

The background is a vibrant red field with several abstract geometric shapes. In the top left, there's a green semi-circle and a blue semi-circle. In the top right, there's a white circle with a blue outline. In the bottom left, there's a blue shape with a white circle inside. In the bottom right, there's a large green semi-circle and a red semi-circle with a white outline. The text is positioned on the left side of the page.

Appendix I1
Accessibility
Audit Report

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Appendix A Other Issues

Appendix B Key Services and Facilities along the Bray route

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1. Introduction

As a part of the Engineering Design Services for the Preliminary Design and Planning Stage, through to the end of the Statutory Process of the BusConnects Radial Core Bus Corridors Infrastructure Programme, an audit of the existing infrastructure provided for people with disabilities along the proposed Bray to City Centre Core Bus Corridor (CBC) has been carried out. This report outlines the standards and guidelines that should be used to provide suitable infrastructure for people with disabilities, the process and outcomes of the audit and recommended improvements that will bring the existing infrastructure up to standard.

This audit should be read in conjunction with the *Preliminary Design Guidance Booklet for BusConnects Core Bus Corridors* as it will feed into the next stages of design.

1.1 Disability Act 2005

The following is an excerpt from the Disability Act 2005:

26. —

(1) *Where a service is provided by a public body, the head of the body shall*

- (a) *where practicable and appropriate, ensure that the provision of access to the service by persons with and persons without disabilities is integrated,*
- (b) *where practicable and appropriate, provide for assistance, if requested, to persons with disabilities in accessing the service if the head is satisfied that such provision is necessary in order to ensure compliance with paragraph (a), and*
- (c) *where appropriate, ensure the availability of persons with appropriate expertise and skills to give advice to the body about the means of ensuring that the service provided by the body is accessible to persons with disabilities.*

(2) *Each head of a public body referred to in subsection (1) shall authorise at least one of his or her officers (referred to in this Act as "access officers") to provide or arrange for and co-ordinate the provision of assistance and guidance to persons with disabilities in accessing its services.*

(3) *This section shall come into operation on 31 December 2005.*

34.—*A sectoral plan of the Minister for Transport ("the Minister") shall contain information concerning—*

- (a) *a programme of projected measures for the provision of access to persons with disabilities to passenger transport services for the general public provided by the Minister or by a public body in relation to which he or she performs functions or by a person or body licensed or regulated by the Minister,*
- (b) *measures to be taken for the purpose of facilitating access by persons with disabilities to such services and the time within which such measures are to be taken,*
- (c) *arrangements proposed to be put in place by the Minister and the Minister for the Environment, Heritage and Local Government to facilitate access to the vehicles providing the passenger transport services by such persons from a public road, and*

(d) any other matter which the Minister considers appropriate.

The Department of Transport, Tourism & Sport's (DTTAS) Sectoral Plan, under the Disability Act 2005, is called **Transport Access for All (2012)**. This concept is based on the principle of Accessible Public Transport which does not distinguish between people with disabilities and other passengers.

The provision of accessible, affordable and acceptable transport can make a very big difference to the quality of life for people. People can feel cut off from wider community life, and can have serious difficulty accessing basic services, due to a lack of access to transport. This is particularly true for older people and for people with disabilities, although of course it applies to many others as well. One of the core principles of Transport Access for All is that through accessibility improvements to the public transport system for people with disabilities, access for all people will be improved.

Transport Access for All has the stated aim of "continuing to promote the development and introduction of accessible public transport services for the greatest number of people with mobility, sensory and cognitive impairments in the shortest possible time."

Bus stations and bus stop design are included among the areas listed for action in the Sectoral Plan. The plan requires that the needs of mobility-impaired persons must be taken into account when designing bus stops.

For the purposes of the plan, mobility-impaired persons include:

- Persons who are visually impaired, or blind;
- Persons who are hard of hearing, or deaf;
- Persons with children in buggies;
- Wheelchair users and people with crutches.

While it is recognised that it will not always be possible to provide conflict-free access for all users to and from buses and/or bus stops, there is an onus on the designer, nevertheless, to ensure in respect of mobility-impaired persons that access is facilitated, and that the highest degree of convenience is afforded them, insofar as is reasonably practicable.

1.2 Project Description

The BusConnects Radial Core Bus Corridors Infrastructure Programme involves implementing dedicated bus lanes and cycle lanes on 12 key bus corridors. The main purposes of this project are to improve journey times, improve accessibility across the city, enhance public transport provision and create a safer environment for cyclists and pedestrians.

The Bray to City Centre CBC scheme (the scheme) connects Dublin City Centre to the Bray area, via the N11. Key facilities and services that need to provide access to all along this scheme are shown in Appendix B. The key facilities and services were identified using the Prime2 data base, developed by Ordnance Survey Ireland to integrate national data in relation to location, and filtering for public areas likely to be sensitive to accessible design requirements. Accessible parking spaces along the Bray scheme are included in the infrastructure audit.

1.3 Report Structure

There are four sections along the Bray to City Centre CBC Scheme. The table below outlines these sections and the roads along the scheme they include.

Table 1.1: Bray Scheme Sections

Sections	Start of Section	End of Section	Roads Included
1	St. Stephen's Green / Leeson Street	UCD	Leeson Street Lower / Upper / Sussex Rd / Morehampton Rd / Stillorgan Rd
2	UCD	Wyattville Rd	Stillorgan Rd / N11
3	Wyattville Rd.	Wilford Roundabout	N11 / Dublin Rd
4	Wilford Roundabout	Lower Dargle Rd	Dublin Rd / Castle Rd

Each chapter of this report focuses on a section of the scheme and the specific issues identified in the site walkovers as being high risk. Other issues are summarised in each chapter, with a full list in Appendix A and full details provided in Project Mapper.

1.4 Methodology

Prior to the site walkovers occurring, a tablet was set up to streamline the collection of data. This involved creating drop down menus based on what was expected to be seen and the current standards and guidelines.

The dropdown menus of the potential issues that were to be used during the site walkovers were developed based on the guidelines discussed in Section 6. These were split into five broad categories with multiple subcategories under each, as below:

Table 1.2: Disability Audit Categories

Footpaths	Crossings / Junctions	Bus Stops	Parking	Other
<ul style="list-style-type: none"> ▪ Insufficient footpath width ▪ Broken paving / footway ▪ Bollards in footway ▪ Lamp post in footway ▪ Signpost in footway ▪ Ponding ▪ Footpath not provided ▪ Inappropriately constructed vehicle crossover point ▪ Uneven paving / footway ▪ Broken kerbing 	<ul style="list-style-type: none"> ▪ Incorrect tactile paving at crossing ▪ No crossing facilities provided ▪ No tactile paving at crossing ▪ No dropped kerbs at crossing ▪ Push button incorrectly positioned ▪ No tactile information at push button ▪ Dropped kerbs not flush with crossing ▪ Crossings not aligned ▪ Road Surfacing at Crossing Poor 	<ul style="list-style-type: none"> ▪ No raised kerb at bus stop ▪ No kassel kerbs ▪ Vehicles parked in bus stop ▪ Bus pole not identified in Braille 	<ul style="list-style-type: none"> ▪ Vehicles parked in footway ▪ No dropped kerbs provided at accessible parking bay 	<ul style="list-style-type: none"> ▪ Unsuitable access for users with disabilities

Footpaths	Crossings / Junctions	Bus Stops	Parking	Other
<ul style="list-style-type: none"> ▪ No dropped kerb provided to access beginning of footpath network ▪ Inappropriate street furniture ▪ Incorrect tactile paving at cycle lane ▪ No level difference between footpath and cycle lane 	<ul style="list-style-type: none"> ▪ No pedestrian refuge for long crossing ▪ Green man time not sufficient ▪ Continuous cycle track indicated at signalised pedestrian crossing ▪ Incorrect raised table 			

The issues identified during the site walkovers were also ranked based on their severity levels. Severity levels of high, medium, and low were used. These were based on the descriptions in Table 1.3.

Table 1.3: Severity Descriptions

Severity Rating	Description	Example
Low	A severity level of low was considered to present minimal impact to safety or ability to access the service.	Insufficient footpath width where it does not meet the standard width, however it is still wide enough for a wheelchair to fit through, would be considered low severity.
Medium	A severity level of medium may present an impact to safety or ability to access the service.	Bus pole not identified in Braille in a low foot traffic area, where a blind person may not be able to find the bus stop and therefore use the service.
High	A severity level of high was considered to present an impact to safety or ability to access the service.	No crossing facilities provided for a disabled person to be able to cross the road, hindering ability to cross the road.

An initial test site walkover for the accessibility audits was held on Tuesday 17 December 2019 to observe the current infrastructure provided for people with disabilities and identify current issues, with the next site walkovers being held over Wednesday 11 March 2020 and Thursday 12 March 2020. The weather conditions on 17 December 2019 were mostly fine and the weather conditions on 11 and 12 March 2020 were fine with intermittent showers, which highlighted the potential for ponding. The current conditions were then analysed to determine how they could be improved to be considered in the design process of the corridor.

Figure 1.1 and

Figure 1.2 show all of the data collection points to date along the length of the scheme.

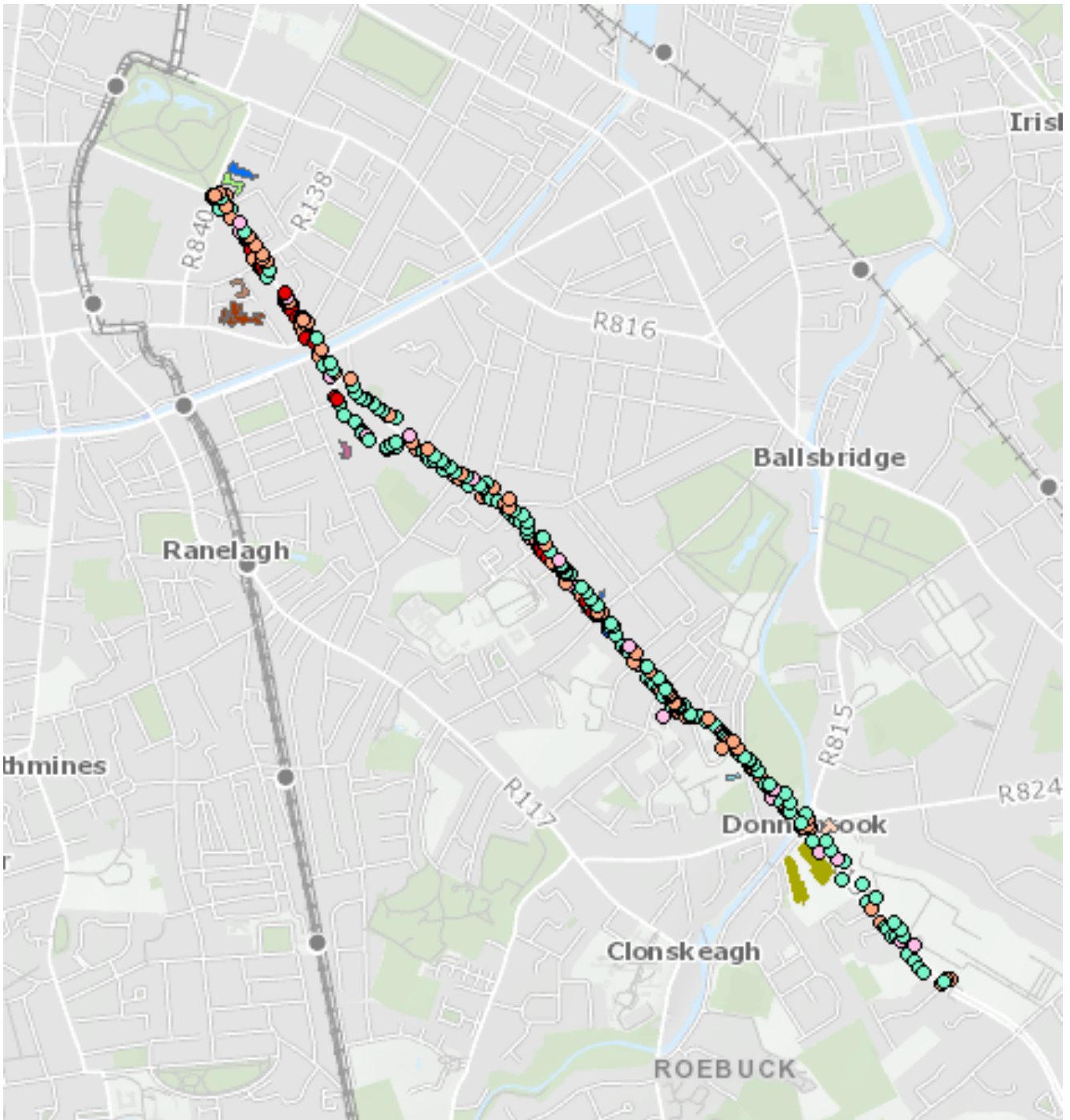


Figure 1.1: Data Collected along the northern end of the Bray Scheme

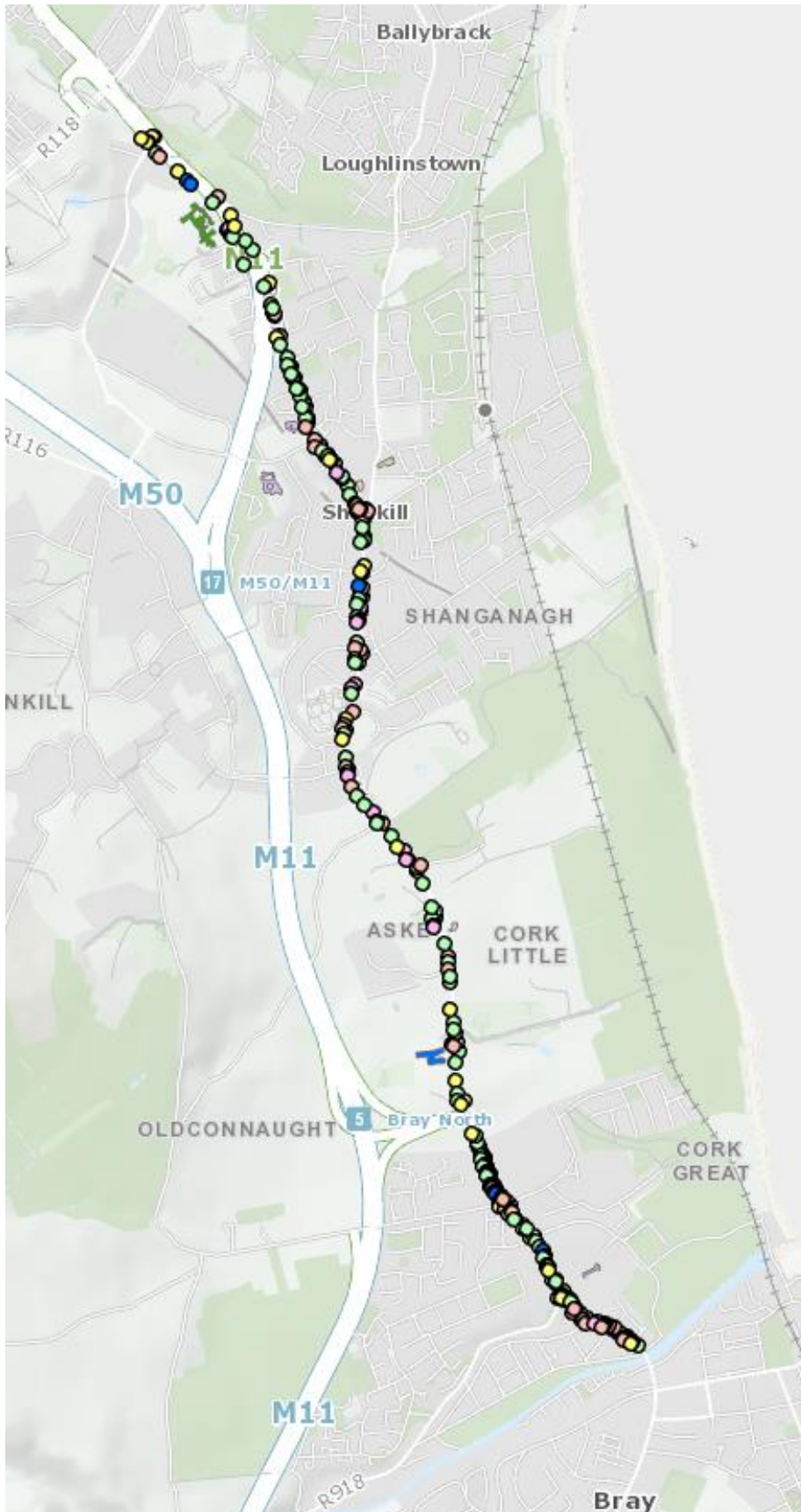


Figure 1.2: Data Collected along the southern end of the Bray Scheme

In the ProjectMapper App, points can be filtered by issue type, ID number or severity. Each point also has a link to the attached image showing the issue.

The issue types are colour coded for ease of recognition.

Figure 1.3 shows the colours used for each issue type.

●	Bus Stops
●	Crossings Junctions
●	Footpaths
●	Other
●	Parking

Figure 1.3: Colour coding of issue types

2. Section 1 – St Stephen’s Green / Leeson Street to UCD

2.1 Description of Section

This section of the scheme includes the road network along Leeson Street Lower, Leeson Street Upper, Sussex Road, Morehampton Road, Donnybrook Road and Stillorgan Road between St. Stephen’s Green and UCD. Figure 2.1 shows this section of the scheme.



Figure 2.1: Map of Section 1

Appendix B shows the main attractors and generators of the entire scheme. Section 1 of the Bray scheme is shown in Map 10, Map 11, Map 12 and Map 13. There are 11 buildings of significance identified from the Prime 2 data within the vicinity of this section of the scheme. These are:

- Loreto College, St. Stephen's Green
- Permanent TSB Stephen's Green
- CUS Secondary and Primary School
- Hatch Hall
- Royal Victoria Eye and Ear Hospital
- Wesley House community centre
- South Dublin Credit Union (Donnybrook Branch)
- EF International Language Campus Dublin
- Mary Aikenhead Day Centre
- Dublin Bus Depot
- Donnybrook Parish – Church of the Sacred Heart

These buildings are all considered to be places that are sensitive to disability design requirements and therefore access and facilities should be provided in the vicinity to make them easy to access for people with disabilities. There are likely to be other buildings in the area that require access for users with disabilities that are not identified in the Prime 2 study, which only identified prioritised buildings within 100m of the corridor. Wesley House community centre, South Dublin Credit Union (Donnybrook Branch) and EF International Language Campus Dublin have on street parking less than 50m away. When an investigation into the requirements for accessible parking and suitable locations is undertaken accessible parking should be considered for these locations. All of the other buildings have private parking to provide for accessible parking spaces.

Figure 2.2 shows the current bus stops along the Bray scheme in the vicinity of the above listed buildings. It is considered that these bus stops currently service the identified buildings well, there are crossings provided where bus stops are across the road.

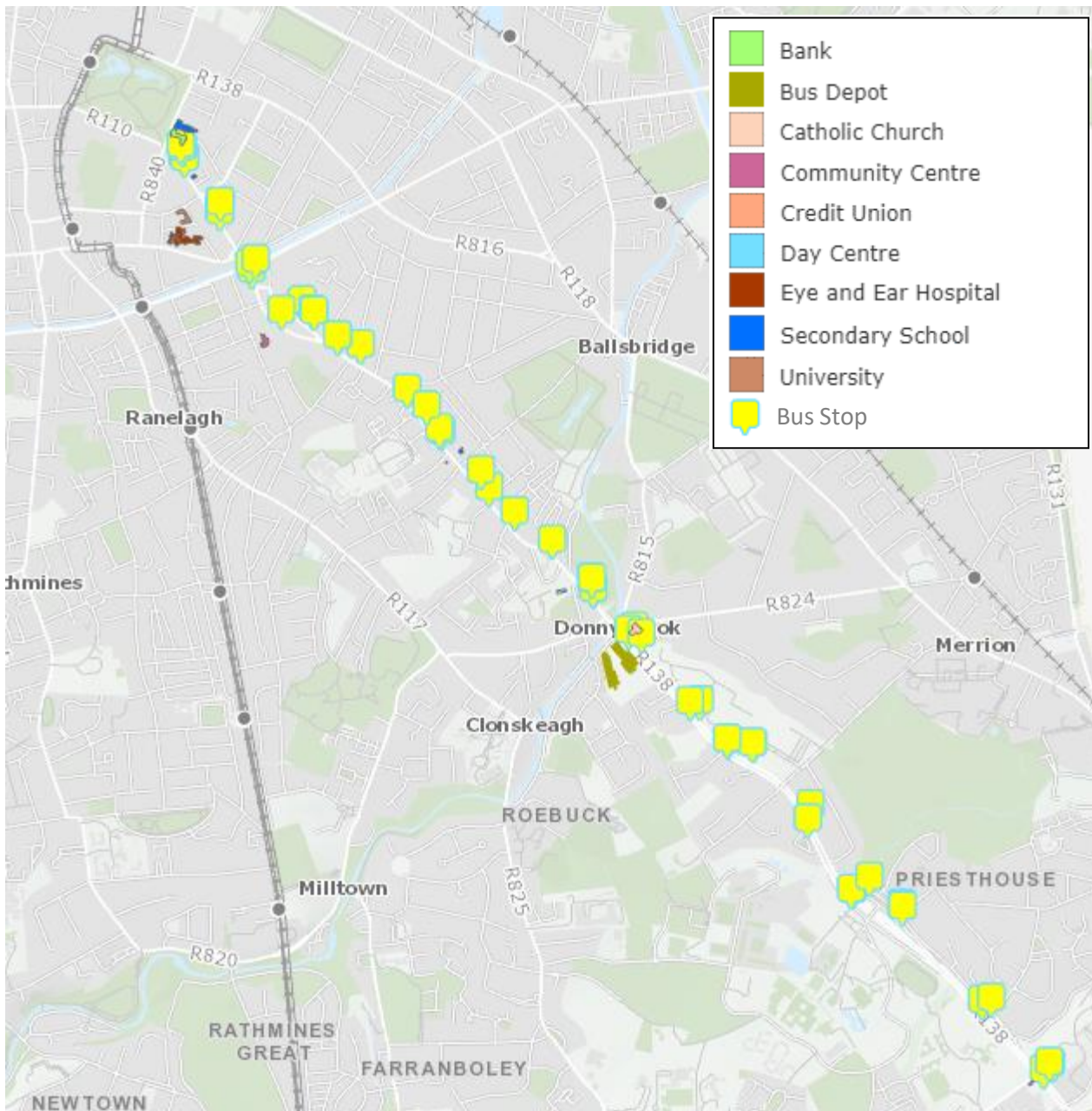


Figure 2.2: Prime2 buildings and nearby bus stops

2.2 Problem Identification

There were 338 identified issues in Section 1 of the Bray scheme during the site walkovers in March 2020. There is a small section of Section 1 at the southern end which was not covered. This section is discussed later in this chapter. Figure 2.3 shows the types of issues identified during the site walkovers.

