Appendix H
Bus Stop Review Report

Appendix H1
Bus Stop Review Methodology

Bus Stop Review Methodology (REV 3)

Project name	Date	Prepared by
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1.0 Introduction

The location and design of bus stops will be critical to the success of the operation of BusConnects Dublin. Bus stop catchment areas and safety will need to be maximised, the size of the stop needs to be sufficient to meet the expected passenger and bus demand, and the bus stop itself must not become a bottle neck to the operation of the corridor. This methodology outlines how each corridor shall be assessed so as the location and operation of bus stops can be optimised.

This Note does not relate to the physical layout of the bus stops which is addressed in Chapter 11 of the Preliminary Design Guidance Booklet, although spatial considerations are discussed in section 5.4. Standard details for bus stop layouts are to be included in the next draft of the Design Guidance Booklet.

It is important to note that existing bus stops located along the Core Bus Corridors will have been subject to considerable thought by Bus Operators, An Garda Siochana, and the Local Authority. For this reason, it is imperative that each location is closely examined before it is considered for relocation or removal.

For avoidance of doubt this manual assumes the standard bus is a twin axle double decker bus (10 to 11m in length) with a front and middle doors. Other vehicles, such as 3-axle double decker, are in use by Dublin Bus and should be considered when undertaking the Geometric Design.



Figure 1.2 Standard Bus being used on the CBC's.

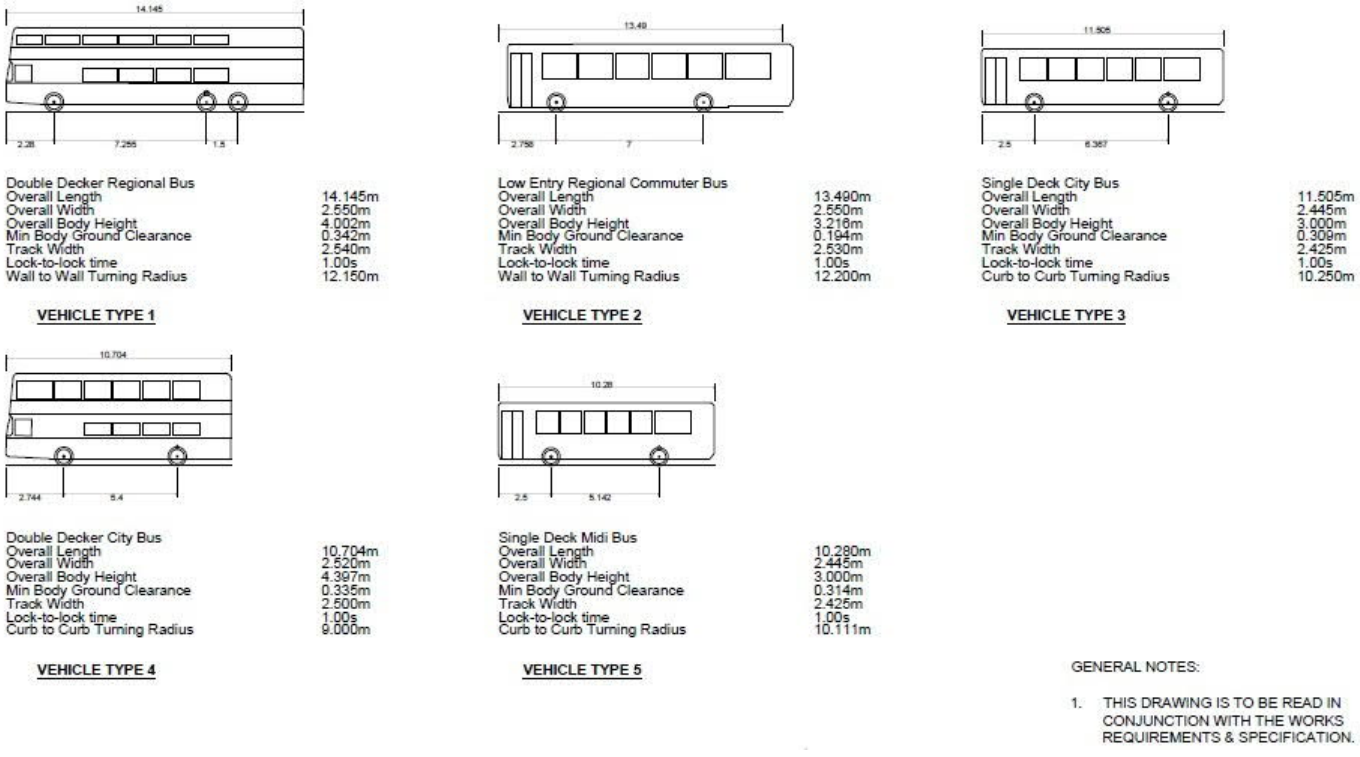


Figure 1.3 Standard Transport for Ireland Bus Specifications.

Considerations for Bus Stop Locations

The basic criteria for consideration when locating a bus stop:

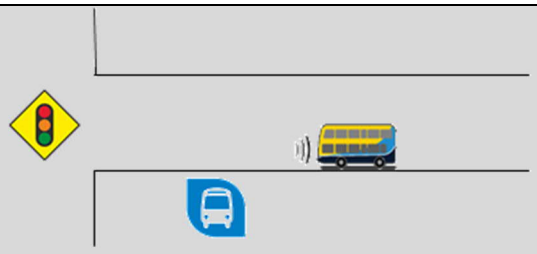
- Driver and waiting passengers are clearly visible to each other;
- Located close to key local facilities;
- Located close to main junctions without affecting road safety or junction operation;
- Located to minimise walking distance between interchange stops;
- Where there is space for a bus shelter;
- Located in pairs, 'Tail to tail' on opposite sides of the road;
- Close to (and on exit side of) pedestrian crossings;
- Away from sites likely to be obstructed; and
- Adequate footway width.

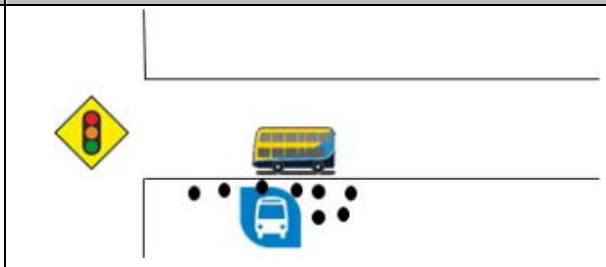
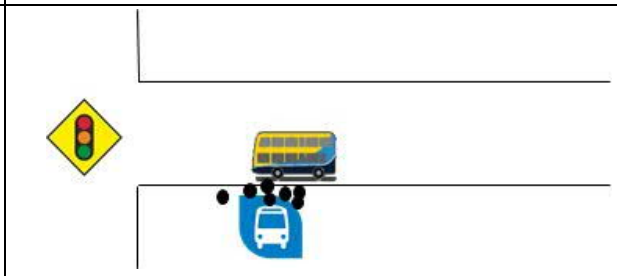
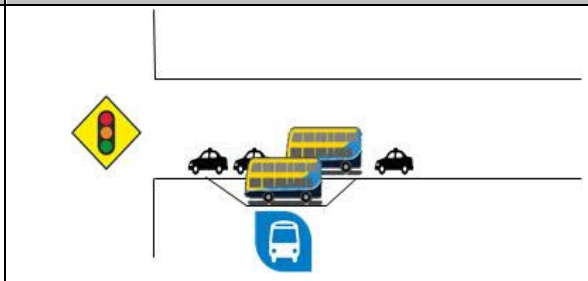
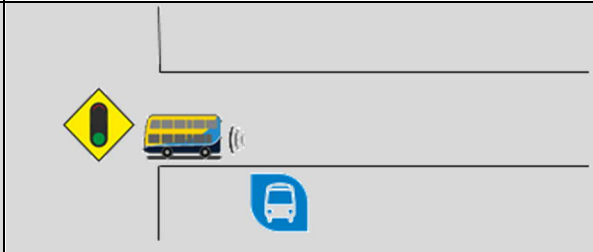
Principals of Bus Stop on high capacity Bus Systems.

The Core Bus Network Report (2015) noted that the distances between bus stops influences the efficiency of the bus network. In general, the lower the distances between stops along a corridor, the higher the delay that is incurred for buses. This delay is caused through acceleration and deceleration and delays associated with pulling in and out of bus stops with some estimates suggesting that stopping at bus stops makes up in excess of 20% of the journey times along the QBC corridors. International literature on bus stop spacing recommends a distance of 300 to 500m (NTA Report on Core Bus Network Infrastructure Network, February 2015) between stops in suburban areas is optimum, whereas in Dublin many routes have bus stops located at far lower spacing. The Core Bus Network Report concluded that increasing spacing between bus stops was part of the solution to reduce delays along the corridors.

The following indicates where delay materialises when accessing bus stops.

Table 1.1 Sources of Bus Delay associated with Bus Stops (TCQoSM, TRB)

1 Deceleration Time spent slowing to serve the stop.	

2 Bus stop failure Waiting for other buses to clear the stop	
3 Boarding lost time Waiting for passengers to reach the bus	
4 Passenger service time (dwell time) Opening the doors, boarding and alighting passengers, and closing the doors	
5 Traffic signal (traffic control) delay Waiting for the signal to turn green, or other traffic control delay	
6 Re-entry delay Waiting for a gap in traffic	
7 Acceleration Time spent getting back up to speed	

Boarding of passengers, layout of stations are not being examined as they are either not relevant in this case or dealt with elsewhere as part of the overall BusConnects Programme.

The acceleration and deceleration will be similar at all stops and clearly the overall impact is dependent on the number of bus stops along a route; this will be dealt with by examining the number of bus stops along a corridor.

Bus Stop failure is linked to the amount of time buses are stopped and the frequency of buses along the route and has a significant impact on the overall corridor capacity and efficiency, particularly where non stopping buses are present (Express or Regional Buses). A situation where a bus arrives at a bus stop to find all loading areas full:

- The bus must wait until space becomes available;
- Slows down the bus and creates schedule reliability issues; and
- Delay can also increase further as bus bunching occurs and bus dwell and traffic control delay times will increase.

The proximity of a bus stop to signalised junctions has an impact on bus speeds with far-side stops having the least negative impact on speed and capacity, and also favored as passengers cross the road behind the bus which increases safety.

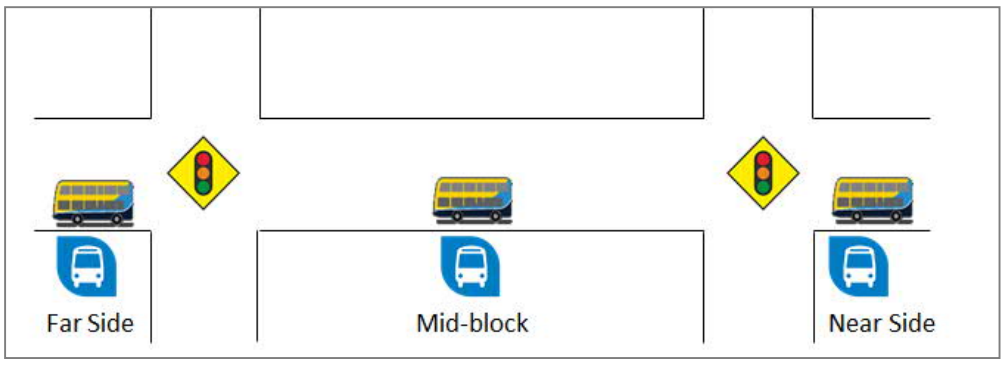


Figure 1.4 Typical Location of Bus Stops.

Ability to overtake slower buses is an important parameter where the route is made up of both express (rarely stopping) and slower (stopping at all stops) buses. For example, on the N11 QBC lay-bys (or passing lanes) were introduced after the original QBC was built to increase the capacity and allow express buses to pass the slower vehicles. On some of the BusConnects schemes this will need to be considered particularly on those routes that include regional and intercity services.



Figure 1.5 Stillorgan QBC with high bus flows and no bus laybys resulted in bus bunching/ platooning; bus lay-by's provided at key locations to allow express buses to pass slower buses. (Source: Google Maps)



Figure 1.6 A typical bus lay-by adjacent to a bus lane; note concrete surface for additional durability.

Consideration should also be given to locations where coaches stop along the Corridors, particularly those serving the airport which could require longer dwell time to allow passengers to load/unload their luggage. In these cases, a layby separate to the CBC Bus Stop maybe desirable (Figure 1.7).

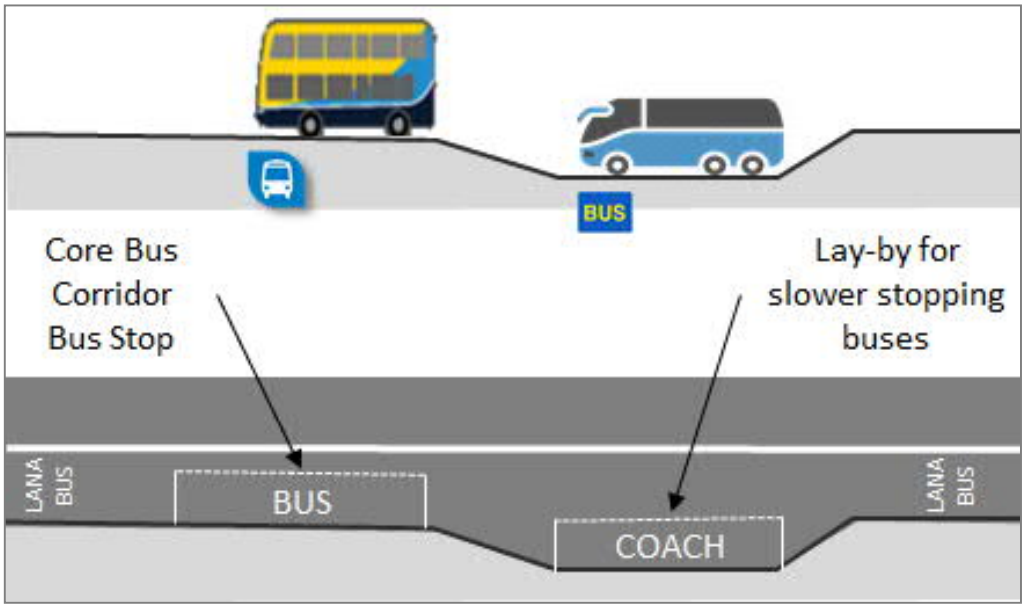


Figure 1.7 Double Bus Stop (in-line for BusConnects routes) concept for locations with buses requiring different dwell times.



Figure 1.8 Multiple bus operators may be using bus stops along the Corridors.

In general, most bus stops along corridors will be in-line (bus stops within the bus lane), as a result re-entry delays will not impact the operation of buses. However, on busier corridors where lay-bys are used re-entry may delay buses. ED's need to consider the flow of buses and taxis passing lay-by's, and where there is increased risk of delay additional measures may be required to generate

gaps in traffic (far-side) or the installation of a yellow box to allow buses to renter the traffic queue (near-side).

Pedestrian accessibility

Another important aspect of bus stop positioning is proximity to pedestrian crossings. Failure to provide high quality pedestrian facilities on the pedestrian desire line may lead to a higher accident risk associated with a bus stop. Therefore, designers need to consider how passengers are going to cross the road to get access to the stop, in general this will require bus stops to be located close to safe crossing points.

2.0 Methodology

This section outlines the process for examining each BusConnects Corridor and assessing and reporting on the bus stops along each route. The flow chart summarises the process and this is followed by a more detailed description of the tasks to be undertaken.

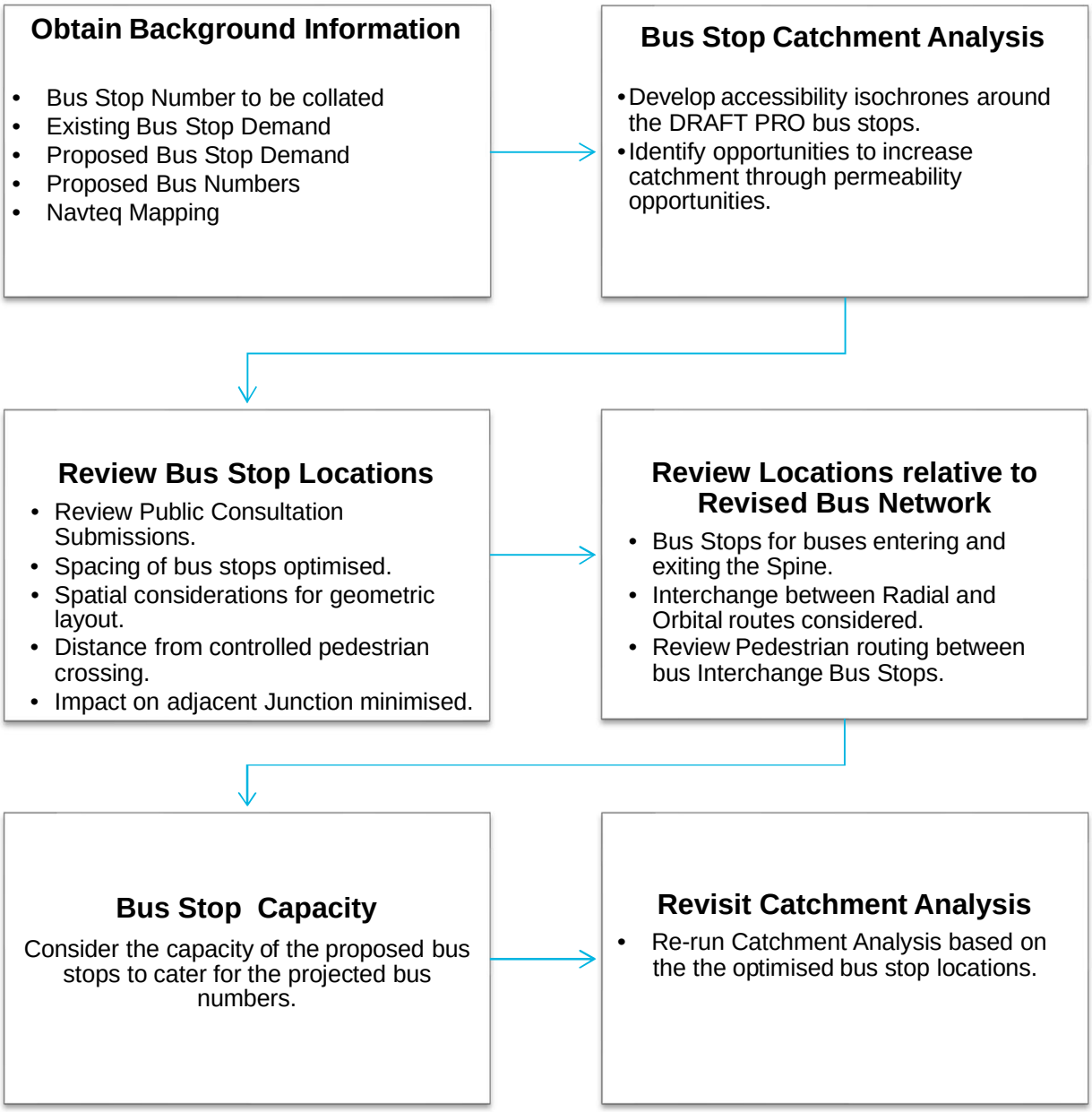
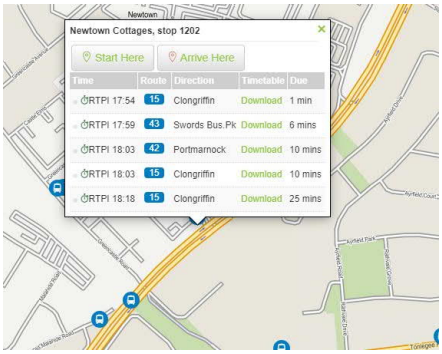


Figure 2.1 Flow Chart for proposed Bus Stop Review.

3.0 Background Information

In order to undertake the review of the bus stops along each corridor background information must be gathered. The following section outlines this information and how to obtain it.

Table 3.1 Information to be gathered to undertake the Bus Stop Review

Item	Description	Location/Contact
Bus Stop Number	Bus Stop Numbers can be obtained from a number of online sources. 	https://www.transportforireland.ie/plan-a-journey/
Existing Bus Stop Demand	Estimated boarding and alighting figures are available from NTA Business Intelligence Unit. Using Leap Card Data and Machine Learning the NTA has recently developed a tool for estimating where passengers are alighting buses along each route. The format that this will be available in is currently under development. This information can include details on use of Free Travel Pass which may help in identifying locations which are a higher priority for the elderly and those with accessibility issues.	**NTA Business Intelligence Unit**
Proposed Bus Stop Demand	Obtain future passenger demand for each corridor, this will come from the ERM. This will not be linked to specific bus stops, but zonal. The bus stop demand will then be linked to bus stops by using the existing bus stop data and factoring up existing boarding and alighting figures.	TIAR Consultant
Proposed Bus Numbers	The number of buses on each corridor is available from the BusConnects Network Redesign Team. This information has already been issued to each ED. It is the ED's responsibility to confirm that these figures are correct at this time.	Confirm that the numbers provided are the revised network data.
Navteq Mapping	The GIS Mapping is required to understand permeability in the area surrounding bus stops. NTA has this information and will provide it to each ED. Note that this base data will need to be reviewed thoroughly as from experience there will be many permeability routes that are missing.	NTA to issue mapping to all teams.

4.0 Bus Stop Catchment Analysis

Bus stop passenger catchment areas are critically important to the success of a high-quality bus corridor. The catchment at each bus stop needs to be maximised so as each stopping movement collects sufficient passengers to justify the loss in journey speed; a bus stopping at each bus stop to pick up one passenger will result in a very slow journey time, the ideal scenario is to stop less often and collect more passengers at each stop. Clearly too few bus stops could also be detrimental to the success of the scheme. To assess if bus stops are optimally spaced to maximise the passenger catchment area it is recommended that a catchment analysis using the NTA Navteq data(or similar process) is undertaken.

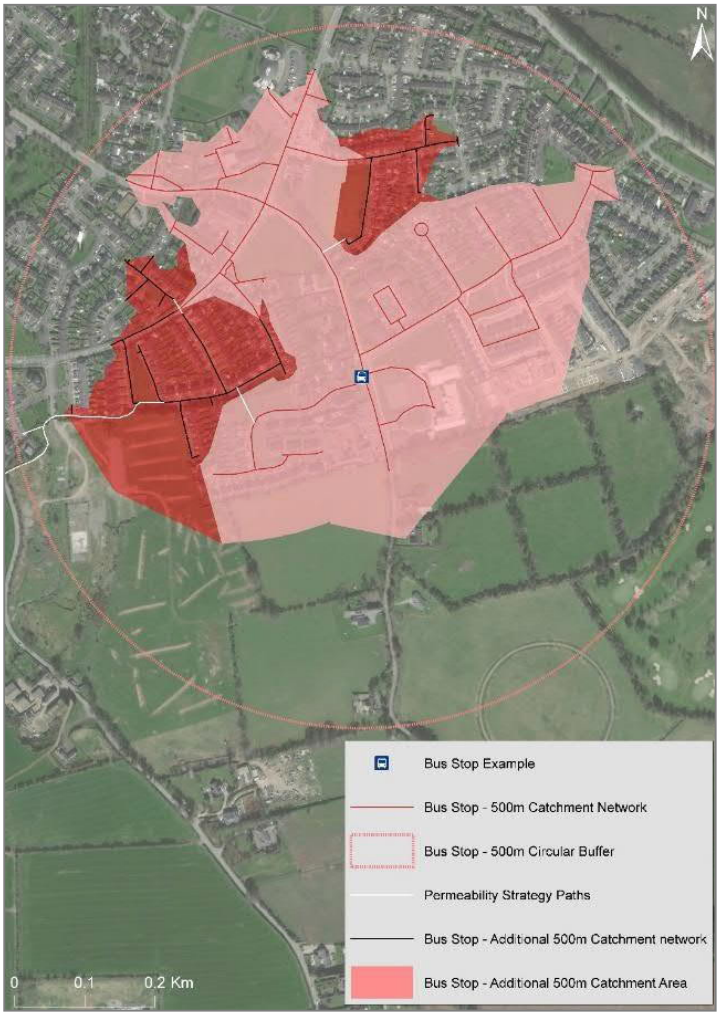


Figure 4.1 Passenger catchment analysis for a bus stop indicating the existing and possible catchment areas assuming permeability improvements can be undertaken.

Figure 4.1 indicates the area that is within a standard walking distance of a bus stop (400m for BusConnects CBC's) based on the actual walking distance rather than "as crow flies" analysis which can be misleading particularly where there are long sections of blank, inaccessible, wall along

corridors. The number of people living within this area can be obtained from GeoDirectory data. In addition, permeability solutions can be identified and the impact of making these changes can be quickly assessed in terms of increased catchment area. The process of undertaking this analysis is outlined below:

Task 1: Enhancing the Navteq network using OpenStreetMap to add footpaths, greenways, cut throughs which are accessible to most people, paths over greens or parks, etc., this is required as the network supplied by the NTA is a primarily a driving network not a pedestrian network.

To do this you will add walk links extracted from OpenStreetMap's data clearly coding these into the Navteq supplied by the NTA. Google Streetview should be used as a check to ensure any link added to the Navteq exist on the ground and are accessible to all. Informal walk links should not be added at this stage.



Figure 4.2 Example of permeability link missing from Navteq mapping on Tallaght/Clondalkin Cor Bus Corridor.

Task 2: Once the Navteq has been enhanced to the required level to capture all major pedestrian movement within bus stop catchment areas, catchment analysis shall be run for the proposed and existing bus stops. Using the Network Analyst Extension in ArcGIS generating 400m and 800m walking bands to reflect 5 and 10-minute walking catchments of bus stops.

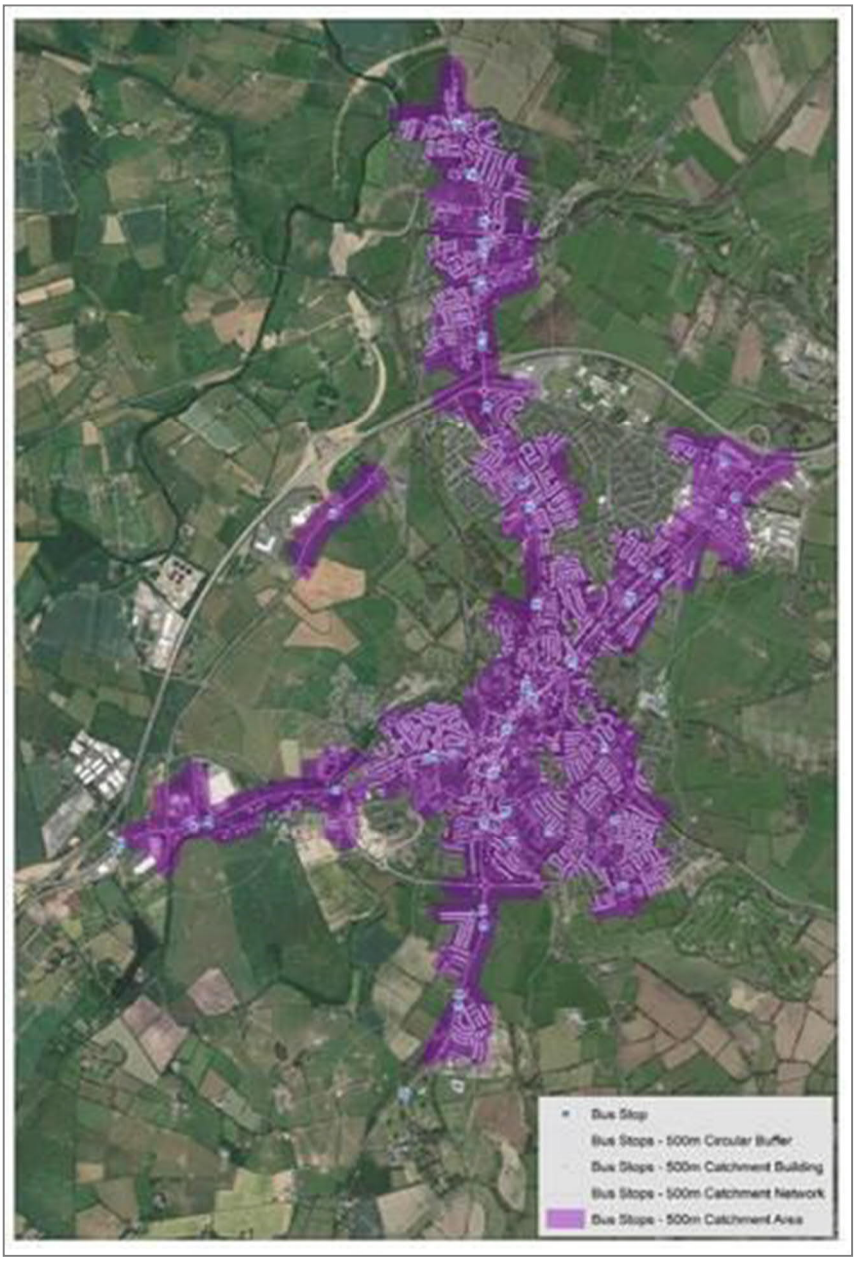


Figure 4.3 Example of catchment analysis run for all bus stops in Naas

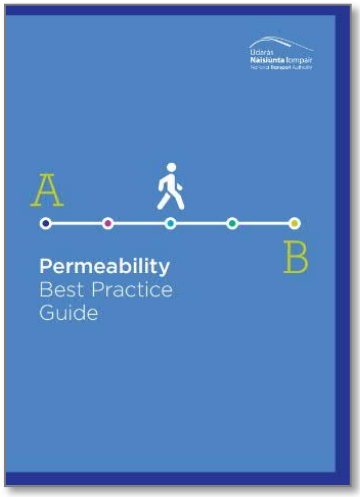
Task 3: Production of catchment tables identifying number of households using Geo Directory or population estimate using census 2016 and Geo Directory to apportion sections of Census Small Area within 400m and 800m catchments of each bus stop. Catchments will be non-overlapping to avoid double counting between stops along the same alignment.

Task 4: Maps will be generated for each stop along each of the alignment, or stops can be grouped together to reflect particular study areas. Maps can be generated in any particular format to match the theme of previous reports (EPR Reports).

Task 5: Quality Assurance and Checking of catchments is critical as missing, or additional, links will be easily identified by the public and could discredit the analysis if there are errors.

Having developed a detailed understanding of the catchment areas consideration should then be given to how the catchments can be widened through identification of permeability opportunities along the corridors. Permeability describes the extent to which an urban area permits the movement of people by walking or cycling. Such an approach is known as “filtered permeability”. Barriers to filtered permeability can include:

- Boundary walls around estates and within residential areas that prevent movement along natural desire lines, being usually the shortest and most direct route connecting two points;
- Cul-de-sacs which prohibit through movement;
- Poorly designed linkages that are difficult or unattractive to use; and
- Connections which require much longer travel distances than direct linkages.



The NTA Permeability Best Practise Guide should be followed for the identification and assessment of these opportunities. Careful consideration should be given to whether or not these proposals should form part of the Bus Connects scheme or if they should be identified to the Local Authority for actioning. Only those linkages that are directly linked to the corridor should be considered as part of this application.

An example from the Clongriffin to City Centre CBC can be seen in Figure 4.4 where a very large housing estate which is located immediately adjacent to the proposed bus corridor has a continuous boundary wall that runs for over 800m preventing easy access to the bus routes and requiring a walk of almost 1km to access the bus routes. Opening a pedestrian access on the boundary wall could create a much shorter route to the buses and substantially increase the bus passenger catchment area.

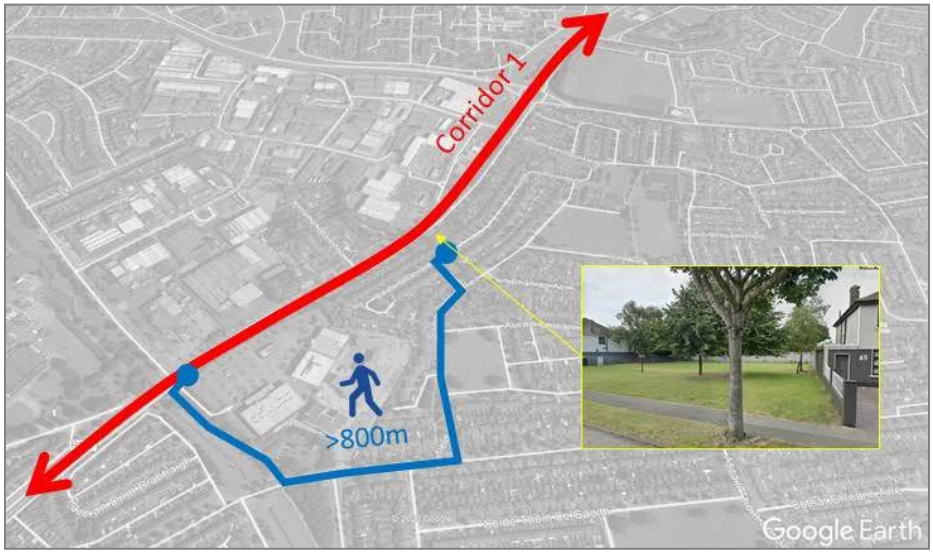


Figure 4.4 Permeability option on the Malahide Road (Source: Google Maps).



Figure 4.5 Boundary wall along Malahide Road (Corridor 1) where local residents have opened up individual doors to access the existing QBC route.

5.0 Review Bus Stop Locations

5.1 Public Consultation Feedback.

An important aspect of the bus stop review is to review feedback received from the general public in relation to the position of an existing, or proposed, bus stop along the corridor. This may identify a specific issue that the reviewer should be aware of before beginning the review. For example, the relocation of a bus stop away from a destination for people with mobility impairments may not have been identified during the preliminary design process and should now be considered. It is also important to review these comments against commitments that may have been given during the "one to one" meetings held during the initial, and subsequent, consultation stages.

Please note that some bus stops were relocated after the EPR public consultation as a result of public consultation comments, if a bus stop is being considered for relocation please also check whether it had been relocated previously by checking the EPR drawings and discussing with the NTA IPO.

5.2 Usage of Bus Stops.

In order to help the reviewer, understand the passenger movements at a bus stop it is recommended that the existing Boarding and Alighting Data is reviewed at this early stage and is used as an approxi for future passenger movements. This will provide an indication of the numbers using a bus stop in an area and would indicate the number of pedestrians movements having to be catered for. It will also indicate those bus stop locations that are relatively lightly used and could be considered for amalgamation with a nearby bus stop, relocation to a more convenient location, or removal completely.

5.3 Spacing of Bus Stops.

The spacing of bus stops has a significant impact on the average speed of a bus corridor, clearly the more times a bus stops the slower the overall journey time will be. A bus incurs a minimum of 15 seconds delay with each stop on an urban street just to decelerate, open and close the bus doors, and accelerate back to speed (25 seconds on a busway). Table 5.1 uses information extracted from the Transit Capacity and Quality of Service Manual (TRB) and indicates the estimated average speed on an 80kph busway. This clearly indicates that bus stop spacing, and dwell time have a large impact on average speed on bus corridors.

Table 5.1 Average Bus Speed (km/h) in Bus Priority Corridors, 80km/h running speed.

Average Stop Spacing (km)	Average Dwell Time (s)				
	0	15	30	45	60
0.8	50	37	32	27	24
1.6	61	51	45	40	37
2.4	68	58	53	48	45

For BusConnects it is proposed that bus stops should be spaced approximately **400m** apart on typical suburban sections of the route, dropping to approximately **250m** in urban centres (CIHT Buses in Urban Developments, January 2018). This spacing should be seen as a recommended spacing rather than an absolute minimum spacing.

The ability to increase stop spacing depends in part on the quality of the pedestrian connectivity in the area and also the availability of safe crossing points in the vicinity of the proposed bus stop. It may also depend on the characteristics of the passengers using the stop, e.g. persons with limited mobility may find it difficult to walk to the next stop. It is therefore recommended that for locations that may generate high number of elderly or mobility impaired bus passengers (health facilities, local businesses) consideration should be given to locating the bus stop within **100m** of the location if spatial considerations permit.

5.4 Spatial considerations for geometric layout.

The provision of high-quality bus stop infrastructure that is customer orientated is considered an essential part of the BusConnects offering, including:

- Being fully accessible for all bus passengers;
- Having a bus shelter for waiting passengers;
- Having both timetable and real time passenger information (RTPI) available to passengers;
- Having sufficient footpath space to allow the free movement of pedestrians passed the bus stop;
- Continuous cycle lane past the bus stop; and
- Provision of Cycle Parking at, or close to, the bus stop.

All of which requires significant space along the already congested radial routes that the Core Bus Corridors run along. Therefore, an important aspect of locating bus stops is identifying locations that have sufficient space to accommodate all, or most, of these elements.

The BusConnects Design Guide suggests that an Island Bus Stop (Figure 34) is the preferred bus stop option to be used as standard on the CBC project where space constraints allow. The **minimum footpath width within which an island bus stop can be implemented is 5.4m** (1.8m footpath + 1.2m cycle track + 2.4m island with shelter). This option assumes a shelter with half bay end panels. Should full panels (as seen on Figure 5.2) be required the width requirement will increase to approximately 6.3m.

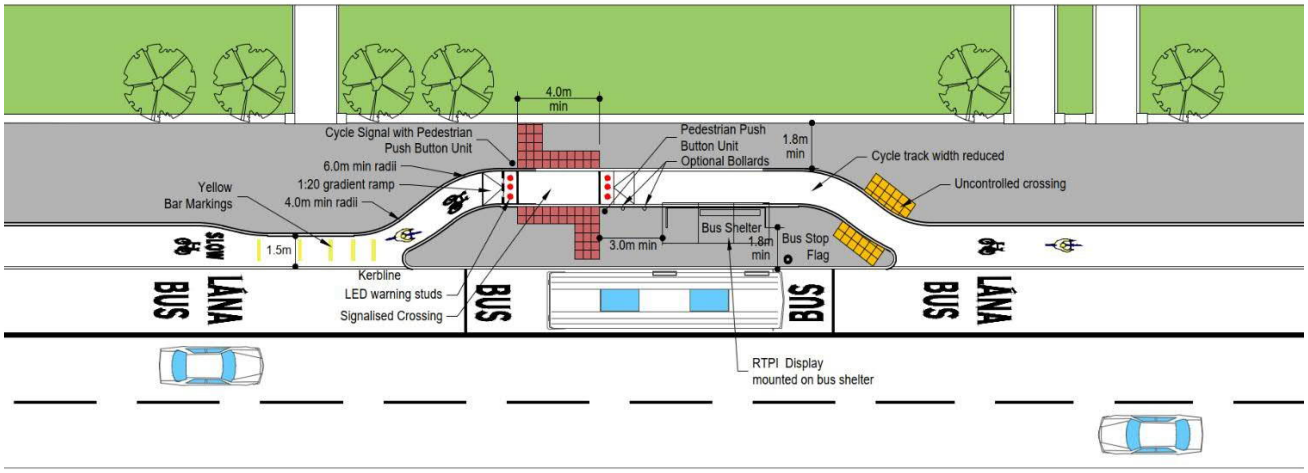


Figure 5.1 Typical Island Bus Stop Arrangement (Bus Connects Design Guideline).



Figure 5.2 Standard 3 Bay Reliance Mark Shelter with full width advertising panel.

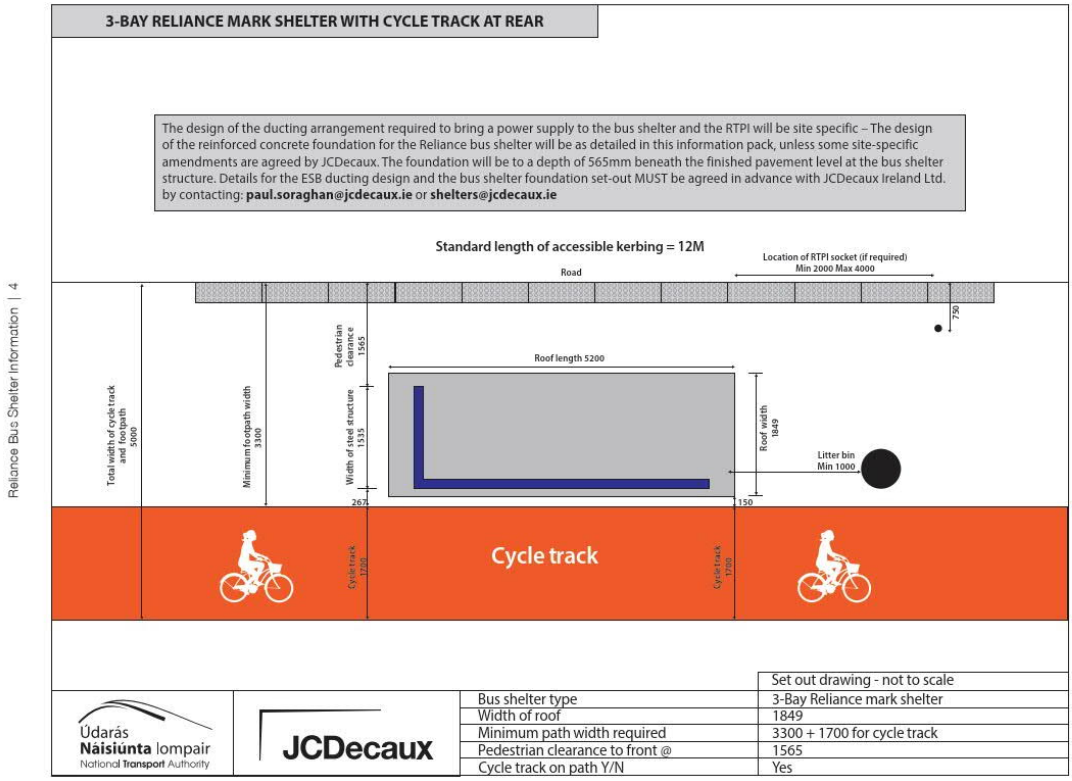


Figure 5.3 Standard layout for a 3 Bay Reliance Mark Shelter with full width advertising panel and cycle lane to the rear (note cycle lane width is to be determined by designers).

For locations where space is constrained an option consisting of a shared bus stop landing zone can be considered. This option is indicated in Figure 5.4 and should only be considered on a case-by-case basis to ensure suitability with particular attention paid to the volume of cyclists and volumes of boarding and alighting passengers. **Using the narrowest non-standard bus shelter this would require a minimum width of approximately 4.0m** (1.9m footpath with shelter + 1.2m cycle track + 0.75m island).

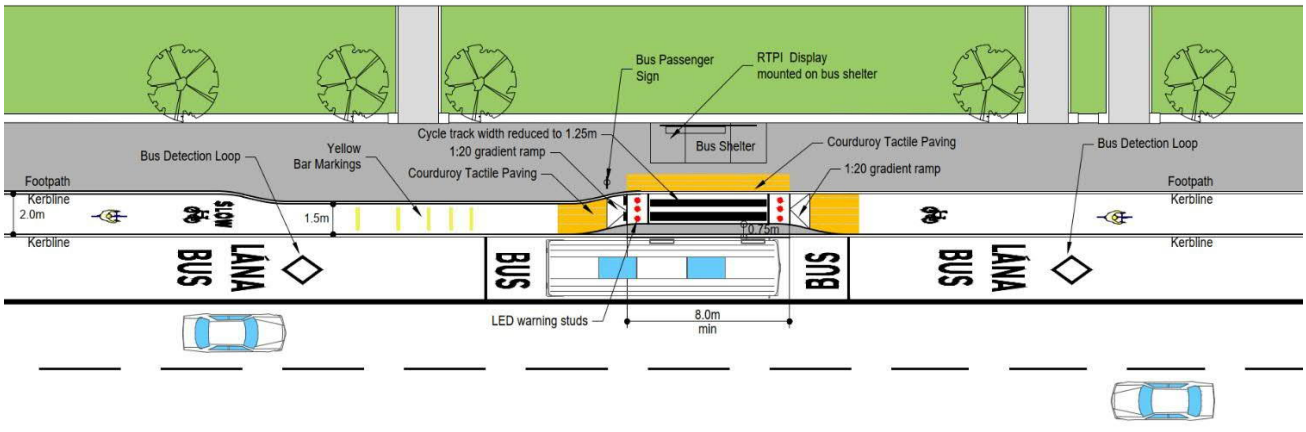


Figure 5.4 Shared Bus Stop Landing Zone Arrangement (Bus Connects Design Guideline).



Figure 5.5 Cantilever narrow roof Bus Shelter

It is important that ED's do not immediately choose the minimum sized shelter as this will impact on the weather protection provided to bus passengers and potentially advertising revenue share received by the NTA. Where there are a substantial number of bus stops using the nonstandard bus shelter it is recommended that the NTA IPO are consulted prior to finalising the proposals.

Providing cycle parking at bus stops has the potential to increase the catchment area of a bus corridor by providing a safe place for cyclists to secure their bike for the duration of their trip. ED's should look to provide cycle parking at all bus stops along the BusConnects Corridors where space permits. The **minimum provision is 3 Sheffield Stands** (accommodating 6 bicycles) in the vicinity of a bus stop. Where larger numbers of cyclists can be expected consideration should be given to providing a larger covered area of approximately 10 Sheffield Stands (accommodating 20 bicycles).



Figure 5.6 Sheffield Bicycle Stands provided at a Bus Stop on the N11.



Figure 5.7 Covered Sheffield Bicycle Stands provided at a Bus Stop on the N11.

5.4 Distance from controlled pedestrian crossing.

Pedestrians by their nature often take the quickest route to their destination rather than the safest route, particularly if they feel the safety risk is low. This results in bus passengers leaving buses stepping out in front of, or behind, buses and crossing the road in a hazardous manner. The placement of bus stops near safe pedestrian crossing points is therefore a critical aspect of bus stop design. Providing a bus stop where there is no, or an indirect, pedestrian crossing will lead to “jaywalking” and pedestrians making higher risk movements.

There are many examples of bus stop located immediately outside a pedestrian opening into a housing estate which makes it easy for passengers to access the bus stop in the morning, however on the return journey the passenger can often be isolated on the other side of the road with no safe crossing point available. While this may be satisfactory on some roads, it may not be on others, and how is a person with a mobility impairment to cross a busy radial route? **All bus stops along the CBC’s should be located within a short distance of a controlled crossing point.**

The optimum location to locate a bus stop is adjacent to junctions which have signalised pedestrian crossings provided on all desire lines. Much research has been undertaken in relation to the optimum location for a bus stop adjacent to a junction, either before (near-side) or after a junction (far-side), while there are advantages and disadvantages of both, all guidance recommends that locating the bus stop on the **far-side of a junction is the optimum solution**. While this may be theoptimum location in terms of the operation of a corridor a near-side bus stop may still be appropriatewhen spatial constraints, routing, or distance from junction are considered.

Figure 5.8 indicates various locations for bus stops at junctions with particular consideration for interchange between Spine and Orbital Core Bus Corridors. This indicates that all options which require passengers to interchange will require passengers to cross at least one arm of a junction (on average over both legs of their journey), emphasizing the importance of locating bus stops at junctions and providing controlled crossings on all desire lines between interchanging bus stops.

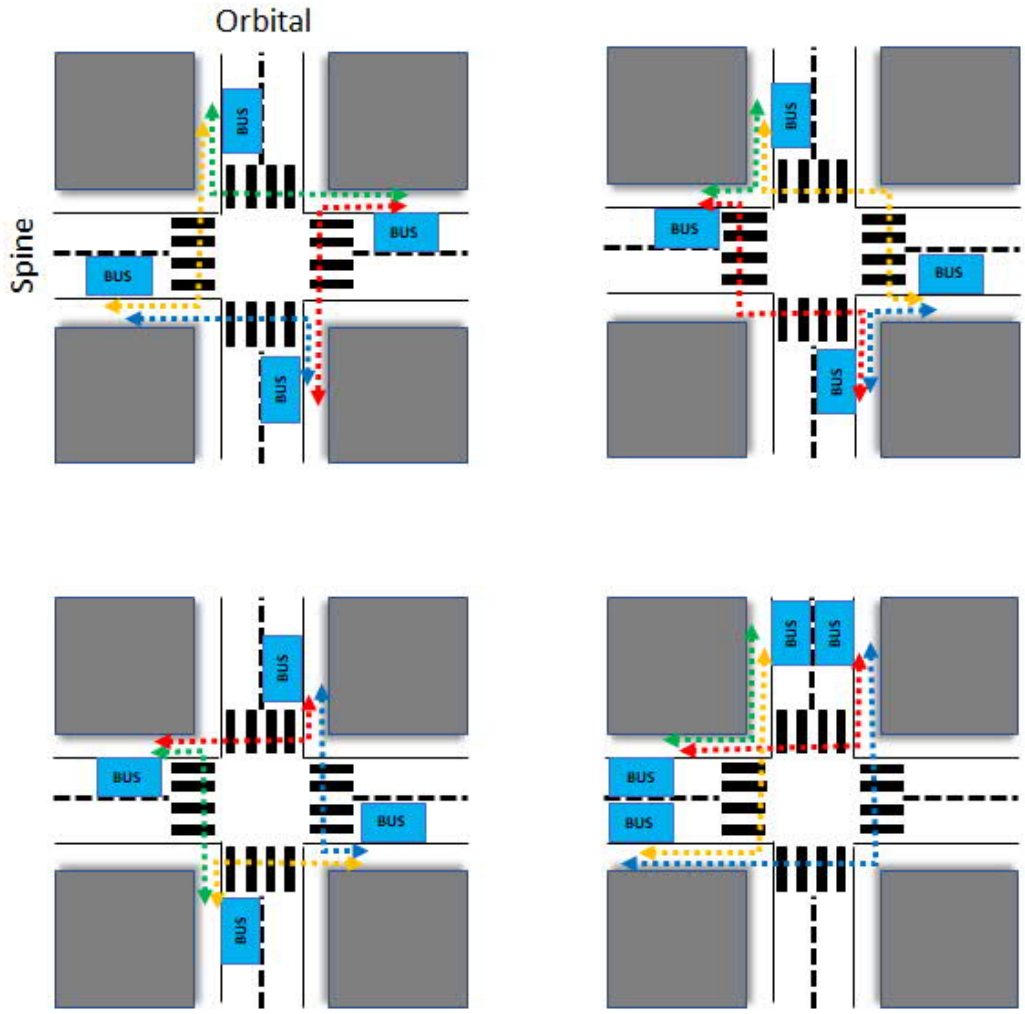


Figure 5.8 Bus stop locations and passenger interchange routes between them.

The DfT document Inclusive Mobility (2005) suggests recommended distance limits without rest for various Mobility Impaired Groups that ranges from 50 to 150m, which limits the distance between interchanging bus stops significantly. It is therefore recommended that the distance between the key interchange bus stops is limited to approximately **100m walking distance** where possible to enable all impaired groups to be able to interchange, consideration must be given to providing a rest spots at approximately 50m between the bus stops to cater for those that will not make this distance without a rest.

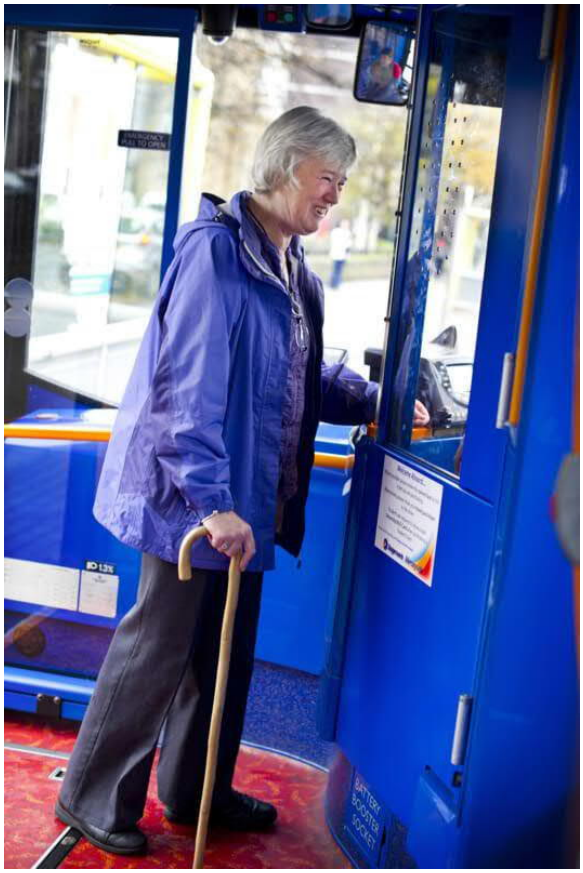


Figure 5.9 Pedestrians using sticks have a limited range of 50m before needing a rest.

For mid-block (between junctions) bus stops it is important that consideration is given to the location of a safe crossing point. It is recommended that a signalised crossing is located in close proximity to these stops to allow all passengers to cross the road safely. It is also recommended that bus stops are positioned upstream of this crossing to avoid buses blocking visibility to the crossing and that passengers walk to the back of the bus where they are more visible to oncoming traffic.

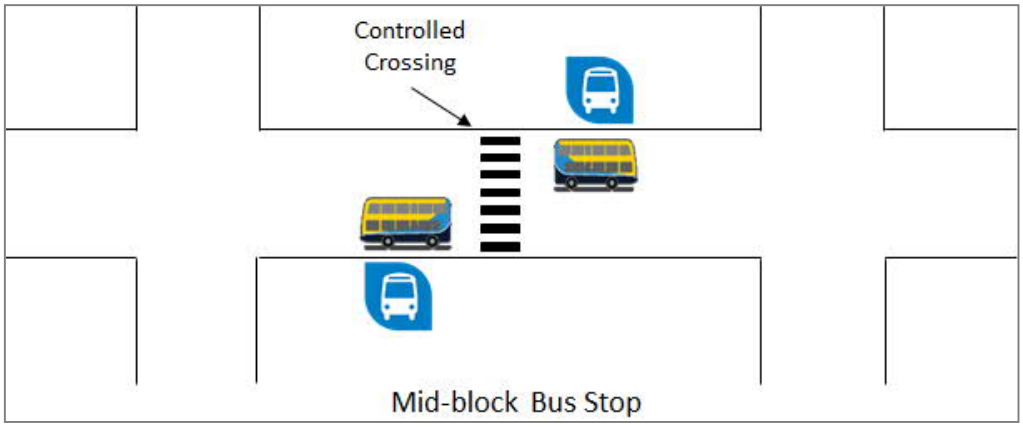


Figure 5.10 Mid-block bus stop optimum layout.

5.5 Impact on Adjacent Junction.

Locating bus stops close to junctions is optimum for pedestrian connectivity and safety, however it clearly can impact on the capacity of a junction and may result in increased congestion. Designers will need to review the location of the bus stops in order to minimise the impact on the operation and capacity of the junctions; things to consider include:

- Distance from the far-side bus stop to the junction. Buses will be running at headways of approximately 2 minutes at peaks on some corridors, while every effort will be made to avoid bunching it is likely that buses will end up meeting each other as they wait for a green signal. As a result, it is important that sufficient space for a bus to wait behind a stopped bus is provided at all junctions. Importantly this offset should start beyond the pedestrian crossing point in order to avoid blocking the crossing. Table 2.2 provides guidance on offset distance from key features.
- For near-side bus stops it is important that the location is reviewed in the context of visibility to the traffic signals for general traffic (bus, or the bus stop infrastructure, impacting on visibility to primary traffic signals) and also interaction with left turning traffic. Reference DMRB DN-GEO-03044 and DTTaS Traffic Signs Manual Chapter 9.
- Where a bus is joining a Spine from a side road it is important that the bus stops are fully accessible by the turning vehicle and sufficient space is provided to allow the bus to pull in flush with the bus stop so as the gap between the kerb and the bus is minimised (both doors). It is also important to ensure that the manoeuvring bus does not require the bus to sweep over the kerb line.



Figure 5.11 Tracking of a turning bus entering a bus stop.

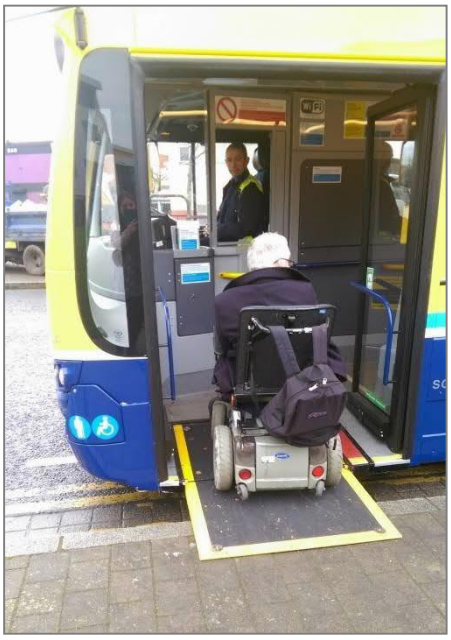




Figure 5.12 Having buses flush with the bus stop is important to allow the ramp to lower correctly, but also to speed up the boarding and alighting of all passengers as gaps slow this down.

Table 5.2 Indicative Distances of Features from Bus Stops

(DRAFT NTA Bus Stop Design Guidance)

Feature	**Distance (m) to bus stop sign**
Prior to isolated pedestrian crossing signals or Zebra	18m
After pedestrian crossing signals or Zebra	10m + bus length*
Prior to signalised junction	20-30m
After signalised junction	20m + bus length*
Prior to or after a side road	20m
After a side road	10m + bus length*
Prior to a roundabout (no diverge)	20-30m
After a roundabout (no merge)	20m + bus length*

***the bus length should be the longest bus using the stop**

6.0 Review Locations relative to Revised Bus Network

The revised BusConnects Network is based on the Connective Network Principle which will rely on some interchange between routes to reduce journey times across the City. This Interchange will primarily occur in the City Centre where the spines overlap rather than along the Spines. However, some interchange will occur between the High Frequency Spines and the Frequent Orbital routes and also between the routes before Branches peel off the spine. Seamless interchange between these bus routes will be critical for the successful operation of this system.

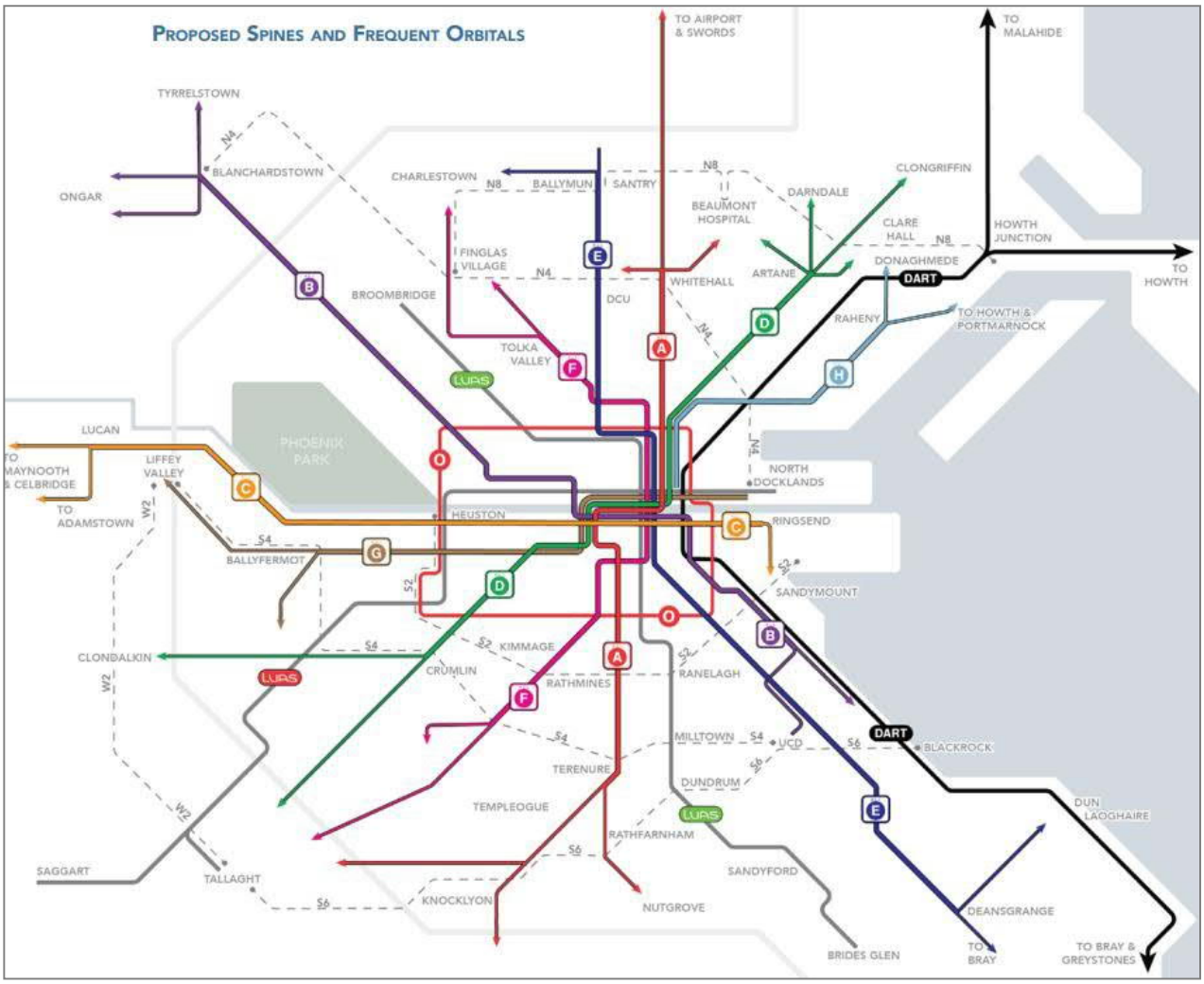


Figure 6.1 Simplified diagram of spines and frequent orbitals in the proposed network

The latest maps need to be obtained by each ED from the NTA IPO. In addition, the ED's can make use of the NTA's Remix system, which is an on-line route and stop information system for the proposed bus network.

6.1 Buses entering and exiting the Spine.

For buses entering and exiting the Spine, consideration should be given to how passengers may switch from one branch to another branch route. While this can happen anywhere along the Spine it will most regularly occur at the last stop before the branch route peels off the Spine. An existing example of this can be seen at Foxrock Church where two high frequency routes (46A/145) deviate at this point. At the last stop before the 46A deviates to Kill Avenue significant numbers switch from one route to the other.



Figure 6.2 Foxrock Church Bus Stop on the N11 QBC

For the Core Bus Corridors consideration should be given to the size and location of the stops before branch routes leave the main Spine. The optimum location of stops at this location will allow all routes to overlap prior to the junction thus removing the necessity for passengers to walk to anotherbus stop.

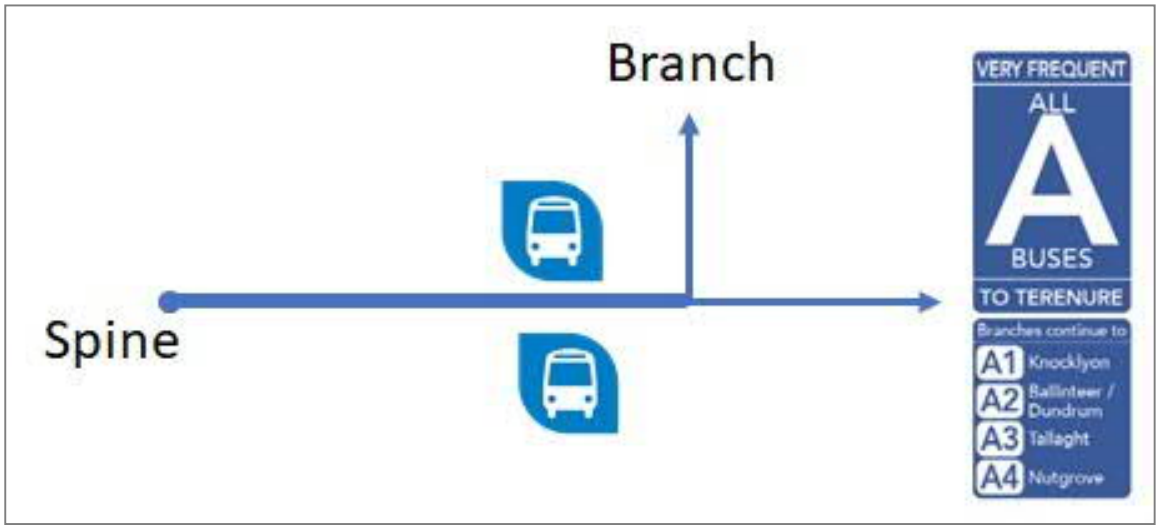


Figure 6.3 Location of Bus Stops Immediately before Branch Route Peels Off Spine

6.2 Interchange between Radial and Orbital routes.

The movement of passengers from one corridor to another is critically important to make Dublin more accessible by public transport. Making this interchange as easy as possible is thus critical to the successful delivery of the BusConnects Programme. Figure 3.4 indicates two typical scenarios that will arise on this project; the crossing movement (D/N4) and the overlapping movement (D/N2).

