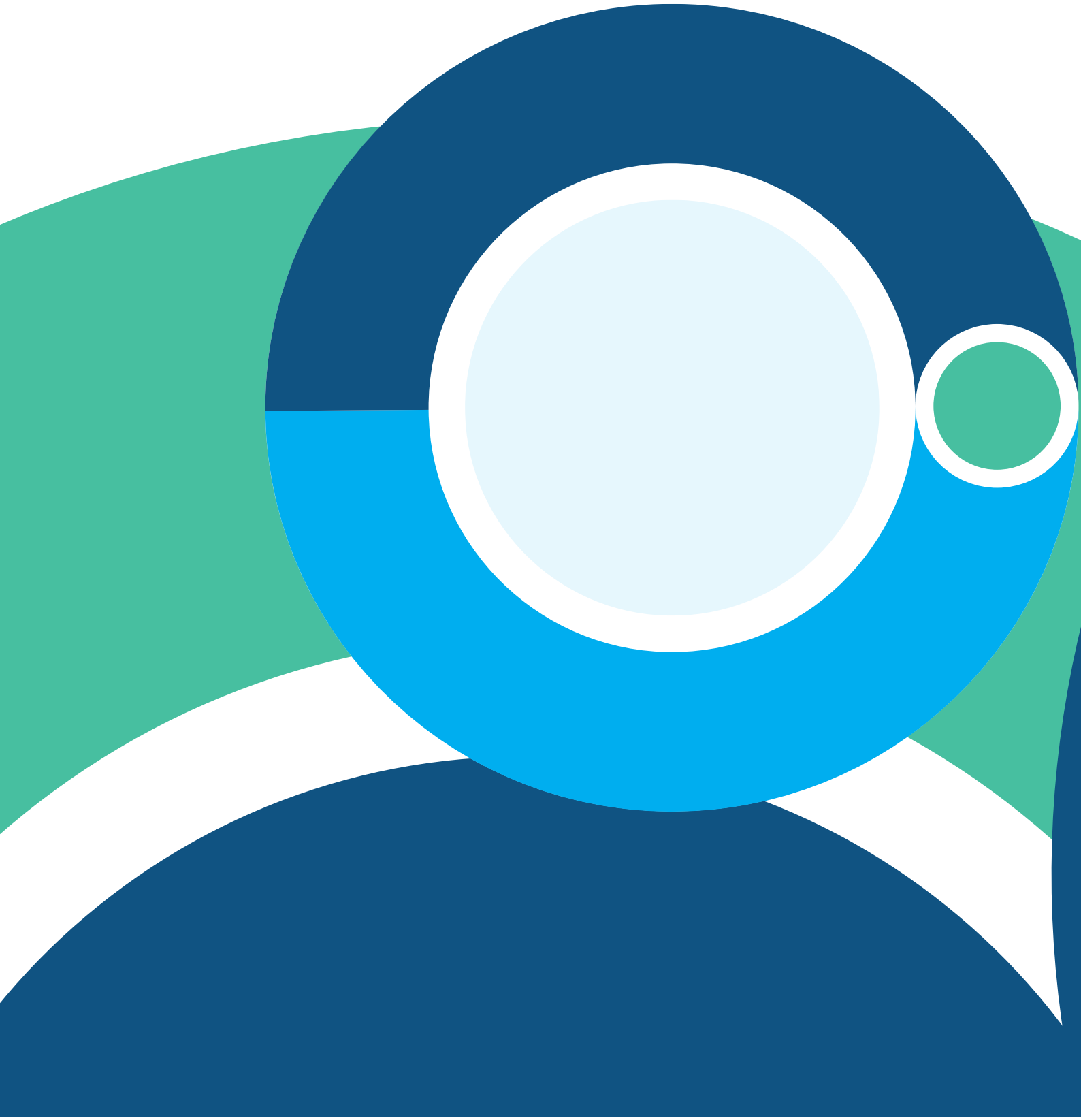


Appendix C. Previous feasibility study/route options assessment report

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

Appendix D. Emerging Preferred Route

Link - https://busconnects.ie/initiatives/core-bus-corridor-background-information/emerging-preferred-route/



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Jacobs ARUP SYSTRA