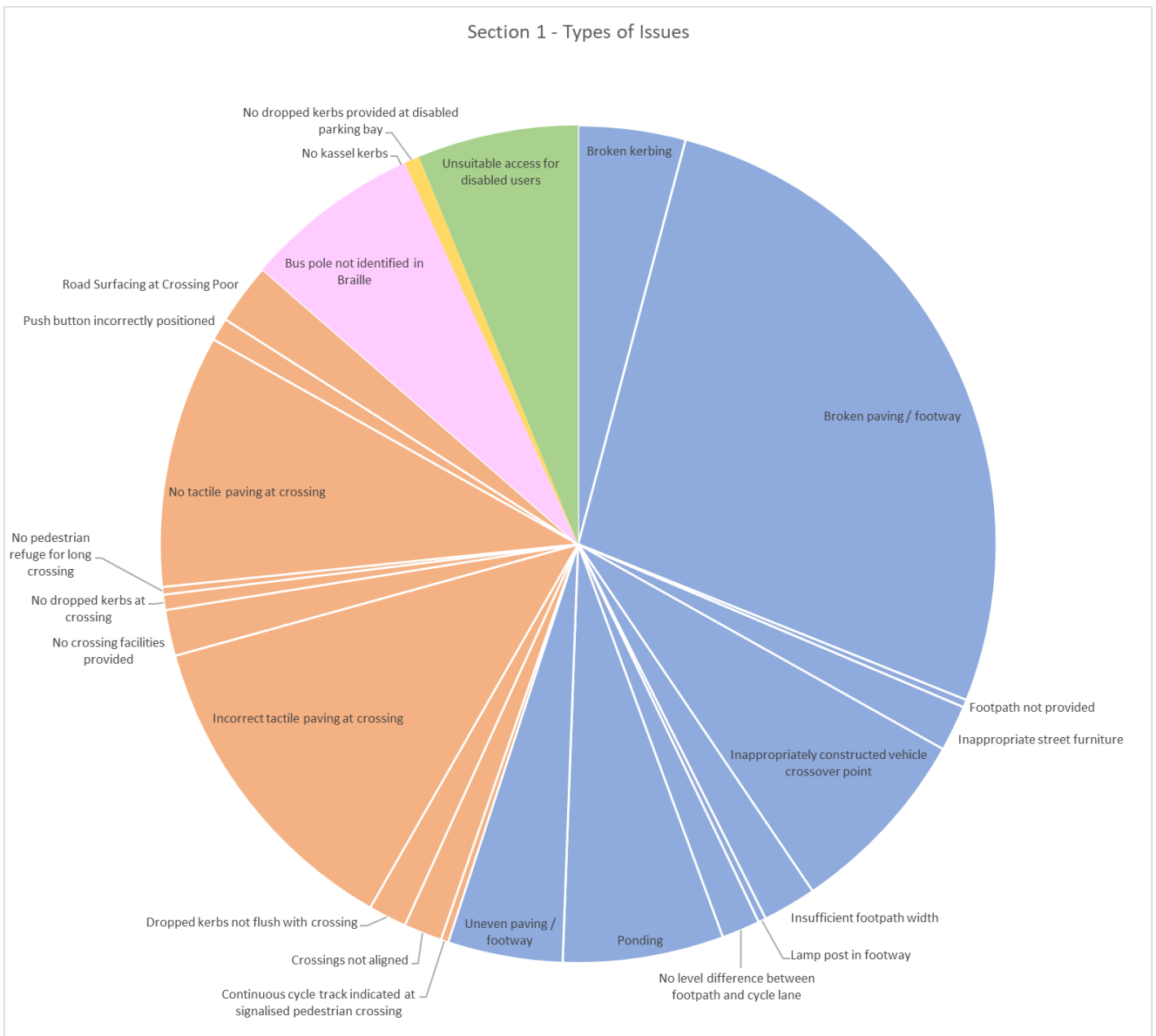


Figure 2.3: Break Down of Types of Issues Identified

2.2.1 Footpaths

Of the identified issues in Section 1, over 50% are due to problems on the footpaths. This includes 21 sections of path with obvious ponding, 14 instances of broken kerbing, 91 instances of broken paving and 15 instances of uneven paving. There are 25 inappropriately constructed vehicle crossings, mostly driveways which are flush with the road. There are five sections of path that have no level difference between the cycle lane and the footpath.

The remaining issues include one section of the scheme where no footpath is provided, six pieces of street furniture that are inappropriately placed (such as overhanging bottom steps), one lamp post in the way of the footpath (Figure 2.4) and seven sections of the footpath are of insufficient width. One pinch point was caused due to two pieces of street furniture being positioned too close to each other.



Figure 2.4: Lamp post in footpath

There are 43 footpath issues which are considered high severity – 29, 55, 67, 69, 72, 73, 74, 75, 76, 77, 92, 94, 95, 97, 103, 105, 120, 160, 162, 163, 172, 174, 180, 183, 193, 202, 215, 220, 226, 228, 229, 234, 236, 243, 255, 270, 272, 275, 296, 303, 308, 316 and 335. These are discussed in Table 2.1.

For more detailed information of the footpath issues, see the green points in the ProjectMapper App.

2.2.2 Crossings / Junctions

There are 106 issues that are due to crossings. There are six crossings where no facilities are provided (such as Figure 2.5), 33 crossings where there is no tactile paving provided, two with no dropped kerb, 42 crossings with incorrect tactile paving and five crossings with dropped kerbs that aren't flush with the crossing. There are five crossings that are not aligned and one instance where a continuous cycle track is indicated at a signalized pedestrian crossing. There are three push buttons incorrectly positioned and eight crossings with poor road surfacing. There is also one crossing that is wider than it should be given the green walk time allowed and with no refuge provided.



Figure 2.5: No crossing facilities

There are 40 crossing or junction issues which are considered high severity – 17, 18, 27, 50, 61, 63, 89, 99, 106, 126, 140, 144, 154, 164, 167, 173, 175, 177, 178, 212, 227, 239, 241, 242, 262, 263, 294, 300, 301, 304, 314, 318, 320, 322, 323, 333, 334, 337, 339 and 340. These are discussed in Table 2.1.

For more detailed information of the crossings / junction's issues, see the orange points in the Project Mapper App.

2.2.3 Bus Stops

There are 22 bus stops within this section which do not have Braille identification on them and one bus stop with no kassel kerb.

For more detailed information of the bus stop issues, see the pink points in the Project Mapper App.

2.2.4 Parking

There are two accessible parking bays in Section 1 that do not have dropped kerbs provided. There is one parking issue which is considered high severity – 130. This is discussed in Table 2.1.

For more detailed information of the parking issues, see the blue points in the ProjectMapper App.

2.2.5 Other

The other issues identified along Section 1 include multiple issues involving steps such as, five cases of stairs leading into basements with predominantly open gates with no warning to disabled users at the top, two cases of stairs being too low, three trip hazards in the form of small steps at entrance gates and one case of no warning at the bottom step.

There are two push buttons which have a defective pulse for the green man. There is a section where cyclists and pedestrians interact with no warning and two slopes to the road which are not part of a crossing facility, as well as two kerbs that are too steep. There is also one instance of incorrect road markings across a signalised crossing.

There are six crossing or junction issues which are considered high severity – 8, 25, 31, 32, 42, 54. These are discussed in Table 2.1.

For more detailed information of the other issues, see the red points in the Project Mapper App.

Of the 338 issues identified on this section of the scheme, 90 are considered high severity, 139 are considered medium severity and 109 are considered low severity, as shown in

Figure 2.6. Table 2.1 details the issues identified as high severity, along with the Irish Transverse Mercator co-ordinates and a proposed solution to the issues. The remaining issues are listed in Appendix A.

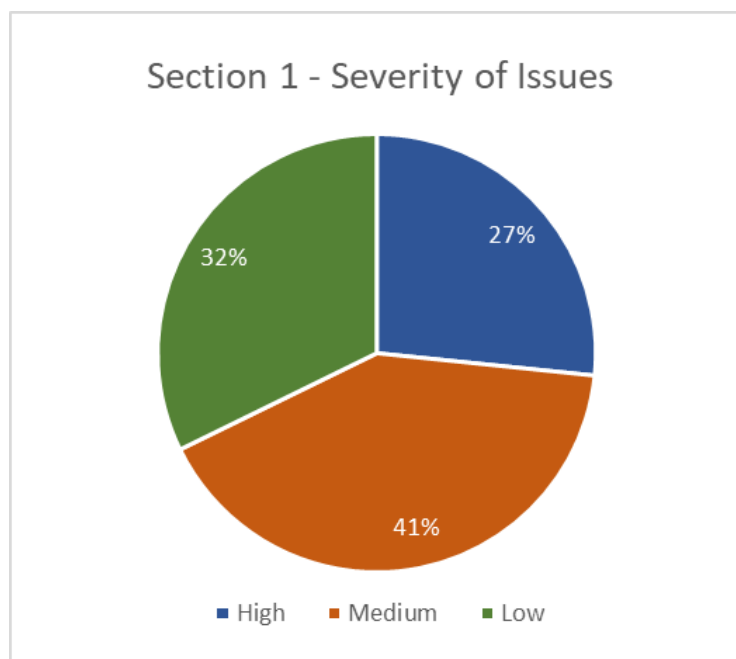


Figure 2.6: Severity of Issues Identified in Section 1

2.3 Desk Top Study for Remaining Issues

The southern portion of Section 1, along Stillorgan Road from Airfield Park to UCD, was not covered by the site walkovers. Jacobs has driven through videos, cycle through videos, and drone images of the Bray scheme which have been used along with Google Maps aerial and street view images to assess the gaps in the site walkovers at a high level.

While all the tactile paving in this section appears to be of the correct layout, the western arm of Greenfield Park is missing tactile paving, as in

Figure 2.7.





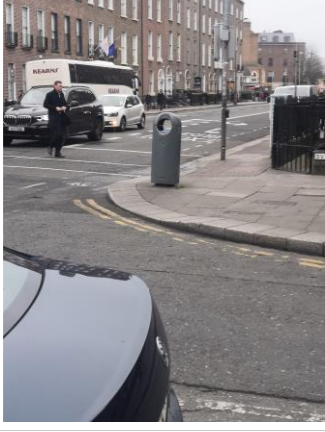













Figure 2.7: Missing tactile paving

In this small section, from Airfield Park to the end of Section 1, there are two bus stops in each direction. As is the trend with the remaining bus stops, it is unlikely these have Braille identification on them. It is recommended that any new bus stops that are considered include Braille identification.








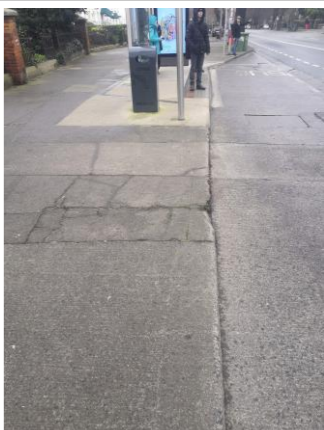
There are no other notable issues in this section of Section 1, however it is recommended that any trip hazards in the footpath or kerbs are repaired, any incorrect or missing tactile pavings are amended and any incomplete push buttons are repaired.

Table 2.1: High Severity Issues in Section 1


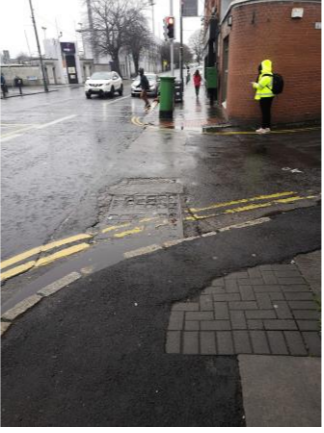






8 - Unsuitable access for disabled users	17 - No tactile paving at crossing	18 - No dropped kerbs at crossing	25 - Unsuitable access for disabled users
<p>This is located on Leeson Street Lower outside buildings 1, 2 & 3. It is considered high severity as there is a large and sustained trip hazard.</p>	<p>This is located on Leeson Street Lower. It is considered high severity as a lack of tactile paving makes visually impaired pedestrians unaware of the presence of the crossing.</p>	<p>This is located on Leeson Street Lower. It is considered high severity as a lack of tactile paving makes visually impaired pedestrians unaware of the presence of the crossing and can also introduce a trip hazard.</p>	<p>This is located on Leeson Street Lower. It is considered high severity as there is a below-ground building entrance with no hazard warning for visually impaired pedestrians.</p>
			
<p>716073, 733174</p>	<p>716168, 733049</p>	<p>716170, 733053</p>	<p>716176, 733023</p>
<p>Solution: Provide a barrier between the seating and the footpath or provide a grade difference to make the edge of the footpath clear.</p>	<p>Solution: Provide tactile paving at this crossing.</p>	<p>Solution: Provide a dropped kerb at this crossing.</p>	<p>Solution: Either provide tactile paving or a level difference so that disabled users can determine the edge of the path.</p>
27 - No tactile paving at crossing	29 - Insufficient footpath width	31 - Unsuitable access for disabled users	32 - Unsuitable access for disabled users
<p>This is located on Hatch Street Lower at the junction with Leeson Street Lower. It is considered high severity as a lack of tactile paving makes visually impaired pedestrians unaware of the presence of the crossing</p>	<p>This is located on Leeson Street Lower south of the junction with Hatch Street Lower. It is considered high severity as it makes the path inaccessible to people using wheelchairs or walking aides.</p>	<p>This is located on Leeson Street Lower south of the junction with Hatch Street Lower. It is considered high severity as there is a below-ground building entrance with no hazard warning for visually impaired pedestrians.</p>	<p>This is located on Leeson Street Lower south of the junction with Hatch Street Lower. It is considered high severity as there is a below-ground building entrance with no hazard warning for visually impaired pedestrians.</p>
			
<p>716185, 732991</p>	<p>716204, 732976</p>	<p>716210, 732967</p>	<p>716221, 732954</p>
<p>Solution: Provide tactile paving at this crossing.</p>	<p>Solution: Reposition street furniture to allow sufficient space for wheelchair users.</p>	<p>Solution: Either provide tactile paving or a level difference so that disabled users can determine the edge of the path.</p>	<p>Solution: Either provide tactile paving or a level difference so that disabled users can determine the edge of the path.</p>





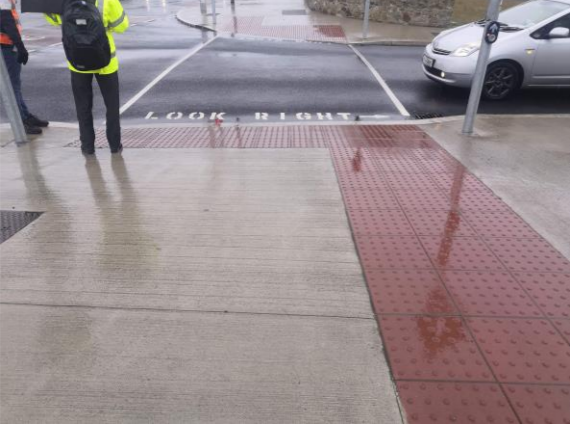



42 - Unsuitable access for disabled users	50 - Incorrect tactile paving at crossing	54 - Unsuitable access for disabled users	55 - Broken paving / footway
<p>This is located on Leeson Street Lower north of the junction with Adelaide Road. It is considered high severity as there is a below-ground building entrance with no hazard warning for visually impaired pedestrians.</p>	<p>This is located on Leeson Street Lower at the junction with Adelaide Road. It is considered high severity as incorrect tactile paving makes visually impaired pedestrians unaware of the type of crossing and could lead to dangerous crossing movements.</p>	<p>This is located on Leeson Street Lower at the junction with Adelaide Road. It is considered high severity due to the risk of collision between pedestrians and cyclists.</p>	<p>This is located on Leeson Street Lower at the junction with Mespil Road. It is considered high severity due to the presence of a trip hazard which could result in a dangerous fall into the carriageway.</p>
			
<p>716297, 732840</p>	<p>716337, 732788</p>	<p>716362, 732750</p>	<p>716375, 732725</p>
<p>Solution: Either provide tactile paving or a level difference so that disabled users can determine the edge of the path.</p>	<p>Solution: Upgrade tactile paving to match the current standards.</p>	<p>Solution: Provide clear markers for interactions between all users in this shared space, particularly between pedestrians and cyclists.</p>	<p>Solution: Repair paving to be even and suitable for disabled users.</p>
61 - No tactile paving at crossing	63 - No tactile paving at crossing	67 - Inappropriately constructed vehicle crossover point (multiple along stretch of road)	69 - Inappropriately constructed vehicle crossover point (multiple along stretch of road)
<p>This is located on Leeson Street Upper at the junction with Darthmouth Road. It is considered high severity as a lack of tactile paving makes visually impaired pedestrians unaware of the presence of the crossing.</p>	<p>This is located on Leeson Street Upper at the junction with Darthmouth Road. It is considered high severity as a lack of tactile paving makes visually impaired pedestrians unaware of the presence of the crossing.</p>	<p>These are located on Leeson Street Upper. They are considered high severity due to the risk of visually impaired pedestrians not being aware of the presence of a kerb and veering into the carriageway.</p>	<p>These are located on Leeson Street Upper. They are considered high severity due to the risk of visually impaired pedestrians not being aware of the presence of a kerb and veering into the carriageway.</p>
			
<p>716425, 732591</p>	<p>716433, 732584</p>	<p>716485, 732517</p>	<p>716509, 732479</p>
<p>Solution: Provide required tactile paving.</p>	<p>Solution: Provide required tactile paving.</p>	<p>Solution: Reconstruct the vehicle crossings to match the level difference required in the current standards.</p>	<p>Solution: Reconstruct the vehicle crossings to match the level difference required in the current standards.</p>






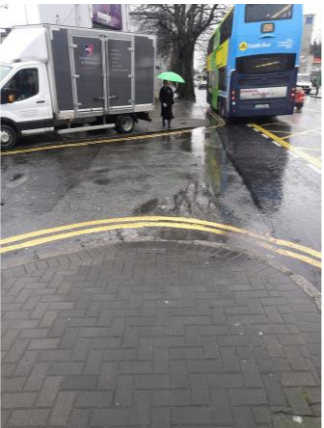
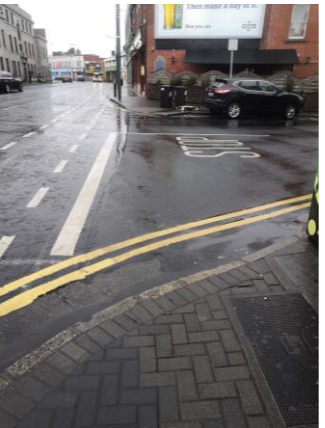

<p>72 - Inappropriately constructed vehicle crossover point (multiple along stretch of road)</p>	<p>73 - Inappropriately constructed vehicle crossover point (multiple along stretch of road)</p>	<p>74 - Broken paving / footway</p>	<p>75 - Broken paving / footway</p>
<p>These are located on Leeson Street Upper. They are considered high severity due to the risk of visually impaired pedestrians not being aware of the presence of a kerb and veering into the carriageway.</p>	<p>These are located on Leeson Street Upper. They are considered high severity due to the risk of visually impaired pedestrians not being aware of the presence of a kerb and veering into the carriageway.</p>	<p>This is located on Leeson Street Upper. It is considered high severity due to the presence of a trip hazard which could result in a dangerous fall into the carriageway.</p>	<p>This is located on Leeson Street Upper. It is considered high severity due to the presence of a trip hazard which could result in a dangerous fall into the carriageway.</p>
<p>716525, 732466</p>	<p>716573, 732437</p>	<p>716604, 732445</p>	<p>716576, 732443</p>
<p>Solution: Reconstruct the vehicle crossings to match the level difference required in the current standards.</p>	<p>Solution: Reconstruct the vehicle crossings to match the level difference required in the current standards.</p>	<p>Solution: Repair paving to be even and suitable for disabled users.</p>	<p>Solution: Repair paving to be even and suitable for disabled users.</p>
<p>76 - Broken kerbing</p>	<p>77 - Inappropriately constructed vehicle crossover point (multiple along stretch of road)</p>	<p>89 - No tactile paving at crossing</p>	<p>92 - Broken paving / footway</p>
<p>This is located on Leeson Street Upper. It is considered high severity due to the presence of a trip hazard which could result in a dangerous fall into the carriageway.</p>	<p>These are located on Leeson Street Upper. They are considered high severity due to the risk of visually impaired pedestrians not being aware of the presence of a kerb and veering into the carriageway.</p>	<p>This is located on Leeson Street Upper at the junction with Appian Way. It is considered high severity as a lack of tactile paving makes visually impaired pedestrians unaware of the presence of the crossing.</p>	<p>This is located on Leeson Street Upper. It is considered high severity due to the presence of a trip hazard which could result in a dangerous fall into the carriageway.</p>
<p>716591, 732452</p>	<p>716601, 732460</p>	<p>716784, 732350</p>	<p>716865, 732306</p>
<p>Solution: Repair kerbing to be even and suitable for disabled users.</p>	<p>Solution: Reconstruct the vehicle crossings to match the level difference required in the current standards.</p>	<p>Solution: Provide tactile paving at this crossing.</p>	<p>Solution: Repair paving to be even and suitable for disabled users.</p>









<p>94 - Broken paving / footway</p>	<p>95 - Broken paving / footway</p>	<p>97 - Broken paving / footway</p>	<p>99 - No crossing facilities provided</p>
<p>This is located on Leeson Street Upper. It is considered high severity due to the presence of a trip hazard which could result in a dangerous fall into the carriageway.</p>	<p>This is located on Leeson Street Upper. It is considered high severity due to the presence of a trip hazard which could result in a dangerous fall into the carriageway.</p>	<p>This is located on Leeson Street Upper. It is considered high severity due to the presence of a trip hazard which could result in a dangerous fall into the carriageway.</p>	<p>This is located on Morehampton Road. It is considered high severity as there are no alternatives to crossing at this point and it makes crossing inaccessible.</p>
			
<p>716871, 732300</p>	<p>716874, 732298</p>	<p>716897, 732284</p>	<p>716918, 732281</p>
<p>Solution: Repair paving to be even and suitable for disabled users.</p>	<p>Solution: Repair paving to be even and suitable for disabled users.</p>	<p>Solution: Repair paving to be even and suitable for disabled users.</p>	<p>Solution: Provide crossing facilities at this location.</p>
<p>103 - Broken paving / footway</p>	<p>105 - Broken paving / footway</p>	<p>106 - No tactile paving at crossing</p>	<p>120 - Broken paving / footway</p>
<p>This is located on Morehampton Road. It is considered high severity due to the presence of a trip hazard which could result in a dangerous fall.</p>	<p>This is located on Morehampton Road. It is considered high severity due to the presence of a trip hazard which could result in a dangerous fall.</p>	<p>This is located on Morehampton Road at the junction with Bloomfield Avenue. It is considered high severity as a lack of tactile paving makes visually impaired pedestrians unaware of the presence of the crossing.</p>	<p>This is located on Morehampton Road. It is considered high severity due to the presence of a trip hazard which could result in a dangerous fall into the carriageway.</p>
			
<p>716967, 732225</p>	<p>716987, 732196</p>	<p>717011, 732165</p>	<p>717138, 732022</p>
<p>Solution: Repair paving to be even and suitable for disabled users.</p>	<p>Solution: Repair paving to be even and suitable for disabled users.</p>	<p>Solution: Provide tactile paving at this crossing.</p>	<p>Solution: Repair paving to be even and suitable for disabled users.</p>

<p>126 - Incorrect tactile paving at crossing</p>	<p>130 - No dropped kerbs provided at disabled parking bay</p>	<p>140 - No tactile paving at crossing</p>	<p>144 - No tactile paving at crossing</p>
<p>This is located on crossing Marlborough Road at the junction with Morehampton Road. It is considered high severity as incorrect tactile paving makes visually impaired pedestrians unaware of the type of crossing and could lead to dangerous crossing movements.</p>	<p>This is located on Morehampton Road. It is considered high severity as it makes the parking bay inaccessible to people using wheelchairs or walking aides.</p>	<p>This is located on crossing Mount Eden Road at the junction with Morehampton Road. It is considered high severity as a lack of tactile paving makes visually impaired pedestrians unaware of the presence of the crossing.</p>	<p>This is located on crossing Belmont Avenue at the junction with Donnybrook Road. It is considered high severity as a lack of tactile paving makes visually impaired pedestrians unaware of the presence of the crossing.</p>
<p>717182, 731959</p>	<p>717226, 731913</p>	<p>717299, 731819</p>	<p>717373, 731737</p>
<p>Solution: Upgrade tactile paving to match the current standards.</p>	<p>Solution: Provide a dropped kerb at this crossing.</p>	<p>Solution: Provide tactile paving at this crossing.</p>	<p>Solution: Provide tactile paving at this crossing.</p>
<p>154 - Crossings not aligned</p>	<p>160 - Broken paving / footway</p>	<p>162 - Broken paving / footway</p>	<p>163 - Broken paving / footway</p>
<p>This is located on Donnybrook Road. It is considered high severity due to the risk of visually impaired pedestrians walking into the carriageway while trying to use the crossing.</p>	<p>This is located on Donnybrook Road. It is considered high severity due to the presence of a trip hazard which could result in a dangerous fall.</p>	<p>This is located on Donnybrook Road. It is considered high severity due to the presence of a trip hazard which could result in a dangerous fall.</p>	<p>This is located on Donnybrook Road. It is considered high severity due to the presence of a trip hazard which could result in a dangerous fall into the carriageway.</p>
<p>717466, 731655</p>	<p>717558, 731604</p>	<p>717569, 731592</p>	<p>717582, 731583</p>
<p>Solution: Reconstruct crossing to align dropped kerbs.</p>	<p>Solution: Repair paving to be even and suitable for disabled users.</p>	<p>Solution: Repair paving to be even and suitable for disabled users.</p>	<p>Solution: Repair paving to be even and suitable for disabled users.</p>

<p>164 - No tactile paving at crossing</p>	<p>167 - Crossings not aligned</p>	<p>172 - Insufficient footpath width</p>	<p>173 - No tactile paving at crossing</p>
<p>This is located on Donnybrook Road. It is considered high severity as a lack of tactile paving makes visually impaired pedestrians unaware of the presence of the crossing.</p>	<p>This is located on Donnybrook Road. It is considered high severity due to the risk of visually impaired pedestrians walking into the carriageway while trying to use the crossing.</p>	<p>This is located on Donnybrook Road opposite Energia Park. It is considered high severity as it makes the path inaccessible to people using wheelchairs or walking aides.</p>	<p>This is located on Donnybrook Road opposite Energia Park. It is considered high severity as a lack of tactile paving makes visually impaired pedestrians unaware of the presence of the crossing.</p>
			