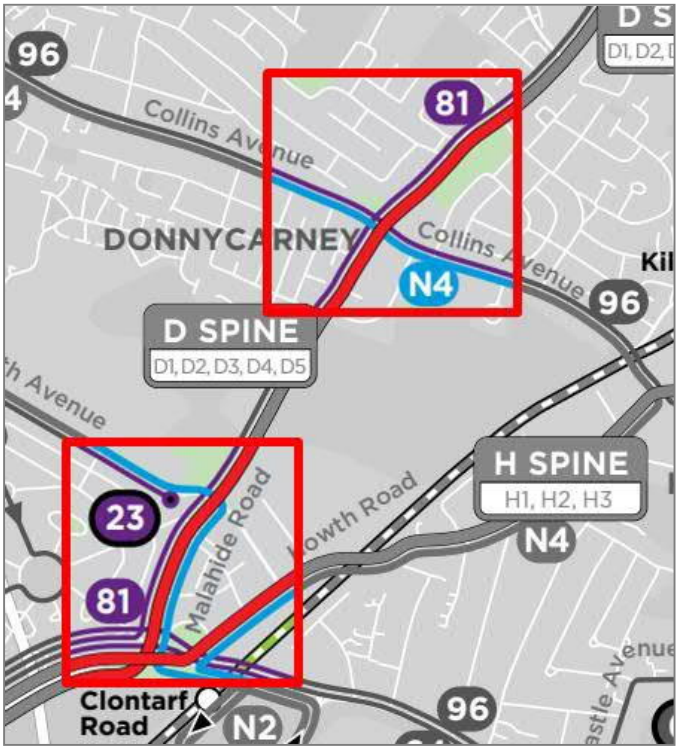


Figure 6.4 Two Different Scenarios for Interchange between orbital and radial corridors.

The optimum solution, but the less likely one, is the overlapping of routes which will allow passengers to leave one route and access another one via the same bus stop (or the opposite pair) making it a very easy interchange. For this option it is important that the designer considers the location of bus stops in a similar manner to the previous section on peeling off of branch lines.

For the more common crossing of routes the location of the bus stops needs to be carefully considered to minimise the distance passengers have to walk and to ensure there is a safe crossing location to facilitate this movements. This was outlined in section 5.4. **For locations where interchange is expected it is recommended that the desirable maximum distance between the interchanging bus stops is 100m,** with rest stops provided at 50m for those with impairments that restrict the maximum walking distance to below 100m.

7.0 Bus Stop Capacity

The capacity of bus stops is a complex and dependent on many variables which may constantly vary throughout a typical peak hour. For this reason it is proposed to undertake a high level assessment of bus stop capacity at this time and a more detailed assessment at a later stage when the Microsimulation Models are available for each corridor which can include the interaction between junctions and bus stops (potential bunching of buses), taxi numbers on the corridor, and the number of express or stopping coaches. Information on the calculation of capacities is available in the TRB, Transit Capacity and Quality of Service Manual, 3rd Edition and for complex locations it is recommended that the designer review applicable sections of this document to gain an understanding of the critical parameters.

7.1 Number of Bus Bays

The TFL Bus Stop Design Guidance states that bus stop capacity is a function of bus length, service frequency, the number of serving routes and their average dwell time. The BusConnects Dublin Corridors will generally carry between 15 to 20 buses per hour at peak times, which equates to a bus every 3 minutes. Assuming a maximum dwell time of 1 minute it could be assumed that one bus stop will be sufficient in most cases. However, the spine corridors will have multiple branches joining at different points with buses running at different frequencies resulting in buses not running at a constant headway. Figure 7.1 below indicates a bus arrival scenario from the TFL Bus Stop Design Guideline which shows how buses may arrive at a stop. This shows the estimated volume of buses at a single bus stop, depending on the frequency of the respective services. For example, Scenario C shows that although there is a frequency of 26 buses per hour, the stop, would theoretically operate well below capacity, however the arrival pattern of buses means that at times more than one bus will be on the stop. For this reason, it would be recommended that this bus stopshould have sufficient space to board and alight two buses at once.

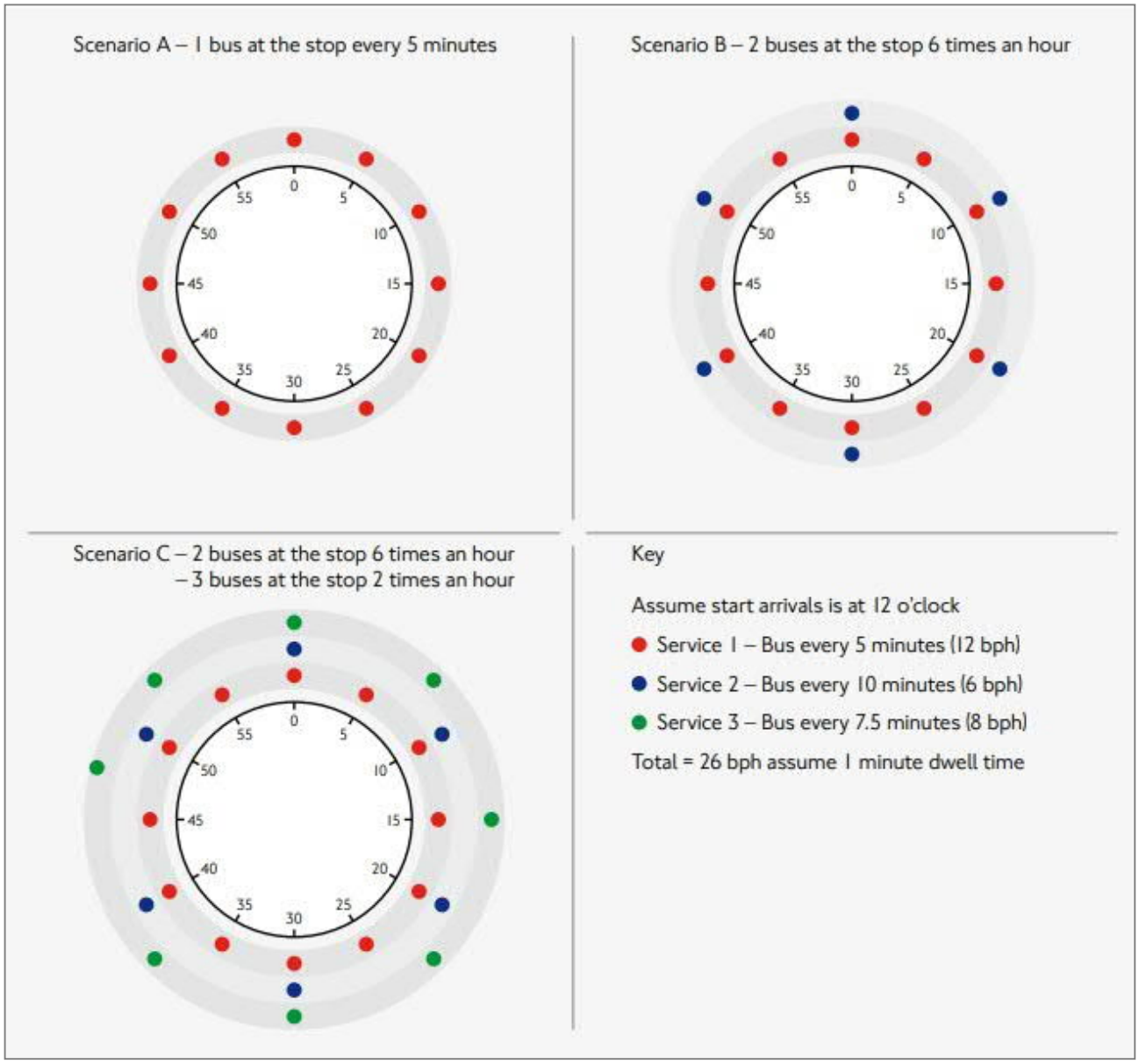


Figure 7.1 Bus Arrival Pattern at a Bus Stop (Source: TFL Bus Stop Design Guidance)

Detail on the buses using each corridor can be obtained from the NTA Remix site (obtain access from NTA IPO), or the frequency information from the BusConnects website. This can be used to make an estimate of the number of bays required at a bus stop by generating scenarios for the stops based on the headways for each route similar to Figure 7.1 above. These assessments will be superseded on completion of the micro-simulation analysis of each route, for this reason it is proposed to undertake this initial assessment based on the assumption that 2 bus bays will likely be required where there are between 25 and 30 buses on the route. This would require a longer bus cage that will accommodate two buses stopped simultaneously, approximately 24m in length (end to end bus), with Kassel Kerbs provided over its length to assist passengers, particularly those with a mobility impairment, to board and alight with ease from both buses.

Number of Bays at a Bus Stop	Where a Corridor is carrying approximately **25 to 30 buses** or more per hour, consideration be given to lengthened the bus stop cage and kerbing to provide space for 2 buses stopping simultaneously. Independent arrival and departure is not required.



Figure 7.2 Where space permits double bus bay should be provided where more than one bus is expected to arrive at a bus stop simultaneously (source: Google)

7.2 Passing Lanes

For corridors with large number of buses, particularly express buses that are not stopping at bus stops it may be necessary to provide a passing lane, or to indent the bus stop in a lay-by, to allow these faster moving buses to overtake the slower ones. This is likely to be particularly important on high capacity corridors where Regional Buses are accessing the City Centre. The TIAR Consultant has undertaken an initial assessment of this and have concluded that where the **hourly bus numbers exceed 40 the addition of a bus stop layby** will help maintain bus capacity and reliability along the corridor. The specific number for each corridor will be obtained from detailed microsimulation analysis at a later date.

Requirements for passing Lanes	Where a section of corridor is carrying approximately **40 to 50 buses** or more an hour**,** consideration should be given to providing passing lanes at bus stops.



Figure 7.3 In-line bus stops on a heavily used bus corridor can lead to express, or non-stopping buses, being delayed or making overtaking manoeuvres. (source: Dublin Bus Stuff).

8.0 Revisit Catchment Analysis

On completion of the review of bus stops along each corridor the catchment analysis for each corridor should be undertaken. The process was detailed in Section 4.0. The analysis should be undertaken and presented on a corridor basis with both Residential and Employment/Education population within 5 and 10 minutes presented.

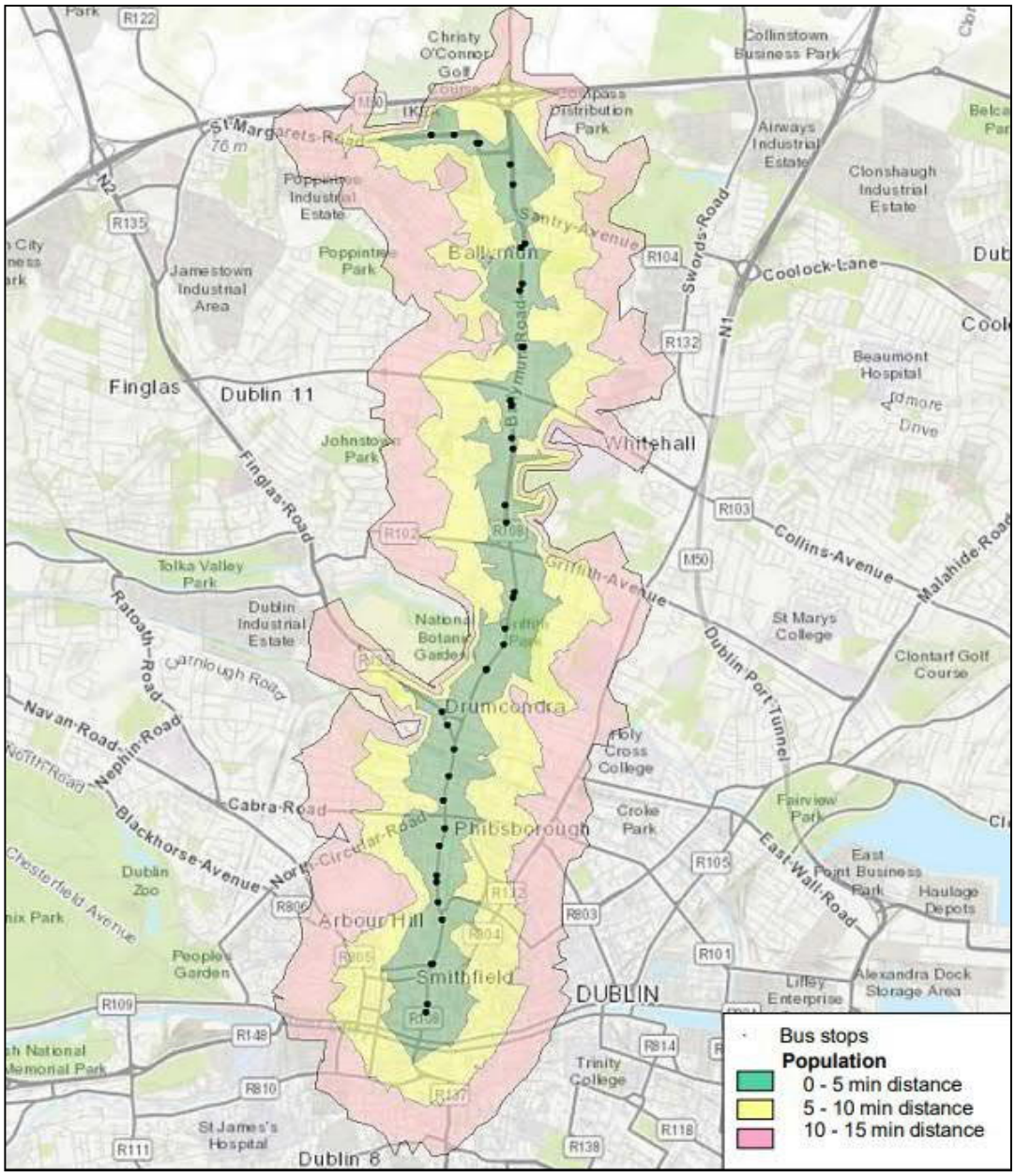


Figure 8.1 Typical map of bus corridor catchment areas

8.1 Presentation of Review

For consistency it is recommended that this review is undertaken, and presented, on the PRO drawings. High-level comments can be listed against each stop with distance between stops also noted (Document 1).

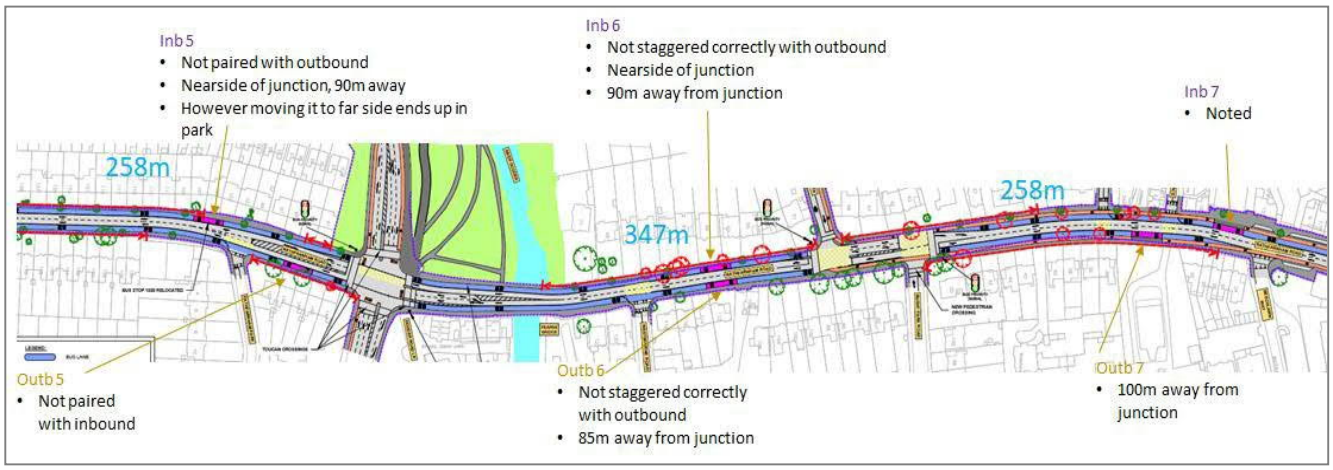


Figure 8.2 Example Review of Bus Stop Locations (Source: ARUP, Rathfarnham CBC).

This document should then be followed by a recommended bus stop strategy (Document 2) for each corridor indicating where bus stop are to be located and that all variables have been considered for each stop. This should be in a similar drawing to the review drawing in Figure 8.2, but focused on those stops that have been altered from the original PRO drawings. A summary table for each corridor should be placed on the front drawing of the recommendations summarising the existing and proposed bus stop strategy:

Corridor Name			
Number of Existing Bus Stops		**Length (KM)**	
	Existing	**Proposed**	**Comment**
Average Spacing of Bus Stops (m)			
All stops located adjacent to a controlled crossing?	Y/N	Y/N	
Have all accessibility / spatial requirements and consultation suggestion been accommodated?	-	Y/N	

Document 2 shall include a report providing specific details of each bus stop along a corridor and detailing the results of the catchment analysis for the optimised bus stops.

Appendix H2
Bus Stop Review Analysis

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1. Introduction and Scheme Details 1
1.1 Introduction 1
1.1.1 Bray to City Centre Core Bus Corridor 1
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List of Acronyms

Acronym	Definition
CBC	Core Bus Corridor
GIS	Geographical Information System

1. Introduction and Scheme Details

1.1 Introduction

Jacobs are undertaking the Engineering Design Services for the Preliminary Design and Planning Stage through to the end of the Statutory Process for the BusConnects Core Bus Corridors Infrastructure Works. The Project has been spilt in four packages with Jacobs undertaking Package B.

The Project comprises the finalisation of the Preferred Route for the Core Bus Corridors (CBCs). Lot B comprises of the following routes:

- Scheme 2: Swords to City Centre Core Bus Corridor Scheme;
- Scheme 7: Liffey Valley to City Centre Core Bus Corridor Scheme;
- Scheme 13: Bray to City Centre Core Bus Corridor Scheme.

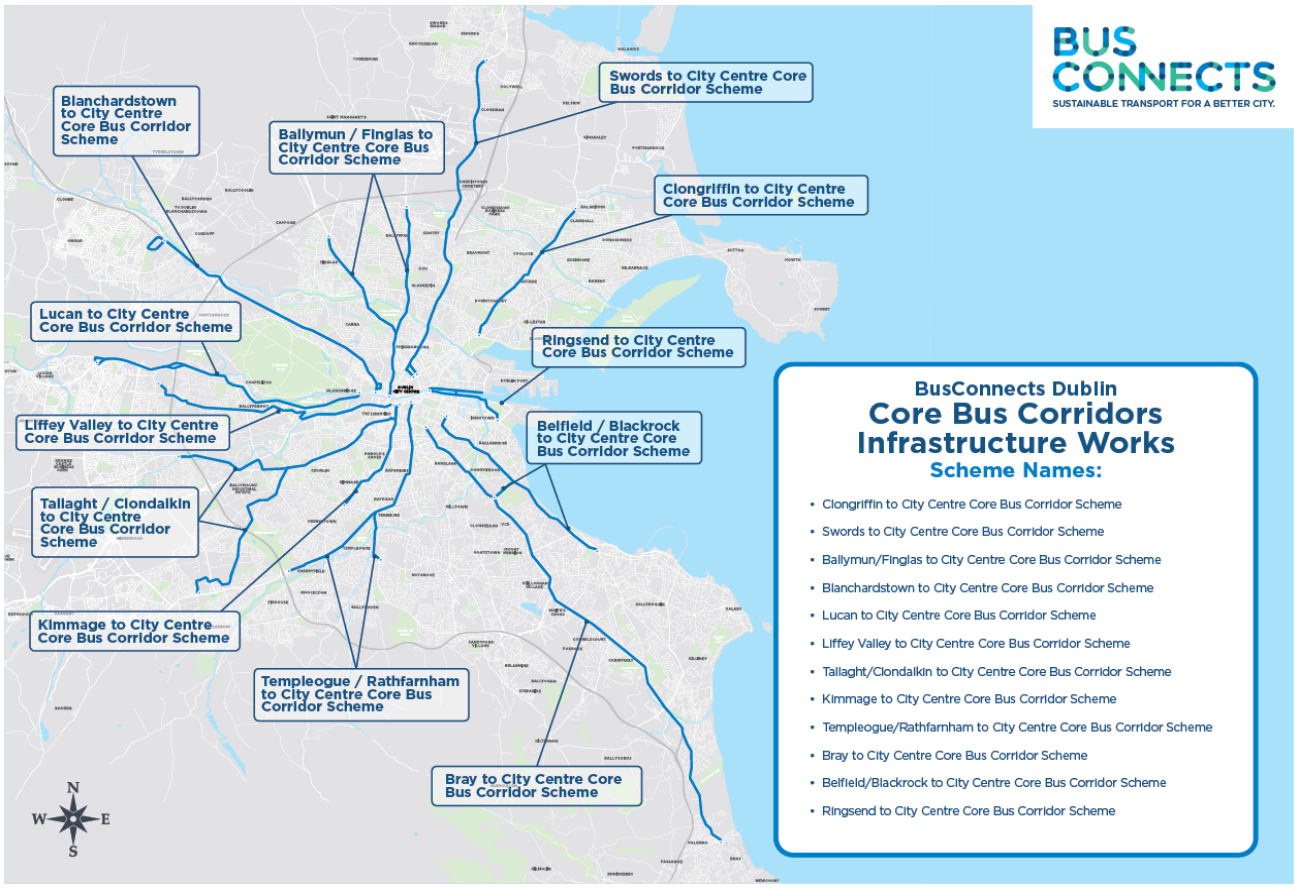


Figure 1.1 : Core Bus Corridor Infrastructure

This report will cover the findings of the Bus Stop Review for the Bray to City Centre Core Bus Corridor (CBC) Scheme (herein after called the **Proposed Scheme)**.

1.1.1 Bray to City Centre Core Bus Corridor

The Proposed Scheme measures approximately 18.5km and commences at the junction of Leeson Street Lower and St. Stephen's Green. The corridor runs along Leeson Street Lower and Upper, and Sussex Road. The corridor continues along Morehampton Road and Donnybrook Road, through Donnybrook Village and on to the Stillorgan Road, serving the UCD Interchange via the Stillorgan Road Overbridge.

The route continues on the Stillorgan Road, which carries on to the Bray Road to Loughlinstown Roundabout, passing Mount Merrion, Stillorgan, Foxrock, Cornelscourt, Cabinteely and Loughlinstown. From Loughlinstown

Roundabout, adjacent to St. Columcille's Hospital, the corridor runs along the Dublin Road to St. Anne's Church and then continues south through Shankill village. The corridor runs through Wilford Junction and along the Dublin Road until it terminates on Castle Street in Bray, to the north side of the River Dargle crossing.

2. Bus Stop Review Methodology

2.1 Purpose

This report presents a summary of the Bus Stop Review process which was conducted for the Proposed Scheme.

The purpose of the process was to review the location of the existing Dublin Bus stops to determine whether a stop should be removed, relocated, or remain where it is. This exercise was carried out to optimise the performance of the bus services travelling along the route by reducing the journey time of the bus service, to increase the walking catchment of the bus stops and to ensure key trip attractors located along the route is sufficiently covered within the catchment of bus stops.

Existing bus stops were therefore rationalised based on best practice principles related to bus stop placement. The outcome of this study was to develop a more efficient route which would attract more passengers by creating a wider population catchment and offer a shorter journey time to destinations.

2.2 Methodology

The methodology followed as part of this review is set out in the 'Bus Stop Review Methodology Working Draft Report' produced by AECOM which is attached in Appendix C. It outlines the methodology to be followed for the bus stop reviews, the various considerations to be made when assessing a stop location, and the background reasoning for those considerations.

Figure 2.1 presents a flowchart which outlines the methodology proposed.

Each of the study components as outlined below are discussed in more detail in the remainder of this report and applied to the Proposed Scheme.

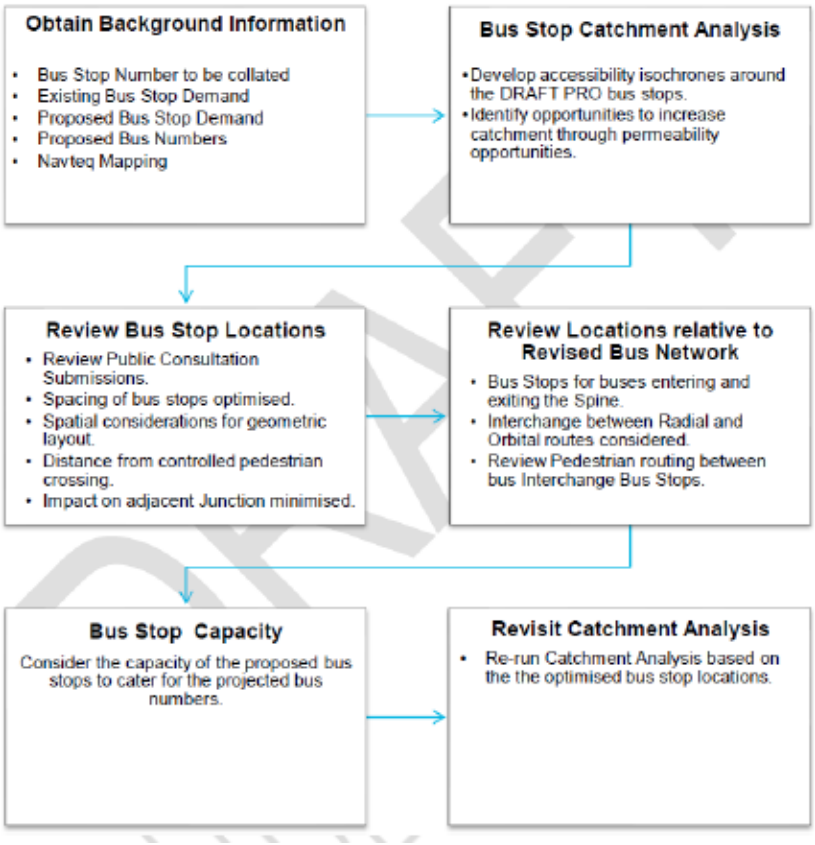


Figure 2.1 : Bus Stop Review Methodology Flowchart

2.3 Obtain Background Information

In order to assess the bus stop locations with a variety of considerations in mind, certain key data was acquired, measured, or calculated. This information was compiled in a spreadsheet which can be found in Appendix A.

The background information obtained for the study along with the source of the information in Table 2.1.

Table 2.1 : Background information and sources

Information	Source
Stop Numbers for all inbound and outbound stops along the route	Dublin Bus Automatic Vehicle Location (AVL) Data
Stop Names	Dublin Bus AVL Data
Current Stop Location Coordinates	Google Maps (MyMaps .kml export)
Current distance to previous stop	Google Maps and Topographical Surveys (Measured)
Stop location as per PRO (relative to existing location)	PRO Design Drawings
PRO Distance to previous stop	PRO Design Drawings and Google Maps
Peak Boarding and alighting volumes and times	NTA
Future Buses per hour	SYSTRA Strategic Model
Current distance to junction / pedestrian crossing	Google Maps and Topographical Surveys (Measured)
PRO distance to junction / pedestrian crossing	PRO Design Drawings and Google Maps
Potential for interchange with Orbital Routes	BusConnects Revised Network Layout

2.4 Bus Stop Analysis

To carry out the analysis a review of the stop locations is done using the spreadsheet in Appendix A. These new locations are then compared to existing locations using bus stop catchments.

To develop a baseline against which any bus stop relocation recommendations can be tested, catchment analysis was conducted on both existing and proposed populations living and working within a 15-minute walk of existing bus stops. This analysis was carried out in GIS using Navteq mapping as the network dataset, along with the coordinates of the existing bus stop locations. The current and proposed catchment of both the inbound and the outbound bus stops are shown in 5-minute walking intervals up to 15 minutes in Figure 2.2 to Figure 2.7 below.

2.4.1 Review Bus Stop Locations

The locations of the bus stops were reviewed in accordance with the 'Bus Stop Review Methodology Working Draft Report' produced by AECOM.

Appendix A provides a table of features for each bus stop which was used to consider the possible relocation of each bus stop.

The main principles considered as part of the review are as follows:

- Aim to achieve a bus stop spacing of 400m in suburban locations, and 250m in urban centres
- Locate bus stop to nearest junction/pedestrian crossing;
- Locate stop downstream of junction rather than upstream;
- Consider space requirements to provide bus stop including shelter, waiting area, cycle lane and footpath provision and information displays;
- Review existing and proposed boarding & alighting volumes to determine the size of the bus stop;

- Potential interchange orbital bus services proposed as part of BusConnects with revised network

The above principles were considered in conjunction with examination of maps and aerial photography to determine whether a bus stop should remain where it is, relocated or removed.

If a bus stop was found to be spaced at an acceptable interval, located optimally in relation to a junction or pedestrian crossing, frequently used, and serving key land uses sufficiently, the decision was usually made to maintain it in its current position.

If it was found that access to a bus stop could be improved by relocating it to a better proximity to local features, the decision was made to move it. This would typically include cases where bus stops are currently upstream from a junction or crossing, or when the stop is not located optimally in terms of a catchment area or key land use access.

When a bus stop was found to be too close to a previous or following stop, the decision was made to either remove the bus stop or to consolidate it with another stop to obtain better spacing intervals.

2.4.2 Catchment Review

Following the review of the bus stop locations, the catchment analysis helped us to understand the impact of the changes on the bus network. The catchment population comparison tables present the number of residents and employees within each catchment zone for the existing and proposed bus stop locations, along with the difference between them. The catchment over the whole route was analysed as one zone, as assessing each stop individually would lead to much of the population being double counted.

Catchment maps were also generated for the route were also generated so that a visual review could be done to identify areas of improvement and areas that are serviced with no attraction or trip origin locations. This can be an iterative process to ensure as many of the population are within the catchment, while also trying to improve the efficiency of the stops to potentially reduce the number of stops along the route. The comparative maps give a good understanding of the improvement, as seen in Figure 2.2 to Figure 2.9 for Inbound 5-minute catchments, Figure 2.10 to Figure 2.17 for Outbound 5 minute catchments, Figure 2.18 to Figure 2.25 for Inbound 10 minute catchments, Figure 2.26 to Figure 2.33 for Outbound 10 minute catchments, Figure 2.34 to Figure 2.40 for Inbound 15 minute catchments, and Figure 2.41 to Figure 2.47 for Outbound 15 minute catchments.

2.4.2.1 Bray to City Centre – 5min Catchments (Inbound and Outbound)

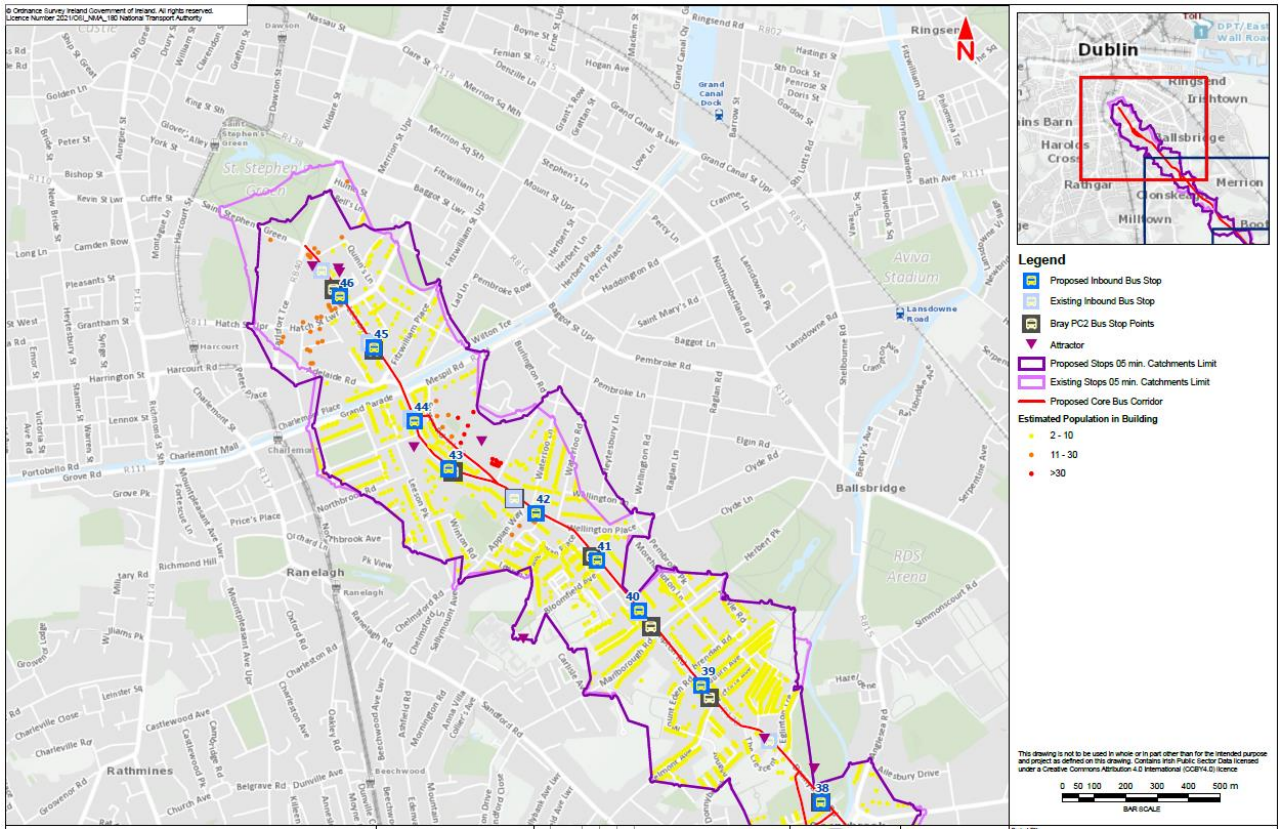


Figure 2.2: Bray to City Centre Existing and Proposed Inbound Bus Stop Catchment – 5min Catchment

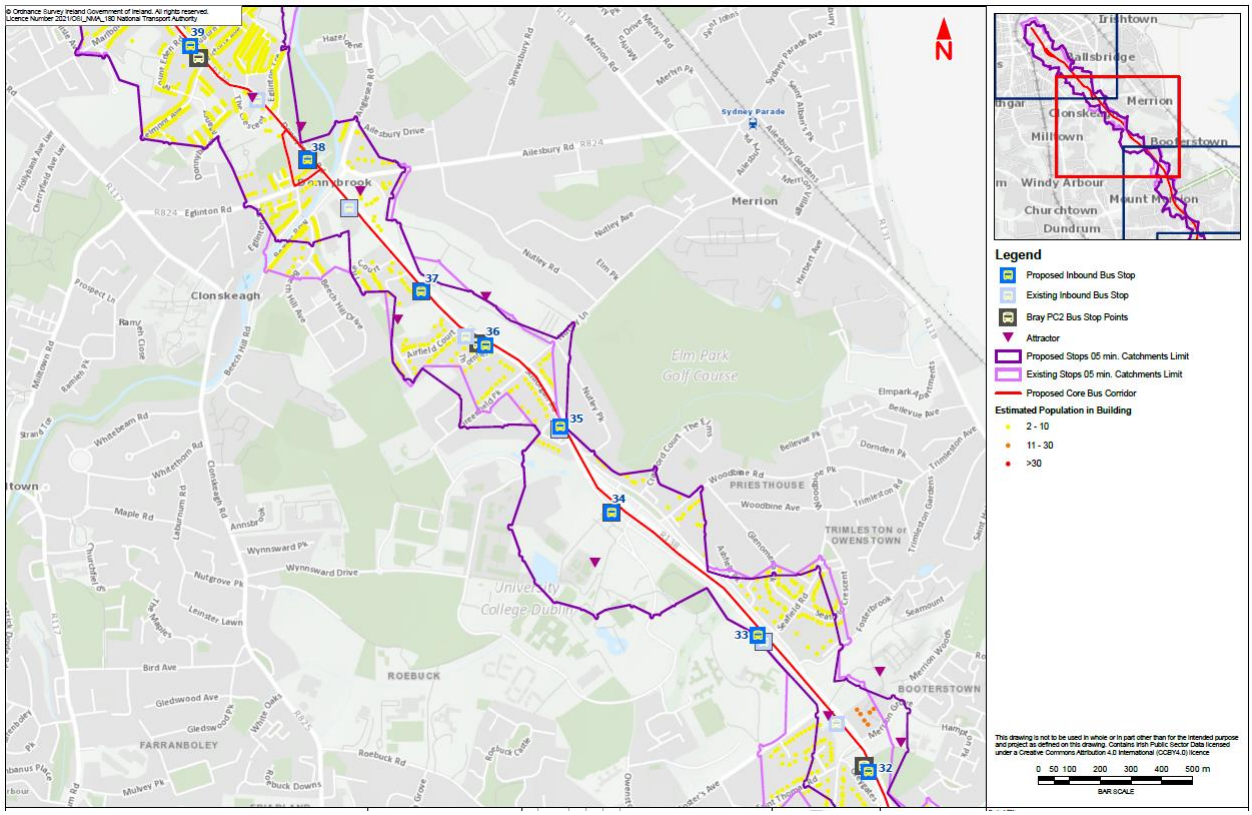


Figure 2.3 : Bray to City Centre Existing and Proposed Inbound Bus Stop Catchment – 5min Catchment

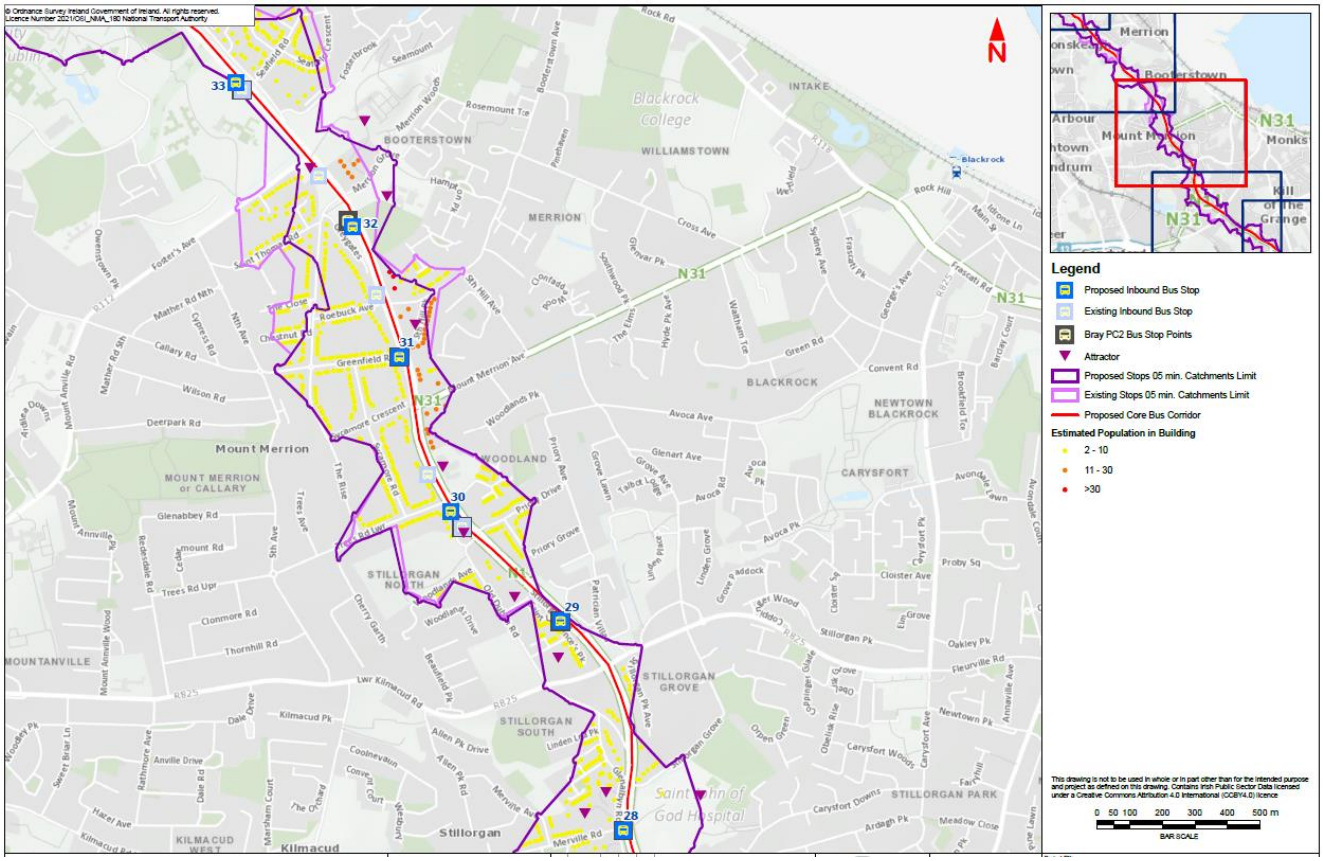


Figure 2.4 : Bray to City Centre Existing and Proposed Inbound Bus Stop Catchment – 5min Catchment

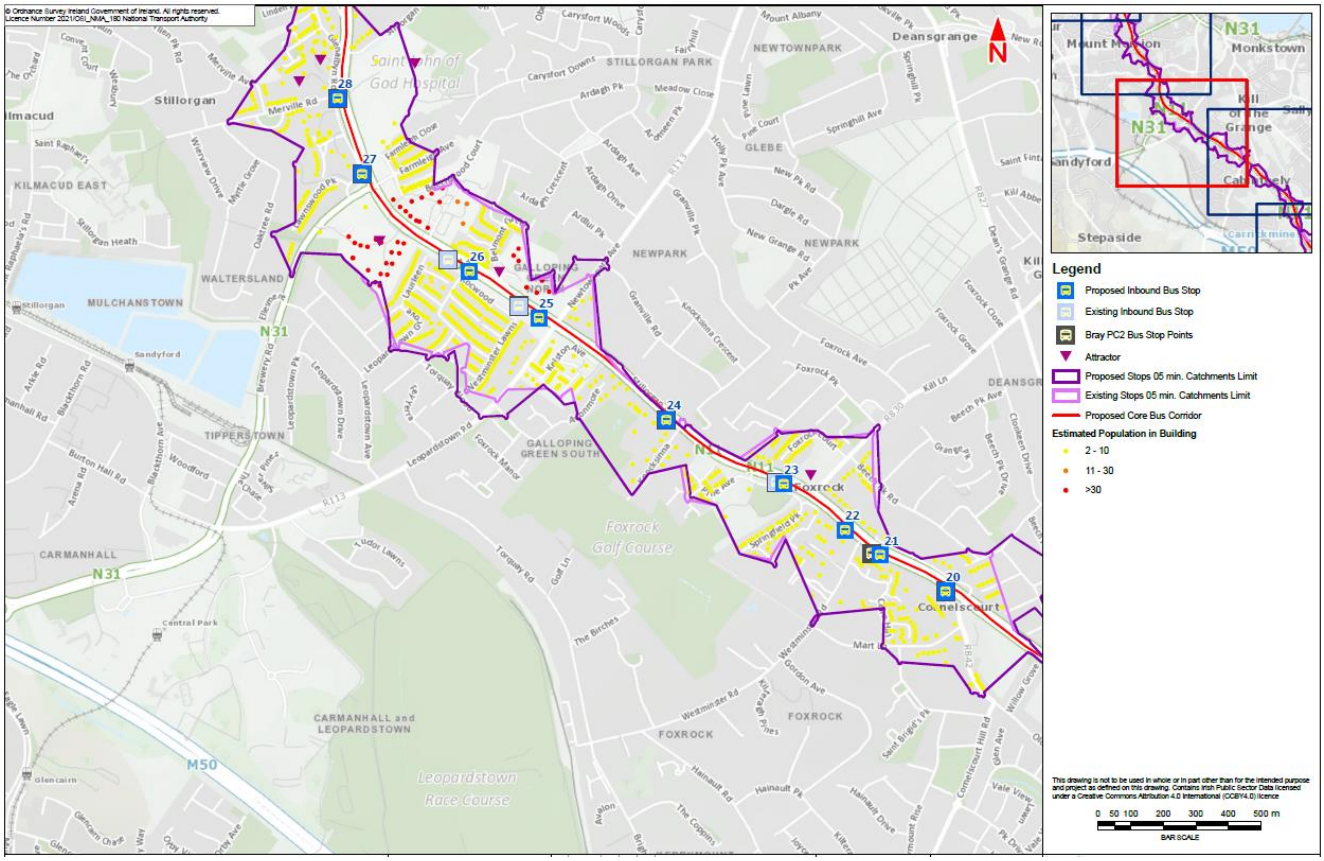


Figure 2.5 : Bray to City Centre Existing and Proposed Inbound Bus Stop Catchment – 5min Catchment

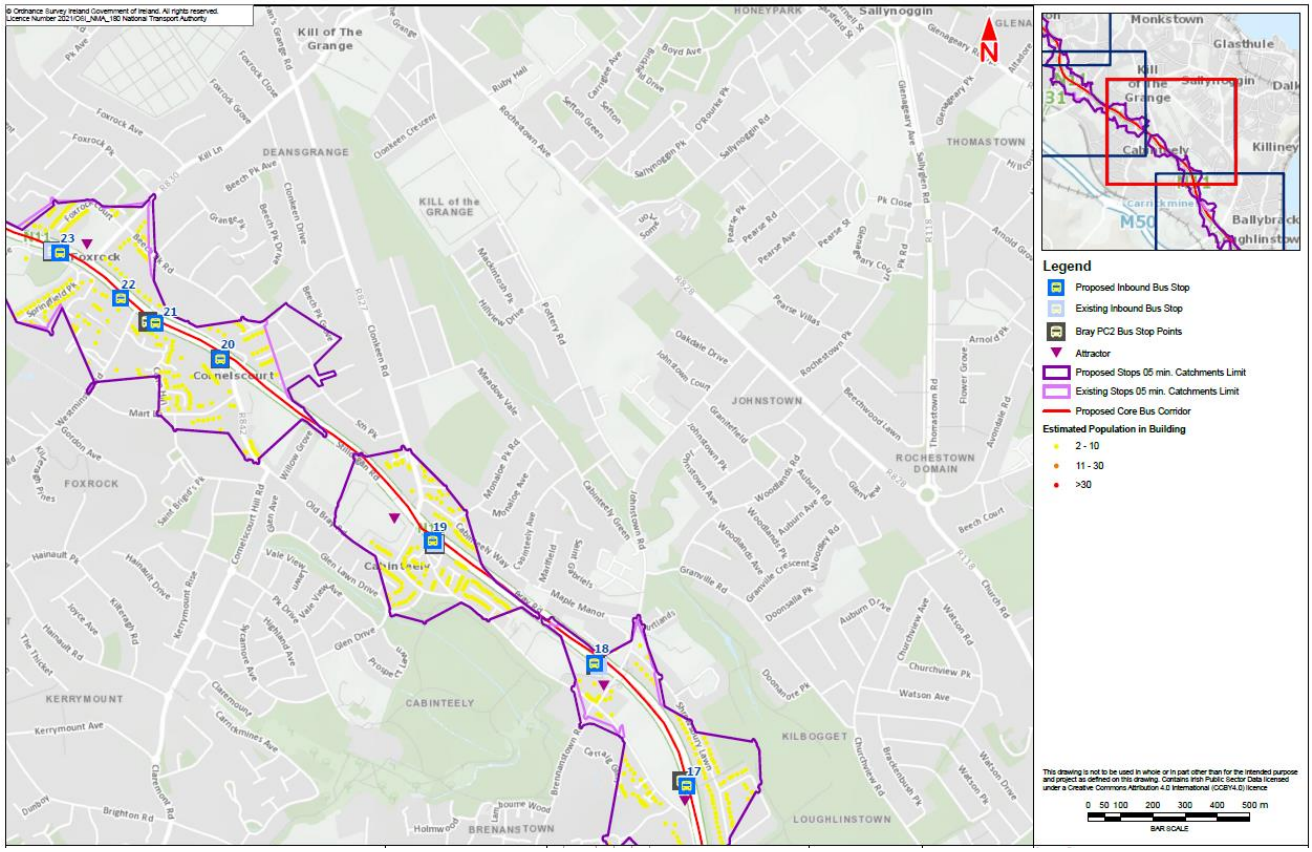


Figure 2.6 : Bray to City Centre Existing and Proposed Inbound Bus Stop Catchment – 5min Catchment

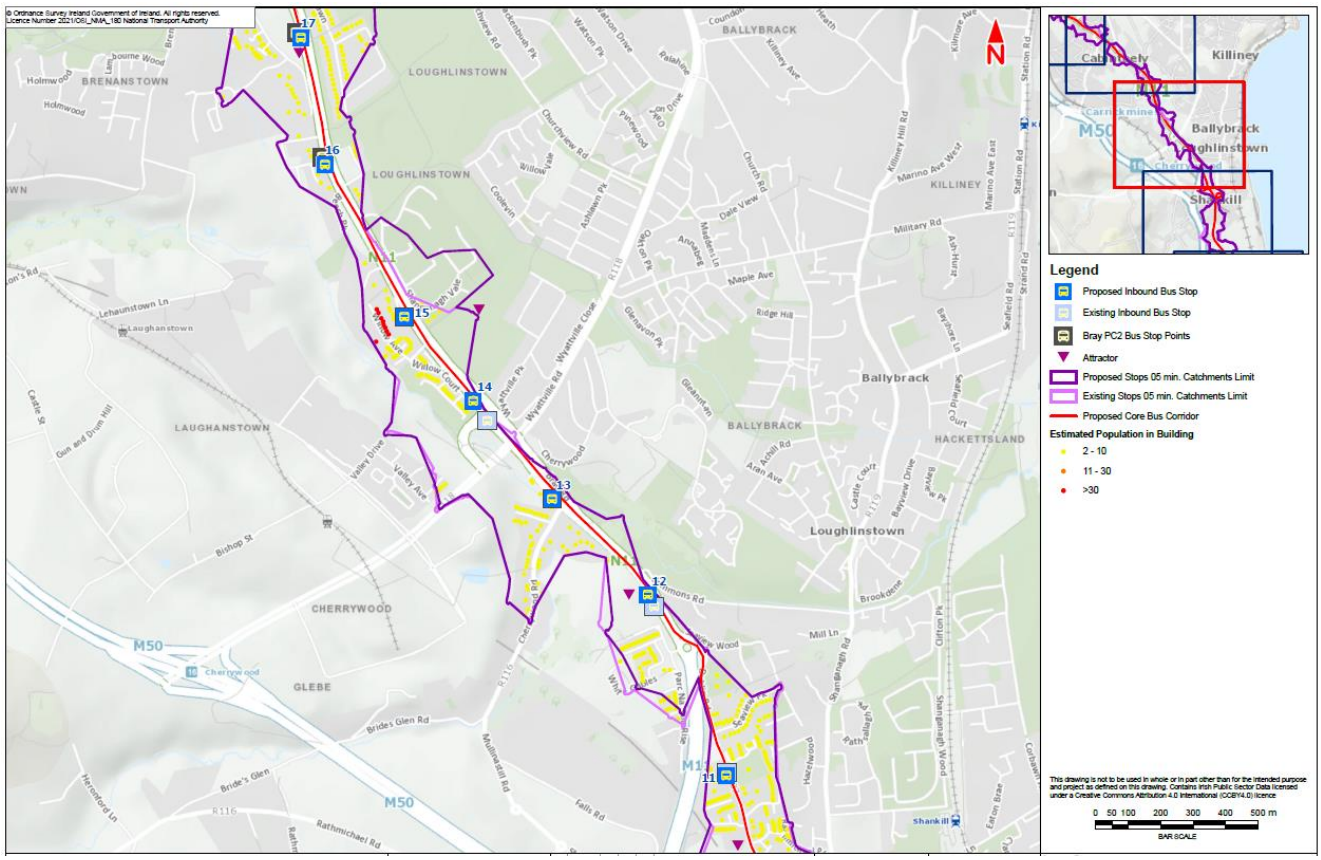


Figure 2.7 : Bray to City Centre Existing and Proposed Inbound Bus Stop Catchment – 5min Catchment

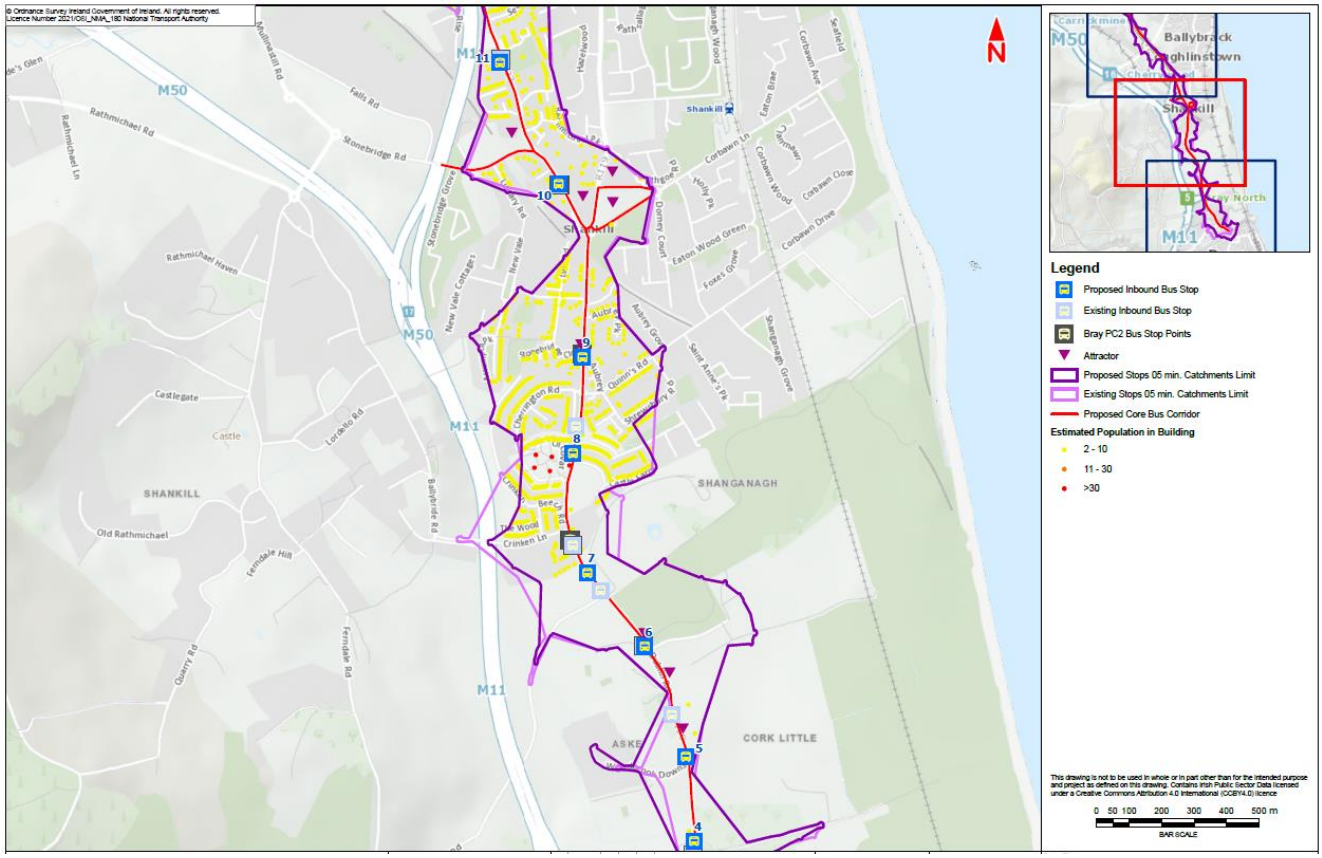


Figure 2.8 : Bray to City Centre Existing and Proposed Inbound Bus Stop Catchment – 5min Catchment

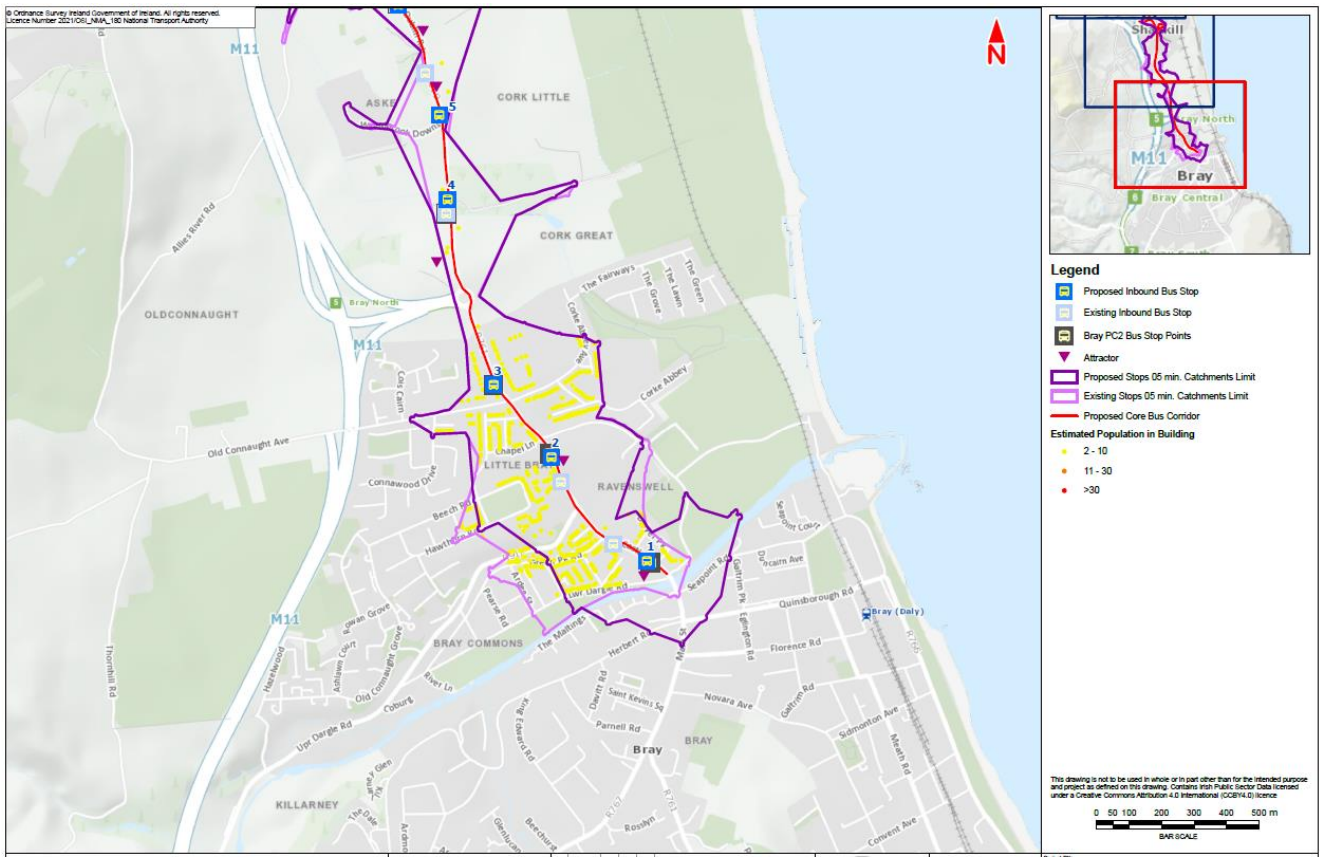


Figure 2.9 : Bray to City Centre Existing and Proposed Inbound Bus Stop Catchment – 5min Catchment

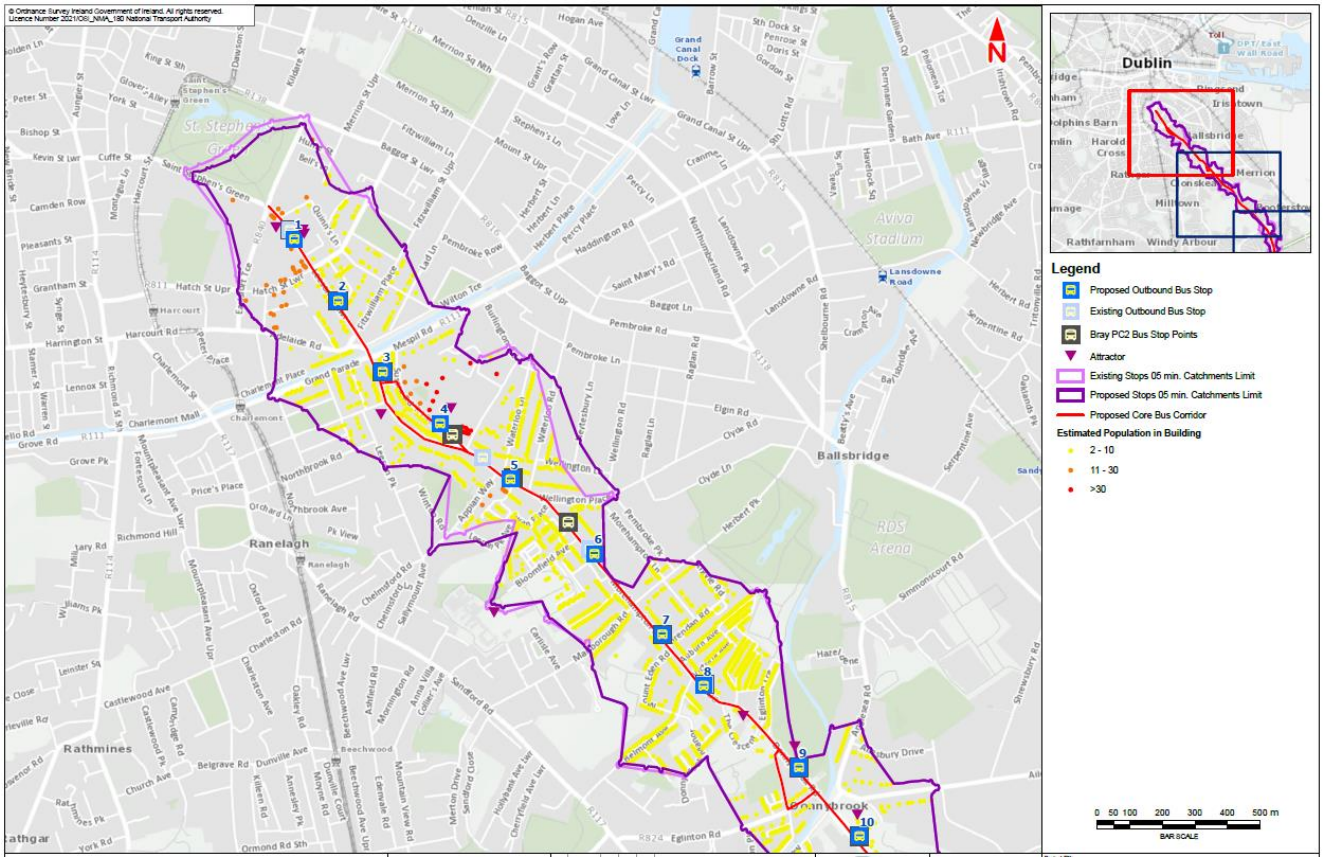


Figure 2.10 : Bray to City Centre Existing and Proposed Outbound Bus Stop Catchment – 5min Catchment