<p>717575, 731586</p>	<p>717577, 731585</p>	<p>717609, 731545</p>	<p>717634, 731517</p>
<p>Solution: Provide tactile paving at this crossing.</p>	<p>Solution: Reconstruct crossing to align dropped kerbs.</p>	<p>Solution: Reposition street furniture to allow sufficient space for wheelchair users.</p>	<p>Solution: Provide tactile paving at this crossing.</p>
<p>174 - Inappropriate street furniture</p>	<p>175 - Road Surfacing at Crossing Poor</p>	<p>177 - No tactile paving at crossing</p>	<p>178 - No crossing facilities provided</p>
<p>This is located on Donnybrook Road opposite Energia Park. It is considered high severity due to the obstruction of the footway in a manner that would not be anticipated by visually impaired pedestrians.</p>	<p>This is located on Donnybrook Road crossing Brookvale Road. It is considered high severity due to the presence of a trip hazard on the road surface which could result in a fall in a dangerous location.</p>	<p>This is located on Donnybrook Road opposite Energia Park. It is considered high severity as a lack of tactile paving makes visually impaired pedestrians unaware of the presence of the crossing.</p>	<p>This is located on Donnybrook Road opposite Energia Park. It is considered high severity as there are no alternatives to crossing at this point and it makes crossing inaccessible.</p>
			
<p>717633, 731518</p>	<p>717636, 731517</p>	<p>717640, 731510</p>	<p>717664, 731481</p>
<p>Solution: Investigate the need for bollards in this location and if they are required, relocate bollards to be out of the line of desire.</p>	<p>Solution: Repair paving to be even and suitable for disabled users.</p>	<p>Solution: Provide tactile paving at this crossing.</p>	<p>Solution: Provide crossing facilities at this location.</p>

180 - Broken kerbing	183 - Insufficient footpath width	193 - No level difference between footpath and cycle lane	202 - No level difference between footpath and cycle lane
<p>This is located on Donnybrook Road. It is considered high severity due to the presence of a trip hazard which could result in a dangerous fall into the carriageway.</p>	<p>This is located on Donnybrook Road. It is considered high severity as it makes the path inaccessible to people using wheelchairs or walking aides.</p>	<p>This is located on Stillorgan Road south of the River Dodder crossing and to the west of the carriageway. It is considered high severity due to the risk of collision between pedestrians and cyclists.</p>	<p>This is located on Stillorgan Road to the west of the carriageway. It is considered high severity due to the risk of collision between pedestrians and cyclists.</p>
			
<p>717694, 731448</p>	<p>717702, 731444</p>	<p>717819, 731295</p>	<p>718066, 731015</p>
<p>Solution: Repair kerbing to be even and suitable for disabled users.</p>	<p>Solution: Reposition bus stop and street furniture to allow sufficient space for wheelchair users.</p>	<p>Solution: Create delineation between the footpath and cycle path.</p>	<p>Solution: Create delineation between the footpath and cycle path.</p>
212 - Incorrect tactile paving at crossing	215 - No level difference between footpath and cycle lane	220 - No level difference between footpath and cycle lane	226 - Insufficient footpath width
<p>This is located on Stillorgan Road outside the RTÉ campus. It is considered high severity as it is an in-line crossing and should have 120 cm tactiles at its narrowest point. Insufficient tactiles could result in visually impaired pedestrians missing the tiles and stepping into the carriageway.</p>	<p>This is located on Stillorgan Road to the east of the carriageway. It is considered high severity due to the risk of collision between pedestrians and cyclists.</p>	<p>This is located on Stillorgan Road south of the River Dodder crossing and to the east of the carriageway. It is considered high severity due to the risk of collision between pedestrians and cyclists.</p>	<p>This is located on Donnybrook Road. It is considered high severity as it makes the path inaccessible to people using wheelchairs or walking aides.</p>
			
<p>718208, 730888</p>	<p>718085, 731018</p>	<p>717910, 731233</p>	<p>717802, 731363</p>
<p>Solution: Upgrade tactile paving to match the current standards.</p>	<p>Solution: Create delineation between the footpath and cycle path.</p>	<p>Solution: Create delineation between the footpath and cycle path.</p>	<p>Solution: Reposition street furniture to allow sufficient space for wheelchair users.</p>

<p>227 - No tactile paving at crossing</p>	<p>228 - Broken paving / footway</p>	<p>229 - Broken kerbing</p>	<p>234 - Broken paving / footway</p>
<p>This is located on Beaver Row. It is considered high severity as a lack of tactile paving makes visually impaired pedestrians unaware of the presence of the crossing.</p>	<p>This is located on Donnybrook Road. It is considered high severity due to the presence of a trip hazard which could result in a dangerous fall into the carriageway.</p>	<p>This is located on Donnybrook Road. It is considered high severity due to the presence of a trip hazard which could result in a dangerous fall into the carriageway.</p>	<p>This is located on Donnybrook Road outside Energia Park. It is considered high severity due to the presence of a trip hazard which could result in a dangerous fall into the carriageway.</p>
			
<p>717806, 731363</p>	<p>717801, 731374</p>	<p>717786, 731345</p>	<p>717660, 731501</p>
<p>Solution: Provide tactile paving at this crossing.</p>	<p>Solution: Repair paving to be even and suitable for disabled users.</p>	<p>Solution: Repair kerbing to be even and suitable for disabled users.</p>	<p>Solution: Repair paving to be even and suitable for disabled users.</p>
<p>236 - Broken paving / footway</p>	<p>239 - No crossing facilities provided</p>	<p>241 - No tactile paving at crossing</p>	<p>242 - No tactile paving at crossing</p>
<p>This is located on Donnybrook Road outside Energia Park. It is considered high severity due to the presence of a trip hazard which could result in a dangerous fall.</p>	<p>This is located on Donnybrook Road outside Bective Rangers Football Club. It is considered high severity as there are no alternatives to crossing at this point and it makes crossing inaccessible.</p>	<p>This is located on Donnybrook Road. It is considered high severity as a lack of tactile paving makes visually impaired pedestrians unaware of the presence of the crossing.</p>	<p>This is located on Donnybrook Road. It is considered high severity as a lack of tactile paving makes visually impaired pedestrians unaware of the presence of the crossing.</p>
			
<p>717635, 731525</p>	<p>717599, 731565</p>	<p>717588, 731584</p>	<p>717515, 731653</p>
<p>Solution: Repair paving to be even and suitable for disabled users.</p>	<p>Solution: Provide crossing facilities at this location.</p>	<p>Solution: Provide tactile paving at this crossing.</p>	<p>Solution: Provide tactile paving at this crossing.</p>
<p>243 - Inappropriately constructed vehicle crossover point</p>	<p>255 - Broken paving / footway</p>	<p>262 - Incorrect tactile paving at crossing</p>	<p>263 - Incorrect tactile paving at crossing</p>
<p>This is located on Donnybrook Road. It is considered high severity due to the risk of visually impaired pedestrians not</p>	<p>This is located on Morehampton Road. It is considered high severity due to the presence of a trip hazard which could result in a dangerous fall.</p>	<p>This is located on crossing Herbert Park at the junction with Morehampton Road. It is considered high severity as incorrect tactile paving makes visually impaired pedestrians unaware</p>	<p>This is located on crossing Morehampton Road at the junction with Herbert Park. It is considered high severity as incorrect tactile paving makes visually impaired pedestrians</p>

<p>being aware of the presence of a kerb and veering into the carriageway.</p>		<p>of the type of crossing and could lead to dangerous crossing movements.</p>	<p>unaware of the type of crossing and could lead to dangerous crossing movements.</p>
			
<p>717462, 731665</p>	<p>717369, 731769</p>	<p>717206, 731961</p>	<p>717192, 731965</p>
<p>Solution: provide a dropped kerb and tactile paving at this location.</p>	<p>Solution: Repair paving to be even and suitable for disabled users.</p>	<p>Solution: Upgrade tactile paving to match the current standards.</p>	<p>Solution: Upgrade tactile paving to match the current standards.</p>
<p>270 - Ponding</p>	<p>272 - Uneven paving / footway</p>	<p>275 - Uneven paving / footway</p>	<p>294 - Road Surfacing at Crossing Poor</p>
<p>This is located on Morehampton Road. It is considered high severity due to the large amount of ponding which makes the footway inaccessible and could mask other hazards.</p>	<p>This is located on Morehampton Road. It is considered high severity due to the presence of a trip hazard which could result in a dangerous fall.</p>	<p>This is located on Morehampton Road. It is considered high severity due to the presence of a trip hazard which could result in a dangerous fall.</p>	<p>This is located on Leeson Street Upper crossing Waterloo Lane. It is considered high severity due to the presence of a trip hazard on the road surface which could result in a fall in a dangerous location.</p>
			
<p>717099, 732082</p>	<p>717088, 732097</p>	<p>717077, 732114</p>	<p>716796, 732366</p>
<p>Solution: Repair paving to be even and prevent ponding.</p>	<p>Solution: Repair paving to be even and suitable for disabled users.</p>	<p>Solution: Repair paving to be even and suitable for disabled users.</p>	<p>Solution: Repair paving to be even and suitable for disabled users.</p>
<p>296 - Broken paving / footway</p>	<p>300 - Incorrect tactile paving at crossing</p>	<p>301 - Incorrect tactile paving at crossing</p>	<p>303 - Inappropriately constructed vehicle crossover point</p>
<p>This is located on Leeson Street Upper at the junction with Appian Way. It is considered high severity due to the presence of a substantial hazard which could result in a dangerous fall.</p>	<p>This is located on Leeson Street Upper at the junction with Burlington Road. It is considered high severity as incorrect tactile paving makes visually impaired pedestrians unaware of the type of crossing and could lead to dangerous crossing movements.</p>	<p>This is located on Sussex Road at the junction with Leeson Street Upper. It is considered high severity as incorrect tactile paving makes visually impaired pedestrians unaware of the type of crossing and could lead to dangerous crossing movements.</p>	<p>This is located on Sussex Road. It is considered high severity due to the risk of visually impaired pedestrians not being aware of the presence of a kerb and veering into the carriageway.</p>

<p>716760, 732384</p>	<p>716692, 732436</p>	<p>716651, 732458</p>	<p>716601, 732528</p>
<p>Solution: Repair paving to be even and suitable for disabled users.</p>	<p>Solution: Upgrade tactile paving to match the current standards.</p>	<p>Solution: Upgrade tactile paving to match the current standards.</p>	<p>Solution: Either provide tactile paving or raise the crossing to show deliniation.</p>
<p>304 - No tactile paving at crossing</p>	<p>308 - Broken paving / footway</p>	<p>314 - No tactile paving at crossing</p>	<p>316 - Broken paving / footway</p>
<p>This is located on Sussex Road. It is considered high severity as a lack of tactile paving makes visually impaired pedestrians unaware of the presence of the crossing.</p>	<p>This is located on Sussex Road. It is considered high severity due to the presence of a substantial hazard which could result in a dangerous fall.</p>	<p>This is located on Sussex Terrace at the junction with Sussex Road. It is considered high severity as a lack of tactile paving makes visually impaired pedestrians unaware of the presence of the crossing.</p>	<p>This is located on Leeson Street Upper. It is considered high severity due to the presence of a trip hazard which could result in a dangerous fall.</p>
<p>716577, 732540</p>	<p>716534, 732572</p>	<p>716472, 732647</p>	<p>716417, 732670</p>
<p>Solution: Provide required tactile paving.</p>	<p>Solution: Repair paving to be even and suitable for disabled users.</p>	<p>Solution: Provide required tactile paving.</p>	<p>Solution: Repair paving to be even and suitable for disabled users.</p>
<p>318 - No tactile paving at crossing</p>	<p>322 - Incorrect tactile paving at crossing</p>	<p>323 - Incorrect tactile paving at crossing</p>	<p>333 - No dropped kerbs at crossing</p>
<p>This is located on Leeson Street Lower at the junction with Mespil Road. It is considered high severity as a lack of tactile paving makes visually impaired pedestrians unaware of the presence of the crossing.</p>	<p>This is located on Leeson Street Lower north of the junction with Adelaide Road. It is considered high severity as incorrect tactile paving makes visually impaired pedestrians unaware of the type of crossing and could lead to dangerous crossing movements.</p>	<p>This is located on Leeson Street Lower north of the junction with Adelaide Road. It is considered high severity as incorrect tactile paving makes visually impaired pedestrians unaware of the type of crossing and could lead to dangerous crossing movements.</p>	<p>This is located on Leeson Street Lower. It is considered high severity as a lack of tactile paving makes visually impaired pedestrians unaware of the presence of the crossing and can also introduce a trip hazard.</p>

<p>716383, 732727</p>	<p>716334, 732820</p>	<p>716332, 732813</p>	<p>716173, 733059</p>
<p>Solution: Provide required tactile paving.</p>	<p>Solution: Upgrade tactile paving to match the current standards.</p>	<p>Solution: Upgrade tactile paving to match the current standards.</p>	<p>Solution: Provide a dropped kerb at this crossing.</p>
<p>334 - No tactile paving at crossing</p>	<p>335 - Inappropriate street furniture</p>	<p>337 - No tactile paving at crossing</p>	<p>339 - Incorrect tactile paving at crossing</p>
<p>This is located on Leeson Street Lower. It is considered high severity as a lack of tactile paving makes visually impaired pedestrians unaware of the presence of the crossing.</p>	<p>This is located on Leeson Street Lower. It is considered high severity due to the presence of a trip hazard which could result in a dangerous fall.</p>	<p>This is located on Leeson Street Lower. It is considered high severity as a lack of tactile paving makes visually impaired pedestrians unaware of the presence of the crossing.</p>	<p>This is located on Leeson Street Lower. It is considered high severity as incorrect tactile paving makes visually impaired pedestrians unaware of the type of crossing and could lead to dangerous crossing movements.</p>
<p>716169, 733059</p>	<p>716158, 733072</p>	<p>716107, 733148</p>	<p>716085, 733183</p>
<p>Solution: Provide required tactile paving.</p>	<p>Solution: Adjust steps to avoid trip hazard. Potentially fill in the underneath of the steps or build out the adjacent fence to make the edge of the footpath obvious.</p>	<p>Solution: Provide required tactile paving.</p>	<p>Solution: Upgrade tactile paving to match the current standards.</p>
<p>340 - Incorrect tactile paving at crossing</p>			
<p>This is located on St. Stephen's Green outside Permanent TSB. It is considered high severity as it is an in-line crossing and should have 120 cm tactiles at its narrowest point. Insufficient tactiles could result in visually impaired pedestrians missing the tiles and stepping into the carriageway.</p>			



716070, 733181

Solution: Upgrade tactile paving to match the current standards.

3. Section 2 – UCD to Wyattville Road

3.1 Description of Section

This section of the scheme includes the road network along Stillorgan Road / N11 between UCD and Wyattville Road. Figure 3.1 shows this section of the scheme.



Figure 3.1: Map of Section 2

Appendix B shows the main attractors and generators of the entire scheme. Section 2 of the Bray scheme is shown in Map 4, Map 5, Map 6, Map 7, Map 8, Map 9 and Map 10. There are six buildings of significance identified from the Prime 2 data within the vicinity of this section of the scheme. These are:

- St. Thomas' Church
- Oatlands College
- Stillorgan College of Further Education
- Church of Our Lady of Perpetual Succour
- AIB Bank Bray Road
- St. Brigid's Church

These buildings are all considered to be places that are sensitive to disability design requirements and therefore access and facilities should be provided in the vicinity to make them easy to access for people with disabilities. There are likely to be other buildings in the area that require access for users with disabilities that are not identified in the Prime 2 study, which only identified prioritised buildings within 100m of the corridor. All of these buildings have private parking to provide for accessible parking spaces.

Figure 3.2 shows the current bus stops along the Bray scheme in the vicinity of the above listed buildings. It is considered that these bus stops currently service the identified buildings well, and there are crossings provided where bus stops are across the road.

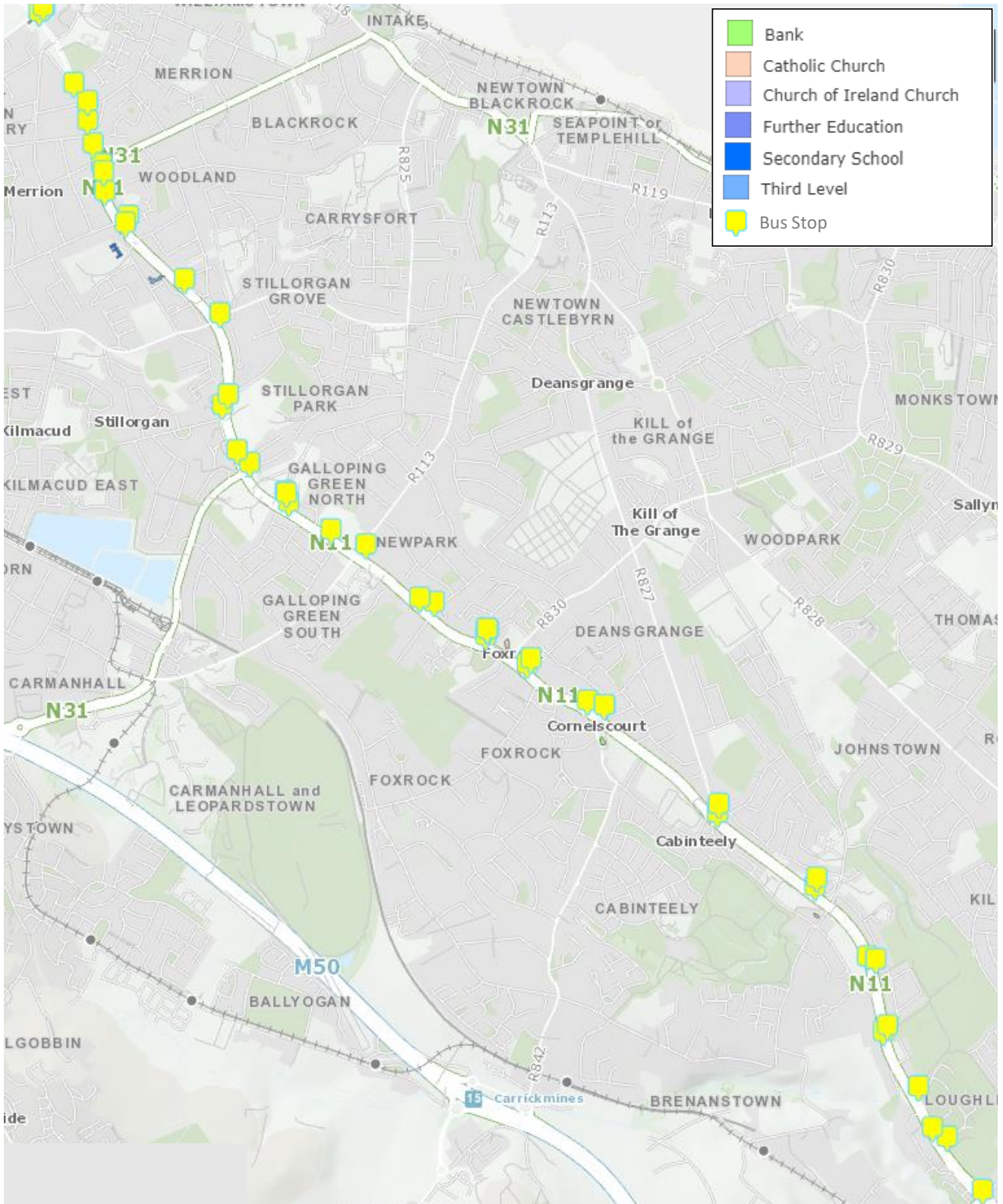


Figure 3.2: Prime2 buildings and nearby bus stops

3.2 Problem Identification

Due to Covid-19 restrictions, Section 2 was assessed utilizing video surveys, online mapping and drone aerial mapping.

3.2.1 Footpaths

Figure 3.3 shows the section of the scheme within this section where there is no continuous footpath provided by design. These sections have either a crossing provided to the footpath on the other side, or a footway on a parallel street away from the main road, with path access to the bus stops.

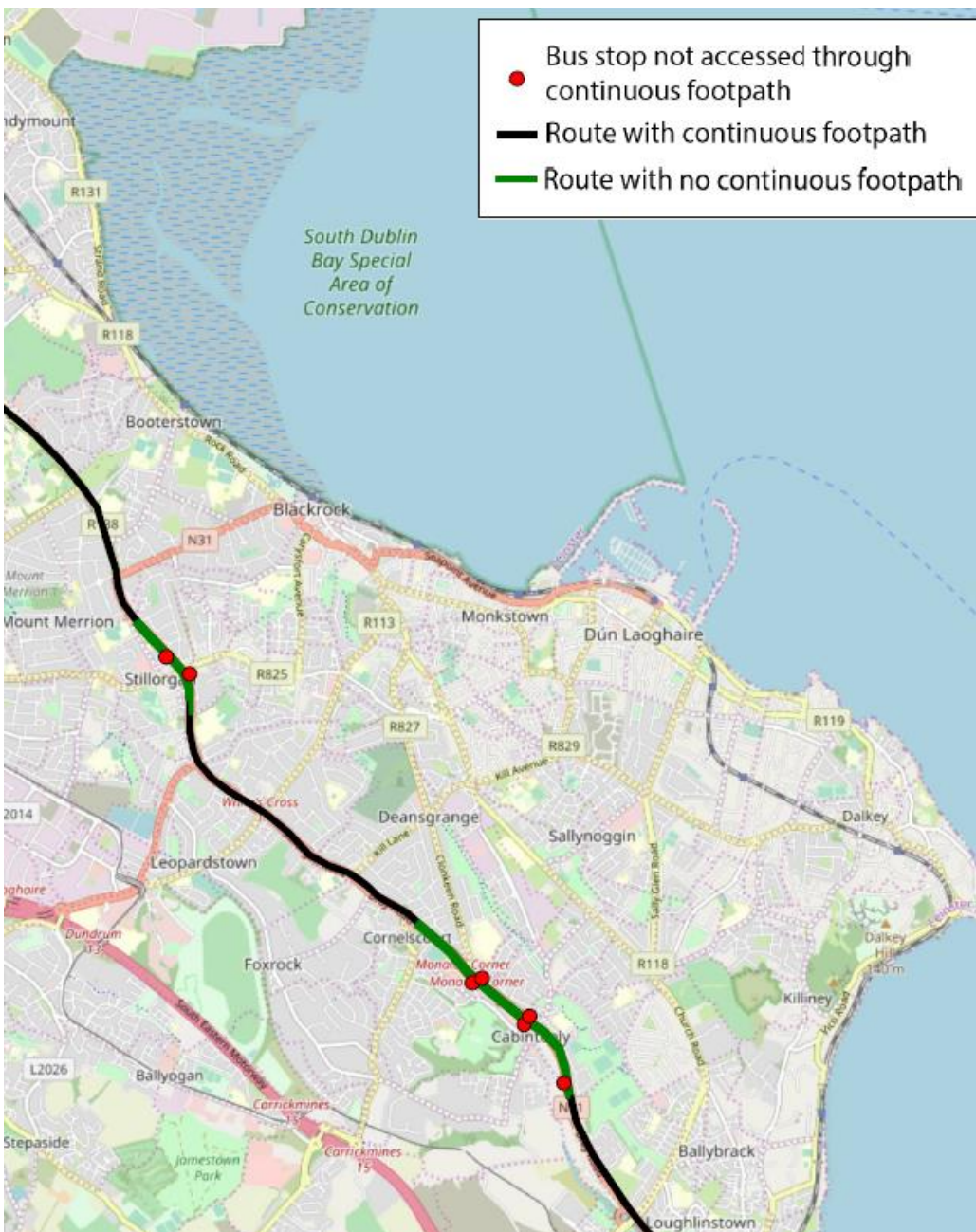


Figure 3.3: Sections of the scheme with no continuous footpath

The footpath and kerbing along this section appears to be mostly of good quality throughout this section. There are two instances on the video where lamp posts appear to limit the width of the footpath below the standards allowed, Figure 3.4. It is recommended that in the design stage, all lamp posts are placed at the edge of the footpath or away from the footpath completely, where considered to limit the width of the footpath below the standards allowed.

For the most part of this section, the cycle path is at the road level or separated from the footpath by a grass verge. However, there are sections where the cycle path is adjacent with the footpath with no level difference,

Figure 3.5.



Figure 3.5: No level difference between footpath and cycle lane

There are multiple instances of incorrect tactile paving at cycle lanes, particularly at bus stops. There is no warning that the space in front of the bus stops is shared space for either the pedestrians or the cyclists. Table 3.1 shows some examples of where tactile paving is missing.

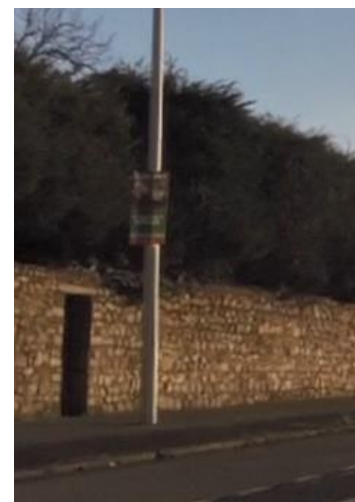


Figure 3.4: Lamp post in footway

Table 3.1: Incorrect tactile paving at cycle lanes




Figure	Issue
	<p>Boosterstown Woodbine Road Bus Stop 2007: There is no tactile paving to indicate the need to cross the cycle path. There is also no provision to indicate priority.</p>
	<p>Boosterstown Woodbine Road Bus Stop 2007: Missing tactile paving for pedestrians to cross cycle path. There is also no provision to indicate priority.</p>
	<p>Seafield Road Bus Stop 2008: Missing tactile paving for pedestrians to cross cycle path. There is also no provision to indicate priority.</p>






Figure	Issue
	<p>Seafield Road Bus Stop 2008: Cycle path ends and becomes shared space with the lower section of the ramp to the overpass without warning.</p>
	<p>Radisson Hotel Bus Stop 2009: The cycle path becomes shared space in front of the bus shelter without any tactile paving to indicate pedestrians need to cross the cycle path to access a bus. There is also no provision to indicate priority.</p>
	<p>Boosterstown Avenue Bus Stop 2010: The cycle path becomes shared space in front of the bus shelter without any tactile paving to indicate pedestrians need to cross the cycle path to access a bus. There is also no provision to indicate priority.</p>

Figure	Issue
	<p>Sycamore Crescent Bus Stop 435: The cycle path becomes shared space in front of the bus shelter without any tactile paving to indicate pedestrians need to cross the cycle path to access a bus. There is also no provision to indicate priority.</p>
	<p>Newtownpark Avenue Bus Stop 2016: Missing tactile paving for pedestrians to cross cycle path. Gap in fence does not align with the footpath. There is also no provision to indicate priority.</p>

3.2.2 Crossings / Junctions

There are some stairs at the interchange at UCD which do not have tactile paving to indicate that they are there.



Figure 3.6: No tactile paving to indicate stairs

Section 2 of the Bray scheme has multiple pedestrian overpasses. These all appear to have ramp access for disabled users.

Through the video footage, it was noticed that some of the vehicle crossovers are flush with the road. These should be corrected to meet the standards to prevent vision impaired people from accidentally walking into the road.




Figure 3.7 shows an example of this.



Figure 3.7: Example of kerb flush with road

Most of the junctions along this section of the scheme appear to have the correct tactile paving. Table 3.2 shows the junctions that are missing tactile paving.

Table 3.2: Junctions missing tactile paving

Intersecting Street	Image
Willow Avenue	 An aerial photograph showing the intersection of Willow Avenue and a main road. Willow Avenue is a narrow road that curves from the top left towards the center. The main road has a red-paved bus lane on the right side with the text 'LANE BUS' painted on it. There are several cars on the main road and a blue car at the intersection. The surrounding area includes green grass and some buildings.
Sunnyhill Park	 An aerial photograph showing the intersection of Sunnyhill Park and a main road. Sunnyhill Park is a road that curves from the top left towards the center. The main road has a red-paved bus lane on the right side. There are several cars on the main road and a white car at the intersection. The surrounding area includes green grass and some trees.
Shanganagh Vale	 An aerial photograph showing the intersection of Shanganagh Vale and a main road. Shanganagh Vale is a road that curves from the top left towards the center. The main road has a red-paved bus lane on the right side. There are several cars on the main road and a red car at the intersection. The surrounding area includes green grass and some trees.

Intersecting Street	Image
Knocksinna	
Treesdale	

3.2.3 Bus Stops

There are 21 bus stops on each side of the road in this Section. As is the trend with the remaining bus stops, it is unlikely these have Braille identification on them. It is recommended that any new bus stops that are considered include Braille identification.

As mentioned above, the interaction of cyclists and pedestrians at bus stops needs to be considered carefully to ensure safe accessibility to all users.

3.2.4 Parking

There is no on street parking along Section 2, which leads to some instances of vehicles parked on the footpath. A separate parking survey is being carried out and should identify areas of high demand where parking may need to be supplied elsewhere.

Figure 3.8 shows two examples of vehicles parked in the footway, from the video survey and the drone footage.



Figure 3.8: Vehicles parked on footpath. Left Image: Northbound carriageway on the northern arm of the Kill Lane junction. Right Image: Southbound Carriageway north of bus stop 435

3.2.5 Other

Some common other issues that were discovered in other sections include overgrown overhang, leaves on the path and push buttons that do not have full functionality.

4. Section 3 – Wyattville Road to Wilford Roundabout

4.1 Description of Section

This section of the scheme includes the road network along Stillorgan Road / N11 and Dublin Road between Wyattville Road and Wilford Roundabout.

Figure 4.1 shows this section of the scheme.



Figure 4.1: Map of Section 3

To date, the community has been consulted on potential design layouts for the length of the scheme. Below is a list of the points and opinions raised by members of the public at the community consultation that relate to Section 3 of the scheme:

- There was significant concern that the existing accessible parking space in Shankill Village should remain, along with the other on-street parking in the area.
- Concerns were raised that footpaths and footpath width should not be reduced in Shankill Village to allow for accessibility.
- It was noted that an increase in road width in Shankill Village could result in accessibility issues for crossing the road.

Appendix B shows the main attractors and generators of the entire scheme. Section 3 of the Bray scheme is shown in Map 1, Map 2, Map 3 and Map 4. There are eight buildings of significance identified from the Prime2 data within the vicinity of this section of the scheme. These are:

- St. Columcille's Hospital
- Rathmichael Parish National School
- Rathmichael Clinic
- St. Anne's National School
- St. Anne's Church Shankill
- Beechfield Manor Nursing Home
- Crinken Church
- Woodbrook College

These buildings are all considered to be places that are sensitive to disability design requirements and therefore access and facilities should be provided in the vicinity to make them easy to access for people with disabilities. There are likely to be other buildings in the area that require access for users with disabilities that are not identified in the Prime2 study, which only identified prioritised buildings within 100m of the corridor. All of these buildings have private parking to provide for accessible parking spaces.

Figure 4.2 shows the current bus stops along the Bray scheme in the vicinity of the above listed buildings. It is considered that these bus stops currently service the identified buildings well, there are crossings provided where bus stops are across the road.

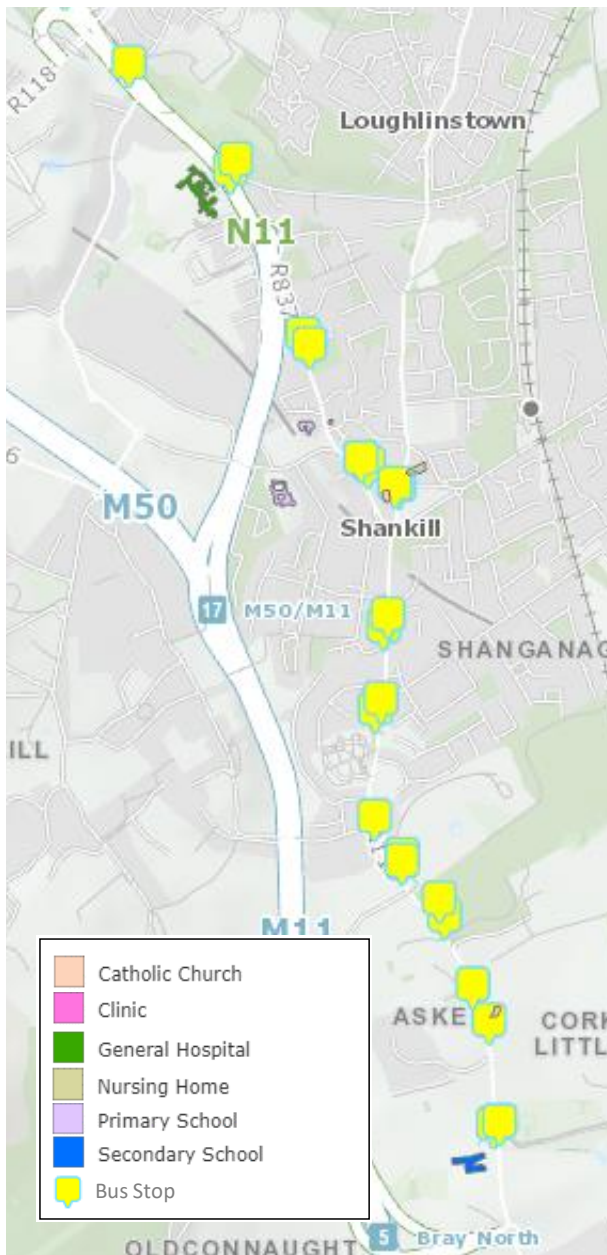


Figure 4.2: Prime2 buildings and nearby bus stops

4.2 Problem Identification

There were 182 identified issues in Section 3 of the Bray scheme. Figure 4.3 shows the types of issues identified.

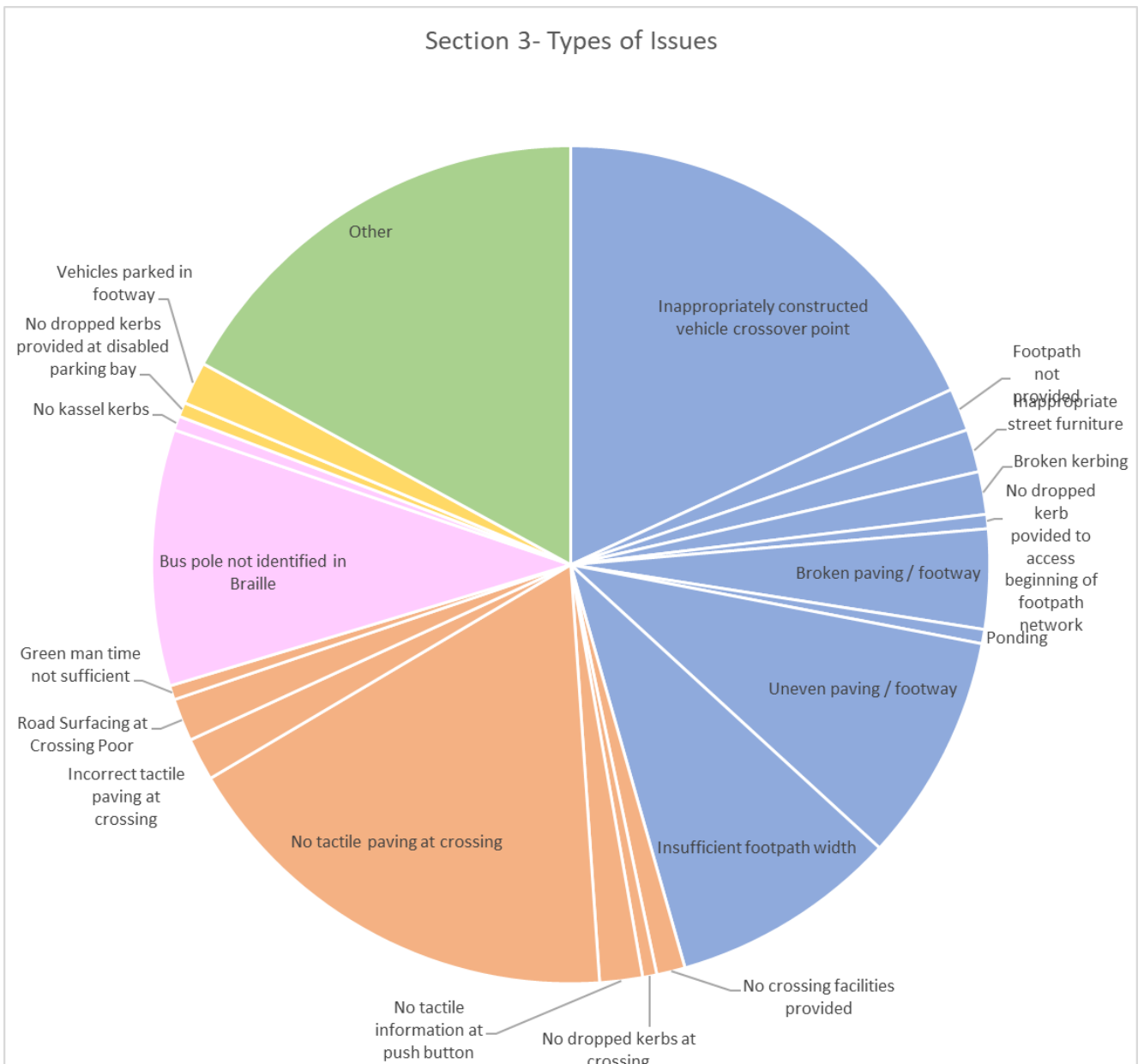


Figure 4.3: Break Down of Types of Issues Identified

4.2.1 Footpaths

Figure 4.4 shows the section of the scheme within this section where there is no continuous footpath provided by design. These sections have either a crossing provided to the footpath on the other side or a footway on a parallel street away from the main road, with path access to the bus stops.



Figure 4.4: Sections of the scheme with no continuous footpath

Of the 182 issues identified in section, 83 are related to footpaths. There are 23 instances of broken or uneven footpath, three instances of broken kerbing and one instance of ponding. There are three sections of this section with no footpath provided, aside from those in Figure 4.4, 16 instances of insufficient footpath width and three pieces of inappropriate street furniture. There is one instance of no dropped kerb being provided at the start of the footpath network and there were 33 inappropriately constructed vehicle crossover points, such as the one in Figure 4.5.



Figure 4.5: Inappropriate vehicle crossover

For more detailed information of the footpath issues, see the green points in the ProjectMapper App.

4.2.2 Crossings / Junctions

25% of the issues identified in Section 3 are due to the crossings or junctions. These issues included two instances of no crossings provided, 32 crossings with no tactile paving, three crossings with incorrect tactile paving and one crossing with no dropped kerb. There are also three crossings with poor road surfacing, three push buttons without tactile information and one instance of insufficient green man crossing time.

For more detailed information of the crossings / junctions issues, see the orange points in the Project Mapper App.

4.2.3 Bus Stops

There are 18 bus stops within this section which do not have Braille identification on them and one bus stop with no kassel kerb.

For more detailed information of the bus stop issues, see the pink points in the Project Mapper App.

4.2.4 Parking

There is one accessible car park with no dropped kerb provided and three instances of vehicles being parked in the footway.

For more detailed information of the parking issues, see the blue points in the ProjectMapper App.

4.2.5 Other

The remaining issues that fall under the other category include two crossings that don't have a clear layout, seven instances of no tactile paving to indicate start / end of cycle path or crossing a cycle path and two instances of no level difference between the footpath and cycle lane. There are five locations where path maintenance was insufficient, including the path being covered in leaves, such as in Figure 4.6.

There is one crossing where the wait for the green man is too long, two push buttons which have no pulse and there is one instance of no corduroy tactiles at some stairs.

For more detailed information of the other issues, see the red points in the ProjectMapper App.



Figure 4.6: Path covered in leaves

As this section was assessed as part of the test walkovers with the tablet, severity level was not determined, therefore there is no high severity table, however all issues are listed in Appendix A.

5. Section 4 – Wilford Roundabout to Lower Dargle Road

5.1 Description of Section

This section of the scheme includes the road network along Dublin Road and Castle Street between Wilford Roundabout and Lower Dargle Road. Figure 5.1 shows this section of the scheme.



Figure 5.1: Map of Section 4

Appendix B shows the main attractors and generators of the entire scheme. Section 4 of the Bray scheme is shown in Map 1. There is one building of significance identified from the Prime2 data within the vicinity of this section of the scheme. This is:

- Ravenswell Primary School

This building is considered to be a place that is sensitive to disability design requirements and therefore access and facilities should be provided in the vicinity to make it easy to access for people with disabilities. There are likely to be other buildings in the area that require access for users with disabilities that are not identified in the Prime2 study, which only identified prioritised buildings within 100m of the corridor. Ravenswell Primary School has private parking to provide for accessible parking spaces.

Figure 5.2 shows the current bus stops along the Bray scheme in the vicinity of the above listed building. It is considered that these bus stops currently service the identified building well, there are crossings provided where bus stops are across the road.

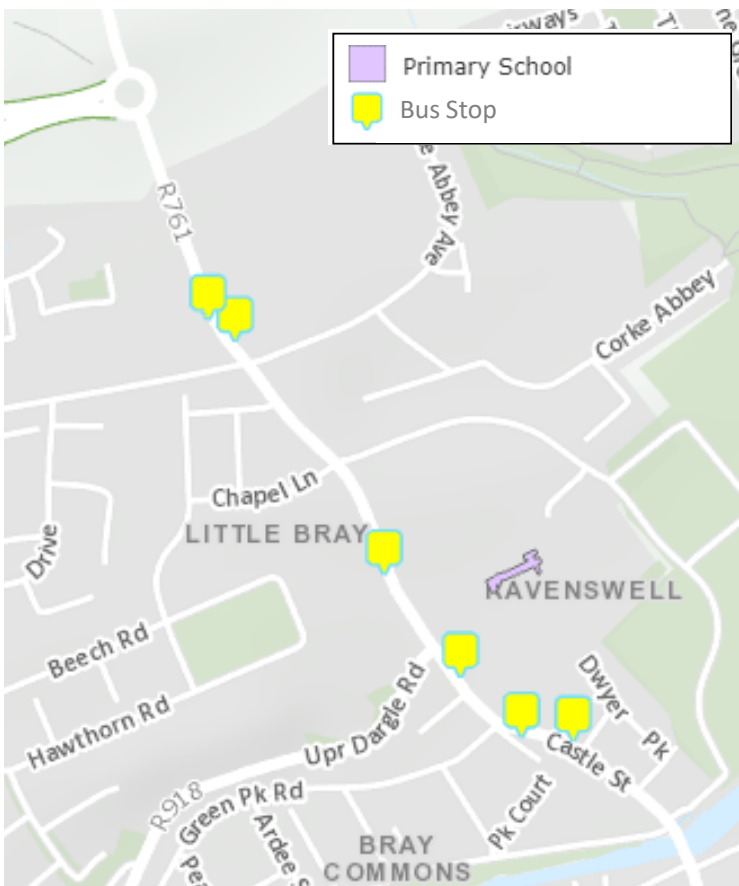


Figure 5.2: Prime2 buildings and nearby bus stops

5.2 Problem Identification

There were 118 identified issues in Section 4 of the Bray scheme. Figure 5.3 shows the types of issues identified.

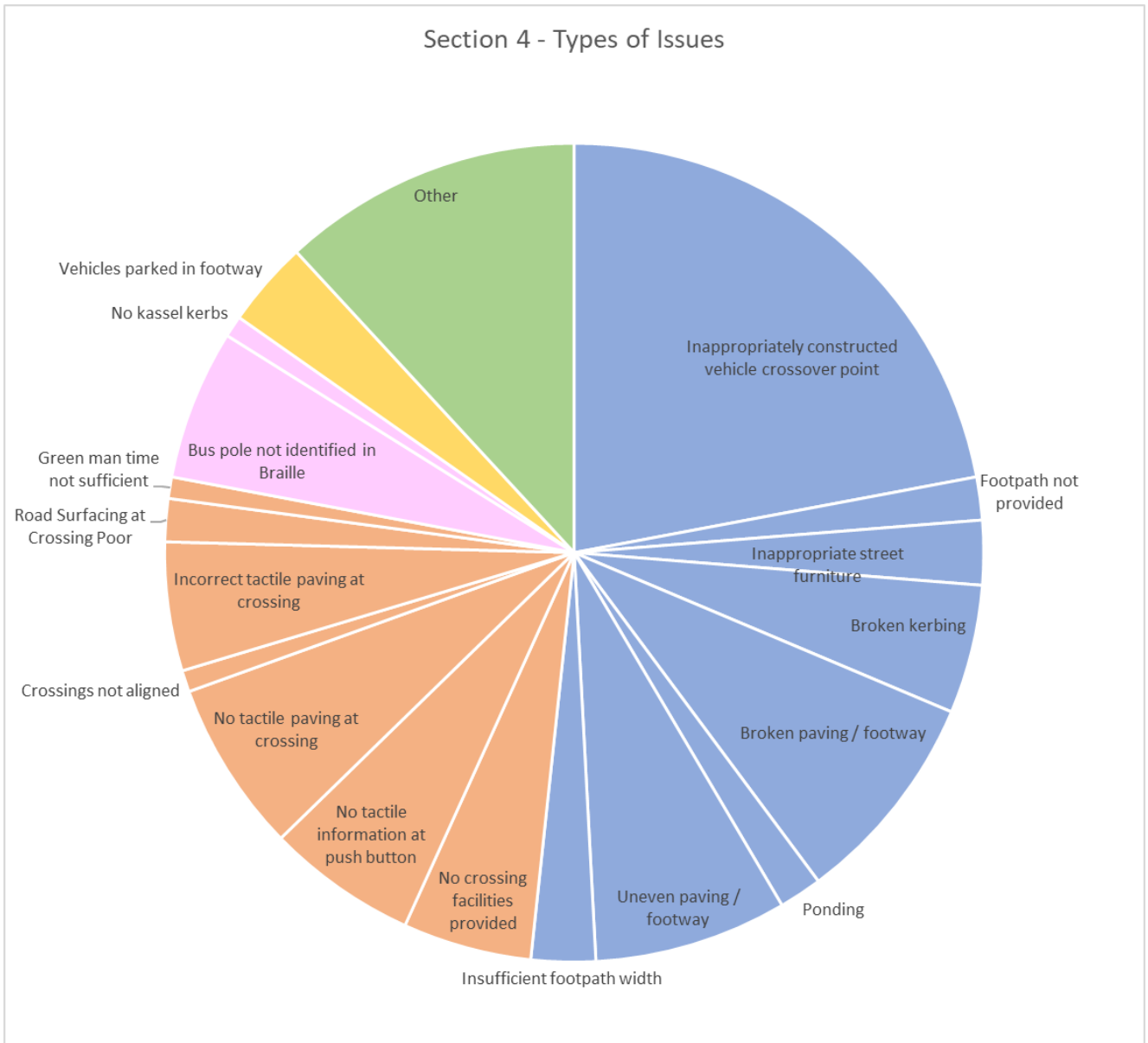


Figure 5.3: Break Down of Types of Issues Identified

5.2.1 Footpaths

The footpath issues account for just over half of the issues identified in Section 4. Of these, there are 19 instances of broken or uneven footpath, six instances of broken kerbing, two instances of ponding and 26 inappropriately constructed vehicle crossover points. There are two sections where no footpath is provided at all, three sections of footpath are of insufficient width and there are three cases of inappropriate street furniture, such as the bus stop in Figure 5.4 which limits the footpath width to less than required.

For more detailed information of the footpath issues, see the green points in the ProjectMapper App.

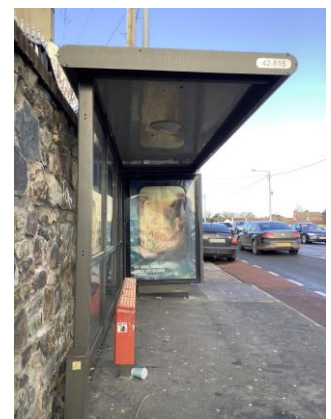


Figure 5.4: Inappropriate bus stop

5.2.2 Crossings / Junctions

The issues relating to crossings or junctions made up 26% of the issues in Section 4. There are six crossings with no crossing facilities provided, eight crossings with no tactile paving, six crossings with incorrect tactile paving and one crossing that is not aligned. There are seven crossings with no tactile information provided on the push buttons and one crossing that has insufficient green man crossing time. Two of the crossings have poor road surfacing.

For more detailed information of the crossings / junctions issues, see the orange points in the ProjectMapper App.

5.2.3 Bus Stops

There are seven bus stops within this section which do not have Braille identification on them and one bus stop with no kassel kerb noted.

For more detailed information of the bus stop issues, see the pink points in the ProjectMapper App.

5.2.4 Parking

In Section 4, there were four instances of vehicles parked in the footway.

For more detailed information of the parking issues, see the blue points in the ProjectMapper App.

5.2.5 Other

The other issues include one confusing junction layout, two instances of overhanging vegetation and one push button with no sound or tactile information. There is one set of stairs with no corduroy warning tactile paving, one instance of no warning tactiles for an obstruction and one dropped kerb that doesn't appear to lead to anything.

For more detailed information of the other issues, see the red points in the ProjectMapper App.

As this section was assessed as part of the test walkovers with the tablet, severity level was not determined, therefore there is no high severity table, however all issues are listed in Appendix A.

6. Scheme Wide Accessibility Design Considerations and Recommendations

The *Preliminary Design Guidance Booklet for BusConnects Core Bus Corridors* outlines the standards and guidelines to be used in the design of the bus corridors within the BusConnects project.

This audit should be read in conjunction with the *Preliminary Design Guidance Booklet for BusConnects Core Bus Corridors* to compare the standards and guidelines used for this project to the current infrastructure. The following sections summarise the design guidance to be followed.

6.1 Footpaths

As per the National Disability Authority's *Building for Everyone: A Universal Design Approach*, the recommended footpath width is 2m to allow for wheelchair users, with a 1.2m minimum at pinch points restricted to a 2m length of path. Figure 6.1 from Part 1 of the guidelines, shown below, illustrates this. It is recommended that footpaths throughout the scheme meet the 2m requirement where possible.