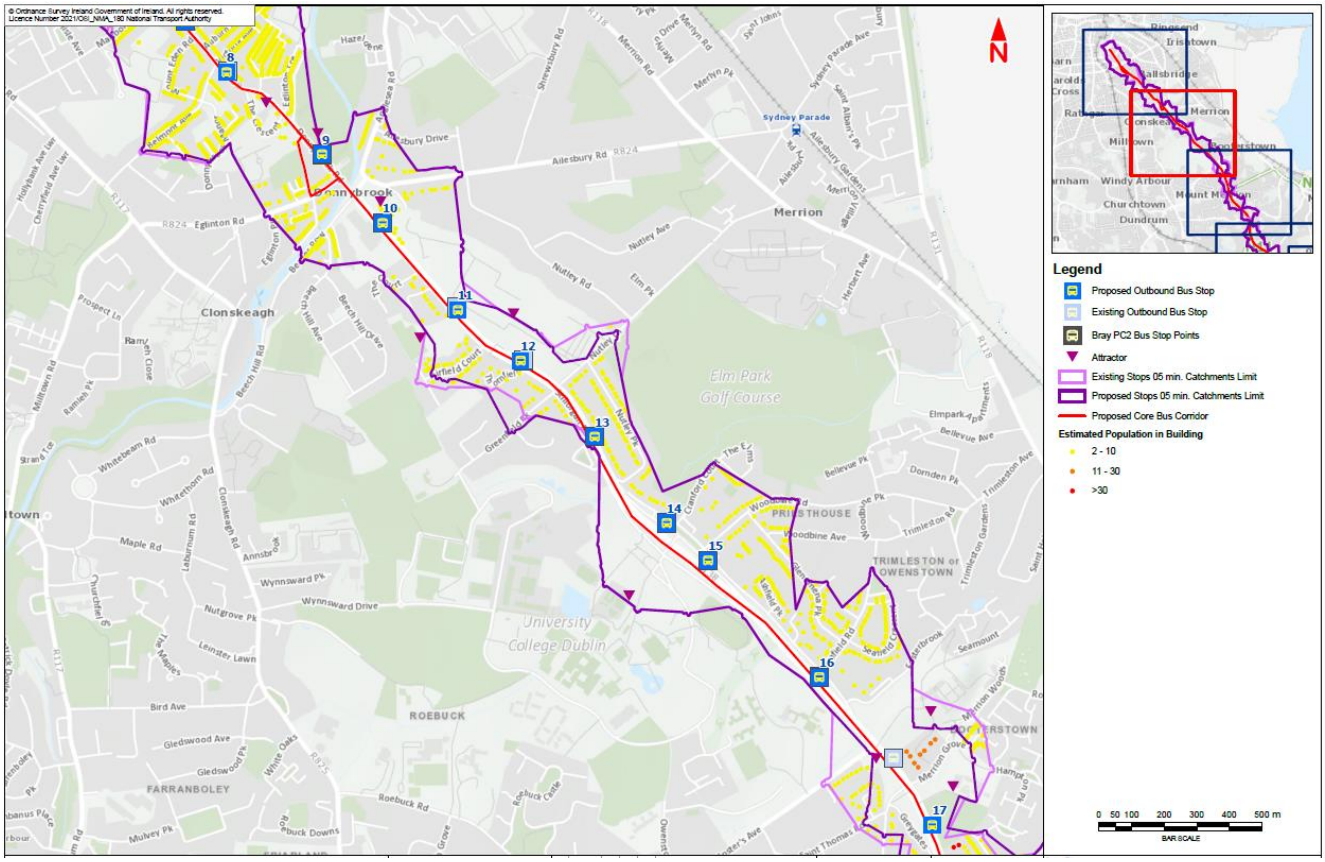


Figure 2.11 : Bray to City Centre Existing and Proposed Outbound Bus Stop Catchment – 5min Catchment

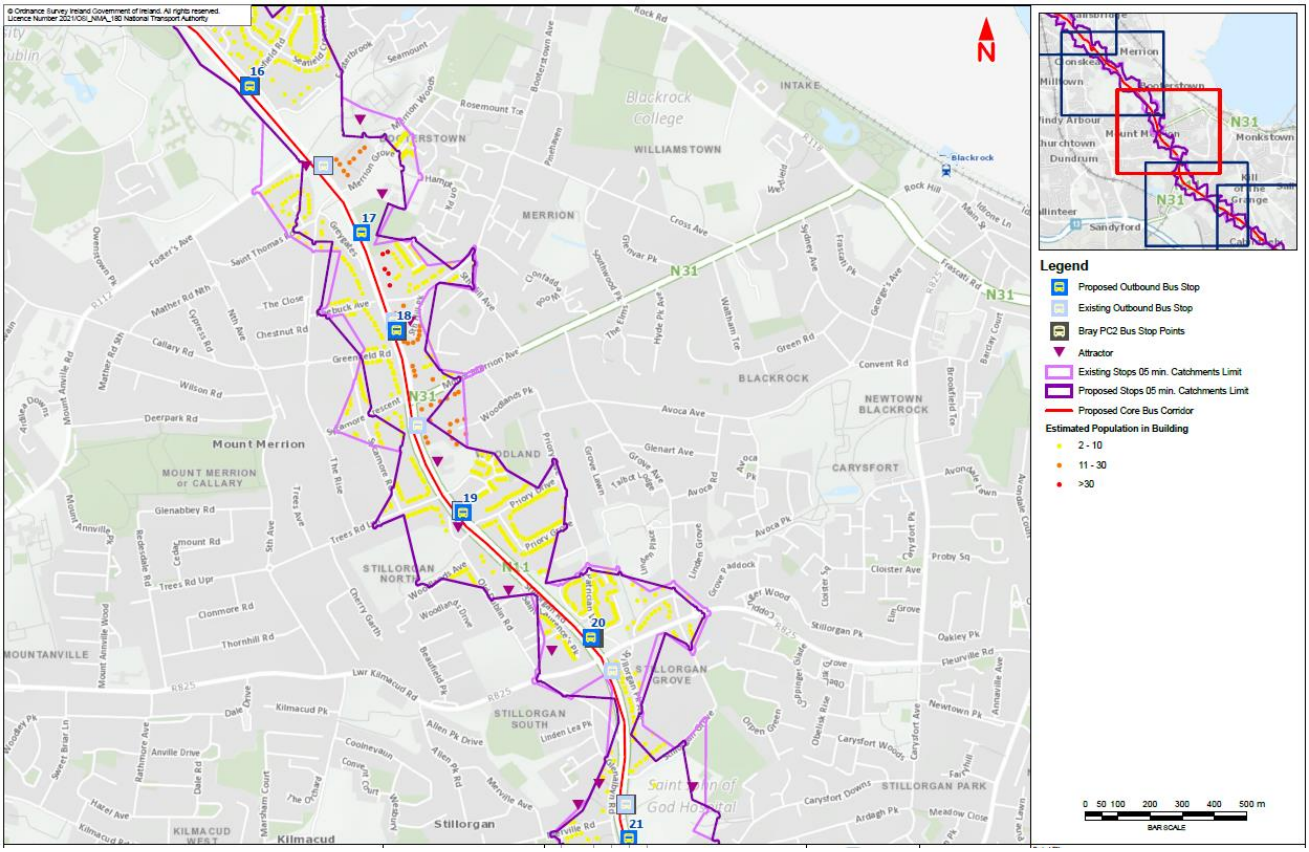


Figure 2.12 : Bray to City Centre Existing and Proposed Outbound Bus Stop Catchment – 5min Catchment

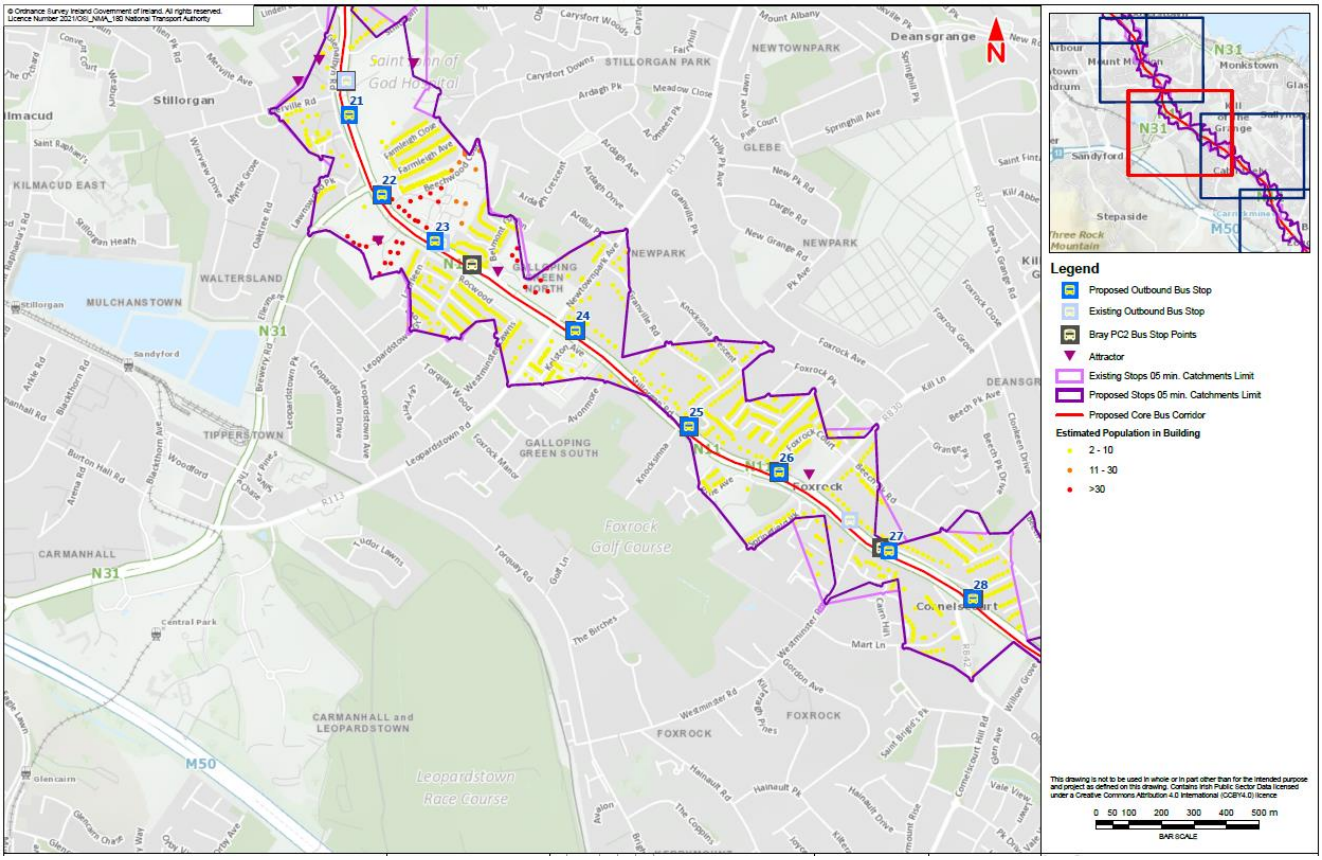


Figure 2.13 : Bray to City Centre Existing and Proposed Outbound Bus Stop Catchment – 5min Catchment

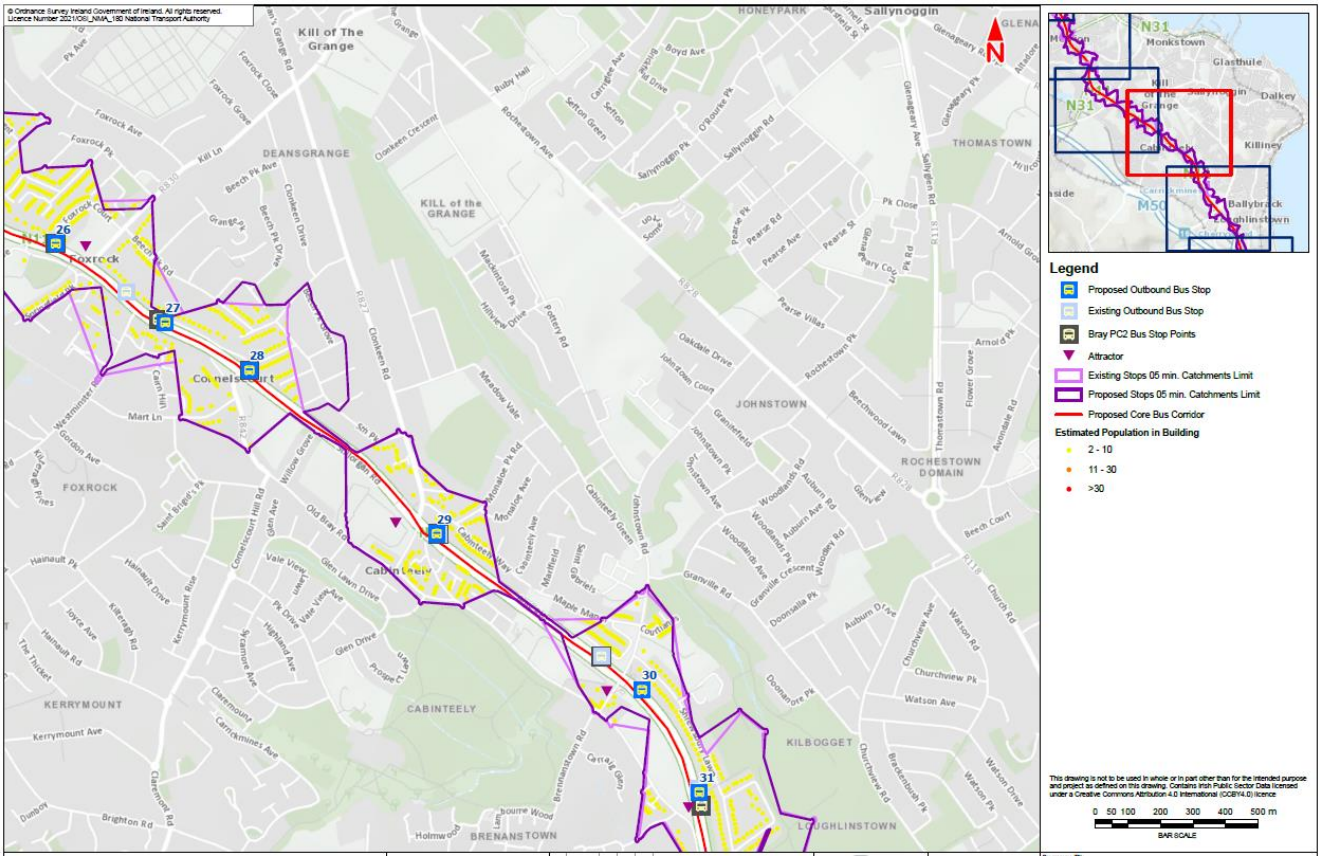


Figure 2.14 : Bray to City Centre Existing and Proposed Outbound Bus Stop Catchment – 5min Catchment

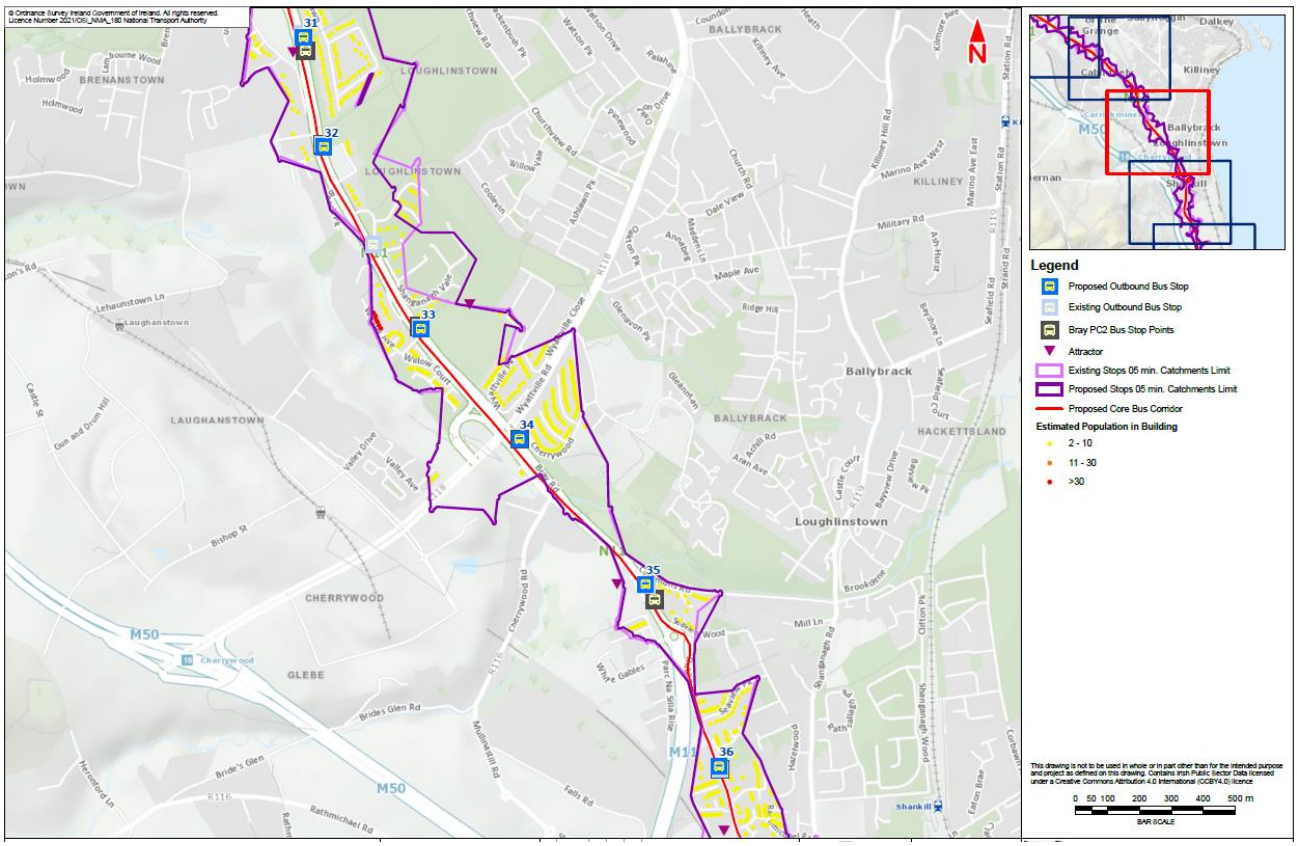


Figure 2.15 : Bray to City Centre Existing and Proposed Outbound Bus Stop Catchment – 5min Catchment

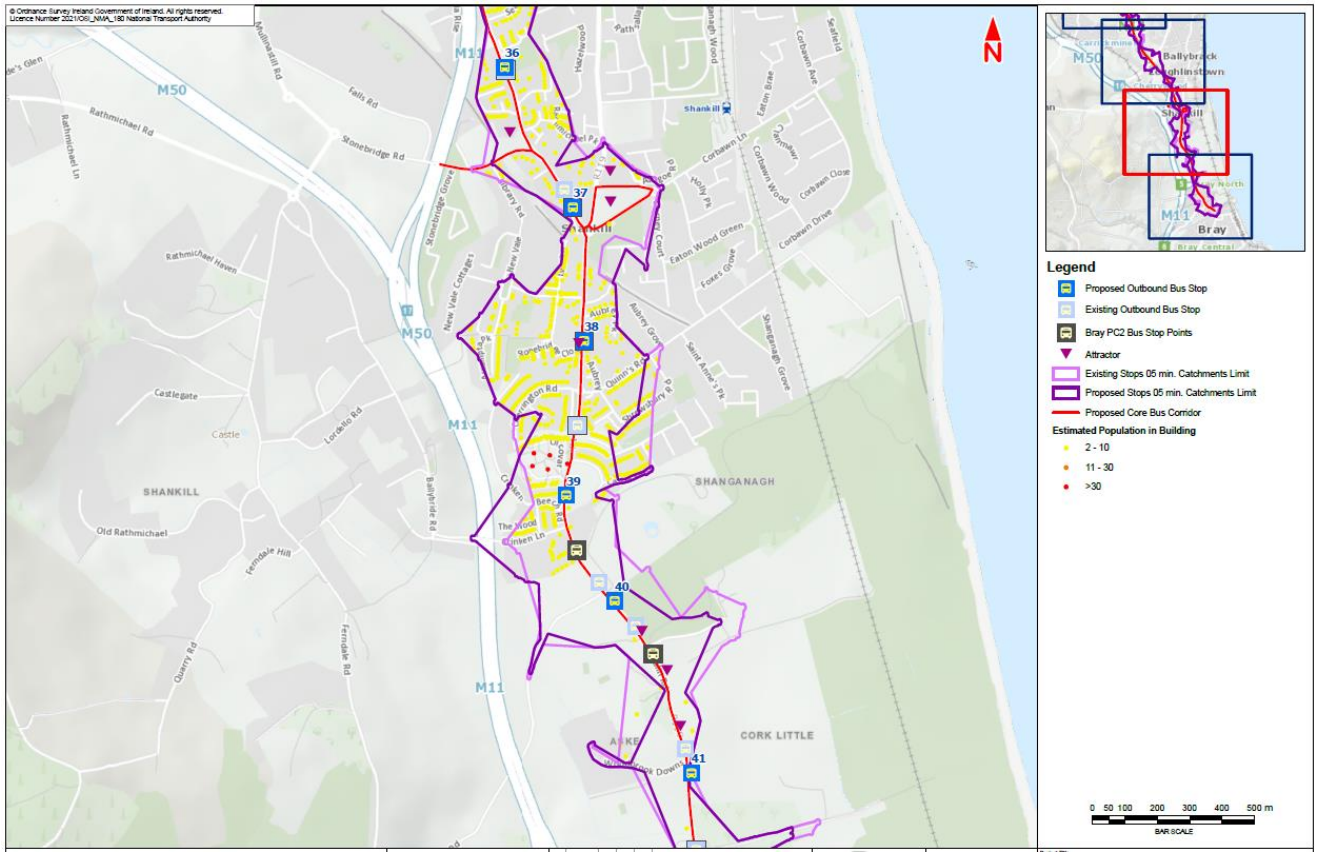


Figure 2.16 : Bray to City Centre Existing and Proposed Outbound Bus Stop Catchment – 5min Catchment

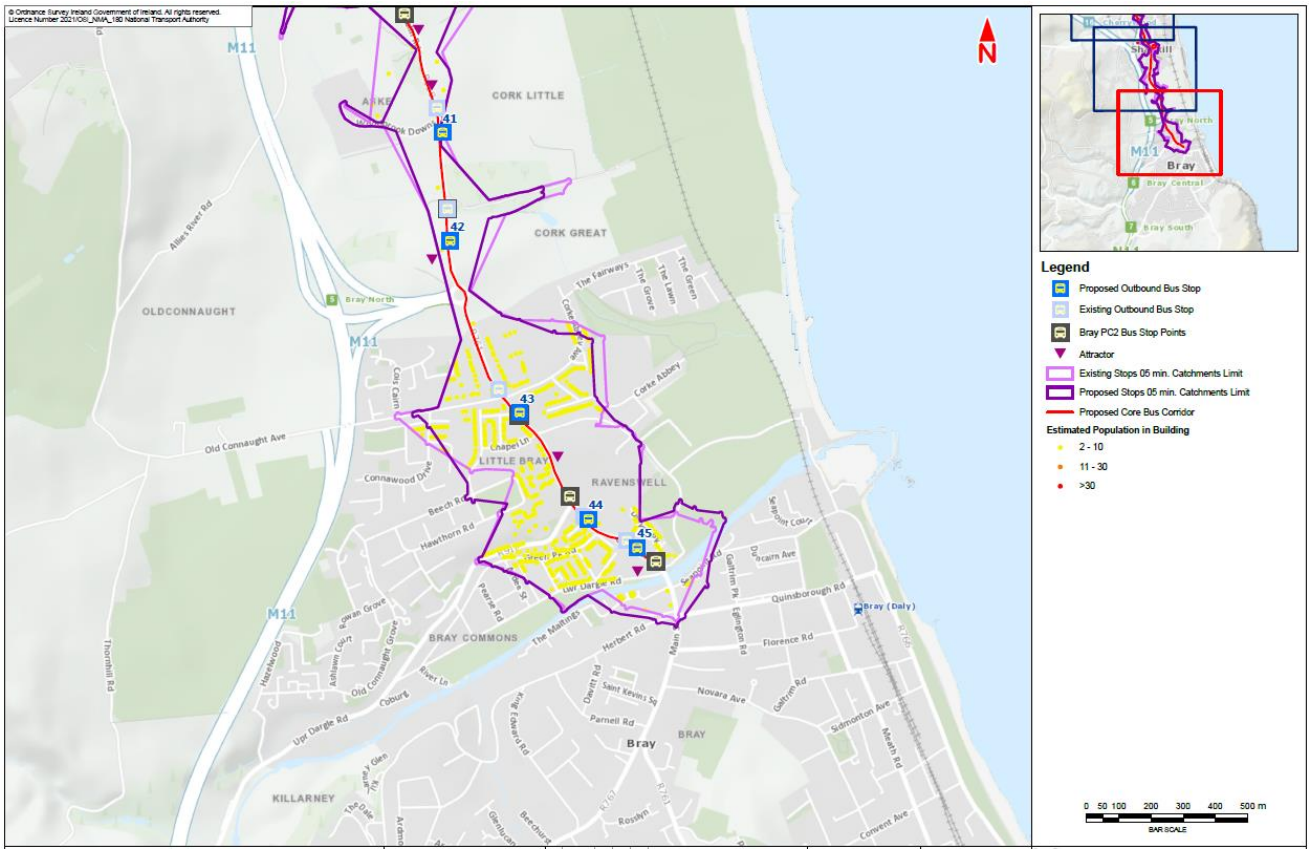
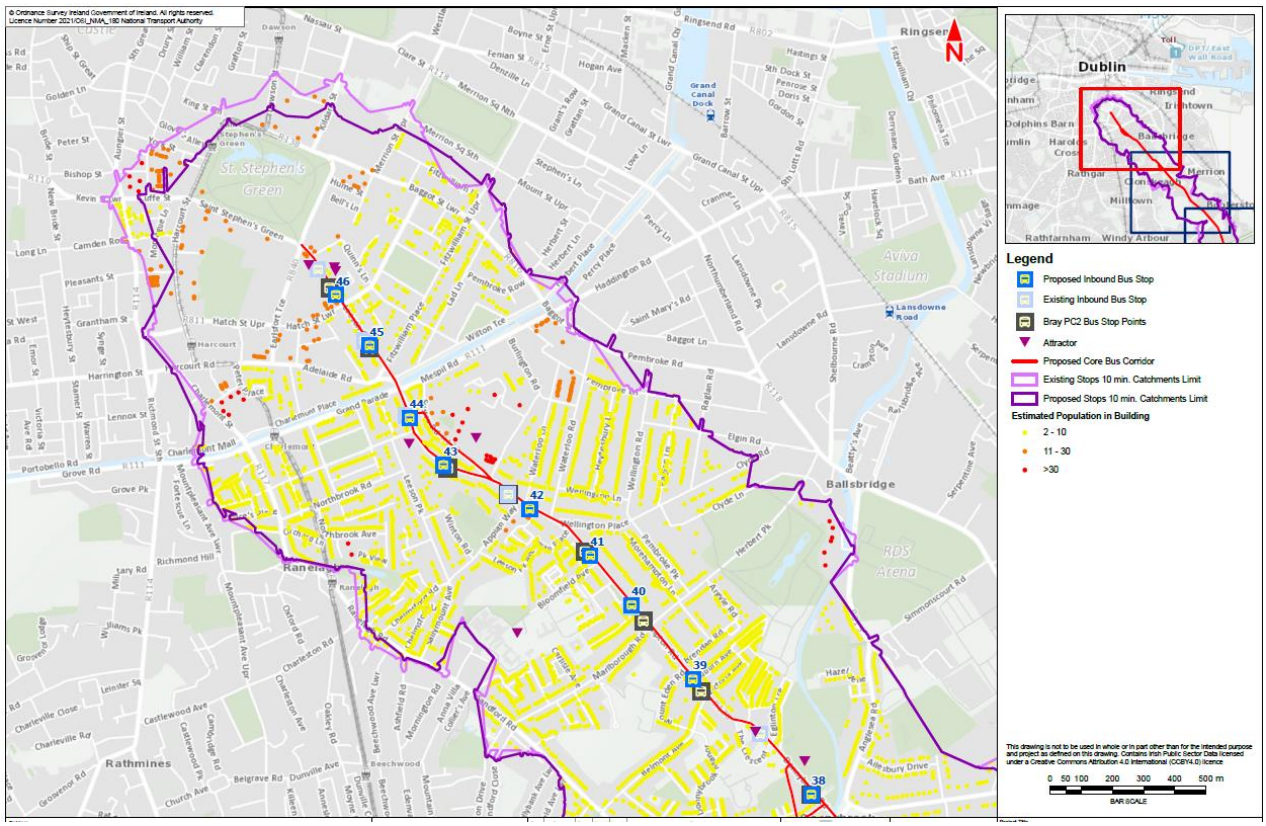


Figure 2.17 : Bray to City Centre Existing and Proposed Outbound Bus Stop Catchment – 5min Catchment

2.4.2.2 Bray to City Centre – 10min Catchments (Inbound and Outbound)



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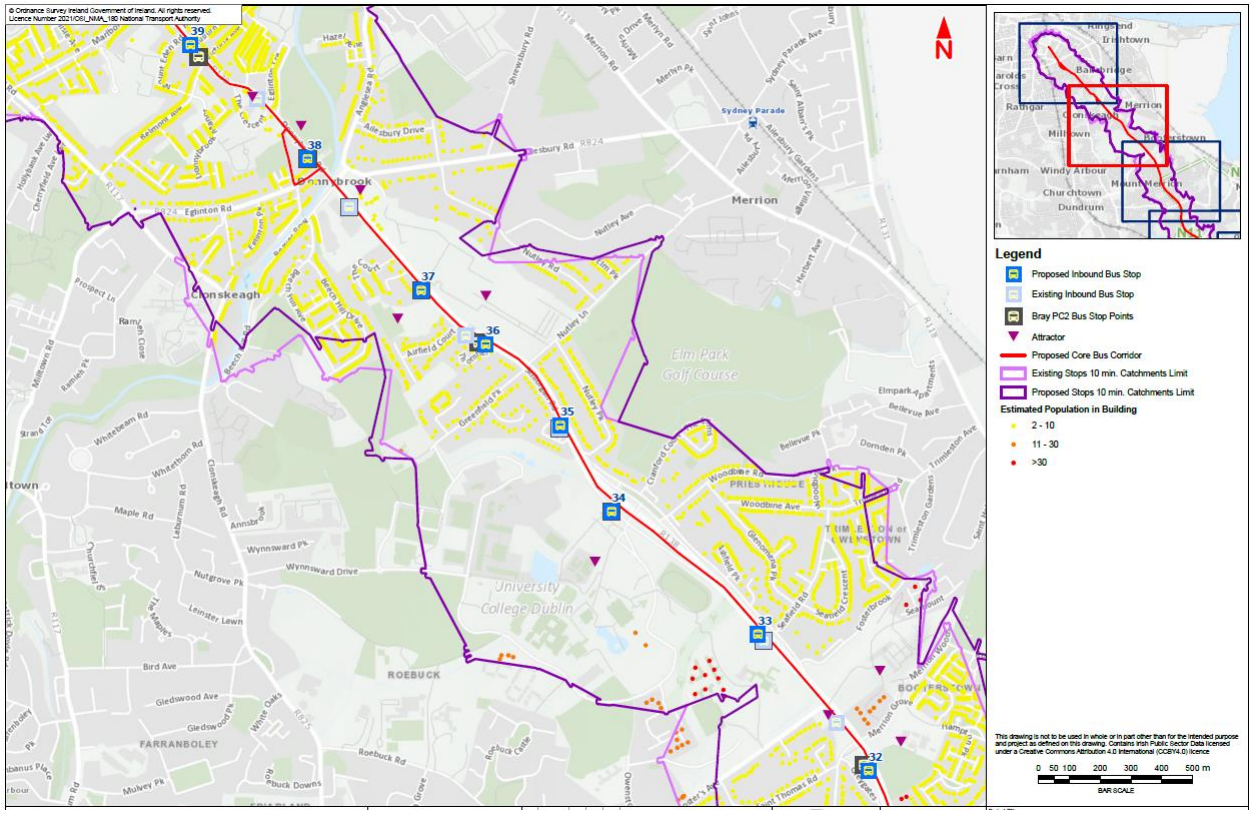

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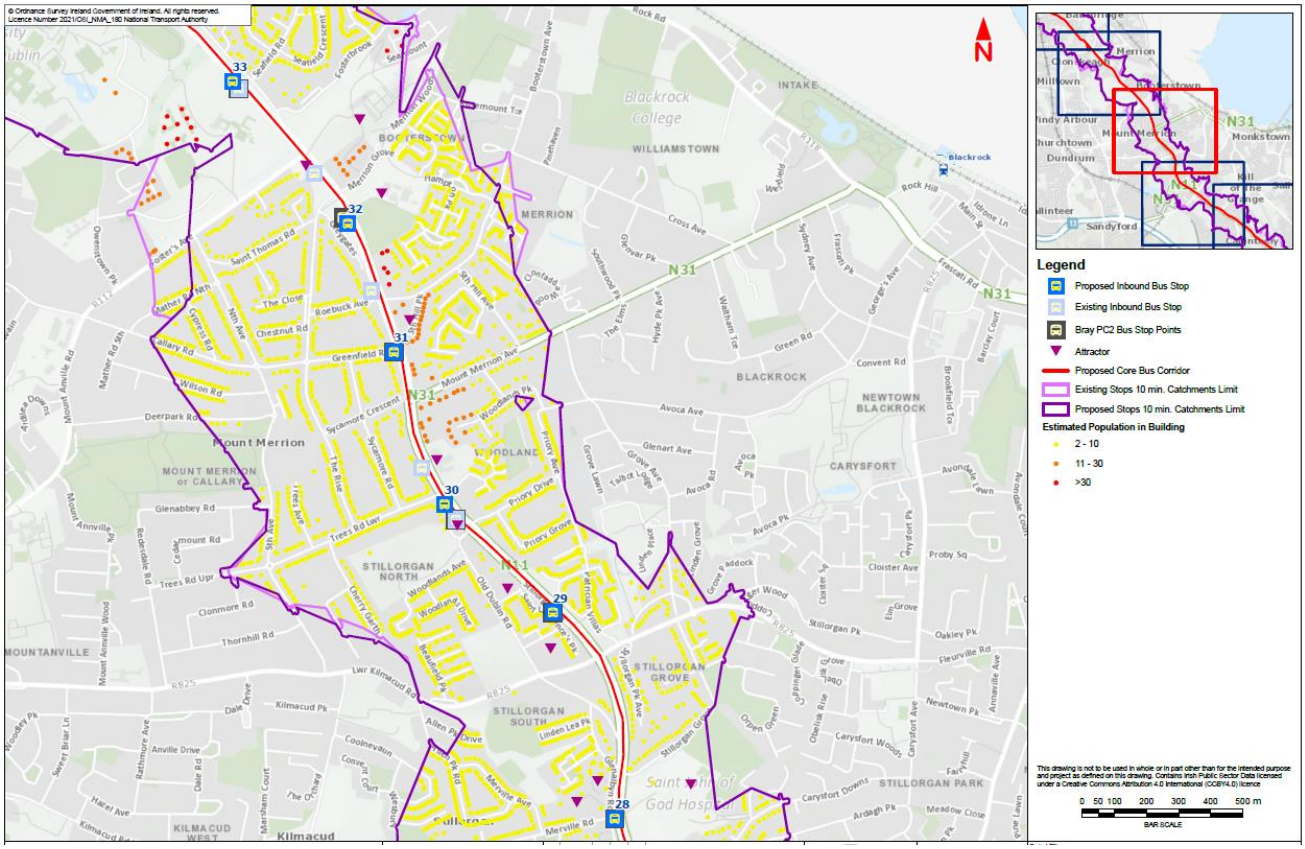

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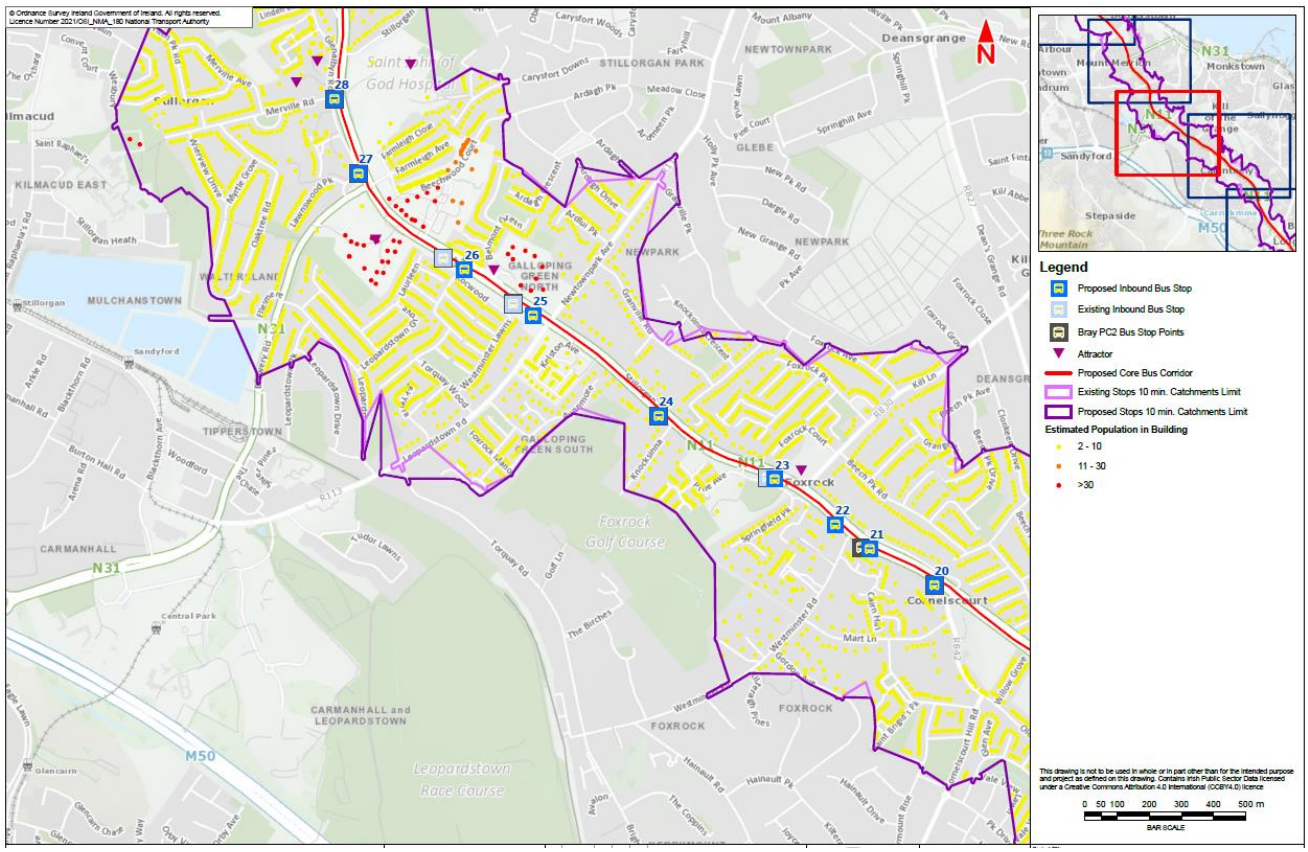

Figure 2.21 : Bray to City Centre Existing and Proposed Inbound Bus Stop Catchment – 10min Catchment

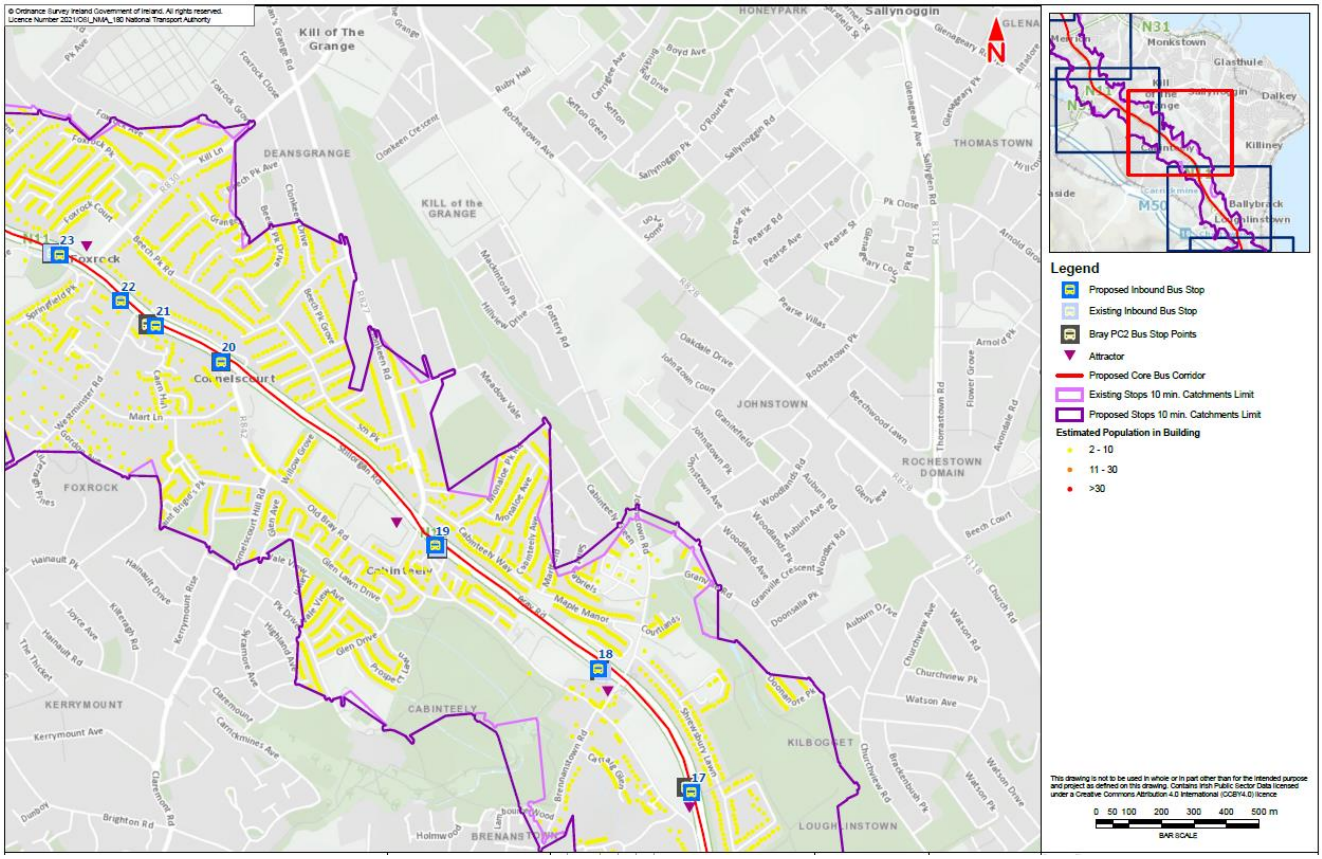

Figure 2.22 : Bray to City Centre Existing and Proposed Inbound Bus Stop Catchment – 10min Catchment

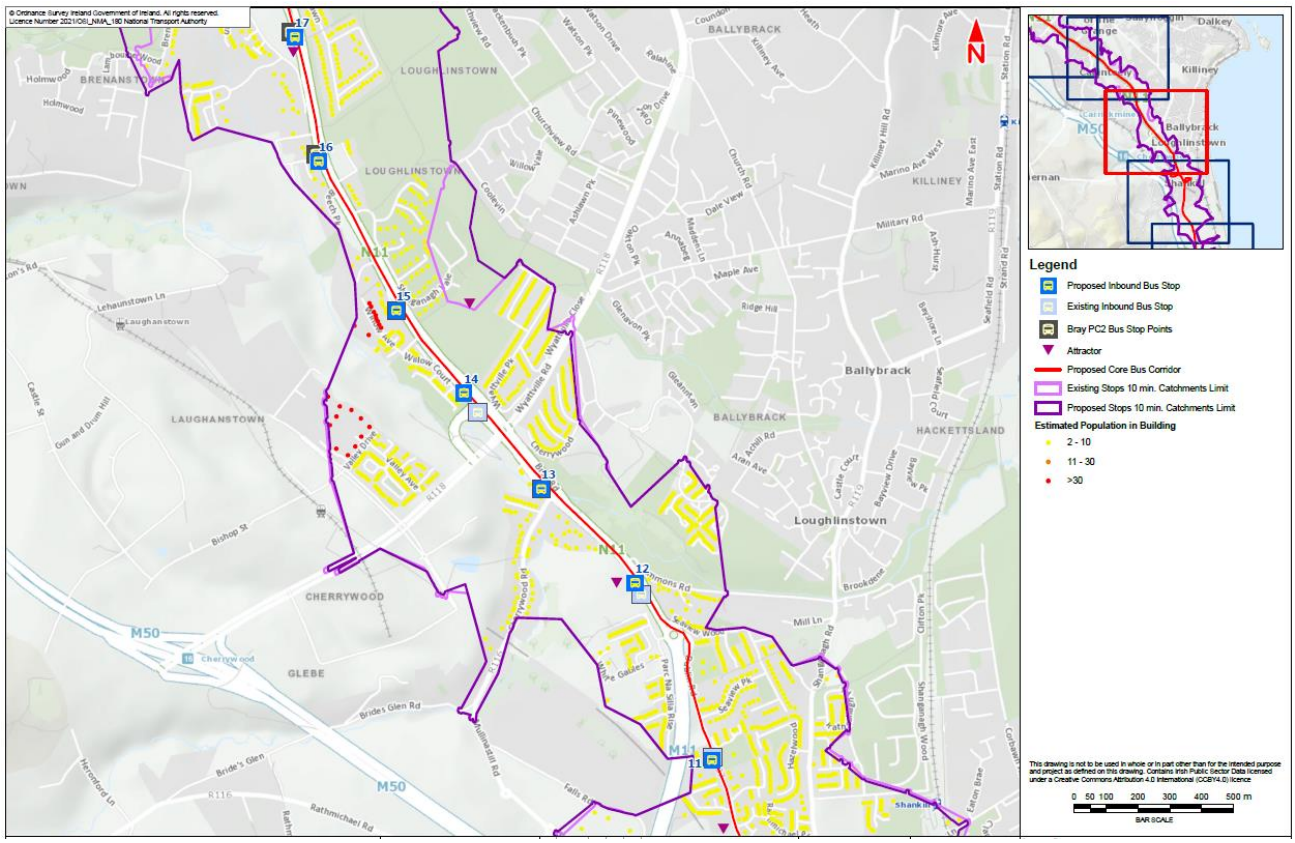

Figure 2.23 : Bray to City Centre Existing and Proposed Inbound Bus Stop Catchment – 10min Catchment

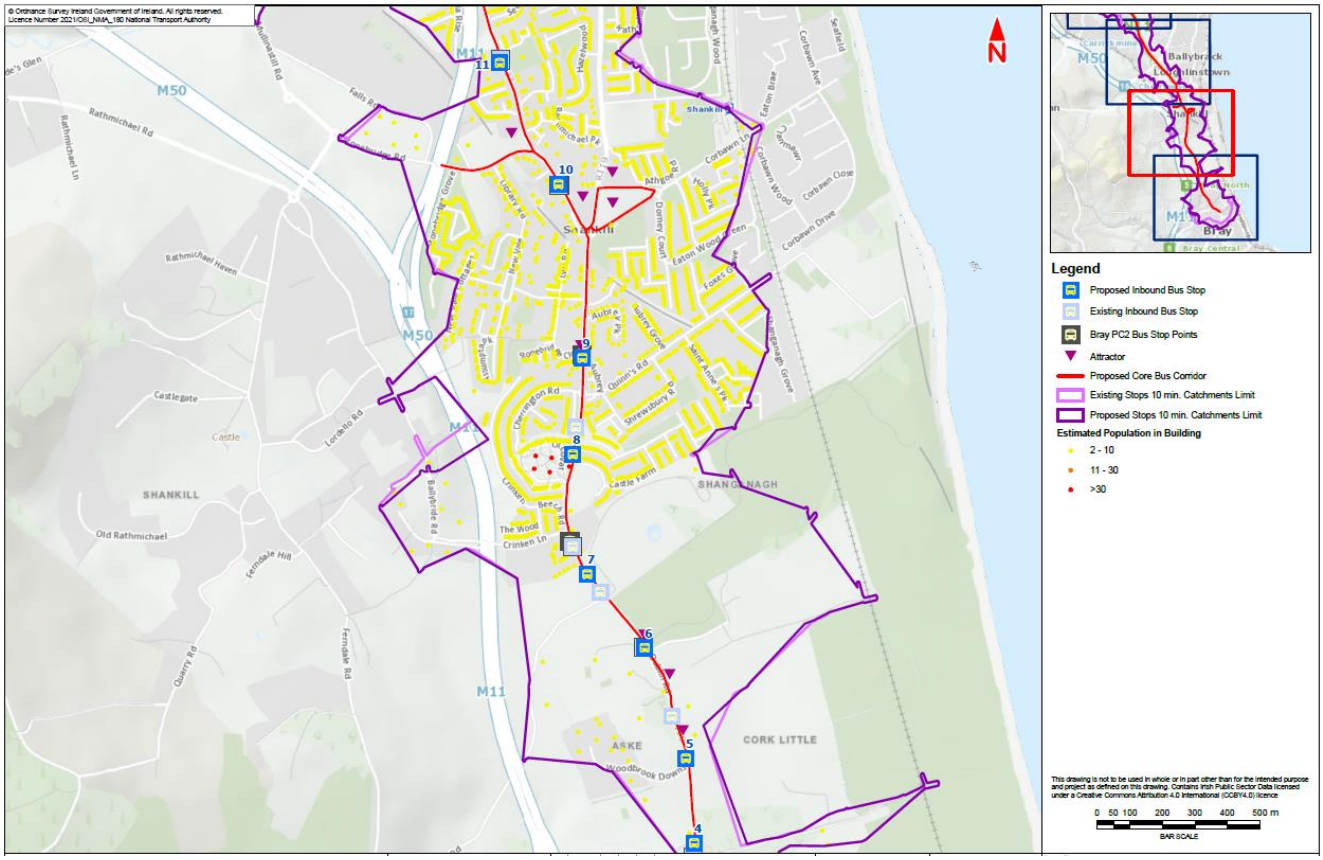

Figure 2.24 : Bray to City Centre Existing and Proposed Inbound Bus Stop Catchment – 10min Catchment

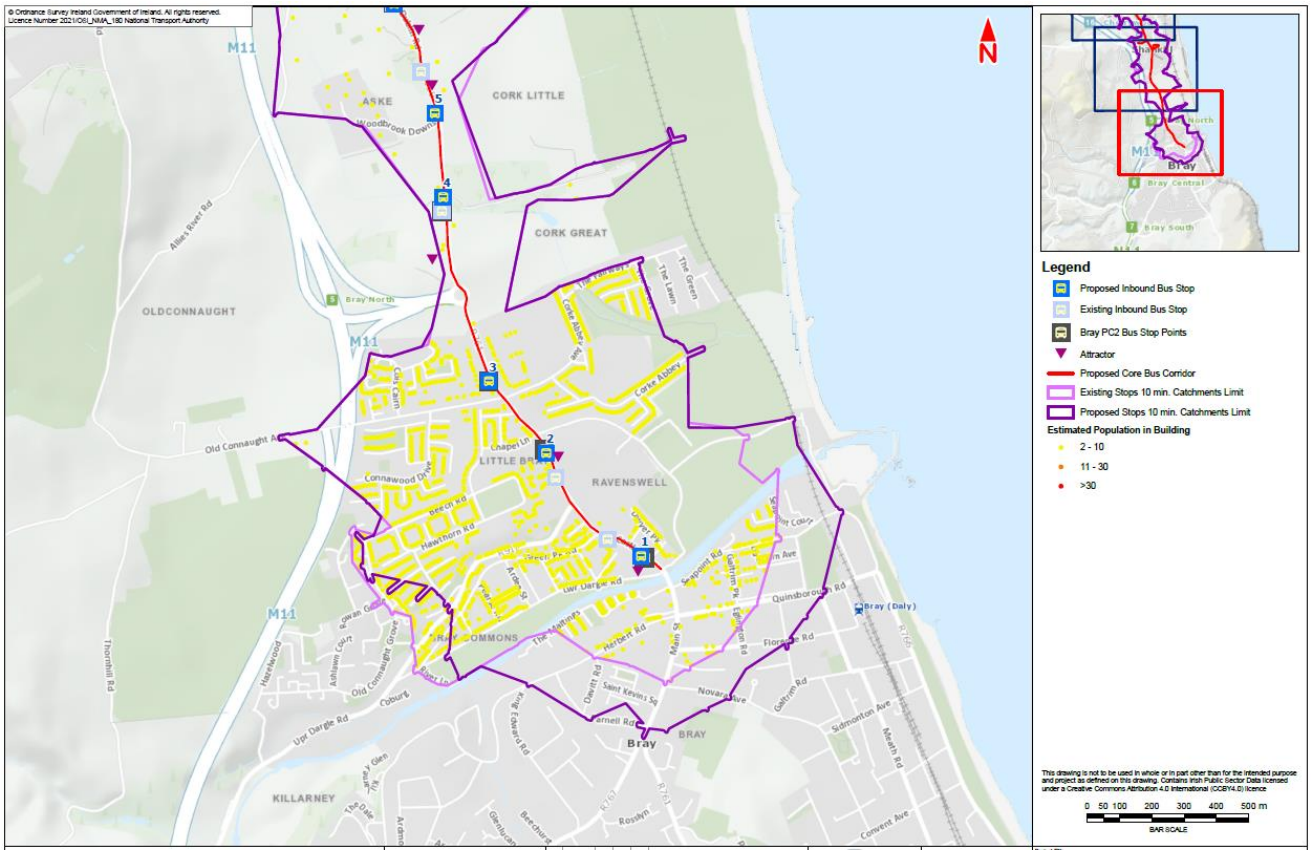

Figure 2.25 : Bray to City Centre Existing and Proposed Inbound Bus Stop Catchment – 10min Catchment

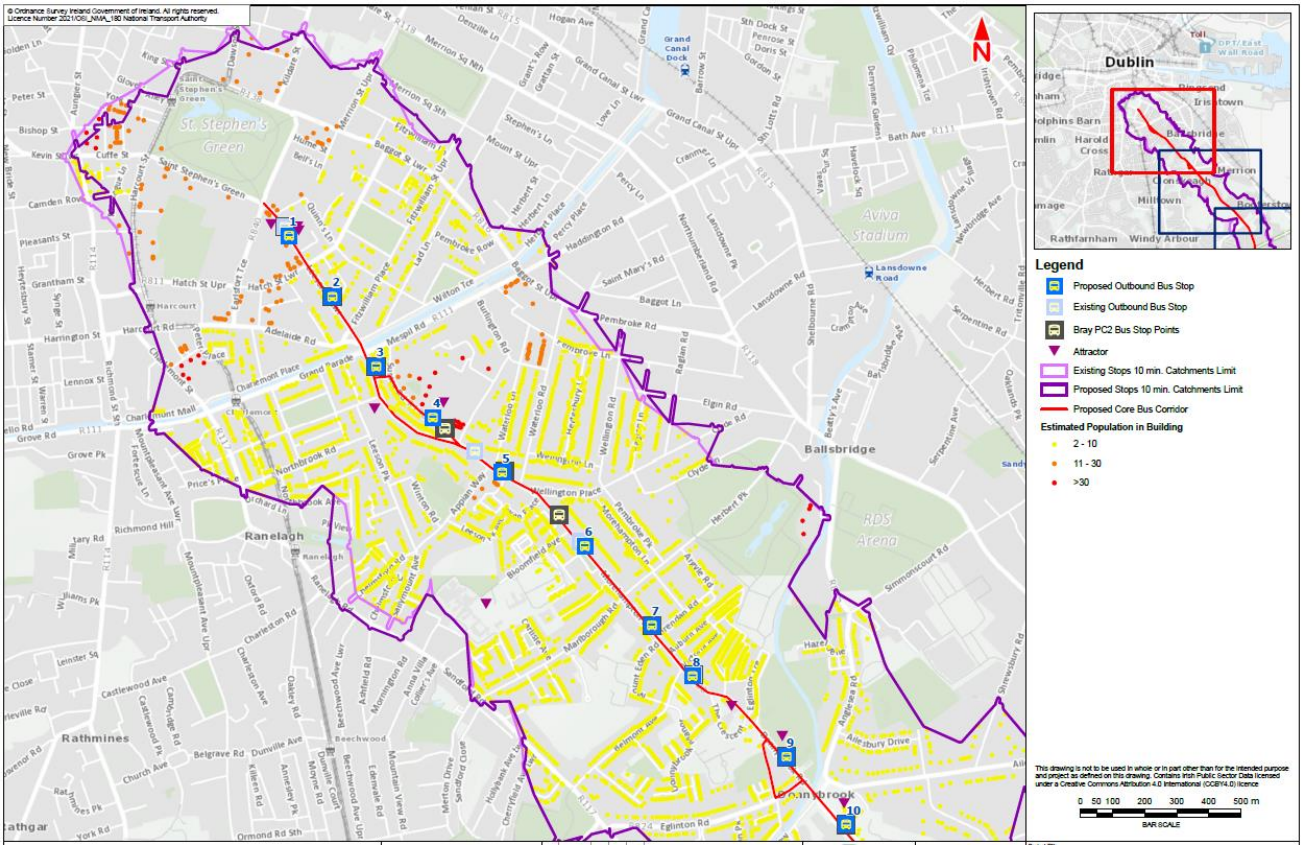

Figure 2.26 : Bray to City Centre Existing and Proposed Outbound Bus Stop Catchment – 10min Catchment

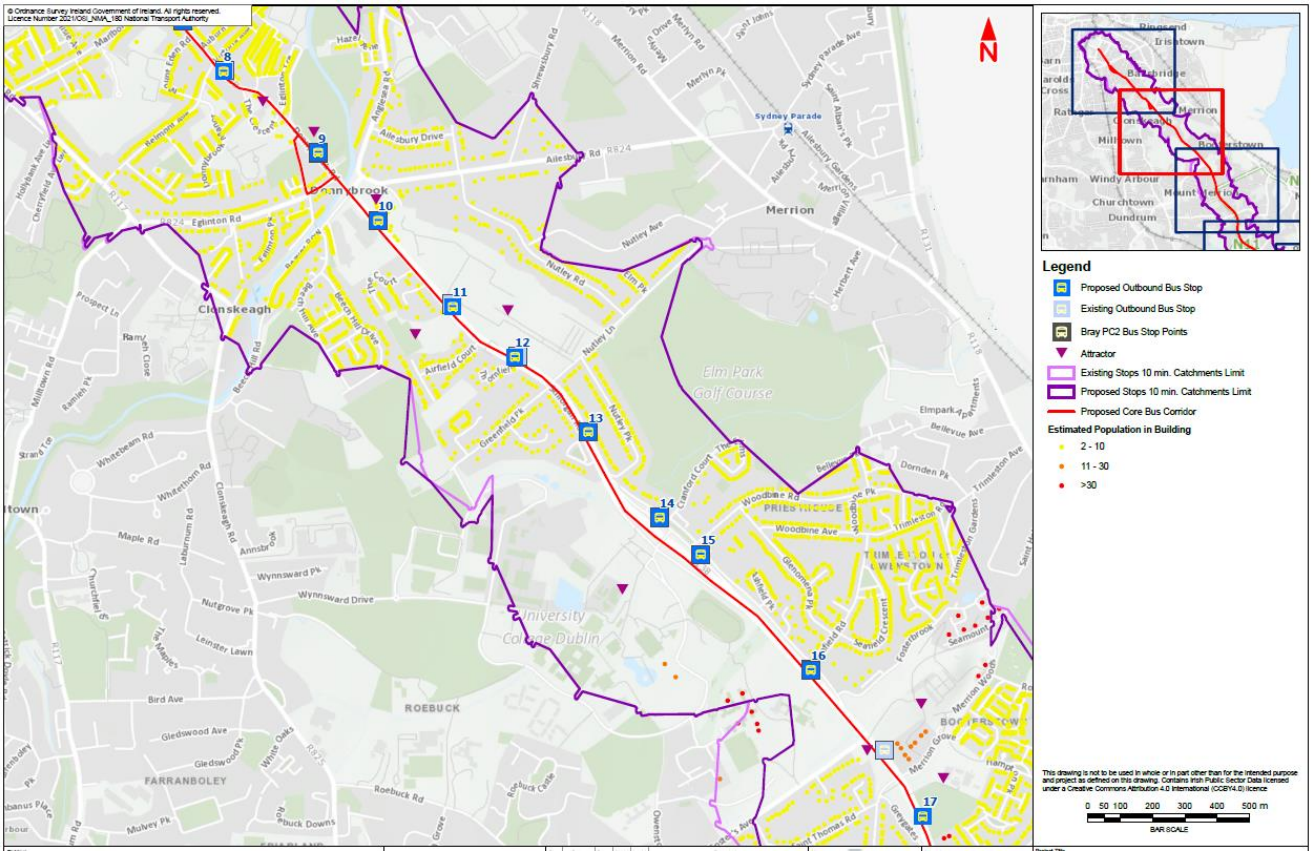

Figure 2.27 : Bray to City Centre Existing and Proposed Outbound Bus Stop Catchment – 10min Catchment

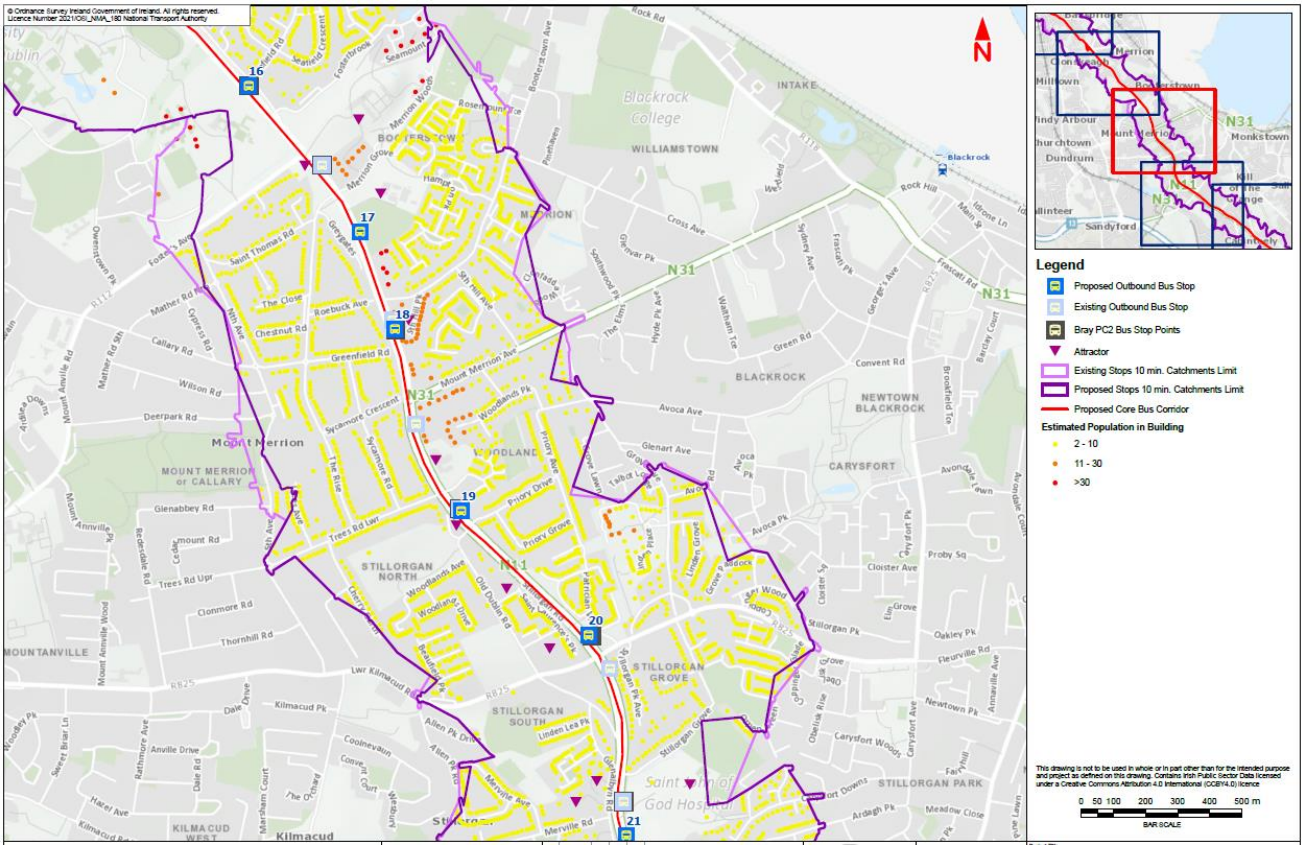

Figure 2.28 : Bray to City Centre Existing and Proposed Outbound Bus Stop Catchment – 10min Catchment