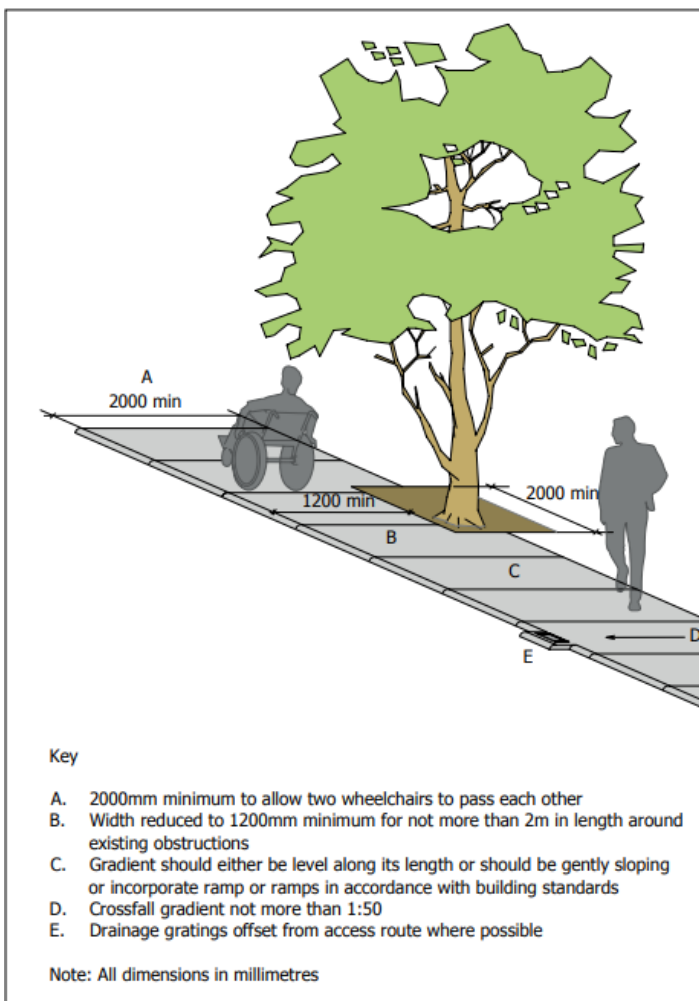


Figure 6.1: Urban Environment Pavement Layout (Note: Extracted from NDA *Building for Everyone: A Universal Design Approach*)

It is important to consider potential reductions in footpath width due to overhang or low-lying vegetation. It is recommended that any new trees planted in close proximity to footpaths are specified with the appropriate 'clear stem' and the tree pit design considers future root growth and an appropriate tree pit surround. Any existing trees and vegetation should be maintained at an appropriate frequency to ensure footways and cycle paths remain unobstructed.

Multiple sections of the footpaths and the kerbs along the Bray scheme have been identified as trip hazards due to cracked surfaces or uneven paving. It is advised that these sections of paving are corrected if they are to remain as part of the scheme.

Instances of shared paths for pedestrians and cyclists should be considered carefully. Where they begin or end, tactile paving is required to warn of the adjacent cycleway. Grade separation should also be provided between the two paths in such a way as to not create a trip hazard. Consideration to the interaction of cyclists and pedestrians at junctions should also be part of the design process.

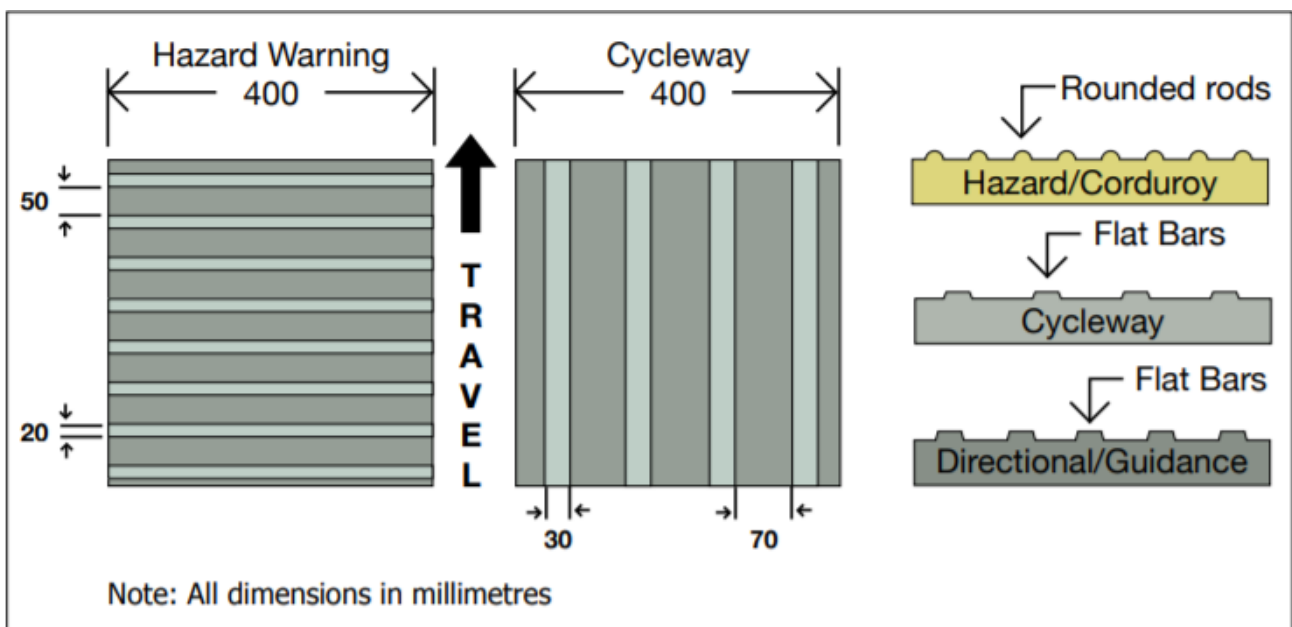


Figure 6.2: Examples of Hazard Warning and Cycleway Paving (Note: Extracted from NDA *Building for Everyone: A Universal Design Approach*)

Placement of street furniture and signage should be considered collectively to minimise obstruction to the footpaths. Where possible, existing signs should be used for mounting new signage. All signage and traffic signal heads shall be mounted with a head height clearance of 2.3m minimum.

6.2 Crossings / Junctions

Pedestrian crossings are mostly provided along the Bray scheme, with instances of no crossings provided reported in above sections.

There are multiple crossings that either provide no tactile paving or have incorrect tactile paving. The tactile paving at all crossing points shall be reviewed and the following design requirements incorporated:

- Red tactile paving slabs shall be used at controlled crossing points and buff tactile paving to be used at uncontrolled crossings;

- All tactile paving at controlled crossings to have a stem (1.2m wide) extend to the rear of the footpath or to the building line;
- All new service chambers are to be located outside the area of tactile paving where possible, any existing chambers that are not able to be relocated must have stick-on tactile paving applied;
- Three full rows of tactile paving (1.2m deep) across the full width of the dropped kerb to be provided at inline crossing points and two rows (800mm deep) to be provided at offline crossing points;
- All tactile paving to dictate direction of crossing and provide alignment guidance; and
- All tactile paving at crossing points shall be blistered.

Push buttons along this scheme are inconsistent. Push buttons that are not currently providing full service (audible, pulsating and demonstrate the orientation of the crossing in Braille) should be replaced with push buttons that are.

Staged crossings should be phased out where possible as per the *Design Manual for Urban Roads and Streets* (DMURS).

6.3 Bus Stops

Each bus stop should have the number of the bus stop provided in Braille for easy identification. Many of the bus stops along the Bray scheme did not have Braille provided.

It is recommended that the kerb be 250mm high for the length of the bus stop. For new bus stops, it is suggested that kassel kerbs are used.

All signs and infrastructure at a bus stop shall be rationalised to prevent clutter and to ensure sufficient space for pedestrians passing the bus stop. The safety and interaction of all users shall be considered, particularly where pedestrians are required to cross a cycle track to access a bus door.

6.4 Parking

There are accessible parking bays located along the length of the Bray scheme. A thorough investigation into the requirements for accessible parking bays and suitable locations should be undertaken.

The road marking requirements for an accessible parking bay are set out in the Department of Transport's *Traffic Signs Manual: Chapter 7*. Figure 6.3 shows Figure 7.27 from the Manual - the required lengths and widths of both parallel and perpendicular accessible parking bays.

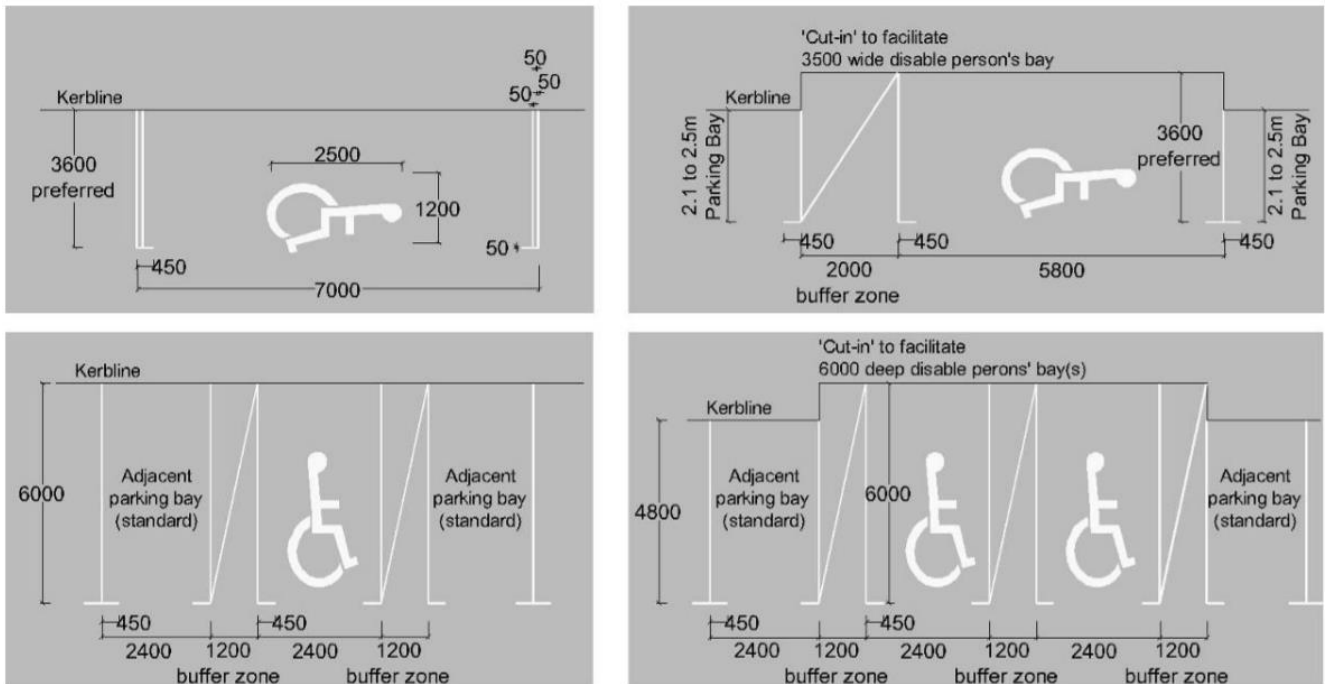


Figure 6.3: Typical Examples of Disabled Persons' Parking Bays

When implementing accessible parking bays, a dropped kerb should be provided for easy access to the footpath and street furniture in the vicinity should be limited to allow for unobstructed access to vehicles.

Appendix A. Other Issues

A.1 Section 1 – Medium

Object ID	Issue	Additional Comments	Co-Ordinates
4	Incorrect tactile paving at crossing		716065, 733170
5	Incorrect tactile paving at crossing	not 3 deep all the way across	716106, 733182
6	Dropped kerbs not flush with crossing		716073, 733175
7	Incorrect tactile paving at crossing	grate in middle of tactiles	716066, 733179
10	Broken paving / footway		716092, 733148
12	Broken paving / footway		716101, 733161
14	Continuous cycle track indicated at signalised pedestrian crossing		716120, 733113
14	Broken paving / footway		716120, 733113
21	Broken paving / footway		716177, 733033
26	No crossing facilities provided		716195, 732994
28	Incorrect tactile paving at crossing	T configuration instead of L	716208, 732983
33	Broken paving / footway		716224, 732944
34	Unsuitable access for disabled users	trip hazard	716278, 732875
41	Broken paving / footway		716293, 732850
46	Incorrect tactile paving at crossing	not all the way to edge	716331, 732805
47	Unsuitable access for disabled users	kerbing too steep	716329, 732791
49	Incorrect tactile paving at crossing	not to edge, grate across pavers	716326, 732800
51	Road Surfacing at Crossing Poor		716330, 732780
52	Incorrect tactile paving at crossing	no stem	716352, 732761
53	Unsuitable access for disabled users	push button not pulsing	716338, 732766
56	Push button incorrectly positioned		716380, 732716
58	Incorrect tactile paving at crossing	grate in middle of pavers	716380, 732709
59	Broken paving / footway		716390, 732686
62	Unsuitable access for disabled users	slope but no drop kerb, wrong positioning	716426, 732589
62	Uneven paving / footway	slope but no drop kerb, wrong positioning	716426, 732589
66	Broken paving / footway		716446, 732538
68	Broken paving / footway		716500, 732494

Object ID	Issue	Additional Comments	Co-Ordinates
79	Dropped kerbs not flush with crossing		716661, 732437
80	Uneven paving / footway		716678, 732431
83	Inappropriately constructed vehicle crossover point		716702, 732405
88	No kassel kerbs		716774, 732356
88	Uneven paving / footway		716774, 732356
90	Inappropriately constructed vehicle crossover point	footpath continues across vehicle access to private estate. footpath dips too low to public roadway.	716816, 732331
91	Uneven paving / footway		716850, 732299
96	Broken paving / footway		716879, 732292
98	No tactile paving at crossing		716919, 732271
100	Broken kerbing		716928, 732262
101	Broken paving / footway		716929, 732255
102	Broken paving / footway		716950, 732235
107	Insufficient footpath width	grate in pavers	717021, 732154
107	Incorrect tactile paving at crossing	grate in pavers	717021, 732154
111	Unsuitable access for disabled users	trip hazard	717027, 732149
113	Unsuitable access for disabled users	trip hazard	717033, 732134
114	Unsuitable access for disabled users	trip hazard	717045, 732121
115	Crossings not aligned		717067, 732101
116	No tactile paving at crossing	both sides no tactiles	717059, 732105
119	No tactile paving at crossing	both sides	717101, 732046
121	Broken paving / footway		717142, 732012
122	No tactile paving at crossing	both sides	717142, 732007
123	Broken paving / footway		717156, 731988
125	Inappropriately constructed vehicle crossover point		717172, 731972
129	Inappropriate street furniture	incorrect warning tactiles	717206, 731953
131	Inappropriate street furniture	bikes should not park here	717222, 731920
132	Uneven paving / footway		717231, 731917
133	Uneven paving / footway		717227, 731914
134	Uneven paving / footway		717243, 731898

Object ID	Issue	Additional Comments	Co-Ordinates
138	Broken paving / footway		717297, 731825
142	Inappropriately constructed vehicle crossover point	loading bay	717348, 731756
143	Ponding		717356, 731749
146	Broken paving / footway		717383, 731717
150	No dropped kerbs provided at disabled parking bay		717422, 731671
151	No tactile paving at crossing		717428, 731669
152	Dropped kerbs not flush with crossing		717447, 731656
153	No tactile paving at crossing	both sides	717462, 731659
155	Insufficient footpath width	pinch point less than 1.2m	717487, 731655
161	Ponding		717558, 731599
165	Road Surfacing at Crossing Poor		717576, 731582
166	Ponding		717574, 731586
169	Dropped kerbs not flush with crossing		717578, 731576
170	Broken paving / footway		717583, 731577
171	Broken kerbing		717601, 731554
176	Dropped kerbs not flush with crossing	too high	717638, 731509
179	Broken paving / footway		717681, 731457
186	Incorrect tactile paving at crossing		717743, 731385
187	Incorrect tactile paving at crossing		717748, 731382
191	No pedestrian refuge for long crossing	not suitable	717787, 731333
192	Incorrect tactile paving at crossing		717793, 731331
195	Insufficient footpath width	pinch point less than 1.2m	717907, 731180
197	No crossing facilities provided	crossing in image is for bikes	717993, 731098
199	Broken paving / footway		718031, 731045
201	Broken paving / footway		718052, 731018
204	Broken paving / footway		718099, 730966
209	Incorrect tactile paving at crossing	in line crossing	718198, 730876
209	Broken paving / footway	in line crossing	718198, 730876
213	No level difference between footpath and cycle lane	bikes sharing crossing	718204, 730887

Object ID	Issue	Additional Comments	Co-Ordinates
217	Ponding		718057, 731057
230	Inappropriately constructed vehicle crossover point		717750, 731408
231	Broken paving / footway		717738, 731431
233	Broken paving / footway		717695, 731462
235	Broken paving / footway		717645, 731517
238	Broken paving / footway		717620, 731539
244	Broken paving / footway		717440, 731689
247	Lamp post in footway		717420, 731697
247	No crossing facilities provided		717420, 731697
248	No tactile paving at crossing		717415, 731700
252	Broken paving / footway		717390, 731744
253	No tactile paving at crossing		717392, 731732
256	No tactile paving at crossing		717343, 731788
258	No tactile paving at crossing		717304, 731840
260	Inappropriately constructed vehicle crossover point		717237, 731919
261	Inappropriately constructed vehicle crossover point		717231, 731930
264	Ponding		717191, 731980
265	Inappropriately constructed vehicle crossover point		717169, 732005
267	Ponding		717145, 732035
268	Uneven paving / footway		717110, 732075
269	Inappropriately constructed vehicle crossover point		717101, 732078
271	Broken paving / footway		717099, 732083
273	Ponding		717087, 732098
274	Inappropriately constructed vehicle crossover point		717083, 732103
277	Inappropriately constructed vehicle crossover point		717054, 732142
278	Incorrect tactile paving at crossing		717040, 732159
279	Inappropriately constructed vehicle crossover point		717024, 732180

Object ID	Issue	Additional Comments	Co-Ordinates
280	Uneven paving / footway		717029, 732180
281	Inappropriately constructed vehicle crossover point		716986, 732209
282	Broken paving / footway		716983, 732228
284	Broken paving / footway		716945, 732261
285	Incorrect tactile paving at crossing	in line crossing	716930, 732267
286	Road Surfacing at Crossing Poor		716934, 732296
287	Incorrect tactile paving at crossing		716883, 732324
289	Inappropriately constructed vehicle crossover point		716851, 732328
290	Broken paving / footway		716848, 732334
292	Broken paving / footway		716808, 732359
293	No tactile paving at crossing		716796, 732366
295	Inappropriately constructed vehicle crossover point		716775, 732375
297	Broken paving / footway		716739, 732401
298	Broken paving / footway		716733, 732406
299	Broken paving / footway		716716, 732417
305	Crossings not aligned		716579, 732538
306	Broken paving / footway		716562, 732549
307	Footpath not provided	no vehicle access	716548, 732556
311	Broken kerbing		716495, 732591
315	Incorrect tactile paving at crossing		716426, 732663
317	Broken paving / footway	loose slabs	716411, 732688
319	Broken paving / footway		716372, 732763
325	No tactile paving at crossing		716291, 732869
327	Unsuitable access for disabled users	no warning for top of the steps	716277, 732897
328	Broken paving / footway		716234, 732961
332	No tactile paving at crossing		716195, 733032
338	Broken paving / footway		716091, 733175

A.2 Section 1 – Low

Object ID	Issue	Additional Comments	Co-Ordinates
9	Ponding		716071, 733177
11	Broken paving / footway		716084, 733139
13	Broken paving / footway		716117, 733142
16	Bus pole not identified in Braille		716145, 733071
20	Broken paving / footway		716171, 733040
22	Broken paving / footway		716181, 733021
23	Broken kerbing		716175, 733024
24	Unsuitable access for disabled users	stairs too low	716183, 733023
30	Broken paving / footway		716207, 732970
35	Broken kerbing		716279, 732868
36	Unsuitable access for disabled users	stairs too low	716288, 732865
37	Broken paving / footway		716282, 732867
38	Bus pole not identified in Braille		716293, 732856
39	Broken kerbing		716299, 732859
40	Broken kerbing		716298, 732843
43	Unsuitable access for disabled users	no warning at bottom of step	716312, 732820
44	Broken paving / footway		716326, 732824
45	Broken paving / footway		716322, 732794
48	Unsuitable access for disabled users	push button pulse not working for green man	716329, 732803
57	Road Surfacing at Crossing Poor		716379, 732714
60	Bus pole not identified in Braille		716409, 732649
64	Broken paving / footway		716439, 732571
70	Broken kerbing		716502, 732488
71	Bus pole not identified in Braille		716519, 732479
78	Incorrect tactile paving at crossing		716659, 732435
81	Broken paving / footway		716693, 732417
82	Broken paving / footway		716695, 732414
84	Uneven paving / footway		716713, 732408
85	Bus pole not identified in Braille		716740, 732384
86	Uneven paving / footway		716739, 732381

Object ID	Issue	Additional Comments	Co-Ordinates
87	Ponding		716772, 732360
93	Incorrect tactile paving at crossing	L on wrong side	716855, 732301
104	Bus pole not identified in Braille		716990, 732181
108	Incorrect tactile paving at crossing	incorrect layout	717024, 732142
109	Ponding		717024, 732156
110	Unsuitable access for disabled users	too steep	717024, 732140
110	Crossings not aligned	too steep	717024, 732140
112	Broken paving / footway		717038, 732132
117	Broken paving / footway		717088, 732077
118	Bus pole not identified in Braille		717127, 732032
124	Unsuitable access for disabled users	slope no vehicle crossing	717154, 731993
127	Unsuitable access for disabled users	incorrect road markings	717180, 731963
128	Incorrect tactile paving at crossing	grate in pavers	717191, 731953
135	Uneven paving / footway		717266, 731860
136	Inappropriately constructed vehicle crossover point		717276, 731855
137	Uneven paving / footway		717284, 731844
139	Bus pole not identified in Braille		717308, 731813
141	Broken paving / footway		717339, 731772
145	Broken kerbing		717368, 731736
147	Incorrect tactile paving at crossing	L tail on wrong side	717376, 731729
148	Broken paving / footway		717385, 731714
149	Broken paving / footway		717411, 731686
156	Broken paving / footway		717508, 731647
157	Inappropriate street furniture		717533, 731631
158	Bus pole not identified in Braille		717551, 731612
159	Broken paving / footway		717559, 731605
168	Incorrect tactile paving at crossing		717578, 731580
182	Bus pole not identified in Braille		717699, 731423
184	Broken kerbing		717728, 731410
185	Ponding		717728, 731404
188	Broken paving / footway		717750, 731378

Object ID	Issue	Additional Comments	Co-Ordinates
189	Incorrect tactile paving at crossing		717786, 731339
190	Ponding		717787, 731336
194	Bus pole not identified in Braille		717840, 731264
196	Broken paving / footway		717978, 731118
198	No tactile paving at crossing		718020, 731054
200	Ponding		718039, 731035
203	Bus pole not identified in Braille		718076, 731005
205	Broken paving / footway		718097, 730962
206	Inappropriately constructed vehicle crossover point		718117, 730944
207	Ponding		718129, 730926
208	Broken paving / footway		718146, 730910
210	Road Surfacing at Crossing Poor		718195, 730879
211	Road Surfacing at Crossing Poor		718221, 730893
214	Bus pole not identified in Braille		718120, 730992
216	Broken paving / footway		718075, 731038
218	Broken paving / footway		718001, 731126
219	Ponding		717964, 731168
221	Bus pole not identified in Braille		717893, 731243
222	Broken paving / footway		717875, 731268
223	Ponding		717855, 731292
224	Incorrect tactile paving at crossing		717812, 731332
225	Incorrect tactile paving at crossing		717802, 731340
232	Bus pole not identified in Braille		717709, 731447
237	Inappropriately constructed vehicle crossover point		717631, 731535
240	Incorrect tactile paving at crossing		717554, 731564
245	Ponding		717429, 731686
246	Broken paving / footway		717431, 731689
249	Bus pole not identified in Braille		717383, 731658
251	Incorrect tactile paving at crossing		717401, 731724
254	Ponding		717391, 731736
257	Ponding		717338, 731803

Object ID	Issue	Additional Comments	Co-Ordinates
259	Bus pole not identified in Braille		717285, 731864
266	Ponding		717159, 732024
276	Bus pole not identified in Braille		717076, 732115
283	Broken paving / footway		716969, 732250
288	Inappropriate street furniture		716864, 732337
291	Bus pole not identified in Braille		716825, 732353
302	Bus pole not identified in Braille		716643, 732479
309	Broken paving / footway		716514, 732582
310	Broken paving / footway		716506, 732586
312	Broken kerbing		716484, 732607
313	Broken paving / footway		716478, 732622
321	Push button incorrectly positioned	no pulse or sound at green man	716344, 732810
326	Bus pole not identified in Braille		716286, 732881
329	Incorrect tactile paving at crossing	no pulse or noise at pushbutton also	716223, 732985
330	Incorrect tactile paving at crossing		716209, 732995
331	Incorrect tactile paving at crossing		716209, 733008
336	Bus pole not identified in Braille		716144, 733101