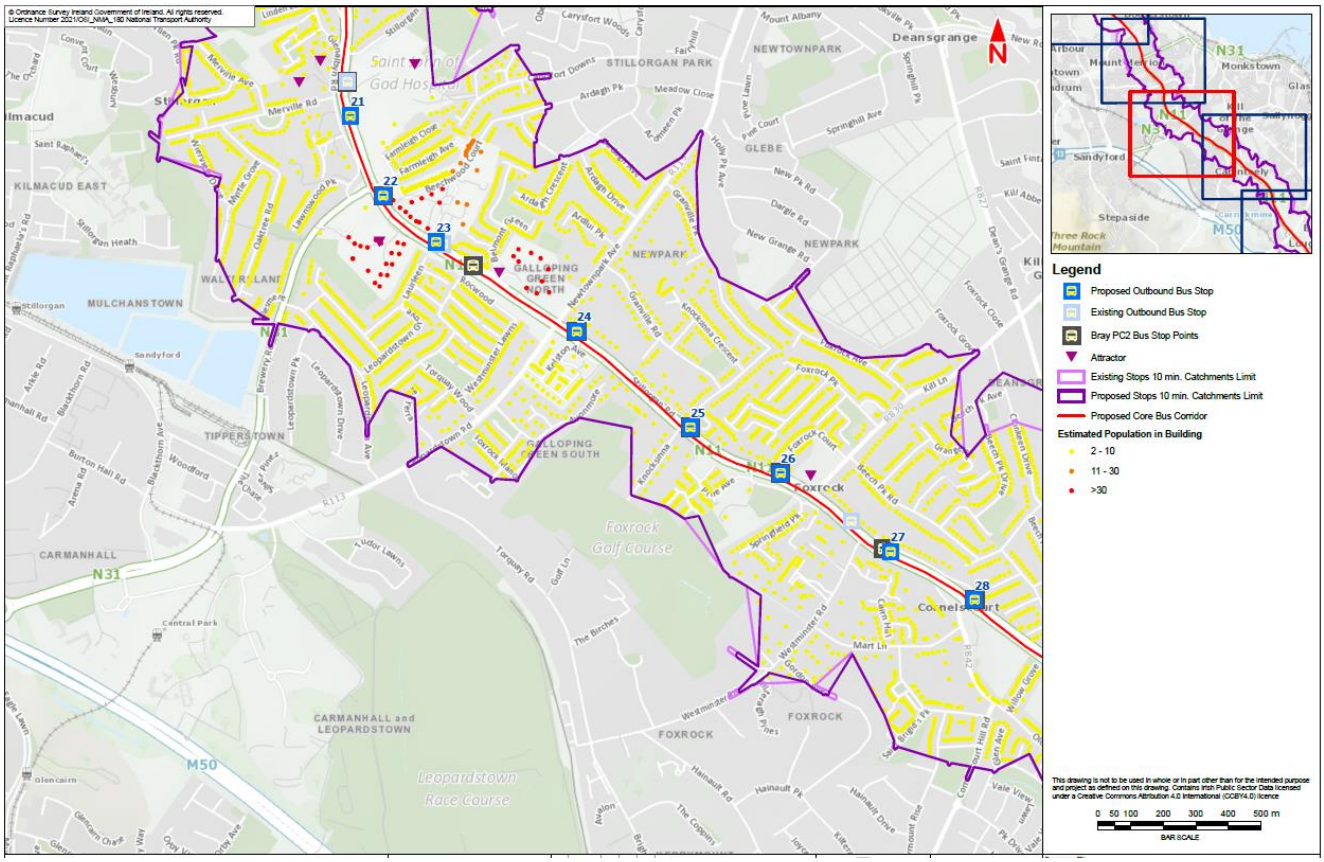

Figure 2.29 : Bray to City Centre Existing and Proposed Outbound Bus Stop Catchment – 10min Catchment

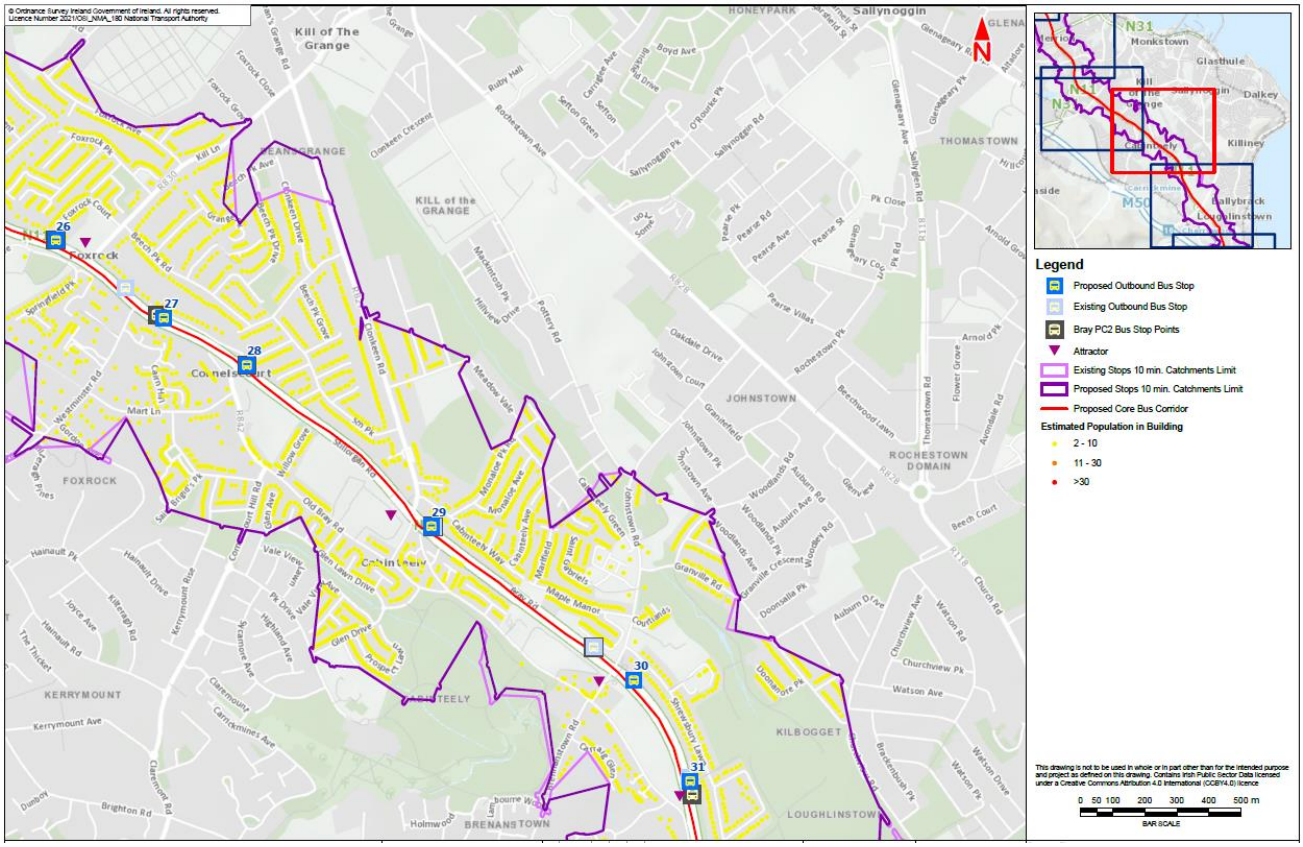

Figure 2.30 : Bray to City Centre Existing and Proposed Outbound Bus Stop Catchment – 10min Catchment

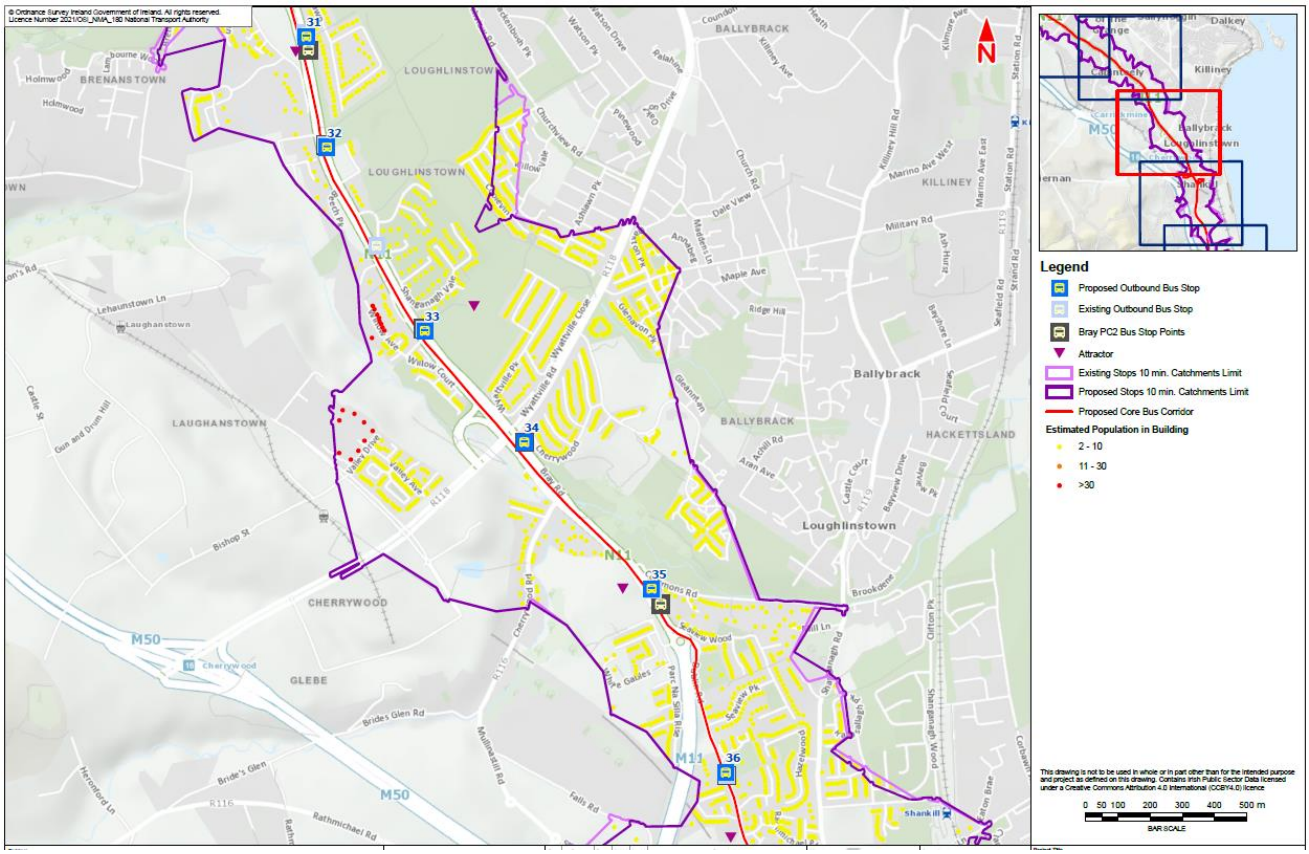

Figure 2.31 : Bray to City Centre Existing and Proposed Outbound Bus Stop Catchment – 10min Catchment

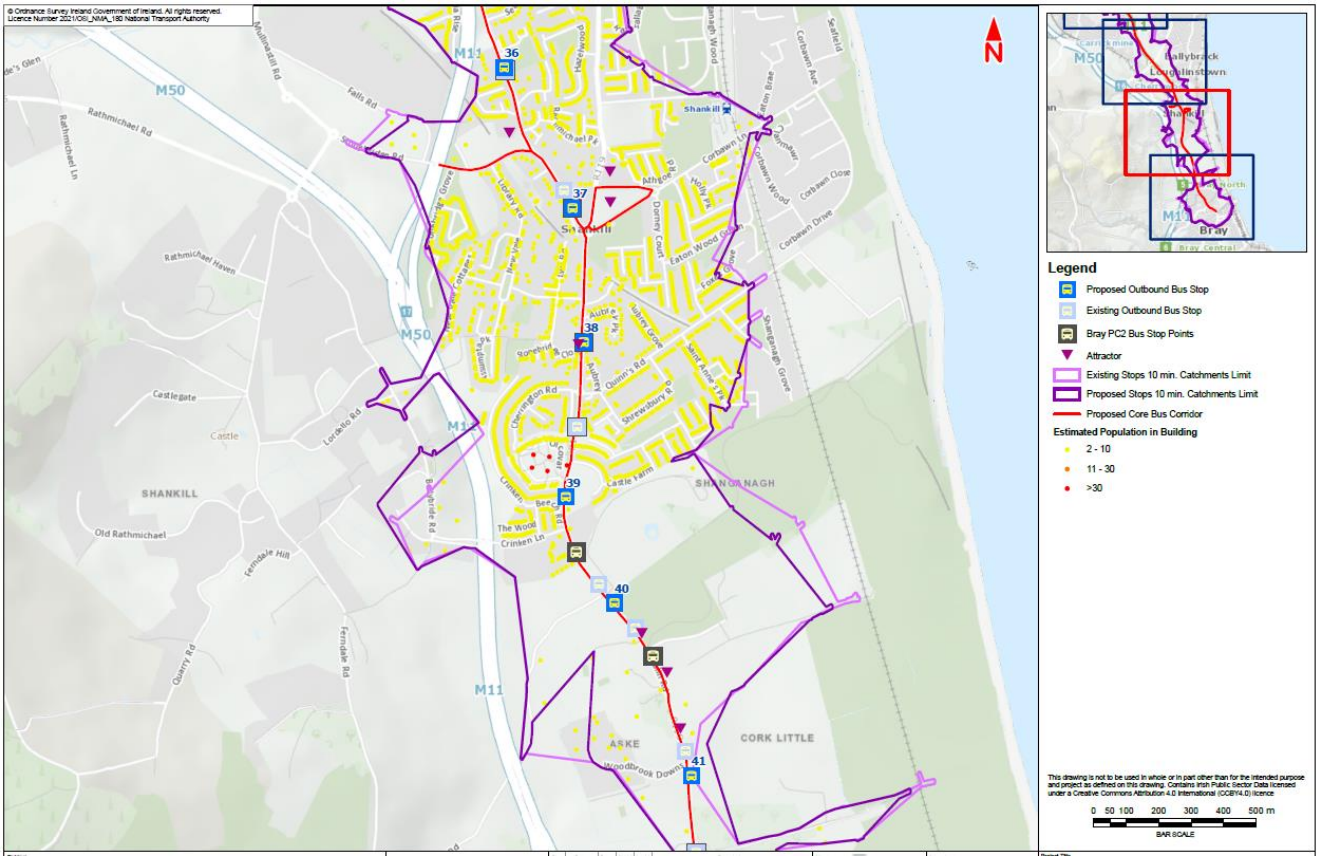

Figure 2.32 : Bray to City Centre Existing and Proposed Outbound Bus Stop Catchment – 10min Catchment

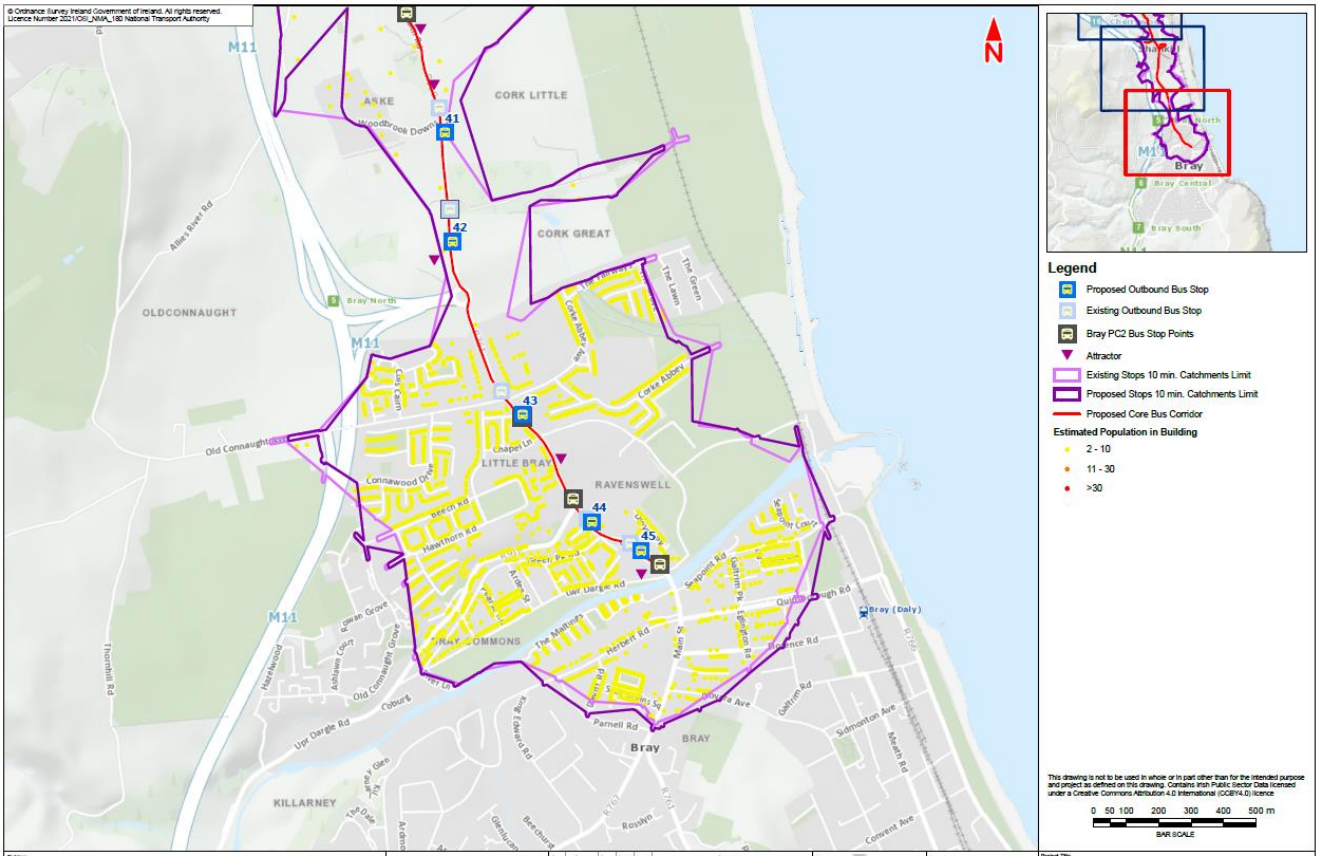

Figure 2.33 : Bray to City Centre Existing and Proposed Outbound Bus Stop Catchment – 10min Catchment

2.4.2.3 Bray to City Centre – 15min Catchments (Inbound and Outbound)

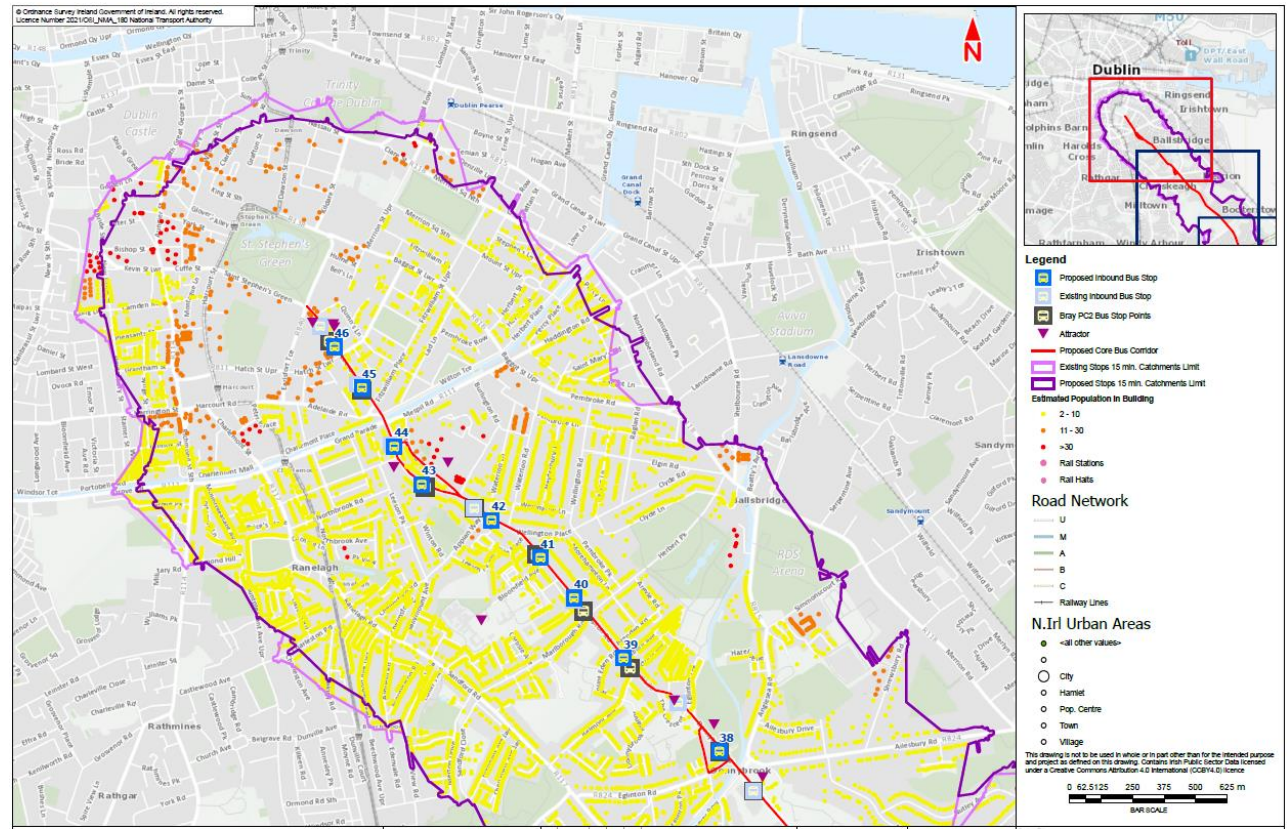

Figure 2.34 : Bray to City Centre Existing and Proposed Inbound Bus Stop Catchment – 15min Catchment

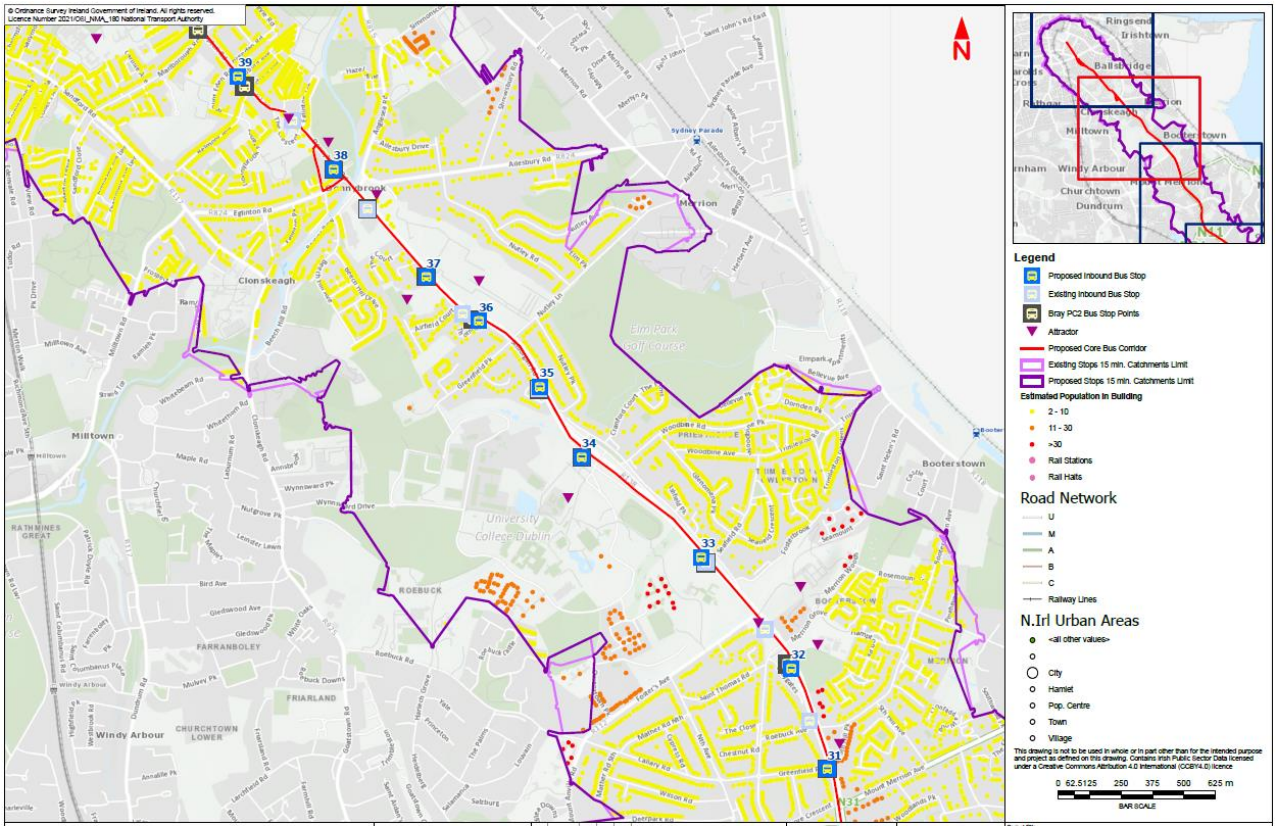

Figure 2.35 : Bray to City Centre Existing and Proposed Inbound Bus Stop Catchment – 15min Catchment

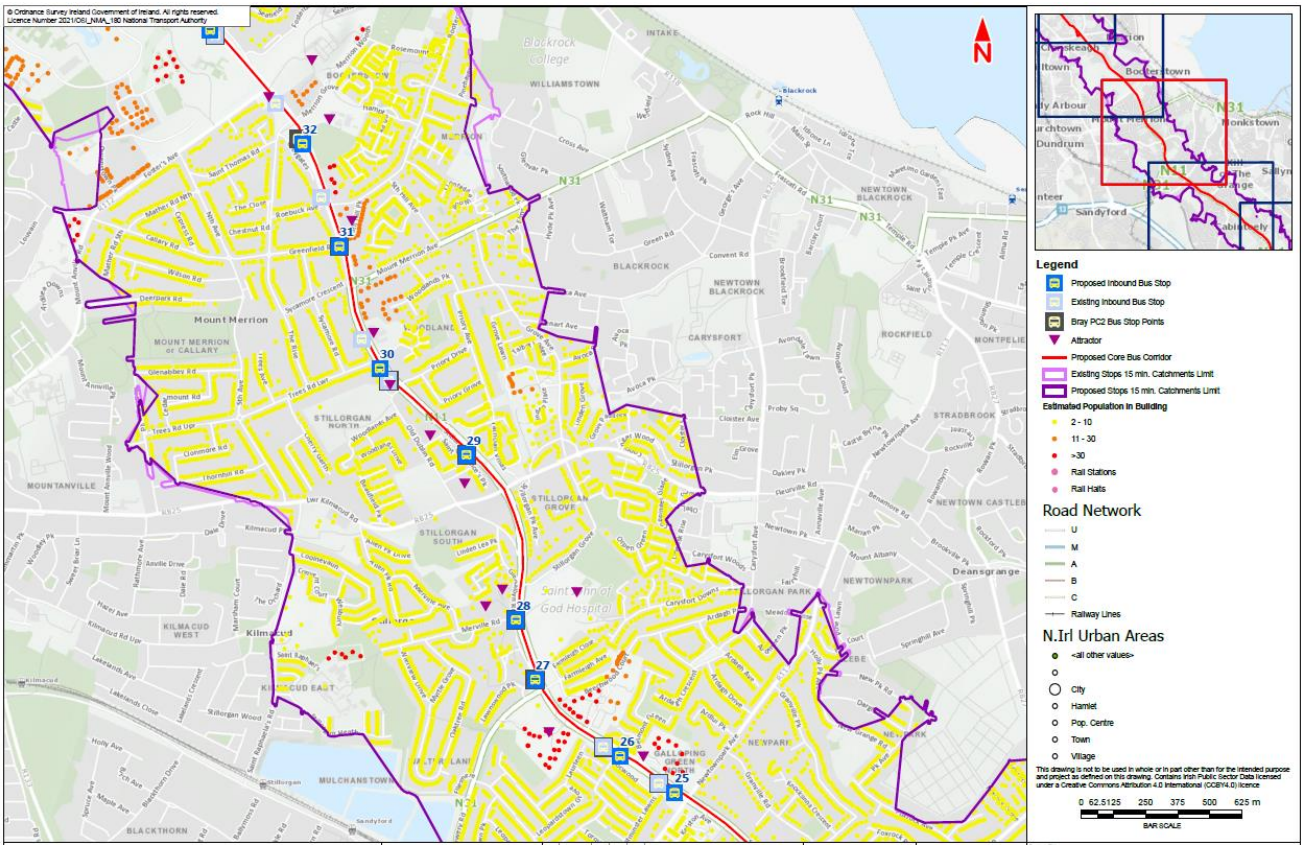

Figure 2.36 : Bray to City Centre Existing and Proposed Inbound Bus Stop Catchment – 15min Catchment

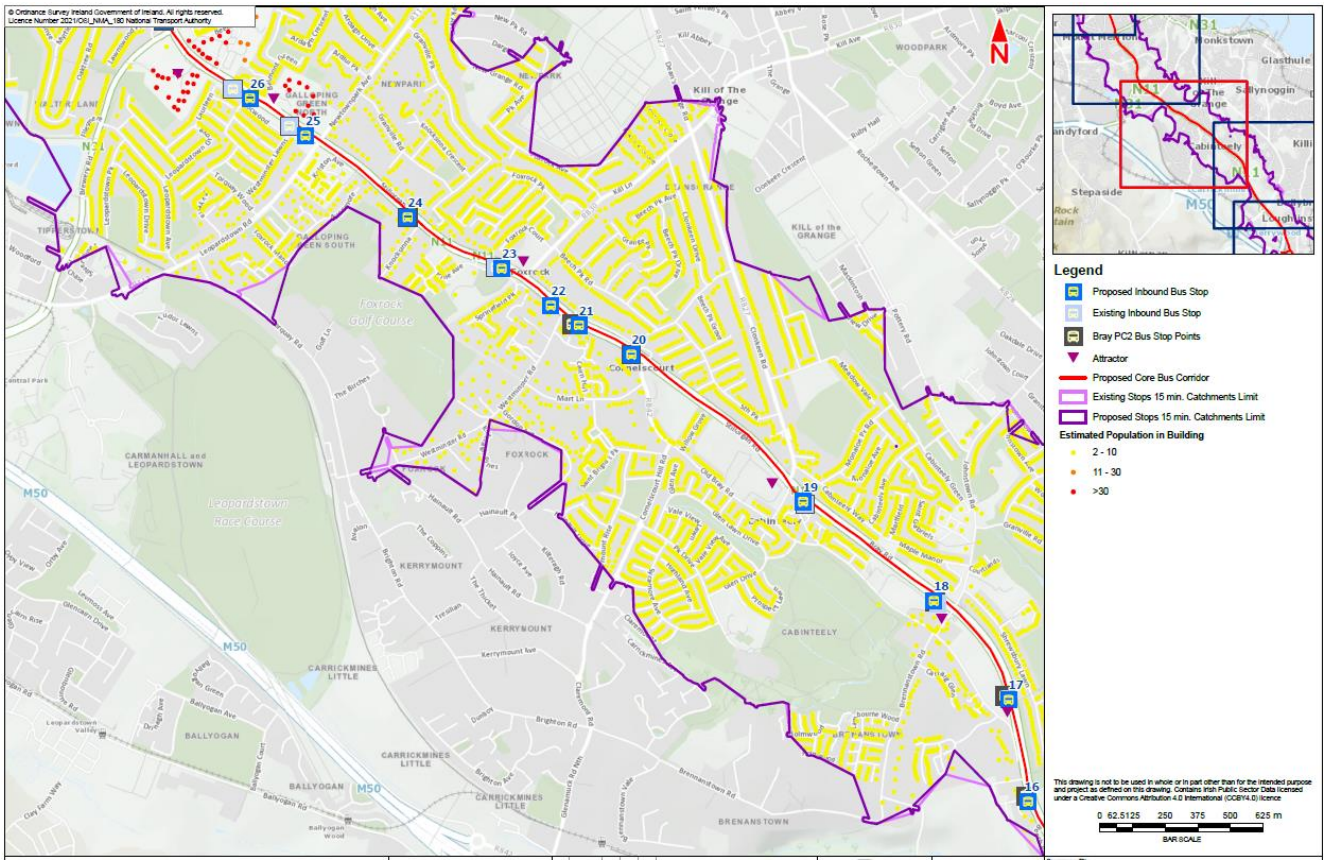

Figure 2.37 : Bray to City Centre Existing and Proposed Inbound Bus Stop Catchment – 15min Catchment

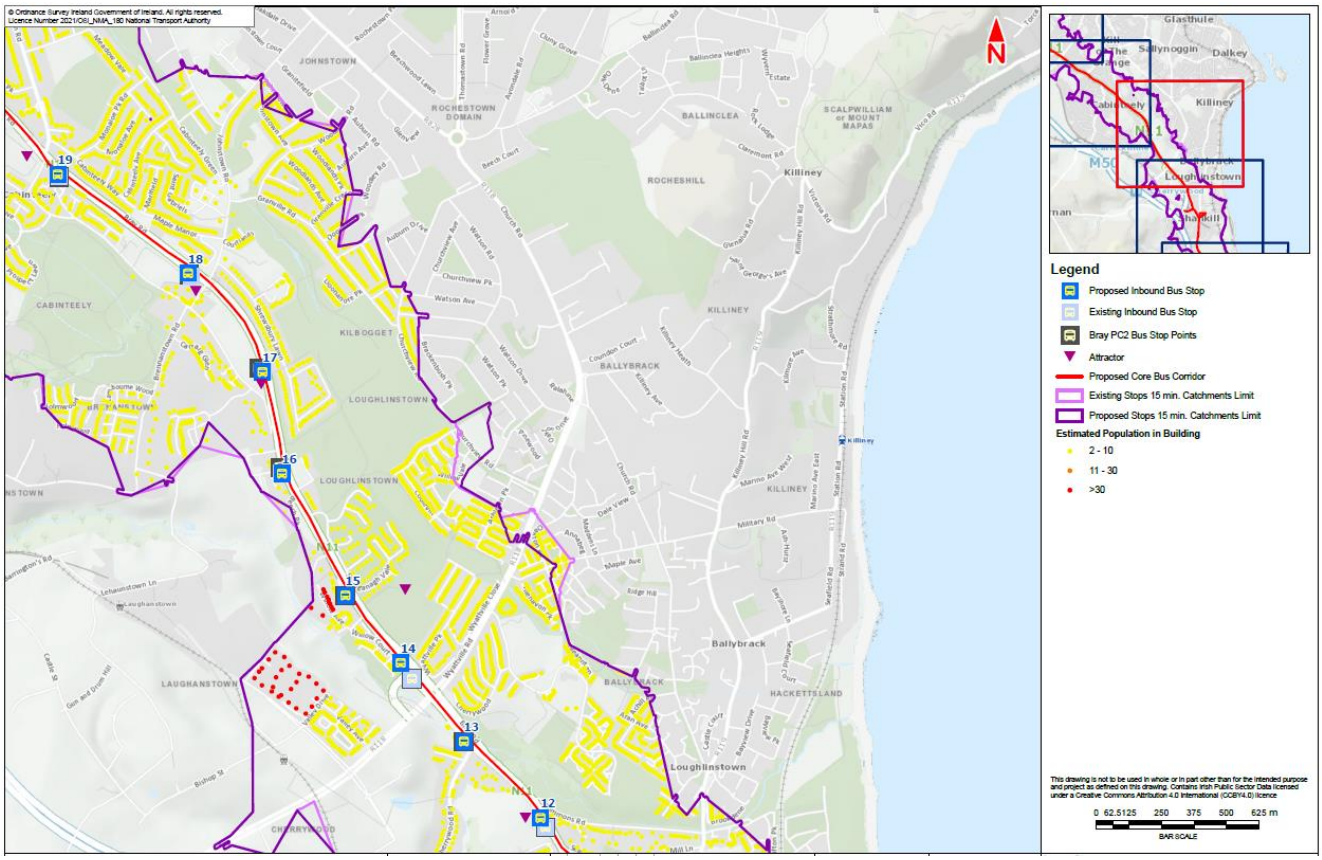

Figure 2.38 : Bray to City Centre Existing and Proposed Inbound Bus Stop Catchment – 15min Catchment

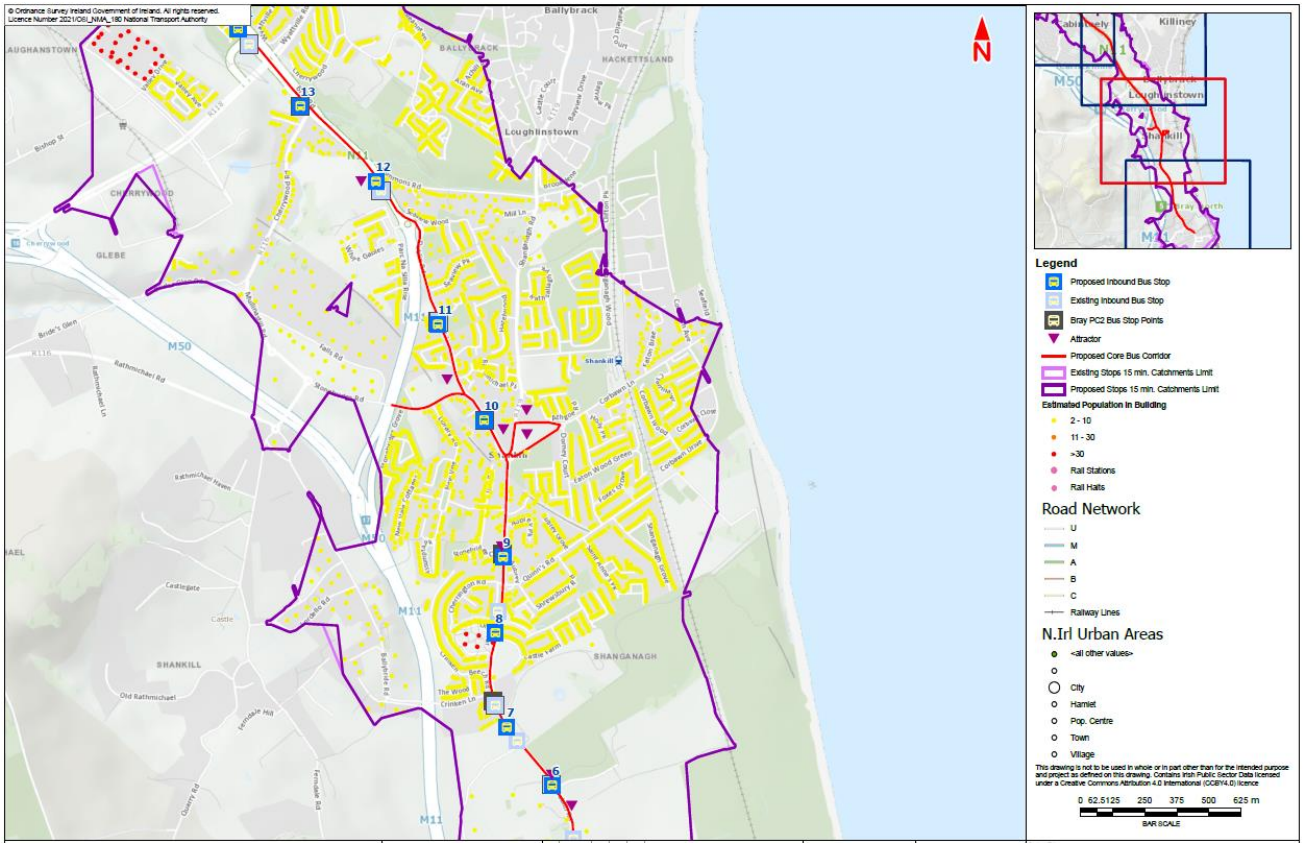

Figure 2.39 : Bray to City Centre Existing and Proposed Inbound Bus Stop Catchment – 15min Catchment

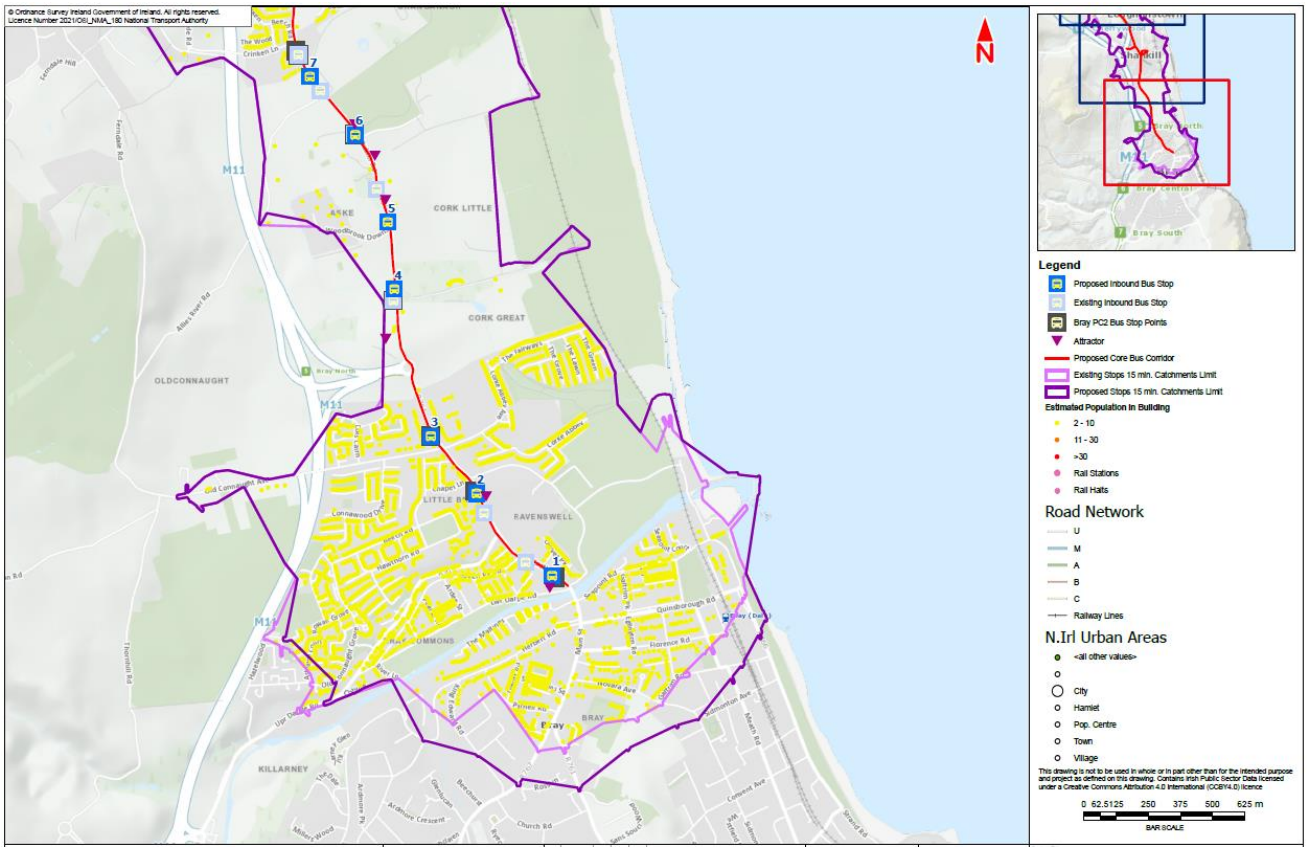

Figure 2.40 : Bray to City Centre Existing and Proposed Inbound Bus Stop Catchment – 15min Catchment

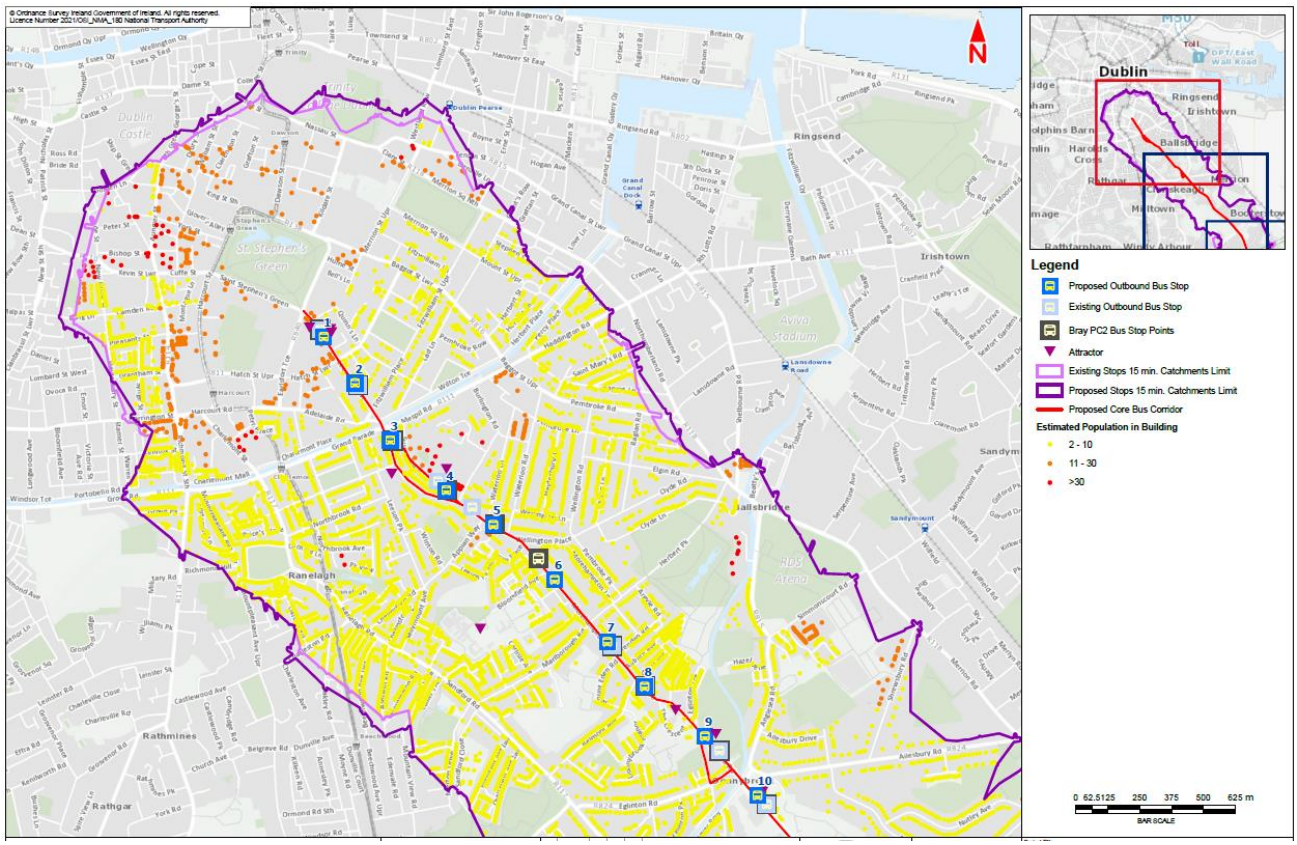

Figure 2.41 : Bray to City Centre Existing and Proposed Outbound Bus Stop Catchment – 15min Catchment

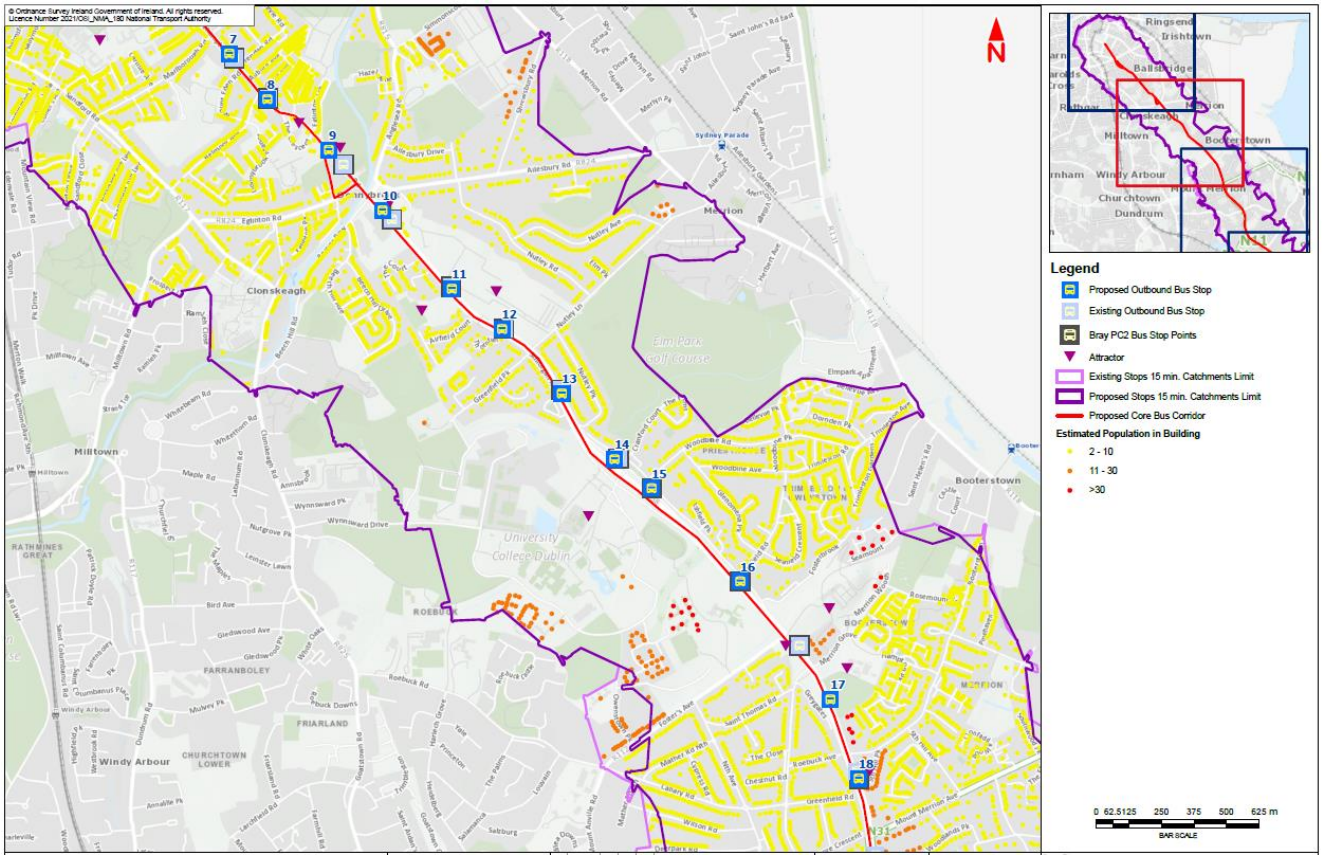

Figure 2.42 : Bray to City Centre Existing and Proposed Outbound Bus Stop Catchment – 15min Catchment

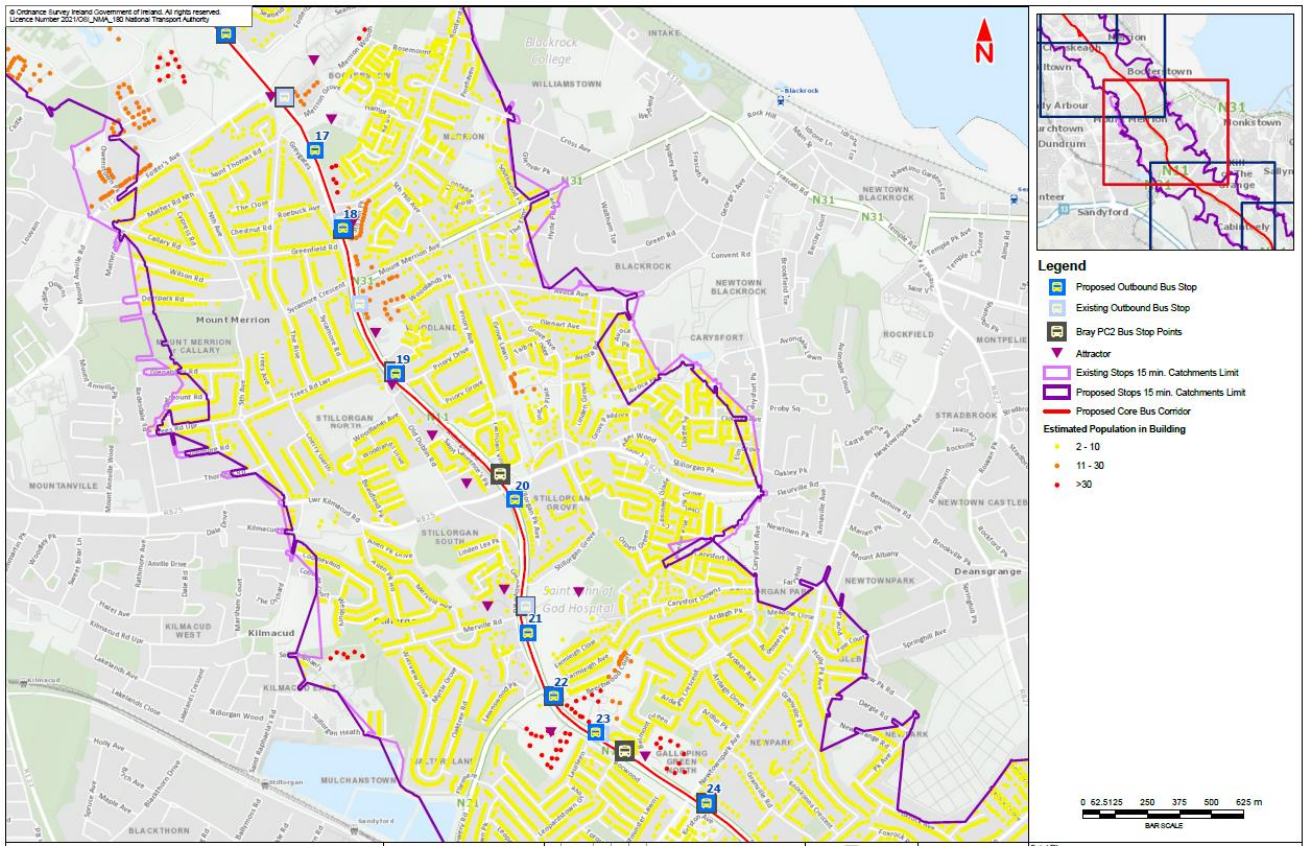

Figure 2.43 : Bray to City Centre Existing and Proposed Outbound Bus Stop Catchment – 15min Catchment

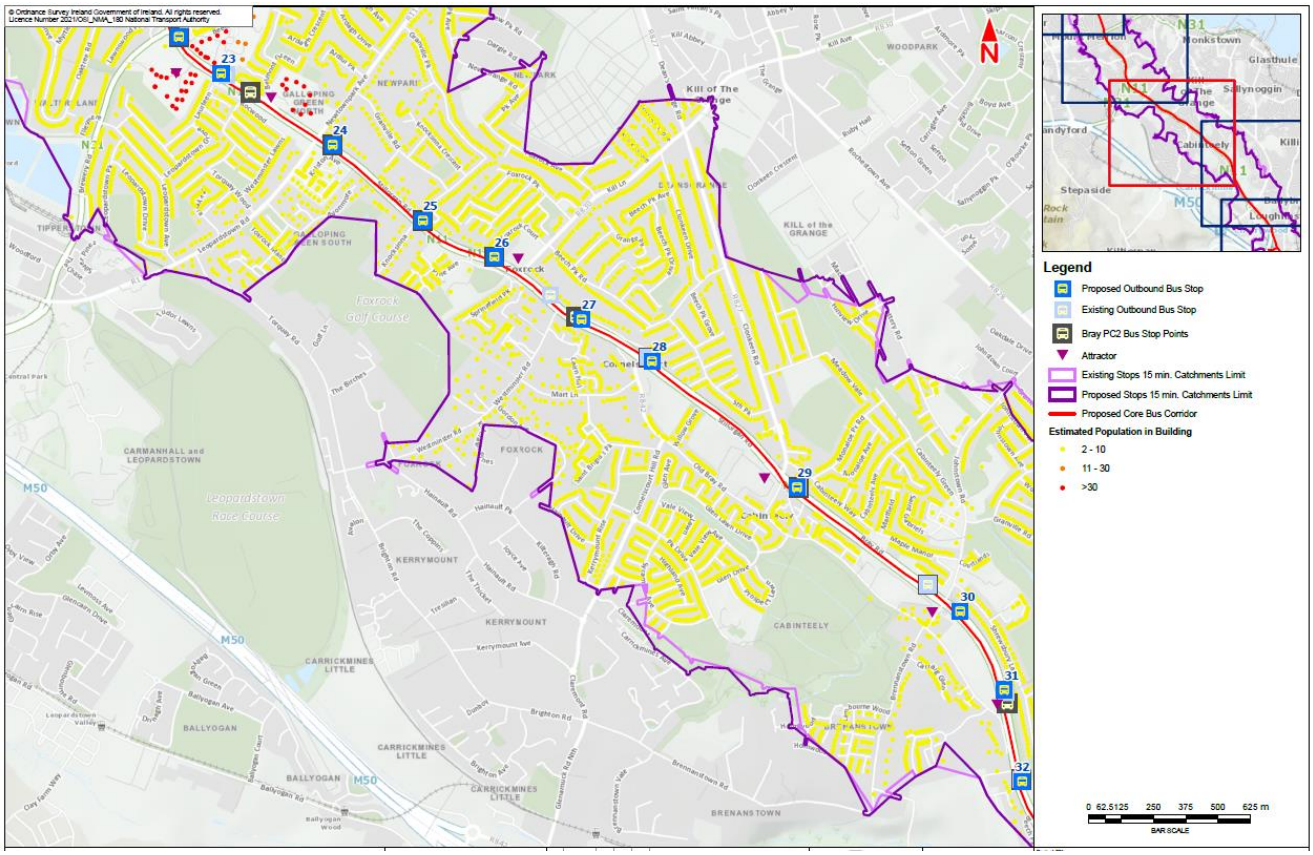

Figure 2.44 : Bray to City Centre Existing and Proposed Outbound Bus Stop Catchment – 15min Catchment

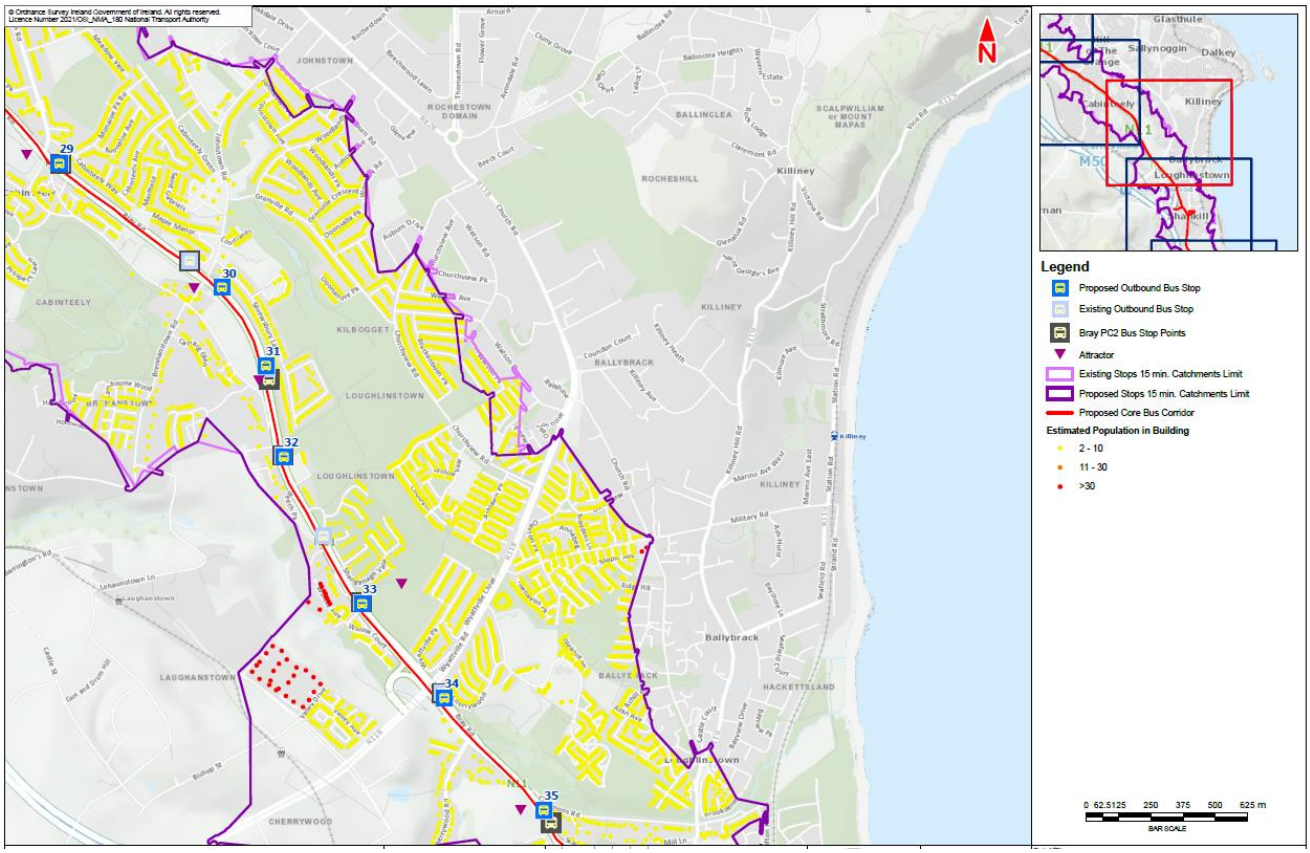

Figure 2.45 : Bray to City Centre Existing and Proposed Outbound Bus Stop Catchment – 15min Catchment

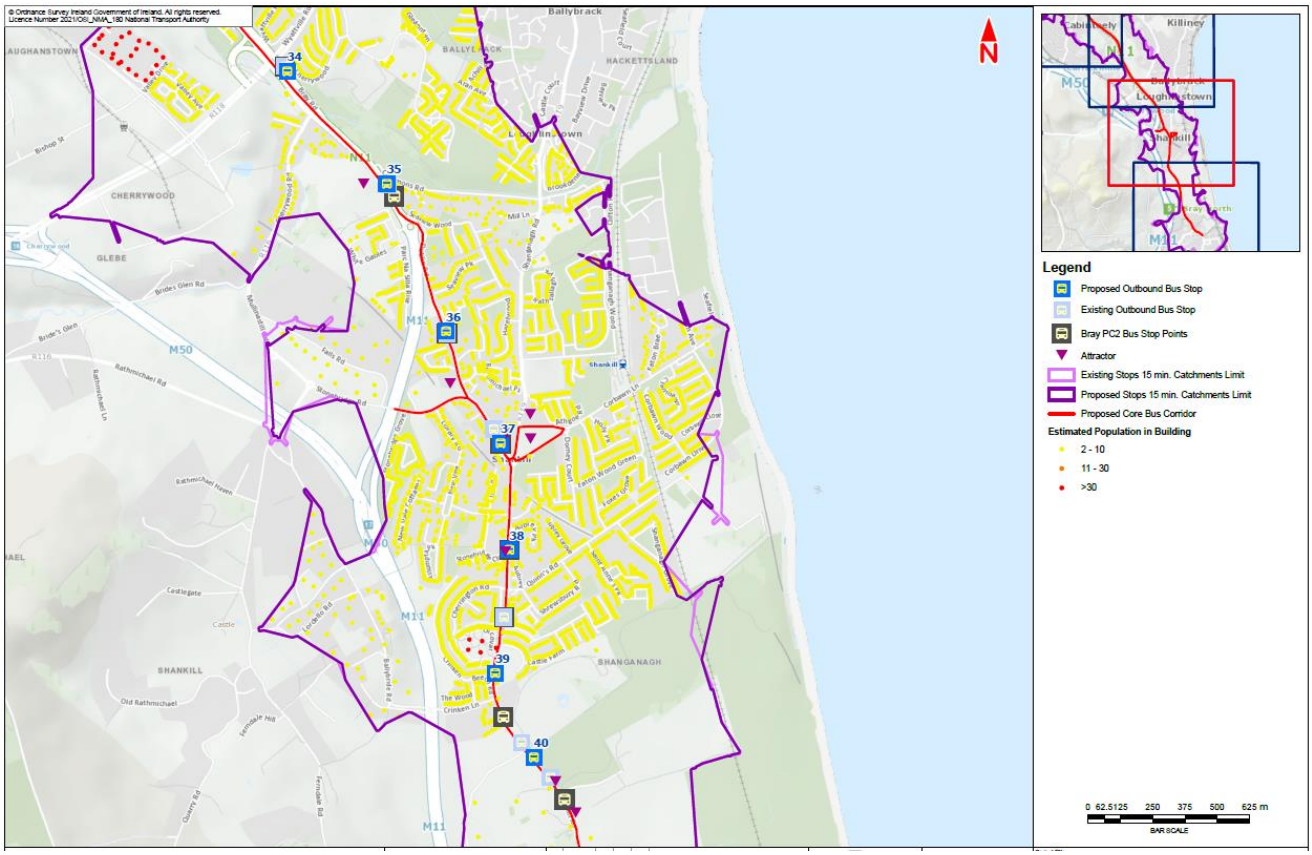

Figure 2.46 : Bray to City Centre Existing and Proposed Outbound Bus Stop Catchment – 15min Catchment

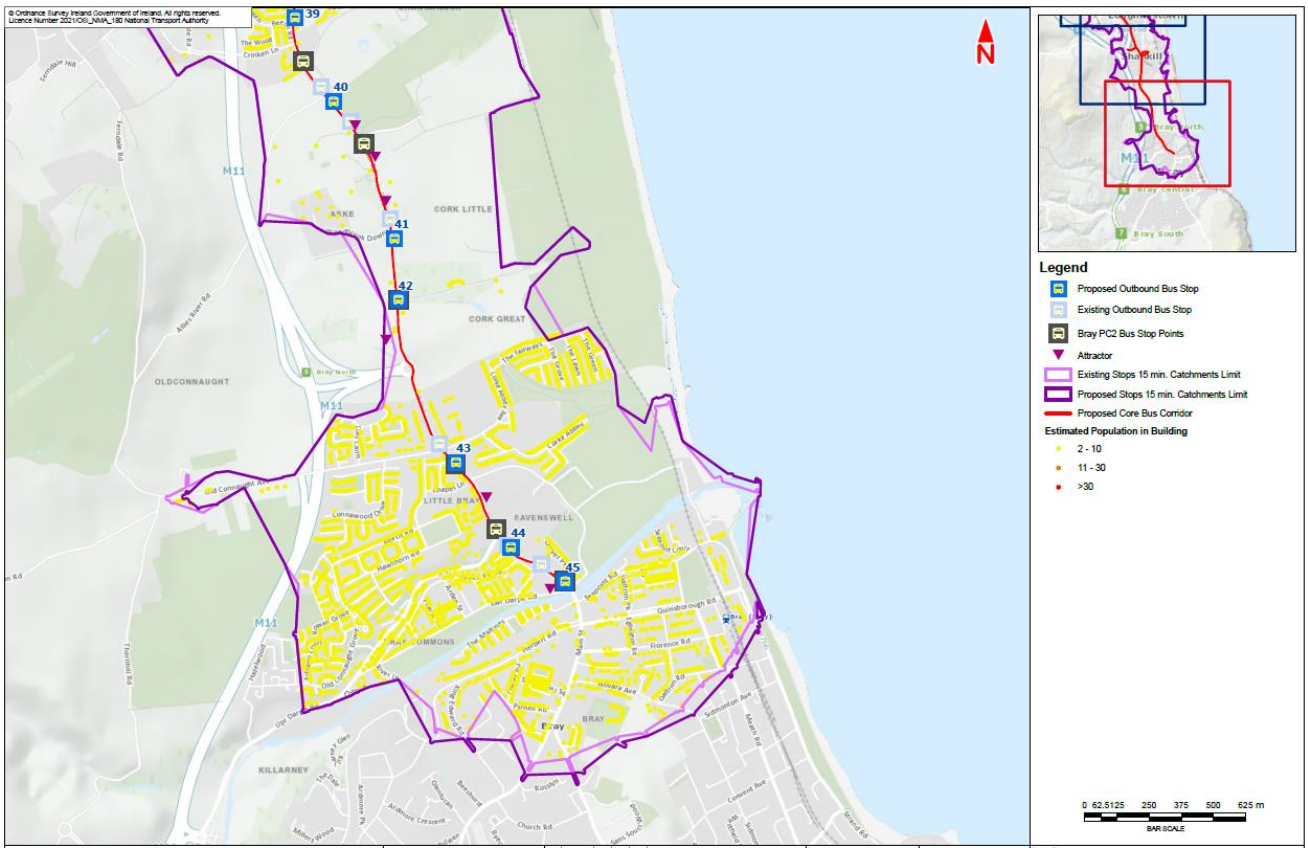

Figure 2.47 : Bray to City Centre Existing and Proposed Outbound Bus Stop Catchment – 15min Catchment

2.4.2.4 Catchment Population Comparison Tables

The catchment comparison tables for the final locations can be seen in Table 2.2 and Table 2.2

Table 2.2 : Inbound Catchment Population Comparison

	ESTIMATED POPULATION		
STOPS	WITHIN 5 MIN.	WITHIN 10 MIN.	WITHIN 15 MIN.
Proposed Stops	19809	58332	98368
Existing Stops	19536	58536	100624
Difference	273	-204	-2256

Table 2.3 : Outbound Catchment Population Comparison

	ESTIMATED POPULATION		
STOPS	WITHIN 5 MIN.	WITHIN 10 MIN.	WITHIN 15 MIN.
Proposed Stops	20464	60963	103992
Existing Stops	20438	61343	103905
Difference	26	-380	87

As can be seen in the tables above, there have been slight reductions in population catchments and residential building numbers across the whole route. The reduction in catchment population has resulted from stop distance optimisation along the scheme to improve overall journey time reliability. It is to be noted that these figures do not take into account proposed developments, although the bus stop changes have been made to reflect proposed new developments. The major developments to note on this route that have been granted planning permission and will increase the overall population catchment numbers for the proposed bus stops are the Stillorgan Leisureplex site (232 residential units), the former Blakes site in Stillorgan (282 residential units), the Brewery Road / Stillorgan Road development (287 residential units), the Shanganagh Castle development (597 residential units), and the Woodbrook Strategic Housing Development (685 residential units). These will increase the population catchment of the route considerably once complete.