A.3 Section 3 – All

Object ID	Issue	Additional Comments	Co-Ordinates
1032	Unsuitable access for disabled users	Path maintenance insufficient	725242, 721695
1033	Inappropriately constructed vehicle crossover point		725252, 721683
1034	Bus pole not identified in Braille		724618, 723164
1035	Inappropriately constructed vehicle crossover point		724633, 723147
1036	Insufficient footpath width		725594, 720039
1037	Inappropriately constructed vehicle crossover point		725560, 720352
1038	Bus pole not identified in Braille		725405, 720733
1039	Ponding	Poor footpath maintenance	725291, 720869
1040	Inappropriately constructed vehicle crossover point		725223, 721333

1041	Inappropriately constructed vehicle crossover point		725246, 721614
1042	Uneven paving / footway		725237, 721565
1043	Uneven paving / footway		725212, 721325
1044	Unsuitable access for disabled users	Leaves covering path	725202, 721004
1045	No crossing facilities provided		725414, 720702
1046	Inappropriately constructed vehicle crossover point		725513, 720453
1047	No tactile paving at crossing		725579, 720033
1048	Bus pole not identified in Braille		725182, 722081
1049	Uneven paving / footway		725007, 722444
1050	No tactile paving at crossing		724777, 723033
1051	Bus pole not identified in Braille		724766, 722989
1052	Insufficient footpath width	Pinch point	724984, 722478
1053	Insufficient footpath width		725161, 722101
1054	Incorrect tactile paving at crossing	Not reaching crossing	725235, 721563
1055	Green man time not sufficient	Actually, red man time excessive after button pressed	725454, 720663
1056	No tactile paving at crossing	Badly aligned dropped kerb	724765, 722981
1057	Bus pole not identified in Braille		725182, 721174
1058	Inappropriately constructed vehicle crossover point		725098, 722201
1059	No tactile paving at crossing		725083, 722221
1060	No tactile paving at crossing		725079, 722193
1061	No tactile paving at crossing		725465, 720681
1062	Inappropriately constructed vehicle crossover point		725325, 720836
1063	Unsuitable access for disabled users	No rails on seat	725217, 721235
1064	Bus pole not identified in Braille		725240, 721444
1065	Unsuitable access for disabled users	Path drops to parking spaceship without no notice	725250, 721450
1066	Incorrect tactile paving at crossing	Not a contrasting colour, stem not full length of path, T shaped tactile rather than L	725246, 721460
1067	Vehicles parked in footway		725253, 721685
1068	No tactile paving at crossing		725255, 721744

1069	No tactile paving at crossing		725255, 721739
1070	No tactile paving at crossing		725261, 721934
1071	Unsuitable access for disabled users	No warning corduroy at steps	725268, 721970
1072	Unsuitable access for disabled users	Pinch point	725268, 721970
1073	Incorrect tactile paving at crossing		725268, 721970
1074	No tactile paving at crossing		725268, 721970
1075	No tactile paving at crossing		725268, 721970
1076	No tactile paving at crossing		725268, 721970
1077	No tactile paving at crossing		725268, 721970
1078	No tactile paving at crossing		725275, 721967
1079	No tactile paving at crossing		725244, 721968
1080	No tactile paving at crossing		725228, 721470
1081	No tactile paving at crossing		725188, 721191
1082	Road Surfacing at Crossing Poor		725213, 720965
1083	No tactile paving at crossing		725304, 720840
1084	No tactile paving at crossing		725560, 720301
1085	Unsuitable access for disabled users	No warning tactile for cycle lane	725584, 720025
1086	Inappropriate street furniture		725045, 722341
1087	Insufficient footpath width		724952, 722596
1088	Unsuitable access for disabled users	Dropped kerb leading to raised kerb	724936, 722674
1089	No dropped kerbs provided at disabled parking bay		724934, 722677
1090	Inappropriately constructed vehicle crossover point		724730, 723100
1091	Inappropriately constructed vehicle crossover point		724521, 723248
1092	Inappropriately constructed vehicle crossover point		725239, 721968
1093	Unsuitable access for disabled users	Inappropriate tactile	725194, 721168
1094	Bus pole not identified in Braille		725248, 721666
1095	No kassel kerbs		725046, 722267
1096	Insufficient footpath width		725255, 721937
1097	No tactile paving at crossing		725194, 721035
1098	Insufficient footpath width		724926, 722685
1099	Uneven paving / footway	Leaves on path	725195, 721170

1100	Bus pole not identified in Braille		725600, 720003
1101	Insufficient footpath width		725588, 720072
1102	Unsuitable access for disabled users	Footpath shared with cycle lane with no warning	725570, 720255
1103	No tactile paving at crossing	Crossings not aligned	725547, 720395
1104	No dropped kerb provided to access beginning of footpath network		725515, 720486
1105	Incorrect tactile paving at crossing	Kerb disappears	725450, 720677
1106	Unsuitable access for disabled users	Leaves covering path	725239, 721415
1107	Road Surfacing at Crossing Poor		725248, 721602
1108	Inappropriately constructed vehicle crossover point		725237, 721649
1109	Bus pole not identified in Braille		725236, 721628
1110	No tactile paving at crossing		725235, 721582
1111	Uneven paving / footway		725202, 721018
1112	No tactile paving at crossing		725416, 720700
1113	Uneven paving / footway		725504, 720487
1114	Insufficient footpath width		725509, 720465
1115	Uneven paving / footway		725506, 720530
1116	Unsuitable access for disabled users	Overhanging tree at head height	725582, 720085
1117	Inappropriately constructed vehicle crossover point		725588, 719967
1118	Bus pole not identified in Braille		725598, 719828
1119	Inappropriately constructed vehicle crossover point		725197, 722056
1120	Insufficient footpath width		725153, 722138
1121	Inappropriately constructed vehicle crossover point		725127, 722167
1122	Footpath not provided		725050, 722300
1123	Inappropriately constructed vehicle crossover point		725022, 722410
1124	Bus pole not identified in Braille		724991, 722488
1125	No tactile paving at crossing	Obstruction in crossing	724925, 722696
1126	Insufficient footpath width		724979, 722518
1127	Unsuitable access for disabled users	Growth causing obstruction	724980, 722490

1128	Inappropriately constructed vehicle crossover point		724994, 722460
1129	Bus pole not identified in Braille		725119, 722165
1130	No tactile paving at crossing		725105, 722185
1131	Unsuitable access for disabled users	Crossing blocked with bins	725129, 722159
1132	Inappropriately constructed vehicle crossover point	Uneven pavement too	725205, 722025
1133	Uneven paving / footway		725511, 720460
1134	Inappropriately constructed vehicle crossover point		724822, 722859
1135	Unsuitable access for disabled users	Footpath ends and no crossings at roundabout	724897, 722779
1197	Uneven paving / footway		725252, 721907
1198	Inappropriately constructed vehicle crossover point		725117, 722168
1199	Bus pole not identified in Braille		724778, 722964
1200	Insufficient footpath width		725142, 722152
1201	Inappropriately constructed vehicle crossover point		725051, 722299
1202	Inappropriately constructed vehicle crossover point		724986, 722495
1203	Inappropriate street furniture		724783, 722958
1204	Broken kerbing		725258, 721860
1205	No tactile information at push button	No pulse	725187, 721156
1206	Unsuitable access for disabled users	No pulsing at push button	725038, 722362
1207	No tactile information at push button	No pulse	725041, 722351
1208	Unsuitable access for disabled users		725029, 722382
1209	Uneven paving / footway		724708, 723079
1210	Broken kerbing		724953, 722565
1211	No tactile paving at crossing		725564, 720327
1212	Inappropriately constructed vehicle crossover point		725514, 720498
1213	Incorrect tactile paving at crossing		725517, 720513
1214	Incorrect tactile paving at crossing		725356, 720786
1215	Uneven paving / footway		725228, 721418
1216	Incorrect tactile paving at crossing		725235, 720934

1217	Inappropriately constructed vehicle crossover point		725308, 720832
1218	Bus pole not identified in Braille		725258, 720899
1219	Insufficient footpath width		725597, 719851
1220	Inappropriately constructed vehicle crossover point		725238, 721979
1221	Broken kerbing		725052, 722288
1222	No tactile paving at crossing		725025, 722400
1223	No tactile paving at crossing	Tactile paving on one side only. No tactile or dropped kerb on far side	724853, 722906
1224	Road Surfacing at Crossing Poor		724830, 722941
1225	No tactile paving at crossing	No tactile paving on far side	724506, 723259
1226	Insufficient footpath width		725033, 722340
1227	Inappropriately constructed vehicle crossover point		725225, 721990
1228	Unsuitable access for disabled users	No tactile for beginning of cycle path	725585, 720112
1229	Unsuitable access for disabled users	No division between cycle path and footpath, no contrasting colour	725200, 721034
1230	Uneven paving / footway		725194, 721068
1231	Uneven paving / footway		725248, 721849
1232	Bus pole not identified in Braille		725233, 721485
1233	Unsuitable access for disabled users	No warning corduroy tactile to cross cycle lane for bus stop	725227, 721428
1234	Unsuitable access for disabled users	No kerb between cycle lane and footpath	725215, 721305
1235	No tactile paving at crossing		725235, 720930
1236	Unsuitable access for disabled users	No tactile for cycle path crossings	725469, 720615
1237	Unsuitable access for disabled users	Long wait for green man	725567, 720279
1238	Unsuitable access for disabled users	No pulse	725179, 722089
1239	Unsuitable access for disabled users	Bad crossing layout. must cross several crossings to get from one side of road to other	725003, 722449
1240	Unsuitable access for disabled users	Bad crossing layout. Complex	724918, 722709
1241	Insufficient footpath width		724506, 723260
1242	Uneven paving / footway		724982, 722493
1243	No tactile paving at crossing		725015, 722407
1244	Unsuitable access for disabled users	No warning tactiles	725624, 719824

1245	Vehicles parked in footway		725505, 720529
1246	Vehicles parked in footway		725246, 721613
1247	Incorrect tactile paving at crossing		725251, 721650
1248	No crossing facilities provided		725256, 721763
1249	Bus pole not identified in Braille		725256, 721869
1250	Inappropriate street furniture		725233, 721966
1251	No dropped kerb provided to access beginning of footpath network		725244, 721746
1252	Footpath not provided		725235, 721562
1253	Footpath not provided		725195, 721210
1254	Unsuitable access for disabled users	Footpath disappears	725181, 721138
1255	Incorrect tactile paving at crossing		725379, 720750
1256	Inappropriately constructed vehicle crossover point		725572, 720157
1257	Inappropriately constructed vehicle crossover point		725591, 719899
1258	Bus pole not identified in Braille		725606, 719812
1259	Insufficient footpath width		725088, 722193
1260	Inappropriately constructed vehicle crossover point		725054, 722283
1261	Insufficient footpath width		724907, 722781
1262	Uneven paving / footway		724912, 722793
1263	Incorrect tactile paving at crossing	Not deep enough for inline crossing	724791, 722998
1264	No tactile information at push button	No pulse	724775, 723034
1265	Inappropriately constructed vehicle crossover point	At service station, busy with vehicles	724500, 723319
1266	Inappropriately constructed vehicle crossover point		724495, 723321
1267	Inappropriately constructed vehicle crossover point		724477, 723299
1268	Unsuitable access for disabled users		724470, 723302
1269	Bus pole not identified in Braille		724452, 723310
1270	Inappropriately constructed vehicle crossover point		724583, 723193
1271	Uneven paving / footway		724944, 722594
1272	Unsuitable access for disabled users	No tactile to indicate cycle lane	725131, 722146

1273	No tactile paving at crossing		725232, 721982
1274	Unsuitable access for disabled users	No warning corduroy tactile to cross cycle lane for bus stop	724791, 722998

A.4 Section 4 – All

Object ID	Issue	Additional Comments	Co-Ordinates
978	Broken paving / footway	Entire length of path at this location approx. 15m	726250, 718941
979	No tactile paving at crossing	Both sides of crossing; and dropped Kerb flush	726226, 718958
980	Broken kerbing		726229, 718957
981	Broken paving / footway		726209, 718974
982	No tactile information at push button	Pulse but no lane info	726204, 718968
983	Broken paving / footway		726180, 718987
984	Inappropriately constructed vehicle crossover point	Dropped kerb at entrance to dealership lower than 25mm with no warning tactile.	726183, 718987
985	No tactile paving at crossing		726155, 719005
986	Road Surfacing at Crossing Poor		726159, 719003
987	No tactile paving at crossing	Both sides of crossing, path fully flush without carriage way on south side, dropped kerb flush with carriage way on north side	726164, 719005
988	Bus pole not identified in Braille	No information at stop	726148, 719011
989	Uneven paving / footway		726135, 719019
990	Inappropriately constructed vehicle crossover point		726106, 719029
991	Uneven paving / footway	Manhole cover dipping	726069, 719040
992	Inappropriately constructed vehicle crossover point		726040, 719058
993	Broken paving / footway	Uneven and broken	726040, 719058
994	Ponding		726041, 719058
995	Broken paving / footway		726028, 719071
996	Bus pole not identified in Braille		726016, 719092
997	Unsuitable access for disabled users	Overhanging vegetation	726006, 719103
998	Broken paving / footway		725996, 719113

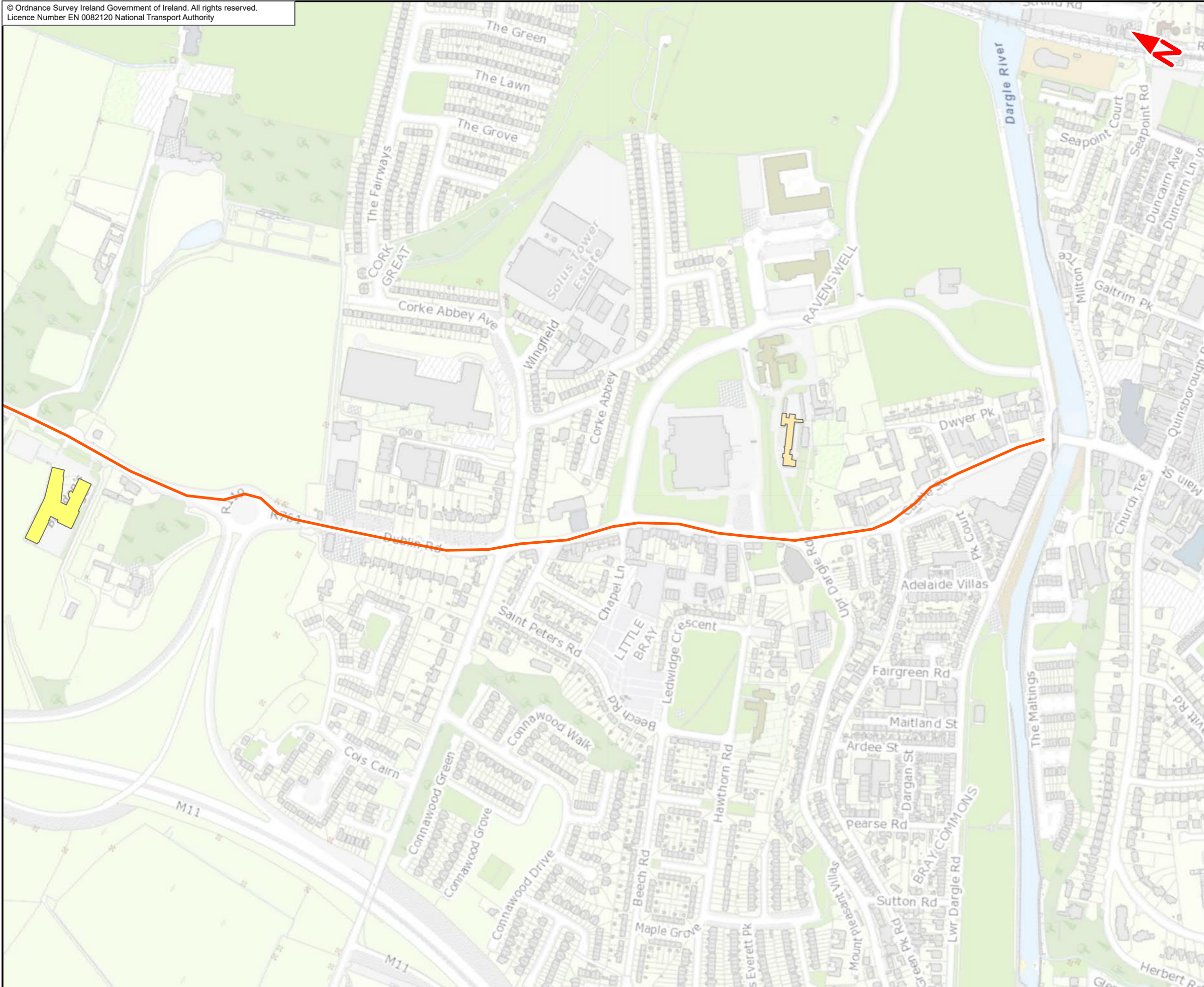
999	Broken paving / footway	Pole in incorrect location, no tactile information on push button, no pulse	725988, 719127
1000	Unsuitable access for disabled users	Overhanging growth	725982, 719138
1001	Inappropriately constructed vehicle crossover point		725850, 719363
1002	Broken kerbing		725835, 719378
1003	Unsuitable access for disabled users	No warning corduroys at steps	725791, 719438
1004	Insufficient footpath width		725786, 719445
1005	Broken paving / footway		725785, 719448
1006	No tactile information at push button	No vibrations or tactile info	725782, 719446
1007	No crossing facilities provided		725791, 719453
1008	Ponding		725777, 719464
1009	No crossing facilities provided		725759, 719473
1010	Unsuitable access for disabled users	Dropped kerb for no reason.	725764, 719468
1011	Bus pole not identified in Braille		725755, 719476
1012	No kassel kerbs		725746, 719486
1013	Inappropriately constructed vehicle crossover point		725753, 719480
1014	Unsuitable access for disabled users		725743, 719493
1015	Inappropriately constructed vehicle crossover point		725726, 719526
1016	Inappropriately constructed vehicle crossover point		725732, 719510
1017	Insufficient footpath width		725717, 719543
1018	Inappropriately constructed vehicle crossover point		725716, 719560
1019	Inappropriately constructed vehicle crossover point		725710, 719569
1020	Inappropriately constructed vehicle crossover point		725703, 719590
1021	Inappropriately constructed vehicle crossover point		725692, 719612
1022	Inappropriately constructed vehicle crossover point		725695, 719612
1023	Uneven paving / footway		725697, 719607
1024	Inappropriately constructed vehicle crossover point		725692, 719622

1025	Broken kerbing		725688, 719628
1026	Inappropriately constructed vehicle crossover point		725683, 719645
1027	Inappropriately constructed vehicle crossover point		725671, 719668
1028	Footpath not provided		725678, 719653
1029	Inappropriate street furniture		725674, 719662
1030	Broken paving / footway		725669, 719675
1031	Insufficient footpath width		725662, 719701
1136	Unsuitable access for disabled users	No footpath provided	725650, 719710
1137	Footpath not provided	Footpath disappears	725679, 719627
1138	Inappropriately constructed vehicle crossover point		725681, 719614
1139	Inappropriately constructed vehicle crossover point		725693, 719596
1140	Inappropriately constructed vehicle crossover point		725691, 719591
1141	Inappropriately constructed vehicle crossover point		725701, 719570
1142	Inappropriately constructed vehicle crossover point		725702, 719563
1143	Inappropriately constructed vehicle crossover point		725701, 719556
1144	Unsuitable access for disabled users		725736, 719495
1145	Inappropriately constructed vehicle crossover point		725718, 719521
1146	Uneven paving / footway		725716, 719517
1147	Bus pole not identified in Braille		725724, 719510
1148	Inappropriately constructed vehicle crossover point		725727, 719497
1149	Vehicles parked in footway		725733, 719498
1150	Vehicles parked in footway		725734, 719490
1151	Broken kerbing		725747, 719459
1152	No tactile information at push button		725746, 719463
1153	Uneven paving / footway		725748, 719456
1154	Green man time not sufficient		725757, 719449
1155	Unsuitable access for disabled users	Obstruction in path	725751, 719444

1156	No tactile information at push button		725773, 719444
1157	Broken paving / footway		725766, 719439
1158	Uneven paving / footway		725784, 719419
1159	No crossing facilities provided		725791, 719422
1160	Vehicles parked in footway		725809, 719398
1161	Uneven paving / footway		725798, 719398
1162	Broken kerbing		725834, 719363
1163	No tactile paving at crossing		725858, 719334
1164	Uneven paving / footway		725872, 719336
1165	Broken kerbing		725880, 719318
1166	Broken paving / footway		725897, 719297
1167	Vehicles parked in footway		725905, 719285
1168	Broken paving / footway		725912, 719266
1169	Broken paving / footway		725908, 719260
1170	Inappropriate street furniture	Unused bus stop	725923, 719229
1171	Inappropriate street furniture	No armrests on bench	725920, 719225
1172	Bus pole not identified in Braille		725941, 719180
1173	No tactile paving at crossing		725928, 719226
1174	Inappropriately constructed vehicle crossover point		725953, 719164
1175	Inappropriately constructed vehicle crossover point		725950, 719180
1176	Unsuitable access for disabled users	No warning tactiles for obstruction	725927, 719211
1177	Broken paving / footway		725954, 719174
1178	No tactile information at push button		725972, 719126
1179	No tactile information at push button		725973, 719118
1180	Broken paving / footway	Lined up wrong	725963, 719114
1181	Unsuitable access for disabled users	Could be difficult for blind person to navigate	725973, 719116
1182	Unsuitable access for disabled users	Cars parked close to junction and not in parking space	725982, 719105
1183	Unsuitable access for disabled users	Lateen man light not working, no sound or tactile info	725976, 719114
1184	Uneven paving / footway		726003, 719097
1185	Road Surfacing at Crossing Poor		726016, 719062

1186	No tactile paving at crossing		726017, 719073
1187	No tactile paving at crossing		726049, 719036
1188	Unsuitable access for disabled users	Bad junction layout	726056, 719026
1189	No crossing facilities provided		726052, 719035
1190	No crossing facilities provided		726060, 719019
1191	Bus pole not identified in Braille		726092, 719018
1192	No tactile paving at crossing		726123, 719013
1193	Crossings not aligned		726121, 719008
1194	No tactile information at push button		726204, 718966
1195	Broken paving / footway		726199, 718961
1196	Unsuitable access for disabled users	Misleading path surface change	726224, 718950
1275	Bus pole not identified in Braille		725755, 719476
1276	No crossing facilities provided		725759, 719473
1277	Inappropriately constructed vehicle crossover point		725850, 719363

Appendix B. Key Facilities and Services Along the Bray Scheme

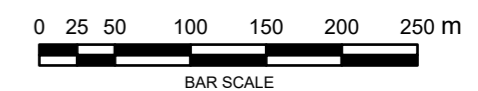


Legend

- Routes

Building

- Primary School
- Secondary School



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Rev	Date	Drn	Chk'd	App'd	Description

Client: **NTA**
Udarás Náisiúnta Iompair
National Transport Authority

Consultant: **Jacobs**

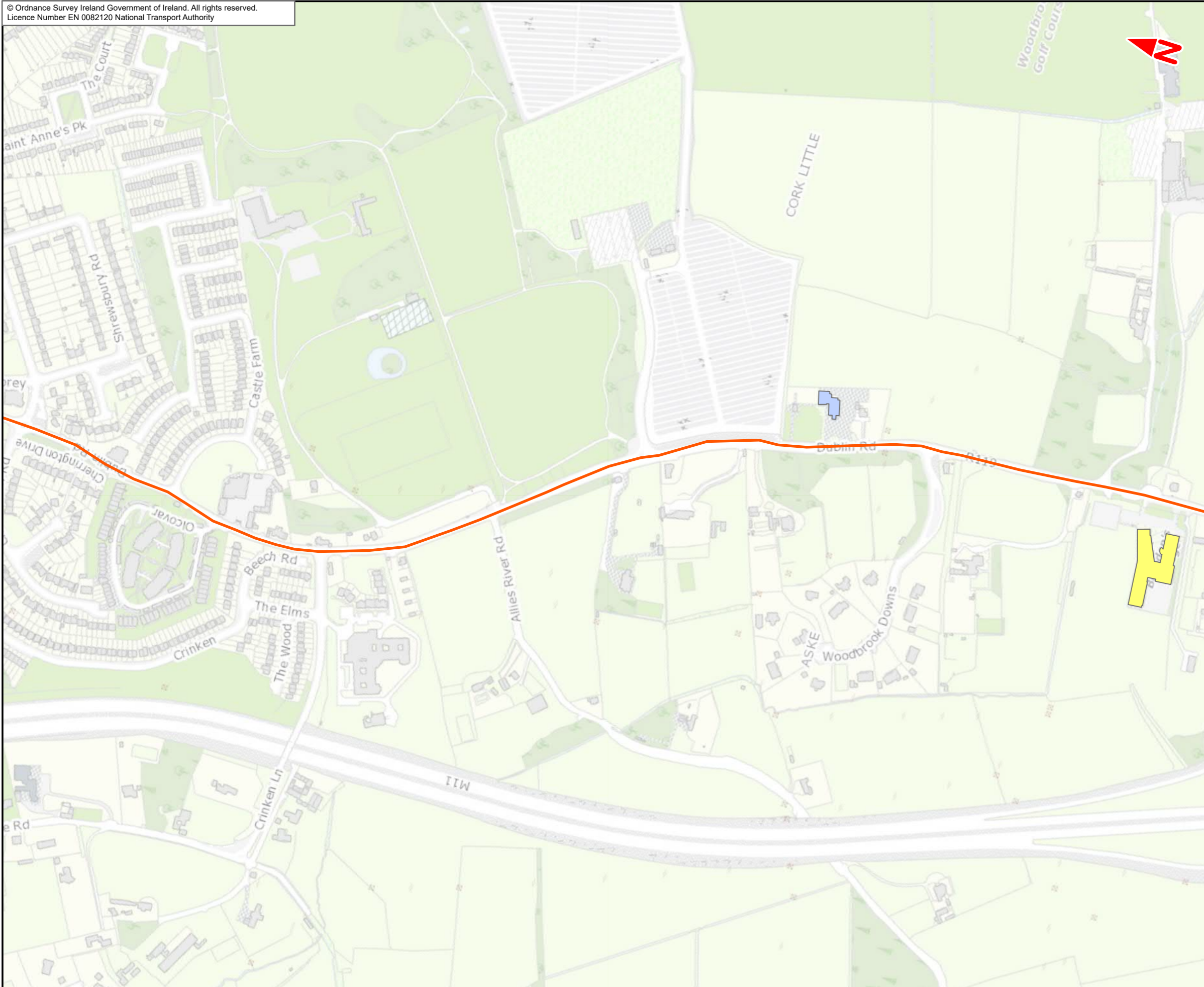
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Project Code: 32110900
Originator Code: JAC

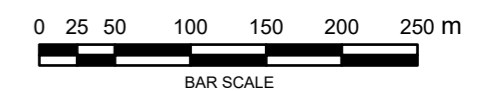
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Checked: []
Approved: []

QMS Code: []

Project Title: BUSCONNECTS Core Bus Corridors			
Drawing Title: Key Facilities and Services of the Bray Route			
Drawing File Reference	Sheet Number: 1 of 13	Status: DRAFT	Rev: []



- Legend**
- Routes
- Building**
- Catholic Church
 - Secondary School



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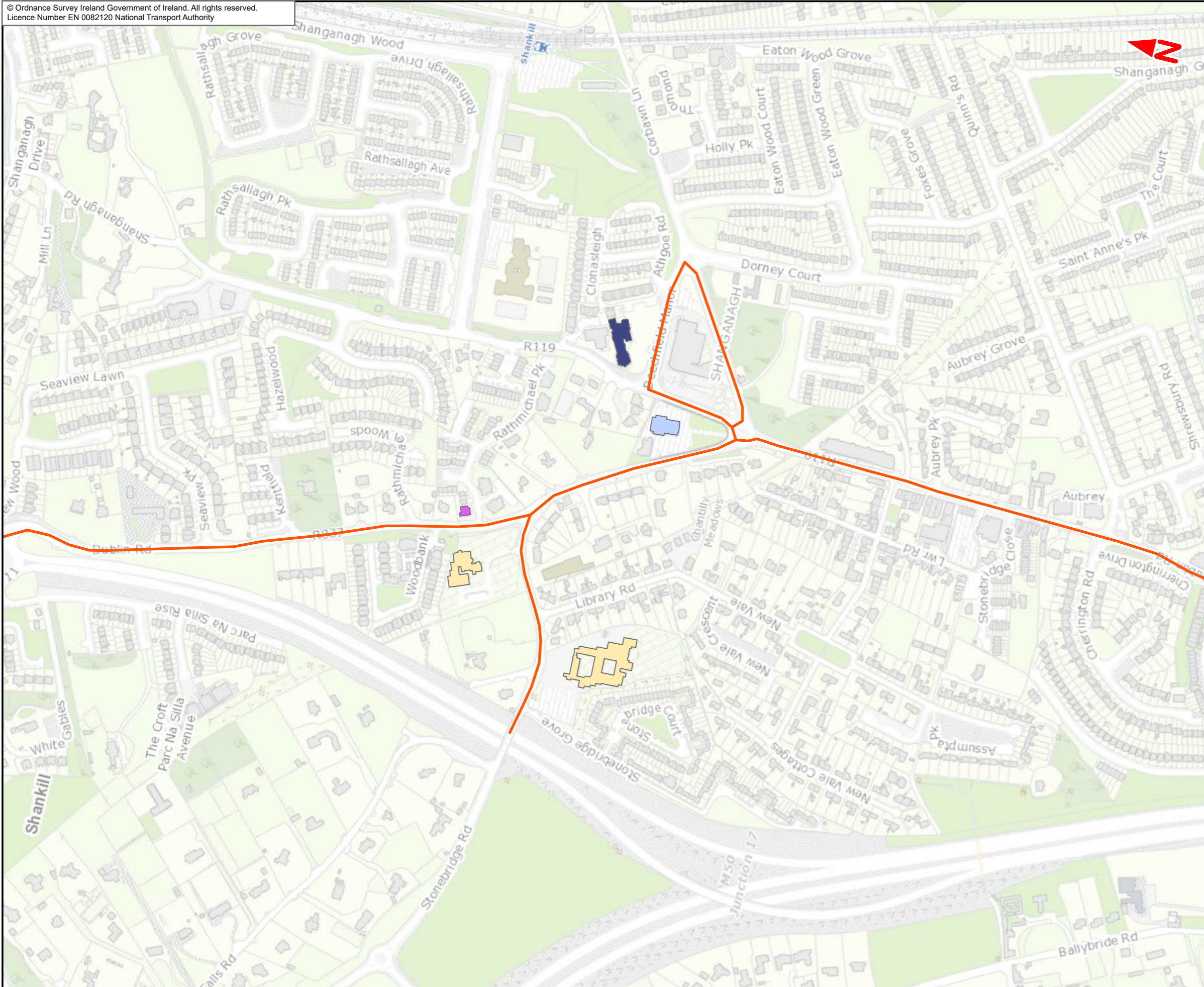
Udarás Náisiúnta Iompair
National Transport Authority



Date	17/04/2020	Scale @ A3	1:5 000	Drawn	Checked	Approved
Project Code	32110900	Originator Code	JAC	QMS Code		

Project Title				BUSCONNECTS Core Bus Corridors		
Drawing Title				Key Facilities and Services of the Bray Route		
Drawing File Reference	Sheet Number	Status	Rev			
	2 of 13	DRAFT				



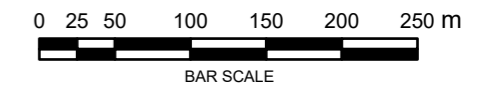


Legend

— Routes

Building

- Catholic Church
- Clinic
- Nursing Home
- Primary School



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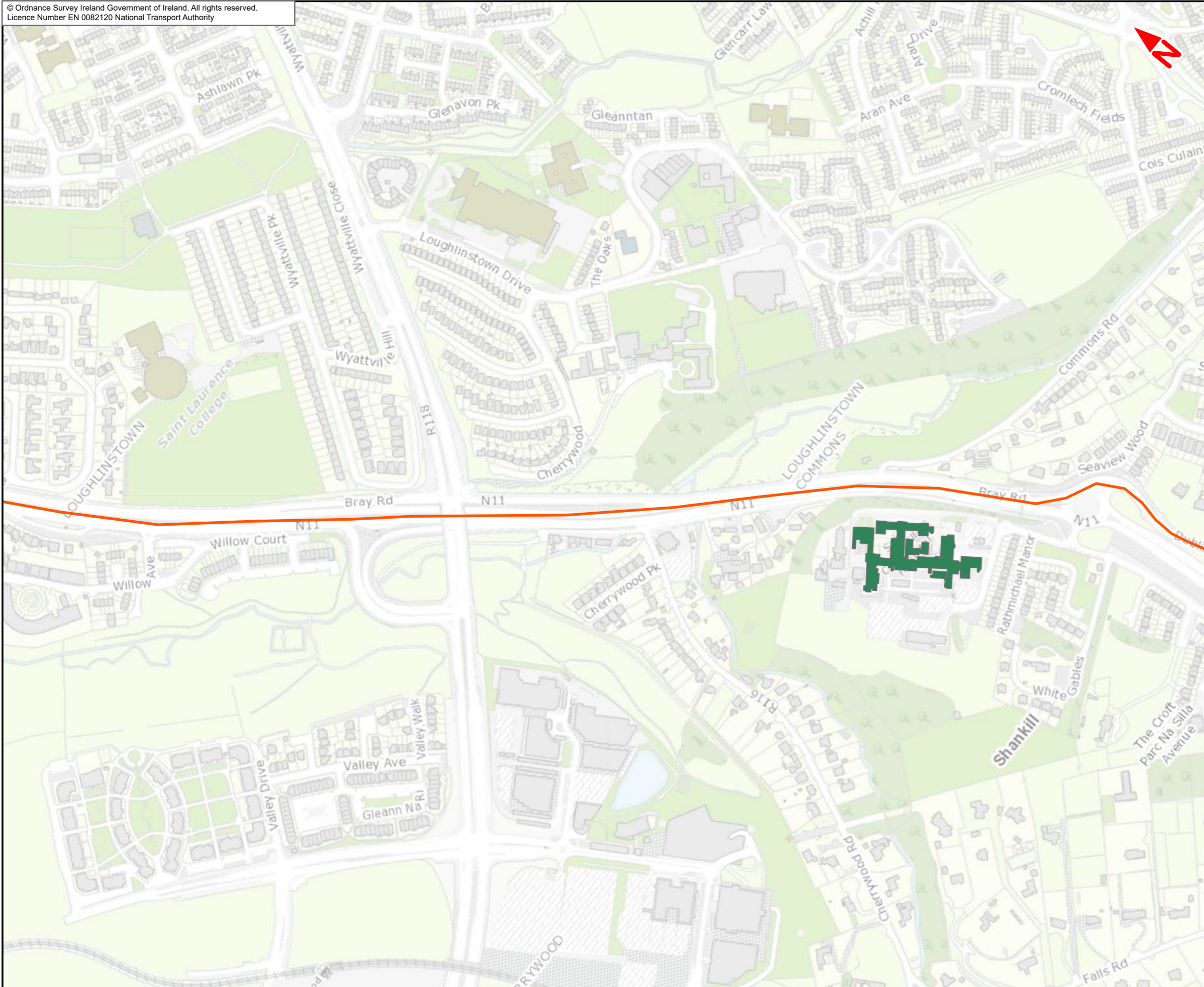
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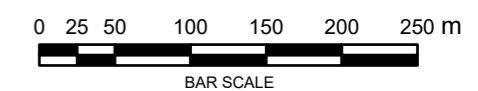
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		QMS Code		Approved

Project Title	BUSCONNECTS Core Bus Corridors		
Drawing Title	Key Facilities and Services of the Bray Route		
Drawing File Reference	Sheet Number	Status	Rev
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Legend

- Routes
- Building
- General Hospital



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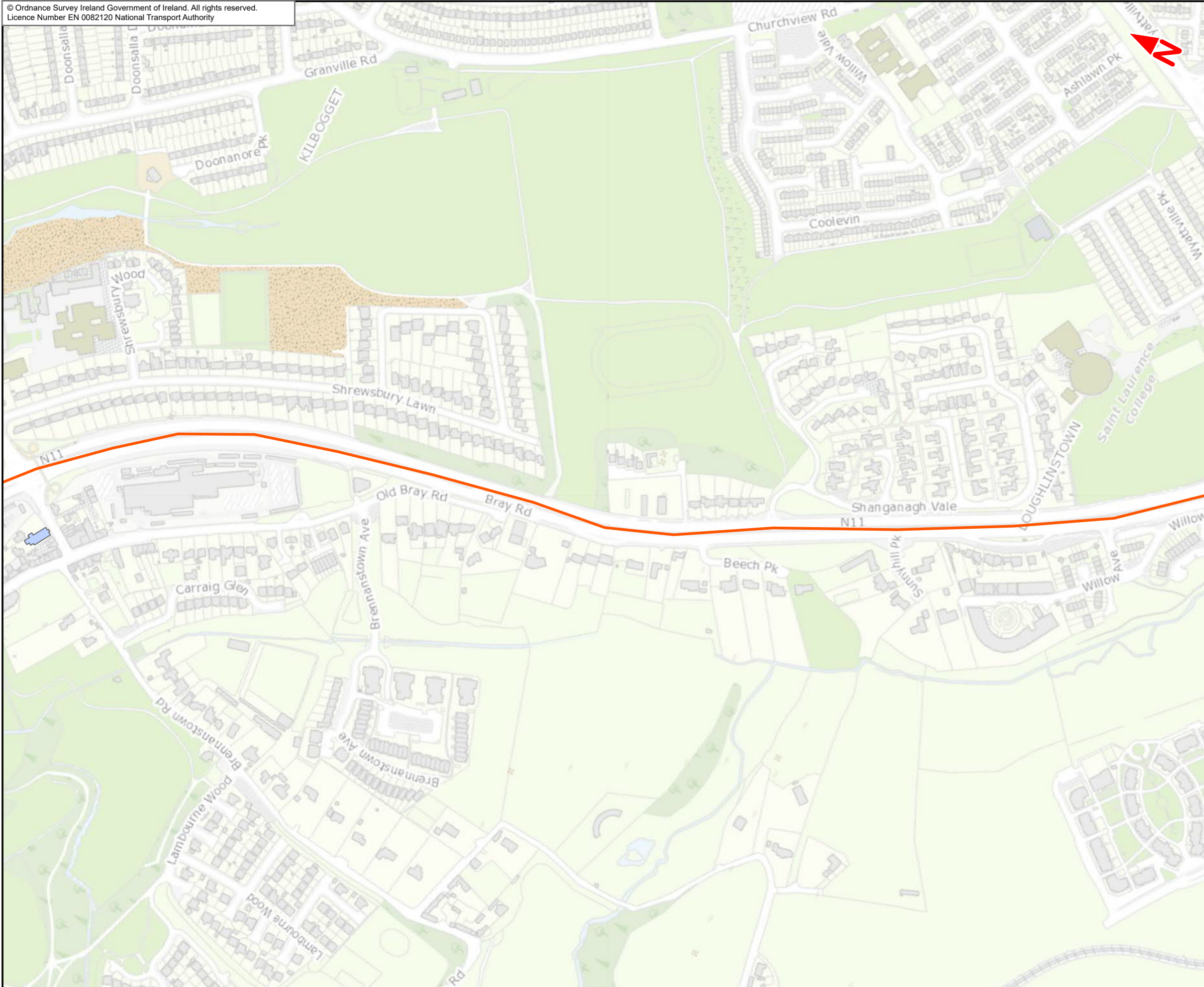
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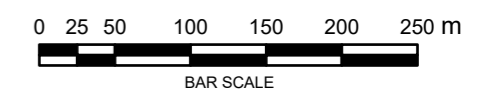
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Project Title	BUSCONNECTS Core Bus Corridors			
Drawing Title	Key Facilities and Services of the Bray Route			
Drawing File Reference	Sheet Number	Status	Rev	
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- Legend**
- Routes
 - Building**
 - Catholic Church



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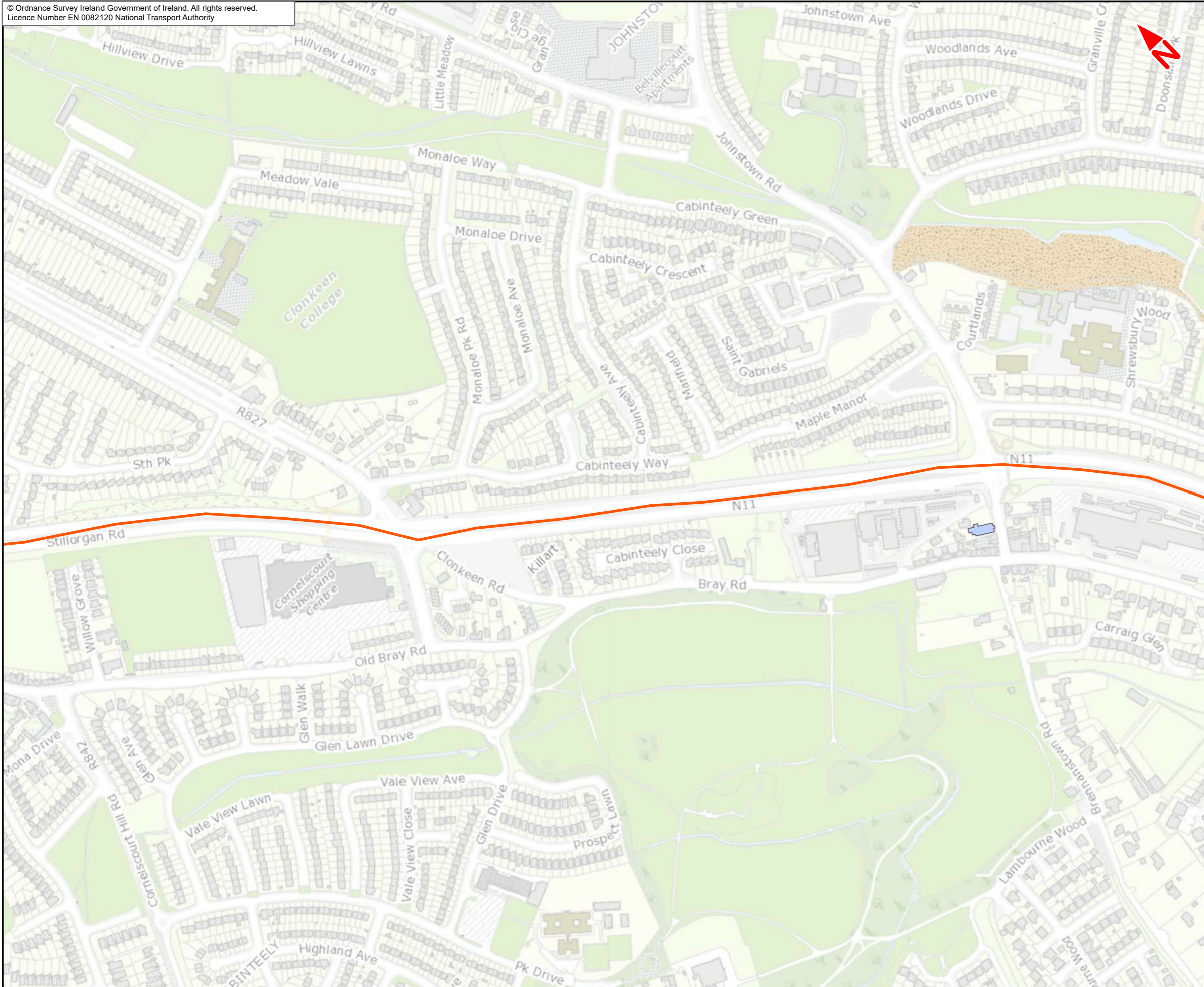
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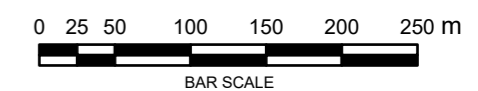
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		QMS Code	Approved	

Project Title				BUSCONNECTS Core Bus Corridors		
Drawing Title				Key Facilities and Services of the Bray Route		
Drawing File Reference	Sheet Number	Status	Rev			
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Legend

- Routes
- Building
- Catholic Church



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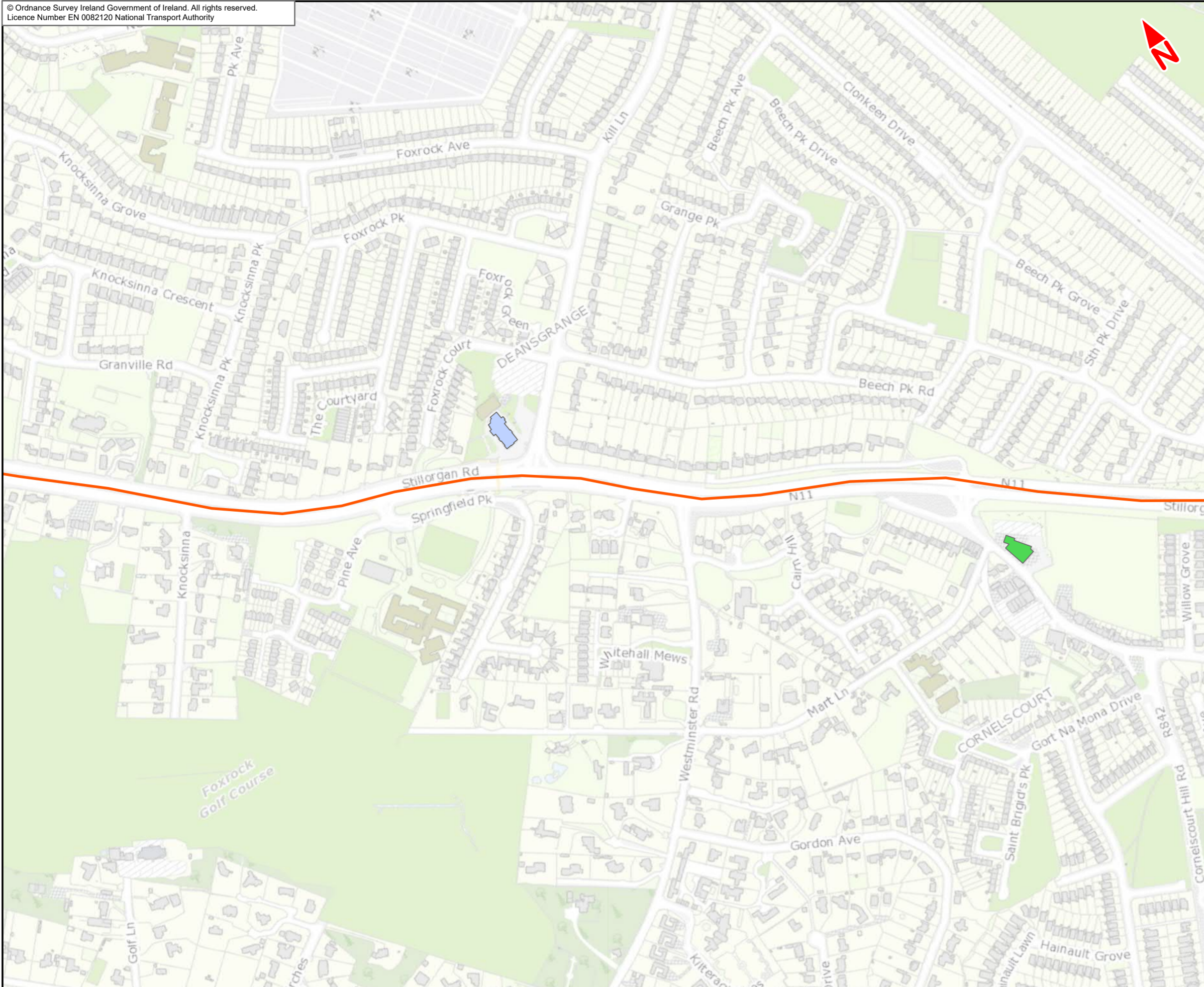
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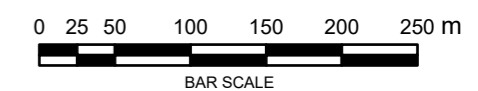
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Project Title				BUSCONNECTS Core Bus Corridors		
Drawing Title				Key Facilities and Services of the Bray Route		
Drawing File Reference	Sheet Number	Status	Rev			
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- Legend**
- Routes
 - Building
 - Bank
 - Catholic Church