3. Route Summary

Table 3.1 and Table 3.2 below provides an overview of the key changes to the locations for bus stops along the route. During the assessment, bus stops were removed in areas where they were too close and underutilised. Also, stops were moved to optimise the spacings and reduce stopping delays.

Table 3.1 : Bray to City Centre Inbound Bus Stop Summary

Number of Existing Stops	50
Number of Stops Moved	23
Number of Stops Removed	5
Number of Stops Added	0

Table 3.2 : Bray to City Centre Outbound Bus Stop Summary

Number of Existing Stops	48
Number of Stops Moved	20
Number of Stops Removed	3
Number of Stops Added	0

4. Conclusion

A bus stop review was carried out for the Proposed Scheme. The purpose of the exercise was to rationalise the bus stop locations to reduce the total journey duration of the route and to improve the catchment of the bus stops.

The study was carried out by reviewing key features of the inbound and outbound bus stops including location, proximity to junctions, road crossings and major land use attractions next to the route, existing and projected passenger volumes and local considerations such as space to provide shelters, waiting areas, footpath, and cycle routes.

As part of the exercise catchment analyses have been carried out to demonstrate the impact of the proposed recommendations. The results show that the catchment footprints along the routes have increased to some extent to include larger residential and employment populations. This is largely due to the improved spacing of the stops, and the fact that stops are positioned closer to intersections, causing the catchment area to spread further along the orbital roads. New footpath linkages have also increased the pedestrian catchment areas.

It is recommended to relocate 23 of the 45 retained inbound and 20 of the 45 retained outbound bus stops along the route. In addition, it is proposed to remove five of the inbound bus stops and three of the outbound bus stops.

It is expected that the overall journey time along these routes will reduce as a result of these changes. The removal of stops will lead to less time lost due to dwell times at stops and the associated time lost due to deceleration and acceleration before and after the stops. Additionally, operational improvement such as the placement of stops after junctions should serve to reduce journey times.

Appendix A. Bus Stop Review Table

Inbound (NB)

EXISTING															PROPOSED																					
Existing Information										Interaction with Junctions and Ped Crossings			Network Redesign		Review Outcome		Distance	Location	Interaction with Junctions and Ped Crossings		Interaction with Junctions and Ped Crossings		Network Redesign													
Bus Stop No.	Bus Stop Name	Station Chainage	Distance from next Stop (m)	Dwell Time (sec) - from AVL Data	Boarding (Peak Hr)	Alighting (Peak Hr)	Boarding (Peak/Hr)	Alighting (Peak/Hr)	Total (Boarding + Alighting)	Bus Stop location Before / After of signal (in the direction of travel)	Bus Stop Distance from nearest Junction (m from nearest stop line)	Bus Stop Distance from nearest Pedestrian Crossing Distance (m)	Interchange with Orbital/Other Routes	Distance between Bus Stop and Orbital Route (m)	Distance of Trip attractor (m)	Bus Stop Location	No. Bus Bays (use drop down menu)	New Distance (between Stops)	Station Chainage	Bus Stop Location Before/ After the Junction (in the direction of travel)	Bus Stop Distance from nearest Junction (m)	Bus Stop Distance from nearest Pedestrian Crossing Distance (m)	Bus Stop Closer / Further than existing pedestrian crossing	Interchange with Orbital/Other Routes	Distance of Trip attractor (m)	Bus Stop Layout	Dublin Bus Only - Google Earth GIS File from Systra Peak Frequency 2028 (Bus/Hr) AM	All Buses - Google Earth GIS File from Systra Peak Frequency 2028 (Bus/Hr) AM	All Buses - Strategic Traffic Model Future Peak Frequency 2028 AM (Bus/Hr)	All Buses - Strategic Traffic Model Future Peak Frequency 2043 AM (Bus/Hr)	Justification for the type of Bus Stop - Shared Landing, Island or Inline Bus Stop Layout	Justification For Number of Cages for the Proposed Bus Stop	Justification for location/ relocation of the Existing Bus Stop	Justification for Removal or Relocation of the Existing Bus Stop
4154	St. Cronan's Road	18290	N/A	13.45	7:00 AM - 7:30 AM	8:00 AM - 8:30 AM & 4:00 PM - 4:30 PM	21	8	305	Mid Block	145	144	N/A	N/A	Castle Street Shopping Centre (50m)	Move	Single	N/A	18410	Mid Block	250	35	Closer	N/A	Castle Street Shopping Centre (25m)	Shared	14	16	14	13	A shared landing layout is proposed to reduce land take and parking impact.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided. Separate coach stop provided in vicinity.	Separate coach/local bus stops provided to improve spacing and overall catchments.	Separate coach/local bus stops provided to improve spacing and overall catchments.
4416	Roseville Court	18020	270	18.75	7:30 AM - 8:00 AM	8:00 AM - 8:30 AM & 1:00 PM - 1:30 PM	21	4	234	Mid Block	96	125	N/A	N/A	Lidl (75m)	Move	Single	450	17960	Before	50	40	Closer	N/A	Lidl (50m)	Shared	13	16	14	12	A shared landing layout is proposed to reduce land take and parking impact.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided. Separate coach stop provided in vicinity.	Moved closer to new junction and away from the protected building. Also closer to pedestrian crossing.	Moved closer to new junction, and away from the protected building. Also closer to pedestrian crossing.
4201	Old Connaught	17675	345	19.57	7:30 AM - 8:00 AM	7:30 AM - 8:00 AM	50	6	379	After	30	31	N/A	N/A	N/A	No Change	Single	285	17675	After	60	45	Closer	N/A	N/A	Shared	11	14	12	10	A shared landing layout is proposed to reduce land take.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided. Separate coach stop provided in vicinity.	No change from existing location.	N/A
4202	Woodbrook College	17120	555	5.17	11:00 AM - 12:00 PM	8:00 AM - 8:30 AM	13	11	152	Before	585	30	N/A	N/A	Woodbrook College (50m)	Move	Single	595	17080	Before	230	100	Further	N/A	Woodbrook College (25m)	Island	11	13	11	11	An island layout is proposed, this is the preferred layout for both cyclists/pedestrians.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided. Separate coach stop provided in vicinity.	Moved slightly from current location following discussion with school on site access.	Move to upstream of pedestrian signal to improve journey times.
4203	St. James Church	16690	430	1.14	7:30 AM - 8:30 AM	7:30 AM - 8:00 AM & 12:30 PM - 1:00 PM	2	4	74	After	1015	425	N/A	N/A	St. James Church (50m)	Move	Single	280	16800	After	50	35	Closer	N/A	St. James Church (50m)	Island	11	13	12	11	An island layout is proposed, this is the preferred layout for both cyclists/pedestrians.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	Move to upstream of new junction to improve safety and journey times and to capture the new Woodbrook development.	Captures the new Woodbrook development while locating bus stop upstream of new development junction.
5090	Shanganagh Cemetery	16460	230	0.36	9:00 PM - 9:30 PM	8:00 AM - 8:30 AM	3	4	45	Mid Block	240	195	N/A	N/A	Shanganagh Cemetery (50m)	Move	Single	340	16460	Mid Block	0	180	Closer	N/A	Shanganagh Cemetery (20m)	In-Line	11	13	11	11	No cycle track is present here, therefore in-line is proposed.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	No change from existing location.	N/A
4204	Shanganagh Castle	16225	235	0.90	7:30 AM - 8:00 AM	4:00 PM - 4:30 PM	2	5	62	After	25	40	N/A	N/A	Shanganagh Castle (50m)	Move	Single	290	16170	After	35	20	Closer	N/A	Shanganagh Castle (40m)	Shared	11	13	11	11	A shared landing layout is proposed to reduce land take.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	Moved to upstream of new junction to improve safety and journey times and capture the new housing development.	Captures the new housing development while locating bus stop upstream of new development junction.
4205	Crinken Lane	16075	150	6.04	7:30 AM - 8:00 AM	4:00 PM - 4:30 PM	8	7	100	Mid Block	125	190	N/A	N/A	N/A	Taken off	Single	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11	13	11	11	N/A	N/A	N/A	Bus stop removed to improve spacing between stops and improve journey times. Justified by catchment analysis.
4206	Claremont	15740	335	11.46	7:30 AM - 8:00 AM	7:30 AM - 8:00 AM	30	5	198	After	150	440	N/A	N/A	N/A	Move	Single	390	15780	After	90	80	Closer	N/A	N/A	In-Line	11	13	11	12	No cycle track is present here, therefore in-line is proposed.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	Slightly moved to improve bus stop spacing, population catchment and proximity to pedestrian crossing.	Slightly moved to improve bus stop spacing, population catchment and proximity to pedestrian crossing.
3140	Stonebridge Close	15485	255	16.02	7:30 AM - 8:00 AM	1:00 PM - 1:30 PM & 4:00 PM - 4:30 PM	44	5	327	Mid Block	185	185	N/A	N/A	Shankill Village (50m)	No Change	Single	300	15480	Before	10	20	Closer	N/A	Shankill Village (50m)	In-Line	11	13	12	12	No cycle track is present here, therefore in-line is proposed.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	No change from existing.	N/A
3141	Station Road	14930	555	19.96	7:30 AM - 8:00 AM	8:00 AM - 8:30 AM & 1:30 PM - 2:00 PM	58	4	380	After	130	45	N/A	N/A	St. Anne's Church (50m)	No Change	Single	550	14930	Before	130	60	Further	N/A	St. Anne's Church (50m)	In-Line	8	10	9	9	No cycle track is present here, therefore in-line is proposed.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	No change from existing.	N/A
3142	Kentfield	14505	425	6.16	7:30 AM - 8:00 AM	8:00 AM - 8:30 AM	22	5	177	Mid Block	405	335	N/A	N/A	N/A	No Change	Single	425	14505	Before	55	55	Closer	N/A	N/A	In-Line	8	10	9	9	No cycle track is present here, therefore in-line is proposed.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	No change from existing.	N/A
3143	St. Columcille's Road	13910	595	16.18	7:30 AM - 8:00 AM	7:30 AM - 8:00 AM	27	11	248	After	90	50	N/A	N/A	St. Columcille's Hospital (50m)	Move	Single	645	13860	After	190	120	Further	N/A	St. Columcille's Hospital (50m)	Island	12	21	29	28	An island layout is proposed, this is the preferred layout for both cyclists/pedestrians.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	Slightly moved from existing location o accommodate a separate Coach Stop	The existing combined stop is retained as Coach stop and the local stop is relocated next to the coach stop
3144	Cherrywood Road	13440	470	9.69	7:30 AM - 8:00 AM	7:30 AM - 8:00 AM	26	17	343	After	240	10	N/A	N/A	N/A	No Change	Single	420	13440	After	30	30	Further	N/A	N/A	In-Line	12	21	28	26	In line proposed due to space constraints and no cycle track at this location.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	No change from existing location.	N/A
3145	Willow Court	13135	305	17.50	8:00 AM - 8:30 AM	7:30 AM - 8:00 AM	30	6	288	Before	34	385	Yes	34	N/A	Move	Single	400	13040	After	50	185	Closer	Yes	N/A	Island	12	21	24	24	An island layout is proposed, this is the preferred layout for both cyclists/pedestrians.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	Connectivity with orbital route. Closer to residences and improved journey time as moved u/s of junction. Also moved to facilitate Separate coach/local.	Connectivity with orbital route. Closer to residences and improved journey time as moved u/s of junction. Also moved to facilitate Separate coach/local.
3146	St. Laurence College	12720	415	9.40	8:00 AM - 8:30 AM	11:30 AM - 12:00 PM	20	8	231	After	614	30	N/A	N/A	St. Laurence College (100m)	No Change	Single	320	12720	After	105	40	Further	N/A	St. Laurence College (100m)	Island	20	29	24	24	An island layout is proposed, this is the preferred layout for both cyclists/pedestrians.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	No change from existing location.	N/A
3147	Kilbogget Grove	12165	555	0.11	9:00 AM - 10:00 AM	8:00 AM - 8:30 AM	2	6	112	Before	59	60	N/A	N/A	N/A	Move	Single	525	12195	Before	75	70	Further	N/A	N/A	Island	20	29	24	24	An island layout is proposed, this is the preferred layout for both cyclists/pedestrians.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	Moved to accommodate the new junction design.	Bus stop placed in advance of the proposed left turn lane for the new junction.
3148	Shrewsbury Lawn	11790	375	11.12	8:00 AM - 8:30 AM	8:30 AM - 9:00 AM	25	5	234	After	316	20	N/A	N/A	Shrewsbury House (50m)	No Change	Single	405	11790	After	315	25	Further	N/A	Shrewsbury House (50m)	Island	20	29	24	24	An island layout is proposed, this is the preferred layout for both cyclists/pedestrians.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	No change from existing location.	N/A
5127	Cabinteely Bypass	11320	470	26.57	8:00 AM - 8:30 AM	8:00 AM - 8:30 AM	66	15	556	After	19	20	Yes	19	N/A	Move	Single	530	11260	After	110	100	Further	Yes	N/A	Island	20	29	24	24	An island layout is proposed, this is the preferred layout for both cyclists/pedestrians.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	Slightly moved from existing to accommodate a separate Coach Stop	The existing combined stop is retained as Coach stop and the local stop is relocated next to the coach stop
5128	Clonkeen Road	10700	620	29.00	8:00 AM - 8:30 AM	8:00 AM - 8:30 AM	85	27	618	Before	99	100	Yes	99	Cornelscourt Shopping Centre (50m)	No Change	Single	560	10700	Before	80	70	Closer	Yes	Cornelscourt Shopping Centre (50m)	Shared	20	29	25	25	A shared landing is proposed due to geometry constraints. A wider space for waiting is provided compared to other shared layouts.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	No change from existing location.	N/A
2996	Old Bray Road	9815	885	12.90	8:00 AM - 8:30 AM	8:00 AM - 8:30 AM	23	7	285	After	25	45	N/A	N/A	N/A	No Change	Single	885	9815	After	35	25	Same	N/A	N/A	Shared	20	29	25	25	A shared landing layout is proposed to reduce impact on trees.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	No change from existing location.	N/A
3258	Westminster Grove	9450	365	10.09	7:30 AM - 8:00 AM	8:00 AM - 8:30 AM	10	3	160	After	50	40	N/A	N/A	N/A	No Change	Single	365	9450	After	50	40	Closer	N/A	N/A	Shared	20	29	26	26	A shared layout is proposed to reduce impact on property boundary.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	No change from existing location.	No change from existing location.
2060	Foxrock Church	9200	250	27.81	7:30 AM - 8:00 AM	8:00 AM - 8:30 AM	114	23	782	After	-50	-30	Yes	-50	Foxrock Church of Our Lady Perpetual Succour (50m)	Move	Single	185	9265	After	35	15	Same	Yes	Foxrock Church of Our Lady Perpetual Succour (50m)	Shared	28	37	26	33	A shared landing layout is proposed to reduce land take.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	Slight shift in location, moved other side of the footbridge to allow a separate coach stop	Slight shift in location, moved to other side of the footbridge to accommodate a separate coach stop
2061	Knocksinna	8790	410	5.66	8:00 AM - 9:00 AM	4:00 PM - 4:30 PM	13	7	203	After	460	440	N/A	N/A	N/A	No Change	Single	475	8790	After	50	30	Same	N/A	N/A	Shared	28	37	32	33	A shared landing layout is proposed to reduce land take.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	No change from existing location.	N/A
2062	Leopardstown Road	8240	550	22.58	7:30 AM - 8:00 AM	8:00 AM - 8:30 AM	56	17	582	After	59	60	N/A	N/A	Belmont Nursing Home (50m)	Move	Single	510	8280	After	60	40	Same	Yes	Belmont Nursing Home (50m)	Island	28	37	32	33	An island layout is proposed, this is the preferred layout for both cyclists/pedestrians.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	Bus Stop moved slightly to accommodate island layout	Bus Stop moved slightly to accommodate island layout
2063	Galloping Green	7940	300	14.24	8:00 AM - 8:30 AM	4:00 PM - 5:00 PM	39	6	426	After	359	40	N/A	N/A	N/A	Move	Single	310	7970	Before	320	30	Closer	N/A	N/A	Island	28	37	32	33	An island layout is proposed, this is the preferred layout for both cyclists/pedestrians.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	Moved to slightly north of pedestrian crossing	Slightly moved north of pedestrian crossing to provide more space for cycle track layout
2064	Brewery Road	7570	370	22.09	8:00 AM - 8:30 AM	7:30 AM - 8:00 AM	91	10	700	After	25	50	N/A	N/A	St. John of God's Church (100m)	No Change	Single	400	7570	After	55	30	Closer	N/A	St. John of God's Church (100m)	Island	28	36	31	33	An island layout is proposed, this is the preferred layout for both cyclists/pedestrians.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	No change from existing location.	N/A
2065	Merville Road	7330	240	8.09	8:00 AM - 8:30 AM	8:00 AM - 8:30 AM	39	10	395	After	265	5	N/A	N/A	N/A	No Change	Single	240	7330	After	290	30	Further	N/A	N/A	Island	28	36	30	33	An island layout is proposed, this is the preferred layout for both cyclists/pedestrians.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	No change from existing location.	N/A

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Outbound (SB)

EXISTING														Review Outcome		PROPOSED																PROPOSED															
Existing Information									Interaction with Junctions and Ped Crossings			Network Redesign				Distance	Location	Interaction with Junctions and Ped Crossings							Network Redesign																					
Bus Stop No.	Station Chainage	Distance from next Stop (m)	Dwell Time (sec) - from AVL Data	Boarding (Peak Hr)	Alighting (Peak Hr)	Boarding (Peak/Hr)	Alighting (Peak/Hr)	Total (Boarding + Alighting)	Bus Stop location Before / After of signal (in the direction of travel)	Bus Stop Distance from nearest Junction (m from nearest stop line)	Bus Stop Distance from nerarest Pedestrian Crossing Distance (m)	Interchange with Orbital/Other Routes	Distance between Bus Stop and Orbital Route (m)	Distance of Trip attactor (m)	Bus Stop Location	No. Bus Bays	New Distance (between Stops)	Station Chainage	Bus Stop Location Before/ After the Junction (in the direction of travel)	Bus Stop Distance from nearest Junction (m)	Bus Stop Distance from nerarest Pedestrian Crossing Distance (m)	Bus Stop Closer / Further than existing pedestrian crossing	Interchange with Orbital/Other Routes	Distance of Trip attactor (m)	Bus Stop Layout	All Buses - Google Earth GIS File from Systra Peak Frequency 2028 (Bus/Hr) AM	All Buses - Strategic Traffic Model Future Peak Frequency 2028 AM (Bus/Hr)	All Buses - Strategic Traffic Model Future Peak Frequency 2043 AM (Bus/Hr)	Justification for the type of Bus Stop - Shared Landing, Island or Inline Bus Stop Layout	Justification For Number of Cages for the Proposed Bus Stop	Justification for location/ relocation of the Existing Bus Stop	Justification for Removal or Relocation of the Existing Bus Stop
845	110	N/A	28.46	5:30 PM - 6:00 PM	7:30 AM - 8:00 AM	60	89	1068	Mid Block	90	70	N/A	N/A	Future MetroLink Stop (300m)	No Change	Double	N/A	140	Mid Block	100	90	Further	N/A	Future MetroLink Stop (200m)	Shared	35	39.0	39.0	A shared landing zone layout is proposed to reduce land impact.	Demand is high enough for a double cage including coaches. Coaches are at a separate stop so a single local bus cage is provided as per the Bus Connect Design Guide. Separate stop for local and bus stop proposed at this location.	Moved lightly to allof for a separate coach stop	N/A
846	365	255	29.72	5:30 PM - 6:00 PM	8:00 AM - 8:30 AM	82	40	857	Mid Block	85	86	Yes	85	N/A	No Change	Double	225	365	Mid Block	115	95	Further	Yes	N/A	Shared	34	39.0	38.7	A shared landing zone layout is proposed to reduce land impact.	Demand is high enough for a double cage including coaches. Coaches are at a separate stop so a single local bus cage is provided as per the Bus Connect Design Guide. Separate stop for local and bus stop proposed at this location.	No change from existing location.	N/A
847	B50	300	24.70	5:30 PM - 6:00 PM	7:00 AM - 7:30 AM	68	25	892	After	40	60	N/A	N/A	N/A	No Change	Double	255	620	Mid Block	50	20	Closer	Yes	N/A	Island	35	47.3	42.7	An island layout is proposed, this is the preferred layout for both cyclists/pedestrians.	Demand is high enough for a double cage, with the coaches included, as per the BusConnects Design Guide. Double cage proposed for both local and coach buses.	No change from existing location.	N/A
848	B350	290	22.47	5:00 PM - 5:30 PM	7:30 AM - 8:00 AM	49	20	512	Before	59	60	N/A	N/A	Clayton Hotel (50m)	No Change	Double	330	950	Before	60	45	Closer	N/A	Clayton Hotel (25m)	Island	39	42.7	42.7	An island layout is proposed, this is the preferred layout for both cyclists/pedestrians.	Demand is high enough for a double cage, excluding coaches, as per the BusConnects Design . Deemed to have insuffient space for a double cage for local bus. Single cage provided for local stop and separate coach stop provided.	No change from existing location.	N/A
2795	1170	260	19.63	8:00 AM - 8:30AM	7:00 AM - 8:00 AM	38	23	629	Mid Block	34	35	Yes	34	N/A	Move	Single	10	1265	After	25	25	Closer	N/A	N/A	Shared	39	42.7	42.7	A shared landding layout is proposed to reduce land take.	Demand is low enough to only require a single cage, as per the BusConnects Design Guide. Single cage provided.	Bus stop moved to downstreak of the Waterloo Rd junction.	Moved to downstream of Waterloo Rd junction to remove the layby situation of existing stop also existing stop location would block the access to property.
756	1515	345	9.21	5:00 PM - 5:30 PM	8:00 AM - 8:30AM	11	28	462	After	55	56	N/A	N/A	Royal Hospital (200m)	Move	Double	275	1540	After	90	75	Further	N/A	Royal Hospital (200m)	Shared	39	42.7	43.0	A shared landing layout with wider landing area is proposed to reduce landtake.	Demand is high enough for a double cage including coaches as per the BusConnects Design Guide, but space is limited. Single Cage provided which will serve both local and coach stops.	Slight move from the existing location	Slight move outbound to accommodate driveways
757	1850	335	13.45	3:30 PM - 4:00 PM & 5:30 PM - 6:00 PM	8:00 AM - 8:30 AM	27	12	507	After	105	48	N/A	N/A	N/A	Move	Single	280	1820	After	95	25	Closer	N/A	N/A	Shared	35	43.7	43.0	A shared landing layout is proposed to reduce land take.	Demand is low enough to only require a single cage as per BusConnects Design Guide. Single cage provided.	Bus stop moved slightly closer to the junction.	Closer to junction and closer to pedestrian crossing, improved catchment.
758	2050	200	10.43	4:00 PM - 4:30 PM	12:30 PM - 1:00 PM	14	8	306	After	25	26	N/A	N/A	N/A	No Change	Single	230	2050	After	50	30	Same	N/A	N/A	Shared	40	43.7	43.7	A shared landing layout is proposed to reduce land take.	Demand is low enough to only require a single cage as per BusConnects Design Guide. Single cage provided.	No change from existing location.	N/A
759	2440	390	11.12	6:00 PM - 6:30 PM	8:00 AM - 8:30 AM	7	20	384	Mid Block	80	130	N/A	N/A	Energia Park (10m)	No Change	Double	390	2440	Mid Block	90	80	Closer	N/A	Energia Park (10m)	Shared	35	43.7	43.7	A shared landing layout is proposed to reduce land take.	Demand is high enough for a double cage including coaches as per the BusConnects Design Guide. Double cage provided and this stop serves both local buses and coaches.	No change from existing location	N/A
760	2710	270	27.45	5:00 PM - 5:30 PM	7:00 AM - 7:30 AM & 8:00 AM - 8:30 AM	28	10	481	After	100	100	N/A	N/A	Donnybrook Church (25m)	No Change	Double	260	2700	After	100	80	Closer	N/A	Donnybrook Church (25m)	Shared	39	42.7	42.7	A shared landing layout is proposed to reduce land take.	Demand is high enough for a double cage excluding coaches as per the BusConnects Design Guide. Double cage provided for local buses. Separate Coach stop in vicinity.	No change from existing location.	N/A
761	3065	355	4.59	1:00 PM - 1:30 PM	7:30 AM - 8:00 AM	7	14	253	After	125	10	N/A	N/A	Teresian School (25m)	No Change	Double	375	3075	Before	125	25	Further	N/A	Teresian School (25m)	Shared	39	40.3	41.3	A shared landing layout is proposed to reduce land take.	Demand is high enough for a double cage per the BusConnects Design Guide, bus space is limited so a single cage is provided.	No change from existing location.	N/A
762	3350	285	10.65	3:30 PM - 4:30 PM	7:00 AM - 7:30 AM	12	27	455	Mid Block	109	100	N/A	N/A	RTE (75m)	No Change	Triple	275	3350	Mid Block	150	140	Further	N/A	RTE (75m)	Island	39	40.3	41.7	An island layout is proposed, this is the preferred layout for both cyclists/pedestrians.	Demand is high enough for a triple cage including coaches (two local, one coach) but space is limited, so local stop maintained and a seperate coach stop is located to the north. Single Cage provided for local bus stop and single cage provided for coach bus.	No change from existing location.	N/A
763	3660	310	12.62	3:30 PM - 4:00 PM	5:00 AM - 5:30 AM	19	66	543	After	165	164	N/A	N/A	N/A	No Change	Double	310	3660	Mid Block	190	170	Further	N/A	N/A	Shared	51	71.7	71.7	A shared landing layout is proposed to accommodate the high volume of buses.	Demand is high enough for a double cage as per BusConnects Design Guide. But space is limited due to driveways so a single cage is provided.	No change from existing location.	N/A
764	4020	360	0.00	N/A	N/A	0	0	0	Before	29	30	N/A	N/A	UCD Campus (125m)	No Change	Double	360	4020	Before	55	40	Further	Yes	UCD Campus (125m)	Island	49	70.0	70.0	An island layout is proposed, this is the preferred layout for both cyclists/pedestrians.	Demand is high enough for a double cage as per BusConnects Design Guide, however triple cage provided to allow for the multiple routes using the UCD interchange.	This is currently a set down only stop, and has been converted to a full set of stops.	A number of routes that use UCD Bus Interchange will now use these stops, as opposed to the stops to the south of the flyover.

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Outbound (SB)

3131	12150	350	0.28	9:30 PM - 10:00 PM	4:30 PM - 5:00 PM	2	20	227	After	20	19	N/A	N/A	N/A	No Change	Single	340	12150	After	45	20	Same	N/A	N/A	Island	19	25.7	26.0	An island layout is proposed, this is the preferred layout for both cyclists/pedestrians.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	No change from existing location.	N/A
3132	12500	350	3.70	5:00 PM - 6:00 PM	6:30 PM - 7:00 PM	2	16	188	Mid Block	710	250	N/A	N/A	St. Laurence College (75m)	Taken off	Single	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19	25.7	26.0	N/A	N/A	N/A	Low usage stop removed to improve jounrey times, can be captured by adjacent stops. New pedestrian access to adjacent housing development to minimise walking times to merged bus stop.
3133	12810	310	8.39	2:30 PM - 3:00 PM	4:00 PM - 4:30 PM	8	25	343	After	420	40	N/A	N/A	N/A	No Change	Single	660	12810	Mid Block	415	60	Same	N/A	N/A	Island	19	25.7	26.0	An island layout is proposed, this is the preferred layout for both cyclists/pedestrians.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	No change from existing location.	N/A
3134	13300	490	13.76	5:30 PM - 6:00 PM	5:00 PM - 5:30 PM	27	39	626	After	19	20	Yes	19	N/A	No Change	Single	490	13300	After	75	60	Same	Yes	N/A	Shared with Two-way Cycle Track	17	25.7	24.0	A shared landing zone layout is proposed to reduce land take.	Demand is low enough to only require a single cage excluding coach needs as per the BusConnects Design Guide. Single cage provided for local stop and separate single cage provided for coach stop next to it.	No change from existing location.	N/A
3135	13870	570	17.06	4:30 PM - 5:00 PM	5:00 PM - 5:30 PM	6	33	341	Mid Block	140	95	N/A	N/A	St. Columcille's Hospital (50m)	No Change	Single	570	13870	Before	155	105	Same	N/A	St. Columcille's Hospital (50m)	Island	20	25.7	11.7	An island layout is proposed, this is the preferred layout for both cyclists/pedestrians.	Demand is low enough to only require a single cage excluding coach needs as per the BusConnects Design Guide. Single cage provided for local stop and separate single cage provided for coach stop next to it.	No change from existing location.	N/A
3136	14540	670	7.55	9:30 AM - 10:00 AM	3:30 PM - 4:00 PM	4	32	309	Mid Block	240	241	N/A	N/A	N/A	No Change	Single	675	14545	Mid Block	245	95	Closer	N/A	N/A	In-Line	10	11.7	11.7	No cycle track is present here, therefore in-line is proposed.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	No change from existing location.	N/A
3138	14950	410	14.64	8:00 AM - 8:30 AM	4:00 PM - 4:30 PM	8	26	315	Before	114	30	N/A	N/A	St. Anne's Church (50m)	Move	Single	465	15010	After	90	20	Closer	N/A	St. Anne's Church (50m)	Shared	10	7.7	11.7	A shared landing zone layout is proposed to reduce land take.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	Slighting moved downstream of the pedestrian crossing for improved journey time and safety.	Moved downstream of pedestrian signal to improve safety and journey times.
3139	15445	495	15.46	8:00 AM - 8:30 AM	3:30 PM - 4:00 PM	8	16	317	Mid Block	143	70	N/A	N/A	Shankill Village (50m)	No Change	Single	435	15445	Before	155	10	Closer	N/A	Shankill Village (50m)	In-Line	13	10.7	10.7	No cycle track is present here, therefore in-line is proposed.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	No change from existing location.	N/A
4124	15700	255	11.60	8:00 AM - 8:30 AM	5:00 PM - 5:30 PM	5	23	289	After	122	385	N/A	N/A	N/A	Move	Single	475	15920	After	40	30	Closer	N/A	N/A	In-Line	13	10.7	11.0	No cycle track is present here, therefore in-line is proposed.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	Moved from existing location to improve bus stop spacing and proximety to pedestrian crossing.	Moved from existing location to improve bus stop spacing and proximety to pedestrian crossing.
4125	16220	520	3.55	12:00 PM - 12:30 PM	4:00 PM - 4:30 PM & 10:30 PM - 11:00 PM	5	15	244	After	642	35	N/A	N/A	Shanganah Castle (50m)	Move	Single	390	16310	After	100	30	Closer	N/A	Shanganagh Cemetery / Castle (100m)	In-Line	13	11.0	11.0	No cycle track is present here, therefore in-line is proposed.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	Moved the existing stop to capture the new development while locatating bus stop downstream of the new development junction.	Moved the existing stop to capture the new development while locatating bus stop downstream of the new development junction.
4126	16390	170	0.53	3:30 PM - 4:00 PM	4:00 PM - 4:30 PM	2	13	114	After	812	205	N/A	N/A	Shanganagh Cemetery (50m)	Taken off	Single	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Shared	13	11.0	11.0	n/a	n/a	N/A	Bus stop removed to improve spacing and improve journey times, and to accommodate future Shanganagh Park Masterplan entrance.
4127	16800	410	1.47	12:00 PM - 12:30 PM & 4:00 PM - 4:30 PM	3:30 PM - 4:00 PM	2	12	132	Mid Block	555	295	N/A	N/A	St. James Church (50m)	Move	Single	580	16890	After	40	30	Closer	N/A	St. James Church (100m)	Island	13	11.0	11.0	An island layout is proposed, this is the preferred layout for both cyclists/pedestrians.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	Capture new development by locatating bus stop downstream of the new development junction.	Capture new development by locatating bus stop downstream of the new development junction.
4128	17115	315	5.28	1:00 PM - 1:30 PM	4:00 PM - 4:30 PM	11	15	261	After	315	10	N/A	N/A	Woodbrook College (50m)	Move	Single	335	17225	Mid Block	165	35	Further	N/A	Woodbrook College (20m)	Island	13	11.0	11.0	An island layout is proposed, this is the preferred layout for both cyclists/pedestrians.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	Move downstream to create space for waiting students and cycle track integration.	Move downstream to create space for waiting students and cycle track integration.
4129	17700	585	32.44	7:30 AM - 8:30 AM	4:00 PM - 4:30 PM	9	23	337	Before	4	5	N/A	N/A	N/A	Move	Single	565	17790	After	45	30	Further	N/A	N/A	Shared	15	10.7	12.7	A shared landing layout is proposed to reduce land take.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	Move to downstream of junction to improve journey times.	Move to downstream of junction to improve journey times.
4130	18190	490	11.82	7:30 AM - 8:00 AM	4:30 PM - 5:00 PM	10	14	277	After	35	34	N/A	N/A	Lidl (75m)	Move	Single	420	18210	After	70	50	Same	N/A	Lidl (50m)	Shared	17	12.7	12.7	A shared landing layout is proposed to reduce land take.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	Moved slightly from the existing location to accommodate shared landing layout at constrained location.	Moved slightly from the existing location to accommodate shared landing layout at constrained location.
4131	18340	150	19.65	2:30 PM - 3:00 PM	4:30 PM - 5:00 PM	10	11	240	Mid Block	285	70	N/A	N/A	Castle Street Shopping Centre (50m)	Move	Single	180	18390	Before	110	85	Further	N/A	Castle Street Shopping Centre (25m)	Shared	16	13.7	13.7	A shared landing layout is proposed to reduce land take.	Demand is low enough to only require a single cage as per the BusConnects Design Guide. Single cage provided.	Moved downstream to increase overall catchment and improve spacing.	Moved downstream to increase overall catchment and improve spacing.

Inbound (NB) Coach

EXISTING

Existing Coach Information

Company	Route	Location	red with Dublin Bus Stop (Y	Station	Before / After of signal (in the direction of travel)
AirCoach	702	St. Cronan's Road	Yes with 4154	18290	Mid Block
Finnegan Bray	722 (Sandyford LUAS - Bray	St. Cronan's Road	Yes with 4154	18290	Mid Block
Finnegan Bray	722 (Sandyford LUAS - Bray	Woodbrook College	Yes with 4202	17120	Near Side
Finnegan Bray	722 (Sandyford LUAS - Bray	Claremont	Yes with 4206	15740	Far Side
AirCoach	702	Stonebridge Close	Yes with 3140	15485	Mid Block
Finnegan Bray	722 (Sandyford LUAS - Bray	Stonebridge Close	Yes with 3140	15485	Mid Block
St. Kevin's Bus Service	181	Stonebridge Close	Yes with 3140	15485	Mid Block
Finnegan Bray	722 (Sandyford LUAS - Bray	Stonebridge Close	Yes with 3140	15485	Far Side
Finnegan Bray	143 (Bray - LUAS)	Kentfield	Yes with 3142	14505	Mid Block
AirCoach	702	St. Columcille's Road	Yes with 3143	13910	Far Side
Bus Eireann	2 / X2	St. Columcille's Road	Yes with 3143	13910	Far Side
Bus Eireann	113	St. Columcille's Road	Yes with 3143	13910	Far Side
Bus Eireann	133/ 133x	St. Columcille's Road	Yes with 3143	13910	Far Side
St. Kevin's Bus Service	181	St. Columcille's Road	Yes with 3143	13910	Far Side
Wexford Bus	740	Willow Court	Yes with 3145	13135	Near Side
AirCoach	702	Cabinteely Bypass	Yes with 5127	11320	Far Side
Bus Eireann	133 / 133x	Cabinteely Bypass	Yes with 5127	11320	Far Side
Finnegan Bray	722 (Sandyford LUAS - Bray	Cabinteely Bypass	Yes with 5127	11320	Far Side
St. Kevin's Bus Service	181	Cabinteely Bypass	Yes with 5127	11320	Far Side
AirCoach	702	Clonkeen Road	Yes with 5128	10700	Near Side
Finnegan Bray	722 (Sandyford LUAS - Bray	Clonkeen Road	Yes with 5128	10700	Near Side
St. Kevin's Bus Service	181	Clonkeen Road	Yes with 5128	10700	Near Side
Finnegan Bray	722 (Sandyford LUAS - Bray	Westminster Grove	Yes with 3258	9450	Far Side
AirCoach	702	Foxrock Church	Yes with 2060	9205	Far Side
Finnegan Bray	722 (Sandyford LUAS - Bray	Foxrock Church	Yes with 2060	9205	Far Side
St. Kevin's Bus Service	181	Foxrock Church	Yes with 2060	9205	Far Side
Finnegan Bray	722 (Sandyford LUAS - Bray	Knocksinna	Yes with 2061	8790	Far Side
Bus Eireann	133	Leopardstown Road	Yes with 2062	8200	Far Side
AirCoach	702	Galloping Green	Yes with 2063	7940	Far Side
Bus Eireann	133 / 133x	Laurence Park	Yes with 4727	6600	Far Side
St. Kevin's Bus Service	181	Laurence Park	Yes with 4727	6625	Far Side
AirCoach	700	Stillorgan Park Hotel	Yes with 461	6020	Mid Block
St. Kevin's Bus Service	181	Stillorgan Park Hotel	Yes with 461	6020	Mid Block
AirCoach	700	St. Thomas Road	Yes with 2070	5030	Far Side
AirCoach	700	UCD	Yes with 768	4020	Far Side
Bus Eireann	133 / 133x	UCD	Yes with 768	4020	Far Side
Bus Eireann	2 / X2	UCD	Yes with 768	4020	Far Side
Fingal Express	533	UCD	Yes with 768	4020	Far Side
Joe Moroney Coach	164	UCD	Yes with 768	4020	Far Side
Kearns Transport	845	UCD	Yes with 768	4020	Far Side
Martley's of Portlaoise	824	UCD	Yes with 768	4020	Far Side
McConnon Travel	180	UCD	Yes with 768	4020	Far Side
Roger Phelan	UCD06	UCD	Yes with 768	4020	Far Side
St. Kevin's Bus Service	181	UCD	Yes with 768	4020	Far Side
Wexford Bus	740	UCD	Yes with 768	4020	Far Side
AirCoach	700	RTE	Yes with 770	3255	Far Side
Bus Eireann	133 / 133x	RTE	Yes with 770	3255	Far Side
Matthew's Coach Hire	904	RTE	Yes with 770	3255	Far Side
Matthew's Coach Hire	910	RTE	Yes with 770	3255	Far Side
Bus Eireann	133 / 133x	Donnybrook Bus	Yes with 772	2685	Near Side
Matthew's Coach Hire	904	Donnybrook Bus	Yes with 772	2685	Near Side
Matthew's Coach Hire	910	Donnybrook Bus	Yes with 772	2685	Near Side
AirCoach	700	Donnybrook Road	Yes with 773	2485	Far Side
Bus Eireann	2 / X2	Donnybrook Road	Yes with 773	2485	Far Side
St. Kevin's Bus Service	181	Donnybrook Road	Yes with 773	2485	Far Side
PJ Martley	824	Mount Eden	Yes with 775	1920	Mid Block

PROPOSED

Proposed Coach Information

Station	Bus Stop Location	stification for Move/Remov	Interaction with Local Bus	Bus Stop Layout
18290	No Change	N/A	Separated Coach/Local Stop	Shared with layby
See Above	See Above	See Above	See Above	See Above
17085	Move	f pedestrian signal to impr	Shared Coach/Local Stop	Island
16335	Move	pulation catchment and pr	Separated Coach/Local Stop	In-Line
16335	Move	/local bus stop, capture ne	Separated Coach/Local Stop	Shared with layby
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
14505	No Change	N/A	Shared Coach/Local Stop	In-Line
13900	No Change	/local bus stop, capture ne	Separated Coach/Local Stop	Shared with layby
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
13120	No Change	N/A	Separate Coach Stop	Separate Coach Stop
11320	No Change	N/A	Separated Coach/Local Stop	Shared with layby
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
10665	Move	/local bus stop, capture ne	Separated Coach/Local Stop	Shared with layby
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
9230	Move	llow for island arrangemen	Separated Coach/Local Stop	Island
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
8245	Move	tion of spacing and cycle ir	Separated Coach/Local Stop	Shared with layby
See Above	See Above	See Above	See Above	See Above
7930	No Change	N/A	Separated Coach/Local Stop	Shared with layby
6600	No Change	N/A	Separated Coach/Local Stop	ared Double Cage with Lay
See Above	See Above	See Above	See Above	See Above
6200	Move	N/A	Separated Coach/Local Stop	Shared with layby
See Above	See Above	See Above	See Above	See Above
5225	Move	ops and sufficient room for	Separated Coach/Local Stop	Island with Layby
4020	No Change	Integrated within new bus interchange at UCD	To be facilitated within UCD Bus Interchange	Saw tooth bay within UCD Bus Interchange on slip road
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
3010	Move	een bus stops and improve	Separated Coach/Local Stop	Shared
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
2485	emoved/ Combined with lo	e constraints at current loca	Shared Coach/Local Stop	Shared with layby
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
2485	No Change	N/A	Shared Coach/Local Stop	Island with layby
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
1630	Move	ng, and proximity to pedes	Shared Coach/Local Stop	Island

Summary

Proposed Coach Information

Stop Location	Stop Chainage	Services	
Castle St. / St Cronin's Rd	18290	AirCoach	702
		Finnegan Bray	722 (Sandyford LUAS - Bray)
Dublin Rd / Woodbrook College	17085	Finnegan Bray	722 (Sandyford LUAS - Bray)
Dublin Rd /	16335	Finnegan Bray	722 (Sandyford LUAS - Bray)
		AirCoach	702
		~~Finnegan Bray~~	~~722 (Sandyford LUAS - Bray)~~
		St. Kevin's Bus Service	181
		~~Finnegan Bray~~	~~722 (Sandyford LUAS - Bray)~~
Dublin Rd / Kentfield	14505	Finnegan Bray	143 (Bray - LUAS)
Bray Rd / St Columcille's Rd	13900	AirCoach	702
		Bus Eireann	2 / X2
		Bus Eireann	113
		Bus Eireann	133/ 133x
		St. Kevin's Bus Service	181
Bray Rd / Willow Court	13120	Wexford Bus	740
Bray Rd / Johnstown Rd	11320	AirCoach	702
		Bus Eireann	133 / 133x
		Finnegan Bray	722 (Sandyford LUAS - Bray)
		St. Kevin's Bus Service	181
Bray Rd / Clonkeen Rd	10665	AirCoach	702
		Finnegan Bray	722 (Sandyford LUAS - Bray)
		St. Kevin's Bus Service	181
Stillorgan Rd / Kill	9230	Finnegan Bray	722 (Sandyford LUAS - Bray)
		AirCoach	702
		~~Finnegan Bray~~	~~722 (Sandyford LUAS - Bray)~~
		St. Kevin's Bus Service	181
Stillorgan Rd /	8230	Finnegan Bray	722 (Sandyford LUAS - Bray)
		Bus Eireann	133
Stillorgan Rd / Galloping Green	7930	AirCoach	702
Stillorgan Rd / Laurence Park	6600	Bus Eireann	133 / 133x
		St. Kevin's Bus Service	181
Stillorgan Rd /	6200	AirCoach	700
		St. Kevin's Bus Service	181
Stillorgan Rd / The Ris	5225	AirCoach	700
Stillorgan Rd / UCD	4020	AirCoach	700
		Bus Eireann	133 / 133x
		Bus Eireann	2 / X2
		Fingal Express	533
		Joe Moroney Coach	164
		Kearns Transport	845
		Martley's of Portlaoise	824
		McConnon Travel	180
		Roger Phelan	UCD06
		St. Kevin's Bus Service	181
		Wexford Bus	740
Stillorgan Rd / RTE	3010	AirCoach	700
		Bus Eireann	133 / 133x
		Matthew's Coach Hire	904
		Matthew's Coach Hire	910
Donnybrook Rd	2485	Bus Eireann	133 / 133x
		Matthew's Coach Hire	904
		Matthew's Coach Hire	910
		AirCoach	700
		Bus Eireann	2 / X2
		St. Kevin's Bus Service	181
Morehampton Rd	1630	PJ Martley	824

AirCoach	700	Morehampton Terrace	Yes with 776	1630	Far Side
AirCoach	700	Leeson Street Upper	Yes with 906	1085	Far Side
Matthew's Coach Hire	904	Leeson Street Upper	Yes with 906	1085	Far Side
Matthew's Coach Hire	910	Leeson Street Upper	Yes with 906	1085	Far Side
Wexford Bus	740	Grand Parade	Yes with 908	625	Mid Block
AirCoach	700	Grand Parade	Yes with 908	See Above	Mid Block
Bus Eireann	2 / X2	Grand Parade	Yes with 908	See Above	Mid Block
St. Kevin's Bus Service	181	Grand Parade	Yes with 908	See Above	Mid Block
Bus Eireann	X2	Fitzwilliam Place	Yes with 909	410	Mid Block
AirCoach	700	Embassy of Malta	Yes with 786	140	Mid Block
Bus Eireann	133 / 133x	Embassy of Malta	Yes with 786	140	Mid Block
Fingal Express	533	Embassy of Malta	Yes with 786	140	Mid Block
PJ Martley	824	Embassy of Malta	Yes with 786	140	Mid Block
Matthew's Coach Hire	904	Embassy of Malta	Yes with 786	140	Mid Block
Matthew's Coach Hire	910	Embassy of Malta	Yes with 786	140	Mid Block
St. Kevin's Bus Service	181	Embassy of Malta	Yes with 786	140	Mid Block

1630	No Change	N/A	Shared Coach/Local Stop	Island
645	removed / combined with	ove spacing and footpath w	Separated Coach/Local Stop	Shared
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
645	No Change	N/A	Separated Coach/Local Stop	Island with Double Cage
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
340	Move	Improve spacings	Separated Coach/Local Stop	Shared
215	Move	ove spacings and footpath w	Separated Coach/Local Stop	Shared
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above

		AirCoach	700
Upper Leeson St	645	AirCoach	700
		Matthew's Coach Hire	904
		Matthew's Coach Hire	910
		Wexford Bus	740
		~~AirCoach~~	~~700~~
		Bus Eireann	2 / X2
		St. Kevin's Bus Service	181
Lower Leeson St	340	Bus Eireann	X2
Lower Leeson St	215	AirCoach	700
		Bus Eireann	133 / 133x
		Fingal Express	533
		PJ Martley	824
		Matthew's Coach Hire	904
		Matthew's Coach Hire	910
		St. Kevin's Bus Service	181

Routes Included:

AirCoach 700
AirCoach 702
Bus Eireann 2
Bus Eireann X2
Bus Eireann 100X
Bus Eireann 133
Bus Eireann 133x
Fingal Express 533
Finnegan Bray 143
Joe Moroney Coach 164
Kearns Transport 845
Martley's of Portlaoise 824
Matthew's Coach Hire 904
Matthew's Coach Hire 910
McConnons Coach 180
Roger Phelan UCD06
n's Service – Glendalough Bus 181
Wexford Bus 740

d the CBC have also been considered when developing the UCD Interchange facility proposals.

Outbound (SB) Coach

EXISTING

Existing Coach Information

Company	Route	Location	red with Dublin Bus Stop (Y	Station	Before / After of signal (in the direction of travel)
AirCoach	700	Leeson St. Lower	Yes with 845	110	Mid Block
Bus Eireann	100x	Leeson St. Lower	Yes with 845	110	Mid Block
Fingal Express	533	Leeson St. Lower	Yes with 845	110	Mid Block
Martley's of Portlaoise	824	Leeson St. Lower	Yes with 845	110	Mid Block
Matthews Coach	904	Leeson St. Lower	Yes with 845	110	Mid Block
Matthews Coach	910	Leeson St. Lower	Yes with 845	110	Mid Block
St. Kevin's Bus Service	181	Leeson St. Lower	Yes with 845	110	Mid Block
Finnegan Bray	Night Bus To Bray	Fitzwilliam Place	Yes with 846	365	Mid Block
Bus Eireann	133 / 133x	Fitzwilliam Place	Yes with 846	365	Mid Block
Bus Eireann	2 / X2	Leeson St. Upper	Yes with 847	B50	Far Side
Kearns Transport	845	Leeson St. Upper	Yes with 847	B50	Far Side
Matthews Coach	904	Leeson St. Upper	Yes with 847	B50	Far Side
Matthews Coach	910	Leeson St. Upper	Yes with 847	B50	Far Side
St. Kevin's Bus Service	181	Leeson St. Upper	Yes with 847	B50	Far Side
Wexford Bus	740	Leeson St. Upper	Yes with 847	B50	Far Side
AirCoach	700	Sussex	Yes with 848	B350	Near Side
Bus Eireann	133 /133x	Sussex	Yes with 848	B350	Near Side
Matthews Coach	904	Sussex	Yes with 848	B350	Near Side
Matthews Coach	910	Sussex	Yes with 848	B350	Near Side
AirCoach	700	Royal Hosptial	Yes with 756	1515	Far Side
Kearns Transport	845	Royal Hosptial	Yes with 756	1515	Far Side
AirCoach	700	Donnybrook Stadium	Yes with 759	2440	Mid Block
Bus Eireann	2 / X2	Donnybrook Stadium	Yes with 759	2440	Mid Block
Kearns Transport	845	Donnybrook Stadium	Yes with 759	2440	Mid Block
Matthews Coach	904	Donnybrook Stadium	Yes with 759	2440	Mid Block
Matthews Coach	910	Donnybrook Stadium	Yes with 759	2440	Mid Block
Bus Eireann	133 / 133x	Donnybrook Church	Yes with 760	2670	Far Side
St. Kevin's Bus Service	181	Donnybrook Church	Yes with 760	2670	Far Side
AirCoach	700	RTE	Yes with 762	3350	Mid Block
Bus Eireann	133 / 133x	RTE	Yes with 762	3350	Mid Block
Matthews Coach	904	RTE	Yes with 762	3350	Mid Block
Matthews Coach	910	RTE	Yes with 762	3350	Mid Block
Kearns Transport	845	Cranford Court	Yes with 764	4020	Near Side
AirCoach	700	Woodbine Ave.	Yes with 2007	4200	Far Side
Bus Eireann	2 / X2 / 133 / 133x	Woodbine Ave.	Yes with 2007	4200	Far Side
Fingal Express	533	Woodbine Ave.	Yes with 2007	4200	Far Side
St. Kevin's Bus Service	181	Woodbine Ave.	Yes with 2007	4200	Far Side
Wexford Bus	740	Woodbine Ave.	Yes with 2007	4200	Far Side
AirCoach	700	Radisson Hotel	Yes with 2009	5025	Far Side
St. Kevin's Bus Service	181	Radisson Hotel	Yes with 2009	5025	Far Side
AirCoach	700	Mount Merrion Ave.	Yes with 435	5885	Far Side
Bus Eireann	133 / 133x	Mount Merrion Ave.	Yes with 435	5885	Far Side
Bus Eireann	133 / 133x	Stillorgan Park	Yes with 4571	6875	Far Side
St. Kevin's Bus Service	181	Stillorgan Park	Yes with 4571	6875	Far Side
AirCoach	702	Galloping Green	Yes with 4636	7920	Far Side
Bus Eireann	133 / 133x	Newtown Park Avenue	Yes with 2016	8410	Far Side
AirCoach	702	Foxrock Church	Yes with 2017	9170	Near Side
St. Kevin's Bus Service	181	Foxrock Church	Yes with 2017	9170	Near Side
Finnegan Bray	722 (Sandyford LUAS - Bray	Foxrock Church	Yes with 2017	9170	Near Side
Finnegan Bray	722 (Sandyford LUAS - Bray	Old Bray Road	Yes with 7361	9905	Far Side
AirCoach	702	Clonkeen Road	Yes with 7362	10650	Far Side
St. Kevin's Bus Service	181	Clonkeen Road	Yes with 7362	10650	Far Side
AirCoach	702	Johnstown Road	Yes with 3129	11285	Near Side
Bus Eireann	133 / 133x	Johnstown Road	Yes with 3129	11285	Near Side
Finnegan Bray	722 (Sandyford LUAS - Bray	Johnstown Road	Yes with 3129	11285	Near Side
St. Kevin's Bus Service	181	Johnstown Road	Yes with 3129	11285	Near Side
Wexford Bus	740	Wyattville Road	Yes with 3134	13300	Far Side
AirCoach	702	St. Columcille's Hospital	Yes with 3135	13875	Mid Block
Bus Eireann	2 / X2 / 133 / 133x	St. Columcille's Hospital	Yes with 3135	13875	Mid Block
Finnegan Bray	143	St. Columcille's Hospital	Yes with 3135	13875	Mid Block

PROPOSED

Proposed Coach Information

Station	Bus Stop Location	stification for Move/Remov	Interaction with Local Bus	Bus Stop Layout
115	Move	r spacing with adjacent bus	eparated Coach/Local Stop	Shared with Double Cage
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
415	Move	r spacing with adjacent bus	eparated Coach/Local Stop	Shared
See Above	See Above	See Above	See Above	See Above
B50	No Change	N/A	Shared Coach/Local Stop	Island with Double Cage
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
B300	Move	parate coach / local bus sto	Other	Shared with layby
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
1540	Move	Conflict with driveways	Shared Coach/Local Stop	Shared
See Above	See Above	See Above	See Above	See Above
2860	Move	ased catchment and close	eparated Coach/Local Stop	Shared
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
2860	Move	Capture New Developmen	eparated Coach/Local Stop	Shared with layby
See Above	See Above	See Above	See Above	See Above
3285	Move	spacing, cycle layouts and f	eparated Coach/Local Stop	Shared with layby
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
4020	No Change	N/A	Shared Coach/Local Stop	Double Cage Island
4200	Move	o improve catchment and	Shared Coach/Local Stop	Double Cage Island
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
4870	Move	parate coach / local bus sto	eparated Coach/Local Stop	Shared with layby
See Above	See Above	See Above	See Above	See Above
6300	Move	Move to impact commercial land opposed to residential land take.	Separated Coach/Local Stop	Shared
See Above	See Above	See Above	See Above	See Above
6875	No Change	N/A	Separated Coach/Local Stop	Shared with layby
See Above	See Above	See Above	See Above	See Above
7780	Move	Room for layby	eparated Coach/Local Stop	Shared with layby
8475	Move	parate coach / local bus sto	eparated Coach/Local Stop	Shared
9120	Move	N/A	eparated Coach/Local Stop	Shared
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
10700	Move	ptimise coach stop spacing	eparated Coach/Local Stop	Shared with layby
10700	Move	parate coach / local bus sto	eparated Coach/Local Stop	Shared with layby
See Above	See Above	See Above	See Above	See Above
11285	No Change	N/A	eparated Coach/Local Stop	Shared with layby
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above
13300	No Change	N/A	eparated Coach/Local Stop	Shared
13900	Move	parate coach / local bus sto	eparated Coach/Local Stop	Shared with layby and Two-way Cycle Track
See Above	See Above	See Above	See Above	See Above
See Above	See Above	See Above	See Above	See Above

Summary

Proposed Coach Information

Stop Location	Stop Chainage	Services	
Lower Leeson St	115	AirCoach	700
		Bus Eireann	100x
		Fingal Express	533
		Martley's of Portlaoise	824
		Matthews Coach	904
		Matthews Coach	910
		St. Kevin's Bus Service	181
Lower Leeson St / Fitzwilliam Place	415	Finnegan Bray	Night Bus To Bray
		Bus Eireann	133 / 133x
Upper Leeson St	610 (B50)	Bus Eireann	2 / X2
		Kearns Transport	845
		Matthews Coach	904
		Matthews Coach	910
		St. Kevin's Bus Service	181
		Wexford Bus	740
Sussex Rd	910 (B300)	AirCoach	700
		Bus Eireann	133 /133x
		Matthews Coach	904
		Matthews Coach	910
Morehampton Rd / Royal Hospital	1540	AirCoach	700
		Kearns Transport	845
Stillorgan Rd / Donnybrook Church	2860	AirCoach	700
		Bus Eireann	2 / X2
		Kearns Transport	845
		Matthews Coach	904
		Matthews Coach	910
		Bus Eireann	133 / 133x
		St. Kevin's Bus Service	181
Stillorgan Rd / RTE	3285	AirCoach	700
		Bus Eireann	133 / 133x
		Matthews Coach	904
		Matthews Coach	910
Stillorgan Rd / Cranford Court	4020	Kearns Transport	845
Stillorgan Rd / Woodbine Ave	4200	AirCoach	700
		Bus Eireann	2 / X2 / 133 / 133x
		Fingal Express	533
		St. Kevin's Bus Service	181
		Wexford Bus	740
Stillorgan Rd / Fosterbrook	4870	AirCoach	700
		St. Kevin's Bus Service	181
Stillorgan Rd / Priory Drive	6300	AirCoach	700
		Bus Eireann	133 / 133x
Stillorgan Rd / Stillorgan Park Rd	6875	Bus Eireann	133 / 133x
		St. Kevin's Bus Service	181
Stillorgan Rd / Galloping Green	7780	AirCoach	702
Stillorgan Rd / Newtownpark Ave	8475	Bus Eireann	133 / 133x
Stillorgan Rd / Kill Lane	9120	AirCoach	702
		St. Kevin's Bus Service	181
		Finnegan Bray	722 (Sandyford LUAS - Bray)
Bray Rd / Clonkeen Rd	10700	Finnegan Bray	722 (Sandyford LUAS - Bray)
		AirCoach	702
		St. Kevin's Bus Service	181
Bray Rd / Johnstown Rd	11285	AirCoach	702
		Bus Eireann	133 / 133x
		Finnegan Bray	722 (Sandyford LUAS - Bray)
		St. Kevin's Bus Service	181
Bray Rd / Wyattville Rd	13300	Wexford Bus	740
Bray Rd / St. Columcille's Hospital	13900	AirCoach	702
		Bus Eireann	2 / X2 / 133 / 133x
		Finnegan Bray	143

Coach (SB)

St. Kevin's Bus Service	181	St. Columcille's Hospital	Yes with 3135	13875	Mid Block		See Above	See Above	See Above	See Above	See Above				St. Kevin's Bus Service	181
AirCoach	702	Stonebridge	Yes with 3139	15445	Mid Block		16515	Move	parate coach / local bus sto	eparated Coach/Local Stop	Island with layby		Dublin Rd / Shanganagh Park	16515	AirCoach	702
Finnegan Bray	722 (Sandyford LUAS - Bray	Stonebridge	Yes with 3139	15445	Mid Block		See Above	See Above	See Above	See Above	See Above				Finnegan Bray	722 (Sandyford LUAS - Bray)
St. Kevin's Bus Service	181	Stonebridge	Yes with 3139	15445	Mid Block		See Above	See Above	See Above	See Above	See Above				St. Kevin's Bus Service	181
AirCoach	702	Dwyer Park	Yes with 4131	18340	Mid Block		18390	Move	overall catchment. Improv	eparated Coach/Local Stop	Shared layout		Castle St / Dwyer Park	18390	AirCoach	702
Bus Eireann	X2 / 133	Dwyer Park	Yes with 4131	18340	Mid Block		See Above	See Above	See Above	See Above	See Above				Bus Eireann	X2 / 133

Routes Included:

AirCoach 700
AirCoach 702
Bus Eireann 2
Bus Eireann X2
Bus Eireann 100X
Bus Eireann 133
Bus Eireann 133x
Fingal Express 533
Finnegan Bray Night Bus
Finnegan Bray 143
Joe Moroney Coach 164
Kearns Transport 845
Martley's of Portlaoise 824
Matthew's Coach Hire 904
Matthew's Coach Hire 910
McConnons Coach 180
Roger Phelan UCD06
n's Service – Glendalough Bus 181
Wexford Bus 740

d the CBC have also been considered when developing the UCD Interchange facility proposals.

Appendix B. Bus Stop Catchment Maps

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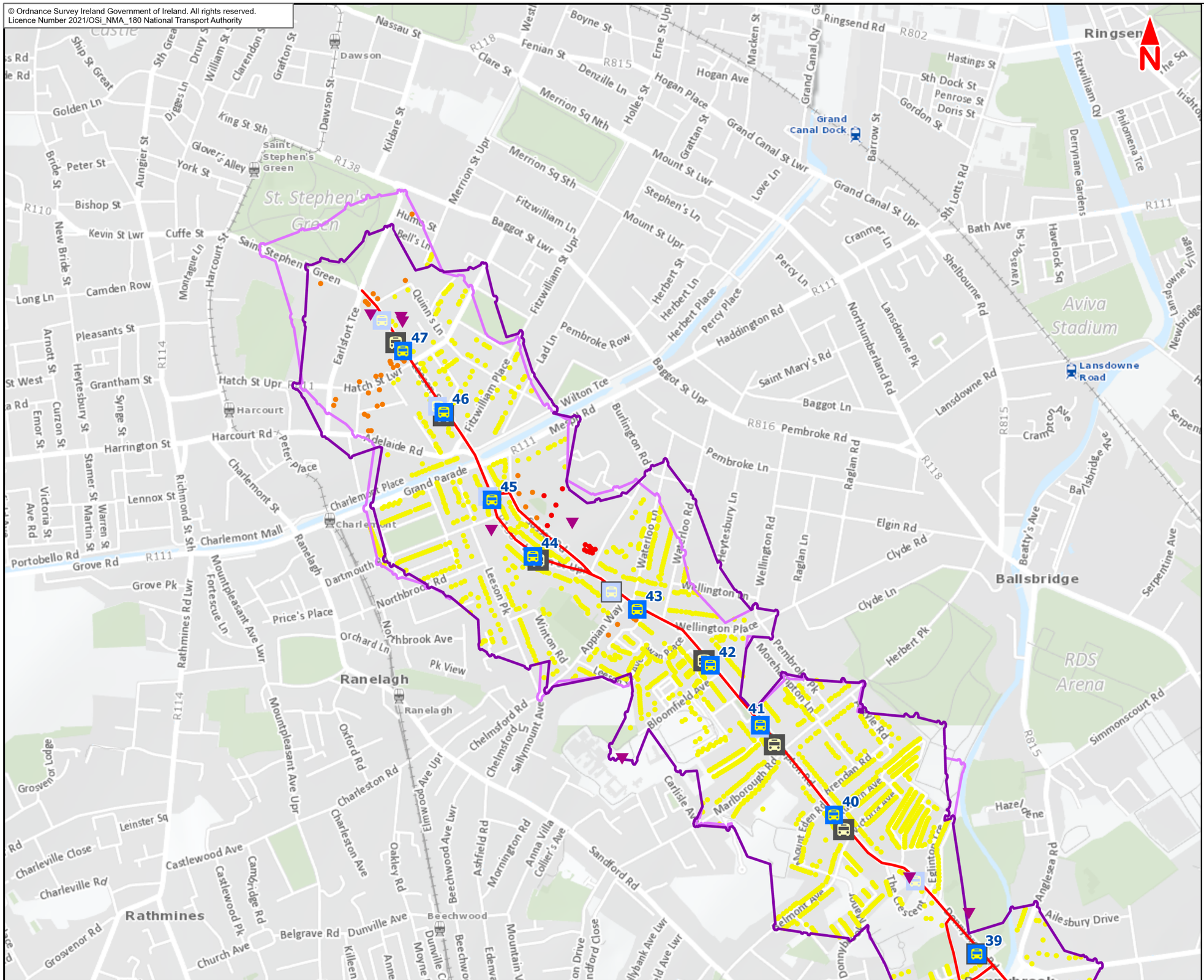

Legend

- Proposed Inbound Bus Stop
- Existing Inbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Proposed Stops 05 min. Catchments Limit
- Existing Stops 05 min. Catchments Limit
- Proposed Core Bus Corridor

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Inbound Stops 05min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0101	1 of 8	A	M01

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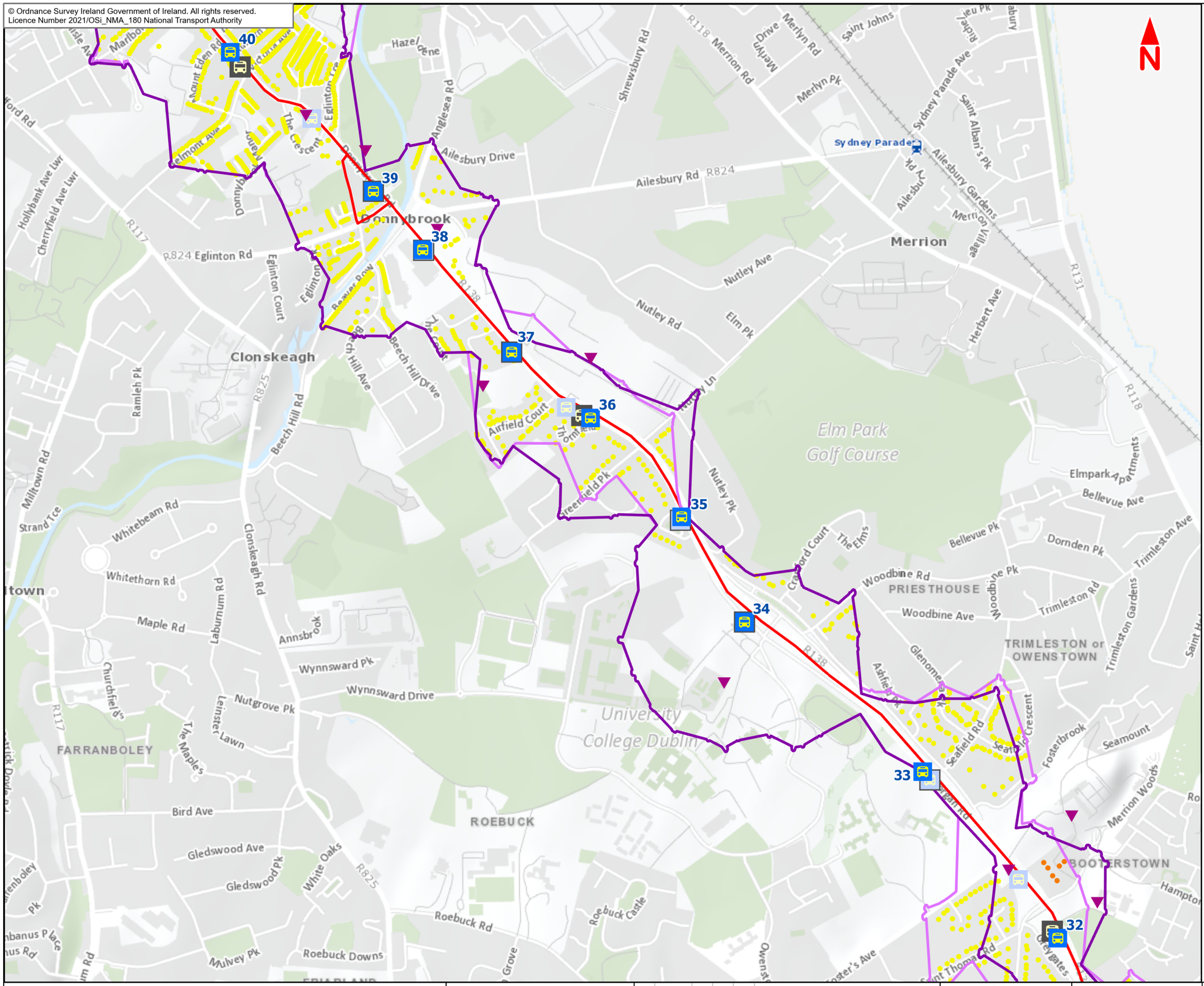

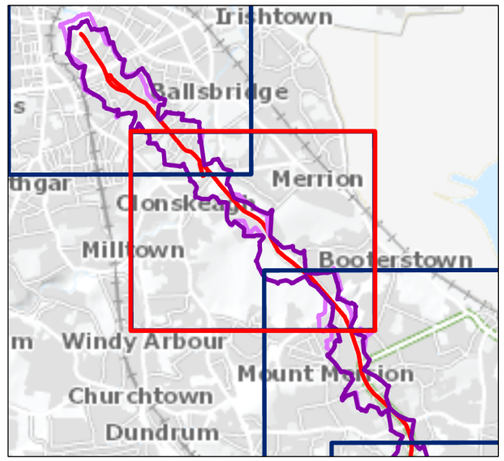

Legend

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- Existing Stops 05 min. Catchments Limit
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Estimated Population in Building

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CORE BUS CORRIDORS INFRASTRUCTURE WORKS

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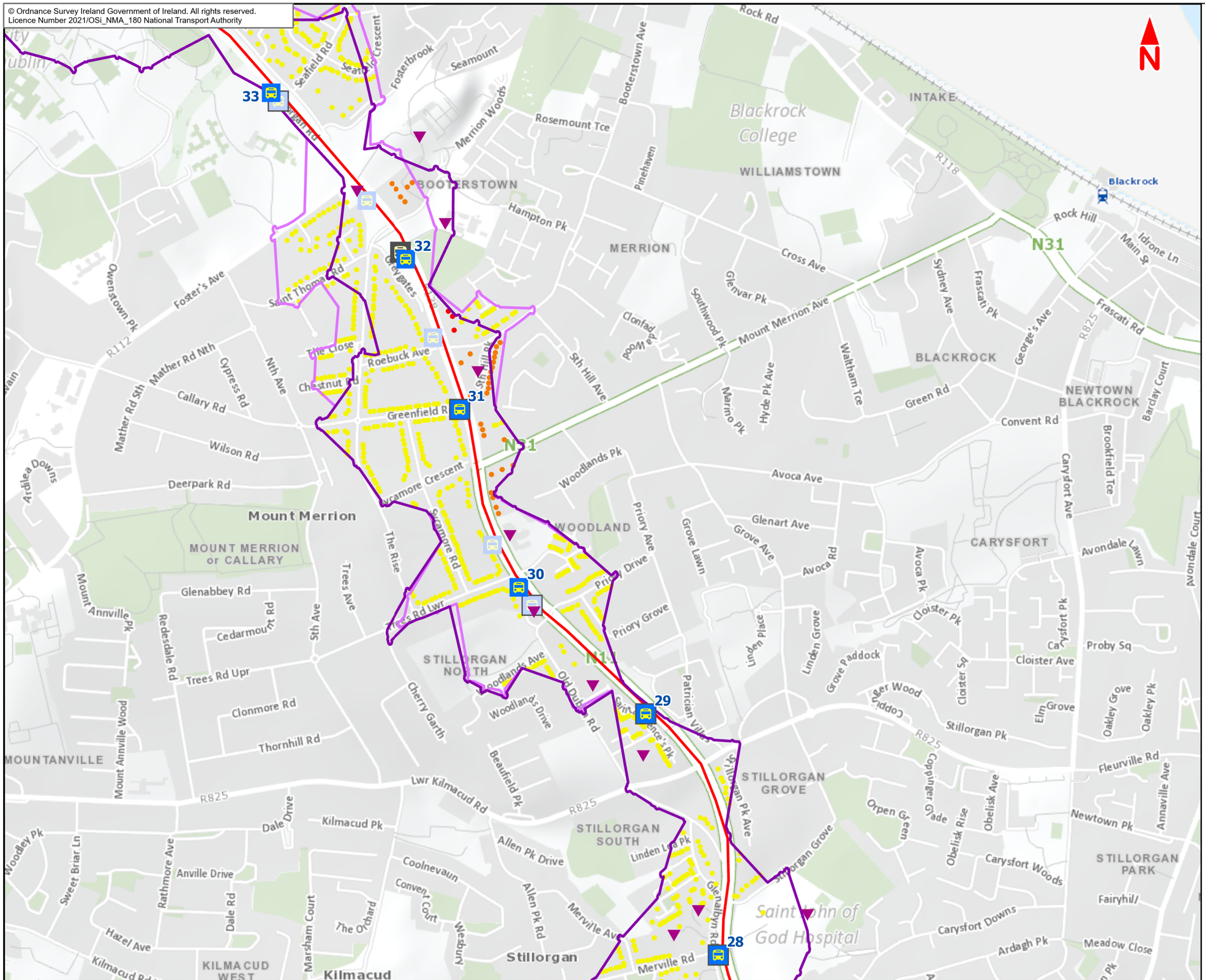

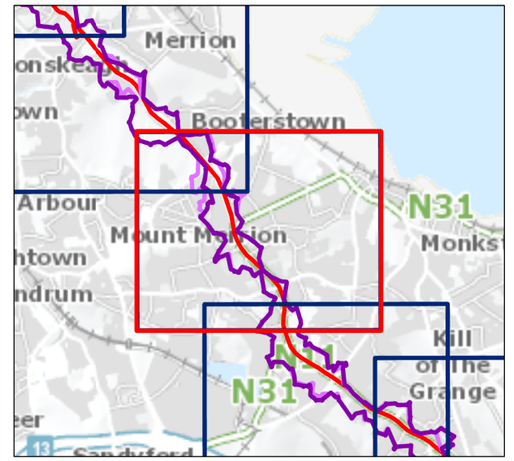

Legend

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- Existing Inbound Bus Stop
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- 2 - 10
- 11 - 30
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Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Inbound Stops 05min. Catchment

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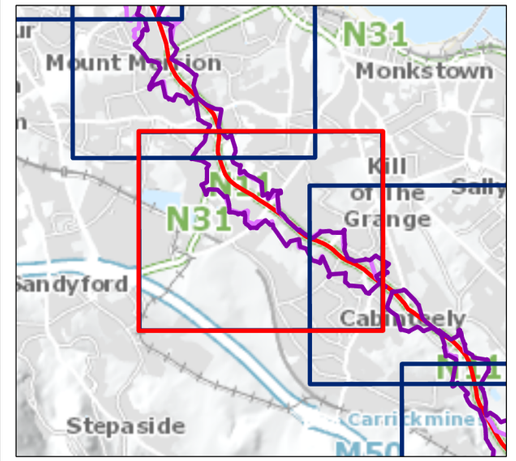

Legend

- Proposed Inbound Bus Stop
- Existing Inbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Proposed Stops 05 min. Catchments Limit
- Existing Stops 05 min. Catchments Limit
- Proposed Core Bus Corridor

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Inbound Stops 05min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0104	4 of 8	A	M01

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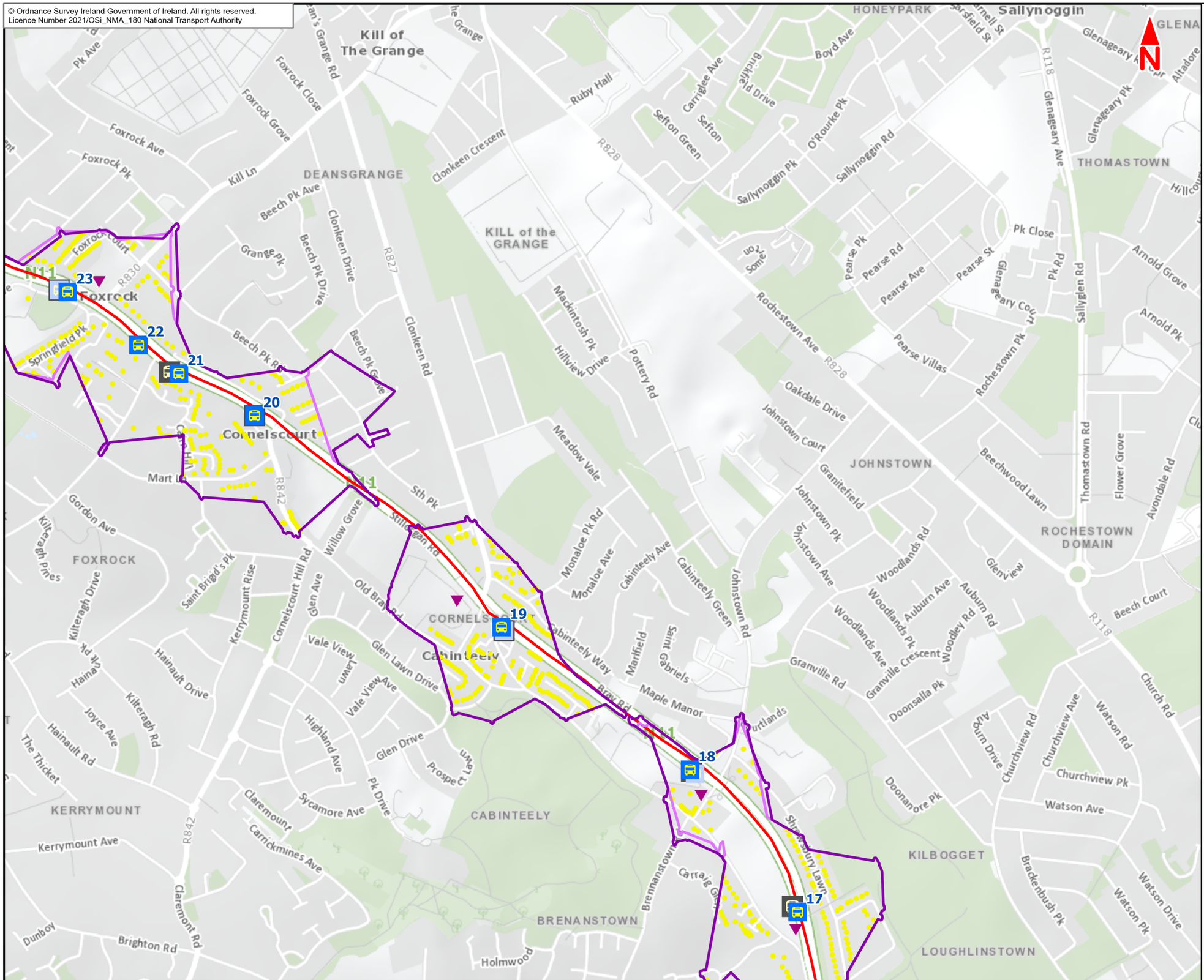

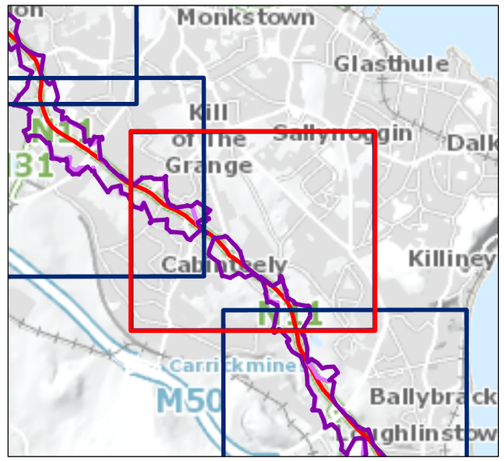

Legend

- Proposed Inbound Bus Stop
- Existing Inbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Proposed Stops 05 min. Catchments Limit
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- Proposed Core Bus Corridor

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Project Ireland 2040 Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
M01	DEC 2021	LF	PDF	JB	ISSUE FOR PHASE 4: PLANNING

Client: NTA — Údarás Náisiúnta Iompair, National Transport Authority

Consultant: Jacobs

Date	Scale @ A3	Drawn	Checked	Approved
11/01/2022	1:10 000	LF	PDF	JB

Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Inbound Stops 05min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0105	5 of 8	A	M01

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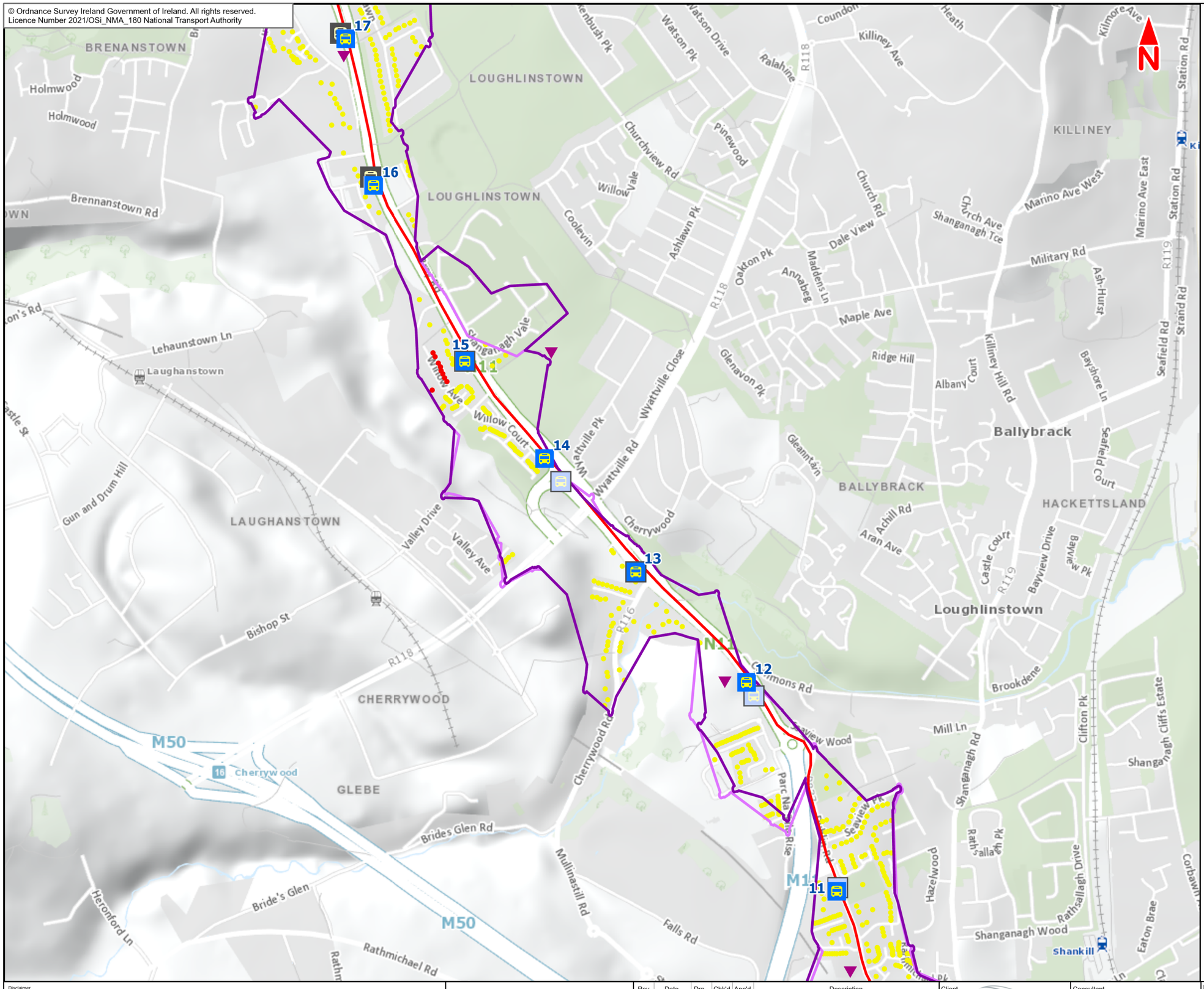

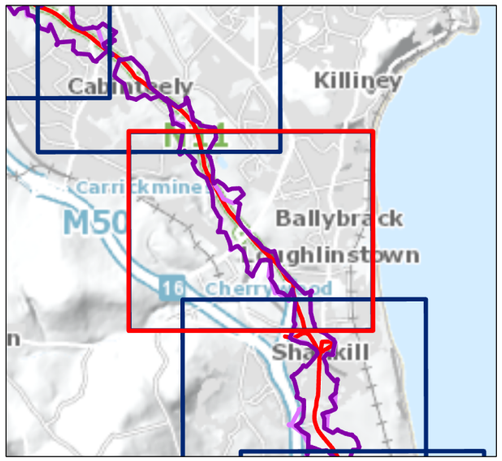

Legend

- Proposed Inbound Bus Stop
- Existing Inbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Proposed Stops 05 min. Catchments Limit
- Existing Stops 05 min. Catchments Limit
- Proposed Core Bus Corridor

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 50 100 200 300 400 500 m

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Building Ireland's Future

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Client: NTA Údarás Náisiúnta Iompair National Transport Authority
Consultant: Jacobs

Date	Scale @ A3	Drawn	Checked	Approved
11/01/2022	1:10 000	LF	PDF	JB

Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS**

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Inbound Stops 05min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0106	6 of 8	A	M01

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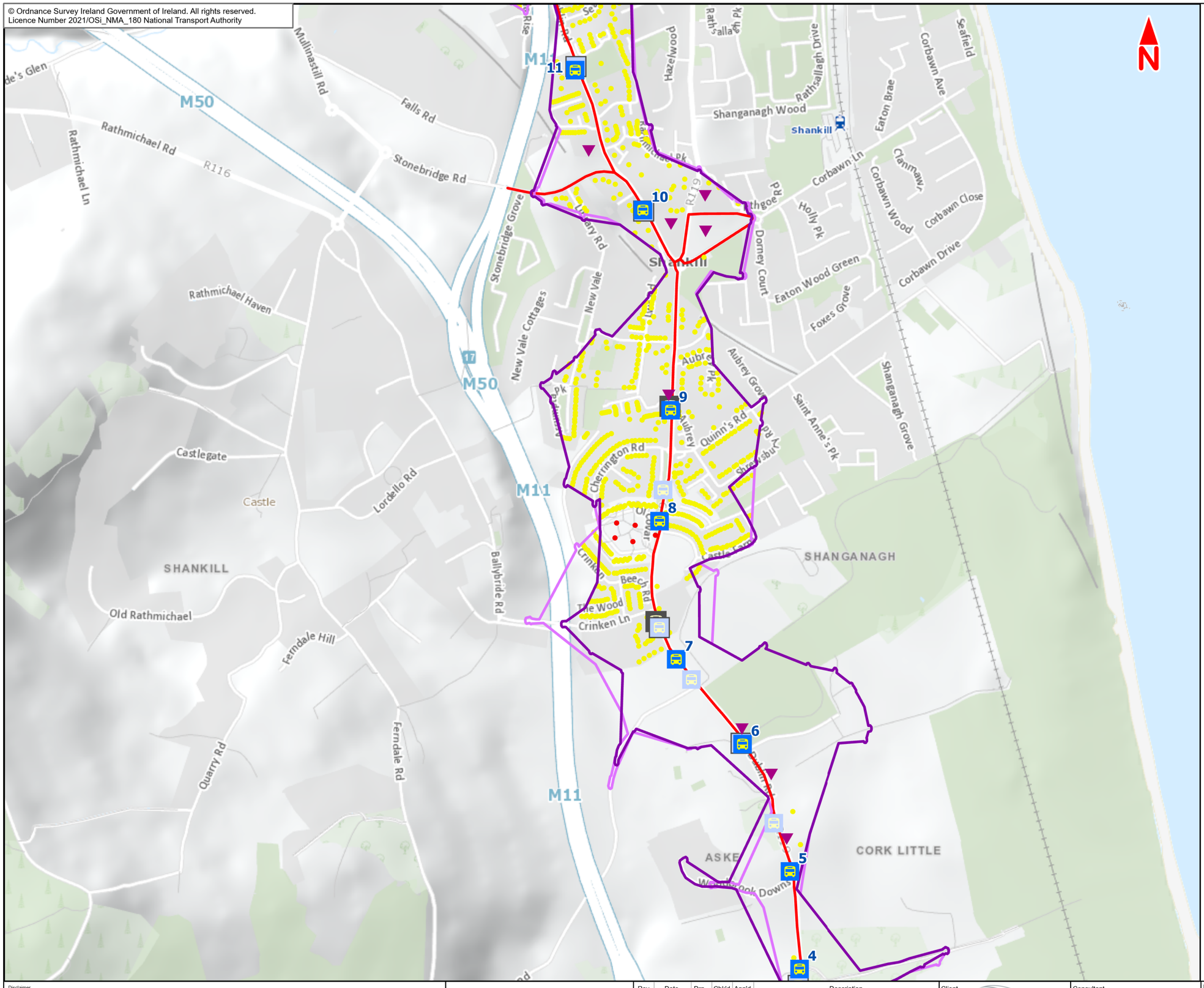

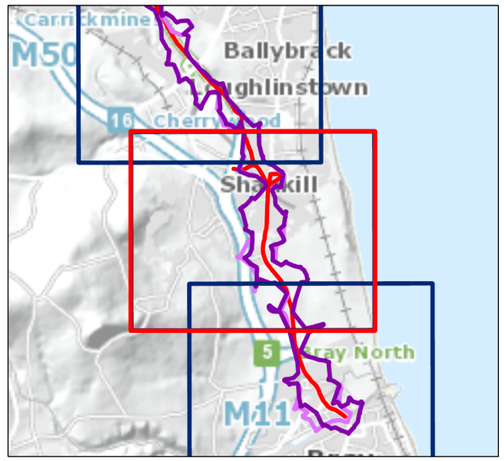

Legend

- Proposed Inbound Bus Stop
- Existing Inbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Proposed Stops 05 min. Catchments Limit
- Existing Stops 05 min. Catchments Limit
- Proposed Core Bus Corridor

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 50 100 200 300 400 500 m

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Consultant: Jacobs

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Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Inbound Stops 05min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0107	7 of 8	A	M01

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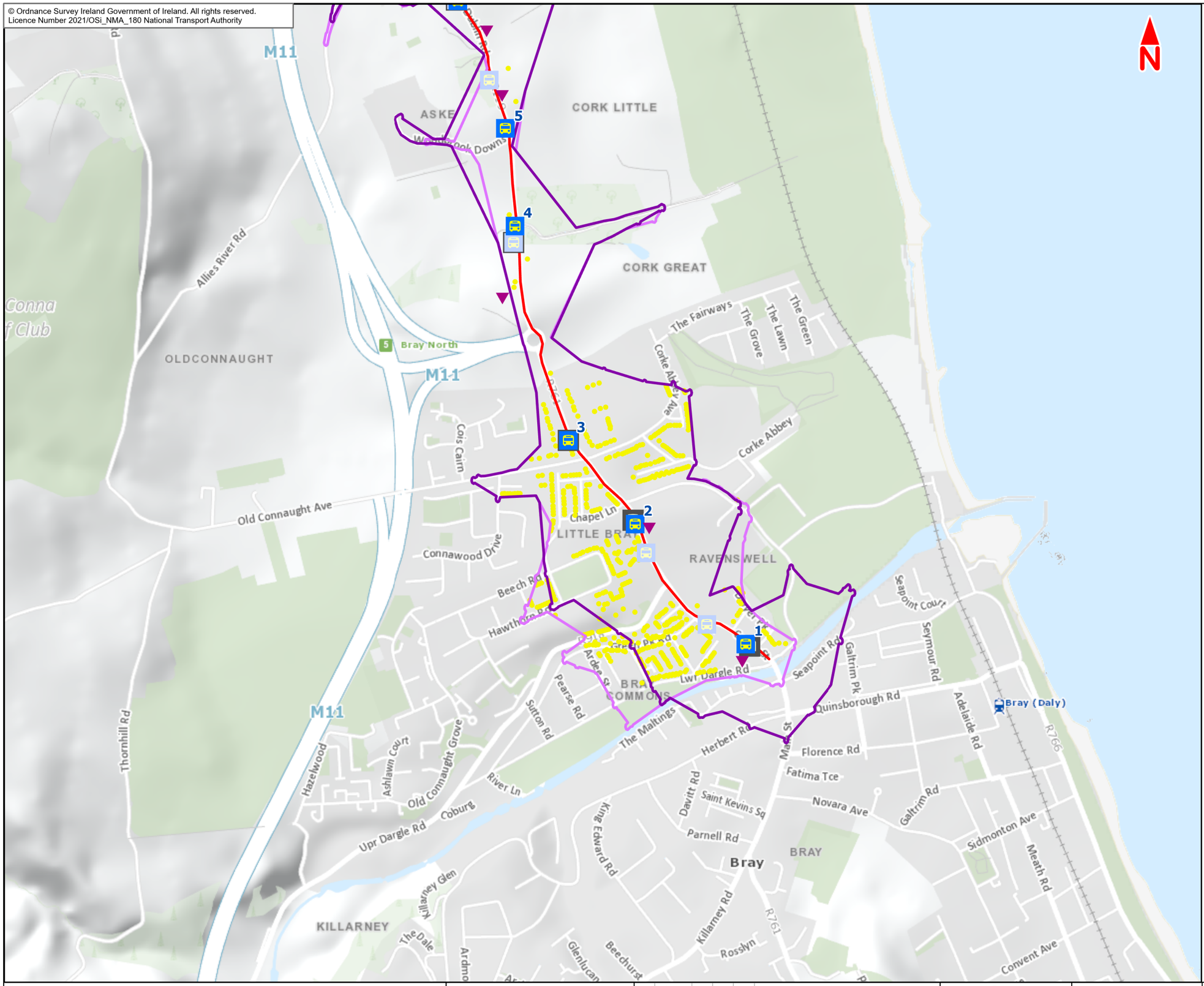

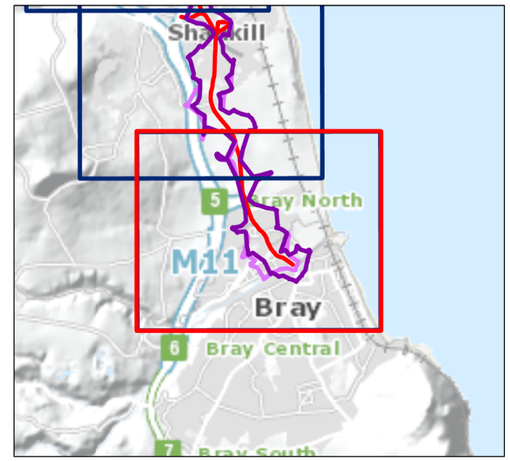

Legend

- Proposed Inbound Bus Stop
- Existing Inbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Proposed Stops 05 min. Catchments Limit
- Existing Stops 05 min. Catchments Limit
- Proposed Core Bus Corridor

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 50 100 200 300 400 500 m

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Consultant: Jacobs

Date	Scale @ A3	Drawn	Checked	Approved
11/01/2022	1:10 000	LF	PDF	JB

Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Inbound Stops 05min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0108	8 of 8	A	M01

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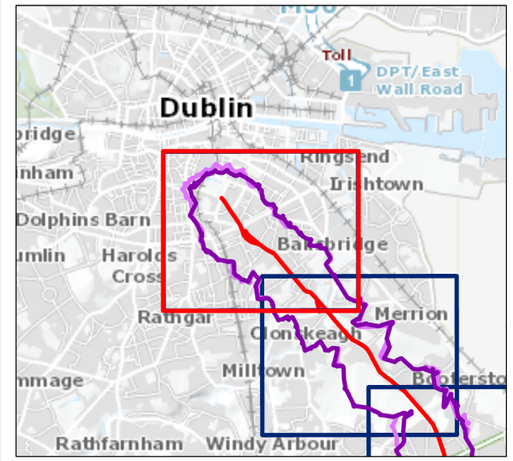

Legend

- Proposed Inbound Bus Stop
- Existing Inbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Proposed Core Bus Corridor
- Existing Stops 10 min. Catchments Limit
- Proposed Stops 10 min. Catchments Limit

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 50 100 200 300 400 500 m

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Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Consultant: Jacobs

Date	Scale @ A3	Drawn	Checked	Approved
11/01/2022	1:10 000	LF	PDF	JB

Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS**

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Inbound Stops 10min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0201	1 of 8	A	M01

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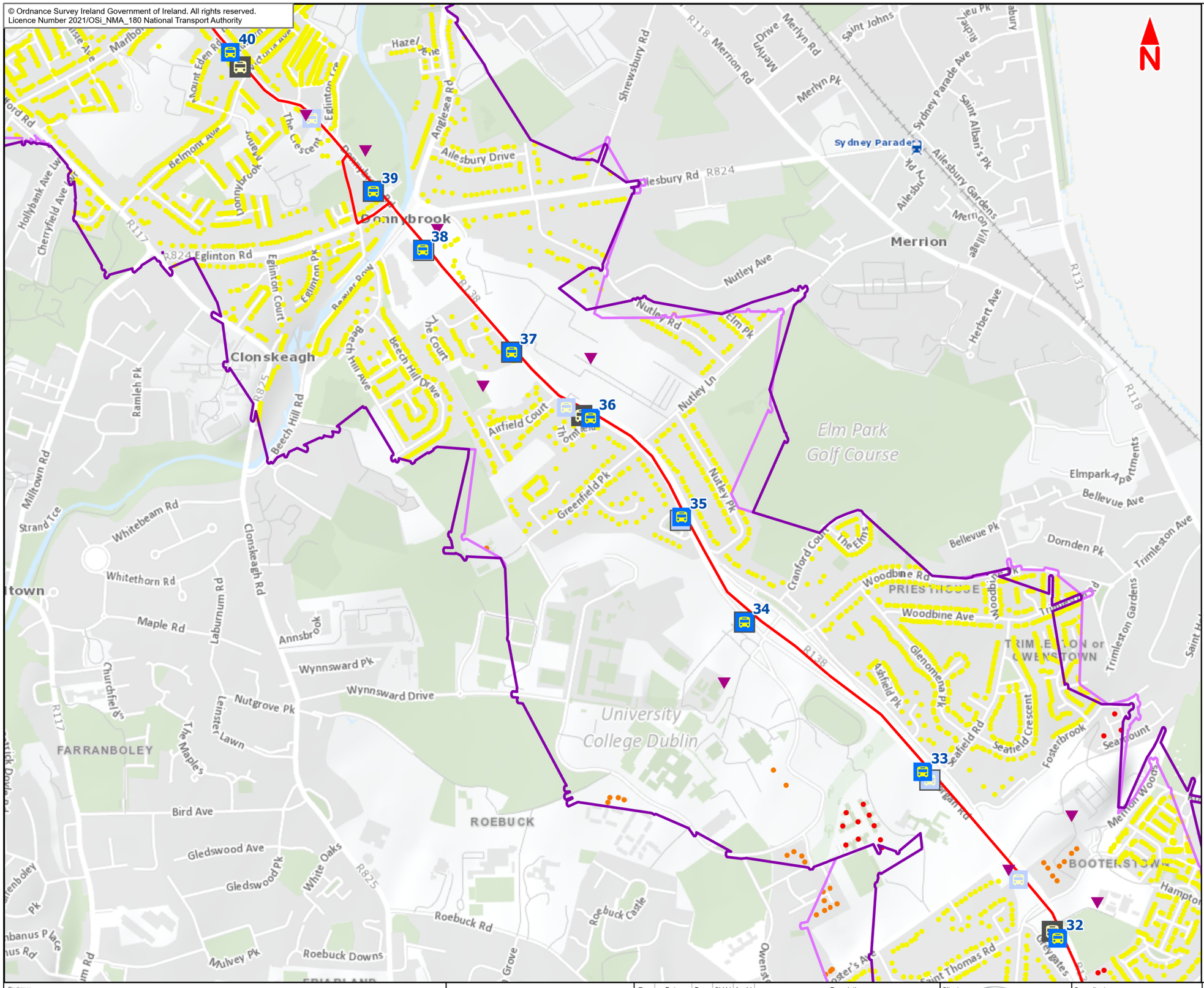

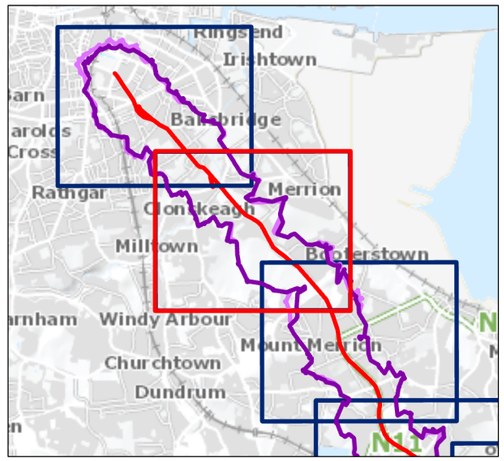

Legend

- Proposed Inbound Bus Stop
- Existing Inbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Proposed Core Bus Corridor
- Existing Stops 10 min. Catchments Limit
- Proposed Stops 10 min. Catchments Limit

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Inbound Stops 10min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0202	2 of 8	A	M01

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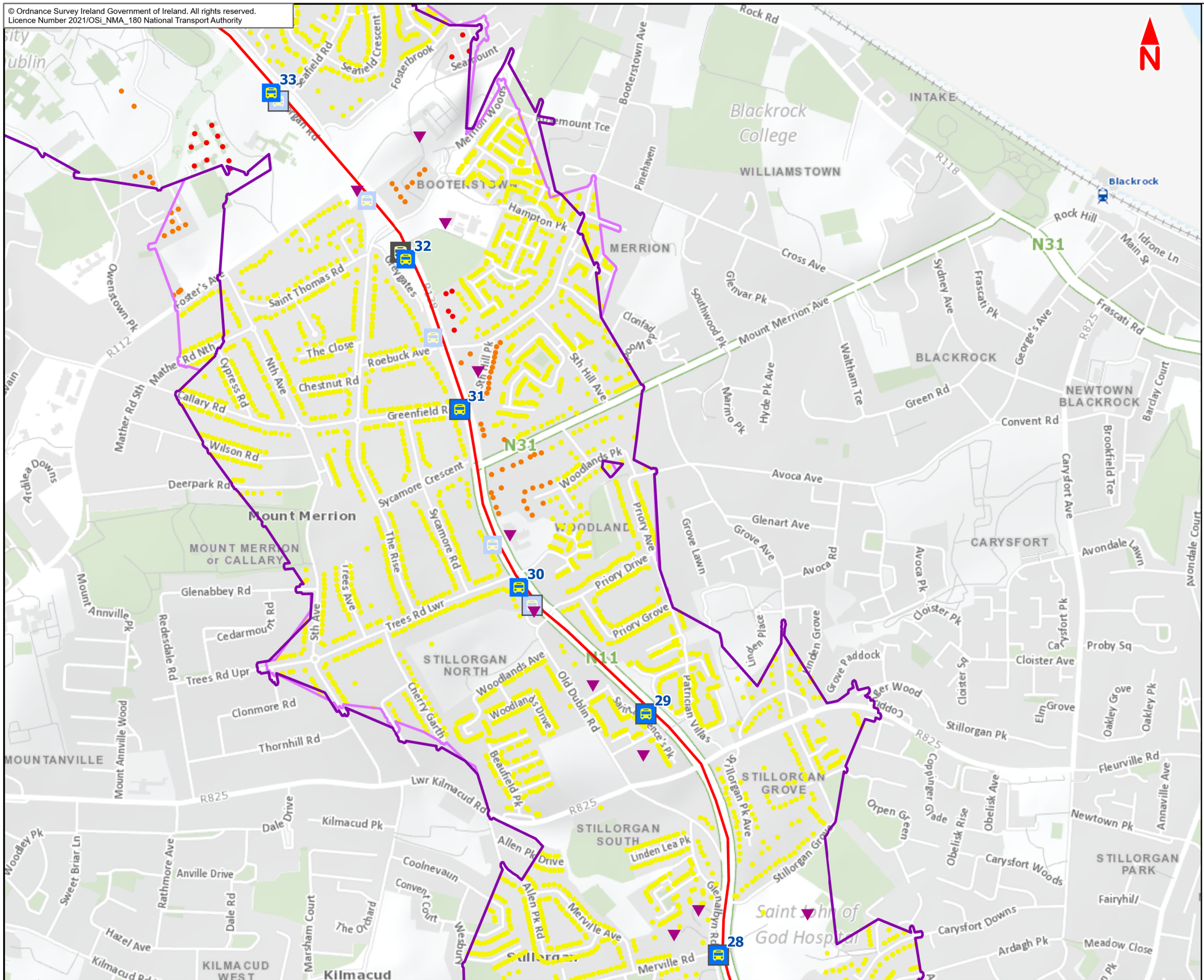

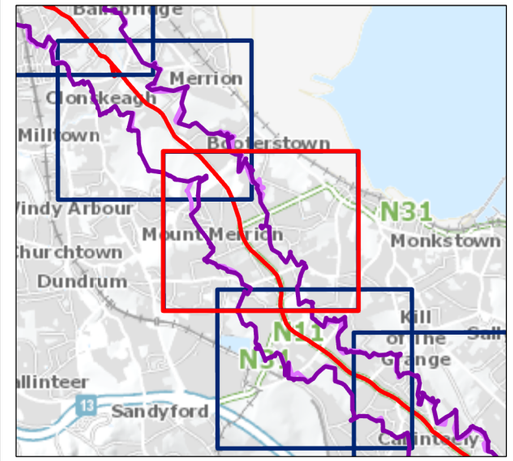

Legend

- Proposed Inbound Bus Stop
- Existing Inbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Proposed Core Bus Corridor
- Existing Stops 10 min. Catchments Limit
- Proposed Stops 10 min. Catchments Limit

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Inbound Stops 10min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0203	3 of 8	A	M01

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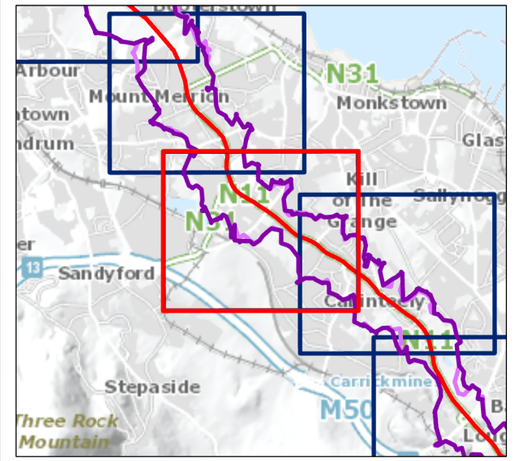

Legend

- Proposed Inbound Bus Stop
- Existing Inbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Proposed Core Bus Corridor
- Existing Stops 10 min. Catchments Limit
- Proposed Stops 10 min. Catchments Limit

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 50 100 200 300 400 500 m

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Project Ireland 2040 Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
M01	DEC 2021	LF	PDF	JB	ISSUE FOR PHASE 4: PLANNING

Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Consultant: Jacobs

Date	Scale @ A3	Drawn	Checked	Approved
11/01/2022	1:10 000	LF	PDF	JB

Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Inbound Stops 10min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0204	4 of 8	A	M01

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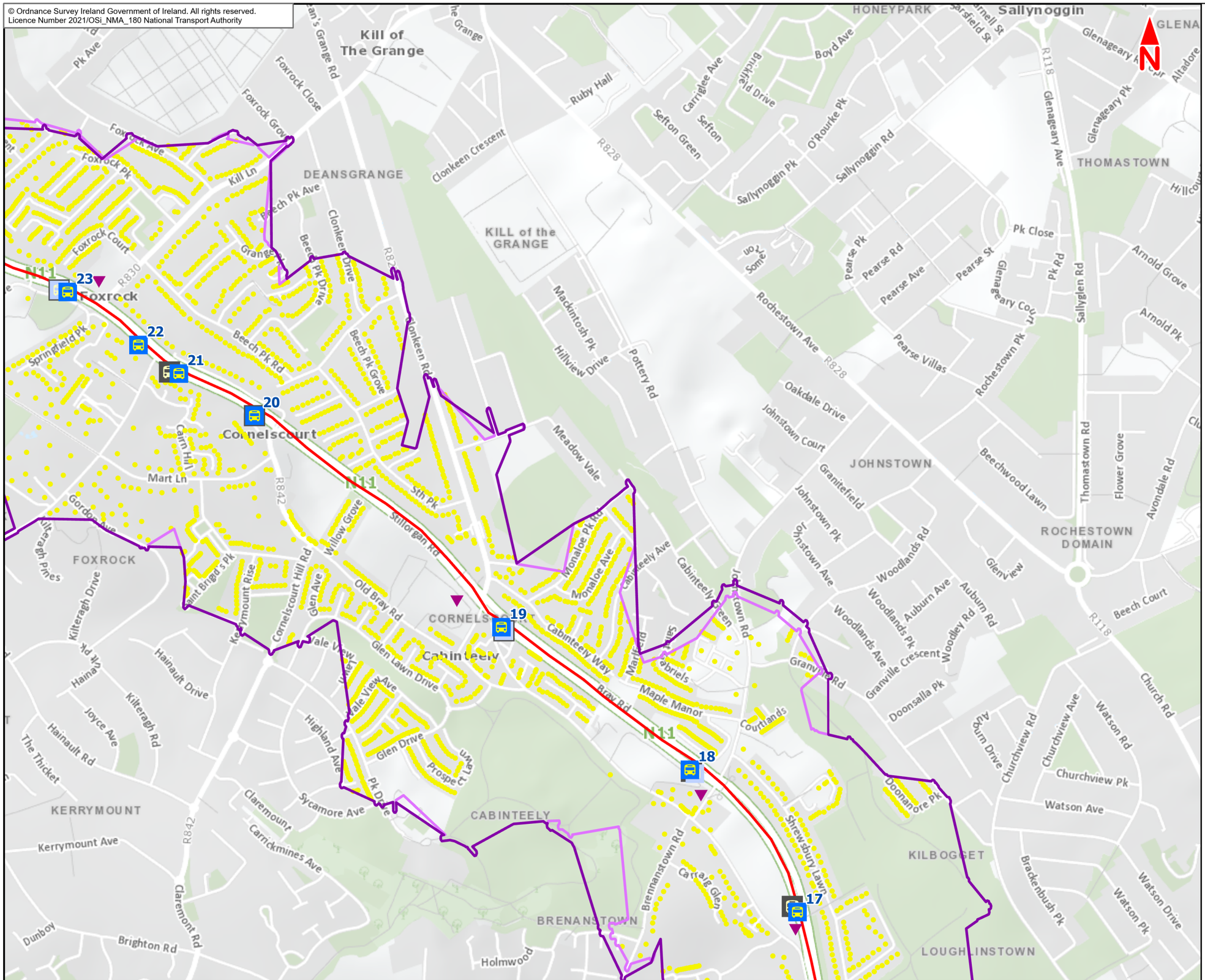
Kill of The Grange
DEANSGRANGE
KILL of the GRANGE
HONEYPARK
Sallynoggin
GLENA
THOMASTOWN
JOHNSTOWN
ROCHESTOWN DOMAIN
FOXROCK
CORNELSCOURT
Cabinteely
CABINTEELY
KERRYMOUNT
BRENANSTOWN
KILBOGGET
LOUGHLINSTOWN
Foxrock
Cornelscourt
N11
R830
R828
R842
R118
Foxrock Close
Foxrock Grove
Foxrock Ave
Foxrock Pk
Kill Ln
Foxrock Court
Beech Pk Ave
Beech Pk Drive
Beech Pk Rd
Beech Pk Grove
Springfield Pk
Clonkeen Crescent
Clonkeen Drive
Clonkeen Rd
Ruby Hall
Sefton Green
Sefton
Carrigdee Ave
Boyd Ave
Sallynoggin Pk
Sallynoggin Rd
O'Rourke Pk
Glenageary Ave
Glenageary Pk
Pearse Pk
Pearse Rd
Pearse Ave
Pearse St
Pk Close
Pk Rd
Sallyglen Rd
Arnold Grove
Arnold Pk
Rochestown Ave
Rochestown Pk
Pearse Villas
Oakdale Drive
Johnstown Court
Granitefield
Beechwood Lawn
Thomastown Rd
Flower Grove
Avondale Rd
Mackintosh Pk
Hillview Drive
Pottery Rd
Meadow Vale
Mart Ln
Carn Hill
5th Pk
Stillorgan Rd
Willow Grove
Gordon Ave
Kilteragh Pines
Kilteragh Drive
Kerrymount Rise
Saint Brigid's Pk
Cornelscourt Hill Rd
Glen Ave
Old Bray Rd
Monaloe Pk Rd
Monaloe Ave
Cabinteely Ave
Cabinteely Green
Cabinteely Way
Bray Rd
Marlfield
Gabriels
Maple Manor
Courtlands
Granville Rd
Granville Crescent
Woodlands Rd
Woodlands Ave
Woodlands Pk
Auburn Ave
Auburn Rd
Woodley Rd
Glenview
Beech Court
Doonsalla Pk
Churchview Rd
Churchview Ave
Watson Rd
Church Rd
Churchview Pk
Watson Ave
Doonamore Pk
Shrewsbury Lawn
Brackenbush Pk
Watson Pk
Watson Drive
Vale View
Vale View Ave
Glen Lawn Drive
Glen Drive
Prospect Ln
Pk Drive
Highland Ave
Hainault Pk
Hainault Drive
Hainault Rd
Joyce Ave
Kilteragh Rd
The Thicket
Claremount
Sycamore Ave
Carrickmines Ave
Kerrymount Ave
Claremont Rd
Dunboy
Brighton Rd
Holmwood
Brennanstown Rd
Carraig Glen
Willow Park Grove
Mayfield
Ballyogan Wood
Ballyogan Rd
Ballyogan Grove
Ballyogan Ave
Ballyogan Green
Ballyogan Court
Ballyogan Pk
Ballyogan Cross
Ballyogan Rise
Ballyogan Pk
Ballyogan Drive
Ballyogan Crescent
Ballyogan Close
Ballyogan Lawn

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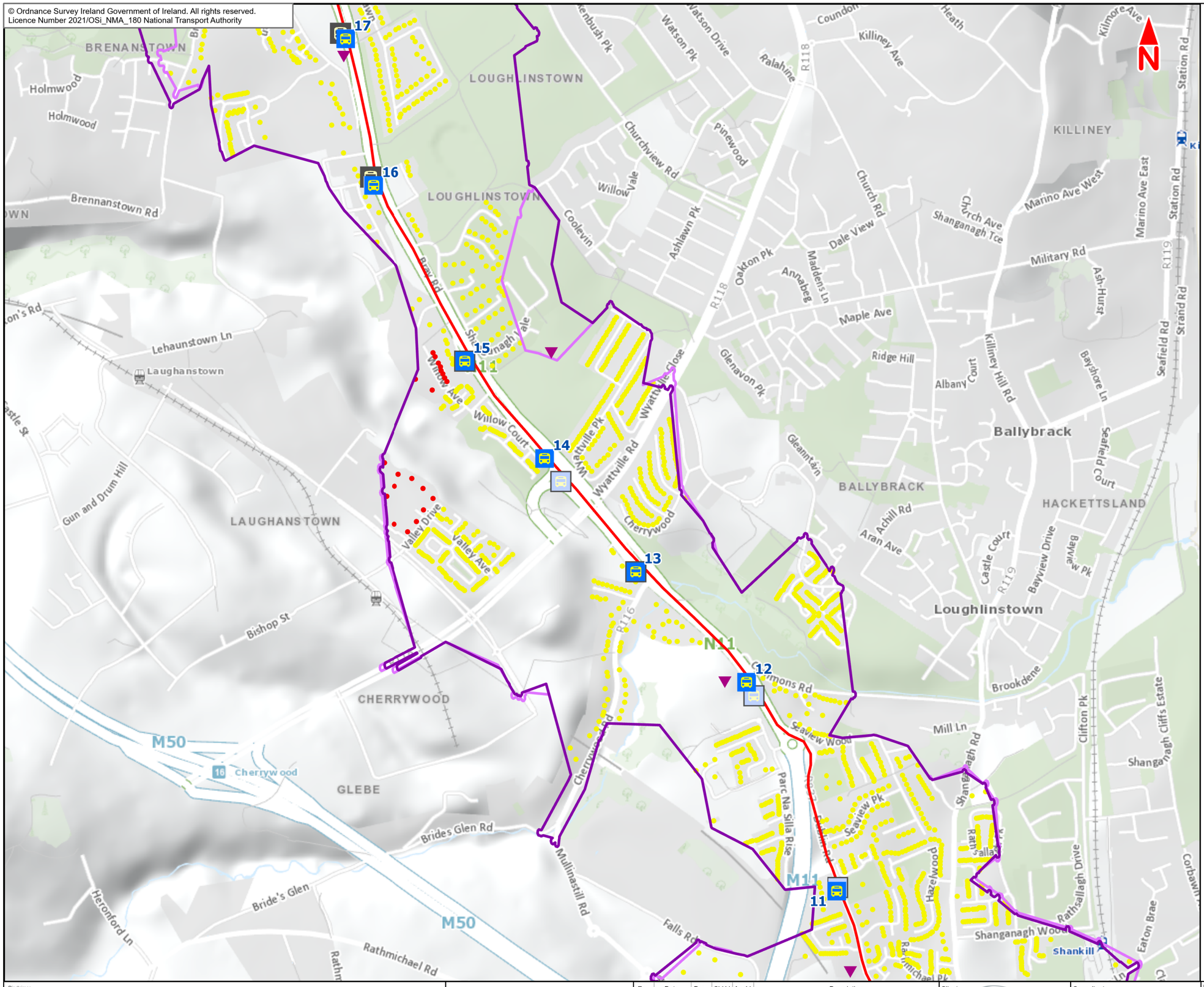

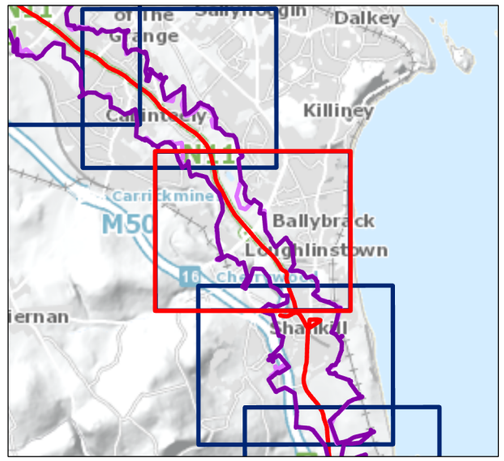

Legend

- Proposed Inbound Bus Stop
- Existing Inbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Proposed Core Bus Corridor
- Existing Stops 10 min. Catchments Limit
- Proposed Stops 10 min. Catchments Limit

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 50 100 200 300 400 500 m

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Project Ireland 2040 Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
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Client: NTA — Údarás Náisiúnta Iompair, National Transport Authority

Consultant: Jacobs

Date	Scale @ A3	Drawn	Checked	Approved
11/01/2022	1:10 000	LF	PDF	JB

Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Inbound Stops 10min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0206	6 of 8	A	M01

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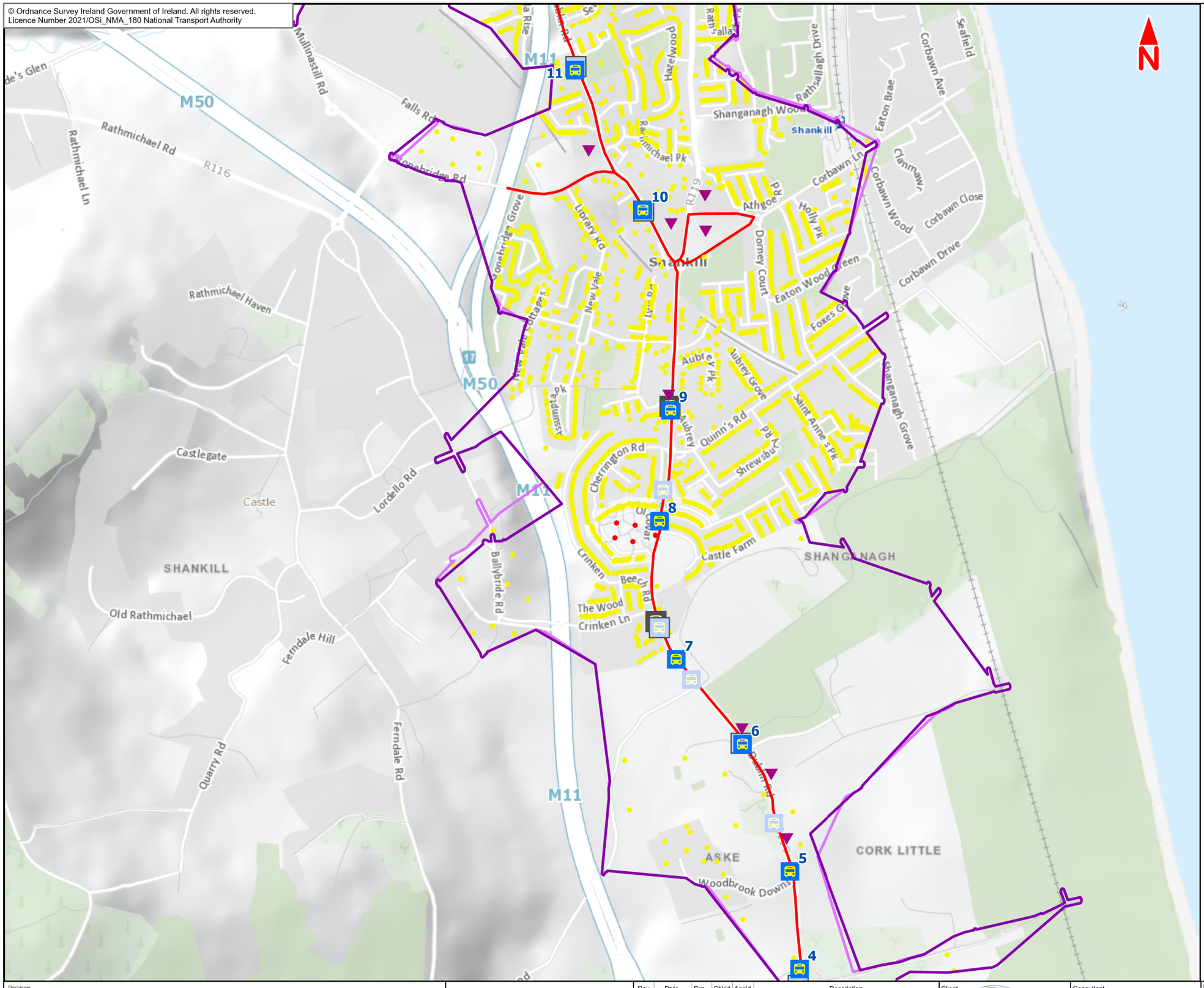