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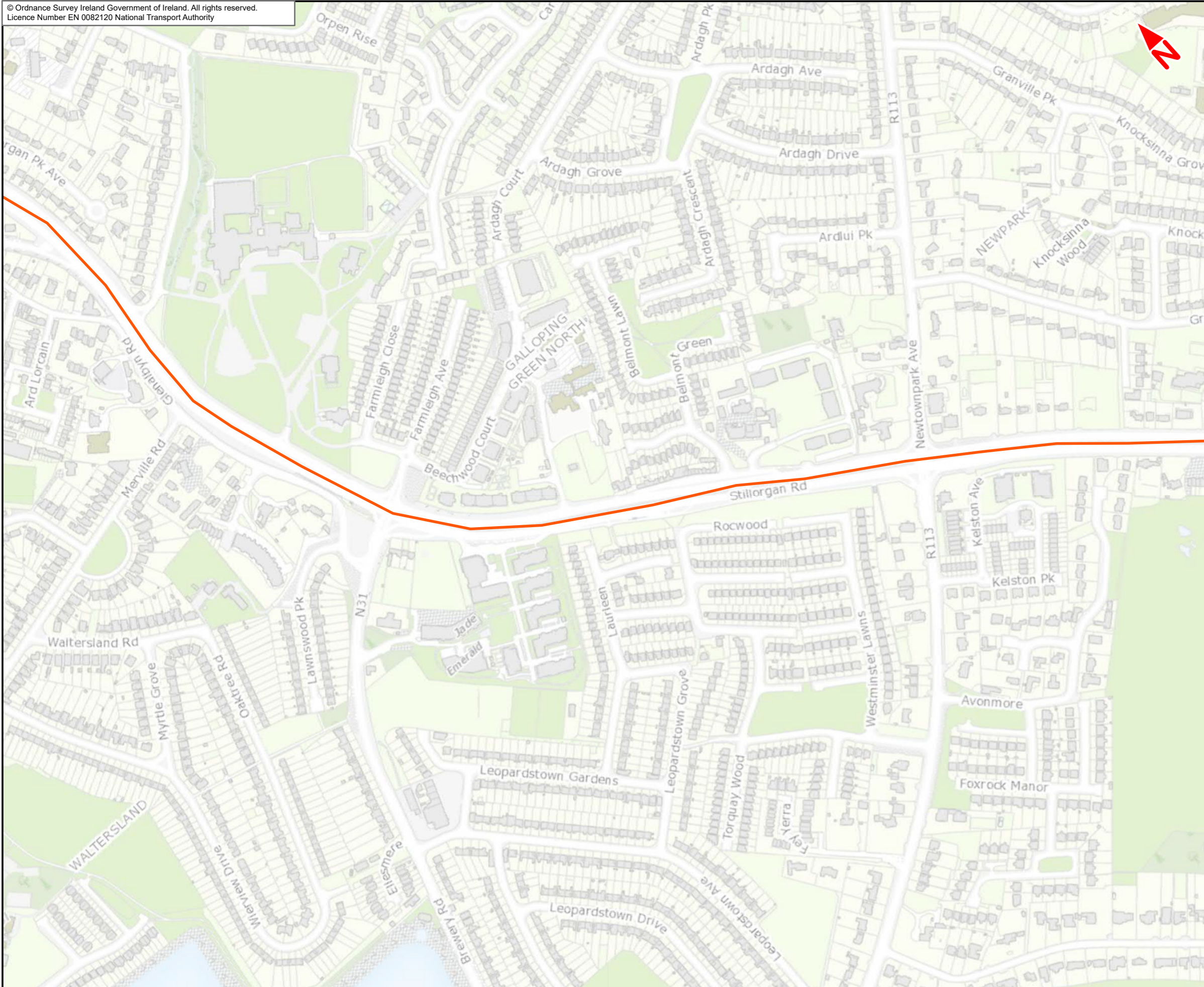
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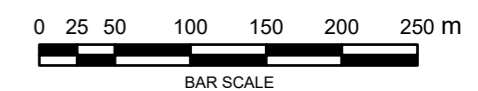
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NTA Udarás Náisiúnta Iompair National Transport Authority		Jacobs		
Date	17/04/2020	Scale @ A3	1:5 000	Drawn
Project Code	32110900	Originator Code	JAC	Checked
		QMS Code		Approved

Project Title				BUSCONNECTS Core Bus Corridors		
Drawing Title				Key Facilities and Services of the Bray Route		
Drawing File Reference	Sheet Number	Status	Rev			
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Legend
— Routes





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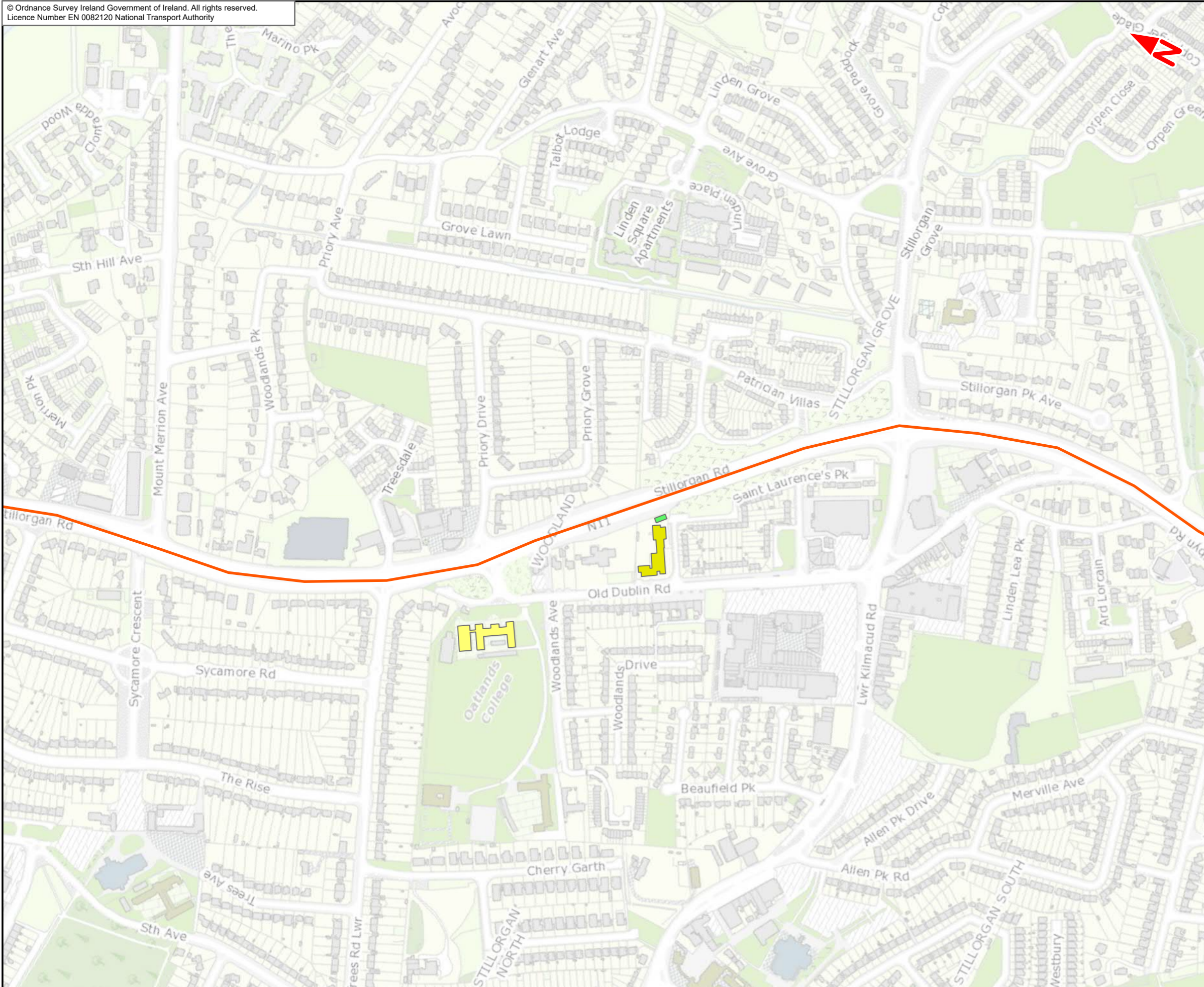
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

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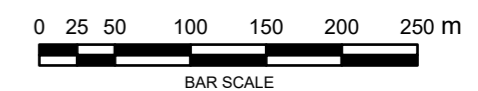
Client  Udarás Náisiúnta Iompair National Transport Authority		Consultant 				
Date	17/04/2020	Scale @ A3	1:5 000	Drawn	Checked	Approved
Project Code	32110900	Originator Code	JAC	QMS Code		

Project Title	BUSCONNECTS Core Bus Corridors		
Drawing Title	Key Facilities and Services of the Bray Route		
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Legend

-  Routes
- Building**
-  Further Education
-  Secondary School
-  Third Level



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Client: **NTA**
Udaráis Náisiúnta Iompair
National Transport Authority

Consultant: **Jacobs**

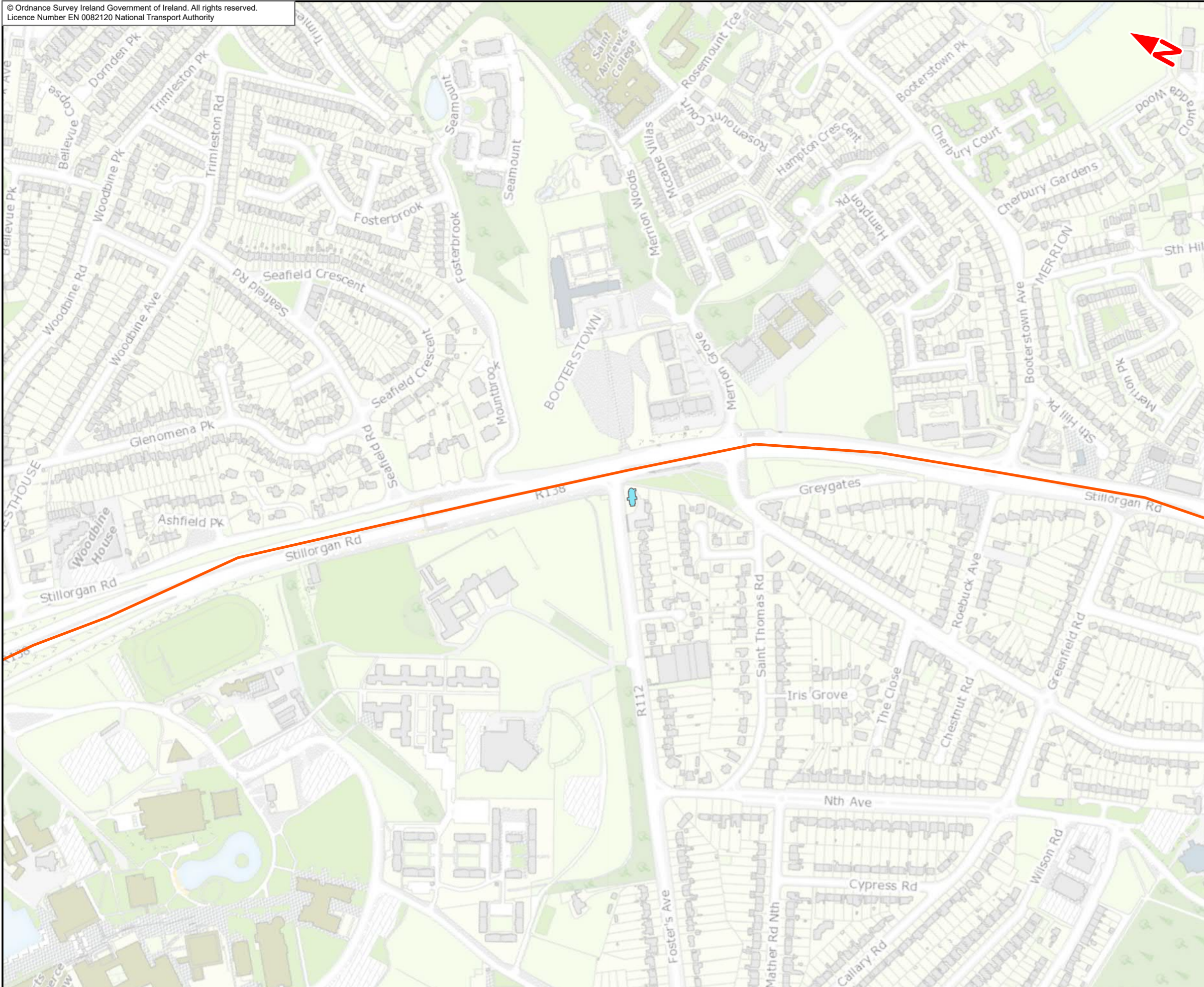
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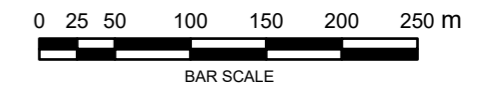
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Project Title: BUSCONNECTS Core Bus Corridors			
Drawing Title: Key Facilities and Services of the Bray Route			
Drawing File Reference	Sheet Number: 9 of 13	Status: DRAFT	Rev: []



Legend

- Routes
- Building
- Church of Ireland Church



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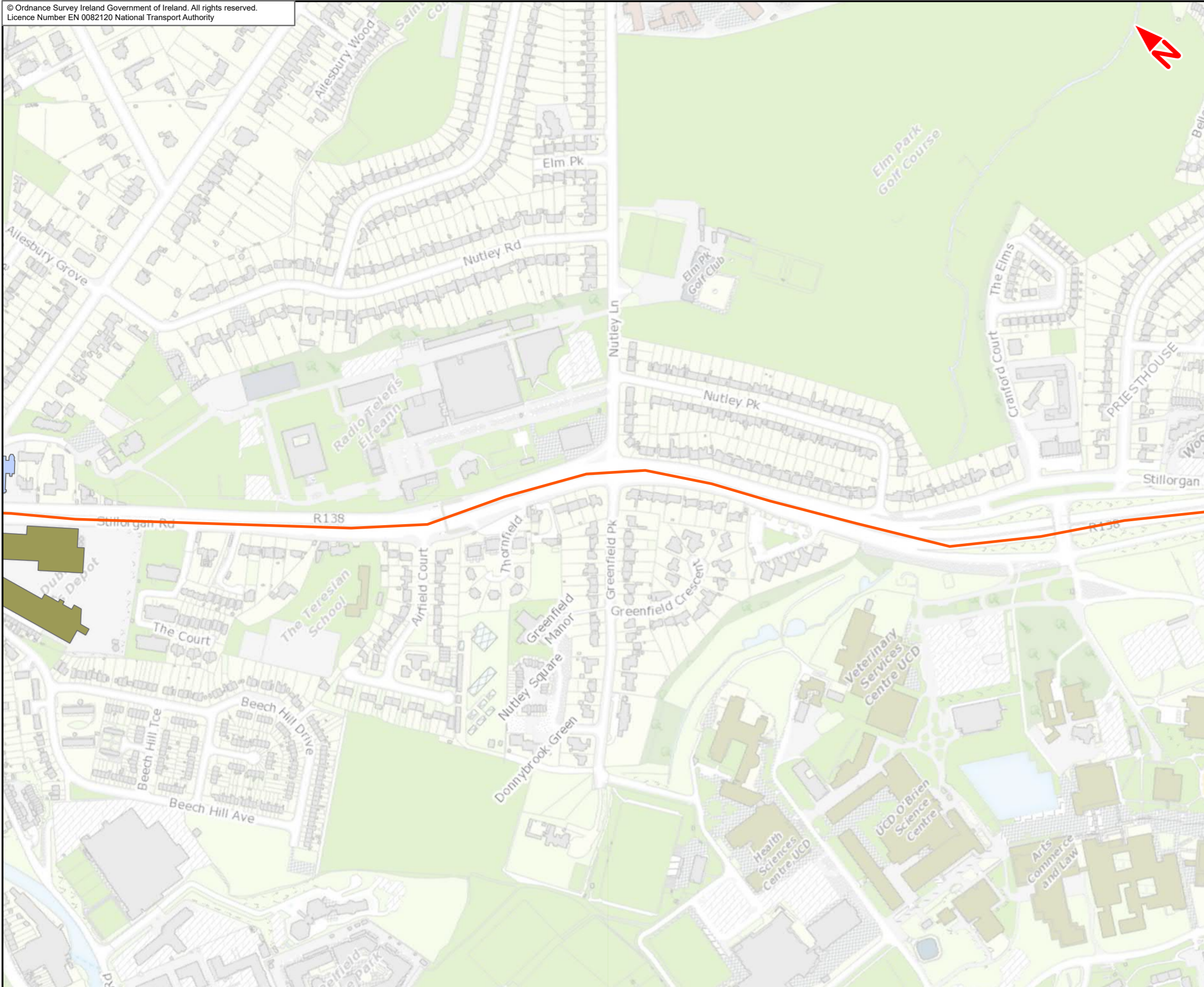
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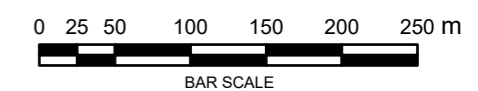
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Project Title				BUSCONNECTS Core Bus Corridors		
Drawing Title				Key Facilities and Services of the Bray Route		
Drawing File Reference	Sheet Number	Status	Rev			
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- Legend**
- Routes
 - Building**
 - Bus Depot
 - Catholic Church



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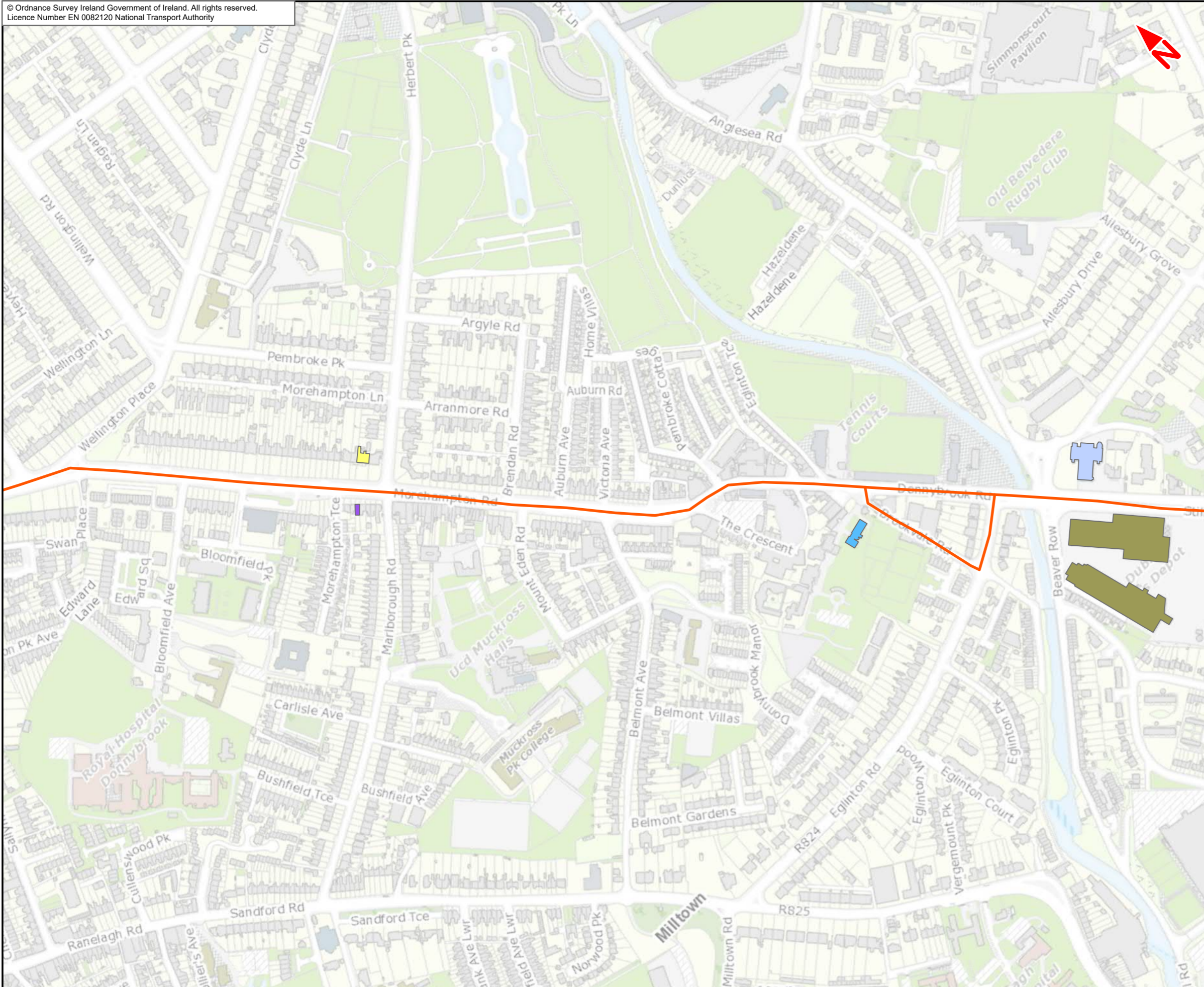
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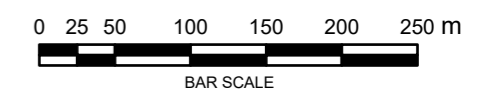
NTA Údarás Náisiúnta Iompair National Transport Authority		Jacobs		
Date	17/04/2020	Scale @ A3	1:5 000	Drawn
Project Code	32110900	Originator Code	JAC	Checked
		QMS Code	Approved	

Project Title				BUSCONNECTS Core Bus Corridors		
Drawing Title				Key Facilities and Services of the Bray Route		
Drawing File Reference	Sheet Number	Status	Rev			
	11 of 13	DRAFT				



Legend

- Routes
- Bus Depot
- Catholic Church
- Credit Union
- Day Centre
- Secondary School



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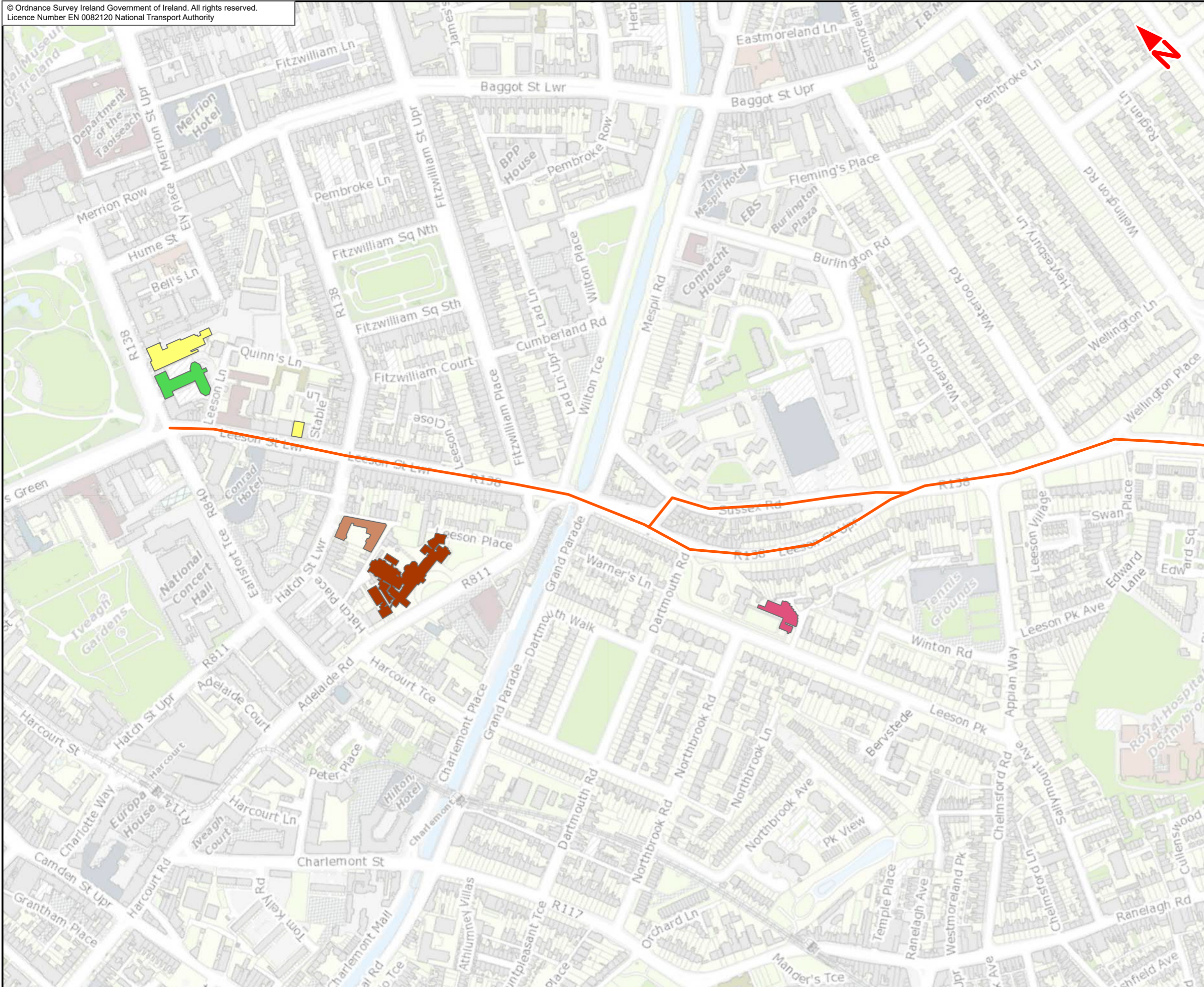
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

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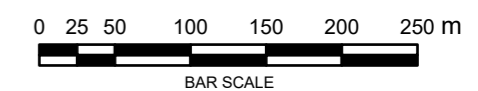
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Project Title				BUSCONNECTS Core Bus Corridors			
Drawing Title				Key Facilities and Services of the Bray Route			
Drawing File Reference	Sheet Number	Status	Rev				
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Legend

-  Routes
- Building**
-  Bank
-  Community Centre
-  Eye and Ear Hospital
-  Secondary School
-  University





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Appendix C. Designer's Responses to Issues Raised

Refer to Appendix I2 of the main PDR Report