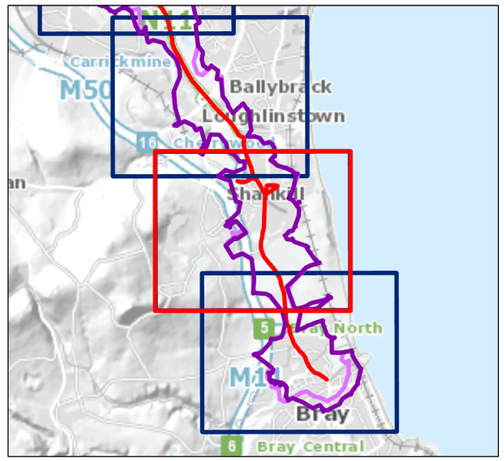

Legend

- Proposed Inbound Bus Stop
- Existing Inbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Proposed Core Bus Corridor
- Existing Stops 10 min. Catchments Limit
- Proposed Stops 10 min. Catchments Limit

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 50 100 200 300 400 500 m

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Project Ireland 2040
Building Ireland's Future

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Date	Scale @ A3	Drawn	Checked	Approved
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Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Inbound Stops 10min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0207	7 of 8	A	M01

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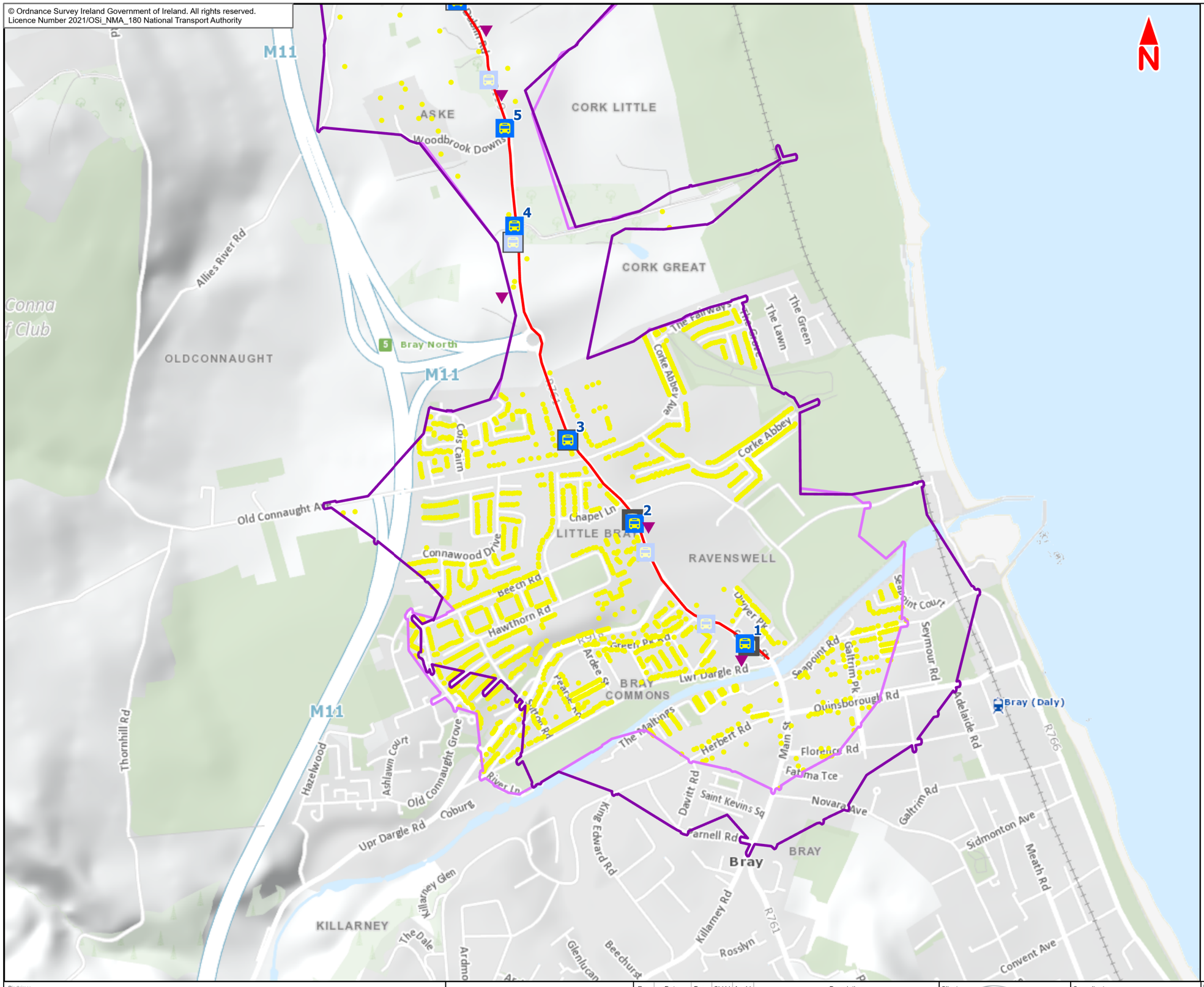

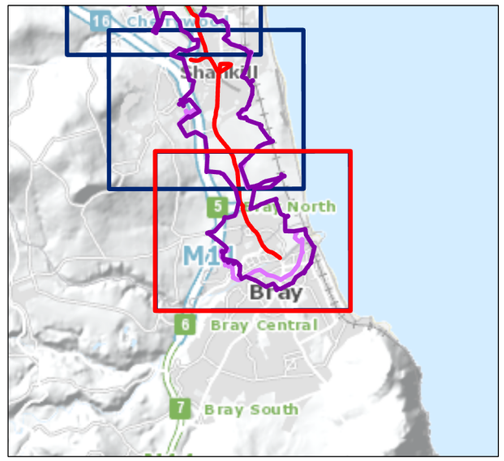

Legend

- Proposed Inbound Bus Stop
- Existing Inbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Proposed Core Bus Corridor
- Existing Stops 10 min. Catchments Limit
- Proposed Stops 10 min. Catchments Limit

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 50 100 200 300 400 500 m

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Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Inbound Stops 10min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0208	8 of 8	A	M01

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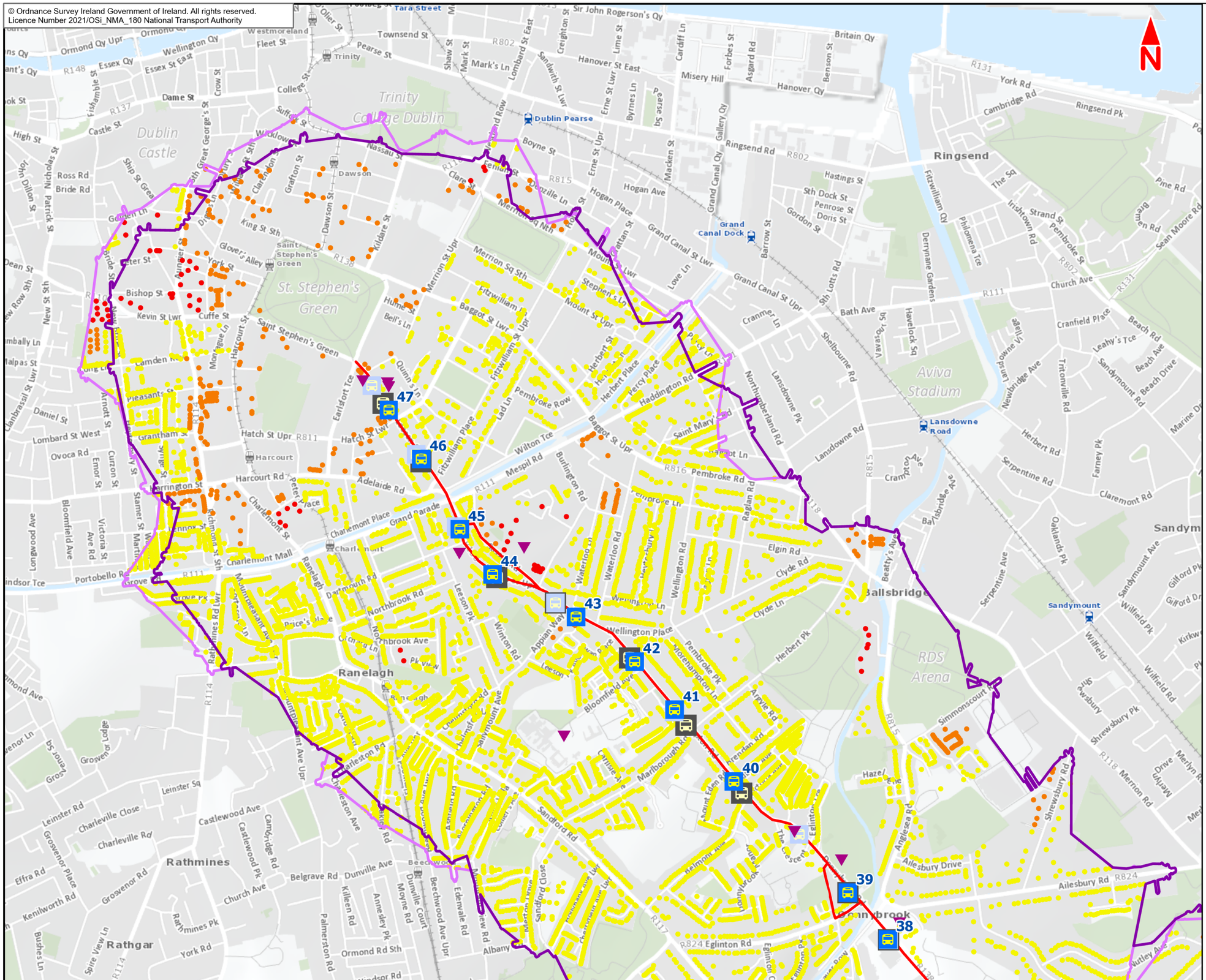

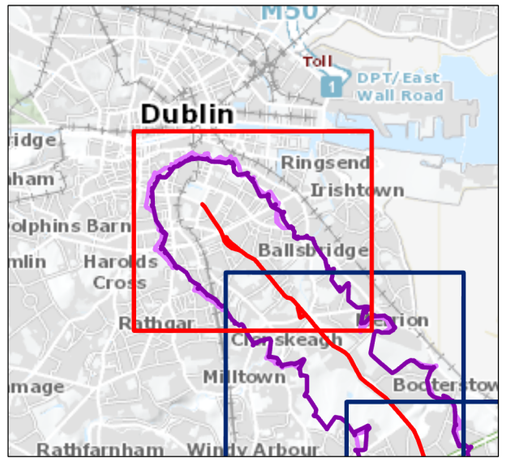

Legend

- Proposed Inbound Bus Stop
- Existing Inbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Proposed Core Bus Corridor
- Existing Stops 15 min. Catchments Limit
- Proposed Stops 15 min. Catchments Limit

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 62.5125 250 375 500 625 m

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Client: NTA — Údarás Náisiúnta Iompair, National Transport Authority

Consultant: Jacobs

Date	Scale @ A3	Drawn	Checked	Approved
11/01/2022	1:12 500	LF	PDF	JB

Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Inbound Stops 15min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0301	1 of 7	A	M01

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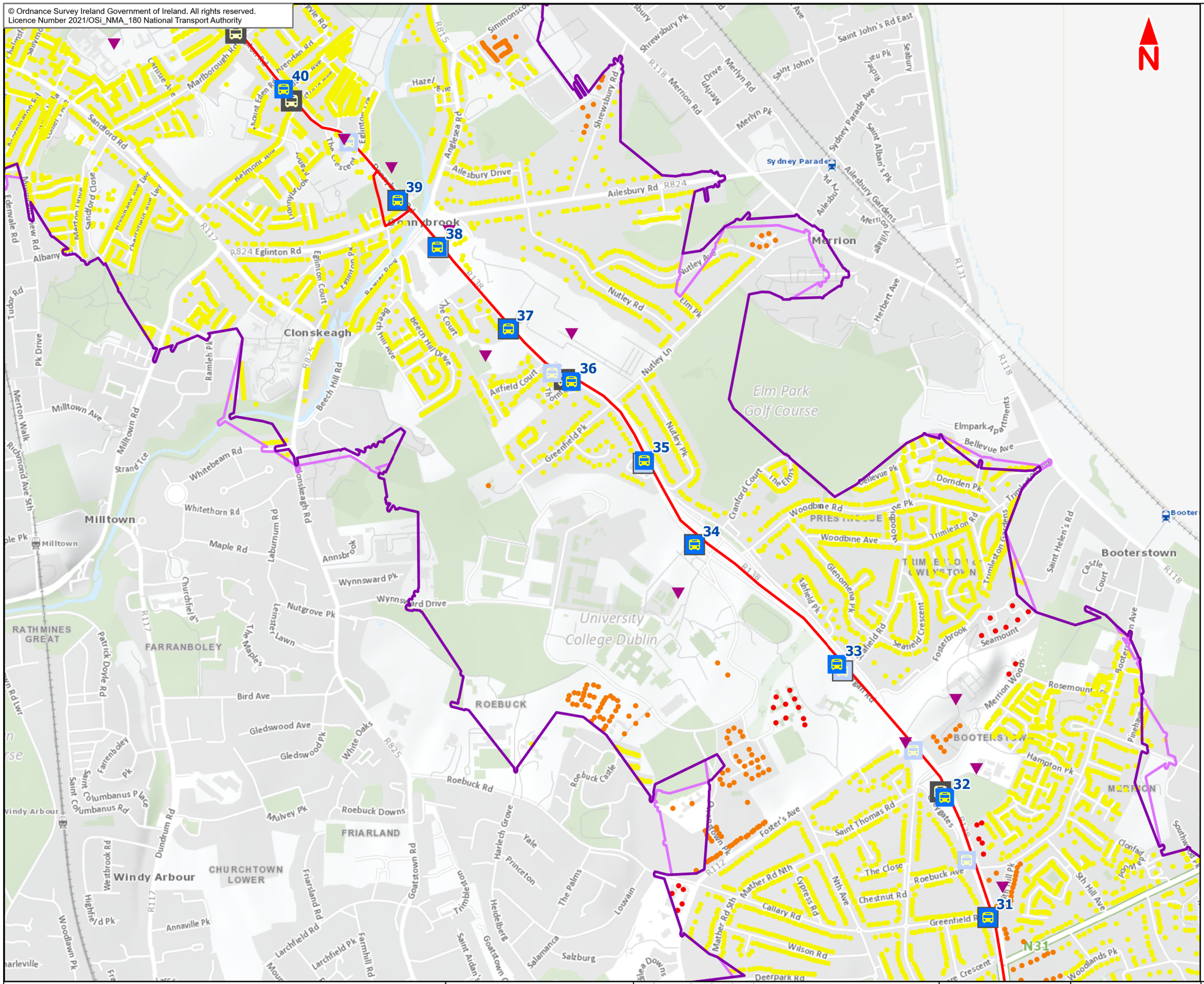

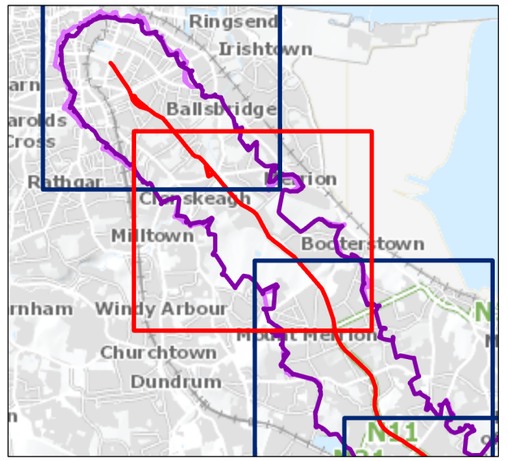

Legend

- Proposed Inbound Bus Stop
- Existing Inbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Proposed Core Bus Corridor
- Existing Stops 15 min. Catchments Limit
- Proposed Stops 15 min. Catchments Limit

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 62.5125 250 375 500 625 m

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Client: NTA — Údarás Náisiúnta Iompair, National Transport Authority
Consultant: Jacobs

Date	Scale @ A3	Drawn	Checked	Approved
11/01/2022	1:12 500	LF	PDF	JB

Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Inbound Stops 15min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0302	2 of 7	A	M01

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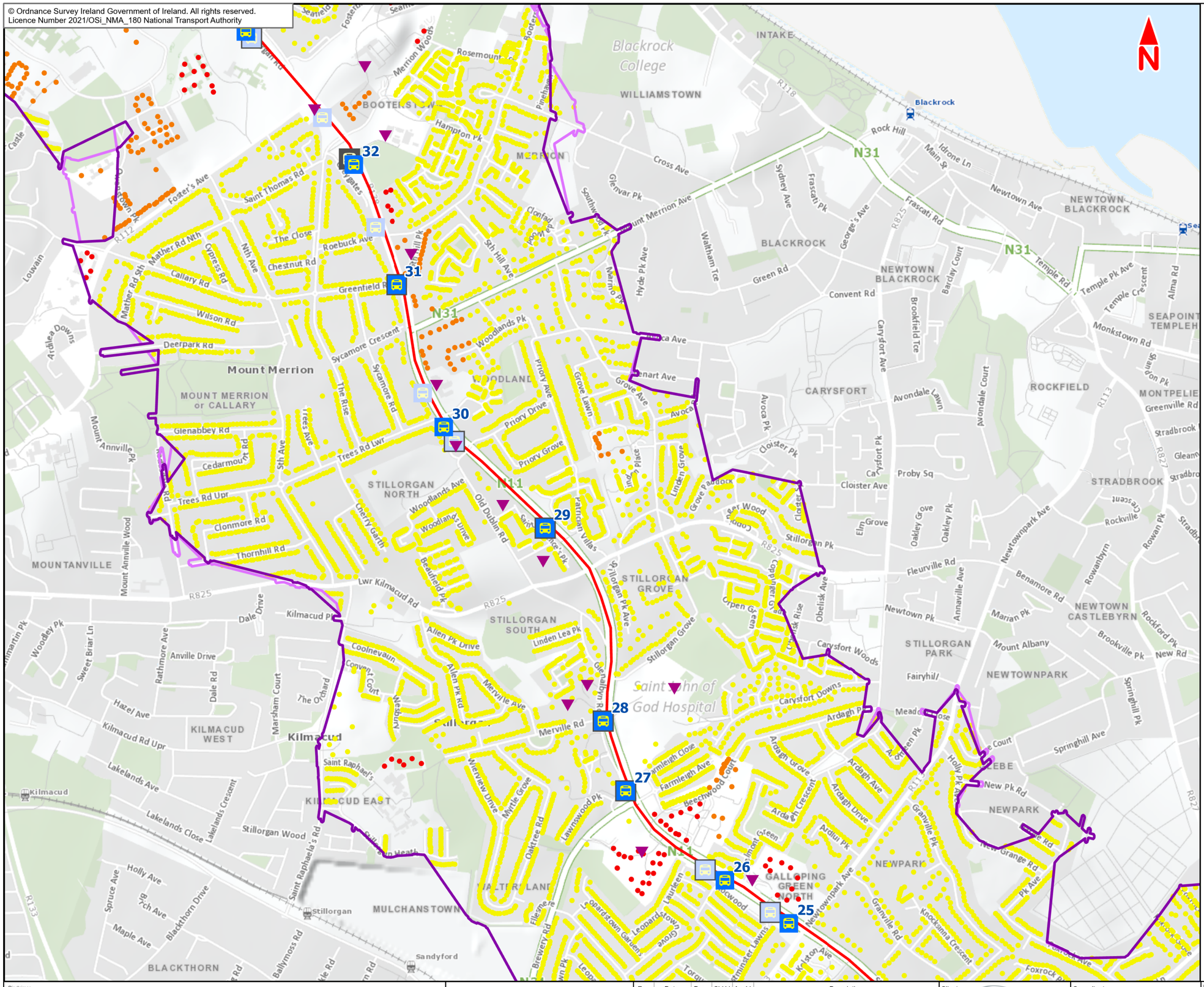

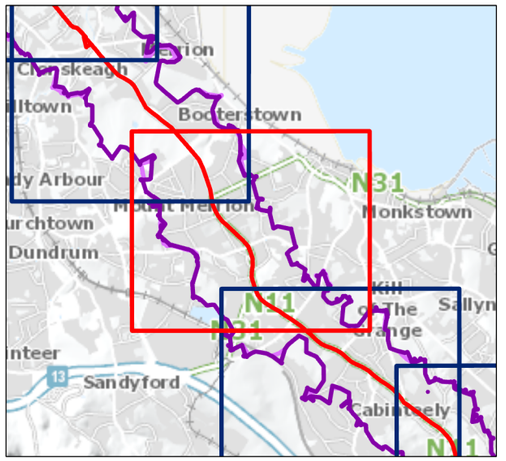

Legend

- Proposed Inbound Bus Stop
- Existing Inbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Proposed Core Bus Corridor
- Existing Stops 15 min. Catchments Limit
- Proposed Stops 15 min. Catchments Limit

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 62.5125 250 375 500 625 m

BAR SCALE

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Project Ireland 2040 Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
M01	DEC 2021	LF	PDF	JB	ISSUE FOR PHASE 4: PLANNING

Client: NTA — Údarás Náisiúnta Iompair, National Transport Authority

Consultant: Jacobs

Date	Scale @ A3	Drawn	Checked	Approved
11/01/2022	1:12 500	LF	PDF	JB

Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS**

Drawing Title: Bray to City Centre Core Bus Corridor Scheme Proposed Inbound Stops 15min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0303	3 of 7	A	M01

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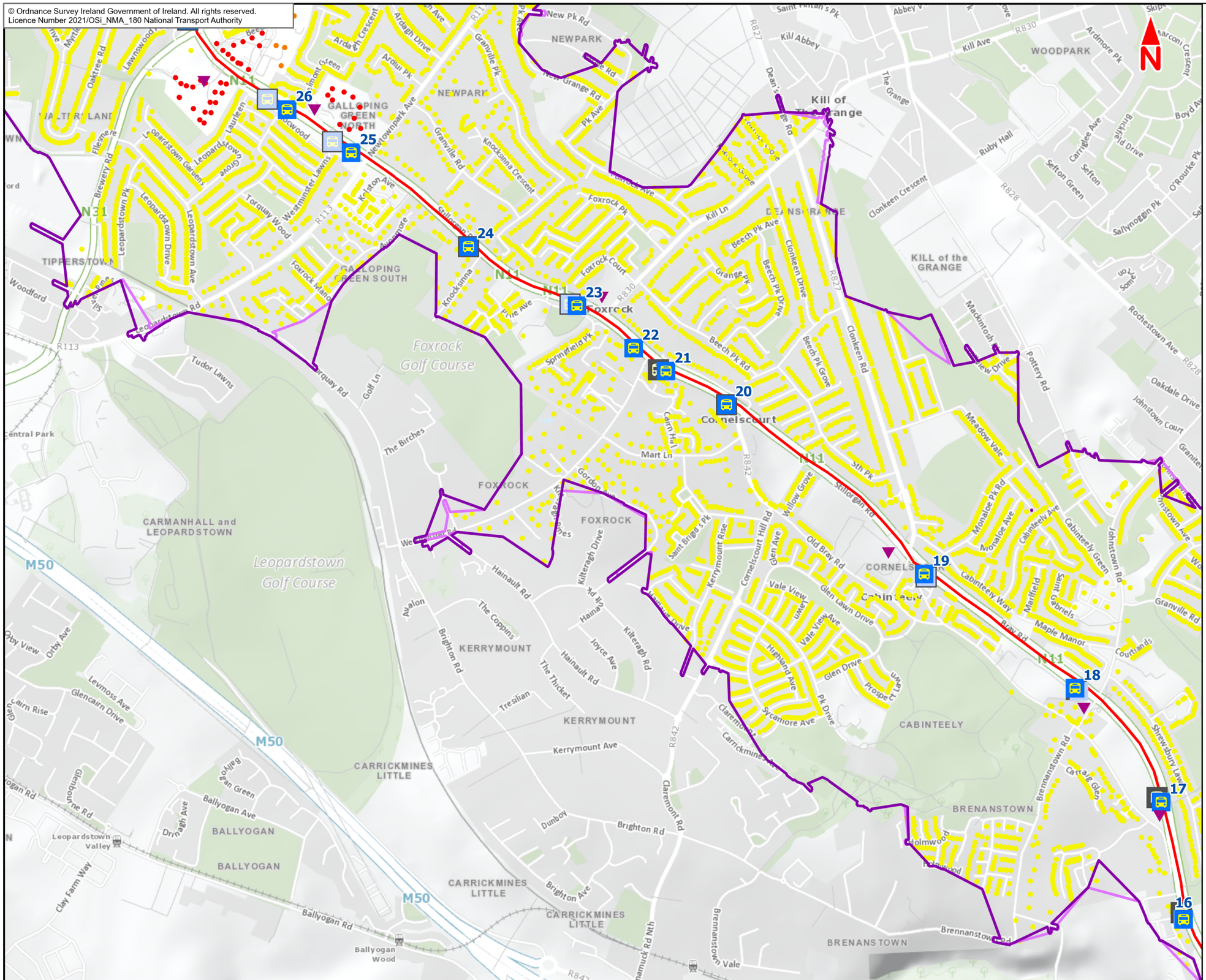

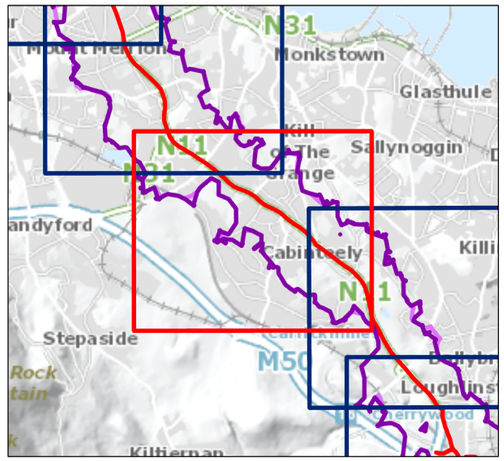

Legend

- Proposed Inbound Bus Stop
- Existing Inbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Proposed Core Bus Corridor
- Existing Stops 15 min. Catchments Limit
- Proposed Stops 15 min. Catchments Limit

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 62.5125 250 375 500 625 m

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Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Inbound Stops 15min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0304	4 of 7	A	M01

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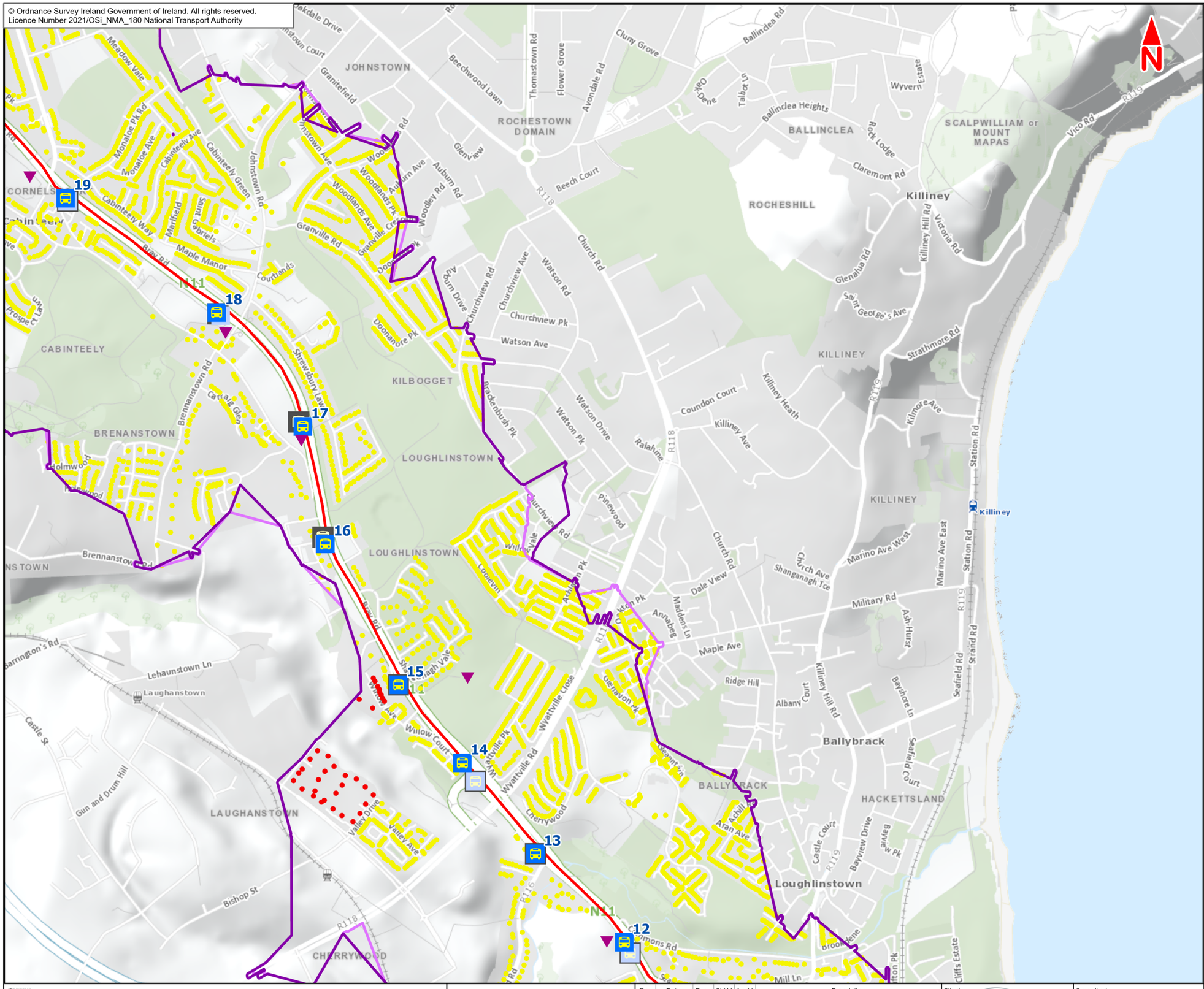

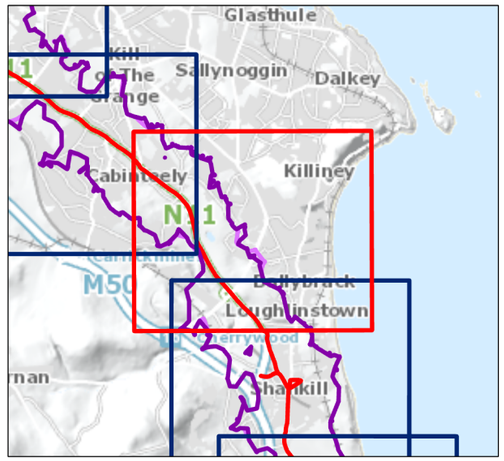

Legend

- Proposed Inbound Bus Stop
- Existing Inbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Proposed Core Bus Corridor
- Existing Stops 15 min. Catchments Limit
- Proposed Stops 15 min. Catchments Limit

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 62.5125 250 375 500 625 m

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Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Inbound Stops 15min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0305	5 of 7	A	M01

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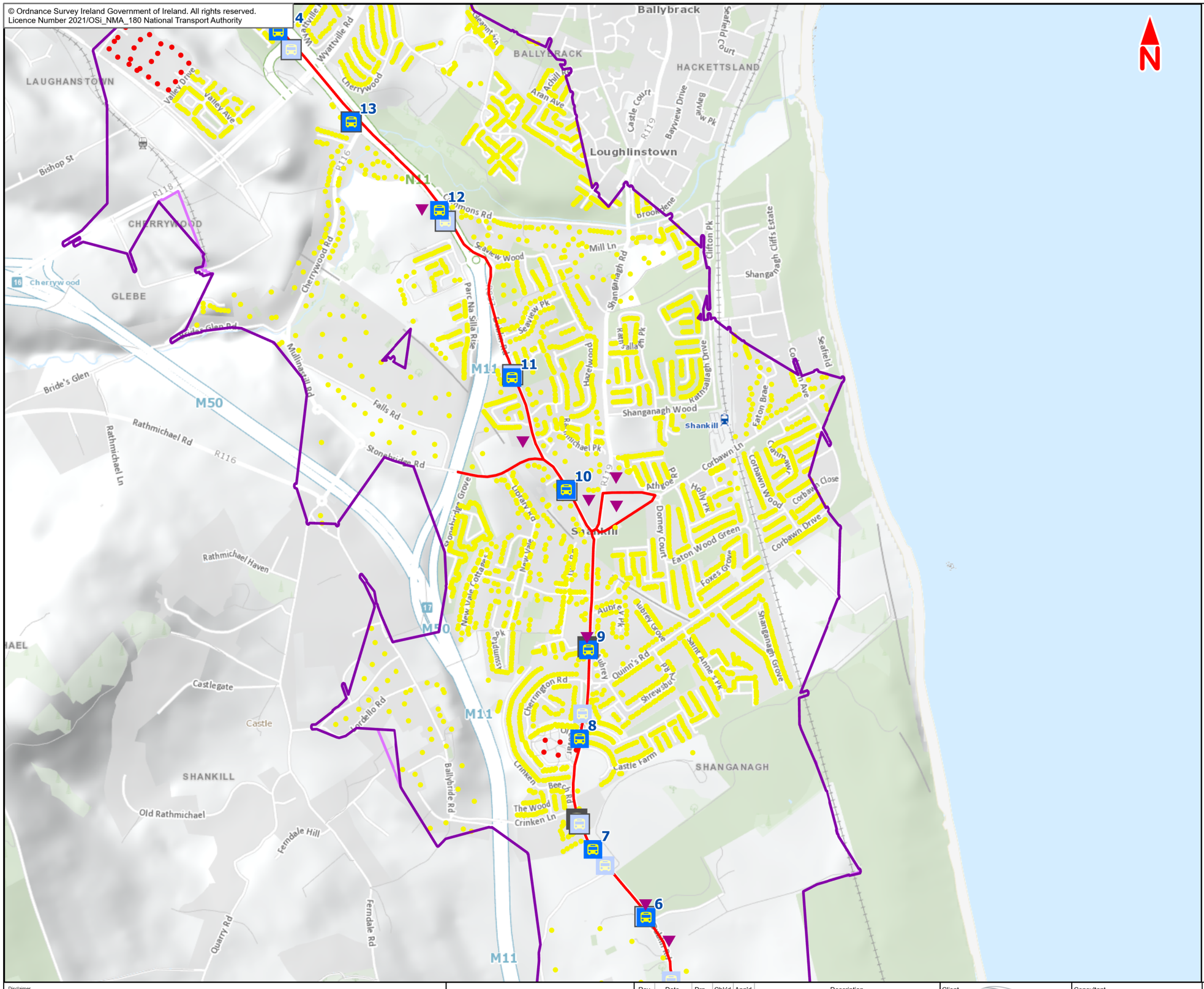

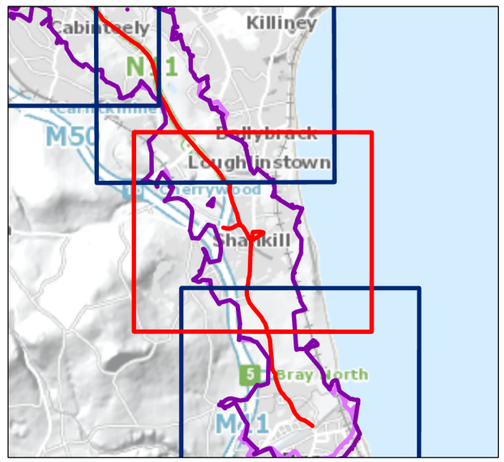

Legend

- Proposed Inbound Bus Stop
- Existing Inbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Proposed Core Bus Corridor
- Existing Stops 15 min. Catchments Limit
- Proposed Stops 15 min. Catchments Limit

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 62.5125 250 375 500 625 m

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Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Inbound Stops 15min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0306	6 of 7	A	M01

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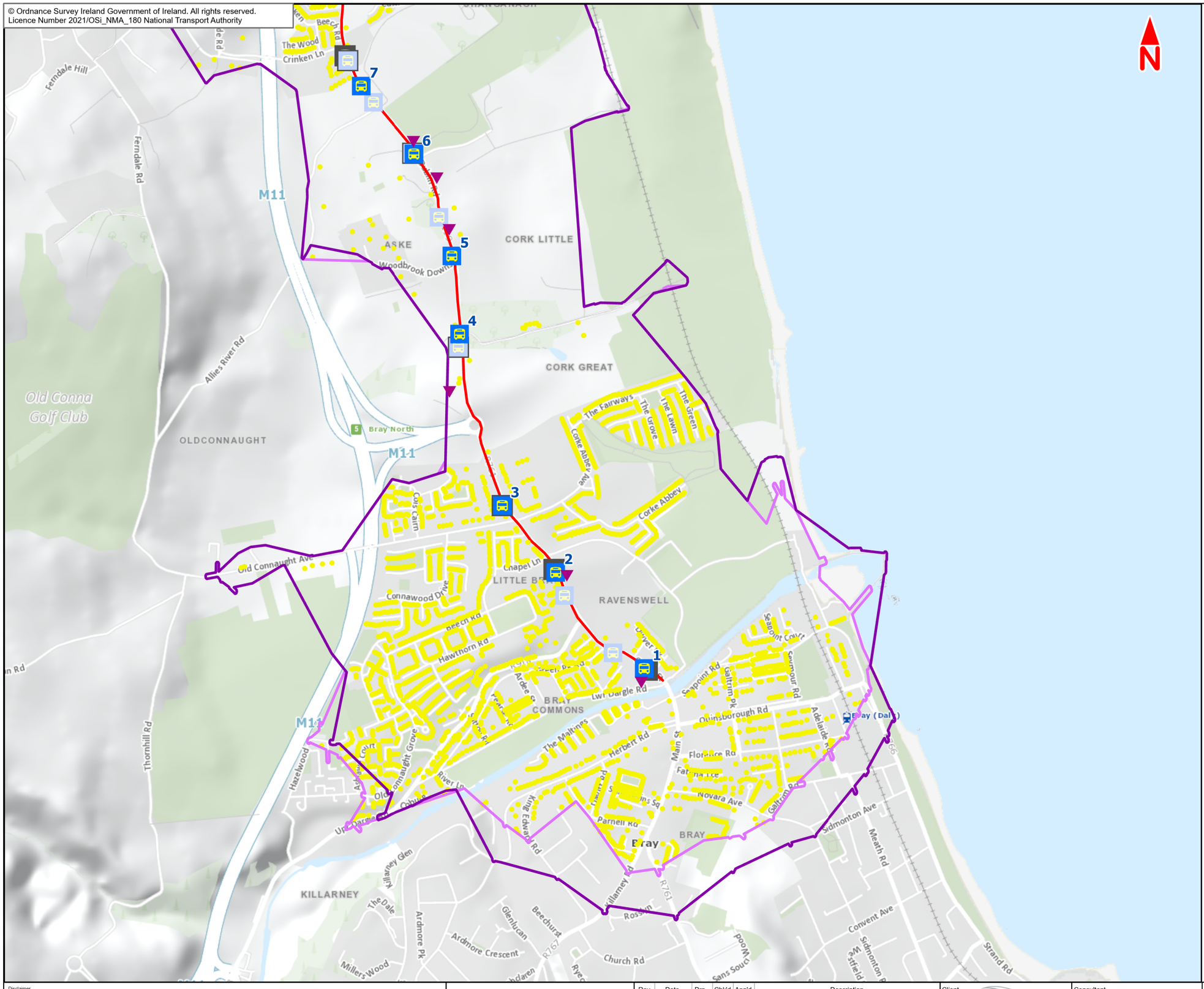

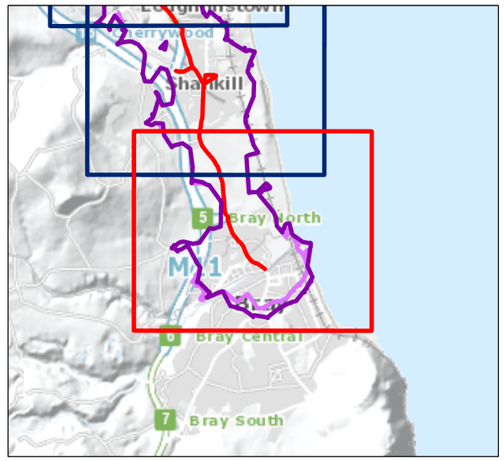

Legend

- Proposed Inbound Bus Stop
- Existing Inbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Proposed Core Bus Corridor
- Existing Stops 15 min. Catchments Limit
- Proposed Stops 15 min. Catchments Limit

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 62.5125 250 375 500 625 m

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Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS**

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Inbound Stops 15min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0307	7 of 7	A	M01

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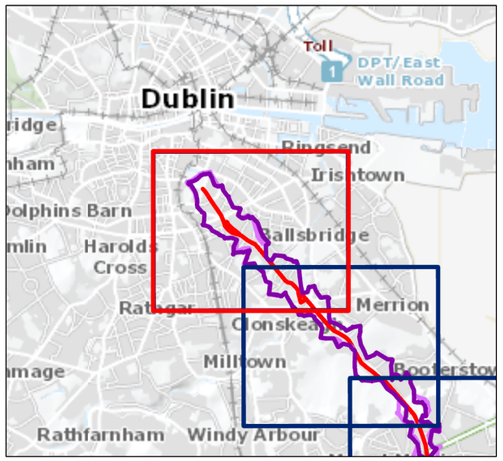

Legend

- Proposed Outbound Bus Stop
- Existing Outbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Existing Stops 05 min. Catchments Limit
- Proposed Stops 05 min. Catchments Limit
- Proposed Core Bus Corridor

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 50 100 200 300 400 500 m

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Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Outbound Stops 05min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0401	1 of 8	A	M01

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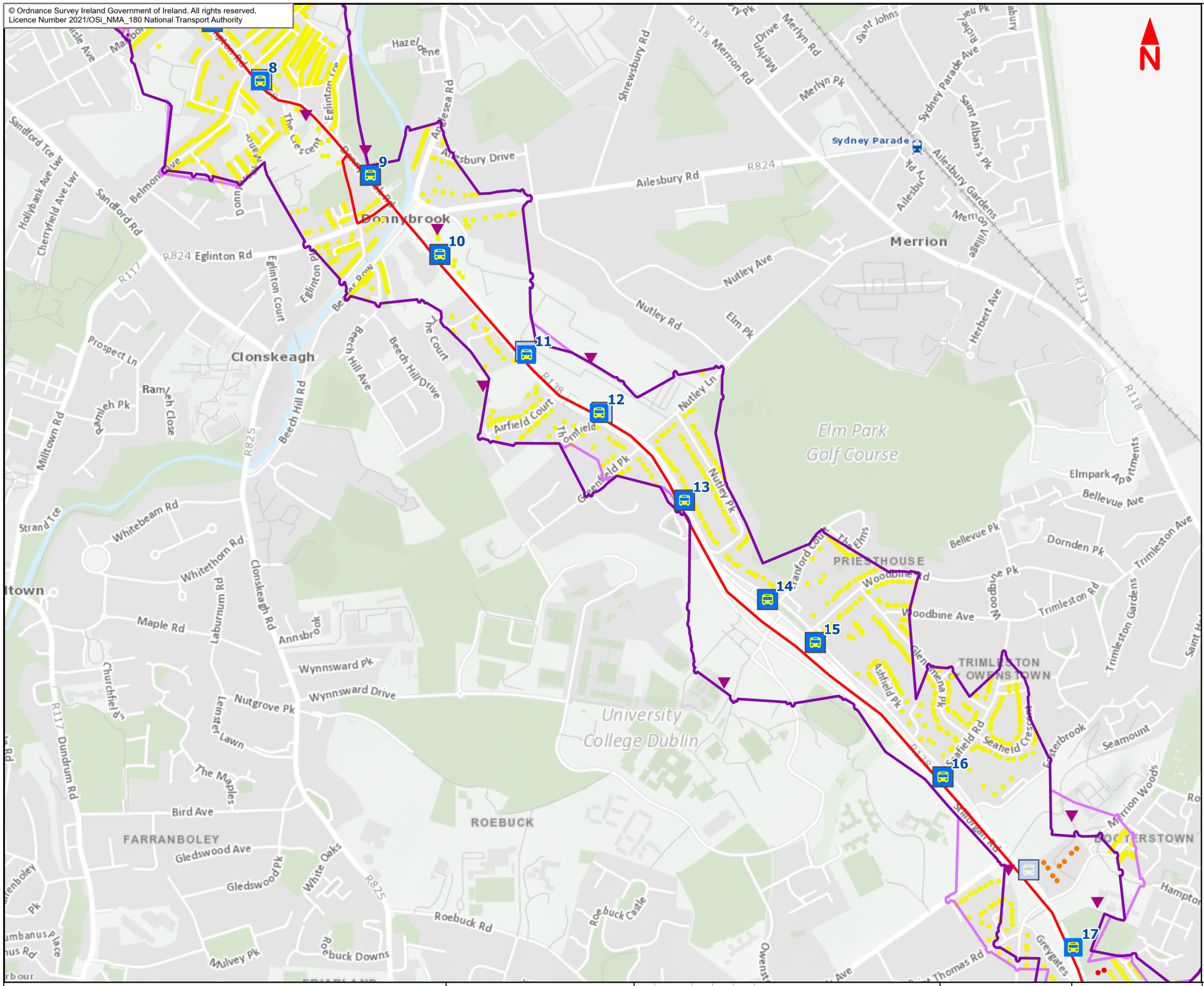

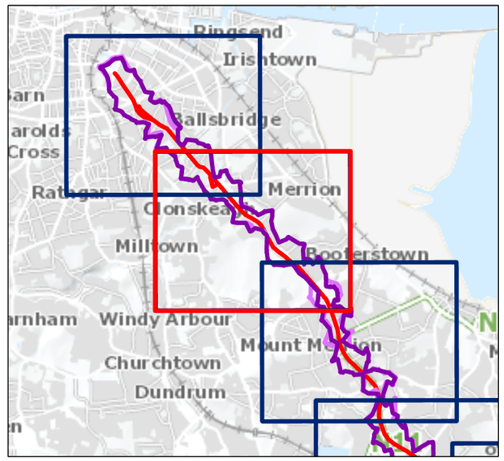

Legend

- Proposed Outbound Bus Stop
- Existing Outbound Bus Stop
- Bray PC2 Bus Stop Points
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- Existing Stops 05 min. Catchments Limit
- Proposed Stops 05 min. Catchments Limit
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0 50 100 200 300 400 500 m

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Programme Title: BUSCONNECTS DUBLIN
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Outbound Stops 05min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0402	2 of 8	A	M01

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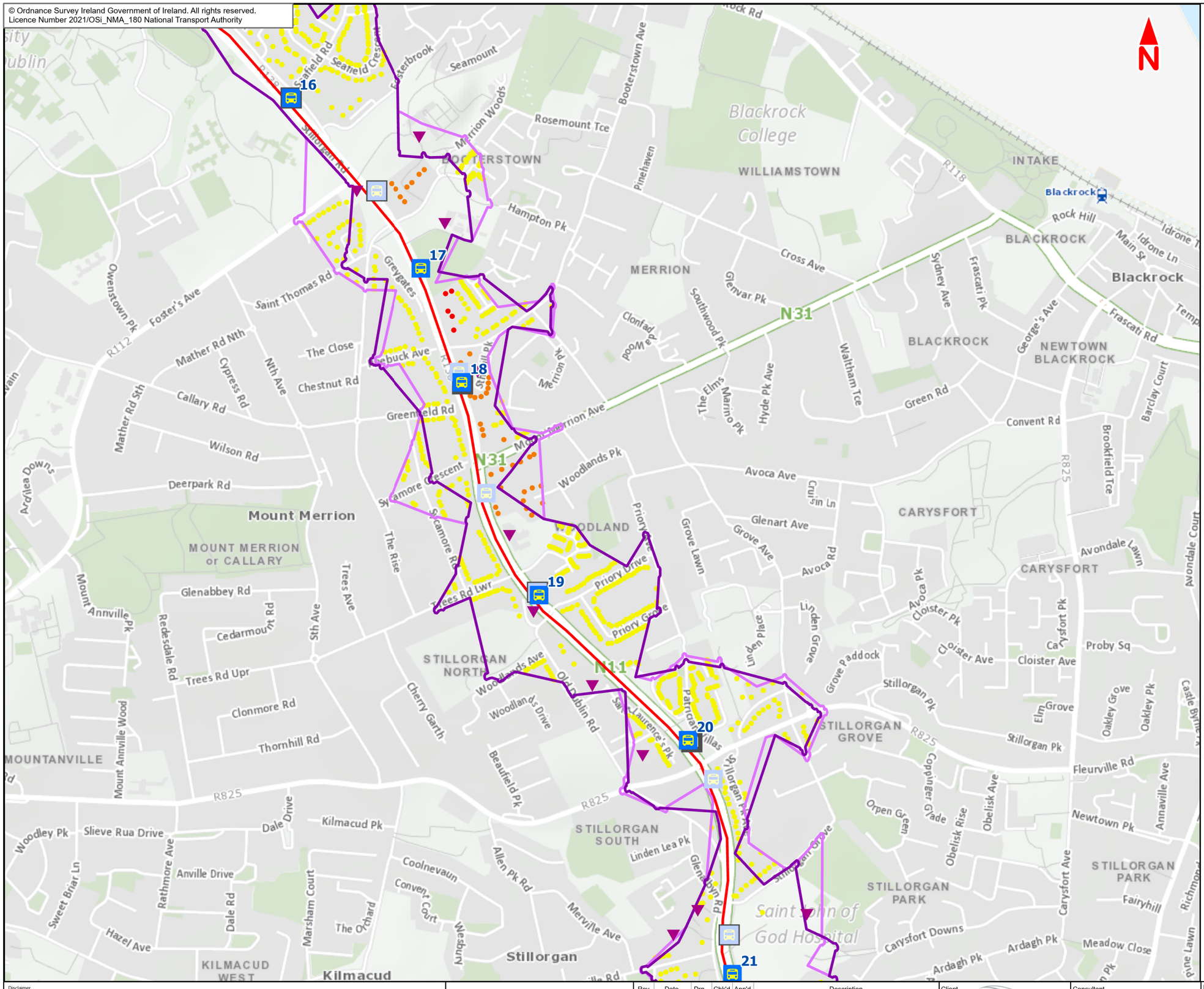

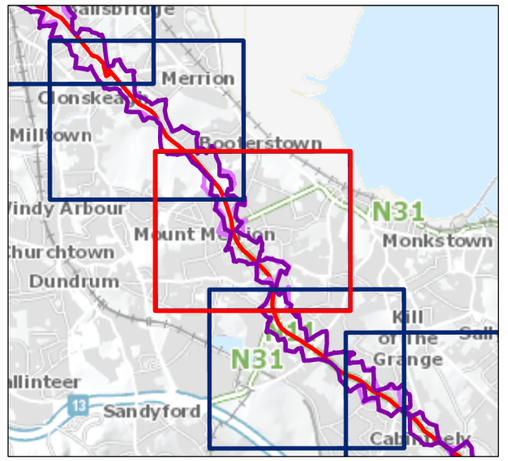

Legend

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- Existing Outbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Existing Stops 05 min. Catchments Limit
- Proposed Stops 05 min. Catchments Limit
- Proposed Core Bus Corridor

Estimated Population in Building

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- 11 - 30
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0 50 100 200 300 400 500 m

BAR SCALE

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Project Ireland 2040 Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
M01	DEC 2021	LF	PDF	JB	ISSUE FOR PHASE 4: PLANNING

Client: NTA — Údarás Náisiúnta Iompair, National Transport Authority

Consultant: Jacobs

Date	Scale @ A3	Drawn	Checked	Approved
04/02/2022	1:10 000	LF	PDF	JB

Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Outbound Stops 05min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0403	3 of 8	A	M01

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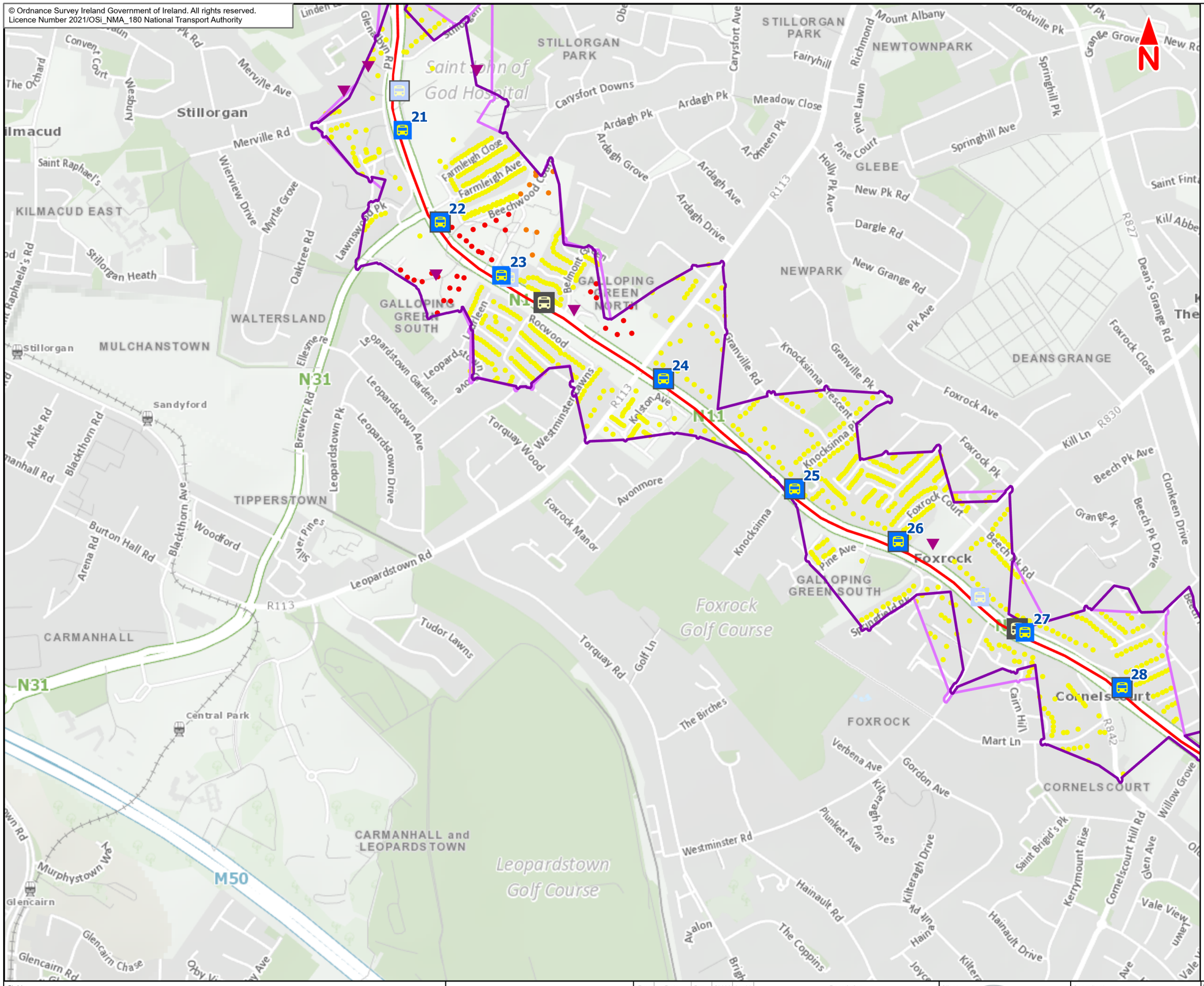

Legend

- Proposed Outbound Bus Stop
- Existing Outbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Existing Stops 05 min. Catchments Limit
- Proposed Stops 05 min. Catchments Limit
- Proposed Core Bus Corridor

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 50 100 200 300 400 500 m

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Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Consultant: Jacobs

Date	Scale @ A3	Drawn	Checked	Approved
04/02/2022	1:10 000	LF	PDF	JB

Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Outbound Stops 05min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0404	4 of 8	A	M01

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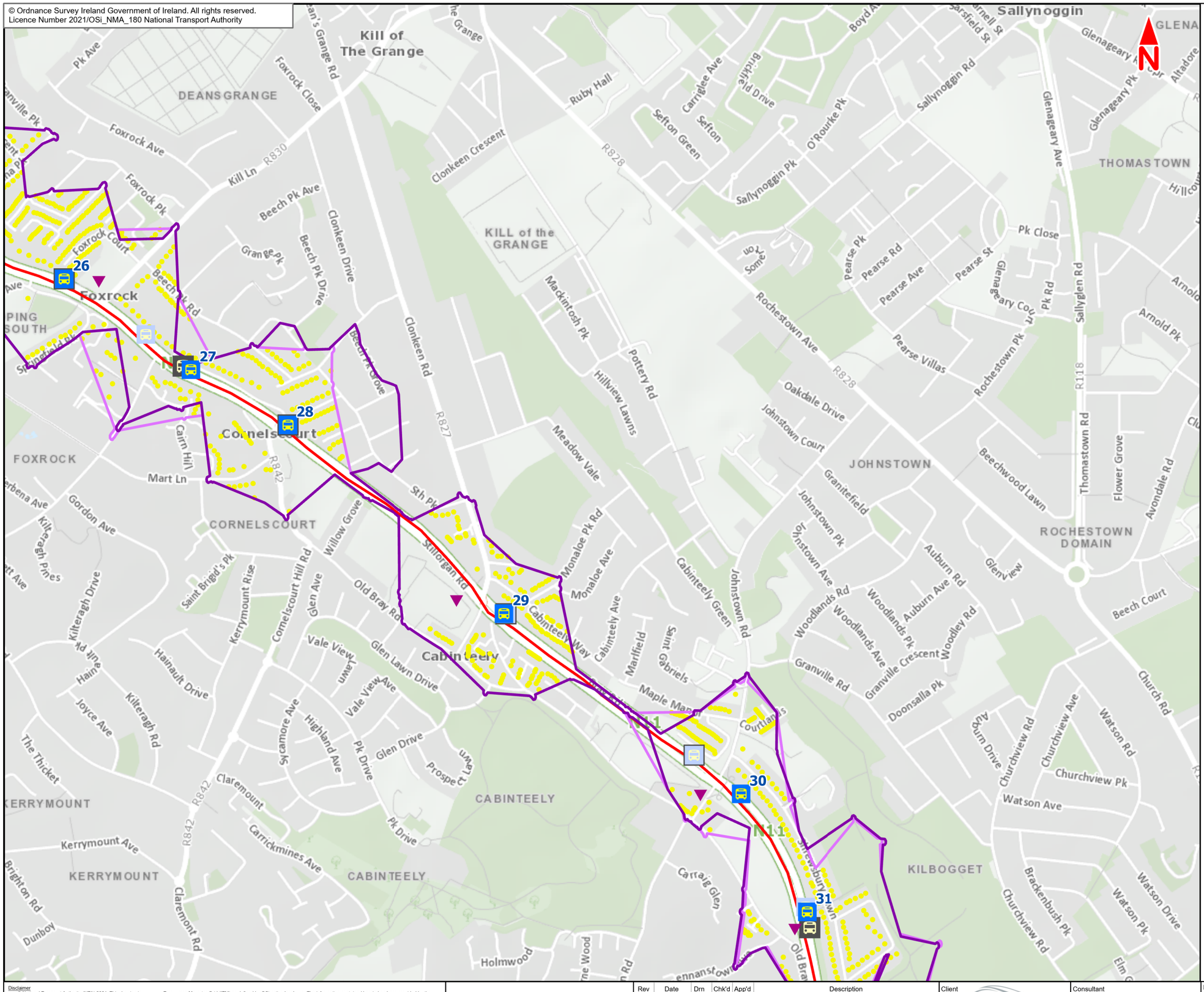

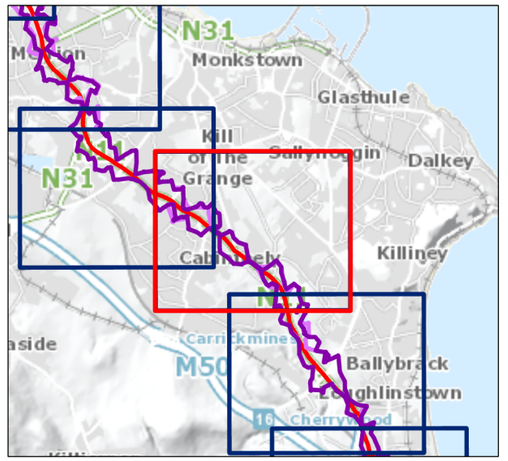

Legend

- Proposed Outbound Bus Stop
- Existing Outbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Existing Stops 05 min. Catchments Limit
- Proposed Stops 05 min. Catchments Limit
- Proposed Core Bus Corridor

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 50 100 200 300 400 500 m

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Consultant: Jacobs

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Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Outbound Stops 05min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0405	5 of 8	A	M01

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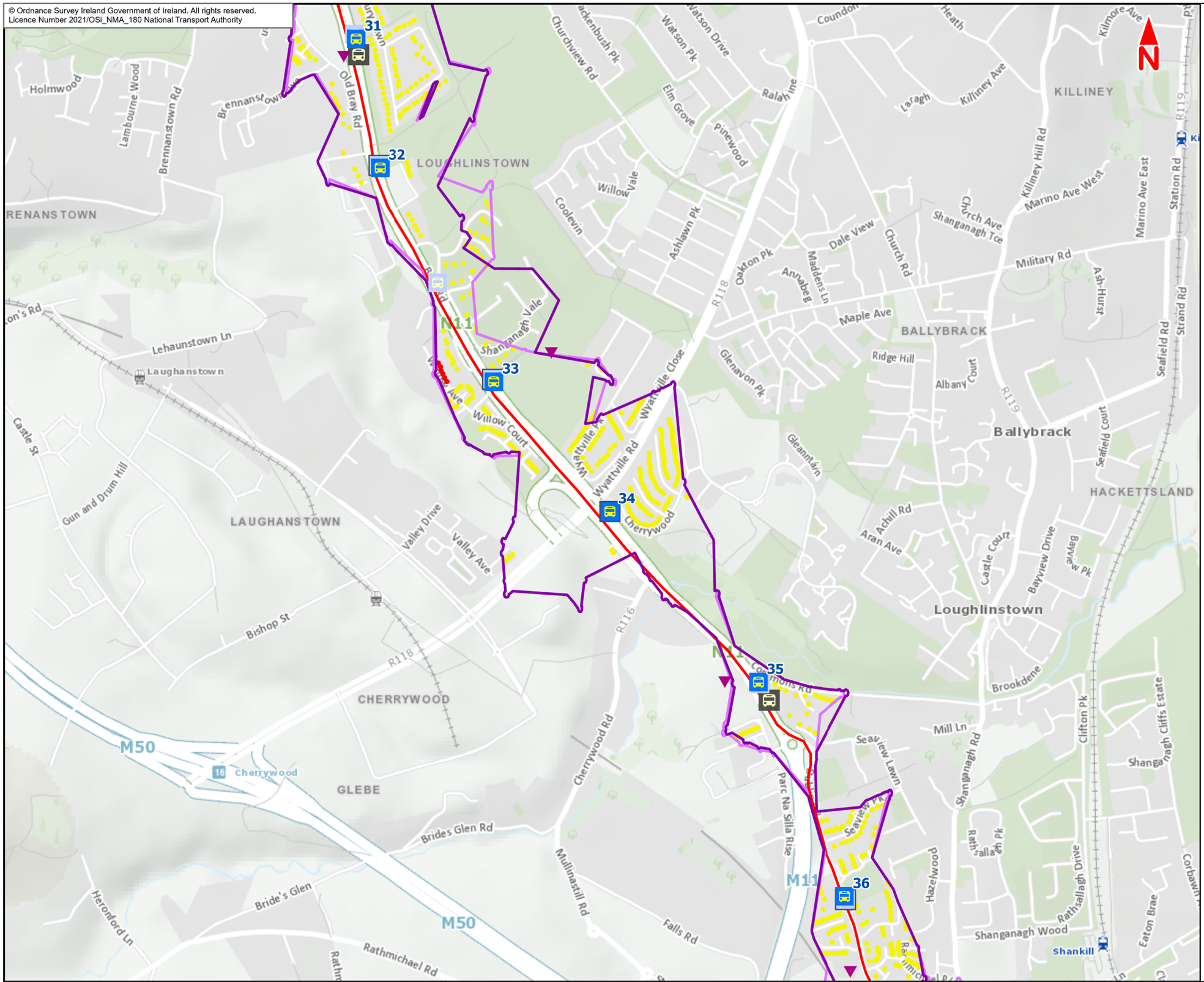

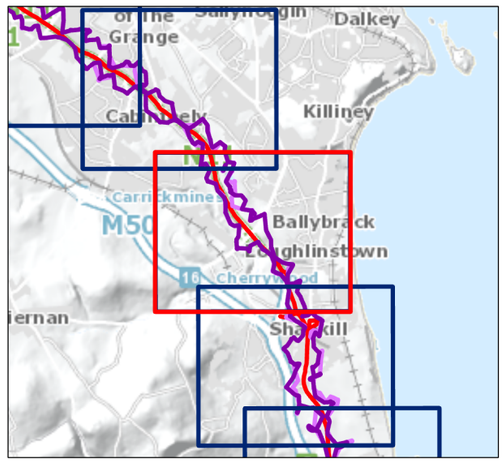

Legend

- Proposed Outbound Bus Stop
- Existing Outbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Existing Stops 05 min. Catchments Limit
- Proposed Stops 05 min. Catchments Limit
- Proposed Core Bus Corridor

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 50 100 200 300 400 500 m

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Date	Scale @ A3	Drawn	Checked	Approved
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Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Outbound Stops 05min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0406	6 of 8	A	M01

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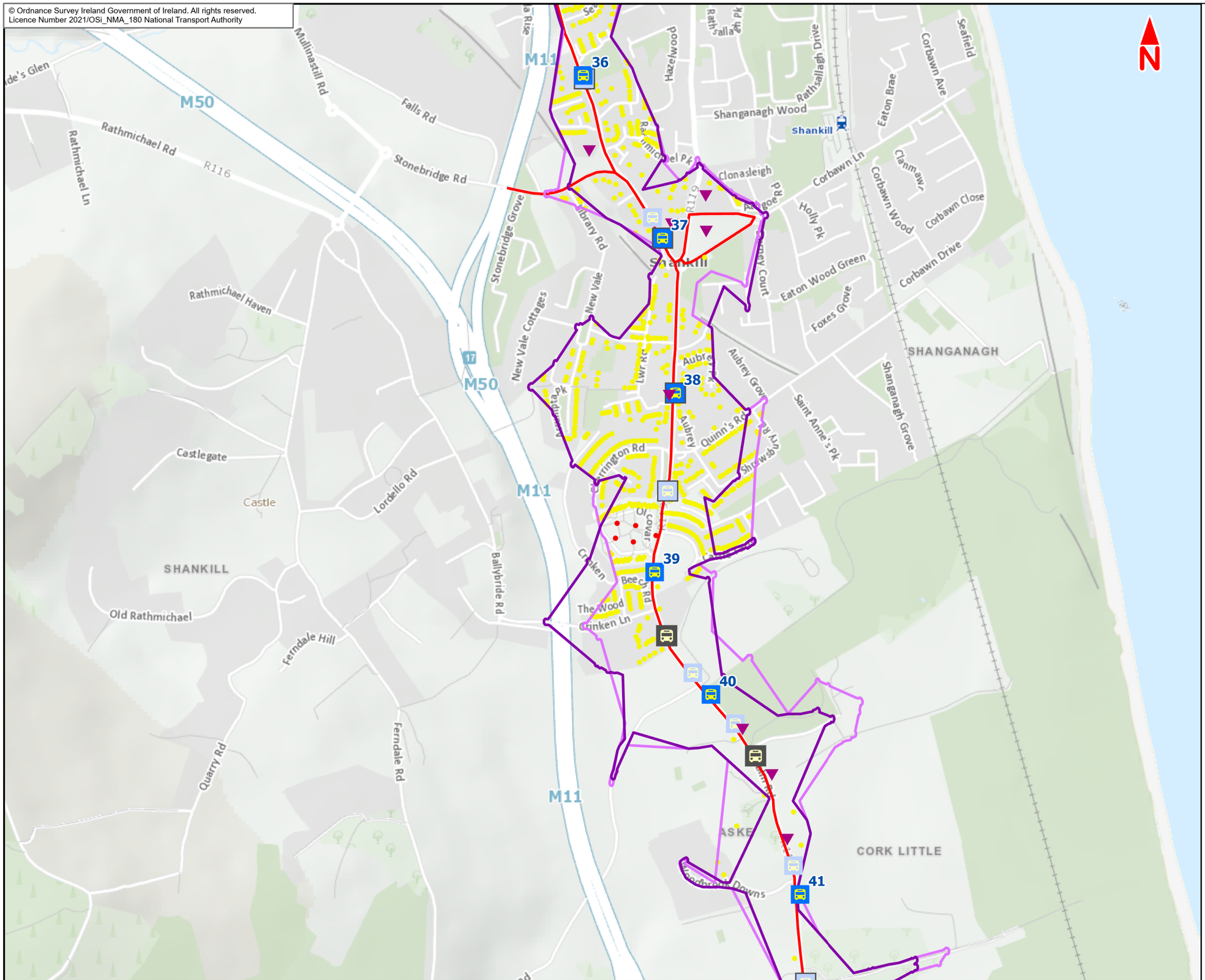

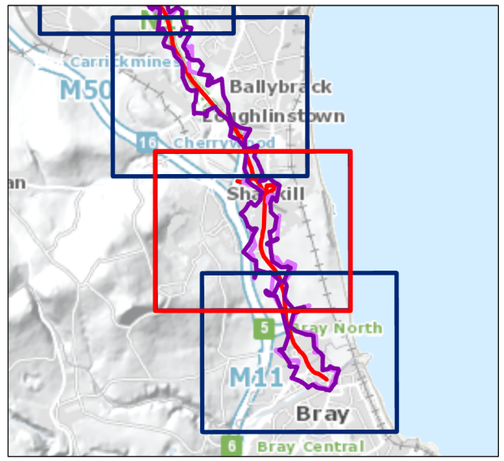

Legend

- Proposed Outbound Bus Stop
- Existing Outbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Existing Stops 05 min. Catchments Limit
- Proposed Stops 05 min. Catchments Limit
- Proposed Core Bus Corridor

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 50 100 200 300 400 500 m

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Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Consultant: Jacobs

Date	Scale @ A3	Drawn	Checked	Approved
04/02/2022	1:10 000	LF	PDF	JB

Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Outbound Stops 05min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0407	7 of 8	A	M01

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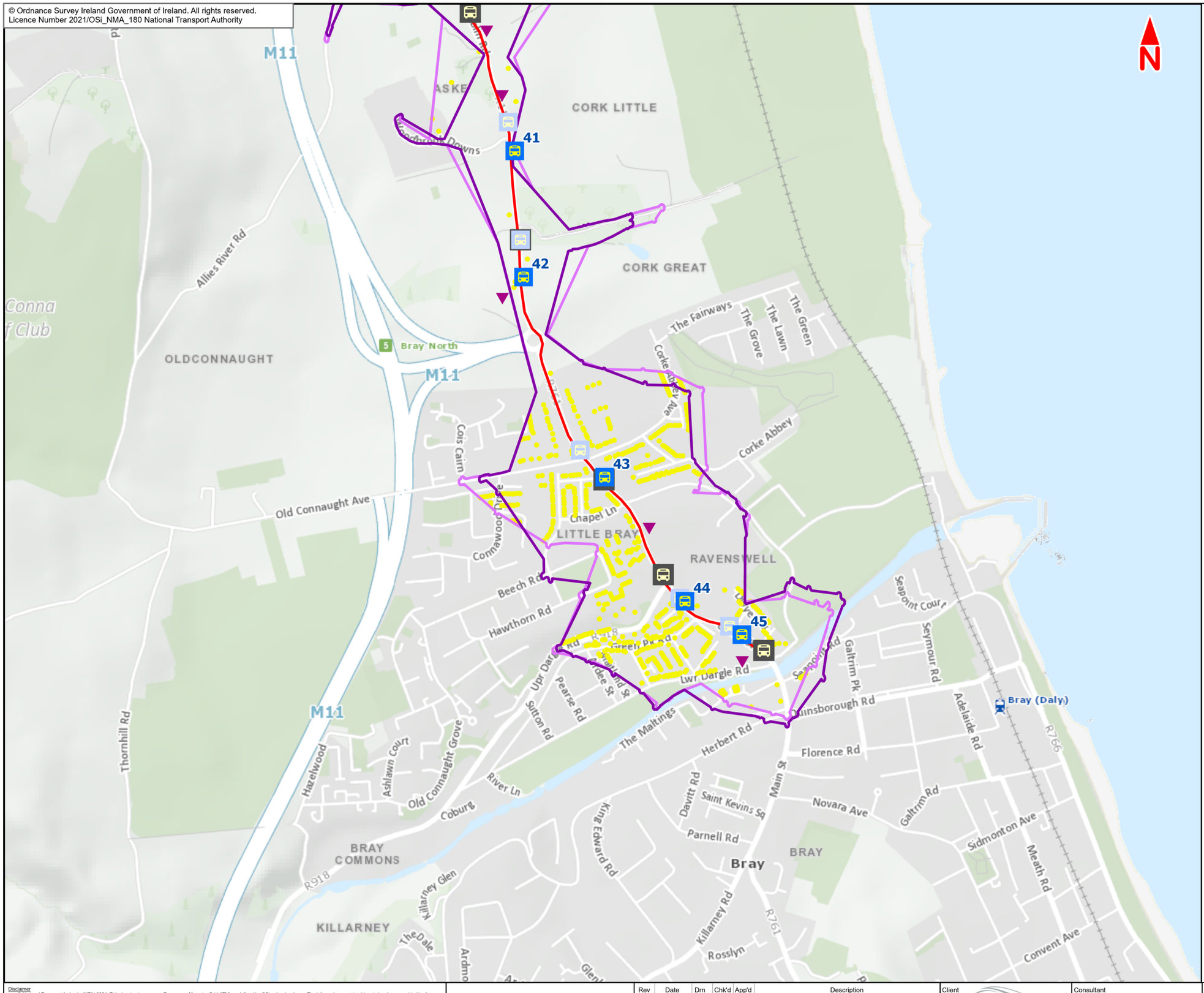

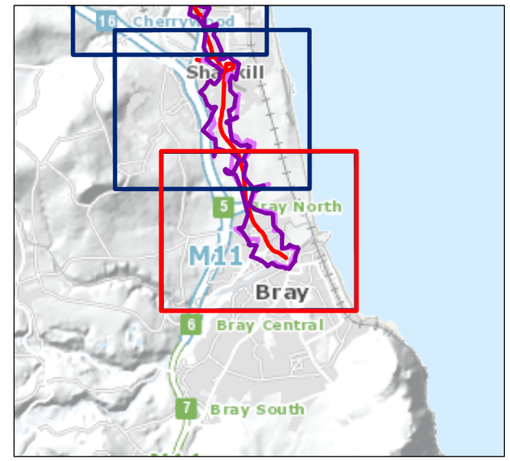

Legend

- Proposed Outbound Bus Stop
- Existing Outbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Existing Stops 05 min. Catchments Limit
- Proposed Stops 05 min. Catchments Limit
- Proposed Core Bus Corridor

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 50 100 200 300 400 500 m

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Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Outbound Stops 05min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0408	8 of 8	A	M01

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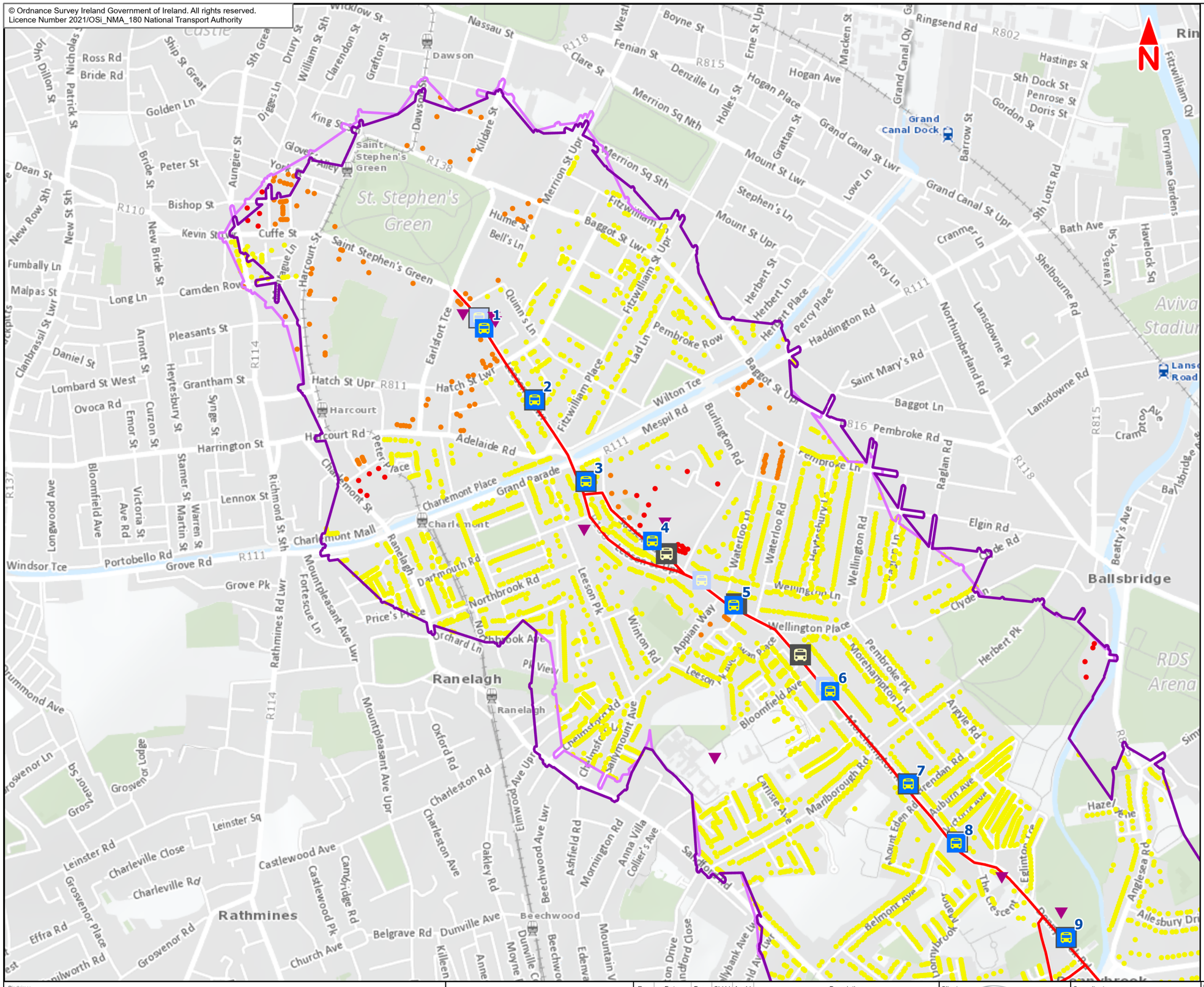

Legend

- Proposed Outbound Bus Stop
- Existing Outbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Existing Stops 10 min. Catchments Limit
- Proposed Stops 10 min. Catchments Limit
- Proposed Core Bus Corridor

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 50 100 200 300 400 500 m

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Client: NTA — Údarás Náisiúnta Iompair, National Transport Authority

Consultant: Jacobs

Date	Scale @ A3	Drawn	Checked	Approved
15/12/2021	1:10 000	LF	PDF	JB

Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Outbound Stops 10min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0501	1 of 8	A	M01

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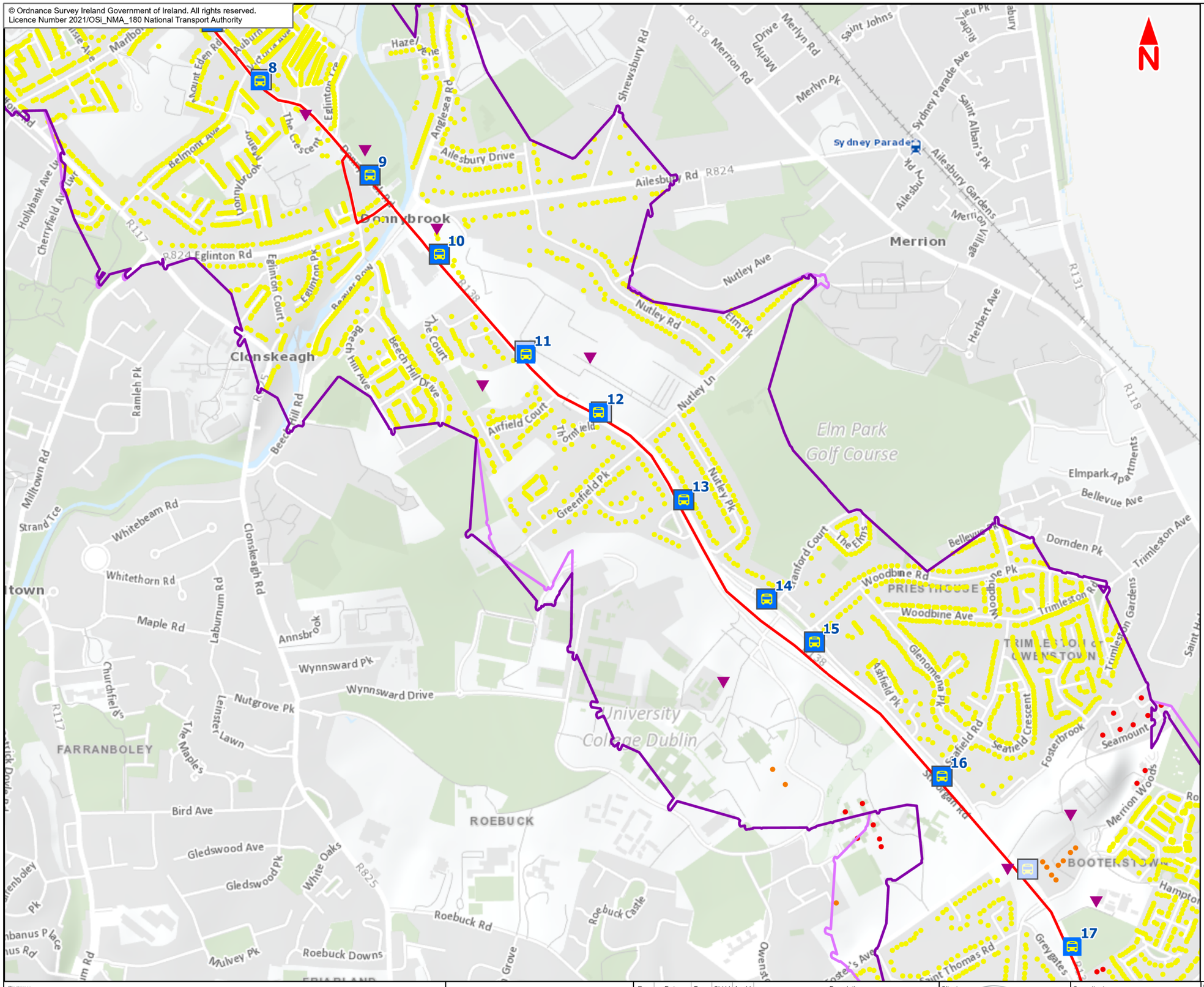

Legend

- Proposed Outbound Bus Stop
- Existing Outbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Existing Stops 10 min. Catchments Limit
- Proposed Stops 10 min. Catchments Limit
- Proposed Core Bus Corridor

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 50 100 200 300 400 500 m

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Project Ireland 2040
Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
M01	DEC 2021	LF	PDF	JB	ISSUE FOR PHASE 4: PLANNING

Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Consultant: Jacobs

Date	Scale @ A3	Drawn	Checked	Approved
15/12/2021	1:10 000	LF	PDF	JB

Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Outbound Stops 10min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0502	2 of 8	A	M01

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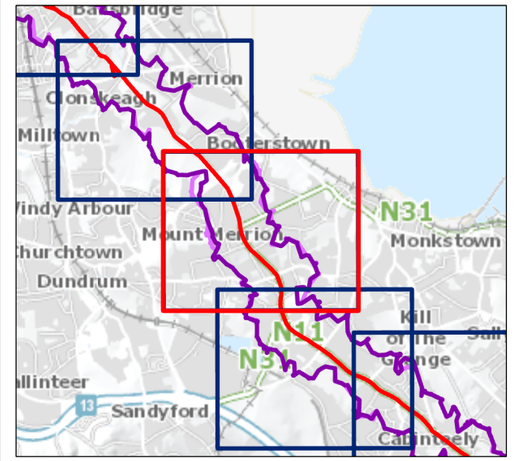

Legend

- Proposed Outbound Bus Stop
- Existing Outbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Existing Stops 10 min. Catchments Limit
- Proposed Stops 10 min. Catchments Limit
- Proposed Core Bus Corridor

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 50 100 200 300 400 500 m

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Project Ireland 2040 Building Ireland's Future

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Client: NTA — Údarás Náisiúnta Iompair, National Transport Authority

Consultant: Jacobs

Date	Scale @ A3	Drawn	Checked	Approved
15/12/2021	1:10 000	LF	PDF	JB

Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Outbound Stops 10min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0503	3 of 8	A	M01

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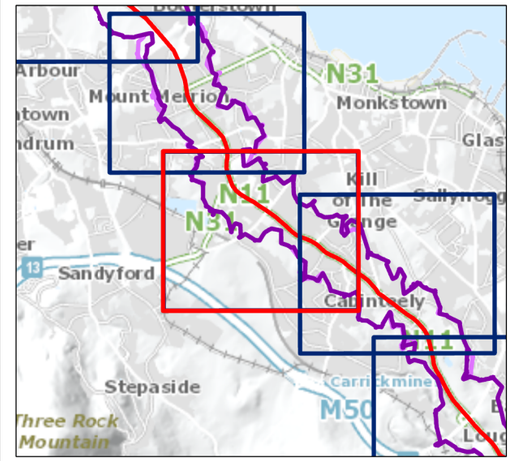

Legend

- Proposed Outbound Bus Stop
- Existing Outbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Existing Stops 10 min. Catchments Limit
- Proposed Stops 10 min. Catchments Limit
- Proposed Core Bus Corridor

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 50 100 200 300 400 500 m

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Client: NTA Údarás Náisiúnta Iompair National Transport Authority

Consultant: Jacobs

Date	Scale @ A3	Drawn	Checked	Approved
15/12/2021	1:10 000	LF	PDF	JB

Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS**

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Outbound Stops 10min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0504	4 of 8	A	M01

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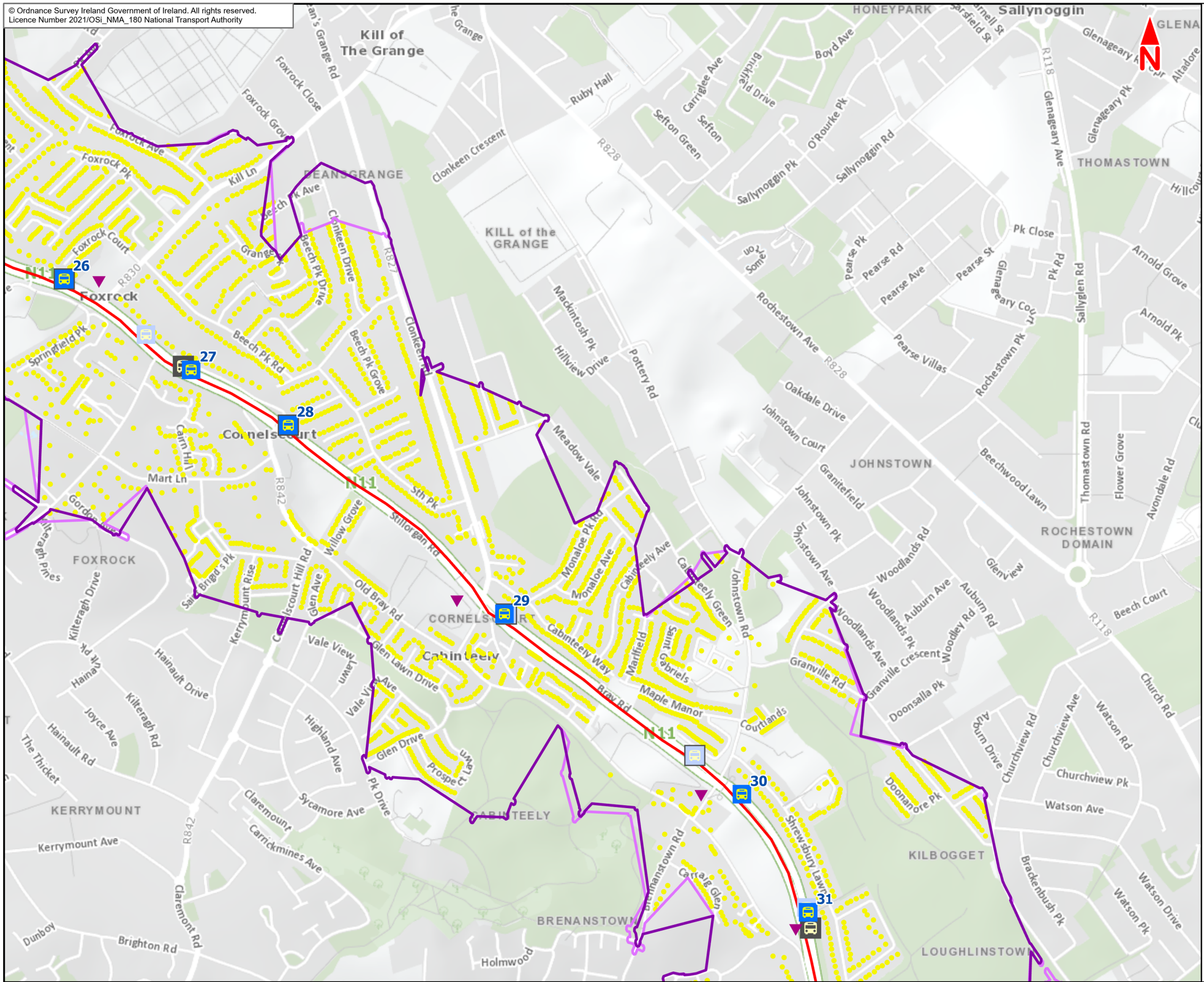

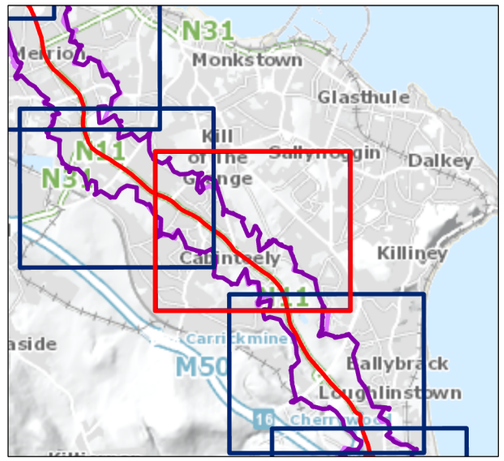

Legend

- Proposed Outbound Bus Stop
- Existing Outbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Existing Stops 10 min. Catchments Limit
- Proposed Stops 10 min. Catchments Limit
- Proposed Core Bus Corridor

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 50 100 200 300 400 500 m

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Client: NTA Údarás Náisiúnta Iompair National Transport Authority
Consultant: Jacobs

Date	Scale @ A3	Drawn	Checked	Approved
15/12/2021	1:10 000	LF	PDF	JB

Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS**

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Outbound Stops 10min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0505	5 of 8	A	M01

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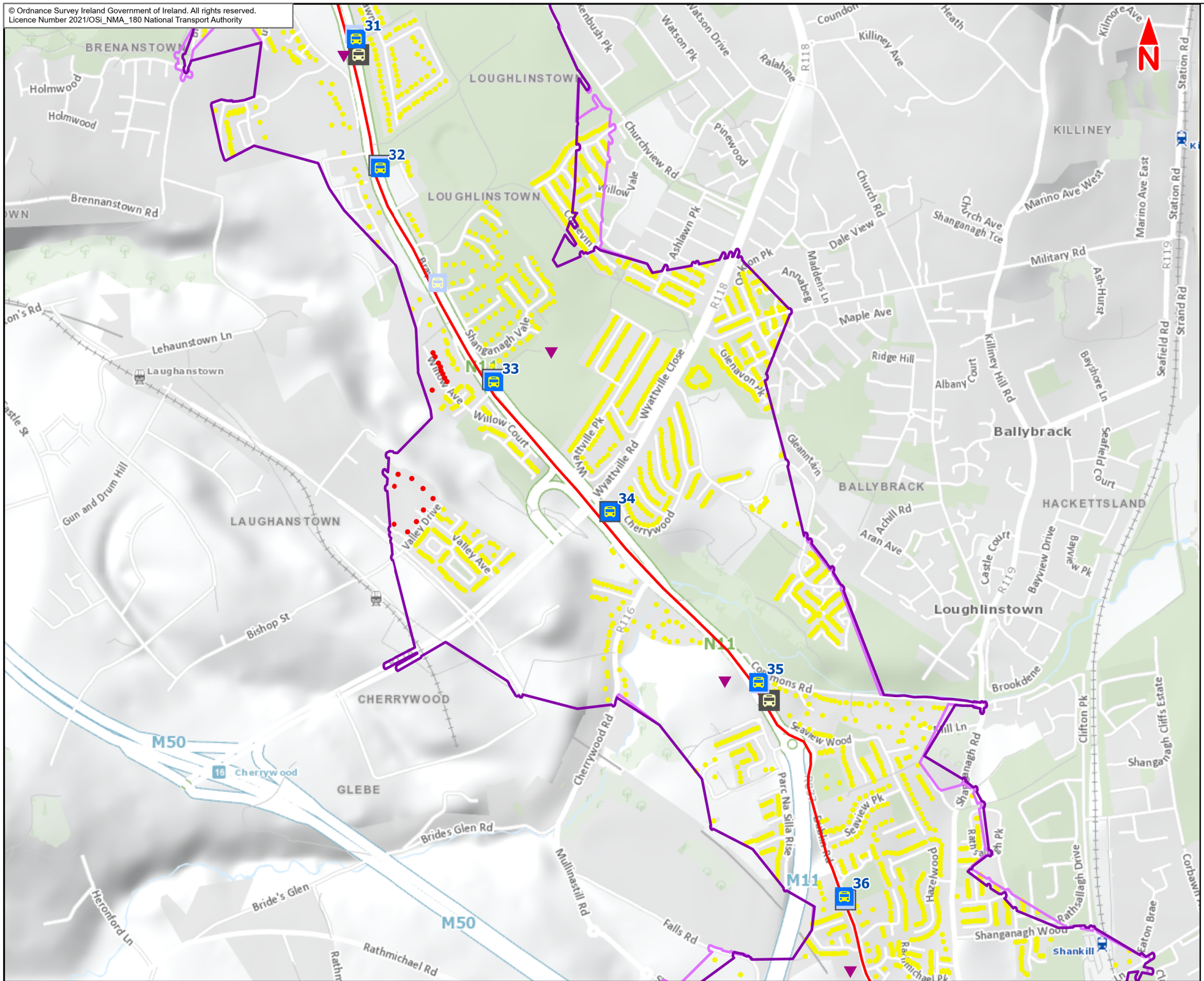

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Client: NTA — Údarás Náisiúnta Iompair, National Transport Authority
Consultant: Jacobs

Date	Scale @ A3	Drawn	Checked	Approved
15/12/2021	1:10 000	LF	PDF	JB

Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Outbound Stops 10min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0506	6 of 8	A	M01

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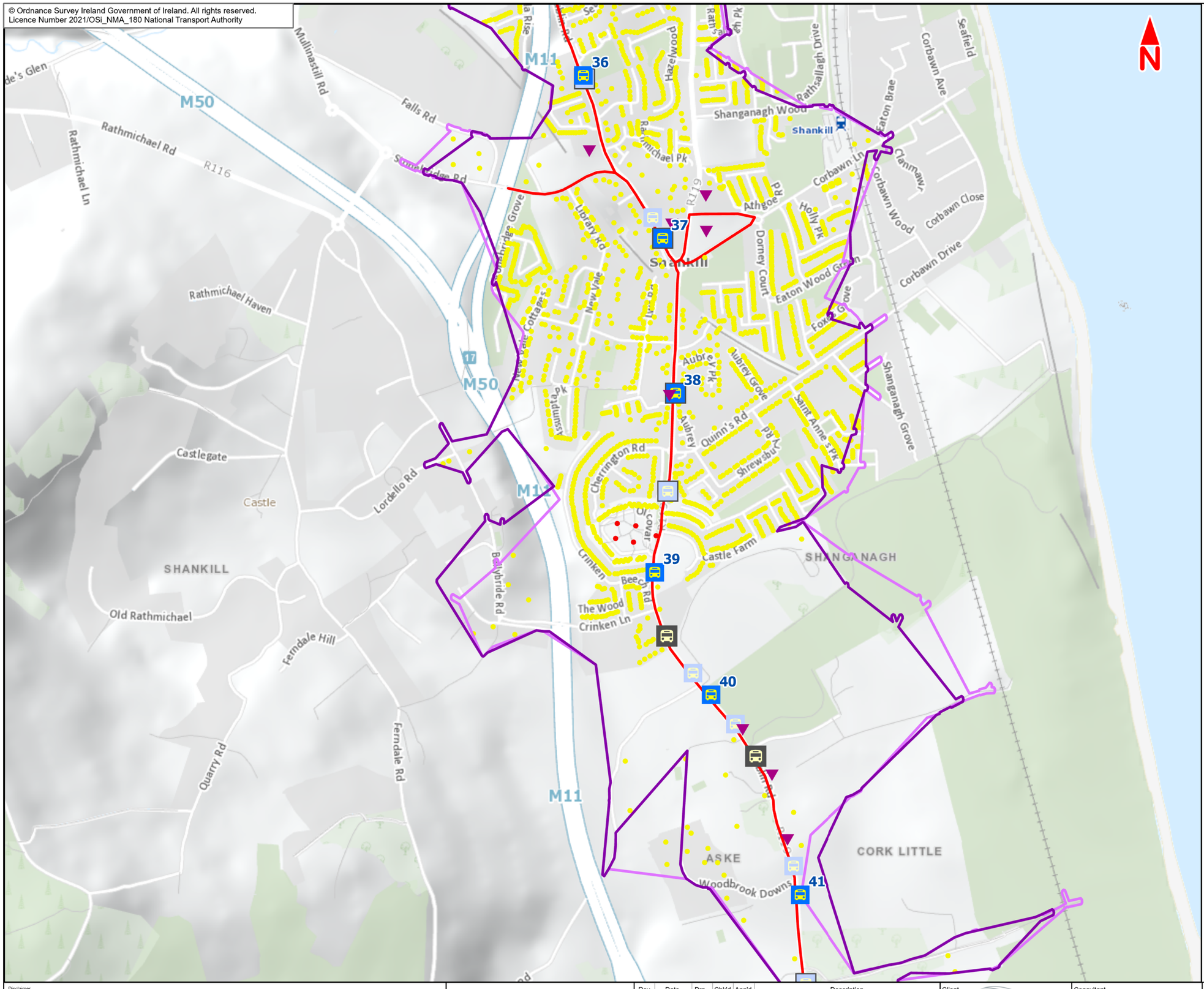

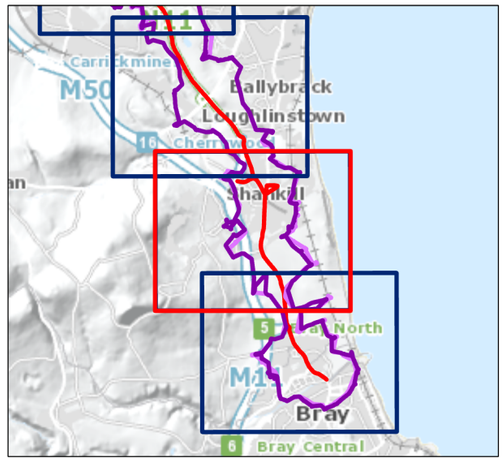

Legend

- Proposed Outbound Bus Stop
- Existing Outbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Existing Stops 10 min. Catchments Limit
- Proposed Stops 10 min. Catchments Limit
- Proposed Core Bus Corridor

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 50 100 200 300 400 500 m

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Client: NTA Údarás Náisiúnta Iompair / National Transport Authority

Consultant: Jacobs

Date	Scale @ A3	Drawn	Checked	Approved
15/12/2021	1:10 000	LF	PDF	JB

Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Outbound Stops 10min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0507	7 of 8	A	M01

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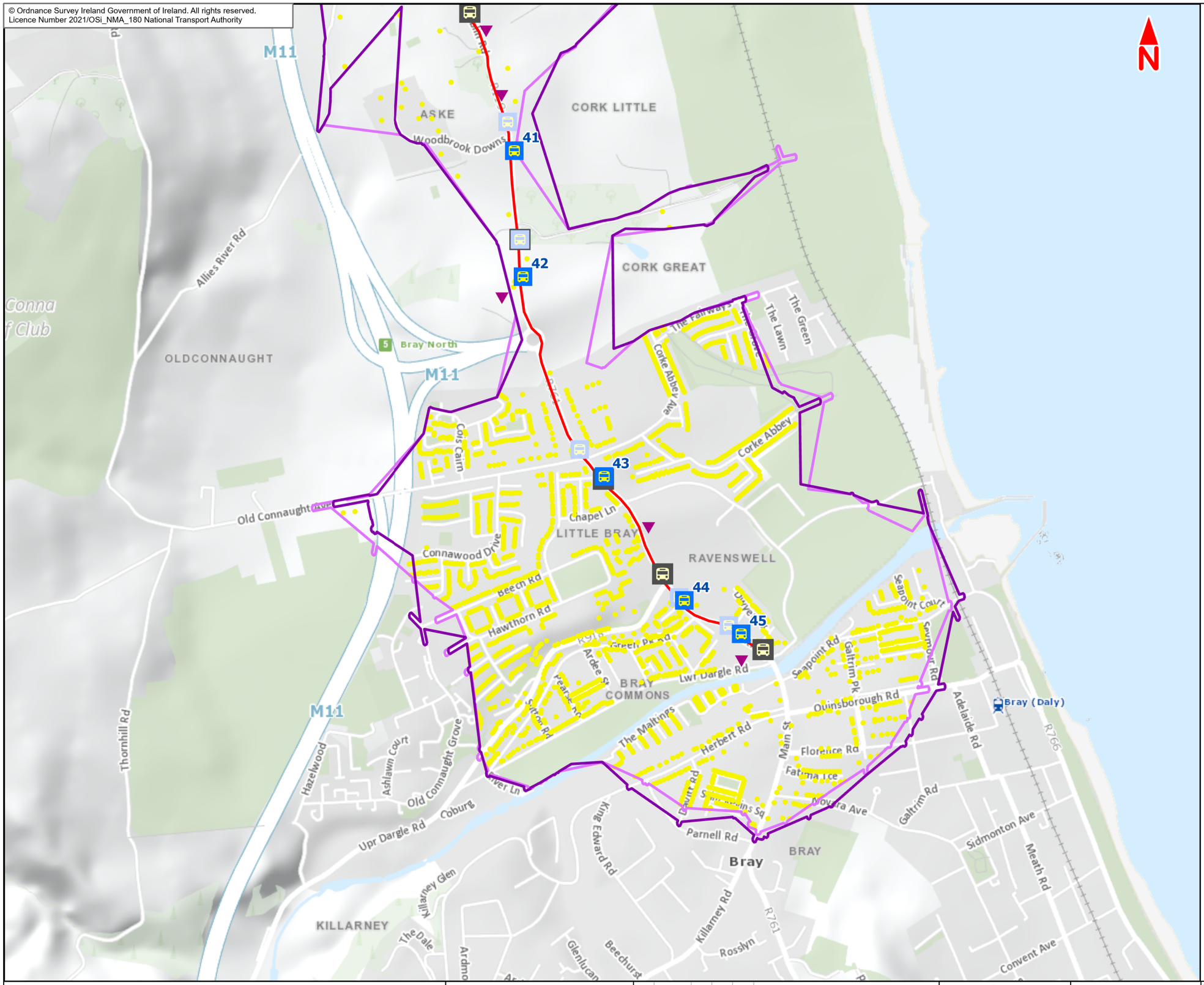

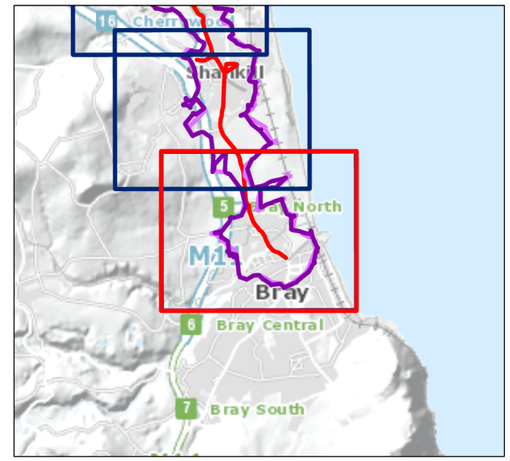

Legend

- Proposed Outbound Bus Stop
- Existing Outbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Existing Stops 10 min. Catchments Limit
- Proposed Stops 10 min. Catchments Limit
- Proposed Core Bus Corridor

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 50 100 200 300 400 500 m

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Consultant: Jacobs

Date	Scale @ A3	Drawn	Checked	Approved
15/12/2021	1:10 000	LF	PDF	JB

Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Outbound Stops 10min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0508	8 of 8	A	M01

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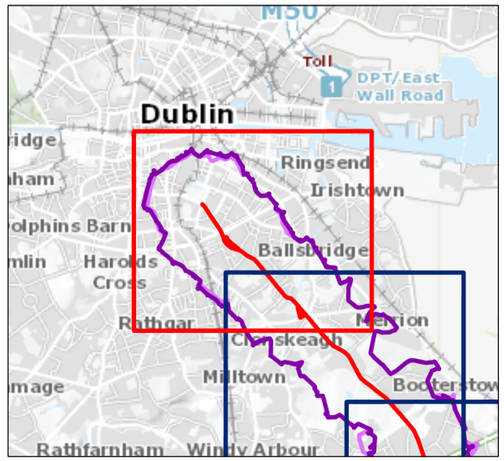

Legend

- Proposed Outbound Bus Stop
- Existing Outbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Existing Stops 15 min. Catchments Limit
- Proposed Stops 15 min. Catchments Limit
- Proposed Core Bus Corridor

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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0 75 150 300 450 600 m

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Client: NTA — Údarás Náisiúnta Iompair, National Transport Authority
Consultant: Jacobs

Date	Scale @ A3	Drawn	Checked	Approved
15/12/2021	1:12 500	LF	PDF	JB

Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Outbound Stops 15min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0601	1 of 7	A	M01

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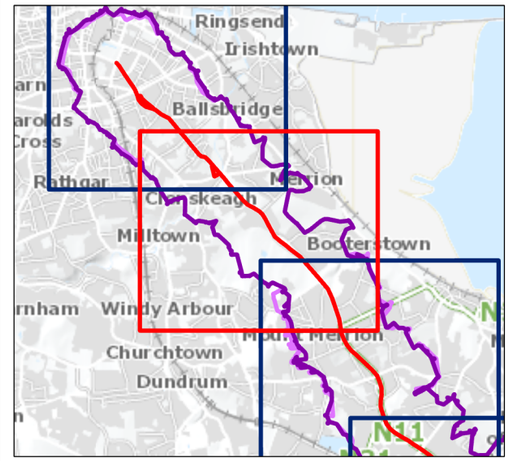

Legend

- Proposed Outbound Bus Stop
- Existing Outbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Existing Stops 15 min. Catchments Limit
- Proposed Stops 15 min. Catchments Limit
- Proposed Core Bus Corridor

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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Consultant: Jacobs

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Project Code	Originator Code	QMS Code
32110900	JAC	

Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Outbound Stops 15min. Catchment

Drawing File Name	Sheet Number	Status	Rev
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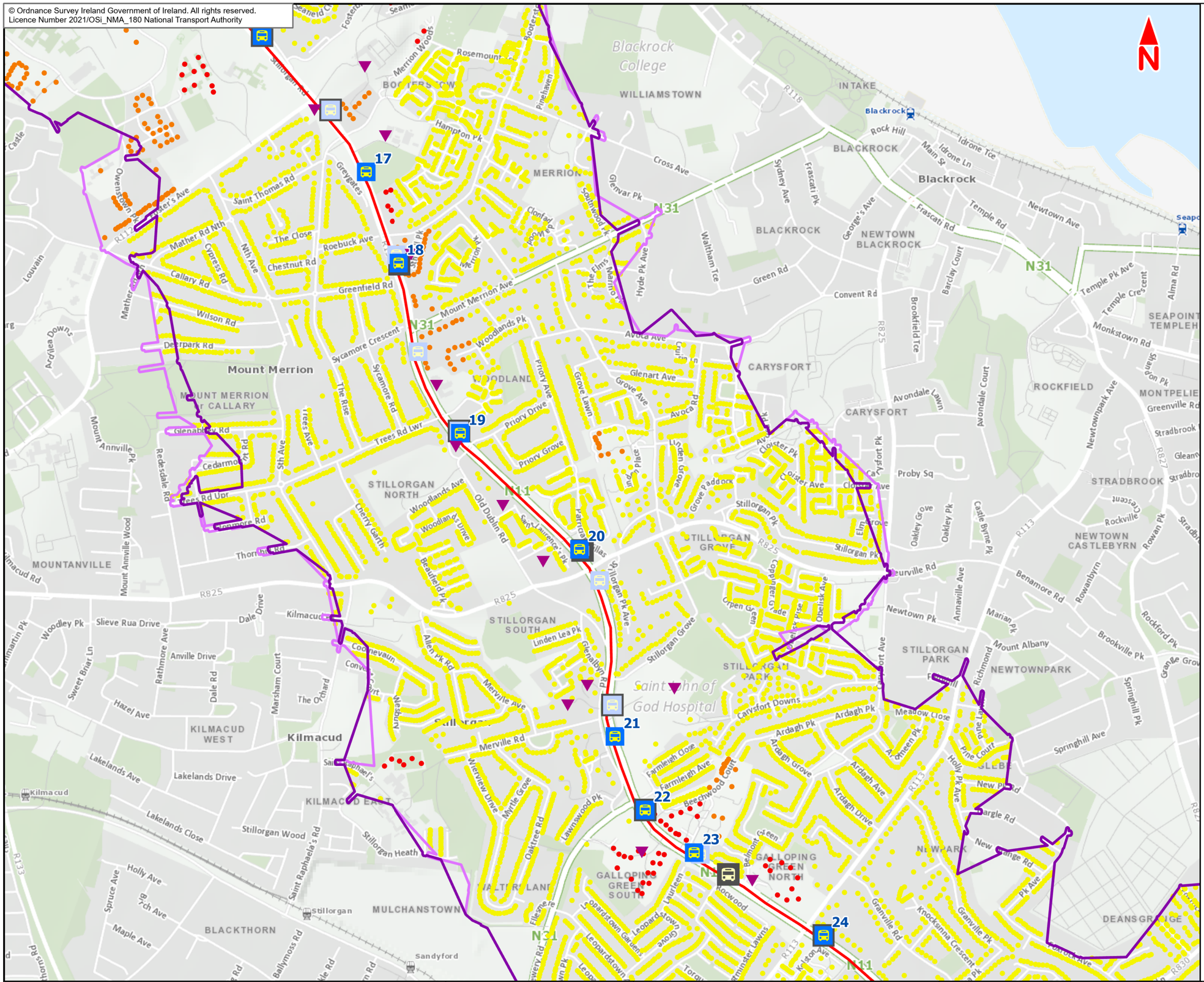

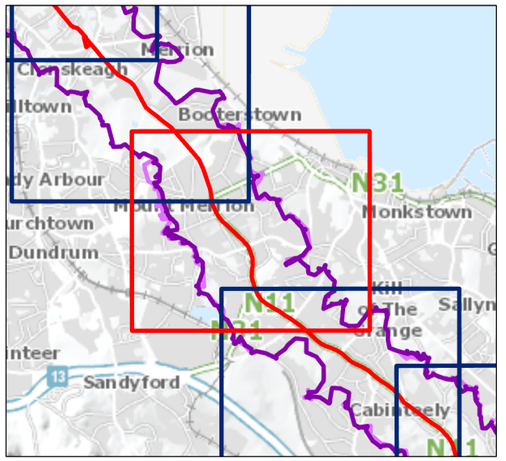

Legend

- Proposed Outbound Bus Stop
- Existing Outbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Existing Stops 15 min. Catchments Limit
- Proposed Stops 15 min. Catchments Limit
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Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Outbound Stops 15min. Catchment

Drawing File Name	Sheet Number	Status	Rev
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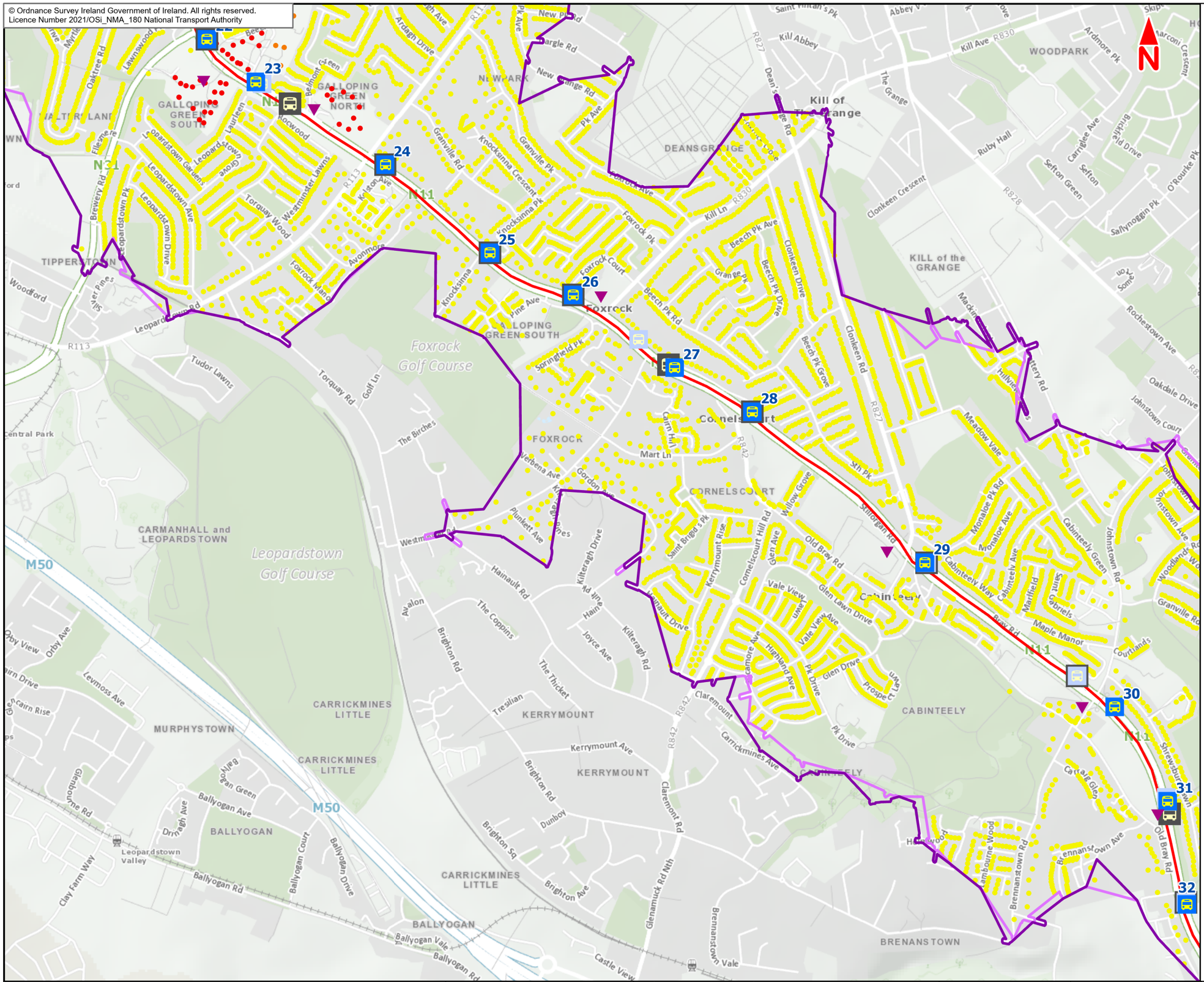

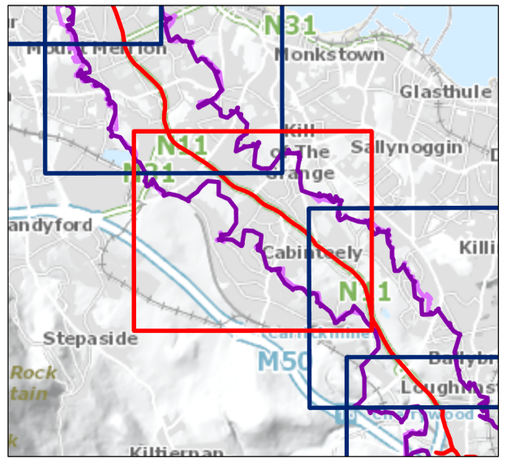

Legend

- Proposed Outbound Bus Stop
- Existing Outbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Existing Stops 15 min. Catchments Limit
- Proposed Stops 15 min. Catchments Limit
- Proposed Core Bus Corridor

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Outbound Stops 15min. Catchment

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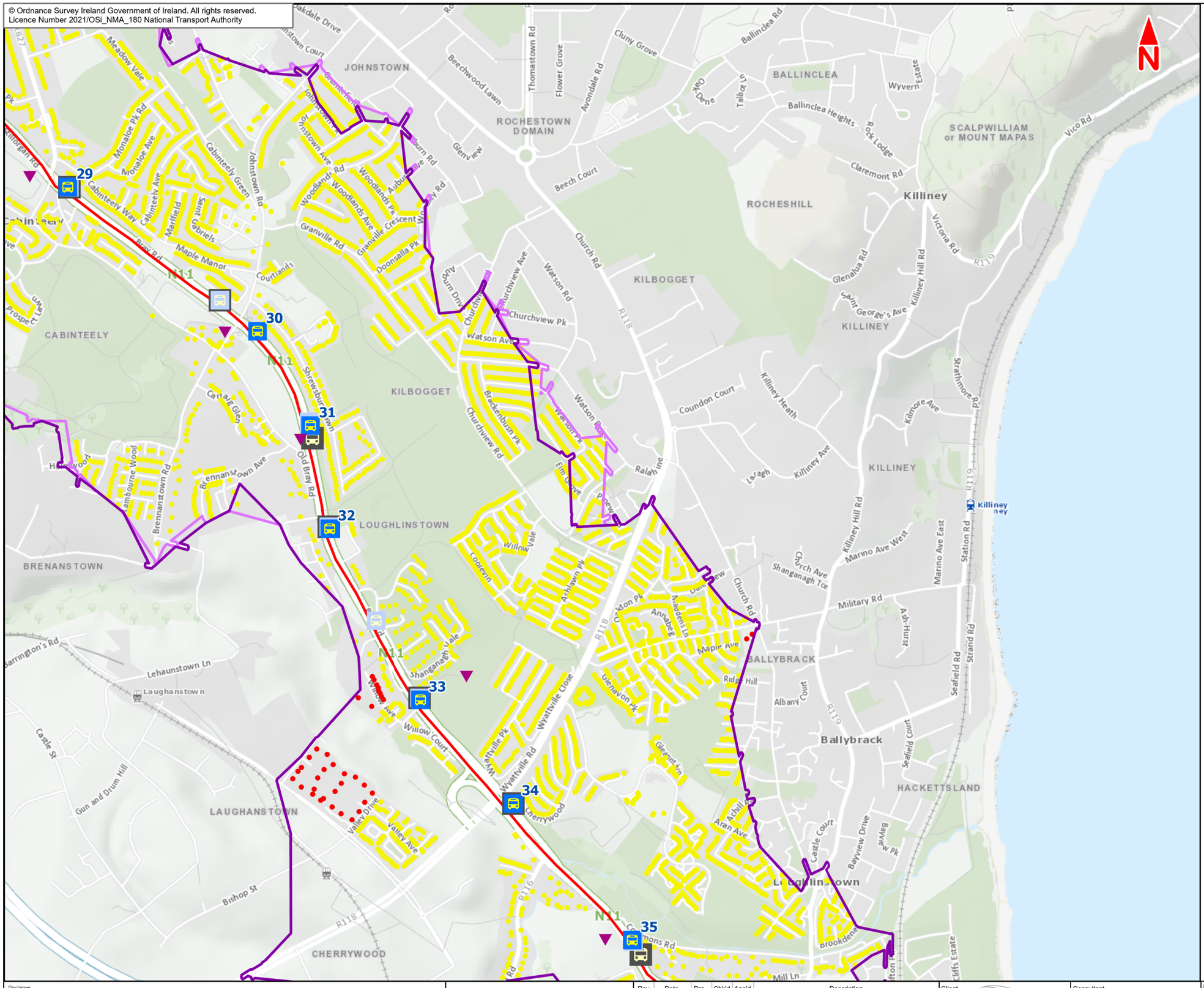

Legend

- Proposed Outbound Bus Stop
- Existing Outbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Existing Stops 15 min. Catchments Limit
- Proposed Stops 15 min. Catchments Limit
- Proposed Core Bus Corridor

Estimated Population in Building

- 2 - 10
- 11 - 30
- >30

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Consultant: Jacobs

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Project Code	Originator Code	QMS Code
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Programme Title: **BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS**

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Outbound Stops 15min. Catchment

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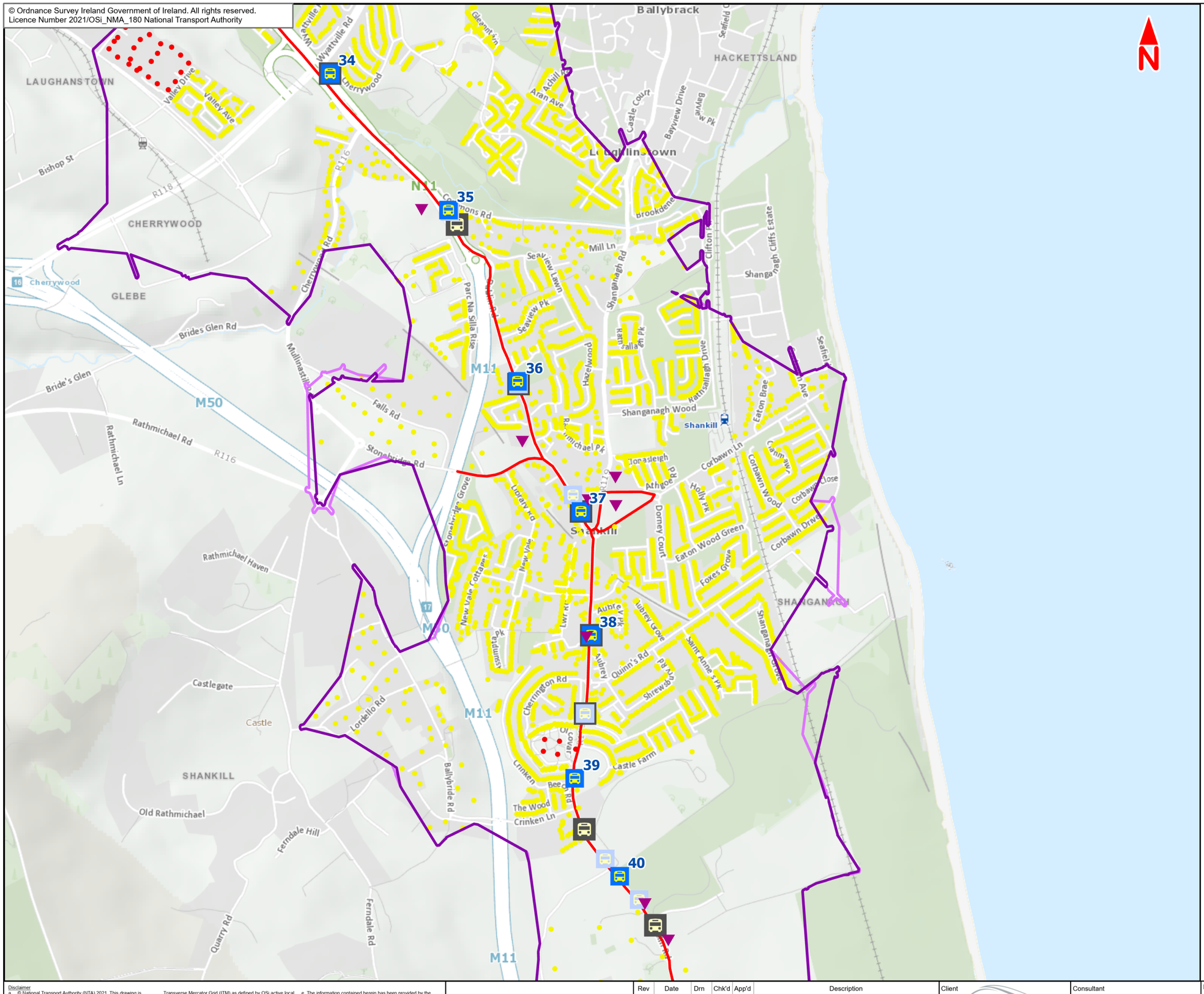

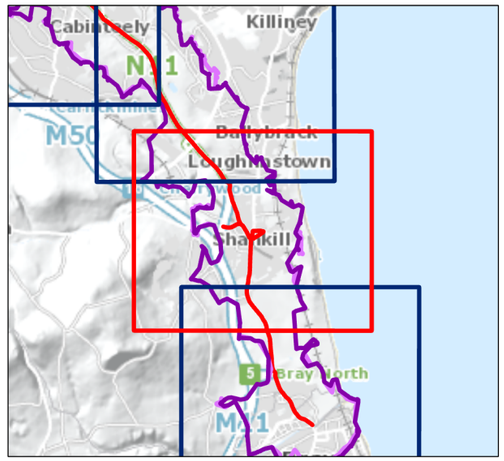

Legend

- Proposed Outbound Bus Stop
- Existing Outbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
- Existing Stops 15 min. Catchments Limit
- Proposed Stops 15 min. Catchments Limit
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Estimated Population in Building

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- 11 - 30
- >30

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Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Outbound Stops 15min. Catchment

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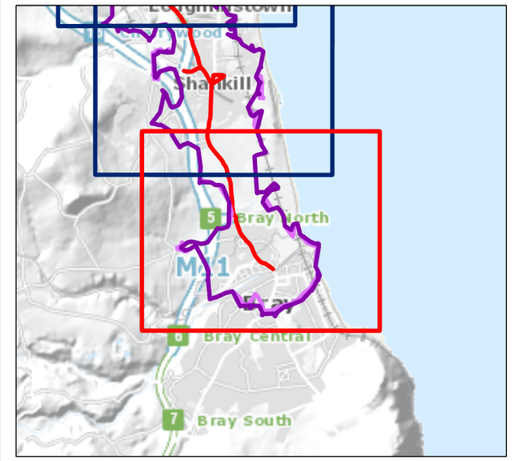

Legend

- Proposed Outbound Bus Stop
- Existing Outbound Bus Stop
- Bray PC2 Bus Stop Points
- Attractor
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- Proposed Stops 15 min. Catchments Limit
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Estimated Population in Building

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Project Code	Originator Code	QMS Code
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Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

Drawing Title: Bray to City Centre Core Bus Corridor Scheme
Proposed Outbound Stops 15min. Catchment

Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-TRA_AN-0013_XX_00-DR-GG-0607	7 of 7	A	M01

Appendix C. Bus Stop Review Methodology

Refer to Appendix H1 of the main PDR Report